

## METHODICAL RECOMMENDATIONS FOR STUDENTS FOR A PRACTICAL LESSON

ON THE TOPIC: *"Diseases of pregnancy, postpartum period and placenta. Diseases of the cervix and body of the uterus, diseases of the ovaries and mammary glands."*

### *Questions:*

1. The concept of the pathology of pregnancy and the postpartum period, their individual types. Ectopic pregnancy: types, causes, morphological diagnosis, complications and outcomes, causes of death. Gestosis, its etiology, pathogenesis, clinical and morphological manifestations. Pathological anatomy of eclampsia, causes of death. Trophoblastic disease: types. Vesical drift, invasive vesical drift, chorion carcinoma. Morphological characteristics, clinical manifestations, prognosis. Placental polyp. Birth infection of the uterus. Endometritis. Mastitis.
2. Diseases of the female genital organs: diseases of the cervix and uterine body, diseases of the fallopian tubes and ovaries. Etiology, clinical and morphological characteristics, outcomes. Ovarian tumors: clinical and morphological characteristics, metastases, complications.
3. Diseases of the mammary glands: mastitis, fibrocystic diseases, tumors. Etiology, morphological characteristics, clinical significance, outcomes.

### *Sources of information:*

Lecture

Textbooks:

1. Edvard C. Klatt. Robbins and Cotran Atlas of Pathology, 4th Edition, 2021
2. Pathologic Anatomy. Ed. by V.S. Paukov, 2022
3. Robbins & Kumar Basic Pathology. (Robbins Pathology) 11th Edition, 2021
4. Bilingual dictionary of medical terms. Ed. by O.D. Mishnev, 2016

### *Repeat:*

1. Epithelial tumors
2. Adaptation and compensation processes
3. Inflammation

For self-control - PC tests on our site of the pathological anatomy and clinical pathological anatomy, Faculty of Medicine.

*For self-control* - PC tests on these sections.

*Means of visualization:*

## Micro preparations

## Macro preparations

№204	des.	Tubal pregnancy.	Tubal pregnancy.
			Bubble drift.
№ 143	des.	Chorion carcinoma.	Chorion carcinoma of the uterus (or metastases to the liver).
№209	des.	Endocervicosis of the cervix.	Endocervicosis of the cervix.
			Hypertrophy of the prostate and the walls of the bladder.
			Postpartum purulent endometritis.
			Uterine leiomyoma.
			Cervical cancer.
			Breast cancer.

*Slides, tables.*

## METHODICAL RECOMMENDATIONS FOR STUDENTS TO THE PRACTICAL LESSON

on the subject: "*Diabetes mellitus. Diseases of the thyroid gland, pituitary gland, adrenal glands*"

### Questions:

1. Etiology and pathogenesis of endocrinopathies. Pluriglandular endocrine insufficiency. Congenital and acquired diseases of the endocrine system.
2. Diseases of the pituitary gland, adrenal glands, thyroid gland, parathyroid glands, pancreas: causes, types, clinical and morphological characteristics, outcomes.
3. Diabetes mellitus: definition, classification, etiology, pathogenesis, risk factors, clinical and morphological characteristics, complications.

### Sources of information:

#### Lecture

#### Textbooks:

1. Edvard C. Klatt. Robbins and Cotran Atlas of Pathology, 4th Edition, 2021
2. Pathologic Anatomy. Ed. by V.S. Paukov, 2022
3. Robbins & Kumar Basic Pathology. (Robbins Pathology) 11th Edition, 2021
4. Bilingual dictionary of medical terms. Ed. by O.D. Mishnev, 2016

### Repeat:

1. Morphology of irreversible damage to cells and tissues.
2. Impaired tissue and cellular metabolism.
3. Circulatory disorders;
4. Epithelial tumors
5. Adaptation and compensation processes.

*For self-control* - PC tests on this section.

### Means of visualization:

Micro preparation

Macro preparation

№ 277	des.	Colloidal struma.	Goiter (struma).
№ 278 or 279	des.	Basedow's goiter. Colloidal struma with basedowification.	Gangrenous necrosis of the foot. Subcutaneous tissue in obesity.
№ 281		Basophilic adenoma of the pituitary gland (anterior lobe).	Myocardial hypertrophy.
№ 316		Diabetic nephropathy.	Bones in parathyroid osteodystrophy. Hyperpigmentation of the skin

*Slides, tables*

## METHODICAL RECOMMENDATIONS FOR STUDENTS FOR A PRACTICAL LESSON

ON THE TOPIC: *"Arterial hypertension, morphological changes in blood vessels and heart. Morphology of hypertensive crisis"*

*Questions:*

1. Arterial hypertension, concept, diagnostic criteria.
2. Essential hypertension (hypertension). Benign and malignant course of hypertension. Risk factors, causes of development, pathogenesis, morphological changes in blood vessels and the heart. Clinical and anatomical forms, their characteristics. Morphology of hypertensive crisis.
3. Secondary (symptomatic) hypertension.
4. Cerebrovascular diseases: concept, relationship with atherosclerosis and hypertension, etiology, pathogenesis, morphological characteristics, outcomes.

