



SOUTH KAZAKHSTAN
**MEDICAL
ACADEMY**

EDUCATIONAL PROGRAM OF RESIDENCY
7R01124
«ONCOLOGY (ADULTS)»

Shymkent, 2025 y.

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Educational program 7R01124 «Oncology (adults)»	

The educational program of the residency 7R01124 «Oncology (adults)» was developed by the Department of Surgery, Oncology and Traumatology

Head of the Department, MD, Acting Professor th Abdurakhmanov B.A.

Protocol no. 8a of " 18 " 09 2025

Agreed with the employer:

Director of the State Enterprise on PCV "City multidisciplinary hospital with an oncological center" near Shymkent Ma Maulenov J.O.

Discussed at the meeting of the AC Surgery profile Chairman of the AK, docent Py Kaldygozova G.E.

Protocol no. 4 from " 21 " 04 2025

Approved by the Clinical Council

Chairman, Professor cy Nurmashev B.K.

Protocol no. 8 of " 15 " 04 2025

Approved by the Academic Council

Protocol no. 13 from " 12 " 05 2025

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Passport of the educational program

1. The mission of the educational program: to be recognized as a leader in the field of training highly specialized, competitive oncologists.
2. The purpose of the educational program is to train highly qualified, competitive oncologists who are able to meet the needs of society in providing medical care to cancer patients, apply and develop advanced innovative technologies in medicine, science and practice.
3. Justification of the OP

Oncology (from Greek. oncos - tumor and logos - word, science) is a branch of medicine that studies the development of tumors, the causes of benign and malignant neoplasms, the mechanisms and patterns of their occurrence, clinical manifestations, methods of their prevention, diagnosis and treatment.

Oncological diseases are systemic and affect, one way or another, all human organs and systems. There are many forms and variants of the course of cancer.

Although patients often perceive oncodiagnosis as a verdict, not all tumors, even malignant ones, lead to death. Modern research has demonstrated that cancer cells and micro-tumors regularly occur in every person's body, which die and resolve under the influence of the antitumor immunity system. The basis of cancer is a violation of the processes of regulation of tissue growth. Despite the efforts of medical scientists, despite scientific and professional progress, the incidence of cancer is growing everywhere. Malignant neoplasms are diseases that lead to high mortality, which is why the mortality rate from cancer in the country does not decrease.. In the Republic of Kazakhstan, as in most developed countries of the world, the incidence of malignant neoplasms and mortality from them are steadily increasing. In our country, oncological diseases occupy the 7th place in the structure of all diseases, mortality after diseases of the circulatory system is 2nd place. Today, over 205 thousand patients with oncological diseases are under dynamic observation. More than 37 thousand new cases are detected annually. The incidence among women is slightly higher than among men (57 and 43%, respectively). This is due to the fact that breast cancer is in the first place in the structure of morbidity. Among the sick, 56% are people of working age. Therefore, the fight against malignant tumors is considered as one of the most important tasks of healthcare and medicine.

4. The educational program is developed on the basis of:

- Order of the Minister of Health of the Republic of Kazakhstan dated 07/04/2022 No. KR DSM-63 "On approval of state mandatory standards for levels of education in the field of healthcare";
 - The professional standard "«Oncology (adults)»" (Order of the Minister of Health of the Republic of Kazakhstan dated January 25, 2024 No. 46 "On approval of professional standards in the field of healthcare".
 - On Amendments and additions to the Order of the Minister of Health of the Republic of Kazakhstan "On approval of the list of medical specialties of residency programs" dated May 25, 2021 No. KR DSM - 43 and "On approval of standard training programs in medical and pharmaceutical specialties" dated January 9, 2023 No. 4. (Order of the Minister of Health of the Republic of Kazakhstan dated 10 November 2023, No. 164).
- The need of medical organizations for adult oncologists is the justification for the discovery and the need to train oncologists, primarily at the regional level, taking into account the main strategies and programs for the development of the health system at the international, national and regional levels in order to increase the level of medical care for cancer patients.

