

CLINICAL APPLICATION OF TRADITIONAL CHINESE MEDICINE IN CANCER TREATMENT

中医在癌症治疗中的临床应用

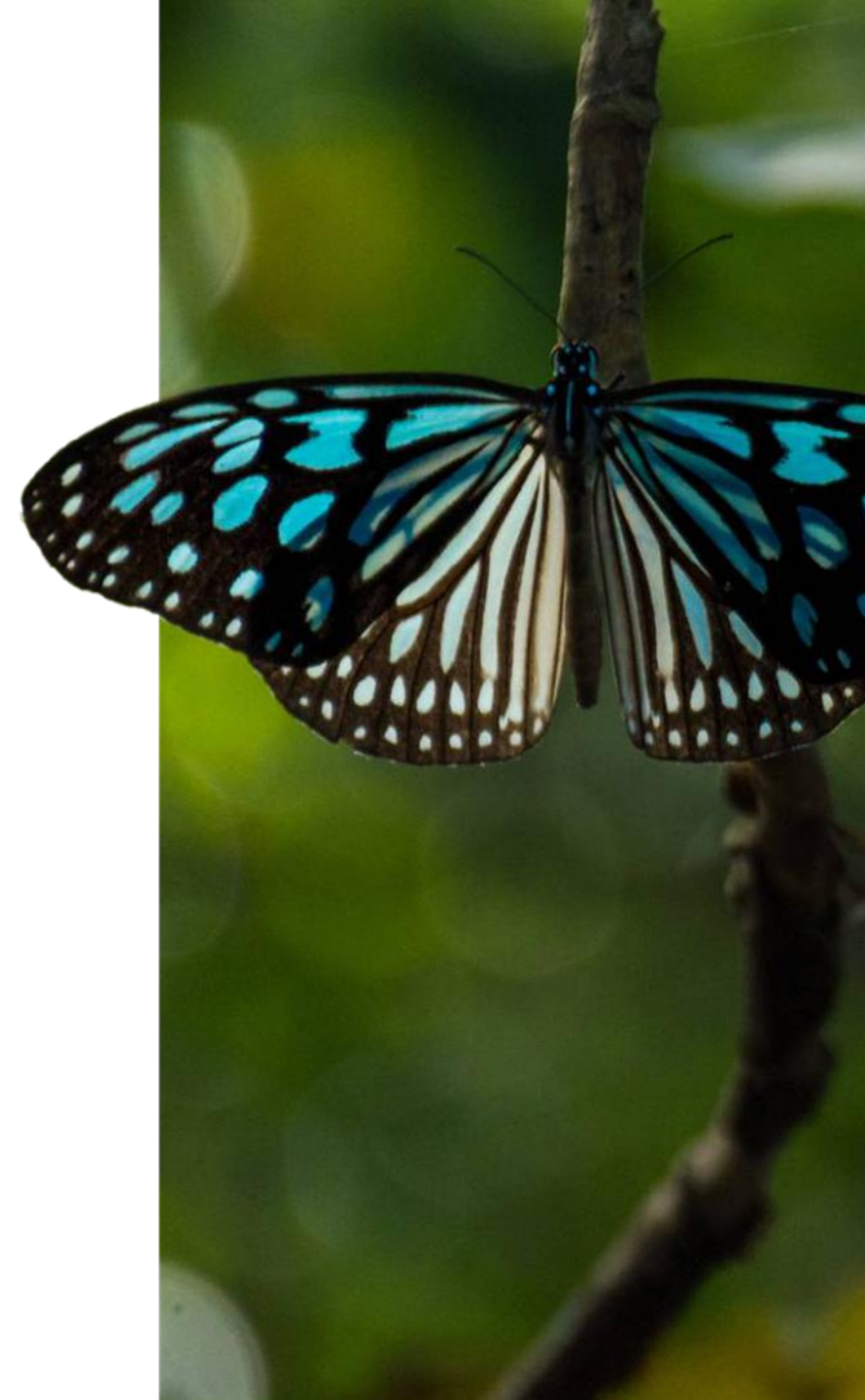
Presented by

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www.sbueaa.com

SBUEAA Webinar Course

June 13th, 2026



I. Course objectives

- Understand the basic factors of cancer etiology and pathogenesis in Western medicine & Traditional Chinese Medicine (TCM).
- Understand the timing and synergistic effects of integrated Chinese and Western medicine in cancer treatment.
- Master the commonly used Chinese herbal formulas and their compatibility principles in cancer treatment.
- Master the acupoint selection principles and the key points of Acupuncture in cancer treatment.
- Cases studies and analysis
- 1. 课程目标
 - 理解中西医对肿瘤病因病机的基本认识。
 - 了解中西医结合治疗肿瘤的时机与协同作用。
 - 掌握肿瘤治疗中常用的中药方剂及其配伍规律。
 - 掌握针灸在肿瘤治疗中的选穴原则与操作要点。
 - 综合案例分析



CONTENTS:

1. Epidemiology of tumors 肿瘤的流行病学
2. Basic concepts and characteristics of tumors 肿瘤的基本概念和特征
3. Etiological factors of tumors 肿瘤的发病因素
4. Diagnosis of tumors 肿瘤的诊断
5. Treatment of tumors 肿瘤的治疗
6. Evaluation of therapeutic efficacy in tumors 肿瘤的疗效评估
7. Prevention of tumors 肿瘤的预防
8. Understanding of malignant tumors in TCM 中医对恶性肿瘤的认识
9. Etiology and pathogenesis of tumors in TCM 中医肿瘤的病因与病机
10. Tumor in TCM differentiation 肿瘤的中医辨证
11. Role of TCM in the malignant tumors treatment 中医在治疗恶性肿瘤中的作用
12. Clinical application of TCM in cancer treatment 中医在癌症治疗中的临床应用
13. Prevention of Cancer in TCM 中医的癌症预防
14. Hospice, Thanatology: End-of-life care / Palliative care 临终关怀



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Oncological Epidemiology Definitions

- Tumor epidemiology is the study of the occurrence, development, and distribution of malignant tumors in the population to explore the causes and conditions of malignant tumors in the population so as to formulate countermeasures and measures to prevent, control, and eliminate malignant tumors.
- The research included:
 - Mastering the incidence, mortality, and distribution patterns of malignant tumors across different populations, times, and geographic regions
 - Elucidate the influencing factors of malignant tumor prevalence and investigate the underlying pathogenesis
 - Identify appropriate prevention strategies and interventions.



肿瘤流行病学 —— 定义

- 肿瘤流行病学是研究恶性肿瘤在人群中发生、发展和分布的规律，以及探讨恶性肿瘤在人群中流行的原因和条件，从而制定预防、控制和消灭恶性肿瘤的对策和措施的科学。
- 研究内容包括：
 - 掌握恶性肿瘤在不同人群、时间和地区的发病或死亡情况和分布规律
 - 阐明恶性肿瘤流行的影响因素，探索其发病机制
 - 指定相应的预防策略和措施。



Oncological Epidemiology

Estimated New Cases

			Males	Females			
Prostate	174,650	20%			Breast	268,600	30%
Lung & bronchus	116,440	13%			Lung & bronchus	111,710	13%
Colon & rectum	78,500	9%			Colon & rectum	67,100	8%
Urinary bladder	61,700	7%			Uterine corpus	61,880	7%
Melanoma of the skin	57,220	7%			Melanoma of the skin	39,260	4%
Kidney & renal pelvis	44,120	5%			Thyroid	37,810	4%
Non-Hodgkin lymphoma	41,090	5%			Non-Hodgkin lymphoma	33,110	4%
Oral cavity & pharynx	38,140	4%			Kidney & renal pelvis	29,700	3%
Leukemia	35,920	4%			Pancreas	26,830	3%
Pancreas	29,940	3%			Leukemia	25,860	3%
All Sites	870,970	100%	All Sites		891,480	100%	

In 2019, about 1,762,400 new cases of cancer are expected in the United States, slightly higher than in 2018. The three most common cancers among men are prostate cancer, lung cancer, and colorectal cancer, accounting for 42% of all male cancer cases. Prostate cancer alone represents nearly 20% of all new cancers. Meanwhile, the three most common cancers among women are breast cancer, lung cancer, and colorectal cancer, accounting for 50% of all cancer diagnoses among women. Breast cancer alone represents 30% of all new cancer cases in women.



肿瘤流行病学

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2019年，预计美国癌症新发病例约 176.24 万例，比 2018 年略高。男性三大高发癌症是前列腺癌、肺癌以及结直肠癌，占有男性癌症的 42%，其中单纯前列腺癌占有所有新发癌症的近 20%。而女性的三大高发癌症分别是：乳腺癌、肺癌以及结直肠癌，占总发病人数的 50%，其中乳腺癌占有所有新发癌症的 30%。

Oncological Epidemiology

Estimated Deaths

			Males	Females			
Lung & bronchus	76,650	24%			Lung & bronchus	66,020	23%
Prostate	31,620	10%			Breast	41,760	15%
Colon & rectum	27,640	9%			Colon & rectum	23,380	8%
Pancreas	23,800	7%			Pancreas	21,950	8%
Liver & intrahepatic bile duct	21,600	7%			Ovary	13,980	5%
Leukemia	13,150	4%			Uterine corpus	12,160	4%
Esophagus	13,020	4%			Liver & intrahepatic bile duct	10,180	4%
Urinary bladder	12,870	4%			Leukemia	9,690	3%
Non-Hodgkin lymphoma	11,510	4%			Non-Hodgkin lymphoma	8,460	3%
Brain & other nervous system	9,910	3%			Brain & other nervous system	7,850	3%
All Sites	321,670	100%			All Sites	285,210	100%

According to data released by the World Health Organization, approximately 8.8 million people worldwide die from cancer each year, accounting for nearly one-sixth of all global deaths. Most of these deaths occur in low- and middle-income countries. More than 14 million new cancer cases are diagnosed each year, and this number is projected to increase to over 21 million by 2030.

In terms of cancer-related deaths, the most common types of cancer are lung cancer, liver cancer, colorectal cancer, stomach cancer, and breast cancer. In the United States, the leading causes of cancer-related death, ranked by mortality, are lung cancer, breast cancer, prostate cancer, and colorectal cancer.

肿瘤流行病学

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世界卫生组织公布的数据表明，全球每年约有880万人死于癌症，占全球每年死亡总人数近六分之一，死者大多数在中低收入国家。每年有1400多万新发癌症病例，预计到2030年这一数字将增加到2100多万。按死亡病例人数排列，最为常见的癌症类型为肺癌、肝癌、结肠直肠癌、胃癌、乳腺癌。在美国死亡率5最高的癌症依次为肺癌、乳腺癌、前列腺癌、结直肠癌。

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Basic concepts and characteristics of tumors

- **DEFINITIONS**

- It refers to a neoplasm formed by abnormal cell proliferation with altered gene expression. This alteration is caused by various tumorigenic factors that induce changes in the cellular genetic material, including the mutation and/or amplification of proto-oncogenes, as well as the loss or inactivation of tumor suppressor genes.



肿瘤的基本概念和特征

- **定义**

- 是机体在各种致瘤因素的作用下，引起细胞遗传物质的改变，包括原癌基因的突变、扩增和（或）抑癌基因的丢失、失活等基因表达失常的细胞异常增生而形成的新生物。

Basic concepts and characteristics of tumors

- **Nomenclature of tumors**
- Malignant tumors originating from **epithelial tissue** are collectively referred to as **carcinomas**. The name of the tissue of origin is combined with the term 'carcinoma' to designate the specific tumor type.
- Malignant tumors originating from the **mesenchymal tissue** are termed **sarcomas**. The tissue of origin is combined with the term 'sarcoma' to designate the specific tumor type.
- Tumors originating from **immature (embryonic) tissue** are referred to as **blastomas**. Benign examples include myoblastoma and chondroblastoma, while malignant examples include neuroblastoma and retinoblastoma.
- Some malignant tumors are named after "people", such as **Hodgkin disease** (Hodgkin lymphoma), a type of malignant lymphoma, and **Burkitt lymphoma**, a malignant tumor of B lymphocytes.
- Some malignant tumors are named as 'diseases.' For example, **leukemia**, a malignant tumor of hematopoietic tissue, and mycosis fungoides, a cutaneous T-cell lymphoma.

肿瘤的基本概念和特征

- 
- **肿瘤的命名**
 - 上皮组织发生的恶性肿瘤统称为**癌 (carcinoma)**，起源组织的名称后加“癌”，即为肿瘤名称。
 - 间叶组织的恶性肿瘤统称为**肉瘤(sarcoma)** 起源组织的名称后加“肉瘤”，即为肿瘤名称。
 - 起源于幼稚组织的肿瘤称为**母细胞瘤**，良性者有肌母细胞瘤、软骨母细胞瘤等；恶性者有神经母细胞瘤、视网膜母细胞瘤。
 - 有些恶性肿瘤则以“人名”命名，如霍奇金(**Hodgkin**)病（恶性淋巴瘤）、伯基特(**Burkitt**)淋巴瘤（**B**淋巴细胞发生的恶性肿瘤）。
 - 有些恶性肿瘤以“病”命名，如白血病(造血组织的恶性肿瘤)、蕈样霉菌病（皮肤的T细胞淋巴瘤）等。

Basic concepts and characteristics of tumors

Structure of the tumor

1. The **parenchyma** of a tumor

These are the tumor cells, which make up the main component of the tumor. They determine the nature and characteristics of the tumor. To determine the tissue origin of a tumor and to differentiate between benign and malignant tumors, it is essential to consider the tumor parenchyma's physical characteristics

It exhibits varying degrees of resemblance to its tissue of origin

- Retaining some of the functions of its originating organization
- Greater differentiation correlates with a closer resemblance to normal tissue in terms of morphology, function, and architecture

1. Tumor **stroma**

It consists of connective tissue and blood vessels. It is nonspecific and serves to provide structural support and nourishment to the tumor parenchyma.

Tumors establish connections with the host through the stroma.

肿瘤的基本概念和特征

肿瘤的结构

1. 肿瘤的**实质**

即瘤细胞，是肿瘤的主要成分。决定肿瘤的性质和特征。根据实质来判断肿瘤的组织来源及辨别肿瘤的良、恶性

与其起源组织有不同程度的相似

- 保留部分其起源组织的功能
- 分化越高，形态功能和组织排列越接近正常组织

2. 肿瘤的**间质**

由结缔组织和血管等构成。无特异性，起着营养和支持肿瘤实质的作用。肿瘤通过间质与机体发生联系。



Basic concepts and characteristics of tumors

- **Abnormal cell differentiation**: characterized by the lack of normal structural and functional features of the original cells, the disruption or deviation of the maturation process, or the dedifferentiation of mature cells induced by carcinogenic factors
- **Uncontrolled cell proliferation**: once a tumor (especially a malignant one) forms, its growth becomes autonomous. Tumor traits are inherited by progeny cells through division, and this growth is relatively independent of host regulation, progressing robustly and indefinitely (characterized by loss of contact inhibition, decreased density-dependent inhibition, and loss of anchorage-dependent growth)
- **Invasive and metastatic**
- **Heterogeneity**: cells within the same tumor are not uniform in various aspects, such as morphology, karyotype, growth rate, metastatic potential, and resistance to chemotherapeutic drugs



肿瘤的基本概念和特征

肿瘤细胞的生物学特征

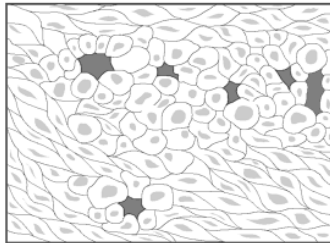
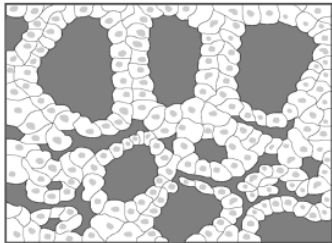
- **细胞分化异常**: 缺乏同样来源的正常细胞的结构和功能，分化成熟的过程被干扰出现偏差，或已分化成熟的细胞在致癌因素作用下逆向分化
- **细胞增殖失控**: 一旦肿瘤（尤其是恶性肿瘤）形成，则其生长为自主性，肿瘤特征通过细胞分裂遗传给子代，生长相对不受机体限制，生长旺盛无止境（接触抑制丧失、密度依赖性抑制降低、贴壁依赖性生长丧失）
- **侵袭性和转移性**
- **异质性**: 即同一个肿瘤中的细胞在形态、核型、生长速度、转移潜能、对化疗药物的耐药等各方面并不一致

Basic concepts and characteristics of tumors

Difference between benign and malignant tumors

Benign tumor

- A large number of abnormal cells (but well-differentiated)
- A tumor that grows slowly, is well encapsulated, and does not metastasize
- Because benign tumors do not infiltrate adjacent tissues, they can usually be excised relatively easily by surgical intervention.



Borderline Tumor

- A tumor whose histologic morphology and biological behavior fall between those of benign and malignant tumors.
- Locally invasive, occasionally metastatic

Cancer

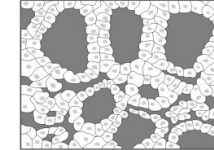
- Composed of structurally abnormal cells
- Characterized by rapid growth, local tissue invasion, and the potential for metastasis
- Malignant tumors infiltrate surrounding tissues, making surgical resection more difficult

肿瘤的基本概念和特征

良、恶性肿瘤的区别

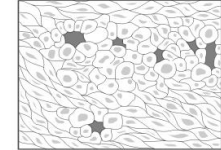
良性肿瘤

- 大量的异常细胞（但分化良好）
- 缓慢生长、包膜完好、不发生扩散的肿瘤
- 良性肿瘤不浸润周围组织，因此可以相对容易地利用外科手术摘除



恶性肿瘤

- 由结构性异常细胞组成
- 生长迅速，可浸润周围组织并发生转移
- 恶性肿瘤浸润周围组织，因此较难利用外科手术摘除



交界性肿瘤

- 组织形态和生物学行为介于良性和恶性之间的肿瘤
- 局部侵袭性、偶有转移性

Basic concepts and characteristics of tumors

Tumor differentiation

Well-differentiated cancers

- The tumor closely resembles normal tissue, exhibits a high degree of differentiation, and is associated with low malignancy
- Characterized by low metastatic potential, slow progression, and a favorable prognosis.

Poorly Differentiated Carcinoma

- Markedly deviated from normal tissue, showing poor differentiation and high-grade malignancy
- High metastatic potential, rapid progression, and poor prognosis.
- Although the tumor is highly sensitive to radiotherapy and chemotherapy, exhibiting rapid shrinkage or even disappearance during treatment, the overall prognosis remains poor

Undifferentiated carcinoma

- worse

Pathological grading of tumors

Assessment of tumor cell differentiation, an effective predictor of prognosis and treatment response

- **G5: Ungradable**
- **G1: Well-differentiated (well-differentiated, low-grade malignancy)**
- **G2: Moderately differentiated (moderately differentiated, malignant poisoning)**
- **G3: Poorly differentiated (poorly differentiated, highly malignant)**
- **G4 (Undifferentiated)**
- **Grades 3 and 4 can be combined under certain circumstances to form "G3-4 Undifferentiated or Undifferentiated"**

The higher the grade, the worse the prognosis

肿瘤的基本概念和特征

肿瘤的分化

高分化癌

- 与正常组织相似，成熟度高，恶性度低
- 转移少，发展慢，预后良好

低分化癌

- 与正常组织相差很大，成熟度差，恶性度高
- 转移多，发展快，预后差
- 对放疗、化疗较敏感，治疗时肿块较快的缩小或消失，但总的预后并不佳

未分化癌

- 更差

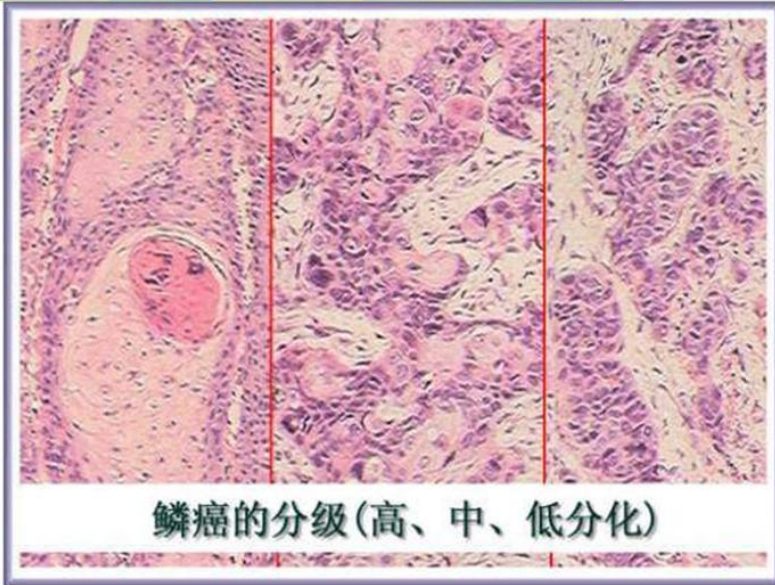
肿瘤的病理分级

鉴定肿瘤细胞的分化程度，有效的预后及治疗反应的预测因素

- **G5:** 无法分级
- **G1:** 分化良好（高分化，低度恶性）
- **G2:** 中等分化（中分化，中度恶性）
- **G3:** 较差分化（低分化，高度恶性）
- **G4:** 未分化
- **Grades 3 和 4 在某些情形下可以合并成 "G3-4 分化不良或未分化"**

分级越高，预后越差

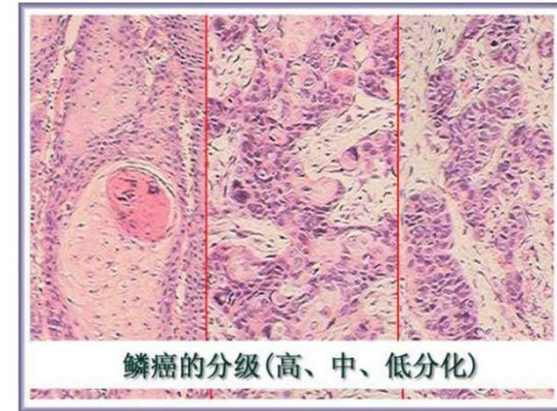
Basic concepts and characteristics of tumors



鳞癌的分级(高、中、低分化)

There are a lot of keratinized beads in well-differentiated squamous cell carcin
Moderately differentiated squamous cell carcinoma with few keratin pearls, and prickly-like cells are visible,
Poorly differentiated squamous cell carcinoma has no significant keratinized beads and intercellular bridges

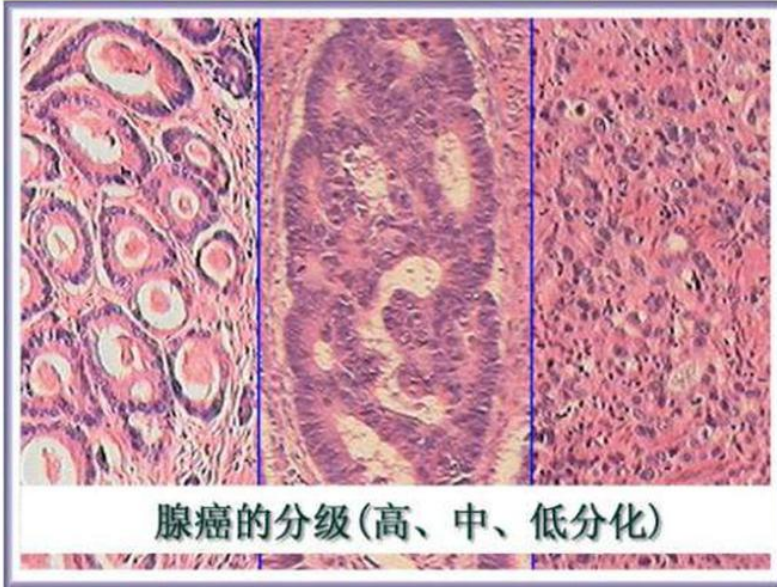
肿瘤的基本概念和特征



鳞癌的分级(高、中、低分化)

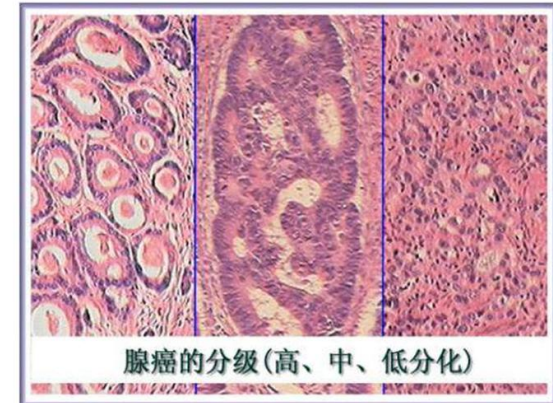
高分化鳞癌内有大量角化珠，
中分化鳞癌有少量角化珠，可见棘细胞样细胞，
低分化鳞癌无明显角化珠和细胞间桥。

Basic concepts and characteristics of tumors



Well-differentiated adenocarcinoma is composed of glandular ducts, and the cancer cells are monolayer columnar;
Poorly differentiated adenocarcinoma mostly forms solid nests or cords, with a small minority forming glandular structures;
moderately differentiated adenocarcinoma falls between the two.

肿瘤的基本概念和特征



高分化腺癌由腺管构成，癌细胞呈单层柱状；
低分化腺癌大部分形成实性团或条索，少部分形成腺管；
中分化腺癌介于两者之间。



Basic Concepts and Characteristics of Neoplasms/Tumors — Invasion and Metastasis

- **Direct spread:** Tumor cells invade and destroy adjacent organs along tissue spaces, blood vessels, lymphatic vessels, or perineurium and continue to grow.
- **Metastasis:** The process by which tumor cells are immersed in lymphatic vessels, blood vessels, and body cavities from the primary site to reach elsewhere and continue to grow, forming new tumors of the same nature as the primary tumor.

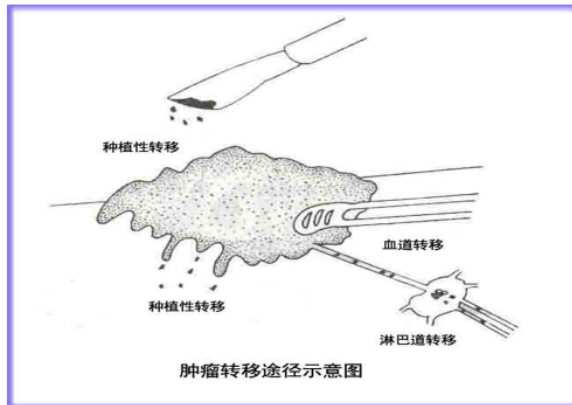


肿瘤的基本概念和特征——侵袭与转移

- **直接蔓延：**瘤细胞沿组织间隙、血管、淋巴管或神经束衣侵入并破坏邻近器官，并继续生长。
- **转移：**瘤细胞从原发部位浸入淋巴管、血管和体腔，到达他处并继续生长，形成与原发瘤性质相同的新肿瘤的过程。

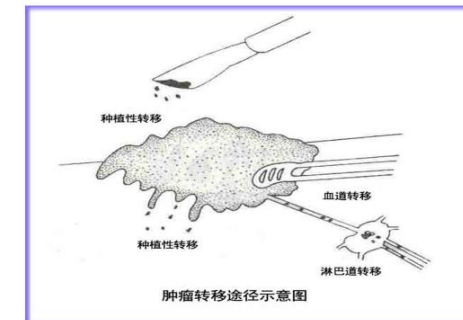
Basic Concepts and Characteristics of Neoplasms/Tumors — Invasion and Metastasis

- **Hematogenous metastasis:** It is a common route of metastasis for sarcomas, and hepatocellular carcinoma, lung cancer, and choriocarcinoma are also prone to hematogenous metastasis. The most common site of hematogenous metastasis is the lung, followed by the liver.
- **Lymphatic metastasis:** A common metastatic route for cancer. After invading the lymphatic vessels, cancer cells are carried by the lymphatic flow to adjacent lymph nodes, where they form metastatic tumors. They may then spread through the efferent lymphatic vessels to another group of lymph nodes, where additional metastatic tumors develop.
- **Implantation metastasis:** When cells from a malignant tumor in an internal organ of the body cavity invade the serosa, they fall off like seeds and scatter on the surface of the organ, forming multiple metastatic tumors.



肿瘤的基本概念和特征——转移途径

- **血道转移:** 是肉瘤常见的转移途径，肝癌、肺癌和绒癌也易经血道转移。血道转移最常见侵及的是肺，其次是肝。
- **淋巴道转移:** 是癌常见的转移途径。癌细胞侵入淋巴管后，随淋巴液引流到邻近淋巴结形成转移癌，再经输出淋巴管到过另一组淋巴结形成转移癌。
- **种植性转移:** 体腔内脏器官恶性肿瘤的细胞侵入浆膜时，瘤细胞脱落像播种一样，散落在器官表面形成多个转移性肿瘤。



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Pathogenesis of tumors

1. External factors

- **Chemical carcinogenesis**

- Over 200 years ago, the English surgeon Percivall Pott identified an association between scrotal cancer (now known as chimney sweeps' carcinoma) in chimney sweeps and their prolonged occupational exposure to soot and coal tar. In the early 20th century, Japanese researchers Katsusaburo Yamagiwa and Koichi Ichikawa successfully induced skin cancer in a rabbit animal model by repeatedly applying coal tar. To date, over 1,000 chemical substances have been proven to induce tumors in animals.



肿瘤的发病因素

1、外界因素

- **化学致癌因素**

- 200年前，英国医生Pott发现扫烟囱工人的癌于多年接触煤烟灰和沥青有关。20世纪初，日本人三极和市川用煤焦油涂兔子的耳朵诱发皮肤癌（动物模型），目前证明有1000种化学物质能诱发动物肿瘤。

Pathogenesis of tumors

- A. Alkylating agent

Its biological effects are similar to those of X-rays, capable of causing carcinogenesis, mutation, and malformations. Substances such as organic pesticides, sulfur mustard, disinfectants, and sterilants can induce tumors of the hematopoietic organs and lung cancer

- B. Polycyclic aromatic hydrocarbons (PAHs)

3,4 Benzopyrene, prone to inducing skin and lung cancer

- C. Aminoazo compounds are dyes (textiles, food, and beverages)

Predisposes to bladder cancer and liver cancer

- D. Nitrosamines, which are associated with the development of esophageal, gastric, and liver cancers.

- E. Mycotoxins and phytotoxins

Aflatoxins (B1, B2), cycasin, safrole, etc.

- F. Others

Metal carcinogens (chromium, arsenic) --- Skin cancer

肿瘤的发病因素

- A、烷化剂

生物学作用类似X射线可致癌变、突变和畸变。如有机农药，硫芥，消毒剂、灭菌剂等可致造血器官肿瘤及肺癌等

- B、多环芳香烃类化合物

3、4苯并芘，易致皮肤癌与肺癌

- C、氨基偶氮类为染料类（纺织品、食品、饮料）

易诱发膀胱癌，肝癌

- D、亚硝胺类，与食管癌，胃癌和肝癌发生有关

- E、霉菌毒素和植物毒素

黄曲霉素（B1、B2），苏铁素，黄樟素等

- F、其它

金属致癌剂（铬、砷）---皮肤癌



Pathogenesis of tumors

- **Physical agents.**

- Ionizing radiation

- Radiation, skin cancer, leukemia

- Ultraviolet Rays

- skin cancer-inducing

- Others

- Long-standing deep burn scars are prone to malignant transformation. Chronic skin ulcers can lead to cutaneous squamous cell carcinoma, which is associated with local irritation.



