

An anatomical illustration of the female reproductive system, including the uterus, fallopian tubes, and ovaries, rendered in a glowing blue and red color scheme. The text is overlaid on the central part of the illustration.

Background, premalignant  
and malignant diseases of  
the female genital organs.

# Precancerous lesions of the external genitalia

1. Leukoplakia;
2. Kraurosis;
3. Bowen's disease;
4. Paget's disease.

# Leukoplakia of vulva

- develops mainly in the perimenopausal period is probably due to hormonal and immune state disorders;
- disease primarily affects the labia minora and clitoris;
- leukoplakia characterized by proliferation of stratified squamous epithelium and the violation of its differentiation and maturation (para- and hyperkeratosis, hyperacanthosis without express cellular and nuclear polymorphism and disorders of the basal membrane, which is determined by cell round infiltration in it;
- complaints of persistent itching of the vulva;
- leukoplakia defined as dry white or yellowish plaques of various sizes with areas of sclerosis, wrinkling of tissues, scratching, inflammation and ulceration.



# Kraurosis of vulva

- associated with impaired of histochemical reactions and histamine release substances that affect neural receptors, leading to pain and itching;
- characteristic for kraurosis- atrophy of papillary and plexiform layers of the skin, loss of elastic tissues and hyalinization of connective tissue;
- At first there is hypertrophy of epidermis (with symptoms of acanthosis and inflammatory infiltration of the connective tissue), disappears subcutaneous fat of the labia majora, then their skin atrophy;
- during colposcopy determined expressed teleangioectasiae;
- skin and mucous membrane of the external genitalia atrophic, fragile, thinning, depigmented, the vagina is narrowed.



# Treatment of leukoplakia and kraurosis of vulva

- should be comprehensive: desensitizing and sedation, compliance of work and rest, gymnastic exercises, exclusion from the diet of spicy food and alcohol;
- To relief of itching- applied 10% Anaesthesin and 2% Dimedrol ointment, 2% Resorcinum application, carry out Novocaine blockade of pudendal nerve or surgical denervation;
- in case of failure of conservative therapy - vulvectomy or radiotherapy is exhibited.

# Bowen's disease

- Bowen's disease characterized by hyperkeratosis and acanthosis;
- clinically manifested by the appearance of flat or protruding spots above the surface of skin with sharp edges and tissue infiltration;
- on the background of Bowen's disease invasive cancer often develops ;
- surgical treatment - vulvectomy.



# Paget's disease

- with **Paget's disease** of the epidermis appear peculiar large bright cells;
- of clinical manifestations - the appearance of bright red, sharply limited, eczema-like spots, with granular surface, the skin around which infiltrated;
- against the background of Paget's disease often develop invasive cancer;
- surgical treatment - vulvectomy.



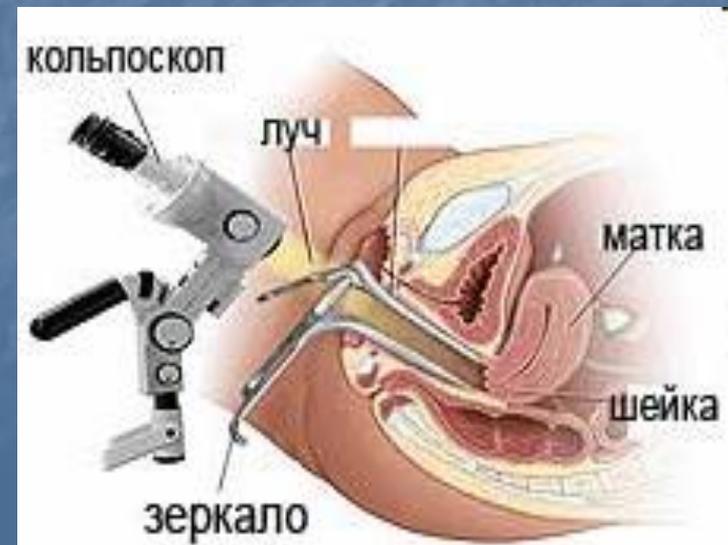
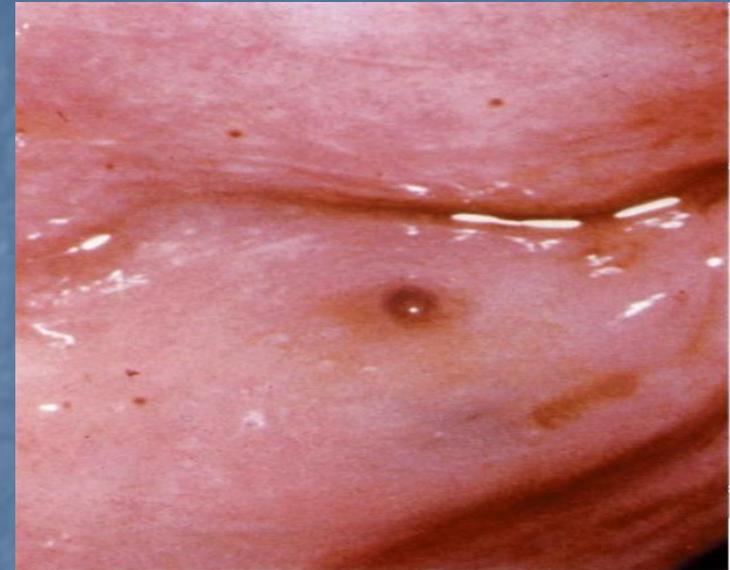
# Precancerous vaginal diseases

- Patients with leukoplakia complain of insignificant whites;
- there are areas of thickening of the vaginal mucosa with whitish foci on the surface;
- leukoplakia patches vary in size and shape, sharply defined edges;
- Colposcopy: lesions of leukoplakia are iodine-negative and can not be removed by a cotton ball;
- the diagnosis is confirm by histology.



# Precancerous vaginal diseases

- **erythroplakia** of the vagina - atrophy of the surface layers of stratified squamous epithelium;
- patients complain of a liquid or sticky yellowish vaginal discharge;
- affected areas have the appearance of dark-red plaques surrounded by normal epithelium;
- diagnosis is based on the results of the inspection, colposcopy and histology material obtained by targeted biopsy;
- erythroplakia distinguish on the severity of the process to mild, moderate and severe.



# Treatment of vaginal dyskeratosis

- diathermocoagulation;
- laser therapy;
- cryosurgical intervention.

# Cervical Precancer

- The **background** diseases are: endocervicoses, polyps, papillomas, simple forms of leukoplakia, ectopias, traumatic eversion (ectropion);
- to the group of **precancerous diseases** belong single or multiple focal proliferates with phenomena of cells atypia (dysplasia, leukoplakia with atypia of cellular elements, adenomatosis);
- precancerous lesions usually occur on the background processes, but sometimes develop on the intact cervix.

# Ectopia of the cervix

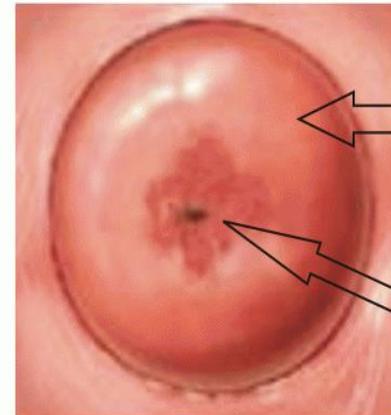
- this is dislocation of columnar epithelium of the cervical canal to the periphery of its vaginal part;
- may have dishormonal and posttraumatic origin;
- Colposcopy: bright pink area with grainular surface determined around the external os, columnar epithelium becomes papillary growths in the form of grapes after treatment with 3% solution of acetic acid, papillary ectopia is detected histologically;
- There are unfinished and finished zone of benign transformation.

