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GALEN

ON THE CONSTITUTION OF

THE ART OF MEDICINE

THE ART OF MEDICINE

A METHOD OF MEDICINE

TO GLAUCON

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# GALEN

ON THE CONSTITUTION  
OF THE ART OF MEDICINE  
THE ART OF MEDICINE  
A METHOD OF MEDICINE  
TO GLAUCON

EDITED AND TRANSLATED BY  
IAN JOHNSTON



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## GENERAL INTRODUCTION

Galen (AD 129–ca. 216) is one of the two truly great figures in the early history of Western medicine—the other, of course, is his revered predecessor Hippocrates (5th c. BC). Galen seemed to have been quite aware of his own importance during his long and productive life, but in his defense (if defense is needed!), he specifically recognized himself as being a transmitter rather than a creator—similar perhaps to the way Confucius perceived himself, albeit in another time, culture, and discipline.<sup>1</sup> What Galen saw himself as transmitting was the Hippocratic practice of medicine, added to and systematized into a comprehensive method with a secure rational foundation. In particular, additions came through his engagement with philosophy (notably the writings of Plato and Aristotle), his own anatomical and experimental studies, his extensive clinical practice, and above all, his detailed formulation of a method, or system, of medicine. Although Hippocrates, Plato, and Aristotle could be regarded as Galen's major influences, he drew from a wide variety of sources in medicine and other disciplines, the majority of which are no

<sup>1</sup> “The Master [Confucius] said: ‘I am a transmitter and not a creator. I believe in and love the ancients’” (*Analects*, 7.1). What Confucius transmitted were the teachings of the ancient sage kings.

longer extant. In fact, no small part of his enduring importance and the continued interest in his works is due to the information he provides on notable doctors between the time of Hippocrates and his own time, and their works now partially or completely lost. There is no doubt, however, that Hippocrates and his school were the dominant voices in medicine during the five hundred or so years before Galen, and that it was Galen who became the dominant voice for the next fifteen hundred years.

The three works included in the present edition represent only a very small part of Galen's prodigious literary output (considered in section 5 below). The first, *On the Constitution of the Art of Medicine*, is essentially a theoretical work devoted to an analysis of the structure of the discipline of medicine, considered as one of the large number of arts and crafts. In this, and an associated work,<sup>2</sup> Galen offers a general theory of the structure, or constitution, of such entities. The second work, *The Art of Medicine*, provides a bridge between the theoretical and the practical and was a work of great importance in medical education over many centuries. The third work, *A Method of Medicine to Glaucon*, is a purely practical work, prepared for his friend, the philosopher Glaucon, to take with him on his planned extended travels. It was intended to enable Glaucon to maintain his own health and presumably to attend to the health of others according to the dictates of circumstances. As a group, these three works

<sup>2</sup> This is the lost work, in two books, that was part of the combined work on the structure, or constitution, of the arts in general. It is now agreed that Galen wrote this work after 193, after *De sanitate tuenda* and before *Ars medica*, and that it was already lost by the sixth century; see Fortuna, *Galeno*, 46.

give some insight into Galen's range from medical theorist to active and very experienced practitioner.

## 1. GALEN'S LIFE

Galen's life is relatively well-documented.<sup>3</sup> Much of the information comes from his own writings, in which numerous anecdotes provide factual information as well as insights into the writer's character. The following chronology sets out the main points of Galen's life, divided into seven clearly defined periods. A somewhat amplified account of each of the periods follows the chronology.

### *Chronology of Galen's Life*

#### 129-146

#### **General Education**

Taught arithmetic, logic, and other subjects by his father to the age of fourteen.

Subsequently instructed in the various schools of philosophy.

Directed into medicine by his father at the age of seventeen.

<sup>3</sup> A more detailed version of the following account may be found in Johnston and Horsley, *Galen: Method of Medicine*, l.xii-xliii. Longer accounts may be found in Sarton, *Galen of Pergamon*, and in the two recent books by Mattern, particularly *The Prince of Medicine*; see also Hankinson's opening chapter in *The Cambridge Companion to Galen*, in which he remarks that the best short account is that in Nutton, *Ancient Medicine*, which also serves to provide an excellent overview of medical practice throughout the ancient period and therefore gives the context for Galen's considerable contribution.

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- 147–157 Medical Training**  
 First in Pergamum, then in Smyrna, then Alexandria.  
 Focus on anatomy and Hippocratic medicine.  
 Continued study of philosophy.  
 Wide range of notable teachers.
- 157–161 Medical Practice in Pergamum**  
 Worked as doctor to the gladiator school.  
 Continued general practice of medicine.  
 Continued study and research.
- 162–166 First Period in Rome**  
 Practiced general medicine.  
 Continued anatomical research.  
 Gave public demonstrations and lectures.  
 Continued study of philosophy.
- 166–168 Return to Pergamum**  
 Reason(s) unknown.  
 To avoid plague in Rome?  
 Difficulties in Rome?  
 Other?
- 168–200 Second Period in Rome**  
 Summoned by Marcus Aurelius.  
 Became Imperial Physician.  
 Very productive period for his writing.
- 200–216/7 Final Years**  
 Very little known.  
 Latest work completed between 204 and 207 (*On Theriac, to Piso*).  
 How and where he died remain unknown.

## GENERAL INTRODUCTION

**Early Years (129–146):** Galen was born in Pergamum in Asia Minor—a place renowned for its shrine to Aesculapius, and for its library, which acted as a considerable attraction to scholars. Nikon, his father, was a wealthy architect of the city and played a very active role in his son's early education, personally instructing him in the basic disciplines of geometry, mathematics, and arithmetic, as well as in logic and architecture. Then, from the age of fourteen, Galen was exposed to the teachings of the major philosophical schools. His father arranged for him to be taught by a series of teachers of philosophy, including a Stoic, a Platonist, a Peripatetic, and an Epicurean. Galen's mother, remembered through her son's unflattering portrayal, seems to have been notable for her intemperate and somewhat violent conduct. Galen himself gives the following contrasting descriptions of his two parents and his attitude toward the behavior of each:

I was extremely fortunate in having a father who was not in the least irascible, very civilized, very kindly and very courteous, whereas my mother was so irascible that she sometimes bit the female servants, always bawling at, and fighting with, my father to an increasing extent—a Xanthippe to Socrates. For myself, seeing set side by side the virtues of my father's actions with the disgraceful affections of my mother, there was an eager following and love of the former but avoidance and hatred of the latter.<sup>4</sup>

<sup>4</sup> *Animi Affect.*, V.1–57K, 40–41K.

**Medical Training (147–157):** The course of his education, and indeed of his life, was changed significantly in his seventeenth year as a result of his father's dreams. In *On the Order of My Own Books*, Galen writes: "Then, persuaded by clear dreams, he made me, in my seventeenth year, train in medicine at the same time as philosophy."<sup>5</sup> The initial years of Galen's medical education were spent in Pergamum. His first known teacher was the renowned anatomist Satyrus, who had come to the city and was apparently lodging with the Roman architect Rufinus, charged with restoring the shrine to Aesculapius. Among his other teachers in Pergamum were Stratonicus and an unknown Pneumatist, as well as two other men: Ephicianus, a Rationalist, and the Empiric, Aeschrion.

During this period, probably in 149, two things happened that altered the course of Galen's life. First, his father died, depriving him of his assiduous educational guide and supervisor. Second, his main teacher, Satyrus, returned to Smyrna. To further his medical education, Galen then began his travels, which lasted until 157. His first port of call was Smyrna, where he spent about a year, studying under Pelops, a noted commentator on Hippocrates. He may also have attended lectures by the Platonist philosopher Albinus, himself a pupil of Gaius. Galen then left Smyrna in search of instruction from Pelops' own teacher, Numisianus, possibly after a brief return to Pergamum for family reasons. Subsequently, he stayed in Alexandria over the five years from 152 to 157. This was the culminating period of his extended medical training, which saw the refinement of his knowledge of anat-

<sup>5</sup> *Ord. Libr. Propr.*, XIX.49–61K, 59K.

omy—general, comparative, and surgical—and of materia medica. Among Galen's teachers was Numisianus' son Heraclianus. Two other possible teachers were Julian the Methodist and Lycus the Macedonian, both of whom Galen later criticized in short treatises.<sup>6</sup> Finally, he is thought to have traveled widely while in Egypt, furthering his knowledge of medications.

**Initial Practice at Pergamum (157–161):** Galen returned to Pergamum from Alexandria in his twenty-eighth year. Shortly thereafter, he was appointed doctor to the city's gladiators and began the practice of medicine as his occupation, combining his work among the gladiators with other aspects of practice and continuing study and research. Thus, by the time Galen entered medical practice, he had undergone a period of training roughly equivalent to that required for specialist training in English-speaking countries in modern times (i.e., around ten years). His credentials were impressive. Impressive too was his work in Pergamum. He records how he came to the notice of the Pontifex through demonstrations of his method of treating tendon injuries, hence his appointment as doctor to the gladiator school, which he retained for at least five periods of seven months. This appointment afforded him a singular opportunity for the study of surgical anatomy and the management of all kinds of wounds and fractures, and it may have contributed to the prominence he was subsequently to give "dissolution of continuity" in his system of disease classification. Precisely why Galen left his apparently flourishing practice in Perga-

<sup>6</sup> The two works are *Adv. Jul.*, XVIII.A.246–99K, and *Adv. Lyc.*, XVIII.A.196–245K.

num remains uncertain. Perhaps it was because of ambition, as Nutton suggests,<sup>7</sup> or because of unrest, either personal or general; or, possibly, other, unknown factors were involved. Whatever the explanation, Galen left Pergamum around 161 and spent the next four years in Rome.

**First Period in Rome (162–166):** Galen's journey to Rome was relatively rapid, although it may have involved some study of medicinal plants en route, perhaps in Lemnos and Cyprus.<sup>8</sup> The precise date of his arrival in Rome is also uncertain but was probably either late 162 or early 163. Although his first stay in Rome was comparatively brief, lasting only until 166, it was eventful in three important ways. First, he established himself as a student of the highly regarded Peripatetic philosopher Eudemus, who was in turn to benefit from his pupil's medical expertise, as recorded in detail in Galen's *On Prognosis, for Epigenes*. As Nutton remarks, "His cure of his old philosophy teacher Eudemus in the winter of 162–163 was crucial in establishing him as a fashionable healer."<sup>9</sup> Second, there was his association with Boethus, flatteringly described in the opening sentences of his *On Anatomical Procedures*.<sup>10</sup> This was an association that encouraged and facilitated the continuation of Galen's own anatomical researches. The first part of one of his greatest works, *On the Use of the Parts*, was completed during this period and sent to Boe-

<sup>7</sup> See Nutton, "Roman Medicine 250 BC to AD 200," in Conrad et al., *Western Medical Tradition*, 62.

<sup>8</sup> See Galen, *Alim. Fac.*, VI.507K, 617K.

<sup>9</sup> See Nutton in Conrad et al., *Western Medical Tradition*, 62n7, and also Galen, *Praen.*, XIV.608K.

<sup>10</sup> *Anat. Adm.*, II.215–16K.

thus, who had been appointed governor of Palestine in 165. Third, as part of an active practice of medicine, Galen engaged in public demonstrations and debates with members of other sects and schools. While this must have furthered his reputation, it must also have made him some enemies.

**Return to Pergamum (166–168):** In 166, Galen left Rome and returned to Pergamum, visiting various parts of Greece during his journey. Why he did this is not clear. In different works written at quite different times, Galen cites two distinct reasons: difficulty with his rivals in Rome coupled with improved conditions in Pergamum, and the advent of plague in Rome.<sup>11</sup> It may also be that it was always his intention to return to Pergamum when the disturbances there, which are thought to have contributed to his initial decision to depart, had settled down.

**Second Period in Rome (168–200):** Galen's stay in Pergamum this time was to be very short. In 168 he was summoned by Marcus Aurelius to join the imperial army on campaign in northern Italy, although abandonment of the immediate military objectives resulted in the army's return to Rome in 169, and Galen with it. He was to remain in Rome for at least the greater part of his remaining life. The years immediately after his return (169–176) were most productive in terms of his literary output, seeing the completion of a number of his major works, including the first six books of his *Method of Medicine*. During this time, Marcus Aurelius entrusted him with the medical care of his ill-fated son Commodus while the emperor was away from the capital. When Marcus Aurelius again re-

<sup>11</sup> Galen, *Praen.*, XIV.623K, 648K, and *Libr. Propr.*, XIX.15K.



turned to Rome in 176, Galen was made imperial physician, his crowning achievement in terms of gaining powerful patronage. He continued his writing throughout the last decades of the century, producing among other works the second part of *The Method of Medicine* and his major works on materia medica. Also from late in the century are the two short works that provide valuable information about his writings, *On My Own Books* and *On the Order of My Own Books*. There is also his *On My Own Opinions*, in which he makes the significant observation that his core ideas changed little over the fifty or more years of his writings.<sup>12</sup>

**Final Years (200–216/7):** Very little is known about the final part of Galen's life, in no small part because those years are not chronicled by Galen himself, as were the earlier years. Until recently, speculation had him leaving Rome somewhere around his seventieth year and returning to his native Pergamum for the remainder of his life.<sup>13</sup> Based on the Byzantine lexicon known as the *Suda*, Galen's death was previously said to have occurred at the age of seventy or seventy-one (i.e., 199–200). The current thinking is that he lived well into the third century. The latest date for any of his writings is that for his *On Theriac, to Piso*, which, according to Nutton, could not have been earlier than 204 and may have been as late as 207.<sup>14</sup> Where he died is also unknown. He may have remained in Rome or returned to Pergamum for his final years. Nutton gives no credence to the theory that he died at Perama in Egypt

<sup>12</sup> On this, see Nutton, *Galen on My Own Opinions*, 46.

<sup>13</sup> See Sarton, *Galen of Pergamon*, 24.

<sup>14</sup> See Nutton, *Ancient Medicine*, 226.

while on a pilgrimage to Jerusalem—indeed, why would he make such a journey? In conclusion, what can be said at the present time is that he probably died in either 216 or 217 at the age of eighty-seven, but how and where he died remain unknown.

## 2. GALEN'S PREDECESSORS

There is no doubt as to who Galen's most respected authorities were—Hippocrates in medicine and Plato in philosophy. He refers frequently to Hippocrates throughout his writings, and always favorably, although he is aware that his great predecessor left work to be done. In his *Method of Medicine*, in relation to the treatment of *dyskrasias*, he writes: "But, although he [Hippocrates] was the first to discover them, he neither established the proper order for all of them, nor determined the worth of each of the indicators precisely. And he left out some distinctions between them, and explained the majority without clarity due to the ancient [predilection for] brevity of speech. Moreover, all in all, he taught very little about combined conditions."<sup>15</sup>

Galen took three principles of primary importance from Hippocrates: first, the humoral theory of the composition of the body, as expressed in Hippocrates' *Nature of Man*, with its stated opposition to the existing claims of a single basic substance; second, the view that each disease had a causal explanation that should be sought and, if identified, would be of relevance to treatment; and third,

<sup>15</sup> *MM*, 9.8 (X.632K); Johnston and Horsley, *Galen: Method of Medicine*, 2.499.

the allopathic principle underlying treatment—opposites cure opposites. Of more general importance were Hippocrates' perceived emphasis on ethics and his methodology, both of which prefigure Galen's own belief in the essential nexus between medicine and philosophy.

Concepts developed by Plato that were of importance to Galen include the following: the concept of the body as composed of the four elemental qualities (hot, cold, dry, and moist), as propounded in the *Timaeus*; the recognition of design in nature, involving the concept of the "Demiurge"; the tripartite division of the soul, involving consideration of the physical correlates of the psychical; and Plato's ideas on causation in general and in medicine in particular, as expounded primarily in the *Timaeus* and the *Phaedo*. On a somewhat more minor but nonetheless important issue, Galen's agreement and identification with Plato on the need to give primary attention to matters themselves rather than to terminology (an oft-repeated mantra) is revealed in the following statement from Galen's *On Anatomical Procedures*: "But if you are at least persuaded by Plato and myself you will always think little of names, whereas you will be attentive primarily and particularly to the knowledge of matters."<sup>16</sup>

Galen is less unreserved in his praise of Aristotle, but a number of the latter's ideas do figure prominently in his writings. For example, in Galen's teleological views, which especially inform his major work *On the Use of the Parts*,<sup>17</sup>

<sup>16</sup> *Anat. Admin.*, II.581K.

<sup>17</sup> *UPart.*, III.1-913K (Books 1-11) and IV.1-368K (Books 12-17). For an English translation of this work, see May, *Galen on the Usefulness*; for a French translation, see Daremberg, *Oeuvres anatomiques*.

it is Aristotle's immanent teleology rather than the Platonic "Demiurge" that is most discernible. In his methodology, Galen is clearly and profoundly influenced by Aristotle, particularly by the works of the *Organon*. In his conception of the structure of the body, he was, as stated above, firmly committed to the theory of four elemental qualities that Aristotle also accepted and developed. Further, in his formulations of structural levels, which are of considerable importance to the classifications of diseases and symptoms advanced in the four treatises on these subjects and restated in *The Method of Medicine*,<sup>18</sup> Galen followed Aristotelian concepts, especially the idea of *homotomeres*. In his consideration of causation, he is also clearly influenced by Aristotle, both in the assumption of the validity of the search for causal explanations and in the specific ideas. In his attention to taxonomy, Galen is obviously following Aristotelian principles. He was unquestionably influenced by the psychology of *De anima*, as indeed were almost all who came after Aristotle and grappled with the same subject matter. Finally, the empirical component of his studies and the use of observation of biological phenomena as the basis for theoretical formulations reveal an Aristotelian imprint.

As mentioned at the outset, Galen was clearly very conversant with the substantial body of medical and philosophical writing that preceded him; his references to predecessors are numerous, although by no means always

<sup>18</sup> The four treatises are: *Morb. Diff.*, VI.836-880K; *Caus. Morb.*, VII.1-41K; *Sympt. Diff.*, VII.42-84K; and *Sympt. Caus.*, VII.85-272K. Johnston, *Galen on Diseases and Symptoms*, provides an English translation of all four treatises. For the discussion on these matters, see Galen, *MM*, 1-2.

flattering. In one of his major works, *The Method of Medicine*, he refers to more than fifty doctors and philosophers individually, of which five of the most notable are briefly considered below.

**Diocles of Carystus** is classed among the Dogmatics and espoused the concepts of *pneuma* and the four humors (blood, phlegm, and yellow and black bile). He is referred to by Galen on a variety of topics. On the matter of treatment, he held the Hippocratic view on the importance of opposites. Particular remedies and methods associated with his name include diet, exercise, bathing, emetics, fomentations, phlebotomy, and medications.

**Praxagoras of Cos** has been identified as a follower of Diocles of Carystus and perhaps a teacher of Herophilus. He espoused theories that attracted Galen's criticism, such as the cardiocentric view of mental and emotional function, which was shared by other notables including Aristotle, and his belief that the arteries carried *pneuma*, a concept developed by Erasistratus in his theories of disease causation. On the positive side, however, he is credited with having made the structural distinction between arteries and veins. His particular similarity to Galen, who identified him as a Rationalist, was his belief in the importance of seeking a causal explanation for disease. Indeed, he is said to have written a book on the subject. In addition, there are his studies of the pulse and its abnormalities, another subject substantially developed by Galen, and his incorporation of *pneuma* into theories of physiology and pathology. Praxagoras also expanded on the concept of humors, subdividing the basic four on the grounds of color, taste, and other aspects to make ten. He particularly associated disease with alteration of the humors and specifically fever with putrefaction of humors.

**Herophilus of Chalcedon** made a major contribution to anatomy, especially of the nervous system, liver, and heart. From the viewpoint of his importance for Galen, he subscribed to the same physiology based on the four elemental qualities with a significant role for *pneuma*, the latter being importantly implicated in neurological function by Herophilus. He also played a major part in establishing "pulse theory," a subject enthusiastically and extensively taken up by Galen. In terms of methodology, Herophilus argued for attention to be directed to phenomena but did, it is thought, accept the importance of causal explanation.

**Erasistratus** had both a positive and a negative effect on Galen. The former was manifest through his significant contribution to anatomy, mainly with regard to the cardiovascular system and peripheral nerves. The latter concerned a number of his theoretical formulations that were strongly criticized by Galen. First, in his physiology and pathology, he moved away from the concept of four elemental qualities, basing his physiology on a corpuscular theory following, it is said, Straton of Lampsacus. In his explanation of disease, he gave particular importance to blood and *pneuma*, invoking the concepts of *plethora* and *paremptosis*. In short, what was involved in these presumed pathological processes was an increase in blood in the veins to an abnormal level, causing a spillover into the arteries with a resultant displacement of *pneuma*. Other aspects of Erasistratus' theorizing to which Galen took exception were his concept of *horror vacui* (or "following toward what is emptied"), his theory of digestion, his departure from the idea of "complete" teleology, and some of his attitudes to therapy. Also, on the issue of causation, there were substantial differences, although it may be said

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that Erasistratus did clearly accept the need for causal explanation.

**Asclepiades of Bithynia** was also influential in a negative way, basing his physiology and pathology on the concept of fragile corpuscles (*anarmoi onkoi*) that traveled through channels (*poroi*) distributed throughout the body but were not anatomically definable. In his view diseases occurred when this process was interfered with, in particular when there was impaction (*emphraxis*). He was the first to apply the atomic theory to medicine and hence was the forerunner of the Methodist school further developed by Themison and Thessalus in particular. This was a theory that Galen opposed in no uncertain terms, although he does include it without criticism in his treatises on disease classification and causation.

### 3. GALEN AND THE SECTS, OR SCHOOLS

By Galen's own time, Roman medicine seems to have become divided into four main sects, or schools—Empiricists, Rationalists, Methodists, and Pneumatists. Quite how important these recognized divisions were is hard to determine accurately, given that surviving evidence is limited to very few contemporary sources, the two notable ones being Celsus (1st c. AD), and Galen himself. The latter certainly attached considerable significance to these sects, writing two works specifically on the subject—*On the Sects* and *On the Best Sect, to Thrasybulus*—and mentioning them frequently in other works. Moreover, in his late work *On My Own Books*, he writes, regarding his *On the Sects*, that this "should be the first book to be read

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by students of the art of medicine."<sup>19</sup> Although Galen does not discuss the issues of the sects in any detail in the three works in the present volume, the first two (*On the Constitution of the Art of Medicine* and *The Art of Medicine*) may be regarded as important statements of the Dogmatic, or Rationalist, position. The essential features of each of the sects are as outlined below.

### Rationalism/Dogmatism

- A theory of the basic structure of matter that is applicable to the human body.
- A theory of the nature of health and disease in terms of concepts of structure and function founded on the theory of basic structure.
- A detailed knowledge of human anatomy.
- Acceptance of the idea of causation—that all events have a cause or causes, which are at least potentially identifiable.
- Acceptance of the view that measures to maintain health and to cure disease can be determined theoretically (at least in part) on the basis of this theoretical foundation.

### Empiricism

- There is no need of a foundational theory of structure and function or a detailed knowledge of anatomy.

<sup>19</sup> The two books referred to are *Sect.*, I.64–105K, and *Opt. Sect.*, I.106–223K. The latter is now regarded as spurious. For the reference to *Libr. Propr.*, XIX.12K, see Singer, *Galen: Selected Works*, 4–5.

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- There is no need to search for causal explanations—indeed, this is not only unnecessary but fruitless.
- Recognition of diseases and their treatment is based on experience (*peira*), observation (*teresis*), history or inquiry (*historia*—or in medicine collected case histories), and inference from analogy (*metabasis*).

### Methodism

- A theory of basic structure involving identical atoms/corpuscles (*anarmoi onkoi*) and channels/pores (*poroi*), inaccessible to observation, through which the corpuscles moved.
- The view that disease was due to disturbance of this normal movement—either constriction of the channels obstructing flow, or dilatation of the channels allowing excessive flow, or as a third possibility, co-existence of constriction and dilatation giving a combined condition.
- The view that these states were readily recognizable and were the basis for treatment.
- The claim that all parts of the body were similarly affected by these processes and that there was no need for a detailed knowledge of anatomy.

### Pneumatism

- Acceptance of the four element/four quality theory of basic structure as in Rationalism.
- Postulation of the particularly important role for the *pneuma* in health and disease.

Galen himself did not have any hard-line allegiance to one sect or another. He was, he would claim, aware of the advantages and disadvantages of each. Certainly, he fol-

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lowed Rationalist principles insofar as his method of medicine was based on a theoretical foundation formulated by reason. He was, however, also aware of some of the pitfalls of Rationalism as a dogma, writing in *The Method of Medicine* as follows:

On the other hand, for those who make reason (*logos*) the principle of discovery and order, who propose that this is the one road leading to the goal, there is the necessity to begin from something primary, agreed upon by all men, and in this way then proceed to the rest. They do not in fact do this, but rather the majority take up disputed starting-points, not demonstrating them, and proceed to the rest in the same way, laying down the law rather than demonstrating.<sup>20</sup>

Equally, Galen was aware of the importance of experience. In the opening paragraph of *On Medical Experience*, he writes:

When I take as my standard the opinion held by the most skillful and wisest doctors and the best philosophers of the past, I say: The art of healing was originally invented and discovered by *logos* (reason) in conjunction with experience. And today also it can be practised excellently and done well by one who employs both of these methods.<sup>21</sup>

<sup>20</sup> *MM*, 1.4 (X.32K); Johnston and Horsley, *Galen: Method of Medicine*, 1.51.

<sup>21</sup> Galen, *On Medical Experience*, in Walzer and Frede, *Three Treatises*, 49.

Galen repeatedly refers to the two ways of gaining knowledge: through reason and through experience. Moreover, theoretical formulations, if they are not verified by and in accord with experience, must be rejected, while experience that is not "organized" by reason risks being unsystematic and irrational. One of Galen's major objections to Methodism was that it was based on the wrong theoretical foundation. Further, according to Galen, Asclepiades despised experience. The later developments of Methodism, culminating in the work of Themison and subsequently Thessalus, were clearly more anathema to him. In essence, the problem was that the Methodists now had no method, as he recurrently states in *The Method of Medicine*. Somewhat curiously, given the virulence of his criticism of the Methodist sect and Thessalus as its self-styled champion, Galen seems to have had no quarrel with Soranus. Nor did he have any major difficulty with the Pneumatists—those differences that are recorded are largely with specific individuals (e.g., Athenaeus) on specific points. The same applies to his differences with the Erasistrateans, although in that case the points of difference are more fundamental. In summary, Galen might be best categorized as an eclectic with strong Rationalist tendencies, drawing what he saw as relevant from all the sects and molding it into his method of medicine.

#### 4. GALEN'S SYSTEM (METHOD) OF MEDICINE

Although Galen wrote prolifically on a wide range of subjects within and beyond medicine, he was first and foremost a doctor, actively engaged in the actual practice of

medicine and the teaching of his method of practice. It is this method, or system, of medical practice, distilled from his detailed knowledge of the work of his predecessors, both medical and philosophical, and refined through his own research and clinical practice, that I shall attempt to summarize below under the headings of "theoretical foundation" and "practical application." He set out his theoretical foundation in a number of major works—on the basic structure of matter, on anatomy, on physiology, on materia medica (pharmacology), on logic and demonstration, on classification and causation, and on the opinions of earlier writers. These were supplemented by a number of shorter works on various more specific matters. Details of the theoretical foundations and the practical application of his methods are to be found in a number of works, the majority of which will be referred to in the following account. Of the works in the present volume, two (*On the Constitution of the Art of Medicine* and *The Art of Medicine*) are of particular relevance to the theory, while the third (*A Method of Medicine to Glaucón*) is a sort of digest of the purely therapeutic components of his major work on medical practice, *The Method of Medicine*.

#### *The Theoretical Foundation*

##### Structure

The keystone of Galen's theoretical foundation is an understanding of the structure of the human body. There are two quite distinct aspects to this. First, there is the knowledge of the fundamental components of matter generally, which is the province of physics and philosophy. Second,

there is the specific and detailed knowledge of how these fundamental components are organized to form the recognizable structures of living organisms, and of the human body in particular, which is the province of anatomy, both macro- and microscopic, although of course only the former was available to Galen.

On the issue of fundamental components, Galen espoused a continuum theory of matter. According to this, matter is composed of the four elements—fire, water, air, and earth—and the four elemental qualities associated with them (hotness, wetness, coldness, and dryness) in varying combinations. Related to these are the four humors: blood, phlegm, yellow bile, and black bile. It is a theory that can be traced back to Empedocles, but Galen particularly identifies Hippocrates, Plato, and Aristotle as his forerunners in embracing this concept. Galen's own articulation of the continuum theory and its application to the human body, as well as his objections to the main rival theory, are to be found chiefly in two works: *The Elements According to Hippocrates* and *On Hippocrates' "Nature of Man."* Both are works in which he elaborates on Hippocrates' own *Nature of Man*. The opposition referred to above came from the "atomic" theory, which was first applied specifically to medicine by Asclepiades of Bithynia (2nd–1st c. BC).<sup>22</sup> It was a theory unequivocally repudiated by Hippocrates and so by Galen. According to the atomic theory, which originated with Leucippus (5th c. BC) and Democritus of Abdera (5th–4th c. BC), matter

<sup>22</sup> For an account of Asclepiades' views (much of it based on evidence from Galen), see Vallance, *The Lost Theory of Asclepiades of Bithynia*.

in general is composed of minute, discrete particles, all similar, existing and moving in an empty space or void. These primary entities, the elements, were taken to be indestructible, immutable, and impassable in themselves, forming the identifiable structures of the world by their unending associations and disassociations. This was the theory that Galen strongly opposed.

On the issue of the arrangement of the fundamental components (whatever they might be),<sup>23</sup> Galen recognized three levels of organization:

1. *Homoiomerous* structures: structures of uniform composition, exemplified by muscle, bone, cartilage, etc.
2. Organic structures: structures compounded from simple structures to form discrete organs (in the original sense as instruments) serving a particular function, such as heart, liver, lung, etc.
3. The whole body: the sum total of all the structures in the first two groups.

All these structures are seen as ultimately being combinations of the four elemental qualities, the actual balance of which may differ in different structures in the same body. What the doctor must know is the norm for each of the specific structures, how they are arranged in themselves and in relation to other structures, and what their functions are. Much of this knowledge comes from anatomy,

<sup>23</sup> In setting out his theory of the structural levels of the body in *Morb. Diff.*, 2.3–4, 3.1, Galen gives a fairly evenhanded treatment of the two main theories of basic structure; see Johnston, *Galen: On Diseases and Symptoms*, 135–36.

both by simple observation and by dissection. Knowledge of functions also derives from observation, but in addition it is dependent on anatomy and on physiological experimentation and reason. Galen wrote a number of treatises on anatomy, notable among which are *On Anatomical Procedures* and *On the Use of the Parts*.

### Function

Two general concepts pertaining to function are of fundamental importance in Galen's theory.

1. Function is dependent on structure. Thus, to function satisfactorily, a part must be *eukratic*. On this point it should be recognized, first, that *eukrasia* as a "normal" balance of the four elemental qualities is not a single, specific state, but allows of a range before shading into *dyskrasia*, and second, that what constitutes *eukrasia* in terms of elemental qualities varies in different tissues/parts (e.g., the balance of qualities necessary for *eukrasia* in skin is different from that required in bone). In the case of organic structures, function also depends on normal morphology and a normal relationship to other structures (in Galenic terms, normal size, conformation, number, and position). 2. Psychological function is determined by the same factors that determine physical function; that is, it is dependent on a satisfactory *krasis* (mixture) of the structures responsible for mental function and also on their structural integrity.

In the case of *krasis*, one might assume that there are homeostatic (to borrow a relatively modern term) mechanisms operative in the body, where necessary supplemented or aided by regimen or medications, that maintain all the parts, whether *homotomerous* or organic, within a

satisfactory range of *krasis* that allows of normal functions/actions.

Next, Galen considered that the animal body is divided into three major functional systems or "principles": (1) the brain, spinal cord, and nerves, both cranial and spinal, responsible for motor and sensory functions; (2) the heart and arteries, responsible for the vital force and preservation of the innate heat (see below); and (3) the liver and veins, responsible for the nutrition of all the bodily parts. Galen includes a fourth functional system in *The Art of Medicine*: the testes and the spermatic ducts.

Other structures are subsidiary to and dependent on these main systems and their components. Further, the working of such a system is dependent on its *dunamis* (capacity, faculty, power), and there may be more than one *dunamis* per system. Galen recognizes the imprecision of his fundamental concept of *dunamis*, writing the following in *On the Natural Faculties*:

The so-called *hematopoietic* faculty in the veins, then, as well as all the other faculties, fall within the category of relative concepts; primarily because the faculty is the cause of the activity, but also, accidentally, because it is the cause of the effect. But if the cause is relative to something—for it is the cause of what results from it, and of nothing else—it is obvious that the faculty also falls into the category of the relative; and so long as we are ignorant of the true essence of the cause which is operating, we call it a faculty.<sup>24</sup>

<sup>24</sup> *Nat. Fac.*, 2.9–10; translation after Brock, *On the Natural Faculties*, 17 (II.9–10K).



Nonetheless, the concept of *dunamis* is critical to Galen's physiology. Initiated by their capacities, the various structures carry out their functions (*energeiai*), which become manifest in their actions (*erga*). For example, the stomach, which Galen often uses to exemplify a mechanism or concept and which is a component in the third (vegetative, nutritive) system, attracts the ingested food through its attractive capacity, retains it through its retentive capacity while it is being processed, alters it through its alterative capacity in this process, and then passes it on through its expulsive capacity. The nutriment so processed in the stomach then moves on to the liver (the headquarters, as it were, of the nutritive system) and the process of transformation into blood is set in motion. This allows the food to provide nutrition for the other structures of the body. This triad of *dunamis* (capacity, faculty, power), *energeia* (function), and *ergon* (action) is, then, one critical component of Galen's physiology.

Two other factors that are also of major importance are *pneuma* (or really plural *pneumata*) and innate heat. In *The Method of Medicine*, Galen states that there are three *pneumata*, one associated with each of the three major systems identified above. In order, there is a psychic *pneuma*, a vital *pneuma*, and a physical *pneuma*. Ultimately these *pneumata* are derived from the external air, either that taken into the lungs via the upper airways and bronchial tree or, in the case of the psychic *pneuma*, into the olfactory tract via the nose and cribriform plate. They are distributed by the arterial system but may undergo modification within their respective systems. Thus the psychic *pneuma* is formed by a modification of the vital *pneuma* in the *rete mirabile* at the base of the brain (a

structure that Galen did not realize was absent in the human) and in the choroid plexus tissue of the lateral and third ventricles. There is also the addition of air passing directly to the brain via the nose, cribriform plate, and olfactory tracts before entering the brain to be distributed by the nerves. For health, the system of *pneumata* needs to be functioning in a normal way.

"Innate heat" is another key concept that Galen inherited from his ancient authorities, on this occasion Hippocrates and particularly Aristotle. He considered this innate heat to have its seat in the heart and the arteries, and to be supplied in the formation of the fetus, as the following statement indicates:

We do not posit masses and pores as elements in the body, nor do we declare that heat comes from motion or friction or some other cause. Rather, we suppose the whole body breathes and flows together, the heat not acquired or subsequent to the generation of the animal, but itself first, original and innate. This is nothing other than the nature and soul of life, so you would not be wrong in thinking heat to be a self-moving and constantly moving substance.<sup>25</sup>

Thus, the innate heat is located centrally in the heart, its maintenance is aided by respiration, and its distribution to the rest of the body takes place through the arteries.

In fact, physiology of the respiratory and cardiovascular systems was also a subject on which Galen both wrote and experimented extensively: there are three works spe-

<sup>25</sup> *Trem.*, VII.616K.

cifically on respiration (*The Causes of Breathing, On the Use of Breathing, Difficulties in Breathing*) and eight on the arteries and arterial pulse (*The Anatomy of Arteries and Veins, Is Blood Naturally Contained in the Arteries?*, *The Pulses for Beginners, The Differentiae of the Pulses, Diagnosis by the Pulses, The Causes of the Pulses, Prognosis from the Pulses, Synopsis of the Pulses*). One of Galen's main predecessors on these matters was undoubtedly Erasistratus, whose concepts he both criticized and modified, but whose fundamental ideas he incorporated into his own thinking in a number of instances. Both men accepted the idea of a separation of the arterial and venous systems, failing to realize they were part of a single, continuous circulatory system. In short, Galen believed that the cardiovascular and respiratory systems largely served the same functions—they maintained the balance of the innate heat and provided for the creation of the psychic *pneuma*.

#### Philosophical Issues

Philosophy occupies an important place in the theoretical foundation of Galen's medical practice. In the short work *The Best Doctor Is Also a Philosopher*, he writes: "What, then, still remains for a doctor who wishes to practice the craft in a manner worthy of Hippocrates not to be a philosopher? For if, in order to discover the nature of the body, the *differentiae* of diseases and the indications for cures, it is appropriate for him to be practiced in logic, and to stay diligent in the practice of these things, to despise money, and to exercise self-control. If so, he already has all the components of philosophy—the logical, the physi-

cal, and the ethical."<sup>26</sup> Three aspects of Galen's application of philosophy to medicine are briefly summarized here.

1. In terms of the acquisition of knowledge, he stresses the separate but complementary roles of reason (*logos*) and experience (*piera*).

2. He attaches great importance to the need for the doctor to be conversant with the methods of logic and demonstration. This allows him to reason soundly from the theoretical foundation to the practical application of the system of medicine and to evaluate critically the claims of others.

3. The premise that every event has a causal explanation is central to Galen's system. That is to say, he believed that potentially one or more causes can be identified for every affection, symptom, and disease, and that to initiate effective treatment of disease, the causal factors must, if possible, be established. Further, it must also be determined which causal factors have acted but are no longer acting, and which are still operative.

Galen's use of the terms pertaining to causation is somewhat variable, but two recurring terms are *prokatartik* and *proegoumenic*. The former seems to indicate external factors, many of which may be readily recognized, like excessive heat or cold in the surroundings—such causes may be termed external antecedent causes. The latter seems to indicate internal factors, for example movement of substances such as humors or fluxes, which may alter the *krasis* of the part affected—such causes may be termed internal antecedent causes. Also, in refuting Erasistratus' objection to causal explanation—that two

<sup>26</sup> *Opt. Med.*, I.60K.

people subject to the same putative cause are quite likely to be affected differently—Galen claims that it is not only what acts but also what is acted upon (i.e., the person's body) in the causal nexus that determines the outcome.

### Terminology and Definitions

Despite his repeated protestations that names are not important and that it is only matters that matter, Galen devotes considerable attention to the definition of a group of key terms in a number of his works, both the theoretical (e.g., *On the Differentiae of Symptoms*) and the practical (e.g., *The Method of Medicine*). There is also his work on nomenclature specifically, *Medical Definitions*.<sup>27</sup> It is essential for the doctor to have a clear concept of what actually constitutes health and disease and of their concomitants if he is to perform his prophylactic and therapeutic tasks adequately. What follows is a brief summary of the definitions most central to Galen's formulations; these are gathered into five groups.

1. In accord with nature (*kata phusin*), not in accord with nature (*ou kata phusin*), and contrary to nature (*para phusin*): The first and third of these are central to Galen's concepts and definitions of health, disease, and related terms—see the third, below. The second term is considered particularly in *The Art of Medicine*. It is applicable to a condition in which the person is not "in accord with nature," having gone beyond a proper balance, but is not

<sup>27</sup> This work survives only in Arabic; for a text with German translation, see Meyerhof and Schacht, *Galen, über die medizinischen Namen*.

yet "contrary to nature," in that function is not yet impaired. Examples include obesity and warts. "In accord with nature" (which might also be rendered as "normal" or "natural") applies when the body or one of its parts has a *krasis* and morphology, as well as a relation with other parts that allow it to serve its particular function or functions satisfactorily. "Contrary to nature" applies when this is not the case.

2. Condition (*diathesis*), constitution (*kataskeue*), state (*hexis*), and state (*schesis*): To a significant degree these terms are interchangeable. The first two particularly are used interchangeably by Galen, who writes: "If health is some condition or constitution in accord with nature, so disease will be some condition or constitution contrary to nature."<sup>28</sup> In his various definitions and in general, Galen uses "condition" more frequently than "constitution." In some respects *diathesis* and *hexis* refer to less stable or less permanent states, while *kataskeue* and *schesis* refer to more stable or permanent states.

3. Health (*hugieta*), disease (*nosos/nosema*), symptom (*sumptoma*), affection (*pathos/pathema*), epiphenomenon (*epigenema*), and syndrome (*sundrome*): The first point to make is that for Galen health is something that positively exists; it is not just the absence of disease. He attacks the Methodist Olympicus, in Book 2 of *The Method of Medicine*, because he takes the latter position.<sup>29</sup> The key elements of the definition of health are that it is a balanced state (presumably a proper balance of the elemental qualities, at least in part), and that it is a stable state that allows

<sup>28</sup> *MM*, 1.7 (X.52K).

<sup>29</sup> *MM*, 2.7 (X.137K).

the body and its component parts to function normally. Galen offers both a functional and a structural definition of health in *On the Differentiae of Diseases*:<sup>30</sup> health exists when the functions (*energeiai*) of the body are in accord with nature (*kata phusin*); and health exists when the constitution (*kataskoeue*) of the organs by which the body functions is in accord with nature (*kata phusin*). Disease, then, is a state of imbalance of sufficient degree to impair a function or functions.

4. Power/capacity/faculty (*dunamis*), function (*energeia*), and action (*ergon*): This triad of terms has been briefly considered above, and the imprecision in the first, recognized by Galen, was noted. In *On the Natural Faculties*, Galen's use of the three terms may be summarized as follows: a structure has a certain power or capacity to carry out a particular function; the function is what the power or capacity is capable of doing; the action is the doing of it. Thus the stomach has a power to digest food; its function is to apply this power and digest food; its action is actually digesting food. *Dunamis* is a particularly important term in Galen's *Method of Medicine*, where it is found in three distinct contexts; in the "physiological" sense, as above; in relation to a patient's ability to tolerate a particular treatment (i.e., his "strength"); and in relation to the strength, power, or potency of a medication.

5. Indication/indicator (*endeixis/skopos*): *Endeixis* is an important term in Galen's method and has been a particular point of discussion in recent times. Galen himself describes it in *The Method of Medicine* as "a reflection of the consequence" and gives detailed consideration to the term

<sup>30</sup> *Morb. Diff.*, 2.1 (VI.836-837K).

in the opening section of Book 3. In essence, his use of "indication" appears to be close to the present usage as defined in Stedman's medical dictionary: "The basis for initiation of a treatment for a disease . . . may be furnished by a knowledge of the cause (causal indication), by the symptoms present (symptomatic indication) or by the nature of the disease (specific indication)." It is the last that Galen is particularly concerned with. The term "indicator," which is sometimes used to translate *skopos* rather than the more usual "aim" or "objective," is taken to apply to what furnishes the basis for the indication and/or is the target of the indicated treatment.

#### Classification

Galen was, as far as we know, the first to propose a comprehensive classification of diseases and symptoms. Although there are undoubtedly problems in his classification pertaining to the basic definitions of disease and symptom and to the "naturalness" of his divisions, among other things, his system did have unquestioned usefulness. The classification is set out in the two works *On the Differentiae of Diseases* and *On the Differentiae of Symptoms* and is used as the basis for his major work, *The Method of Medicine*. In summary, he divided diseases into three primary classes: *dyskrasias*—applicable to *homoimerous* structures; abnormalities of morphology and composition—applicable to organic structures; and dissolution of continuity—applicable to both *homoimerous* and organic structures.

*Dyskrasias* were further subdivided into four simple *dyskrasias* (an imbalance involving one of the four ele-

mental qualities—hot, cold, wet, dry); four regular compound *dyskrasias* (an imbalance involving two of the four elemental qualities that are “compatible”—hot and wet, hot and dry, cold and wet, cold and dry); and two irregular compound *dyskrasias* (an imbalance involving two of the four elemental qualities that are “incompatible”—hot and cold, wet and dry), although details of the last subgroup are not altogether clear. Abnormalities of morphology and composition were subdivided into disorders of conformation, disorders of number, disorders of size, and disorders of position in relation to other structures. A person or a part of the person’s body could be simultaneously affected by more than one of the major classes of disease—for example, an infected wound in a *homoimerous* part could be simultaneously affected by a *dyskrasia* and dissolution of continuity. Symptoms were more simply classified into loss of function, reduction of function, and disorder of function—an example is the stomach, which may manifest apepsia (absence of digestion), bradypepsia (slow digestion), or dyspepsia (disordered digestion). The details of Galen’s classification of diseases and symptoms and some of the problems involved in his nosological endeavors are discussed in *Galen on Diseases and Symptoms*.<sup>31</sup>

#### Materia Medica (Pharmacology)

Three major works on materia medica by Galen still survive: *On the Nature and Powers of Simple Medications*, *On the Composition of Medications according to Places*,

<sup>31</sup> Johnston, *Galen on Diseases and Symptoms*, 65–80.

and *On the Composition of Medications according to Kind*.<sup>32</sup> In addition, there are several other lesser treatises, such as *On the Powers of Purgative Medications* and *On Antidotes*.<sup>33</sup> From the theoretical standpoint, *On the Nature and Powers of Simple Medications* is of particular relevance. The definition of a *pharmakon* (medication, drug) is that it is a substance or agent that acts on the body to produce an effect. This is in contrast to a food or a drink that the body acts on to produce an effect. Galen’s concept of drug action rests ultimately on the same theoretical foundation as does his theory of the structure of the body—the four elements/elemental qualities as the fundamental components of matter. A medication (or drug) acts on the *krasis* of the body or body part of the patient being treated according to the allopathic principle articulated by Hippocrates—opposites cure opposites. Each medication has specific properties and powers (*dunamis*), and in Galen’s scheme, four degrees of intensity. In treatment, attention must be given to the issue of matching the intensity of the medication with the severity of the *dyskrasia*. With compound as opposed to simple medications, it is more difficult to determine what the overall effect will be, inasmuch as mixture itself may alter the powers of the individual components. Galen also makes a distinction between the basic and the derivative properties of a drug, the latter being its effect on the body. The science of pharmacology is then about the invest-

<sup>32</sup> *Simpl. Med.*, XI.369–892K, XII.1–377K; *Comp. Med. Loc.*, XII.378–1003K, XIII.1–361K; *Comp. Med. Gen.*, XIII.362–1058K.

<sup>33</sup> *Purg. Med. Fac.*, XI.323–42K; *Antid.*, XIV.1–209K.

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igation of the basic and derivative properties of simple and compound drugs so that they can be applied to the diagnosed disorder in a systematic and rational manner.

### *The Practical Application*

For the doctor with a thorough grounding in the theoretical foundation outlined above, the four main components in the practical application of Galen's system of medicine—diagnosis, prognosis, prophylaxis, and therapeutics—are considered in brief.

### Diagnosis

Galen has no general work devoted to diagnosis as he does for the other three matters. However, the subject features prominently in works such as *The Art of Medicine* and *On Affected Places*. It is also an important part of *The Method of Medicine* and the subject of specific works such as *Diagnosis by the Pulses*.<sup>34</sup> The essential components—distinguishing normal from abnormal and identifying sites and types of disorder—depend on Galen's definitions and on his classification of diseases and symptoms. The measures available in his time were those that are still the foundation of diagnosis today: an accurate history of the presenting illness, background details such as the patient's previous health and circumstances, and a thorough physical examination utilizing all five senses and including all available secretions and excretions. The ultimate aim was,

<sup>34</sup> *Ars M.*, I.305–412K; *Loc. Aff.*, VIII.1–452K; *MM*, X.1–1021K; *Diagn. Puls.*, VIII.766–961K.

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as it is now, to arrive at the indication (*endeixis*) or indications for treatment.

### Prognosis

Galen wrote several works devoted to prognosis: *On Prognosis, for Epigenes* and his two lengthy commentaries on Hippocrates' *Prognostic* and *Prorrhetic*.<sup>35</sup> There are also the specific works such as *Prognosis from the Pulses*, *On Crises*, and *On Critical Days*.<sup>36</sup> Galen clearly subscribed to Hippocrates' ideas on the importance of prognosis, as set out in the opening sentences of the latter's *Prognostic*.<sup>37</sup> In acquiring expertise in prognosis, the combination of reason and experience is of particular importance.

### Prophylaxis

Galen's major work on this subject was *On the Preservation of Health (Hygiene)*.<sup>38</sup> In this, he deals systematically with such essential components of prophylaxis as diet, exercise, massage, and bathing. The sixth (and final) book of the work is devoted to the prophylaxis of specific diseases. Aspects of prophylaxis are also dealt with in other specific works, such as *Thrasybulus, Or Whether Health belongs to Medicine or Gymnastics*.<sup>39</sup> A key element of prophylaxis

<sup>35</sup> *Praen.*, XIV.599–673K; *Progn. Hippocr.*, XVIII.B.1–317K; *Praedict. Hippocr.*, XVI.489–840K.

<sup>36</sup> *Praesag. Puls.*, IX.205–430K; *Cris.*, IX.550–760K; *Dieb. Decret.*, IX.761–941K.

<sup>37</sup> See *Prognostic*, 1, in Jones, *Hippocrates: Prognostic*, 2.6–9.

<sup>38</sup> *San. Tuend.*, VI.1–452K.

<sup>39</sup> *Thras.*, V.806–98K.

in Galen's theory is the preservation of *krasis* within the normal range in all parts of the body.

#### Treatment

Galen's major work on treatment is *The Method of Medicine*, supplemented by *A Method of Medicine to Glauccon*,<sup>40</sup> and *The Art of Medicine*. In addition, there are works on specific measures (such as his several works on venesection) and on specific conditions, as well as his works on foods and medications, especially the three major works on materia medica referred to earlier. In summary, and following Galen's disease classification, the aims of treatment may be enumerated as follows:

1. Restoration of a normal *krasis* in the simple or compound *dyskrasias*, usually through the exhibition of opposites, whether as foods, drinks or medications, or some combination of these.
2. Restoration of an accord with nature in organic parts that are contrary to nature in terms of size, conformation, number or position—at least if the change is sufficient to interfere with function. This may involve surgery and/or other measures depending on circumstances.
3. Restoration of continuity or union where there is dissolution of continuity or union. This may involve surgical measures directly with appropriate postoperative care (e.g., immobilization in a fracture), and/or treatment by medications and other measures in cases such as infected wounds or chronic ulcers.

<sup>40</sup> *MM Glauc.*, XI.1–146K.

In addition, symptoms consequent upon the primary disease can be treated with symptomatic measures. The means available to achieve these aims include foods, drinks, and medications to restore *eukrasia*; surgical measures to deal with dissolution of continuity (for example, in *The Method of Medicine*, he gives detailed accounts of the surgical treatment of full thickness wounds of the abdominal wall and of various kinds of skull fracture); measures to deal with inflammation and pain; and ways of correcting organic diseases, which often involve surgery but also may include other measures, such as exercise in the case of obesity (an organic disease of size in Galen's classification).

#### 5. HIS WRITINGS

Galen's writings are remarkable for their sheer volume alone. However, they are arguably no less notable for their range of subject matter and their enduring influence. No other ancient writer of any genre comes close to matching Galen's prodigious output, although of course much ancient writing has been lost, so a true comparison is impossible. However, Galen himself was not immune to such loss; some of his writings were destroyed in the fire near the Temple of Peace in 192.<sup>41</sup> In quantitative terms, Galen's preserved writings account for about 10 percent of all surviving literature in Greek prior to AD 350; assuming a writing life of a little over fifty years, he must have averaged two to three pages per day—a quite extraordinary output. Indeed, it would seem that when Galen was not

<sup>41</sup> See Mattern, *The Prince of Medicine*, 257–78.

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engaged in the actual practice or teaching of medicine, or the basic functions of life, he was writing about medicine or related matters.

Four sources provide very useful information on the number and nature of Galen's works.

1. Galen's two short works written late in his career, *On My Own Books* and *On the Order of My Own Books*.<sup>42</sup> In the former, counting multivolume works on a single topic as single treatises, there are 187 separate treatises, although it is not always clear what constitutes a separate treatise. Moreover, not all Galen's writings are included, anyway. There are also those works written after Galen wrote *On My Own Books* and works he may have omitted for some reason. Those that are listed are grouped under the following headings (with translations after Singer),<sup>43</sup> which give a good picture of his range of interests.

Works written during the first stay in Rome

Books of my composition which were given to me by certain parties on my return home

Works of anatomical science

Works of therapeutics

The nature of the works of prognosis

Commentaries on Hippocrates

Works expressing differences with Erasistratus

Works relevant to Asclepiades

Works expressing differences with the Empiric doctors

Works expressing differences with the Methodics

Works of use in the context of logical proof

<sup>42</sup> *Libr. Propr.*, XIX.8–48K; *Ord. Libr. Propr.*, XIX.49–61K.

<sup>43</sup> Singer, *Galen: Selected Works*, 3–22.

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Books of moral philosophy

Works concerning the philosophy of Plato

Works concerning the philosophy of Aristotle

Works expressing differences with the philosophy of the Stoics

Works concerning the philosophy of Epicurus

Works of both linguistic and rhetorical interest

2. Ackermann's introduction to Kühn's edition of the *Galen Opera Omnia*, first published in the 1820s and most recently reprinted in 1997 in twenty-one volumes (volumes 17 and 18 are divided into parts A and B, volume 20 is a Latin index separately prepared). In this edition there are 124 titles. A current listing of these titles marks twenty-three as spurious and a further three as questionable. The genuine works range in length from three to four pages only (e.g., *The Causes of Breathing*)<sup>44</sup> to those in excess of one thousand pages (e.g., *On the Use of the Parts*<sup>45</sup> and *The Method of Medicine*). Ackermann lists one hundred genuine works, forty-four "manifestly spurious works," nineteen fragments, and eighteen commentaries on works by Hippocrates.

3. "Ediciones de Galeno" in López Férez, *Galeno*, 309–29.

4. Appendices 1 and 2 of Hankinson's *Cambridge Companion to Galen*. These list, respectively, "the editions and abbreviations of the Galenic corpus" and "English titles and modern translations."

Possibly as early as the sixth century, but certainly by

<sup>44</sup> *Caus. Resp.*, IV.465–69K.

<sup>45</sup> *UPart.*, III.1–933K and IV.1–366K.



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the end of the first millennium AD, Galen's core treatises on the theory and practice of medicine had been gathered together in what became known as the Galenic or Alexandrian Canon (*Summaria Alexandria*) comprising the following works (Kühn volume and page numbers are given for each):

- On the Sects* (I.64–105K)
- The Art of Medicine* (I.305–412K)
- Synopsis of the Pulses* (IX.431–549K)
- A Method of Medicine to Glaucou* (XI.1–146K)
- Collection 1 (on anatomy): *Bones for Beginners* (II.732–778K); *The Anatomy of Arteries and Veins* (II.779–830K); *The Anatomy of Nerves* (II.831–856K); *The Anatomy of Muscles* (XVIII.B.926–1026K)
- On the Elements according to Hippocrates* (I.413–508K)
- On Mixtures (Krasias)* (I.509–694K)
- On the Natural Faculties* (II.1–204K)
- Collection 2 (on diseases and symptoms): *On the Differentiae of Diseases* (VI.836–880K); *The Causes of Diseases* (VII.1–41K); *On the Differentiae of Symptoms* (VII.42–84K); *On the Causes of Symptoms* (VII.85–272K)
- On Affected Places* (VIII.1–452K)
- Collection 3 (on pulses): *The Differentiae of the Pulses* (VIII.493–765K); *Diagnosis by the Pulses* (VIII.766–961K); *The Causes of the Pulses* (IX.1–204K); *Prognosis from the Pulses* (IX.205–430K)
- The Differentiae of Fevers* (VII.273–405K)
- On Crises* (IX.550–760K)

## GENERAL INTRODUCTION

- On Critical Days* (IX.761–941K)
- The Method of Medicine* (On the Therapeutic Method) (X.1–1021K)
- On the Preservation of Health (Hygiene)* (VI.1–452K)

Galen's own list of recommended works at the end of *The Art of Medicine* (see below) includes all the above works apart from *On the Sects* and *The Differentiae of Fevers* plus another twenty-seven largely short works.

## 6. TEXTS AND TRANSLATIONS

The base text for each of the three works in the present volume was taken from Kühn's *Claudii Galeni Opera Omnia* (1821–1833). However, there are recent critical editions of both *On the Constitution of the Art of Medicine* (Fortuna) and *The Art of Medicine* (Boudon). In both cases these recent texts have been used to extensively revise the Kühn text, so the texts given in the present work very closely follow these recent editions. This also means that the nineteenth century German orthographic conventions have been updated. Only where there is a clear difference in meaning between the Kühn text and the modern version is a note appended. In certain instances the Kühn reading is preferred. In the case of *A Method of Medicine to Glaucou*, there is a recent edition of Book 1 only, which includes the commentary by Stephanus (Dickson). This has been used in the same way as the first two recent texts. There is no recent text for Book 2, so the Kühn text is given with some tacit changes to update orthographic conventions. The Leiden manuscript (Voss.

Gr. F. 53) has been examined and several changes have been made on the basis of this. I have not, however, attempted a full collation of this manuscript against Kühn. In addition, Niccolò Leoniceno's sixteenth century Latin translation has been studied with regard to certain variant readings (and otherwise), and notes on textual matters in Daremberg's 1854 French translation have been taken into account.

The Latin text printed in K (abbreviated as KLat in this volume) was produced three hundred years before K was printed, and so is not a translation or a correction of K's Greek text. It clearly draws on other MSS than those used by K, reflecting different readings in the Greek. This may sometimes alert us to a problem in K; but generally I have not privileged the Latin translation over K's Greek text.

On the matter of translation, the following modern versions have been consulted:

*On the Constitution of the Art of Medicine*: Dean-Jones in English; Fortuna in Italian

*The Art of Medicine*: Singer in English; Boudon in French

*A Method of Medicine to Glaucou*: Daremberg in French (Books 1 and 2); Dickson in English (Book 1 only)

On the translation itself, I refer to comments made regarding the earlier translation of Galen's *Method of Medicine*, which are reproduced here with some modifications and additions.<sup>46</sup> The overall objective that would

<sup>46</sup> Johnston and Horsley, *Galen: Method of Medicine*, I.cxi-cxii.

be claimed by translators is to provide a readily readable version in the language of the translation while remaining faithful to what is expressed in the language of the original—an objective easier to state than achieve. In even approaching such an objective, Galen's Greek presents certain specific and substantial problems, two of which are particularly knotty. First, how should one deal with Galen's prolixity and repetition, not to mention his complex sentence construction? Second, how should one deal with what are, in effect, technical terms in Galen's own system of medicine, especially when these reflect structural and functional concepts now outmoded? To make matters worse, some of these terms remain in use today, albeit with a different meaning in some instances. On this point, there are four terms or pairs of terms for which transliteration seemed the best solution: *εὐκρασία/δυσκρασία*, *εὐχυσμία/κακόχυσμία*, *κακοήθεια/κακοήθης*, and *ὁμοιομέρεια/ὁμοιομέρης*.

*εὐκρασία/δυσκρασία*: These two terms are fundamental to Galen's concept of health and disease, and the definitions thereof are formulated on the basis of the four-element/four-quality theory. *Eukrasia* is a proper balance in the mixing of the four elemental components, while *dyskrasia* is an imbalance. The definition in *Medical Definitions* is as follows: "Health is a *eukrasia* in accord with nature in the primary humors in us, or function of the physical capacities that is unhindered. Health is a *eukrasia* of the four primary elements from which the body is composed" (XIX.382K). In modern usage the term *dyskrasia* is defined as "a morbid general state resulting from the presence of abnormal material in the blood, usually applied to diseases affecting blood cells and platelets" (S).

*εὐχρμία/κακὸχρμία*: The LSJ definitions of these terms are, respectively, “a healthy state of the humors” (reference Galen, XI.491K) and “an unhealthy state of the humors” (reference Galen, XI.553K and X.891K). As with *eukrasia* and *dyskrasia*, they are technical terms in Galen’s pathophysiology, again dependent on his concept of the four qualities as the basic constituents of the body. In general use, the term *χυμός* can mean “juice” or “flavor.” *Medical Definitions* has the following explanation: “*χυμός* in Hippocrates is invariably applied to the humors in the body of which our structure is—that is, of blood, phlegm, and the two biles, yellow and black. In Plato and Aristotle the gustatory quality which each of these has in us is also termed humor. These are the qualities of sharpness, dryness, harshness, acridness, saltiness, sweetness, and bitterness. So Mnesitheus meant in his pathology” (XIX.457–58K).

*κακὸῦθεις/κακὸῦθης*: According to LSJ, the basic meaning of the noun is “bad disposition” or “malignity,” while the medical meaning is “malignant character.” Given the modern medical connotation of the term “malignant,” it is better avoided here. The term is transliterated and understood in the sense of “bad disposition.” *Medical Definitions* has: “A *kakoethical* disease is one which is severe and difficult in potency. In concept, there is a weakness undivided by times of crisis. Or a *kakoethical* disease is one which carries the threat of danger to patients but does not take away the hope of safety (survival)” (XIX.389K).

*ὁμοιομέρεια/ὁμοιομέρης*: Both the noun and the adjective have been directly transliterated and italicized in the translation. The LSJ entries are limited to single meanings—“having like parts” and “having parts like each

other and the whole”—for noun and adjective respectively, meanings obviously in accord with derivation and certainly applicable to Galen’s usage. A common English translation is “uniform.” There is general acceptance of the attribution of the terms to Anaxagoras—indeed, Galen refers to this in *On the Opinions of Hippocrates and Plato* (V.3.18K, de Lacy 1.308). Usage is, however, particularly associated with Aristotle, both in relation to inanimate things (*Meteorologica*, IV.X–XII, 388a10–390b23) and animate things (*Parts of Animals*, II, 648a6–655b27). There are several places where Galen clearly defines what he means by *homoiomeres*. Thus, in *On the Elements according to Hippocrates*, he describes them as “the primary parts with respect to perception,” and lists arteries, veins, nerves, ligaments, membranes, and flesh as *homoiomeres* in humans (I.493K). In *On the Opinions of Hippocrates and Plato*, the list differs slightly, including cartilage, bones, nerves, membranes, ligaments, and all other such things (VIII.4.7–15, de Lacy, 2.500). Here he also provides the following definition, having considered the term’s biological application to stem particularly from Aristotle: “Therefore, bodies in one outline are often called *homoiomeres* because all their parts are similar to each other and to the whole, and they are also often called simple or primary.” In *On the Differentiae of Diseases*, Galen lists arteries, veins, nerves, bones, cartilage, ligaments, membranes, and flesh as *homoiomerous* structures and clearly states that these are the components of organic bodies and are themselves formed from the primary elements (III.1, VI.841K). In *The Method of Medicine* he writes: “A part is *homoiomerous*, as the name itself also clearly shows, which is divisible into similar parts throughout, like the

vitreous and the crystalloid and the specific substance of the membranes in the eye" (X.48K). Galen has a specific work on the subject, *On the Differences of Homoiomerous Parts*, which is not included in Kühn, as it did not survive in Greek.<sup>47</sup>

On a more general note, in the attempt to render Galen's elaborate Greek *Fachprosa* into passably readable modern English (remember too, this is a medical text), three particular strategies have been adopted. First, to split up some of Galen's long and involved sentences and in some instances to change the order of the clauses where this seems to improve clarity without unduly sacrificing fidelity to the original. Second, not to translate every Greek particle, especially when punctuation would suffice in creating a modern English version. Third, some license has been taken in dealing with the voices, tenses, and moods of Greek verbs where not to do so would result in an awkward English sentence. The hope is that despite these modifications, a readable English version is produced that can nevertheless be matched with the Greek without undue difficulty—consideration of some importance in a bilingual work.

Finally, the three works included in this volume provide some interesting contrasts and represent a range from the purely theoretical to the almost entirely practical. The first, *On the Constitution of the Art of Medicine*, is the remaining part of a two-part work written late in

<sup>47</sup> *Galenus De partium homoeomerium differentia libelli*. For an Arabic edition with German translation, see Strohmaier, *Über die Verschiedenheit*.

Galen's career examining the structure, or constitution, of the arts in general (Part 1) and medicine in particular (Part 2). The endeavor is driven by the central idea of an art as an activity characterized by a certain purpose (or purposes) directed toward a definable and achievable end result. It is not one of Galen's works that received much attention over the centuries, its preservation has been somewhat tenuous, and its relevance to the actual practice of medicine marginal. Nevertheless, it is of interest both for its central thesis and as a statement of Galen's mature concept of the theory of medical practice.

The second work, *The Art of Medicine*, is one of the most influential of all Galen's works, being the most important relatively concise statement of both the theoretical and the practical aspects of medicine. It was included in the Alexandrian Canon, was given considerable attention by Syriac and Arabic-speaking doctors, and became a substantial component of the teaching of medicine in European universities in the medieval and Renaissance periods. On this last point, Durling speaks of eighty-eight editions and printings of Latin versions from the late fifteenth to the early seventeenth century.

The third book, *A Method of Medicine to Glaucon*, is a purely practical work, written with the specifically stated aim of assisting Galen's friend, the philosopher Glaucon, to deal with medical matters involving himself and others while on what were intended to be extensive travels, during which skilled medical attention might at times prove hard to come by. For later students, it sets out in a concise way much of the practical teaching that is detailed in the main body of *The Method of Medicine*.

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## ABBREVIATIONS

### WORKS OF GALEN CITED IN THIS EDITION

<i>Adv. Jul.</i>	<i>Adversus Julianum</i>	Against Julian
<i>Adv. Lyc.</i>	<i>Adversus Lycum</i>	Against Lycus
<i>Alim. Fac.</i>	<i>De alimentis facultatibus</i>	The Powers of Foods
<i>Anat. Admin.</i>	<i>De anatomicis administrationibus</i>	On Anatomical Procedures
<i>Animi Affect.</i>	<i>De proprium animi cuiuslibet affectuum dignotione et curatione</i>	The Soul's Affections: Diagnosis and Cure
<i>Animi Mores</i>	<i>Quod animi mores corporis temperamenta sequuntur</i>	The Soul's Dependence on the Body
<i>Animi Peccat.</i>	<i>De animi cuiuslibet peccatorum dignotione et curatione</i>	The Soul's Errors: Diagnosis and Cure
<i>Antid.</i>	<i>De antidotis</i>	On Antidotes



ABBREVIATIONS

<i>Ars M.</i>	<i>Ars medica</i>	The Art of Medicine
<i>Arter. Sang.</i>	<i>An in arteriis natura sanguis contineatur</i>	Is Blood Naturally Contained in the Arteries?
<i>Bon. Habit.</i>	<i>De bono habitu</i>	On Good Condition
<i>Caus. Morb.</i>	<i>De causis morborum</i>	The Causes of Diseases
<i>Caus. Puls.</i>	<i>De causis pulsuum</i>	The Causes of the Pulses
<i>Caus. Resp.</i>	<i>De causis respirationis</i>	The Causes of Breathing
<i>Comp. Med. Gen.</i>	<i>De compositione medicamentorum per genera</i>	On the Composition of Medications according to Kind
<i>Comp. Med. Loc.</i>	<i>De compositione medicamentorum secundum locos</i>	On the Composition of Medications according to Places
<i>Const. Art. Med.</i>	<i>De constitutione artis medicae</i>	On the Constitution of the Art of Medicine
<i>Cris.</i>	<i>De crisiibus</i>	On Crises
<i>Defin. Med.</i>	<i>Definitiones medicae</i>	Medical Definitions
<i>Diagn. Puls.</i>	<i>De diagnoscendis pulsibus</i>	Diagnosis by the Pulses

ABBREVIATIONS

<i>Dieb. Decret.</i>	<i>De diebus decretoriis</i>	On Critical Days
<i>Diff. Febr.</i>	<i>De februum differentiiis</i>	The <i>Differentiae</i> of Fevers
<i>Diff. Puls.</i>	<i>De differentiis pulsuum</i>	The <i>Differentiae</i> of the Pulses
<i>Diffic. Resp.</i>	<i>De difficultate respirationis</i>	Difficulties in Breathing
<i>Elem. Hippocr.</i>	<i>De elementis secundum Hippocratem</i>	On the Elements according to Hippocrates
<i>Foet. Form.</i>	<i>De foetuum formatione</i>	The Formation of the Fetus
<i>Hp. Aph.</i>	<i>Hippocratis aphorismos</i>	Commentary on Hippocrates' Aphorisms
<i>HVA</i>	<i>In Hippocratis de acutorum morborum victu</i>	On Hippocrates' Regimen in Acute Diseases
<i>Inaequal. Intemp.</i>	<i>De inaequali intemperie</i>	On Anomalous Dyskrasia
<i>Libr. Propr.</i>	<i>De libris propriis</i>	On My Own Books
<i>Loc. Aff.</i>	<i>De locis affectis</i>	On Affected Places
<i>Med. Exp.</i>	<i>De experientia</i>	On Medical Experience
<i>Mixt.</i>	<i>De temperamentis</i>	On Mixtures ( <i>Kra-seis</i> )

ABBREVIATIONS

MM	<i>De methodo medendi</i>	The Method of Medicine
MM <i>Glauc.</i>	<i>Ad Glauconem de methodo medendi</i>	A Method of Medicine to Glaucon
<i>Morb. Diff.</i>	<i>De morborum differentiis</i>	On the <i>Differentiae</i> of Diseases
<i>Mot. Musc.</i>	<i>De motu musculorum</i>	The Movement of Muscles
<i>Musc. Dissect.</i>	<i>De musculorum dissectione</i>	The Anatomy of Muscles
<i>Nerv. Dissect.</i>	<i>De nervorum dissectione</i>	The Anatomy of Nerves
<i>Nat. Fac.</i>	<i>De naturalibus facultatibus</i>	On the Natural Faculties
NH <i>Hippocr.</i>	<i>In Hippocratis de natura hominis</i>	On Hippocrates' "Nature of Man"
<i>Opt. Const.</i>	<i>De optima corporis nostri constitutione</i>	On the Best Constitution of our Bodies
<i>Opt. Med.</i>	<i>Quod optimus medicus sit quoque philosophus</i>	The Best Doctor Is Also a Philosopher
<i>Opt. Sect.</i>	<i>De optima secta ad Thrasybulum</i>	On the Best Sect, to Thrasybulus
<i>Ord. Libr. Propr.</i>	<i>De ordine librorum propriorum</i>	On the Order of My Own Books
<i>Oss. ad Tir.</i>	<i>De ossibus ad tirones</i>	Bones for Beginners

ABBREVIATIONS

<i>Plac. Hippocr. Plat.</i>	<i>De placitis Hippocratis et Platonis</i>	On the Opinions of Hippocrates and Plato
<i>Plenit.</i>	<i>De plenitudine</i>	On Plethora
<i>Praedict. Hippocr.</i>	<i>In Hippocratis de praedictionibus</i>	On Hippocrates' <i>Prorrhetic</i>
<i>Praen.</i>	<i>De praenotione ad Epigenem</i>	On Prognosis, for Epigenes
<i>Praesag. Puls.</i>	<i>De praesagitione ex pulsibus</i>	Prognosis from the Pulses
<i>Progn. Hippocr.</i>	<i>In Hippocratis prognosticum</i>	On Hippocrates' <i>Prognostic</i>
<i>Propr. Plac.</i>	<i>De propriis placitis</i>	On My Own Opinions
<i>Protr.</i>	<i>Protrepticus</i>	Protrepticus
<i>Puls. ad Tir.</i>	<i>De pulsibus ad tirones</i>	The Pulses for Beginners
<i>Puls. Ant.</i>	<i>De pulsibus ad Antoninum</i>	The Pulses for Antoninus
<i>Purg. Med. Fac.</i>	<i>De purgantium medicamentorum facultate</i>	On the Powers of Purgative Medications
<i>San. Tuend.</i>	<i>De sanitate tuenda</i>	On the Preservation of Health (Hygiene)
<i>Sect.</i>	<i>De sectis ad eos introducuntur</i>	On the Sects
<i>Semen</i>	<i>De semine</i>	On Semen

ABBREVIATIONS

<i>Simpl. Med.</i>	<i>De simplicium medicamentorum temperamentis et facultatibus</i>	On the Nature and Powers of Simple Medications
<i>Soph.</i>	<i>De Sophismatibus penes dictionem</i>	On Linguistic Sophisms
<i>Sympt. Caus.</i>	<i>De symptomatum causis</i>	On the Causes of Symptoms
<i>Sympt. Diff.</i>	<i>De symptomatum differentiis</i>	On the Differentiae of Symptoms
<i>Syn. Puls.</i>	<i>Synopsis de pulsibus</i>	Synopsis of the Pulses
<i>Ther.</i>	<i>De theriaca ad Pisonem</i>	On Theriac, to Piso
<i>Thras.</i>	<i>Thrasymbulus sive utrum medicinae sit an gymnasticae hygieine</i>	Thrasymbulus, On Whether Health belongs to Medicine or Gymnastics
<i>Trem.</i>	<i>De tremore, palpitatione, convulsione et rigore</i>	On Tremor, Palpitation, Convulsion, and Rigor
<i>Tumor. praeter Nat.</i>	<i>De tumoribus praeter naturam</i>	On Unnatural Swellings
<i>UPart.</i>	<i>De usu partium</i>	On the Use of the Parts
<i>UPuls.</i>	<i>De usu pulsuum</i>	The Use of the Pulses

ABBREVIATIONS

<i>UResp.</i>	<i>De utilitate respirationis</i>	On the Use of Breathing
<i>Uteri dissect.</i>	<i>De uteri dissectione</i>	The Anatomy of the Uterus
<i>Venae Sect.</i>	<i>De venae sectione adversus Erasistratum</i>	On Phlebotomy, against Erasistratus
<i>Ven. Art. Dissect.</i>	<i>De venarum articularumque dissectione</i>	The Anatomy of Arteries and Veins
<i>Vict. Att.</i>	<i>De victu attenuate</i>	On the Thinning Diet

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- F Fortunà, Stefania. *Galeno: A Patrofilo sulla costituzione della medicina. Testo e traduzione*. CMG, V.1.3. Berlin: Akademie Verlag, 1997.
- K Kühn, C. G. *Claudii Galeni Opera Omnia*. Leipzig: Knobloch, 1821–1833.

## ABBREVIATIONS

- Leon. Leonicensis, Niccolo. *Claudii Galeni Pergameni De Arte Curativa ad Glauconem*. Paris, 1528.  
Ln Leiden ms. Voss. gr. F 53.

## REFERENCE WORKS

- CMG *Corpus Medicorum Graecorum*  
EANS *The Encyclopedia of Ancient Natural Scientists*. Edited by P. T. Keyser and G. L. Irby-Massie. London: Routledge, 2008.  
L&S *A Latin Dictionary*. C. T. Lewis and C. Short. Oxford, 1993 reprint.  
LCL The Loeb Classical Library.  
LSJ *A Greek-English Lexicon*. H. G. Liddell, R. Scott, and H. S. Jones. Oxford, 1990 reprint.  
OCD *The Oxford Classical Dictionary*. Edited by S. Hornblower and A. Spawforth. Oxford, 1996.  
OED *The Oxford English Dictionary*. 12 vols. Oxford, 1978 [1933].  
S *Stedman's Medical Dictionary*. 27th ed. Baltimore, MD: Lippincott, Williams and Wilkins, 2000.

## ΓΑΛΗΝΟΥ ΠΡΟΣ ΠΑΤΡΟΦΙΛΟΝ ΠΕΡΙ ΣΤΑΣΤΑΣΕΩΣ ΙΑΤΡΙΚΗΣ GALEN TO PATROPHILUS, ON THE CONSTITUTION OF THE ART OF MEDICINE

## INTRODUCTION

The present *On the Constitution of the Art of Medicine*, now available in the critical edition with Italian translation by Stefania Fortuna (1997), has had a somewhat checkered history. It is what remains of one of Galen's late works, written in two parts, on the structure, or constitution, of arts in general and the medical art in particular. Although the precise date of composition is unknown, it is thought to have been during the reign of Septimius Severus (193–211), probably in the later part of the last decade of the second century. The only references to the work in Galen's other writings are to be found in *The Art of Medicine* (two) and *On My Own Books* (one):

But no one prior to myself has written of the teaching beginning from the concept of *telos* (end, ultimate aim). I have gone over that elsewhere. (*The Art of Medicine*, I.306K)

I have said before that there is one other book in which I go through the constitution of the medical art. Two prior works on the composition of an art (in general) precede this, but these, along with the work just finished, are separate from the detailed works. (*The Art of Medicine*, I.407K)

## CONSTITUTION OF THE ART OF MEDICINE

In the section headed "Works of use in the context of logical proof" he has "three on the composition of arts." (*On My Own Books*, XIX.45K)

At some point, the first part (in two books) was lost. According to Fortuna, whose detailed study of the work is the best current source of information on the matter, this loss had occurred by the sixth century.<sup>1</sup> Also, the second part suffered dislocation—the final four sections in the present text (17–20) being in some instances joined to Galen's *On Prognosis, for Epigenes* (XIV.599–673K) and also in part being preserved in what is included in Kühn as *De praenotione* (XIX.497–511K)—and is listed as spurious. On this matter, in the introduction to his edition of the former, and referring to the latter, Nutton writes:

But, as K. Kalbfleisch showed, this is not an independent treatise but an excerpt from the larger *De constitutione artis medicae* (I.289.1–304.3K) which was separated from the main body of the treatise, possibly as early as the time of Oribasius, and thenceforth enjoyed an existence in its own right. At a later date it was attracted in some manuscripts to the larger treatise of the same name and subject, to which it served as a second part or an appendix. Since the translator found it already united with *On Prognosis* in his Greek source, he made no separate translation of it, and thus there is no Latin version recorded in Diel's Katalog (p. 112). The conjunction of the two tracts was not universal, as we have seen, and Hunain, who describes *On Prognosis* as a single

<sup>1</sup> Fortuna, *Galeno*, 46.

book, was using a manuscript which contained only the first part.<sup>2</sup>

The preservation of the one surviving book was somewhat tenuous. There is said to have been an Arabic version in the ninth century. There is only one Greek manuscript listed by Diels (Laurent. plut. 74,3) from the twelfth century. Fortuna lists ten other manuscripts that may contain material from *On the Constitution of the Art of Medicine*.<sup>3</sup> There have been five printed editions prior to Fortuna:

The Aldine edition of 1525.

The edition of Ioannes Guinterius published in Paris in 1529–1530.

The edition of Heironymus Gemusaeus published in Basel in 1538.

The Chartier edition of 1679 (Greek and Latin).

Kühn's edition of 1821–1833 (Greek and Latin).

The first Latin translation known was that by Niccolò da Reggio (14th c.).<sup>4</sup> Durling lists eight Latin versions in

<sup>2</sup> See Nutton, *Galen on Prognosis*, 51. The reference to Kalbfleisch is: "Zu Galenos," *Berliner Philologische Wochenschrift*, 1896, 59ff.

<sup>3</sup> See Fortuna, *Galeno*, 14–20.

<sup>4</sup> On him, Nutton writes: "The final translator of importance was Niccolò da Reggio (fl. 1315–1348), a bilingual doctor and diplomat in the Kingdom of Naples. In all he translated over fifty writings by Galen, many for the first time, including the complete *De usu partium*. He was remarkably accurate, living up to his claim neither to add nor remove anything from his Greek original, and modern philologists have united in his praise" (Nutton in Conrad et al., *Western Medical Tradition*, 144).

his census of Renaissance editions and translations. The translators, apart from Niccolò da Reggio, were J. Guinterius, B. Sylvanius, and V. Trincavellius.

Turning to the structure and content of the work, which consists of an introduction and twenty sections, a four-part division may be recognized.

1. The introduction is addressed to Patrophilus, a mysterious figure whose name is not listed in the Kühn index and, as far as I am aware, is not to be found anywhere else in Galen's writings. The conclusion that one would draw from the introduction itself is that he was a doctor, or at least a student of medicine, although the possibility has been raised that he may be fictitious—a kind of idealized student/reader.<sup>5</sup>

2. The first two numbered sections set out Galen's basic thesis about the nature of an art as pertaining to *telos* (as in *The Art of Medicine*), the classification and characteristics of the different kinds of arts—medicine is a productive art applicable to a structure that already exists (i.e., a body), and for the proper practice of the art, the practitioner must know the nature of all the parts responsible for functions and all the functions attributable to the known parts.

3. The main body of the work (Sections 3–16)—that is, the application of this knowledge in the areas of nosology, diagnosis, and treatment. This includes a digression about the elementary components of the body (Sections 8–9), which states in summary Galen's views most fully expressed in his *On the Elements according to Hippocrates*.

4. The displaced sections (17–20), whose true position

<sup>5</sup> See Dean-Jones, "Galen, 'On the Constitution,'" 71.

at the end of this work was recognized by Kalbfleisch in 1895. These extend the discussion into the area of the principles of the prophylactic, restorative, and recuperative components of the art.

## SYNOPSIS OF CHAPTERS

*Preface:* Galen, in his introductory remarks, acknowledges and praises Patrophilus' earnest desire to understand the true practice of all the arts in terms of demonstration and method. Galen refers to two works prepared in response to Patrophilus' request: the first, in two books, on the constitution, or structure, common to all arts, and the second, pertaining to the art of medicine specifically, which is the present work.

1. *General principles:* Arts are based on their *τέλος* (end result, ultimate purpose, final outcome). Galen identifies four classes of arts: theoretical (e.g., arithmetic), practical (e.g., medicine), constructive (e.g., building), acquisitive (e.g., hunting and fishing). He also makes a division into productive (where there is a tangible outcome) and nonproductive (where there is not), and a further division of the former into that which creates something that has not previously existed and that which restores what is already in existence. Medicine, in Galen's scheme, is a practical, productive art that restores what previously existed—that is, health/accord with nature.

2. *The foundations of medical knowledge:* Medicine is compared to house building, in which there is a distinction between creating a house *de novo* and repairing a house that has been damaged. Medicine belongs in the second subclass; God and Nature are responsible for the creative

process. In housebuilding it is, of course, the builder's business to deal with both aspects. Common to both arts, however, is the need to know and understand the components of house or body, and how they are put together. Specific to medicine is the need to know how the parts function. Starting from this division, the aim is to know the functions of all the parts composing the whole structure, and the parts responsible for all the functions we recognize.

3. *The division of functions:* Galen makes a twofold division. The primary and most important functions are those carried out by the simple parts. The secondary and consequent functions are those of the organic parts, broadly understood (i.e., compound parts). The leg is taken as an example. The movement of the muscles is, in a sense, primary, although Galen recognizes that movement is dependent on nerves, and nerves in turn are dependent on the brain. Where the ultimate power lies is an issue he does not address here.

4. *More on function:* Consideration of the function of the leg is continued. The component parts of the leg—specifically here, bones, muscles, ligaments, and joints—must all be correct, not only in their basic substance but also in size, number, and arrangement, if they are to produce satisfactory function of the leg as a whole.

5. *The formation of the body:* There is a brief account of the defects that occur in compound structures such as houses, boats, beds, clothes, shoes, and the like, and the organic components of the human body. There are five classes of disorder: size, conformation, number, position (or arrangement), plus breakdown or dissolution of continuity. Galen refers to his work *On the Differentiae of Dis-*

*eases*, in which his tripartite classification is set out in detail: *dyskrasias* affecting *homoimeres*; disorders of size, number, conformation, and position affecting organs; dissolution of continuity affecting both *homoimeres* and organic parts.

6. *Defects of the body*: Galen deliberates on the recognition of defects in the parts of the body, preserving the distinction between simple (i.e., *homoimerous*) and organic parts, and continuing to use the house analogy. He also introduces a pharmacological analogy, contrasting compound medications in which the components are completely intermixed (i.e., *tetrapharmacos*) and those in which the components retain their identity (i.e., are juxtaposed, giving the example of *cephalica*). On the issue of restoring lost or damaged parts, there is the question of whether they can be regenerated in their original form (e.g., skin) or not (e.g., bone). This he sees as basically dependent on whether their origin was from semen (in Galen's concept of embryology) in the initial formation of the body, or from nutriment via the blood. He gives specific examples. Finally, he enumerates the requirements for the successful pursuit of truth, echoing Plato in this matter.

7. *The basic components of matter*: This is a summarized statement of Galen's views on this subject, which are most fully expressed in his two works on Hippocrates' *Nature of Man*, to which he refers in this section. His own position, as stated in brief here, is that the "four elements/four qualities" theory is the correct one. The two men he identifies here as holding wrong views are Epicurus (atoms and void) and Asclepiades of Bithynia (frangible corpuscles). He also refutes Empedocles' view that, although

there are multiple elements, they do not undergo change into each other.

8. *Change in the basic constituents of the body*: This continues the discussion of the basic constituents of the body specifically and of matter generally. There are four elements (air, water, earth, and fire) and four qualities (hot, cold, dry, and moist), and for change to be produced in the qualities, direct contact with the agent of change is required. Things can effect change without changing the qualities of the actual substance itself. Examples are sharp and hard objects. Change generally requires application of one of the four basic qualities. The section concludes with a restatement of the importance of demonstration.

9. *Krasis and dyskrasia*: There are nine possible states of the body or its component parts in terms of *krasis* (temperament, mixture): *eukrasia*, four simple (mono-) *dyskrasias*, in which only one of the four elemental qualities is imbalanced, and four compound (bi-) *dyskrasias*, in which one of the four possible combinations of the elemental qualities is imbalanced (hot and dry, hot and moist, cold and dry, cold and moist). There is brief mention of the matter of *dyskrasias* that are not severe enough to impair function and therefore cause disease. This topic is considered in greater detail in *The Art of Medicine*.

10. *Summary*: The medical art is one of the productive arts. The basic aim is to maintain a proper balance, or *krasis*, throughout the body or restore this, if an imbalance has developed. The compound, or organic, parts are made up of simple parts, so the health of these organic parts depends on their component simple parts having the correct *krasis* and their arrangement being in accord with



nature in terms of size, number, conformation, and position. To be effective, the doctor must have accurate knowledge of the normal *krasis* of the *homoiomerous*, or simple, parts and the normal structure and arrangement of the organic, or compound, parts.

11. *The Hippocratic method*: Galen examines the general principles of the Hippocratic method that apply to the treatment of disease. The fundamental principle is the one stated in *Aphorisms*, 2.22, and elsewhere: "Opposites are the cures of opposites." In the case of the *homoiomerous* parts, this involves using measures that oppose the prevailing imbalance in one or two of the four elemental qualities. In the organic parts, it involves correcting deviations in size, number, conformation, or position by moving them in the opposite direction through various means.

12. *Agents of correction*: In general terms the two key agents that can effect restoration of balance in diseased bodies are Nature and the doctor. Things are variously possible for the former or the latter acting either alone or in concert. At times, however, correction may be altogether impossible, impossible at the particular time, or only partially possible. Galen speculates briefly on Nature's limitations regarding the regeneration of certain tissues and physical abnormalities and concludes by returning to the house-building analogy. His objective is to look at the individual materials available for restoration by the therapeutic component of the art, just as in the previous section he looked at materials that make bodies healthy or diseased.

13. *Practical application of the principles*: The section begins with a summary of methods of applying the principle "opposites are the cures of opposites" to the three

basic classes of disease: *dyskrasias* in *homoiomerous*; disorders of size, number, conformation, and position in organic parts; and dissolution of continuity in both. There are some brief comments on discovering the materials of remedies, with the inclusion of physical methods and surgery in these materials—the examples given relate to orthopedics. The basis of the therapeutic art is simply stated: the doctor must have knowledge of the bodies to which the remedies are applied, and knowledge of the actual nature of the remedies.

14. *Diagnosis*: This, in short, involves determining what part is affected and what the affection is. Both can be difficult in parts that are deeply situated. Galen begins by revisiting some theoretical aspects: the threefold division of things contrary to nature—conditions that damage functions, the causes of these conditions, and symptoms; and the division of symptoms into those that inevitably follow in a particular condition (pathognomic) and those that do not. The latter indicate either the *differentiae* of the disease, its nature, or its severity. These matters are exemplified by considering inflammation of the pleura and its clinical manifestations—specifically pain, cough, and sputum.

15. *Diagnosis continued*: The essential requirement for making a diagnosis is a knowledge of three things: the function and uses of each of the parts, the genesis of diseases and symptoms, and the causes producing disease. Galen returns to the example of the previous section and considers the *kakoethicity* (malign nature) of the melancholic humor, if this is what is being evacuated by expectoration, and also the sympathetic affection, which may involve the brain, as well as the evidence from the urine

and feces. He then turns to the evidence of the magnitude and *differentiae* of the particular disease, which are the keys to prognosis and the timing of application of remedies. He considers the diagnostic significance of the secretion/excretion of membranous material and returns to the issue of sympathetic and protopathic.

16. *The correct use of remedies*: The doctor must have a precise knowledge of the substance of the affected part, its conformation, and its position. Treatment is essentially a matter of applying the amount of "opposite" commensurate with the degree of departure from normal. Three examples are given: blockage in the veins of the liver, treated by thinning fluids and medications, and by evacuation; evacuation from inflamed parts, including chest and lungs, brain, and hip joints; dispersing inflammation and the importance of medications having sufficient potency remaining when they reach the inflamed part.

17. *Prognosis*: The first requirement for an art of prognosis is to know whether each disease has a more or less specific duration or any disease can have a variable course ranging from quick resolution through varying degrees of chronicity and disability to death. Galen does not explicitly answer this question, but does so implicitly in the remainder of the section. Thus, while a specific disease in an untreated patient who is otherwise healthy may have a more or less predictable course, there are several important factors that may substantially influence this. He identifies, apart from incorrect treatment, the nature of the disease and the nature (strength, capacity) of the patient. These are matched like the contestants in a wrestling match. Predicting the outcome is dependent on correct treatment and a correct assessment of the superfluties

(whether concocted or not) and the pulse. Galen refers to three of his treatises on this subject.

18. *Four aspects of prophylaxis*: These are restoring to health those who have been sick, preventing those who are sick from getting worse, preventing those who are potentially diseased from becoming actually diseased, and preserving those who are healthy in that state. The preventative part predominantly involves dealing with known causes of disease before the person becomes frankly diseased. On this point, patients must be questioned on the occurrence of possible causes arising externally; then, certain premonitory symptoms must be recognized, a number of which are listed. Restoration is effected largely through opposites, as treatment is. Again, examples are given.

19. *Restoration of health in those who have been diseased*: Such people have no remaining cause or condition contrary to nature—only thinness and weakness of capacity. There is then the constitution of prophylaxis. This also involves diet and exercise, but also protection against possible causes of disease. Galen lists cooling, heatstroke, fatigue, apepsia, drunkenness, insomnia, grief, anger, and passion.

20. *Summary*: Medicine is a productive art in the subgroup of those that restore to a good state what already exists. It is not about fashioning the structure itself but knowing what the proper structure is and restoring it when damaged. The doctor is, then, a restorer and helper of Nature and through the medical art has knowledge of the substance of the *homoiomeres* and function of the organic structures, the affections they might suffer, and the objectives of cures.

ΓΑΛΗΝΟΣ ΠΡΟΣ ΠΑΤΡΟΦΙΛΟΝ  
ΠΕΡΙ ΣΥΣΤΑΣΕΩΣ ΙΑΤΡΙΚΗΣ

GALEN TO PATROPHILUS, ON  
THE CONSTITUTION OF THE  
ART OF MEDICINE

PREFACE

224K Ἐπεὶ μοι δοκεῖς, ὦ Πατρόφιλε, θεῖόν τι πεπονθέναι  
πάθος ὀρεγόμενος ἅπαντα σὺν ἀποδείξει τε καὶ μεθ-  
όδῳ μανθάνειν, ὑπηρετῆσαι σου διέγνωκα τῇ προθυ-  
μία, καὶ γράψαι τῶν λόγων, ὧν ἤκουσας ἢ περὶ ὧν  
ἠπόρεις, ὑπομνήματά σοι.<sup>1</sup> πῶς δ' οὐκ ἂν ὑπέστην τὸν  
ἄθλον τοῦτον ὀρώων σε καθεωρακότα μὲν ἀρχὴν τινα  
τῆς ἐπ' ἀλήθειαν ἀγούσης ὁδοῦ, μόνον δ' οὐ δυνά-  
μενον αὐτῆς ἐφικέσθαι δι' ὕψος τε καὶ μῆκος καὶ  
225K τραχυτήτα; τοὺς μὲν γὰρ | πολλοὺς ὀρῶ μηδὲ μετὰ  
παρακλήσεως ἐπ' αὐτὴν ἰόντας, ἀλλ' ὀκνοῦντάς τε καὶ  
ἀποτρεπομένους, σὲ δ' ἐκείνων ἔμπαλιν <ἔχοντα> ἀπο-  
τρεπομένων <γὰρ> ἀπάντων, ἄχρι γε τοῦ δεῦρο, καὶ  
πρὸς ἄλλας ὁδοὺς ἐκτρεπόντων, αὐτόν σε κατιδόντα  
τὴν ἀλήθειαν, ὡς ἐφ' ὑψηλοῦ τινος ᾤκισται, καὶ τοῦ  
κάλλους αὐτῆς ἐραστὴν δριμύτατον γενόμενον, οὗτ'  
ὀκνεῖν τὴν ὁδὸν οὗτ' ἐπιτρέπειν ἑαυτῷ μόνῳ τὴν

Since you seem to me, Patrophilus,<sup>1</sup> to have suffered some 224K  
divine affection in that you desire to learn everything with  
the aid of demonstration and method,<sup>2</sup> I have decided to  
go along with your enthusiasm and write out some notes  
for you on both the arguments you understood and those  
you had difficulty with. How could I not engage in this  
task, seeing that you have discovered a beginning of the  
road that leads to truth, but are not able to travel it alone  
because it is so steep, so long and so rough? For I see the 225K  
majority do not travel this road without exhortation, but  
hesitate and turn away from it, whereas you are the very  
opposite to them. Up to now they all desist and turn to  
other paths, while you, being open to the truth, which is  
settled on some high point, have become a very keen lover  
of its beauty. Nor do you hesitate on the road or trust the

<sup>1</sup> om. σοι F

<sup>1</sup> Nothing is known of Patrophilus. The name is not listed in the Kühn index so presumably does not appear in any other works by Galen.

<sup>2</sup> Galen's large work *De demonstratione* has not survived. Demonstration (*ἀπόδειξις*) and method (*μέθοδος*) were, for him, concepts of foundational importance.

πορείαν. ἐν μὲν δὴ τῷ παρόντι σύστασιν ἰατρικῆς τέχνης ἐπιθυμῶν ἐξευρεῖν ἀληθῆ μεστός ὠδίνων ἦσθα τὴν ψυχὴν, ὡς δ' ἐγὼ τοπάζω, μικρὸν ὕστερον ἐμπλησθήσῃ μείζονος ὀρέξεως, εἰ θεάσαιο τὸ τῆς ἀληθείας φῶς καταλάμπου ἐτέρα οὐσίαν πολὺ<sup>2</sup> καλλίονα τῆς νῦν σοι ζητουμένης. ὁρῶ γάρ σε περὶ τὴν τάληθους εὔρεσιν ἐνθέως διακείμενον, ἐφ' ἧς ἂν ὕλης φαντάζεται.

λέγοντος οὖν σου μυρίοις μὲν ὑποβεβληκέναι τὰ ὄτα μαθήσεως ἕνεκα τέχνης ἰατρικῆς, οὔτε δ' ὅθεν ἄρχεσθαι χρὴ σὺν ἀποδείξει τε καὶ μεθόδῳ παρ' οὐδενὸς ἀκηκοέναι, καὶ πολὺ δὴ μάλλον οὐδὲ τὴν ἀπὸ τῆς ἀρχῆς ἐπὶ τὸ τέλος ὁδὸν οὐδενὶ δεικνύντι σοι συγγεγονέναι, δείξειν ὑπεσχόμεν ὁ ποθεῖς, εἰ πρότερον ὑπομείναις ἐπ' ἄλλων γυμνάσασθαι τεχνῶν.<sup>3</sup> σοὺ δ' οὐχ ὅπως ἀποστάντος οὐδ' ὀκνήσαντος τὴν πρόσκλησιν, ἀλλ' ἦδιον ἂν οὕτω φάντος ἢ ἐκείνως ἐπὶ τὸ προκείμενον ἐλθεῖν, εἰ μόνον ἐπαγγέλλαιμί σοι τὴν αὐτὴν μέθοδον ἐν ἀπάσαις ἐπιδείξειν ταῖς τέχναις, εἴτ' ἐμοῦ καὶ τοῦτ' ἐπαγγελαμένου καὶ δεικνύντος ἐπὶ τῆς πρώτης προβληθείσης<sup>4</sup> θεωρίας, ἐώρων σε γανόμενον ἐπὶ τῇ τῆς θεωρίας ἀληθείᾳ. καὶ τοίνυν ἐφεξῆς πολλὰς ὁμοίως διασκεψάμενος καὶ μάλιστα αὐτῶν τὰς ποιητικὰς, ἐπειδὴ τοῦ γένους ἐστὶ τούτου καὶ ἡ περὶ τὴν ὑγίειαν ἔχουσα, τηρικαῦτα μετέβης ἐπ' αὐτήν,

<sup>2</sup> οὐσίαν πολὺ F; οὐχ εὐρῶν ὁδὸν K

<sup>3</sup> post τεχνῶν om. τὸν λόγον F

journey to yourself alone.<sup>3</sup> Certainly, at the present time, you are eager to discover the true substance of the medical art, and your soul is filled with birth pangs. But I imagine that in a little while you will be filled with a greater desire, if you see the brightness of truth lighting some other road more beautiful than the one you now seek, for I see that you are in a state of divine inspiration regarding the discovery of the truth in whatever material form it might appear.

Therefore, since you say you have subjected your ears to numerous people in order to learn the medical art, but have not heard from any of them whence you must begin with demonstration and method—and much more than this, you came across no one who could show you the road from beginning to end—I undertook to show you what you wanted, if you would first submit to training in other arts. Not only did you not resile or shrink from this request, but you said it would be a pleasure to approach the matter before you in this way rather than any other, as long as I promised to show you the same method in all the arts. When I kept my promise and showed this in the first art put forward, I saw you were pleased with the truth of what you saw. Accordingly, having examined many arts in the same way, and particularly the practical ones among them (since the one pertaining to health is of this class), in due course you passed on to this one, which was the one you

<sup>3</sup> The road metaphor is found in a number of places; a particularly noteworthy example is *MM*, 9 (X.633K), referring to Trajan.

<sup>4</sup> post προβληθείσης add. θεωρίας K

ἦν ἐξ ἀρχῆς ὄρμησο· καὶ θεασάμενος, ὡς ἐστὶ κἀν-  
ταῦθα μία τε καὶ ἡ αὐτὴ μέθοδος, ἠξίωσας ὑπὲρ τοῦ  
μηδέποτ' ἐκρῦναι τῆς μνήμης τὰ λεχθέντα γραφήναι  
τινα αὐτῶν ὑπομνήματα.

227K

κἀγὼ χαίρων σου τῇ | περὶ τὴν ἀλήθειαν σπουδῇ  
δύο ταῦτα συνέθηκα γράμματα· τὸ μὲν ἕτερον, ἐν ᾧ  
χρῆ πρότερον γυμνάσασθαι τὸν τεχνωθῆναι βουλό-  
μενον, ἐπιδεικνύον, ὅπερ οἱ παλαιοὶ φιλόσοφοι λέ-  
γουσι, τὸ πάσῃ τέχνῃ τὴν σύστασιν ἀπὸ τῆς κατὰ τὸ  
τέλος ἐννοίας γίνεσθαι διηρέθη δὲ διὰ τὸ μέγεθος  
εἰς δύο βιβλία· τὸ δ' ἕτερον καὶ δεύτερον, οὗ νῦν  
ἀρχόμεθα, δεικνύον, ὅπως ἡ αὐτὴ καὶ μία μέθοδος,  
ὥσπερ τὰς ἄλλας ἀπάσας τέχνας, οὕτω καὶ τὴν ἰα-  
τρικὴν συνεστήσατο. καὶ δὴ ἀρκτέον ἤδη μοι τοῦ λό-  
γου.

1. Ἐπειδὴ τῶν τεχνῶν ἔναι μὲν ἐν μόνῳ τῷ θεωρήσει  
τὴν φύσιν ὧν ἐπισκοποῦνται πραγμάτων ἔχουσι τὸ  
τέλος, ὡς ἀριθμητικὴ καὶ ἀστρονομία καὶ φυσιολο-  
γία, τινὲς δὲ πράττουσι μὲν τινὰς πράξεις, ὡς ὄρχη-  
στικὴ τε καὶ κηρυκικὴ, δεῖξαι δ' οὐδὲν ἔργον ἑαυτῶν  
ἔχουσι τοῦ πράττειν πανσάμεναι, τινὲς δ' ἔμπαλιν  
τούτων ἐπιδείκνυνται δημιουργήματα, καθάπερ οἰκο-  
δομικὴ τε καὶ τεκτονικὴ, τινὲς δ' οὐδὲν αὐταὶ δημιουρ-  
γοῦσιν, ἔργον δ' αὐταῖς ἐστὶ καὶ σπούδασμα | θηρά-  
σαι τε καὶ κτήσασθαι,<sup>5</sup> καθάπερ ἡ τε ἀλιευτικὴ καὶ

228K

<sup>5</sup> τῶν ὄντων τι post κτήσασθαι K

were hastening toward from the start. When you saw that  
here too there is the one same method, you asked that I  
write some notes on the things said, so they would never  
vanish from your memory.

So I, delighted with your zeal for the truth, composed 227K  
these two treatises<sup>4</sup>—the one in which the aim is to show  
what must be practiced first by someone who wishes to  
become proficient in an art (the philosophers of old<sup>5</sup> say it  
is the constitution of every art to arise from the notion of  
an end result), and which has been divided into two books  
on account of its size, and the other and second, which is  
the one I am now beginning, and shows how the method  
from which the medical art is constituted is one and the  
same as the method from which every other art is consti-  
tuted. So now I must begin the discussion.

1. Some of the arts, such as arithmetic, astronomy and  
natural philosophy, have as their sole end consideration of  
the nature of the matter they are investigating, whereas  
others, which produce certain actions such as dancing and  
heraldry, have no result of their own to show when the  
actions stop. Some, like house building and carpentry, do  
on the contrary have the result of workmanship to show.  
Other arts, however, produce nothing, but have as their  
end-result the activities of pursuing and acquiring; exam- 228K  
ples are fishing and hunting with hounds, or in a word,

<sup>4</sup> The first of the two works referred to is one on the constitu-  
tion of the arts in general (in two books) and is no longer extant.  
The second is the present work.

<sup>5</sup> Galen's primary philo-  
sophical antecedents were Plato (427–347 BC) and Aristotle  
(384–322 BC). On the matter in question see the latter's *Nicomachean Ethics*, 1094a18, and *Metaphysics*, 994b9–996a24.

κυνηγετική καὶ συλλήβδην εἰπεῖν ἢ θηρευτική πᾶσα, πρόκειται δέ σοι<sup>6</sup> συστήσασθαι μεθόδῳ τέχνην ἰατρικήν, ἐπίσκεψαι πρῶτον, ἐκ ποίου γένους ἐστὶ τῶν τεχνῶν. ἄρα γε τῶν θεωρητικῶν ἐστὶ μία τις ἢ τῶν πρακτικῶν ἢ ποιητική τις ἢ κτητική; τοῦτο δ' οὐ χαλεπὴν οὔτε τὴν ζήτησιν οὔτε τὴν εὔρεσιν ἔχει. δι' ὃ γὰρ ὅλως ἐπεθύμησας κτήσασθαι τέχνην τοιαύτην, ἀναμνησθήναί σε χρή. πρῶτον οὖν σε πάντων αὐτὸ τοῦτο ἠρόμην, ἠνίκα ἡμῖν ἢ ἀρχὴ τοῦ τοιούτου ἐγίνετο γυμνάσματος, ἀπεκρίνω δέ μοι, βούλεσθαι τοὺς παρὰ φύσιν ἔχοντας ἀνθρώπους τὸ σῶμα μάλιστα μέν, εἰ οἶόν τε, πάντας<sup>7</sup> εἰς τὴν φύσιν ἐπαναγαγεῖν, εἰ δ' ἄρα τοῦτ' ἀδύνατον, ἀλλὰ τοῦ γε διαγινώσκειν ἐκάτερος, ὅσοι τε ἰάσιμοι καὶ ὅσοι μὴ, κτήσασθαι τινα γνώσιν. ἐπεὶ δὲ ταύτην ἀρχὴν ἔδωκας τῷ λόγῳ, τῶν ποιητικῶν ἔφην σε τεχνῶν ἀποφαίνειν ἢν συστήσασθαι ποθεῖς, εἴ γε | δὴ δεικνύειν ἔχεις τῆς τέχνης τοῦργον ἤδη τοῦ πράττειν πεπαμένης. εἰσὶ δὲ δῆπου καὶ ἄλλαι πολλαὶ τέχναι ποιητικαί, χαλκευτική, σκνυτομοική, ναυπηγική, τεκτονική, πλαστική, γραφική, καὶ σχεδὸν ὅσος οὐκ ἄλλος ἀριθμὸς ἑτέρου γένους αἱ ποιητικαὶ τέχναι παρὰ τοῖς ἀνθρώποις εἰσίν.

ἦν οὖν ἐπὶ τῶν τοιούτων τεχνῶν ἔμαθες ἠέθοδον ἐν τῷ πρὸ τούτου γράμματι, ταύτην ἤδη σοι μεταφέρειν καιρὸς ἐφ' ἣν συστήσασθαι σπεύδεις, ἀρχὴν κάν-

<sup>6</sup> om. σοι F<sup>7</sup> πάνν K

all forms of hunting. Since these things are so, and the task before me is to set down for you the art of medicine in a systematic way, the first matter to consider is the question of which class of the arts it is from. Is it one of the theoretical arts, one of the practical arts, one of the constructive arts, or one of the acquisitive arts?<sup>6</sup> The answer to this question is difficult neither to seek nor to discover. I only need remind you of why you wished to acquire such an art. This, then, is the very thing I asked you first of all, when you began such training. Your reply to me was that you particularly wanted to restore to an accord with nature all those whose bodily state was contrary to nature, if this were possible. If this were not possible, however, you wished at least to acquire some knowledge of how to recognize those who were curable and those who were not. Since I have given you this starting point for the argument, I said the art you wanted me to set down represented one of the productive ones, because you can in fact show the result of the art when the practice of it stops. There are, of course, many other productive arts, such as metalwork, shoemaking, shipbuilding, carpentry, sculpture, painting—so many almost that the productive arts among people are unequalled in number by any other class.

Now would be an appropriate time for you to carry over the method you learned in the case of the arts in the work prior to this one, and apply it to the art you hope to

<sup>6</sup> For a similar consideration of the division of the arts, see Galen's *Thras.*, V.806–98K, and particularly Chapters 5 and 30. For an English translation of this work, see Singer, *Galen: Selected Works*.

ταῦθα τῷ λόγῳ τὴν αὐτὴν τιθέμενος, ἣν ἐπ' ἐκείνων ἀπασῶν ἐτίθεσο, τὴν ἔννοιαν τοῦ τέλους, ἣν ὀπόθεν ἐκτησάμεθα λέγειν ἤδη καιρός. πρώτη μὲν <οὖν><sup>8</sup> ἡμῖν ἐγένετο γνώσις ἡμῶν τε αὐτῶν ὑγιαίνοντων, καὶ τῶν ἄλλων ἀνθρώπων, δευτέρα δ' ἐπὶ ταύτῃ νοσησάντων, ὅθεν περ καὶ ἡ ἐπιθυμία τοῦ θ' ὑγιαίνειν εἰσῆλθεν ἡμᾶς<sup>9</sup> καὶ τοῦ συστήσασθαι τινα τέχνην ὑγιαστικὴν· ἀλλ' ἐπεὶπερ ὑγείαν ἐργάζεσθαι βουλόμεθα τοῦ γένους ἂν τις εἴη μία τῶν ποιητικῶν τεχνῶν, ἣν συστήσασθαι ποθοῦμεν· οὐσῶν δὲ διφυῶν, ὡς ἐδείχθη, τῶν ποιητικῶν ἐκ τῶν ἐπανορθουμένων ἂν εἴη τὸ ἤδη γεγονός, ἣν ζητοῦμεν, οὐκ ἐκ τῶν δημιουργουσῶν, ὁ μῆπω πρόσθεν ἦν. ἔνιαι μὲν γὰρ τῶν τεχνῶν αὐτὰ τὰ πράγματα δημιουργοῦσιν, ὥσπερ αἱ κατὰ τὴν ὕφαντικὴν καὶ σκυτοτομίαν, ἔνιαι δ' ἐπανορθοῦνται τὰ πονήσαντα, καθάπερ αἱ τε τὰ διερωγότα τῶν ἱματίων, καὶ τὰ διεσπασμένα τῶν ὑποδημάτων συρράπτουσαι.

230K 2. Ἐδείχθη δὲ κατὰ τῆς οἰκοδομικῆς οὕτως ἔχον ἔστι γὰρ οὖν δὴ καὶ ταύτης ἔργα διττά, γένεσις τε τῆς οὐκ οὔσης οἰκίας ἐπανόρθωσις τε τῆς πεπονησίας· ἐδείχθη μὲν γὰρ πρὸς ἀμφοτέρας τὰς ἐνεργείας ἀναγκαῖον ὄν τῷ δημιουργῷ γινώσκειν ἅπαντα τῆς οἰκίας τὰ μόρια, τίνα τε κατὰ τὴν οὐσίαν ἐστὶ καὶ ὅποια κατὰ τὴν διάπλασιν, καὶ ὅπηλικά τε κατὰ τὸ μέγεθος ὅποια τε τὸν ἀριθμόν, καὶ ὅπως ἀλλήλοις συγκείμενα. καὶ τοίνυν τῷ συνισταμένῳ τὴν περὶ τὸ σῶμα τέχνην, ἣν ἐν τῷ παρόντι συγχωρεῖτωσαν ἡμῖν οἱ περὶ ὀνόματων ἐρίζοντες ὀνομάζειν ἱατρικὴν, ἀνα-

establish, setting up here too the same beginning to the argument which you set up in all the others—the concept of an end result. It is time now to say whence we got this concept. First, there was the knowledge of ourselves and of other people when in a state of health; second there was the same knowledge when in a diseased state. From these arose the enthusiasm both for being healthy and for setting down a health-producing art. Since we wish to bring about health, the art we want to establish will be one from the class of productive arts. And because there is a bipartite division of these arts, as we showed, the one we are seeking will be from those that restore what has already existed and not from those that create what has not previously existed. For some arts create the actual things, like those pertaining to weaving and shoemaking, while others restore those things that have suffered damage, like those that sew together torn cloaks and shoes that have come unstitched.

230K

2. We showed what the method is in the case of house building, for the tasks of this are also of two kinds—the creation of a house that doesn't yet exist and the restoration of an existing house that has been damaged. In respect of both operations, it was shown to be essential for the builder to know all the parts of the house—that is, what they are in terms of substance and conformation, how big they are in magnitude, how many they are in number, and how they fit together with each other. It is also the same for the person constructing the art that involves the body, which for the present let those who dispute over names agree with us in calling medicine. It will

<sup>8</sup> οὖν F<sup>9</sup> ἡμῖν K

γκαίον ἔσται γινώσκειν ἕκαστον τῶν ἀπλῶν μορίων, ὁποῖόν τι κατὰ τὴν οὐσίαν ἐστὶ καὶ τὴν διάπλασιν, | ὀπηλικόν τε τὸ μέγεθος, ἔτι τε τὸν ἀριθμὸν αὐτῶν ἅπαντα καὶ τὴν πρὸς ἄλληλα σύνθεσιν.

ὥσπερ οὖν ὁ τὴν ἤδη γεγενημένην οἰκίαν ὅποια τίς ἐστὶν ἀκριβῶς γινῶναι βουλόμενος ἐξ ἀναλύσεως καὶ διαλύσεως ἐπὶ τὴν διάγνωσιν αὐτῆς ἐγένετο, κατὰ τὸν αὐτὸν τρόπον καὶ ἡμεῖς ἐξ ἀνατομῆς ἀνθρώπου σῶμα γνωσόμεθα. θεὸς μὲν γὰρ καὶ φύσις, ὡς ὁ πρῶτον οἰκίαν ἐργασάμενος, οὕτω προγινώσκουσι τὰ μέρη τῆς χρείας αὐτοῖς τὸ παράδειγμα γεννώσης, ἡμεῖς δ' ὡς ὁ τὴν ἤδη γεγενημένην οἰκίαν ἱστορῶν καίτοι καὶ ἡμεῖς εἰ μὴ καθ' ὅσον οἶόν<sup>10</sup> τε παραπλησίαν θεῷ ποιησαίμεθα τὴν γνώσιν, ἀδύνατον ἡμῖν ἔσται διαγινῶναι, πότερον ἅπαντα διὰ χρείαν τινὰ γέγονεν ἢ μάτην ἔνια. καὶ γὰρ ταῦτα ἄμφω δυνατόν ἐστιν ἐπινοεῖν καὶ πρὸς τούτοις ἔτι πρὸς κακοῦ τινα γεγονέναι. καὶ μέντοι καὶ ἡ γνώσις ἢ τῶν ἄριστα κατασκευασμένων σωματίων ἐντεῦθεν παραγίνεται ἀλλὰ περὶ μὲν τούτων

<sup>10</sup> καθὼς οἶόν K

<sup>7</sup> The term "dialysis" is retained here in a specifically technical sense, where it has a somewhat similar meaning to "analysis"—breaking down, separating into components, resolving. In Leonico's sixteenth-century Latin translation, the terms are rendered (in the order in the text) with the verbs *resolvo* and *dissolvo*. See also the opening section of *The Art of Medicine* below, where the term "synthesis" is added to the two terms used here.

be essential for him to know each of the simple parts; that is, what kind they are in terms of substance and conformation, how big in terms of magnitude, and further, the number of all of them and their combination with each other.

It is, then, just the same for someone who wants to know precisely what kind of thing a house that already exists is. He comes to the recognition of this through analysis and dialysis.<sup>7</sup> In the same way, we know the human body through anatomy. Thus, God and Nature, like the one who first built a house, knew the parts in advance because it was their use that provided the pattern. We, on the other hand, are like those who observe an already existing house, and further, if we don't make this knowledge as similar as we can to that of God, it will be impossible for us to recognize whether every part exists for some use, or some are without a purpose, for we can conceive of both these possibilities, and in addition, that some have arisen for a bad purpose.<sup>8</sup> And of course, the knowledge of the best constitution of bodies<sup>9</sup> is involved here—but more about these matters later. When we have learned from

<sup>8</sup> The issue of the use or purpose of the parts is examined in detail in Galen's *UPart.*, III.1–933K and IV.1–336K, for an English translation of which, see May, *Galen on the Usefulness*.

<sup>9</sup> This is a critical component of the doctor's knowledge. Galen devotes a short work specifically to it—*Opt. Const.*, V.737–49K. For an English translation of this work, see Singer, *Galen: Selected Works*.



αὐθις. ἐξ ἀνατομῆς δὲ τὰ ὁμοιομερῆ προσαγορευόμενα σώματα μαθόντες, ὁποῖόν τε τὴν διάπλασιν ἕκαστον αὐτῶν ἔστιν ὀπηλίκον τε τὸ μέγεθος, ὅσα τε τὰ  
 232K σύμπαντα | καὶ ὅπως συγκείμενα, τῶν συνθέτων μορίων ἐπιστήμην ἔσχομεν, ἃ δὴ καὶ προσαγορεύομεν ὀργανικά· τοιοῦτόν ἐστι σκέλος, τοιοῦτο χεῖρ, τοιοῦτο δάκτυλος, ὀφθαλμός, γλῶττα, πνεύμων, ἦπαρ, ὅσα τ' ἄλλα τοιαῦτα. καὶ τοῖνυν καὶ τὰς ἐνεργείας διττὰς εὐρεῖν ἔστι τῶν μορίων, ἑτέρας μὲν τῶν ἀπλῶν τε καὶ ὁμοιομερῶν, ἑτέρας δὲ τῶν συνθέτων τε καὶ ὀργανικῶν.

ἔνεστι γοῦν καὶ τὸ σκέλος ὅλον ἰδεῖν κινούμενον· ἔνεστι δὲ καὶ τῶν ἐν αὐτῷ μῶν ἕκαστον καὶ καθ' ἕκαστόν γε τῶν μῶν ἐγκάρσιον ὅλως διακοπέντα κίνησιν τινα διαφθειρομένην τοῦ σκέλους· ἔνεστι δ' ἰστορεῖν τὰ κατὰ τὸ σῶμα καὶ ὅτι, τὸ καθήκον εἰς τὸν μῶν νεῦρον ἐπειδὴν τρωθῆ, πρῶτος μὲν αὐτὸς ὁ μῶς ἀναίσθητός τε καὶ ἀκίνητος γίνεται, σὺν αὐτῷ δὲ καὶ τὸ κινούμενον ἄρθρον, ὅθεν, οἶμαι, καὶ ἀναγκαῖόν ἐστι συνισταμένοις ἡμῖν τὴν τέχνην, οὐ μόνον γνῶναι τὰ μόρια καὶ τὴν σύνθεσιν, ἀλλὰ καὶ τὰς ἐνεργείας αὐτῶν, καὶ ταύτη διοίσομεν οἰκοδόμων. ἐκεῖνοι μὲν  
 233K γὰρ τὰ μόρια μόνα καὶ τὴν | σύνθεσιν ἴσασι—οὐδὲν γὰρ αὐτῶν ἐνεργεῖ, διότι μηδὲ ζῶόν ἐστιν ἡ οἰκία—ἡμῖν δὲ καὶ τὰς ἐνεργείας ζητητέον ἐστί. ἀρχὴ δὲ κἀνταῦθα διττὴ τῆς ζητήσεως, ἥτοι τῆς ἐνεργείας ἢ γνῶσις ἢ τοῦ μορίου, τῆς ἐνεργείας μὲν οἷον τοῦ λογιζέσθαι τοῦ μεμνήσθαι, τοῦ προαιρεῖσθαι, τοῦ

anatomy those bodies termed *homoiomeric*<sup>10</sup>—what kind each of these is in conformation, how big in size, how many there are in all, and how they are put together—we shall have a knowledge of the compound parts, which we then call organic. Such parts are leg, arm, finger, eye, tongue, lung, liver and other such parts. Moreover, we can also discover that there are two kinds of functions of the parts; those of the simple or *homoiomeric* parts and those of the compound or organic parts. 232K

Anyway, it is possible to see the whole leg moving, just as it is also possible to see each of the muscles in it moving. And when any one of the muscles is completely cut across transversely, it is possible to see that some movement of the leg is destroyed. It is also possible to see, in the body, that whenever a nerve that comes down to a muscle is damaged, there is first the loss of sensation and movement in the muscle itself, and with this also movement of the joint. This is why I think it is also necessary for us, since we are constructing the art, to know not only the parts and their combinations, but also their functions, and in this we shall differ from house builders, who know only the parts and their combination—none of them function because a house is not a living organism—whereas for us it is necessary to look also into the functions. And here too the principle of investigation is twofold: there is either knowledge of the function or knowledge of the part. Examples 233K

<sup>10</sup> The basic definition of this term is "having all its parts like each other"—i.e., being of uniform structure throughout. The term originated with Aristotle—see, for example, his *Parts of Animals*, 648a6–655b27, and Johnston, *Galen: On Diseases and Symptoms*, 45.

μορίου δ' οἶον ἐγκεφάλου τε καὶ νωτιαίου καὶ καρδίας. ἀπασῶν οὖν ὧν ἴσμεν ἐνεργειῶν ζητήσωμεν τὰ μόρια τῶν τε μορίων ἀπάντων τὰς ἐνεργείας. ἢ ζητήσις δὲ πάντως ἡμῖν κἀναυθθα διὰ τινος ἔσται μεθ' οἴδου, περὶ ἧς αὖθις σκεψόμεθα.

3. Νυνὶ δ' ὅτι διττὴ μὲν ἡ τῶν μορίων ἐστὶ φύσις, διττὴ δὲ καὶ ἡ τῶν ἐνεργειῶν, ἥδη γε λέλεκται, καὶ αὖθις ἀκριβέστερον λεγέσθω. τοῦ σύμπαντος σκέλους ἐνεργεια βᾶδισίς ἐστὶ γίνεται δὲ τῶν ἐν αὐτῷ διαρθρώσεων ἐναλλάξ ἀλλήλων ἐκτεινομένων τε καὶ συγκαμπομένων. οἶον αὐτίκα κατὰ γόνυ τῶν μὲν ἔμπροσθεν μυῶν ὑπερβαινόντων τὴν ἐπιγονατίδα, καὶ διὰ τενόντων εἰς τὸ τῆς κνήμης ὀστοῦν ἐμφυομένων, ἐπειδὴν ἐκεῖ ἐπισπᾶσονται τὴν κνήμην, ἢ ἔκτασις γίνεται | τοῦ σκέλους, τῶν δ' ἐντὸς ὁμοίως ἐνεργησάντων ἢ κάμψις· οὕτω καὶ κατ' ἰσχίον καὶ πόδα καμπομένης ἢ ἐκτεινομένης τῆς διαρθρώσεως αἱ κινήσεις γίνονται. φαίνεται μὲν οὖν ὁ μῦς ἐναργῶς, ὅταν τοῦ περικειμένου δέρματος γυμνωθῆ, συναγόμενός τε καὶ ἀνασπώμενος ὡς ἐπὶ τὴν ἑαυτοῦ κεφαλὴν· οὐ μὴν τὸ καθῆκον εἰς αὐτὸν νεῦρον αἰσθητὴν τινα κίνησιν κινούμενον φαίνεται, ἀλλ' ἔοικεν ὁδὸς εἶναι τοῦτο τῆς ἐξ ἐγκεφάλου κατιούσης δυνάμεως. αὐτὸς δ' ὁ ἐγκεφαλος ὅτι μὲν ἀρχὴ τοῖς νεύροις ἅπασι τῆς τοιαύτης δυνάμεως ἐστίν, ἐναργῶς ἐμάθομεν ἐκ τοῦ διαιρεθέντος ὄτου οὖν νεῦρον ἐν μὲν τοῖς ἄνω μέρεσιν, ὃ συνεχές ἐστίν ἐγκεφάλῳ, διασφάζειν τὰς ἐνεργείας, ἀπολλύναι δ' ἐν τοῖς κάτω· πότερον δ' ὥσπερ αὐτὸς τοῖς

234K

of the former are thinking, remembering and choosing, and of the latter, brain, spine and heart. Let us, then, investigate the parts of all the functions we know, and the functions of all the parts. Here too, our investigation will be through a particular method, which we shall consider in what follows.

3. I already said just now that the nature of the parts is twofold, as is the nature of the functions. Let me state this again more precisely. The function of the whole leg is walking, and this occurs when the joints in it are alternately extended and flexed. For example, since the muscles in front of the knee pass over the kneecap and are attached by tendons to the bone of the lower leg (the tibia), whenever they pull on the lower leg, extension occurs, whereas when the posterior muscles function in the same way, flexion occurs. The movements of flexion and extension of the joints in the hip and foot also occur in the same way. Thus, the muscle is clearly apparent, contracting and retracting toward its own origin, when it is stripped bare of the overlying skin, but when it moves, there is no perceptible movement of the actual nerve which passes down to it, although it seems likely that this is the path of the downward passage of power from the brain. That the brain itself is the source of such power to the nerves, we learned clearly from the fact that after the division of any nerve whatsoever, the functions are preserved in the parts above the division where there is continuity with the brain, whereas in the parts below the division the functions are destroyed. Whether, just as for the nerves themselves, some other part in turn transmits the powers to the

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νεύροις, οὕτως ἐκείνῳ πάλιν ἕτερόν τι μόριον ἐπιπέμπει τὰς δυνάμεις ἢ πηγὴ τις αὐτῶν ἐστίν, ἔτ' ἄδηλον. ἢ γὰρ τοιαύτη σκέψις ὑπὲρ ἡγεμονικοῦ ψυχῆς ἐστίν.

235K

ἀλλ' ἐπανίωμεν, ὅθεν ὁ λόγος ἀπετράπετο. βάδισις μὲν ἢ ἐνέργεια τοῦ σκέλους παντός. ἐξηγεῖται δ' αὐτῆς τῶν ἐν τοῖς σκέλεσι μορίων τὸ μῦδες ἢ γένος· ὅστ' αὖ καὶ χόνδροι καὶ πιμελὴ καὶ ἀδένες καὶ ἀρτηρία καὶ δέρμα καὶ φλέβες ὑμένες τε καὶ σύνδεσμοι, τὴν ἀρχὴν τῆς κινήσεως ἔχουσιν ἐκ τῶν μῶν· πρῶτον μὲν γὰρ ὑπ' αὐτῶν κινεῖται τὰ ὅστ' αὖ, τὰ δ' ἄλλα πάντα τῷ παρακείσθαι τοῖς ὅστοις ἐν κύκλῳ σὺν ἐκείνοις κινεῖται. ἢ μὲν οὖν τοῦ μῦός<sup>11</sup> κίνησις ἐνέργεια τοῦ μῦός ἐστίν, ἢ δ' ὅλου τοῦ σκέλους [οὐκ] ἔστιν ἀπάντων ἐνέργεια τῶν μορίων αὐτοῦ. καὶ διὰ τοῦτο διττὸν ἔφαμεν εἶναι τῶν ἐνεργειῶν τὸ γένος, ἐν μὲν τὸ πρῶτον καὶ κυριώτατον ἐκάστου τῶν ἀπλῶν μορίων ἐνεργούντος, ἕτερον δὲ κατὰ συμβεβηκὸς ἢ δευτέρως ἢ οὐ πρώτως, ἢ ὅπως ἂν τις ὀνομάζειν ἐθέλη, τῶν ὅλων ὀργάνων.

4. Ἐπεὶ δὲ τοῦθ' ἡμῖν διώριστο, μετὰ τοῦτο ζητήτεον ἐστίν, ἐκ τίνων μὲν ἢ τῶν ὀργανικῶν μορίων, ἐκ τίνων δ' ἢ τῶν ἀπλῶν ἐνέργεια συμπληροῦνται καὶ πρῶτόν γε ἀπὸ τῶν ὀργανικῶν ἀρκτέον, ἐπειδὴ σκέλους ἐμνημονεύσαμεν. εἰ μὴ τοίνυν εἴη τὰ ὅστ' αὖ τηλικαυτά τε καὶ τοσαῦτα καὶ ὡδί πως διαπεπλά-

<sup>11</sup> ποδὸς K

brain, or it is itself the fount of such powers, remains unclear. Such a consideration pertains to the hegemonic (authoritative) soul.<sup>11</sup>

But let us return to the point where the discussion digressed. Walking is the function of the leg as a whole, whereas it is the muscular class of the parts in the legs that directs this. Bones, cartilage, fat, glands, arteries, skin, veins, membranes and ligaments have the origin of their movement from the muscles. First, the bones are moved by the muscles, while all the other parts lying in immediate proximity to the bones are moved with them. Thus the movement of a muscle is a function of that muscle while the movement of the leg as a whole is a function of all its parts. This is why we said the class of functions is twofold—the primary and most important is when each of the simple parts functions; the other, which is contingent and secondary rather than primary, or whatever you might wish to call it, is when whole organs function.

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4. Since we have made this distinction, what we must next investigate after this is from which of the organic parts or which of the simple parts is a function fulfilled. And we must begin first from the organic parts, because we were speaking about the leg. Accordingly, if the bones are not of such and such a size and such and such a num-

<sup>11</sup> Galen follows Plato's tripartite division of the soul—see *Phaedrus*, 253 et seq. In ancient times there were two views on the location of the soul/hegemon: in the brain/head (e.g., Plato) or in the heart/chest (e.g., Aristotle). See Galen, *MM*, 9.10 (X.635K), and *Plac. Hippocr. Plat.*, V.506K, 532K.

236K

σμένα, καὶ ὡδί πως συναττόμενα, τῶν μυῶν ἢ κίνησι-  
 σις | οὐδὲν [ἀν] ἀνύσει. χρῆ γὰρ ἐν ταῖς διαρθρώσεσι  
 τὸ μὲν ὑποδέχασθαι τῶν ὀστέων, τὸ δ' ἐμβαίνειν, συν-  
 δέσμους δ' ἕξωθεν ἐν κύκλῳ περιβεβληῖσθαι, σφίγγου-  
 τας αὐτῶν τὴν σύνταξιν, ὅπως μὴ παραλλάττοι· οὐ  
 μὴν οὕτως γίνεσθαι συντόνους τε καὶ σκληροὺς ὡς  
 ἀντιπράττειν ταῖς κινήσεις, οὐ μὴν οὐδ' οὕτω χαλα-  
 ροὺς ὡς παραλλάττειν ἐπιτρέπειν τὰ διαρθρούμενα.  
 φαίνονται τοίνυν καὶ οἱ σύνδεσμοι δεόμενοι μεγέθους  
 τέ τινος καὶ διαπλάσεως καὶ ἀριθμοῦ καὶ συνθέσεως·  
 εἴαν τε γὰρ ἐλάττους ἢ μείζους γένωνται, εἴαν τε πλεί-  
 ους ἢ ὀλιγώτεροι τοῦ δέοντος, ἢ ἂν τ' ἐν ἐτέρῳ σχήματι,  
 καὶ καθ' ἕτερον ἐμφυόμενοι χωρίον, οὐκέτι ἄμεμπτος  
 ἢ τῆς διαρθρώσεως γίνεται κίνησις.

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ὥσπερ οὖν ἐπὶ συνδέσμων τε καὶ ὀστέων καὶ μυῶν  
 εἴρηται νῦν, οὕτως ἐπὶ πάντων προσήκει διασκέψα-  
 σθαι τῆς ἐνεργείας τε περὶ καὶ τῆς χρείας. εἰ μὲν γὰρ  
 εὕρισκοιτο μόριον μηδὲν ἀργὸν ἐνεργείας ἢ χρείας,  
 ἀλλὰ κατὰ τὴν οὐσίαν τὴν ἑαυτοῦ καὶ τὸ μέγεθος ἔτι  
 τε τὴν διάπλασιν τε καὶ τὴν σύνταξιν ἀριστα κατ-  
 εσκευασμένον, | οἷον περ ἔστι, φυλακτέον αὐτό, διη-  
 μαρτημένον δὲ κατὰ τι, πρὸς τὸ βέλτιον ἀκτέον ὅπερ  
 οὐχ οἷον τε ποιῆσαι πρὶν τὴν ἐνέργειαν καὶ τὴν  
 χρείαν καὶ τὴν κατασκευὴν ἐκάστου γινῶναι τῶν μο-  
 ρίων. ζητητέον οὖν αὐτὰ καὶ οὐκ ἀποκνητέον, εἰ μέλ-  
 λοιμεν ἕξειν ἐπιστήμην ὑγιεινοῦ καὶ νοσηροῦ σώμα-  
 τος.

5. Ἐπειδὴ δὲ κατὰ τοῦτο γέγονεν ὁ λόγος, ἀναμνη-

236K

ber, and are not formed and put together in a certain way, the movement of the muscles will accomplish nothing. Thus, in the joints there must be one of the bones that receives and one that enters, and there must be ligaments externally which surround the joint in a circular fashion, binding their arrangement together so there is no slippage. However, the joints must neither be so tight and stiff as to resist movement nor so loose as to allow slippage. Also the ligaments clearly need to be of a certain size, conformation, number and combination. If they are smaller or larger, or more or fewer than they need to be, or are in a different form, or are attached to a different place, the movement of the joint will no longer occur faultlessly.

Therefore, just as we have now spoken about ligaments, bones and muscles, so it is appropriate to consider thoroughly function and use in all cases. For if we find a part which is in no way defective in function or use, but is constituted in the best way in terms of its own substance and size, as well as its conformation and arrangement, we must preserve it just as it is, whereas if it has deviated from this to some extent, we must lead it back toward improvement. But it is impossible to do this before we know the function, use and constitution of each of the parts. Therefore we must investigate these and not shrink from doing so, if we are going to have knowledge of healthy and diseased bodies.

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5. Since the discussion has come to this point, we must

σθῆναι χρῆ τῆς μεθόδου τὴν δύναμιν. οὔτε γὰρ οἰκίας οὔτε νεῶς, οὔτε σκίμποδος οὔτε ἄλλου τῶν ἀπάντων οὐδενὸς ἐτέρως ἂν τις ἐξετάσειε τὴν κατασκευὴν, εἴτ' ἄμεμπτός ἐστιν εἴτε μεμπτή, χωρὶς τοῦ τὰ συνθετικὰ διασκέψασθαι μόρια, πόσα τε τὸν ἀριθμὸν ἐστὶ καὶ πηλίκον ἕκαστον, ὅπως τε διαπέπλασται καὶ ὅπως κείται. ἀλλ' ἐν τούτοις ἐστὶν ἢ τ' ἀρετὴ καὶ ἢ κακία τῶν συνθέτων ἀπάντων σωμάτων ἐν αὐτοῖς δὲ τούτοις ἐδείκνυτο καὶ τὰ πάθη τῆς οἰκίας εἶναι. καὶ τῆς νεῶς δ' ἐν τούτοις τὰ πάθη,<sup>12</sup> μεγέθει καὶ διαπλάσει καὶ ἀριθμῷ καὶ θέσει τῶν μορίων, εἴπερ γε καὶ ἡ ἀρετὴ τε καὶ κακία. σκίμποδος δ' οὐκ ἐν τούτοις; ἱματίων δ' ἄρα | ἐν ἄλλοις τισίν; ὑποδήματος δ' οὐκ ἐν τοῖς αὐτοῖς; ἐν ἅπασιν οὖν τοῖς ὀργανικοῖς σώμασιν, οἷς ἡ οὐσία κατὰ σύνθεσιν, ἐν τέτταρσι γένεσιν ἢ ἀρετὴ καὶ ἢ κακία καὶ τὸ πάθος ἐστίν. εἰ δὲ καὶ [κατὰ] σύμφυσιν καὶ ἔνωσιν λαμβάνοι τὰ μόρια, πέμπτον τι γένος τοῦθ' ὑπάρξει τοῖς τοιούτοις σώμασιν, ὥστε τὸν μὲν ἀριστον ἀρίστας ἔχειν τὰς συμφύσεις,<sup>13</sup> τὸν δὲ μοχθηρότατον χειρίστας. εἰ δὲ καὶ λυθείη τις σύμφυσις, οὐ μεμπτή μόνον ἢ τοιαυτὴ διάθεσις, ἀλλ' ἤδη καὶ νόσημά ἐστι. καλέισθω δ' ἔνεκα σαφοῦς διδασκαλίας τὸ τοιοῦτο γένος ἐνώσεως λύσις, οὐδὲν διαφέρον, εἰ καὶ συνεχείας τις εἴποι λύσιν.

ἀλλ' ὅτι γε καὶ τοῖς ὁμοιομερέσιν ἐγγίγνεται τὸ

<sup>12</sup> ἤτοι K; δ' ἐν τούτοις τὰ πάθη F

<sup>13</sup> ἐνεργείας K

mention the power of the method. There is no other way of closely examining the constitution of a house, boat, bed, or anything else, and determining whether it is flawless or flawed, than considering the parts from which it is composed—how many they are in number, how big each one is, how they are formed, and how they are arranged. It is in these things that the goodness and badness of all compound bodies lies—and it was shown that the “affections” of a house are in these same things. The “affections” of a boat are also in them; the size, conformation, number and position of the parts determine whether it is either good or bad. Is the goodness or badness of a bed not in them too? Is the goodness or badness of clothes in other things? Is the goodness or badness of a shoe not in these same things? Therefore, in all the organic bodies, in which substance relates to composition, goodness, badness and affections fall into four classes. And if the parts take on a continuity and unity, there will be a fifth class in such bodies, so that the best body is best in terms of continuity, and the worst is worst. Moreover, if the continuity is broken down, such a condition is not only not flawless; there is already disease as well. For the sake of clarity in teaching, let us call such a class “dissolution (breakdown) of unity.” It would make no difference if we were to say “dissolution (breakdown) of continuity.”<sup>12</sup>

But we must, in fact, recognize that this affection

<sup>12</sup> For the basic definition of this class of diseases, see Galen, *Morb. Diff.*, 11.1 (VI.871–72K); Johnston, *Galen: On Diseases and Symptoms*, 152. A detailed account focusing on treatment is given in *MM*, 3–6 (X.157–455K).

πάθος τοῦτο, γνώσκεσθαι χρή, καὶ γὰρ ὅστού καὶ νεύρου καὶ φλεβὸς καὶ ἀρτηρίας καὶ σαρκὸς ἐν τῷ νύττεσθαι τε καὶ τέμνεσθαι καὶ διαβιβρώσκεσθαι καὶ διασπᾶσθαι καὶ ῥήγνυσθαι διαφθείρεται τὸ συνεχές. ἀλλ' ἐν μὲν ὀστέῳ κάταγμα καλεῖται τὸ πάθος, ῥήγμα δ' ἐν τοῖς σαρκώδεσι μορίοις τῶν μυῶν ἐκ διατάσεως  
 239K γιγνόμενον· αἱ δ' ἴνες ὅταν ὁμοίως ταθεῖσαι ῥαγῶσι, σπᾶσμα καλεῖται τὸ πάθος· ὡσαύτως δὲ τῷ ῥήγματι τὸ τραῦμα συνεχείας ἐστὶν ἐν σαρκὶ λύσις, οὐκ ἐκ διατάσεως, ἀλλ' ἐκ τομῆς· εἰ δ' ὀξὺ καὶ λεπτὸν εἴη τὸ τιτρώσκον, ὀνομάζεται νύγμα καὶ νύξις, εἰ δὲ βαρὺ, θλάσμα καὶ θλάσις. τῶν δ' ἐξ ἀναβρώσεως ὅσα μὲν ἐν ὀστέῳ γίνεται, τερηδῶν, ὅσα δ' ἐν τοῖς ἄλλοις, ἔλκος· ἀλλ' ὀνομάζειν μὲν ἐξέστω καὶ ἄλλως. αἱ διαφοραὶ δ' αἱ σύμπασαι τοιαῦταί εἰσι καὶ τοσαῦτα τοῦ πέμπτου γένους τῶν νοσημάτων, ὅταν ἐν τοῖς πρώτοις συνίστηται μέρεσιν.

ἐν ὀργανικοῖς δ' ὡς εἴρηται, κατὰ τὰς τῶν ἑτερογενῶν γίνεται συμφύσεις καὶ καλεῖται πάντα ἀποσπᾶσματα. διαιρεθέντος μέντοι τινὸς ὅλου τῶν ὁμοιομερῶν, εἴη μὲν ἂν καὶ αὐτοῦ τοῦ διηρημένου τὸ πάθος, εἴη δ' ἂν καὶ τοῦ σύμπαντος ὀργάνου, ποτὲ μὲν κατὰ συμβεβηκός, ὡς ἐπειδὴν ἦτοι μὴς ἢ τι τοιοῦτον ἕτερον πάθη, ποτὲ δὲ καὶ πρώτως, <ὡς> ἐπειδὴν σύνδεσμος· ὡσπερ οὖν ἐφ' ἐνὸς γένους νοσήματος, ἐν ᾧ τὸ συνεχές τῶν μορίων βλάπτεται, τὰς διαφορὰς  
 240K | ἐγὼ νῦν ἐπήλθον, οὕτω πειράθητι καὶ σὺ τῶν ἄλλων τεττάρων γενῶν σαυτῷ διελθεῖν ἀναμιμνή-

also occurs in *homoiomeres*. Thus the continuity of bone, nerve, vein, artery and flesh is destroyed by being pierced, cut, eroded, torn or ruptured. In bone the affection is called a fracture, whereas in the fleshy parts of the muscles it arises from stretching and is called a tear. Whenever the fibers are stretched in the same way and a tear occurs, the affection is called a sprain. Similar to a tear, a wound in flesh is a dissolution of continuity, which is not from stretching but from cutting. If what causes the wound is sharp and thin, it is called a puncture or stab wound, whereas if the causative agent is thick, it is called bruising or crushing. Those things that occur in bone due to erosion are called caries, while those that occur in other parts are called ulcers. But it should be possible to name these otherwise. All such differences, in kind and number, are of the fifth class of diseases, when they exist in the primary parts.

As I said, those occurring in the joins of different kinds in the organic parts are all called separations. Of course, when all of one of the *homoiomereous* parts is divided, the affection may be of the divided part itself or it may be of the whole organ, and is sometimes secondary (contingent), as when a muscle or something similar is affected, and sometimes primary, as when a ligament is affected. Therefore, just as I now went over the differences in the case of one disease class in which the continuity of the part is damaged, so you too, in like manner, should attempt to go over the other four classes for yourself, for it seemed

σκειν γὰρ αὐτῶν ἐν τῷδε τῷ λόγῳ περιττὸν ἐδόκει μοι γεγραμμένων γε ἀπάντων ἀκριβῶς ἐν τῷ Περὶ τῆς τῶν νοσημάτων διαφορᾶς.

6. Πάλιν οὖν ἀναμνήσωμεν ἡμᾶς αὐτούς, ὡς καὶ τοῖς ἄλλοις ἅπασιν, ὧν ἐν συνθέσει τὸ τῆς οὐσίας εἶδος ἐστίν, ἐδείχθη τὰ σύμπαντα γένη τέτταρα τῆς ὅλης οὐσίας αὐτῶν αἷτια καὶ προσέτι τοῦ κατωρθωμένου τε καὶ διημαρτημένου<sup>14</sup> ἐν αὐτοῖς, ἔπειτα δ' ὅτι καὶ αὐτῶν τῶν ἀπλῶν ἐκάστου μορίων ἀναγκαῖόν ἐστίν ἐπίστασθαι τὴν φύσιν, εἰ καὶ τὴν τούτων τις ἀρετὴν τε καὶ κακίαν ἰκανός ἐστι γνωρίζειν ἐπανορθοῦσθαι τε τὰ παθήματα. πεπονθυίας γοῦν ἐν οἰκίᾳ κεραμίδος ἢ πλίνθου τινὸς ὠμῆς ἢ ὀπτῆς, ἐπίστασθαι χρὴ τὸν τεχνίτην, ὅπως τε δημιουργήσει τοιαύτην ἑτέραν ὅπως <τε> τὴν μὲν πεπονθυῖαν ἐξαιρήσει, καταθήσεται δ' εἰς τὸν ἐκείνης τόπον ἑτέραν ἀπαθῆ. τῷ μέντοι γε τὴν περὶ τὸ σῶμα ἀνθρώπου τέχνην 241K συνισταμένην πρὸς τοῖς ἄλλοις ἔτι | καὶ τοῦτ' ἀναγκαῖον ἔσται γινώσκειν, εἴτε δυνατόν ἐστίν ἀντιτιθῆναι τι μόριον εἴτε ἀδύνατον.<sup>15</sup>

αὐτίκα γέ τοι<sup>16</sup> σάρκα μὲν ἐκκόψας πεπονθυῖαν, ἑτέραν ἐργάσασθαι δύνασαι, νεῦρον δ' ἢ σύνδεσμον ἐκκόψας ἕτερον ἀποτελέσαι τοιοῦτον οὐ δυνήσῃ τῇ μὲν γὰρ ἐξ αἵματος ἢ γένεσις, τοῖς δὲ ἐκ σπέρματος. ἐστὶ δὲ καὶ ὅστων ἐν τῶν ἐν τῇ πρώτῃ διαπλάσει

<sup>14</sup> σχήματος post διημαρτημένου K  
τίθεσθαι. om. F

<sup>16</sup> αὐτίκα γέ τοι add. F

<sup>15</sup> ἀντ' ἄλλου

to me superfluous to mention them in this discussion, having written about them comprehensively in the work *On the Differentiae of Diseases*.<sup>13</sup>

6. Let us again remind ourselves that in all other bodies in which the kind of substance lies in their combination, all four classes (i.e., size, number, conformation and position) were shown to be the causes of their whole substance, and in addition to this, causes of what is properly constructed and what has gone awry in them. Next, it was shown to be essential to know the nature of each of the actual simple parts, if we are to recognize adequately some goodness or badness of these and correct the affections. For example, if a tile or brick in a house, whether unbaked or baked, has been affected, the builder must know how to make another, similar brick, how to remove the one that has been affected, and how to lay another, unaffected one in its place. Of course, for someone constructing the art pertaining to the human body, it will be essential to know, in addition to the other things, whether or not it is possible 241K to substitute some part.

Thus, if you excise flesh that has been affected, it is possible for other flesh to be produced, whereas if you excise a nerve or ligament, you will not be able to produce another such thing, because the genesis of flesh is from blood while that of the latter two is from semen. Bone is one of the things constructed in the first formation, but we

<sup>13</sup> *Morb. Diff.*, VI.836–80K. For an English translation of this work, see Johnston, *Galen: On Diseases and Symptoms*, 131–56.

συνισταμένων, ἀλλ' εἰς τὴν χώραν αὐτοῦ καταθεῖναι τι δυνάμεθα παραπλήσιον ὀστέῳ. καὶ ταῦτ' ἐγὼ μὲν νῦν ἀπεφηνάμην ἐκ προχείρου λαβὼν ἕνεκα παραδείγματος, ὁ δὲ λόγος αὐτόν σε κελεύει ζητῆσαι πάντα συνιστάμενον τὴν τέχνην, καὶ ἤδη γε τὰς ἀρχὰς τῆς εὐρέσεως ὑπεγραψάμην ἐπὶ τὴν πρώτην τοῦ ζώου γένεσιν ἀναπέμψας καὶ συμβουλεύσας ζητῆσαι, τίνα μὲν ἐκ σπέρματος ἐγένετο, τίνα δ' ἐκ τροφῆς αἰεὶ γίγνεται· ἔτι δὲ δὴ μᾶλλον ἢ μέθοδος ἀναγκάζει τε καὶ κελεύει ζητεῖν ἡμᾶς, εἴθ' ἔν ἐστιν ἕκαστον τῶν ὁμοιομερῶν τε καὶ ἀπλῶν φαινομένων μορίων εἴτ' ἐκ πλειόνων σύγκειται καὶ τίς ὁ τρόπος αὐτοῖς ἐστι τῆς συνθέσεως.<sup>17</sup>

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εὐδηλον γὰρ, ὡς καὶ ταῦτα τοῖς ὀργανικοῖς ὀνομαζομένοις ἀνάλογον ἔν τε τῇ ποσότητι καὶ διαπλάσει καὶ μεγέθει καὶ θέσει τῶν συνιστάντων αὐτὰ τὴν τ' ἀρετὴν ἔξει καὶ τὴν κακίαν, εἴπερ ἀνάλογος ὁ τρόπος αὐτῶν ἐστι τῆς γενέσεως· εἰ δ' οὐχ οὕτως, ἀλλ' ὡς ἡ τετραφάρμακος ὀνομαζομένη, δι' ὄλων κερασθέντων ἀπάντων ἐγένετο, καθ' ἕτερον τρόπον ἐξευρήσεις αὐτῶν τὴν ἀρετὴν τε καὶ κακίαν καὶ νόσον. ὥσπερ οἶμαι, καὶ εἰ μὴ κερασθέντων, ἀλλ' ἐκ παραθέσεως ἀκριβοῦς ἢ γένεσις<sup>18</sup> αὐτῶν ἐστιν ὁμοίως τῷ κεφα-

<sup>17</sup> τῇ συνθέσει K

<sup>18</sup> ἔνωσις K

are able to put in its place something similar to bone. I have presented these things now, taking them as readily available examples. The discussion urges you yourself to investigate all things in constructing the art. I have already sketched out the principles of discovery, directing and advising you to investigate, in the primary genesis of the organism, those things that arise from semen and those that are continually arising from nutriment.<sup>14</sup> Still more, the method compels and urges us to investigate whether each of the parts which appear *homoiomerous* and simple is one, or is compounded from many, and what the manner of synthesis is in them.

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For it is clear that these parts too will possess goodness or badness analogously to the so-called organic parts, in terms of the quantity, conformation, size and position of the things composing them, since the manner of their genesis is analogous. On the other hand, if this is not so, but like the so-called *tetrapharmakos*,<sup>15</sup> they arose through a complete mixing of all [their components], you will discover goodness, badness or disease in them in a different way, just as you will, I think, if they are not mixed together, but have their genesis from a precise juxtaposition of these components, similar to the dry medications called *cepha-*

<sup>14</sup> For a concise account of Galen's views on embryology, see Debru in Hankinson, *Cambridge Companion to Galen*, 278–80. The two key works are *Semen*, IV.512–651K, and *Foet. Form.*, IV.652–702K. For English translations of these works, see, respectively, de Lacy, *Galen on Semen*; Singer, *Galen: Selected Works*.

<sup>15</sup> A compound remedy consisting of wax, resin, pitch, and fat—see *MM*, X.281K, and *Simpl. Med.*, XII.328K.



λικῶ καλουμένῳ φαρμάκῳ τῷ ξηρῷ, καὶ οὕτως ἐξεύ-  
 ροις <τῆν> ἀρετὴν τε καὶ κακίαν καὶ νόσους οἰκείας  
 τῇ γενέσει τοῦ πράγματος.<sup>19</sup> εἰ μὴ δ' ἐκ πολλῶν δια-  
 φερόντων κατ' εἶδος, ἀλλ' ὁμοειδῶν ἀπάντων σύγκει-  
 ται, καθάπερ, εἰ οὕτως ἔτυχεν, οἰκία τις ἐξ ὀπτῆς  
 πλίνθου μόνης ἢ λίθων, ἐν τῇ συνθέσει μόνῃ δηλο-  
 νότι τὴν ἀρετὴν τε καὶ κακίαν καὶ νόσους ἐξευρήσεις  
 τῶν ὁμοιομερῶν. ὅτι μὲν δὴ τῶν εἰρημένων ἐν τι τοῖς  
 ὁμοιομερέσιν | ὑπάρχει σώμασιν, ὁ λόγος ἡμῖν ὑφη-  
 γεῖται, τί δ' ἐξ αὐτῶν ἐστὶν ἀληθές, ἀκριβοῦς δέεται  
 σκέψεως.

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ὁρῶμέν γέ τοι καὶ τοὺς φιλοσόφους ἐπὶ τὴν τοιαύ-  
 την μὲν ἀφικομένους ζήτησιν, ὥσπερ καὶ τῶν ἰατρῶν  
 ἐνίοις, ἐπιπλέον δ' ἀλλήλοις διενεχθέντας [ἤπερ τοὺς  
 ἰατρούς].<sup>20</sup> διό μοι καὶ δοκοῦσιν οἱ πλείστοι τῶν ἰα-  
 τρῶν ἀποστήναι τῆς τοιαύτης ζητήσεως ἀπογνόντες  
 εὐρήσειν τὸ ζητούμενον, ἐνιοὶ δ' οὐ μόνον ὡς ἀδυ-  
 νάτου τῆς εὐρέσεως ἀπέστησαν, ἀλλὰ καὶ ὡς ἀχρή-  
 στου ὅτι μὲν <οὖν> οὐκ ἄχρηστος, εἰ μέλλοι τις οὐ  
 διὰ πείρας τινός, ἀλλὰ μεθόδῳ συστήσασθαι τὴν  
 τέχνην, ἥδη μοι δοκῶ πρόδηλον ὑπάρχειν, ὅτι δ'  
 οὐδ' ἀδύνατος ἐφεξῆς σκοπῶμεν, ὀλίγον τι πρότερον  
 ἡμῖν διαλεχθέντες. εἰ γάρ τί μοι πιστεύεις, ὥσπερ οὖν  
 πιστεύεις, ὁρῶν <με> οὐδὲν πρὸς δόξαν ἀνθρώπων,  
 ἀλλὰ καὶ πρὸς ἀλήθειαν ἅπαντα πράττοντα, μὴ κατα-

<sup>19</sup> *om.* οἰκείας τῇ γενέσει τοῦ πράγματος. K

<sup>20</sup> [ἤπερ τοὺς ἰατρούς] *add.* F

*lika*.<sup>16</sup> You will discover in the same way goodness, badness  
 and disease specific to the genesis of the entity. However,  
 if they are not compounded from many things differing in  
 kind, but from things all of the same kind, as might happen  
 if there were a house built from baked brick alone, or  
 stones, you will clearly discover goodness, badness and  
 disease only in the arrangement of the *homoiomerous*  
 parts. The discussion indicates to us that one of the things  
 spoken of exists in the *homoiomerous* bodies, but which  
 one of these it actually is requires precise consideration.

243K

We certainly see that even philosophers, when they  
 come to such an investigation, disagree comprehensively  
 with each other, just as some doctors do. This seems to me  
 to be why the majority of doctors eschew this kind of in-  
 vestigation, despairing of ever discovering what they are  
 seeking. On the other hand, there are some who have  
 dissociated themselves from such investigations, because  
 they think that discovery is not only impossible, but also  
 useless. That it is not useless, if someone intends to con-  
 struct the art by method and not by trial and error, seems  
 to me to be clear already. Let us next consider whether or  
 not it is impossible, after first discussing it a little more  
 between ourselves. If you have faith in me, as you do, and  
 you see I do nothing with a view to reputation but every-  
 thing with a view to truth, don't be deterred by the great

<sup>16</sup> This refers to a group of remedies used either as a dry ap-  
 plication or in plasters for disorders of the head—see *MM*,  
 X.445K for composition; *Comp. Med. Gen.*, XIII.844K for uses,  
 and XIII.541–43 for use in a plaster. The essential feature is the  
 drying capacity.

