

**DANYLO HALYTSKY LVIV NATIONAL MEDICAL UNIVERSITY**  
Department of Urology FPGE

APPROVED

The first vice-rector  
on scientific and pedagogical work  
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\_\_\_\_\_ 2020  
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**STUDY PROGRAM OF THE DISCIPLINE**  
**ELECTIVE COURSE**  
**ONCOUROLOGY**  
(name of academic discipline)

training of specialists of the second (master's) level of higher education  
field of knowledge 22 "Health care"  
specialty 222 "Medicine"

Discussed and approved  
at a meeting of the Department of  
Urology FPGE  
Protocol №3  
from "31" August 2020  
Head of Department  
\_\_\_\_\_ prof. Borzhievsky A.Ts.

Approved  
profile methodical commission  
of Medical Faculty 1  
Protocol №8  
from "24" September 2020  
Chairman of the profile methodical  
commission  
\_\_\_\_\_ Prof. Andryushchenko V.P.

**Lviv - 2020**

Working curriculum of the discipline elective course "Oncourology" for students of the VI course of the medical faculty, studying in the specialty 222 "Medicine"

Compiled by the staff of the Department of Urology FPGE Lviv National Medical University named after Danylo Halytsky: prof. Borzhievsky A.Ts., prof. Stroy OO, prof. Vorobets DZ, docent Mytsyk YO, docent Dmitrienko VV, docent Sheremeta RZ, docent Vitkovsky VF, docent Lychkovsky OE, docent Pasichnyk SM, as. Borzhievsky OA, as. Zagoruyko RR, as. Chaplia MM, as. Kobylnik YS, as. Nakonechnyy YA.

Based on the sample program of the discipline, the elective course "Oncourology" and approved by the relevant methodological commission (" 24 "of September 2020)

**Changes and additions to the curriculum for 2020 - 2021 academic year.**

<b>№</b>	<b>Contents of changes (additions)</b>	<b>Date and № minutes of the department meeting</b>	<b>Notes</b>
1.			

Head of the Department of Urology FPDO Signature \_\_\_\_\_  
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## INTRODUCTION

Program of study of the discipline elective course "Oncourology"  
 according to the Standard of higher education of the second (master's) level  
 areas of knowledge 22 "Health"  
 specialty 222 "Medicine"  
 educational program of master of medicine

Description of the discipline (annotation) elective course "Oncourology"- one of the elective disciplines in the system of higher medical education, knowledge of which is necessary for quality training of specialists in the field of health care. The program covers in full and at the current scientific level general clinical, laboratory and instrumental methods of examination used in urological patients with oncopathology. Attention is paid to a number of features of the clinical course of oncurological diseases. According to its content and depth of coverage of educational material, it meets its main task: to improve, systematize and generalize students' knowledge about the course of oncological and urological diseases, methods of examination and treatment.

In recent decades, methods of diagnosis and treatment of cancer patients have been supplemented by new approaches. In this regard, the standards of higher medical education require the graduate of a higher medical educational institution to be able to use these methods in a timely and sufficient manner in the diagnosis and treatment of urogenital cancer.

The knowledge from the elective course "Oncourology" allows the future specialist to form skills and apply the acquired knowledge in the process of professional activity.

The structure of the discipline	Number of credits, hours, of them			CPC	Year of study semester	type of control
	Total	Classroom				
		Lectures (hours)	Practical classes (hours)			
Subjects: elective course "Oncourology"	4.0 credits / 120 hours	-	30	90	6th year (11/12 semesters)	credit

**The subject of study of the discipline are:** methods of research and treatment of oncurological patients, ability to apply them in medical activity.

**Interdisciplinary links:**

The study of the discipline elective course "Oncourology" is based on the study of students of the clinical discipline - oncourology; morphological disciplines - human anatomy, pathomorphology and pathophysiology; integrates with these disciplines; lays an array of students' knowledge of methods of diagnosis and treatment of oncological uropathology, provides for the integration of teaching with general surgery, oncology, radiology, radiation therapy; forms the ability to apply knowledge in the process of professional activity at the level of general practitioner.

**1. The purpose and objectives of the discipline**

**1.1. The purpose of teaching the discipline elective course "Oncourology"** is the formation of students' complex knowledge, skills and abilities in the study of methods of diagnosis and treatment of urooncological pathology, mastering theoretical and practical knowledge of modern methods of diagnosis and treatment in urology and urooncology, indications and contraindications for their appointment, methods of analysis, analysis and interpretation the results of research within the limits corresponding to the training of a general practitioner, taking into account the peculiarities of his specialty.

**1.2. The main tasks of studying the discipline elective course "Oncourology"** is to teach applied methods of diagnosis and treatment of oncopathology of the genitourinary system, methods of conducting, analyzing and interpreting research results.

**1.3 Competences and learning outcomes**, the formation of which is facilitated by the discipline (relationship with the normative content of training of higher education seekers, formulated in terms of learning outcomes in the Standard of Higher Education).

