MINISTRY OF EDUCATION AND SCIENCE OF THE RUSSIAN FEDERATION,
MINISTRY OF EDUCATION AND SCIENCE OF THE KYRGYZ REPUBLIC

Govemment-run educational institution of higher professional education
Kyrgyz-Russian Slavic University named after B.N. Yeltsin

ENDORSED BY
Dean of ICMandBT
Abilova S.S.
"04" 07 2026

Clinical pathological anatomy

Course Outline (Module)

Assigned to the Department of Pathology and forensic medicine
Academic Curriculum 310501 _26 _ 1 лд ин.plx

Specialty 560001 - KR General Medicine (for foreign students)

Qualification	general practitioner
Mode of Study	**Intramural**
Total Credit Value	__1 __**credit points**

Course Hours	30
including:	
in-class learning	16,3
individual work	13,7

Scope of testing semesters: credits with assessment 9

Course Hours Scheduling (per semester)

Semester Academic Year	9 (5.1)		Total	
Weeks	17			
Type of Traning	AC	CO	AC	CO
Practical Session	16	16	16	16
Contact work during theoretical training	0,3	0,3	0,3	0,3
Including Interactive Session	2	2	2	2
Total In-class Session	16	16	16	16
Face-to-face Learning	16,3	16,3	16,3	16,3
Individual Work	13,7	13,7	13,7	13,7
Total	30	30	30	30

MD, Associate Professor of the Department of Pathology and Forensic Medicine of the ICMandBT:
Akhmetova Maira Isaevna_____
Senior Lecturer of the Department of Pathology and Forensic Medicine of the ICMandBT:

Orozaliev Ruslan Kachkynbaevich _____

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Reviewer(s):
Aida Zurdinova, DMS, Associate Professor, Head of the Department of Basic and Clinical Pharmacology, Chemistry and Biochemistry, ICMandBT
Ashiralievna;
Doctor of Medical Sciences, Professor, Head of the Department of Pathological Anatomy, Kyrgyz State Medical Academy, Ishen Zhusuevich Satyldanov

НЕР Жаныкан Кызы М.

The Course Outline
Clinical pathological anatomy
Developed in accordance with Federal State Educational Standard 3++:
Federal State Educational Standard for Higher Education – Bachelor's degree in the specialisation 31.05.01 General Medicine (Order of the Ministry of Education and Science of Russia No. 988 of 12 August 2020)
drawn up on the basis of the curriculum:
Speciality 31.05.01 – RF, 560001 – KR General Medicine
approved by the university's Academic Council on 26 June 2026, Minutes No. 11.
The syllabus was approved at a meeting of the Department of Pathology and Forensic Medicine, ICMandBT

Record of _26.08.2026 №1

Programme duration: 2026–2031 academic years

Head of Department: Kakeev B.A., Doctor of Medical Sciences, Professor

1. COURSE OUTLINE OBJECTIVES	
1.1	Familiarization of students with the organization and role of the pathoanatomical service in practical health care. In-depth formation of clinical and morphological thinking of a doctor of any specialty.

2. PLACE OF THE COURSE IN THE EDUCATIONAL PROGRAM	
Educational Program Units:	
2.1	**Students' Preliminary Training Requirements:**
2.1.1	Obstetrics and gynecology
2.1.2	Hospital surgery
2.1.3	Infectious diseases
2.1.4	Ophthalmology
2.1.5	Pediatrics
2.1.6	Otorhinolaryngology
2.1.7	Neurology, medical genetics, neurosurgery
2.1.8	Public health and health care, health economics
2.1.9	Occupational diseases
2.1.10	Urology
2.1.11	Faculty surgery
2.1.12	Endocrinology
2.1.13	General surgery
2.1.14	Pathological anatomy
2.1.15	Pathophysiology, clinical pathophysiology
2.1.16	Emergency Medicine
2.1.17	Propedeutics of Internal Medicine
2.2	**Course Units and Practical Sessions imposing the prior Proficiency**
2.2.1	Outpatient therapy
2.2.2	Anesthesiology, resuscitation, intensive care
2.2.3	Dermatovenereology
2.2.4	Medical rehabilitation
2.2.5	Preparation for passing and passing the state exam
2.2.6	Diagnostic and Treatment Standards
2.2.7	Phthisiology
2.2.8	Hospital therapy
2.2.9	Gerontology
2.2.10	Pediatric surgery
2.2.11	Oncology, radiation therapy
2.2.12	Evidence-based medicine
2.2.13	Outpatient therapy
2.2.14	Forensic Medicine
2.2.15	Traumatology, orthopedics

3. STUDENTS' COMPETENCIES RESULTING FROM THE COURCE UNIT (MODULE)	
Knowledge:	
Level 1	Legislation of the Russian Federation and the Kyrgyz Republic in the field of healthcare. Fundamentals of the legislation of the Russian Federation, the Kyrgyz Republic and regulatory documents of the Ministry of Health of the Russian Federation and the Kyrgyz Republic, regulating the activities of a doctor in the specialty "Pathological Anatomy"
Level 2	Fundamentals of the current legislation on health care and the pathological service, the procedure for conducting pathological autopsy of a corpse.
Level 3	The concept of diagnosis, principles of constructing clinical and pathoanatomical diagnosis and clinical and anatomical comparison

Skills:	
Level 1	Correctly code morbidity and mortality data (ICD)
Level 2	Justify the conduct or cancellation of autopsies
Level 3	Analyze clinical data (medical history data), morphological data (autopsy protocol data), applying the laws of formal logic
Expertise:	
Level 1	Possess the principles of formulating clinical and pathological diagnoses, taking into account the requirements of the ICD
Level 2	Macro-microscopic diagnostics of pathological processes
Level 3	Rules for drawing up autopsy protocols, principles for comparing and formalizing clinical and pathological diagnoses

