

MINISTRY OF HEALTH OF THE REPUBLIC OF BELARUS
EDUCATIONAL INSTITUTION
BELARUSIAN STATE MEDICAL UNIVERSITY

Контрольный
экземпляр

APPROVED



by First Vice-Rector, Professor

I.N.Moroz

12.08. 2023

Reg. # UD-6.07/2324/edu.sub.

ONCOLOGY

Curriculum of educational institution in the educational discipline for the
specialty 1-79 01 01 «General Medicine»

Sub-Residency «General Clinical Practice»

Minsk 2023

Curriculum is based on the educational program of educational institution in the educational discipline «Oncology» for the Sub-Residency «General Clinical Practice (for foreign citizens)», approved 11.08.2023, registration # УД-Л. 07/23.24/уч.суб.

COMPILERS:

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RECOMMENDED FOR APPROVAL:

by the Department of Oncology of the Educational Institution «Belarusian State Medical University»
(protocol from 09.08.2023);

by the Scientific and Methodological Council of the Educational Institution «Belarusian State Medical University»
(protocol # 7 of 10.08.2023)

EXPLANATORY NOTE

«Oncology» is the educational discipline containing systematic and scientific knowledge about etiology and pathogenesis of oncological diseases, methods of its clinical diagnosis treatment and prevention.

The purpose of teaching of the discipline «Oncology» as a subject of the Sub-Residency «General Clinical Practice (for foreign citizens)» is forming of academic, social and personal, professional competences for health care to patients with oncological diseases.

The objectives of the teaching of the discipline «Oncology» are forming scientific knowledge about epidemiology, etiology, pathogenesis, diagnosis and treatment, prevention of oncological diseases, professional skills that are necessary for:

- investigations of patients with suspicions to malignant tumors;
- interpretation of results of laboratory and instrumental methods of investigation;
- treatment the patients with premalignant diseases and most spreading malignant tumors;
- contemporary methods of revealing of premalignant conditions, cancer in situ and malignant tumors;
- palliative care and treatment the patients with most spreading malignant diseases;
- medical rehabilitation of patients after performing of radical treatment;
- early diagnosis and prevention most spreading malignant tumors.

Teaching and successful study of the educational discipline «Oncology» of the Sub-Residency «General Clinical Practice (for foreign citizens)» is carried out on the base of knowledge and skills acquired by students in the sections of the following academic disciplines:

Pathologic physiology. Etiology and pathogenesis of tumors. Carcinogens and its classification. Stages and mechanisms of carcinogenesis. Fundamental pathophysiological issues of prevention and treatment of tumors.

Pathologic anatomy. Pathologic anatomy of tumor development. Morphological diagnostic of tumors and its methods. International morphological classification of tumors. Pathological features of separate neoplastic diseases.

Microbiology, virology, immunology. Biological carcinogenesis, specificities by world regions.

Radiation medicine and ecology. Environmental and radiation etiological factors of tumor development. Radiation sources, mechanisms of its action. Long-term effects of the Chernobyl accident.

Radiodiagnostic and radiotherapy. Methods of radiodiagnostic in oncology. Radiodiagnostics and symptomatic of neoplasms of the prevailing localizations. Methods and biological fundaments of treatment patients with oncological diseases.

Pharmacology. Antitumoral agents and its characteristics. Cellular background of chemotherapy. The main groups of antitumor drugs.

Public health and healthcare management. Organization of special medical care in patients with oncological diseases. Organization of screening. Organization and types of preventive examinations for early diagnostic of malignant tumors.

Medical psychology. Medical and deontological ethics in the work with oncological patients.

General surgery. General conception of cancerogenesis. Essentials of diagnosis in concept with International Classification of malignant tumors. Treatment of patients with oncological diseases.

Topographic anatomy and operative surgery. Surgical treatment of patients with the most common malignant tumors.

Internal diseases. Premalignant diseases and conditions (obligatory and facultative) and malignant tumors digestive tract, lungs, kidneys, bones and thyroid. Differential diagnosis in case of anemia, symptom of elevation of erythrocytes rate sedimentation (ERS) and lymphadenopathies. Dispensary of patients are in groups of high oncological risk.

Outpatient's therapy. Prevention of malignant tumors. Prevention work of physicians on identifying of factors predisposing to development of malignant neoplasms and precancerous diseases. Follow up observation of patients are in high oncological risk group. Consistent actions of physicians and design of investigation in case of suspicions of malignant disease. Screening in early diagnosis of malignant diseases.