*Sources of information:*

Lecture

Textbooks:

1. Edvard C. Klatt. Robbins and Cotran Atlas of Pathology, 4th Edition, 2021
2. Pathologic Anatomy. Ed. by V.S. Paukov, 2022
3. Robbins & Kumar Basic Pathology. (Robbins Pathology) 11th Edition, 2021
4. Bilingual dictionary of medical terms. Ed. by O.D. Mishnev, 2016

*Repeat:*

1. Adaptation and compensation processes.
2. Stromal-vascular dystrophies (fibrinoid swelling, hyalinosis).
3. Parenchymal fatty degenerations.
4. Circulatory disorders

*For self-control* - PC tests on this section.

*Means of visualization:*

Micro preparations

Macro preparations

№ 167	des.	Cerebral vessels in hypertension.	Cerebral hemorrhage.
№ 16a		Cerebral hemorrhage by the type of hemorrhagic infiltration.	Hypertrophy of the left ventricular myocardium ("bovine heart").
№ 166	des.	Arteriolar sclerotic nephrosclerosis (primary-wrinkled kidney).	Fatty degeneration of the myocardium.
			Nephrosclerosis ("wrinkled" kidney).

*Slides, tables.*

METHODICAL RECOMMENDATIONS FOR STUDENTS FOR A PRACTICAL LESSON ON THE TOPIC: "*Atherosclerosis. Clinical and morphological forms of atherosclerosis, complications, causes of death.*"

*Questions:*

1. Atherosclerosis. Modern ideas about the etiology and pathogenesis. Morphological characteristics and stages of atherosclerosis, the structure of atherosclerotic plaque. Clinical and morphological forms, complications, causes of death.
2. Ischemic heart disease (coronary artery disease). The concept, the relationship with atherosclerosis and hypertension. Etiology, pathogenesis, risk factors.
3. Myocardial infarction: causes, classification, dynamics of morpho functional changes in the myocardium. Outcomes, complications, causes of death.
4. Chronic coronary heart disease: clinical and morphological characteristics, complications, causes of death.

*Sources of information:*

Lecture

Textbooks:

1. Edvard C. Klatt. Robbins and Cotran Atlas of Pathology, 4th Edition, 2021
2. Pathologic Anatomy. Ed. by V.S. Paukov, 2022
3. Robbins & Kumar Basic Pathology. (Robbins Pathology) 11th Edition, 2021
4. Bilingual dictionary of medical terms. Ed. by O.D. Mishnev, 2016

*Repeat*

1. Circulatory disorders
2. Morphology of irreversible damage to cells and tissues.
3. Stromal-vascular dystrophies.
4. Violation of mineral metabolism.
5. Adaptation and compensation processes.

*For self-control* - PC tests on this section.

*Means of visualization:*

Micro preparations

Macro preparations

№ 1606	des.	Atherosclerotic plaque in the aorta.	Atherosclerosis of the aorta (different stages). Gangrene of the intestine.
№ 162	des.	Transmural myocardial infarction with the beginning of organization.	Gangrene of the foot. Spleen infarctions. Myocardial infarction with acute aneurysm. Chronic aneurysm of the heart.

*Slides and tables*

METHODICAL RECOMMENDATIONS FOR STUDENTS FOR A PRACTICAL LESSON ON THE TOPIC: "*Rheumatism. Clinical and anatomical forms. Acquired and congenital heart defects*"

*Questions:*

1. Rheumatic diseases. The concept of a group of rheumatic diseases. Pathogenesis and features of morphogenesis. General morphology of immune disorders and processes of systemic disorganization of connective tissue. Features in children.
2. Rheumatism: etiology, pathogenesis, dynamics of microscopic changes, heart damage, outcomes and complications. Clinical and anatomical forms. Features in children.
3. Rheumatoid arthritis: etiology, pathogenesis, clinical and morphological characteristics, outcomes and complications.
4. Systemic lupus erythematosus: etiology, pathogenesis, clinical and morphological characteristics, complications and outcomes.
5. Vasculitis. Classification, etiology, pathogenesis, clinical and morphological characteristics. Nodular periarteritis: etiology, pathogenesis, clinical and morphological characteristics, complications, outcomes.
6. Scleroderma, dermatomyositis. Etiology, pathogenesis, clinical and morphological characteristics, complications, outcomes.
7. Endocarditis, myocarditis, pericarditis: etiology, pathogenesis, morphological characteristics, outcomes.
8. Acquired and congenital heart defects: etiology, pathogenesis, organopathology, complications and causes of death.

