Ministry of Science and Higher Education of the Russian Federation Ulyanovsk State University	The form	
F-Work program of the discipline		

APPROVED
by the decision of the Academic Council of the USU
Institute of Medicine, Ecology and Physical Culture
17.05.2023 Record No. 9/250
Chairman Miglenko V.I.
(Signature, Name)
«17» May 2023.

EDUCATIONAL PLAN

Subject:	Oncology, radiation therapy
Faculty	Medical
Department	Oncology and radiation diagnostics
Course	6

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: « 01 » of September 2023.
The program was updated at the meeting of the department: №10 of 27.06.2024.
The program was updated at the meeting of the department: №__ of ___ 20___.

Information about the authors:

Initials	Department	Position, academic degree, scientific rank
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AGREED	AGREED
Head of the department of Oncology and radiation diagnostics, implementing the discipline	Head of the graduating department of Hospital therapy
_____ / Sharafutdinov M.G. / *Signature* «17» 05. 2023	_____ / Vize-Khripunova M.A./ *Signature* «17» 05. 2023

1. GOALS AND OBJECTIVES OF LEARNING THE DISCIPLINE:

Objectives of mastering the discipline:

- formation of a basic oncological outlook, knowledge in students,

skills and practical skills required: for early diagnosis
oncological diseases; to carry out a complex of medical and preventive measures; to determine the tactics in relation to cancer patients.

- mastering the theoretical foundations and practical skills of students in the use of radiation therapy in the treatment of malignant tumors

Objectives of mastering the discipline:

- teaching students the most important diagnostic methods; allowing timely diagnosis of tumor diseases, developing skills oncological alertness
- teaching students to recognize signs of tumor lesions during examination of a patient, determining the severity of the course of the tumor process,
- teaching students the ability to identify the leading pathognomonic signs, symptoms, syndromes, etc.,
- teaching students the choice of optimal methods of instrumental examination for tumor diseases and the compilation of an algorithm for differential diagnosis;
- training in carrying out the full scope of medical, rehabilitation and preventive measures among patients with various nosological forms of diseases;
- teaching students to provide first aid to cancer patients in case of emergencies;
- teaching students how to choose the optimal drug, radiation, and surgical treatment of the most common malignant and benign tumor diseases;
- training students in the preparation of medical documentation (medical records of an inpatient or outpatient patient, a certificate of incapacity for work, a statistical ticket, etc.);
- familiarization of students with the principles of organization and operation of medical and preventive institutions of various types;
- developing skills in studying scientific literature and official statistical reviews;
- the formation of communication skills with the patient, taking into account ethics and deontology, depending on the revealed pathology and characterological characteristics of the patients;
- formation of the student's communication skills with the team.

2. PLACE OF DISCIPLINE IN THE STRUCTURE OF OPOP:

Discipline "Oncology, radiation therapy" refers to the basic part of the disciplines of the curriculum of the direction of training "General Medicine".

Teaching oncology is based on the knowledge gained during the study of the following disciplines:

Propedeutics of internal diseases **GPC-7; PC-2**
General surgery. Introduction to the specialty **GPC-7; PC-2**
Pharmacology **GPC-7**
Pathological anatomy **PC-2**
Dentistry **GPC-7; PC-2**
Dermatovenereology **PC-2**
Neurology, medical genetics. Neurosurgery **PC-2**
Otorhinolaryngology **PC-2**
Pediatrics **GPC-11; PC-2**
Faculty surgery **PC-2**
Obstetrics and gynecology **GPC-7; PC-2**
Faculty therapy **GPC-7; PC-2**
Ophthalmology **PC-2**
Psychiatry, medical psychology **GPC-7; GPC-11; PC-2**

Endocrinology **GPC-7; PC-2**
Hospital therapy **GPC-7; GPC-11; PC-2**
Infectious diseases **GPC-7; PC-2**
Traumatology, orthopedics **PC-2**
Polyclinic therapy **GPC-7; GPC-11**
Hospital surgery, pediatric surgery **GPC-7; GPC-11; PC-2**
Anesthesiology, resuscitation and intensive care **GPC-7**
Phthisiology **GPC-7; PC-2**
Epidemiology **GPC-11**
Clinical pharmacology **GPC-7**
Forensic medicine **PC-2**
Oncology, radiation therapy **GPC-7; GPC-11; PC-2**
Radiation diagnostics **GPC-11; PC-2**
Clinical psychology **GPC-7; GPC-11**
Analysis of scientific text (obstetrics) **PC-2**
Topical issues of gynecology **PC-2**
Modern aspects of oncology **PC-2**
Dialogue between a doctor and a patient (diseases of the gastrointestinal tract) **PC-2**
Topical issues of internal diseases **PC-2**
Urology and Andrology **PC-2**
Preparation for clinical practice **PC-2**
Analysis of scientific text (gynecology) **PC-2**
Dialogue between a doctor and a patient (diseases of the excretory system) **PC-2**
Diagnostics and treatment of extrapulmonary tuberculosis **PC-2**
Surgical gastroenterology and endoscopy **PC-2**
Analysis of scientific text (therapy) **PC-2**
Analysis of scientific text (surgery) **PC-2**
Dialogue between a doctor and a patient (diseases of the cardiovascular system) **PC-2**
Dialogue between a doctor and a patient (diseases of the respiratory system) **PC-2**
Topical issues of HIV infection **PC-2**
Clinical electrocardiography **PC-2**
Therapeutic patient care **PC-2**
Junior medical staff assistant **PC-2**
Familiarization practice **PC-2**
Nurse assistant **PC-2**
Ward nurse Assistant **PC-2**
Practice for obtaining professional skills and professional experience in the positions of paramedical personnel **PC-2**
Diagnostic practice **PC-2**
Inpatient physician assistant **PC-2**
Outpatient clinic physician assistant **GPC-7**
Preparation and passing of the state exam **GPC-7; GPC-11; PC-2**

3. LIST OF PLANNED LEARNING OUTCOMES ON THE DISCIPLINE (MODULE), CORRELATED TO THE PLANNED OUTCOMES OF THE BASIC PROFESSIONAL EDUCATIONAL PROGRAM