Surgical diseases. Differential diagnosis of surgical diseases and malignant tumors. Dispensary of surgical patients are in high oncological risk group.

Obstetrics and gynecology. Etiology and pathogenesis of tumors of female genital organs. Background and premalignant diseases of female genital organs. Screening in early diagnosis and prevention. Organization and role of female diagnostic cabinets, modern diagnostic capacities, dispensary observation of gynecological patients are in high oncological risk group.

Phthisiopulmonology. Low dose computer tomography as screening method for early detection of malignant tumors in lungs. Algorithm of diagnosis in case of peripheral shadow in lung, lungs' infiltrate, cavitary infiltrate, disseminate shadows in lungs, intrathoracic lymphadenopathy, pleural fluid. Differential diagnosis of tuberculosis, sarcoidosis and tumors in lungs and lymphadenopathy in mediastinum.

Infectious diseases. Differential diagnosis of inflectional diseases and malignant tumors.

Otorhinolaryngology. Benign and malignant tumors of pharyngo-laryngeal zone, nasopharyngeal zone. Clinical symptoms, methods of diagnosis, treatment. Dispensary observation of patients are in risk group on otorhinolaryngology diseases.

Ophthalmology. Benign and malignant tumors of eye. The clinical presentations, diagnosis, treatment. Clinical examination of patients is in risk group

on ophthalmological diseases. Dispensary observation of patients are in risk group on ophthalmological diseases.

Dermatovenereology. Malignant and benign neoplasms of skin, premalignant conditions (obligate and facultative). Classification, clinical presentation, diagnosis, treatment. Paraneoplastic skin syndromes. Dispensary observation of patients are in risk group on dermatological and venerological diseases.

Neurology and neurosurgery. Tumors of brain and spinal cord. Classification, clinical presentation, diagnosis, methods of treatment.

Dentistry. Tumors of facial and mandibular zone. Epidemiology, clinical presentation, diagnosis of tumors of soft tissue, facial bones, tumors of salivary glands. Modern aspects of treatment with malignant tumors of facial and mandibular zone. Dispensary observation of patients with malignant tumors of facial and mandibular zone.

Oncology. Organization of special oncological medical care. Screening, methods of diagnosis and treatment in oncology. Medical ethics and deontology. Prevention of malignant tumors. Palliative medical care. Etiology, epidemiology, clinical presentation, diagnosis and treatment of patients with common localizations of malignant tumors – esophagus, stomach, colon and rectum, hepatoduodenal zone, breast, thyroid, salivary glands, skin, mediastinum, retroperitoneal space, soft tissue, bones, kidneys, urinary bladder, prostate, testes, cervix and corpus uteri, ovaries, lymphoid tissue.

As a result of studying the discipline «Oncology» of the Sub-Residency «General Clinical Practice (for foreign citizens)» the student should be

know:

etiology, pathogenesis, classification, clinical presentations, methods of diagnosis (primary and precisely) differential diagnosis more frequent localizations of malignant diseases;

paraneoplastic syndromes;

essentials and specificities of multimodal treatment of more common of malignant diseases, complications of special treatment and ways of its correction;

specificities of diagnosis and treatment of malignant diseases in children;

essentials of palliative medical care;

ethics and deontology in the process of diagnosis, treatment and follow observation of cancer patients;

be able to:

carry out of prevention and concomitant examination of patient for revealing of hidden flowing malignant diseases;

perform palpation of peripheral lymph nodes

perform physical examination thyroid and breast for revealing malignant disease;

perform physical examination of organs of abdominal cavity for revealing malignant neoplasms;

perform physical examination of organs of thorax for revealing malignant disease;

perform physical examination of organs of pelvis for revealing malignant disease;

prescribe plan of laboratory and instrumental investigation in case of suspicious on malignant tumors of base localizations;

to give interpretation of X-ray, computed tomograms, ultrasonograms containing typical signs of malignant tumors of base localizations;

to give interpretation of morphological, cytological, molecular-genetic results in case of malignant diseases;

to give interpretation of laboratory results in case of malignant diseases;

to perform of smear;

make diagnosis of malignant disease considering TNM-classification of malignant tumors, stage of disease, to determine of clinical group;

master:

skills of collected complaints, which characterized for malignant tumors of base localizations;

skills of examinations of skin and «criminal» zone for melanoma;

skills of palpation of peripheral lymphatic nodules in case of primary tumors and metastasis lesion;

skills of palpation of thyroid for the purpose revealing of oncological disease;

skills of palpation of breast in cases of benign and malignant tumors;

