PRIVATE HIGHER EDUCATIONAL INSTITUTION
"INTERNATIONAL ACADEMY OF ECOLOGY AND MEDICINE"
Department of Surgery

WORKING PROGRAM OF EDUCATIONAL DISCIPLINE

"ONCOLOGY"

LEVEL OF HIGHER EDUCATION Second (master's) level
DEGREE OF HIGHER EDUCATION Master's degree
BRANCH OF KNOWLEDGE 22 Healthcare
SPECIALTY 222 Medicine

Reviewed and approved
at the meeting of the Academic Council
Protocol No. 1, dated August 31, 2019

Kyiv 2019

Working program of education discipline Oncology for the preparation of students of higher education of the second (master's) level of higher education in specialty 222 Medicine.

Introduction

The program in the academic discipline "Oncology" is compiled in accordance with the educational and professional program for the training of specialists of the second (master's) level of the specialty *222 Medicine* , field of knowledge 22 Health care, the Law of Ukraine "On Higher Education" dated 07.01.2014 No. 1556 - VII (Article 13, Clause 7), the provision "On the organization of the educational process at the International Academy of Ecology and Medicine" of the methodological recommendations approved by the Central Methodical Cabinet of Higher Medical Education of the Ministry of Health of Ukraine regarding the development of curricula of educational disciplines in accordance with industry standards higher education. The discipline "Oncology" belongs to the section of General training of the training plan for students of higher education of the second educational (master's) level.

Description of the academic discipline

<table>
<tr><td rowspan="2">Name of indicators</td><td rowspan="2">Field of knowledge, specialty. level of higher education</td><td>Characteristics of the academic discipline</td></tr>
<tr><td>full-time education</td></tr>
<tr><td>The number of credits is 3.0</td><td>Branch of knowledge:
22 Health care</td><td></td></tr>
<tr><td>Modules - 1</td><td rowspan="5">Specialty:
222 Medicine</td><td>Year of preparation:</td></tr>
<tr><td>Content modules – 2</td><td>the 5th</td></tr>
<tr><td></td><td>Semester</td></tr>
<tr><td>The total number of hours is 90</td><td>IX | X</td></tr>
<tr><td rowspan="6"></td><td>Lectures</td></tr>
<tr><td rowspan="5">Educational level: master's degree</td><td>10 hours</td></tr>
<tr><td>Practical</td></tr>
<tr><td>50 hours</td></tr>
<tr><td>Independent (individual) work</td></tr>
<tr><td>30 hours</td></tr>
<tr><td>Type of control: Current and final modular control, Exam.</td></tr>
</table>

The purpose of teaching the discipline is to study the theoretical foundations and master practical skills in clinical oncology and radiation medicine necessary for the practical activities of a doctor. The main tasks of the subject:

- familiarization of students with the organization of oncological care for the population and with modern principles of diagnosis and treatment of cancer patients;
- study of the main nosological forms of malignant tumors, their clinical manifestations, features of the course and methods of diagnosis and treatment
- development of practical skills in the organization of oncological care, prevention, early diagnosis of malignant tumors and rehabilitation of patients;
- determination of the tactics of a general practitioner in case of suspicion of the presence of a malignant tumor;
- formation of students' complex of knowledge, skills and abilities in radiation medicine;
- determination of etiological, pathogenetic factors and clinical manifestations of general and local radiation injuries, tactics of management of victims exposed to ionizing radiation, means of prevention of radiation exposure;
- forecasting the possible consequences of external and internal exposure;
- mastering the main social, sanitary-hygienic, environmental and psychological aspects of accidents at nuclear production facilities (according to the model of the accident at the Chernobyl nuclear power plant).

COMPETENCE

The types of training according to the curriculum are:

a) lectures;

b) practical classes;

c) independent work of students (IWS).

Thematic plans of practical classes and IWS ensure the implementation in the educational process of all topics included in content modules.

The lecture course uses various didactic tools as much as possible - multimedia presentations, educational films, slides, demonstration of thematic patients.

Practical classes in clinical disciplines are conducted by rotating modules of clinical disciplines. Practical classes involve students studying the main issues of theoretical oncology, organization of oncology services, prevention, clinic, diagnostics, principles of treatment of the most common tumor diseases of the broncho-pulmonary system, digestive tract, mediastinum, mammary gland, thyroid gland, urinary tract, genitals, skin and muscles what fabrics

Practical classes are held in the oncology clinic and consist of four structural parts: mastering the theoretical part of the topic; demonstration of a thematic patient; students' work on practicing practical skills under the teacher's supervision; solution of situational tasks and test-control of mastering the material. Particular attention is paid to the peculiarities of communication with the patient, the detection of early signs of a malignant tumor and the factors that contribute to its appearance.

Independent work of students occupies an important place in the study of

oncology. In addition to extracurricular training on theoretical issues of oncology, it includes the work of students in hospital departments, operating rooms and polyclinics under the supervision of a teacher. Independent work includes curation of patients with medical history writing.

The current educational activity of the student is monitored in practical classes in accordance with specific goals, intermediate control of mastering the content of modules is carried out at the last class of each module. It is recommended to use the following tools for diagnosing the level of students' training: solving situational problems, solving tests, controlling the implementation of practical skills in patient examination methods with further interpretation of the obtained data, analysis and evaluation of the results of instrumental and laboratory research.

The final control of the learning of the module is carried out after its completion at the final control session. The evaluation of the student's success in the discipline is a rating and is presented on a multi-point scale and is defined according to the ECTS system and the traditional scale adopted in Ukraine. For those students who want to improve their performance in the discipline according to the ECTS scale, the final control of the learning of the module is carried out in accordance with the regulatory documents, additionally according to the schedule approved by the educational institution.