Code and name of the implemented competence	The list of planned learning outcomes for the discipline (module), correlated with indicators of achievement (IA) of

	competencies
GPC-7 (able to prescribe treatment and control its effectiveness and safety)	IA-1 (GPC-7) Know: classification and main characteristics of drugs, pharmacodynamics and pharmacokinetics, indications and contraindications for the use of drugs, side effects; general principles for the preparation of prescriptions and the preparation of prescription drug prescriptions; methods of treatment and indications for their use; the mechanism of the therapeutic action of physiotherapy exercises and physiotherapy, indications and contraindications to their appointment, the peculiarities of their implementation; types and methods of modern general anesthesia (mask, endotracheal, intravenous), prevention of postoperative pulmonary complications, - clinical and pharmacological characteristics of the main groups of drugs and rational choice of specific drugs in the treatment of major pathological syndromes of diseases and emergency conditions in patients, including the basics of anti-doping legislation. IA-2 (GPC-7) Be able to: use physical, chemical and biological equipment; classify chemical compounds based on their structural formulas; predict the direction and result of physical and chemical processes and chemical transformations of biologically important substances; use the IUPAC nomenclature for compiling names according to the formulas of typical representatives of biologically important substances and drugs; to analyze the action of drugs in terms of the totality of their pharmacological properties and the possibility of their use for therapeutic treatment; write out prescriptions for medicines, use various dosage forms in the treatment of certain pathological conditions, based on the characteristics of their pharmacodynamics and pharmacokinetics; use basic antibacterial antiviral and biological drugs; to evaluate possible manifestations of drug overdose and how to eliminate them; formulate indications for the chosen method of treatment, taking into account etiotropic and pathogenetic agents, substantiate pharmacotherapy in a particular patient with major pathological syndromes and emergency conditions, determine the route of administration, regimen and dose of drugs, evaluate the effectiveness and safety of the treatment; apply various methods of drug administration. IA-3 (GPC-7) Own: methods of analysis of clinical, laboratory and instrumental data to determine the algorithm for patient management, drawing up drug and non-drug treatment regimens.
GPC-11 (capable to prepare and apply scientific, scientific production, design, organizational, managerial and regulatory documentation in	IA 1 (GPC-11) Know: maintaining standard of accounting and reporting medical documentation in medical organizations; fundamentals of the technique of translating a scientific text in a specialty, the basics of annotating and abstracting a scientific text; the main types of special dictionary and reference literature and the rules for

health care system)	working with it; science concept; classification of sciences; scientific research and its stages; methodological foundations of scientific knowledge, modern classification of diseases. IA-2 (GPC-11) Be able to: use databases for storing and using information in healthcare; use computer programs to solve problems of mathematical statistics in professional activities; interpret and use the data of the main instrumental examination methods (ECG, ultrasound, X-ray, ECHO CS, RF, FGDS, etc.), take an ECG on your own; correctly draw up the documentation. IA-3 (GPC-11) Possess: the basics of working on a personal computer, the ability to maintain medical records.
PC-2 (readiness to collect and analyze patient complaints, data from his anamnesis, examination results, laboratory, instrumental, pathological, anatomical and other studies in order to recognize a condition or establish the presence or absence of a disease)	Know: diagnostic methods, diagnostic capabilities of methods of direct examination of a patient of a therapeutic, surgical and obstetric-gynecological profile; modern methods of clinical, laboratory, instrumental examination of patients (including endoscopic, radiological methods, ultrasound diagnostics). Be able to: determine the patient's status - collect anamnesis, interview the patient and / or his relatives, conduct a physical examination of the patient (examination, palpation, auscultation); conduct a primary examination of systems and organs: respiratory, cardiovascular, blood and hematopoietic organs, digestive, endocrine and urinary; outline the volume of additional studies in accordance with the prognosis of the disease, to clarify the diagnosis and obtain a reliable result. Possess: methods of general clinical objective examination (questioning, examination, palpation, percussion, auscultation) for diseases of internal organs; interpretation of the results of laboratory, instrumental diagnostic methods for pathology of internal organs.

4. TOTAL EMPLOYMENT OF THE DISCIPLINE

4.1. Discipline volume in credit units (total) _____ 3_____

4.2. Discipline volume by type of academic work (in hours) 108 **hours**

Type of educational work	Number of hours (full-time education)	
	Total according to plan	Incl. by semester eleven
1	2	3
Contact work of students with the teacher	52	52
Auditory lessons:	52	52
Lectures	10	10
Interactive classes	6	6
practical and seminars	42	42
laboratory work (laboratory practice)	-	-
Independent work	56	56
Current control (quantity and type: cont. Work, colloquium)	Oral questioning, testing,	Oral questioning, testing,

	situational tasks	situational tasks
Course work	-	-
Types of intermediate certification (exam, test)	Offset	Offset
Total hours by discipline	108	108

4.3. Content of the discipline (module.) Distribution of hours by topics and types of academic work:

Full-time study form

Title and sections and topics	Total	Types of training sessions					Knowledge current control form
		Auditory lessons			Interactive classes	Independent work	
		lectures	practical training, seminar	laboratory work			
1	2	3	4	five	6	7	8
Section 1. Tumors of the skin, bones, soft tissues, head and neck							
1. Skin cancer, melanoma. Thyroid cancer	8			3	1	5	Oral questioning, testing, situational tasks
2. Tumors of bones and soft tissues	9	1		3	1	5	Oral questioning, testing, situational tasks
Section 2. Lung cancer							
3. Lung cancer	9	1		3	1	5	Oral questioning, testing, situational tasks
Section 3. Tumors of the digestive tract							
4. Cancer of the esophagus and stomach.	9	1		3	1	5	Oral questioning, testing, situational tasks
5. Colorectal cancer. Tumors of the liver of the biliopancreatoduodenal zone	10	1		4	1	5	Oral questioning, testing, situational tasks
Section 4. Tumors of the female reproductive system							
6. Breast cancer.	10	1		4		5	Oral questioning, testing, situational tasks
7. Cancer of the body and cervix, ovarian cancer	10	1		4		5	Oral questioning, testing, situational tasks
Section 5. Lymphoproliferative diseases							
8. Hodgkin's	10	1		4		5	Oral

disease. Non-Hodgkin lymphomas							questioning, testing, situational tasks
Section 6. Oncourology							
9. Cancer of the kidney, bladder and prostate	10	1		4	1	5	Oral questioning, testing, situational tasks
Section 7. Radiation therapy							
10. Types of ionizing radiation and their sources. Radiation therapy methods. Radiosensitivity and radio modification	12	1		5		6	Oral questioning, testing, situational tasks
11. Pre-ray period. Ray period. Post-radiation period. Complications of radiation therapy and control of them. Offset	11	1		5		5	Oral survey, testing
Total	108	10		42	6	56	

5. CONTENT OF THE DISCIPLINE (MODULE)

Section 1. Tumors of the skin, thyroid gland, bones and soft tissues.

Topic 1 . Skin cancer, melanoma. Thyroid cancer.

Topic content: Etiopathogenesis of skin cancer, contributing factors. Optional and obligate precancerous skin. Histological and clinical variants of skin cancer. Principles of diagnosis and treatment of skin cancer. Epidemiology and etiopathogenesis of melanoma. Factors contributing to the malignancy of pigmented nevi. Signs of malignant nevus. Special examination methods. Indications, contraindications and method of sampling material for cytological and histological studies. Principles of radical treatment. Thyroid cancer. Morbidity, contributing factors, treatment tactics for thyroid nodules. Prevention. Pathological characteristics. Metastatic pathways. The clinical picture. Diagnostic methods. General principles and results of treatment.

Topic 2. Tumors of bones and soft tissues.

Content of the topic: Etiopathogenesis of soft tissue and bone tumors. Classification of benign and malignant soft tissue tumors. The clinical picture. Features of the diagnosis of tumors of soft tissues and bones. Principles of radical and palliative care. The ability to perform organ-preserving and reconstructive plastic surgeries. Rehabilitation of patients with bone tumors.