Final Students' Competences

3.1	**Knowledge:**
3.1.1	Organizational structure, tasks and system of measures of the pathological service in practical health care;
3.1.2	Organization and legal basis of pathological autopsies;
3.1.3	Principles and methods for the study of biopsy material, the rules for sending biopsies and surgical material to the pathological laboratory;
3.1.4	The structure and logic of the diagnosis at all stages of its formulation;
3.1.5	Principles of formulating clinical and pathological diagnoses (taking into account some of the requirements of the International Classification of Diseases);
3.1.6	The concept of "iatrogeny" and its possible place in the patient's diagnosis;
3.1.7	Principles of comparison of clinical and pathological anatomical diagnoses;
3.1.8	Diagnostic discrepancy categories;
3.1.9	Regulations on the medical and control commission. Regulations on the clinical and pathological conference;
3.1.10	Rules for the registration and issuance of a medical death certificate;
3.1.11	Deontological aspects arising from the organization or cancellation of an autopsy, the issuance of a medical death certificate, a biopsy report.
3.2	**Skills:**
3.2.1	Justify the conduct or cancellation of an autopsy;
3.2.2	To issue a referral for the study of biopsy and surgical material and evaluate their result;
3.2.3	To issue intravital and posthumous clinical diagnoses;
3.2.4	Highlight concepts: the mechanism of death, the immediate cause of death, the main cause of death;
3.2.5	Conduct a clinical and morphological analysis of the autopsy results;
3.2.6	Conduct a comparison of clinical and pathological diagnoses;
3.2.7	Determine the nature of errors in clinical diagnostics and establish the category of discrepancies in diagnoses;
3.2.8	Fill out a medical death certificate.
3.3	**Expertise:**
3.3.1	Basic information transformation technologies: text, spreadsheet editors; technique of work on the Internet for professional activities;
3.3.2	The ability to analyze the significance of pathological anatomy at the present stage
3.3.3	Macroscopic diagnosis of pathological processes;
3.3.4	Microscopic (histological) diagnostics of pathological processes;
3.3.5	Skills of clinical and anatomical analysis.

4. COURSE (MODULE) STRUCTURE AND CONTENT							
Class Code	**Subject Name /Type of Class/**	**Semester / Academic Year**	**Hours**	**Competencies**	**Literature**	**Interactive Sessions**	**Notes**
	Section 1. The structure, goals and objectives of the pathological service in the health care system						
1.1	The structure, goals and objectives of the pathological service in the health care system / Pr /	9	2		RR1.1 RR.1.2 AR 1.1 GP.1.1	0	
1.2	The structure, goals and objectives of the pathological service in the health care system / IW /	9	2		RR1.1 RR.1.2 AR 1.1	0	Get acquainted with the legislation of

					GP.1.1		the Kyrgyz Republic and the Russian Federation
1.3	Normative documentation regulating the activities of the pathological service / Pr /	9	2		RR1.1 RR.1.2 AR 1.1 GP.1.1	0	
1.4	Normative documentation regulating the activities of the pathological service /I W/	9	2		RR1.1 RR.1.2 AR 1.1 GP.1.1	0	Know the regulations governing the activities of the pathologist service
1.5	Formal logic laws in diagnostics. Forms of logical thinking. Algorithm of the diagnostic process. /Pr/	9	2		RR1.1 RR.1.2 AR 1.1 GP.1.1	0	
1.6	Formal logic laws in diagnostics. Forms of logical thinking. Algorithm of the diagnostic process. /IW/	9	2		RR1.1 RR.1.2 AR 1.1 GP.1.1	0	
1.7	International classification of diseases 10 revision (ICD-10) / Pr /	9	2		RR1.1 RR.1.2 AR 1.1 GP.1.1	0	
1.8	International classification of diseases 10 revision (ICD-10) /IW /	9	2		RR1.1 RR.1.2 AR 1.1 GP.1.1	0	
1.9	International Classification of Diseases in Oncology (ICD-O) / Pr /	9	2		RR1.1 RR.1.2 AR 1.1 GP.1.1	0	
1.10	International Classification of Diseases in Oncology (ICD-O) / IW /	9	2		RR1.1 RR.1.2 AR 1.1 GP.1.1	0	
1.11	Classification of hereditary human diseases OMIM / Pr /	9	2		RR1.1 RR.1.2 AR 1.1 GP.1.1	0	
1.12	Classification of hereditary human diseases OMIM / IW /	9	2		RR1.1 RR.1.2 AR 1.1 GP.1.1	0	
1.13	Nosology. Environmental pathology and environmental nosology. Microelementoses / Pr /	9	2		RR1.1 RR.1.2 AR 1.1 GP.1.1	0	
1.14	Nosology. Environmental pathology and environmental nosology. Microelementoses / IW /	9	2		RR1.1 RR.1.2 AR 1.1 GP.1.1	0	The concept of nosology
1.15	Diagnosis (clinical, pathological). The structure of the diagnosis. /Pr/	9	2		RR1.1 RR.1.2 AR 1.1 GP.1.1	0	
1.16	Diagnosis (clinical, pathological). The structure of the diagnosis. /IW/	9	2		RR1.1 RR.1.2 AR 1.1 GP.1.1	0	The structure of the clinical diagnosis
1.17	Comparison of clinical and pathoanatomical diagnoses. Diagnostic errors. /Pr/	9	2		RR1.1 RR.1.2 AR 1.1 GP.1.1	0	

1.18	Comparison of clinical and pathoanatomical diagnoses. Diagnostic errors. /IW/	9	2		RR1.1 RR.1.2 AR 1.1 GP.1.1	0	
1.19	Clinical and anatomical conference. /Pr/	9	2		RR1.1 RR.1.2 AR 1.1 GP.1.1	0	
1.20	Clinical and anatomical conference. /IW/	9	2		RR1.1 RR.1.2 AR 1.1 GP.1.1	0	
1.21	Deontological aspects in pathological practice / Pr /	9	2		RR1.1 RR.1.2 AR 1.1 GP.1.1	0	
1.22	Deontological aspects in pathological practice / IW /	9	2		RR1.1 RR.1.2 AR 1.1 GP.1.1	0	
1.23	Classification and definition of categories of iatrogenic / Pr /	9	2		RR1.1 RR.1.2 AR 1.1 GP.1.1	0	
1.24	Classification and definition of categories of iatrogenic / IW /	9	1,7		RR1.1 RR.1.2 AR 1.1 GP.1.1	0	The concept of iatrogeny
	Section 2. Sectional - biopsy section						
2.1	Autopsy. Autopsy methods. Opening technique. /Pr/	9	2		RR1.1 RR.1.2 AR 1.1 GP.1.1	0	
2.2	Autopsy. Autopsy methods. Opening technique. /IW/	9	2		RR1.1 RR.1.2 AR 1.1 GP.1.1	0	
2.3	Autopsy protocol / Pr /	9	2		RR1.1 RR.1.2 AR 1.1 GP.1.1	0	
2.4	Autopsy protocol /IW /	9	2		RR1.1 RR.1.2 AR 1.1 GP.1.1	0	
2.5	Clinical and anatomical epicrisis. /Pr/	9	2		RR1.1 RR.1.2 AR 1.1 GP.1.1	0	
2.6	Clinical and anatomical epicrisis. /IW/	9	2		RR1.1 RR.1.2 AR 1.1 GP.1.1	0	
2.7	Intravital morphological diagnostics. Goals, objectives and methods. /Pr/	9	2		RR1.1 RR.1.2 AR 1.1 GP.1.1	0	
2.8	Intravital morphological diagnostics. Goals, objectives and methods. /IW/	9	2		RR1.1 RR.1.2 AR 1.1 GP.1.1	0	
2.9	Rules for sending biopsy material for research / Pr /	9	2		RR1.1 RR.1.2 AR 1.1 GP.1.1	0	