skills of palpation of abdominal cavity for the purpose revealing of tumors of digestive tract, kidney, retroperitoneal space, metastasis lesion of organs of abdominal cavity;

skills of physical examination of pelvis for the purpose of revealing malignant tumors of prostate, men and women reproductive organs;

skills of plan completing of investigation for the purpose to establish of diagnosis of malignant disease and evaluation of spreading of malignant disease (primary and definitive diagnostic);

skills of evaluation of investigational results in case of different malignant tumors;

skills of differential diagnosis of neoplastic and nontumoral diseases;

skills of formulate of diagnosis malignant tumor together with to pointed on localization, stage of disease, complication of neoplastic process and clinical group;

skills carried out of concomitant medical examination for the purpose revealing of premalignant and background conditions.

Total number of hours for the study of the discipline is 56 academic hours. Classroom hours according to the types of studies: practical classes – 35 hours; student independent work (self-study) 21 hours.

Intermediate assessment is carried out in accordance with the curriculum of the higher education institution in the form of a credit (11th semester).

Form of higher education – full-time.

THEMATIC PLAN

Section (topic) name	Number of class hours
	practical
1. Malignant tumors of skin, soft tissue and bones. Breast cancer. Metastasis from unknown primary localization. Ethics and deontology	7
2. Lung cancer. Paraneoplastic syndrome. Malignant lymphomas. Lymphadenopathies	7
3. Carcinoma of lips, carcinoma of oral cavity, tongue. Esophagus cancer. Stomach cancer	7
4. Colon and rectal carcinoma. Screening programs of early diagnosis of breast cancer, cervical cancer, prostate, colon and rectal carcinoma. Palliative treatment in case of oncological diseases	7
5. Hepato- pancreato- duodenal tumors. Kidney carcinoma and urinary bladders carcinoma. Primary multiply tumors	7
Total hours	35

CONTENT OF THE EDUCATIONAL MATERIAL

1. Malignant tumors of skin, soft tissue and bones. Breast cancer. Metastasis from unknown primary localization. Ethics and deontology

Malignant tumors of skin: classification of epithelial skin tumors, risk factors, obligate and facultative premalignant diseases, histological types of skin cancer, its specificities, clinical forms, methods diagnosis, prevention.

Pigmented neoplasms of skin: classification of pigmented nevi, signs of its malignancy. Melanoma: incidence, clinical forms, diagnostic features, prevention.

Tumors of soft tissue: classification, clinical presentation of benign tumors and soft tissue sarcomas, diagnosis.

Malignant neoplasms of bones: classification, clinical presentation, diagnosis, differential diagnosis.

Breast cancer: risk factors, pathogenesis, classification, clinical presentation, diagnostic methods, screening, prevention.

Metastases from unknown primary localization: classification, diagnostic search, examination algorithm, tumor markers and its role in identifying the source of metastasis.

Ethics and deontology in the process of diagnosis, treatment and follow observation of cancer patients.

Collection of complaints and anamnesis, examination of patient. Making of investigational plan. Interpretation of laboratory and instrumental examination

results. Argumentation of diagnosis. Making up of treatments plan. Registration of medical documentation on oncology.

2. Lung cancer. Paraneoplastic syndrome. Malignant lymphomas. Lymphadenopathies

Lung cancer: morbidity and mortality, risk factors, premalignant diseases, histological, clinical and anatomical classification, clinical features, metastasis, diagnosis methods, screening, prevention.

Paraneoplastic syndromes: pathogenesis, classification, specificities of clinical currencies, meaning of paraneoplasias in diagnosis of oncological diseases.

Malignant lymphomas: classification, general and specific signs of Hodgkin disease and non-Hodgkin lymphomas, histological forms, rules of staging, clinical features, methods of verifications of diagnosis, volume of investigations for evaluation of spreading of disease.

Lymphadenopathies: etiology, pathogenesis, classification, algorithm of diagnosis in case of increasing peripheral lymph nodes. Collection of complaints and anamnesis of disease, general investigation of patient. Making of investigational plan. Interpretation of laboratory and instrumental examination results. Argumentation of diagnosis. Making up of treatments plan. Registration of medical documentation on oncology.

3. Lips carcinoma, carcinoma of oral cavity, tongue. Esophagus cancer. Stomach cancer

Carcinoma of lips: etiology, clinical features, differential diagnosis. Premalignant diseases of lips.

Carcinoma of oral cavity: etiology, clinical features, differential diagnosis. Premalignant diseases of oral cavity.