Section 2. Lung cancer.

Topic 3. Lung cancer.

Content of the topic: Epidemiology of lung cancer. Age and sex characteristics. Contributing factors. Prevention. Issues of etiopathogenesis of various morphological forms of malignant lung tumors. Pathological characteristics. Growth forms. The concept of central and peripheral cancer. Regularities of metastasis, stage classification. The clinical picture. Differential diagnosis. Diagnostics. The main radiological symptoms. Cytological and endoscopic

examination. Additional examination system for suspected central and peripheral cancer. Screening, high-risk groups. General principles of treatment, the choice of treatment methods depending on localization, stage and morphological structure. Rehabilitation of patients with lung cancer.

Section 3. Tumors of the digestive tract.

Topic 4. Cancer of the esophagus. Stomach cancer.

Content of the topic: Epidemiology and etiopathogenesis of esophageal cancer. Growth forms, histological structure, metastatic pathways. Clinic. Pathogenesis of clinical symptoms. Differential diagnostics. X-ray method in diagnostics. Esophagoscopy. Basic principles of radical and palliative treatment of esophageal cancer. Epidemiology of stomach cancer. The value of exogenous and endogenous carcinogens. Precancerous diseases for stomach cancer, peculiarities of dispensary observation of patients with precancerous stomach diseases. Concept of early stomach cancer. Growth forms. Pathological anatomy of stomach cancer, pathways of metastasis. The clinical picture of stomach cancer, depending on the location of the lesion and the form of growth. Small Signs Syndrome. Differential diagnosis for gastric discomfort syndromes, dysphagia and pyloric stenosis. Diagnostics. X-ray and complex endoscopic examination. Early diagnosis methods. Radical and palliative operations, indications, technique. Combined treatment for stomach cancer. Long-term results.

Topic 5. Colorectal cancer. Tumors of the liver and biliopancreatoduodenal zone.

Content of the topic: Epidemiology, morbidity. Contributing factors. Precancerous diseases. Pathological characteristics. Growth forms and tumor localization. Metastatic pathways. The clinical picture of cancer of the right and left halves of the colon. Basic clinical options. Diagnostics, the value of X-ray and endoscopic examination. Principles of radical treatment of colon cancer, the extent of surgery depending on the location of the tumor. The role of drug therapy in the treatment of colon cancer. Rectal cancer. Epidemiology, morbidity. Contributing factors. Precancerous diseases. Pathological characteristics. Growth forms and tumor localization. Metastatic pathways. The clinical picture depending on the location and form of growth. Differential diagnosis for rectal bleeding (hemorrhoids, polyps, dysentery, anal fissure). Diagnostics (digital examination of the rectum, sigmoidoscopy). Principles of radical treatment of rectal cancer, types of surgical interventions. The role of radiation and drug therapy in the treatment of rectal cancer. Principles of palliative treatment for rectal cancer, types of palliative surgery. Primary and metastatic liver cancer. Growth forms and histological structure. Etiopathogenesis of hepatocellular cancer. Liver cancer clinic. Development periods and clinical forms. Diagnostic methods. Treatment principles. Morbidity and mortality. Contributing factors. Pathomorphology: localization, macroscopic forms, histological structure, metastasis. Pancreatic cancer symptoms. The clinical picture depending on the localization of the tumor. Diagnostics. Clinical minimum examination. "Alarm signals". Differential diagnosis of jaundice due to a tumor of the head of the pancreas. Modern examination methods: ultrasound, CT, MRI. Principles of radical and palliative treatment of pancreatic cancer.

Section 4. Tumors of the female reproductive system.

Topic 6. Precancerous diseases and breast cancer.

Content of the topic: Epidemiology. Morbidity and mortality. Etiology and pathogenesis of tumor diseases of the mammary glands. Mastopathy, etiopathogenesis, classification, clinical picture and management tactics. Early diagnosis. Screening. Pathological characteristics of breast cancer. Classification of breast cancer by stages. Clinical variants of breast cancer. Nodular form, skin symptoms. Diffuse and specific variants of breast cancer. Diagnostic principles (mammography, ultrasound, MRI, determination of hormonal status). Surgical treatment of breast cancer, the main types of surgical interventions. Radiation therapy for breast cancer. Chemotherapy and hormone therapy for breast cancer. Breast cancer prevention. Rehabilitation of patients with breast cancer.

Topic 7. Cancer of the body and cervix, ovarian cancer.

Content of the topic: The structure and general characteristics of malignant and benign tumors of the female genital organs. Viral theory of cervical cancer carcinogenesis. Epidemiology of cervical and uterine cancer. Background and precancerous diseases of the cervix. Screening for cervical pathology. Pathological anatomy of cervical cancer, metastatic pathways, classification, staging. Diagnostic algorithm for suspected cervical cancer. Clinic. Treatment methods. The possibilities of organ-preserving treatment. Forecast. Epidemiology of cancer of the body of the uterus. Background and precancerous endometrial pathology. Variants of the pathogenesis of cancer of the uterine body. Uterine Cancer Clinic. Diagnostics. The main methods of treatment. Forecast. Epidemiology of ovarian cancer. Theories of ovarian tumors. The role of heredity in the pathogenesis of ovarian cancer. Histological classification of ovarian tumors, features of ovarian cancer metastasis. Diagnostic search for tumor-like formation of the ovary. Ovarian Cancer Clinic. The main treatments for ovarian cancer. Possibilities of organ-preserving methods of treatment. Recurrent ovarian cancer. Ovarian cancer palliative care and rehabilitation. Forecast.

Section 5. Lymphoproliferative diseases.
Topic 8. Hodgkin's disease. Non-Hodgkin's lymphomas.
Topic content: Hodgkin's disease (HMD). Epidemiology. Modern concepts of etiopathogenesis. The role of viruses in the etiology of Hodgkin's disease. Histological classification. Staging. Signs of intoxication and their predictive value. Clinic with the defeat of various groups of lymph nodes. Differential diagnosis of lymphadenopathies. The importance of morphological examination, puncture and surgical biopsy. The scope of the diagnostic examination. The value of diagnostic laparotomy. The choice of treatment method depending on the clinical characteristics. Treatment results, prognosis. Rehabilitation. Morphological characteristics of non-Hodgkin lymphomas. Differential diagnosis of lymphoproliferative diseases. Treatment principles. Forecast.

Section 6. Oncourology.
Topic 9. Cancer of the kidney, bladder, prostate.
Content of the topic: Epidemiology of cancer of the urinary system **.** Classification of benign and malignant renal tumors. Clinic of kidney cancer depending on the location of the tumor, diagnosis and staging. Basic principles and methods of kidney cancer treatment. Bladder cancer theories. Diagnosis and staging of bladder cancer. The main methods of treatment. Types of surgical interventions on the bladder. Possibilities of chemotherapy and immunotherapy for kidney and urinary tract cancer. Epidemiology of prostate cancer. Differential diagnosis of adenoma and prostate cancer. Screening for prostate cancer. Clinic. Treatment methods depending on the stage and age of the patient. Forecast.