*Sources of information:*

Lecture

Textbooks:

1. Edvard C. Klatt. Robbins and Cotran Atlas of Pathology, 4th Edition, 2021
2. Pathologic Anatomy. Ed. by V.S. Paukov, 2022
3. Robbins & Kumar Basic Pathology. (Robbins Pathology) 11th Edition, 2021
4. Bilingual dictionary of medical terms. Ed. by O.D. Mishnev, 2016

*Repeat:*

1. Circulatory disorders
2. Stromal-vascular dystrophies.
3. Violation of mineral metabolism.
4. Adaptation and compensation processes.
5. Inflammation is productive and exudative;
6. Pathology of the immune system.

*For self-control* - PC tests on the specified sections.

*Means of visualization:*

Micro preparations

Macro preparations

№ 174	des.	Recurrent warty endocarditis of the mitral valve.	Warty endocarditis of the mitral valve.
№ 177		Productive (granulomatous) myocarditis in rheumatism.	Ischemic infarctions of the spleen, kidneys.
№81		Fibrinous pericarditis.	Mitral stenosis (by the type of "funnel" or "diaphragm").
№310	des.	Kidney with nodous periarteritis.	"Hairy Heart" Polypous-ulcerative endocarditis. Defect of the interventricular septum (congenital malformation). Nutmeg liver Brown induration of the lungs.

*Slides, tables*

***№ 310. The kidney in polyarteritis nodosa***

Microscopic picture: There are changes in the intra organic arteries of the muscular type, which mainly capture the outer (*periarteritis*), the middle membrane (*mesarteritis*), in some places - the inner shell (*endarteritis*), which gives a picture of *polyarteritis*. In some vessels there is focal and diffuse destruction of the walls of blood vessels (disorganization of connective tissue) up to segmental fibrinoid necrosis. In these areas, the walls are thinned, up to the formation of aneurysms. The walls of the vessels are diffusely infiltrated leukocytes, lymphocytes, macrophages, plasma cells. In other vessels - hyalinosis, sclerosis of the walls with partial or complete obliteration of the lumen. *Kidney tissue:* atrophy of the parenchyma with lymphoid infiltration of the stroma, glomerular sclerosis, tubule atrophy.

METHODICAL RECOMMENDATIONS FOR STUDENTS TO THE PRACTICAL LESSON ON THE TOPIC: "*Kidney disease: glomerulonephritis, nephrotic syndrome. Acute renal failure. Chronic renal failure. Pyelonephritis.*"

*Questions:*

1. Modern clinical and morphological classification of kidney diseases. Hereditary and acquired nephropathy.
2. Glomerulopathy. Glomerulonephritis: definition, etiology, pathogenesis, modern classification. Acute, rapidly progressive, chronic glomerulonephritis. Morphological characteristics, outcomes. Hereditary nephritis (Alport syndrome): etiology, pathogenesis, clinical and morphological characteristics, outcomes.
3. Nephrotic syndrome: classification, etiology, pathogenesis, clinical and morphological characteristics of various forms.
4. Kidney damage in systemic diseases. Diabetic glomerulosclerosis. Amyloidosis of the kidneys.
5. Tubulopathies: hereditary and acquired, acute and chronic. Chronic hereditary tubulopathies: classification, etiology, pathogenesis, clinical and morphological characteristics, outcomes.
6. Acute renal failure (necrotic nephrosis). Definition, etiology, pathogenesis, stages of development, clinical and morphological characteristics, outcomes and complications, especially in children.
7. Chronic renal failure: etiology, pathogenesis, clinical and morphological characteristics.
8. Pyelonephritis is acute and chronic. Etiology, pathogenesis, morphological characteristics, complications, outcomes. Obstruction of the urinary tract (obstructive uropathy): causes, clinical and morphological characteristics, outcomes. Hydronephrosis. Urolithiasis (kidney stones): types of stones, mechanisms of stone formation, morphological characteristics, complications.
9. Kidney tumors are benign and malignant: morphological characteristics, features of metastasis, prognosis.

*Sources of information:*

Lecture.