2.10	Rules for sending biopsy material for research / IW /	9	2		RR1.1 RR.1.2 AR 1.1 GP.1.1	0	
2.11	Clinical and anatomical analysis of diagnostic and operational biopsies / Pr /	9	2		RR1.1 RR.1.2 AR 1.1 GP.1.1	0	
2.12	Clinical and anatomical analysis of diagnostic and operational biopsies / IW /	9	2		RR1.1 RR.1.2 AR 1.1 GP.1.1	0	
2.13	Midpoint assessment	9	0		RR1.1 RR.1.2 AR.1.2.1 GP.1.1	0	

5. ASSESSMENT FUND

5.1. Advancement Questions and Assignments

SECTION REVIEW QUESTIONS FOR 11 SEMESTER:

KNOW:

Section 1. "The structure, goals and objectives of the pathological service in the health care system":

1. Tasks of the pathological service in the health care system.
2. The structure of the pathological service.
3. What cases are subject to analysis at clinical and pathological conferences?
4. Who is responsible for organizing and conducting the conference, who are the keynote speakers at the conference?
5. Give the characteristics of 1, 2, 3 categories of discrepancy in diagnoses.
6. List in sequence the sections of the patient's diagnosis.
7. Give the definition of the underlying disease in the diagnosis of the patient (lifetime and post-mortem).
8. What is recorded in the first section of the patient's diagnosis, except for the name of the disease?
9. Give a definition of a competing disease, indicate its place in the diagnosis?
10. Give the definition of a combined disease, indicate its place in the diagnosis.
11. Give the definition of the underlying disease, indicate its place in the diagnosis.
12. Give a definition of the concept of "second disease", indicate its place in the diagnosis.
13. Describe the concept of "manifestation of the underlying disease", indicate their place in the diagnosis.
14. Give a description of the concept of "complications of the underlying disease."
15. In what order are complications of the underlying disease recorded, if there are many?
16. Give the definition of concomitant diseases.
17. Give a definition of the concept of "patient diagnosis".
18. Give a definition of the concepts of "death mechanism", "immediate cause of death", "main cause of death".
19. How long after death in the hospital is it allowed to carry out an autopsy?
20. What accompanying documents are attached in case of death of the patient, upon admission to the corpse in the morgue
21. Who should be present at the autopsy of different profiles
22. What is a medical history
23. What is the difference between postmortem diagnosis and clinical postmortem diagnosis?

Section 2. "Sectional - biopsy section"

1. Rules for autopsy;
2. Rules for the collection of autopsy material
3. Purpose of histological examination of autopsy material
4. What is the autopsy report
5. Protocol headings
6. Biopsy and surgical material; definition of concepts.
7. Rules for taking biopsy material. Basic requirements for biopsy materials.
8. Direction rules; marking and fixation of biopsy material.
9. Fixing fluid.
10. Rules for the pathologist's response to biopsy and surgical material.
11. Possibilities of using pathoanatomical research in the clinic.
12. Cases of postmortem autopsy carried out on the AS.
13. Tasks of the participants AS: clinician, pathologist, reviewer, chairman.
14. Biopsies. Definition. Types of biopsies
15. Technique of histological diagnosis of biopsy material
16. Rules for the collection and study of operating material
17. Technique of histological examination of the operating material
18. Rules for the preparation of a histopathological diagnosis

Tasks for checking the level of training to be able to, own:
1. Draw up an autopsy report
2. Substantiate the pathological epicrisis
3. Make an entry in the medical death certificate in the presence of a combined underlying disease (competing, combined, background)
4. Indicate the place of the "second disease" from the diagnosis in the medical certificate of death.

LIST OF MICROSLIDES
1. Necrosis of the epithelium of the convoluted tubules of the kidney
2. Myocardial infarction
3. Basedow's struma of the thyroid gland
4. Fatty degeneration of the liver
5. Gout
6. Diapedetic hemorrhage in the brain
7. Hemorrhagic infiltration of the uterine mucosa
8. Embolic brain abscess
9. Syphilitic gum of the aorta
10. Giant cell hepatitis
11. Pulmonary tuberculosis
12. Chronic cholecystitis with exacerbation
13. Phlegmonous appendicitis
14. Encephalitis
15. Croupous pneumonia, microbial edema with transition to hepatization
16. Croupous pneumonia gray hepatization
17. Cardiosclerosis
18. Spindle cell sarcoma
19. Adenocarcinoma of the uterus
20. Cancer metastasis to the lung
21. Cystic tumor of the ovary
22. Melanoma
23. Squamous cell non-keratinizing cancer
24. Squamous cell lung cancer
25. Renal cell carcinoma
26. Metastasis of adenocarcinoma in the liver
27. Keratinizing squamous cell carcinoma
28. Basalioma
29. Melanoma
30. Myocardial infarction
31. Hemorrhagic infarction
32. Rheumatic myocarditis
33. Chronic stomach ulcer
34. Embolic brain abscess
35. Abscessed pneumonia with influenza

ABSTRACT TOPICS:
1. Pathology caused by environmental factors and nutrition
2. The importance of the environment in human pathology.
3. Air pollution. Role in human pathology
4. Chemical and medicinal effects.
5. Adverse drug reactions (predictable and unpredictable). Medicinal pathology. Iatrogenic drug pathology.
6. Exogenous estrogens and oral contraceptives: possible negative effects.
7. Harmful effects from the use of non-therapeutic agents.
8. Diseases caused by physical factors.
9. Diseases related to nutrition.
10. Violation of vitamin intake.
11. Diet and systemic diseases. Diet and cancer. Food additives, problems of control over their use.
12. The main provisions of the doctrine of diagnosis.

5.2. Course Papers Themes

Course paper is not required

5.3. Assessment Fund

1. Questions for an interview in paragraph 5.1.
2. Tests in ANNEX 4
3. Microslides - the list in paragraph 5.1.

4. TOPICS OF ABSTRACTS:
1.Pathology caused by environmental factors and nutrition

2. The value of the environment in human pathology.
3. Air pollution. Role in human pathology
4. Chemical and medicinal effects.
5. Adverse drug reactions (predictable and unpredictable). Medicinal pathology. Iatrogenic drug pathology.
6. Exogenous estrogens and oral contraceptives: possible negative effects.
7. Harmful effects from the use of non-therapeutic agents.
8. Diseases caused by physical factors.
9. Diseases associated with nutrition.
10. Violation of vitamin intake.
11. Diet and systemic diseases. Diet and cancer. Food additives, problems of control over their use.
12. The main provisions of the doctrine of diagnosis.