- **The final goals of the discipline:**

According to with requirements educational and professional programs students should:

know:

- symptoms and course of diseases
- methods of diagnostic and therapeutic procedures appropriate for specific disease states
- environmental and epidemiological determinants of the most frequent diseases
- environmental and epidemiological determinants of the most frequent human neoplastic diseases
- basics of early detection of neoplastic diseases and principles of screening in oncology
- possibilities of modern neoplastic therapy, including multimodal therapy, perspectives of cellular and gene therapies and their adverse effects
- principles of combination therapies in oncology, algorithms of diagnostic and therapeutic procedures in the most common human cancers
- principles for the treatment of pain, including cancer and chronic pai
- principles for palliative treatment of terminal patient
- basic principles of pharmacotherapy in oncological disorders
- causes, symptoms, principles of diagnosis and therapeutic management in the most common oncological diseases

be able:

- conduct a medical history on an adult patient

- do a thorough and focused physical examination on an adult patient
- evaluate the patient's overall condition, level of consciousness, and awareness
- develop diagnostic, therapeutic, and preventive treatments
- identify medical problems and prioritize medical management
- plan the diagnostic procedure and interpret its results
- implement appropriate and safe therapeutic treatment and predict its effects
- communicate with the patient and his family in an atmosphere of trust, taking into account the needs of the patient
- propose individualization of existing therapeutic guidelines and other methods of treatment in the face of ineffectiveness or contraindications to standard therapy
- plan specialist consultations
- assist in the performance of the following procedures and medical procedures including bone marrow aspiration biopsy

is ready to:

- perceive and recognize own limitations and self-assessing educational deficits and needs;
- use objective sources of information;
- promote health-promoting behaviors;
- to be guided by the well-being of a patient;
- respect medical confidentiality and patients' rights;
- to create and maintain close and respectful relationship with patients, as well as to demonstrate tolerance for variations in world views and cultures
- determine the tactics of the examination and management of the patient in case of suspicion of a malignant tumor;
- interpret the results of special research methods;
- formulate a preliminary clinical diagnosis of the main oncological diseases;
- determine the tactics of examination and management of patients with the most common oncological diseases;
- formulate conclusions from own measurements or observations;
- demonstrate the ability to maintain medical documentation in the oncology clinic;
- demonstrate mastery of the principles of oncological deontology

According to the requirements of the standard, the discipline ensures the acquisition of competencies and program learning outcomes by students:

	general competences
ZK-1	Ability to abstract thinking, analysis and synthesis.
ZK-2	Ability to learn and master modern knowledge.
ZK-3	Ability to apply knowledge in practical situations.
ZK-4	Knowledge and understanding of the subject area and understanding of professional activity.
ZK-5	Ability to adapt and act in a new situation.
ZK-6	Ability to make informed decisions.

ZK-7	Ability to work in a team.
ZK-8	Ability to interpersonal interaction.
ZK-10	Ability to use information and communication technologies.
ZK-11	Ability to search, process and analyze information from various sources.
ZK-12	Determination and persistence in relation to assigned tasks an-dassumed responsibilities.
	Professionals compe-tence (FC)
FC-1	Ability to collect medical information about the patient and analyze clinical data.
FC-2	Ability to determine the necessary list of laboratory and instrumental studies and evaluate their results.
FC-3	Ability to establish a preliminary and clinical diagnosis of the disease.
FC-4	The ability to determine the necessary regime of work and rest in the treatment and prevention of diseases.
FC-5	The ability to determine the nature of nutrition in the treatment and prevention of diseases.
FC-6	Ability to determine the principles and nature of treatment and prevention of diseases.
FC-7	Ability to diagnose emergency conditions.
FC-8	Ability to determine tactics and provide emergency medical care.
FC-10	Ability to perform medical manipulations.
FC-11	Ability to solve medical problems in new or unfamiliar environments in the presence of incomplete or limited information, taking into account aspects of social and ethicalresponsibility.
FC-16	Ability to maintain medical documentation, including electronic forms.
FC-21	It is clear and unambiguous to convey one's own knowledge, conclusions and argumentson health care problems and related issues to specialists and non-specialists, in particular to people who are studying.
FC-24	Adherence to ethical principles when working with patients and laboratory animals.
FC-25	Adherence to professional and academic integrity, to be responsible for the reliability of the obtained scientific results.
	Software the results training (PRN)
PRN-1	Have thorough knowledge of the structure of professional activity. To be able to carryout professional activities that require updating and integration of knowledge. To be responsible for professional development, the ability for further professional trainingwith a high level of autonomy.
PRN-3	Specialized conceptual knowledge, which includes scientific achievements in the fieldof health care and is the basis for conducting research, critical understanding of problems in the field of medicine and related interdisciplinary problems.
PRN-4	Identify and identify leading clinical symptoms and syndromes; according to standard methods, using preliminary data of the patient's history, data ofthe patient's examination, knowledge about the person, his organs and systems, establish a preliminary clinical diagnosis of the disease.
PRN-5	Collect complaints, history of life and diseases, evaluate psychomotor and physical development of the patient, state of organs and systems of the body, based on the resultsof laboratory and instrumental studies, evaluate information regarding the diagnosis, taking into account the age of the patient.

PRN-6	Establish the final clinical diagnosis by making a reasoned decision and analyzing the received subjective and objective data of clinical, additional examination, differential diagnosis, observing the relevant ethical and legal norms, under the supervision of the head physician in the conditions of the health care institution.
PRN-7	Assign and analyze additional (mandatory and optional) examination methods (laboratory, functional and/or instrumental) of patients with diseasesof organs and body systems for differential diagnosis of diseases .
PRN-8	Determine the main clinical syndrome or what causes the severity of the condition of the patient by making a reasoned decision and assessing the person's condition under any circumstances (in the conditions of a health care institution, outside its borders) , including in conditions of emergency and hostilities, in field conditions, in conditions of lack of information and limited time.
PRN-9	Determine the nature and principles of treatment (conservative, operative) of patients with diseases, taking into account the patient's age, in the conditions of a health care institution, outside its borders and at the stages of medical evacuation , including in field conditions, on the basis of a preliminary clinical diagnosis, observing the relevant ethical and legal norms, by making a reasoned decision according toexisting algorithms and standard schemes, in case of the need to expand the standard scheme, be able to justify personalized recommendations under the control of the head physician in the conditions of a medical institution.
PRN-10	Determine the necessary mode of work, rest and nutrition on the basis of the finalclinical diagnosis, observing the relevant ethical and legal norms, by making a reasoned decision according to existing algorithms and standard schemes.
PRN-14	Determine tactics and provide emergency medical care in emergency situations in limited time in accordance with existing clinical protocols and treatment standards.
PRN-17	Perform medical manipulations in the conditions of a medicalinstitution, at home or at work based on a previous clinical diagnosis and/or indicators of the patient's condition by making a reasoned decision, observing the relevant ethicaland legal norms.
PRN-18	To determine the state of functioning and limitations of a person's vital activities and theduration of incapacity for work with the preparation of relevant documents, in the conditions of a health care institution, based on data about the disease and its course, peculiarities of the person's professional activity, etc. Maintain medical documentation regarding the patient and the contingent of the population on the basis of regulatory documents.
PRN-21	Search for the necessary information in the professional literature and databases of othersources, analyze, evaluate and apply this information.
PRN-22	Apply modern digital technologies, specialized software, and statistical methods of data analysis to solve complex healthcare problems.
PRN-24	To organize the necessary level of individual safety (own and the persons he cares for) in case of typical dangerous situations in the individual field of activity.
PRN-25	It is clear and unambiguous to convey one's own knowledge, conclusions and argumentson health care problems and related issues to specialists and non-specialists.
PRN-27	Communicate freely in the national and English languages, both orally and in writing to discuss professional activities, research and projects.