**Здоровая шейка матки**



Многослойный  
плоский  
эпителий

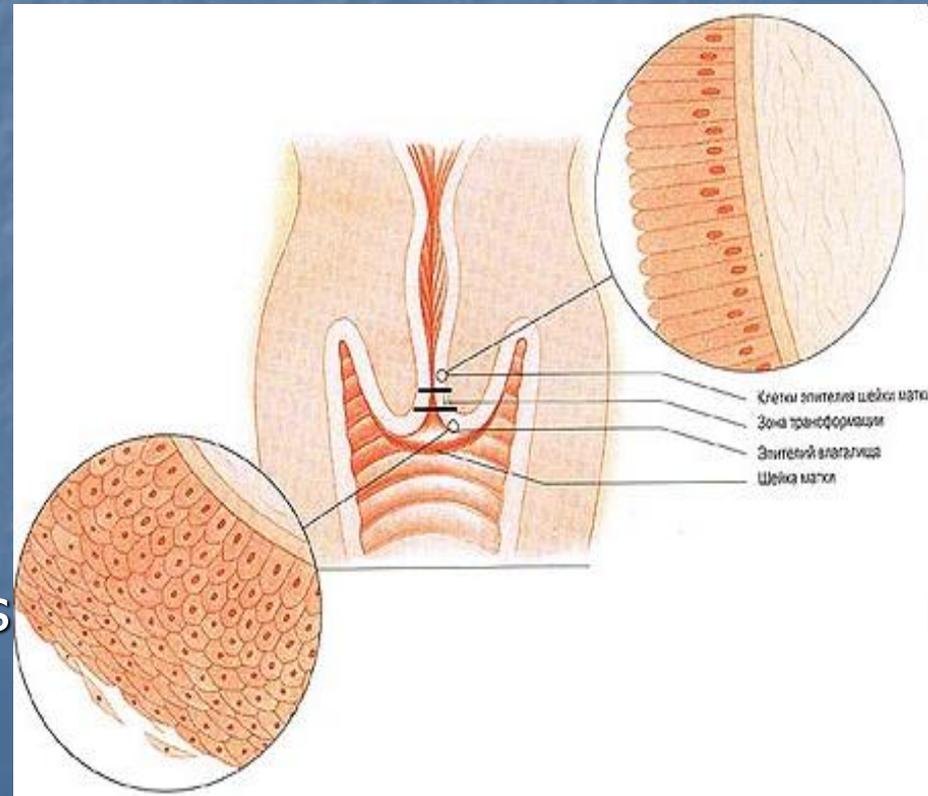
**Шейка матки с патологией**



Многослойный  
плоский  
эпителий

Эктопия  
(цилиндрический  
эпителий  
на поверхности  
шейки матки)

- if **there is incomplete** or the proliferative endocervicosis Columnar epithelium at the periphery is partially replaced by stratified squamous,. Elements of glandular and papillary erosion determined histologically;
- When IT is **complete transformation zone** or healing endocervicoses, Nabothi cysts and individual functioning gland observed on the BACKGROUND OF stratified squamous epithelium; histologically detected follicular or glandular erosion;
- if **true erosion-an area of** mucosa of vaginal part of cervix deprived of the SQUAMOUS epithelium, most often this process develops after mucosal injury;
- **subepithelial endometriosis** develops mainly due to trauma of cervical mucosa and proliferation of endometrial cells which implanted.

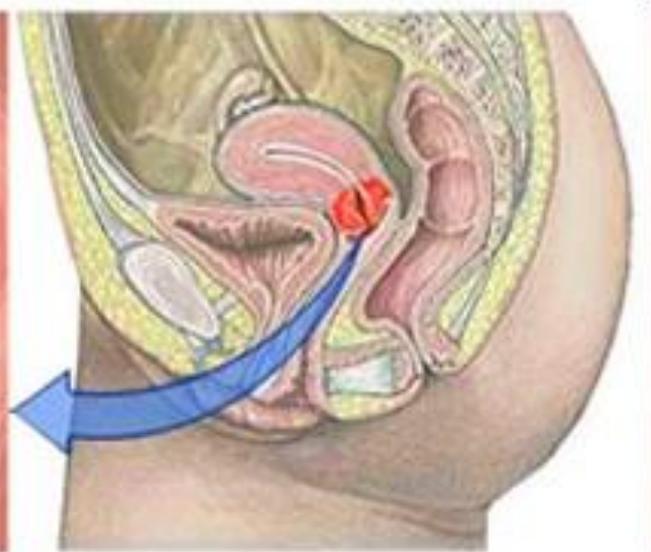




здоровая шейка матки



эрозия шейки матки

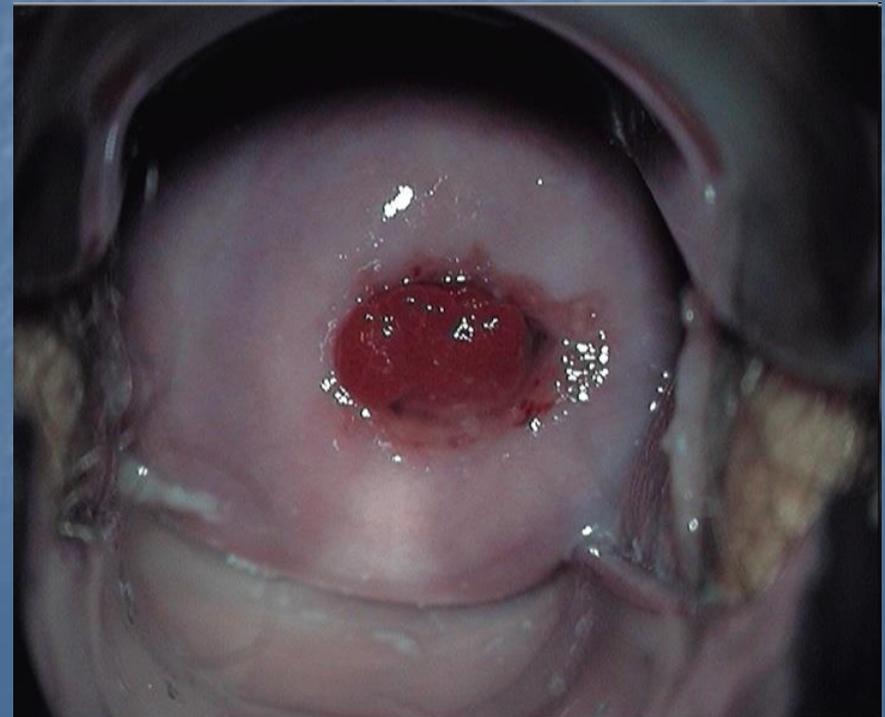
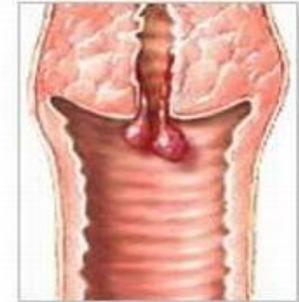


# Cervical Polyps

- Some of the most common diseases of the female genital organs;
- Hyperplastic processes of endocervix include various forms of focal hyperplasia, they must be differentiated from true polyps of cervical mucosa;
- in a polyp may be secondary changes, namely inflammation with diffuse or focal character (mostly associated with the trauma and its subsequent infection), squamous metaplasia, circulatory disorders;
- in the presence of secondary pathologic variations are possible discharges , including sanious; other patients' complaints (pain, menstrual and reproductive dysfunction, etc.) are due to comorbidities .