244K πληττέτω σε τὸ πλήθος τῶν διαφωνησάντων ἰατρῶν  
 τε καὶ φιλοσόφων. εἰ μὲν γὰρ ἐξ ὧν χρῆ γινῶναι  
 τάληθές ἅπανσιν ὑπήρξεν, εἴτ' οὐχ εἶρον, εὐλογον ἢ  
 ἀπογινῶναι | τῆς εὐρέσεως· εἰ δὲ τινὰ μὲν οὐδ' ὄλως  
 ἔσχον—ὡσπερ οὖν ὁμολογοῦσι καὶ αὐτοί—τινὰ δ'  
 ἄδηλον εἰ ἔσχον, ἡμεῖς δὲ σύνοισμεν ἡμῖν αὐτοῖς ἔχου-  
 σιν ἅπαντα, θαρρούντως χρῆ προσιέναι τῇ ζητήσει.

τίνα τοῖωνν ἐστίν, ἃ χρῆ συνελθεῖν, ἵνα ζητῶν  
 ὁτιοῦν τις ἦτοι γινῶ τάληθές ἢ μὴ γινούς οὐκ ἀπογινῶ  
 τῆς εὐρέσεως; ἐπτα δὴ δηλονότι πρῶτον μὲν ὄξεια φύσις  
 ὡς ὅπερ ἂν ἐκδιδάσκηται μάθημα λογικὸν ἐτοιμῶς  
 ἔπεσθαι· δεύτερον δ' ἢ ἐκ τῆς παιδικῆς ἡλικίας ἀγωγή  
 τε καὶ ἀσκησις, ὡς ἐν τοῖς πρῶτοις γενέσθαι μα-  
 θήμασι. μάλιστα δ' αὐτῶν ἐν ἀριθμητικῇ τε καὶ γεω-  
 μετρῖα γυμνάσασθαι καθάπερ καὶ Πλάτων συμβου-  
 λέει· τρίτον ἐπὶ τούτοις ἅπανσιν ὑποσχέειν τὰ ὄτα  
 τοῖς κατὰ τὸν ἑαυτοῦ χρόνον ἀρίστοις εἶναι δοκοῦσιν·  
 εἴτα τέταρτον αὐτὸν εἶναι φιλοπονώτατον ὡς μηδὲν  
 μήθ' ἡμέρας μήτε νυκτὸς ἐκμελετᾶν ἄλλο πλὴν τῶν  
 μαθημάτων· εἴτα πέμπτον, ὅπερ ὀλιγίστοις ὑπήρξεν,  
 ἀληθείας ὀρεχθῆναι καὶ τοῦτο σπουδάσαι μόνον ἐν  
 245K ἅπαντι τῷ βίῳ, καταφρονήσαντα τῶν ἄλλων ἀπάν-  
 των, ἃ τοῖς | πολλοῖς διεσπούδασαι πρὸς τούτοις  
 ἔκτον, ἐκμαθεῖν τινα μέθοδον, ἣ διακρίνεται τὸ ἀληθές  
 τε καὶ τὸ ψεῦδος. οὐ γὰρ δὴ ἀποχρήσει γε μόνον εἰς  
 τὴν εὐρεσιν ὧν ζητοῦμεν ἐπιθυμῆσαι τῆς ἀληθείας,  
 ἀλλὰ χρῆ καὶ δύναμιν τινα τῆς εὐρέσεως πορίσα-

number of doctors and philosophers who disagree. For if  
 those things necessary for the discovery of the truth were  
 available to them all, and yet they did not discover it, to  
 despair of its discovery would be entirely reasonable. If, 244K  
 however, they don't have some of these things at all—and  
 they themselves admit this—or it is not clear whether they  
 have some, but we know they all exist in ourselves, we  
 must confidently go forward in our investigation.

So what are the things which must come together for  
 someone investigating anything either to discover the  
 truth, or if he doesn't, to abandon the search? Clearly  
 there are seven. First is a quick nature, so he readily fol-  
 lows a logical lesson which he is taught. Second is an  
 upbringing from childhood such that he has engaged in  
 the primary studies, and of these is particularly trained in  
 arithmetic and geometry, just as Plato too advises.<sup>17</sup> Third,  
 in addition to all these, is that he has listened to those who  
 seem to be the best in his own time. Fourth, he must  
 be most diligent, so that neither during the day nor at  
 night does he train in anything other than his studies.  
 Then fifth, what is present in very few, he must desire the  
 truth and be zealous in the pursuit of this alone through- 245K  
 out his whole life, despising all other things which are  
 anxiously sought after by the majority. In addition to these,  
 there is a sixth which is to learn a certain method by which  
 to distinguish truth and falsehood, for an enthusiasm for  
 truth will not in itself be enough for the discovery of the  
 things we seek; it is also necessary to acquire a capacity for

<sup>17</sup> See, for example, *Republic*, 522C–27C, and *Gorgias*, 508a4–8.

σθαι. ἑβδομον ἐπὶ τούτοις ἅπασιν, ἀσκήσαι τὴν μέθοδον, ὡς μὴ γινώσκειν μόνον, ἀλλὰ καὶ χρῆσθαι δύνασθαι. εἰ γὰρ δὴ τοῖς μὲν ῥήτορσιν ἐλάττωνα τέχνην μετερχομένοις οὐχ ἰκανὸν εἶναι δοκεῖ τὸ γινῶναι τὴν μέθοδον, ἀλλ' ἐν ἅπαντι τῷ βίῳ τὴν ἀσκησιν αὐτῆς μεταχειρίζονται<sup>21</sup> τοῖς δ' οὕτω μεγάλα ζητούσιν ἀποχρήσει μόνον ἐκμαθεῖν τὴν μέθοδον; εἰ μὲν οὖν ἐν τῶν εἰρημένων ἐνδέοι τῷ καθηγουμένῳ τῆς ἐπὶ τὴν ἀλήθειαν ὁδοῦ, δίκαιόν ἐστι μὴ πάνυ τι τυχεῖν ἐλπίζειν ὧν ἐφίεται· εἰ δ' ἅπαντα ὑπάρχει, τί κωλύει ζητεῖν τὸ ἀληθὲς ἐπ' ἐλπίσιν ἀγαθαῖς;

246K 7. Ἐστὶ μὲν δὴ τὸ προκείμενον, ὡσπερ τοῦ συμπαντος σώματος ἐξ ἀνατομῆς ἐμάθομεν ἅπαντα τὰ μόρια μέχρι τῶν ἀπλουστάτων ὡς πρὸς τὴν αἴσθησιν, οὕτω καὶ αὐτῶν τούτων ἐξευρεῖν, ὅποια τὰ πρὸς τὴν φύσιν ἐστὶ τὰ πρῶτά τε καὶ ἀπλούστατα μόρια. μὴ τοίνυν ἐπὶ πάντων, ἀλλ' ἐφ' ἐνὸς ὡς ἐπὶ παραδείγματος ὁ λόγος ἡμῖν γινέσθω, τῆς σαρκός, ἐπισκεπτομένοις, πρῶτον μὲν, εἰ ἐν τι τὴν ἰδέαν ἐστὶ τὸ γεννησάν αὐτὴν στοιχεῖον—οὐδὲν γὰρ χεῖρον οὕτως ὀνομάσαι τὸ πρῶτόν τε καὶ ἀπλούστατον ἐν αὐτῇ μόριον—εἴθ' ἐξῆς, εἴπερ μὴ φαίνοντο τοιοῦτον, εἰ πολλά, κἄπειτα, πόσα γε καὶ τίνα καὶ ὅστις ὁ τρόπος αὐτοῖς ἐστὶ τῆς συνθέσεως.

ἐπεὶ τοίνυν ἡ σὰρξ ὀδυνᾶται τεμνομένη τε καὶ θερμαινομένη σφοδρῶς, ἀδύνατον ἐν εἶναι τῷ εἶδει τὸ στοιχεῖον, οἷον Ἐπίκουρος ὑπέθετο τὴν ἄτομον. ὅτι γὰρ [οὐχ]<sup>22</sup> ἐν τῷ εἶδει τὸ τοιοῦτόν ἐστι στοιχεῖον,

its discovery. Seventh, after all these, is to practice the method, so he not only knows it, but is also able to use it. Thus, it seems to orators, who practice a lesser art, not enough to know the method; they must engage in the practice of it throughout their lives. And so for those who investigate great matters, in this way will it be enough to learn the method only? Therefore, for one setting out on the road to truth, if he should lack one of the things spoken of, it is right for him not to expect to gain completely what he sets out after, whereas if he possesses them all, what is to prevent him seeking the truth with the best of hopes?

7. The matter before us now is this: just as we learned from anatomy what all the parts of the whole body are, right down to the simplest to perception, so too it is to discover of these same parts what kind the primary and simplest parts are in terms of nature. Accordingly, our discussion should not be about all the parts, but about one—the flesh—using this as an example, and examining first whether the element generating it is one in kind (for we could do worse than name the primary and simplest part in it thus), and then next, if this does not appear to be so and there are many, how many and what kinds there are, and what their manner of combination is.

And so, since flesh feels pain when cut or strongly heated, it is impossible for the element to be one in kind, as Epicurus supposed the atom to be. It is clear from this that such an element is not one in kind. None of the atoms

246K

<sup>21</sup> *om. πολὺ μάλλον K*

<sup>22</sup> *οὐχ is included in the Aldine text.*

247K

ἐνθένδε δῆλον. οὐδεμία τῶν ἀτόμων αὐτὴ καθ' ἑαυτὴν οὔτε θερμὴ τὴν φύσιν ἐστὶν οὔτε ψυχρά, οὐ μὴν οὐδὲ λευκὴ τίς ἐστὶν ἐξ αὐτῶν ἢ μέλαινα. καὶ τί διατρίβω καὶ καταμηκύνω κατακερματίζω τὸν λόγον; ὅλως γὰρ οὐδεμία ποιότης ἐστὶν ἐν<sup>23</sup> τῇ ἀτόμῳ, ὡς οἱ πατέρες αὐτῶν βούλονται. τῶν γε δὴ τοιούτων, ὅσαι<sup>24</sup> δι' ὅλων φαίνονται διεληλυθέναι τῶν σωμάτων ὡς ἢ γε κατὰ τὸ σχῆμα ποιότης ὑπάρχει πάσαις αὐταῖς, ὑπάρχει δὲ καὶ ἀντιτυπία καὶ βᾶρος, ἀλλ' εἴτε ποιότητα χρὴ καλεῖν εἴτε ἄλλο τι τὰ τοιαῦτα πρὸς γε τὸ προκείμενον οὐδὲν διαφέρει. πάσαις γὰρ αὐταῖς ὑπάρχει τὰ εἰρημένα καὶ οὐ διαφέρουσιν ἀλλήλων εἶδει, καθάπερ αἱ ὁμοιομέρειαι τοῖς ἐκείνας ὑποτιθεμένοις ἢ τὰ τέτταρα στοιχεῖα τοῖς τιθεμένοις ταῦτα.

φησὶν οὖν ὁ Ἱπποκράτης· “ἐγὼ δὲ φημι, εἰ ἐν ἦν <ὁ> ἄνθρωπος, οὐδέποτε ἂν ἤλγεεν,” ὀρθότατα λέγων. τὸ γὰρ ἐν ἀμετάβλητον εἰς ἕτερον, οὐκ ἔχον γε εἰς ὃ μεταβάλλῃ, τὸ δὲ ἀμετάβλητον ἀναλλοίωτον καὶ ἀπαθές, τὸ δ' ἀπαθές ἀνώδυνον γίγνεται τοίνυν ἐκ τῶν εἰρημένων προτάσεων συμπέρασμα τὸ ἐν ἀπαθές ὑπάρχειν. ἐφ' ᾧ πάλιν ἕτερος ἐρωτηθήσεται λόγος τοιόσδε· εἰ ἐν ἦν τῷ εἶδει τὸ στοιχεῖον, οὐδὲν ἐν τοῖς πάσιν οὐδέποτε ὀδυνήσεται· ἀλλὰ μὴν ὀδυνάται οὐκ ἄρα ἔν ἐστι τὸ στοιχεῖον. ἐπεὶ δ' ὑπέκειτο περὶ σαρκὸς ποιεῖσθαι τὸν λόγον, ἐπ' ἐκείνης ἐξεταζέσθω εἰ ἐν ἦν τῷ εἶδει τὸ τῆς σαρκὸς στοιχεῖον, οὐδέποτε ἢ

23 ἐν F; αὐτῇ K

24 ὅσαι F; ποιότητων πᾶσαι K

is in itself either hot or cold in nature, nor are any of them white or black. But why do I waste time stringing out the argument by dividing it into small parts? For there is absolutely no quality in the atom, such as the authors of the theory of atoms would wish there to be, and certainly not one of the sort to have manifestly spread throughout whole bodies. There is the quality of shape in them all, and there is resistance and weight, but whether we must call such things qualities or something else makes no difference to the matter before us, for the things mentioned exist in them all and don't differ from each other in kind, as the *homoiomeres* do to those who postulate them, or the four elements do to those who assume them.

Thus Hippocrates said: “I say, if man were one, he would never feel pain.”<sup>18</sup> And in saying this he is absolutely right. For if there is only one kind of thing, it cannot change into something else, since in fact there is nothing into which it might change, and what cannot change is immutable and impassible, and what is impassible cannot perceive pain. Accordingly, the conclusion arises from the stated premises—what is one is impassible. In addition to this, another argument will in turn be advanced as follows: If an element is one in kind, among all things there is none that will ever feel pain. But there is the feeling of pain, therefore the element is not one. Since it was proposed to make the argument about flesh, let us examine that. If the element of flesh is one in form, flesh will never feel pain.

247K

248K

<sup>18</sup> Hippocrates, *Nature of Man*, 2.

248K σὰρξ | ὀδυνήσεται ἀλλὰ μὴν ὀδυνᾶται οὐκ ἄρα ἐν  
 ἔστι τῷ εἶδει τὸ τῆς σαρκὸς στοιχείον. ὁ δ' αὐτὸς  
 λόγος καὶ καθ' ἕτερον ἐρωτηθήσεται τρόπον· εἰ ἀπα-  
 θές ἐστι τὸ τῆς σαρκὸς στοιχείον, οὐκ ὀδυνήσεται  
 ἀλλὰ μὴν ὀδυνᾶται οὐκ ἄρα ἐστὶν ἀπαθές. εἰ δὲ καὶ  
 πλείω λέγοι τις εἶναι τὰ στοιχεῖα μὴ μέντοι γε ἀλλοι-  
 ούμενα, καὶ πρὸς ἐκείνους<sup>25</sup> ὁ αὐτὸς λόγος ἐρωτηθήσε-  
 ται κατὰ τὸν αὐτὸν τρόπον. εἰ ἀπαθὴ τῆς σαρκὸς ἐστι  
 τὰ στοιχεῖα, οὐκ ἀλγήσει ἀλλὰ μὴν ἀλγεί· οὐκ ἄρα  
 ἐστὶν ἀπαθὴ τὰ τῆς σαρκὸς στοιχεῖα.

ὁ μὲν οὖν πρότερος λόγος ἀνατρέπει τὴν τε τῶν  
 ἀτόμων καὶ τὴν τῶν ἀνάρμων καὶ τὴν τῶν ἐλαχί-  
 στων ὑπόθεσιν, κατὰ δὲ τὸν δεύτερον ἢ τε τῶν ὁμοι-  
 ομερειῶν ἀναιρείται δόξα καὶ ἡ Ἐμπεδοκλέους. καὶ  
 γὰρ καὶ οὗτος ἐκ τῶν τεσσάρων στοιχείων βούλεται  
 συνίστασθαι τὰ σώματα μὴ μεταβαλλόντων εἰς ἄλ-  
 ληλα. πρόσεχε νοῦν ἤδη τῷ λόγῳ, ὡς θάπτον ἐλπίδος  
 ἐξεύρε τὸ μέγιστον μέρος ὧν ἐζήτει· παθητὰ<sup>26</sup> γὰρ  
 ἀπέδειξεν εἶναι δεῖν τὰ στοιχεῖα τῆς σαρκὸς. οὐκ οὖν  
 249K ἔτι καθέξουσι | σε κατὰ τὸν λόγον οἱ περὶ τὸν Ἐπί-  
 κουρον ἐν τῇ συνθέσει<sup>27</sup> τῶν ἀπαθῶν ἐκείνων σω-  
 μάτων, ἀ δὲ στοιχεῖα τῆς τῶν ὄντων ἀπάντων φύσεως  
 ὑποτίθενται τὰς ὀδύνας γεννᾶσθαι φάσκοντες· <τὸ>

<sup>25</sup> πρὸς ἐκείνους F; ἐπ' ἐκείνων K

<sup>26</sup> παθητὰ F; οὐκ ἀπαθὴ K

<sup>27</sup> σε κατὰ τὸν λόγον οἱ περὶ τὸν Ἐπίκουρον ἐν τῇ συν-  
 θέσει F; τὸ προκείμενον κατὰ τὸν λόγον ἐν τῇ συνθέσει K

But it does feel pain, so the element of flesh is not one in kind. And the same argument will also be questioned in another way. If the element of flesh is impassible, flesh will not feel pain. But it does feel pain, therefore the element is not impassible. If, on the other hand, someone were to say the elements are many but immutable, the same argument will be questioned in the same way. If the elements of flesh are impassible, flesh will not feel pain. But it does feel pain, therefore the elements of flesh are not impassible.

Thus, the first argument refutes the hypotheses of atoms or *anarmoi* (corpuscles) which are hypotheses of least bodies, whereas, according to the second argument, the notion of *homoiomeres* and the notion of Empedocles are refuted, for Empedocles wishes bodies to be composed of four elements which don't change into one another. Now direct your attention to the argument as it reveals quicker than expected the most important part of the things you were seeking, for it demonstrates that the elements of flesh need to be passible. The followers of Epicurus<sup>19</sup> will therefore no longer constrain you by the argument about the combination of the impassible bodies which they postulate are elements of the nature of all existing things, saying they are what generate pain. For the concept of

249K

<sup>19</sup> Epicurus was a particular advocate of the theory of the basic structure of matter consisting of atoms and void—a concept generally accepted as originating with Leucippus and Democritus.

ἀπαθὲς γὰρ ὀδυνώμενον οὐθ' ἡ διάνοια προσίεται,<sup>28</sup>  
καὶ πολλὰ δὴ μᾶλλον οὐδὲν τῶν αἰσθητῶν μαρτυρεῖ.  
τοὺς γοῦν δακτύλους εἰ περιπλέκοις<sup>29</sup> ἀλλήλους, εἴτ'  
αἰθῆς ἀποχωρίζοις, οὐθ' ἡ σύνοδος οὐθ' ὁ διαχω-  
ρισμὸς ὀδύνῃ ἐργάζεται. τὸ μὲν γὰρ ὀδυνᾶσθαι σὺν  
τῷ πάσχειν ἐστὶ, πάσχει δ' οὐδὲν τὸ ψαῦον, ἐπειδή-  
περ ἐν δυοῖν τούτοις ἐστὶ τὸ πάσχειν, ἀλλοιώσει τε  
τῇ δι' ὅλων καὶ λύσει τῆς συνεχείας. ὁπότ' οὖν οὐδ'  
ἐν τοῖς παθητοῖς ἐναργῶς σώμασιν οὐθ' ἡ σύνοδος  
οὐθ' ἡ ἀφοδος ὀδύνῃ ἐργάζεται, σχολῇ γε ἂν ἐν τοῖς  
ἀπαθέσιν ἐργάσαιτο. οὐ μὴν οὐδὲ τὸ ἀναρμον τὸ  
Ἀσκληπιάδου θραυστὸν ὃν ὀδυνήσεται θραυόμενον.  
ἀναίσθητον γὰρ ἐστὶν ὥστε οὐδὲ τούτῳ πλέον οὐδεν<sup>30</sup>  
ἐξ ὧν πάσχει τῆς αἰσθήσεως ἀπούσης, ὥσπερ ὀστῶ  
καὶ χόνδρῳ καὶ πιμελῇ καὶ συνδέσμῳ καὶ θριζί. καὶ  
γὰρ ταῦτα<sup>31</sup> πάσχει μὲν, οὐκ ὀδυνᾶται δέ, διότι μὴδ'  
αἰσθάνεται.

250K

χρῆ τοῖνυν τὸ μέλλον ὀδυνήσεσθαι παθητὸν εἶναι  
καὶ αἰσθητικόν· οὐ μὴν ἐξ αἰσθητικῶν γε τῶν πρώτων  
ἀναγκαῖον εἶναι τὸ αἰσθητικόν, ἀλλ' ἀρκεῖ τὸ παθη-  
τὸν μόνον αἰσθητικὸν γὰρ δύναται γενέσθαι ποτὲ  
μεταβάλλον τε καὶ ἀλλοιούμενον. ἐπεὶ δ' ἀπείρους τὸ  
πλήθος ἐγχαρῆ γενέσθαι τὰς ἐκ τῶν στοιχείων ἀλ-  
λοιώσεις τε καὶ κράσεις, ἀπειροὶ τῶν κατὰ μέρος σω-  
μάτων αἱ ιδιότητες συστήσονται, καθ' ἃς οὐδὲν ἄτο-

<sup>28</sup> προσίεται F; παραδέχεται K    <sup>29</sup> περιπλέκοις F; συμ-  
πλέξης K    <sup>30</sup> οὐδεν F; ὀδύνῃς ἔσται K

what is impassible feeling pain is inadmissible, and much more, none of the senses provides evidence for it. Anyway, if you intertwine your fingers with each other and then separate them again, neither the coming together nor the separation will produce pain. For feeling pain is associated with being affected and touch is not being affected, since being affected has two components: to be changed throughout and to have dissolution of continuity. Therefore, when neither coming together nor separating produce pain in bodies that are clearly passible, it will hardly do so in those that are impassible. Nor will the frangible corpuscles of Asclepiades<sup>20</sup> feel pain when broken for they are without sensation. As a consequence, there is nothing more by which it is affected since sensation is absent, just as in bone, cartilage, fat, ligament and hair, for these things are affected but do not feel pain because they are without sensation.

250K

Accordingly, it is necessary for what is going to feel pain to be passible and capable of sensation. It is not necessary for what is capable of sensation to be from primary components capable of sensation. It is alone enough for them to be passible, for they can become capable of sensation at some time by being changed and altered. Since it is possible for the changes and combinations of the elements to be infinite in number, the specific qualities existing in individual bodies are infinite, so it is not strange that

<sup>20</sup> None of Asclepiades' writings are extant. A detailed account of his theory of *anarmoi onkoi* is given by Vallance, *Lost Theory of Asclepiades of Bithynia*.

<sup>31</sup> *post taúta om. pánta F*

πον ἀναίσθητα γενέσθαι πολλὰ καὶ τῶν αἰσθανομένων  
τὸ μὲν μᾶλλον αἰσθάνεσθαι, τὸ δ' ἥττον.

ὅτι μὲν οὖν ἀναγκαῖόν ἐστι καὶ πλείω τοῦ ἐνὸς  
εἶναι τὰ στοιχεῖα, καὶ ἀλλοιοῦσθαι φύσιν ἔχοντα, δέ-  
δεικται σαφῶς ἤδη τοῖς γε,<sup>32</sup> ὡς ὀλίγον ἔμπροσθεν  
εἴρηται, τὴν παρασκευὴν ἔχουσιν ἅπασαν ἐξ ὧν ἂν  
τις ἐπιστημονικὸς γένοιτο. τοὺς δ' εἰς τοσοῦτον ἤκου-  
τας ἀναισθησίας, ὡς μηδ' εἴ τις ἐστὶν ἀποδεικτικὴ  
μέθοδος ζητῆσαι πρότερον ἐθέλειν ἢ παρ' ἄλλου μα-  
θεῖν, εἴτ' ἀσκηθῆναι καὶ ταύτῃ οὐδὲ κοινωνοὺς | τοῦ  
251K λόγου ποιητέον· οὐ γὰρ ἐρίζοντες ἄλλοις ἢ νικᾶν  
ἐθέλοντες, ἀλλὰ τὴν ἀλήθειαν αὐτῆν<sup>33</sup> σπουδάζοντες  
ἐπὶ τόνδε τὸν λόγον ἀφικόμεθα. τῷ γὰρ βουλομένῳ  
καὶ τὰς ἀπαιδέυτους ὑπολήψεις αὐτῶν ἐξελέγχει ἐν  
ἴδιον γέγραπται βιβλίον, ἐν ᾧ περὶ τῶν καθ' Ἴππο-  
κράτην στοιχείων ἐπισκεπτόμεθα.

8. Πάλιν οὖν ἐπανελθόντες ἐπὶ τὸ προκείμενον,  
ἐπιθῶμεν αὐτῷ τέλος. ἐπειδὴ τὸ στοιχείον ἀλλιωτὸν  
ἐστὶ δι' ὅλου, πόσα τὰ πάντ' ἐστὶ στοιχεῖα διέλθωμεν  
ἐξῆς ἀρχὴν κἀνταῦθα τῶν λόγων τῶν ἐναργῶς τι φαι-  
νομένων ποιησάμενοι. τοῖς ἀλλοιοῦσιν ὅτι οὖν ἀναγ-  
καῖόν<sup>34</sup> ἐστὶν ἀφαιμένους πρῶτον ὧν ἀλλοιοῦν, ποιή-  
σασθαι τὴν μεταβολήν, ὡς ἡ αἴσθησις διδάσκει καὶ  
αὐτῇ τῶν πραγμάτων ἢ φύσις ἐνδείκνυται. παρὰ γὰρ  
τὴν ἐννοιάν ἐστὶν ὑπὸ τῆς ἐνταῦθα φλογὸς ἀλλοιοῦ-

<sup>32</sup> δέδεικται σαφῶς ἤδη τοῖς γε, F; δεδήλωται σαφῶς, τοῖς  
γε, K <sup>33</sup> post αὐτὴν om. εὐρέιν F

many of these bodies become incapable of sensation, or  
that those capable of sensation become more or less so.

Therefore, that it is necessary for the elements to be  
more than one and have it in their nature to be capable of  
change, has already been clearly shown—at least to those  
who, as I said a little earlier, have every prior requirement  
to be capable of scientific knowledge. What we must not  
do is to make partners in our argument those who have  
reached such a degree of foolishness that they do not wish  
to investigate first whether there is some demonstrative  
method or learn it from another, and then become prac-  
ticed in it. For it was not by contending with others or  
wishing to carry the day, but by being zealous about dis-  
covering the truth itself, that we came to this argument.  
It is for anyone who wishes to refute the ill-informed as-  
sumptions of these people that I have written one specific  
book in which I give consideration to the elements accord-  
ing to Hippocrates.<sup>21</sup>

8. Going back again to what was proposed, let us bring  
this to a conclusion. Since the element is capable of change  
throughout, let us next go through how many elements  
there are in all, here too beginning the arguments from  
things that are clearly apparent. It is necessary for those  
things that change anything whatsoever to first touch what  
they change in order to produce the change, as sense per-  
ception teaches and the actual nature of the matters  
shows. Thus, it is contrary to reason for something in

<sup>21</sup> This is his *Elem. Hippocr.*, I.413–509K. For an English  
translation of this work, see de Lacy, *Galen on the Elements*.

<sup>34</sup> καὶ ἀφαιμένους ὧν πρῶτον post ἀναγκαῖον K

σθαί τι τῶν ἐν Αἰγύπτῳ, καὶ μὴν εἰ ἀψάμενον ἄλλοιοὶ τὸ μεταβάλλον, ἀναγκαῖον αὐτῷ κατὰ τινα τῶν ἀπτῶν ποιότητων ἐνεργῆσαι. τί οὖν τὸ κωλύον ἐστὶν ἐπισκέψασθαι πάσας αὐτάς;

252K ὀξύτης<sup>35</sup> μὲν οὖν τέμνει τὸ πλησιάζον, | ἀλλ' οὐκ ἄλλοιοὶ τὴν οὐσίαν αὐτοῦ, καθάπερ οὐδὲ τὸ βᾶρος, ἀλλὰ θλά μὲν καὶ τοῦτο, δι' ὅλου δ' οὐκ ἐργάζεται τῆς πασχούσης οὐσίας τὴν μεταβολήν. οὐ μὴν οὐδὲ σκληρότης οὕτως ἀλλοιῶσαι δύναται τὸ πλησιάζον ὡς εἰς ἕτερον εἶδος μεταστῆσαι. θερμότης μέντοι καὶ ψυχρότης ὅλην ἀλλοιῶσαι δύναται τὴν πλησιάζουσαν οὐσίαν. ὡσαύτως δ' ὑγρότης καὶ ξηρότης, εἰ καὶ μὴ διὰ ταχέων ὁμοίως ταῖς εἰρημέναις, ἀλλ' ἐν χρόνῳ γε καὶ αὐταὶ μεταλλάττουσι τὸ ὑποκείμενον. ἄρ' οὖν καὶ ἕτεραν τιὰ ἔχομεν ἄλλοιοῦν δυναμένην ἢ τὸ σὺμπαν πλῆθος ἐν ταύταις ἐστί, καὶ μόνας ὀνομάζεσθαι τε καὶ νομίζεσθαι προσήκει τὰς εἰρημένας ποιότητας δραστικὰς, καὶ μάλιστα ἐν αὐταῖς τὴν πρώτην ἀντίθεσιν, καὶ κατ' αὐτὴν μᾶλλον τὴν θερμότητα; δραστικωτάτη γὰρ αὕτη τῶν ποιότητων ἐστίν, ἐξῆς δ' αὐτῆς ψυχρότης, εἰθ' ὑγρότης τε καὶ ξηρότης. ἄλλη δ' οὐδὲ μία ποιότης ἄλλοιοὶ τὰ πλησιάζοντα δι' ὅλων αὐτῶν. εἰ γὰρ διασπᾶ καὶ θλά καὶ τέμνει καὶ νύττει δρᾶ μὲν τι<sup>36</sup> καὶ τοῦτο, δι' ὅλου δ' οὐκ ἐκτείνει τοῦ πάσχοντος | τὴν ἀλλοίωσιν, ὅθεν οὐδ' εἰς ἕτερον εἶδος οὐσίας αὐτὸ μεθίστησιν, ἀλλ' εἰς πλείω διαιρεῖ. τὴν γοῦν χιόνα διαιρῶν μὲν εἰς ἐλάχιστα μόρια φυλάξει χιόνα, θερμῆνας δὲ παύσεις<sup>37</sup> χιόνα. καὶ γὰρ καὶ ἡ γένεσις

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Egypt to be changed by a flame here. And if what changes something does so by touching it, then it is necessary for it to effect this in relation to some of the tangible qualities. What, then, is to prevent us examining all these?

Thus sharpness cuts what it comes near but doesn't alter its substance, just as heaviness does not, but rather crushes it, and does not effect a change throughout the substance of what is affected. Nor is hardness able to change what it comes near to in this way, converting it into a different kind. However, heat and cold can change the whole substance of what they come near to, in the same way as moisture and dryness can, although not as quickly as those just mentioned. But in time, at least, these too change what is underlying. Do we, then, have something else with the capacity to effect change, or is the full extent in these, and are the things spoken of alone appropriate to term and consider active qualities, and particularly among those the first antithesis (hot/cold), and especially within this, heat? For heat is the most active of the qualities, following it, cold, and then moisture and dryness. No other quality completely changes the things it comes near to, for if something tears, crushes, cuts or pierces, it does do something, but the change doesn't extend through the whole of what is affected. This is why it doesn't transform it into another kind of substance, but divides it more. For example, if you divide snow into the smallest possible parts, you will still preserve it as snow, whereas if you heat it, you will put an end to it being snow. Moreover, the

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<sup>35</sup> ὀξύτης F; ὀξύ K

<sup>36</sup> μὲν τι F; μέντοι K

<sup>37</sup> τοῦ εἶναι post παύσεις K



ἐξ ὕδατος αὐτοῦ ψυχθέντος, οὐκ εἰς ἓν ἀθροισθέντος· αὐξησις μὲν γὰρ οὐσίας τοῦτο, γένεσις δ' ἐκείνο. καὶ δὴ καὶ τῶν ἐναντίων ἢ μὲν εἰς σμικρὰ διαίρεσις, μείωσις τῆς οὐσίας ἐστίν, ἢ δὲ θέρμανσις ἐτέρας οὐσίας ἐστὶ γένεσις, ὅταν ἀλλοιώσῃ τὸ προϋπάρχον εἶδος.

254K ὅσα τοίνυν σώματα πρῶτα τὰς τοιαύτας ἔχει ποιότητας, ἐκείνα στοιχεῖα τῶν ἄλλων ἀπάντων ἐστὶ καὶ τῆς σαρκός. ἔστι δὲ ταῦτα γῆ καὶ ὕδωρ καὶ ἀήρ καὶ πῦρ, ἅπερ ἅπαντες οἱ μὴ φύγοντες ἀπόδειξιν φιλόσοφοι στοιχεῖα τῶν γεννωμένων τε καὶ φθειρομένων ἔφασαν εἶναι, καὶ μεταβάλλειν εἰς ἀλλήλα φασιν αὐτὰ καὶ εἶναι τι κοινὸν ἅπασιν ὑποκείμενον. ἀλλ' οὐ περὶ τούτων ὁ λόγος, ὅτι δ' οὐ χρὴ δυσωπείσθαι τὸ πλήθος τῶν ἀμαρτανόντων τῆς ἀληθείας, ἀλλ' εἰ μὲν ἔχει τις ἀπόδειξιν, ἢ ἐκείνη πιστεύειν, εἰ δ' οὐκ οἶδεν ὅλως οὐσίαν ἀποδείξεως, ὥσπερ ἔνιοι τῶν φιλοσοφῶν φασκόντων ὁμολογοῦσι, μὴ τολμᾶν ἀποφαίνεσθαι πάντως. παραπλήσιον γὰρ τοῦτό γε τῷ βούλεσθαι μαθεῖν, ὅπως χρὴ προγιγνώσκειν ἔκλειψιν ἡλίου, πρὶν ἐπ' ἀριθμῶν καὶ γραμμῶν γυμνάσασθαι. φευκτέον οὖν σοι τοὺς τοιούτους ἐστὶν<sup>38</sup> ἀνθρώπους ὥσπερ τὰ βάραθρα· συγκατασπῶσι γὰρ αὐτοῖς ἐνίοτε τοὺς πλησιάζοντας ἢ πάντως γε ῥυπαίνουσιν, εἰ μὴ τις ἰκανῶς εἴη γεγυμνασμένος ἐν θεωρίᾳ λογικῇ, ταύτη τοι καὶ ἀσκητέον ἡμῖν, οὕτως ὡς οὐδὲν ἕτερον, ἐκείνην τῇ θεωρίαν· ἀλλὰ τοῦτο μὲν οἶδ' ὅτι ποιήσεις.<sup>39</sup>

generation of snow is from the cooling of the water constituting it and not by a collecting together into one—this is an increase in substance, whereas the former is a generation. Furthermore, the division of opposites into small parts is a diminution of substance, while heating is a generation of another substance whenever it changes the pre-existing kind.

Therefore, those primary bodies that have such qualities are the elements of all the others, and of flesh. These are earth, water, air and fire, which all the philosophers who do not resile from demonstration say are elements of things that come into being and pass away. They also say these [four] change into one another and that there is some common thing underlying them all. But the discussion is not about these; it is rather that one must not be troubled by the large number of people who fall into error on the matter of what is true. If someone has a demonstration, he should believe in that, while if he is completely ignorant of the essence of demonstration, as some who say they are philosophers admit to being, he should not be so bold as to make any declaration at all. This would be like someone wishing to learn what is necessary for predicting an eclipse before he is practiced in numbers and lines. You must, then, avoid such people as you would the infernal regions, for they sometimes drag those who associate with them down as well, or at all events contaminate them, unless one is sufficiently practiced in logical theory. And here certainly we must train ourselves in that theory like no other. But I know you will do this.

<sup>38</sup> τοὺς τοιούτους ἐστὶν F; τοιούτους K

<sup>39</sup> ποιήσεις F; πάρεργον K

9. Ἐπὶ δὲ τὸ προκείμενον ἐπανίωμεν. ἐκ τῶν τεσσάρων στοιχείων ἀλλήλοις κεραυνυμένων ἐν ὁμοιομερῆς γίγνεται σῶμα, κατὰ τὸ τῆς κράσεως ποιὸν ἦτοι γ' αἰσθητικὸν ἢ ἀναίσθητον, ὡσαύτως δὲ καὶ <αἷ> κατὰ μέρος ὡς ἐν ἑκατέρῳ τῷ γένει διαφοραὶ πᾶσαι τῇ τῆς κράσεως ἔπονται διαφορᾷ. κατὰ γούν  
 255K τὴν ταύτης ιδιότητα τὸ μὲν ὀστοῦν γίγνεται, | τὸ δὲ σὰρξ, τὸ δ' ἀρτηρία, τὸ δὲ νεῦρον. ἀλλὰ καὶ ἡ καθ' ἑκάστου αὐτῶν ὀτιοῦν<sup>40</sup> ιδιότης ἐν τῇ τῆς κράσεως ἐστὶν ιδιότητι ξηροτέρα μὲν γὰρ καὶ θερμότερα σὰρξ ἢ τοῦ λέοντος, ὑγροτέρα δὲ καὶ ψυχροτέρα <ἡ> τοῦ προβάτου, μέση δ' ἀμφοῖν ἢ <τ>ἀνθρώπου. καὶ αὐτῶν δὲ τῶν ἀνθρώπων ἡ μὲν τοῦ Δίωνος, εἰ οὕτως ἔτυχε, θερμότερα, ψυχροτέρα δ' ἢ τοῦ Φίλωνος· ὥστε γίνεσθαι τὰς πάσας<sup>41</sup> διαφορὰς τῶν ὁμοιομερῶν σωμάτων ἀπλᾶς μὲν ὅσαπερ ἐστὶ τὰ στοιχεῖα, θερμότεραν καὶ ψυχροτέραν καὶ ὑγροτέραν καὶ ξηροτέραν, συνθέτους δ' ἄλλας τέτταρας, ὑγροτέραν τε ἅμα καὶ ψυχροτέραν, θερμότεραν τε <ἅμα> καὶ ὑγροτέραν· ἄλλην τέ τινα τρίτην ξηροτέραν <τε> ἅμα καὶ θερμότεραν, ἐφ' ἣ τετάρτην ψυχροτέραν τε ἅμα καὶ ξηροτέραν· ἐφ' αἷς πρώτῃν ἀπασῶν εἶναι τὴν εὐκρατοτάτην.

ἀλλὰ περὶ μὲν τούτων ὁ λόγος ἱκανὸς ἐξείργασται σύμπας ἐν τοῖς Περὶ κράσεων· ὁ δὲ νῦν ἐνεστῶς, ἐπειδὴ τῶν ὁμοιομερῶν τὴν ἀρετὴν τε καὶ κακίαν ἐξεῦρεν ἐν τῇ συμμετρίᾳ τε καὶ ἀμετρίᾳ τῶν στοι-

<sup>40</sup> add. ὀτιοῦν F

<sup>41</sup> add. πάσας F

9. But let us return to the matter before us. A single *homoiomerous* body arises from the four elements being mixed with each other. Whether the body is capable of sensation or not depends on what kind of *krasis* (mixing) it has, while similarly all the differences in each class individually follow the difference of the *krasis*. Anyway, in relation to the specificity of this (*krasis*), a bone arises, or  
 255K flesh, or an artery or nerve. But also the specificity in each of these things, whatever it is, lies in the specificity of the *krasis*. Thus, a lion's flesh is drier and warmer, whereas that of a sheep is moister and colder. Midway between the two is human flesh, and among men, that of Dion may happen to be warmer while that of Philon may happen to be colder. Consequently, all the differences of the *homoiomerous* bodies are simple and as many as the elements are (i.e., four)—that is, hotter, colder, moister and drier—more moist and at the same time colder, hotter and at the same time more moist, and another and third, more dry and at the same time hotter, and fourth, in addition to this, colder and at the same time more dry. In addition to these, and first of all, is the most *eukratic*.

But the whole argument about these [*krasias*] has been worked out sufficiently in the treatises *On Mixtures*<sup>22</sup> The argument now before us, since we have discovered that the goodness and badness of the *homoiomeres* lies in the balance and imbalance of the elements, is to seek next to

<sup>22</sup> The major work on *krasias* (temperaments, mixtures) is *Mixt.*, I.509–694K. For an English translation of this work, see Singer, *Galen: Selected Works*.

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χείων, ἐξῆς ζητήσῃ διορίσαι τῆς κακίας αὐτῶν τὴν νόσον. ὁ διορισμὸς δ' ἀπὸ τῆς ἐννοίας ἑκατέρων | τῶν πραγμάτων, ὡς ἐν τῷ Περὶ ἀποδείξεως ἐδείκνυτο, τὴν πρώτην ἀρχὴν ἔξει. τίς οὖν ὑγιαίνουσας κατασκευῆς σώματος ἐννοία καὶ τίς ἤδη νοσοῦσας; ἡ μὲν οὖν ὑγιαίνουσα κατασκευῆ σώματος ἀβλαβεῖς ἔχει τὰς κατὰ φύσιν ἐνεργείας, ἡ δὲ νοσοῦσα βεβλαμμένης, ὥστ' ἐπειδὴν τις ὑγιαίνων ἀσθενεστεράς μὲν ὑγιαίνουτος ἐτέρου τὰς ἐνεργείας ἔχη, μηδέπω δὲ βεβλαμμένης, δυσκρατότερος μὲν ἐστὶ, νοσεῖ δ' οὐδέπω. μία μὲν οὖν ἡ εὐκρατοτάτη τῶν ἑξῶν ἐστὶ τῶν ὑγιεινῶν, ὀκτῶ δὲ δύσκρατοι, νόσος δ' εὐκρατος μὲν οὐδεμία, δύσκρατοι δὲ σύμπασαι, τοσαῦται τὸν ἀριθμὸν ὅσαι περ αἱ ὑγιεῖναι δυσκρασίαι.

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εἰ δ' οὐκ ἀρέσκει τιμὴ τῶν ὑγιαίνοντων τοὺς μὲν εὐκράτους τίθεσθαι, τοὺς δὲ δυσκράτους, οὗτος ἀναγκασθήσεται δυοῖν δογμάτων ἐλέσθαι θάτερον, ἥτοι διὰ παντὸς ἅπαντας νοσεῖν ἢ μίαν ἀπάντων ἀνθρώπων<sup>42</sup> εἶναι κρᾶσιν, ἀνδρῶν καὶ γυναικῶν, ἀκμαζόντων, γερόντων, παίδων, ἀθλητῶν, ἰδιωτῶν, ἐργατῶν, ἀργῶν, ἰσχυρῶν, ἀσθενῶν ἄλλ' ἑκάτερον ἄποπον. ἀναγκαῖον οὖν | τρίτον εἶναι τι πλάτος ὑγείας, ὡς παμπόλλας ἐν αὐτῷ περιέχεσθαι διαφορὰς τῶν ὑγιαίνοντων σωμάτων ἐν τῷ μᾶλλον τε καὶ ἥττον. οὕτως

<sup>42</sup> add. ἀνθρώπων F

<sup>23</sup> This, a major work, is no longer extant. In Galen's *De libris*

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distinguish disease from badness in these. The distinction will have its first division from the concept of each of the matters, as was shown in the work *On Demonstration*.<sup>23</sup> What, then, is the concept of a healthy constitution of a body and what of one already diseased? Surely, the healthy constitution of a body has no damage of the functions that accord with nature, whereas in a diseased constitution, the functions have been damaged, so that whenever someone who is healthy has weaker functions than those of another healthy person, but these functions are not yet damaged, he is more *dyskratic* but not yet diseased. One state of those who are healthy is perfect *eukrasia* while eight are *dyskrasias*. On the other hand, no disease is *eukratic*—they are all *dyskratic* and the same in number as the healthy *dyskrasias*.

However, if it is not acceptable to regard some healthy people as *eukratic* and some as *dyskratic*, it will be necessary to choose one of two doctrines—either everyone is continuously ill or there is one *krasis* for all people, men and women, people in their prime and those who are old, children, athletes, laymen, those who are active and those who are idle, those who are strong and those who are weak. But each of these doctrines is untenable. Therefore, it is necessary for there to be a third, broad category of health such that the very many differences of healthy bodies are included in it on the basis of more and less. And

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*propriis*, he writes: "Now those who wish to cultivate the geometrical style of proof must be advised to acquire a thorough training in it, and after that, to read my work *On Demonstration* in fifteen volumes" (XIX.41K). Translation after Singer, *Galen: Selected Works*, 19.

δὲ καὶ τοῖς ἄλλοις ἅπασιν ἔχει καὶ γὰρ οἰκία καὶ ναῦς καὶ σκίμπους καὶ κιβωτὸς ἱμάτιόν τε καὶ ὑπόδημα καὶ δίφρος ἤτοι βέλτιόν ἐστιν ἢ χεῖρον τῇ κατασκευῇ, πρὶν νοσεῖν. καὶ τρεῖς ταύτας ὑποθετέον ἡμῖν ἐστί κατασκευᾶς σώματος ἐν ἅπασιν τοῖς οὖσι, τὴν ἀρίστην, τὴν φαύλην, τὴν νοσοῦσαν· ἀλλ' ἢ μὲν ἀρίστη μία—τὸ χεῖρον γὰρ οὐκ ἐγγίγνεται τῷ τελεωτάτῳ—τῶν δ' ἄλλων ἀμφοῖν οὐκ εὐαρίθμητον μὲν τὸ πλήθος, αἱ διαφοραὶ δ' ἐν τῷ μᾶλλον τε καὶ ἥττον.

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10. Ὅπου οὖν ἐν τῷδε τῷ λόγῳ γεγόναμεν, ἐπιστήσαντες αὐτὸν ἀναλάβωμεν ἐν κεφαλαίοις τὰ εἰρημένα. γνωσόμεθα γὰρ οὕτως, ὅποσον τε τοῦ ζητουμένου τὸ εὐρημένον ἤδη καὶ ὅποσον ἔτι τὸ ὑπολειπόμενον ἐστί. προῦκειτο μὲν ἡμῖν συστήσασθαι τέχνην ὑγείας ποιητικὴν, ἀλλ' οὐχ οὕτως ὡς ἡ οἰκοδομικὴ τῆς οἰκίας δημιουργικὴ ἐστίν, ἀλλ' ὡς τοῦ διαφθειρομένου μέρους αὐτῆς ἐπανορθωτικὴ, καὶ οὐδ' ἐνταῦθα πάντῃ τὸν αὐτὸν τρόπον· ἀλλ' αὐτὸ δὴ τοῦτο τὸ ζητούμενον ἦν, ἐξευρεῖν ἄχρι πόσου, παραπλησίως οἰκοδόμῳ, τὰ σφάλματα τοῦ σώματος ἐπανορθοῦσθαι δυνατὸς ἐστίν ὁ τὴν ὑγιαστικὴν τέχνην μεταχειριζόμενος. ἐπεὶ δ' ἀναγκαῖον εἰς ἅπαντα τὰ τοιαῦτα προεγνώσθαι τὴν φύσιν τοῦ σώματος, οὗ τὰ σφάλματα μέλλει θεραπεύειν ἢ τέχνη, διὰ τοῦτ' αὐτὴν ἐζητήσαμεν· εὐρόντες δ' ὡς ἐνέργειαί τε καὶ κατασκευαὶ μορίων εἰσὶ κατὰ

<sup>24</sup> This section is a very condensed statement of Galen's basic theory of disease, the necessary definitions of health and disease,

the same holds for all other matters—a house, ship, bed, box, cloak, shoe and stool are either better or worse in constitution before they are “diseased.” So we must assume there are these three constitutions of a body in all existing things: the best, the inferior and the diseased. But the best is one, for the inferior is not present in the most perfect, while the number of both the others is not easy to count, the differences being in degree.<sup>24</sup>

10. Therefore, since we are at this point in the discussion, let us stop it here and summarize what has been said under headings. In this way we shall find out how much of what is being sought is already discovered and how much still remains to be discovered. The task before us was to construct an art productive of health, but not in the way the art of building constructs a house; rather as it is restorative of a damaged part of it, and not in the same way in every case. Instead, what was sought was actually this: to discover to what extent the one who practices the curative art is able, like the house builder, to restore the defects of the body. Since it is necessary in all such matters to have prior knowledge of the nature of the body, the defects of which the art is going to treat, we sought it through these. Having discovered that there are functions and constitutions of the parts that accord with nature,

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the “gray” area between perfect health and frank disease, and the classes of *dyskrasias*. These matters are dealt with more fully in a number of works—for example, the four short treatises on the *differentiae* and causes of diseases and symptoms. See Johnston, *Galen on Diseases and Symptoms*; Galen, *MM*, 2, and the opening chapters of *Arts medica*, where the concept of a tripartite division into “healthy,” “diseased,” and “neither” is introduced.

φύσιν, ὧν ἀντιποιεῖσθαι χρή παντὶ τρόπῳ τῆς φυλακῆς τε καὶ τῆς ἐπανορθώσεως, ἐπειδὴν πάσχοιεν, ἐκ πόσων συμπληροῦνται τὸ κατὰ φύσιν, ἐζητήσαμεν εὐρόντες δ' ὡς τοῖς ὀργανικοῖς μορίοις ἐκ συνθέσεως ἐστὶ τῶν ἐν αὐτοῖς ἀπλῶν ἢ οὐσία, τοῖς δ' ἀπλοῖς ἐκ τῶν τεσσάρων στοιχείων, ἐφεξῆς καὶ περὶ τῶν καθ' ἑκάτερον νοσημάτων ἐσκεψάμεθα.

καὶ σχεδὸν ἡμῖν ὁ λόγος ἤδη τὴν γνώσιν τῶν ὑγιεινῶν τε καὶ νοσῶδων σωμάτων ἐξεύρηκεν, οὐδὲ ταύτην ἅπασαν, ἀλλ' εἶδος τι μόνον αὐτῆς καὶ οἶον παράδειγμα· τὴν δὲ σύμπασαν οὐσίαν τῆς τῶν ὑγιεινῶν τε καὶ νοσῶδων σωμάτων ἐπιστήμης ἐξομεν, ἐπειδὴν ταῖς ὕλαις ἐμβιβάσωμεν τὰ εἶδη, χρή γὰρ οὐ μόνον, ὅτι θερμοῦ καὶ ψυχροῦ καὶ ξηροῦ καὶ ὑγροῦ κερασθέντων ἕκαστόν γίγνεται μόριον, ἐγνωκέναι τὸν ἰατρόν, ἀλλὰ καὶ κατ' εἶδος ἐπελθόντα, τίς μὲν ἢ τῶν ὀστέων ἐστὶ κρᾶσις, ὅποια δ' ἢ τῶν σαρκῶν τε καὶ νεύρων καὶ φλεβῶν ἑκάστου τε τῶν ἄλλων τῶν ἀπλῶν ὡσαύτως δὲ καὶ τῶν ὀργανικῶν ἧτις ἑκάστου μορίου σύνθεσις, οἶον σκέλους, χειρός, ἥπατος, θώρακος, πνεύμονος, καρδίας, ἐγκεφάλου. κατὰ δὲ τὸν αὐτὸν τρόπον οὐχ ἀπλῶς τὰ γένη τε καὶ τὰς διαφορὰς τῶν νοσημάτων ἀνταρκές ἐστὶ γινώσκειν, ἀλλὰ καὶ καθ' ἕκαστον μόριον ὅπως γίγνεται ταῦτα. τοῦτο γὰρ ποιήσαντες ἐπιστήμην ἂν ἔχοιμεν ὑγιεινοῦ τε καὶ νοσεροῦ σώματος, οὐ κατὰ τὸ εἶδος μόνον, ἀλλὰ καὶ καθ' ὅλην τὴν οὐσίαν, ἧτις ἐκ συναμφοτέρων ἐδείχθη συνίστασθαι, τοῦ τε εἶδους καὶ τῆς ὑποδεχομένης ὕλης

which we must strive to preserve and restore in every way whenever they are affected, we looked into how many things make up this accord with nature. Then, having discovered that the substance in the organic parts arises from a combination of the simple parts in them, and in the simple parts the substance is from the four elements, we next considered the diseases in both.

And already the argument has almost discovered for us the knowledge of healthy and diseased bodies, although not this knowledge in its entirety but only a kind of it—a paradigm, as it were. We shall possess the whole essence of the knowledge of healthy and diseased bodies when we set the kinds on the materials. For not only must the doctor know that each part arises from a mixing of hot, cold, dry and moist, but also, going on to each kind, he must know what the *krasis* of bones is, and what kind it is of flesh, nerves, veins and each of the other simple parts. In like manner too, he must know what the composition of each of the organic parts is—for example, legs, arms, liver, chest, lungs, heart and brain. By the same token, it is not enough simply to know the classes and *differentiae* of diseases, but also how these arise in each part, for if we were to do this, we would have a knowledge of a healthy and diseased body—and not in respect of kind alone, but in respect of the whole substance, which was shown to be constituted from both together, the form and the matter receiving this. What remains is to go over how someone might cure diseases and preserve health. These are mat-

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αὐτό. κατάλοιπον δ' ἐστὶ διελθεῖν, ὅπως ἂν τις ἐξιῶτο  
 τε τὰ<sup>43</sup> νοσήματα καὶ φυλάττοι τὴν υἰείαν, ἄπερ ἐπι  
 πλείστον | μὲν ἐν δύο πραγματείαις διερχόμεθα, τῇ  
 τε τῆς θεραπευτικῆς μεθόδου καὶ τῇ τῶν Ἵγυειῶν  
 ἐνταῦθα δ' ὅσον ὑποδείξει τὴν μέθοδον αὐτῶν ἀρκεῖ  
 μνημονεύσαι.

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11. Ἡ μὲν οὖν θεραπευτικὴ μέθοδος ἐκ τῆς τῶν  
 υἰγαινόντων τε καὶ νοσοῦντων σωμάτων ἀρχεται δια-  
 θέσεως. ἐπειδὴ γὰρ τὸ μὲν υἰγαῖνον,<sup>44</sup> ἂν θ' ὁμοιο-  
 μερές, ἂν τ' ὀργανικὸν ἦ, σύμμετρον πάντα ἐστίν,  
 ἄμετρον δὲ τὸ νοσοῦν, ἐπισκεπτέον αὐτὴν τὴν ἀμε-  
 τρίαν τίς ἐστίν. ἀνάγκη γὰρ εἶναι ἐτέραν ἐναντίαν  
 ἀμετρίαν αὐτῇ. κατὰ μὲν τὰς τῶν ὁμοιομερῶν καὶ  
 ἀπλῶν σωμάτων διαθέσεις ποιότητα, κατὰ δὲ τὰς τῶν  
 ὀργανικῶν, εἰ μὲν εἴη κατὰ μέγεθος ἢ ἀμετρία τοῦ  
 νοσήματος, ἕτερον ἐναντίον μέγεθος, εἰ δὲ κατὰ διά-  
 πλασιν, ἐτέραν ἐναντίαν διάπλασιν, οὕτως δὲ καὶ εἰ  
 κατὰ θέσιν ἢ ἀριθμόν. ἐπὶ πάντων οὖν ἢ εἰς τὸ σύμ-  
 μετρον ἐπάνοδος ἐκ τῆς ἀμετρίας ὑπὸ τῆς ἐναντίας  
 ἀμετρίας ἔσται. χρῆ γὰρ οἷον ὁδὸν τινα βαδίσαι τὸ  
 παρὰ φύσιν ἔχον ἐν τῷ πρὸς τὴν φύσιν ἐπανερχε-  
 σθαι, | τὴν αὐτὴν μὲν, ἀλλ' ἔμπαλιν ὁδοιπορήσαν' εἰ  
 δ' ἔμπαλιν ἔρχεσθαι μέλλοι, διὰ τῶν ἐναντίων ἀφίξε-  
 ται τῇ παρούσῃ διαθέσει.

καὶ οὗτος <μὲν> ἂν εἴη κοινότατός τε καὶ γενικώτα-

<sup>43</sup> ἐξιῶτο τε τὰ F; ἐξιάσαιο τὰ τε K

<sup>44</sup> post υἰγαῖνον om. καθ' ὑπερβολὴν K

ters I have covered at the greatest length in two treatises— 260K  
*The Method of Medicine* and *On the Preservation of Health (Hygiene)*.<sup>25</sup> Here it is enough to make mention of  
 these so far as to indicate the method.

11. The therapeutic method begins, then, from the  
 condition of healthy and diseased bodies. Since a healthy  
 body, whether it be *homoiomeric* or organic, is entirely  
 in balance, while a diseased body is imbalanced, we must  
 observe what the actual imbalance is. For of necessity,  
 there is another imbalance opposite to it. In respect of the  
 conditions of *homoiomeres* or simple bodies, the imbal-  
 ance will be in qualities; in respect of the conditions of  
 organic bodies, if the imbalance of the disease pertains to  
 size, the other and opposite does so too; if it pertains to  
 conformation, the other opposite pertains to conforma-  
 tion; and the same applies also if the imbalance pertains  
 to position or number. In all instances, then, the return to  
 balance from imbalance will be through the opposite im-  
 balance. For what is contrary to nature must return to  
 what accords with nature by walking along a kind of road;  
 it must travel the same road but in the opposite direction,  
 if it is going to make a return, and it will do this through  
 those things opposite to the existing condition. 261K

And this is the most common and general aim of every

<sup>25</sup> These are the two major works detailing Galen's clinical  
 practice: *MM* (X.1–1021K), and *San. Tuend.* (VI.1–451K). For an  
 English translation of the former, see Johnston and Horsley, *Ga-  
 len: Method of Medicine*; for the latter, see Green, *A Translation  
 of Galen's Hygiene*.

262K τος σκοπὸς ἀπάσης τῶν νοσημάτων τῆς ἰάσεως, τὸ ἐναντίον, ὡς πον καὶ πρὸς Ἱπποκράτους εἴρηται, "τὰ ἐναντία τῶν ἐναντίων ἰάματα." κατὰ μέρος δὲ τὰ κατὰ μέρος ἐναντία, τῷ μὲν θερμῷ νοσήματι τὸ ψυχρὸν [αἰτία],<sup>45</sup> τῷ δὲ ψυχρῷ τὸ θερμόν. ὡσαύτως δὲ καὶ τῷ μὲν ξηρῷ τὸ ὑγραῖνον, τῷ δὲ ὑγρῷ τὸ ξηραῖνον. οὕτω μὲν ἐπὶ τῶν ὁμοιομερῶν ἐπὶ δὲ τῶν ὀργανικῶν καθ' ἕκαστον τῶν εἰρημένων αὐτῶν γενῶν τεττάρων τῆς νοσώδους ἀμετρίας τὴν ἐναντίαν χρῆ<sup>46</sup> ἀντεισάγειν, ἄχρισ ἂν ἐπὶ τὸ σύμμετρον καὶ κατὰ φύσιν ἔλθωμεν. οἷον εἰ ἐπετράφη τινὶ σὰρξ ἔλκει πλείων > τοῦ κατὰ φύσιν, οὐ τὸ σαρκούν οὐδὲ τὸ ἀνατρέφον, ἀλλὰ τὸ καθαιροῦν τε καὶ ἀφαιροῦν καὶ διαβιβρώσκον καὶ διαφθεῖρον ἀρμόττει προσφέρειν ὡσπερ καὶ εἰ κοῖλον ἔλκος ἐν τιμὴ γένοιτο μέρει, τὸ σαρκῶσον ἐκείνῳ σύμφορον.<sup>47</sup> | ἑκατέρου δ' εἰς τοσοῦτον ἢ χρῆσις ὡς παύσασθαι τότε πρῶτον, ὅταν εἰς τὸ σύμμετρον ἀφίκηται, πρὶν ὑπερβῆναι πρὸς τὸ ἐναντίον καὶ γὰρ τὸ ὑπερσαρκούν καθαιρῶν, εἰ μὴ σταίης ἐν τῷ συμμέτρῳ, κοῖλον ἀποδείξεις τὸ μέρος, ἀνατρέφων τε τὸ κοῖλον, εἰ μὴ σταίης κἀνταῦθα παύσαιο κατὰ τὸ σύμμετρον, ὑπερσαρκούν ἐργάση.

κατὰ μὲν δὴ τὸ γένος τοῦτο τῶν νοσημάτων, ἐν ᾧ τὰ μόρια πρὸς τὸ μείζον τε καὶ τοῦλαττον ἐκτρέπεται, τὴν ἐπανόρθωσιν, ὡς εἴρηται, διὰ τῶν ἐναντίων ἐστὶ ποιητέον καθ' ἕτερον δὲ γένος, ἐν ᾧ τῆς διαπλάσεως

45 add. αἰτία F

46 χρῆ om. F

cure of disease—that is, the opposite. As Hippocrates said somewhere: "Opposites are the cures of opposites."<sup>26</sup> In individual cases it is the individual opposite—for a hot disease, cold; for a cold disease, hot. Similarly, for a dry disease, it is moisture and for a moist disease, dryness. So it is in the case of *homoiomeres*. However, in the case of the organic parts, in each of the four classes mentioned, it is necessary to introduce instead what is opposite to the disease imbalance until we come to a balance and accord with nature. For example, if more flesh than accords with nature forms on some ulcer, it is appropriate to apply what takes away, removes, consumes and destroys and not what enfleshes and nourishes. And similarly, if a hollow ulcer occurs in some part, it is appropriate to apply what is enfleshing to it. The use of each is to the extent that it stops as soon as it comes to a balance and before it goes over to the opposite. Thus, in removing excess flesh, if you don't stop at the point of balance, you will create a cavity in the part, while in nourishing a cavity, here too, if you don't stop and cease when there is balance, you will produce excess flesh.

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Certainly, in relation to this class of diseases in which the parts are deviated toward more or less, the restoration must be accomplished through opposites, as I said. In relation to the other class, in which there is a deviation

<sup>26</sup> Hippocrates, *Aphorisms*, 2.22, and *Nature of Man*, 9. The statement is quoted a number of times in *The Method of Medicine*.

<sup>47</sup> τὸ σαρκῶσον ἐκείνῳ σύμφορον F; σαρκωτικὸν προσφέρειν ἐκείνῳ K

ἐξίσταται τῆς κατὰ φύσιν, ἐπειδὴ πλείους εἰσὶν αἱ κατὰ μέρος διαφοραί, καθ' ἑκάστην αὐτῶν ἐξευρίσκειν τὸ ἐναντίον. οἷον εἴ τι μόριον ἑαυτοῦ κυρτότερον ἐγένετο, πρὸς τοῦναντίον ἀπάγειν αὐτὸ θλίβοντα καὶ ὠθοῦντα· τὰ δ' εἴσω θλιβέντα καὶ οἰονεὶ σιμωθέντα πρὸς τοῦκτὸς ἐπανάγειν, ὥσπερ τὴν ρίνα· τὰ δ' ἀντὶ τραχέων λεία γινόμενα τραχύνειν, ὥσπερ γε καὶ ὅσα τραχέα λειαίνειν· οὕτω δὲ καὶ ὅσα τὰς κοιλότητας, ἢ

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τοὺς πόρους ἢ ὅλως τὰς διατρήσεις | ἤτοι μείζους ἢ ἐλάττους ἔσχειν ἢ κενωτέρας τοῦ δέοντος ἢ μεστοτέρας ἢ συμπεφραγμένας ὑπὸ παχέων τε καὶ γλίσχωρων ὑγρῶν, καὶ ταῦτα πρὸς τοῦναντίον ἀπάγειν, μέχρις ἂν ἐπὶ τὸ σύμμετρον ἀφίκηται.

καὶ μὲν δὴ καὶ ὅσα κατὰ τὴν θέσιν ἐξέστη τοῦ κατὰ φύσιν, ἐπανάγειν αὐτὰ πρὸς τὴν ἀρχαίαν φύσιν ἔμπαλιν ἀπάγοντα, τὸ μὲν εἰς τὸ πρόσω χωρήσαν ὀπίσω, τὸ δ' εἰς τὴν ὀπίσω χώραν μεταστὰν ἀνθελκοντα πρόσω· καὶ κατὰ τὰς ἄλλας ἀντιθέσεις δύο, τὴν τε ἄνω καὶ τὴν κάτω καὶ τὴν ἔνθα καὶ ἔνθα, κατὰ τὸν αὐτὸν τρόπον. εἰ δὲ τοῦ κατὰ φύσιν ἀριθμοῦ τῶν μορίων διαφθαρέντος εἰς νόσον ἐμπίπτει τὸ σύμπαν ὄργανον, εἰδέναι μὲν δῆπου κἀνταῦθα χρὴ τὸ μὲν ὑπερβολὴν εἶναι τοῦ ποσοῦ, τὸ δ' ἔλλειψιν, ὡς κἀν τῇ κατὰ μέγεθος ἐξαλλαγῇ πρόσθεν εἴρηται, τὴν δ' ἴασιν, ὥσπερ ἐπ' ἐκείνης, ἐν ἀφαιρέσει τε καὶ προσθέσει γίνεσθαι. διαφέρει δὲ τοσοῦτον, ὅτι μόρια μὲν ὀλόκληρα κατὰ τοῦτο τὸ γένος, ἐν ἐκείνῳ δὲ μέρη μορίων ἀφαιρεῖν τε καὶ προστιθέναι προσήκει. |

from the conformation that accords with nature, since the individual differences are more numerous, you discover the opposite in relation to each of these. For example, if some part has become more convex than it should be, direct it toward the opposite by compressing and pushing in. On the other hand, if a part is compressed inward, as if it is bent upward (concave), bring it back outward, as in the case of the nose. Roughen the parts that have become smooth instead of rough, and smooth out those that have become rough. In the same way too, with those parts that have cavities, pores, or in short holes, or are bigger or smaller, or more empty or full than they should be, or are obstructed by thick and viscid liquids, we should lead these toward the opposite until a balance is reached.

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Further, those parts that have deviated from an accord with nature in terms of position, we lead back to the original nature, moving them in the opposite direction, drawing backward what has moved forward and drawing forward what has moved backward. And we do the same with regard to the two other antitheses—up and down, or hither and thither. If, however, when the number of parts that accord with nature is disturbed and the whole organ falls into disease, even here you must of course know there is either an excess of quantity or a deficiency, as I said before in respect of the alteration in size, and the cure, just as in that instance, lies in taking away or adding, but differs to the extent that it is appropriate in this class (of number) to take away or add whole parts, while in that class (of size), parts of parts.



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12. Σκεπτέον δ' οὐκ ἐπὶ τούτου τοῦ γένους μόνον, ἀλλὰ κατὰ τῶν ἄλλων ἀπάντων, ὧν δύναμις ἡμῶν ἐστὶν ἐξεργάσασθαι τὴν ἔνδειξιν. ἡ γὰρ τοῦ νοσήματος ἰδέα τὸν τρόπον ἐνδείκνυται μόνον τῆς ἐπανορθώσεως, εἴτε δ' ἀδύνατός ἐστιν εἴτε δυνατὸς οὐκέτι συνειδείται λαμβάνεται γὰρ ἐν ἀπάσαις ταῖς ποιητικαῖς τέχναις τὸ τοιοῦτον οὐκ ἐκ τῆς ἐννοίας τοῦ γενησομένου πραγμάτος, ἀλλ' ἐκ τῆς δυνάμεώς τε καὶ ἀδυναμίας τοῦ δημιουργοῦντος αἰτίου καὶ προσέτι τῆς κατὰ τὴν ὕλην εὐπορίας τε καὶ ἀπορίας. τὰ γοῦν αὐτὰ πράγματα τοῖς μὲν ἀδύνατα, τοῖς δὲ δυνατὰ καθίσταται, καὶ καθ' ἕτερον μὲν καιρὸν ἀδύνατα, καθ' ἕτερον δὲ δυνατά.

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αἴτιον γοῦν ἐστὶ τῶν περὶ τὸ σῶμα γενομένων ἐπ' ἀγαθῶ φύσις τε καὶ ἰατρός, ἀλλὰ τινὰ μὲν τῇ φύσει, τινὰ δὲ τοῖς ἰατροῖς ἐστὶν ἀδύνατα. τῇ φύσει μὲν ὁστοῦν κατεαγὸς, ὡς παραλλάττει αὐτοῦ τὰ μόρια καὶ διεστράφθαι τὸ κῶλον ἀδύνατον ὀρθῶσαι καὶ διαπλάσαι, τῷ δ' ἰατρῷ δυνατόν. οὕτω δὲ καὶ τὸ παραρθῆσαν ἰατρῷ μὲν ἐμβαλεῖν δυνατόν, ἀδύνατον δὲ τῇ φύσει. τὸ κοῖλον δ' ἔλκος σαρκῶσαι, τῇ φύσει μὲν ἐστὶ δυνατόν, ἀδύνατον δ' ἰατρῷ, καθάπερ γε καὶ τὸ πέσαι τι τῶν ἡμιπέπτων τε καὶ ἀπέπτων. ἀλλὰ καὶ εἰς ταῦθ' ὑπηρετεῖ τε καὶ συμπράττει τῇ φύσει ὁ ἰατρός, καθαρὸν μὲν ἐργαζόμενος τὸ ἔλκος ἐπιθέσει φαρμάκου καθαίροντος, ἐπιφέρων δὲ τὰ συμμέτρως θάλλοντα τοῖς πεφθῆναι δεομένοις. πολλὰ δὲ καὶ αὐτῇ τῇ φύσει τῶν ἔμπροσθεν ὑπ' αὐτῆς ἀπεργασθέντων ἀδύ-

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12. What must be considered, not only in the case of this class but also in all the others, is the indication of those things we have the power to accomplish. For the kind of disease indicates only the manner of restoration; it does not indicate at the same time whether it is possible or no longer possible. In all the productive arts such a thing is taken not from the concept of the thing that will come to be, but from the capacity or incapacity of the effecting cause, and besides this, from the ready supply or lack of material. Anyway, the same things become impossible for some but possible for others, and possible on one occasion but impossible on another.

At any rate, the cause of things turning out for the best concerning the body is Nature and the doctor. But some things are impossible for Nature and some are impossible for doctors. For Nature, a bone that is fractured such that its parts override and the limb is distorted is impossible to reduce and set straight, but this is possible for the doctor. In the same way too, it is possible for a doctor to reduce a dislocation but impossible for Nature. On the other hand, the enfleshing of an ulcer cavity is possible for Nature but not for a doctor, just as the concoction (digestion) of something semiconcocted or unconcocted is too. But also the doctor serves and assists Nature in these matters, making the ulcer clean by the application of cleansing medications or providing agents that are moderately heating to those things requiring concoction. And for Nature herself it is impossible to make again many of the things which

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νατον αἰθις ποιῆσαι, καθάπερ φλέβα καὶ ἀρτηρίαν  
καὶ σύνδεσμον καὶ νεύρον ὅσα τ' ἄλλα τοιαῦτα.

τῆς οὖν θεραπευτικῆς μεθόδου πρῶτον μὲν ἐξευ-  
ρεῖν, ὡσπερ εἴρηται, τὸν κοινὸν ἀπάντων σκοπὸν, ὅτι  
τὰ ἐναντία τῶν ἐναντίων ἐστὶν ἰάματα· δεύτερον δὲ  
καθ' ἕκαστον γένος ὑποτάξαι τὰναντία· τρίτον ἐπὶ  
τούτοις σκέψασθαι, πότε μὲν ἐστὶ δυνατὸν ἡμῖν ἢ τῇ  
φύσει τῷ κατὰ τὴν ἔνδειξιν ὑπηρετῆσαι σκοπῷ, πότε  
δ' ἦτοι παντάπασιν ἀδύνατον ἢ κατὰ χρόνον ἀδύνα-  
τον ἢ ἐκ μέρους ἀδύνατον. καὶ εἴη ἂν οὐκ ἐλαχίστη  
μοῖρα τῆς φυσικῆς θεωρίας, ἐν ἣ γε χρὴ γεγυμνά-  
σθαι τὸν ἐξευρήσοντα | τὸ δυνατόν τε καὶ ἀδύνατον  
ἐν ἑκάστῳ τῶν ἐσομένων. αἱ πραγματεῖαι δ' εἰσιν αἱ  
τούτο διδάσκουσαι δύο, ἣ τε Περὶ ζωογονίας ὀνομα-  
ζομένη, καθ' ἣν, ὅπως ἐκ σπέρματός τε καὶ καταμη-  
νίου τὴν γένεσιν ἔχει τὸ κινούμενον, ἐπισκεπτόμεθα,  
καὶ ἡ<sup>48</sup> τῶν Φυσικῶν δυνάμεων.

ἐν μὲν γὰρ τῷ περὶ τῆς φύσεως τοῦ σπέρματος  
ἐπισκέπτεσθαι<sup>49</sup> φανεῖται σοι πάντως ὑποβαλόντι τὴν  
σκέψιν ἀποδεικτικῆ μεθόδῳ, ταῦθ' ἄπερ ἡμῖν ἀπεδεί-  
χθη, τὸ γεννᾶσθαι τὰ πλείεστα τῶν ἐν τῷ κινουμένῳ  
μόριων τῆς διαπλαττούσης αὐτὰ δυνάμεως ὕλη χρω-  
μένης αὐτῇ τῇ τοῦ σπέρματος οὐσίᾳ· καὶ εἴπερ τοῦτ'  
ἐξεύροις, οὐκ ἂν ἔτι θαυμάσῃς, εἰ μηδὲν τῶν τοιούτων

<sup>48</sup> post ἢ om. λοιπὴ περὶ K

<sup>49</sup> ἐπισκέπτεσθαι F; ἐπισκέψαι K

she previously made, like veins, arteries, ligaments, nerves  
and other such things.

So the first objective of the therapeutic method, which  
is common to all cases as I said, is that opposites are the  
cures of opposites. The second is to arrange the oppo-  
sites according to each class, and the third, in addition to  
these, is to consider whether it is possible for us or Nature  
to assist in this objective according to the indication, or  
whether it is completely impossible, impossible at that  
particular time, or impossible in part. And this is not the  
least part of the contemplation of Nature which someone  
who would discover what is possible and impossible in  
each of the things that will occur must be practiced in.  
There are two treatises which offer instruction in this: one  
is called *On the Generation of Animals* in which we exam-  
ine how the fetus has its genesis from semen and men-  
strual material while the other is called *On the Natural  
Faculties*.<sup>27</sup>

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In the investigation of the nature of the semen, if you  
carry this out by a demonstrative method, those things I  
demonstrated will be altogether apparent to you—that is,  
the majority of the parts of the fetus are generated when  
the capacity that forms them uses the actual substance of  
the semen as material. And if you do discover this, you will  
no longer be surprised by Nature's inability to make any

<sup>27</sup> There is no extant work by Galen with the title *On the  
Generation of Animals*. The subject is covered in the two works  
in volume 5 of Kühn. For English translations of these works, see  
de Lacy, *Galen on Semen*, and *On the Formation of the Foetus* in  
Singer, *Galen: Selected Works*. The subject is also covered in  
Galen, *Nat. Fac.*, 1.5–6, for an English translation of which see  
Brock, *Galen: On the Natural Faculties*.

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ἡ φύσις ὕστερόν ποτε δύναται δημιουργεῖν. ἐν δὲ τῷ Περὶ φυσικῶν δυνάμεων ἐπισκοπεῖσθαι τὴν περὶ τοῦ γεγενημένου διοίκησιν ἐξευρήσεις,<sup>50</sup> ὡς κἀντεῦθεν εὐπορήσασαι σε τῆς εὐρέσεως ὧν τε δυνατὸν ἐστὶ τῇ φύσει ποιεῖν, αὐτῇ τε κατὰ μόνας ὑπηρετουμένη τε πρὸς τῶν ἰατρῶν, ὧν τ' ἀδύνατον. ἐν τῷ τοιούτῳ τόπῳ παντί,<sup>51</sup> καθ' ὃν ἐπισκεπτόμεθα περὶ τῆς τῶν δημιουργικῶν αἰτιῶν δυνάμεως καὶ τῆς τῶν ἀποτελουμένων | οὐσίας, ἐξευρήσεις ἅπαντα τὰ δυνατὰ τε καὶ ἀδύνατα οἷον εἰ δυνατὸν ἀπολλυμένον χόνδρον γεννᾶσθαι πάλιν ἕτερον χόνδρον ἢ ἀντ' αὐτοῦ τι παραπλήσιον οὕτω δὲ καὶ ὄστούν εἰ δυνατὸν ἕτερον ποιῆσαι τοῦ μετὰ τὴν ἀποκύσιν ἀπολλυμένου ἢ τι παραπλήσιον αὐτῷ, καὶ εἰ συμφύναι τὸ νευρῶδες τοῦ διαφράγματος ἢ τὴν καρδίαν ἢ τὸ ἥπαρ ἢ ὅλως ὄτιοῦν τῶν ἄλλων μορίων. ἐμοὶ δ' οὐκ ἐνταῦθα διέρχεσθαι πάντα καιρός· οὐ γὰρ εἰς ἐν<sup>52</sup> βιβλίον ἐγχωρεῖ τὴν ὅλην ἰατρικὴν καταθέσθαι, οὐδὲ τοῦτ' ἐξ ἀρχῆς ὁ λόγος ἔσπευδεν, ἀλλὰ τὰς μεθόδους ἀπάσας εἰπεῖν ἐνδείξασθαι τε περὶ τῆς συστάσεως τῆς τέχνης, ἐκ τίνων τε καὶ πόσων ἀρχῶν καὶ κατὰ τίνας ὁδοὺς γίνεταί.

καταπαύσας οὖν ἐνταῦθα τὸν ἐνεστῶτα λόγον εἰς ἐν τε κεφάλαιον ἀναλαβὼν,<sup>53</sup> προσθήσω τῷ πρόσθεν ἤδη συνεστῶτι μέρει τῆς τέχνης. ὡς γὰρ ἐν ἐκείνῳ τῶν ὑγιεινῶν τε καὶ νοσωδῶν σωμάτων εἶδος ἐξευρόντες ἡξιούμεν ἐν ταῖς κατὰ μέρος ὕλαις αὐτὸ θεάσα-

of these kinds of things at some later time. By examining the work, *On the Natural Faculties*, you will discover what internally governs what has arisen, so here you will easily discover which things it is possible for Nature to make by herself alone, which with the help of doctors, and which are impossible. In every topic of this sort, in which we examine the capacity of the creating causes and the substance of those things being produced, you will discover all those that are possible and all those that are impossible—for example, whether it is possible to generate cartilage that has been destroyed, or likewise, whether it is possible to make other bone or something similar to it in place of bone destroyed after birth, or whether it is possible to unite the sinewy parts of the diaphragm, or the heart, or the liver, or to speak generally, any one of the other parts. Now is not an appropriate time for me to go over all these matters. It is not possible to set down the whole medical art in one book, and from the beginning the discussion did not have this aim. Rather the aim was to state all the methods and to indicate in respect of the constitution of the art, from which things and how many principles and by which paths it arose.

Therefore, having brought the present discussion to an end here, summarizing it under one main heading, I shall add this to the part of the art already established. Just as, in discovering in that part the kind of healthy and diseased bodies, we thought it worthwhile to look at this in terms

<sup>50</sup> τὴν περὶ τοῦ γεγενημένου διοίκησιν ἐξευρήσεις, F; τὴν περὶ τῶν γεγενημένων διοίκησιν, K  
<sup>51</sup> ἐν τῷ τοιούτῳ τόπῳ παντί, F; ἐν ἐκείνῳ τῷ τόπῳ, K  
<sup>52</sup> post ἐν om. τοῦτο τὸ K  
<sup>53</sup> ἀναλαβὼν F; ἀναβαλῶν K

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σθαι πάσαις, οὕτω καὶ νῦν τῶν [ὑπὸ] τῆς θεραπευτικῆς μεθόδου σκοπῶν εὐρημένων εἰς τὰς | κατὰ μέρος ὕλας ἐμβιβάζειν ἀξιώσομεν,<sup>54</sup> ὅσοι τε δυνατοὶ γίγνεσθαι κατ' αὐτάς εἰσι· ἢ ἐκ μέρους ἢ κατὰ τινα χρόνον ὅσοι τ' ἀδύνατοι παντάπασιν. ἐπισκοπεῖσθαι δὲ κἀναυθὰ τὴν πρὸς τὰς ἄλλας τέχνας ἀναλογίαν. ὡς γὰρ εἴ τις ἐξ ὀπτῶν πλίνθων γεγενημένης οἰκίας, εἴτα πεπονθυίας κατὰ τι μέρος ἐπανορθοῦσθαι τοῦτο κελεύσειεν ἐξαιρουντας μὲν ὅσαι πεπόνθασι τῶν πλίνθων, εἰς δὲ τὸν ἐκείνων τόπον ἐντιθέντας ἐτέρας ἀπαθείς, ἀναγκαῖον ἔσται τῷ δημιουργῷ κατασκευάζειν πρότερον ἐτέρας ὁμοίας ταῖς πεπονθυίαις ἔτι τε πρὸς τούτῳ τὴν ἐπιτηδείαν ὕλην οὐκ ἔχοντος παρασχεῖν τοῦ δεσπότου τῆς οἰκίας ἀδύνατον εἶναι λέγειν τὴν ἐπανόρθωσιν, οὕτως ἔχει καὶ τοῦ νῦν προκειμένου σκέμματος· ἀπορία γὰρ τῆς ὕλης οὐδὲν ἐξ ὑστέρου ποιεῖν ἢ φύσις οἷα τ' ἔστιν ὧν ἐκ σπέρματος ἐν τῷ διαπλάττειν τὸ ζῶον ἐποίησεν.

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13. Ἐπεὶ δὲ καὶ περὶ τούτων αὐτάρκως εἴρηται, προσθῶμεν τῷ λόγῳ τὸ λείπον, ὑπὲρ ὧν ὀλίγον ἔμπροσθεν εἶπομεν ἐξευρίσκοντες τὰ βοηθήματα. τὰς μὲν γὰρ οἶον | γενικὰς αὐτῶν ιδέας διήλθομεν, ὡς χρὴ τὰ μὲν ψύχειν, τὰ δὲ θερμαίνειν, τὰ δὲ ὑγραίνειν, τὰ δὲ ξηραίνειν· οἷοι γὰρ ἐν τοῖς ὁμοιομερέσιν οἱ σκοποὶ· καθάπερ ἐν τοῖς κατὰ τὸ πηλίκον ἦτοι καθαίρειν ἢ ἀνατρέφειν, οὕτω δὲ κἀν τοῖς κατ' ἀριθμὸν ἢ ἐξαιρεῖν ὅλον ἢ γενεᾶν· ἐν δὲ τοῖς κατὰ διάπλασιν εἰς τε τὰ κατὰ φύσιν ἐπανάγειν σχήματα, καὶ κενοῦν τὰ

of all the materials individually, so in the same way now, in discovering the objectives of the therapeutic method, we shall think it worthwhile to proceed to the materials individually—both those of them that are able to arise, either in part or at a certain time, and those that are altogether unable to do so. Here too the analogy to the other arts is to be considered. Thus, if a house built from baked bricks is then damaged in some part, and someone orders this part be restored by removing all the affected bricks and putting other unaffected bricks in their place, what will be necessary for the builder is first to prepare other bricks like those affected, and in addition to this, if the owner of the house is not able to provide suitable material, to say the restoration is impossible. The same applies in the case of the question now before us. For Nature lacks any material to subsequently make those things she made in the formation of the animal from semen.

13. Since enough has been said about these matters, let me add what remains for the argument by discovering the remedies which we spoke about a little earlier. We already went over the generic kinds of these, as it were—that it is necessary to cool some things, to heat some, to moisten some and to dry some, for these are the objectives in the *homoiomerous* parts, just as we must reduce or nourish in the case of those parts affected in respect of size, and in the same way, in respect of those affected in number, we must take away completely or generate. In those affected in respect of conformation, we must lead them back to forms in accord with nature by emptying what

<sup>54</sup> post ἀξιώσομεν, ὅσοι τε δυνατοὶ F; ἵνα γνῶσιν, ὅσα τε δυνατὸν K

πεπληρωμένα καὶ πληροῦν τὰ κεκενωμένα καὶ τὰς ἐμφράξεις ἐκφράττειν καὶ τὰς ἀναστομώσεις συνάγειν καὶ τὰ μεμυκῶτα καὶ πεπυκνωμένα πρὸς τὸναντίον ἐπιστρέφειν τὰ μὲν ἀναστομοῦντα, τὰ δὲ ἀραιοῦντα οὕτω δὲ κὰν τῷ κατὰ τὴν θέσιν<sup>55</sup> νοσήματι πρὸς τὸ κατὰ φύσιν ἐπανάγειν ὁ σκοπὸς κὰν τῷ τὴν ἔνωσιν λελύσθαι κόλλησιν ἐργάζεσθαι τῶν κεχωρισμένων.

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has been filled and filling what has been emptied, by opening up blockages, by bringing together what has been opened up, and by turning toward the opposite what has been closed and condensed, opening up some and rarefying others. It is the same even in disease relating to position; the objective is to effect a return to an accord with nature. In disease relating to dissolution of continuity, it is to bring about a binding together of what has been separated.

But in all these cases, to discover materials of remedies is no small part of the art. An immediate example is the case of dislocated joints, since what happens is not only that the dislocated part is displaced backward or forward, and to one side or another; it may also be drawn upward to a higher place by the tension of the muscles. The need for those encountering such a situation is of a twofold movement, the first being downward and the second a resetting in the proper place. Because of this, it is impossible to bring about reduction without countertension. And it is clear to everyone that for the purposes of countertension, there is need of a stronger counterhold and tension. Because we are sometimes unable to do these things with our hands, we have invented suitable instruments for this purpose. Many of these also contribute jointly to the reduction of what has been dislocated. And all these instruments are kinds of materials of remedies, just as all the surgical instruments, medications, foods and drinks are, and put simply, all those things that, when applied to the body, restore the conditions mentioned to an accord with nature.

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<sup>55</sup> τὴν θέσιν F; τὴν σύνθεσιν K

<sup>56</sup> τὰ ἄρμενα F; τὰ ἀρμοζόμενα K

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χρῆ τοίνυν πεπραγματεύσθαι καὶ περὶ τῆς τούτων ὕλης τὸν ἰατρὸν ἐμβιβάζοντα τοὺς εἰρημένους ἔμπροσθεν σκοποὺς τῇ χρήσει τῶν ὑλῶν, ἵνα μήποτε πλανηθεὶς ὁμοίον τι πάθῃ τοῖς οἰομένοις, ὅσα μὲν δέεται ψύχεσθαι, πᾶσιν αὐτοῖς ἀρμόττειν ὕδωρ ψυχρόν, ὅσα δὲ θερμαίνεσθαι, θερμόν, οὐκ εἰδόσιν, ὅτι κατὰ συμβεβηκὸς | ἐνίοτε καὶ τὸ ψυχρὸν θερμαίνει, καὶ τὸ θερμὸν ψύχει. <τὰ> πλείστα δὲ περὶ τῆς ἐν τούτοις ἅσασι μεθόδου κατὰ τὴν Περὶ φαρμάκων πραγματείαν λέγεται. ἐν δὲ τῷ παρόντι λόγῳ τοῦτο προσθῶμεν, ὡς ἅπαν τὸ τοιοῦτον γένος τῆς ὕλης τῶν βοηθημάτων ἐν προσφερομένοις καὶ ποιουμένοις καὶ κενουμένοις καὶ τοῖς ἔξωθεν προσπίπτουσι κείται, δι' ὧν ἀπάντων ὁ συνιστάμενος τὴν τέχνην διεξελθὼν καὶ τῆς κατὰ μέρος ὕλης ἀπάσης ἐπιστήμην ἔχων, οὐ μόνον τῆς δυνάμεως, ἀλλὰ καὶ τῆς χρήσεως, οὕτως ἂν εἴη συμπεπληρωκὸς ἅπαντα τὰ ὑγιεινὰ τῶν αἰτίων, ὡς μηδὲν λείπειν αὐτῷ πρὸς τὴν τῆς θεραπευτικῆς τέχνης σύστασιν, εἰς δύο κεφάλαια ταῦτ' ἀναγομένην,<sup>57</sup> εἷς τε τὴν γνῶσιν τῶν σωμάτων, οἷς προσάγεται τὰ βοηθήματα, καὶ αὐτὴν τὴν τῶν βοηθημάτων φύσιν.

14. Ὑπόλοιπον δ' ἂν εἴη πράττειν αὐτῷ μέλλοντι τὰ κατὰ τὴν τέχνην ἐξευρησθαί τινα διαγνωστικὴν θεωρίαν ἀπασῶν τῶν διαθέσεων, καὶ μάλιστα' ὅτε<sup>58</sup> περὶ τὰ κατὰ βάθος μόρια συνίστανται. οὐδὲ γὰρ

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Therefore, it is necessary for a doctor, set on the previously mentioned objectives through the use of the materials, to concern himself with the material of these so that he is never led astray to the point of suffering something like those who think cold water is sufficient for all those things that need to be cooled and warm water for all those that need to be heated, not realizing that sometimes what is cold heats incidentally, and what is hot, cools incidentally. For the most part I have spoken about the method in all these instances in the treatise *On the Nature and Powers of Simple Medications*.<sup>28</sup> In the present discussion let me add this: Every such class of material of remedies rests in things applied, acting, evacuating, and befalling from without, and if the one constructing the art went through all these and had a knowledge of every material individually—and not only the potency but also the use—he would in this way be fully conversant with all the causes of health, so that nothing would remain for him regarding the constitution of the therapeutic art. It comes down to these two chief points: the knowledge of the bodies to which the remedies are being applied and the actual nature of the remedies.

14. What remains for the person who intends to do the things pertaining to the [medical] art is to discover some diagnostic theory for all conditions, and particularly those that exist in the internal parts. For here the disease condi-

<sup>28</sup> This is presumably a reference to *Simpl. Med.*, XI.369–892K, XII.1–377K.

<sup>57</sup> ταῦτ' ἀναγομένην, F; τούτων ἀπάντων ἀναγομένων, K

<sup>58</sup> ὅσαι K

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ἐνταῦθα τοῦ τυχόντος ἐστὶν ἐξευρεῖν ἐκάστου τῶν μοριῶν ἢ τῶν ἀπλῶν ἢ τῶν ὀργανικῶν, τὴν νοσώδη διάθεσιν, ὅταν ἐν τῷ βάθει τύχη κείμενον, ἀλλὰ κἀνταῦθα μεθόδῳ τινὶ χρὴ πειρᾶσθαι τὸ πεποιηθὸς ἐξευρίσκειν ἅμα τῇ περὶ αὐτὸ διαθέσει, περὶ ἧς εἴρηται καὶ ἡμῖν ἐτέρωθι διὰ πλειόνων. ἀλλ' ὥσπερ τῶν ἄλλων ἀπασῶν μεθόδων ἐνταῦθα τὰ κεφάλαια διήλθομεν, οὕτω καὶ περὶ τούτων εἰπεῖν ἀναγκαῖόν ἐστι, καὶ πρῶτόν γε, διὰ τίνος γένους τῶν παρὰ φύσιν ἐλπίζειν χρὴ τὴν διάγνωσιν αὐτῶν ποιήσασθαι.

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τρία γὰρ ἐστὶ τὰ σύμπαντα γένη τῶν παρὰ φύσιν, ἐν μὲν αἱ διαθέσεις αἱ βλάπτουσαι τὴν ἐνέργειαν· ἔτερον δὲ τὰ τούτων αἰτία καὶ τρίτον τὰ συμπτώματα. τὰ μὲν οὖν αἰτία κυριώτατα μὲν, ὅταν ἐνεργῇ, ταύτης τῆς προσηγορίας ἀξιοῦται, λέγεται μέντοι γε πολλάκις, εἰ καὶ μηδέπω μηδὲν ἐνεργεῖ, κατ' αὐτὸ τὸ δύνασθαι μόνον· οἷον καὶ ἡ ἀπεψία νόσων αἰτία λέγεται, κἀν μηδέπω νοσᾷ· καλῶ δὲ ἀπεψίαν οὐ μόνον τῆς ἐν γαστρὶ πέψεως τὴν ἀποτυχίαν, ἀλλὰ καὶ τὴν ἐν τοῖς ἀγγείοις τε καὶ ἥπατι καὶ κατὰ τὸν ὄγκον σύμπαντα. ἢ τῶν δὲ συμπτωμάτων τὸ γένος εἰς τρεῖς τέμνεται διαφοράς, τὴν βλάβην τῶν ἐνεργειῶν, τὰ συμβεβηκότα τοῖς σώμασι, τὰς τῶν ἐκκρινόμενων ἀμετρίας. ἀπάντων δὲ τούτων αἰτία τοῦ σώματος ἐστὶν ἡ διάθεσις, ἣν εἴτε νόσον εἴτε πάθος ὀνομάζοι τις οὐ διοίσει· γνωρίζεται δ' εἰκότως ὑπὸ τῶν συμπτωμάτων αἰτίας γε λόγον ἔχουσα πρὸς αὐτά. ἔνια μὲν οὖν αὐτῶν ἐξ ἀνάγκης ἔπεται ταῖς διαθέσεις, ἔνια δ'

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tion of each of the parts, whether simple or organic, may not be accessible to discovery when the part happens to be situated in the depths. But even here we must attempt to discover by some method what is affected along with the condition involving it. I have spoken about this at length elsewhere.<sup>29</sup> But just as we have gone through the chief points of all the other methods here, so too is it necessary to speak about these, and first, through what class of things contrary to nature we must expect to make the diagnosis of them.

There are, in all, three classes of things contrary to nature: one comprises the conditions that damage function; another comprises the causes of these conditions; and a third comprises the symptoms. The causes are most entitled to this name when they act. However, they are often called causes, even if they never act at all, simply on the basis of their being able to act. For example, *apepsia* is called a cause of diseases, even if it is not yet causing a disease. I call "*apepsia*" not only the failure of concoction in the stomach, but also in the blood vessels, the liver, and in the whole mass of the body. The class of symptoms is divided into three *differentiae*: damage of functions, things occurring to bodies *per accidens* (contingently), and imbalances of excretions. The condition of the body is the cause of all these things, which may be termed either diseases or affections—it makes no difference which. They are reasonably known through the symptoms which have the ground of causes in relation to them. Some of these follow the conditions of necessity, whereas some

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<sup>29</sup> See, for example, *Ars M.*, 6–22 (I.319–65K).

οὐκ ἐξ ἀνάγκης, ἀλλ' ἤτοι πλειστάκις ἢ σπανιάκις ἢ ἀμφιδόξως. ὥσπερ αὖ πάλιν ἕτερα συμπτώματα τὰ μὲν ἐξ ἀνάγκης ἔπεται τῇ διαφορᾷ τῆς διαθέσεως, τὰ δ' ὡς ἐπὶ τὸ πολὺ, τὰ δ' ἀμφιδόξως, τὰ δὲ σπανίως. ὅσα μὲν οὖν ἐξ ἀνάγκης ἔπεται τῷ νοσήματι συμπτώματα, παθογνωμονικὰ προσαγορεύεται, καὶ ταῦθ' ἠγείσθαι χρῆ γινώσιμα βέβαια τῶν νοσημάτων ὑπάρχειν, ὅσα δ' οὐκ ἐξ ἀνάγκης, ἤτοι τῆς διαφορᾶς ἐστὶ τοῦ νοσήματος ἢ τοῦ ἤθους ἢ τοῦ μεγέθους ἐνδεικτικά. δείξω δ' ἐπὶ παραδείγματος ἑνὸς ἐκάστου τῶν εἰρημένων τὴν δύναμιν, ἵν' ἐντεῦθεν ὁρμώμενος ἔχῃς γυμνάζειν σεαυτὸν ὁμοίως ἐν ἅπασιν κατὰ τὴν αὐτὴν μέθοδον.

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ὑποκείσθω <γοῦν> φλεγμαίνειν ὁ τὰς πλευρὰς ὑπεζωκῶς ὑμῆν· ἐστὶ δὲ δὴ τοῦτο πάθος ἢ φλεγμονὴ συμπτώματα μὲν ἐξ ἀνάγκης ἔχουσα τὸν παρὰ φύσιν ὄγκον, ἔρευθος, ὀδύνην, ὧν οὐχ ὑποπίπτει νῦν τὰ δύο, λείπεται δὲ τὸ ἄλγημα μόνον, ὃ κατὰ τὰς πλευρὰς ἐρείδει νυγματώδες γιγνόμενον. ἀλγεί μὲν οὖν ὁ ἄνθρωπος, ὅτι φλεγμονὴ τὸ πάθος· ἢ δ' ἰδέα τῆς ὀδύνης νυγματώδης, ὅτι καὶ ἡ οὐσία τοῦ πεπονθότος ἐστὶν ὑμενώδης· κατὰ δὲ τὴν πλευρὰν ἐρείδει, διότι ἐν ταύτῃ κείται τὸ πεπονθός· καὶ μὲν δὴ καὶ μέχρι πλείστου διήκει, διότι καὶ αὐτὸς ὁ ὑπεζωκῶς ἐπὶ πλείστον ἐκ-

<sup>30</sup> This term remains in current medical use. The definition in Stedman is as follows: "Characteristic or indicative of a disease; denoting especially one or more typical symptoms, findings,

do not follow of necessity but either often, rarely or unpredictably, while other symptoms again follow the *differentia* of necessity, some for the most part, some unpredictably, and some rarely. Those symptoms that follow the disease of necessity are termed pathognomic,<sup>30</sup> and these must be regarded as certain signs of the diseases. Those symptoms that do not follow of necessity indicate either the *differentia* of the disease, its nature, or its severity. I shall show by way of an example the power of one of each of the things mentioned, so that beginning here you will be able to exercise yourself equally in all of them according to the same method.

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Let us suppose the pleural membrane is inflamed. This affection is certainly an inflammation which has as its necessary symptoms an unnatural swelling, redness and pain (tumor, rubor and dolor)<sup>31</sup> two of which are not at the present observable. Only the pain is left, and this is a stabbing pain which is localized to the ribs. Thus the person feels pain because the affection is an inflammation. The kind of pain is stabbing because the substance of what is affected is membranous, and the pain is localized to the ribs because this is where what is affected lies. Furthermore, the pain extends over a wide area because the pleura itself extends widely. Fever follows of necessity

or patterns of abnormalities specific for a given disease and not found in any other condition." See Galen, *Hp. Aph.*, XVIIIB.390K, and *Loc. Aff.*, VIII.14K.

<sup>31</sup> The four "cardinal" signs of inflammation are still given as "rubor," "calor," "tumor," and "dolor," to which "functio laesa" is sometimes added as a fifth. Galen here does not mention calor.



τέταται. πυρετὸς δ' ἐξ ἀνάγκης ἔπεται διὰ τε τὸ πάθος  
καὶ τὴν θέσιν τοῦ πεπουθότος, ὧν ἂν ἀπὴ θάτερον,  
οὐκ ἐξ ἀνάγκης ἀκολουθήσει πυρετός. οὐδὲ γὰρ ἂν  
ὁ δάκτυλος φλεγμαίνῃ, πάντως πυρέττουσιν, ὅτι  
πόρρω τῆς καρδίας, οὐδ' ὅταν οὖν ὁ ὑπεζωκὸς μὲν  
μὴν καὶ ἡ δύσπνοια τῶν ἐξ ἀνάγκης ἀκολουθησάντων  
ἔσται τῷ πεπουθότῳ τόπῳ διότι μέρος ἐστὶν ἀναπνευ-  
στικῆς οὐκ ἀνάγκης ὄργανον τὸ μέντοι τῆς δυσπνοίας εἶδος  
οὐ διὰ τὸ μέρος, ἀλλὰ διὰ τὸ πάθος ἔσται. κωλύει γὰρ  
ἡ ὀδύνη διεσπάλθαι μέχρι πλείστου τὰ τῆς ἀναπνοῆς  
ὄργανα· προκαταλύει τοιγαροῦν τῆς ἀναπνοῆς τὴν  
ἐνέργειαν οὐδέπω τῆς χρείας πεπληρωμένης, ὅθεν  
ἀναγκάζεται διὰ τάχους ἐπὶ τὴν δευτέραν ἐνέργειαν  
ιέναι μηκέτ' ἡρεμοῦντα τοσοῦτον ὅσον ὅτ' ἐν τῷ κατὰ  
φύσιν ἦν, καὶ οὕτω γίγνεται τὸ πνεῦμα μικρὸν καὶ  
πυκνόν. ἀλλὰ καὶ ἡ τῶν σφυγμῶν ἀλλοίωσις ἐξ  
ἀνάγκης ἀκολουθεῖ τῇ φλεγμονῇ τοῦ ὑπεζωκώτος, ἢ  
τ' ἀχώριστος τῶν πυρετῶν καὶ ἡ κατὰ <τὴν> τοῦ πε-  
πουθότος ἰδέαν σφύζουσι γὰρ αὐτοῖς αἱ ἀρτηρίαί,  
διότι μὲν πυρέττουσι μείζον καὶ θάπτον καὶ πυκνότε-  
ρον, ὅτι δὲ νευρώδες τὸ φλεγμαίνον, ἅμα τάσει καὶ  
τινι σκληρότητι.

ταῦτα μὲν οὖν ἐξ ἀνάγκης ἀκολουθεῖ τὰ συμ-  
πτώματα τῇ φλεγμονῇ τοῦ ὑπεζωκώτος. ἐξ ἀνάγκης  
δὲ καὶ τῶν εἰρη<σο>μένων<sup>59</sup> ἐν τι, ἦτοι γε ἐπὶ τὴν  
πεπουθυῖαν ἢ πλευρὰν ἢ κατάκλισις ἦττον ἐπώδυνός  
ἐστὶν ἢ ἐπὶ τὴν ἀντικειμένην ἢ ἐπ' ἀμφοτέρας παρα-

because of the affection and the location of what is af-  
fected, but if one or other of these were to be lacking,  
fever would not necessarily follow. Thus, if a finger is in-  
flamed, patients are not always febrile because it is far  
away from the heart. Nor, therefore, whenever the pleura  
is affected [is there fever], if the affection happens to be  
scirrhus or edematous. Furthermore, dyspnea will be  
one of the necessary consequences due to the affected  
place because it is one of the organs of respiration. How-  
ever, the kind of dyspnea will not be due to the part but  
to the affection, for the pain prevents the respiratory or-  
gans from expanding to their full extent, and for that very  
reason prematurely inhibits the action of respiration when  
it has not yet fulfilled its use. Therefore the lungs are  
forced to go on quickly to their second action when they  
have not yet rested to their normal degree, and in this way  
the breathing becomes shallow and rapid. But also an al-  
teration of the pulses necessarily follows inflammation of  
the pleura, one kind being inseparable from the fever and  
the other being in relation to the kind of the affected part.  
The arteries in these cases pulsate more in those patients  
who are feverish, and quicker and more frequently, be-  
cause what is inflamed is sinewy, as well as being under  
tension and somewhat hard.

These symptoms, then, follow the inflammation of the  
pleura of necessity, but only one of those I shall now men-  
tion occurs of necessity—either lying on the affected side  
is less painful, or lying on the opposite side is, or it is the

<sup>59</sup> εἰρη<σο>μένων F; ἐπομένων K

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275K

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πλησίως. διπλοῦ γὰρ ὄντος τοῦ ὑπεζωκότος, εἰ μὲν οὖν τὸ περὶ τοῖς ὀστοῖς ἕξωθεν αὐτοῦ μέρος ἰσχυρότερον φλεγμαῖνοι, ῥῆον ἐπὶ τὸ ἀντικείμενον κατακλίνονται θλίβονται γὰρ ἐπὶ τοῦ πεπονθότος· εἰ δὲ τὸ ἔτερον τὸ ἔνδον, ὅπερ ὡς τὰ πολλὰ συμβαίνειν εἴωθεν, ἐπὶ τὸ ἀντικείμενον ὀδυνῶνται μᾶλλον κλινόμενοι· κρέματα γὰρ αὐτοῖς τὸ φλεγμαῖνον· εἰ δ' ἐπὶ τὸ πεπονθός, ἦττον, οὔτε γὰρ θλίβεται πρὸς τοῖς ὀστοῖς οὔτε κρέματα, ἀλλ' ἀμφοῖν τε τούτων<sup>60</sup> ἡλευθέρωνται καὶ κατὰ θατέρον τοῦ ἀπαθοῦς ἐστήρικται παθόντων δὲ ἀμφοτέρων τῶν μερῶν τοῦ ὑπεζωκότος ὁμοίως, ἐπ' ἀμφοτέραις ταῖς πλευραῖς ὁμοίως<sup>61</sup> κλίνονται.

καὶ μὲν δὴ καὶ το διήκειν τὸ ἄλγημα τοῖς μὲν εἰς ὑποχόνδριον, ἐνίοις δ' εἰς κλεῖν διὰ τε τὴν φύσιν τοῦ πεπονθότος γίνεται μορίου καὶ τὸ τῆς φλεγμονῆς σύμπτωμα τὸ ἐκτείνεσθαι τὴν ὀδύνην· ἐπειδὴ γὰρ ἄχρι τε τῶν κλειδῶν ὁ ὑπεζωκὸς ἀνήκει καὶ κατὰ τοῦ  
277K διαφράγματος | ἅπαντος, τῶν μὲν ἄνω μερῶν αὐτοῦ φλεγμαινόντων ἢ κλεῖς κατασπᾶσθαι δοκεῖ, τῶν κάτω δ' εἰς ὑποχόνδριον ἐξήκει τὸ ἄλγημα. μικρὰν οὖν χρὴ πάνυ κατὰ τὰ μέσα τῶν πλευρῶν γενέσθαι τὴν φλεγμονήν, ἢ εἰς μηδέτερον ἐξίκηται, ὡς ἢ γε μεγάλη πρὸς ἄμφω διῆκνείται.

καὶ μὴν καὶ τὸ διῦδροῦσθαι τινα καὶ ἀποχεῖσθαι τοῦ φλεγμαίνοντος μορίου λεπτὸν ἰχώρα διὰ τε τὸ νόσημα γενήσεται καὶ τὸ μόριον, ὥσπερ καὶ τοῖς ἐν τῷ στόματι φλεγμαινουσιν ἅπασιν συμπίπτει καὶ τοῖς ὀφθαλμοῖς· ἐξ ἐπιρροῆς τε γὰρ τῶν ὑγρῶν ἢ φλεγ-

same on both sides. Since the pleura is double, if the external part of it in proximity to the bones is more severely inflamed, it is easier to lie on the opposite side, thus avoiding pressure on the affected side. But if the other, internal part is more severely inflamed, which is what customarily happens in the majority of cases, it is more painful to lie on the opposite side, for what is inflamed in these patients hangs down. If, however, they lie on the affected side, the pain is less, for it is neither pressed against the bones nor does it hang down, but is freed from both these things and has been fixed in relation to the other, unaffected part. However, when both parts of the pleura are affected equally, it is the same no matter which side patients lie on.

Furthermore, in some the pain extends to the hypochondrium and in others to the clavicles due to the nature of the affected part and because extension of the pain is a symptom of inflammation. Since the pleura extends upward to the clavicles and downward over the whole diaphragm, when the upper parts of the pleura are inflamed, the clavicles seem to be drawn down, whereas  
277K when the lower parts are inflamed, the pain seems to reach to the hypochondrium. The inflammation must, therefore, be very minor and localized to the middle of the ribs for it to reach to neither, while a major inflammation extends to both.

And further, there will be a certain amount of transudation and outpouring of thin ichor from the inflamed part due to the disease and the part. This also occurs in all inflammations involving the mouth and eyes, because the inflammation arises from the flow of the fluids and be-

<sup>60</sup> τε τούτων F; γε τούτοις K

<sup>61</sup> ὁμοίως add. F

μονή καὶ τὸ μέρος ἀραιόν, οὐχ ὥσπερ τὸ δέρμα πε-  
πιλημένον τε καὶ πυκνόν. ἐὰν μὲν οὖν πολλή τε ἅμα  
καὶ λεπτή κατὰ τὸ φλεγμαῖνον ἢ ὑγρότης ὑπάρχη καὶ  
τὸ μόριον ἀραιόν, πλείστον ἀποχεῖται πρὸς τοῦτ' ὅταν  
ὅταν δ' ἔμπαλιν ὀλίγον τε ἦ καὶ παχὺ τὸ ρεῦμα καὶ  
τὸ σῶμα πυκνόν, ἐλάχιστον.<sup>62</sup> ἐρεθίζει μὲν εἰς βήχα,  
πτύουσι δὲ οὐδέν, ὥσπερ, κάπειδ' ἀν πλείστον γίνηται,  
βήττουσι τε πλείστα καὶ ἀναπτύουσιν οὐκ ὀλίγα. καὶ  
εἴη ἂν τὸ μὲν βήττειν ἀχώριστον τοῦ πάθους, τὸ δὲ  
278K πτύειν ἐπὶ τῷ βήττειν οὐκ ἀχώριστον μὲν, ὡς τὸ  
πολὺ δὲ γιγνόμενον.

εἰ μέντοι γε ἀναπτύοιεν, ἐξ ἀνάγκης μὲν χρωσθή-  
σεται τὸ σίελον, οὐ μὴν αἰεὶ γε ταυτῷ χρώματι, διότι  
μηδ' ἐν τῷ φλεγμαῖνοντι μέρει τῆς αὐτῆς αἰεὶ φύσεως  
ἔστι τὸ περιττόν. ὅταν μὲν οὖν αἱματώδες ἢ χολώδες  
ὑπάρχη—τοιούτο δ' ἐν πλευρίτισι τοῦπίπαι ἐστὶ τὸ  
τὴν φλεγμονὴν ἐργαζόμενον ρεῦμα—κέχρωσται τὸ  
σίελον αὐτοῦ ὀρρῷ τοῦ περιεχομένου χυμοῦ κατὰ  
τὸ φλεγμαῖνον, ἐρυθρὸν μὲν ὅταν αἱματικὸν ὑπάρχη  
τὸ ρεῦμα εἰς τὸν ὑπεζωκότα, ξανθὸν δ' ὅτε πικρόχολόν  
ἔστιν· εἰ μέντοι φλεγματώδης χυμὸς πρῶτον σφηνω-  
θεῖς τε καὶ διασαπείσῃ αἴτιος καθίσταται τοῦ τὴν  
φλεγμονὴν ἐργασαμένου ρεύματος, τῆνικαῦτα πτύου-  
σιν ἀφρώδη· πτύουσι δὲ καὶ μέλανα κατοπηθέντος  
τοῦ ρεύματος, ἂν θ' αἱματικὸν ἂν τε πικρόχολον ἦ.

συνειδείξεται οὖν τὰ τοιαῦτα πάντα τῇ τε τοῦ πε-  
πονθότος μορίου διαγνώσει καὶ τῇ τοῦ πάθους τὴν  
διαφορὰν τοῦ ρεύματος, ὥστε ἐκ τῶν εἰρημένων εὔδη-

cause the part is rarefied (porous), unlike the skin which  
is condensed and thick. If the fluid in the inflamed part is  
copious and thin, and the part is rarefied (porous), most  
of it pours off to the outside (externally), but when, on the  
contrary, the flow is scanty and thick and the body con-  
densed, there is very little [flow]. This provokes cough-  
ing but nothing is expectorated, just as, whenever a large  
amount flows, people cough a lot and expectorate a large  
amount. Cough is inseparable from the affection, whereas  
the expectoration is not inseparable from the coughing, 278K  
although it occurs a lot.

If, however, there is expectoration, the sputum will  
necessarily be tinged, but not always with the same color,  
because the excess in the inflamed part is not always of the  
same nature. Thus, whenever it is bloody or bilious—for  
generally in the pleuritides the flux creating the inflamma-  
tion is like this—the sputum from it is tinged by the serum  
of the fluid contained in the inflamed part; red when the  
flux to the pleura is bloody but yellow when it is picrocho-  
lic. If, however, a phlegmatic humor, when it is first ob-  
structed and putrefied, is the flux creating the inflamma-  
tion, what people expectorate under these circumstances  
is foamy. When the flux is overheated, what is expecto-  
rated is black, whether it be bloody or picrocholic.

All such things, then, along with the diagnosis of the  
affected part and the affection, will jointly indicate the  
difference of the flow, so it is quite clear from the things

<sup>62</sup> om. τουτὶ δ' ἐλάχιστον (K) post ἐλάχιστον (F)

279K λον, ὡς καὶ τὴν οὐσίαν | ἐκάστου τῶν πεπουθότων  
μορίων ἀναγκαῖόν ἐστιν ἐπίστασθαι καὶ τὴν πρὸς τὰ  
παρακείμενα κοινωνίαν εἰς τὴν τῶν νοσημάτων καὶ  
νοσοῦντων τόπων εὔρεσιν. ὅτι δ' οὐδὲν διαφέρει λέ-  
γειν ἢ θέσειν ἢ σύνθεσιν ἢ πρὸς τὰ παρακείμενα κοι-  
νωνίαν, εὐδηλον εἶναι νομίζω, κἂν ἐγὼ μὴ λέγω.

15. Εὐδηλον δ' ἐκ τῶν εἰρημένων ἐστίν, ὡς καὶ τὴν  
ἐνέργειάν καὶ τὴν χρεῖαν ἐκάστου τῶν μορίων ἀναγ-  
καῖόν ἐστιν ἐπίστασθαι, καὶ πρὸς τούτοις ἔτι τὰς τῶν  
νοσημάτων τε καὶ συμπτωμάτων γενέσεις· εἰς δὲ  
τοῦτο καὶ τὰς ποιούσας αἰτίας τὰ νοσήματα· πρὸς τε  
γὰρ τὴν διάγνωσιν ἐκάστου τῶν πεπουθότων μορίων  
ἅμα ταῖς διαθέσεσι καὶ πρὸς τὰς τοῦ νοσήματος  
αὐτοῦ διαφορὰς ἀναγκαῖα φαίνεται ταῦτα. καὶ τὸ μέ-  
γεθος δὲ καὶ τὸ ἦθος ἐκάστου τῶν νοσημάτων ἐκ τῶν  
αὐτῶν τούτων λαμβάνεται, τὸ μέγεθος μὲν ἐκ τε τοῦ  
κατὰ τὴν διάθεσιν αὐτῶν μεγέθους καὶ τῶν ἐπομένων  
αὐτῇ συμπτωμάτων, τὸ δ' ἦθος ἐκ τε τῆς διαφορᾶς  
τοῦ νοσήματος καὶ τῶν ἐπομένων αὐτῇ συμπτωμάτων.

280K εὐθέως γοῦν ἐπὶ τοῦ προκειμένου παραδείγματος |  
ὀλεθριώτατος μὲν ἐστὶν ὁ μελαγχολικὸς ἐπικρατῶν  
χυμὸς, ὅτι τε κακοθέστατος αὐτός ἐστι καὶ διαβρω-  
τικώτατος καὶ δύσπεπτος καὶ δυσεκκάθατος ὅτι τε  
πλείστης ἐστὶ θερμασίας ἐνδεικτικὸς, ὑφ' ἧς κατοπη-  
θεῖς ἐγένετο, πάντων δ' ἐπιεικέστατος ὁ αἱματικὸς  
γλυκύτατος τε καὶ εὐπεπτότατος ὧν οἱ δ' ἄλλοι δύο  
χυμοὶ μεταξὺ τῶν εἰρημένων εἰσὶν ἀπλότητός τε πέρι  
καὶ κακοηθείας. τῶν συμπτωμάτων δὲ τὸ μὲν μηδὲν

said that we must know the substance of each of the af- 279K  
fected parts and their association with the parts adjacent  
in order to discover the diseases and the diseased places.  
That it makes no difference to say position, arrangement  
or association with adjacent parts is, I think, quite clear,  
even if I don't actually say so.

15. It is clear from the things said that it is essential to  
know the function and use of each of the parts, and in  
addition to these, the genesis of diseases and symptoms;  
to this may also be added the causes producing the dis-  
eases. These things are clearly necessary for the diagnosis  
of each of the affected parts along with the conditions and  
the *differentiae* of disease itself. And the magnitude and  
nature of each of the diseases are taken from these things:  
the magnitude from the magnitude relating to their condi-  
tion and the symptoms which follow this; the nature from  
the *differentia* of the disease and the symptoms which  
follow it.

Anyway, in the proposed example, the melancholic hu- 280K  
mor, when it prevails, is the most destructive in that it is  
the most *kakoethical* (malign) and most erosive. And it is  
difficult to concoct and evacuate in that the very large  
amount of heat is an indication of that by which it was over-  
heated. The most favorable of all [humors] is the bloody,  
being the sweetest and the most easily concocted. The  
other two humors are in between those spoken of in terms  
of simplicity and *kakoethicity*. Of the symptoms, expecto-

ἀναπτύειν ὀλέθριον, ὅτι τε δεδέσθαι δηλοῖ πρὸς τῆς φλεγμονῆς τὸ ῥεῦμα καὶ ὅτι διὰ τὸ μένειν ἔνδον ὄλον διαφθαρῆσεται τὸ δ' ἀναπτύειν ἀπόνως τε καὶ ῥαδίως ἐπιεικέστατον, εἰ δὲ δὴ καὶ τὸ πτυόμενον εἴη πεπεμμένον, ἔτι καὶ μᾶλλον· ἀλλὰ καὶ τὰ κατὰ τοὺς σφυγμοὺς συμπτώματα τὸ ἦθος δηλοῖ τοῦ νοσήματος, ἥδη δὲ καὶ τᾶλλα, ὅσα κατὰ συμπάθειαν ἐπίγινεται, παραφροσύνη τε καὶ κόματα καὶ ἀνορεξία καὶ οὖρα καὶ διαχωρήματα τοῖα καὶ τοῖα γινόμενα

281K γυμναστέον οὖν ἡμῖν ἐστὶν ἐν ἅπασιν τοῖς εἰρημένοισι, εἰ διαγνωστικοὶ βουλόμεθα γενέσθαι νοσημάτων τε καὶ μορίου | πεπονθότος, ἤθους τε καὶ μεγέθους καὶ διαφορᾶς τῆς κατ' αὐτά. ἐκ τῶν αὐτῶν δὲ τούτων ἡμῖν ὑπάρξει καὶ τὸ προγιγνώσκων ἐς ὃ τι τελευτήσει τὸ νόσημα, καὶ ἡ τῶν βοηθημάτων ἐπιδέξιος χρήσις. ἡ μὲν γὰρ πρόγνωσις ἀναίτιόν τε τὸν ἰατρὸν ἀποφαίνει τῶν θανάτων εὐπειθεῖς τε παρέχει τοὺς κάμνοντας ἐκ πολλοῦ τε προδιδάσκει τὸν καιρὸν τῶν βοηθημάτων. ἡ δὲ τῶν βοηθημάτων χρήσις ἐπιδέξιος ὅτι μὲν αὐτὸ τὸ κυριώτατόν ἐστι τῆς τέχνης, ἐφ' ᾧ σύμψας ὁ λόγος ἄρμηται, πρόδηλον παντί· πῶς δ' ἐκ τῶν προειρημένων περιγίγνεται, μετ' ὀλίγον εἰρήσεται. νυνὶ μὲν γὰρ ἐπιθεῖναι βούλομαι πρότερον, οἷς διεξήειν, τὸ τέλος. ἡ γὰρ τῶν νοσημάτων ἅμα τοῖς δεδεγμένοις αὐτὰ μορίοις διάγνωσις ἐφ' ἐνὸς μὲν ἥδη μοι παραδείγματος εἴρηται, προσθεῖναι δ' ἕτερόν τι παραπλήσιον οὐδὲν χείρον.

rating nothing is destructive in that this shows the flux from the inflammation is being retained, and because it remains within, it is wholly destructive. Painless and easy expectoration is the most favorable, and certainly, if what is expectorated is also concocted, still more so. But also, the symptoms relating to the pulse make clear the nature of the disease, and so too do the other things which supervene in addition in relation to *sympatheia*<sup>32</sup>—delirium, coma, anorexia, and the qualities occurring in the urine and feces respectively.

We must, then, be practiced in all the things mentioned, if we wish to become diagnosticians of disease and the affected part, and the character, magnitude and *differentiae* in relation to these. It is from these same things that we will prognosticate to what end the disease will come and our use of remedies will be skillful. The prognosis is what provides evidence that the doctor is not responsible for the deaths [of patients], makes patients tractable, and teaches well in advance the appropriate time for the remedies. That the skillful use of the remedies is the most important part of the art from which the whole discussion began is clear to everyone. How this results from the things previously spoken of, I shall speak about a little later. For the present, I wish to put an end to those things I was going through before. I have already spoken about the diagnosis of the diseases together with the parts that have succumbed to them, by way of one example, although it would be no bad thing to add another, similar example.

281K

<sup>32</sup> For a consideration of Galen's thinking on "sympathetic affections," see R. E. Siegel, *Galen on Sense Perception*, 187-89. See also Galen, *MM*, 4.4 (X.414K), and *Caus. Morb.*, VII.127-28K, VII.136-37K.

282K ἡ γάρ τοι τῶν ἐκκρινομένων ιδέα διδάσκει πολλά,  
 συνήπται δ' αὐτῇ τὸ σῶμα, δι' οὗ τὴν ἐκκρίσιν ὀρώ-  
 μεν γιγνομένην, ὡς ἐξ ἀμφοῖν συνιόντων ἔνδειξιν  
 μίαν γίγνεσθαι βεβαίαν. ὑμενώδους γάρ, εἰ οὕτως  
 283K ἔτυχεν, ἐκκριθέντος σώματος ἢ μὲν | ἐξ αὐτοῦ τοῦ  
 φανέντος ἔνδειξις ἠλκῶσθαι τι τοιοῦτον ἐνδείκνυται  
 μέρος ὡς ἐπιπολῆς ὑμενώδη φύσιν ἔχειν, ἀφωρισμέ-  
 νον δ' αὐτὸ δηλοῦν ἀδυνατεῖ τὸ μέντοι τῆς ἐκκρίσεως  
 χωρίον ἐπ' αὐτὸ τὸ πεπονηθὸς ποδηγεί. κάτω μὲν γὰρ  
 διαχωρήσαν ἐντέρου δηλοῖ τὴν ἔλκωσιν, ἄνω δ' ἐμε-  
 θὲν γαστρός, ἀναβηχθὲν δὲ τῶν ὑπαλειφόντων τὰς  
 τραχείας ἀρτηρίας ὑμένων, οὐρηθὲν δ' ἦτοι κύστεως  
 ἢ τοῦ κατὰ τὸ αἰδοῖον πόρου. αὐτά τε οὖν ταῦτα καὶ  
 πρὸς τούτοις ἔτι τὰ κατὰ συμπάθειάν τε καὶ πρωτο-  
 πάθειαν κάμνοντα σώματα διακρίνειν ἀλλήλων προσ-  
 ἤκει τῇ τε ἡγεμονίᾳ καὶ ἀκολουθίᾳ, καὶ τῷ μεγέθει τε  
 καὶ τῇ μικρότητι καὶ προσέτι τῇ τῶν κακούντων  
 ἐκάτερον αἰτίων προσόδῳ. πολλοὶ γοῦν ἐπὶ στομαχι-  
 καῖς διαθέσεσιν ἦτοι τοῦ ἐγκεφάλου εἰς συμπάθειαν  
 ἀχθέντος ἐν μελαγχολικοῖς ἐγένοντο συμπτώμασιν ἢ  
 τῶν ὀφθαλμῶν ἐν τοῖς τῶν ὑποχουμένων. ἀλλ' ἐπὶ τῶν  
 τοιοῦτων, εἴαν τις ἀκριβῶς προσέχη τὸν νοῦν, εὐρήσει  
 ταῖς ἀπεψίαις τε καὶ ταῖς τῶν περιττωμάτων ἀθροίσε-  
 σιν ἐν στόματι κοιλίας ἐπόμενα τὰ εἰρημένα παθή-  
 283K ματα, καὶ συμπαροξυνόμενά τε τοῖς | βλάβπτουσι τὸ  
 τῆς γαστρὸς στόμα καὶ συγκαθιστάμενα τοῖς ὤφε-  
 λούσιν.

Certainly, the kind of secretion teaches many things. However, joined to it is the body through which we see the excretion occurring, so when both these are linked together, there is one reliable indication. Thus, if it should happen that a membranous body is expelled, the indication from the appearance of this reveals that some part which naturally has a membranous surface has become ulcerated, although it cannot show which part is affected. Nonetheless, the place of the secretion is a guide to the actual affected part. Thus, if it is passed downward, it indicates ulceration of the intestine, whereas if it is vomited, it indicates ulceration of the stomach. If it is coughed up, it indicates the membrane lining the rough arteries (trachea and bronchi), and if passed in the urine, either the bladder or the urethra. It is appropriate to distinguish these same things from one another, and in addition to them, which bodies are diseased sympathetically and which protopathically,<sup>33</sup> and by antecedent and consequent, and by largeness and smallness, and further, by the progression in each of the harmful causes. For example, many people with gastric conditions have melancholic symptoms, if the brain is involved sympathetically; or cataracts, if the eyes are so involved. But in such cases, if someone pays close attention, he will discover that the aforementioned affections follow the aepsias and the collection of superfluities in the cardiac orifice of the stomach, and are exacerbated by the things that damage the cardiac orifice of the stomach and restored by things that benefit it.

33 The Greek terms are retained here, although "protopathic" has come to refer to a specific aspect of the peripheral nervous system. The distinction being made by Galen is essentially that between primary and secondary. See Galen, *Loc. Aff.*, VIII.31K.

ἀλλ' οὐ πρόκειται μοι τὰ νῦν ἅπαντα τὸν ὑπὲρ τῶν πεπονητότων μερῶν λόγον διέρχεσθαι, ὡς περ οὐδ' ἄλλο τι τῶν κατὰ τὴν τέχνην ὀλόκληρον, ἀλλ' ἐνδείξασθαι μόνον τὴν μέθοδον αὐτοῦ τῆς εὑρέσεως καὶ ὅπως τῷ τέλει τῆς τέχνης συνήπται. καὶ ἀναγκαῖόν ἐστι αὐτὸν καθ' ἑαυτὸν<sup>63</sup> ἕκαστον γυμνάσασθαι πολυειδῶς ἐν ἀπάσαις ταῖς ὑπὲρ αὐτῶν γεγραμμέναις ἡμῖν<sup>64</sup> πραγματείαις. ὅπερ οὖν ἀναγκαῖόν ἐστιν εἰς τὰ παρόντα προσθεῖς, ἀπαλλάξομαι τὰς εἰρημένας μεθόδους κἀνταῦθα τὸ εἶδος νόμιζε τοῦ πράγματος ὑπάρχειν, ἐπειδὴν δὲ ταῖς ὕλαις ἐμβιβασθῶσι, ὅλην τὴν οὐσίαν, εἰς ἅπαντα διέλθω τὰ κατὰ μέρος, ὡς περ νῦν ἐπὶ παραδειγμάτων ὀλίγων ἐποίησα, καὶ τοῦτ' ἂν σοι τὸ μέρος εἴη τῆς τέχνης ὀλοκλήρως συνεστηκός.

16. Ἐπόλοιπον δ' ἐστὶν ὑποδεικνύειν, ὡς καὶ εἰς τὴν ἐπιδέξιον χρήσιν τῶν βοηθημάτων ἀναγκαῖον ἐπιστάσθαι τὴν τε οὐσίαν ἀκριβῶς τοῦ θεραπευομένου μορίου, καὶ τὴν διάπλασιν καὶ τὴν θέσιν. ἡ μὲν οὖν οὐσία διδάσκει τὰ τε πρῶτα νοσήματα τὰ κατὰ δυσκрасίαν εἰς ὅσον ἐξέστηκε τοῦ κατὰ φύσιν ἄχρι πόσου τε θερμαντέον ἐστὶν ἕκαστον αὐτῶν καὶ ψυκτέον καὶ ξηραντέον καὶ ὑγραντέον· ἡ δὲ διάπλασις αὐτὰ τε τὰ καθ' ἑαυτὴν διδάσκει νοσήματα, περὶ ὧν ἔμπροσθεν εἴρηται, καὶ συνειδείκνυται τὸ μέγεθος αὐτῶν· εἰς ὅσον γὰρ ἕκαστον ἐξέστηκε τοῦ κατὰ φύσιν, εἰς τοσοῦτον ἤκει μέγεθος· ἅμα δὲ τῷ μεγέθει καὶ τὸ μέχρι πόσου διὰ τῶν ἐναντίων ἐπανάγειν αὐτὰ χρὴ πρὸς τὸ κατὰ φύσιν ἐξ αὐτῆς λαμβάνεται. ταῦτα μὲν

But I do not propose to now go through the discussion of everything pertaining to the affected parts, or anything else pertaining to the art as a whole, but only to demonstrate the method of its discovery and how this method relates to attaining the goal of the art. And it is necessary for each person himself to be variously practiced in all the treatises I have written about these things. Therefore, after adding what is necessary for our present purposes, I shall set aside the aforementioned methods and here consider what kind of matter this is, when it is put into the materials—that is, the whole substance. If I go through all these things individually, as I did just now with reference to a few examples, this would be, for you, the part of the art wholly constructed.

16. What remains is to show that, for the skillful use of the remedies, it is necessary to know precisely the substance of the part being treated, its conformation and position. The substance teaches us, in the primary diseases due to *dyskrasia*, how far they depart from an accord with nature and how much we must heat, cool, dry or moisten each of them. The conformation teaches the diseases related to itself—I spoke about these earlier—and jointly indicates their magnitude, for the extent that each departs from an accord with nature is the measure of its magnitude. Along with the magnitude, we take from the conformation how far we must go in the use of opposites to bring these diseases back to an accord with nature. These, then,

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<sup>63</sup> <ἑαυτὸν> add. F

<sup>64</sup> post ἡμῖν: πραγματείαις F; ἐννοίας ταῖς πραγματείαις ἀναλεγόμενον K

οὖν ἀνάλογον τοῖς κατὰ δυσκρασίαν, [αἱ δ' ἐμφράξεις  
 τε καὶ σφηνώσεις τούτου εἰσὶ γένους,]<sup>65</sup> ἴδιον δὲ ἐξαί-  
 ρητον ἐνδείκνυται τὸν τρόπον τῆς κενώσεως ἐκ τῶν  
 στομάτων, [καὶ διὰ τῶν],<sup>66</sup> ἃ κέκτηται τὸ θεραπευόμε-  
 νον ὄργανον· ἐπικοινωνεῖ δὲ τοῦτο τοῖς ὑπὸ τῆς θέ-  
 σεως ἐνδεικνυμένοις, ὑπὲρ ὧν ἤδη λέγομεν. ὅσα μὲν  
 οὖν ἐν αὐτοῖς ἀνάλογα ἔστιν εἰς τε τὴν τοῦ μεγέθους  
 διάγνωσιν εἰς τε τὸ ποσὸν τῆς τῶν βοηθημάτων  
 χρήσεως, οὐδὲν ἔτι δεόμεναι λέγειν· ὅσα δ' ἐξαίρετα,  
 λεκτέον ἐφεξῆς, ἐπειδὴ καὶ ἡ χρεία μεγίστη πρὸς τὰς  
 285K θεραπείας | αὐτῶν ἔστι μινυμένων ταῖς ἀπὸ τῆς δια-  
 πλάσεως ἐνδείξεσιν. ἔσται δὲ κἀναυθῆ ὁ λόγος ἐπὶ  
 παραδειγμάτων ὀλίγων ὑπὲρ τοῦ γινῶναι τὴν μέθοδον.

Ἐμφραξίς οὖν ἔστιν ἐν τι τῶν ὀργανικῶν παθῶν  
 ἐγγίγνεται δ' ἥπατι μάλιστα διὰ τὴν κατασκευὴν  
 αὐτοῦ καὶ τὴν ἐνέργειαν. αἱ γὰρ ἀπὸ τῶν πυλῶν φλέ-  
 βες εἰς ἅπαντα τοῦ σπλάγγνου τὰ σιμὰ κατασχί-  
 ζόμεναι συνάπτουσι ταῖς ἐν τοῖς κυρτοῖς ἀδήλοις  
 αἰσθήσει στόμασιν. ἀναφέρεται δ' ἐκ τῆς κοιλίας  
 τροφή πᾶσα πρὸς ἓνα τόπον τοῦ ἥπατος, ὃν ἀπ' αὐ-  
 τοῦ τοῦδε τοῦ νῦν εἰρημένου πύλας ὀνομάζουσιν· οὔτε  
 γὰρ εἰς πόλιν εἰσελθεῖν τις δύναται πρὶν διελθεῖν τὰς  
 πύλας οὔτ' εἰς ἥπαρ ἀφικέσθαι τι πρὶν ἐν τούτῳ γενέ-  
 σθαι τῷ χωρίῳ. διανέμεται δ' ἐντεῦθεν εἰς τὰ σιμὰ

<sup>65</sup> αἱ δ' ἐμφράξεις τε καὶ σφηνώσεις τούτου εἰσὶ γένους,  
 om. F

<sup>66</sup> [καὶ διὰ τῶν] F; καὶ διὰ τῶν σχημάτων K

have a correspondence to the diseases in the *dyskrasias*, but they indicate specifically and exceptionally the manner of their evacuation from the openings which the organ being treated possesses. This is something they have in common with those things which have an indication from the position; I spoke about these just now. Therefore, I don't need to say anything more about those things that are analogous in them to that relating to the diagnosis of magnitude or the amounts of the remedies to be used. Next, I must speak about the things that are distinctive, since their use in conjunction with the indications from the conformation is most important in regard to treatment. Here too the discussion will use a few examples to make the method known.

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Blockage is one of the affections of organs. It supervenes particularly in the liver due to its structure and function. For the veins from "the gates" (the portal fissure)<sup>34</sup> split up over the whole concave part of the viscus and connect with those in the convex parts by imperceptible openings. All nutriment is carried up from the stomach to one place in the liver, which is now termed "the gates," as we just said. Just as no one can enter a city before going through the gates, so nothing can reach the liver before being in this place. From here it is distributed to the whole

<sup>34</sup> See Gray's *Anatomy* (15th ed.), 919: "The transverse or portal fissure is a short but deep fissure, about two inches in length, extending transversely across the under surface of the left portion of the right lobe, nearer to its posterior border than its anterior border . . . By the older anatomists this fissure was considered the gateway (*porta*) to the liver, hence the large vein which enters at this fissure was called the portal vein."



286K τοῦ ἥπατος ἅπαντα, κᾶπειτα δι' ὧν εἰρήκαμεν περάτων εἰς τὰ κυρτὰ μεταλαμβάνεται. οὐδὲν οὖν θαυμαστόν ἐστι διὰ τε τὴν τῶν ὁδῶν στενότητα καὶ τὸ πλήθος τῆς διερχομένης οὐσίας ἐμφράξεισι συνεχέσιν ἀλίσκεσθαι τὸ σπλάγγχνον. ἴασις οὖν | αὐτῶν ἔσται πρὶν μὲν πολλὰς γενέσθαι καὶ πυρέττειν τὸν ἄνθρωπον ἢ τῶν λεπτυνόντων ἐδεσμάτων τε καὶ φαρμάκων προσφορά, πολλῶν δὲ γενομένων οὐκ αὐτῇ μόνον, ἀλλὰ καὶ ἡ κένωσις ἤντινα δι' ὧν χρῆ ποιείσθαι χωρίων, ἢ τε διάπλασις ἐνδείξεται τοῦ σπλάγγχνου καὶ ἡ θέσις· ἐκ τούτων γοῦν ὀρμώμενοι, τὰ μὲν ἐν τοῖς σιμοῖς τοῦ ἥπατος ἐπ' ἔντερον προτρέφομεν, ὅσα δ' ἐν τοῖς κυρτοῖς ἐστι, δι' οὕρων ἐκκενώσομεν.

οὕτω δὲ καί, ὅσα κατὰ τὸν θώρακα καὶ τὸν πνεύμονα περιέχεται, κενούσθαι δεόμενα, παρὰ τε τῆς διαπλάσεως αὐτῶν καὶ τῆς θέσεως ἐδιδάχθημεν ἐκκαθαίρειν διὰ βηχῶν, ὡσαύτως δὲ καὶ ὅσα κατὰ τὸν ἐγκέφαλον, ἐπὶ τὰς ῥίνας ἔλκειν. οὐχ ἥκιστα δὲ καὶ ἡ τῶν φλεγμαινόντων μορίων ἴασις ἐκ θέσεώς τε καὶ διαπλάσεως λαμβάνεται. ἔστι μὲν γὰρ καὶ τούτων ὁ πρῶτος σκοπὸς ἡ κένωσις τοῦ χυμοῦ τοῦ κατασκήψαντος εἰς τὸ φλεγμαῖνον, ὅπως δ' ἐκκενοῦν αὐτὸν χρῆ, τῶν<sup>67</sup> ὀργανικῶν μορίων ἢ φύσις ἐνδείκνυται. παρ' αὐτῶν γοῦν διδασκόμενοι τὰ μὲν εἰς ἰσχίον κατασκήψαντα ρέματα διὰ | τῶν κατ' ἰγνύαν τε καὶ σφυρὰ φλεβῶν ἐκκενοῦμεν, ὥσπερ γε καὶ ὅσα κατὰ τὰς μῆτρας ἰσχεταί, τὰ δὲ κατὰ θώρακα καὶ πνεύμονα διὰ τῆς κατ'

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286K concavity of the liver, and then, having passed through the boundaries I spoke of, it is received in the convex parts. It is hardly surprising that the viscus is affected by frequent blockages due to the narrowness of the passages and the large amount of substance passing through them. The cure of these before they become too numerous and the person develops a fever will be the provision of thinning foods and medications. However, if they have already become too numerous, it will not be this alone, but also evacuation which will be effected through the places the conformation and position of the viscus indicate. And then, beginning from these, we shall impel the things in the concavities of the viscus on to the intestines, while those in the convexities we shall evacuate through the urine.

In this way too, we have been taught by the conformation and position of the chest and lungs to evacuate by coughing those things contained in these structures which need to be evacuated, and similarly to draw away those things in the brain through the nostrils. No less too the cure of inflamed parts is taken from position and conformation. For the primary objective in these instances is evacuation of the humor that has passed down to the inflamed part. How this must be evacuated, the nature of the organic parts indicates. Anyway, learning from these instances, we evacuate fluxes passing down to the hip joint through the veins behind the knee and at the ankles, just as we do with those things contained in the uterus. On the other hand, those things contained in the chest and lungs are evacuated through the veins in the antecubital fossa,

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<sup>67</sup> F om. κατεχόντων (K) post τῶν

ἀγκῶνα τῆς ἔνδον.<sup>68</sup> ὅσα δὲ κατὰ κεφαλὴν τε καὶ τράχηλον ἐκ τῆς ὠμιαίας. ἢ γὰρ τῶν ἐγγυτάτων τε καὶ κοινῶν τῷ πεπονθότι μορίῳ φλεβῶν κένωσις ἀρίστη τε καὶ ῥάσθη. καὶ τὸ διαφορεῖν δὲ τὸ φλεγμαῖνόν ἐστι μὲν δῆπου καὶ αὐτὸ τὴν ἐκ τοῦ νοσήματος ἔνδειξιν ἔχον, ὑπαλλάττεται δ' ἐν τῇ κατὰ μέρος τῶν βοηθημάτων χρήσει τὴν παρὰ τῆς θέσεως τοῦ πεπονθότου μορίου προσλαμβάνον ἔνδειξιν. ὅσα μὲν γὰρ ἐπιπολῆς κείται, τοιοῦτον ἐπ' αὐτῶν εἶναι προσήκει τὸ διαφορῆσον φάρμακον, οἷόν περ ἐνδείκνυται τὸ τῆς φλεγμονῆς εἶδος· ὅσα δ' ἐν βάθει, τοσοῦτω δριμυτέρων δέεται φαρμάκων, ὅσω τῶν ἐκτὸς ἀποκεχώρηκεν, ὥστε καὶ σικύας ἐπ' αὐτῶν ἐνίοτε χρῆζομεν, εἰ κατὰ συχνοῦ κέοιτο βάθους, ὅπερ ἐναντιώτατόν ἐστι τοῖς ἐπιπολῆς φλεγμαίνουσιν. οὕτω δὲ καὶ εἴ ποιν στύφοντος εἴη φαρμάκων χρεία, σκοπεῖσθαι τοῦ δεομένου μορίου<sup>69</sup> τὴν θέσιν. εἰ μὲν γὰρ ἰκανόν ἐστιν ἐξικέσθαι | πρὸς αὐτὸ τὸ στύφον, οὐδὲν κωλύει παραλαμβάνειν· εἰ δ' οὐχ ἰκανόν, ἐπισκοπεῖσθαι, μήποτ' ἄρα τὴν ἐκ τῶν προκειμένων ὑγρότητα συνελάσωμεν εἰς τὸ πεπονθός, ὥστε ἥτοι τὴν ποδηγοῦσαν τῷ στύφοντι φαρμάκῳ μικτέον ἐστὶ δύναμιν ἢ οὐ χρηστέον αὐτῷ. μέγιστον γοῦν οἶδα βλάπτοντας, ὅσοι τοῖς ἐκ πνεύμονος

<sup>68</sup> post διὰ τῆς: κατ' ἀγκῶνα τῆς ἔνδον F; ἔνδον κατ' ἀγκῶνα φλεβός K

<sup>69</sup> μορίου F; χωρίου K

and those in relation to the head and neck through the veins on the inner aspect of the elbow.<sup>35</sup> For evacuation is best and easiest through the veins nearest to and associated with the affected part. Dispersing inflammation is clearly something that takes its indication from the disease, although this changes somewhat in the use of individual remedies, taking the indication from the position of the affected part. For those parts that lie on the surface, the dispersing medication should be one that is appropriate for these parts, and of the kind the inflammation indicates. However, those parts in the depths need medications that are more penetrating to the extent that the parts are away from the surface, so that we sometimes also use a cupping glass in these cases, if they lie very deep, which is completely opposite to the inflammations on the surface. In this way too, if there is, perhaps, need for an astringent medication, we should consider the position of the part needing it. Then, if it is sufficient to reach the part with its astringent potency intact, nothing prevents the taking of it. If, however, it is not sufficient, we must take care never to drive the fluid from adjacent areas to the affected part, so we must either mix a guiding capacity with the astringent medication or we must not use it. Any- way, I know the greatest harm is done by those who ap-

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<sup>35</sup> See *Gray's Anatomy* (15th ed.), 585, fig. 330, for a diagram of the veins on the inner aspect of the elbow. On the subsequent page there is a quote from Tillaux that begins: "Venesection is usually performed at the bend of the elbow, and as a matter of practice the largest vein in this situation is selected. This is usually the median basilic, and there are anatomical advantages and disadvantages in selecting this vein."

ἀναβήττουσιν αἷμα περιτιθέασιν κύκλω καθ' ὅλον τὸν θώρακα φάρμακα στύφοντα· πρὸς γὰρ τῷ μὴ δι-  
ϊκνεῖσθαι τὴν δύναμιν αὐτῶν εἰς τὸν πνεύμονα συν-  
ελαύνουσι καὶ τὸ κατὰ τὸν θώρακα πᾶν<sup>70</sup> αἷμα πρὸς  
τὸ σπλάγγχνον.

ἀρκεῖν ἡγοῦμαι καὶ περὶ τούτων εἰς γε τὴν ἐνεστῶ-  
σαν πραγματείαν τὰ εἰρημένα. τοσοῦτον οὖν εἰπὼν  
ἔτι περὶ αὐτῶν ἀπαλλάξομαι, ὡς ἡ μέθοδος αὕτη τὸ  
εἶδος μόνον ἐστὶ τοῦ πραγματεῖος, ἡ δὲ καθ' ἕκαστον  
μέρος τοῦ σώματος ἐπιστήμη τε καὶ διεξοδος ἡ οἶον  
οὐσία σύμπασα.<sup>71</sup> |

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17. Περὶ προγνώσεως τοίνυν ἐφεξῆς λέγωμεν, ἐπ-  
ειδὴ χρήσιμος ἡμῖν εἰς ἄλλα τέ τινα καὶ οὐχ ἡκιστα  
πρὸς τὴν θεραπείαν ἐφάνη. τῷ μὲν οὖν πρῶτον βου-  
λομένῳ συστήσασθαι τέχνην προγνωστικὴν ἀναγ-  
καῖον ἐστὶ προσεπισκέψασθαι, πότερον, ὥσπερ ἐκά-  
στου ζώου φύσις ἴδιον ἔχει χρόνον ζωῆς, οὕτω καὶ  
τῶν νοσημάτων ἕκαστον ὡς ἀδύνατον εἶναι τέσσαρ-  
σιν ἡμέραις λυθῆναι νόσον, ἧς ἡ φυσικὴ προθεσμία  
δυοῖν ἐστὶ μηνῶν, ἢ πᾶν νόσημα καὶ χρονίσαι δυνα-  
τόν ἐστὶ καὶ λυθῆναι τάχιστα. νυνὶ μέντοι διὰ τὸ πολ-  
λοὺς ἤδη γεγυῖναι προγνωστικούς τῶν ἐσομένων  
ιατροὺς οὐκέτ' οὐδὲ τοῖς ἰδιώταις ζητεῖται, πότερον  
ἐγχωρεῖ γενέσθαι τινα τοῦ μέλλοντος ἀποβήσεσθαι  
προγνωστικὸν ἢ ἀδύνατόν ἐστιν, ἀλλ' ἐξῆς ἅπαντες  
ὥσπερ δυνατοῦ τε τοῦ πράγματος ἔχουσι πυνθάνου-  
νται τε τῶν ἰατρῶν, ἐν ἧτινι προθεσμία λυθήσεται τὸ  
νόσημα. πρὸς μέντοι τὴν ἐνεστῶσαν πραγματείαν

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ply astringent medication all around the chest in patients  
who are coughing up blood from the lungs. In such cases,  
not only does the potency of these medications not get  
through to the lungs, but they also drive all the blood in  
the chest to that organ.

I think I have said enough about these matters for the  
present treatise. I shall move away from them after say-  
ing that the method itself is only the form of the matter,  
whereas the knowledge of each part of the body and its  
detailed description is the whole substance, as it were.

17. Let us therefore speak next about prognosis, since  
it has been shown to be useful to us for certain other  
things, and not least for treatment. And so, first, for some-  
one who wishes to construct an art of prognosis, it is nec-  
essary to consider whether each disease has a specific  
duration, just as it is in the nature of each animal to have  
a specific lifespan, so that a disease whose natural duration  
is two months can't be resolved in four days, or whether  
every disease can be both chronic and resolved very  
quickly. For the present, however, because there are al-  
ready many doctors who prognosticate what will be so, it  
is no longer even questioned by laymen whether or not it  
is possible for someone to deliver a prognosis about what  
is going to happen. Rather, everyone assumes it is possible  
and asks the doctors within what particular time the dis-  
ease will be resolved. However, in the present treatise, it  
would be no bad thing for us to assume we are now estab-

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<sup>70</sup> πᾶν *add.* F

<sup>71</sup> F: *post σύμπασα om. ἢ ἐν ἄλλαις πραγματείαις διε-  
ξήλομεν (K)*

οὐδὲν ἂν εἴη χείρον ὑποθέσθαι νῦν πρῶτον ἡμᾶς  
συνίστασθαι τέχνην προγνωστικὴν· καὶ γὰρ τᾶλλα  
πάντα κατὰ τὸν λόγον οὕτω διήλθομεν.

290K ἔν μὲν ἰ δὴ καὶ πρῶτον ἀναγκαῖον, εἵπερ εἴη τις  
πρόγνωσις, εἶναί τινα βεβαίως ἐσόμενα κατὰ τὸν  
μέλλοντα χρόνον· ἐξῆς δὲ σκεπτέον, ὅπως ἂν τις  
εὔροι, τίνα τε καὶ πόσα τὰ τοιαῦτά ἐστιν. οὐ γὰρ δὴ  
πάντα γε τὰ γενησόμενα περὶ τὸν κάμνοντα τὴν γέ-  
νεσιν ἀναγκαῖαν ἔχει. θόρυβος οὖν ἐκ γειτόνων δια-  
νυκτὸς ἢ κύνες ὑλακτοῦντες ἢ ἀγγελίαι τινὲς ἀηδεῖς  
ἀγρύπνους ἐργάζονται τοὺς νοσοῦντας, ὧν οὐδὲν οὐτ'  
ἀναγκαῖαν ἔχει τὴν γένεσιν οὔτε βεβαίαν τὴν πρό-  
γνωσιν. ἄρ' οὖν ὅσα κατὰ τὸν τοῦ νοσήματος ἀπο-  
τελεῖται λόγον, ὠρισμένην τε τὴν γένεσιν ἔχει καὶ  
βεβαίαν τὴν πρόγνωσιν ἢ οὐδὲ ταῦτα σύμπαντα; δύ-  
ναται γὰρ ἐξαίφνης ἐπιρρηῆναί τι περιττὸν ὑγρὸν  
ἔνδον τοῦ σώματος ἀλλόμενον ἐπὶ τι μόριον ἀναγ-  
καῖον εἰς τὴν ζωὴν, ὥσπερ αὖ πάλιν ἕτερον ἐκ μέρους  
κυρίου μεταστῆναι πρὸς ἄκυρον· ἀκολουθήσει δ' ἐξ  
ἀνάγκης τῷ μὲν εἰς τὸ κύριον ἐνεχθέντι μέρος ἔσχα-  
τος κίνδυνος, τῷ μεταστάντι δ' ἐξαίφνιδίως τε καὶ  
ἀπροσδόκητος ἢ τοῦ κάμνοντος σωτηρία.

291K τῶν μὲν δὴ τοιούτων καταστάσεων ἰ αὐτὸ τοῦτο  
μόνον ἐστὶ προγνῶναι, τὸ ἀβεβαίον τε καὶ σφαλερόν,  
οὐ μὴν ἐς ὃ τι τελευτήσει δυνατὸν ἀκριβῶς ἐξευρεῖν·  
ἐφ' ὧν δ' οὐκέτι διαρρεῖ τὰ περιττώματα, κατασκή-  
ψαντα δ' εἰς τινα τόπον ἐκείνον κατείληφεν, ἐπὶ τού-  
των ἐγχαρεῖ προγνῶναι τὸ μέλλον εἰδόντων ἡμῶν, ὅτι

lishing the prognostic art for the first time; and in fact we  
went over everything else pertaining to the discussion in  
this same way.

The one primary necessity, if there is to be a prognosis,  
is for there to be things that will reliably occur in the time  
to come. Next, we must consider how someone might dis-  
cover the kinds of such things and how many of them there  
are. For not everything that will occur regarding the pa-  
tient has a necessary genesis. Thus, clamor from neighbors  
at night, barking dogs, or some unpleasant news produce  
insomnia in those who are sick, but none of these things  
has either a necessary genesis or a certain prognosis. Then  
do those things brought about on the ground of disease  
have a defined genesis and a certain prognosis, or not in  
all cases? Thus, it is possible for some moist superfluity  
to flow suddenly within the body, necessarily effecting a  
change to some part of the organism, just as it is for an-  
other moist superfluity to change position from a part that  
is important to one that is unimportant. Extreme danger  
will follow inevitably when the fluid superfluity is carried  
to an important part, whereas the patient's recovery is  
sudden and unexpected when the flow goes the other way.

