

显微智能常规检测系统
Intelligent Micro Routine Detection System

应用指南
Application Guide

(二)

(II)

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一、样本收集和检查

I. Sample Collection and Examination

1、用品：盖玻片、载玻片、采血针、采血笔、消毒酒精等应当放在易于拿取的位置，一旦指尖取血开始，制片应当在 30 秒内完成，以免血液凝固。

1. Utensil: cover slip, glass slide, blood taking needle, lancing device, rubbing alcohol and some other stuff should be put at some place where it would be easily to get. As soon as it begins to take blood sample from the fingertip, flaking must be conducted within 30 seconds to avoid blood coagulation.

2、消毒：病人的整个指尖应当用 75%乙醇消毒。

2. Disinfection: the whole fingertip of the patient should be disinfected by using 75% ethanol.

3、取血部位：选择指尖向末端的侧部为取血部位，因为这些位置神经末梢少，不易感觉到疼痛。同时采血针应当垂直于采血位置，以确保快速地采集到干净的血滴。

3. Position for blood collection: select the lateral part of the fingertip end as the position for blood collection, because there are few nerve endings so as to reduce the hurt feeling by the patient. Meanwhile, blood taking needle should be vertical against the position for blood collection in order to collect the clean blood drop quickly.

4、活血采集：轻轻揉捏拇指，使血滴成球形，玻片轻轻接触血滴，然后反转玻片，立即放一干净的盖玻片在血滴上面，轻轻加压，直到血滴扩散开，作为活血样本。

4. Live blood collection: gently pinch the thumb to make blood drop into sphere, and lightly contact the blood drop by using glass slide, then reverse the glass slide; meanwhile put a clean cover slip on the blood drop at once, and gently compress it until the blood drop spreads to serve as the live blood sample.

5、观察：先用目镜观察，选择较薄的适宜于观察区域，然后交换观察目镜和屏幕图象。

5. Observation: first observe by using ocular to figure out a thin appropriate observation part, then observe picture in the ocular and the screen alternately.

6、讲解：观察若干区域，让病人同时在屏幕上看到自己的血液状况，向病人讲解存在的异常现象和病因，并提出纠正和治疗的方法和措施。

6. Explanation: observe several areas; meanwhile, let patient see his (her) blood condition on the screen, then explain the existing abnormal phenomenon and reasons to him (her) and come up with measure for correction and treatment.

二、红细胞的异形与贫血

II. Poikilocyte and Anemia of Red Blood Cells

在探讨各种红细胞异形性和临床意义之前，我们应当首先讨论一些贫血的病因和症状，这是因为贫血的种类不一样，患者红细胞的异形也不一样。由于媒体广告的宣传，许多人认为贫血仅仅是由于血液中缺乏铁离子。事实上，贫血的分类与贫血的治疗是一项非常复杂的工作，并不仅仅是因为血中缺铁。

Since different types of anemia will lead to different poikilocyte, we first need to figure out some reasons and symptoms of anemia before discussing various kinds of poikilocyte and clinical significance. Due to the propaganda made by media as well as advertisement, most people think that the blood lacking of ferrous ion is the only reason for anemia. In fact, anemia type and treatment is complicated, not just because of blood lacking of iron.

医学上确定贫血为一种状态，在这种状态中，病人外周循环血液中红细胞数量减少，或者血红蛋白减少，

或者血液中红细胞压积减少，或者以上因素二者或三者均同时减少。因此，贫血并不仅仅是因为血中缺乏铁离子。

Anemia is confirmed as a pathological state medically. Under this state, patient's red blood cells in peripheral circulating blood, hemoglobin or packed red blood cells in blood are decreasing, or two of them even all of them are reducing at the same time. Therefore, anemia is not just caused by blood lacking of ferrous ion.

血红蛋白减少可以引起贫血，血红蛋白是位于细胞内的一种载氧色素蛋白复合体，由两部分组成，一部分是含铁的色素，另一部分是珠蛋白。当血液流经肺部时，血红蛋白与氧迅速结合成一种不稳定的松散的化合物（氧合血红蛋白）。在全血组织内，氧合血红蛋白与组织内的二氧化碳发生气体交换。若红细胞中的血红蛋白数量减少，组织内的二氧化碳就会蓄积而影响细胞的正常的新陈代谢，出现贫血所引起的一系列症状。

Hemoglobin which can cause anemia is consisted of pigment containing iron and globin and located at the oxygen-carrying pigment protein complex in the cells. When blood flows through lung, hemoglobin will combine with oxygen, and then form a unstable loose chemical compound (oxyhemoglobin). Inside the whole blood tissue, oxyhemoglobin exchanges gas with carbon dioxide in the tissue. If hemoglobin in the red blood cells is reducing, carbon dioxide in the tissue will accumulate, which would affect the normal metabolism in cells, then some symptoms will appear caused by anemia.

往往通过检查红细胞的畸形而确定贫血的存在。

Therefore, whether there exists anemia or not can be confirmed by bypoikilocytosis.

当严重贫血时，有如下症状：衰弱、头疼、耳鸣、面色苍白、食欲减退、腹痛、易怒、嗜睡等。溶血性贫血可以通过活血观察，发现有红细胞碎片而确定其存在。其病因可以由于抗氧化物的缺乏，导致红细胞膜的完整性受损害而引起，如患者长时间受到环境的污染、射线照射、机体内自由基产生过多等原因。推荐服用抗氧化物的如 VC、VE、β—胡萝卜素等。

When serious anemia occurs, the following symptoms will appear, such as: asthenia, headache, tinnitus, pale face, inappetence, belly ache, irritability, drowsiness and so on. Hemolytic anemia can be confirmed by observing the live blood to see whether there are cell fragments. The reason may be caused by damaged red blood cell membrane due to lacking of antioxidants, and some other reason, such as, patient suffering from long-term environmental pollution, radiation exposure, too many free radicals in the body and so on. So patients are recommended to take antioxidants, such as VC, VE, β- carotene and so on.

红细胞大小不均指的是红细胞在体积大小方面的不均一性。在一个视野中，可以发现大红细胞、小红细胞、正常红细胞同时存在。在多数贫血患者外周血液中，均可以出现一定程度的红细胞大小不均。

Anisocytosis refers to irregularity in the volumes and sizes of red blood cells. In one view, you are able to find macrocyte, microcyte and normocyte as well at the same time. Anisocytosis at certain extend can be found in periphery blood in most anemia patients.

异形红细胞指红细胞出现明显的形态方面的异常：卵圆形、梨形、泪滴形、不规则形。

Poikilocyte refers to red blood cells having some abnormal shapes, such as: orbicular-ovate, pyriform, lachrymiform and irregular forms.

裂红细胞常用来描述红细胞碎片，形态有：钢盔形、三角形、撒扯形、模糊红细胞形等。常见于烧伤患者。提示有溶血性贫血、巨幼红细胞贫血。

Schistocyte is used to describe packed red blood cell with shapes, such as helmet-shaped, triangle,

teardrop shaped, vague red blood cell and so on. It often occurs on fire victim. And it will indicate that hemolytic anemia and megaloblastic anemia exist.

锯齿状红细胞指红细胞失去了正常形态下的双面凹的外形，细胞膜出现粗糙的短刺。正常情况下，血液中出现 1—2% 的锯齿状红细胞，但超过该数量，提示血液 pH 失衡、渗透脆性改变，并应进一步确定病因。Echinocyte indicates that red blood cell loses its normal appearance with double convex surfaces; meanwhile, cell membranes appear short pricks. There are 1 to 2% echinocyt in the blood normally, but with number exceeded, which indicates that blood pH is in dissonance, permeability changes and the accurate pathogeny needs to be further confirmed.

治疗建议：

Treatment Recommendation:

新鲜生肝、脾浓缩物制剂，其中含丰富 VB 族，对促进红细胞生长发育至关重要。VB 复合物含对氨基苯磺酸，对蛋白质利用及健康红细胞的形成非常重要，且可刺激机体产生叶酸，叶酸是合成 DNA 的重要原料。Fresh row liver and spleen concentrated preparation which contain rich VB are very important to red blood cells' growth and development. VB compound contains anilinesulfonic acid, which is extremely significant for using protein and forming healthy red blood cell; meanwhile, it can stimulate body to produce folic acid which is an important material for composing DNA.

VC 作为辅助治疗，有助于 VB12 的吸收，预防叶酸氧化，利于铁离子的吸收。

As an adjunctive therapy, VC is helpful for absorbing VB12 and ferrous ion, as well as preventing folic acid oxidation.

每天补充 20—25mg 的铁离子，利于机体制造新生的红细胞。

Having 20-25 mg ferrous ion per day is helpful for body to produce new red blood cells.

最近的研究证明，许多红细胞异形是由于血液中缺乏抗氧化物，而蓄积了氧化剂。机体在疾病状态下或免疫功能低下时可能产生有毒的氧化剂，这些氧化剂不仅损害红细胞、也易形成与氧起反应的活性氧毒性物质（ROTS），这些有毒物质与机体争夺氧气。

Recent research proved that most poikilocytes are caused by blood lacking of antioxidants, and accumulating oxidant instead. Body may produce poisonous oxidant when under morbid state or with poor immunologic function. These oxidants can not only damage the red blood cells but also can form the ROTs which can react with the oxygen. Such toxic substances can compete for oxygen with the body.

三、活血的形态学分析

III. Live Blood Morphological Analysis

1、红细胞钱串状：红细胞之间粘连，形成钱串状外观，敲击玻璃片，易散开。提示血液黏度高，为血管机械性梗塞的基础。

1. Elythrocyte Rouleau Formation: connection between red blood cells forms the rouleau aspect, and it is easy to apart the red blood cells when raping on the glass slide, indicating high blood viscosity, which is the basic reason for blood vessel mechanical block.

患者体内氧气输送发生障碍，易出现疲乏、衰弱、昏睡等。

If oxygen transfer is obstructed inside the patient's body, it will be easy to suffer from fatigue, asthenia, lethargy and so on.

极度的红细胞钱串状形成在蛋白质代谢紊乱所形成的高蛋白血症患者中容易看到。

It is easy to see the extreme erythrocyte rouleau formation inside the patient body with hyperproteinemia being formed due to protein metabolism disorder.

2、红细胞聚集：红细胞之间不但粘连且堆积，敲击玻璃片，不易散开。提示血液黏度很高，为血管机械性梗塞的基础。

2. Erythrocyte aggregation: red blood cells can connect and accumulate; it is not easy to apart them when rapping on the glass slide, indicating high blood viscosity, which is the basic reason for blood vessel mechanical block.

患者体内氧气交换受到限制，毛细血管通量减少，应及时采取治疗否则易形成大的血凝块。

Therapeutic measure should be taken to avoid big blood clot if oxygen exchange is limited and capillary flux is reduced inside the patient body.

3、血小板：较小，大约 2um（红细胞 7um），圆形成卵圆形，正常情况下散开不动，有止血功能。

3. Blood platelet: small, about 2 um (7 um for red blood cell), orbicular-ovate, and it scatters but without moving normally, and has the function of stop bleeding.

月经前减少，月经第三天回升。

Blood platelet reduces before monthly period, but goes up again on the third day of monthly period.

剧烈运动引起血小板升高，可能是情绪紧张刺激脾脏释放血小板。

Strenuous exercise leads blood platelet to go up, which probably is because emotional tension stimulates spleen to release blood platelet.

4、血小板聚集：形成较大的团块，团块边缘可以看清散在的血小板。

4. Platelet aggregation: form into a big block mass, the scattered blood platelet can be clearly seen around the edge of the block mass.

细胞受损或血管破裂时血小板自行聚集。

Blood platelet will automatically aggregate if cells are damaged or blood vessels rupture.

过量脂肪导致血小板聚集形成团块，可以堵塞血管，影响血液循环，导致中风或心脏病发作。

Excessive fat leads blood platelet to aggregate then form block mass which may block blood vessels, affect blood circulation, result in stroke or heart attack.

5、血小板针状体或网状：血小板针状体提示肝脏处于应激状态，往往是由于滥用药物、酗酒、脂肪堆积引起肝功能活力减退、肝功能负担重、脂肪肝。

5. Spicular or reticular blood platelet: spicular blood platelet indicates that liver is in stress state, which is often caused by misuse of drugs, excessive drinking, fat accumulating resulting in liver function deficiency, high burden on the liver function and fatty liver.

血小板网状：提示肝硬化。引起原因：麻醉剂、过量饮酒、脂肪积累、肝功能下降。

Reticular blood platelet: indicates cirrhosis. Reasons: anesthetic, excessive drinking, fat accumulating and liver function deficiency.

6、乳糜微粒：直径大约 1um。乳糜微粒中心是甘油三酯和胆固醇，周围存在有极性蛋白、胆固醇和磷脂层。

6. Chylomicron: diameter is about 1um. There are triglyceride and cholesterol in the center of chylomicron while portal protein, cholesterol and phospholipid layer are around the chylomicron.

屏幕上呈现雪花斑点，在严重的情况下，含有乳化的乳糜微粒表现为白色雾状斑块，漂浮在各种血细胞之间。

Snow spots appear on the screen; and under serious situation, emulsive chylomicron shows like white haze spot floating among all kinds of blood cells.

过量的乳糜微粒提示高脂蛋白血症，可能导致冠状动脉方面的病症，形成动脉粥样斑块。

Excessive chylomicrons indicate hyperlipoproteemia and may cause coronary artery disease, forming into atherosclerotic plaque.

7、动脉粥样硬化斑块：斑块较大、不透明、有几个白细胞的体积那样大小。实际上，它是附着在动脉壁上动脉粥样硬化斑块中的一小块，脱落于血液中。

7. Atherosclerotic plaque: plaque is big, non-transparent, and with size as big as white blood cell. In fact, it is a spot of atherosclerotic plaque attached on the artery wall, and then drops into blood.

动脉粥样硬化斑块是一种最为严重的与胆固醇有关的结晶体，斑块的形成预示胆固醇沉淀在动脉壁上的过程属于晚期阶段。提示动脉已经粥样硬化，动脉变硬。

Atherosclerotic plaque is a most serious crystal relative with cholesterol, the formation of plaque predicts process that cholesterol deposits on artery wall belongs to late stage. It indicates that atherosclerotic plaque appears and arteries have already been stiffen.

8、红色结晶：在原生质体（透明不规则晶体）中容易发现一些红色或橙色花样晶体。这些晶体的存在提示肠中毒或代谢吸收功能紊乱。红色是由于放线菌素或各种链霉素产生。

8. Red crystal: it is easy to find some red or orange crystals in protoplast (transparent irregular crystal). The existence of these crystals indicate that intestines are poisoned or metabolic effects and absorptive function are in disorder. Red crystals are caused by actinomycin or all kinds of streptomycin.

9、胆固醇晶体或胆固醇盘状结构：屏幕上表现为大小不一的白色固体物质，可以反白光。

9. Cholesterol crystal or disk-like structure of cholesterol: white solid matters in different sizes appear on the screen, and they can reflect white light.

胆固醇盘状结构是指拉长的胆固醇晶体，形状较方正。它是动脉粥样硬化斑块形成的早期阶段，正常情况下不会出现。出现的意义提示动脉壁受损。

Disk-like structure of cholesterol refers to extended cholesterol crystal in square shape. It is early stage of forming atherosclerotic plaque, and it won't appear normally. The importance of disk-like structure of cholesterol is to indicate that artery wall has been damaged.

浅蓝色且小而多，提示影响微循环；大而呈现片状，提示引起冠心病。

It indicates that these cholesterols would affect microcirculation when they are light blue, small and excessive; besides, coronary disease will be caused if cholesterols are big and flaky.

10、红细胞异形性：可以根据红细胞的畸形确定存在贫血。

10. Poikilocyte: it can confirm whether anemia exists according to poikilocyte.

严重贫血时出现：衰弱、头疼、耳鸣、面色苍白、食欲减退、腹痛、易怒、嗜睡等。

Symptoms appear when serious anemia occurs, such as: asthenia, headache, tinnitus, pale face, and inappetence, belly ache, irritability, drowsiness and so on.

11、红细胞大小不均：多数贫血患者均有不同程度的红细胞大小不均。提示贫血、低铁、吸收不良、VB6、VB12、叶酸不足。

11. Anisocytosis: most patient all have anisocytosis at certain extend. It indicates that some symptoms exist, such as anemia, low iron, poor absorption, lacking of VB 6, VB 12 and folic acid.

12、异形红细胞症：常见：卵圆形、梨形、泪滴形、不规则形。

12. Pecilocythemia: common shapes: orbicular-ovate, pyriform, lachrymiform and irregular forms.

泪滴状红细胞提示骨髓功能纤维化，造血功能性贫血。

Teardrop cells indicate bone marrow fibrosis and aplastic anemia.

柠檬状红细胞多个出现表示消化吸收功能差。提示：萎缩性胃炎、浅表性胃炎。

Several lemon-shaped red blood cells appear, which indicates poor digestion and absorption function. Indicate: atrophic gastritis and superficial gastritis.

13、椭圆形红细胞：在椭圆形红细胞增多症中容易出现；超过 10%时，在缺铁性贫血中数量也增加。

13. Cameloid cells: it is easy to find in patient suffering from elliptocyte, and the cameloid cells in patient suffering from iron deficiency anemia will increase if those cells are over 10%.

14、小红细胞：指直径小于 5 μ m，在缺铁性贫血中容易见到。

14. Microcyte: diameter is below 5 μ m, and easy to find when suffering from iron deficiency anemia.

15、大红细胞：指直径大于 10 μ m，在溶血性贫血中容易见到。

15. Macrocyte: diameter is below 10 μ m, and easy to find when suffering from hemolytic anemia.

16、棘形红细胞：在外形上与锯齿状红细胞相似，但刺更尖而突出。提示 β -脂蛋白缺乏，且肝脏与脾脏功能失调。

16. Acanthocyte: it is similar to echinocyte externally in shape, but with sharper and more striking pricks. Indicate: lack of β - lipoprotein, moreover, liver and spleen are in disorder.

超过 1—2%时，提示血液 pH 失衡、渗透性改变、易引起早衰、肾功能不好。

When exceeding 1-2%, it indicates that blood pH is in dissonance, permeability change, and it will easily lead to progeria and poor renal function.

17、靶形红细胞：细胞较薄，直径增大，中心颜色较深，中心四周无色，边缘血红蛋白浓集而色深，形似靶子。提示地中海贫血、缺铁性贫血、血红蛋白减少性贫血、脾脏切除、梗阻性黄疸等病。

17. Target cell: it is thin with diameter increased, deep color in the center; and it is colorless around the center; hemoglobin is enriched and with deep color at the edge, just like target. Indicate: mediterranean anemia, iron deficiency anemia, low hemoglobin anemia, splenectomy, jaundice obstructive and some other diseases.

红细胞中心淡染区偏大超过 1/2 面积时，提示轻度贫血。

Pale dye area in the red blood cell center exceeds 1/2 of the area, which indicates mild anemia.

18、红细胞为瓶颈形、C 字形：提示寄生虫或全身病毒感染或早熟的红细胞被破坏。

18. Red blood cells are bottle neck and C letter shaped: it indicates parasite, virus infection over the whole body or premature red blood cells being damaged.

19、红细胞皱缩：提示营养不良，消化吸收不良；另外可能炎症、手术后失血、体内污染、VC、VB 缺乏、SOD 损伤。

19. Echinosis: indicates malnutrition, poor digestion and absorption: besides, it may cause inflammation, hemorrhage after operation, internal pollution, lacking of VC as well as VB, and SOD damaged.

20、晶体为细长形：提示外周血管的高危险性。

20. Crystals are slim line type: indicating high periphery vascular risk.

21、晶体为方的，不规则，透明：提示电解质失衡、pH 改变、脱水、钙/磷比例失调，缺钙。也可解释为易患心脑血管疾病。

21. Crystals are quadrate, irregular and transparent: indicating electrolyte imbalance, pH change, dehydration, ratio imbalance of calcium and phosphorus, lacking of calcium. It also indicates that it is easy to suffer from cardiovascular and cerebrovascular diseases.