- Diagnostics - inspection of the cervix, colposcopy, cervicoscopy; structure of polyp determined histologically;
- Treatment - polypectomy followed by destruction of the bed of the polyp; hysteroressectoscopy.

Полипы шейки матки



# Epithelial dysplasia

- affected areas have views of monomorphic whitish-pink or white areas of polygonal, rhomboid or oval delimited by lines of bright pink or red;
- histologically defined as complexes of displastic multilayered squamous epithelium, delimited with lines from healthy or thinning of the mucosa, where the blood vessels appear through the connective tissue.



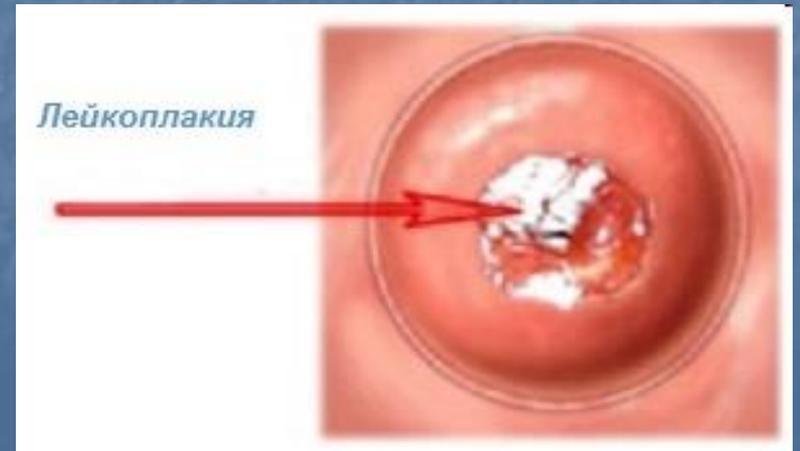
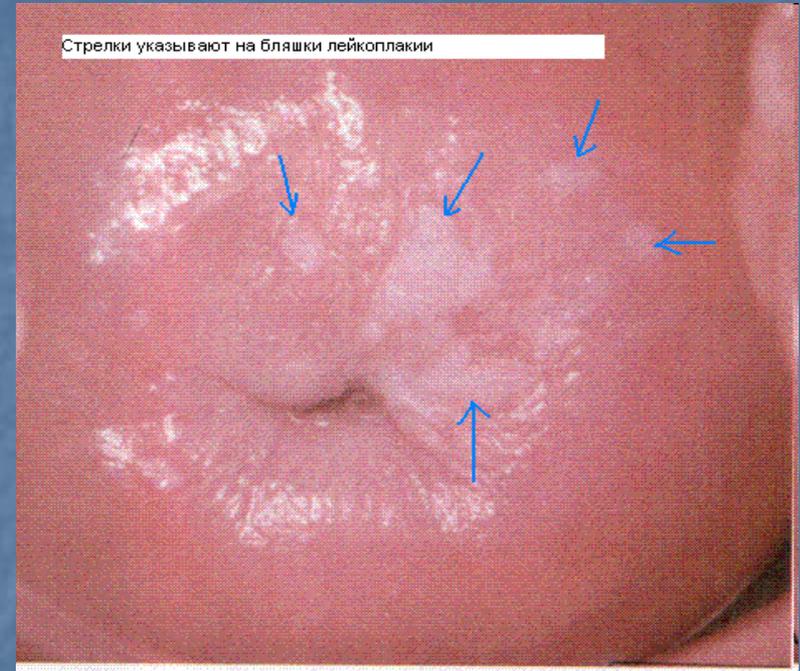
# Papillary epithelial dysplasia zone

- colposcopy is defined as white or pink and white portion of the mucous membrane of the cervix with precise contours and numerous monomorphic red dots of the same shape, size and extent;
- Histologically: ingrown vessels find in the thin layer of stratified displastic epithelium of papillae.



# Proliferative leukoplakia

- manifested extensive white, yellow, gray horny spots with bumpy, scaly, warty relief, often defects occur in the form of cracks and ulcers, pathological center stands over the surrounding surface epithelium;
- diagnosis confirmed histologically.

