



SOUTH KAZAKHSTAN  
MEDICAL  
ACADEMY

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

The educational residency program 7R01124 Oncology (adults) was developed on the basis of the 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».

Position	Full name	Signature
<b>Developed by</b>		
PTS of the Department of Surgery, Oncology and Traumatology		
Head of the Department, MD, Acting Professor	Abdurakhmanov B.A.	
Candidate of Medical Sciences, Associate Professor of the Department	Yusupov A.M.	
Assistant of the Department	Zhanteev M.E.	
Representative of practical healthcare	Aimagambetov M.B.	
Deputy Head of the GKP at the Regional Clinical Hospital UZ TO		
Resident of the Educational program Oncology (adults)	Yusantaev A.G.	
Minutes of the department meeting № <u>6</u> from " <u>24</u> " " <u>01</u> " 202 <u>4</u> .		
Discussed at the meeting of the Committee of Educational Programs of the Residency in Chairman of the Educational Programs Committee № <u>5</u> from « <u>26</u> » « <u>01</u> » 202 <u>4</u> y.	Kulbaeva S.N.	
Approved by the Clinical Council. Chairman of the Clinical Council № <u>8</u> from « <u>29</u> » « <u>01</u> » 202 <u>4</u> y.	Kauyzbay Zh.A.	
Approved by the First Vice-Rector First Vice-Rector « <u>30</u> » « <u>01</u> » 202 <u>4</u> y.	Esirkepov M.M.	
Approved by the Academic Council № <u>14</u> from « <u>31</u> » « <u>01</u> » 202 <u>4</u> y.		



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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" (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	no
	Partner University (SOP)	no
	Partner University (SOP)	no
11	List of competencies	<p>CC1 He is able to synthesize professional and scientific medical knowledge to provide qualified medical assistance.</p> <p>CC2 He is able to effectively interact with the patient, his environment, and healthcare professionals in order to achieve the best results for the patient.</p> <p>CC3 He is able to provide qualified medical care of the basic category of complexity and determine a strategy for providing qualified medical care to the population of the second category of complexity.</p> <p>CC4 He is able to coordinate activities in health care organizations, make decisions and be responsible for the result of providing qualified medical care.</p> <p>CC5 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.</p> <p>CC6 is able to operate within the legal and organizational framework of the healthcare system of the Republic of Kazakhstan.</p> <p>CC7 is capable of researching and evaluating the results of his professional activity, applying the principles of diagnosis of</p>

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		diseases based on scientific data, applying modern research methods in healthcare, taking into account bioethics and implementations into clinical practice
12	Learning outcomes:	<p><b>LO1</b> Able to formulate a clinical diagnosis, prescribe treatment plan in accordance with the clinical protocols for diagnosis and treatment of the Ministry of Health of the Republic of Kazakhstan, with an assessment of its effectiveness based on evidence-based practice at all levels of medical care assistance to patients with cancer;</p> <p><b>LO2</b> Able to formulate a clinical diagnosis, prescribe treatment plan in accordance with the clinical protocols for diagnosis and treatment of the Ministry of Health of the Republic of Kazakhstan, with an assessment of its effectiveness based on evidence-based practice at all levels of medical care assistance to patients with cancer;</p> <p><b>LO3</b> Able to assess risks and use the most effective methods to ensure a high level of safety and quality of medical care for patients with cancer;</p> <p><b>LO4</b> Able to act within the legal and organizational framework of the healthcare system of the Republic of Kazakhstan in the specialty "Adult Oncology", provide basic assistance in emergency situations, work as part of interprofessional teams to implement policies to improve the health of the nation;</p> <p><b>LO5</b> Able to formulate adequate research questions, critically evaluate professional literature on adult oncology, effectively use international databases in their daily activities, and participate in the work of a research team.</p> <p><b>LO6</b> Able to learn independently and train other members of the professional team, actively participate in discussions, conferences and other forms of continuing professional development in the field of adult oncology.</p>
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	Oncologist (adult)
18	Availability of an appendix to the license for the direction of training	KZ 22BFA00167288
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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#### Application 1.1

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

	PO1	PO2	PO3	PO4	PO5	PO6
CC1	+	+	+			
CC2		+		+		
CC3			+		+	
CC4				+		
CC5					+	
CC6						+
CC7						

#### 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-clinic oncology	Organization and methods of outpatient care for cancer patients. Features of dispensary observation. Accounting and evaluation of the effectiveness of medical examination. Diagnostic manipulations and the volume of operational assistance in a clinic. Radiation diagnostics and radiation therapy. Chemotherapy, classification of chemotherapy drugs and methods of their use.	PD	MC	12	LO2 LO3
2	Oncoreabilitology	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. Palliative surgery. Forecast. Rehabilitation of cancer patients after radical or palliative treatment. Hospice. Work principles	PD	MC	6	LO2 LO3 LO4

3	Functional diagnostics in oncology	Modern functional, highly specialized methods for the diagnosis of cancer The ability to formulate a clinical diagnosis, based on evidence-based practice, using effective diagnostic methods to maximize the safety and quality of patient care.	PD	MC	6	LO1 LO4 LO5
4	Clinical and laboratory diagnostics 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.	PD	MC	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.	PD	MC	6	LO1 LO4
6	Radiation diagnostics in oncology	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.	PD	MC	7	LO2 LO4 LO5
7	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.	PD	MC	10	LO2 LO3 LO4