Program content

Patterns of development of malignant tumors.

Multistage carcinogenesis. Molecular genetic mechanisms of carcinogenesis. The role of oncogenes. The role of internal and external environmental factors in the occurrence of malignant tumors. Chemical and physical carcinogens. Virogenetic theory of the occurrence of malignant tumors. Antitumor immunity. Modern scientific achievements in the disclosure of the mechanisms of carcinogenesis and the treatment of malignant tumors. Facultative and obligate precancerous diseases. The concept of dysplasia. The course of the cancer process. Early cancer. Forms of malignant tumor growth. Assessment of the spread of the process: principles of classification of tumors by stage.

Preclinical and clinical periods of tumor development. Pathogenesis of symptoms of malignant tumors: changes in water-electrolyte metabolism and acid-base balance. Protein-energy deficiency syndrome. Pain syndrome. Paraneoplasia in cancer patients. Changes in the regulation of the aggregate state of blood in oncological diseases: thromboembolism, DIC-syndrome, bleeding.

Epidemiology and prevention of malignant tumors.

Morbidity and mortality from malignant tumors. Gender and age characteristics of patients. Dynamics and structure of morbidity. Geographical features of the spread of malignant tumors. The concept of primary and secondary prevention. Socio-hygienic and individual cancer prevention measures. Smoking cessation. Food hygiene. Anti-cancer sanitary-educational work. Deontology in oncology.

Organization of oncological care.

Structure of the oncological network in Ukraine. Oncology dispensary, its functions. General characteristics of the state of oncological care in the region. Division of cancer patients into clinical groups. Accounting documentation. Clinical examination of cancer patients. Analysis of the causes of cancer and analysis of cases of malignant tumors.

Basic principles of diagnosis of malignant tumors.

Collection and evaluation of complaints and anamnesis in cancer patients. Features of physical examination methods for suspected malignant tumors. X-ray, endoscopic, ultrasound, thermographic and isotope diagnostic methods. Computed tomography. Nuclear magnetic resonance. Laboratory tests: changes in peripheral blood, biochemical and immunological tests, morphological methods. A minimum of examination on an outpatient basis is mandatory.

Cancer recognition in the preclinical period. The role of preventive examinations in the timely recognition of cancer. Forms, methods and frequency of preventive examinations. Formation of high-risk groups. Screening methods. The concept of monitoring.

Principles of treatment of malignant tumors.

Classification of special treatment methods. Combined and complex treatment. Radical, palliative and symptomatic methods. Principles of ablastics, antiblastics, zonality and caseness in surgical oncology. Radical, extended and combined operations.

Methods of radiation therapy of malignant tumors. Radiosensitive and radioresistant tumors. Mechanism of action of ionizing radiation on malignant tumors. Means of increasing radiosensitivity.

Classification of antitumor chemotherapy drugs. Mechanism of their action. Indications and contraindications for chemotherapy. Basic principles of polychemotherapy. Regional and endolymphatic chemotherapy. Hormone and immunotherapy. The concept of hormone-dependent, hormone-dependent and hormone-active tumors. Medical, surgical and radiation methods of hormonal correction.

Basic principles of symptomatic therapy. Karnofsky Quality of Life Index. Hospices.

Labor, social and medical rehabilitation of cancer patients.

Types, nature and properties of ionizing radiation.

Dosimetry of ionizing radiation. Physical units used in radiation medicine: radioactivity units;

units of exposure, absorbed, equivalent and effective dose equivalence.

Sanitary and hygienic consequences of radiation accidents. Characteristics of the radiation

situation after the Chernobyl accident. Food hygiene in the living conditions of the population in the territories contaminated with radionuclides.

Biological effect of ionizing radiation. Dependence of the biological effect on the absorbed dose, dose rate, volume of tissue irradiation and type of radiation.

Effects of low doses of radiation on the human body. Maximum permissible doses and levels of exposure of a person living in the territory contaminated with radionuclides. Criticism of the 35-Ber concept of permissible exposure levels.

Social and psychological consequences of an accident at nuclear facilities.

Clinical examination of the population living in the territory contaminated with radionuclides. State National Register of Persons Working at Nuclear Production Facilities.

Anti-radiation and social protection of the population and personnel of nuclear facilities in case of radiation accidents. Law of Ukraine "On Human Protection from the Effects of Ionizing Radiation". Legislative acts and documents regulating the order of residence of the population in the territory contaminated with radionuclides, the provision of benefits to the population and participants in the liquidation of the consequences of the Chornobyl accident.

STRUCTURE AND CONTENT OF THE PRACTICAL PART OF THE PROGRAM Special Oncology:

Skin tumors. Melanoma.

Skin cancer. Epidemiology. contributing factors. Facultative and obligate precancerous skin conditions. Local destructive processes of the skin. Basal cell carcinoma. Clinic, diagnosis, treatment, prognosis. Means of prevention of skin cancer. Histological variants of skin cancer. Classification by stages. Clinical forms of growth. Diagnostic methods. Treatment of skin cancer (surgical, radiation, cryogenic, photodynamic therapy. immediate and long-term results.

Melanoma. Epidemiology of melanomas. Types of pigmented nevi, factors that contribute to their degeneration. Prevention of malignancy of nevi. Features of growth and metastasis of melanoma. Classification by stages. Degrees of invasion according to Clark. Methods of special examination (radioisotope and laboratory diagnostics, epiluminescent dermatoscopy, thermography). Indications, contraindications and methods of sampling material for cytological and histological examination. Basic principles of treatment. Features of surgical treatment of melanomas. Results, prognosis.

Kaposi's sarcoma. Clinic, diagnostics. Principles of treatment.

Head and neck tumors.

