Ministry of science and high education RF Ulyanovsk State University Faculty of Medicine named after Biktimirov T.Z., IMEiPC	Form	$(\mathbf{i})$
F-Educational plan of the dicipline		THE SAFE TORUMS
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by the decision of the Academic Coun-	cil of the USU Institule of Medicine,
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АНИАЗИЗАНИИ	

### EDUCATIONAL PLAN

Subject:	Pathological Anatomy
Faculty	Medicine
Department	General and Clinical Morphology
Course	3

Speciality 31.05.01. «General medicine»

(code of the speciality, full name)

Form of education- full-time education

Date of introducing in the instruction process at USU: « 1 » of September 2021. The program was updated at the meeting of the department:  $N_{\underline{0}} \stackrel{1}{\underline{3}}$  of  $\underbrace{30.0!}{\underline{20}} \underbrace{20} \underbrace{dd}_{\underline{3}}$ . The program was updated at the meeting of the department:  $N_{\underline{0}} \stackrel{1}{\underline{3}}$  of  $\underbrace{37.0!}{\underline{20}} \underbrace{20} \underbrace{dd}_{\underline{3}}$ .

### Information about the authors:

Initials	Abbreviation of the department	Degree, scientific rank	
Slesareva Elena Vasilievna	General and clinical morphology	Head of Department, MD, Professor	

Agreed	Agreed		
Head of department, developing discipline	Head of the graduating Department		
/Slesareva E.V./ <i>signature</i> « 12 » May 2021 yr.	M. Ofuen /Vise-Chripunova M.A. signature « 12 » May 2021 yr.		



### 1. OBJECTIVES AND AIM OF PATALOGICAL ANATOMY

The aim of teaching the discipline "Pathological anatomy" is to study the basic of occurrence, development mechanisms and structural foundations of diseases to comprehend the etiology, pathogenesis, clinical manifestations of diseases

### *the objectives* of the discipline are:

- the study of cell pathology and general pathological processes, the totality of which determines the morphological manifestations of a disease;

- the acquisition of knowledge about the etiology, pathogenesis and morphology of diseases at different stages of their development (morphogenesis), the structural foundations of recovery, complications, outcomes and long-term effects of diseases;

- the development of the morphology and mechanisms of the processes of adaptation and compensation of the body in response to the influence of pathogenic factors and changing environmental conditions;

- the study of changes in diseases that arise both in connection with changing living conditions of a person and treatment (pathomorphosis), and as a result of various manipulations (pathology of therapy).

### 2. PLACE OF THE SUBJECT IN THE STRUCTURE OF GEP:

The discipline "Pathological anatomy" refers to the basic part of the curriculum of the GEP specialty 31.05.01 "General Medicine".

The basic knowledge necessary to study the discipline is formed:

- in the cycle of natural sciences, including the following disciplines: anatomy; histology, embryology, cytology; biochemistry; normal physiology; propaedeutics of internal diseases; pathophysiology, clinical pathophysiology; neuroanatomy; embryonic development of body tissues; physiology of visceral systems.

The discipline provides the necessary knowledge, skills and competencies for subsequent disciplines included in the modules of clinical, therapeutic, surgical and medical and preventive disciplines.

### 3. LIST OF EXPECTED RESULTS OF INSTRUCTION ON THE SUBJECT (UNIT), CORELATED WITH PLANNED RESULTS OF COMPLETING THE PROGRAM

The study of the subject «Pathological anatomy » within the completion of the educational program is directed towards the formation of the following general and professional competences in students:

Competence index. Content of a competence	The proposed results of the course, correlated with indicators of achievement of competencies
GPC-5	<u>To know</u> : the structure, topography and development of cells, tissues, organs and systems of the body in interac-
Able to assess morphological,	tion with their function in pathology, the functional sys-
functional, physiological condi-	tems of the human body, their regulation and self-
tions and pathological processes	regulation when exposed to the external environment in
in the human body to solve pro-	health and disease; structural and functional bases of dis-
fessional problems and parts of	eases and pathological processes, causes, main mecha-



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professional competence	nisms of development and outcomes of typical pathologi-
projessional competence	cal processes, dysfunctions of organs and systems; con- cepts of etiology, pathogenesis, morphogenesis, patholog-
	ical morphosis of a disease, nosology, principles of classi- fication of diseases, basic concepts of general nosology;
	the role of causal factors and disease-causing conditions
	in the occurrence of typical pathological processes and diseases; primary pathological reactions; the development
	of cause-and-effect relationships in the pathology of the whole organism; the importance of the body's reactivity in
	the occurrence, development and outcome of typical pathological processes and diseases; patterns of pathogen-
	esis and hygiene measures of typical pathological pro-
	cesses and diseases; staging of development of typical pathological processes and diseases, their complications
	and outcomes; syndromes and symptoms of the most
	common diseases; <u>Be able to:</u> use educational, scientific, popular science
	literature, the Internet for professional activities; visually assess and record changes in the organs and tissues of the
	corpse, substantiate the nature of the pathological process
	and its clinical manifestations; give an opinion on the cause of death and formulate a pathological diagnosis; use
	biological equipment; work with magnifying equipment (microscopes, optical and simple loupes); to give a histo-
	logical and physiological assessment of the state of vari- ous cellular, tissue and organ structures; describe the
	morphological changes of the studied macroscopic, mi-
	croscopic preparations and electronic diagrams; <u>To own:</u> methods of assessing the anatomical, physio-
DC 4	logical, and pathological conditions of the patient;
PC 2 Readiness to collect and analyze	<u>To know:</u> the modern methods of clinical, laboratory, instrumental examination of patients (including endo-
patient complaints, his medical history, examination results, la-	scopic, radiological methods, ultrasound diagnostics).
boratory, instrumental, patholog-	To be able to: conduct a primary examination of systems
ical, and other tests in order to recognize the condition or estab-	and organs: respiratory, cardiovascular, blood and hema- topoietic organs, digestive, endocrine and urinary; out-
lish the presence or absence of diseases.	line the volume of additional studies in accordance with
	the prognosis of the disease, to clarify the diagnosis and obtain a reliable result.
	To own: interpretation of the results of laboratory, in-
	strumental diagnostic methods for pathology of internal organs.

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### 4. VOLUME OF THE SUBJECT

### **4.1.** Volume of the subject in credit points (total): 7 credit points

### 4.2. On types of academic workload (in hours): 252

	Number of hours (form of education pathological anatomy)				
Type of academic work	Total according to	n semesters			
	the plan	5	6		
Work of students with a		158			
teacher					
Lectures	53	36	17		
Auditory lessons:					
practical classes and	105	54	51		
seminars					
Self-study work	58	36	22		
Concurrent control (number		Colloquium	Colloquium		
and type: a test, a colloqui-		Testing	Testing		
um, a report)		essay	essay		
Types of intermediate attes-	36	-	36		
tation (examination, test)			exam		
Total number of hours on					
the subject	252	126	126		

If it is necessary to use partially or exclusively remote educational technologies in the educational process, the table shows the number of hours of work of teaching staff with students for conducting classes in a remote format using e-learning.

# **4.3.** Contents of the discipline (module). Distribution of hours on themes and kinds of study:

Number of hours -252The form of training: full time

			Activity	format		
Name of sections and		Classroom studies		Self-	Form of current	
themes	Total	Lectures	Practical lessons	Interac- tive clas- ses	study work	control
Inte	rview, c	hecking the	work album			
2. Necrosis. Heart at-	7	2	3		2	Interview,
tack.5						checking the
1. The subject and objec-						work album
tives of the discipline						
"pathological anatomy".						
Cell pathology. Autopsy						
3. Compensatory	7	2	3		2	Interview,
processes						checking the
						work album



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1 Circulatory	7	2	3		2	Interview
4. Circulatory	/	Z	3		Z	Interview,
disturbance.						checking the
Thromboembolic						work album
syndrome.	5			3	2	Testing selving
5. Colloquium on topics	5	-		3	2	Testing, solving
1-4						situational tasks,
						diagnostics of
						microprepara-
						tions
6. Dystrophy.	7	2	3		2	Interview,
Parenchymal dystrophies.						checking the
						work album
7. Stromal vascular	7	2	3		2	Interview,
dystrophy.						checking the
						work album
8. Mixed dystrophy.	7	2	3		2	Interview,
						checking the
						work album
9. Colloquium on topics	5	-		3	2	Interview,
6-8						checking the
						work album
10. Inflammation.	7	2	3		2	Interview,
		-	C		-	checking the
						work album
11. Productive	7	2	3		2	Interview,
inflammation.		-	C		-	checking the
						work album
12. Immunological	7	2	3		2	Interview,
processes.	,	2	5		-	checking the
processes.						work album
13. Tumors.	7	2	3		2	Interview,
Morphogenesis and	/	2	5		2	checking the
histogenesis.						work album
	7	2	3		2	Interview,
14. Epithelial tumors.	/	Z	5		2	
						checking the
15 M 1 1	7	2	2		2	work album
15. Mesenchymal tumors.	7	2	3		2	Interview,
Tumors of the nervous						checking the
tissue.	~		2			work album
16. Hemoblastosis.	7	2	3		2	Interview,
						checking the
						work album
17. Colloquium on topics	5			3	2	Testing, solving
10-16						situational tasks,
						diagnostics of
						microprepara-
						tions
18. Diagnosis of drugs,	5		3		2	Diagnostics of

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autopsy.						microprepara- tions
Section 2. Private patholo	gv			-1 - L		
19. Hypertension. Ather- osclerosis	6	1	3		1	Interview, checking the work album
20. Pathomorphology of heart disease.23	4	1	3		1	Interview, checking the work album
21. Rheumatic diseases.	6	2	3		1	Interview, checking the work album
22. Pathomorphology of lung diseases.	6	2	3		1	Interview, checking the work album
<ul><li>23. Colloquium on topics</li><li>19-22</li></ul>	5			3	2	Testing, solving situational tasks, diagnostics of microprepara- tions
24. Pathomorphology of diseases of the stomach	6	2	3		1	Interview, checking the work album
25. Pathomorphology of intestinal diseases.	6	2	3		1	Interview, checking the work album
26. Pathomorphology of liver diseases.	6	2	3		1	Interview, checking the work album
27. Pathomorphology of kidney disease.	6	2	3		1	Interview, checking the work album
<ul><li>28. Colloquium on topics</li><li>24-27</li></ul>	5			3	2	Testing, solving situational tasks, diagnostics of microprepara- tions
29. Pathomorphology of diseases of the endocrine system.	6	2	3		1	Interview, checking the work album
30. Pathomorphology of genital diseases.	6	2	3		1	Interview, checking the work album
31. Viral infections. AIDS.	6	2	3		1	Interview, checking the work album
32. Bacterial infections	6	2	3		1	Interview, checking the

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						work album
33. Tuberculosis.	7	2	3		2	Interview,
						checking the
						work album
34. Sepsis.	7	2	3		2	Interview,
						checking the
						work album
35. Colloquium on topics	5	-		3	2	Testing, solving
29-34.						situational tasks,
						diagnostics of
						microprepara-
						tions
Total	216	53	87	18	58	

### Interactive form of classes

№п/	The name of the discipline	Interactive form of classes	Hours
п	section		
1.	Colloquium on topics 1-4	Work in small groups for the diagnosis of preparations, solving situational tasks	3
2.	Colloquium on topics 6-8 Work in small groups for the diagnosis of preparations, solving situational tasks	3	
3.	Colloquium on topics 10-16	Work in small groups for the diagnosis of preparations, solving situational tasks	3
4	Colloquium on topics 19-22	Work in small groups for the diagnosis of preparations, solving situational tasks	3
5	Colloquium on topics 24-27	Work in small groups for the diagnosis of preparations, solving situational tasks	3
6	Colloquium on topics 29-34	Work in small groups for the diagnosis of preparations, solving situational tasks	3
TOTA			18

### **5. COURSE CONTENT** Section 1. General pathology

1. The subject and objectives of the disci-	"Pathological anatomy" - its content, tasks, objects, methods and re- search levels. Pathological anatomical service, its significance. The con-
pline "pathological	cept of the disease. Pathomorphism of the disease. Death, signs of death.
anatomy". Cell	Causes. The concept of pathogenesis and resuscitation. General charac-
pathology. Autopsy	teristics of cell pathology. Ultrastructural violations, methods for their
	verification. Damage. Demonstration of autopsy on Shore.
2. Necrosis. Heart at-	Definition of necrosis as local death. The concept of paranecrosis, nec-
tack	robiosis, parabiosis, autolysis. Causes, development mechanisms and
	morphological characteristics of necrosis. Classification of necrosis.
	Heart attack is a type of necrosis. Causes. Kinds. Morphological charac-
	teristics. Kinds. Outcomes.
3. Compensatory-	Regeneration. The essence and biological significance of regeneration,