22、晶体为明亮、带有彩色：可以简单解释为血液内含有毒素。

22. Crystals are bright, and colored: indicating there are toxins in the blood.

23、脂肪斑状或带状：片状中有颜色的颗粒（如同水管壁上掉下的水垢）。提示外周血管性疾病的高危险性。

23. Fat is mottled or taenioid: there are colored granules in the flake (just like incrustation falling off from the water wall).It indicates high risk in suffering from peripheral vascular disease.

24、病原体感染。提示常引起关节炎、肺炎、生殖泌尿道和神经系统疾病等，说明脾脏功能障碍，免疫系统功能欠佳，应该予以治疗。

24. Pathogen infection, indicating that it will cause diseases, such as arthritis, pneumonia, urogenital tract and nervous system disease. It also indicates that the patient suffers from spleen deficiency, poor immune system, so treatment is needed.

支原体感染的形态表现：米粒大小、有时带有尾巴、自由运动、活力大、有光环，细胞内外都会存在。支原体感染常会在白细胞中出现。

Shape manifestations of mycoplasma infection: grain size, with tail sometimes, free movement, high activity, having a ring of light, and all these symptoms can appear at both inner and outer cells. Mycoplasma infection often exists in the white blood cells.

支原体多，提示：上呼吸道感染、咽喉炎、口腔炎症、支原体性肺炎。

Much mycoplasma: indicating upper respiratory tract infection, laryngopharyngitis, mouth inflammation and mycoplasmal pneumonia.

25、尿酸结晶：黄、红、棕色等，形态多样如磨刀状、斜方状、枪状。提示：痛风、关节炎。

25. Uric acid crystal: the colors are yellow, red, brown and so on, and there are various kinds of shapes, such as: grind knife-shaped, orthorhombic form and gun-shaped. Indicate: arthrolithiasis and arthritis.

26、黑色结晶：提示肠毒素、肠功能差。

26. Black crystals: indicate enterotoxigenic and poor intestinal function.

27、白细胞（正常情况每个视野 1—2 个，3—5 个视野为观察到白细胞，视为免疫力下降）为免疫系统的基础，形态上淋巴细胞与红细胞大小接近，单核、嗜酸、嗜碱、中性白细胞比红细胞大 1—3 倍，有颗粒和细胞核、细胞核有分叶。

27. Leukocyte (it is 1-2 at per view normally, for 3-5, which indicates immunity dropping) is the basic of immunity system. The size of lymphocyte is similar to red blood cell morphologically. Monocyte, acidophil, basophil and neutrophil which have granules and lobulated cell nucleus are as 1 to 3 times bigger as red blood cells.

判断免疫功能好差，主要看白细胞内颗粒是否在动，活跃程度，是否在变形，是否伸出伪足。如果不动不

活跃、不变形、不伸出伪足，提示：免疫功能下降。

To observe motion, activity level of granules in the white blood cells or whether they are be out of shapes and show pseudopodia out, we can judge the immunologic function. If granules do not move, are not be out of shapes, and do not show pseudopodia out, then it indicates that immunologic function drops.

观察细胞核分叶，正常情况下为 2—4 叶。

Observe the lobulations of cell nucleus, and there are 2 to 4 lobulations normally.

观察白细胞数量，如果 5—6 个视野中，白细胞极少或无，建议查常规。

Observe number of white blood cells, If there are 5 to 6 white blood cells in one view, which indicates that the number is too low or no white blood cells at all, so routine examination is recommended.

四、凝固血象形态学分析

IV. Blood Coagulation Morphological Analysis

基本原则：活性有毒物质（ROTS）活动的证据——纤维蛋白网的退化、减弱、裂开、缺乏以及红细胞团块颜色的改变、空白区域的出现，尤其是半透明区域（ROTS 带）的出现，以及这种区带的大小、数目、颜色和构成。

Basic principle: activity evidence of ROTs—fibrin mesh deteriorates, weakens, cracks, or lack of fibrin; besides, the color of red blood cell mass changes, blank zone appears, specially semi-transparent zone (ROTS zone). And some other evidences, such as the size, number, color and formation of such zone.

判断标准：为了方便缘故，血滴形态变化的过程分为 5 级，即从 0 级到 4 级。其中：0 级为最佳级（健康级），4 级为代谢紊乱的终末期。具体划分标准如下：

Criterion for judgment: we divide the process of image changes of blood drops into 5 levels which is from 0 to 4 for sake of convenience. There, level "0" is the best one (health level), level "4" is the terminal stage of metabolic disturbance. It is divided according to the follow standards:

0 级：无 ROTs 团块。

Level "0": no ROTs block mass.

1 级：10% 以内的红细胞团块被 ROTs 团块代替。

Level "1": within 10% of red blood cell mass are replaced by ROTs block masses.

2 级：10—20% 的红细胞团块被 ROTs 团块代替。

Level "2": 10 to 20% of red blood cell mass are replaced by ROTs block mass.

3 级：20—30% 的红细胞团块被 ROTs 团块代替，纤维网开始退化。

Level "3": 20 to 30% of red blood cell mass are replaced by ROTs block mass; meanwhile, fibrin begins to deteriorate.

4 级：30% 以上的红细胞团块被 ROTs 团块代替，纤维网完全退化。

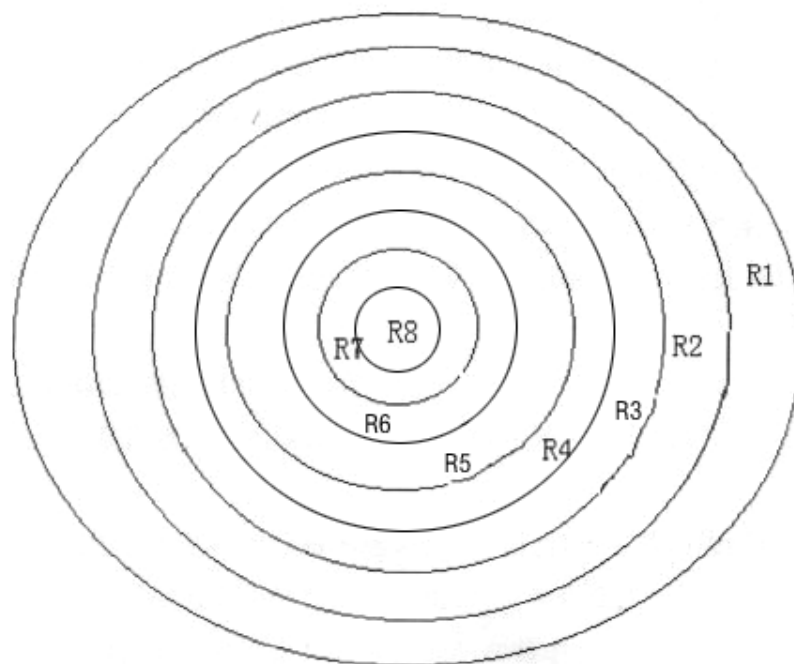
Level "4": more than 30% of red blood cell mass are replaced by ROTs block mass; meanwhile, fibrin totally deteriorates.

注意：由于儿童（8 岁以下）代谢较年轻人和老年人活跃，所以，在划分级时，1 级应该考虑为 2 级。相反，70 岁以上的老人，代谢机能较弱，2 级应当考虑为 1 级。因此这个划分标准是以 9—69 岁的个体为主要对象的。当然，不排除一些特殊情况。

Note: we need to consider level "1" as "2" when divide the level for children, for their metabolism function is more active than those of the youth and old men. On the contrary, the old men who are above 70 years old have a poor metabolism function, so we need to consider level "2" as "1" for them. Therefore, this standard is mainly based on the individual whose age ranking from 9 to 69 years old. Certainly, we do not eliminate some special situations.

我们在大量的实践过程中，以及结合最新研究的成果，将凝固血象的分析又更加纵深和精确推进了一步。下图为“一滴血干血全息图谱”。

The analysis of blood coagulation is more profound and accurate due to excessive practice and latest research. The followings are the "Multiplex Holograms of a Dried Blood".



- | | |
|---|--|
| R1: 头、颈、皮肤、上呼吸道 | R2: 淋巴、皮肤、关节、颈 |
| R1: head, neck, skin, the upper respiratory tract | R 2: lymph, skin, joint, neck |
| R3: 内分泌 | R4: 心脏、肺、乳腺 |
| R 3: internal secretion | R 4: heart, lung, mammary gland |
| R5: 肝、胆、胃 | R6: 肠道、腰背 |
| R 5: liver, gallbladder, stomach | R 6: intestinal tract, lumbar spinal cord |
| R7: 胰脏、膀胱 | R8: 生殖系统、肛肠系统 |
| R 7: pancreas, bladder | R 8: reproductive system, anorectal system |

图解:

Diagram:

R1: 即最外圈，正常血象应该边缘连接圆滑、整齐。若外缘不规整、有断裂，提示 VC 缺乏；血膜不整、有水印，表明有贫血。

R1: it is outmost ring. Periphery should connect smoothly and fitly under normal hemogram. It indicates lacking of VC if outer margin is not in order and crack; blood film is disordered and has watermark, which

indicates that patient suffers from anemia.

R2: 如果自由基团块出现于该区，有突起，表明颈部肌肉疲劳，有颈椎病、肩周炎；

R2: it indicates that muscoli colli becomes fagged and suffer from intervertebral disk disease and lohumeral periartthritis if free radical block appears at this zone and rises high.

如果自由基团块与红细胞团块之间的间质清晰，自由基团块内有一些较小或者说紫色的颗粒存在，也可能有淡蓝色出现，一般为关节炎。

If mesenchyme between free radical block and red blood cell mass is clear, and there are some small or purple granules in the free radical block, or sometime light blue one, then we probably can tell it is arthritis.

如果自由基有齿状边缘，则表示脑神经有损伤（如面瘫）。

It indicates cranial nerves are damaged (such as: facioplegia) if there is dentelated edge around radical.

如果该区纤维蛋白网颜色深，表明体内毒素多。

It indicates that there are many toxins inside the body if color of fibrin mesh in this zone is deep.

如果自由基呈半月状，一般为关节炎。

It is usually arthritis if the free radical looks like semilunar notch.

R3: 糖尿病患者在该区有大量的自由基团块。R2、R3 有较大的自由基团块表明疲劳。妇科方面的疾病再现为纤维蛋白网少并且断裂，经期会出现大块自由基团块。甲亢患者在该区有一些浮云状的自由基团块。

R3: a diabetic patient has many free radical in this zone. It indicates fatigue if there are many big free radical block in R2 and R3. Gynecological diseases manifest less fibrin mesh and fibrin cracks; moreover, there are many big free radical block during period. Patient suffering from hyperthyreosis has some free radicals which look like floating clouds in this zone.

R4: 该区自由基团块深红色异于其它，如形似玫瑰花瓣，表明心脏供血不足；有异常黑线出现，提示心脏传导阻塞。心脏供血不足，还体现在纤维网颜色深、发黑、平时有胸闷气短等不良感觉。结核病患者与肺癌患者在该区自由基团块具有绿色区带、亮白色、铬黄特点，在团块与红细胞之间有一界限分明的浓集带。

R4: it indicates cardiac insufficiency if scarlet colors of the free radical block in this zone are different from others, and with shape like roseleaf; it indicates heart block if there is abnormal lineae nigra. The symptoms of cardiac insufficiency also include deep color of fibrin, black fibrin and feelings of short of breathe. The free radical block have green zone, bright white spot, and are chrome yellow; besides, there is an enrichment zone with clear boundary between block and red blood cell in this zone for patient suffering from tuberculosis and lung cancer.

R5: 该区自由基团块呈枪击点，提示胃肠过敏（如腹泻等）；自由团块中有刺状，说明肝脏负担过重；如再现 V 形大而长是肝癌症状，如果纤维网有黑色横线，提示有胆囊炎、胆结石。

R5: it indicates gastrointestinal allergy (such as : diarrhoea) if the free radicl block are like shooting spot; spinous free radical block indicates high burden of liver function; V shaped and long free radical block is the symptom of liver cancer; it indicates cholecystitis and gall-stone if there is black transverse line in fibrin.

R6: 该区的自由基团块呈现不规则长条状，提示肾脏有损伤的人有此血象；颜色特别黑，有直肠癌征兆。

R6: it indicates patient whose kidney is damaged has such hemogram if free radical block are irregularly long string in this zone; it is a symptom of rectal cancer if the free radical block are extremely black.

R7: 出现自由基团块，提示胰脏、膀胱有病症。

R 7: it indicates some symptoms of pancreas and bladder diseases if free radical block appear.

R8: 该区出现形似葫芦状的自由基团块，提示女性生殖系统有疾病。

R8: it indicates there are some diseases in female reproductive system if free radical block are gourd shaped in this zone.

另外:

In addition:

关节炎: 在血滴当中自由基团块分布不均匀，呈 C 形，且自由基团块颜色偏淡青色。

Arthritis: free radical block scatter uneven in blood drops, and are C shaped; besides, the colors of free radical block are more like nattierblue.

上呼吸道感染: 血片周围有细小的自由基团块，并且颜色变浅。

Upper respiratory tract infection: there are some small free radical block around blood flakes and colors of them become light.

哮喘: 较多的中小自由基散乱于血片并有红细胞在其中。

Asthma: many medium and small free radicals scatter into blood flakes and with red blood cells in.

甲状腺功能异常: 内分泌纤维层网局限性拉长变色呈白色突出的环状，另外，纤维连接较差。

Thyroid disorders: internal secretion fibrin layer extends, changes color and shows protruding ring form with limitations. Besides, connections among fibrins are poor.

肝细胞损伤、循环好: 自由基团块中间有结晶体或针状物。

Liver cell damaged and good circulation: there are crystals or spicules in the center of free radical block.

肝应激反应: 自由基团块呈黑洞状，黑洞越大，毒性越高。

Stress response of liver: free radical block look like black holes; the bigger the black holes are, the higher the toxicity is.

胆结石和胆囊炎: 肝胆区出现孤立、透亮椭圆的自由基团块反应。

Gall-stone and cholecystitis: liver and gall zones appear isolated, bring elliptical free radical block response.

胃肠功能: 血滴中心发黑，表明肝内毒素过多，提示胃肠功能或大肠功能性病变，如果有自由基团块提示有胃肠器质性病变。

Gastrointestinal function: there are too many toxins in the liver if it is black in the center of blood drops, and it indicates that gastrointestinal function or large intestines pathological changes; besides, it indicates gastrointestinal organic pathological change if there are free radical block.

生殖系统: 血滴中央出现葫芦状，周围并不发黑，在女性为子宫、生殖器官病变；在男性为前列腺及生殖器官病变。

Reproductive system: it is gourd shaped in the center of blood drops and is not black around, which indicates that womb and organs of generation pathologically change among women; for men, it indicates that prostate and organs of generation pathologically change.

病毒感染: 如果自由基中间有一条细长的病毒桥，提示病毒感染。

Virus infection: it indicates that patient suffers from virus infection if there is a long virus bridge in the free

radicals.

月经：女性月经周期，从第一滴血外围显示自由基环状，有单个的红细胞漂浮在自由基中，中下腹部出现云雾头的白色的、形态不一的自由基团块。

Period: during period, it shows out free radical ring form from periphery of the first blood drop, and there is single red blood cell floating on the free radical; besides, cloud head shaped white free radical block with different shapes appear at middle-lower abdomen.

最后：

Finally:

自由基团块中出现尿酸结晶提示有痛风、痛经或关节炎。

Uric acid crystals appear at the free radical block, which indicates arthrolithiasis, dysmenorrheal or arthritis.

肝区出现黑色环状为肝损伤。

Black ring form appears at liver area, which indicates liver is damaged.

肝胆区出现明亮的自由基团块提示体内有结石现象。

Bright free radical block appear at liver and gall areas, which indicates there is stone inside the body.

枪击点状小白点为过敏点，遍布血滴为过敏性体质；如果在胸部，提示肺部气管炎、哮喘。如果在血象的中心，提示胃肠过敏、胃炎。

White shooting spots are allergy points, and if they scatter through blood drops, then we can tell it is allergic constitution; besides, it indicates obstructive disease of lung and asthma if allergy points are in chest. It indicates gastrointestinal allergy and gastritis if allergy points are in the center of hemogram.

R8 盆腔区孤立空洞，外围颜色发黑，提示肛肠疾病。

R8 pelvic cavity is isolated and cavitory with black periphery, which indicates anorectal disease.

肝区有近方形的自由基团块，边缘颜色发黑，内有倒刺及病毒桥，提示脂肪肝、肝癌。

There are square-like free radical block in liver area, and it is black around the edge; besides, there is agnail and virus bridge inside, indicating fatty liver and liver cancer.

纤维蛋白局部性扩大、增粗、变色，提示心率不齐，供血不足。

Fibrin expands, thickens and changes color locally, which indicates arrhythmia and cardiac insufficiency.

纤维蛋白网外周发黑，第 3—5 层出现黑色斜杠，提示有病毒性心肌炎。

It is black around the outer fibrin mesh while black sprits are on the 3 to 5 layers, which indicates viral myocarditis.

如果出现年轮状，提示心肌供血不好。

If annual ring shape appears, then it indicates blood-supply to cardiac muscle is poor.

R5—R7 层出现横跨黑杠，提示腰肌劳损、胆囊炎、阑尾炎、乳腺病变等。

Horizontal black line appears at R5 to R7 layers, which indicates lumbar muscle degeneration, cholecystitis, appendicitis, mammary gland pathology and so on.

注意：不能太机械地要求必须把血斑分成精确的分区图谱，因为个体差异，有些人的血斑甚至很难分成 8 个部分。

Note: blood spots of some people are different to be divided into 8 parts due to individual difference, so do

not always divide blood spots into accurate sectional images.

五、凝固血象的检查与分析

IV. Examination and Analysis of Coagulated Hemogram

通过观察数滴（1—6 滴）血斑，人们可以探测出具有活性的含氧有毒物质（ROTS 块），并在凝固血象中反映出来，且提示体内出现特异性的代谢紊乱。而这些紊乱可导致多种疾病的发生，即布拉福德—艾伦效应。

Through the observation of several drops (1-6 drops) of blood pots, the active oxygen toxic substance (ROTS blocks) can be detected, which reflects in the coagulated hemogram and indicates the metabolic disturbance with specificity in the body. These disturbances can lead to the occurrence of many diseases, i.e., Bradford- Allen effect.

机理：ROTS 块实际上是新陈代谢紊乱所产生的，它们中很多是正常的（如分解代谢），而有些则属于异常的，形成的原因可能是内源性或者外源性的。通常我们用“自由基”来解释这些 ROTs 块，但并不是所有的 ROTs 块都是自由基，它们还有其它很多种形式。

Mechanism: ROTs blocks are actually resulted from the metabolic disturbance, many of which are normal (such as the catabolic metabolism) and some of which are abnormal due to the endogenous or exogenous reasons. We usually explain these ROTs blocks by “free radical”; however, not all of ROTs blocks are free radical because they have many forms.

ROTS 块是正常氧分子的变体，具有很高的生化活性。大多数的 ROTs 块是自由基，主要由羟基和超氧化物所组成，最重要的是非自由 ROTs 块是过氧化氢。

ROTS blocks that have high biochemical activity are the variant of normal oxygen molecule. The majority of ROTs blocks belong to the free radical, mainly because they are composed by hydroxyl and superoxide and the most important is that the non-free ROTs blocks are hydrogen peroxide.

ROTS 块，可能会导致机体每个细胞的系统性代谢紊乱。它们是毒素和体细胞相互作用的结果。ROTS 块在影响机体的基本细胞结构的生化过程时，它们还会同血液成分发生各种代谢产物，而这些代谢产物是可以被探测出来的。这些血象变化、代谢产物和特殊的 ROTs 块会随着代谢状况、免疫活力和 ROTs 块水平而改变。

ROTS blocks may cause the systemic metabolic disturbance of each cell of a body. They are the interaction results between the toxins and the body cells. While ROTs blocks influence the biochemical process of the basic cell structure of a body, various kinds of metabolites are produced due to their interaction with different blood constituents. These metabolites can be detected. The change of coagulated hemogram, metabolites and special ROTs blocks goes with the change of the metabolism status and the level of immunity and ROTs blocks level.

