

**Odessa National Medical University**  
**Faculty of Medicine №2**  
**Department of Radiation Diagnostics, Therapy, Radiation medicine**  
**and Oncology**

**Syllabus of the discipline "Oncology"**

<b>Amount</b>	<b>75 hours</b>
<b>Semester, year of study</b>	<b>IX - X semester, V year of study</b>
<b>Days, time, place</b>	On schedule
<b>Teacher (s)</b>	<p><i>Bondar Oleksandr Vadimovich</i> prof., doctor of medicine, oleksandr.bondar@onmedu.edu.ua</p> <p><i>Rybin Andriy Ihorevych</i>, prof., doctor of medicine, andrii.rybin@onmedu.edu.ua</p> <p><i>Kuznetsova Olga Vladimirovna</i>, docent, candidate of medical sciences, olga.kuznetsova@onmedu.edu.ua</p> <p><i>Bilenko Oleksandr Anatoliyovych</i>, docent, candidate of medical sciences, olexandr.bilenko@onmedu.edu.ua</p> <p><i>Patskov Andrey Alexandrovich</i>, docent, candidate of medical sciences, andrii.patskov@onmedu.edu.ua</p> <p><i>Aliyeva Svitlana Oktaivna</i>, assistant, candidate of medical sciences, svitlana.aliyeva@onmedu.edu.ua</p> <p><i>Maksymovskiy Viacheslav Evgeniyovych</i>, assistant, candidate of medical sciences, viacheslav.maksymovskiy@onmedu.edu.ua</p> <p><i>Chistyakov Roman Sergeevich</i>, assistant, roman.chystiakov@onmedu.edu.ua</p> <p><i>Stolyarchuk Evgeny Anatoliyovych</i>, assistant, yevhenii.stoliarchuk@onmedu.edu.ua</p> <p><i>Yermakov Vasily Yurievich</i>, assistant, vasyi.yermakov@onmedu.edu.ua</p> <p><i>Atanasov Dmytro Vadumovich</i>, assistant, dmytro.atanasov@onmedu.edu.ua</p> <p><i>Chetverikov Mykhailo Sergiyovych</i>, assistant, mykhailo.chetverikov@onmedu.edu.ua</p> <p><i>Muzyka Viktoria Viktorivna</i>, assistant, viktorija.muzyka@onmedu.edu.ua</p>
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<b>Workplace</b>	Center of Reconstructive and Reconstructive Medicine (University Clinic), 1 floor
<b>Consultations</b>	<i>Online Consultations: Every Saturday at Windows Teams</i>

## COMMUNICATION

Communication with the student during the distance form of study Full-time in the classrooms and offices of the department, remotely on the platform *Microsoft Teams* (<https://teams.microsoft.com>), informational system of ONMedU (<https://info.odmu.edu.ua>) in some cases with prior notice - through ZOOM (<https://zoom.us>) and in *Viber* -groups.

During the quarantine classes will be held exclusively remotely.

## COURSE ANNOTATION

The program "Oncology" offers a review of basic information on general and clinical oncology. In general oncology, the basic principles of diagnosis of malignant tumors and the basic principles of their treatment are considered. Among the issues considered Clinical Oncology gastrointestinal tumors, tumors of the respiratory, breast and thyroid cancer, tumors of the skin, tumors of the genital and urinary systems. The program is designed for 75 teaching hours.

<b>Course details</b>		
<p>Information on the disciplines, basic knowledge and learning outcomes required by the student (enrolled) for successful study and acquisition of competencies in this discipline is indicated :</p> <ol style="list-style-type: none"> <li>1. anatomy,</li> <li>2. histology,</li> <li>3. pathological anatomy,</li> <li>4. otolaryngology,</li> <li>5. dentistry,</li> <li>6. surgery,</li> <li>7. dermatology,</li> <li>8. therapy,</li> <li>9. radiation therapy,</li> <li>10. endocrinology,</li> <li>11. gynecology,</li> <li>12. urology</li> </ol>		
<b>Program learning outcomes</b>		
<b>List of studying results</b>		
Learning outcome code	The content of the learning outcome	References code on the competence matrix
<i>Zn-1</i> <i>Zn-2</i> <i>Zn-3</i> <i>Zn-4</i> <i>Zn-5</i>	to create in the student a modern idea of tumor growth give information about the etiology of tumor growth the concept of carcinogens to present modern information on carcinogenesis to state the basic principles of diagnosis of tumor processes	<i>PRI</i>