In accordance with the requirements of the Standard of Higher Education, the discipline provides students with the acquisition of competencies:

- *general*:

- ability to abstract thinking, analysis and synthesis;
- ability to learn and master modern knowledge;
- ability to apply knowledge in practical situations;
- knowledge and understanding of the subject area and understanding of professional activity;
- ability to adapt and act in a new situation;
- ability to make informed decisions;
- ability to work in a team;
- interpersonal skills;
- ability to communicate in the state language both orally and in writing;
- ability to communicate in a foreign language;
- skills of using information and communication technologies.
- certainty and persistence in the tasks and responsibilities;
- ability to act socially responsibly and consciously;
- the desire to preserve the environment;
- ability to act on the basis of ethical considerations (motives).

- *special* (professional, subject):

- skills of interviewing and clinical examination of the patient;
- ability to determine the necessary list of laboratory and instrumental studies and evaluate their results;
- ability to establish a preliminary and clinical diagnosis of the disease;
- ability to determine the necessary mode of work and rest in the treatment of diseases;
- ability to determine the nature of nutrition in the treatment of diseases;
- ability to determine the principles and nature of disease treatment;
- ability to diagnose emergencies;
- ability to determine the tactics of emergency medical care;
- emergency medical skills;
- ability to carry out medical and evacuation measures;
- skills of performing medical manipulations;
- ability to carry out sanitary and hygienic and preventive measures;
- ability to determine the tactics of management of persons subject to dispensary supervision;
- ability to keep medical records;
- ability to assess the impact of the environment, socio-economic and biological determinants on the health of the individual, family, population.

Detailing of competencies according to NQF descriptors in the form of "Competence Matrix".

### Competence matrix

№	Competence	Knowledge	Skills	Communication	Autonomy and responsibility
<b>Integral competence</b>					
Ability to solve typical and complex specialized problems and practical problems in professional activities in the field of health care, or in the learning process, which involves research and / or innovation and is characterized by complexity and uncertainty of conditions and requirements.					
<b>General competencies</b>					
1.	Ability to abstract thinking, analysis and synthesis	Have an abstract thinking, analysis and synthesis	Be able to abstract think, analyze and synthesize knowledge	The ability to effectively use the results of abstract thinking	Be responsible for the results of abstract thinking, analysis and synthesis
2.	Ability to learn and master modern knowledge	Have modern knowledge	Be able to learn and use modern knowledge	Ability to use modern knowledge	Be responsible for the results of the use of modern knowledge
3.	Ability to apply knowledge in practical situations	Have specialized conceptual knowledge acquired in the learning process.	Be able to solve complex problems and problems that arise in professional activities.	Clear and unambiguous communication of own conclusions, knowledge and explanations that substantiate them to specialists and non-specialists.	Responsible for making decisions in difficult conditions
4.	Knowledge and understanding of the subject area and understanding of the profession	Have deep knowledge of the structure of professional activity.	Be able to carry out professional activities that require updating and integration of knowledge.	Ability to effectively form a communication strategy in professional activities	To be responsible for professional development, ability to further professional training with a high level of autonomy.
5.	Ability to adapt and act in a new situation	Have deep knowledge of adaptation and action in a new situation	Be able to use the acquired knowledge to adapt and act in a new situation	Communicate effectively in a new situation	Take responsibility for acting in a new situation
6.	Ability to make informed decisions	Have deep knowledge to justify the decision	Be able to make informed decisions based on knowledge	Use the acquired knowledge to justify the decision	Be responsible for informed decisions
7.	Ability to work in a team	Know the methods of teamwork	Be able to work in a team	Use the acquired knowledge in teamwork	Be responsible for teamwork

<b>N<sup>o</sup></b>	<b>Competence</b>	<b>Knowledge</b>	<b>Skills</b>	<b>Communication</b>	<b>Autonomy and responsibility</b>
8.	Interpersonal skills	Have interpersonal skills	Be able to use the skills of interpersonal interaction	Use the acquired knowledge for interpersonal interaction	Be responsible for interpersonal interaction
9.	Ability to communicate in the state language both orally and in writing	Have the skills to communicate in the state language both orally and in writing	Be able to communicate in the state language both orally and in writing	Use knowledge of the state language	Be responsible for communicating in the state language both orally and in writing
10	Ability to communicate in a foreign language	Have the skills to communicate in a foreign language	Be able to communicate in a foreign language	Use knowledge of a foreign language	Be responsible for communicating in a foreign language
11	Skills in the use of information and communication technologies	Have deep knowledge in the field of information and communication technologies used in professional activities	Be able to use information and communication technologies in a professional field that requires updating and integration of knowledge.	Use information and communication technologies in professional activities	Be responsible for the development of professional knowledge and skills.
12	Definiteness and persistence in terms of tasks and responsibilities	Have persistence in the tasks and responsibilities	Be able to persistently perform tasks and responsibilities	Communicate with others in the performance of tasks and responsibilities	Be responsible for the performance of their duties and tasks
13	The ability to act socially responsibly and consciously	Have deep knowledge for social responsibility	Be able to act socially responsibly and consciously	Establish appropriate links for social and conscious responsibility	Be responsible for social actions
14	The desire to preserve the environment	Have in-depth knowledge of environmental protection	Be able to analyze the preservation of the environment	Use the acquired knowledge to preserve the environment	Be responsible for preserving the environment
15	Ability to act on the basis of ethical considerations (motives)	Have in-depth knowledge of ethical relations	Be able to use knowledge of ethical relations	Communicate effectively on the basis of ethical considerations (motives)	Be responsible for the actions of ethical considerations (motives)
<b>Special (professional, subject) competencies</b>					
1.	Skills of interviewing and clinical examination of the patient	Have in-depth knowledge of interviewing and clinical examination of the patient	Be able to use knowledge for interviewing and clinical examination of the patient	Use the acquired knowledge for interviewing and clinical examination of the patient	Responsible for interviewing and clinical examination of the patient