凝固血片的检查主要通过血片形态学的观察，发现机体在临床、亚临床水平所产生的代谢紊乱与疾病状态，是一项很重要的含有大量信息的代谢评估手段，应用前景十分广阔。

The examination of coagulated blood flake is mainly by way of the observation of the blood flake morphology to find out the metabolic disturbance and disease status generated in the clinical and subclinical level of bodies, which is an important metabolism evaluation method with a great deal of information and has a bright application prospect.

1、制取血片

1. Make Blood Flake

针刺取血时伤口应适中，以免过多的血液流出或血液流不出来。挤揉采血手指，知道血滴达到 2.5mm 直径大小（大约铅笔芯大小），指尖向上，保持 15—20 秒。玻片垂直向下，短时且仅仅接触血滴即向上抬起 1—2cm 高度。重复该过程连续采集血样，直到指尖上的血滴用尽，可以取到 4—6 滴血斑。

The size of wound should be appropriate in taking the blood by needles so as to prevent too much blood from running out or no blood from running out. Rub the finger from which the blood is taken until the blood drop reaches 2.5mm (about the size of a pencil lead). The fingertip points upward for 15-20 seconds. The glass slide points vertical-down; uplifts 1-2cm upon the touch of blood drops. Repeat this process to take blood samples continuously until the blood drop on the fingertip is used up and it can take 4-6 drops of blood spots.

2、判断原则

2. Judgement Principle

正常血滴表现为红细胞团块被深黑色纤维蛋白网络所包围，就好象一堆砖红色硬币，其间没有代谢产物、半透明物质、残渣、无法辩认的物体或其它颜色。是一个基本对照。

The normal blood drop manifests in the red blood cell mass surrounded by the dark black fibrin network, which is like a pile of brick-red coins and in which there is no metabolite, vitrina, residue and unidentifiable objects or other colors. It forms a basic contrast.

应当充分掌握前面所述“基本原则”。

It should fully master the "basic principle" as set forth.

应当充分掌握前面所述“判断标准”。

It should fully master the "judgment standard" as set forth.

应当充分掌握前面所述“干血全息图”。

It should fully master the " Multiplex Holograms of a Dried Blood " as set forth.

3、程序

3. Procedure

1—6 滴血滴中，第 1、2 滴代表急性期；第 3、4 滴代表慢性期；第 5、6 滴代表慢性陈旧性过程。比如：第 1、2 滴中发现痔疮出血，第 5、6 滴中发现痔疮。

In the 1-6 blood drop, the first blood drop and the second blood drop represent the acute phase; the third blood drop and the fourth blood drop represent the chronic phase; the fifth blood drop and the sixth blood drop represent the chronic old myocardial infarction. For example, the first drop and the second blood drop find the bleeding hemorrhoids; the fifth blood drop and the sixth blood drop find hemorrhoids.

先看第 1、2 滴血滴周边：

Look at the periphery of the first blood drop and the second blood drop:

①缺 VC：周边有红细胞溢出，呈散落状态。

1)Lack VC: The red blood cell spills from the periphery in a scattering state.

②脑部缺血：周边有尖头突出，且有黑纤维网跟随。

2)Cerebral ischemia: The oxycephalia stands out in the periphery and is followed by the black fiber web.

③颈椎问题：周边有圆锥突出，并有黑纤维网跟随。

3) Cervical vertebra problem: the cone stands out in the periphery and is followed by the black fiber web.

④上呼吸道感染、支气管炎、周边有 1/3 ROTS 块。

4) Infection of the upper respiratory tract, bronchitis and the periphery has 1/3 ROTS blocks.

⑤哮喘：R4，云雾状。

5) Asthma: R4, cloud.

⑥关节退化：周边有细碎的 ROTS 块。

6) Joint degradation: Small ROTS blocks in the periphery.

⑦体内污染（易引起大脑迟钝）：周边发黑。

7) Internal pollution (easy give rise to dull brain): The periphery tends to be black.

第 3、4、5、6 滴，看 ROTS 块、纤维网、颜色。

Look at the ROTS blocks, fiber web and colors for the third, fourth, fifth and sixth blood drop.

（1）肌肉疲劳：R2 是不规则的大的 ROTS 块。

(1) Muscle fatigue: R2 is an irregular large ROTS block.

（2）内分泌紊乱：R3 层纤维网断裂，不规则。

(2) Endocrine disturbance: R3 fiber web is cracked and irregular.

（3）免疫功能低下：ROTS 块多，形状不典型，R3 内分泌层没有纤维。

(3) Degradation of immunologic function: Too many ROTS blocks with uncharacteristic shapes, R3 endocrine layer without fiber.

（4）心脏应激、心肌缺血：R4 层有玫瑰花瓣，颜色更红。

(4) Cardiac stress and myocardial ischemia: R4 layer has rose leaf with redder colors.

（5）小叶增生：R4 层一侧有大的 ROTS 块。

(5) Lobular hyperplasia: One side of R4 layer has large ROTS blocks.

（6）肝细胞损伤或脂肪肝：R5 层出现方形或近方形 ROTS，有黑圈，占近 1/3，结合活血中血小板针状体，进行综合评。

(6) Hepatocellular injury or fatty liver: R5 layer has the square or square-like ROTS; the layer has a black circle, occupying one third of the layer; carry out the comprehensive evaluation by combining the platelet spicula in the invigorate blood circulation.

（7）结石体质：圆或椭圆的透亮的 ROTS 块。

(7) Calculus: Round or elliptical bright ROTS blocks.

（8）肾亏或肾功能下降：出现不规则的长条形的 ROTS 块。

(8) Lack of the kidney or degradation of the kidney function: Occurrence of the irregular ROTS blocks with elongated shapes.

（9）过敏体质：出现小的圆的 ROTS（枪击点）。

(9) Anaphylaxis: Occurrence of small and round ROTS (shooting spot).

（10）胃炎、胃黏膜病变、器质性改变：R6、R7、R8 层出现黑色改变，有 ROTS 块。

(10) Gastritis, gastric mucosal lesion and organic change: R6, R7 and R8 layer occur the change of black

color and have ROTS blocks.

(11) 痔疮：第 R5、R6、R8 层有孤立的黑圈包围的 ROTS 块。

(11) Hemorrhoids: R5, R6 and R8 layer have ROTS blocks surrounded by isolated black rings.

(12) 前列腺肥大（男人 55 岁以上）前列腺炎（年轻人）：R8 层没有黑圈包围 ROTS 块。

(2) Prostatomegaly (55 year-old for males) and prostatitis (for young people): R8 layer doesn't have ROTS blocks surrounded by black rings.

(13) 子宫卵巢病变（子宫肌瘤、子宫切除、子宫硬变等）：R8 层出现倒置葫芦状的 ROTS 块。

(13) Pathological changes of utero-ovarian (myoma of uterus, hysterectomy, metroscirrhus, etc): R8 layer appears the ROTS blocks with the shape of an upside down bottle gourd.

(14) 缺钙：很细碎的 ROTS 呈放射状。

(14) Calcium lacking: Very small ROTS blocks in radial pattern.

(15) 贫血：第 1、2、3 滴血中 ROTS 块多。

(15) Anemia: a lot of ROTS blocks in the first, second and third blood drops.

(16) 糖尿病：早期 R3 层出现小的 ROTS，已恢复或控制，一般看不出来。血脂高的有血糖高的嫌疑（但不是绝对的）。

(16) Diabetes mellitus: R3 layer appears small ROTS blocks in early stage, which usually cannot be observed after they are recovered or kept under control. Hyperlipidemia may lead to high blood sugar (but no absolute).

(17) 胃炎：R8 层有小的 ROTS 圆点块。

(17) Gastritis: R8 layer has small and round ROTS blocks.

(18) 胃黏膜损伤：ROTS 块不在中间，有点偏。

(18) Gastric mucosal lesion: ROTS blocks are not in the middle and deviate a bit from it.

(19) 肠道毒素：中间纤维网明显发黑。

(19) Enterotoxin: the middle fiber web is obviously black.

(20) 癌症：大片 ROTS 块，第 1—6 滴均呈覆盖状，30% 以上，唾液酸增加。一般描述为：

(20) Cancer: Big ROTS blocks; 1-6 drop is overlapped; over 30% of the sialic acid increases. It is usually described as:

1、免疫功能下降。2、自由基严重损伤。3、建议去医院检查。

1. Degradation of the immunity. 2. Severe damage to the free radical. 3. Suggest going to the hospital for examination.

注意事项

Cautions:

1、检测中发现的疾病，除非与患者取得一致，得到确认，否则不能下判断结论。如心脏疾病、心室肥大、二尖瓣狭窄等，不能下结论。只能写：心脏应激。特别是癌症，注意描述时的措辞。

1. The disease found in the detection cannot jump to a conclusion unless it is consistent with the patient and confirmed. For example, heart diseases, ventricular hypertrophy, mitral (valve) stenosis, etc cannot rush a conclusion. Only the heart stress can be written. Especially, attention to wording should be made in describing cancer.

2、仪器应当可以看到各种各样的血象，查出上百种疾病。但目前我们还没有达到这个水平，还需要很多人很多的时间去努力学习和探索，前面的路还很长。

2. The instrument may see various kinds of hemogram and hundreds of diseases can be found out. However, we have not reached this level and the road ahead may be long and we will study and explore it by putting many efforts and time.

3、仪器的准确率不可能是百分之百。我们在回答患者的疑问或者质问时如：为什么已知的病没有查出来？我们在回答时要尽量把握，建议这样回答：

3. The instrument cannot be 100% accurate. While in answering such questions or inquires as “why my disease cannot be detected?” , we suggest answering in this way:

(1) 仪器不是百分之百的准确。

(1) The instrument is not 100% accurate.

(2) 因个体差异，表现情况不一样。

(2) The situation may differ due to the individual difference.

(3) 未查出的病在控制中，目前表现不明显，血象不典型。

(3) The undetected diseases are under control and are not obvious currently and the hemogram is not typical.

(4) 仪器查出已患的病、现患的病、以及未被发现的病是提前告知。

(4) The diseases suffered, the disease suffering and the diseases undetected are informed in advance.

(5) 被检人被告知的病是处于临界状态，等病情重了，临床症状明显了就麻烦了。

(5) If the examinee is told that he is in a critical state, he will be in trouble when it becomes serious and the clinical symptoms are obvious.

(6) 早期发现、早期引起重视、早期防治，这是一件好事，是本仪器的独到之处。

(6) Early detection, early brought to the forefront and early prevention are good things and also the distinctive features of this instrument.

4、如果要问这种检测方法与医院的检查方法有什么区别时，建议这样回答：

4. If the question is that “what is different between this detection method and that of the hospital”, we suggest answering in this way:

这种检测方法是最近几年的医学领域的新成果，在检测技术方面属于定性检测。而在医疗机构中一般采用保守而传统的定量检测方法。定量检测的结果往往滞后于定性检测的结果。在技术发展的规律性方面，定性技术总是走在定量技术的前面，是定量技术的基础。随着研究的不断深入，这种检测技术也将逐步实现量化。现代医学强调疾病应预防为主，所以早期发现的意义是很大的。因此这种定性检测的技术在疾病的早期预防方面具有很强的应用价值。

This detection method is a new achievement in the medical domain in recent years and belongs to the qualitative detection with respect to the detecting techniques, while the medical institution usually employs the conservative and traditional detecting techniques of quantitative detection. The result of the quantitative detection usually lacks behind that of the qualitative detection. In terms of the law of technical development, the qualitative technology always runs ahead of the quantitative technology and it is the basis of quantitative technology. With the deepening of the research, this detection technique will achieve the quantification step by step. The modern medicine emphasizes that the disease should put the prevention first. Therefore, early detection of disease is very significant. Therefore, this qualitative

technology has a strong application value in the early disease prevention.

六、血象氧化学及形态学评估 VI. Evaluation of Hemogram Oxidation and Morphology

1、活血象形态学分析与诊断 (HLB)

1. Analysis and diagnosis of hemogram morphology (HLB)

序号 SN	镜下所见活体形态 Living organism morpheus under the microscope	危险因子 Risk Factors
L1 L1	红血球膜之间蛋白质连接，柠檬状 L1 Protein connection of red blood cell membrane, lemon-shaped	1、大肠功能差，吸收差、肠道菌群失调 1. Poor function, absorption and alteration of intestinal flora of large intestine 2、消化不良，吸收不好 2. Maldigestion and poor absorption 3、饮食中蛋白质过多 3. Too much protein in the diet 4、由食物引起的 IgG 过敏 4. IgG irritability caused by food ※一般可能为浅表性胃炎或萎缩性胃炎 ※ Generally, it may be superficial gastritis or atrophic gastritis
L2 L2	红血球聚集成钱串状或成堆 Red blood cell gathers into a rouleaux or heap	1、脂肪代谢功能差，脂肪过氧化 1. Poor fat metabolism and lipid peroxidation 2、脂肪摄入消化过度 2. Excessive digest of fat intake 3、由食物引起的 IgG 过敏 3. IgG irritability caused by food 4、由药物引起的 IgG 过敏 4. IgG irritability caused by medicine 5、消化吸收不良 5. Poor digestion and absorption 6、情绪压力（功能性的） 6. Emotional stress (functional) 7、吸烟 7. Smoke 8、真菌感染 8. Fungus infection ※血液粘稠 ※ Blood Viscosity
L3 L3	红血球为巨红细胞，小红细胞 The red blood cell is macrocyte and microcyte	1、贫血、低铁、吸收不良 1. Anemia, low iron and poor absorption 2、维生素 B6、B12、叶酸不足 2. Lack of vitamin B6, B12 and folic acid 3、骨髓功能差 3. Poor function of bone marrow 4、化学中毒（可能为环境性） 4. Chemical poisoning (may be of environment property)
L4 L4	红血球为靶（状）形 the red blood cell is of target shape	1、骨髓功能差 1. Poor function of bone marrow 2、脾脏功能欠佳 2. Poor function of spleen 3、血红蛋白减少性贫血 3. Haemoglobin anaemia 4、化疗反应 4. Chemotherapeutic reaction 5、地中海贫血 5. Mediterranean anemia
L5 L5	红血球为瓶顶形，C 字型形状 The red blood cell is of top bottle-shaped and C-shaped	1、寄生虫感染 1. Parasitic infection 2、全身病毒感染 2. Virus infection all over the body 3、早熟红细胞破坏（RBC）

		3. Damage to the premature red blood cell (RBC)
L6 L6	红血球皱缩 Shrinking of the red blood cell (30 分钟内在 15%以上) (above 15% within 30 minutes)	<ul style="list-style-type: none"> 1、营养不良 1. Malnutrition 2、消化吸收不良 2. Poor digestion and absorption 3、大肠功能差、肠道菌群失调 3. Poor function and alteration of intestinal flora of large intestine
L7 L7	红血球呈脆性，膜破裂成断片 The red blood cell is fragile and the membrane breaks into fragments	<ul style="list-style-type: none"> 1、贫血，低铁，吸收不良。 1. Anemia, low iron and poor absorption. 2、真菌感染 2. Fungus infection 3、骨髓功能差 3. Poor function of bone marrow 4、器官反应，严重氧自由基堆积 4. Organ reaction and severe accumulation of oxygen radical 5、过氧化反应（纤维团块） 5. Peroxidatic reaction (fiber agglomerates) 6、炎症过程 6. Inflammatory processes 7、脾脏功能欠佳 7. Poor function of spleen

序号 SN	镜下所见活体形态 Living organism morpheus under the microscope	危险因素 Risk Factors
L8 L8	血小板聚集过多 Excessive platelet aggregation	1、由食物引起的 IgG 过敏 1. IgG irritability caused by food 2、器官反应，严重自由基堆积，过氧化反应 2. Organ reaction, severe accumulation of free radical and peroxidatic reaction 3、消化吸收不良 3. Poor digestion and absorption 4、脂肪代谢功能差，脂肪过氧化 4. Poor fat metabolism and lipid peroxidation 5、真菌感染 5. Fungus infection ※易堵塞血管，导致中风和心脏病发作 ※ Easy to stuff the blood vessel, which can lead to stroke and heart attack
L9 L9	白细胞减少（较正常为少） Leucopenia (less than the usual quantity)	1、维生素 B6、B12、叶酸不足 1. Lack of vitamin B6, B12 and folic acid 2、消化吸收不良 2. Poor digestion and absorption 3、营养不良 3. Malnutrition
L10	白细胞增多（较正常为多） Leucocytosis (more than the usual quantity)	1、牛磺酸缺乏 1. Lack of aminoethylsulfonic acid 2、骨髓功能差 2. Poor function of bone marrow 3、过氧化反应（纤维团块） 3. Peroxidatic reaction (fiber agglomerates) 4、消化不良、吸收不良 4. Maldigestion and poor absorption 5、大肠吸收功能差，肠道菌群失调 5. Poor function and alteration of intestinal flora of large intestine
L11	白细胞（中性多型核）颗粒少，胞质环流少 Small number of leukocyte (polymorphonuclear neutrophil) granule and cyclosis	1、由食物或药物引起的 IgG 过敏 1. IgG irritability caused by food or medicine 2、化疗反应 2. Chemotherapeutic reaction 3、药品物摄入解毒 3. Drug intake mistakenly for detoxification 4、肺功能欠佳或病变 4. Poor or pathologic change of pulmonary function 5、放射性损伤 5. Radioactive damage 6、全身病毒感染 6. Virus infection all over the body
L12	白细胞（中性多型核）嗜酸性细胞，分裂过多 Excessive fragment of leukocyte (polymorphonuclear neutrophil) acidophic cell	1、药物引起的 IgG 过敏 1. IgG irritability caused by medicine 2、过度流泪，眼睛周边变色 2. Polydacrya and colors change under the eyes 3、炎症过程 3. Inflammatory processes 4、上呼吸道充血 4. Upper respiratory tract hyperemia
L13	白细胞呈不规则，脆性，不完整 Irregular, fragile and incomplete of the white blood cell	1、维生素 B6、B12、叶酸不足 1. Lack of vitamin B6, B12 and folic acid 2、消化吸收不良 2. Poor digestion and absorption 3、营养不良 3. Malnutrition
L14	嗜碱性白细胞过多 Excessive basophil leukocyte	1、牛磺酸缺乏 1. Lack of aminoethylsulfonic acid

		2、骨髓功能差 2. Poor function of bone marrow 3、过氧化反应（纤维团块） 3. Peroxidatic reaction (fiber agglomerates) 4、消化不良、吸收不良 4. Maldigestion and poor absorption 5、大肠吸收功能差，肠道菌群失调 5. Poor function and alteration of intestinal flora of large intestine
L15	嗜酸性白细胞过多 Excessive acidophil leukocyte	1、由食物或药物引起的IgG 过敏 1. IgG irritability caused by food or medicine 2、化疗反应 2. Chemotherapeutic reaction 3、药品物摄入解毒 3. Drug intake mistakenly for detoxification 4、肺功能欠佳或病变 4. Poor or pathologic change of pulmonary function 5、放射性损伤 5. Radioactive damage 6、全身病毒感染 6. Virus infection all over the body

序号 SN	镜下所见活体形态 Living organism morpheus under the microscope	危险因素 Risk Factors
L16	淋巴细胞过多 Excessive lymphocyte	1、真菌感染 1. Fungus infection 2、排除晚期转移性癌症 2. Terminal metastatic carcinoma is eliminated 3、化学中毒 3. Chemical poisoning 4、淋巴细胞炎, T 或 B 细胞功能欠佳 4. Inflammatory lymphocyte, poor function of T or B cell 5、全身病素感染 5. Virus infection all over the body 6、白血病 6. Eucocythemia
L17	淋巴细胞减少 Lymphocytopenia	1、化疗反应 1. Chemotherapeutic reaction 2、免疫功能差, 排除 H.I.V 2. Poor function of immunity and H.I.V eliminated 3、免疫系统活性抑制 3. Immune system activity inhibition 4、T 或 B 细胞功能欠佳 4. Poor function of T or B cell 5、全身病毒感染 5. Virus infection all over the body
L18	淋巴细胞核损伤 Damage of lymphocyte cell nucleus	1、真菌感染 1. Fungus infection 2、全身病毒感染 2. Virus infection all over the body 3、自动免疫 3. Active immunity 4、全身中毒 4. Systemic poisoning 5、营养不良 5. Malnutrition 6、重金属中毒 6. Heavy metal poisoning
L19	淋巴细胞, 大而激活的 T 细胞 Lymphocyte, big and activated T cells	1、化学中毒 (可为环境性) 1. Chemical poisoning (may be of environment property) 2、细菌或全身病毒感染 2. Fungus or virus infection all over the body
L20	异源性斑块 Heterologous plaque	1、酶-胰酶缺乏 1. Lack of enzyme-pancreatic enzyme 2、外周性血管疾病的危险性 2. Risk of peripheral vascular disease 3、大肠吸收功能差, 肠道菌群失调 3. Poor function and alteration of intestinal flora of large intestine 4、消化吸收不良 4. Poor digestion and absorption 5、全身性酶活动抑制 5. Suppression of enzyme activity all over the body
L21	晶体为细长形 The crystal is of slimline type	1、外周血管性痢疾的高危险性, 易患心脑血管疾病 1. High risk of peripheral vascular diarrhea, which is easy to develop the cardiovascular and cerebrovascular disease 2、电解质不平衡, PH 改变、脱水、钙/磷比例失调, 缺钙 2. Electrolyte imbalance, PH changed, dehydration, calcium/phosphorus disproportionality and calcium deficiency 3、低密度脂蛋白氧化胆固醇

