

# Pulse diagnosis

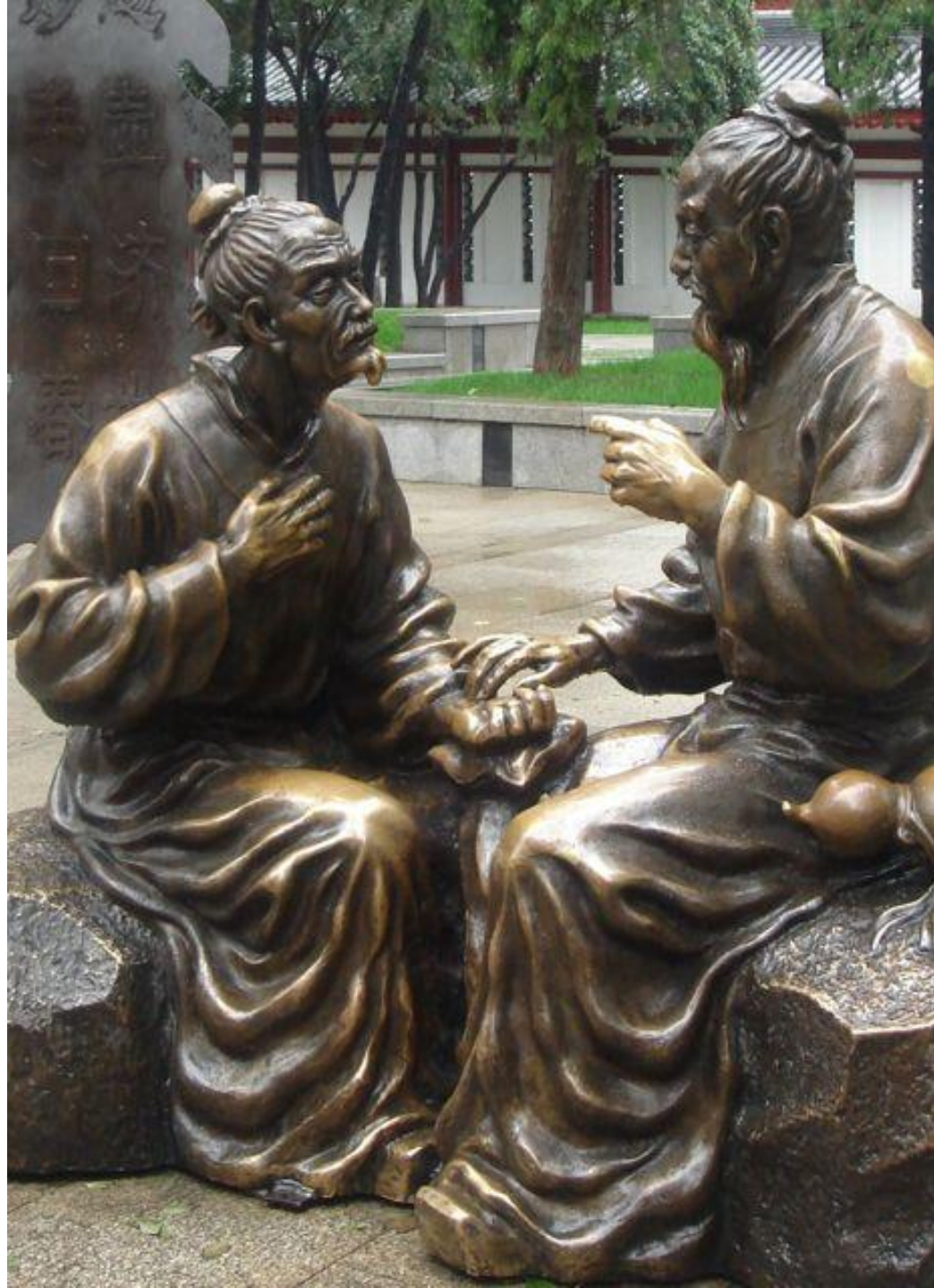
Yu Qi MD (China)

<http://www.CNacupuncture.com>

<http://www.AcupunctureForStroke.com>

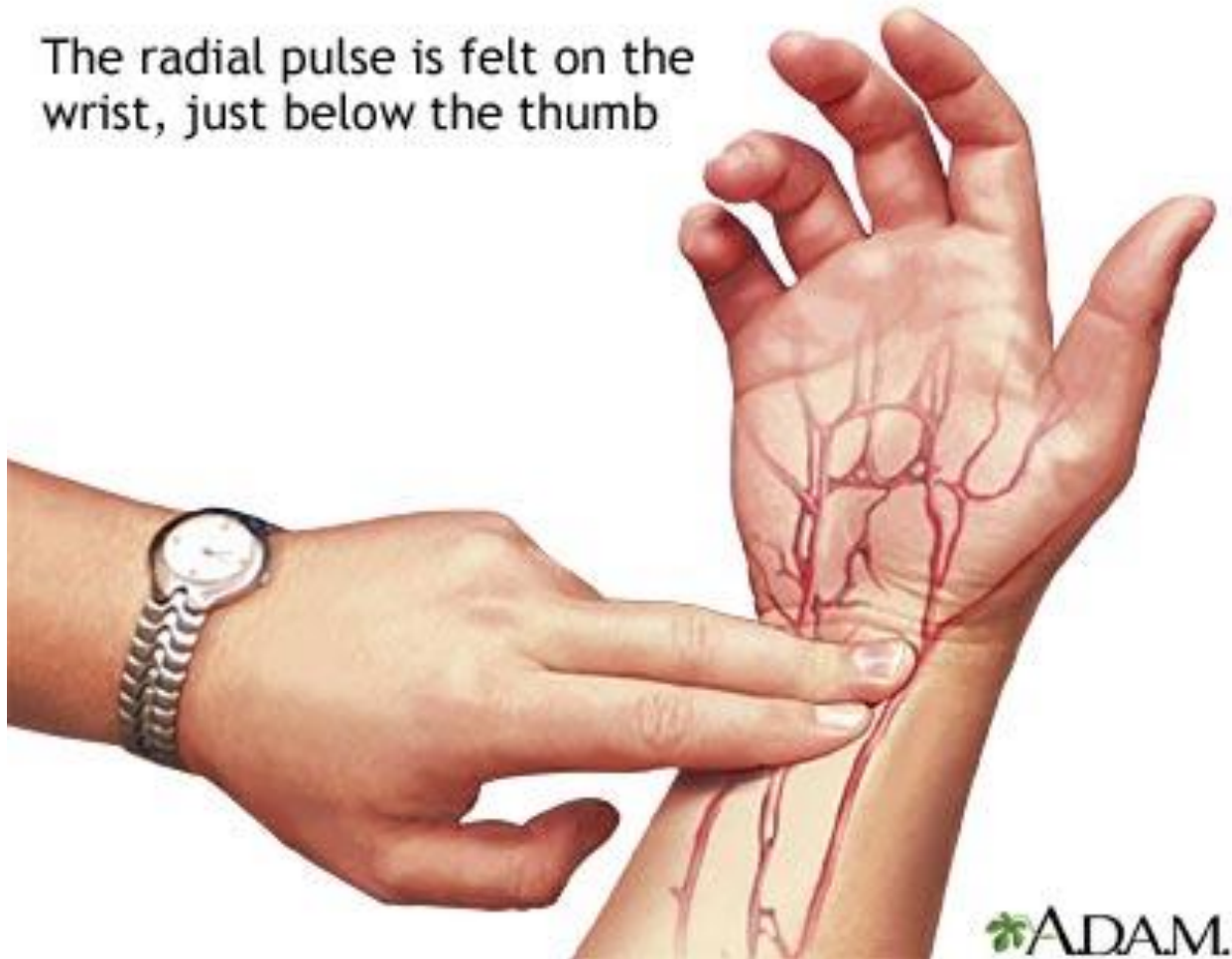
此中醫道之圖也京中醫士有太醫御醫  
之乃是在太醫院應差者如有人請看馬  
錢貳千四百文四吊八百文不尋如來到  
門首看病者給銀數百作為門脈