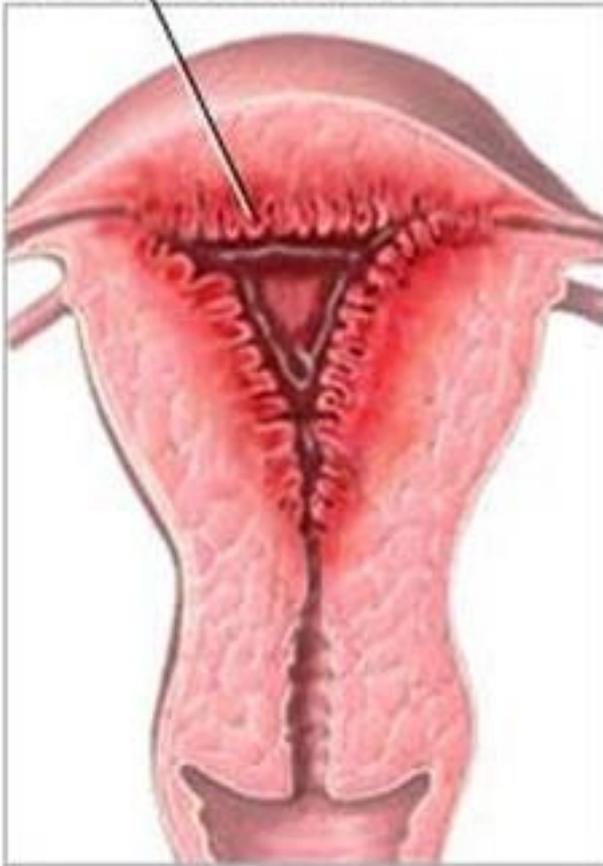


# Areas of atypical epithelium

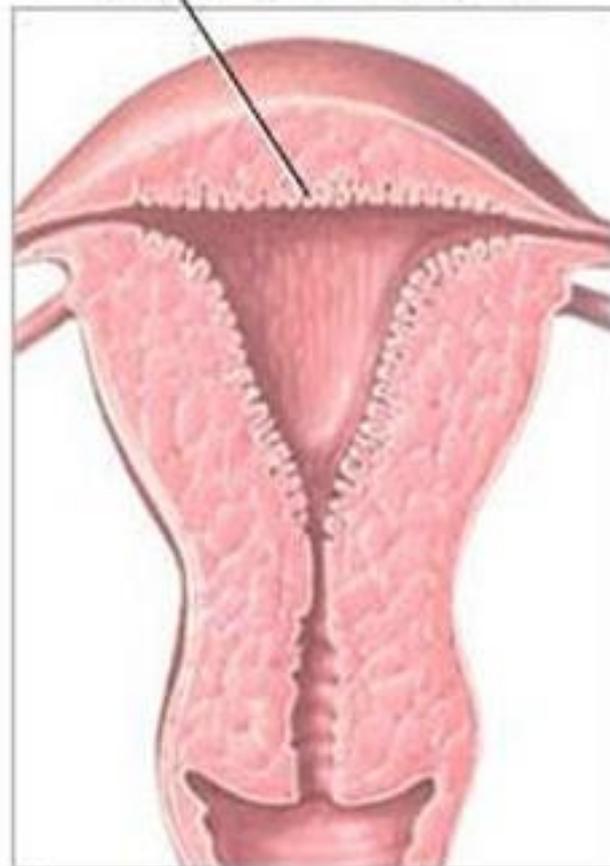
- it is the polymorphic (different form, sizes and height) polyhonal areas of white, pink, grey and yellow color, differentiated by red lines;  
at displasias of squamous epithelium of cervix conduct the complex of clinical and morphological inspection of patients and appoint radical treatment (diathermoexcision or conization , cryolysis, laser treatment, amputation of the cervix) in connection with the risk of development of cervical cancer.

# Hyperplasia of endometrium

Гиперплазия  
эндометрия



Нормальный  
эндометрий



# Classification of endometrial hyperplasia (YV Bohman, 1989)

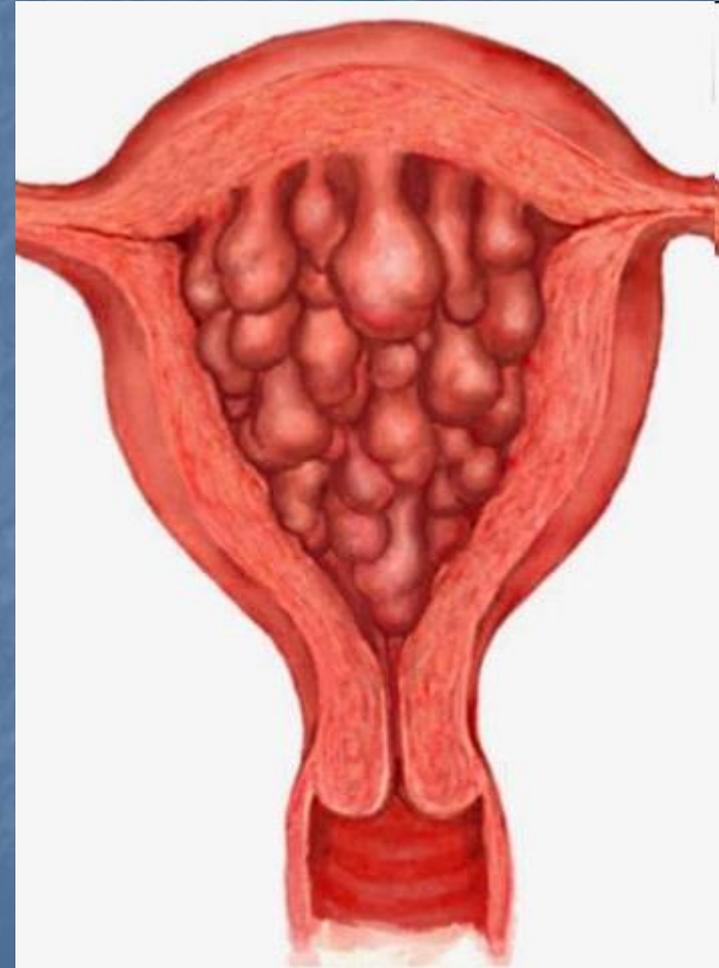
## I. Endometrial hyperplasia.

- 1) Endometrial hyperplasia: a diffuse glandular, glandular multifocal, glandulo-cystic.
- 2) Endometrial polyps: glandular, glandular-fibrous, glandular-cystic, angiomatous.
- 3) Precancerous endometrial hyperplasia or atypical (adenomatous)

## II. Associated benign hyperplasias of the uterus.

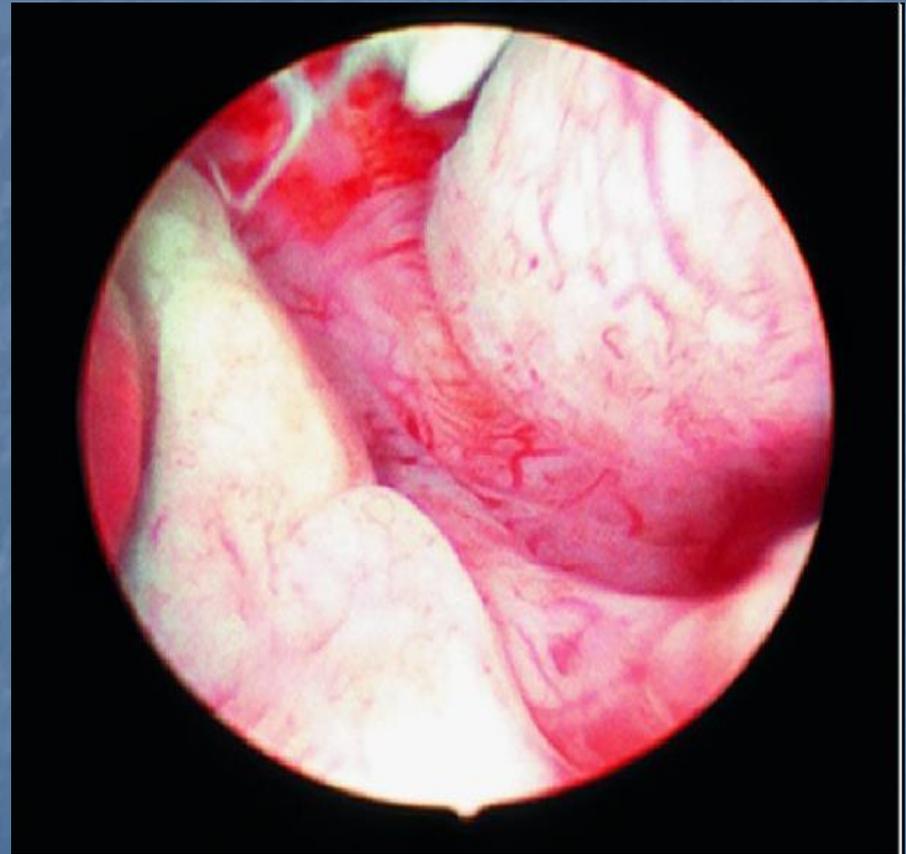
# Glandular and glandular-cystic hyperplasia

- difference between these forms is the presence of advanced cystic glands with glandulocystic pathology;
- One of the rare glandular cystic hyperplasia is stromal hyperplasia, which is characterized by large polymorphic nuclei in the cells of the stroma;
- with basal hyperplasia observed thickening of the basal layer of the mucosa due to proliferation of glands located in the compact layer of the endometrium.



