As we have seen throughout this volume, visual images have been a major vector for the transmission of Chinese medical culture. They figure largely in Chinese medical texts from medieval times onwards, and there are numerous examples in post-Song printed books. This chapter will argue that words and graphics are closely integrated, and most effective, in conveying practical knowledge in the literature of manual therapies such as skin-deep surgery and orthopaedics of various styles; the visual medium therefore assumes a particular importance for Chinese surgical and manual therapies associated with waike 外科, literally 'external medicine', and specifically for shangke 傷科, the treatment of injury and trauma to the body. The very nature of these subjects demands the communication of certain kinds of dexterity and spatial awareness that may be obscured by the textual medium.

There has been a specialised medical literature in China devoted to the science of treating wounds, sores and abscesses, and using mercury to treat skin diseases, with heat sterilisation of surgical instruments, since Liu Juanzi guiwei fang 劉涓子鬼遺方 (Liu Juanzi’s Remedies Bequeathed by Ghosts), which dates from the Jin period (265–420 CE). Early treatises on external medicine and traumatology of this kind were not illustrated, and relied solely on textual description. But as the sum of medical knowledge and the fund of clinical experience grew, this format posed increasing challenges for the student, and so illustrations were introduced as an adjunct to the written text. The earliest surviving illustrated book on surgery and traumatology in China is Weiji baoshu 衛濟寶書 (Wei Ji’s Precious Book), in two juan (fascicles), compiled by the hermit Dong Xuan 東軒 in the Song period (960–1279). The images illustrate skin diseases as well as therapeutic locations, and demonstrate the kinds of pathologies associated with waike.

These earliest illustrations had an indicative value only, being intended as aids to understanding and mastering difficult points in the text. Later, visual images became an integral part of many medical works, regardless of the degree of difficulty of the text. Lavish productions became ever more numerous and sophisticated. The prime example with the greatest number of surgical illustrations, 260 in all, is the Qing-dynasty work Weiji baoshu, introduced above, provides a good introduction to the range of interest and expertise in surgery and trauma study. It discusses the causation and pathogenesis of sores and abscesses, the five good practices (wu shan 五善) and seven evil karmas (qi e 七惡) of Buddhist philosophy, and symptoms of illness. The Buddhist terms wu shan and qi e refer respectively to five or seven prohibitions: no killing, no stealing, no adultery, no lying, and no alcohol; and no killing, stealing, adultery, lying, speaking senselessly, harsh words, and slander. Chinese physicians then brought these Buddhist concepts of morality to bear in describing the state of, for example, the five organs.

1 This is a separate edition of the sections on external medicine of Yizong jinjian 醫宗金鑒 (The Golden Mirror of Medicine), a large-scale medical work published under the aegis of the Qing government in 1742 (7th year of the Qianlong reign period of the Qing dynasty).
Weiji baoshu contains illustrations of five categories of skin disease: ai 癌 (cancers), biao 胫 (whitlows), ju 疽 (carbuncles, abscesses, phlegma), gu 瘡 (chronic, intractable conditions), and yong 癢 (abscesses). Apart from fulfilling the pleasures of professional connoisseurship, differentiating skin diseases presumably served the function of matching symptom with therapeutic procedure. There are also illustrations of instruments and techniques that have obvious practical value: an injection method, the application of poultices to the back, and the moxibustion technique called 'Riding the Bamboo Horse', of which we will see more of in a moment.

The second volume of Weiji baoshu contains 50 prescriptions for external application, and discusses in detail medications for breast abscesses and soft boils. In addition, the book contains two further diagrams. One of these shows a method for establishing the location on the spine for applying poultices. The other shows six moxibustion points for treating abscesses and ulcers, labelled quchi 曲池, shou qili 手七里, jianfeng 肩峰, zu sanli 足三里, fengshi 風市, and tui fenggu zhong 腿縫骨中.