The radial pulse is felt on the wrist, just below the thumb





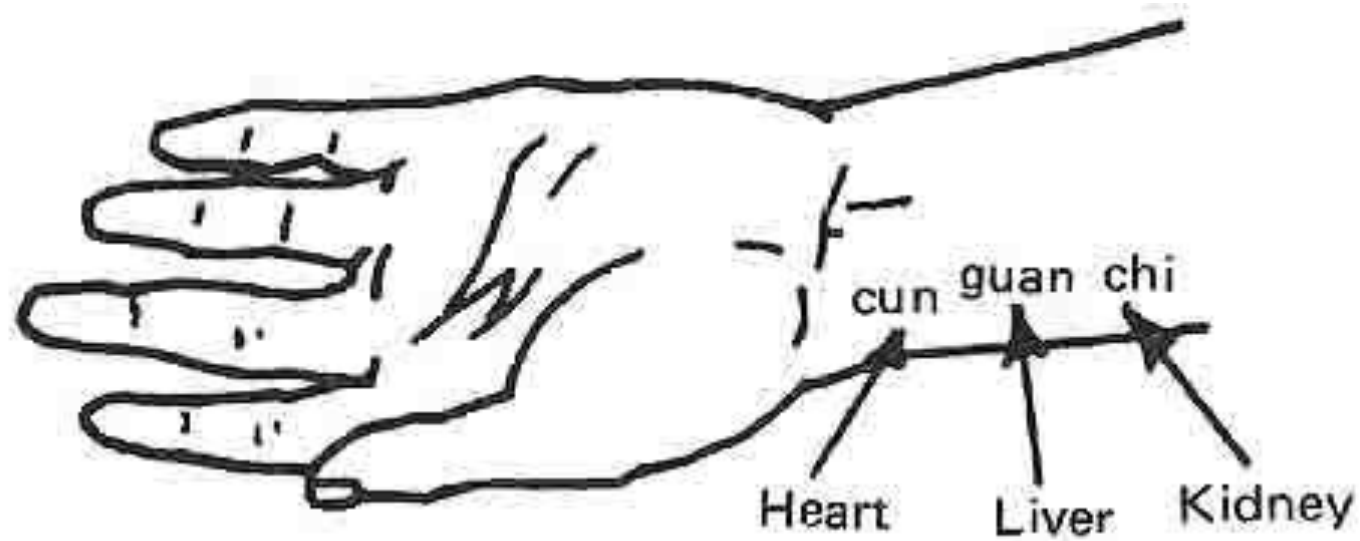
When feeling for the carotid pulse under the angle of the jaw, use very light pressure

# Pulse oximetry

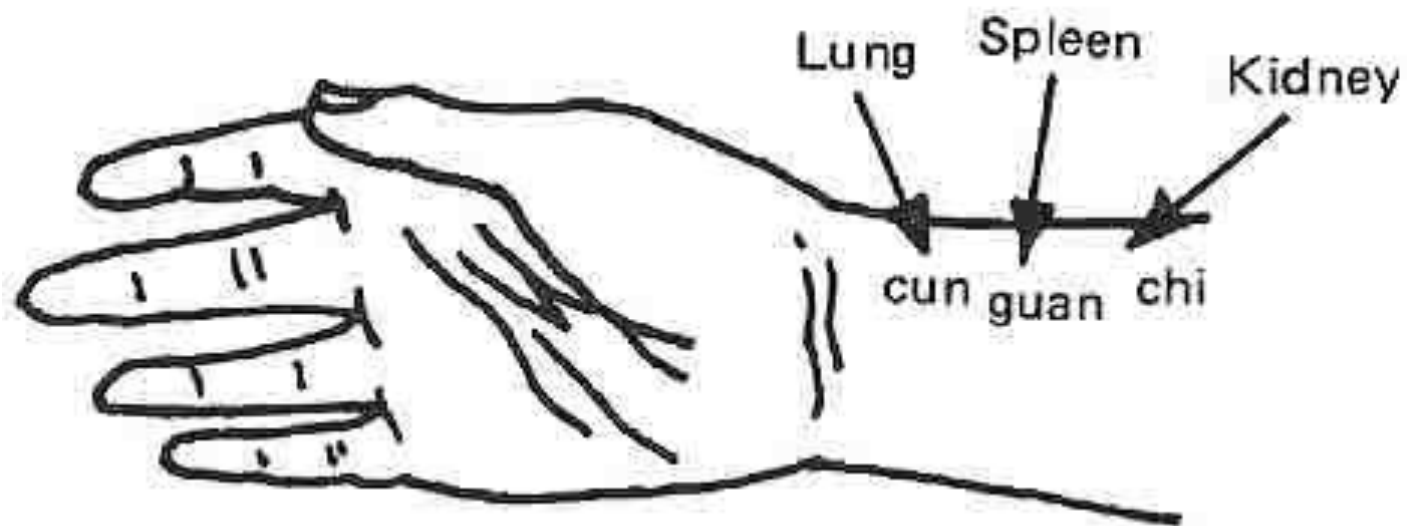


# Regions for taking pulse

- **Cunkou**, also known as "Qikou" (opening of Qi), is the usual pulse taking region, refers to pulsation of radial artery on the wrist.
- Pulse over Cunkou is divided into three parts: **Cun**, **Guan** and **Chi**,
- **The left Cun** pulse is corresponding **heart and Tanzhong** (the part between the breasts).
- **The left Guan** pulse is corresponding **liver and gallbladder**.
- **The left Chi** pulse is corresponding **kid-ney and the lower abdomen**.
- **The right Cun** pulse is corresponding **lung and thorax**.