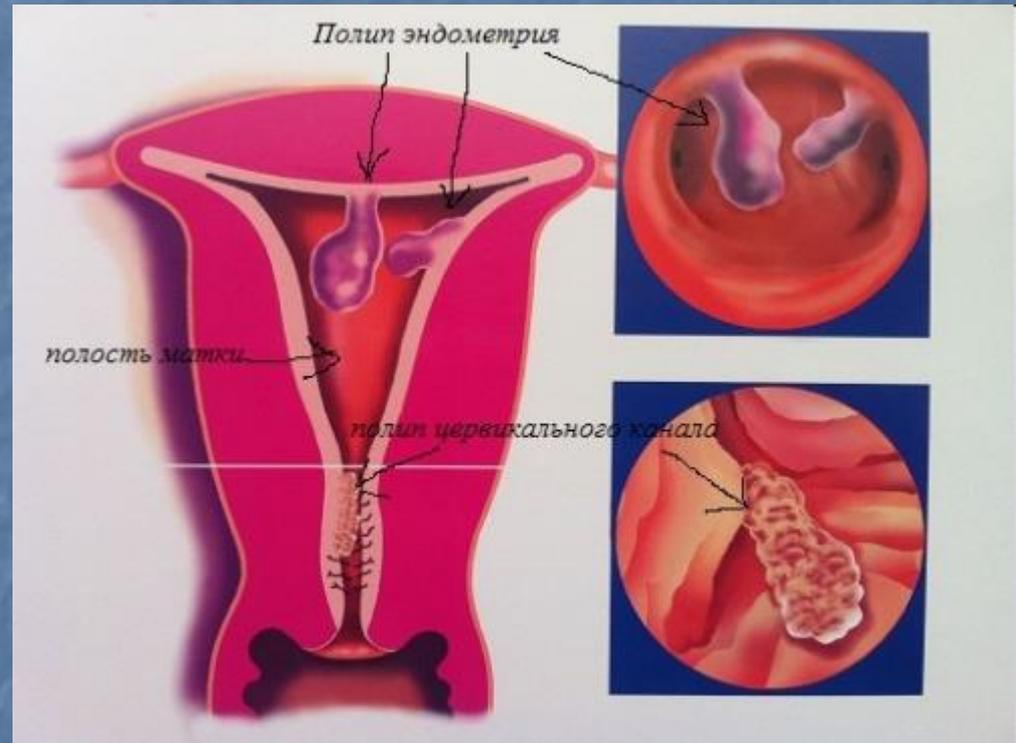
# Atypical endometrial hyperplasia

- characterized by structural adjustment and more intense proliferation of glands compared with other types of hyperplasia;
- distinguish mild expression (major and minor glands are separated by thin layers of the stroma) and expressed forms of atypical endometrial hyperplasia (thickly overgrown gland tight contact with each other, the stroma between them is virtually absent).



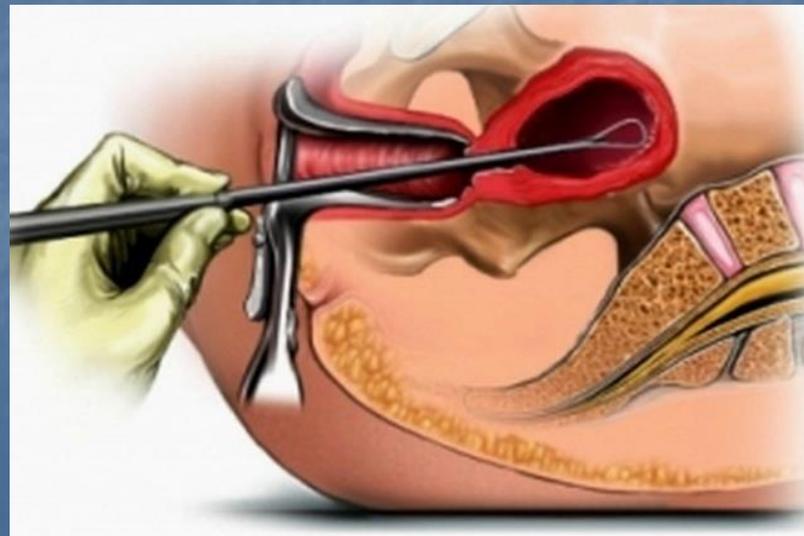
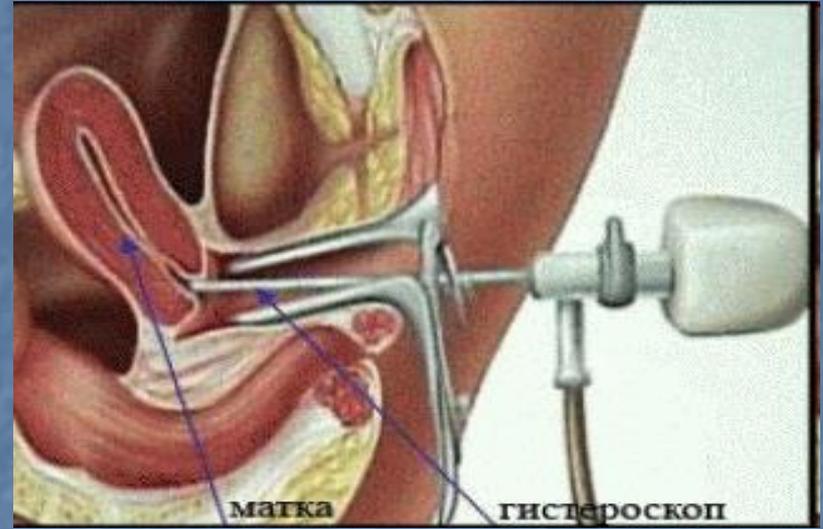
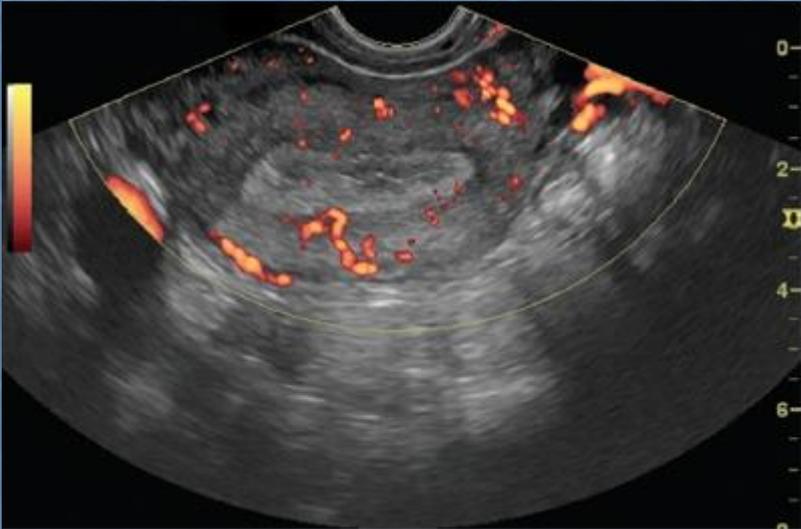
# Endometrial polyps

- proliferation of individual portions of the mucous membrane of the uterus;
- distinguish two clinical variants of endometrial polyps:
  - The development of polyps on a background of diffuse hyperplasia of the endometrium (glandular and glandular-cystic);
  - The development of polyps as proliferative lesions on a background of normal endometrium (glandular fibrosis and fibrotic).