5. The field of professional activity. Healthcare

6. Objects of professional activity. Medical organizations providing inpatient and outpatient care, healthcare systems of the Republic of Kazakhstan

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General information

1	Registration number	7R09100082
2	The code and classification of the field of education	7R01 Healthcare (medicine)
3	The code and classification of training areas	7R011 Healthcare
4	Group of educational programs	R024 Oncology (adult)
5	Code, name of the educational program	7R01124 Oncology (adult), residency
6	Type Op	Updated OP
7	ISCED level	7
8	The level of the NRK	7
9	ORC Level	7
10	Distinctive features of the OP	compiled according to the professional standard
11	List of competencies	CC1. Patient supervision: is able to formulate a clinical diagnosis, prescribe a treatment plan and evaluate its effectiveness based on evidence-based practice at all levels of medical care. CC 2. Communication and collaboration: He is able to effectively interact with the patient, his environment, and healthcare professionals in order to achieve the best results for the patient. CC 3. Safety and quality: He is able to assess risks and use the most effective methods to ensure a high level of safety and quality of medical care. CC 4. Public health: He is able to act within the legal and organizational framework of the healthcare system of the Republic of Kazakhstan in his specialty, provide basic assistance in emergency situations, and work as part of interprofessional teams to implement national health promotion policies. CC 5. Researches: He is able to formulate adequate research questions, critically evaluate professional literature, effectively use international databases in his daily activities, and participate in the work of a research team. CC 6. Training and development: He is able to study independently and train other members of a professional team, actively participate in discussions, conferences and other forms of continuous professional development.

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12	Learning outcomes:	LO1 Is able to formulate adequate research questions, critically evaluate professional literature, effectively use international databases and digital tools in the activities of an oncologist, and participate in the work of a research team.; LO2 Safety and quality: able to assess risks and use the most effective methods to ensure a high level of safety and quality of cancer care. LO3 Communication and collaboration: able to effectively interact with the cancer patient, his relatives, health care professionals in order to achieve the best results for the patient LO4 Training and development: able to learn independently and train other members of a professional team, actively participate in discussions, conferences and other forms of continuous professional development. To use artificial intelligence in medicine. LO5 He is able to diagnose and treat malignant neoplasms, prescribe a treatment plan and evaluate its effectiveness based on evidence-based practice at all levels of oncological care, formulate adequate research questions, critically evaluate professional literature, effectively use international databases in the activities of an oncologist, participate in the work of a research team, and use artificial intelligence to diagnose oncological diseases. LO6 He is able to act within the legal and organizational framework of the healthcare system of the Republic of Kazakhstan in providing oncological care, provide basic assistance in emergency situations, work as part of interprofessional teams to implement national health promotion policies; participate in the management of medical documentation, medical and statistical information.
13	The form of study	is full-time
14	The language of instruction	<i>Kazakh and Russian</i>
15	Volume of loans	140
16	The duration of the training:	2 year
17	Degree awarded, qualification	Doctor Oncologist (adult)
18	Availability of an appendix to the license for the direction of training	KZ 36LAA00011387
19	Availability of OP accreditation	Have
	Name of the accreditation body	<i>IAAR</i>
	The validity period of the accreditation	№ AB 3514 27.05.2021-26.05.2026

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20	Information about the disciplines	Application 1.2
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Application 1.1

The matrix of correlation of learning outcomes according to the educational program as a whole with the competencies being formed

	LO1	LO2	LO3	LO4	LO5	LO6
CC1	+	+	+			
CC2		+		+		
CC3			+		+	
CC4				+		
CC5					+	
CC6						+

Application 1.2

Matrix of achievability of competencies/learning outcomes

№	Name of the discipline	A brief description of the discipline	Cycle	Component	Number of credits.	Formed RO
1	Ambulatory-cliniconcology	Organization and methodology of outpatient care for cancer patients. Features of dispensary supervision. Accounting and evaluation of the effectiveness of medical examination. Outpatient treatment of cancer patients. Diagnostic manipulations and the volume of operative care in a polyclinic. Radiation diagnostics and radiation therapy. Chemotherapy, classification of chemotherapy drugs and methods of their application.	PD	UC	12	LO2 LO3
2	Oncoreabilitology	To diagnose and treat malignant neoplasms and evaluate its effectiveness based on evidence-based practice at all levels of oncological care, and to use artificial intelligence to diagnose oncological diseases. Management of patients with advanced cancer. The problem of obesity and pathology at the stages of medical care. Modern methods of treatment, depending on the stage of spread.	PD	UC	6	LO2 LO3 LO5

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		Palliative surgery. Forecast.Rehabilitation Of cancer patients after radical or palliative treatment. Hospice. Principles of operation				
3	Functional diagnostic s in oncology	To diagnose and treat malignant neoplasms and evaluate its effectiveness based on evidence-based practice at all levels of oncological care, and to use artificial intelligence to diagnose oncological diseases. Methods of diagnosis of oncological diseases based on modern, specialized, instrumental and functional diagnostic studies. The ability to formulate a clinical diagnosis independently, based on evidence- based practice, using effective diagnostic methods to maximize the safety and quality of medical care for patients. To use artificial intelligence in medicine.	PD	UC	6	LO1 LO4 LO5
4	Clinical and laboratory diagnostic s in oncology	Clinical and laboratory diagnostics of oncological diseases of internal organs: lungs, stomach, intestines, liver, biliary system and pancreas, kidneys and urinary tract, kidneys, thyroid gland, adrenal glands and musculoskeletal system, skin and lymphomas. Endoscopic, morphological studies. To use artificial intelligence in medicine.	PD	UC	6	LO1 LO3 LO4
5	Medical genetics in oncology	Medical genetics in oncology.Genetic aspects of the development of oncological diseases based on heredity and variability in various human populations, features of the manifestation and development of normal and pathological signs under the influence of carcinogenic substances. Predisposition, heredity in oncology. Modern genetic research in the early diagnosis and prevention of cancer. To use artificial intelligence in medicine.	PD	UC	6	LO1 LO4