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adaptive processes	regulatory mechanisms. The morphogenesis of the regenerative process.
	Types of regeneration. Hypertrophy and hyperplasia. Atrophy. Tissue
	remodeling and metaplasia. Reasons, morphological characteristics.
4. Circulatory	Hyperemia. Arterial, venous hyperemia. Classification. Morphological
disturbance.	manifestations. Outcomes. Ischemia. Causes. Kinds. Clinical and mor-
Thromboembolic	phological manifestations. Reasons, stages of thrombosis. Local and
syndrome.	general factors of thrombosis. Types of blood clots. Disseminated intra-
	vascular coagulation syndrome. Embolism. Reasons, types, outcomes.
5. Colloquium on	The solution of situational problems. Diagnosis of drugs in small groups
topics 1-4	
6. Dystrophy.	Dystrophy as an expression of tissue metabolism and a form of damage.
Parenchymal	Causes of dystrophy. Morphogenetic mechanisms. Classification of dys-
dystrophies.	trophies. Hereditary fermentopathies (accumulation diseases).
5 1	Parenchymal protein, carbohydrate dystrophies.
7. Stromal-vascular	Mesenchymal protein dystrophy. Amyloidosis as a form of mesenchy-
dystrophy.	mal protein dystrophy. Classification of amyloidosis, morphological
ajsu opny.	characteristics. General and local obesity (lipomatosis). Mesenchymal
	fatty, carbohydrate dystrophies.
8. Mixed dystrophy.	Disorders of chromoprotein metabolism. Violations of the exchange of
o. wixed dystrophy.	nucleoproteins. Disorders of mineral metabolism. The pathology of cal-
	cium metabolism is calcifications. Violation of phosphorus metabolism.
	The formation of stones. Causes, mechanisms and consequences of stone
	formation.
9. Colloquium on	The solution of situational problems. Diagnosis of drugs in small groups
topics 6-8	The solution of situational problems. Diagnosis of drugs in small groups
10. Inflammation.	The essence, patterns of development of inflammation. The morphology
10. Innannnation.	of the kinetics of the inflammatory reaction. Classification. Exudative
	inflammation. Reasons, types. Outcomes.
11. Productive	Productive inflammation, its types. Interstitial, granulomatous, inflam-
inflammation.	
Innanination.	mation with the formation of polyps. Reasons, development mecha-
	nisms. Morphological characteristics. Outcomes. Specific inflammation.
10 1 1 1	Reasons, development mechanisms. Morphology.
12. Immunological	The concept of the reactivity of the body (normo-hypo-hyperemia). Al-
processes.	lergy. Reactions of delayed and immediate types. Immunodeficiency
10.5	conditions. Morphological manifestations.
13. Tumors.	The concept of tumor growth. Etiology. Pathogenesis. Precancerous
Morphogenesis and	conditions. Dysplasia and cancer. The importance of biopsy in oncology.
histogenesis.	The structure of the tumor. Growth, classification. Criteria for malignan-
	cy. Metastasis. The concept of relapse.
14. Epithelial tumors.	Epithelial tumors (organ-specific and organ-specific). Ways of metasta-
	sis. Tumors of individual organs.
15. Mesenchymal tu-	Mesenchymal tumors. Sarcomas and its types. Tumors from melanin-
mors. Tumors of the	forming tissue. Nevus, melanoma. Tumors of the nervous tissue: neu-
nervous tissue.	roectodermal, meningovascular, autonomic and nervous systems.
16. Hemoblastosis	Systemic tumor diseases of the hematopoietic tissue. Leukemia. Acute
	levizonia ita tempo Chagaia levizonia alegaification I resultante est

leukemia, its types. Chronic leukemia, classification. Lymphomas are regional tumor diseases. Causes, forms, morphological characteristics. The solution of situational problems. Diagnosis of drugs in small groups

17. Colloquium on

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topics 10-16	
18. Diagnosis of drugs	Description of microscopic structures and signs of general pathological
	processes on histological preparations.

### Section 2. Private pathology

10 Hypertension	Arterial hypertension Clinical and mernhological characteristics of
19. Hypertension.	Arterial hypertension. Clinical and morphological characteristics of
Atherosclerosis.	hypertension. Forms, stages, complications. Atherosclerosis. Stage of
	atherosclerosis. Clinical and morphological forms, their characteristics,
20 D 1 1 1	causes of death.
20. Pathomorphology	Coronary heart disease, etiology and pathogenesis. Acute coronary ar-
of heart disease.	tery disease. Chronic coronary heart disease, morphological picture,
	complications, causes of death. Endocarditis. Myocarditis. Classifica-
	tion. Causes, development mechanisms, signs, outcomes. Cardiomyo-
	pathy Cerebrovascular disease.
21. Rheumatic diseases	The concept of rheumatic (collagen) diseases. Morphology of immune
	disorders and the process of systemic disorganization of connective
	tissue. Rheumatism (etiology, pathogenesis, pathomorphology).
	Changes in the heart and blood vessels, rheumatic heart diseases.
	Complications and causes of death. Rheumatoid arthritis. Etiology,
	pathogenesis, morphology.
22. Pathomorphology	Classification of acute pneumonia. Croupous pneumonia, broncho-
of lung diseases.	pneumonia, interstitial pneumonia: pathogenesis, morphological char-
C C	acteristics. Chronic non-specific lung diseases: etiology, pathogenesis,
	classification, morphological signs. Chronical bronchitis. Bronchiectat-
	ic disease. Chronic lung abscess. Chronic pneumonia Pneumosclerosis
	Emphysema. Interstitial lung disease. Bronchial asthma. Lung cancer.
23. Colloquium on	The solution of situational problems. Diagnosis of drugs in small
topics 19-22	groups
24. Pathomorphology	Gastritis. Acute gastritis: etiology, pathogenesis, morphological forms,
of diseases of the stom-	their characteristics, complications. Chronic gastritis: causes, develop-
ach.	ment mechanisms, morphological forms, their characteristics. Chronic
	gastritis, as a precancerous condition of the stomach. Peptic ulcer of the
	stomach and duodenum. Pathological anatomy, complications and out-
	comes. Chronic gastric ulcer as a precancerous condition. Stomach
	cancer.
25. Pathomorphology	Enteritis. Acute enteritis. Chronic enteritis: causes, development mech-
of intestinal diseases.	anisms, morphological forms. Colitis. Nonspecific ulcerative colitis.
of intestinal diseases.	
	Crohn's disease. Appendicitis: etiology, pathogenesis, classification,
	pathological anatomy of acute and chronic appendicitis, complications.
26 Detheme	Colon cancer, forms, morphological characteristics.
26. Pathomorphology	Hepatosis, toxic liver dystrophy, fatty hepatosis. Hepatitis (acute and
of liver disease.	chronic, primary and secondary). Liver cirrhosis: etiology, pathogene-
	sis, morphogenesis, modern classification. Liver cancer. Macro and
	microscopic forms of cancer, complications, patterns of metastasis. The
	value of liver cirrhosis as a precancerous condition.
27. Pathomorphology	Glomerulonephritis: modern classification, etiology and pathogenesis,
of kidney disease.	morphology, complications, outcomes. Nephrotic syndrome: primary

	and secondary. Acute renal failure: etiology, pathogenesis, morpholog- ical characteristics. Chronic tubulopathies. Paraproteinemic nephrosis,
	gouty kidney. Pyelonephritis. Renal stone disease, pathological anato-
	my, complications, outcomes, polycystic kidney disease.
	Nephrosclerosis Tumors of the kidneys.
28. Colloquium on	The solution of situational problems. Diagnosis of drugs in small
topics 24-27	groups
29. Pathomorphology	Pituitary disorders: acromegaly, pituitary dwarf growth, cerebral pitui-
of diseases of the endo-	tary cachexia, Itsenko-Cushing's disease, adipose-genital dystrophy:
crine system.	etiology, pathogenesis, morphology. Pituitary tumors. Adrenal disor-
	ders: Addison's disease, adrenal tumors. Thyroid: goiter. Thyroid tu-
	mors, morphology, complications. Pathomorphology of the parathyroid
	glands: hyperparathyroidism, hypoparathyroidism. Diabetes.
30. Pathomorphology	Dyshormonal diseases: prostatic hypertrophy, glandular hypertrophy of
of genital diseases.	the uterine mucosa. Benign breast dysplasia. Inflammatory diseases:
	acute and chronic endometritis. Tumors of the genitals and breast,
	ovarian cancer, prostate cancer, testicular cancer.
31. Viral infections.	Introduction to the nosology of the infectious process. Classification.
AIDS.	General morphology of the infectious process. Features of the infec-
	tious process. Acute respiratory viral infections (ARVI), classification,
	factors determining the incidence. Morphology. Outcomes with influ-
	enza, parainfluenza. adenovirus infection. Measles. Etiopathogenesis.
32. Bacterial infections.	-
33 Tuberculosis	
55. 1 00010010515.	
34. Sepsis.	
	Exodus.
35. Colloquium on	The solution of situational problems. Diagnosis of drugs in small
topics 29-34.	groups
-	The solution of situational problems. Diagnosis of drugs in small

### 6.TOPICS OF PRACTICAL CLASSES AND SEMINARS

### Section 1. General pathology.

Lesson 1. Pathological anatomy. Tasks, methods of teaching and studying the subject. Death,

signs of death. Cell pathology. The form of the exercise is a practical lesson. Questions to the topic:

1. Death. General characteristic: The concept of "death", the concept of thanatogenesis. Classification depending on the cause and reversibility of life.

2. Clinical death: definition of a concept, duration, signs, concept of resuscitation.

3. Biological death: definition of a concept, signs, time of occurrence and mechanisms of their development.

4. Pathology of the nucleus. Pathology of the cytoplasm.

Questions for independent study:

- 1. The content, tasks, objects and methods of pathological anatomy.
- 2. The concept of the disease. Pathomorphism of the disease.
- 3. Ultrastructural disturbances in the cell.

**Lesson 2.** Necrosis, types of necrosis and necrobiosis. The form of teaching is a practical lesson. Questions to the topic:

- 1. The definition of "necrosis", "paranecrosis", "necrobiosis", "autolysis". Causes of necrosis.
- 2. Classification of necrosis, clinical and morphological forms.
- 3. Heart attack a type of necrosis, clinical significance
- 4. Outcomes, meaning for the body.

Questions for independent study:

- 1. Manifestations of necrosis at the cell level.
- 2. Macro and microscopic signs of necrosis.

**Lesson 3.** Compensatory-adaptive processes. Regeneration. Atrophy. Hypertrophy. Metaplasia. The form of teaching is a practical lesson.

Questions to the topic:

1. The concept of compensatory-adaptive processes. Types, stages.

2. Regeneration. Classification (physiological, pathological). Localization. Levels. Morphological manifestations. Outcomes.

- 3. Hypertrophy. Kinds. Functional value. Morphological characteristics.
- 4. Atrophy. Classification, Morphological manifestations. Outcomes
- 5. Structural adjustment and tissue organization. Kinds. Functional value.
- 6. Metaplasia, its types.

Questions for independent study:

- 1. Regeneration of individual tissues and organs.
- 2. Wound healing.
- 3. Sclerosis.

**Lesson 4.** Circulatory disturbance. Hyperemia. Bleeding. Stasis. Thrombosis. Embolism. Myocardial form of teaching - a practical lesson.

Questions to the topic:

1. Arterial, venous hyperemia. Definition, development mechanisms, classification, morphological manifestations, outcomes.

2. Bleeding. Species, morphology, outcomes.

3. Thrombosis: Definition, thrombosis mechanisms, classification, morphology, clinical signifi-



cance and outcomes.

4. Embolism: Definition of a concept, path of movement, characteristic, outcomes.

5. Heart attacks: Etiology, pathogenesis, species, morphological picture, complications, outcomes.

Questions for independent study:

1. Violation of the content of tissue fluid (edema, exsicosis). Etiology, classification, morpholo-

gy, complications, outcomes

2. Impaired lymph circulation. Classification, morphology.

**Lesson 5**. Colloquium on topics 1-4. Form of teaching - work in small groups for the diagnosis of micropreparations. The solution of situational problems.

Micropreparations for diagnosis.