<b>N<sup>o</sup></b>	<b>Competence</b>	<b>Knowledge</b>	<b>Skills</b>	<b>Communication</b>	<b>Autonomy and responsibility</b>
2.	Ability to determine the required list of laboratory and instrumental studies and evaluate their results	Have in-depth knowledge of laboratory and instrumental research and evaluation of their results	Be able to use laboratory and instrumental research	Use the acquired knowledge to evaluate laboratory and instrumental research	Be responsible for the evaluation of laboratory and instrumental research
3.	Ability to establish a preliminary and clinical diagnosis of the disease	Have special knowledge before establishing a preliminary and clinical diagnosis of the disease	Be able to establish a preliminary and clinical diagnosis of the disease	Justify the establishment of preliminary and clinical diagnosis of the disease	Be responsible for establishing a preliminary and clinical diagnosis of the disease
4.	Ability to determine the required mode of work and rest in the treatment of diseases	Have the knowledge to determine the necessary mode of work and rest in the treatment of diseases	Be able to prescribe the necessary mode of work and rest in the treatment of diseases	Justify the necessary mode of work and rest in the treatment of diseases	Be responsible for prescribing the necessary mode of work and rest in the treatment of diseases
5.	Ability to determine the nature of nutrition in the treatment of diseases	Have the knowledge to determine the nature of nutrition in the treatment of diseases	Be able to prescribe the necessary diet in the treatment of diseases	Justify the necessary diet in the treatment of diseases	Be responsible for the prescribed diet in the treatment of diseases
6.	Ability to determine the principles and nature of disease treatment	Have the knowledge to determine the principles and nature of disease treatment	Be able to prescribe appropriate treatment of diseases	Justify appropriate treatment of diseases	Be responsible for the prescribed treatment
7.	Ability to diagnose emergencies	Have special knowledge for diagnosing emergencies	Be able to diagnose emergencies	Justify the diagnosis of emergencies	Be responsible for diagnosing emergencies
8.	Ability to determine the tactics of emergency medical care	Have specialized knowledge to determine the tactics of emergency medical care	Be able to determine the tactics of emergency medical care	Justify the tactics of emergency medical care	Be responsible for determining the tactics of emergency medical care
9.	Emergency care skills	Have knowledge of emergency medical care	Be able to provide emergency medical care	Justify the provision of emergency medical care	Be responsible for providing emergency medical care
10	Skills to perform medical manipulations	Have the knowledge to perform medical manipulations	Be able to perform medical manipulations	Use the acquired knowledge to perform medical manipulations	Be responsible for performing medical manipulations



<b>Nº</b>	<b>Competence</b>	<b>Knowledge</b>	<b>Skills</b>	<b>Communication</b>	<b>Autonomy and responsibility</b>
11	ability to determine the tactics of management of persons subject to dispensary supervision	Have knowledge of determining the tactics of management of persons subject to dispensary supervision	Be able to identify groups of persons of dispensary supervision	Justify the definition of persons subject to dispensary supervision	To be responsible for the tactics of conducting persons subject to dispensary supervision
12	Ability to keep medical records	Have knowledge of medical records	Be able to keep medical records	Use the acquired knowledge in maintaining medical records	Be responsible for keeping medical records

### **Learning outcomes:**

Integrative final program learning outcomes, the formation of which is facilitated by the discipline of the elective course "Oncourology":

- methods of research and treatment of patients with oncopathology of the genitourinary system;
- practical use of instrumental diagnostic methods;
- solving clinical situational problems and test tasks;
- mastering the elements of research on patients and models;
- mastering the skills of application of diagnostic and treatment methods in oncourology.

Learning outcomes for the discipline elective course "Oncourology":

#### **know:**

- the most common clinical symptoms and syndromes in urooncology.
- principles of evidence-based medicine in making diagnostic and therapeutic decisions in oncological diseases of the genitourinary system.
- how to diagnose and plan an examination for the most common urooncological diseases.
- how to apply diagnostic methods that help in making decisions on the management of various urooncological diseases.
- how to determine and justify the indications for referral of the patient for research in the most common cancers of the genitourinary system.
- how to interpret the data of instrumental examinations in the typical course of the most common urooncological diseases.
- how to determine and justify the indications for the optimal method of treatment of a urooncological patient taking into account the stage of the tumor process.
- how to determine the prognosis of life and ability to work in the most common urooncological diseases on the basis of research data.
- and demonstrate the ability to perform medical manipulations according to the OKH.
- how to provide emergency medical care for the most common complications in the study or treatment of cancer of the genitourinary system.
- and demonstrate the ability to maintain medical records in a urology clinic.
- and demonstrate mastery of the moral and deontological principles of a medical professional and the principles of professional subordination in a urology clinic.