肿瘤的发病因素

- **物理因素**

- 电离辐射

- 放射线·致皮肤癌·白血病

- 紫外线

- 致皮肤癌

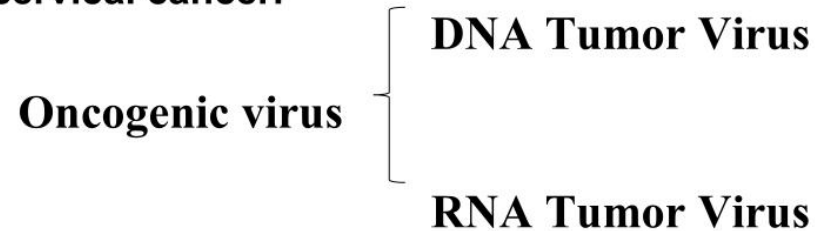
- 其它

- 烧伤深瘢痕长期存在易癌变·皮肤慢性溃疡可致皮肤鳞癌·与局部刺激有关

Pathogenesis of tumors

- Biological Factors

Viral factors, such as Epstein-Barr virus (EBV) in nasopharyngeal carcinoma, and recurrent infections of the herpes simplex virus (HSV) are associated with cervical cancer.



In addition, parasites are associated with tumors

Clonorchis sinensis— Liver cancer

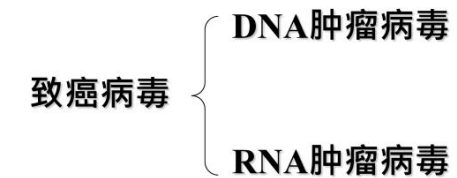
Egyptian Schistosomiasis—Bladder Cancer

Schistosomiasis—Colorectal Cancer

肿瘤的发病因素

- 生物因素

病毒因素，如EB病毒与鼻咽癌等，单纯疱疹病毒反复感染与宫颈癌有关。



此外，寄生虫与肿瘤有关

华支睾吸虫—肝癌

埃及血吸虫—膀胱癌

日本血吸虫病—大肠癌



Pathogenesis of tumors

- **Internal factor**
 - **genetic factors**

While there is no direct evidence of a relationship with human cancers, cancers exhibit a hereditary predisposition, also known as genetic susceptibility, as seen in familial colonic polyposis, breast cancer, and gastric cancer.



肿瘤的发病因素

- **内在因素**
 - **遗传因素**

与人类癌症的关系虽无直接证据，但癌症有遗传倾向性，即遗传易感性，如家族性结肠息肉病，乳癌，胃癌等。



Pathogenesis of tumors

Inherited tumors

- (1) Retinoblastoma is an autosomal dominant disorder; 40% are heritable, and there is a 50% chance of passing it on to the offspring.
- (2) Multiple Endocrine Neoplasia (MEN) Syndrome - a hereditary tumor syndrome with autosomal dominant inheritance that involves multiple endocrine organs. It is characterized by the occurrence of functional tumors in two or more endocrine glands, either simultaneously or sequentially.
- (3) Neuroblastoma- an autosomal hereditary tumor; 80% of cases occur before the age of 5.
- (4) Wilms tumor- a kidney tumor accounting for about 15% of childhood cancers; one-third of cases are associated with congenital malformations.



肿瘤的发病因素

遗传性肿瘤

- (1) 视网膜母细胞瘤--常染色体显性遗传，40%为遗传性，50%可遗传给下一代。
- (2) 多发性内分泌肿瘤病综合征(MEN)--累及多种内分泌器官的伴有常染色体显性遗传的遗传性肿瘤综合征，一般为两个或两个以上的内分泌腺体同时或先后发生功能性肿瘤。
- (3) 神经母细胞瘤--常染色体遗传，80%在5岁以前发病。
- (4) Wilm 瘤--肾脏肿瘤，占儿童肿瘤15%，1/3与先天畸形并存。



Pathogenesis of tumors

- **Hereditary precancerous lesions**
 - (1) Neurofibromatosis (NF)
 - (2) Familial polyposis coli (FPC) with an 80%–100% risk of colon cancer.
 - (3) Dysplastic Nevus Syndrome (B-K Mole Syndrome) Familial Atypical Multiple Mole Melanoma Syndrome (FAMMM)syndrome, a precancerous lesion of malignant melanosis.



肿瘤的发病因素

- 遗传性肿瘤前病变
 - (1)神经纤维瘤病(NF)
 - (2)家族性结肠息肉病(FPC)80%-100%可发生结肠癌。
 - (3)发育异常痣综合征(B-K痣综合征)家族性不典型痣——恶性黑色素瘤综合征，为恶性黑色素病的癌前病变。



Pathogenesis of tumors

- **Currently, it is believed that environmental factors are the initiating factors in tumorigenesis, while individual genetic characteristics determine tumor susceptibility.**
 - **The genetic susceptibility to sporadic tumors remains not fully elucidated**
 - **In recent years, studies have found that certain susceptibility gene polymorphisms (such as single nucleotide polymorphisms) are closely associated with the risk of some common sporadic tumors.**
- **Hereditary familial tumor syndrome**
 - **with obvious familial clustering**
 - **Early onset, often multiple primary cancers, often accompanied by other abnormalities (deformities, hypofunction, etc.)**
 - **Genetic abnormalities can be detected in somatic cells**
 - **Hereditary tumors account for a very small proportion of overall tumor incidence; the vast majority of cancers result from the interplay between environmental factors and individual genetic susceptibility**



肿瘤的发病因素

- **目前认为，环境因素是肿瘤发生的始动因素，而个人的遗传特征决定肿瘤的易感性**
 - **散发性肿瘤的遗传易感性尚未完全阐明**
 - **近年来研究发现一些易感基因多态性与常见的一些散发性肿瘤的风险密切相关（如单核苷酸多态性等）**
- **遗传性家族性肿瘤综合症**
 - **具有明显的家族聚集现象**
 - **发病年龄早、常有多发原发癌，常伴有其他异常（畸形、功能低下等）**
 - **能在体细胞中检测出基因的异常**
 - **遗传性肿瘤在整个肿瘤发病率中占极少比例，绝大多数肿瘤是环境因素和个体遗传易感因素共同作用的结果**



Pathogenesis of tumors

- **3. Endocrine factors**

Among the hormones associated with tumorigenesis, the most clearly defined are estrogens. For instance, estrogen and prolactin are linked to breast cancer, and endometrial cancer is also associated with estrogen.

- **4. Immune factors**

Patients with congenital or acquired immunodeficiency are highly susceptible to malignant tumors. Furthermore, there are other factors involved in tumorigenesis, such as nutrition, trace elements, and psychological factors.



肿瘤的发病因素

- **3、内分泌因素**

与肿瘤发生有关的激素，较明确的激素为雌激素，如雌激素及催乳素与乳癌有关，子宫内膜癌与雌激素也有关。

- **4、免疫因素**

先天或后天免疫缺陷者易发生恶性肿瘤
关于肿瘤发生还有其它方面因素，如营养，微量元素，精神因素等。

Pathogenesis of tumors

- Smoking and drinking
 - Smoking is the main risk factor for malignant tumors, such as oral cavity, pharynx, larynx, lung, esophagus, bladder, pancreas, liver, kidney, etc.
 - According to WHO estimates, 16% of malignancies can be attributed to tobacco, of which 71% of lung cancer and 59% of laryngeal cancer deaths can be attributed to tobacco
 - There is a significant dose-effect relationship between the degree of harm caused by smoking and the beginning of smoking early, smoking for a long time, and smoking a large amount of cigarettes.
 - China is the world's largest tobacco consumer, with adult male and female smoking rates of 67.0% and 4.1%, respectively, and a passive smoking rate of 53.5%. Smoking is the biggest risk factor for cancer in China.
 - Alcohol consumption was significantly related to the occurrence of malignant tumors in the oral cavity, pharynx, larynx, esophagus, and large intestine, and was dose-related. There are also studies confirming that drinking alcohol increases the risk of breast cancer.

肿瘤的发病因素

- 吸烟饮酒
 - 吸烟是恶性肿瘤最主要的发病危险因素，是口腔、咽、喉、肺、食管、膀胱、胰腺、肝、肾等部位恶性肿瘤的主要危险因素
 - 据 WHO 估计，16% 的恶性肿瘤可归因于烟草，其中 71% 的肺癌和 59% 的喉癌死亡可归因于烟草
 - 吸烟危害程度与开始吸烟早、吸烟时间长、吸烟量大有明显的剂量效应关系
 - 中国是世界上最大的烟草消费国家，成年男性和女性吸烟率分别达 67.0% 和 4.1%，被动吸烟率高达 53.5%，吸烟是我国癌症最大危险因素
 - 饮酒与口腔、咽、喉、食管、大肠的恶性肿瘤发生有明显关系，且呈剂量相关性。还有研究证实饮酒增加乳腺癌风险

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Diagnosis of tumors

- **Pathological Diagnosis**
- **Molecular Marker Diagnostics**
- **Imaging/Endoscopic Diagnostics**
- **Clinical Diagnosis**
- **Clinical Staging and Evaluation**



肿瘤的诊断

- 病理学诊断
- 分子标志物诊断
- 影像学/内窥镜诊断
- 临床诊断
- 临床分期与评估

Tumor Diagnosis - Pathological Diagnosis

- **Histological diagnosis (paraffin section, frozen section)** To truly establish the diagnosis and distinguish whether the tumor is benign or malignant, it is necessary to rely on pathological examination, especially tissue section examination
 - **General specimen:** surgical resection of tissue
 - **Biopsy specimens:** outpatient surgical excision biopsy, excision biopsy, endoscopic biopsy
- **Cytological Diagnosis:**
 - **Exfoliative cytology:** sputum, urine, vaginal fluid, nipple secretion, cervical scraping, esophageal stretch smear, pleural ascites, pericardial fluid, bronchoalveolar lavage fluid, intraoperative abdominal and pelvic irrigation fluid
 - **Aspiration Cytology :** Fine needles (diameter $\leq 1\text{mm}$) are used to aspirate cell smears into tumor bodies. Tumors that can be palpable on the surface of the body can be punctured directly (lymph nodes, thyroid glands, salivary glands, breast glands, prostate glands, limb masses). Deep organ tumors can be punctured with imaging assistance (liver, spleen, mediastinum, lungs, breast glands, brain).
 - **Advantages of cytology diagnosis:** Simple procedure, specimens are easy to obtain, minimally invasive and causes little harm to the patient
 - **Disadvantages:** limited sample size, lack of tissue architecture, less accurate than histological diagnosis. At present, cytology is mainly used for auxiliary diagnosis and screening for suspicious lesions. When a cytological examination reveals cancerous or suspected cancerous cells, a tissue biopsy should be scheduled as soon as possible to further confirm

肿瘤的诊断 —— 病理学诊断

- 组织学诊断（石蜡切片、冷冻切片）要真正确立诊断并分辨出肿瘤为良性或恶性，必须靠病理检查，尤其是组织切片检查
 - 大体标本：手术切除组织
 - 活检标本：门诊手术切取活检、切除活检，内窥镜活检
- 细胞学诊断
 - 脱落细胞学：痰液、尿液、阴道液、乳头分泌物、宫颈刮片、食管拉网涂片、胸腹水、心包液、支气管肺泡灌洗液、术中腹腔冲洗液
 - 穿刺细胞学：细针（直径 $\leq 1\text{mm}$ ）刺入肿瘤实体内吸取细胞涂片的方法，对体表可触及的肿瘤可直接穿刺（淋巴结、甲状腺、唾液腺、乳腺、前列腺、肢体肿块），深部脏器肿瘤可在影像学协助下穿刺（肝、脾、纵隔、肺、乳腺、脑）
 - 细胞学诊断优点：方法简单，容易取得标本，病人伤害小
 - 缺点：取材少，缺乏组织结构，精确性不及组织学诊断。目前细胞学检查主要用于辅助诊断及可疑病灶的筛检。当细胞学检查发现癌细胞或疑似癌细胞之细胞时，应尽速安排组织切片检查以进一步确认



Tumor Diagnosis - Molecular Marker Diagnosis

- Tumor biomarker
 - Diagnostic
 - Therapeutic
 - ✓ Predictive
 - ✓ Prognostic
- Ideal diagnostic tumor markers should meet the following conditions
 - High sensitivity
 - High specificity
 - Correlation with tumor metastasis and degree of malignancy
 - Correlation with tumor size
 - Short half-life, quickly decreasing after effective treatment and promptly reflecting therapeutic response.
 - Presence in bodily fluids, making it easy to detect through minimally invasive testing.



肿瘤的诊断 —— 分子标志物诊断

- 肿瘤生物标志物 (biomarker)
 - 诊断性
 - 治疗性
 - ✓ 预测性
 - ✓ 预后性
- 理想的诊断性肿瘤标志物应符合以下几个条件
 - 敏感性高
 - 特异性强
 - 与肿瘤的转移、恶性程度有关
 - 与肿瘤大小有关
 - 半衰期短，有效治疗后很快下降，较快反映疗效情况
 - 存在于体液中，易于检测

Tumor Diagnosis - Molecular Marker Diagnosis

Common tumor biomarkers are extremely useful

Tumor Marker	Related organs and main application areas
Alpha-fetoprotein (AFP)	Hepatocellular carcinoma and spermat
CA125	Ovarian cancer
CA199	Pancreatic cancer
CA724	Gastric cancer
CA153	Breast cancer
Calcitonin	Thyroid medullary carcinoma
Human carcinoembryonic antigen CEA	Colorectal cancer
Chorionic Gonadotropin	Non-seminogenic tumors (embryonic carcinoma, teratoma, chorionic cell carcinoma, yolk sac tumor), seminogenic tumors
Estrogen receptor ER	Evaluation of efficacy and prognosis of endocrine therapy for breast cancer
Progesterone Receptor PR	Evaluation of efficacy and prognosis of endocrine therapy for breast cancer
Prostate-Specific Antigen (PSA)	Prostate cancer
Squamous cell carcinoma antigen SCCA	Squamous cell carcinoma (esophageal, lung, bladder, cervix)
Tissue polypeptide antigen TPA	Multiple tumors
Neurogenic Specific Enolase NSE	Small cell lung cancer, neuroblastoma

肿瘤的诊断 —— 分子标志物诊断

常用的肿瘤生物标志物极其应用范围

肿瘤标志物	相关器官与主要应用范围
甲胎蛋白 AFP	肝癌和精原细胞瘤
CA125	卵巢癌
CA199	胰腺癌
CA724	胃癌
CA153	乳腺癌
降钙素	甲状腺髓样癌
人癌胚抗原 CEA	结直肠癌
绒毛膜促性腺激素	非精原细胞瘤（胚胎瘤、畸胎瘤、绒毛膜细胞癌、卵黄囊肿瘤）、精原细胞瘤
雌激素受体 ER	乳腺癌内分泌治疗的疗效评估和预后判断
孕激素受体 PR	乳腺癌内分泌治疗的疗效评估和预后判断
前列腺特异性抗原 PSA	前列腺癌
鳞状细胞癌抗原 SCCA	鳞状细胞癌（食管癌、肺癌、膀胱癌、子宫颈癌）
组织多肽性抗原 TPA	多种肿瘤
神经源性特异性烯醇化酶NSE	小细胞肺癌、神经母细胞瘤

Tumor Diagnosis - Imaging/Endoscopic Diagnosis

- Computer tomography (CT)
 - Plain Scan
 - Contrast-enhanced scan: scan performed after the intravascular injection of contrast agent to increase the density difference between pathological tissues and normal tissues.
 - Specialized scans: Thin-slice scan ($\leq 5\text{ mm}$), overlapping scan, target scan, high-resolution scan
 - Spiral CT
- Magnetic Resonance Imaging (MRI)
 - Utilizes the magnetic resonance of hydrogen nuclei in the human body after being exposed to radiofrequency pulses to receive and process signals for imaging
 - Advantages: No ionizing radiation, safe and non-invasive, high resolution for brain and soft tissue, multi-directional and multi-parameter imaging

肿瘤的诊断 —— 影像学/内窥镜诊断

- 计算机体层成像 (CT)
 - 平扫
 - 增强扫描: 血管内注射对比剂后再进行扫描, 提高病变组织与正常组织的密度差
 - 特殊扫描: 薄层扫描 ($\leq 5\text{mm}$), 重叠扫描, 靶扫描, 高分辨率扫描
 - 螺旋 CT
- 磁共振成像 (MRI)
 - 利用人体内氢原子核在受到射频脉冲后的磁共振进行信号接受、处理成像
 - 优势: 无电离辐射, 安全无创, 对脑和软组织分辨率高, 可多方位多参数成像



Tumor Diagnosis - Imaging/Endoscopic Diagnosis

- **Nuclear medicine (SPECT, PET):** Single-Photon Emission Computed Tomography (SPECT) and Positron Emission Tomography (PET) are two CT techniques in nuclear medicine. Since they are both gamma-ray imaging emitted from the patient, they are collectively referred to as emission-type computed tomography (ECT). It reflects the metabolic and functional state of the organs, dynamic imaging, high sensitivity and specificity; but poor spatial resolution
- **PET-CT:** It is a combination of pet (functional metabolic imaging) and CT (anatomical imaging). CT provides accurate anatomical location of the lesion. pet provides detailed functional and metabolic molecular information of the lesion. It has the characteristics of sensitivity, accuracy, specificity and accurate location. A single imaging can obtain tomographic images of all parts of the body. At a glance, it can understand the overall situation of the body at a glance, so as to achieve the purpose of early detection of the lesion and diagnosis of the disease.
- **Endoscopy:** esophagoscopy, bronchoscopy, gastroscopy, colonoscopy, cystoscopy, laparoscopy, etc.



肿瘤的诊断 —— 影像学/内窥镜诊断

- **核医学 (SPECT, PET):** 单光子发射计算机断层成像术(Single-Photon Emission Computed Tomography, SPECT)和正电子发射断层成像术(Positron Emission Tomography, PET)是核医学的两种CT技术, 由于它们都是对从病人体内发射的 γ 射线成像, 故统称发射型计算机断层成像术ECT。其反映脏器代谢和功能状态, 动态显像, 灵敏度、特异性较高; 但空间分辨率较差
- **PET-CT:** 是将PET (功能代谢显像)、CT (解剖结构显像) 两个技术相融合, 由CT提供病灶的精确解剖定位, 而PET提供病灶详尽的功能与代谢等分子信息, 具有灵敏、准确、特异及定位精确等特点, 一次显像可获得全身各方位的断层图像, 一目了然的了解全身整体状况, 达到早期发现病灶和诊断疾病的目的。
- **内窥镜检查:** 食管镜、支气管镜、胃镜、结肠镜、膀胱镜、腹腔镜等。



Tumor Diagnosis - Clinical Diagnosis

Ask medical history: gender, age, main complaint, current medical history, past history, family history

Physical Examination

- **Local manifestations:** lumps, blockages, compression, local destruction, pain, pathological secretions, ulcers
- **Systemic manifestations:** cachexia (fever, progressive wasting, anemia, fatigue), jaundice
- **Tumor accompanying syndrome occurs in approximately 15% of patients with advanced tumors.** In addition to the clinical manifestations caused by the primary tumor and/or metastasis, the abnormal bioactive substances produced by the tumor cause the patient's systemic clinical manifestations, also known as "paraneoplastic syndrome".
 - ✓ **Skin and connective tissue:** pruritus, black acanthosis, dermatomyositis, erythema erythema pepticum, herpes zoster
 - ✓ **Pulmonary osteoarthritis**
 - ✓ **Nervous system:** polymyositis, peripheral neuritis, myasthenia syndrome
 - ✓ **Cardiovascular:** migratory thrombophlebitis, non-bacterial thrombotic endocarditis
 - ✓ **Endocrine metabolism:** hypercortisolism, hypercalcemia, hypoglycemia, hyperglycemia, hyponatremia, carcinoid syndrome
 - ✓ **Blood system:** chronic anemia, erythrocytosis, leukoid reactions, fibrinolytic purpura, thrombocytosis



肿瘤的诊断 —— 临床诊断

- 询问病史：性别、年龄、主诉、现病史、既往史、家族史
- 体格检查
 - 局部表现：肿块、阻塞、压迫、局部破坏、疼痛、病理性分泌物、溃疡
 - 全身表现：恶病质（发热、进行性消瘦、贫血、乏力）、黄疸
 - 肿瘤伴随综合征，约有15%的晚期肿瘤患者可出现。除了肿瘤原发和或转移引起的临床表现外，由肿瘤产生的异常生物活性物质引起患者的全身临床表现的统称，也称“副瘤综合征”
 - ✓ 皮肤与结缔组织：瘙痒、黑棘皮病、皮炎、葡行性回状红斑、带状疱疹
 - ✓ 肺源性骨关节增生
 - ✓ 神经系统：多发性肌炎、周围神经炎、肌无力综合征
 - ✓ 心血管：游走性血栓性静脉炎、非细菌性血栓性心内膜炎
 - ✓ 内分泌代谢：皮质醇增多症、高钙血症、低血糖症、高血糖症、低钠血症、类癌综合征
 - ✓ 血液系统：慢性贫血、红细胞增多症、类白血病反应、纤维蛋白溶解性紫癜、血小板增多



Tumor Diagnosis - Clinical Diagnosis

Routine examination

- leukemia
- Urine (urological neoplasms, gynecologic neoplasms, multiple myeloma)
- Gastrointestinal bleeding

Imaging studies

- X-ray, CT, MRI, ultrasound, SPECT, pet
- Esophagoscope, bronchoscope, gastroscope, colonoscope, cystoscope, laparoscope

Molecular/immunological examination: tumor markers

- **Diagnostic surgery:** For visceral masses, the nature of the lesion cannot be determined after diagnosis using various methods currently available, and the possibility of tumor is suspected. For early diagnosis and timely treatment, diagnostic surgery can be considered, and tumor resection can also be performed at the same time.



肿瘤的诊断 —— 临床诊断

常规检查

- 血（白血病）
- 尿（泌尿系肿瘤、妇科肿瘤、多发性骨髓瘤）
- 大便（胃肠道出血）

影像学/内窥镜检查

- X线摄片、CT、MRI、超声、SPECT、PET
- 食管镜、支气管镜、胃镜、结肠镜、膀胱镜、腹腔镜

分子/免疫学检查：肿瘤标志物

- **诊断性手术：**对于内脏肿块，使用目前可以应用的各种方法诊断后仍不能确定病变的性质，同时疑有肿瘤可能，为了早期诊断和及时治疗，可考虑诊断性手术，也可同时做肿瘤切除

Tumor Diagnosis - Clinical Staging

Taking the aforementioned various examination methods to the patient, once the diagnosis of malignant tumor is confirmed, it is necessary to accurately estimate the tumor extension range before formulating the treatment plan, that is, to perform clinical staging.

Significance of clinical stage of tumor

- Develop a reasonable treatment plan according to the stage, objectively evaluate the efficacy, and correctly judge the prognosis
- Compare treatments to facilitate exchange of experience

Generic Oncology Clinical Staging TNM Pre-Treatment Clinical Staging for UICC

- Pre-treatment clinical staging (commonly referred to as TNM staging)
- Post-operative pathologic stage (also known as pTMN)

Basic principle: Once you have defined the categories of T, N, M and/or pT, pN, pM, combine them into phases

What is the relationship and difference between clinical staging and pathological grading?

- The pathological grade reflects the degree of malignancy of the tumor, and the clinical stage reflects the morning and evening of the patient's malignancy and the degree of harm to the patient.
- The combination of the two is conducive to making the right diagnosis, selecting the right treatment, and estimating the patient's prognosis.

肿瘤的诊断 —— 临床分期

- 对患者采取前述的各种检查方法，一旦确诊为恶性肿瘤，在制订治疗方案之前，必需准确的估计肿瘤扩展范围，即进行临床分期
- 肿瘤临床分期的意义
 - 根据分期制订合理的治疗方案，客观的评估疗效，正确的判断预后
 - 比较各种治疗方法，促进经验交流
- 通用的肿瘤临床分期为 UICC 的 TNM 治疗前临床分期
 - 治疗前临床分期（常规所说的TNM分期）
 - 手术后的病理分期（又称为pTMN）
- 基本原则：定妥T, N, M和/或pT, pN, pM的类别后, 再将它们组合成期别
- 临床分期与病理分级有什么关系与不同？
 - 病理分级反映肿瘤的恶性程度，临床分期反映患者患恶性肿瘤的早晚、对患者造成危害的程度
 - 二者结合起来有利于作出正确的诊断，选择合适的治疗方法，估计患者的预后

Diagnosis of tumors - TNM staging

- **T :**
 - **T_x** (Primary tumor cannot be estimated)
 - **T₀** (no evidence of primary tumor)
 - **Tis**(carcinoma in situ)
 - **T₁** (small tumor)
 - **T₂, T3** (medium-sized tumor)
 - **T₄** (Large tumor)
- **N:** Refers to the presence or absence of regional lymph node metastases
 - **N_x** (local lymph nodes not detected)
 - **N₀** (no local lymph node metastases)
 - **N₁, N₂, N₃** (indicating a gradual increase in the number of local lymph nodes involved)
- **M:** Refers to the presence or absence of distant metastases
 - **M_x** (unable to estimate presence of distant metastases)
 - **M₀** (no distant metastases found)
 - **M₁** (presence of distant metastases)

肿瘤的诊断 —— TNM分期

- **T (肿瘤大小)**
 - **T_x** (原发肿瘤无法估计)
 - **T₀** (无原发肿瘤的证据)
 - **Tis** (原位癌)
 - **T₁** (小肿瘤)
 - **T₂, T3** (中等大小的肿瘤)
 - **T₄** (大肿瘤)
- **N: 指有或无 区域淋巴结转移**
 - **N_x** (局部淋巴结未检出)
 - **N₀** (无局部淋巴结转移)
 - **N₁, N₂, N₃** (表示累及的局部淋巴结数目逐渐增多)
- **M: 指有或无远处转移**
 - **M_x** (无法估计是否存在远隔转移)
 - **M₀** (未发现远隔转移)
 - **M₁** (存在远隔转移)

Tumor Diagnosis - Clinical Evaluation (Performance Status Score)

WHO	Rating	Rating	Karnofsky
Normal activity	0	100	Normal, asymptomatic and signs
Symptomatic, but almost completely free to move	1	90	Performs normal activities with mild signs and symptoms
		80	Barely able to lead a normal life with some signs or symptoms
		70	Self-care, but unable to maintain normal activities or work
Sometimes in bed, but not more than 50% of the time during the day	2	60	Occasionally need help, but most of the time on their own
		50	Frequently in need of help or medical attention
Need to stay in bed, stay in bed more than 50% of the time during the day	3	40	I can't take care of myself and need special care and help
		30	Seriously unable to take care of themselves and must be hospitalized, but there is no risk of death
Bedridden	4	20	Critical, requiring hospitalization and active supportive care
		10	Fall critically ill
Fatal	5	0	Fatal

肿瘤的诊断 —— 临床评估（体力状态评分）

ECOG (WHO)	评分	评分	Karnofsky
正常活动	0	100	正常、无症状和体征
有症状，但几乎完全可自由行动	1	90	能进行正常活动，有轻微症状和体征
		80	勉强可进行正常生活，有一些症状或体征
		70	生活可自理，但不能维持正常活动或工作
有时卧床，但白天卧床时间不超过50%	2	60	偶尔需要扶助，但大多数时间可自理
		50	常需人帮助或医疗护理
需要卧床，卧床时间白天超过50%	3	40	生活不能自理，需要特别护理和帮助
		30	生活严重不能自理，须住院，但无死亡危险
卧床不起	4	20	危重，需住院积极支持治疗
		10	病危，临近死亡
死亡	5	0	死亡

CONTENTS:

1. Epidemiology of tumors 肿瘤的流行病学
2. Basic concepts and characteristics of tumors 肿瘤的基本概念和特征
3. Etiological factors of tumors 肿瘤的发病因素
4. Diagnosis of tumors 肿瘤的诊断
5. **Treatment of tumors 肿瘤的治疗**
6. Evaluation of therapeutic efficacy in tumors 肿瘤的疗效评估
7. Prevention of tumors 肿瘤的预防
8. Understanding of malignant tumors in TCM 中医对恶性肿瘤的认识
9. Etiology and pathogenesis of tumors in TCM 中医肿瘤的病因与病机
10. Tumor in TCM differentiation 肿瘤的中医辨证
11. Role of TCM in the malignant tumors treatment 中医在治疗恶性肿瘤中的作用
12. Clinical application of TCM in cancer treatment 中医在癌症治疗中的临床应用
13. Prevention of Cancer in TCM 中医的癌症预防
14. Hospice, Thanatology: End-of-life care / Palliative care 临终关怀





Treatment of tumors

- **Goals of Therapy**
- **Principles of treatment**
- **Treatment method**
- **Efficacy Evaluation**



肿瘤的治疗

- 治疗目标
- 治疗原则
- 治疗方法
- 疗效评估



Treatment of tumors - Therapeutic objectives

- **Cure**
 - Kill all tumor cells
 - Return to normal health
 - Achieve functional healing as soon as possible and with minimal damage
- **Response/appeasement**
 - Reduces tumor growth
 - Reduce pain or other symptoms
 - extend life
 - Quality of Life improvement



肿瘤的治疗 ——治疗目标

- **治愈**
 - 杀灭所有肿瘤细胞
 - 恢复正常健康
 - 尽快并尽量减少损伤的情况下，达成功能治愈
- **缓解/姑息**
 - 减少肿瘤的生长
 - 减轻疼痛或其他症状
 - 延长生命
 - 提高生活质量