Section 7. Radiation therapy.
Topic 10. Types of ionizing radiation and their sources. Radiation therapy methods. Radiosensitivity and radio modification.
Content of the topic: The concept of radiation therapy, the main stages of development. The concept of cooperation in radiation therapy. Dosimetry concept, basic dosimetric units. The place of radiation therapy in the treatment of cancer patients. The concept of ionizing radiation, types of AI. Sources of AI. Physical and biological effects of AI. The concept of radiosensitivity. Factors affecting the radiosensitivity of systems. Radiomodification, physical and chemical factors. Radiation therapy methods: external beam radiation therapy. Contact radiation therapy, scope. Systemic radiation therapy, essence, main indications.
Topic 11. Pre-ray period. Ray period. Post-radiation period. Complications of radiation therapy and control of them.
Content of the topic: Pre-radiation period: clinical topometry, essence, necessary equipment, planning of radiation therapy. Dose fractionation modes. Radiation period, its features. Post-radiation period:

radiation complications, their classification and control of them. Radiation therapy for non-neoplastic diseases. Directions of progress in radiation oncology.

6. TOPICS OF PRACTICAL AND SEMINAR LESSONS

Section 1. Tumors of the skin, bones and soft tissues.

Topic 1 . Skin cancer, melanoma. Thyroid cancer.

Goal:

To study the etiology, pathogenesis, diagnosis, clinical picture, differential diagnosis, treatment of skin and thyroid tumors.

Questions on the topics of the section:

1. Epidemiology of skin cancer
2. Etiopathogenetic factors in skin cancer.
3. Optional and obligate precancerous skin.
4. Skin cancer morphology.
5. Classification of skin cancer by stages and TNM system.
6. Skin cancer clinic.
7. Diagnosis of skin cancer, identify methods of early diagnosis.
8. Principles of radical treatment for skin cancer
9. Palliative care for incurable skin cancer.
10. Melanoma. Epidemiology and etiopathogenesis.
11. Signs of malignant nevus.
12. Melanoma. Localization, clinic, features of metastasis.
13. Melanoma. The principles of diagnosis and treatment.
14. Thyroid cancer. Etiological factors.
15. Thyroid cancer. Pathological and clinical classification.
16. Thyroid Cancer Clinic.
17. Diagnosis of thyroid cancer.
18. Principles of radical treatment for thyroid cancer.
19. Principles of palliative care for thyroid cancer.

Results:

The student must be able to diagnose a tumor of the skin and thyroid gland and prescribe adequate (therapeutic and surgical) treatment in accordance with the diagnosis.

Topic 2 . Tumors of bones and soft tissues.

Goal:

To study the etiology, pathogenesis, diagnosis, clinical picture, differential diagnosis, treatment of bone and soft tissue tumors.

Questions on the topics of the section:

1. Etiopathogenesis of soft tissue tumors.
2. Morphological and clinical classification of soft tissue tumors.
3. Clinic of soft tissue tumors.
4. Features of diagnostics of soft tissue tumors (ultrasound, CT, MRI, angiography)
5. Principles of radical treatment of soft tissue tumors.
6. Etiopathogenetic factors of bone tumors.
7. Morphological and clinical classification of bone tumors.
8. Clinic of malignant bone tumors.
9. Fundamentals of the diagnosis of bone tumors.
10. Principles of radical treatment of bone tumors (X-ray, CT, MRI, angiography, scintigraphy).
11. Palliative treatment of soft tissue and bone tumors.

Results:

The student must be able to diagnose a tumor of bones and soft tissues and prescribe adequate (therapeutic and surgical) treatment in accordance with the diagnosis.

Section 2. Lung cancer.

Topic 3. Lung cancer.

Goal:

To study the etiology, pathogenesis, diagnosis, clinic, differential diagnosis, treatment of lung cancer.

Questions on the topics of the section:

1. General information about mediastinal tumors. The basics of their diagnosis, clinical picture and treatment.
2. General characteristics of benign lung tumors.
3. Epidemiology of lung cancer in Russia, CIS countries and industrialized Western countries, USA and Canada.
4. Lung cancer morbidity and mortality.
5. Etiology and pathogenesis of lung cancer.
6. Pathological anatomy of lung cancer.
7. Lung cancer morphogenesis, its influence on tactics and treatment results.
8. Classification of lung cancer by stages.
9. TNM classification of lung cancer.
10. Clinical and anatomical classification of lung cancer.
11. General principles of lung cancer diagnostics (radiography, bronchoscopy, CT, MRI).
12. Central Lung Cancer Clinic.
13. Clinic for peripheral lung cancer.
14. Clinic of atypical forms of lung cancer.
15. Principles of radical treatment for lung cancer.
16. Palliative treatment of lung cancer.

Results:

The student must be able to diagnose lung cancer and prescribe adequate (therapeutic and surgical) treatment in accordance with the diagnosis.

Section 3. Tumors of the digestive tract.

Topic 4. Cancer of the esophagus. Stomach cancer.

Goal:

To study the etiology, pathogenesis, diagnosis, clinical picture, differential diagnosis and treatment of esophageal and gastric cancer.

Questions on the topics of the section:

1. Benign tumors of the esophagus.
2. Epidemiology of esophageal cancer.
3. Etiological factors in the development of esophageal cancer.
4. Pathological anatomy of esophageal cancer.
5. Classification of cancer of the esophagus by stage.
6. TNM classification of esophageal cancer.
7. Clinic of esophageal cancer, pathogenesis of clinical symptoms.
8. Diagnosis of esophageal cancer (X-ray, CT, endoscopic methods).
9. Principles of radical treatment for esophageal cancer.
10. Principles of palliative treatment for esophageal cancer.
11. Clinic, diagnosis and treatment of benign stomach tumors. The role of endoscopic techniques.

12. Epidemiology of stomach cancer.
13. Etiology and pathogenesis of stomach cancer.
14. Classification of stomach cancer by stages.
15. TNM classification of stomach cancer.
16. Pathological anatomy of stomach cancer.
17. Small signs syndrome in gastric cancer.
18. Clinic of stomach cancer, depending on the localization of the tumor process and the form of growth.
19. Diagnostics of stomach cancer (X-ray, endoscopic methods).
20. The main types of radical surgery for stomach cancer.
21. Palliative treatment of stomach cancer.

Results:

The student should be able to diagnose cancer of the esophagus and stomach and prescribe adequate (therapeutic and surgical) treatment in accordance with the diagnosis.

Topic 5. Colorectal cancer. Tumors of the liver and biliopancreatoduodenal zone.

Goal:

To study the etiology, pathogenesis, diagnosis, clinical picture, differential diagnosis and treatment of colorectal cancer, liver and pancreas cancer.