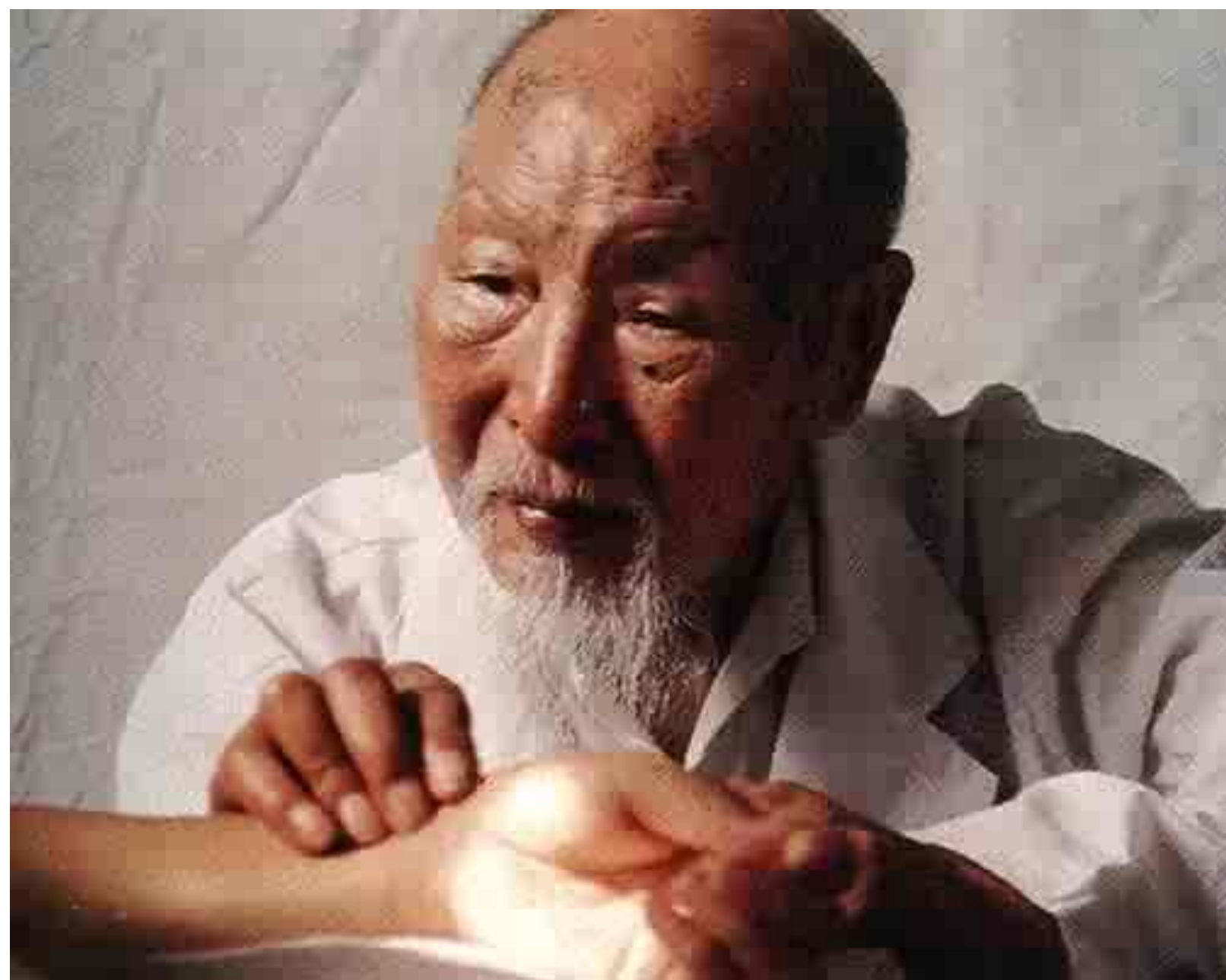


Left hand



Right hand







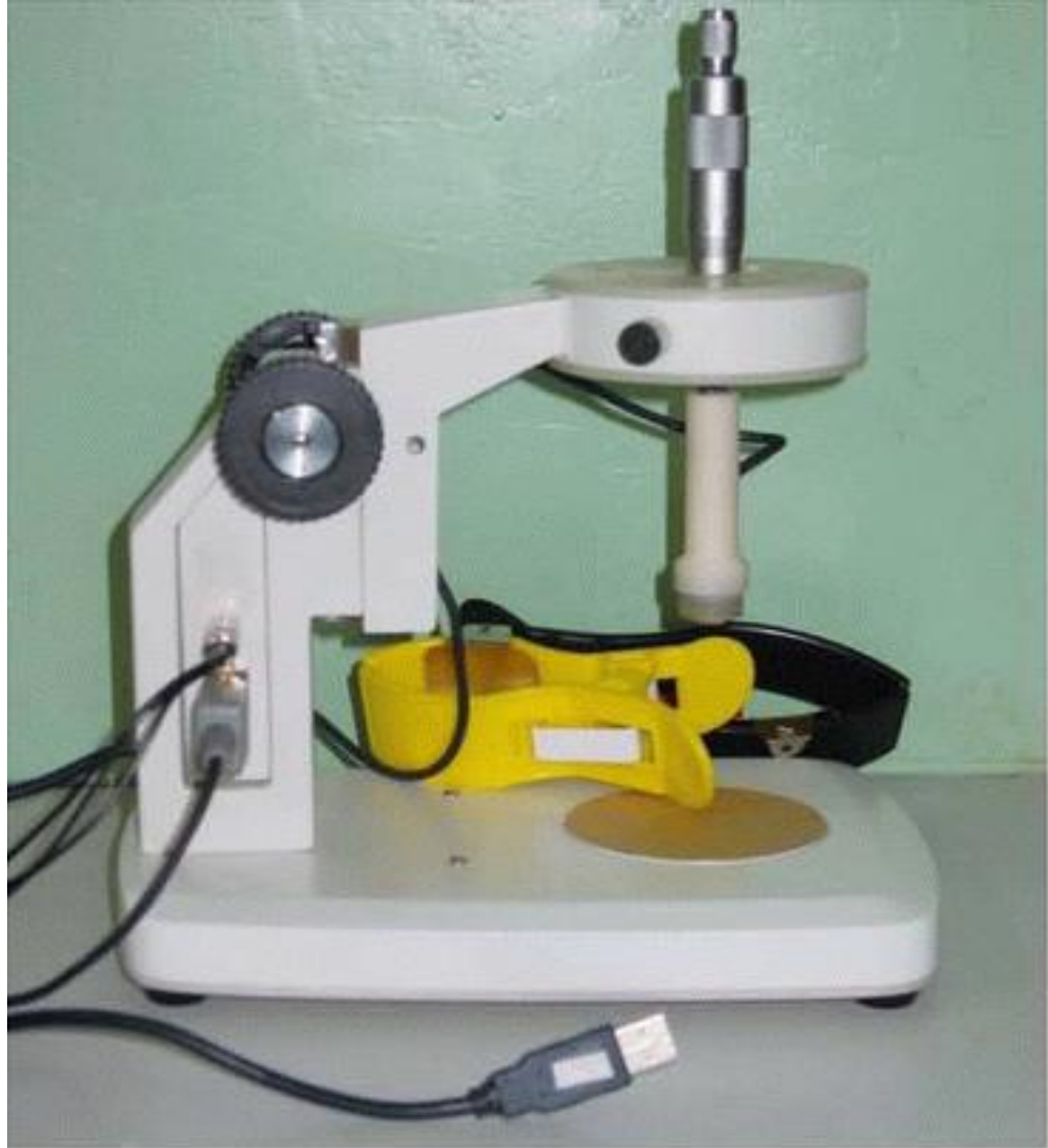


图 1 Bio-ME 中医脉诊仪

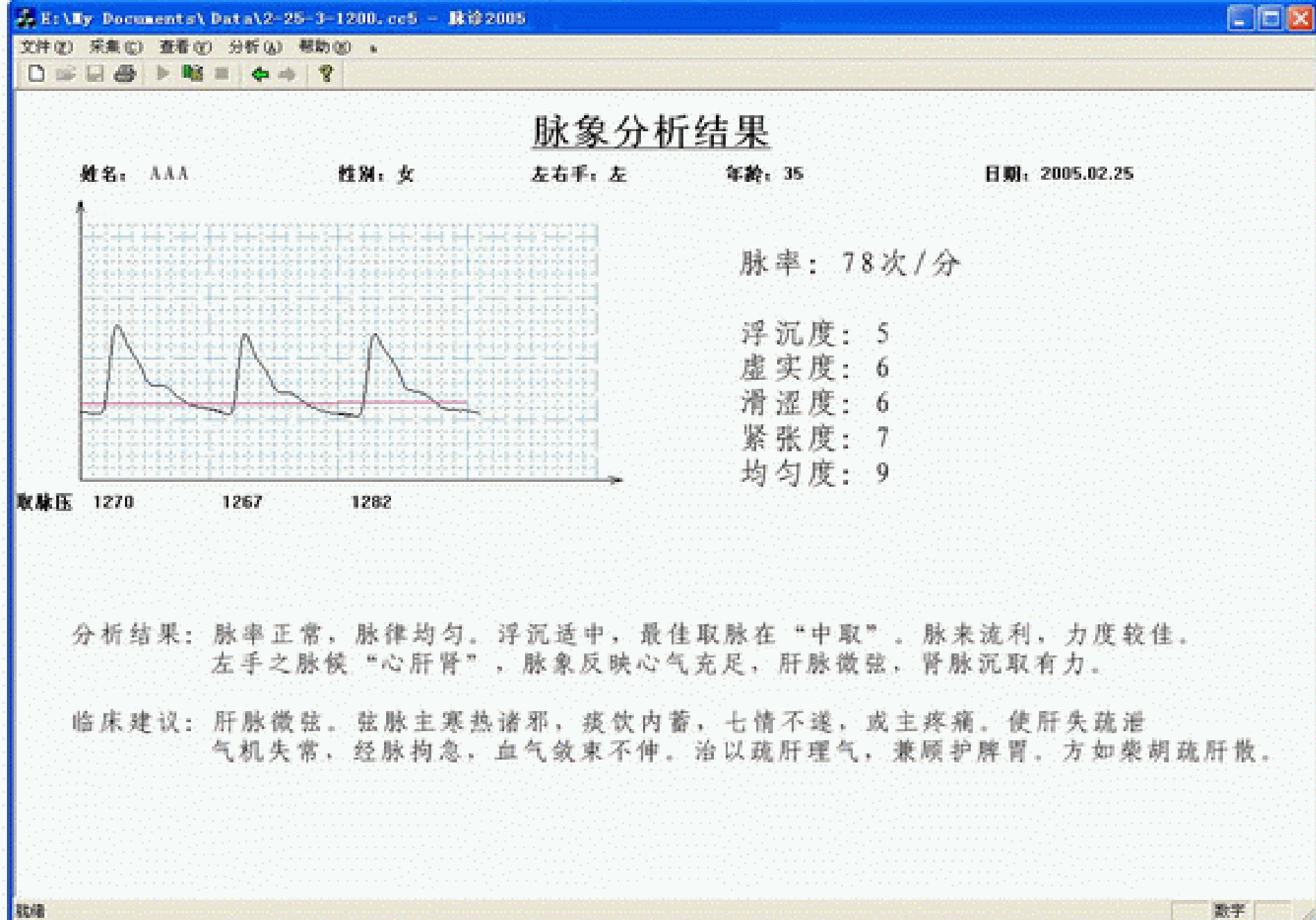


图3 分析参考界面

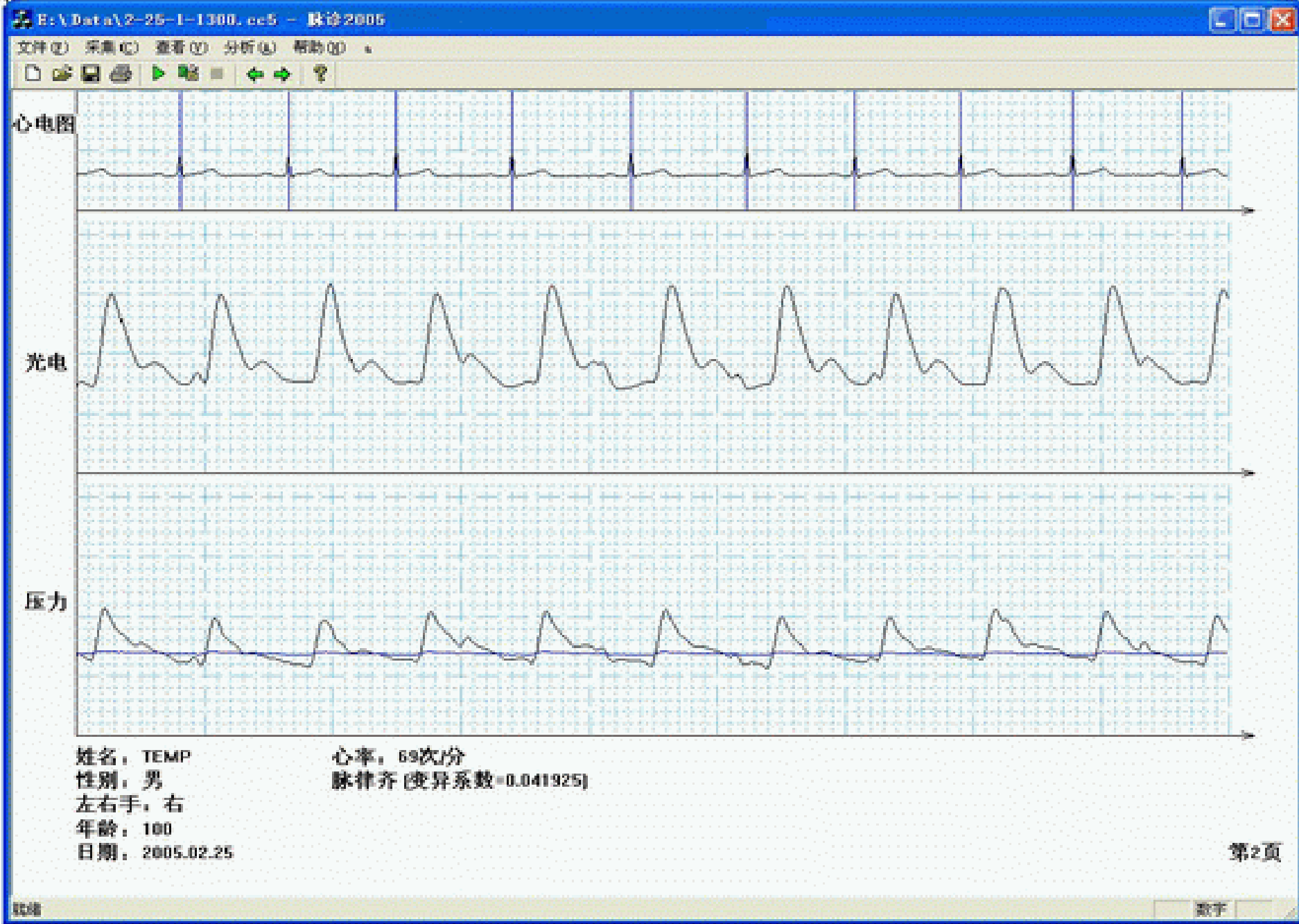


图 2 脉象采集界面



# The methods for taking pulse

- The following points should be borne in mind in taking pulse.
- **Time**
- **Calm breath:** Healthy people breathe 16 - 18 times one minute under normal conditions. And the pulse beats 4 - 5 times in a cycle of exhalation and inhalation, about **60 - 90 beats per minute**.
- **Posture**
- **Arrangement of fingers**
- **General pressure and single pressure:**

# Lifting, pressing and searching

- **Lifting (Ju)** means light pressure;
- **Pressing (An)** means heavy pressure;
- **Searching (Xun)** means mobile moderate pressure which is used to look for the most obvious region of the pulse.

# Normal pulses

- The normal pulse is neither floating nor sunken, neither fast nor slow, sensible with moderate pressure, usually beating 4 - 5 times in a cycle of breath (about 60-90 beats per minute), gentle in sensation, powerful in rebounding, moderate in size, regular in beating and varying with physical activities and environmental changes.

# The characteristics of normal pulse

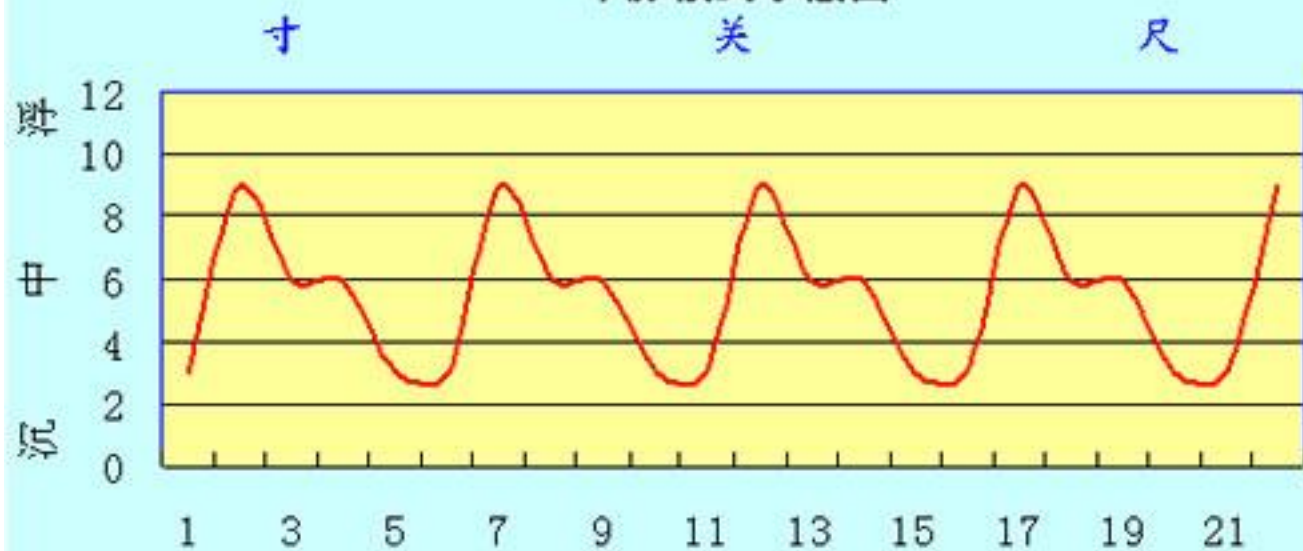
- The normal pulse is marked by gastric qi, spirit and root. **Gastric qi** means that the pulse is located at the middle, neither floating nor sunken, and regular in beating, moderate in size, gentle in sensation and floating. **Spirit** means that the pulse is soft, powerful and rhythmic. **Root** means that the chi pulse is powerful and constantly beating under heavy pressure.