Therapy for tumors -

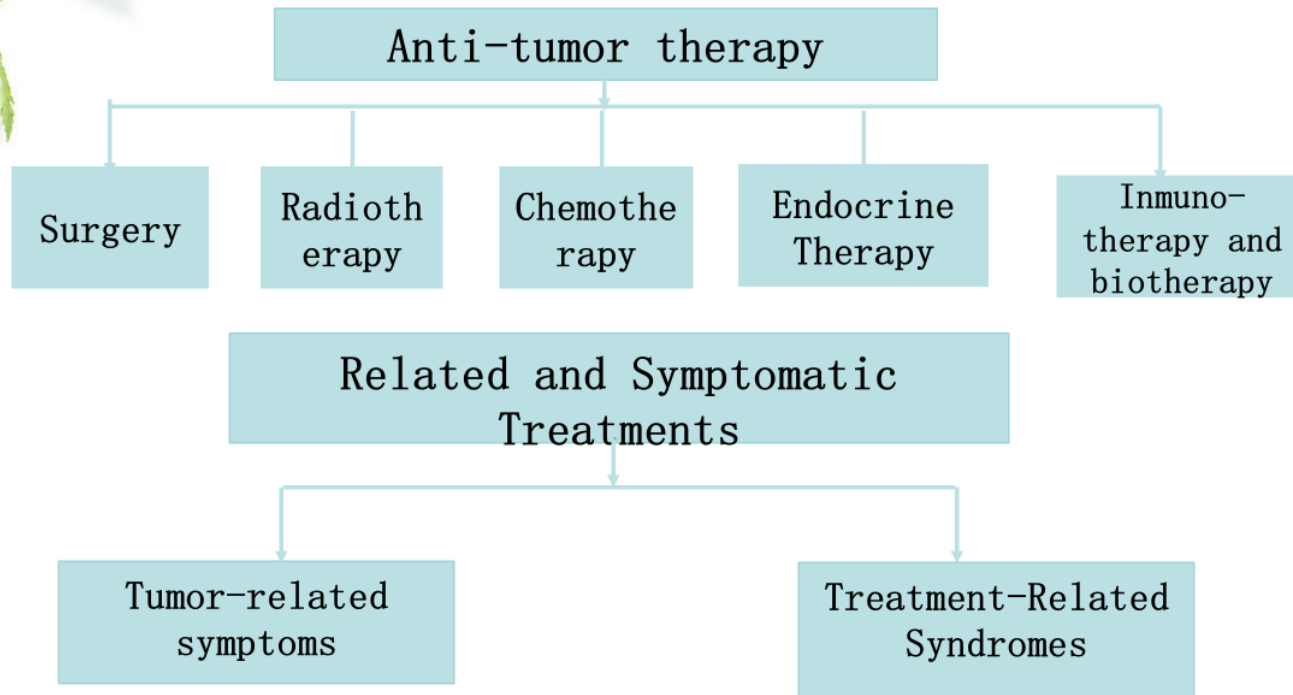
Therapeutic principles

- **Benign and borderline tumors:** mainly surgical resection. In particular, borderline tumors must be resected, otherwise they are prone to recurrence or malignancy.
- **Malignant tumors:** Develop a comprehensive treatment plan to treat metastatic lesions after controlling the primary lesion. The correctness of the first treatment of malignant tumors is closely related to the prognosis.
 - **Stage I: Surgery-based.**
 - **Stage II: local therapy, primary tumor resection or RT, and must include treatment of metastatic disease, supported by effective systemic chemotherapy.**
 - **Stage III: Preoperative, postoperative, and intraoperative radiation or chemotherapy.**
 - **Stage IV: There is systemic therapy, supplemented by local symptomatic treatment.**

肿瘤的治疗——治疗原则

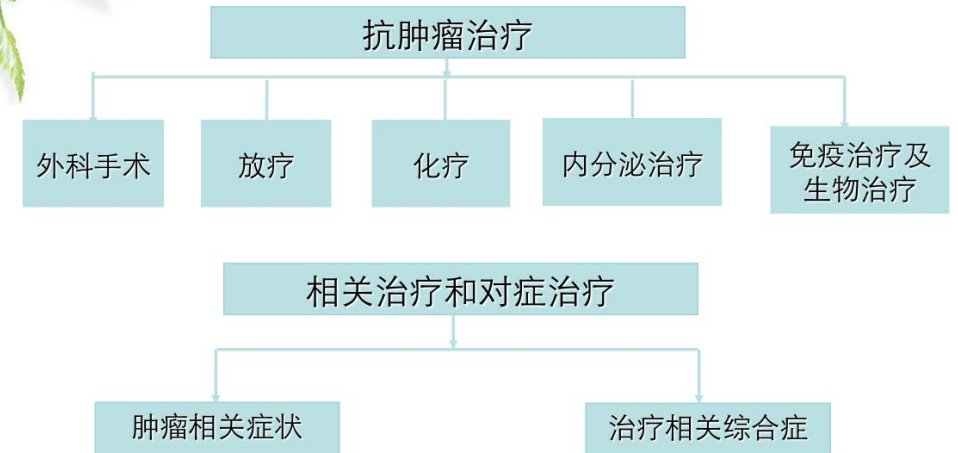
- **良性肿瘤及交界性肿瘤:** 以手术切除为主。尤其交界性肿瘤必须切除, 否则极易复发或恶性变。
- **恶性肿瘤:** 拟定综合治疗方案, 在控制原发病灶后, 进行转移灶的治疗。恶性肿瘤第一次治疗的正确与否对预后有密切关系。
 - **I期:** 手术为主。
 - **II期:** 局部治疗为主, 原发肿瘤切除或放疗, 并必须包括转移灶的治疗, 辅以有效的全身化疗。
 - **III期:** 手术前、后及术中放疗或化疗。
 - **IV期:** 有全身治疗为主, 辅以局部对症治疗。

Treatment of tumors - therapeutic methods



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肿瘤的治疗——治疗方法



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Treatment of tumors - surgical procedures

- **Status:** The earliest means used to treat tumors, the preferred method and only chance of cure for the vast majority of solid tumors, an important part of multidisciplinary comprehensive treatment



肿瘤的治疗 —— 外科手术

- **地位:** 最早用于治疗肿瘤的手段, 治疗绝大多数实体肿瘤的首选方法和唯一根治机会, 多学科综合治疗的重要组成部分

Treatment of tumors - surgical procedures

Therapeutic Principles of Oncology Surgery

Benign tumor: complete resection of the tumor to prevent local recurrence

Cancer

- ✓ Definitive Diagnosis
- ✓ Rationally develop a comprehensive treatment plan (in combination with radiation, chemotherapy, chemotherapy, chemoradiation, targeted therapy)
- ✓ Reasonable choice of technique
- ✓ Prevent iatrogenic spread (no excision, mass removal, tumor-free procedure)
- 1. **Non-cutting principle:** Do not cut the cancerous tissue directly during the operation, dissect it from the periphery to the center, and all operations should be performed in normal tissue far away from the cancerous tumor.
- 2. **Principle of mass resection:** The primary lesion and the lymph nodes in the region are subjected to continuous mass resection, and should not be resected separately.
- 3. **Principles OF tumor-free technology:** The purpose of tumor-free technology is to prevent the growth and metastasis of tumors during surgery. The main content is that no procedure in the surgery is in contact with the tumor itself, including local metastatic lesions.
- ✓ Documentation and post-operative follow-up

肿瘤的治疗 —— 外科手术

肿瘤外科的治疗原则

- 良性肿瘤：完整切除肿瘤，防止局部复发
- 恶性肿瘤
 - ✓ 明确诊断
 - ✓ 合理制订综合治疗计划（与放疗、化疗、放化疗、靶向治疗的结合）
 - ✓ 合理选择术式
 - ✓ 防止医源性播散（不切割、整块切除、无瘤操作）
- ① 不切割原则：手术中不直接切割癌肿组织，由四周向中央解剖，一切操作均应在远离癌肿的正常组织中进行。
- ② 整块切除原则：将原发病灶和所属区域淋巴结作连续性的整块切除，而不应将其分别切除。
- ③ 无瘤技术原则：无瘤技术的目的是，防止手术过程中肿瘤的种植和转移。其主要内容为：手术中的任何操作均不接触肿瘤本身，包括局部的转移病灶。
- ✓ 记录及术后随访

Treatment of tumors - Types of surgical procedures

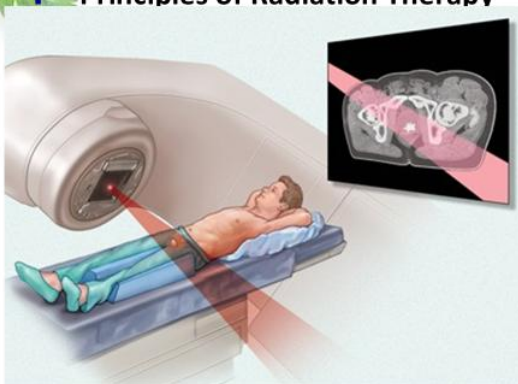
- **Radical surgery:** includes the removal of part or all of the organ in which the primary cancer is located, together with the surrounding normal tissue and regional lymph nodes; and the application of no-contact techniques to block the contamination or spread of tumor cells, ligating the return vein, etc.
- **Expanded radical resection:** Appropriate removal of nearby organs and regional lymph nodes based on the original radical treatment scope
- **Symptomatic or palliative surgery:** surgery to relieve or alleviate symptoms
- **Adjunctive surgery:** Adjunctive surgery is required in conjunction with other treatments
- **Reconstruction and rehabilitation surgery:** In order to improve the quality of life of oncology patients, reconstruction and rehabilitation surgery are increasingly valued.
- **Preventive surgery:** For diseases and precancerous lesions with potential malignant tendencies, resection is performed accordingly, with a view to preventing cancer from occurring.
- **Distant metastatic cancer resection:** Distant metastatic cancer belongs to advanced cancer and is difficult to cure surgically. However, clinically, some patients with metastatic cancer survive for a long time after surgery, so surgery for metastatic cancer cannot be ruled out. Solitary lung, liver, brain and bone metastases, with good results after resection
- **Recurrent cancer resection:** The treatment effect of recurrent cancer is also poor, but with other disciplines, surgical treatment can still obtain some effect.
- **Tumor reduction surgery:** When the tumor is large, malignant tumors that cannot be cured by surgery alone are removed for the most part, followed by other non-surgical treatments such as chemotherapy, radiotherapy, biological therapy, etc. to control residual tumor cells, called tumor reduction surgery

肿瘤的治疗 —— 外科手术的类型

- **根治手术:** 包括原发癌所在器官的部分或全部, 连同周围正常组织和区域淋巴结整块切除; 并应用不接触技术, 阻隔肿瘤细胞沾污或扩散, 结扎回流静脉等措施
- **扩大根治术:** 在原根治范围基础上, 适当切除附近器官及区域淋巴结
- **对症手术或姑息手术:** 以手术解除或减轻症状
- **辅助性手术:** 为了配合其它治疗, 需要作辅助性手术
- **重建与康复手术:** 为了提高肿瘤病者的生存质量, 重建和康复手术越来越受到重视
- **预防性手术:** 对于那些有潜在恶性趋向的疾病和癌前病变, 作相应的切除术, 以期防止癌症发生
- **远处转移癌切除术:** 远处转移癌属于晚期癌瘤, 难以手术治愈, 但临床上确有部分转移癌患者手术后获得长期生存, 故此对转移癌手术不能一概否定。孤立性肺、肝、脑、骨转移, 施行切除术后获得良好效果
- **复发性癌瘤切除术:** 复发性癌瘤治疗效果也很差, 但配合其它学科治疗, 其中手术治疗仍可获得一定疗效。
- **减瘤手术:** 当肿瘤体积较大, 单靠手术无法根治的恶性肿瘤, 作大部切除, 术后继以其他非手术治疗, 诸如化疗、放疗、生物治疗等以控制残留的肿瘤细胞, 称为减瘤手术

Treatment of tumors - radiotherapy

Principles of Radiation Therapy



Ionizing radiation is the general term for all radiation that can cause ionization of matter, including charged particles (alpha particles, beta particles, protons, heavy ions, etc.) and uncharged particles (X-rays, gamma rays, neutron rays, etc.)

Ionizing radiation is incident on human cells, collides with extra-nuclear electrons or nuclei inside cells, especially DNA molecules, or causes destruction of DNA structure by producing secondary particles

Radiation-sensitive tumors

- Reproductive System Neoplasms
- lymphoma
- Nasopharynx cancer
- Head and Face
- Small Cell Lung Carcinoma
- Breast cancer
- Central Nervous System Neoplasms
- Soft Tissue and Bone Malignancies
- Malign melanin tumour!

肿瘤的治疗 —— 放射治疗

放射治疗的原理



电离辐射是一切能引起物质电离的辐射的总称，包括带电粒子（ α 粒子、 β 粒子、质子、重离子等）和非带电粒子（X线、 γ 射线、中子射线等）

电离辐射入射到人体细胞，与细胞内尤其是 DNA 分子的核外电子或原子核发生碰撞作用，或通过产生次级粒子，导致 DNA 结构的破坏

放疗敏感的肿瘤

- 生殖系统肿瘤
- 淋巴瘤
- 鼻咽癌
- 头面部、皮肤鳞癌
- 小细胞肺癌
- 乳腺癌
- 中枢神经系统肿瘤
- 软组织 and 骨恶性肿瘤
- 恶性黑色素瘤



Treatment of tumors - radiotherapy

- **Type of RT**
 - **Radical RT**
 - ✓ Radiation therapy is preferred (head and face skin cancer, nasopharyngeal cancer, head and neck malignancies)
 - ✓ Radiation therapy as one of the main treatments (head and neck tumor, laryngeal cancer, spermatoma, breast cancer, lymphoma, esophageal cancer, lung cancer, etc.)
 - **Palliative RT**
- **Side effects of RT**
 - **Acute:** days to 1 week after initiation of RT (cell death, tissue edema inflammation);
Delayed: 2-3 months after RT (interstitial fibrosis)
 - **Systemic reactions:** fatigue, tiredness, decreased appetite, nausea, vomiting, mild bone marrow depression
 - **Local reactions:**
 - ✓ Skin (erythema, peeling, degeneration, etc.)
 - ✓ Radiation esophagitis, radioactive pulmonary fibrosis, radioactive liver disease, etc.



肿瘤的治疗 —— 放射治疗

- **放疗的类型**
 - **根治性放疗**
 - ✓ 放疗作为首选（头面部皮肤癌、鼻咽癌、头颈部恶性肿瘤）
 - ✓ 放疗作为主要治疗手段之一（头颈部肿瘤、喉癌、精原细胞瘤、乳腺癌、淋巴瘤、食管癌、肺癌等）
 - **姑息性放疗**
- **放疗的副作用**
 - **急性：**放疗开始后数天～1周（细胞死亡、组织水肿炎症）；**迟发性：**放疗后2～3个月（间质纤维化）
 - **全身反应：**乏力、疲倦、食欲减退、恶心、呕吐、骨髓轻度抑制
 - **局部反应：**放射损伤
 - ✓ 皮肤（红斑、脱皮、退行性变等）
 - ✓ 放射性食管炎、放射性肺纤维化、放射性肝病等



Treatment of tumors - chemotherapy

Objectives of Chemotherapy

- Cure the tumor
- Delayed tumor metastasis
- Symptom alleviation
- Minimize toxic side effects

Application of Chemotherapy

- As primary treatment: alone or in combination
- Adjuvant chemotherapy: Chemotherapy applied after local surgery or radiotherapy for malignant tumors in order to kill as many cancer cells as possible, improve the cure rate, and prolong survival
- Neoadjuvant chemotherapy: chemotherapy prior to local surgery or RT for malignancy, with the aim of shrinking the tumor and facilitating or increasing the chances of later local therapy

- Radically curable tumors with chemotherapy
 - choriocarcinoma, testicular spermatoma, malignant lymphoma, childhood acute leukemia, rhabdomyosarcoma, childhood neuroblastoma, nephroblastoma, etc.,
- Tumors curable by postoperative adjuvant chemotherapy
 - Breast cancer
- Advanced Tumors for which Chemotherapy Prolongs Survival
 - Significantly prolongs survival and improves quality of life by relieving symptoms, such as advanced breast cancer



肿瘤的治疗 —— 化学治疗

- 化疗的目标
 - 治愈肿瘤
 - 延缓肿瘤转移
 - 减轻症状
 - 尽量减少毒副反应
- 化疗的应用
 - 作为主要治疗：单用或联合用药
 - 辅助化疗：恶性肿瘤局部手术或放疗后应用的化疗，目的在于尽量杀死可能残存的癌细胞，提高治愈率，延长生存
 - 新辅助化疗：恶性肿瘤局部手术或放疗前应用的化疗，目的在于缩小肿瘤，为后期局部治疗提供便利或更多的机会
- 化疗可根治的肿瘤
 - 绒毛膜上皮癌、睾丸精原细胞瘤、恶性淋巴瘤、儿童急性白血病、横纹肌肉瘤、儿童神经母细胞瘤、肾母细胞瘤等，
- 术后辅助化疗能治愈的肿瘤
 - 乳腺癌
- 化疗可延长生存期的晚期肿瘤
 - 可明显延长生存期，缓解症状从而提高生活质量，如晚期乳腺癌



Therapy for Tumors - Principles of Chemotherapy

Principles of Chemotherapy

- Hinders the synthesis of deoxynucleotides, interferes with the synthesis of DNA (5FU, methotrexate, hydroxyurea, cytarabine, etc.)
- Cross-linking with DNA through alkylation destroys the structure and function of DNA (cyclophosphamide, nitrogen mustard, etc.)
- Interferes with the transcription process and hinders RNA synthesis (doxorubicin, actinomycin D, etc.)
- Inhibits topoisomerase, affects DNA synthesis, and causes DNA breaks (etoposide, camptothecins, etc.)
- Damage to the spindle and stagnation of mitosis (taxanes, vinblastines)

Characteristics of cytotoxicity of chemotherapeutic agents to tumor cells

- Primary Kinetic: Unit dose drugs do not kill a fixed number of cells, but a fixed proportion of cells
- Most drugs have a stronger effect on fast proliferating cells than slow proliferating cells (different degrees of killing for different phases)
- Antineoplastic drugs have a blocking effect on cell cycle progression (may weaken the effect of the drug, but are two separate concepts from the specific killing effect on the cell cycle)



肿瘤的治疗 —— 化疗的原理

化疗的原理

- 阻碍脱氧核苷酸的合成，干扰 DNA 的合成（5FU、甲氨蝶呤、羟基脲、阿糖胞苷等）
- 通过烷化作用与 DNA 交叉联结，破坏 DNA 的结构与功能（环磷酰胺、氮芥等）
- 干扰转录过程，阻碍 RNA 合成（多柔比星、放线菌素D等）
- 抑制拓扑异构酶，影响 DNA 合成，引起 DNA 断链（依托泊苷、喜树碱类等）
- 损伤纺锤体，使有丝分裂停滞（紫杉类、长春碱类）

化疗药物对肿瘤细胞杀伤的特点

- 一级动力学：单位剂量药物不是杀伤固定数量的细胞，而是杀伤固定比例的细胞
- 大多数药物对快增殖细胞的作用强于慢增殖的细胞（对不同时相的杀灭程度不同）
- 抗肿瘤药物对细胞周期进程有阻滞作用（可能会削弱药物的作用，但与对细胞周期特异性的杀伤作用是两个不同的独立概念）

Tumor Treatment - Chemotherapy Strategies

Classification of chemotherapy drugs

by cell cycle	Cell cycle specific drugs
	Cell cycle nonspecific drugs
By source and pharmacological action	Alkylating Agents
	Anti-tumor antibiotics
	Antimetabolites
	Plant Alkaloids
	Other (platinum, hormones, etc.)

Basic mechanism of action of traditional chemotherapeutic agents: cytotoxic/antiproliferative effects

肿瘤的治疗 —— 化疗策略

化疗药物的分类

按细胞周期分	细胞周期特异性药物
	细胞周期非特异性药物
按来源和药理作用分	烷化剂
	抗肿瘤抗生素
	抗代谢药
	植物碱类
	其他（铂类、激素等）

传统化疗药物的基本作用机理：细胞毒/抗细胞增殖作用

Tumor Treatment - Chemotherapy Strategies

Principles and Strategies for Chemotherapy

- **Combination chemotherapy: heterogeneity and drug resistance of tumor cells; selection of drugs with different mechanisms and time phases to prevent superposition of toxicity**
- **Appropriate dosage, schedule, sequence and route of administration**
- **Reasonable arrangement of different chemotherapy cycles: sequential, alternating, maintaining, consolidating**
- **Personalization**
 - ✓ Understand the patient's general condition and organ function to determine the dosage of the drug, taking into account all factors such as their previous chemotherapy efficacy, adverse reactions, etc.
 - ✓ Chemotherapy doses are mainly calculated based on the patient's kg/body weight or body surface area, and drugs are also calculated based on the area under the curve (AUC) covered by the drug metabolism curve.
 - ✓ During chemotherapy, dose intensity should be adjusted according to the degree of toxicity and efficacy of the drug

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肿瘤的治疗 —— 化疗策略

化疗的原则和策略

- 联合化疗：肿瘤细胞的异质性、耐药性；选用不同机制、时相药物，防止毒性的叠加
- 合适的剂量、时程、顺序和给药途径
- 不同化疗周期的合理安排：序贯、交替、维持、巩固
- 个体化
 - ✓ 了解患者的一般状况及脏器功能以确定药物的用量，兼顾其既往化疗有效性、不良反应等各个方面因素
 - ✓ 化疗剂量主要根据患者的公斤/体重或体表面积计算，也有药物根据药物代谢曲线所覆盖的曲线下面积 (AUC) 计算
 - ✓ 化疗过程中，应依据药物的毒性反应程度和疗效调整剂量强度

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Treatment of tumors - indications and contraindications for chemotherapy

Indication

- Preferred treatment for chemotherapy-sensitive tumors
- Preoperative or preradiotherapy chemotherapy can improve the cure rate of tumors (neoadjuvant)
- Tumors requiring adjuvant postoperative chemotherapy to improve cure rate
- Palliative chemotherapy in patients with advanced tumors or recurrent metastases after surgery or radiation therapy for which there is no indication of surgery or radiation
- Tumors treated with local chemotherapy with a special route of administration
- Tumor-induced superior vena cava compression, respiratory tract compression, and intracranial hypertension require acute chemotherapy to relieve symptoms

Contraindications

- Poor general condition (KPS score < 50 or EGCO PS > 2), failure, high fever, severe poor fluid quality
- People with severe impairment of vital organ functions such as liver, kidney, lung and cardiovascular functions
- Those with white blood cells below $3.5 \times 10^9/L$ or platelets below $80 \times 10^9/L$ or severe anemia that has not been corrected

Indications for withdrawal

- Hemogram decreased: white blood cells as low as $3.5 \times 10^9/L$ or platelets as low as $8 \times 10^9/L$
- Frequent vomiting affecting electrolyte balance; diarrhea more than 5 times/day or bloody diarrhea
- Pyrexia above $38^\circ C$ (except for tumor-induced pyrexia)
- Toxicity of vital organs such as myocardial damage, drug-induced hepatitis, nephritis or cystitis, gastrointestinal bleeding, perforation, chemical pneumonia or pulmonary fibrosis

肿瘤的治疗 —— 化疗的适应症和禁忌症

适应症

- 化疗敏感肿瘤的首选治疗
- 术前或放疗前化疗能提高治愈率的肿瘤（新辅助）
- 需要术后辅助化疗提高愈率的肿瘤
- 已无手术和放疗指征的晚期肿瘤或术后、放疗后复发转移者的姑息性化疗
- 采用特殊给药途径局部化疗的肿瘤
- 肿瘤引起的上腔静脉压迫、呼吸道压迫、颅内压增高者，需要急症化疗减轻症状

禁忌症

- 一般情况很差 (KPS评分<50分或 EGCO PS>2分)，或有衰竭、高热、严重恶液质状态者
- 肝、肾、肺和心血管功能等重要脏器功能严重障碍者
- 白细胞低于 $3.5 \times 10^9/L$ 或血小板低于 $80 \times 10^9/L$ 或严重贫血未被纠正者

停药指征

- 血象下降：白细胞低至 $3.5 \times 10^9/L$ 或血小板低至 $8 \times 10^9/L$
- 呕吐频繁影响电解质平衡；腹泻超过5次/日或有血性腹泻
- 发热超过 $38^\circ C$ 以上（除外由肿瘤引起的发热）
- 出现重要脏器的毒性，如心肌损害、药物性肝炎、肾炎或膀胱炎、消化道出血、穿孔、化学性肺炎或肺纤维化

Treatment of tumors - major side effects of chemotherapy and management

- Digestive system toxicity
 - Nausea and vomiting: occurs in 70-80% of patients. Acute (prophylactic antiemetics), delayed (symptomatic treatment after occurrence), anticipatory (anti-anxiety/depressive drugs)
 - Oral mucositis: about 40% incidence, 1-2 weeks after chemotherapy, can be repaired on its own
 - Diarrhea: 5-FU, irinotecan common, the incidence can reach 50 ~ 80%
- Bone marrow suppression
 - Most chemotherapy drugs have varying degrees of myelosuppression
 - granulocyte colony-stimulating factor, thrombopoietin
- Cardiotoxicity
 - Anthracycline, trastuzumab, bevacizumab, taxane
 - Related to cumulative dose (anthracyclines)
- Neurotoxicity
 - Central neurotoxicity (non-bacterial meningitis, chronic progressive hemiplegia, aphasia, dementia, etc.)
 - Peripheral neuritis: yew, platinum, vinblasts
- Skin toxicity
 - Hand-foot syndrome: mechanism is not clear, discontinuation can relieve
 - Alopecia
- Renal and bladder toxicity
 - Cisplatin
- Hepatotoxicity
 - Hepatocellular necrosis, liver fibrosis, venous occlusion
 - Hepatic insufficiency should be reduced or used with caution
- Pulmonary toxicity
 - There is no standard therapy for interstitial pneumonia, and timely discontinuation can relieve it

肿瘤的治疗 —— 化疗主要副作用及处理

- 消化系统毒性
 - 恶心呕吐：70~80% 患者会发生。急性（预防性应用止吐药）、迟发性（发生后予对症治疗）、预期性（抗焦虑/抑郁药）
 - 口腔黏膜炎：发生率约 40%，化疗后 1~2 周发生，可自行修复
 - 腹泻：5-FU、伊立替康常见，发生率可达 50~80%
- 骨髓抑制
 - 大多数化疗药物均有不同程度的骨髓抑制
 - 粒细胞集落刺激因子、促血小板生成因子
- 心脏毒性
 - 蒽环类、曲妥珠单抗、贝伐珠单抗、紫杉类
 - 与累积剂量有关（蒽环类）
- 神经毒性
 - 中枢神经毒性（非细菌性脑膜炎、慢性进展偏瘫、失语、痴呆等）
 - 外周神经炎：紫杉类、铂类、长春碱类
- 皮肤毒性
 - 手足综合征：机制尚不明确，停药可缓解
 - 脱发
- 肾和膀胱毒性
 - 顺铂
- 肝毒性
 - 肝细胞损伤坏死、肝纤维化、静脉闭塞
 - 肝功能不全者应减量或慎用肝损害药物
- 肺毒性
 - 间质性肺炎无标准疗法，及时停药可缓解

Treatment of tumors - endocrine therapy

- **Fundamental Principle**
 - Eliminate hormonal stimulation of hormone-dependent tumor cells
 - Decreased tumor size with relatively mild toxic side effects
 - Reducing Tumor-Related Symptoms
- **Mainly used for**
 - Breast, Prostate and Gynecologic Oncology
 - Partial Hematologic Oncology
 - Used for oedema, inflammatory reactions, nerf/tumor-induced cachexia (ex: medroxyprogesterone)
- **Related Drugs**
 - Estrogens: ethylstilbestrol, ethinylestradiol
 - Progesterone: medroxyprogesterone, medroxyprogesterone
 - Androgens: testosterone, fluorocarbon methyltestosterone, testosterone
 - Hormone antagonist: tamoxifen
 - Corticosteroids
 - Gonadotropin analogs: leuprolide, greserin
 - Aromatase inhibitors, including but not limited to: letrozole and anastrozole;

肿瘤的治疗 —— 内分泌治疗

- **基本原理**
 - 消除激素依赖的肿瘤细胞的激素刺激
 - 缩小肿瘤大小，且毒副作用相对较轻
 - 减轻肿瘤相关的症状
- **主要用于**
 - 乳腺癌、前列腺癌和妇科肿瘤
 - 部分血液学肿瘤
 - 用于水肿、炎症反应、纳差/肿瘤引起的恶液质 (如：甲孕酮)
- **有关药物**
 - 雌激素：乙烯雌酚、乙炔雌二醇
 - 孕激素：甲孕酮、甲地孕酮
 - 雄激素：睾酮、氟羟甲基睾丸素、睾内酯
 - 激素拮抗剂：三苯氧胺
 - 皮质类固醇：强的松
 - 促性腺激素类似物：亮丙瑞林、戈瑞舍林
 - 芳香化酶抑制剂：来曲唑、阿那曲唑



Treatment of Oncology - Interventional Therapy

- Transcatheter arterial perfusion chemotherapy
- Transcatheter arterial chemoembolization
- Ultrasound-guided intratumoral injection of anhydrous ethanol into hepatocellular carcinoma
- Percutaneous tumor ablation
- Radioactive Particle Placement



肿瘤的治疗 —— 介入治疗

- 经导管动脉灌注化疗术
- 经导管动脉化疗栓塞术
- 超声引导经皮肝癌无水乙醇瘤内注射
- 经皮肿瘤消融术
- 放射性粒子置入术

Tumor Therapy - Targeted Therapy

- Principles

- Anti-tumor drugs target different specific sites of the tumor (resulting in cell signal transduction and other biological pathway targets in the development process) to kill tumor cells, but have less impact on normal tissues, which is the most ideal treatment mode at present.

- Primary type of targeted therapy

- Signaling-related enzyme inhibitors (ectinib, gefitinib, erlotinib, sunitinib, sorafenib)
- Antiangiogenic drugs (bevacizumab)
- Monoclonal antibodies (panitumumab, cetuximab, rituximab)
- Drugs acting on the cell cycle (cyclin-dependent kinase inhibitors, mitotic Aurora kinase inhibitors)
- Other (protein kinase C inhibitor, histone deacetylase inhibitor)

肿瘤的治疗 —— 靶向治疗

- 原理

- 抗肿瘤药物靶向性地与肿瘤的不同特异性位点（发生发展过程得细胞信号转导和其他生物学途径靶标）发生作用从而杀死肿瘤细胞，而对正常组织影响较小，是目前最理想的治疗模式

- 靶向治疗的主要类型

- 与信号转导相关的酶抑制剂（埃克替尼、吉非替尼，厄洛替尼，舒尼替尼，索拉非尼）
- 抗血管生成药物（贝伐珠单抗）
- 单克隆抗体（帕尼单抗、西妥昔单抗、利妥昔单抗）
- 作用于细胞周期的药物（周期素依赖性激酶抑制剂、有丝分裂 Aurora 激酶抑制剂）
- 其他（蛋白激酶 C 抑制剂、组蛋白去乙酰化酶抑制剂）



Treatment of tumors - biologic therapy

■ Concept

- At present, the scope of oncology biotherapy is not completely unified. NCI is defined as: biotherapy is immunotherapy, which controls tumors or alleviates related side effects of tumor treatment by regulating the body's immune system.

■ Primary type of biologic therapy

- Active specific immunotherapy: tumor vaccine (tumor cell inactivation vaccine, dendritic cell vaccine, tumor peptide vaccine, unique vaccine)
- Adoptive immunotherapy (lymphokine-activated killer cells, tumor-infiltrating lymphocytes, cytokine-induced killer cells, donor lymphocyte infusion)
- Nonspecific immunomodulators (alpha interferon, interleukin-2, recombinant diphtheria toxin/IL-2 fusion protein, CTLA-4 monoclonal antibody)
- Immune checkpoint inhibitors such as nivolumab, pembrolizumab, etc.