Certainly in such states this itself alone is known be-  
forehand—that there is instability and danger. It is not  
possible to discover precisely to what end they will come.  
In those cases where the superfluities are no longer flow-  
ing, but having descended upon a certain place, take  
that place over, we can foretell what is going to happen

290K

291K

τε δυνάμεις εἰσὶ τῆς φύσεως οὐκ ὀλίγαι, καθ' ἃς δι-  
οικεῖται τὸ ζῶον, ὅποια τέ τις ἔστιν αὐτῶν ἢ διαφορά.  
καὶ μὲν γε καὶ ὅσα καθ' ὄλον τὸ ζῶον ἐμφέρεται τῷ  
αἵματι περιττὰ χωρὶς πλήθους ἀμέτρου, καὶ ταῦτα  
προθεσμίαν ἔξει πέψεως ἰδίαν ἕκαστον, εἴαν γε μόνον  
ἐκάστου περιττώματος εὐρωμεν τὴν φύσιν· οὕτω γὰρ  
ἐγχωρήσει τι καὶ περὶ τῆς πέψεως αὐτῶν στοχάσα-  
σθαι τεχνικῶς ἀπάντων γε δηλονότι τῶν περὶ τὸν  
κάμνοντα πραττομένων ὀρθῶς. ὅσα γὰρ ἀμαρτάνεται  
πρὸς τινος, ἢ τοῦ βραδύναι τὴν λύσιν τοῦ νοσήματος  
ἢ τοῦ φθάσαι τὸν θάνατον αἷτια καθίσταται καὶ χρῆ  
μεμνήσθαι τοῦδε παρ' ὄλον τὸν λόγον, εἴπερ τινὸς  
ἄλλον. μόνου γὰρ αἰ προγνώσεις ἀποβήσονται τοῦ  
ἀρίστου ἱατροῦ, θεραπεύοντος | αὐτοῦ τὸν κάμνοντα  
μηδὲν ἀμαρτάνοντα.<sup>72</sup>

292K

τὸ δ' οἴεσθαι τοιαύτην εἶναι τοῖς ἱατροῖς τὴν πρό-  
γνωσιν, οἷαν οἱ μάντις ἐπαγγέλλονται, γελοῖον. ἐκέ-  
νοι μὲν γὰρ φασιν ἐναταῖον, εἰ οὕτως ἔτυχε, σωθήσε-  
σθαι τὸν ἄνθρωπον, οὐκέτι προστιθέντες τὸ πάντων  
ὀρθῶς γιγνομένων.<sup>73</sup> καὶ γὰρ καὶ αὐτοῦ τοῦδε τὴν  
πρόγνωσιν ἐπαγγέλλονται, τοῦ πάντ' ὀρθῶς ἢ οὐκ ὀρ-  
θῶς γενήσεσθαι περὶ τοὺς νοσοῦντας· ὁ δ' ἱατρὸς οὐχ  
οὕτω προερεῖ τὸ μέλλον, ἀλλ' εἰ πάντα γίγνεται δεόν-  
τως, ἐβδομαῖον, εἰ οὕτως ἔτυχε, λυθήσεσθαι τὸ νό-

<sup>72</sup> post θεραπεύοντος: αὐτοῦ τὸν κάμνοντα μηδὲν ἀμαρτάνοντα. F; μὲν αὐτοῦ ὀρθῶς, τοῦ κάμνοντος δὲ μηδὲν ἀμαρτάνοντος. K <sup>73</sup> post γιγνομένων: καὶ γὰρ καὶ αὐτοῦ τοῦδε

because we know that the capacities of nature governing the animal are many, and what the difference is between them. Moreover, we know that those superfluities are carried throughout the whole organism by the blood, apart from an immoderate excess, and each of these will have a specific duration of concoction, if only we discover the nature of each superfluity. In this way, it will be possible to make a systematic calculation about their concoction, assuming everything done for the patient is done correctly. Those mistakes that are made in this regard exist as causes of delayed resolution of the disease or swift death. And we must remember this throughout the whole discussion, even if we remember nothing else, for the prognoses of the best doctor will only come about when he treats the sick person without making any mistakes. 292K

To think that such prognosticating by doctors is like prophets prophesying is absurd. Thus, seers say, on the ninth day (for example), the person will be saved, without adding, if everything is done correctly. [For they prophesy that everything which will happen to those who are sick is either well-omened or ill-omened.]<sup>36</sup> The doctor, on the other hand, does not predict what is going to happen in this way, but that if everything happens as it ought, the disease will be resolved on the seventh day, should this

<sup>36</sup> The translation of this sentence follows the Kühn text. See note 73 to the Greek text, and Fortuna, *Galeno*, 116nn4-5.

τὴν πρόγνωσιν ἐπαγγέλλονται, τοῦ πάντ' ὀρθῶς ἢ οὐκ ὀρθῶς γενήσεσθαι περὶ τοὺς νοσοῦντας· F; οἱ μὲν γὰρ ἅπαντα τὰ τοῖς κάμνοντι αἰσῖως τε καὶ ἀπαισῖως ἐπιγενησόμενα προμαντεύονται. K

σημα· προσγενομένου δέ τινος ἀμαρτήματος, εἰ μὲν μικρὸν εἴη τοῦτο, δύνασθαι μεταπεσεῖν τὴν λύσιν ἐκ τῆς ἐβδόμης εἰς τὴν ἐνάτην, εἰ δὲ μείζον, εἰς τὴν ἐνδεκάτην, εἰ δὲ πολὺ μείζον, εἰς τὴν τεσσαρεσκαίδεκάτην, εἰ δὲ πάνυ σφόδρα μέγα, κίνδυνον ἀκολουθήσειν ἀντὶ σωτηρίας ἀσφαλοῦς.

293K προσέχει γὰρ ὁ ἰατρὸς αἰεὶ δύο τούτοις ὡσπερ ἀντιπάλους, τῷ τε νοσήματι καὶ τῇ φύσει καὶ πρῶτον μὲν τοῦ σωθήσεσθαι τὸν ἄνθρωπον ἢ ἀπολείεσθαι τὴν πρόγνωσιν ἐκ τοῦ διαγνῶναι τὸ ἰσχυρότερον, ἔπειτα δὲ καὶ τῆς προθεσμίας | ἐκ τοῦ πόσῳ θάτερον ἰσχυρότερόν ἐστι ποιεῖται, καὶ οὐ χρῆθαι θαυμάζειν, εἰ κατασκευάμενος ἑκατέρου τὴν ῥώμην ἐξευρίσκει τὸ νικῆσον. ὀρώμεν γὰρ οὐκ ὀλίγους τῶν γυμναστικῶν ἐκ τῶν πρώτων κινήσεων, αἷς κινεῦνται πρὸς ἀλλήλους οἱ παλαισταί, προλέγοντας τὸν νικήσοντα, καὶ πολλὰκις γε<sup>74</sup> σὺν τῇ νίκῃ καὶ ὅτι ταχέως ὑποχείριον ἔξει τὸν ἀνταγωνιστὴν πράττουσι δὲ τὸ τοιοῦτον ὅταν ὀρώσιν ἀξιολόγῳ τινὶ τὸν ἕτερον ἰσχυρότερον ὄντα θατέρου. προγνώσεται μὲν οὖν ὁ ἰατρὸς ὑγείαν τε καὶ θάνατον οὐκ ἐξ ἄλλων ἀσκημάτων ἢ τοῦ γνωρίζειν ἀκριβῶς ἰσχὺν νοσήματός τε καὶ φύσεως· ἐκ δὲ τῶν αὐτῶν τούτων καὶ τὴν ἑκατέρου προθεσμίαν ἐξευρίσκει. ταχεῖα γὰρ ἢ λύσις ἔσται τοῦ νοσήματος, εἴαν ἢ δύναμις εὐρωστῆ, θάνατος δὲ δια ταχέων, ἂν αὐτὴ μὲν ἀσθενής, ἰσχυρότερον δὲ τὸ νόσημα· τὸ δὲ τῆς ὑπεροχῆς μέγεθος ἐνδείκνυται τῆς προθεσμίας τὸν χρόνον. ἀπὸ τούτων μὲν τῶν σκοπῶν ὁ ἰατρὸς ἐστι

happen to be the case. Should something go wrong, if it is minor, the resolution can change from the seventh to the ninth day; if the error is greater, to the eleventh day; or if it is much greater, the fourteenth day. If, however, the error is very great indeed, danger will follow instead of certain safety.

So the doctor always directs his attention to these two things which are, as it were, rivals—the disease and the nature. First, he makes the prognosis of whether the person will recover or die from his diagnosis of [which of the two] is stronger, and then of the duration from the amount by which the one is stronger than the other. And we must not be surprised if, having considered the strength of each, he discovers the one that will prevail. Thus, we see many athletic trainers predict, from the first moves wrestlers make on each other, who the victor will be; and often, in fact, besides predicting the victor, they also predict how quickly he will gain control over his opponent. They do this whenever they see that one is significantly stronger than the other. The doctor, then, makes a prediction of health or death on no other basis than a precise knowledge of the strength of the disease and the strength of the [patient's] nature. And from these same things, he will also discover the duration of each, for the resolution of the disease will be quick if the capacity is strong, whereas death will come quickly if the capacity is weak and the disease is stronger. It is from these telltale signs that the

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<sup>74</sup> post γε: σὺν τῇ νίκῃ F; καὶ πρὸ τῆς νίκης, K

προγνωστικός. ἐξ οἶων δὲ διασκεμμάτων αὐτῷ παρέ-  
 294K Περὶ κρίσεων ἐπὶ ἰ πλέον, εἴρηται μὲν ἐν τοῖς  
 ὄλου μέθοδος, ὡσπερ τῶν ἄλλων ἀπάντων, οὕτω καὶ  
 τοῦδε.

Τὴν μὲν <οἶν> τῆς φύσεως ῥώμην<sup>76</sup> ἐκ τῶν οἰκείων  
 ἐνεργειῶν γνωρίσεις καὶ μάλιστα τῶν κατὰ τοὺς  
 σφυγμούς, ἐπειδὴ τῆς ζωτικῆς δυνάμεως ἔργον εἰσὶ  
 τὸ δὲ μέγεθος τοῦ νοσήματος ἐκ τῶν ἰδίων συμπτω-  
 μάτων· τὸ δ' ὅσον θάτερον ὑπερέχει θατέρον, ταῖς  
 ἀπεψίαις καὶ πέψεσιν· αὐτὰς δὲ ταύτας ἐκ τῶν οἰκείων  
 περιττωμάτων, τὰς μὲν ἐν τῇ γαστρὶ διὰ τῶν ὑπιόν-  
 των κάτω, τὰς δ' ἐν τοῖς ἀγγείοις διὰ τῶν οὔρων, τὰς  
 δ' ἐν ὄλῳ τῷ σώματι διὰ τῶν ἰδρώτων· οὕτω δὲ καὶ  
 τὰς ἄλλας ἀπάσας, ὅσαι κατὰ τι μέρος ἐν ἡ πλείω  
 συνίστανται, τὰς μὲν κατὰ θώρακα καὶ πνεύμονα διὰ  
 τῶν ἀναβηττομένων, ὅσαι δὲ κατὰ κύστιν ἢ νεφροῦς  
 διὰ τῶν τοῖς οὔροις ἐμφερομένων, ἥπατος δὲ τὰ σιμὰ  
 καὶ μεσεντέριον ὅπως ἔχει δυνάμεως, ἐκ τῶν ὑπιόντων  
 κάτω, καὶ<sup>77</sup> μὴν καὶ τοῖς ἐμουμένοις τὰ κατὰ τὴν ἄνω  
 295K γαστέρα καὶ στόμαχον. ὅσα δὲ δι' ὑπερώας ἐκκρίνε-  
 ται ἢ διὰ ῥινῶν καὶ δι' ὠτων, ἐγκέφαλον ἢ ὅπως ἔχει  
 ῥώμης δηλώσει. κοινὸν δ' ἐπὶ πάντων, ὡς οὐχ οἶόν τε  
 διαλυθῆναι τὸ νόσημα πρὶν ἐν τοῖς ἀπιούσι περι-  
 τώμασιν ὀφθῆναι πέψεως γνωρίσματα, [τὸ] κἂν ὄτα

<sup>75</sup> παρέσται F; περίεστι K  
 σεως ῥώμην F; ἰσχὺν μὲν τῆς φύσεως K

<sup>76</sup> Τὴν μὲν <οἶν> τῆς φύ-

doctor is able to prognosticate. From what kind of obser-  
 vations he is able to recognize the telltale signs, I have  
 spoken about at length in the treatises *On Crises*;<sup>37</sup> now I  
 shall speak about the method in general, like I did for all  
 the other things, as follows. 294K

You will ascertain the strength of the nature from its  
 proper functions, and particularly those relating to the  
 pulses, since they are the work of the vital (physical) ca-  
 pacity. You will ascertain the magnitude of the disease  
 from the specific symptoms. You will ascertain the degree  
 to which one is stronger than the other from the apeesias  
 (failures of concoction) and the pepsias (concoctions),  
 and these in turn from the proper superfluities—those  
 in the stomach from what is passed downward, those  
 in the [blood] vessels from the urine, and those in the  
 whole body from the sweats. It is the same with all the  
 other superfluities that exist in some part, whether one  
 or many; those in the chest and lungs by the sputum ex-  
 pectorated; those in the bladder and kidneys by what is  
 carried in the urine; how much capacity the concave parts  
 of the liver and the mesentery have from the feces, and  
 furthermore, those in the upper stomach and esophagus  
 from the vomitus. Those things excreted through the pal-  
 ate, nostrils and ears will show how much strength the  
 brain has. Common in all these cases is that it is not pos-  
 sible for the disease to be resolved before the signs of  
 concoction are seen in the outgoing superfluities, if the 295K

<sup>37</sup> *Cris.*, IX.550–760K.

<sup>77</sup> *post* καὶ: μὴν καὶ τοῖς ἐμουμένοις F; τῶν ἐμουμένων K

κακῶς ἔχη κἂν ὀφθαλμοὶ κἂν φάρυγξ κἂν<sup>78</sup> ἠλκωμένοντι ἢ τι καὶ συλλήβδην εἰπεῖν, πεπασμοὶ ταχυτῆτα κρίσεως, ἀσφάλειαν ὑγιεινῆν σημαίνουσιν, ὡμὰ δὲ καὶ ἄπεπτα καὶ εἰς κακὰς ἀποστασίας τρεπόμενα ἀκρισίας ἢ πόνους ἢ χρόνους ἢ θανάτους ἢ τῶν αὐτῶν ὑποστροφάς.

ταῦτα περὶ προγνώσεως ἀρκεῖ πρὸς γε τὸ παρόν. ὁ γάρ τοι πᾶς ὑπὲρ αὐτῶν λόγος ἐν ταῖς οἰκείαις πραγματείαις γεγένηται,<sup>79</sup> πλέοσι μὲν οὔσαις κατὰ μέρος, μεγίσταις δέ, καὶ σχεδὸν ἅπαντα περιειληφύταις τὰ θεωρήματα, τὰ τε Περὶ τῶν σφυγμῶν καὶ Κρισίμων καὶ Κρίσεων. ἐξ ὧν γάρ τις προγινώσκου μάλιστα, διὰ τῶν τριῶν τούτων δεδήλωται. καὶ δοκῶ μοι τέλος ἔχειν τὴν θεραπευτικὴν ἤδη<sup>80</sup> μέθοδον.

296K 18. Ἐπεὶ δὲ καὶ τοὺς ἀπαλλαγέντας νοσημάτων εἰς εὐρωστίαν ὑγιεινῆν ἀγεσθαι προσήκει καὶ τοὺς ὑποσυρομένους | εἰς τὰ νοσήματα προφυλάττεσθαι τὰς νόσους, ἔτι τε τοὺς ἀμέμπτως ὑγιαίνοντας ἐν τούτῳ φυλάττεσθαι, καὶ τρία ταῦθ' ὑπόλοιπα μέρη τῆς τέχνης ἐστὶ, πειρατέον εἰς ὅσον ἔστι<sup>81</sup> διὰ βραχυτάτων εἰπεῖν τι καὶ περὶ τῆς τούτων συστάσεως. ἐπεὶ τοῖνυν εἴρηται καὶ πρόσθεν, ὡς ἔστι τρία τὰ σύμπαντα γένη τῶν παρὰ φύσιν, αἰτιά τε καὶ διαθέσεις καὶ συμ-

<sup>78</sup> post κἂν: ἠλκωμένοντι ἢ τι F; μόριόν τι ἐλκωθὲν ἢ, K

<sup>79</sup> post γεγένηται: πλέοσι μὲν οὔσαις κατὰ μέρος, μεγίσταις δέ, F; κατὰ μέρος μεγίσταις οὔσαις, K

<sup>80</sup> ἅπασαν K <sup>81</sup> add. πειρατέον εἰς ὅσον ἔστι F

ears, eyes and pharynx are bad (adversely affected) or if some part is ulcerated. In short, concoctions mean the swift onset of a crisis and signify certain health, whereas raw and unconcocted [superfluities], which also turn into bad abscesses, mean no crisis, pains, chronicity and death, or a return of the same symptoms.

This is enough about prognosis for the present. The complete discussion about these matters is to be found in the proper treatises, which are individually numerous, very large and contain almost all the subjects of investigation—these are *On the Pulses*, *On Critical Days* and *On Crises*.<sup>38</sup> The things from which someone might especially prognosticate have been shown in these three. It seems to me we now have an end to the therapeutic method.

18. Since it is fitting to lead those recovering from diseases back to full health, to prevent disease in those who are being dragged down into disease, and in addition, to preserve those who are faultlessly healthy in this state, and these three parts of the art are what remain, I must also attempt to say something very briefly about their constitution. Accordingly, since I also said previously that there are in all three classes of things contrary to nature—causes, conditions and symptoms—there is a preventative

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<sup>38</sup> *On the Pulses* presumably refers to the four treatises: *Diff. Puls.* (VIII.493–765K); *Diagn. Puls.* (VIII.766–961K); *Caus. Puls.* (IX.1–204K); *Praesag. Puls.* (IX.205–430K). There are several other, shorter works on the pulses, including a synopsis of the works referred to above—see Hankinson, *Cambridge Companion to Galen*, 391–403. The other two works are *Dieb. Decret.*, IX.761–941K, and *Cris.*, IX.550–760K.



πτώματα, τὸ προφυλακτικὸν ἂν εἴη μέρος τῆς τέχνης, ὃ δὴ καὶ καλοῦσιν ἰδίως προφυλακτικόν, ἐν τῷ πρώτῳ γένει συνιστάμενον. ὅταν γὰρ ἦτοι πλήθός τι χυμῶν ἢ φαυλότης ἢ ἔμφραξις ἢ φθαρτικὴ δύναμις ἐγγίνηται τῷ σώματι, κίνδυνός ἐστιν ὅσον οὐπω νοσήσαι τὸν ἄνθρωπον, ἔσθ' ὅτε δὲ καὶ κινδυνεύσαι τὰ ἔσχατα.<sup>82</sup> δυσδιάγνωστα δ' ἐστὶ τὰ τοιαῦτα τῶν αἰτίων ὡς ἂν μηδέπω λυποῦντα τὸν ἄνθρωπον.<sup>83</sup> ὥσπερ ἀμέλει καὶ ὁ τοῦ λυτῶντος κυνὸς ἰός, οὗ σημεῖον ἴδιον οὐδέν ἐστιν ἐν τῷ σώματι περιεχόμενον πρὶν ἐγγὺς ἤκειν λύττης τὸν δηχθέντα· καὶ δὴ καὶ πυρῆθαι τῶν τοιούτων αἰτιῶν ἀναγκαῖον ἐστιν τὸν ἰατρὸν αὐτῶν τῶν πασχόντων ὑπὲρ τῶν συμπεσόντων αὐτοῖς ἀπάντων.<sup>84</sup>

297K

ὅταν μέντοι πλήθος ἢ κακοχυμία τις ὑποτρέφηται κατὰ τὸν ὄγκον τοῦ σώματος ἢ ἐμφράττηται τι σπλάγγχον ἔνεστι γνωρίζειν αὐτὰ διὰ τινων συμπτωμάτων, ἃ μέσα πῶς ἐστὶ τῶν τε τοῖς ὑγιαίνουσιν ὑπαρχόντων καὶ τῶν τοῖς νοσοῦσι συμβαινόντων· τὰ μὲν γὰρ τοῖς ὑγιαίνουσιν ὑπάρχοντα κατὰ φύσιν ἅπαντ' ἐστὶ καὶ ἀμεμπτα, τὰ δὲ τοῖς νοσοῦσι συμβαινόντα παρὰ φύσιν τε καὶ μεμπτά, τὰ δ' ἐν τῷ<sup>85</sup> μεταξὺ τούτων ἐκ μὲν τοῦ γένους ἐστὶ τῶν ταῖς νόσοις συμπιπτόντων, οὕτω μέντοι σμικρὰ τοῖς μεγέθεσι καὶ ἀσθενῆ ταῖς δυνάμεσι, ὡς μηδέπω κωλύεσθαι πρὸς αὐτῶν τὰς συνήθεις ἐκάστῳ πράξεις. εἴτε γὰρ ὀδύνη κεφαλῆς ἢ ἄλλου τινὸς εἴη μέρους, οὕτω σμικρὰ τις ὡς μήπω τὸν ἄνθρωπον ἀναγκάζεσθαι κλινῆρη γενέ-

part of the art, which they call specifically prophylactic and exists in the first class. For whenever either some abundance or badness of humors, or a blockage, or some destructive power supervenes in the body, there is a danger to a degree not hitherto present that the person will become diseased, and sometimes the danger will be extreme. Such causes are difficult to diagnose because the person doesn't yet suffer pain. This is just like the poison of a rabid dog; no specific sign of this is present in the body before the person bitten comes close to madness. Furthermore, it is necessary for the doctor, when inquiring into such causes, to ask the patients themselves about everything that has happened to them.

297K

However, when some excess or *kakochymia* grows up in the mass of the body, or some organ is obstructed, it is possible to recognize these things through certain symptoms, which are somewhere between those existing in healthy people and those occurring in sick people. For those existing in healthy people are all in accord with nature and faultless, while those occurring in sick people are contrary to nature and faulty. Those in between these are from the class of those occurring in the sick, but are so small in magnitude and weak in their powers that they do not yet hinder the person's customary activities in each case. Some examples are as follows: a pain in the head or some other part which is so small that it doesn't yet compel

<sup>82</sup> post ἄνθρωπον: ἔσθ' ὅτε δὲ καὶ κινδυνεύσαι τὰ ἔσχατα. F; ποτὲ δὲ καὶ ἐσχάτως κινδυνεύσαι. K

<sup>83</sup> δυσδιάγνωστοι δὲ τοιαῦται αἰτίαι ἅτε οὐ λυποῦσαι τὸν ἄνθρωπον. K <sup>84</sup> ἀπάντων F; ἐκάστου K

<sup>85</sup> add. ἐν τῷ F

σθαι, εἴτε βάρος ἤτοι καθ' ὑποχόνδριον ἢ κεφαλὴν ἢ ἄλλο τι μέρος ἢ σπλάγχνον, οὐδὲ τοῦθ' ἰκανὸν ἀποστήσαι τῶν συνήθων· ἐτι δὲ δὴ μᾶλλον ὄγκος τοῦ σώματος ἢ ἰσχνότης ἢ ἀχροια καὶ πρὸς τὰς κινήσεις ὄκκος ἢ ὑπνώδης διάθεσις ἢ ἀγρυπνία τῶν κατὰ τὰς  
 298K τοῦ | βίου πράξεις ἐνεργειῶν ἀπάγειν οὐκ ἰκανά· καὶ πολὺ δὴ μᾶλλον ἀνορεξία τις ἢ ὄρεξις ἐπιτεταμένη σιτίων· ἄμφω γὰρ γίνεταί τοῦ σώματος οὐκ ἀκριβῶς ὑγιαίνοντος, ὥσπερ γε καὶ <οἱ> ἀδίψοι παρὰ λόγον ἢ διαψύδεις ἢ δακνομένοι τὸν στόμαχον ἢ τὴν κοιλίαν ἢ κοπῶδων ἑαυτῶν αἰσθανόμενοι· τοιοῦτος γὰρ τις ὁ τύπος ἐστὶ τῶν συμβαινόντων τοῖς ὑποσυρομένοις<sup>86</sup> εἰς νόσον.

ἢ δ' ἐπανόρθωσις τῶν ἐργαζομένων αὐτὰ διαθέσεων, συνελόντι μὲν εἰπεῖν, διὰ τῶν ἐναντίων, ὡς ἔμπροσθεν δέδεικται κατὰ μέρος δ' ἐπιόντι, τὸ μὲν περιττὸν ἅπαν ἐκκενοῦν προσήκει, διορισάμενον ὅπως ἐστὶ περιττὸν, εἴτε ὡς ποσὸν εἴτε ὡς ποιὸν εἴτε ὡς ἄμφω· τὸ δ' ἐπανελθεῖν δυνάμενον εἰς τὸ κατὰ φύσιν ἀλλοιοῦν διὰ τῶν ἐναντίων, τὸ μὲν παχὺ καὶ γλίσχρον λεπτύνοντα, τὸ δὲ λεπτὸν παχύνοντα, κοινῇ δ' ἄμφω πέττοντα, τὰς δ' ἐμφράξεις διαρρύπτοντα, τὰ δ' ὄλη τῷ γενεῖ παρὰ φύσιν, οἷά τὰ δηλητήρια καὶ οἱ  
 299K ἰοὶ τῶν ἰοβόλων ζῶων, ἀλλοιοῦντα καὶ κενοῦντα, τὰς μὲν ἀλλοιώσεις | διὰ τῶν ἐναντίων ἤτοι καθ' ὅλην τὴν

the person to lie down; a heaviness in the hypochondrium or head, or some other part or organ, which is not enough to keep the person from their customary activities; still more, swelling or thinness of the body, or pallor, and as regards movements, a sluggish or drowsy condition or insomnia which is not sufficient to deprive a person of the functions pertaining to the activities of life.<sup>39</sup> Much more, there is loss of appetite or an increased desire for food, for both these arise when the body is not entirely healthy, just like those who are not thirsty or thirsty for no reason, or have a biting pain in the esophagus or stomach, or who perceive themselves to be fatigued. This is the sort of thing which befalls those being dragged down into disease. 298K

The restoration of the conditions bringing these things about is, to speak generally, through opposites, as was shown previously. Let me, then, set them down one by one. It is appropriate to do the following things: evacuate every superfluity, distinguishing how it is a superfluity either in amount or kind or both; restore what can be restored to an accord with nature by change through opposites; thin what is thick and viscous and thicken what is thin by concocting in both cases; and thoroughly clean out obstructions. Those things that are wholly in the class of contrary to nature, such as the noxious agents and poisons of venomous animals, should be changed and evacuated. The changes are effected through opposites, 299K

<sup>39</sup> Galen's basic division of the art of medicine, with further subdivisions in these primary groups, is given in his work *De partis artibus medicativae*, which is not included in Kühn but is available in Arabic and English in Lyons, *Galen on the Parts of Medicine*.

<sup>86</sup> ὑποφερομένοις K

οὐσίαν ἢ κατὰ ποιότητα μίαν ἢ δύο ποιοῦμενον, ἐκκενοῦντα δὲ διὰ τῶν ἐλκτικῶν δυνάμεων.

δι' ὧν δ' ἂν τις ταῦτα ποιήσῃ βοηθημάτων, ἐξ αὐτῶν τῶν διαθέσεων ληπτέον. εἰ μὲν γὰρ οἱ τέτταρες<sup>87</sup> ὁμοίως αὐξηθεῖεν χυμοὶ, διὰ φλεβοτομίας μὲν ἢ κυριωτάτη καὶ μεγίστη κένωσις, ἐξῆς δὲ διὰ τρύψεων καὶ γυμνασίων καὶ λουτρῶν καὶ ἀσιτίας· οὕτω δὲ χρῆκεν, καὶ εἰ τὸ αἷμα πλεονάσειε μόνον. εἰ δ' ὁ τῆς ξανθῆς ἢ μελαινῆς χολῆς χυμὸς ἢ τις ὑδατώδης ὁρὸς χυμοῦ, διὰ κενώσεως μὲν, ἀλλ' οὐχ ὁμοίως· τὰ μὲν γὰρ ἐν ταῖς πρώταις φλεβὶ περιττώματα τοῖς ὑψηλάταις ἐκκαθαίρειν, τὰ δ' ἐν ταῖς ἄλλαις, δι' οὕρων μὲν τὰ ὑδατώδη καὶ λεπτά, διὰ καθάρσεως δὲ τὰ χολώδη· ἐγχωρεῖ δὲ καὶ τὰ λεπτά τοῖς ὑψηλάτοις ἐκκενοῦν τὰ δὲ καθ' ὅλην τὴν ἔξιν, ὅσα μὲν λεπτά, δι' ἰδρώτων τε καὶ φαρμάκων, ὅποσα τῷ δέρματι προσφερόμενα ξηραίνειν πέφυκεν. ὅσα δὲ χολώδη, καθάρσει | μὲν πρώτον, ἐξῆς δὲ τῇ διὰ τοῦ δέρματος κενώσει. εἰ δ' ὁ τοῦ φλέγματος πλεονάζει χυμὸς, εἰ μὲν ἀλμυρὸν εἴη, καθαίρειν, ὅξυν δὲ γενόμενον, ἀλλοιοῦν πειράσθαι συντελοῦντα τῇ φύσει πρὸς τὴν πέψιν αὐτοῦ· πολὺ δὲ δὴ μᾶλλον ἔτι τὸ γλυκὺ πέττεται ῥαδίως. ἄγει δ' εἰς πέψιν ἡσυχία τε καὶ θάλψις μετρία καὶ σιτίων εὐχύμων ὀλίγων ἔδωδη καὶ οἴνου πόσις θερμαίνοντος.<sup>88</sup> ὀλίγον δὲ θάλψιν ἢ τε σύμμετρος τρύψις

<sup>87</sup> πάντες K

<sup>88</sup> post θερμαίνοντος: ὀλίγον δὲ θάλψιν ἢ τε σύμμετρος

either in relation to the whole substance or one or two qualities, and the evacuations through the drawing powers.

If someone is to do these things through remedies, he must make the choice [of remedy] from the conditions themselves. Thus, if the four humors are increased equally, the most powerful and strongest remedy is phlebotomy; next come massage, exercise, bathing and fasting. It is necessary to evacuate in this way, if blood alone is in excess. If the humor is yellow or black bile, or some other watery serum of a humor, it is through evacuation but not in the same way. Thus, superfluities in the primary veins are cleared out with downward purging, while those in the other veins are cleared out through the urine if they are watery and thin, and by purging if they are bilious. And it is possible to evacuate the thin superfluities through downward purging. In respect of excesses involving the whole state, those that are thin are evacuated through sweating and medications of the kind that are drying in nature when applied to the skin. The bilious superfluities are cleared out by purging first, then next by evacuation through the skin. If phlegmatous humor is in excess, and if it is salty, purge; if it is acrid, attempt to change it by bringing it to concoction naturally. It is much easier to concoct if it is sweet. Rest and moderate heat will bring it to concoction, as will small amounts of *euchymous* food and a drink of heating wine. A small amount of heat can

τρύψις ἐργάζεσθαι δύναται καὶ ἡ τῶν θερμῶν ὑδάτων σύμμετρος χρῆσις, F; ὀλίγον. τὴν δὲ θάλψιν μετρίαν ποιεῖ ἢ εὐκρατος τρύψις, καὶ αἱ τῶν θερμῶν ὑδάτων σύμμετροι χρῆσεις, K

300K

300K

ἐργάζεσθαι δύναται καὶ ἡ τῶν θερμῶν ὑδάτων σύμμετρος χρῆσις, ἐδέσματά τε καὶ φάρμακα τὰ μετρίως θερμαίνοντα· διαρρῦπτει δὲ τὰς ἐμφράξεις ὅσα λεπτύνειν πέφυκεν, ἐδέσματά τε καὶ πόματα καὶ φάρμακα. τὰς δ' ὕλας τούτων ὅπως εὐρίσκειν τε καὶ κρίνειν προσήκει, διὰ μιᾶς ἐξηγησάμεθα πραγματείας, ἣν Περὶ τῆς τῶν ἀπλῶν φαρμάκων δυνάμεως ἐπιγράψαμεν· εἴρηται δὲ κἀν τῷ Περὶ τῆς λεπτυνούσης διαίτης γράμματι.

301K

19. Καιρὸς οὖν ἤδη μετιέναι τῷ λόγῳ πρὸς τοὺς ἐκ τῶν νοσημάτων ἀναλαμβάνοντας, ἐφ' ὧν οὐτ' αἷτιον οὐδὲν ἐστι παρὰ φύσιν οὔτε διάθεσις ἐστίν, ἰσχυρῆς δὲ μόνη μετὰ δυνάμεως ἀσθενούς. διὰ ταῦτα τοι καὶ ἡ εἰς το κατὰ φύσιν ἀγωγή τῶν οὕτω διακειμένων ἀνάθρεψις τε καὶ ῥώσις ἐστίν ἐκ κινήσεών τε καὶ τροφῶν συμμέτρων γιγνομένη. τὰς δ' ὕλας κἀνταῦθα, δι' ὧν αἱ κινήσεις τε καὶ θρέψεις ἔσονται, διὰ τῆς Ἑγιεινῆς ἐδήλωσα πραγματείας· ἀλλ' ὑπὲρ τοῦ μηδὲν λείπειν τῷ παρόντι λόγῳ λεχθήσεται καὶ νῦν ἡ μέθοδος ἀπάσης τῆς Ἑγιεινῆς πραγματείας, οὐ μόνον τῆς ἀναληπτικῆς λεγομένης, καὶ πρῶτόν γε, ποῖον τὸ γένος αὐτῆς ἐστίν.

Ἄρα γε τῶν παρόντων φυλακτικὸν ἢ τούτῳ μόνῳ διαφέρει τοῦ θεραπευτικοῦ, τῷ κατὰ σμικρὰ ποιείσθαι τὴν ἐπανόρθωσιν; οὐ γὰρ δὴ διαφυλάττοντί γε τῷ σώματι τὴν ἔμπροσθεν ἕξιν ἐπιστατούσης ἐδέησε

be produced by moderate massage, the moderate use of warm water, and foods and medications that are moderately heating. Those foods, drinks and medications that are naturally thinning thoroughly clear out the obstructions. How it is possible to discover and judge the materials of these, I have set out in detail in one treatise I wrote—*On the Nature and Powers of Simple Medications*. This was also spoken about in the work, *On the Thinning Diet*.<sup>40</sup>

19. It is now an appropriate time to move on in the discussion to those recovering from diseases in whom there is no cause or condition contrary to nature, but thinness only along with weakness of the capacity. Bringing those in such a state to an accord with nature is through restoration and strengthening which arise from exercises and moderate nourishment. And here I made clear what the materials of the exercises and nutriments will be through the treatise, *On the Preservation of Health (Hygiene)*.<sup>41</sup> But so that nothing is left out in the present discussion, I shall now state the method of the whole treatise, *On the Preservation of Health (Hygiene)*, not only that of the so-called restoration, stating first of all what kind of class it belongs to.

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Is it, in fact, protective of what presently exists, or does it differ from the therapeutic in this alone—that it makes the restoration little by little? Certainly, a body which preserves its preexisting state would have no need of any art

<sup>40</sup> These two works are *Simpl. Med.*, XI.379–892K and XII.1–377K; *Vict. Att.*, CMG, 5.4.2. For an English translation of the latter, see Singer, *Galen: Selected Works*.

<sup>41</sup> *San. Tuend.*, VI.1–452K. For an English translation of this work, see Green, *A Translation of Galen's Hygiene*.

302K τέχνης· ἀλλ' αὐτὸ τοῦτ' ἔστιν αἴτιον τοῦ δέισθαι τῆς  
 προνοησομένης ἐπιστήμης, ὅτι διαφθείρεται | τε καὶ  
 οὐ διαμένει τοιοῦτον, οἷον ἔμπροσθεν ἦν. εἰ μὲν δὴ  
 τοῦτο μόνον αὐτῷ τὸ κενουσθαι τε καὶ διαφορεῖσθαι  
 συμπίπτοι, τροφή καὶ ποτὸν ἀναπληρώσουσι τὸ λεί-  
 πον· εἰ δ' ἤτοι πλήθος ὑποθρέψειε χυμῶν ἢ περιτ-  
 τώματα μοχθηρά, γυμνασίων αὐτῷ δεήσει σκοπὸν  
 ἔχόντων<sup>89</sup> ἔκκεονῶν μὲν τὸν χυμὸν, ἐκκαθαίρειν δὲ καὶ  
 πέπτειν τὰ περιττώματα, πρὸς τῷ καὶ φυλάττεσθαι  
 τὰς αἰτίας ἀπάσας, ὅσαι τὴν ὑγίαν αὐτοῦ διαφθεῖραι  
 δυνήσονται, ψύξιν, ἔγκαυσιν, κόπον, ἀπεισίαν, μέθην,  
 ἀγρυπνίαν, λύπας, ὄργας, θυμοὺς ὅσα τ' ἄλλα τοιαῦτα.

οὐ γὰρ ἐτι δεῖ καθ' ἕκαστον ἐπεξιέναι τῷ λόγῳ τῆς  
 ὑποθέσεως, ἣν ὑπεθέμεθα, πεπληρωμένης ἤδη προῦ-  
 κειτο γὰρ οὐ κατὰ διέξοδον ὑπὲρ ἀπάντων τῶν μερῶν  
 τῆς ἰατρικῆς διελλεῖν, ἀλλὰ δεῖξαι, πῶς ἀπὸ τῆς κατὰ  
 τὸ τέλος ἐννοίας, ὥσπερ τῶν ἄλλων τεχνῶν, οὕτω καὶ  
 ταύτης ἡ σύστασις γίγνεται. καὶ τοίνυν ἐπειδὴ γέ-  
 γονε τοῦτο, διὰ κεφαλαίων ἀναλάβωμεν ἅπαντα τῆς  
 303K ἰατρικῆς τὸν λόγον εὐθύς καὶ τὴν | ἀναλογίαν ἐπι-  
 δεικνύντες, ἣν ἔχει πρὸς τὰς ἄλλας τέχνας, ὅσαι ποι-  
 ητικά.

20. Ἔστιν οὖν ἡ ἰατρικὴ μία τῶν ποιητικῶν, οὐ μὴν  
 ἀπλῶς οὕτως ὡς ἡ οἰκοδομικὴ τε καὶ τεκτονικὴ καὶ  
 ὑφαντικὴ, ἀλλ' ὡς ἡ τε τῆς πεπονηθείας οἰκίας ἐπ-  
 ανορθωτικὴ καὶ τῶν ραγέντων ἱματίων ἀκεστικὴ. ἐπεὶ  
 δὲ καὶ τούτων αὐτῶν ἡ σύστασις ἐδείχθη διττὴ, ποτὲ  
 μὲν ἑαυτῷ γεννῶντος τοῦ τεχνίτου τὸ παράδειγμα,

to maintain it. But the very reason why there is a need for  
 prognostic knowledge is that a body is corrupted and does  
 not remain as it was before. If evacuation and dispersion  
 were the only things to happen to it, food and drink would  
 make up and restore what is lost. If, however, there is ei-  
 ther an increase of humors or the superfluities are harm-  
 ful, the body will need exercises which have the aims of  
 evacuating the humor and clearing out and concocting the  
 superfluities. In addition to this, it will need protection  
 against all the causes which can destroy its health—cool-  
 ing, heatstroke, fatigue, apepsia, drunkenness, insomnia,  
 grief, anger, passion and other such things.

There is no need to bring forth each matter in the  
 discussion of our proposal; what we proposed has already  
 been completed, for what was proposed was not to go over  
 all the parts of the medical art in detail, but to show how  
 the constitution of the art arises, as it does in the other  
 arts, from the notion of a goal. Therefore, since we have  
 done this, let us summarize the whole account of the med-  
 ical art under the chief points, showing immediately the  
 analogy it has to the other arts which are productive.

20. Medicine is, then, one of the productive arts, not  
 simply as house building, carpentry and weaving are, but  
 like the art that restores an adversely affected house and  
 repairs a torn cloak. Also, since the constitution of these  
 arts was demonstrated to be twofold, in that sometimes  
 the craftsman creates a model for himself and sometimes

<sup>89</sup> post ἔχόντων: ἔκκεονῶν μὲν τὸν χυμὸν, ἐκκαθαίρειν δὲ  
 F; καὶ ἔκκεονῶν μὲν, καὶ καθαίρειν τὸν χυμὸν, K

ποτέ δ' ἐκτὸς ὑπάρχον θεωμένου, τὴν ἰατρικὴν τέχνην ἐκ τοῦ δευτέρου γένους ἐπεδείξαμεν· οὐ γὰρ ἑαυτῇ διαπλάττει τὸ παράδειγμα, θεασαμένη δὲ δι' ἀνατομῆς ὄλον ἀκριβῶς αὐτὸ πειρᾶται τὸ διαφθειρόμενον ἐπανορθοῦσθαι. διήνεγκε δ' ἐν τούτῳ τῶν προειρημένων τεχνῶν, ὅτι τὰ πλείστα τῆς φύσεως ἐργαζομένης ὑπηρετεῖ τὴν θεωρίαν μέντοι πᾶσαν, ἐξ ἧς ὀρμώμενος ὁ ἰατρὸς ἐπανορθωτικὸς τε καὶ ὑπηρετικὸς ἐστίν, ἀνάλογον ἐκτήσατο ταῖς ἄλλαις τέχναις ταῖς ποιητικαῖς. καὶ γὰρ τῶν ὁμοιομερῶν ἔγνωκε τὴν οὐσίαν, καὶ τῶν ὀργανικῶν τὸν τρόπον τῆς γενέσεως, ἔτι τε τῶν παθῶν τὴν εὕρεσιν ὁμοίως ἐποίησατο καὶ τοὺς καθ' ἕκαστον αὐτῶν σκοποὺς τῆς ἰάσεως.

304K

works from what is seen externally, we showed the medical art to be from the second class. For it does not fashion the model for itself, but having seen the whole accurately through anatomy, it attempts to restore what is damaged. However, it differs from the previous arts in this—in most cases it assists Nature in her work. But in respect of the whole theory, in which the doctor starts by being a restorer and helper [of Nature], it has acquired a correspondence to the other arts that are productive. For it has come to know the substance of the *homoiomeres* and the mode of genesis of the organs, and further, has similarly made the discovery of the affections and the objectives of the cure of each of these.

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ΓΑΛΗΝΟΥ ΤΕΧΝΗ ΙΑΤΡΙΚΗ  
THE ART OF MEDICINE

## INTRODUCTION

*The Art of Medicine* could be considered the single most important of Galen's many works, based on the criteria of the amount of use in medical teaching over many centuries and the number of manuscripts, printings, and translations. Boudon, whose excellent recent edition with a French translation has been of so much help in the preparation of the present Greek text and English translation, includes in her account of *The Art of Medicine* the following statement:

Dans l'*Art médical*, traité de la maturité, le médecin de Pergame se propose de faire le point de connaissance de son temps en matière de pathologie. À cette fin, il isole trois grands domaines correspondant à trois développements distincts . . . (ou trois livres intitulés dans la traduction arabe de Hunain [traduite en latin par Gérard de Crémone]: *De arte medica*, *De signis*, et *De causis*.)

In *The Art of Medicine*, a mature work, the Pergamene doctor sets himself the task of documenting the current state of the art on the subject of pathology. For this purpose, he isolates three great fields corresponding to three distinct developments . . . (or three books entitled, in Hunain's Arabic transla-



tion [itself translated into Latin by Gerard of Cremona]: *The Art of Medicine, On Signs, and On Causes.*)

First, *The Art of Medicine* was quoted or utilized by the major medical encyclopedists of the centuries immediately after Galen—for example, Oribasius, Aëtius of Amida, and Paul of Aegina. Second, it was included as the second of the sixteen works in the *Summaria Alexandria*, which became the foundation of medical teaching in the schools of that city in the sixth and seventh centuries. It was then translated into Syriac, Arabic, and Hebrew, coming to play a significant role in medical teaching in the Islamic world.<sup>1</sup> Next, through the introduction of Arabic (and Greek) medicine into Western Europe, centering on Salerno and Monte Cassino in southern Italy during the eleventh and twelfth centuries, *The Art of Medicine* continued to be a major component of medical teaching. Nutton writes:

It was in Salerno, or possibly even at Monte Cassino, that a new canon of medical authority, known in the sixteenth century as the *Articella* or *Little Art of Medicine* was created. To the *Liber ysagogarum* (of Hunain ibn Ishaq/Johannicius) . . . were added Hippocrates' *Aphorisms* and *Prognostic*, and two Byzantine treatises, Theophilus, *On Urines* and Philaretus, *On Pulses*. Before 1200, this collection had been supplemented by Galen's *Tegni* (*Art of Medi-*

<sup>1</sup> See Boudon, *Galien: Introduction générale*, 177 for the initial quote and 229–42 for details of these translations.

*cine*) . . . The *Articella* swiftly became the basis for advanced teaching of medicine throughout Western Europe.<sup>2</sup>

As Nutton points out, one of the features of the collection was that it was “largely concerned to convey the theoretical knowledge essential for practice.” Subsequently, either as an independent work or as part of the *Articella*, *The Art of Medicine* became one of the major components of medical teaching in Western Europe. Durling, in his census of Renaissance editions of Galen, writes: “As we might have expected, Galen's *Ars Medica*, ever popular as the *Tegni* in the medieval period, enjoyed an unbroken vogue, and with eighty-eight different editions or impressions easily heads the list [of editions of Galen's works].”<sup>3</sup>

I shall say very little here about Greek manuscripts and early versions in other languages (Syriac, Arabic, Hebrew, Latin). Boudon lists thirty Greek manuscripts dating from the twelfth to the sixteenth century, plus ten manuscripts that contain extracts from the work.<sup>4</sup> Notable Latin translators include Gerard of Cremona, L. Laurentiano, N. Leoniceno, J. Manardus, G-F. Ingrassia, and F. Valles. There was also an edition that included both the *Aphorisms* of Hippocrates and Galen's *The Art of Medicine* by François Rabelais (Lyon, 1532). Prior to Boudon's 2007 French translation, there were four twentieth-century translations into modern European languages:

<sup>2</sup> Nutton, “Medicine in Medieval Western Europe,” in Conrad et al., *Western Medical Tradition*, 142.

<sup>3</sup> Durling, “Chronological Census,” 243.

<sup>4</sup> See Boudon, *Galien: Introduction général*, 196–200.

- Lafont, J-B., and A-R Moreno. *Obras de Galeno*. La Plata, 1947 (Spanish).  
 Malato, M-I. *L'arte medica*. Rome, 1972 (Italian).  
 Garafalo, I, and M. Vegetti. *Opere scelte di Galeno*. Turin, 1978 (Italian).  
 Singer, P. N. *Galen. Selected Works*. Oxford, 1997 (English).

Turning to the structure and content of the work, the threefold division referred to by Boudon above (art, signs, causes) is somewhat expanded, followed by a synopsis of the individual chapters.

*Introduction:* This begins with a tripartite division applicable to all teachings: *analysis*, which gives rise to the concept of *telos* (end, ultimate point, or objective); *synthesis*, which is a reconstruction of the components identified by analysis; and *dialysis*, which is the breakdown of a definition. Galen acknowledges specifically the endeavors of the Herophileans, Heraclides of Erythrea, the Erasistrateans, and Athenaeus of Attaleia. He sees his own unique contribution as recognition of the importance of the notion of *telos*.

*Theory and definitions* (1–2): There is again a tripartite division, this time of medical knowledge: health/healthy/health-producing, disease/diseased/disease-producing, neither/neutral. These categories are applied to bodies, signs, and causes sequentially in the structure of the work, as follows: the diagnosis of bodies is prior and is from signs; then comes the description of causes. In the application of the original three terms, Galen tries to take into account temporal and spatial variations as well as differences of degree, introducing paired terms like “abso-

lute/relative,” “continuously/intermittently,” and “at the present time/for the most part.” Due to the natural imprecision of the boundaries in the basic divisions, the terms prove difficult to define and the discussion somewhat difficult to follow.

*Signs in general* (3–5): There is a broad division into those signs diagnostic of the present state; those prognostic of a future state; and those anamnestic of a previous state. This division is combined with the earlier division into healthy, diseased, and neither. Structures (bodies) within the body as a whole are divided into four groups: principles (brain, heart, liver, and testes); parts growing out of the principles and serving them (nerves and spinal cord, arteries, veins, and spermatic ducts); parts that are entirely self-governing (cartilage, bone, ligaments, membranes, glands, fat, and simple flesh); parts that govern themselves but need nerves, arteries and veins.

*Signs specific for conditions and structures* (6–22): There is a division of these sections as follows: simple and compound *dyskrasias* of the principles (6–13); signs of the state of the whole body (14–16); signs of *dyskrasias* of the stomach, chest, and lungs (17–18); signs of diseases of the organic parts (19); signs in relation to time (20–22).

*Causes in general* (23–25): There is again a threefold division into health, disease, and neither. Causes that are health-producing/healthy can be divided into those that preserve health and those that produce health. In both cases they may have different effects on different bodies within the body as a whole. There is also a division into “necessary” (these are the “six non-naturals”: ambient air, movement and rest, sleeping and waking, things taken into the body [i.e., food and drink], things excreted/secreted,

perturbations of the soul)<sup>5</sup> and “non-necessary” (Galen’s examples are swords and wild beasts). There is a need for balance/moderation in the operation of health-producing causes. They can act on both *homoiomerous* and organic parts.

*Causes of health in specific situations* (26–37 part): Eleven-and-a-half of the last twelve sections deal with health-producing causes (in effect, treatment) in the following specific situations: diseases of organic parts (26); diseased bodies (28); dissolution of continuity (27, 29–31); ulcers as a combined condition (32); disorders of conformation (33); obstructions and stenoses (34); disorders of number and position (35); in prophylaxis (36); in restoration and recuperation (37 part). Section 27 is a brief digression raising the question of whether or not dissolution of continuity may in some instances be compatible with health.

*The list of books* (37 part): *The Art of Medicine* ends with a list of books necessary for the student who wishes to acquire a comprehensive understanding of the art.

## SYNOPSIS OF CHAPTERS

*Introduction*: Galen starts with a brief statement on the key elements in the teaching of an art in general, and of medicine in particular. Central to any art is the notion of a goal, end, or fundamental purpose—*telos*. Teaching the

<sup>5</sup> See Garcia-Ballester, “On the Origin of the “Six Non-Natural Things,” in Kollesch and Nickel, *Galen und das hellenistische Erbe*, 105–15.

art involves three processes: *analysis* (a breakdown into components), *synthesis* (a reconstruction of the components identified by analysis), and *dialysis* (the breakdown of a definition). Reference is made to previous attempts to do what Galen is attempting—by Herophilus and subsequent Herophileans, and by Erasistratus and subsequent Erasistrateans. He sees these attempts as unsuccessful because they ignored the notion of *telos*.

1. *Clarification of terms*: Three groups of terms are considered: health/healthy, disease/diseased, and neither/neutral; body, cause, and sign; absolute and relative. These are the components of a definition of medicine. His stated intention is to deal with the second and third groups sequentially in relation to the first group. His perceived problem is the difficulty of establishing a clear demarcation between the components of each group. The introduction of the term “neither” (“neutral”) is an attempt to deal with this problem in the first group.

2. *The distinction between absolute and relative*: Galen attempts to clarify this distinction as applied to his basic division of health, disease, and neither. Health in the absolute sense means *eukrasia* in the *homoiomeres* and balance in organic (compound) structures in terms of the previously mentioned four factors—size, number, conformation, and position—from birth. Health in the relative sense means that there is *eukrasia*, or something close to this, and balance in the four factors listed, or something close to this, at the present time. Disease is the converse. A body that is “neither” is one that partakes of neither of the extremes (health and disease), or partakes of both, or partakes of one at one time and the other at another time. Galen is clearly aware of the difficulties of applying rigid

distinctions in this way, and attempts to deal with these, at least in part.

3. *Signs*: The same basic tripartite division into health/healthy, disease/diseased, and neither/neutral applies to signs. Galen then makes a further tripartite division: diagnostic of the present state, prognostic of a future state, and anamnestic of a previous state, all in terms of the initial three basic categories. Diagnostic and prognostic signs are described as very useful, anamnestic signs less so.

4. *Healthy bodies*: Galen returns to his divisions of absolute and relative. Considering the absolute category first, as it applies to the healthy state, he makes a further subdivision into bodies that are continually absolutely healthy and those that are absolutely healthy for the most part. The former are those bodies that have the best constitution, as described in his work on that subject,<sup>6</sup> while those that are healthy for the most part fall slightly short of this.

5. *A subdivision of parts of the body*: In this classification, Galen identifies four groups plus a residuum:

Principles: brain, heart, liver, and testes (in the classification in *On the Natural Faculties*, the testes are omitted).

Parts growing out of the principles and serving them—respectively, nerves and spinal cord, arteries, veins, and spermat ducts.

Parts that are entirely self-governing: cartilage, bone, ligaments, membranes, glands, fat, and simple flesh.

<sup>6</sup> *Opt. Const.*, IV.737–49K, for an English translation of which see Singer, *Galen: Selected Works*.

Parts that govern themselves but need nerves, arteries, and veins.

The residuum comprises hair and nails, which neither govern themselves nor are governed.

6. *Signs of krasis of the brain*: There are five classes of innate signs pertaining to the brain:

size and shape of the head  
 quality of the sensory functions  
 quality of the motor (active) functions  
 quality of the hegemonic functions  
 quality of the physical functions

There are also signs relating to the responses to things befalling the head/brain externally—for example, heat, cold, moisture, and dryness.

7. *Signs of simple dyskrasias of the head*: Hot, cold, dry, and moist diseases are considered in turn. The signs involve the amount and nature of the superfluities excreted through the recognized channels, the growth and nature of the hair, the complexion, the acuity or otherwise of the sensations, how the head feels to the examiner, the appearance of the veins around the eyes, and the sleep pattern.

8. *Compound dyskrasias of the brain*: This section details the signs. The major ones are as follows:

Hot and dry: lack of superfluities, acute sensations, extreme wakefulness, and rapid development of baldness. The hair is black and curly, and the head hot to the touch and red until the time of full growth.

Hot and moist: healthy complexion and warmth, the veins in the eyes are large, superfluities are increased

and moderately concocted. The hair is straight and light brown, and people do not become bald easily. Cold and dry: the head is cold and devoid of color, no visible veins in relation to the eyes, readily harmed by cold causes, without superfluities in the outflows, sometimes readily overcome by catarrhs and coryzas due to minor causes, precise and faultless sensations in youth.

Cold and moist: lethargy and drowsiness, poor sensations, excrementitious, easily cooled, full in the head, and readily susceptible to catarrhs and coryzas. Such people do not become bald.

These signs can be carried over to each of the organs of sensation.

9. *Eye signs*: Galen states that consideration of the eye will be enough for an understanding of the signs in the organs of sensation. The key features are how the eyes feel on palpation (hot, cold, hard), their size, the nature of their movements, and their function. The color of the eyes is also taken to be of some diagnostic importance; Galen addresses this in some detail.

10. *Signs of simple (mono-) dyskrasias of the heart*: Galen starts by making the point that each structure must be compared to itself—the example he gives is that an abnormally cold heart is still much hotter than an abnormally hot brain. The signs for the heart are to be found in the size, shape, and degree of hairiness of the chest, the pulse, respiration, and the spirit (calm, fiery, easily angered, brave, cowardly, and the like).

11. *Signs of compound dyskrasias of the heart*: The

same observable features as for the simple *dyskrasias* are relevant here. Galen concludes this section by reminding the reader that when he talks about dispositions, he is not referring to those that might be due to philosophy, but about characteristics that are innate.

12. *Signs of simple and compound dyskrasias of the liver*: These signs include the appearance of the hypochondrium (specifically, the degree of hairiness), the visible veins of the region, the temperature and consistency of the blood, the preponderance of certain humors, and also the predisposition to putrefactive and *kakochymous* diseases. The state of the whole body is also important in diagnosing a *dyskrasia* of the liver.

13. *Signs of simple and compound dyskrasias of the testes*: The fourth “principle” is given brief consideration, both simple and compound *dyskrasias* being dealt with in this short section. The important features here are hair growth in the genital region, the amount and consistency of the semen, fertility, and the desire for and effects of sexual activity.

14. *The state of the whole body*: This is generally assessed by examining the most obvious parts. Also, the effect of dwelling place must be taken into account. Galen then describes the features of a well-balanced *krasis* of the whole body in terms of complexion, hair color, and the quantity and quality of the flesh. This is the standard against which bodies that are not well-balanced are measured.

15. This section is a summary of the signs of the four simple *dyskrasias* as manifest in the state of the whole body, as follows:

Hot: increased hairiness and decreased fat commensurate with the degree of heat, ruddy complexion, black hair.

Cold: relatively hairless and fat, cold to the touch, complexion and hair reddish-brown (face may be livid).

Dry: thinner and harder than the *eukratic*.

Moist: better-fleshed and soft.

16. *Signs of combined dyskrasias of the whole body:*

Hot and dry: hairy, hot, hard, thin, and devoid of fat, black hair, dark complexion.

Hot and moist: hairy, soft, well-fleshed, hot to the touch, prone to putrefactive diseases.

Cold and moist: hairless, pale, soft, dense, and fatty, hair and complexion tend to be reddish, although the latter may be livid.

Cold and dry: hairless, thin, hard and cold to the touch.

Variations are considered, as are the effects of applying heating, cooling, moistening, and drying agents in the compound *dyskrasias*.

17. *Signs of dyskrasias of the stomach:* These are thirst, appetite for foods, and the effects of different sorts of foods and drinks. In the stomach, *dyskrasias* due to disease differ from those that are innate by producing a desire for opposites rather than similars. Galen also makes the point that the state of the chest and lungs has a bearing on thirst and the desire for hot or cold drinks.

18. *Signs of dyskrasias of the lungs:* The most important signs are to be found in the superfluities revealed by the sputum and in the voice. Obviously the upper air-

ways also have a considerable bearing on signs detected in the voice.

19. *Signs of diseases of the organic parts:* These involve abnormalities of size, conformation, number, and position. There is an obvious distinction between parts that are readily visible—head, chest, abdomen, and limbs—and those that are not (internal organs), although with the latter, there may be some cases where direct observation is possible. Galen gives two examples of this. Where direct observation is not possible, attention must be directed to functions and uses.

20. *Signs in bodies suffering diseases at the present time:* This relates to the earlier subdivision into absolute and relative. Galen gives the following general list of observable signs: changes in size, color, form, number, and position, differences in hardness and softness, hot and cold, apparent damage to functions, the secretions and excretions, pains and abnormal swellings. He then considers the specific signs among those characteristic of diseases of brain, heart, liver, stomach, chest, and lungs. Abnormal swellings include inflammations, indurations (scirrhosities), and edema. Pain can be due to either dissolution of continuity or change of substance by heat, cold, moisture, or dryness. Functions may be weak, deficient, or absent altogether. He refers to his work *On Affected Places*, where these matters are considered in detail.

21. *Signs in bodies about to become diseased:* These signs fall broadly into two groups:

Those that are in accord with nature but are changed in terms of quantity, quality, or time.

Those that are contrary to nature but not to such a degree that the person is diseased.

This brings Galen back to the subject of "neither" ("neutral") examined in the opening section. He then deals with the prognostic signs of an impending dry disease, following the twofold division above.

22. *Signs in bodies already diseased*: These may indicate future health (i.e., recovery) or death. They are signs taken from the goodness or badness of functions. In considering these, he returns to his fourfold classification of the component of the body given in Section 5—principles, parts that take their origin from the principles, parts that are self-governing but receive outgrowths from the principles, and parts that are independent. It is the first three that provide prognostic signs. What ultimately determines whether the patient returns to health is the "battle" between Nature and material. He refers to two of his works for details: *On Crises* and *On the Differentiae of Symptoms*.

23. *Causes—the threefold division*: There is again a threefold division into health-producing, disease-producing, and neither (neutral). First, health-producing causes may be subdivided into "preserving of health" and "productive of health." He makes a further subdivision of those things that change the body into those that are "necessary" (ambient air, movement and rest, waking and sleeping, things ingested [i.e., food and drink]), things eliminated (i.e., excretions and secretions), affections of the soul,<sup>7</sup> and those that are "non-necessary" (his examples here are

<sup>7</sup> That is, the Six Non-Naturals—see note 5 above.

contact with swords or wild beasts). The art is to do with the former, and each is briefly examined. These are all things that may be beneficial to the body under the proper circumstances, but also injurious under adverse circumstances. This matter is examined in detail in his *On the Preservation of Health (Hygiene)*.

24. *More on causes in general*: This continues his consideration of these causes and the need for balance/moderation in them in preserving or restoring health. He adds two other factors to the list in the previous section: psychic affections and sexual activity. The keys here are to avoid imbalance in psychic affections (he lists anger, grief, joy, passion, fear, and envy) and to be attentive to the bodily state before indulging in sexual activity.

25. *Causes that preserve health*: These may act on *homoiomerous* or organic parts. The former are of two kinds: those that preserve the *krasis* of bodies (e.g., hot bodies require hot regimens and so on) and those that effect change for the better (e.g., are opposite to an existing *dyskrasia*). The two kinds might be called, respectively, "preserving" and "transforming," although the latter could also be called "therapeutic" or "restoring." Morbid causes are the opposite of healthy causes. Differences in the degree of *dyskrasia* in different parts of the body must also be taken into account.

26. *Causes of health in organic parts*: The basic aim here must be to correct defects in conformation, size, number, and position. Galen deals in general terms with the correction of an abnormality in each of these kinds of defects. He makes two other general points. First, in simple parts there are four *differentiae*: slightly changed but still healthy, greater change and unhealthy, greatest

change, and diseased. Second, a differentiation must be made between parts generated from semen and those generated from blood—the former are almost impossible to restore, the latter not so.

27. *Dissolution of continuity*: In this brief section Galen raises the question of whether dissolution of continuity is always an affection or can exist in healthy bodies.

28. *Causes of health in bodies that are diseased*: Galen deals first with the *dyskrasias*. The groups of health-producing causes are identified: those that correct a *dyskrasia* that has already occurred, those that act on an evolving *dyskrasia*, and those that act to prevent a *dyskrasia* that would otherwise occur. Causes of health in these three groups are, respectively: therapeutic, a combination of therapeutic and prophylactic, and prophylactic. In general terms, the principle of treatment is again “opposites cure opposites.” Galen gives an example of the application of the general principles of treatment in a still evolving disease—a fever due to putrefying humors. In the compound *dyskrasias*, treatment is complicated by the need to correct deviations in two qualities. Thus medications will need to be administered in different amounts according to the differences in the two components of the *dyskrasia*. There is also the question of a medication retaining its potency until it reaches the affected part. He concludes by saying that the cure of causes creating *dyskrasias* is by evacuation, while the cure of the *dyskrasias* themselves is by alteration.

29. *Causes of health in dissolution of continuity*: Cure of dissolution of continuity is only possible in *homoiomerous* parts. The four basic components of cure are: bring together what has been separated, maintain this apposi-

tion, ensure that nothing interposes itself between the apposed parts, and ensure that the substance of the affected part(s) is in good state. Clearly, if there is an affection of the damaged part itself in addition to the dissolution of continuity, the therapeutic situation is complicated.

30. *Causes of health in bone fractures*: There is need to focus not only on the broken bones but also on the adjacent tissues. Nutritional factors conducive to callus formation must also be considered.

31. *Causes of health in puncture wounds of nerves and tendons*: In this brief section the need to open the wound is stressed. Also, drying must be effected with a fine-particled substance.

32. *Causes of health in ulcers*: An ulcer is a typical example of a compound condition, in that there is both dissolution of continuity and loss of substance, resulting in two distinct therapeutic objectives. These are restoration of continuity and regeneration of lost substance. Several important aspects of these processes are briefly touched on.

33. *Causes of health in disorders of conformation*: Galen describes the class of disorders of conformation as presenting many difficulties. This is a somewhat confusing section that may have suffered textual disturbance. As it stands, it considers successively fractures, obstructions, abnormal collections of fluid, abnormal things contained in any part, and also roughness and smoothness.

34. *Causes of health in obstructions and stenoses*: This long section deals with obstructions and stenoses consequent upon other diseases—inflammation, induration/scirrhus, edema, swelling/tumor, and abnormal dryness or moisture. These are matters considered in detail in *The*



*Method of Medicine.* The key aspects of treatment, if there is a buildup of material in a part, are evacuation, revulsion, diversion, and change of the physical characteristics of what has accumulated. Specific consideration is given to the liver, which as a "principle" also affects the veins. There is also the question of whether an abnormal flux to a part may affect the *krasis* of that part. If so, this may need correction, and to effect this properly, there must be knowledge of the normal *krasis* of the part.

35. *Causes of health in disorders of number and position:* These may involve excess or deficiency; the latter includes complete loss or destruction. The basic objectives are obvious: remove the excess or make good the deficiency. Where these are not possible, alternate strategies must be employed, such as changing position or creating a different kind of tissue to replace one that cannot be regenerated. Brief mention is also made of disorders of position, exemplified by dislocation at a joint and abdominal hernias. Again, reference is made to *The Method of Medicine* for detailed consideration of these matters.

36. *Causes of health in prophylaxis:* Only very brief consideration is given to this subject. Galen reiterates his tripartite division of states into healthy, imperfectly healthy, and diseased. Prophylaxis pertains to the first two of these and here is dealt with only in terms of correcting abnormalities of humors that might otherwise become causes of disease. The main methods, as previously mentioned, are evacuation, revulsion, and diversion. Reference is made to *On the Preservation of Health (Hygiene)*—in particular the third and fourth books and the sections dealing with the fatigues.

37. *Causes of health in restoration and recuperation:*

There is brief consideration of restoration and recuperation after disease and the amelioration of the problems of aging. The main methods are listed: proper nourishment, adequate activity and exercise, massage, and bathing. Foods need to be moist, easily digested/concocted, and not cold. Wine is a suitable drink, balanced according to age.

*List of books:* *The Art of Medicine* concludes with a list of his books that Galen sees as particularly relevant to learning—even mastering—the art. Prominent among these are the works on the following:

Basic matters: on elements, on *krasis*, on the natural/physical capacities, on anatomy, and on reasoning (specifically, his lost work *On Demonstration*).

Clinical diagnosis: on the pulses, on respiration, on crises, and on critical days.

Materia medica/pharmacology: the three major works on medications.

The two major clinical works: *The Method of Medicine* and *On the Preservation of Health (Hygiene)*.

## ΓΑΛΗΝΟΥ ΤΕΧΝΗ ΙΑΤΡΙΚΗ

305K Τρεῖς εἰσιν αἱ πᾶσαι διδασκαλῖαι τάξεως ἐχόμεναι  
πρώτη μὲν, ἢ ἐκ τῆς τοῦ τέλους ἐννοίας κατὰ ἀνάλυ-  
σιν γινομένη. δευτέρα δέ, ἢ ἐκ συνθέσεως τῶν κατὰ  
ἀνάλυσιν εὑρεθέντων· τρίτη δέ, ἢ ἐξ ὄρου διαλύσεως,  
ἣν νῦν ἐνιστάμεθα. καλεῖν δὲ ἕξει τὴν τοιαύτην δι-  
δασκαλίαν, οὐ μόνον ὄρου διάλυσιν, ἀλλὰ καὶ διά-  
πτυξιν, ὡς τινες ὠνόμασαν, ἢ ἀνάλυσιν, ἢ διαίρεσιν,  
ὡς ἕτεροί τινες, ἢ ἐξάπλωσιν, ἢ ἐξήγησιν, ὡς ἄλλοι.  
ἐπεχείρησαν μὲν οὖν ἔνιοι τῶν Ἡροφιλείων τοι-  
αύτην ποιήσασθαι διδασκαλίαν, ὥσπερ καὶ Ἡρα-  
κλείδης ὁ Ἐρυθραῖος· ἐπεχείρησαν δὲ καὶ τὴν κατὰ  
306K σύνθεσιν, | αὐτοὶ τε οἱ Ἡροφίλειοι, καὶ τινες τῶν

<sup>1</sup> Τέλος is a word with a multiplicity of meanings. It occupies almost three complete columns in LSJ. The sense here is "end result," "ultimate purpose," or "objective aimed at."

<sup>2</sup> Galen begins by referring to two terms also used at the outset in *De constitutione artis medicae* ("analysis" and "dialysis"), to which he adds a third—"synthesis." See Boudon, *Galen*, 274, with reference to her article: "Médecin et enseignement dans l'Art Medical de Galien," *Revue des Etudes Grecques* 106 (1993): 120-41.

## THE ART OF MEDICINE

### PREFACE

All teachings have an order in which there are three components. The first is from the concept of the end (τέλος)<sup>1</sup> and arises from analysis. The second is from the synthesis of those things discovered by analysis. The third is from dialysis (breakdown) of a definition, which is what we are now setting up. It is possible to call such a teaching not only dialysis of a definition, but also explication, as some term it, or analysis, or division, as others call it, or explanation or exegesis as still others call it.<sup>2</sup> 305K

Some of the Herophileans have tried to create such a teaching, as has Heraclides the Erythraean too.<sup>3</sup> Also, some of these same Herophileans have tried to create the teaching relating to synthesis, as have some of the Erasids- 306K

<sup>3</sup> Herophilus of Chalcedon (ca. 330-260 BC): a noted Alexandrian doctor, described as a Dogmatic, who accepted the four elements/four qualities theory of structure and the importance of *pneuma*. He made notable contributions to neuroanatomy and to pulse theory. Heraclides (ca. 30BC-AD 30) was a student of Chrysermus (1st c. BC). Both were noted Herophileans. Heraclides wrote a work in seven books (now lost) entitled *On the Herophilean Sect*.

Ἐρασιστρατείων καὶ Ἀθηναῖος ὁ Ἀτταλεύς· οὐδεὶς μέντοι γε τῶν πρὸ ἡμῶν ἔγραψε τὴν ἐκ τῆς τοῦ τέλους ἐννοίας ἀρχομένην διδασκαλίαν, ἐξ ἧς αἱ τέχναι πᾶσαι συνίστανται κατὰ μέθοδον. ἀλλ' ἐκείνη μὲν ἐτέρωθι διήλθομεν, ἐνταῦθα<sup>1</sup> δὲ τὴν ὀρικὴν ποιησόμεθα διδασκαλίαν, ὅσον γὰρ ἀπολείπεται τῆς κατὰ ἀνάλυσιν ἀξιώματί τε καὶ μεθόδῳ, τοσοῦτον πλεονεκτοῦσαν εὐρήσομεν εἰς σύνοψιν τε τοῦ ὅλου καὶ μνήμην τῶν κατὰ μέρος. εὐμνημόνευτα γὰρ ἱκανῶς ἐστὶ τὰ ἐξ ὄρου διαλύσεως ἅπαντα, διὰ τὸ περιέχειν ὅλης τῆς τέχνης ἐν ἑαυτῷ τὰ κεφάλαια τὸν ἀριστον ὄρου, ὃνπέρ καὶ οὐσιώδη τινὲς ὀνομάζουσιν, ἀντιδιαιρούμενοι τοῖς ἐννοηματικοῖς προσαγορευομένοις· ἐκείνοι μὲν γὰρ ἀπὸ τῶν συμβεβηκότων οἷς ὀρίζονται πράγμασιν, οὗτοι δὲ ἀπὸ τῆς οὐσίας αὐτῆς συνίστανται. ἢ δὲ κατὰ μέρος ἐξεργασία συμπάσης τῆς ἰατρικῆς θεωρίας ἐν πολλαῖς ἡμῖν ἐτέραις γέγραπται πραγματείαις, αἷς ἕξεστι | χρῆσθαι πρὸς τὰς τρεῖς διδασκαλίας· ἀλλὰ νῦν γε τῆς ὀρικῆς ὑπαρξόμεθα, τοσοῦτον ἔτι προσθέντες, ὡς μόνα τὰ κεφάλαια καὶ οἶον συμπεράσματα τῶν κατὰ διέξοδον ἀποδεδειγμένων εἰρήσεται νῦν.

<sup>1</sup> ἐνταυθοῖ K; ἐνταυθα B

<sup>4</sup> Erasistratus (ca. 315–240 BC) was the other noted Alexandrian doctor of the third century BC, along with Herophilus. He espoused a particle theory of the structure of matter. Galen was

trateans and Athenaeus of Attaleia.<sup>4</sup> But no one prior to myself has written of the teaching beginning from the concept of the end (τέλος) from which all the arts are constituted according to method. I have gone over that elsewhere.<sup>5</sup> Here we shall fashion the teaching relating to definition, and to the same extent that this falls short of the teaching relating to analysis, both in worth and method, we shall discover that it has the advantage when it comes to a synopsis of the whole and the memorization of its individual components. Thus, all the things arising from the dialysis of a definition are very easy to remember because the best definition contains in itself the chief points of the whole art (which some also term essential points), distinguishing them logically from notional names. The latter are derived from those things incidental to the matters being defined, whereas the former arise from the substance itself. I have written about the working out of the whole theory of medicine, part by part, in many other treatises which can be used in regard to the three components of teaching. Now, however, I shall begin the definitional component, adding just this—for the present I shall state the chief points only, and the conclusions, as it were, of those things demonstrated in detail.

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at odds with him on a number of major issues. Athenaeus (1st c. AD) was a noted Greek doctor who subscribed to the four elements/four qualities theory of structure like Galen and gave particular importance to the role of *pneuma*. In fact, he is regarded as the founder of the Pneumaticist sect. Galen is generally well-disposed toward him.

<sup>5</sup> This is taken to be a reference to *De constitutione artis medicae*.

1. Ἱατρικὴ ἐστὶν ἐπιστήμη ὑγιεινῶν καὶ νοσῶδων καὶ οὐδετέρων· οὐ διαφέρει δὲ οὐδ' εἰ νοσερῶν τις εἴποι τοῦ μὲν οὖν τῆς ἐπιστήμης ὀνόματος κοινῶς καὶ οὐκ ἰδίως ἀκούειν χρή· τὸ δὲ ὑγιεινὸν καὶ τὸ νοσῶδες, καὶ τὸ οὐδέτερον, τριχῶς ἕκαστον λέγεται· τὸ μὲν ὡς σῶμα, τὸ δὲ ὡς αἷτιον, τὸ δὲ ὡς σημεῖον, καὶ γὰρ τὸ ἐπιδεκτικὸν τῆς ὑγείας σῶμα, καὶ τὸ ποιητικὸν καὶ φυλακτικὸν αὐτῆς αἷτιον καὶ τὸ δηλωτικὸν σημεῖον, ἅπαντα ταῦτα καλοῦσιν οἱ Ἕλληνες ὑγιεινά· κατὰ δὲ τὸν αὐτὸν τρόπον καὶ νοσῶδη τὰ τε ἐπιδεκτικὰ νόσων σώματα, καὶ τὰ ποιητικὰ τε καὶ φυλακτικὰ νόσων αἷτια, καὶ τὰ δηλωτικὰ σημεῖα· καὶ δὴ καὶ τὰ οὐδέτερα κατὰ τὸν αὐτὸν λόγον σώματά τε καὶ αἷτια καὶ σημεῖα· καὶ ἐστὶ κατὰ πρῶτον μὲν λόγον ἐπιστήμη τῶν ὑγιεινῶν | αἰτίων ἢ ἱατρικὴ, δι' ἐκεῖνα δὲ ἤδη καὶ τῶν ἄλλων. δεύτερον μὲν τῶν νοσῶδων· τρίτον δὲ τῶν οὐδετέρων· καὶ δὴ καὶ μετὰ ταῦτα τῶν σωμάτων, πρῶτον μὲν κἀνταῦθα τῶν ὑγιεινῶν, ἐφεξῆς δὲ τῶν νοσερῶν, εἶτα τῶν οὐδετέρων· καὶ περὶ τῶν σημεῖων δὲ κατὰ τὸν αὐτὸν λόγον· ἐν μέντοι ταῖς πράξεσι, πρότερον μὲν τῶν σωμάτων ἐκ τῶν σημεῖων ἢ διάγνωσις δηλονότι, μετὰ ταῦτα δὲ ἤδη τῶν ἐπ' αὐτοῖς αἰτίων εὔρεσις.

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ἀλλ' ἐπεὶ καὶ τὸ ποιητικὸν καὶ τὸ δηλωτικὸν καὶ τὸ ἐπιδεκτικὸν διχῶς ἕκαστον λέγεται, τὸ μὲν ἀπλῶς, τὸ δὲ ἐν τῷ ὕν, ἰστέον ἀμφοῖν οὖσαν ἐπιστήμην τῆν

1. Medicine is the knowledge of those things that are healthy, those that are diseased, and those that are neither (neutral)—it would make no difference if someone were to say sickly. It is necessary to understand the term “knowledge” generally and not specifically. [The terms] “healthy,” “diseased” and “neither” are each used in three ways: as pertaining to the body; as pertaining to the cause; and as pertaining to the sign. Thus, the body is what is capable of “receiving” health; the cause is what is capable of creating and maintaining health; and the sign is what is capable of indicating health. The Greeks call all these “healthy.” In the same way too, the term “diseased” refers to bodies capable of “receiving” diseases, “cause” to what are capable of creating and maintaining diseases, and “sign” to what are capable of indicating diseases. Furthermore, in the same way, “neither” refers to bodies, causes and signs. In the first sense, medicine is knowledge of causes of health, and through those, of other matters too. In the second sense, it is knowledge of the causes of disease, and in the third sense, of the causes of neither. And next after these, it is a knowledge of bodies: first of those that are healthy, then of those that are diseased, and then of those that are neither. The same argument applies to signs. However, in practice the diagnosis of bodies is prior, and is obviously from the signs; after this comes the discovery of their causes.

But since “capable of creating,” “capable of indicating” and “capable of receiving” are each used in two ways—the one absolutely (generally) and the other relatively (per-

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ιατρικήν· καὶ αὐτὸ δὲ τὸ ἀπλῶς διχῶς λέγεται, τό τε διὰ παντὸς καὶ ὡς ἐπὶ τὸ πολὺ καὶ ἔστιν ἀμφοτέρων τούτων ἐπιστήμη ἢ ἱατρική· καὶ δὴ καὶ τὸ<sup>2</sup> οὐδέτερον αἰτίον τε καὶ σημεῖον καὶ σῶμα, τό τε ἀπλῶς λεγόμενον καὶ τὸ ἐν τῷ νῦν, τριχῶς ἕκαστον λέγεται τὸ μὲν τῷ μῆδ' ἐτέρου τῶν ἐναντίων μετέχειν, τὸ δὲ τῷ ἀμφοτέρων, τὸ δὲ τῷ ποτὲ μὲν τοῦδε, ποτὲ δὲ τοῦδε. 309K τούτων δὲ αὐτῶν | τὸ δεύτερον κατὰ δύο τρόπους λέγεται ποτὲ μὲν τῷ μετέχειν ἑκατέρου τῶν ἐναντίων ἕξ ἴσου, ποτὲ δὲ τῷ πλεόν θατέρον.

ἔστι δὲ καὶ καθ' ὅλου τοῦ ὅρου κατὰ τὴν λέξιν ἀμφιβολία τις, ἣν καὶ αὐτὴν χρῆ διελέσθαι ἐν γὰρ τῷ λέγειν τὴν ἱατρικὴν ἐπιστήμην ὑπάρχειν ὑγιεινῶν καὶ νοσῶδων καὶ οὐδέτερον, σημαίνεται μὲν καὶ τὸ πάντων τῶν κατὰ μέρος, σημαίνεται δὲ καὶ τό τινων, σημαίνεται δὲ καὶ τὸ ὁποίων. ἀλλὰ τὸ μὲν πάντων ἀπεριόριστόν τε καὶ ἀδύνατον, τὸ δὲ τινων ἑλλιπές τε καὶ οὐ τεχνικόν· τὸ δὲ ὁποίων<sup>3</sup> τεχνικόν τε ἅμα καὶ διαρκές εἰς ἅπαντα τῆς τέχνης τὰ κατὰ μέρος, ὅπερ καὶ περιέχεσθαι φαμεν ἐν τῷ τῆς ἱατρικῆς ὅρω· ἀρξόμεθα οὖν ἀπὸ τῶν σωμάτων πρώτον, ὁποῖά τινα τὰ τε ὑγιεινά, καὶ τὰ νοσῶδη, καὶ τὰ οὐδέτερα τετύχηκεν

<sup>2</sup> καὶ δὴ καὶ τὸ B; τὸ δὲ K

<sup>3</sup> ὁμοίων K

taining only to present time/circumstances)<sup>6</sup>—we must realize that medicine is the knowledge of both. Also, “absolutely” itself is used in two ways—one meaning “always” and the other “for the most part.” Medicine is a knowledge of both of these. Furthermore, “neither” is stated absolutely and relatively in respect of cause, sign and body, and each is used in three ways. The first is having no part in either of the opposites, the second is partaking of both, and the next (third) is partaking of one at one time and of the other at another time. Of these themselves, the second is used in two ways; it may partake of each of the opposites equally or it may partake of one more than the other.

There is also some ambiguity surrounding the statement of the definition as a whole and this must be resolved. Thus, in saying that medicine is knowledge of what is healthy, diseased and neither, this also signifies all such things individually, or some things, or the kinds of things. But the knowledge of all would be indefinable and unrealizable while the knowledge of some would be deficient and unsystematic. The knowledge of the kinds is systematic and, at the same time, sufficient for all the individual parts of the art, which we also say is encompassed in the definition of medicine.<sup>7</sup> Let us, therefore, begin with the bodies first, touching on those kinds that are healthy, dis-

<sup>6</sup> There is some variation in the rendering of the terms ἀπλῶς and ἐν τῷ νῦν. Thus the Kühn Latin has *simpliciter* and *nunc*; Boudon has *pur et simple* and *sous son aspect present*; Singer has “in the general sense” and “with application to the present time”; von Staden has “absolutely” and “at the present moment.”

<sup>7</sup> For a detailed and informative note on Galen's attempt to define the art of medicine here, see Boudon, *Galen*, 400.

ὄντα· μετὰ δὲ ταῦτα τὸν περὶ τῶν σημείων τε καὶ αἰ-  
τιῶν διεξέλθωμεν λόγον.

2. Ὑγιεινόν ἐστιν ἀπλῶς σῶμα τὸ ἐκ γενετῆς εὐ-  
κρατον μὲν ὑπάρχον τοῖς ἀπλοῖς καὶ πρώτοις μορίοις·  
310K | σύμμετρον δὲ τοῖς ἐκ τούτων συγκεκμημένοις ὀργάνοις·  
ὑγιεινὸν δὲ νῦν ἐστὶ σῶμα, τὸ κατὰ τὸ παρὸν ὑγιαί-  
νον· ἔστι δὲ δὴ που καὶ τούτο, καθ' ὃν ὑγιαίνει χρό-  
νον, εὐκρατόν τε καὶ σύμμετρον, οὐ τὴν ἀρίστην εὐ-  
κрасίαν τε καὶ συμμετρίαν, ἀλλὰ τὴν οἰκείαν· αὐτοῦ  
δὲ τοῦ ἀπλῶς ὑγιεινοῦ σώματος, διὰ παντὸς μὲν τοι-  
ούτῳ ἐστὶ τὸ εὐκρατότατον τε καὶ συμμετρότατον, ὡς  
τὸ πολὺ δὲ τὸ τῆς ἀρίστης κατασκευῆς ἀπολειπόμε-  
νον οὐ πολλῶ· νοσῶδες δὲ ἐστὶν ἀπλῶς σῶμα, τὸ ἐκ  
γενετῆς ἤτοι δύσκρατον τοῖς ὁμοιομερέσιν, ἢ ἀσύμ-  
μετρον τοῖς ὀργανικοῖς, ἢ ἀμφοτέρω· νοσῶδες δὲ νῦν  
ἐστὶ σῶμα τὸ νοσοῦν, ἐν ᾧ λέγεται χρόνῳ τοιοῦτον  
ὑπάρχειν· εὐδηλον δὲ ὡς καὶ τούτο, καθ' ὃν λέγεται  
χρόνον εἶναι νοσῶδες, ἤτοι δύσκρατόν ἐστι ἐν τοῖς  
ὁμοιομερέσιν, ἢ ἀσύμμετρον τοῖς ὀργανικοῖς ἢ ἀμ-  
φότερω· καὶ δὴ καὶ διὰ παντὸς μὲν νοσῶδες ἐστὶν, ὅ  
τι περ ἂν ἐκ γενετῆς ἤτοι δυσκρατότατον ὑπάρχη  
τοῖς ἀπλοῖς καὶ πρώτοις μορίοις ἅπασιν, ἢ τισιν ἢ  
τοῖς κυριωτάτοις, ἢ καὶ τοῖς ὀργανικοῖς ἀσυμμετρότα-  
311K | τον, ὁμοίως | καὶ τούτοις, ἤτοι πᾶσιν, ἢ τισιν, ἢ τοῖς  
κυριωτάτοις· ὡς τὸ πολὺ δὲ νοσῶδες ἐστὶ σῶμα, τὸ  
τοῦ μὲν τοιούτου τῆς κακίας ἀπολειπόμενον, οὐπω δὲ  
ἐν τῷ μέσῳ καθεστηκός.

ἐπεὶ δὲ καὶ τὸ οὐδέτερον σῶμα τριχῶς ἐλέγετο, τὸ

eased and neither. After this, I shall go through the discus-  
sion regarding signs and causes.

2. A body is healthy in the absolute sense when it is  
*eukratic* in the simple and primary parts from birth, and 310K  
balanced in the organs compounded from these parts. A  
body is healthy relatively (now) when it is healthy at the  
present time. Of course, at the time it is healthy it is *eu-*  
*kratic* and balanced, although not [necessarily] the best  
*eukrasia* and balance, but what is suitable to itself. When  
a body is healthy in the absolute sense, it is always the most  
*eukratic* and balanced; when it is healthy for the most part  
it falls short of the best constitution but not by much. A  
body that is diseased in the absolute sense is either *dysk-*  
*ratic* in the *homoiomeric* parts from birth, or unbalanced  
in the organic parts, or both. A body is diseased in a rela-  
tive sense (at the present time) when it is suffering a dis-  
ease at the time it is said to be diseased. In this case too,  
it is clear that at the time it is said to be diseased, it is either  
*dyskratic* in the *homoiomeric* parts, or unbalanced in the  
organic parts, or both. Furthermore, a body is continually  
diseased when it is, from birth, very *dyskratic* in all the  
simple and primary parts, or in some, or in the most im-  
portant, or also very unbalanced in the organic parts—and 311K  
similarly with these, in all, or some, or the most important.  
A body that is diseased for the most part is one that falls  
short of this degree of badness but is not yet established  
in a median position.

After that, a body that is neither is spoken of in three

312K μὲν τῷ μηδ' ἐτέρας τῶν ἄκρων διαθέσεων μετέχειν, τὸ δὲ τῷ ἀμφοτέρων, τὸ δὲ τῷ ποτὲ μὲν τῆσδε, ποτὲ δὲ τῆσδε· κατὰ μὲν τὸ πρῶτον σημαινόμενον οὐδέτερον ἔσται σῶμα τὸ μέσον ἀκριβῶς ὑπάρχον, τοῦ τε ὑγιεινοτάτου σώματος καὶ τοῦ νοσωδεστάτου· καὶ τούτου τὸ μὲν ἀπλῶς τοιοῦτον, ὃ τι περ ἂν ἐκ γενετῆς τοιοῦτον ἢ κατεσκευασμένον. τὸ δ' ἐν τῷ νῦν ὃ τι περ ἂν ἐν τῷ παρόντι χρόνῳ μέσον ἀκριβῶς ὑπάρχη<sup>4</sup> τοῦ τε ὑγιεινοτάτου σώματος καὶ τοῦ νοσωδεστάτου· αὐτοῦ δὲ τοῦ ἀπλῶς, τὸ μὲν διὰ παντὸς τοιοῦτον ὃ τι περ ἂν ἐν ἀπάσαις ταῖς ἡλικίαις διαμένῃ τοιοῦτον· τὸ δὲ ὡς ἐπὶ τὸ πολὺ, τὸ καὶ μεταβολὰς τινὰς λαμβάνον· κατὰ δὲ τὸ δευτέρον σημαινόμενον οὐδέτερον ἔσται σῶμα τὸ τῶν ἐναντίων ἅμα διαθέσεων μετέχον ἐκ γενετῆς, ἦτοι καθ' ἐν μόριον, ἢ κατὰ δύο διαφέροντα· καθ' ἐν μὲν, εἰ κατὰ τὴν ἐτέραν ἀντίθεσιν εὐκρατον εἶη τῶν δραστηκῶν ποιότητων, ἢ κατ' ἀμφοτέρας μὲν, ἀλλὰ περὶ τὴν διάπλασιν ἢ τὸ μέγεθος ἢ τὸν ἀριθμὸν τῶν μορίων ἢ τὴν θέσιν ἐσφαλμένον ἢ ἔμπαλιν ἐν τούτοις μὲν κατωρθωμένον ἅπασιν ἢ τισιν, ἐν δὲ τῇ κράσει διημαρτημένον· ἐν διαφέρουσι δὲ μορίοις, καὶ κατὰ πάσας τὰς ἀντιθέσεις, δύναταί τι τῶν ἐναντίων ἅμα μετέχειν.

καὶ διὰ παντὸς μὲν τοιοῦτον, τὸ κατὰ πάσας τὰς ἡλικίας μένον ὁμοιον, ὡς τὸ πολλὸν δέ ἐστί, τὸ καὶ μεταβάλλον κατὰ τι οὕτω δὲ καὶ τῷ νῦν οὐδέτερον

<sup>4</sup> τὸ δὲ νῦν ὁτιοῦν, κατὰ παρὸν τὸ μέσον ὑπάρχον K

ways: one when it partakes of neither of the extreme conditions; one when it partakes of both; and one when it partakes sometimes of one and sometimes of the other. In the first category, what is signified as "neither" will be a body that is precisely midway between the most healthy and the most diseased. Of this, there is that which is absolutely so—that is, it has been in such a state from birth; and there is what is so now—that is, at the present time it is precisely midway between the most healthy and the most diseased. This category of "absolutely" includes what is so throughout, in that it remains so through all the periods of life (childhood, adolescence, maturity/prime, old age), and that which is "for the most part," allows of certain changes. In the second category, what is signified as "neither" will be a body which partakes, from birth, of opposite conditions at the same time, either in one part or two different parts. It is "in one part" if it is *eukratic* in one antithesis of the active qualities, or in both, but is defective in conformation, size, number of parts, or position.<sup>8</sup> Conversely, it may be properly constructed in all of these aspects, or in some of them, but is at fault in *krasis*. It is also possible to partake of some of the opposites in different parts at the same time and in respect of all the antitheses.

That which is so "continually" remains the same throughout all the periods of life, whereas that which is "for the most part" is changed in some respect. In the same

<sup>8</sup> This is basically Galen's classification of diseases, which he sets out in detail in *Morb. Diff.*, VI.836–80K, omitting the one class (dissolution of continuity) that affects both *homoimerous* bodies and organic parts.

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ἔσται σῶμα, κατὰ τὸ δεύτερον σημαινόμενον, ἢ τῷ περὶ ἐν μόνιον, τὰ μὲν ἔχειν ὑγιεινά, τὰ δὲ νοσερά τῶν ὑπαρχόντων αὐτῷ, ἢ τῷ περὶ διαφέροντα μέρη· κατὰ δὲ τὸ τρίτον σημαινόμενον, οὐδέτερον ἔσται σῶμα τὸ ποτὲ μὲν ὑγιεινόν, ποτὲ δὲ νοσερὸν ἐν μέρει γινόμενον, ὥσπερ ἐπίοις ὑπήρξε, παισὶ μὲν οὖσιν, ὑγιεινοῖς γενέσθαι, νεανίσκοις δὲ γενομένοις, νοσεροῖς, ἢ ἔμπαλιν· ἐν ἐνὶ δὲ χρόνῳ τὸ οὕτως οὐδέτερον, ἀκριβῶς μὲν οὐκ ἐγχωρεῖ συστήναι, κατὰ πλάτος δ' ἐγχωρεῖ· ἴσμεν δὲ ὅτι τὸ νῦν διχῶς λέγεται· τὸ μὲν οὖν ὑγιεινὸν καὶ νοσῶδες καὶ οὐδέτερον σῶμα ποσαχῶς λέγεται, καὶ ὁποῖον ἕκαστόν ἐστιν, αὐτάρκως διώρυσται.

3. Περὶ δὲ τῶν σημείων ἐφεξῆς ἂν εἴη ῥητέον· ἔστι δὲ καὶ τούτων ὑγιεινὰ μὲν, ὅσα τῆς τε παρουσίας ὑγείας ἐστὶ διαγνωστικά, καὶ τῆς μελλούσης ἔσεσθαι προγνωστικά, καὶ τῆς προγεγεννημένης ἀναμνηστικά· νοσῶδη δὲ τὰ τε τῆς παρουσίας νόσου διαγνωστικά, καὶ τῆς μελλούσης ἔσεσθαι προγνωστικά, καὶ τῆς προγεγεννημένης ἀναμνηστικά· κατὰ ταῦτα δὲ καὶ τὰ οὐδέτερα, τὰ τε τῶν οὐδετέρων διαθέσεων διαγνωστικά, καὶ προγνωστικά, καὶ ἀναμνηστικά, καὶ τὰ μηδὲν ὅλως δηλοῦντα περὶ διαθέσεων, ἢ τὰ μηδὲν μᾶλλον ὑγιεινῆν, ἢ νοσερὰν δηλοῦντα διάθεσιν· καὶ τὰ κατὰ τι μὲν ὑγιεινῆν, κατὰ τι δὲ νοσερὰν δηλοῦντα διάθεσιν, καὶ τὰ ποτὲ μὲν ὑγιεινῆν, ποτὲ δὲ νοσῶδη

way, a body will be “neither” at the present time, according to the second signification, when health and disease coexist in one part, or coexist in different parts. In the third signification, a body will be “neither” when it is healthy at one time and diseased at another time in turn, as in those who were healthy when they were children but became diseased as adolescents, or vice versa. The “neither” which is at one time in this way cannot exist in a strict sense but it can in a broad sense. And we recognize that the term “now” is used in two ways.<sup>9</sup> The various ways in which a body is said to be healthy, diseased or neither, and what kind of thing each of these is, have now been rigorously defined. 313K

3. What I must speak of next are the signs. Of these, there are the healthy signs—those that are diagnostic of present health, those that are prognostic of future health, and those that are anamnestic (indicative) of previously existing health. The signs of disease are those that are diagnostic of present disease, those that are prognostic of future disease, and those that are anamnestic (indicative) of previously existing disease. In the same way too, there are the signs of neither—those that are diagnostic, prognostic and anamnestic (indicative) of neither condition, and those that indicate nothing at all about conditions. These are no more indicative of a healthy condition than they are of a disease condition. And there are those that are in some part indicative of a healthy condition and in some part of a diseased condition, and those that sometimes indicate a healthy condition and sometimes a dis-

<sup>9</sup> On Galen's lack of precision regarding the double sense of “now,” see Boudon, *Galen*, 281.



314K καὶ ταῦτα δὲ κατὰ τοὺς τρεῖς χρόνους ὁμοίως τοῖς |  
 ὑγιεινοῖς τε καὶ νοσώδεσι καλεῖται δὲ ἐνίοτε πρὸς τῶν  
 παλαιῶν ἰατρῶν ἅπαντα ταῦτα τὰ σημεῖα προγνω-  
 στικά, κἂν τῶν ἐνεστώτων ἢ προγεγονότων ἢ δηλω-  
 τικά· καὶ ἡ χρεία μεγάλη μὲν τῶν διαγνωστικῶν τε  
 καὶ προγνωστικῶν, ἐλάττων δὲ τῶν ἀναμνηστικῶν.

4. Ὀντων οὖν σωμάτων ὑγιεινῶν, τῶν μὲν ἀπλῶς,  
 τῶν δὲ ἐν τῷ νῦν, ἅπερ δὴ καὶ ὑγαίνοντα λέγεται,  
 τῶν ἀπλῶς ὑγιεινῶν σωμάτων διττὴν ἔφαμεν εἶναι  
 τὴν διαφορὰν, τῷ τὰ μὲν διὰ παντὸς ὑπάρχει τοι-  
 αῦτα, τὰ δὲ ὡς τὸ πολὺ· διὰ παντὸς μὲν, ὅσα τὴν  
 ἀρίστην ἔχει κατασκευὴν· ὡς τὸ πολὺ δέ, ὅσα μὴ  
 πολλῶ ταύτης ἀπολείπεται· τὰς διαγνώσεις δὲ αὐτῶν  
 ἀπὸ τε τῶν ὑπαρχόντων κατὰ τὸν τῆς οὐσίας αὐτῶν  
 λόγον χρὴ ποιεῖσθαι, καὶ τῶν ἐξ ἀνάγκης τούτοις  
 ἐπομένων ἐνεργειῶν τε καὶ συμπτωμάτων, ἃ δὴ καὶ  
 συμβεβηκότα καλοῦμεν ἰδίως· ἀπὸ μὲν τῆς οὐσίας  
 αὐτῆς, τῶν ἐν ἀρίστη κατασκευῇ, συμμετρία τῶν μὲν  
 315K ὁμοιομερῶν | ἐν θερμότητι, καὶ ψυχρότητι, καὶ ξη-  
 ρότητι, καὶ ὑγρότητι· τῶν δὲ ὀργανικῶν ἐν ποσότητι  
 καὶ πηλικότητι τῶν συντιθέντων αὐτά, καὶ προσέτι  
 διαπλάσει τε καὶ θέσει τῶν μορίων ἐκάστου καὶ ὄλου  
 τοῦ ὀργάνου· ἀπὸ δὲ τῶν ἐξ ἀνάγκης ἐπομένων τοῖς  
 ὁμοιομερέσι, ὡς μὲν πρὸς τὴν ἀφήν, ἐν σκληρότητι  
 καὶ μαλακότητι συμμετρία, πρὸς δὲ τὴν ὄψιν, εὐχροία  
 τε καὶ ἡ κατὰ λειότητα καὶ δασύτητα συμμετρία.  
 κατὰ δὲ τὰς ἐνεργείας ἢ τελειότης, ἣν δὴ καὶ ἀρετὴν  
 αὐτῶν ὀνομάζομεν· ἀπὸ δὲ τῶν τοῖς ὀργανικοῖς ἐπο-

eased condition. These are also related to the three times  
 (i.e., past, present and future) like the healthy and dis- 314K  
 eased are. Sometimes, by the doctors of old, all these signs  
 were termed prognostic, even if they were indicative of  
 presently or previously existing conditions. The diagnostic  
 and prognostic signs are of great use; the anamnestic signs  
 are of less use.

4. Among bodies that are healthy, there are those that  
 are absolutely so and those that are relatively so (so at the  
 present time), which are also said to be healthy. We said  
 there is a twofold difference in those bodies that are  
 healthy in the absolute sense: those which are continually  
 so and those which are so for the most part. Those which  
 are continually so are those that have the best constitution,  
 while those that are so for the most part do not fall short  
 of this constitution by much. We must make the diagnoses  
 of these from those things which exist by reason of their  
 substance, and the functions and symptoms necessarily  
 following them, which we also call specifically "inciden-  
 tal." Balance in the best constitution comes from the ac- 315K  
 tual substance of the *homoiomeres*, and is in hot, cold, dry  
 and moist; balance of the organic parts is in the quantity  
 and magnitude of their constituents, and besides these, in  
 the conformation and position of the whole organ and  
 each of its parts. From those things which necessarily fol-  
 low in the *homoiomeres*, what pertains to touch is a bal-  
 ance in hardness and softness, what pertains to sight is a  
 good color and a balance in smoothness and roughness. In  
 relation to the functions, there is perfection, which we also  
 call their excellence. From these things that follow in the

μένων, ἐν συμμετρίᾳ τε καὶ κάλλει τῶν τοῦ παντὸς σώματος ὀργάνων, ἔτι τε τῇ τῶν ὑπαρχουσῶν αὐτοῖς ἐνεργειῶν ἀρετῇ.

316K τῆς μὲν οὖν ἀρίστης κατασκευῆς τοῦ σώματος τὰ διαγνωστικά σημεῖα ταῦτά ἐστι τῶν δ' ἀπολειπομένων μὲν αὐτῆς, ὑγιεινῶν δ' ἔτι, τὰ μὲν ἐν τῇ τῶν ὁμοιομερῶν ἔσφαλται κράσει μικρόν τι σφάλμα, τὰ δὲ ἐν τῇ τῶν ὀργανικῶν μικρόν τι κἀνταῦθα, καὶ ἦτοι πάντων, ἢ τινων ἢ καθ' ἑκάτερον· τὰ δὲ γένη τῶν σφαλμάτων τὰ αὐτὰ τοῖς | τὴν ἀρετὴν αὐτῶν συμπληροῦσι, κράσις μὲν ἐν τοῖς ὁμοιομερέσιν, ἀριθμὸς δὲ καὶ διάπλασις καὶ μέγεθος καὶ θέσις ἐν τοῖς ὀργανικοῖς. ἀμφοῖν δὲ κοινὸν ἢ ἔνωσις ἦν δὴ καὶ συνέχειαν αὐτῶν ὀνομάζομεν· ἐν δὲ τοῖς αὐτοῖς τούτοις γένεσι καὶ ἡ τῶν νοσῶδων σωματῶν ἐστὶ κακία, καθ' ἑκάτερον τοῦ νοσῶδου τὸ σημαινόμενον· ὄρος δ' ἀμφοῖν ἐστὶ διακριτικὸς ἢ τῆς ἐνεργείας αἰσθητῆ βλάβῃ· τὰ δὲ τῆς ἀρίστης ἀπολειπόμενα κατασκευῆς σώματα βραχὺ τι βέβλαπται μὲν δὴ πού καὶ αὐτὰ κατὰ γε τὴν ἀλήθειαν, οὐ μὴν αἰσθητὸν γε τοῦτο· διορίζει τοιγαροῦν αὐτὰ τὸ μᾶλλον τε καὶ ἦττον, ἐν τε ταῖς ἐνεργείαις τε καὶ τῷ τοῖς νοσῶδεσιν αἰτίους ἀπομάχεσθαι. τὰ δὲ γε ἀπλῶς νοσῶδη σώματα διώρισται τῷ τε ῥαδίως ὑπὸ τῶν νοσῶδων αἰτίων νικᾶσθαι, καὶ τῷ πολὺ τι κατὰ τὴν ἀρετὴν τῶν ἐνεργειῶν ἀπολείπεσθαι· γίνεται οὖν ἐν μέσῳ ἀμφοῖν τὰ οὐδέτερα τά τε καὶ ἀκριβῶς λεγόμενα καὶ τὰ σὺν τινι πλάτει, καὶ τμηθῆσεται τὸ τῆς ὄλης ὑγείας πλάτος εἰς τρία

organs, it is in the balance and excellence of the organs of the whole body, and further still, in the excellence of the functions existing in them.

These, then, are the diagnostic signs of the best constitution of the body.<sup>10</sup> Of those [bodies] which fall short of this but are still healthy, some have a minor fault in the *krasis* of the *homoiomeres*, while others have a minor fault in the *krasis* of the organs—either all of them, or some of them, or in some of each. The classes of defects are the same as things that help to bring about their goodness: 316K *krasis* in the *homoiomeres* and number, conformation, size and position in the organic parts. However, common to both is unity, which we really call their continuity. In these same classes, there is also the faultiness of diseased bodies in relation to each signification of “the diseased.” The dividing line separating the two is perceptible damage of function. The bodies which fall slightly short of the best constitution are somewhat harmed—to a degree they actually are, strictly speaking—but this is not in fact perceptible. For that very reason, degree (i.e., more or less) divides these, both in the functions and in counteracting the causes of diseases. Those bodies that are diseased in the absolute sense are distinguished by the ease with which they are overcome by the causes of diseases, and by falling short to a significant degree in the excellence of their functions. In the middle of both of these are those that are neither; both those so termed with precision and those with a certain range.

And the range of health as a whole will be divided into

<sup>10</sup> Galen has a short work on the best constitution of the body, which is referred to specifically at the end of this section.

317K μόρια, πλάτος | ἔχοντα καὶ αὐτὰ συχνόν ὧν τὸ μὲν  
 πρῶτον ἔσται τῶν ὑγιεινῶν σωμάτων, τὸ δὲ δεύτερον,  
 τῶν οὐδετέρων, τὸ δὲ τρίτον, τῶν νοσῶδων οἷς ἐφεξῆς  
 ἔσται τὰ ἤδη νοσοῦντα σώματα, βλάβαις αἰσθηταῖς  
 ἐνεργειῶν<sup>5</sup> ἀφωρισμένα. τὰ μὲν οὖν ὀδυνώδη τε καὶ  
 ὧν αἱ κινήσεις πλημμελεῖς εἰσιν ἢ ὅλως ἀπολώλασιν,  
 ἐναργεῖς ἔχει τοὺς ὄρους· ὅσα δὲ ἀτόνους κέκτηται τὰς  
 ἐνεργείας, ἐν μὲν ταῖς μεγίσταις ἀποστάσεσιν εὐδιά-  
 κριτα, κατὰ δὲ τὰς μικροτέρας ἀμφίβολα, καὶ διὰ  
 τοῦτο κατὰ τὸ γένος τοῦτο τῆς βλάβης, ἢ μηδ' ἑτέρου  
 τῶν ἐναντίων μετέχουσα συνίσταται διάθεσις, ἣν καὶ  
 αὐτὴν ἔφαμεν οὐδετέραν ὀνομάζεσθαι, πάντων τούτων  
 αἰσθήσει διακρινομένων, οὐκ αὐτῇ τῶν πραγμάτων  
 τῇ φύσει κίνδυνος γὰρ εἰς τὸ τῆς ἀειπαθείας ὑπο-  
 συρῆναι δόγμα· καὶ τοίνυν καὶ τὰ σημεῖα τῶν <nunc><sup>6</sup>  
 ὑγιαίνοντων μὲν σωμάτων, ἀλλ' ἦτοι ὑγιεινῶν<sup>7</sup> ἢ οὐ-  
 δετέρων ὑπαρχόντων, τῷ ποσῷ τῆς ἀποστάσεως διοί-  
 σει, θεμένων ἡμῶν ἄκρους μὲν ὄρους ἐναντίους ἀλ-  
 λήλοις, τὴν τε ἀρίστην κατασκευὴν καὶ τὴν ἄρτι |  
 318K γενομένην νόσον, ἐπισκοποῦμένων δέ, ὀποτέρῳ τού-  
 των ἔστιν ἐγγυτέρω τὰ δοκιμαζόμενα σώματα· τὸ μὲν  
 γὰρ ἐγγυτέρω τῆς ἀρίστης κατασκευῆς ὑγιεινόν, τὸ  
 δὲ ταύτης μὲν πορρωτέρω, τοῦ δ' ἤδη νοσοῦντος ἐγ-

<sup>5</sup> ἐνεργειῶν K; <operationem> B

<sup>6</sup> <nunc> B

<sup>7</sup> νοσῶδων K

three parts, which themselves have considerable range. 317K  
 The first part will be that of healthy bodies, the second  
 that of neither, and the third that of diseased bodies. Next  
 in order to these are bodies already diseased, distin-  
 guished by perceptible damage to functions. Thus bodies  
 that are painful and those of which the movements are  
 defective or wholly lost have clear boundaries. However,  
 those that have acquired weakened functions, although  
 easy to distinguish when the deviation is very great, are  
 equivocal when it is smaller. For this reason a condition  
 exists in this class of damage which partakes of neither of  
 the opposite functions, and which, as I said, is itself called  
 "neither." All these are distinguished by perception but  
 not by the actual nature of the matters, for there is a dan-  
 ger of being dragged down into the doctrine of "perpetual  
 affection."<sup>11</sup> These, therefore, are signs of healthy bodies  
 that are now healthy, unhealthy or neither, and will differ  
 in the amount of the deviation, since we posit extreme  
 boundaries which are the opposites of each other, the one  
 being the best constitution of the body and the other a 318K  
 disease that has just now occurred. So when we consider  
 to which of these the bodies being examined are nearer,  
 that which is nearer to the best constitution is healthy,  
 whereas that which is further removed from this and is

<sup>11</sup> On this term, see Boudon, *Galen*, 285n3: "Voir sur les dif-  
 ficultés et les dangers d'une conception trop stricte de la santé  
 qui conduirait à dénier la qualité de sain à tout être vivant le *Sur  
 la constitution de l'art médical* 9 (Kühn I.256-257; éd. S. Fortuna,  
 CMG, 5.1.3, p. 84). Le substantif ἀειπάθεια ne se reconte pas  
 en dehors du corpus galénique. Voir un autre emploi de ce mot  
 au c. XXVII.2."

γυτέρω, νοσῶδες· τὸ δ' ἀμφοῖν μεταξύ, καὶ ἴσον ἑκατέρων ἀπέχειν φαινόμενον, οὐδέτερον ἔσται τοῦτο.

5.<sup>8</sup> Τῆς μὲν οὖν ἀρίστης κατασκευῆς τοῦ σώματος εἴρηται τὰ γνωρίσματα· τῶν δ' ἀπολειπομένων αὐτῆς ἀνάριθμα μὲν τὰ γένη, ἐν τῷ μᾶλλον τε καὶ ἥττον τέμνεσθαι δυναμένων· ἀφωρισμένων δὲ εἰς τρία μέρη, τὰ σημεῖα τοῦ νοσῶδους σώματος ἀπλῶς ἐροῦμεν· ἐξ αὐτῶν γὰρ ἔσται δῆλα καὶ τὰ λοιπὰ δύο πλάτη· κατὰ γένος μὲν οὖν εἴρηται πρόσθεν ἐν τῷ τῆς ἀρίστης κατασκευῆς λόγῳ, κατ' εἶδος δὲ νῦν εἰρήσεται, διελομένων ἡμῶν πρότερον τὰ μόρια.

319K τέσσαρες δ' αὐτῶν εἰσιν αἱ πᾶσαι διαφοραί· τὰ μὲν γὰρ αὐτῶν ἀρχαί τινές εἰσι· τὰ δὲ ἀπ' ἐκείνων ἐκπέφυκε· τὰ δὲ οὐτ' ἄλλων ἀρχει τῆς διοικήσεως, οὐθ' ὑπ' ἄλλων ἀρχεται, | συμφύτους ἔχοντα τὰς διοικούσας αὐτὰ δυνάμεις· ἔνια δὲ συμφύτους τε ἅμα καὶ ἐπιρρύτους ἔχει· ἀρχαὶ μὲν οὖν εἰσιν ἐγκέφαλος, καρδία, ἥπαρ καὶ ὄρχεις· ἀπ' ἐκείνων δ' ἐκπέφυκε, κἀκείνοις ὑπηρετεῖ, νεύρα μὲν καὶ νωτιαῖος μυελὸς ἐγκεφάλῳ, τῇ καρδίᾳ δὲ ἀρτηριαί, φλέβες δὲ ἥπατι, τὰ σπερματικά δ' ἀγγεῖα τοῖς ὄρχεσιν, αὐτὰ δ' αὐτὰ διοικεῖ χόνδρος, ὀστοῦν, σύνδεσμος, ὑμῆν, ἀδὴν, πιμελή, σὰρξ ἀπλή· τὰ δ' ἄλλα πάντα μόρια κοινῇ τούτοις ἔχοντα τὴν ἐξ ἑαυτῶν διοίκησιν, ἀρτηριῶν τε καὶ φλεβῶν καὶ νεύρων προσδέεται· τριχῶν δὲ καὶ ὀνύχων οὐδὲ διοικη-

<sup>8</sup> The first paragraph of Section 5 here (the arrangement in Kühn) forms the final paragraph of Section 4 in Boudon's text.

nearer to what is already diseased is diseased, and the body that appears to be midway between both and equally distant from each will be "neither."

5. The signs of the best constitution of the body have, then, been stated. The classes of those that fall short of the best constitution are of equal number and can be divided on the grounds of degree. Having made the separation into three parts, I shall speak absolutely about the signs of the diseased body; the remaining two ranges will be clear from these. This matter was spoken of previously in terms of class in the book *On the Best Constitution of our Bodies*<sup>12</sup> and will now be spoken of in terms of kind, after we first make a division of the parts.

The *differentiae* of these parts are four in all. Some of them are principles; some grow out of those; some neither control the governance of others nor are controlled by others, having innate powers that [allow them to] administer themselves; and some have both innate and inflowing powers. The principles are brain, heart, liver and testicles.<sup>13</sup> Growing out of those and serving them are nerves and spinal cord for the brain, arteries for the heart, veins for the liver, and spermatic ducts for the testicles. Those parts that govern themselves are cartilage, bones, ligaments, membranes, glands, fat and simple flesh. All the other parts which have in common with these the governance of themselves need arteries, veins and nerves as

<sup>12</sup> *Opt. Const.*, IV.737-49K. For an English translation of this work, see Singer, *Galen: Selected Works*.

<sup>13</sup> See Galen, *MM Glauc.*, 2.4 (XI.97K).

σίς τίς ἐστίν, ἀλλὰ γένεσις μόνη· αὐταὶ μὲν οὖν αἰ τῶν μορίων διαφοραί.

320K 6. Σημεῖα δ' ἐκάστου τῆς κράσεως ἐφεξῆς εἰρήσεται, τὴν ἀρχὴν ἀπ' ἐγκεφάλου ποιησαμένων ἡμῶν· ἔστι δὲ πέντε τὰ σύμφυτα γένη τῶν γνωρισμάτων αὐτοῦ· ἐν μὲν ἢ τῆς συμπάσης κεφαλῆς διάθεσις, δεύτερον δὲ ἢ τῶν αἰσθητικῶν ἐνεργειῶν ἀρετὴ τε καὶ κακία, καὶ τρίτον ἢ τῶν πρακτικῶν, καὶ τέταρτον ἢ τῶν ἡγεμονικῶν, καὶ πέμπτον ἢ τῶν φυσικῶν· ἄλλο δὲ γένος ἐπὶ τούτοις ἅπασιν, ἢ ἀπὸ τῶν ἔξωθεν αὐτῷ προσπιπτόντων ἀλλοίωσις· ἢ μὲν δὴ τῆς συμπάσης κεφαλῆς διάθεσις ἐκ μεγέθους τε καὶ σχήματος αὐτῆς λαμβάνεται καὶ τριχῶν· ἢ μὲν οὖν μικρὰ κεφαλὴ μοχθηρᾶς ἐγκεφάλου κατασκευῆς ἴδιον σημεῖον· ἢ μεγάλη δὲ οὐκ ἐξ ἀνάγκης ἀγαθῆς κατασκευῆς σημεῖον· ἀλλ' εἰ μὲν διὰ ῥώμην ἐγένετο τῆς ἐγχωρίου δυνάμεως, ὕλην χρηστήν τε καὶ πολλὴν δημιουργούσης, ἀγαθὸν σημεῖον· εἰ δὲ διὰ μόνης τῆς ὕλης τὸ πλήθος, οὐκ ἀγαθόν.

διοριστέον οὖν ἐστίν αὐτὰ τῷ τε σχήματι καὶ τοῖς ἀπ' αὐτῆς πεφυκόσι· τῷ σχήματι μὲν, εἰ εὐρυθμὸς, ἀεὶ γὰρ ἀγαθὸν τοῦτο σημεῖον· τοῖς δ' ἀπ' αὐτῆς πεφυκόσιν, εἰ κρατεραύχην τέ ἐστὶ καὶ τοῖς ἄλλοις ὁστοῖς ἄριστα διάκεται, καὶ εἰ τὸ νευρῶδες αὐτῷ σύμπαν εὐτραφές τέ ἐστὶ καὶ εὐτονον· οἰκείον δὲ σχῆμα κεφαλῆς, ὥσπερ ἂν εἰ νοήσαις σφαῖραν ἀκριβῆ κηρίνην ἐκατέρωθεν ἀτρέμα πεπιλημένην· ἀνάγκη γὰρ τῆς τοιαύτης κυρτότερα μὲν ἢ κατὰ σφαῖραν γενέ-

well. There is no governance of hair and nails, only genesis. These, then, are the *differentiae* of the parts.

6. Next I shall speak about the signs of the *krasts* of each part, making the brain my starting point. There are five innate classes of signs from this. The first is the condition of the whole head; the second is the goodness or badness of the perceptive functions; the third is the goodness or badness of the active functions; the fourth is the goodness or badness of the hegemonic functions; and the fifth is the goodness or badness of the physical functions. Another class, in addition to all these, is change befalling it from external factors. The condition of the head as a whole is taken from its size and shape, and from the hair. Thus a small head is a specific sign of a bad constitution of the brain, although a big head is not necessarily a sign of a good constitution. But if the head has become big because of the strength of the capacity located in it which creates material that is useful and abundant, then it is a good sign. However, if it is due to the amount of material alone, it is not a good sign.

One must, then, discern these things from the shape of the head and from the things growing from it. On the shape, if the head is well-proportioned, this is always a good sign. On the things growing from it, if it is strong-necked and well-constituted in the other bones, and if the neural parts in it are as a whole thriving and vigorous, [these are good signs]. The proper shape of the head is as you would imagine a perfect ball of wax to be after it has been compressed gently on both sides. There must be a greater convexity of such a head at the back and front than

320K

321K σθαι τά τε ὀπισθεν καὶ τὰ ἔμπροσθεν, | εὐθύτερα δὲ τὰ ἐκατέρωθεν· εἰ δ' ἢ κατ' ἰνίον ἐξοχὴ μειωθείη τινί, συνεπισκέπτου τά τε νεῦρα καὶ τὸν αὐχένα σὺν τοῖς ἄλλοις ὀστοῖς· κατὰ φύσιν μὲν γὰρ ἐχόντων, ἐνδεία τῆς ὕλης, οὐ δυνάμειος ἀρρωστία τοιοῦτος ἐγένετο· φαυλοτέρων δὲ ὑπαρχόντων, ἀσθενῆς ἢ ἀρχή· τὰ πολλὰ δὲ ταῖς κατ' ἰνίον ἐνδείαις ἀσθένεια τῶν εἰρημένων ἔπεται, καὶ σπάνιον πάνυ τὸ μὴ τοιοῦτον· καὶ τὴν φοξότεραν δὲ κατ' ἰνίον ἐπισκέπτου κεφαλῆν, ὡσαύτως τοῖς ἐφ' ὅλης αὐτῆς μεγάλης γενομένης διορισμοῖς· ὡς τὰ πολλὰ δὲ κἀνταῦθα σὺν εὐρύθμῳ τῷ σχήματι γενομένης τῆς παρεγκεφαλίδος, ἀγαθὸν σημείον, ἢν ἐνιοὶ τῶν ἰατρῶν ὀπίσθιον ἐγκέφαλον ὀνομάζουσιν, ὡσπερ οὖν καὶ ἔστιν ὀπίσθιος, ὀριζόμενος τῇ λαμβδοειδεί ραφῇ. τοῦ νωτιαίου δὲ ἔστιν ἀρχὴ τὸ μόριον τοῦτο, καὶ δι' ἐκείνου ἀπάντων τῶν καθ' ὅλον τὸ ζῶον νεύρων πρακτικῶν· αὐτὸ δὲ τὸ ὀπισθεν μέρος καθ' αὐτὸ παντάπασι ὀλίγων αἰσθητικῶν μετέχει, παμπόλλων δὲ τῶν πρακτικῶν, ὡσπερ γε καὶ θάτερον

322K τὸ πρόσθιον, | αἰσθητικῶν μὲν παμπόλλων, ὀλίγων δὲ τῶν πρακτικῶν· ὡστε καὶ καλῶς διακείμενα ῥωμαλέας ἔξει τὰς ἀποφύσεις ἐκάτερον τὰς ἰδίας.

οἱ δ' αὐτοὶ καπὶ τῶν ἔμπροσθεν τῆς κεφαλῆς τῶν κατὰ τὸ μέτωπον διορισμοὶ τοῖς ὀπισθεν, εἰς μικροτήτά τε καὶ μέγεθος αὐτοῦ βλέπόντων, καὶ σχῆμα, καὶ τὰς ἐνταῦθα αἰσθήσεις, ὅψιν τε καὶ γεῦσιν καὶ ὄσφρησιν· ἀλλήλων γὰρ ἔστι γνωρίσματα, καὶ ἀλλήλοις μαρτυρεῖ, τά τε ἀπὸ τῆς ἀρχῆς πεφυκότα, τῇ

there is with a sphere, and it must be straighter on either side. If the prominence at the occiput is diminished somewhat, examine both the nerves and the neck along with the other bones. If they are in accord with nature, such a deficiency has come about through a lack of material and not through a weakness of capacity. If, however, they are inferior, the principle is weak. In many instances a weakness of the things mentioned follows the deficiencies at the occiput; very rarely is such a thing not the case. Also examine a head that is more pointed at the occiput, using similar distinctions as in the case of the whole head being large. In most cases, here too, if the cerebellum is well-proportioned, it is a good sign—some doctors term the cerebellum the hindmost brain just because it is more posterior and delimited by the lambdoid suture. This part is the principle of the spinal cord, and through that, of all the effector (motor) nerves in the whole animal. This same posterior part has very few receptor (sensory) nerves in relation to itself, but very many effector (motor) nerves, just as the other, more anterior part has very many receptor (sensory) nerves but few effector (motor) nerves. As a result, when these are in a good state, the outgrowths specific to each part will be strong.

322K

The same distinctions also apply to the parts at the front of the head, in relation to the face, as they do to the more posterior parts, when you look at the smallness and largeness of the face, its form, and the senses there—sight, taste and smell. For these parts that have grown from the principle are signs of each other, and bear witness reciprocally to the goodness and badness of the principle, as the

τῆς ἀρχῆς ἀρετῇ τε καὶ κακίᾳ, καὶ ἡ ἀρχὴ τοῖς ἀπ' αὐτῆς· ἡ μέντοι τῶν ἡγεμονικῶν ἐνεργειῶν ἀρετὴ τε καὶ κακία τῆς ἀρχῆς μόνης ἐστὶν αὐτῆς καθ' ἑαυτὴν γνώρισμα· καλῶ δὲ ἡγεμονικὰς ἐνεργείας τὰς ὑπὸ τῆς ἀρχῆς μόνης γινομένας· ἀγχίνοια μὲν οὖν λεπτομεροῦς οὐσίας ἐγκεφάλου γνώρισμα, βραδυτῆς δὲ διανοίας παχυμεροῦς· εὐμάθεια δ' εὐτυπώτου, καὶ μνήμη μονίμου· οὕτω δὲ καὶ ἡ μὲν δυσμάθεια δυστυπώτου ἢ δὲ ἐπιλησμοσύνη διαρρεούσης, καὶ τὸ μὲν εὐμετάβολον ἐν δόξαις θερμῆς, τὸ δὲ μόνιμον ψυχρᾶς.

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ἔτι δέ μοι δοκῶ λείπεσθαι δύο γένη γνωρισμάτων, ὧν ἓξ ἀρχῆς ὑπεσχόμεν ἔρειν, ἐν μὲν τὸ τῶν φυσικῶν ἐνεργειῶν, ἕτερον δὲ τὸ τῶν ἕξωθεν προσπιπτόντων· ἔσται δὲ κοινὸς ὑπὲρ ἀμφοῖν ὁ λόγος· εἰ μὲν εὐκρατος ὁ ἐγκέφαλος ὑπάρχει κατὰ τὰς τέσσαρας ποιότητας, ἀπάντων τῶν εἰρημένων ἕξει μετρίως, καὶ τῶν περιτωμάτων, ὅσα δι' ὑπερώας ἢ ὠτων ἢ μυκτῆρων <aut oculus><sup>9</sup> ἐκκαθαίρεται, καὶ τούτων ἕξει μετρίως, ἥκιστα τε βλαβήσεται πρὸς ἀπάντων τῶν ἕξωθεν προσπιπτόντων, ὅσα θερμαίνει, καὶ ψύχει, καὶ ξηραίνει, καὶ ὑγραίνει τοῖς τοιούτοις αἱ τρίχες τῆς κεφαλῆς, βρέφεσι μὲν οὖσιν ὑπόπυρροι, παισὶ δὲ ὑπόξανθοι, τελειομένοις δὲ γίνονται ξανθαί, μεταξὺ πως οὖσαι τῶν τε ἀκριβῶς οὐλῶν καὶ ἀπλῶν, οὐ μὴν οὐδὲ φαλακροῦνται ῥαδίως. ἀκούειν δὲ χρῆ τῶν εἰρημένων τε καὶ ῥηθησομένων γνωρισμάτων ὡς ἐπὶ εὐκράτων

<sup>9</sup> <aut oculus> add. B

principle does of itself through them. However, the goodness or badness of the hegemonic functions is a sign of the principle alone and in itself. I shall call the hegemonic functions those arising from the principle alone. Thus, quickness of mentation is a sign of a fine-particled substance of the brain whereas slowness of mentation is a sign of a thickened substance. Ease of learning is a sign of a substance which readily takes impressions, and memory a sign of a stable substance. Likewise, difficulty in learning is a sign of a substance that takes impressions poorly, while forgetfulness is a sign of a substance that is diffluent. Changeability of opinions is a sign of a hot substance, just as stability is of a cold substance.

It seems to me that there still remain two classes of signs of those which I took it upon myself to speak of at the outset: one is that of the physical functions and the other that of things befalling externally. A common discussion will apply to both. If the brain is *eukratic* in respect of the four qualities, it will have moderation in all the things spoken of and will have a proper measure of the superfluities that are evacuated through the palate, [eyes],<sup>14</sup> ears and nostrils. Also it will suffer least harm from all those things befalling it externally, such as heat, cold, dryness and moisture. In such cases, the hair of the head is reddish in infants, yellowish in children, and becomes yellow in those reaching maturity. It is somewhere between curly and completely straight, and people do not readily become bald. One should understand that the signs are being spoken of, and will be spoken of, as pertaining to

323K

<sup>14</sup> Added by Boudon and present in the grouping given subsequently (Chapter 7, 324K).

οικήσεων· ὅσα δὲ κατὰ τὰς τρίχας οὐκ ἐπὶ χωρίων  
 324K μόνον, ἀλλὰ καὶ τῆς τῶν χυμῶν κράσεως, ἀνάλογον  
 ἐχούσης | τῇ κράσει τῇ κατὰ τὸν ἐγκέφαλον· εἰ δὲ  
 θερμότερος εἴη τοῦ συμμέτρου, κατὰ δὲ τὴν ἐτέραν  
 ἀντίθεσιν εὐκρατος, εἰ μὲν ἐπὶ πλέον εἴη θερμότερος,  
 ἰσχυρὰ πάντα τὰ ῥηθησόμενα γενήσεται γνωρί-  
 σματα, βραχείας δὲ τῆς ὑπερβολῆς ὑπαρχούσης,  
 ἀμυδρά· κοινὸς δὲ οὗτος ὁ λόγος ἐπὶ πάντων εἰρήσθω  
 μοι τῶν μορίων, τῶν ἐν πάσαις ταῖς κράσεσι μελλόν-  
 των λέγεσθαι γνωρισμάτων.

7. Ἐξῆς δ' οὖν σημεῖα τῆς ἐν ἐγκεφάλῳ θερμότη-  
 τος, ἐπὶ τοῖς ἔμπροσθεν εἰρημένοις, ἐρυθρότερα καὶ  
 θερμότερα τὰ περὶ τὴν κεφαλὴν σύμπαντα, καὶ αἱ ἐν  
 τοῖς ὀφθαλμοῖς φλέβες αἰσθηταί, αἱ τρίχες τούτοις  
 γεννηθείσι ταχέως ἐπὶ τῆς κεφαλῆς φύονται· πολλῶ  
 μὲν οὖσι θερμότεροις τῶν εὐκράτων, μέλαιναί καὶ  
 ἰσχυραὶ καὶ οὐλαὶ γίνονται· μὴ πολλῶ δέ, ὑπόξανθοί  
 μὲν τὸ πρῶτον, εἶτα μελαίνονται· προϊόντων δὲ ταῖς  
 ἡλικίαις φαλακροῦνται καὶ μᾶλλον γε οἱ ἐπὶ πλέον  
 θερμοί· περιτώματα δὲ καθ' ὑπερώαν καὶ μυκτῆρας  
 325K ὀφθαλμούς τε καὶ ὄτα, βραχεία καὶ πέποννα τούτοις  
 ἐστίν, ὅταν ἀμέμπτως ὑγαίνωσι | πληρωθείσης δὲ  
 ποτε τῆς κεφαλῆς, συνεχῶς γὰρ αὐτοῖς καὶ μάλιστα,  
 ὅταν ἀφυλάκτως διαιτῶνται, τὸ τοιοῦτον συμβαίνει,  
 πλείω μὲν, ἀλλ' οὐκ ἄπεπτα τὰ περιτώματα γίνετα·  
 πληροῦνται δὲ καὶ βαρύνονται τὴν κεφαλὴν ὑπὸ τῶν  
 θερμαινόντων ἐδεσμάτων τε καὶ πομάτων καὶ ὀσμῶν,  
 καὶ τῶν ἕξωθεν προσπιπτόντων ἀπάντων, ἐν οἷς ἐστί

*eukratic* dwelling places. Those things relating to hair  
 don't apply to places alone but also to the *krasis* of the  
 humors, which is in proportion to the *krasis* of the humors  
 324K in the brain. If it is hotter than the mean, but *eukratic* in  
 the other opposition, and if the excess heat becomes even  
 greater, all the signs mentioned will become even more  
 pronounced, whereas, if the excess is slight, they will be  
 indistinct. Let this statement be accepted as generally ap-  
 plicable in the case of the parts whose signs we are going  
 to speak about in all the *krasias*.

7. Next in turn are the signs of heat in the brain in ad-  
 dition to those previously mentioned. These are: all the  
 parts about the head are redder and hotter, the veins in  
 the eyes are visible, and after birth, hair on the head grows  
 quickly. In those much hotter than those who are *eukratic*,  
 the hair becomes black, strong and curly, whereas in those  
 who are not much hotter, the hair is at first light-brown  
 and then becomes black. As they grow older, they become  
 bald, especially those who are hotter to a greater degree.  
 In them, the superfluities in relation to the palate, nostrils,  
 eyes and ears are slight and concocted, whichever they are  
 perfectly healthy. Sometimes, however, when the head has  
 325K been filled continually, and especially in those who are  
 careless about diet, what happens is this—the superfluities  
 become greater in amount but are not unconcocted. Fill-  
 ing and heaviness of the head are due to heating foods  
 and drinks, and to smells, and all those things befalling it



καὶ ὁ περιέχων ἡμᾶς ἀήρ· ἔτι δὲ μᾶλλον, εἰ μὴ μόνον εἶη θερμὰ τὰ τοιαῦτα τὴν φύσιν, ἀλλὰ καὶ ὑγρά, βραχέσιν ὕπνοις αἱ τοιαῦται κράσεις ἀρκοῦνται, πρὸς τῷ μηδὲ βαθεῖς αὐτοὺς γίνεσθαι.

ψυχροτέρου δὲ ἢ προσήκειν ἐγκεφάλου γνωρίσματα, περιπτώματα πλείω κατὰ τὰς οἰκείας ἐκροάς,<sup>10</sup> καὶ αἱ τρίχες εὐθείαι τε καὶ πυρραὶ καὶ μόνιμοι, καὶ μετὰ πολλὸν χρόνον τοῦ γεννηθῆναι φυόμεναι λεπταὶ καὶ ἄτροφοι τὸ πρῶτον, καὶ ῥαδίως ὑπὸ τῶν ψυχρῶν αἰτιῶν βλάπτονται, καὶ κατ' αὐτὸν τὸν χρόνον τῆς βλάβης κατάρροις τε καὶ κορυζαῖς ἀλίσκονται· οὐ μὴν οὐδ' ἀπτομένοις θερμὰ τὰ περὶ τὴν κεφαλὴν, οὐδ' ὀρώσων ἐρυθρά, καὶ τῶν ὀφθαλμῶν αἱ φλέβες ἀόρατοι, καὶ ὑπνωδέστεροί | πῶς εἰσι ξηροτέρου δ' ἐγκεφάλου γνωρίσματα, τὸ ἀπέριττον ἐν ταῖς ἐκροαῖς, καὶ τὸ τῶν αἰσθήσεων ἀκριβές· ἀγρυπνητικοὶ δὲ εἰσι, καὶ τρίχας ἰσχυροτάτας μὲν ἔχουσι, καὶ τάχιστα φύουσι γεννηθέντες, οὐλας μᾶλλον ἢ εὐθείας, φαλακροῦνται δ' ἐν τάχει· ὑγροτέρου δὲ τρίχες ἀπλαῖ, καὶ οὐδ' ὄλας φαλακροῦνται, καὶ αἱ αἰσθήσεις ἀχλυνώδεις εἰσὶ, καὶ περιτωμάτων πλῆθος, ὕπνοι τε πολλοὶ καὶ βαθεῖς· αὐτὰ μὲν αἱ ἀπλαῖ δυσκρασίαι.

8. Σύνθετοι δέ, θερμῇ μὲν καὶ ξηρᾷ πρώτῃ, καθ' ἣν ἀπέριττοί τε εἰσι καὶ ἀκριβεῖς ταῖς αἰσθήσεσι, καὶ ἀγρυπνητικώτατοι, καὶ φαλακροῦνται ταχέως· ἢ πρώτῃ μέντοι γένεσις τῶν τριχῶν ταχίστη τέ ἐστι καὶ εὐτραφεστάτη, μελανότριχες τε καὶ οὐλότριχες εἰσι, καὶ θερμοὶ, ψαυόντων τῆς κεφαλῆς, ἐρυθροὶ τε μέχρι

externally, including the ambient air. Still more do such things happen in a nature that is not only hot but also moist. *Krasias* of this sort are satisfied by little sleep and, in addition, their sleep is not heavy.

The signs of a brain that is colder than it should be are more superfluities in the specific outflows and hair that is straight, reddish and permanent, and which starts growing a long time after birth, being initially thin and weak. Such cases are easily harmed by cold causes and, at the same time, are attacked by catarrhs and coryzas. The parts about the head are not hot to the touch, nor do they seem as red, the veins in the eyes are not visible, and to some degree they are sleepy. The signs of a drier brain are absence of superfluities in the outflows and precision of perceptions. [Such people] are wakeful, have very strong hair which grows very quickly after birth and is curly rather than straight, and they become bald quickly. The signs of a moister brain are straight hair that doesn't fall out at all, perceptions that are hazy, abundant superfluities and sleep that is prolonged and deep. So much for the simple *dyskrasias*.

8. The first of the compound *dyskrasias* is the hot and dry. In this there is a lack of superfluities, sensations that are acute, extreme wakefulness, and rapid development of baldness. However, the first production of hair is very quick and vigorous, the hair itself is black and curly, and the head is hot to the touch and red until the time of full

<sup>10</sup> *add.* <and not concocted>— B

327K τῶν τῆς ἀκμῆς χρόνων· εἰ δ' ὑγρότης προσείη τῇ θερμότητι, βραχὺ μὲν ὑπερβαλλουσῶν ἀμφοτέρων τὸ σύμμετρον, εὐχροιά τε καὶ θερμότης, καὶ αἱ ἐν τοῖς ὀφθαλμοῖς φλέβες μεγάλαι, καὶ περιττώματα | πλείω καὶ μετρίως πέπονα, καὶ αἱ τρίχες εὐθείαι καὶ ὑπόξανθοι, καὶ οὐ φαλακροῦνται ῥαδίως, πληροῦνται δὲ καὶ βαρύνονται τὴν κεφαλὴν ὑπὸ τῶν θερμαινόντων· εἰ δὲ καὶ ὑγραίνοντο, πολὺ δὴ καὶ μᾶλλον, ἤνικα καὶ πλήθος ἰσχυροσι περιττωμάτων· ὅταν δὲ<sup>11</sup> ἐπὶ πλείστον ὑγρότητός τε καὶ θερμότητος ἤκωσι, νοσώδης τούτοις ἡ κεφαλὴ, καὶ περιττωματικὴ, καὶ ῥαδίως ὑπὸ τῶν ὑγραίνόντων τε καὶ θερμαινόντων βλαπτομένη.

νότος δὲ αὐτοῖς πολέμιος αἰεὶ· ἄριστα δ' ἐν τοῖς βορείοις διάγουσιν, οὐ μὴν οὐδ' ἐγρηγορέναι δύνανται μέχρι πλείονος, ὕπνω τ' ἐπιτρέψαντες ἑαυτούς, ἅμα τε κωματώδεις εἰσὶ καὶ ἄγρυπνοι, καὶ φαντασιώδεις τοῖς ὀνείρασι, καὶ αἱ ὄψεις ἀχλωῶδεις, καὶ αἱ αἰσθήσεις οὐκ ἀκριβεῖς· εἰ δὲ πολλῶ μὲν εἴη τοῦ συμμέτρου θερμότερος ὁ ἐγκέφαλος, ὀλίγῳ δ' ὑγρότερος, ἐπικρατήσει μὲν τὰ τῆς θερμῆς κράσεως γνωρίσματα, μεμίζεται δὲ αὐτοῖς ἀμυδρά<sup>12</sup> τὰ τῆς ὑγρότητος, ὥσπερ καί, εἰ πολλῶ μὲν ὑγρότερος, ὀλίγῳ δ' εἴη θερμότερος, ἐναργῆ μὲν ἔσται καὶ σφοδρὰ τὰ τῆς ὑγρότητος, ἀμυδρὰ δὲ τὰ τῆς θερμότητος γνωρίσματα· 328K κοινὸς δ' οὗτος ὁ λόγος ἐπὶ πασῶν ἔστι τῶν | κατὰ συζυγίαν δυσκρασιῶν.

growth. If moisture is added to the heat, and both only exceed moderation slightly, there is a healthy complexion and warmth, the veins in the eyes are large, and superfluities are increased and moderately concocted. The hair is straight and light brown, and people don't become bald easily, but they do become full and heavy in the head due to those things that are heating, and much more so, of course, if they also become moist, being at that time full of superfluities. However, when they reach a greater degree of moisture and heat, their heads are diseased, full of superfluities and easily harmed by those things that moisten and heat. 327K

In these same people a south wind is always inimical.<sup>15</sup> They live best in north winds, but are not able to stay awake for long periods. When they give themselves up to sleep they are, at one and the same time, lethargic and wakeful, and given to fantasies in their dreams. Also their visual impressions are hazy and their sensations imprecise. If the brain is much hotter than moderate but only moister by a little, the signs of the hot *krasis* will predominate, although the signs of the moist will be mixed with them, albeit indistinctly. It is the same too if they are moister by much but hotter by a little—the signs of the moistness will be clear and strong whereas those of heat will be indistinct. This argument is common to all the conjugate 328K *dyskrasias*.

<sup>15</sup> Hippocrates, *Airs, Waters, Places*, 10.3. See also Galen, *Mixt.*, 1.530–32K, where he quotes this excerpt in reference to the effects of the south winds.

<sup>11</sup> ἐὰν δ' K; ὅταν δὲ B      <sup>12</sup> μεμίζεται δὲ αὐτοῖς ἀμυδρὰ B; μιχθήσονται δ' αὐτοῖς ἀμυδρῶς K

αἱ ψυχραὶ δ' ἅμα καὶ ξηραὶ κράσεις ἐγκεφάλου  
 ψυχρὰν καὶ ἄχρονον ἀποτελοῦσι τὴν κεφαλὴν, ὅσον  
 ἐφ' ἑαυταῖς· αἰεὶ γὰρ χρῆ μνησθῆναι τούτου τοῦ κατ'  
 ἀρχὰς διορισμοῦ, προσεπιλογιζόμενον, ὅσον ἐκ τῆς  
 τῶν χυμῶν κράσεως ἀλλοιοῦνται τὰ κατ' αὐτόν· εὐθύς  
 δ' αἱ τοιαῦται κράσεις ἀφλεβοὶ τε τὰ κατὰ τοὺς  
 ὀφθαλμούς· εἰσι, καὶ πρὸς τῶν ψυχρῶν αἰτίων ἐτοίμως  
 βλάπτονται· διὸ καὶ ἀνωμάλως ὑγιαίνουσι, ποτὲ μὲν  
 κουφότατοι τὰς κεφαλὰς, ἀπέριττοι τε τὰς ἐκροάς,  
 ἐνίοτε δὲ κατάρροις τε καὶ κορυζαῖς ἐπὶ μικροῖς αἰ-  
 τίοις ἐτοίμως ἀλισκόμενοι· αἱ δ' αἰσθήσεις αὐτοῖς ἐν  
 νεότητι μὲν ἀκριβεῖς τέ εἰσι καὶ ἄμμεπτοι τὰ πάντα,  
 προῖουσι δὲ ἀπομαραίνονται ταχέως, καὶ συλλήβδην  
 φάναι, ταχύγηροι τὰ περὶ τὴν κεφαλὴν ἅπαντά εἰσι·  
 διὸ καὶ πολιοῦνται ταχέως· αἱ τρίχες δ' αὐτοῖς γεννη-  
 θεῖσι μὲν ἀνέρχονται μόγις, ἄτροφοι καὶ πυρραὶ·  
 προῖοντος δὲ τοῦ χρόνου,<sup>13</sup> κρατούσης μὲν ἐπὶ πλέον  
 τῆς ψυχρότητος ἢ περὶ τῆς ξηρότητος, οὐ φαλακροῦν-  
 329K ται· τοῦμπαλιν δέ, | εἰ συμβαίῃ τὴν ξηρότητα μὲν ἐπὶ  
 πλείστον κρατῆσαι τῆς ὑγρότητος, τὴν ψυχρότητα δὲ  
 τῆς θερμότητος ὀλίγον, οἱ τοιοῦτοι φαλακροῦνται· αἱ  
 δ' ὑγραὶ καὶ ψυχραὶ κράσεις ἐγκεφάλου κωματώδεις  
 ἐργάζονται καὶ ὑπνηλοὺς καὶ φαύλους ταῖς αἰσθή-  
 σεσι, καὶ περιπτωματικούς, εὐψύκτους τε καὶ εὐπλη-  
 ρώτους τὴν κεφαλὴν, εὐαλώτους τε κατάρροις καὶ κο-  
 ρυζαῖς· οὐ μὴν οὐδὲ φαλακροῦνται οἱ τοιοῦτοι· ταῦτα  
 μὲν οὖν ἐστὶ τὰ σημεῖα τῶν ἐγκεφάλου κράσεων· ἐξ

The *krasias* of the brain that are simultaneously cold and dry make the head cold and devoid of color to the degree that is within their power. For what was distinguished at the beginning must always be remembered—that is, to take into account as well the degree to which the parts in it are changed by the *krasis* of the humors. First of all, such *krasias* are without veins in relation to the eyes, and are readily harmed by cold causes. On this account, they are healthy in an irregular way, sometimes being very light in the head and without superfluities in the outflows, while sometimes they are readily overcome by catarrhs and coryzas due to minor causes. Their sensations in youth are precise and faultless in every way, but as they grow older they quickly waste away and, to speak briefly, they all soon become decrepit with respect to all those things involving the head. And because of this, they quickly go gray. The hair generated in them comes up with difficulty, is atrophic and red, and as time passes, coldness and dryness prevail still more, but they don't go bald. Contrariwise, if it should happen that the dryness greatly pre-  
 329K  
 vails over the moisture but the cold only slightly over the hot, such people do become bald. The moist and cold *krasias* of the brain make people lethargic and drowsy, with poor sensations, excrementitious, easily cooled, full in the head, and readily susceptible to catarrhs and coryzas. Such people do not become bald. These, then, are the signs of *krasias* of the brain. Starting from these, learn by

<sup>13</sup> προῖοντος δὲ τοῦ χρόνου B; προήκοντι δὲ τῷ χρόνῳ K

αὐτῶν δ' ὀρμώμενος ἐφ' ἕκαστον ὄργανον αἰσθήσεως ἴσθι τὰς διαγνώσεις μεταφέρων.

9. Ἀρκέσει δ' ἐπ' ὀφθαλμῶν μόνον εἰπεῖν ὅσοι μὲν ἀποτέμνοισι ἐναργῶς εἰσι θερμοί, καὶ κινούνται ῥαδίως τε καὶ πολλάκις, καὶ φλέβας εὐρείας ἔχουσι, θερμοὶ σύμπαντές εἰσι ψυχροὶ δὲ οἱ τούτοις ἐναντίοι, καὶ ὑγροὶ μὲν οἱ μαλακοὶ τε ἅμα καὶ πλήρεις ὑγρότητος, ξηροὶ δὲ οἱ σκληροὶ τε ἅμα καὶ ἀχμηροὶ· καὶ βλάπτονται μὲν ὑπὸ τῶν ὁμοίων αἰτίων τῇ κράσει ῥαδίως, ὠφελοῦνται δὲ ὑπὸ τῶν ἐναντίων ἐν συμμετρῷ χρήσει. ἀλλὰ τοῦτό γε κοινὸν ἐπὶ ἰάσῃ διαγνώσει κράσεως ἅπαντος μορίου μεμνησθαι προσήκει μέγεθος δ' ὀφθαλμῶν ἅμα μὲν εὐρυθμία τε καὶ τῇ τῶν ἐνεργειῶν ἀρετῇ πλήθος οὐσίας εὐκράτου, ἐξ ἧς διεπλάσθησαν, ἐνδείκνυται τὸ δ' ἄνευ τούτων πολλὴν μὲν τὴν οὐσίαν, οὐκ εὐκράτου δὲ δηλοῦ· μικρότης δὲ ὀφθαλμῶν ἅμα μὲν εὐρυθμία τε καὶ ἀρετῇ τῶν ἐνεργειῶν, ὀλίγην μὲν, ἀλλ' εὐκράτου ἐνδείκνυται τὴν οὐσίαν, ἐξ ἧς διεπλάσθησαν, ἅμα δ' ἀρρυθμία τε τιμὴ καὶ κακία τῶν ἐνεργειῶν ὀλίγην τε ἅμα καὶ φαύλην εἶναι σημαίνει τὴν οὐσίαν αὐτῶν.

τὰ δὲ κατὰ χροάν ὧδε χρῆ διορίζεσθαι· γλανκοὶ μὲν ὀφθαλμοὶ λάμποντες ὑγρότητι καθαρῇ τε καὶ οὐ πολλῇ φωτὸς λαμπροῦ γίνονται περιουσία, μέλανες δ' ἔμπαλιν οἱ δ' αὖ μεταξὺ κατὰ τὰς ἀνὰ μέσον αἰτίας· γλανκὸς μὲν οὖν ὀφθαλμὸς ἦτοι διὰ μέγεθος,

carrying over the diagnoses in the case of each organ of sensation.

9. It will be sufficient to speak about the eyes alone. Those which are clearly hot to the touch, which move easily and often, and have dilated veins, are all hot. The cold are those which are opposite to these. The moist are those which are soft and, at the same time, full of moisture, while the dry are those which are hard and, at the same time, dry. And these are harmed easily by causes similar to their *krasis* but benefitted by causes that are opposite, when used in moderation. However, it is appropriate to call to mind that this is, in fact, common in every diagnosis of the *krasis* of every part. Largeness of the eyes along with good proportion and excellence of functions indicate an abundance of *eukratic* substance from which they were formed. The absence of these things indicates a large amount of substance which is not *eukratic*. Small eyes along with good proportions and excellence of functions indicates the substance from which they formed was small in amount but *eukratic*, whereas along with poor proportions and bad function indicates their substance was small in amount and poor in quality.

We must distinguish the matters pertaining to color as follows:<sup>16</sup> bright blue-green eyes, shining with moisture that is clear and not much in amount, arise through an abundance of bright light. Dark eyes are the opposite and those in between arise from intermediate causes. Eyes that are blue-gray arise either through large size, bright-

<sup>16</sup> Aristotle's discussion of eye color (*Generation of Animals* 779a-781a) is of interest here.

331K ἢ λαμπρότητα τοῦ κρυσταλλοειδοῦς, ἢ προπεγῆ θέ-  
 σιν, ἢ διὰ τὴν τοῦ λεπτοῦ καὶ ὑδατώδους ὑγροῦ τοῦ  
 κατὰ τὴν κόρην ὀλιγότητά τε καὶ καθαρότητα γίνε-  
 ται πάντων μὲν ἅμα συνελθόντων, ὁ γλαυκώτατος· εἰ  
 | δὲ τὰ μὲν αὐτῶν παρείη, τὰ δὲ μὴ, τὸ μᾶλλον τε καὶ  
 ἦττον ἐν γλαυκότητι συνίσταται μέλας δ' ὀφθαλμὸς  
 ἢ διὰ τὴν μικρότητα τοῦ κρυσταλλοειδοῦς, ἢ διὰ τὴν  
 ἐν βάθει θέσιν, ἢ ὅτι λαμπρόν τε καὶ αὐγοειδὲς ἀκρι-  
 βῶς οὐκ ἔστιν, ἢ ὅτι τὸ λεπτὸν ὑγρὸν, ἦτοι πλέον, ἢ  
 οὐ καθαρὸν ἔστιν, ἢ διὰ τινα τούτων, ἢ διὰ πάντα  
 πέφυκε γίνεσθαι· τὸ μᾶλλον δὲ καὶ ἦττον ἐν αὐτοῖς,  
 ὡς ἔμπροσθεν εἴρηται τὸ μὲν οὖν λεπτὸν ὑγρὸν, ὑδα-  
 τωδέστερόν τε καὶ πλέον γενόμενον, ὑγρότερον ἀπο-  
 φαίνει τὸν ὀφθαλμόν ὥσπερ γε καὶ εἰ παχύτερον ἢ  
 ἔλαττον γένοιτο, ξηρότερον, τὸ δὲ κρυσταλλοειδὲς, εἰ  
 μὲν σκληρότερον εἴη, ξηρότερον ἐργάζεται τὸν ὀφθαλ-  
 μόν, εἰ δὲ μαλακώτερον, ὑγρότερον οὕτως δὲ καὶ εἰ  
 μὲν ὑπερβάλλοι τῆς συμμετρίας τοῦ λεπτοῦ, ξηρότε-  
 ρον· εἰ δ' ἀπολείποιτο, τούναντίον.

10. Περὶ δὲ τῶν τῆς καρδίας κράσεων ἐξῆς λεγέ-  
 σθω, πρότερόν γε τοῦτο ἀναμνησάντων ἡμῶν, ὡς  
 ἕκαστον μέρος ἦτοι θερμότερον, ἢ ψυχρότερον, ἢ ξη-  
 ρότερον, ἢ ὑγρότερον ἑαυτοῦ γεγονέναι φαμέν, οὐ  
 πρὸς ἕτερόν τι παραβάλλοντες.<sup>14</sup> ὅπως γὰρ ἂν ἡ |  
 332K καρδιά γένηται τινι φύσει ψυχροτάτη, πολὺν θερμο-  
 τέρα τὴν κρᾶσίν ἐστιν ἐγκεφάλου τοῦ θερμοτάτου.

<sup>14</sup> ἀλλὰ πρὸς ἑαυτό σμ. B

ness of the crystalline lens,<sup>17</sup> and a forward-inclining posi-  
 tion, or through the small amount and purity of the thin,  
 watery moisture in the pupil. When all these factors come  
 together at the same time, the eyes are very blue-gray. If  
 some of the factors are present but not others, there exists  
 a greater or lesser degree in the blue-gray color. Black eyes  
 arise either through the small quantity of the crystalline  
 lens, or through a sunken position, or because they are not  
 perfectly bright and luminous, or because the thin mois-  
 ture is either more in amount or not pure, or because some  
 or all of these things occur naturally. And there is more or  
 less in these things, as was said before. Thus the thin mois-  
 ture, when it is more watery and greater in amount, rep-  
 resents a more watery eye, just as, if it becomes thicker or  
 less in amount, it is drier. If the crystalline lens is harder,  
 it makes the eye drier, and if it is softer, it makes it moister.  
 Similarly, if there is excess of the thinness beyond the  
 moderate, the eye is drier, whereas if there is deficiency,  
 the opposite obtains.

10. Let us speak next about the *krasis* of the heart, first  
 reminding ourselves of this—that when we say each part  
 is either hotter or colder, or drier or moister than it should  
 be, we are comparing it to itself and not to some other  
 part. Thus, a heart that has become very cold in its own  
 nature is still much hotter in terms of *krasis* than the hot-

<sup>17</sup> I have taken τὸ κρυσταλλοειδὲς here to refer to the crystal-  
 line lens (*κρυσταλλοειδὲς ὑγρὸν*) as, for example, in *UPart.*,  
 10.15 (III.838–41K), where the two are used interchangeably.  
 See also Boudon, *Galen*, 300n2.

τῆς μὲν οὖν θερμότερας ὡς πρὸς τὴν οἰκείαν συμμε-  
 τριαν καρδίας σημεῖα, τὰ μὲν ἀχώριστά τε καὶ οἰκεία,  
 μέγεθος ἀναπνοῆς καὶ σφυγμοῦ τάχος καὶ πυκνότης  
 ἐστίν, εὐτολμία τε καὶ τὸ πρὸς τὰς πράξεις ἄοκνον  
 εἰ δὲ ἐπὶ πλείστον ἤκει θερμότητος, ὀξυθυμία τε καὶ  
 μανιώδης θρασύτης. ἔστι δὲ καὶ λάσιος αὐτοῖς ὁ  
 θώραξ, καὶ μάλιστα τὰ στέρνα, καὶ τῶν καθ' ὑποχόν-  
 δριον ὅσα τούτοις πλησίον· ὡς ἐπὶ τὸ πολὺν δὲ καὶ τὸ  
 σύμπαν σῶμα θερμὸν ἐπὶ θερμῇ τῇ καρδίᾳ γίνεται,  
 πλὴν εἰ μὴ μεγάλως ἀντιπράττοι τὸ ἥπαρ.