		<p>3. Low-density lipoprotein cholesterol</p> <p>4、运动过度</p> <p>4. Hypercinesia</p> <p>5、过氧反应</p> <p>5. Peroxidatic reaction</p>
L22	<p>晶体为方的，不规则，透明</p> <p>The crystal is square, irregular and transparent</p>	<p>1、骨胶质性疾病</p> <p>1. Bone gelatin diseases</p> <p>2、电解质不平衡，PH 改变、脱水、钙/磷比例失调，缺钙</p> <p>2. Electrolyte imbalance, PH changed, dehydration, calcium/phosphorus disproportionality and calcium deficiency</p> <p>3、查血清尿酸排除风湿关节炎</p> <p>3. Examine the blood serum and the uric acid to eliminate the rheumathrosis</p> <p>4、肌肉疲劳</p> <p>4. Muscular fatigue</p>
L23	<p>晶体为明亮，带有彩色</p> <p>The crystal is bright with colors</p>	<p>1、抗菌素引起真菌感染</p> <p>1. The fungus infection is caused by antibiotic</p> <p>2、胆酸不足或分泌受阻</p> <p>2.The choleic acid is deficient or the secretion is blocked</p> <p>3、大肠功能差、肠道菌群失调</p> <p>3. Poor function and alteration of intestinal flora of large intestine</p> <p>4、电解质失衡，PH 值改变、脱水、钙磷比例失调</p> <p>4. Electrolyte imbalance, PH changed, dehydration, calcium/phosphorus disproportionality</p> <p>5、消化、吸收不良</p> <p>5. Poor digestion and absorption</p> <p>6、肝脏应激，排除肝炎，感染，中毒</p> <p>6. Liver stress, and the infection and poisoning of hepatitis are eliminated</p> <p>※血液内有毒素</p> <p>※ The blood contains toxin</p>

序号 SN	镜下所见活体形态 Living organism morpheus under the microscope	危险因子 Risk Factors
L24	真菌<霉菌>, 酵母, 念珠菌, 黑霉菌, 芽胞, 菌丝 Fungus (mould fungus), yeast, candida, melanomyces, germ and bacterial filament	1、抗菌素相起的真菌感染, 全身真菌感染 1. The fungus infection all over the body is caused by antibiotic 2、大肠吸收功能差, 肠道菌群失调 2. Poor function and alteration of intestinal flora of large intestine 3、消化吸收不良 3. Poor digestion and absorption 4、免疫系统活性抑制 4. Immune system activity inhibition 5、葡萄糖耐最差 5. The glucose tolerance is worst.
L25	细菌为 L 形, 活动棒状 The bacterium is L-shaped and of rodlike	1、细菌, 病毒感染 1. Bacterial and virus infection 2、牛磺酸缺乏 2. Lack of aminoethylsulfonic acid 3、大肠吸收差, 肠道菌群失调 3. Poor function and alteration of intestinal flora of large intestine 4、消化吸收不良 4. Poor digestion and absorption 5、全身中毒 5. Systemic poisoning
L26	针刺状, 到处可见 Needling-shaped, which can be seen elsewhere.	1、大肠吸收差, 肠道菌群失调 1. Poor function and alteration of intestinal flora of large intestine 2、消化吸收不良 2. Poor digestion and absorption 3、肝脏应激, 排除肝炎, 感染, 中毒 3. Liver stress, and the infection and poisoning of hepatitis are eliminated 4、病原体感染 4. Causative agent infection
L27	针刺状, 局部可见 Needling-shaped, part of which can be seen.	1、慢性疲劳, 排除感染 1. Chronic fatigue and the infection is eliminated 2、肌炎, 疲劳 2. Myositis and fatigue
L28	乳糜微粒 Chylomicron	1、脂肪代谢差, 脂肪过氧化 1. Poor fat metabolism and lipid peroxidation 2、高血脂血症, 是动脉硬化或梗死的高危因子 2. Hyperlipemia is the high risk factor of arteriosclerosis or infarction.
L29	脂肪斑状或带状 Maculosus or banding of fat	1、酶—胰酶缺乏 1. Lack of enzyme-pancreatic enzyme 2、外周血管性疾病的高危险性 2. High risk of peripheral vascular disease 3、胆酸不是成分分泌受阻 3. The choleic acid is deficient or the secretion is blocked 4、消化吸收不良 4. Poor digestion and absorption 5、脂肪代谢功能差, 脂肪过氧化 5. Poor fat metabolism and lipid peroxidation 6、脂肪摄入过度 6. Excessive intake of fat 7、过氧化反应 7. Peroxidatic reaction
L30	支原体在血液中, 在红细胞上 The mycoplasma is in the blood and on the red blood cell	1、骨胶原性疾病 1. Glue immunogenicity disease 2、脑功能, 神经传导功能差

		2. Poor brain function and nerve conduction 3、慢性疲劳，排除感染 3. Chronic fatigue and the infection is eliminated 4、记忆力差 4. Poor memory 5、免疫系统活性抑制 5. Immune system activity inhibition 6、肺功能欠佳或病变 6. Poor or pathologic change of pulmonary function 7、全身中毒 7. Systemic poisoning
L31	红细胞泪滴状 The teardrop red blood cell	1、慢性疲劳，排除感染 1. Chronic fatigue and the infection is eliminated 2、葡萄糖耐量差 2. The glucose tolerance is worst.
L32	细胞表面有结构的微生物，寄生虫 The cell surface has structured microorganism and parasite	细菌，寄生虫感染 Parasitic infection

2、凝固血相形态学分析与诊断 (HRBM)

2. Analysis and diagnosis of hemogram morphology (HLBM)

序号 SN	镜下干血表现 Dried Blood under the Microscope	危险因素 Risk Factors
H1	外周环粘附性不佳 (形成双环) Poor peripheral adhesion (dual ring)	1、维生素 C 缺乏 1. Vitamin C deficiency 2、电解质不平衡, PH 改变、脱水、钙磷比例失调, 缺钙 2. Electrolyte imbalance, PH changed, dehydration, calcium/phosphorus disproportionality and calcium deficiency
H2	沿外周有黑色纤维环 It has the fibrous ring along periphery	1、重金属中毒 1. Heavy metal poisoning 2、EDTA 整个疗效的效果 2. The effect of EDTA entire curative effect
H3	血滴中央有黑色物 1-3 滴, 4-7 滴 There is black substance in the center of blood drops, 1-3 drops, 4-7 drops	1、胆酸分泌不足或分泌受阻 1.The choleric acid is deficient or the secretion is blocked 2、大肠功能差, 吸收差、肠道菌群失调 2. Poor function, absorption and alteration of intestinal flora of large intestine 3、肛门炎, 痔疮, 隐窝炎 3. Anusitis, pile and cryptitis 4、消化不良 4. Poor digestion and absorption 5、肛门直肠炎症或细胞破坏 5. Anorectitis or cytolysis 6、急性或慢性胃炎, 排除了溃疡 6. Acute or chronic gastritis; the ulcer is eliminated
H4	纤维网联接较差 Poor fiber web connection	1、内分泌失调 1. Endocrine dyscrasia 2、甲状腺, 甲状旁腺炎 2. Glandula thyroidea and Gley's glands 3、化疗反应 3. Chemotherapeutic reaction 4、排除晚期转移性癌症 4. Terminal metastatic carcinoma is eliminated 5、胸腺功能萎缩 5. Thymus gland functional shrinkage 6、肾上腺应激 6. Adrenal gland stress
H5	纤维网不集中 Fiber web aprosexia	1、营养不良 1. Malnutrition 2、甲状腺, 甲状旁腺炎 2. Glandula thyroidea and Gley's glands 3、消化不良 3. Poor digestion and absorption
H6	纤维网有黑色突起 Black substance blow-up in the fiber web	寄生虫感染 Parasitic infection
H7	纤维网延长, 变化 Prolonged and changed of fiber web	甲状腺, 甲状旁腺炎 Glandula thyroidea and Gley's glands
H8	纤维网扩大, 变化 Expansion and change of fiber web	1、牛磺酸缺乏 1. Lack of aminoethylsulfonic acid 2、心肌功能欠佳 2. Poor function of heart muscle 3、心血管供血不足或炎症引的功能改变, 酶缺乏 3. The function is changed caused by inadequate blood supply of cardiovascular or by phlegmonosis, azymia 4、体力应激, 功能性肾上腺应激, 4. Physical strength stress, the functional adrenal gland stress,
H9	纤维团块, 中间有纤维条 The fiber agglomerates with the fiber rod in the	肌炎, 疲劳 Myositis and fatigue

	middle	
H10	红细胞颜色变化，内有纤维网围绕 The red blood cell color is changed, and the inside of which is surrounded by the fiber web.	1、血红蛋白减少性贫血 1. Haemoglobin anaemia 2、贫血，低铁，吸收不良 2. Anemia, low iron and poor absorption 3、消化吸收不良 3. Poor digestion and absorption 4、微量元素缺乏——镁，硒，锌等 4. Microelement deficiencies—magnesium, selenium, zinc, etc
H11	纤维网条索延长 Prolonged of fiber web	肌肉疼痛或关节痛 Muscle pain or arthralgia
H12	纤维团块，片状颜色改变 Fiber agglomerates, the schistic color of which is changed	1、早期，局部癌症 1. Early stage and local cancers 2、排除肿瘤，可能早期转移性的 2. The neoplasm is eliminated, which may be early metastatic 3、排除晚期转移性癌症 3. Terminal metastatic carcinoma is eliminated 4、化疗反应 4. Chemotherapeutic reaction 5、慢性退变 5. Chronic ataplasia 6、器官反应，严重氧自由基堆积，过氧化反应 6. Organ reaction, severe accumulation of free radical and peroxidatic reaction

序号 SN	镜下干血表现 Dried Blood under the Microscope	危险因素 Risk Factors
H13	纤维团块，变宽，不规则形态 Fiber agglomerates is broadened with irregular form	1、外周血管性疾病的高危险性 1. High risk of peripheral vascular disease 2、外周血液循环不足 2. Lack of peripheral blood circulation 3、脂肪代谢功能差，脂肪过氧化 3. Poor fat metabolism and lipid peroxidation 4、营养不良 4. Malnutrition 5、异源性斑块 5. Heterologous plaque
H14	纤维团体块，形态狭长 Fiber agglomerates with long and narrow form	1、慢性疲劳，排除感染 1. Chronic fatigue and the infection is eliminated 2、全身病毒感染 2. Virus infection all over the body
H15	纤维团块，黑色圈 Fiber agglomerates with black rings	1、胆酸不足或分泌受阻 1. The choleic acid is deficient or the secretion is blocked 2、肝脏应激，排除肝炎，感染，中毒 2. Liver stress, and the infection and poisoning of hepatitis are eliminated 3、消化吸收不良 3. Poor digestion and absorption
H16	纤维团块连接 Fiber agglomerates connection rthritis	关节炎，神经痛，炎症过程 Arthritis, neuralgia and phlegmonosis process
H17	纤维团块宽、大并连接 Fiber agglomerates is broad, large and connected	1、骨胶原性疾病 1. Glue immunogenicity disease 2、早期、局部癌症 2. Early stage and local cancers 3、排除肿瘤，可能早期转移性的 3. The neoplasm is eliminated, which may be early metastatic 4、排除晚期转移性癌症 4. The terminal metastatic carcinoma is eliminated
H18	纤维团块、纤维网破碎	葡萄糖耐量差

	Fiber agglomerates the fiber web is broken	The glucose tolerance is worst.
H19	纤维团块，呈 C—形态延伸，成群 The fiber agglomerates with extending and grouping in a C-shaped	肌炎，疲劳 Myositis and fatigue
H20	纤维团块，圆形中间清晰 Fiber agglomerates, the middle of circular is clear	1、排除肿瘤早期转移性 1. The neoplasm is eliminated, which may be early metastatic 2、炎症过程 2. Inflammatory processes
H21	纤维团块，从中内至外周放射状破裂 Fiber agglomerates, broken from internal to external in radial pattern	电解质不平衡，PH 改变、脱水、钙/磷比例失调，缺钙 Electrolyte imbalance, PH changed, dehydration, calcium/phosphorus disproportionality and calcium deficiency
H22	纤维团块，有黑色桥梁（横穿团块） Fiber agglomerates, having a black bridge (cross the agglomerates),	全身病毒感染 Virus infection all over the body
H23	纤维团块，有血小板点刺 Fiber agglomerates with small pricks,	1、肝脏应激，排除肝炎，感染，中毒 1. Liver stress, and the infection and poisoning of hepatitis are eliminated 2、大肠功能并，吸收差、肠道菌群失调 2. Poor function, absorption and alteration of intestinal flora of large intestine 3、消化不良 3. Poor digestion and absorption 4、排除肿瘤，可能早期转移的 4. The neoplasm is eliminated, which may be early metastatic
H24	纤维团块，有坏死组织 Fiber agglomerates with necrotic tissue	1、器官反应，严重氧自由基堆积，过氧化反应 1. Organ reaction, severe accumulation of free radical and peroxidatic reaction 2、排除晚期转移性癌症 2. Terminal metastatic carcinoma is eliminated 3、骨胶原性疾病 3. Glue immunogenicity disease 4、外周血管性疾病的高危险性 4. High risk of peripheral vascular disease 5、胰酶缺乏 5. Lack of pancreatic enzyme 6、机体部分急性退化 6. Part of organism degenerates acutely
H25	纤维团块，有 4—10 微米亮区围绕 Fiber agglomerates with a 4-10um bright zone surrounded,	1、排除晚期转移性癌症 1. Terminal metastatic carcinoma is eliminated 2、器官反应，严重氧化自由基堆积，过氧化反应 2. Organ reaction, severe accumulation of free radical and peroxidatic reaction 3、炎症过程 3. Inflammatory processes
H26	纤维团块，有 0.5 微米黑点 Fiber agglomerates with a 0.5 um black spot,	1、排除晚期转移性癌症 1. Terminal metastatic carcinoma is eliminated 2、排除肿瘤，可能早期转移性的 2. The neoplasm is eliminated, which may be early metastatic 3、慢性器质性退行病变 3. Chronic organic regression lesion
H27	纤维团块，有结晶块 Fiber agglomerates with a crystal block, indicating	1、骨胶原性疾病 1. Glue immunogenicity disease 2、电解质不平衡，PH 改变、脱水、钙/磷比例失调，缺钙 2. Electrolyte imbalance, PH changed, dehydration, calcium/phosphorus disproportionality and calcium deficiency

序号 SN	镜下干血表现 Dried Blood under the Microscope	危险因素 Risk Factors
H28	纤维团块，从外周向内有刺状突起 The fiber agglomerates with the barbed protrusions from the peripheral to the inside, indicating	1、肝脏应激，排除肝炎，感染，中毒 1. Liver stress, and the infection and poisoning of hepatitis are eliminated 2、排除肿瘤，可能早期转移性的 2. The neoplasm is eliminated, which may be early metastatic 3、消化不良 3. Poor digestion and absorption
H29	纤维团块，中央有红细胞变性 The fiber agglomerates with the cell degeneration in the center,	治疗中的症状 Symptoms under medical treatment
H30	纤维团块，从外周开始红细胞变性逐步增加 Fiber agglomerates, erythrodegeneration increases gradually from the periphery	1、关节炎，神经痛，炎症过程 1. Arthritis, neuralgia and phlegmonosis process 2、炎症过程 2. Inflammatory processes
H31	纤维团块，在纤维网内有细长的连接 Fiber agglomerates, it has threadlike connection in the fiber web	淋巴细胞损害，T、B 细胞功能欠佳 Lymphocyte damage, poor function of T or B cell
H32	纤维团块，外周有绿色 The fiber agglomerates with green periphery, indicating	1、排除肿瘤，可能早期转移性的 1. The neoplasm is eliminated, which may be early metastatic 2、排除晚期转移性癌症 2. Terminal metastatic carcinoma is eliminated 3、早期，局部癌症 3. Early stage and local cancers
H33	纤维团块，外周有深橘红色 The fiber agglomerates with dark jacinth periphery, indicating	1、肠出血可能性 1. Possibility of intestinal hemorrhage 2、炎症过程 2. Inflammatory processes
H34	纤维网，外周圈有红细胞突起 Fiber agglomerates, the periphery has red blood cells standing out	1、盆腔肌肉痛，肌肉紧张 1. Pelvic cavity myalgia, muscular tension 2、记忆力差 2. Poor memory 3、脑功能，神经传导功能差 3. Poor brain function and nerve conduction 4、头痛，颈部肌肉痛 4. Headache and musculi colli pain 5、排除肿瘤，可能早期转移性的 5. The neoplasm is eliminated, which may be early metastatic 6、神经传导功能差，忧郁，嗜睡 6. Poor function of nerve conduction, gloom and drowsiness 7、排除式迷路病变 7. Labyrinthine lesion
H35	红细胞，棕褐色或深褐色 Red blood cell, dark brown or sable	1、细菌、真菌、病毒感染 1. Bacterial, fungus and virus infection 2、葡萄糖耐量差 2. The glucose tolerance is worst. 3、全身真菌感染 3. Fungus infection all over the body
H36	血滴周围有白色环 There is a white ring around the blood drop	化学中毒，可能为环境性 Chemical poisoning, may be of environment property

备注:

Remarks:

1、用采血笔刺破就诊者消毒后的小拇指头尖部，血液流出成小球状时，用载玻片连续蘸取 6 个血斑，晾干，为凝固血片。

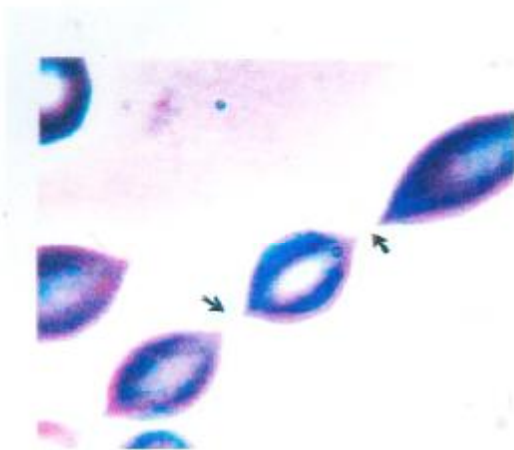
1. Use lancing device to pierce the tip of the disinfected little finger of the patient; when the blood flows out like a small ball, use the glass slide to pick up six blood spots continuously and dry them in the air as the coagulation blood flake.

2、用棉球搽拭干净，轻揉小拇指头，血液流出成小球状时，用载玻片蘸取一个血斑，盖上盖玻片，为活血片。

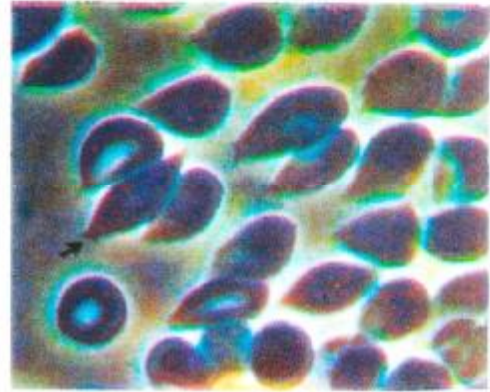
2. Use the cotton ball to clean it up, rub the little finger softly; when the blood flows out like a small ball, use the glass slide to pick up a blood spot and put on the cover slip air as an activating blood film.