1. Edvard C. Klatt. Robbins and Cotran Atlas of Pathology, 4th Edition, 2021
2. Pathologic Anatomy. Ed. by V.S. Paukov, 2022
3. Robbins & Kumar Basic Pathology. (Robbins Pathology) 11th Edition, 2021
4. Bilingual dictionary of medical terms. Ed. by O.D. Mishnev, 2016

*Repeat:*

1. Morphology of irreversible damage to cells and tissues.
2. Violation of tissue and cellular metabolism
3. Inflammation.
4. Adaptation and compensation processes.

*For self-control* - PC tests on this section.



*Means of visualization:*

Micro preparations

Macro preparations

№ 194	des.	Chronic glomerulonephritis with wrinkling.	Glomerulonephritis ("mottled" kidney).
№4	des.	Necrotic nephrosis.	Hypertrophy of the left ventricular myocardium.
№ 196a	des.	Chronic pyelonephritis.	Nephrosclerosis ("wrinkled" kidney).  Amyloid nephrosis ("sebaceous" kidney).  Kidney with mechanical jaundice.  Hydronephrosis.  Apostematous nephritis. Polycystic kidney disease. Fibrinous pericarditis.

*Slides and tables*

***Boundary control of the 3rd module***

**List of macro preparations**

<i>№</i>	<i>Name of preparations</i>
1	Hypertrophy of the left ventricle of the heart ("Bull's heart")
2	Cerebral hemorrhage
3	Nephrosclerosis ("Wrinkled kidney")
4	Atherosclerosis of the aorta (different stages)
5	Gangrene of the small intestine (foot)
6	Myocardial infarction
7	Spleen (kidney) infarctions
8	Warty endocarditis of the mitral valve
9	Mitral stenosis
10	Goiter (struma)
11	Glomerulonephritis ('Mottled Kidney')
12	Amyloid nephrosis ("Sebaceous kidney")
13	Гидронефроз
14	Apostematous nephritis
15	Tubal pregnancy
16	Hydatidiform mole
17	Endocervicosis
18	Postpartum purulent endometritis
19	Carcinoma of the uterus body (cervix, breast)

***List of micro preparations***

<i>№</i>	<i>Catalogue No.</i>	<i>Name of the preparations</i>
1	209	Endocervicosis
2	277	Colloidal struma
3	167	Cerebral vessels in arterial hypertension
4	160 б	Atherosclerotic plaque in the aorta
5	162	Transmural myocardial infarction
6	16a	Cerebral hemorrhage
7	174	Recurrent warty endocarditis
8	278	Basedow's Goiter
9	194	Chronic glomerulonephritis with wrinkling of the kidney

**METHODICAL RECOMMENDATIONS FOR STUDENTS FOR A PRACTICAL LESSON ON THE TOPIC: "*Hepatitis, hepatosis, cirrhosis of the liver, liver cancer. Cholelithiasis.*"**

**Questions:**

1. Causes and mechanisms of development of liver diseases. The importance of biopsy in the diagnosis of liver diseases.
2. Steatosis and massive liver necrosis. Etiology, pathogenesis, clinical and morphological characteristics, outcomes.
3. Alcoholic liver damage. Alcoholic fatty liver. Alcoholic hepatitis. Alcoholic cirrhosis of the liver. Pathogenesis, morphological characteristics, clinical manifestations, complications and outcomes.
1. Hepatitis: definition, classification. Acute viral hepatitis: epidemiology, etiology, routes of transmission, pathogenesis and morphogenesis, clinical and morphological forms, viral markers, outcomes. Chronic hepatitis: concept, etiology, clinical and morphological characteristics, classification, outcomes.
1. Cirrhosis of the liver: principles of classification, etiology, pathogenesis and morphogenesis, morphological features. Clinical and morphological characteristics of the most important types of cirrhosis, complications and causes of death. The most important complications of portal hypertension and hepatocellular insufficiency: pathogenesis, clinical and morphological characteristics. Jaundice.
2. Cholelithiasis (cholelithiasis): etiology, pathogenesis, types of stones.
3. Cholecystitis: definition, acute and chronic cholecystitis, etiology, pathogenesis, morphological characteristics, complications, causes of death.

**Sources of information:**

**Lecture.**

1. Edvard C. Klatt. Robbins and Cotran Atlas of Pathology, 4th Edition, 2021
2. Pathologic Anatomy. Ed. by V.S. Paukov, 2022
3. Robbins & Kumar Basic Pathology. (Robbins Pathology) 11th Edition, 2021
4. Bilingual dictionary of medical terms. Ed. by O.D. Mishnev, 2016

**Repeat:**

1. Circulatory disorders
2. Morphology of irreversible damage to cells and tissues.
3. Violation of tissue and cellular metabolism
4. Adaptation and compensation processes.
5. Regeneration and repair
6. Inflammation is productive.