肿瘤的治疗 —— 生物治疗

■ 概念

- 目前肿瘤生物治疗的范畴尚不完全统一，NCI的定义是：生物治疗即免疫治疗，通过调节机体的免疫系统来控制肿瘤或减轻肿瘤治疗的相关副作用

■ 生物治疗的主要类型

- 主动特异性免疫治疗：肿瘤疫苗（肿瘤细胞灭活疫苗、树突细胞疫苗、肿瘤多肽疫苗、独特型疫苗）
- 过继性免疫治疗（淋巴因子活化的杀伤细胞、肿瘤浸润性淋巴细胞、细胞因子诱导的杀伤细胞、供者淋巴细胞输注）
- 非特异性免疫调节剂（ α 干扰素、白介素-2、重组白喉毒素/IL-2 融合蛋白、CTLA-4 单抗）
- 免疫检查点抑制剂 纳武利尤单抗、帕姆单抗等

CONTENTS:

1. Epidemiology of tumors 肿瘤的流行病学
2. Basic concepts and characteristics of tumors 肿瘤的基本概念和特征
3. Etiological factors of tumors 肿瘤的发病因素
4. Diagnosis of tumors 肿瘤的诊断
5. Treatment of tumors 肿瘤的治疗
6. **Evaluation of therapeutic efficacy in tumors 肿瘤的疗效评估**
7. Prevention of tumors 肿瘤的预防
8. Understanding of malignant tumors in TCM 中医对恶性肿瘤的认识
9. Etiology and pathogenesis of tumors in TCM 中医肿瘤的病因与病机
10. Tumor in TCM differentiation 肿瘤的中医辨证
11. Role of TCM in the malignant tumors treatment 中医在治疗恶性肿瘤中的作用
12. Clinical application of TCM in cancer treatment 中医在癌症治疗中的临床应用
13. Prevention of Cancer in TCM 中医的癌症预防
14. Hospice, Thanatology: End-of-life care / Palliative care 临终关怀



Tumor Efficacy Evaluation

- RECIST 1.0 was first introduced at the 1999 ASCO conference in the United States

- The new version of RECIST 1.1, published in 2009, is evidence-based, literature-based, but still based on tumor-based anatomical imaging

- Measurable lesions (at least one measurable lesion is required)

- With conventional techniques, precisely measurable lesions with a lesion diameter length $\geq 20\text{mm}$ or spiral CT $\geq 10\text{mm}$

- Non-measurable lesions

- All other lesions (including small lesions ie conventional techniques with a long diameter $< 20\text{mm}$ or spiral CT $< 10\text{mm}$)
- Includes bone lesions, meningeal lesions, ascites, pleural effusion, pericardial effusion, inflammatory breast cancer, cancerous lymphangitis of the skin or lung, abdominal masses that cannot be diagnosed with imaging and follow-up, and cystic lesions

- Measurement method

- CT/MRI: 10mm for thoracoabdominal and pelvic cavity, 5mm for spiral CT, currently best and repeatable follow-up
- Superficial lesion photos, endoscopes, ultrasound, etc.: There are many restrictions on the application

肿瘤的疗效评估

- 1999 年美国 ASCO 会议首次介绍 RECIST 1.0

- 2009 年颁布新版 RECIST 1.1, 具有循证性, 以文献为基础, 但仍以基于肿瘤的解剖成像为基础

- 可测量病灶 (至少需具有一个可测量病灶)

- 用常规技术, 病灶直径长度 $\geq 20\text{mm}$ 或螺旋CT $\geq 10\text{mm}$ 的可精确测量的病灶

- 不可测量病灶

- 所有其它病变 (包括小病灶即常规技术长径 $< 20\text{mm}$ 或螺旋CT $< 10\text{mm}$)
- 包括骨病灶、脑膜病变、腹水、胸水、心包积液、炎症乳腺癌、皮肤或肺的癌性淋巴管炎、影像学不能确诊和随诊的腹部肿块和囊性病灶

- 测量方法

- CT/MRI: 胸腹盆腔用 10mm , 螺旋CT用 5mm 层面连续扫描, 目前最好并可重复随诊
- 表浅病灶照片、内窥镜、超声等: 应用限制较多



Tumor Efficacy Evaluation

- Preliminary estimate of total tumor burden and measurable lesions
 - Generally, tumors that can be measured to the longest diameter and can be tracked and evaluated over a long period of time are regarded as "target/target" lesions.
 - Other tumors are called "non-target/target" lesions, which can be recorded without measurement, but their presence or disappearance should be recorded.
- Measurable target lesion
- At least one target lesion
 - Should represent all involved organs, up to 5 target lesions per organ, up to 10 total lesions
 - The longest diameter of all target lesions is added together as a baseline for an effective response
- Non-target lesions
 - All other lesions, lesions that do not need to be measured are noted for their presence or disappearance during follow-up
 - Record exists or disappears



肿瘤的疗效评估

- 初估肿瘤的总负荷及可以测量的病变
 - 一般把能测量到最长直径并能长期追踪及测量评估的肿瘤，作为“目标/靶”病变
 - 其它的肿瘤称为“非目标/靶”病变，可记录不必测量，但其存在或消失，都应有记载
- 可测量的目标病灶
- 至少有一个目标病变
 - 应代表所有累及的器官，每个脏器最多 5 个标的病变，全部病灶总数最多 10 个
 - 所有目标病灶最长直径加在一起作为有效缓解的基线
- 非目标病灶
 - 所有其它病灶，不需测量的病灶在随诊期注意其存在或消失
 - 记录存在或消失

Tumor Efficacy Evaluation

Target lesions: All tracked tumors that need to be measured and must be summarized and classified in:

- CR: Tumor completely disappeared or no new tumor appeared, tumor index decreased to normal, no change within 4 weeks
- PR: $\geq 30\%$ reduction in total number of single or multiple maximum diameters for four weeks
- SD: The tumor has shrunk, but it has not reached the level of PR; the tumor has grown, and it has not yet reached the level of PD
- PD: $\geq 20\%$ increase in the total number of longest diameters of a single or several tumors, or the appearance of new tumors

Non-target lesion tumors can be used as a reference, but are not included in the calculation of the primary tumor

- CR: disappearance of all lesions and normal tumor markers for 4 weeks
- SD: 1 or more lesions and/or marker abnormalities
- PD: 1 new lesion or/and progression of non-target lesion

Confirmation of efficacy

- Tumor assessment frequency: every 2 cycles (6-8 weeks)
- Reviewed at least 4 weeks after the first CR/PR review
- SD patients have at least one SD at 6-8 weeks post-treatment

肿瘤的疗效评估

目标病变：所有追踪的肿瘤，需测量并必须归纳分类在：

- CR：肿瘤完全消失或无新的肿瘤出现，肿瘤指标下降到正常，在四星期内不变
- PR：单一或数个最长直径总数减少 $\geq 30\%$ ，并维持四星期之久
- SD：肿瘤有缩小，但没到PR程度；肿瘤长大，还没到PD程度
- PD：单一或数个肿瘤最长直径总数增加 $\geq 20\%$ ，或有新的肿瘤出现

非目标病变肿瘤可作参考，但不列入主要肿瘤的计算内

- CR：所有病灶消失和肿瘤标志物正常，并维持四星期之久
- SD：1个或多个病灶和/或标志物异常
- PD：1个或多个新病灶或/和非目标病灶进展

疗效确认

- 肿瘤评价频率：每2周期(6~8周)
- 在首次评价CR/PR者至少4周后复核
- SD者疗后6~8周至少有1次SD



Tumor Efficacy Evaluation

- **Safety evaluation**

- The toxicity of treatment can be assessed by the incidence and severity of side effects
- Evaluation method: Commonly used NCI toxicity classification CTCAE V3.0/4.0
- Grade 0 to 5 based on toxicity severity
 - Grade 0: Normal, non-toxic
 - Grade 1: Mildly toxic (symptomatic but not requiring treatment)
 - Grade 2: Moderately toxic (symptomatic and requires medical treatment: dose reduction, symptomatic treatment)
 - Grade 3: Severe toxicity (more intense medical intervention required: dose reduction/discontinuation, add-on therapy)
 - Level 4: Serious toxicity that is life-threatening or causes bed rest
 - Level 5: Dead



肿瘤的疗效评估

- 安全性评估

- 治疗的毒性可通过副反应的发生率和严重程度来评估
- 评估方法：常用 NCI 毒性分级 CTCAE V3.0/4.0
- 根据毒性严重程度分为 0~5 级
 - 0级：正常，无毒性
 - 1级：轻度毒性（有症状但不需治疗）
 - 2级：中度毒性（有症状且需医学处理：减量、对症处理）
 - 3级：重度毒性（需要比原来更剧烈的医学干预：减量/停药、加药治疗）
 - 4级：威胁生命或导致卧床不起的严重毒性
 - 5级：死亡

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Prevention and control of tumors

- **Primary prevention (etiologic prevention)**
 - Take proactive precautions against more definitive carcinogens to effectively control and eliminate the major risk factors for carcinogenesis
 - Change bad hygiene habits and maintain a healthy lifestyle
 - Reasonable nutritious dietary structure
 - Research and identification of carcinogens and carcinogens in the environment
 - Establish vaccination and chemoprevention methods
- **Secondary prevention (early detection, early diagnosis, early treatment)**
 - Preventive screening of high-risk groups through simple and feasible screening and early diagnosis to actively treat precancerous lesions and block the occurrence of cancerous lesions
 - Cervical cancer screening, breast ultrasound, mammography, etc.
- **Tertiary prophylaxis (treatment of tumors)**
 - Improve the cure rate, survival rate and quality of life of malignant tumors



肿瘤的预防控制

- **一级预防（病因预防）**
 - 针对比较明确的致癌因素采取积极性的预防措施，有效控制和消除致癌的主要危险因素
 - 改变不良卫生习惯，保持健康生活方式
 - 合理营养膳食结构
 - 研究、鉴定环境中致、促癌物
 - 建立疫苗接种和化学预防方法
- **二级预防（早期发现、早期诊断、早期治疗）**
 - 通过简便可行的筛查和早期诊断，对高危人群进行预防性筛检，积极治疗癌前病变，阻断癌变发生
 - 宫颈癌筛查，乳腺 B 超、钼靶等
- **三级预防（肿瘤的治疗）**
 - 提高恶性肿瘤治愈率、生存率和生存质量



Prevention of tumors - Precancerous lesions

- **Definition:**

- The development of malignant tumors is a gradual evolutionary process. Some benign lesions in certain organs of the human body are prone to abnormal cell proliferation and have a tendency to malignant changes. These abnormal proliferation lesions with a tendency to cancer are called precancerous lesions.
- Precancerous lesions are a special stage before the onset of malignancy, and not all precancerous lesions will become malignant.

Common precancerous lesions

- Mucosal leukoplakia
- Uterine Cervical Erosion
- Mammary cystic hyperplasia
- Colonic adenomatous polyposis
- Slice 2: Junctional mole.



肿瘤的预防——癌前病变

- **定义:**

- 恶性肿瘤的发生是一个逐渐演变的过程，人体上某些器官的一些良性病变容易出现细胞异常增生，具有恶性变化倾向，这些异常增生具有癌变倾向的病变称为癌前病变。
- 癌前病变是恶性肿瘤发生前的一个特殊阶段，并非所有癌前病变都会变成恶性肿瘤。

常见的癌前病变

- 粘膜白斑
- 宫颈糜烂
- 乳腺囊性增生病
- 结肠腺瘤样息肉病
- 交界痣



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Understanding of malignant tumors in TCM

- The occurrence of cancer is based on the imbalance of viscera, Yin and Yang, Qi and blood, weakness of antipathogenic Qi, invasion of external pathogenesis of phlegm, dampness, Qi stagnation, blood stasis, toxic of tumor and other facts for a long time and accumulated.



中医对恶性肿瘤的认识

- 癌症的发生是在脏腑阴阳气血失调、正气虚弱的基础上，外邪入侵，痰、湿、气、瘀、毒等搏结日久，积渐而成。

8. Understanding of malignant Tumors in TCM

中医对恶性肿瘤的认识

- Ancient medical books have a lot of discussion about tumors, and there is a record of "tumor 瘤" in the Oracle of Yin Ruins 殷墟甲骨文; In the "Huangdi Neijing (Huangdi Inner Classic)", there are descriptions of symptoms such as "past tumors 昔瘤", "stones 石瘕", "intestinal fungus 肠蕈", "polyps 息肉", "diaphragmatic plugs 膈塞" and other similar cancers;
- The first record of cancer is found in the Song Dynasty "Renzhai pointed directly to the remains of the prescription 《仁斋直指附遗方》", which states: "Cancer patients, high and low, rocky, poisonous roots are hidden. 癌者，上高下深，岩石之状，毒根深藏."

癌 ai = cancer (Carcinoma)

疒

Bing = sickness

品

3 mouths = nose, mouth, bowel movements/urine/vagina

山

Shan = mountain/ rock

古代医籍对本病论述颇多，远在殷墟甲骨文中就有“瘤”的记载；
在《黄帝内经》中有“昔瘤”、“石瘕”、“肠蕈”、“息肉”、“膈塞”等类似癌症的症状描述；
对癌的记载，首见于宋代《仁斋直指附遗方》，该书指出：“癌者，上高下深，岩石之状，毒根深藏”。

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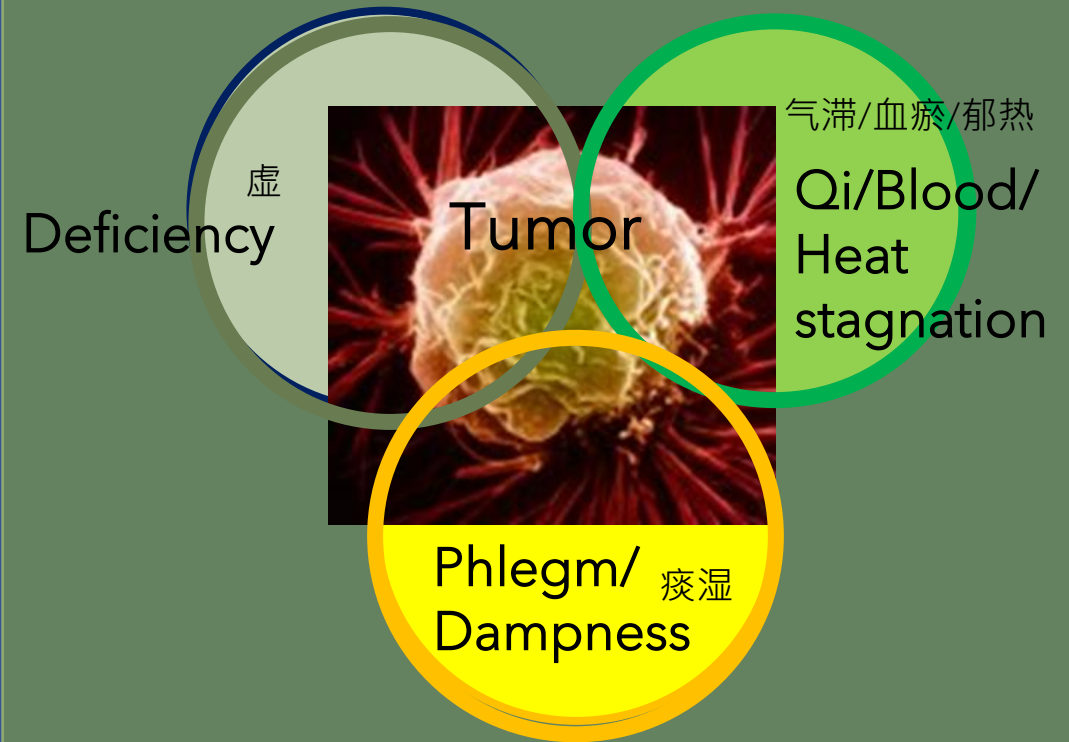
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9. Etiology and Pathogenesis of Tumors in TCM

肿瘤的中医病因病机

1. Antipathogenic Qi deficiency 正气不足
2. Qi stagnation 气滞
3. Blood stasis 血凝
4. Phlegm 痰
5. Dampness 湿
6. Heat stagnation 郁热
7. Cancerous toxin 癌毒



Etiology and pathogenesis:

1. **Six external pathogenesis** invasion, Qi and blood stagnation.
2. **Seven internal emotions** injury, deficiency of internal organs
3. **Dietary imbalances and overexertion**, resulting in deficiency of vital energy and retention of pathogenic factors.
4. **Congenital insufficiency**, abnormal endowment

* The occurrence of cancer is related to weakness of Qi and dysfunction of viscera. The so-called "Wherever pathogenic factors gather, the vital energy (Qi) must be deficient. 邪之所凑，其气必虚".
Spiritual Pivot · Hundred Sicknesses 《灵枢·百病始生》
"points out: Accumulation (of pathogens or stagnant matter) does not occur in a strong person, but only in a deficient one. 壮人无积，虚则有之。

Six exogenous pathogenic factors:

1. Wind 风
2. Cold 寒
3. Heat 暑
4. Dampness 湿
5. Dryness 燥
6. Fire 火



➤ 六淫: 风、寒、暑、湿、燥、火。

7

- 病因病机
- 1.六淫外侵，气血凝结
- 2.七情内伤，脏腑亏损
- 3.饮食劳伤，正虚邪留
- 4.先天不足，禀赋异常
- 癌症的发病与正气虚弱、脏腑功能失调有关。所谓“邪之所凑，其气必虚”。《灵枢·百病始生》指出：壮人无积，虚则有之。

Characteristics of the 6 Pathogenic Factors 六淫的性质和致病特点

1. Pathogenic wind 风邪

A. Natural characteristics: light, dispersing, rising, outward-moving. Although "wind" is the environmental factor of spring, it is present in all seasons.

风的自然特性：轻扬、开泄、向上、向外、喜动。是春天的主气。虽春季为主，但四季皆有。

B. Pathological characteristics of the "pathogenic wind" 风邪的性质和致病特点：

B1. Wind is a "Yang" pathogen, dispersing and localizing in the "Yang" (upper) regions.

风为阳邪，其性开泄，易袭阳位

B2. It is migratory, with constant changes 善行而数变

B3. It is movable, trembling 主动

B4. It is the main factor in diseases 为百病之长



2. Pathogenic Cold 寒邪

A. Natural characteristics of cold 寒的自然特性：

Cold, condenses, coagulates. It is the environmental factor of winter.

寒冷、凝结。冬季的主气。

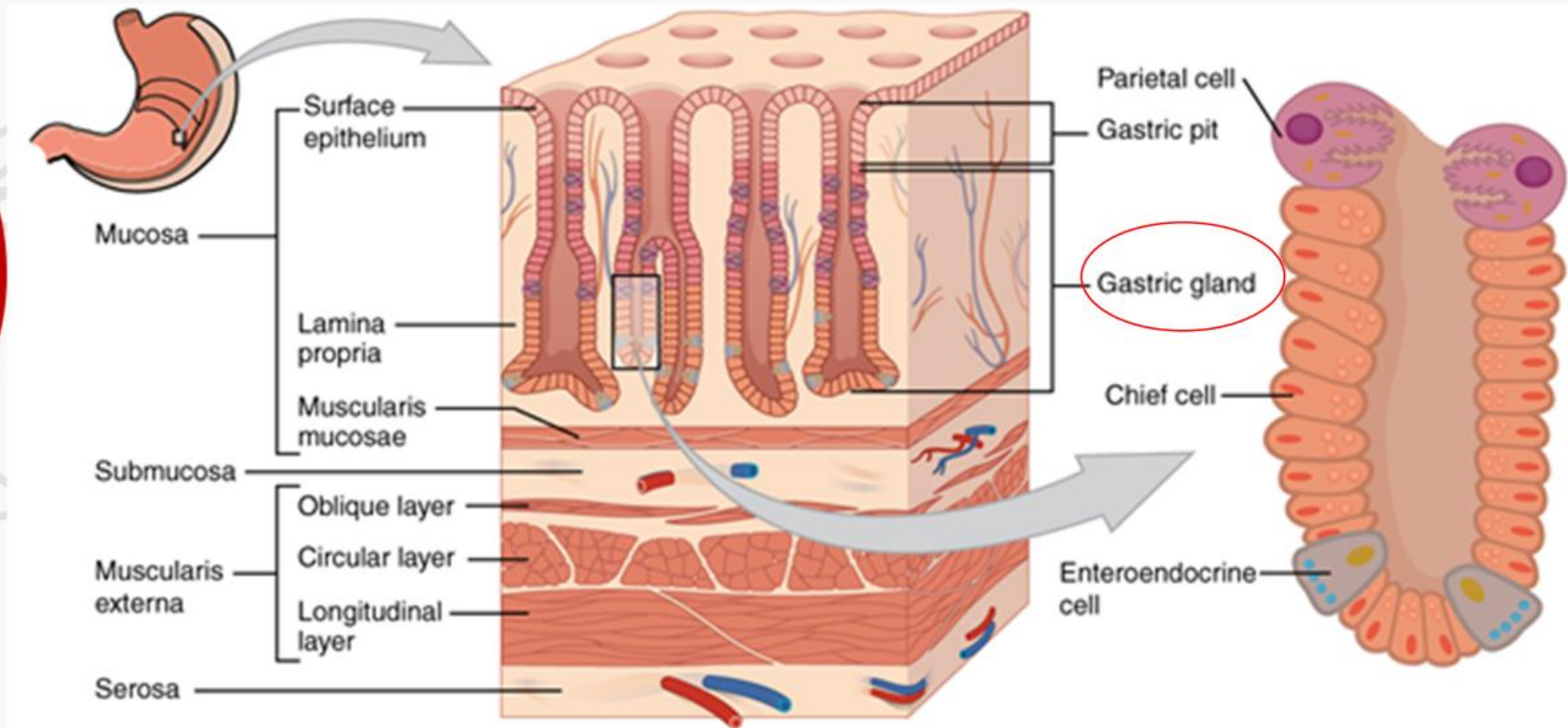
B. Pathological characteristics of “cold” 寒邪的性质和致病特点：

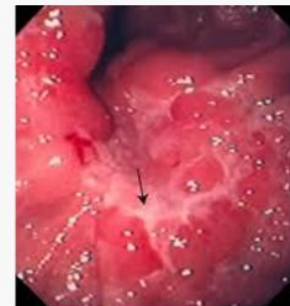
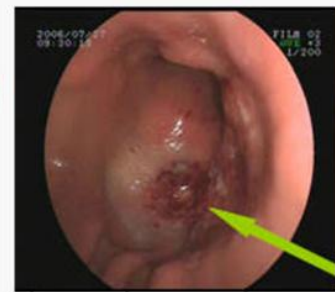
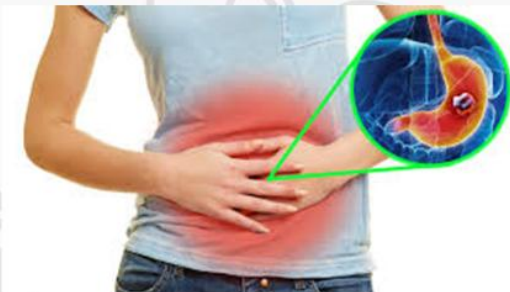
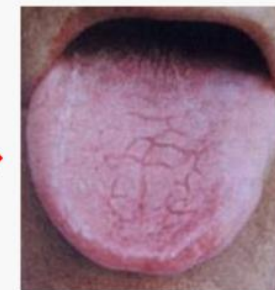
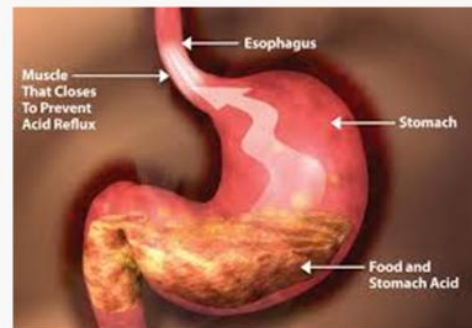
1. “Cold” is a “Yin” pathogen that harms “Yang” energy. 寒为阴邪，易伤阳气
2. Clotting, stagnation, stasis, and pain. 寒性凝滞主痛
3. Contraction 寒性收引



❖ **Do not consume ice, cold beer, or constantly cold foods.**

Cold foods damage the mucous layer, causing gastritis.







Colon cancer



Colon cancer
with lung
metastasis

During the Acupuncture treatment

Before Acupuntura



After Acupuntura



Diabetic with heart, respiratory, liver and kidney disorders.

3. Pathogenic Heat 暑邪

A. Natural characteristics of “Heat” 暑的自然特性:

a. Hot, rising, dispersing, and humid. That's the environmental factor of summer.

炎热、升散、兼湿。夏季主气

b. It is an exogenous factor, which does not become an endogenous factor.

暑病只有外感，没有内生。是六淫中独有的。

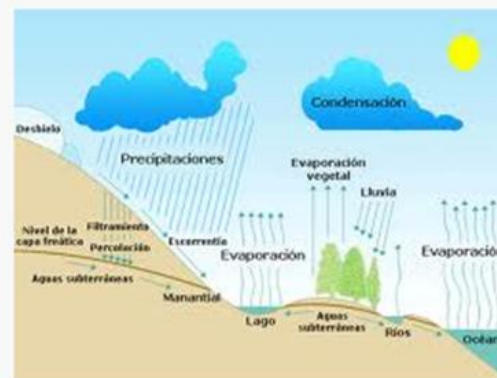
c. It is the unique factor of summer. 暑邪致病有明显的季节性。

B. Pathological characteristics of “Heat” 暑邪的性质和致病特点:

1. It is a “Yang” pathogen, with a lot of heat. 暑为阳邪，其性炎热

2. It is ascending and dispersing, it consumes body fluids and impairs energy. 暑性升散，易伤津耗气

3. It is accompanied by humidity or dampness. 暑多挟湿



4. Pathogenic Dampness 湿邪

A. Natural characteristics of dampness 湿的自然特性:

Heavy, sticky, descending. It is an environmental factor of late summer. 重浊、粘滞、趋下。长夏的主气。

B. Pathological characteristics of “Dampness” 湿邪的性质和致病特点:

1. It is a “Yin” pathogen, it stagnates energy, it harms “Yang”.

湿为阴邪，易阻滞气机，损伤阳气：

2. Heaviness 湿性重浊

3. Sticky 湿性粘滞

4. Descending and located in the “Yin” regions 湿性趋下，易袭阴位



5. Pathogenic Dryness 燥邪

A. Natural characteristics of "Dryness" 燥的自然特性:

Dryness. It is an environmental factor of autumn. 干燥。秋天的主气。

B. Pathological characteristics of "Dryness" 燥邪的性质和致病特点:

1. Dryness, it consumes body fluids 燥性干涩，易伤津液
2. It damages the lungs. 燥易伤肺



6. Pathogenic of Fire (Heat) 火邪

A. Natural characteristics of “Fire (heat)” 火(热)的自然特性:

Heat. It is an environmental factor of summer, but it is observed in all seasons. 炎热。盛于夏，但四季皆有。

B. Pathological characteristics of “Fire (heat)” 火(热)邪的性质和致病特点:

1. It is a “Yang” pathogen, it is hot and ascending. 火为阳邪，其性炎上
2. It is fiery, consumes bodily fluids, and impairs energy. 火性燥灼，易伤津耗气
3. It is abrupt, generates wind, and causes bleeding. 火性急迫，易生风动血
4. Accumulation of toxins (infections) causes inflammation and ulcers. 火毒结聚，易致肿疡
5. Anxiety harms the mind. 火性躁动，易扰心神



7. Endogenous factors 内伤病因

A. Seven emotions 七情

1. Happy 喜 (heart)
2. Anger 怒 (Liver)
3. Worry 忧 (Spleen)
4. Nostalgia 思 (Spleen)
5. Sadness 悲 (Lung)
6. Fear 恐 (Kidney)
7. Panic 惊 (Kidney)



B. Over work 过劳

C. Excessive sedentary behavior 过逸

D. Inadequate nutrition 饮食失宜



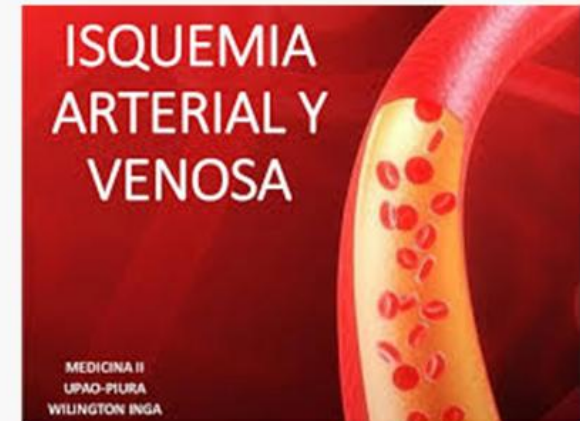
➤ 内伤病因：七情(喜、怒、忧、思、悲、恐、惊)；过劳；过逸；饮食失宜。

8. Deficiency (organ dysfunction) causes cancer, and cancer weakens the body (the organs).

- Apply simultaneous dispersion or toning.

9. Ischemia (poor circulation, lack of oxygen)

- It causes mutations in oncogenes and turns them into cancer.
- 因虚致瘤或因瘤致虚，虚实夹杂。
- 现代医学认为，人体自身就存在癌基因，癌基因在缺氧的情况下，容易突变或缺失而致病。肿瘤局部血管畸形紊乱，同时肿瘤患者高凝状态容易造成肿瘤内缺氧，引起癌基因变异而致病。



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10. Tumor in TCM

differentiation

肿瘤的中医辨证

Pattern Differentiation of Yin and Yang : 辨阴阳

Pattern Differentiation of Yin and Yang : considering factors such as the **tumor's location**, **growth rate**, **course of the disease**, **local manifestations**, **systemic symptoms**, **tumor stage**, **pulse characteristics**, etc.

1. 辨阴阳 (肿瘤部位, 生长速度, 病程长短, 局部症状, 全身症状, 肿瘤分期, 脉象等)



Syndrome differentiations:

1. Yin - Yang
2. Cold – Heat
3. Deficiency – Excess
4. Organs – Visceras
5. San Jiao
6. 6 Meridians

YIN	YANG
Cold	Heat
Deficiency	Excess
Organs	Visceras
Inferior Jiao	Superior Jiao
Shao Yin Jue Yin Tai Yin	Tai Yang Yang Ming Shao Yang

➤ 中医肿瘤的辩证融合: 阴阳, 寒热, 虚实, 脏腑, 三焦, 六经辨证。

Classifications 分型	YIN 阴	YANG 阳
Tumor location 肿瘤部位	Internal	Superficial
TCM pathogenesis 中医病因	Cold - Dampness	Heat - Fire
Type of cancer 癌症种类	CA of Pancreas, liver, kidney	Lung cancer, breast cancer, nasal cancer, esophageal cancer, lymphoma, thyroid cancer, skin cancer, cervical cancer, prostate cancer
Lung cancer 肺癌	Adenocarcinoma 腺癌 Peripheral lung cancer, near the pleura	Squamous cell carcinoma, of small size (near the large bronchi) 鳞癌
Digestive viceras cancer 消化系统癌症	Cancer in Cardia to Sigmoid Colon (腺癌 Adenocarcinoma)	Mouth, throat, esophageal carcinoma (Squamous cell carcinoma)
Course of the disease 病程长短	Difficult to detect, poor prognosis	Easy to detect, good prognosis
Growth rate 增长速度	Slow (because of the cold)	Quick (by fire)
Color 色泽	Purple	Red
Temperature 温度	Cold	Heat
Tumor stage 肿瘤分期	Late (Grade 3, 4, terminal)	Early (Grade 1, 2)
Symptoms 症状	Weak, pale, cold limbs, loss of appetite, frequent or scanty urination, diarrhea, pale, fat tongue, slow, deep, thin, weak pulse, etc. 四肢无力、苍白、冰冷、食欲不振、尿频或尿少、腹	Strong, red face, heat, restlessness, loud voice, heavy breathing, dry mouth, scanty urine and burning, constipation, purplish tongue, yellow coating, shallow, strong, wiry, vast pulse, etc.