εἰρήσεται δ' ὀλίγον ὑστερον ἅπαντος τοῦ σώματος  
 τὰ γνωρίσματα· καὶ μέντοι καὶ ἡ τοῦ θώρακος εὐρύτης  
 θερμότητος γνώρισμα, πλὴν εἰ μὴ κἀνταῦθ' ἄ ποτε με-  
 γάλως ὁ ἐγκέφαλος ἀντιπράξειεν· ἐπειδὴ τὸ μὲν τοῦ  
 νωτιαίου μέγεθος ἀνάλογόν ἐστιν ἐκείνῳ τὰ πολλά,  
 τηλικούτοι μὲν οἱ σπόνδυλοι τὸ μέγεθος, ἡλικὸς ὁ νω-  
 τιαῖος μυελός· ὥστε καὶ ἡ ράχισ ὅλη· συμπήγνυται δὲ  
 333K ὁ θώραξ ἐπὶ τὸ κατὰ τὸ ἰσχυρότερον αὐτῆς μέρος,  
 καθάπερ ἐπὶ τρόπιν ναῦς, ὥστ' ἐξ ἀνάγκης ἕξει τὸ μὲν  
 μῆκος ἴσον τῷ μεταφρένῳ, τὸ δ' εὐρὸς, ὅταν μὲν  
 ἀνάλογον τῷ πάχει τῶν σπονδύλων ἢ σύμπηξις αὐτῷ  
 γένηται, κατ' ἐκείνους· ὅταν δὲ ἡ τῆς καρδίας θερ-  
 μότης κρατήσασα διαφυσήσῃ τε καὶ ἀνευρύνη κατὰ  
 τὴν πρώτην γένεσιν, ἀνάλογον τῇ ταύτης θερμότητι  
 διὸ καὶ ὅταν μὲν ἐπὶ σμικρᾷ κεφαλῇ ὁ θώραξ εὐρὸς  
 ᾖ, μέγιστον γίνεται γνώρισμα τῆς κατὰ τὴν καρδίαν  
 θερμότητος· ὅταν δ' ἐπὶ μεγάλῃ σμικρός, ἰδικώτατον  
 καὶ τοῦτο σημεῖόν ἐστι καρδίας ψυχροτέρας· εἰ δ'

test brain. Signs of heat, as they pertain to the proper  
 balance of the heart, are inseparable from and specific to  
 it—such signs are the magnitude of respiration, the speed  
 and frequency of the pulse, and courage and untiring ef-  
 fort in actions. However, if heat reaches a greater amount,  
 there is sudden anger and crazy rashness. The chest in  
 these same people is hairy, especially the sternum, the  
 parts in relation to the hypochondrium, and those that are  
 near these. Further, in the case of a heart that is hot to the  
 highest degree, the whole body also becomes hot, unless  
 the liver acts strongly in opposition.

I shall speak a little later about the signs of the whole  
 body. However, a broad chest is a sign of heat, unless here  
 too the brain strongly counteracts this. Since the size of  
 the spinal cord is in most instances proportional to the size  
 of the brain, and the vertebrae correspond in size to the  
 spinal cord, so the whole spine does too. The chest is  
 constructed in relation to that part of it at the back, like a  
 ship in relation to the keel, so that, of necessity, it will have  
 a length equal to the keel, while the breadth, whenever  
 the construction is proportional to the thickness of the  
 vertebrae, will accord with this. However, when the heat  
 of the heart is predominant at birth, it inflates and dilates  
 in proportion to its heat. On this account also, when the  
 chest is broad in relation to a small head, this is a major  
 sign of the heat in the heart, whereas when the chest is  
 small in conjunction with a big head, this is a very specific  
 sign of a colder heart. If, however, it is in proportion to the

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ἀνάλογον ἔχει τὴν κεφαλὴν, τοῖς ἄλλοις σημείοις διορίζου περὶ τῆς καρδίας, ὡς ἐκ θώρακός γε πηλικότητος οὐδὲν ληψόμενος.

334K ἐπὶ δὲ ψυχρότερας καρδίας σφύγμοι μικρότεροι τῶν συμμέτρων, οὐ μὴν βραδύτεροί γε ἐξ ἀνάγκης ἢ ἀραιότεροι ἢ ἀναπνοὴ δέ, εἰ μὲν τοσοῦτω μικρότερος ὁ θώραξ, ὅσῳ περ ἢ καρδία ψυχρότερα, τοῖς σφύγμοις ἀνάλογον· εἰ δὲ μείζων, ἢ κατὰ τὸ ποσὸν τῆς ψύξεως, οὐ μικρότερα μόνον, ἀλλὰ καὶ βραδύτερα καὶ ἀραιότερα· δειλοὶ τὴν φύσιν οἱ τοιοῦτοι καὶ ἄτολμοι εἰσι καὶ λήθαργοι<sup>15</sup> καὶ μελληταί, καὶ ψιλὸν αὐτοῖς τὸ στέρνον τριχῶν ἐστὶ περὶ δὲ σμικρότητος αὐτῆς διοριστέον ὡς ἔμπροσθεν εἴρηται κατὰ ταῦτα δὲ καὶ περὶ τῆς ὅλου τοῦ σώματος ψυχρότητος.<sup>16</sup> ἢ δὲ ξηρότερα καρδία τοὺς σφύγμοὺς ἐργάζεται σκληροτέρους, καὶ τὸν θυμὸν οὐχ ἔτοιμον μὲν, ἄγριον δὲ καὶ δύσπαστον, ὡς τὰ πολλὰ δὲ καὶ ὅλον τὸ σῶμα ξηρότερον, εἰ μὴ τὰ καθ' ἥπαρ ἀντιπράττοι ὑγρότερας δὲ καρδίας σημεῖα, σφύγμοι μαλακοὶ, καὶ ἦθος εὐκίνητον μὲν πρὸς ὀργήν, εὐκατάπαστον δέ, καὶ τὸ σῶμα ὑγρότερον, πλὴν εἰ μὴ τὰ καθ' ἥπαρ ἀντιπράττοι.

11. Κατὰ δὲ συνζυγίαν τῶν πρώτων ποιότητων αἱ δυσκρασίαι τῆς καρδίας ὧδε ἔχουσιν· θερμῆς καὶ ξηρᾶς καρδίας οἱ σφύγμοι σκληροὶ καὶ μεγάλοι, καὶ ταχεῖς, καὶ πυκνοί, καὶ αἱ ἀναπνοαὶ μεγάλαι τε καὶ ταχεῖαι, καὶ πυκναί· καὶ πολὺ δὴ μᾶλλον εἰς τάχος ἐπιδιδόασιν καὶ πυκνότητα, μὴ συναυξηθέντος ἀνάλο-

head, you must make a determination about the heart through other signs, as you will take nothing from the size of the chest.

In the case of a colder heart, the pulses are smaller than normal, but not necessarily slower or more intermittent. Respiration, if the chest is smaller to the degree that the heart is colder, is in proportion to the pulses. If it is greater than pertains to the amount of coldness, then not only will respiration be smaller, but also slower and more intermittent. Such people are cowardly in nature, lack spirit and are hesitant; in them the sternum is bare of hair. Regarding the smallness of respiration, one must make a distinction, as I said before, and in the same way also, about the coldness of the whole body. A drier heart makes the pulses harder and the spirit not readily roused, but fierce and implacable, as in most cases the whole body is drier, unless the parts in relation to the liver counteract it. Signs of a moister heart are soft pulses, a disposition easily moved to anger but also easily placated, and a whole body that is moister, unless the parts in relation to the liver counteract this.

11. The *dyskrasias* of the heart involving a conjunction of the primary qualities are as follows: the pulses of a hot and dry heart are hard, large, rapid and frequent, while the respirations are large, rapid and frequent also. And when the chest has not increased in proportion to the heart, this contributes much more to swiftness and fre-

<sup>15</sup> καὶ λήθαργοι *add.* B

<sup>16</sup> For the variations here see Boudon, 304.

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γον τῆ καρδία τοῦ θώρακος· πάντων οὔτοι λασιώτατοι τὰ κατὰ τὸ στέρνον εἰσὶ | καὶ τὸ ὑποχόνδριον· εἰς δὲ τὰς πράξεις ἔτοιμοι καὶ ταχεῖς καὶ θυμικοὶ<sup>17</sup> καὶ τυραννικοὶ τοῖς ἤθεσι, καὶ γὰρ ὀξύθυμοι καὶ δύσπαστοι· περὶ δὲ τῆς ἅπαντος τοῦ σώματος κράσεως, ἔτι τε τῆς τοῦ θώρακος εὐρυχωρίας, ἀνάλογον τοῖς ἔμπροσθεν εἰρημένους διοριστέον.

εἰ δ' ὑγρότης ἐπικρατήσκειν ἅμα θερμότητι, λασίοι μὲν ἦττον οἱ τοιοῦτοι τῶν προειρημένων, ἔτοιμοι δὲ εἰς τὰς πράξεις οὐδὲν ἦττον· οὐ μὴν ἄγριός γε ὁ θυμός, ἀλλ' εἰς ὀργὴν μόνον ἔτοιμος· οἱ σφνυμοὶ δὲ μαλακοὶ τε καὶ μεγάλοι, καὶ ταχεῖς, καὶ πυκνοὶ· καὶ ἡ ἀναπνοή, τοῦ μὲν θώρακος ἀνάλογον ἔχουτος τῆ καρδία, κατὰ τὴν αὐτὴν ιδέαν τοῖς σφνυμοῖς· μικροτέρου δὲ γενομένου, τοσοῦτω θάπτων τε καὶ πυκνοτέρα τῶν προειρημένων, ὅσῳ καὶ ὁ θώραξ μικρότερός ἐστι· πολλῆς δὲ τῆς κατὰ τὴν κράσιν ἐκτροπῆς γινομένης, καὶ μάλιστα εἰ κατὰ τὴν ὑγρότητα συμπέσοι τοῦτο, πρὸς τοῖς εἰρημένους ἔτι καὶ τὰ σηπεδονώδη νοσήματα, διαφθειρομένων τε καὶ σηπομένων αὐτοῖς τῶν

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χυμῶν συμπεσεῖται, καὶ αἱ ἐκπνοαὶ | μείζους τε καὶ θάπτους τῶν εἰσπνοῶν, κὰν τοῖς σφνυμοῖς ἡ συστολή ταχεία.

ὑγροτέρας δὲ καὶ ψυχροτέρας καρδίας, οἱ μὲν σφνυμοὶ μαλακοί, τὸ δὲ ἦθος ἄτολμόν τε καὶ δειλὸν καὶ ὀκνηρόν· εἰσὶ δὲ καὶ ψιλοὶ τριχῶν οἱ τοιοῦτοι τὰ στέρνα καὶ ἥκιστα μηνιώσιν, ὥσπερ γε καὶ εἰς ὀργὴν οὐχ ἔτοιμοι· τὰ δὲ κατὰ θώρακα καὶ τὸ σύμπαν σῶμα

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quency. These people are the most hairy of all over the sternum and hypochondrium. When it comes to actions, they are zealous, spirited, quick, fierce, savage, reckless and shameless; they are tyrannical in disposition, for they are both quick to anger and hard to placate. Regarding the *krasis* of the whole body, as well as the breadth of the chest, a determination must be made analogous to those previously mentioned.

If, however, moisture prevails along with heat, such people are less hairy than those previously mentioned, but no less zealous in their actions. The spirit is not fierce, only readily moved to anger. The pulses are soft, large, rapid and frequent. Respiration, when the chest is in proportion to the heart, is of similar form to the pulses. If, on the other hand, the chest is smaller, respiration is quicker and more frequent to the extent that it is smaller. If there is a large deviation in the *krasis*, and particularly if this happens to be toward the moist, the putrefactive diseases arise in addition to those things mentioned, since what happens is that the humors are corrupted and putrefied in these people at the same time, the exhalations are larger and quicker than the inhalations, and in the pulses the systole (contraction) is rapid.

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If there is a moister, colder heart, the pulses are soft and the disposition cowardly, fearful and hesitant. Such people are devoid of hair on the sternum and are least prone to wrath, just as they are not readily stirred to anger. One must make a determination of the things in relation

<sup>17</sup> post 'θυμικοί', ἄγριοι, καὶ ἀνήμεροι, καὶ ἰταμοί, καὶ ἀναίσχυντοι, om. B



τοῖς ἔμπροσθεν ὡσαύτως διοριστέον· ἡ ψυχρὰ δὲ καὶ  
ξηρὰ καρδία τοὺς μὲν σφυγμοὺς σκληροὺς ἐργά-  
ζεται καὶ μικροὺς· τὴν δὲ ἀναπνοήν, εἰ μὲν ἀνάλογον  
τῇ ψυχρότητι μικρὸς ὁ θώραξ γένοιτο, σύμμετρον· εἰ  
δὲ μείζων, ἀραιὰν καὶ βραδείαν· ἀοργητότατοι πάν-  
των οὗτου βιασθέντες μέντοι τισὶν ὀργισθῆναι, φυ-  
λάττουσι τὴν μῆνιν· εἰσὶ δὲ καὶ ἄτριχοι τὰ στέρνα  
πάντων μάλιστα· περὶ δὲ σμικρότητος τοῦ θώρακος,  
ἔτι τε τῆς τοῦ ὅλου σώματος ψυχρότητος ὁμοίως δι-  
οριστέον, ἐν κοινὸν ἐπὶ πᾶσι τοῖς εἰρημένοις ἐκείνο  
μεμνημένους, ὡς, ὅσα περὶ ἡθῶν ἢ νῦν, ἢ κατ' ἄλλου  
τινὰ γέγραπται λόγον εἰς διάγνωσιν κράσεως, οὐχ |  
337K ὑπὲρ τῶν ἐκ φιλοσοφίας ἢ χρηστῶν ἢ μοχθηρῶν  
ἡθῶν ἐγγιγνομένων, ἀλλ' ὑπὲρ τῶν ἐμφύτων ἐκάστω  
λέλεκται.

12. Ἡπατος θερμοτέρου γνωρίσματα, φλεβῶν εὐ-  
ρύτης, ἢ ξανθὴ χολὴ πλείων, ἐν δὲ τῷ χρόνῳ τῆς  
ἀκμῆς καὶ ἢ μέλαινα, θερμότερον αὐτοῖς τὸ αἷμα, καὶ  
διὰ τοῦτο καὶ τὸ σύμπαν σῶμα, πλὴν εἰ μὴ τὰ κατὰ  
τὴν καρδίαν ἀντιπράττοι, δασύτης τῶν καθ' ὑποχόν-  
δρια καὶ γαστέρα· ψυχροτέρου δὲ στενότης φλεβῶν,  
φλέγμα πλείον, αἷμα ψυχρότερον, καὶ ἢ σύμπασα τοῦ  
σώματος ἕξις ψυχροτέρα, εἰ μὴ πρὸς τῆς καρδίας  
θερμαίνουτο, ψιλὰ τριχῶν ὑποχόνδριά τε καὶ γαστήρ·  
ξηροτέρου δὲ τὸ μὲν αἷμα παχύτερόν τε καὶ ὀλιγωτέ-  
ρον, αἱ φλέβες δὲ σκληρότεραι, καὶ ἢ σύμπασα τοῦ  
σώματος ἕξις ξηροτέρα· ὑγροτέρου δὲ τὸ μὲν αἷμα  
πλείον τε καὶ ὑγρότερον, αἱ φλέβες δὲ μαλακώτεραι·

to the chest and the whole body in the same way as previ-  
ously mentioned. A cold and dry heart makes the pulses  
hard and small, and the respirations moderate, if the  
smallness of the chest is in proportion to the coldness. If  
the chest is larger, respiration is intermittent and slow.  
These people are the least irascible of all, but when they  
are forced to anger by certain things, they maintain their  
rage. They are the most hairless of all around the sternum.  
Regarding the smallness of the chest, as well as the cold-  
ness of the whole body, a determination must still be made  
in the same way, remembering the one thing common to  
all the things mentioned. What I have written about dis-  
positions, either now or in some other discussion on the  
diagnosis of *krasis*, is not about the good or bad disposi-  
tions that arise due to philosophy but about the innate  
characteristics I have spoken of in each case.

12. The signs of a hotter liver are dilated veins and an  
abundance of yellow bile. In the prime of life, there is also  
black bile, the blood is hotter in them, and because of this,  
the whole body also, unless those things in relation to the  
heart counteract this. And there is hairiness over the hy-  
pochondrium and abdomen. The marks of a colder liver  
are constricted veins, abundant phlegm, colder blood and  
a colder state of the body as a whole, unless it is heated to  
some degree by the heart; also the hypochondrium and  
abdomen are free of hair. The signs of a drier liver are  
blood that is thicker and less in amount, veins that are  
harder, and a drier state of the body as a whole. The signs  
of a moister liver are blood that is abundant and moister,  
and veins that are softer, as is the whole body too, unless

οὕτως δὲ καὶ τὸ σύμπαν σῶμα πλὴν εἰ μὴ τὰ κατὰ τὴν καρδίαν ἀντιπράττοι θερμοῦ δὲ ἅμα καὶ ξηροῦ ἥπατος γνωρίσματα, λασιώτατον ὑποχόνδριον, αἷμα παχύτερον τε καὶ ὀλιγώτερον,<sup>18</sup> ἢ ξανθὴ χολὴ πλείστη, κατὰ δὲ τὴν ἀκμὴν καὶ ἢ μέλαινα, φλεβῶν |  
 338K εὐρύτης τε καὶ σκληρότης· οὕτω δὲ καὶ τὸ σύμπαν σῶμα· θερμότης μὲν γὰρ ἢ ἐκ καρδίας ὀρρωμένη νικῆσαι δύναται τὴν ἐξ ἥπατος ὀρρωμένην ψυχρότητα, καθάπερ γε καὶ ἢ ψυχρότης τὴν θερμότητα· τὴν ξηρότητα δὲ οὐχ οἶόν τε πρὸς τοῦναντίον ὑπὸ τῆς καρδίας ὑγροτέρας γενομένης ἀχθῆναι· μεταξὺ δ' ἔστιν ἢ ἀφ' ἥπατος ὑγρότης τῶν εἰρημένων· μᾶλλον μὲν γὰρ ὑπὸ τῆς ἐν καρδίᾳ νικᾶται ξηρότητας, ἢ περ ἢ ξηρότης ὑπὸ τῆς ὑγρότητας· ἦττον δὲ τῆς θερμότητος, ἔτι δὲ μᾶλλον ἦττον ὑπὸ τῆς ψυχρότητας· εὐνικητοτάτη γὰρ αὕτη τῶν ἐξ ἥπατος ὀρρωμένων ποιότητων· εὐδηλον οὖν, ὡς ἐπειδὴν εἰς ταῦτ' οὐδράμωσι αἱ τῶν ἀρχῶν ἀμφοτέρων κράσεις, ὅλον ἀκριβῶς τὸ σῶμα κατ' ἐκείνας διατίθεται· λεχθήσεται δ' ὀλίγον ὕστερον αὐτοῦ τὰ γνωρίσματα.

τὸ δὲ ὑγρὸν ἅμα καὶ θερμὸν ἥπαρ ἦττον μὲν τοῦ θερμοῦ καὶ ξηροῦ τὰ καθ' ὑποχόνδρια ἐργάζεται λασια, πλείστον δ' αἷμα, καὶ φλέβας μεγάλας, καὶ τὴν ἕξιν ὑγρὰν καὶ θερμὴν, εἰ μὴ τὰ κατὰ τὴν καρδίαν ἀντιπράττοι. εἰ δὲ ἐπὶ πλείον ἀμφοτέροις ταῖς ποιότη-  
 339K σιν ἐκτραπέη | τοῦ κατὰ φύσιν, ἐτοιμῶς ἀλίσκονται τοῖς σηπεδονάδεσι καὶ κακοχύμοις νοσήμασιν· ἔτι δὲ μᾶλλον, εἰ ἐπὶ πλείστον μὲν αὐξηθῆι τὸ ὑγρὸν, ἐπ'

this is counteracted by those parts in relation to the heart. The signs of a liver that is hot and dry at the same time are a very hairy hypochondrium, blood that is thicker and smaller in amount, abundant yellow bile, and in the prime of life, black bile also, and veins that are dilated and hard. 338K The whole body is like this too. For the heat arising from the heart is able to overcome the cold arising from the liver, just as the cold is also able to overcome the heat. However, it is not possible for the dryness to be led to the opposite by the greater moistness arising from the heart. Between the things mentioned is the moistness from the liver, for it is more overcome by the dryness in the heart than the dryness is by the moistness [in the heart], but less by the heat and less still by the cold, for this is the most easily overcome of the qualities arising from the liver. It is clear, then, that when the *krasias* of both principles conspire together to this end, the whole body in its entirety is composed in accord with those *krasias*. The signs of this will be spoken of a little later.

A liver which is moist and hot at the same time makes the hypochondrium less hairy than one that is hot and dry. Blood is abundant, the veins large, and the state moist and hot unless counteracted by things in relation to the heart. If, however, in the case of both qualities, the deviation 339K from an accord with nature is still greater, the person is readily afflicted with putrefactive and *kakochymous* diseases. Still more does this occur if the moistness is further increased while the heat becomes less. Conversely, if there

<sup>18</sup> τε καὶ ὀλιγώτερον B; τε ἅμα καὶ ξηρότερον K

ὀλίγον δὲ τὸ θερμόν· εἰ δ' ἔμπαλιν ἐπ' ὀλίγον μὲν αὐξηθείη τὸ ὑγρόν, ἐπὶ πλείστον δὲ τὸ θερμόν, ἤκιστα κακόχυμοι γίνονται· τὸ δ' αὖ ὑγρόν καὶ ψυχρὸν ἥπαρ ἄτριχον μὲν ἔχει τὸ ὑποχόνδριον, αἷμα δ' ἐργάζεται φλεγματικώτερον ἅμα φλεβῶν στενότητι, καὶ τὸ σύμπαν σῶμα παραπλησιῶς ἔχον, εἰ μὴ πρὸς τῆς καρδίας ἐς τὰναντία μεταγούτο· τὸ δὲ ψυχρὸν ἅμα καὶ ξηρὸν ἥπαρ ὀλίγαίμων τε καὶ στενόφλεβον ἐργάζεται τὸ σῶμα καὶ ψυχρότερον, ὑποχόνδριόν τε ψιλόν, εἰ μὴ κἀναυθὰ νικήσειεν ἡ καρδία.

13. Τῆς δὲ τῶν ὄρχεων κράσεως ἡ θερμὴ μὲν ἀφροδισιαστικὴ τέ ἐστι καὶ ἀρρενόγονος καὶ γόνιμος, καὶ ταχέως δασύνει τὰ γεννητικὰ μόρια, συνεφέπεται δὲ καὶ τῶν πέριξ, ἡ ψυχρὰ δὲ τὰναντία, καὶ ἡ μὲν ὑγρὰ πολύσπερμος τέ ἐστι καὶ ὑγρόσπερμος, ἡ ξηρὰ δὲ ὀλιγόσπερμος τε καὶ μετρίως παχύσπερμος· ἡ θερμὴ δὲ | καὶ ξηρὰ παχυσπερμοτάτη τέ ἐστι καὶ γονιμο-  
340K τάτη, καὶ τάχιστα πρὸς συνουσίαν ἐπεγείρει τὸ ζῶον εὐθέως ἐξ ἀρχῆς· ἀτὰρ οὖν οἱ τοιοῦτοι καὶ δασύνονται τάχιστα τὰ γεννητικὰ μόρια καὶ σύμπαντα τὰ πέριξ, ἄνω μὲν ἄχρι τῶν κατὰ τὸν ὀμφαλὸν χωρίων, κάτω δὲ μέχρι μέσων μηρῶν· ὀρμητικὴ μὲν οὖν ἡ τοιαύτη κράσις ἱκανῶς ἐπ' ἀφροδισία, τάχιστα δὲ ἐμπιπλάμενῃ καί, εἰ βιάσαιτο, βλαπτομένη· συνελθούσης δὲ ὑγρότητος τῇ θερμότητι, λάσιοι μὲν ἦσαν οἱ τοιοῦτοι, πολύσπερμοι δὲ μᾶλλον, οὐ μὴν ὀρέγονται γε μᾶλλον τῶν ἐτέρων, ἐξαρκούσι δ' ἀβλαβέστερον ἀφροδισίοις πλείοσιν· εἰ δ' ἱκανῶς ἄμφω συναυξηθείη τό τε ὑγρόν

is less increase in moistness but more increase in heat, *kakochymias* are least likely to occur. A liver that is moist and cold is associated with a hairless hypochondrium, but makes the blood more phlegm-filled, the veins constricted at the same time, and the whole body is much the same, unless changed to the opposite by the heart. A liver that is at once cold and dry makes for less blood, constricted veins, a colder body, and a hairless hypochondrium, unless here again the heart prevails.

13. As for the testes, a hot *krasis* is aphrodisiac, productive of male children and fertile. It leads to rapid hair growth on the generative and surrounding parts, whereas a cold *krasis* is the opposite. A moist *krasis* is associated with high semen production and rather moist sperm, whereas a dry *krasis* is associated with low semen production and moderately thick sperm. A hot and dry *krasis* is associated with very thick semen that is very fertile, and from the beginning very quickly urges the organism toward congress. Also such people very rapidly grow hair on the genitals and all the surrounding parts, the hair reaching above to the region of the umbilicus and below to the middle of the thighs. Such a *krasis* produces a strong impulse toward sexual intercourse, but is also very quickly satisfied, and if forced, is prone to damage. If moistness is combined with heat, such people are less hairy but have a greater quantity of semen. They are not more desirous than others, but are capable of more sexual encounters with less likelihood of damage. If both moistness and heat are increased together sufficiently, the person cannot ab-

καὶ θερμόν, οὐδ' ἀβλαβῶς ἀπέχονται τῶν ἀφροδι-  
σίων. εἰ δ' ὑγροὶ καὶ ψυχροὶ τὴν κρᾶσιν οἱ ὄρχεις  
γένονται, ψιλὰ τὰ περίξ τριχῶν, καὶ βραδέως ἀφρο-  
δισιάζειν ἄρχονται, καὶ οὐδ' ὀρμητικοὶ πρὸς τὴν ἐνέρ-  
γειάν εἰσιν, ὑδατώδες δὲ καὶ λεπτὸν αὐτοῖς τὸ σπέρμα  
καὶ ὀλιγογονόν ἐστὶ καὶ θηλύγονον.<sup>19</sup> ἢ ξηρὰ δὲ καὶ  
341K ψυχρὰ κρᾶσις ὁμοία μὲν τᾶλλα τῇ προειρημένῃ | κρά-  
σει, παχύτερον δ' αὐτοῖς τὸ σπέρμα, καὶ παντάπασιν  
ὀλίγον.

14. Αἱ δ' ὅλου τοῦ σώματος ἕξεις εἴρηται μὲν που  
καὶ πρόσθεν, ὡς ὁμοιοῦνται καρδίᾳ τε καὶ ἥπατι· κρα-  
τεῖ δὲ ἡ ὁμοιότης τοῦ σφοδροτέρων ἔχοντος ἡντιναοῦν  
τῶν πρώτων ποιότητων, ἃς δὴ καὶ δραστικὰς ὀνομά-  
ζομεν ὅλου δὲ τοῦ σώματος ἡ ἕξις ἐπ' ἐκείνων μάλι-  
στα λέγεται τῶν μορίων, ὅσα θεωμένοις ὑποπίπτει  
πρῶτα· μνες δὲ εἰσιν οὗτοι πᾶσι τοῖς ὄστοις περιβε-  
βλημένοι, σύνθετοὶ τινες σάρκες ἕκ τε τῆς ἀπλῆς καὶ  
πρώτης σαρκός, ἔτι τε τῶν ἰνῶν, αἷς αὐταὶ περιπε-  
φύκασιν ἢ γὰρ οἰκεία τῶν μυῶν οὐσία ταυτ' ἐστὶν  
ἄμφω τὰ δ' εἰς αὐτοὺς ἤκοντα τῶν ἀγγείων οἶον ὄχε-  
τοὶ τινές εἰσιν, οὐ συμπληροῦντες αὐτῶν τὴν οὐσίαν,  
ἀλλ' ὑπηρετοῦντες εἰς διαμονήν· εἰρήσεται γοῦν καὶ  
τὰ τῆς τούτων κράσεως γνωρίσματα κατὰ τὴν εὐκρα-  
τον οἴκησιν· ἐξαλλάττουσι γὰρ αἱ δύσκρατοι τὸ  
δέρμα, καθ' ἑαυτὰς τυπούσαι, καὶ διαφθείρουσιν ἔνια  
τῶν γνωρισμάτων· οὕτως δὲ καὶ εἰ κατὰ τὴν εὐκρατον

<sup>19</sup> καὶ ἄγονον K; om. B

stain from sexual intercourse without harm. If, however,  
the testes are moist and cold in *krasis*, the surrounding  
parts are devoid of hair. Such people will be late in begin-  
ning sexual activity and are not impulsive regarding the  
function. In them the semen is watery and thin, small in  
amount, given to producing females, (and infertile).<sup>18</sup> A  
dry and cold *krasis* is similar in other respects to those  
previously mentioned, although the semen in them is 341K  
thicker and very small in amount.

14. The states of the whole body have been spoken  
of to some extent before, as they are similar to those of  
the heart and liver. What has the stronger likeness to  
any one of the primary qualities, which we also call "ac-  
tive," prevails. The state of the whole body is particularly  
said of those parts which are first encountered by observ-  
ers. These are muscles surrounding all the bones and cer-  
tain fleshs compounded from the simple and primary  
flesh, and from the fibers around which these grow, for the  
specific substance of the muscles is both of these, while  
those of the vessels which come to them are like conduits;  
they don't fill their substance but they do help in maintain-  
ing them. Anyway, I shall also speak of the signs of the  
*krasis* of these in relation to the *eukratic* dwelling. Thus,  
*dyskratic* dwellings change the skin completely, modeling  
it on themselves, and destroying some of the signs. In this  
way too, if in a *eukratic* place in summer, someone were 342K

<sup>18</sup> Present in Kühn but not in Boudon; see her note at Boudon,  
*Galen*, 315.

342K χώραν ὄρα | θέρους ἑαυτὸν ἡλίῳ παραβάλλοι τις γυμνόν, ἐξαλλάξει τῶν γνωρισμάτων ὅσα κατὰ χροίαν τέ ἐστι καὶ τὴν ἐν μαλακότητι καὶ σκληρότητι σύστασιν· εἰ δ' ὥσπερ εὐκρατόν ἐστι τὸ χωρίον, οὕτως καὶ αὐτὸς εὐκράτως διαιτῶτο, μήτ' ἐξοπτῶμενος ἐν ἡλίῳ γυμνὸς ἐκάστης ἡμέρας ἐπὶ πλείστον, ἀλλὰ μήθ', ὥσπερ ἔνιοι, δίκην παρθένου σκιατροφούμενος, ἀκριβῆ τὰ τῆς κράσεως ἐνδείξεται γνωρίσματα.

καὶ τοῖνυν ὡς ἐπὶ τούτων τοῦ λόγου γενησομένου, προσέχωμεν ἤδη τὸν νοῦν αὐτῷ· συμμέτρον κράσεως γνωρίσματα πρὸς ὅλην τοῦ ζῴου τὴν ἕξιν, ἢ χροιά μὲν ἐξ ἐρυθροῦ καὶ λευκοῦ συμμιγῆς· αἱ τρίχες δὲ ξανθαὶ καὶ μετρίως οὖλαι τὰ πολλὰ· συμμετρία δὲ σαρκώσεως ἐν ποσότητι καὶ ποιότητι· μέσον γὰρ ἀκριβῶς ἐστι τὸ τοιοῦτον σῶμα πασῶν τῶν ὑπερβολῶν, ὡς ἂν καὶ νοουμένων τε καὶ λεγομένων πρὸς αὐτό. καὶ γὰρ τὸ παχὺ σῶμα πρὸς τοῦτο λέγεται παχὺ, καὶ τὸ λεπτὸν ὡσαύτως πρὸς τοῦτο, πολὺσαρκόν τε καὶ ὀλιγόσαρκον, καὶ πιμελώδες,<sup>20</sup> καὶ σκληρόν

343K καὶ μαλακόν, καὶ λάσιον καὶ | ψιλόν. οὐδὲν οὖν τούτων ἐστὶ τὸ σύμμετρον, ἀλλ' οἷος ὁ Πολυκλείτου κανὼν εἰς ἄκρον ἵκει συμμετρίας ἀπάσης, ὡς ψαυόντων μὲν μήτε μαλακὸν φαίνεσθαι, μήτε σκληρόν, μήτε θερμόν, μήτε ψυχρόν, ὀρώντων δὲ μήτε λάσιον, μήτε ψιλόν, μήτε παχὺ, μήτε ἰσχυρόν, ἢ τινα ἐτέραν ἔχον ἀμετρίαν.

<sup>20</sup> post πιμελώδες add. <and the emaciated > B

to expose himself naked to the heat of the summer sun, he would change those of the signs which relate to color and to composition in terms of softness and hardness. However, if the place is *eukratic* and he himself lives in a *eukratic* manner, not baking himself even more naked in the sun for a great part of every day, but also not, as some do, sitting constantly in the shadows like a young maiden, the signs will be an accurate indication of the *krasis*.

And so, since the argument has come to these matters, let us now turn our attention to this. The signs of a well-balanced *krasis* in the whole state of the organism are: the color being a mixture of red and white; the hair being moderately fair and for the most part curly; and having a good balance of the flesh in terms of quantity and quality. Such a body is precisely in the midpoint of all the excesses which are considered and described in relation to it. Thus, the thick body is described as thick in relation to this [well-balanced body] and the thin body likewise, and the fleshy and fleshless, and the fat, hard, soft, hairy and bare too. That is, none of these is well-balanced. Only that which is like the Canon of Polyclitus<sup>19</sup> reaches the acme of all balance so that, when touched, it seems neither hard nor soft, neither hot nor cold and, when looked at, it is neither hairy nor bare, neither thick nor thin, and has no other imbalance.

343K

<sup>19</sup> Polyclitus was an Argive sculptor active during the middle to late third century BC. His most famous work was the Doryphorus (or Spearbearer). He is said to have written a book (his *Canon*) detailing the principles of his art as exemplified by that statue. Galen also refers to this work in several other places, including *Mixt.*, I.566K, and *Opt. Const.*, IV.744K. The key feature was the proportion of the parts of the sculpted body.

15. Ὅσα δὲ τοῦ συμμέτρου θερμότερα μὲν ἔστιν, οὐ μὴν ὑγρότερα γὰρ, ἢ ξηρότερα κατὰ τὸ σαρκῶδες γένος, ὑπὲρ τούτου γὰρ ὁ ἐνεσθηκὼς λόγος· φαίνεται μὲν δὴπου καὶ ἀπτομένοις θερμότερα τοσοῦτον, ὅσον πέρ ἐστι τῇ κράσει θερμότερα· λασιώτερα δὲ τοσοῦτον ἔσται, ὅσονπερ καὶ θερμότερα, καὶ πιμελῆς ἦτον ἔχοντα, τῇ χροιά δὲ ἐξέρυθρα καὶ μελανότριχα· ψυχρότερας δὲ κράσεως σημεῖα τὸ ἄτριχον, τὸ πιμελώδες, τὸ ψυχρὸν ἀπτομένοις· ἢ χροιά δ' αὐτοῖς ἅμα ταῖς θριξὶ πυρροτέρα· πολλῆς δὲ τῆς ψύξεως οὔσης, πελιδνὴ πῶς ἔστι, καὶ καλεῖν ἔθος ἔστιν ἐνίοις τῶν ἰατρῶν τοὺς τοιοῦτους μολυβδοχρῶτας· ἢ δὲ ξηροτέρα κρᾶσις ἰσχυρότερα τέ ἐστι καὶ σκληρότερα τῆς ἰσχύος· ἐκράτου τοσοῦτον, ὅσονπερ ἂν ἢ ξηροτέρα, τὰ δ' ἄλλα παραπλήσιος. καὶ ἢ ὑγροτέρα δὲ τὰ μὲν ἄλλα παραπλήσιος, εὐσαρκοτέρα δὲ καὶ μαλακώτερα.

344K

16. Καὶ μὴν καὶ κατὰ συζυγίαν τῶν πρώτων ποιότητων αἱ δυσκρασίαι γινόμεναι σύνθετον ἔχουσι καὶ τὴν τῶν γνωρισμάτων ἰδέαν· ἢ μὲν γὰρ θερμὴ καὶ ξηρά, λασιωτέρα τε καὶ θερμότερα, καὶ σκληρότερα, καὶ ἀπίμελός ἐστι, καὶ ἰσχνή, καὶ μελανότριξ· εἰ δ' ἐπὶ πλέον ἤκει θερμότητος, καὶ μελάγχρους· ἢ θερμὴ καὶ ὑγρὰ κρᾶσις μαλακώτερα τε καὶ θερμότερα, καὶ πολυσαρκοτέρα<sup>21</sup> τῆς ἀρίστης κράσεως εἰς τοσοῦτόν ἐστιν, εἰς ὅσον ἀμφοτέραις ἠύξηθῆ ταῖς ποιότησιν· ἐπὶ πλεῖστον δὲ αὐξηθεῖσα, τοῖς σηπεδονώδεσιν ἐτοιμῶς ἀλίσκεται νοσήμασιν, ὅτι καὶ κακόχυμος ἐτοιμῶς γίγνεται· εἰ δ' ὀλίγω μὲν εἴη ὑγροτέρα, παμπόλλω

15. Those bodies that are hotter than the well-balanced body, but are not in fact more moist or more dry in relation to the fleshy class—for the present argument is also about this—seem of course hotter to those touching them to the extent that they are hotter in *krasis*. They will be more hairy to the same extent as they are hotter, and have less fat; and they will be ruddy in complexion and black-haired. Signs of a colder *krasis* are hairlessness, fatness and coldness to those touching them. In them, the complexion along with the hair is more red-brown. If there is a great degree of cold, there is in some way lividity; some doctors are accustomed to call such people “lead-colored.” The drier *krasis* is thinner and harder than the *eukratic* to the extent that it is drier, but in other respects is similar. The more moist is also similar in other respects, although it is better fleshed and softer.

344K

16. Furthermore, the *dyskrasias* arising from a conjunction of the primary qualities have the kind of signs that are compound. Thus, the hot and dry is hairier, hotter, harder, devoid of fat, and also thin and black-haired. If, however, even more heat is present, there is also a dark complexion. The hot and moist *krasis* is softer, hotter and more well-fleshed than the best *krasis* to the extent of the increase in both qualities. When these are increased to the greatest extent, there is a proneness to be seized by putrefactive diseases in that *kakochymia* also readily occurs. If the increase in moistness is small while the increase

<sup>21</sup> θερμότερα, καὶ πολυσαρκοτέρα B; εὐσαρκοτέρα, καὶ θερμότερα K

δ' εἴη θερμότερα, καὶ μαλακώτεροι μὲν ὀλίγῳ τῶν  
 συμμέτρων οἱ τοιοῦτοι, καὶ σαρκωδέστεροι, λασιώτε-  
 ροὶ δὲ οὐκ ὀλίγῳ· καὶ μὲν δὴ καὶ ἀπτομένοις οὐκ  
 ὀλίγῳ θερμότεροι μέλαιναί δ' αὐτοῖς αἱ τρίχες, καὶ ἡ  
 σὰρξ ἀπίμελος· εἰ δ' ὀλίγῳ μὲν εἴη θερμότερα, παμ-  
 345K πόλλῳ δὲ ὑγροτέρα, μαλακὴ τούτοις ἐστὶν ἡ σὰρξ,  
 καὶ πολλή, καὶ τὸ χρῶμα συμμιγὲς ἐξ ἐρυθροῦ καὶ  
 λευκοῦ, καὶ ψαύοντων ὀλίγῳ θερμότεροι· καὶ συλλή-  
 βδην δ' εἰπεῖν ἐπὶ τῶν κατὰ συζυγίαν κράσεων, αἰετῆς  
 ἐπικρατούσης ποιότητος ἐπικρατήσῃ τὰ γνωρίσματα.

ἡ ψυχρὰ δὲ καὶ ὑγρὰ κρᾶσις, ἐπ' ὀλίγον μὲν ἀμ-  
 φοῖν ἠϋξημένων, ἄτριχός τε ἐστὶ καὶ λευκὴ καὶ μα-  
 λακὴ καὶ παχεῖα καὶ πιμελώδης· ἐπὶ πλείον δὲ τὰ μὲν  
 ἄλλα κατὰ ἀναλογίαν τῆς τῶν ποιοτήτων αὐξήσεως·  
 ἡ χροιά δὲ ἅμα ταῖς θριξὶ πυρρά, καθάπερ γε καὶ ἐπὶ  
 πλείστον ἀμφοῖν ἠϋξημένων πελιδινή· εἰ δ' ἀνισος ἡ  
 αὐξήσις εἴη τῶν ποιοτήτων, ἐπικρατήσῃ τὰ τῆς μᾶλ-  
 λον ἠϋξημένης ἴδια· εἰ δὲ τὸ ψυχρὸν ἅμα τῷ ξηρῷ  
 κατ' ἴσον αὐξηθείη, φύσει σκληρὸν καὶ ἰσχυρὸν  
 ἴσχουσι τὸ σῶμα, καὶ ἄτριχον, ἀπτομένοις δὲ ψυ-  
 χρὸν· ἡ πιμελὴ δὲ ὅμως αὐτοῖς, καίτοι γε ἰσχυροῖς  
 οὔσι, παρέσπαρται τῇ σαρκί· τὰ δὲ τῶν τριχῶν καὶ τῆς  
 χροιάς, ἀνάλογον τῷ μέτρῳ τῆς ψυχρότητος· μετα-  
 346K πεσοῦσης δὲ τῆς θερμῆς καὶ ξηρᾶς κρᾶσεως ἐν τῷ  
 χρόνῳ τῆς παρακμῆς εἰς τὴν ξηρὰν τε καὶ ψυχράν,  
 ἡ ἕξις τῶν τοιούτων ἰσχυρῆ<sup>22</sup> καὶ σκληρά, καὶ μελαγχο-  
 λικὴ ἐστὶ καὶ διὰ τοῦτο μέλαινά τε ἅμα καὶ δασεῖαι  
 αὐτοῖς εἰσιν αἱ τρίχες·<sup>23</sup> κρατούσης δὲ τῆς ἐτέρας τῶν

in heat is great, such people will be softer to a small de-  
 gree compared to the balanced state, and fleshier, but to  
 no small degree more hairy. Furthermore, to those who  
 touch them, they are hotter to no small degree. In them  
 the hair is black and their flesh devoid of fat. If, however,  
 they are hotter to a small degree but moister to a great 345K  
 degree, their flesh is soft and abundant, their color a mix-  
 ture of red and white, and to those touching them, they  
 are hotter to a small degree. To sum up, in the conjunctive  
*dyskrasias* the signs of the dominant quality will always  
 predominate.

The cold and moist *krasis*, when the increase in both  
 qualities is slight, is hairless, pale, soft, dense and fatty. If  
 the increase is greater, the other things are in proportion  
 to the increase of the qualities. The complexion and hair  
 are reddish, just as they are livid when the increase in both  
 is very great. If, however, the increase of qualities is un-  
 equal, the specific features of the one that is increased  
 more will predominate. If the cold is increased equally  
 along with the dry, the body is hard in nature and thin,  
 hairless, and cold to the touch. In such people the fat, even  
 in those who are thin, is interspersed equally throughout  
 the flesh. The features of the hair and complexion are in  
 proportion to the degree of coldness. If the hot and dry  
*krasis* undergoes a change at an age past the prime of life,  
 to the dry and cold, the state of such people is thin and 346K  
 hard, there is melancholia, and because of this, there is a  
 dark complexion and hairiness in them. When there is a

<sup>22</sup> μὲν ὡσαύτως *add.* B

<sup>23</sup> αὐτοῖς εἰσιν αἱ τρίχες *add.* B

ποιότητων παρὰ πολὺ, τῆς δὲ ἐτέρας ὀλίγον τι τοῦ  
 συμμέτρον παραλλαττούσης, ἐπικρατήσῃ μὲν τὰ τῆς  
 ἐπικρατούσης, ἀμυδρὰ δὲ ἔσται τὰ τῆς ἐτέρας γνω-  
 ρίσματα.

ἐπὶ πᾶσι δὲ τοῖς εἰρημένοις τε καὶ μέλλουσι λέγε-  
 σθαι κοινὸν γνώρισμα κράσεως, εἰ μὲν εὐψυκτον εἶη  
 τὸ μόριον, ἥτοι ψυχρότητος ἢ ἀραιότητος, εἰ δὲ δύσ-  
 ψυκτον, ἥτοι θερμότητος ἢ πυκνότητος· εἰ δ' ὑπὸ τῶν  
 ξηραίνοντων βλάπτοιο, αὐχμηρόν τε καὶ ξηρὸν καὶ  
 δυσκίνητον γένοιτο, ξηρότητος, ὥσπερ γέ καὶ εἰ βα-  
 ρύνουτο πρὸς τῶν ὑγραιώντων, ὑγρότητος· ἐπιβλέπων  
 δὲ καὶ εἰ ὡσαύτως ἀλλήλοις ἅπαντες οἱ μῦες ἢ οὐχ  
 ὡσαύτως κέκρανται, συνεπισκοπούμενον ἐν ἅπασι  
 πηλικότητα τῶν ὑποβεβλημένων ὀστέων· ἐνίοτε γοῦν  
 ἰσχυρότερον εἶναι δοκεῖ τὸ μέρος, οὐκ ὄν ἰσχυρότερον,  
 ὅσον ἐπὶ τοῖς μυσίν, ἀλλὰ διὰ τὴν στενότητα τῶν  
 ὀστέων τοιοῦτον φανταζόμενον· οὕτως δὲ καὶ παχύτε-  
 ρον ἐνίοις εἶναι δοκεῖ πολλάκις, οὐ διὰ τὴν εὐρύτητα  
 347K | τῶν ὀστέων, ἀλλὰ διὰ τὸ τῆς σαρκὸς πλήθος, ἥτις  
 ἀξανομένη τε καὶ μειομένη, σκληροτέρα τε καὶ μα-  
 λακωτέρα γενομένη, ξηρότερον ἢ ὑγρότερον ἀποφαί-  
 νει τὸ μόριον· ἢ μὲν οὖν ὀλίγη τε καὶ σκληρά, τὸ  
 ξηρότερον· ἢ πολλή δὲ καὶ ἡ μαλακή, τὸ ὑγρότερον·  
 οὕτω δὲ καὶ αἱ μεταξὺ χώραι τῶν ὁμοιομερῶν σω-  
 μάτων, ἥτοι πλεόν ὑγρὸν ἢ ἔλαττον ἐν αὐταῖς περι-  
 έχουσαι, καὶ ἥτοι παχύτερον ἢ λεπτότερον ἢ ὑγρότε-  
 ρον ἢ ξηρότερον ἀποφαίνουσι τὸ μόριον· ὑγρότερον  
 μὲν, ἐνθα λεπτότερα τε καὶ πλείων ἔστιν ἡ ὑγρότης,

much greater preponderance of one of the qualities while  
 the other changes only a little from the balanced state, the  
 features of the one that predominates will prevail while  
 the signs of the other will be indistinct.

In the case of all the things mentioned and the signs of  
*krasis* generally that are going to be spoken of, if the part  
 is easily cooled there is coldness or loose texture. If, how-  
 ever, the part is difficult to cool, there is either hotness or  
 dense texture. If it is harmed by drying agents and be-  
 comes rough, dry and difficult to move, there is dryness,  
 just as if it is weighed down by moistening agents, there is  
 moistness. Examine also whether all the muscles have  
 been mixed in a similar way to each other or not, consider-  
 ing together in all cases the size of the underlying bones.  
 Sometimes, in fact, the part seems to be thinner, although  
 the greater thinness is an illusion due to the narrowness of  
 the bones. Similarly also, in some it often seems to be  
 thicker, due not to the wideness of the bones but to the  
 amount of flesh which, increasing and diminishing, and  
 becoming harder and softer, makes the part seem drier or  
 moister. Small quantity and hardness make it seem drier  
 whereas large quantity and softness make it seem moister.  
 In the same way too, the places between the *homoiomer-*  
*ous* bodies contain in themselves either more or less mois-  
 ture, and make the part appear either thicker or thinner,  
 moister or drier. Moister, if the moisture is thinner in con-



ξηρότερον δέ, ὅπου παχύτερα τε ἅμα καὶ ἐλάττων· αὐτὰ μὲν γὰρ τὰ στερεὰ τοῦ σώματος μόρια, τὰ ὄντως στερεὰ καὶ πρῶτα, κατ' οὐδένα τρόπον οἷον τέ ἐστὶν ὑγρότερα ποιεῖν, ἀλλ' ἱκανόν, εἰ κωλύει τις αὐτὰ μὴ διὰ ταχέων ξηραίνεσθαι, τὰς δὲ διαλαμβανούσας αὐτὰ χώρας ἔνεστι πληροῦν ὑγρότητος, ἥτοι τοίας ἢ τοίας· αὕτη δὲ ἐστὶν ἅπασιν ἢ οἰκεία τροφή τῶν ὁμοιομερῶν ἐκ παραθέσεως, οὐ δι' ἀγγείων ἐλκομένη· κοινὸς δὲ καὶ οὗτος ὁ λόγος ἐστὶν ἀπάντων τῶν εἰρημένων<sup>24</sup> μορίων, καὶ ῥηθήσεται καὶ αὐθις ἐν ἰ τῇ τῶν ὑγιεινῶν καὶ νοσῶδων αἰτίων διδασκαλίᾳ· νυνὶ δὲ τῶν ἐφεξῆς ἐχώμεθα.

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17. Γαστρὸς γνωρίσματα, τῆς μὲν φύσει ξηροτέρας, εἰ ταχέως διψῶδεις γίνονται, καὶ ὀλίγον αὐτοῖς ἀρκοίη ποτόν, καὶ βαρύνονται τῷ πλείονι, καὶ κλύδωνας ἴσχοιεν, ἢ ἐπιπολάζοι τὸ περιττεῖον αὐτοῖς, ἐδέσμασί τε χαίροιν ξηροτέροις· ὑγροτέρας δέ, εἰ μήτε διψῶδεις γίνονται, καὶ τὸ πλεῖον ὑγρὸν ἀλύτως φέροιν, ἐδέσμασί τε χαίροιν ὑγροτέροις· ἢ δὲ θερμοτέρα φύσει γαστήρ πέττει μὲν ἄμεινον ἢ ὀρέγεται, καὶ πολὺ μᾶλλον ὅσα σκληρὰ φύσει καὶ δυσαλλοιώτα διαφθείρεται γὰρ ἐν αὐτῇ τὰ εὐαλλοιώτα χαίρουσα δὲ τοῖς θερμοῖς ἐδέσμασί τε καὶ πόμασιν, οὐδ' ὑπὸ τῶν ψυχρῶν οὐδὲν βλάπτεται, κατὰ γε τὴν σύμμετρον χρῆσιν· ἢ δὲ ψυχροτέρα φύσει γαστήρ, ὀρεχθῆναι μὲν ἀγαθῆ, πέψαι δὲ οὐκ ἀγαθῆ, καὶ μάλιστα ὅσα δυσαλλοιώτα καὶ ψυχρὰ τῶν ἐδεσμάτων ἐστίν· ὀξύνεται γοῦν ἐτοίμως ἐν αὐτῇ· διὰ τοῦτο καὶ

sistency and large in amount; drier, if it is thicker in consistency and less in amount. The solid parts of the body themselves—those that are truly solid and primary—can in no way be made moister. It is sufficient for someone to prevent them being dried out quickly, it being possible to fill the spaces between them with moisture of one kind or another. Thus, the proper nutrition of all the *homoiomerous* bodies is from what is adjacent and not what is drawn in through the vessels. This argument is common for all the parts and will also be spoken of again in the teaching on the causes of health and disease. Now let us turn to the next matter.

348K

17. As for signs of the stomach, when it is drier in nature, if people quickly become thirsty, they are relieved with a small amount of drink but are weighed down with a greater amount, and there are splashings, or the superfluity rises to the surface in them and they are pleased with drier foods. If it is moister, however, they will not become thirsty but will tolerate more fluid without distress and are pleased with moister foods. The stomach that is hotter in nature digests better than the appetite suggests, and much more so those things that are hard in nature and difficult to transform—things that are easily transformed are destroyed in it. It is pleased with hot foods and drinks, but is not harmed by anything cold, at least with moderate use. The stomach that is colder in nature will show a good appetite but will not digest well, especially those foods that are difficult to transform and cold. In fact, there is a prone-

<sup>24</sup> εἰρημένων *add.* B

349K ὄξυρεγμιάδης ἐστὶν ἢ ἰ τοιαύτη γαστήρ, καὶ χαίρει μὲν τοῖς ψυχροῖς, βλάπτεται δὲ ῥαδίως ἀμετρότερον χρησαμένη· οὕτως δὲ καὶ τῶν ἕξωθεν αὐτῇ προσπιπτόντων ψυχρῶν οὐ φέρει τὴν πολυχρόνιον ὁμίλιαν, ὥσπερ οὐδ' ἢ θερμῆ τῶν θερμῶν.

αἱ μέντοι διὰ νόσον ἐν τῇ γαστρὶ δυσκρασίαι ταύτη διαφέρουσι τῶν ἐμφύτων, ἢ τῶν ἐναντίων ἐπιθυμοῦσιν, οὐ τῶν ὁμοίων, ὥσπερ αἱ σύμφυτοι· αἱ δὲ κατὰ συζυγίαν ἐν τῇ γαστρὶ δυσκρασίαι διὰ τῆς τῶν ἀπλῶν γνωρισθήσονται συνθέσεως· ἀκριβῶς δὲ χρῆ προσέχειν τὸν νοῦν τοῖς εἰρημένοις, διακρίνοντας αὐτὰ τῶν ῥηθησομένων· οὐ μόνον γὰρ ἢ κοιλία διψῶδεις τε καὶ ἀδίψους ἐργάζεται, καὶ ψυχροῦ καὶ θερμοῦ πόματος ὀρεκτικούς, ἀλλὰ καὶ τὰ κατὰ τὸν θώρακα σπλάγχνα, καρδία καὶ πνεύμων· ἀλλ' οἷ γε διὰ τὴν τούτων θερμότητα διψῶντες εἰσπνεύουσι τε πλεον, ἐκφυσιῶσι τε μακρόν, αἰσθάνονται τε κατὰ τὸν θώρακα τοῦ καύματος, οὐχ ὥσπερ οἱ διὰ τὴν γαστέρα κατὰ τὰ ὑποχόνδρια· καὶ μὲν δὴ πίνοντες οὐκ αὐτίκα παύονται,<sup>25</sup> καὶ τὸ ψυχρὸν ποτὸν ἴσθησιν αὐτῶν μάλλον  
350K τὸ δίψος, ἢπερ τὸ ἰ πολὺ θερμόν· ἀναψύχει δὲ αὐτοὺς καὶ ὁ ψυχρὸς ἀήρ εἰσπνεόμενος, οὐδὲν ἐπικουφίζων τοὺς ἐκ γαστρὸς διψῶδεις· οὕτως δὲ καὶ οἱ ἐναντίως ἔχοντες ὑπὸ τῆς ψυχρᾶς εἰσπνοῆς αἰσθητῶς ἀνιώνται, καὶ μέγιστόν ἐστι τοῦτο γνώρισμα τῆς ἐν πνεύμονι ψυχρότητος· ὥσπερ δὲ εἰσπνεύοντες ψυχρὸν αἰσθάνονται σαφῶς ἀνίας τε καὶ ψύξεως, οὕτως τὸ

ness to acidity in it, and because of this, such a stomach is 349K also troubled with heartburn and enjoys cold foods, but is readily harmed if their use is excessive. In like manner too, it doesn't tolerate prolonged contact with cold things falling upon it from without, just as a hot stomach doesn't tolerate hot things doing so.

However, the *dyskrasias* in the stomach due to disease differ in this way from those that are innate—they have a desire for opposites and not for similars, like those which are innate do. The combined *dyskrasias* in the stomach will be revealed by the combination of the simple ones. It is necessary to pay close attention to the things said, differentiating these from what will be said, for it is not the abdomen alone that creates thirst and lack of thirst, and the appetite for hot or cold drinks, but also the organs in the chest—that is, the heart and lungs. But in fact those who are thirsty due to the heat of these organs inhale more deeply, exhale over a long period, and are aware of the burning heat in the chest, unlike those who are thirsty due to the stomach, who are aware of a burning heat in the hypochondrium. Further, they are not immediately relieved by drinking, although a cold drink stops their thirst more than one that is very hot. And cold air cools them 350K when they inhale it, although it gives no relief to those who are thirsty due to the stomach. In the same way, those in an opposite state are perceptibly distressed by the inhalation of cold air. And this is the best sign of coldness in the lung. And just as, when inhaling cold air, they have a clear sensation of distress and coldness, so the heat is a friend

<sup>25</sup> αὐτίκα παύονται B; εὐθέως ἠσυχάζουσι K

θερμὸν αὐτοῖς ἐστὶ φίλιον· ἀλλὰ καὶ φλεγματικά περιπτώματα φθεγγόμενοι τε<sup>26</sup> καὶ μετὰ βηχὸς ἀναπτύσσειν·

18. Αἱ ξηρότητες δὲ τοῦ πνεύμονος ἀπέριττοι τέ εἰσι καὶ καθαραὶ τῷ φλέγματι, καὶ λαμπρὰν ἔχουσι τὴν φωνήν, καθάπερ αἱ ὑγρότητες τὸ ἐναντίον ἀλαμπῆ μὲν ἐργάζονται καὶ βραγχώδη τὴν φωνήν, ἐντρέχει δὲ αὐτοῖς περιπτώματα, μείζον τε καὶ ὀξύτερον φθέγξασθαι προαιρουμένοις· οὐ μὴν αὐτό γε τὸ τῆς φωνῆς μέγεθος ὑπὸ τῆς θερμότητος αὐτῆς, ὥσπερ οὐδ' ἡ σμικρότης ὑπὸ τῆς ψυχρότητος, γίνεται· ἀλλὰ τὸ μὲν εὐρύτητι τῆς τραχείας ἀρτηρίας ἐκφυσήσει τε σφοδροτέρα, ἡ σμικρότης δὲ τοῖς ἐναντίοις ἀκολουθεῖ ὥστε οὔτε διὰ παντός, οὔτε πρώτως, ἀλλὰ κατὰ συμ-  
351K βεβηκός τε καὶ μόλαις ταῖς συμφύτοις | κράσειν, οὐ ταῖς ἐπικτήτοις, ἔπεται τὸ τῆς φωνῆς μέγεθός τε καὶ ἡ σμικρότης.

ὅτι μὲν γὰρ τοιαύδε τὰ ὄργανα διὰ τὴν κρᾶσιν ἐγένετο, τοῖς τοιούτοις δὲ ἔπεται τοιαύδε φωνή, διὰ τοῦτο ἐκ φωνῆς ἔνεστι περὶ τῆς συμφύτου κράσειος συλλογίσασθαι· καὶ γὰρ ἡ λεία φωνὴ λειότητι τῆς ἀρτηρίας ἔπεται, ὥσπερ καὶ ἡ τραχεῖα τραχύτητι λειότης μὲν οὖν ἀρτηρίας συμμετρία κράσειος ἔπεται, τραχύτης δὲ ξηρότητι· τραχύτης μὲν γὰρ ἐστὶν ἀνωμαλία κατὰ σκληρὸν σῶμα,<sup>27</sup> τὴν δὲ ἀρτηρίαν ἐργάζεται σκληρὰν μὲν ἢ τῶν ὁμοιομερῶν αὐτῆς μορίων ξηρότης, ἀνώμαλον δὲ ἢ τῆς παρεσπαρμένης τούτοις ὑγρότητος ἔνδεια· κατὰ δὲ τὸν αὐτὸν τρόπον οὔτε ἡ

to them. But they also cough up phlegmatic superfluities which they expectorate along with the cough.

18. The dry *dyskrasias* of the lung are without superfluities, uncontaminated by phlegm, and there is a clear voice, just as, conversely, the moist *dyskrasias* make for an unclear and hoarse voice, and are accompanied by superfluities in those people who choose to speak more and more loudly. It is not, in fact, that the loudness of the voice is due to the heat itself, just as the softness does not arise due to the coldness. Rather, it is due to the breadth of the rough artery (trachea/upper airways) and the greater force of the exhalation, while softness follows the opposites. As a consequence, neither invariably nor primarily, but incidentally, and only in the innate *krasias* and not in the ac-  
351K quired ones, do the loudness and softness of the voice follow.

Because these particular organs have become like this due to the *krasis* and a particular voice follows in such people, it is possible to draw conclusions about the innate *krasis* from the voice. Thus, a small voice follows smoothness of the rough artery just as a rough voice follows roughness. Smoothness of the upper airways follows a balance of *krasis* whereas roughness follows dryness. For roughness is due to an irregularity in a dry body which makes the upper airways hard and creates the actual dryness of the *homoiomerous* parts, whereas the lack of moisture interspersed in these creates the irregularity. In the same

<sup>26</sup> φθεγγόμενοι τε B; χρεμπτόμενοι ἅμα K

<sup>27</sup> ἐστὶν ἀνωμαλία κατὰ σκληρὸν σῶμα, B; ἐπὶ ἀνωμαλία, κατὰ ξηρὸν σῶμα. K

352K δξεία φύσει φωνή χωρὶς στενότητος φάρυγγος, οὐθ' ἢ βαρεῖα χωρὶς εὐρύτητος δύναται γίνεσθαι στενότης μὲν οὖν ἐμφύτου ψυχρότητος ἔκγονός ἐστιν, εὐρύτης δὲ θερμότητος· ἀνάλογον δὲ ταῖς φυσικαῖς διαφοραῖς τῶν φωνῶν αἱ κατὰ πάθος ἐπιτελοῦνται, γνωρίσματα καὶ αὐταὶ γινόμεναι τῶν ἐργαζομένων αὐτὰς αἰτίων, ὑπὲρ ὧν ἐν τοῖς Περὶ φωνῆς ἀντάρκως διώρισταί τὰ δ' ἄλλα μόρια τοῦ ζώου τὰ ἐντὸς ἀμυδρὰ τῆς κράσεως ἔχει τὰ γνωρίσματα· πειρατέον δὲ ὅμως αὐτὰ διὰ τε τῶν ὠφελούντων καὶ βλαπτόντων διαγιγνώσκειν, ἔτι τε κατὰ τὰς τῶν φυσικῶν δυνάμεων ἐνεργείας· εἴρηται δὲ ἐν τῷ τρίτῳ Περὶ τῶν ἐν τοῖς συμπτώμασι αἰτίων, ὡς ἦτις ἐκάστης δυνάμεως ἀρετῇ τε καὶ κακίᾳ, ἢ προηγουμένη κρᾶσις ἐστίν· τὰ μὲν οὖν τῶν κρᾶσεων γνωρίσματα καὶ ἤδη λέλεκται.

19. Τὰ δὲ περὶ τὸ μέγεθος ἦτοι τὴν διάπλασιν, ἢ τὸν ἀριθμὸν, ἢ τὴν θέσιν ἐσφαλμένα, ὧδε ἔχει.<sup>28</sup> ὅσα μὲν ὑποπίπτει ταῖς αἰσθήσεσιν, γνωρισθῆναι βῆδιον τῶν δ' οὐχ ὑποπιπτόντων τὰ μὲν δύσγνωστα, τὰ δὲ ἄγνωστά ἐστι· τὸ μὲν οὖν τῆς κεφαλῆς μέγεθός τε καὶ σχῆμα, καὶ σὺν αὐτῇ τὸ τοῦ ἐγκεφάλου πρόδηλόν τε ἐστὶ καὶ πρόσθεν εἴρηται· κατὰ ταῦτα δὲ καὶ τὸ τοῦ θώρακος· οὕτως δὲ καὶ ὅσα κατ' ὠμοπλάτας, ἢ ὦμους, ἢ βραχίονας, ἢ πήχεις, ἢ ἄκρας χεῖρας, ἢ ἰσχίον, ἢ μηρόν, ἢ κνήμην, ἢ πόδας, οὐ χαλεπὸν διαγιγνώσκειν,

<sup>28</sup> ὧδε ἔχει· *add.* B

way, a naturally sharp voice is inseparable from a narrow pharynx, while a deep voice cannot be separated from wideness of the pharynx. Thus, narrowness is an offshoot of innate coldness and breadth an offshoot of innate heat. The pathological accompaniments are in proportion to the physical differences of voices and these produce the signs of the effecting causes. I have discussed these matters adequately in the work, *On the Voice*.<sup>20</sup> The other parts of the organism that are internal have indistinct signs of the *krasis*. Nevertheless, one must attempt to recognize these through factors that are beneficial and harmful, and further, through the functions of the physical capacities. I said, in the third book of *On the Causes of Symptoms*, that the *krasis* is the forerunner of the goodness or badness of each capacity.<sup>21</sup> Thus the signs of the *krasias* have now been spoken of.

19. The defects involving size, conformation, number and position are as follows: those that befall the senses are easily recognized, whereas of those that do not befall the senses, some are difficult to recognize and some are unrecognizable. Thus the size and shape of the head, and with it of the brain, are clearly apparent and have been stated previously. The same also applies to the chest. Similarly too, in parts such as the scapulae, shoulders, upper arms, forearms and hands or the hip, thigh, calf and feet,

<sup>20</sup> The work *De voce* (Περὶ φωνῆς) was in four books and dedicated to Boethus. The original has been lost, although some fragments and an Arabic summary remain. See Boudon, *Galen*, 419n3.

<sup>21</sup> See *Sympt. Caus.*, Book 3, I.7, VII.213–15K, and Johnston, *Galen: On Diseases and Symptoms*, 273–74.

353K ἄν τε κατὰ τὴν διάπλασιν ἐσφαλμένον ἢ τι τῶν τοιούτων, ἄν τε κατὰ τὸ μέγεθος, ἢ ἄν τε κατὰ τὸν ἀριθμόν, ἢ τὴν σύνθεσιν τῶν συντιθέντων αὐτά· πρόδηλοι δὲ καὶ αἱ τῆς ἐνεργείας ἐφ' ἐκάστου βλάβαι· τὰ δ' ἐντὸς τοῦ σώματος οὐ πάντα διαγνωσθῆναι δυνατὸν· γαστέρα μὲν γὰρ τινος οὕτω σμικρὰν τε καὶ στρογγύλην καὶ προπετῆ κατὰ τὸ ὑποχόνδριον ἔθεασάμην, ὡς ἐναργῶς φαίνεσθαι αὐτὴν κατὰ περιγραφὴν ἰδίαν ὁρώσι τε καὶ ἀπτομένοις· οὕτω δὲ καὶ κύστιν ἔθεασάμην τινὸς ἐγκειμένην τε καὶ σμικρὰν, ὥστ' εἴ ποτε χρούσειε περὶ τὴν ἔκκρισιν τῶν οὕρων, ὄγκος ἐφαίνετο περιγεγραμμένος ἐναργῶς· οὐ μὴν τῶν ἄλλων γέ τι τῶν ἐντὸς ἐναργῆ διάγνωσιν παρέσχε μοί ποτε.

πειρᾶσθαι μέντοι χρὴ διαγιγνώσκειν, ὡς οἶόν τε ἐστίν, ἀρετὴν τε καὶ κακίαν αὐτῶν, εἰ καὶ μὴ κατ' ἐπιστήμην βεβαίαν, ἀλλ' οὖν κατὰ στοχασμόν γέ τινα τεχνικόν, οἶον εἰ οὕτως ἔτυχεν ἐπὶ ἥπατος· εἶδον γὰρ τινὰς ἤδη καὶ πολλοὺς στενὰς μὲν φλέβας ἔχοντας, ἄχρουν δὲ τὸ σύμπαν σῶμα, καὶ εἰ βραχὺ πλείω προσητέγκαντο τροφῆς, καὶ μᾶλλον εἰ φυσώδης, καὶ 354K παχέα καὶ γλίσχρα, τοὺς μὲν ὡσπερ τινὸς βάρους ἐγκειμένον καὶ κρεμαμένον, κατὰ τὸ δεξιὸν ὑποχόνδριον αἰσθανομένους ἐν βάθει, τοὺς δὲ μετὰ τάσεως τινος ὀδυνάδους· ἐπὶ τούτων οὖν εἰκὸς ἐστὶ καὶ μικρὸν εἶναι τὸ ἥπαρ, καὶ στενὸν ταῖς διεξόδοις· ἕτερον δὲ ἔθεασάμην φλεγματικὸν μὲν ὄλην τὴν ἕξιν, ἐμοῦντα δὲ ἐκάστης ἡμέρας χολὴν ὠχρὰν· ἔγνω οὖν χρῆναι καὶ τὰ διαχωρήματα αὐτοῦ θεάσασθαι, καὶ ὀλιγο-

it is not difficult to discern whether or not there is a defect in their conformation, size, number or composition of the component parts. Also, the damages of function of each are clear. However, not all those parts within the body can be discerned. Thus, I have seen a stomach in someone that was so small, round and inclined forward in the hypochondrium as to appear clearly in outline to those observing and palpating. In the same way too, I saw the bladder of someone so placed and so small that, if at any time he delayed passing urine, a clearly discernible swelling appeared in outline. But none of the other internal parts ever provided me with a clear diagnosis. 353K

It is however, necessary to attempt a diagnosis, as far as possible, of the goodness and badness of these parts, if not with certain knowledge then by an educated guess, as for example, might happen in the case of the liver. Thus, I have already seen certain people with many narrow veins and a lack of color in the whole body who, if they are offered a little more food, and especially if it is flatulence-producing, thick and viscid, have a sensation in the depths like some weight enclosed and suspended in the right hypochondrium, along with a painful tension. In these cases, then, the liver is likely to be small with narrow channels. I have seen another person, phlegmatic in his whole state, who vomited yellow bile every day. I realized it was necessary to also observe his excretions, and they contained very 354K

στὸν εἶχε χολῆς· ἐτεκμηράμην οὖν τούτῳ τὸν τὸ χολῶδες ὑγρὸν ἐξοχετεύοντα πόρον οὐ μικρὰν ἑαυτοῦ μοῖραν εἰς τὸν πυλωρὸν τῆς γαστρὸς ἀποπέμπειν, ὡς ἐπ' ἐνίων φαίνεται ζῶων.

355K ἐξ ὧν δῆλον, ὡς ἐν τοῖς ἀδήλοις τῇ αἰσθήσει μεγάλα συντελεῖ πρὸς διάγνωσιν ἢ τε τῶν ἐξ ἀνατομῆς φαινομένων γνώσις, ἢ τε τῶν ἐνεργειῶν τε καὶ τῶν χρειῶν εὐρεσις· ὅστις οὖν διαγνωστικὸς εἶναι βούλεται τῶν ὡς εἴρηται νῦν ἐσφαλμένων σωμάτων, ἐν ταῖς ἀνατομαῖς αὐτὸν γυμναστέον ἐστί, κὰν ταῖς τῶν ἐνεργειῶν τε καὶ χρειῶν εὐρέσεσι γέγραπται δὲ ὑπὲρ ἀπάντων ἰδία καθ' ἑτέρας πραγματείας, ὑπὲρ ὧν ἐπὶ τελευτῇ | τοῦ παντὸς λόγου εἰρήσεται, χάριν τοῦ γινώσκειν τοὺς φιλομαθεῖς ἕκαστον ὧν ἂν ὀρεχθῶσι μαθεῖν, ἐκ ποίας μάλιστα πραγματείας ἀναλέγεσθαι χρή· ἀλλὰ περὶ μὲν τούτων ἄλλοις.

20. Ὅσα δὲ ἐν τῷ νῦν ἐστί νοσῶδη σώματα, τουτέστιν ὅσα νοσεῖ, διαγιγνώσκειν χρή καὶ ταῦτα, ταῖς μὲν αἰσθήσεσιν ὑποπίπτοντα τῇ μεταβολῇ τῶν κατὰ φύσιν αὐτοῖς ὑπαρχόντων, ἐν μεγέθει καὶ χροιά καὶ σχήματι καὶ ἀριθμῷ καὶ θέσει καὶ τῇ κατὰ σκληρότητα καὶ μαλακότητα καὶ θερμότητα καὶ ψυχρότητα διαφορᾷ· μὴ φαινόμενα δέ, καθόλου μὲν φάναι, ταῖς βλάβαις τῶν ἐνεργειῶν, ἢ τοῖς ἐκκρινομένοις, ἢ ταῖς ὀδύναϊς, ἢ τοῖς ὄγκοις τοῖς παρὰ φύσιν, ἢ τισὶ τούτων, ἢ πᾶσι κατὰ μέρος δέ, τὰς μὲν κατὰ τὸν ἐγκέφαλον νοσῶδεις διαθέσεις, ἢ τοῖς τῆς παραφροσύνης εἶδεσιν, ἢ ταῖς τῶν αἰσθητικῶν ἢ φαντασιῶν βλάβαις.

little bile. I surmised from this that the channel drawing off the fluid bile was sending no small part of it to the pylorus of the stomach, as is seen in some animals.

It is clear from these cases that in those things not obvious to the senses, knowledge of those things apparent from dissection contributes greatly to diagnosis, as does the discovery of functions and uses. Therefore, anyone who wishes to be a diagnostician of defective bodies must, as I said just now, himself be practiced in dissections and in the discovery of functions and uses. I have written about all these things specifically in other treatises, and these will be discussed at the end of the whole treatise. This is so those who love learning and wish to understand each of these matters may know which of my works he must read in particular. But enough of these things.

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20. There are those bodies that are diseased—that is, those that are sick—at the present time, and it is necessary to diagnose them by the change accessible to the senses of the things existing in them which accord with nature, in terms of size, color, form, number and position, and by the difference in terms of hard and soft, hot and cold. In respect of those things not apparent [to perception], to speak in general, diagnosis is through the damages of the functions, or the excretions, or pains, or swellings contrary to nature—either some, or all of these. Specifically, the disease conditions of the brain are diagnosed by the kinds of delirium, or by damage to perception, conceptualiza-

356K βαις, ἢ ταῖς τῶν προαιρετικῶν, ἢ τοῖς ἐκκρिनόμενοις δι' ὑπερώας καὶ ῥινῶν καὶ ὠτων, ἢ ταῖς τῶν κατ' αὐτὸν ὀδυνῶν διαφοραῖς· τὰς δὲ κατὰ τὴν καρδίαν ἔκ τε τῶν τῆς δυσπνοίας εἰδῶν καὶ τῶν παλμῶν τῶν κατ' αὐτήν, | ἔτι τε τῶν σφυγμῶν τῶν κατ' αὐτήν καὶ τὰς ἀρτηρίας, ὀξυθυμίας τε καὶ ἀθυμίας, καὶ τῶν πυρετῶν καὶ καταψύξεων, καὶ τῶν ἐν τῷ χρώματι διαφορῶν ἀλλαγμάτων τε τῶν κατ' αὐτήν.

τὰς δὲ καθ' ἡπαρ, ἔκ τε τῆς τῶν χυμῶν ἐνδείας τε καὶ πλεονεξίας, ἐκτροπῆς τε τῆς εἰς τὸ παρὰ φύσιν καὶ ἀχροίας, καὶ προσέτι τοῖς κατὰ τὴν ἀνάδοσιν, ἢ θρέψιν, ἢ τὴν τῶν περιττωμάτων ἔκκρισιν ὑπαλλαστομένοις, ἀλλὰ καὶ τοῖς βάρεσι τοῖς κατ' αὐτό, καὶ ὄγκοις, καὶ ἀλγήμασιν, οὐ τοῖς ἐγχωρίοις μόνον, ἀλλὰ καὶ κατὰ συμπάθειαν ὅσα γίνεται, κατὰ τινα δυσπνοίας εἶδε καὶ βηχός. οὕτως δὲ καὶ τὰ κατὰ τὴν γαστέρα τοῖς περὶ τὴν πέψιν τε καὶ τὴν ὄρεξιν ὑγρᾶς ἢ ξηρᾶς προσφορᾶς, ἢ περὶ τὴν τῶν περιττωμάτων ἔκκρισιν ἀμαρτανόμενοις· ὡσαύτως δὲ καὶ ταῖς λυγξίν, ἐρυγαῖς, ναντίαις, ἐμέτοις, αὐταῖς τῶν ἐμουμένων ταῖς ιδέαις, ἀλγήμασιν, ὄγκοις, δυσπνοίαις<sup>29</sup> καὶ μὲν γε καὶ ὅσα κατὰ θώρακα, δυσπνοίαις, βηξίν, ὀδύναις ταῖς κατ' αὐτόν, τῇ τῶν ἀναβηττομένων διαφορᾷ· καὶ τὰ κατὰ τὴν ἀρτηρίαν δὲ τὴν τραχείαν νοσήματα, 357K δύσπνοιά τε καὶ βήξ, ἢ τε κατὰ τὸν τόπον ὀδύνη, τά τε | ἀναπτύμενα, καὶ αἱ τῆς φωνῆς βλάβαι γνωρίζουσιν ἀνάλογον δὲ ἀπὸ τῶν ἄλλων μορίων ἀπάντων

tion or voluntary actions, or by the excretions through the palate, nostrils and ears, or by the differences of the pains in it. The disease conditions of the heart are diagnosed from the various kinds of dyspnea and the palpitations relating to it, and also from the pulses in the heart and arteries, and from rages, despondencies, fevers and chills, and from the differences in color, and the pains relating to it.

With the disease conditions pertaining to the liver, diagnosis is from deficiency or excess of the humors, from a deviation of these to become contrary to nature, from a lack of color, and besides these, from the changes in distribution, nutrition or excretion of superfluities, but also from heaviness in the liver itself, swellings and pains, and not only those having their origins in the liver itself, but also those that occur as a sympathetic affection, and some kind of dyspnea and cough. In the same way too, in relation to the stomach, diagnosis is through those things involving digestion and the appetite for moist or dry foods, or from defects involving the excretion of superfluities, and similarly, from retching, belching, nausea and vomiting, and from the actual kinds of vomitus, pains, swellings, dyspneas. Furthermore, those things from which a diagnosis is made in relation to the chest include dyspneas, coughs, pains in the chest itself, and the difference in what is coughed up. And in the diseases relating to the rough artery (trachea, upper airways), there are dyspnea and cough, and pain in that place, and what is expectorated, as well as the impairments of the voice which people recognize. Analogously in the case of all the other parts,

<sup>29</sup> ἀλγήμασιν, ὄγκοις, δυσπνοίαις add. B

ἐξ ὄγκου καὶ ὀδύνης καὶ βλάβης ἐνεργειῶν, ἔτι τε τῆς τῶν ἐκκρινόμενων διαφορᾶς αἱ διαγνώσεις ἔσονται.

ὄγκους μὲν δὴ τοὺς παρὰ φύσιν ἐν φλεγμοναῖς καὶ ἐρυσσιπέλασι καὶ σκίρροις καὶ οἰδήμασιν ἐξεταστέον· ἄλγημα δέ, καθ' ὃν ἂν ἐρείδῃ τόπον, ἤτοι συνεχείας λύσει, ἢ ἀλλοίωσιν ἀθρόαν ἐνδείκνυται· λύεται μὲν οὖν ἢ συνεχεία τομῇ καὶ διαβρώσει καὶ θλάσει καὶ τάσει· ἀλλοιοῦται δὲ ἢ οὐσία θερμότητι καὶ ψυχρότητι καὶ ξηρότητι καὶ ὑγρότητι· βλάπτεται δὲ ἢ ἐνέργεια τριχῶς, ἢ ἀρρώστως, ἢ πλημμελῶς, ἢ μηδ' ὅλως γινομένη· ὅσα δὲ ἐκκρίνεται, τὰ μὲν ὡς μόρια τῶν πεπονηθῶτων, τὰ δὲ ὡς περιττώματα, τὰ δὲ ὡς ἐν αὐτοῖς περιεχόμενα κατὰ φύσιν, ἔνδειξιν ἰδίων ἕκαστον ποιήσεται. λέλεκται δὲ περὶ τῶν τοιούτων ἀπάντων ἐπιπλέον ἐν τῇ τῶν πεπονηθῶτων τῶν πραγμάτων, μηδενὸς αὐτῆν ὑπὸ μέθοδον τῶν ἔμπροσθεν ἀγαγόντος, ἢ τὸ τέλειον ἀποδόντος, ὥσπερ οὐδ' ἄλλην οὐδεμίαν ὧν ὑπῆρξαντο μὲν οἱ παλαιοί, ἢ οὐ συνετέλεσαν δὲ τῶν μὲν δὴ νοσούντων σωμάτων ἐξ ἐκείνης τῆς πραγματείας μαθάνειν χρὴ τὰ γνωρίσματα, τῶν νοσησόντων δὲ καὶ τῶν ὑγιασθησομένων ἐκ τῆσδε τῆς μεθόδου.

358K

21. Τὰ μὲν οὖν τῶν νοσησόντων ἐν τῷ μεταξὺ τῆν ἰδέαν ἐστὶ τῶν τε τοῖς ὑγιαίνουσι καὶ τοῖς νοσοῦσι συμβαινόντων· κατὰ φύσιν μὲν γὰρ ἅπαντα τοῖς ὑγιαίνουσιν ὑπάρχει, παρὰ φύσιν δὲ τοῖς νοσοῦσιν καθόσον νοσοῦσιν· ἐν μεθορίῳ δὲ τούτων ἐστὶ τὰ δηλω-

the diagnosis will be made from swelling, pain and damage to functions, and in addition, from the difference of the excretions.

One must carefully examine the swellings contrary to nature in inflammations, erysipelitates, indurations (scirrhosities) and edemas. Pain strongly established in a particular place indicates dissolution of continuity or a sudden complete change. Continuity is disrupted by cutting, erosion, bruising and stretching. Substance is changed by heat, cold, dryness and moistness. Function is damaged in three ways—it may be weak, deficient or fail to occur at all. Of the things excreted, there are parts of what has been affected, things that are superfluities, and those things that are naturally contained in the parts themselves. Each will produce a specific indication. More has been said about all such things in my treatise, *On Affected Places*.<sup>22</sup> None of my predecessors has dealt with this methodically or brought the matter to completion, just as the ancients did not complete any of the things they began. Certainly, it is necessary to learn the signs of diseased bodies from that treatise, while the signs of those bodies that are going to be diseased and those that are going to be restored to health must be learned from the following method.

358K

21. Those bodies that are about to be diseased happen to be intermediate in kind between those that are healthy and those that are diseased. For all things are in accord with nature in those who are healthy while they are contrary to nature in those who are diseased, to the extent that

<sup>22</sup> *Loc. Aff.*, VIII.1–451K. For a French translation of this work, see Daremberg, *Oeuvres anatomiques*; for English, see Siegel, *Galen on the Affected Parts*.



359K τικὰ σημεῖα τῶν νόσων, ἕνια μὲν ἐκ τοῦ γένους ὑπάρχοντα τῶν κατὰ φύσιν, ἀλλὰ ποσότησιν ἢ ποιότησιν ἢ καιροῖς ὑπηλλαγμένα, τινὰ δὲ ἐκ τῶν παρὰ φύσιν μὲν, ἀλλὰ μικρότερα τῶν ἐν ταῖς νόσοις· καὶ διὰ τοῦτο καὶ αἱ διαθέσεις μὲν αὐταὶ τῶν σωμάτων, ὅσα νοσήσειν ὑπέδειξα, τῶν οὐδετέρων εἰσὶ, καὶ τὰ δηλοῦντα δὲ αὐτὰς σημεῖα· πρῶτως μὲν γὰρ ταῦτα ὑγίαν δηλοῖ, δευτέρως δὲ τὰς νόσους· καὶ γίνεται τὰ αὐτὰ σημεῖα κατὰ τὴν πρὸς τι σχέσιν, οὐδέτερά τε καὶ ἢ νοσῶδη· τὰ μὲν τὴν ἤδη διάθεσιν ὑπάρχουσαν δηλοῦντα οὐδέτερα, τὰ δὲ τὴν ἐσομένην προδηλοῦντα νοσῶδη· κατὰ δὲ τὸν αὐτὸν λόγον, καὶ ὅσα τοῖς νοσοῦσιν ἐπιφαίνεται σημεῖα σωτήρια, λεχθήσεται μὲν ὑγιεινά, διότι τὴν ἐσομένην ὑγίαν προδηλοῖ· λεχθήσεται δὲ καὶ νοσερά, καθόσον τὴν ὑπάρχουσαν νόσον ἐνδείκνυται. καὶ δῆλον ὡς, εἴπερ ἀμφοῖν ἐστὶ δηλωτικά, λεχθείη ἂν οὐδέτερα καθ' ἓν τι τῶν σημαινομένων τῆς οὐδετέρας φωνῆς· οὐδὲν δὲ θυμαστόν, τὰ αὐτὰ σημεῖα τοὺς τρεῖς ἴσχειν λόγους ἐν διαφερούσαις σχέσεσιν, ὑγιεινά τε καὶ νοσερά καὶ οὐδέτερα λεγόμενα· καθ' ἕτερον δὲ σημαινόμενον, ὅσα τοῖς ἀνακομιζομένοις ἐκ νόσων ὑπάρχει σημεῖα, λέγομεν οὐδέτερα, καθ' ὅ, οἶμαι, καὶ τὰ τῶν ἐν γήρα· ταῦτα μὲν οὖν ἅπαντα πλείοσιν ὑποπέπτωκεν ἐννοίαις τε καὶ λόγοις· ὅσα δὲ τοῖς ἀμέμπτως ὑγιαίνουσιν ὑπάρχει, μόνη τῇ τῶν ὑγιεινῶν ἐννοία, καὶ ὅσα τοῖς νοσοῦσι μὴ προδηλοῦντα τὴν ἐσομένην ὑγίαν, μόνη καὶ

359K they are diseased. Lying between these are the indicative signs of those who are about to be diseased (of incipient disease). Some of these are from the class of accord with nature but are changed in quantities, qualities or times, whereas some are from the class of contrary to nature, but are smaller than those in people who are diseased. And because of this too, the actual conditions of the bodies which I have shown are about to become diseased are of [the category/class of] "neither," as are the signs that reveal them, for primarily these show health and only secondarily the diseases. And the same signs are, according to circumstances in respect of the state, both "neither" and of disease. Those which signify an already existing condition are neither, while those which presage a future condition are morbid. By the same token, those signs which display recovery in those who are diseased will be termed healthy because they indicate future health. On the other hand, they will also be called morbid inasmuch as they show an existing disease. And it is clear that if they are indicative of both, they would be called "neither," according to one of the significations of the term "neither." It is no surprise that the same signs have three appellations in different states, being called "healthy," "diseased" and "neither." In another signification, the signs in those who are recovering from diseases, we call "neither," being the same, I think, as those in old age. All these then fall under a number of concepts and definitions. However, the signs existing in those who are perfectly healthy fall only under the concept of "the healthy," and signs in those who are

360K ταῦτα τῇ τῶν νοσῶδων ὑποπέπτωκεν ἐννοία· περὶ μὲν δὴ | τούτων ἐξῆς εἰρήσεται.

τὰ δὲ τῆς μελλούσης νόσου προγνωστικὰ διέλθω-  
 μεν πρότερον· διττῆς δὲ οὔσης τῆς αὐτῶν διαφορᾶς,  
 προχειρισώμεθα πρότερον τὰ ποσότησιν ἢ ποιότησιν  
 ἢ καιροῖς, οὐκ αὐταῖς ταῖς οἰκείαις ιδέαις ἐξηλλαγα-  
 μένα τῶν κατὰ φύσιν, οἶον ὄρεξιν σιτίων ἐπιτεταμένην  
 ἢ ἐκλελυμένην, ἢ μὴ κατὰ τὸν συνήθη καιρὸν<sup>30</sup> ἢ οὐ  
 συνήθων ἐδεσμάτων, ἢ ἀπόκρισιν τε τῶν περιττωμά-  
 των τῆς τροφῆς ἐλαττόνων, ἢ πλειόνων, ἢ ὑγροτέρων,  
 ἢ σκληροτέρων· οὕτως δὲ καὶ τῶν ὑγρῶν περιττω-  
 μάτων ἔνδεια, καὶ πλεονεξία παρὰ τὸ κατὰ φύσιν, ἢ  
 χροιάς, ἢ συστάσεως ἐξάλλαξις, ἢ καιροῦ κενώσεως,  
 ἀγρυπνία τε καὶ πλείων ὕπνος, ἢ οὐκ ἐν καιρῷ τῷ  
 συνήθει· κατὰ ταῦτα δὲ καὶ ἡ περὶ το πόμα πλείων, ἢ  
 ἔλαττον, ἢ θερμόν, ἢ ψυχρὸν ἐπιθυμία παρὰ τὸ σύνη-  
 θες· ὥσπερ γε καὶ ἡ περὶ τὴν τῶν ἀφροδισίων χρήσιν  
 ἄμετρος ἢ ἄκαιρος ἐπιθυμία, ἰδρώτες πλείους τοῦ  
 δέοντος, ἢ ἐλάττους, ὄκνος εἰς τὰς κινήσεις, ἢ πειρω-  
 μένων κινεῖσθαι βαρῦτης, ἢ ἐκλυσίς ἰσχυρά, καταμη-  
 νίων κρύψις, ἢ πλείων, ἢ ἐλάττων κένωσις. | οὕτω δὲ  
 361K καὶ ἡ δι' αἱμορροΐδων· ἀλλὰ καὶ ἡ κατ' αὐτὴν τὴν  
 ἐδωδὴν ἢ πόσιν οὐχ ὁμοία τῇ πρόσθεν ἡδονῇ γνώ-  
 ρισμὰ ἐστὶ μέλλοντος νοσήματος· οὕτως δὲ καὶ ἡ τῆς  
 διανοίας ἀμβλύτης οὐ κατὰ φύσιν, ἢ ἐπιλησμοσύνη  
 τις ἀήθης, ἢ φαντασιωδέστεροι τῶν ἔμπροσθεν ὕπνοι

<sup>30</sup> γινομένην post καιρὸν B

diseased which do not presage health fall only under the  
 concept of "the morbid." I shall speak about these next. 360K

First let me go over the prognostic signs of impending  
 disease. There is a twofold difference in these. Let us turn  
 our attention first to those things that change from an ac-  
 cord with nature, not in their specific kinds, but in quanti-  
 ties, qualities or times—for example, an appetite for food  
 which is increased or decreased, or is not at the custom-  
 ary time, or not for the customary foods, or a diminution  
 or increase in excretion of the superfluities of nutriment,  
 or superfluities that are moister or harder. Similarly too,  
 there may be a lack of moist superfluities, or an excess  
 beyond what is normal, or a change in color or consistency,  
 or time of evacuation, insomnia and excessive sleep, or  
 sleep which is not at the customary time. In the same way  
 too, there may be an increase or decrease in drinking, or  
 a desire for hot or cold contrary to what is usual. Similarly  
 too, in the use of sexual activity, there may be immoderate  
 indulgence or untimely desire, or there may be sweating  
 that is more or less than normal, or hesitation in move-  
 ments, or heaviness when attempting to move, or severe  
 feebleness,<sup>23</sup> or a suppression of menstruation, or evacu-  
 ation that is greater or less. It is the same too with hemor-  
 rhoids. But also a dissimilarity to the previous pleasure in  
 the actual food and drink taken is a sign of impending  
 disease. So too is an unnatural blunting of thought pro-  
 cesses, some unwonted forgetfulness, or sleep that is more  
 troubled with dreams than before. Furthermore, hearing, 361K

<sup>23</sup> Elsewhere "collapse" is used for ἐκλῦσις when used with  
 λειποθυμία/λειποψύχια and συγκοπή (see below). Here it is  
 used in the sense found in Hippocrates, *Aphorisms*, 7.8.

καὶ μὲν δὴ καὶ ἀκοὴ καὶ ὄσφρησις καὶ ὄψις ἀμβλύ-  
 τεραὶ τε καὶ ἀχλυνωδέστεραι καὶ ἀπλῶς εἰπεῖν, ὅσα  
 κατὰ φύσιν ὑπῆρχε, τὰ μὲν αὐξανόμενα, τὰ δὲ μειού-  
 μενα, τὰ δὲ καιροῖς τισιν<sup>31</sup> ἢ ποιότησιν ἐξαλλαττό-  
 μενα· καὶ γὰρ οὖν καὶ τοῦ σώματος ὄγκος, ἐλάττων τε  
 καὶ μείζων γινόμενος, ἐρυθρότερός τε καὶ λευκότερος,  
 ἢ οἶον πελιδνότερος καὶ μελάντερος, ἐρνηγαί τε καὶ  
 παρμιοί, καὶ φύσαι πλείους ἢ ἐλάττους τῶν κατὰ φύ-  
 σιν· οὕτως δὲ καὶ ὅσα διὰ ῥινῶν ἢ ὑπερώας ἢ ὠτων,  
 οἷς ὁ ἐγκέφαλος ἐκκαθαίρεται, ποσότησιν ἢ ποιότη-  
 σιν ἢ καιροῖς ἐξαλλαττόμενα· ταῦτα μὲν οὖν ἅπαντα  
 τοῦ γένους τῶν κατὰ φύσιν ἐστί.

362K δῆξις δὲ γαστρὸς ἢ κατὰ στόμαχον ἢ κατὰ τι τῶν  
 ἐντέρων, ἢ ἐπὶ τοῖς διαχωρουμένοις, ἢ ἐμουμένοις, ἢ  
 οὐρουμένοις, ἢ τις ἕτερος μέτριος πόνος, ἐκ τοῦ γέ-  
 νους μὲν ἐστί τῶν παρὰ φύσιν, οὕτω δὲ νοσεῖν οἱ  
 οὕτως ἔχοντες λέγονται, καθάπερ οὐδ' οἱ βαρυνόμενοι  
 τὴν κεφαλὴν, ἢ ἀλγούντες, ὅταν γε μηδέπω διὰ ταῦτα  
 πρὸς τὰ συνήθη τῶν ἔργων ἐμποδίζονται· καὶ ὁ γε  
 τοῦ νοσεῖν ὄρος οὗτός ἐστιν ἐπὶ ταῖς τοιαύταις διαθέ-  
 σεσι· καὶ διὰ τοῦτο ἐν τῷ πρὸς τι τὴν αὐτὴν διάθεσιν  
 ἤδη τε νοσῶδη καὶ οὐδετέραν ἐροῦμεν ἔτι πρὸς γὰρ  
 τὴν ῥώμην τῆς φερούσης ῥαδίως ἢ νικωμένης ἤδη  
 δυνάμειος ἢτοι νόσος ἐστίν, ἢ οὐδετέρα διάθεσις ἐκά-

<sup>31</sup> *add.* ἢ ποσότησιν *post* τισιν K

smell or sight may be duller or more hazy. In summary, of those things that are in accord with nature, some are increased, some are decreased, and some are changed in terms of times, quantities<sup>24</sup> or qualities. Also the body mass becomes smaller or greater, redder or whiter, or is, as it were, more livid or darker, and belching, sneezing and farting are more or less than accords with nature. In like manner too, those things by which the brain is purified through the nostrils, palate or ears are changed in quantities, qualities or times. All these, then, are of the class of things that accord with nature.

A biting sensation of the stomach, either at the cardiac orifice or the pylorus,<sup>25</sup> or some other moderate pain or distress during defecation, vomiting or urination belong to the class of contrary to nature, although those who have these things are said to be not yet diseased, as is the case with those who have a heaviness in the head, or pains, whenever they are not yet hindered in their customary activities by these things. And this is, in fact, the definition of disease in such conditions, and it is because of this that we say, in respect to the same condition, that it is already diseased or still neither, according to circumstances. Each of the conditions mentioned is either a disease or neither, depending on the strength of the capacity—that

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<sup>24</sup> The Kühn text is followed here. See further, Boudon, *Galen*, 336.

<sup>25</sup> Here *στόμαχον* is taken to refer to the cardiac orifice of the stomach rather than the esophagus, which is taken to be the more usual meaning. There is generally some uncertainty about the exact meaning of several terms relating to the upper gastrointestinal tract; see for example Boudon, *Galen*, 340n4.

στη τῶν εἰρημένων· οὕτω δὲ καὶ ὅσα κατὰ τὰς αἰσθήσεις, οὐκ ἐν τῷ μᾶλλον τε καὶ ἥττον ἀλλήλων διετηνόχεν, ἀλλ' ὅλω τῷ γένει παρὰ φύσιν ἐστί· καὶ ταῦτ' ἐστὶ νόσων σημεῖα, μέχρι περ ἂν ἢ μικρά, καὶ μηδέπω τῶν εἰθισμένων πράξεων ἀπάγειν ἰκανά· τοιαῦτα δ' ἐστὶ κατὰ μὲν τὴν γεύσιν, ὅταν ἀλμυρᾶς ἢ πικρᾶς ἢ τινος ἐτέρας ποιότητος ἔμφασις ἢ τοῖς ἐσθιομένοις τε καὶ πινομένοις ἅπασιν, ἢ καὶ χωρὶς τοῦ προσάρασθαί τι τὸ σάλιον αὐτὸ φαίνεται τοιοῦτον· κατὰ δὲ τὴν ὄσφρησιν, ὅταν ἦτοι τινὸς αἰσθανώμεθα μᾶς ποιότητος, οὐδενὸς ὄσφρητου παρόντος, ἢ καὶ προσφέροντες πλείω τε καὶ διαφέροντα πάντων αὐτῶν ὡς ὁμοίων αἰσθανώμεθα· πολλάκις δὲ οὐδ' ὅλω αἰσθησις ἡμῖν οὐδενὸς ἢ δυσωδίας τινὸς γίνεται, μηδενὸς παρόντος δυσώδους· κατὰ δὲ τὴν ἀκοήν, ἢχοι καὶ ψόφοι τοῦ παρὰ φύσιν εἰσίν· ὥσπερ γε καὶ κατὰ τὴν ὄψιν, ὅσα προφαίνεσθαι δοκεῖ, μέλανά τε καὶ ὀρφνώδη καὶ κυανὰ καὶ πυρρὰ καὶ ξανθὰ, καὶ τὰ μὲν στρογγύλα, τὰ δὲ προμήκη· καὶ τὰ μὲν ἰσχνά, τὰ δὲ παχέα, παραπέτασθαι πάντα δοκοῦντα· κατὰ δὲ τὴν ἀπτικήν αἴσθησιν, ὅταν ἀνωμαλία τις, ἢ πυκνότης ἢ βάρος ἢ τάσις ἢ ἐλκώδης διάθεσις ἐμφαίνεται καθ' ὅλην τὴν ἕξιν, οὕτως δὲ καὶ καθ' ὅτιον μέρος ἢ τάσις ἢ θλίψις ἢ δῆξις ἢ βαρύτης,<sup>32</sup> ὅταν σμικραὶ τινες ὦσι καὶ μὴ μόνιμοι, τὴν μὲν διάθεσιν οὐδετέραν εἶναι δηλοῦσι· προαγγέλλουσι δὲ νόσον· |

364K 22. Ὅσα δὲ ἐν τοῖς ἤδη νοσοῦσι γίνεται σημεῖα, τὰ μὲν ὑγείαν δηλοῦντα, τὰ δὲ θάνατον, ὑγιεινὰ μὲν

is, whether it is able to bear it easily or is already overcome. In this way too, in relation to the senses, these things are not differentiated from each other in terms of more or less, but are in the whole class of contrary to nature. Moreover, they are signs of disease so long as they are small and not yet sufficient to interfere with customary activities. In respect of taste, such perceptions exist whenever there is the impression of saltiness, bitterness or some other quality in all the things eaten or drunk, or also when the saliva itself seems to be like this without anything being consumed. In relation to smell, such perceptions exist whenever we perceive a particular quality when no odor is present, or when there are many different odors present but and we perceive them all as the same. Often we have no perception at all, or some foul smell occurs when nothing malodorous is present. In relation to hearing, such perceptions are noises and sounds contrary to nature. Similarly, in relation to sight, circles or lines all seem to hover [before our eyes] which are black and dark, or dark blue, red or yellow, and are round or elongated, narrow or wide. In relation to the perception of touch, whenever there is some irregularity—a sensation of thickness, heaviness, tension, numbness or wound-like pain—it may be a condition manifest in the whole state. Similarly too, if in any part there is a sensation of tension, pressure, biting or heaviness, whenever these are minor and transient, they show the condition to be neither. They are, however, harbingers of disease.

22. Of the signs occurring in those who are already diseased, some indicate health whereas others indicate

<sup>32</sup> There are various other terms here in different texts/manuscripts; see Boudon, Galien, 342.

τὰ πρότερα, τὰ δὲ ἕτερα τῷ γένει μὲν νοσερά, κατ' εἶδος δὲ ὀλέθρια λέγεται λαμβάνεται δέ, καθόλου μὲν εἰπεῖν, ἕκ τῆς τῶν ἐνεργειῶν ἀρετῆς τε καὶ κακίας, κατὰ μέρος δὲ ἕκ τῆς τῶν κατὰ μέρος ἐνεργειῶν, ὧν τὰ γένη πρόσθεν εἴρηται, πρῶτον μὲν τὸ τῶν ἀρχῶν, δεύτερον δὲ τὸ τῶν ἀπ' ἐκείνων πεφυκότων, καὶ τρίτον τῶν ἰδίαν μὲν ἐχόντων διοίκησιν, ἀπὸ δὲ τῶν ἀρχῶν ἀποφύσεις τινὰς δεχομένων· τὸ γὰρ δὴ τέταρτον γένος τῶν τότε ῥηθέντων,<sup>33</sup> ἕξ ἑαυτοῦ μὲν ἀχρηστον εἰς τὰς προγνώσεις, κατὰ συμβεβηκὸς δέ, κακ τούτων ἔσται ποτὲ πρόγνωσις, ὥσπερ γε κακ τῶν περιττωμάτων· ἐκ τούτων μὲν λόγῳ συμπαθείας, ἐκ δὲ τῶν περιττωμάτων διὰ παντός ὅτι πέψεως καὶ ἀπειψίας ἐν αὐτοῖς ἔστι σημεῖα· ὥστε οὐκ ἐνδέχεται μὴ δηλοῦν αὐτὰ διὰ παντός, ἥτοι τὴν φύσιν ἐπικρατεῖν τῆς ὕλης, ἢ τὴν ὕλην | τῆς φύσεως, ἢ οὐδέτερον οὐδέτερον· ὕγεινὰ μὲν οὖν σημεῖα λεχθήσεται, κρατούσης τῆς φύσεως, νοσώδη δέ, κρατουμένης, οὐδέτερα δὲ τὰ ἐν ταῖς ἰσοσθενέσι μάχαις· τὰ μὲν δὴ τῆς ἐναργοῦς πέψεως σημεῖα τῶν ὕγεινῶν ἔστι, καθάπερ καὶ τὰ τῆς ἀπειψίας νοσερά, τὰ δὲ οὔτε πέψιν, οὔτε ἀπειψίαν ἐναργῶς ἐνδεικνύμενα τῆς τῶν οὐδετέρων ἔστι φύσεως· οὐ-

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<sup>33</sup> *post ῥηθέντων*, B has: <quorum regimen est seipsis et non sunt radices aliis nec alia sunt radices eis, neque alicui horum quae sunt in eis>

<sup>26</sup> The translation of this sentence includes the Latin addition given in Boudon's text, which is aimed at clarifying the connection

death. The former are healthy signs while the latter are morbid in class and are called specifically "fatal." To speak generally, these signs are taken from the goodness and badness of the functions, and to speak specifically, from the individual functions. I have spoken about the classes of these previously. The first is that of the principles; the second is that of things which take their origin from those principles; and the third is that of things which govern themselves but receive certain outgrowths from the principles. Now the fourth class of those things spoken of at that time, which comprises parts that govern themselves, and are neither roots from others nor for others, nor for any of those things in them, is of no use in itself for prognosis, although incidentally there will sometimes be a prognosis from these, just as there will be from the superfluities.<sup>26</sup> They come about from the former by reason of sympathy whereas they come about from the latter because the signs of digestion and failure of digestion are continually in them. As a consequence, it is altogether impossible for the latter not to indicate, and they either indicate nature prevailing over material, or material prevailing over nature, or neither one prevailing over the other. Thus the signs will be spoken of as healthy when nature prevails but morbid when nature is prevailed over, and neither when they are evenly matched. Certainly, the signs of obvious digestion (concoction) are those of health, just as those of failure of digestion (concoction) are morbid, and those that don't indicate clearly either digestion or failure of digestion are of the nature of neither. Those

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between this passage and the earlier mention of the four classes in Chapter 5 above; see Boudon, *Galen*, 424n4.

δέτερα δὲ καὶ ὅσα νῦν μὲν τοῦτο, νῦν δὲ τοῦναντίον δηλοῖ, καθάπερ οἱ μελαινώμενοι δάκτυλοι τοιαῦτα δ' ἐστὶ καὶ τὰ κριτικὰ συμπτώματα· λέλεκται δὲ ὑπὲρ ἀπάντων αὐτῶν ἐν τοῖς Περὶ κρίσεων, ὥσπερ γε καὶ περὶ τῶν καθ' ἐκάστην ἐνέργειαν συμπτωμάτων ἐν τοῖς Περὶ συμπτωμάτων αἰτίων· ἐκ τούτων οὖν χρὴ τὴν κατὰ μέρος ἄπασαν αὐτῶν ὕλην ἀναλέγεσθαι. ἐγὼ δὲ μήκους φειδόμενος ἐνταυθοῖ μὲν ἤδη καταπαύσω τὸν περὶ τῶν σημείων λόγον, μεταβήσομαι δὲ ἐπὶ τὸν περὶ τῶν αἰτίων.

366K 23. Ἐπεὶ δὲ καὶ τούτων ἐστὶ τὰ μὲν ὑγιεινά, τὰ δὲ νοσερά, τὰ δὲ οὐδέτερα, πρῶτον περὶ τῶν ὑγιεινῶν ὁ λόγος ἔσται· ἐπεὶ δὲ καὶ τούτων αὐτῶν τὰ μὲν ἦν φυλακτικά, τὰ δὲ ποιητικὰ τῆς ὑγείας, ἔστι δὲ καὶ χρόνος, καὶ ἀξιώματι πρότερα τὰ φυλακτικά τῶν ποιητικῶν, ἀπὸ τῶν φυλακτικῶν νῦν ἀρκτέον ὄντος τοῦ οὐχ ἐνὸς τοῦ ὑγιεινοῦ σώματος, ἀλλὰ πλειόνων, ὡς ἔμπροσθεν διώρισται, καθ' ἕκαστον αὐτῶν ἴδιον ἔσται τὸ φυλακτικόν, ὅτι καὶ πᾶν αἴτιον ἐν τῷ πρὸς τι πάλιν οὖν ἐνταῦθα τὴν ἀρχὴν ἀπὸ τῆς ἀρίστης κατασκευῆς τοῦ σώματος ποιητέον, ἐπισκεπτομένους τὰ πρὸς ταύτην ὑγιεινά· τὴν δὲ εὔρεσιν αὐτῶν ἢ τοῦ πράγματος αὐτοῦ φύσις ὑπαγορεύει· εἰ μὲν γὰρ ἦν ἀπαθὲς καὶ ἀναλλοίωτον τὸ σῶμα, διὰ παντός τε ἂν ἔμενεν ἢ ἀρίστη κατασκευή, καὶ οὐδὲν ἂν ἐδέετο τέ-

<sup>27</sup> These are the signs manifest at the time of crisis. See Boudon, *Galen*, 344n2: "La crise est le moment décisif de la

that are neither are those that now indicate this and now indicate the opposite, like the fingers becoming black. The critical symptoms<sup>27</sup> are also of this kind. I spoke about all these in my work *On Crises*,<sup>28</sup> just as I did about those in relation to each of the functions in the work, *On the Causes of Symptoms*.<sup>29</sup> It is necessary, then, to pick up for oneself from these works all the material on these individually. I have no space to spare here to cover these matters in full, so I shall now stop the discussion about signs and move on to that about causes.

23. Some of these causes are healthy, some diseased, and some neither; the discussion will first be about those that are healthy. And since, of healthy causes, some are preserving of health while some are productive of health, and both in time and importance, the preserving is prior to the producing, we must now begin from the preserving. And so, since there is not just one healthy body but many, as was distinguished before, the preserving will be specific to each of them, in that every cause in it relates to some particular thing. Again, then, even here we must make a start from the best constitution of the body, and consider the things that are health-producing in relation to that. The nature of the matter itself dictates the discovery of these. For if the body were impassable and immutable, and the best constitution were to remain continually, it

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maladie, celle-ci alors aussibien évoluer vers une amélioration qu'une aggravation. Aussi les symptômes qui se manifestant à ce moment-la indiquent-ils aussi bien la maladie que la santé et sont-ils dites neutres." <sup>28</sup> *Cris.*, IX.550-760K.

<sup>29</sup> *Sympt. Caus.*, VII.85-272K. For an English translation of this work, see Johnston, *Galen: On Diseases and Symptoms*.

χνης ἐπιστατούσης αὐτῷ· ἐπειδὴ δὲ ἀλλοιοῦνται καὶ διαφθείρεται καὶ τρέπεται, μὴ φυλάττον ἢν εἶχεν ἐξ ἀρχῆς κατάστασιν, ἐπικουρίας ἐν τοσοῦτον δέεται καθ' ὅσους οὖν τρόπους ἀλλοιοῦνται, τοσαῦτα γένη καὶ τῶν ἐπικουριῶν ἔξει, τουτέστι τῶν φυλακτικῶν αἰτίων, ἃ πρόδηλον ἤδη καὶ αὐτῶν τῶν εἰρημένων, ὡς ἐπανορθωτικὰ τῷ γένει τετύχηκεν ὄντα· τῷ δὲ κατὰ βραχὺ ποιεῖσθαι τὰς ἐπανορθώσεις, πρὶν ἀθρόον | ἀπαντῆσαι τὸ βλάβος, οὐ προφυλακτικὰ τοῦ μέλλοντος ἔσεσθαι κακοῦ κέκληται πρὸς τῶν ἰατρῶν, ἀλλὰ φυλακτικὰ τῆς παρούσης κατασκευῆς.

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ἀλλοιοῦνται τοίνυν τὸ σῶμα, πρὸς μὲν τινων ἐξ ἀνάγκης, πρὸς δὲ τινων οὐκ ἐξ ἀνάγκης· λέγω δὲ ἐξ ἀνάγκης μὲν, οἷς ἀδύνατον αὐτῷ μὴ πλησιάζειν, οὐκ ἐξ ἀνάγκης δὲ τὰ λοιπά. τὸ μὲν γὰρ τῷ περιέχοντι διὰ παντὸς ὀμιλεῖν, ἐσθίειν τε καὶ πίνειν, καὶ ἐγρηγορέναι καὶ ὑπνοῦν ἀναγκαῖον αὐτῷ, ξίφεσι δὲ καὶ θηρίοις οὐκ ἀναγκαῖον· ὅθεν ἐν μὲν τῷ προτέρῳ γένει τῶν αἰτίων ἢ περὶ τὸ σῶμα τέχνη καταγίνεται, κατὰ δὲ τὸ δεύτερον οὐκέτι· ὅποσα τοίνυν ἐστὶ τὰ ἐξ ἀνάγκης ἀλλοιοῦντα τὸ σῶμα διελόμενοι, καθ' ἕκαστον αὐτῶν ἰδίον τι γένος αἰτίων ὑγιεινῶν εὐρήσομεν· ἔστιν οὖν ἐν μὲν ἐκ τῆς τοῦ περιέχοντος ἀέρος ὀμιλίας, ἕτερον δὲ ἐκ κινήσεως καὶ ἡσυχίας ὄλου τε τοῦ σώματος καὶ κατὰ τὰ μόρια· τρίτον, ἐξ ὑπνου καὶ ἐγρηγόρσεως· τέταρτον, ἐκ τῶν προσφερομένων· πέμπτον, ἐκ τῶν

would need no art to take care of it. However, since it is subject to change, destruction and redirection, and does not preserve the state which existed from the beginning, it requires help to this extent. Therefore, according to the number of ways it is changed, so it will have as many classes of things that are helpful—that is to say, of preserving causes, which clearly are from among those things already spoken of as restorative in class. Because we make the restorations little by little, opposing the damage before it is consolidated,<sup>30</sup> they are not called by doctors prophylactic of some impending badness but preservative of the present constitution.

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Accordingly, some of the changes of the body are necessary and some are not. I call “necessary” those which it is impossible for a body not to be associated with and “not necessary” the rest. Thus constant contact with the ambient air, eating and drinking, waking and sleeping are necessary to it whereas constant contact with swords and wild animals are not necessary, whence the art devoted to the body resides in the first class of causes whereas the second doesn’t apply any more. And so, if we distinguish all those changes of the body which are necessary, we shall discover, in respect of each of them, some specific class of causes of health. There is, then, one from association with the ambient air, another from movement and rest of the whole body and its parts, a third from sleeping and waking, a fourth from those things taken in, a fifth from those

<sup>30</sup> Boudon draws attention to the use of the same opposition between “gradual” (*κατὰ βραχὺ*) and “sudden” (*ἀθρόον*) in Chapter 25 below to express the idea of a progressive treatment; see Boudon, *Galen*, 345n2.

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ἐκκρινομένων ἢ ἐπεχομένων· ἕκτον, ἐκ τῶν ψυχικῶν παθῶν ὑπὸ τούτων γὰρ ἀπάντων ἡ ἀνάγκη τὸ σῶμα διατίθεσθαι πως· ὑπὸ μὲν τοῦ περιέχοντος, ἢτοι θερμαινόμενον ἢ ψυχόμενον ἢ ξηραίνόμενον ἢ ὑγραινόμενον ἢ κατὰ συζυγίαν τι τούτων πάσχον, ἢ καθ' ὅλην τὴν οὐσίαν ἀλλοιούμενον. ἐκ κινήσεως δὲ καὶ ἡσυχίας, ἀμέτρων ἀμφοῖν γινομένων, ἢ θερμαινόμενον ἢ ψυχόμενον ἢ ξηραίνόμενον ἢ ὑγραινόμενον· ἢ κατὰ συζυγίαν τι τούτων πάσχον· οὕτω δὲ καὶ ἐξ ὕπνου καὶ ἐγρηγόρσεως ἀνάγκη πως πάσχειν αὐτό· κατὰ δὲ τὸν αὐτὸν λόγον ἐκ τῶν προσφερομένων, ἢ ἐκκρινομένων, ἢ ἐπεχομένων, <et passionibus animae>,<sup>34</sup> ἅπαντα γὰρ ταῦτα, τὰ μὲν ἀντικρυς, τὰ δὲ διὰ μέσων ἐτέρων αἰτίων ἀλλοιοῖ τὸ σῶμα, καὶ <si perseveret et multiplicetur illa mutatio><sup>35</sup> διαφθείρει τὴν ὑγίαν· καὶ γέγραπται περὶ τούτων αὐτῶν ἰδίᾳ καθ' ἕκαστον ἐν τῇ τῶν ὑγιεινῶν πραγματείᾳ.

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ταῦτα μὲν οὖν ἅπαντα τὰ νῦν εἰρημένα γένη τῶν ὑγιεινῶν αἰτίων ἕλαι τινὲς ὑπάρχουσι· μετὰ δὲ τῆς δεούσης χρήσεως αἴτια γίνεται φυλακτικά τε καὶ ὑγιεινά· διαμαρτανόμενα δὲ τῆς συμμετρίας, νοσῶδη καθίσταται· ὥστε δῆλον ἤδη κακ τούτων, ὡς οὐχ ἐτέρας μὲν οὐσίας τῶν ἐκτὸς τούτων πραγμάτων ὑγιεινὰς ἡμῖν, ἐτέρας ἢ δὲ νοσερὰς ὑποληπτέον, ἀλλὰ τὰς αὐτὰς ἐν τῷ πρὸς τι ποτὲ μὲν ὑγιεινὰς, ποτὲ δὲ νοσῶδεις γινομένας· ἡνίκα μὲν γὰρ δέεται κινήσεως τὸ

<sup>34</sup> <et passionibus animae> add. B

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things excreted or released, and a sixth from the affections of the soul. Of necessity, the body is in some way affected by all these. Something that is affected by the ambient air is either heated, cooled, dried or moistened, or a conjunction of these, or changed in its whole substance. By movement and rest, when both of these are excessive, it is affected by heating, cooling, drying or moistening, or a conjunction of these. In the same way too, it is necessarily affected by sleeping and waking in some way. On the same basis, it is affected by those things taken in, excreted or retained, [and by affections of the soul], for all these, either directly or through the medium of other causes, change the body and, if that change persists or is multiplied, destroy health.<sup>31</sup> I have also written about each of these individually in the treatise, *On the Preservation of Health (Hygiene)*.<sup>32</sup>

Thus, all the classes of causes of health we are now speaking of are certain materials. With the right use, they are preserving causes and healthy whereas, when used wrongly in terms of balance, they become morbid. As a result, it is already clear from these things that we must not suppose there are for us other healthy or morbid causes which exist apart from these matters, but these substances are, depending on circumstances, at one time healthy and at another time morbid. Thus, when the body needs move-

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<sup>31</sup> The translation of this sentence includes the addition to the Kühn text made by Boudon; see Boudon, *Galen*, 347n2.

<sup>32</sup> *San. Tuend.*, VI.1–451K. For an English translation of this work, see Green, *A Translation of Galen's Hygiene*.

<sup>35</sup> <si perseveret et multiplicetur illa mutatio> add. B



σῶμα, τὸ μὲν γυμνάσιον ὑγιεινόν, ἢ δὲ ἡσυχία νοσερόν· ἡνίκα δὲ ἀναπαύσεως, ὑγιεινὸν μὲν ἢ ἡσυχία, νοσερόν δὲ τὸ γυμνάσιον· ὡσαύτως δὲ καὶ περὶ σιτίων καὶ πομάτων καὶ τῶν ἄλλων ἀπάντων· ἕκαστον γάρ, ἐπειδὰν δεομένῳ τῷ σώματι προσάγῃται μετὰ τῆς οἰκείας ποσότητος ὑγιεινὸν γίνεται· τὸ δὲ ἥτοι μῆδ' ὅλως δεομένῳ προσφερόμενον, ἢ οὐκ ἐν τῷ προσήκοντι μέτρῳ, νοσῶδες καθίσταται· καὶ δύο εἰσὶν οὗτοι σκοποὶ περὶ τε τὸ ὑγιεινὸν καὶ τὸ νοσερόν, ἢ ποιότης τε καὶ ἡ ποσότης τοῦ προσφερομένου· τὸ γὰρ καὶ τὸν καιρὸν, ὡς ἕτερόν τι τούτων, τρίτον ἐπεισάγειν ἐν τοῖς εἰρημένοις περιεχόμενον, οὐκ εὐλογον· εἰ γὰρ δεῖται τὸ σῶμα τοιοῦδε καὶ τοσοῦδε τοῦ προσφερομένου, δηλονότι καὶ κατὰ τὸν καιρὸν τὸν δέοντα προσφέρεται· καὶ ἡ γένεσις τῷ καιρῷ ἐκ τοῦ ῥευστὸν καὶ εὐμετάβλητον εἶναι τὸ θνητὸν σῶμα, καὶ δεῖσθαι κατὰ τὰς μεταβολὰς ἄλλοτε ἄλλοίων τῶν ὠφελούντων· ὥστε οὐκ ἔστι μὲν ἐν τῷ γένει τρίτον ἐν τοῖς εἰρημένοις ὁ καιρὸς· εἰς δὲ τὴν διδασκαλίαν αὐτῷ πολλάκις ὡς τρίτῳ χρώμεθα διὰ τὴν εἰρημένην αἰτίαν.

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24. Ἐπεὶ δὲ ἐν τούτοις τοῖς σκοποῖς τά τε ἄλλα τῶν αἰτίων τῶν ὑγιεινῶν καὶ τὸ νῦν ἡμῖν προκείμενόν ἐστι γένος, ἀνθὶς ἀναλάβωμεν αὐτά· τῇ τοίνυν ἀρίστη κατασκευῇ τοῦ σώματος, ἐπειδὰν μὲν εὐκρατον ἢ τὸ περιέχον, ἀρμόσει συμμετρία τῶν τε ἄλλων ἀκριβῆς, ὧν ἀρτίως εἶπον, ἡσυχίας τε καὶ κινήσεως, καὶ ὕπνου καὶ ἐγρηγόρσεως, καὶ τῶν προσφερομένων τε καὶ ἐκκρινομένων· ἐπειδὰν δὲ δύσκρατον, εἰς τοσοῦτον καὶ τὰς συμμετρίας ὑπαλλάττειν προσήκει, εἰς ὅσον καὶ

ment, exercise is healthy but rest is morbid. When the body needs relaxation, rest is healthy but exercise is morbid. The same applies with regard to foods, drinks and all the other things, for in each case, whenever these are applied in the proper amount to the body requiring them, they are healthy, whereas when they are applied to the body that doesn't need them at all, or are not applied in the proper measure, they become disease-producing causes. And these are the two objectives regarding health and disease—the quality and quantity of what is applied. To bring in the time as another and third of these factors, including it in those mentioned, is not reasonable, for if the body needs the provision of such and such a thing, clearly what is needed is introduced at the appropriate time. And the genesis of the need in terms of time derives from the fact that the body is subject to flux and changeability, and in relation to the changes, will require different beneficial factors at different times. As a consequence, the time is not a third in terms of class among those things spoken of. Often, however, for the purpose of teaching, we use it as a third for the reason mentioned.

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24. Since in these objectives there are the other healthy causes, and this is the class now lying before us, let us take these up again. Accordingly, in the best constitution of the body, when the ambient air is *eukratic*, and there is balance of the other things I spoke of just now—rest and movement, sleeping and waking, and those things taken in and excreted—this will be suitable. However, when the ambient air is *dyskratic*, it is appropriate to change the balance to the degree that there is loss of *eukrasia*. Objec-

τὰ τῆς εὐκρασίας διέφθαρται· σκοποὶ δὲ τῆς συμμε-  
 τρίας, ἐπὶ μὲν τοῦ περιέχοντος, ὡς μήτε φρίττειν διὰ  
 κρύος, μήθ' ἰδροῦν διὰ θάλπος· ἐν δὲ τοῖς γυμνασίοις,  
 ὅταν πρῶτον ἄρξηται πονεῖν τὸ σῶμα, καταπαύειν  
 εὐθύς· ἐν δὲ τοῖς ἐδέσμασι, πέψεως ἀκρίβεια, καὶ δια-  
 χωρήσεως συμμετρία κατὰ τε τὸ ποσὸν καὶ τὸ ποιόν·  
 371K ἰσάζει δὲ πῶς ἐπὶ τούτων ἡ ὄρεξις τῇ πέψει, ἵ ὥστε  
 οὐδ' ἐπιστάτου δέονται, τοῦ τὸ ποσὸν ἐκάστου τῶν  
 προσφερομένων μετρήσοντος· ἡ γὰρ ἀρίστη φύσις,  
 ὅσον ὀρέγεται, τοσοῦτον καὶ πέττει καλῶς· οὕτω δὲ  
 καὶ τῶν ὑπῶν τὸ ποσὸν ἡ φύσις αὐτῆ μετρεῖ τοῖς ἐν  
 ἀρίστη κατασκευῇ, καὶ παύονται τηνικαῦτα ὑπνοῦν-  
 τες, ὅταν μηκέτι δέηται τὸ σῶμα· καὶ δὴ καὶ οὕτως  
 αὐτῶν διαιτωμένων, ἐν ταῖς ἐκκρίσεσιν οὐδὲν πλημ-  
 μελείται κατὰ γαστέρα καὶ οὔρα καὶ ὄλον τὸ σῶμα.

τὰς μὲν γὰρ ἡ συμμετρία τῶν προσφερομένων, τὴν  
 δὲ καθ' ὄλον τὸ σῶμα διαπνοὴν ἡ τῶν γυμνασίων  
 ὑγιεινὴν ἀπεργάζεται· ἀπέχεσθαι δὲ δηλονότι τῆς  
 ἀμετρίας αὐτοὺς χρῆ ἀπάντων τῶν ψυχικῶν παθῶν,  
 ὀργῆς καὶ λύπης<sup>36</sup> καὶ θυμοῦ καὶ φόβου καὶ φθόνου·  
 ἐξίστησι γὰρ καὶ ταῦτα, καὶ ἄλλοιοὶ τὸ σῶμα τῆς  
 κατὰ φύσιν συστάσεως· ἀφροδισίων δὲ κατὰ μὲν  
 Ἐπίκουρον οὐδεμία χρῆσις ὑγιεινῆ· κατὰ δὲ τὸ ἀλη-

<sup>36</sup> B: *add.* <et gaudium> post λύπης and om. καὶ φροντίδος  
 post φθόνου

<sup>33</sup> See Bailey, *Epicurus*, 115 (F 51): "You tell me that the  
 stimulus of the flesh makes you too prone to the pleasures of love.

tives of balance in the case of the ambient air are that there  
 is neither shivering due to cold nor sweating due to heat.  
 In exercises, whenever the body first begins to be dis-  
 tressed, cease immediately. In foods, there should be per-  
 fect concoction, and in excretions perfect balance in re-  
 spect of amount and kind. In these cases, the appetite  
 should, in some way, be equal to the digestion, so there is  
 no need for a supervisor to measure the amount of each  
 of the things provided. For the best nature desires only as  
 much as it is able to digest well. In the same way too,  
 Nature itself measures the amount of sleep in those with  
 the best constitution, and under these circumstances, they  
 stop sleeping whenever the body no longer needs sleep.  
 Furthermore, when their way of life is like this, there is  
 nothing wrong in the excretions from the stomach, urine  
 and whole body.

Balance of the things provided brings these [healthy  
 excretions] about while moderation of exercises restores  
 healthy transpiration to the whole body. Obviously it is  
 necessary for people to keep away from the imbalance of  
 all the psychic affections—anger, grief, joy, passion, fear  
 and envy—for these bring changes and also change the  
 normal composition of the body. According to Epicurus,  
 abstinence from sexual intercourse is healthy,<sup>33</sup> although

Provided that you do not break the laws or good customs and do  
 not distress any of your neighbours or do harm to your body or  
 squander your pittance, you may indulge your inclination as you  
 please. Yet it is impossible not to come up against one or other of  
 these barriers: for the pleasures of love never profited a man and  
 he is lucky if they do him no harm." See also the detailed note at  
 Boudon, *Galen*, 427–28.

372K θές ἐκ διαλειμμάτων τηλικούτων, ὡς ἐπὶ ταῖς χρήσεσι μῆτ' ἐκλύσεως αἰσθάνεσθαι, καὶ κουφότερον αὐτὸν ἑαυτοῦ δοκεῖν γεγονέναι καὶ εὐπνότερον· ὁ δὲ καιρὸς τῆς χρήσεως, ὅταν ἀκριβῶς μέσον· ἢ τῶν ἔξωθεν περιστάσεων ἀπασῶν τὸ σῶμα, μῆθ' ὑπερπεπληρωμένον μῆθ' ἐνδεές μῆθ' ὑπερφυγμένον μῆθ' ὑπερθερμασμένον ἢ ἐξηρασμένον ἢ ὑγρασμένον ἀμέτρως· εἰ δὲ καὶ διαμαρτανόιεν ποτε κατὰ τι, σμικρὸν μὲν ἔστω τὸ διαμαρτανόμενον, ἄμεινον δὲ τεθερμασμένῳ μᾶλλον ἢ εἰφυγμένῳ, καὶ πεπληρωμένῳ<sup>37</sup> μᾶλλον ἢ κεκεωνένῳ, καὶ ὑγρασμένῳ μᾶλλον ἢ ἐξηρασμένῳ τῷ σώματι χρῆσθαι τοῖς ἀφροδισίοις· ποιότητα δὲ ἐκάστου τῶν εἰρημένων ἐπὶ τῆς ἀρίστης κατασκευῆς ἐκλέγεσθαι δεῖ· γυμνασίῳ μὲν γὰρ, ἐν ᾧ πάντα τὰ μόρια τοῦ σώματος ἀνάλογον κινεῖται, καὶ μὴ τὸ μὲν ὑπερπονεῖ, τὸ δὲ ἐνδεέστερον πονεῖ· τῶν δὲ ἐσθιωμένων τε καὶ πινομένων τὰ εὐκρατότατα· ταῦτα γὰρ οἰκειότατα ταῖς εὐκράτοις φύσεσιν· ὡσαύτως δὲ καὶ πῶς τῶν ἄλλων.

25. Εἰ δὲ τι τῆς ἀρίστης κατασκευῆς ἀπολείπεται τὸ σῶμα, μὴ πολλῶν δὲ τοῦτο, καὶ τὰ φυλακτικὰ τῆς ὑγείας αἴτια κατὰ τὴν ἀναλογίαν ὑπὸ ἀλλοτρίων γενήσεται· πλείονων δὲ τοιούτων ὄντων σωμάτων, καθ' ἕκαστον γένος ἰδίᾳ ῥητέον· τὸ μὲν οὖν τῇ κράσει τῶν ὁμοιομερῶν<sup>38</sup> | παραλλάττον, ἐν μέντοι τῇ συμμετρίᾳ τῶν ὀργανικῶν μορίων μὴ παραλλάττον, διττὴν ἰδέαν ἔχει τῶν ὑγιεινῶν αἰτίων· ἑτέραν μὲν τῶν φυλακτικῶν

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the truth is that it should be undertaken at intervals so great that in its uses there is no sensation of loss of strength, but one seems to become lighter than before and to be breathing better. The proper time of use is when the body is in a precisely balanced state in relation to all external circumstances, neither overfilled nor deficient, neither over-cooled nor over-heated, neither dried out nor moistened immoderately. If there is any error in these at any time, what is wrong should be small. And it is better for the body to have been heated rather than cooled, to be over-filled rather than emptied, and to be moist rather than dry when indulging in sexual intercourse. One needs to choose the quality of each of the things mentioned in relation to the best constitution. When exercising, this is for all the parts of the body to move in proportion, and none to be worked too much or too little. In the case of foods and drinks, it is the most *eukratic* that are the most fitting for *eukratic* natures. The same applies in the case of all the other things.

25. If a body is wanting somewhat of the best constitution, but not by much, the causes that preserve health will become changed in proportion. Since, however, there are many kinds of such bodies, we must speak of each class specifically. Thus, what creates a relatively small change in the *krasis* of the *homoiomeres* but does not create a change in the balance of the organic parts,<sup>34</sup> has two kinds of causes of health. One comprises those things that pre-

<sup>34</sup> The reference to *homoiomeres* is omitted in Boudon's text.

<sup>37</sup> μᾶλλον ἢ κεκεωνένῳ, B; ἢ ἐνδεεῖ K

<sup>38</sup> τῶν ὁμοιομερῶν *om.* B

των αὐτοῦ τὴν κρᾶσιν, ἑτέραν δὲ τῶν ἐπὶ τὴν ἀρίστην ἀγόντων· τὰ μὲν δὴ φυλάττοντα τὴν κρᾶσιν αὐτοῦ τοσοῦτον παραλλάξει τῶν ἐπὶ τῆς εὐκρατοτάτης φύσεως αἰτίων, ὅσον περ καὶ ἡ τοῦ σώματος ὅλου κρᾶσις ἐκείνης παραλλάττει· τὰ μὲν γὰρ θερμότερα σώματα θερμότερων δεῖται διαιτημάτων, τὰ δὲ ψυχρότερα ψυχρότερον· καὶ τὰ μὲν ξηρότερα τῶν ξηροτέρων, τὰ δὲ ὑγρότερα τῶν ὑγροτέρων· καὶ κατὰ συζυγίαν τὰ θερμότερά καὶ ξηρότερα τῶν θερμότερων καὶ ξηροτέρων, καὶ τούτοις ἀνάλογον ἐπὶ τῶν λοιπῶν τριῶν συζυγιῶν· χρήσεται δὲ ταῖς ὕλαις τῶν αἰτίων ὀρθῶς ὁ τὰς συμφύτους αὐτῶν δυνάμεις ἐπιστάμενος· οἶον ὅτι κίνησις μὲν καὶ ἔνδεια καὶ ἀγρυπνία καὶ ἔκκρισις καὶ πάντα τὰ ψυχικὰ πάθη ξηραίνει τὸ σῶμα, τὰ δ' ἐναντία τούτοις ὑγραίνει· οὕτως δὲ καὶ περὶ τῶν θερμαινόντων καὶ ψυχόντων ἐπιτηδευμάτων τε καὶ ἐδεσμάτων καὶ πομάτων, καὶ ἀπλῶς εἰπεῖν ἀπάντων τῶν |

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κατὰ τὸ σῶμα γινώσκων τις τὰς ὕλας καὶ τὰς δυνάμεις, ὑγιεινοῖς αἰτίοις χρήσεται, τὰς ὁμοίας τοῖς ὁμοίοις προσφέρων, ὅταν γε φυλάττειν βούληται τὴν τοῦ σώματος κρᾶσιν, ἣν παρέλαβεν.

εἰ δ' ἐξαλλάττειν ἐθέλει καὶ μετάγειν ἐπὶ τὸ βέλτιον, ἑτερόν ἐστιν ἐνταῦθα γένος αἰτίων ὑγιεινῶν, ἐναντίον μὲν τοῖς προειρημένους, ἴσον δὲ ἀπέχον ἐπὶ θάτερα τῶν εὐκράτων τε καὶ μέσων, ἃ ταῖς ἀρίσταις φύσεσιν ἀρμόττειν ἐλέγομεν· τὴν γὰρ θερμότεραν τε καὶ ξηρότεραν κρᾶσιν οὐ τὰ θερμὰ καὶ ξηρὰ διαιτήματα ποιήσειεν ἂν εὐκρατον ἀκριβῶς, ἀλλὰ το-

serve its *krasis* while the other comprises those things that lead to the best [constitution]. Now causes that preserve its *krasis* will differ from the causes of the most *eukratic* nature by as much as the *krasis* of the whole body differs from that nature. Thus hotter bodies require hotter regimens, colder bodies colder regimens, drier bodies drier regimens, and moister bodies moister regimens. And in terms of conjunctions, hotter and drier bodies require hotter and drier regimens, and the requirements are analogous in the remaining three conjunctions. Those who know their innate capacities will use the materials of the causes correctly—for example, that movement, deficiency, insomnia, excretion and all the psychical affections dry the body whereas those opposite to these moisten the body. The same also applies to heating and cooling practices, and foods and drinks, and in a word, with all those things that affect the body, someone who knows the materials and capacities will use health-producing causes, applying like to like whenever he wishes to preserve the *krasis* of the body of which he has care.

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If, however, he should wish to change and convert it to something better, there is here a different class of causes of health, opposite to those previously spoken of, and differing to an equal degree from those others of the *eukratic* and median kind which I said are suitable for the best natures. Hot and dry regimens will not make a hotter and drier *krasis* perfectly *eukratic*; it will require a regimen

σοῦτω τῆς εὐκράτου ψυχρότερα τε καὶ ὑγρότερα ταῖς κράσεσιν, ὅσπερ καὶ ἡ φύσις τῆς φύσεως ἦν θερμότερα καὶ ξηρότερα· τὸ μὲν γὰρ τοιοῦτον γένος τῶν αἰτίων ἐπανορθοῦται τὰς συμφύτους δυσκρασίας, τὸ δ' ἕτερον τὸ προειρημένον διαφυλάττει χρεῖα δ' ἑκατέρων ἐν μέρει τοῖς ἰατροῖς, ἐπανορθοῦσθαι μὲν ἐπὶ πολλῆς σχολῆς, κατὰ βραχὺ μετάγοντας ἐπὶ τὸ βέλτιον· οὐ γὰρ φέρονσιν αἱ φύσεις τὰς ἀθροῦς ἀλλοιώσεις· φυλάττειν δὲ ἐν | ταυτῷ κατὰ τὰς ἀναγκαίας ἀσχολίας.

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πῶς οὖν καὶ τὸ τοιοῦτον εἶδος τῶν αἰτίων φυλακτικὸν ὀνομάζομεν; ἔπρεπε γὰρ αὐτὸ μᾶλλον ἴσως ἀλλοιωτικὸν τε καὶ θεραπευτικὸν, καὶ τῶν συμφύτων ἀμαρτημάτων ἐπανορθωτικὸν κεκλήσθαι ὅτι πρὸς ὅλον τὸ γένος τῆς ὑγείας ἀναφέροντες, οὐ πρὸς τὰς κατ' εἶδος ἐν αὐτῇ διαφοράς, ὅσα μὲν ὑγιαίνοντας φυλάττει, φυλακτικὰ πάντα κεκλήκαμεν, ἔάν τε πρὸς τῷ φυλάττειν τὴν ὑγείαν ἐπὶ τὸ βέλτιον ἄγη τὴν ὅλην κρᾶσιν, ἂν τε φυλάττη τὴν ἐξ ἀρχῆς ὑπάρχουσαν· ὅσα δὲ χείρονα τὴν κατάστασιν ἀποτελεῖ, νοσερά· τῶν μὲν οὖν ὁμοίως δυσκράτων ἅπασιν τοῖς τοῦ σώματος μέρεσιν ὁμοία καὶ ἡ ἐπιμέλεια· τῶν δ' ἀνομοίων οὐχ ὁμοία· δύναται γὰρ ἢ μὲν γαστήρ τινὶ ψυχρότερα τοῦ προσήκοντος ὑπάρχειν, ἢ κεφαλὴ δὲ θερμότερα, καὶ δεῖσθαι τῶν οἰκείων ἑκατέρα· κατὰ ταῦτα δὲ καὶ τῶν ἄλλων ἕκαστον μορίων ἢ ὑγρότερον ἢ ξηρότερον ἢ θερμότερον ἢ ψυχρότερον ὑπάρχον τοῦ συμμέτρου, τῶν οἰκείων τῆς δυσκρασίας δεῖσθαι διαιτημάτων.

that is colder and moister than the *eukratic* in terms of *krasias*, to the degree that the nature was hotter and drier than that (*eukratic*) nature. Such a class of causes restores the innate *dyskrasias* while the other previously mentioned class preserves them. The use of either of these two kinds by doctors is restorative over a long time and effects a gradual change to what is better, for natures don't tolerate sudden changes. When people are constrained by necessary occupations, preserve them in the same state.

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Why, then, do we call such a kind of causes "preserving?" Perhaps it would have been more appropriate to have called this kind "transforming" or "therapeutic" or "restorative of innate defects," but since they refer to the whole class of health and not to the differences in it in terms of kind, we have called all those that preserve people in health, "preservative" if, in addition to preserving health, they lead the whole *krasis* to a better state or preserve the state that existed from the start. On the other hand, those that make the state worse are "morbid" causes. Thus, if all the parts of the body are similarly *dyskratic*, the cure is also similar, but if the *dyskrasias* are not similar, the cures are not similar. So it is possible for the stomach in someone to be colder than is appropriate but the head to be hotter, and each will need its own remedy. The same applies to each of the other parts, if they are moister, drier, hotter or colder than a balanced state. They will need specific regimens for the *dyskrasia*. We shall not, then, exer-

376K οὐτ' οὖν ἐξ ἴσου γυμνάσομεν ἅπαντα | τῶν τοιούτων  
τὰ μόρια τοῦ σώματος, οὐθ' ὡσαύτως ὑγρανοῦμεν ἢ  
ξηρανοῦμεν, ἢ τι τῶν ἄλλων πράξομεν· ἐπὶ πλεόν δὲ  
λέγεται περὶ αὐτῶν ἐν τῇ τῶν ὑγιεινῶν πραγματείᾳ.

26. Τὰ δὲ τῶν ὀργανικῶν μορίων αἰτία ὑγιεινὰ κατὰ  
τὸ σφάλμα κἀνταῦθα τῆς ἀρίστης κατασκευῆς ἀλ-  
λήλων διενήροχεν· ἄλλα μὲν γάρ ἐστιν ὑγιεινὰ τῶν  
παρὰ τὴν διάπλασιν σφαλμάτων, ἄλλα δὲ τῶν παρὰ  
τὸ μέγεθος ἢ τὸν ἀριθμὸν ἢ τὴν θέσιν· ἐν μὲν οὖν τῇ  
διάπλασει πλείω τὰ σφάλματα· καὶ γὰρ καὶ τὸ σχῆμα  
τοῦ μορίου, καὶ εἴ ποῦ τις ἐν αὐτῷ κοιλότης ἐστὶ κατὰ  
φύσιν, ἢ πόρος ἢ στόμιον ἢ τραχύτης τις ἢ λειότης,  
ὅταν ἐξιστῆται τῆς οἰκείας συμμετρίας, ἐπ' ὀλίγου  
μὲν τοῦτο πάσχον, τῆς τῶν ὑγιεινῶν σωμάτων ἔχε-  
ται προσηγορίας, ἐπὶ πλεόν δὲ τῆς τῶν νοσῶδων· εἰ  
δ' ἐπὶ τοσοῦτον, ὡς βλάπτειν τὴν ἐνέργειαν, ἤδη νο-  
σεῖν λεχθήσεται.<sup>39</sup> κατὰ δὲ τὸ ποσὸν ἢ ὑπερβολὴ τε  
καὶ ἔλλειψις εἰς τὰς αὐτὰς ἄγει διαφοράς· ἐν ἀριθμῷ  
377K δὲ λείπον ἢ περισσεῖον ὀτιοῦν | τῶν ὁμοιομερῶν ἐν ἢ  
πλείω. τούτου τοῦ γένους εἰσὶ καὶ ὅσαι παρὰ φύσιν  
ἐν ἡμῖν οὐσίαι συνίστανται. λοιπὸν δ' ἐστὶ γένος  
ἄλλο παρὰ τὴν θέσιν ἐκάστου τῶν ἀπλῶν μορίων, ἐν  
ᾧ καὶ αὐτῷ τέτταρες αἱ πᾶσαι γίνονται διαφοραί·  
πρώτη μὲν ἢ ἀρίστη· δευτέρα δὲ ἢ βραχύ τι παρα-  
λάττουσα καὶ διὰ τοῦτο ἔτι ὑγιεινὸν ἀποτελοῦσα τὸ  
σῶμα· καὶ τρίτη τὸ νοσερόν, ὅταν ἐπὶ πλεόν ἐξιστῆ-  
ται· καὶ τετάρτη τὸ ἤδη νοσοῦν, ὅταν ἐπὶ πλείστον.

cise all the parts of the body of such people equally, nor 376K  
will we moisten or dry, or do one of the other things in the  
same way. More is said about these matters in the treatise,  
*On the Preservation of Health (Hygiene)*.<sup>35</sup>

26. The healthy causes of the organic parts are also  
here differentiated from each other in respect of the fault  
of the best constitution, for there are not only those that  
are health-producing for the faults due to conformation,  
but also for those due to size, number and position. The  
faults in conformation are greater in number, for there is  
the shape of the part, and whether there is a cavity in it  
naturally, or channel or opening, or roughness or smooth-  
ness, should these depart from their proper proportions.  
If this affection is slight, the bodies may be termed healthy  
bodies, but if it is greater, they are called morbid bodies.  
If the abnormality is great enough to damage function,  
it will now be called diseased. Excess and deficiency in  
amount lead to the same differences. In number, [the fault  
is when there is] any lack or abundance whatsoever of the  
*homoiomerous* bodies, either one or more. Also of this 377K  
class are those substances existing in us that are contrary  
to nature. The other and remaining class is that due to the  
position of each of the simple parts and in this itself there  
are also four *differentiae* in all. First, there is the best;  
second, there is some slight change and because of this the  
body is still healthy; third, when the deviation is still more  
the body is unhealthy; and fourth, when it reaches its  
greatest extent, the body is now diseased.

<sup>35</sup> *San. Tuend.*, VI.1-451K; see esp. VI.1-10.

<sup>39</sup> *om. λεχθήσεται B*

ὅσα μὲν οὖν ἡμάρτηται μόρια κατὰ τὸ σχῆμα, καθάπερ ὅσα βλαισὰ καὶ ραιβὰ καὶ φοξά, ταῦτα νεογενῆ μὲν ἔτι ὄντα καὶ ἀπαλὰ διαπλάσει τε καὶ ἐπίδεσει εἰς τὸ κατὰ φύσιν ἐπανέρχεται σκληρὰ δ' εἰ φθάσειεν αὐξηθέντα γενέσθαι, τὴν ἐπανόρθωσιν οὐ προσίεται· καὶ μὲν δὴ καὶ ὅσα περὶ τὴν κοιλότητα ἡμάρτηται, καὶ ταῦτα ὡσαύτως ἐπανορθοῦνται μὲν ἔτι αὐξανόμενα, τελειωθέντα δὲ οὐ δύναται· μικρὰς μὲν οὖν κοιλότητος ἐπίδεσις τε καὶ ἡσυχία, μεγάλας δὲ ἐνέργειά τε τῶν μερῶν καὶ κατάληψις ἐργάζεται πνεύματος· οὕτως δὲ καὶ ὅσα κατὰ πόρους ἢ | στόμια· καὶ μὲν δὴ καὶ ὅσα μείζω τοῦ δέοντος, ἡσυχία τε καὶ ἐπίδεσις ἐπιτήδειος ἐλάττονα πέφυκεν ἐργάζεσθαι· μείζω δ' ἀποτελεῖ τὰ μόρια κινήσις ἢ κατὰ φύσιν ἅμα τρίψει συμμέτρῳ, καὶ τοῖς ἄλλοις, ὅσα πέφυκεν ἐπισπᾶσθαι πλέον αἷμα.

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τῶν δὲ ἐλλειπόντων μορίων, ὅσα μὲν ἐξ αἵματος ἔχει τὴν γένεσιν, οὐκ ἀδύνατος ἢ ἐπανόρθωσις· ὅσα δὲ ἐκ σπέρματος, ὀλίγου δέιν ἀδύνατος· ἔστι δ' ὅμως ἀντ' αὐτῶν ἐνίοτε ποιεῖν ἕτερα παραπλησίαν ἐκείνοις ἔχοντα τὴν χρείαν· ἀπάντων δ' αὐτῶν ἢ μὲν φύσις ἐστὶ δημιουργός, ὁ δ' ἰατρὸς ὑπηρέτης· ὅσα δὲ περιτενεῖ κατ' ἀριθμὸν, ἀφαίρεσις αὐτῶν ἐστὶν αἴτιον ὑγιεινόν· ἐπισκέπτεσθαι δὲ δεῖ, ἐφ' ᾧ δυνατόν· εἰ δ' ἀδύνατον φαίνοιτο, μετατιθέναι πειρᾶσθαι· ἢ δ' αὐτῇ καὶ τῶν παρὰ τὴν θέσιν ἡμαρτημένων ἐπανόρθωσις· εὐδηλον δέ, ὡς δύο καὶ τρία πολλάκις ἀμαρτήματα δύναται συστῆναι περὶ μόριον ἓν, ὥσπερ ἐπὶ τοῦ τὴν

Those parts that are abnormal in form, like those that are crooked, bent or slanting, can be returned to an accord with nature by molding and binding, when they are newly formed and still soft. However, if they have grown beforehand and become hard, they do not allow of restoration. Furthermore, those that are abnormal in respect of a cavity can similarly be restored while still growing, but once growth is completed, this is not possible. Thus, cavities are made small by binding and rest, but large by function of the parts and retention of *pneuma*. The same also applies to abnormalities of channels or openings. Those that are larger than they should be are naturally reduced by rest and suitable binding, while what makes the parts larger is normal movement along with moderate massage and those other things that draw in more blood naturally.

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Among deficient parts, those that have their genesis from blood are not impossible to restore whereas those that are generated from semen are almost impossible to restore. Nevertheless, instead of these, it is sometimes possible to make other parts having nearly the same use as them. Nature is the demiurge of all these; the doctor is merely her servant. With those that are in excess numerically, removal of them is a cause of health. It is, however, necessary to consider in which cases this is possible. If it seems impossible, attempt to effect a transfer. The same restoration also applies for those parts that are abnormal in position. Clearly it is often possible for two or three abnormalities to coexist in one part. A case in point [was

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γαστέρα μικράν τε ἅμα καὶ στρογγύλην καὶ κατὰ τοῦ διαφράγματος ἐπικειμένην ἔχοντας· ἡμάρτητο γὰρ ἐν αὐτῇ μέγεθός τε καὶ διάπλασις καὶ θέσις· ἦν δὲ καὶ τῇ | κράσει ψυχροτέρα· ταύτην εἰς μὲν τὸ κατὰ φύσιν ἀγαγεῖν ἀμήχανον ἦν· ὥστε δὲ ἦττον ὑπ' αὐτῆς ἐνοχλείσθαι, δυνατὸν· ἐπειδὴ γὰρ ἐδυσπνόει, πληρωθείσης τῆς γαστροῦ, ἐλάττονά τε καὶ τρόφιμα καὶ μὴ βραδέως ὑπιόντα προσεφέρετο τρις τῆς ἡμέρας· ἄλλω δέ, ἐμφράξεως ἐν ἥπατι διὰ τὴν στενότητα τῶν ἀγγείων συνεχέστατα γινομένης, ὑγιεινὸν αἷτιον ἐξευρέθη ἢ λεπτύνουσα δίαιτα.

27. Λοιπὸν οὖν ἔτι γένος ἐν κοινὸν ὁμοιομερῶν τε καὶ ὀργανικῶν ἐστίν ἢ λύσις τῆς συνεχείας, ἣν ἴσως τις οὐ συγχωρήσει τοῖς ἀμέμπτως ὑγαίνοισιν ὑπάρξαι ποτέ, εἶναι γὰρ ἀεὶ πάθος· οὐκ εἰδὼς ὁμοίαν ἀπορίαν ἐσομένην ὑπὲρ ἀπάντων τῶν γενῶν· εἰ μὴ γὰρ ἐνεργείας αἰσθητῆ βλάβῃ διορίζοιτο τὸ νόσημα τῆς ὑγείας, ἀλλὰ κατὰ τὸ ποῖον τῆς διαθέσεως ἐπωοῖτο μόνον, ἀναγκαῖον ἔσται τὸ τῆς ἀεিপαθείας προσδέξασθαι δόγμα, μηδενὸς ἀρίστας ἔχοντος τὰς ἐνεργείας ἀπάσας· ἀλλὰ τοῦτο μὲν, ὡς ἂν λογικώτερον σκέμμα, καθ' ἑαυτὸ λόγου τυχανέτω. |

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28. Τὰ δ' ὡς πρὸς τοὺς ὁμολογουμένως νοσοῦντας ὑγιεινὰ τῶν αἰτίων ἐξῆς διέλθωμεν, ἀπὸ τοῦ τῆς δυσκρασίας ἀρξάμενοι γένους· διοριστέον οὖν ἐνταῦθα πρότερον, ὅπερ ὀλίγου δεῖν ἅπαντες οἱ ἰατροὶ παραλείπουσιν, ὡς ἄλλα μὲν ἐστὶν ὑγιεινὰ τῆς ἤδη γεγενημένης δυσκρασίας, ἄλλα δὲ τῆς ἔτι γινομένης,

a person who had] a stomach that was, at one and the same time, small, round and pressing against the diaphragm, so that its size, conformation and position were abnormal. Also it was colder in *krasis*. It was impossible to bring this to an accord with nature, although it was possible to lessen the distress due to it. Thus, when the stomach was full, the patient suffered dyspnea, so three times a day he was given nourishment that was less in amount and not eliminated slowly. In another case, when there was recurrent obstruction in the liver due to narrowness of the vessels, a thinning diet was found to be a cause of health.

379K

27. There still remains one class, common to *homoiomeres* and organs—dissolution of continuity—which perhaps some would deny can even exist in those who are faultlessly healthy, but is always an affection.<sup>36</sup> This is to be unaware that a similar problem will exist in all the classes. Thus, if a perceptible damage to function does not distinguish disease from health, but only the kind of condition is considered, it will be necessary to accept the doctrine of “perpetual affection,”<sup>37</sup> since no one has all the functions optimal. But this, since it is a more theoretical issue, should have a discussion to itself.

28. Let us pass next to the causes of health in those who are, by general agreement, diseased, starting from the class of *dyskrasia*. Here we must first make the distinction which almost all doctors neglect—that some causes are healthy in a *dyskrasia* that has already occurred while others are healthy in a still evolving *dyskrasia*, just as there

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<sup>36</sup> See Galen, *Morb. Diff.*, 11 (VI.871–72K); *Caus. Morb.*, 11 (VII.37–41K); and *MM*, 3–6 (X157–455K).

<sup>37</sup> See note 11 above.