<i>Zn-6</i>	to state the basic principles of treatment of tumor processes	
<i>Mind-1</i> <i>Mind-2</i> <i>Mind-3</i> <i>Mind-4</i>	to substantiate the diagnosis, to make a differential diagnosis, to make a detailed one treatment plan and rehabilitation of a specific patient (with taking into account age, comorbidities ), be able to provide emergency care	<i>PR-2</i>
<i>K-1</i> <i>K-2</i>	to conduct professional activities of social interaction. Based on humanistic and ethical principles; to carry out professional activity with social interaction. Based on humanistic and ethical principles;	<i>PR-3</i>
<i>AB-1</i> <i>AB-2</i> <i>AB-3</i>	demonstrate the ability of independent search, analysis and synthesis; argue information for decision-making, be responsible for them in standard and non-standard professional situations, adhere to the principles of deontology and ethics in professional activities;	<i>PR-4</i>
<b>Postrequisites of the course:</b> lays the foundations for students to study the standard algorithm for diagnosis and treatment of cancer patients. Formulate the basic principles and stages of examination of patients with cancer.		

### **The purpose and objectives of the course**

**The purpose of** teaching the discipline "ONCOLOGY" (the ultimate goal) is to prepare a master's degree in the specialty. The description of goals is formulated through skills in the form of target tasks (actions). Based on the ultimate goals of the module, specific goals are formulated in the form of certain skills (actions), target tasks that ensure the achievement of the ultimate goal of studying the discipline.

#### **Learning objectives:**

- determine tactics examination of the patient in case of suspicion on a malignant tumor;
- interpret the results of special research methods;
- determine the general tactics of treatment for the most common cancers;
- demonstrate the ability to maintain medical records;
- demonstrate mastery of the principles of oncological deontology.

**Competences** and learning outcomes, the formation of which provides the study of the discipline (general and special competencies):

- *general*:

- ability to act socially responsible and civic conscious;
- ability to apply knowledge in practical situations;
- ability to abstract thinking, analysis and synthesis;

- ability to communicate in the native language orally and in writing;
- ability to communicate with representatives of other professions.
- *special (professional, subject):*
  - determine the tactics of monitoring and management of the patient in case of suspicion of malignancy;
  - interpret the results of special research methods;
  - formulate previous clinical diagnosis of major oncological diseases;
  - formulate general tactics of treatment;
  - demonstrate the ability to conduct medical documentation;
  - demonstrate mastery of the principles of oncological deontology.

## **Expected results**

### ***Student must know:***

- The structure of the oncology service
- Distribution of patients into clinical groups
- System and terms of medical examination of cancer patients
- Accounting system and the procedure for filling in the registration oncology documentation
- The main patterns of malignancy
- Carcinogenic factors, the role of the environment, lifestyle and bad habits in carcinogenesis
- Measures of primary prevention of malignant neoplasms
- General principles of organization and conduct of preventive examinations
- Methods for assessing complaints and collecting medical history of patients with symptoms of chronic diseases of the internal organs
- Characteristics of special means of examination of cancer patients
- General characteristics of treatment of malignant neoplasms
- Principles of surgical treatment
- Means and mechanism of action of radiation therapy, dose and mode of irradiation
- Classification and mechanism of action of chemotherapeutics, indications and contraindications to chemotherapy
- Classification of cytostatics, target therapy agents, immunotherapy agents
- The mechanism of action of chemotherapeutics
- Indications, contraindications and side effects of antitumor drugs
- Favorable factors and measures for the prevention of tumors of the head and neck
- Clinic of head and neck tumors, differences from precancerous and background diseases
- Standard method of examination of patients with suspected tumors of the head and neck
- From the face of treatment
- Favorable factors and measures for the prevention of thyroid tumors.

