


JSC «SOUTH KAZAKHSTAN MEDICAL ACADEMY»



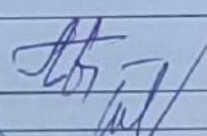
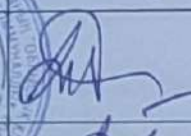
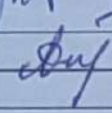
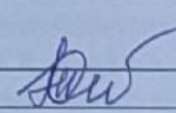
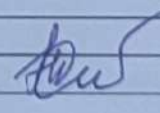
SOUTH KAZAKHSTAN
MEDICAL
ACADEMY


EDUCATIONAL PROGRAM OF RESIDENCY
7R01115
« RADIATION ONCOLOGY »

Shymkent 2022 y.

ОНТҮСТІК-ҚАЗАҚСТАН MEDISINA АКАДЕМИЯСЫ «Оңтүстік Қазақстан медицина академиясы» АҚ	 SKMA - 1979 -	SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казахстанская медицинская академия»
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The educational program of the residency 7R01115 «Radiation Oncology» was compiled in accordance with the Order of the Minister of Health of the Republic of Kazakhstan "On approval of state mandatory standards for levels of education in the field of healthcare" dated July 4, 2022 No. KRDSM-63 and Standard curricula of postgraduate education and proposals from all interested parties

Position	Full name	Signature
Developed by		
Teaching staff of the Department of Surgery-2		
Head of the Department, MD, Acting Professor	Abdurakhmanov B.A.	
Assistant of the Department	Yusupov A.M.	
Acting Associate Professor, Ph.D.,	Zhanteev M.E.	
Head of the Department of Chemotherapy of the City Cancer Center, Ph.D., Associate Professor	Arybzhianov D.T.	
Resident of EP «Radiation Oncology»	Abdurakhmanov F.B.	
Minutes of the department meeting		
Protocol No. <u>110</u> from « <u>03</u> » « <u>08</u> » 2022		
Discussed at the meeting of the Residency COP		
Chairman of the CPC	Kauyzbai Zh.A.	
Protocol No. <u>50</u> from « <u>04</u> » « <u>08</u> » 2022		
Approved by the Clinical Council		
Chairman of the Clinical Council	Kauyzbai Zh.A.	
Protocol No. <u>50</u> of « <u>05</u> » « <u>08</u> » 2022		
Approved by the Academic Council		
Protocol No. <u>12</u> of « <u>08</u> » « <u>08</u> » 2022		

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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
 Ensuring the integration of practice and theory; in - depth study of theoretical issues of radiation oncology; improving practical skills according to modern principles of early, differential and syndromic diagnosis, interpretation of the results of the examination from the perspective of evidence-based medicine, treatment and prevention of oncological diseases in the field of radiation oncology; independent implementation of qualified emergency medical care in the radiation oncology clinic.
 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 professional standard on the basis of which the educational program was developed Regulatory documents for the development of an educational program -The Law of the Republic of Kazakhstan "On Education" for medical and pharmaceutical specialties, by Order No. 2 and the state mandatory standard of technical and vocational education in the field of healthcare, approved by Order No. KR DSM-63. - Professional standard "Radiation Oncology" Standard for the organization of oncological radiation care in the Republic of Kazakhstan Order of the Ministry of Health of the Republic of Kazakhstan No.RK DSM 92 of 08/26/2021 -"Regulations on the procedure and procedures for the development of educational programs" JSC "YUKMA" dated 05/29/2019 - Internal regulatory documents of JSC "YUKMA".
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	7R01111264
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	R015 Radiation oncology
5	Code, name of the educational program	7R01115 Radiation oncology
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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		CC7 is capable of researching and evaluating the results of his professional activity, applying the principles of diagnosis of diseases based on scientific data, applying modern research methods in healthcare, taking into account bioethics and implementations into clinical practice
12	Learning outcomes:	<p>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;</p> <p>LO2 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>LO3 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>LO4 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>LO5 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>LO6 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-radiation
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>

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	The validity period of the accreditation	№ AB4559 10.06.2022-09.06.2027	
20	Information about the disciplines	Application 1.2	



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
KK1	+	+	+			
KK2		+		+		
KK3			+		+	
KK4				+		
KK5					+	
KK6						+

Application 1.2

Matrix of achievability of competencies/learning outcomes

Nr	Name of the discipline	A brief description of the discipline	Cycle	Component	Number of credits.	Formed RO
1	Oncology in the hospital	<p><i>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.</i></p> <p>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.</p>	PD	UC	12	LO1 LO2 LO3