1. No. 1 REGENERATIVE MYOCARDIAL HYPERTROPHY

2. No. 3 NECROSIS OF THE KIDNAL CANCER

**3.** NO. 4 LIVER ATROPHY OF THE LIVER

**4.** No. 6 GOITER HASHIMOTO

**5.** No. 7 NECROSIS OF THE PLACENTA WITH DYSTROPHIC CONDITIONING OF THE NAP

6. No. 13 MUSCULAR LIVER

7. No. 14 HEMORRHAGIC INFARCTION OF THE EASY

8. No. 18 KIDNEY HEMORRHAGE

9. No. 21 IRON HYPERPLASIA ENDOMETRY

10. No. 24 BROWN LUNG INDUCTION

11. No. 29 ORGANIZED CLOSE IN VIENNA

12. No. 33 COLLOIDAL GOITER

13. No. 35 FAT EMBOLASIS OF LUNG VESSELS

14. No. 36 OBTURING FRESH RED CLOSE IN VIENNA

**15.** No. 39 HEMORRHAGE IN THE BRAIN

Lesson 6. Parenchymal dystrophies. The form of teaching is a practical lesson.

Questions to the topic:

1. General pathology of dystrophy, Determination of dystrophy. Etiology, developmental mechanisms, classification, localization,

2. Types of parenchymal dystrophies (protein, fat, carbohydrate), morphological picture, outcomes.

3. Hereditary dysproteinoses. Development mechanisms.

Questions for independent study:

1. Dystrophy as an expression of tissue metabolism and form of damage.

2. Diseases of accumulation.

**Lesson 7.** Mesenchymal dystrophies. The form of teaching is a practical lesson. Questions to the topic:

1. General pathology: definition, localization, development mechanisms, classification.

2. Mesenchymal protein dystrophies (mucoid swelling, fibrinoid swelling, hyalinosis, amyloidosis). Etiology, morphogenesis, outcomes.

3. Mesenchymal fatty degeneration. Disorders of the metabolism of neutral fats, cholesterol. Eti-

ology, morphogenesis, outcomes.

4. Mesenchymal carbohydrate dystrophy. Etiology, morphogenesis, outcomes.

Questions for independent study:

1. Inherited carbohydrate dystrophy.

2. Inherited fatty degeneration.

**Lesson 8.** Mixed dystrophies. Impaired chromoprotein metabolism. The form of teaching is a practical lesson.

Questions to the topic:

1. General pathology of mixed dystrophy. Definition, classification, distinctive features.

2. Hemoglobinogenic pigmentation (hemosiderin, ferritin, hematoidin, bilirubin, hematin). Mechanisms of education, localization, morphology.

3. Proteinogenic pigmentation (melanin, adrenochrome, pigment enterochromaffin cells). Mechanisms of education, localization, morphology.

4. Lipidogenic pigmentation (lipofuscin, lipochromes). Mechanisms of education, localization, morphology.

5. Violations of the exchange of nucleoproteins. The composition of nucleoproteins. Manifestations of violations of nucleoproteins (gout, uric acid infarction, urolithiasis).

6. Lime dystrophy. Classification, causes and development mechanisms. Morphology. Outcomes.

Questions for independent study:

1. Disorders of phosphorus metabolism.

2. Violation of the metabolism of trace elements - copper, potassium, sodium, chlorine.

**Lesson 9.** Colloquium on topics 6-8. Form of teaching - work in small groups for the diagnosis of micropreparations. The solution of situational problems.

Micropreparations for diagnosis.

**1.** No. 41 MURRID SWELLING OF THE EPITHELIUM OF THE KINDERED KIDNAL CANAL

**2.** N ° 44 TOTAL SPLEEN

- **3.** No. 48 LIVER AMYLOIDOSIS
- 4. No. 49 KIDNEY AMYLOIDOSIS
- 5. No. 60 FATAL DYSTROPHY OF THE LIVER
- 6. No. 61 OBESITY OF MYOCARDIUM
- 7. No. 62 DYSTROPHIC DEFENSE IN KIDNEY TUBERCULOSIS
- 8. No. 74 ANTHRACOSIS OF BRONCHIAL NODE
- 9. No. 24 BROWN LUNG INDUCTION

**Lesson 10.** Inflammation. General information about inflammation. Exudative inflammation. The form of teaching is a practical lesson.

Questions to the topic:

1. General pathology of inflammation. Definition of a concept. Biological entity. Etiology, pathogenesis of inflammation.

2. Morphological characteristics of inflammation. Stage of inflammation (alteration, exudation,



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proliferation), classification.

3. Exudative inflammation. Localization, causes, types, outcomes.

Questions for independent study:

1. The kinetics of inflammatory reactions.

2. Mediators of inflammation - a characteristic, the specifics of the allocation in the focus of inflammation.

**Lesson 11.** Inflammation. Productive and specific inflammation. The form of teaching is a practical lesson.

Questions to the topic:

1. General pathology of productive inflammation. Definition, developmental conditions, classification.

2. Morphological characteristics of certain types of productive inflammation (inter-exact, granu-

lomatous, inflammation around parasites, with the formation of polyps and condylomas).

3. Specific inflammation. Etiology. Pathogenesis, Species, Outcomes.

Questions for independent study:

1. The reaction of lymphoid tissue with inflammation.

2. The importance of inflammation as a general pathological reaction of the body.

**Lesson 12.** Immunopathological processes. The form of teaching is a practical lesson. Questions to the topic:

1. The definition of "immunopathological processes." Types of immune reactions. Methods of morphological research. Etiology. Pathogenesis.

2. Thymus pathology (hypoplasia, atrophy, hyperplasia, thymomegaly). Morphological picture.

3. Changes in peripheral lymphoid tissue in violation of immunogenesis. Types of pathology. Morphological picture.

4. Autoimmune diseases. Etiology. Pathogenesis, classification. Morphological manifestations.

5. Hypersensitivity reaction. Types. Development mechanisms. Morphological characteristics.

6. Immunodeficiency conditions. Classification. Etiology. Pathogenesis. Morphological manifestations.

Questions for independent study:

1. Hereditary immunodeficiency conditions.

**Lesson 13.** General pathology of tumors. The form of teaching is a practical lesson. Questions to the topic:

1. The concept of a tumor, tumor growth, distinctive features of tumors. Theories of tumor de-



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velopment. Pretumor processes.

- 2. Histogenesis, tumor morphogenesis. Macro and microscopic signs of tumors, tumor growth.
- 3. Signs of benign and malignant tumors. properties of tumor cells. Classification of tumors.

Questions for independent study:

1. Dysplasia and cancer. The importance of biopsy in oncology.

Lesson 14. Epithelial tumors. The form of teaching is a practical lesson.

Questions to the topic:

- 1. Epithelial tumors (organ-specific and organ-specific).
- 2. Ways of metastasis.
- 3. Tumors of individual organs.

Questions for independent study:

1. Theories of carcinogenesis.

**Lesson 15.** Mesenchymal tumors. Tumors of melanin-forming and nervous tissue. The form of teaching is a practical lesson.

Questions to the topic:

1. The principles of classification of mesenchymal tumors. Histogenesis, morphogenesis. Criteria for malignancy and benignity. Ways of metastasis.

2. Tumors of melanin-forming tissue. Localization. Histogenesis. Morphological characteristics.

3. Tumors of the nervous tissue and meninges. Classification. Ways of metastasis. Features of the structure.

Questions for independent study:

1. Teratomas.

2. Tumors of the autonomic nervous system.

Lesson 16. Hemoblastoses. The form of teaching is a practical lesson.

Questions to the topic:

1. The concept of definition of leukemia. Classification, Group characteristics. Pathogenesis and morphogenesis of leukemia.

2. Leukemia (acute, chronic). Morphological characteristics. Complications Outcomes.

3. Regional tumor diseases of the blood-forming organs, Classification. Morphology. Outcomes.

Questions for independent study:

1. Hodgkin's disease. Variants of the course.

2. Non-Hodgkin lymphomas.

**Lesson 17.** Colloquium on topics 10-16. Form of teaching - work in small groups for the diagnosis of micropreparations. The solution of situational problems.

Micropreparations for diagnosis.

No. 84 Purulent Meningitis

No. 93 GRANULEMA IN EASY WITH ACTINYMICOSIS

No. 95 MULTI-CHAMBER LIVER ECHINOCOCCOSIS

- No. 100 Squamous Cellulose Cancer
- No. 107 LENGTH ADENOCARCINOMA

No. 109 METASTASIS OF CANCER IN THE HEART

No. 111 METASTASIS OF CANCER IN THE LIVER

No. 114 CHONDROSARCOMA

No. 115 LIPOSARCOMA

No. 116 POLYMORPH CELL SARCOM

No. 120A WILLIS TUMOR

No. 137 BREAST FIBROADENOMA

No. 141 SKIN HEMANGIOMA

**Lesson 18.** Diagnosis of drugs. Form of teaching - work in small groups for the diagnosis of micropreparations.

Micropreparations for diagnosis.

No. 1 REGENERATIVE HYPERTROPHY OF MYOCARDIUM

- No. 3 NECROSIS OF KIDNAL CANCER
- No. 4A BROWN LIVER ATROPHY
- No. 6A GOITER IS HASIMOTO

No. 7 NECROSIS OF PLACENTA WITH DYSTROPHIC SIMULATION OF VOR-SIN

- No. 13 Muscat liver
- No. 14 HEMORRHAGIC LIGHT INFARCTION
- No. 18 HEMORRHAGE TO THE KIDNEY
- No. 21 IRON HYPERPLASIA ENDOMETRY
- No. 24 BROWN LUNG INDUCTION
- NO. 29 ORGANIZED CLOSE IN VIENNA
- No. 33 COLLOIDAL GOITER
- No. 35 FAT EMBOLASIS OF LUNG VESSELS
- No. 36 OBTURING FRESH RED CLOSE IN VIENNA
- No. 39 HEMORRHAGE IN THE BRAIN
- No. 41 Murky swelling of the epithelium of the convoluted tubules of the kidney
- No. 44 TOTAL SPLEEN
- No. 48 LIVER AMILOIDOSIS



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### No. 49 KIDNEY AMYLIDOSIS

No. 60 FATTY DYSTROPHY OF THE LIVER

- No. 61 OBESITY OF MYOCARDIUM
- No. 62 DYSTROPHIC DISEASEMENT IN KIDNEY TUBERCULOSIS
- No. 74 ANTHRACOSIS OF BRONCHIAL NODE
- No. 84 Purulent Meningitis
- No. 93 GRANULEMA IN EASY WITH ACTINYMICOSIS
- No. 95 MULTI-CHAMBER LIVER ECHINOCOCCOSIS
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- No. 141 SKIN HEMANGIOMA

### Section 2. Private pathology.

Lesson 19. Hypertension. Atherosclerosis. The form of teaching is a practical lesson.

Questions to the topic:

1. Causal factors of atherosclerosis. Risk factors. Stages of morphogenesis and the course of atherosclerosis:

2. Types of complications of atherosclerosis. Outcomes.

3. Hypertension. Symptomatic hypertension. Differential diagnosis of hypertension and symptomatic hypertension.

4. Etiology, pathogenesis of hypertension. Risk factors. Reflex, basic, humoral factors for the occurrence of hypertension.

5. Morphology of hypertension. Clinical and morphological stages.

Questions for independent study:

1. The definition of atherosclerosis, arteriosclerosis, arteriosclerosis.

- 2. Cardiosclerosis.
- 3. Theories of the occurrence of hypertension.

**Lesson 20.** Pathomorphology of heart disease. Cardiomyopathy Cerebro-vascular disease. The form of teaching is a practical lesson.

Questions to the topic:

1. The concept of coronary heart disease. Causal factors. Risk factors. Classification of coronary insufficiency.

- 2. Myocardial infarction. Classification. Complications Outcomes. Causes of death.
- 3. Cerebrovascular disease. Definition of a concept. Development mechanisms. Morphology.
- 4. Cardiomyopathies. Classification. Morphology.



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Questions for independent study:

1. Myocarditis.

2. Heart defects: congenital and acquired.

**Lesson 21.** Rheumatic diseases. Rheumatism. The form of teaching is a practical lesson. Questions to the topic:

1. The definition of "rheumatic disease." Nosological forms. Etiopathologist.

2. Rheumatism. Etiopathogenesis. Morphology of connective tissue lesions. Nonspecific reactions. Clinical and anatomical forms.

3. Rheumatic heart disease. Endocarditis, myocarditis, pericarditis. Heart defects. Nosological and morphological variants of defects.