3、在仪器上观察、分析诊断，建议用户接受专家培训合格后方可使用本仪器！

3. Observe and analyze in the instrument, suggest the customer using this instrument after he has received training from experts.

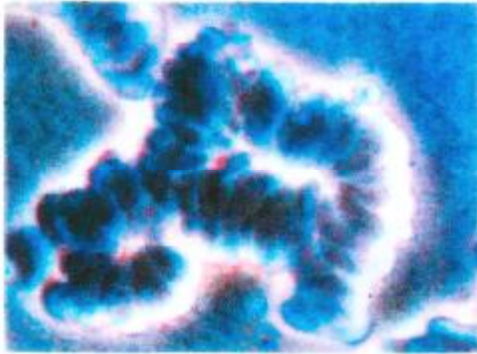


L1



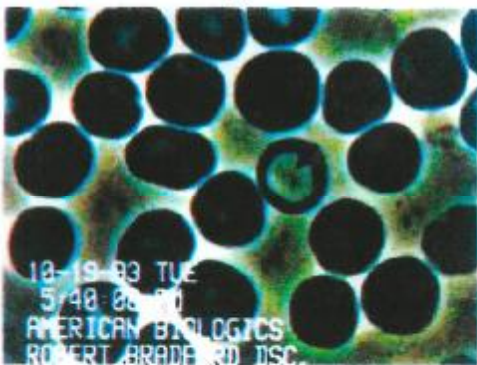
红细胞膜之间蛋白质连接，柠檬状

L2



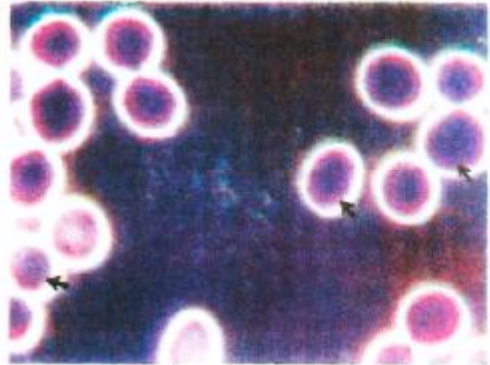
红细胞聚集成钱串状或成堆

L4



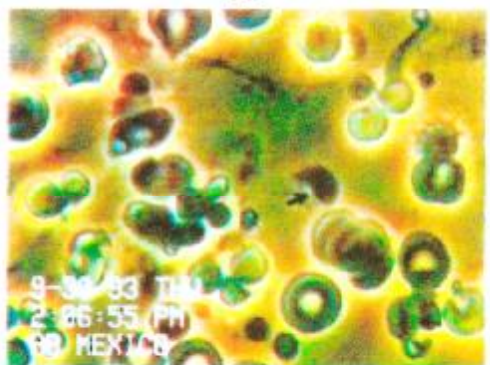
靶形细胞（着色后）

L3



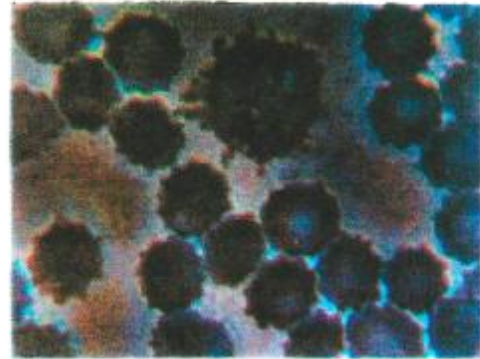
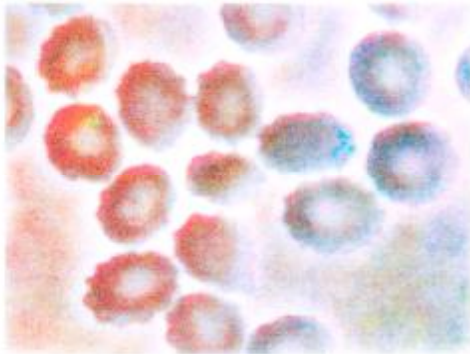
巨红细胞、小红细胞

L5



瓶顶形，C形红细胞

L6



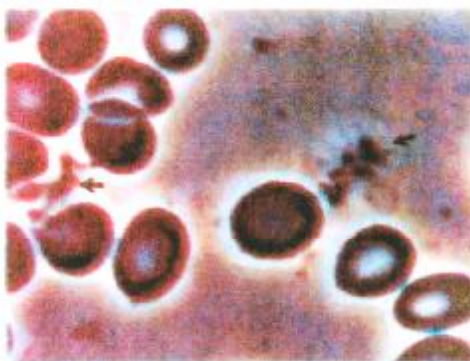
红细胞皱缩 (30 分钟内在 15% 以上)

L7



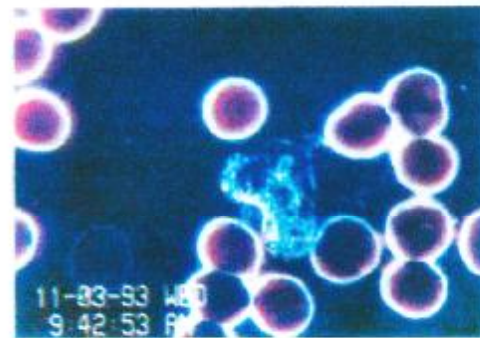
红血球呈脆性, 膜破裂成断片

L8



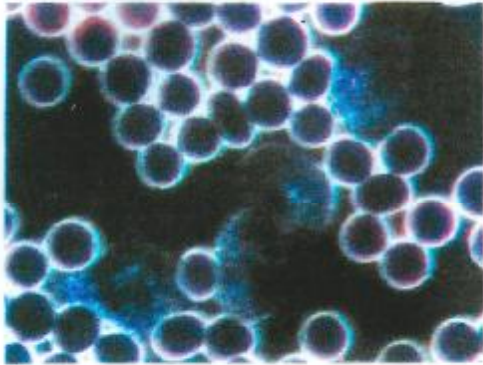
血小板聚集过多

L9



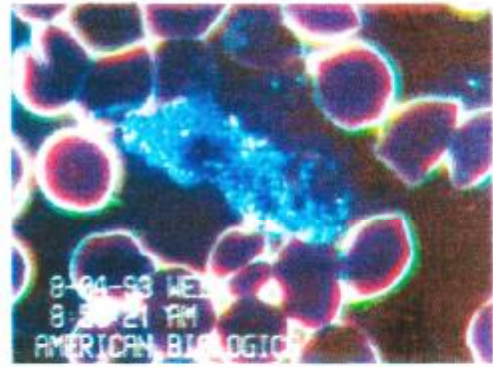
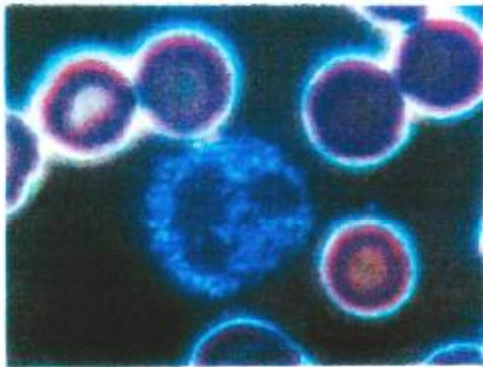
白细胞减少

L 10



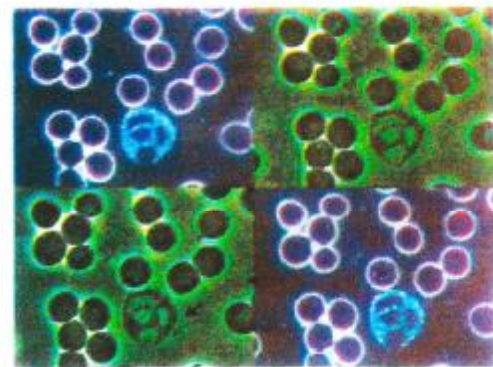
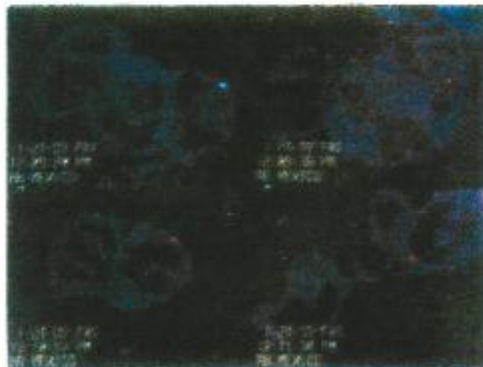
白细胞增多（较正常为多）

L 11



白细胞（中性多型核）颗粒少，胞质环流少

L 12



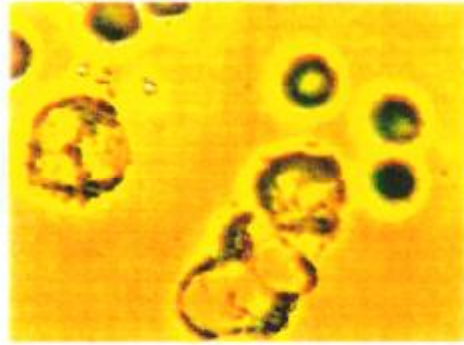
白细胞高度分裂

L 13



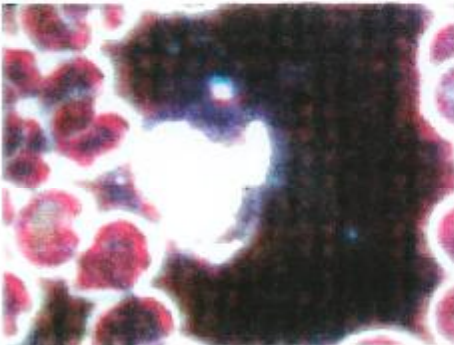
白细胞不规则
易碎不完整

L 14



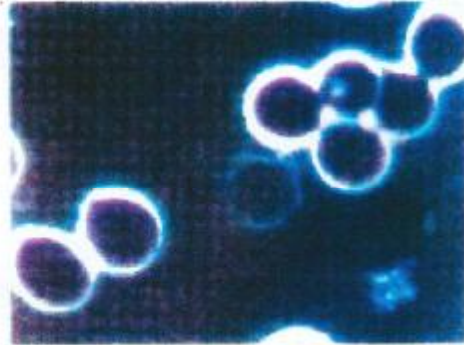
嗜酸性白细胞过多

L 15



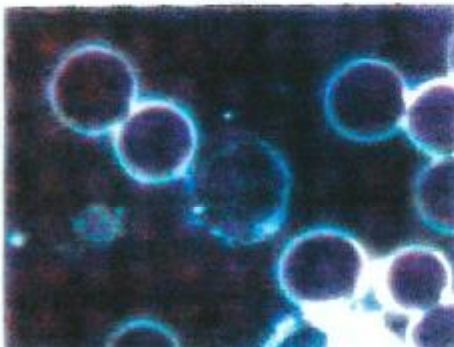
嗜酸性白细胞过多

L 16



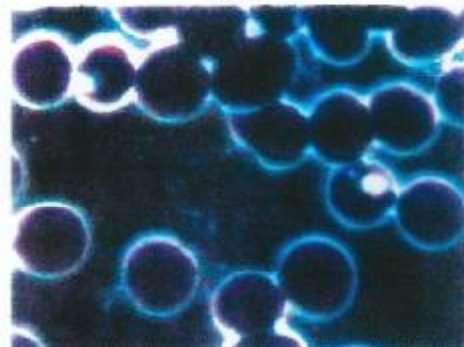
淋巴细胞过多

L 17

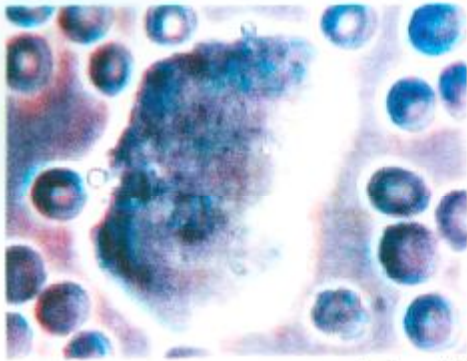


淋巴单核细胞太少

L 18



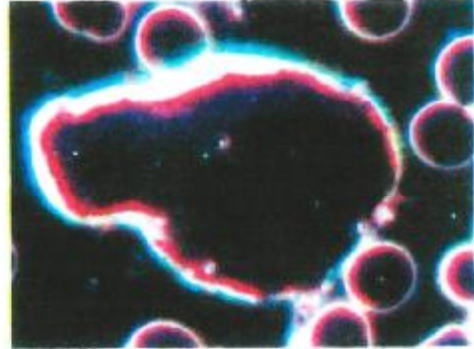
淋巴细胞核受损



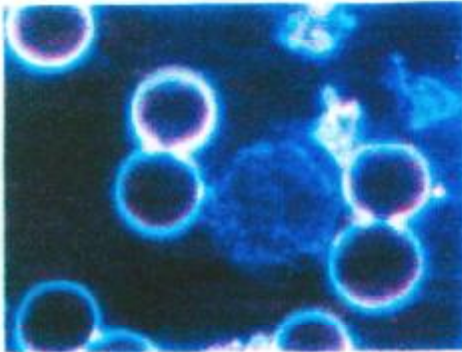
L 19

异源性斑块

L 20

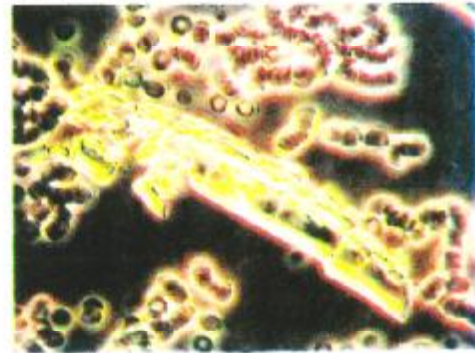


L 21

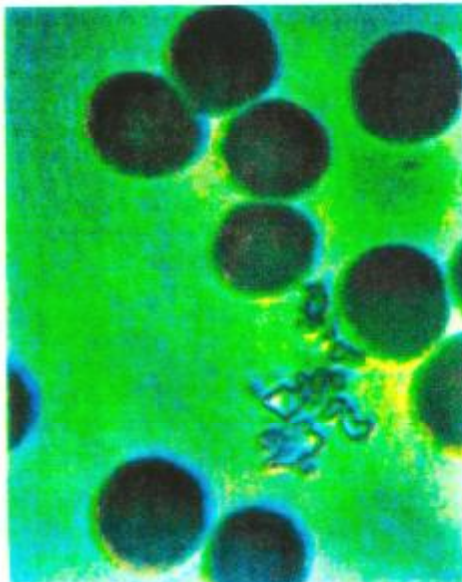


淋巴细胞，大而激活的 T 细胞

L 22

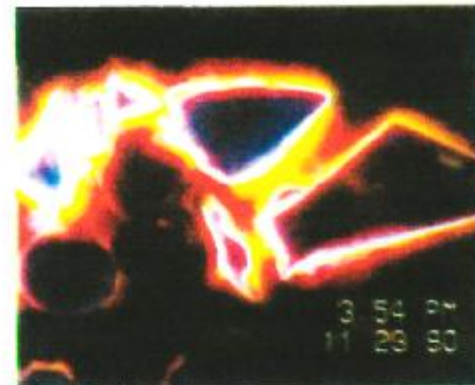


晶体为细长形



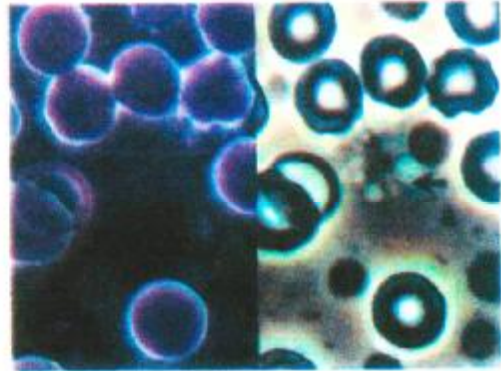
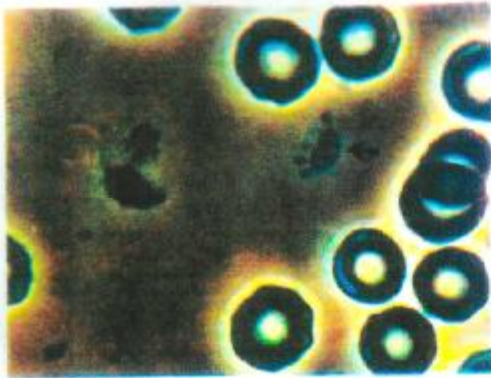
方型或不规则型结晶体

L 23



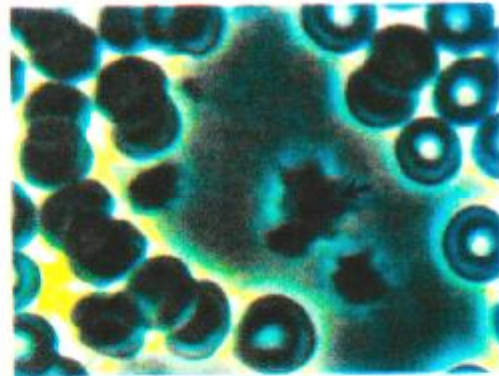
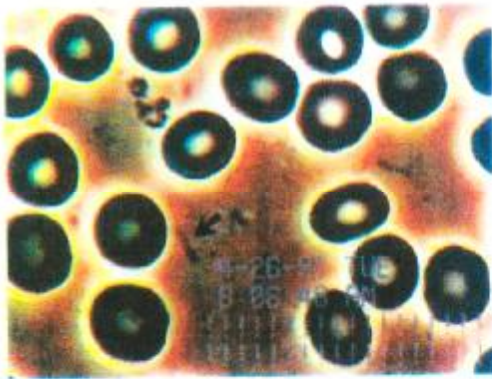
晶体为明亮，带有彩色