5.4. List of Assessment Tools

1. Interview
2. Tests
3. Microslides
4. Abstract
5. Scales of assessment for all types of assessment tools in ANNEX

6. COURSE (MODULE) METHODOLOGICAL AND INFORMATIONAL SUPPORT

6.1 Recommended Reading

6.1.1 Required Reading List

	Authors, Compliers	Title	Book publisher, Year
RR1.1	Kumar, Cotran, Robbins.	Basic pathology. 8-th Edition,	2007
RR.1.2	Kumar, Abbas, Aste	Pathologic basic of disease. 9-th Edition	2015

6.1.2 Advanced Reading

	Authors, Compliers	Title	Book publisher, Year
AR 1.1	Harsh Mohan	Textbook of pathology. 6th Edition	2010

6.1.3 Guidance Papers

	Authors, Compliers	Title	Book publisher, Year
GP.1.1	A. M. Romaniuk, L. I. Karpenko	Biopsy-sectional course : study guide	2015

6.2 Online Resources

OR.2.1	Electronic library of the 1st Moscow State Medical University I.M.Sechenov.	http://www.studmedlib.ru;
OR.2.2	EBS “Student Consultant. Electronic library of a medical university "	http://www.studmedlib.ru;

6.3. List of Information and Education Technologies

6.3.1 Competence-based Educational Technologies

6.3.1.1	Traditional educational technologies - under the supervision of a teacher, independent autopsy with clinical and morphological analysis of its results: mechanisms of death, immediate and main cause of death, taking autopsy material, its diagnostic histological examination, execution of an autopsy protocol, comparison of clinical and pathological anatomical diagnoses. Clipping and descriptive characteristics of the operating material. Traditional educational technologies are focused primarily on the communication of knowledge and methods of action transmitted by the resident in a ready-made form and are designed for reproductive assimilation and analysis of specific samples.
6.3.1.2	Information educational technologies - the use of computer equipment and Internet resources by an intern for independent mastering of practical skills

6.3.2 List of Information Reference Systems and Software

6.3.2.1	Electronic library of Omsk State Medical University: http://webIib.omsk-osma.ru/;
6.3.2.2	Electronic library system "KnigaFond": http://www.knigafund.ru;
6.3.2.3	EBS “Student Consultant. Electronic library of a medical university "http://www.studmedlib.ru;
6.3.2.4	Scientific electronic library: http://elibrarv.ru/defaultx.asp;
6.3.2.5	Scopus Database: http://wwvv.scopus.com;
6.3.2.6	Electronic library of the 1st Moscow State Medical University I.M.Sechenov. Access mode: http://www.scsml.rssi.ru;
6.3.2.7	Site of the Russian Society of Pathologists [Electronic resource]. Access mode: www.patolog.ru;
6.3.2.8	The Internet Pathology Laboratory for Medical Education [Electronic resource]. Access mode: http://library.med.utah.edu/WebPath/webpath.html.
6.3.2.9	Virtual Slide Database Portals [Electronic resource]. Access mode: http://www.path.uiowa.edu/virtualslidebox:
6.3.2.10	Pathology education resourse [Electronic resource]. Access mode: http://peir2.path, uab.edu/pdl/dbra.cgi?uid=default&view searched

7. COURSE (MODULE) LOGISTICS

7.1	Lecture hall for 100 seats, classrooms (for 64 seats) - L. Tolstoy street 102/5, the building of the former pathological laboratory. Teaching aids: Microscopes, multimedia complex (laptop, projector) 2 personal computers with a monitor, Internet connection. Demonstration materials: 300 macro-preparations and 1000 micro-preparations, 1500 tables, multimedia presentations. Study boards; Audio system;
7.2	Laboratory "Experimental modeling of pathological processes" - room 2.9 st. L. Tolstoy 1 A. Equipment: refrigerator, thermostat, distiller, laboratory scales, microscope, electrocardiograph, drying cabinet, set of instruments (surgical scissors, different tweezers, forceps, clamps, etc.), a set of chemical vessels (test tubes, flasks, pipettes, etc.) etc.), plates for fixing animals, pulse oximeter, pressure chamber, glucometer, flame photometer, coagulograph, thermostat, coagulometer.
7.3	Center for integrative and practical training - Alamedin-1, st. Zvenigorodskaya 31/5. Equipment of the center: room for engineering and technical personnel (operator's room). A room for teaching practical skills, with a set of simulation mannequins in the amount of 63 pcs. Hardware and software complex "Interactive anatomical table" Pirogov ", operating in three modes: 1)" View "module - spatial orientation of a 3D human model; 2) "Comparisons" module - selection of objects for comparison (norm, pathology, preferences); 3) module "Testing knowledge" - creating your own tests (7 types of questions), using pre-installed tests.

8. COURSE (MODULE) PROFICIENCY METHODICAL GLUIDELINES (FOR STUDENT)

TECHNOLOGICAL MAP IN APPENDIX 2

MODULAR DISCIPLINE CONTROL INCLUDES:
1. Current control: assimilation of educational material in classroom lessons (practical and compulsory tasks for independent work
2. Mid-term control: checking the completeness of knowledge and skills on the material of the module as a whole.
3. Intermediate control of the academic discipline (11 semester - test with an assessment)

BASIC REQUIREMENTS FOR CURRENT CONTROL.
To understand the material and to master it qualitatively, the following sequence of actions is recommended:
1. During the week, choose a time to work with the recommended literature.
2. When preparing for the next day's practice sessions, you must first read the basic concepts and approaches on the homework topic. When performing an assignment, you must first understand what is required in it, what theoretical material you need to use, outline a solution plan.
3. Control over the assimilation of the material of the curriculum of the discipline is carried out systematically by the teacher.

METHODOLOGICAL RECOMMENDATIONS FOR INDEPENDENT OUT-OF-AUDIT WORK, for studying the theoretical foundations of the sectional course:
The study of the theoretical part of the disciplines is designed not only to deepen and consolidate the knowledge gained in the classroom, but also to promote the development of the student's creative skills, initiative and organize their time.
Independent work in the study of disciplines includes:
- reading the recommended literature and mastering the theoretical material of the discipline;
- acquaintance with Internet sources;
-preparation for various forms of control;
-preparation and writing of abstracts;
-preparation of answers to questions on discipline topics in the sequence in which they are presented;
To expand knowledge of the discipline, it is recommended to use Internet resources; conduct searches in various systems and use materials from sites recommended by the teacher.
When performing independent work on writing an abstract, you must: read the theoretical material in the recommended literature, periodicals, on Internet sites; creatively rework the studied material and present it for the report in the form of an abstract, illustrating it with diagrams, diagrams, photographs and drawings.
The text should be written in intelligible, simple and clear language.