- the main manifestations of endometrial hyperplasia are uterine bleeding ( Meno and / or metrorrhagia);
- Diagnosis is based on the results of the histological examination of the removed uterine mucosa;
- Hysteroscopic picture of endometrial hyperplasia is characterized by the following options: diffuse hyperplasia, lobular hyperplasia, endometrial polyposis, adenomatosis, atrophy, endometrial cancer;
- endometrial hyperplastic processes deserve special attention because of the risk of malignancy of some forms of this disease .

# Diagnosis of endometrial hyperplasia



# Cancer of the vulva

## ■ classification:

1. Carcinoma in situ;
2. microinvasive cancer (invasion up to 5 mm);
3. Paget's disease (pre-invasive and invasive forms);
4. invasive cancer: squamous keratinization with and without adenocarcinoma, basal cell, poorly differentiated;
5. non-epithelial malignant tumors (melanoma, sarcoma).

## ■ Cancers of the vulva:

- Exophytic;
- Endophytic;
- Infiltrative-edematous.



## ■ Classification by the extent of:

0 - preinvasive carcinoma;

I - the tumor up to 2 cm in diameter, limited by vulva, regional metastases absent;

II - tumor more than 2 cm in diameter, limited by vulva, regional metastases absent;

IIIa - tumor of any size extending to the vagina and / or lower third of the urethra / anus, regional metastases absent;

IIIb - the same as IIIa, with metastases to the inguinal lymph nodes;

IVa - the tumor extends to the upper third of the urethra / bladder / rectum / pelvis;

IVb - the same as IVa, plus any options for regional metastasis or tumor stage any local spread with distant metastases.



- **clinical picture** - purulent discharge from the genital tract, discomfort, bleeding, itching of the vulva;

- **Diagnostics** - colposcopy with biopsy and subsequent histological examination of biopsy; cytological, radiologic studies, vulvoscopy , fluorescence microscopy of the vulva;

- Ways of nodal **metastasis** : inguinal, iliac and lumbar lymph nodes.



a



б



B



г



e



д

# Treatment

- at **0 degrees** - simple vulvectomy;
- when **I degree**- radical vulvectomy with bilateral inguinal lymphadenectomy;
- with **II degree** - extended vulvectomy with postoperative radiotherapy;
- with **III degree** - preoperative radiation, extended vulvectomy and inguinal lymphadenectomy;
- with **IV degree** - symptomatic treatment.



# Vaginal cancer

- predominantly secondary damage due to metastatic cancer of the cervix, endometrium, uterine sarcomas, chorionepithelioma, at least - ovarian cancer and hypernephroma;
- viral theory (viruses genital warts and herpes serotype 2);
- neuroendocrine abnormalities;
- immunosuppression.



## ■ Clinical classification:

0 - preinvasive carcinoma;

I - tumor diameter of 2 cm, which grows deeper than the mucous layer; regional metastases absent;

II - tumor more than 2 cm, with paravaginal infiltrate which reaches pelvic walls ; regional metastases absent;

IIIa - tumor with paravaginal infiltrate extends to the pelvic wall ; regional metastases absent;

IIIb - tumor of any size, there are movable regional metastases;

IVa - tumor of any size that invades the nearby tissues and organs;

IVb - tumor of any size with fixed regional metastases or distant metastases

## ■ Histological classification:

1. Squamous cell carcinoma without keratinization and keratinization;

2. Adenocarcinoma (as metastasis);

3. Non-epithelial malignant tumors (sarcoma, melanoma).



- Clinic - in the early stages of bleeding point, leukorrhoea, dysuria, impaired defecation, at later stages of developing lower limb edema blue or white, disrupted the function of the kidneys;
- Diagnosis is based on the results of colposcopy, targeted biopsy, cystoscopy, intravenous urography, radioisotope reography, sigmoidoscopy, radioisotope lymphography, chest radiography;
- treatment is the use of surgical and radiation techniques.

# Cervical Cancer

## Clinical and morphological classification:

- 1) Preinvasive cancer (Carcinoma in situ, intraepithelial);
- 2) Microinvasive cancer (began to attach basal membrane);
- 3) Invasive: squamous with and without keratinization, adenocarcinoma, squamous dimorphic glandular (mucoepidermoid) poorly differentiated.



# Classification by the extent of

0 - preinvasive cancer (carcinoma in situ);

Ia - tumor is confined to the cervix , with invasion of less than 3 mm in diameter and 1 cm - microinvasive cancer ;

Ib - the tumor is confined to the cervix , with invasion more than 3 mm;

IIa - cancer infiltrates the vagina without going to the lower third (vaginal option ) , and / or effuse on the body of the uterus (uterine option ) ;

IIb - cancer infiltrates parauterine tissue on one or both sides, without going to the pelvic wall ( parametrial option ) ;

IIIa - cancer infiltrates the lower third of the vagina ( vaginal version) and / or spreads to the appendages( metastatic variant) ; regional metastases absent;

IIIb - cancer infiltrates parauterine tissues to the pelvic wall ( parametrial option ) and / or defined hydronephrosis and non-functioning kidney, ureteral stenosis due ;

IVa - cancer invades bladder and / or rectum ;

IVb - have distant metastases outside the pelvis.

■ **Clinic** - patients complain of watery whites, discharges take the form of meat with a sharp slop putrid odor and admixture of pus, contact bleeding, pain, dysuria, violation of the act of defecation, in the case of compression of the ureter tumor may develop renal failure;

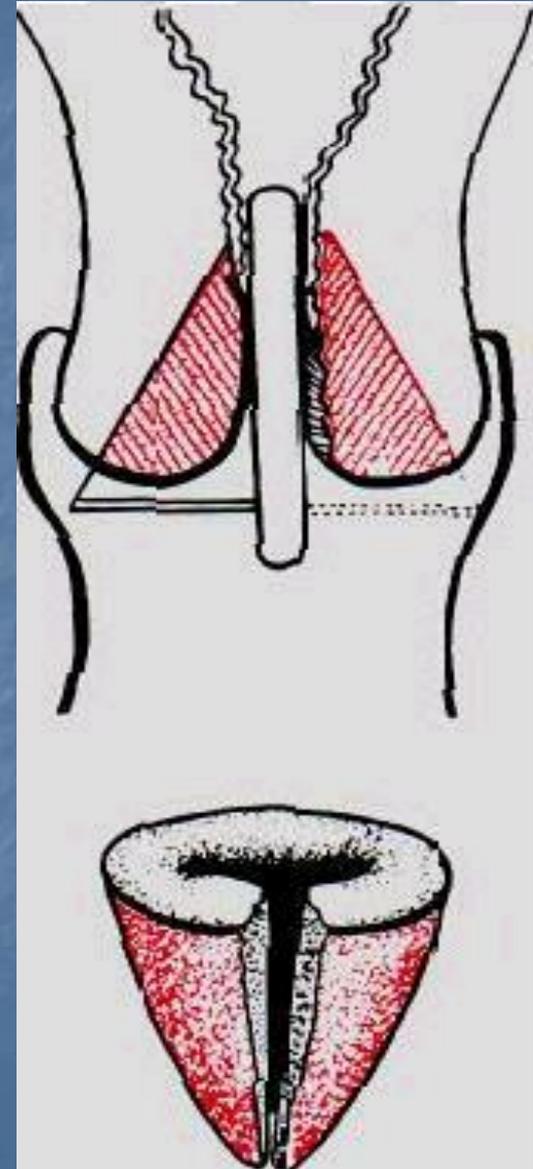
■ **examination of patients with cervical cancer:**

1. Colpocervicoscopy.
2. Cytological examination of smears.
3. Biopsy and curettage of the mucous membrane of the cervical canal with subsequent histologic study.
4. X-ray contrast lymphography and venography.
5. Arteriography.
6. Excretory urography.