*For self-control* - PC tests on this section.

*Means of visualization:*

Micro preparations

Macro preparations

№202	des.	Acute massive necrosis of the liver.	Toxic liver dystrophy. Fatty hepatosis (fatty degeneration of the liver).
№200	des.	Portal cirrhosis of the liver.	Cirrhosis. Nutmeg liver.
№76	des.	Phlegmonous cholecystitis	Pigment cirrhosis (hemosiderosis). Varicose veins of the esophagus. Calculous cholecystitis. Stone in the choledochal.

*Slides, tables*

METODIC RECOMMENDATIONS FOR STUDENTS FOR A PRACTICAL LESSON ON THE TOPIC: "*Gastritis. Peptic ulcer of the stomach and duodenum. Appendicitis.*"

*Questions:*

1. Gastritis: definition, classification. Acute and chronic gastritis. Etiology, pathogenesis, morphology of various forms, complications, outcomes.
2. Peptic ulcer disease. Definition. Etiology, features of the pathogenesis of peptic ulcer disease and duodenum. Morphological characteristics of chronic ulcers in the period of exacerbation and remission. Complications, outcomes. Acute gastric ulcers: etiology, pathogenesis, morphological characteristics, outcomes.
3. Appendicitis: classification, etiology, pathogenesis. Clinical and morphological characteristics of acute and chronic appendicitis. Complications. Features of appendicitis in children and the elderly.
4. Colon cancer: clinical and morphological characteristics, prognosis.

*Sources of information:*

Lecture.

1. Edvard C. Klatt. Robbins and Cotran Atlas of Pathology, 4th Edition, 2021
2. Pathologic Anatomy. Ed. by V.S. Paukov, 2022
3. Robbins & Kumar Basic Pathology. (Robbins Pathology) 11th Edition, 2021
4. Bilingual dictionary of medical terms. Ed. by O.D. Mishnev, 2016

*Repeat:*

Morphology of irreversible damage to cells and tissues.

Stromal-vascular dystrophies.

Morphology of chromoprotein metabolism disorders. Formation of stones.

Inflammation

Epithelial tumors

*For self-control* - PC tests on this section.

*Means of visualization:*

Micro preparations

Macro preparations

№ 266	des.	Chronic stomach ulcer.	Chronic stomach ulcer.
№ 263	des.	Phlegmonous-ulcerative appendicitis.	Phlegmonous appendicitis. Gangrenous appendicitis.
№134	des.	Adenocarcinoma of the colon	Chronic appendicitis.

*Slides, tables*

# METHODOLOGICAL RECOMMENDATIONS FOR STUDENTS FOR A PRACTICAL LESSON ON THE TOPIC:

## "Acute respiratory viral infections. Acute pneumonia. Measles"

### Questions:

1. Acute inflammatory diseases of the lungs, classification principles.
2. Lobar (croupous pneumonia). Etiology, pathogenesis, stages of development, their clinical and morphological characteristics, pathomorphosis, atypical forms, complications, outcomes.
3. Focal pneumonia (bronchopneumonia). Etiology, pathogenesis, classification principles, morphology, complications, outcomes. Age features. Pneumonia in conditions of suppression of immunity. The concept of nosocomial infection.
4. Interstitial (interstitial) pneumonia: etiology, pathogenesis, clinical and morphological characteristics, outcomes.
5. Acute respiratory viral infections: influenza, parainfluenza, adenovirus infection, respiratory syncytial infection, coronavirus infection. Pathogenesis, clinical and morphological characteristics, complications, outcomes.
6. Measles. Etiology, pathogenesis, clinical and morphological characteristics, complications, outcomes.
7. Acute destructive processes in the lungs: abscess, gangrene. Etiology, pathogenesis, morphology, complications, outcomes.

### Sources of information:

#### Lecture.

1. Edvard C. Klatt. Robbins and Cotran Atlas of Pathology, 4th Edition, 2021
2. Pathologic Anatomy. Ed. by V.S. Paukov, 2022
3. Robbins & Kumar Basic Pathology. (Robbins Pathology) 11th Edition, 2021
4. Bilingual dictionary of medical terms. Ed. by O.D. Mishnev, 2016

### Repeat:

1. Circulatory disorders
2. Inflammation.
3. Regeneration and repair

For self-control - PC tests on this section

### Means of visualization:

#### Micro preparations

#### Macro preparations

№211	des.	Croupous pneumonia.	Croupous pneumonia.
№220	des.	Pneumonia.	Lung gangrene.
№ 6/Н	des.	Lungs in Covid -19	Purulent lymphangitis.
			Purulent meningitis, brain abscess.
			Focal pneumonia.
			Lungs and trachea with influenza.