Cancer of the lower lip. Incidence, predisposing factors. Obligate and facultative re-drafts. Forms of growth and ways of metastasis. Classification by stages. Histological structure of tumors. Diagnostic methods. Treatment of primary swelling and regional metastases. Results.

Cancer of the oral mucosa. Incidence. Predisposing factors (smoking, bad habits). Precancerous conditions. Forms of tumor growth and ways of metastasis. Classification by stages. Histological structure and features of the clinical course of tumors. Diagnostic methods. Treatment.

Thyroid cancer. Incidence. Etiological factors. Precancerous conditions. Cancer prevention. Pathological characteristics of cancer. Stage. Features of metastasis. Clinical manifestations. Diagnostic methods. Treatment. Forecast.

Cancer of the larynx and pharynx. Clinic. Diagnostics. Methods of combined treatment. Features of metastasis. Prevention. Principles of surgical treatment of metastatic lesions of the lymph nodes of the neck.

Brain tumors. Classification of intracerebral and extracerebral tumors. Clinical manifestations. Basic diagnostic methods. Principles of treatment.

Dyshormonal hyperplasia and breast cancer.

Mastopathy. Etiopathogenesis. Classification. Division into local and diffuse forms. Clinical picture. Therapeutic tactics for localized forms. Principles of treatment of diffuse mastopathy.

Mintz's disease. Clinic, methods of diagnosis and treatment.

Fibroadenoma. Clinic, diagnosis, treatment. Features of the clinical course of filoid fibroadenoma. Breast cancer. Epidemiology. Etiopathogenesis. The role of hormonal disorders. Risk factors.

Prevention. Pathogenetic forms of breast cancer. Clinical forms. Breast cancer screening. High-risk groups. Self-examination technique. Methods of examination and palpation of mammary glands and lymph nodes. Methods of special examination. Breast cancer treatment. Radical mastectomy. Cost- effective surgeries. Indications for combined and complex treatment. Adjuvant and neoadjuvant radiation, chemotherapy and hormone therapy. Treatment results and prognosis. Dispensary supervision and rehabilitation measures.

Lymphogranulomatosis, non-Hodgkin's lymphomas.

Etiopathogenesis. Pathological classification. Classification by stages. Clinical manifestations, diagnostic methods. Treatment. Criteria for the effectiveness of treatment, the concept of the biological activity of the process.

Forecast.

Lung tumors.

Epidemiology. Etiological factors. Precancerous diseases. Gender and age characteristics. Clinical and anatomical classification. Forms of tumor growth, histological variants. Central and peripheral lung cancer. Atypical forms. Ways of metastasis. Division into stages. Clinical manifestations of lung cancer. Clinical, radiological and endoscopic syndromes. Diagnosis of early forms of lung cancer. The importance of fluorography. Organization of screening. High-risk groups.

X-ray and endoscopic diagnostic methods. Cytological examination of sputum. Transthoracic puncture. Treatment of patients with lung cancer (surgical, radiation, chemotherapy). Results, prognosis. Prevention of lung cancer.

Tumors of the mediastinum and pleura.

Classification. Neurogenic tumors, mediastinal cysts. Clinic and diagnosis of malignant thymoma. Tumors of lymphoreticular tissue. Clinical syndromes of mediastinal tumors. X-ray, instrumental, morphological methods for diagnosing mediastinal tumors. Treatment. Prognostic factors.

Pleural mesothelioma. Clinic, diagnosis, treatment.

Tumors of the esophagus.

Epidemiology. Etiological factors. Prevention of esophageal cancer. Forms of tumor growth. Localization. Features of spread and metastasis. Stage. Clinical manifestations. Complications of esophageal cancer. Differential diagnosis of dysphagia. X-ray and endoscopic characterization. Morphological diagnostics. Treatment. Types of operations. Combination treatment. Results. Forecast.

Stomach tumors.

Incidence. Importance of exogenous and endogenous carcinogens. Precancerous diseases. Dysplasia and gastric cancer. Early stomach cancer. Histological variants of gastric cancer. Macroscopic forms of growth. Tumor localization. Classification by stages. Stomach Cancer Clinic. Complications. Differential diagnosis between cancer and ulcer. Methods for diagnosing stomach cancer. Physical and laboratory tests. Major radiological and endoscopic findings (direct and indirect). Screening methods: questionnaires, clinical examination of risk groups, hemocult test, fibrogastroscopy. Treatment. Types of radical surgeries. Indications. Palliative and symptomatic surgeries. Combination treatment. Treatment results. Forecast.

Colon tumors.

Epidemiology. Etiological factors. The role of the nature of nutrition. Precancerous diseases. Familial polyposis. Cancer prevention methods. Causes of neglected cancer cases. Forms of tumor growth and localization. Histological variants of cancer. Ways of metastasis. Classification by stages. Complications. Clinical forms of colon cancer. Symptomatology of rectal cancer. Diagnostic methods. The role of finger research. Hemocult test as a method of screening. The importance of colonoscopy, irrigoscopy, and sigmoidoscopy for diagnosis. Differential diagnosis. Treatment is radical and palliative. The scope of surgical intervention depends on the location of the tumor. Tactics for obstructive intestinal obstruction. Chemotherapy. Treatment results.

Tumors of the liver and pancreas.

Epidemiology of liver cancer. Etiopathogenesis of hepatocellular and cholangiocellular carcinoma. Forms of growth. Primary and metastatic liver cancer. Preventive measures. Liver Cancer Clinic. Diagnostic methods: radionuclide methods, ultrasound, computed tomography, puncture biopsy of the liver, laparoscopy, Abelev-Tatarinov reaction. Principles of treatment.

Pancreatic cancer. Incidence. Etiological factors. Preventive measures. Localization, macroscopic forms, histological structure, metastasis. Symptoms of pancreatic cancer. Clinical signs depending on the location of the tumor. Diagnostics. Differential diagnosis of jaundice. Principles of surgical treatment of pancreatic cancer. Results.

Tumors of bones and soft tissues.

Bone sarcomas. Classification. Osteogenic sarcoma. Ewing's sarcoma. Reticulotta chondrosarcoma. Features of clinical and radiological diagnostics. Indications for surgical and chemoradiation treatment.

Soft tissue sarcomas. Classification. Histological types. Diagnostics. Treatment of primary tumor and recurrence. Forecast.

Tumors of the genitourinary system.