Carcinoma of tongue: etiology, clinical features, differential diagnosis. Premalignant diseases of tongue.

Esophageal carcinoma: etiology, risk factors, clinical presentation, complications, differential diagnosis, specificities of metastasis, premalignant diseases.

Gastric cancer: etiology, risk factors, clinical presentations depending on tumor growth and localisation of cancer, complication of tumor, differential diagnosis, early diagnosis, prevention. Premalignant diseases of stomach.

Collection of complaints and anamnesis of disease, general investigation of patient. Making of investigational plan. Interpretation of laboratory and instrumental examination results. Argumentation of diagnosis. Making up of treatments plan. Registration of medical documentation on oncology.

4. Colon and rectal carcinoma. Screening programs of early diagnosis of breast cancer, cervical cancer, prostate, colon and rectal carcinoma. Palliative treatment in case of oncological diseases.

Colon carcinoma: risk factors, clinical presentations depending on localisation, clinical forms of colon carcinoma, diagnosis, differential diagnosis, complications of malignant process, screening, early diagnosis and prevention. Premalignant disease of colon and rectum. Screening programs of early diagnosis malignant diseases. Screening programs of early diagnosis of breast cancer, cervical cancer, prostate,

colon and rectal carcinoma. Principles of formation of groups of people for screening, methods of investigations, assessment of results of investigations, their effectiveness.

Palliative treatment of patients with oncological diseases: definition, differentiation, tasks, orientation. Types of palliative treatment. Treatment of pain syndrome, dyspepsia and intestinal disturbances, anaemia, polyserosities, metabolic disturbances.

Examinations of patients with colon and rectal carcinoma: collection of complaints and anamnesis of disease, general investigation of patient. Making of investigational plan. Interpretation of laboratory and instrumental examination results. Argumentation of diagnosis. Making up of treatments plan. Registration of medical documentation on oncology.

5. Hepato-pancreato-duodenal tumors. Kidney carcinoma and urinary bladders carcinoma. Primary multiply tumors

Liver carcinoma: risk factors, classification, clinical presentations, diagnosis, differential diagnosis. Premalignant conditions of liver.

Pancreas carcinoma: etiology, risk factors, classification, clinical presentations, complications, methods of diagnosis, differential diagnosis of icterus.

Renal carcinoma: classification, specificities of growth and metastasis, clinical presentations, diagnosis, differential diagnosis.

Urinary bladder carcinoma: risk factors, clinical presentations, diagnosis, differential diagnosis.

Primary multiply tumors: etiology, classification of primary multiplies tumors, synchronous and metachronous neoplasms, clinical presentations, specificities of diagnosis, algorithm of investigation. Collection of complaints and anamnesis of disease, general investigation of patient. Making of investigational plan. Interpretation of laboratory and instrumental examination results. Argumentation of diagnosis. Making up of treatments plan. Registration of medical documentation on oncology.

EDUCATIONAL DISCIPLINE CURRICULAR CHART OF THE DISCIPLINE «ONCOLOGY»
OF THE PROFILES OF THE SUB-RESIDENCY «GENERAL MEDICAL PRACTICE» (FOR FOREIGN CITIZENS)

Number of section, topic	Section (topic) name	number of hours		Self-studies	Resources of learning	Literature	Form of control
		lectures	practical classes				
1.	Malignant tumors of skin, soft tissue and bones. Breast cancer. Metastasis from unknown primary localization. Ethics and deontology	–	7	4	1-5	1-6	1-4, 6, 7
2.	Lung cancer. Paraneoplastic syndrome. Malignant lymphomas. Lymphadenopathies	–	7	4	1-5	1-6	1-4, 6, 7
3.	Lips carcinoma, carcinoma of oral cavity, tongue. Esophagus cancer. Stomach cancer	–	7	4	1-5	1-6	1-4, 6, 7
4.	Colon and rectal carcinoma. Screening programs of early diagnosis of breast cancer, cervical cancer, prostate, colon and rectal carcinoma. Palliative treatment in case of oncological diseases.	–	7	4	1-5	1-6	1-4, 6, 7
5.	Hepato-pancreato- duodenal tumors. Kidney carcinoma and urinary bladders carcinoma. Primary multiply tumors.	–	7	5	1-5	1-6	1-7
	Total hours	–	35	21			

INFORMATION AND INSTRUCTIONAL UNIT

LITERATURE

Basic:

1. Oncology: a training manual for the students of the higher medical educational establishment of the 3-4 level/by A. I. Shevchenko and other. – Vinnyutsya : Nova Knyha, 2020. – 496 p.