### Slides, tables

### ***No b/n Lungs for Covid -19***

Microscopic picture: histological changes in the lungs correspond to two phases of diffuse alveolar damage. The exudative (first, early) phase of DAD is characterized by the following changes: intraalveolar edema; hyaline membranes; desquamation of the alveolar and bronchiolar epithelium; the appearance of large, irregular forms of alveolocytes, the formation of symplasts; perivascular and peribronchial lymphoid and plasma cells, macrophage infiltration; evident fullness of blood vessels, with fresh fibrous and organizing thrombi; multiple hemorrhages; megakaryocytes of typical structure in the capillaries of the alveolar septa. The proliferative (second, late) phase of the DAD is characterized by the following changes: in the lumens of the alveoli fibrin is different from the type of maturity; in the part of the alveolar growth of granulation tissue; confluent fields of bronchiolitis obliterating and organizing pneumonia, sometimes evident interstitial inflammation, progression of microangiopathy and vascular thrombosis.

METHODICAL RECOMMENDATIONS FOR STUDENTS TO THE PRACTICAL LESSON ON THE TOPIC:

***"Obstructive and restrictive lung diseases. Pneumoconiosis»***

*Questions:*

1. Chronic obstructive and restrictive lung diseases. Classification, pathogenesis, clinical and morphological characteristics.
2. Chronic obstructive emphysema: definition, etiology, pathogenesis, clinical and morphological characteristics, complications, outcomes, causes of death. Other types of emphysema: compensatory, senile, vicarious, interstitial.
3. Chronic obstructive bronchitis: definition, classification, etiology, pathogenesis, clinical and morphological characteristics, complications, outcomes.
4. Bronchial asthma: definition, classification, pathogenesis, clinical and morphological characteristics, outcomes, causes of death.
5. Bronchiectasis and bronchiectasis: concept, classification, etiology, pathogenesis, clinical and morphological characteristics, complications, outcomes, causes of death.
6. Atelectasis: definition, classification, etiology, pathogenesis, clinical and morphological characteristics.
7. Hypertension of the pulmonary circulation (pulmonary hypertension) is primary and secondary. Pathogenesis, morphological characteristics of changes in the lungs and heart ("pulmonary heart").
8. Pneumoconiosis: anthracosis, silicosis, silicosis. Pathogenesis, clinical and morphological characteristics, complications and outcomes.
9. Pathological processes in the pleura. Classification. Pleural effusion of inflammatory origin: pleurisy, pleural empyema. Etiology, clinical and morphological characteristics, outcomes. Pleural effusion of non-inflammatory origin: hydrothorax, hemothorax, chylothorax. Etiology, pathogenesis, clinical and morphological characteristics. Pneumothorax: etiology, pathogenesis, diagnosis on autopsy.

*Sources of information:*

Lecture.

1. Edvard C. Klatt. Robbins and Cotran Atlas of Pathology, 4th Edition, 2021
2. Pathologic Anatomy. Ed. by V.S. Paukov, 2022
3. Robbins & Kumar Basic Pathology. (Robbins Pathology) 11th Edition, 2021
4. Bilingual dictionary of medical terms. Ed. by O.D. Mishnev, 2016

*Repeat:*

Circulatory disorders

Inflammation.

Processes of adaptation and compensation (hypertrophy, atrophy, regeneration, organization and restructuring of tissues).

Stromal-vascular dystrophies

*For self-control* - PC tests on this section.



*Means of visualization:*

Micro preparations

Macro preparations

№214	des	Chronic bronchitis with bronchiectasis.	Bronchiectasis and cirrhosis of the lung.
№ 222	des	Chronic lung abscess.	"Pulmonary heart".
№213	des	Silicosis of the lungs (nodular form)	Chronic lung abscess.  Amyloid nephrosis.  Anthracosis of the lungs.  Silicosis of the lungs (or anthracosis and silicosis of the lungs)

*Slides , tables*

METHODICAL RECOMMENDATIONS FOR STUDENTS TO THE  
PRACTICAL LESSON ON THE TOPIC: "*Intestinal infections. Poliomyelitis.  
Typhus. Syphilis. Diphtheria*"

*Questions:*

1. A general concept of infection and infectious disease. Principles of classification of infectious diseases.
2. Intestinal infections. Dysentery (shigellosis). Typhoid fever and salmonellosis. Yersiniosis. Cholera. Amebiasis. Epidemiology, etiology, pathogenesis, morphological characteristics, clinical manifestations, complications, outcomes, causes of death.
3. Rickettsiosis. Features of the infection. Typhus: epidemiology, etiology, pathogenesis, clinical and morphological characteristics, complications, outcomes.
4. Sexually transmitted infections. General characteristics. Syphilis: etiology, pathogenesis, clinical and morphological characteristics acquired and congenital syphilis, complications, outcomes, causes of death.
5. Infectious diseases of childhood. Diphtheria. Poliomyelitis. Etiology, pathogenesis, clinical and morphological characteristics, complications, outcomes.