#### **be able:**

- define the basic concepts of urooncology in tumors of the genitourinary system
- to interpret diagnostic algorithms in urology clinic.
- substantiate the indications and contraindications to the appointment of diagnostic methods in oncopathology of the urinary system.
- to highlight the features of the etiology and pathogenesis of benign and malignant kidney tumors.
- diagnose and differentiate benign and malignant tumors kidneys on the basis of clinical data and results of instrumental, radiological examinations, levels of tumor markers.
- to stage and predict the course of kidney cancer according to the methods of examination.
- use types and methods of treatment of patients with benign and malignant tumors kidneys (surgical, minimally invasive, laparoscopic, chemotherapy and radiation therapy).
- to highlight the features of the etiology and pathogenesis of benign and malignant tumors of the ureter.
- diagnose and differentiate benign and malignant tumors of the ureter based on clinical data and the results of instrumental, radiological examinations, levels of tumor markers.
- apply the skills of staging and predicting the course of ureteral cancer according to the methods of examination.
- apply types and methods of treatment of patients with benign and malignant tumors of the ureter (surgical, minimally invasive, laparoscopic, chemotherapy and radiation therapy).
- explain the etiology and pathogenesis of benign and malignant tumors bladder.
- diagnose and differentiate benign and malignant tumors bladder on the basis of clinical data and the results of instrumental, radiological examinations, levels of tumor markers.
- use the skills of staging and predicting the course of cancer bladder according to survey methods.
- Apply different types and methods of treatment of patients with benign and malignant tumors bladder (surgical, minimally invasive, laparoscopic, chemotherapy and radiation therapy).
- to highlight the features of the etiology and pathogenesis of benign and malignant prostate tumors.
- diagnose and differentiate benign and malignant prostate tumors based on clinical data and the results of instrumental, radiological examinations, levels of tumor markers.
- use the skills of staging and predicting the course of prostate cancer according to the methods of examination.
- apply types and methods of treatment of patients with benign and malignant prostate tumors (surgical, minimally invasive, laparoscopic, chemotherapy and radiation therapy).
- to highlight the features of the etiology and pathogenesis of benign and malignant tumors of the tumor of the testicles and penis.
- to diagnose and differentiate benign and malignant tumors of the testicles and penis based on clinical data and the results of instrumental, radiological examinations, levels of tumor markers.
- use the skills of staging and predicting the course of testicular and penile cancer according to the methods of examination.
- apply types and methods of treatment of patients with benign and malignant tumors of the testicles and penis (surgical, minimally invasive, laparoscopic, chemotherapy and radiation therapy).

## **2. Information volume of the discipline**

4.0 ECTS credits / 120 hours are allocated for the study of the discipline.

### **Topic 1. Benign and malignant tumors kidney. Etiology, pathogenesis, diagnosis and treatment.**

Benign and malignant tumors kidneys: etiology, basics of pathogenesis, molecular biology, pathophysiology and histopathology. Basic clinical manifestations, principles of laboratory, instrumental and radiological diagnostics,

stage determination according to the TNM system. Tumor markers and their use for screening and early detection. Prevention and risk factors.

Basic principles of surgical treatment. Minimally invasive, laparoscopic, working methods of surgical treatment. Prevention and treatment of postoperative complications. The foundations of chemotherapy, radiation, combined and complex treatment. Observations in the postoperative period. Prediction of survival and recurrence. Treatment of recurrent and metastatic forms.

### **Topic 2. Benign and malignant tumors of the ureter. Etiology, pathogenesis, diagnosis and treatment.**

Benign and malignant tumors ureter: etiology, basics of pathogenesis, molecular biology, pathophysiology and histopathology. Basic clinical manifestations, principles of laboratory, instrumental and radiological diagnostics, stage determination according to the TNM system. Tumor markers and their use for screening and early detection. Prevention and risk factors.

Basic principles of surgical treatment. Minimally invasive, laparoscopic, working methods of surgical treatment. Prevention and treatment of postoperative complications. The foundations of chemotherapy, radiation, combined and complex treatment. Observations in the postoperative period. Prediction of survival and recurrence. Treatment of recurrent and metastatic forms.

### **Topic 3. Benign and malignant tumors bladder. Etiology, pathogenesis, diagnosis and treatment.**

Benign and malignant tumors bladder: etiology, basics of pathogenesis, molecular biology, pathophysiology and histopathology. Basic clinical manifestations, principles of laboratory, instrumental and radiological diagnostics, stage determination according to the TNM system. Tumor markers and their use for screening and early detection. Prevention and risk factors.

Basic principles of surgical treatment. Minimally invasive, laparoscopic, working methods of surgical treatment. Prevention and treatment of postoperative complications. The foundations of chemotherapy, radiation, combined and complex treatment. Observations in the postoperative period. Prediction of survival and recurrence. Treatment of recurrent and metastatic forms.

### **Topic 4. Benign and malignant tumors prostate. Etiology, pathogenesis, diagnosis and treatment.**

Benign and malignant tumors prostate: etiology, basics of pathogenesis, molecular biology, pathophysiology and histopathology. Basic clinical manifestations, principles of laboratory, instrumental and radiological diagnostics, stage determination according to the TNM system. Tumor markers and their use for screening and early detection. Prevention and risk factors.