381K ὡσπερ γε καὶ τῆς γενησομένης ἄλλα ταύτης μὲν οὖν τῆς ὑστάτης τὰ μὲν ἐν τῷ προφυλακτικῷ μέρει τῆς τέχνης ἐστί, τὰ δὲ ἐν τῷ ὑγιεινῷ· τῆς δὲ πρώτης ἀπασῶν ἐν τῷ θεραπευτικῷ μόνῳ· τῆς δ' ἀμφοῖν μέσης λεχθείσης ἐν τῷ προφυλακτικῷ τε καὶ θεραπευτικῷ. τὴν μὲν γὰρ ἤδη γεγενημένην τε καὶ οὖσαν νόσον ἰᾶσθαι χρή· τὴν δ' οὐπω μὲν οὖσαν, ἐσομένην δὲ ἐκ τῆς κατὰ τὸ σῶμα διαθέσεως κωλύσαι γενέσθαι· τῆς γινομένης δέ, τὸ μὲν ἤδη γεγονὸς ἰᾶσθαι, τὸ γενησόμενον δὲ κωλύσαι γενέσθαι· κωλυθήσεται δέ, τῆς διαθέσεως ἐφ' ἧ γίνεσθαι πέφυκεν, ἀναιρεθείσης· ὀνομάζεται δὲ ἡ τοιαύτη διάθεσις αἰτία προηγουμένη· ἡ γεγονυῖα δὲ ἢ νόσος ἤδη θεραπευθήσεται, τῆς διαθέσεως ὑφ' ἧς πρώτως ἢ κατὰ φύσιν ἐνέργεια βλάπτεται, λυθείσης, ἢ ὑπερ δὴ καὶ αὐτὴν φαμέν εἶναι τῆς νόσου τὴν αἰτίαν. ἢ δ' ἰασις ἕνα μὲν ἔχει τὸν πρῶτον καὶ τὸν κοινότατον σκοπόν, αὐτῷ τῷ μέλλοντι λυθήσασθαι τὸ ἐναντίον· ἐκ τούτου δὲ τοῦ γένους ἐστὶ πάντα τὰ δημιουργοῦντα τὴν ὑγίαν αἴτια, κατὰ μέρος δὲ ἐκ τῶν καθ' ἕκαστον ἐναντίων· τῇ μὲν οὖν θερμῇ διαθέσει τὸ ψυχρὸν αἴτιον ἐναντίον ἐστί, τῇ ψυχρῇ δὲ τὸ θερμόν, ἐπὶ τε τῶν ἄλλων ἀνάλογον· εἰ γὰρ ἄμετρον μὲν ἅπαν τὸ παρὰ φύσιν, σύμμετρον δὲ τὸ κατὰ φύσιν, ἀνάγκη πᾶσα τὸ ἄμετρον ὑπὸ τοῦ κατὰ τοῦναντίον ἀμέτρου πρὸς τὸ σύμμετρον ἐπανελεῖν· εὐδηλον δέ, ὡς τὸ κατὰ δύναμιν, οὐ τὸ κατὰ φαντασίαν θερμαίνον τε καὶ ψύχον, ὅσα τ' ἄλλα τοιαῦτα, ληπτέον ἐστί· καλῶ δὲ κατὰ δύναμιν μὲν, ὅπερ ὄντως

are also others for a *dyskrasia* that will occur. Of the last *dyskrasia*, some causes fall within the prophylactic part of the art and some within the hygienic. Of the first group, all causes fall within the therapeutic part alone. Of the *dyskrasia* in between both those mentioned, the causes of health are both the prophylactic and the therapeutic. A *dyskrasia* that has already occurred and is a disease must be cured. What doesn't yet exist but will exist, coming about from the condition of the body, must be prevented. Of what is evolving, what has already come about must be cured and what will come about must be prevented. It will be prevented when the condition from which it will naturally come about is removed. Such a condition is called a *proegoumenic* (internal antecedent) cause. A disease which has already occurred will be cured when the condition from which the function in accord with nature is primarily damaged is resolved. This is really what we call the cause of the disease. The cure has one primary and completely general objective, which is the opposite to what is going to be resolved. From this class are all those things which work as causes of health individually from the opposites in each case. In a hot condition, then, cold is the cause that is opposite, while in a cold condition it is heat, and analogously in the case of the others. Thus, if everything unbalanced is contrary to nature and everything balanced is in accord with nature, it is necessary to restore everything that is unbalanced to a balance by the due measure of the opposite. It is clear that what one must undertake relates to the capacity and not to the impression of heating the cold, and other such things. I call relating

382K τε καὶ ἀληθῶς ἐστὶν οἷον λέγεται κατὰ φαντασίαν δέ, τὸ τῇ προχείρῳ μὲν αἰσθήσει τοιοῦτον εἶναι φανταζόμενον, ὄντως δὲ οὐκ ὄν τοιοῦτον· ὅπως δὲ χρῆ γινώριζεν αὐτά, ἐν τῇ περὶ τῆς τῶν ἀπλῶν φαρμάκων |

383K εἰς δὲ τὴν εὕρεσιν τῶν ὑγιεινῶν αἰτίων, ὅσα μὲν ὡς πρὸς τὴν ἤδη γεγενημένην νόσον ἐστὶν ὑγιεινά, τῇ μεθόδῳ χρηστέον ἢ τὸ κατὰ φαντασίαν διορίζεται τοῦ κατὰ δύναμιν. ὅσα δὲ ὡς πρὸς τὴν ἔτι γινομένην, αὐτῇ τε ταύτῃ, καὶ προσέτι καθ' ἣν ἐξευρίσκεται τὰ τῶν νοσημάτων αἷτια· φέρε γάρ, εἰ οὕτως ἔτυχεν, ἐπὶ χυμοῖς σηπομένοις ἀνάπτεσθαι πυρετόν, ἔνδειξις ἐπὶ τοῖς τοιοῦτοις ἀλλοιώσις τε καὶ κένωσις ἐστὶν ἀλλοίωσις μὲν ἢ παύουσα τὴν σηπεδόνα, μενούσης τῆς οὐσίας, κένωσις δὲ ἢ ὅλην ἐκ τοῦ σώματος ἐξάγουσα τὴν οὐσίαν<sup>40</sup> ἀλλὰ τὸ μὲν εἰρημένον εἶδος τῆς ἀλλοιώσεως πέψις ἐστίν, ἣν ὑπὸ τίνων αἰτίων ἐγχωρεῖ ποιεῖν ἐξευρόντες, ἐν ἐκείνοις ἂν ἔχοιμεν ἤδη τὴν γνῶσιν τῶν οὕτως ὑγιεινῶν· αἱ κενώσεις δὲ διὰ τε φλεβοτομίας καὶ κλυστήρων καὶ οὖρων καὶ τῆς κατὰ τὸ δέρμα διαπνοῆς εἰσιν, ἔτι δὲ ἀντισπάσεως τε καὶ μετοχευέσεως εἰς ἕτερα· τούτου γὰρ τοῦ γένους ἐστὶ καὶ τὸ καταμήνια κινήσαι καὶ αἱμορροΐδας ἀναστομῶσαι, καὶ | διὰ ῥινῶν καὶ ὑπερώας καθάραι· ἐξευρόντες οὖν κἀνταῦθα τὰς ὕλας, αἷς ἐν καιρῷ καὶ ποιότητι καὶ ποσότητι καὶ τρόπῳ τῆς χρήσεως προσφερομέναις ἢ

<sup>40</sup> οὐσίας/οὐσίαν B; αἰτίας/αἰτίαν K

to capacity that which is really and truly as it is described, and relating to the impression that which just seems to be so to external perception, but is not really so. How we must recognize these things is described in the treatise, 382K *On the Nature and Powers of Simple Medications*.<sup>38</sup>

For the discovery of the health-producing causes—those that are health-producing in relation to the disease that has already occurred—we must use the method by which what relates to impression is distinguished from what relates to capacity. For those health-producing causes that pertain to a still evolving disease, we must use the same method, and besides this, that by which the causes of diseases are discovered. Let us suppose, as may happen, that a fever is kindled by putrefying humors. In such cases the indication is for change and evacuation. Change puts an end to the putrefaction; if the cause remains in existence, evacuation removes the whole cause from the body. But the kind of change spoken of is concoction. If we discover by what causes it is possible to effect this, we already have in those cases the knowledge of healthy causes in this way. The evacuations are by phlebotomy, clysters, the urine and transpiration through the skin, as well as revulsion and diversion to other places. Belonging to this class are setting in motion the menstrual flow, opening up of hemorrhoids, and purifications through the nostrils and palate. Therefore, if we discover the materials through which, when applied with due regard to time, 383K quality, quantity and manner of use, evacuation occurs, we

<sup>38</sup> *Simpl. Med.*, XI.369–892K and XII.1–377K.

κένωσις γίνεται, κατ' αὐτὸ τὸ μέρος τῆς τέχνης εὐρήσομεν ὑγιεινά· καὶ γέγραπται πάντων ἢ εὐρεσις ἐν τῇ θεραπευτικῇ πραγματείᾳ.

κατὰ δὲ τὸν αὐτὸν τρόπον ἐπὶ ταῖς ἄλλαις δυσκрасίαις ταῖς τρισίν, ἐν κοινὸν ἔχοντες παράγγελμα, τὸ ποιῶν ἐκάστον αὐτῶν αἰτίαν<sup>41</sup> ἐκκόπτειν πρότερον, εἴθ' οὕτως ἤκειν ἐπὶ τὸ γεγονός ὑπ' αὐτοῦ νόσημα, τὴν τῶν ὑγιεινῶν αἰτίων εὐρεσιν ποιησόμεθα· κατὰ δὲ τὰς συνθέτους δυσκрасίας, ἢ ἐκ τῶν ἀπλῶν σύνθεσις ἐνδείξεται τὰ ὑγιεινὰ παραγγέλματα, κἀνταῦθα ἔχόντων ἡμῶν ἀνάλογον φάρμακον τῷ μεγέθει τῆς δυσκрасίας, τὸ πρὸς ἐκείνην ἀρμόττον, ἐξευρίσκειν· οἶον, εἰ οὕτως ἔτυχεν, ἐάν δέκα μὲν ἀριθμοῖς ἐπὶ τὸ θερμότερον ἐξεστήκη τοῦ κατὰ φύσιν, ἑπτὰ δ' ἐπὶ τὸ ξηρότερον· εἶναι δὴπου χρὴ καὶ τὸ ὑγιεινὸν αἴτιον ἐπὶ ταῖς τοιαύταις διαθέσεσι δέκα μὲν ἀριθμοῖς ψυχρότερον, ἑπτὰ δὲ ὑγρότερον· εἰ μὲν οὖν αὐτῷ τῷ πεπονθότι μορίῳ προσάγοιτο | τοιοῦτον φάρμακον, εἰς τοσοῦτον ἔστω ψυχρότερόν τε καὶ ὑγρότερον, εἰς ὅσον ἢ ἐνδείξις κελεύει διὰ βάθους δὲ κειμένου τοῦ πεπονθότος, ἐπιτεχνᾶσθαι χρὴ τοιοῦτον ἐργάζεσθαι τὸ ὑγιεινόν, ὡς μὴ φθάνειν ἐκλύεσθαι κατὰ τὴν ὁδόν· εἰ μὲν οὖν θερμότερον εἶναι δέοι τοῦ συμμέτρου, μὴ τοσοῦτον μόνον ἔστω θερμότερον, ὅσον δέεται τὸ πάθος, ἀλλ' ἐξ ἐπιμέτρου προσκείσθω τὸ διὰ τὴν θέσιν ἀναγκαίως προσερχόμενον· εἰ δὲ ψυχρότερον, οὐχ ἀπλῶς χρὴ τοσοῦτον ποιεῖν αὐτὸ ψυχρότερον, ἀλλὰ καὶ τὴν ὕλην σκοπεῖσθαι πρότερον.

will discover in the same part of the art, the healthy causes. The discovery of all these has been described in *The Method of Medicine*.<sup>39</sup>

The same applies to the other three *dyskrasias*, since they have a single common precept, which is first to eradicate the effecting cause in each case, and then to come to the disease that has occurred due to it. This is how we shall make the discovery of the causes of health. In respect of the compound *dyskrasias*, their compounding from the simple components shows the prescriptions for health. And even here, if we have a medication proportional in magnitude to the *dyskrasia*, we shall find this suitable for the latter. For example, should there happen to be a deviation of ten parts in number toward what is hotter than normal and seven toward what is drier, it is obvious that the health-producing cause in such conditions must be colder by ten magnitudes and moister by seven. Thus, if such a medication is applied to the affected part itself, it should be colder and moister to the extent the indication demands. If the affected part is deeply placed we must attempt to contrive a health-producing medication whose efficacy is not dissipated beforehand during its passage. Thus, if it needs to be hotter than the normal balance, it should not only be hotter to the degree the affection requires but also an extra measure should be added to the extent that is necessary for it to come to the due position. If, on the other hand, it is colder, we must not simply make it colder, but also consider the material first.

384K

<sup>39</sup> MM, X.1-1021K. For an English translation of this work, see Johnston and Horsley, *Galen: Method of Medicine*.

<sup>41</sup> ἐκάστον αὐτῶν αἰτίαν B; ἕκαστον K

εἰ μὲν γὰρ παχυμερές ἐστίν, οὐχ ὁδοιπορήσει  
 μέχρι βάθους πολλοῦ· τούναντίον δὲ ἐνίοτε πάν ἐρ-  
 γάσεται πυκνώσαν τὴν ἐπιφάνειαν· εἰ δὲ λεπτομερές  
 ὑπάρχει, δυνατόν ἐξικέσθαι μέχρι πλείονος βάθους·  
 οὕτως δὲ κατὰ τῶν ὑγραυνόντων τε καὶ ξηραυνόντων  
 τὸ παχυμερές καὶ λεπτομερές τῆς οὐσίας ἐπισκε-  
 πτέον· ἀπὸ μὲν δὴ τῆς θέσεως τοῦ πεπονθότος τόπου  
 ἢ ἐνδείξεις εὐρίσκει τὸ ὑγιεινόν, ὡς εἴρηται νῦν· ἀπὸ δὲ  
 τῆς διαπλάσεως τε καὶ θέσεως, ὅταν ἐκροὰς αἰσθητὰς  
 ἔχη συντετρημένας εἰς ἕτερον, ἢ μηδεμίαν ἔχη. τὰς  
 385K μὲν ἰὰρ εἰς τὰ κυριώτερα φερούσας ἐκροὰς ἀποτρέ-  
 ψομεν, ἐρεθίσομεν δὲ τὰς εἰς μὴ ἀκυρότερα· δῆλον δὲ  
 ὡς τῶν ποιούντων αἰτίων τὴν δυσκрасίαν ἢ διὰ τῆς  
 κενώσεως ἐστίν ἴασις· αὐτῶν δὲ τῶν δυσκрасιῶν μό-  
 νον ἀλλοίωσις ἢ ἴασις ἐστίν.

29. Λυθείσης δὲ τῆς συνεχείας, ὁ μὲν τῆς ἰάσεως  
 σκοπός, ἢ ἔνωσις, ἐπὶ μὲν τῶν ὀργανικῶν μορίων  
 ἀδύνατος· ἐπὶ δὲ τῶν ὁμοιομερῶν οὐκ αἰεὶ ἀδύνατος,  
 ἀλλ' ἐπὶ ἐνίοις δυνατός,<sup>42</sup> ὡς ἐν τοῖς σαρκώδεσι, κόλ-  
 λησις ἢ ἴασις ἐστίν· οὐ διοίσει δὲ οὐδ' εἰ σύμφυσι  
 ὀνομάζοις· ἠγείται δ' αὐτῆς, ὅταν μείζον γένηται τὸ  
 τραῦμα, ἢ προσαγωγῇ τῶν διεστώτων μορίων, ἐκ τοῦ  
 τῆς διαπλάσεως ὑπάρχονσα γένους· ἵνα δ' αὐτῇ γένη-  
 ται μόνιμος, ἢ ἐπίδεσις ἢ συνάγουσα τὰ διεστώτα,  
 καὶ ἀγκυτήρες καὶ ῥαφαὶ χρήσιμοι· κολλᾶ μὲν οὖν τὰ  
 διεστώτα καὶ τὴν ἐξ ἀρχῆς ἔνωσιν ἀποδίδωσιν ἢ φύ-  
 σις· ἡμέτερον δὲ ἔργον πρῶτον μὲν, ὡς εἴρηται, τὸ  
 συνάγειν εἰς ταῦτ' τὰ διεστώτα, δεύτερον δὲ τὸ φυ-

Thus, if it is thick-particled, it will not penetrate to a  
 great depth. In fact, on the contrary, it will make the whole  
 surface thick. If, however, it is fine-particled, it will be able  
 to reach a greater depth. In the same way too, we must  
 consider the thick- and fine-particled nature in the cases  
 of the moistening and drying agents. Certainly the indica-  
 tion of what is health-producing is discovered from the  
 position of what is affected, as I said just now. However, it  
 is from the conformation and position whenever [the af-  
 fected part] has perceptible places of efflux joining it to  
 some other place, or does not have these at all. Thus we  
 shall deter the places of efflux leading to the more impor-  
 tant parts and activate those that lead to parts that are not  
 so important. It is clear that the cure of the causes creating  
 the *dyskrasias* is through evacuation. The cure of the *dys-*  
*krasias* is alteration alone.

29. The objective of the cure of dissolution of continu-  
 ity (or union) is impossible to achieve in the case of the  
 organic parts. However, it is not always impossible in the  
 case of the *homoiomeres*, but possible in some, as in the  
 fleshy parts, where the cure is colligation; and it makes no  
 difference if you call it "closing up" (*sympphysis*). When-  
 ever the wound is rather large, precede this by coopting  
 the separated parts, this being from the class of remodel-  
 ing (reduction). For binding or joining the coopted parts  
 to become secure, fistulae and sutures are useful, but it is  
 Nature that colligates those things that are separated and  
 restores the original unity. Our task is, in the first place, to  
 bring together what has been separated, as I said; second,

<sup>42</sup> post οὐκ αἰεὶ: ἀδύνατος, ἀλλ' ἐπὶ ἐνίοις δυνατός, B; δυ-  
 νατὸς, ἀλλ' ἐν ἐνίοις, K

386K λάπτειν, ὡς συνήχθη, καὶ τρίτον, ὡς μηδὲν ἐμπέσῃ τῶν χειλῶν μεταξύ, προνοεῖσθαι, | καὶ τέταρτον, αὐτὴν τοῦ μέρους τὴν οὐσίαν ὑγιεινὴν διαφυλάττειν.

τὸ μὲν δὴ πρῶτόν τε καὶ δεύτερον ὡς ἂν τις ποιήσῃ, εἴρηται· τὸ δὲ τρίτον ἐν μὲν τῷ συνάγειν τὰ διεστῶτα γίνουτ' ἂν, εἰ μηδὲν ἕξωθεν ἐμπίπτειν ἐάσομεν, ὡς πολλάκις γε θριξὶ ἢ ἔλαιον ἢ ὑγρότης τις ἕτερα μεταξὺ στάσα τῶν κολληθησομένων, ἐκώλυσε αὐτῶν τὴν ἔνωσιν· ἐν δὲ τῷ μετὰ ταῦτα χρόνῳ διὰ τῶν ὑπορρύσεων ἢ τοῦ τρίτου σκοποῦ φυλακῆ· τὴν δ' ὑπόρρυσιν αὐτὴν ἐξ ἐπιδιαιρέσεως καὶ ἀντιδιαιρέσεως καὶ σχήματος ἐπιτηδείου ποριστέον· ἢ δ' οὐσία τοῦ μέρους ὑγιεινὴ φυλαχθήσεται διὰ τῶν μετρίως ξηραίνοντων· αὕτη μὲν ἢ ἰασίς ἐστὶ συνεχείας λύσεως ἐν σαρκώδει μορίῳ γενομένης αὐτῆς καθ' ἑαυτὴν μόνῃς· εἰ δ' ἐτέρῳ τιμὶ μυχθείη νοσήματι, πλείους οἱ σκοποὶ τῶν ἐνδείξεων, οὓς ἐν ταῖς τῶν συνθέτων ἢ ἐπιπεπλεγμένων, ἢ ὅπως ἂν τις ὀνομάζῃ ἐθέλοι, διδασκαλίαις ἐξῆς ἐροῦμεν· ἐν δὲ τῷ παρόντι πρὸς τὰς λοιπὰς τῆς ἐνώσεως λύσεις ἰτέον τῷ λόγῳ. |

387K 30. Κάταγμα τοίνυν ἐστὶ μὲν τῆς ἐν ὀστέῳ συνεχείας λύσις· ἀνίατον δὲ ὄν, ὅσον ἐπὶ τῷ πρῶτῳ σκοπῷ, κατὰ δεύτερον δὲ τινα τρόπον ἰατὸν πως γίνεται· πρῶτος μὲν οὖν σκοπὸς ἢ σύμφυσις οὐ δυναμένη διὰ σκληρότητα τοῦ μορίου γενέσθαι· δεύτερος δὲ ἢ δέσις ἐγχωροῦσα γενέσθαι<sup>43</sup> διὰ πάρου δεσμῶντος

<sup>43</sup> ἐγχωροῦσα γενέσθαι *add.* B

it is to maintain them as they are when brought together; third, it is to take care that nothing interposes itself between the margins [of the wound]; and fourth, it is to maintain the actual substance of the part in a healthy state. 386K

How someone might accomplish the first and second tasks has been stated. The third, which is the coaptation of the separated parts, occurs if we allow nothing to fall in from without, as often happens when hair, oil or something else moist comes between the parts being colligated, preventing their union. In the subsequent period, the third objective is maintained by wound drainage. We must provide the actual drainage through a further incision, a counterincision, or appropriate positioning. The substance of the part will be maintained in a healthy state through agents that are moderately drying. This is the cure for dissolution of continuity in a fleshy part when this has occurred in isolation. If, however, it is mixed with some other disease, the objectives of the indications are more. I shall speak about these in the compound or combined diseases (or whatever someone might wish to call them) in the teachings that follow. In the present discussion, I must go on to the remaining kinds of dissolution of continuity.

30. So then, dissolution of continuity in a bone is a fracture. It is incurable in respect of the first objective; in relation to the second, there is a certain kind of cure. The first objective, then, which is *symphysis* (actual growing together), is not possible due to the hardness of the part. The second, which is binding together through a callus 387K

ἐν κύκλῳ τὸ κάταγμα· γένεσις δὲ τῷ πῶρῳ, καθ' ὅσον μὲν ἐξ ὕλης καὶ ἀπο φύσεως γίνεται, κοινὴ πρὸς τὰ ἄλλα, καθ' ὅσον δὲ ἐγγύς ἐστιν ὀστέῳ τὴν ἰδέαν, ἐκ τῆς ἐκείνου τροφῆς· μαλακὸν δὲ καὶ παιδικὸν ὀστοῦν καὶ συμφῦναι δυνατόν· σπανίως δὲ καὶ ἡ τοῦδε τοῦ πάθους γένεσις ἄνευ συμπλοκῆς, ὡς τὰ πόλλα γὰρ οἱ παρακείμενοι μύες ἅμα τοῖς ἄλλοις σώμασι πάσχουσι, ῥηγνυμένων τῶν ὀστέων, ὥστε καὶ ὁ σκοπὸς τῆς θεραπείας διττός, ἕτερος μὲν ὁ ἐπὶ τοῖς ὀστοῖς, ἕτερος δὲ ὁ ἐπὶ τοῖς ἀμφ' αὐτὰ σώμασιν· ὁ μὲν δὴ τοιοῦτος ἐν ταῖς τῶν σαρκωδῶν μορίων ἐπιπεπλεγμέναις διαθέσειν εἰρήσεται· περὶ δὲ τῶν καταγμάτων ἐν τῷδε ῥητέον· ἐπεὶ γὰρ καὶ τούτων ἡ ἴασίς ἐστιν ἐκ τῆς πωρώσεως, ἵνα δ' αὐτὴ γένηται, τῆς οἰκείας τροφῆς ὀστοῦ χρεία,<sup>44</sup> δεῖ περίττωμα πρὸς τὴν τοῦ πῶρου γένεσιν ὑποβεβλήσθαι τῇ φύσει, τὸ περίττωμα δὲ τοῦτο καὶ τῇ ποιότητι καὶ τῇ ποσότητι σύμμετρον εἶναι χρῆ, διὰ τοῦτο ἀγωγῆς δεῖται τῆς τοσοῦτον καὶ τοιοῦτον τὸ ἐπιρρέον αἷμα τοῖς ὀστοῖς παρασκευαζούσης, ἐξ οἴου τε καὶ ὄσου γενήσεται πῶρος· ἐπεὶ δὲ ἐγγεῖται τοῦτο διὰ τῶν σηράγγων τοῦ κατεαγότος ὀστοῦ, σκοπεῖν αὐτοῦ χρῆ τὸ πλήθός τε καὶ τὴν ποιότητα, καὶ οὕτως ἢ ξηραντικώτεραν ποιείσθαι τὴν ἀγωγὴν, ἢ ὑγραντικώτεραν, ἅπερ ἐπὶ πλεον ἐν τοῖς Τῆς θεραπευτικῆς μεθόδου γράμμασι λέλεκται.

31. Νεύρου δὲ καὶ τένοντος νύγμα διὰ τε τὸ περι-

<sup>44</sup> ὀστοῦ χρεία B; τοῦ ὀστοῦ K

surrounding the fracture circumferentially, is possible. Genesis in the callus, to the extent it occurs from existing material and new growth, is common to other things, but to the extent it is near bone in kind, it is from the nutriment of bone. Soft bone in children is able to grow together. It is rare for such an affection to occur without a complication, as in many instances the adjacent muscles, along with other bodies, are affected when bones are broken. Consequently, there is a twofold objective of treatment—one objective pertains to the bones and the other to the bodies on both sides of them. Now such an objective will be spoken of in the associated conditions of the fleshy parts.<sup>40</sup> Here I must speak about fractures. Since the cure of these is from callus formation, for this to occur there is need of the specific nutriment of bone; there must be a superfluity of this for the genesis of the callus to come about naturally. This superfluity must also be balanced in quality and quantity. Because of this there needs to be the preparatory introduction of a flow of blood of the amount and kind from which callus will be created. However, since this pours through the cavities of the fractured bone, it is necessary to consider its amount and quality, and depending on this, to make what is brought in more drying or moistening. More has been said about these matters in *The Method of Medicine*.<sup>41</sup>

31. A puncture wound of a nerve or tendon readily

<sup>40</sup> See Chapter 32 below.

<sup>41</sup> The treatment of various forms of dissolution of continuity is given very detailed consideration in Books 3–6 of the *Method of Medicine*; see note 36 above.

389K

τὸν τῆς αἰσθήσεως, καὶ διότι συνεχές ἐστι πρὸς τὴν ἀρχὴν τὸ μόριον, ἔτοιμον ἐπικαλέσασθαι σπασμούς, καὶ μάλιστα ὅταν μηδὲν διαπνέηται πρὸς τὸ ἐκτός, τυφλωθείσης τῆς τοῦ δέρματος τρώσεως. ἀναστομοῦν χρὴ τοῦτο τοίνυν, καὶ ξηραίνειν οὐσία λεπτομερεῖ, δικνεῖσθαι δυναμένη πρὸς τὸ βάθος ἄχρι τοῦ τετραμένου νεύρου· λέλεκται δὲ καὶ περὶ τούτου τελῶς ἐν τοῖς Τῆς θεραπευτικῆς μεθόδου | γράμμασιν. ἐν μὲν οὖν δὴ ταῖς ἀπλαῖς τοῦδε τοῦ γένους διαθέσεων ἢ τῶν ὑγμειῶν αἰτίων ἰδέα τοιάδε.

32. Κατὰ δὲ τὰς συνθέτους ἐπιπέλεκται τοῖς ἔλκεσιν πρώτη μὲν ἡ κοιλότης, ἣν οὐκ ἄλλην διάθεσιν, ἀλλ' ἔλκος ἡγοῦνται διαφορὰν· ἔστι δὲ οὐ διαφορὰ τό γε τοιοῦτον, ἀλλ' ἕτερον τι γένος ὄλου τοῦ νοσήματος, ἐν ᾧ τῆς οὐσίας αὐτῆς ἐστὶν ἀπώλεια· καὶ τοίνυν καὶ ἡ ἴασις ἐπὶ διττῷ πάθει διττοῦ δεῖται σκοποῦ· ἡ μὲν γὰρ τῆς συνεχείας λύσις ἐνώσεως, ἡ δὲ τῆς οὐσίας ἀπώλεια γενέσεως χρήζειν λελεγμένοι δ' εἰσὶν ὀλίγον ἔμπροσθεν οἱ τῆς γενέσεως σκοποὶ· καὶ μὲν δὴ καὶ ὡς χρὴ πρῶτον ἰᾶσθαι τῆνδε τὴν διάθεσιν, εἴθ' ἐξῆς ἐνοῦν ἐπιχειρεῖν, αὐτῇ τῶν πραγμάτων ἢ φύσις ἐνδείκνυται· ὅταν οὖν ἀναπληρωθῇ μὲν τὸ κοῖλον, ὁμαλὸν δὲ τὸ ἔλκος ὑπάρχη, τὸν ἕτερον τῶν σκοπῶν ἀναιρεῖσθαι συμβαίνει· μέσης γὰρ τῆς νεογενοῦς σαρκὸς ἰσταμένης τῶν χειλῶν τοῦ ἔλκος, ἐνωθῆναι μὲν ἀδύνατον τὰ διεστῶτα, σκοπὸν δ' ἰάσεως ἄλλον ἐξευρεῖν χρὴ·

τὴν δ' εὔρεσιν ἐκ τοῦ κατὰ φύσιν ἕξομεν, ὃ περι-

evokes spasms due to the excess of sensation and because there is a continuity of the part with the principle. This is especially so when there is no outflow to the exterior because the wound of the skin has closed up. Accordingly, this must be opened up and dried by a fine-particled substance which is able to penetrate into the depths as far as the injured nerve. There has been a complete discussion of this in *The Method of Medicine*.<sup>42</sup> Such are the kinds of health producing causes in the simple conditions of this particular class. 389K

32. In the compound conditions, the first complication of ulcers or wounds is a cavity, which is not another condition but is considered to be different from the ulcer or wound. This is not a *differentia* as such, but another class of the whole disease in which there is destruction of the actual substance. And accordingly, the cure in the case of a twofold affection requires a twofold objective, for the dissolution of continuity requires union and the loss of substance requires regeneration. The objectives of regeneration are those stated a little earlier. Furthermore, the actual nature of the matters shows it is necessary to cure this particular condition first and next to try to effect union. Therefore, when the cavity is filled and the ulcer or wound is flat, what happens is that the other objective is taken away because, if there is newly generated flesh standing between the margins of the ulcer or wound, it is impossible for the separated parts to be brought to union, so it is necessary to discover a different objective of cure.

We shall make this discovery from what accords with

<sup>42</sup> See *MM*, 3 (X.157-231K).

390K ποιῆσαι | τῷ μέρει προσήκει κατὰ φύσιν δ' ἦν αὐτῷ σκέπεσθαι δέρματι τοῦτ' οὖν ἡμῖν ἐστὶ ποιητέον, ἢ, εἴπερ ἐστὶν ἀδύνατος ὁ σκοπός, ὁμοίον τι δέρματι τὴν γοῦν σάρκα δερματώδη ποιητέον ἐστίν· ἔσται δὲ τοιαύτη, ξηραίνομένη τε ἅμα καὶ τυλουμένη· ξηραίνοντων οὖν καὶ στυφόντων ἀδήκτως ἔσται χρεία φαρμάκων εἰς τὰς ἐπουλώσεις· οὕτως δὲ καὶ ῥύπος ἐπιτραφῆ, σκοπὸς μὲν ἀπορρύψαι· φάρμακον δὲ ὑγιεινὸν τὸ ῥυπτικόν· εἴρηται δὲ αὐτῶν ἐν τοῖς περὶ φαρμάκων ἢ ὕλη· καὶ μὲν δὴ καὶ εἰ φλεγμονή τις, ἢ θλάσις ἢ σκίρρος ἢ οἴδημα μετὰ τοῦ ἔλκουσ εἶη, θεραπευτέον ἐκεῖνα πρότερον διὰ τῶν εἰρη(σο)μένων μεθόδων· οὕτως δὲ καὶ εἰ ἐπιρρεῖ τι τῷ ἔλκει, κατὰ τὴν τῶν ἐπιρρέοντων ἴασιν· ὡσαύτως δὲ καὶ εἰ δυσκρασία τις εἶη κατὰ τὸ ἠλκωμένον, ἐπὶ τὰ τῆς δυσκρασίας πρότερον ἰεναὶ βοηθήματα· καὶ περὶ μὲν τούτων ἄλις.

33. Ἐπὶ δὲ τὸ περὶ τὴν διάπλασιν ἰτέον ἤδη γένος, 391K εἰς πλείους διαφορὰς τεμνόμενον· ἀλλ' ἀπὸ τοῦ | σαφεστάτου τὴν ἀρχὴν τῷ λόγῳ θετέον, ὃ κατὰ τὴν τοῦ σχήματος ἐξάλλαξιν γίνεται· τῶν μὲν οὖν ἔτι ἀξαναμένων οἶόν τε τὸ σχῆμα τῶν πλείστων μορίων ἐπανορθώσασθαι, τῶν δ' ἠϋξημένων οὐκέτι· σκοπὸς δὲ ὡς οἶόν τε θεραπεῦσαι, πρὸς τοῦναντίον ἀπάγειν τῆς διαστροφῆς· εἰ δὲ κατάγματος οὐκ ὀρθῶς διαπλασθέντος ἡμάρτηται τινος κώλου σχῆμα, παρωθῆναι φθάσαντος,<sup>45</sup> εἰ δ' ἔτι πρόσφατος ὁ πῶρος ὑπάρχει, καταῶσα-

<sup>45</sup> *post φθάσαντος, add. <tunc opus ut dimittas ipsum>, B*

nature, and is fitting for the preservation of the part. In 390K the natural state it is covered by skin, so this is what we must make—or if this objective is impossible, something like skin. At any rate, we must create flesh that is skin-like. Such flesh will be dry and, at the same time, callous. For cicatrization, the need will be for medications that are drying and astringent without being biting. And if dirt collects, the aim is to cleanse, so a health-producing medication will be cleansing. The material of these was stated in the works on medications.<sup>43</sup> Moreover, if there is any inflammation, contusion, induration or edema in relation to the ulcer or wound, those must be treated first by the methods mentioned. The same also applies to the cure of things that flow into the ulcer or wound. Similarly, if there is any *dyskrasia* in what is ulcerated, the remedies should go first to the *dyskrasia*. But enough about these matters.

33. We must proceed now to the class pertaining to conformation, dividing this into many *differentiae*. But we 391K must establish the beginning of the discussion from what is most clear, which is the change of shape. In those who are still growing, it is possible to correct the shape of many parts; in those who have grown, it is no longer possible. The aim where treatment is possible is to lead what is distorted in the opposite direction. If a fracture is not set properly, so there is a fault in shape of a limb, and this is before a callus is fully formed and it is still fresh, after

<sup>43</sup> There are three major Galenic works on medications: *Simpl. Med.*, XI.369–892K and XII.1–377K; *Comp. Med. Loc.* XII.378–1007K and XIII.1–361K; *Comp. Med. Gen.*, XIII.362–1058K. See also the detailed note at Boudon, *Galen* 370n1, and particularly Galen, *Simpl. Med.*, 13.16 (XII.108K).



ντα χρῆ διαπλάπτειν αἰθῆς ὀρθῶς, εἴτα παροῦν ἔστι δὲ καὶ ἡ ἔμφραξις ἐκ τούτου τοῦ γένους τῶν νοσημάτων· ἡ μὲν ὑπὸ γλίσχρων καὶ παχέων γινομένη χυμῶν, ἕνα μὲν ἔχουσα καὶ αὐτὴ σκοπὸν ἐναντίον τῷ πάθει τὴν ἔκφραξιν· αἷτια δὲ ὑγιεινὰ τὰ τε ῥυπτικὰ καὶ τμητικὰ τῶν φαρμάκων· ἡ δ' ὑπὸ κόπρου σκληρᾶς ἔμφραχθείσης ἐντέρω, προτέρα μὲν ἔξει τὴν τῆς σκληρότητος ἐπανόρθωσιν ἐξ ὑγρῶν καὶ λιπαρῶν κλισμάτων, ἐφεξῆς δὲ τὴν κένωσιν ἐκ δριμέων· ἡ δ' ὑπὸ λίθου κατὰ κύστιν, ἐν μὲν τῷ παρανίκα τὴν μετάθεσιν· ἰάσεως δὲ παντελοῦς ἕνεκα τὴν διὰ τομῆς κομιδὴν.

392K ἡ δὲ τῆς παρὰ φύσιν ἐν μορίῳ ἢ περιεχομένης ὑγρότητος ἰασίς ἐν τῇ παντελεῖ κενώσει, καθάπερ ἐπὶ τῶν ἐμπύων· ἡ δὲ ἄμετρος πλήρωσις ἐν ἐμμέτρῳ κενώσει, καθάπερ ἐπὶ τοῦ κατὰ τὰς φλέβας αἵματος· ὡσαύτως καὶ ὅσοις κατὰ γαστέρα καὶ ἔντερον ἢ τραχεῖαν ἀρτηρίαν ἢ πνεύμονα πύον ἢ αἷμα περιέχεται, παντελοῦς κενώσεως δεῖται· τοῦ δὲ πλείονος ἐδέσματος ἢ πόματος ἔτι ὄντος προσφάτου, κατὰ τὴν ἀποκένωσιν ἢ ἐπανόρθωσιν· ὅσα μὲν οὖν ἐν πνεύμονί τε καὶ θώρακι περιέχεται, μετὰ βηχῶν μὲν ἢ κένωσις, ὑπὸ δὲ φαρμάκων λεπτυντικῶν· ὅσα δὲ καθ' ἡπαρ ἢ φλέβας ἢ ἀρτηρίας ἢ νεφροὺς ἤτοι δι' οὖρων ἢ γαστρὸς· ἀλλὰ δι' οὖρων μὲν ὑπὸ τῶν λεπτυνόντων σφοδρῶς, διὰ γαστρὸς δὲ ὑπὸ τῶν ἐλκτικῶν τε καὶ ἀναστομωτικῶν· ὅσα μὲν οὖν κατὰ τὴν ἄνω γαστέρα, δι' ἐμέτων· ὅσα δὲ κατὰ τὴν κάτω, δι' ὑπαγωγῆς· ὅσα δὲ ὑπὸ τῷ δέρματι, διὰ τομῆς ἢ καύσεως ἢ φαρμάκων

breaking it up, you must reset the limb correctly and then allow callus formation. Obstruction is from this class of diseases. It arises from viscid and thick humors and has one objective which is the opposite to the affection—that is, removal of the obstruction. The causes of health are medications that are cleansing and cutting. If there is obstruction in the intestines due to hard feces, the initial correction of the hardness will be by moist and oily enemas, and next by purging with those that are acrid. With obstruction of the bladder by a stone, the immediate treatment is to move the stone; complete cure is extraction by cutting (surgery).

The cure of moisture contrary to nature contained in a part lies in complete evacuation, as in the case of those parts that are suppurating. In an excessive fullness, the cure lies in suitable evacuation, as in the case of blood in the veins. It is the same also in other parts such as the stomach, intestines and rough artery (trachea/upper airways) or lungs, if they contain pus or blood—all need complete evacuation. The correction of an excess of food or drink, if it is still recent, is by evacuation. For those things contained in the lungs and chest, the evacuation is through coughing and by thinning medications. For those things in the liver, veins, arteries or kidneys, it is either through the urine or the stomach—through the urine by means of powerful thinning agents or through the stomach by agents that are drawing and opening. Those things in the upper part of the stomach are evacuated by vomiting; those in the lower part by defecation. Things that are subcutaneous are evacuated by incision, cauterization or caustic medications. It is sometimes similar with

καυστικῶν οὕτως δ' ἐνίοτε καὶ ὅσα κατὰ τινα κοι-  
λότητα φυσικῆν, ὡς ἐπὶ θώρακος.

393K ἐνὶ δὲ κεφαλαίῳ, τῶν μὲν | τῷ γένει παρὰ φύσιν ἔν-  
τισι μέρεσι περιεχομένων ὁ σκοπὸς τῆς ἰάσεως ἄρσις  
ἐστίν· εἰ δ' ἀδύνατος γενέσθαι, μετάθεσις· ὅσα δὲ οὐ  
τῷ γένει παρὰ φύσιν ἐστίν, ἀλλὰ τῷ ποσῷ, σκοπὸς  
τούτων ἡ ἀποκένωσις· ἢ δ' εὗρεσις τῶν ἰασομένων  
αὐτὰ μέρος μὲν τι καὶ αὐτῆς λαμβάνεται τῆς διαθέ-  
σεως· ἢ πλείστη δὲ ἐκ τῶν πεποιθότων μορίων· ὅσα  
δὲ ἐν τῷ τετραχύνθαι παρὰ φύσιν ἔχει, τὴν κατὰ φύ-  
σιν αὐτοῖς ἀντιστακτέον λειότητα· κατὰ μὲν οὖν  
ὄστον ξύοντα, κατὰ δὲ τραχείαν ἀρτηρίαν ἢ γλῶτ-  
ταν ἐκλεαίνοντα δι' ὑγρῶν ἀδήκτων καὶ γλίσχρων·  
ὅσα δὲ τῷ λεία γενέσθαι παρὰ φύσιν ἔχει, τὴν κατὰ  
φύσιν αὐτοῖς ἀντιστακτέον τραχύτητα διὰ τε φαρ-  
μάκων ἰκανῶς ῥυπτικῶν καὶ διὰ βραχείας στύψεως.<sup>46</sup>

394K 34. Ὅσαι δὲ ἐμφράξεις ἢ στενοχωρίαι νοσήμασιν  
ἐτέροις ἔπονται, θεραπευτέον ἐκεῖνα πρότερον· δέδει-  
κται δ' ἐν τῷ Περὶ τῆς τῶν νοσημάτων διαφορᾶς, ὡς  
φλεγμοναῖς καὶ σκίρροις καὶ οἰδήμασι καὶ ξηρότησιν  
ἐνίοτε ἀμέτρως, ἔτι τε μοχθηροῖς σχήμασιν αὐτῶν  
τῶν περιεχόντων σωμάτων ἔπεται πολλάκις τὰ εἰρη-  
μένα, καθάπερ | καὶ ὄγκοις τισὶ τῶν περίξ σωμάτων·  
εἰ δὲ καὶ πρὸς ἄλληλα τῶν εἰρημένων ἐπιπλέκοιτό

<sup>46</sup> There are four different words here in different manu-  
scripts (and Latin versions), as follows: στύψεως (contraction,  
astringency), ζύσεως (scraping, scouring), πτύσεως (spitting),  
and ψύξεως (cooling)—see Boudon, p. 373 and note 4, p. 436.

those things in some natural cavity, as in the case of the  
chest.

In summary, the aim of cure of things in the class of 393K  
contrary to nature contained in any parts is removal. If this  
is impossible, it is *metathesis* (change of position). For  
things that are not in the class of contrary to nature, but  
are abnormal in amount, the aim is evacuation of these.  
The discovery of those who will be cured in respect of a  
particular part is taken in some measure from the condi-  
tion itself, but largely from the affected parts. With parts  
that are in a roughened state contrary to nature, one must  
restore their natural softness. In bone, this involves scrap-  
ing; in the upper airways or tongue it involves a smooth-  
ing out through agents that are moist and viscid without  
being biting. Conditions that have acquired an unnatu-  
ral smoothness must be restored to their natural rough-  
ness through medications that are strongly cleansing and  
slightly astringent.

34. In the obstructions and stenoses that follow other  
diseases, one must treat those diseases first. It has been  
shown in the work *On the Differentiae of Diseases* that the  
things mentioned often follow inflammations, indurations  
(scirrhoticities), edemas, sometimes excessively dry states,  
and cases of abnormal morphology in the bodies which  
contain them, as also in certain swellings of the bodies 394K  
which surround them.<sup>44</sup> Also, when some of the things

<sup>44</sup> Galen, *Morb. Diff.*, 7.2 (VI.857–58K). See Johnston, *Galen:  
On Diseases and Symptoms*, 145–46.

τινα, τὰς ἐνδείξεις ἕξει ποικίλας· ἀρκέσει δ' ἐφ' ἑνός, ὡς ἐπὶ παραδείγματος, ποιήσασθαι τὸν λόγον· ἐπὶ πλέον γὰρ ὑπὲρ ἀπάντων ἐν τοῖς θεραπευτικοῖς λέγεται<sup>47</sup> ὑποκείσθω τούνυ ἐπιρρεῖν τινι μέρει πλήθος αἵματος, ὡς διατείνεσθαι τὰ κατὰ τὸ μόριον ἀγγεία, μὴ τὰ μεγάλα μόνον, ἀλλὰ καὶ τὰ μικρὰ τὰ πρότερον ἐκφεύγοντα τὴν ὄψιν, ἐκ δὲ τοῦ πεπληρῶσθαι φαινόμενα νῦν, ὥσπερ γε ἐπ' ὀφθαλμῶν ὁράται σαφῶς ἐνίοτε διὰ τὴν λευκότητα τοῦ χιτῶνος· εἰκὸς δὲ δήπου, καὶ ἄλλα μικρότερα τῶν εἰρημένων<sup>48</sup> ἀγγείων διατετάσθαι μεμεστωμένα, μηδέπω μὴδ' αὐτὰ φαινόμενα διὰ τὴν σμικρότητα· καὶ δὴ καὶ κίνδυνος ἐκχυθῆναι τὸ διυδρούμενον ἐκ τῶν ἀγγείων εἰς τὰς μεταξὺ χώρας τὰς κενάς, ἢ καὶ παρεκχεῖσθαι μικρόν. ἢ δὲ τοῦ τοιούτου πάθους ἴασις ἕξει μὲν δήπου τὸν σκοπὸν τὴν κένωσιν, ἢ, ἵνα σαφέστερον εἴπωμεν, ἀποκένωσιν.

395K ἐπεὶ δὲ τὸ πάθος ἦν ἐν τῷ πεπληρῶσθαι τὸ μόριον ἀμέτρως, ἀναγκαῖον δὴ, ἤτοι παλινδρομήσαν | ἐκκενωθῆναι τὸ περιτόν, ἢ δι' αὐτοῦ τοῦ πεπονθότος μορίου· παλινδρομήσει μὲν οὖν, ἢ ὡσθὲν ἢ ἐλχθὲν ἢ παραπεμφθὲν ἢ κατὰ τινα τούτων ἢ κατὰ πάντα· δι' αὐτοῦ δὲ τοῦ πεπονθότος ἐκκενωθήσεται, τὸ μὲν τι

<sup>47</sup> post λέγεται om. γράμμασιν. B

<sup>48</sup> post ἄλλα: μικρότερα τῶν εἰρημένων B; τῶν μὴ ὀρωμένων K

mentioned are combined with one another, they will have diverse indications. One case will suffice by way of example to make the argument—much more is said about all these matters in *The Method of Medicine*.<sup>45</sup> So let us assume that a large amount of blood flows to a certain part so as to distend the vessels in that part, and not only the large vessels but also the small vessels that were previously invisible but are now apparent having been filled, as is sometimes clearly seen in the eyes due to the whiteness of the tunic.<sup>46</sup> It is likely, of course, that there are other unseen vessels full by distension, but not yet apparent due to their smallness. There is now, certainly, the danger of transudation from these vessels being poured out into the empty spaces between them, or that a small amount has already overflowed. The cure of such an affection will presumably have the aim of emptying, or if I may speak more clearly, “apoevacuation” (emptying away from).<sup>47</sup>

Since the affection results from the excess filling of the part, it is of course essential for the excess being evacuated to either flow back whence it came or on through the affected part itself. It will flow back again if it is either pushed, drawn or carried with something else, or some combination of these, or all of them. It will be evacuated

395K

<sup>45</sup> See Galen, *MM*, 8.8 (X.592–97K); Johnston and Horsley, *Galen: Method of Medicine*, 2.438–49.

<sup>46</sup> See Boudon, *Galen*, 437n5.

<sup>47</sup> The distinction in the Greek is between κένωσις and ἀποκένωσις. In LSJ the primary meaning of the first is given as “emptying” and of the second as “evacuation”; presumably it is a matter of degree.

φανερῶς τε καὶ αἰσθητῶς, τὸ δὲ εἰς ἀτμοὺς λεπτυνθέν· εἰ μὲν οὖν εἴη τὸ σύμπαν σῶμα πληθωρικώτερον, οὐ χρὴ διὰ τοῦ πεπονθότος τόπου ἐκκενοῦν· εἰ μὲν γὰρ ἀμυχαῖς καὶ τομαῖς αἰσθητῶς ἐκκενώσομεν ὀδυνήσαντες, ἐπισπασόμεθα διὰ τὴν ὀδύνην πλεόν· εἰ δὲ τοῖς θερμαίνουσι διαφορεῖν ἐπιχειρήσομεν, ἔλξομεν τῇ θερμασίᾳ πλείον<sup>49</sup> εἰς τὸ μόριον ἢ διαφορήσομεν· εἰ δ' αὖ βουλοίμεθα παλιδρομεῖν ἀναγκάζειν τὸ ἐπιρρὸν, οὐκ ἂν δέξαιτο μεστὸν ὑπάρχον τὸ σῶμα.

πρὸς ἄμφω τοῖνυν ταῦτα χρὴ κενῶσαι τὸ ὄλον, εἴτα ἀντισπᾶσαι γε πάντως εἰς ἄλλα χωρία τὸ ἐπιρρῶν τῷ πεπονθότῳ τοῦτο δὲ ἐργασάμενον ἀπωθεῖσθαι τοῦ μέρους πρότερον, ἢ διαφορεῖν ἐπιχειρεῖν· ἔτοιμοτέρα γὰρ ἢ κένωσις, ὅσῳ διὰ μειζόνων· ἀποκρουσόμεθα δ' ἐκ τοῦ πεπονθότος, | εἰ στύφοιμὲν τε καὶ ψύχοιμεν· ἀλλὰ καὶ τὰ κενωθέντα πρὸς ἑαυτὰ τὸ ἀποκρουόμενον ἔλξει· δέδεικται γὰρ καὶ τοῦτο διὰ τοῦ Περὶ τῶν φυσικῶν δυνάμεων λόγου· καὶ δὴ καὶ παραπέμψει τὰ ἀγγεία, τονωθέντα τοῖς στύφουσι φαρμάκοις· εἰ μὲν οὖν ἅπαν οὕτω παλιδρομήσειεν, εἴ ἂν ἔχοι καταλειφθέντος δὲ τινος ἐν τῷ μορίῳ, χρὴ, μὲν δήπου τεκμαίρεσθαι τοῦτο γλίσχρον ὑπάρχειν, ἢ παχύ, καὶ διὰ τοῦτ' ἐσφηνῶσθαι δυσλύτως.

<sup>49</sup> τῇ θερμασίᾳ πλείον B; διὰ τὴν θερμότητα πλείον K

through the affected part itself either as something obvious and perceptible or after being thinned to a vapor. If the whole body is overly plethoric, we must not evacuate through the affected part, because if we should evacuate provoking perceptible pain with scarification and incisions, we would draw in more due to the pain. But if we should attempt to disperse with heating agents, we would attract more to the part due to the heating than we would disperse. If, in turn, we wanted to compel the flow to go back whence it came, a body that is full would not accept it.<sup>48</sup>

Accordingly, for both these reasons, it is necessary to evacuate the body as a whole, or to revulse completely to other places what is flowing to the affected part. We should carry out this revulsion of the affected part first and then attempt to disperse, for evacuation occurs more readily to the extent that it is through larger passages. We shall drive away from the affected part, if we contract and cool. But also, those things being evacuated will draw to themselves what is being driven off; this was also shown in the work *On the Natural Faculties*.<sup>49</sup> Furthermore, the vessels will also send it along besides, being made more tense by the contracting medications. Thus, if everything is sent back in this way, all will be well. However, if something remains in the part, we must, I presume, regard it as viscid or thick, and because of this, plugged up and so difficult to dislodge.

<sup>48</sup> See Boudon, *Galen*, 376n1.

<sup>49</sup> *Nat. Fac.*, II.1-214K. For an English translation of this work, see Brock, *Galen: On the Natural Faculties*. See also Boudon, *Galen*, 437n4, where she draws attention to II.9K and II.107K.

δύναται δὲ καὶ μὴ τοιοῦτον ὄν εἰς τὰς μεταξὺ χώρας ἐκκεχύσθαι τότε οὖν ἦκειν ἤδη καιρὸς ἐπὶ τὸ κενοῦν αὐτὸ διὰ τοῦ πεπονθότος αὐτοῦ, ἐπιθέντα τοῖς ὑπερκειμένοις ἀποκρουστικὰς τῶν ἐπιρρεόντων δυνάμεις· ἐκκενώσεις δὲ μάλιστα, εἰ κατὰ τὰς μεταξὺ χώρας τεκμαίροιο περιέχεσθαι τι, δι' ἀμυχῶν τε ἅμα καὶ διὰ φαρμάκων διαφορητικῶν· ἀλλ' ἐπεὶ τὰ διαφοροῦντα πάντα θερμὰ ταῖς δυνάμεσιν ὑπάρχει, τῆς δ' αὐτῆς ἐστὶ κράσεως ἔργον τὸ δάκνειν, ὅταν ἀμετρότερον ἢ θερμὰ, φυλακτέον ἐν αὐτοῖς τὰ πάνυ θερμὰ, καὶ μάλιστα ἢ ἐπιπολῆς ἢ τὸ | πεπονθός· ὀδυνῆσεται γὰρ οὐ μικρῶς, ἢν ἅμα πεπόνηται καὶ δάκνηται, ὀδύνη τε πᾶσα παροξύνει τὰ ρεύματα· τὸ μετρίως οὖν θερμὸν ἐπὶ τούτων ἀνώδυνον, ἔτι δὲ μᾶλλον, εἰν ὑγρὸν ὑπάρχει· καὶ μέντοι καὶ ἰκανόν ἐστὶν διαφορηθῆναι τὸ ἐπιπολῆς, εἰ καὶ μὴ σφοδρὸν εἴη τὸ διαφορητικὸν φάρμακον· εἰ δὲ τὰ μὲν ἐπιπολῆς ἀπαθῆ παντάπασιν ὑπάρχει, διὰ βάθους δ' εἴη τὸ κενώσεως δεόμενον, ἐπιτείνει τε καὶ αὐξῆσαι χρὴ τοῦ διαφορητικοῦ φαρμάκου τὴν θερμασίαν· κινδυνεύσει γὰρ ἐκλυθῆναι, πρὶν εἰς τὸ βάθος ἐξικέσθαι, οὐ μὴν οὐδ' ἀνιάσει τι τὰ ἐπιπολῆς, ὧν ψαύσει, διότι μὴ πέπονθεν· ὥστε καὶ νῦν ἐς ταῦτόν ἄμφω συμβαίνει πρὸς τὴν τῶν θερμότερων τε ἅμα καὶ δριμυτέρων φαρμάκων χρῆσιν, τὰ τε ἐπιπολῆς ἀνεχόμενα καὶ τὰ διὰ βάθους δεόμενα· ταύτην μὲν οὖν ἐκ τῆς θέσεως τοῦ μορίου τὴν ἔνδειξιν ἐλάβομεν.

ἐξῆς δὲ σκοπῶμεν, εἰ λείπει τι πρὸς τὴν ἴασιν· ἔοικε

If it is not like this, it is possible to pour it out to the places between. There now comes an appropriate time for the actual evacuation through the affected part by placing on the overlying parts those agents which have powers to drive out what is inflowing. If you judge that anything is contained in the spaces between, the evacuation should particularly be through scarification and, at the same time, medications that are dispersing. But since all those things that are dispersing are hot in their powers and the action of the *krasis* itself is biting when the heat is too immoderate, you must guard against excessive heat in these, and especially if the affected part is on the surface. It will produce considerable pain and biting, along with what is affected, and all pain provokes the flows. What is moderately hot in these cases is painless, and still more so if it is moist. Of course, it is also sufficient to disperse what is superficial, even if it is not a strong dispersing medication. If, on the other hand, the parts at the surface are altogether unaffected, while what requires evacuation is deep, there is a need to strengthen and increase the heating of the dispersing medication, for there will be a danger of it becoming ineffectual before it reaches the depths. And it will not disturb the parts at the surface it comes into contact with because they are not affected. So now both factors come together to the same end in the use of agents that are quite heating at the same time as being quite acrid—the parts at the surface tolerate them and the parts in the depths need them. Therefore, we take the same indication from the position of the part.

Next we should consider whether this omits anything

397K

397K

398K

γὰρ λείπειν οὐ μικρά· τῶν γὰρ πεπονθότων αὐτῶν, ἐν οἷς ἐστὶ τὸ περιττὸν τοῦ | ρεύματος, ἕνια μὲν ἀραιὰ καὶ χαλνα καὶ μαλακὰ τὴν φύσιν ἐστίν, ἕνια δὲ πυκνὰ καὶ πεπιλημένα καὶ σκληρά· τὰ μὲν οὖν πρότερα ῥαδιδίως ἐκκενοῦνται· τὰ δ' ἕτερα δριμυτέρων δεῖται τῶν κενωσόντων αὐτά, καὶ προσέτι λεπτομερεστέρων· ἂν δὲ καὶ κατὰ συχνοῦ κείνται βάθους, ἔτι δὴ καὶ μάλλον· αὕτη σοι πάλιν ἔνδειξις ἕτερα παρὰ τῆς οὐσίας τοῦ πεπονθότου· ἄλλη δ' ἀπὸ τῆς διαπλάσεώς ἅμα καὶ θέσεως.

399K

ὑποκείσθω γάρ, εἰ οὕτως ἔτυχεν, ἐν ἥπατι τὴν προειρημένην εἶναι διάθεσιν, ἐν τοῖς στενοῖς πέρασι τῶν ἀγγείων ἐσφηνωμένων ὑγρῶν, ἥτοι γλισχρῶν ἢ παχέων ἢ πολλῶν· ἂρ' οὐχ ἔτοιμον ἐδέσμασί τε καὶ πόμασι λεπτυντικοῖς τὸ πάχος μὲν πρῶτον ἅμα τῇ γλισχροῦτι λεπτομερὲς ἐργάζασθαι; δεύτερον δὲ μὴ διὰ τῶν ἀοράτων καὶ στενῶν<sup>50</sup> πόρων μόνον ὡς καὶ ἐπ' ἄλλων μορίων, ἀλλὰ καὶ δι' εὐρειῶν ὁδῶν ἐκκενωῦσαι τὸ λυποῦν; εὐρύταται γὰρ εἰσι κατὰ τὸ ἥπαρ αἱ φλέβες, ὥσπερ καὶ πλείσται· τελευτῶσι δὲ αἱ μὲν ἐν τοῖς κυρτοῖς εἰς τὴν κοίλην, αἱ δ' ἐν τοῖς σιμοῖς ἐπὶ πύλην ὥστε ἤδη σοι ῥᾶστον, ἐν ὁποτέραις ἂν ὦσιν αἱ σφηνώσεις, ἐκκενοῦν ἐτοίμως | αὐτάς, ἔλκοντα μὲν εἰς τὴν γαστέρα διὰ τῶν ἐλκτικῶν, [τε καὶ ἀναστοματικῶν,]<sup>51</sup> ὅσα τῶν ὑγρῶν ἐσφηνῶτο, κατὰ τὰς ἐν τοῖς σιμοῖς φλέβας, ἐπ' οὐρα δὲ προτρέποντα διὰ τῆς κοίλης φλεβός, ὅσα κατὰ τὰς ταύτης φλέβας· ἕτερα δὲ ἐπὶ ταῖς προειρημέναις ἔνδειξις ἀφ' ἥπατος, ὡς ἀρχῆς φλε-

398K

399K

regarding the cure, for it seems to leave out quite a lot. Of the affected parts themselves in which the excess of the flux is, some are loose-textured, porous and soft in nature while some are dense, thickened and hard. The former are easily evacuated whereas the latter need quite acrid agents that are also fine-particled to evacuate them. And should they lie at a considerable depth, this applies even more. There is, in turn, another indication relating to the substance of the affected part. Another is from the conformation along with the position.

Let us assume, as may happen, that the previously mentioned condition is in the liver and there is fluid which is viscid, thick or large in amount obstructing the narrowed ends of the vessels. Should we not be prepared to first make what is thick and viscid, fine-particled with thinning foods and drinks? Second, should we not evacuate what is distressing, not only through the invisible, narrow channels, as in the case of other parts, but also through wide channels? For the veins in relation to the liver are quite wide, just as they are numerous. Those veins on the convexity end in the inferior vena cava, whereas those on the concavity end in the portal [vein], so that it should already be very easy for you to evacuate them readily in whichever of the two places the obstructions are, drawing to the stomach by means of drawing and opening up agents those of the liquids that are obstructing the veins in the concavity, while directing to the urine through the inferior vena cava those things in relation to the veins of this. In the case of the things previously mentioned, another indi-

<sup>50</sup> post στενῶν: πόρων μόνον ὡς καὶ ἐπ' ἄλλων μορίων, B; μόνον, K <sup>51</sup> om. τε καὶ ἀναστοματικῶν, B

βῶν· ἐπεὶ γὰρ οὐχ ἑαυτὸ μόνον, ὥσπερ τὰ πλείστα μόρια τοῦ ζῶον, διοικεῖν πέφυκεν, ἀλλ' ἐπιπέμπει δύναμιν ταῖς φλεβί, κίνδυνός ἐστιν, εἰ ἐκλύσωμεν αὐτοῦ τὸν τόνον ἐπιβροχαῖς τε καὶ καταπλάσμασι χαλαστικοῖς, αὐτὸ τε πρῶτον ἀτουῆσαι περὶ τὴν ἐνεργειαν, ἀτόνους τε συμπάσας ἐργάσασθαι τὰς φλέβας· ὅθεν ἐπιμυγνύναι χρὴ τῶν στυφόντων τι φαρμάκων ἐν ταῖς θεραπέαις αὐτοῦ· ἀλλ' ἐπειδὴ διὰ βάθους ἐστὶ στυφονοῦ, κίνδυνος ἐκλυθῆναι τοῦ στυφονοῦ τὴν δύναμιν, εἰ μὴ ποδηγηθῆται πρὸς τινος ἐτέρας οὐσίας λεπτομεροῦς, οἷαπερ ἡ τῶν ἀρωμάτων ἐστὶ κάλλιον δέ, εἰ αὐτὸ τὸ στυφονοῦ φάρμακον εὐθὺς εἴη καὶ ἀρωματώδες· συμφύτους γὰρ ἔχον τὰς δύο ποιότητάς τε καὶ δυνάμεις ἰσχυρότερον ἢ ἐνεργήσει.

400K

καὶ τοίνυν ἐκκενούσθω μὲν καὶ ἤδη τὸ παρὰ φύσιν εἰς τὸ μόριον ἐνεχθέν· ἐχέτω δὲ τὴν συμμετρίαν τῶν χυμῶν τὴν κατὰ φύσιν· ἐπισκεπτέον οὖν ἡμῖν ἐν τούτῳ, μὴ τι πρὸς τῆς τοῦ ρεύματος ποιότητος ἡλλοιωθῆ τὴν κρᾶσιν, εἰ μὲν φλεγματικώτερον ἦν, ψυχθέν, εἰ δὲ χολωδέστερον, θερμανθέν, ἵνα καὶ ταύτην αὐτοῦ τὴν δυσκρασίαν ἰασάμενοι τελῶς ὑγιᾶς ἀποφήνωμεν αὐτό· ἰασόμεθα δὲ τὴν ἐναντίαν ἀντεισάγοντες ποιότητα, καθάπερ ἐν ταῖς τῶν δυσκρασιῶν εἴρηται θεραπέαις, εἰς ὅσον ἕκαστον ἐγένετο θερμότερον, εἰς τοσοῦτον ψυχόντες· ὥστ' ἐνταῦθα πάλιν ἀναγκαῖον ἐπίστασθαι τὴν κατὰ φύσιν εὐκρασίαν αὐτοῦ· πῶς γὰρ ἂν εἰδέημεν, ὅπως τοῦ κατὰ φύσιν ἐστὶ<sup>52</sup> θερ-

<sup>52</sup> post ἐστὶ om. ψυχρότερον ἢ B

cation from the liver is that from its role as the principle of the veins. Since by nature it doesn't only govern itself like most parts of the organism do, but sends a capacity to the veins, there is a danger, if we relax its tone with embrocations and relaxing cataplasms, that it will first become weak in terms of function and then make all the veins weak. On this account, we must mix in one of the contracting medications in the treatment of it. But since its depth is considerable, there is a danger of the potency of the contracting agent being released, if we don't guide it with certain other fine-particled substances such as the aromatics are. It is better, however, if the actual contracting medication is, at the same time, also aromatic, for then, having two inherent qualities and potencies, it will act with greater strength.

400K

And so, suppose what has been carried to the part and is contrary to nature has already been evacuated, and suppose there is a balance of humors that accords with nature. It behooves us then to consider whether the *krasis* in this part has been changed as a result of the quality of the flux. Thus, if the flux was overly phlegmatic, it may have been cooled, while if it was more bilious, it may have been heated, so that we should also cure this *dyskrasia* of the part, if we are going to render it completely healthy. And we shall effect a cure by introducing the opposite quality, just as was said in the treatments of the *dyskrasias*—viz. each part is made hotter to the extent that it has been cooled. Consequently, here again it is essential to know the natural *eukrasia* of the part. How shall we know by how much it is colder or hotter than accords with nature,

μότερον, ἢ πότε ψύχοντες παυσόμεθα, μὴ γινώσκοντες τὸ μέτρον τῆς κατὰ φύσιν θερμότητος; οὕτω δὲ καὶ εἰ τὸ ψυχρότερον γενόμενον θερμαίνομεν,<sup>53</sup> ἀνευ τοῦ γινώσκειν μὴ γινώσκοντες τὸ μέτρον τῆς κατὰ φύσιν ψυχρότητος, οὐχ οἶόν τε ἡμῖν οὐτ' εὐπορήσασθαι τοῦ θερμαίνοντος οἰκείως, οὔτε παύσασθαι θερμαίνοντας. |

401K 35. Ἐπεὶ δὲ καὶ περὶ τούτων ἀντάρκως εἴρηται, μεταβαίνειν ἤδη καιρὸς ἐπὶ τὰ κατὰ τὸν ἀριθμὸν οὐ κατὰ φύσιν ἔχοντα· διττῆς δὲ οὕσης αὐτῶν τῆς διαφορᾶς, οἷς μὲν ἐλλείπει τι μόριον, ἐργάζασθαι τοῦτο σκοπός, ὑπηρετοῦντας δηλονότι τῇ φύσει, καθ' ὃν ὀλίγον ἔμπροσθεν εἴρηκα τρόπον· οἷς δ' αὖ περιττεύει, τοῦτ' ἐκκόπτει αὐτό, ἤτοι διὰ σμίλης, ἢ διὰ πυρός, ἢ διὰ φαρμάκου καυστικοῦ· ταυτὶ μὲν οὖν σχεδὸν ἅπαντα δυνατόν ἐστιν ἰάσασθαι, γεννηῆσαι δὲ οὐχ ἅπαντα δυνατόν, ὡς ἐν τῷ Περὶ σπέρματος ἀποδέδεικται λόγῳ· τινὰ δὲ καὶ αὐτὰ μὴ δυνατόν ἢ γεννηῆσαι, ποιῆσαι γοῦν ἀντ' αὐτῶν ἕτερόν τι δυνατόν, ὡς ἐπὶ τοῦ ὀστοῦ τελέως ἐξαίρεθέντος οὐσίαν ἕτεραν ἐν τῇ κατ' αὐτὸ χώρα ὑπάρχουσαν,<sup>54</sup> διαφέρουσαν ὀστοῦ τε καὶ σαρκός· ἔστι γὰρ ἡ γινομένη κατὰ τὴν χώραν αὐτοῦ καθάπερ τις σὰρξ πωροειδής, ἢ πῶρος σαρκοειδής, καὶ τοῦ χρόνου δὲ προϊόντος ἐπὶ τὸ πωρωδέστερον μεθίσταται, κατ' ἀρχὰς σαρκοειδής μᾶλλον οὖσα.

<sup>53</sup> post θερμαίνομεν, ἀνευ τοῦ γινώσκειν B; μὴ γινώσκοντες K

<sup>54</sup> add. ὑπάρχουσαν B

or when we should stop cooling, if we don't know the measure of heat that accords with nature? In the same way too, if we heat what has become colder without knowing the measure of the actual coldness that accords with nature, it will not be possible to find a proper heating agent or know when to stop the heating.

35. Since enough has been said about these matters, it is now time to move on to other things that are not in accord with nature in terms of number. There is a twofold difference of these. In those in which there is a deficiency in some part, the objective is to rectify this deficiency, with the help of Nature obviously, in the manner stated a little earlier.<sup>50</sup> In those in which some part is in excess, the objective is to excise this excess, either with a knife, cautery or caustic medication. It is possible for almost all these parts to be treated, but it is not possible for them all to be regenerated, as I showed in the work *On Semen*.<sup>51</sup> With some, however, even if it is not possible to regenerate them, it is at least possible to create something to take their place. For example, in the case of bone which is completely taken away, it is possible for another substance, different from both bone and flesh, to take its place. For that which arises in its place is like some bone-hard flesh or some flesh-like bone (callus), and as time goes by it changes to become more callus-like, although it is more flesh-like at the beginning.

<sup>50</sup> See Chapter 26 above.

<sup>51</sup> *Semen*, IV.512-651K. For an English translation of this work, see de Lacy, *Galen on Semen*, esp. 1.11 at 102 (IV.551-52K).



καθ' ὃ τι δ' αὖ μόριον ἀπολλύμενον οὔτε τὴν αὐτὴν  
 402K οὐσίαν κατ' εἶδος, οὔθ' ὁμοίαν ἐργάσασθαι δυνάμεθα,  
 τρίτος ἡμῖν σκοπὸς ἐξευρεῖν τινα κόσμον, ὡς | ἐπὶ  
 κολοβωμάτων· ἐπικοινωνεῖ δὲ δηλονότι τὸ γένος ὅλον  
 τοῦτο τῷ κατὰ τὸ πηλίκον· ὅσον γὰρ αὐτοῦ περὶ τὸ  
 κατὰ φύσιν ἐστίν, ἐκείνῳ πλησιάζει· τὸ δὲ ἐν τοῖς τῷ  
 γένει παρὰ φύσιν ἀποκεχώρισται μόνον· ἐφ' οὗ πρῶ-  
 τος μὲν σκοπὸς ἡ ἀφαίρεσις· εἰ δ' ἀδύνατος οὗτος, ἡ  
 μετὰθεσις δεύτερος, ὡς ἐπὶ τῶν ὑποχυμάτων· ὅσα δ'  
 οὐχ ὅλοις μορίοις, ἀλλ' ἐν μέρεσι μορίων ἐλλείπει τε  
 καὶ ὑπερβάλλει τοῦ κατὰ φύσιν, ἀνάθρεψις μὲν ἡ γέ-  
 νεσις ἐπὶ τῶν ἐλλειπόντων, ἀφαίρεσις δὲ καὶ καθαίρε-  
 σις ἐπὶ τῶν ὑπερβαλλόντων· ὅθεν οὐδὲ σκοπὸς ἐπ'  
 αὐτῶν ἕτερος, οὔτε ἰδέα φαρμάκων ἕτερα κατὰ γένος.

ἀλλ' ἐπὶ τὸ λοιπὸν ἔτι γένος ἰτέον τῶν ὑγιεινῶν  
 αἰτιῶν, ὅπερ ἐπανορθωτικόν ἐστι τῶν παρὰ τὴν θέσιν  
 ἐσφαλμένων σωμάτων, οἷον ἐξαρθρήματά καὶ ἔντερον  
 ἐν ὁσχεῷ· γίνεται δὲ τὸ μὲν ἐκ βιαίας τάσεως ἡ  
 ὤσεως· τὸ δὲ ἐξ ἀνευρύσεως ἢ ῥήξεως τοῦ περιέχον-  
 τος· ὥστε καὶ ἡ ἴασις τῷ μὲν ἐξ ἀντιτάσεώς τε καὶ  
 403K τῆς εἰς τούναντίον, εἰ παρήλλαξεν, ὤσεως, τῷ δὲ ἐκ  
 τοῦ στεγανόν | ἐργάσασθαι τὸ περιέχον· ἐξ ὧν δ' αὖ

<sup>52</sup> This term remains in use with the following meaning: "Any defect, congenital, pathological or artificial, especially of the eye due to incomplete closure of the optic fissure" (S). The meaning given in LSJ is "mutilation," with reference to Galen, *MM*, X.1002K.

<sup>53</sup> See Boudon, *Galen*, 382n1.

Further, in the case of some part which has been completely destroyed, when we are unable to make the same substance or a substance like it, a third aim is for us to discover some good form, as in the case of colobomata.<sup>52</sup> Clearly this class as a whole has something in common with that which relates to magnitude, for to the degree that it involves an accord with nature, it comes near to the latter. The only aspect in which it departs from it is in those things that are contrary to nature.<sup>53</sup> In this case, the primary objective is removal. If, however, this is impossible, the second objective is change of position, as in the case of cataracts. In those cases where the deficiency or excess in terms of accord with nature is not in whole parts but in parts of parts, restoration or genesis in cases of deficiency and removal or reduction in cases of excess are the objectives. Apart from this, there is no other objective in these cases, nor are there other kinds of medications in terms of class.

But we must proceed to the remaining class of health-producing causes which are restorative of those bodies at fault in terms of position, like dislocation of bones and [herniation of the] intestines into the scrotum. The former occurs from violent stretching or thrusting, the latter from dilatation or rupture of surrounding tissue. Consequently, the cure in the former is also from stretching in the opposite direction, and if there is over-riding, thrusting in the opposite direction, while in the latter it is by making the surrounding tissue confining. You will find individual examples of these methods throughout the treatises com-

τις μεθόδων τὰ κατὰ μέρος ἐξευρίσκη, διὰ τῆς θεραπευτικῆς πραγματείας δεδήλωται.

36. Ἐξῆς δ' ἂν εἶη λέγειν, ὅσα κατὰ τὸν ἔμπροσθεν λόγον ἀνεβαλλόμεθα· καλοῦσι δὲ αὐτὰ προφυλακτικά· τριττὴ δ' ἐστὶ καὶ τούτων ἢ κατὰ γένος διαφορά· πρώτη μὲν ὑγιαίνοντος ἀμέμπτως τοῦ ἀνθρώπου, δευτέρα δὲ ἢ μεμπτῶς, ἢ τρίτη δὲ νοσοῦντος. τὸ μὲν οὖν πρῶτον γένος ἐκ τῆς ὑγιεινῆς ἐστὶ πραγματείας, διττὸν ὑπάρχον, ὡς ἔμπροσθεν εἴρηται· τὸ δὲ δεύτερον ἐκ τῆς προφυλακτικῆς· τὸ δὲ τρίτον ἐκ τῆς θεραπευτικῆς· ἐν χυμοῖς δὲ μάλιστα τὴν σύστασιν ἔχει σύμπαν τούτο τὸ γένος, οὓς οὔτε γλίσχρους εἶναι προσήκει, οὔτε παχεῖς οὔθ' ὕδατώδεις οὔτε πολλοὺς οὔτε ἐπὶ πλεόν θερμούς, ἢ ψυχροὺς, οὔτε δακνωδείς, οὔτε σηπεδονώδεις, οὔτε δηλητηρίους· αὐξηθέντες γὰρ αἵτιοι καθίστανται νοσημάτων· αὐξάνονται δέ, ποτὲ μὲν ὑπὸ τῆς αὐτῆς αἰτίας, ἢ περ αὐτοὺς ἐγέννησε τὸ πρῶτον· ἐστὶ δ' ὅτε συναλλοιοῦντες ἑαυτοῖς τοὺς κατὰ τὸ | σῶμα χυμούς.

404K

σκοπὸς δ' ἐστὶ καπὶ τούτων ὁ τῆς ἰάσεως διττός, ἢ ἀλλοιώσις τε καὶ κένωσις· ἀλλοιοῦνται μὲν οὖν, ἢτοι πεττόμενοι πρὸς αὐτοῦ τοῦ σώματος, ἢ ὑπὸ τινων φαρμακῶδων δυνάμεων, ἐν αἷς εἰσι καὶ αἱ θεραπεύουσιν τοὺς ἰοὺς τῶν ἰοβόλων ὀνομαζομένων ζῶων· ἔτι τε τὰ δηλητήρια φάρμακα μεταβάλλουσαι· κενοῦνται δὲ ὑπὸ τῶν θερμῶν ἰκανῶς φαρμάκων, καὶ καθάρσεων καὶ κλυστήρων καὶ ἰδρώτων καὶ ἐμέτων· αὐται

prising *The Method of Medicine*, where they have been made clear.<sup>54</sup>

36. The next matters to speak about are those things we put off in the previous discussion. People call these prophylactic. There are also three *differentiae* of these according to class. The first is that of people who are faultlessly healthy; the second is that of people who are imperfectly healthy; the third is that of people who are diseased. The first class falls under the matter of health and is twofold, as was said before. The second falls under the matter of prophylaxis and the third under the matter of treatment. Now this whole class depends particularly on humors, which should be neither viscid nor thick, nor watery, nor excessive in amount. Still more, they should not be hot, cold, biting, putrefying or noxious. If these aspects are increased, they become causes of diseases. Sometimes they are increased by the actual cause which generated them in the first place. At other times, however, the hu- 404K  
mors in the body undergo change by themselves.

The objective of the cure of these is also twofold—alteration and evacuation. Thus they may be altered if they are concocted by the body itself, or by certain pharmacological potencies, among which are also those which treat the poisons of the so-called venomous animals, and further, those that change noxious drugs. They are evacuated by medications that are strongly heating, cathartics, clysters, sweating and vomiting. These are the common

<sup>54</sup> See *MM*, X.158K and 220–21K (Johnston and Horsley, *Galen: Method of Medicine*, 2.243–45 and 2.334–35) for dislocations, and X.988K (Johnston and Horsley, *Galen: Method of Medicine*, 3.488–89) for hemias.

μὲν οὖν αὐτῶν αἱ κοινὰ κενώσεις· ἴδιαι δὲ ἐκ τῶν τόπων, ἐν οἷς ἂν ἀθροισθῶσι, λαμβάνονται, καθάπερ ἐν τοῖς ὑγιεινοῖς δεδήλωται, κατὰ τὸ τρίτον καὶ τέταρτον, καὶ μάλιστα περὶ τε κόπων ἡμῶν διεξιόντων, ὅσαι τε ἄλλαι τοιαῦται παράκεινται τοῖς κόποις διαθέσεις· ἐκκενοῦνται γὰρ ἐτοιμότερον, οἱ μὲν ἐν ταῖς πρώταις φλεβί δια γαστρός· οἱ δ' ἐν ταῖς καθ' ἥπαρ δι' οὔρων· οἱ δὲ καθ' ὅλην τὴν ἕξιν δι' ἰδρώτων ὥσπερ γε καὶ οἱ κατὰ τὴν κεφαλὴν ἤτοι δι' ὑπερώας ἢ διὰ ῥινῶν ἢ δι' ἀμφοτέρων· οἱ δὲ ἐν ταῖς τοῦ θώρακος εὐρυχωρίαις | διὰ φάρυγγος ἅμα καὶ βηξίν· οἱ δὲ κατὰ νεφροῦς ἢ κύστιν δι' οὔρων ἀντισπάσις δὲ κοινὴ συμπάντων τῶν μερῶν ἔνδειξις ἐπὶ τὰ πορρωτάτω, παροχέτευσις δὲ ἐπὶ τὰ πλησίον· ἅπαντα οὖν, ὅσα θεραπεύει τὰς τοιαύτας διαθέσεις, ὑγιεινὰ προσ-  
 405K αγορεύομεν αἴτια, καθάπερ νοσερὰ τὰ προσαύξοντα, καὶ οὐδέτερα τὰ μήτε βλάπτοντα μήτε ὠφελούντα δύναιτο δ' ἂν τις αὐτὰ μηδὲ αἴτια προσαγορεύειν ὅλως, οἰοί πέρ εἰσιν οἱ πολλοὶ τῶν σοφιστῶν, ἀμελοῦντες μὲν αὐτῶν τῶν πραγμάτων ἐξευρίσκειν τὴν διαφοράν, ἐν δὲ τοῖς ὀνόμασι τὸ πλεῖστον τοῦ χρόνου διατρίβοντες· εἴρηται δ' ἐν ἑτέροις ἐπὶ πλεόν πρὸς αὐτούς· τὸ μὲν δὴ προφυλακτικὸν εἶδος τῆς τέχνης τοιόνδε.

37. Τὸ δὲ ἀναληπτικὸν τε καὶ ἀναθρεπτικὸν ἐπὶ τε

<sup>55</sup> *San. Tuend.*, VI.1-451K; see esp. 3.7 (VI.199K ff.) and 4.3 (VI.241K ff.).

evacuations of these humors. The specific evacuations are derived from the places in which they are collected, as has been shown in the work, *On the Preservation of Health (Hygiene)*, in the third and fourth books, and particularly where I go over fatigues and other such conditions connected with the fatigues.<sup>55</sup> Thus, those humors in the primary veins are more readily evacuated through the stomach; those in the veins in relation to the liver through the urine; those in the whole body mass through sweats; those in the head through the palate or nostrils, or both; those in the spaces of the chest through the pharynx along with coughing; and those in the kidneys or bladder through the urine. Revulsion is a common indication for all the parts that are farthest away, and diversion for those parts that are near. So all the things that treat such conditions we call health-producing causes, just as those that increase them are disease-producing causes, while those that neither harm nor help are called neither. Now one may not be able to call these causes at all, for there are many Sophists who pay little attention to discovering the difference of the actual matters but waste a great deal of time on the names. I have said more elsewhere about these people.<sup>56</sup> This, then, is the prophylactic component of the art.

37. The restorative and recuperative part applies to

<sup>56</sup> For a detailed note on this matter, see Boudon, *Galen*, 440. The main reference is Galen, *Soph.*, XIV.582-98K. For an English translation of this work, see Edlow, *Galen on Language and Ambiguity*. Boudon also draws attention to the lost work *On Clarity and Obscurity*, and a passage from *Diff. Puls.*, VIII.571K ff.

406K τῶν ἀνακομιζομένων ἐκ νόσου καὶ γερόντων· ὁποῖα δὲ τίς ἐστί καὶ ἡ τούτων διάθεσις, ὑπὸ τίνων τε μάλιστα αἰτίων εἰς τὸ κατὰ φύσιν ἐπανέρχεται, τελεώτατα μὲν | ἐν τοῖς Τῆς θεραπευτικῆς μεθόδου γράμμασι δεδῆλωται διὰ κεφαλαίων δ' ἂν ῥηθῆῃ καὶ νῦν· ἡ μὲν οὖν διάθεσις ἐστὶ τοιάδε· χρηστὸν μὲν, ἀλλ' ὀλίγον τὸ αἷμα, καὶ σὺν αὐτῷ τό τε ζωτικὸν ὀνομαζόμενον πνεῦμα καὶ τὸ ψυχικόν· αὐτὰ δὲ τὰ στερεὰ μόρια ξηρότερα, καὶ διὰ τοῦτο καὶ αἱ δυνάμεις αὐτῶν ἀρρωστότεραι, καὶ διὰ ταύτας ὅλον τὸ σῶμα ψυχρότερον· αἴτια δ' ὑγιεινά, τὰ τὴν εἰρημένην ἐπανορθούμενα διάθεσιν ἐνὶ μὲν κεφαλαίῳ περιλαβεῖν, ὅσα ταχέϊαν μὲν καὶ ἀσφαλῆ θρέψιν ἐργάζεται· κατὰ μέρος δέ, ἐν ταῖς συμμέτροις κινήσεσι, καὶ σιτίοις, καὶ πόμασι, καὶ ὕπνοις· εἰσὶ δὲ ὕλαι τῶν μὲν κινήσεων αἰῶραι καὶ περίπατοι καὶ τρήψεις καὶ λουτρά· καὶ εἰ πολὺ βελτίους ἐπὶ τούτοις γίνονται, καὶ τῶν συνήθων ἔργων ἐπ' ὀλίγον ἀπτέσθωσαν· τῶν δὲ σιτίων κατ' ἀρχὰς μὲν ὑγρὰ καὶ εὐπεπτα καὶ μὴ ψυχρά, προϊόντων δὲ καὶ αἱ τροφικώτερα, πόμα δὲ ἐπιτῆδειον οἶνος, ἡλικία μὲν σύμμετρος, ἰδέα δὲ καθαρὸς τε καὶ διαυγής, ἥτοι λευκὸς ἢ ὑπόξανθος,<sup>55</sup> τὴν δὲ ὄσμὴν ἡδὺς μετρίως, ἐν τῷ γεύεσθαι, μὴτ' ὕδατῶδης τὸ πᾶν, | μῆτε τινὰ σφοδρὰν ἐνδεικνύμενος ποιότητα, μὴτ' οὖν γλυκύτητα μῆτε στρυφνότητα μῆτε δριμύτητα μῆτε πι-

407K

<sup>55</sup> post ἢ ὑπόξανθος: τὴν δὲ ὄσμὴν ἡδὺς μετρίως, B; ὄσμῃ ἡδὺς, μέτριος K

those recovering from disease and those who are aging. What kind of condition such people have, and by what causes particularly it is returned to an accord with nature have been shown most completely in the work *The Method of Medicine*.<sup>57</sup> What are to be stated now are the chief points. Thus, the condition is as follows: the blood is of good quality but small in amount, and with it the so-called vital *pneuma* and the psychical. The solid parts themselves are drier, and because of this their capacities are also weaker, and for these reasons, the whole body is colder. Health-producing causes—those that correct the condition described—are included under a single heading. They are those that bring about swift and safe nourishing. In turn, these are moderate movements, foods, drinks and sleep. The kinds of movements are passive exercises, walking around, massages and baths. And if the patient becomes much better from these, he may also engage in his customary activities to a small extent. At the beginning, the foods should be moist, easily concocted and not cold; going forward, they should be more nourishing. Wine is a suitable drink, balanced according to age, pure and translucent in kind, either white or tawny, moderately sweet-smelling, and in taste neither altogether watery, nor displaying any strong quality—that is, neither sweetness, astringency, sharpness, nor bitterness. More has been said

406K

407K

<sup>57</sup> I would echo the comment of Boudon, *Galen*, 440n3, which reads in part: "Je n'ai trouvé nulle part, sauf erreur, dans le *Sur la méthode thérapeutique, de développement explicitement consacré au régime reconstituant et fortifiant des vieillards et convalescents*." She refers to Galen, *San. Tuend.*, 5.4, which details the case histories of two very old men.

κρότητα λέλεκται δ', ὡς ἀρτίως εἶπον, ἐν τοῖς Θερα-  
 πευτικῇ μεθόδῳ ἐπὶ πλείστον ὑπὲρ αὐτῶν· νυνὶ γὰρ  
 οὐ διελθεῖν ἅπαντα τὰ κατὰ μέρος ἡμῖν πρόκειται,  
 μόνον δ' ἀναμνησθαι τῶν κεφαλαίων, ὧν ἐν ἑτέραις  
 πραγματείαις ἐποιησάμεθα τὴν διέξοδον, ἃς καὶ  
 προσγράψας, ὁπόσαι τέ εἰσι καὶ ὁποῖαι, καταπαύσω  
 τὸν λόγον ἐνταῦθα.

Ἐῖρηται μὲν οὖν καὶ πρόσθεν, ὡς ἔστιν ἐν ἄλλο βι-  
 βλίον, ἐν ᾧ περὶ συστάσεως τῆς ἰατρικῆς τέχνης δι-  
 ερχόμεθα· προηγείται δ' αὐτοῦ τὰ πρότερα δύο περὶ  
 τεχνῶν συστάσεως· ἀλλὰ ταῦτα μὲν ἅμα τῷ νῦν πε-  
 ρανθέντι χωρὶς τῶν κατὰ διέξοδόν ἐστι πραγματειῶν  
 ἐκείναι δὲ τήνδε τὴν τάξιν ἔχουσι· περὶ μὲν οὖν τῶν  
 καθ' Ἴπποκράτην στοιχείων ἐν βιβλίον ἐστίν· ἐξῆς δ'  
 αὐτῷ τρία Περὶ κράσεων· ὧν τὰ μὲν δύο περὶ τῶν ἐν  
 τοῖς ζῴοις ἐστὶ κράσεων, τὸ δὲ τρίτον ὑπὲρ τῶν ἐν  
 τοῖς φαρμάκοις· διὸ καὶ τὴν Περὶ τῆς τῶν ἀπλῶν φαρ-  
 μάκων δυνάμεως πραγματείαν οὐχ οἶδόν τε κατανοή-  
 408K σαι καλῶς ἄνευ τοῦ τὸ τρίτον | ἀκριβῶς ἀναγνῶναι  
 Περὶ κράσεων· ἔστι δὲ καὶ ἄλλο βιβλίον μικρόν, ἐπό-

<sup>58</sup> The most detailed consideration of wines in *MM* is in 12.4 (X.830–837K; see Johnston and Horsley, *Galen: Method of Medicine*, 3.252–65). See also Galen, *San. Tuend.*, 5.5.

<sup>59</sup> For a comprehensive list of Galen's extant works, including translations into modern European languages, see Hankinson, *Cambridge Companion to Galen*, 391–403.

<sup>60</sup> One of the prior works is presumably Galen, *Const. Art.*

about these things in *The Method of Medicine*,<sup>58</sup> as I men-  
 tioned just now. What presently lies before us is not to go  
 through all these things individually but only to call to  
 mind the chief points, of which I have given a detailed  
 account in other works. Once I have added a list of these  
 works—how many there are and of what kind—I shall  
 bring the present work to an end.

THE LIST<sup>59</sup>

I said before that there is one other book in which I go  
 through the constitution of the medical art. Two prior  
 works on the composition of the arts precede this, but  
 these along with the work just finished are separate from  
 the detailed works.<sup>60</sup> The latter have the following se-  
 quence: There is one book, *On the Elements according to  
 Hippocrates*. Following this, there are three books in the  
 treatise *On Mixtures*—two of these concern *krasias* in ani-  
 mals while the third is about *krasias* in medications. On this  
 account also, the work *On the Nature and Powers of Sim-  
 ple Medications* cannot be understood properly without  
 408K carefully reading the third book in the treatise *On Mix-*

*Med.*, I.224–304K, which is included in the present volume. This  
 itself was apparently one of three books on the arts in general.  
 Fortuna, who recently prepared a critical edition with an Italian  
 translation, claims the other two works referred to were lost by  
 the sixth century. Boudon, *Galen*, 388n3, concurs on this point.  
 Singer, *Galen: Selected Works*, 402, however, suggests that Galen  
 might be referring to *Protr.*, I.1–39K, and *Thras.*, V.806–98K. In  
*De libris propriis*, Galen refers to the three books without further  
 elaboration.

μενον τοῖς πρώτοις δύο περὶ κράσεων, ὁ περὶ τῆς ἀνωμάλου δυσκρασίας ἐπιγραφόμενον ὁμοίως δ' αὐτῷ καὶ ἄλλα δύο μικρά, τὸ μὲν Περὶ τῆς ἀρίστης κατασκευῆς τοῦ σώματος, τὸ δὲ Περὶ εὐξίας· τρίβιβλος δ' ἄλλη πραγματεία ἢ Περὶ φυσικῶν δυνάμεων ἔστιν ἢν εἶτε μετὰ τὰ δύο περὶ κράσεων, εἶτε μετὰ τὸ περὶ στοιχείων ἀναγινώσκειν τις ἐθέλοι, δύναται ἂν ἔσεσθαι μετὰ δὲ ταύτην ἐν πλείοσι πραγματείας ὑπὲρ τῶν ψυχικῶν ἐνεργειῶν διέξιμεν· ἐπεὶ δὲ εἰς τὰς ἀποδείξεις αὐτῶν οὐ μικρὸν ὄφελός ἐστι τὰ διὰ τῶν ἀνατομῶν φαινόμενα, πρώταις ἐκείναις ἐγγυμνάσασθαι προσήκει· ἔστι δὲ χρησιμωτάτη μὲν αὐτῶν ἢ τῶν ἀνατομικῶν ἐγχειρήσεων βίβλιος· ἄλλαι δὲ τινας ἐπ' αὐταῖς πλείους ἐν νοοῖν μὲν Περὶ ἀνατομικῆς διαφανίας, ἐν ἐνὶ δὲ Περὶ τῆς ἐπὶ τῶν τεθνεώτων ἀνατομῆς· οἷς ἐφεξῆς δύο Περὶ τῆς ἐπὶ τῶν ζώντων ἐν ἄλλοις δὲ τισι κατὰ μέρος, ὅσα τοῖς εἰσαγομένους

<sup>61</sup> Of the four books mentioned here, two are of fundamental importance in Galen's theory of medicine: *Elem. Hippocr.*, I.403–508K, and *Mixt.*, I.509–694K. For English translations of these works, see, respectively, de Lacy, *On the Elements According to Hippocrates*, and *On Mixtures* in Singer, *Galen: Selected Works*. The work on simple medications (*Simpl. Med.*, XI.369–892K and XII.1–377K) is frequently referred to in Galen's clinical writings. The short work on nonuniform *dyskrasias* (*Inaequal. Intemp.*, VII.733–52K) likewise has an English translation in Singer, *Galen: Selected Works*.

<sup>62</sup> Two short works, the first of which is referred to several times in the present work: *Opt. Const.*, IV.737–49K, and *Bon. Habit.*, IV.750–56K. For English translations of both works, see Singer, *Galen: Selected Works*.

tures. And there is another small book which follows these first two on *krasias*, and was written on the nonuniform *dyskrasias*.<sup>61</sup> Similar to these are two other small books: *On the Best Constitution of our Bodies* and *On Good Condition*.<sup>62</sup> There is another treatise in three books, which is my *On the Natural Faculties*.<sup>63</sup> If someone wishes to read this after the other two books on *krasias* or after that on the elements, he will be able to understand it. After this, I have gone over the functions of the soul in a number of books.<sup>64</sup> However, since the appearances revealed by anatomical dissections are of no little benefit to the demonstrations of these, it is appropriate to be practiced in them first. The most useful of them is the work *On Anatomical Procedures*.<sup>65</sup> There are, however, a number of others in addition to this: *On Disagreements in Anatomy* in two books, *On the Dissection of Corpses* in one book, and following these, *On the Dissection of Living Animals*.<sup>66</sup> In

<sup>63</sup> *Nat. Fac.*, II.1–204K. For an English translation of this work, see Brock, *Galen: On the Natural Faculties*.

<sup>64</sup> The three main works on the soul are as follows: *Animi Mores*, IV.767–822K; *Animi Affect.*, V.1–57K; and *Animi Peccat.*, V.58–103K. English translations of all three are included in Singer, *Galen: Selected Works*, although there are other modern translations of each.

<sup>65</sup> *Anat. Admin.*, II.205–731K. For English translations, see Singer, *Galen: On Anatomical Procedures* (Books 1–9), and Duckworth, *Galen on Anatomical Procedures* (Books 9–15, from Arabic). This is one of Galen's two major extant works on anatomy, the other being *De usu partium*; see note 71 below. For a detailed note on this work, see Boudon, *Galien*, 389n3.

<sup>66</sup> These three works in the original Greek are all lost, although the first is preserved in Arabic; see Boudon, *Galien*, 443n4.

ἐποιησάμεθα,<sup>56</sup> τό τε περὶ τῆς ὀστέων ἀνατομῆς, τό τε περὶ τῶν μυῶν, καὶ νεύρων, ἢ καὶ ἀρτηριῶν καὶ φλεβῶν, καὶ τινα τοιαῦτα ἕτερα· τῶν τοιούτων δὲ ἔστι, καὶ εἰ κατὰ φύσιν τὸ ἐν ἀρτηρίαῖς αἷμα περιέχεται· τὰ δὲ τὰς ἐνεργείας αὐτὰς ἀποδεικνύοντα, δύο μὲν ἔστι περὶ μυῶν κινήσεως, τρία δὲ περὶ θώρακος καὶ πνεύμονος κινήσεως, οἷς ἐφέξῃς περὶ τῶν τῆς ἀναπνοῆς αἰτίων, οἷς ἔπεται τὰ περὶ φωνῆς· ὑπὲρ ἡγεμονικοῦ δὲ καὶ τῶν ἄλλων ἀπάντων, ὅσα περὶ φυσικῶν ἢ ψυχικῶν ἐνεργειῶν ζητεῖται, διὰ πολυβίβλου πραγματείας ἐδηλώσαμεν, ἣν Περὶ τῶν Ἱπποκράτους καὶ Πλάτωνος δογμάτων ἐπιγράφομεν· ἐκ τούτου τοῦ γένους ἔστι τῆς θεωρίας καὶ τὰ περὶ σπέρματος ἰδίᾳ γεγραμμένα, καὶ προσέτι τῆς Ἱπποκράτους ἀνατομῆς, οἷς ἅπασιν ἡ Περὶ χρείας μορίων ἔπεται πραγματεία.

εἰς δὲ τὰς διαγνώσεις τῶν νοσημάτων ἡ τε Περὶ

<sup>56</sup> *post ἐποιησάμεθα*: τό τε περὶ τῆς ὀστέων ἀνατομῆς, τό τε περὶ τῶν μυῶν, καὶ νεύρων, B; τὰ περὶ ὀστέων, καὶ ἡ τῶν μυῶν ἀνατομή, καὶ ἡ τῶν νεύρων, K

<sup>67</sup> These works include the following: *Oss. ad Tir.*, II.732–78K; *Ven. Art. Dissect.*, II.779–830K; *Nerv. Dissect.*, II.831–56K; *Arter. Sang.*, IV.703–36K; and possibly *Uteri. dissect.*, II.887–908K.

<sup>68</sup> Of the seven books listed here, the two on the movements of muscles (*Mot. Musc.*) are included in Kühn (IV.367–464K), as is a work *Caus. Resp.* (IV.465–69K), although according to Boudon, *Galen*, 390n3, this is not the work referred to here. The

certain others—devoted to specific issues and prepared for beginners—there are those about the anatomy of bones, muscles, nerves, arteries and veins, and certain other such works. Among these also is the work on whether blood is contained in the arteries in the normal state.<sup>67</sup> Of the books demonstrating the function of these structures, there are two on the movements of muscles, three on the movements of the chest and lungs, and next after these, on the causes of respiration, and following these, those on the voice.<sup>68</sup> And among all the others about the *hegemonikon*, there are those that inquire into physical and psychical functions throughout the multibook work which I wrote—*On the Opinions of Hippocrates and Plato*.<sup>69</sup> Also of this class of theory are the works written specifically on semen, and besides these, about Hippocratic anatomy.<sup>70</sup> Following all these is the work *On the Use of the Parts*.<sup>71</sup>

Regarding the diagnosis of diseases, the treatise *On*

works on the movements of the chest and lungs are lost, as is the work *De voce*; see Boudon, *Galen*, 390n3, 443n4.

<sup>69</sup> *Plac. Hippocr. Plat.*, V.181–805K. For an English translation of this work, see de Lacy, *Galen on the Doctrines*. This work contains important passages expressing Galen's views on the soul.

<sup>70</sup> *Semen*, IV.512–651K. The work on Hippocrates' anatomy, referred to in *Libr. Propr.* (XIX.14K) is lost; see Boudon, *Galen*, 444n7.

<sup>71</sup> *UPart.*, III.1–933K and IV.1–406K. This is a detailed and important statement of Galen's ideas on anatomy and his acceptance of Aristotelean teleology. For a French translation of this work, see Daremberg, *Oeuvres anatomiques*; for an English translation with comprehensive notes, see May, *Galen on the Usefulness*.

τῶν πεπονθότων τόπων καὶ ἡ περὶ σφυγμῶν πραγμα-  
 τεία χρήσιμος ὑπάρχει, καθ' ἣν καὶ τὰς προγνώσεις  
 διδάσκομεν· ἡγείται δὲ τῆς περὶ σφυγμῶν δύο βι-  
 βλία, τὸ περὶ χρείας ἀναπνοῆς, ἢ καὶ τὸ περὶ χρείας  
 410K σφυγμῶν· αὕτη δὲ ἡ περὶ τῶν σφυγμῶν πραγματεία  
 εἰς τέτταρα μέρη νεύεσθαι· πρῶτον μὲν τὸ περὶ τῆς  
 διαφορᾶς αὐτῶν, δεύτερον δὲ τὸ <περὶ> τῆς διαγνώ-  
 σεως, καὶ τρίτον τὸ περὶ τῶν ἐν τοῖς σφυγμοῖς αἰτίων,  
 καὶ τέταρτον τὸ περὶ τῆς διὰ τῶν σφυγμῶν προγνώ-  
 σεως· ἐκ τούτου δὲ τοῦ γένους ἐστὶ καὶ τὸ τοῖς εἰσ-  
 αγομένοις περὶ τῶν σφυγμῶν γεγραμμένον· ἐννοῶ δὲ  
 καὶ ἄλλο τι ποιῆσαι βιβλίον ἐν οἷον ἐπιτομὴν ἀπάν-  
 των, ὅπερ ἦτοί τε τέχνην περὶ σφυγμῶν, ἢ σύνοψιν ἐπι-  
 γράψω· χρήσιμα δὲ εἰς τὴν τοιαύτην θεωρίαν ἐστὶ,  
 καὶ δι' ὧν ἐξηγοῦμαι τε ἅμα καὶ κρίνω τὸ Περὶ σφυγ-  
 μῶν Ἀρχιγένους βιβλίον· εἰς δὲ τὰς προγνώσεις χρη-  
 σιμωτάτη μάλιστα ἐστὶν ἡ Περὶ κρίσεων πραγμα-  
 τεία· προηγείται δὲ αὐτῆς ἡ Περὶ τῶν κρισίμων· ἀλλὰ  
 καὶ ἡ περὶ δυσπνοίας πρὸς διάγνωσιν τε τῆς παρού-  
 σης διαθέσεως καὶ πρόγνωσιν τῶν ἐσομένων ἀγαθῶν  
 ἢ κακῶν περὶ τὸν κάμνοντα χρήσιμος ὑπάρχει.

<sup>72</sup> The work *Loc. Aff.*, VIII.1–452K, has considerable relevance to clinical practice. For a French translation of this work, see Daremberg, *Oeuvres anatomiques*; for English, see Siegel, *Galen on the Affected Parts*; for Spanish, see Aparicio, *Sobre la localización*.

<sup>73</sup> There are in all seven books on the pulse included in Kühn. The four "major" treatises are *Diff. Puls.*, VIII.493–765K; *Diagn. Puls.*, VIII.766–961K; *Caus. Puls.*, IX.1–

*Affected Places*<sup>72</sup> and those on the pulses are useful.<sup>73</sup> In these we also teach prognosis. Preceding the two books on the pulses there is the one on the use of respiration, and one on the use of the pulses.<sup>74</sup> The actual work on the pulses is divided into four parts: the first is on their classification (*differentiae*), the second on their diagnosis, the third on the causes of the pulses, and the fourth on prognosis by way of the pulses. From this class also is the work written on pulses for beginners. I have it in mind to produce one other book as a kind of epitome of all these, which I shall title *An Art of the Pulses* or *Synopsis of the Pulses*. Also useful on the same subject is the work in which I comment on and evaluate Archigenes' book *On the Pulses*.<sup>75</sup> Of most use in regard to prognosis is the work *On Crises*; preceding this is the work *On Critical Days*.<sup>76</sup> But also the work *Difficulties in Breathing*<sup>77</sup> is useful, both for diagnosis of the present condition and prognosis of future good and bad that will befall the patient.

204K; and *Praesag. Puls.*, IX.205–430K. There is no modern translation of these works. The "minor" works include *UPuls.*, V.149–80K; *Puls. ad Tir.*, VIII.453–92K; *Syn. Puls.*, IX.431–549K. For an English translation of the first, see Furley and Wilkie, *Galen on Respiration*; for the third, see Singer, *Galen: Selected Works*.

<sup>74</sup> There are two additional works on respiration: *Caus. Resp.*, IV.465–69K (see note 68 above), and *UResp.*, IV.470–511K. For English translations of both, see Furley and Wilkie, *Galen on Respiration*. See note 73 above for the work on the use of the pulses.

<sup>75</sup> This work is no longer extant; see Boudon, *Galen*, 443n4.

<sup>76</sup> These two works are also of particular clinical relevance: *Cris.*, IX.550–760K, and *Dieb. Decret.*, IX.761–941K.

<sup>77</sup> *Diffic. Resp.*, VII.753–960K.



ταυτά τε οὖν ἅπαντα, καὶ σὺν αὐτοῖς ἔστιν ἕνια  
 μονόβιβλά ἐστι γινώσκεσθαι χρήσιμα, καθάπερ τὸ  
 411K Περὶ τῶν προκαταρτικῶν αἰτίων, | καὶ τὸ Περὶ τῆς  
 ἰατρικῆς ἐμπειρίας, καὶ τὸ Περὶ τῆς λεπτινούσης  
 διαίτης, ἔτι τε τὸ Περὶ τῆς φλεβοτομίας πρὸς Ἐρα-  
 σίστρατον, καὶ τὸ Περὶ τῶν παρὰ φύσιν ὄγκων  
 ὡσαύτως δὲ καὶ τὸ Περὶ πλήθους, ἕτερα τέ τινα τοι-  
 αῦτα· πάντων δὲ ἀναγκαϊότατα πρὸς τὴν θεραπει-  
 κὴν μέθοδόν ἐστι τό τε Περὶ τῆς τῶν νοσημάτων δια-  
 φορᾶς, καὶ τὸ Περὶ τῆς τῶν συμπτωμάτων, καὶ τρίτον  
 ἐπ' αὐτοῖς, ἐν ᾧ τὰς αἰτίας τῶν νοσημάτων διέξιμεν,  
 ἐφ' οἷς ἄλλα τρία, καθ' ἃ τὰς ἐν τοῖς συμπτώμασι  
 αἰτίας ἐξηγούμεθα, τά τε περὶ τῆς τῶν ἀπλῶν φαρ-  
 μάκων δυνάμεως ἐστίν, ὧν ἐμπροσθεν ἐμνημόνευσα,  
 καὶ τὰ περὶ συνθέσεως φαρμάκων, οἷς τὰ τῆς θερα-  
 πευτικῆς ἔπεται μεθόδου γεγραμμένα ἡμῖν ἰδίᾳ, καὶ  
 τῆς τῶν ὑγιεινῶν πραγματείας· ὅτι δὲ καὶ πρὸ ἀπάν-  
 των τούτων ἐγγεγυμνάσθαι χρὴ τῇ Περὶ τῆς ἀποδεί-

<sup>78</sup> Of these six works, the first three are not included in Kühn but are extant; see Hankinson, *Cambridge Companion to Galen*, 397. There are English translations in all three cases: see Hankinson, *Galen on Antecedent Causes* (from the Latin); Walzer and Frede, *Three Treatises on the Nature of Science* (from the Arabic); and Singer, *Galen: Selected Works*, respectively. The last three are included in Kühn: *Venae Sect.*, XI.141–86K (for an English translation, see Brain, *Galen on Bloodletting*); *Tumor praeter Nat.*, VII.705–32K (for an English translation, see Reedy, “Galen, *De tumoribus*”); and *Plenit.*, VII.513–83K.

All these, then, along with some single-volume works, are useful to know—works such as *On Prokatartik Causes*, *On Medical Experience*, *On the Thinning Diet*, *On Phlebotomy, against Erasistratus* and *On Unnatural Swellings*. Similarly too, there is the work *On Plethora* and other such works.<sup>78</sup> Most essential of all regarding the therapeutic method are the books, *On the Differentiae of Diseases*, *On the Differentiae of Symptoms*, and a third in addition to these in which I go over the causes of diseases, and another three in addition to these in which I expound on the causes of symptoms.<sup>79</sup> And there are the books in the treatise *On the Nature and Powers of Simple Medications*, which I mentioned before, and those on compound medications.<sup>80</sup> The work I wrote specifically on the therapeutic method and the work on hygiene follow these.<sup>81</sup> Also, I

411K

<sup>79</sup> These four short treatises are fundamental to Galen's system of medicine, as he often states: *Morb. Diff.*, VI.836–80K; *Caus. Morb.*, VII.1–41K; *Sympt. Diff.*, VII.42–84K; and *Sympt. Caus.*, VII.85–272K. For English translations of all four, see Johnston, *Galen on Diseases and Symptoms*.

<sup>80</sup> There are three major extant works on medications that Galen frequently refers to. The one on simple medications is listed in note 60 above. The two on compound medications are *Comp. Med. Loc.*, XII.378–1003K and XIII.1–361K, and *Comp. Med. Gen.*, XIII.362–1058K. See Boudon, *Galen*, 446n2.

<sup>81</sup> These two works—*MM*, X.1–1021K, and *San. Tuend.*, VI.1–451K—are the major statements of Galen's clinical practice. For a French translation of the former, see Boulogne, *Méthode de traitement*; for English, see Johnston and Horsley, *Galen: Method of Medicine*. For an English translation of the latter, see Green, *A Translation of Galen's Hygiene*, and also Johnston, *Galen's Hygiene*, LCL, in preparation.

412K ξεως πραγματεία τὸν μέλλοντα λογικῶς μεταχειρίζε-  
σθαι τὴν τέχνην, ἐν τῷ Περὶ τῆς ἀρίστης αἰρέσεως  
ἐπιδέδεικται γράμματι περὶ δὲ τῶν ἄλλων συγγραμ-  
μάτων τε καὶ ὑπομνημάτων ὧν ἐγράψαμεν, οὐκ ἀνα-  
γκαῖόν ἐστι διεξέρχασθαι νῦν, ὑπὲρ πάντων | γε  
μέλλοντας ἐρεῖν ἑτέρωθι, καθ' ἐν ἴσως ἢ δύο βιβλία  
τὴν ἐπιγραφὴν ἔξοντα, Γαληνοῦ περὶ τῶν ἰδίων συγ-  
γραμμάτων.

have shown in the work *On the Best Sect*<sup>82</sup> that prior to these, one must become practiced in the work *On Demonstration*<sup>83</sup> if one is going to pursue the medical art rationally. It is not necessary now to go over the other treatises and commentaries I have written. I shall say something on all of these somewhere else in the future—in one, or perhaps two, books entitled *On My Own Books*.<sup>84</sup> 412K

<sup>82</sup> The work included in Kühn under this name (I.106–223) is of doubtful authenticity; see Boudon, *Galen*, 447n6.

<sup>83</sup> This substantial work, which Galen refers to often, is no longer extant; see Boudon, *Galen*, 447n5.

<sup>84</sup> There are, in fact, two short works in which Galen summarizes his writings: *Libr. Propr.*, XIX.8–48K, and *Ord. Libr. Propr.*, XIX.49–61K. For English translations of these works, see Singer, *Galen: Selected Works*; for French, see Boudon, *Galen*.

ΓΑΛΗΝΟΥ ΤΩΝ ΠΡΟΣ  
ΓΛΑΥΚΩΝΑ ΘΕΡΑΠΕΥΤΙΚΩΝ  
A METHOD OF MEDICINE TO  
GLAUCON

## INTRODUCTION

*A Method of Medicine to Glaucon* was written in the early 170s, probably no later than 174, which places it after the first six books of *The Method of Medicine* but well before Galen completed his great work. Such is the conclusion of Donald Peterson, who made a detailed study of the history of *A Method of Medicine to Glaucon* and its early commentaries.<sup>1</sup> There is general agreement that Glaucon was a philosopher, presumably with an interest in medicine, and one of Galen's friends. As is made clear in the work itself, the book was intended to help Glaucon should he encounter any medical problems during a long journey and sojourn abroad that he intended to make. According to Peterson, the request was made some ten years before the book was actually completed, by which time Glaucon had developed a serious interest in medicine.

There is also a long anecdote involving Glaucon in Galen's *On Affected Places*,<sup>2</sup> which begins,

<sup>1</sup> Peterson, "Galen's *Therapeutics*."

<sup>2</sup> *Loc. Aff.*, VIII.361-66K. The translation follows Siegel, *Galen on the Affected Parts*, 161-63 (with minor modifications). There is an extended account of this meeting in Mattern, *The Prince of Medicine*, 135-37.

Personally, when I came to Rome for the first time, I was greatly admired by the philosopher Glaucon for such a diagnosis. When he met me by chance on the street he told me that I appeared at just the right time. And shaking hands with me, he said: "We are close to a sick person whom I just saw and I ask you to visit him together with me. He is the Sicilian doctor whom you met a few days earlier while going for a walk with me." "What makes him sick?" I replied. Drawing up close to me he spoke very openly, since he was a person who does not hide his thoughts nor is he wicked, and said: "Yesterday, Gorgias and Apulus informed me that you made diagnoses and prognoses which border more on soothsaying and divination than on medical [science]. Therefore, I want to find out for myself, not in regard to you personally, but as to whether medical science is able to make a diagnosis and prognosis in such a case."

A *Method of Medicine to Glaucon*, which is mentioned by Galen in two other places,<sup>3</sup> is a very practical account of two areas of medical practice:

- The character, diagnosis, and management of the various kinds of fever (Book 1)
- The causation, diagnosis, and management of a group of conditions loosely gathered under the heading of "inflammation" (Book 2)

<sup>3</sup> In *De crisis* and *De libris propriis*; see Peterson, "Galen's *Therapeutics*," 3n4.

The book ends with a promise to supply Glaucon with more, and more detailed, material should it become available during his time abroad, as below:

These things would, I think, be convenient for you to have when setting out on a long journey abroad. If, as I said before, I were to write a treatise pertaining to medications relating them to class and affected places, you will have that when you return from your journey. There is also another large treatise I consider worthy for my friends, on the whole therapeutic method. If you are detained longer abroad, I shall not hesitate to send you each of the treatises I write. (XI.145-46K)

In effect, the work is a kind of vade mecum of medical practice according to Galen's methods but excluding surgical techniques. It approximates in scope to Books 7-14 of *The Method of Medicine*. The content of the two books may be summarized as follows:

*Book 1:* This is about fevers. In Galen's view, fevers due to humors are to be regarded as diseases per se in contradistinction to ephemeral fevers, which are symptoms. The first of the sixteen sections is devoted to general and theoretical considerations. Sections 2 and 3 cover ephemeral fevers—causes, manifestations, and treatment. Sections 4-8 deal with other kinds of fevers, beginning with a section on classification (4), and then sections on tertian, quartan, quotidian, and continuous fevers, respectively. Sections 9-14 deal with treatment of the forms described, beginning again with a section on general considerations. On the matter of treatment, Galen makes a distinction

between genuine and nongenuine tertian fevers. The final two sections are about the symptoms that may accompany fevers, and their management (15–16).

*Book 2:* This is about inflammation and related tumors and swellings. The opening section deals with some general issues and broad divisions—in part, whether the inflammation is due to an inflowing flux or an increase in the innate heat of the involved part, which in turn determines whether the inflammation is basically moist or dry. The next three sections (2–4) are about the key aspects of treatment, which depend on the broad divisions: if there is a flux (2), if there is not a flux (3), according to the affected part (4). The next eight sections deal with clinically recognizable inflammations and tumors/swellings: edema (5), scirrhoty and induration (6–7), swellings due to *pneuma* (8), abscesses (9), sinuses and fistulae (10), gangrenous inflammations (11), cancerous tumors (12), and elephantiasis (leprosy) (12). The final section (13) refers to several tumors/swellings that might be best treated by surgery, but which, given his “amateur” status, Glaucon may have to treat by nonsurgical means.

*The Method of Medicine to Glaucon* was already an important component of medical teaching by the time of the Alexandrian school (6th–7th c.). According to Hunain ibn Ishaq, it was one of four Galenic works forming a collection used for teaching medicine to beginners. The others were *On the Sects*, *The Art of Medicine*, and *The Pulses for Beginners*.<sup>4</sup> Peterson then gives details of two early commentaries, one in Latin and one in Greek, which have been preserved. The latter is the commentary on Book 1

<sup>4</sup> Peterson, “Galen’s *Therapeutics*,” 94.

by the philosopher Stephanus, which has been recently translated into English by Dickson.<sup>5</sup> *A Method of Medicine to Glaucon* has been well preserved. There are twenty Greek manuscripts listed in Diels,<sup>6</sup> some of which include Stephanus’ commentary on Book 1. In addition, there are twenty editions or version in Latin translation listed by Durling in the census of Renaissance translations referred to earlier. The first Latin translation was that of Niccolò da Reggio (fl. early 14th c.). Other Latin translations include those by N. Leoniceno, M. Acakia, A. Gadaldinus, and G. Chrestian. There were also early translations into French and Spanish, as listed by Durling.<sup>7</sup>

## SYNOPSIS OF CHAPTERS

### *Book 1*

1. *General principles and theoretical considerations:* Tribute is initially paid to Hippocrates for recognizing the critical importance of knowing the nature common to all people and, as far as possible, the specific nature of the individual patient being treated. This will allow remedies with the appropriate qualities to be applied in the appropriate quantities at the appropriate times. Second, it is imperative to have a comprehensive classification of phenomena in accord with and contrary to nature in terms of classes (*genera*), kinds (*species*), and differences (*differantiae*). Attention must be paid to matters pertaining to the

<sup>5</sup> Dickson, *Stephanus the Philosopher*.

<sup>6</sup> Diels, *Hippocrates und Galenos*, 93.

<sup>7</sup> See Durling, “Chronological Census,” 250–79, esp. 281–82.

person: age, sex, variations in temperament (*krasias*) and capacities (*dunameis*) manifest in color, heat, pulse, customs, and habits of the soul. Also, external circumstances must be considered: place, season of the year, and climatic conditions.

2. *Ephemeral fevers*: These are the simplest of fevers and are caused by fatigue, excessive drinking, excessive cooling or heating, buboes, insomnia, and perturbations of the soul. Signs are in the pulse, urine, and respiration. The staples of treatment are bathing and attention to diet. Galen lists some features that differ according to the cause. It is important to identify the antecedent cause. He writes specifically about the role of thickening of the skin in ephemeral fevers.

3. *The treatment of ephemeral fevers*: This section highlights some variations in the basic regime of bathing and careful attention to diet. Where applicable and possible, the general principle of "opposites are the cure of opposites" should be followed—for example, sleep for those with insomnia and rest for those fatigued by overexertion.

4. *Basic divisions*: Fevers due to humors are diseases in themselves and not symptoms. Some are accompanied by symptoms and some are not. Some are intermittent and some are continuous. Diagnosis should be made as early as possible—even on the first day. With few exceptions the diagnosis will be apparent by the fourth day.

5. *Tertian fevers*: After some general remarks on the distinction between tertian and quartan fevers based on the type of rigor seen, Galen focusses on the features of the tertian fevers. These are fevers that commonly be-

gin with a severe rigor. Other signs are: considerable and sharp heat; large, violent, frequent, and rapid pulse with no irregularity; sharp rigors; occurrence in summer; a hot and bilious nature; violent thirst; sweating; bilious vomiting.

6. *Quartan fevers*: The key signs are: a slow and intermittent pulse between peaks and irregularity of a single beat; absence of the burning heat typical in tertian fevers; characteristic season (autumn), place, and weather conditions; evidence of epidemic disease; an enlarged spleen.

7. *Quotidian fevers*: The characteristics are: heat; moisture with a certain sharpness/acridity; a small and intermittent pulse; less thirst-exiting than the other fevers; dryness of the tongue and whole body; phlegmatous vomitus. They characteristically occur in children and small people, and those with a thick bodily state. There is also a characteristic urine.

8. *Continuous fevers*: Key features are: absence of the characteristic signs of the other fevers and a fever that does not end within twenty-four hours. Typically there is an irregular pulse and signs of failure of concoction in both urine and feces.

9. *General aspects of treatment*: Galen declares his intention of discussing the treatment of the various forms of fever. After a brief comment on the use of a very light diet in the quotidian form, he makes a distinction between the genuine and nongenuine tertian forms, exemplifying the latter with a detailed case report. The quartan and quotidian fevers have an analogous division into genuine and nongenuine. He then focuses on what he identifies as the most important aspect, which is the recognition of the

"quantity" of the disease and the "quantity" of the patient's capacity. The outcome is primarily determined by the "struggle" between these two factors.

10. *Treatment of genuine tertian fevers*: The essential elements are moistening and cooling coupled with evacuation of the causative yellow bile, which is the hottest and driest of the humors. Baths must be particularly tailored to the needs of such fevers. Various medications are listed. Details are given of the natures of the wines and foods that are useful.

11. *Treatment of nongenuine tertian fevers*: An important issue here is to achieve a balance between controlling the disease and preserving the capacity of the patient. Fasting is beneficial for the former but harmful for the latter. Bathing should begin immediately; nourishment should be on alternate days. The overall objective is realized by agents that are cutting and warming, unlike the tertian fevers, where moistening and cooling are the aims.

12. *Treatment of quartan fevers*: A gentle approach is called for—no strong medications and no purging unless there is a considerable increase in blood. Certain easily digested foods and effective medications are listed. Massage, walking, and bathing are to be used, and customary activities allowed. Massage without bathing is particularly good. Softening and relaxing cataplasms or poultices help, as do diuretic medications. There is also a place for the judicious use of medications that purge black bile.

13. *Treatment of quotidian fevers*: In this very brief section the things mentioned are oxymel over the first few days, diuretics, and, in general terms, a cutting regimen. Vomiting and defecation should be encouraged as ways to rid the body of phlegm.

14. *Treatment of continuous fevers*: Characteristic of these fevers is a peak within the first seven days. If the capacity is strong and the patient of a suitable age, a light and carefully considered diet is appropriate prior to a peak. During a peak, the diet should be very thin, but thicker after each peak. The magnitude of the disease determines whether venesection should be used.

15. *Symptoms associated with fevers*: Galen begins this long section by stressing the need to give due consideration to both the fever and the associated symptoms, balancing the treatment of the two according to clinical circumstances. The symptoms particularly considered include: vomiting, diarrhea, excessive sweating, pain, and insomnia. The roles and methods of venesection and evacuation are considered, as is the general state of the body and its relevance to treatment. Detailed consideration is given to groups of symptoms that may be gathered under the two headings of syncope and physical collapse. Treatment is specific to each different affliction. Methods described include revulsion, binding of the limbs, and the use of cupping glasses. Drinks (including wine), bathing, massage, and various medications all have roles, but their use must be carefully considered.

16. *Treatment of the symptoms*: The key to finding an effective cure is by identifying the cause of a particular symptom. Galen starts by considering headache, nausea, and vomiting. Inquiry into the precise nature of these symptoms in the individual patient will help in recognizing the cause. The standard treatment methods are to be used—evacuation, venesection, revulsion, and medications—according to circumstances. Care must be taken to recognize symptoms that are, in fact, Nature's way of deal-



ing with the basic problem. These symptoms can be indicated by the type, severity, and stage of a particular fever. Also, in making an assessment, the usual factors of age, time of year, place, prevailing climatic conditions, and past medical history are important. Galen ends the first book with a statement of his intention to devote the second book to the fevers due to the various kinds of inflammation.

### Book 2

1. *The differentiae of inflammation:* The first important differentiation is whether there is moistness or dryness. The former occurs when a hot flux flows to a part; the latter is due to an increase of innate heat in the part. There are various kinds of flux—blood, bile, phlegm, or a combination, and within these there are variations in physical characteristics. Galen describes the features of inflammation due to inflowing blood and bile. He then deals with certain specific inflammations: herpes, which may be eroding or miliary; erysipelas, either alone or in combination with inflammation (erysipelitic inflammation, inflammatory erysipelas); and anthrax. Sometimes inflammation is named for the type and sometimes for the part involved. Inflammation is easy to recognize when it is superficial; in unseen parts, when it is characterized by fever, diagnosis can be difficult.

2. *Treatment of superficial inflammation due to flux:* Treatment must be correct from the beginning. Key mistakes are neglecting treatment of the whole body and further heating the part. Correct treatment involves evacuation of the whole body and the application of cataplasms

to the part, aimed at revulsing the inflow; these latter may be moistening. Several important factors—age, season, place, climatic conditions, strength of the patient, the patient's state and customs, and the underlying cause, as well as the site of inflammation—are determinants of when, where, and how to evacuate. Galen gives details of some specific medications to be included in cataplasms. If pus has collected, incision may well be necessary.

3. *Treatment of inflammations not due to flux:* With these, moistening and heating are permissible, as are inducing suppuration with cataplasms, and scarification. Evacuation is still required but may not need to be by venesection. Galen describes the composition of cataplasms for erysipelas due to wounds or ulcers, and the treatment of erysipelitic inflammation and inflammatory erysipelas. He also deals briefly with the treatment of buboes, *phy-mata*, and *phygethla*. He gives detailed consideration to the medications required for herpes, and particularly for herpetic ulceration. Various troches are listed for use with ulcers. He gives brief consideration to applications for anthrax.

4. *Treatment of inflammation according to the affected part/organ:* Having dealt with the treatment of inflammation according to class, Galen now considers the significance of the actual organ involved. There are four factors: *krasis*, conformation, position, and capacity. *Krasis* indicates what is required to improve this. Conformation is significant in terms of internal and external spaces and the relative density of the structure. Position indicates which parts must be evacuated, how and when—he gives as an example the uterus, then goes into some detail about venesection, revulsion and diversion, and the use of cupping

glasses. There is a brief statement about the natural routes of evacuation for several organs. The next consideration is the path a therapeutic agent takes from its place of administration to the target tissue or organ and the effect this might have on the agent's potency. The fourth factor (the capacity of the organ being treated) is then considered. One problem is that a particular remedy may resolve the affection but harm the innate capacity of the involved part. An important indication of this is whether the part is anesthetic or dysesthetic. The former will tolerate acrid medications; the latter will not. Finally, there is the issue of the capacity of the body as a whole.

5. *Treatment of edema*: Edema is a painless, spongy swelling arising from a phlegmatic substance or vaporous *pneuma*. Typical sites and associations are feet and legs in dropsical conditions, consumptions, and other cachexias. Edema may not require treatment in itself; treatment of the primary condition may suffice. Galen gives brief details of specific agents that may be applied with benefit in edema. In addition to medications, bandaging may be required.

6. *Treatment of scirrhus swellings in general*: A genuine scirrhus swelling is hard and without sensation; a nongenuine scirrhus swelling has sensation but is dysesthetic. The former can be impossible to cure; the latter difficult. The basic cause is a thick, viscous humor adhering indissolubly to the involved part. Such affections may be iatrogenic, arising due to the inappropriate use of astringent and strongly cooling medications in inflammations. Treatment must be through agents that are strongly drying but also have a mild heating effect and the right amount of moisture. Some appropriate agents are listed.

Galen refers to an earlier statement that strong drying agents are not needed. The issue is whether they are thin- or thick-particled. He gives a detailed case report of a young boy who had developed a scirrhus swelling involving the whole thigh due to ill-advised treatment of erysipelas with strong astringents and cooling agents.

7. *Treatment of scirrhus in the spleen and liver*: In the case of the spleen, a distinction must be made between scirrhus and pneumatic swellings. The treatment of the former is by strong medications applied externally or consumed. The medications should be of mixed potency, but particularly dispersing with some astringency. Scirrhuses of the liver can be treated successfully in the early stages, but if they become chronic, treatment may be difficult or impossible. The liver differs from the spleen in not tolerating strong medications, so softening agents may have to be incorporated in compound preparations, as Galen describes.

8. *Swellings (tumors) containing flatulent pneuma*: The contained material is thick and vaporous. The basic aims of treatment are: rarefaction of bodies that have been condensed; and thinning of thickened *pneuma*. The actual methods depend on the part involved. Sites include intraperitoneal, within the stomach and intestines, and within the membranes surrounding muscles. If the contained *pneuma* is very cold, pain will be considerable. Sometimes, however, the condition is painless. Useful medications are described. Cupping glasses may be helpful. If pain is severe, medications derived from opium may be required. Routes of administration of medications depend on the site of the swelling.

9. *Treatment of abscesses*: The section begins with the

definition of abscess: the separation of bodies that were previously in contact, and the occupation of the space so created by either a *pneuma*-like substance or a watery fluid. Abscesses arise from the transformation of existing inflammations, the generation of certain fluids within a body, or the inflow of fluids from other bodies. In chronic abscesses the contained fluid may take a variety of forms. Diagnosis of superficial abscesses is easily made by palpation. Treatment depends on the stage of the abscess. Prior to concoction and suppuration, pain-relieving and relaxing cataplasms may be used. Scarification may be required, if there is notable tension in the skin. The preparation of various cataplasms is described. With abscesses that are difficult to disperse, there is danger of leaving material behind that becomes scirrhus or indurated. Diagnosis of this is also by palpation. Specific cataplasms for treatment are described. When there is suppuration, there may be need for incision together with specific cataplasms.

10. *Treatment of sinuses/fistulae*: The use of a *pyulcus* (small pipe) for introducing medications into a sinus or fistula is described, as is the use of "tents" (medicated plugs of lint) placed in the sinus. Once healing from below is already underway, conglutinating medications may be used. Details of various medications are given. Subsequently, sutures or fibulae may be required. Awareness of the possibility of multiple channels in a sinus is important. Where drainage is required, this may be achieved by positioning or counterincision.

11. *Gangrenous inflammations*: These are defined as major inflammations progressing toward necrosis but not yet completely necrosed. The basis of treatment is the removal of blood that is regarded as blocking up the af-

ected part. This may be achieved by appropriate venesection, scarification (deep), and local application of medications in the form of cataplasms or plasters. A number of useful compound medications are described, including several eponymous troches.

12. *Cancerous tumors and elephantiasis*: The cause of both conditions is a melancholic superfluity, which is normally generated in the liver and cleared away by the spleen. Breast cancer, when it is advanced, requires surgical treatment. In the early stages, purging of the melancholic humor may be effective. Venesection may also be helpful. He speculates on the geographical distribution of elephantiasis and relates observed differences to way of life and diet. Various medications for the treatment of elephantiasis are described.

13. *Final comments*: Galen does not consider it worthwhile to write to Glaucon about the surgical treatment of other tumors. He does briefly mention medications useful for *choirades* (tuberculous lymph glands in the neck) and *melicerides* (cysts or wens resembling honeycomb), hydroceles, and ascites—the last two as examples of dropsy. He promises Glaucon further works on medications when he returns from his travels, as well as his major work, *The Method of Medicine*.

## BIBLION A

- 1K 1. Ὅτι μὲν οὐ τὴν κοινὴν μόνον ἀπάντων ἀνθρώπων φύσιν, ὧ Γλαύκων, ἐπίστασθαι χρὴ τὸν ἰατρόν, ἀλλὰ καὶ τὴν ἰδίαν ἐκάστου, πάλαι τε πρὸς Ἱπποκράτους ὀρθῶς εἴρηται καὶ ἡμῖν δ' ἐπ' αὐτῶν, ὡς οἴσθαι, τῶν ἔργων τῆς τέχνης ἰκανῶς ἐσπούδασται. οὐ μὴν γράφειν γε δυνατόν, ὥσπερ τὴν κοινὴν, οὕτως καὶ τὴν ἰδίαν ἐκάστου, ἀλλ' ὑπεναντίως ἔχει τὰ γράμματα πρὸς τὰς πράξεις, ἄλλοθί τε πολλαχόθεν καὶ οὐχ ἥκιστα ἐν τοῖς νῦν ὑπ' ἐμοῦ γραφομένοις.<sup>1</sup> ἤξιώσας μὲν 2K γὰρ ἡμᾶς, ἰαμάτων τινά σοι καθόλου μέθοδον | ὑποτυπώσασθαι περαίνεται δὲ αὕτη διὰ τε ποιότητα καὶ ποσότητα ἐκάστου τῶν βοηθημάτων καὶ τοῦ τρόπου τῆς χρήσεως αὐτῶν καὶ τοῦ πάντων τούτων χαλεπωτάτου διαγνωσθῆναι καιροῦ, περὶ ὃν ὀξὺν ἰκανῶς ὄντα, καθάπερ πού καὶ τοῦτό φησιν ὁ πάντων ἡμῖν τῶν καλῶν Ἱπποκράτης, σφαλλομένους πολλακίς

<sup>1</sup> γραφομένοις D; προκειμένοις K

<sup>1</sup> Glaucon is thought to be a philosopher, possibly of Athenian origin, who came to know Galen during the latter's first stay in Rome (AD 162–166). He is mentioned several times in Galen's

## BOOK I

1. A long time ago, Glaucon,<sup>1</sup> Hippocrates rightly said it is necessary for the doctor to know not only the nature 1K common to all people,<sup>2</sup> but also the nature specific to each individual. As you know, I have been zealously committed to these same actions of the art. However, it is not possible to write about the specific nature of each person as it is about the nature common to all. Rather, words stand in opposition to practices, as they do in many other things, and not least in those matters now lying before me. You asked me to sketch out for you some general method of treatment. This is accomplished through the quality and 2K quantity of each of the remedies, the manner of their use, and the opportune time, which is the most difficult of all these things to determine. It is with reference to the last, which is very quick to pass, just as Hippocrates, our guide in all things good, also says somewhere that not only do

writings—for example, *Loc. Aff.*, VIII.361–66K. The most detailed consideration of Glaucon is to be found in Peterson, “Galen’s *Therapeutics*.”

<sup>2</sup> Stephanus, in his commentary, considers the term “nature” here and gives the following four meanings: as *krasis*, as the arrangement of the parts, as the powers or capacities of the organism, and as the governing functions of the soul. He identifies the second and fourth as particularly relevant here.

ὄρῳ οὐ τοὺς τυχόντας μόνου, ἀλλὰ δὴ καὶ τοὺς ἀρίστοις ἰατρούς. καὶ μὲν δὴ καὶ ὅτι μέγα τὸ ποσὸν εὐστόχως συναρμοσθὲν εἰς δύναμιν ὁ αὐτὸς ἀνὴρ ἔγραψεν.

ὅταν οὖν εἰς μὲν τὸ καλῶς ἰᾶσθαι μέγα συντελεῖν φαίνοιτο ὁ τε καιρὸς καὶ ἡ ποσότης τῶν βοηθημάτων, ἴδια δὲ ταῦτα καθ' ἕκαστον τῶν νοσοῦντων εὐρήσεις, μηδὲν δ' ἴδιον ἐρμηνεύεσθαι λόγῳ δύναται, τὸ κοινὸν οὕτως ἀναγκαζόμεθα γράφειν, κἂν τῇ χρείᾳ δεύτερον ἦ. καὶ γὰρ οὖν καὶ ἐπισκοπούμεθά τινας ἀρρώστους πολλάκις, οἷς ὑγιαίνουσιν ἔμπροσθεν οὐκ ἐνετύχομεν οὐκουν οὐδ' ὅπως εἶχον χροιάς, ἢ σχέσεως, ἢ τῆς κατὰ φύσιν θερμασίας, ἢ τῆς τῶν ἀρτηριῶν γινώσκου-  
 3K τες, εἰδότες ἱκανοὶ κριταὶ γενώμεθ' ἂν | ποτε τῶν νοσημάτων τοῦ μεγέθους. εἰς ὅσον γὰρ ἐξίσταται τῆς φύσεως ἕκαστον, εἰς τοσοῦτον καὶ μεγέθους ἦκει. τὸ δ' ὅσον ἐξίσταται, γινῶναι δυνατὸν μόνῳ τῷ κατὰ φύσιν ἀκριβῶς ἐπισταμένῳ. τοῦτ' οὖν ἀγνοοῦντες ἐπ' αὐτῶν, ἵνα μὴ παντάπασιν ἀποροῦμεν, ἐπὶ τὸ κοινὸν ἀφικνούμεθα, κἂν τῇ χρείᾳ δεύτερον ἦ.<sup>2</sup> πλέον τι κἂν τοῦτῳ τῶν ἀτέχνων ὁ τεχνίτης ἔχει. καὶ τί τὸ πλέον;  
 Ἰπποκράτης μὲν καὶ τοῦτο πρῶτον ἀπάντων ὧν ἴσμεν ἔγραψεν. ἐξηγήσαντο δ'<sup>3</sup> ἐπὶ πλέον τῶν μετ' αὐτὸν ὅσοι τῶν ἐκείνου συνήκαν γραμμάτων, ὧν εἰς

<sup>2</sup> κἂν τῇ χρείᾳ δεύτερον ἦ add. D

<sup>3</sup> ἐξηγήσαντο δ' D; ὑπεμνήσαντο δὲ K

you often see ordinary men make mistakes, but also in fact the best doctors. Furthermore, this same man, Hippocrates, also wrote that it is of great importance to match the quantity wisely to the capacity.<sup>3</sup>

Therefore, when the appropriate time and the quantity of the remedies appear to contribute greatly to curing well, you will find that these things are specific to each patient, but since it is impossible to express anything specific in words, I am compelled, on this account, to write about the general, even though it is secondary in terms of use. For in actuality, we are often attending patients whom we have not encountered previously, when they were healthy, so we do not know how they were in terms of color, physical state, natural heat or the movements of the arteries; if we knew these things we would be adequate judges of the magnitude of the diseases at that time, for the magnitude is proportional to the extent to which each  
 3K departs from the natural state. But the degree to which there is departure from the natural state can only be known by someone who has a precise knowledge of what the natural state was. Therefore, when we are ignorant of these very things, we fall back on the common so we are not altogether at a loss, even though it is secondary in terms of use. But in this too, the trained person offers more than those who are untrained. And what is this "more"?

Hippocrates was the first of all those we know who wrote this. And among those who came after him and expounded on his writings to a greater degree, there

<sup>3</sup> See Hippocrates, *Aphorisms*, I.1; *Nutriments*, 35.

ἦν καὶ Μνησίθεος ὁ Ἀθηναῖος, ἀνὴρ τὰ τ' ἄλλα πάντα τῆς τέχνης ἱκανὸς ἐπιγινῶναι καὶ εἰς ὅσον χρῆ μεθόδῳ τὴν ἰατρικὴν τέχνην ἀσκεῖν, οὐδενὸς ἐπιγινῶναι δεύτερος. οὗτος ὁ Μνησίθεος ἀπὸ τῶν πρώτων καὶ ἀνωτάτω γενῶν ἀρξάμενος ἀξιοῖ τέμνειν αὐτὰ κατ' εἶδη τε καὶ γένη καὶ διαφοράς. εἴτ' αὖθις τὰ τεμνόμενα τέμνειν ὁμοίως κακέϊνα πάλιν ὡσαύτως, ἔστ' ἂν ἐπὶ τι τοιοῦτον εἶδος ἀφικώμεθα μεθ' ὃ τέμνοντες,<sup>4</sup> εἰς ἓν τῷ ἀριθμῷ καὶ ἄτομον ἤδη τελευτήσωμεν. ἀρκεῖ μοι ταῦτα πρὸς γέ σε διὰ βραχέων ἃ βούλομαι δεδηλωσθαι. | καὶ γὰρ ἂν εἶην γελοῖος, εἴ σε διδάσκουμι τὰ σὰ ὡσπερ οὐχὶ παρὰ Πλάτωνος αὐτὰ πάλαι μεμαθηκότας. οὐ γὰρ ὥστε διδάξαι σέ περὶ τῆς κατὰ τὴν τοιαύτην διαίρεσιν μεθόδου τὴν ὑπόμνησιν ἐποιήσαμην, ἀλλ' ὅτι μοι πρὸς τὸν ἐφεξῆς λόγον ἅπαντα χρῆσιμον αὐτὴν ἔσεσθαι νομίζω καὶ τὴν αἰτίαν, ὧν ἐκάστοτε σφαλλομένους ὄρῃς τοὺς πολλοὺς τῶν ἰατρῶν, ἀξιούντι σοι μαθεῖν οὐκ ἐνῆν ἄλλως ἐνδείξασθαι. καὶ γὰρ καὶ τὰ κατὰ τὰς ἄλλας αἰρέσεις σφάλματα καὶ ὅσα νῦν ἐπὶ τῶν νοσοῦντων οἱ πολλοὶ τῶν ἰατρῶν ἀμαρτάνουσι, πρώτην καὶ μεγίστην αἰτίαν ἔχει τὸ μοχθηρὸν τῆς διαιρέσεως. οἱ μὲν γὰρ ἐπὶ τῶν πρώτων καὶ ἀνωτάτω γενῶν μένουσιν, ἀρκούμενοι

<sup>4</sup> post τέμνοντες, 'ἀχρὶς οὗ τὸ τεμνόμενον' (K) om.

<sup>4</sup> Mnesitheus was a Greek doctor who flourished in the middle of the fourth century BC. He is regarded as having been a

was Mnesitheus the Athenian,<sup>4</sup> a man who had adequate knowledge of all the other arts, but was also recognized as second to none in the practice of the medical art as far as this must be by method. This Mnesitheus, beginning from the first and highest classes, thought it worthwhile to divide these things according to kinds (species), classes (genera) and differences (*differentiae*) and then again to divide the things divided similarly, and then those again in the same way until, after making the divisions, we shall come finally to what is one in number and indivisible. It is enough for me to have made clear to you, at least briefly, what I wish to make clear. For truly it would be laughable if I were to teach you your own business, as if you had not learned these things from Plato long ago. But I did not make mention of this so I might somehow teach you something about the method pertaining to such a division; I did it because I think this will be useful in relation to the whole discussion to follow, and that you might see the reason why the majority of doctors fall into error on each occasion, it being impossible to show you otherwise what you consider worth learning. Furthermore, the faults besetting the other sects, and those which the majority of doctors now have in respect of those who are sick have faultiness of division as the primary and most important cause. Thus, there are some who remain at the level of the primary and highest classes (genera), being satisfied with the indica-

4K

Dogmatic and his name is linked with Diocles and Dieuches in Galen's *De methodo medendi*. The entry on him in EANS (Manetti, pp. 560–61) reads in part: "Mnēsitheus followed but also innovated Hippocrates' humoral etiology and developed the difference between humors (χῦμός) and savors (χῦλός)."

ταῖς ἀπὸ τούτων ἐνδείξεσιν· οἱ δὲ μέχρι μὲν τινος ἔτεμον, οὐ μὴν πρὸς γε τὸ τέλος ἐξείκοντο· πολλοὶ δὲ καὶ μοχθηραῖς ἐχρήσαντο διαιρέσεσιν.

5K ὅστις δὲ καὶ τὰ κατὰ φύσιν ἅπαντα καὶ τὰ παρὰ φύσιν εἰς τὴν τοιαύτην ἀνάγων μέθοδον, ἐξ ἁπάντων τῶν κατὰ τὴν διαίρεσιν ἀνευδεῆ λαμβάνει τὴν ἔνδειξιν, μόνος ἂν οὗτος εἰς ἀνθρωπίνην δύναμιν ἀναμάρτητος εἴη περὶ τὰς ἰάσεις· καὶ τοὺς τε γινωσκομένους  
 ἁμεινον τῶν ἄλλων ἰῶτο καὶ τοὺς ἀγνοουμένους εἰς ὅσον οἶόν τε καὶ τούτους ἐγγυτάτω τῶν γινωσκομένων. εἰ γὰρ διωρίσαιντο τις πρῶτον μὲν τὴν κατὰ τὰς ἡλικίας διαφορὰν, ἐφεξῆς δὲ τὴν κατὰ τὰς κράσεις καὶ τὰς δυνάμεις καὶ τᾶλλα τὰ τοῖς ἀνθρώποις ὑπάρχοντα, χροιάς λέγω καὶ θερμοσίας καὶ σχέσεις καὶ σφυγμῶν κινήσεις καὶ ἔθῃ καὶ ἐπιτηδεύματα καὶ τὰ τῆς ψυχῆς ἦθη, προσθείη δὲ τούτοις καὶ τὴν ὡς ἄρρενος πρὸς θῆλυ διαφορὰν, ὅσα τε κατὰ τὰς χωρικὰ καὶ τὰς ὥρας τοῦ ἔτους καὶ τὰς ἄλλας τοῦ περιέχοντος ἡμᾶς ἀέρος καταστάσεις, ὡς χρῆ διωρίσαιντο, πλησίον ἂν ἦκει τῆς ἰδίας τοῦ κάμνοντος φύσεως. ἀλλὰ πάντων τούτων τὰ μὲν ἐν τοῖς περὶ σφυγμῶν, τὰ δ' ἐν τοῖς περὶ κράσεων διώρισται ὥσπερ γε καὶ τῶν παρὰ φύσιν ἁπάντων ὅσαι κατ' εἶδη τε καὶ γένῃ διαφοραὶ τυγχάνουσιν οὖσαι, πάσας ἐν τῷ περὶ πα-

<sup>5</sup> There are seven works on the pulses—the four major treatises on classification, causation, diagnosis, and prognosis, respectively (for details see above: *The Art of Medicine*, note 73), and three minor works: *UPuls.*, V.149–80K; *Puls. ad Tir.*, VIII.453–

tions from these; there are some who divide up to a certain point but don't follow through to the end; and there are also many who use faulty divisions.

But if someone refers all things in accord with nature as well as all things contrary to nature to such a method, he will take a faultless indication from all those things pertaining to the division. Only such a person would be free of error concerning cures as far as humanly possible, and would cure those he knows better than others and those he does not know as well as possible, but very nearly as well as those he does know. For if someone were to divide first according to differences of age, and next according to differences in *krasias* and capacities (*dynamis*), and the other things that relate to humans—I speak of colors, heats, states, movements of pulses, customs, practices and the habits of the soul—and to add to these the division into male and female, and those things that must be divided relating to places, seasons of the year, and the other conditions of the air surrounding us, he would come close to the specific nature of the sick person. But all of these have been distinguished in the works on the pulses and in those on *krasias*.<sup>5</sup> In the same way too, we distinguish in the work on affections those *differentiae* that happen to exist in all the things contrary to nature, in terms of kinds and classes.<sup>6</sup> For the present, however, our

92K; and *Syn. Puls.*, IX.431–549K. There is also the spurious *Puls. Ant.*, XIX.629–42K, and a lost work on Archigenes' book on the pulses. The two main works on *krasis* are *Mixt.*, I.509–694K, and *Inaequal. Intemp.*, VII.733–52K.

<sup>6</sup> I take this to be a reference to *De morborum differentiis* and *De symptomatum differentiis*. For an English translation of these works, see Johnston, *Galen on Diseases and Symptoms*.

6K θῶν διοριζόμεθα λόγῳ. ἰνὺ δὲ ὁ μὲν λόγος ἡμῖν ἅπας ἔσται περὶ τῶν τοιούτων ἀρρώστων ὧν τὴν φύσιν ἀκριβῶς ἐπιστάμεθα πρὸ τῆς νόσου· συνεπινοηθήσονται δὲ αὐτοῖς καὶ οἱ λοιποὶ πάντες οἷς ἄγνοοῦμεν.<sup>5</sup> οὐδὲν γὰρ ἦν χαλεπὸν ἀπὸ τοῦ τελέως διορισμένου καὶ τὸ μὴ τοιοῦτον ἐξευρίσκειν.

2. Ἀρξώμεθα γοῦν ἀπὸ τῶν πυρετῶν, ἐπειδὴ καὶ σὺ τῆς τούτων ἰάσεως μάλιστα ἤξιον σοι τὴν μέθοδον λεχθήναι, καὶ πρῶτον εἴπωμεν περὶ τῶν ἀπλοστάτων, οὓς Ἴπποκράτης ἐφημέρους καλεῖ. τοιοῦτοι δ' εἰσιν οἱ τε διὰ κόπους γινόμενοι καὶ μέθας καὶ ὀργὰς καὶ λύπας καὶ θυμοὺς καὶ τὰς ἄλλας φροντίδας τῆς ψυχῆς τὰς συντόνους. καὶ οἱ ἐπὶ βουβῶσι δὲ πυρετοὶ τούτου τοῦ γένους εἰσὶ, πλὴν εἰ μὴ χωρὶς ἔλκους φανεροῦ γένοιτο. τηνικαῦτα γὰρ ὑποπτοὶ τ' εἰσὶ καὶ οὐδαμῶς ἐπιεικεῖς. καὶ ἀγρυπνία δὲ πολλάκις ἤνεγκεν ἀπλοῦν πυρετόν, ὥσπερ οὖν καὶ ψύξις ποτὲ καὶ ἔγκαυσις. οὗτοι πάντες οἱ πυρετοὶ ῥᾶστα λυθῆναι δύνανται· χρῆ γὰρ ἐπὶ τε λουτρὰ ταχέως ἄγειν αὐτοὺς καὶ τὴν ἄλλην τὴν συνήθη δίαιταν. ὅσοι δ' τὴν πολυθρύλλητον διάτριστον ἐπὶ πάντων τῶν τοιούτων ἐκδέχονται, δριμυτέρους πολλάκις εἰργάσαντο τοὺς τοιούτους πυρετούς, καὶ τι καὶ ἄλλο προσεξαμαρτάνοντες, ὥσπερ οὖν ὀρᾶς τοὺς πολλοὺς αὐτῶν καθ' ἐκάστην

<sup>5</sup> οἷς ἄγνοοῦμεν D; ὧν ἠγνοοῦμεν K

<sup>7</sup> Stephanus, in his commentary, gives a comprehensive and

6K whole discussion will be about those sick people whose natures we know accurately prior to the disease, while all the rest, whose natures we do not know, are considered along with them. For it would not be difficult to discover from what was completely determined what was not yet so.<sup>7</sup>

2. Let us begin, then, from the fevers, since you too thought it particularly important for the method of cure of these to be discussed. First, let me speak about the simplest, which Hippocrates calls "ephemeral."<sup>8</sup> These are the fevers which arise due to fatigue, excessive drinking, passion, grief, anger and the other intense perturbations of the soul. The fevers due to buboes are also of this class, unless they occur without an apparent wound or ulcer. Under these circumstance, they are suspicious and in no way mild. Also insomnia often brings on a simple fever, just as both cooling and heating do on occasion. All these fevers can be resolved easily; it is necessary to bring the patients to the bath quickly and to their other customary regimen. But those who accept the notorious "three-day period"<sup>9</sup> in the case of all such fevers often make the fevers sharper, and they also err in other respects—you see many

clear account of Galen's division of the normal state; see Dickson, *Stephanus the Philosopher*, 40–45.

<sup>8</sup> See Hippocrates, *Aphorisms*, 4.55.

<sup>9</sup> *Διάτριστος*: on this see Galen's *MM*, X.558–63 and X.580–84K; Johnston and Horsley, *Galen: Method of Medicine*, 2.388–95 and 420–27). This is a concept particularly associated with the Methodic school, which imposed what was in effect a forty-eight hour fast at the onset of a fever, in line with their idiosyncratic ideas on disease causation much criticized by Galen.



7K εἰσοδον | ἀμαρτάνοντας, ὡς καὶ χειροποίητον ὄντως ἐργάσασθαι τὸ νόσημα.

τὰ μὲν δὴ τῆς θεραπείας τοῖς τοιούτοις πυρετοῖς πρόχειρα, τὰ δὲ τῆς διαγνώσεως ἀκριβείας πλείονος δεῖται καὶ οὐδεὶς πρό γε ἡμῶν ἔγραψεν αὐτὰ εἰς ὅσον ἐχρῆν. ὥστ' οὐδὲν θαυμαστὸν εἰς τοσοῦτον ἀμαρτάνειν τοὺς πολλοὺς ἐν ταῖς ἰάσεσιν, εἰς ὅσον κὰν ταῖς διαγνώσεσι σφάλλονται. πολλάκις γὰρ ἤρξαντό τινες νοσημάτων χαλεπῶν κατὰ τινα συντυχίαν, οἷον ἢ ἐγκαυθέντες ἢ οἰνωθέντες ἢ ψυχθέντες ἢ κοπωθέντες ἢ ἀγρυπνήσαντες ἢ θυμωθέντες ἢ ὀπωσοῦν αἰτία τινὶ συσχεθέντες τῶν καὶ καθ' αὐτὰ βλάπτειν πεφυκότων· εἶτα οἰηθέντες τὸ πᾶν διὰ τὸ ἡγησάμενον αἴτιον, καὶ μὴ δι' ἄλλην τινὰ γεγονέναι διάθεσιν, ἀφυλακτότερον διαιτηθέντες ἔλαθον ἑαυτοὺς εἰς ἀνίατον ἢ καὶ δεινῶς δυσίατον ἐμβάλλοντες νόσημα. ταῦτ' ἄρα χρὴ περὶ παντὸς πεποιῆσθαι, καθότι καὶ ὁ Ἱπποκράτης παραινεί προγινώσκειν οὐ τὰ μέλλοντα μόνον, ἀλλὰ καὶ τὰ προγεγονότα καὶ τὰ παρόντα. καὶ γὰρ οὖν καὶ τὸ νῦν προκείμενον ἐκείνου τοῦ μέρους τῆς τέχνης ἐστίν, καὶ ἡμεῖς αὐτὸ καθόσον οἷόν τε | σαφῶς γράψομεν.

8K οὐ μικρὰ γὰρ ἡ διαφορὰ λούειν ἤδη τὸν κάμνοντα καὶ θαρρεῖν κελεύειν, ἢ διὰ πάσης φυλακῆς τε καὶ ἀσφαλείας ἄγειν. εἰσελθόντας οὖν χρὴ περὶ τὸν ἀσθενοῦντα πρῶτον μὲν ἀπὸ τῶν μεγίστων σκοπεῖσθαι τὰ κατ' αὐτόν· ἔπειτα δὲ καὶ ἀπὸ τῶν ἄλλων μηδὲν ὡς οἷόν τε μηδὲ τῶν ἐλαχίστων παραλίποντας. τὸ γὰρ μᾶλλον ἢ ἥττον τῇ παρὰ τῶν μεγίστων ἐνδεί-

of them going wrong each time they visit the patient, so as to bring about what is really an iatrogenic disease. 7K

Now the aspects of treatment for these fevers are ready to hand, whereas the aspects of diagnosis require great precision and no one prior to myself has written about these to the necessary extent. Consequently, it is not surprising that many err to the same extent in their treatments as they fail in their diagnoses. Some [doctors] often pave the way for difficult diseases related to some chance occurrence, like overheating, drunkenness, cooling, fatigue, insomnia, rage or anything else whatsoever when these are coincident with some cause among those that are naturally harmful by themselves. Then they suppose the whole [disease] arose from the antecedent cause and was not due to some other condition. As a result, they treat it too carelessly, not realizing they are bringing down upon themselves a disease that is incurable or extremely difficult to cure. It is necessary, then, to give forethought to these things above all in the manner Hippocrates also advises—to know beforehand not only those things to come but also those that have previously existed, and those that presently exist. Furthermore, the matter presently before us is of that part of the art, and I shall write about this as clearly as possible. 8K

Now there is no small difference between directing the patient to bathe confidently, and to proceed with every care and precaution. Thus, when we come to the patient, we must first consider those features that are the most significant in his case. And then we must consider the other features as far as possible, leaving none aside, not even those of least significance. For whether we rely more or less on the indication from the major signs arises from

ξει πιστεύειν ἐκ τῆς τῶν ἄλλων προσθήκης γίνεται. μέγιστα μὲν δὴ τοῖς πυρέσσουσιν ἅπασιν ἐν τοῖς τε<sup>6</sup> σφυγμοῖς ἐστί καὶ τοῖς οὔροις γνωρίσματα· προστιθέναι δὲ χρὴ τούτοις καὶ τᾶλλα σύμπαντα, τὰ τε περὶ τὸ πρόσωπον ὑφ' Ἰπποκράτους εἰρημένα καὶ τὰ κατα τῶν κλίσεών τε καὶ τὰ τῆς ἀναπνοῆς καὶ ὅσα κάτω τε καὶ ἄνω κενοῦνται καὶ μὲν δὴ καὶ εἴ τι σύμπτωμα περὶ ὁτιοῦν μόριον τοῦ σώματος ἢ ἐνέργειαν αὐτοῦ συνιστάμενον βλέποις, οἷα δὴ μυρία ἐπὶ μυρίοις ἐκεῖνος ἔγραψε, μηδὲ τούτων ῥαθύμως μηδὲν παρέρχεσθαι. ταῦτα μὲν ἐπὶ πάντων κοινὰ τῶν πυρετῶν. ὥστε καὶ τοῖς ἀπλουστάτοις, ὑπὲρ ὧν ὁ ἐνεστηκὼς λόγος. οὐδὲν οὐδὲ τούτων χρὴ παραλιπεῖν.