SCHEME FOR MICROSCOPIC DESCRIPTION OF THE PREPARATION
1. Name the tissue or organ in the micropreparation
2. Determine the criteria for the process at the cellular level;
4. Connected and consistently summarize the detected changes in the histological diagnosis;
5. Explain the mechanism of development of the process and evaluate its functional significance.
The algorithm of students' actions should be as follows:
- Viewing a micropreparation at low magnification of the microscope has the purpose of:
a) Investigation of the entire area of the cut by moving it along the steps;
b) Determination of the preparation method for coloring;
c) Determination of normal structures of an organ, tissue;
d) Revealing the localization and nature of the main structural changes in the organ and tissue;
e) Preliminary diagnostics of the process based on the summation of the received data
- Viewing the specimen at high magnification of the microscope has the purpose of:
a) Detailed view of all components of the organ with structural changes;
b) Final diagnosis of the pathological process.

BASIC REQUIREMENTS FOR COUNTRY CONTROL:
METHODOLOGICAL RECOMMENDATIONS FOR THE IMPLEMENTATION OF ABSTRACTS
The essay provides for an in-depth study of the discipline, contributes to the development of skills for independent work with literary sources.
Abstract - a summary in writing of the content of scientific work on the topic provided. This is an independent research work, where the student reveals the essence of the problem under study with elements of analysis on the topic of the abstract. Provides various points of view, as well as his own views on the problems of the topic of the abstract. The content of the abstract should be logical, the presentation of the material should be problem-specific.

REQUIREMENTS FOR REGISTRATION OF THE ABSTRACT:
The volume of the abstract can vary from 15 to 20 printed pages. Main sections: table of contents (plan), introduction, main content, conclusion, list of references.
The abstract text should contain the following sections:
- title page indicating: the name of the university, department, topic of the abstract, the author's full name and the teacher's full name.
- introduction, relevance of the topic.
- main section.
- conclusion (analysis of the results of literary search); conclusions.
- the list of literary sources must have at least 10 bibliographic titles, including network resources
The text part of the abstract is drawn up on a sheet of the following format:
- top indent - 2 cm; left indent - 3 cm; indent on the right - 1.5 cm; bottom margin - 2.5 cm;
- text font: Times New Roman, font height - 14, space - 1.5;
- page numbering - at the bottom of the sheet. There is no number on the first page.
The essay must be completed correctly in compliance with the culture of presentation. There must be references to the literature used, including periodicals for the last 5 years.

ABSTRACT ASSESSMENT CRITERIA:
- Relevance of the research topic;
- correspondence of the content to the topic;
- depth of study of the material;
- correctness and completeness of the development of the questions raised;
- the significance of the conclusions for further practical activities;
- the correctness and completeness of the use of literature;
- compliance of the abstract design with the standard;
- the quality of the message and answers to questions when defending the abstract.

AUTOPSY PROCEDURE AND TAKING MATERIAL FOR RESEARCH
AUTOPSY PROCEDURE
Usually, an autopsy is performed 12 hours after death, but Soviet legislation allows autopsies to be performed for scientific and practical purposes after 2 hours and even half an hour after death.
In these cases, the autopsy must be performed in the presence of three doctors, who draw up a protocol before the autopsy indicating the evidence of actual death and the reasons for the need for an early autopsy.
Before each autopsy, the dissector acquaints in detail not only with the clinical diagnosis, but also with the medical history of the deceased.
The medical history must be finalized and signed. No corrections to the clinical diagnosis after autopsy are allowed.
Autopsy should be done in daylight. Under ordinary artificial light, an autopsy is performed only if absolutely necessary. But good artificial, electric lighting, quite bright, and even better shadeless, due to its constancy has a great advantage over natural, which is very variable both from the weather (cloudiness, obscurity, nebula, rainy) and from the hour of the day.
Only the most essential tools are prepared and placed on a separate board or on a table
Surgical dressings, drains, catheters, tampons, etc. remain on the corpse until opening and are removed only after a thorough examination of the wound or organ.
The projector takes place at the sectional table on the right side of the corpse. Only when the skull is opened does it stand at the head of the corpse. On the left side of the corpse there are assistants and those present at the autopsy.
The basic order of opening is as follows:
1. External examination of the corpse.
2. Opening of the skull and extraction of the brain.
3. Opening the paranasal cavities (if necessary)
4. Opening the spinal canal and removing the spinal cord (if necessary)
5. Opening of the abdominal wall.
6. Opening the chest and neck
7. Removal of the organs of the neck, chest and abdomen.
8. Examination of harvested organs.
9. Opening of limbs (if necessary)
This is the basic order of autopsy, however, if necessary, dictated by the specifics of the case, there may be deviations.
Usually they start with opening the skull, since after the removal of the organs of the neck and chest, the blood supply to the brain and its shells may change.

If an air embolism is suspected, and if necessary, perform blood cultures from the heart and for other indications, an autopsy should be started from the chest.

EXTERNAL INSPECTION OF THE CADAVER
An external examination of the body must be performed in each case.
External examination: gender, physique, nutritional status, condition of the skin, visible mucous membranes, external genital organs, if any, bedsores, surgical wounds, traces of injections with a syringe, etc.

AUTOPSY ON THE SHORE:
The technique of the complete evisceration method is reduced to opening the cranial cavity and spine, removing the brain and spinal cord, opening the integument with a direct incision with exposure of the neck organs, examining the abdominal cavity, opening the chest cavity and isolating the complex of the organs of the neck, chest and abdominal cavity in connection with each other. To do this, the organs of the neck and chest cavity are removed, the diaphragm is crossed at the ribs to the kidneys, the parietal peritoneum of the lateral abdominal wall is cut from top to bottom to the small pelvis. Allocate the pelvic organs and separate the peritoneum in a blunt way and with a knife from the muscles of the posterior abdominal wall and then from the spine the entire organocomplex.
The autopsy report describes all organs of the systems, their macroscopic picture: size, condition of organs in the section, color, weight, tissue pattern and all pathological changes in organs.