Basic principles of surgical treatment. Minimally invasive, laparoscopic, working methods of surgical treatment. Prevention and treatment of postoperative complications. The foundations of chemotherapy, radiation, combined and complex treatment. Observations in the postoperative period. Prediction of survival and recurrence. Treatment of recurrent and metastatic forms.

### **Topic 5. Benign and malignant tumors testicles. Etiology, pathogenesis, diagnosis and treatment.**

Benign and malignant tumors testicles: etiology, basics of pathogenesis, molecular biology, pathophysiology and histopathology. Basic clinical manifestations, principles of laboratory, instrumental and radiological diagnostics, stage determination according to the TNM system. Tumor markers and their use for screening and early detection. Prevention and risk factors.

Basic principles of surgical treatment. Minimally invasive, laparoscopic, working methods of surgical treatment. Prevention and treatment of postoperative complications. The foundations of chemotherapy, radiation, combined and complex treatment. Observations in the postoperative period. Prediction of survival and recurrence. Treatment of recurrent and metastatic forms.

### **Topic 6. Benign and malignant tumors penis. Etiology, pathogenesis, diagnosis and treatment.**

Benign and malignant tumors penis: etiology, basics of pathogenesis, molecular biology, pathophysiology and histopathology. Basic clinical manifestations, principles of laboratory, instrumental and radiological diagnostics, stage

determination according to the TNM system. Tumor markers and their use for screening and early detection. Prevention and risk factors.

Basic principles of surgical treatment. Minimally invasive, laparoscopic, working methods of surgical treatment. Prevention and treatment of postoperative complications. The foundations of chemotherapy, radiation, combined and complex treatment. Observations in the postoperative period. Prediction of survival and recurrence. Treatment of recurrent and metastatic forms.

### 3. The structure of the discipline

Topic	Lectures	Practical (seminar) classes	CPC	Individual work
<b>Elective course "Oncourology"</b>				
1. Benign and malignant tumors kidney. Etiology, pathogenesis, diagnosis and treatment.	-	5	15	-
2. Benign and malignant tumors of the ureter. Etiology, pathogenesis, diagnosis and treatment.	-	5	15	
3. Benign and malignant tumors bladder. Etiology, pathogenesis, diagnosis and treatment.	-	5	15	
4. Benign and malignant prostate tumors. Etiology, pathogenesis, diagnosis and treatment.	-	5	15	-
5. Benign and malignant testicular tumors. Etiology, pathogenesis, diagnosis and treatment.	-	5	15	
6. Benign and malignant tumors of the penis. Etiology, pathogenesis, diagnosis and treatment.	-	5	15	
<b>Total hours 120 / 4.0 ECTS credits</b>	-	<b>30</b>	<b>90</b>	
<b>Final control</b>				Credit

### 4. Thematic plan of practical classes

№ z.p.	TOPIC	Number of hours
1.	1. Benign and malignant tumors kidney. Etiology, pathogenesis, diagnosis and treatment.	5
2.	2. Benign and malignant tumors of the ureter. Etiology, pathogenesis, diagnosis and treatment.	5
3.	3. Benign and malignant tumors bladder. Etiology, pathogenesis, diagnosis and treatment.	5
4.	4. Benign and malignant prostate tumors. Etiology, pathogenesis, diagnosis and treatment.	5
5.	5. Benign and malignant testicular tumors. Etiology, pathogenesis, diagnosis and treatment.	5
6.	6. Benign and malignant tumors of the penis. Etiology, pathogenesis, diagnosis and treatment.	5
	<b>Total</b>	<b>30</b>

### 5. Thematic plan of independent work of students

№ z.p.	TOPIC	Number of hours	type of control
1.	Benign and malignant tumors kidneys: etiology, basics of pathogenesis, molecular biology, pathophysiology and histopathology. Basic clinical manifestations, principles of laboratory, instrumental and radiological diagnostics, stage determination according to the TNM system.	6	Current control in practical classes
2.	Basic principles of surgical treatment of kidney cancer. Minimally invasive, laparoscopic, working methods of surgical treatment. Prevention and treatment of postoperative complications. The foundations of chemotherapy, radiation, combined and complex treatment.	5	
3.	Kidney cancer: observation in the postoperative period. Prediction of survival and recurrence. Treatment of recurrent and metastatic forms.	4	
4.	Benign and malignant tumors ureter: etiology, basics of pathogenesis, molecular biology, pathophysiology and histopathology. Basic clinical manifestations, principles of laboratory, instrumental and radiological diagnostics, stage determination according to the TNM system.	6	
5.	Basic principles of surgical treatment of ureteral cancer. Minimally invasive, laparoscopic, working methods of surgical treatment. Prevention and treatment of postoperative complications. The foundations of chemotherapy, radiation, combined and complex treatment.	5	
6.	Ureteral cancer: follow-up in the postoperative period. Prediction of survival and recurrence. Treatment of recurrent and metastatic forms.	4	
7.	Benign and malignant tumors bladder: etiology, basics of pathogenesis, molecular biology, pathophysiology and histopathology. Basic clinical manifestations, principles of laboratory, instrumental and radiological diagnostics, stage determination according to the TNM system.	6	
8.	Basic principles of surgical treatment of bladder cancer. Minimally invasive, laparoscopic, working methods of surgical treatment. Prevention and treatment of postoperative complications. The foundations of chemotherapy, radiation, combined and complex treatment.	5	
9.	Bladder cancer: observations in the postoperative period. Prediction of survival and recurrence. Treatment of recurrent and metastatic forms.	4	
10.	Benign and malignant tumors prostate: etiology, basics of pathogenesis, molecular biology, pathophysiology and histopathology. Basic clinical manifestations, principles of laboratory, instrumental and radiological diagnostics, stage determination according to the TNM system.	6	
11.	Basic principles of surgical treatment of prostate cancer. Minimally invasive, laparoscopic, working methods of surgical treatment. Prevention and treatment of postoperative complications. The foundations of chemotherapy, radiation, combined and complex treatment.	5	
12.	Prostate cancer: follow-up in the postoperative period. Prediction of survival and recurrence. Treatment of recurrent and metastatic forms.	4	
13.	Benign and malignant tumors testicles: etiology, basics of pathogenesis, molecular biology, pathophysiology and	6	

