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TYPES, CLASSIFICATION, MORPHOLOGY OF TUMORS, AND THEIR CLINICAL PRESENTATION

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Abstract: Tumors are abnormal growths of cells that can occur in any part of the body, leading to a variety of clinical manifestations depending on their type and location. Tumors are generally classified into two main categories: benign (non-cancerous) and malignant (cancerous). Benign tumors are typically well-defined, slow-growing, and non-invasive, whereas malignant tumors exhibit rapid growth, invasive potential, and can metastasize to distant organs. The morphology of tumors, including cellular appearance, growth patterns, and nuclear characteristics, is crucial for determining their nature and aggressiveness. The clinical presentation of tumors varies from asymptomatic masses to symptoms like pain, weight loss, fatigue, and abnormal bleeding, depending on whether the tumor is benign or malignant. Accurate diagnosis and classification through imaging and biopsy are essential for appropriate treatment and management. This article discusses the various types of tumors, their morphological characteristics, and how they present clinically in patients.

Key words: Tumors, Benign Tumors, Malignant Tumors, Tumor Classification, Tumor Morphology, Tumor Growth Patterns, Cellular Differentiation, Clinical Presentation, Cancer, Metastasis, Diagnosis, Biopsy.

Introduction: P a p i l l o m a s a r e benign tumors of the mammary layer consisting of a connective tissue base covered with epithelium . They can be observed on the skin or mucous membranes (mostly in the mucous membranes of the stomach, intestines and urinary tract). Papillomas can turn into malignant tumors

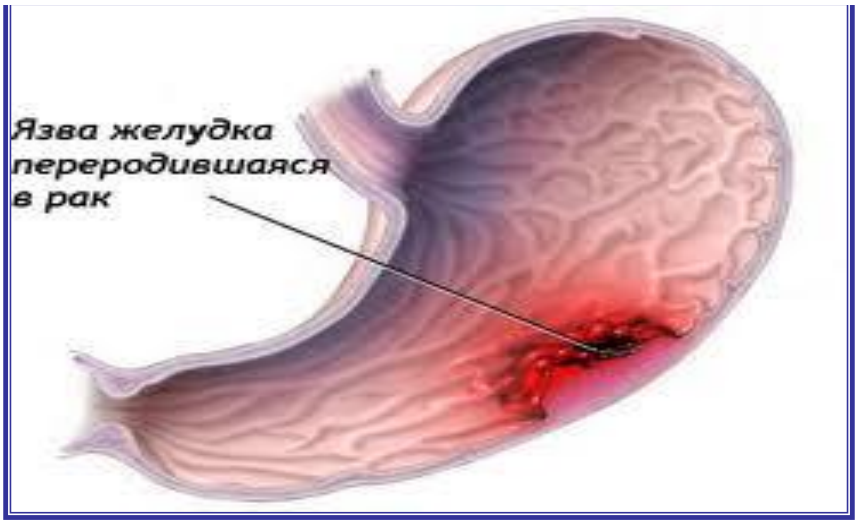
A d e n o m a s - is formed in glandular tissue. Sometimes it can turn into glandular cancer. They are found in all organs of the body with glandular tissue, including salivary glands, lymph, mammary gland, thyroid gland, ovaries, etc.

Prostate adenoma

D e r m o i d c y s t s - are sac-like structures that are formed as a result of the penetration of smaller pieces of skin during embryonic development . They have a dense membrane, which surrounds a mushy mass of hair (hair), a mixture of epithelial cells migrated with sebum. It is more located in the groin and front chest area.

Cancer is the most common malignant tumor that develops from epithelial cells. Cancer affects all organs that have epithelial cells . Epithelium changes and has an atypical structure is a symptom of cancer.