EXAMPLES OF AUTOPSY PROTOCOLS
Autopsy report No. 1
Full name of the deceased: M., age 79, gender - husband.
Spent 8 bed days
Posthumous (final) clinical diagnosis: Generalized atherosclerosis of the vessels of the lower extremities, heart, brain, gangrene of the right foot. Ischemic heart disease. Exertional angina pectoris, postinfarction cardiosclerosis. Atrial fibrillation. GB III Art. ONMK. Bilateral hypostatic pneumonia. Prostate adenoma. Chronic pyelonephritis, exacerbation. Hepatic renal failure. Purulent-necrotic wound of the left thigh stump (amputation operation).
Brief clinical epicrisis
Upon admission, contact with the patient is difficult due to severe encephalopathy. According to his relatives, he complained of soreness in the area of the left thigh stump wound (after a recent amputation). Long suffered from prostate adenoma. In the department, his condition was serious, however, he did not show active complaints. Pale skin, blood pressure 140/80 mm Hg. Art. During the observation period, the patient's condition was without positive dynamics. The toilet of the hip stump wound and symptomatic therapy were performed. There are signs of gangrene in the right foot. Death occurred against the background of increasing cardiovascular and respiratory failure. Clinical blood test: hemoglobin - 94 g / l, leukocytes - 29.7x109 / l, erythrocytes - 2.5x1012 / l. General urine analysis: protein - 0.26 g / l, leukocytes all over, erythrocytes - 45 in p.z., bacteria ++. Blood biochemistry: protein - 58 g / l, blood sugar up to 9.6 mmol / l, urea - 25 mmol / l, total bilirubin. - 68 μmol / l, ex. - 54.4, ind. - 13.4 μmol / l. ECG: atrial fibrillation, ventricular tachysystole, cicatricial changes in the anterior apical and lateral walls of the left ventricle.
Autopsy report
Visual inspection. The corpse of an elderly man, the correct constitution, normal nutrition. Rigor mortis is well expressed in the limbs. The skin is pale yellow, cadaveric spots are purple-cyanotic, located on the back of the body and limbs. The left lower limb was amputated at the level of the middle third of the left thigh. Stump wound with smooth edges of bright pink color. The bottom of the wound is scarlet with light gray dots up to 0.1 cm in diameter. The foot of the right lower limb is bright pink to the ankle, pasty.
Internal inspection. The subcutaneous fat layer is light yellow in color, has a thickness: on the chest 1.5 cm, on the abdomen - 2 cm. The muscles in the section are light red, moist. In the left and right pleural cavities, a clear straw-colored liquid up to 200 ml is determined. In the abdominal cavity up to 100 ml of clear straw-colored liquid. The peritoneum is moist and shiny throughout. In the area of the bladder, there are single adhesions of the sheets of the peritoneum of the small intestine. Serous membrane covering the bladder with capillary injection. Omentum and mesentery with moderate amount of normal fatty tissue.
385 Cranial cavity. Skull bones without visible pathology. The dura mater is gray, shiny. The pia mater is abundantly saturated with transparent fluid. The vessels of the base of the brain do not collapse; they contain sectoral yellow plaques covering up to 60% of the lumen. The brain tissue is soft-elastic consistency with the preservation of the anatomical pattern on the cut. The ventricles of the brain are slightly dilated, contain a transparent cerebrospinal fluid.
Respiratory system. The mucous membrane of the larynx, trachea and large bronchi is bright pink, moist, smooth. The lungs have a doughy consistency in the upper sections, gray-pink on the cut, airy on palpation. The lower parts of the lungs are of a watery consistency, brown-cyanotic in color. In the section, the lung tissue in the subpleural regions is brown, in the basal regions it is gray-brown. A foamy, slightly turbid liquid flows abundantly from the surface of the incisions.
The cardiovascular system. Heart, dimensions 11.5x10, x6.5 cm.The epicardium is smooth, shiny. The myocardium is of a flabby consistency. The cavities of the right heart contain liquid blood and mixed postmortem blood clots. In the lumen of the left ventricle along the anterior wall, dense masses of brown-yellow color, tightly connected to the endocardium on a site measuring 5x3 cm and protruding into the lumen by 0.5-0.8 cm.The thickness of the left ventricular myocardium is 1.8 cm, the thickness of the myocardium of the right ventricle 0.4 cm. On the cut, the myocardium is dull brown. In the antero-lateral wall of the left ventricle, subendocardially, there is a lesion of whitish color, fibrous consistency, 4.5-3x0.5 cm in size with thin brown stripes that do not merge with each other. The wall of the anterior branch of the left coronary artery with single whitish thickenings obturating the lumen of the vessel up to 80%. The intima of the aorta with many whitish spots and stripes merging

