

SYLLABUS

1. General information on the course

Full course name	Oncology
Full official name of a higher education institution	Sumy State University
Full name of a structural unit	Medical Institute. Department of Oncology and Radiology
Author(s)	Moskalenko Yuliia Vasylivna
Cycle/higher education level	The Second Level Of Higher Education, National Qualifications Framework Of Ukraine – The 7th Level, QF-LLL – The 7th Level, FQ-EHEA – The Second Cycle
Semester	1 week within 10 semester
Workload	The volume of the course is 1 ECTS credit, 30 hours, of which 20 hours are contact work with the teacher (20 hours of practical classes), 10 hours are independent work.
Language(s)	English

2. Place in the study programme

Relation to curriculum	Compulsory course available for study programme "Medicine"
Prerequisites	Step-1", Oncology as a discipline based on the study of etiology by students, pathogenesis, genetic and molecular basis development of malignant neoplasms, their study diagnosis and treatment. In previous courses students studied anatomy, physiology, pathological anatomy, pharmacology, medical genetics, radiology, therapy, surgery analysis in parallel, which allows you to learn the discipline in combination with therapeutic and general surgical pathologies.
Additional requirements	none
Restrictions	none

3. Aims of the course

The academic discipline aims to study theoretical and practical knowledge on the etiology of cancer, carcinogenesis, typical clinical manifestations, methods of diagnosis and treatment of malignant tumors, rehabilitation of cancer patients, appropriate training of the doctor. The practice of practical skills of diagnostics and treatment of diseases, development, and formation of clinical thinking of the future doctor is providing.

4. Contents

Topic 1 Lip and Oral cavity cancer.

Morbidity, main causes, epidemiology, precancerous diseases; clinic, methods of diagnosis and early diagnosis, methods of morphological diagnosis (puncture and incisional biopsy); TNM classification; treatment methods; surgical treatment, regional chemotherapy; principles of combined and complex treatment; immediate and separate results of treatment; primary and secondary prevention of tumors of the lip, oral mucosa, tongue.

Topic 2 Thyroid cancer.

Incidence, causes, epidemiology, precancerous diseases, clinic, diagnosis, early diagnosis, differential diagnosis, TNM classification; treatment: surgical treatment, combined and complex treatment; immediate and separate results of treatment; prevention.

Topic 3 Esophageal cancer.

Morbidity, causes, epidemiology, precancerous diseases, clinic, diagnosis, early diagnosis, differential diagnosis, diagnosis of Barrett's esophagus, classification by stages and TNM, treatment methods, surgical treatment (radical, palliative and symptomatic operations); general principles of combined and complex treatment; immediate and separate results of treatment, methods of medical rehabilitation, prevention of esophageal cancer.

Topic 4 Stomach cancer.

Morbidity, causes, epidemiology, precancerous diseases of the stomach; clinic, diagnosis, early diagnosis, differential diagnosis, methods of instrumental diagnosis, methods of screening for gastric cancer; classification by stages and TNM; treatment of gastric cancer: surgery, radical surgery, the role of lymphadenectomy; palliative and symptomatic operations; principles of combined and complex treatment; immediate and separate results of treatment; methods of medical rehabilitation; primary and secondary prevention of gastric cancer.

Topic 5 Pancreatic cancer.

Morbidity, causes, epidemiology, clinic, diagnosis, differential diagnosis, classification, general principles and methods of treatment; principles of combined and complex treatment; immediate and separate results of treatment; prevention of pancreatic cancer.

Topic 6 Liver cancer.

Morbidity, causes, epidemiology, precancerous diseases, clinic, diagnosis, differential diagnosis, classification, methods of treatment, principles of combined and complex treatment; prevention of liver cancer.

Topic 7 Cancer of the colon.

Morbidity, causes, epidemiology, precancerous diseases, clinic, diagnosis, early diagnosis, differential diagnosis, classification, treatment: surgical treatment (radical, palliative and symptomatic operations), principles of combined and complex treatment; immediate and separate results of treatment.

Topic 8 Cancer of the rectum and anal canal.

Morbidity, causes, epidemiology, precancerous diseases, clinic, diagnosis, differential diagnosis, classification, treatment: surgical treatment: radical, palliative and symptomatic operations, principles of combined and complex treatment; immediate and separate results of treatment. Methods of medical rehabilitation; primary and secondary prevention of colon tumors.