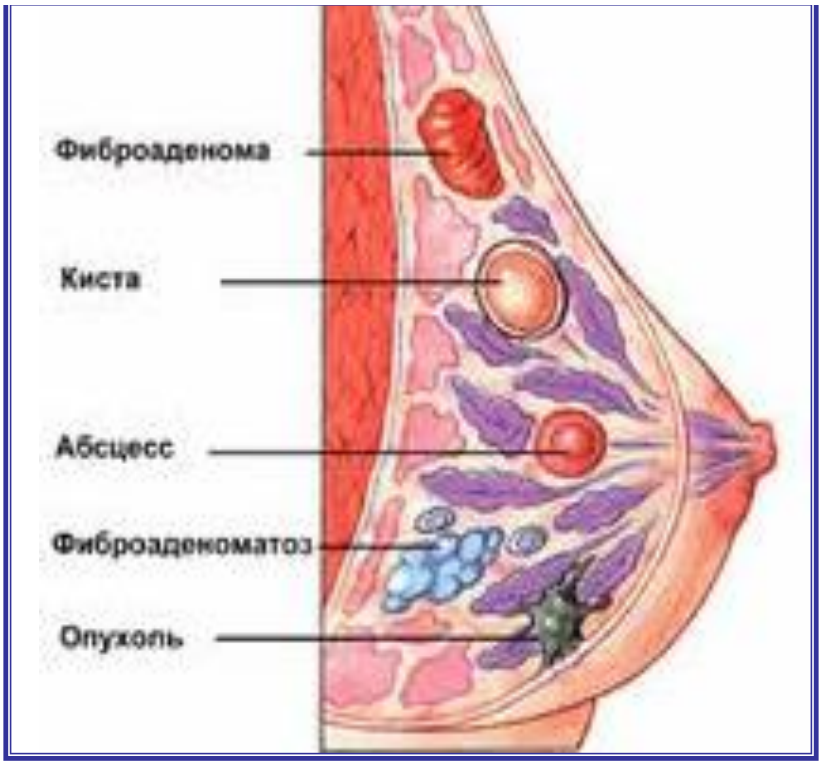
Rapid and continuous growth of cancer leads to necrosis of tumor parts, bleeding, then disintegration and formation of cavities and wounds. A cancer ulcer is distinguished by its characteristic features: the edges and bottom are covered with a dense, brown, oily film. Metastases of cancer through lymphatic and blood vessels are characteristic. The cancer process is often accompanied by cachexia (severe weight loss and emaciation) . Cachexia is observed especially quickly when affected by stomach cancer.



Stomach cancer

F i b r o m a — benign tumor formed from connective tissue. It occurs in almost all tissues of the body. More is located in the uterus, skin, subcutaneous tissue. It can grow and become very large.

Uterine fibroma

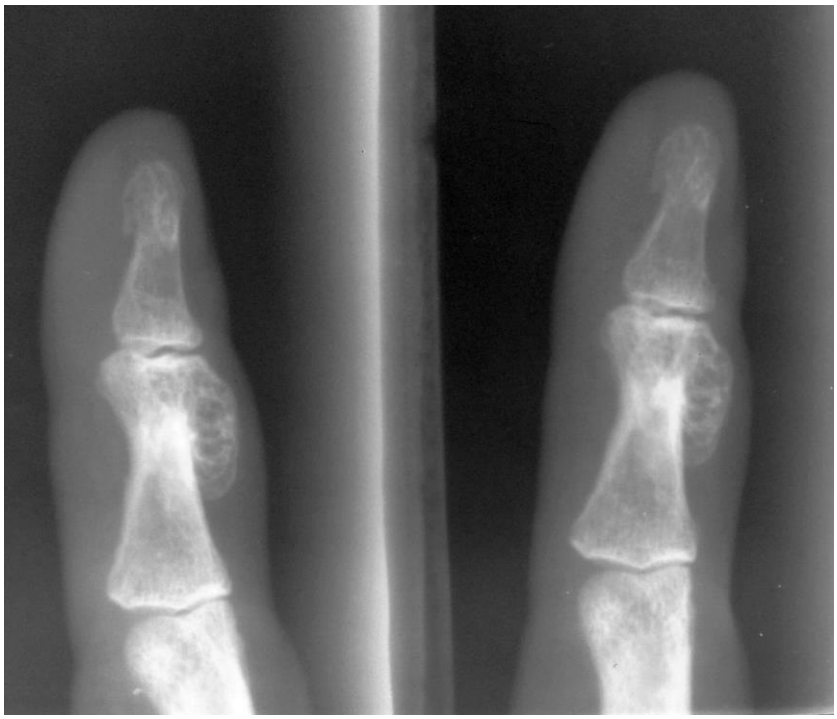


Neoplastic diseases of the mammary gland

L i p o m a — a benign tumor formed from adipose tissue. It has a granular structure, is surrounded by a thin-walled capsule, and grows slowly. It is located in any organ with adipose tissue.