4. Rheumatic diseases of organs and systems. Etiopathogenesis. Morphology. Complications of the underlying disease.

Questions for independent study:

1. Systemic lupus erythematosus. Etiopathogenesis. Morphology. Complications

2. Nodular periarteritis. Etiopathogenesis. Morphology. Complications

3. Systemic scleroderma, dermatomyositis.

**Lesson 22.** Pathomorphology of lung diseases. The form of teaching is a practical lesson. Questions to the topic:

1. Classification of respiratory diseases.

2. Croupous pneumonia. Definition of a concept. Etiopathogenesis. Morphological pattern. Complications Outcomes.

3. Focal pneumonia. Classification. Morphological picture. Complications Outcomes.

4. Bronchial asthma. Classification. Morphological picture. Complications Outcomes.

5. Chronic bronchitis. Classification. Morphology. Complications Outcomes.

6. Chronic pneumonia. Definition of a concept. Development mechanisms. Morphology.

7. Bronchiectasis. Emphysema. Atelectasis. Classification. Development mechanisms. Causes of death of patients.

8. Lung cancer. Clinical and morphological forms. Metastases Complications

Questions for independent study:

1. Interstitial lung disease.

2. Chronic non-specific lung diseases, etiology, pathogenesis. The role of the body in the emergence and development.

**Lesson 23.** Colloquium on topics 19-22. Form of teaching - work in small groups for the diagnosis of micropreparations. The solution of situational problems.

Micropreparations for diagnosis.

No. 146 PRIMARY-CRUNCHED KIDNEY

No. 147 MYOCARDIAL INFARCTION

No. 148 Atherosclerotic plaque of the aorta with ulceration

No. 149 ATHEROSCLEROSIS OF THE CORONARY ARTERY

No. 158 RETURNED BEARD-ENDOCARDITIS

No. 159 RHEUMATIC CARDIOSCLEROSIS



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### No. 165 EMPHYSEMA OF THE LUNGS

No. 166 CHRONIC PNEUMONIA

- No. 167 BRONCHOPNEUMONIA
- No. 169 CARNIFICATION OF EASY
- No. 171 LARGE PNEUMONIA (GRAY FORM)
- No. 172 BRONCH CANCER
- No. 175 LARGE PNEUMONIA (RED FORM)
- No. 187 MILLAR TUBERCULOSIS OF THE LUNGS

**Lesson 24.** Pathomorphology of diseases of the stomach. The form of teaching is a practical lesson.

Questions to the topic:

1. Gastritis. Acute gastritis: etiology, pathogenesis, morphological forms, their characteristics, complications.

2. Chronic gastritis: causes, development mechanisms, morphological forms, their characterization.

3. Chronic gastritis, as a precancerous condition of the stomach.

4. Peptic ulcer of the stomach and duodenum. Pathological anatomy, complications and outcomes.

5. Chronic gastric ulcer as a precancerous condition.

6. Cancer of the stomach. Clinical, anatomical, and morphological forms of stomach cancer. Ways of metastasis. Complications

Questions for independent study:

1. Diseases of the esophagus - esophagitis, diverticula, cancer of the esophagus.

2. Diseases of the oral cavity - stomatitis, glossitis, tonsillitis.

**Lesson 25.** Pathomorphology of intestinal diseases. The form of teaching is a practical lesson. Ouestions to the topic:

1 Enteritie A oute enteriti

1. Enteritis. Acute enteritis.

2. Chronic enteritis: causes, development mechanisms, morphological forms.

3. Appendicitis: etiology, pathogenesis, classification, pathological anatomy of acute and chronic appendicitis, complications.

- 4. Cancer of the small intestine.
- 5. Colitis. Classification. Morphology. Complications
- 6. Nonspecific ulcerative colitis. Disease
- 7. Colon cancer, shape, morphological characteristics.

Questions for independent study:

1. Pathomorphology of diseases of the rectum.

**Lesson 26.** Pathomorphology of diseases of the liver and biliary tract. The form of teaching is a practical lesson.

Questions to the topic:

1. Classification of liver diseases. General pathology. Definition of the concepts of hepatosis, hepatitis, cirrhosis.

2. Hepatoses. Kinds. Etiopathogenesis. Morphological picture. Outcomes.

3. Hepatitis. Classification. Etiology, pathogenesis. Morphological picture of liver changes in

various types of hepatitis. Outcomes. Causes of death of patients.

- 4. Cirrhosis of the liver: etiology, pathogenesis, morphogenesis, modern classification.
- 5. Liver cancer. Macro and microscopic forms of cancer, complications, patterns of metastasis.

Questions for independent study:

- 1. Pancreatitis: acute, chronic.
- 2. Diseases of the biliary tract and gall bladder.
- 3. The significance of cirrhosis as a precancerous condition.

**Lesson 27.** Pathomorphology of kidney disease. The form of teaching is a practical lesson. Questions to the topic:

1. Classification of kidney disease. Definition of a concept. General pathomorphology.

2. Glomerulopathy. Glomerulonephritis. Classification. Etiopathogenesis. The mechanism of immune conflict. Clinical and anatomical forms.

3. Nephrotic syndrome. Classification. The mechanism of development. Morphological manifestations. Pyelonephritis. Amyloidosis.

4. Renal failure. Development mechanisms. Stages, their morphological picture. Extrarenal complications. Outcomes.

- 5. Urolithiasis. The formation of stones. Complications Outcomes.
- 6. Cancer of the kidney. Morphological types.

Questions for independent study:

- 1. Nephrotic syndrome: primary and secondary.
- 2. Paraproteinemic nephrosis.
- 3. Nephrosclerosis.

**Lesson 28.** Colloquium on topics 24-27. Form of teaching - work in small groups for the diagnosis of micropreparations. The solution of situational problems.

Micropreparations for diagnosis.

No. 3 NECROSIS OF KIDNAL CANCER

No. 4 Brown liver atrophy

No. 13 Muscat liver

No. 18 HEMORRHAGE TO THE KIDNEY

No. 41 Murky swelling of the epithelium of the convoluted tubules of the kidney

No. 48 LIVER AMILOIDOSIS

No. 49 KIDNEY AMYLIDOSIS

No. 60 FATTY DYSTROPHY OF THE LIVER

No. 62 DYSTROPHIC DISEASEMENT IN KIDNEY TUBERCULOSIS

No. 95 MULTI-CHAMBER LIVER ECHINOCOCCOSIS

No. 100 Squamous Cellulose Cancer

No. 107 LENGTH ADENOCARCINOMA

No. 111 METASTASIS OF CANCER IN THE LIVER

No. 120A WILLIS TUMOR

No. 146 PRIMARY-CRUNCHED KIDNEY

No. 189 LIVER TUBERCULOSIS

No. 192 TUBERCULOSIS INTESTINAL

No. 196 STOMACH ULCER



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### No. 198 FLEGMON OF THE WORM-BROWN No. 200 CHRONIC APPENDICIT No. 214 Purulent cholangitis (hepatitis) No. 215 CIRROSIS OF THE LIVER

No. 232 NECROTIC ULCER UTERITIS

**Lesson 29.** Diseases of the endocrine glands. The form of teaching is a practical lesson. Questions to the topic:

1. Diseases of the pituitary gland. Classification. The main clinical and morphological manifestations.

2. Diseases of the adrenal glands. Complications Outcomes.

3. Pathology of the thyroid gland. Classification of goiter. Development mechanisms. Morphology. Outcomes.

4. Parathyroid osteodystrophy. Hypoparathyroidism. Features of manifestation.

5. Diabetes mellitus. Etiopathogenesis. Morphological manifestations. Complications Causes of death.

Questions for independent study:

1. Pathology of the hypothalamus. Hypothalamic syndrome.

2. Tumors of the endocrine glands.

**Lesson 30.** Pathomorphology of genital diseases. Pathology of pregnancy. The form of teaching is a practical lesson.

Questions to the topic:

1. Dyshormonal and inflammatory diseases of the female genital organs and mammary gland. Breast dysplasia. Endometritis.

- 2. Tumors of the female genital organs and mammary gland. Classification. Metastasis.
- 3. Diseases of pregnancy. Complications Outcomes.
- 4. Dyshormonal diseases of the male genital organs, prostatic hypertrophy,
- 5. Tumors of the male genital organs, prostate cancer, testicular cancer.

Questions for independent study:

1. Pathology of the afterbirth. Malformations of the placenta.

2. Birth injury. Perinatal pathology.

**Lesson 31.** Viral infections. AIDS. The form of teaching is a practical lesson. Questions to the topic:

1. Acute respiratory viral infections (ARVI), classification, factors determining the incidence.

Morphology. Outcomes with influenza, parainfluenza. adenovirus infection.

2. Measles. Etiopathogenesis. Features of morphology. Complications Outcomes.

3. AIDS (acquired immunodeficiency syndrome). Etiopathogenesis. Periods of flow. Morphology.

Questions for independent study:

1. Rickettsioses. Definition of a concept. Etiopathogenesis. Morphology of typhus. Complications.

Lesson 32. Bacterial airborne infections (diphtheria, scarlet fever, meningococcal infection). The



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form of teaching is a practical lesson.

Questions to the topic:

- 1. General characteristics of a bacterial airborne infection.
- 2. Diphtheria. Scarlet fever. Etiopathogenesis. Morphological picture. Complications

3. Meningococcal infection. Etiology. Pathogenesis. Morphological picture. Complications. Outcomes.

- 4. Dysentery. Etiopathogenesis. Stages of morphogenesis. Diagnostics.
- 5. Typhoid fever. Etiology. Pathogenesis. Morphological picture.
- 6. Cholera. Epidemiology and pathogenesis. Morphology. Complications Causes of death.

Questions for independent study:

- 1. Whooping cough. Etiology. Pathogenesis. Morphological picture. complications.
- 2. Amoebiasis. Etiology. Pathogenesis. Morphological picture. complications.
- 3. Intestinal coli infection. Pathogenesis. Morphological picture. complications.

Lesson 33. Tuberculosis. The form of the exercise is a practical lesson.

Questions to the topic:

- 1. Tuberculosis. Etiology. Pathogenesis. General morphology. Classification.
- 2. Primary tuberculosis complex, PTC variants, course, healing. Morphological signs.

3. Hematogenous tuberculosis. Routes of distribution, classification. Morphological signs. Localization of tuberculosis foci.

4. Secondary tuberculosis. Clinical and anatomical signs. Pathomorphosis. Complications Outcomes.

Questions for independent study:

- 1. Drug pathomorphism of tuberculosis.
- 2. Extrapulmonary forms of tuberculosis.

Lesson 34. Sepsis. The form of the exercise is a practical lesson.

Questions to the topic:

1. Sepsis. Definition of a concept. Distinctive (from infection) symptoms. Etiopathogenesis.

Classification. General and local manifestations.

2. Septicemia. Local and general changes.

- 3. Septicopyemia. Clinical and morphological manifestations. Complications Causes of death.
- 4. Chroniosepsis. Features of the clinical anatomical picture. Morphological manifestations.

Questions for independent study. 1. Septic bacterial endocarditis.

### Lesson 35.

Colloquium on topics 29-34. The form of work is work in small groups for the diagnosis of micropreparations. The solution of situational problems.

Micropreparations for diagnosis.

No. 239 CHOLERE Enteritis

No. 246 GRANULEMA OF TYPE TYPE IN THE BRAIN

No. 251 EMBOLIC Pustules in the brain

No. 252 EMBOLIC Pustules in the kidney



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No. 254 EMBOLIC Pustules in the HEART No. 259 MALARIUM MELANOSIS OF THE SPLEEN No. 261 SEROUS-HEMORRHAGIC Meningitis No. 265 DIPHTERIA MYOCARDITIS No. 269 ULCEROUS-NECROTIC TRACHEITIS No. 296 ENDOCERVITIS No. 297 ENDOMETRITIS

### 7. LABORATORY CLASSES

- this type of work is not provided for by the thematic plan.

### 8. SUBJECTS OF COURSE PAPERS, TESTS, ESSAYS

- this type of work is not provided for by the thematic plan.

### 9. QUESTIONS FOR EXAM ON DISCIPLINE «PATHOLOGICAL ANATOMY»

1. Pathological anatomy. Content, purpose, objectives of the subject. Connection with other related disciplines.

2. History of the development of pathological anatomy in Russia and foreign countries.

3. Methods of pathological anatomy. Autopsy of the dead as one of the methods of studying the essence of diseases, clinical anatomical analysis. Investigations of autopsy materials, biopsies and surgical materials, their significance for intravital and postnatal recognition and dynamic study of diseases.

4. Damage. The nature, causes, mechanisms and types of damage.

5. Pathology of protein metabolism.

6. General death. Classification. Posthumous changes, developmental mechanisms. The concept of resuscitation.

7. Local death. (necrosis, necrosis), main types, causes of development, macro and microscopic signs.

8. Gangrene. Definition of a concept. Types of gangrene, characteristic, outcomes.

9. Heart attack, as a form of necrosis. Classification. Types of heart attacks in different organs. The dependence of a heart attack on developmental conditions. Outcomes. Dependence of heart attack outcomes.