The 260 illustrations of surgical conditions in Waike xinfa are divided into 16 juan (volumes or fascicles). Juan 1 and 2 form a general introduction. Juan 3–11 deal with external conditions with a specific location, proceeding from the head to the feet. Juan 12–14 deal with external conditions that do not have a specific location. Juan 15 deals with miscellaneous disorders, and Juan 16 is devoted to paediatrics. The entire text is a reworking of Waike dacheng 外科大成 (The Great Compendium of External Medicine), 1665. The entry for each disorder begins with a summary of symptoms and remedies in heptasyllabic verse, for ease of memorisation. This is followed by more detailed explanations. A highly influential text, it was studied and recited from memory by generations of medical students.

The 629 pre-1949 texts on external medicine and traumatology cited above contain a higher-than-average proportion of illustrations. Nonetheless it should be noted that only eight of them actually have the word tu 圖 (illustration, visual representation) in their title, and all of those were published in the Qing period (1644–1911) or later. This is suggestive of an increasing modern attention to establishing this genre of illustrated texts.

Waike and shangke illustrations can be divided into the following 18 categories according to their subject matter.

1. Affected Parts
Images showing diseased or injured body parts. This is the largest group of illustrations. They convey information at a glance, in the most readily comprehensible manner.

The Ming (1368–1644) work Waike qixuan 外科啓玄 by Shen Gongchen 申拱宸 (1607), contains more than 150 illustrations of this kind. Primarily intended to indicate the location of the disease or injury, they rarely show any...
details of the condition itself, which is generally signalled by a dot or circle.

2. Therapeutic Locations

These images show the location where treatment is to take place, which does not necessarily coincide with the affected area. As this information could be difficult to convey in words, illustrations were an essential visual aid. The illustration of the moxibustion technique called ‘Riding the Bamboo Horse’ (Qi zhuma jiutu 騎竹馬灸圖) in Chen Ziming’s 陳自明 Song-dynasty work Waike jingyao 外科精要 (Essentials of External Medicine), 1263, is a case in point (Fig. 1). This is essentially a moxibustion technique, but it demonstrates the manual skill needed to find the locations, and the complexities of collaboration with the patient and the physician’s assistants incurred in the treatment of sores and abscesses.

The accompanying text reads:
This is used to treat all kinds of sores and abscesses; it is indicated in all cases. To perform this technique, have the patient lean on the elbow. The wrist must be straight and pointing upward. Extend a string from the horizontal crease at the middle of the wrist, on the left for a man and the right for a woman. Measure along the flesh to the tip of the middle finger, excluding the fingernail, and cut off the string to use as a measure. Then take a bamboo pole, and have the patient undress and sit astride it. Two people should then raise the pole at the back and front, till the patient’s feet no longer touch the ground. Two more people should support him/her, ensuring that his/her back is kept straight. Then using the piece of string previously obtained as a measure, measure from the end of the coccyx as the patient sits astride the bamboo pole, up along the back to the end of the piece of string, keeping close to the flesh. Mark this spot with a black ink mark. Note that this is a reference point only; it is not a location for moxibustion. Then using a piece of thin string as a ruler, measure the patient’s middle finger joint between the two horizontal creases, on the left for a man and the right for a woman, and cut off the string to use as a measure. Measure this distance to either side of the mark previously made. The outer limits are the locations for moxibustion.

Without reference to the illustration, this explanation is hard to follow, and the therapeutic points could not be reliably identified.

3. Therapeutic Methods

Images illustrating particular therapies. A typical example is the illustration of an orthopaedic traction method known as Pansuo diezhuang (Holding ropes and standing on stacks of bricks) in Shangke buyao 傷科補要 (Supplement to traumatology), 1808 (Fig. 2).