	histopathology. Basic clinical manifestations, principles of laboratory, instrumental and radiological diagnostics, stage determination according to the TNM system.		
14.	Basic principles of surgical treatment of testicular cancer. Minimally invasive, laparoscopic, working methods of surgical treatment. Prevention and treatment of postoperative complications. The foundations of chemotherapy, radiation, combined and complex treatment.	5	
15.	Testicular cancer: observations in the postoperative period. Prediction of survival and recurrence. Treatment of recurrent and metastatic forms.	4	
16.	Benign and malignant tumors penis: etiology, basics of pathogenesis, molecular biology, pathophysiology and histopathology. Basic clinical manifestations, principles of laboratory, instrumental and radiological diagnostics, stage determination according to the TNM system.	6	
17.	Basic principles of surgical treatment of penile cancer. Minimally invasive, laparoscopic, working methods of surgical treatment. Prevention and treatment of postoperative complications. The foundations of chemotherapy, radiation, combined and complex treatment.	5	
18.	Penile cancer: follow-up in the postoperative period. Prediction of survival and recurrence. Treatment of recurrent and metastatic forms.	4	
	<b>Total</b>	<b>90</b>	

## 6. Individual tasks are not provided

## 7. Teaching methods

In the process of studying the discipline of the elective course "Oncourology" the following methods of teaching students are used:

- by type of cognitive activity:
  - explanatory-illustrative;
  - reproductive;
  - problem statement;
  - logic of cognition:
    - analytical;
    - inductive;
    - deductive;
- according to the main stages of the process:
  - knowledge formation;
  - formation of skills and abilities;
  - application of knowledge;
  - generalization;
  - fixing;
  - audit;
- according to the system approach:
  - stimulation and motivation;
  - control and self-control;
- by sources of knowledge:
  - verbal - lecture, explanation;
  - visual - demonstration, illustration;
- by the level of independent mental activity:
  - problematic;
  - partial search;
  - research;

- method of problem-based teaching.

## 8. Control methods

**Current control** carried out at each practical lesson in accordance with specific goals, during the individual work of the teacher with the student for those topics that the student develops independently and they are not part of the structure of the practical lesson. Objective (standardized) control of theoretical and practical training of students is applied.

The following means of diagnosing the level of preparation of students are used: testing, solving situational problems, control of practical skills.

At each practical lesson, the student answers 20 questions (tests on the topic of practical training, standardized questions, knowledge of which is necessary to understand the current topic of practical training and independent work related to the current lesson; demonstrates knowledge and skills of practical skills).

The form of final control in the study of the elective course "Oncourology" is a semester test, which consists in assessing the student's mastery of educational material solely on the basis of the results of his performance of certain types of work in practical classes. Semester credit in the discipline is conducted after the end of its study, before the examination session.

### Methods and tools of standardized assessment when compiling the final control

#### ***Regulations for the semester test***

The form of final control is standardized, includes control of theoretical and practical training and is conducted at the last lesson based on learning outcomes.

**9. Current control** is carried out during training sessions and aims to check the assimilation of educational material by students.

Forms of assessment of current educational activities are standardized and include control of theoretical and practical training.

**9.1. Evaluation of current educational activities.** During the assessment of mastering each topic for the current educational activity of the student, grades are given on the 4th point (national). This takes into account all types of work provided by the discipline program. The student must receive a grade from each topic for further conversion of grades into points on a multi-point (200-point) scale. Test control of theoretical training is carried out by writing a test of 20 questions, the correct answer to 1-18 questions is evaluated in 1 point, questions 19 and 20 are evaluated in 2 points. The maximum sum of points for the whole test is 22 points, the minimum number of points that a student must score to enroll in the theoretical part of the practical lesson is 9 points (50% of correct answers).

In each practical lesson, the teacher evaluates the knowledge of each student on a four-point scale.