Questions on the topics of the section:

1. Epidemiology and etiopathogenesis of colon cancer. Precancerous diseases.
2. Pathological classification of rectal cancer.
3. Clinical classification of colon cancer by stage.
4. Forms of growth and localization of colon cancer. Metastatic pathways.
5. The clinical picture of cancer of the right and left halves of the colon. Basic clinical options.
6. Principles of Colon Cancer Diagnosis.
7. Principles of radical treatment for colon cancer. Types of surgical interventions.
8. Etiopathogenesis of rectal cancer.
9. Pathological classification of rectal cancer.
10. Classification of rectal cancer by stage.
11. Rectal cancer clinic depending on the location and form of growth.
12. Diagnosis of rectal cancer, which of the many methods, in your opinion, is the main one?
13. Principles of radical treatment for rectal cancer. Types of surgical interventions.
14. The place of radiation and drug therapy in the treatment of rectal cancer.
15. Principles of palliative treatment for rectal cancer.
16. Epidemiology of liver cancer.
17. Primary and metastatic liver cancer.
18. Etiopathogenesis of hepatocellular cancer.
19. Pathological anatomy of liver cancer.
20. Liver cancer clinic. Development periods and clinical forms.
21. Methods for diagnosing liver cancer.
22. Principles of radical treatment for liver cancer.
23. Principles of palliative treatment for liver cancer.
24. Etiopathogenesis of pancreatic cancer. Contributing factors.
25. Pathomorphology of pancreatic cancer, metastasis.
26. Pancreatic cancer symptoms. "Alarm signals".
27. The clinical picture depending on the localization of the tumor.
28. Pancreatic cancer diagnostics (ultrasound, CT, MRI).
29. Differential diagnosis of jaundice due to a tumor of the head of the pancreas.

30. Principles of radical treatment for pancreatic cancer.
31. Principles of palliative treatment for pancreatic cancer.

Results:

The student must be able to diagnose colorectal cancer, liver and pancreatic cancer and prescribe adequate (therapeutic and surgical) treatment in accordance with the diagnosis.

Section 4. Tumors of the female reproductive system.

Topic 6. Precancerous diseases and breast cancer.

Goal:

To study the etiology, pathogenesis, diagnosis, clinic, differential diagnosis and treatment of breast tumors.

Questions on the topics of the section:

1. Precancerous diseases of the mammary glands.
2. Etiology and pathogenesis of breast cancer.
3. Pathogenetic variants of breast cancer.
4. Breast cancer morbidity and mortality, screening programs.
5. Nodular form of breast cancer, the main symptoms and the mechanism of their formation.
6. Diffuse variants of breast cancer.
7. Diagnostics of breast cancer (mammography, ultrasound, MRI, determination of hormonal status).
8. Surgical treatment of breast cancer.
9. Chemotherapy for breast cancer.
10. Radiation therapy for breast cancer.
11. Hormone therapy for breast cancer.
12. Palliative treatment for breast cancer.
13. Breast cancer prevention.

Results:

The student must be able to diagnose breast cancer and prescribe adequate (therapeutic and surgical) treatment in accordance with the diagnosis.

Topic 7. Cancer of the body and cervix, ovarian cancer.

Goal:

To study the etiology, pathogenesis, diagnosis, clinic, differential diagnosis and treatment of cancer of the body, cervix and ovaries.

Questions on the topics of the section:

1. The structure and general characteristics of benign tumors of the female genital area.
2. The structure and general characteristics of malignant tumors of the female genital area.
3. Cervical cancer, epidemiology, morbidity and mortality.
4. Etiology of cervical cancer.
5. Localization options for cervical cancer.
6. Precancer and background diseases in cervical cancer.
7. Pathological anatomy of cervical cancer.
8. Classification of cervical cancer by stage.
9. TNM classification of cervical cancer.
10. Diagnosis of cervical cancer.
11. Screening for cervical cancer.
12. Clinic for cervical cancer.
13. Principles of radical treatment for cervical cancer.
14. Palliative care for cervical cancer.
15. Benign tumors of the body of the uterus.

16. Pathogenetic variants of endometrial cancer.
17. Endometrial Cancer Clinic.
18. Endometrial cancer diagnostics.
19. Principles of radical treatment for endometrial cancer.
20. Palliative treatment of endometrial cancer.
21. Etiopathogenesis of ovarian cancer. The role of heredity in the pathogenesis of ovarian cancer.
22. Benign ovarian tumors.
23. Pathological anatomy of ovarian cancer.
24. Classification of ovarian cancer by stages and TNM system.
25. Ovarian Cancer Clinic.
26. Ovarian cancer diagnostics (ultrasound, CT, laparoscopy, determination of tumor markers).
27. Principles of radical treatment for ovarian cancer.
28. Metastatic ovarian cancer.
29. Are radical approaches possible in the treatment of advanced forms of ovarian cancer?

Results:

The student must be able to diagnose cancer of the body, cervix and ovaries and prescribe adequate (therapeutic and surgical) treatment in accordance with the diagnosis.

Section 5. Lymphoproliferative diseases.

Topic 6. Hodgkin's disease. Non-Hodgkin's lymphomas.

Goal:

To study the etiology, pathogenesis, diagnosis, clinic, differential diagnosis and treatment of lymphoproliferative diseases.

Questions on the topics of the section:

1. Etiopathogenesis of lymphoproliferative diseases.
2. Clinical and morphological classification of Hodgkin's disease.
3. Clinic of the disease. Features of the clinic, depending on the lesion of various groups of lymph nodes.
4. Signs of intoxication.
5. Diagnosis of Hodgkin's disease.
6. Diagnostic algorithm for suspected lesions of the internal groups of lymph nodes.
7. Principles of treatment for Hodgkin's disease.
8. Morphological characteristics of non-Hodgkin lymphomas.
9. Features of the clinical course of non-Hodgkin's lymphomas depending on the morphological variant.
10. Differential diagnosis of lymphoproliferative diseases.
11. Principles of treatment for non-Hodgkin's lymphomas.
12. Complications of chemoradiation treatment of lymphoproliferative diseases, methods of their prevention.

Results:

The student should be able to diagnose lymphoproliferative diseases and prescribe adequate (therapeutic and surgical) treatment in accordance with the diagnosis.

Section 6. Oncourology.

Topic 9. Cancer of the kidney, bladder, prostate.

Goal:

To study the etiology, pathogenesis, diagnosis, clinic, differential diagnosis and treatment of tumors of the genitourinary system.

Questions on the topics of the section:

1. Classification of benign and malignant renal tumors.
2. Etiopathogenesis of kidney cancer.
3. Kidney Cancer Clinic.
4. Classification of kidney cancer by stages and TNM system.
5. Diagnosis of kidney cancer (ultrasound, X-ray, CT, MRI). Early diagnosis opportunities.
6. Principles of radical treatment for kidney cancer.
7. Palliative treatment of kidney cancer.
8. Benign tumors of the bladder.
9. Etiopathogenesis of bladder cancer.
10. Classification of bladder cancer by stages and TNM system.
11. Bladder Cancer Clinic.
12. Diagnosis of bladder cancer (ultrasound, endoscopic methods).
13. Principles of radical treatment for bladder cancer.
14. Palliative treatment of bladder cancer.
15. Clinic, diagnosis and treatment of penile cancer.
16. Etiopathogenesis of prostate cancer.
17. Diagnosis of prostate cancer. Early diagnosis opportunities.
18. Clinic for prostate cancer.
19. Principles of radical treatment for prostate cancer.
20. Principles of palliative treatment for prostate cancer.