As the accompanying text explains, this is a technique used to treat an injury approximating to the modern slipped disk, with stiffness and pain in the lumbar region. Two lengths of rope are suspended from a height, and a stack of bricks is placed beneath each of them, one on either side. The patient has to stand on the bricks, grasping a rope in each hand. The patient is supported at the small of the back, while the bricks are removed one at a time, obliging him or her to adopt an upright stance. This is done three times, or as long as the patient’s feet can still touch the ground. It is supposed to smooth the flow of Qi and disperse stagnations, raise prolapsed vertebrae, and correct curvature. The illustration is both lifelike and aesthetically pleasing.
Hu Tingguang’s 胡廷光 1815 *Shangliao huizuan* 傷科彙纂 (Anthology of Traumatology) makes use of vivid illustrations and rhymed couplets to convey information about orthopaedics and bone-setting in an accessible and memorable way. It includes a number of simple techniques especially suited to emergency and first-aid use, such as the two methods for reducing a dislocated shoulder shown in Figure 3.

### 4. Bone-Length Measurements

Illustrations indicating the (relative) lengths of the bones, as discussed in the ‘Chapter on Bone-length Measurement’ of the Numinous Pivot (*Lingshu jing: gudu pian* 靈樞經·骨度篇). Qian Xiuchang’s 錢秀昌 1808 *Shangke buyao* 傷科補要 contains bone-length diagrams for the front and back of the body, showing the bones of the head, the thorax and abdomen, the back, the sides, and the limbs (Figs 4a, b).

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*Figures 4a, b* Charts of bone-length measurement in *chi* and *cun* (anterior and posterior views). Qian Xiuchang 錢秀昌 1808, *Shangke buyao* 傷科補要 (Supplement to Traumatology), ed. 1976, pp. 9–10. © Wellcome Library, London, L0038855 and L0038854.
5. The Skeleton
Charts showing the number, names, form and structure, and position of the bones of the skeleton. The significance of each element of the skeleton is also explained in words, i.e. whether or not injury to that part would result in death. *Shangke huizuan* 傷科彙纂 (Traumatology Compilation) has four illustrations of the skeleton: two diagrams of the bones of the skeleton viewed from the front and the back, and two fatality charts, also from the front and back view. The skeletal images in *Shangke buyao* 傷科補要, when compared with those in the forensic medical literature, for example, *Chongkan buzhu xiyyuanlu jizheng* 重刊補注 洗冤錄集證 (1844), do not show any essential difference, but rather indicate an inheritance of illustrations of the earlier genre in the construction of therapeutic rather than legal expertise.

6. Appearance of Clinical Conditions
Images were used to show the appearance and signs of specific conditions. For instance, *Waike qixuan* 匪科全書 distinguishes, with the aid of illustrations, 24 types of haemorrhoids, each with a distinct morphology (see table below).

| Differentiation of Haemorrhoids in Waike Qixuan |
|-----------------------------------------------|
| *lingjiao zhi* 菱角痔 | Water-chestnut haemorrhoids, multifistular haemorrhoids |
| *lianhuazhi* 蓮花痔 | Lotus-flower haemorrhoids, hyperplastic haemorrhoids |
| *chuanchang zhi* 穿腸痔 | Haemorrhoids passing through the intestine, haemorrhoid and anal fistula? |
| *shunai zhi* 胸奶痔 | Rat’s breast haemorrhoids |
| *lianhuazhe* 蓮花結 | Lotus clusters |
| *fengke zhi* 蜂窠痔 | Bee-hive haemorrhoids |
| *cixiong zhi* 雌雄痔 | Female and male haemorrhoids |
| *zima zhi* 子母痔 | Mother and child haemorrhoids, prolapsed internal haemorrhoids |
| *xuanzhu zhi* 懸珠痔 | Haemorrhoids hooked into the intestine |
| *hetao zhi* 核桃痔 | Walnut haemorrhoids |
| *lizi zhi* 林子痔 | Chestnut haemorrhoids |
| *jiquan zhi* 雞冠痔 | Cockscomb haemorrhoids |
| *shanhu zhi* 珊瑚痔 | Coral haemorrhoids |
| *neizhi* 内痔 | Internal haemorrhoids |
| *danchang zhi* 擔腸痔 | Haemorrhoids lifting the intestine |
| *chuizhu zhi* 垂珠痔 | Drooping pearl haemorrhoids |
| *jixin zhi* 雞心痔 | Chicken's heart haemorrhoids |
| *qizhi* 氣痔 | Qi/air haemorrhoids, internal haemorrhoids with prolapse of rectum |
| *xuezhi* 血痔 | Blood haemorrhoids, internal haemorrhoids with bleeding |
| *niunai zhi* 牛奶痔 | Cow’s udder haemorrhoids |
| *yangnai zhi* 羊奶痔 | Sheep’s udder haemorrhoids |
| *chuantun zhi* 串臀痔 | Haemorrhoids running through to the buttocks |
| *liwai zhi* 裹外痔 | Internal and external haemorrhoids |