9K ἀλλ' ἐπειδὴν σοι | τὰ τε τῶν σφυγμῶν καὶ τὰ τῶν οὔρων ἐνδείξεται τὸ ἦθος τοῦ πυρετοῦ· τῶν μὲν σφυγμῶν μήτε τὸ τῆς φλεγμονῆς σημεῖον ἐχόντων μήθ' ὅλως τὸ κατὰ μίαν προσβολὴν τῆς ἀρτηρίας ἀνώμαλον· εἰ δὲ καὶ ἔχοιεν, τοῦτο μὲν παντάπασιν ἀμυδρὸν ἐχόντων, τῶν δ' οὔρων ἤτοι πάντη τοῖς κατὰ φύσιν ἐοικότων ἢ μὴ πολὺ τῆς φύσεως ἐξισταμένων, τότε ἤκειν χρὴ καπὶ τᾶλλα σύμπαντα τὰ πρόσθεν εἰρημένα. καπειδὴν ὥσπερ χορὸς συμφώνως ἅπαντα φθέγγεται, θαρρεῖν τε ἤδη χρὴ καὶ, εἰ βούλοιο, προσανερέσθαι, μή τι προηγῆσατο φανερὸν αἴτιον· εἰ γάρ τι καὶ τοιοῦτον ὁμολογήσειν ὁ νοσῶν, ἀναμείνας τὴν πρῶτην λύσιν τοῦ πυρετοῦ, λούειν αὐτίκα, πιστοτέρας

the assistance provided by the others. Now the major signs in all those with fever are in the pulse and the urine. It is necessary to add to these also all the others—those Hippocrates spoke about involving the face,<sup>10</sup> those from the way the patient lies, those from the respiration and those things that are expelled both downward and upward. And further, if you see some symptom involving any part of the body whatsoever, or a function of it—and Hippocrates wrote about many instances in many places—overlook none of these lightly. These things are common to all the fevers. As a consequence, even in the most simple fevers, which is what the present discussion is about, you must not leave any of these aside.

But whenever the features of the pulse and urine indicate to you the character of the fever—if the pulse has 9K neither the sign of inflammation nor any irregularity in a single beat of the artery, or does have these features but is in every respect weak, while the urine seems either entirely normal, or is not far removed from normal—then it is necessary to proceed to all the other things previously mentioned. And whenever, like a chorus, everything sounds in unison, you must already be confident and, if you wish, inquire further whether or not there was some clear antecedent cause. For if the patient agrees there was such a cause, bathe him immediately while awaiting the first lysis of the fever, since your diagnosis is more trust-

<sup>10</sup> Hippocrates, *Prognostic*, 1.20.

<sup>6</sup> γίνεται. μέγιστα μὲν δὴ τοῖς πυρέσσουσιν ἅπασιν ἐν τοῖς τε om. in D's text but included in his translation.

10K σοι τῆς διαγνώσεως καὶ κατ' αὐτὸ τὸ τῆς λύσεως εἶδος γενησομένης· ἢ τε γὰρ τῶν ἀρτηριῶν κίνησις ἐν τῷδε κατὰ πᾶν ἐξομοιοῦται τῇ τῶν ὑγιαίνοντων, οὐδενὸς τῶν ἄλλων πυρετῶν εἰς τὸ κατὰ φύσιν ἐπανιόντος, οὐδ' εἰ πάμπολυς ὁ μεταξύ χρόνος τῆς τε προτέρας τελευτῆς καὶ τῆς δευτέρας ἀρχῆς εἴη, καθάπερ ἐν τριταίοις τε καὶ τεταρταίοις, ἐν ἐκείνοις γὰρ αἰεὶ παραμένει τὸ τοῦ πυρετοῦ σημεῖον, ἐν δὲ τοῖς ἑφήμεροις συνεχῶς αὐτὸ πᾶν τοῦ παροξυσμοῦ πανομένου τοῖς πλείστοις δ' αὐτῶν καὶ νοτίδες ἔστι δ' οἷς καὶ ἰδρῶτες ἐπιφαίνονται χρηστοί. ἢ πάντως γε οἶον ἀτμός τις πολὺς ἐκ τοῦ βάθους ἀναφέρεται. ἀλλὰ καὶ τὰ οὖρα πολὺ βελτίω νῦν ἢ κατὰ τὴν ἀρχὴν τοῦ πυρετοῦ φαίνεται σοι. καὶ εἰ κεφαλῆς ἢ τινος ἄλλου μέρος ἀλγῆμα συνεισέβαλε, οὐδὲ τοῦτο ἂν ἔτι μένη, καὶ ἢ τοῦ κάμνοντος εὐφορία μέγιστον τι καὶ αὐτὴ σημεῖον οὔσα, καθάπερ τις σφραγὶς ἐπὶ τοῖς ἄλλοις ἐνδείξεται σοι τὴν ἐπιείκειαν τοῦ πυρετοῦ. καὶ εἰ λουομένοις δ' αὐτοῖς μήτε φρίκη τις διοχλοῖη μήτ' ἄλλη τις ἀηδία, καὶ εἰ τὸ μετὰ τὸ λουτρὸν ἐφεξῆς ἐν εὐφορίᾳ μένοιεν, θαρρῶν ἤδη τρέφοις ἂν αὐτοὺς καὶ οἴνου παρέχοι ἀδεῶς πίνειν ὅσον τοῖς παροῦσι μέτριον.

ἡμεῖς δ', ὡς οἴσθα, πειρόμεθα λέγειν αὐτοῖς τὸ προηγησάμενον αἴτιον, οὐ περιμέναντες ἐρέσθαι τὸν κάμνοντα, καὶ ἔστι μέγιστον σημεῖον εἰς τὸ μηδὲν σφάλλεσθαι τὸ τοιαύτην τινα πεπορίσθαι δύναμιν. εἰ μέντοι μερόντων ἔτι τῶν τῆς ψυχῆς παθῶν ἢ ἐπίσκε-

worthy when made from the kind of lysis. In this case, the movement of the arteries is in every way similar to that in healthy people, whereas in none of the other fevers does it return to an accord with nature, even if there is a very long time between the end of the first accession and the beginning of the second one, as in tertian and quartan fevers, for in those the sign of the fever always remains. In the ephemeral fevers all the signs are eradicated when the paroxysm ends. In the majority of these there are also sweats, and these sweats seem to be beneficial in them. At all events, a kind of vapor rises up from the depths in large amounts. But also the urine will now seem to you much better than it did at the beginning of the fever. And if pain, either in the head or some other part, has also befallen the patient, this will no longer remain. Also the well-being of the patient is itself the most significant sign, and like some seal on all the other signs, will indicate to you the benign nature of the fever. If, in those who have bathed, neither unwonted shivering nor any other unpleasantness troubles them excessively, and if following on after the bath, they remain in a state of well-being, you may now nourish them with confidence and provide wine to drink freely to an extent commensurate with the prevailing conditions.

I, as you know, attempt to tell them the antecedent cause without waiting to ask the patient—and to have attained such an ability is the best sign of not being mistaken. If, however, the examination occurs while the affections of the soul still remain, attempt particularly to make

10K

11K ψις γίγνεται, διὰ τῶν σφυγμῶν μάλιστα πειραῖσθαι  
 διαγινώσκειν, ὡς ἐν τοῖς περὶ | σφυγμῶν γέγραπται  
 μετὰ τούτους δὲ καὶ τὴν ἀπὸ τῶν ἄλλων ἐπάγειν διά-  
 γνῶσιν. εἰ δ' αὐτὰ μὲν εἴη πεπανμένα, μένοι δὲ ἢ  
 διάθεσις, ἀμυδρὸν μὲν τι κατὰ τοὺς σφυγμοὺς εὐρή-  
 σεις γνώρισμα τῶν ποιησάντων τὸν πυρετὸν παθῶν,  
 ἀποχρήσει δέ σοι καὶ χωρὶς τῶν σφυγμῶν τὰ λοιπά.  
 κοινῶς μὲν γὰρ τὰ οὖρα πυρρότερα.

πρόσεστι δὲ τοῖς μὲν διὰ λύπην δριμύτης τις μάλ-  
 λον ἢ πλήθος θερμασίας· ὡς τοῖς γε διὰ θυμὸν ἔμπα-  
 λιν. ἀλλὰ καὶ ἡ ἰσχυρότης τοῦ σώματος ἐπιδηλοτέρα  
 τοῖς λυπηθείσιν ἢ φροντίσασιν· καὶ ἡ τῶν ὀφθαλμῶν  
 κοιλότης καὶ ἡτις ἀήθης ἄχροια. ταῦτα μὲν δὴ καὶ  
 τῶν ἄλλως [τῶν] ὀπωσοῦν φροντισάντων κοινά. μάλι-  
 στα δὲ τοῖς ὀφθαλμοῖς διορίζειν χρή· ἔνεστι γὰρ ἐκ  
 τούτων τεκμαίρεσθαι καὶ τοῖς ὑγιαίνουσι μὲν τὸ τῆς  
 ψυχῆς ἤθος. καὶ νοσοῦντων δὲ σαφέστερα τὰ σημεῖα  
 τῷ γε δυναμένῳ συνορᾶν ἀκριβῶς. οὕτω μὲν οὖν τοὺς  
 διὰ μαθήματα καὶ θεωρίαν τινα φροντίσαντας διακρί-  
 νειν τῶν λυπηθέντων προσήκει. τοὺς δὲ ἐπ' ἀγρυ-  
 πνίαις πυρεξάντων<sup>1</sup> διορίζει μὲν καὶ τὸ τῆς ἀχροίας  
 12K εἶδος, ὑποῖδον γὰρ ἔστω αὐτοῖς τὸ | πρόσωπον, καὶ  
 αἰ τῶν ὀφθαλμῶν δὲ κινήσεις δῆλαι. μόλις γὰρ ἐπαί-  
 ρουσι τὰ βλέφαρα· καὶ ἡ ὑγρότης δὲ ἐν τοῖς βλε-  
 φάροις· ξηροὶ γὰρ γίνονται τοῖς λυπηθείσιν ἢ φρον-  
 τίσασιν. ἡ κοιλότης δὲ κοινὸν ἀπάντων σύμπτωμα,

<sup>1</sup> πυρεξάντων add. D

a diagnosis through the pulses, as I have described in the 11K  
 works on the pulses.<sup>11</sup> After these things, also take the  
 diagnosis from the other signs. If those have ceased but  
 the condition remains, you will find, in the pulse, an indis-  
 tinct sign of the affections creating the fever, but even  
 apart from the pulses, the other signs will be sufficient for  
 you. Generally, the urine is more yellowish-red.

A sharpness more than an abundance of heat is present  
 in those fevers due to grief, whereas the opposite applies  
 in those fevers due to anger. But thinness of the body is  
 more apparent in those who are grieving than in those who  
 are anxious, as are a hollowness of the eyes and a certain  
 unwonted pallor as well. Certainly these signs are com-  
 mon in those who are otherwise anxious in any way what-  
 soever. It is especially necessary to make a distinction from  
 the eyes, for it is possible to find evidence of the character  
 of the soul from the eyes, even in those who are healthy.  
 And in those who are ill they are the clearest signs, at least  
 to one who is able to observe them accurately. This, then,  
 is the appropriate way to distinguish someone anxious due  
 to studies or some kind of speculation from those who are  
 grieving. In those febrile due to insomnia, a kind of pallor  
 is also a distinguishing feature. In them, the face is some- 12K  
 what swollen and there are obvious movements of the eyes  
 also, for they have difficulty raising their eyelids, and there  
 is moisture in the eyelids, whereas they become dry in  
 those who are grieving or anxious. Hollowness, however,  
 is a symptom common to all—grief, insomnia and anxi-

<sup>11</sup> See note 5 above. The work *Diagn. Puls.*, VIII.766–961K,  
 is particularly relevant here.

λύπης, ἀγρυπνίας, φροντίδος. οὐ μὴν ἤδη γε καὶ θυμοῦ, τούτῳ γὰρ οὔτε τὰ τῆς κοιλότητος τῶν ὀφθαλμῶν οὔτε τὰ τῆς ἀχροίας ἐπίδηλα. καὶ ἡ θερμασία πλείω τε καὶ ὠκέως ἐκ τοῦ βάθους ἀναφερομένη καὶ τὸ μέγεθος τῶν σφυγμῶν οὐ καθαιρεῖται, καθάπερ ἐπ' ἀγρυπνίας καὶ λύπης καὶ φροντίδος. ὥστε θυμὸν μὲν καὶ πάνυ σαφῶς αὐτὰ διοριεῖς· ἀλλήλων δ' ἐκείνα, καθότι προείρηται.

τῶν δ' ἐπὶ κόποις πυρετῶν τὸ δέρμα ξηρότερον ἢ περ ἄλλω τινὶ τῶν ἐφημέρων πυρετῶν. ἀλλὰ τοῦτο μὲν ἅπασιν τοῖς ἐπὶ κόποις πυρέξασιν κοινὸν ἔν γε τῷ μέχρι τῆς ἀκμῆς τοῦ παροξυσμοῦ χρόνῳ. τὸ δ' ἀπὸ τοῦδε τοῖς πλείστοις μὲν, ὅσοι γε μὴ ὑπερεπόνησαν, ἰκμάδες τινὲς ἢ ἀτμῖς θερμῆ ἐκ τοῦ βάθους ἀναφέρονται. τισὶ δὲ καὶ τοῖς μετὰ τὴν ἀκμὴν χρόνοις ἡ ξηρότης παραμένει· γίνεται δὲ τοῦτο μάλιστα τοῖς ὑπερπονθήσασιν, ἢ ψυχθείσιν ἅμα τῷ κόπῳ ἢ ἐγκαυθείσιν.

13K | καὶ μὲν δὴ καὶ τὰ τῶν σφυγμῶν οὐχ ὡσαύτως ἐν ἀμφοτέροις ἔχει. μικροὶ μὲν γὰρ τοῖς ὑπερπονθήσασιν, μεγάλοι δὲ εἰσὶ τοῖς ἄλλοις. οἱ δ' ἐπὶ πυκνώσει τοῦ δέρματος γινόμενοι πυρετοί, πυκνοῦνται δὲ τοῦτο ἢ ψυχόμενον ἢ ποιότητος στρυφνῆς ἀήθους<sup>8</sup> αὐτῷ προσπessούσης, οἷον τι καὶ λουσαμένῳ ἐν ὕδατι τῷ στυπτηριώδει ἐγένετο· οὗτοι μόνον πάντων πυρετῶν στεγνὸν εἰσι πάθος. ἔνεστι δ' αὐτοῖς τῇ ἀφῆ διαγωνώσκειν, ὡσπερ καὶ τοὺς ἀυχμῶδεις τῶν πυρετῶν καὶ τοὺς ἐπὶ κόποις καὶ τοὺς ἐπ' ἐγκαύσεσιν.<sup>9</sup> οὐδὲ γὰρ ἂν οὐδ' ἡ τούτων πύκνωσις ἀφῆν γεγυμνασμένην διαλάθοι.

ety—but this is not in fact the case in anger, for in this there is neither hollowness of the eyes nor the appearance of pallor. The heat is greater, is carried up from the depths quicker, and the magnitude of the pulse is not reduced, as it is in insomnia, grief and anxiety. As a consequence, you can distinguish these states very clearly from anger, and from each other in the way previously described.

The skin in the fevers due to fatigues is drier than in any other of the ephemeral fevers. But this is common to all the fevers due to fatigue, at least in the time up to the peak of the paroxysm. After this, in the majority, or at least in those who did not overexert themselves, some moisture or a warm vapor is carried up from the depths. In some, the dryness even remains in the time after the peak. This occurs particularly in those who do overexert themselves, or are cooled or heated along with the fatigue. Furthermore, the pulse is not the same in both cases; it is weak in those who have overexerted themselves but strong in the others. Fevers may arise due to a thickening of the skin, which is due either to being cooled, or to an astringent quality falling upon it in a concentrated fashion, as happens for example to someone who bathes in astringent (alum-containing) water. These alone of all the fevers are constrictive affections. It is possible to diagnose them by touch, just as it is with the dry fevers, and those due to fatigue and overheating, for the thickening of these would not escape a practiced touch. But still, when the move-

13K

<sup>8</sup> ἀήθους D; ἀθρόως K

<sup>9</sup> καὶ τοὺς ἐπ' ἐγκαύσεσιν om. D

ἀτὰρ οὖν καὶ ἡ τῆς θερμασίας κίνησις ἐπαναδιδοῦσά πῶς ἐστὶ, πραεῖα μὲν κατὰ τὴν πρώτην ἐπιβολὴν φαινομένη, δριμύεια δὲ εἰ χρονίσειας ἐπὶ πλείον γιγνομένη.

οὐ μὴν οὐδὲ πυρρὰ τὰ οὖρα τοῖς τοιούτοις, οὐδὲ ὁ τοῦ σώματος ὄγκος συμπέπτωκεν οὐκουν οὐδὲ οἱ ὀφθαλμοὶ κοῖλοι καὶ ξηροὶ γίνονται ἄν, ἀλλ' ἐστὶν οἷς ὑγρότεροί τε καὶ προπετέστεροι δόξουσιν εἶναι τῶν κατὰ φύσιν. οὐδ' οἱ σφνυγμοὶ μικρότεροι, καθάπερ ἐπὶ λύπης καὶ φροντίδος καὶ ἀγρυπνίας καὶ τοῖς ἄγαν ἀμέτρῳ χρωμένοις γυμνασίοις. τοῖς δὲ ἐπὶ βουβῶσι πυρετοῖς ἐφημέροις οἱ σφνυγμοὶ μέγιστοι τε γίνονται καὶ ἰσχυροὶ καὶ πυκνοί, καὶ ἡ θερμασία πολλὴ καὶ μετὰ τὴν ἀκμὴν εὐθὺς ἐκ τοῦ βάθους ἀναφέρεται τις ἰκμὰς θερμῆ μὲν, ἀλλ' ἡδέια. τὸ γὰρ δριμύ καὶ δάκνον ἦκιστα πάντων τοῖς τοιούτοις ὑπάρχει· καὶ τὸ πρόσωπον αὐτοῖς ἐρυθρὸν γίνεται τοῦπίπαν καὶ ἐν ὄγκῳ μείζονι, καὶ τὰ οὖρα ὑπόλευκα. κοινὸν δὲ τοῖς τοιούτοις ἅπασιν πυρετοῖς τοῖς ἐφημέροις ἢ ὁμαλότης τοῦ σφνυγμοῦ. παντελῶς γὰρ ὀλίγοι τινὲς ἐξ αὐτῶν τὴν κατὰ μίαν πληγὴν ἀνωμαλίαν ἐμφαίνουσιν· ἀλλ' οὐδ' οὗτοι πάννυ σαφῶς οὐδ' ἐναργῶς. τοιαῦτα μὲν αὐτῶν τὰ γνωρίσματα.

3. Θεραπεύειν δὲ χρὴ λουτρῷ μὲν ἅπαντας. ἀλλὰ τοὺς μὲν ἐπὶ πυκνώσει τοῦ δέρματος ἢ ἐπὶ βουβῶσιν, οὐδ' εἰ ἐν τῷ ἀέρι τοῦ βαλανείου χρονίσαι κελεύσειας, οὐδὲν βλάψεις· τοὺς δ' ἄλλους ἅπαντας ὅτι τάχιστα τοῦ ἀέρος ἀπάγειν. ἐν δὲ τῷ ὕδατι, κἂν ἐπὶ πλείστον

ment of the heat is somehow progressively increasing, it appears mild at the first application of the hand whereas it becomes sharp if you wait longer.

The urine is not yellowish-red in such cases, nor is the mass of the body sunken in. Therefore the eyes do not become hollow and dry; rather, there is more moisture in them and they seem more protuberant than is natural. Nor is the pulse smaller, as it is in the case of grief, anxiety and insomnia, and in those who make excessive use of exercise.<sup>12</sup> In the ephemeral fevers due to buboes, the pulse becomes very large, rapid and frequent, the heat is considerable, and immediately after the peak a hot moisture is carried up from the depths but is mild. In fevers such as these, the acidity and biting quality is the least of all the fevers, the patients generally become red and more swollen in the face, and the urine is whitish. Common to all the ephemeral fevers is evenness of the pulse—very few of them display a single irregular beat, and these are not very clear or distinct. Such are the signs of these fevers.

3. You must treat all [these fevers] by bathing, but with those due to thickening of the skin or buboes, if you direct them to spend time in the air of the bath house, you will do no harm. However, take all the others away from the air as quickly as possible. If, on the other hand, they wish to spend an even longer time in the water, allow them to

<sup>12</sup> In D the earlier sentence, "these alone of all fevers constitute a constrictive affection" is repeated here with Stephanus' comment. (74-75)

15K ἐθέλοιεν διατρίβειν, ἐπιτρέπειν. ἐλαίῳ χλιαρῶ καὶ πολλῶ καὶ μαλακαῖς χερσὶν ἀνατρίβειν ἐπιπλέον, μάλιστα μὲν τοὺς κοπωθέντας, ἐφεξῆς δ' αὐτῶν τοὺς στεγνωθέντας· καὶ τρίτους τοὺς ἐπὶ | βουβῶσι πυρέξαντας. καὶ λούειν δὲ πολλάκις εἰς ὅσον ἐγχωρεῖ τοὺς τοιούτους. ἐσθίειν δὲ τοὺς μὲν ἐπὶ τοῖς κόποις ἐνδέχεται πολλάκις, οὐ μὴν οὔτε τοὺς στεγνωθέντας οὔτε τοὺς ἐπὶ βουβῶσι πυρέξαντας· ἀλλὰ τούτοις ἀμφοτέροις ἢ λεπτὴ διαίτα χρηστέ. τοὺς δ' ἐπὶ κόποις ὅσα καλῶς πέψαι δύνανται κελεύειν ἐσθίειν, ἀπεψίαν μόνην φυλαττομένους. ἀλλὰ καὶ οἴνου πίνειν εἰς ὅσον ἂν καὶ τούτου κρατεῖν δύναιτο. σκοποὶ δ' ἂν εἶεν τοῦ μέτρου ὡσπερ δὴ καὶ τῶν ἄλλων ἀπάντων, ἢ τε δύναμις καὶ ἢ ἡλικία τοῦ νοσοῦντος καὶ ἢ φυσικὴ κράσις, ἔθνη τε καὶ ὥρα καὶ χῶρα καὶ τὰ τοιαῦτα. τοὺς δ' ἐπὶ βουβῶσι πυρέξαντας εἴργειν οἴνου, πρὶν ἢ τοὺς βουβῶνας λυθῆναι. τῶν στεγνωθέντων δὲ τοὺς μὲν ἐπ' ὀλίγον τοῦτο παθόντας ἢ κιστά τε πληθωρικοὺς οὐ χρὴ κωλύειν οἴνον προσφέρεισθαι, τοὺς δ' ἐπὶ πλέον<sup>10</sup> πληθωρικοὺς κωλύειν συμφέρει. τοὺς δ' ἐπ' ἀγρυπνίαις καὶ τινι πάθει ψυχῆς πυρέξαντας, ἐπὰν λούσης, ὑγραινούσῃ τε καὶ εὐχύμῳ τροφῇ διαιτῶν. οἴνου δὲ μάλιστα τοῖς ἀγρυπνησασιν ἀδεῶς διδόναι, πλην  
16K | εἰ μὴ κεφαλὴν ἀλγοῖεν ἢ οἱ κρόταφοι σφύζοιεν. ὃ δηλονότι κἀν ἐν τοῖς ἄλλοις φυλακτέον, ἀλλὰ καὶ τοῖς ὀργισθεῖσιν ἢ λυπηθεῖσιν ἢ φροντίσθεῖσιν οἴνου διδόναι· τοῖς θυμωθεῖσι δέ, ἡνίκα παντελῶς ἔξω τοῦ πάθους ὦσι, πρότερον δ' οὐκ ἀσφαλὲς οἴνω χρῆσθαι.

do so. Massage them a lot with oil that is lukewarm and abundant, and with soft hands. Particularly in the case of those who are fatigued; second, those with stoppage of the pores; and third, those who are febrile due to buboes; 15K bathe such patients as often as possible. It is permissible for those with fever due to fatigue to eat often, but not those with constriction of the pores or those febrile due to buboes. In both these cases a light diet is good. Direct those febrile due to fatigue to eat as much as they are able to digest well, only guarding against *apepsia* (failure of digestion), but also to drink as much as they can master. The indicators of the amount are the same as they are for all other things—the capacity and age of the sick person, the natural *krasis*, customs, seasons and places, and other such things. Keep wine away from those febrile due to buboes until the glandular swellings are resolved. It is not necessary to prohibit the provision of wine for those with constriction of the pores, if they are only mildly affected and not very plethoric. However, it is useful to forbid it for those who are cooled to a greater degree and those who are plethoric. Feed those who are febrile due to insomnia or some affection of the soul with moist and *euchymous* nutriment after you bathe them. In particular, give wine freely to all those febrile due to insomnia, unless they have 16K pain in the head or their temples are throbbing. Obviously you must also guard against this in other cases too. But give wine to those who are angry, grieving or anxious. In those who are angry, it is not safe to use wine before the time they are completely over the affection. And al-

<sup>10</sup> post ἐπὶ πλέον add. ψυχθέντας ἢ K

πειράσθαι δὲ καὶ τὸ ἐναντίον ἀντεισάγειν αἰεὶ τῷ λυ-  
πήσαντι κόπῳ μὲν ἀνάπαισιν, ἀγρυπνία δὲ ὕπνον,  
ὀργῇ δὲ καὶ λύπη καὶ θυμῷ τὴν ἐν λόγοις τε καὶ  
πράξεσι<sup>11</sup> καὶ θεάμασι καὶ διηγήμασι θυμηδίαν. οὕτω  
δὲ καὶ ὁ φροντίσας ἐπ' αὐτῷ τελῶς ἀναπαυσάτω τὸν  
λογισμὸν. καὶ ὁ διὰ βουβῶνα πυρέξας αὐτὸν τε τοῦ-  
τον ἐξιάσθω καὶ πολὺ πρότερον αὐτοῦ τὸ ἔλκος ἐφ' ᾧ  
συνέστη. ταῦτά σοι πυρετῶν ἐφημέρων γνωρίσματα  
τε ἱκανὰ καὶ ἰάματα.

τῶν δὲ ἄλλων πυρετῶν οἱ μὲν ἐπὶ φλεγμοναῖς, οἱ  
δ' ἐπὶ χυμοῖς ἀνάπτονται. καὶ εἰσὶν οἱ μὲν ἐπὶ ταῖς  
φλεγμοναῖς οἷον συμπτώματά τινα τῶν φλεγμαινόν-  
των μορίων, καὶ τοῦνομά γε τῶν ᾧ νοσημάτων παρωνύ-  
μως τὰ πολλὰ ἀπὸ τοῦ πάσχοντος μορίου<sup>12</sup> φρενίτις  
ἢ περιπνευμονία ἢ πλευρίτις ἢ τι τοιοῦτον ἕτερον.  
περὶ μὲν δὴ τῶν τοιούτων ὕστερον ἐροῦμεν.

4. Οἱ δ' ἐπὶ χυμοῖς ἀναπτόμενοι πυρετοὶ καλοῦνται  
τ' αὐτὸ τοῦτο πυρετοὶ καὶ οὐκ εἰσὶν συμπτώματα νο-  
σημάτων, ἀλλ' αὐτοὶ νοσήματα. τούτων δὲ τινὲς μὲν  
ἄνευ συμπτωμάτων, ὅπερ δὴ καὶ ἐπιεικέστατοί εἰσι-  
νινὲς δ' ἅμα συμπτώμασιν ἐνοχλοῦσιν. εἰρήσεται δ'  
ἡμῖν περὶ προτέρων τῶν ἄνευ συμπτωμάτων πυρετῶν  
ἐν οἷς μάλιστα εἰ οἷόν τε κατὰ τὴν πρώτην ἡμέραν  
διαγνωστέον, οἷός τις ἐστὶν ὁ πυρετός, ἄρα γε χρόνιος  
ἢ ὀξὺς καὶ πότερον τῶν διαλειπόντων καλουμένων ἢ  
τῶν συνεχῶν. εἰ δὲ μὴ οἷόν τε περὶ τὴν πρώτην  
ἡμέραν, ἀλλὰ τὴν γε δευτέραν πειρατέον ἐξευρεῖν τὴν  
ιδεάν τοῦ πυρετοῦ. μηδενὸς δὲ μηδ' ἐν ταύτῃ βεβαίως

ways attempt to introduce the opposite to one who is  
troubled—cessation [of activity] for fatigue, sleep for in-  
somnia, and gladness of heart in words, deeds, sights and  
descriptions for rage, grief and anger. Likewise, one who  
is anxious should cease completely from ratiocination on  
the particular matter at issue. And someone febrile from  
a swollen gland (bubo) should be cured of this completely,  
and particularly prior to this, the ulcer from which it arose.  
These things should be enough for you on the signs and  
cures of ephemeral fevers.

Of the other fevers, some are kindled by inflamma-  
tions and some by humors. And those due to inflamma-  
tions are like symptoms of the inflamed parts. In the ma-  
jority of cases the names of the diseases are derived from  
the affected organ—phrenitis, peripneumonia, pleuritis  
or something else of this sort. I shall speak about such  
matters later.

4. The fevers kindled by humors are called fevers in  
and of themselves; they are not symptoms of diseases but  
are diseases themselves. Some of them are without symp-  
toms and these are certainly also the mildest, whereas  
some cause distress along with symptoms. I shall speak to  
you first about the fevers without symptoms. In these par-  
ticularly, you must if possible make a diagnosis on the  
first day as to what the fever is—whether it is chronic or  
acute, and whether it is one of the so-called intermittent  
or one of the continuous fevers. If a diagnosis is not pos-  
sible on the first day, you must attempt to discover the kind  
of fever on the second day. If you can diagnose nothing  
confidently on that day, the matter will, at any rate, be

<sup>11</sup> καὶ πράξεσι om. D

<sup>12</sup> μορίου D; ὀργάνου K



διαγνωσθέντος, ἐν γοῦν τῇ τρίτῃ πάντως φανήσεται σοι σαφέστερόν τι. παντελῶς γὰρ ὀλίγοι πυρετοὶ τῆς τετάρτης ἡμέρας δέονται πρὸς ἀκριβῆ διάγνωσιν. ἐρῶ δέ σοι καθόσον οἷόν τε διὰ βραχέων σημεία, δι' ὧν ἐπιγνώσῃ τὸ εἶδος τοῦ πυρετοῦ. μακρότερον δὲ καὶ σαφέστερον ἐτέρωθι πάντα λέλεκται. |

18K 5. Τοὺς μὲν οὖν μετὰ ρίγους εἰσβάλλοντας οὐκ ἂν ἀπὸ τρόπου τῶν κατὰ περίοδον ἐνοχλούντων ὑπολάβοις εἶναι. τριταῖοι γὰρ καὶ τεταρταῖοι μετὰ ρίγους τοῦπίπαν παροξύνουσιν. ἀλλ' οἱ μὲν τριταῖοι εὐθὺς ἐν τῇ πρώτῃ καταβολῇ πολλάκις μετὰ σφοδροῦ τοῦ ρίγους ἀρξάμενοι. τεταρταῖον δ' οὐκ οἶδα μετὰ σφοδροῦ τοῦ ρίγους ἀρξάμενον, ἀλλ' ἐν τῷ χρόνῳ τὸ μέγεθος αὐτῷ προσγίνεται, σὺν τῷ μηδ' εὐθὺς ἀπ' ἀρχῆς τὰ πολλὰ τὸν πυρετὸν τοῦτον εἰσβάλλειν, ἀλλ' ἐτέρων προηγησαμένων συμπίπτειν. ὁ μὲν οὖν τεταρταῖος τοῖς καλουμένοις πλάνησί τε καὶ πλανήταις ἐπιγίνεται πυρετοῖς (διὰ φλέγμα).<sup>13</sup> ὁ δ' ἀμφημερινὸς οὐδὲ χωρὶς τοῦ τὸ στόμα τῆς γαστρὸς πεπουθέναι τὰ πολλὰ συνίσταται. καθάπερ ὁ τεταρταῖος ἐπὶ σπληνὶ κακοπραγοῦντι (ὁ δὲ τριταῖος περὶ ἥπατι.)<sup>14</sup> τὸν μὲν δὴ μετὰ σφοδροῦ τοῦ ρίγους ἀρξάμενον εἰκὸς μᾶλλον τριταῖον ἢ τινὰ τῶν ἄλλων εἶναι πυρετῶν. εἰ δὲ καὶ

<sup>13</sup> *om.* διὰ φλέγμα D; included in K and both Latin versions.

<sup>14</sup> *om.* ὁ δὲ τριταῖος περὶ ἥπατι. D; included in K and both Latin versions.

altogether clearer to you on the third day. In general, there are few fevers that require a fourth day for an accurate diagnosis. I shall tell you as briefly as possible the signs by which you may recognize the kind of fever. I have spoken about all these at greater length and more clearly elsewhere.<sup>13</sup>

5. You would not be wrong to assume that the fevers which come upon a person with a rigor are among those that cause distress in a periodic fashion. In general, the tertian and quartan fevers have a paroxysm with a rigor. The tertians often begin with a severe rigor immediately in the first attack, whereas I have never seen a quartan fever begin with a severe rigor, although over time the magnitude the rigors increases; I might add that in many cases, a fever of this kind doesn't come upon a person right from the start, but occurs when other things are antecedent. Thus the quartan fever supervenes in the so-called wandering or irregular fevers due [to phlegm]. The quotidian fever for the most part does not exist without the orifice of the stomach being affected, just as the quartan doesn't without the spleen malfunctioning, [and the tertian the liver]. Now a fever beginning with a severe rigor is more likely to be a tertian than any of the other fevers. 18K

<sup>13</sup> On this, Stephanus writes: "Here he says, I shall briefly discuss with you the diagnosis of these fevers. We have his complete scientific account of them in the second book of his *On Crises* and in his work *On the Differentiae of Fevers*. However, it is necessary to know that nothing is more perfect than the indications given here. This is because in these writings he has presented a copious treatment of the whole art that concerns them." See Dickson, *Stephanus the Philosopher*, 99.

19K τὰλλα τὰ ἐφεξῆς εἰρησόμενα μαρτυροίη, τοῦτον μὲν  
 ἂν ἐναργῶς εὐθὺς ἐν τῇ πρώτῃ τῶν ἡμερῶν διαγνω-  
 σκης εἶναι τριταῖον. εἰ δὲ μετὰ βραχέος ἄρξῃται ρί-  
 γους, | τότε δεῖ καὶ μᾶλλον τοῖς ἄλλοις γνωρίσμασι  
 προσέχειν τὸν νοῦν, ὡς οὐκ ἀμφημερινοῦ καὶ τεταρ-  
 ταίου μόνον, ἀλλὰ καὶ ἡμιτριταίου καὶ ἄλλου τινὸς  
 τῶν συνεχῶν εἶναι δυναμένου.

τὰ δ' ἄλλα γνωρίσματα τό τε τῆς θερμασίας ἐστὶ  
 ποιὸν καὶ ποσὸν καὶ ἡ τῶν ἀρτηριῶν κίνησις, αὐτό τε  
 τοῦ ρίγους τὸ εἶδος αἰσθανομένου, ὥρα τε καὶ χώρα  
 καὶ κατάστασις καὶ ἡ φύσις τοῦ κάμνοντος καὶ ἡ  
 ἡλικία καὶ τὰ προηγησάμενα καὶ τὰ παρακολουθοῦ-  
 ντα. τὴν καὶ γὰρ θερμασίαν πολλὴν καὶ δριμεῖαν εἶ-  
 ναι χρή· τοὺς δὲ σφυγμοὺς μεγάλους καὶ θερμοὺς καὶ  
 σφοδροὺς καὶ πυκνοὺς καὶ ταχεῖς καὶ χωρὶς πάσης  
 ἀνωμαλίας, πλὴν τῆς πυρεκτικῆς. τὸ δὲ ρίγος, οἶον  
 νυττομένου τοῦ χρωτὸς ὡς ὑπὸ τινος ὀξέος μᾶλλον ἢ  
 ψυχροῦ, τῶν ἐν τεταρταίοις τε καὶ ἀμφημερινοῖς ψυ-  
 χροῦ τοῦ ρίγους αἰσθανομένου. τὴν δ' ὥραν θεριωῆν,  
 ὡσπερ οὖν καὶ τὸ χωρίον θερμὸν καὶ τὴν γε παρού-  
 σαν κατάστασιν· ἔστω δὲ καὶ ἡ φύσις τοῦ νοσοῦντος  
 θερμότερα τε καὶ χολωδεστέρα, καὶ ἡ ἡλικία νεανί-  
 σκον καὶ γυμνασία μᾶλλον ἢ ἀργία προηγεῖσθω, καὶ  
 ἔγκανσις μᾶλλον ἢ ψύξις, καὶ ἔνδεια μᾶλλον ἢ πλη-  
 σμονή. καὶ ἀγρυπνίαι δὲ καὶ λῦπαι καὶ κόποι καὶ  
 20K σύντονοι | φρουτίδες εἰς τοῦτο συντελοῦσιν. εἰ δὲ καὶ  
 πολλοῖς ἄλλοις τῶν νοσοῦντων ἐν ἐκείνῳ τῷ χρόνῳ  
 τριταίοις ἀλῶναι συμβαίη καὶ τοῦτ' ἂν εἴη πρὸς τοῖς

And if the other things which will be spoken of in due  
 course are confirmatory, you would clearly diagnose this  
 immediately on the first day as a tertian. If, however, it  
 begins with a small rigor, then you must pay more atten- 19K  
 tion to the other signs as it could be not only a quotidian  
 or quartan fever, but also a semitertian or one of the other  
 continuous fevers.

The other signs are the quality and quantity of the heat,  
 the movement of the arteries, the actual kind of rigor  
 observed, time of year, place, climatic conditions, the na-  
 ture and age of the sick person, the preceding factors and  
 the sequelae. The heat must be considerable and sharp,  
 and the pulse large, hot, violent, frequent and rapid, and  
 without any irregularity apart from being characteristic of  
 fever. The rigor should be like the flesh being pierced  
 by something sharp rather than cold, whereas in the quar-  
 tan and quotidian fevers, the rigor should be perceived  
 as cold. The season should be summer, just as the place  
 should be hot too, as should the prevailing weather condi-  
 tions. The nature of the patient should be rather hot and  
 bilious, the age that of a young person; exercise rather than  
 idleness should be preceding; there should be overheating  
 rather than cooling, and lack of food rather than satiety.  
 Also insomnia, grief, fatigue and intense anxiety contrib- 20K  
 ute to this. And if, in that time, a tertian fever should  
 happen to strike many others of those who are ill, this too

εἰρημένοις μέγιστον γνώρισμα. εἰ δὲ τούτων ἀπάντων  
 ὑπαρχόντων ἢ τῶν μεγίστων τε καὶ ἐπικαιροτάτων  
 δάψιος δὲ αὐτὸν ἔχει σφοδρόν, ἕμετός τε χολῆς ἢ ἰδρῶς  
 ἐπιγένηται ἢ ἀμφότερα, νῦν μὲν γὰρ καὶ σαφῶς εἶη  
 δηλός. εἰ δὲ καὶ παύσαιτο μὲν πυρέττων ἐπὶ τοῖσδε  
 τούτων δὴ τὸν φανερόν ἅπασιν καὶ ἐν κινήσει πυρετόν,  
 ὑπολείπεται δ' αὐτῷ κατὰ τὴν τῶν ἀρτηριῶν κίνησιν  
 ἢ ἴδιος ἀνωμαλία τῶν πυρετῶν, βεβαίως ἂν οὕτως  
 ἀποφαίνουσι τριταίον ὑπάρχειν αὐτόν, ὡς εἰ καὶ διὰ  
 τρίτης ἤδη παροξυνόμενον ἑώρας.

21K 6. Ὁ δὲ τεταρταίος, χρῆ γὰρ καὶ τούτου τὰ γνωρί-  
 σματα προσγράψαι, τὸ μὲν ἐναργέστατον ἑαυτοῦ τεκ-  
 μήριον ἐνδείκνυται κατὰ τὴν ἀρχὴν τῶν παροξυσμῶν,  
 ἠνίκα ῥιγῶσιν ἔτι οἱ νοσοῦντες. ἰκανῶς γὰρ ἀραιοὶ  
 καὶ βραδεῖς αὐτῶν οἱ σφυγμοὶ γίνονται· κατὰ δὲ τὰς  
 ἀκμὰς ἢ καὶ ἀύξανομένων ἔτι τῶν σφυγμῶν<sup>15</sup> ταχεῖς  
 μὲν ἀνάγκη καὶ πυκνοὺς εἶναι· σώζεται | δ' ὁμως καὶ  
 τότε ἢ ἴδιος αὐτῶν βραδύτης καὶ ἀραιότης, εἰ τὸ  
 προσγεγονὸς τοῦ τάχους ἢ τῆς πυκνότητος τῶν παρ-  
 οξυσμῶν λογίασι. καὶ γὰρ οὖν καὶ εἰ παραβάλοις  
 τὴν ἀκμὴν τοῦ τεταρταίου πυρετοῦ, τῇ τοῦ τριταίου  
 ἀκμῇ πολλῷ τινὶ δόξουσι θάπτόν τε καὶ πυκνότερον  
 ἐν τοῖς τριταίοις αἱ ἀρτηρίαὶ σφύζειν· καὶ αὐτῆς δὲ  
 τῆς μιᾶς κινήσεως ἐν τῷ τεταρταίῳ πυρετῷ τὸ ἀνώμα-  
 λον ἐνδείκνυται τὴν ἴδιαν αὐτοῦ. τὴν γὰρ κοινὴν  
 ἀπάντων τῶν πυρετῶν ἐν μιᾷ προσβολῇ τῆς ἀρτηρίας  
 ἀνωμαλίαν ἐναργεστάτην ἔστιν εὐρεῖν ἐν τούτοις.  
 πολλῷ γάρ τιμι τὴν τε ἀρχὴν τῆς κινήσεως καὶ τὸ

would be a very significant sign in addition to the things  
 previously stated. If, when all these things exist, or the  
 most significant and most relevant of them, the patient  
 has a violent thirst, and bilious vomiting or sweating or  
 both supervene, it would obviously now be clear [what the  
 fever is]. If also the person stopped being feverish after  
 these things—and this was a fever clear to all by its move-  
 ment—but the specific irregularity of fevers remained in  
 the movement of the arteries, you could in this way confi-  
 dently declare this to be a tertian fever, as if you had al-  
 ready seen the paroxysm on the third day.

6. The quartan fever—for I must write out for you the  
 signs of this in addition—displays the clearest evidence of  
 itself in the beginning of the paroxysms when the patients  
 are still having rigors. The pulse of these patients becomes  
 quite intermittent and slow, whereas in the peaks, when  
 the pulse also increases, it is of necessity rapid and fre-  
 quent. Nevertheless, at that time too, the specific slowness  
 and intermittency of the pulse are preserved, if you take  
 into account the rapidity and frequency of the paroxysms,  
 for also, if you compare the peak of the quartan fever with  
 that of the tertian, the arteries will seem to you to pulsate  
 with much greater rapidity and frequency in the tertians.  
 And the irregularity of the single beat in the quartan fever  
 itself shows its specific type. For their regularity in a single  
 beat of the artery, common to all the fevers, is found most  
 evident in these fevers. You will find the beginning and

21K

<sup>15</sup> τῶν σφυγμῶν *add.* D

τέλος ὠκύτερον εὐρήσεις τῶν μέσων· οὐ μὴν ἐπὶ γε τῶν τριταίων ὧδε ἔχει. βραχεία γὰρ ἐν τούτοις ἢ ὑπεροχὴ τοῦ τάχους ἐστὶ καὶ μάλιστα κατὰ τὰς ἀκμάς.

22K ἀλλὰ καὶ τὰ τῆς θερμασίας γνωρίσματα διαφερόντως αὐτοῖς ἔχει. τὸ γὰρ θερμὸν καὶ διακαῆς καὶ τὸ οἶον ζέον τῶν τριταίων πυρετῶν οὐκ ἂν εὖροις ἐν τεταρταίοις. ταῦτα μὲν τὰ μέγιστα σημεῖα, τὰ δ' ἄλλα τὰ ἔξωθεν. οὐδὲ ἐνταῦθα γὰρ παραλιπεῖν, ἀλλὰ τὴν γε φύσιν ἐπισκοπεῖσθαι τοῦ νοσοῦντος, εἰ μελαγχολικωτέρα· καὶ τὸν καιρὸν τοῦ ἔτους, εἰ φθινόπωρον καὶ τὴν παρούσαν κατάστασιν, εἰ ἀνώμαλος. οὕτω δὲ καὶ τοῦ χωρίου τὴν φύσιν καὶ τῶν ἐπιδημούντων νοσημάτων· καὶ εἰ σπλῆν μέγας εἴη καὶ ἄτακτοι πυρετοὶ προηγῆσαντο καὶ εἰ ἡλικία τῆς ἀκμῆς ἐπέκεινα καὶ εἰ μεθ' ἰδρῶτος παύοιτο· χολῆς δὲ ξανθῆς ἔμετον ἐν τούτοις τοῖς πυρετοῖς μὴ προσδοκᾶν, ὥσπερ οὐδ' ἐν τοῖς ἀμφημερινοῖς, ἴδιον γὰρ τῶν τριταίων τοῦτο, παυσαμένων δὲ τοῦ πυρέττειν, εἰ τὸ τοῦ πυρετοῦ σημεῖον ἔτι παραμένει καὶ οἱ σφυγμοὶ τῶν κατὰ φύσιν ἀραιότεροί τε καὶ βραδύτεροι γίνονται, τεταρταίος ἂν ὁ τοιοῦτος σαφῶς εἴη πυρετός.

7. Ἀμφημερινὸν δὲ πυρετὸν τοῖσδ' ἂν μάλιστα γνωρίσαιο· ὑγροτέρα γὰρ εἶναι χρὴ τὴν θερμασίαν αὐτοῦ μετὰ τινος δριμύτητος, οὐ κατὰ τὴν πρώτην ἐπιβολὴν εὐθὺς πιπτούσης, ἀλλ' ἐγχρονιζούσης τῆς χειρός. καπνώδη γὰρ τινα θερμασίαν ἀτμῶ πολλῶ συμμιγῆ δόξαις ἀνίεναι, καταπνιγομένου μᾶλλον ἐν

end of the movement much faster than the middle. This is not so in the case of the tertians; in them the excess of speed is slight, and particularly at the peaks.

But also the signs of heat are different in them. Thus, you will not find the heat and burning, and as it were the seething of the tertian fevers in the quartans. These then are the most significant signs; the others are external. You must not, however, leave these aside, but at least consider the nature of the sick person, whether he is rather melancholic (atrabilious), and the time of year, if it is autumn, and the prevailing climatic conditions, if they are irregular. And in the same way too, consider the nature of the place and of the diseases that are epidemic. Consider too if the spleen is enlarged and if irregular fevers precede, and if the age is beyond the prime, and if it ends with sweating. Nor should you expect the vomiting of yellow bile in such fevers, just as you should not in the quotidian, this being specific to the tertian. And if, when the fever ceases, the sign of the fever still persists and the pulse becomes more intermittent and slower than is natural, such a fever would clearly be quartan.

7. You will recognize the quotidian fever by the following features in particular: the heat must be quite moist with a certain sharpness, and not be felt immediately at the first touch of the hand but only after a delay. You will think there is a certain smoky heat mixed with much vapor coming out, since the fire is more stifled by the large

22K

23K ὑγρότητι πολλῇ τοῦ πυρὸς ἢ αὐτοῦ τῆς ὕλης κρατοῦν-  
 τος. ἀλλὰ καὶ οἱ σφυγμοὶ τούτοις μικρότεροι τῶν ἐν  
 τεταρταίοις εἰσὶ πλέον ἢ ἐκείνοι τῶν ἐν τριταίοις. |  
 ἀραιότεροι δ' αὖ πάλιν οἱ ἐν τοῖς ἀμφημερινοῖς τῶν  
 ἐν τριταίοις τοσοῦτον, ὅσον τούτων οἱ ἐν τεταρταίοις.  
 βραδύτητος δ' ὡσαύτως ἔχουσιν ἐν ἀμφοῖν. ἦττον δὲ  
 διψώδης οὗτος.λείπεται οὖν τεταρταίου τοσοῦτον,  
 ὅσον ἐκείνος τριταίου. καὶ ἡ γλῶσσα καὶ τὸ σύμπαν  
 σῶμα ξηρότατα μὲν ἐν τριταίοις, ὑγρὰ δ' ἐν τούτοις  
 τοῖς πυρετοῖς ἐστὶ καὶ οἱ ἔμετοι φλεγματοῦδες καὶ  
 ὅσα διὰ γαστρὸς ἐκκρίνεται ψυχρότερα καὶ ὑγρότερα  
 καὶ ὠμότερα καὶ ὕδατωδέστερα καὶ φλεγματοδέ-  
 στερα. καὶ τὸ σύμπαν ἀνάπλεων ἀπέπτων χυμῶν ἐν  
 τούτοις τοῖς πυρετοῖς εὐρήσεις τὸ σῶμα. καὶ γὰρ οὖν  
 καὶ ἡλικίαις καὶ φύσεσι (καὶ χώραις)<sup>16</sup> καὶ ὥραις τοῦ  
 ἔτους καὶ κράσεσιν ὑγροτέραις συμπίπτουσι.

νεανίσκων μὲν γε χολώδη καὶ ξηρὸν τῇ κράσει οὐκ  
 εἶδον οὐδέπω ποτε ἀλόντα τούτῳ τῷ πυρετῷ. παῖδες  
 δὲ καὶ μάλιστα οἱ σμικρότεροι καὶ ὅσοι τῶν πλείων  
 φλεγματικώτεροί εἰσι καὶ τὴν ἕξιν τοῦ σώματος πα-  
 χεῖς καὶ ἀργὸν τὸν βίον ἔχοντες ἐν πλησμοναῖς καὶ  
 μέθαις καὶ λουτροῖς συνεχέσι καὶ μάλιστα τοῖς ἐπὶ  
 τροφῆς ἀμφημερινοῖς εὐάλωτοι ἀτὰρ οὖν καὶ χωρία  
 τὰ ὑγρότερα καὶ τῶν ὠρῶν τοῦ ἔτους ὁ χειμῶν καὶ  
 24K τῶν καταστάσεων αἱ ὑγρότεροι, | μάλιστα φέρουσι  
 τὸν πυρετὸν τούτον· εἰ δὲ καὶ ἐπιδημοῖη ττηρικαῦτα,  
 καὶ τοῦτό σοι πρὸς τὴν διάγνωσιν τοῖς εἰρημένους  
 συντελέσει. οὐ μὴν οὐδὲ παύουσι τὰς καταβολὰς

amount of moisture instead of overcoming its material. But also the pulse in these fevers is smaller than in the 23K  
 quartans by more than it is in the tertians. And again, the  
 pulse is more intermittent in the quotidian fevers than in  
 the tertians by as much as the pulse in the quartans is more  
 intermittent than in the tertians. It has, however, a similar  
 slowness in both. This fever is less thirst-exciting—it lacks  
 as much compared to the quartan as the quartan lacks  
 compared to the tertian. And the tongue and whole body  
 are very dry in the tertians but are moist in these fevers.  
 Also the vomitus is phlegmatous and those things expelled  
 through the stomach are colder, moister, more undigested,  
 watery and phlegmatous. And you will find the whole body  
 filled with unconcocted humors in these fevers. This, then,  
 is in keeping with age, nature, place, season of the year  
 and a more moist *krasis*.

I have never, in fact, seen a youth who was bilious and  
 dry in *krasis* seized by this fever at any time. Children,  
 and particularly those who are smaller, and those fully  
 grown who are more phlegmatous and are thick in bodily  
 state, and live an idle life, indulging in eating, drinking and  
 continual bathing, especially after nutriment, are readily  
 seized by quotidian fevers. But then also the more moist  
 places and winter among the seasons of the year, and the  
 more moist climatic conditions particularly bring on this 24K  
 fever. And if [the fever] is prevalent at that time, this also  
 helps you to no small extent regarding the diagnosis, in  
 addition to the things mentioned. Sweats do not bring

<sup>16</sup> καὶ χώραις om. D

τούτων τῶν πυρετῶν ἰδρώτες, ὥσπερ ἐν τριταίοις καὶ τεταρταίοις, ὅθεν οὐδ' εἰς ἀπυρεξίαν ἔρχονται σαφῆ, πλὴν ὀλίγων δὴ τιῶν. τὰ δ' οὖρα τὰ μὲν ἐπὶ προήκουσιν αὐτοῖς γνωόμενα τοὺς καιροὺς τῆς ὅλης νόσου διδάσκειν τὰ δ' ἐν ἀρχαῖς ἐνδείξεταί σοι καὶ αὐτὸ τὸ εἶδος τοῦ πυρετοῦ. τοῖς μὲν γὰρ ἀμφημερινοῖς ἢ λεπτὰ καὶ λευκὰ ἢ παχέα καὶ θολερὰ ἢ ἐρυθρά. τοῖς δὲ τριταίοις ἢ πυρρὰ ἢ ὑπόξανθα. τοῖς δὲ τεταρταίοις πολυειδῆ μὲν, ἀλλ' ἀπεπτα πάντα. καὶ ταῦτα μὲν τῶν διαλειπόντων πυρετῶν ἐστὶ γνωρίσματα.

8. Τοὺς συνεχεῖς δ' ἂν γνωρίζεις μάλιστα μὲν ἐκ τοῦ μηδὲν αὐτοῖς παρεῖναι σημεῖον, ὧν εἵπομεν ὑπάρχειν χρῆναι τοῖς διαλείπουσι, καὶ εἰ μὴ παύοιτο δὲ τῶν τεττάρων καὶ εἴκοσιν ὥρων ἐντὸς ὁ πυρετός· εἰ δὲ καὶ ἀνώμαλον ποιήσαιντο τὴν αὔξησιν, οὗτος μὲν γὰρ πρὸς τοῖς ἄλλοις (γνωρίσμασι)<sup>17</sup> καὶ χρόνον ὑποσημαίνει πλείονα· καὶ μὲν ἢ δὴ καὶ τὸ ἴδιον τῶν πυρετῶν σημεῖον ἐν τοῖς σφνυμοῖς ἐναργὲς ἔχοιεν. εἰ δὲ καὶ ἀταξία τις ἢ ἀνωμαλία προσείη αὐτοῖς ἢ ἀρρυθμία, καὶ τοῦτ' ἂν εἴη σημεῖον τοῦ μεγέθους ἅμα καὶ ὡς οὐκ εἰσὶ τῶν διαλειπόντων. εἰ δὲ τοιοῦτοι μέιναντες ἐν τῇ τρίτῃ τῶν ἡμερῶν μείζονα τὸν παροξυσμὸν ἐνδείξαντο ἢ εἰ καὶ τὰ διαχωρήματα καὶ τὰ οὖρα παντάπασιν ἀπεπτα φαίνοντο, τοὺς τοιούτους πυρετοὺς οὐκ ἐνδέχεται περὶ τὴν ἐβδόμην<sup>18</sup> κριθῆναι. εἰ δὲ καὶ ἢ τετάρτῃ τῶν ἡμερῶν ὁμοία φαίνοιτο τῇ τρίτῃ, καὶ ὁ πυρετὸς οἷον σμυχνόμενος εἴη, καὶ τὸ πρόσωπον ἢ τε σύμπασα τοῦ σώματος ἕξις ἀσύμπτωτος, ὁ τοιοῦτος

an end to the periodical attacks of these fevers as they do in the tertian and quartan fevers, which is why patients don't become clearly apyrexial apart from a certain few. As things progress, the urine occurring in these fevers teaches you the phases of the whole disease. The urine in the beginning shows you the actual kind of the fever. In the quotidian fevers it is either thin and white, or thick and turbid, or red; in the tertians it is yellowish-red or yellow. In the quartans it has many forms but all are unconcocted. And these are the signs of the intermittent fevers.

8. You may recognize the continuous fevers particularly from the absence of any sign among those I said were necessarily present in the intermittent fevers, and if the fever doesn't cease within twenty-four hours. If it makes an irregular increase, this, in addition to the other signs, also signifies a prolonged time. Furthermore, the specific sign of fevers is clearly present in the pulse. If, however, some disorder or irregularity is added to the pulse, or an arrhythmia, this too would be a sign of both the magnitude [of the fever], and at the same time that it was not intermittent. If they remain as such, and on the third day show a more severe paroxysm, or if both the feces and the urine are obviously altogether unconcocted, it is impossible for such fevers to come to a crisis during the seventh day. But if the fourth day seems similar to the third, the fever is like a smoldering fire, and the face or whole state of the

25K

<sup>17</sup> γνωρίσμασι om. D

<sup>18</sup> ἡμέραν D

πυρετὸς εἰς πλείονα χρόνον ἐκτείνεσθαι φιλεῖ. τοιαῦται μὲν αἱ διαφοραὶ τῶν ἄνευ συμπτωμάτων πυρετῶν.

9. Ἡ θεραπεία δὲ καθ' ἕκαστον αὐτῶν ἐφεξῆς γράφεται· πρῶτον μὲν τῶν διαλειπόντων, δεύτερον δὲ τῶν συνεχῶν καλουμένων. ἐν μὲν οὖν τοῖς διαλείπουσιν ὀξύτατός τε ἅμα καὶ ἐπιεικέστατος ὁ τριταίος ἐστὶ μακρότατος δὲ καὶ ἀκίνδυνος ὅσον ἐφ' ἑαυτῷ ὁ τεταρταίος. ὁ δ' ἀμφημερινὸς καὶ μακρὸς καὶ οὐκ ἀκίνδυνος, ὥστε καὶ τὴν δίαιταν εὐθύς | ἐξ ἀρχῆς καίστασθαι προσήκει, πρὸς τὸν σύμπαντα χρόνον τοῦ νοσήματος ἀποβλέποντα. τὰ μὲν γὰρ ὀξέα καὶ ταχέως ἀκμάζοντα, κὰν εἰ πάνυ λεπτῶς ἐθέλης διαιτᾶν, οὐδέν τι μέγα βλάψει. ὅσα δὲ χροσιώτερα, τοῦτ' εἰ μὴ κατ' ἀρχὰς ἀδρότερον διαιτήσεως, ἢ συναναίρησεις τῷ νοσήματι τὸν ἄνθρωπον ἢ οὐκ ἐν καιρῷ τὴν δίαιταν ὑπαλλάξεις. οὐ γὰρ χρὴ προσιούσης τῆς ἀκμῆς ἀδρότερον ἢ πρόσθεν διαιτᾶν, ἀλλὰ τούναντίον τῆς ὄλης τοῦ πάθους διαίτης τὸ λεπτότατον εἰς τὴν ἀκμὴν ἀποτίθεσθαι.

τοῦτο μὲν δὴ κοινὸν ἀπάντων ἐστὶ πυρετῶν.<sup>19</sup> πρὸς αὐτῷ δὲ δεῖ καὶ τὰ ἴδια τῶν διαλειπόντων ἐπισκοπεῖσθαι, οἷον εὐθύς ἐν τοῖς τριταίοις, οὐδέν γὰρ χεῖρον ἐντεῦθεν ἄρξασθαι, διορίζεσθω σοι κατ' ἀρχὰς εἰ ἀκριβῆς ἐστὶ καί, ὡς ἂν τις εἴποι γνήσιος, ἢ οὐκ ἀκριβῆς, ἀλλ' οἷον νόθος. ὁ μὲν γὰρ ἀκριβῆς τριταίος τὸ μακρότατον ἐν ἑπτὰ περιόδοισι κρίνεται, πρὸς τῷ καὶ ἀκίνδυνότατον εἶναι. τὸν ἕτερον δὲ τὸν οὐκ ἀκριβῆ

body is not sunken, such a fever is wont to extend for a longer time. These are the differences of the fevers without symptoms.

9. The treatment of each of these fevers will be set out in order: first, that of the intermittent fevers and second that of the so-called continuous fevers. Among the intermittent fevers, the tertian is very acute and, at the same time, very mild, whereas the quartan is very long-lasting (chronic), but not of itself, dangerous. The quotidian is both long-lasting and not without danger, so it is also appropriate to establish the regimen right from the start, looking at the whole time of the disease. For with those that are acute and reach a peak quickly, even if you wish to feed [the patient] a very light diet, it will not do any great harm. With those that are more chronic, if you don't prescribe a thicker diet from the beginning, you will either destroy the patient along with the disease, or you will have to change the diet at an inopportune time. You must not, as the peak is approaching, prescribe a thicker diet than before, but opposite to the whole regimen of the affection, you must defer the thinnest diet until the peak.

This is common for all fevers. But in addition to this, you need to give consideration to the specific features of the intermittent fevers; for example, whether it is immediately among the tertians, for it is no bad thing to begin here, in that you must determine at the start if it is a genuine tertian fever (one might say, legitimate), or not genuine but something illegitimate, as it were. For the genuine tertian at its most chronic comes to a crisis in seven cycles, and added to this, is least dangerous. How-

<sup>19</sup> ἐστὶ πυρετῶν *add.* D

οἰδὰ ποτε φθινοπώρῳ μὲν ἀρξάμενον, ἦρος δὲ παυσά-  
μενον· εἴτα οἶα εἰκὸς ἐν τῷ χρόνῳ, τὸ μὲν τοι καὶ  
αὐτοῦ τοῦ νοσοῦντος οὐ πᾶν τι πειθομένου τοῖς τῶν  
ιατρῶν | προστάγμασιν, ἀλλὰ τι καὶ ἀμαρτάνοντός·  
τὸ δέ τι καὶ ὑπὸ (τῆς αἰτίας)<sup>20</sup> τοῦ χειμῶνος βλαπτο-  
μένου, σπλήν τε μέγιστος ἐξήρθη καὶ ὑποχόνδριον  
διεφυσάτο· καὶ τις ἤδη καὶ ὑπιδος ἦν ἄχροια περί-  
τε τὸ πρόσωπον καὶ οὐχ ἤκιστα τοῖς σκέλεσιν, ὥστε  
δέισαί τε ἡμᾶς ἀμφὶ τῷ μειρακίῳ καὶ δεηθῆναι μει-  
ζόνων βοηθημάτων. οὕτως οὐδὲν ὅμοιον ἔχει ὁ τοι-  
οῦτος τριταῖος τῷ ἀκριβεῖ· διὰ τοῦτο φημι χρῆναι  
κατ' ἀρχὰς αὐτοὺς διορίζειν, εἰς ὅσον γὰρ τῇ φύσει  
διαφέρουσιν, εἰς τοσοῦτον εὐλογόν ἐστι καὶ τὸν τῆς  
διαίτης τρόπον ὑπαλλάττεσθαι. ὅπως οὖν ἄριστα δι-  
ορισθεῖεν, ἀρκεῖ μοι τὰ τῷ μειρακίῳ συμπεσόντα  
γράψαι, παράδειγμά τε ἅμα τῶν οὐκ ἀκριβῶν τρι-  
ταίων καὶ ὑπομνήματά σοι γενησόμενα.

ἦν μὲν δὴ τοῦ ἔτους τὸ μεταξὺ Πλειάδων τε δύσεως  
καὶ τῆς προγεγενημένης ἰσημερίας· ἤρξατο δὲ μετὰ  
φρίκης ὁ πυρετὸς τῷ μειρακίῳ περὶ αὐτὴν σχεδὸν τὴν  
ἑω ὥστε μήτε τῇ θερμασίᾳ τριταίῳ δόξαις εἰοικέναι

<sup>20</sup> τῆς αἰτίας om. D

<sup>14</sup> The Pleiades (or Seven Sisters)—according to mythology, daughters of Atlas and the sea nymph Pleione—are a group of seven stars prominent in the northern sky during late autumn and winter. They were of particular relevance to sailors in ancient times. The following is Stephanus' comment on the matter: "Now it is necessary to know there are two equinoxes, one in spring and

ever, I saw another case that was nongenuine beginning sometime in autumn and ending in spring. Then, as is likely to happen over such a time, the patient himself did not entirely comply with the instructions of the doctors, but did something wrong. And when he was harmed by the winter, the spleen became very swollen and the hypochondrium inflated. Also, there was a colorless swelling involving the face, and no less the legs. As a result, I feared for the young man and more remedies were needed. So such a tertian fever bears no resemblance to a genuine tertian fever. This is why I say it is necessary to distinguish them at the beginning. For they differ in nature to such a degree that it is reasonable to change the type of regimen to the same degree. In order to distinguish them in the best way, it is enough for me to write down what happened to the young man, as this will be for you, at one and the same time, an example and a record of the nongenuine tertian fevers.

Now it was the time of the year between the setting of the Pleiades<sup>14</sup> and the equinox that had preceded this. The fever in the young lad began with shivering around dawn so you would not suppose it to be like a tertian either by

the other in autumn. Here he mentions that it occurs in autumn, and says that this preceded the setting of the Pleiades. But so as not to draw out our account at length by investigating what the Pleiades are, what kind of setting they have and what kind of rising, and in so doing confuse our readers, we will say only as much as we have already said and instead move on to the matter at issue, namely that this fever began around the middle of autumn and thus was abnormal due to the season of the year. For in order to have been a genuine tertian, it would have had to begin in summer." See Dickson, *Stephanus the Philosopher*, 139.



μήτε τοῖς σφυγμοῖς· ἀλλ' οὐδὲ χολῆς ἔμετος ἠκολούθησεν οὔτε ἰδρῶς ἱκανός· ἀλλὰ μόνον ἐν τῇ δευτέρᾳ τῶν ἡμερῶν ὥρα που τρίτῃ βραχεΐαι νοτίδες |  
 28K ἐγένοντο, ἐφ' αἷς διεπνεύτο μὲν ὁ πυρετός, ἀτρέμα δ' οὔτως, ὥστε περὶ τὴν ἑσπέραν που μόγις ἀπύρετος εἶναι δοκεῖν· ἔμενε δὲ δηλαδὴ κατὰ τοὺς σφυγμοὺς τότε τοῦ πυρετοῦ σημεῖον αὐτῷ σαφὲς ἱκανῶς. ἀλλὰ τᾶλλα γε καὶ πάνυ εὐφόρως εἶχε κατὰ τὴν ἑσπέραν καὶ δι' ὅλης τῆς νυκτός. αὐθις δὲ περὶ τὴν ἕω τῆς τρίτης ἡμέρας δευτέρα καταβολὴ γίνεται, τὰ πάντα παραπλησία τῇ πρώτῃ, πλὴν τοῦ χρόνου· τῆς γὰρ ἐπιούσης νυκτός ὀλίγον πρὸ τῆς ἡμέρας νοτίδες ἐγένοντο καὶ ὁ πυρετός ἐπαύετο περὶ τὴν ἕω τῆς τετάρτης ἡμέρας· καὶ τοῦ λοιποῦ δὲ παντὸς φθινοπώρου καὶ χειμῶνος, ἐν ᾧ διενόσησε, τὰ τ' ἄλλα πάντα καὶ ὁ χρόνος τῆς καταβολῆς καὶ τῆς λύσεως τοῦ πυρετοῦ κατὰ ταῦτα διέμεινον. ἦν δὲ τὸ μειράκιον ἡλικία μὲν ἀμφὶ τὰ ὀκτωκαίδεκα ἔτη, λευκὸν κατὰ τὸ ιδέσθαι καὶ πῖον, ἀργότερω τῷ βίῳ πολλάκις ἔμπροσθεν ἐν μέθαις τε (καὶ λουτροῖς συνεχέσι)<sup>21</sup> καὶ πλησμοναῖς γεγεννημένον, ὥστ' οὐδὲ χρηστῶς ἔπεπτε τὰ σιτία. συνεισέβαλλε δὲ αὐτῷ καὶ σφυγμὸς σκληρὸς ἐν μὲν τῇ πρώτῃ καὶ δευτέρᾳ τῶν ἡμερῶν μετρίως, ἐν δὲ τῇ  
 29K τρίτῃ καὶ τετάρτῃ | καὶ ταῖς ἐφεξῆς μέχρι τῆς ἑβδόμης εἰς τοσοῦτον ἦκε σκληρότητος, ὡς ἂν τιμι δόξαι τῷ σφυγμῷ πιστεύσαντα πολλῶν μηνῶν εἶναι τὸ νόσημα· καὶ τοιοῦτος παρέμενεν ἄχρι τῆς κατὰ τὸ ἔαρ ἰσημερίας, ἐν ᾗ πρῶτον ἤρξατο μαλάττεσθαι. καὶ

the heat or by the pulse. But neither bilious vomiting followed, nor much sweating. Instead, there was only slight sweating which occurred around the third hour on the second day, after which the fever dispersed so gently that 28K around evening he seemed to be virtually apyrexial. However, a sufficiently clear sign of the fever manifestly remained in his pulse. In other respects he bore up well through the evening and the whole night. But again, around dawn on the third day, a second attack (access) occurred, similar in all respects to the first, apart from the time, for sweats occurred during the following night a little before daybreak and the fever ceased around the dawn of the fourth day. Throughout the rest of the entire autumn and winter in which he was sick, all the other things, including the time of the attack (access) and of the lysis of the fever remained the same. The young man was about eighteen years old, pale in appearance, and fat, living a rather idle life, and had often previously engaged in drinking bouts, continual baths and eating excessively, so that he did not concoct his food properly. A hard pulse also appeared in him on the first and second days to a moderate extent, which on the third and fourth days and the days 29K following up to the seventh came to such a degree of hardness that for someone relying on the pulse, it would have seemed to be a disease of many months duration. And it remained like this up to the spring equinox, at which time it first began to soften. Again later he was finally delivered

<sup>21</sup> καὶ λουτροῖς συνεχέσι om. D

αὔθις ὑστερον ἡμέρα τεσσαρακοστῇ τελέως ἀπαλλάττεται τοῦ τριταίου, κατὰ βραχὺν τε τοῦ σφυγμοῦ μαλαχθέντος καὶ τοῦ παροξυσμοῦ μικροτέρου γιγνομένου καὶ τῶν οὔρων ὑπόστασιν χρηστὴν ἔχόντων· καὶ γὰρ οὖν καὶ ταῦτα ἐν τῷ πρόσθεν χρόνῳ δεινῶς ἦν ἀπεπτα.

30K τοιοῦτος ὁ ἐναντιώτατος τῷ ἀκριβεῖ τριταίῳ. τοὺς δ' ἄλλους τοὺς μεταξὺ παμπόλλους ὄντας ἐκ τῶν ἀκρων ἀφωρισμένων οὐ χαλεπῶς ἀν' εὐρήσης. ἃ γὰρ ἐν ἀρχῇ τοῦ λόγου τριταίων πυρετῶν ἔγραψα γνωρίσματα, ταῦτα εἰ σύμπαντα παρείη, τὸν ἀκριβῆ τριταίον ἐργάζεται, ᾧ πάντως καὶ ὁ τοῦ παροξυσμοῦ χρόνος βραχὺς ὡρῶν πρὸς τεσσάρων ἢ πέντε ἢ ἕξ ἢ τὸ μήκιστον δέκα ἢ δώδεκα. καὶ μὲντοι καὶ τὰ οὔρα τῶν τοιούτων ἐν τῇ τρίτῃ τῶν ἡμερῶν ἢ πάντως γε τῇ τετάρτῃ φέρει τι σημεῖον πέψεως. οὕτω μὲν ἀκριβῆ τε καὶ οὐκ ἀκριβῆ γνωρίζειν | τριταίων.

ἀνάλογον δὲ καὶ τεταρταίων καὶ ἀμφημερινόν. ᾧ μὲν γὰρ ὑπάρχει πάνθ' ὅσα πρόσθεν ἔγραψα τεταρταίων πυρετῶν γνωρίσματα, γνήσιός τε καὶ ἀκριβῆς τεταρταίος. ᾧ δὲ μή, νόθος τε ἐκείνος καὶ οὐκ ἀκριβῆς. καὶ ἀμφημερινῶν δὲ ὅτῳ μὲν πάνθ' ὅσα γέγραπται εἰ πάρεστιν, ἀκριβῆς· ᾧ δὲ μή, ὁ τοιοῦτος οὐκ ἀκριβῆς. οὐκοῦν οὐδὲ χρόνιοι ὁμοίως τεταρταίος καὶ ἀμφημερινος οἱ οὐκ ἀκριβεῖς, ἀλλ' ὥσπερ τριταίος ὄξυς ὁ ἀκριβῆς, οὕτω τεταρταίος τε καὶ ἀμφημερινὸς χρόνιοι. ταῦτα μὲν ἐν τοῖς κατὰ περίοδον πυρέττουσι σκοπεῖσθαι. τῶν δ' ἄλλων πυρεπόντων οὔρα τε καὶ

from the tertian fever on the fortieth day when the pulse gradually became soft, the paroxysm smaller and the urine, which had previously been severely unconcocted, had a favorable sediment.

Such a fever was entirely the opposite to a genuine tertian fever. You will discover the other fevers—the many intermediate between the extremes I have defined—without difficulty. Thus, if all those signs which I set down at the beginning of the account of tertian fevers are present, it makes a genuine tertian fever in which the paroxysm is altogether brief in time, being four, five or six hours or, at the most, eleven or twelve. Furthermore, the urine in such fevers carries some sign of concoction on the third day, or at all events on the fourth. In this way, then, you may recognize a genuine and a nongenuine tertian fever.

30K

There is an analogous distinction in the case of both the quartan and the quotidian fevers. Thus a fever in which there are all these signs I wrote of earlier as belonging to the quartan fevers is a legitimate and genuine quartan fever. However, that fever in which there are not these signs is a nonlegitimate and nongenuine quartan fever. And among the quotidian fevers, one in which all those signs that have been described are present is genuine and such a fever in which they are not is nongenuine. Thus the fevers that are nongenuine are not as long lasting as the quartan and quotidian, but just as a genuine tertian fever is acute, so a quartan and a quotidian are chronic. These things are to be considered in those who are febrile with a certain periodicity. In others who are febrile, look at the

διαχωρήματα καὶ τὴν ὄλην ἔξω τοῦ σώματος ὄρᾶν καὶ τὴν θερμασίαν καὶ τὴν τῶν ἀρτηριῶν κίνησιν, ὅσα τ' ἄλλα πρὸς τούτοις ὁ Ἱπποκράτης καὶ ἡ μακρὰ πείρα κελεύει σκοπεῖσθαι, ὥρας καὶ χώρας καὶ καταστάσεις καὶ ἡλικίας καὶ κράσεις σωμάτων, ἔθνη τε καὶ τὰ προηγησάμενα τῶν αἰτίων καὶ τὰ συνεισβάλλοντα τοῖς νοσήμασι καὶ ὅσα μεταξὺ ἐπιφαίνεται.

31K παρῆνεται μὲν οὖν ὡς ἂν τιμι δόξοι τὸ πᾶν, οὐ μὴν πρὸς γε τὴν ἀλήθειαν | ὧδ' ἔχει. τὸ γάρ τοι μέγιστον μὲν ἀπάντων τούτων, ῥηθῆναι δὲ σμικρότατον, οὐδέπω γέγραπται. τί δ' ἐστὶ τοῦτο; ποσότης νοσήματος καὶ δυνάμεως· πρᾶγμα πρὸς μὲν τὴν δήλωσιν ἐνὸς ὀνόματος δεόμενον, εἰς δὲ τὴν χρείαν μέγιστον. οὐδὲ γὰρ οἷόν τε προγνῶναι καλῶς, ἄνευ τοῦ τὸ ποσὸν ἐκάστου τῶν εἰρημένων ἀκριβῶς ἐκλογιάσασθαι. καὶ γὰρ εἴτ' ὀλέθριόν ἐστὶ τὸ νόσημα, εἴτε μὴ, καὶ ὀπηρῖκα μᾶλλον δυνατὸν ἢ τεθνήξασθαι τὸν ἄνθρωπον ἢ ἀπαλλαγῆσθαι τοῦ πάθους, εἰ μὴ πάντων προειρημένων τὸ ποσὸν ἀκριβῶς διασκεψάμενος ἀνάγωγος εἰς δύο κεφάλαια τὴν τε νόσον αὐτὴν καὶ τοῦ νοσοῦντος δύναμιν, οὐκ ἂν οἷός τε εἶης προγνῶναι καλῶς. τῆς μὲν γὰρ δυνάμεως οὕτως ἰσχυρῶς οὔσης ὡς περιγένεσθαι τοῦ νοσήματος, ἀνάγκη σωθῆναι τὸν ἄνθρωπον. εἰ δὲ τοῦμπαλιν εἶη, πάντως τεθνήξασθαι. μὴ τοῖνυν ὁποῖόν τι τὴν ἰδίαν ἐστὶ τὸ νόσημα σκόπει μόνον, ἀλλὰ καὶ πηλίκον. οὐ μικρᾶς δέεται τοῦτό τριβῆς, καὶ τὰ ἄλλα καὶ τὸ μῆτε γραφῆναι μῆθ' ὅλως διδαχθῆναι λόγῳ δύνασθαι τὸ ποσὸν ἐκάστου. καὶ

urine, feces and whole state of the body, as well as the heat and the movement of the arteries, and in addition to these, the other things which Hippocrates and long experience direct you to consider<sup>15</sup>—seasons, places, climatic conditions, ages and *krastias* of bodies, customs, those things preceding which are causes, those things that attack with the diseases, and those things that manifest themselves in between times.

What I have advised might seem to someone complete, but this is not, in truth, so. For let me tell you, the most important of all these things, and yet the shortest to state, I have not yet written. What is this? It is the "quantity" of disease and the "quantity" of the capacity. In regard to explanation, the matter needs but a single word; when it comes to use, it needs much more. Thus, it is impossible to prognosticate correctly without calculating accurately the amount of each of the things mentioned. It would not be possible to correctly know beforehand whether the disease is fatal or not, and at which time it is most probable the person will die or be released from the affection, if you were not to consider accurately the amount of all the things previously mentioned, and refer them to two headings—the potency of the disease itself and the capacity of the patient—and so it would not be possible to prognosticate properly. Thus, if the capacity [of the patient] is strong enough to prevail over the disease, the person will, of necessity, be saved. If the opposite applies he will certainly die. Accordingly, don't only consider what the kind of the disease is but also how severe it is. This, in fact, needs no little practice, for apart from anything else, the amount of each can neither be written down nor completely taught

31K

<sup>15</sup> See, for example, Hippocrates, *Humors*, I.

32K

ἔτι ἄρα τὸ ἡμέτερόν ἐστιν, οὐχ ὑπ' ἄλλου τινὸς εἰς  
 τοσοῦτον | ἢκει ἀκριβείας ἢ ἐκ τοῦ μάλιστα ἡσκη-  
 σθαι περὶ τὸν τῆς ποσότητος στοχασμόν· τοῦτο μὲν  
 δὴ καὶ ἐπ' αὐτῶν τῶν ἔργων καὶ μαθεῖν καὶ διδάξαι  
 δυνατόν. ὅσα δὲ ἐν τῇ ποιότητι τὸν διορισμὸν ἔχει,  
 ταῦτα γράψομεν ἀκριβῶς τε ἅμα καὶ σαφῶς εἰς ὅσον  
 ἐγχαρεῖ διὰ βραχέων.

33K

10. Τὸν μὲν οὖν ἀκριβῆ τρίταιον, ὡς ἂν ὑπὸ τῆς  
 ξανθῆς χολῆς κινουμένης δυναστευόμενον, ὑγραίνειν  
 τε καὶ ψύχειν εἰς τοσοῦτον, εἰς ὅσον ἂν οἶόν τε μάλι-  
 στα. τὰ γὰρ ἐναντία τῶν ἐναντίων ἰάματα, κολάζοντα  
 μὲν τὸ ὑπερβάλλον, ἀντεισάγοντα δὲ τὸ λείπον. ὁ δὲ  
 τῆς ξανθῆς χολῆς χυμὸς ἀπάντων τῶν ἐν τῷ σώματι  
 χυμῶν θερμότητος καὶ ξηρότατός ἐστι. προτρέπειν  
 οὖν χρὴ τὸν εἰς τὴν γαστέρα συρρέοντα, κενουῖσθαι  
 δι' ἐμέτων· τὸν δὲ κάτω ὑπίοντα διὰ τῆς κάτω ἐκκρί-  
 σεως· τοῦτο μὲν δὴ καὶ αὐτόματον ἐν τοῖς ἀκριβέσι  
 γίνεται τρίταιοις. καὶ τοῖς οὔροις δὲ καὶ τοῖς ἰδρώσι  
 ποδηγεῖν ἀγαθὴ δὲ καὶ ἡ διὰ τῶν δὲ κάτω κἀθαρσις  
 τῆς χολῆς. ἀλλὰ τὴν μὲν γαστέρα μαλακοῖς κλύ-  
 σμασι κενουῖν· τὰ δ' οὔρα προτρέπειν σελίνου τε καὶ  
 ἀνήθου τοῖς πόμασιν | ἐναποβρέχοντας. καὶ ἦν σοι

<sup>16</sup> Daremberg remarks that this passage evoked considerable discussion among ancient commentators. Stephanus says: "Whether this passage reads as the ancient commentators read it, I do not know, but we will pass over their nonsense and speak the truth instead. What he means to say is this. If we really have distinguished ourselves and gained prominence in the art of heal-

in words. Therefore, if my view amounts to anything, it has come to such a degree of accuracy through nothing else than being particularly practiced in the estimation of "quantity."<sup>16</sup> And this certainly can be learned and taught by actual practice. Those things that permit of a distinction in quality, I shall write about accurately and clearly, and as briefly as possible.

10. Thus, moisten and cool the genuine tertian fevers to the greatest degree possible as they are made powerful by the movement of yellow bile. For opposites are cures of opposites,<sup>17</sup> curbing what is excessive and reintroducing what is lacking. The humor of yellow bile is the hottest and driest of all the humors in the body. It is necessary, then, to urge on what is flowing to the stomach and evacuate it through vomiting, and what has passed on downward in like manner through the downward excretion. And this certainly occurs spontaneously in the genuine tertian fevers. Also guide it to the urine and sweat. Good also is the purging of yellow bile through the downward route, but evacuate the stomach with gentle clysters. However, provoke the flow of urine by soaking celery and dill in drinks.

ing, this has accrued to us from no source other than accuracy in the matter of quantity. In saying 'if' he shows his modest character, since he does not want to be witness to his own fine reputation and to the praises accorded to him by the public." See Dickson, *Stephanus the Philosopher*, 151.

<sup>17</sup> Stephanus, in his commentary, writes: "This line is from Hippocrates [*De flatibus*, I], and is all the more true in every respect. We must not be led astray, however, by the sophistic claim that opposites are not treated but destroyed by opposites." See Dickson, *Stephanus the Philosopher*, 153.

32K

33K

πέψεως σημεῖα προφαίνηται, θαρρῶν ἤδη καὶ τοῦ ἀψινθίου διδόναι· τοῦτο μὲν δὴ καὶ ἄλλως μέγιστον ἴαμα τῶν τοῦ στομάχου διὰ χολῆς δῆξεων καὶ μάλ-  
 λον εἰ, τῆς κόμης αὐτοῦ λαμβάνων ὅσον αὐταρκες ἐναποβρέχους μελικράτῳ. λουτρά δὲ θερμὰ δι' ὕδατος ποτίμου τὸ μὲν τι κενοὶ τῆς χολῆς ἀπάγοντα, τὸ δέ τι καὶ τῇ ποιότητι μεγάλως ὀνύνησιν· ὑγραίνει γὰρ καὶ ψύχει κατὰ δύνανμιν, ὅσα τοιαῦτα λουτρά. τὰ δὲ θαλάττια καὶ ἀλμῶδη καὶ νιτρώδη καὶ θειώδη πλείω μὲν ἀπάγει τῆς χολῆς, πολὺ δ' ἦττον ὠφελεί τῶν ποτίμων. ἄμεινον δ' εἰπεῖν, οὐδ' ὠφελεῖν αὐτὰ μειζόνως βλάπτοντα ταῖς ποιότησιν ἢ βοηθοῦντα ταῖς κενώσεσιν. ἀπάρ οὖν καὶ οἰδά τινα κιβδηλῶ λογισμῶ τοιοῖσδε χρήσασθαι λουτροῖς ἀναπεισθέντα· εἶτα ξηρανθέντα τὴν ἕξιν τοῦ σώματος εἰς τοσοῦτόν (τε διαφθαρέντα),<sup>22</sup> ὥστε μαραινθεὶς ἀπέθανεν. ἐπέτεινε δ' αὐτῷ καὶ ἡ ἄλλα σύμπασα δίαιτα πρὸς τὴν κένωσιν (τῆς χολῆς).<sup>23</sup> αἰεὶ χρῆ ποιότητος ἐναντίας τῇ κρατούσῃ παρὰ φύσιν ἀντεισάγειν· καὶ ὡς τὸ πολὺ βέλτιον τοῦτο τοῦ κενοῦν, ὅπως οὖν·<sup>24</sup> ὅπερ οὐτ' αὐτὸς ἐγίνωσκεν, οὐθ' ἐτέρων | λεγόντων ἐμάθανε.

34K

ἐν τε οὖν τοῖς λουτροῖς οὕτως ὁ σκοπὸς γενέσθω σοι, διαβρέξαι τε καὶ ὑγράναι τὸ σῶμα· καὶ διὰ τοῦτο μήτε νίτρου μήτε ἀλῶν μήτε νάπυος προστάττειν, οἷα δὴ τοὺς πλείστους ἐστὶν ἰδεῖν λυμαινομένους τοῖς ἀρρώστοις, ἀλλ' ὅτι μάλιστα θερμὸν ἔλαιον περιχέον-  
 τας ἐμβιβάζειν τῷ ὕδατι καὶ διαβρέχεσθαι, καὶ εἰ γε θέλοιεν νήχεσθαι ἐν αὐτῷ, συγχωρεῖν αὐτοῖς εἰς ὅσον

And if the signs of concoction are apparent to you, be confident now to give absinth also, for this is besides the best remedy for biting sensations in the stomach due to bile, and particularly if, when you take its leaves, you soak them to a sufficient extent in melikratos. Warm baths of potable water, in part lead to the evacuation of the bile, and in part help greatly by virtue of their quality, in that such baths moisten and cool according to their potency. Baths of sea water, brine, sodium carbonate and sulfur draw off the bile more, but help much less than those of potable water. Indeed, it is better to say that these don't help at all in that they harm more due to their qualities than they help by the evacuations. But I also know someone who, misled by false reasoning, used such baths, drying out the state of the body to such a degree that having wasted away, the patient died. All the rest of the regimen also increased the evacuation of bile. Instead, you must always introduce qualities that are opposite to what prevails contrary to nature, as this is far better than evacuating by any means whatsoever. This is something that man neither knew nor learned from what others said.

34K

Let this be your objective, then, in baths: to soak and moisten the body, and because of this, prescribe neither niter, salt nor mustard, which is what you see the majority of those who harm the sick doing. Rather, pour warm olive oil on them copiously, put them in the bath and soak them in the water, and if they want to swim in it, allow them to do so as much as they can. With those who love

<sup>22</sup> τε διαφθαρέντα om. D

<sup>23</sup> τῆς χολῆς om. D

<sup>24</sup> ὥσπερ οὖν D; ὅπως οὖν K

δύνανται. τοὺς δὲ φιλολουτρούοντας, οὐδ' εἰ δις τῆς ἡμέρας λούεις, οὐκ ἂν ἀμάρτοις.<sup>25</sup> ἀλλ' ἐν καιρῷ μάλιστά σοι τοῦτο μνημονεύεσθω. εἰ δὲ καὶ πέψεως τῆς νόσου σημεῖον φαίνοιτο, κἂν εἰ πλεονάκις λούοις, οὐκ ἂν ἀμάρτοις. οἶνον δὲ πρὶν μὲν πέπτεσθαι τὸ νόσημα παντάπασιν εἶργειν, ἀρξαμένου δὲ πέπτεσθαι, λεπτὸν καὶ ὑδαρῆ καὶ ὀλίγον τὴν πρώτην διδόναι· πλησίον δ' ἤδη τοῦ λύεσθαι γενομένου πλείονα. σιτία δὲ ὅσα ὑγραίνει τε καὶ ψύχει, πάντα χρήσιμα τριταίοις ἀκριβέσι. τὸ δὲ ποσὸν ἐν αὐτοῖς τοσοῦτον, ὅσον πλείστον καλῶς πέψαι δύνανται. λαχάνων μὲν ἀνδράφαξ τε καὶ βλίτον καὶ λάπαθον καὶ μαλάχη καὶ θριδακίνη καὶ κολοκύνθη. τῶν δ' ἄλλων ὃ τε πιτσάνης χυλὸς καὶ τὰ

35K διὰ | τοῦ χόνδρου ροφήματα, καὶ οἱ πετραῖοι τῶν ἰχθύων, καὶ τῶν πτηνῶν τὰ μαλακόσαρκα, καὶ τῶν μῆ τοιούτων τὰ πτερά. καὶ μὲν δὴ καὶ ἀλεκτρούνων τοὺς ὄρχεις διδόναι καὶ τῶν συῶν τοὺς πόδας τε καὶ τοὺς ἐγκεφάλους· τῶν μικροτέρων δὲ εἰ καὶ τὰς σάρκος δοίης τακεράς, οὐδὲν βλάψει. ἀλλὰ καὶ ὡὰ συγχωρεῖν ροφεῖν καὶ μάλιστα τοὺς λεκίθους· ῥᾶον γὰρ αὐταὶ πέπτονται τοῦ λευκοῦ, καὶ τῶν ὀπωρῶν δὲ γε συγχωρεῖν γεύεσθαι, τῶν γε μὴ παντάπασι δυσπέπτων. ἀπέχεσθαι δὲ μέλιτός καὶ νάπυος καὶ ταρίχου καὶ τῶν δριμέων ἀπάντων καὶ οἴνων τῶν τε παλαιῶν ἰκανῶς καὶ ὅσοι φύσει θερμοί. αὕτη μὲν οὖν ἡ δίαίτα τῶν πολλῶν ἐστόχασταί σοι. ὅσοι δὲ μὴ τρυφῶσι, διαιτέον ἐστὶ ὡς οἴσθα καὶ μετὰ διαιτηθέντα ποτὲ ἐν ἀκριβεί τριταίῳ πυρετῷ κατὰ τὸν Ἱπποκράτους

bathing, if you wish to bathe them twice a day, you won't go wrong, but you must remember to do this particularly at the appropriate time. And if the signs of concoction of the disease appear, you would not err, even if you were to bathe them frequently. Keep them away from wine altogether before the disease is concocted, but when concoction begins, first give wine that is thin, watery and small in amount, and when the lysis is already near to occurring, give more. Those foods that moisten and cool are all beneficial in the genuine tertian fevers. In respect of quantity, in these [fevers give patients] as much as they are able to digest properly—among vegetables, orach, blite, rhubarb, mallow, lettuce and colocynth, and among other things, the juice of ptisane, porridge made from groats, fish that live among the rocks, and birds that are soft-fleshed; of those that are not, give the wings and also certainly the testes of cocks and the feet and brains of pigs. And if you give the tender flesh of smaller ones, you will do no harm. But also allow patients to suck eggs, and particularly the yolks, as these are easier to digest than the whites. Also let them eat fruits—at least those that are not very hard to digest. However, keep away from honey, mustard, preserved food, all things that are acrid, wines that are unduly old, and those that are naturally hot. This same diet has been tried out for you on many people, but those who do not live luxuriously, you must treat as you saw me treating at one time in a genuine tertian fever, according to the Hippocratic teaching with the juice of ptisane until the

35K

<sup>25</sup> post ἡμέρας: λούεις, οὐκ ἂν ἀμάρτοις D; λούειν ἐθέλοις, ἀμαρτάνοις K

λόγον ἐπὶ χυλῷ πτισάνης ἄχρι κρίσεως. ταῦτα μὲν ἐν τοῖς ἀκριβέσι τριταίοις.

36K 11. Ἐν δὲ τοῖς μὴ ἀκριβέσι προνοεῖσθαι χρὴ μάλιστα καθ' ὅσον οἶόν τε μήτε αὔξειν τὸ νόσημα μήτε καταβαλεῖν τοῦ νοσοῦντος τὴν δύναμιν ἐν χρόνῳ | πλείονι ταλαιπωρεῖσθαι μέλλουσαν. ἔστι μὲν οὖν χαλεπὸν ἀμφοῖν κρατεῖν, ὡς ἂν τῶν μὲν ἀσιτιῶν ὅσον εἰς τὴν πέψιν τοῦ νοσήματος ὠφελουσῶν, τοσοῦτον ἢ καὶ ἐπὶ πλείον ἀδικουσῶν τὴν δύναμιν· τῶν δὲ τροφῶν ὅσον εἰς ῥώσιν τελουσῶν τῷ νοσοῦντι, τοσοῦτον ἐμποδιζουσῶν τὰς πέψεις. ἀλλὰ κἀνταῦθά σοι γνωστότεον, εἰς ὅσον μὲν ἦκει μεγέθους ἢ νόσος, εἰς ὅσον δὲ ἡ δύναμις αὐτοῦ τοῦ νοσοῦντος· ἵνα πρὸς τὰ μείζονος ἐπικουρίας δεόμενα ἀποβλέπων ἀσιτία μὲν ἐν ἰσχυροτάτῃ τῇ δυνάμει καὶ δυσπέπτῳ νοσήματι θαρσαλεώτερον χρήσῃ τροφαῖς δὲ πλείοσιν ἐν ἀσθενεστέρα μὲν τῇ δυνάμει, νοσήματι δὲ μὴ πάνυ δυσπέπτῳ. ταῦτα μὲν δὴ καὶ ἐν τοῖς ἄλλοις ἅπασιν νοσήμασι χρὴ σκοπεῖν.

37K ἐν δὲ τοῖς οὐκ ἀκριβέσι τριταίοις οὐδὲ λούειν εὐθὺς κατ' ἀρχὰς ἀγαθόν, ἀλλ' ἠνίκα ἂν ἤδη φαίνοντο τὰ σημεῖα τῆς πέψεως, οὐδὲ καθ' ἡμέραν τρέφειν, ἀλλ' ἀρκεῖ παρὰ μίαν. ἡσυχία δὲ καὶ θάλψις τῶν καθ' ὑποχόνδριον αὐτοῖς συμφέρεει καὶ ῥοφήματα εὐπεπτα καὶ κλύσματα τῆς κάτω γαστρὸς μὴ πάνυ μαλακά. καὶ εἰ αἵματος ἀφαιρέσεως δέοιντο, μηδὲ τοῦτο | παραλει-

crisis.<sup>18</sup> These are the things to be used in genuine tertian fevers.

11. In the nongenuine [tertian] fevers, it is necessary to give particular forethought as to how much it is possible for the disease not to increase and not to overcome the capacity of the person who is diseased, so he is not going to be worn out over a longer time. It is difficult to prevail over both [these problems], for as much as fasting benefits the concoction of the disease, to the same extent or even more, it damages the capacity, while the nutrients contribute as much to the strength of the patient as they hinder concoctions. But here too you must know to what magnitude the disease has come, and also what the capacity of the patient himself has come to. So then, by giving attention to what requires more help, you may, with greater confidence, use fasting in the case of a stronger capacity and a disease that is difficult of concoction, whereas in the case of a weaker capacity but a disease that is not very difficult to concoct, you may use more nutriment. You must consider these things also in all the other diseases.

In the nongenuine tertian fevers it is good not to bathe immediately at the beginning, but when the signs of concoction are already apparent. Don't nourish every day; to nourish on alternate days is enough. Quiet and warmth for those things in the hypochondrium benefit patients, as do gruels that are easy to digest and clysters to evacuate the stomach downward that are not too mild. And if the patients need removal of blood, don't neglect this, but im-

<sup>18</sup> Hippocrates, *Regimen in Acute Diseases*, 25; see Jones, *Hippocrates: Prognostic*, 82-83.

πειν, ἀλλ' εὐθὺς κατ' ἀρχὰς διορισάμενος ἐξ ὧν οἶσθα ἀποχεῖν αἵματος ὅσον τοῖς παροῦσι μέτριον. ἢ δ' ὅλη τῆς διαίτης κατάστασις οὐ ψύχουσα καὶ ὑγραίνουσα τὸ σὺμπαν σῶμα ὡς ἐπὶ τῶν ἀκριβῶν ἐστὶ τριταίων, ἀλλὰ τι καὶ τοῦ τμητικωτάτου καὶ τοῦ θερμοτάτου τρόπου προσεπιλαμβανέσθω. μάλιστα γοῦν ἀρμόσειεν αὐτοῖς ὁ τῆς πτισάνης χυλὸς ἐμβαλλομένου πεπέρεως· ἀτὰρ οὖν καὶ ὑσσώπου ποτὲ καὶ ὀριγάνου ἢ στάχνος νάρδου ἐμβαλὼν μελικράτῳ καὶ συναφεψῶν διδόναι πίνειν καὶ τᾶλλα δὲ ὅσα οὖρησιν κινεῖ πλὴν τῶν ἄκρως θερμαινόντων τε καὶ ξηραίνοντων. μάλιστα δὲ τοῦ ἀμυγθίου διδόναι συνεχέστατα μετὰ τὴν ἐβδόμην ἡμέραν. καὶ μὲν δὴ καὶ ὀξύμελι πολλοὺς ὠνήσε πινόμενον καὶ τι τῶν ἐπιεικῶν ὑψηλάτων χρῆσθαι,<sup>26</sup> οἷς οἶσθα καὶ ἡμᾶς χρωμένους συνεχῶς. ὁ δὲ ἐπὶ σιτίοις ἔμετος εἰς τοσοῦτον ἄρα τοῖς ἐν τῷδε πυρετῷ χρονίζουσι χρήσιμος, ὥστε πολλοὺς οἶδα τελῶς ἀπαλλαγέντας εὐθέως ἐπὶ τοῖς ἐμέτοις.

38K 12. Ἐξῆς δὲ περὶ τῶν τεταρταίων ἐροῦμεν, οὓς καὶ αὐτοὺς κατ' ἀρχὰς μετρίως τε καὶ πρῶως ἄγειν | χρῆ, μήτε φάρμακόν τι τῶν ἰσχυρῶν μηδὲν προσφέροντος μήτε κένωσιν, εἰ μὴ τι ἄρα πάνν σφόδρα φαίνουτο πλεονάζον αἷμα, καὶ εἰ διελόντι φλέβα τὸ ρέον εἴη μέλαν καὶ παχύ, μάλιστα δ' ἐν τοῖς σπληνώδεσι τοιοῦτον εὐρίσκεται, θαρρεῖν τῇ κενώσει ξανθοῦ δὲ καὶ λεπτοῦ φανέντος, ἐπέχειν αὐτίκα. τέμνειν δὲ φλέβα ἢτοι τὴν ἐντὸς ἢ τὴν μέσην ἀγκῶνος ἀριστεροῦ, καὶ δίαιταν ἐφεξῆς ἀφυσόν καὶ χρηστὴν διαιτᾶ-

mediately at the start determine from those things you know, how much blood to withdraw that is commensurate with the prevailing circumstances. The whole aim of the prescribed regimen should be neither to cool nor moisten the whole body, as it should do in the case of the genuine tertian fevers; it should, rather, contribute in a more cutting and warming manner. The juice of ptisane with pepper added is, then, particularly suitable for them. On occasion, give them to drink hyssop, oregano and spikenard added to melikraton and cooked together, and other such things that bring about urination, except those that are excessively heating and drying. Especially give absinth very frequently after the seventh day. Furthermore, drinking oxymel benefits many patients, as does one of those things suitable for carrying off downward, which you have seen me use repeatedly. Vomiting after food is beneficial to such a degree for those chronically affected by this fever that I have seen many completely relieved immediately after vomiting.

12. I shall speak next about the quartan fevers which you must deal with moderately and gently at the beginning, neither giving one of the strong medications nor purging, unless the blood seems to be very greatly in excess. And if, when you open a vein, the flow is black and thick, which is the kind of thing you find particularly in those who are splenetic, be confident about the purging. However, if it appears yellow and thin, stop immediately. Cut the vein in the inner or medial part of the left antecubital fossa and next prescribe a diet that doesn't cause

38K

<sup>26</sup> add. χρῆσθαι D



σθαι, μαλάττοντας τὴν γαστέρα, καθ' ὅσον οἶόν τε διὰ τῶν συνηθῶν. εἰ δὲ μηδὲν ἀνύοι ταῦτα, κλύσμασι χρῆσθαι κατ' ἀρχὰς μὲν μαλακοῖς, ὕστερον δὲ καὶ δριμντέροις. χοιρέων δ' εἴργειν αὐτοὺς κρεῶν καὶ πάντων ὅσα γλίσχρα καὶ βραδύπορα καὶ τῶν ψυχόντων καὶ τῶν ὑγραινόντων ἐδεσμάτων ἀπάντων, οἶνω δὲ χρῆσθαι λευκῷ καὶ λεπτῷ καὶ συμμέτρως θερμῷ. καὶ πτηνῶν δὲ τοῖς (εὐχύμοις καὶ)<sup>27</sup> οὐκ ἐλείοις· καὶ τῶν ἰχθύων τοῖς εὐπέτοις τε καὶ μαλακοσάρκοις καὶ μηδὲν γλίσχρον ἔχουσι. καὶ ταρίχει δὲ καὶ νάπτῳ χρῆσθαι καὶ δι' ἡμερῶν τινων τῆς διὰ τριῶν πεπέρειω λαμβάνειν ἢ τοῦ διοσπολιτικοῦ φαρμάκου (καὶ εἰ πεπέρειω)<sup>28</sup> μόνου σὺν ὕδατι καθ' ἑκάστην ἡμέραν (λαμβάνοιεν),<sup>29</sup> ὀρθῶς ἂν ποιήσειεν.

39K

τρίψεω δὲ καὶ περιπάτων καὶ λουτρῶν καὶ τῶν ἄλλων τῶν συνηθῶν μὴ παντελῶς εἴργειν. εἰ δὲ καὶ παντάπασιν ἀπέχεσθαι λουτρῶν δύναιντο, ταῖς τρίψεσιν ἀρκοῦμενοι μάλιστ' ἂν οὐναιντο. καὶ εἰ βραχυὸς εἶη καὶ μὴ πάνν βίαιος ὁ τεταρταῖος (πυρετὸς),<sup>30</sup> ἐν ταῖς μέσαις τῶν ἡμερῶν οὐδὲν χεῖρον ἀπτεσθαι τῶν συνηθῶν γυμνασιῶν. ταῦτα μὲν δὴ κατὰ τὰς ἀρχὰς καὶ μέχρι τῆς ἀκμῆς πρακτέον. εἰ δ' ἐν ἀκμῇ μάλιστά που δοκοίη τοῦ νοσήματος εἶναι ὁ κάμνων τότε χρῆσαι διαιτῶν μὲν λεπτότερον ἢ πρόσθεν τε καὶ ὀπισθεν· εὐθὺς δὲ καὶ ἡσυχάζειν εἰς μακρὸν κελεύειν· καὶ τῶν σπλάγχνων προνοεῖσθαι, καταιονῶντά τε καὶ καταπλάττοντα τοῖς μαλάττειν καὶ χαλᾶν δυναμένοις. ἐφ' ἐξῆς δὲ τοῖς διουρητικοῖς καλουμένοις φαρμάκοις

flatulence and is beneficial, softening the stomach as much as possible with those things that are customary. If these measures accomplish nothing, use gentle clysters at the start but later those that are more acrid. Keep patients away from the flesh of pigs and all those things that are viscous and slow to pass, and all those foods that cool and moisten. Use wine that is white, thin, and moderately warm, and birds that are *euchymous* but are not marsh-dwelling. Also use fish that are easily digested, soft-fleshed and have nothing viscous about them. Use preserved meat and mustard, and after an interval of several days also add the medication made from three peppers or the diospoliticum medication. Also, if they were to take pepper alone with water each day, they would do well.

39K

However, massage, walking, baths and other things that are customary should not be prohibited at all. Also, if patients are able to stay away from baths completely and be content with massage, they benefit greatly. And if the quartan fever is of short duration and not very strong, it is no bad things for patients to engage in their customary exercises around noon each day. Certainly these are the things that must be done at the start and up to the peak. But particularly if the patient seems to be at the peak of the disease, you must at that time prescribe a lighter diet than either before or afterward, and immediately direct him to rest for a long period. Also give thought to the internal organs, applying fomentations and poultices with those things that can soften and relax. Next in order, use

27 *om.* εὐχύμοις καὶ D28 *om.* καὶ εἰ πεπέρειω D29 *om.* λαμβάνοιεν D30 *om.* πυρετὸς D

χρησθαι καὶ εἰ τὰ τῆς πέψεως τοῦ νοσήματος φαί-  
 νοιτο σημεῖα, καθαίρειν τηνικαῦτα τοῖς τοὺς μέλανας  
 χυμοὺς κενούσι φαρμάκοις χρή οὐχ ἅπαξ μόνον,  
 ἀλλὰ καὶ πολλάκις, ἣν οὕτω δέοι. χρῆσθαι δὲ καὶ τοῖς  
 ἀπὸ τῶν σιτίων ἐμέτοις τηνικαῦτα δὲ συνεχῶς, καὶ  
 40K μῆθενὸς κωλύοντος ἐλλέβορον λευκὸν διδόναι τὴν  
 πρώτην | ἐπιμιγνύντα ῥαφανίσιν· εἰ δὲ μῆδὲν ἀνύει  
 καὶ αὐτὸν τὸν ἐλλέβορον. οἷς δ' ἐμείν ἀδύνατον,  
 τούτους σφοδρότερον καθήραντας κάτω τοῦ διὰ τῶν  
 ἐχιδνῶν φαρμάκου πίνειν διδόναι καὶ τῶν ἄλλων ὅσα  
 πρὸς τοὺς τοιοῦτους ἐπαινεῖται πυρετούς· ἐν οἷς ἐστὶ  
 καὶ τὸ σύννηθες ἡμῖν ἀπάντων δοκιμώτατον, ὅπου τοῦ  
 Κυρηναϊκοῦ λαμβάνου. ὅσοι δὲ κατ' ἀρχὰς τῶν τοι-  
 οῦτων τι φαρμάκον ἔδοσαν ἢ ὅλως πρὸ τῆς ἀκμῆς,  
 ἀπλοῦν μὲν τε τεταρταῖον διπλοῦν πολλάκις ἀπέφη-  
 ναν, ἢ πάντως μείζονά τε καὶ χαλεπώτερον εἰργά-  
 σαντο· διπλοῦν δὲ ὄντα τριπλοῦν ἐποίησαν, ἢ πάντως  
 γε τοὺς δύο χαλεπωτέρους καὶ μείζονας. οἶδε δὲ τινα  
 ἰατρόν, ὅστις ἐτόλμησεν ὑπὸ τριῶν ἐχομένῳ τεταρ-  
 ταίων δοῦναι τοῦ διὰ τῶν ἐχιδνῶν (φαρμάκου)<sup>31</sup> οὐπω  
 τοῦ νοσήματος ἀκμάζοντος· εἶτα οἶα εἰκὸς ἀνέστη-  
 των ἀπάντων συνεχῆς δεξάμενος πυρετὸς ἀπέκτεινε  
 τὸν ἄνθρωπον.

<sup>31</sup> *om.* φαρμάκου D

<sup>19</sup> Stephanus has the following comment: "He says that the usual snake poison antidote is given in these cases. For thanks to its rarefying action, it can secrete and disperse whatever remnant

the so-called diuretic medications, and if the signs of con-  
 coction of the disease appear, you must, under those cir-  
 cumstances, purify with medications that purge the black  
 bile—and not once only but often, if it is so required.  
 Also under these circumstances use repeatedly the emet-  
 ics derived from foods, and if there is no contraindication,  
 give white hellebore, at first mixed with radishes; if this  
 achieves nothing, give hellebore itself. To those who are  
 40K unable to vomit, give something stronger to drink that  
 acts by downward purgation, such as the medication made  
 from vipers, and those others recommended for such fe-  
 vers. Among these is the one I customarily use, and is the  
 most esteemed of all, which is that taken from the juice  
 of the Cyreniac.<sup>19</sup> However, those who gave one of such  
 medications from the beginning or on the whole before  
 the peak, often made a simple quartan fever double; at all  
 events, they made it greater and more difficult. If it was  
 double, they made it triple, or in short, they made the two  
 more difficult and greater. I know a certain doctor who  
 dared to give a patient in the grip of three quartans the  
 medication made from vipers when the disease had not  
 yet reached a peak. Thus, as was likely, when everything  
 was increased, a continuous fever supervened and killed  
 the man.

of this humor might be left and modify the state of the pores. Not  
 just this must be used, however, but also as many other antidotes  
 as are approved for use against fevers. In any case, something of  
 this kind was devised by Galen, which is called the drug from  
 Cyreniac juice. But it is evident that there is also another Cyre-  
 niac juice, namely what is called Medic juice." See Dickson,  
*Stephanus the Philosopher*, 187, and also *Simpl. Med.*, XI.860K,  
 and *Comp. Med. Gen.*, XIII.567K.

13. Ἀμφημερινὸν δὲ θεραπεύων ὀξυμέλιτι χρω̄ μετὰ τὰς πρώτας ἡμέρας καὶ τοῖς οὖρα καλῶς προτρέπειν δυναμένους καὶ τὸ σύμπαν σοι τῆς διαίτης κεφάλαιον  
41K | τμητικώτερον ἔστω. περὶ δὲ τὴν ἀκμὴν προνοεῖσθαι χρῆ τῆς γαστρούς, μάλιστα δὲ τοῦ στόματος αὐτῆς. κάπειτ' ἐμεῖν ἀπὸ τε ραφανίδων καὶ σιτίων κελεύειν καὶ τοῖς φλέγμα κενούσιν ὑπηλάτοις χρῆσθαι. τὰ δὲ ἄλλα τῆς διαίτης πρὸς τοὺς κοινούς ἀποβλέπων σκοποὺς ευρήσης.

14. Τοὺς δὲ συνεχεῖς πυρετοὺς, οἷς μὲν ἡ ἀκμὴ τοῦ νοσήματος οὐ πόρρω τῆς ἐβδόμης ἔσεσθαι μέλλου καὶ ἔστιν ἡ δύναμις ἰσχυρὰ καὶ τὰ τῆς ἡλικίας ὁμολογεῖ, τούτους ἀκριβῶς τε πάνν καὶ λεπτῶς διαιτᾶν. ὅσοις δὲ ἦτοι πορρωτέρω τῆς ἐβδόμης ἡ ἀκμὴ τοῦ ὅλου νοσήματος ἢ τὰ τῆς δυνάμεως οὐκ εὐρρωστα, κατ' ἀρχὰς μὲν ἀδρότερον, ἐγγύς δὲ τῆς ἀκμῆς λεπτότερον, ἀκμαζόντων δ' ἤδη λεπτότατον διαιτᾶν. εἴτ' αὖθις ἀδρότεραν αἰεὶ καὶ μᾶλλον ποιούμενον ὁμοίαν τὴν αὐξήσιν τῇ πρὸ τῆς ἀκμῆς μειώσει. αἵματος δὲ ἀφαιρέσεις διὰ τε τὸ μέγεθος τοῦ νοσήματος καὶ εἰ πολὺ πλεον ἔρευθός ἐστι τοῦ κατὰ φύσιν καὶ τις ὄγκος ἀήθης ὅλου τοῦ σώματος μετέωροί τε καὶ τεταμέναι φλέβες, τοῦτο ἀφαιρεῖν, ἦν μὴ σε τὰ τῆς δυνάμεως ἢ τὰ τῆς ἡλικίας ἢ τι τῶν ἄλλων ὧν κατ' |  
42K ἀρχὰς εἶπον ἀπείργει. ὑγραὶ δὲ δίαται ὅτι τοῖς ὀξέσι πυρετοῖς ἅπασι συμφέρουσιν ὀρθῶς εἴρηται πάλαι. πτωσάνης τε οὖν χυλὸν οἷς οὐκ ὀξύνεται διδόναι καὶ μελίκρατον οἷς οὐκ ἐκχολοῦται καὶ τὰ διὰ τοῦ χόν-

13. When treating a quotidian fever use oxymel after the first days, and those things that are good for producing urine; and let the chief aspect of the regimen as a whole be that it is more cutting. Around the peak, you must give forethought to the stomach, and particularly its opening (cardiac orifice). Then you should order vomiting from radishes and foods, and those things that evacuate phlegm, carrying it off downward. You will discover the other aspects of the regimen by looking at the common objectives. 41K

14. In the continuous fevers in which the peak of the disease will not be further off than the seventh day, if the capacity is strong and factors relating to age allow, feed these patients a well-considered and very light diet. In those in whom the peak of the whole disease is further off than the seventh day, or matters pertaining to the capacity are not strong, prescribe a thicker diet at the beginning, then when it is near the peak, a thinner one, and when it is already at the peak, the thinnest diet. Then, once again prescribe a thicker diet, always making the increase more like the reduction before the peak. The withdrawal of blood [is indicated] by the magnitude of the disease, and in those in whom there is markedly increased rubor that is unnatural, and an unusual swelling of the whole body, with veins that are raised and distended. Under these circumstances, it is carried out, unless one of the matters relating to the capacity, age, or one of the other things which I spoke of at the beginning prevents it. It was rightly said long ago that moist diets are beneficial in all the acute fevers.<sup>20</sup> Give the juice of ptisane, then, to those who won't become acidic; melikraton to those who won't become 42K

<sup>20</sup> Hippocrates, *Aphorisms*, 1.16.

δρου ροφήματα καὶ ἄρτον δι' ὕδατος, ὅσα τ' ἄλλα τῆς αὐτῆς ἢ παραπλησίας ἐστὶ δυνάμεως. τοῖς ἰσχυρῶς θερμοῖς καὶ καυσώδεσιν, ὅταν πρῶτον ἴδῃς τὰ τῆς πέψεως σημεῖα, θαρρῶν ὕδατος ψυχροῦ διδόναι πίνειν τῆς δόσεως τὸ πλήθος, μετρῶν ὥρα τε καὶ χώρα καὶ ἡλικία καὶ φύσει καὶ ἔθει. τοιαύτη μὲν τις ἐν τῷ καθόλου φάναι τῶν ἀνευ συμπτωμάτων πυρεττόντων ἐπιμέλεια.

15. Τῶν δὲ μετὰ συμπτωμάτων πυρεττόντων οὐκ ἔθ' ἀπλῶς οὕτως, ἀλλὰ μετρήσαι χρὴ καθ' ὅσον οἶόν τε πηλίκος μὲν ὁ πυρετός, πηλίκόν δὲ τὸ σύμπτωμα τὸ τὸν κίνδυνον ἐπιφέρειν, καὶ πρὸς τὸ σφοδρότερον ἐν αὐτοῖς καὶ χαλεπώτερον ἵστασθαι, μηδὲ θατέρου παντάπασι ἀμελοῦντας. φέρε γὰρ εἴ τις πυρέττοι μὴ τῆς πληθωρικῆς καλουμένης διαθέσεως παρούσης, ἀλλ' ἐξ ἀπειθῶν τε προσφάτων εἴη καὶ δάκνοιο καὶ θλίβοιο τὸ στόμα τῆς γαστρὸς ἢ καὶ χυμόν | 43K τινα μοχθηρὸν ἐμημεκῶς εἴη καὶ τῇ τούτου διόδῳ μεγάλως βεβλημένος, ὥστε δυσφορεῖν τε καὶ ἀλύειν ἄρ' ἐνταῦθα πρὸς τὸν πυρετὸν ἀποβλέψαντες μόνον κενοῦν ἐπιχειρήσομεν τὸ πλήθος, ὅπερ ἂν ἀλύπως ἄλλως ἐπράξαμεν; ἢ πρότερον (τοῦ στόματος)<sup>32</sup> τῆς γαστρὸς προνοησόμεθα, κάπειθ' οὕτως, ἐπειδὴν ἡμῶν καλῶς ἔχει τούτο, τὴν ἐνδεχομένην τοῦ παντὸς σώματος κένωσιν ποιησόμεθα; ἐμοὶ μὲν οὕτως<sup>33</sup> πολλάκις γοῦν οἶδα πολλοὺς τῶν τοιούτων, τοὺς μὲν ἀπολλυμένους, τοὺς δ' εἰς ἔσχατον ἀφικομένους κινδύνου, ἐπι-

charged with bile; and gruel made from barley, bread made with water, and those other things which are the same or similar in capacity. However, in patients who are very hot and burning, when you first see the signs of concoction, be confident enough to give cold water to drink, determining the amount to be administered from the season, the place, the age, nature and customs. Speaking in general, such is the care of those who are febrile without symptoms.

15. In the fevers with symptoms it is not as simple as this. Rather, it is necessary to measure as far as possible how great the fever is and how great the symptoms are that carry the danger, and to make a stand against the stronger and more difficult of these without altogether neglecting the other. Suppose someone is febrile without the so-called plethoric condition being present, but because of recent failure of digestion (*apepsia*), the orifice of the stomach is both bitten and compressed, or having vomited 43K some bad humor, has been greatly harmed by its passage, so that he is distressed and distraught. Here then, focusing on the fever alone, should we attempt to evacuate the excess which in other instances we did painlessly? Or should we give prior consideration to the opening of the stomach, and then in this way, when we judge this to be in a good state, carry out the appropriate evacuation of the whole body? This is how it seems to be to me. At any rate, I have often seen many such patients who died or came to ex-

<sup>32</sup> τοῦ στόματος *om.* D

<sup>33</sup> ἐμοὶ μὲν οὕτως D; ἐμοὶ μὲν οὖν οὕτω δοκεῖ. K

χειρησάντων αὐτοὺς κενοῦν τῶν ἰατρῶν πρὶν ῥῶσαι τὸν στόμαχον.

44K ἀλλ' οὐδὲ εἰ μετὰ διαρροίας ὁ πυρετὸς εἴη, χρήζει τινὸς ἄλλης κενώσεως, ἀλλ' αὐτάρκης αὕτη, κἂν μὴ κατὰ λόγον ἢ τοῦ πλήθους. ὅσοι γὰρ τῶν τοιούτων ὡς πλείονος χρηζόντων ἀφαιρέσεως ἦτοι τοῦ αἵματος ἀπάγειν ἐτόλμησαν ἢ τὴν γαστέρα κινεῖν, ἔτι μᾶλλον ὀξεῖς κινδύνους ἐπήνεγκαν. ἀλλὰ καὶ ἐκ σπῶμενός τις ἅμα καὶ κενώσεως αἵματος εἴη χρήζων, οὐδὲ τούτῳ τοσοῦτον ἀφαιρῆν προσήκει εἰσάπαξ ὅσον δεῖται τὸ πλήθος, ἀλλὰ τι καὶ τῷ συμπτώματι καταλειπτόεν  
ιδρώτας | τε πολλάκις κινουῦντι καὶ ἀγρυπνίας προσφέρουσι καὶ τὴν ἰσχὺν καταβάλλουσι τοῦ νοσοῦντος. οὕτω δὲ καὶ εἰ ἀγρυπνία σφοδρὰ καὶ εἰ ἀλγημα σύντονον ἐνοχλοῖ τὸν νοσοῦντα, φυλακτέον ἀθρόως κενώσεις καὶ πολλὰς. οἷον δὲ σύμπτωμα τι καὶ τὴν τοῦ περιέχοντος ἀέρος ὑπολογιστέον κρᾶσιν, ὅταν τε ἄλλως ἢ θερμὴ καὶ ξηρὰ καθάπερ τῆτες<sup>34</sup> ἐγένετο μεταξὺ κυνὸς ἐπιτολῆς καὶ ἀρκτούρου. καὶ διὰ τοῦτο πάντες ἀπέθανον, ὧν οἱ μὴδ' ὄλωσ ταῖς ὥραις προσέχοντες ἰατροὶ τὰς φλέβας τεμεῖν ἐθάρρησαν. καὶ εἰ ψυχρά τις εἴη σφόδρα, ἀτὰρ οὖν καὶ τότε φυλακτέον ἀποχεῖν τι τοῦ αἵματος, εἰδότας οὐ σμικροὺς ἐν τοῖς τοιούτοις ἀκολουθεῖν κινδύνους. ἀπόλλυνται μὲν οἱ ἐν ταῖς θερμαῖς πάνν καταστάσεσιν οὐκ ὀρθῶς κενωθέντες.

<sup>34</sup> post τῆτες: ἐγένετο D; ἐν τῷ K

treme danger when doctors attempted to purge them before the stomach was strengthened.

But if the fever exists along with diarrhea, there is no need for any other evacuation; this itself is sufficient, even if it is not by reason of the abundance. Those who dared to remove blood or activate the stomach of patients who required a greater evacuation, brought upon [that patient] still more acute dangers. But also, if someone convulses at the same time as he also needs removal of blood, it is not appropriate in this case to withdraw all at once the amount the excess requires. Rather, you must leave some behind for the symptom, which often sets in motion sweats, is conducive to insomnia and overthrows the strength of the patient. And in the same way too, if severe insomnia and intense pain distress the patient, you must guard against concentrated and frequent evacuations. Likewise, you must also take the *krasis* of the ambient air as a kind of symptom, when it is otherwise hot and dry, as at the time of year between the rising of Orion (the Dog) and Arcturus (the Bear). And it is because of this that all those, whose doctors paid no attention at all to the season and were overbold in opening the veins, died. In this way too, if it is very cold, you must guard against withdrawing any blood at that time, realizing that in such cases major dangers follow. Those who are incorrectly purged in very hot weather die due to so-called *syncope* (fainting) and *dia-*

44K

ντες ὑπὸ τῆς καλουμένης συγκοπῆς τε καὶ διαφορή-  
σεως. οἱ δ' ἐν ταῖς ψυχραῖς ἐν ἀρχαῖς τῶν παροξυ-  
σμῶν καταψυχθέντες σφοδρῶς οὐκέτι ἀναφέρουσι.

ταῦτ' ἄρα καὶ τῶν χωρίων οὐτ' ἐν τοῖς θερμοῖς ἄγαν  
οὐτ' ἐν τοῖς ψυχροῖς αἵματος ἀφαιρέσει θαρροῦμεν.  
ἀλλ' εἰ μὲν ὁμολογεῖ τὰ τῆς ὥρας τῷ χωρίῳ, παντά-  
45K πασι ἀπεχόμεθα μὴ ὁμολογούντων | δὲ κενούμεν  
μὲν, ἀλλ' ἔλαττον πολὺ ὥσπερ εἰ μὴδὲν ἕτερον ἐκώλυεν.  
οἶον σύμπτωμα δέ τι καὶ τὸ τοῦ νοσοῦντος εὐπαθὲς  
ὑφορᾶσθαι χρή. πολλοὶ γὰρ (οὐτ' ἐκενώθησάν ποτε)<sup>35</sup>  
οὔτε κένωσιν ἀθροωτέραν οὐδεμίαν φέρουσιν οὐτ'  
ἀσιτίαν μακροτέραν· ἀλλ' οἱ μὲν ἄρρωστοὶ τὴν ἀπα-  
σαν ἰσχὺν τοῦ σώματος ἐπ' αὐτοῖς γίνονται ῥαδίως·  
οἱ δ' εὐθὺς τὸν στόμαχον φαύλον ἔχουσιν, ὥστ' ἀπο-  
στρέφεισθαι τὰ σιτία· καὶ εἰ βιασάμενοι λάβοιεν μὲν  
ἢ μὴ κατέχειν ἢ μὴ πέττειν καλῶς. ἐν τούτῳ τῷ μέρει  
τῆς διαγνώσεως καὶ τὴν κράσιν τοῦ νοσοῦντος θεω-  
ρητέον. ὅσοι γὰρ θερμοὶ καὶ ξηροὶ φύσει τυγχάνου-  
σιν ὄντες, οὗτοι πάντες ὑπὸ τῶν ἀθρόων κενώσεων  
ῥαδίως βλάπτονται. καὶ μὲν δὴ καὶ τὸ ἔθος<sup>36</sup> οὐ σμι-  
κρὰ συντελεῖ πρὸς τε τα ἄλλα σύμπαντα καὶ οὐχ  
ἤκιστα πρὸς τὴν τῆς κενώσεως ἔνδειξιν. οἱ μὲν γὰρ

<sup>35</sup> οὐτ' ἐκενώθησάν ποτε om. D

<sup>36</sup> post τὸ ἔθος: οὐ σμικρὰ συντελεῖ πρὸς τε τα ἄλλα D;  
οὐ μικρὰ μοῖρα πρὸς τε ἄλλα K

<sup>21</sup> Like Daremberg (2.730), I have chosen to leave these

*phoresis* (prostration),<sup>21</sup> while in cold weather, those who  
are strongly cooled at the beginning of the paroxysms no  
longer recover.

For these reasons, then, I don't dare to withdraw blood  
in places that are extremely hot or cold. But if the condi-  
tions of the season are in accord with the place, I alto-  
gether avoid this. If they don't, I do evacuate, but much  
45K less than if neither factor contraindicated it. For example,  
the susceptibility of the patient to affection must be sus-  
pected of being a sort of symptom. Thus, many patients  
either do not tolerate too concentrated an evacuation or  
overly long fasting. In some, the whole strength of the  
body readily becomes weak due to these things, whereas  
others immediately suffer impairment of the stomach, so  
that they turn away from food. And if they are compelled  
to take food, they either cannot retain it or don't digest it  
properly. In this part of the diagnosis, the *krasis* of the  
patient must also be considered. All those who happen to  
be hot and dry in nature are easily harmed by frequent  
purging. Furthermore, custom plays no small part regard-  
ing all the other things, and not least the indication for  
purging. For those who have not been purged before, or

terms transliterated here. Subsequently, I have rendered *syncope*  
"fainting"; see Galen's definition, *MM*, 12.5 (X.837K): "That syn-  
cope is an acute collapse of capacity has been stated by my pre-  
decessors"; Johnston and Horsley, *Galen: Method of Medicine*  
2.264-65. On *diaphoresis*, LSJ has three groups of meanings, the  
second of which includes, "evaporation," "dissipation," "perspira-  
tion" (which is the current medical meaning), "dispersion" (e.g.,  
*MM*, X.909K), and "discussion." I have taken the meaning here  
to be dissipation or dispersal of capacity or strength.

οὐτ' ἐκενώθησαν ἔμπροσθεν οὔτε πώποτε κένωσιν ἀθρόαν ὑπήνεγκαν, παμπόλλοις τε σιτίοις ἐχρῶντο, τινὲς δὲ ἔμπαλιν οὔτε πολλοῖς χρῶνται σιτίοις καὶ κενώσεων ἐθάδες εἰσί. τούτους μὲν οὖν ἀδεῶς κενώ-  
 46K ἔτερούς τοὺς ἀήθεις οὐδ' εἰ | τὰ ἄλλα σύμπαντα προ-  
 τρέποιτο.

κατὰ ταῦτά δὲ καὶ τὰς σχέσεις τοῦ σώματος χρῆ-  
 σκοπέεισθαι. τοῖς μὲν γὰρ πυκνὴν καὶ στερεὰν ἔχουσι  
 τὴν σάρκα δυσπαθῆς ἢ ἕξις. ὥστε οὐδὲν χρῆ δεδιέναι  
 κενοῦν αὐτοὺς εἰσάπαξ, ἣν γε καὶ τὰλλα κελεύη. τοῖς  
 δὲ μαλακὴν τε καὶ βρυῶδη καὶ διαρρέουσιν ἐτοίμως  
 εὐπαθῆς ἐστὶ δεινῶς. ὥστε τῶν γε τοιούτων οὐδ' εἰ  
 πάντα τὰλλα κελεύοι, τοῦ αἵματος ἀποχεῖν οὐδὲ τότε  
 τολμητέον, ἀλλὰ καὶ ταῖς ἄλλαις κενώσεσι καθ' ὅσον  
 οἶόν τε μετρίως τε καὶ εὐλαβῶς χρηστέον. ὁμοίως δὲ  
 καὶ ὅσοι παχεῖς ὑπερβαλλόντως ἢ ἰσχυροὶ, καὶ γὰρ  
 καὶ τούτων τὰς τε φλέβας τέμνειν φυλακτέον καὶ τὰς  
 ἄλλας κενώσεις τὰς ἀθρόας εὐλαβητέον. εἴη δ' ἂν ἐν  
 τούτοις καὶ ἡ ἡλικία, καθάπερ τι σύμπτωμα κωλυτι-  
 κὸν ἀθρόας κενώσεως· οὔτε γὰρ οἱ παῖδες οὔθ' οἱ  
 γέροντες ἀλύπως αὐτὰς φέρουσιν. πάντας οὖν τοὺς  
 εἰρημένους, ὅταν αἱ διαθέσεις κένωσιν ὑπαγορεύωσιν,  
 οὐχ ἅπαξ οὐδ' ἀθρόως, ἀλλὰ κατὰ βραχὺ κενώτεον,  
 ἀσιτίαις τε συμμέτροις (καὶ τρίψεσι)<sup>37</sup> καὶ κλύσμασι  
 μαλακοῖς, καταιονήσεσιν τε καὶ καταπλάσμασι καὶ  
 47K τῶν | προειρημένων λαμβάνοντας.

would not at any time tolerate a concentrated purging, require a great amount of food. Contrariwise, others aren't in need of much food and are accustomed to being purged. You must purge these patients with confidence whenever other factors also suggest it. The others who are unaccustomed to purging, not so, even if all the other factors urge  
 46K you to do so.

In relation to these matters you must also consider the habitus of the body. Thus the state in those who have dense and solid flesh is one that is not easily affected (*dyspathic*), so you must have no fear about purging them all at once, if other factors urge you to do so. However, in those in whom the flesh is soft, flabby and readily flowing, there is extreme ease of being affected (*eupathia*), so that in these people, even if all the other factors don't contraindicate it, you must not dare to withdraw blood at that time; instead you must use the other forms of evacuation as moderately and carefully as possible. Similarly too, with those who are excessively fat or thin, you must guard against cutting their veins, and you must also be wary of the other evacuations that are sudden. Also, their age would be like some symptom preventing sudden evacuation, for neither children nor the aged tolerate this without harm. Therefore, in respect of all the factors mentioned, whenever the conditions dictate evacuation, you must not evacuate all at once or suddenly, but gradually, using moderate fasting, [massage,] gentle clysters, fomentations, cataplasms and baths, taking the indication for each of these in turn from what has been previously men-  
 47K tioned.

<sup>37</sup> καὶ τρίψεσι *om.* D

οὕτως δὲ καὶ εἰ δύο ποτὲ συμπτώματα ἐναντία παρακολουθεῖν, σκέπτεσθαι χρὴ ὀπότερον αὐτῶν ἰσχυρότερόν ἐστιν. ὡσαύτως δὲ καὶ εἰ νοσήματα δύο περὶ τὸν αὐτὸν ἄνθρωπον εἴη, μαχομένας τὰς ἐνδείξεις ποιούμενα· καὶ γὰρ καί, τότε πρὸς τὸ κατεπεῖγον ἴστασθαι χρὴ, μηδὲ θατέρου παντάπασιν ἀμελοῦντας. τὰς δ' ἀπὸ τῶν συμπτωμάτων τε καὶ νοσημάτων ἐνδείξεις οὐχ ἀπλῶς, ἀλλὰ κατὰ τὴν ἐργαζομένην ἕκαστον αἰτίαν χρὴ σκοπεῖν, οἷον ἐστὶ ἡ λειποθυμία καὶ ἡ ἔκλυσις. εἰώθασιν γὰρ οἱ ἰατροὶ καθ' ἑνὸς πράγματος ἅμφω ταῦτα τὰ ὀνόματα φέρειν αὐτὸ μὲν οὖν τὸ πρᾶγμα ἔν ἐστιν, αἰτίαι δ' αὐτοῦ πολλαί. λειποθυμοῦσι γὰρ ἐπὶ τε χολέrais καὶ διαρροίais καὶ δυσεντερίais καὶ λυεντερίais καὶ γυναικείῳ ῥῶ καὶ τραύμασιν ἀγωγαῖς<sup>38</sup> αἵματος καὶ ταῖς διὰ ῥινῶν αἰμορραγίais καὶ λοχείais καθάρσεσιν ταῖς ἀμέτροis. ἤνεγκε δέ ποτε καὶ ἀπεψία μεγάλη λειποθυμίαν καὶ μάλισθ' ὅταν ἀμετρότερον ὑπαγάγε τὴν γαστέρα. καὶ ὁ βούλιμος δὲ καλούμενος οὐδὲν ἄλλο ἢ λειποθυμία ἐστὶ. καὶ ὑστερικῆς δὲ πνίξεως ἀπάσης λειποθυμία προηγείται· καὶ ταῖς ἀναδρομαῖς τῶν ὑστέρων ἔπεται καὶ ταῖς παρεγκλίσεσι δὲ καὶ ταῖς φλεγμοναῖς αὐτῶν

48K

48K

<sup>38</sup> post καί: τραύμασιν ἀγωγαῖς D; τραύμασιν, αἰμορροῖσι τε καὶ ἀναγωγαῖς K

<sup>22</sup> The following four terms are used on a number of occasions in this passage and earlier (see note 20 above on the first two): συγκοπή, διαφόρησις, λειποθυμία/λειποψυχία and ἔκλυσις.

In the same way too, if at any time two opposite symptoms should follow closely, you must consider which of the two of them is the stronger. Likewise, if there are two diseases involving the same person creating contending indications, you must, at that time, make a stand against the one that is urgent without altogether neglecting the other one. You must consider the indications not just from the symptoms and the diseases, but from the cause bringing each one about—for example, if there is swooning or collapse.<sup>22</sup> Doctors are accustomed to applying both these terms to the one matter. The matter itself is in fact one, whereas the causes of it are many. For people swoon in the following: choleras, diarrheas, dysenteries, leenteries, menstrual flows, wounds, hemorrhoids, hemoptyses, epistaxes and immoderate purging during childbirth. At times, apepsia that is severe enough has brought on swooning, and particularly whenever it draws the stomach down excessively. Also, what is called bulimia (ravenous hunger) is nothing other than swooning. Swooning also precedes all cases of hysterical choking. It also follows sudden pains, flexures, and often the inflammations of the uterus. However, it precedes apoplexies and *kakoethical*

They have been translated as “fainting,” “prostration,” “swooning,” and “collapse,” respectively. The first and third are presumably associated with transient loss of consciousness. *Stedman's Medical Dictionary* defines *syncope* (a term still of course in common use) as: “loss of consciousness due to reduced cerebral blood flow from various causes.” Lipothymia has a substantial entry in *The Oxford English Dictionary* (1933 edition) and is defined as “fainting, swooning, syncope.” See also Hippocrates, *Aphorisms*, 1.23 and 7.8.



πολλάκις ἀκολουθεῖ. προηγείται δ' ἀποπληξίας καὶ κακοήθους ἐπιληψίας καὶ διαφορήσεων καὶ συγκοπῶν καὶ μαρασμῶν. ἀλλὰ καὶ συνεισβάλλει καταβολαῖς πυρετῶν οὐκ ὀλίγαις καὶ μάλιστα ὅταν ἄκρως ἢ ξηρὸν καὶ αὐχμῶδες ἢ πληθωρικὸν ἀμέτρως τὸ σῶμα. καὶ καυσώδει καὶ κακοήθει πυρετῶ συνεισέβαλέ ποτε καὶ τοῖς μεγάλως καταψυχθείσι τὰ ἄκρα τοῦ σώματος ἐν ταῖς εἰσβολαῖς τῶν πυρετῶν καὶ ὅσοι διὰ μέγεθος φλεγμονῆς ἤπατος ἢ κοιλίας ἢ στομάχου πυρέττουσι, καὶ οὗτοι λειποθυμοῦσι ἔστιν ὅτε καὶ<sup>39</sup> κατὰ τὰς ἀρχὰς τῶν παροξυσμῶν μάλιστα δ' οἷς πλήθος χυμῶν ὤμων καὶ ἀπέπτων καὶ τις ἔμφραξις ἐπικαίρου μορίου. λειποθυμοῦσι δὲ καὶ ὅσοις τὸ στόμα τῆς γαστρὸς ἄρρωστον ἔχουσιν, ἢ ὑπὸ μοχθηρίων χυμῶν δάκνεται ἢ ὑπὸ παχέων καὶ γλίσχρων ὑγρῶν (ἢ ψυχρῶν)<sup>40</sup> βαρύνεται. καὶ μὲν δὴ καὶ ψυχικῶν παθῶν ἰσχυρῶς λειποθυμοῦσιν οἱ μᾶλλον δὲ πρεσβῦται πάσχουσιν αὐτὸ καὶ οἱ ἄλλως ἀσθενεῖς. καὶ γὰρ λυπηθέντες αὐτῶν πολλοὶ καὶ χαράντες καὶ θυμωθέντες ἐλειποθύμησαν.

ἀλλὰ καὶ νοτίδες ἔσθ' ὅτε μὴ κατὰ καιρὸν τοῖς οὕτως ἔχουσιν ἐπιφαινόμεναι λειποθυμίας ἐπιφέρουσιν, ὥσπερ καὶ τοῖς ἰσχυροτέροις ἰδρῶτες ἀμετροί,

<sup>39</sup> ἔστιν ὅτε καὶ *add.* D

<sup>40</sup> ἢ ψυχρῶν *om.* D

epilepsies,<sup>23</sup> and is an antecedent in the *diaphoreses*, *syncope*s and *marasmuses*. But it is also occurs at times along with quite a few attacks of fever and particularly whenever the body is extremely dry and parched, or excessively plethoric. At times it also appears together with a burning and *kakoethical* fever, and in those in whom the extremities of the body are greatly chilled in the attacks of fever. And those who are feverish due to severe inflammation of the liver, stomach or esophagus swoon sometimes at the beginnings of the paroxysms, and particularly those with an abundance of crude and uncocted humors and some obstruction of an important part. People also swoon in whom the opening of the stomach is weak because of either the biting of abnormal humors, or by being weighed down by humors which are thick, viscid and moist. Furthermore, some swoon due to the strength of the psychic affections. Old people particularly suffer this, as do those who are otherwise weak. Many of them have swooned when grieving, overjoyed or crying, rejoicing or

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angry. But sometimes also untimely sweating appears suddenly in those affected in this way, and brings swooning as well, just as also, in those who are stronger, there are

<sup>23</sup> Stephanus comments here on epilepsy: "In turn, epilepsy is a convulsion of the entire body accompanied by injury to the ruling activities, though the damage is not total. However, there is a malignant form of this when it occurs continuously, such that patients with it stand up and fall down, with the result that the faculty breaks and the affliction of swooning (*leipothumia*) occurs." See Dickson, *Stephanus the Philosopher*, 209: I have substituted "swooning" for "fainting" in his translation.

καὶ εἰ ἀποστήματα ῥαγείη, τῷ μὴ πάνυ<sup>41</sup> τὴν δύναμιν ἰσχυρῶ, καὶ μάλιστα εἰ ῥαγὲν ἀθρόως εἰς κοιλίαν ἢ εἰς στομάχον ἢ εἰς θώρακα συρρέοι. καὶ ἡμεῖς αὐτοὶ τέμνοντες ἀποστήματα εἰ τὸ πῦον ἀθρόως ἐκενώσομεν, ἀνάγκη λειποθυμῆσαι· καὶ εἰ καθαίροντες ἢ κλύζοντες ἢ ὀπωσοῦν κενοῦντες, ἀθροώτερον αὐτὸ δράσομεν, οὐδὲ γὰρ τὸ ἐν τοῖς ὑδέροις ὑγρὸν καὶ τοι περιττὸν ὄν καὶ παρὰ φύσιν ἀλύτως ἀνέχεται τὴν ἀθρόαν κένωσιν, ἀλλ' ἀνάγκη καὶ τότε λειποθυμῆσαι τὸν ἄνθρωπον. ἀλλὰ καὶ διὰ μέγεθος ὀδύνης ἐκλύσεις γίνονται δῆξέων τινων ἢ στρόφων ἢ εἰλεῶν ἢ κωλικῆς διαθέσεως ἐξαίφνης ἐμπεσοῦσης. ἀλλὰ καὶ νεῦρον τραθὲν καὶ μνὸς κεφαλῆ λειποθυμίαν ἤνεγκε καὶ τὰ ἐν τοῖς ἄρθροις ἔλκη τὰ κακοήθη καὶ τὰ γαγγραινώδη καὶ νομώδη συμπτώματα<sup>42</sup> καὶ τις ἄμετρος ψύξις ἢ θερμασία καὶ ἢ τοῦ ζωτικῆς τόνου λύσις. αὐτὰ μὲν αἰ τῆς λειποθυμίας αἰτίαι.

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καθ' ἐκάστην δὲ αὐτῶν ἴδιος θεραπεία, καὶ γράψαι νῦν ὑπὲρ πασῶν οὐκ ἐγχωρεῖ. τὰς γὰρ ἐν τοῖς πάθεσι συνεδρευούσας οὐχ οἶόν τε χωρὶς ἐκείνων ἰάσασθαι. τοσοῦτον οὖν ἐν τῷ παρόντι λόγῳ περὶ αὐτῶν ἐροῦμεν, ὅσον ἂν τις μαθὼν ἰκανὸς εἴη τοῖς ἐξαίφνης ἐμπίπτουσιν ἐνίστασθαι παροξυσμοῖς. οἶον τι τοῖς ἐπὶ χολέραις καὶ διαρροαῖς καὶ ταῖς ἄλλαις ταῖς πολλαῖς καὶ ἀθρόαις κενώσεσιν ἐκλυομένοις (ῥῶδρ τε

<sup>41</sup> τῷ μὴ πάνυ D; βλάπτει K

<sup>42</sup> συμπτώματα D; σύμπαντα K

excessive sweats. And if some abscess should burst, this strongly injures the capacity, particularly if, having burst, the contents flow suddenly to the stomach, esophagus or chest. And when we ourselves incise abscesses, if we evacuate the pus all at once, invariably there is swooning. Moreover, we shall do the same if we purify, administer clysters, or purge in any other way whatsoever, doing this in a quite concentrated fashion. Nor is it possible in the dropsies to tolerate sudden evacuation of the fluid without harm, even though it is excessive and unnatural. Inevitably the person also swoons at that time. But also, due to severe pain, collapse occurs when certain bitings and twistings, or ileus, or a colicky condition suddenly befalls the patient. But also wounding of a nerve and the head of a muscle have brought on swooning, as have *kakoethical* wounds/ulcers<sup>24</sup> in the joints, all gangrenes and spreading ulcers, some immoderate cooling or heating, and a release of vital tone. These are the causes of *leipothymia* (swooning).

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Treatment is specific to each of these [afflictions] and it is not possible to write about them all now. It is, however, impossible to cure the accompanying symptoms in the affections without curing the affections themselves. I shall, therefore, say as much about them in the present discussion as would be sufficient for someone learning to adequately counteract the paroxysms that attack suddenly. For example, sprinkle cold water on those collapsing from

<sup>24</sup> The usual (e.g., LSJ) translation of *kakoethical* as "malignant" is avoided here as elsewhere because of its current specific meaning in relation to ulcers. It is retained transliterated as a technical term.

ψυχρὸν προσραίνειν καὶ τοὺς μυκτῆρας ἐπιλαμβάνειν)<sup>43</sup> καὶ ἀνατρίβειν τὸ στόμα τῆς γαστρὸς καὶ κελύειν ἐμὲν ἢ σπαράττειν τὸν στόμαχον ἤτοι δακτύλων ἢ πτερῶν καθέσειν· ἀλλὰ καὶ χεῖρας καὶ σκέλη (καὶ πόδας)<sup>44</sup> διαδεῖν· εἶναι δὲ χρῆ καὶ τοὺς δεσμοὺς πλείονας μὲν καὶ σφοδρότερους ἐν ταῖς χερσίν, ὅταν διὰ τῶν κάτω μερῶν αἱ κενώσεις γίνωνται, καθάπερ ἐν ταῖς αἰμορροῖσι καὶ διαρροαῖσι ὅσα τε διὰ ὑστερῶν αἱ γυναῖκες κενοῦνται. τὸ γὰρ τὰ σκέλη τημικαῦτα διαδεῖν σφοδρῶς ἐπισπάται τι κάτω πολλακίς. ἔμπαιλον δ' ἐν ταῖς διὰ ῥινῶν αἰμορραγίαις καὶ τοῖς ἐμέτοις οἱ δεσμοὶ πλείονες καὶ σφοδρότεροι κατὰ τὰ σκέλη γιγνέσθωσαν. | καὶ μὲν δὴ καὶ ὅσοι ἐπὶ τράμασι αἰμορραγοῦσιν, ὡσαύτως ἄνω μὲν ἐπὶ τοῖς κάτω κάτω δ' ἐπὶ τοῖς ἄνω τὰ δεσμὰ ἐπιβάλλειν. ἐξευρίσκειν δέ τι καὶ ἀνάρροπον σχῆμα τῷ μέρει, μὴ μέντοι πᾶν σφόδρα· τεινόμενον γὰρ ἐν τῷδε καὶ πονοῦν οὐδὲν ἦττον ἢ εἰ κατάρροπον ἦν παροξύνεται. τὸ δὲ σύμπαν ἀντισπᾶν ἢ ἐπὶ τὰ κοινὰ τοῖς πεπονθόσι ἢ ἐπὶ τὰ τῆς κενώσεως κατάρξαντα· διὰ τοῦτο τὰς μὲν ἐκ τῶν ὑστερῶν ἀθρόας κενώσεις αἱ παρὰ τοὺς τιτθοὺς παραβαλλόμεναι σικύαι τάχιστα παύουσι· τὰς δὲ διὰ τῶν ῥινῶν ἤπατί τε καὶ σπληνὶ κατὰ τὴν

<sup>43</sup> ὕδωρ τε ψυχρὸν προσραίνειν καὶ τοὺς μυκτῆρας ἐπιλαμβάνειν *om.* D <sup>44</sup> καὶ πόδας *om.* D

<sup>25</sup> The measures added in the Kühn text are "sprinkling with cold water" and "squeezing the nostrils."

cholera, diarrhea and the many other sudden evacuations, squeeze the nostrils, massage the opening of the stomach, and direct the patient to vomit, or provoke the esophagus by passing down either fingers or feathers.<sup>25</sup> But also bind the arms, legs and feet;<sup>26</sup> the bindings must be many and quite strong in the arms, whenever the evacuations occur through to the parts below, as in hemorrhoids and those diarrheas which occur when women evacuate the uterus. Under these circumstances, binding the legs strongly often draws something downward. Conversely, in the hemorrhages from the nostrils (epistaxes) and vomiting, the bindings should be many and stronger in the legs. Furthermore, in those hemorrhages from wounds, similarly place the bindings around the parts below when the hemorrhage is from the parts above, and around the parts above when the hemorrhage is from the parts below. Also try to find some upwardly inclined form for the part, but not too much, for then, if it is bound tight to the point of causing distress to the patient, it will irritate no less than if it were downwardly inclined. In general, create revulsion<sup>27</sup> to the parts common to those affected, or from which the evacuation originates. Because of this, cupping glasses applied beside the breasts very quickly put an end to the concentrated evacuations from the uterus. In respect of hemorrhages from the nostrils, apply the cupping glass to the liver or spleen, depending on which nostril is

51K

<sup>26</sup> It is variable what should be bound: arms, legs, and feet (Kühn); arms and legs (Dickson); hands and feet (Leoniceno); arms, legs, and feet (Daremborg).

<sup>27</sup> For a brief description of the techniques of revulsion and diversion, see Galen, *MM*, 5.3 (X.315–316K); Johnston and Horsley, *Galen: Method of Medicine*, 2.14–19.

αἰμορραγοῦσαν ῥίνα, καὶ εἰ δι' ἀμφοτέρων ἀθρόου καὶ πολὺ φέροιο, τοῖς σπλάγγχοις ἀμφοτέροις προσβάλλειν. ἰᾶται δὲ καὶ οἶνος ὕδατι ψυχρῷ κεκραμένος τὰς ἐπὶ ταῖς ἀθρόαις κενώσεσιν ἐκλύσεις καὶ μάλιστα τῶν εἰς τὴν γαστέρα ῥεπόντων ῥευμάτων. ἐπισκοπεῖσθαι δὲ μὴ τι κωλύῃ τὴν τοιαύτην δόσιν, οἷον εἰ σπλάγγχον τι φλεγμαῖνον ἢ κεφαλῆς ἄλγημα σφοδρότερον ἢ παρακρουστικόν πάθος ἢ πυρετὸς καυσώδης ἐν ἀπέπτῳ νοσήματι.

52K      μεγάλαι | γὰρ ἐν τοῖς τοιούτοις καὶ σχεδὸν ἀνίατοι ταῖς τῶν οἴνων πόσεσιν ἔπονται βλάβαι. μηδενὸς δὲ κωλύοντος, ἐφεξῆς (δεῖ)<sup>45</sup> διορίζεσθαι τοῦ νοσοῦντος τὴν φύσιν καὶ τὸ ἔθος καὶ τὴν ἡλικίαν καὶ τὴν τοῦ περιέχοντος ἀέρος κράσιν· εἰς ταῦτα γὰρ ἀποβλέπων ἢ θερμὸν ἢ ψυχρὸν δώσεις τὸ πόμα. τοὺς μὲν γὰρ ἀήθεις ψυχροῦ πόματος ἢ καὶ φανερώς βλαπτομένους ὑπ' αὐτοῦ καὶ ὅσοι φύσει ψυχρότεροι καὶ τοὺς ἐν ἐσχάτῳ γῆρα ἢ καὶ χωρῖω ψυχροτέρῳ φύσει ἢ καὶ χειμῶνι εἶργειν τοῦ ψυχροῦ. τοῖς δ' ἐναντίως ἔχουσιν ἀδεῶς διδόναι (πίνειν).<sup>46</sup> ἔστω δὲ καὶ οἶνος ἐπὶ μὲν τοῖς εἰς τὴν γαστέρα ῥεύμασι λεπτός τε καὶ θερμός, οἶος ὁ Λέσβιος. ἐπὶ δὲ ταῖς αἰμορραγίαις παχύς τε καὶ μέλας καὶ στρυφνός. ἐπὶ δὲ τοὺς τόπους αὐτοὺς ἐπιτιθέναι, γαστρί μὲν καὶ μήτρα καὶ στομάχῳ καὶ θώρακι τὰ τονοῦν πεφυκότα. κεφαλῇ δὲ καὶ μετώπῳ καὶ ταῦτα καὶ τὰ ψύχοντα. καὶ ἐφ' ὧν ἐπιπολῆς καὶ κατὰ τοὺς μυκτῆρας φλεβῶν εἴη τις ἔρρωγυῖα, τῶν ἐπεχόντων τὸ αἷμα φαρμάκων ἐπιτιθέναι. λουτρὰ δὲ

involved, but if the hemorrhage is continuous and copious, apply cupping glasses to both organs. Wine mixed with cold water cures the collapses due to concentrated evacuations, and particularly when the fluxes incline toward the stomach. Consider whether something prevents such an administration—for example, if there is some inflamed internal organ (viscus), quite severe head pain, some delusional affection, or a burning fever in an unconcocted disease.