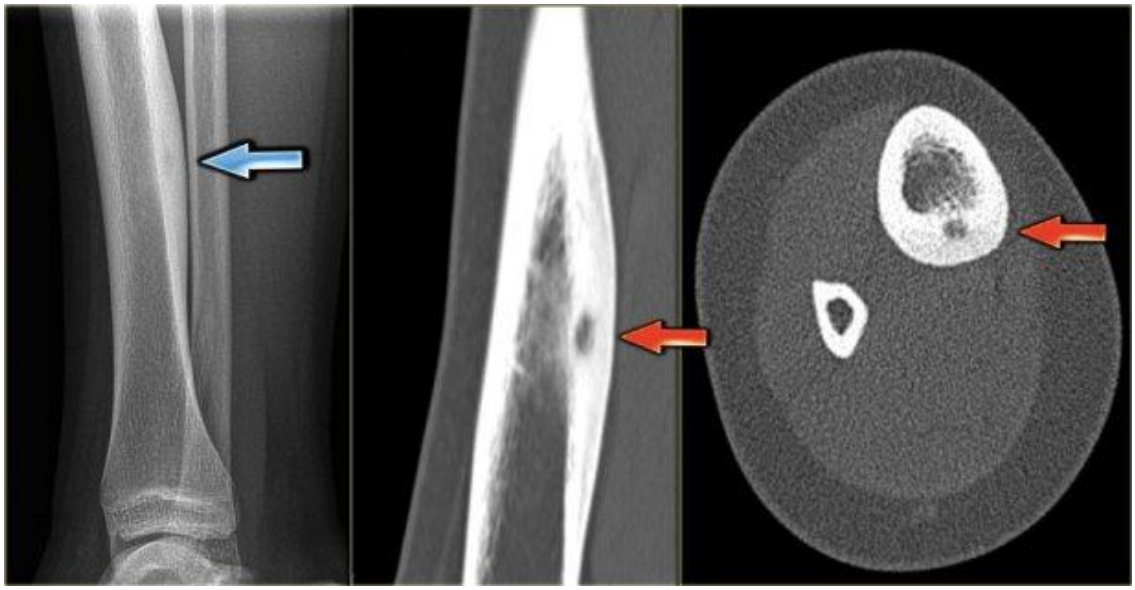
Lipoma

C h o n d r o m a — a benign tumor formed from the tissues of the anus. It is characterized by slow growth.



Finger chondroma (X-ray appearance)

O s t e o m a — a tumor consisting of bone tissue. It grows slowly. It can become dangerous.



Osteoma of the tibia

S a r c o m a — a malignant tumor developed from connective tissue . It is called chondrosarcoma if it originates from bone tissue, osteosarcoma if it originates from bone, fibrosarcoma from fascia, lymphosarcoma from lymph nodes, and angiosarcoma if it develops from blood vessels. Sarcoma has all the symptoms of malignant tumors due to its progressive nature.