Kidney cancer.Epidemiology. Classification of kidney tumors. Etiology . . . Pathological anatomy. Classification by stages. Symptomatology of kidney tumors. Basic diagnostic methods. Treatment.

Bladder tumors. Benign tumors: papilloma, fibroma, leiomyoma

– clinic, diagnosis, treatment. The role of chemical carcinogens in the occurrence of bladder cancer. Histological types of cancer. Classification by stages. Clinical manifestations. Characteristics of hematuria. The role of cystoscopy in the diagnosis of bladder tumors. Treatment methods.

Testicular tumors. Epidemiology, possible etiological factors. Morphology of testicular tumors. Features of lymphogenic metastasis. Clinic, diagnostic methods, treatment.

Tumors of the prostate gland. Epidemiology. Etiological factors: the role of androgens in the occurrence of cancer. Morphological types of prostate cancer. Classification by stages. Clinic. Features of metastasis. Diagnostic methods. The role of digital examination of the rectum in the diagnosis of prostate cancer. Basic principles of treatment.

Tumors of the external genital organs. Penile cancer: etiology, clinical manifestations, diagnosis, treatment. Vulvar cancer: precancerous diseases, clinic, diagnosis, treatment.

Tumors of the cervix and body of the uterus.

Incidence. Causes of neglected cases. Etiology. Stages. Cancer in situ. Invasive and non-invasive forms of cervical cancer. Diagnostic methods. Risk groups. Features of treatment. Types of operations. Combination treatment. Results.

Ovarian tumors. Chorionepithelioma.

Ovarian cancer. Incidence. Etiological factors. Causes of neglected cases. Risk groups. Classification by stages. Morphological classification. Clinic. Diagnostic methods. Features of treatment. Adjuvant polychemotherapy. Forecast.

Treatment results.

Chorionepithelioma. Epidemiology. Risk factors. Clinical manifestations. Diagnostic methods. The role of radioimmune methods in the diagnosis of chorionepithelioma. Therapeutic tactics. Indications for surgical treatment. Prognosis.

Tumors of childhood.

Incidence. The role of heredity in the occurrence of tumors in children. The Role of Genetic Counseling in Prenatal Tumor Recognition. Clinic, diagnosis, treatment and prognosis for the most common malignant tumors of childhood (leukemia, brain tumors, neuroblastoma, malignant lymphomas, Wilms tumor, Ewing tumor, retinoblastoma, germ cell tumors).

Human acute radiation sickness.

Etiology, pathogenesis, clinic, diagnosis, treatment, prevention. Features of the course of acute radiation sickness in the incorporation of radionuclides. Principles of medical triage of victims and provision of emergency care

Chronic radiation sickness.

Etiological factors, pathogenesis, clinic, diagnosis, treatment, prevention, rehabilitation

Local radiation reactions and damage. Etiological factors, pathogenesis, clinic, diagnosis, treatment, prevention, rehabilitation.

The clinical part of the class involves:

- conducting outpatient appointments with an assistant doctor;
- supervision of patients in the hospital;
- collection of anamnestic data and examination of patients, assessment of complaints, course of the disease;

Thematic plan of lectures

No.	Topic	Hours
1	Skin cancer. Melanoma. Head and neck tumors.	1
2	Breast cancer. Cancer of the cervix and body of the uterus. Ovarian cancer.	1
3	Lung tumors. Lymphoma.	1
4	Cancer of the esophagus and stomach.	1
5	Colorectal cancer. Liver cancer.	1
6	Tumors of the kidney, bladder and prostate gland.	1
7	Physical, Technological and Organizational Foundations of Radiation Medicine	1
8	Pediatric tumors	1
9	Acute radiation injuries	1
10	Sanitary-hygienic, environmental and social consequences of radiation and nuclear accidents. Anti-radiation and social protection of the population in the sphere of ionizing radiation	1
	TOTAL	**10**

Thematic plan of practical classess

No.	Topic	Hours
1	Skin tumors.	3
2	Head and neck tumors.	3
3	Breast tumors.	3
4	Lymphogranulomatosis. Non-Hodgkin lymphomas.	3
5	Lung tumors.	3
6	Mediastinal tumors.	3
7	Tumors of the esophagus.	3
8	Stomach tumors.	4
9	Tumors of the liver and pancreas.	3
10	Colon tumors.	3
11	Tumors of the kidney and genitourinary system.	3
12	Cancer of the cervix and body of the uterus. Ovarian cancer.	3
13	Physical, Technological and Organizational Foundations of Radiation Medicine. Fundamentals of Radiation Safety. Organization of work and equipment of the laboratory of the radiology department for radiometric and dosimetric studies. Dosimetry of ionizing radiation.	4
14	Acute radiation sickness. Chronic radiation sickness. Local radiation reactions and damage. Long-term consequences of radiation accidents.	4
15	Exam preparation	3
	TOTAL	**50**

Thematic plan of independent extracurricular work (SRS)

No.	Topic	Hours
1	Principles of tumor classification according to the TNM system. Methods for diagnosing tumors.	4
2	Principles of treatment and dispensary supervision of cancer patients.	2
3	Cytostatic drugs. Classification. Mechanism of action. Principles of polychemotherapy.	2
4	Hormonal therapy of malignant tumors. Basic principles. Labor, social and medical rehabilitation of cancer patients.	2
5	Brain tumors.	3
6	Precancerous diseases of the breast.	2
7	Tumors of the external genital organs. Testicular tumors. Tumors of the prostate gland.	3
8	Tumors of childhood.	3
9	Bone sarcomas. Soft tissue sarcomas.	2
10	Clinical examination of personnel of nuclear facilities and the population exposed to ionizing radiation. State Register of	3

	Ukraine of Persons Affected by the Chornobyl Disaster. Psychological consequences of radiation accidents.	
11	Exam preparation	3
	TOTAL	**30**

Individual tasks.

Individual tasks are one of the forms of organization of learning, which is aimed at deepening, generalizing and consolidating the knowledge that students receive in the learning process, as well as applying this knowledge in practice. Individual tasks are performed by students independently under the guidance of a teacher.

Individual tasks include: writing essays and creating multimedia presentations with reports at meetings of the scientific student circle of the department, participation in the research work of the department, participation in writing abstracts and articles of the report at student scientific conferences.

List of tasks for individual work of the student: Defense of an individual research project; participation in the work of the student scientific circle and speeches at scientific forums; participation in the student Olympiad in the discipline; selection of video and audio materials from the sections of the discipline; selection of materials and creation of a presentation on the relevant topic or section of the discipline.