Very severe harm, almost incurable, follows drinks of wine in such cases. If, however, nothing contraindicates it, you next need to determine the nature of the patient, his habits and age, and the *krasis* of the surrounding air. By directing attention to these factors, you will give either a hot or cold drink. Now in those unaccustomed to cold drink or who are clearly harmed by this, those who are colder by nature, those at the extreme of age, and those in a naturally cold place, or also during the winter, avoid cold drink. To all those whose state is the opposite, give cold water to drink freely. And in fluxes to the stomach, the wine should be warm and thin, like that of Lesbium, but in the case of hemorrhages, it should be thick, dark and sour. Apply to the places themselves—to the stomach, uterus, esophagus and chest—those things that naturally strengthen. To the head and face apply both these and those things that are cooling. And if on the surface of these or in the nostrils, there is some rupture of veins, apply the blood-staunching medications. Baths are very suitable

<sup>45</sup> δεῖ om. D

<sup>46</sup> διδόναι D; πίνειν K

53K τοῖς μὲν εἰς τὴν γαστέρα ρεύμασιν ἐπιτηδειότατα. | τὰς δ' αἰμορραγίας δεινῶς παροξύνει. καὶ ὅσοι διὰ πλήθος ἰδρώτος λειποθυμοῦσι, καὶ τούτοις ἐναντιώτατον, χρῆ γὰρ αὐτοῦ στύφειν τε καὶ ψύχειν, οὐ χαλᾶν τὸ δέρμα. καὶ τὸν οἶνον ψυχρὸν μάλιστα προσφέρειν τούτοις καὶ μηδὲν ὄλως προσφέρειν θερμόν. ἀλλὰ μηδὲ διαδεῖν τὰ κῶλα, μηδὲ ἀναγκάζειν ἐμῆν, μηδὲ κινεῖν ὄλως. καὶ πνευμάτων ψυχόντων εἰσόδους ἐπιτεχνᾶσθαι καὶ τὸν ἀέρα τοῦ οἴκου τρέπειν εἰς ψύχουσαν τε καὶ στρυφνὴν ποιότητα, μυρσίνης τε καὶ ἀμπέλων ἔλιξι καὶ ῥόδοις καταστρωννύντα τὸ ἔδαφος· τούτων οὐδὲν χρήσιμον τοῖς εἰς τὴν γαστέρα ρεύμασιν, αὐξεται γὰρ εἰς ὅσον ἂν πυκνώσει τὸ δέρμα. τοῖς μὲν οὖν ἐπὶ ταῖς κενώσεσιν ἐκκλυμένοις οὕτω βοηθεῖν ἔν τῷ παραχρήμα.

54K τοῖς δ' ἐπὶ πλήθει οὐκ ἔσθ' ὁμοίως, ἀλλὰ τρίβειν ἐπὶ πλείστον ἐκείνων τὰ κῶλα καὶ θερμαίνειν καὶ διαδεῖν. οἴνου δὲ καὶ τροφῆς ἀπέχειν καὶ λουτρῶν, εἰ πυρέττοιεν· ἀρκεῖ δ' αὐτοῖς μελικράτου τε διδόναί πομα ἢ θύμου ἢ ὀριγάνου ἢ γλήχωνος ἢ ὑσσώπου ἔχοντος ἐναφειημένον. ἐπιτήδειον δὲ καὶ | ὀξύμελι. καὶ τὰς ὑστέρας δὲ πεπονθυίας ἐκκλυμένας ὡσαύτως ἰᾶσθαι, πλὴν ὀξυμέλιτος, καὶ διαδεῖν καὶ τρίβειν σκέλη μᾶλλον ἢ χεῖρας. καὶ ὥσπερ ἐπ' ἐκκρίσει πολλῇ παρὰ τοὺς τιθθοὺς σικύας ἐπιτίθεμεν, οὕτως αἷς ἀνέσπασται (καὶ παρέσπασται),<sup>47</sup> βουβῶσί τε καὶ μηροῖς προσάξομεν. καὶ ταῖς μὲν ῥίσιν ὀσφραντὰ

53K for fluxes to the stomach, but they exacerbate the hemorrhages severely. With those who swoon due to excessive sweating, and are the complete opposite of these, you must contract and cool their skin and not relax it. Particularly give them wine that is cold and administer nothing at all that is warm. But don't bind the limbs, compel vomiting, or move them at all. Also create entrances for cold winds to turn the air of the house toward a cold and astringent quality, strewing the ground with myrtle, vine tendrils and roses. None of these is useful for the fluxes to the stomach; these increase to the degree that the skin is thickened. This, then, is how you provide immediate help for those who collapse due to evacuations.

54K However, in those who faint due to abundance, it is not the same. Massage them a lot, and heat and bind their limbs. And if they are febrile, keep them away from wine, food and baths. It is enough to give them melikraton and a drink having thyme, oregano, pennyroyal or hyssop boiled down in it. Useful also is oxymel. Cure those who collapse due to uterine affections in the same way apart from oxymel. Also bind and massage the legs more than the arms. And just as in the case of a large discharge, I apply a cupping glass beside the breasts, as I shall do to the groins and thighs in those in whom the uterus is drawn back or to the side, and add very malodorous scents to the

<sup>47</sup> καὶ παρέσπασται om. D

δυσωδέστατα, ταῖς δὲ μήτραις εὐώδη. καὶ τὰ χαλᾶν  
καὶ θερμαίνειν δυνάμενα φάρμακα προσοίσωμεν. εἰ δ'  
ἄρρωστος ὁ στόμαχος εἶη καὶ ταύτη λειποθυμοίεν,  
ἐπιπλάττειν μὲν τοῖς τουοῦν δυναμένους, οἷα τὰ τε διὰ  
τῶν φοινίκων ἐστὶ καὶ οἶνον καὶ ἀλφίτων καὶ κρόκου  
καὶ ἀλόης καὶ μαστίχης· ἐπιβρέχειν δὲ τοῖς δι' ἀψιν-  
θίου καὶ μηλίνου καὶ μαστιχίνου καὶ νάρδου καὶ οἰάν-  
θης καὶ οἶνου. καὶ εἰ καίτοι, μινύν τι καὶ τῶν ψυ-  
χόντων, οἶον τῆς τε κολοκύνθης τὸν χυλὸν καὶ τῆς  
θριδακίνης καὶ τῆς ἀνδράχνης καὶ τοῦ στρύχνου καὶ  
τῆς σέρεως καὶ τοῦ ὄμφακος. οὗτος μὲν γε οὐ ψύχει  
μόνον, ἀλλὰ καὶ στύφει. καὶ ψυχρὸν ὕδωρ τοῖς δια-  
καιομένοις τὸν στόμαχον ὤνησε πολλάκις ἐν καιρῷ  
δοθέν, ἄλλως δὲ μεγάλως βλάπτει. καὶ χρῆ μᾶλλον  
55K οἶνον θερμῷ | διδόναι τοῖς ἀρρώστοις τὸν στόμαχον,  
εἰ μηδὲν ἄλλο κωλύει· ὀνύνησι δὲ μεγάλως τοὺς τοι-  
ούτους στομάχους καὶ ἢ τῶν ἀκρωτηρίων τρίψις. εἰ δ'  
ἐπὶ τούτοις βελτίους μὴ γένοιτο, τοὺς μὲν ἐγκαιομέ-  
νους εἰς λουτρὸν ἄγειν τὴν ταχίστην.

ὅσοι δὲ ψύξεώς τινος αἰσθησιν ἔχουσι, τοῦ τε διὰ  
τριῶν πεπέρεων φαρμάκου καὶ αὐτοῦ τοῦ πεπέρεως  
μόνου καὶ ἀψινθίου πινόντων. ὅσοι δὲ μοχθηρῶν χυ-  
μῶν δακνόντων τὸ στόμα τῆς γαστρὸς ἐκλύονται, δι-  
δοὺς ὕδωρ θερμὸν ἢ ὑδρέλαιον ἐμείν κελεύειν. εἰ δὲ  
δυσσεμῆς εἶεν, θάλπειν χρῆ πρότερον αὐτὰ τε τὰ περι

nose but fragrant ones to the uterus.<sup>28</sup> And I shall admin-  
ister medications that are able to relax and heat. If the  
esophagus is weak and they swoon because of this, apply  
plasters that are able to strengthen, like those made from  
the date palm, and wine, barley groats, saffron, aloes and  
mastich, and pour onto them absinthe, a preparation of  
quinces, mastich, spikenard, inflorescence of grapevine  
and wine. If there is burning, mix also something that  
is cooling, like the juice of colocynth, lettuce, purslane,  
nightshade, endive and unripe grapes. This in fact not only  
cools but also constricts. Also cold water given at the right  
time often benefits those burning in the esophagus, but  
otherwise it harms greatly. And it is more necessary to give  
warm wine to those who are sick in the esophagus, if noth-  
ing else contraindicates it. Also massage of the extremities  
greatly benefits such esophagi. If after these measures,  
they don't become better, bring those who are burning to  
the bath as quickly as possible.

55K

However, give those who have a perception of being  
cold the medication made from three peppers, or from  
pepper itself alone, and absinth to drink. In the case of  
those who collapse when the gastric orifice is bitten by bad  
humors, after giving warm water or water mixed with oil,  
direct them to vomit. If they are hard to make vomit, it is  
necessary to first warm the area around the esophagus and

<sup>28</sup> As Dickson, in *Stephanus the Philosopher*, observes at 235n41, the idea of the uterus as "autonomous, sentient, appetitive being" is notably expressed in Plato; see Taylor, *Commentary on Plato's Timaeus*, 637–40. Stephanus gives detailed consideration to the mechanism whereby odors/fragrances can affect this organ; see Dickson, *Stephanus the Philosopher*, 235–37.

τὸν στόμαχον χωρία καὶ πόδας καὶ χεῖρας. εἰ δὲ μηδ' οὕτως δύνανται, δακτύλους ἢ πτερὰ καθιέντας ἐρεθίζειν. εἰ δὲ μηδ' οὕτως δύνανται, αἰθίς αὐτοῖς ἔλαιον θερμὸν ὅτι κάλλιστον δοτέον. εἴωθε δὲ πολλακίς τὸ ἔλαιον οὐκ εἰς ἔμετον μόνον ὀρμᾶν, ἀλλὰ καὶ τὴν γαστέρα μαλάττειν· ἔστι δὲ καὶ τοῦτο οὐ μικρὸν ἀγαθὸν τοῖς παροῦσιν. ὥστε εἰ μὴ γένοιτο αὐτόματον, ἐπιτεχνᾶσθαι χρὴ τοῦτο· μάλιστα δὲ τοῖς προσθέτοις βαλάνοις τοῦτο<sup>48</sup> πειρᾶσθαι δρᾶν· εἰ δὲ ῥᾶον ἐπὶ τοῖσδε γένοιτο, καὶ ἀψινθίου | κόμην ἐναφεψώματι μελικράτῳ διδόναί πίνειν καὶ οἶνον ἐφεξῆς· καὶ παντοίως ῥωννύναι τὰ μόρια διὰ τε τῶν ἔξωθεν ἐπιτιθεμένων φαρμάκων καὶ τοῦ ἀψινθίου ταῖς πόσεσιν.

56K οὐ μὴν κατ' ἀρχὰς κελεύω σε τοῦτο ποιεῖν οὕτως, ἀλλ' ὕστερον, ἤνικα ἂν ἤδη καθαρὰ τὰ περὶ τὴν κοιλίαν ἢ περιεχομένων δ' ἔτι τῶν χυμῶν ἐν αὐτῇ μηδέπω στύφειν, ἀλλ' ἀρκεῖ θάλπειν μόνον, ὡς ἔμπροσθεν εἴρηται. φλέγματος δὲ πολλοῦ καὶ ψυχροῦ κατὰ τὸ στόμα τῆς γαστρὸς ἠθροισμένου, καταντλεῖν μὲν ἐπὶ πλείστον, ἐλαίῳ συνέψων ἀψίνθιον· ἐφεξῆς δὲ τοῦ μελικράτου διδόναί ἢ ὑσώπου ἢ τι τῶν ὁμοίων ἀποβρέχων ὄξυμέλιτός τε καὶ πεπέρεως καὶ τοῦ διὰ τριῶν πεπέρεων καὶ τοῦ διοςπολιτικοῦ φαρμάκου. καὶ τὸ σὺμπαν σοὶ τῆς διαίτης κεφάλαιον τμητικώτερον ἔστω. τὰς δ' ἐπὶ ταῖς ἰσχυραῖς ψύξεσιν ἐκλύσεις ὁμοίως τοῖς βουλίμοις ἰᾶσθαι, παντὶ τρόπῳ θερμαί-

<sup>48</sup> βαλάνοις τοῦτο D; αὐτὸ K

also the feet and hands. However, if they are still not able to vomit, provoke them by inserting feathers or fingers. If they are still unable to vomit, you must again give them warm olive oil of the best quality. It is usual for olive oil not only to often provoke vomiting but also to soften the stomach, and this is of no small benefit in the prevailing circumstances. As a consequence, if this does not occur spontaneously, you must contrive it. In particular, attempt to do this with the additional things applied.<sup>29</sup> If it becomes easier after these, also give them leaves of absinth 56K boiled down in melikraton to drink, and next, wine; and strengthen the parts in various ways with externally applied medications and drinks of absinth.

I do not, however, direct you to do this at the beginning, but only later, when the parts in the abdomen are already purged. If there are still juices contained in it, don't constrict it; rather, it is sufficient just to warm it, as I said before. But if a large amount of cold phlegm has collected at the opening of the stomach, irrigate to the greatest extent with oil in which absinth is boiled down. Next give melikraton in which hyssop, or something of this sort, is soaked, and oxymel, pepper, or the three peppers and the *diospoliticum* medication. The chief overall aim of your diet should be greater cutting. Cure those who collapse due to severe cold in a similar manner to those who are bulimic (with ravenous hunger), heating them in

<sup>29</sup> Stephanus writes: "By 'applications' are meant the suppositories that doctors use, and which can cause moderate irritation." See Dickson, *Stephanus the Philosopher*, 241.

νοντα. τόν τε οὖν οἶνον αὐτοῖς διδόναι θερμῶ κε-  
 κραμένον καὶ τροφὰς τὰς θερμαίνειν πεφυκίας, ἀνα-  
 τρίβειν τε καὶ θάλπειν παρὰ πυρί. τὰς δ' ἐπὶ θερμασίᾳ  
 57K πλείονι γινομένας λειποθυμίας τοῖς ἐμφύχειν τε καὶ  
 τοιοῦν δυναμένοις. ἐμπίπτουσι | γὰρ αὐταὶ μάλιστα  
 τοῖς ἀέρι πιγιάδει καὶ βαλανεΐῳ χρονίσασι. ῥώσεις  
 οὖν αὐτοὺς ἐν τῷ παραχρήμα τότε ψυχρὸν ὕδωρ  
 προσραίνων καὶ ῥαντίζων ἢ<sup>49</sup> καὶ ῥιπίζων καὶ πρὸς  
 ἄνεμον τρέπων καὶ τρίβων τὸ στόμα τῆς κοιλίας καὶ  
 σπαράττων· ἐφεξῆς δὲ καὶ οἶνον διδοὺς καὶ τροφάς.  
 τοὺς δὲ διὰ μέγεθος φλεγμονῆς ἢ διὰ κακοῦθειαν  
 σφοδρῶν πυρετῶν λειποθυμοῦντας ἐν ταῖς εἰσβολαῖς  
 καὶ καταψυχομένους τὰ κῶλα τρίβων ἰσχυρῶς καὶ  
 θάλπων καὶ διαδεσμῶν σκέλη τε καὶ χεῖρας, ἐργη-  
 γορέναι τε κελεύων καὶ σιτίου δὲ παντὸς ἀπέχεσθαι  
 καὶ πόματος. ἄριστον δὲ ἐπὶ τούτων προγνῶναι τὸ  
 μέλλον ἔσεσθαι καὶ φθάνειν αὐτὰ πράξαντα πρὸ τοῦ  
 παροξυσμοῦ. καὶ τοὺς διὰ ξηρότητα δὲ συγκοπτομέ-  
 νους ἐν ταῖς τῶν παροξυσμῶν ἀρχαῖς ἄριστον προγι-  
 νώσκειν. εἰ γὰρ ὥραις πού δύο ἢ τρισὶν ἔμπροσθεν  
 τοῦ παροξυσμοῦ θρέψαις, διακρατεῖσθαι τε χεῖρας  
 καὶ πόδας κελεύσειας, οὐκ ἂν ἀπῄλλοιτο. εἶναι δὲ  
 χρῆ τὰς τροφὰς εὐπέπτους τε καὶ εὐστομάχους. εἰ δὲ  
 καὶ σφοδρὸν τὸν κίνδυνον ὑπονοεῖς ἔσεσθαι, φθάνειν  
 οἶνον διδόναι μᾶλλον δ' εἰς χόνδρον ἐφθὸν τὸν οἶνον  
 ἐπιχέας προσφέρειν. εἰ δὲ καὶ ἄρτον ἀντὶ χόνδρου  
 δοίης, ἴσον δύναται. |

58K μετρίας δὲ τῆς συγκοπῆς προσδοκωμένης οὐδ' οἶ-

every way. Therefore give them wine mixed with warm  
 water and nutriments that are heating by nature, massage  
 them, and warm them by the fire. Cure those who swoon  
 due to severe heat with those things that cool and are able  
 to restore vigor. These swoons particularly befall those  
 who spend a long time in stifling air and in the bathhouse.  
 57K Restore strength in them immediately at that time by  
 sprinkling them with cold water, fanning them, turning  
 them toward the wind, and massaging and provoking the  
 opening of the stomach to retch. Next also give wine and  
 nutriments. In the case of those swooning in the acces-  
 sions due to the magnitude of the inflammation or also the  
*kakoethicity* (malignancy) of severe fevers and those who  
 are chilled, massage the limbs strongly, heat and bind the  
 legs and arms, direct them to stay awake, and keep them  
 away from all food and drink. It is best in these cases to  
 anticipate what is going to happen, doing these things be-  
 forehand, prior to the paroxysm. It is also best to recognize  
 beforehand those who due to dryness will faint in the  
 beginnings of the paroxysms, for if you were to nourish  
 them to some degree two or three hours before the par-  
 oxysm, and order their hands and feet to be restrained,  
 they would not die. It is necessary for the nutriments to  
 be easily concocted and good for the stomach. If, however,  
 you also suspect the danger will be severe, give wine be-  
 forehand, and particularly that which is boiled and poured  
 over groats. If, however, you give bread instead of gruel,  
 it can be equally effective.

When you expect a moderate faint, there is no need 58K

<sup>49</sup> *add.* καὶ ῥαντίζων ἢ D



νου δέ, ἀλλ' ἀρκεί τῆνικαῦτα ροιῶν ἢ ἀπίων ἢ μήλων ἢ τινοσ ἀλλῆσ ὀπώρασ στρυφούσῃσ ταῖσ τροφαῖσ μιγνύναι. καὶ εἰ ἐπὶ τοῖσδε μετρίωσ τὸν παροξυσμὸν ἐνέγκοιεν, αἰθῆσ τρέφοντασ οὐκ ἀναγκαῖον ὀπώραισ χρῆσθαι. ταῦτα μὲν δὴ πράττειν, εἰ προγνοῖῃσ τὸ μέλλον ἔσασθαι. τοῖσ δ' ἐξαίφῃσ εἰσ τὸν κίνδυνον ἐμπεσοῦσιν<sup>50</sup> οἶνου τε διδόναι θερμοῦ καὶ ἄρτου καὶ χόνδρου σὺν αὐτῷ θερμοῦ παντελῶσ ὀλίγον. εἰ γὰρ πλείω δοῖῃσ ἢ δυσπεπτότερα σιτία τοῖσ οὕτωσ ἔχουσιν, οὐ συγκοπῆσονται μόνον, ἀλλὰ καὶ πνιγῆσονται. τοῖσ δὲ δι' ἐμφραξιν ἐπικαίρου μορίου λειποθυμοῦσιν ὀξύμελί τε διδόναι καὶ τὸ δι' ὑσώπου καὶ ὀριγάνου καὶ γλήχωνοσ καὶ μέλιτοσ πόμα· καὶ τροφὰσ τοῦ τμητικωτέρου τρόπου. τὰ γὰρ παχέα καὶ γλίσχροα μεγάλασ ἐν τοῖσ τοιοῦτοῖσ ἐργάζεται βλάβασ. ἀλλὰ καὶ τὰ κῶλα τρίβειν τε καὶ διαδεῖν οὐδὲν χεῖρον. ἀγαθὸν δὲ καὶ τοῖσ οὔρα κενούσιν χρῆσθαι πόμασιν, οἷα τὰ τε δι' ἀνήθου καὶ μαράθρου καὶ σελίνου καὶ πετροσελί-  
59K νου καὶ ἄμμοσ καὶ δαύκου καὶ ναρδοστάχνοσ<sup>51</sup> ἐφ' οἷσ φανεράσ ἤδη τῆσ ὀφελείασ οὔσῃσ οἶνω χρῆσθαι λευκῷ καὶ λεπτῷ μὴ πάνν παλαιῷ.

γνωριούμεν δὲ τὰσ τοιαύτασ ἐμφράξεισ ταῖσ τε ἀλλοίωσ ἀνωμαλίωσ τῶν σφνυγμῶν καὶ μάλιστα ὅσαι κατὰ μέγεθὸσ τε καὶ μικρότητα καὶ σφοδρότητα καὶ ἀμυδροτότητα γίνονται, μὴ παρούσῃσ τῆσ καλουμένησ πληθωρικῆσ συνδρομῆσ, εἰσὶ γὰρ κἀκείνῃσ κοιναί.

<sup>50</sup> ἐμπεσοῦσιν D; ἐμπύπτουσιν K

for wine; it is sufficient under these circumstances to mix pomegranates, pears or apples, or one of the other astringent fruits with the nutriment. And if, after these things, they tolerate the paroxysm moderately, when you nourish them again, it is not essential to use fruits. Do these things if you know beforehand what is going to happen. However, to those who suddenly fall into danger, give warm wine, and with this a very small quantity of bread and warm gruel. For if you give them more, or the food is more difficult for them to digest in this way, not only will they suffer syncope but they will also choke. To those who swoon due to obstruction of an important part, give oxymel and the drink made from hyssop, oregano, pennyroyal and honey, and nutriment of the more cutting kind, for things that are thick and viscid bring about great harm in such cases. But also it is not bad to massage the limbs and bind them. It is also good to use drinks that purge through urination, like those made from dill, fennel, parsley, celery, ammi, wild carrot and spikenard.<sup>30</sup> When the benefit from these is already apparent, use white wine that is thin and not very old.

59K

We will recognize such obstructions through the other irregularities of the pulse, and particularly those that are related to large and small, and strong and weak, if the so-called plethoric syndrome is not present, for they are also

<sup>30</sup> For ammi, see Pliny, *Natural History*, 10.163, and Dioscorides, 3.70.

<sup>51</sup> The order of the six medications listed here follows K. The order in D is slightly different.

γίνονται δὲ καὶ διαλείποντες ἐπὶ ταῖς μεγάλαις τῶν τοιούτων διαθέσεων οἱ σφυγμοί. ταῦτα μὲν ἐπὶ πλέον ἐν τοῖς περὶ σφυγμῶν λέγεται. νυνὶ δὲ μεταβῶμεν ἐπὶ τὸν περὶ τῶν ὑπολοίπων ἐκλύσεων λόγον οἷον ὅσαι τε διὰ ῥῆξιν ἀποστήματος ἢ τομῆν γίνονται καὶ ὅσαι διὰ κένωσιν ἀθρόαν ἐν ὑδέροις. ἀπόχρη δὲ τούτοις ἐν μὲν τῷ παραχρήμα τοῖς ὀσφραντικοῖς ἀνακτησασθαι μικρὸν δ' ὕστερον ροφήμασιν εὐπέπτοις τρέφειν.<sup>52</sup> εἰ δὲ καὶ διὰ λύπην ἢ χαρὰν ἢ φόβον ἢ θυμὸν ἢ ἐκπληξιν ἐκλυθεῖεν, ὀσφραντοῖς τε καὶ ταῖς τῶν ῥινῶν καταλήψεσιν ἀνακτησάμενον ἐμῆν ἀναγκάζειν. ὡσαύτως δὲ καὶ τοὺς ἐπὶ τραύμασιν ἢ καθάρσεσιν<sup>53</sup> | ἢ ἀλγήμασι τοῖς κατ' ἄρθρα καὶ νεῦρα καὶ τῶν μυῶν τοὺς τένοντας ἔν γε τῷ παραχρήμα διανακτᾶσθαι μετὰ δὲ ταῦτα τὴν προσήκουσαν ποιῆσθαι τοῦ παθήματος θεραπείαν.

αἱ δ' ἐπὶ τοῖς κωλικοῖς πάθεσιν ἢ τοῖς εἰλεοῖς ἢ τινι τῶν οὕτως μεγάλας ἐπιφερόντων ὀδύνας ἐπόμεναι λειποθυμίαι ταῖς τε τῶν πεπονθότων μορίων ἀλείψις μάλιστα καθίστανται καὶ ταῖς τῶν ἄκρων τράψεσιν. τὰς δὲ δι' ἀρρωστίαν οἰκείαν τῶν διοικουσῶν τὸ σῶμα δυνάμεων ἐκλύσεις ἐπὶ δυσκρασίας τῶν μορίων ἐκείνων γιγνομένας, ὅθεν αἱ δυνάμεις ὀρμῶνται, ταῖς ἐναντίαις δυσκρασίαις ἰᾶσθαι προσήκει, θερμαίνοντας μὲν τὰς ψυχράς, ψύχοντας δὲ τὰς θερμὰς, ἐπὶ τε

<sup>52</sup> τρέφειν D; χρῆσθαι K

<sup>53</sup> τραύμασιν ἢ καθάρσεσιν K; τρώμασιν ἢ ῥίγμασιν D

common to that. The pulse becomes intermittent in the major forms of such conditions. These matters are spoken of more fully in the works on the pulse.<sup>31</sup> For the present, let me move on to the discussion of the remaining collapses—for example, those that occur due to bursting or incision of an abscess, and those that occur due to concentrated evacuation in dropsies. In the immediate situation it is enough to provide these patients with scents<sup>32</sup> to revive them. A little later, use easily digested gruel to nourish them. If, however, they collapse due to grief, joy, fear, anger, or terror, they are revived by scents and by squeezing the nostrils to compel vomiting. In like manner too, with those collapsing due to wounds, or purging (chilling) or pains involving the joints, nerves or tendons of muscles, there is a need to revive immediately. After this, carry out the appropriate treatment of the affection.

The swoonings that follow colicky affections or ileus, or one of those things that bring on severe pains in this way are countered especially by warming of the affected parts and massage of the extremities. With those who collapse due to a specific weakness of the capacities that govern the body occurring due to *dyskrasias* of those parts from which the capacities arise, it is appropriate to effect a cure with the opposite *dyskrasias*, heating those that are cold, cooling those that are hot, and analogously in the

<sup>31</sup> For Galen's works on pulses (four major treatises, three short works, and one lost work), see above, *The Art of Medicine*, note 73.

<sup>32</sup> Stephanus, in his commentary, speaks of roses, lilies, and the Alexandrian lotus.

τῶν ἄλλων ἀνάλογως. ἡ μὲν οὖν ζωτικὴ καλουμένη δύναμις, ἣν ἐκ καρδίας ὀρμωμένην ἐδείξαμεν, ἐκ τῶν ἀμυδρῶν σφυγμῶν γνωρίζεται. ἡ δ' ἐξ ἥπατος μὲν ὀρμωμένη, θρεπτικὴ δ' ὀνομαζομένη, ταῖς αἱματώδεσι διαχωρήσεσι κατ' ἀρχὰς μὲν ὕδατώδεσί τε καὶ λεπταῖς γιγνομέναις, ὕστερον δὲ παχείαις, οἷαπερ ἡ ἀμοργή. τὴν δ' ἐξ ἐγκεφάλου μὲν ὀρμωμένην δύναμιν ἐξαιρέτως δὲ ὑπὸ τινῶν ὀνομαζομένην ψυχικὴν. | τῇ ἐπὶ τὰς προαιρετικὰς κινήσεις ἀρρωστία γνωρίζομεν. ἀλλὰ περὶ μὲν τῶν τοιούτων διαθέσεων ἰδίᾳ σοι γράψομεν ἐν ἐτέρῳ γράμματι, πάμπολλα γὰρ ἔστιν ἐν αὐτοῖς παρορώμενα τοῖς ἰατροῖς.

61K 16. Ἐπεὶ δὲ τὸν περὶ τῶν συμπτωμάτων λόγον ἐποιούμεθα μέχρι τοῦ δεῦρο, πάλιν ἐπάνιμεν πρὸς τὰ ἐξ ἀρχῆς ἓνα κοινὸν ἐπὶ πάντων ἔχοντες σκοπὸν, ἐπισκέπτεσθαι τὴν ἐργαζομένην ἕκαστον αὐτῶν αἰτίαν. αὐταὶ γὰρ ἐνδείξονται σοι τὴν προσήκουσαν ἴασιν. οἷον εἴ τις ἀλγοίῃ τὴν κεφαλὴν, εἰ μὲν ἀσώδης εἶη καὶ καρδιώττοι, κελεύειν ἐμεῖν, ἐμεῖται γὰρ ἢ χολὴν ἢ φλέγμα ἢ ἄμφω. μηδεὶνος δ' ἐπισήμου κατὰ τὴν γαστέρα παθήματος ὑποφαινομένου σκοπεῖσθαι, πότερον πλήθός ἐστιν ἢ ἔμφραξις ἢ φλεγμονὴ τινος τῶν ἐν τῇ κεφαλῇ μορίων· εὐρήσεις δὲ πρῶτον μὲν, εἰ δι' ὅλης αὐτῆς ἐκτέταται τὸ ἀλγημα πυθόμενος, εἰ κατὰ τινος τῶν μορίων ἐρείδει σφοδρότερον. ἔπειτα δὲ πότερον μετὰ βάρους ἢ τάσεως ἢ δόξεως ἢ σφυγμοῦ.

case of the others. Thus the so-called vital capacity, which we showed arises from the heart, is recognized from the weak pulse. What is termed the nutritive capacity, arising from the liver, is recognized at the beginning by bloody stools which are watery and thin, but later are thick, like the juice of pressed olives. We recognize the capacity arising exclusively from the brain, which is called by some the 61K psychic, by weakness of the voluntary movements. But I shall write a specific account of such conditions for you in another treatise,<sup>33</sup> for there are very many aspects of these that are overlooked by doctors.

16. Since we have made the argument about the symptoms up to this point, let us return again to those things we started from that have one common objective in all cases, which is to consider the cause bringing each of them about, for these will reveal to you the appropriate cure. For example, if someone has pain in the head, or has nausea and stomach pain, and you order him to vomit, he vomits bile or phlegm or both. However, if no notable affection involving the stomach is apparent, observe whether there is fullness, obstruction or inflammation of one of the parts in the head. You will discover first by inquiry if the pain extends through the whole head or if it is fixed more strongly in one of its parts. Then you will discover whether it is associated with heaviness, tension, biting or throbbing.

<sup>33</sup> There are three works specifically on the soul in Kühn: *Animi Mores*, IV.767–822K; *Animi Affect.*, V.1–57K; *Animi Peccat.*, V.58–103K. There is also considerable discussion of the soul in *Plac. Hippocr. Plat.*, V.181–805K. There are English translations of the first three in Singer, *Galen: Selected Works*, and of the last in de Lacy, *Galen on the Doctrines*.

62K τὰ γὰρ μετὰ βάρους ἀλγήματα πλήθος δηλοῦ· τὰ δὲ μετὰ δῆξεως ἢ ἀτμῶν ἢ χυμῶν δριμύτητα· | τὰ δὲ μετὰ σφυγμοῦ φλεγμονήν· τὰ δὲ μετὰ τάσεως, εἰ μὲν ἄνευ βάρους καὶ σφυγμοῦ καὶ πνεύματος ἀπέπτου καὶ φυσώδης, πλήθος· εἰ δὲ μετὰ σφυγμοῦ, φλεγμονήν ὑμενώδους σώματος· εἰ δὲ μετὰ βάρους, πλήθος ἐντὸς τῶν ὑμένων ισχύμενον.

ὅταν οὖν ἅπαντά σοι ταῦτα διορισθῆι, τὴν ἐργαζομένην ἕκαστον αὐτῶν αἰτίαν χρή σκοπεῖν. ἐκείνη γὰρ ἐνδείξεται σοι τὴν θεραπείαν· οἷον εἰ πλήθος εἴη περιεχόμενον ἀτμῶν ἢ χυμῶν, ἐπισκοπεῖσθαι, πότερον διὰ μέγεθος πυρετῶν οἱ χυμοὶ χυθέντες καὶ οἰοεὶ ζέσαντες ἐπὶ τὴν κεφαλὴν ὥρμησαν, ἢ διὰ τὴν τοῦ μέρους ἀρρωστίαν ἢ διὰ τὴν ἐν παντὶ τῷ σώματι πλησμονήν· ταύτην μὲν γὰρ οὐκ ἂν χαλεπῶς ἰάσαιτό τις χωρὶς τῆς τοῦ ὅλου σώματος κενώσεως.<sup>54</sup> τὴν δ' ἐπ' ἀσθενείᾳ τοῦ μορίου τὸ μέντοι πάντη τοῦ σώματος ἀντισπῶν, τὸ δέ τι ταῖς τοῦ μέρους ἰάσεσιν. ἀντισπάσεις μὲν οὖν κλύσμασί τε δριμέσι καὶ δεσμοῖς καὶ τρίψεσι τῶν κάτω πολλαῖς, καὶ ἦν οὕτω δέη, καὶ τοῦ αἵματος ἀπάγων τί. τὸ δὲ μόριον ἐξιάσει, καθ' ὃν μὲν καιρὸν ἀντισπᾶς εἰς τὸ ὅλον τὸ σῶμα, ταῖς ἀπωθεισθαί τι τῆς κεφαλῆς δυναμέναις ἐπιβροχαῖς· | 63K μετὰ δὲ ταῦτα ταῖς κενούσαις· ὕστερον δὲ ταῖς τουούσαις.

bing. Pains associated with heaviness indicate fullness; those associated with biting indicate an acidity of vapors or humors; those associated with throbbing, inflammation; 62K those associated with tension, if they are without heaviness, throbbing and *pneuma* that is unconcocted and flatulent, indicate fullness. If, however, they are associated with throbbing, they indicate inflammation of a membranous body, and if with heaviness, fullness held within the membranes.

Whenever all these things are determined, you must consider the cause bringing each of them about, for that will indicate to you the treatment. For example, if fullness is the containment of vapors and humors, consider whether the humors are liquefied due to the magnitude of the fevers, as if boiling they are impelled toward the head due either to the weakness of the part or a surfeit in the whole body. This latter would not be difficult to treat with evacuations of the whole body. That in the case of weakness of the part is of course treated on the one hand by revulsion of the whole body and on the other by the cures of the part. Revulsions are with clysters that are acrid, bindings and much massage of the parts below, and if needs be, some withdrawal of blood. You cure the part at the same time as you carry out revulsion on the whole body, repelling with things that are able to moisten the head, and after these, with evacuating agents, and later 63K still with things that strengthen.

<sup>54</sup> ἰάσαιτό τις χωρὶς τῆς τοῦ ὅλου σώματος κενώσεως. D; ἰάσαιτο ταῖς τοῦ ὅλου κενώσεσι. K—*the meaning here favors the Kühn version, which both Latin texts follow.*

ἀπαθεῖται μὲν οὖν ἔλαιον τὸ καλούμενον ὠμοτριβές ἢ ἄλλο τι τῶν τοιούτων παραπλήσιον, οἶον ὄξυρρόδιον τε καὶ ῥόδιον ἐαυτὸ καθ' αὐτό, καὶ ὄσα διὰ τῶν τοῦ μήκωνος κωδιῶν καὶ θαλλῶν ἐλαίας τῶν ἀπαλῶν καὶ κισσοῦ τῶν κορύμβων ἠδυνόσμου τε τοῦ χλωροῦ καὶ σισυμβρίου σκευάζεται· χρῆσθαι δ' αὐτοῖς ἐπὶ μὲν ὠμοτέρου τε καὶ ψυχροτέρου πλήθους χλιαροῖς· ἐπὶ δὲ θερμότερου καὶ χολωδεστέρου ψυχροῖς. κενῶσι δὲ καὶ διαφορεῖ τὸ θερμὸν ἔλαιον αὐτὸ τε καθ' ἑαυτὸ καὶ μᾶλλον εἰ παλαιὸν ἢ σικυώνειον εἴη ἢ καὶ ἄνηθον ἐναφεψημένον ἔχει· τὸ γὰρ μὴ πᾶν παχείων μήτε γλίσχρων χυμῶν πλήθος ἰκανῶς διὰ τῶν τοιούτων κενώσεις· ἀλλὰ καὶ εἰ σπονδύλιον ἢ ἔρπυλλον ἐναφέψοις ἢ γλήχωνος κόμην ἢ καταμίνθης ἢ ἠδυνόσμου τε καὶ σισυμβρίου, κενώσεις οὕτω καὶ τὸ παχύτερον. αὐτὰ δὲ ταῦτα καὶ τόνον τινὰ δίδωσι τοῖς μορίοις καὶ ῥώννυσι τὰ ἡσθενηκότα. χρηστέον οὖν αὐτοῖς ἐφεξῆς, μέχρι παντελοῦς ἰάσεως. καὶ εἰ δεήσῃ, διὰ τε ῥινῶν καὶ ὑπερώας καθαίρειν καὶ πταρμῶνς κινεῖν.

64K

καὶ ἦν ἐπὶ λουτρον ἀγάγης τὸν ἄνθρωπον, ἀνατρίβειν τε ξηροῖς συνδόσι τὴν κεφαλὴν καὶ χωρὶς ἐλαίου διαπάττειν, ἄλσι τε καὶ νίτρω καὶ νάπτῃ. ταῦτα μὲν δὴ τῆς ἐπ' ἀρρωστίας τοῦ μορίου κεφαλαλγίας ἰάματα. τῆς δ' ἐπὶ μεγέθους πυρετῶν, τῆς μὲν ἰαμάτων δεομένης, αἱ ψυχραὶ ποιότητες καὶ δυνάμεις αἱ δι' ὑδρελαίου τε καὶ ὄξυρροδίνου καὶ μήκωνος κωδιῶν συγκείμεαι ἀρμόζουσιν ἐπιβροχαί. τῆς δὲ κρίσιμον

The oil called *omotribes*,<sup>34</sup> or any other of those things that are similar, repel—for example, oxyrhodinon and oil of roses by itself and those things prepared from the heads of poppies and the soft leaves of the olive tree, the fruit clusters of ivy, green mint and bergamot. Use these lukewarm in the case of a more crude and colder excess, but cold in the case of a warm and more bilious excess. Warm oil purges and disperses by itself, and more so if it is old, or Sicyonian, or has dill boiled down in it. With such things you will adequately purge an excess of humors that are not very thick or viscous. But also, if you boil down spondylium or thyme, or the leaf of pennyroyal, catmint, green mint or bergamot, you will in this way evacuate what is thicker too. These same things also give a certain tone to the parts and strengthen those that have been weakened. You must, then, use these things in order until the cure is complete. And if necessary, also purge through the nostrils and palate by inducing sneezing.

64K

And if perchance you bring the person to the bath, rub his head with dry linen cloths, and apart from oil, sprinkle with salt, niter and mustard. These are cures of headache when the part is weak. However, in the case of severe fevers, when there is need of cures, the cold qualities and potencies present in embrocations composed of water and oil mixed with oxyrhodinum and the heads of poppies are suitable. You should not seek cures for headache mani-

<sup>34</sup> The oil from unripe olives when first pressed; see Dioscorides, 1.29, and Galen, *MM*, X.702K.

αἱμορραγίαν ἢ ἔμετον δηλούσης ἰάματα μὲν οὐ χρὴ ζητεῖν· οὐδὲ γὰρ σύμπτωμα τήν γε τοιαύτην νομιστέον, ἀλλὰ μᾶλλον ἀγαθὸν σημεῖον, ὥσπερ καὶ τᾶλλα πάντα πρὸ τῶν κρίσεων ἅ τοὺς μὲν πολλοὺς ἐκφοβεῖ, χρηστὸν δέ τι δηλοῖ. κάλλιστον δὲ δύνασθαι γνωρίζειν σῶμα ταραπτόμενον ὑπὸ φύσεως παρασκευαζομένης ἐπὶ τε τὰς ἄλλας ἐκκρίσεις καὶ οὐχ ἥκιστα τὰς δι' ἐμέτων τε καὶ αἱμορραγίας, ὧν ἀχώριστόν ἐστι σημεῖον ἢ κεφαλαλγία. λέγεται δ' ἐπὶ πλεόν μὲν ἐτέρωθι πάντα. τὸ δὲ νῦν εἰδέναι, καθ' ὅσον ἐγχωρεῖ τὴν ἐξ ἀρχῆς προαίρεσιν φυλάττοντα διὰ συντόμων εἰπεῖν, τί περὶ αὐτῶν εἰρήσεται. |

65K σκεπτέον δὲ πρῶτον μὲν τὸ τῶν πυρετῶν εἶδος, εἰ θερμοὶ καὶ διακαεῖς. ἐκκρίσεισι γὰρ οἱ τοιοῦτοι φιλοῦσι ἐκκρίνεσθαι καθάπερ οἱ μαλακώτεροί τε καὶ οἶον σμυχόμενοι χρονίζουσί τε καὶ εἰς ἀποστάσεις ὀρμῶσι τὰ πολλά. δεύτερον δέ, εἰ σωτήριόν εἴη τὸ νόσημα, τίς γὰρ ἂν ἀγαθὴ κρίσις ἐν τῷ ὀλεθρίῳ νοσήματι ἐλπισθείη; τρίτον ἐπὶ τοῖσδε τὸν καιρὸν τῆς ὄλης νόσου σκοπεῖν. εἰ γὰρ ἀρχῆς ἢ ἐπιδόσεώς ἐστι σημεῖον μηδέπω δ' ἀκμῆς μηδὲ πέψεως γνωρίσματα δι' οὔρων ἢ πτυσμάτων ἢ ἀποπατημάτων, οὐκ ἐνδέχεται κρίσιν ἀγαθὴν γενέσθαι. ταῦτα μὲν ἔστιν ἐξ ὧν ἂν τις ἐλπίσειε δι' ἐκκρίσεως κριθήσεσθαι τὸ νόσημα.

τοῦ δὲ νῦν ἤδη καὶ μηκέτι μέλλοντος σημεῖα τάδε· δυσφορία προηγείται κρίσεως ἀπάσης· καὶ εἰ μὲν ἐν ἡμέρᾳ μέλλοι κριθήσεσθαι τὸ νόσημα, νύκτωρ· εἰ δ'

fest in relation to critical hemorrhage or vomiting, for you must not deem such a headache a symptom, but rather a good sign, just like the other things prior to crises which alarm many people but signify something good. It is best to be able to recognize a body troubled by Nature's preparations in the case of other excretions, and not least those due to vomiting and hemorrhage, of which headache is an inseparable sign. More is said about all these matters elsewhere. Now to appear to be preserving as far as possible our original intention to speak briefly, something will be said about these.

First, you must consider the kind of the fever—if it is hot and burning. For such fevers are wont to come to crisis with excretions, just as those that are milder and, as it were, smoldering are chronic, the majority culminating in abscesses. Second you must consider whether the disease is one that betokens recovery, for who could hope for a favorable crisis in a fatal disease? Third, in addition to these things, consider the time of the whole disease. If there is a sign of a beginning or progression when there are not yet signs of a peak or concoction in the urine, sputum or feces, there cannot be a favorable crisis. These are the things from which someone might hope the disease will be brought to a crisis through excretions.

The signs that a crisis is already at hand and no longer to come in the future are as follows. Malaise precedes every crisis; if the disease is going to be brought to crisis in the day, malaise occurs at night. If, on the other hand, it

65K

ἐν νυκτί, δι' ἡμέρας. εἰ οὖν τοιοῦτόν τι βλέποισ, ἐπι-  
σκοπεῖσθαι δεῖ πόσῃν ἄγει τοῦ νοσεῖν ἡμέραν ὁ ἄν-  
θρωπος. εἰσὶ γὰρ αἱ κρίνειν πεφύκασι κὰν βραχείας  
ὀρμῆς τῆς φύσεως λάβωνται. πολλοὶ δ' ἐν ταῖς σφο-  
δραῖς κινήσειν ὅλως οὐ δύνανται τὸ μέγεθος συν-  
66K ορᾶν | τῆς ταραχῆς, εἰ κατὰ τὴν φύσιν ἐστὶ τῆς  
ἡμέρας. ἡ μὲν γὰρ ἐβδόμη ἡμέρα καὶ κατὰ τὰς βρα-  
χείας παρασκευὰς [ταραχῆς]<sup>55</sup> τῆς φύσεως ἐξορμᾶ  
πρὸς τὴν διὰ κενώσεως κρίσιν. ἡ δ' ἕκτη μεγάλης τε  
δεῖται τῆς παρασκευῆς [ταραχῆς] καὶ πολλάκις μὲν  
οὐδὲν ἔκρινεν. εἰ δέ καὶ κρίνειεν, οὔτε χωρὶς κινδύνου  
οὔτε πιστῶς. οὕτω δὲ καὶ τῶν ἄλλων ἡμερῶν ἐκάστης  
ἐστὶ τις ἴδιος φύσις, ἣν ἐν τοῖς περὶ κρίσιμων διορι-  
ζόμεθα.

φέρει δὴ καὶ τὴν ἡμέραν εἶναι κατὰ τὸ τῆς ταραχῆς  
μέγεθος. εἴτ' ἐφεξῆς σκοπεῖν, ὅποια τις ἡ κρίσις  
ἔσται. περὶ μὲν οὖν τῶν ἄλλων οὐδὲν δεόμεθα λέγειν  
νῦν. εἰ δ' ἔμετος ἢ αἵματος ἔκκρισις διὰ ῥινῶν ἔσε-  
σθαι μέλλοι, ταύταις γὰρ ἐλέγομεν ταῖς κρίσεσιν ἐν  
τι τῶν σημείων εἶναι τὴν κεφαλαλγίαν, ἐκ τῶνδε  
μάλιστα διορίζεσθαι. πρῶτον μὲν εἰ μὴ κατ' ἀρχὰς  
εὐθύς εισέβαλεν οἶον σύμπτωμά τι τοῦ νοσήματος,  
ἀλλ' ἐν τῇ πρὸ τῆς κρίσεως ταραχῇ. δεύτερον δ' εἰ  
καὶ ὁ τράχηλος συναλγοίη καὶ ὑποχόνδριον ἀνασπώ-  
μενον εἴη καὶ εἰ δύσπνοιά τις ἐξαίφνης, οἶονεὶ στε-  
67K σιν ἐξαίφνης | ὀγκούμενοι οἱ σφυγμοὶ μὴ καταπίπτειν

is going to come to crisis at night, the malaise is during the  
day. Therefore, if you see such a thing, you must consider  
how much of the day the person is sick for. There are  
diseases that naturally come to crisis when they receive  
even a slight impulse from Nature. However, when move-  
ments are severe, there are many who are unable to take  
an overall view of the severity of the disorder, and whether  
it is in accord with the nature of the day. Thus the seventh  
day, even with a slight preparation from Nature, sets in  
motion toward the crisis through evacuation. The sixth  
day, however, needs a great preparation and often the fe-  
ver does not come to crisis. If it does come to a crisis, it  
is neither without danger, nor reliably. In the same way,  
there is also some specific nature of each of the other days,  
which I distinguish in the work *On Critical Days*.<sup>35</sup>

Well then, the day is related to the magnitude of the  
disorder. Consider next what kind of crisis there will be.  
We need say nothing about the others for the present. If  
there is going to be vomiting or a separation of blood  
through the nose, and I said headache was one of the signs  
in these crises, it is distinguished particularly by the fol-  
lowing things. First, if it did not come upon [the patient]  
immediately from the start, like some symptom of the  
disease, but in the disorder prior to the crisis. Second, if  
the neck also is painful and the hypochondrium is drawn  
up, and if there is some sudden dyspnea, as if the chest is  
being compressed. If in addition to all these, the pulse  
suddenly swells up and doesn't drop back to become small

<sup>35</sup> *Dieb. Decret.*, IX.761-941K.

<sup>55</sup> ταραχῆς D; παρασκευὰς K here and following

εἰς μηδ' ἀμυδροὶ γίνονται, παραχρῆμα τὴν κρίσιν ἐλπίζειν· εἰ δὲ πρὸς τῷ μὴ καταπίπτειν εἰς ὕψος ἀρθεῖεν καὶ σφοδρότητα προσλάβοιεν, ἐπιβλέπειν ἤδη χρῆ τὸ πρόσωπον τοῦ νοσοῦντος· εἰ γὰρ καὶ πάλλουτό τι τῶν ἐν αὐτῷ μορίων ἢ σφύζοιεν αἱ ἐν τοῖς κροτάφοις φλέβες ἢ μῆλον ἢ ρῖς ἢ ὀφθαλμοὺς ἐρυθρότερα γένοιτο, μᾶλλον ἐλπίζειν τὴν κρίσιν. εἰ δὲ καὶ δακρύνουσιν ἄκουτες ἢ μαρμαρυγὰς ὄραν φαντάζονται καὶ τὰς χεῖρας ἐπὶ τὰς ρίνας φέροντο ὡς κνήμενοι, τηνικαῦτα μὲν οὐκέτι μέλλον, ἀλλ' ἤδη ῥέον ὄψει τὸ αἷμα. κνησαμένων γὰρ αὐτῶν ἀπαξ που καὶ δις εὐθύς ἐκρήγνυται. μὴ καταπλαγῆς δ' ἐν τούτοις, ἣν παραφρονοῦντα τὸν ἄνθρωπον καὶ ἀναπηδῶντα θεάσαιο. καὶ γὰρ καὶ ταῦτα τῆς ἄνω φορᾶς τῶν χυμῶν γνωρίσματα. καθάπερ ἢ τε δύσπνοια καὶ τὸ ὑποχόνδριον ἀνασπῶμενον, ὃ τε τράχηλος ἅμα τῇ κεφαλῇ βαρυνόμενος· ἀλλὰ σοὶ σὺν τούτοις ἐν τι σημείον ἔστω καὶ ἡ παραφροσύνη.

καὶ ταῦτα μὲν οὖν ἱκανὰ γνωρίσματα. προσέρχεται δ' αὐτοῖς πολλάκις ἢ τε τοῦ νοσοῦντος ἡλικία τε καὶ φύσις | βεβαιούσα τὴν ἐλπίδα καὶ προσέτι τοῦ ἔτους 68K ὁ καιρὸς, ἢ τε παρούσα κατάστασις. εἰ γὰρ μενιόχου εἶη τὸ νοσοῦν ἢ ἄλλως φύσει θερμὸν ἢ πολυαἷμον, ἔτι μᾶλλον ἐλπίσεις. εἰ δὲ καὶ πρόσθεν αὐτῷ πολλάκις αἷμα διὰ ρινῶν ἐπεφάνη, νοσοῦντί τε καὶ ὑγιαίνοντι, τούτο μὲν καὶ μόνον ἱκανὸν αἱμορραγίας ἐλπίδα παρασχέειν. εἰ δὲ καὶ τὸν καιρὸν τοῦ ἔτους ὀρώης θέρος, ἢ οὐ θέρος μὲν, ἄλλως δὲ θερμὴν τὴν παρού-

and indistinct, expect the crisis immediately. If, in addition to not dropping back down, it rises up to a height and takes on a violence, you must now examine the patient's face. If there is quivering in one of the parts in it, or the veins at the temples are throbbing, or a cheek, nose or eye becomes reddened, there is more hope for the crisis. If the patients also weep involuntarily, or imagine they see flashing, and bring their hands to their nose as if there is itching, under these circumstances, no longer in the future but already now you will see a flow of blood, for if they itch once or twice, it immediately bursts forth. Don't be anxious in these cases if you see the person become delirious and leap up, for these too are signs of the upward movement of humors. Just like the dyspnea and the drawing up of the hypochondrium, and the weighing down of the neck along with the head, let the delirium be for you one sign along with these.

These signs, then, are sufficient. But add to them often the age and nature of the patient, when these confirm the expectation, and in addition, the time of the year and the prevailing climatic conditions. If the sick person is an adolescent, or otherwise hot by nature, or full of blood, you may hope still more. However, if previously blood often appeared through his nose, whether sick or healthy, this fact alone provides sufficient hope for hemorrhage. And if you see the time of year to be summer, or if it is not summer but you see the prevailing weather conditions are



σαν κατάστασιν, ἄρ' οὐκ ἂν τινα καὶ παρὰ τούτων ἔνδειξιν λάβῃς; εἰ δὲ καὶ πολλοὶ κατ' ἐκείνον τὸν καιρὸν αἱμορραγίας εἶεν κεκριμένοι, καὶ τοῦτ' ἂν αὐξήσειέ σοι τὴν ἐλπίδα, καὶ εἰ πληθωρικὸν εἴη τὸ σῶμα καὶ εἰ συνηθῶν ἐκκρίσεων ἐπίσχεσις. ἐμοὶ μὲν οὐκ ὁπωσοῦν<sup>56</sup> χαλεπὸν εἶναι δοκεῖ, τοσαῦτα καὶ τοιαῦτα γνωρίσματα μελλούσης αἱμορραγίας ἔχοντα δύνασθαι προγινώσκειν, ἀλλ' ἄτοπὸν τε καὶ δεινῶς ἀμαθὲς τὸ μὴ προγνῶναι. τῇ δ' ὀλιγωρίᾳ τῶν νῦν ἰατρῶν θαυμάζεται τὰ μὴ θαυμαστά. καὶ γὰρ εἴτ' ἐξ ἀριστεροῦ μυχτῆρος εἴτ' ἐκ δεξιῶν ῥνήσεται τὸ αἷμα, χαλεπὸν μὲν οὐδὲν ἐκ τῶν προειρημένων προγινώσκειν, τοῖς πολλοῖς δὲ τῶν ἰατρῶν οὐ μόνον χαλεπὸν, ἀλλ' οὐδὲ δυνατὸν ἢ ὅλως εἶναι δοκεῖ.

69K

καὶ τοι καὶ ταύτας καὶ τὰς ἄλλας ἐκκρίσεις ἀπάσας ἔνεστι προγνῶναι, δύο ταῦτα σκοπομένῳ τό τε ὄθει ἢ ὄρμη τῆς φύσεως καὶ τὸ ποῦ. καὶ γὰρ συνεργήσομεν ταῖς ἐλλείψεσι καὶ κωλύσωμεν τὰς ἀμέτρους γινόμενας φοράς, εἰ ταῦτα γινώσκοιμεν· οἷον αὐτίκα τὰς ἀπὸ σπληνὸς αἱμορραγίας αἰ κατὰ τὸ ἀριστερὸν ὑποχόνδριον τιθέμεναι μεγάλαι σικύαι ῥαδίως ἀντισπῶσι, τὰς δ' ἀπὸ τοῦ ἥπατος αἰ κατὰ τὸ δεξιόν. κατὰ τῶν ἄλλων ὁ αὐτὸς λόγος. ἐξ ἑνὸς γὰρ περὶ πάντα δυνήση συλλογίζεσθαι τό γε καθόλου σκοπούμενος.

ὥστε καὶ γὰρ τῆδε καταπαύσω τὸν παρόντα λόγον. ἐφεξῆς δὲ περὶ τε τῶν ἐπὶ ταῖς φλεγμοναῖς ἀναπτωμένων πυρετῶν δίδειμί σοι καὶ τῶν ἄλλων παθῶν, ὅσα καθ' ἕκαστον τῶν τοῦ σώματος μορίων συνίσταται.

otherwise warm, would you not also take some indication from these things? And if there are many who have come to a crisis at that time through hemorrhage, this would also increase your hope, as would a body that is plethoric, and a hindrance of the customary separations. It seems to me not to be difficult at all, when there are so many such signs, to be able to foresee an impending hemorrhage. Rather it would be absurd and very ignorant not to do so. However, due to the negligence of today's doctors, there is surprise at things that are not surprising. And it is not difficult, from what has been said, to know beforehand whether the blood will flow from the left or right nostril, although for many doctors it seems to be not only difficult but altogether impossible.

69K

In fact, it is possible to foresee all the other separations by considering these two things—where Nature's impulse is coming from and where it is going to. If we know these [two things], we can correct the deficiencies and prevent immoderate movements from occurring. For example, immediately applying large cupping glasses to the left hypochondrium easily revulses hemorrhages from the spleen, and to the right hypochondrium, those from the liver. And in the case of other hemorrhages, the same argument applies. Thus from one consideration you will be able to reach a general observation concerning all.

And so I shall bring the present argument to a close here. Next, I shall give you an account of the fevers kindled in inflammations, and of those other affections which may exist in each of the parts of the body. The ancients

<sup>56</sup> οὐκ ὁπωσοῦν D; οὐδ' ὅλως K

70K φλεγμονὰς δὲ οἱ μὲν παλαιοὶ τὰς οἶον φλογώσεις  
 ἀνόμαζον· οἱ δὲ νεώτεροι οὐ πάσας οὔτε γὰρ τὸν ἔρ-  
 πητα οὔτε τὸ ἐρυσίπελας οὔτ' ἄλλο οὐδὲν τῶν τοιούτων  
 ταῖς φλεγμοναῖς συναριθμοῦσιν, ἀλλ' ἐνὶ μόνῃ τῶν  
 θερμῶν παθημάτων ἐπιφέρουσι τοῦτο τὸ ὄνομα, τῷ  
 μετ' οἰδήματος σκληροῦ καὶ ὀδύνης σφυγματώδους.  
 οὐ μὴν τούτῳ γε μόνῳ πυρετοὺς καὶ πόνοὺς ἐπομένους  
 ὀρώμεν, ἀλλ' ἅπασιν ἀπλῶς τοῖς θερμοῖς καὶ οἶον  
 ζέουσι πάθεσι. περὶ τε οὖν τούτων καὶ τῶν ἄλλων ὅσα  
 τοιαῦτα νοσήματα τὸν ἐξῆς ποιησόμεθα λόγον.

70K were accustomed to apply the term inflammation to what  
 was like burning heat. However, later doctors do not do so  
 in all cases, for they do not number herpes and erysipelas  
 or any other such things among the inflammations, but  
 apply this term to one of the hot affections alone—that  
 is, the one with edematous hardness and throbbing pain.  
 However, we see that fever and distress do not follow this  
 alone, but absolutely all the hot and, as it were, seething  
 affections. We shall then make the following discussion  
 about these and other such diseases.

## BIBLION B

71K 1. Περὶ δὲ τῶν καθ' ἕκαστον μέρος τοῦ σώματος πα-  
θῶν, ᾧ Γλαύκων, ἐξῆς ἐρούμεν ἀπὸ φλεγμονῆς ἀρξά-  
μενοι. καὶ γὰρ πλειστάκις αὕτη γίνεται καὶ πλείστας  
ἔχει διαφοράς· καὶ πάσαις αὐταῖς πυρετοὶ πεφύκασιν  
ἔπεσθαι. κοινὸν μὲν οὖν ἀπάσαις ἡ ἄμετρος ἐστὶ θερ-  
μασία καὶ οἶον φλόγωσις, ὅθεν περ καὶ τὸ τῆς φλεγ-  
μονῆς ὄνομα κατ' αὐτῶν ἐπιφέρειν ἕθος ἦν τοῖς πα-  
λαιοῖς. ἰδίαν δὲ καθ' ἑκάστην εὗροις ἂν τινα διαφοράν,  
ἐξ ἧς τό τε εἶδος αὐτῆς γνωριεῖς καὶ τῆς προσηκού-  
σης εὐπορήσεις ἰάσεως. ἐτέρως μὲν γὰρ ἔρπητας, |  
72K ἐτέρως δ' ἐρυσσιπέλατα, ἐτέρως δὲ φύγεθλα καὶ τᾶλλα  
τῶν φλεγμονῶν εἶδη θεραπεύσεις. ὥστε κἀνταῦθα  
πάλιν ἡγεῖται διαγινώσκειν ὀρθῶς τὰ πάθη δύνα-  
σθαι. καὶ σοι πειράσομαι τοῦτο πρῶτον γράψαι, δι-  
ελόμενος ἐξ ἀρχῆς περὶ τῶν κατὰ τὰς φλεγμονὰς  
πάσας διαφορῶν.

πρώτη μὲν οὖν διαφορὰ φλεγμονῆς ἐστὶ, καθ' ἣν  
τὴν μὲν αὐτῆς ὑγρὰν, τὴν δὲ ξηρὰν εἶναι συμβέβη-  
κεν. ὑγρὰν μὲν ἦτις ἂν ἐκ ῥεύματος θερμοῦ τὸ μύριον

## BOOK II

1. I shall speak next, Glaucon, about the affections per- 71K  
taining to every part of the body, beginning with inflam-  
mation, for this occurs very frequently and has many  
*differentiae*; fevers naturally follow all these. What is  
common in all cases is the excessive heat—a burning up<sup>1</sup>  
as it were—which is why the name of “inflammation”  
(*phlegmonē*) was customarily applied to them by the an-  
cients. You will discover a specific *differentia* in relation to  
each one, from which you will recognize the kind of in-  
flammation and be provided with the means of appro-  
priate cure. Sometimes you will treat herpes, sometimes 72K  
erysipelas, sometimes glandular swelling, and at other  
times, other kinds of inflammation. As a result, this leads  
in turn to your being able to diagnose the affections cor-  
rectly. First, I shall attempt to set this out for you, going  
through the *differentiae* pertaining to all inflammations  
from the beginning.

The first differentiation of inflammation is whether  
there happens to be moistness or dryness in it. Moisture  
occurs when a hot flux takes hold of the part; dryness oc-

<sup>1</sup> Galen uses the word *phlogōsis*, which means “burning”  
(Theophrastus, *De igne*, 69; Thucydides, 2.49), or “burning heat”;  
see also Galen, *Diffic. Resp.*, VII.853K.

καταλαμβάνοντος γίγνηται ξηρὰν δ' ὅταν μηδενὸς ἐπιρρύντος τὴν σύμφυτον θερμασίαν ἐκπυρωθῆναι συμβῆ. τοῦτο δὲ μέχρι μὲν τινος οἶον πυρετός ἐστι τοῦ μορίου· ἐπειδὴν δὲ εἰς ἄμετρον ἤδη θερμότητα καὶ ξηρότητα προήκη, φθορὰ καὶ νέκρωσις παντελῆς γίγνεται, ὅθεν οὐδ' εἰς πλείω τέμνεσθαι πέφυκεν, ὡσπερ ἢ ἑτέρα διαφορὰ καθ' ἣν ἐπιρρεῖν τινὰς χυμοὺς ἐλέγομεν τῷ μέρει. πολλὰ γὰρ τὰ ταύτης εἶδη αἵματος μὲν γὰρ ἐπιρρύντος ἕτερον· χολῆς δὲ ξανθῆς ἕτερον· ἀμφοῖν δ' ἅμα τρίτον ἄλλο. καὶ μὲν δὴ καὶ καθ' ἕκαστον αὐτῶν ἢ σεσηπός ἐστιν ἤδη τὸ ἐπιρρέον ἢ ἐν τῷ μορίῳ σφηνούμενον σήπεται· καὶ ἦτοι παχὺ τὴν σύστασιν ἢ λεπτὸν ἢ χρηστὸν ἢ δριμύ.

73K

αἵματος μὲν οὖν χρηστοῦ καὶ συμμέτρου τῷ πάχει ῥυέντος εἰς τι μόριον ἀθρώως καὶ διὰ τὸ πλήθος σφηνωθέντος, ὀδύνη σφοδρὰ καταλαμβάνει τὸν ἄνθρωπον, ἣν γε μὴ παντελῶς δυσαίσθητον ἢ τὸ μόριον· καὶ σφηνγμός ἀνιαρὸς ἐν τῷ βάθει καὶ τείνεσθαι πάντη νομίζει καὶ θλάσθαι τὸ μόριον καὶ θερμασίας αἰσθάνεσθαι πλείονος, ὡς διακαίεσθαι δοκεῖν καὶ ἀναψύχεσθαι ποθεῖν· καὶ ἔρευθος ἐπανθεῖ τοιοῦτον, οἶον τοῖς λελουμένοις ἢ παρὰ τῷ πυρὶ θαλφθείσιν ἢ πως ἄλλως θερμανθείσι. τοῦτο τὸ πάθος τὴν τοῦ γένους ὄλου προσηγορίαν ἀπηνέγκατο καὶ καλεῖται φλεγμονή, ἄλλοις παραπλησίως πολλοῖς εἶδεσι λαμβάνουσι τὸ τοῦ γένους ἐπιφερόμενον ὄνομα. καὶ γίνεται συνεχῶς ἐπὶ πάσῃ σχεδὸν προφάσει· καὶ γὰρ καὶ τρώσεσι καὶ σπάσμασι καὶ θλάσμασι καὶ ῥήγμασι

curs when there is no flux but there is a burning up of the innate heat. This goes only as far as there being a kind of fever of a certain part. However, when heat and dryness have already reached excessive levels, complete destruction and necrosis occur. Then no further division is possible, like the other *differentia* in which we said certain humors flow to the part. There are many kinds of this: One is when blood flows; another is when yellow bile flows; another and third is when both flow together. Furthermore, in each of these, what flows is either already putrefied, or being obstructed in the part, becomes putrefied. And it is either thick in consistency or thin, either good or acrid.

73K

Thus if blood which is good and moderate in thickness flows to some part all at once, and due to the amount causes obstruction, severe pain takes hold of the person unless the part is completely dysesthetic. There is a distressing throbbing in the depths, the person thinks the part is stretched and bruised everywhere, and is aware of a great heat, so he imagines he is burning up and yearns to be cooled. A redness appears on the surface in such a person, as in those who have bathed or warmed themselves beside the fire, or been heated in some other way. This affection has taken the name of the class as a whole and is called "inflammation" (*phlegmonē*), in the same way as the name of the class is taken by many other kinds (species). And inflammation occurs frequently from almost every cause. Thus, it supervenes in wounds, tears, contusions and lacerations and in the fatigues due to exercise,

καὶ τοῖς ἐκ τῶν γυμνασίων καμάτοις, ἐξαρθρήμασί τε καὶ κατάγμασι καὶ τοῖς αὐτομάτοις ἔλκεσιν ἐπιγίγνεται καὶ χωρὶς δὲ τούτων ἀπάντων, ὅταν εἰς ἄμετρον χυμῶν πλησμονὴν αἱ φλέβες ἀφίκωνται, τότε τὸ περιττὸν ἀποχέουσιν εἰς τι χωρίον, ὃ ἂν ἐπιτηδειότατον ἢ τηρικαῦτα | δέξασθαι πάντως δὲ τοῦτο τῶν ἄλλων ἢ ἀρρωστότερόν ἐστιν ἢ μανώτερον ἢ ἔλκειν ἐτοιμότερον ἢ ἀκινήτερον, ἐξ ἧστισοσούν αιτίας, εἰς ταύτας ἀχθὲν τὰς διαθέσεις. οὐ γὰρ τοῦτό γε νῦν πρόκειται λέγειν.

74K

Χολῆ δὲ ξανθὴ ἠνίκα μὲν τὴν ἑαυτῆς φύσιν σώζουσα σὺν τῷ αἵματι φέρεται πανταχόσε τοῦ σώματος, ἵκτερος τὸ πάθος καλεῖται. μόνης δ' ἀποκριθείσης καὶ κατὰ τι μόριον ἰσταμένης, ἔρπητος ὀνομάζεται εἰ μὲν δὴ παχεῖα τὴν σύστασιν εἶη, πᾶν ἐλκοῖ μέχρι τῆς ὑποκειμένης σαρκὸς τὸ δέρμα, καὶ καλεῖ τούτους Ἰπποκράτης ἔρπητας ἐσθιομένους. εἰ δὲ λεπτοτέρα εἶη, τὸ ἐπιπολῆς μόνον ὥσπερ ἐπικάϊει καὶ τοῦτο τὸ εἶδος ἀπηνέγκατο τὴν τοῦ γένους προσηγορίαν, ἀπλῶς τε καὶ χωρὶς προσθήκης ἔρπητος ὀνομασθέν. τῶν γὰρ ἄλλων δυοῖν εἰδῶν τὸ μὲν ἤδη προειρημένον ἐσθιόμενος ἔρπητος ὀνομάζεται, θάτερον δὲ τὸ λοιπὸν κεγχρίας, ὅτι καὶ τούτῳ συμβέβηκε, φλυκταΐνας μικρὰς καὶ πολλὰς ἐπιπολῆς τοῦ δέρματος ἐπεγείρειν, κέγχροις ἐοικυίας. γίνεται δ' ὁ τοιοῦτος ἔρπητος ὑπὸ χολῆς μὲν καὶ αὐτός, ἀλλ' ἦττον δριμείας καὶ θερμῆς ἢ οἱ πρόσθεν.

75K εἰ δ' ἐξ αἵματος καὶ ξανθῆς | χολῆς θερμότερων

in dislocations and fractures, and in spontaneous ulcers. Apart from all these causes, it occurs whenever the veins reach an excessive fullness of humors; at this time the superfluity pours out to some part which is the most ready to receive it under the circumstances. Generally, this part is weaker than the others, or more loose-textured, or draws more readily, or is more motionless from whatever cause, and is susceptible to these conditions. But this is not in fact the matter now before us to discuss.

74K

When yellow bile, preserving its own nature, is borne with the blood all over the body, the affection is called icterus (jaundice). However, when it alone is separated and is established in some part, the affection is termed herpes. If it is thick in consistency, it ulcerates the whole skin down to the underlying flesh—Hippocrates calls this eroding herpes.<sup>2</sup> If it is thinner, it burns up the surface alone and this kind carries the name of the class, being termed simply "herpes" without any addition. Of the two other kinds, the one already spoken about is called "eroding herpes," while the other, remaining one is termed "miliary herpes"<sup>3</sup> because what happens in this is that many small pustules are stirred up on the surface of the skin, resembling millet seeds. This kind of herpes itself arises due to bile, but is less acrid and hot than those previously described.

If, however, the flux is a mixture of blood and bile

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<sup>2</sup> Hippocrates, *Aphorisms*, 5.22.

<sup>3</sup> See Galen, *MM*, X.1008-9K; Johnston and Horsley, *Galen: Method of Medicine*, 3.518-19.

τοῦ δέοντος μικτὸν εἶη τὸ ρεῦμα, ἢ ἐξ αἵματος μὲν, ζέοντος δὲ καὶ λεπτοτάτου τὴν σύστασιν, ἐρυσίπελας τὸ πάθος καλεῖται, θερμότερον πολλῶ τῆς φλεγμονῆς τοῦτο καὶ ξανθότερον ιδέσθαι. καὶ εἰ ἄψαιιο, ὑπερέχει ραδίως<sup>1</sup> τὸ αἷμα καὶ αὐθις ἐπιρρεῖ, λεπτὸν ἀκριβῶς καὶ ἐρυθρὸν φαινόμενον, οὐ μὴν οὐδ' ὀδυνᾶται ὁμοίως τῇ φλεγμονῇ τοῦτο. καὶ κατ' οὐδὲν δὲ τῶν τῆς φλεγμονῆς εἰδῶν οὔτε σφυγμὸν οὔτε θλάψιν οὔτε τάσιν ὁμοίαν ἐπιφέρει, ἀλλ' ἔσθ' ὅτε καὶ πάνν μετρίως ἐνοχλεῖ καὶ μάλισθ' ὅταν κατὰ μόνου τοῦ δέρματος ἐκχυθῆ, μηδὲν ἀδικοῦν τὴν ὑποκειμένην σάρκα· καὶ μὲν δὴ καὶ γίνεται τοιοῦτον ὡς τὰ πολλὰ καὶ τοῦτό ἐστι τὸ ἀκριβὲς ἐρυσίπελας. ὡς τό γε καὶ τῆς ὑποκειμένης ἀπτόμενον σαρκὸς οὔτ' ἐξ ἀκριβῶς λεπτοῦ γίνεται τοῦ ρεύματος οὔτ' ἐρυσίπελάς ἐστι μόνον, ἀλλ' ἤδη μικτὴ διάθεσις ἐξ ἐρυσιπέλατός τε καὶ φλεγμονῆς, ἐπικρατεῖ δ' ἐν αὐτῇ ποτὲ μὲν τὰ τοῦ ἐρυσιπέλατος ἴδια συμπτώματα, καὶ καλεῖται τὸ τοιοῦτον πάθος ὑπὸ τῶν νεωτέρων ἰατρῶν ἐρυσίπελας φλεγμονῶδες· ποτὲ δὲ τὰ τῆς φλεγμονῆς, καὶ ὀνομάζουσιν αὐτὸ τηνικαῦτα φλεγμονὴν ἐρυσιπελατώδη. εἰ δὲ τὰ μηδενότερον | ἐπικρατοῖ σαφῶς, ἀλλ' ἴσα φαίνοιτο, φλεγμονὴ καὶ ἐρυσίπελας μεμίχθαι λέγεται.

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τὸ μὲν οὖν ἀκριβὲς ἐρυσίπελας αὐτοῦ τοῦ δέρματος μόνου πάθος ἐστίν. οὐ μὴν ἢ γε φλεγμονὴ μόνων τῶν ὑποκειμένων τῷ δέρματι μορίων, ἀλλὰ μάλιστα μὲν τούτων, ἐνίοτε δὲ καὶ τοῦ δέρματος. καὶ ἔστιν αὐτῇ τᾶλλα μὲν ὀδυνηρὰ τῆς ἐτέρας οὐδὲν ἦττον, ἄπεστι δ'

which is hotter than it should be, or is from blood that is seething and very thin in consistency, the affection is called erysipelas. This is much hotter than inflammation and is seen to be more yellow. And if you were to touch it, you could easily hold up the blood, which then flows back again appearing entirely thin and red. This is not painful like inflammation and does not bring throbbing pressure or tension like any of the kinds of inflammation. But sometimes it does produce a very moderate disturbance, particularly when the flow is dispersed through the skin alone without harming the underlying flesh. Furthermore, such an affection occurs very frequently; this is genuine erysipelas. When the affection also involves the underlying flesh and arises from a flux that is not entirely thin, it is not erysipelas alone but is now a mixed condition of erysipelas and inflammation. Sometimes in this the specific symptoms of erysipelas prevail; such an affection is called inflammatory erysipelas by the doctors of recent times. At other times, the symptoms of inflammation prevail, and under those circumstances they call this erysipelitic inflammation. If neither clearly prevails, but they seem equal, it is said to be a mixture of inflammation and erysipelas.

76K

Genuine erysipelas is an affection of the skin itself alone. Inflammation is not an affection of the parts underlying the skin alone, but particularly involves these, although sometimes also the skin. This is no less than the other painful affections but throbbing is absent from it.

<sup>1</sup> ὑπερέχει ραδίως Ln; ραδίως ὑποπρέχει K; facile sanguis subterfugit Leon.; sanguis facile suffugit KLat

αὐτῆς ὁ σφυγμός. ὅταν δὲ τὸ ἐπιρρέον αἷμα θερμὸν ἰκανῶς ἢ καὶ παχύ, καθ' ὅτι ἂν μόριον ἀθρόον ἐπιρρῆ, τοῦτο καύσαν ἔλκος ἐσχάραν ἔχον εἰργάσατο. τὸ περίξ δ' αὐτοῦ πᾶν εἰς φλεγμονὴν ἐξαίρει, ζέουσάν τε καὶ δεινῶς ἐπώδυνον. ὀνομάζεται δὲ τὸ τοιοῦτον πάθος ἀνθραξ. ὅταν δὲ τὸ ἐπιρρέον αἷμα ἢ μέλαν καὶ παχὺ καὶ ἰλυῶδες καὶ ζέον, οἷον περ τὸ προειρημένον, ἅμα δὲ καὶ ἰχώρας τινὰς λεπτοὺς μεμιγμένους ἔχη, φλυκταίνας ἐπιπολῆς τοῦ δέρματος ἀνίστησιν, ὁμοίαι ταῖς ἀπὸ πυρὸς ὧν ἐκρηγνυμένων τὸ ἐσχαρῶδες ὑπ' αὐταῖς ἔλκος εὐρίσκεται καὶ ἔστιν ἀνθραξ ἤδη καὶ τοῦτο. τὰ μὲν οὖν τῆς φλεγμονῆς εἶδη τοσαῦτα κατὰ γε τὴν φύσιν αὐτῆν τοῦ πάθους διαιρούμενα.

77K πολλὰ δ' ἂν ἴσως δόξειέ τις παραλελειφθαι | τῷ πληθεὶ τῶν ὀνομάτων ἐξαπατώμενος, οἷον βουβῶνας τε καὶ φύματα καὶ φύγεθλα καὶ ὀφθαλμίας καὶ περιπνευμονίας καὶ πλευρίτιδας καὶ ἄλλα πολλὰ τῶν ὁμοίως ὀνομαζομένων. ἅπαντα γὰρ ταῦτα φλεγμοναὶ μὲν τινές εἰσιν, ἐν οἷς πρόσθεν εἶπον εἶδεσι περιεχομεναι, διαφόρου δ' αὐτῶν ἕκαστον ἔτυχε προσηγορίας, τῶν πρώτως θεμένων αὐτὰς σύνθετον νόησιν αὐτοῦ τε τοῦ πάθους καὶ τοῦ δεδεγμένου ἅμα μέρους αὐτό, δι' ἐνὸς ἐρμηνεύσαι βουληθέντων ὀνόματος. ἔστι γὰρ ὁ μὲν βουβῶν καὶ τὸ φύμα καὶ τὸ φύγεθλον ἀδένων παθήματα. βουβῶν μὲν ἢ φλεγμονή· φύμα δὲ τὸ ταχέως αὐξόμενον καὶ πρὸς ἐκπύησιν ἐπειγόμενον· φύγεθλον δὲ τὸ λεγόμενον φλεγμονῶδες ἐρυσίπελας ἢ ἐρυσιπελατώδης φλεγμονή. οὕτω δὲ καὶ ὀφθαλμία

Whenever the inflowing blood is excessively hot and thick, and is such that it flows to a part suddenly, this brings about a burning ulcer which has an eschar. It stirs everything around about it to inflammation, being fiery hot and exceedingly painful. Such an affection is called anthrax (carbuncle). Whenever the inflowing blood is black, thick, slimy and seething, of the kind previously mentioned, and at the same time is mixed with some thin ichors, it sets up pustules on the skin surface like those when the eschar due to cautery is broken open and an ulcer is discovered under them. And this is also anthrax. Such, then, are the kinds of inflammation divided according to the actual nature of the affection.

Perhaps someone, deceived by the multitude of names, might think many have been left out: names like buboes, tubercles (*phymata*), glandular swellings (*phygethla*), ophthalmias, peripneumonias, pleuritides and many other of those things similarly named. For all these are inflammations included in the kinds I spoke of above, but each of them has acquired a different name, since those who previously first applied a compound name to them thought of both the affection itself and the part receiving this, and wished to explain both through a single name. Thus, buboes, *phymata* and *phygethla* are affections of glands. Buboes is inflammation, *phyma* is what rapidly increases and hastens on to suppuration; what is called *phygethlon* is inflammary erysipelas or erysipelitic inflammation. In this way too, ophthalmia is an inflammation of the natural

μὲν ἢ τοῦ πεφυκότος ὑμένος τῷ κερατοειδεῖ φλεγμονή· πλευρίτις δ' ἢ τοῦ τὰς πλευρὰς ὑπεζωκότος ὑμένος· συνάγχη δὲ φάρυγγος· ἢ περιπνευμονία δὲ τοῦ πνεύμονος· ἐκάστου τε τῶν ἄλλων ἀνάλογον.

78K τὰς μὲν οὖν ἐν τοῖς φαινομένοις μέρεσι τοῦ σώματος φλεγμονὰς ἔτοιμον γνωρίζειν τὰς δ' ἐν τοῖς ἀφανέσιν, αἱ καὶ τοὺς πυρετοὺς ἐπιφέρουσι | πάντως, οὐκέθ' ὁμοίως· ἀλλ' ἐμοὶ μὲν δοκεῖ γνώμης τε πάνυ λεπτῆς ἢ τοιαύτη δεῖσθαι διάγνωσις, ἐμπειρίας τε τῆς φύσεως τῶν μορίων, ἣν ἐξ ἀνατομῆς τε ἅμα καὶ ἀκριβοῦς ἐπιστήμης ἐνεργειῶν τε καὶ χρεῶν ποριζόμεθα· περὶ μὲν δὴ τούτων ἐν ἐτέραις εἶρηται πραγματείας. νῦν δ' οὐκέτ' ἐγχωρεῖ, προστιθέναι τὸν περὶ τούτων λόγον, ἐξαίφνης σοι προσπεσούσης ἀναγκαίας ἀποδημίας, ὅπως δ' ἂν τις τὰς ἐν τοῖς φαινομένοις μορίοις συνισταμένας φλεγμονὰς κάλλιστα ἴδῃτο, τοῦτό σοι πρῶτον δίδεμι τὴν ἀρχὴν ἀπὸ τοῦ πολλάκις τε γιννομένου πάθους καὶ δι' αὐτὸ τοῦτο ὄλου τοῦ γένους τὴν προσηγορίαν ἀπενευκαμένου ποιησάμενος. ἐφ' οὗ τοῦτο πρῶτον ἀπάντων φημὶ χρῆναι σκοπεῖν, ὅπερ καὶ τοῖς ἄλλοις ἅπασι μεγίστην ἔχει δύναμιν, ἐξευρεῖν τὴν πρόφασιν τοῦ νοσήματος.

2. Ἔστι γοῦν μία τις πρόφασις τῶν φαινομένων φλεγμονῶν, οὐ πάνυ τι λαυθάνουσα τὸ καλούμενον ρεύμα, πλὴν εἴποτε συνδράμοι ταῖς δι' ἄλλην τινα πρόδηλον αἰτίαν δοκούσαις γεγενῆσθαι. ἡνίκα μὲν γὰρ οὐδεμίας | ἐκείνων προσηγησαμένης ἐξαίφνης ἐφλέγ-

79K

membrane in the external coat of the eye.<sup>4</sup> Pleuritis is an inflammation of the membrane which covers the lung, cynanche of the pharynx, peripneumonia of the lung; inflammation of each of the other parts is analogous.

It is easy to recognize inflammations in the visible parts of the body; those in the unseen parts, which also generally bring on fever, are not similarly easy to recognize. It seems to me such a diagnosis requires very fine judgment and experience of the nature of the parts which we furnish ourselves with from anatomy. At the same time, it also requires precise knowledge of functions and uses. These matters are spoken of in other treatises.<sup>5</sup> For the present, it is not possible to add the discussion of these, since essential travels abroad have suddenly fallen upon you. So I shall describe for you first how someone might best cure the inflammations existing in the visible parts, starting from the affection which occurs frequently and from which the name of the whole class is taken. In speaking of this, what I need to consider first of all is the discovery of the cause of the disease—a matter which also has the greatest importance in all other instances.

78K

2. There is, at any rate, one cause of the apparent inflammations which is not altogether hidden—that called flux—unless at sometime it acts in conjunction with those things that are thought to occur due to some other obvious cause. When, without the prior occurrence any of those

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<sup>4</sup> For Galen's concept of the structure of the eye, see *UPart.*, 10, III.759–841K (May, *Galen on the Usefulness*, 2.463–503) and particularly 10.15 (III.838–41K).

<sup>5</sup> For example, Galen, *Loc. Aff.*, VIII.1–452K. For an English translation of this work see Siegel, *Galen on the Affected Parts*.



μηνε τὸ μόριον, ἢ μὲν ἐργασαμένη τὸ πάθος αἰτία  
 ρεῦμα καλεῖται, τὸ πάθος δ' αὐτὸ ρευματικὴ διάθεσις.  
 καὶ χρῆ μάλιστ' ἐπὶ τῶν τοιούτων φλεγμονῶν τὰς  
 ἀρχὰς τῶν ἰάσεων χρηστὰς εἶναι. τὰ γὰρ ἐν αὐταῖς  
 ἀμαρτήματα δυσιάτους ἢ καὶ παντάπασιν ἀνιάτους  
 ἐργάζεται τὰς διαθέσεις. μέγιστα δ' ἀμαρτήματα δύο  
 ταῦτα, τό τε μηδεμίαν ὄλου τοῦ σώματος πρόνοιαν  
 ποιεῖσθαι καὶ τὸ θερμαίνειν μὲν καὶ ὑγραίνειν ἔτι τὸ  
 μέρος. ἄμφω δ' οἱ πολλοὶ τῶν ἰατρῶν ἀμαρτάνουσι.  
 τινὲς μὲν γάρ εἰσιν ἐκ τῆς μεθοδικῆς αἰρέσεως ἀνα-  
 πεπεισμένοι καὶ τὰς φλεγμονὰς ἀπάσας στεγνὰ πάθη  
 νομίζοντες καὶ χαλᾶν αὐτὰς ἠγούμενοι δεῖν. εἰσὶ δ' οἱ  
 καὶ ἀλόγως τε καὶ ἀσκέπτως ἐκείνοις ἔπονται, μίαν  
 ἀπολογίαν τοῦ κακῶς ποιεῖν ἔχοντες τὸ σὺν πολλοῖς  
 ἀμαρτάνειν. ἀλλ' οὔτε τῶν δογματικῶν ἰατρῶν τις  
 οὔτε τῶν ἐμπειρικῶν οὕτως ἐγίνωσκεν. ἀλλ' ὅπερ ὁ  
 τε λόγος ὑπαγορεύει καὶ ἡ πείρα, τὸ μὲν ὄλον σῶμα  
 κενοῦν ταῖς ἐνδεχομέναις κενώσεσι συμβουλευούσιν,  
 αὐτὸ δὲ τὸ φλεγμαῖνον μέρος ἐπιβρέχειν τε καὶ κατα-  
 πλάττειν τοῖς ἀπωθεῖσθαι μὲν τὸ ἐπιρρέον | δυναμέ-  
 νοις, κενοῦν δὲ τὸ ἤδη περιεχόμενον ἐν τῷ πεπονθότι  
 τόπῳ· τόνον δὲ καὶ ῥώμην ἐντιθέσθαι τοῖς ἤδη πεπονη-  
 κόσι μορίοις.

εἰς ἃ δὲ χρῆ βλέποντας κενοῦν, εἴρηται μὲν ἤδη  
 καὶ πρόσθεν, ἀλλὰ καὶ νῦν ἔτι δι' ὀλίγων ὑπομνήσο-  
 μεν ὥστε κὰν τοῖς ἐξῆς ἅπασιν μεμνημένου σε μηκέτι  
 δεῖσθαι καθ' ἕκαστον πάθος ἀκούειν τοὺς ἐνδεικνυμέ-  
 νους σκοποὺς τὰς κενώσεις. ἡλικίαν μὲν οὖν καὶ ὄραν

things, the part suddenly becomes inflamed, the cause  
 bringing about the affection is called a flux and the affec-  
 tion itself a "rheumatic" condition. And it is particularly  
 necessary in such inflammations for the beginnings of the  
 cure to be good; mistakes here make the conditions diffi-  
 cult or even impossible to cure. There are two major mis-  
 takes: not to give any forethought to the whole body and  
 to further heat and moisten the part. Many doctors make  
 both these mistakes. Thus, there are some who have been  
 persuaded by the Methodic sect to think of all inflamma-  
 tions as constrictive affections requiring relaxation. And  
 there are those who irrationally and unreflectively follow  
 them, and having a single defense for acting badly, make  
 mistakes along with the majority. But none of the Dog-  
 matic doctors or Empirics think like this. Both reason and  
 experience suggest to them to recommend evacuating the  
 whole body with suitable methods of evacuation and to  
 moisten and apply cataplasms to the inflamed part itself  
 with those things that are able to drive back the inflow  
 while evacuating what is already contained in the affected  
 place, and also to put tone and strength into the parts al-  
 ready affected. 80K

I have already stated previously what must be looked  
 at in relation to evacuation;<sup>6</sup> now I shall also remind you  
 again briefly, so that there is no longer need to remind you  
 further of all these considerations in relation to each affec-  
 tion for you to understand the objectives indicating  
 evacuations. I said it was necessary to look at the age,

<sup>6</sup> See 1.15 above.

καὶ χώραν καὶ τὴν παρούσαν κατάστασιν καὶ τὴν  
 ῥώμην τοῦ κάμνοντος καὶ τὴν ξίω καὶ τὸ ἔθος καὶ  
 αὐτὴν τὴν τοῦ νοσήματος ὑπόθεσιν ἐπιβλέπειν ἐφά-  
 σκομεν δεῖν. ἐκ τούτων γάρ, ὅτε χρή κενοῦν ἢ μὴ  
 κενοῦν καὶ ὅθεν καὶ ὅπως, εὐρεθήσεται, οἷον ἐπὶ τῆς  
 προκειμένης διαθέσεως· εἰς γόνυ φερέσθω τὸ ρεῦμα  
 καὶ τοῦτ' ἐπὶ πλείστον ἀθρόως ἐξαιρέσθω. φαινέσθω  
 δέ σοι καὶ τὸ σύμπαν σῶμα μεστὸν αἵματος καὶ ἡ  
 δύναμις τοῦ νοσοῦντος ἰσχυρὰ καὶ ὁ καιρὸς τοῦ ἔτους  
 ἔαρ ἔστω καὶ τὸ χωρίον εὐκρατον καὶ ὁ νοσῶν μει-  
 ράκιον ἢ νεανίσκος, οὗτος αἵματος κενώσεως τῆς ἐκ  
 τῶν ἄνω χωρίων δέεται καὶ χρή τεμῆν αὐτοῦ τῶν ἐν  
 ἀγκῶνι φλεβῶν, ἤτοι τὴν ἐντὸς ἢ τὴν μέσην.

81K εἰ δὲ τῶν ἄνωθέν τι | ἐπεπόνθει, κάτωθεν ἀπάγειν  
 τοῦ αἵματος. αἰεὶ γὰρ εἰς τοῦναντίον τὴν τοῦ ρεύματος  
 ὀρμὴν ἀντισπᾶν ξυμφέρει. καταπλάττειν δὲ τῷ διὰ  
 τοῦ ἀειζῶου καὶ λεπισμάτων ροιᾶς ἐφθῶν ἐν οἴνῳ καὶ  
 ῥοῦ καὶ ἀλφίτων συγκειμένῳ· κάλλιστον γὰρ τοῦτό γ'  
 ἐν τε τοῖς τοιοῦτοις καὶ πάνθ' ὅσων δεόμεθα δρᾶν  
 δυνάμενον. ἀποκρούεται γὰρ τὸ ἐπιρρέον καὶ ξηραίνει  
 τὸ περιεχόμενον καὶ ῥώννυσσι τὰ περίξ μόρια. καὶ  
 ἄλλα δὲ μυρία φάρμακα κατὰ τὸν αὐτὸν τρόπον ἐν-  
 εστί σοι συντιθέναι. ὦν τὴν μέθοδον τῆς συνθέσεως  
 ἐν τοῖς περὶ φαρμάκων μεμάθηκας. ὅθεν καὶ γὰρ καθ'  
 ἕκαστον ἐν τί σοι παραγράψω καὶ ὑπόμνημά τε ἅμα  
 καὶ παράδειγμα τῆς τῶν ἄλλων δυνάμεως ἐσόμενον.  
 εἰ μὲν δὴ μὴ σφοδρῶς ὀδυνῶντο, τοῖς τοιοῦτοις χρή-  
 σθαι· σὺν ὀδύνῃ δὲ μείζονι τοῦ ρεύματος ἐμπεσόντος

season, place, prevailing climatic conditions, the strength  
 of the patient, his state and customs, and what was actually  
 underlying the disease. It is from these things you will  
 discover when you must evacuate and when not, and from  
 where and how, as in the case of the condition being pre-  
 sented. Suppose the flux is carried to the knee and this  
 suddenly becomes markedly swollen. Suppose it is appar-  
 ent to you also that the whole body is full of blood and the  
 capacity of the patient is strong. Suppose the time of the  
 year is spring, the place *eukratic*, and the one who is ill an  
 adolescent or young man. This person needs evacuation of  
 blood from the places above and you must cut one of his  
 veins in the antecubital fossa—either the internal or the  
 medial.

If, however, one of the parts above has been affected,  
 draw the blood downward, for it is always of benefit to  
 repel the movement of the flux in the opposite direction.  
 Apply cataplasms compounded from houseleek and flakes  
 of pomegranate boiled in wine, and sumac and barley-  
 groats, for this is best in such affections and we need to do  
 everything possible—drive away the influx, dry out what  
 is contained, and strengthen the surrounding parts. You  
 can also synthesize countless other medications in the  
 same way. I have taught the method of synthesis of these  
 in the treatises on medications.<sup>7</sup> I shall add for you one  
 example of each case as a reminder, as well as giving ex-  
 amples of the potencies of the others. If there is not severe  
 pain, use such medications. However, if more severe pain

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<sup>7</sup> *Simpl. Med.*, XI.379–892K and XII.1–377K; *Comp. Med. Loc.*, XII.378–1007K and XIII.1–361; and *Comp. Med. Gen.*, XIII.362–1038K.

οὐ χρῆ μὲν οὐδ' οὕτως οὐδ' ὕδωρ θερμὸν οὐτ' ἔλαιον οὐτε τὰ διὰ τῶν πυρίνων ἀλεύρων προσφέρειν καταπλάσματα. πολέμια γὰρ ἅπαντα τὰ τοιαῦτα ταῖς ρευματικαῖς διαθέσει, κἂν εἰ παραχρῆμα δόξειε ραστώνην τινὰ φέρειν. ἀρκεῖ δὲ τῶν τοιούτων τινὶ παραμυθήσασθαι τὸ σφοδρὸν | τῆς ὀδύνης, ὅσα διὰ γλυκέος τε καὶ ῥοδίνου καὶ κηροῦ βραχέος ἐν ἀμφοῖν τετηκότος σύγκειται. χρῆ δὲ καὶ ταῦτ' ἀναλαμβάνειν ἐρίοις ῥυπαροῖς, οἷσιν ὡς πλείστον ἔχουσι καὶ θέρουσ μὲν ψυχρά· χειμῶνος δὲ χλιαρὰ προσφέρειν. οὕτω δὲ καὶ τὰ καταπλάσματα δι' ἀρνογλώσσου καὶ φακῆς καὶ ἄρτου καὶ ῥοδίνου.

82K

μικρὸν δ' ὑπεράνω τῶν πεπονθότων χωρίων ἐπιτιθέναι σπόγγον οἴνω στρυφνῶ βεβρεγμένον ἢ ὕδατι ψυχρῶ· κάλλιον δ' εἰ καὶ ὄξους ὀλίγον ἔχοι. καὶ εἰ μὲν ἐπὶ τοιούτοις ἀξιόλογός τις ὠφέλεια γένοιτο καὶ μηδαμοῦ πῦον ὑποφαίνοιτο, τοῖς πρὸς τὰ ρεύματα μαλθακοῖς ἐμπλάστοις δεῖ χρῆσθαι· κάλλιστα δ' αὐτῶν, ὅσα ξηραίνειν τε ἅμα καὶ ἀπωθεῖσθαι δύναται τὸ ἐπιρρέον αἷμα χωρὶς ὀδύνης. ὥστε τὰ γε συντίνοντα σφοδρῶς καὶ διὰ τοῦτο ὀδυνῶντα πλείον ἀδικεῖ τοῖς ἀλγῆμασιν ἢ ὠφελεί ξηραίνοντα. τοιούτων οὖν εἶναι χρῆ τὸ φάρμακον, οἷον ἐστὶ τὸ σύννηθες ἡμῖν τὸ διὰ τῆς χαλκίτεως ἀνιέμενον ῥοδίνω. εἰ δὲ καὶ καθαρὸν ἔριον οἴνω στρυφνῶ βρέχων ἕξωθεν ἐπιβάλλοις αὐτῶ, πλέον ὀνήσεις. ὑποφαινομένου | δὲ κατὰ τὸ μόριον πύου, καταπλάττειν μὲν ἀναγκαῖον ἅπαξ ἢ δὶς πού.

83K

arises from a flux, you must not use hot water or oil in this way, or apply cataplasms made from wheat flour. All such things are inimical in the rheumatic conditions, even if it seems easy to apply them immediately. It is enough to assuage the violence of the pain with one of those medications that are compounded from grape syrup and oil of roses with a little wax dissolved in both. And it is necessary to take up the grease from dirty sheep's wool, as much as there is, and apply this cold in summer or lukewarm in winter. Also use the cataplasms made from plantain, lentils, bread and oil of roses in the same way.

82K

A little above the affected place apply a sponge moistened with astringent wine or cold water. It is better if there is also a little vinegar. If there is some worthwhile benefit due to such things and no pus comes to light, you need to use mild plasters for the fluxes. The best of these are those that dry and at the same time are able to repel the blood flowing in without pain. As for those things that stretch violently, they do more harm by causing pain than they do good by drying. There must, then, be some such medication like that which is familiar to us made from copper moderated with rosewater. Also, if you apply it externally, pure sheep's wool moistened with astringent wine will bring considerable benefit. However, when pus reveals itself in the part, it is essential to apply a cataplasm once or possibly twice. And it is better for present pur-

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καὶ ἄμεινον εἰς τὰ παρόντα τὸ ἐκ τῶν κριθῶν ἄλευρον. παραπλέκειν δ' ὁμοίως τι κἂν τούτοις ἢ ὄξους ἢ οἶνον.

καὶ διελόντα καὶ κενώσαντα τὸ πῦον φυλάττεσθαι μὲν τοῦ λοιποῦ προσφέρειν ἔλαιον ἢ ὕδωρ. καὶ εἰ ἀπονώμην ποτὲ δέοι τὸ τραῦμα, μελικράτω τε ἢ ὄξυκράτω καὶ οἶνω καὶ οἶνομέλιτι χρηστέον. ἐπιτιθέναι δέ, εἰ μὲν ἔτι φλεγμαῖνοι, τὸ διὰ τῆς φακῆς κατάπλασμα. μὴ φλεγμαίνοντος δὲ τῶν τε ἄλλων φαρμάκων τι τῶν ἐμπλαστών, οἷς ἐπὶ ταῖς τοιαύταις τομαῖς χρώμεθα καὶ οὐχ ἥκιστα γε τῷ διὰ τῆς χαλκίτεως. ἐπιτιθέναι δὲ κατ' αὐτῶν ἕξωθεν σπόγγον ἢ ἔριον οἶνω βρέχοντας στρυφνῶ. μὴ παρόντος δὲ τοῦ στρυφνοῦ, τῷ ὕδατι μίξαινας ὄξους τοσοῦτον, ὡς πίνειν δύνασθαι, τούτω βρέχειν. ἐπιτήδειοι δ' εἰς ταῦτα καὶ ὅσοι θαλάττης ἔχουσιν οἶνοι. καὶ αὐτὸς δ' ἂν ἐπὶ τοῦ καιροῦ τεχνήσαιο, μιγνύων ἁλῶν τῷ παρόντι τῷ δὲ τραύματι μηδὲν τῶν λιπαινόντων φαρμάκων προσφέρειν, | οἷον τό τε Μακεδονικόν ἐστὶ καὶ τὸ τετραφάρμακον καλούμενον ἀκριβῶς γὰρ δέτται ξηραίνεσθαι. οὕτω μὲν ἰᾶσθαι δεῖ τὰς ἐπὶ ῥεύματι φλεγμονάς.

84K

3. Τὰς δ' ἐπὶ τινι τῶν ἄλλων αἰτίων ὑγραίνειν τε καὶ θερμαίνειν οὐδὲν κωλύει. καὶ εἰ ἐκπτυῆσαι βουληθείης αὐτάς, καταπλάττειν ἀλεύρω πυρίνω δι' ἔλαιου τε καὶ ὕδατος ἠψημένω. καὶ εἴποτε καὶ ἀποσχάζειν δεήσειεν, οὐδὲ τοῦτο χρὴ δεδιέναι. τὰς δ' ἐπὶ τοῖς ῥεύμασιν εἰ ἀποσχάσαις, μέγα τι κακὸν ἐργάσῃ καὶ

poses to apply one made from barley meal. Mix either vinegar or wine with these in the same way.

After incising [the part] and evacuating the pus, apply oil or water to preserve what remains. And if, sometimes, you need to wash the wound clean, you must use melikratos, oxykratos, wine or a wine-honey mixture. If there is still inflammation, apply the cataplasm made with lentils. If there is no inflammation, apply one of the other emplasitic medications which we use after such incisions, and not least that made with copper. Place externally on these a sponge or wool moistened with astringent wine. If nothing astringent is available, mix vinegar with water such that one could drink it, and moisten with this. Also suitable for these things are those wines that have seawater in them. And you yourself will contrive this, when the occasion demands, by mixing salt with whatever wine you have. Apply none of the anointing medications to the wound, like the Macedonian and the so-called tetrapharmaceutical because you need to dry completely.<sup>8</sup> This is how you need to treat the inflammations due to flux.

84K

3. Nothing prevents moistening and heating the inflammations due to one of the other causes. And if you wish these to suppurate, apply a cataplasm of wheat meal boiled with oil and water. If you ever need to scarify also, you must not be afraid to do this. However, if you scarify the inflammations due to fluxes you will do great harm,

<sup>8</sup> On these compound medications see Galen's *MM*, 10.882–83; Johnston and Horsley, *Galen: Method of Medicine*, 3.328–31.

μάλιστ' εἰ κατ' ἀρχάς. ὅσαι γὰρ αὐτῶν χρόνου πλείονος οὔσαι μετὰ τε τὴν τοῦ παντὸς σώματος κένωσιν καὶ τὴν ἄλλην τὴν προσήκουσαν ἴασιν σκληρότητάς τινας ἢ μελανότητάς ἐν τοῖς μέρεσιν ὑπολειπομένας ἔχουσι, τούτων ἀπάγειν τοῦ αἵματος οὐδὲν ἄτοπον οὔτε γὰρ φλεγμονὰς τὰς γε τοιαύτας ἔτι νομιστέον ὥσπερ οὐδὲ ἐρυσίπελας ἔτι τὸ ἤδη πελιδνόν. καὶ γὰρ οὖν καὶ τοῦτο κατὰ τὰς ἀρχὰς μὲν ψύχειν χρῆ καὶ μάλισθ' ὅταν ἄνευ φανερᾶς γένηται προφάσεως. ἡνίκα δ' ἤδη τὸ ζέον ἀπεστιν αὐτοῦ, καὶ σχάσαι συμφέροι καὶ καταπλάσαι θερμῷ τῷ κριθίνῳ καὶ κηρωτὴν καὶ ἄλλο τι φάρμακον ἐντιθέναι τῶν διαφοροῦντων. οὐ μὴν ἀπὸ γε φλεβὸς αἷμα τῶν γε τοιούτων κενοῦν ἀναγκαῖον, ἀλλ' αἱ διὰ τῆς κοιλίας ὑποκαθάρσεις ἀρκούσι. διδόναι δὲ φάρμακον, ὃ χολὴν ξανθὴν ἄγει. μικροῦ δ' ὄντος τοῦ παθήματος οὐδὲ τοῦτ' ἀναγκαῖον, ἀλλ' ἀρκεῖ κλύσαι δριμύει.

τὰ δ' ἐφ' ἔλκεσιν ἐρυσιπέλατα καὶ ὅσα οὕτω φανερᾶς ἔχει τὰς αἰτίας, οὐδ' εἰ παραχρῆμα βούλοιο καταπλάττειν ἀλεύρῳ κριθίνῳ καὶ μάλιστα καὶ προαποσχάσας, οὐδὲν βλάβεις. τὰς δὲ φλεγμονὰς τὰς ἐρυσιπελατώδεις καὶ τὰ φλεγμονώδη τῶν ἐρυσιπελάτων ἰᾶσθαι, μικτὴν μὲν ὡς οἶόν τε ποιούμενον τὴν ἐπιμέλειαν, ἐναντιούμενον δ' αἰεὶ τῷ μᾶλλον κρατοῦντι. καὶ βουβῶνων δὲ καὶ φυμάτων καὶ φνυγέθλων παραπλησίαν ταῖς ἐν τοῖς ἄλλοις μέρεσι γιγνομέναις ὁμοίαις διαθέσεσι τὴν ἐπιμέλειαν ποιείσθαι, πλὴν

and particularly if you do so at the beginning. Inflammations that have persisted for a long time after evacuation of the whole body and other appropriate treatment have a residual hardness and blackness in the parts, so it is not untoward to lead the blood away from these, for you must not still consider such things as inflammations, just as you must not still consider as erysipelas what is already livid. Therefore, you must also cool this at the beginning, and particularly when it arises without an apparent cause. When its seething has already gone, it is also helpful to scarify and apply cataplasms with warm barley and and to put in wax or another of the dispersing medications. It is not necessary to evacuate blood from a vein in such cases; downward evacuations through the belly are sufficient. Give a medication which drives out yellow bile. If the affection is small, this is not necessary; an acrid clyster is enough.

With the erysipelitades due to wounds or ulcers and those that have obvious causes like this, if you don't want to apply a cataplasm of barley meal immediately, and particularly to also scarify first, you will do no harm. To cure the erysipelitic inflammations and the inflammatory erysipelitades, prepare as far as possible a mixed cure, always opposing more what prevails. In buboes, *phymata* and *phygethla* make the treatment similar to that for similar conditions occurring in other parts, apart from those, like

85K

85K

ὄσα δριμντέρων φαρμάκων ἐπὶ τοῖς αὐτοῖς παθήμασι  
ἀνέχεσθαι πεφύκασιν, ὡς ἀδένες.

86K τοὺς δ' ἔρπητας τὰ μὲν περὶ τὴν τοῦ σώματος ὄλου  
κένωσιν ὁμοίως τοῖς ἐρυσσιπέλασιν ἰᾶσθαι προσήκει.  
τὰ δὲ περὶ τὴν αὐτοῦ τοῦ πεπονθότος μέρους οὐκ ἔθ'  
ὁμοίως. ἅπαντες γὰρ οἱ ἀναβιβρωσκόμενοι ψύχεσθαι  
μὲν ἐθέλουσιν, ὡσαύτως τοῖς ἄλλοις ἔρρησί τε καὶ  
ἐρυσσιπέλασιν οὐ μὴν ὄσα γε σὺν τῷ ψύχειν καὶ  
ὑγραίνειν φάρμακα πέφυκε, ταῦτά γ' ἔτι φέρουσιν,  
ἀλλὰ μόνον τῶν ψυχόντων προσίενται τὰ ξηραίνειν  
μάλιστα δυνάμενα. μὴ τοίνυν μήτε θριδακίνην αὐτοῖς  
μήτε πολύγονου μήτε τὸν ἀπὸ τῶν τελμάτων φακὸν ἢ  
τὸν ἔλειον λωτὸν ἢ ἀνθύλλιον ἢ ψύλλιον ἢ ἀνδράχην  
ἢ σέριν ἢ αἰίζων ἢ τι τῶν οὕτως ὑγραίνειν τε καὶ  
ψύχειν δυναμένων προσφέρειν, ἀ τοῖς ἐρυσσιπέλασιν  
ἦν οἰκεία. ἀλλὰ μήτε σπόγγω ποτὲ θαρρήσης ὕδατι  
ψυχρῷ βεβρεγμένῳ μήτε στρύχνῳ, καὶ τοι καὶ τοῦτο  
ξηραίνειν τε καὶ ψύχειν πέφυκεν, ἀλλὰ μετρίως. οἱ δ'  
ἄρα σφοδροτέρας ἢ κατὰ τὸν στρύχνον δέονται ξη-  
ρότητος. ἐπιπλάττειν οὖν αὐτοῖς χρὴ κατ' ἀρχᾶς μὲν  
ἔλικας ἀμπέλου καὶ βάτου καὶ κυνοσβάτου καὶ ἀρνο-  
γλώσσου. μετὰ δὲ ταῦτα τὴν τε φακὴν μινύειν δεῖ  
καὶ μελιτός ποτε καὶ ἀλφίτων καὶ τὸ προγεγραμμένον  
87K πρὸς τὰς ἐκ ρεύματος φλεγμονὰς κατάπλασμα, περι-  
ελὼν αὐτοῦ τὸ | αἰίζων.

αὐτὰ δὲ τὰ ἡλκωμένα κατάχριε φαρμάκοις τοῖς  
πρὸς ἔρπητας ἐπιγεγραμμένοις. ἐν ταῖς φαρμακίτισι

the glands, that are naturally able to tolerate more acrid  
medications in these affections.

With regard to the evacuation of the whole body, it is  
appropriate to treat the herpetides like the erysipelitates.  
With regard to the evacuation of the affected part itself, 86K  
this is no longer the case. All those who suffer erosions  
wish for cooling in the same fashion as in the other her-  
petides and in the erysipelitates, but they don't tolerate  
those medications which by nature combine cooling and  
moistening; they only accept the cooling agents that are  
particularly able to dry. Accordingly, do not, in them, apply  
lettuce, knotgrass, lentils from the marshes, clover from  
the meadows, or anthyllim, fleawort, purslane, endive or  
houseleek since these are able to moisten and cool, which  
is suitable for the erysipelitates. But neither should you  
be confident at any time about using a sponge moistened  
with cold water or sleepy nightshade, for although this is  
certainly drying and cooling by nature, it does so only  
moderately. They need a stronger drying than that of  
sleepy nightshade. Therefore you must apply plasters to  
them from the start, made with the tendrils of crack wil-  
low, bramble, white rose and plantain. After these, you  
need to mix lentils and honey on occasion and barley  
and the cataplasm previously written about in relation  
to the inflammation from a flux, taking away from it the 87K  
houseleek.<sup>9</sup>

For the ulcers themselves, anoint with the medications  
for the herpetides written about in the pharmacological

<sup>9</sup> See chapter 2 above (81K).

βίβλοις. πολλὰ δ' ἐστὶ ταῦτα παρὰ πᾶσι καὶ εἰς κυκλίσκους ἀναπλάττεται τὰ πλείστα καὶ δεῖται χρωμένους ἀνίσσθαι γλυκεῖ. μὴ παρόντος δὲ γλυκέος, οἴνω λεπτῷ τε καὶ λευκῷ καὶ ὑποστύφοντι, οἶος ὃ τε Φαλερίνος καὶ ὁ Μασσαλιώτης καὶ ὁ Σαβίνος καὶ Ἀδριανὸς καὶ Ἀρσύϊνος, μηδέπω μηδὲν ἐν τῇ γεύσει δριμύδιὰ παλαιότητα κεκτημένοι. καὶ ὀξύκρατῳ δ' ὕδαρεῖ ποτε χρῆσάμενος ἀντὶ τούτων οὐδὲν ἦττον ἂν ἔχους. ἤδη δὲ καὶ χρονιζομένων τῶν ἐλκῶν μήτε γλυκεῖ λύειν τοὺς κυκλίσκους μήτε ὕδαρες ἔτι τὸ ὀξύκρατον ἔστω. καὶ τῶν οἴνων δ' ὅσοι στύφουσιν ἰκανῶς ἀγαθοῦ μάλιστα μὲν οἱ μέλανες, εἰ δ' ἀπορούμεν αὐτῶν, λευκοί. φάρμακα δ' ἐν τῷδε τῷ καιρῷ μάλιστα μὲν ἀρμόσει αὐτοῖς, τό τε τοῦ Πολυεῖδου καὶ Πασίωνος καὶ τὸ Μούσα καὶ τὸ Ἄνδρωνος, ὅσα τ' ἄλλα τούτους ἔοικε. τοὺς δὲ τὰ ἐπιπολῆς μόνον ἐλκούντας ἔρπητας, εἰ μὴ πάνν τι κεχρονικότες εἶεν, οὐδὲν χρῆ καταχρίειν τούτων, καίει γὰρ ἰσχυρῶς καὶ ξηραίνει σφοδρῶς, ἀλλ' ἀρκεῖ τοῖς | τοιούτοις ἔρρησι, ὅσα κατὰ γλαυκίου δύναμιν ἐστὶ φάρμακα, λύεσθαι δὲ μάλιστα μὲν ὕδατι. μηδὲν δ' ἀνύοντος αὐτοῦ καὶ ὄξους παραπλέκειν. εἰ δὲ καὶ στρύχνου δεύσειας χυλῷ ἢ ἀρνογλώσσου, μειζόνως ὠφελήσεις.

ἐν δὲ τῷ καθόλου τούτῳ σε γιγνώσκεις χρῆ ἐπὶ

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treatises.<sup>10</sup> There are many of these everywhere, and the majority are made up into troches; when used, they need to be dissolved with grape juice. However, if there is no grape juice available, dissolve them with wine that is thin, white and slightly astringent, such as the Falernian, that from Marseilles, the Sabine, Adrianian and Ariusian which haven't yet acquired any pungency in taste due to age.<sup>11</sup> Sometimes, instead of these, use oxykratos that is watery, which is no less good. If the ulcers are already chronic, do not dissolve the troches in grape syrup and do not let the oxykratos be watery. Of the wines, those that are sufficiently astringent are very good, particularly those that are dark. But if you are without these, use the white. Of the medications which are particularly suitable for them at this time there are the [troches of] Polyides, Pasion, Musa, Andron and those others that are like these.<sup>12</sup> With respect to the herpetic ulcerations which are only superficial, unless they are very chronic, it is unnecessary to anoint with these things because they burn strongly and dry strongly. Sufficient for such herpetides are those medications which have the potency of glaucium, especially when dissolved in water. If this accomplishes nothing, mix in vinegar. If you also mix with the juice of sleepy nightshade or plantain, you will help more.

88K

In general, you must know in the case of every ulcer

<sup>10</sup> See, for example, *Simpl. Med.*, XI.391, 419, 439K, and XII.42 and 53K, and *Comp. Med. Gen.*, XIII.752, 808 and 836-37K.

<sup>11</sup> On the various wines, see Galen, *MM*, X.830-37K, and *San. Tuend.*, 5.5. See also McGovern, *Ancient Wine*, and Seltman, *Wine in the Ancient World*.

<sup>12</sup> See note 44.

παντὸς ἔλκουσ εἶτ' αὐτομάτως εἶτ' ἀπὸ συμπτώματος εἶτε καὶ τρωθείσιν εἴη γεγεννημένον, ὡς ξηραίνεσθαι μὲν αἰεὶ βούλεται, φαρμάκῳ δ' ὡς Ἱπποκράτης φησὶ μὴ περισκελεῖ τουτέστι μὴ δάκνουσι, μηδ' ἐρεθίζουσι σφοδρῶς, πλὴν εἰ μὴ κακότηές τε καὶ μετὰ σήψεως εἴη. τὰ γὰρ τοιαῦτα δριμυτάτων δεῖται φαρμάκων καὶ πυρὶ τὴν δύναμιν εὐκότων, οἶόν ἐστι τό τε μίσυ καὶ ἡ χαλκίτις καὶ ἀρσενικὸν καὶ τίτανος καὶ σανδαράχη· καὶ γὰρ οὖν καὶ καίει παραπλησίως τῷ πυρὶ τὰ τοιαῦτα φάρμακα· πολλάκις δὲ καὶ τούτων νικωμένων αὐτῷ τῷ πυρὶ χρώμεθα. ταῦτ' ἄρα καὶ τοῖς καλουμένοις ἀνθραξι κατ' αὐτῆς τῆς ἐσχάρας, ἔνθα μάλιστα σήπεται τὸ μορίον, ἢ τῶν τοιούτων φαρμάκων ἰδέα πρόσφορος, οὐ μὴν τῷ περίξ χωρίῳ, λήσεις γὰρ αὐτὸς ἐλκώσας αὐτὰ εἰς μηδὲν δέον, ἀλλὰ τοῖς προειρημένοις κυκλίσκοις χρηστέον, οἷος ὁ Ἄνδρωνιος. εἰ δέ ποτε ἔρευθος ἐπικρατοῖη καὶ πολλὴ φλόγωσις, ἀνιέναι χρὴ γλυκεῖ τὸ φάρμακον ἢ ἀρνογλώσσου χυλῷ. εἰ δ' ὄγκου μέγεθος ὑπάρχει, οἶνω μὲν στρυφνῷ τὸ πρῶτον, ἔπειτα δὲ καὶ ὄξει. καταπλάττειν δὲ τῷ τῶν ὀρόβων ἀλεύρω δι' ὄξυμέλιτος· καὶ πρὸ τούτων ἀπάντων εὐθὺς κατ' ἀρχὰς ἀφαιρεῖν αἵματος ἰκανόν, ἣν γε μηδὲν κωλύη.

4. Τοιαῦται μὲν τινες αἱ τῶν τοιούτων παθῶν ἰάσεις κατὰ γένος· ἐξαλλάττονται δὲ παρὰ τὰς τῶν πεπονθότων ὀργάνων φύσεις. τέτταρες δὲ ἀπὸ τούτων ἐνδείξεις εἰσὶν, ἐκ τῆς κράσεως αὐτῶν, ἐκ τῆς διαπλάσεως, ἐκ τῆς θέσεως, ἐκ τῆς δυνάμεως. ἐκ μὲν τῆς κράσεως,

whether it is spontaneous, from a symptom, or has occurred due to a wound, as the wish is always to dry with a medication which, as Hippocrates says,<sup>13</sup> is not harsh—that is to say, is neither biting nor strongly irritating—providing there is no *kakoethia* with putrefaction. For such things need very acrid medications which are similar in potency to fire—for example, misu, chalcitis, yellow orpiment, gypsum and realgar (red sulfate of arsenic), for such medications also burn like fire. And often, when these are overcome, we use fire itself. We use these things also in the so-called anthraces (carbuncles) on the eschar itself, and especially where the part is putrefied. The appropriate kind of application of such medications avoids the surrounding area, for otherwise you will inadvertently extend the ulceration unnecessarily. But you must use the previously mentioned troches, such as the Andronian. If, however, at some time redness prevails and there is much *phlogōsis* (burning heat), you must dissolve the medication in grape juice or the juice of plantain. If a sizable swelling exists, first use wine that is astringent, then also vinegar. Apply a cataplasm made from oxymel with meal of vetch. And right at the start, before all these things, draw off a sufficient amount of blood if nothing contraindicates this.

4. Such are the treatments of these kinds of affections according to class. They change according to the natures of the affected organs. There are four indications from these: from their *krasis*, from their conformation, from their position and from their capacity. It is from the *krasis*,

<sup>13</sup> See Hippocrates, *Ulcers*, 1.



90K εἰ τὰ μὲν αὐτῶν ξηρότερα φύσει, τὰ δ' ὑγρότερα, τὰ δὲ ψυχρότερα, τὰ δὲ θερμότερα γέγονε· καὶ κατὰ συζυγίαν ἢ ὑγρότερα καὶ θερμότερα ἢ ὑγρότερα καὶ ψυχρότερα ἢ ξηρότερα καὶ θερμότερα ἢ ξηρότερα καὶ ψυχρότερα ἢ κατὰ πᾶν εὐκράτα. καὶ χρὴ σκοπὸν εἶναί σοι ἐν ταῖς θεραπαίαις τὴν φύσιν τοῦ μορίου. τὸ γὰρ μέχρι πόσου ψυκτέον ἢ ξηραυτέον αὕτη διδάσκει. τὰ γὰρ | σαρκώδη φλεγμαίνοντα βραχέως δέεται ξηραίνεσθαι· καὶ μὲν δὴ καὶ ὅσα φλεβώδη, κἂν ἢ μᾶλλον τῶν σαρκωδῶν ξηρότερα, ἀλλ' οὐδ' αὐτὰ γε ἰκανῶς. ὅσα δ' ἀρτηριώδη τὴν φύσιν ἐστὶ μόρια, μᾶλλον ἔτι τῶν φλεβωδῶν καὶ τούτων ἔτι μᾶλλον τὰ νευρώδη, καὶ πολὺ δὴ μᾶλλον τούτων ὅσα χονδρώδη καὶ ὀστώδη. πρὶν γὰρ εἰς τὴν οἰκείαν ἐπανέλθω φύσιν τὸ μέρος, οὐδέπω τέλος ἡγητέον ἔχειν τὴν ἴασιν. ἐπανάγει δ' εἰς τὴν ξηροτέραν μὲν κρᾶσιν, ὅσα φύσει ξηρότατα· εἰς δὲ τὴν ψυχροτέραν ὅσα ψυχρότατα. καὶ κατὰ τὰς ἄλλας δὲ δύο ποιότητος ὁμοίως· εἰς δὲ τὸ μέτριον ἐν ἐκάστη τὰ μέτρια. οὕτω μὲν αἱ κράσεις τῶν μορίων ποικίλλουσι τὰς τῶν παθῶν θεραπαίας.

91K αἱ δὲ διαπλάσεις ὡδί· τὰ μὲν γὰρ ἔνδον αὐτῶν εὐρύτητας ἔχει, τὰ δ' ἐξῶθεν, τὰ δ' ἐκατέρωθεν, τὰ δ' οὐδετέρωθεν· οἷον τῶν μὲν ἀπλῶν αἱ ἀρτηριαὶ καὶ αἱ φλέβες καὶ νεύρα· αἱ μὲν ἐν τοῖς κόλλοις ἔνδον αὐτῶν· αἱ δ' ἐντὸς περιτοναίου καθ' ἑκάτερα· νεύρα δὲ τὰ μὲν ἐν τοῖς κόλλοις, καθ' οὐδέτερον· ὅσα δ' ἐντὸς περιτοναίου, κατὰ θάπερον. τοῖς δὲ σπλάγχνοις σχεδὸν ἀπασιν ἔνδοθεν τε καὶ ἐξῶθεν εἰσὶν | εὐρυχωρίαί με-

if they have become drier, moister, colder or hotter in nature; there are also conjunctions of moister and hotter, moister and colder, drier and hotter, or drier and colder, and there is entirely *eukratic*. Your indicator in the treatments must be the nature of the part. This teaches how much you must cool or dry. Thus, when the fleshy parts are inflamed, they need to be dried slightly, as do the vein-like parts also,<sup>14</sup> even if they are more dry than the fleshy, but not excessively so. Those parts that are artery-like in nature need to be dried more than the vein-like, and still more than these, the nerve-like, and much more than these, those that are cartilaginous and bony. Until the part returns to its proper nature, the cure cannot be considered complete. Those medications that are by nature very dry, return the part to a drier *krasis*, those that are very cold to a colder *krasis*, and similarly with the other two qualities. Those that are moderate restore moderation in each case. In this way the *krasias* of the parts are diverse in terms of the treatments of the affections.

With the conformations it is as follows: some are very wide within, some without, some both and some neither. Of the simple parts, there are the arteries, veins and nerves. The arteries and veins of the limbs have internal spaces; those in the peritoneum have both [internal and external spaces]. The nerves in the limbs have neither; those in the peritoneum have one or the other. In almost all the internal organs there are very large spaces inter-

<sup>14</sup> On this term, see Galen, *UPart.*, 6.10 (III.444K ff.), and *Diff. Puls.*, VIII.737K.

γάλαι, καὶ προσέτι καὶ ἡ σὰρξ αὐτῆ ἢ μὲν τοῦ πνεύμονος μαρῆ· ἔμπαλιν δ' ἡ τῶν νεφρῶν πυκνοτάτη καὶ μετὰ ταύτην ἡ τοῦ ἥπατος. ἡ δὲ τοῦ σπληνὸς εἰς ὅσον πυκνότερα τῆς τοῦ πνεύμονος, εἰς τοσοῦτον μαρωτέρα τῆς τοῦ ἥπατος. ἐν ἅπασιν οὖν τούτοις ὅσα μὲν οὐδετέρωθεν ἔχει κοιλότητος ἐκδεχομένης τὸ περιττὸν τοῦ ρεύματος, ἰσχυρῶς δεῖται ξηραίνεσθαι, κἂν μὴ πάνυ ξηρὰ τὴν φύσιν ἦ, καθάπερ τὰ νεῦρα καὶ μάλιστα τὰ ἐν τοῖς κώλοις. ὅσα δ' ἔξω τε καὶ εἴσω δύναται χαλάσαι τι τῆς φλεγμονῆς, οὐδὲν δεῖται τά γε τοιαῦτα τῶν ἰκανῶς ξηραινόντων καὶ μάλιστ' εἰ χαύνην ἔχει τὴν σάρκα, καθάπερ ὁ πνεύμων.

ἡ δ' ἀπὸ τῆς θέσεως ἔνδειξις οὐδ' αὐτῆ παροπτέα· δι' ὧν τε γὰρ χρῆ κενῶν καὶ ὅπως καὶ ὅθεν, αὐτῆ μάλιστα διδάσκει. τῶν μὲν οὖν ἔτι ἐπιρρέοντων ἢ ἀντίσπασις, οὕτω γὰρ ὁ Ἱπποκράτης ὀνομάζει, τῶν δ' ἤδη κατεληφῶτων τὸ μόριον ρευμάτων, ἡ παροχέτευσις ἴαμα. ἄμφω δὲ τὰ εἶδη τῆς κενώσεως διὰ τῶν κοινῶν ποιέσθαι κελεύει φλεβῶν. οἷον τὰς ἐπὶ μητρῶν ἀντισπάσεις, εἰ τὴν ἐν ἀγκῶνι τέμνοις φλέβα ἢ 92K παρὰ τοὺς τιθθοὺς σικίας προσβάλλοις ἢ εἰ τὰς χεῖρας θερμαῖνοις τε καὶ ἀνατρίψαις καὶ διαδήσαις. παροχετεύσεις δὲ τὰς ἐν ἰγνύαις ἢ σφυροῖς διαιρῶν καὶ σικίας μηροῖς προσβάλλων καὶ θερμαίνων καὶ ἀνατρίβων καὶ διαδῶν τὰ σκέλη. καὶ εἰ μὲν ἡ δεξιὰ μήτρα πεπόνθοι, ἐκ δεξιᾶς χειρὸς καὶ σκέλους ἀπάγων τὸ αἷμα. τῆς δ' ἀριστερᾶς πεπονθυίας ἐκ τῶν ἐν ἐκείνῃ κατ' εὐθὺ κώλων. τὸ γὰρ καθ' ἕξιν ὑπ' αὐτοῦ

nally and externally. And over and above this, the actual flesh of the lung is loose in texture. Contrariwise, that of the kidneys is very dense, and along with this, that of the liver. The flesh of the spleen is more dense than that of the lung to the same degree as it is looser than that of the liver. In all these, then, those that have no cavity on either side to receive the superfluity of flux need to be strongly dried, even if they are not very dry in nature, like the nerves, and particularly those in the limbs. Those that have both external and internal spaces are able to escape some of the inflammation and need none of the things that dry strongly—especially if the flesh is spongy, as in the lung.

The indication from the position is not to be overlooked; it particularly teaches through which parts we must evacuate, and how and whence. Thus the revulsion of those things still flowing in, for this is how Hippocrates refers to them,<sup>15</sup> or diversion is the cure of those fluxes that have already reached the part. He directs us to make both kinds of evacuation through the common veins. For example, you will effect revulsion in the case of the uterus, if you cut the vein in the antecubital fossa or place a cupping glass beside the breasts, or if you warm the arms, and massage and bind them. You will effect diversion, if you cut the veins in the popliteal fossa or at the ankles, apply a cupping glass to the thighs, and heat, massage and bind the legs. If the right uterus has been affected, draw off the blood from the right arm and leg, while if the left uterus<sup>16</sup> has been affected, draw off the blood from the limbs in a

92K

<sup>15</sup> See Hippocrates, *Humors*, I.

<sup>16</sup> See *UPart.*, 14.3-4, for Galen's description of the anatomy of the uterus.

λεγόμενον αὐτὸ τοῦτ' ἔστι τὸ κατ' ἰσότητα. τέμνειν δὲ τὰς ἔνδον φλέβας τοῦ Ἱπποκράτους· αὐταὶ γὰρ ἐγγυτέρω τε τῶν πεπονθῶτων μορίων καὶ μᾶλλον κατ' εὐθύ. καὶ γὰρ εἰ σπληνὸς φλεγμαίνοντος κενοῦν αἵματος ἐθέλοις, τῆς ἀριστερᾶς χειρὸς τὰς ἔνδον φλέβας τέμνειν, καὶ εἰ ἥπατος, τῆς δεξιᾶς ὡσαύτως. εἰ δέ τι τῶν ἄνωθεν εἴη φλεγμαίνον, ὡς ἐν συνάγχαις τε καὶ ὀφθαλμίαις καὶ ὅσα περι κεφαλῆν, τὰς ἔξωθεν τε καὶ κατ' εὐθύ τῶν κώλων δ' αὐτῶν πεπονθῶτων ἀπὸ τῶν ὁμοζύγων ἢ κένωσις, εἴτε ἀντισπᾶν εἴτε παροχετεύειν ἐθέλοις, πλὴν εἰ μὴ χρόνιον εἴη τὸ πάθημα. τηρικαῦτα γὰρ ἀπ' αὐτοῦ τοῦ πεπονθῶτος.

93K οὕτως οὖν κάπὶ τῶν συναγκικῶν | τὰς ὑπὸ τὴν γλῶσσαν φλέβας τέμνομεν, ὅταν ἡμῖν τὸ μὲν ὄλον ἤδη σῶμα κενὸν ἦ, χρονίζη δὲ τὸ πάθος. οὕτω δὲ καὶ σπληνὶ καὶ ἥπατι σικύας προσβάλλομεν. οὕτω δὲ καὶ ἄλλο τι καὶ ἄλλο μέρος πεπονθὸς ἀποσχάζομεν, οὐκ ἐπιρρεόντων ἔτι τῶν χυμῶν· ἐρεθιεῖς γὰρ αὐτοὺς ἐν τῷδε μᾶλλον καὶ διπλάσιον ἐργάση τὸ κακόν. ἀλλ' ὅταν ἤδη τὸ μὲν ὄλον ἀπέριπτον ἦ σῶμα, μηδὲν δ' ἐπιρρῆ νῦν, ἴσχηται δέ τι τοῦ παλαιοῦ ρεύματος ἐν τῷ μορίῳ. καὶ μὴν καὶ ὅτι τὰ μὲν ἐν τοῖς κυρτοῖς τοῦ ἥπατος ἐπ' οὐρα χρῆ προτρέπειν, τὰ δ' ἐν τοῖς σιμοῖς ἐπὶ τὴν κάτω διαχώρησιν, ἢ θέσις ἐδίδαξε τοῦ σπλάγχνου. καὶ ὅτι θώρακα μὲν καὶ πνεύμονα διὰ βηχῶν ἐκκαθαίρειν· γαστέρα δὲ καὶ στόμαχον δι' ἐμέτων

<sup>17</sup> The term "angina," now commonly used as an abbreviation

direct line from that. For what he said was "on the same side (*καθ' ἴχην*)," which is to say "uniformly." Thus, Hippocrates said, cut the internal veins that are near the affected parts and particularly those in a direct line (on the same side). So if the spleen is inflamed and you wish to evacuate blood, cut the inner veins on the left arm, while if the liver is inflamed do the same on the right. If one of the parts above is inflamed, as in cynanche, ophthalmia and those things involving the head, cut the outer veins that are in a straight line. When the limbs themselves are affected, the evacuation is from those things yoked together (i.e., the other limb) if you wish to revulse or divert, unless the affection is not chronic. Under these circumstances it is from the affected part itself.

In this way, then, in the anginas (cynanche),<sup>17</sup> we cut the veins under the tongue (sublingual veins) whenever 93K the affection is chronic and it now falls to us to evacuate the whole body. In this way too, we apply a cupping glasses over the spleen and liver. Similarly, we scarify one or other affected part, if the humors are not still flowing, for you will disturb them more if they are, and make the problem twice as bad. But whenever the whole body is already free of superfluity and nothing is now flowing, retain some of the old flux in the part. Furthermore, the position of the organ has taught us that those things in the convexities of the liver must be urged on to the urine, by way of those in the concavities to the feces, that the chest and lungs are evacuated by coughs, the stomach and esophagus by vomiting, and the intestines by excretion downward. Also, just

for angina pectoris, means primarily a sore throat due to several different causes. "Cynanche" is the true English equivalent.

94K ἔντερα δὲ ταῖς κάτω διαχωρήσεσιν ὥσπερ οὖν καὶ σπλήνα καὶ νεφροὺς μὲν ταῖς δι' οὖρων μήτραν δὲ ταῖς διὰ τῶν καταμηνίων ἐγκέφαλον δὲ καὶ μήνιγγας ταῖς δι' ὑπερώας καὶ γαργαρέωνος καὶ ῥινῶν καὶ ὠτων. ἀλλὰ καὶ ὅτι τοῖς μὲν ἐπιπολῆς μορίοις τοιοῦτον εἶδος χρῆ φαρμάκων προσφέρειν, οἷον δέεται τὸ πάθος· τοῖς δ' ἐν τῷ βάθει καὶ διὰ πολλῶν τῶν μεταξὺ μέλλουσιν ἰομιλλήσῃν ταῖς δυνάμεσιν αὐτῶν, οὐχ οἷον νῦν ἐστίν, ἀλλ' οἷον ἔσεσθαι μέλλει παρὰ τῆς θέσεως τῶν μορίων ἐμάθομεν.

ὥστ' εἴ τι τῶν ἕξωθεν ἐπιτιθεμένων εἴτε τῶν ἐσθιόμενων ἢ πινομένων εἴη τὸ φάρμακον, οὐ τὴν παρούσαν αὐτοῦ δύναμιν ἐπισκεπτέον, ἀλλ' οἷαν ἕξει πησιάζον τῷ πεπονθότι μορίῳ. ταῦτ' ἄρα ταῖς τοῦ πνεύμονος φλεγμοναῖς, ὅσα προσφέρουσιν ἕξωθεν ἐπιπλάσματα, τῷ θώρακι περιβάλλοντες ἰσχυρότερα πολὺ καὶ δριμύτερα τὴν φύσιν ἐστὶν ἢ εἰ αὐτῷ τῷ σπλάγγχνῳ προσεφέρετο. διὰ πολλῶν γὰρ τῶν μεταξὺ σωματίων τὸ ἐντυγχάνειν μέλλον τῷ πεπονθότι μορίῳ παροδεῦον πάντως ἂν ἐξελύθη τε καὶ ἡμαυρώθη τὴν δύναμιν, εἰ ἐξ ἀρχῆς ἦν ἀσθενές. τοσοῦτον οὖν αὐτοῖς ἐπικτητῆτος ἰσχύος διδόναι προσῆκεν, ὅποσον ἢ ὁδὸς ἀφαιρεῖται ὥστε ἴσον καθίστασθαι τὸ λειπόμενον τῷ διὰ τοῦ ψαύειν ὠφελοῦντι. ταῦτ' ἄρα καὶ αὐτοῦ τοῦ θώρακος τοῖς μὲν ἐπιπολῆς φλεγμαίνουσιν ἰκανά, τὰ χαλᾶν μόνον δυνάμενα· τοῖς δ' ἔνδον, ὥσπερ καὶ τῷ ὑμένι τῷ ὑπεζωκότι, δριμυτέρων δεῖ. καὶ περὶ σπληνὸς δὲ καὶ ἥπατος καὶ πάντων τῶν ἔνδον τοῦ περιτο-

as the spleen and kidneys are evacuated by the excretions through the urine, so the uterus is by the menstrual flow. The brain and meninges are evacuated by the excretions through the palate, uvula, nostrils and ears. But also, the affection dictates what kind of medication must be applied to the parts on the surface, whereas for those parts in the depths and through many of those between, where you intend to benefit with their potencies, it is not now possible, but perhaps will become so, when we have learned the relative positions of the parts. 94K

Consequently, if there is one of the medications applied externally, whether by eating or drinking it, we must consider what potency it will have when adjacent to the affected part, and not its present potency. Thus, in the inflammations of the lungs, those plasters doctors apply externally, when placed on the chest, are much stronger and more acrid in nature than they are when they reach the organ itself, for in passing through the many bodies in between, if they are going to get to the affected part, the potency is altogether released and weakened, if it was weak from the beginning. It is appropriate to give them as much additional strength as the passage takes away. As a result, what remains is made equal to what is beneficial by [direct] contact. The medications that are sufficient for the inflammations of the surface of the chest itself are those that just release their potencies, whereas those for the inflammations within, as for the pleura, need to be more acrid. And regarding the spleen and liver, and all the

95K ναίου | μορίων ὁ αὐτὸς λόγος. ἐλκοῦται γὰρ πολλάκις ὑπὸ τῶν ἐπιτιθεμένων φαρμάκων τὸ δέρμα, καὶ τοὶ πολλοὶ σκληρότερον τε καὶ δυσπαθέστερον ὑπάρχον τῶν σπλάγχων. καὶ εἰ δυνατὸν ἦν αὐτοῖς τοῖς σπλάγχχοις ἐπιβάλλειν, ὧν ἐκάστοτε δέονται, τοσοῦτῳ μαλακωτέρων φαρμάκων ἂν ἐδεήθησαν, ὅσα καὶ ἡ φύσις αὐτῶν ἐστὶν εὐπαθεστέρα. καὶ μὲν δὴ καὶ ὅσα κελεύουσὶ τε ἐσθίειν καὶ πίνειν φάρμακα τοῖς τῶν σπλάγχων παθήμασιν ἀραγά, καὶ ταῦτα πολλὰ δριμύτέρα τε καὶ ἰσχυρότερα ἐστὶ ταῖς δυνάμεσιν ἢ οἶων δέεται τὰ πάσχοντα μόρια, πλὴν τῶν γαστρὶ καὶ στομάχῳ συμφερόντων ταῦτα γὰρ μόνα τοιαῦτα διδόασιν, οἶων χρῆζει τὰ πάθη· τὰ δ' ἄλλα πάντα δριμύτερα καὶ ἰσχυρότερα ταῖς δυνάμεσιν ἐστὶ καὶ μάλιστα ὅσα νεφρῶν ἢ πνεύμονος ἕνεκα δίδονται.

σκοπεῖν οὖν ὅσον ἀριθμὸν μορίων διεξέρχεται, τὸ μέλλον εἰς πνεύμονα φέρεσθαι. πρῶτον μὲν στόμα καὶ φάρυγγα καὶ στόμαχον· ἔπειτα δ' αὐτὴν τὴν γαστέρα καὶ τινα τῶν λεπτῶν ἐντέρων· εἶτα τὰς ἐν τῷ μεσεντερίῳ φλέβας· εἶτα τὰς ἐν τοῖς σιμοῖς τοῦ ἥπατος· ἐξ ὧν εἰς τὰς ἐν τοῖς κυρτοῖς μεταληφθὲν, 96K ἐντεῦθεν | εἰς τὴν κοίλην φλέβα ἔρχεται, μεθ' ἧν εἰς καρδίαν· ἔπειθ' οὕτως εἰς πνεύμονα. καὶ οὐκ ἔστιν εἰπεῖν, ὡς οὐ καθ' ἕκαστον τούτων τῶν μορίων, χυμοῖς τέ τισιν ἀναμίγνυται καὶ τινα μεταβολὴν καὶ ἀλλοίωσιν οἰκείαν τῇ φύσει τοῦ σπλάγχχου δέχεται. ὥστε τὸ καταλειπόμενον αὐτοῦ τῆς δυνάμεως παντελῶς ἐστὶ μικρὸν καὶ ἀμυδρὸν ἢ ὅσον αὐταρκες εἰς τὴν

parts within the peritoneum, the same argument applies. 95K Thus the skin is often ulcerated by the applied medications, although surely it is much harder and less easily affected than the internal organs. And if it were possible to put the medications on the actual organs which require them in each case, there would be need of medications softer to the extent that the nature of these is more easily affected. Furthermore, doctors direct patients to eat and drink medications beneficial for the affections of the internal organs, and these are much more acrid and stronger in their potencies than those the affected parts need, apart from those of benefit to the stomach and esophagus. In these cases alone they give such medications as the affections require. In all other cases, they are more acrid and stronger in their potencies, and especially those they give for the kidneys or lungs.

Consider, then, the number of parts [for medications] to go through, if they are going to be carried to the lung. First, there are the mouth, pharynx and esophagus; then there is the stomach itself and some of the small (thin) intestines; then there are the veins in the mesentery and then those in the concavity of the liver. From these, they are carried to the veins on the convexity of the liver, and from these they go to the hollow vein (vena cava), after 96K that to the heart, and then, in like manner, to the lungs. And this is not to say that in each of these parts, when mixed with certain humors, they don't undergo some change or alteration specific to the nature of the internal organ. As a result, what is left behind of the medication's potency is either very small and indistinct or sufficiently

ωφέλειαν τοῦ πεπονθότος. ἡ μὲν οὖν παρὰ τῆς θέσεως τῶν μορίων ἔνδειξις εἰς τοσοῦτον ἄρα τὴν θεραπείαν ὑπαλλάττει ἢ δὲ παρὰ τῆς δυνάμεως εἰς ὅσον νῦν ἐρῶ.

97K ἐπειδὴ τῶν μορίων τοῦ σώματος τὰ μὲν ἐπιρρῦτοις διοικεῖται δυνάμεσι, τὰ δὲ καὶ συμφύτοις· τούτων δ' αὐτῶν τὰ μὲν ἑαυτοῖς μόνοις, τὰ δὲ καὶ ἄλλοις ἀρχαὶ δυνάμεων εἰσι καὶ τῶν μὲν ἴδιον τοῦργον ἐστὶ, τῶν δὲ κοινόν, ἀναγκαῖον ὑπαλλάττεσθαι τὸ τῆς θεραπείας εἶδος ἐν ἐκάστη τῶν εἰρημένων διαφορῶν. πολλὰ γὰρ τῶν προειρημένων βοηθημάτων λύει μὲν τὰ πάθη, βλάπτει δὲ τὰς συμφύτους τῶν μορίων δυνάμεις, ὧν δὲ ἢ βλάβη παντὶ τῷ σώματι διαφέρει, διττῶς τοῦτου γιγνομένου, παρ' ὅσον ἦτοι δυνάμεώς | ἐστὶν ἀρχὴ τὸ σπλάγχχνον, ἅπασι τοῖς μέρεσι κοινὴ ἢ τοῦργον αὐτοῦ παντὶ τῷ σώματι χρήσιμον. ἦπαρ μὲν γὰρ καὶ καρδία καὶ ἐγκέφαλος καὶ ὄρχεις ἀρχαὶ δυνάμεων εἰσι κοινὰ ὅλῳ τῷ σώματι. γαστρί δὲ καὶ μήτρα ἐμφυτοὶ μὲν αἱ δυνάμεις καὶ οὐδενὸς ἄλλου κοινὰ. τό γε μὴν ἔργον τὸ μὲν τῆς γαστρὸς ἅπαντι τῷ σώματι χρήσιμον· τὸ δὲ τῶν μητρῶν οὐκέτι.

βλάπτει δὲ πολλάκις ἢ τοῦ πάθους ἴασις τὴν δύναμιν τοῦ μέρους· τὰ τε γὰρ ἀμέτρως χαλῶντα λύει τὸν τόνον, ὥστε καὶ τὴν δύναμιν τοῦ μέρους· τὰ δ' ὑπερβαλλόντως ψύχοντα σβέννυσι τὸ ἐμφυτον θερμόν, ὃ τάχα μὲν, ὡς τισιν ἔδοξε τῶν ἀρίστων ἰατρῶν τε καὶ φιλοσόφων, ἢ οὐσία τῶν δυνάμεων ἐστὶν, εἰ δὲ μή, ἀλλὰ τό γε πρῶτόν τε καὶ ἀναγκαϊότατον αὐτῶν

strong to benefit what is affected. Thus, the indication from the position of the parts changes the treatment to a significant degree. I shall now speak of how much the capacity does this.

There are parts of the body governed by inflowing capacities and parts governed by innate capacities. Of the latter, there are those governed by themselves alone and those that are the principles of the capacities for other parts. Of the latter, there is a specific action and a common action, and it is necessary to change the kind of treatment in each of the *differentiae* spoken of. Many of the previously mentioned remedies resolve the affections but harm the innate capacities of the parts, and the injury of those differs in every body. This occurs in a twofold way: either from the extent to which the organ is the principle of the capacity, or whether its action is useful in common to all the parts or to the whole body. Thus liver, heart, brain and testes are common principles of capacities to the whole body. However, the capacities are innate in stomach and uterus, and common to no other part. In fact, the action of the stomach is useful to every part but this is not the case with the uterus.

The treatment of the affection often harms the capacity of the part. Thus, agents that relax excessively break down the tone, and as a result the capacity of the part. Agents that cool excessively, quench the innate heat, which is perhaps, as it seemed to some of the best doctors and philosophers, the substance of the capacities. If not, it is otherwise the primary and most essential instrument of them.

ὄργανον. ἤδη δὲ καὶ ποιότητές τινες ἄτοποι καταλυ-  
 τικαὶ τῶν δυνάμεων εἰσιν. οὐδὲν οὖν τούτων χρῆ-  
 παρέρχεσθαι κατὰ τὰς ἰάσεις, ἵνα μὴ ποτε λάθωμεν  
 ἡμᾶς αὐτοὺς εἰπόντας τὸ μὲν πάθος ἐθεραπεύθη, ὁ δὲ  
 ἄνθρωπος ἀπέθανεν· ὅπερ ὁσημέραι γιγνόμενον ὄρα-  
 ὑπὸ τῶν πλείστων, ὅσοι τὴν τε ἄλογον τριβὴν πρε-  
 σβεύουσι καὶ τὴν ἅπασιν τοῖς τῆς τέχνης καλοῖς |  
 98K λυμηναμένην αἵρεσιν μεθοδικήν, ἣ τινὰς λόγους  
 μεταδιώκει δογματικούς μὲν, ἀλλὰ καὶ πολλῶν ἀμαρ-  
 τημάτων ἀνάπλεως.

ἐν τῇ παρὰ τῆς δυνάμεως ἐνδείξει τῶν μορίων εἴη  
 δ' ἂν καὶ τὸ δυσαίσθητον ἢ εὐαίσθητον ὑπάρχειν  
 αὐτό. τὰ γὰρ εὐαίσθητα δριμέων οὐκ ἀνέχεται φαρ-  
 μάκων, ὥσπερ οὐδὲ χυμῶν. ἐν γοῦν τῷ στόματι τῆς  
 κοιλίας δριμέος τινὸς χυμοῦ περιεχομένου συγκόπτον-  
 ται πολλάκις· εἰ δὲ τὰ μετριώτατα πάσχοιεν, ἀλύουσι  
 τε καὶ ναυτιῶσι, ποτὲ μὲν ἐμοῦντες τὸν λυποῦντα χυ-  
 μόν, ἔσθ' ὅτε δὲ μάτην σπαραττόμενοι· καὶ γίνεται  
 τοῦτο κατ' ἐκείνας μάλιστα τὰς διαθέσεις, ἐν αἷς εἰς  
 τὸ στόμα τῆς γαστρὸς ὁ μοχθηρὸς ἀναπίνεται χυμὸς.  
 ὁμοίως δὲ καὶ τοῖς ὀφθαλμοῖς ἐπιρρέων ὁ τοιοῦτος  
 χυμὸς ὀδονηρότατός ἐστι καὶ φλυκταίνας ἐλκώδεις τε  
 καὶ δυσιάτους ἐργάζεται. ὡσαύτως οὖν οὐδὲ τῆς τῶν  
 δριμέων φαρμάκων ὀμιλίας ὀφθαλμὸς ἀνέχεται διὰ  
 τὴν εὐαισθησίαν, ὥσπερ οὐδὲ τὸ στόμα τῆς γαστρὸς.  
 οὐ μὴν οὐδ' ἐπικειμένου τινὸς ἕξωθεν βαρύνοντος,  
 ἀνέχεται ταῦτα τὰ μόρια· καὶ μᾶλλον γε τῆς γαστρὸς  
 ὁ ὀφθαλμὸς· ὅπου γ' ἐνίοτε καὶ πρὸς τῶν ἐπιχειρο-

Already some of the alien qualities of the capacities are  
 dissipated. It is necessary not to overlook any of these  
 things in relation to the treatments, so we don't at any time  
 leave them unobserved and say the affection was treated  
 but the patient died. This is something you might see oc-  
 ccurring every day due to the many who give first place to  
 the irrational path of of the Methodic sect, and dissipate  
 all that is good in the art, or who pursue certain rational  
 doctrines, but are also beset by many mistakes.

98K

In the indication from the capacity of the parts there  
 is also the question of whether the part has impaired or  
 normal sensation. Thus the latter doesn't tolerate acrid  
 medications, just as it doesn't with humors. Anyway, when  
 some acrid humor is contained in the opening (cardiac  
 orifice) of the stomach, people often faint. If they are af-  
 fected more moderately, they are distraught and nause-  
 ated, and sometimes vomit the distressing humor. At other  
 times, vomiting is provoked in vain. This occurs particu-  
 larly in those conditions in which the bad humor is sucked  
 up into the opening of the stomach. There is a similar  
 situation in the eyes, when a humor that is very distressing  
 flows in and brings about pustules that ulcerate and are  
 difficult to cure. In like manner, the eye, due to its sensitiv-  
 ity, tolerates none of the beneficial medications that are  
 acrid, just as the opening of the stomach doesn't. These  
 parts don't tolerate anything heavy placed on them ex-  
 ternally—the eye more so than the stomach—inasmuch

99K μένων φαρμάκων βαρύνεται. | τὰ δ' ἀναισθητότερα  
 μόρια καὶ καταπλασμάτων ἀνέχεται βαρέων καὶ φαρ-  
 μάκων δακνόντων. εἰ γοῦν πέμπτην τις ἐθέλοι πρὸς  
 ταῖς εἰρημέναις τέτταρσι τὴν ἀπὸ τῆς εὐαισθησίας  
 ἔνδειξιν ἀριθμεῖν, εἴτ' οὖν περιλαβεῖν τὴν κατὰ δύνα-  
 μιν, οὐδὲν ὡς πρὸς τὸ καλῶς ἰᾶσθαι διαφέρει. τούτων  
 οὖν ἀεὶ χρὴ μεμνήσθαι τῶν ἐνδείξεων ἐπὶ παντὸς  
 μορίου πάσχοντος ὁτιοῦν πάθος. ἢ τε γὰρ κρᾶσις  
 αὐτοῦ καὶ ἢ διάπλασις ἢ τε θέσις καὶ ἢ δύναμις  
 ὑπαλλάξει τὰς κατὰ μέρος ἡμῶν ἐνεργείας φυλαττο-  
 μένου τοῦ κοινοῦ σκοποῦ· τούτων γὰρ ἔφαμεν ἐκ τοῦ  
 πάθους ἀεὶ δεῖν λαμβάνεσθαι. τὰ μὲν οὖν κατὰ ψιλὴν  
 καὶ μόνην δυσκρασίαν γιγνόμενα νοσήματα διὰ τῶν  
 ἐναντίων ποιότητων θεραπεύεται· θερμὴ μὲν δυσκρα-  
 σία διὰ τῶν ψυχόντων, εἴτ' οὖν πρῶτως εἶτε καὶ κατὰ  
 συμβεβηκὸς εἴη ταῦτα ψύχοντα· ψυχρὰ δὲ διὰ τῶν  
 θερμαινόντων. οὕτω δὲ καὶ ξηρὰ μὲν διὰ τῶν ὑγραιο-  
 νόντων· ὑγρὰ δὲ διὰ τῶν ξηραινόντων.

100K περὶ δὲ τοῦ πρῶτως θερμαίνοντος ἢ κατὰ συμβε-  
 βηκὸς ἐπὶ πλείστον, ὡς οἴσθα, ἐν τῇ περὶ τῆς τῶν  
 ἀπλῶν φαρμάκων δυνάμεως ἐπεσκεψάμεθα πραγμα-  
 100K τεία, ἐπιδεικνύντες ἐνίοτε καὶ τὸ πρῶτως | ψύχον θερ-  
 μαίνειν κατὰ τι συμβεβηκός, ὥσπερ καὶ τὴν τοῦ ψυ-  
 χροῦ κατάχυσιν ὕδατος, ὅταν ἐπανάκλῃσιν θέρμης  
 ποιῆται· καὶ τὴν τοῦ θερμοῦ ψύξιν, ὅταν ἀραιώσῃ τὸ  
 σῶμα διαφορήσῃ τὴν ἐν αὐτῷ θερμοσίαν. αἱ μὲν οὖν  
 κατὰ μόνας τὰς δραστικὰς ποιότητας ἀλλοιώσεις τῶν  
 σωμάτων ὑπὸ μόνῃς τῆς διὰ τῶν θερμαινόντων τε καὶ

as sometimes also they are weighed down by the medica- 99K  
 tions applied as ointments. The insensitive parts do toler-  
 ate heavy cataplasms and biting medications. Anyway, if  
 someone should wish to count a fifth indication in addition  
 to the four mentioned relation to sensitivity, then let him  
 include that relating to the capacity—it makes no differ-  
 ence in terms of treating properly. It is always necessary  
 to be mindful of these indications in the case of every part  
 affected, whatever the affection. For its *krasis*, conforma-  
 tion, position and capacity change our actions individu-  
 ally, while preserving the common objective, and as I said,  
 we always need to take this from the affection. There-  
 fore, the diseases arising in a simple, single *dyskrasia* are  
 treated by the opposite qualities—thus a hot *dyskrasia* is  
 treated by those agents that are cooling, whether these are  
 cooling primarily or incidentally, and a cold *dykrasia* by  
 those things that are heating. In the same way too, a dry  
*dyskrasia* is treated by moistening agents and a moist *dys-*  
*krasia* by drying agents.

As you know, I have examined the matter of heating 100K  
 primarily and incidentally at greater length in the work on  
 the potency of simple medications,<sup>18</sup> showing that some-  
 times what is primarily cooling heats to some extent inci-  
 dentally, like the pouring on of cold water when it pro-  
 duces a recall of heat, and the cooling of heat, when by  
 dispersing the heat in it, rarefies the body. Thus, these  
 things individually change the active qualities of bodies by  
 means of the capacity alone, and through heating, cooling,

<sup>18</sup> *Simpl. Med.*, XI.369–982K and XII.1–377K.