A casual glance through this list impresses the reader with the degree to which visual images are evoked not only through illustration, but also through verbal reference to animals and fruits, blurring categorical boundaries between the human and a distinct non-human world. Over half of the descriptors relate to the common physical morphologies of cow udders or pearls, cockscombs or walnuts etc. From the earliest surviving texts on pathology, we see this kind of animal imagery used to differentiate the sounds emitted during different types of convulsion, or to depict the qualities of the pulse. *Waike qixuan* also includes the graphically labelled *e zhongfang* 館掌風 (goose-skin palm) as well as other, more plainly named, symptoms such as *luo* 瘍 (scrofula) and terms containing references to pathogenic causes like Wind-Heat, e.g. *xue feng chuang* 血風瘡 (itching eruptions due to Wind-Heat in the blood).

It is interesting also to speculate why it was felt so important to differentiate styles of haemorrhoids in such detail. In Chapter 16 of this volume, by Wan Fang, we will see representations of smallpox. In this case, the list of morphologically distinct varieties of haemorrhoids not only suggests a fascination with the grotesque appearance of ab-
normal physical conditions, but also would have facilitated the communication of practical procedures. Haemorrhoids like those 'hooked into the intestine' might have required a more dangerous operation, and different surgical instruments from 'cow's udder' or 'hanging pearl' haemorrhoids.

7. Aetiological Factors
Pictures showing the causes of medical conditions also evoke the animal kingdom. For instance in Shen Gongchen's 1607 Waike qixuan, pictures of a tiger, a dog, a snake, a scorpion etc. are used as emblems of bites inflicted by these creatures. These animals indicate very direct and easily visualised traumatic causes. Particularly graphic are the 'human bites' as illustrated by a vivid sketch of two men fighting, one of them sinking his teeth into the other's arm. The entry on suicide by cutting the throat shows a general in full armour, in the act of drawing his sword to slit his own throat. More subtle causes such as Wind-Heat or diseases of Qi are not illustrated, probably in consequence of their more abstract nature.

8. Orthopaedic Instruments
Illustrations were used to show the appearance and structure of therapeutic instruments, and sometimes also to demonstrate their use.

Shangke buyao contains depictions of a lumbar fixation splint (yaozhu 腰柱), a fixation appliance for fractured kneecaps (baoxi 抱膝) (Fig. 5), and two other devices for setting and fixing broken bones described as shanli 杉籬 (fir wood fence) and muban 木板 (wooden board) (Figs 6, 7). There are additional illustrations showing these appliances in use.

Ninomiya Hika's 二宮彥可 1807 Waike tushuo 外科圖說 (Pictorial Guide to External Medicine) contains illustrations of 35 specialised implements used in petty surgery and external medicine. They include:
- square-pointed scissors (fangtou jian 方頭剪)
- sharp-pointed scissors (jianou jian 尖頭剪)
- claw scissors (zhuajian 爪剪)
- tongs or tweezers (jiadian 火剪)
- curved knife (wan dao 弯刀)
- hooked knife (gou dao 鉤刀)
- willow-leaf knife (liuye dao 柳葉刀)
- sharp-pointed knife (jianou dao 尖頭刀)
- razor (bi dao 笔刀)
- cooking cylinder, for heating liquid drugs (pengtong 烹筒)
- tube for applying medicaments (yao tong 藥筒)
- mercuric oxide tube (shengyao tong 升藥筒)
- anal probe (tan gang tong 探肛筒)
- needle sheath for anal insertion to treat piles (chuanggang zhentao 穿腸針筒)
- large forceps (da qian 大鉗)
- straight forceps (zhi qian 直鉗)
- double hook (shuang gou 双勾)
- silver wire (yinsi 銀絲)
- cautery iron (laotie 烙鐵).