Results:

The student must be able to diagnose tumors of the genitourinary system and prescribe adequate (therapeutic and surgical) treatment in accordance with the diagnosis.

Section 7. Radiation therapy.

Topic 10. Types of ionizing radiation and their sources. Radiation therapy methods. Radiosensitivity and radio modification.

Goal:

To acquaint with the main sources of ionizing radiation used in medicine and study the methods of radiation therapy.

Questions on the topics of the section:

1. The concept of radiation therapy, the main stages of development. The concept of cooperation in radiation therapy.
2. Dosimetry concept, basic dosimetric units.
3. The place of radiation therapy in the treatment of cancer patients.
4. The concept of ionizing radiation, types of ionizing radiation.
5. Sources of ionizing radiation.
6. The physical effect of ionizing radiation.
7. Biological action of ionizing radiation.
8. The concept of radiosensitivity.
9. Factors affecting the radiosensitivity of systems.
10. Radiomodification, physical and chemical factors.
11. Radiation therapy methods: external beam radiation therapy.
12. Contact radiation therapy, scope.
13. Systemic radiation therapy, essence, main indications.

Results:

The student should be able to draw up a plan for conducting a course of radiation treatment for a patient and evaluate the effectiveness of this treatment.

Topic 11. Pre-ray period. Ray period. Post-radiation period. Complications of radiation therapy and control of them.

Goal:

Introduce the main steps of radiation therapy and study the complications of radiation therapy.

Questions on the topics of the section:

1. Pre-radiation period: clinical topometry, nature, necessary equipment, planning of radiation therapy.
2. Dose fractionation modes.
3. Radiation period, its features.
4. Post-radiation period: radiation complications, their classification and control of them.

Results:

The student should be able to draw up a plan for conducting a course of radiation treatment for a patient and evaluate the effectiveness of this treatment, as well as timely diagnose and treat radiation complications.

7. LABORATORY WORKS, PRACTICE

This type of work is not provided for by the EP.

8. TOPICS OF COURSE, CONTROL WORKS, ABSTRACTS

This type of work is not provided for by the EP.

9. LIST OF QUESTIONS FOR CREDIT

1. Etiology and pathogenesis of malignant tumors. Theories of the occurrence of malignant tumors.
2. Mechanisms of carcinogenesis. Habitat and carcinogenesis. The internal environment of the body and carcinogenesis.
3. Classification of tumors. What is stage and clinical group? TNM system?
4. Morbidity and mortality in malignant tumors. The structure of cancer incidence. The concept of the epidemiology of malignant tumors.
5. Modern concepts of precancerous conditions. Dysplasia.
6. The principles of organizing cancer care. The structure of the oncological service of the Russian Federation.
7. Early diagnosis of malignant neoplasms. Screening programs.
8. Prevention of oncological diseases.
9. General principles of diagnostics of malignant tumors.
10. The role of morphological research methods in oncology. Methods for taking material for cytological and histological studies.
11. Locoregional methods of treatment of malignant neoplasms.
12. Systemic methods of treatment of malignant neoplasms.
13. Principles of palliative treatment of malignant neoplasms.
14. Deontological approaches when communicating with a cancer patient.
15. Skin cancer. Epidemiology. Etiopathogenetic factors. Precancerous diseases.
16. Skin cancer. Morphologists and clinic. Diagnostics and treatment.
17. Melanoma. Epidemiology. Risk factors. Pigmented nevi. Symptoms of malignant nevus.
18. Melanoma clinic, diagnosis and treatment.
19. Thyroid cancer, etiological factors, pathological and anatomical characteristics.
20. Clinical picture and diagnosis of thyroid cancer.
21. Principles of radical and palliative treatment of thyroid cancer.
22. Malignant tumors of soft tissues. Clinic, diagnosis and treatment.

23. Malignant bone tumors. Clinic, diagnosis and treatment.
24. General information about mediastinal tumors. The basics of their diagnosis, clinical picture and treatment.
25. Epidemiology of lung cancer in Russia, CIS countries and industrialized Western countries, USA and Canada. Lung cancer morbidity and mortality.
26. Lung cancer. Etiopathogenetic factors. Morphogenesis and its influence on tactics and results of treatment.
27. General principles of lung cancer diagnosis. Early detection and prevention opportunities.
28. Lung cancer. Clinical options (central, peripheral, atypical forms).
29. Principles of radical and palliative treatment of lung cancer.
30. Esophageal carcinoma. Epidemiology. Etiological factors. Anatomical forms of growth and features of metastasis.
31. Features of the clinic, diagnosis and treatment of esophageal cancer.
32. Stomach cancer. Epidemiology. Etiology and pathogenesis.
33. Stomach cancer. Morphological classification. Growth forms. Features of metastasis.
34. Diagnostics of the stomach cancer. Small Signs Syndrome.
35. Clinic of stomach cancer, depending on the localization of the tumor process and the form of growth.
36. The main types of radical surgery for stomach cancer.
37. Palliative treatment of stomach cancer.
38. Colon cancer. Etiological factors. Precancerous diseases. Pathological and anatomical characteristics.
39. Colon Cancer Clinic. Symptoms of cancer of the right and left half of the colon. The main clinical forms.
40. Colon cancer diagnostics.
41. Principles of radical treatment for colon cancer.
42. Colon cancer palliative care. The concept of cytoreductive operations.
43. Rectal cancer. Etiological factors. Precancerous diseases.
44. Pathological anatomy of rectal cancer, growth forms and features of metastasis.
45. Clinical picture and diagnosis of rectal cancer.
46. Principles of radical and palliative treatment of rectal cancer.
47. Liver cancer. Etiological factors. Clinic, diagnostics, treatment.
48. Pancreas cancer. Clinic, diagnostics, treatment.
49. Mammary cancer. Epidemiology. Morbidity and mortality. Possibility of early diagnosis.
50. Precancerous diseases of the mammary glands.
51. Etiology and pathogenesis of breast cancer.
52. Nodular form of breast cancer, the main symptoms and the mechanism of their formation.
53. Diffuse variants of breast cancer.
54. Specific variants of breast cancer: cancer with a pagetoid reaction, occult cancer.
55. Breast cancer diagnostics. Screening programs.
56. Mammary cancer. Loco-regional treatment methods.
57. Mammary cancer. Systemic treatments.
58. Palliative treatment for breast cancer.
59. Cervical cancer, epidemiology, morbidity and mortality.
60. Etiology of cervical cancer. Precancer and underlying diseases.
61. Pathological anatomy of cervical cancer. Localization options for cervical cancer. Metastatic pathways.
62. Diagnosis of cervical cancer. Early diagnosis opportunities.
63. Clinic for cervical cancer.
64. Principles of radical and palliative treatment of cervical cancer.