Teaching Methods

According to the sources of knowledge, teaching methods are used: verbal – storytelling, explanation, lecture, instruction; visual – demonstration, illustration; practical – practical work, problem solving. According to the nature of the logic of cognition, the following methods are used: analytical, synthetic, analytical-synthetic, inductive, deductive. According to the level of independent mental activity, the following methods are used: problem-based, searching, research.

1. Verbal methods: lecture, interactive lecture, conversation;
2. Visual methods: illustration, demonstration, demonstration at the patient's bedside;
3. Practical methods: performing practical work and solving situational tasks to develop skills and abilities;
4. Students' independent work on comprehension and assimilation of new material
5. Use of control and educational computer programs
6. Innovative teaching methods: Case-based learning; educational discussion;educational debates;role play; Team-based learning;think-pair-share.

Types of training sessions according to the curriculum are: lectures; practical classes; independent work of students.

List of questions for the final modular control

1. List of questions for the differentiated test.
2. Clinical groups of dispensary observation.
3. Oncological records.
4. Principles of classification of tumors by stage.
5. Prevention of malignant tumors.
6. Screening for malignant tumors.
7. Levels of diagnosis of malignant tumors.
8. Principles of radionuclide diagnostics of malignant tumors.
9. X-ray diagnostics of malignant tumors.
10. Cancer immunodiagnosis.
11. Morphological diagnosis of malignant tumors. Types of biopsies.
12. General principles of treatment of malignant tumors.
13. Principles of surgical treatment of malignant tumors.
14. Principles of radical oncological surgeries.
15. Fundamentals of radiation therapy of malignant tumors.
16. Indications, contraindications and complications of radiation therapy.
17. Classification of cytostatic drugs.
18. Indications, contraindications and complications of chemotherapy.
19. Hormonal therapy for patients with malignant tumors.
20. Immunotherapy of malignant tumors.
21. Symptomatic therapy of cancer patients. Hospices.
22. Medical rehabilitation of cancer patients.
23. Labor rehabilitation of cancer patients.
24. Social rehabilitation of cancer patients.
25. Features of deontology in oncology.
26. Epidemiology of malignant skin tumors.
27. Etiology of skin cancer.
28. Obligate skin pre-tears.
29. Classification of skin cancer by stage.
30. Diagnosis and treatment of skin cancer.
31. Etiological factors in melanoma.
32. Precancerous diseases of melanoma, signs of malignancy of the nevus.
33. Morphological classification of melanoma.
34. Classification of melanoma by stage.
35. Classification of melanoma according to Clark.
36. Clinical variants of melanoma.
37. Diagnosis of melanoma of the skin.
38. Treatment of melanoma of the skin.
39. Kaposi's sarcoma.
40. Precancerous diseases and benign tumors of the lower lip.
41. Pathological anatomy of lower lip cancer.
42. Diagnosis and treatment of lower lip cancer.

43. Precancerous diseases of the oral cavity.
44. Forms of tongue cancer growth.
45. Tongue cancer treatment.
46. Etiology of laryngeal cancer.
47. Benign tumors and precancerous conditions of the larynx.
48. Laryngeal cancer clinic, its dependence on the location of the tumor.
49. Diagnosis of laryngeal cancer.
50. Treatment of laryngeal cancer.
51. Benign tumors of the thyroid gland.
52. Etiological factors of thyroid cancer.
53. Histological classification of thyroid cancer.
54. Classification of thyroid cancer by stage.
55. Aberrant thyroid cancer.
56. Diagnosis of thyroid cancer.
57. Thyroid cancer treatment.
58. Principles of treatment of metastatic lesions of the lymph nodes of the neck.
59. Brain tumors.
60. Epidemiology of Breast Cancer.
61. Risk Factors for Breast Cancer.
62. Mintz's disease. Clinic, diagnosis, treatment.
63. Mastopathy. Clinic, diagnosis, treatment.
64. Fibroadenoma. Clinic, diagnosis, treatment.
65. Clinical forms of breast cancer.
66. Pathogenetic forms of breast cancer.
67. Diffuse forms of breast cancer. Clinic, treatment.
68. Diagnosis of breast cancer.
69. Chemotherapy for breast cancer.
70. Surgical treatment of breast cancer.
71. Radiation therapy for breast cancer.
72. Principles of Hormonal Therapy for Breast Cancer.
73. Classification of mediastinal tumors.
74. Primary mediastinal tumors.
75. Tumors of the thymus gland.
76. Clinical syndromes of mediastinal tumors.
77. Diagnosis of mediastinal tumors.
78. Treatment of mediastinal tumors.
79. Epidemiology of Lung Cancer.
80. Clinical and radiological forms of lung cancer.
81. Diagnosis of lung cancer.
82. Clinical syndromes of lung cancer.
83. X-ray symptoms of lung cancer.
84. Surgical treatment of lung cancer.
85. Principles of radiation therapy for lung cancer.
86. Chemotherapy for lung cancer.
87. Atypical forms of lung cancer. Clinic, diagnosis, treatment.

88. Pencost's cancer. Clinic, diagnosis, treatment.
89. Prevention of lung cancer.
90. Pleural tumors.
91. Benign tumors and precancerous diseases of the esophagus.
92. Epidemiology of esophageal cancer.
93. Etiological factors in esophageal cancer.
94. Pathological anatomy of esophageal cancer (histological variants, growth forms, ways of metastasis).
95. Clinical manifestations of esophageal cancer. Types and degrees of dysphagia, their differential diagnosis.
96. Complications of esophageal cancer.
97. Diagnosis of esophageal cancer.
98. X-ray symptoms of esophageal cancer.
99. Surgical treatment of esophageal cancer.
100. Radiation therapy for esophageal cancer.
101. Precancerous diseases of the stomach.
102. High-risk groups for gastric cancer.
103. Histological variants of gastric cancer.
104. Lymphatic drainage pathways from the stomach.
105. Early stomach cancer.
106. Clinic of stomach cancer, its dependence on the location of the tumor.
107. Complications of stomach cancer.
108. Distant metastases of gastric cancer are characteristic.
109. Surgical treatment of stomach cancer. Factors influencing the choice of surgery method.
110. Chemotherapy for stomach cancer.
111. Symptomatic treatment of gastric cancer.
112. Etiological factors of liver cancer.
113. Pathoanatomy of liver cancer (histological variants, macroscopic growth forms).
114. Clinical manifestations of liver cancer.
115. Diagnosis of liver cancer.
116. X-ray diagnosis of liver cancer.
117. Treatment of liver cancer.
118. Etiological factors of pancreatic cancer.
119. Clinical manifestations of pancreatic cancer, their dependence on the location of the tumor.
120. Variants of the clinical course of pancreatic cancer. Radionuclide diagnostics of liver and pancreatic cancer Immunodiagnostics of liver and pancreatic cancer. Treatment of pancreatic cancer.
121. Epidemiology of colon cancer.
122. Etiological factors in colon cancer.
123. Precancerous diseases of the colon, polyps.
124. Features of venous and lymphatic outflow from the rectum, its importance in cancer. Clinical forms of colon cancer.