It would be hard to obtain an accurate impression of their nature and use from a description alone.

9. Pharmaceutical Substances
Illustrations of medicinal plants figure largely in the Materia Medica books (herbals). They are also found
ILLUSTRATION IN THE LITERATURE OF SURGERY AND TRAUMATOLOGY IN CHINESE MEDICINE

occasionally in works on external medicine and traumatology. For instance, Waike jingyao contains an illustration of *rendongteng* 忍冬藤 (Japanese honeysuckle, *Lonicera japonica*) (Fig. 8) with the note:

Liquor made with Japanese honeysuckle is a highly effective treatment for abscesses and ulcers of all kinds. It can also be made into a medicinal plaster with wheatmeal.

In the Materia Medica literature, Japanese honeysuckle is first recorded in *Mingyi bielu* 名醫別録 (Informal Records of Famous Physicians), c. 510 CE. It is described there as cooling, efficacious in clearing poisons and unblocking the channels, and frequently used to treat external conditions such as abscesses, sores and swellings.

10. Proportional Somatic Measurements
Proportional somatic measurement (*tongshen chi* 同身尺), based on a unit (*cun* 寸) derived from the patient’s own body, was an important topic in early Chinese medicine. It was intended to take account of individual differences in build and stature and to place them within a unified framework. There were various methods for finding the value of the *cun* unit, based on the fingers, the eye or the mouth; most commonly it was based on the middle finger. Waike jingyao contains a somatic measurement chart (Fig. 9) accompanied by the following text:

The left hand is used for men and the right hand for women. The middle finger is bent, and the middle joint is then measured with a thin string. The horizontal creases at their widest point are the parameters for the proportional *cun* unit.

11. Charts of the Nine Mansions and Travelling Spirit
The phrase ‘Nine Mansions and Travelling Spirit’ (*jiugong kaoshen* 九宮尻神) alludes to a theory whereby the human spirit (*renshen* 神人) processed through the body according to times and seasons; each part of the body became subject to prohibitions on acupuncture and other therapeutic procedures as the spirit passed through it. The current location of the spirit could be calculated by reference to the divinatory systems of the Nine Palaces and Eight Trigrams. Works of external medicine such as Waike zhenzhong 外科正宗 (Orthodox Manual of External Medicine), 1617, contain ready-reference tables of prohibitions enshrining this information, which was a long-standing tradition in determining auspicious times to treat people (Fig. 10). (See Lo and Tlalim, Chapter 19 in this volume, p. 273 *et passim.*

Figure 12.8 Chart of the healing herb *rendongteng* 忍冬藤 (Japanese honeysuckle, *Lonicera japonica*), Waike jingyao 外科精要 1273, modern edn, 2007, p. 21. © Library of China Academy of Chinese Medical Sciences

Figure 12.9 Proportional somatic measurements. Chen Ziming 陳自明 1263, Waike jingyao 外科精要, modern edn, 2007, p. 7. © Library of China Academy of Chinese Medical Sciences

Figure 12.10 Nine Mansions and Travelling Spirit. Chen Shigong 陳實功 1617, Waike zhenzhong 外科正宗, modern edn, 1993, p. 329. © Library of China Academy of Chinese Medical Sciences
12. Charts of the Five Circulatory Phases and Six Climatic Factors; Taiji Diagrams

The concepts of the Five Circulatory Phases and Six Climatic Factors, as fundamental to Chinese medical theory, were applied in the practice of external medicine. Texts such as *Yangyi daquan* (Great Compendium of Dermatology), 1760, incorporated tables and charts of the Five Circulatory Phases and Six Climatic Factors and Taiji diagrams to guide the practitioner in differentiating the choice of treatment method for skin-deep disorders, especially as to whether the Qi in the body should be supplemented or dispersed according to changing heat factors (Fig. 11).