L 24



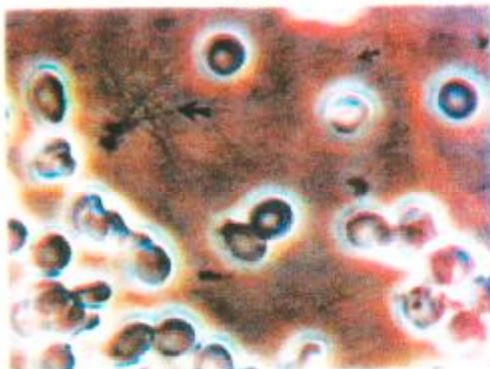
真菌（霉菌），酵母，念珠菌，黑霉菌，芽胞，菌丝

L 25



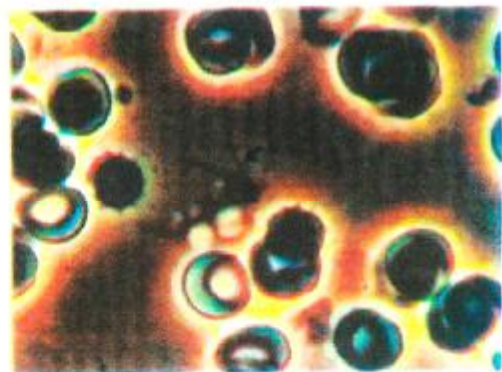
细菌为L形，活动棒状

L 26



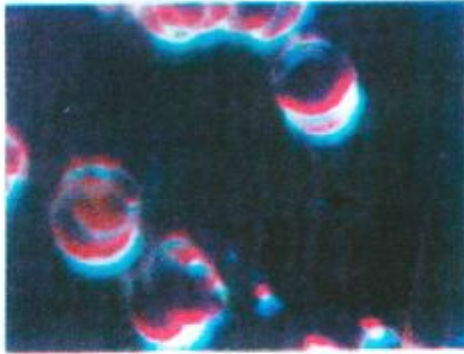
针刺状，到处可见

L 27



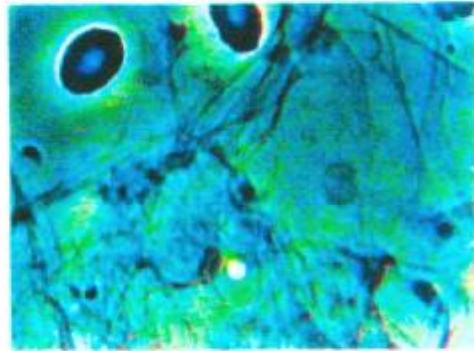
针刺状，局部可见

L 28



乳糜微粒

L 29



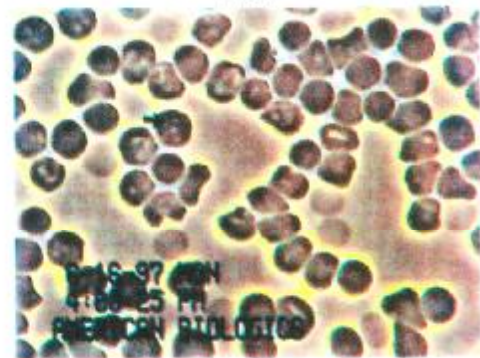
脂肪斑状或带状

L 30



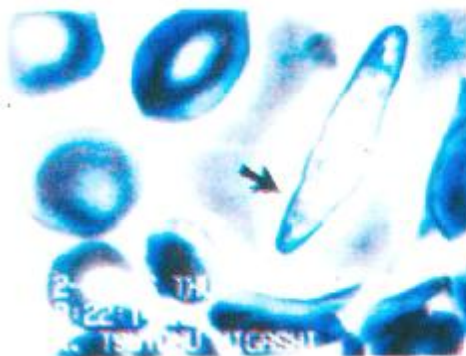
支原体在血渍中，在红细胞上

L 31



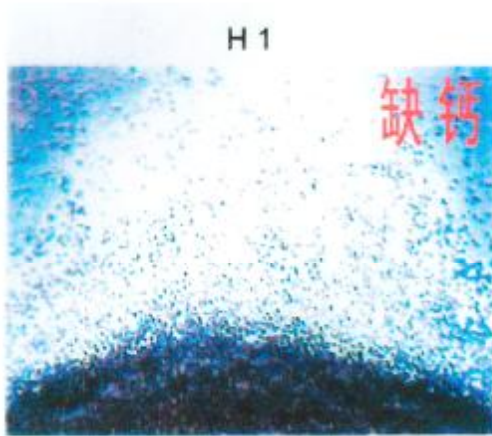
红细胞泪滴状

L 32

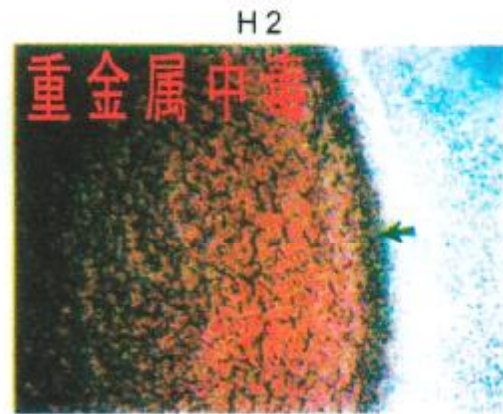


细长的结构，有机物和寄生虫

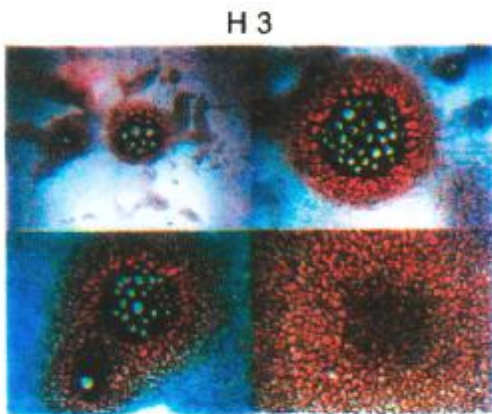




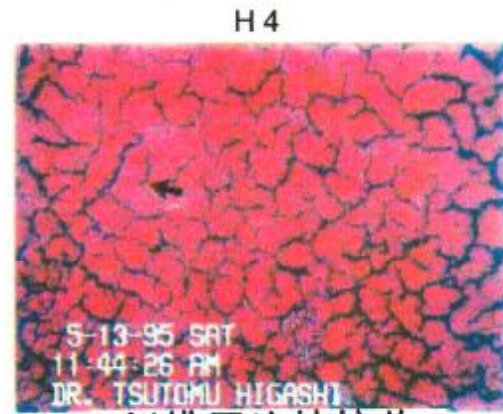
外周环粘附不佳（形成双环）



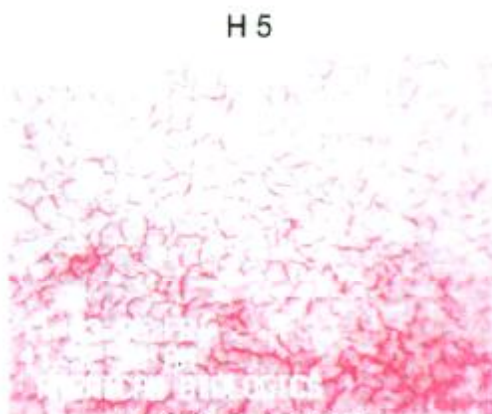
沿外周有黑色纤维环



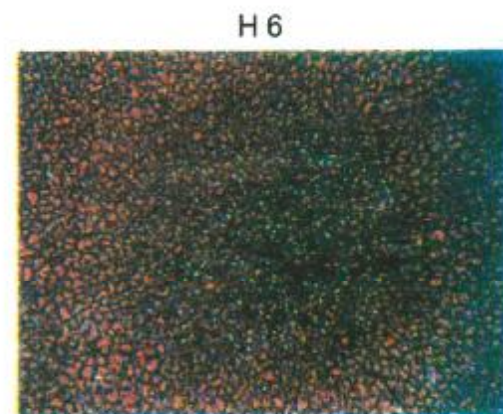
血滴中央有黑色物 1-7 滴
菌群失调、肛门炎、胃炎、大肠功能差



纤维网连接较差
内分泌失调、甲状腺功能差



纤维蛋白断裂
甲状腺炎、营养不良



纤维蛋白网发黑突起
寄生虫感染

H7



纤维网有黑色突起

甲状腺，甲状旁腺炎

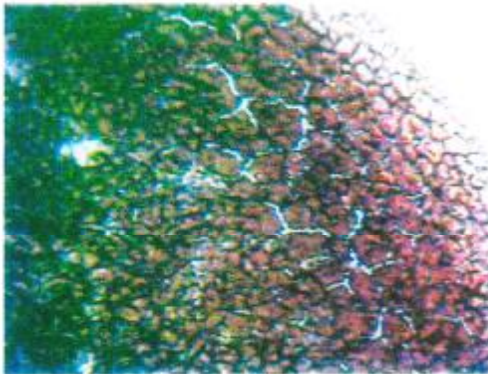
H8



纤维网扩大，变化

心肌功能差、心血管供血不足

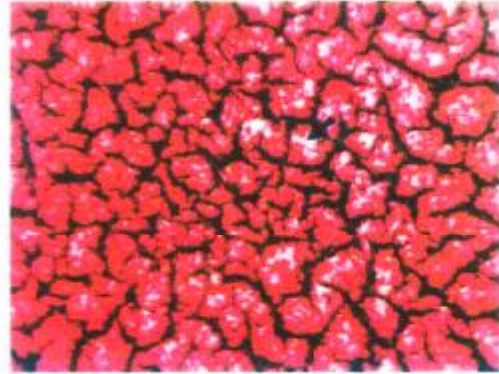
H9



纤维团块 中间有纤维条

肌炎，疲劳

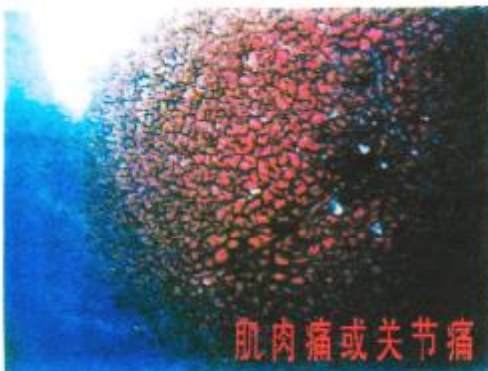
H 10



红细胞颜色变化内有纤维围绕

贫血、消化吸收不良、缺乏微量元素

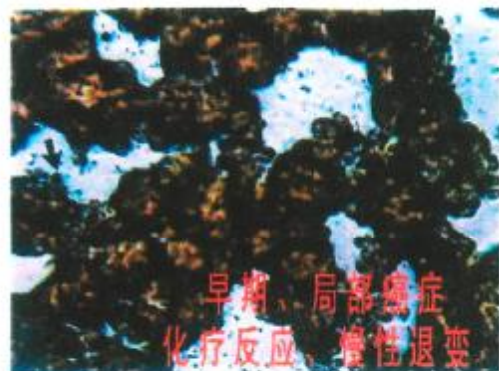
H11



肌肉痛或关节痛

纤维条索延长

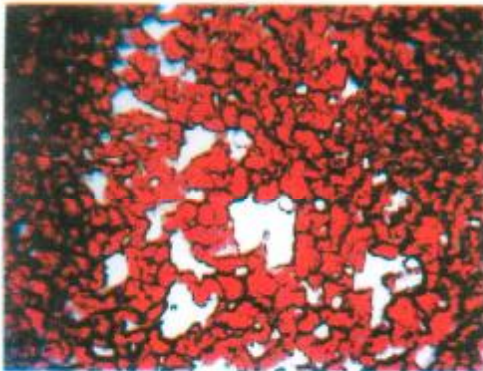
H 12



早期、局部癌症
化疗反应、慢性退变

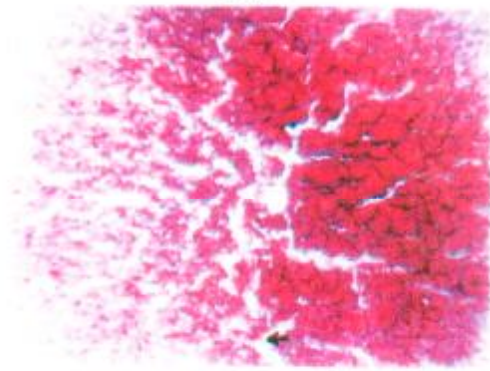
**纤维团块
片状颜色改变**

H 13



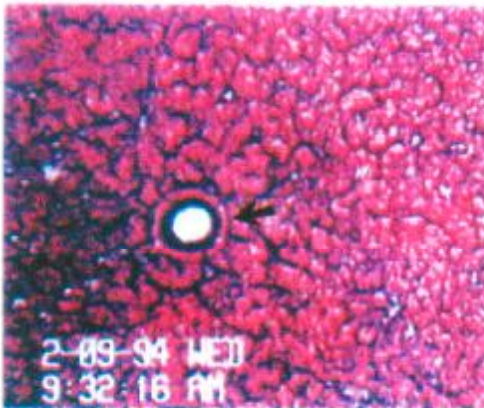
纤维团块、变宽、不规则
外周血循环不足、营养不良

H 14



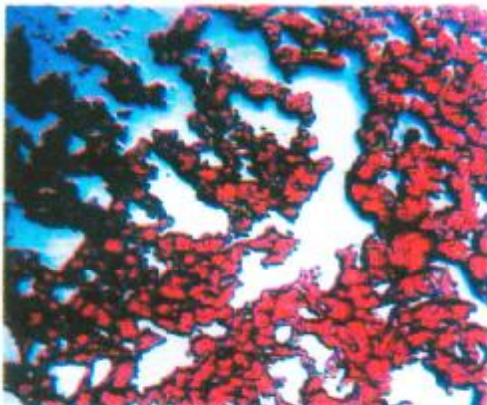
纤维团块、形态狭长
慢性疲劳、病毒感染

H 15



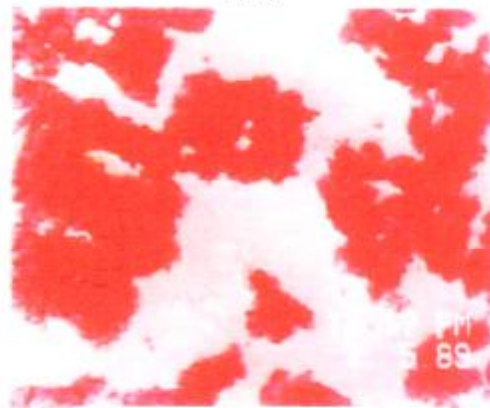
纤维团块、黑色圈
消化不良、胆汁酸分泌不足

H 17



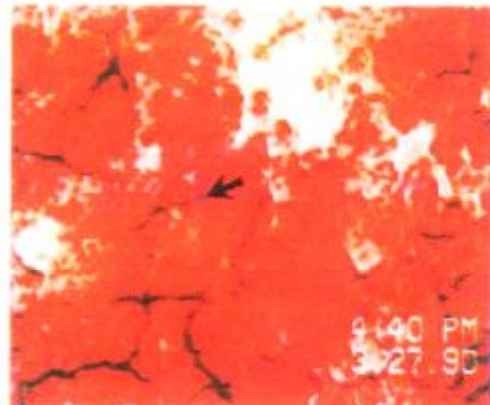
纤维团块宽、大并连接
骨胶原性疾病或早期，局部癌症

H 16



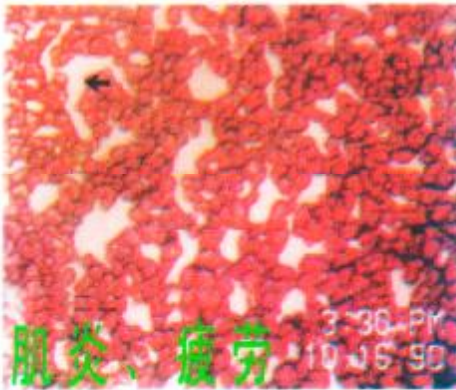
纤维团块连接
关节炎

H 18



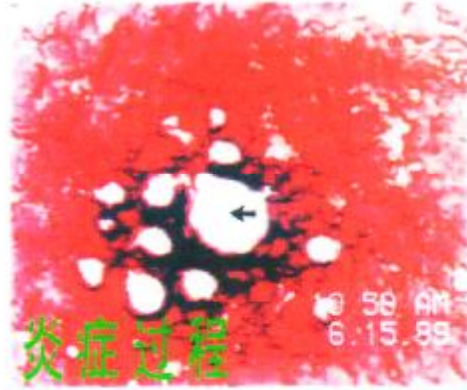
纤维团块、纤维网破碎
葡萄糖耐量差

H 19



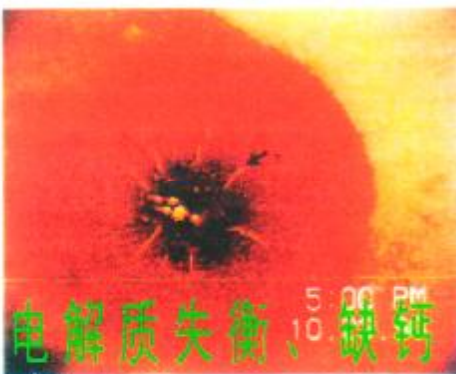
纤维团块
呈 C- 形态延伸、成群

H 20



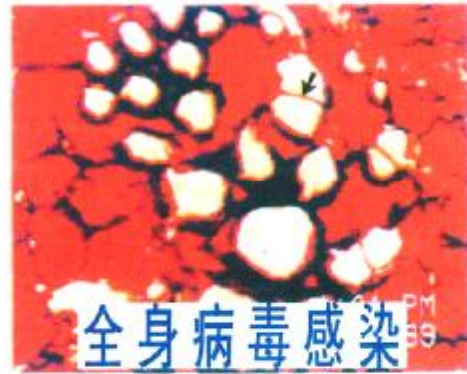
纤维团块、圆形中间清晰

H 21



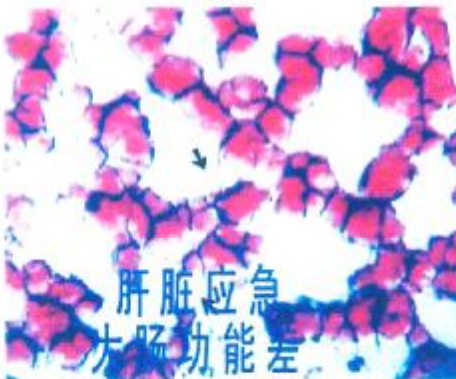
从中内至外周放射状破裂

H 22



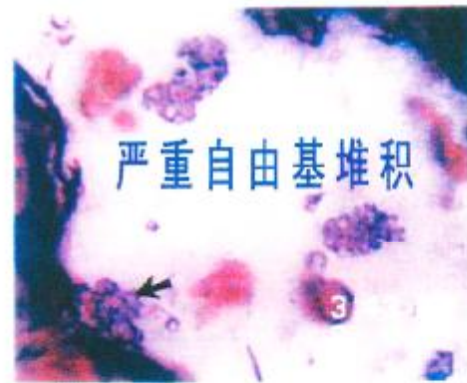
有黑色桥梁（横穿团块）

H 23



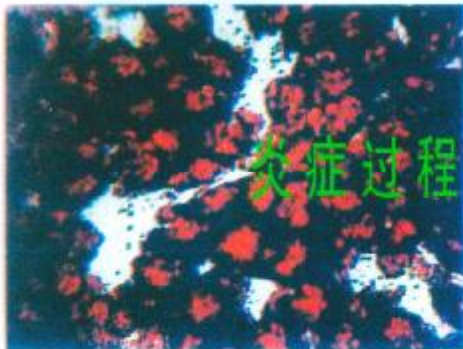
纤维团块、有小点刺

H 24



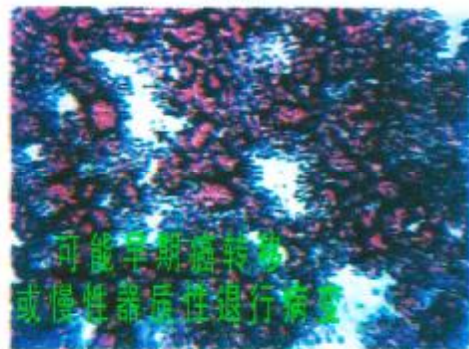
纤维团块、有坏死组织

H 25



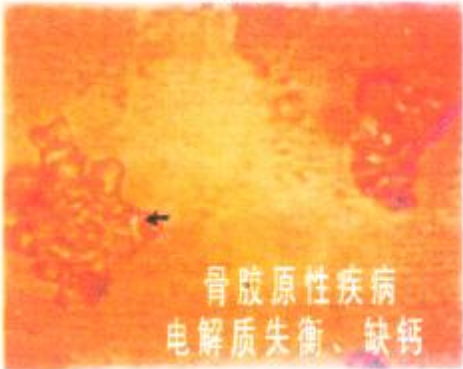
纤维团块
有 4-10 微米亮区围绕

H 26



纤维团块，有 0.5 微米黑点

H 27



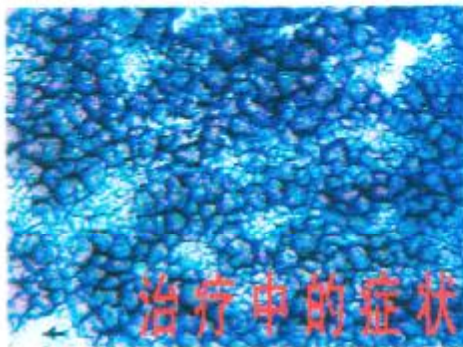
纤维团块，有结晶块

H 28



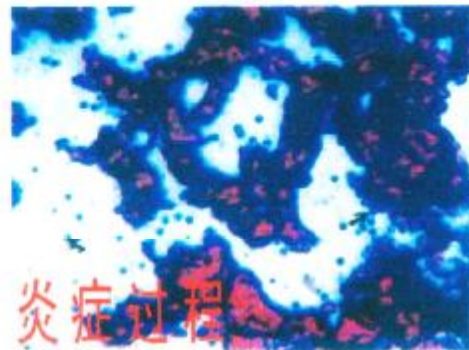
纤维团块
从外周向内有刺状突起

H 29



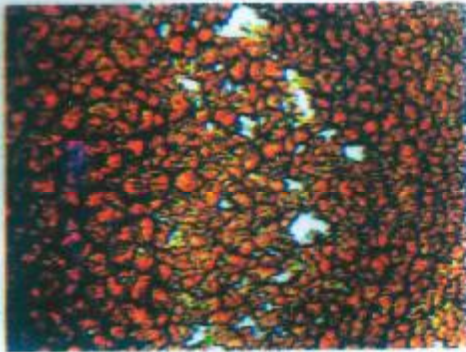
纤维团块，中央有细胞变性

H 30



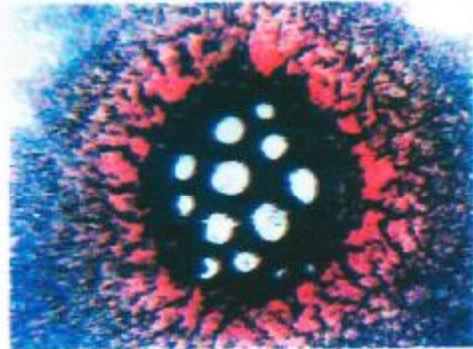
纤维团块，有细胞变性

H 31



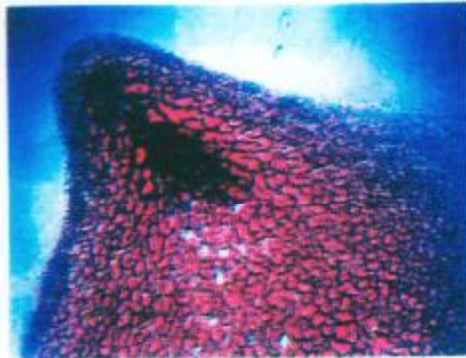
纤维团块，外周有绿色
早期或晚期肿瘤

H 32



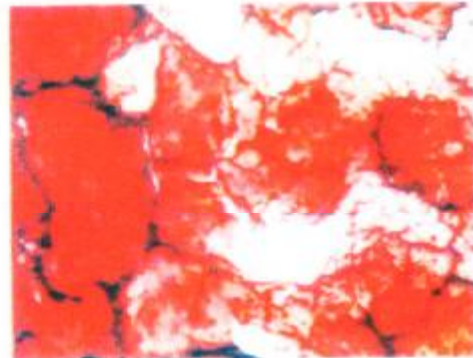
纤维团块，外周有深橘红色
肠出血

H 33



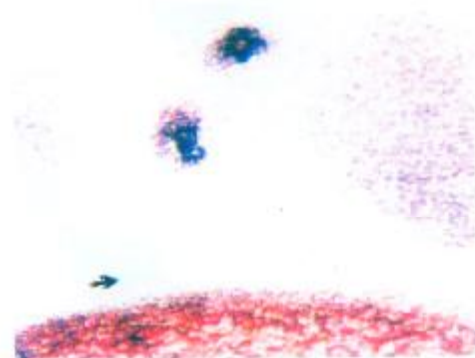
外周有红细胞突起
头颈部疾病

H 34



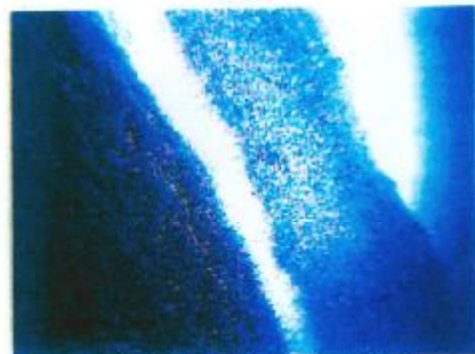
棕褐色或深褐色红细胞

H 35



黑色胆固醇结晶 --- 营养不良

H 36



血滴周围有白色环
(化学中毒)

七、彩色图谱注解

VII Color Atlas Notes

我们在实践中积累了大量有参考意义的典型图片，把大部分整理出来供客户学习。对各种血象图片特征做简要介绍。希望客户在充分理解掌握前述理论知识和指导性观察方法的基础上辨认这些图片。部分图片属于同一类型病症，可能有一定的重复性，因为个体之间的差异不同、采集和摄相时的操作有差异目的是加深印象。

We have accumulated a large number of typical pictures with reference significance in the practice and sort out the majority for customers to learn. We make brief introductions to the characteristics of various hemogram pictures and hope that the customer can identify these pictures on the basis of fully understanding and grasping the above theoretical knowledge and the guidance observation methods. Some pictures are of the same type of symptoms, which may have some repetition. The operations in the collection and perturbation are different due to the differences among individuals. The purpose is to deepen the impression.

L1-1: 血小板呈现针状体，且有形成网状的趋势。

L1-1: The platelet is spicular and has the trend of forming a reticular one.

L1-2: 血小板形态变异较多，多数呈现针状体，聚集，且已经形成网状结构。

L1-2: There are more platelet form variations, the majority of which are the spicular and have formed a reticular structure.

L1-3: 大量血小板聚集，形态多样，网状结构。

L1-3: A large number of the platelets aggregate with a variety of forms and in a reticular structure.

L1-4: 大量血小板聚集，但无针状体。

L1-4: A large number of the platelet aggregate without the spicular one.

L1-5 血小板变异，为典型的针状体。

L1-5: The platelet has the variation. The typical is the spicular.

L1-6: 血小板针刺状，到处可见。

L1-6: The platelet is spicular and can be seen everywhere.

L1-7: 血小板针刺状，局部可见。

L1-7: The platelet is spicular and can be seen in some parts.

L2-1: 红细胞上圆形拉长为柠檬状。

L2-1: The upper circle of the red blood cell is extended as lemon-shaped.

L2-2: 同上。

L2-1: Ditto.

L2-3: 同上。

L2-1: Ditto.

L2-4: 同上。

L2-1: Ditto.

L3: 单个红细胞相互连接形成钱串状。

L3: Single red blood cell is interconnected with each other, forming a rouleaux.

L3-1: 红细胞聚集成钱串状或成堆。

L3-1: red blood cell gathers into a rouleaux or heap.

L4-1: 经细胞中心有明显的淡染区，提示轻度贫血。

L4-1: There is an obvious pale dye area in the cell center, indicating the mild anemia.

L5: 红细胞中心有明显的淡染区，且有皱缩的红细胞出现。提示贫血，伴有营养不良。

L5: There is an obvious pale dye area in the red blood cell center and the shrinking red blood cells, indicating the anemia with the malnutrition.

L6: 所见为嗜酸性白细胞，含大量明显可见的颗粒，流动性好，也可见两个圆形的细胞核。

L6: What have been seen are the acidophic white blood cell, containing large amounts of visible granule with good liquidity. Two round nucleuses are also seen.

L7: 所见为粥样斑块，形态不规整，堆积状态，边缘弥散，粗糙，不透明，白色。

L7: What has been seen is an atherosclerotic plaque with an irregular shape and in a stacked state. The edge is diffused, rough, non-transparent and white.

L8-1: 所见为脂质斑块，类似粥样斑，但较薄，部分透明，常带杂色。

L8-1: What has been seen is a lipid plaque, similar to the atherosclerotic plaque. But it is thinner with parts transparent and often with mixed colors.

L8-2: 所见为脂质类结晶，类似脂质斑块。

L8-2: What has been seen is a lipid crystal, similar to the lipid plaque.

L8-3: 脂质斑块。

L8-3: Lipid plaque.

L8-4: 脂质条带。

L8-4: Lipid bands.

L8-5: 脂质斑块。

L8-5: Lipid plaque.

L8-6: 脂质条带。

L8-6: Lipid bands.

L9: 活血中发现弓形虫，为妇女儿童易感病原体，易导致妇女流产和胎幼儿畸形。

L9: There is the toxoplasma found in the live blood, which is the susceptible pathogen for women and children, easy to cause the abortion of women and the fetal malformation of children.

L10-1: 典型的红细胞靶形。提示地中海贫血。

L10-1: Typical red blood cell target shape, indicating the mediterranean anemia.

L10-2: 靶形红细胞，提示地中海贫血。

L10-2: Target-shaped red blood cells, indicating the mediterranean anemia.

L11-1: 血管内皮脱落，提示血管损伤、老化。

L11-1: The vascular endothelium loss, indicating the vascular injury and aging.

L11-2: 坏死的组织，主要为脱落的血管内皮。

L11-2: Necrotic tissue, mainly the lost vascular endothelium.

L12: 尿酸结晶, 提示可能中风。

L12: Uric acid crystal, indicating the possibility of stroke.

L13: 大量跳动的乳糜微粒, 形成云雾状。提示血脂水平显著偏高。

L13: A large amount of jumping chylomicrons forming a cloud shape, indicating the significant high blood lipid level.

L14: 在装滤光镜情况下, 可以大致看见白细胞的内部结构。即明显的胞质颗粒和分叶核。

L14: With the installation of the filter, it can be generally seen the internal structure of the white blood cell, that is, the apparent cytoplasmic granules and polymorpho nuclear.

L15: 中性白细胞, 可见明显的胞质颗粒和分叶核。

L15: Neutrophilic white blood cell. The apparent cytoplasmic granules and polymorpho nuclear can be seen.

L16: 白细胞大量存在, 占 30%以上。提示白血病。

L16: There are a large amount of white blood cells, taking 30%, indicating the leukemia.

L17: 活血中发现大量寄生虫的成虫或幼虫, 提示寄生虫感染。

L17: A large number of adults or larvae are found in the live blood, indicating the parasitic infection.

L18: 活血中硅结晶出现, 提示含硅类物质摄入人体。

L18: There appears the crystalline silicon in the live blood, indicating the intaking of the silicon substances in the human body.

L19-1: 着色的胆固醇结晶 (苏丹黑酒精染料瞬时着色)。

L19-1: Colored cholesterol crystal (Sudan black alcohol dye instantaneous color)

L19-2: 胆固醇结晶。

L19-2: Cholesterol crystal.

L19-3: 胆固醇结晶。