# Treatment

- If a preinvasive cancer- the cone-shaped electroexcision of cervix is executed after careful endoscopic and morphological research by an aiming biopsy and curettage of mucous membrane of cervical canal;  
Testimonies to surgical conization:  
An invasion of cancer is a to 1 mm;  
Absence of tumour on the edge of resection;  
High-differentiated form of cancer which limit by ectocervix;  
Age of patients till 50 years;  
Possibility of realization of dynamic, clinical, cytologic and colposcopic control



# Indications to extirpation

- Prevailing localization is in the cervical canal;  
Default of areas free from preinvasive cancer in preparation after conization ;  
Absence of technical possibility of extensive electroconization because of a conical or shortened cervix, at the smoothed the vaults of vagina;  
Combination of preinvasive cancer with myoma or tumour of appendages of the uterus;  
Relapse after cryo- or laser destruction.

# Cancer of endometrium

## ■ Classification:

### 1. Adenocarcinoma:

- a) highly differentiated;
- b) mildly differentiated;
- c) lowly differentiated;
- d) glandular-solid cancer.

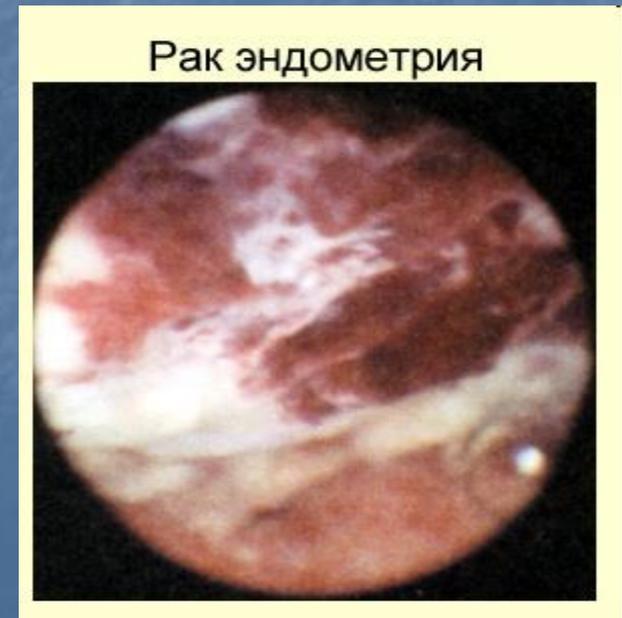
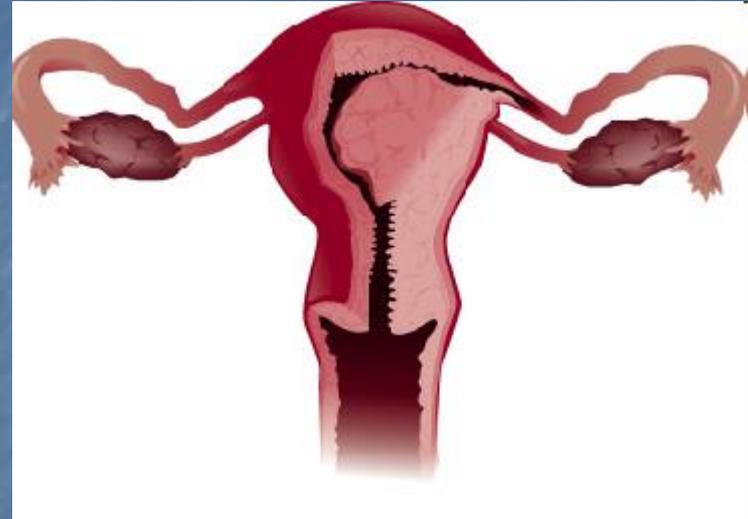
2.

Adenoacantoma (adenocanthocarcinoma).

3. Clear-cell mesonephric adenocarcinoma.

4. Adeno-squamous cancer (mucocystadenoma).

5. Lowly differentiated cancer.



# Classification by the prevalence

0 - preinvasive carcinoma ( atypical endometrial hyperplasia );

I - tumor limited to the body of the uterus ; regional metastases are not defined;

Ia - tumor limited to the endometrium ;

Ib - invasion of the myometrium to 1 cm ;

Ic - invasion of the myometrium than 1 cm , but no germination to serous membrane ;

II - the tumor affects the body and cervix, regional metastases are not defined;

III - tumor extends beyond the uterus but not beyond the pelvis ;

IIIa - tumor infiltrating the serosa of the uterus, and / or have metastasized to the uterine appendages , regional pelvic lymph nodes ;

IIIb - infiltrating tumor tissue of the pelvis and / or has metastasized into the vagina ;

IV - tumor has spread beyond the pelvis and / or are sprouting bladder or rectum ;

IVa - tumor invades bladder and / or rectum ;

IVb - extent of any tumor with distant metastases.

- **forms of endometrial cancer:** exophytic , endophytic, mixed, local, diffuse;
- **path of metastasis:** lymphogenous ( lumbar and iliac lymph nodes), hematogenous (later involved);
- **Clinic** - uterine bleeding, leucorrhoea, pain, stenosis of the cervical canal - serosometra;
- **Diagnostics** - aspiration biopsy, fractional curettage of the uterine mucosa, hystero-cervicography, hystero-resectoscopy, target biopsy, ultrasound, radioisotope color X-ray lymphography, chest and bone radiography.

# Uterine sarcoma

## ■ Morphological classification:

- 1) leiomyosarcoma;
- 2) endometrial stromal sarcoma;
- 3) carcinosarcoma;
- 4) Heterologous mixed mesodermal tumor;
- 5) other: homology (angiosarcoma), heterologous (rhabdomyosarcoma, osteosarcoma).



# Classification by the extent of

I - tumor limited to the body of the uterus;

II - the tumor affects the body and the cervix, but does not go beyond it;