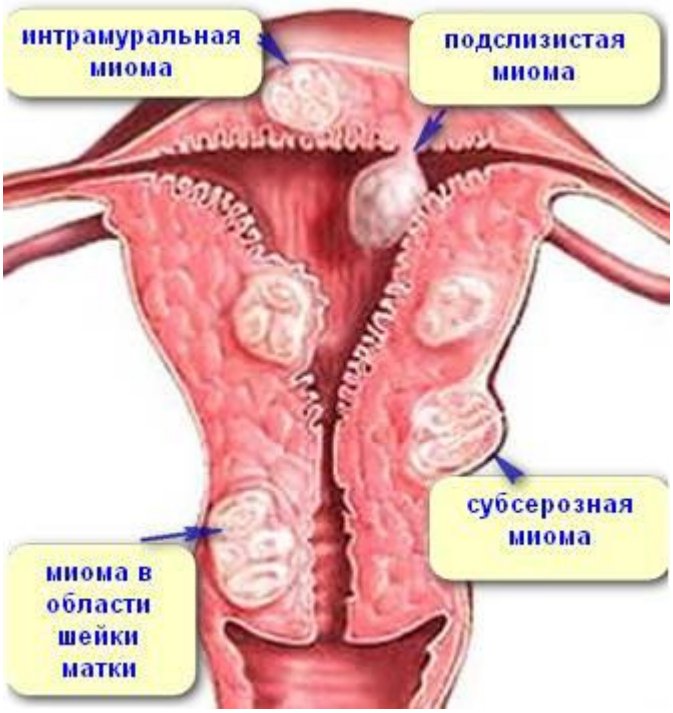
Sarcoma

A n g i o m a - a benign tumor growing from veins. It is divided into lim phangiomas and hemangiomas. Hemangiomas, in turn, are 1) simple or capillary hemangiomas; 2) cavernous or cavernous hemangiomas; 3) divided into branching hemangiomas.

In severe hemangiomas, a vascular murmur can often be heard in the area of the tumor.

Hemangioma

Myoma is a tumor formed from muscle tissue. Smooth muscle tumor is called leiomyoma, transverse muscle tumor is called rhabdomyoma. They grow slowly.



Uterine myoma

N e u r i n o m a a—tumor (schwannoma) formed from the Schwann membranes of the nerve column. Rare. It is often located in the ulnar, median and ulnar nerves. It consists of a smaller tumor-like structure that directly causes pain along the conduction pathway.

Despite the fact that glioma-brain and spinal cord tumors belong to benign tumors, they are characterized by rapid growth and invasion of surrounding tissues. Recurrence may occur after removal of the glioma .

Carcinoma

Cyst

Examination and treatment of oncological patients

Diagnosis of malignant tumors. In the diagnosis of malignant tumors, as in the diagnosis of other diseases, anamnestic information is of great importance. The patient's complaints, the results of the examination, and the examination methods that allow making an accurate diagnosis include cytological and histological diagnosis. In this case, a punctate or smear is taken from the organ and the structure of the tumor is determined. In addition, general X-ray, computed tomography, magnetic resonance imaging, multispiral computed tomography, radioisotope scanning, positron emission tomography, and UTT examinations of organs help in timely diagnosis of malignant tumors.

carried out using modern devices with fiber optics (fibrobronchoscope, fibroesophagoscope, fibrogastroscope, etc.) greatly expand the possibilities of diagnosis.

Treatment of malignant tumors. Treatment of a malignant tumor is a multifaceted process that includes all modern methods. Currently, surgery, chemotherapy, radiation therapy methods are considered the main methods of treatment of malignant tumors, immunotherapy, hormone therapy, additional high temperature and laser treatment methods are widely used in recent years. **Surgical treatment is** the most radical method and is used when most internal organs are affected - esophagus, stomach, lungs, uterus, etc. In this type of treatment, an organ is completely or partially removed from the border of healthy tissue along with regional lymph nodes and surrounding tissue.

Light therapy is used as an independent treatment and together with surgical, hormonal and chemotherapy treatment.

all methods of radiation therapy can be conditionally divided into 3 groups according to the method of application of the radiation, with a diverse spectrum of ionizing radiation :

externally through the skin;

sending the radiation source into natural cavities such as the mouth, uterine cavity, esophagus, bladder or artificially created cavities;

irradiating the tissue (tumor).

Chemotherapy . In recent years, special chemical preparations that selectively affect malignant cells, Tio TEF, embixin, sarcolysin, lofenal, colchamine, etc., have been used in practice.

Hormone therapy. In the treatment of some malignant tumors, h o r m o n e therapy gives good results. For example, male sex hormones - androgens are used in breast cancer, and female sex hormones (estrogens) are used in prostate cancer.

All methods give a good therapeutic result when combined together . The earlier targeted therapy is used, the better the outcome.

Treating benign tumors is not difficult. Since a benign tumor can turn into a malignant tumor, it is important not to forget that its removal is a preventive measure against a malignant tumor .