L19-3: Cholesterol crystal.

L20: 活血中可见的游离栓子, 提示血栓。

L20: The free embolus can be seen in the live blood, indicating the thrombus.

L21: 大红细胞。

L21: Macrocyte

L22: 红细胞聚集。

L22: Erythrocyte aggregation.

L23: 白细胞活力观察。

L23: Leukocyte activity observation.

L24: 红细胞呈瓶顶形、C 形。

L24: Erythrocyte becomes bottle-top-shaped and C-shaped.

L25-1: 红细胞皱缩 (30 分钟内在 15%以上)。

L25-1: Crenulationechinosis (More than 15% in 30 min).

L25-2: 同上。

L25-1: Ditto.

L26: 红细胞呈脆性，膜破裂成断片。

L26: The red blood cell becomes brittle and the membrane is broken into fragments.

L27: 中性白细胞（多核型）颗粒少，颗粒大多不明显，胞质环流少。

L27: There are few neutrophilic leukocyte (multi-nucleus) granule, most of which are not obvious with little cyclosis.

L28: 白细胞的核高度分裂。

L28: The nucleus of the leukocyte is highly fragmented.

L28: 白细胞不规整，易碎或破裂，完整性不好。

L29: The leukocyte is irregular, brittle or cracked with poor integrity.

L30: 淋巴细胞中大而被激活的 T 细胞。

L30: Big and activated T cell in the lymphocyte.

L31: 细长的胆固醇形晶体。

L31: Extended cholesterol crystals

L32: 方形或不规则形晶体，提示出现盘状结构胆固醇晶体。

L32: Square or irregular crystal, indicating the appearance of the discoidin cholesterol crystals.

L33: 胆固醇晶体明亮，带有彩色。

L33: Bright cholesterol crystal with colors.

L34: 真菌类（酵母菌、霉菌、念珠菌等）感染。

L34: Fungi (yeasts, molds, Candida, etc.) infection.

L35: 真菌类（酵母菌、霉菌、念珠菌等）感染。

L35: Fungi (yeasts, molds, Candida, etc.) infection.

L36: L 形细菌感染。

L36: L-shaped bacterial infection.

L37: 支原体在血渍和红细胞上，提示支原体感染。

L37: Mycoplasma on the in blood spot and the red blood cell, indicating the mycoplasma infection.

L38: 红细胞泪滴状。

L38: Teardrop-shaped red blood cells.

L39: 活血中出现的细长的生物，为寄生虫感染。

L39: The slender creatures appear in the live blood, which is the parasite infection.

L40: 活血中出现的细长的生物，为寄生虫感染。

L40: The slender creatures appear in the live blood, which is the parasite infection.

H1: 健康人干血图, 看不到 ROTs, 红色均一。

H1: Figure of dried blood of healthy people. ROTs cannot be seen with uniform red color.

H2-1: 血斑整个颜色转为青紫色, 红色很淡, 并且分布很多 ROTs 块, 红细胞团块被分割得比较小。诊断有严重的重金属污染, 环境恶劣。

H2-1: The color of the blood spot turns indigo with very light red. And there are many ROTs blocks distributed. The red blood cell mass is divided with relatively small blocks. It is diagnosed that it is with a serious heavy metal pollution and poor environment.

H2-2: 重金属中毒。

H2-2: Heavy metal poisoning.

H2-3: 血斑外周有黑色纤维环, 提示重金属中毒。

H2-3: Heavy metal poisoning. There is a black fibrous ring around the blood spot, indicating the heavy metal poisoning.

H3: ROTs 块大块, 且向内出现倒刺。

H3: Large blocks of ROTs, and the barb appears inwardly.

H4-1: 血斑中心区域(肠道区)颜色转黑, 且分布圆形较大的 ROTs 块。提示大肠菌群紊乱, 消化吸收功能差, 并伴有肠炎。

H4-1: The color in the blood spot center (intestinal area) turns black and the bigger round ROTs block is distributed, indicating the coliform disorder, poor digestion and absorption as well as the enteritis.

H4-2: 同上。

H4-2: Ditto.

H4-3: 同上。

H4-3: Ditto.

H4-4: 血滴中央有 1—7 滴黑色物, 提示大肠菌群失调、大肠功能并、肛门炎、胃炎。

H4-4: There are 1-7 drops of black substances in the center of the blood drop, indicating the coliform disorder, poor bowel function, anal inflammation and gastritis.

H5: 纤维团块环状, 提示心肌缺血。

H5: Fiber ring clumps, indicating myocardial ischemia.

H6-1: 关节炎。

H6-1: Arthritis.

H6-2: 关节炎。

H6-2: Arthritis.

H7-1: 血斑从中心向外围出现明显的放射状 ROTs 线状长条, 中心向外黑色依次减弱。诊断主要为体内钙/磷比例失调, 钙吸收差, 明显缺钙。

H7-1: The apparent radial ROTs linear strips appear in the blood spot from the center to the

periphery with the black weakens in turn from the center to the outward. It is mainly diagnosed the calcium/phosphorus disproportionality inside the body and the poor calcium absorption, which is obviously a calcium deficiency.

H7-1: 血斑从中心各外围出现明显扩身状 ROTS 线状长条，中心向外黑色依次减弱。诊断主要为体内钙/磷比例失调，钙吸收差，明显缺钙。

H7-1: The apparent body-expansion-shaped ROTS linear strips appear in the blood spot from the center to the periphery with the black weakens in turn from the center to the outward. It is mainly diagnosed the calcium/phosphorus disproportionality inside the body and the poor calcium absorption, which is obviously a calcium deficiency.

H7-2: 同上。

H7-2: Ditto.

H7-3: 同上。

H7-3: Ditto.

H7-4: 同上。

H7-4: Ditto.

H8: 心肌功能欠佳。

H8: Poor myocardial function

H9: 血斑肠区出现明显的圆形且较透亮的 ROTS 块，提示常发性痔疮、肠炎。

H9: Apparent round and more translucent ROTS blocks appear in the blood spot intestinal area, indicating the hemorrhoids and colitis that often occur.

H11-1: 晚期癌症血象，ROTS 块分割达 30%以上，纤维网断裂严重且退化。

H11-1: Terminal cancer blood. The segmentation of the ROTS block is above 30%. The fiber web is seriously broken and degraded.

H11-2: 晚期癌症血象。

H11-2: Terminal cancer blood.

H11-3: 癌症病人凝固血象四个时期的表现。

H11-3: The performances of the blood coagulation of the cancer patient in four phases.

H12: 该病人凝固血斑具有明显的分区特征。

H12: The blood coagulation of the patient has obvious regional characteristics.

H13: 细碎的 ROTS 块分布在血斑上，提示过敏体质。

H13: The finely ROTS blocks are distributed on the blood spot, indicating the anaphylaxis.

H14: 血斑边缘呈现尖锐突起，提示头颈部异常，主要为神经传导功能问题。诊断为癫痫。

H14: The blood spot edge appears the sharp protrusions, indicating the abnormalities of the head and neck, which are mainly the nerve conduction problems, being diagnosed as the epilepsy.

H15: ROTS 块出现不规则的长条形，提示肾功能问题，肾炎。

H15: ROTS block appears the irregular strips, indicating the kidney problems and nephritis.

H16-1: 血斑边缘钝形突起，提示颈部问题，颈椎病。

H16-1: The blood spot edge appears the blunt protrusions, indicating the neck problem, such as the cervical spondylosis.

H16-2: 颈椎病。

H16-2: Cervical spondylosis

H16-3: 颈椎病。

H16-3: Cervical spondylosis

H17: 在 R2—R4 区出现明显的区带，提示甲状腺紊乱。

H17: The apparent zones appear in R2-R4, indicating the thyroid disorders.

H18: 心肌紧张。

H18: Myocardial tension.

H19: 大的 ROTS 块连接，提示关节炎。

H19: Big ROTS block connection, indicating the arthritis.

H20: 凝固血象周缘弥散，提示血糖不稳。

H20: The diffusion of the periphery of the blood coagulation, indicating the glucose instability.

H21: 传导阻滞（该血象没有参照，较难解释）。

H21: Conduction block (the blood picture has no reference and is hard to explain).

H22: 纤维网连接较差，提示内分泌失调、甲状腺功能差。

H22: The connection of the fiber web is poor, indicating the endocrine dyscrasia and poor thyroid function.

H23: 纤维蛋白断裂，提示甲状腺炎、营养不良。

H23: The fibrin fractures, indicating the thyroiditis and malnutrition.

H24: 纤维蛋白网发黑，似有突起，提示寄生虫感染。

H24: The fibrin mesh turns black and seems to have protrusions, indicating the parasitic infections.

H25: 纤维网有黑色突起，提示甲状腺、甲状旁腺炎。

H25: The fiber web has the black protrusions, indicating the thyroid and the parathyroid inflammation.

H26: 纤维网扩大、变化，提示心肌功能差，心血管供血不足。

H26: The fiber web expands and changes, indicating the poor myocardial function and inadequate blood supply of cardiovascular.

H27: 纤维团块，中间有纤维条，肌炎、疲劳。

H27: The fiber agglomerates with the fiber rod in the middle, indicating the myositis and fatigue.

H28: 红细胞颜色变化，内有纤维网围绕，提示贫血，消化吸收不良，缺乏微量元素。

H28: The red blood cell color is changed, and the inside of which is surrounded by the fiber web, indicating the anemia, poor digestion and absorption and lack of trace elements.

H29: 纤维条素拉长，提示肌肉痛或关节痛。

H29: The stretching of the plain fiber, indicating the muscle pain or joint pain.

H30: 纤维成团块，片状 ROTS 颜色改变，提示早期局部癌症、化疗反应，慢性退行性改变。

H30: The fiber agglomerates and the color of the plate ROTS changes, indicating the early partial cancer,

chemotherapy and chronic degenerative changes.

H31: 纤维成团块、变宽、不规则，提示外周血循环不足、营养不良。

H31: The fiber agglomerates, wider and irregular, indicating the insufficient external blood circulation and malnutrition.

H32: 纤维成团块，形态狭长，提示慢性疲劳、病毒感染。

H32: The fiber agglomerates and long and narrow, indicating the chronic fatigue and viral infection.