**Excellent ("5")** - The student correctly answered 90-100% of the tests of format A. Correctly, clearly and logically and fully answers all standardized questions of the current topic, including questions of the lecture course and independent work. Closely connects theory with practice and correctly demonstrates the performance (knowledge) of practical skills. Solves situational problems of increased complexity, is able to summarize the material. Performed the planned individual work.

**Good ("4")** - The student correctly answered 70-89% of the tests of format A. Correctly, and essentially answers the standardized questions of the current topic, lecture course and independent work. Demonstrates performance (knowledge) of practical skills. Correctly uses theoretical knowledge in solving practical problems. Is able to solve easy and medium situational problems. Has the necessary practical skills and techniques to perform them in excess of the required minimum.

**Satisfactory ("3")** - The student correctly answered 50-69% of the tests of format A. Incomplete, with the help of additional questions, answers the standardized questions of the current topic, lecture course and independent work. Cannot build a clear, logical answer on their own. During the answer and demonstration of practical skills the student makes mistakes. The student solves only the easiest problems.

**Unsatisfactory ("2")** - The student answered less than 50% of the tests of format A. Does not know the material of the current topic, can not build a logical answer, does not answer additional questions, does not understand the content of the material. Makes significant, gross mistakes when answering and demonstrating practical skills.

At each practical lesson, student knowledge is assessed on a four-point scale ("5".

Control of solving situational problems is carried out in a practical lesson by assessing the quality and completeness of their implementation, the ability to interpret the results. For the practical part of the lesson the student can type:

4 points, if the work is done in full and the student freely and correctly explains the situational task and gives an assessment;

2 points, if the work is done with some errors, the student can not fully explain the situational task and give an assessment;

0 points if the work is not completed or the student cannot explain the situational task and give an assessment.

The final grade for the lesson is determined by the sum of the results of test control and practical work as follows:

The sum of points	Score on a four-point scale
from 22 to 26	5
from 17 to 21	4
from 11 to 16	3
<9 points for test control or 0 points for the practical part	2

The material for independent work of students, which is provided in the topic of practical classes at the same time as classroom work, is evaluated during the current control of the topic in the relevant classroom. Assessment of topics that are submitted for self-study and are not included in the topics of classroom classes, are controlled during the final control.

**10. The form of final control of academic performance in the study of the elective course "Oncourology" is a semester test.**

Semester test is a form of final control, which consists in assessing the student's mastery of educational material solely on the basis of the results of his performance of certain types of work in practical classes. Semester credit in disciplines is held after the end of its study, before the examination session.

**11. Scheme of accrual and distribution of points received by students:**

*Maximum number of points*, which a student can earn for current academic activities in the discipline, is 200 points.

*Minimum number of points*, which must be scored by the student for the current educational activity in the discipline is 120 points.

*Calculation of the number of points* is carried out on the basis of the marks received by the student on a traditional scale during studying of discipline, by calculation of the arithmetic average (CA) rounded to two signs after a comma. The resulting value is converted into points on a multi-point scale as follows:

$$X = (CA * 200) / 5$$

Below is a table of recalculation on a 200-point scale:

4-point scale	200-point scale	4-point scale	120-point scale	4-point scale	120-point scale	4-point scale	120-point scale
5	200	4.45	178	3.92	157	3.37	135
4.97	199	4.42	177	3.89	156	3.35	134
4.95	198	4.4	176	3.87	155	3.32	133
4.92	197	4.37	175	3.84	154	3.3	132
4.9	196	4.35	174	3.82	153	3.27	131
4.87	195	4.32	173	3.79	152	3.25	130
4.85	194	4.3	172	3.77	151	3.22	129
4.82	193	4.27	171	3.74	150	3.2	128
4.8	192	4.24	170	3.72	149	3.17	127
4.77	191	4.22	169	3.7	148	3.15	126
4.75	190	4.19	168	3.67	147	3.12	125
4.72	189	4.17	167	3.65	146	3.1	124
4.7	188	4.14	166	3.62	145	3.07	123
4.67	187	4.12	165	3.57	143	3.02	121
4.65	186	4.09	164	3.55	142	3	120
4.62	185	4.07	163	3.52	141		



4.6	184
4.57	183
4.52	181
4.5	180
4.47	179

4.04	162
4.02	161
3.99	160
3.97	159
3.94	158

3.5	140
3.47	139
3.45	138
3.42	137
3.4	136

Less than 3	Not enough

**Independent work of students** is assessed during the current control of the topic in the relevant lesson. Assimilation of topics that are submitted only for independent work is controlled during the final control.

Points from the discipline are independently converted into both the ECTS scale and the 4-point (national) scale. ECTS scale scores are not converted to a 4-point scale and vice versa.

The scores of students studying in one specialty, taking into account the number of scores earned in the discipline are ranked on the ECTS scale as follows:

ECTS assessment	Statistical indicator
A	The best 10% of students
B	The next 25% of students
C	The next 30% of students
D	The next 25% of students
E	The last 10% of students

Ranking with the assignment of grades "A", "B", "C", "D", "E" is carried out for students of this course who study in one specialty and have successfully completed the study of the discipline. Students who receive grades FX, F ("2") are not included in the list of ranked students. Students with an FX grade automatically receive an E score after retaking.