125. Clinical syndromes of rectal cancer, their dependence on the location of the tumor. Complications of colon cancer.
126. Diagnosis of colon cancer.
127. Surgical treatment of colon cancer.
128. Surgical treatment of rectal cancer.
129. Etiological factors of malignant bone tumors.
130. International Histological Classification of Primary Bone Tumors.
131. Clinical manifestations of malignant bone tumors.
132. Diagnosis of malignant bone tumors.
133. Radiological symptoms of malignant bone tumors.
134. Osteogenic sarcoma.
135. Juxtacortical sarcoma.
136. Ewing's sarcoma.
137. Chondrosarcoma.
138. Reticulosarcoma.
139. Basic principles of treatment of bone tumors.
140. Clinic of soft tissue tumors.
141. Diagnosis of soft tissue tumors.
142. Treatment of soft tissue sarcomas.
143. Morphology of lymphogranulomatosis.
144. Classification of malignant lymphomas by stage.
145. Histological classification of lymphogranulomatosis and lymphosarcoma.
146. Clinical manifestations of malignant lymphomas.
147. Clinical characteristics of lymphadenopathy in lymphogranulomatosis and
148. Diagnosis of lymphomas.
149. The concept of the biological activity of the process in lymphogranulomatosis.
150. Methods for diagnosing the degree of spread of lymphomas and leukemia of the process.
151. Treatment of malignant lymphomas.
152. Prognostic factors in lymphogranulomatosis and lymphosarcoma.
153. Benign tumors of the bladder, their treatment.
154. Etiology of bladder cancer.
155. Histological variants of bladder cancer.
156. Bladder Cancer Clinic.
157. Diagnosis of bladder cancer.
158. Treatment of bladder cancer.
159. Benign tumors of the kidney.
160. Etiological factors of kidney cancer.
161. Kidney Cancer Clinic.
162. Diagnosing kidney cancer.
163. Kidney cancer treatment.
164. Nephroblastoma.

165. Etiological factors in cervical cancer.
166. Background processes in cervical cancer.
167. Pathological anatomy of cervical cancer (forms of growth, features of metastasis).
168. Histological classification of cervical and uterine cancer.
169. Clinical manifestations of cervical cancer.
170. Diagnosis of cervical cancer.
171. Cytological examination of the cervix (meaning, rules of sampling, classes of smears).
172. Colposcopy (essence, significance for diagnosis, types of colposcopy, classification of
173. colposcopic images).
174. Intraepithelial and microinvasive cervical cancer, diagnosis, treatment.
175. Radiation treatment for cervical cancer.
176. Surgical treatment of cervical cancer.
177. Prevention of cervical cancer.
178. Etiology and risk factors for uterine cancer.
179. Precancerous diseases of the uterine body.
180. Clinical manifestations of uterine cancer.
181. Treatment of uterine cancer.
182. Rehabilitation treatment of patients with uterine cancer.
183. Etiology of ovarian cancer.
184. Features of ovarian cancer metastasis.
185. Immunodiagnostics of ovarian cancer.
186. Ovarian cancer treatment.
187. Precancerous diseases of the vulva.
188. Complications of prostate cancer.
189. Features of prostate cancer metastasis.
190. Treatment of prostate cancer.
191. Malignant tumors of the testicle.
192. Trophoblastic disease.
193. Epidemiology of pediatric tumors.
194. Clinical and biological criteria for the diagnosis of ARS.
195. Pathogenesis of ARS.
196. General and clinical classification of radiation injuries.
197. Clinical signs of the period of primary ARS reaction.
198. Clinical signs of a latent period of ARS.
199. Clinical signs of the peak of the disease.
200. Treatment of ARS depending on the period of the disease and experience in the
201. treatment of victims of the Chernobyl accidents.
202. Principles of medical and psychosocial rehabilitation of persons who have undergone ARS.

7. Forms of control

Current control is carried out on the basis of control theoretical knowledge, practical skills and abilities.

Forms of current control are: oral survey (frontal, individual, combined), interview; practical

verification of the formed professional skills (carried out based on the results of solving clinical cases, working with medical documentation, performing practical skills, working at the patient's bedside); test control ("open" and "closed" test tasks).

Current control is mandatory. During the evaluation of mastering of each topic from all disciplines of the curriculum for the current educational activity, the student is given grades on a 4-point (traditional scale) taking into account the approved evaluation criteria for the discipline. All types of work provided by the curriculum are taken into account. The student must receive a grade in each topic. The teacher conducts a survey of each student in the group at each lesson and assigns a grade in the journal of attendance and student performance according to the traditional scale ("5", "4", "3", "2").

When evaluating the student's current educational activity, 20% of the grade is the student's independent work, which takes into account the knowledge of the topic of independent study and the performance of work in the notebook.

The final (summary) control is carried out:

- in the form of a written test, which includes test tasks, theoretical questions
- control of practical skills (solving clinical cases, assessment of correct performance of practical skills - practical-oriented exam.

According to the specifics of professional training, preference is given to test and practically oriented control.

Differential assessment is a form of final control of the student's assimilation of theoretical and practical material from the academic discipline.

14. Scheme of accrual and distribution of points received by students.

The maximum number of points for a discipline is 200 points. The ratio between the results of the evaluation of the current educational activity and the final control of knowledge is 60% and 40%.

The study of the discipline ends with a final control in the form of a differential assessment. Only those students who do not have academic debt (all missed classes have been completed) and whose average score for the current educational activity in the academic discipline is at least "3" are admitted to the differential credit.

The maximum number of points that a student can score for the current educational activity for admission to the exam is 120 points and is defined as the sum of the arithmetic average of all grades received in the semester.