- Clinic of the thyroid gland, differences from precancerous and background diseases
- Standard method of examination of patients with suspected thyroid cancer.
- Methods of treatment
- Factors conducive to skin cancer and melanoma, prevention measures
- Obligatory and optional precancers
- Clinical picture of basal cell carcinoma, squamous cell carcinoma
- Schemes for the recognition and treatment of skin cancer
- Factors conducive to the occurrence of melanoma
- Clinical characteristics of melanoma
- Signs of malignancy of pigmented nevi
- Schemes of recognition and treatment of melanoma
- Statistics on breast disease
- Favorable factors and prevention measures
- Pathological characteristics
- Semiotics and pathogenesis of symptoms
- Examination methods
- General principles of breast cancer treatment
- Principles of deontology in oncology
- Features of the approach to oncology patients in the polyclinic
- Deontological features of students' behavior in an oncology clinic
- The content of the concepts of facultative and obligate precancer, dysplasia and cancer in situ
- Forms of growth of malignant tumors, principles of distribution by stages and TNM system
- Clinical phenomena of malignant tumors
- Obligatory and facultative skin diseases
- Prevention of skin cancer, predisposing factors
- Precancerous diseases of the stomach and tactics in relation to patients with precancerous stomach
- Measures to prevent stomach cancer
- Disability groups and principles of their definition
- Current trends in oncology, aimed at maximum preservation of labor and social activity of cancer patients
- Epidemiology, etiology, pathogenesis of HIV infection.
- Methods of primary HIV prevention.
- Classifications and clinical manifestations of HIV infection.
- Opportunistic infections, nonspecific and specific prevention
- HIV-associated tumors
- Formation and development of the idea of hospice movement and palliative care
- The essence, principles, components of PCBs
- The concept of the process of dying (phase) and death
- The concept of "incurable disease"

- The concept of quality of life of a patient with an incurable disease and his relatives
- Ways of communication with the incurable patient and his relatives
- The concept of pain management and other debilitating symptoms
- Psychological and spiritual aspects of PCBs
- Ethical and legal issues of PCBs
- The concept of emotional burnout, prevention methods.

***Know how to:***

- Establish a clinical group in a cancer patient
- Make a notification about the first identified patient and fill in the control card of the dispensary observation
- Fill in the discharge from the hospital about the patient with a malignant neoplasm
- Calculate the usual incidence of malignant neoplasms
- Give recommendations for a healthy lifestyle and individual measures to prevent cancer
- Conduct a preventive examination of a healthy person
- Collect anamnesis, conduct an objective study and fill in the history of the cancer patient
- Outline the general scheme of examination of patients with suspected cancer of the external organs, gastrointestinal tract, lungs.
- Timely establish the need for special treatment of patients with malignant neoplasms
- To exercise control over patients and to recognize in time complications at carrying out a course of radiotherapy and chemotherapy, to enter chemotherapy
- Recognize the side effects of chemotherapy
- Evaluate the indications and contraindications to chemotherapy
- Collect anamnesis and conduct an objective examination of the patient
- Take a smear for cytological examination
- Collect anamnesis and conduct an objective examination of the patient.
- Make a puncture biopsy of the thyroid gland.
- Recognize the appearance of skin cancer
- Make a palpation of the thyroid gland
- Prepare a micropreparation from a skin tumor for cytological examination
- Distinguish in appearance melanoma from pigmented nevus
- Collect a history of patients with precancerous breast disease.
- Conduct a physical examination of the patient
- Detect pathological changes in a patient with a malignant neoplasm
- Find contact with the patient when collecting medical history
- Correctly report the patient on the bypass
- Approximately determine the stage in a particular patient
- To give recommendations concerning measures of prevention of tumor diseases of skin
- Examine a patient with suspected skin tumor