*Sources of information:*

Lecture.

1. Edvard C. Klatt. Robbins and Cotran Atlas of Pathology, 4th Edition, 2021
2. Pathologic Anatomy. Ed. by V.S. Paukov, 2022
3. Robbins & Kumar Basic Pathology. (Robbins Pathology) 11th Edition, 2021
4. Bilingual dictionary of medical terms. Ed. by O.D. Mishnev, 2016

*Repeat:*

1. Circulatory disorders
2. Morphology of irreversible damage to cells and tissues.
3. Inflammation.
4. Adaptation and compensation processes

*For self-control - PC tests on this section.*

*Means of visualization:*

Micro preparations

Macro preparations

№ 182	des.	Brain-like swelling of Peyer's patches in typhoid fever.	Changes in the small intestine in typhoid fever.
№ 170	des.	Diphtheritic ulcerative colitis in dysentery.	Hyperplasia of the spleen. Gangrene of the foot. Fibrinous colitis.
№ 83	des.	Croupous tracheitis in diphtheria	Liver abscess. Aneurysm of the ascending aorta. Gumma.

*Slides, tables*

METHODICAL RECOMMENDATIONS FOR STUDENTS TO THE  
PRACTICAL LESSON ON THE TOPIC: "*Sepsis. Meningococcal infection*»

*Questions:*

1. Infectious agents. Interaction of host and infectious agents. Reactivity of the organism and infection, the importance of the age factor. General characteristics of the infectious process: local and general changes. Cyclic and acyclic infectious diseases. Pathomorphosis.
2. Sepsis. Sepsis as a special form of infection. Differences from other infections. Etiology, pathogenesis, relationships of macro- and microorganism. The concept of the entrance gate and the primary septic focus.
3. Classification of sepsis. Clinical and anatomical forms of sepsis, their morphological characteristics, clinical significance, outcomes.
4. Meningococcal infection. Etiology, pathogenesis, clinical and morphological characteristics, complications, outcomes.

*Sources of information:*

Lecture.

1. Edvard C. Klatt. Robbins and Cotran Atlas of Pathology, 4th Edition, 2021
2. Pathologic Anatomy. Ed. by V.S. Paukov, 2022
3. Robbins & Kumar Basic Pathology. (Robbins Pathology) 11th Edition, 2021
4. Bilingual dictionary of medical terms. Ed. by O.D. Mishnev, 2016

*Repeat:*

1. Circulatory disorders
2. Morphology of irreversible damage to cells and tissues.
3. Parenchymal dystrophies.
4. Inflammation.
5. Adaptation and compensation processes
6. Pathology of the immune system

*For self-control* - PC tests on this section.

*Means of visualization:*

Micro preparations

Macro preparations

№94	des.	Phlegmon with septic thrombophlebitis (septic focus).	Purulent postpartum endometritis. Embolic kidney abscesses.
№180	des.	Polypous-ulcerative endocarditis.	Polypous-ulcerative endocarditis. Hyperplasia of the spleen.
№90	des.	Purulent leptomeningitis.	Hemorrhagic diathesis (hemorrhage in the renal pelvis, under the endocardium).  Purulent meningitis (brain or spinal cord).  Hemorrhage in the adrenal glands.

*Slides, tables*

# METHODICAL RECOMMENDATIONS FOR STUDENTS FOR A PRACTICAL LESSON ON THE TOPIC: "**Tuberculosis**"

## Questions:

1. Tuberculosis. Epidemiology, etiology, pathogenesis and morphogenesis, classification.
2. Primary, hematogenous, secondary tuberculosis. Morphological characteristics, clinical manifestations, causes of death.