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6	Radiation diagnostics in oncology	To diagnose and treat malignant neoplasms and evaluate its effectiveness based on evidence-based practice at all levels of oncological care, and to use artificial intelligence to diagnose oncological diseases. oncological diseases of internal organs. Radiological symptoms and syndromes in oncological diseases of the musculoskeletal system, gastrointestinal tract and lung. Modern instrumental diagnostic methods of ultrasound, CT and MRI in oncology, diagnostic signs and criteria of oncological diseases. Screening diagnosis of breast cancer. To use artificial intelligence in medicine. To use artificial intelligence in medicine.	PD	UC	7	LO2 LO4 LO5
7	Pathomorphological diagnosis	Pathomorphological diagnosis of oncological diseases: skin, lymphomas, lungs, stomach, intestines, liver, biliary system and pancreas, kidneys and urinary tract, kidneys, thyroid gland, adrenal glands. Musculoskeletal system. Methods of taking biopsy material: cytomasoc, puncture biopsy, trepan biopsy, invasive methods and endoscopic, morphological studies. To use artificial intelligence in medicine.	PD	UC	8	LO1 LO2 LO4
8	Radiation therapy	Radiation therapy of oncological diseases of internal organs and musculoskeletal systems, skin, lower lips, tumors of the oral cavity. Methods and doses of radiation therapy for various nosological forms of oncopathology. Modern instrumental innovative methods of radiation therapy, criteria for the effectiveness of cancer treatment. To use artificial intelligence in medicine.	PD	UC	10	LO2 LO3 LO4

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9	Clinical Immunology in oncology	The immunological status of cancer patients depends on the general condition, histological form of the tumor and the stage of development. Immunotherapy of malignant neoplasms. Immunomodulators in the treatment of oncological diseases. To use artificial intelligence in medicine.	PD	UC	8	LO2 LO3 LO4
10	Oncology in the hospital	To diagnose and treat malignant neoplasms and evaluate its effectiveness based on evidence-based practice at all levels of oncological care, and to use artificial intelligence to diagnose oncological diseases. Modern diagnostic and therapeutic manipulations in stationary conditions. Highly qualified assistance in the diagnosis and treatment of oncological diseases of various localization, taking into account the spread and stage of the tumor. Prevention of oncological diseases. Providing basic care at the stages of medical care. Prevention of complications, prognosis and rehabilitation. Clinical protocols of the Ministry of Health of the Republic of Kazakhstan on nosology	PD	UC	49	LO2 LO3 LO5
11	Palliative oncology	Palliative care in oncology. The amount of palliative care depends on the clinical condition of the patient, the stage of tumor development, location and nature of growth. The principle of operation of the palliative care department. Assessment of the risk, safety and effectiveness of palliative care (surgery, chemotherapy and radiotherapy).	PD	UC	7	LO1 LO2 LO3

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12	Intensive care in oncology	The tactics of a doctor in emergency conditions of oncopathology. Modern highly specialized methods of treatment. Equipment and instruments used in intensive care. Principles of working with diagnostic and therapeutic equipment. To use artificial intelligence in medicine. Adequate assessment of the patient's condition. The use of modern and effective methods of emergency care. Risk and safety assessment of	PD	UC	9	LO1 LO3 LO4
		anesthesia and treatment. The legal field of action of the Healthcare of the Republic of Kazakhstan.				
	Pediatric Oncology/	Pediatric oncology. Often common oncological diseases in children and adolescents. Congenital oncological diseases, teratomas. Wilms tumor, Ewing tumor and lymphoma. A modern approach to the development of oncological diseases in children. Methods of diagnosis and treatment. Rehabilitation.	PD	OC	4	LO1 LO2 LO5
	Interventional chemotherapy	Interventional chemotherapy in oncology. Endovascular administration of chemotherapy drugs with embolization of tumor feeding vessels. Methods of endovascular administration of drugs and vascular embolization. Indications and contraindications of manipulation. The choice of drugs and embolizing substances for the procedure. Risks and complications. To use artificial intelligence in medicine. Participate in the management of medical records, medical and statistical information.				LO1 LO4 LO6
	Total:				138	
	Final certification				2	
	Total:				140	