- Perform a puncture biopsy and take a swab from a patient with suspected tumor of the skin
- Carry out a follow-up examination of a patient with precancerous gastric disease
- Approximately determine the disability group
- Conduct a physical examination of a patient with mediastinal tumor.
- Outline a survey plan
- Detect pathological changes on radiographs of a patient with mediastinal tumor
- Conduct a physical examination of a patient with breast cancer
- Identify skin symptoms and nipple symptoms
- Teach methods of self-examination
- Timely detection of complications of chemotherapy
- Choose the optimal surgical intervention taking into account the clinical form of the tumor and the stage of the process
- Outline a plan for examining a specific patient with suspected cancer
- Read the radiograph, tomogram and bronchogram of a patient with lung cancer
- Make a differential diagnosis of central lung cancer based on clinical and radiological data.
- To determine the clinical stage of lung cancer on the basis of clinical, instrumental and morphological examination of the patient
- Develop tactics for treating a specific patient with lung cancer
- Examine a patient with precancerous disease
- Make a differential diagnosis of the main syndromes of gastric cancer
- Detect on the radiograph the signs characteristic of gastric cancer.
- Determine the tactics of treatment of a particular patient with gastric cancer
- Collect anamnesis and suspect a patient with esophageal cancer on an outpatient basis
- Choose a rational survey scheme
- Fill in special records for a patient with newly diagnosed esophageal cancer
- Collect a history of colon cancer
- Palpate the colon
- Make a differential diagnosis if colon cancer is suspected
- Describe radiographs when colon cancer is suspected
- Collect a history of a patient with rectal cancer
- Perform a finger examination of the rectum
- Outline a plan of examination in the event of blood in the feces
- Collect a history of a patient with LGM
- Palpate and describe the condition of peripheral lymph nodes
- Make a plan for examining the patient
- Collect a medical history and conduct a physical examination
- Perform a puncture lymph node biopsy
- Detect Courvoisier's symptom
- On the basis of clinical and laboratory data to recognize mechanical jaundice
- Outline a plan to examine a jaundiced patient to rule out pancreatic cancer
- Conduct a physical examination of a patient with a soft tissue tumor

- Make a differential diagnosis between soft tissue sarcoma and benign tumor
- Perform a soft tissue puncture
- Diagnose HIV infection and disease stage
- Diagnose, treat and prevent opportunistic infections in HIV patients
- Diagnose incurable disease, terminal condition and its phases
- Diagnose, treat pain, having a wide range of modern anesthesia technologies
- Carry out diagnostics, treatment of other debilitating symptoms (vomiting, shortness of breath, etc.) that accompany the incurable condition
- Calculate the dose of analgesic and prescribe appropriate prescriptions
- Keep records and store potent and narcotic agents in accordance with current legislation
- Carry out resuscitation measures for terminally ill patients
- To provide psychological support to the terminally ill and their relatives
- Apply the rules of conduct with the deceased in accordance with current legislation
- Adhere to bioethical and legal norms when providing PCBs
- Advise incurable patients and their relatives on medical and non-medical support during incurable illness, including care, nutrition, social, legal or spiritual support
- Work in a multidisciplinary team
- Use prevention methods of emotional burnout syndrome and prevention of its consequences.

## **COURSE DESCRIPTION**

### **Forms and methods of teaching**

The course takes the form of lectures (5 hours), practical classes (35 hours) and independent student work (35 hours)

### **Teaching methods**

**Lectures:** problem lectures, lectures - visualizations, lectures with the analysis of concrete situations, the story, explanations, conversation, instruction, discussion, dispute, discussion of problem situations, discussion of clinical situations, situational training.

**Practical classes:** conversation, solving clinical situational problems, practicing patient examination skills, demonstration and practice of manipulation skills according to list 5, description of diagnostic radiation images according to schemes, training exercises on differential diagnosis of the most common cancers.

**Independent work:** independent work with the textbook, independent work with the bank of test tasks Step-2, independent solution of clinical problems.

### **Topics and content of the course**

The program is structured on 2 semantic sections: general and separate oncology, includes 20 topics.

**Topic 1.** Organization of cancer care. Epidemiology and prevention of malignant tumors.



- Topic 2.** Methods of diagnosis and treatment principles of malignant tumors.
- Topic 3.** Patterns of malignant tumors.
- Topic 4.** Medical and labor examination and rehabilitation of cancer patients. Deontology in oncology.
- Topic 5.** Melanoma and skin cancer.
- Topic 6.** Tumors of the head and neck.
- Topic 7.** Lung cancer.
- Topic 8.** Breast cancer
- Topic 9.** Cancer of the esophagus and stomach.
- Topic 10.** Tumors of the pancreatoduodenal area.
- Topic 11.** Cancer of the colon and rectum.
- Topic 12.** Hodgkin lymphoma.
- Topic 13.** Non-Hodgkin lymphoma. HIV infection. AIDS-associated conditions and tumors. Opportunistic infections.
- Topic 14.** Bone tumors. Soft tissue tumors.
- Topic 15.** Malignant tumors of the ovaries.
- Topic 16.** Cervical cancer.
- Topic 17.** Endometrial cancer.
- Topic 18.** Kidney cancer.
- Topic 19.** Prostate cancer.
- Topic 20.** Bladder cancer.