10. Venous congestion. General and local. The consequences of venous plethora. Morphological manifestations.

11. Lymphostasis. Causes. Outcomes.

12. Arterial hyperemia. Reasons, types, outcomes. Morphology of metabolic disorders in hyperemia.

13. Staz. Causes of development, morphology, outcomes.

14. Bleeding. Concept. Kinds. causes, morphology. Outcomes.

15. Thrombosis. Reasons, thrombosis mechanism, thrombosis factors.

16. Types of blood clots. Subsequent changes in blood clots. The value of thrombosis. Outcomes of blood clots.

17. ICE - a syndrome. Causes, stages of development, outcomes.

18. Embolism. The laws of motion of dense emboli. Types of emboli.

19. Types of embolism, causes, outcomes. Value.

20. Dystrophy. General mechanisms of occurrence. causes of dystrophic processes. Classification. Histochemical methods for the study of dystrophic processes.



21. Types of protein dystrophy. Macro - and microscopic manifestations. Outcomes.

22. Horny dystrophy. Causes, morphology, outcomes, cause of transition to cancer.

23. Fatty degeneration. Reasons, morphogenesis, classification. Violation of fat content in tissues. Outcomes.

24. Carbohydrate dystrophy. Mucous dystrophy. Causes, morphology, outcomes. Age features.

25. Extracellular dysproteinoses. Classification. Causes, morphology, outcomes. Hyalinosis, causes, options.

26. Mucoid and fibrinoid swelling. Causes, morphology, outcomes.

27. Hyalinosis. Classification, types of hyalycosis for a reason. Morphology. Outcomes.

28. Amyloidosis. Stages and theories of the formation of amyloidosis. Causes, morphology, outcomes.

29. Stromal vascular fatty degeneration. General and local fatty degeneration. Causes, morphology, outcomes.

30. Impaired carbohydrate metabolism (extracellular dystrophy). Reasons, morphology. Outcomes. Features of impaired carbohydrate metabolism depending on age. The accumulation of glycogen, pathomorphosis.

31. Exogenous and endogenous pigmentation. Classification. Causes, manifestations, outcomes.

32. Hemoglobinogenic pigments. Hemosiderosis, hemomelanosis. Causes, morphology, outcomes.

33. Disorders of the exchange of bile pigments. Types of jaundice. Reasons, morphology. Mechanisms of jaundice formation. Differential diagnosis of the morphological picture of jaundice in the liver.

34. Lipidogenic pigments. Causes of metabolic disorders, morphology.

35. Violation of the exchange of nucleoproteins. Urolithiasis disease. The mechanisms of deposition of uric acid stones, complications, outcomes.

36. Lime dystrophy. Classification. Mechanisms of calcium metabolism disorders, outcomes.

37. The formation of stones (stones). Mechanisms, theories of education, types of stones. Complications, outcomes.

38. The biological nature of inflammation. Causes of development, morphology and pathogenesis of the stages of inflammation.

39. Classification of inflammation. Exudative inflammation, causes of exudation, manifestations. Outcomes.

40. Fibrinous inflammation. Species, localization, morphology, outcomes.

41. Purulent inflammation. Kinds. Causes of development, morphology, outcomes.

42. Productive inflammation. Classification. Causes. Morphology. General patterns of inflammation.

43. Catarrhal inflammation, localization, species, morphology, outcomes.

44. Granuloma. Concept Types of granulomas, structure.

45. Tuberculous tubercle, developmental phases, types of tubercles, outcomes.

46. Productive inflammation around animal parasites (echinococcosis, cysticercosis, trichinosis). Morphology, complications, outcomes.

47. The importance of the immunological state of the body for inflammation. Inflammation and allergies. Morphology of the reactions of GNT and HRT.

48. Atrophy. Classification, morphological features. Brown atrophy, senile atrophy.

49. Hypertrophy, causes of development, outcomes. Species, morphological characters. False hypertrophy.



50. Metaplasia, hyperplasia, dysplasia. Concept. Value. Outcomes. The mechanisms of cancer.

51. Wound healing. Stage of healing, morphological characteristics. Outcomes.

52. Regeneration. The overall value of regeneration. Forms of regeneration. types of regulation, sources of the process.

53. Classification of regeneration. Bone tissue regeneration.

54. Regeneration of blood, bone marrow, blood vessels.

55. Regeneration of epithelial and muscle tissue.

56. Tumors. The concept of tumor growth. Theories of Origin. Classification. The importance of biopsy in oncology.

57. Features of the tumor cell. Signs of atypism. Benign and malignant. Criteria for malignancy

58. Metastasis, types, causes, stages of development. Relapse, causes of relapse, types. Metastatic cascade.

59. Benign tumors from the epithelium. Classification, localization, outcomes.

60. Malignant tumors from the epithelium (cancers from the integumentary and glandular epithelium). The main signs of a malignant tumor.

61. Benign tumors from connective tissue. Signs of good quality.

62. Malignant tumors from connective tissue. Signs of malignancy, metastatic pathways.

63. Tumors from muscle tissue. Classification, growth, outcomes, metastatic pathways.

64. Opyxols from melanin-forming tissue. Classification, growth, outcome.

65. Tumors of their nerve tissue. Classification, growth, outcome.

66. Tumors from the vessels. Classification, growth, outcome.

67. Teratomas and teratoblastomas. Features of the development of these tumors. Signs

68. Endocarditis. The concept, causes, types of endocarditis. Fibroplastic endocarditis. Morphology, outcomes.

69. Myocarditis. Concept. Ideopathic myocarditis. Causes, species, morphology, outcomes.

70. Acquired heart defects. Causes, pathogenesis, types of defects, outcomes.

71. Cardiosclerosis. Species, morphology, outcomes.

72. Atherosclerosis, theories of atherosclerosis, pathogenesis, Clinical and morphological forms, complications.

73. Stages of atherosclerosis morphogenesis. Reasons for the development of stages.

74. Hypertension. Causes, pathogenesis. Types, stages of hypertension, morphology, outcomes.

75. Clinical and morphological forms of hypertension. Complications Causes of death.

76. Coronary heart disease. Causes, pathogenesis, forms, morphology. Ischemic myocardial dystrophy. Acute heart failure.

77. Myocardial infarction. Concept, causes of development. Classification, morphology, complications, causes of death.

78. Cardiomyopathy. Types, causes, complications.

79. Cerebrovascular disease. Etiology, pathogenesis, classification, pathology, outcomes.

80. The concept of rheumatic diseases, immunomorphology of disorganization of connective tissue. General patterns of development of these diseases.

81. Rheumatism. Stages of development of rheumatism. Morphological manifestations. Clinical and anatomical forms.

82. Rheumatic changes in the heart and blood vessels, complications, outcomes.

83. Croupous pneumonia. Etiology, pathogenesis, stages of development, composition of exudate, pathology. Complications, causes of death.

84. Bronchopneumonia. Causes, pathogenesis, pathology, complications.

85. Interstitial pneumonia, etiology, pathological anatomy.

86. Chronic non-specific lung diseases. Classification, reasons. Chronic bronchitis, bronchiectasis.

87. Emphysema. Causes, pathogenesis, pathological anatomy, outcomes. Pulmonary heart.

88. Bronchial asthma. Causes, pathogenesis, pathological anatomy, outcomes

89. Chronic pneumonia. Causes, pathology, outcomes. Pulmonary heart, developmental mechanism.

90. Lung cancer. Classification, features of the course, pathological anatomy of metastases, three groups of complications.

91. Pneumoconiosis. Concept. Causes. Pathogenesis. Silicosis. Pathanatomy. Outcomes.

92. Acute gastritis. Etiology, pathogenesis. Classification. Pathanatomy. Complications.

93. Chronic gastritis. Classification. Causes, the role of pH - infection, development mechanisms. Morphological picture. Signs of gastritis activity. The role of gastrobiopsy in clarifying the diagnosis. Precancerous conditions of the stomach.

94. Gastric ulcer and 12 tons of duodenal ulcer. Etiology, pathogenesis. Morphological picture during exacerbation and remission. Complications Outcomes.

95. Cancer of the stomach. Spread. Clinical and morphological classification Histological forms. Complications Metastasis.

96. Enteritis. Classification. Etiology, pathogenesis. Morphological manifestations. Outcomes. Complications

97. Colitis. Classification. Etiology, pathogenesis. Complications Outcomes.

98. Nonspecific ulcerative colitis. Etiology, pathogenesis. Morphological picture. Complications Pathomorphism of ulcerative colitis.

99. Crohn's disease. Etiology. Pathogenesis. Morphological picture. Complications Outcomes.

100. Appendicitis. Etiology, pathogenesis, Clinical and morphological forms, complications.

101. Intestinal tumors. Classification. Spread. Clinical and morphological forms. Metastasis, complications, outcomes, causes of metastases and relapses.

102. Toxic dystrophy of the liver, as a variant of hepatosis. Etiology, pathogenesis, morphology. Complications, outcomes.

103. Fatty hepatosis (liver steatosis). Etiology, pathogenesis, morphology, complications.

104. Hepatitis. Definition Classification. The role of puncture biopsy in the diagnosis. Morphological picture of hepatitis. Signs of hepatitis activity.

105. Chronic hepatitis. Classification. Etiology. Pathogenesis. Clinical and morphological forms, their characteristics. Complications Outcomes.

106. Alcoholic hepatitis. Etiology, pathogenesis, pathanatomy, complications, outcomes.

107. Cirrhosis of the liver. Concept. Classification Etiology. Pathogenesis. Morphological signs of cirrhosis. Hepatic and extrahepatic changes. Complications Outcomes.

108. Viral hepatitis. Classification. Etiology. Pathogenesis. Clinical and morphological forms, their characteristics. Complications Outcomes.

109. Liver cancer. Etiology, pathogenesis. Primary and secondary cancer. Classification. Morphology, complications, metastases. The disease.

110. Diseases of the gallbladder. Etiology, pathogenesis. Morphological picture of cholecystitis. Complications Outcomes.

111. Glomerulopathy. Modern classification. Etiology and pathogenesis. The role of immune mechanisms. Morphological characteristics of different types of glomerulopathies.

112. Nephrotic syndrome. Concept. Classification. Forms (lipoid nephrosis, membranous nephropathy. Renal amyloidosis). Etiology, pathogenesis, morphology, outcomes.

113. Amyloidosis of the kidney. Etiology, pathogenesis, stages, pathology.

114. Acute renal failure. Etiology, classification of causes, pathogenesis. Morphological picture in different clinical stages. Complications of Outcomes.

115. Chronic tubulopathies. Myeloma, a gouty kidney. Morphology. Complications Outcomes.

116. Kidney stone disease. Etiology, pathogenesis. Pathanatomy. The mechanism of the formation of stones. Complications of Outcomes.

117. Nephrosclerosis as the basis of CHP. Chronic renal failure. Etiology, pathogenesis. Pathanatomy, outcomes.

118. Pyelonephritis. Etiology, pathogenesis, morphology, complications, outcomes.



F-Educational plan of the dicipline

119. Kidney cancer. Types of kidney tumors. Metastases, complications, outcomes

120. Hypertrophy of the prostate gland. Forms. Morphological characteristics. Complications Prostate cancer, causes of prostate cancer.

121. Glandular hyperplasia of the uterine mucosa. Endocervicosis, causes, morphological characteristics

122. Inflammatory diseases of the mammary gland and genitals. Etiology, pathogenesis. Morphology. Outcomes.

123. Breast cancer. Forms and histological types of cancer. Ways of metastasis, causes of complications.

124. Cancer of the uterus (neck and body). Height. Histological types. Metastases

125. Toxicosis of pregnancy. Classification. Causes of death. Ectopic pregnancy, its types.

127. Bubble drift. Causes, pathogenesis. Morphology, complications, outcomes.

128. Pathology of the afterbirth. Perinatal pathology.

129. Diseases of the thyroid gland. Classification. Clinical and morphological forms. Morphological features of a base disease.

130. Classification of diseases of the thyroid gland. Goiter Hoshimoto, Riedel's goiter. Morphology, outcomes.

131. Thyroid tumors. Types of tumors. Evaluation criteria for malignant thyroid oxyxole.

132. Diseases of the parathyroid glands. Classification. Non-ferrous and glandular manifestations of pathology.

133. Diabetes mellitus. Etiology, pathogenesis. Types of diabetic angiopathy, diabetic glomerulosclerosis. Coma for diabetes.

134. Diseases of the pituitary gland: acromegaly, pituitary dwarfism, cerebral pituitary cachexia, Itsenko-Cushing's disease. Diabetes insipidus. Etiology, pathogenesis, main manifestations.

135. Adrenal gland disease. Adrenal cortical and adrenal cerebral syndrome. Addison's disease. Reasons, morphology.

136. General morphology of the infectious process. Local and general changes. Immunomorphological infections. Classification of infectious diseases. Pathogen. Entrance gate. Pathomorphism of an infectious disease.