<p>Topic 9 Palliative therapy. Symptomatic therapy of cancer patients.</p> <p>Tasks, principles, methods. Pain management, principles, methods, main groups of analgesics. Methods of palliative treatment of the main symptoms and syndromes. Ethical and psychological principles of palliative care. Symptomatic therapy: tasks, principles, methods of basic symptoms and syndromes. Principles of palliative care.</p>
<p>Topic 10 Control module.</p> <p>Control module.</p>

5. Intended learning outcomes of the course

After successful study of the course, the student will be able to:

LO1	Skills in surveying and clinical examination of a patient
LO2	Ability to determine the required set of laboratory and instrumental studies and to evaluate their results
LO3	Ability to establish a provisional and clinical diagnosis of disease
LO4	Ability to determine the necessary mode of work and rest in the treatment course
LO5	Ability to determine a diet in the treatment course
LO6	Ability to determine the principles of treatment and treatment modality
LO7	Ability to diagnose medical emergencies
LO8	Ability to determine the approach to emergency medical care
LO9	Skills in emergency medical procedures
LO10	Ability to conduct medical evacuation procedures
LO11	Skills in performing medical procedures
LO13	Ability to perform sanitary and preventive measures
LO15	Ability to manage the patients who are subject to dispensary monitoring
LO16	Ability to perform disability examination
LO17	Ability to maintain medical records
LO18	Ability to conduct epidemiological and medical-statistical research of public health; ability to process governmental, social, economic, and medical information

6. Role of the course in the achievement of programme learning outcomes

Programme learning outcomes achieved by the course.

For 222 Medicine:

PO1	To detect and identify the leading clinical symptoms and syndromes (according to the List 1); to establish the most probable nosological or syndromic preliminary clinical diagnosis of diseases (according to the List 2) using standard methods, preliminary data of the patient's anamnesis, patient's examination data, and knowledge about a human, his organs and systems.
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PO2	To collect information about the patient's general condition; to assess the patient's psychomotor and physical development and the state of organs and systems of the body; to assess information on the diagnosis (according to the List 4) based on laboratory and instrumental findings.
PO3	To order and analyze additional (mandatory and optional) examinations (laboratory, radiological, functional and/or instrumental) (according to the List 4) in order to perform a differential diagnosis of diseases (according to the List 2).
PO4	To establish a final clinical diagnosis at a medical institution under control of a supervising doctor by means of informed decision and logical analysis of the obtained subjective and objective data of clinical and additional examinations, and differential diagnosis, following the relevant ethical and legal norms (according to the List 2).
PO5	To detect the key clinical syndrome or the reason for patient's condition severity (according to the List 3) via informed decision and evaluation of the person's state under any circumstances (at home, in the street, at a healthcare facility), including under emergency and military operation conditions, in the field, with a lack of information and limited time.
PO7	To determine an appropriate work and rest mode in the treatment of diseases (according to the List 2) at a healthcare institution, at patient's home and during medical evacuation (including in the field), based on the provisional clinical diagnosis and observing the relevant ethical and legal norms, by making a reasonable decision according to existing algorithms and standard procedures.
PO8	To determine an appropriate diet in the treatment of diseases (according to the List 2) at a healthcare institution, at patient's home and during medical evacuation (including in the field), based on the provisional clinical diagnosis and observing the relevant ethical and legal norms, by making a reasonable decision according to existing algorithms and standard procedures.
PO11	To determine the appropriate approach in emergency medical care case under any circumstances, adhering to the relevant ethical and legal norms, by making an informed decision based on the main clinical syndrome (disease severity) and emergency diagnosis (according to the List 3) using standard schemes under limited time conditions based on the principles of evidence-based medicine.
PO12	To provide emergency medical assistance under any circumstances, adhering to the relevant ethical and legal norms, by making an informed decision based on the main clinical syndrome (disease severity) and emergency diagnosis (according to the List 3) using standard schemes and predetermined approach under limited time conditions based on the principles of evidence-based medicine.
PO13	To organize medical evacuation procedures among the population and the military under emergency and military operation conditions (including in the field), and during the phases of medical evacuation, given the existing system of medical evacuation provision.
PO14	To perform medical procedures (according to the List 5) at a medical facility, at home or at work on the basis of a provisional clinical diagnosis and/or health parameters through making an informed decision and adhering to the relevant ethical and legal norms.

PO15	To perform procedures related to emergency medical assistance within a limited time and under any circumstances, using standard schemes on the basis of a medical emergency diagnosis (according to the List 3).
PO16	To plan and implement a system of sanitary and preventive measures against the occurrence and spread of diseases among the population.
PO18	To search for the necessary information in the professional literature and databases; to analyze, evaluate, and apply this information. To apply modern digital technologies, specialized software, statistical methods of data analysis to solve complex health problems.
PO19	To assess environmental impact on public health.
PO21	To organize an appropriate level of individual safety (own and of those cared for) in case of typical dangerous situations in the individual field of activity.