in the abdominal region into fields of calcification. In the lumen of the posterior tibial artery, dense crumbling masses of brown color, obturating the lumen of the vessel by 100%, are released when pulled with tweezers.
The digestive organs. The mucous membrane of the tongue, pharynx is gray-pink, and the esophagus is light gray. The mucous membrane of the stomach is gray-cyanotic in color, the folding is smoothed. In the lumen of the stomach there are liquid masses. The mucous membrane of the intestine in all sections with the usual relief, pink, shiny. The biliary tract is passable. The gallbladder contains about 40 ml of brown bile. The mucous membrane of the bladder is velvety in appearance. The liver measures 30x19x14x10 cm, dense consistency. The surface of the organ is smooth. The cut surface is of a homogeneous structure, yellowish-brown in color with burgundy blotches. The pancreas measures 19x2.5x1.5 cm. On the cut, the tissue is yellowish-gray, unevenly lobed, with fatty and fibrous layers.
Urinary organs. The right kidney measures 10x5.5x3.5 cm, the left one is 10.5x5.5x3.5 cm. Both organs are of dense consistency. The cortical layer is red-brown in color, up to 0.6 cm wide. On the section, the border between the cortical and medulla is clear. The mucous membrane of the pyelocaliceal system of both organs with injection of capillaries is gray-yellow, slightly dull. The capsule of the left and right kidneys is easily removed, exposing the smooth surface of the organs. The bladder is tense, its wall is hypertrophied, up to 0.8 cm thick. In the lumen of the bladder, up to 50 ml of turbid, dark yellow urine. The mucous membrane of the organ is dull, with injection of capillaries and pus-like overlays of light yellow color. The prostate gland is 4x2.5x2 cm in size, of dense consistency. In the center of the organ, along the junction of the ejaculatory and urethra canals, there is a formation of a round shape, up to 1 cm in diameter, of a dense consistency, of a fibrous structure, compressing the lumen of the canal.
Endocrine glands. The thyroid gland is not enlarged. Both lobes of the thyroid gland are of dense consistency, dark brown on the cut, compact. The left lobe of the thyroid gland in the upper pole has a dense rounded formation, up to 1.5 cm in diameter, on a cut in the lumen, liquid masses of yellow color, the inner wall is smooth. The adrenal glands are leaf-shaped, each 4.5x2.5x0.7 cm in size. On the cut, the crust is 0.2 cm thick, yellow. The medulla is dark brown, compact.
Organs of hemo- and lymphopoiesis. The spleen is 9x5x3.5 cm in size, soft-elastic, gray-cherry-colored on the cut, the pulp does not scrap. The red bone marrow of the ribs is grayish-red, juicy.
Microscopic examination results
Myocardium - hypertrophy and dystrophy of cardiomyocytes, their diffuse fragmentation. Vascular congestion of the microcirculatory bed. Scattered lymphohistiocytic and fibroblastic infiltration of the myocardium in the area of substitutional sclerosis with alternating cardiomyocytes with pycnosis of nuclei mainly in the area of connective tissue formation. On the endocardium, lymphoid and leukocyte reactions, layered masses of fibrin and blood elements. Conclusion: postinfarction cardiosclerosis in the anterior wall with thrombendocarditis.
Brain - an increased number of microglial cells against the background of fine spongy vacuolization of the white matter, moderate perivasal edema.
Lungs - thinning and rupture of interalveolar septa, in the lumen of the alveoli there are homogeneous low-intensity pink masses with an admixture of neutrophilic leukocytes. In the vessels of the microcirculatory bed, stasis, sludge. Conclusion: emphysema, edema, mild focal pneumonia.
Kidneys - protein degeneration of the epithelium of the convoluted tubules, focal karyolysis in epithelial cells (focal necrotic nephrosis). In the area of the calyx-pelvic system, foci of necrosis and elements of diffuse neutrophilic infiltration, spreading into the stroma of the kidneys. Conclusion: purulent pyelonephritis.
Bladder - hypertrophy of muscle elements, diffuse neutrophilic infiltration with the formation of foci of necrosis in the mucous membrane. Conclusion: exacerbation of chronic purulent cystitis.
Liver - the architectonics is moderately impaired due to the plethora of the centers of the lobules with discomplexation of hepatocytes, along the periphery, small-droplet fatty degeneration.
Pancreas - focal sclerosis and lipomatosis with autolysis.
The prostate gland is a chaotic proliferation of mature glandular structures and connective tissue. Conclusion: nodose fibro-adenomatous hyperplasia.
Thyroid gland - in the left lobe, the node is represented by enlarged follicles of the correct structure with a large amount of colloid and a fibrous capsule. Conclusion: macrofollicular adenoma.
Posterior tibial artery - in the lumen layered masses of fibrin and blood components, disintegrating erythrocytes, similar to those in the left ventricle of the heart. Conclusion: thromboembolism of the vessel.
Fragment of the wound of the stump of the left lower extremity - the formation of granulation tissue against the background of chronic inflammation.
The area of the skin of the right lower limb - diffuse neutrophilic infiltration, foci of necrosis. Stasis, sludge in the vessels of the microvasculature.
Medical death certificate
I. a) uremia
b) ascending purulent pyelonephritis
c) prostate adenoma
II. Atherosclerotic gangrene of the lower limb
Pathological diagnosis
Main disease: prostate adenoma, glandular fibrous type.
Complications of the underlying disease: stenosis of the urinary duct of the prostate gland. Purulent cystitis. Purulent bilateral pyelonephritis, uremia (urea 25 μmol / l)
Competing disease: widespread atherosclerosis with a predominant vascular lesion of the heart, left lower limb and aorta at the stage of atherocalcinosis.
Complications of the underlying disease: gangrene of the left lower limb. Surgery (date) amputation of the left lower limb at the level of the middle third of the thigh. Organizing subendocardial infarction of the anterolateral wall of the left ventricle, parietal thrombendocarditis. Thromboembolism of the posterior right tibial artery. Gangrene of the right lower limb. Dystrophy

and venous plethora of internal organs, focal necrotic nephrosis. Bilateral posterior basal small focal pneumonia. Bilateral hydrothorax (right and left 200 ml each). Ascites (100 ml). Pulmonary edema.
Concomitant diseases: hypertension (left ventricular myocardial hypertrophy up to 1.8 cm). Fatty hepatosis. Adenoma of the left lobe of the thyroid gland.
Clinical and pathological anatomical epicrisis
Morphological examination of the corpse of patient M., 79 years old, revealed two independent diseases, each of which could lead to death. Given the greater severity of the purulent process in the kidneys and the increase in renal failure, preference is given to the prostate adenoma, which, through a violation of the outflow of urine and the development of congestive purulent cystitis, led to kidney damage. A complex of complications of pathological processes led to irreversible deep dystrophic processes, which became the direct cause of the patient's death. The construction of the postmortem clinical diagnosis is incorrect.
Pathologist (signature)

Autopsy report No. 2
Full name of the deceased: K., age 53, gender - wives.
The autopsy was attended by a doctor of the Russian Academy of Education, interns of the PIRP.
8 bed days spent.
Postmortem clinical diagnosis: chronic glomerulonephritis. Complications: uremia; symptomatic hypertension. Subarachnoid-parenchymal bleeding into the right hemisphere. Hypertensive disease, stage III, risk of stage IV. Atherosclerosis of the cerebral arteries. Left-sided hemiplegia. Associated: fatty hepatosis. Hypostatic pneumonia. Ischemic heart disease. Stable exertional angina, grade III.
Brief clinical epicrisis
She was admitted via the NSR from home in serious condition. It was found that against the background of an increase in blood pressure, a headache arose, and she lost consciousness. Was at home for 2 days, after which weakness appeared in the left limbs, continued to stay at home for a week. On admission, neurologically - left-sided hemiplegia. Arterial hypertension 110/70 mm Hg. Art., the number of heartbeats is 80 beats / min., the number of respiratory movements is 19 per minute. Electrocardiographic: left ventricular hypertrophy and diffuse changes

EXAMPLES OF COMPLETING THE DEATH CERTIFICATE
The task. Fill out the death certificate
Problem A 22-year-old woman had a pregnancy without complications. The size of the pelvis is normal. In the second stage of labor, secondary weakness of labor activity was registered, and rhodostimulation was performed. In connection with the signs of fetal hypoxia, abdominal forceps were applied. A dead male fetus weighing 3500 g and 53 cm long was retrieved. Autopsy: rupture of the tentorium of the cerebellum, subdural hemorrhage.
Perinatal death certificate
a) rupture of the cerebellar tentorium in case of birth injury
b) intrauterine hypoxia, first noted during childbirth
c) secondary weakness of labor
d) -
e) rhodostimulation, abdominal forceps