13. Charts of the Channels, Illuminated Hall Charts

Charts of the channels appear frequently in works of surgery and traumatology. Most of them show 14 channels and the points located on those channels, and are closely modelled on the mainstream literature of acupuncture and moxibustion. For instance, *Dongtian aozhi* (Profound Teachings of the Heavenly Cavern), 1694, contains 14 channel charts: one each for the 12 regular channels, one for *dumai* (the Governor Vessel) (Fig. 12) and one for *renmai* (the Director Vessel or Conception Vessel). Unusually, *Yangyi daquan* has separate channel charts for the right and left arm. *Yangke huizuan* contains an example of the *Mingtang tu*, or Illuminated Hall chart – an atlas of the channel network (See Lo, Introduction, p. 5; Wang, Chapter 1; Huang, Chapter 9, in this volume).

The term *Mingtang tu* (Illuminated Hall Chart) appeared earlier than *Zhenjiu tu* (Acupuncture and Moxibustion Chart) and *Jingluo tu* (Chart of the Channels and Networks). The former term was in use by the Han period, while the latter two terms appeared no later than Tang and Song respectively. But before the Tang period, the term *Mingtang tu* was not associated with acupuncture and moxa-cautery, but in almost all cases referred to illustrations of a ritual hall in the royal palace, where the emperor dealt with political and official affairs – in an ideal construction of ritual rulership, the emperor moved around the palace according to the season and in concert with astronomical changes. Physicians borrowed the concept of Mingtang to denote the human body; where acupuncture or moxa-cautery is involved, the *Mingtang tu* are, nevertheless, almost identical to *Zhenjiu tu* or *Jingluo tu*. If there is a difference, it might be that the *Mingtang tu* genre of chart often represents the ‘whole’ body, and not just its constituent parts or parts under scrutiny.

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2 Sun Zhenyuan 1802, *Yangke huizuan* 瘡科會粹, modern edn 1987, p. 44.
14. Acu-Moxa Locations for Traumatology

The charts of acu-moxa locations in monographs on traumatology differ somewhat from the channel and point charts found in the literature of acupuncture and moxibustion. Shangke buyao has three acu-moxa charts: a front view of the body with 19 therapeutic locations marked; a back view with 16 locations; and a side view with 12 locations (Fig. 13). Most of these locations are labelled with names associated with body parts, only a few of which are technical terms from acupuncture. Charts of therapeutic body locations that are labelled primarily according to anatomical terminology, and not the classical acu-moxa locations, are known from medieval moxa-cautery manuscripts (See Lo and Talim, Chapter 19 in this volume). In this case, the physical injury suggests that the locations for traumatology belong to a different tradition, which was more closely related to the strategic points in wushu 武術 (martial arts) and perhaps also to forensic medicine, concerned with the establishing of a case history of injury through physical attack to the live or dead body.

15. Internal Visualisation Images; Illustrations of the Internal Organs

Images showing the location or form and structure of the five zang-viscera and six fu-viscera. Chapter three of Yangyi daquan contains internal visualisation images, showing the internal topography of the body, following a chapter devoted to theory, and one on diagnosis. In contrast with internal visualisation charts that represent the inscape of the body as microcosm, which include depictions of the constellations in the form of the sixiang 四像 (the four animals of the constellations) and other spirit and meditational entities such as the chizi 赤字 (the red infant [of immortality]) (See Despeux, Chapter 2 in this volume, pp. 58–65), the chart in Figure 14 concentrates the gaze on mundane anatomy. Apart from the Mingmen 明門, which is a gate of the body and a site of more esoteric anatomy than the viscera, it marks the heart, the lungs, the liver, the kidneys, the stomach, the spleen, the bladder etc. It is followed by versions of the Yanluozi diagrams that we have already seen described in Catherine Despeux’ chapter, and then a series of images that isolate the organs themselves. The accompanying text contains excerpts on the viscera from many received medical works, notably recensions of the Yellow Emperor’s corpus and the Nanjing. These quotations outline the connections between the organs and their physiological roles. Sun Zhenyuan’s 孫震元 1802 Yangke huicui 瘡科會粹 (Treasury of Dermatology) contains an internal visualisation chart with illustrations of the viscera (Fig. 15), but the chart is juxtaposed with other human figures with much more anatomical detail, such as bones and blood vessels, as well as the more common illustrations of the acu-moxa channels. Overall these images serve to focus the attention on knowledge of the physicality of the body and its viscera, in keeping with the manual and practical therapies that follow.