137. Acute respiratory viral infections. Influenza, forms. Etiology, pathogenesis, morphology, complications. Causes of death.

138. AIDS. Etiology, pathogenesis, epidemiology. Pathanatomy, stages of development, complications, causes of death.

139. Rickettsioses. Features of infection, classification. Epidemiological typhus. Etiology, pathogenesis, pathanatomy, outcomes.

140. Typhoid fever. Etiology, pathogenesis, pathanatomy. Local and general changes at different stages of the development of the disease. Complications

141. Dysentery, etiology, pathogenesis, pathology, complications, causes of death.

142. Cholera. Etiology, pathogenesis. pathanatomy. complications, outcomes.

143. Amoebiasis. Etiology, pathogenesis, pathanatomy, complications.

144. Scarlet fever. Etiology, pathogenesis, pathanatomy. General and local changes. Complications The story.

145. Measles. Etiology, pathogenesis, pathanatomy, complications, outcomes.

146. Meningococcal infection. Etiology, pathogenesis, morphological forms, pathological anatomy, outcomes.

147. Tuberculosis. etiology, pathogenesis. Classification. Primary tuberculosis. Variants of the

F-Educational plan of the dicipline

course. Pathanatomy, complications.

- 148. Hematogenous tuberculosis. Etiology, pathogenesis, pathanatomy.
- 149. Secondary tuberculosis, etiology, pathogenesis, pathanatomy, manifestations.
- 150. Sepsis. Etiology, pathogenesis. Classification. General and local changes.
- 151. Clinical and morphological forms of sepsis. Pathanatomy (septicemia, septicopyemia).
- 152. Septic endocarditis. Etiology, pathogenesis. Classification, pathology. Complications
- 153. Leukemia, Classification. Etiology, pathogenesis, pathanatomy, outcomes.
- 154. Acute and chronic lymphocytic leukemia. Pathanatomy, complications, outcomes.
- 155. Acute and chronic myeloid leukemia. Pathanatomy, complications, outcomes.
- 156. Lymphomas. Classification. Etiology, pagogenesis. Modern classification.
- 157. Lymphogranulomatosis (Hodgkin's disease). Clinical and morphological options, pathology, outcomes. The main criteria for morphological diagnosis.

List of micropreparations by pathological anatomy.

1. NO. 1 REGENERATIVE MYOCARDIAL HYPERTROPHY

- 2. NO. 3 NECROSIS OF THE KIDNAL CANCER
- **3.** NO. 4A BROWN LIVER ATROPHY
- 4. NO. 6A GOITER IS HASHIMOTO

5. NO. 7 NECROSIS OF PLACENTA WITH DYSTROPHIC SIMULATION OF VOR-SIN

6. NO. 13 MUSCULAR LIVER

7. NO. 14 HEMORRHAGIC INFARCTION OF THE EASY

8. NO. 18 KIDNEY HEMORRHAGE

9. NO. 21 IRON HYPERPLASIA ENDOMETRY

**10.** NO. 24 BROWN LUNG INDUCTION

11. NO. 29 ORGANIZED CLOSE IN VIENNA

12. NO. 33 COLLOIDAL GOITER

**13.** NO. 35 FAT EMBOLASIS OF LUNG VESSELS

14. NO. 36 OBTURING FRESH RED CLOSE IN VIENNA

**15.** NO. 39 HEMORRHAGE IN THE BRAIN

16. NO. 41 MURRID SWELLING OF THE EPITHELIUM OF THE KINDERED KIDNAL CANAL

17. NO. 44 TOTAL SPLEEN

18. NO. 48 LIVER AMYLOIDOSIS

**19.** NO. 49 KIDNEY AMYLOIDOSIS

**20.** NO. 60 FATTY DYSTROPHY OF THE LIVER

**21.** NO. 61 OBESITY OF MYOCARDIUM

22. NO. 62 DYSTROPHIC DISEASEMENT IN KIDNEY TUBERCULOSIS

23. NO. 74 ANTHRACOSIS OF BRONCHIAL NODE

**24.** NO. 84 PURULENT MENINGITIS

**25.** NO. 93 THE GRANULEMA IN THE EASY AT ACTINYMICOSIS

26. NO. 95 MULTI-CHAMBER LIVER ECHINOCOCCOSIS

27. NO. 100 SQUAMOUS CELLULOCARCINOMA CARCINOMA

28. NO. 107 BACCULAR ADENOCARCINOMA

29. NO. 109 METASTASIS OF CANCER IN THE HEART

**30.** NO. 111 METASTASIS OF CANCER IN THE LIVER

**31.** NO. 114 CHONDROSARCOMA

32. NO. 115 LIPOSARKOMA

33. NO. 116 POLYMORPH CELL SARCOM

**34.** NO. 120A WILLIS TUMOR





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<b>35.</b> NO. 137 BREAST FIBROADENOMA
<b>36.</b> NO. 141 SKIN HEMANGIOMA
<b>37.</b> NO. 146 PRIMARY-CRUNCHED KIDNEY
<b>38.</b> NO. 147 MYOCARDIAL INFARCTION
<b>39.</b> NO. 148 ATHEROSCLEROTIC PLAQUE OF THE AORTA WITH ULCERATION
40. NO. 149 ATHEROSCLEROSIS OF THE CORONARY ARTERY
<b>41.</b> NO. 158 RETURNED BEARD-ENDOCARDIUM
42. NO. 159 RHEUMATIC CARDIOSCLEROSIS
<b>43.</b> NO. 165 EMPHISEMA OF THE LUNG
44. NO. 166 CHRONIC PNEUMONIA
<b>45.</b> NO. 167 BRONCHOPNEUMONIA
<b>46.</b> NO. 169 CARNIFICATION OF EASY
47. NO. 171 LARGE PNEUMONIA (GRAY FORM)
<b>48.</b> NO. 172 CANCER OF THE BRONCH
<b>49.</b> NO. 175 LARGE PNEUMONIA (RED FORM)
<b>50.</b> NO. 187 MILLAR TUBERCULOSIS OF THE LUNGS
<b>51.</b> NO. 189 LIVER TUBERCULOSIS
<b>52.</b> NO. 192 INTESTINAL TUBERCULOSIS
<b>53.</b> NO. 196 ULCER OF THE STOMACH
<b>54.</b> NO. 198 OF THE WOOLFILM FLEGMON
55. NO. 200 CHRONIC APPENDICIT
56. NO. 214 PURULENT CHOLANGITIS (HEPATITIS)
<b>57.</b> NO. 215 CIRROSIS OF THE LIVER
58. NO. 232 NECROTIC ULCER UTERITIS
<b>59.</b> NO. 239 CHOLERE ENTERITIS
60. NO. 246 GRANULEMA OF TYPE TYPE IN THE BRAIN

### 10. SELF-STUDY WORK OF STUDENTS

Full-time form of education.

Name of the section / subject	Types of SSW	Total num- ber of hours	Current control
Section 1. General pa	thology		
1. The subject and objectives of the dis- cipline "pathological anatomy". Cell pathology. Autopsy	Study material training, solution of situational problems, work with micropreparations	2	Checking microprepara- tions, questions on the exam
2. Necrosis. Heart attack	Study material training, solution of situational problems, work with micropreparations	2	Checking microprepara- tions, questions on the exam
3. Compensatory processes	Study material training, solution of situational problems, work with micropreparations	2	Checking microprepara- tions, questions on the exam
4. Circulatory disturbance. Thromboembolic	Study material training, solution of situational problems, work with micropreparations	2	Checking microprepara- tions, questions on the exam



#### F-Educational plan of the dicipline

syndrome.			
5. Colloquium on	Study material training, solution of	2	Checking microprepara-
topics 1-4	situational problems, work with		tions, questions on the
	micropreparations		exam
6. Dystrophy.	Study material training, solution of	2	Checking microprepara-
Parenchymal	situational problems, work with	2	tions, questions on the
dystrophies.	micropreparations		exam
7. Stromal vascular	Study material training, solution of	2	Checking microprepara-
dystrophy.	situational problems, work with	2	tions, questions on the
uysuopny.	micropreparations		· •
9 Mixed dustrophy	* *	2	exam Chaoking micropropero
8. Mixed dystrophy.	Study material training, solution of	L	Checking microprepara-
	situational problems, work with		tions, questions on the
0 0 11 '	micropreparations	2	exam
9. Colloquium on	Study material training, solution of	2	Checking microprepara-
topics 6-8	situational problems, work with		tions, questions on the
10 7 7 1	micropreparations	-	exam
10. Inflammation.	Study material training, solution of	2	Checking microprepara-
	situational problems, work with		tions, questions on the
	micropreparations		exam
11. Productive	Study material training, solution of	2	Checking microprepara-
inflammation.	situational problems, work with		tions, questions on the
	micropreparations		exam
12. Immunological	Study material training, solution of	2	Checking microprepara-
processes.	situational problems, work with		tions, questions on the
	micropreparations		exam
13. Tumors.	Study material training, solution of	2	Checking microprepara-
Morphogenesis and	situational problems, work with		tions, questions on the
histogenesis.	micropreparations		exam
14. Epithelial tumors.	Study material training, solution of	2	Checking microprepara-
-	situational problems, work with		tions, questions on the
	micropreparations		exam
15. Mesenchymal	Study material training, solution of	2	Checking microprepara-
tumors. Tumors of	situational problems, work with		tions, questions on the
the nervous tissue.	micropreparations		exam
16. Hemoblastosis.	Study material training, solution of	2	Checking microprepara-
	situational problems, work with	-	tions, questions on the
	micropreparations		exam
17. Colloquium on	Study material training, solution of	2	Checking microprepara-
topics 10-16	situational problems, work with	2	tions, questions on the
topics 10-10	micropreparations		exam
19 Diagnosis of	Study material training, solution of	2	
18. Diagnosis of		L	Checking microprepara-
drugs, autopsy.	situational problems, work with		tions, questions on the
	micropreparations		exam
Section 2. Private pat		1	
19. Hypertension.	Study material training, solution of	1	Checking microprepara-
Atherosclerosis	situational problems, work with		tions, questions on the
	micropreparations	-	exam
20. Pathomorphology	Study material training, solution of	1	Checking microprepara-



### F-Educational plan of the dicipline

of heart disease.	situational problems, work with		tions, questions on the
	micropreparations		exam
21. Rheumatic	Study material training, solution of	1	Checking microprepara-
diseases.	situational problems, work with	_	tions, questions on the
	micropreparations		exam
22. Pathomorphology	Study material training, solution of	1	Checking microprepara-
of lung diseases.	situational problems, work with		tions, questions on the
	micropreparations		exam
23. Colloquium on	Study material training, solution of	2	Checking microprepara-
topics 19-22	situational problems, work with		tions, questions on the
	micropreparations		exam
24. Pathomorphology	Study material training, solution of	1	Checking microprepara-
of diseases of the	situational problems, work with		tions, questions on the
stomach	micropreparations		exam
25. Pathomorphology	Study material training, solution of	1	Checking microprepara-
of intestinal diseases.	situational problems, work with		tions, questions on the
	micropreparations		exam
26. Pathomorphology	Study material training, solution of	1	Checking microprepara-
of liver diseases.	situational problems, work with		tions, questions on the
	micropreparations		exam
27. Pathomorphology	Study material training, solution of	1	Checking microprepara-
of kidney disease.	situational problems, work with		tions, questions on the
5	micropreparations		exam
28. Colloquium on	Study material training, solution of	2	Checking microprepara-
topics 24-27	situational problems, work with		tions, questions on the
1	micropreparations		exam
29. Pathomorphology	Study material training, solution of	1	Checking microprepara-
of diseases of the en-	situational problems, work with		tions, questions on the
docrine system.	micropreparations		exam
30. Pathomorphology	Study material training, solution of	1	Checking microprepara-
of genital diseases.	situational problems, work with		tions, questions on the
-	micropreparations		exam
31. Viral infections.	Study material training, solution of	1	Checking microprepara-
AIDS.	situational problems, work with		tions, questions on the
	micropreparations		exam
32. Bacterial	Study material training, solution of	1	Checking microprepara-
infections	situational problems, work with		tions, questions on the
	micropreparations		exam
33. Tuberculosis.	Study material training, solution of	2	Checking microprepara-
	situational problems, work with		tions, questions on the
	micropreparations		exam
34. Sepsis.	Study material training, solution of	2	Checking microprepara-
•	situational problems, work with		tions, questions on the
	micropreparations		exam
35. Colloquium on	Study material training, solution of	2	Checking microprepara-
	· ·		
topics 29-34.	situational problems, work with		tions, questions on the



# 11. EDUCATIONAL-METHODICAL AND INFORMATION SUPPORT OF DISCIPLINE

### List of recommended literature:

### Main literature:

- Clinical pathophysiology : concise lectures, tests, cases : учебное пособие для студентов учреждений высшего образования / П. Ф. Литвицкий, С. В. Пирожков, Е. Б. Тезиков. 3-е изд., перераб. и доп. Москва : ГЭОТАР-Медиа, 2019. 432 с. 432 с. ISBN 978-5-9704-4992-9. Текст : электронный // ЭБС "Консультант студента" : [сайт]. URL : https://www.studentlibrary.ru/book/ISBN9785970449929.html (дата обращения: 08.04.2021). -
- Forensic Medicine. Textbook / Pigolkin Yu. I., Dubrovin I. A. Москва : ГЭОТАР-Медиа, 2019. - ISBN 978-5-9704-5138-0. - Текст : электронный // ЭБС "Консультант студента" : [сайт]. - URL : https://www.studentlibrary.ru/book/ISBN9785970451380.html (дата обращения: 08.04.2021).