# Main factors to affect the normal puls

- Age, sex and body shape
- Daily life and psychological factors
- Seasonal, alternation of day and night and geographical factors:
- Besides, the changes of the anatomic position of the radial artery may shift the pulse normally at the Cunkou region to the dorsum of the hand from the chi region, known as **oblique flying pulse** 斜飞脉. The pulse, shifted to the back of the Cunkou region, is called **ectopic radial pulse**.



平脉模式示意图



脉位：不浮不沉 沉取不绝  
 脉数：息四五至 节律一致  
 脉形：三部有脉 不大不小  
 脉势：从容和缓 流畅有力

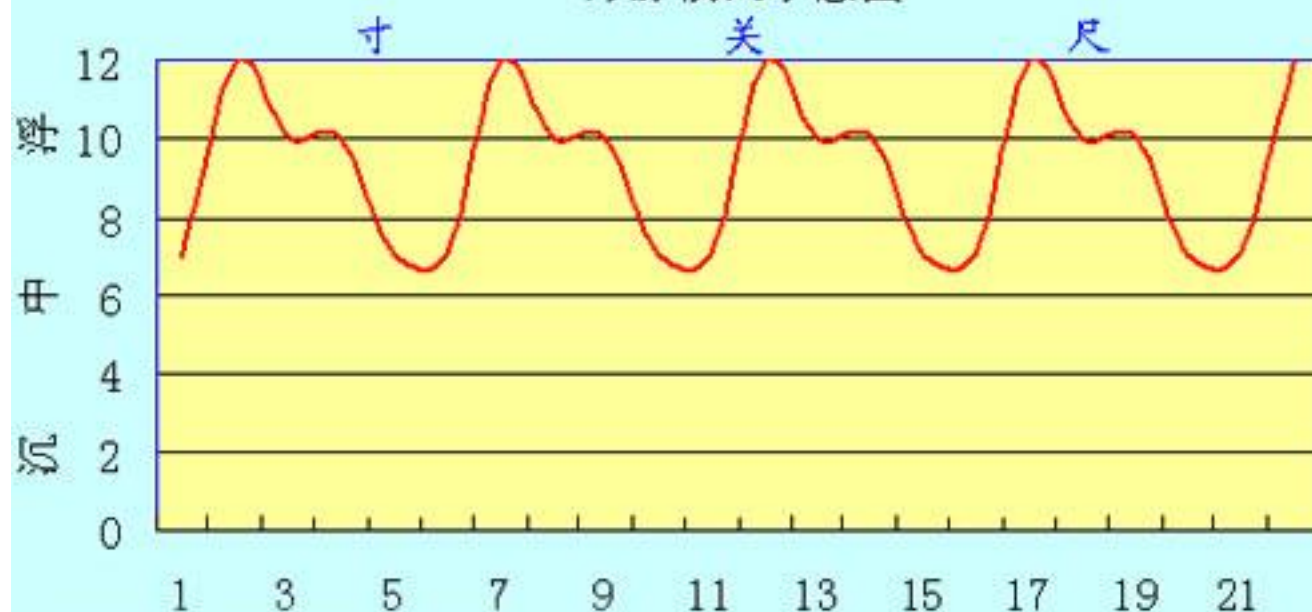
# Abnormal pulses

- There are five elements of abnormal pulse diagnosis:
- **Position**---deep or superficial
- **Frequency**---rapid or slow
- **Morphology**---wide or thin, long or short, hard or soft, fluent or not
- **Strength**---strong or weak
- **Rhythm**---regular or irregular

# According to depth

- **Floating (superficial) pulse (Fu Mai)**
- Features: Sensible under light pressure, weak and constant beating under heavy pressure. It is marked by superficial beating.
- Clinical significance: Floating pulse indicates **external syndrome**, floating and powerful pulse signifying external excess syndrome while floating and weak pulse manifesting external asthenia syndrome. Floating pulse can also be seen in internal asthenia syndrome due to consumption of essence and blood in chronic disease and external floating of deficient Yang.
- **Deep pulse (Chen Mai)**
- Features: Sensible only under heavy pressure.
- Clinical significance: Indicating **internal syndrome**. Sunken and powerful pulse signifies excess internal syndrome, while sunken and weak pulse shows deficient internal syndrome.