The minimum number of points that a student must score for the current educational activity for admission to the exam is 72 points. Recalculation of the average grade for the current academic performance (on a 120-point scale) in the table. 1.

Table 1. Recalculation of the average grade the current activity into a multi-point scale for disciplines ending with an exam

4-points scale	200-point scale	4-point scale	200-point scale	4-point scale	200-point scale
5	120	4.29	103	3.58	86
4.96	119	4.25	102	3.54	85
4.92	118	4.21	101	3.50	84
4.87	117	4.17	100	3.46	83
4.83	116	4.12	99	3.42	82
4.79	115	4.08	98	3.37	81
4.75	114	4.04	97	3.33	80
4.71	113	4.00	96	3.29	79
4.67	112	3.96	95	3.25	78
4.62	111	3.92	94	3.21	77
4.58	110	3.87	93	3.17	76
4.54	109	3.83	92	3.12	75
4.50	108	3.79	91	3.08	74
4.46	107	3.75	90	3.04	73
4.42	106	3.71	89	3	72
4.37	105	3.67	88	Less than 3	Not enough
4.33	104	3.62	87		

The maximum number of points that a student can score when taking the exam is 80 (minimum number – not less than 50).

Discipline assessment is defined comprehensively as the sum of points for the current educational activity and points for the exam .

From the allocated 120 points for the current educational activity, 4 to 12 additional points are allocated for the assessment of individual independent work of higher education applicants, according to the work curriculum. Encouragement points are added to the final grade for the discipline at the end of its study.

Points from the discipline for students who have successfully completed the program are converted into the national scale and the ECTS system (tables 2).

Rating scale: national and ECTS.

The sum of points for all types educational activity	Evaluation of ECTS	Evaluation on a national scale	
		for an exam, a diploma	for credit
180-200	A	perfectly	counted
160-179	B	okay	
150-159	C		
130-149	D	satisfactorily	
120-129	E		

50-119	FX	unsatisfactory with the possibility of re-folding	not included with the possibility of refolding
0-49	F	unsatisfactory with mandatory restudy disciplines	not enrolled with mandatory restudy disciplines

Methodological support

1. Working curriculum of the discipline;
2. Plans of lectures, practical classes and independent work of students;
3. Abstracts of lectures on the discipline;
4. Methodical instructions for practical classes for students;
5. Methodical materials that ensure independent work of students;
6. Test and control tasks for practical classes;
7. List of exam questions.

List of basic literature

1. Algorithms of modern oncology / Edited by I.B. Shchepotyn, G.V. Bondarya, V.L. Ganula. - K.: Book Plus, 2006.

2. Bondar G.V. Palliative medical care / G.V. Bondar, I.S. Vitenko, O. Yu. Popovych. - Donetsk: Donetsk region, 2004. - 150 p.

3. Selected lectures on clinical oncology / Under the general editorship of Acad. AMNU Bondarya G.V. and Prof. Antipova S.V. – Luhansk, 2008. – 580 p.

4. Diagnosis and treatment of malignant neoplasms: methodological guidelines for organizing students' independent work / B.A. Bolyukh, V.V. Petrushenko, A.A. Tkach [et al.] ; Under the editorship Doctor of Medicine, Prof. B.A. Bolyukha. - Vinnytsia : State Enterprise "DKF", 2012. - 264 p.

5. Efetov V.M. Selected lectures on clinical oncology / V.M. Efetov. - 1997. - 260 p.

6. Clinical oncology: a guide for students of higher medical institutions of the IV accreditation level and interns / B.A. Bolyukh, V.V. Petrushenko, A.A. Tkach [and others.] ; Under the editorship Doctor of Medicine, Prof. B.A. Bolyukha. - Vinnytsia: State Enterprise "DKF", 2012. - 704 p.

7. Oncology: a textbook / Ed. G. V. Bondarya, Y. V. Dumanskyi, O. Yu. Popovich. - Kyiv: Medicine, 2012. - 350 p.

8. Oncology / Ed. V.P. Bashtana, A.L. Odabashyan, P.V. Sheleshka. – Ternopil: Ukrmedknyga, 2003. – 316 p.

9. Oncology: textbook - 3rd edition, revision. and additional / B.T. Bilynskyi, N.A. Volodko, A.I. Hnatyshak, O.O. Galai [and others]; Under the

editorship B. T. Bilinskyi. - K. Zdrov'ya , 2004. - 528 p.

10. V.I. Starykov General oncology: textbook / V.I. Starykov. - Kharkiv: KhSMU, 2001. - 72 p.

11. Oncology: a textbook for students: 2nd ed., revised and supplemented. / A.I.Shevchenko, O.Yu.Popovych, N.F.Shevchenko [and others]. – Melitopol: Col. "MMD" publishing house, 2011. - 457 p.

12. Oncology: electr. study guide for students of higher medical institutions of III-IV level of accreditation / A.I.Shevchenko, O.Yu.Popovych, N.F.Shevchenko [and others]. - Zaporizhzhia. - 2011.

13. Oncology / I.B. Shchepotin, V. L. Ganul, I. O. Klymenko [and others]. - K.: Book Plus, 2006. - 496 p.

14. Encyclopedia of clinical oncology: manual for practicing doctors / M.I.Davydov, G.L.Vyshkovsky [and others]. - M.: RLS, 2005, 2004. - 1536 p.

15. Sorkin VM Clinical oncology (Lectures for medical students) / VMSorkin, IAPerehod. - Simferopol, 2007. - 136 p.

List of additional literature

16. Atlas of oncological operations / Ed. B.E. Peterson, V.I. Chissova, A.I. Pachesa - M.: Medicine, 1987. - 534 p.

17. Ganul V.L. Esophageal cancer: a guide for oncologists and surgeons / V.L.Ganul, S.I.Kirkilevsky. - K.: Book plus, 2003. - 200 p.

18. Grinevich Yu.A. Fundamentals of clinical immunology of tumors / Yu.A.Grinevich, L.Ya.Kamenets. - K.: Health, 1986. - 180 p.

19. Prevedchikova N.I. Guide to chemotherapy of tumor diseases / Ed. N.Y. Perevodchikova. - 3rd ed., supplement - M.: Practical Medicine, 2011. - P.195 - 209.

20. V.I. Starykov Lung cancer / V.I.Starykov, G.V.Trunov. - Kharkov: "OOO Katran KPK", 2002. - 212 p.

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