ψυχόντων ὑγραινόντων τε καὶ ξηραινόντων δυνάμεως εἰς τὸ κατὰ φύσιν ἄγονται, μὴ δεόμεναι κενώσεως αἰσθητῆς. αἱ δὲ δι' ἐπιρροὴν ὕλης, εὐκράτου μὲν οὐσης αὐτῆς, κενώσεως χρήζουσι μόνης, δυσκράτου δέ, κενώσεώς τε ἅμα καὶ τῆς διὰ τῶν ἐναντίων ποιότητων ἀλλοιώσεως· κενώσεως μὲν, ὥσπερ αἱ ρευματικά καλούμεναι, περὶ ὧν ἐν ἡμῖν, ὡς οἴσθα, γέγραπται βιβλίον· ἐν ᾧ καὶ τοῦτο εὐθέως κατ' ἀρχὰς ἐδείχθη, τὸ τῆς θρεπτικῆς δυνάμεως ὄλου τοῦ σώματος ἀρρωστούσης, γίνεσθαι τὰς διαθέσεις ταύτας, ρεούσης τῆς ἀθροισμένης περιουσίας εἰς τὰ πάντων ἀπουώτατα μόρια. τοῦ μὲν τοι ρέοντος αἵματος εἰς τὰ τοιαῦτα μόρια κατὰ τὰς ρευματικὰς διαθέσεις ἔχοντός τινα *kakochymia*ν ἢ διάθεσις γίνεται μικτή· καὶ γίνονται· ἂν ἴσως τοῦτο σπανιώτατα. διὰ παντὸς γὰρ ὤφθη μοι, χωρὶς φλέγματος ἢ ξανθῆς χολῆς ἢ μελαίνης αἷμα τῇ συστάσει λεπτὸν ἐπιρρέον. ἐξ ἄλλης δέ τινος αἰτίας εἰς ὄγκον ἀρθέντος τοῦ μορίου σκοπεῖν εἴτε φλεγμονὴ τὸ πάθος ἐστὶν εἴτε σκίρρος εἴτε οἴδημα, φλεγμονὴν ὀνομαζόντων ἡμῶν ἅπασαν τὴν θερμὴν καὶ οἶον φλογώδη διάθεσιν, ἧς τὰς διαφορὰς ὀλίγον ἔμπροσθεν εἶπομεν. ὦρα τοίνυν ἤδη περὶ τῶν οἰδημάτων ὑποθέσθαι σοι διὰ βραχέων, ἀναμνήσεως ἕνεκεν ὧν κατὰ διέξοδον ἤκουσας ἡμῶν λεγόντων.

5. Ὀνομαζόμεν οὖν οἴδημα τὸν ἀνώδυνον μὲν καὶ χαῖνον ὄγκον. ἐπιδέδεικται δ' οὗτος ἐκ φλεγματώδους οὐσίας γιγνόμενος ἢ πνεύματος ἀτμώδους, ὁποῖόν τι καὶ κατὰ τὰ νεκρὰ γίνεται σώματα καὶ κατὰ τοὺς

moistening and drying, lead to an accord with nature, so there is no need for perceptible evacuation. However, those due to an inflow of material, when this itself is *eukratic*, need evacuation alone, whereas when it is *dyskratic*, they need evacuation and, at the same time also, transformation through the opposing qualities. As you know, I have written one book<sup>19</sup> on evacuations, as the discharges are called. In this I showed at the start that a weakness of the nutritive capacity of the whole body occurs in these conditions when the collected excess flows to the weakest parts of all. Certainly, when there is a flow of blood to such parts in the rheumatic conditions, there is some *kakochymia* or a mixed condition arises, but perhaps this occurs very rarely, for I have repeatedly seen blood of thin consistency, apart from phlegm, yellow or black bile, flowing. When the part is raised into a swelling from some other cause, consider whether the affection is inflammation, induration, or edema—for we call “inflammation” every hot and burning condition, of which we stated the *differentiae* a little earlier. Accordingly, it is now time to set down for you briefly something about the edemas, bearing in mind, for the purpose of these, that path we have so far traveled in the discussion.

5. We use the term edema for a swelling that is painless and spongy. This has been shown to arise from phlegmatic substance or vaporous *pneuma* of the kind that also occurs in dead bodies, in the feet and legs often, in dropsical

<sup>19</sup> This appears to be a lost work.

πόδας τε καὶ σκέλη πολλάκις, ἐν ὑδερικαῖς διαθέσει  
καὶ φθόαις καὶ καχεξίαις ἑτέραις. ἀλλ' ἐπ' ἐκείνων  
μὲν σύμπτωμά ἐστι τὸ τοιοῦτον οἴδημα διαθέσεων  
ἐπισφαλῶν, οὐδεμιᾶς ἰδίας ἐξαιρέτου θεραπείας δεό-  
μενον αὐτό. καὶ γὰρ ἀνάτριψις μόνη δι' ὄξυρροδίνου  
καὶ ποτε δι' ἁλῶν καὶ ἐλαίου ἢ καὶ τῶν ἁλῶν ἐμβλη-  
θέντων | τῷ ὄξυρροδίνῳ κατέστησεν αὐτὸ καὶ ἄλλα  
πολλὰ τοιαῦτα. διὰ δὲ τὸν φλεγματικὸν χυμὸν ἐπιρ-  
ρύνετα μορίῳ, ἐπιγενομένον τοῦ πάθους, ἐνίοτε μὲν  
σπόγγος ὕδατι βεβρεγμένος ὀλίγον ὄξους ἔχων κατ-  
έστησε τὸ πάθος· εἰ δὲ μὴ καταστήσειε, βραχὺ πλείον  
ἐπιβλητέον τοῦ ὄξους, ὥστε τὸ μὲν σύμμετρον τοι-  
οῦτον εἶναι κατὰ τὴν κράσιν, ὡς δύνασθαί τινα καὶ  
πίνειν αὐτοῦ. τούτου δὲ τὸ μὲν ὑδαρέστερον ἐν ἀρχῇ  
παραληπτέον ἐπὶ μαλακῶν μάλιστα σωμάτων· τὸ δ'  
ἰσχυρότερον ἐπὶ τε γενναίων καὶ σκληρὸν ἔχόντων  
δέρμα καὶ πρὸς τὰς πρώτας ἐπιθέσεις τοῦ σπόγγου  
μηδὲν ὠφεληθέντων. εἶναι δὲ χρὴ τὸν σπόγγον πάν-  
τως καινόν· εἰ δὲ μὴ παρείη τοιοῦτος, ἔστω ἀκριβῶς  
ἐκπεπλυμένος ἀφρονίτρῳ τε καὶ νίτρῳ καὶ τῇ κα-  
λουμένη κοιλία στακτῇ.

μὴ πανσαμένον δὲ μὴδ' ἐπὶ τούτοις τοῦ οἰδήματος,  
ἐπεμβάλλειν χρὴ βραχὺ στυπτηρίας καὶ τὸν σπόγγον  
πάντως ἐπιτιθέναι καινόν. εἰ δὲ καὶ κατὰ τι τῶν  
κώλων τὸ τοιοῦτον οἴδημα γένοιτο, τῆς ἐπιδέσεως ἐκ  
τῶν κάτω μερῶν ἀρχόμενον ἄνω τελευτᾶν τὴν ἐπιβο-  
λὴν καὶ τὴν πίεσιν καὶ τὴν σύμπασαν νομῆν ὡς ἐπὶ  
καταγμάτων ποιούμενον. ὁ γὰρ τοι σκοπὸς τῆς θερα-

conditions, consumptions and other cachexias. In those  
cases, such edema is a symptom of dangerous conditions  
but requires no specific or special treatment. For massage  
alone with oxyrhodinum, and sometimes with salt and oil,  
or with other things put into the oxyrhodinum settles this  
and many other such things. When the affection super-  
venes due to the phlegmatic humor flowing into a part,  
sometimes a sponge moistened with water having a little  
vinegar in it settles the affection. If it doesn't settle you  
must put in a little more vinegar so it is balanced in terms  
of *krasis* such that someone could drink it. You must apply  
this in a more watery form at the beginning, particularly  
in the case of soft bodies. The stronger form must be ap-  
plied in those who are robust and have hard skin, and  
those who derive no benefit from the first application of  
the sponge. It is necessary for the sponge to be completely  
fresh. If such a sponge is not available, carry out thorough  
irrigation with aphronitron, niter and the so-called alkali-  
line fluid (lixivium).

If the edema is not stopped with these measures, you  
must put in a little astringency and apply the sponge com-  
pletely fresh. Also, if such edema arises in one of the limbs,  
you must bandage, beginning from the parts below and  
ending the application above, compressing the whole area,  
as is done in the case of fractures. For certainly the aim of

103K πείας ἐπὶ τῶν τοιούτων παθῶν | μικτός ἐστὶ τὸ μὲν τι  
 διαφορεῖν τῆς οὐσίας αὐτῶν, τὸ δέ τι συνάγειν καὶ  
 σφίγγειν. εἰ τοίνυν ἐπὶ τοῖς προειρημένοις μὴ καθ-  
 ἴσταιτο, τότε τῶν ἰσχυροτέρων φαρμάκων ἃ μικτῆν  
 ἔχει τὴν κρᾶσιν ἐκ τῶν εἰρημένων δυνάμεων ἐπιβάλ-  
 λειν. ἐγὼ δὲ ἐπὶ κεχροϊκῶτος οἰδηματώδους ὄγκου  
 προὔπαλεΐσας ἐλαίῳ τὸ μόριον εἴτ' ἐπιθεῖς σπόγγον  
 ἐκ κοΐας καὶ σφίγγξας βιαιότερον, οἶδα τελέως ἐκ-  
 θεραπευθῆν τὸ πάθος, οὐκέτι δηλονότι τῆς τοιαύτης  
 ἀγωγῆς σκοπὸν ἐχούσης, τὸ μικτὸν τῶν δυνάμεων,  
 ἀλλ' ἐπὶ τὸ διαφορητικόν τε καὶ τμητικὸν ἀποκλινά-  
 σης, ὅπερ ἐπὶ τῶν χρονιζόντων σχεδὸν ἀπάντων  
 ἴσμεν εὐδοκιμοῦν. ἐπεὶ δὲ καὶ περὶ τῶν οἰδημάτων  
 ἀντάρκως εἴρηται πρὸς γε σέ, περὶ τῶν σκιρρωδῶν  
 ὄγκων ἐφεξῆς ἂν εἴη ῥητέον.

6. Ὁ μὲν οὖν ἀκριβῆς σκίρρος ὄγκος ἐστὶ παρὰ  
 φύσιν ἀναίσθητός τε καὶ σκληρός. ὁ δ' οὐκ ἀκριβῆς  
 οὐκ ἀναίσθητος μὲν παντάπασι, δυσαίσθητός γε μὴν  
 ἐστὶ πάντως. ὁ μὲν οὖν ἀναίσθητος σκίρρος ἀνίατος.  
 ὁ δὲ δυσαίσθητος οὐκ ἀνίατος μὲν, οὐ μὴν εὐίατος.  
 γίνεται γὰρ ἐκ γλίσχρου καὶ παχέος χυμοῦ δυσλύτως  
 104K ἐμπλαπτομένου τοῖς | σκιρρουμένοις μορίοις· ἐνίστε  
 μὲν οὖν εὐθὺς ἐξ ἀρχῆς κατὰ βραχὺ συνίσταται  
 τε καὶ αὐξάνεται. τὰ πολλὰ δ' ὑπὸ τῶν ἰατρῶν  
 κατασκευάζεται, στυψάντων καὶ ψυξάντων σφοδρῶς  
 ἐρυσιπέλατά τε καὶ φλεγμονάς. εἰ μὲν οὖν τις τὰ  
 ἰσχυρῶς διαφοροῦντα τοῖς σκιρρουμένοις σώμασι  
 προσφέρῃ φάρμακα καὶ σαφῆ μείωσιν ἐργασάμενος

treatment in such affections is mixed—to effect some dis-  
 103K persion of their substance, to draw together and to com-  
 press. Accordingly, if it is not settled with the previously  
 mentioned measures, apply at that time the stronger  
 medications which are mixed in terms of *krasis* from the  
 potencies mentioned. In the case of a chronic edematous  
 swelling, I anoint the part beforehand with oil and then  
 apply a sponge with alkaline fluid (lixivium) and bind more  
 strongly, knowing the affection is completely curable.  
 When it is not yet clear what the aim of such a course  
 is, we use a mixture of the potencies, but incline toward  
 the dispersing and cutting, which we know are highly re-  
 garded in almost all the chronic edemas. Since I have told  
 you enough about the edemas, it behooves me to speak  
 next about the scirrhus swellings.

6. The genuine scirrhus swelling is contrary to na-  
 104K ture, without sensation, and hard. One that is not genuine  
 is not altogether without sensation but is completely dys-  
 aesthetic. The scirrhusity without sensation is incurable  
 whereas that with disturbed sensation is not incurable but  
 is not easily cured. [A scirrhus swelling] arises when a vis-  
 cous and thick humor adheres indissolubly to the parts be-  
 ing made scirrhus. Thus, sometimes, immediately from  
 the start, it gradually solidifies and increases. In many  
 instances, it is created by doctors applying astringent  
 and strongly cooling agents to erysipelitates and inflam-  
 mations. Now if someone applies medications that are  
 strongly dispersing to scirrhus bodies and clearly brings  
 about a reduction of the scirrhusity in a short time, this

τοῦ σκίρρου, χρόνῳ βραχεί θαρρήσει περὶ τῆς παντελοῦς θεραπείας οὐκ ἀληθῶς, ἀγνοῶν ὅτι τῷ τοιοῦτῳ τρόπῳ τῆς θεραπείας τὸ λείψανον τοῦ πάθους ἀνίατον γίνεται. διαφορηθείσης γὰρ ἐξ αὐτοῦ τῆς λεπτομέρους ὑγρότητος ἢ λοιπῆ ξηρανθεῖσα λιθώδης ἀποτελείται.

οὐκὸν χρῆ σφοδρῶς ξηραίνονται τὰ σκιρρούμενα μόρια θεραπεύειν φαρμάκῳ, ἀλλὰ θερμασίαν μὲν ἔχειν χλιαρόν, ὑγρότητα δ' οὔτε πολλὴν οὔτε παντάπασιν ἐλαχίστην. τὸ μὲν γὰρ ὑπερβαλλόντως ὑγρὸν οὐδ' ὄλως διαφορεῖ τὸ δ' ὀλιγοστὴν ἔχον ἱκμάδα ξηραίνει σφοδρότερον ἢ προσήκει. χρῆ τοίνυν ὑπὲρ τοῦ μέλλοντος ὀνήσειν φαρμάκον. τὸ σκιρρούμενον σῶμα τοῖς ἐν ἡλίῳ χεομένοις ὁμοίον τι πάσχειν. ὀνομάζεται δὲ τὰ τοιαῦτα φάρμακα μαλακτικά· καὶ λέλεκται περὶ 105K | αὐτῶν ἐπὶ πλείον ἐν τῷ πέμπτῳ τῆς περὶ τῶν ἀπλῶν φαρμάκων πραγματείας, καὶ τὰ παραδείγματα αὐτῶν εἴρηται, τὰ γε ἀπλᾶ μυελοὶ τε σύμπαντες καὶ στέατα. πρωτεύει δὲ τῶν μὲν μυελῶν πάντων ὁ ἐλάφειος· εἶτα ὁ μόσχειος. στεάτων δὲ ἐν μὲν τοῖς πτηνοῖς ζώοις τὸ χήνειον· ἐν δὲ τοῖς πεζοῖς τὸ λεόντειον. ἐφεξῆς δὲ χηνεῖα μὲν τὸ τῆς ἀλεκτορίδος· λεοντεῖα δὲ τὸ τῶν παρδάλεων καὶ τὸ τῶν ἄρκτων· εἶτα τὸ τῶν ταύρων. τὸ δὲ τῶν αἰγῶν παχύτερόν τε τούτων ἐστὶ καὶ ξηρότερον· ἐτι δὲ μᾶλλον αὐτοῦ τὸ τῶν τράγων.

ὅτι δ' οὐ δεῖται τῶν ἰσχυρῶς ξηραίνόντων φαρμάκων τὸ πάθος τοῦτο, προείρηται. περὶ δὲ τῆς κατὰ λεπτομέρειάν τε καὶ παχυμέρειαν αὐτῶν διαφορᾶς

will give him false confidence regarding the entire treatment, since he fails to realize that with this form of treatment the remnant of the affection becomes incurable, because when the fine-particled moisture is dispersed from it, the remainder, being dried, is ultimately made stony hard.

You must not, therefore, treat the scirrhus parts with a strongly drying medication, but those which have a mild heat and neither much nor altogether too little moisture, for the excessive amount of moisture does not completely disperse, whereas a very small amount of moisture dries more strongly than is appropriate. Therefore, it is necessary for a medication that is going to be of benefit to a scirrhus body to be similar to those that suffer liquefaction in the sun. Such medications are called emollients; these have also been described in greater detail in the fifth 105K of the treatises on simple medications.<sup>20</sup> Some examples of these are as follows. The simple ones are all the marrows and animal fats. The best of all the marrows is that of the stag and next that of the calf. Of the fats, among flying creatures, the best is that of the goose; among those that are terrestrial, the lion. Next after the goose is the cock; next after the lion are the leopard and bear. Then there is that of bulls. That of goats is thicker than these and drier. Still more than this is that of billy goats.

I have said previously that this affection does not need strongly drying medications. Although I have given some indication about the differences in these in respect of be-

<sup>20</sup> See Galen, *Simpl. Med.*, 5.9 (XI.729–739K), and Oribasius, 14.38.

ἐνδεικτικῶς μὲν εἶρηται, σαφῶς δ' οὐδέπω. διὸ νῦν ἀναμνήσαι σε προσήκει τῶν ῥηθέντων ἡμῖν πρὸς ἀλλήλους, ὅτε τὸ τοῦ Κερκυλλίου παιδάριον ἐθεράπευον, ἐξ ἐρυσιπέλατος σφοδρῶς στυφθέντος τε καὶ ψυχθέντος ὄγκου σκιρρώδη ἔχοντος ἐν ὅλῳ τῷ μηρῷ. λεπτομερῆ γὰρ ἡμῖν ἐφαίνετο δεῖν εἶναι τὰ μέλλοντα θεραπεύειν αὐτὸ φάρμακα, διὸ κατήντηλον ἐλαίῳ τὸν μηρὸν, ἐν σκάφῃ καθίζον βαθείᾳ | τὸ παιδάριον, ἐχούσῃ πλήθος ἐλαίου τοῦ Σαβίνου, διότι λεπτομερέστατον ἔλαιον ἴσμεν ἀπάντων αὐτό. λουτροῦ δ' ἀπέχον ὅτι μὴ διὰ πλειόνων ἡμερῶν ἔνεκα τῆς τοῦ παντὸς ἐπιμελείας σώματος. μετὰ δὲ τὴν εἰρημένην κατάντησιν τὰ διὰ τῶν εἰρημένων μυελῶν τε καὶ στεάτων φάρμακα προσέφερον, ἐνίοτε δὲ καὶ βδέλλιον τοῦ Σκυθικοῦ μινγῆς καὶ μαστίχης Αἰγυπτίας καὶ ἀμμωνιακοῦ θυμιάματος, τοῦ λιπαροῦ τε καὶ μὴ παλαιοῦ καὶ χαλβάνης ὡσαύτως. καὶ ἐπειδὴ διὰ τούτων προπαρασκευάστο, λύσας ἀμμωνιακὸν τὸ λιπαρώτατον ὄξει δριμυτάτῳ κατέχρισα τὸν μηρὸν ὅλον ἐν κύκλῳ. καίπειτα δι' ἡμερῶν ἀθῆτις ὀποπάνακος ἔμιξα τὸ λιπαρώτατον, ὄξει δριμυτάτῳ ἐκλύων καὶ τούτου δηλονότι τὸν πρόσφατον, οὐ γὰρ ἂν ἄλλως ἔτι διαμένοι λιπαρός· ὥσπερ οὐδὲ τὸ βδέλλιον οὐδὲ τὸ ἀμμωνιακὸν οὐδὲ ἡ χαλβάνη. καὶ ἀσκληλιάζειν δὲ κατὰ θατέρον σκέλους ἐποίουν τὸ παιδάριον, ὅπως ἐπ' ἐκείνο φέροιτο τὸ πλεόν τῆς τροφῆς. ὕστερον δ' ὡς ἤδη προσέσταλτο μὲν ὁ σκιρρώδης ὄγκος, ἐδεδίειν δὲ μῆτι λείψανον αὐτῷ μένοι τούναντίον ἅπαν εἰργα-

ing fine-particled and thick-particled, I have not yet described them clearly. Accordingly, it is now appropriate to remind you of what I discussed with others when I was treating a young boy from Cercyllius<sup>21</sup> with erysipelas, who due to strong astringents and cooling agents had a scirrhus swelling involving the whole thigh. It seemed to me this was going to need treatment with medications that were fine-particled. Accordingly, I irrigated the thigh with oil, the child sitting in a deep bowl containing an abundance of Sabine oil because we know this to be the most fine-particled oil of all. I kept him away from the bath for a period of many days for the sake of the betterment of the whole body. After the aforementioned irrigation, I applied medications made from the marrows and fats spoken of, and sometimes also I mixed in Scythian aromatic gum, Egyptian mastich, fragrant gum ammonium, fatty and not old, and all-heal (galbanum) in similar fashion. And when it was prepared with these things, dissolving the very fatty gum ammonium with very acrid vinegar, I poured it all around the whole thigh. Then, after some days, I again mixed in very fatty opopanax dissolved in the most pungent vinegar. What was used of this opopanax was obviously fresh, for otherwise it does not remain fatty, just as the aromatic gum, ammoniacal gum and galbanum do not. And I made the young boy hop on the other leg so the affected one might carry more of the nutriment. Later, when the scirrhus swelling was already drawn tight, I bound it lest I made what remained of it altogether op-

<sup>21</sup> On this see Mattern, *Galen and the Rhetoric of Healing*, 189, 210n57.

107K ζόμην, ἐπιχρίων τινὶ τῶν πιττωτῶν | φαρμάκων τὸν  
μηρόν. ἐφαίμετο δὲ σαφῶς ἐπὶ μὲν τοῖς δι' ὄξους ἐπι-  
χρίμασιν ἀξιολόγως καθαιρούμενος ὁ σκιρρώδης ὄγ-  
κος· ἐπὶ δὲ τοῖς χαλαστικοῖς μαλακνύμενος μὲν,  
ἐλάττων δ' οὐ γινόμενος. ἀλλ' ἢ μετὰ μέτρου τοῦ  
προσήκοντος ἐναλλάξ αὐτῶν χρήσις ἐθεράπευσε τὸ  
παιδάριον. ὡς εἶγε διὰ θατέρου γένους μόνου τῶν  
φαρμάκων ἐποιεῖτό τις τὴν θεραπείαν αὐτῶν, οὐκ ἂν  
ἔλυσε τὸν σκίρρον.

ἐπὶ δὲ τῶν τενόντων, ὀνομάζω δ' οὕτω δηλονότι τὰς  
ἀπονευρώσεις τῶν μυῶν, ἐπὶ τῇ λεγομένῃ χρήσει τῶν  
φαρμάκων ἐναργεστάτην ὠφέλειάν ἐστιν ἰδεῖν, εἴ τις  
καλῶς χρήσαιο τῇ διὰ τοῦ πυρίτου λίθου θεραπείᾳ·  
χρῆ δὲ διάπυρον αὐτὸν ἐργασάμενον ὄξει δριμυτάτῳ  
καταρραίνειν, εἶτα διακινεῖν τὸ πεπονθὸς μόριον ὑπὲρ  
τὸν λίθον, ὡς ἂν ὑπὸ τῆς ἀναφερομένης ἀτμίδος ὁ  
σκίρρος λύοιτο. πολλὰ γὰρ ἤδη τελέως ἠγκυλωμένα  
τε καὶ κεκυλλωμένα διὰ τούτου τοῦ τρόπου τῆς θερα-  
πείας, ἐν αὐτῷ τῷ διακινεῖν ἐθεραπεύθη τελέως, ὡς τὸ  
πρᾶγμα παραπλήσιον εἶναι μαγείᾳ. χρῆ δὲ προπαρα-  
σκευάσθαι μεμαλαγμένον τὸ σκιρρῶδες μόριον ὑφ'  
ὧν εἴρηκα βοθημάτων. ἀλλὰ καὶ κατὰ ταύτην τὴν  
διὰ τοῦ πυρίτου λίθου θεραπείαν προκαταντλείσθαι |  
108K πολλάκις ἐλαίῳ δαψιλῶς θερμῷ Σαβίνῳ ἢ ἄλλῳ τινὶ  
τῶν λεπτομερῶν οὐ χεῖρον δὲ καὶ ἀνήθου τὴν κόμην  
ἐναφειήσασθαι καὶ μᾶλλον, εἴ χλωρὸν εἴη καὶ πρόσ-  
φατον. εἰ δὲ μὴ παρέῃη πυρίτης, τῷ μυλίτῃ χρηστέον

posite, and I poured one of the pitching medications on 107K  
the thigh. It seemed clear that the scirrhus swelling was  
notably reduced by the vinegar mixture that was smeared  
on. When it was softened by the relaxing agents, it did not  
become less. But using these things alternately in the ap-  
propriate manner, I treated the young boy. So if someone  
had made the treatment of these with the other class of  
medications alone, he would not have resolved the scir-  
rhusity.

In the case of the tendons—I obviously refer to the  
aponeuroses of the muscles in this way—with the use of  
the medications described, a very clear benefit is seen, if  
someone uses the treatment with the firestone effect-  
ively.<sup>22</sup> It is necessary, when it is made very hot, to sprin-  
kle on very acrid vinegar, then to move the affected part  
around above the stone, so the scirrhus resolves due to the  
vapor that is carried up. In many instances, by moving [the  
limb] around in a circle and flexing it, with this kind of  
treatment, I completely cured it by the movement itself,  
so that the matter seemed like magic. It is necessary for  
the scirrhus part to be prepared beforehand by softening  
it with the medications I have spoken of. But also, in this  
same treatment with the pyretic stone, it needs to be ir-  
rigated prior and often with abundant hot Sabine oil or 108K  
one of the other fine-particled oils. Not bad also are the  
leaves of dill that have been boiled down, and especially  
if they are green and fresh. If pyrites is not available, you

<sup>22</sup> *Purites lithos* (Copper pyrites); see Dioscorides, 5.143, and  
Pliny, *Natural History*, 36.29.

ονομάζουσι δ' οὕτως ἐκείνον τὸν λίθον, ἐξ οὗ τὰς μύλας κατασκευάζουσιν, ἐφ' ὧν ἀλήθουσι τὸν σῖτον.

7. Σπλήνα μέντοι σκιρρούμενον οὐ μόνον ἕξωθεν ἰσχυροῖς φαρμάκοις θεραπεύειν προσήκει, ἀλλὰ καὶ διὰ πομάτων ἰσχυροτάτων. ἀνέχεται γὰρ καὶ τούτων ἀλύπως. ἄριστα δ' ἐξ αὐτῶν καππαρέως ρίζης φλοιὸς καὶ σκολοπενδρίου καὶ μυρικής αἷ τε ρίζαι καὶ οἱ ἀκρέμονες. ἔψει δὲ τὰ τοιαῦτα πάντα προσήκει ἐν ὄξει τε καὶ ὄξυμέλιτι. πολλάκις δ' ἀπτομένῳ φαίνεται μὲν ἀντίτυπος ὁ σπλήν, οὐ μὴν σκιρρώδης ἐστὶν ὁ ὄγκος, ἀλλὰ πνευματώδης μᾶλλον. ἐφ' οὗ προαποβρέξαντα δι' ἀψινθίου φάρμακον ἔμπλαστρον ἐπιτιθέναι χρὴ μικτῆς δυνάμεως, ὁποῖόν ἐστι τὸ διὰ θείου τε καὶ στυπτηρίας. ἔστι δ' ἀμέλει τὰ πλείστα τῶν ἐν ταῖς φαρμακίταισι βιβλίοις γεγραμμένων φαρμάκων τοιαῦτα. πρόσεχε δὲ ἰσχυρὰ ἀπλῶς τῇ δυνάμει τῶν μεμιγμένων φαρμάκων, ἀλλὰ καὶ τῷ πόσῳ τῆς μίξεως. ἐπὶ γὰρ τῶν πνευματώδων τὸν ὄγκον ἔχόντων σπληνῶν καὶ μᾶλλον ἐπὶ τῶν οἰδημάτων, κἂν πολλὰ τῶν στυπτηριῶν ἐμβάλλῃς, οὐδὲν βλάψεις. ἐπὶ δὲ τῶν σκιρρωδῶν προσήκει ἐπικρατεῖν τὴν διαφορητικὴν δύναμιν, ὀλίγον δ' αὐτῇ μεμίχθαι τῆς στυφούσης. ἐν γούν τῶν ἀπλῶν τε καὶ αὐτοφυῶν φαρμάκων τοιοῦτον ὑπάρχον ἀλὸς ἄνθος ἰᾶται σκιρρουμένους σπλήνας, ἐπιτεθὲν ἕξωθεν αὐτοῖς ἐν κύστει.

ἥπατος δὲ σκίρρον ἀρχόμενον μὲν ἰασάμεθα πολλάκις ἕκταθέντα δ' εἰς πλείους ἡμέρας οὐτ' αὐτὸς ἠδυνήθη ἰάσασθαι, οὐτ' ἄλλον τινὰ εἶδον ἰάσασθαι

must use a millstone. This is what they call that stone from which they prepare the mills in which they grind grain.

7. It is, of course, appropriate to treat scirrhus of the spleen not only externally with strong medications but also with very strong drinks, for it is possible to tolerate these without pain. The best of them are the root and bark of capparid and scolopendron and the roots and branches of tamarisk. It is appropriate to boil all such things in vinegar and oxymel. Often the spleen is manifestly hard to the touch when the swelling is not scirrhus but more pneumatic. In this case, apply a medicated plaster of mixed potency soaked beforehand in absinth, like that made with sulfur and alum. Obviously, I have written about the majority of such medications in the books on medications.<sup>23</sup> Do not simply direct your attention to the potency of the mixed medications, but also to the amount of the mixture. Thus, in the case of spleens that have a pneumatic swelling, and still more in the edemas, even if you put in a lot of astringent, you will do no harm. In the case of the scirrhus swellings, it is appropriate for the dispersing potency to predominate but have a little of the astringent mixed with it. Anyway, one of the simple and natural medications such as flower of salt cures scirrhus spleens when applied to them externally in a bladder.

We often cure an incipient scirrhus of the liver. However, when it is prolonged for many days, this cannot be treated, nor is it possible to cure any other kind. All

<sup>23</sup> See note 32, p. xli above.

110K *δυναθέντα. πᾶσι μὲν οὖν τοῖς οὕτω παθοῦσιν ἐξ ἅπαντος ὕδρος ἔπεται. διαφθείρονται δ' οἱ πλείστοι ἐν χρόνῳ μακροτέρῳ. τιναὶ δ' ἰσθόρησα καὶ διὰ ταχέων ἀπολομένους, οἷς ἢ γαστήρ διεχώρει πολλά. πρόδηλον οὖν ὅτι τούτοις ἰκανῶς ἐστέγνωτο τὰ στόματα τῶν μεταλαμβάνοντων τὴν τροφήν ἀγγείων, ἐκ τῶν σιμῶν τοῦ ἥπατος εἰς τὰ κυρτά. τοὺς δ' οὖν θεραπευθέντας ἐξ αὐτῶν ἢ προειρημένη τῶν ἐν τοῖς μνώδεσι σκίρρων ἀγωγή διέσωσεν. | οὐ γὰρ φέρει τὸ σπλάγχχνον τοῦτο τὰ σφοδρὰ φάρμακα, καθάπερ ὁ σπλήν. ἐπιτείνειν οὖν χρὴ τὰ διὰ φλεγμονὴν αὐτῷ προσαγόμενα τῇ μίξει τῶν μαλακτικῶν. ἦν δ' ἐκεῖνα τὰ δι' ἀψυθίου κόμης καὶ μυροβαλάνου πύσματος καὶ νάρδων ἀμφοτέρων Ἰνδικῆς τε καὶ Κελτικῆς, ἔτι δὲ κρόκου καὶ οἰνάνθης καὶ μαστίχης Χίας καὶ μύρων τῶν διὰ ναρδοστάχους σκευαζομένων, ἔτι δὲ μαστιχίου καὶ σχινίου καὶ μηλίνου καὶ οἰνανθίνου. τούτοις οὖν ἀμμωνιακόν τε θυμίαμα καὶ βδέλλιον, οἷ τ' εἰρημένοι μνελοὶ καὶ τὰ στέατα μινύμενα καὶ τὰ τέμνειν δυνάμενα, τὸν γεννώμενον ἐν ἥπατι σκίρρον ἰάσαιντο μετὰ τῆς προσηκούσης δηλονότι διαίτης καὶ τῶν ἅμα αὐτῇ πινομένων φαρμάκων, σκοπὸν ἔχοντων ἐκφράξαι τε καὶ διαρρῦσαι τὸν χυμὸν τὸν ἐν τῷ σπλάγχχνῳ. ἔστι δὲ ταῦτα πάντα καὶ τῶν ἐν νεφροῖς λίθων θρυπτικά. καὶ γέγραπται πολλοῖς ἰατροῖς περὶ τῆς ὕλης αὐτῶν. ἐπιμινύναι δὲ χρὴ τοῖς τοιούτοις καὶ τῶν οὐρητικῶν τε παμπόλλη δ' ἔστι καὶ τούτων ἢ ὕλη γεγραμμένη μὲν ὑπὸ πολλῶν, εἰρημένη δὲ καὶ πρὸς*

affections like this follow in every case of hydrops. The majority of patients die over a longer time; however some, in whom the stomach expels much, are recorded as dying quickly. It is clear in these cases that the mouths of the vessels which transmit the nutriment from the concavity of the liver to the convexity are severely blocked. If, in fact, there are some of these patients who are cured, they owe their salvation to the previously mentioned treatment of the scirrhosities in the muscular parts. This organ (the liver) does not tolerate the strong medications like the spleen does. It is necessary, therefore, to augment those things introduced to it for the inflammation by mixing in softening agents. These are made from leaf of absinth and pressed myrobalanos, and both kinds of nard, the Indian and the Celtic. In addition, there are those made from crocus, oinanthe and Chian mastich, and the sweet oils prepared from spikenard, and further, those made from mastich, the mastich tree, quinces and the wild vineflower. These, when mixed with gum ammonia, bdellium, the marrows and fats mentioned, and those things capable of cutting, will cure the scirrhosity generated in the liver, along with the appropriate regimen obviously, and in conjunction with medications that are taken as a drink which have the aim of unblocking and breaking up the humor in the organ. All these things also break up stones in the kidneys—I have written about the material for these for many doctors. It is necessary also to mix in addition with such things one of the diuretics. The material of these is manifold and has been written about by many people and



ἡμῶν ἐν ταῖς περὶ τῶν φαρμάκων πραγματείαις. διὸ καὶ νῦν ἀρκείτω καὶ πρὸς σέ τὰ εἰρημένα. |

111K 8. Μεταβῆναι γὰρ ἤδη καιρὸς ἐφ' ἕτερον ὄγκου γένος, ᾧ τῆς γενέσεως ἡ ὕλη πνεῦμα φυσῶδες ἐστὶ. ὀνομάζεται δ' οὐ μόνον φυσῶδες, ἀλλὰ καὶ φύσα τὸ τοιοῦτον πνεῦμα, παχὺ καὶ ἀτμῶδες ὑπάρχον, οὐκ αἰθερῶδες τὴν οὐσίαν οὐδὲ λεπτόν· ἐννόησον δ' αὐτοῦ τὴν φύσιν ἐκ τοῦ περιέχοντος ἡμᾶς ἀέρος ἀναμνησθεῖς, ὁποῖος μὲν ἐν νοτίοις καταστάσεσιν, ὁποῖος δ' ἐν βορείοις γίνεται. τῷ μὲν γὰρ ἐν νοτίοις καταστάσεσιν ἔοικε τὸ φυσῶδες· τῷ δ' ἐν βορείοις τὸ κατὰ φύσιν ἐν ἡμῖν πνεῦμα· συμβάλλεται δ' εἰς τὸ μὴ διαπνεῖσθαι τὸ τοιοῦτον πνεῦμα καὶ ἡ τῶν σωμάτων πύκνωσις. ὥστε καὶ ἡ ἴασις τοῦ πάθους τούτου τὸν σκοπὸν ἓνα καὶ κοινὸν ἀμφοῖν ἔξει τὴν τῶν πεπυκνωμένων σωμάτων ἀραιώσιν καὶ τὴν τῶν πεπαχυσμένων πνευμάτων λέπτυνσιν. θερμαίνων γὰρ ἱκανῶς ἄμφω δι' οὐσίας λεπτομεροῦς ἀραιώσεις μὲν τὸ πεπυκνωμένον, λεπτυνεῖς δὲ τὸ πεπαχυσμένον. ἡ δὲ τῶν πασχόντων μορίων φύσις συνενδείξεται σοι τὴν τ' ἐπιτήδειον ὕλην τῶν βοηθημάτων καὶ τὸ μᾶλλον τε καὶ ἥττον ἐν αὐτῇ.

112K τὸ γὰρ τοι πνεῦμα τοῦτο | τὸ παχὺ καὶ ἀτμῶδες ἔσθ' ὅτε μὲν ὑπὸ τοῖς περιστοιχείοις ὑμέσιν ἀθροιζόμενον ἴσχεται ποτὲ δ' ὑπὸ τῷ περιτοναίῳ· ποτὲ δ' ἐντὸς τῶν ἐντέρων ἢ τῆς γαστρὸς. ἴσχεται δὲ ποτε καὶ ὑπὸ τῶν τοῦς μῦς περιεχόντων ὑμένων ἔνδον, ὥσπερ γε καὶ ὑπὸ τῶν ὑμενωδῶν τενόντων. ἴσχεται δὲ καὶ κατὰ

also spoken of by myself in the treatises on medications.<sup>24</sup> So now let what I have said suffice for you.

8. It is now time to pass on to another class of swelling (tumor) in which the material of genesis is flatulent *pneuma*. Such a *pneuma* is not only called flatulent but also flatus, being thick and vaporous and not ethereal in terms of substance, nor thin. We have an idea of the nature of this by calling to mind the air around us—one is like the conditions in south winds and one is like those in north winds. Thus flatulent *pneuma* is like the conditions in the south winds while the *pneuma* in us, which is in accord with nature, is like the conditions in north winds. The density (thickening) of bodies is an impediment to the vaporous outflow of such a *pneuma*. As a consequence, the cure of such an affection will have a single common objective for both—the rarefaction of bodies that have been condensed and the thinning of *pneumas* that have been thickened. By heating sufficiently through agents that are fine-particled, you both rarefy what has been condensed and thin what has been thickened. The nature of the affected parts indicates to you the suitable material of the remedies and the amounts.

In fact, this *pneuma* is sometimes thick and vaporous when it is collected together and retained by the periosteal membranes. Sometimes it is retained by the peritoneum, sometimes within the intestines and stomach, and sometimes within the membranes surrounding the muscles, just as it also is by the membranous tendons. And it is

<sup>24</sup> See note 32, p. xli above.

τὰς λόγῳ θεωρητὰς χώρας ἐν τε τοῖς μῦσι καὶ τοῖς ἄλλοις σώμασιν· ὧν χωρίων τὴν φύσιν ἐν ταῖς ἀνατομικαῖς ἔμαθες ἐγχειρήσεσιν. οὕτω γοῦν καὶ αὐτὸς ὁ μὺς ἐμφυσᾶται. καὶ κατὰ τὸ τῆς γαστρὸς ἢ τὸ τῶν ἐντέρων σῶμα κατακλείεται πνεῦμα φυσῶδες· ὅταν δὲ καὶ ψυχρὸν ἰκανῶς ἢ τοῦτο, μεγίστην ὀδύνην παρέχει. θεραπεία δὲ κοινὴ μὲν ἀπάντων, ὡς εἴρηται, διὰ λεπτομεροῦς οὐσίας· καὶ ὅταν γε μετ' ὀδύνης ἢ τὸ πάθημα, τοιαύτης τὴν φύσιν ὡς πραῦνειν τὰ ἀλγῆματα δύνασθαι. κατὰ δὲ τὴν τῶν πασχόντων μορίων διαφορὰν ἢ θ' ὕλη τῆς θεραπείας ὑπαλλάττεται καὶ ἡ δύναμις ἐπιτείνεται καὶ ἀμβλύνεται.

113K διὰ τοιοῦτον οὖν πνεῦμα τῆς ὀδύνης γιγνομένης ἐν τῇ κάτω γαστρὶ, τὸ λεπτομερὲς ἔλαιον ἐνεῖς ἅμα τοῖς ἐναφηψημένοις αὐτῷ φαρμάκοις, αὐτίκα παύσεις | αὐτήν. τὰ δ' ἐναφηψημένα τῷ ἐλαίῳ φάρμακα θερμαίνοντα μετὰ λεπτομερείας ἔστω κύμινόν τε τὸ παρ' ἡμῖν καὶ μᾶλλον αὐτοῦ τὸ καλούμενον Αἰθιοπικὸν καὶ σελίνου καὶ πετροσελίνου σπέρμα καὶ μαράθρου καὶ σίνωνος καὶ ἀνίσου τε καὶ λιβυστικοῦ καὶ σεσέλεως καὶ δαύκου καὶ σπονδυλίου. καὶ εἰ τεκμαίροιο ψυχρὰν εἶναι τὴν διάθεσιν τῶν ὀδυνωμένων μορίων, καὶ πῆγανον καὶ μάραθρον καὶ δαφνίδας ἐναφειψήσεις καὶ μίξεις ἀσφαλτόν τε καὶ αὐτὸ τὸ δάφνινον, ὅσα τ' ἄλλα τῶν οὕτω θερμαινόντων ἔστιν. εἰ δὲ καὶ φλεγμονὴν μεμίχθαι ταῖς τοιαύταις ὀδύναϊς ὑπολάβοις, ἀφαιρήσεις μὲν τὰ δριμύα πάνν καὶ θερμαίνοντα σφοδρῶς. ἐπὶ δὲ τὰ μετρίως τοιαῦτα μεταβήσῃ χαλα-

retained within the theoretical spaces in the muscles and other bodies. You learned about the nature of these spaces in the work, *On Anatomical Procedures*.<sup>25</sup> Anyhow, in this way the muscle itself is inflated. Also flatulent *pneuma* is enclosed in the body of the stomach and in the intestines. Whenever this is also very cold it produces great pain. There is, as I said, a common treatment of all these [conditions] using fine-particled substances. And whenever the affection is accompanied by pain, an agent of such a nature is able to assuage the pains. The material of the treatment is changed according to the difference of the affected parts, and the potency is increased in intensity or loses its force.

Therefore, when pain arises due to such a *pneuma* in the stomach below and you put in fine-particled oil along with the medications that have been boiled down in it, you immediately stop the pain. The medications boiled down in the oil should be heating as well as fine-particled— 113K cumin, both our own and better than this, that called Ethiopian, celery, seeds of parsley, fennel, stone parsley, anise, libustikon, hartwort, wild carrot and spondylium. If you judge the condition of the painful parts to be a cold one, you also boil down rue, fennel and bay leaves, and mix asphalt and the bay oil and those other things that are heating in this way. If, however, you suspect inflammation to have also been mixed with such pains, you take away those things that are very acrid and strongly heating and change to those that have a moderately relaxing potency.

<sup>25</sup> *Anat. Admin.*, II.205–731K. For English translations, see Singer, *Galen: On Anatomical Procedures* (Books 1–9), and Duckworth, *Galen on Anatomical Procedures* (Books 9–15, from Arabic). See also, *The Art of Medicine*, 16.

114K στικὴν ἔχοντα δύναμιν. ἐναφειψήσεις οὖν τῷ ἐλαίῳ τὸ  
 ἄνηθον, οὐ τὸ πήγανον, καὶ μίξεις στέαρ χήνειον ἢ  
 ἀλεκτορίδος. ἀλλὰ ταῦτα μὲν ἐπὶ μεγάλοις ἀλγήμασι.  
 τὰ δὲ μέτρια καὶ ἢ ἔξωθεν ὠνήσε πυρία, μάλιστα μὲν  
 διὰ κέγχρων, ἢ γὰρ κουφότης αὐτῶν ἀλυποτάτη τοῖς  
 ὀδυνωμένοις ἐστί. τούτων δὲ μὴ παρουσῶν ἢ δι' ἀλῶν  
 114K θερμανθέντων ἢ δι' ὀμόλινον ἢ ὀπωσοῦν ἄλλως. | καὶ  
 σικύα δὲ μεγάλη μετὰ φλογὸς δαψιλοῦς ἄνευ τοῦ  
 σχάσαι τὸ δέρμα πολλάκις ἀνωδύνους διὰ ταχέως  
 εἰργάσατο. χρῆ δὲ περιλαμβάνειν αὐτὴν τὸν ὀμφα-  
 λόν. εἰ δ' ἐπὶ τούτοις ἐπιμένοιν αἱ ὀδύνας, τολμήσεις  
 χρήσασθαι τοῖς δι' ὀπίου φαρμάκοις, ὁποῖόν ἐστι καὶ  
 τὸ τοῦ Ταρσέως Φίλωνος ἅπασιν τοῖς ἰατροῖς γινω-  
 σκόμενον, εἰδὼς μὲν ἔξ ἀνάγκης τινὰ βλάβην τοῖς  
 πεπονθόσι μορίοις ἐκ τῶν τοιούτων φαρμάκων ἐσο-  
 μένην, ἀλλὰ πρὸς τὸ κατεπεῖγον ἐνιστάμενος αἰρήσῃ  
 μετὰ μικρᾶς βλάβης σῶσαι τὸν ἄνθρωπον ὑπὸ τοῦ  
 τῆς ὀδύνης μεγέθους συγκοπτόμενον. ἐξέσται γάρ  
 σοι ταῖς ἐξῆς ἡμέραις ἐπανορθώσασθαι τὴν γεγενη-  
 μένην βλάβην ὑπὸ τοῦ φαρμάκου. καλεῖται μὲν οὖν  
 ἀνώδυνα φάρμακα τὰ τοιαῦτα τῷ παύειν τὰς ὀδύνας.  
 ἐργάζεται δὲ τὴν ἀνάπαυλαν αὐτῶν οὐ τὰς διαθέσεις  
 θεραπεύοντα τελέως, ἀλλὰ τὴν αἰσθητικὴν δύναμιν  
 ναρκοῦντα. χρῆσθαι δὲ προσήκει τῷ Φιλωνείῳ φαρ-  
 μάκῳ καὶ πᾶσι τοῖς δι' ὀπίου σκευαζομένοις οὐκ εὐ-  
 θέως, ἀλλὰ μετὰ χρόνον τῆς συνθέσεως ἐνιαύσιον ἢ  
 115K διὰ τῶν πινομένων φαρμάκων | οἱ κάμνοντες ἀνώδουνοι

Thus you boil down dill and not rue with oil and mix goose  
 fat or that of a cockerel. But these things are for severe  
 pains. The moderate and externally applied fomentations  
 help, particularly those with millet, for the lightness of  
 these makes patients with pain absolutely pain free. If  
 these things are not available, use heating with salts or  
 coarse linen, or in any other way whatsoever. And a large  
 114K cupping glass with a strong heat often quickly makes peo-  
 ple pain free without scarifying the skin. It is necessary  
 to apply this to the umbilicus. If the pains still remain af-  
 ter these measures, you should have the courage to use  
 the medications made with opium—an example is that of  
 Philon of Tarsus, recognized by all doctors<sup>26</sup>—knowing  
 there will inevitably be some injury to the affected parts  
 from such medications. But given the urgency, you will  
 choose to accept the small harm in order to save the per-  
 son from collapsing due to the severity of the pain. As the  
 following days proceed, it will be up to you to restore the  
 injury that has occurred due to the medication. Such med-  
 ications are called anodyne because they stop the pains.  
 Accept the end point of these as being the dulling of ca-  
 pacity for sensation and not the complete treatment of the  
 conditions. The Philonian medication and all those pre-  
 pared with opium should not be used immediately after  
 they are synthesized, but only after a year or at least six  
 months have elapsed. Especially do those who are suf- 115K

<sup>26</sup> Philon of Tarsus was a Greek doctor of the first century AD.  
 He was apparently responsible for a number of compound medi-  
 cations—see Galen, *Comp. Med. Loc.*, 9.4 (XIII. 267–69K), and  
 Celsus, *De medicina*, 6.6.3.

γίνονται, πεπονθότων αὐτοῖς τῶν λεπτῶν ἐντέρων, ὥσπερ γε καὶ διὰ τῶν ἐντιθεμένων τῇ ἔδρᾳ ταχέως ὠφελούνται τὰ τῶν παχέων ἐντέρων παθήματα. γίνεται δὲ οὐ σμικρὰ τῆς δυνάμεως διάδοσις καὶ τῶν πινομένων τοῖς κάτω πεπονθόσι, καὶ τῶν ἐντιθεμένων τῇ ἔδρᾳ τοῖς τὰ ἄνω πάσχουσιν.

ἢ γε μὴν ἐν τοῖς σαρκώδεσι μέρεσι τοῦ φυσώδους πνεύματος ἄθροισις ἔστιν ὅτε παντάπασιν ἀνώδυνος γίνεται καὶ χρόνῳ παραμένει πλείονι καὶ μάλισθ' ὅταν ἐγγὺς ἢ διαρθρώσεως. ἐνταῦθα γάρ τοι καὶ οἱ μύες αὐτοὶ νευρωδέστεροί τε καὶ πικνότεροι καὶ σαρκωδέστεροί τε καὶ ἀραιότεροι κατὰ τὰ μέσα σφῶν αὐτῶν. ἐθεράπευσα δέ, ὡς οἴσθα, τὰς τοιαύτας διαθέσεις τοῖς διὰ πίττης καὶ ῥητίνης καὶ τερεβινθίνης καὶ στέατος λεοντείου καὶ ταυρείου φαρμάκοις. ἀρμόζει δ' ἐπ' αὐτῶν καὶ τὸ διὰ γλοιοῦ καὶ τιτάνου καὶ τὸ διὰ τοῦ συκομόρου, καὶ συνελόντι φάναι τὰ λεπτομερῆ γενναίως, ἐπιμιγνυμένων αὐτοῖς τῶν μαλακτικῶν.

9. Ἐπειδὴ δὲ καὶ περὶ τούτων ἰκανῶς εἴρηται, μεταβαίνειν καιρὸς ἐπὶ τὸν περὶ τῶν ἀποστημάτων λόγον. ὀνομάζουσι δ' οὕτω τὰς διαθέσεις ἐκεῖνας, ἐν αἷς ἀλλήλων ἰαφίσταται τὰ πρότερον ἀλλήλων ψαύοντα σώματα. χώραν οὖν ἀναγκαῖον ἐν τῷ μεταξὺ γενέσθαι κενήν, ἥτις ἦτοι πνευματώδη τινα οὐσίαν ὑγρὰν ἢ ἐξ ἀμφοῖν σύνθετον περιέξει. μεθίστανται δ' εἰς τοῦτο καὶ τῶν φλεγμονῶν ἔνια, καὶ τῶν ἐρυσιπελατωδῶν δὲ καὶ φλεγμονωδῶν οὐκ ὀλίγα. συνίσταται δὲ καὶ χωρὶς τούτων ἢ τῶν ἀποστημάτων διαθέσεις ἐκ

fering become pain free very quickly through drinking medications when what is affected in them involves the small intestines, just as those with affections of the large intestines are quickly benefited by medications administered *per rectum*. With the medications taken *per os*, a significant degree of their potency is retained for parts affected below, just as with the medications administered *per rectum* for the parts affected above.

The buildup of flatulent *pneuma* in the fleshy parts is sometimes completely painless and remains so over a long time, particularly when it is near a joint. For here, certainly, the muscles themselves are more nerve-like, thicker, more fleshy and more rarefied than they are in their middle sections. As you know, I treated such conditions with medications made from pitch, pine resin, terebinth, lion and bull fat. Also the medications made from *glotos*,<sup>27</sup> white earth and sycamore figs are adequate for these, and in summary, those medications that are notably fine-particled after the emollients are mixed with them.

9. Since enough has been said about these things, it is time to pass on to the discussion of abscesses. [Doctors] term those conditions abscesses in which bodies that were previously in contact with each other are separated. Of necessity, therefore, the space in between becomes empty, and this will contain either a *pneuma*-like or a watery substance, or a mixture of both. Some of the inflammations are transformed into this, including more than a few of the erysipelitic and phlegmonous ones. Apart from these things, the condition of abscess arises from an abun-

<sup>27</sup> *Glotos* is taken to be the same as *rupos*—i.e., grime from different sources such as baths, wrestling halls, and gymnasia. See Dioscorides, 1.34–36, and Galen, *MM*, X.967K.

περιουσίας μὲν τινῶν ὑγρῶν ἢ πνευμάτων ἀτμωδῶν, ἦτοι δ' ἐν αὐτοῖς τοῖς πάσχουσι σώμασιν ἐν μέσῳ γεννωμένων ἢ ἐξ ἑτέρων ἐπιρρεόντων, λόγῳ τῶν καλουμένων ἀποσκημμάτων. ὀνομάζουσι δ' οὕτω τὰς διαθέσεις ἐκείνας, ὅταν χυμοὶ τινες ἐνοχλοῦντες πρότερον ἑτέρῳ μορίῳ καταλιπόντες ἐκείνο εἰς ἕτερον μεταστῶσιν. ὅτῳ δ' ἂν τρόπῳ γένηται διάθεσις ἀποστήματος, ἢ μεταξὺ χώρα τῶν ἀφισταμένων σωμάτων πληροῦται τῶν ἐργαζομένων αὐτὴν ὑγρῶν.

117K ἄπερ ἐνίοτε χρονίζοντα πολυειδῶς ἀλλοιώσεις ἴσχει. καὶ γὰρ λίθοις καὶ ψάμμοις καὶ ὄστράκοις τε καὶ ξύλοις, ἄνθραξί τε καὶ πηλῷ καὶ γλοιῷ καὶ ἀμοργῇ καὶ τρυγί καὶ πολλοῖς ἄλλοις τοιούτοις εὐρηται πολλάκις, ἐν ἀποστήμασιν ὅμοια περιεχόμενα σώματα. ἰ τῶν μὲν οὖν ἐπιπολῆς ὑπὸ τῷ δέρματι συνισταμένων ἢ τε διάγνωσις ῥάστη καὶ ἡ ἴασις οὐ χαλεπή. διαγιγνώσκεται μὲν γὰρ ἐτόιμως τῇ τῆς ἀφῆς ιδιότητι. θεραπεύεται δὲ διὰ τῶν ἐξῴθεν ἐπιτιθεμένων φαρμάκων, διὸ οὐ δεόμεθα τῶν πινομένων, ὥσπερ ὅσα διὰ βάθους καὶ μάλιστα κατὰ σπλάγχνα συνίσταται. κατὰ μὲν οὖν τὰς διαγνώσεις εἴκει τοῖς ἐπειρειδομένοις δακτύλοις τὰ ἐκτυίσκοντα, τὴν ἀντιπῖαν οὐκ ἔχοντα τῶν φλεγμαινόντων μορίων. τὴν διάγνωσιν οὖν παρέχει σαφῆ. ιδιότης δὲ τῆς ἐξέως<sup>2</sup>

<sup>2</sup> There is some question about ἐξέως here and εἴξεως used twice in the final sentence of the paragraph. Ln has ἐξέως here and in the first use in the final sentence of the paragraph but εἴξεως in the second use. (KLat habitus . . . cessionis . . . cessionis; Leon. has habitus in all three instances.

dance of certain fluids and *pneuma*-like vapors which are either generated in the middle of the affected bodies themselves, or flow in from other bodies, by reason of which they are called *aposkemmata*.<sup>28</sup> They name in this way those conditions [that arise] when certain humors which were previously causing distress in one part have left that part and moved to another. This is how the condition of abscess is created and the space between the separated bodies is filled with the fluids creating it.

Sometimes, if these become chronic, they change into many different forms. Bodies like stones, sand, shell, woody material, charcoal-like material, clay, dirt, oily material or lees, and many other such things are often found contained in abscesses. When abscesses are established superficially under the skin, the diagnosis is very easy and the cure not difficult, for they are recognized readily by their specific nature on palpation. They are treated by medications applied externally, on which account there is no need for medications taken *per os*, as is the case for abscesses existing in the depths, and particularly in relation to internal organs. In respect of the diagnoses, it seems to the fingers palpating those things that are suppurating that they don't have the resistance of the inflamed parts. This, then, provides a clear diagnosis. One particu-

117K

<sup>28</sup> The term ἀπόσκημμα has a primary meaning of "support" or "prop" (LSJ, s.v.). It is also used for ἀπόσκηψις—see Hippocrates, *Art*, 6.56, and Galen, *Progn. Hippocr.*, XVIII.B.133K. The cognate verb is ἀποσκήπτω, meaning "to fall upon suddenly." Galen provides the definition above.

έτέρα μὲν ἔστιν ἐπὶ λεπτοῖς ὑγροῖς, έτέρα δ' ἐπὶ παχέσι, καθάπερ γε καὶ ἐπὶ γλίσχρω καὶ μυζώδει χυμῷ. πολλάκις δ' ἡμῖν ὑποπίπτει μετὰ τάσεως πνευματώδους ἀφεστός τι μόριον, οὗ διαιρεθέντος εύρέθη θρόμβος αἵματος, ὥστε καὶ ὅστις ἐθεάσατο δις ἢ τρίς ποιοιούτην διάθεσιν, εἰν φιλόπονος ἢ καὶ μνήμων, ἱκανὸς ἔσται διαγινώσκειν ἐν τοῖς τοιούτοις ὄγκοις περιεχόμενον θρόμβον ἐκ τοῦ παραθέσθαι τῇ μνήμη τὴν ιδιότητα τῆς τάσεως καὶ τῆς εἴξεως. ἴσως δ' ἀμεινόν ἔστιν οὐκ ιδιότητα λέγειν, ἀλλὰ ποσότητα τάσεως τε καὶ εἴξεως.

118K ἡ θεραπεία δὲ τῶν ἐπιπολῆς φλεγμονῶν ἀφισταμένων | ἀρχομένης μὲν ἔτι τῆς ἀποστάσεως διὰ τῆς ἀνωδύνου τε καὶ χαλαστικῆς ἀγωγῆς, ἥδη δὲ προηκούσης ἐπὶ τὴν πεπτικὴν τε καὶ διαπνητικὴν ἰδίως ὀνομαζομένην μεταβαίνοντων γίνεται λέλεκται δὲ περὶ αὐτῆς, ὥσπερ οὖν καὶ περὶ τῶν ἄλλων τοιούτων, ἐν τῷ πέμπτῳ Περὶ τῆς τῶν ἀπλῶν φαρμάκων δυνάμεως συντάγματι. ὕδατί τε οὖν ἐπὶ πλείον καταντλεῖν προσήκει, καταχέοντας ἔλαιον θερμὸν τοῦ φλεγμαίνοντος μορίου καὶ καταπλάττειν τῷ τῶν πυρῶν ἀλεύρῳ δι' ὕδατος καὶ ἐλαίου συμμέτρως ἔψοντας· θάπτου γὰρ ἄγει πρὸς διαπύησιν τοῦτο τοῦ δι' ἄρτου καταπλάσματος. ἐκεῖνο μὲν γὰρ διαφορητικώτατόν ἔστιν, ὡς ἂν ἄλων τε καὶ ζύμης ἔχον, ὠπτημένον τε καλῶς. οὐδὲν δ' ὑπάρχει τούτων τῷ δι' ἀλεύρου πυρίνου. καὶ ὅταν γε τὴν ἀρχομένην ἐκπνύσκεσθαι φλεγμονὴν θεραπεύων ἐλπίσης κωλύσαι τὴν ἐκπύησιν, ἐπὶ

lar kind of yielding is due to thin fluids and another to thick fluids, as in the case of a viscous and mucoid humor. What often happens when we palpate is that some *pneuma*-like part moves away, by which the differentiation from a blood clot is discovered. As a result, whoever has seen such a condition two or three times, if he is diligent and has a good memory, will be adequate to make a diagnosis in those swellings containing a thrombus by comparing the memory of the specificity of the touch and the yielding. Perhaps it is better not to say specificity but rather amount of touch and yielding.

The treatment of those inflammations on the surface at the beginning, when there is still separation, is through an agent that is anodyne and relaxing but when there is already progression to what is termed, specifically, concoction and suppuration, a change should be made. I have spoken about this, as I also have about other such things, in the fifth book of *On the Powers of Simple Medications*.<sup>29</sup> Thus, it is appropriate to irrigate still more with water, to pour warm oil on the inflamed part, and to apply a cataplasm of wheat mixed with barley meal which has been boiled moderately with water and oil. This leads more quickly to suppuration than a cataplasm made from bread because it is the most dispersing, as it has salts and yeast when it is cooked properly. There are none of these things in the wheat/barley meal plaster. And when, in fact, you treat an inflammation that is beginning to suppurate, and

<sup>29</sup> *Simpl. Med.*, 5 (XI.704–88K).

πλείστον ἔψε τὸν ἄρτον, ἐλαίῳ δηλονότι καὶ ὕδατι  
φυράσας· πολλαπλάσιον δ' ἔστω τὸ ὕδωρ τοῦ ἐλαίου.  
μᾶλλον δ' ἔτι τούτου κωλύει τὴν ἐκπύησιν τὸ τῶν  
κριθῶν ἄλευρον ὁμοίως σκευαζόμενον. τὸ δ' ἐν τῇ θε-  
119K ραπείᾳ ταύτῃ καταντλούμενον | ὕδωρ ἠψημέην ἐχέτω  
μετ' αὐτοῦ ρίζαν ἀλθαίας.

εἰ δὲ τάσις εἴη τοῦ περὶ τὸ φλεγμαῖνον μόριον  
δέρματος ἰσχυρά, σχάζειν αὐτοῦ δεῖ πολλάκις ἐπιπο-  
λαίαις ἀμυχαῖς· καὶ μετὰ ταῦτα τὸ κρίθινον ἄλευρον  
ἔψοντας, ὡς εἴρηται, καταπλάττειν. ἐπειράθη δὲ πολ-  
λάκις ἐπιπολῆς τε καὶ πάνυ λεπτῶν ἀμυχῶν· ἔμπαλιν  
δὲ ταύταις διὰ βάθους ἐτέρων μεγάλων καὶ τρίτων  
ἄλλων μεταξὺ τῶν εἰρημένων ἐν μήκει τε καὶ βάθει.  
αἱ μὲν οὖν ἐπιπολῆς ἀσθενῆ τὴν βοήθειαν εἶχον. αἱ  
δὲ βαθεαῖα τε καὶ μακρὰί πλείστον μὲν ἐκένοον τοῦ  
αἵματος, ὡς ἐγγὺς ἀφικνεῖσθαι λειποθυμίας· αὐταὶ δὲ  
πάλιν ἰδίας ἐδέοντο θεραπείας, ὥσπερ τραύματα. τὰς  
διὰ μέσου δ' αὐτῶν ἀμφοτέρων ἔξω τῶν εἰρημένων  
ἀτόπων καθεστηκυίας εἶρον αἰεὶ καὶ διὰ τοῦτο χρῆ-  
σθαι μᾶλλον εἰλόμην αὐταῖς πρὸ τῶν ἄλλων. ἐφ' ὧν  
μὲν τοι δυσεκπύητός τε καὶ δυσδιαφόρητος ὁ ὄγκος  
ἐστί, τοὺς ἐσφηνωμένους χωμοὺς ἠγητέον εἶναι πα-  
χυτέρους τε καὶ γλισχροτέρους. ἐν δὲ ταῖς τοιαύταις  
διαθέσεσι μόναις ἐπιτηδείος ἐστὶν ἢ διὰ τῶν βαθέων  
ἀμυχῶν ἴασις, ἐπιτηδεῖον δὲ καὶ τὸ διὰ τῶν ἠψημένων  
120K ἰσχυάδων κατάπλασμα. | χρῆ δ' οὐκ αὐτὰς ἰσχυάδας  
λαμβάνειν, ἀλλὰ τὸ ὕδωρ ἐν ᾧ διετάκησαν ἠψημένα.  
προσῆκει δὲ δηλονότι γλυκείας τε καὶ λιπαρὰς τὰς

you hope to prevent the suppuration, bake the bread still  
more, mixing it with oil obviously and with water. There  
should be much more water than oil. What prevents sup-  
puration even more than this is the meal prepared simi-  
larly with barley. The water that is poured over in this  
treatment should have the root of marshmallow boiled  
down in it.

If there is severe tension of the skin around the in-  
flamed part you frequently need to scarify it with superfi-  
cial scarifications. After this, apply a cataplasm of boiled  
barley meal, as I said. I often tried scarifications that were  
superficial and very fine. Opposite to these are those that  
are deep and large, and there is a third type intermediate  
between those spoken of in length and depth. Those that  
are superficial are a weak form of treatment. However,  
those that are deep and large evacuate the blood to a  
greater extent, so the patient comes nearer to swooning,  
and these in turn require their own specific treatment as  
wounds. I always found the intermediate scarifications to  
be free of both the problems mentioned, and because of  
this, I choose to use them more than the others. Certainly,  
in those cases in which the swelling is difficult to bring to  
suppuration and difficult to disperse, one must consider  
the obstructing humors to be quite thick and viscous. Only  
in conditions such as these is the cure through deep scar-  
ifications suitable. Useful also is the cataplasm made with  
boiled, dried figs. It is not necessary to take the figs them-  
selves, but only the water in which they were soaked and  
boiled. It is appropriate, clearly, for the figs to be sweet

119K

120K

ισχάδας εἶναι, ὡς ἐν αὐταῖς ἔχειν ὑγρότητα παραπλησίαν μέλιτι καὶ εἰ τοιαύτας λαβῶν ἐψήσειας ἄχρι πλείστου, τὸ ἀφέψημα μέλιτι λεπτῶ κατὰ τὴν σύστασιν ἔσται παραπλήσιον. τούτῳ τοιγαροῦν τῷ ὕδατι ποτὲ μὲν κρίθινον ἄλευρον ἀναδεύειν προσήκει, ποτὲ δ' ἄρτον συγκόμιστον ὀνομάζουσι δ' οὕτω τὸν μέσον τοῦ τε ἀκριβῶς καθαροῦ καὶ τοῦ πιτυρίτου καλουμένου. προσαγορεύουσι δ' ἔτι οἱ τὸν τοιοῦτον ἄρτον αὐτόπυρον·

ἐπειδὴ τοῦ μὲν καθαροῦ τὸ ἄλευρον, οὐχ οἶον πέρ ἔστι τῇ φύσει, τοιοῦτον εἰς τὴν ἀρτοποιίαν λαμβάνουσιν, ἀλλὰ προδιατῶντες ἀποκρίνουσι τὸ πίτυρον. ἔμπαλιν δὲ τοῦ πιτυρίτου προαφαιροῦσι τὸ καθαρώτατον. ὁ δ' αὐτόπυρος ἄρτος, οἶον περιέχει τὸ ἄλευρον, ὁ πυρὸς αὐτοφυῶς τοιοῦτον φυλάττει. χρῆ δὲ καὶ τὸν πυρὸν αὐτόν, ἐξ οὗπερ τὸ ἄλευρον λαμβάνεται, τῶν εὐγενῶν ὀνομαζομένων εἶναι. τινὲς μὲν γὰρ πυροὶ πλείστου ἐν ἑαυτοῖς ἔχουσι τὸ πίτυρον, οὓς δὴ καὶ ἀγενεῖς ὀνομάζουσιν· ἔτι οἱ δὲ τὴν σεμίδαλιν, οὓς, ὡς ἔφη, εὐγενεῖς προσαγορεύουσιν. οὐκ οὐκ χρῆ! πιτυρίαν εἶναι τὸν πυρὸν, ἐξ οὗπερ χρήσιμον εἰς τὸ κατὰπλασμα λαμβάνομεν ἄλευρον, ἀλλ' ὡς εἴρηται τῶν πολλῶν ἐχόντων σεμίδαλιν. εἰ δ' ἐξ ἀγενοῦς σίτου λαμβάνοις τὸ ἄλευρον, ἀποκρίνειν αὐτοῦ χρῆ μέρος τι τοῦ πιτύρου καὶ οὕτω τὸν μέσον ἄρτον ἐργάζεσθαι τοῦ τοιοῦτου τοίνυν ἄρτου τὸ μέσον καὶ ἀπαλὸν εἰς τὰ καταπλάσματα μιγνύναι, ὅταν ὡς ἔφη ἐν τῷ

and oily, as in these there is a moisture similar to honey. And if you take such boilings to the furthest point, what is boiled will be similar in consistency to thin honey. For that very reason, it is sometimes appropriate to soak barley meal in water, and sometimes bread made of coarse meal. People refer in this way to what is in between completely pure bread and that made with so-called bran. Some call it *autopuros*.<sup>30</sup>

Since, in terms of purity, bread is not really like this in nature, people attribute this to the baking, but the bran is separated by prior sifting. Contrariwise, they prefer the purest bread to that made with bran. The bread of whole wheaten meal which is, as it were, bread with wheat, retains what it naturally is. And it is necessary for the wheat itself, from which the bread is made, to be what is termed the best (*eugenes*) kind. Some breads have more of the bran mixture in them, and they call these inferior (*agenes*), whereas some have the finest wheaten flour and these they call the best kind, as I said. It is therefore necessary for the bread made with bran not to be the bread from which we take the meal useful for the cataplasm, but as I said, it should be from those breads having much of the finest wheaten flour. If you were to take the meal from inferior grain, it would be necessary to choose a portion of the bran-made bread itself, and in this way produce bread of a middle grade. Accordingly, the middle of such bread is soft for mixing cataplasms, whenever, as I said, you wish

<sup>30</sup> This is bread made from whole wheaten meal; see also Galen, *HVA*, XV.577K. KLat and Leon. simply transliterate the term, as does Daremberg, who includes in parentheses "fait avec le grain entier."



μέσῳ κατὰ δύναμιν ἀλεύρου κριθίνου τε καὶ πυρίνου  
 βουληθῆς ποιῆσαι τὸ κατάπλασμα. τὸ μὲν γὰρ πύρι-  
 νον ἄλευρον ἐκπυητικώτατόν ἐστι καὶ πεπτικώτατον·  
 τὸ δὲ κριθίνον διαφορητικώτατον. ὁ δ' εἰρημένος ἄρ-  
 τος ἐν τῷ μεταξύ τούτων, ὥσπερ γε καὶ τὸ ἄλευρον  
 αὐτοῦ τῶν εἰρημένων ἀλεύρων πυρίνων μεταξύ. πρὸς  
 ταῦτ' οὖν ἀποβλέπων καὶ τῷ τῶν ἰσχάδων ἀφεψήματι  
 μίγνυε, ὃ τι περ ἂν ἀρμόττειν σοι δοκῆ τῶν ἀλεύρων  
 ἢ τῶν ἄρτων. εἰ δὲ διαφοροῦτο μὲν ὁ ὄγκος, ἐλλιπέ-  
 στερον δ' ἢ προσήκε, συνέψευε χρῆ ταῖς ἰσχάσιν ὕσ-  
 σωπον ἢ ὀρίγανον. εἰ δὲ ἰσχυρότερόν ποτε ξηρᾶναι  
 βουληθείης τὸν ὄγκον, ἅλας ἐπιβάλλειν τῷ ἀφεψή-  
 ματι κάπειθ' οὕτως ἀναδεύσαντας αὐτῷ τὸ τῶν κρι-  
 θῶν ἄλευρον, ἀφαιρήσαντας δὲ καὶ τούτων τὸ πιτυ-  
 ρῶδες πᾶν, | οὕτω καταπλάττειν ἐπὶ πλέον ἔψοντας.

122K

ἐπὶ γε μὴν τῶν δυσδιαφορήτων ὄγκων εὐλαβητέον  
 ἐστὶ τὸ λείψανον αὐτῶν γενέσθαι σκιρρῶδες. ὥστε  
 καὶ προσέχειν χρῆ τὸν νοῦν ἀκριβῶς ἐφ' ἐκάστης  
 λύσεως, ἐφ' ὃ τι μεθίσταται τῶν θεραπευομένων ὄγ-  
 κων ἕκαστος· ἢ γὰρ διὰ τῶν ξηραίνοντων ἰσχυρῶς  
 ἀγωγῆ σκιρρῶδες αὐτῶν τὸ κατάλοιπον ἐργάζεται  
 γνώση δὲ τοῦτο καθ' ἐκάστην λύσιν, ἀπτόμενος τοῦ  
 πεπονθότος μορίου καὶ παραβάλλων τῷ πρόσθεν ὄντι  
 τὸ νῦν φαινόμενον. εἰάν οὖν ποτε τοιαύτην ὑποψίαν  
 ἔχης, ἐναφεψεῖν τῷ ὕδατι σικύου ἀγρίου ρίζαν ἢ βρυ-  
 ωνίας ἢ ἀσάρου, πολλάκις μὲν καὶ αὐτῶν μόνων,  
 εἴποτε δὲ καὶ τῶν λιπαρῶν ἰσχάδων ἐπεμβάλλων· εἶτα  
 τῷ ὕδατι μίγνυειν τὸ ἄλευρον, ἀναμειγνύοντα τι καὶ

to make the cataplasm intermediate in terms of the capac-  
 ity of the barley meal and wheat meal. For the wheat meal  
 bread is the most suppuration inducing and concocting,  
 whereas the barley meal bread is the most dispersing.  
 There is the bread I spoke of in between these, just as  
 there is also the meal in between those wheat meals spo-  
 ken of. Look at these, then, and mix with the boilings of  
 dried figs whichever of the meals and breads seems to you  
 to be suitable. If the swelling disperses, but less well than  
 it should, it is necessary to boil together with the figs, hys-  
 sop or organy. If, on the other hand, you should sometimes  
 wish to dry the swelling more strongly, put salts in with  
 what is boiled. And then, in this way, when you mix in the  
 meal of barley with it, take away all the bran from these,  
 and in this way apply the cataplasm after boiling for longer.

122K

In the case of the swellings that are difficult to disperse,  
 what you must be wary of is leaving something of them  
 remaining which becomes scirrhus. Consequently, you  
 must direct your attention precisely to each resolution in  
 which something of each of the treated swellings changes.  
 Thus, treatment through agents that are strongly drying  
 makes the remnant of them scirrhus. You may recognize  
 this in each resolution by palpating the affected part and  
 comparing what now appears with what existed before. If,  
 at some time, you have such a suspicion, boil down in  
 water root of wild cucumber, bryony or hazelwort; often  
 these alone will do but sometimes or put in fatty figs. Then  
 mix the meal with water, mixing in also some fat with it, of

στέατος αὐτῷ χηνὸς μάλιστα ἢ ἀλεκτορίδος· εἰ δ' οὐκ ἔχεις ταῦτα, τοῦ γε τῶν συῶν. καὶ αὐταὶ δ' αἱ ρίζαι τῶν προειρημένων βοτανῶν καὶ πρὸς αὐταῖς τῆς ἀλθαίας μετὰ τὴν σύμμετρον ἀφέψησιν λειούμεναι σὺν ἄρτρῳ τε καὶ στέατι τοὺς τοιοῦτους ὄγκους διαφοροῦσιν. ἰσχυροτέρα δὲ τούτων ἐστὶν ἡ τοῦ δρακοντίου· καὶ εἴποτε βουληθείης χρῆσθαι αὐτῇ λεπτομερεστέρα.

123K | τε πολὺ τῶν εἰρημένων οὔσῃ καὶ διαφορητικωτέρα, μίγνυε πάντως τὸ στέαρ· εἰ μὴ γὰρ ὑγραίνουσι τε καὶ μαλάττουσι τοὺς σκίρρουμένους ὄγκους, ἀλλὰ διαφοροῖν μόνον ἰσχυροτέροις φαρμάκοις, ἐν μὲν ταῖς πρώταις ἡμέραις ἀξιολόγως αὐτοὺς καθαιρήσεις, ἅμα τῷ σκληρύνειν τὸ καταλειπόμενον· αὐτὸ δὲ τοῦτο σκληρυνθέν ἔσται δύσλυτον. ἄμεινον οὖν, ὡς ἔφη, τοῖς διαφοροῦσιν ἰσχυρῶς φαρμάκοις ἀναμιγνύναι τὰ μαλάττοντα, τὴν εἰς σκίρρον μετάπτωσιν αὐτῶν ἐλαβόμενον· καὶ αὐτῶν δὲ τῶν σκίρρουμένων ἤδη τῆς θεραπείας τὸν τρόπον ἐμπροσθεν ἤκουσας.

αὐθις οὖν ἐπὶ τοὺς ἐκπυῖσκομένους ὄγκους ἴωμεν· οὓς ὅταν ἀπογνῶς διαφορῆσαι, τοῖς διὰ τοῦ πυρίνου ἀλεύρου καταπλάσμασι χρῶ. συλλαμβάνουσι γὰρ ἱκανῶς τῷ τάχει τῆς ἐκπυήσεως. ἔπειτα στομώσας εἰ μὲν ἀκριβῶς ἢ τὰ περίξ τῆς τομῆς ἀφλέγμαντα, τοῖς ἐμπλάστοις φαρμάκοις θεράπευε. ξηραντικὴ δ' αὐτῶν ἡ δυνάμις καὶ ἀδηκτος ἔστω, μὴ διὰ τῶν στυφόντων συγκεκλιμένη φαρμάκων, ἀλλ' ἦτοι τῶν ἀλύτως διαφορῶντων μόνον ἢ καὶ τι βραχὺ στύψεως ἐχόν-

a goose particularly, or a cock. If you don't have these, use the fat of pigs. And the actual roots of the plants previously mentioned, and in addition to these, of marshmallow, after moderate boiling, pounded fine with bread and fat disperse such swellings. Stronger than these is the root of adderwort.<sup>31</sup> If you ever wish to use this, which is much more fine-particled than the things mentioned and more dispersing, mix the fat thoroughly. If you don't moisten and soften the scirrhus swellings, but only disperse them with strong medications, in the first days you will reduce them to a significant extent, while at the same time hardening what remains. What is hardened will be difficult to disperse. It is better then, as I said, to mix softening agents with the strongly dispersing medications as a precaution against their changing to a scirrhusosity. If they are already scirrhus, you have heard about the manner of treatment previously.

123K

Let us return again to the swellings that are suppurating. Whenever you despair of dispersing these, use cataplasms made with wheat meal. These gather together the suppuration quickly enough. Then you make an opening, if the places around the cut are free of inflammation, and treat with the emplastic medications. The drying potency of these should be nonbiting and they should not be compounded from astringent medications, but either from those that disperse painlessly alone or those that also have

<sup>31</sup> There is some doubt about what is being referred to here—*δρακόντιον* has several meanings, including "adderwort" (Theophrastus, *History of Plants*, 7.12; Dioscorides, 2.196). KLat has *dracunculus*, which can mean "tarragon" (*Artemisia drancunculus*—Pliny, *Natural History*, 24.89–93).

124K των. ἐχρησάμην δ' ἐγὼ πολλάκις ἐπὶ τῶν τοιούτων τῷ  
 124K διὰ | τῆς ζύμης καὶ τῶν κεκαυμένων ὀστρέων. εἰ δέ τι  
 τῶν περίξ τῆς τομῆς φλεγμαῖνοι, τῷ διὰ τῆς χαλ-  
 κίτεως ἐλαίῳ τήξας, ὅταν ἀτρέμα ψυχθῆ, κατακερά-  
 σσας εἰς θυεῖαν, μαλάττων τε ταῖς χερσὶ καὶ οἶνον  
 παραχέων. ὡς οἶσθα, πολυχρησιότατον δ' ἐστὶ τοῦτό  
 μοι τὸ φάρμακον, ὡς ἐν τοῖς περὶ συνθέσεως φαρ-  
 μάκων ὑπομνήμασι λέλεκται. γενήσεται δ' ἂν θεὸς  
 ἐθέλῃ καὶ περὶ τῶν κατὰ τὰ μόρια παθῶν πραγμα-  
 τεῖα· καθ' ἣν τὰς τε δυνάμεις ἀπάντων τῶν συνηθῶν  
 μοι φαρμάκων ἀκριβῶς ἐξηγήσασθαι πειράσομαι  
 καὶ τὴν ἐπιτήδειον ὑφήγησασθαι χρήσιν. ἀλλὰ σὺ γε  
 τούτων ἤδη τῶν φαρμάκων, ὧν ἐμνημόνευσα κατὰ τὸ  
 βιβλίον τοῦτο, τὰς συμμετρίας τε καὶ σκευασίας  
 ἔχεις παρ' ἡμῶν λαβών. ὅταν γε μὴν ἐπὶ πλεόν ἐκ-  
 τακῆ τὸ δέρμα κατὰ τὰς ἐκπνήσεις, ὡς ῥακῶδες γενέ-  
 σθαι, δυσκόλλητον ἀποτελεῖται τοῖς ὑποκειμένοις σώ-  
 μασι· ὥστ' ἀναγκαῖον εἶναι, τῇ καλουμένῃ κατὰ  
 πλάτος ἀγωγῇ θεραπεύεσθαι τὸ ἔλκος. |

125K 10. Ὅταν δ' ἐπὶ πλεόν ἀκόλλητον ἦ τὸ δέρμα τοῖς  
 ὑποκειμένοις σώμασι, κόλπῳ ὀνομάζουσι τὸ τοιοῦτον  
 πάθος· ἐφεξῆς δ' ἀναμνήσω σε καὶ τῆς τούτου θερα-  
 πείας, ἣν ἐθεάσω με πολλάκις ἐπὶ πολλῶν ποιησά-  
 μενον. οὐσης οὖν τοιαύτης διαθέσεως, βέλτιον μὲν  
 αὐλίσκον εὐθύτρητον ἢ ἐκ χαλκοῦ πεποιημένον ἢ  
 ἐκ κέρατος ἠτοιμάσθαι σοι· μὴ παρόντος δ' ἐκείνου,  
 τῶν καλουμένων πνουλκῶν ὅστις ἂν εὐρύτατον ἔχοι

a little astringency. I often used, in such cases, that made  
 with leaven and burned oysters. If some of the area sur-  
 124K rounding the cut is inflamed, use the medication made  
 with copper dissolved in oil; when this is cooled to an ex-  
 treme degree, temper it in an oil press, soften it with your  
 hands, and pour in wine. As you know, for me this is an  
 extremely useful medication, as I have stated in the treatise  
 on compound medications.<sup>32</sup> There will be a work,  
 should the gods so wish, about the affections relating to  
 the parts.<sup>33</sup> In this I shall attempt to relate the powers of  
 all the compound medications and provide a guide to their  
 suitable use. But you already have received from me the  
 measures and preparations of the medications I men-  
 tioned in this book. Whenever, in fact, the skin melts away  
 still more in relation to the suppuration, so as to become  
 wrinkled, it is hard to make it adhere to the underlying  
 bodies, so it is necessary to treat the ulcer by making the  
 outlet larger.<sup>34</sup>

10. Whenever the skin is even more uncoaptable to the  
 125K underlying bodies, [doctors] call such an affection a *kolpos*  
 (sinus, fistula). Next, I shall call to mind for you the treat-  
 ment of this, which you often saw me carry out in many  
 cases. Thus, when such a condition exists, what is prefer-  
 able for you [to use] is a small pipe bored straight through,  
 which has been made from copper or prepared from horn,  
 or if that is not available, a so-called *pyulcus*<sup>35</sup> which has a

<sup>32</sup> *Comp. Med. Gen.*, XIII.362–1058K; see esp. XIII.568K.

<sup>33</sup> Presumably Galen, *Comp. Med. Loc.*, XII.378–1003K and XIII.1–361K.

<sup>34</sup> Daremberg, *Oeuvres anatomiques*, 773, has a note to the effect that this is what became known as “by second intention”; see *Comp. Med. Gen.*, XIII.601K.

<sup>35</sup> See Galen, *MM*, 5.8 (X.340K), and *Comp. Med. Gen.*, 2.5.

τρήμα· καὶ τό γε διὰ χάρτου κεκαυμένου συντιθέμενον ἡμέτερον φάρμακον, οἰδᾶς με πολλάκις ὀλίγον πολλῶ ῥοδίνῳ μιγνύντα, καὶ διὰ τοῦ τοιούτου πνουλοῦ τοῖς κόλποις ἐνιέντα· κάππειτα μοτῶ τιλτῶ μύοντα τὸ στόμιον. ὅσα δ' ἐμπλαστὰ φάρμακα τήκοντες ῥοδίνῳ τοῖς τοιούτοις ἐνίεμεν, οὐ διεξέρχεται τὸν πνουλοκόν· ἀλλ' ἐπὶ τούτων κύστιν προσήκει λαβόντα χοιρείαν, προστιθέναι τὸν εὐθύρητον αὐλίσκον. εἶναι δὲ χρῆ τὰ τηκόμενα φάρμακα δριμύτερα τῶν ἐμμότων ὀνομαζομένων· ὅποια ταῦτ' ἐστὶ τὰ συνήθη πᾶσι, χλωρὰ τῇ χροίῳ. προσήκει μὲν γὰρ αὐτὰ τοῦ ῥοδίνου κατὰ τὴν τήξιν οὐκ ὀλίγον ἔχειν, ὥστ' ἐνίεσθαι τῷ κόλπῳ δύνασθαι. καταλύεται δὲ τῶν ἐμμότων ἡ δύναμις ἐν ταῖς τοιαύταις μίξεσιν. ὅσα τοίνυν ἐμπλαστὰ φάρμακα τελέως ὄντα, καθάπερ τό τε τοῦ Μαχαιρίωνος καὶ τὸ τοῦ Ἐπιγόνου καὶ τὸ προσαγορευόμενον Ἴσις εἰς τὴν τῶν ἐμμότων χρήσιν ἀγόμενα κηρωτῆς μιγνυμένης δεῖται, ταῦτα γὰρ ἐπιτηδεῖα τοῖς κόλποις ἐστί. δι' ὃ γὰρ αὐτοῖς ἡ κηρωτῆ μίγνυται, διὰ τοῦτο καὶ νῦν ἐστὶν ἐπιτηδεῖα. μίγνυται δὲ διότι δακνώδη ταῖς δυνάμεσιν ἐστίν, εἰ τακεῖν μόνα αὐτὰ καθ' αὐτὰ μὴ μιχθείσης αὐτοῖς τῆς κηρωτῆς. ἀλλ' ὅταν γε τὸ μὲν ἔλαιον ἢ ῥοδίνον πολὺ, τὸ δ' ἐν αὐτῷ τηκόμενον φάρμακον ὀλίγον οὐκ ἔτι μένει δριμέα.

126K

<sup>36</sup> This is described in LSJ as a small pipe or tube, or a catheter; see Hippocrates, *Diseases*, 1.6. <sup>37</sup> "Tents" are "plugs of lint to keep a suppurating place open until it is well on the way to healing from the bottom." See Hippocrates, *Aphorisms*, 5.47.

<sup>38</sup> It is not entirely clear what the differences are between

very wide opening, and also our medication compounded from burned papyrus. You have often seen me mix a little of this with a lot of rosewater and through such a *pyulcus* introduce it into the sinuses, and then with shredded lint, close up the opening. However, those emplastastic medications dissolved in rose oil which I apply in these cases, I do not pass through the *pyulcus*. In such cases it is appropriate to take a pig's bladder adding the wide-bore *auliskus*.<sup>36</sup> It is necessary for the dissolved medications to be more acrid than the so-called "tent treatments."<sup>37</sup> These kinds of things, familiar to everyone, are green in color. It is appropriate for them to have not a little rose water in the solution so they are able to get into the sinus. The potency of the "tent treatments" is released in such mixtures. Accordingly, those medications that are completely emplastastic, like the Machairion, the Epigonian and the so-called Isian, which lead to the use of the tents, need to be mixed with a salve.<sup>38</sup> These are useful for sinuses because, when the salve is mixed with them, they are now beneficial because of this, since a biting is mixed with the potencies, if they are melted down by themselves alone and the salve is not mixed with them. But when there is a large amount of rose water, the small amount of medication dissolved in it does not still remain acrid.

126K

these compound medications. Thus Galen says, in *MM*, "that such a wound becomes clean by means of the green medication, or if you prefer, the medication of Machairion or Isis, for it makes no difference." (5.10, X.349K). In *EANS*, under *Isis*, there is: "Scribonius Largus 206 explains that Glukōn's excellent plaster was known as 'Isis'; according to Hērās, in Galen *CMGen*, 5.2 (XIII.774-775K), Epigonos' plaster was so named" (p. 446). See also *EANS* under Makhairiōn, p. 522.

συμμέτρως δ' ὑποσαρκωθέντος τοῦ κόλπου, τῶν κολλητικῶν τι φαρμάκων ἐπιθήσεις, ὡς εἰ καὶ πρόσφατον ἔναιμον ἐθεράπευες τραῦμα. πολλὰ δὲ τοιαῦτά ἐστι· τὰ μὲν δι' ἀσφάλτου σκευαζόμενα, καὶ καλοῦσιν οὐκ οἶδ' ὅπως αὐτὰ βαρβάρους ἐμπλάστρους· ἕτερα δὲ φάρμακα κίρρα ἢ φαῖα τὰ διὰ λιθαργύρου τε καὶ ἰοῦ μέχρι πλείονος ἐψηθέντα. γίνεται γὰρ οὗτος ὁ ἰδὸς κίρρος, ὁ δ' ἐπ' ὀλίγον ἐψηθεὶς τὰς μηλίνας ὀνομαζόμενας ἐμπλάστρους ἐργάζεται. γινώσκεις δ' ἵσθι πάντα τὰ μεταλλικὰ φάρμακα λεπτομερέστερά τε καὶ ξηραντικώτερα γίνεται μέχρι πλείονος ἐψόμενα. τοῖς γε μὴν ἐν τῷ παρανίκα κίρροῖς φαρμάκοις ἀποθεῖσθαι ἐπίπαγός τις ἕξωθεν ἐπιπήγνυται φαῖός, ὑφ' ᾧ τὸ βάθος τοῦ φαρμάκου κίρρότερον ἢ ἐξ ἀρχῆς φαίνεται. καὶ διὰ τοῦτο τινὲς μὲν διχρῶμους ὀνομάζουσι τὰς τοιαύτας ἐμπλάστρους, τινὲς δὲ διπροσώπους. ὅσῳ δ' ἂν ὦσι λεπτομερέστεραί τε καὶ ξηραντικώτεροι, τοσοῦτ' ἄλλοι ἐνεργήσουσιν ἐπὶ τὸν κόλπον. εἰς βάθος γὰρ αὐτῶν χρὴ διῆκνῆσθαι τὴν δύναμιν, εἰ τοῦ προκειμένου σκοποῦ τυγχάνειν μέλλοιεν. αἱ δὲ τὰ πρόσφατα καὶ ἔναιμα τραύματα κολλῶσαι, καὶ ἦντων τούτων ξηραίνωσι, κολλῶσι τὰ χεῖλη τῶν τραυμάτων· εἰ μὲν γὰρ εἴη βραχέα τε καὶ ἀβαθῆ, δι' αὐτὸ τοῦτο ῥῆόν τε καὶ θάπτον ἀνύουσι τὸ δέον, εἰ μὲν εἰς βάθος δὴκῆ τὸ τραῦμα τὸ πρόσφατον, καὶ ῥαφαῖς καὶ ἀγκτήρσιν εἰώθαμεν αὐτὰ συνάγειν.

οἱ μὲν οὖν κόλποι πάντες οὐχ ἅπλαϊ διαίρεσεις εἰσίν, ἀλλ' ἀναδέδονται συχνὸν ἐν αὐτοῖς ἄλλοτε κατ'

When the sinus is moderately healed up from below, apply one of the conglutinating medications, as if you were treating a fresh, bloody wound. There are many such medications. There are those prepared with asphalt which they call foreign emplastics—why I don't know. Other medications are orange-tawny or gray, such as those made with litharge and verdigris when boiled for a longer time. For this becomes orange-tawny verdigris which, if you boil it for a shorter time, makes what are called quince-yellow salves. You know that all the metallic medications become more fine-particled and drying when they are boiled down more. In fact, in the orange-tawny medications, immediately they are stored away, a hard, dusky crust that is gray congeals on the outside, in which case the depth of the medication appears more orange-tawny than it did at the start. Because of this some people call such salves "two-colored" and others call them "two-faced." By virtue of being more fine-particled and drying, they function more effectively in the sinus. It is necessary for the potency to penetrate to the depths of the sinuses, if the proposed objective is to be realized. The conglutinants, in the case of a fresh and bloody wound, even if they dry less than these, conglutinate the margins of the wounds. If the wound is slight and without depth, they accomplish this by themselves easier and quicker than is needed. However, if the wound is fresh and extends to the depths, we are accustomed to draw the margins together with sutures and fibulae.

Not all the sinuses are simple divisions; in many instances there are separate channels in one part or another,

128K ἄλλο μέρος, ὅπερ οὐδ' αὐτὸ χρή λαυθάνειν σε. πρὸς  
 μὲν γὰρ τὴν ἄνω χώραν ἀνατεταμένου | τοῦ κόλπου,  
 βραδίως ἐκρεῖ διὰ τοῦ στόματος ὁ ἰχώρ. κατάντους δ'  
 ὄντος αὐτοῦ, μένων ἔνδον ἀναβιβρώσκει τι τῶν συν-  
 εχῶν. ἐπὶ μὲν δὴ τῶν τοιούτων κόλπων, εἰ μὴ πρότε-  
 ρον εἰς ὑπόρρυσιν τινα ποιήσης τομῆν, οὐδὲν ἀνύσει  
 οὔτ' ἐν τῷ σαρκῶν αὐτοῦ οὔτ' ἐν τῷ κολλῶν. ἐπὶ δὲ  
 τῶν ἄλλων οὐ δεήσει διαιρέσεως, εἴαν γε μόνον φυ-  
 λάττης τὸ προσήκον σχῆμα τῷ πεπονθότι μορίῳ, δι'  
 ὃ σχῆμα δυνήσῃ ποτὲ καὶ τὸν ἀνάρροπον κόλπον ἐρ-  
 γάσασθαι κατάρροπον καὶ τὸν κατάρροπον ἀνάρρο-  
 πον. εἶδες γοῦν ἐμὲ ποτὲ τὸν ἐν τῷ πῆχει κόλπον, οὗ  
 τὸ στόμιον ἦν ἐγγὺς τοῦ ἀγκῶνος, ἀναρρόπῳ σχήματι  
 θεραπεύσαντα, χωρὶς ἀντιδιαρέσεως. καὶ κατὰ μηρὸν  
 δὲ ὁμοίως τοῦ καταρρόπου κόλπου, πρὸς μὲν τῷ γό-  
 νατι τὸ πέρασ ἔχοντος, ὑψηλὸν δὲ τὸ στόμα τῆς μέ-  
 σης κατὰ τὸν μηρὸν χώρας ἀνωτέρω, χωρὶς ἀντιδια-  
 ρέσεως ἐθεάσω τὴν θεραπείαν γενομένην, ὑποτιθέντος  
 μου κατὰ τὴν ἰγνύαν ὑπαυχένιον μαλακὸν ὡς ταπει-  
 νοτέραν ἔχειν τὴν θέσιν τὸν βουβῶνα τοῦ γόνατος.  
 ἤρκεσε δὲ καὶ ἐπὶ τούτου τοῦ κόλπου καὶ ἐτέρων μει-  
 ζόνων μελίκρατον μόνον ἐνεθέν, ἐπιτήδειον εἰς κόλλη-  
 σιν παρασχέιν | ἅπαν τὸ βάθος αὐτοῦ. τινὲς μὲν δὴ  
 129K κούριαν στακτὴν προσενίασιν, ἐξελέγχοντες ἑαυτοῦς  
 ἐφ' οἷς ἐνίεσαν ἔμπροσθεν φαρμάκοις ὑποσαρκούντες  
 τὸν κόλπον. οὐ γὰρ οἶόν τε σάρκα νεωτέραν ἐπιτρα-  
 φῆναι τῇ πρότερον οὔσῃ ρύπου περικειμένου. πῶς οὖν  
 αὐτάρκως σεσαρκωμένου τοῦ κόλπου τὸ κολλητικὸν

128K which must not escape your notice. When the sinus ex-  
 tends upward, toward the region above, ichor easily flows  
 out through the opening. However, when the sinus is in-  
 clined, the ichor remains within it and erodes some of the  
 contiguous parts. In such sinuses, if you don't make some  
 prior incision for drainage, you will accomplish nothing,  
 either in terms of enfleshing or conglutinating them. In  
 other cases, it will not require division, if you only preserve  
 the proper form in the affected part, and through this form  
 you are able sometimes either to make an upwardly inclin-  
 ing sinus downwardly inclining, or a downwardly inclining  
 sinus upwardly inclining. Anyway, you saw me on one oc-  
 casion, in the case of a sinus in the forearm with the open-  
 ing near the elbow, treating with an upwardly inclining  
 form without a counterincision. And similarly in the thigh,  
 with a downwardly inclining sinus which ended near the  
 knee, with an opening that was higher, above the midthigh,  
 you saw the treatment without a counterincision when I  
 placed a soft pillow under the back of the thigh so as to  
 have the position of the lymph nodes lower than the knee.  
 And it was sufficient in the case of this sinus, and others  
 larger than it, to put in melikraton alone, to provide suit-  
 ably for conglutination in the whole depth of it. There are  
 129K some who also inject lye ashes,<sup>39</sup> refuting themselves by  
 inserting the medications before refleshing the sinus from  
 below, for it is not as if the new flesh is nourished by the  
 presence of previous filth lying around. How, then, when  
 the sinus has been sufficiently refleshed, does it tolerate  
 the conglutinating medication if, while it is still very dirty,

<sup>39</sup> See Galen, *Simpl. Med.*, XI.629K ff.; Dioscorides, 1.186; and Pliny, *Natural History*, 23.64, 3:374–75.

ἐπιφέρουσι φάρμακον, εἴπερ ὡς ἰκανῶς ὄντα ῥυπαρὸν ἐπιχειροῦσι διαρρῦπτειν τῇ κονία τῆς καθαρᾶς σαρκός, οὐδὲ τὸ δριμύ μελίκρατον φερούσης; ἐπὶ ταύτης μὲν οὖν ἀρκεῖ τὸ τοιοῦτον ἐνιέμενον, ὡς ἂν καὶ πίνου τις ἡδέως αὐτό.

καὶ μετὰ γε τὸ μελίκρατον ἐφεξῆς εἴωθα, πρὶν ἐπιθεῖναι τὸ κολλητικὸν φάρμακον, ἐκκλύζειν τὸν κόλπον ποτὲ μὲν οἴνῳ μόνῳ, ποτὲ δὲ οἴνομέλιτι. πρὸς μὲν γὰρ τὸ περιρρῦψαί τε καὶ ἀποκαθῆραι τοὺς περὶ αὐτὸν ἰχώρας ἄμεινον τὸ μελίκρατον· εἰς δὲ τὴν μέλλουσαν κόλλησιν ὁ οἶνος, ἔστω δὲ μέσος γλυκύτητός τε καὶ στύψεως. καὶ μέντοι καὶ μετὰ τὴν ἐπίθεσιν τοῦ κολλησόντος φαρμάκου σπόγγος καινὸς ἐξ οἴνομέλιτος μόνος περιβαλλέσθω μαλακὸς ὡς ἔνι μάλιστα καὶ ἡ ἐπίδεσις ἀπὸ μὲν τοῦ πυθμένος ἀρχέσθω τοῦ κόλπου, 130K τελευτάτῳ δὲ ἐπὶ τὸ στόμιον. αἱ δὲ | περιβολαὶ τῶν ὀθονίων σφιγγέτωσαν μὲν ἀνωδύνως τὸν πυθμένα τοῦ κόλπου, κατὰ βραχὺ δ' ἐκλύεσθω ἄχρι τοῦ στομίου· καὶ τοῦτο δ' αὐτὸ χαλαρὰν ἐπίδεσιν ἔχετω τοῦ φαρμάκου, τῆς περιβαλλομένης ἕξωθεν ἐμπλάστρου τῷ κόλπῳ διεψαλισμένης κατὰ τὸ τοῦ κόλπου στόμιον, ὡς ἐκρεῖν δύνασθαι εἴ τις ἰχώρ. ἐκκρίνεται δὲ διὰ τοῦ κόλπου, μικροῦ τινος ἄλλου κατ' αὐτοῦ ἐπιτιθεμένου ἐμπλάστρου μέχρι τῆς ἐπιλύσεως, ἣν διὰ τρίτης ποιησάμενος ἀφαιρήσεις αὐτὸ τοῦτο τὸ οἶον ἐπίθεμα περικείμενον, εἵσας τὸ καθόλου τοῦ κόλπου περιβεβλημένον φάρμακον.

ἔστω δὲ σοι διάγνωσις, εἰ κεκόλληται τὸ βάθος

they attempt to cleanse thoroughly with lye ashes the clean flesh, which does not tolerate acrid melikraton? In this case, then, it is enough to put in what someone might drink with pleasure.

It is my custom, next after the melikraton, and before applying the conglutinating medication, to wash out the sinus, sometimes with wine alone and sometimes with a wine-honey mixture. For scouring all around and cleansing the ichors around it, melikraton is better;<sup>40</sup> for the impending conglutination, wine is better. This latter should be in between sweet and astringent. And indeed also, after the application of the conglutinating medication put around it a fresh sponge, which is as soft as possible, with a wine-honey mixture alone. Begin the bandage from the base of the sinus and end it at the opening. The encompassing bandages of linen should compress the base of the sinus painlessly and gradually be loosened until they reach the opening. This itself should also have a loose binding for the medication; the plaster surrounding the sinus externally should be cut with scissors at the opening of the sinus so some ichor is able to flow out. As it flows out through the sinus, apply some other small plaster to it until it is released. When you have done this for three days, take away the cover, as it were, lying around the sinus allowing the medication to surround the whole sinus.

You should determine whether the depth of the sinus

<sup>40</sup> Daremberg adds the following statement in parentheses here, "One must have recourse to warming when the ulcer is very dirty" (*Oeuvres anatomiques*, 776n1).

τοῦ κόλπου καλῶς, ἐκ τοῦ ρέοντος ἰχώρος, εἰ πολὺς ἢ ὀλίγος ἐστὶν ἢ πεπεμμένος ἢ ἄπεπτος· ἔτι δὲ καὶ κατ' αὐτὸν τὸν κόλπον, εἰ μήτ' ὀδύνη τις αἰσθητικὴ μήτ' ὄγκος· ἀλλὰ προσέσतालται τὸ χωρίον ἅπαν καὶ ξηρὸν καὶ ἀνωδυνόν ἐστίν. ἐὰν δὲ καὶ πῦον εὐπεπτον ἐπὶ τοῦ στόματος ἴδῃς ὀλίγον, ἔτι μᾶλλον τὰς ἐλπίδας ἀγαθὰς ἕξεις περὶ τοῦ κεκολληθῆσθαι τὸν κόλπον. ἐπιθείς τε τὸν σπόγγον αὖθις, ἐπιδήσας τε πάλιν, ὡς εἴρηται, λῦε κατὰ τὴν ὑστεραίαν ἢ διὰ τρίτης ὑπαλλάττων αἰεὶ τὸ κατὰ τοῦ κόλπου στομίου ἐπικείμενον | ὀθόνιον ἐκ τῆς αὐτῆς ἐμπλάστρου κεχρισμένον, ὃ περιλήψεται σύμπαν ἐν κύκλῳ τὸ στόμιον· εἶναι δ' αὐτὸ χρὴ μὴ πάνυ προστετυπωμένον, ἀλλ' ὥστε δύνασθαι τὸν ἰχώρα τοῦ κόλπου πάντα κενουθῆσθαι δι' αὐτοῦ. κατὰ μὲν οὖν τὴν πρώτην τε καὶ δευτέραν ἡμέραν ἐὰν ἐκκρίνη ταύτης ἰχώρ λεπτὸς ἐκ τοῦ κόλπου, μὴ πάνυ τῆς κολλήσεως ἀπέλπιζε. πολλάκις γὰρ ἢ τοῦ περιβαλλομένου φαρμάκου τῷ πεπονθότι μορίῳ δύναμις ἐκθλίβει σφοδρῶς ἐκ τε τοῦ δέρματος αὐτοῦ καὶ τῆς ὑποκειμένης σαρκὸς αὐτῷ ὑγρότητα λεπτήν, ὅταν γε οὕτως ἔχη διαθέσεως τὸ τοῦ θεραπευομένου σῶμα διὰ φυσικὴν κρᾶσιν ἢ μοχθηρὰν δίαιταν. ἥς ἐκθλιβείσης συμμετρῶς ξηρὰ γενόμενα τὰ χωρία κολλᾶται. κατὰ δὲ τὴν τρίτην ἡμέραν ἢ τετάρτην ἀπὸ τῆς ἀρχῆς, ἐὰν ἄπεπτος ἰχώρ φαίνεται διὰ τοῦ στόματος, γίνωσκε μὴ κεκολληθῆσθαι τὸν κόλπον. ἔστω δὲ πρὸ πάντων καὶ τὸ περιβαλλόμενον τῷ πεπονθότι μορίῳ φάρμακον ἰσχυρῶς μὲν ξηραίνον, οὔτε

has been conglutinated properly from the flowing ichor—whether there is much or little, and whether it has been concocted or is unconcocted, and further, in relation to the sinus itself, if there is neither a sensation of pain nor swelling, but the whole area is uniformly dry and painless. If you also see the pus in the opening is well-concocted and small in amount, you will have even greater hope of the sinus having been conglutinated. Apply the sponge again, bandage again as I said, release the bandage during the following day or the third day, always changing the linen [bandage] placed at the opening of the sinus, having anointed the plaster which will be placed around the whole opening circumferentially. This must not be molded to the shape to a great degree but be such that all the ichor of the sinus can be evacuated through it. Therefore, during the first and second days, if the thin ichor flows out from the sinus, do not altogether despair of conglutination. Often the potency of the medication placed around the affected part strongly compresses the thin fluid from the skin itself and the flesh underlying it, whenever the body being treated is in a similar condition due to natural *krasis* or a bad regimen. When there is a moderate squeezing out, the place becomes dry and is conglutinated. During the third or fourth day from the beginning, if the ichor appearing through the opening is not concocted, recognize that the sinus has not been conglutinated. Above all, the medication surrounding the affected part should be



δὲ δάκνον οὔτε συντείνον<sup>3</sup> οἶόν ἐστι τὸ ἡμέτερον κερρόν, ὃ χωρὶς κηροῦ σκευάζεται διὰ μεταλλικῶν φαρμάκων ἠψημένων καὶ ἐλαίου κικίνου καὶ ὄξους. ἐναίμων τε τραυμάτων κολλητικὸν ἀλύπως καὶ ξηραυτικὸν κόλπων. |

- 132K εἶδες δ' αὐτῷ καὶ σύριγγα θεραπευθεῖσαν, ἐφ' ἧς στενῆς τ' οὔσης ὀπῆς καὶ μακρᾶς καὶ μηδέπω μοι φαινομένης ἔχειν ἔνδον ἐν αὐτῇ τύλον, ἀλλὰ μόνον ῥύπον, ἐν ἧ καὶ πρότερον ἔκλυσα τὴν κονίαν, εἴτ' ἐπισχῶν ἐν τῇ σύριγγι μείναι τοσοῦτον χρόνον, ἐν ὅσῳ τὸν ῥύπον ἤλπισα τελῶς ἐκπεσεῖν ἅπαντα, μετὰ ταῦτ' ἐπέθηκα τὸ φάρμακον. οὕτω δὲ καὶ τοὺς ὑπ' αὐτῷ τῷ δέρματι μόνῳ κόλπους σαρκώσεως μὲν οὐ δεομένους, ἀμαθῶς δὲ θεραπευομένους ὑπὸ τινων, ἅμα τῷ παραλαβεῖν ἐκόλλησα τῷ φαρμάκῳ τῷδε προεκκλύσας τῇ κονίᾳ, διὰ τὸ μηδενὶ τῶν καθαιρόντων ἔλκους φαρμάκων χρῆσθαι τοὺς θεραπεύοντας. ὅταν γὰρ μὴ τῶν εἰς ἀπόστασιν ἀφικνουμένων ὄγκων ἢ τομῆ γένηται βραδέως ἢ δι' ἀμαθίαν τῶν θεραπευόντων ἢ διὰ δειλίαν τῶν θεραπευομένων, οὐκ ἐπιτρεπόντων τεμῆν, ἀλλὰ περιμεινάντων ἐν χρόνῳ πλείονι διαβρωθῆναι τὸ δέσμα πρὸς τοῦ πύου, συμβαίνει πολλάκις ἅπαν τὸ περὶ τῷ κατὰ τὴν ἀπόστασιν ἀθροισθέντι πύφ δέσμα λεπτὸν ἰκανῶς γενέσθαι, καθάπερ τι ῥάκος· ὅθεν ἠγοῦμαι καὶ τοῦνομα αὐτῷ πρὸς τῶν ἰατρῶν τεθείσθαι τὸ ρακῶδες. ἔστιν οὖν τὰ τοιαῦτα |
- 133K δέρματα δυσκόλλητα, καὶ μάλισθ' ὅταν τις αὐτοῖς ἐπιβάλη ξηρὸν κατὰ τὴν σύστασιν φάρμακον ὑπὸ

strongly drying but neither biting nor contracting. An example is my orange-tawny medication prepared without wax using the metallic medications, boiled down in castor oil and vinegar. This is painlessly conglutinating for bloody wounds and drying for sinuses.

- You saw me treating with this medication a small fistula with an opening that was narrow and long, which didn't yet seem to me to have callus in it, but only filth. In this case, I first washed it out with alkaline fluid (lixivium), and then, letting it remain in the fistula for a time which I hoped would be sufficient for all the filth to be completely driven out, I applied the medication after this. In this way too, the sinuses which are in the skin itself alone and don't need enfleshing, but are ignorantly treated by some, I conglutinated, after first washing the sinus out with alkaline fluid, using none of the purifying medications for the treatment of ulcers. In fact, whenever the incision of those swellings that come to abscess formation is delayed, due either to the ignorance of those treating or their timidity, who don't commit themselves to incision but wait a long time while the skin is eroded to pus, what often happens is that all the skin around the collected pus in the abscess becomes exceedingly thin, like some rag—from which, I think, the name applied to it by doctors is “ragged” (“rugose”). Such skin is, then, difficult to conglutinate, and particularly when someone applies to it a medication dry in con-
- 132K
- 133K

<sup>3</sup> On the basis of Oribasius having liquefant, D suggests *συντεῖνον* for *συντείνον*. Ln, like K, has *συντείνον*. (KLat has *nec contrahat* [cutem]; Leon. has *neque intendens*.)

τούτων γὰρ ἔτι μᾶλλον γίνεται ρακῶδές τε καὶ ξηρὸν τὸ δέρμα, παραπλήσιον ταῖς τριβακαῖς διφθέραις. ἔδοξεν οὖν μοι προσηκόντως ἂν τις χρήσασθαι πρὸς τὴν κόλλησιν αὐτοῦ τῇ συστάσει μὲν ὑγρῷ φαρμάκῳ, τῇ δυνάμει δὲ ξηρῷ.

λέλεκται δ' ἐν τοῖς περὶ φαρμάκων ὅτι δυνάμει ξηρὰ φάρμακα καλεῖν ἔθος ἐστὶ τοῖς ἰατροῖς ὅσα ξηραίνειν πέφυκε. κάλλιστον δὲ πάντων τῶν ὑγρῶν μὲν τῇ συστάσει, ξηρῶν δὲ τῇ δυνάμει τὸ συντεθὲν ὑπ' ἐμοῦ φάρμακόν ἐστι, τὸ διὰ λιθαργύρου καὶ στέατος χοιρείου παλαιοῦ καὶ χαλκίτεως, ἐχόντων ἔλαιον παλαιότατον. ἄμεινον δ' ἐνεργούντος ἐπειράθηεν αὐτοῦ κατὰ τὰς τοιαύτας διαθέσεις, ὅταν μὴ πάνυ τι σκληρὸν ἢ μῆδ' ἀκριβῶς ἀμόλυντον. ἀλλὰ καὶ τοιοῦτον σκευασθῆ καὶ τῶν ἐναίμων μὲν ἐστὶ τραυμάτων κολλητικὸν καὶ πάντων δὲ τῶν ἐλκῶν ἐπουλωτικόν, ἀνιέμενόν τ' ἐλαίῳ, κάπειτα μετ' οἶνον μετρίως παλαιοῦ φυρώμενον, εἴτ' ἐπιτιθέμενον ἐν κύκλῳ ταῖς τοιαύταις διαθέσεσιν, ἀλύπως αὐτὰς ἐκόλλησε πολλάκις. ἀρμόττει δέ, ὡς ἰ εἴρηται, ἐπὶ τῶν ρακῶδων δερμάτων οὐχ ἤκιστα καὶ τὸ μέλι μέχρι συστάσεως ἐμπλαστρώδους ἐψηθέν. ἐστὶ δ' ἡ συμμετρία τῆς ἐψησεως αὐτοῦ δυσκατόρθωτος τῷ μὴ τεθεαμένῳ. χρή γὰρ αὐτὸ μῆθ' οὕτω γενέσθαι σκληρόν, ὡς δυσπρόπτωτον εἶναι, μῆθ' οὕτως ὑγρόν, ὡς περιρρεῖν. τὸ μὲν γὰρ σκληρὸν εἰς τὴν τοιαύτην ἀτοπίαν ἀφικνεῖται ταῖς σκληραῖς ἐμπλάστοις, τὸ δ' ὑγρόν, ὡσανεὶ ἐπικείμενον θερμῷ σώματι, περιρρεῖ κύκλῳ καὶ ξηρὰν ἀπολεί-

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sistency. With these, the dry skin becomes even more ragged, like worn leather. It seemed to me, then, appropriate for someone to use for its conglutination a medication moist in consistency but dry in potency.

I have said in the works on medications<sup>41</sup> that it is customary for doctors to call medications that are drying in potency, those that are naturally drying. Best of all those that are moist in consistency but drying in potency is the medication I synthesized with litharge, pork fat that is old and copper, having oil that is very old. When I made trial of this, it worked better in such conditions when it was neither very hard nor completely soft (*amolunton*).<sup>42</sup> But even if such a medication is prepared as a conglutinant for bloody wounds and for cicatrizing all ulcers, it is better when mixed with oil, and next with wine that is moderately old, and then, when placed all around such conditions, it often conglutinates them painlessly. By no means the least suitable agent in the case of ragged skin is, as I said, honey boiled to the consistency of a salve. The balance of the boiling of this is difficult to get right by looking at it. It is necessary for it not to become so hard as to be difficult to apply, nor so moist as to flow around. If it is hard, this creates a significant degree of inconvenience in the hard plasters; if it is moist, it flows around circumferentially, as if

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<sup>41</sup> This is a general reference to the three works listed in note 32, p. xli.

<sup>42</sup> The term *amolunton* is generally taken to mean "undefiled." It is not clear that this is the meaning here. KLat has *neque plane manus inquinaret*; Leon. has *neque exquisite molle*; Daremberg has *salit un peu de doigt*. I have followed Leon.

πει τὴν ὀθόνην, ἥτις οὐ μόνον οὐδὲν ὀνίνησιν, ἀλλὰ καὶ πρὸς κακοῦ γίνεται τῷ κολληθησομένῳ δέρματι. συμμέτρως γε μὴν ἐψηθὲν τὸ μέλι κάλλιστόν ἐστι φάρμακον ἐπὶ τῶν τοιούτων κόλπων. ἐπεὶ δ' ἡ συμμετρία τῆς ἐψήσεως αὐτοῦ δυστέκμαρτός ἐστιν, ἄμεινον ἔδοξέ μοι καταπάττειν αὐτῷ χροῶδη σμύρναν ἢ ἀλόην ἢ λιβανωτὸν ἢ τινα τούτων ἢ πάντα ὁμοῦ· καὶ μάλισθ' ὅταν ἐπὶ τῆς ὀθόνης ἐγχρισθὲν ὑγρότερον φαίνεται. καταπάττειν δὲ αὐτὰ διὰ κοσκίνου, μετῴρου κρατουμένου κατὰ τοῦ μέλιτος. ἀρκεῖ δ' ἅπαξ ἢ δις κρούσαι αὐτὸ πρὸς τὴν συμμετρίαν τῆς διεκπτώσεως. ἐνίοτε δὲ καὶ κατ' αὐτὴν τὴν ἔψησιν ἐμπάττω

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τι | τῷ μέλιτι τῶν εἰρημένων φαρμάκων, καὶ μάλισθ' ὅταν ὁ κόλπος ἢ μείζων τε καὶ βαθύτερος.

ἐπειράθην δὲ καὶ τοῦ λεπτοῦ κενταυρίου, θαυμαστοῦ φαρμάκου πρὸς τὴν τοιαύτην χρείαν· ἐφεξῆς δ' αὐτῷ σύμφυτον ἐπιτήδειον ἐστὶ καὶ μετ' αὐτὸ τῆς Ἰλλυρίδος ἴρεως ἢ ῥίζα, μεθ' ἣν καὶ τὸ τῶν ὀρόβων ἄλευρον. εὐδηλον ὅτι κεκόφθαι τε καὶ διηθήσθαι λεπτῷ κοσκίνῳ καὶ μετὰ ταῦτά γε λελειῶσθαι τὰ τοιαῦτα πάντα προσήκει. μινύσθω δὲ τῷ μέλιτι κατ' ἐκείνον τὸν καιρὸν, ἥνικ' ἂν ἀπὸ τοῦ πυρὸς ἐξαίρεσθαι μέλλη, τοσοῦτον ἡμῶν ἐπιδιατριψάντων, ὡς ἐνωθῆναι καλῶς αὐτὰ τῷ προσηψμένῳ μέλιτι. κάλλιον δὲ καὶ καθαιροῦντα τὴν κακάβην ἀπὸ τοῦ πυρὸς, ἐμπάττειν ἅπαντα τὰ τοιαῦτα, κάπειτα κινεῖν ἐπιμελῶς ἄχρις ἂν οὕτω γένηται τὸ μέλι χλιαρόν, ὡς ἐπιτιθέναι δύνασθαι τῷ θεραπευσομένῳ σώματι.

placed on a hot body, and dryness leaves the linen, which not only is of no benefit but also has a bad effect on the skin to be conglutinated. Honey that is moderately boiled is the best medication in such sinuses. When the measure of its boiling was hard to determine, it seemed to me better to sprinkle finely powdered myrrh, aloes or frankincense on it—either one of these or all together—and particularly when the anointing of the linen seems more moist. Sprinkle these through a sieve held up above the honey. It suffices to strike this once or twice according to the amount that passes through the sieve. Sometimes also, in the actual boiling, sprinkle some of the aforementioned medications on the honey, and particularly when the sinus is quite large and deep.

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I have also tried thin centaury—a remarkable medication for such a use. Next to this in suitability is comfrey, and after this the root of Illyrian iris, and after this also the meal of bitter vetch. It is clear that these are to be chopped up and strained through a fine sieve, and along with this, it is appropriate for all such preparations to have been made fine. Mix them with the honey at the time you are about to take the honey from the fire, awaiting the appropriate time to unify these with the previously boiled honey. And it is better when removing the three-legged pot from the fire, to sprinkle on all such things, and then carefully move it up to the point where it becomes lukewarm, so it can be applied to the body being treated.

11. Ἐφεξῆς δ' ἂν εἴη τοῖς εἰρημένους εἰπεῖν σοί τι καὶ περὶ τῶν γαγγραινομένων φλεγμονῶν. ὀνομάζουσι δέ, ὡς οἴσθα, γαγγραίνας τὰς διὰ μέγεθος φλεγμονῆς νεκρώσεις οὐκ ἤδη γεγενημένας, ἀλλὰ γινομένας ἔτι. τελέως μὲν γὰρ | νεκρωθὲν μόριον ὡς νυττόμενον ἢ τεμνόμενον ἢ καιόμενον ἀναίσθητον ὑπάρχειν ὧν πάσχει, τάχιστα χρή περικόπτειν καθ' ὃ ψαύει τοῦ πλησιάζοντος ὑγιοῦς. ἀλλὰ τὸ μὲν οὕτω διατεθὲν μέλαν γίνεται, τὸ δ' ἐν τῷ μεταξὺ καθεστηκός, ὡς ὀδοιπορεῖν ἐπὶ τὴν νέκρωσιν, γάγγραινα ὀνομάζεται. θεραπεία δ' αὐτῆς γίνεται κενωσάντων ἡμῶν ὅσον οἶόν τε πλείστον τοῦ κατὰ τὸ πάσχον μόριον αἵματος ἐσφηνωμένου, δι' ὃ καὶ ἡ νέκρωσις γίνεται, μὴ δυναμένων τῶν ἀρτηριῶν ὑπὸ στενοχωρίας διαστέλλεσθαι, τῷ δ' ὑπολοίπῳ διαπνοᾶς παρασχόντων. ἢ τοῖνυν ὅλον τὸ δέρμα πολλαῖς βαθείαις τομαῖς διαιρεῖν χρή, τέμνοντας ἅμα αὐτῷ τὴν ὑποκειμένην οὐσίαν ἢ πολλαῖς ἀμυχαῖς βαθείαις ἀποσχάζειν, ἑάσαντα δ' ἀπορρηῆναι τὸ αἷμα τῶν φαρμάκων ἐπιτιθέναι τι τῶν πρὸς τὰ σηπόμενα χρησίμων. ἔστι δὲ τοιαῦτα δι' ὀξύμελιτος καὶ ἀλεύρου ὀρόβων ἢ αἰρώων, ἢ εἰ μὴ ταῦτα παρέιη, τὸ τῶν κυάμων· αὐτὸ τε μόνον τὸ ὀξύμελι.

σφοδρότερον δὲ αὐτῷ χρῆσθαι βουλόμενος, ἀλῶν ἐπεμβάλλειν ἢ τῶν κυκλίσκων τινὰ λειοῦν ἀκριβῶς, οἶος ὁ Ἀνδρώνιος ἔστι καὶ | ὁ Πολυεΐδου καὶ ὁ Πασίωνος. ἀλλὰ καὶ τὸ τοῦ Μούσα φάρμακον ἐπιτη-

11. Next, after the things I have spoken of, is to tell you about gangrenous inflammations. As you know, people term gangrenous those major inflammations which have not yet become necrotic but are still becoming so. For when a part is completely necrosed, such that, if pricked, cut or burned, it suffers no sensation of these things, it is necessary to very quickly cut around until you reach the adjacent healthy part. What is in this state is black, whereas what is in an intermediate state but is progressing toward necrosis, is called gangrenous. The treatment of this is by our evacuating as much as possible of the blood that is blocking up the affected part; it is due to this that the necrosis occurs, since the arteries are not able to dilate due to the narrow space and so provide transpiration to the remainder. Accordingly, it is necessary<sup>43</sup> to divide the whole skin with many deep cuts, cutting the underlying substance at the same time as the skin or scarifying with many deep scarifications, allowing the blood to flow out and some of the useful medications applied to move toward the parts that are putrefying. Such medications are those made with oxymel and meal of bitter vetch or darnel, or if these are not available, from beans, and the oxymel by itself alone.

If you wish to use this in a stronger form, put in salt, or one of the troches meticulously ground, such as the Andronian is, and the Polyeidon and Pasion. But also the medication of Musa is very useful for these purposes—I

<sup>43</sup> Here Daremberg adds the following based on Oribasius, 44.25: "either to withdraw blood to evacuate the corrupted blood if the affection is in a part which has a large vein that can be opened without danger, or . . ." (*Oeuvres anatomiques*, 779–80).

δειότατόν ἐστιν εἰς ταῦτα, ὃ κατὰ τὸν Ἡρα γέγραπται τόμον. χρῶ δὲ τούτοις καὶ οἷς προείρηκα, προσέχων τὸν νοῦν τῷ σώματι τοῦ κάμνοντος. ἀγροίκου μὲν γὰρ ὄντος αὐτοῦ καὶ σκληροῦ φύσει, τῶν ἰσχυροτάτων δεῖται φαρμάκων τὸ σῶμα· γυναιίου δὲ ἀπαλοσάρκου, τῶν ἀσθενεστέρων. οὕτω δὲ καὶ τῶν ἀνδρῶν ὅσοι λευκοὶ τε καὶ ἀπαλόσαρκοι καὶ φιλόλουτροι καὶ ἀγύμναστοι μαλακῶν δέονται φαρμάκων. δῆλον δ' ὅτι καὶ τὰ παιδία, κὰν ἐκτέμοις δέ ποτε τὸ σεσηπὸς καὶ νενεκρωμένον μέρος ἀσφαλείας ἔνεκα, τοῖς εἰρημένους ἄρτι χρῶ φαρμάκοις, ἀποβλέπων εἰς τὰς τῶν νοσημάτων φύσεις, ἅμα τῷ καὶ τὴν αὐτοῦ τοῦ πεπονθότος μορίου φύσιν ἐπισκοπεῖν· τινα γὰρ τάχιστα σήπεται καὶ βέλτιον ἀσφαλείας ἔνεκα, ὅταν ἐκτέμῃς ἢ περιτέμῃς τὸ σεσηπὸς, τὴν οἶον ρίζαν αὐτοῦ συνημμένην τοῖς ἀπαθέσι καίειν, ὡς ἐπὶ τῶν αἰδοίων εἰώθαμεν ἐργάζεσθαι πολλάκις, ἐνίοτε μὲν αὐτοῖς τοῖς πεπονθόσι μορίοις τὰ καντήρια προσφέρουτες, ἐνίοτε δὲ καὶ | προῦποβάλλοντες μότον. 138K  
μετά γε μὴν τὴν καῦσιν εἰώθαμεν, ὡς οἴσθα, χυλῷ πράσου χρῆσθαι, μὴ παρόντος δὲ τούτου, τοῖς προειρημένους ὀλίγον ἔμπροσθεν.

<sup>44</sup> Andron (uncertain dates—late 3rd c.—early 1st c.) prepared a troche for gangrene made from a number of materials macerated in sweet wine; see EANS, 80. Polyeides (dates as for Andron) prepared a troche for wounds that is mentioned by Celsus (5:20.2). There is some doubt as to whether the name signifies

have written about this in the tome for Heras.<sup>44</sup> Use these, and those previously mentioned, directing your attention to the body of the patient. When it is rustic and hard in nature, the body requires the strongest medications; when it is of a woman and soft-fleshed, the weakest, and the same also applies to men who are pale and soft-fleshed, are fond of bathing and don't exercise; they need soft medications. It is clear that this is also the case with children. And even if you sometimes cut out the putrefied and necrosed part for the sake of safety, use those medications mentioned just now, looking to the natures of those diseased, and at the same time also, to the nature of the affected part itself. For such parts putrefy very quickly and it is better for the sake of safety if you cut out or around the putrefaction and cauterize its root, as it were, joining it to unaffected parts. This is what we are often accustomed to do in the case of the genitalia, sometimes applying the cauterizing agents to the affected parts themselves and sometimes also putting a lint pledget beneath first. 138K  
After the cauterization, I am, as you know, accustomed to use the juice of leek, but if this is not available, I use those things mentioned a little earlier.

a real person—see EANS, 682. Pasion (dates as for Andron) prepared a troche made with litharge, pine resin, and beeswax in olive oil and aged dry wine. Musa is Antonius Musa (1st c. BC) whose compound medications are referred to by a number of later writers, including Galen, Aëtius, and Paul of Aegina. Heras was a Greek doctor from Cappadocia who practiced in Rome around the turn of the millennium. He is credited with a pharmacological treatise that was known to and quoted from by Galen—see EANS, 374.

ὅταν δὲ φαίνεται σοι τούτων γιγνομένων πεπαύσθαι τὸ σηπόμενον, ὅπως ἀποπέση θάπτον ἢ ἐσχάρα, τῷ κεφαλικῷ καλουμένῳ φαρμάκῳ μετὰ μέλιτος χρῶ. κάλλιον καὶ καταπλάττειν ἕξωθεν ἢ δι' ὑδρελαίου τὸν ἄρτον ἔβοντας ἢ κρίθινον ἄλευρον οὕτω σκευάζοντας, ἢ μετὰ αὐτοῦ μίξαι πύρινον. καὶ μὴν καὶ τὸ τετραφάρμακον ὀνομαζόμενον, ἔτι τε τὸ Μακεδονικόν, ἐπιτήδεια πρὸς τὰς διαπυήσεις τε καὶ ἀποπτώσεις τῶν ἐσχάρων, ὁμοίως δὲ καὶ πάντα ὅσα διαπύσκει. καὶ ἄρτος δὲ μετὰ σελίνου λειωθεὶς ἢ ὠκίμου περιρρήσει καὶ χωρίζει τὰς ἐσχάρας ἀπὸ τῶν ὑγιεινῶν. τῶν δ' ἀπλῶν φαρμάκων μετὰ μέλιτος ἴρις ἢ ῥίζα πάνακος ἢ ἀριστολοχίας ἢ ἀκόρου. ἐπὶ δὲ τῶν μαλακῶν σωματίων ἀρκεί καὶ τὸ τῶν ὀρόβων ἄλευρον μετὰ μέλιτος ἢ λιβανωτοῦ. ὁμοίως δὲ ἀφαιρεῖ τὰς ἐσχάρας καὶ τὸ τοῦ Μαχαιρίωνος φάρμακον καὶ ἡ Ἴσις ἔμμοτα μετὰ μέλιτος. ὅταν δὲ ἐκπέσωσιν αἱ ἐσχάρας, καὶ διὰ τῶν ἐπιτυχόντων φαρμάκων σαρκοῦνται τὰ τοιαῦτα τῶν ἐλκῶν.

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12. Ἐπεὶ δὲ καὶ περὶ τούτων εἴρηται μετρίως, περὶ τῶν καρκινωδῶν ἐξῆς ἂν εἴη ὄγκων εἰπεῖν, γινομένων ἐν ἅπασιν τοῖς μορίοις, μάλιστα δὲ τοῖς τιτθοῖς τῶν γυναικῶν, ὅσαι μηκέτι καθαίρονται τὴν κατὰ φύσιν κάθαρσιν ἢ τις ὅταν ὡς χρῆ γένηται, τελέως ἄνοσος ἢ γυνὴ διατελεῖ. πάντες οὖν οἱ τοιοῦτοι παρὰ φύσιν ὄγκοι τὴν γένεσιν ἐκ μελαγχολικοῦ περιττώματος

These things being done, when it is apparent to you that they have put a stop to the putrefaction, use the so-called cephalic medication with honey so the eschar falls off quicker. And it is better to apply a cataplasm externally, made either with bread boiled in a water-oil mixture or barley meal prepared in this way. Furthermore, the so-called tetrapharmaceutical, and the Macedonian [medication]<sup>45</sup> are suitable for the collections of pus and the separation of eschars, and similarly also for all the parts suppurating throughout. And bread triturated fine with celery or basil flows around and separates the eschars from the healthy parts. Among the simple medications with honey there are iris, the root of all-heal (Panax), aristolochia and yellow flag. In the case of the soft bodies, it is enough [to use] meal of bitter vetch with honey or frankincense. Similarly, to take away the eschars, there are both the Machaerion medication and the Isian with honey as "tents."<sup>46</sup> Whenever the eschars fall off, these kinds of ulcers are also enflashed by the suitable medications.

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12. Since I have said enough about these matters, the next to speak about are the cancerous tumors occurring in all the parts, but especially in the breasts of women who are no longer being purged by the natural evacuation (i.e., menstruation). Whenever this occurs as it should, the woman continues to be entirely disease free. All such tumors contrary to nature have their genesis from a melan-

<sup>45</sup> On these two medications, see Galen, *MM*, X.883K; Johnston and Horsley, *Galen: Method of Medicine*, 3.331. The tetrapharmaceutical contained wax, tallow, pitch, and resin.

<sup>46</sup> On these two medications, see note 45 above, and *MM*, X.349K; Johnston and Horsley, *Galen: Method of Medicine*, 2.67.

ἰσχοῦσι, ὑπὲρ οὗ λέλεκται καὶ ἐν τοῖς κατὰ φυσικῶν  
δυνάμειν ὑπομνήμασι, γεννᾶσθαι μὲν ἡμῶν δειξάν-  
των ἐν ἥπατι κατὰ τὴν ἐξαιμάτωσιν ἀνάλογον τῇ  
κατὰ τὸν οἶνον τρυγί, καθαίρεσθαι δὲ διὰ τοῦ σπλη-  
νός. ἐκ γὰρ τοῦ τοιούτου χυμοῦ τρέφεσθαι πέφυκεν.  
ὅταν οὖν ἡ φυσικὴ κρᾶσις τοῦ ζώου τὸν χυμὸν τοῦτον  
ὀλίγον ἢ γεννώσῃ καὶ ἡ διαίτα συντελῇ καὶ ὁ σπλήν  
ἀξιολόγως ἔλκη τὸ γεννώμενον εἰς ἑαυτόν, οὐδὲν  
ἀθροίζεται κατὰ τὰς φλέβας τοιούτων περιττώμα.  
140K ὅταν δὲ τὰναντία ἦ, ἀθροίζεται πολὺ κατὰ τὰς φλέ-  
βας καὶ ἐργάζεται τὰ λεχθησόμενα νοσήματα.

λέγω δ' ἐναντία τοῖς εἰρημέτοις τὸ μὲν ἥπαρ εἰς  
γένεσιν ἐπιτήδειον τοῦ τοιούτου περιττώματος, τὴν  
διαίταν δὲ διὰ τῶν τοιούτων ἐδεσμάτων γινομένην, ἃ  
πέφυκε γεννᾶν αἷμα παχὺ καὶ ἰλυώδες· ἀσθενέστερον  
δὲ τὸν σπλήνα φύσει καὶ ἀδυνατώτερον ἔλκειν ἐφ'  
ἑαυτὸν ἅπαν τὸ γεννώμενον. ἐν δὲ τῷ τοιούτῳ σώματι  
θολοῦνται καὶ παχύνεται τὸ κατὰ τὰς φλέβας αἷμα.  
καὶ ποτὲ μὲν ὑπ' αὐτῶν τῶν φλεβῶν, ἔχουσῶν γε καὶ  
αὐτῶν ἀποκριτικὴν τῶν ἀλλοτριῶν δύναντιν, ὥσπερ  
καὶ τὰλλα πάντα δι' αἰμορροΐδος ἐκκρίνεται· πολ-  
λάκις δὲ εἰς κισσοὺς κατασκήπτει, καὶ ποτὲ εἰς τὸ  
δέρμα πᾶν ὠθεῖται, καὶ τοῦτό ἐστι γένεσις τοῦ  
πάθους, ὃ καλοῦσιν ἐλέφαντα. γίνεται γε μὴν ἐνίοτε

<sup>47</sup> See *Nat. Fac.*, 2.9 (II.125–42K). For an English translation of this work see Brock, *Galen: On the Natural Faculties*, esp. 208–19.

cholic superfluity, which I have also spoken about in the treatise *On the Natural Faculties*,<sup>47</sup> showing this to be generated in the liver in relation to the formation of blood, analogous to the lees in wine, and is to be purged away through the spleen. From such a humor it is naturally produced. Therefore, when the natural *krasis* of the organism generates a small amount of the humor and the diet is as it should be, the spleen effectively draws to itself what is generated and none of these superfluities are collected in the veins. However, when the opposite situation exists, much is collected in the veins and brings about the diseases that will be spoken of.

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When I speak of opposites to those things mentioned, I refer to the liver being adapted to the generation of such a superfluity, a diet consisting of those foods which by nature generate blood that is thick and muddy, and a spleen that is weaker in nature and more unable to draw all that is generated to itself. In such a body, the blood becomes turbid and thickened in the veins. But sometimes the veins themselves are provided with a separative capacity for getting rid of what is abnormal, just as all other parts are, and pour this humor out through hemorrhoids. Often it rushes down to dilated (varicose) veins and is sometimes thrust toward the skin as a whole. This is the genesis of the affection people call *elephas/elephantiasis*.<sup>48</sup> In fact, the pas-

<sup>48</sup> Cf. Celsus, 3.25. Grmek writes: "The enumeration of the symptoms of elephantiasis by Rufus of Ephesus (early 2nd c. AD) corresponds perfectly with the clinical profile of low immune resistance leprosy" (*Diseases of the Ancient Greek World*, 168–76).

καὶ εἰς ἄλλα μόρια τοῦ σώματος, ἅπερ ἂν ἦ πάντων ἀσθενέστατα, φορὰ τοῦ τοιούτου χυμοῦ, καὶ φαίνονται γε σαφῶς αἱ κατὰ τὸ μόριον ἐκεῖνο φλέβες μεσταὶ αἵματος μέλανός τε καὶ παχέος. καὶ ὅσον δ' ἂν ἦ παχύτερόν τε καὶ μελάντερον, τοσοῦτον χεῖρόν ἐστι τὸ πάθος.

141K ἐπὶ δὲ τῶν τιθῶν εἶδομεν πολλάκις ἀκριβῶς ὄγκον ὅμοιον | καρκίνῳ ζώῳ. καθάπερ γὰρ ἐπ' ἐκείνου πόδες ἐκατέρωθεν εἰσι τοῦ σώματος, οὕτω καὶ ἐπὶ τοῦδε τοῦ πάθους αἱ φλεβές ἀποτεταμέναι τοῦ παρὰ φύσιν ὄγκου τὸ σχῆμα καρκίνῳ παραπλήσιον ἐργάζονται. τοῦτο τὸ πάθος ἀρχόμενον μὲν ἰασάμεθα πολλάκις, εἰς μέγεθος δὲ ἀξιόλογον ἀρθέν ἄνευ χειρουργίας οὐδεὶς ἰάσατο. πάσης μὲν οὖν χειρουργίας ἐκκοπτούσης ὄγκον παρὰ φύσιν ὁ σκοπὸς ἐστὶν ἐν κύκλῳ πάντα τὸν ὄγκον περικόψαι, καθ' ἃ τῷ κατὰ φύσιν ἔχοντι πλησιάζει. διὰ δὲ τὸ μέγεθος τῶν ἀγγείων, καὶ μάλισθ' ὅταν ἀρτηρίαι τύχωσιν οὔσαι, παραχρῆμά τε κίνδυνος αἰμορραγίας γίνεται βρόχοις τε διαλαμβανόντων αὐτὰς συμπάθειαι ἐπονται. ἐὰν δὲ καὶ καῦσαι τὰς ρίζας αὐτοῦ πάθους προελώμεθα, καὶ κατὰ τοῦτο κίνδυνος οὐ μικρὸς, ὅταν ἐγγὺς καιρίων μορίων ἢ καῦσις γένηται. ἀλλ' ἀρχόμενον γεννᾶσθαι, καθάπερ ἔφην, ἰασάμεθα πολλάκις τὸ πάθος τοῦτο, καὶ μάλισθ' ὅταν ὁ μελαγχολικὸς χυμὸς φαίνεται μὴ πᾶν παχὺς ὑπάρχων. ὑπακούει γὰρ οὗτος τοῖς καθαίρουσι φαρμάκοις ἐτοίμως, δι' ὧν ἡ θεραπεία γίνεται. 142K πρόδηλον δ' ὅτι μελάνων εἶναι χρῆ κενωτικὰ | τὰ

sage of such a humor also happens sometimes to other parts of the body which are the weakest of all, and the veins in the part seem clearly to be full of blood that is black and thick. To the degree that it is thicker and blacker, so the affection is worse.

We have often seen in the breasts a tumor exactly like a crab. Just as that animal has feet on either side of its body, so too in this affection the veins of the unnatural swelling are stretched out on either side, creating a form similar to a crab. When this affection is just beginning, we often cure it. When it has become swollen to a significant size, no one will cure it without surgery. The aim of all surgery is to excise the tumor contrary to nature, cutting around the whole mass circumferentially to where it is adjacent to what is in accord with nature. Due to the magnitude of the vessels, particularly when these happen to be arteries and there is an immediate danger of hemorrhage, when you cut these off with ligatures, sympathetic affections follow. And if we elect beforehand to cauterize the roots of the affection itself, there is no little danger in doing this, whenever the cauterization occurs near important parts. But when this affection is beginning to be generated, we will often cure it, as I said, and especially when the melancholic humor is obviously not very thick, for this readily yields to the purging medications by which the



διδόμενα φάρμακα, καὶ τοῦτο συνεχῶς ποιητέον, ἄχρις ἂν εἰς τὸ κατὰ φύσιν ἀκριβῶς ἐπανέλθοι τὸ μόριον, οὕσης καὶ τῆς διαίτης εὐχύμου. κατὰ γοῦν τὴν Ἀλεξάνδρειαν ἐλεφαντιῶσι πάμπολλοι διὰ τε τὴν δίαιταν καὶ τὴν θερμότητα τοῦ χωρίου. κατὰ δὲ τὰς Γερμανίας τε καὶ Μυσίας σπανιώτατα τοῦτο τὸ πάθος ὄπται γινόμενον. καὶ παρά γε τοῖς γαλακτοπόταις Σκύθαις σχεδὸν οὐδέποτε φαίνεται γινόμενον. ἀλλ' ἐν Ἀλεξανδρείᾳ παμπόλλη ἢ γένεσις αὐτοῦ διὰ τὴν δίαιτάν ἐστίν· ἀθάραν γὰρ ἐσθίουσι καὶ φακὴν καὶ κοχλίας καὶ ταρίχη πολλά· τινὲς δὲ καὶ ὄνεια κρέα καὶ ἄλλα τοιαῦτα παχὺν καὶ μελαγχολικὸν γεννῶντα χυμόν. ἅτε δὲ θερμοῦ τοῦ περιέχοντος ὄντος καὶ ἡ ῥοπή τῆς φορᾶς αὐτῶν πρὸς τὸ δέρμα γίνεται.

143K τούτῳ μὲν οὖν τῷ πάθει συμφέρουσιν αἱ εἰρημέναι καθάρσεις. εἰ δὲ τὰ τῆς ἡλικίας καὶ τὰ τῆς δυνάμεως ἐπιτρέπη, φλεβοτομεῖν πρότερον. ἐπὶ δὲ τῶν καρκίνων οὐκ ἀνάρμοστον μὲν οὐδ' ἐπὶ τούτων, ἢν μηδὲν κωλύη, φλεβοτομεῖν· ἐφεξῆς δὲ καθαίρειν· καὶ  
143K εἰ μὲν γυναικὲς εἴεν, ἔμμηνα κινεῖν αὐταῖς, ἢ εἰ γὰρ δηλονότι μηδέπω πεντηκοστὸν ἔτος ἄγωσι. κατὰ δὲ τοῦ πεπονθότος μορίου χυλὸς ἐπικεῖσθω στρύχνου, κάλλιστον γὰρ τοῦτο φάρμακον εἰς τὰ τοιαῦτα. μὴ βουλομένον δὲ τοῦ θεραπευομένου φάρμακον οὕτως ὑγρὸν ἐπιβαλέσθαι, καὶ μάλισθ' ὅταν προέρχεται τε τῆς οἰκίας καὶ τὰ συνήθη πράττειν ἀναγκάζεται, τὸ διὰ πομφόλυγος ἐπιβλητέον, ᾧ καὶ πρὸς τοὺς ἡλκωμένους καρκίνους οἴσθα χρώμενόν με· καὶ τούτου μὴ

142K treatment is carried out. It is clear that the medications given must be purgative of the black humors, and we must administer them repeatedly until the part returns completely to an accord with nature and the diet is *euchymous*. As it happens, in Alexandria very many suffer from *elephantiasis* due to the way of life and heat of the place. Among the Germans and Mysians this affection is seen to occur very rarely, and among the milk-drinking Scythians it almost never seems to occur. But in Alexandria the genesis is very frequent due to the diet, for they eat gruel, lentil soup, snails and salted fish. Some also eat asses' flesh and other such things that generate a thick and melancholic humor. Inasmuch as the ambient air is hot, the inclination of the passage of these humors is toward the skin.

In this affection the aforementioned purifications are beneficial. If, however, the factors of age and capacity permit, carry out phlebotomy beforehand. Neither in the case of cancerous swellings nor in these is it inappropriate to phlebotomize, if nothing prevents this, and next to purge. If the patients are women, activate the menstrual flow in them, if they are not yet fifty, obviously. Place the juice of  
143K sleepy nightshade on the affected part, for this is the best medication for such affections. If the person being treated doesn't want a moist medication to be applied in this way, and particularly if he is compelled to leave home to carry out his customary activities, you must look to the medication made from pompholyx, which I use, as you know, in the ulcerated cancers. If this is not available, use my med-

παρόντος τῷ δια χαλκίτεως ἡμετέρῳ φαρμάκῳ. κατὰ δὲ τὴν διαίταν ἐν χυλῷ πτισάνης πλεουαστέον καὶ γάλακτος ὀρρῷ καὶ λαχάνοις, μαλάχῃ καὶ ἀτραφάξει καὶ βλίτῳ, καὶ κατὰ καιρὸν ἐν ᾧ εἰσιν αἱ κολοκύνθαι, ταύταις χρηστέον. ἰχθύων δὲ τοῖς πετραίοις καὶ ὄρνισι πᾶσι, πλὴν ἐλείων. ἐπὶ δὲ τῶν ἐλεφαντιῶντων ἢ τῶν ἐχιδνῶν ἐδωδὴ θαυμασίον ἐστὶ φάρμακον. χρῆ δὲ ἐσθίειν αὐτὰς οὕτω σκευάζοντας ὡς τοὺς θηριοτρόφους καὶ ἀσπιδοτρόφους Μάρσους ἐθεάσω, πρῶτον μὲν ἀποκοπτομένης τῆς οὐρᾶς καὶ τῆς κεφαλῆς ἄκρι δακτύλων τετάρων, εἶτα τῶν ἔνδον ἀπάντων ἀφαιρέθων | καὶ τοῦ δέρματος δηλονότι, εἴθ' ὕδατι τοῦ σώματος αὐτῶν περιπλυθέντος. ἀλλὰ μέχρι μὲν τοῦδε, κάπειδαν τὴν θηριακὴν ἀντίδοτον καλουμένην σκευάζομεν, οὕτω πράττομεν ἐφεξῆς δὲ διαφερόντως ἔφομεν, ἐπὶ μὲν τῆς θηριακῆς ἐν ὕδατι προσεπεμβάλλοντες ἀνήθου καὶ βραχέων ἁλῶν, ἐπὶ δὲ τῶν ἐλεφαντιῶντων ἐν λοπάσι παραπλησίως ταῖς ἐγγέλνυσι σκευάζοντες διὰ λευκοῦ ζυμοῦ. γίνεται δὲ οὕτως. ὕδατος μὲν δαψιλοῦς ἐμβληθέντος καὶ ἐλαίου βραχέος καὶ σὺν αὐτῷ πράσου καὶ ἀνήθου. πρόδηλον δ' ὅτι μέχρι τοσοῦτου τὰς σάρκας τῶν ἐχιδνῶν ἀφεψεῖν προσήκει, μέχρις ἂν ἀκριβῶς γενηθῶσι μαλακαί. καὶ αὐτὸ δὲ τὸ δι' αὐτῶν σκευαζόμενον φάρμακον, ὃ καλοῦσι θηριακὴν ἀντίδοτον, ἐπιτήδειον ἐστὶ πίνεσθαι τοῖς οὕτω κάμνουσι, καὶ εἰ βούλοιτό τις αὐτοῦ καὶ τὸ δέρμα χρίεσθαι. ταῦτα γὰρ ἅπαντα ποιοῦντων ἐστ' ὅτε λε-

ication made with copper. In terms of diet, one must use an abundance in the juice of ptisane and the whey of milk, garden herbs, orach, blite, and when they are in season one must use the colocynths. Also one must use fish from the rocks and all birds except those from the marshes. For the *elephantiasis* the flesh of vipers is a remarkable medication. Vipers must be eaten after being prepared in the way I saw the Marsians, who feed on wild animals and snakes, prepare them—first cut off the tail and head up to the length of four fingers, then take away all the things within and the skin, obviously, then wash off the body with water. Up to this point, when we prepare the so-called theriac antidote, we proceed in this way. Next we boil in different ways: in the case of the theriac antidote, in water, adding besides dill and a little salt. For the *elephantiasis*, we prepare them similar to eels in flat dishes with white juice. It is done in this way: put in a large amount of water and a little oil, and with this, leek and dill. It is clear from what has been said to this point that it is appropriate to boil the flesh of vipers until it has been made completely soft. And the actual medication prepared by these measures, which they call the theriac antidote, is suitable as a drink for those suffering in this way, and also, if someone should so wish, to anoint the skin with. When all these things are done, sometimes the epithelial debris of the

πίς ἀφίσταται τοῦ δέρματος, ὅποιον ἐπὶ τῶν ὄφρων τὸ καλούμενον γήρας.

145K 13. Τῶν δ' ἄλλων ὄγκων τῶν παρὰ φύσιν οὐδενὸς μὲν ἠξιώσά σοι γραφήναι χειρουργίαν· ἔλαβες γὰρ |  
δοκιμώτατα τῶν παρ' ἡμῖν φαρμάκων. ἐπὶ μὲν χοιρά-  
δων τὰ τε προστέλλειν καὶ ξηραίνειν δυνάμενα καὶ  
διαπνύσκειν. ἐπὶ δὲ μελικηρίδων ὅσα καὶ ταύτας δια-  
φορεῖ καὶ πύου διαφορητικὰ φάρμακα καὶ ὕδατος ἐν  
ὁσχέῳ τε καὶ κατ' ἐπιγαστρίον ἔλαβες, ὡς καπὶ τῶν  
ὕδερικῶν κεχρηῆσθαι. διττὸς γὰρ καὶ τούτων ὁ σκο-  
πός, ἰᾶσθαι τε τοῦ σπλάγχχνου τὸν σκίρρον καὶ  
διαφορῆσαι τὸ συνειλεγμένον ὑγρὸν. εἴρηται δ' ἔμ-  
προσθεν ἢ τῶν σκιρρουμένων σπλάγχχνων θεραπεία.  
ὥστε καὶ ἢ τῶν ὑδέρων ἴασις εἰς τρεῖς τούτους ἀνά-  
γεται σκοπούς, ἰᾶσθαι τοῦ σκιρρουμένου σπλάγχχνου  
τὸν σκίρρον, ἐπιθέμασί τε καὶ διαφοροῦσι τὴν  
ὑγρότητα χρησθαι φάρμακά τε πίνειν διουρητικά.  
ταῦτα μὲν οὖν εἰς ἀποδημίαν σοι μακρὰν στελλομένῳ  
νομίζω συμμέτρως ἔχειν. εἴαν δέ, ὡς προείρηται, καὶ  
τὴν ἐπὶ τῶν κατὰ γένος καὶ τόπους πεπονθότας φαρ-  
μάκων πραγματείαν ποιήσωμαι, κακείνην ἔξεις ἐπα-  
νελθὼν ἐκ τῆς ἀποδημίας. ἔστι δὲ καὶ ἄλλη μεγάλη  
146K πραγματεία τῶν ἐταίρων | ἀξιωσάντων ἀπάσης τῆς  
θεραπευτικῆς μεθόδου. κατεχομένῳ δ' ἐπὶ πλέον ἔξω  
σοὶ πέμπειν οὐκ ὀκνήσω τῶν γραφομένων ἡμῖν ὑπο-  
μνημάτων ἕκαστον.

<sup>49</sup> *Choirades*: scrofulous (tuberculous) swellings of the lymph glands in the neck. See Hippocrates, *Aphorisms*, 3.26.

skin is separated, like what is termed aging in the case of snakes.

13. I don't consider it worthwhile to write for you about surgery for any of the other tumors contrary to nature, for you have accepted my medications as most reliable. In the case of *choirades*,<sup>49</sup> there are those that are able to draw together, dry and provoke suppuration. For the *melikeres*,<sup>50</sup> there are those that disperse and dissipate pus. For water in the scrotum (hydrocele), and also in the epigastrium (ascites), you accepted those I have used in the dropsies. The aim of these is twofold—to cure the scirrhus of the viscus and disperse the collected fluid. I spoke before about the treatment of the scirrhus organs. Consequently, the cure of dropsies is reduced to these three objectives: cure the scirrhus of the scirrhus internal organ; use topical applications to disperse the fluid; and give diuretic medications to drink. These things would, I think, be convenient for you to have when setting out on a long journey abroad. If, as I said before, I were to write a treatise pertaining to medications relating them to class and affected places,<sup>51</sup> you will have that when you return from your journey. There is also another large treatise I consider worthy for my friends, on the whole therapeutic method.<sup>52</sup> If you are detained longer abroad, I shall not hesitate to send you each of the treatises I write.

<sup>50</sup> *Melikeris*: a cyst or wen resembling a honeycomb; see also Galen, *MM*, X.985K for treatment, and *Comp. Med. Gen.*, XIII.929, 931, and 943K.

<sup>51</sup> Presumably the two works on the compounding of medications—*De compositione medicamentorum per genera* and *De compositione medicamentorum secundum locos* (see note 32, p. xli above). <sup>52</sup> *MM*, X.1–1021K. For an English translation of this work see Johnston and Horsley, *Galen: Method of Medicine*.

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