65. Etiology of endometrial cancer. Pathogenetic variants.
66. Endometrial Cancer Clinic.
67. Endometrial cancer diagnostics. Early diagnosis opportunities.
68. Principles of radical and palliative treatment of endometrial cancer.
69. Benign ovarian tumors.
70. Etiology of ovarian cancer. Precancerous diseases.
71. Pathological anatomy of ovarian cancer.
72. Ovarian Cancer Clinic.
73. Ovarian cancer diagnostics.
74. Principles of radical treatment for ovarian cancer.
75. Metastatic ovarian cancer. Are radical approaches possible in the treatment of advanced forms of ovarian cancer?
76. Etiopathogenesis of lymphoproliferative diseases.
77. Clinical and morphological classification of lymphogranulomatosis.
78. Clinic of lymphogranulomatosis.
79. Diagnosis of lymphogranulomatosis.
80. Principles of treatment for lymphogranulomatosis.
81. Morphological characteristics of lymphosarcomas.
82. Differential diagnosis of lymphoproliferative diseases.
83. Principles of treatment for lymphosarcoma.
84. Kidney cancer. Etiology. Clinic and diagnostics.
85. Principles of radical and palliative treatment of kidney cancer.
86. Bladder cancer. Predisposing factors.
87. Clinical picture and diagnosis of bladder cancer.
88. Principles of radical and palliative treatment of bladder cancer.
89. Prostate cancer. Predisposing factors.
90. Clinic, diagnosis and treatment of prostate cancer.
91. The concept of radiation therapy, the main stages of development.
92. The place of radiation therapy in the treatment of cancer patients.
93. The concept of ionizing radiation, types of AI used in radiation therapy.
94. Dosimetry concept, basic dosimetric units.
95. Sources of ionizing radiation.
96. The physical effect of ionizing radiation.
97. Biological action of ionizing radiation.
98. The concept of radiosensitivity. Factors affecting the radiosensitivity of systems: 4 "R" of clinical radiobiology.
99. Factors affecting the radiosensitivity of systems: the Bergonier – Tribondot postulate, the "oxygen effect", the influence of the cell cycle phase.
100. The concept of radio modification. Physical methods of radio modification and their characteristics.
101. The concept of radio modification. Chemical methods of radiomodification and their characteristics.
102. Classification of methods of radiation therapy.
103. External beam therapy: essence, classification of methods, basic equipment.
104. Contact radiation therapy: essence, classification of methods, scope.
105. Systemic radiation therapy: concept, essence, main indications for use.
106. The structure of the course of radiation therapy: the main stages.
107. Pre-beam period: clinical topometry, essence, necessary equipment.
108. Pre-radiation period: planning radiation therapy.

109. Radiation period, its features. Post-radiation period: radiation complications and their classification.
110. Post-radiation period: radiation complications and their classification.
111. Early radiation complications: characteristics of general radiation reactions, control of them.
112. Early radiation complications: local radiation reactions from the skin, classification, methods of dealing with them.
113. Early radiation complications: local radiation reactions from the mucous membranes: classification, methods of dealing with them.
114. Late radiation complications: classification.
115. Radiation dose fractionation modes.
116. Intracavitary radiation therapy: the essence of the method, indications.
117. Interstitial radiation therapy, the essence of the method, indications.
118. MRI diagnostics of diseases of the spine and spinal cord: degenerative changes in the spine, trauma.
119. Application method of radiation therapy: essence, indications.
120. Radiation therapy for non-neoplastic diseases.
121.

10. INDEPENDENT WORK OF STUDENTS

Full-time study form

No.	Title of sections and topics	Independent work type	Volume in hours	form of control (*checking the solution of problems, etc.)*
Section 1. Tumors of the skin, bones, soft tissues, head and neck				
1.	Skin cancer, melanoma. Thyroid cancer.	study of educational material, preparation for passing the test	5	Self-preparation: extracurricular reading, solving situational problems, test control. Current control in a practical lesson.
2.	Tumors of bones and soft tissues.	study of educational material, preparation for passing the test	5	Self-preparation: extracurricular reading, solving situational problems, test control. Current control in a practical lesson.
Section 2. Lung cancer				
3.	Lung cancer	study of educational material, preparation for passing the test	5	Self-preparation: extracurricular reading, solving situational problems, test control. Current control in a practical lesson
Section 3. Tumors of the digestive tract				
4.	Cancer of the esophagus and stomach.	study of educational material, preparation for passing the test	5	Self-preparation: extracurricular reading, solving situational problems, test control. Current control in a practical lesson.
5.	Colorectal cancer. Tumors of the liver of the biliopancreatoduodenal zone.	study of educational material,	5	Self-preparation: extracurricular reading, solving situational problems, test control. Current

		preparation for passing the test		control in a practical lesson.
Section 4. Tumors of the female reproductive system				
6.	Mammary cancer.	study of educational material, preparation for passing the test	5	Self-preparation: extracurricular reading, solving situational problems, test control. Current control in a practical lesson.
7.	Cancer of the body and cervix, ovarian cancer.	study of educational material, preparation for passing the test	5	Self-preparation: extracurricular reading, solving situational problems, test control. Current control in a practical lesson.
Section 5. Lymphoproliferative diseases				
8.	Hodgkin's disease. Non-Hodgkin's lymphomas.	study of educational material, preparation for passing the test	5	Self-preparation: extracurricular reading, solving situational problems, test control. Current control in a practical lesson.
Section 6. Oncourology				
9.	Cancer of the kidney, bladder and prostate gland.	study of educational material, preparation for passing the test	5	Self-preparation: extracurricular reading, solving situational problems, test control. Current control in a practical lesson.
Section 7. Radiation therapy				
10.	Types of ionizing radiation and their sources. Radiation therapy methods. Radiosensitivity and radio modification.	study of educational material, preparation for passing the test	6	Self-study: extracurricular reading. Oral presentation. Current control in a practical lesson.
11.	Pre-ray period. Ray period. Post-radiation period. Complications of radiation therapy and control of them. Offset	study of educational material, preparation for passing the test	5	Self-preparation: extracurricular reading, solving situational problems, test control. Current control in a practical lesson.
	Total:		56h.	