Clasificaciones	YIN	YANG
Tumor location 肿瘤部位	Internal, inferior, ventral	Superficial, Head/neck, dorsal
TCM pathogenesis 中医病因	Dampness, cold	Wind, heat, flema phlegm
TCM Meridians	Yin Meridians Tai Yin, Jue Yin, Shao Yin	Yang Meridians Tai Yang, Yang Ming, Shao Yang
Digestive viceras cancer 消化系统癌症	Cancer in Cardia to Sigmoid Colon (腺癌 Adenocarcinoma)	Cancer in oral, throat, esophagus (鳞癌 Carcinoma of escamosa cells)
Course of the disease 病程长短	Difficult to detect, poor prognosis	Easy to detect, good prognosis
Growth rate 生长速度	Slow (due to the cold)	Fast (due to the heat-fire)
Color 色泽	Purple	Red
Temperature 温度	Cold	Heat
Tumor stage 肿瘤分期	Late stage (Grade 3, 4, terminal)	Early stage (Grade 1, 2)
Symptoms 症状	Weak, pale, cold limbs, loss of appetite, frequent or scanty urination, diarrhea, pale, fat tongue, slow, deep, thin, weak pulse, etc.	Strong, red face, heat, restlessness, loud voice, heavy breathing, dry mouth, scanty urine and burning, constipation, purplish tongue, yellow coating, shallow, strong, wiry, vast pulse, etc.

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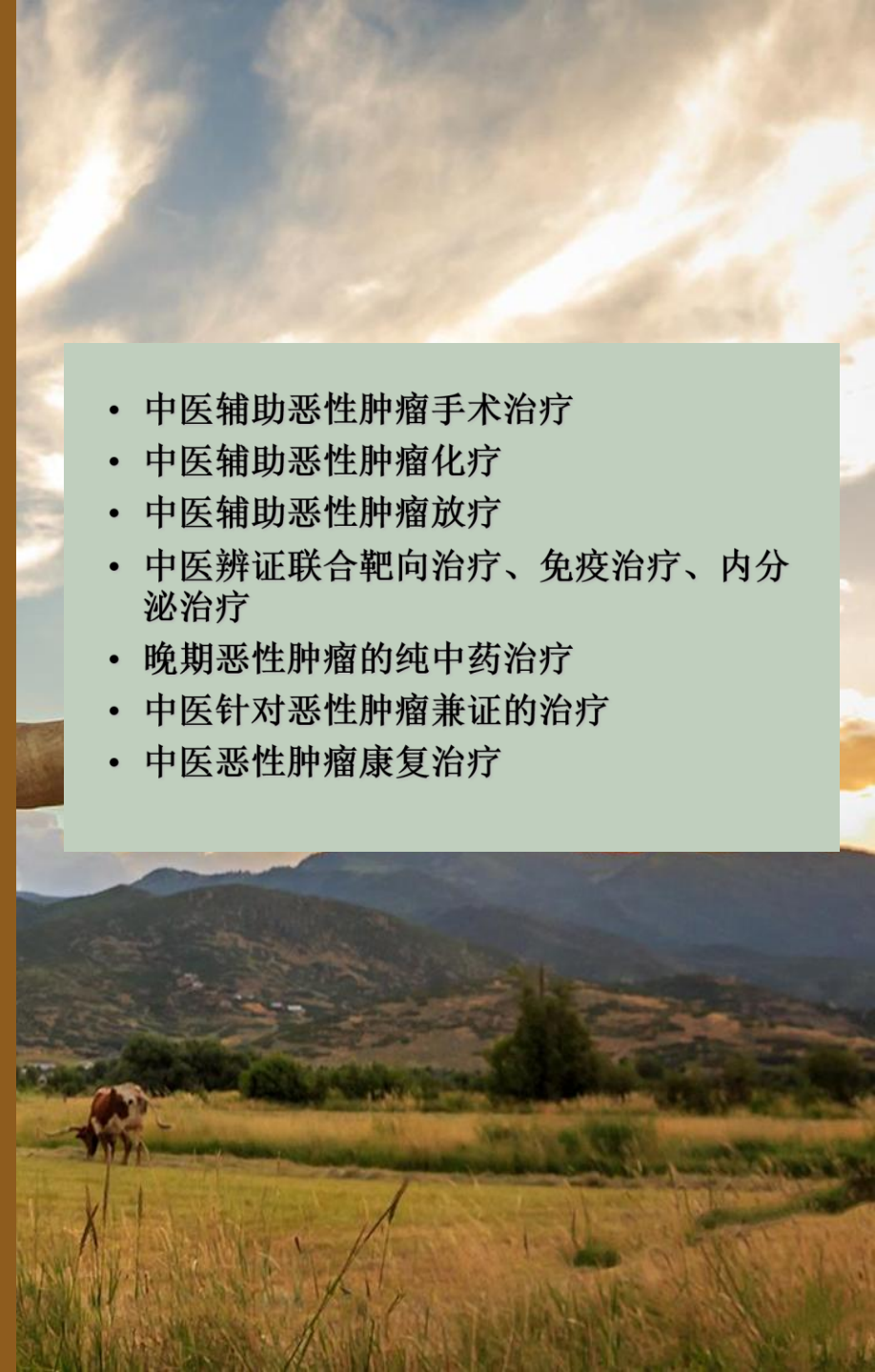


11. Role of TCM in the cancer treatment

中医在治疗恶性肿瘤中的作用

1. Traditional Chinese Medicine (TCM) as an adjunct to **surgery** for cancer
2. TCM as an adjunct to **chemotherapy** for cancer
3. TCM as an adjunct to **radiotherapy** for cancer
4. TCM differentiation-based treatment combined with **targeted therapy, immunotherapy, and endocrine therapy**
5. Pure **TCM treatment** for advanced (stage 5th) cancer
6. TCM treatment for **concurrent symptoms** of cancer
7. **TCM rehabilitation** treatment for cancer

- 中医辅助恶性肿瘤手术治疗
- 中医辅助恶性肿瘤化疗
- 中医辅助恶性肿瘤放疗
- 中医辨证联合靶向治疗、免疫治疗、内分泌治疗
- 晚期恶性肿瘤的纯中药治疗
- 中医针对恶性肿瘤兼证的治疗
- 中医恶性肿瘤康复治疗

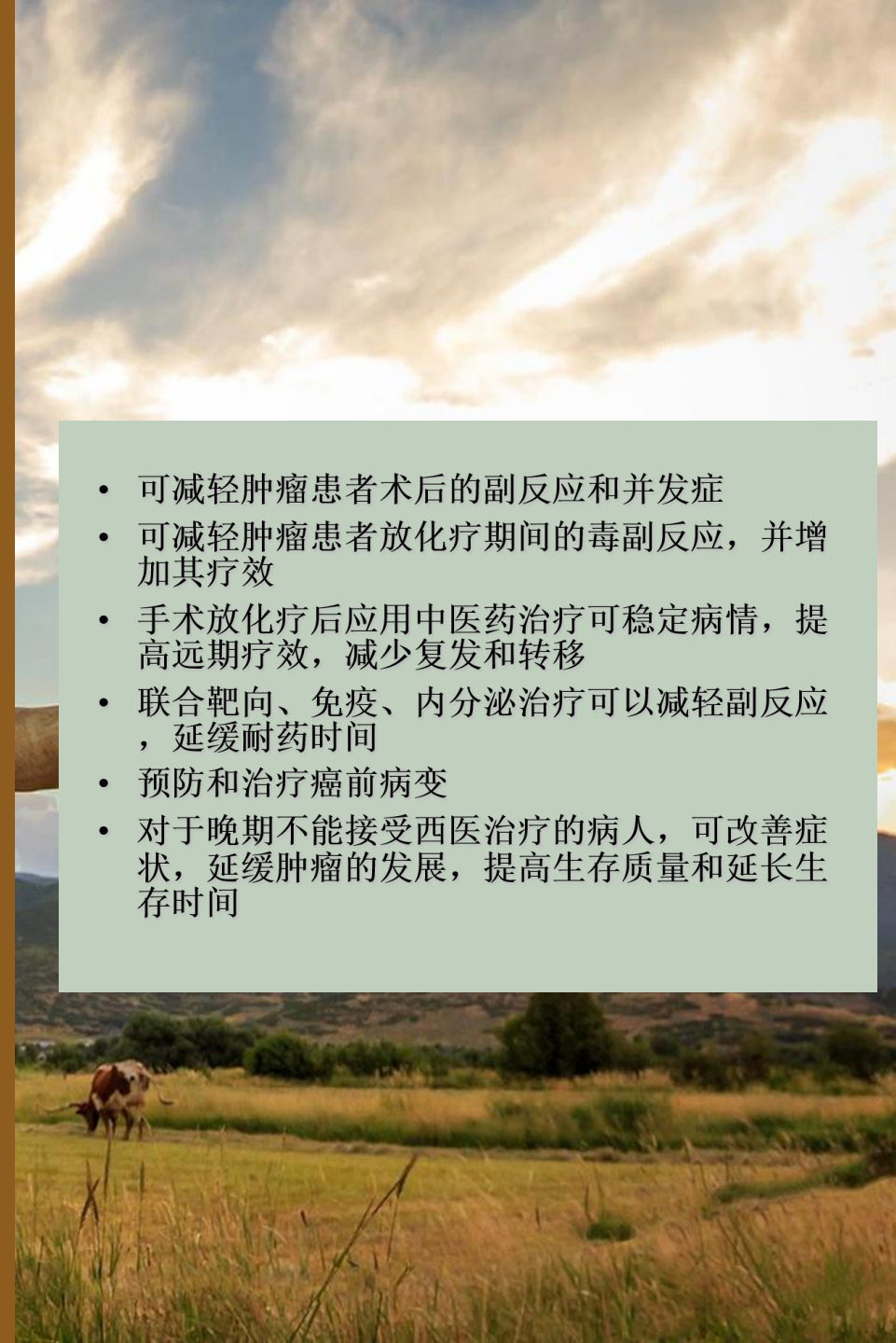


10. Role of TCM in the cancer treatment

中医在治疗恶性肿瘤中的作用

- ✓ It can reduce postoperative **side effects** and **complications** in cancer patients.
- ✓ It can **alleviate** the **toxic side effects** experienced by cancer patients during radiotherapy and chemotherapy, while enhancing the therapeutic efficacy.
- ✓ The application of Traditional Chinese Medicine (TCM) **after surgery, radiotherapy, and chemotherapy** can help stabilize the patient's condition, improve long-term outcomes, and reduce recurrence and metastasis.
- ✓ When combined with targeted therapy, immunotherapy, or endocrine therapy, it can **reduce side effects and delay the development of drug resistance**.
- ✓ It can **prevent** and **treat** precancerous lesions.
- ✓ For patients in **advanced stages** who are unable to receive Western medical treatment, it can **relieve symptoms, slow the progression of cancer, improve quality of life, and extend survival time**.

- 可减轻肿瘤患者术后的副反应和并发症
- 可减轻肿瘤患者放化疗期间的毒副反应，并增加其疗效
- 手术放化疗后应用中医药治疗可稳定病情，提高远期疗效，减少复发和转移
- 联合靶向、免疫、内分泌治疗可以减轻副反应，延缓耐药时间
- 预防和治疗癌前病变
- 对于晚期不能接受西医治疗的病人，可改善症状，延缓肿瘤的发展，提高生存质量和延长生存时间

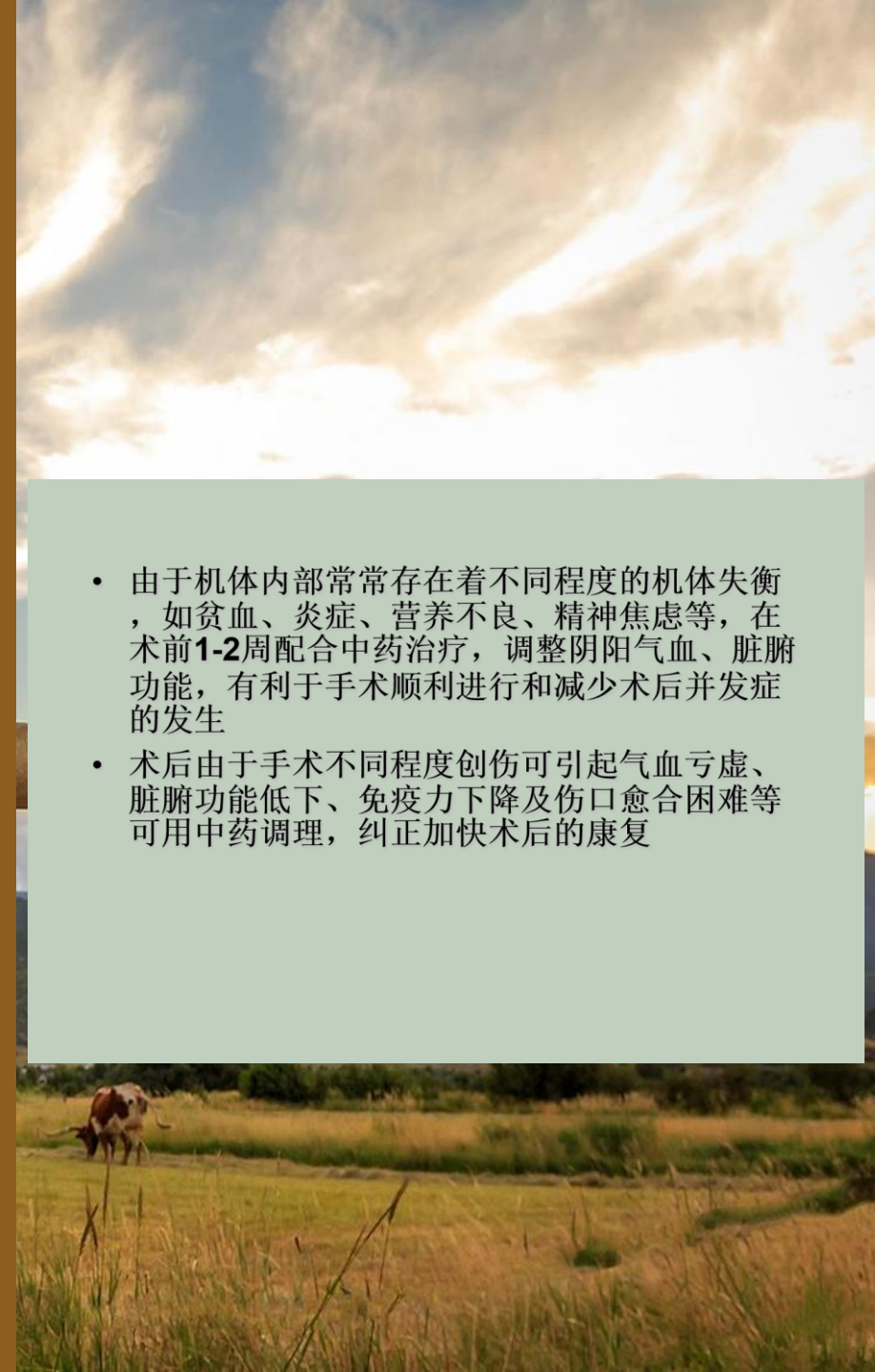


10. Role of TCM in the cancer treatment

中医在治疗恶性肿瘤中的作用

- ✓ Due to the frequent presence of various internal imbalances in the body, such as anemia, inflammation, malnutrition, and mental anxiety, the use of Traditional Chinese Medicine (TCM) treatment one to two weeks before surgery can help regulate yin-yang, qi-blood, and organ functions. This facilitates a smoother surgical procedure and reduces the occurrence of postoperative complications.
- ✓ After surgery, trauma of varying degrees may lead to deficiencies in qi and blood, weakened organ function, reduced immunity, and difficulties in wound healing. TCM can be used to restore balance and accelerate postoperative recovery.

- 由于机体内部常常存在着不同程度的机体失衡，如贫血、炎症、营养不良、精神焦虑等，在术前**1-2**周配合中药治疗，调整阴阳气血、脏腑功能，有利于手术顺利进行和减少术后并发症的发生
- 术后由于手术不同程度创伤可引起气血亏虚、脏腑功能低下、免疫力下降及伤口愈合困难等可用中药调理，纠正加快术后的康复

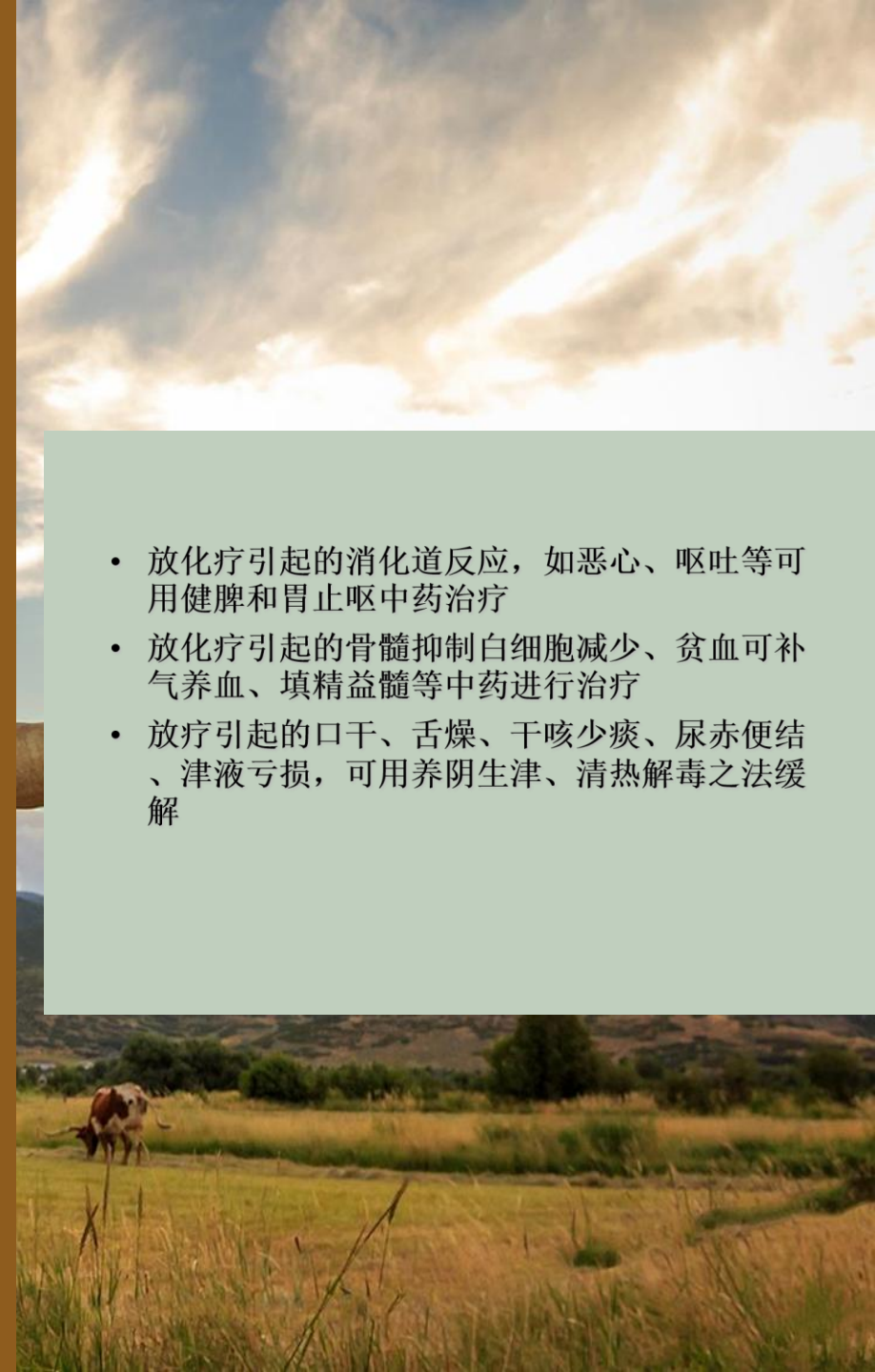


10. Role of TCM in the cancer treatment

中医在治疗恶性肿瘤中的作用

- ✓ Gastrointestinal reactions caused by radiotherapy and chemotherapy, such as nausea and vomiting, can be treated with Chinese herbs that strengthen the spleen, harmonize the stomach, and stop vomiting.
- ✓ Bone marrow suppression caused by radiotherapy and chemotherapy, including leukopenia and anemia, can be treated with Chinese herbs that tonify qi and nourish blood, as well as replenish essence and marrow.
- ✓ Dry mouth, dry tongue, dry cough with little sputum, dark urine, constipation, and fluid depletion caused by radiotherapy can be alleviated by methods that nourish yin, promote fluid production, clear heat, and remove toxins.

- 放化疗引起的消化道反应，如恶心、呕吐等可用健脾和胃止呕中药治疗
- 放化疗引起的骨髓抑制白细胞减少、贫血可补气养血、填精益髓等中药进行治疗
- 放疗引起的口干、舌燥、干咳少痰、尿赤便秘、津液亏损，可用养阴生津、清热解毒之法缓解





TAKE A BREAK

COFFEE TIME!

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12. Clinical application of TCM in cancer treatment

中医在癌症治疗中的临床应用

- | | |
|---|---|
| <ul style="list-style-type: none">• 扶正培本法• 清热解毒法• 软坚散结法• 理气开郁法• 化痰除湿法• 活血化瘀法 | <ul style="list-style-type: none">• 术后以益气健脾和胃• 化疗期间补气养血、滋补肝肾、调和脾胃• 放疗期间养阴生津、活血解毒• 肿瘤缓解期或稳定期以益气健脾、解毒化瘀• 不适宜手术、放化疗和晚期肿瘤患者，益气养血、解毒散结，扶正与驱邪并重 |
|---|---|

- Strengthening the body antipathogenic Qi and tonify the vital Qi method.
- Clearing heat and removing toxins method.
- Softening hard lumps and dissolving masses method.
- Regulating qi and relieving stagnation method.
- Resolving phlegm and eliminating dampness method.
- Promoting blood circulation and removing blood stasis method.

After surgery: Supplement qi, strengthen the spleen, and harmonize the stomach.

During chemotherapy: Tonify qi and nourish blood, nourish the liver and kidneys, and harmonize the spleen and stomach.

During radiotherapy: Nourish yin and promote fluid production, invigorate blood circulation, and detoxify.

During tumor remission or stable phase: Supplement qi and strengthen the spleen, detoxify and resolve blood stasis.

For patients who are not suitable for surgery, radiotherapy, chemotherapy, or those with advanced tumors: Tonify qi and nourish blood, detoxify and dissolve masses, with equal emphasis on strengthening the body's resistance and eliminating pathogenic.

12. Clinical application of TCM in cancer treatment

中医在癌症治疗中的临床应用

4 Majors TCM methods for controlling Tumors (Dr. Huang Jinchang):

1. **Tonify Yang** (heart, spleen, kidney).
2. **Activate blood circulation, eliminate blood stasis.**
3. Using **toxic substances** to treat and control the malignant tumor.
4. **Improve the urination and defecation.**

中医药抑瘤四大治法 (黄金昶) :

1. 温阳 (心脾肾)
2. 活血破瘀
3. 以毒攻毒
4. 通利大小便



12. Clinical application of TCM in cancer treatment

中医在癌症治疗中的临床应用

Method 治法	TCM Herbals 中药
Tonify Yang (heart, spleen, kidney) 温阳 (心脾肾)	Fuzi (Aconite root) – Aconitum carmichaelii Rougui (Cinnamon bark) – Cinnamomum cassia Guizhi (Cinnamon twig) – Cinnamomum cassia twig Ganjiang (Dried ginger) – Zingiber officinale Liuhuang (Sulfur) – elemental sulfur (processed for medicinal use) Chuanjiaomu (Sichuan prickly ash seed) – Zanthoxylum bungeanum seed Wuzhuyu (Evodia fruit) – Tetradium ruticarpum Gaoliangjiang (Galangal rhizome) – Alpinia officinarum Lujiaojiao (Deer antler glue) – Cervus elaphus (gelatin) Lurong (Deer antler velvet) – Cervus nippon or C. elaphus Chuanwu (Sichuan aconite) – Aconitum carmichaelii (mother root) Caowu (Kusnezoff aconite) – Aconitum kusnezoffii 附子，肉桂，桂枝，干姜，硫磺，川椒目，吴茱萸，高良姜，鹿角胶，鹿茸，川乌，草乌等。



12. Clinical application of TCM in cancer treatment

中医在癌症治疗中的临床应用

Method 治法	TCM Herbals 中药
Activate blood circulation, eliminate blood stasis 活血破瘀	Taoren (Peach seed) – Prunus persica or P. davidiana (seed) Honghua (Safflower) – Carthamus tinctorius (flower) Sanleng (Burreed tuber) – Sparganium stoloniferum (rhizome) Ezhu (Zedoary rhizome) – Curcuma phaeocaulis or related species (rhizome) Zelan (Bugleweed herb) – Lycopus lucidus (aerial parts) Tubiechong (Ground beetle) – Eupolyphaga sinensis (whole insect) Shuizhi (Leech) – Hirudo nipponica or related species (dried leech) Wugong (Centipede) – Scolopendra subspinipes (dried centipede) Quanxie (Scorpion) – Buthus martensii (dried scorpion) Chuanshanjia (Pangolin scales) – Manis pentadactyla (scales) – Note: Use of pangolin scales is restricted or banned in many regions due to conservation laws; substitutes are often used in modern practice. 桃仁，红花，三棱，莪术，泽兰，土鳖虫，水蛭，蜈蚣，全蝎，穿山甲等。



12. Clinical application of TCM in cancer treatment

中医在癌症治疗中的临床应用

Method 治法	TCM Herbals 中药
Using toxic substances to treat and control the malignant tumor 以毒攻毒	Banmao (Cantharis) – Mylabris phalerata or M. cichorii (dried blister beetle) Chanchú (Toad) – Bufo bufo gargarizans or related species (dried toad venom or toad skin) Pishi (Arsenic) – Arsenic (usually processed as realgar or arsenolite, highly toxic) Langdu (Wolf root) – Stellera chamaejasme or related species (root) Gouwen (Gelsemium) – Gelsemium elegans (a highly toxic plant, also known as "heartbreak grass") Xishu (Camptotheca) – Camptotheca acuminata (the tree from which camptothecin, a chemotherapy agent, is derived) Bihu (Gecko) – Gekko gecko (dried gecko) Baihuashe (White-banded snake) – Bungarus multicinctus (dried venomous snake, also known as many-banded krait) 斑蝥，蟾蜍，砒石，狼毒，钩吻，喜树，壁虎，白花蛇等。



12. Clinical application of TCM in cancer treatment

中医在癌症治疗中的临床应用

Method 治法	TCM Herbals 中药
Improve the urination and defecation 通利大小便	Dahuang (Rhubarb) – Rheum palmatum or related species (root and rhizome) Yuanmingfen (Glauber's salt) – Sodium sulfate (decahydrate), a crystalline laxative Erchou (Morning glory seed) – Pharbitis nil or P. purpurea (seed); "Erchou" refers to both black and white varieties Binglang (Areca nut) – Areca catechu (seed) Fanxieye (Senna leaf) – Cassia angustifolia or C. acutifolia (leaf) Badou (Croton seed) – Croton tiglium (seed, highly toxic and purgative) Tufulin (Glabrous greenbrier rhizome) – Smilax glabra (rhizome) Jinqiancao (Lysimachia / Christ's-loosestrife) – Lysimachia christinae or related species (whole herb) 大黄，元明粉，二丑，槟榔，番泻叶，巴豆，土茯苓，金钱草等。

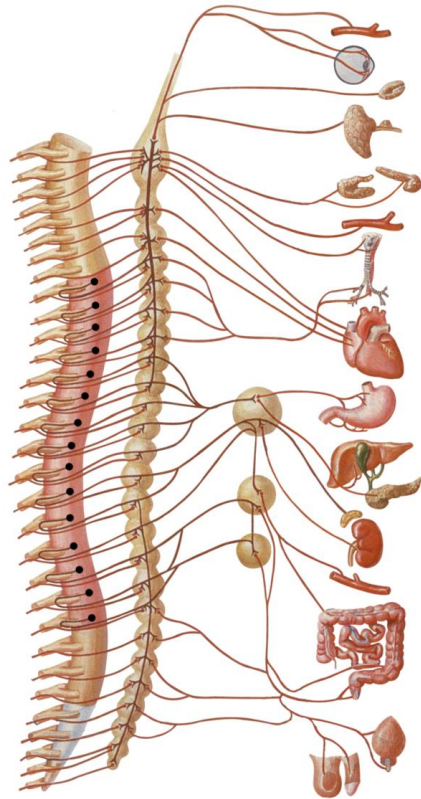


12. Clinical application of TCM in cancer treatment

中医在癌症治疗中的临床应用

Sympathetic Nerve

交感神经概况



Parasympathetic Nerve

副交感神经概况

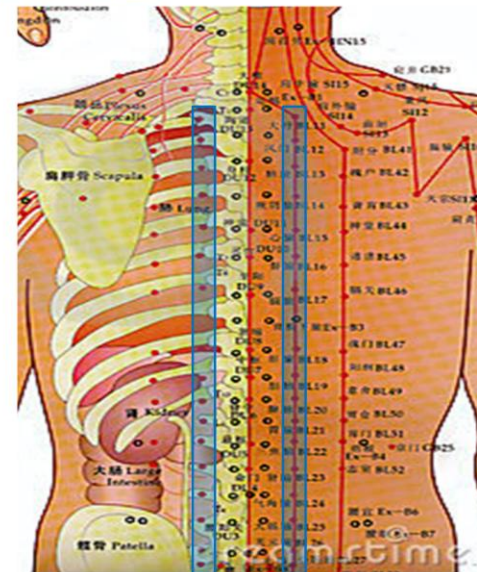
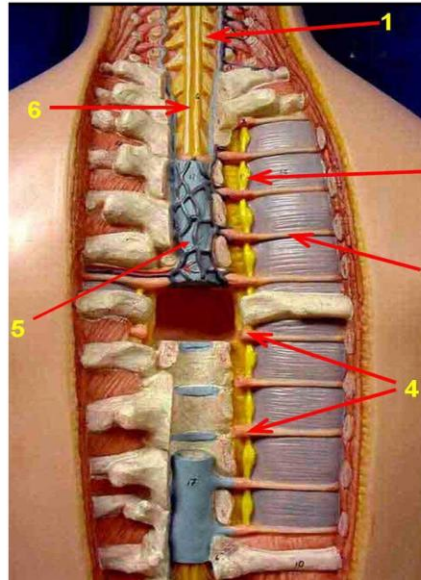