浮脉模式示意图

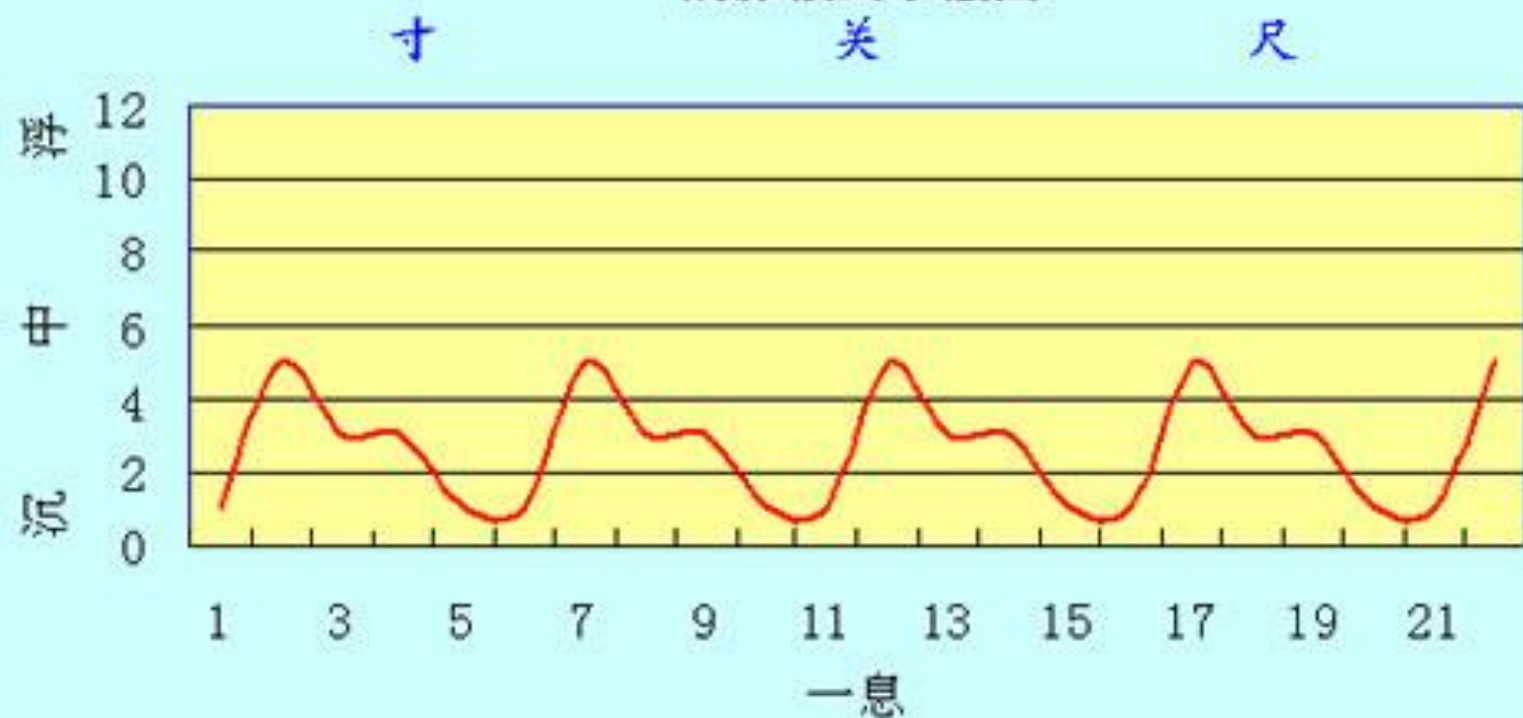


浮脉特征：轻取即得，重按稍减（浅）

主病：表证，虚阳外越证

一息

沉脉模式示意图



沉脉特征：轻取不应，重按始得（深）

主病：里证



# According to frequency

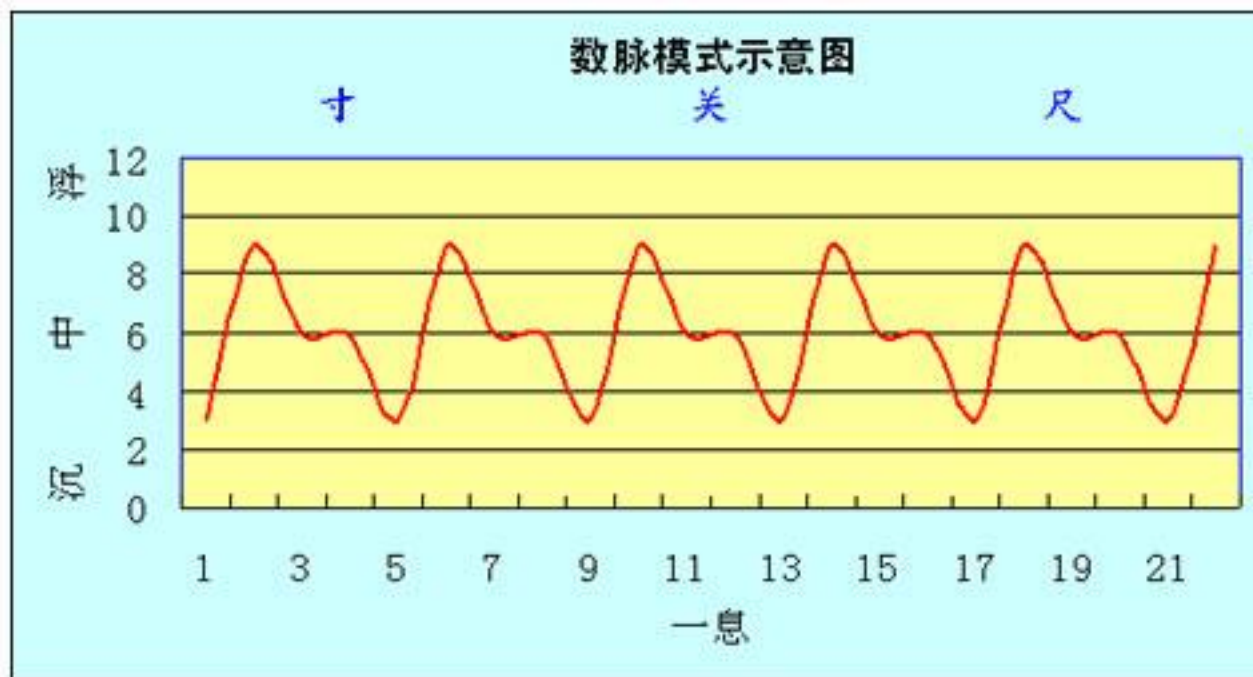
- **Slow pulse (Chi Mai)**
- Features: Less than 4 beats in a breath cycle (<60/min).
- Clinical significance: Indicating **cold syndrome**. Slow and powerful pulse signifies excess cold syndrome, while slow and weak pulse shows deficient cold syndrome. Such a pulse condition is also seen in internal excess heat syndrome due to internal accumulation of pathogenic heat. Athletes with slow pulse are in a normal condition.



迟脉特征：脉来缓缓，息不足四（慢） 脉搏频率 < 60次/分  
主病：寒证 / 里实热证

# According to frequency

- **Rapid pulse (Shuo Mai)**
- Features: The pulse beats over 5 - 6 times in a breath cycle (>90/min).
- Clinical significance: Indicating heat syndrome. Rapid and powerful pulse signifies excess heat syndrome, while rapid and weak pulse shows deficient heat syndrome. Such a pulse condition is also seen in the syndrome due to external floating of deficient Yang.