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Профессиональный стандарт: «Oncology (adults)»

Profession card "7.2 Oncologist"	Mandatory labor functions:	1. Diagnosis and treatment of malignant neoplasms
		2. Rehabilitation treatment and rehabilitation of patients with malignant neoplasms
		3. Conducting a medical examination for patients with malignant neoplasms
		4. Providing medical care for emergencies in oncology
		5. Participation in the management of medical documentation, medical and statistical information. Conducting primary examinations and diagnostic measures for children and adolescents. Diagnosis and therapeutic procedures.
	Additional labor functions:	1. Continuous professional development
Labor function 1: Diagnosis and treatment of malignant neoplasms	Skill 1: Conducting diagnostic procedures	Skills: 1. Skills in performing fine-needle biopsies for tumors of the breast, liver, pancreas, and lymph nodes Skills of conducting trepanobiopsy for breast, lung, liver, and prostate tumors. 2. Skills in interpreting radiological diagnostic methods (X-ray, CT, MRI, ultrasound, NMR methods). Skills in interpreting endoscopic diagnostic methods (bronchoscopy, esophagogastroduodenoscopy, colonoscopy, rectoromanoscopy, laparoscopy, thoracoscopy, mediastinoscopy). 5. Skills of conducting an incision biopsy from skin formations.
		Knowledge: 1. Medical indications, contraindications, methods of conducting fine needle biopsy of tumors, methods of conducting trepanobiopsy of tumors, radiography, CT, MRI, ultrasound, methods of nuclear medicine.

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		2. Medical indications, contraindications to bronchoscopy, esophagogastroduodenoscopy, colonoscopy, rectoromanoscopy, laparoscopy, thoracoscopy, mediastinoscopy.
Labor function 2: Rehabilitation treatment and rehabilitation of patients with malignant neoplasms	Skill 1: Drawing up a plan, evaluating the effectiveness and safety of measures for the medical and social rehabilitation of patients with malignant neoplasms	Skills: 1. To determine the types of rehabilitation for cancer patients and the principles of their implementation. 2. To develop the goals and stages of medical rehabilitation of cancer patients. 3. To carry out medical rehabilitation at the pre-hospital, hospital and post-hospital stages. 4. To carry out psychological and social rehabilitation of patients with malignant neoplasms. 5. To provide sanatorium-resort treatment to patients with malignant neoplasms. Knowledge: 1. Types of rehabilitation for cancer patients as defined by WHO (medical, professional, social). 2. Goals (restorative, supportive, palliative) and stages (pre-hospital, hospital, post-hospital) of medical rehabilitation. 3. Aspects of social and psychological rehabilitation of patients with malignant neoplasms. 4. Medical indications and contraindications for types of sanatorium-resort treatment for cancer patients. 4. Medical indications and contraindications for physical therapy, prosthetics, reconstructive surgery, and drug therapy for patients with malignant neoplasms. 5. Ethics and deontology in dealing with cancer patients.
Labor function 5: Participation in the management of medical documentation, medical and statistical information	Skill 1: Maintaining medical records, analyzing medical and statistical information, in accordance with the requirements of regulatory legal acts in the field of	Skills: 1. Plan your work and compile a report analyzing your own performance indicators. 2. Maintain medical records, including in electronic form, and monitor the quality of its management. 3. To analyze the medical and statistical indicators of the work of the specialized medical department. 4. Use patients' personal data and information in accordance with the law. 5. Use information systems in accordance with the established procedure Knowledge: 1. Order of the Acting Minister of Health of the Republic of Kazakhstan dated October 30, 2020 No. KR DSM-175/2020 "On approval of Accounting Documentation forms in the field of

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		healthcare" (registered with the Ministry of Justice of the Republic of Kazakhstan on December 23, 2020 No. 21879). 3. Order of the Minister of Health of the Republic of Kazakhstan dated December 10, 2020 No. KR DSM-244/2020 "On approval of the Rules for maintaining primary medical records and submitting reports" (registered with the Ministry of Justice of the Republic of Kazakhstan on December 11, 2020, No. 21761). 4. Electronic accounting and documentation systems. 5. Confidentiality of patients' medical information. 6. Fundamentals of medical statistics.
Personal competence requirements:	Empathy Communication skills Tolerance and respect Collaboration and teamwork Stress resistance Reflection and introspection Compliance with professional ethics Openness and willingness to learn Activity and initiative Striving for professional development	

Head of the educational and methodological center



B.Z. Doltayeva