The task. Make a postmortem diagnosis and write a certificate of perinatal death
Problem number 1. The pregnancy was uneventful. Labor is premature at 32 weeks. After birth, the newborn has frequent attacks of asphyxia, symptoms of cerebrovascular accident. Death on the 2nd day.
On the section there is hemorrhage in the subependymal zone of the lateral ventricles of the brain substance with a breakthrough and tamponade of the lateral, 3rd and 4th cerebral ventricles. Venous congestion of internal organs.
Pathological diagnosis:
The underlying disease. Intraventricular hemorrhage with tamponade of the lateral, 3rd and 4th ventricles of the brain.
Complication of the underlying disease. Partial lung atelectasis. Venous congestion of internal organs.
Concomitant disease. Prematurity.
Perinatal death certificate
a) hemorrhage in the ventricles of the brain
b) prematurity, partial lung atelectasis
c) the cause of death of the newborn on the part of the mother has not been established
d) -
e) –

EXAMPLE OF COMPLETING THE AUTOPSY PROTOCOL
Visual inspection. The corpse of a 3-month-old boy, of the correct constitution, sharply reduced nutrition. Body weight 3600 g. The skin on the trunk and limbs is wrinkled, dry. There is almost no subcutaneous fat. The head is stretched anteroposteriorly, the cerebral skull is somewhat asymmetrical. Rigor mortis is absent. Cadaveric spots are located on the back surface of the body, bluish-purple. Osteoarticular system without visible changes. Mucous membranes of the nose and mouth are dry, pale gray,
Abdomen. The peritoneum is shiny, with poor blood supply. There is no free liquid. The intestinal loops are straightened, swollen, contain a small amount of tiny putty-like light yellow masses. Big and small omentums contain almost no fatty tissue. The liver protrudes from under the edge of the costal arch by 2-2.5 cm, elastic. The spleen is located along the edge of the

costal arch. Rib cage. The lungs completely fill the pleural cavity, with the anterior edges covering the anterior mediastinum throughout.
There is no free fluid in the pleural cavities. Pleural sheets are dull, cloudy, mucous. In the paravertebral regions on the right, there are dense, difficult to separate adhesions. The tissue in the thymus is edematous and has a mucous appearance. The thymus is weakly contoured, together with edematous tissue it weighs 3 g, in the section it is represented by a narrow body of a fleshy consistency, the tissue in the section is pale gray, the thickness is 0.2-0.3 cm.
Cranial cavity. Skull bones of uneven density, intact. The dura mater is shiny, clean. The pia mater is edematous, full-blooded, transparent, shiny. Brains are smoothed out. The border between gray and white matter in the section is clear. The brain tissue is moist, with the exception of the paraventricular zones, where diffuse massive "callous" areas are determined, passing into ordinary tissue without clear boundaries. The ventricles are somewhat dilated, the ependyma is full-blooded, the contents are transparent liquor. Appendages of the brain of the correct structure,
Respiratory system. The mucous membrane of the larynx, trachea and bronchi is pale pink, dull. There is a small amount (traces) of mucous masses in the lumen of the respiratory tract. In the posterolateral parts of the lungs (2/3 of the volume) of hepatic density, in places bumpy, dark bluish from the surface. On the cut, dark bluish areas turn into gray-red. In the areas of the paravertebral zones, the anatomical pattern of the lungs is erased. With a detailed visual examination, the anterior sections of the lungs have increased airiness, pale pink color. When squeezed from the surface of the incision, a small amount of foamy pinkish liquid is released, and from the bronchi, mainly small, viscous, yellowish-whitish (pus-like) masses.
Circulatory organs. The heart is 4x3x3 cm in size, with the correct anatomical structure. The myocardium is flabby, dull, pale pink. The endocardium, valves of the heart and intima of large vessels are transparent, clean. In the cavities of the heart - mixed clots of blood. The intima of the aorta and pulmonary artery is smooth, dull white.
The digestive organs. The mucous membrane of the gastrointestinal tract is pale pink with increased blood filling of the tops of the folds. The liver measures 10x8x7x3 cm, smooth from the surface, resiliently elastic. On the cut, the anatomical pattern is preserved, the cut surface is brownish-pink. The bile ducts are patent, the gallbladder contains a gelatinous flowing liquid, the color of starch. The bladder walls are thinned (tissue paper thickness). Due to its viscosity, the content does not enter the duct when pressed. The pancreas is 7x1x1 cm in size, woody density. In the tail region there is a tuberous thickening, dense to the touch. The small-lobed pattern is emphasized on the section.
Urinary organs. The kidneys are 4x3x2 cm in size, the capsule can be easily removed, the surface is lobular. On the cut, the cortex and medulla are clearly demarcated. The cut surface is reddish-cyanotic. The mucous membrane of the urinary tract is pale gray, shiny. The genitals are shaped according to age and gender.
The adrenal glands are leaf-shaped; in the section, the cortical substance is clearly delimited from the medullary. The spleen is 5x3x2 cm in size, resiliently elastic, with a dark cherry-colored pulp on the cut. The lymph nodes are very small (0.2x0.2 cm), bluish. The bone marrow is red, not abundant.

HISTOLOGICAL EXAMINATION
Intestines: catarrhal-erosive enterocolitis; in the epithelium and the lumen of the glands - eosinophilic masses.
The wall of the gallbladder: the epithelium is flattened, in places multi-row, the remnants of mucous eosinophilic masses are visible, the wall is thinned.
Brain: gliosis of the subependymal zones.
Liver; blood stasis, protein dystrophy.
Pancreas; cystic fibrosis.
Lungs: abscess pneumonia, bronchiectasis with metaplasia of the epithelium, in the glands - the accumulation of eosinophilic masses.
Thymus: The embryonic structure of the thymus gland.
Sample answer
Pathological diagnosis
The underlying disease. Cystic fibrosis (cystic fibrosis of the pancreas), mixed pulmonary-intestinal form.
Complication of the underlying disease. Bilateral drainage, destructive pneumonia. Catarrhal-erosive enterocolitis. Dystrophic changes in internal organs and tissues. Focal gliosis of the brain.
Concomitant disease. Congenital hypoplasia of the thymus. Lymph node hypoplasia.
Pathological epicrisis. In this case, the main disease should be considered cystic fibrosis, which occurs with damage to the pancreas, lungs, intestines and gallbladder. Developed pneumonia should be considered a complication of the underlying disease and the immediate cause of death. A feature of this case, which played a certain role as an additional unfavorable factor, is congenital hypoplasia of the thymus and lymphoid tissue. The discrepancy between clinical and pathoanatomical diagnoses, obviously, should be considered as a category I discrepancy, since diagnostic errors were made at the previous stages of treatment. In this medical institution, the wrong diagnosis was caused, apparently, by the short-term stay (12 hours) of the patient in the hospital and the complexity of the case.