8	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.	PD	MC	8	LO1 LO2 LO3
9	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	MC	7	LO1 LO3 LO4
10	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.	PD	MC	8	LO1 LO2 LO4
11	Oncology in the hospital	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	MC	49	LO2 LO3 LO5
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. Adequate assessment of the patient's condition. The use of modern and effective methods of emergency care. Risk and safety assessment of	PD	MC	9	LO2 LO4 LO6



		anesthesia and treatment. The legal field of action of the Healthcare of the Republic of Kazakhstan.				
	<b>Total:</b>				<b>134</b>	
1	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	MC	4	LO1 LO3 LO5
2	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.	PD	MC		LO1 LO4 LO6
	<b>Total:</b>				<b>138</b>	
	<b>Final certification</b>				<b>2</b>	
	<b>Total:</b>				<b>140</b>	

**The matrix of achievement of RO by various teaching methods and assessment methods**


LO	Teaching and learning methods	
LO1 Able to formulate a clinical diagnosis, prescribe treatment plan in accordance with the clinical protocols for diagnosis and treatment of the Ministry of Health of the Republic of Kazakhstan, with an assessment of its effectiveness based on evidence-based practice at all levels of medical care assistance to patients with cancer;	Analysis of the material, feedback from the resident	Modeling situations and maintaining medical records

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<b>LO2</b> Able to formulate a clinical diagnosis, prescribe treatment plan in accordance with the clinical protocols for diagnosis and treatment of the Ministry of Health of the Republic of Kazakhstan, with an assessment of its effectiveness based on evidence-based practice at all levels of medical care assistance to patients with cancer;	A reflective diary	Maintaining medical records
<b>LO3</b> Able to assess risks and use the most effective methods to ensure a high level of safety and quality of medical care for patients with cancer;	Supervision of clinical work	
<b>LO4</b> Able to act within the legal and organizational framework of the healthcare system of the Republic of Kazakhstan in the specialty "Adult Oncology", provide basic assistance in emergency situations, work as part of interprofessional teams to implement policies to improve the health of the nation;	Supervision of clinical work	Maintaining medical records
<b>LO5</b> Able to formulate adequate research questions, critically evaluate professional literature on adult oncology, effectively use international databases in their daily activities, and participate in the work of a research team.	"Magazine Club"	Writing theses, articles Public appearances
<b>LO6</b> Able to learn independently and train other members of the professional team, actively participate in discussions, conferences and other forms of continuing professional development in the field of adult oncology.	Observation	

### The matrix of compliance with RO assessment methods

LO	Assessment methods	
<b>LO1</b> Able to formulate a clinical diagnosis, prescribe treatment plan in accordance with the clinical protocols for diagnosis and treatment of the Ministry of Health of the Republic of Kazakhstan, with an assessment of its effectiveness based on evidence-based practice at all levels of medical care assistance to patients with cancer;	Testing Oral interview	Essay (short and long) The short answer
<b>LO2</b> Able to formulate a clinical diagnosis, prescribe treatment plan in accordance with the clinical protocols for diagnosis and treatment of the Ministry of Health of the Republic of Kazakhstan, with an assessment of its effectiveness based on evidence-based practice at all levels of medical care assistance to patients with cancer;	OSCE (with skill check stations). A mini-clinical exam.	A long-lasting case



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<b>LO3</b> Able to assess risks and use the most effective methods to ensure a high level of safety and quality of medical care for patients with cancer;				Analysis of records in the medical history Analysis of the records of the doctor's activities	Keeping diaries	
<b>LO4</b> Able to act within the legal and organizational framework of the healthcare system of the Republic of Kazakhstan in the specialty "Adult Oncology", provide basic assistance in emergency situations, work as part of interprofessional teams to implement policies to improve the health of the nation;				Evaluation 360 <sup>0</sup>	Patient reviews Feedback from other students Rating 360	
<b>LO5</b> Able to formulate adequate research questions, critically evaluate professional literature on adult oncology, effectively use international databases in their daily activities, and participate in the work of a research team.				Summary/ presentation	Publications	
<b>LO6</b> Able to learn independently and train other members of the professional team, actively participate in discussions, conferences and other forms of continuing professional development in the field of adult oncology.				Portfolio	Clinical records Self-assessment	

### Work plan for the entire period of study

The cycle of	The dissociation code	Name of disciplines/modules/	Number of credits	Shared hours	SRO			1 year of study	2 year of study	Form of control
					CPPH	PQЖ/СРР/RTIC/				
БП/П Д/РД/		/ CYCLE OF PROFILING DISCIPLINES	138	4140						
БП/П Д/РД/	M K/ O K/ U C/	Mandatory component	134	4020						
		R-ACO Ambulatory-clinic oncology	12	360	72	234	54	12		Exa m
		R-ONR Oncoreabilitology	6	180	36	117	27	6		Exa m
		R-FDO Functional diagnostics in oncology	6	180	36	117	27	6		Exa m
		R-CLDO Clinical and laboratory diagnostics in oncology	6	180	36	117	27	6		Exa m
		R-MGO Medical genetics in oncology	6	180	36	117	27	6		Exa m
		R-RDO Radiation diagnostics in	7	210	42	136	32	7		Exa



		oncology								m
	R-RT	Radiation therapy	10	300	60	195	45	10		Exam
	R-CIO	Clinical Immunology in oncology	8	240	48	156	36		8	Exam
	R-PO	Palliative oncology	7	210	42	136	32		7	Exam
	R-PD	Pathomorphological diagnosis	8	240	48	156	36	8		Exam
	R-OH	Oncology in the hospital	49	1470	294	955	221		49	Exam
	R-ICO	Intensive care in oncology	9	270	54	175	41	9		Exam
O	Optional component		4	120	24	78	18		4	
C	R-PO	Pediatric Oncology								
	R-IC	Interventional chemotherapy	4	120	24	78	18		4	Exam
	BCEGO		138	4140	828	2691	621*			
IC	INTERMEDIATE CERTIFICATION									
FE	FINAL EXAMINATION		2	60					2	60
In total			140	4200	828	2691	621	70	70	60