12. Clinical application of TCM in cancer treatment

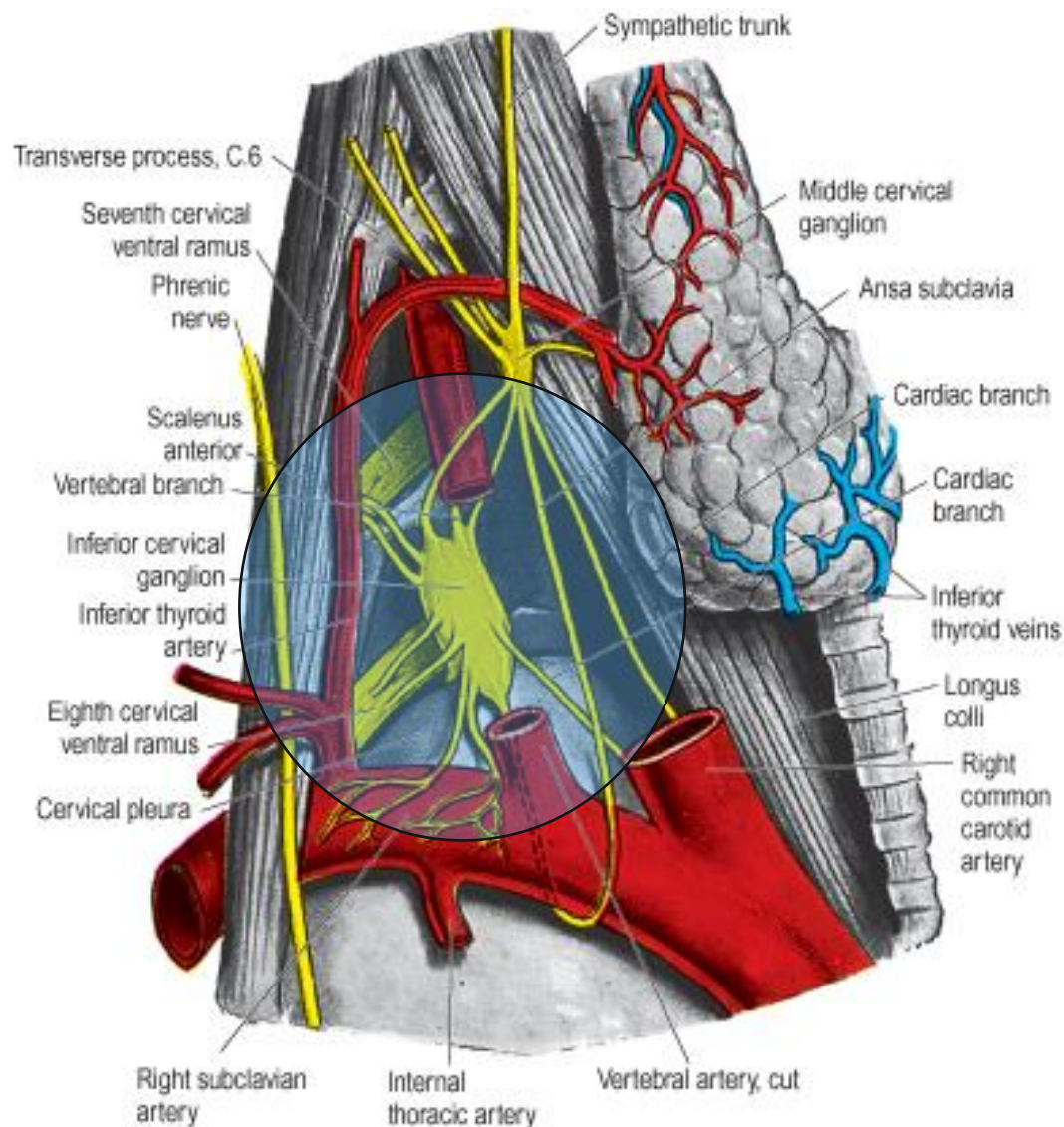
中医在癌症治疗中的临床应用

Location of Sympathetic ganglions:
The lower edge of the rib tubercle
close to the Foot Taiyang UB meridian 1st. medial line
(with each visceral Shu points)

交感神经节位置: 肋骨节结下缘
近足太阳膀胱经第一内侧线(各内脏俞穴位置)



Stellate Ganglion/ 星状神经节



- Autonomic nervous system

- Endocrine system

- Immune system

- 植物神经系统

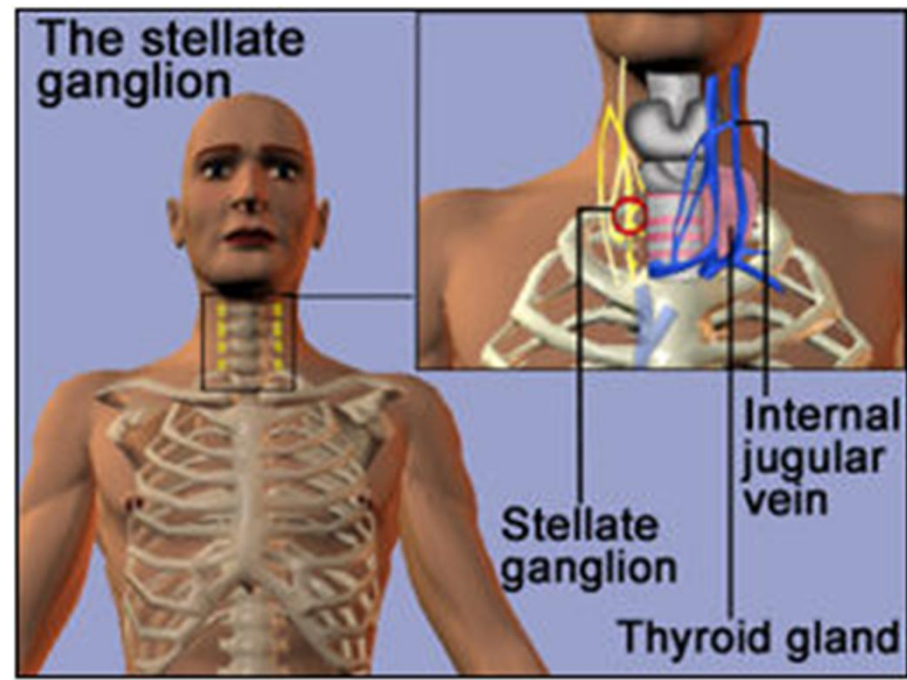
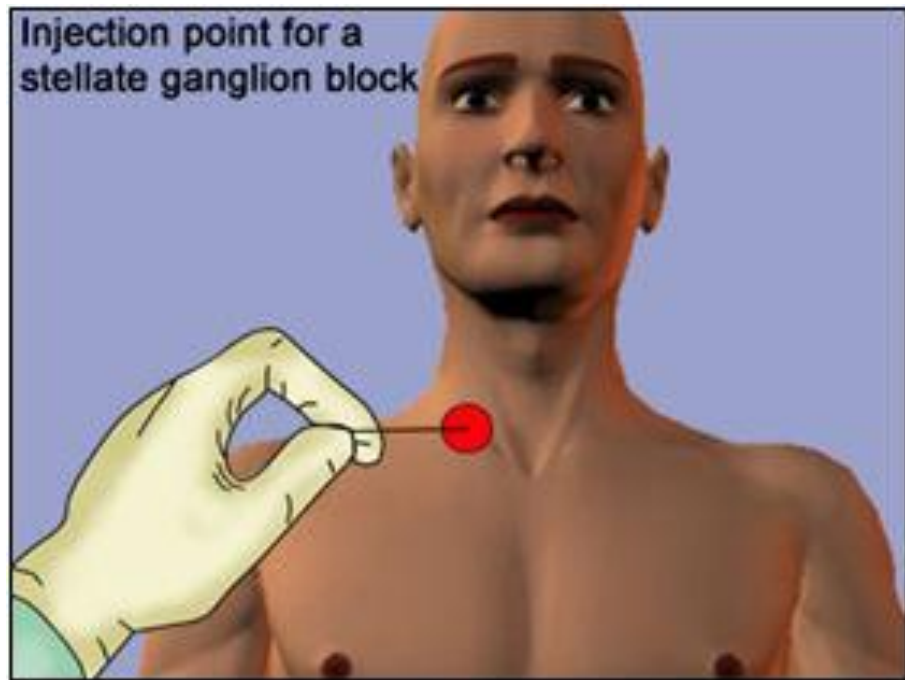
- 内分泌系统

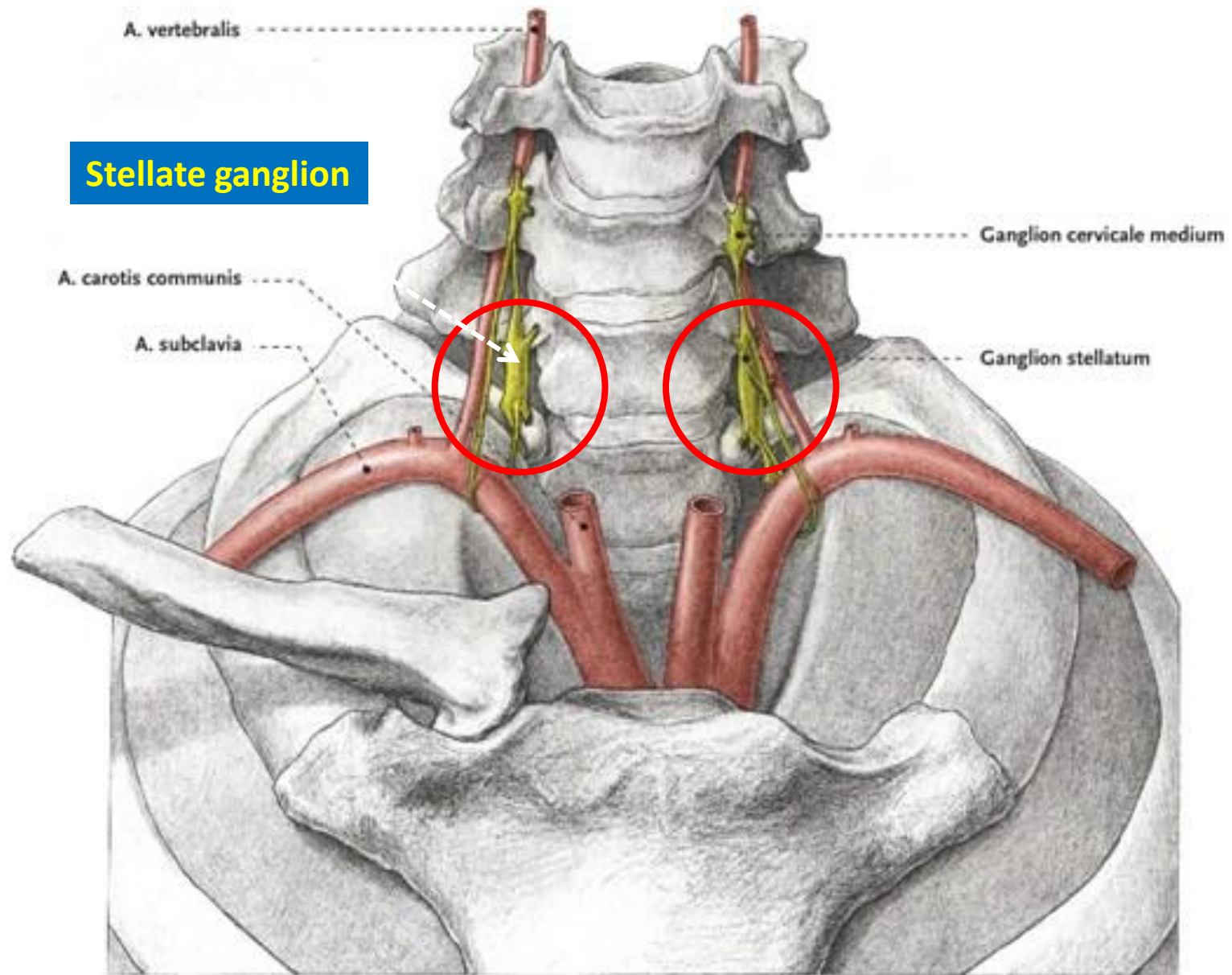
- 免疫系统

Stellate Ganglion location

星状神经节具体位置

C7~T1 level

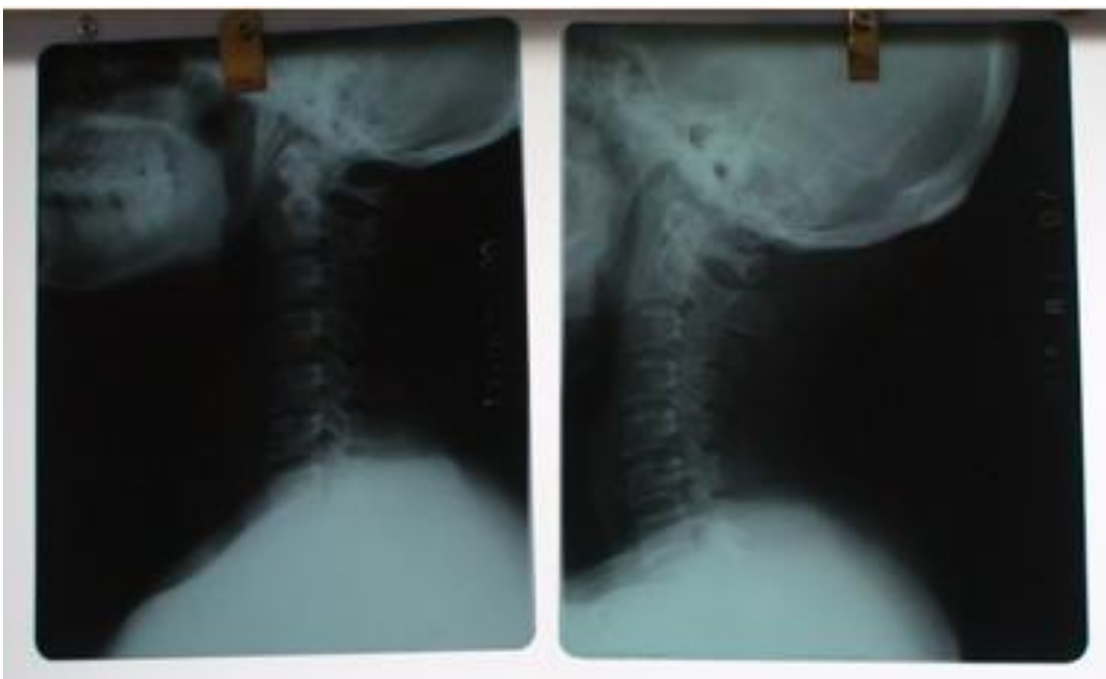




Stellate ganglion



Became to straight

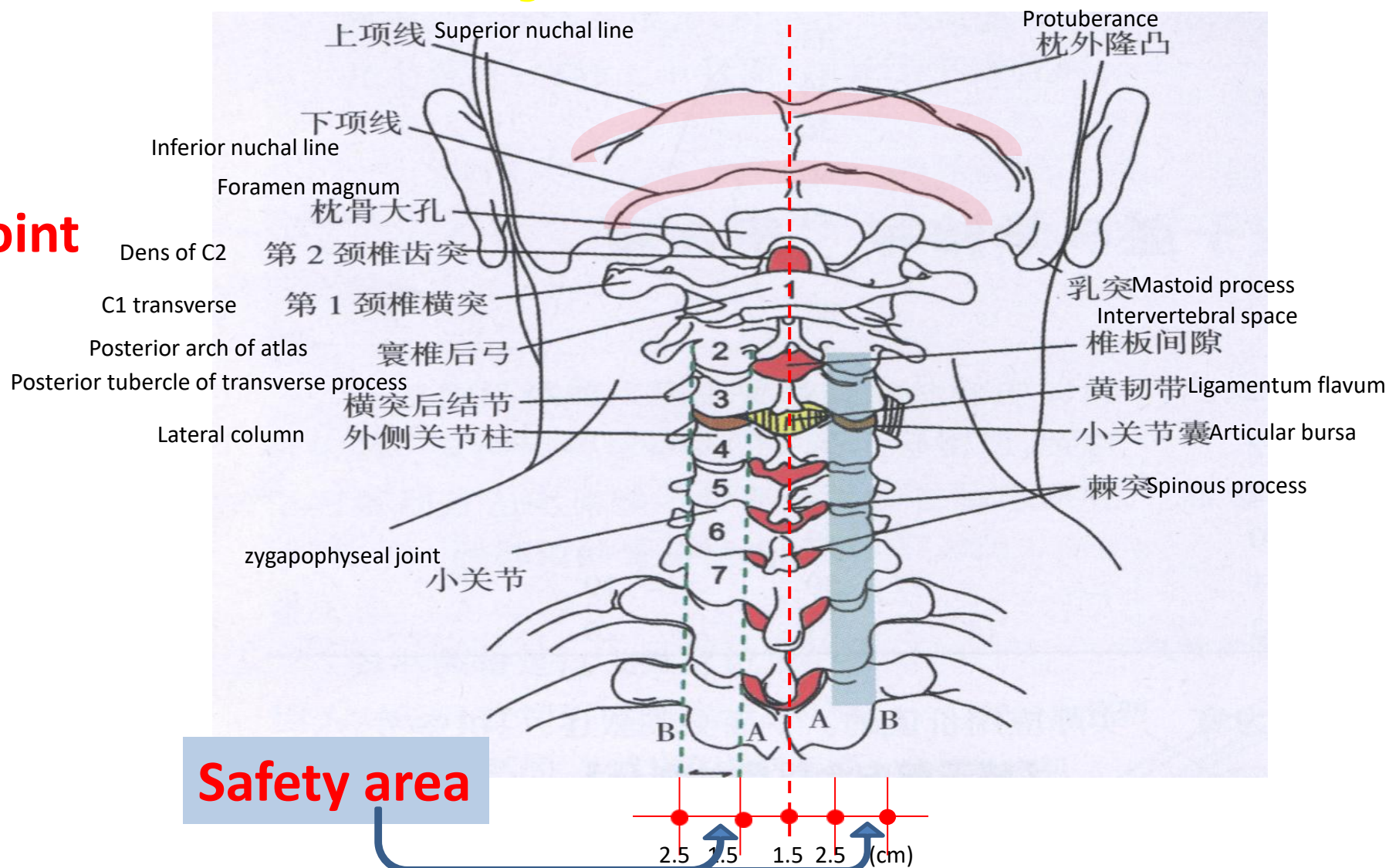




Cervical Vertebrae

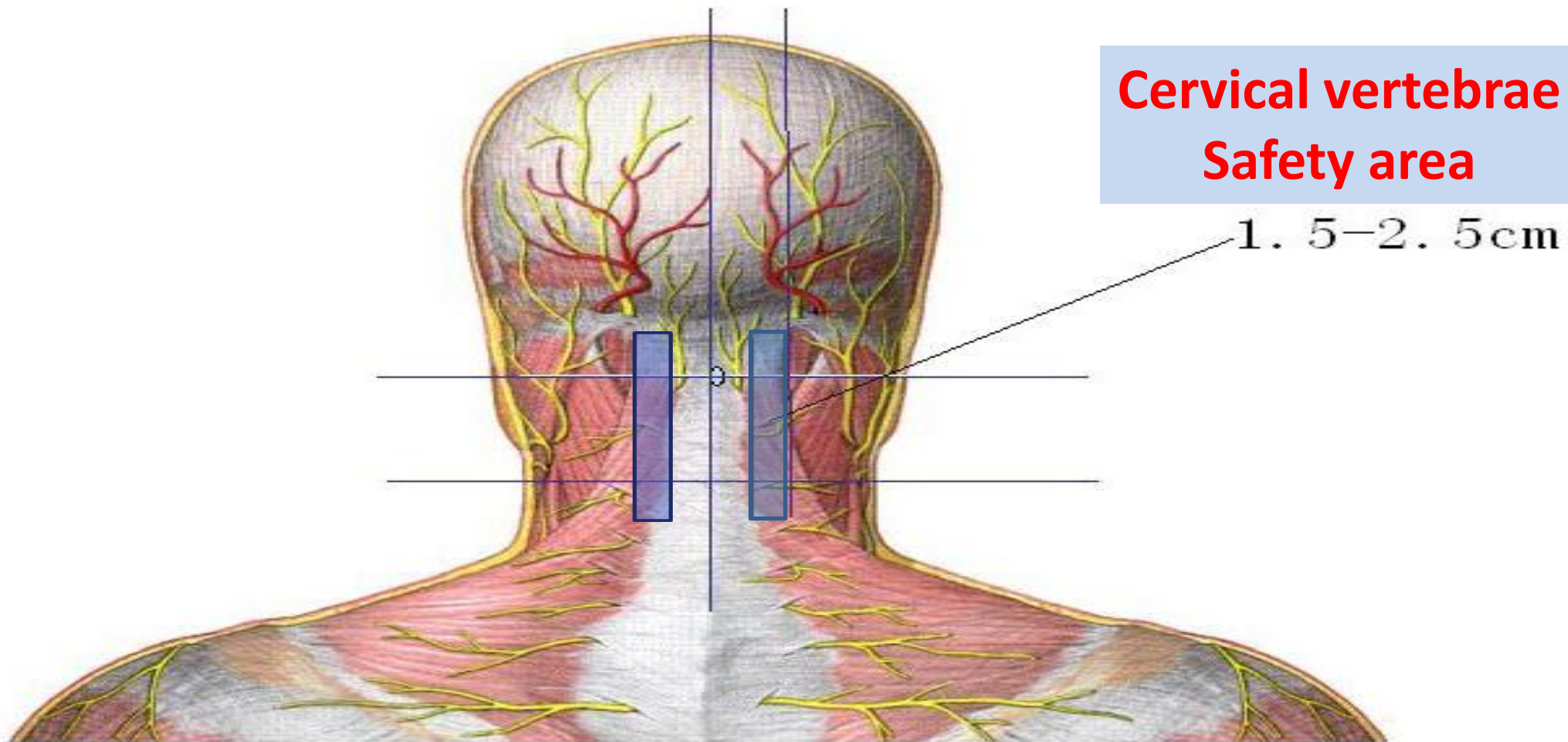
Safety area

- Uncovertebrae joint area
- 关节突关节



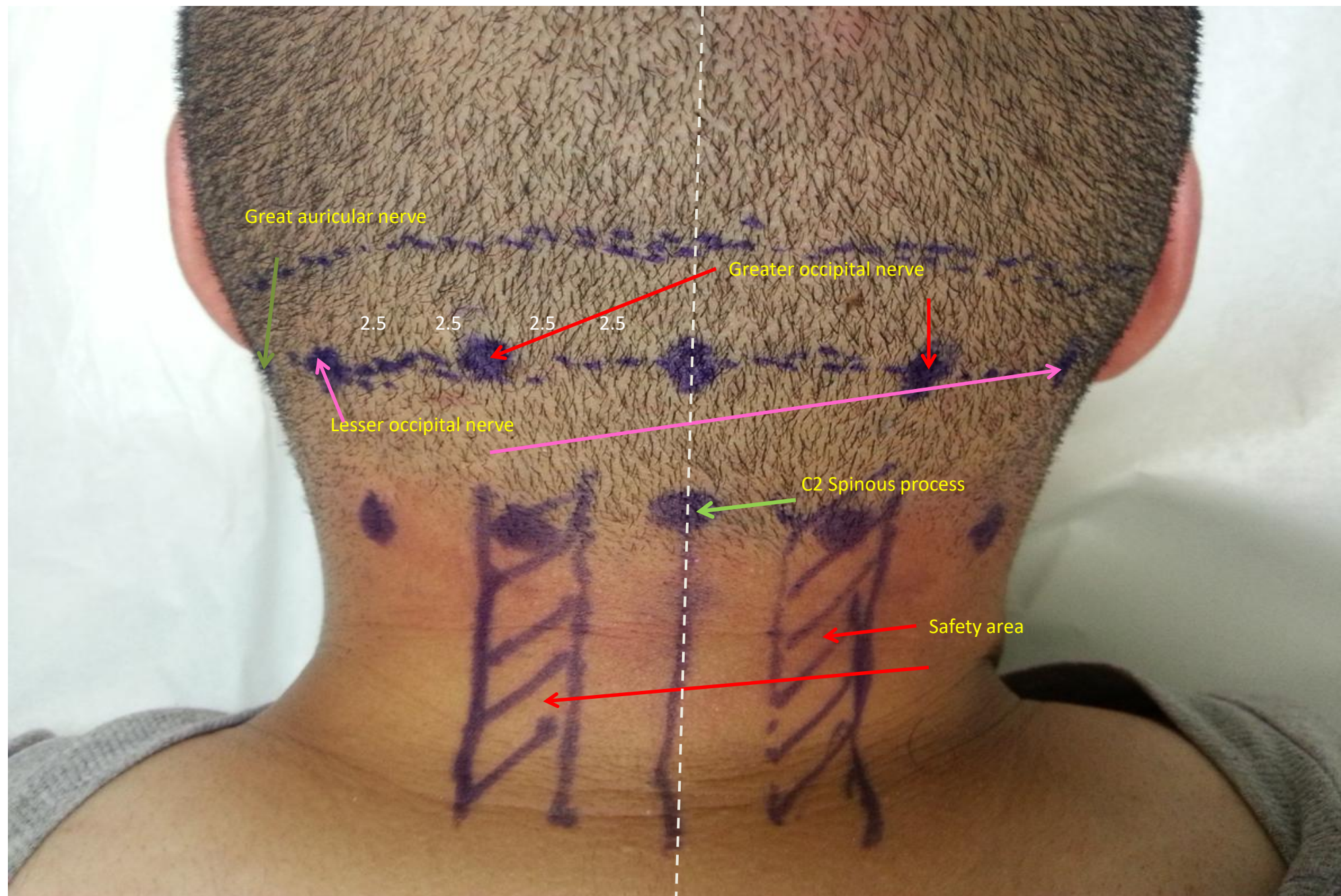


Cervical Vertebrae Safety area



**Cervical vertebrae
Safety area**

1.5-2.5cm









Remark area 重点

1. The most vulnerable area of CS:

- a. Atlantooccipital space (Aponeurosis)
- b. Atlantoaxial joint
- c. Suboccipital triangle
- d. C5, C6 interspinous ligament, posterior articular process

2. Displacement or luxation of articular joints, should apply the adjustment technique.

3. Cervical soft tissue injury (3 points with 5 points):

Tianzhu (UB10), Tianliao (SJ15) bilateral.

Dazhui (Du14) unilateral.

4. Precaution areas:

- a. Aponeurosis Atlantooccipital
- b. Ligamentum flavum
- c. Transversal process
- d. Intervertebral foramen

1. 椎动脉型颈椎病容易出问题的部位是:
寰枕间隙(寰枕筋膜)
寰枢关节
枕下三角
C5、C6棘间韧带、后关节突
2. 小关节错位或半脱位, 手法整复是治疗关键。
3. 软组织损伤型, 可采用“三穴五点”:
三穴: 天柱、大椎、天髎。
天柱、天髎均为双侧。加大椎, 共为五点。
另加: 肩胛骨内上角
4. 危险部位: 寰枕后膜、黄韧带、横突尖、椎间孔。

Treatment 治疗

1.1. Atlanto-occipital 寰枕关节

1. Patient prone.
2. Landmarks:
 - ✓ Protuberance, C2 spinous process, posterior hairline, trapezius.
3. Points locations: (3 points)
 - ✓ Nuchal area, 3.5cm upper of the midpoint hairline. (or 2~3cm lower of the inferior border of occipital protuberance), the depression bilateral of trapezius (Around Fengfu/Du16+ 1cm bilateral)
4. Acupuncture treatment:
 - Apply piriforme needle of No. 28-30.



11.1. 寰枕间隙

A. 体位: 俯卧位, 头前屈。

B. 体表标志: 枕外隆凸、C2棘突、后发际、斜方肌。

C. 定点:

项部, 当后发际正中之上3.5cm, 或枕外隆凸下缘之下2~3cm, 两侧斜方肌之间凹陷处 (相当于风府穴) 定中点, 中点两侧旁开约1cm左右处各取一点, 共3点。采取斜刺手法。

D. 针灸治疗:

建议使用至少28~30号针, 以达到松解目的。

Treatment 治疗

1.2. Atlantoaxial joint 寰枢关节

1. Patient prone.

2. Landmark: C2 spinous process.

3. Points locations:

a. 1 point on the C1~C2 interspinous ligament, + 1 point on the safety area (1.5~2.5cm) bilateral, total will be 3 points.

b. 1 point on the C2~C3 interspinous ligament, + 1 point on the safety area (1.5~2.5cm) bilateral, total will be 3 points.

4. Acupuncture treatment:

a. C1~C3 interspinous ligament insertion: perpendicular 3~5mm.

b. Articular joints: Perpendicular 1cm.

c. Apply the piriforme needle No. 28~30.