In addition, photodynamic therapy and cryotherapy are effective in treatment. All the methods of treatment being created should be carried out only by an oncologist, because the treatment carried out by a specialist is effective and reduces the occurrence of relapses and metastases. When determining the treatment method, it is necessary to pay attention to the following characteristics of the tumor: determination of the stage of the tumor, its growth into the surrounding tissues, damage to the lymph nodes, the histological type of the tumor, its size, the age of the patient, and related diseases . The treatment method should be aimed mainly at the complete removal of the tumor process, its recurrence and metastasis . Therefore, in most cases, additional (combined) and complex (complex) methods are used in stages II-III of the tumor process, that is, several treatment methods are used together for the patient. The use of treatment methods in the early stages of the tumor process leads to complete recovery of patients. Therefore, early detection of the tumor process allows the patient to use treatment methods in time and get a good result. In recent years, organ-sparing surgical methods have been widely used in the treatment of malignant tumors, in addition to the use of modern chemical drugs (taxotere, eloxatin, nevelbin, herceptin, campto, xeloda, paclitaxel, avastin, tarseva, temodal, etc.), in light therapy - brachytherapy, " The use of gamma radiation, radiation therapy , neutron therapy, proton therapy, liquid radioisotopes, and immunotherapy (anti-tumor substances obtained from immune cells) are becoming increasingly important. Vaccines are widely used in the treatment of certain malignant tumors (skin cancer, melanoma, cervical cancer), and this method makes it possible to use it in the treatment of other neoplastic diseases.

In addition, endoscopic surgery, interventional radiology and photodynamic (laser) method of treatment with photosensing gives positive results in the treatment of some types of tumors. All the above-mentioned treatment methods can be highly effective if they are used only at the initial stage of the tumor process. Therefore, the measures taken in this regard should consist of the following:

- it is necessary to pay attention to the quality of conducting screening examinations and preventive examinations among the population, and it is necessary to focus on the detection of tumors in the initial stages;
- extensive use of modern methods (x-ray, ultrasound, molecular biological) in preventive examination works;
- timely detection and treatment of pre-tumor diseases;
- carrying out sanitary-hygiene and promotion work among the population on a large scale, explaining the necessity of timely treatment of tumor diseases;
- to organize radio, television, newspaper and magazine presentations about tumor diseases and to increase the medical literacy of our people, and at the same time to change the attitude towards oncology in a positive direction;
- implementation of modern treatment methods in oncology practice on a large scale.

The implementation of these measures makes it possible to detect tumor diseases in the early stages, which can be effective in treating the disease in time. Identifying and eliminating the factors that cause tumor diseases, which have been indicated above, will reduce the incidence of dangerous tumor diseases among the population and play an important role in their prevention. The use of modern treatment methods increases the standard of living of oncology patients and improves the quality of life.

Therefore, we should remove from the minds of our people the idea that oncological disease cannot be cured and pay great attention to this direction of medicine.

Concept of radical, palliative and symptomatic treatment. Radical treatment is treatment measures aimed at the complete elimination of the disease, the complete recovery of the patient from the disease. In this case, the focus of the disease, that is, the tumor, is surgically removed or the tumor is completely destroyed by chemotherapy and light therapy. Radical treatment methods include surgery, chemotherapy, light therapy, hormone therapy, and immunotherapy.

Palliative treatment is complex treatment measures aimed at improving the patient's quality of life, which is carried out when radical treatment is impossible due to the spread of the process or due to contraindications. For example: placing biliodigestive anastomoses, placing stomas in order to eliminate mechanical jaundice in pancreatic head cancer, hormone and chemotherapy in disseminated form of breast cancer.

Symptomatic treatment is treatment measures aimed at eliminating the symptoms of the disease. Fighting pain, restoring the body's acid-alkaline and electrolyte balance, using antibacterial, anti-inflammatory, and anti-intoxication drugs form the basis of symptomatic treatment procedures.

Combined treatment is the simultaneous use of two treatment methods, one of which is directed against the tumor, and the other can be a method that affects the body systemically. For example: the combined use of surgery and chemotherapy.

Complex treatment is the application of three or more treatment methods (surgery, chemotherapy, nurotherapy, etc.) that have a local and general effect on the body.

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