数脉特征：脉来急促，息五六至(快)脉搏频率>90次/分  
主病：热证（实热、虚热、假热）

# According to frequency

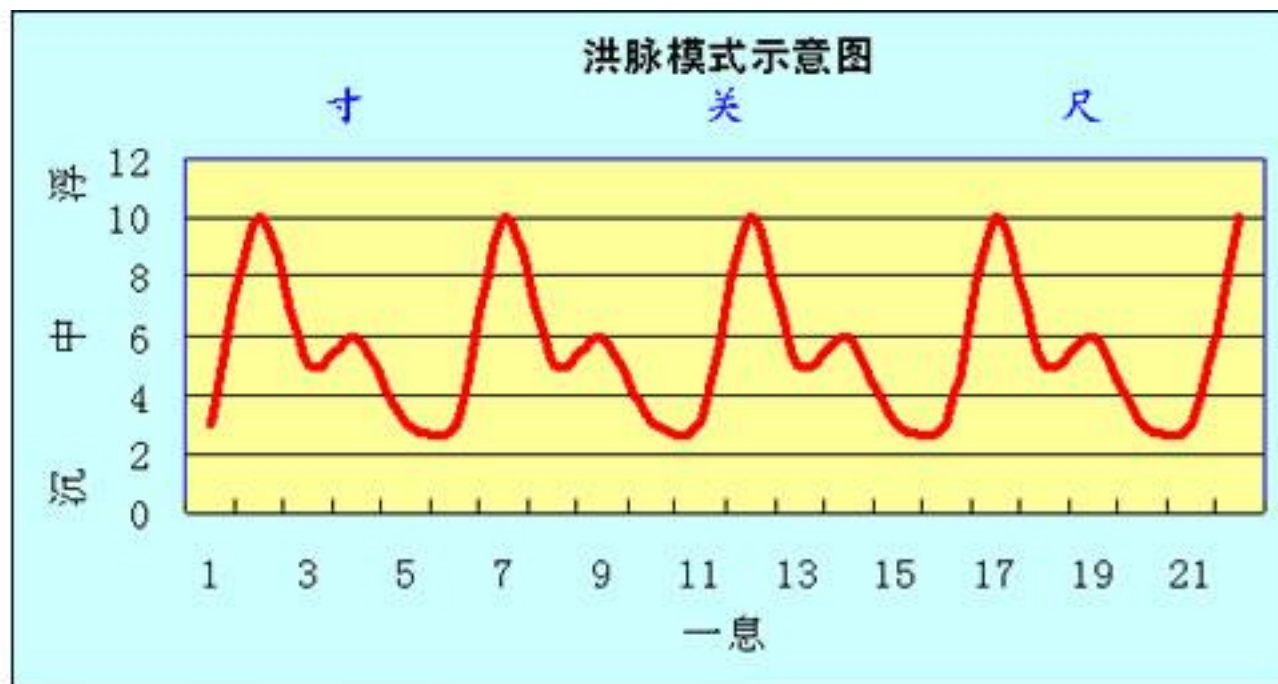
- **Moderate pulse (Huan Mai)**
- Features: The pulse is moderate and powerful, beating 4 times in a cycle of breath; or moderate and sluggish, beating 4 times in a cycle of breath (60-70/min).
- Clinical significance: Indicating damp disease and weakness of the stomach and



**According to morphology**

# According to wide or thin (width)

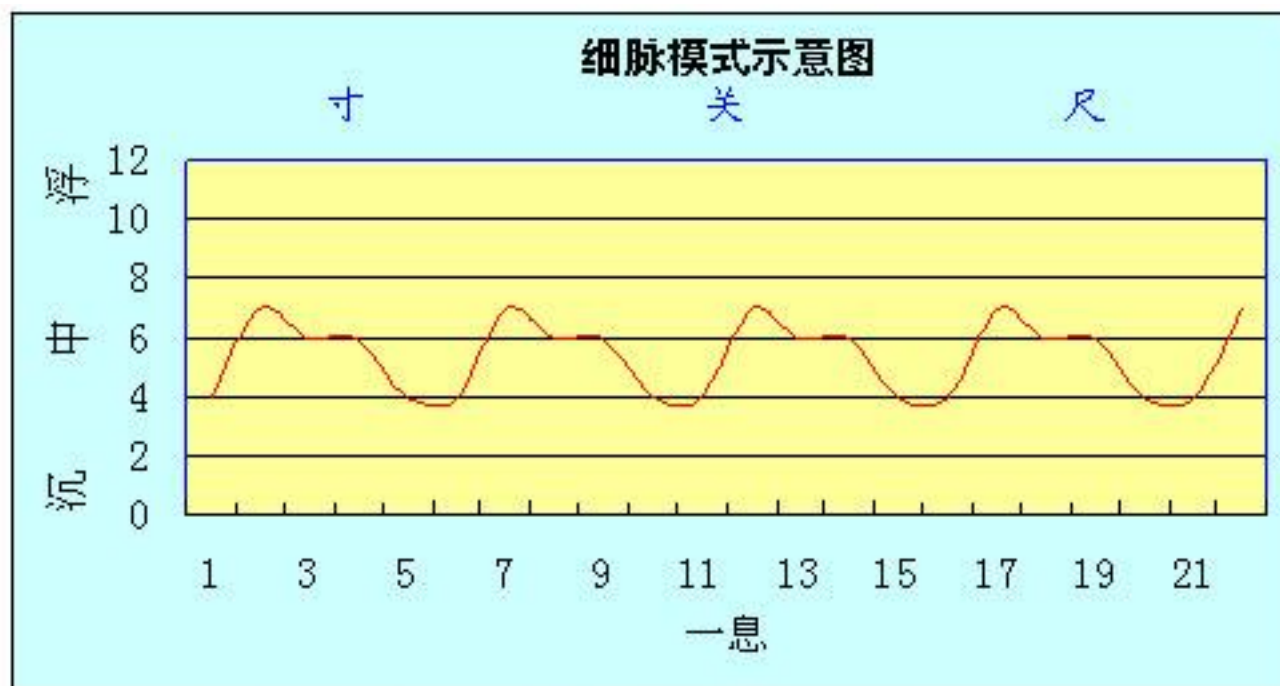
- **Surging pulse (Hong Mai)**
- **Features:** Surging pulse is marked by wide size and full content, beating like roaring waves and sensibility under light pressure and surges as well as sudden flowing and ebbing.
- **Clinical significance:** Indicating exuberant internal heat.



洪脉特征：脉形宽大，来盛去衰(大盛大落)  
主病：阳、实、热证

# According to wide or thin (width)

- **Thin pulse (Xi Mai)**
- **Features:** The pulse is as thin as a thread, weak and quite sensible under pressure.
- **Clinical significance:** Indicating deficiency of both Qi, Yin and blood, various overstrain and diseases due to pathogenic dampness.

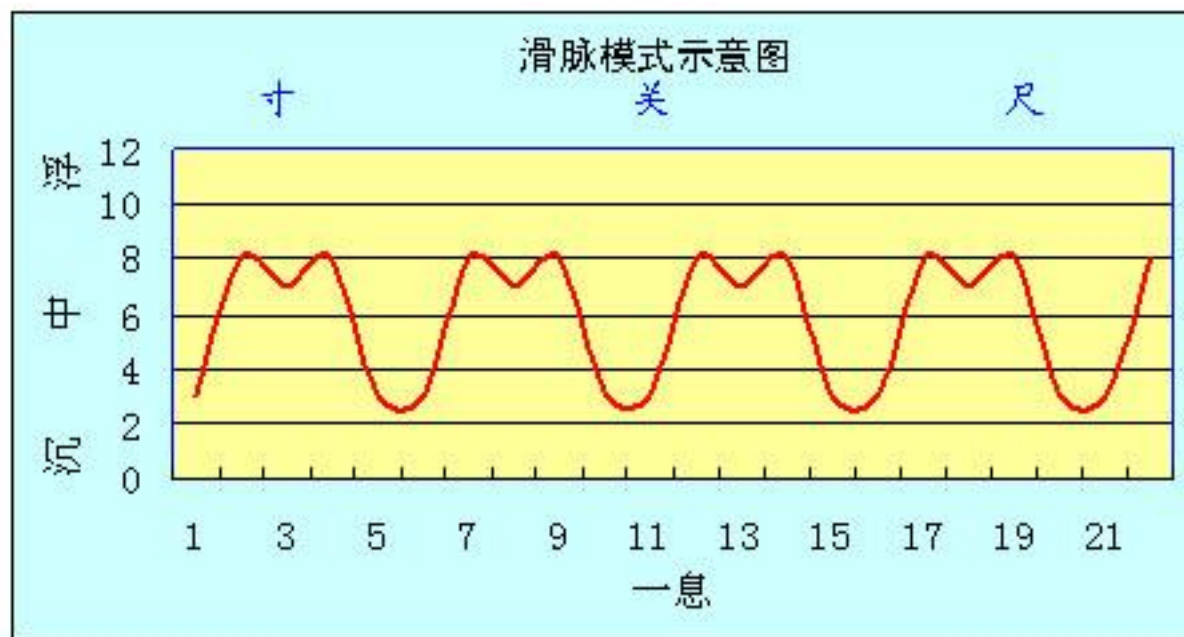


细脉特征：细小如线，应指明显(小)

主病：脉细无力——气血两虚      脉细而缓——脾虚湿阻

# According to hard or soft

- **Slippery pulse (Hua Mai)**
- **Features:** The pulse is beating freely and smoothly like the movement of beads of an abacus.
- **Clinical significance:** Indicating retention of phlegm and fluid, dyspepsia and excess heat. Such a pulse condition is also seen among young and strong and pregnant people.