11.2. 寰枢关节

A. 体位: 俯卧位。

B. 体表标志: C2棘突。

C. 定点:

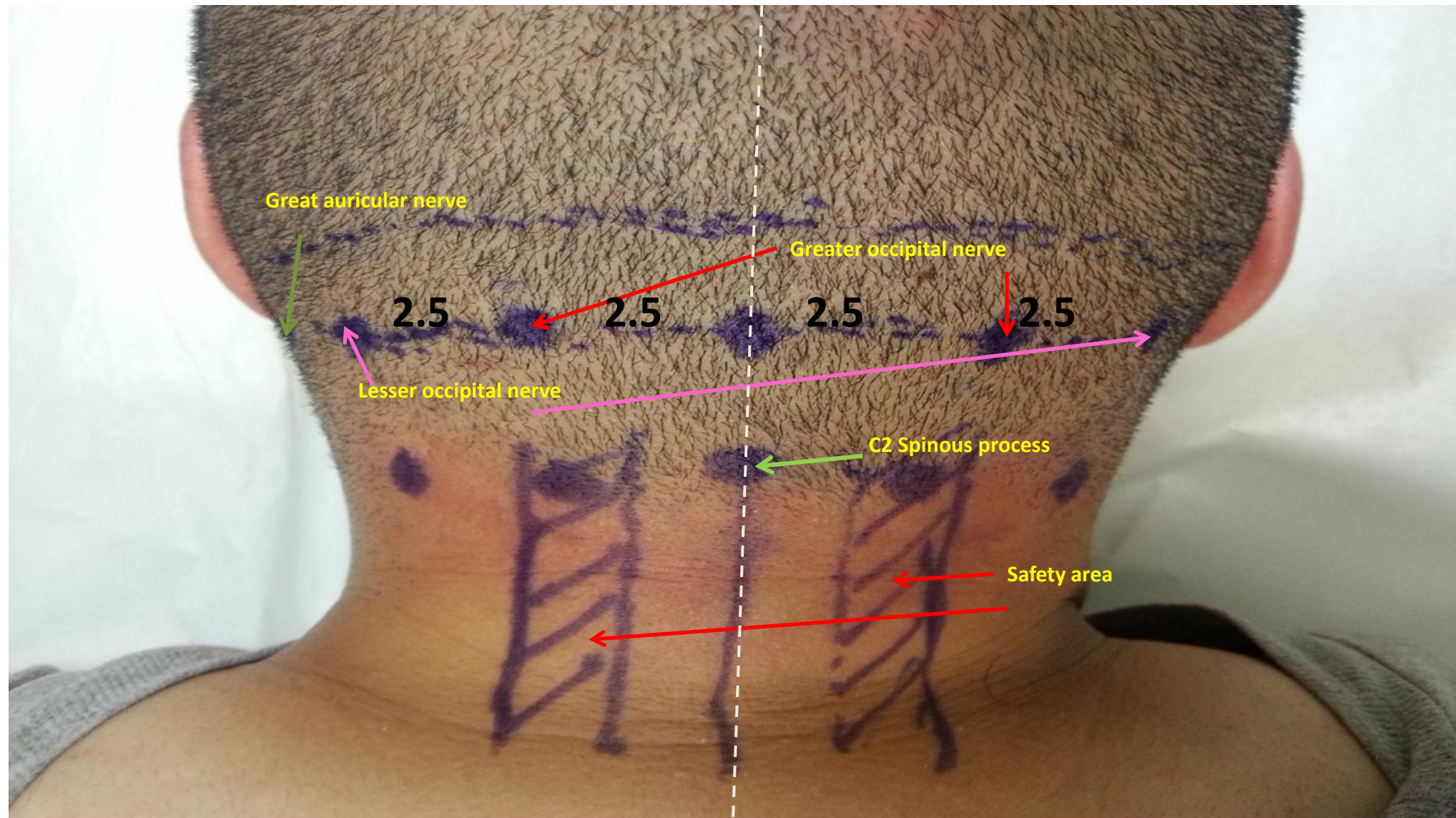
1. C2棘突上缘一点 (C1~C2棘间韧带), 两侧旁开1.5~2.5cm各一点 (棘突外上缘), 共3点。

2. C2棘突下缘一点 (C2~C3棘间韧带), 两侧旁开1.5~2.5cm各一点 (后关节突关节囊), 共3点。

D. 针灸治疗:

1. C1~C3棘间韧带: 直刺3~5mm。后关节突关节囊: 直刺1cm。

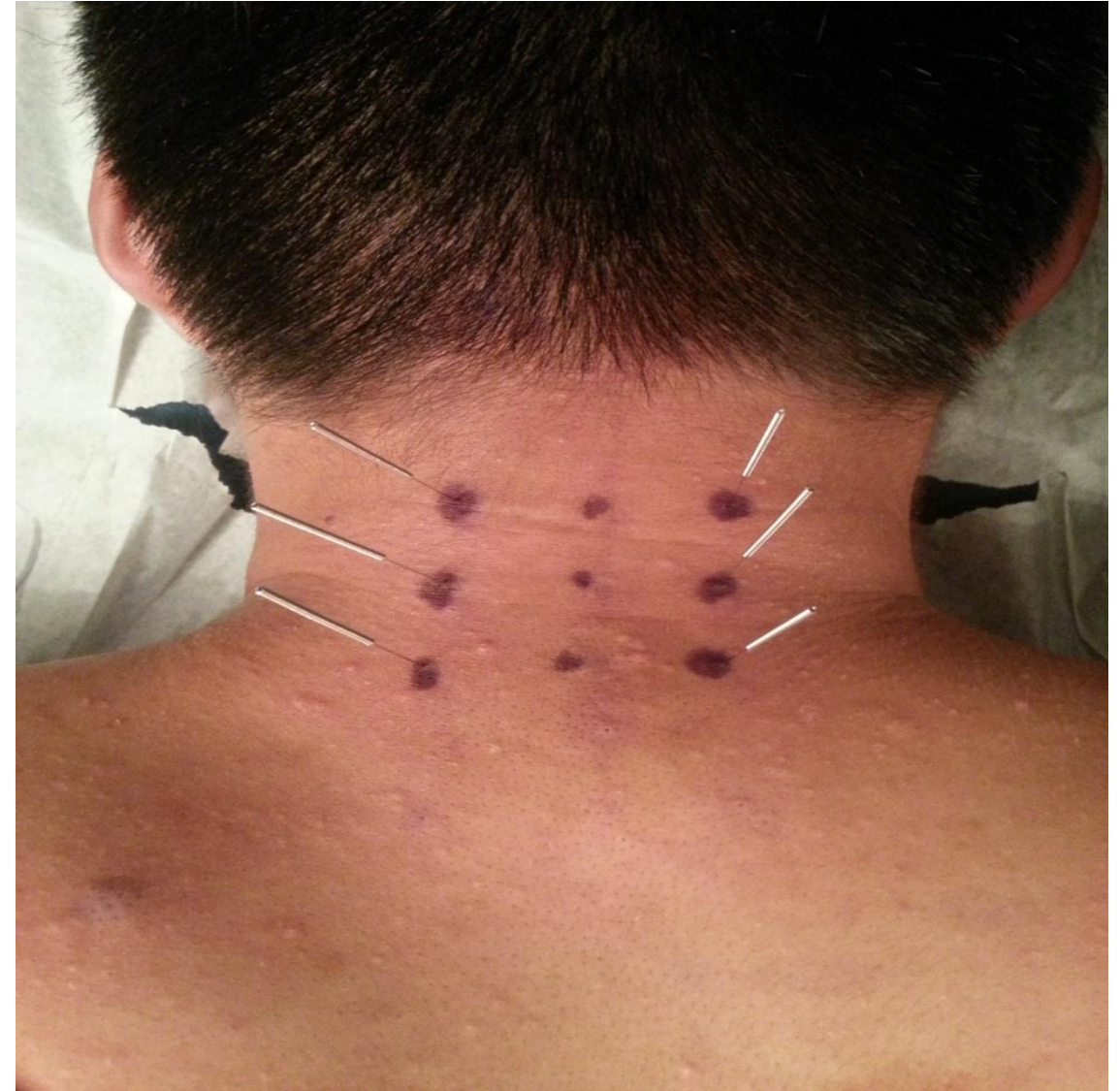
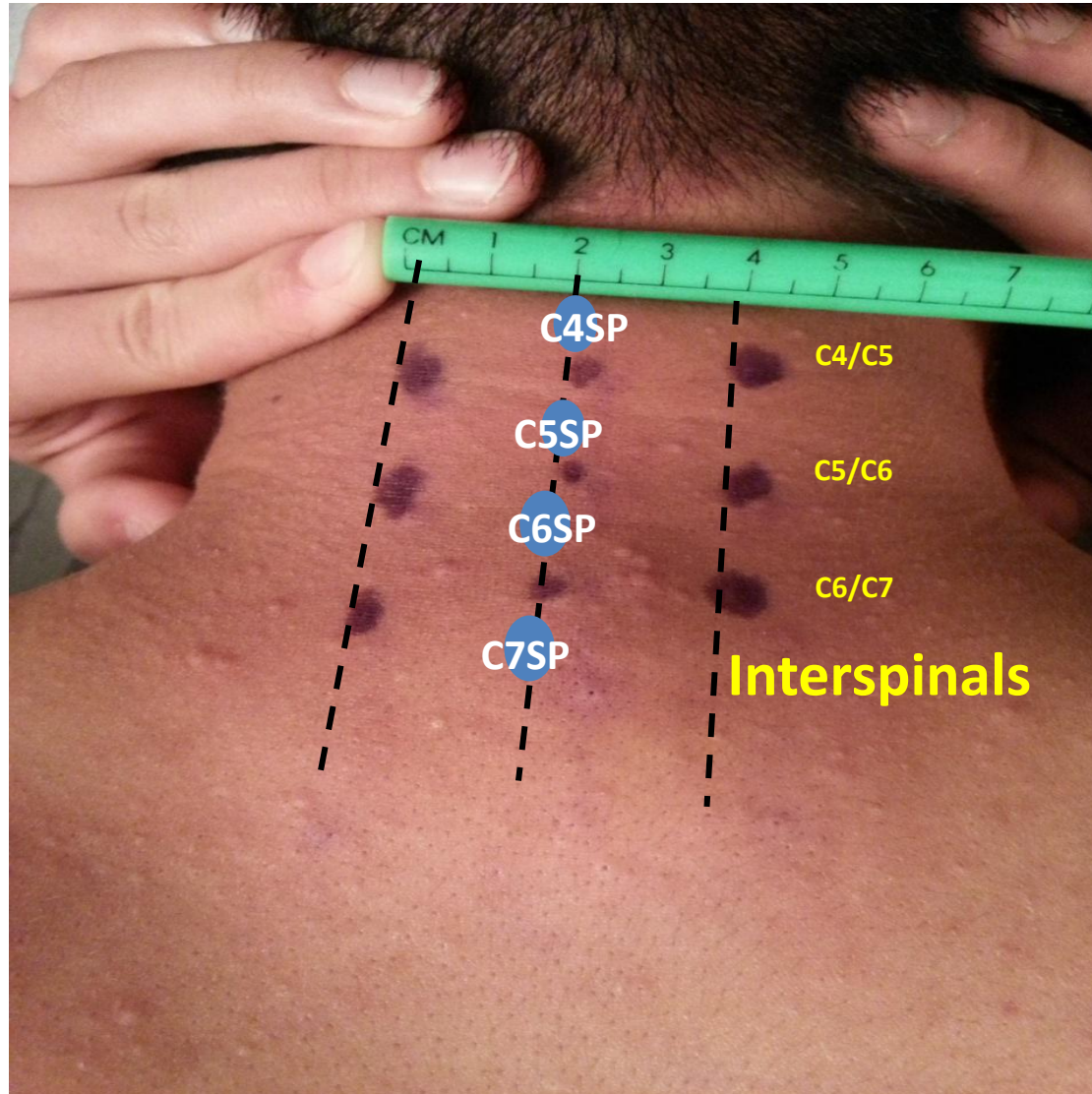
2. 建议使用至少28~30号针, 以达到松解目的。



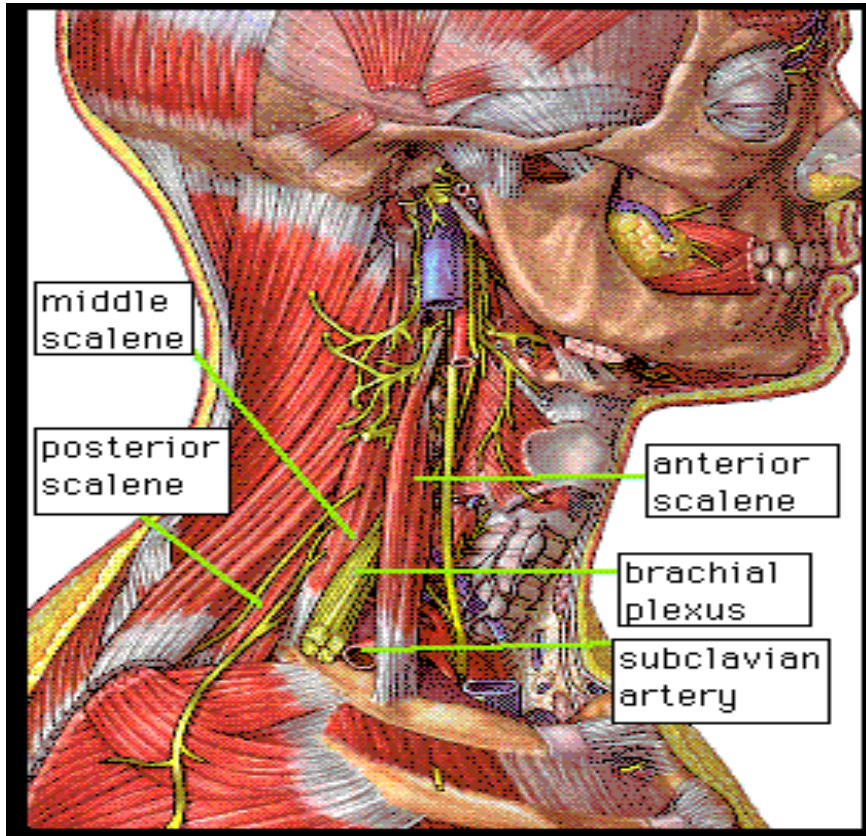


Middle ganglion treatment area

颈中神经节治疗区



Treatment 治疗

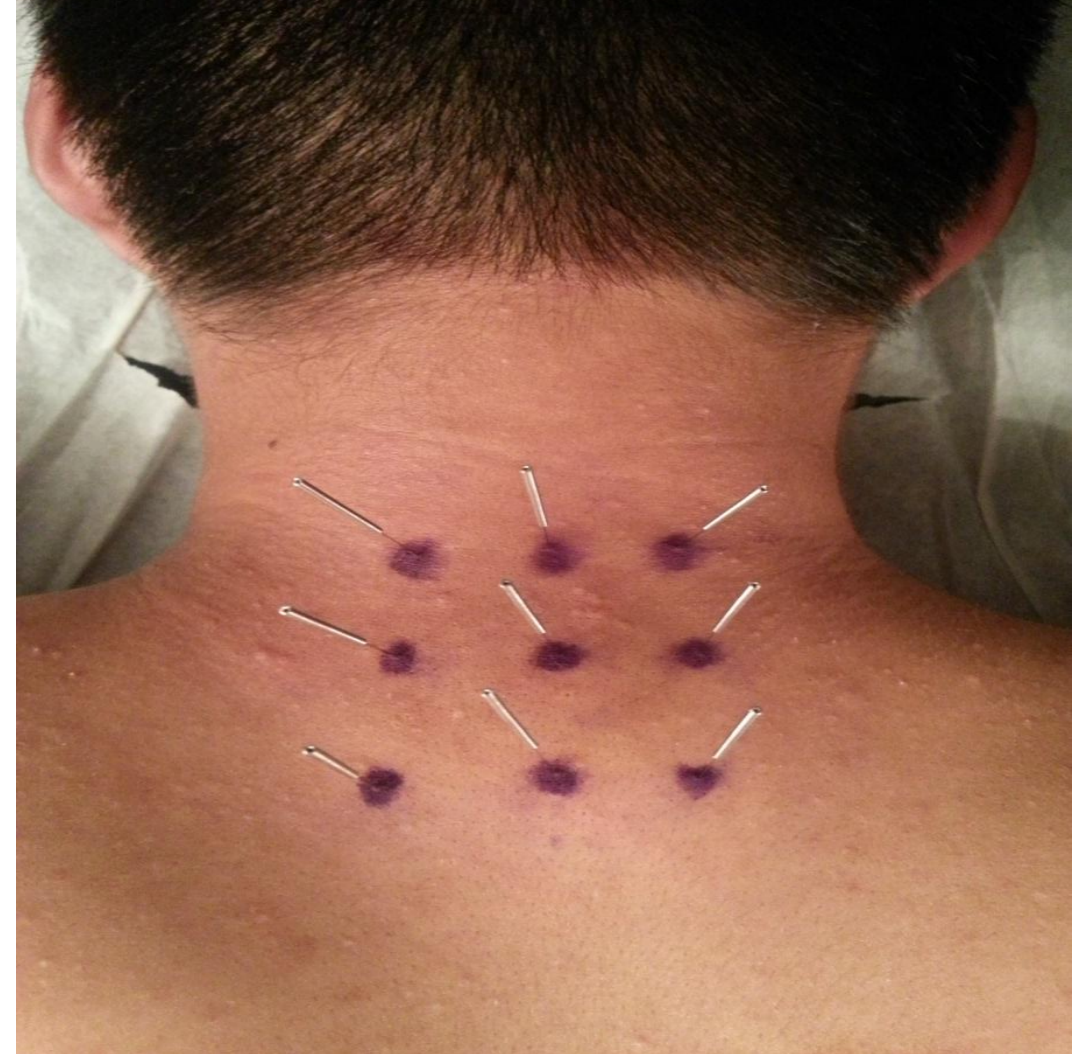
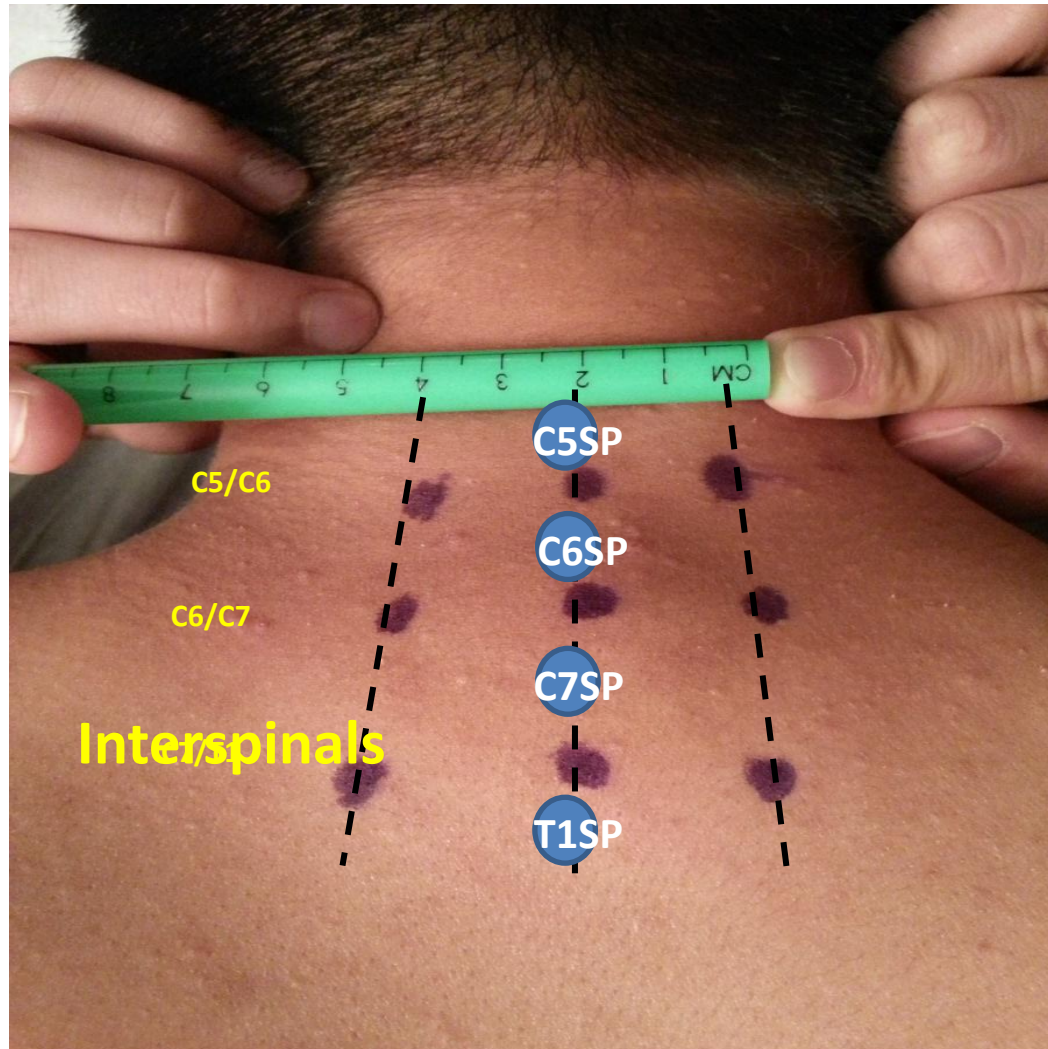


3. C5/C6, C6/C7, C7/T1 uncovertebral joints (Cervical 9 points)

3. C5/C6, C6/C7, C7/T1 后关节 (颈9针)

Inferior ganglion/ Stellate ganglion treatment area

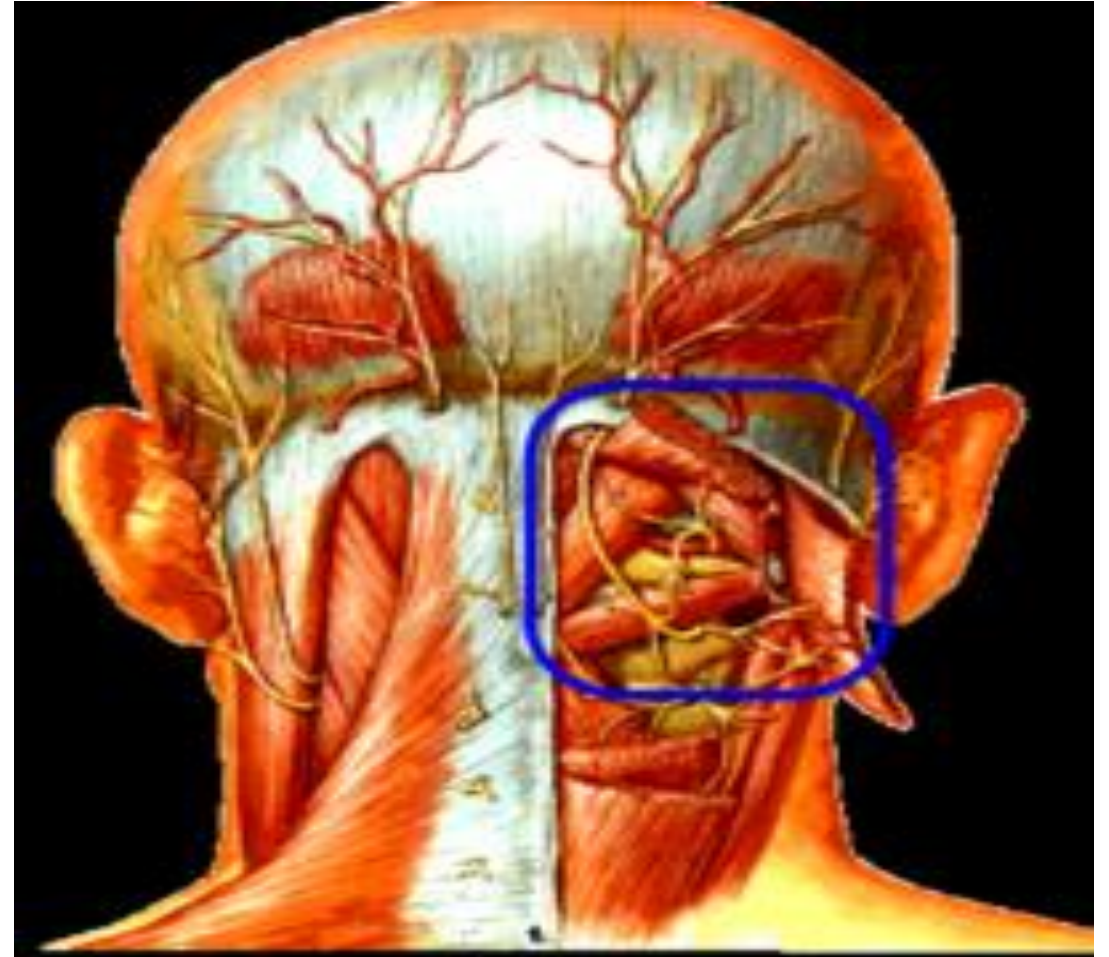
颈下神经节/星状神经节治疗区



Treatment 治疗

4. Greater occipital nerves (above of Fengchi GB20)

枕大神经点（风池穴上部）



Cervical Spondylosis

Nuchal type

颈型颈椎病

5 points upon 3 acupoints

3 Acupoints: UB10, Du14, SJ15

5 points: UB10(bilateral), SJ15 (bilateral), Du14

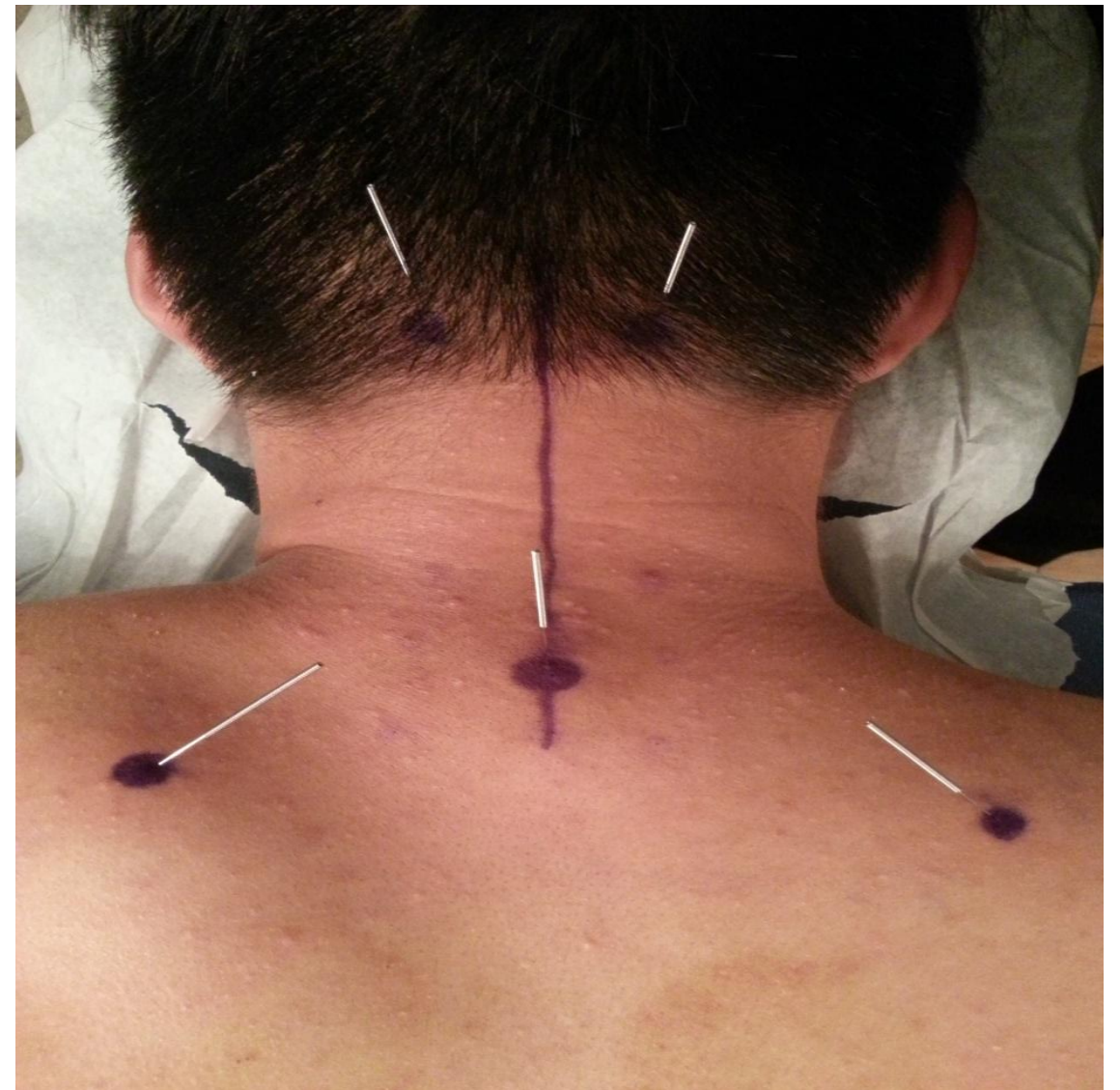
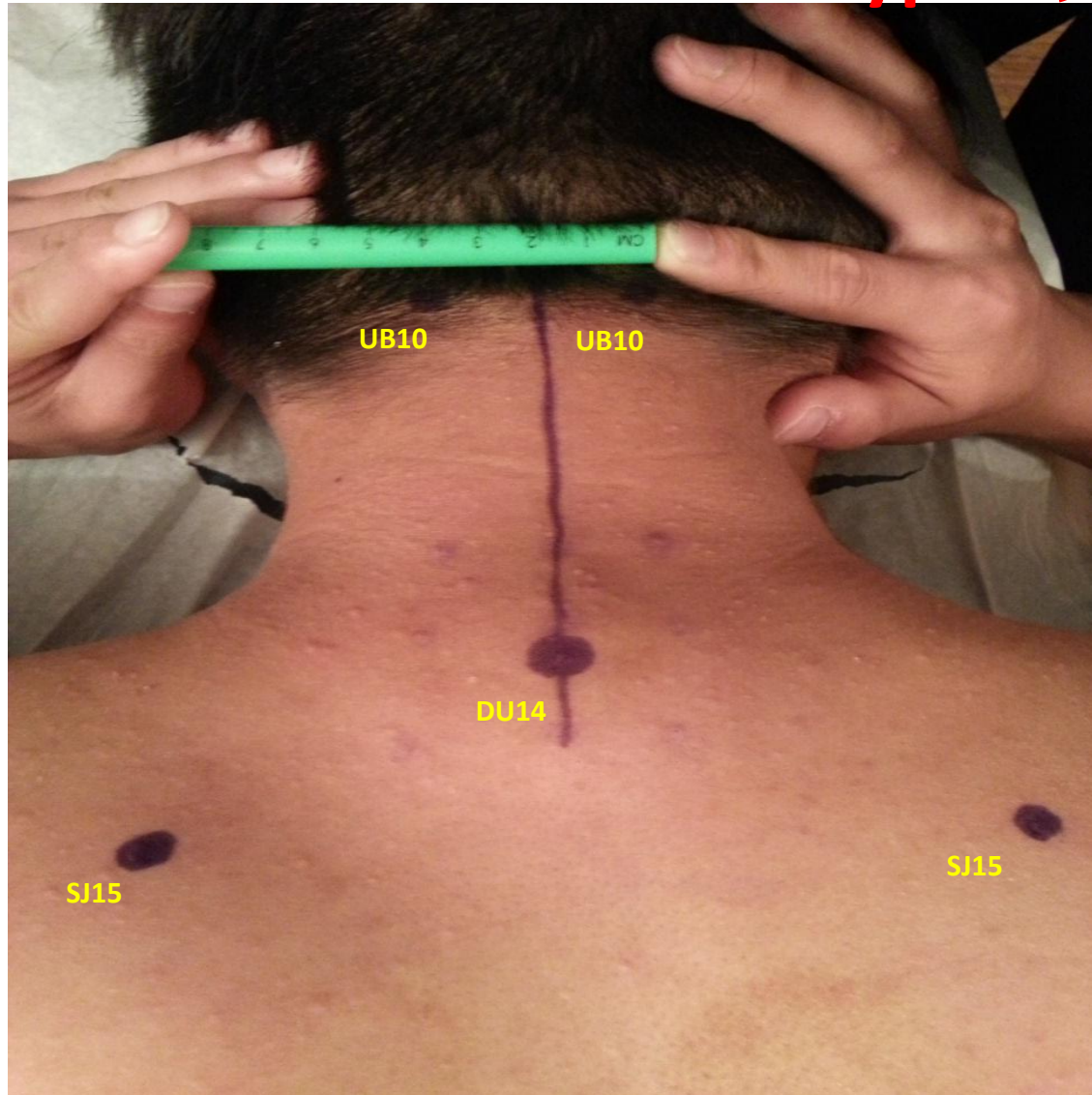
三穴五点

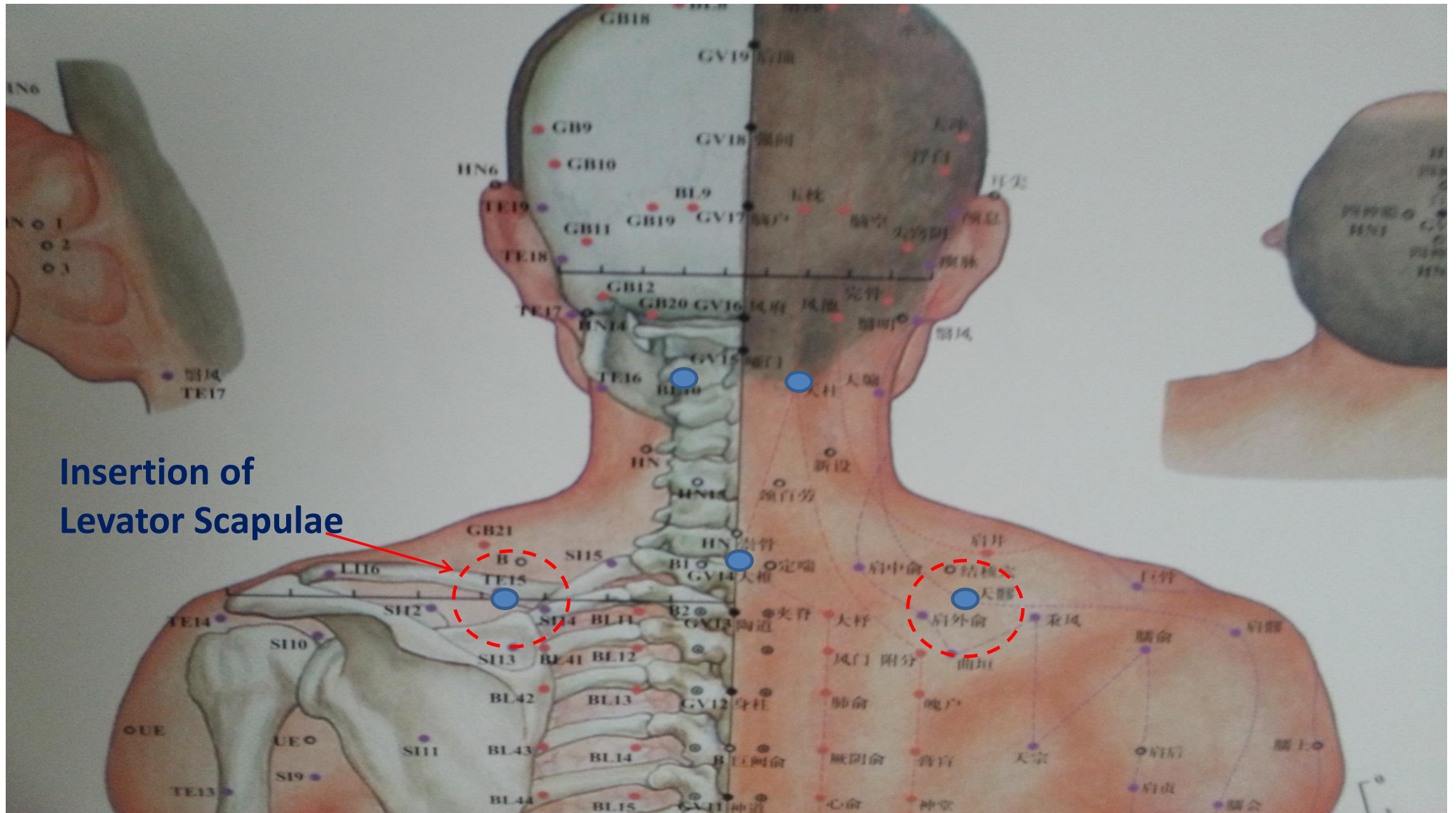
三穴：天柱、大椎、天髎

五点：天柱（双侧）、天髎（双侧）、加大椎

Cervical Spondylosis

Nuchal type 颈型颈椎病





Insertion of
Levator Scapulae

Cervical pain also related to Lumbosacral pain



Cervical pain also related to Lumbosacral pain



中医在癌症治疗中的临床应用

Nervio accesorio (XI)

apex (reflejado)

r de la escápula

nsversas del
(cendentes)

3

incho

a de

ibar

Nervio occipital m
nervio espinal C2)

3.º nervio occipital
nervio espinal C3)

Nervio occipital m

Nervio auricular m

Músculo trapecio

Ramos cutáneo
mediales de los ra
espinales C4-T6; C

MC

Ramos c
ventrale

Múscu
abdom

Cresta

Nervio
(ramo
espinal

Nervio
(ramo
nervio

Nervio
(ramo
nervio

Nervio
nervio
poster

This anatomical illustration shows the posterior view of the human torso, highlighting various muscle groups. The central focus is the trapezius muscle, which originates from the upper thoracic vertebrae and extends laterally towards the shoulders. Other prominent muscles include the latissimus dorsi, which runs along the spine and curves around the waist, and the erector spinae muscles in the lower back. The deltoids are visible at the shoulders, and the gluteal muscles are shown at the base of the torso. Numerous labels in Spanish identify specific anatomical features and muscles.