Discipline scores for students who have successfully completed the program are converted into a traditional 4-point scale according to the absolute criteria listed below in the table:

Points in the discipline	Score on a 4-point scale
From 170 to 200 points	5
From 140 to 169 points	4
From 139 points to the minimum number of points that a student must score	3
Below the minimum number of points that a student must score	2

The ECTS score is not converted to the traditional scale, as the ECTS scale and the four-point scale are independent.

The objectivity of the assessment of students' learning activities is checked by statistical methods (correlation coefficient between ECTS assessment and assessment on a national scale).

## 12. Methodical support

The list and content of the initial methodological support for the study of the discipline elective course "Oncourology" includes:

- thematic plans of practical classes, independent work of students;
- tasks for practical classes and independent work;
- questions, tasks, tasks for the current and final control of knowledge and skills of students.

### *List of questions for the final control of knowledge with elective course "Oncourology" for 6th year medical students*

1. Etiopathogenesis of benign and malignant kidney tumors.
2. Classification of benign and malignant tumors of the kidney.
3. Classification of renal tumors according to the TNM system.

4. Symptoms of benign and malignant tumors of the kidneys.
5. Modern diagnosis of kidney tumors.
6. Conservative treatment of benign and malignant kidney tumors.
7. Surgical treatment of kidney tumors.
8. Prognosis and survival in renal tumors.
9. Etiopathogenesis of benign and malignant tumors of the ureter.
10. Classification of benign and malignant tumors of the ureter.
11. Classification of ureteral tumors according to the TNM system.
12. Symptoms of benign and malignant tumors of the ureter.
13. Modern diagnosis of ureteral tumors.
14. Conservative treatment of benign and malignant tumors of the ureter.
15. Surgical treatment of ureteral tumors.
16. Prognosis and survival of ureteral tumors.
17. Etiopathogenesis of benign and malignant tumors of the bladder.
18. Classification of benign and malignant tumors of the bladder.
19. Classification of bladder tumors according to the TNM system.
20. Symptoms of benign and malignant tumors of the bladder.
21. Modern diagnosis of bladder tumors.
22. Conservative treatment of benign and malignant tumors of the bladder.
23. Surgical treatment of bladder tumors.
24. Prognosis and survival in tumors of the bladder.
25. Etiopathogenesis of benign and malignant prostate tumors.
26. Classification of benign and malignant prostate tumors.
27. Classification of prostate tumors according to the TNM system.
28. Symptoms of benign and malignant prostate tumors.
29. Modern diagnosis of prostate tumors.
30. Conservative treatment of benign and malignant prostate tumors.
31. Surgical treatment of prostate tumors.
32. Prognosis and survival of prostate tumors.
33. Etiopathogenesis of benign and malignant tumors of the testes and penis.
34. Classification of benign and malignant tumors of the testicles and penis.
35. Classification of tumors of the testicles and penis according to the TNM system.
36. Symptoms of benign and malignant tumors of the testicles and penis.
37. Modern diagnosis of tumors of the testicles and penis.
38. Conservative treatment of benign and malignant tumors of the testicles and penis.
39. Surgical treatment of testicular and penile tumors.
40. Prognosis and survival in tumors of the testicles and penis.

### 13. Recommended literature

#### *Basic*

1. UROLOGY: Edited by Professor SP Pasechnikov National textbook for students of higher medical educational institutions of the IV level of accreditation, "New Book", 2014.
2. Urology: a textbook (University of IV year) / ОВ Люлько, О.Ф. Vozianov. - 3rd ed., Corrected, "Medicine", 2011.
3. Vozianov SO, Shulyak OV et al. - UROLOGY, "Quart", Lviv 2009 (electronic version)
4. Vozianov SO, Zerbino DD, Shulyak OV et al. - Atlas of micro- and macrourology. Lviv, 2004.
5. Vozianov SO, Grzegotsky MR, Shulyak OV et al. - Urology, Svit, Lviv 2002
6. Order of the Ministry of Health of Ukraine № 593 of 02.12.2004 "On approval of protocols for the provision of medical care in the specialty" Nephrology ".

#### *Additional*

1. Vozianov OF, Lyulko OV - Urology, Dnepropetrovsk, 2002
2. Grzegotski MR, Shulyak OV et al. - Kidneys - laboratory methods of examination. Lviv, 2020.
3. Internal Medicine. Textbook: In 3 vols. - Vol. 1 / K.M. Amosova, O.Ya. Babak, V.M. Zaitseva and others; For order. prof. K.M. Amosova. - К .: Медицина, 2008. –1056 с.

4. Laboratory and instrumental diagnosis of diseases of internal organs. Guide for doctors and students / G.E. Roitberg, A.W. Струтынский. - М.: Binom-press, 2005. - 678 p.

#### **14. Information resources**

When studying the discipline, through the use of local and global computer networks, students use the following information resources and knowledge bases:

- Wikipedia (<http://uk.wikipedia.org>)

Electronic versions of educational and methodical support:

1. Methodical recommendations for practical classes and independent work on the elective course "Oncourology" for students of the VI course of the medical faculty in the specialty: 222 - "medicine", field of knowledge "Health".

Access method: <https://new.meduniv.lviv.ua/kafedry/kafedra-urologiyi-fpdo/>