11. УЧЕБНО-МЕТОДИЧЕСКОЕ И ИНФОРМАЦИОННОЕ ОБЕСПЕЧЕНИЕ ДИСЦИПЛИНЫ

а) Список рекомендуемой литературы

основная:

1. Trufanov, G. E. Diagnostic radiology : textbook / G. E. Trufanov, R. M. Akiev, K. N. Alekseev [et al.] ; ed. G. E. Trufanov. - Москва : ГЭОТАР-Медиа, 2021. - 444 с. - ISBN 978-5-9704-5963-8. - Текст : электронный // ЭБС "Консультант студента" : [сайт]. - URL : https://www.studentlibrary.ru/book/ISBN9785970459638.html

2. Кира, Е. Ф. The basic questions of oncogynecology Основные вопросы онкогинекологии : учебник на английском и русском языках / Кира Е. Ф. [и др.]. - Москва : ГЭОТАР-Медиа, 2018. - 288 с. - ISBN 978-5-9704-4565-5. - Текст : электронный // ЭБС "Консультант студента" : [сайт]. - URL : https://www.studentlibrary.ru/book/ISBN9785970445655.html

дополнительная:

1 Каравай А. В. Clinical Oncology in two parts. Part I = Клиническая онкология в двух частях. Часть I : пособие для студентов учреждений высшего образования, обучающихся по специальности 1-79 01 01 «Лечебное дело» : manual for students of higher education institutions studying in the specialty 1-79 01 01 «General Medicine» / А. В. Каравай, Г. Г. Божко. - Гродно : ГрГМУ, 2018. - 304 с. - ISBN 9789855589892. - Текст : электронный // ЭБС "Букап" : [сайт]. - URL : https://www.books-up.ru/ru/book/clinical-oncology-in-two-parts-part-i-12199149/

2 Хоров А. О. Clinical tasks in oncology = Клинические задачи по онкологии : пособие для студентов факультета иностранных студентов с английским языком обучения (специальность 1-79 01 01 «Лечебное дело») [на англ. яз.] : handbook for the foreign students of the Medical Faculty / А. О. Хоров, А. В. Каравай, К. Н. Угляница. - Гродно : ГрГМУ, 2018. - 72 с. - ISBN 9789855589533. - Текст : электронный // ЭБС "Букап" : [сайт]. - URL : https://www.books-up.ru/ru/book/slinical-tasks-in-oncology-12199649/

3 Antoneeva I. I. Studying oncology: the selected chapters : Tutorial / I. I. Antoneeva; Ulyanovsk State University, Faculty of Medicine. - Ulyanovsk : UlSU, 2021. - 172 p. - На англ. яз.; Загл. с экрана. - URL: http://lib.ulsu.ru/MegaPro/Download/MObject/14450.

учебно-методическая:

1. Sharafutdinov M. G.

Guidelines for independent work of students in the discipline «Oncology, radiation therapy» for specialty 31.05.01 «General medicine» / M. G. Sharafutdinov, L. V. Matveeva. - Ulyanovsk : UlSU, 2022. - Неопубликованный ресурс; На англ. яз. - URL: http://lib.ulsu.ru/MegaPro/Download/MObject/11512. - Режим доступа: ЭБС УлГУ. - Текст : электронный.

2. Sharafutdinov M. G.

Methodological instructions for preparation for practical studies of students on the discipline «Oncology, radiation therapy» for specialty 31.05.01 «General medicine» / M. G. Sharafutdinov, L. V. Matveeva. - Ulyanovsk : UlSU, 2022. - Неопубликованный ресурс; На англ. яз. - URL: http://lib.ulsu.ru/MegaPro/Download/MObject/11517. - Режим доступа: ЭБС УлГУ. - Текст : электронный.

Согласовано:

Специалист ведущий НБ УлГУ/ Стадольникова Д.Р./ _____ / 10.05.2023

Должность сотрудника научной библиотеки ФИО подпись дата

б) Программное обеспечение

1. ОС Microsoft Windows;
2. Microsoft OfficeStd 2016 RUS.

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:http://www.iprbookshop.ru. – 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:https://www.studentlibrary.ru/cgi-bin/mb4x. – 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: https://www.rosmedlib.ru. – Режим доступа: для зарегистрир. пользователей. – Текст : электронный.

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

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

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

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

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

5. Российское образование: 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:http://lib.ulsu.ru/MegaPro/Web. – Режим доступа :для пользователей научной библиотеки. – Текст : электронный.

Согласовано:

Ведущий инженер	/ Щуренко Ю.В.	/	/
Должность сотрудника УИТТ	ФИО	подпись	дата

12. MATERIAL AND TECHNICAL SUPPORT OF THE DISCIPLINE:

Practical clinical classes are held in 2 classrooms equipped with magnetic marker boards, personal computers (2 pcs.), Negatoscopes, breast palpation simulator, rectal tumor palpation simulator, vaginal examinations simulator, cancer metastasis scheme. For practical classes, lectures and seminars, a multimedia projector, a screen, an Overhead projector are used.

Work with patients is carried out in the offices of the heads of the profile departments of the Regional Clinical Oncological Dispensary - polyclinic, mammological, gynecological, chemotherapeutic. In addition, students have access to the operating rooms of the oncology dispensary and the radiotherapy block.

13 SPECIAL CONDITIONS FOR STUDENTS WITH DISABILITIES

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

-for persons with visual impairments: in printed form in an enlarge d font; in the form of an electronic document; in the form of an audio file (translation of educational materials into audio format); in printed form in Braille; individual consultations with the involvement of a tiflosurd interpreter; individual assignments and consultations;

-for persons with hearing impairments: in printed form; in the form of an electronic document; videos with subtitles; individual consultations with the involvement of a sign language interpreter; individual assignments and consultations;

-for persons with disabilities of the musculoskeletal system: in printed form; in the form of an electronic document; in the form of an audio file; individual assignments and consultations.

If it is necessary to use partially/exclusively distance educational technologies in the educational process, the organization of the work of teaching staff with students with disabilities and disabilities is provided in an electronic information and educational environment, taking into account their individual psychophysical characteristics.

Developer _____ Head of the Department, Candidate of Medical Sciences, Associate Professor Sharafutdinov M.G
signature position full name

Developer _____ Candidate of Medical Sciences, Associate Professor MorozovV.S
signature position full name

Developer _____ Candidate of Medical Sciences, Associate Professo Matveeva L.V.
signature position full name

LIST OF CHANGES of

Educational plan of discipline "Oncology, radiation therapy"
specialty 31.05.01 "Medical business"

№ п/п	The content of the change or a link to the attached text of the change	Full name of the head of the department implementing the discipline/ starting department	the Signature	Date
1	Amendments to item a) The list of recommended literature item 11 "Educational, methodological and informational support of the discipline" with the design of Appendix 1	Sharafutdinov M.G.		27.06. 2024
2	Amendments to p.p. c) Professional databases, information and reference systems p. 11 "Educational, methodological and information support of the discipline" with the design of Appendix 2	Sharafutdinov M.G.		27.06. 2024

11. УЧЕБНО-МЕТОДИЧЕСКОЕ И ИНФОРМАЦИОННОЕ ОБЕСПЕЧЕНИЕ ДИСЦИПЛИНЫ

а) Список рекомендуемой литературы

основная:

1. Trufanov, G. E. Diagnostic radiology : textbook / G. E. Trufanov, R. M. Akiev, K. N. Alekseev [et al.] ; ed. G. E. Trufanov. - Москва : ГЭОТАР-Медиа, 2021. - 444 с. - ISBN 978-5-9704-5963-8. - Текст : электронный // ЭБС "Консультант студента" : [сайт]. - URL : https://www.studentlibrary.ru/book/ISBN9785970459638.html

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Инженер ведущий Щуренко Ю.В. 2024