Labels on the left side:

- Músculo superior del cráneo
- espinosa de la vértebra C2
- esternocleidomastoideo
- ngulo posterior del cuello
- Músculo trapecio
- a escápula
- s
- osa de la
- racomular
- uo idomen
- i interno del riángulo lumbar
- esta iliaca
- tea (sobre el medio)
- teo mayor

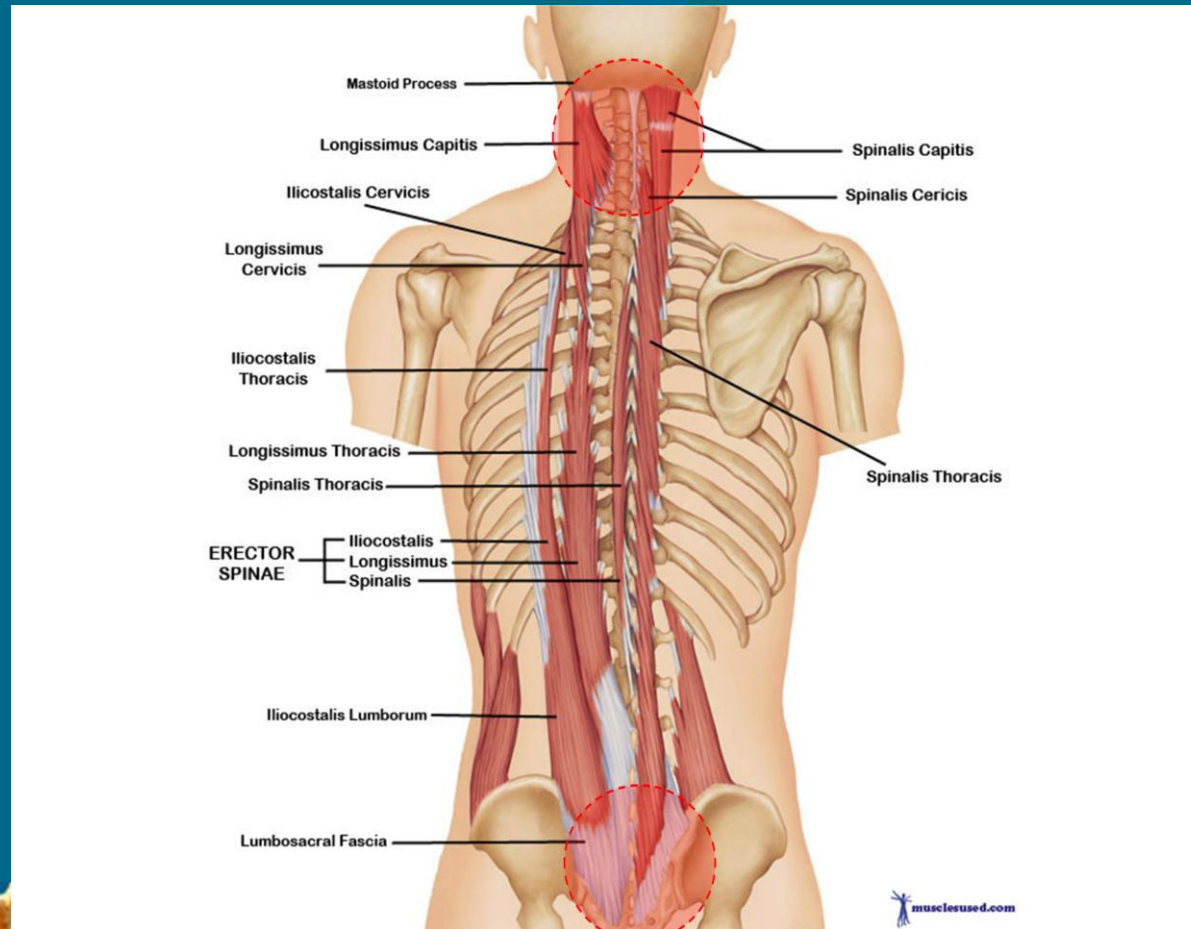
Labels on the right side:

- Músculo semiespinoso
- Músculo esplenio de la
- Apófisis espinosa de la vé
- Músculo esplenio del cue
- Músculo elevador de la
- Músculo romboides me
- M su
- M pc su
- I i r i
- Músculo dorsal i (cortado)
- Músculo serrato inferior
- 12.^a costilla
- Músculo erector d
- Músculo oblicuo del abdomen
- Músculo oblicuo del abdomen

Signature: F. Netter M.D.

12. Clinical application of TCM in cancer treatment

中医在癌症治疗中的临床应用



12. Clinical application of TCM in cancer treatment

中医在癌症治疗中的临床应用

Adjustment technique:

✓ Cervical, thoracic and lumbar vertebrae adjustments.



5.2. Protocol of TCM integrated treatment 综合治疗方案

5.2.1. Integrate treatments:

1. Acupuncture 针灸
2. Herbals 中药
3. Moxibustion 艾灸 (Ren4 关元, Ren6 气海, Ren12 中脘, E36 足三里)
4. poultice 外敷 (belly button 脐疗, local of tumor 肿瘤局部)
5. Reflexology 足疗
6. Balance diet 均衡饮食
6. Exercise 运动

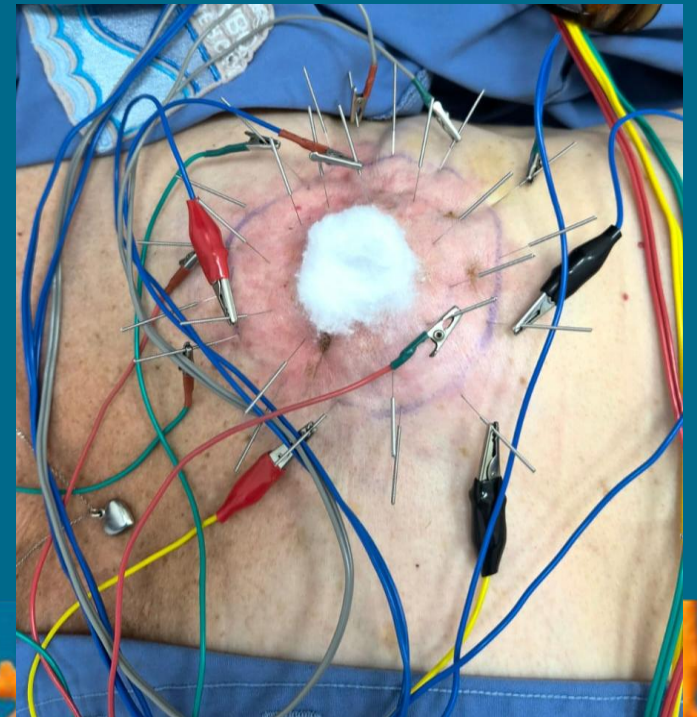
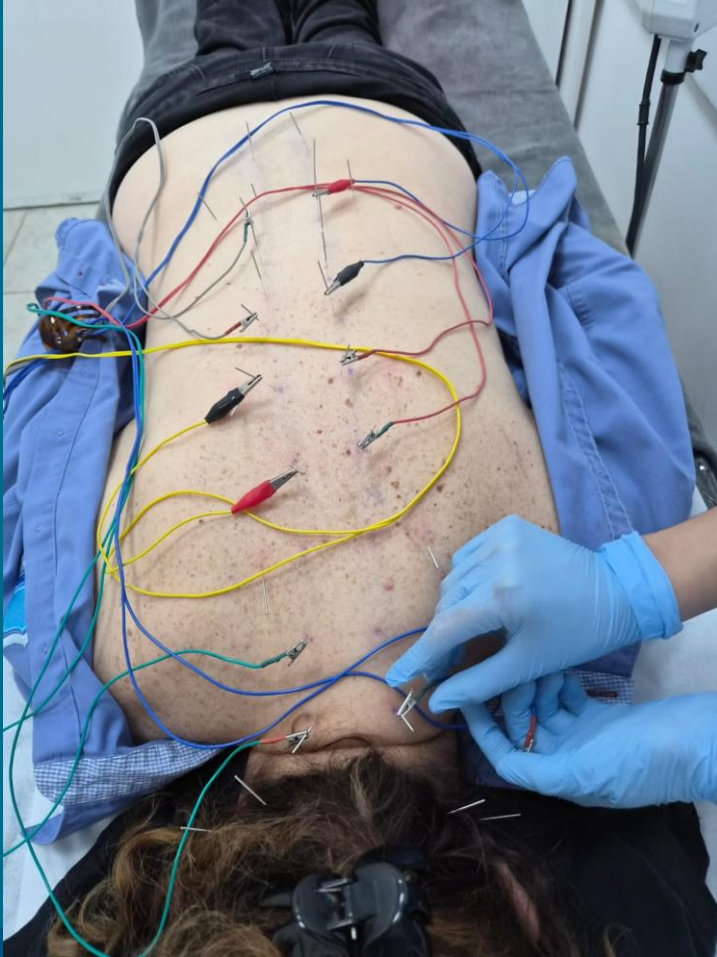




BREAK
TIME

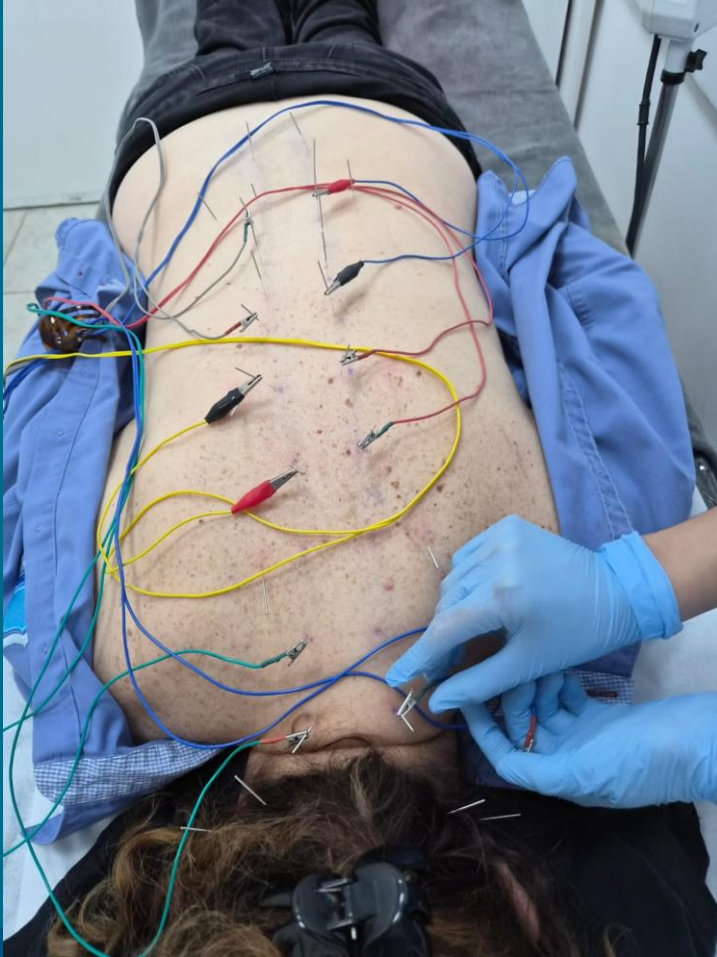
Clinical case

1. Breast cancer/ 68 yrs/ female/ 8 year complete TCM treatment/ no metast



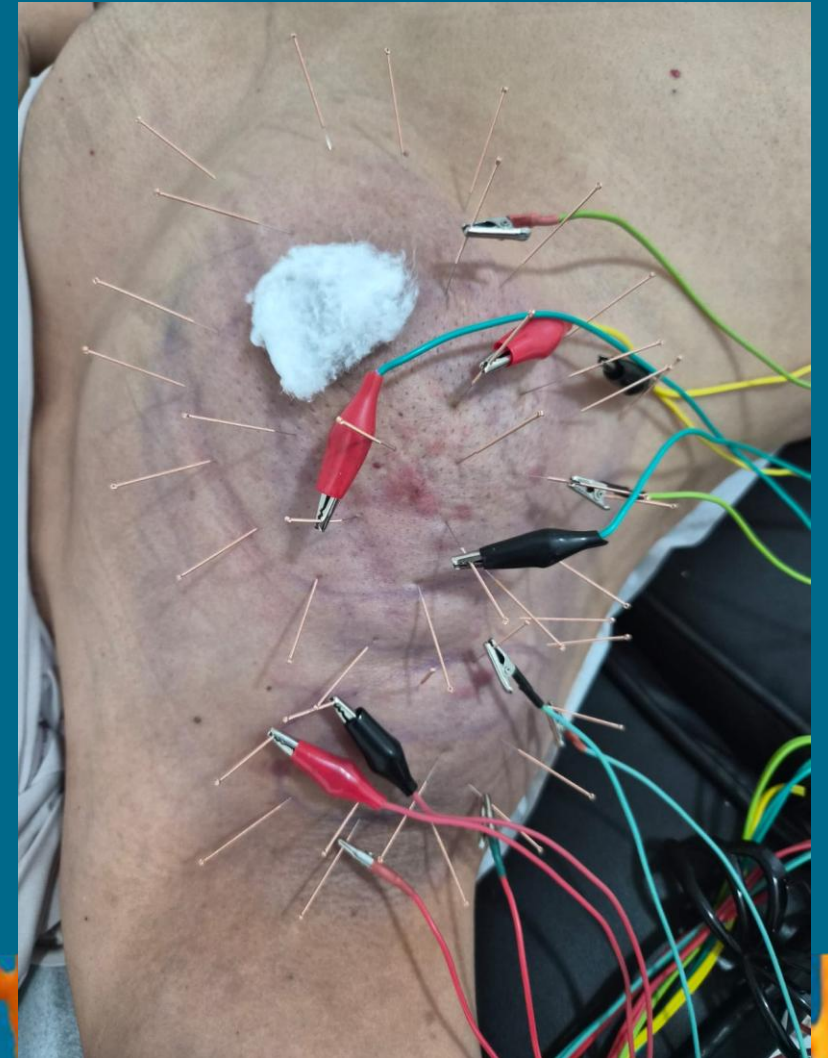
Clinical case

1. Breast cancer/ 68 yrs/ 8 year complete TCM treatment/ no metastasis



Clinical case

2. Breast cancer/ 46 yrs/female/ Stage 2/ 2 year complete TCM treatment/ no metastasis



Clinical case

3. Breast cancer/ 35 yrs/ female/ 2 year with radical mastectomy/ chemotherapy/ metastasis to lung for 6 months



Clinical case

4. Thyroid cancer / 65 yrs/ female/ 2 year complete TCM treatment/ no metastasis



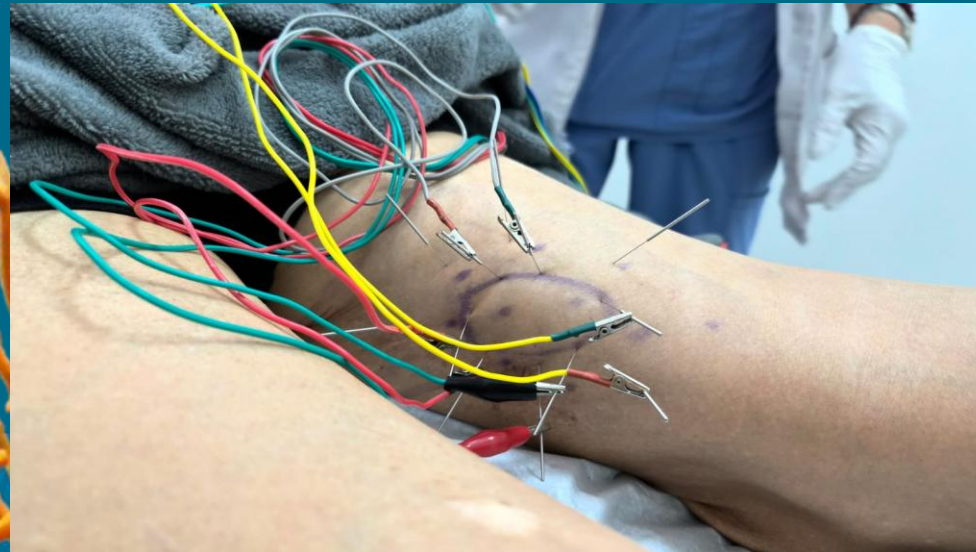
Clinical case

5. Kidney cancer/ 66 yrs/ male/ Right nephrectomy for 2 year/ metastasis to lung & brain



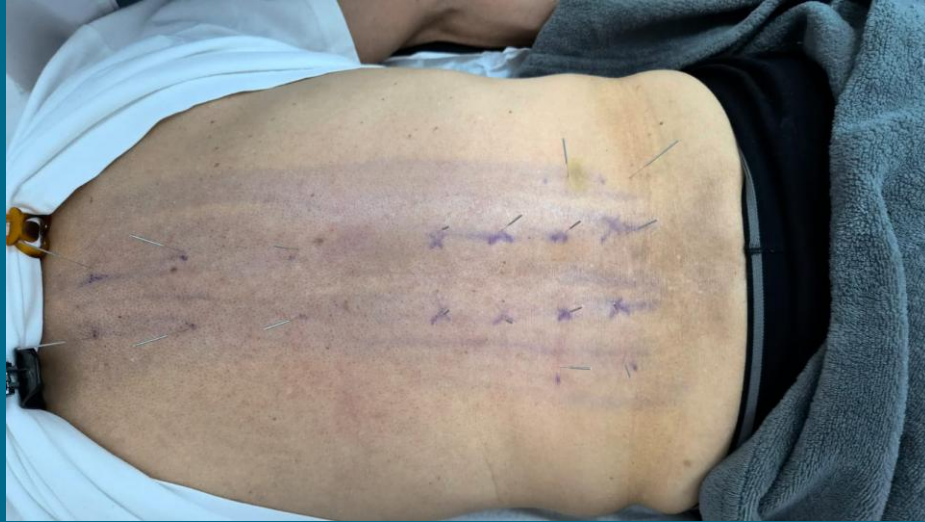
Clinical case

2. Sarcoma/ 78 yrs/ 3 month complete TCM treatment



Clinical case

2. Sarcoma/ 78 yrs/ 3 month complete TCM treatment



CONTENTS:

1. Epidemiology of tumors 肿瘤的流行病学
2. Basic concepts and characteristics of tumors 肿瘤的基本概念和特征
3. Etiological factors of tumors 肿瘤的发病因素
4. Diagnosis of tumors 肿瘤的诊断
5. Treatment of tumors 肿瘤的治疗
6. Evaluation of therapeutic efficacy in tumors 肿瘤的疗效评估
7. Prevention of tumors 肿瘤的预防
8. Understanding of malignant tumors in TCM 中医对恶性肿瘤的认识
9. Etiology and pathogenesis of tumors in TCM 中医肿瘤的病因与病机
10. Tumor in TCM differentiation 肿瘤的中医辨证
11. Role of TCM in the malignant tumors treatment 中医在治疗恶性肿瘤中的作用
12. Clinical application of TCM in cancer treatment 中医在癌症治疗中的临床应用
13. Prevention of Cancer in TCM 中医的癌症预防
14. Hospice, Thanatology: End-of-life care / Palliative care 临终关怀



13. Prevention of Cancer in TCM

中医的癌症预防

Relation of Five Elements (prevention of metastasis)

1. Generation
2. Inhibition
3. Counteraction (antagonism)
4. Overaction

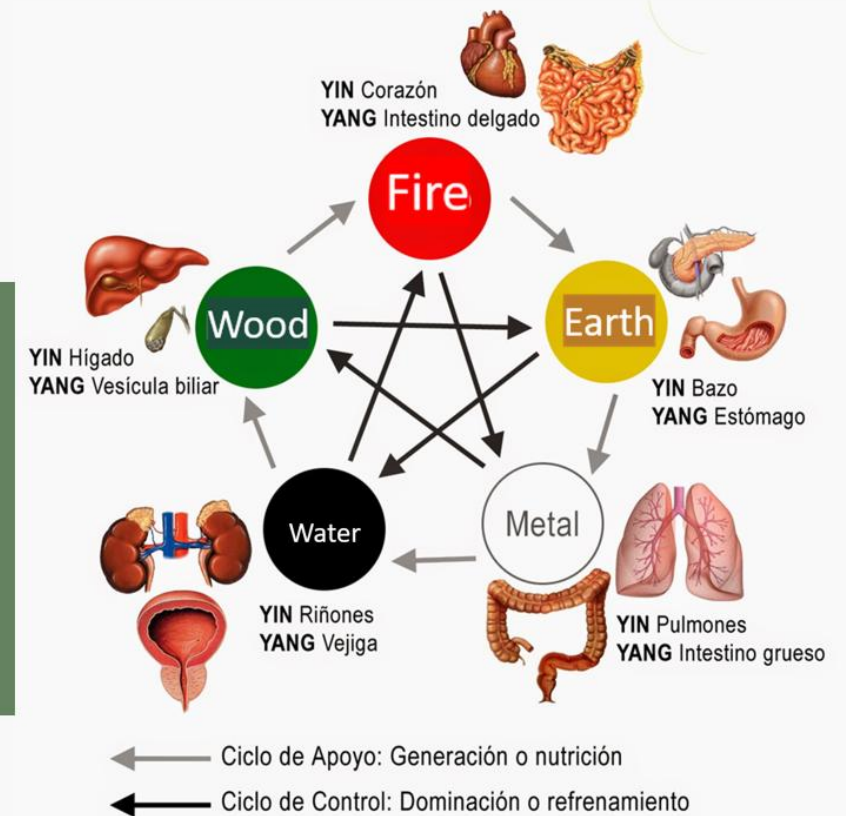
Metastasis 肿瘤转移:

- Metastasis with mass, shape 有形转移: Phlegm 痰
- Metastasis to bone 骨转移: Blood stasis 血瘀, blood with heat 血热.
- Metastasis to liver 肝转移: Isquemia 缺血 (Blood Deficiency) of liver.
- Metastasis to brain 脑转移: phlegm 痰, heat 热, wind 风.
- Pleural fluid 胸水, abdominal fluid (ascitis) 腹水: Cold 寒

中医肿瘤的辩证: 辩脏腑:

中医脏腑的生理功能系统, 能防治肿瘤的发生或转移。应重视五行之生克关系。

5 ELEMENTS – 5 ORGANOS Y VISCERAS



Carcinoma consumes fluids from the organs

ORGANOS	Carcinoma in lung	Carcinoma in liver	Carcinoma in stomach
Damages	Qi & YIN Deficiency of Lung	Blood Deficiency of Liver	Yin Deficiency of Stomach

肺部肿瘤必伤肺之气阴， 肝之肿瘤必伤肝之阴血， 胃之肿瘤必伤胃之阴津。



Prevention of cancer 癌症预防

Keep good habit 保持良好习惯

1. Dietary 注意事项

1.1. Avoid excessive consumption of sources of "Phlegm and Dampness":

- Avoid high protein: meat, chicken, seafood, dairy, cheese, etc.
- Avoid excessive sugar, glucose: sweets, chocolate, bread, cake, pasta, etc.
- Do not consume cold foods: ice water or iced drinks, daily salad, ice cream, etc.

1.2. Avoid excessive consumption of "Heat" / high-calorie foods:

- Avoid too much fried food: French fries, breaded cutlets (milanesa), tortilla chips (totopos), crispy tacos, etc.
- Do not consume daily: chocolate, turmeric, anise, peppers, chilies, etc.

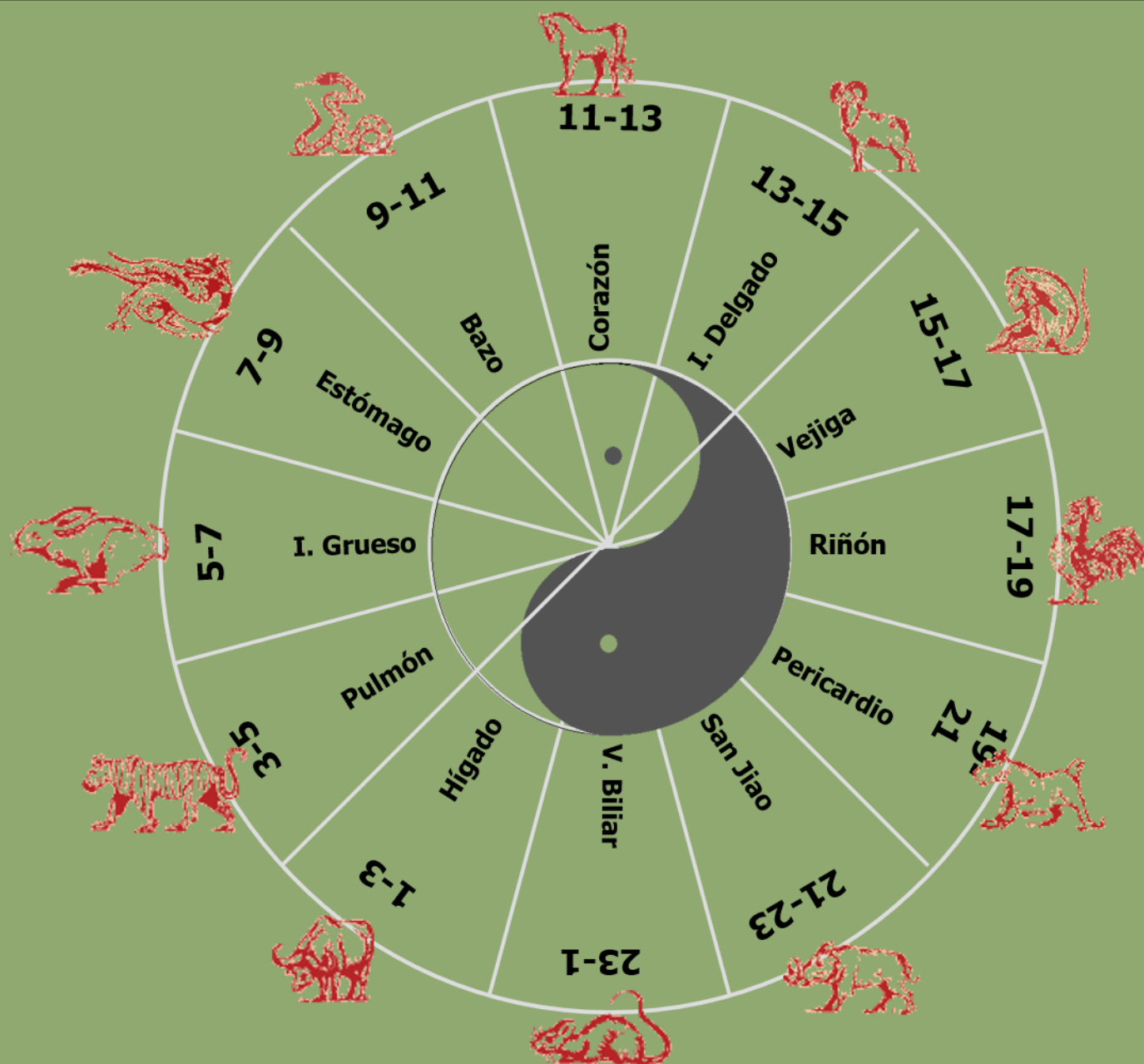
2. Daily habits (Biological clock of the organs, 12 daily periods)

3. Emotional control (joy, anger, worry/anxiety, nostalgia, sadness, fear and fright)

4. Exercises (Qi Gong)

5. Regular periodic health maintenance





Herbal Diatery 中医药膳



Excercise, meditation 运动，冥想



Hospice, Thanatology 临终关怀

7.1. Family support

7.2. Religion support

7.3. Psychological support





Q&A

dreamstime.

REFERENCE:

- 1.Traditional Chinese Medicine Oncology (Chief Editor: Zhou Daihan)
- 2.Integrative Chinese and Western Medicine Oncology (Sun Yan et al.)
- 3.Ten Lectures on Differential Diagnosis and Treatment of Cancer in TCM (Huang Jinchang)
- 4.Twenty Years of Experience in Oncology Practice (Huang Jinchang)
- 5.Acupuncture and Moxibustion for Cancer Treatment (Relevant chapters by Shi Xuemin)
- 6.Anti-tumor Chinese Patent Medicine Section in the Pharmacopoeia of the People's Republic of China



Thank you

for your attention

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