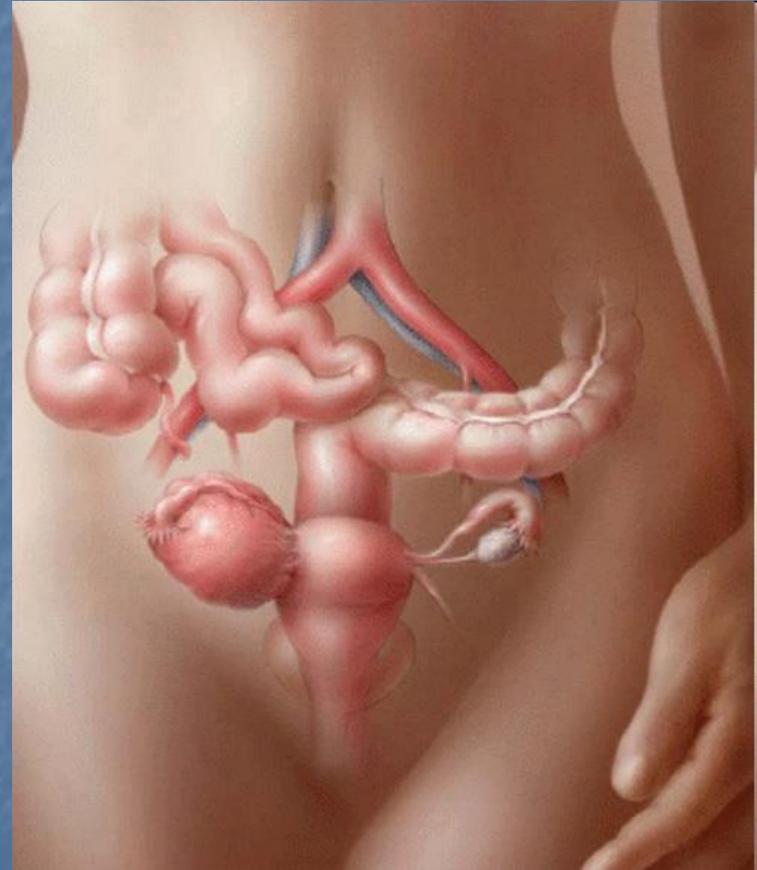
III - tumor has spread outside the uterus, but does not go beyond the pelvis;

IV - tumor invades adjacent organs, and / or spread beyond the pelvis, and / or there are distant metastases.

- **metastasis ways**: lymphogenous (rare as endometrial cancer); hematogenous (preferably the lungs, liver, vagina, bone);
- **Diagnostics** - the same as for endometrial cancer;
- **treatment** should be integrated with the use of radical surgery (Wertheim operation, hysterectomy with oophorectomy), radiation and medical techniques.

# Malignant tumors of the ovary

- **classification of histotypes:**  
serous cystadenocarcinoma,  
endometrial carcinoma,  
adenocarcinoma ,non  
differentiated; mucinous  
cystadenocarcinoma, clear cell  
carcinoma (mezonephroma);  
folliculoma; androblastoma,  
metastatic cancer,  
dysgerminoma, teratoma,  
Tecoma, Brenner tumor.



# Classification by the extent of

I - tumor limited to the ovaries ;

Ia - limited to one ovary , no ascites ;

Ib - limited to both ovaries ;

Ic - is limited to one or both ovaries expressed in the presence of ascites tumor cells or defined in the washings ;

II - affects one or both ovaries with extension to the pelvic region ;

IIa - distributed on the surface of the uterus and / or fallopian tubes ;

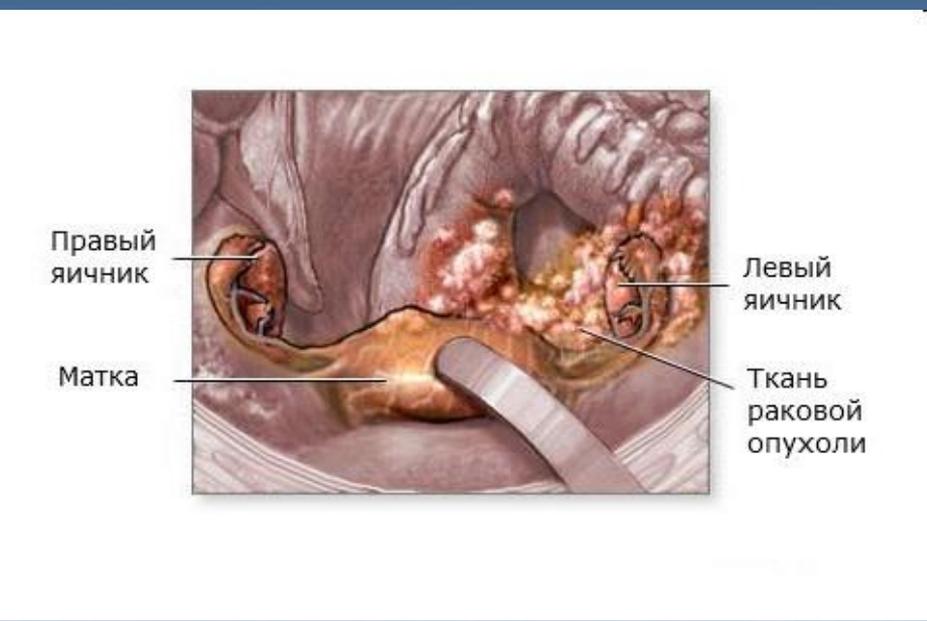
IIb - spreads to other tissues of the pelvis , including the peritoneum and the uterus ;

IIc - applies as in stage IIa or IIb, but there is a pronounced ascites or defined cancer cells in washings ;

III - applies to one or both ovaries with peritoneal metastasis outside the pelvis and / or metastases to the retroperitoneal lymph nodes;

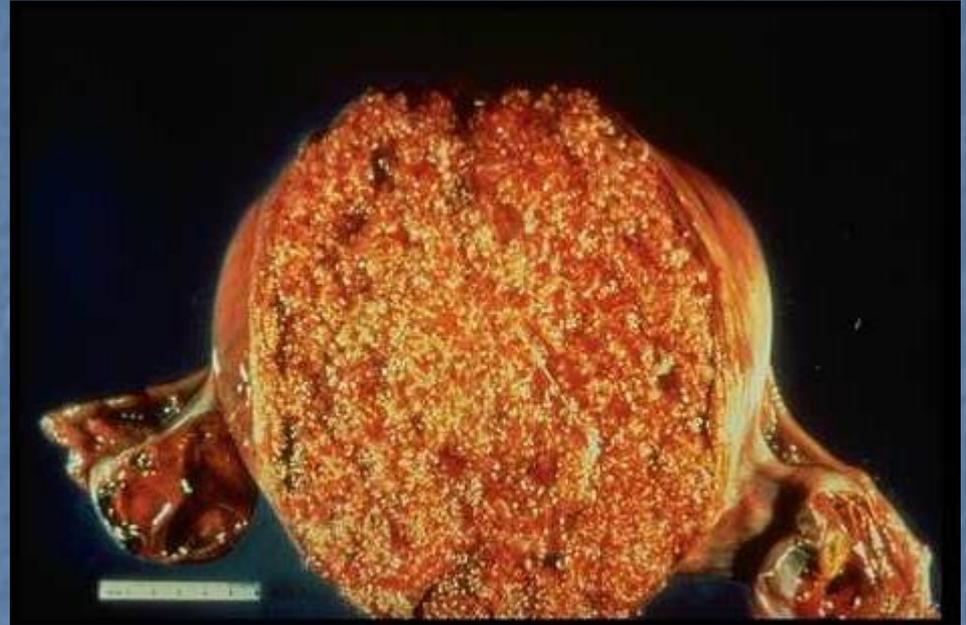
IV - distant metastases ( in the presence of pleural effusion cytology results should be positive to refer cases to stage IV ; liver metastases ) .

- **clinical picture** depends on the tumor histotypes and stage of disease;
- **Diagnostics** - clinical history, physical examination, cytology, radiographic techniques, ultrasound, endoscopic techniques, determination of CA-125 in the blood;
- **Treatment** - surgical (hysterectomy with appendages and omenectomy that operate on the level of transverse colon.



# Trophoblastic disease

- hydatidiform mole



- chorionepithelioma