16. Pulse Diagnosis

Diagrams and tables showing the locations for pulse diagnosis and the correlations between the pulses and the internal organs. Such charts are most commonly associated with internal medicine. However, the introduction to Yangyi daquan 瘡醫大全 laments the loss of ancient knowledge about the relationship between surgical methods and, for example, the understanding of the superficial and deep pulses as they relate both to the internal organs and to the likelihood of a person surviving a life-threatening situation. Examples are the illustrations of pulse-taking
in *Yangyi daquan* and the table of correlations between pulses and viscera in the 1742 *Waike xinfa yaojue* (Knowledge and Skills of External Medicine in Verse).

17. The Alchemical Furnace
The alchemical elixir known as *danyao* was frequently used in external medicine. Both the refining process and the furnace itself were considered crucial to the quality of the finished product. *Waike tushuo*, 1856, contains illustrations of two types of alchemical furnace. They show implements for creating and refining *bagua da jiangdan* (Eight-Trigram Grand Descending Elixir), with special attention given to the internal structure of the alchemical furnace. This elixir is a type of Hydrargyrum chloratum compositum – *jiangdan* or *bai jiangdan* – obtained through the mixed crystallisation of mercuric chloride (HgCl₂) and mercurous chloride (Hg₂Cl₂) by heating mercury together with various minerals in the furnace. It was used to treat ulcers, fistulas, *luoli* (scrofula), *xirou* (polyps), *wanxuan* (chronic itchy skin condition), etc. (Fig. 15).

18. Authors’ Portraits
Some texts were adorned with portraits of the author, like the portrait of the physician Wang Ji (1463–1539) in *Waike lili* (Principles and Examples of External Medicine) (Fig. 16). These images clearly have no practical value in therapy and are apparently inserted as a way of enhancing authorial authority.

**Summary**
The extant literature on *waike* and *shangke* yields a vast array of visual images, which fall into 18 broad categories as described above. Many of these categories are specific to surgery and traumatology – in particular the illustrations of affected parts, therapeutic locations, orthopaedic methods, clinical presentation, causation, surgical instruments, and the bones and skeleton. Others however, such as the tables of the Five Circulatory Phases and Six Climatic Factors and the channel charts, are drawn from different medical disciplines, indicating that cross-fertilisation occurred between surgery and traumatology, and other branches of learning. The illustrations of acu-moxa locations in particular seem to have more in common with points for combat training than with classic charts of the points and
channels, suggesting a link with martial arts traditions that deserves further research. Above all however, knowledge of the physiology of the body, and the movement of its fluids and spirits according to cosmic and seasonal cycles, and an understanding of when the Qi and the organs and channels were in the most appropriate conditions to respond to intervention, were all essential factors in determining the proper time for treatment.

The function of illustration in writings on external medicine and traumatology was shaped by the nature of these specialist areas and the complexity of the therapeutic methods involved. In carrying out, demonstrating and teaching the variety of therapies illustrated above, we can see that it was necessary to coordinate a community of people for the therapeutic performance: in orthopaedic medicine in particular, the therapist did not work alone, but in conjunction with assistants who pulled, lifted and supported the patient. Considerable skill was also necessary in the production of a wide and inventive range of orthopaedic and surgical instruments. Thus visual images came to play a vital role both in the diagnosis and in the transmission of therapeutic methods, in a way that was a natural and effective supplement to textual instructions.

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