## Sources of information:

### Lecture.

1. Edvard C. Klatt. Robbins and Cotran Atlas of Pathology, 4th Edition, 2021
2. Pathologic Anatomy. Ed. by V.S. Paukov, 2022
3. Robbins & Kumar Basic Pathology. (Robbins Pathology) 11th Edition, 2021
4. Bilingual dictionary of medical terms. Ed. by O.D. Mishnev, 2016

## Repeat:

1. Circulatory disorders
2. Morphology of irreversible damage to cells and tissues.
3. Inflammation is productive.
4. Adaptation and compensation processes
5. Pathology of the immune system
6. Violation of mineral metabolism. Pathological calcification.

*For self-control* - PC tests on this section.

## Means of visualization:

### Micro preparations

### Macro preparations

№241	des.	Healed primary affect as Gon focus in tuberculosis.	Gon focus. Primary tuberculosis complex in the lungs.
№242	des.	Caseous pneumonia (predominance exudative tissue reaction in tuberculosis).	Tuberculosis of the mesenteric lymph nodes. Fibrinous pericarditis.
№244	des.	Miliary tuberculosis.	Miliary pulmonary tuberculosis (spleen, liver). Organ tuberculosis (kidneys, vertebrae, uterus and appendix). Fibro-cavernous pulmonary tuberculosis. Amyloid nephrosis.

## Slides, tables

# METHODICAL RECOMMENDATIONS FOR STUDENTS FOR A PRACTICAL LESSON ON THE TOPIC: "**HIV INFECTION**".

## Questions:

1. HIV infection: etiology, pathogenesis, clinical and morphological characteristics,
2. HIV-associated diseases, complications, causes of death.

## Sources of information:

### Lecture.

1. Edvard C. Klatt. Robbins and Cotran Atlas of Pathology, 4th Edition, 2021
2. Pathologic Anatomy. Ed. by V.S. Paukov, 2022
3. Robbins & Kumar Basic Pathology. (Robbins Pathology) 11th Edition, 2021
4. Bilingual dictionary of medical terms. Ed. by O.D. Mishnev, 2016

## Repeat:

1. Inflammation is productive.
2. Pathology of the immune system
3. Mesenchymal tumors
4. Hodgkin's lymphoma. Non-Hodgkin lymphomas.

For self-control - PC tests on this section.

## Means of visualization:

Micro preparations

Macro preparations

No №		Cytomegalovirus pneumonia	
№318		Kaposi's sarcoma.	
No №		Pneumocystis pneumonia	

## Slides, tables

### № 318 Kaposi's Sarcoma

Microscopic picture: there are many newly formed chaotic thin-walled vessels with a well-defined endothelium, and bundles of spindle cells. Hemorrhages and accumulations of hemosiderin are visible in the loose stroma.

### No № Cytomegalovirus pneumonia

Microscopic picture: characterized by the defeat of the interstitium by the type of alveolitis with lymphocytic and histiocytic infiltration and moderate fibrosis. In the lumens of the alveoli there are clusters of lymphocytes, edematous fluid, fibrin with the presence of cytomegalovirus cells, the altered nuclei of which resemble an owl's eye.

### No № Pneumocystis pneumonia.

Microscopic picture: interstitial pneumonia with infiltration of the interalveolar septa by lymphocytes, plasma cells, macrophages and accumulation in the lumen of the alveoli of foamy eosinophilic material containing pneumocystis.

***Current boundary control of the 4th module***

List of macro preparations

<i>№</i>	<i>Name of the preparation</i>
1	Fatty hepatosis
2	Cirrhosis of the liver
3	Croupous pneumonia
4	Bronchopneumonia
5	Anthracosis of the lungs
6	"Pulmonary" heart
7	Changes in the small intestine in typhoid fever
8	Fibrinous colitis
9	Ascending aortic aneurysm
10	Postpartum purulent endometritis
11	Embolic kidney abscesses
12	Polypous ulcerative endocarditis
13	Purulent meningitis
14	Liver abscess
15	Primary tuberculosis complex in the lungs
16	Miliary tuberculosis of the lungs (liver)
17	Organ tuberculosis
18	Fibrous cavernous tuberculosis
19	Fibrinous pericarditis
20	Chronic stomach ulcer
21	Calculous cholecystitis
22	Tracheitis with influenza
23	Bronchiectases of the lungs

List of micro preparations

<i>№</i>	<i>№ by catalogue</i>	<i>Name of the preparation</i>
1	211	Croupous pneumonia
2	220	Bronchopneumonia
3	214	Chronic bronchitis with bronchiectasis
4	200	Portal cirrhosis of the liver
5	263	Phlegmonous-ulcerative appendicitis
6	170	Diphtheritic ulcerative colitis
7	90	Purulent leptomeningitis
8	242	Caseous pneumonia
9	244	Miliary pulmonary tuberculosis
10	202	Acute massive necrosis of the liver

Slides, tables