### **Additional literature:**

- Khaitov, R. M. Immunology : textbook / Rakhim M. Khaitov. 2nd updated edition. -Moscow : GEOTAR-Media, 2021. - 272 с. - ISBN 978-5-9704-5861-7. - Текст : электронный // ЭБС "Консультант студента" : [сайт]. - URL : https://www.studentlibrary.ru/book/ISBN9785970458617.html (дата обращения: 08.04.2021).
- Yushchuk, N. D. Infectious diseases : textbook / Yushchuk N. D., Vengerov Yu. Ya. - Москва : ГЭОТАР-Медиа, 2020. - 464 с. - ISBN 978-5-9704-5504-3. - Текст : электронный // ЭБС "Консультант студента" : [сайт]. - URL : https://www.studentlibrary.ru/book/ISBN9785970455043.html (дата обращения: 08.04.2021).

### **Educational:**

 Слесарева Е. В. Методические рекомендации для организации самостоятельной работы по дисциплине «Клиническая патологическая анатомия» для специальностей 31.05.01 – Лечебное дело, 31.05.02 – Педиатрия, в том числе специальности 31.05.01 «Лечебное дело» с частичным освоением программы на английском языке / Е. В. Слесарева, К. С. Колосовских; УлГУ, ИМЭиФК, Мед. фак. - Ульяновск : УлГУ, 2019. -Загл. с экрана; Неопубликованный ресурс. - Электрон. текстовые дан. (1 файл : 362 КБ). -Текст : электронный.-<u>http://lib.ulsu.ru/MegaPro/Download/MObject/4808</u>

**AGREED:** Centru Robo 1 mag 1.1. DUD alle mente Position of scientific library employee



F-Educational plan of the dicipline

### Professional databases, information and reference systems:

### **1. Electronic library systems:**

- IPRbooks: electronic library system: website / group of companies IPR Media. -Saratov, [2021]. - URL: http://www.iprbookshop.ru. - Access mode: for registered. users. - Text: electronic.
- YURAYT: electronic library system: website / LLC Electronic publishing house URAYT. - Moscow, [2021]. - URL: https://www.biblio-online.ru. - Access mode: for registered. users. - Text: electronic.
- 1.3. Student advisor: electronic library system: website / Polytekhresurs LLC. Moscow,
  [2021]. URL: http://www.studentlibrary.ru/catalogue/switch\_kit/x2019128.html. Access mode: for registered. users. Text: electronic.
- 1.4. Lan: electronic library system: website / EBS Lan. St. Petersburg, [2021]. URL: https://e.lanbook.com. Access mode: for registered. users. Text: electronic.
- 1.5. Znanium.com: electronic library system: website / Znanium LLC. Moscow, [2021].
   URL: http://znanium.com. Access mode: for registered. users. Text: electronic.
- 1.6. Clinical Collection: collection for medical universities, clinics, medical libraries // EBSCOhost: [portal]. URL: http://web.a.ebscohost.com/ehost/search/advanced?vid=1&sid=e3ddfb99-a1a7-46dd-a6eb-2185f3e0876a%40sessionmgr4008. Access mode: for authorization. users. Text: electronic.
- **2. ConsultantPlus** [Electronic resource]: reference legal system. / LLC "Consultant Plus" Electron. Dan. Moscow: ConsultantPlus, [2021].

### 3. Databases of periodicals:

- 3.1. Database of periodicals: electronic journals / LLC IVIS. Moscow, [2021]. URL: https://dlib.eastview.com/browse/udb/12. Access mode: for authorization. users. Text: electronic.
- 3.2. eLIBRARY.RU: scientific electronic library: site / Scientific Electronic Library LLC. - Moscow, [2021]. - URL: http://elibrary.ru. - Access mode: for authorization. users. - Text: electronic
- 3.3. "Grebennikon": electronic library / ID Grebennikov. Moscow, [2021]. URL: https://id2.action-media.ru/Personal/Products. - Access mode: for authorization. users. - Text: electronic.
- 4. National Electronic Library: Electronic Library: Federal State Information System: website / Ministry of Culture of the Russian Federation; RSL. - Moscow, [2021]. - URL: https: //neb.rf. - Access mode: for users of the scientific library. - Text: electronic.
- 5. SMART Imagebase // EBSCOhost: [portal]. URL: https://ebsco.smartimagebase.com/?TOKEN=EBSCO-1a2ff8c55aa76d8229047223a7d6dc9c&custid=s6895741. - Access mode: for authorization. users. - Image: electronic.

### 6. Federal information and educational portals:

- 6.1. Single window of access to educational resources: federal portal / founder of FGAOU DPO TsRGOP and IT. URL: http://window.edu.ru/. Text: electronic.
- 6.2. Russian education: federal portal / founder of FGAOU DPO TsRGOP and IT. URL: http://www.edu.ru. Text: electronic.
- 7. Educational resources of UISU:



- F-Educational plan of the dicipline
- 7.1. Electronic library of UISU: module ABIS Mega-PRO / LLC "Data Express". URL: http://lib.ulsu.ru/MegaPro/Web. - Access mode: for users of the scientific library. - Text: electronic.

### CONTRA

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Position of information tech		ployee	full name	signature	date	

### 12. EDUCATIONAL AND METHODICAL AND INFORMATION SUPPORT OF DIS-CIPLINE

Classrooms for practical training, for ongoing monitoring and intermediate certification are equipped with specialized furniture, a training board, a plasma panel for demonstrating microphotographs, and there are also:

- macrodrugs 64
- micropreparations 800
- microscopes 18
- digital micro-video camera

- cadaveric material (at autopsy) - sectional hall of the pathoanatomical department of the hospital.

The lecture halls are equipped with multimedia equipment for presenting information to a large audience.

The rooms for independent work are equipped with computer equipment with the possibility of connecting to the Internet and providing access to the electronic informational and educational environment, the electronic library system.

### **13. SPECIAL CONDITIONS FOR STUDENTS WITH DISABILITIES**

If necessary, students from among persons with disabilities (at the request of the student) may be offered one of the following options for perceiving information, taking into account their individual psychophysical characteristics:

- for persons with visual impairment: in print in large print; in the form of an electronic document; in the form of an audio file (translation of training materials into audio format); in printed form in Braille; individual consultations with the involvement of a translator; individual tasks and consultations:

- for persons with hearing impairment: in print; in the form of an electronic document; video materials with subtitles; individual consultations involving an interpreter; individual tasks and consultations:

- for persons with disorders of the musculoskeletal system: in print; in the form of an electronic document; in the form of an audio file; individual tasks and consultations.

If it is necessary to use partly distance educational technologies in the educational process, the organization of work with students with disabilities and disabled people is provided in the electronic information and educational environment, taking into account their individual psychophysical characteristics.

Developer\_

Head of Department \_\_\_\_\_ Slesareva E.V Position

Full name

Ministry of science and high education RF	
Ulyanovsk State University	
Faculty of Medicine named after Biktimirov T.Z., IMEiPC	



F-Educational plan of the dicipline

### LIST OF CHANGES of Educational plan of discipline « Pathological anatomy »

Nº	Content of the change or a link to the attached text of the	Full name of the head of the Department developing the disci- pline	Signature	Date
1	Introduction of changes to item A) Recommended Literature item 11 "Educational, methodological and information support of the discipline" with the design of Appendix 1		Cheus	30.08.22
2	Introduction of changes to item C) Professional databases, information and reference systems item 11 "Edu- cational, methodological and infor- mation support of the discipline" with the design of Appendix 2		Cleub	30.08.22



## Appendix 1

### 11. EDUCATIONAL-METHODICAL AND INFORMATION SUPPORT OF DISCIPLINE

### List of recommended literature:

### Main literature:

- 1. Clinical pathophysiology : concise lectures, tests, cases : учебное пособие для студентов учреждений высшего образования / П. Ф. Литвицкий, С. В. Пирожков, Е. Б. Тезиков. - 3е изд., перераб. и доп. - Москва : ГЭОТАР-Медиа, 2019. - 432 с. - 432 с. - ISBN 978-5-9704-4992-9. - Текст : электронный // ЭБС "Консультант студента" : [сайт]. - URL : <u>https://www.studentlibrary.ru/book/ISBN9785970449929.html</u>
- Samsonova I. V. Pathological Anatomy. Lecture Course. Part I. General Pathology = Патологическая анатомия. Курс лекций. Часть І. Общая патология / И. В. Самсонова. - 2е изд. перераб. и доп., курс лекций. - Витебск : ВГМУ, 2019. - 278 с. - ISBN 9789854669106. - Текст : электронный // ЭБС "Букап" : [сайт]. - URL : <u>https://www.booksup.ru/ru/book/pathological-anatomy-lecture-course-part-i-general-pathology-12138016/</u>
- 3. Samsonova I. V. Pathological anatomy. Lecture course. Part II. Systemic pathology = ПАТОЛОГИЧЕСКАЯ АНАТОМИЯ. Курс лекций. Часть II. Частная патология / I. V. Samsonova, V. A. Klopova. - Витебск : ВГМУ, 2020. - 493 с. - ISBN 9789854669113. -Текст : электронный // ЭБС "Букап" : [сайт]. - URL : <u>https://www.books-up.ru/ru/book/pathological-anatomy-lecture-course-part-ii-systemic-pathology-12138304/</u>

### **Additional literature:**

- Pulmonary problems (clinical, morphological and diagnostic aspects) : methodical recommendation to the practical classes on forensic medicine and radiology for the students of the faculty of general medicine / В. В. Ермилов, А. В. Смирнов, В. Б. Барканов и др. -Волгоград : ВолгГМУ, 2020. - 168 с. - Текст : электронный // ЭБС "Букап" : [сайт]. - URL : <u>https://www.books-up.ru/ru/book/pulmonary-problems-clinical-morphological-and-</u> diagnostic-aspects-12449948
- Шульга А. В. Pathological anatomy. Guidelines for practical classes = Патологическая анатомия. Руководство к практическим занятиям: учебное пособие для иностранных студентов учреждений высшего образования по специальностям «Лечебное дело», «Педиатрия» : textbook for foreign students of higher education institutions in the specialties / А. В. Шульга, М. Г. Зубрицкий. - Гродно : ГрГМУ, 2020. - 324 с. - ISBN 9789855955444.
   - Текст : электронный // ЭБС "Букап" : [сайт]. - URL : <u>https://www.booksup.ru/ru/book/pathological-anatomy-guidelines-for-practical-classes-11961787</u>
- Khaitov, R. M. Immunology : textbook / Rakhim M. Khaitov. 2nd updated edition. Moscow : GEOTAR-Media, 2021. 272 с. ISBN 978-5-9704-5861-7. Текст : электронный // ЭБС "Консультант студента" : [сайт]. URL : https://www.studentlibrary.ru/book/ISBN9785970458617.html
- 4. Yushchuk, N. D. Infectious diseases : textbook / Yushchuk N. D., Vengerov Yu. Ya. Москва : ГЭОТАР-Медиа, 2020. - 464 с. - ISBN 978-5-9704-5504-3. - Текст : электронный // ЭБС "Консультант студента" : [сайт]. - URL : https://www.studentlibrary.ru/book/ISBN9785970455043.html
  Educational:
- Sologub A. A. Guidelines for the organization of independent work of students in the discipline «Pathological anatomy» for the specialty 31.05.01 «General medicine» / A. A. Sologub, E. V. Slesareva; Ulyanovsk State University. - Ulyanovsk : UISU, 2022. - 34 p. -Неопубликованный ресурс; На англ. яз. - URL: http://lib.ulsu.ru/MegaPro/Download/MObject/11613.