H33: 纤维成团块，出现黑色圈，提示消化不良，胆汁酸分泌不足。

H33: The fiber agglomerates and appears the black ring, indicating the poor dyspepsia and bile acid secretion.

H34: 纤维成团块，大的 ROTS 块连接。提示关节炎。

H34: The fiber agglomerates and big ROTS blocks connect, indicating the arthritis.

H35: 纤维成团块、变宽、变大并且连接，提示骨胶原性疾病，或者早期、局部癌症。

H35: The fiber agglomerates and wider, larger and connected, indicating the glue immunogenicity disease, or the early partial cancer.

H36: 纤维成团块，纤维网破碎，提示：葡萄糖耐量差。

H36: The fiber agglomerates and the fiber web is fragmented, indicating the poor glucose tolerance.

H37: 纤维成团块，呈 C 形态延伸、成群，提示肌炎、疲劳。

H37: The fiber agglomerates with extending and grouping in a C-shaped, indicating the myositis and fatigue.

H38: 纤维成团块，ROTS 块圆形，中间清晰，提示炎症发生过程。

H38: The fiber agglomerates and the ROTS block is round with the clear middle part, indicating the process of inflammation.

H39: 有黑色桥梁，横穿 ROTS 块，提示全身病毒感染。

H39: There is a black bridge cross the ROTS block, indicating infection all over the body.

H40: 纤维成团块，有小点刺，提示肝脏应激、大肠功能差。

H40: The fiber agglomerates with small pricks, indicating the liver stress and poor bowel function.

H41: 纤维成团块，有坏死组织（颜色明显不同，）提示有严重的自由基堆积。

H41: The fiber agglomerates with necrotic tissue (the color is obviously different), indicating a serious accumulation of free radicals.

H42: 纤维成团块，有 4—10um 亮区围绕，提示炎症过程。

H42: The fiber agglomerates with a 4-10um bright zone surrounded, indicating the process of inflammation.

H43: 纤维成团块，有 0.5um 黑点，提示可能早期癌症转移，或慢性器质性退行病变。

H43: The fiber agglomerates with a 0.5um black spot, indicating the possibility of the transfer of early cancer, or chronic organic disease regression.

H44: 纤维成团块，有结晶块，提示骨胶原性疾病、电解质失衡、缺钙。

H44: The fiber agglomerates with a crystal block, indicating the immunogenicity glue disease, electrolyte

imbalance and calcium deficiency.

H45: 纤维成团块，从外周向内有刺状突起，提示肝脏应激、消化不良、或早期癌症转移。

H45: The fiber agglomerates with the barbed protrusions from the peripheral to the inside, indicating the liver stress, poor dyspepsia or the early cancer metastasis.

H46: 纤维成团块，中央有细胞变性，提示疾病治疗过程。

H46: The fiber agglomerates with the cell degeneration in the center, indicating the process of disease treatment.

H47: 纤维成团块，有细胞变性，提示炎症过程。

H47: The fiber agglomerates with the cell degeneration, indicating the process of inflammation.

H48: 纤维成团块，外周有绿色，提示早期或晚期癌症。

H48: The fiber agglomerates with green periphery, indicating the early or terminal cancer.

H49: 纤维成团块，外周有深橘红色，提示肠道出血。

H49: The fiber agglomerates with deep orange periphery, indicating the intestinal bleeding.

H50: 血滴周围有白色环，提示化学中毒。

H50: There is a white ring around the blood drop, indicating the chemical poisoning.

H51: 细碎的 ROTS 块分布在血滴的大部分，提示过敏。

H51: The finely ROTS blocks are distributed in the majority of the blood drop, indicating the allergy.

H52: 哮喘。

H52: Asthma.

H53: 哮喘（服用 SOD 后 20 小时）

H53: Asthma (20 hours after taking the SOD).

H54: 关节炎。

H54: Arthritis.

H55: 结核。

H55: Tuberculosis.

H56: 肺癌。

H56: Lung cancer.

H57: 挫伤、出血或月经。

H57: Contusion, bleeding or menstruation.

H58: 挫伤、出血或月经。

H58: Contusion, bleeding or menstruation.

H59: 滑囊炎。

H59: Bursitis.

H60: 滑囊炎（服药后 48 小时）。

H60: Bursitis (48 hours after taking the medicine)

H61: 癌症 1 级。

H61: Cancel Grade 1.

H62: 癌症 2 级。

H62: Cancel Grade 2.

H63: 癌症 3 级。

H63: Cancel Grade 3.

H64: 癌症 4 级。

H64: Cancel Grade 4.

H65: 癌症。

H65: Cancel.

H66: 癌症（服药三天后）。

H66: Cancel (in 3 days after taking the medicine).

H67: 癌症（服药后五天）。

H67: Cancel (in 5 days after taking the medicine).

H68: 吸烟者。

H68: Smoker.

H69: 吸烟者。

H69: Smoker.

H70: 吸烟者。

H70: Smoker.

H71: 癌症。

H71: Cancel.

H72: 癌症（治疗三个月）。

H72: Cancel (3 months of treatment).

H73: 癌症（治疗五个月）。

H73: Cancel (5 months of treatment).

H74: 癌症（治疗九个月）。

H74: Cancel (9 months of treatment).

H75: 白血病。

H75: Leukemia.

H76: 多发性硬化症。

H76: Multiple sclerosis.

H77: 多发性硬化症（服药后 24 小时）。

H77: Multiple sclerosis (in 24 hours after taking the medicine).

H78: 多发性硬化症（服药后 48 小时）。

H78: Multiple sclerosis (in 48 hours after taking the medicine).

H79: 吸烟者。

H79: Smoker.

H80: 吸烟者（服用抗自由基药 20 小时后）。

H80: Smoker (in 20 hours after taking the anti-free radical medicine).

H81: 身体紧张。

H81: Body tension.

H82: 心理紧张。

H82: Mental tension.

H83: 维生素缺乏（重）

H83: Vitamin deficiency (serious)

H84: 维生素缺乏（中）

H84: Vitamin deficiency (mild)

H85: 维生素缺乏（轻）。

H85: Vitamin deficiency (slight)

八、参考图谱 VIII. Reference Maps

该部分血象图片是对前述图片的有益的补充，希望灵活掌握。

The part of blood pictures is the useful complement to the above pictures. I hope that they can be flexibly grasped.

1、肝脏损伤。

1. Liver damage.

2、胆固醇结晶。

2. Cholesterol crystals.

3、血管内脱落的脂质斑块，提示动脉硬化。

3. The lipid plaque shedded inside the blood vessel, indicating the atherosclerosis.

4、血小板聚集，易形成血栓。

4. Platelet aggregation, easy to form **thrombus**.

5、正常红细胞（注意：摄相效果不好，失真）。

5. Normal red blood cells (Note: The perturbation effect is not good and distorted.)

6、脂肪栓。

6. Fat embolism.

7、红细胞变异。

7. Red blood cell mutation.

8、胆固醇结晶块。

8. Cholesterol crystal block.

9、坏死组织及结晶块。

9. Necrotic tissue and crystalline block.
- 10、长形胆固醇结晶块。
10. Extended cholesterol crystal block.
- 11、不规则胆固醇结晶块。
11. Irregular cholesterol crystal block.
- 12、明亮的脂质结晶体。
12. Bright Lipid crystals.
- 13、异形血小板。
13. Poikilothrombocyte.
- 14、柠檬状红细胞，提示消化吸收差。
14. Lemon-shaped red blood cells, indicating the poor digestion and absorption.
- 15、棘形红细胞。
15. Spine-shaped red blood cells.
- 16、肌肉痛、关节痛。
16. Pain in the muscle and joint.
- 17、蛋白纤维连接差，提示内分泌失调、甲状腺功能差。
17. Poor protein fibronectin connection, indicating the endocrine dyscrasia and poor thyroid dysfunction.
- 18、脑梗塞。
18. Cerebral infarction.
- 19、重金属中毒。
19. Heavy metal poisoning.
- 20、正常人干血片。
20. Normal dried blood.
- 21、细胞突变，提示恶病变。
21. Cell mutation, indicating the evil disease.
- 22、慢性疲劳和病毒感染。
22. Chronic fatigue and viral infections.
- 23、胃肠炎。
23. Gastroenteritis.
- 24、黑色胆固醇结晶块，提示营养不良，严重缺乏维生素。
24. Black cholesterol crystal block, indicating the malnutrition and serious lack of vitamins.
- 25、自由基边缘少许绿色，提示肿瘤。
25. The radical edge has a little green, indicating the tumor.
- 26、干血片边缘突起，提示头颈部疾病。
26. Protruding edge of dried blood, indicating the head and neck diseases.

- 27、红细胞颜色浅，提示贫血。
27. The color of the red blood cell is light, indicating the anemia.
- 28、围绕一圈为深橘红色，提示肠出血。
28. The circle surrounded is deep orange, indicating the intestinal bleeding.
- 29、自由基中有明亮的结晶物，提示动脉粥样硬化。
29. There are bright crystals in the free radical, indicating the atherosclerosis.
- 30、不规则小片状自由基偏多，提示肺炎、支气管炎、哮喘。
30. There are too many irregular and small pieces of free radical, indicating the pneumonia, bronchitis and asthma.
- 31、严重吸烟者。
31. Heavy smoker.
- 32、正常干血片。
32. Normal dried blood.
- 33、白色活性氧有毒物质（自由基、ROTS）。
33. White toxic reactive oxygen material (free radical and ROTs).
- 34、干血片中心有白色亮点。
34. There are white highlights in the center of the dried blood.
- 35、自由基斑块连接，提示关节炎。
35. Radical patch connection, indicating the arthritis.
- 36、自由基环状分布，提示滑囊炎。
36. Radical ring-shaped distribution, indicating the bursitis.
- 37、血色暗、自由基色淡，提示挫伤、出血、月经。
37. Dark blood color and light color of the free radical, indicating the contusion, hemorrhage and menstruation.
- 38、自由基突起且上面有斑点，提示结核。
38. Free radical processes and there are spots on the above, indicating the tuberculosis.
- 39、肺病患者干血图，比较严重。
39. Dried blood picture of the patient with lung disease, more serious.
- 40、柠檬状细胞，提示消化吸收差。
40. Lemon-shaped cells, indicating the poor digestion and absorption.
- 41、胆固醇结晶。
41. Cholesterol crystals.
- 42、胆固醇结晶。
42. Cholesterol crystals.
- 43、自由基连接，提示关节炎。
43. Radical connections, indicating the arthritis.

- 44、缺钙。
44. Calcium deficiency.
- 45、胃肠炎、胆囊炎、消化不良、痔疮。
45. Gastroenteritis, cholecystitis, indigestion, hemorrhoids.
- 46、蛋白纤维断裂，提示肝脾代谢紊乱。
46. Protein fiber breakage, indicating the liver and spleen metabolic disorders.
- 47、纤维团块大范围不规则，微循环不好，营养不良。
47. Large-scale irregular fiber clumps, poor micro-circulation and malnutrition.
- 48、纤维团块大面积连接，提示糖尿病。
48. Connections of large-area fiber clumps, indicating the diabetes.
- 49、纤维网过密变异，提示心肌功能欠佳。
49. The fiber web is too dense and has variation, indicating the poor myocardial function.
- 50、蛋白纤维黑色边白色，提示疲劳症。
50. The protein fiber is black while the edge is white, indicating the fatigue.
- 51、甲状腺疾病。
51. Thyroid disease.
- 52、自由基团块大突变，提示肿瘤。
52. Large radical clump mutation, indicating the tumor.
- 53、多发性硬化症。
53. Multiple sclerosis.
- 54、玫瑰花瓣样改变，提示心肌缺血。
54. Rose petal-like changes, indicating the myocardial ischemia.
- 55、严重缺乏维生素和钙。
55. Serious lack of vitamins and calcium.
- 56、维生素缺乏严重。
56. Serious lack of vitamins.
- 57、缺乏维生素。
57. Lack of vitamins.
- 58、肿瘤病人的干血图。
58. Dried blood picture of the patient with tumor.
- 59、胃癌。
59. Gastric cancer.
- 60、肝胆区 ROTS 块，切有病毒桥，提示肝细胞损伤，应注意炎症或感染。
60. The ROTS block in the hepatobiliary area is cut with a virus bridge, indicating the liver cell injury and shall pay attention to the inflammation or infection.
- 61、血液中游离栓子。

61. Free emboli in the blood.
- 62、中腹部 ROTs 块呈条形，反应肾脏功能下降或肾亏。
62. The ROTs block in the abdomen is strip-like, reflecting the decreased kidney function or kidney deficiency.
- 63、活血中靶形红细胞提示地中海贫血。
63. Target-shaped red blood cells in the blood, indicating the mediterranean anemia.
- 64、胆固醇结晶。
64. Cholesterol crystals.
- 65、红细胞串状排列，提示血黏度高。
65. String-like arrangement of red blood cells, indicating the high blood viscosity.
- 66、正常红细胞（摄相效果差，失真）。
66. Normal red blood cell (poor perturbation results and distortion).
- 67、血小板针状体。
67. Platelet spicules.
- 68、血管内脱落的脂质斑块，提示动脉硬化。
68. The lipid plaque shedded inside the blood vessel, indicating the atherosclerosis.
- 69、正常活血。
69. Normal blood.
- 70、红细胞黏结。
70. RBC cohering.
- 71、血小板聚集，易形成血栓。
71. Platelet aggregation, easy to form **thrombus**.
- 72、菌群失调。
72. Dysbacteriosis.
- 73、血小板针状体。
73. Platelet spicules.
- 74、杆菌感染。
74. Mycobacterial infection.
- 75、真菌感染。
75. Fungal infection.
- 76、不规则胆固醇结晶体，提示肝脏负担重，脂肪肝。
76. Irregular cholesterol crystals, indicating the heavy burden on the liver and fatty liver.
- 77、裂红细胞：是指红细胞碎片包括盔形红细胞等，多见于弥散性血管内凝血、微血管病性溶血性贫血、心源性溶血性贫血等红细胞破碎性综合症、其它常见于化学性中毒、肾功能衰竭、血栓性血小板减少性紫癜。
77. The schizocyte refers to the red blood cell fragments including the helmet-shaped red blood cell,

which is more commonly seen in the disseminated intravascular coagulation, microangiopathic hemolytic anemia, cardiogenic hemolytic anemia and other red blood cell fragmentation syndrome, and others commonly seen in the chemical poisoning, renal function failure, thrombotic thrombocytopenic purpura epilepsy.

78、血小板大量聚集。

78. A large number of platelet aggregations.

79、齿形红细胞，提示脏脾功能不好。

79. Toothed red blood cells, indicating the poor dirty splenic function.

80、红细胞钱串状且聚集，提示严重血稠。糖尿病患者也出现此血象。

80. The red blood cells are rouleaux and aggregated, indicating the serious blood thickens, which also occurs in the patient with diabetes.

81、红细胞缙线状（钱串状），提示血稠。

81. The red blood cells are in linear cord (rouleaux), indicating the blood thickens.

82、血液中变色的胆固醇。

82. Discolored cholesterol in the blood.

83、血小板。

83. Platelet.

84、血小板针状体，提示疲劳、体内有病毒感染。

84. Platelet spicules, indicating the fatigue and the virus infection in the body.

85、扁型红细胞粘连，提示易患糖尿病、结石、肿瘤、类风湿等，也可以说是酸性体质。

85. Flat-type red blood cell adhesion, indicating the susceptibility to the diabetes, stones, cancer, rheumatoid, etc. and it can also be said to be acidic.

86、毒素，提示肠道菌群失调。

86. Toxin, indicating the intestinal flora.

87、裂红细胞，同 77。

87. Schizocyte, same as 77.

88、点彩红细胞：又名嗜碱性点彩红细胞，染色后的血片中出现。正常情况下极罕见，约占 0.01%。提示再生加速并有紊乱现象，在铅中毒病人血象中这种细胞明显增多，为诊断的重要指标之一。另外，在铋、锌、汞中毒中也有此类细胞出现。

88. Basophilic stipplins, also known as the erythrocyte basophilic stippling, which appears in the dyed blood. It is extremely rare under normal circumstances, about 0.01%. It suggests the regeneration acceleration and the disorder phenomenon. The cells increase in the blood picture of the patient with lead poisoning, which is one of the important indexes of the diagnosis. In addition, such cells also appear in the bismuth, zinc and mercury poisoning.

89、靶性红细胞：红细胞中央色深，四周为苍白圈，近红细胞边缘处色又较深，形同射击之靶。正常情况下该细胞极罕见，但在黄疸、肝病、脾切除后、缺铁性贫血，尤其是地中海贫血中颇为常见。

89. Target red blood cell: the color of the center of the red blood cell is dark with the surround is pale white circle, while the edge near the red blood cell is relatively deep, just like a shooting target. It is

extremely rare under normal circumstances but commonly seen in the jaundice, liver disease, after splenectomy, iron deficiency anemia, especially in the mediterranean anemia.

90、半月形红细胞：胞体巨大，呈月形，淡红色。见于某些增生性贫血、血小管球性肾炎。

90. Semilobar RBC is of a huge cell body, moon-like and light red, which is found in some proliferative anemia and blood tubular ball nephritis.

91、棘形红细胞：包括刺细胞、钻细胞、及锯细胞，往往见于微血管病性溶血性贫血；锯细胞多见于肝脏疾病；钻细胞也见于尿毒症。

91. The acanthocyturia includes the stinging cell, drilling cell and saw cell, which is often seen in the microangiopathic hemolytic anemia. The saw cells are more commonly seen in the liver disease while the drilling cells in the uremia.

92、念珠菌感染。

92. Monilial infection.

93、念珠菌感染。

93. Monilial infection.

94、血小板聚集。

94. Platelet aggregation.

95、支原体感染。

95. Mycoplasma infection.

96、活血中的粥样斑块。

96. Atherosclerotic plaque in the blood.

97、治疗过程的血象变化。

97. Blood changes in the treatment process.

97-1、钙磷比例失调。

97-1: Calcium/phosphorus disproportionality.

97-2、钙磷比例失调修复后。

97-2: After the repair of the calcium/phosphorus disproportionality.

97-3、氧自由基修复后。

97-3: After the repair of oxygen free radicals.

97-4、氧自由基修复前。

97-4: Before the repair of oxygen free radicals.

97-5、肠胃损伤炎症。

97-5: Inflammation of the stomach and intestines.

97-6、肠胃损伤炎症修复后。

97-6: After the repair of inflammation of the stomach and intestines.

98、医院临床亚健康诊断病历血象图片。

98. Blood picture of clinical diagnosis of sub-health records.

98-1、正常干血片。

98-1: Normal dried blood.

98-2、肺部炎症。

98-2. Lung inflammation

98-3、肝癌。

98-3. Hepatic carcinoma

98-4、肝癌。

98-4. Hepatic carcinoma

98-5、肛肠疾病。

98-5. Anorectal disease

98-6、慢性结肠炎。

98-6. Chronic colitis.

98-7、内分泌紊乱。

98-7. Endocrine disorders

98-8、脑供血不足。

98-8. Insufficient blood supply to the brain

98-9、胃黏膜糜烂。

98-9. Gastric erosion

98-10、胃黏膜水肿。

98-10. Mucosal edema

98-11、心脏病变。

98-11. Heart disease

98-12、心脏应激反应。

98-12. Cardiac stress response

98-13、眼部疾病。

98-13. Eye diseases

98-14、陈旧性损伤。

98-14. Old injuries

98-15、脂肪肝。

98-15. Fatty liver

98-16、痔疮。

98-16. Hemorrhoids

98-17、颈椎病变。

98-17. Cervical lesions

98-18、子宫肌瘤。

98-18. Uterine fibroids

98-19、钙磷比例失调。

98-19: Calcium/phosphorus disproportionality.

98-20、唾液酸株（癌症状态）。

98-20. Sialic acid strains (cancer state)

99、异物感染在血象中的表现。

99. Performance of foreign body infection in the blood.

99-1、活血中的石棉。

99-1. Asbestos in the blood

99-2、母乳中含硅。

99-2. Silicon in the breast milk

99-3、活血中的硅。

99-3. Silicon in the blood

99-4、血液中的坏死组织。

99-4. Necrotic tissue in the blood

99-5、血液中的念珠菌感染。

99-5. Candida infection in the blood