### **Recommended literature**

#### ***Main literature:***

1. Practical Medical Oncology Textbook by Russo, A., Peeters, M., Incorvaia, L., Rolfo, C. Published: July 27, 2021
2. Oxford Textbook of Oncology by David J. Kerr, Daniel G. Haller, Cornelis J. H. van de Velde, and Michael Baumann. Published: 21 October 2018
3. Clinical oncology by John E. Niederhuber & James O. Armitage & James H Doroshow & Michael B. Kastan & Joel E. Tepper. Published: 26 March 2019.

#### ***Additional literature:***

1. Textbook of gynecological oncology – ESMO 2021
2. Surgical oncology. Theory and multidisciplinary practice / 2<sup>nd</sup> edition / G. Poston, L. Wyld, R. A Audicio – 2019

### **Information resources**

1. NCCN and clinical guidelines <https://www.nccn.org>
2. UpToDate – <http://www.uptodate.com/home>
3. Access Medicine - <http://accessmedicine.mhmedical.com>
4. PubMed - <https://www.ncbi.nlm.nih.gov/pmc/>
5. CancerMedicine [www.ncbi.nih.gov](http://www.ncbi.nih.gov)

## **EVALUATION**

**Methods of current control:** test control, oral examination, written answer to the teacher's question, description of diagnostic radiation images according to the schemes, solving clinical problems.

At the last practical lesson the teacher is obliged to announce to students the results of their current academic success, academic, academic debt (if any).

Only those students who do not have academic debts and have an average score for current academic activity of at least **3.00** are allowed to the final certification.

**Forms and methods of final control**, at the end of the study subjects carried differentiated credit and final certification are permitted only those students who have academic debt and with the average score for current educational activity of at least 3.00.

Differentiated student credit is assessed on a 4-point (traditional) scale

Final control should be standardized.

The form of differentiated credit of Radiation Medicine consists of knowledge testing and interview, according to the list of questions.

***How will the assessment of knowledge (distribution of points) of higher education students be carried out?***

The maximum number of points assigned to students when mastering each module (ECTS credit) is 200.

GPA for discipline	The ratio received by the student average score for the discipline to the maximum possible value of this indicator	Score from discipline on a 4-point scale (traditional assessment)
4,45 – 5,0	90-100%	5
3,75 – 4,44	75-89%	4
3,0 – 3,74	60-74%	3

Additionally, the department holds a competition of abstracts and presentations. Students who have prepared the best works receive a diff. credit automatically if the average score of a student in the discipline "Radiology" is 4,5 and above.

**Independent work of students (VTS)**

Independent work of students, which provides employment subject to audience work, estimated during current control to THE APPROPRIATE class. Assimilation of topics that are submitted only for independent work is checked during the exam or differential test.

**COURSE POLICY**

**Policy on deadlines and rearrangement:** For students who want to improve their performance in mastering the content modules, it is possible to conduct a re-final control of the discipline (content module) during the exam in the commission.

***Academic Integrity Policy :***

Violation of academic integrity is not allowed when working on writing essays, presentations, preparing reports, etc. When using *Internet* resources and other sources of information, the student must indicate the source used during the task.

If plagiarism is detected, the student receives an unsatisfactory grade for the task and must re-complete the task.

Write-off during testing and diff. offsets are prohibited (including the use of mobile devices).

***Attendance and lateness policy:***

Delay of the student for more than 15 minutes before the lecture or before the practical lesson is counted as absence from the practical lesson.

***Mobile devices:***

Mobile devices in practice can be used exclusively for educational purposes. And itself: consideration of the presentation which is worked out at employment, the decision of problems of the teacher. The use of mobile devices for other purposes during a lecture or practical lesson is prohibited, and a student who ignores these requirements will be suspended from the lecture or practical lesson.

***Audience behavior:***

During a lecture or practical lesson, the student should not interfere with the learning of other students and distract the teacher. A student is not allowed to eat or drink during a lecture or practical session. The student can leave the auditorium, where there is a lecture or practical lesson at will only on health grounds.