### Agreed:

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### Appendix 2

### Professional databases, information and reference systems: Электронно-библиотечные системы:

1.1. Цифровой образовательный ресурс IPRsmart : электронно-библиотечная система : сайт / ООО Компания «Ай Пи Ар Медиа». - Саратов, [2022]. – URL: <u>http://www.iprbookshop.ru</u>. – Режим доступа: для зарегистрир. пользователей.

1.2. Образовательная платформа ЮРАЙТ : образовательный ресурс, электронная библиотека : сайт / ООО Электронное издательство ЮРАЙТ. – Москва, [2022]. - URL: https://urait.ru. – Режим доступа: для зарегистрир. пользователей. - Текст : электронный.

1.3. База данных «Электронная библиотека технического ВУЗа (ЭБС «Консультант студента») : электронно-библиотечная система : сайт / ООО Политехресурс. – Москва, [2022]. – URL: <u>https://www.studentlibrary.ru/cgi-bin/mb4x</u>. – Режим доступа: для зарегистрир. пользователей. – Текст : электронный.

1.4. Консультант врача. Электронная медицинская библиотека : база данных : сайт / ООО Высшая школа организации и управления здравоохранением-Комплексный медицинский консалтинг. – Москва, [2022]. – URL: <u>https://www.rosmedlib.ru</u>. – Режим доступа: для зарегистрир. пользователей. – Текст : электронный.

1.5. Большая медицинская библиотека : электронно-библиотечная система : сайт / ООО Букап. – Томск, [2022]. – URL: <u>https://www.books-up.ru/ru/library/</u>. – Режим доступа: для зарегистрир. пользователей. – Текст : электронный.

1.6. ЭБС Лань : электронно-библиотечная система : сайт / ООО ЭБС Лань. – Санкт-Петербург, [2022]. – URL: <u>https://e.lanbook.com</u>. – Режим доступа: для зарегистрир. пользователей. – Текст : электронный.

1.7. ЭБС **Znanium.com :** электронно-библиотечная система : сайт / ООО Знаниум. - Москва, [2022]. - URL: <u>http://znanium.com</u>. – Режим доступа : для зарегистрир. пользователей. - Текст : электронный.

1.8. Clinical Collection : научно-информационная база данных EBSCO // EBSCOhost : [портал]. – URL: <u>http://web.b.ebscohost.com/ehost/search/advanced?vid=1&sid=9f57a3e1-1191-414b-8763-e97828f9f7e1%40sessionmgr102</u> – Режим доступа : для авториз. пользователей. – Текст : электронный.

**2. КонсультантПлюс** [Электронный ресурс]: справочная правовая система. /ООО «Консультант Плюс» - Электрон. дан. - Москва : КонсультантПлюс, [2022].

### 3. Базы данных периодических изданий:

3.1. База данных периодических изданий EastView : электронные журналы / ООО ИВИС. - Москва, [2022]. – URL: https://dlib.eastview.com/browse/udb/12. – Режим доступа : для авториз. пользователей. – Текст : электронный.

3.2. eLIBRARY.RU: научная электронная библиотека : сайт / ООО Научная Электронная Библиотека. – Москва, [2022]. – URL: <u>http://elibrary.ru</u>. – Режим доступа : для авториз. пользователей. – Текст : электронный

3.3. Электронная библиотека «Издательского дома «Гребенников» (Grebinnikon) : электронная библиотека / ООО ИД Гребенников. – Москва, [2022]. – URL: <u>https://id2.action-media.ru/Personal/Products</u>. – Режим доступа : для авториз. пользователей.

**4.** Федеральная государственная информационная система «Национальная электронная библиотека» : электронная библиотека : сайт / ФГБУ РГБ. – Москва, [2022]. – URL: <u>https://нэб.рф</u>. – Режим доступа : для пользователей научной библиотеки. – Текст : электронный.

**5.** <u>SMART Imagebase : научно-информационная база данных EBSCO</u> // EBSCOhost : [портал]. – URL: https://ebsco.smartimagebase.com/?TOKEN=EBSCO

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<u>1a2ff8c55aa76d8229047223a7d6dc9c&custid=s6895741</u>. – Режим доступа : для авториз. пользователей. – Изображение : электронные.

### 6. Федеральные информационно-образовательные порталы:

6.1. Единое окно доступа к образовательным ресурсам : федеральный портал . – URL: http://window.edu.ru/ . – Текст : электронный.

6.2. Российское образование : федеральный портал / учредитель ФГАУ «ФИЦТО». – URL: http://www.edu.ru. – Текст : электронный.

### 7. Образовательные ресурсы УлГУ:

7.1. Электронная библиотечная система УлГУ : модуль «Электронная библиотека» АБИС Мега-ПРО / ООО «Дата Экспресс». – URL: http://lib.ulsu.ru/MegaPro/Web. – Режим доступа : для пользователей научной библиотеки. – Текст : электронный.

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### LIST OF CHANGES of Educational plan of discipline « Pathological Anatomy»

Nº	Content of the change or a link to the attached text of the	Full name of the head of the Depart- ment developing the discipline	Signature	Date
1	Introduction of changes to item A) Recommended Literature item 11 "Educational, methodological and information support of the discipline" with the design of Appendix 1		Cheus	27.06.2023
2	Introduction of changes to item C) Professional databases, information and reference systems item 11 "Edu- cational, methodological and infor- mation support of the discipline" with the design of Appendix 2		Cheus	27.06.2023



### Appendix 1

### Educational, methodological and information support of the discipline a) List of recommended literature:

### **Main literature:**

1. Clinical pathophysiology : concise lectures, tests, cases : учебное пособие для студентов учреждений высшего образования / П. Ф. Литвицкий, С. В. Пирожков, Е. Б. Тезиков. - 3-е изд., перераб. и доп. - Москва : ГЭОТАР-Медиа, 2019. - 432 с. - 432 с. - ISBN 978-5-9704-4992-9. - Текст : электронный // ЭБС "Консультант студента" : [сайт]. - URL : https://www.studentlibrary.ru/book/ISBN9785970449929.html

2.Коряк В. А. Making a clinical and pathologic diagnosis : study guide / В. А. Коряк, О. В. Антипина. - Иркутск : ИГМУ, 2020. - 69 с. - Текст : электронный // ЭБС "Букап" : [сайт]. -URL : https://www.books-up.ru/ru/book/making-a-clinical-and-pathologic-diagnosis-15642291 Additional literature:

1.Pulmonary problems (clinical, morphological and diagnostic aspects) : methodical recommendation to the practical classes on forensic medicine and radiology for the students of the faculty of general medicine / В. В. Ермилов, А. В. Смирнов, В. Б. Барканов и др. - Волгоград : ВолгГМУ, 2020. - 168 с. - Текст : электронный // ЭБС "Букап" : [сайт]. - URL : https://www.books-up.ru/ru/book/pulmonary-problems-clinical-morphological-and-diagnosticaspects-12449948

2.Шульга A. B. Pathological anatomy. Guidelines for practical classes = Патологическая анатомия. Руководство к практическим занятиям: учебное пособие для иностранных студентов учреждений высшего образования по специальностям «Лечебное дело», «Педиатрия» : textbook for foreign students of higher education institutions in the specialties / A. B. Шульга, М. Г. Зубрицкий. - Гродно : ГрГМУ, 2020. - 324 с. - ISBN 9789855955444. - Текст : электронный // ЭБС "Букап" : [сайт]. - URL : <u>https://www.books-up.ru/ru/book/pathological-</u> anatomy-guidelines-for-practical-classes-11961787

3.Khaitov, R. M. Immunology : textbook / Rakhim M. Khaitov. - 2nd updated edition. - Moscow : GEOTAR-Media, 2021. - 272 с. - ISBN 978-5-9704-5861-7. - Текст : электронный // ЭБС "Консультант студента" URL [сайт]. https://www.studentlibrary.ru/book/ISBN9785970458617.html

4. Yushchuk, N. D. Infectious diseases : textbook / Yushchuk N. D., Vengerov Yu. Ya. - Москва : ГЭОТАР-Медиа, 2020. - 464 с. - ISBN 978-5-9704-5504-3. - Текст : электронный // ЭБС "Консультант студента" URL [сайт].

https://www.studentlibrary.ru/book/ISBN9785970455043.html

5. Practice book for particular pathophysiology : Training book for students of Department of general medicine / М. В. Осиков, А. А. Агеева, А. Е. Бакеева и др. - Челябинск : ЮУГМУ, 2023. - 120 с. - Текст : электронный // ЭБС "Букап" : [сайт]. - URL : https://www.booksup.ru/ru/book/practice-book-for-particular-pathophysiology-16157349/

### **Educational:**

Sologub A. A. Guidelines for the organization of independent work of students in the discipline «Pathological anatomy» for the specialty 31.05.01 «General medicine» / A. A. Sologub, E. V. Slesareva; Ulyanovsk State University. - Ulyanovsk : UlSU, 2022. - 34 р. - Неопубликованный pecypc; Ha англ. яз. - URL: http://lib.ulsu.ru/MegaPro/Download/MObject/11613. - Режим доступа: ЭБС УлГУ. - Текст : электронный.

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### Appendix 2

### в) Профессиональные базы данных, информационно-справочные системы 1. Электронно-библиотечные системы:

1.1. Цифровой образовательный ресурс IPRsmart : электронно-библиотечная система : сайт / ООО Компания «Ай Пи Ар Медиа». - Саратов, [2023]. – URL: <u>http://www.iprbookshop.ru</u>. – Режим доступа: для зарегистрир. пользователей. - Текст : электронный.

1.2. Образовательная платформа ЮРАЙТ : образовательный ресурс, электронная библиотека : сайт / ООО Электронное издательство «ЮРАЙТ». – Москва, [2023]. - URL: https://urait.ru. – Режим доступа: для зарегистрир. пользователей. - Текст : электронный.

1.3. База данных «Электронная библиотека технического ВУЗа (ЭБС «Консультант студента») : электронно-библиотечная система : сайт / ООО «Политехресурс». – Москва, [2023]. – URL: <u>https://www.studentlibrary.ru/cgi-bin/mb4x</u>. – Режим доступа: для зарегистрир. пользователей. – Текст : электронный.

1.4. Консультант врача. Электронная медицинская библиотека : база данных : сайт / ООО «Высшая школа организации и управления здравоохранением-Комплексный медицинский консалтинг». – Москва, [2023]. – URL: <u>https://www.rosmedlib.ru</u>. – Режим доступа: для зарегистрир. пользователей. – Текст : электронный.

1.5. Большая медицинская библиотека : электронно-библиотечная система : сайт / ООО «Букап». – Томск, [2023]. – URL: <u>https://www.books-up.ru/ru/library/</u>. – Режим доступа: для зарегистрир. пользователей. – Текст : электронный.

1.6. ЭБС Лань : электронно-библиотечная система : сайт / ООО ЭБС «Лань». – Санкт-Петербург, [2023]. – URL: <u>https://e.lanbook.com</u>. – Режим доступа: для зарегистрир. пользователей. – Текст : электронный.

1.7. ЭБС **Znanium.com** : электронно-библиотечная система : сайт / ООО «Знаниум». - Москва, [2023]. - URL: <u>http://znanium.com</u>. – Режим доступа : для зарегистрир. пользователей. - Текст : электронный.

**2. КонсультантПлюс** [Электронный ресурс]: справочная правовая система. / ООО «Консультант Плюс» - Электрон. дан. - Москва : КонсультантПлюс, [2023].

### 3. Базы данных периодических изданий:

3.1. eLIBRARY.RU: научная электронная библиотека : сайт / ООО «Научная Электронная Библиотека». – Москва, [2023]. – URL: <u>http://elibrary.ru</u>. – Режим доступа : для авториз. пользователей. – Текст : электронный

3.2. Электронная библиотека «Издательского дома «Гребенников» (Grebinnikon) : электронная библиотека / ООО ИД «Гребенников». – Москва, [2023]. – URL: <u>https://id2.action-media.ru/Personal/Products</u>. – Режим доступа : для авториз. пользователей. – Текст : электронный.

**4.** Федеральная государственная информационная система «Национальная электронная библиотека» : электронная библиотека : сайт / ФГБУ РГБ. – Москва, [2023]. – URL: <u>https://нэб.рф</u>. – Режим доступа : для пользователей научной библиотеки. – Текст : электронный.

5. <u>Российское образование</u> : федеральный портал / учредитель ФГАУ «ФИЦТО». – URL: http://www.edu.ru. – Текст : электронный.

**6.** Электронная библиотечная система УлГУ : модуль «Электронная библиотека» АБИС Мега-ПРО / ООО «Дата Экспресс». – URL: <u>http://lib.ulsu.ru/MegaPro/Web</u>. – Режим доступа : для пользователей научной библиотеки. – Текст : электронный.

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