滑脉特征：往来流利，应指圆滑（流利）

主病：脉滑而沉实——痰饮、食积      脉滑而数——实热诸证

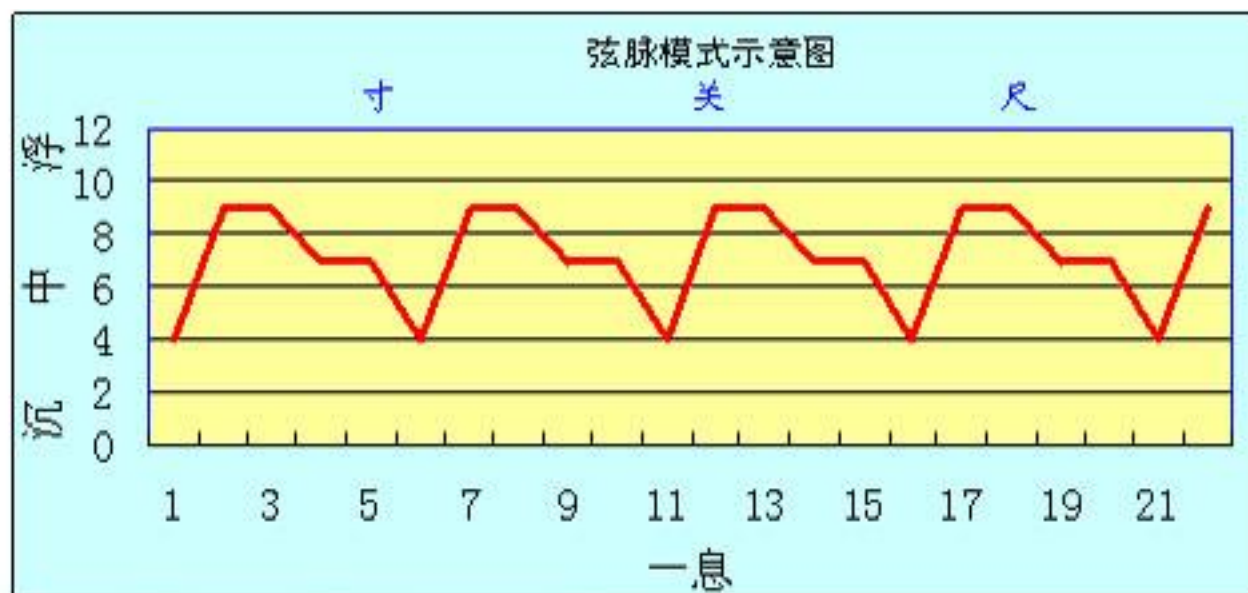
青壮之年，脉滑和缓——常脉（气血充实）

妇人停经，脉滑冲和——妊娠（聚血养胎）

# According to hard or soft

- **Wiry pulse (Xuan Mai)**
- Features: Wiry pulse appears straight, energetic and hard like the feeling of pressing the string of a violin.
- Clinical significance: Indicating disorders of the liver and gallbladder, pain syndrome and retention of phlegm and fluid.





弦脉特征：端直以长，如按琴弦(硬)

主病：肝胆病 / 诸痛证 / 痰饮病 / 老年健康人

- |              |             |
|--------------|-------------|
| ① 寒郁肝脉——脉弦紧； | ② 肝火上炎——脉弦数 |
| ③ 痰饮内积——脉弦滑； | ④ 肝气犯脾——脉弦缓 |
| ⑤ 肝肾阴虚——脉弦细； | ⑥ 胃气衰败——脉弦刃 |

# According to hard or soft

- **Tense pulse (Jin Mai)**
- Features: Tense pulse appears like the pulling of a rope and flicks the finger when pressed.
- Clinical significance: Indicating cold syndrome, pain syndrome and retention of food.

# According to hard or soft

- **Soft/soggy pulse (Ru Mai)**
- Features: Superficial, soft, weak and thin, become weak under heavy pressure.
- Clinical significance: Indicating insufficiency of qi and blood, and dampness syndrome.
- This pulse is similar to the fine and weak pulses. The thready pulse sensation felt on light touch gives the impression of being easily moved, as if floating on water; hence, it tends to indicate spleen-qi deficiency with accumulation of dampness.

# According to fluency

- **Astringent/choppy pulse (She Mai)**
- Features: The pulse is beating in an inhibited way like scraping a piece of bamboo.
- Clinical significance: Astringent and powerful pulse indicates qi stagnation and blood stasis; astringent and weak pulse signifies lack of essence and insufficiency of blood.



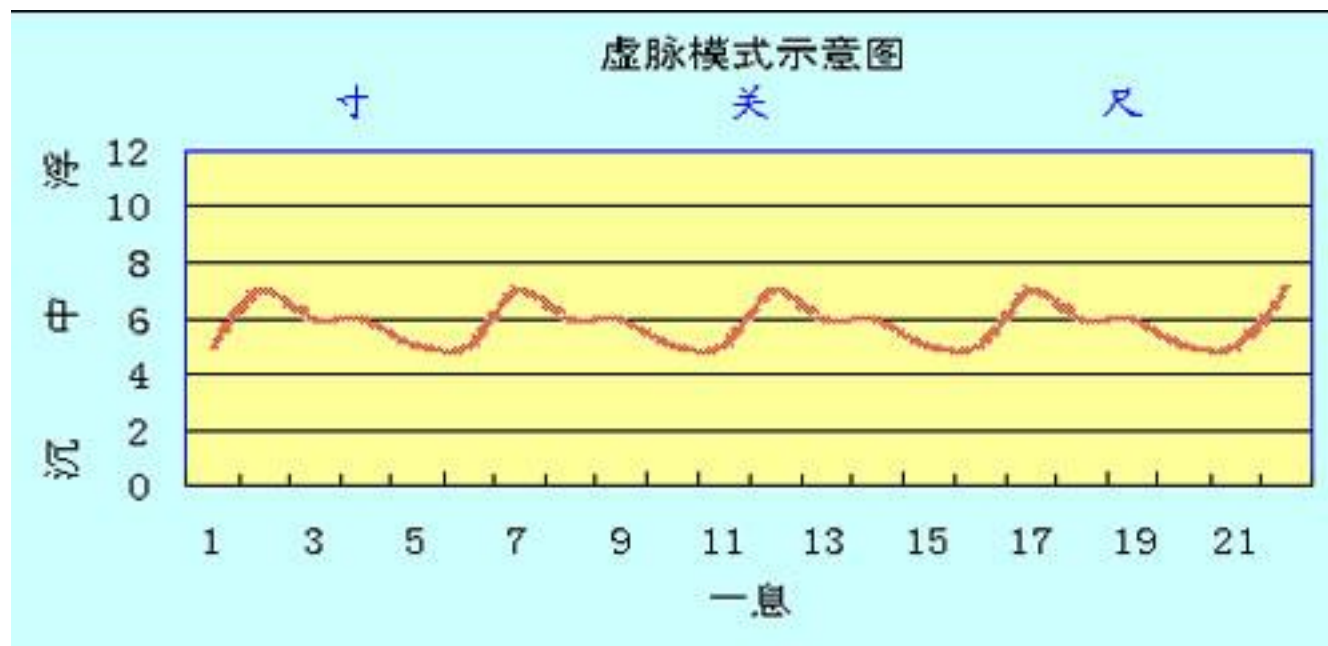
涩脉特征：脉细迟不畅，律力不匀(不畅不匀)

主病：脉涩有力——气滞血瘀；

脉涩无力——精亏血少。

# According to Strength

- **Weak pulse (Xu Mai)**
- **Features:** Weak pulse is marked by weak beating of the pulse at all the cun, guan and chi regions.
- **Clinical significance:** Indicating asthenia syndrome, usually seen in asthenia of both qi and blood, especially in Qi asthenia.