2. Каравай, А. В. Клиническая онкология = Clinical oncology : пособие для студентов учреждений высш. образования, обучающихся по спец. 1-79 01 01 «Лечебное дело». В 2 ч. Ч. 1 / А. В. Каравай, Г. Г. Божко. - Гродно : ГрГМУ, 2019. - 304 с.

3. Клиническая онкология = Clinical oncology : пособие для студентов учреждений высш. образования, обучающихся по спец. 1-79 01 01 «Лечебное дело». В 2 ч. Ч. 2 / А. В. Каравай [и др.]. - Гродно : ГрГМУ, 2020. - 399 с.

Additional:

4. Угляница, К. Н. Курс лекций по клинической онкологии = Course of lectures of clinical oncology: Manual for students of foreign faculty who are studying in English medium : пособие для студентов факультета иностранных учащихся, обучающихся на английском языке – Гродно : ГрГМУ, 2016 - 328 с

5. Вельшер, Л, Генс, Г, Коробкова, Л. Этика и деонтология в онкологии // Cathedra № 45, 2013 – С.56-58 // Welsher, L, Gens, G, Korobkova, L. Ethics and deontology in oncology // Cathedra No. 45, 2013 - P.56-58.

6. Loscalzo, J, Fauci, A, Kasper, D, Hausen, S, Longo, Dan L, Jameson, J L / 21-th Edition Harrison's Principles of internal medicine - 4132 p.

CHARACTERISTICS OF THE USED TRAINING METHODS

When organizing the educational process, traditional methods of teaching the discipline are used: practical classes and elements of controlled independent work of students.

It is recommended to organize the educational process with the use of traditional and modern educational technologies (technologies of simulation training, methods of «standardized patient», various forms of communication, variable models of independent work, tests and other systems of competence assessment, etc.).

Practical trainings are conducted on the basis of oncological departments of health care organizations. In practical classes under the supervision of a teacher, students independently collect patient complaints and anamnesis of the disease, conduct physical examination, learn to draw up a plan of laboratory and instrumental examination, interpret the results of laboratory and instrumental methods of research, make a diagnosis and a treatment plan, fill in medical documentation. Practical training is provided by the students' solution of situational problems, test tasks, development of skills of examination of patients, diagnosis and differential diagnosis of diseases, skills of communicative competence with the use of standardized (simulated) patient.

Independent self-study work consists in the study of basic and additional literature, monographs and periodical literature, preparation of reports, essays, presentations and brief reports on the most pressing problems of emergency medical care for patients with endocrine diseases, development of topics (issues), submitted to independent study, preparation for credit.

Students are introduced to safe working conditions, international requirements and ethical standards during practical classes.

LIST OF TRAINING MEANS

1. Multimedia presentations.
2. Videos.
3. Medical records of inpatient (outpatient) patient.
4. Results of additional examination methods (laboratory, functional, radiation, etc.).
5. Simulation equipment.

LIST OF AVAILABLE DIAGNOSTIC TOOLS

The assessment of the student's academic achievements is carried out using the fund of evaluation means and technologies of higher education institution. The fund of evaluation means of student's academic achievements includes:

typical tasks in various forms (oral, written, test, situational, simulation);
themes of abstracts;

medical records of inpatient (outpatient) patients and the results of additional examination methods (laboratory, functional, radiological).

The following forms are used for competences assessment:

Oral form:

1. interview.

Written form:

2. tests;
3. essay.

Oral-written form:

4. situational tasks;
5. credit.

Technical form:

6. electronic tests.

Simulation form:

7. evaluation using virtual simulators and computer programs.

LIST OF PRACTICAL SKILLS

1. Taking anamnesis and identifying the most significant complaints for patients with malignant tumors of the base localizations.
2. Physical examination of patients with suspected on malignant tumors.
3. Palpation of peripheral lymph nodes.

4. Palpation of the breast.
5. Palpation of the thyroid gland.
6. Performing of fine needle biopsy, smear of the tumor.
7. Collection of sputum for examination for revealing of atypical cells.
8. Interpretation of laboratory, radiation, isotopic and morphological examinations in case of suspicion on malignant tumor.
9. Making of correct diagnosis in case of malignant tumor, pointing of location, stage, complications of the tumor.
10. Registration and medical documents in oncology.

Onc.

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Curriculum content, composition and the accompanying documents comply with established requirements.

Dean of the Medical Faculty for
International Students of the
educational institution «Belarusian
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09.08. 2023

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