7. Teaching and learning activities

7.1 Types of training

Topic 1. Lip and Oral cavity cancer.
pr.tr.1 "Lip and Oral cavity cancer." (full-time course) Morbidity, main causes, epidemiology, precancerous diseases; clinic, methods of diagnosis and early diagnosis, methods of morphological diagnosis (puncture and incisional biopsy); classification TNM by stages; treatment methods; surgical treatment, regional chemotherapy; principles of combined and complex treatment; immediate and separate results of treatment; primary and secondary prevention of tumors of the lip, oral mucosa, tongue. Work with cytological and histological examinations.
Topic 2. Thyroid cancer.
pr.tr.2 "Thyroid cancer" (full-time course) Incidence, causes, epidemiology, precancerous diseases, clinic, diagnosis, early diagnosis, differential diagnosis, TNM classification; treatment: surgical treatment, combined and complex treatment; immediate and separate results of treatment; prevention. Practice of palpation technique thyroid gland. Practice the technique of palpation of the thyroid gland.
Topic 3. Esophageal cancer.
pr.tr.3 "Esophageal cancer." (full-time course) Morbidity, causes, epidemiology, precancerous diseases, clinic, diagnosis, early diagnosis, differential diagnosis, diagnosis of Barrett's esophagus, TNM classification by stages, treatment methods, surgical treatment (radical, palliative and symptomatic operations); general principles of combined and complex treatment; immediate and separate results of treatment, methods of medical rehabilitation, prevention of esophageal cancer.
Topic 4. Stomach cancer.

pr.tr.4 "Stomach cancer." (full-time course)

Morbidity, causes, epidemiology, precancerous diseases of the stomach; clinic, diagnosis, early diagnosis, differential diagnosis, methods of instrumental diagnosis, methods of screening for gastric cancer; TNM classification by stages; treatment of gastric cancer: surgery, radical surgery, the role of lymphadenectomy; palliative and symptomatic operations; principles of combined and complex treatment; immediate and separate results of treatment; methods of medical rehabilitation; primary and secondary prevention of gastric cancer. Study of methods of carrying out the test on *Helicobacter pylori*.

Topic 5. Pancreatic cancer.

pr.tr.5 "Pancreatic cancer." (full-time course)

Morbidity, causes, epidemiology, clinic, diagnosis, differential diagnosis, classification, general principles and methods of treatment; principles of combined and complex treatment; immediate and separate results of treatment; prevention of pancreatic cancer. Work with the results of biochemical blood tests. Study of the technique of retrograde pancreatocholangiography.

Topic 6. Liver cancer.

pr.tr.6 "Liver cancer." (full-time course)

Morbidity, causes, epidemiology, precancerous diseases, clinic, diagnosis, differential diagnosis, classification, methods of treatment, principles of combined and complex treatment; prevention of liver cancer. Work with the results of biochemical blood tests.

Topic 7. Cancer of the colon.

pr.tr.7 "Cancer of the colon." (full-time course)

Morbidity, causes, epidemiology, precancerous diseases, clinic, diagnosis, early diagnosis, differential diagnosis, classification, treatment: surgical treatment (radical, palliative and symptomatic operations), principles of combined and complex treatment; immediate and separate results of treatment. Study of methods of testing feces for occult blood.

Topic 8. Cancer of the rectum and anal canal.

pr.tr.8 "Cancer of the rectum and anal canal." (full-time course)

Morbidity, causes, epidemiology, precancerous diseases, clinic, diagnosis, differential diagnosis, classification, treatment: surgical treatment: radical, palliative and symptomatic operations, principles of combined and complex treatment; immediate and separate results of treatment. Methods of medical rehabilitation; primary and secondary prevention of colon tumors. Working with phantoms. Practice the technique of palpation of the rectum.

Topic 9. Palliative therapy. Symptomatic therapy of cancer patients.

pr.tr.9 "Palliative therapy of cancer patients." (full-time course)

Tasks, principles, methods. Pain management, principles, methods, main groups of analgesics. Methods of palliative treatment of the main symptoms and syndromes. Ethical and psychological principles of palliative care. Symptomatic therapy of cancer patients. Tasks, principles, methods of basic symptoms and syndromes. Principles of palliative care.

Topic 10. Control module.

pr.tr.10 "Control module." (full-time course)
Control module.

7.2 Learning activities

LA1	E-learning in systems (Zoom, MIX.sumdu.edu.ua and in YouTube channel)
LA2	Discussion of cases
LA3	Watching movies
LA4	Preparation for practical classes
LA5	Execution of practical tasks
LA6	Preparation for current and final control

8. Teaching methods

Course involves learning through:

TM1	Practical classes.
TM2	Case-based learning (CBL).
TM3	Team-based learning (TBL).
TM4	Research-based learning (RBL).
TM5	Think-pair-share

The discipline is taught using modern teaching methods (CBL, TBL, RBL), which not only promote the development of professional skills, but also stimulate creative and scientific activities and are aimed at training practice-oriented professionals.