2	Medical physics	<p>Medical physics in radiation oncology. Clinical dosimetry. Types of ionizing radiation. The interaction of radiation with matter. Fundamentals of clinical dosimetry. Radiobiological foundations of radiotherapy. Remote radiation therapy equipment. Brachytherapy equipment. Dosimetric planning of radiation therapy. Quality control in radiation therapy. Radiation safety in radiation therapy</p>	PD	UC	12	LO5 LO6
3	Radiation diagnostics of oncological diseases of internal organs and oncology	<p>Radiation diagnostics of 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 radiation oncology, diagnostic signs and criteria of oncological radiation diseases. Screening diagnosis of breast cancer. 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. The therapeutic and diagnostic significance of the introduction of innovative methods of interventional radiology in oncological practice Modern instrumental innovative methods of radiation therapy, criteria for the effectiveness of treatment of oncological diseases.</p>	PD	UC	12	LO1 LO2 LO3 LO6



4	Intensive care in radio therapy and 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. Clinic, diagnosis, prevention and basic principles of urgent therapy in case of emergency conditions in patients with malignant neoplasms.	PD	UC	15	LO3 LO4 LO6
5	Functional diagnostics in radiotherapy and oncology	Methods of diagnosis of oncological diseases based on modern, specialized, instrumental and functional diagnostic studies. Principles of functional diagnosis, correction and treatment of various disorders of the functional status of cancer patients. 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.	PD	UC	7	LO1 LO5 LO6
6	Pathomorphological diagnostics	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, immunohistochemical studies.	PD	UC	6	LO3 LO5 LO6



7	Radiation therapy in the hospital	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	UC	70	LO2 LO3 LO6
					134	
1	Nutriciology in radiation therapy/ Occupational health and safety in the Radiological Department	Artificial nutrition, nutritional support for cancer patients. Nutraceuticals (amino acids, lipids, triglycerides) The use of artificial pharma.nutrition in cancer patients with manorexia-cachexia syndrome. Correction of protein-energy deficiency.	PD	OC	2	LO1 LO2 LO5
2	Clinical pharmacology in radiation therapy/ Organization of work of the radiological department	Pharmacological drugs used in radiation therapy. Types, indications, effectiveness. Treatment of patients with ionizing radiation sources. Requirements for the organization of work.	PD	OC	2	LO4 LO5 LO6
	Total:				138	
	Final certification				2	
	Total:				140	


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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
LO2 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
LO3 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	
LO4 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
LO5 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
LO6 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	
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;	Testing Oral interview	Essay (short and long) The short answer

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LO2 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	
LO3 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	
LO4 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 ⁰	Patient reviews Feedback from other students Rating 360	
LO5 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	
LO6 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

/ Cycle disciplines/	Discipline code/	Name of the discipline/ modules/	Amount of credits	General hours/	/ classroom	PQЖ/ CPP/ RIC		1 year of study	2 year of study	The form control/	FE
						CPPH	PQЖ/ CPP/ RIC				
БП/ІІ/ PD/		CYCLE OF PROFILING DISCIPLINES	138	4140							
БП/ МК/ ІІ/ ОК/ PD/ UC/		/ Mandatory component	134	4020							
		R-SO R-OS R-OH Oncology in the hospital	12	360	72	252	36	12		Exam	



R-MF R-MF R-MP	Medical physics	12	360	72	252	36	12		Exam
R- STOSD R- LDLTO R- RDRTO	Radiation diagnostics in radiation therapy and oncology	12	360	72	252	36		12	/ Exam
R- STOKT R- ITLTO R- ICRTO	Intensive care in radio therapy and oncology	15	450	90	315	45		15	/ Exam
R- STOFD R- FDLTO R- FDRTO	Functional diagnostics in radio therapy and oncology	7	210	42	147	21	7		/ Exam
R-PD R-PD R-PD	Pathomorpholog ical diagnostics	6	180	36	126	18	6		/ Exam
R-SST R-LTS R-RTH	Radiation therapy in the hospital	70	2100	420	1470	210	31	39	/ Exam
TK/ KV/ OC/	Optional component	4	120	24	84	12	2	2	



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	R-STN R-NLT R-NRT	Nutriciology in radiation therapy/									
	R-RBEK R-OTR R- OHSRD	Occupational health and safety in the Radiological Department	2	60	12	42	6	2		/	Exam
	R-STKF R-KFLD R-CPRT R- RBZhU R-ORRC R- OWRD	Clinical pharmacology in radiation therapy/ Organization of work of the radiological department	2	60	12	42	6		2	/	Exam
	ВСЕГО		138	4140	828	289	414*				
АЛПА IC	INTERMEDIATE CERTIFICATION										
КА/НА FE	FINAL EXAMINATION		2	60					2		60
	ИТОГО		140	4200	828	289	414	70	70		60