虚脉特征：举之无力，按之虚软（无力）

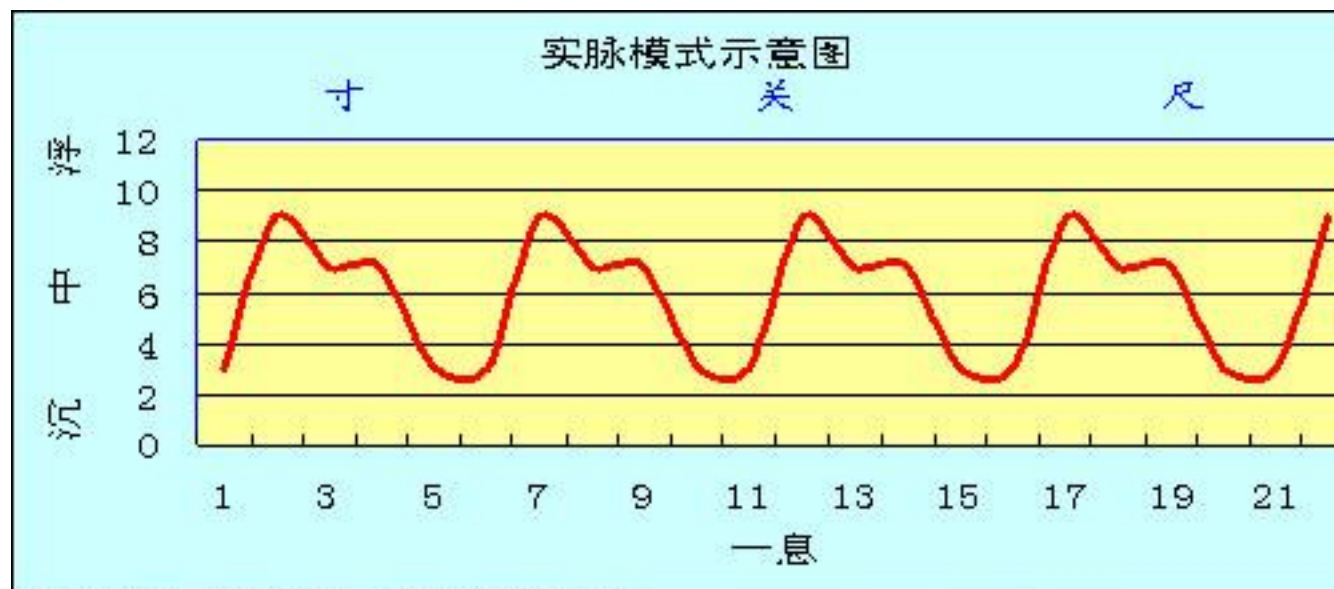
主病：虚证（多为气血两虚）

- |             |            |
|-------------|------------|
| ① 脉软无力——气虚； | ② 脉细无力——血虚 |
| ③ 脉迟无力——阳虚； | ④ 脉数无力——阴虚 |

# According to Strength

- **Powerful pulse (Shi Mai)**
- Features: Powerful pulse is marked by powerful sensation of pulse beating at cun, guan and chi regions under superficial, moderate and heavy pressure.



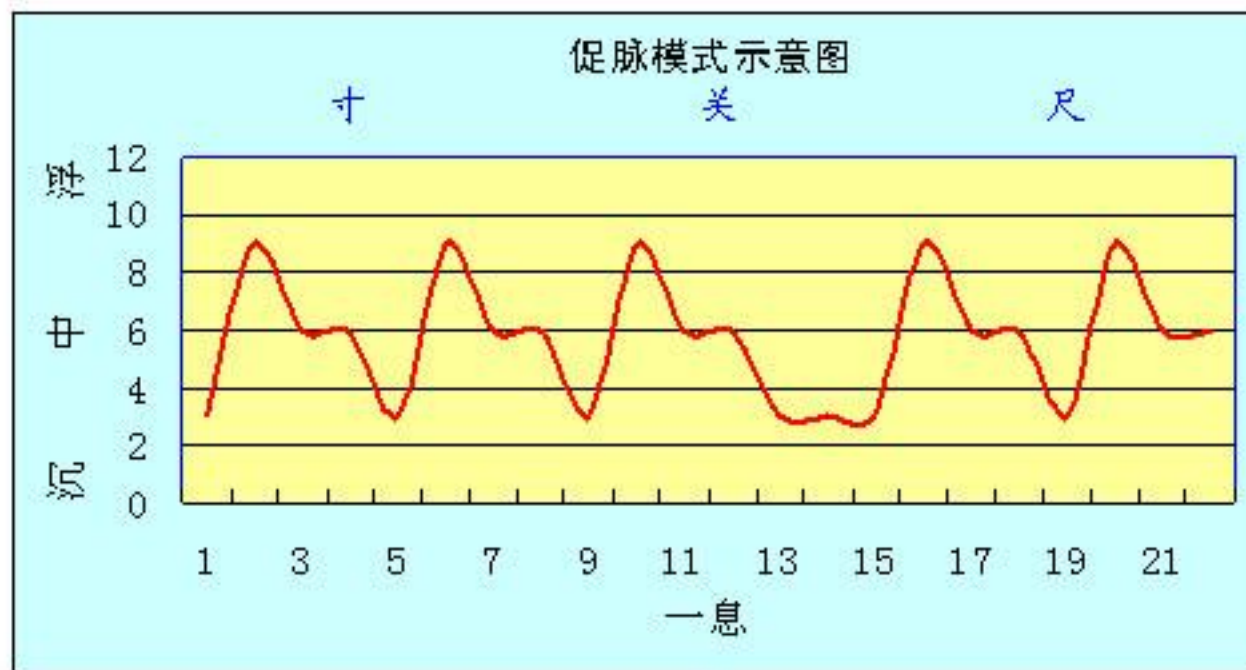


实脉特征：举按有力，应指充盛(有力)

主病：实证 脉实浮数——实热证，表实证；脉实沉迟——实寒证，里实证  
 久病体虚，反见实脉——孤阳外脱(预后不良)  
 平人脉实，且兼和缓——气血旺盛(体质偏强)  
 平人两手六脉洪大偏实——六阳脉(平脉)

# According to Rhythm

- **Hurried (Rapid and irregular pulse, Cu Mai)**
- Features: Rapid and intermittent pulse beats fast with occasional and irregular intermittence.
- Clinical significance: Fast and powerful pulse indicates hyperactivity of yang heat, qi stagnation, blood stasis and retention of phlegm and food; fast and weak pulse signifies weakness of visceral qi and insufficiency of blood.



促脉特征：脉数有歇止，止无规律（数止无定数）  
主病：阳盛实热/实邪阻滞

# According to Rhythm

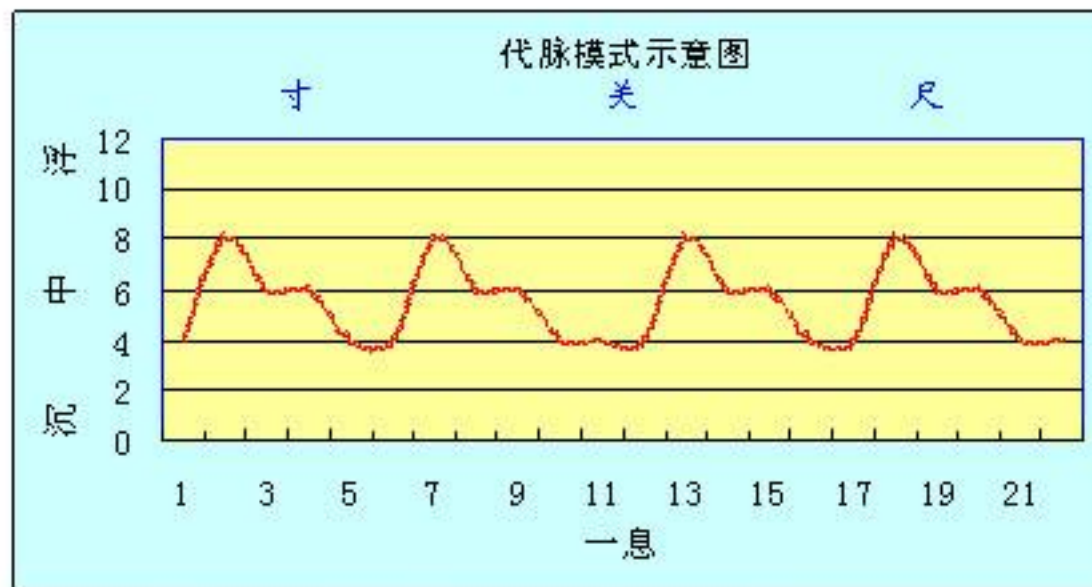
- **Knotted (Slow and irregular pulse, Jie Mai)**
- Features: The pulse beats slowly with occasional and irregular intermittence.
- Clinical significance: Slow, intermittent and powerful pulse indicates predominance of yin, qi stagnation, retention of phlegm, and blood stasis; while slow, intermittent and weak pulse signifies declination of qi and blood.



结脉特征：脉慢有歇止，止无规律（迟止无定数）  
主病：阴盛气结（血瘀、痰闭、食阻、寒凝）

# According to Rhythm

- Features: The pulse beats slowly with regular and longer intermittence.
- Clinical significance: Indicating declination of visceral qi and asthenia of primordial qi.



代脉特征：脉缓有歇止，止有规律（缓止有定数）

主病：脉代无力——脏气衰微（时间较长）

脉代有力——痹伤七情（时间较短）