GC 1. Ability to abstract thinking, analysis, and synthesis. GC 2. Ability to learn, master modern knowledge, and apply the knowledge in practice. GC 3. Knowledge and understanding of the subject area and professional activity comprehension. GC 4. Ability to adapt and act in a new situation. GC 5. Ability to make reasoned decisions; teamwork ability; interpersonal skills. GC 7. Ability to use information and communication technologies. GC 8. Determination and persistence on the tasks and commitments undertaken.

9. Methods and criteria for assessment

9.1. Assessment criteria

ECTS	Definition	National scale	Rating scale
	Outstanding performance without errors	5 (Excellent)	$170 \leq RD \leq 200$
	Above the average standard but with minor errors	4 (Good)	$140 \leq RD < 169$
	Fair but with significant shortcomings	3 (Satisfactory)	$120 \leq RD < 139$
	Fail – some more work required before the credit can be awarded	2 (Fail)	$0 \leq RD < 119$

9.2 Formative assessment

FA1	Diagnostic testing
FA2	Interviews and oral comments of the teacher on his results
FA3	Checking and evaluating written assignments
FA4	Peer assessment

9.3 Summative assessment

SA1	The average grade for current success in the discipline
SA2	Drawing up of complex written modular control

Form of assessment:

9 semester		200 scores
SA1. The average grade for current success in the discipline		120
	Oral examination and testing, verification and assessment of writing tasks	100
	Test control	20
SA2. Drawing up of complex written modular control		80
	Theoretical questions	60
	Medical skills	10
	Emergency care	10

Form of assessment (special cases):

9 semester		200 scores
SA1. The average grade for current success in the discipline		120
	In case of quarantine restrictions, practical classes are held remotely using the platform Mix.sumdu.edu.ua, Zoom, Google meet	120
SA2. Drawing up of complex written modular control		80
		80

Grade in the discipline is defined as the sum of points for current educational activities (not less than 72) and the final module control (not less than 48). The number of points for the recent move is calculated by the formula $120 \text{ arithmetic mean of student performance in a 4-point grading system} / 5$. The final module control is conducted at the end of the semester in the form of a written test, with a score of "5" corresponds to 80 points, "4" - 64 points, "3" - 48 points, "2" - 0 points. In case of unsatisfactory results for the final module control, the student has the right to rearrange the test. Students who fail to take the test without good reason are considered to have received an unsatisfactory grade.

10. Learning resources

10.1 Material and technical support

MTS1	Information and communication systems
MTS2	Computers, computer systems and networks
MTS3	Models and organs (mammary gland, rectum)
MTS4	Medical facilities / premises and equipment (Sumy Regional Oncology Dispensary)
MTS6	Medical equipment (fibrobronchoscopus, mammagrams)

10.2 Information and methodical support

Essential Reading	
1	Patient Care (Practical Course): textbook. — 2nd edition / O. M. Kovalyova, V. M. Lisovyi, R. S. Shevchenko et al. — K., 2018. — 320 p.
2	Kravets O. V. Care of the Patient in Surgery. Test questions : Study guide / O. V. Kravets, G. I. Pyatikop, R. A. Moskalenko. – Sumy : Sumy State University, 2020. – 158 p.
3	Moskalenko, Yu.V. TNM Classification of Malignant Tumours with Test Questions (Seventh Edition, 2009) [Текст]: study guide / Yu.V. Moskalenko, O.I. Vynnychenko, I.O. Vynnychenko. – Sumy : Sumy State University, 2018. – 110 p.
Supplemental Reading	
4	12 years frighting liposarcoma: case report / M. G. Kononenko, I.O. Vynnychenko, Yu.V. Moskalenko [et al.] // Wiadomosci Lekarskie. – 2017. – Vol. 70, Issue 5. – P. 995–997.
5	Primary multiple tumor with affection of the thyroid gland, uterus, urinary bladder, mammary gland and other organs / A. Romaniuk, M. Lyndin, V. Smiyanov [et al.] // Pathology – Research and Practice. – 2017. – Vol. 213, Issue 5. – P. 574–579.
6	Case report of giant nonmetastatic gastrointestinal solid tumor without clinical manifestations in a middle-aged male patient / I.O. Vynnychenko, M.G. Kononenko, O.M. Smorodska [et al.] // Novosti khirurgii.
7	Kravets O. V. Care of the Patient in Surgery. Test questions : Study guide / O. V. Kravets, G. I. Pyatikop, R. A. Moskalenko. – Sumy : Sumy State University, 2020. – 158 p.
Web-based and electronic resources	
8	https://www.cancer.org.au/health-professionals/oncology/clinical-oncology-for-medical-students.html
10	https://www.cancer.org