

Catalog of elective disciplines

1. **Department:** «Surgery, Oncology and Traumatology»
2. **Level of training:** Residency
3. **Educational program:** «Radiation oncology».
4. **Course:** 1
5. **Name of elective discipline:** «Nutritionology in radiation therapy».
6. **Number of credits:** 2 credits / 60 hours.

1. Objective: To train a radiation oncologist specialist who meets the requirements of the professional educational standard, who possesses the required amount of knowledge, skills and practical skills for self-conducting diagnostic, therapeutic, rehabilitation and preventive measures in clinical practice.

2. The content of the discipline: The study of the discipline nutritionology in radiation therapy is compiled taking into account the achievements of modern oncology and on the basis of many years of teaching experience. The discipline reveals complete information on modern methods of artificial nutrition, nutritional support for cancer patients. Nutraceuticals (amino acids, lipids, triglycerides). The use of artificial pharmacological nutrition in cancer patients with anorexia-cachexia syndrome. Correction of protein-energy deficiency.

1. Tasks:

- Improvement of knowledge about the use of artificial nutrition methods in modern oncology, nutritional support for cancer patients, the use of artificial pharmacological nutrition in cancer patients with anorexia-cachexia syndrome, as well as for the correction of protein and energy deficiency.
- Improving the skills of practical use of nutraceuticals in cancer patients during the correction of protein-energy deficiency.
- * Training in the ability to assess risk factors, indications and contraindications to the use of artificial nutrition, nutraceuticals during radiation therapy for cancer patients.
- Improving skills in the management of cancer patients with anorexia-cachexia syndrome.

10. Justification of the choice of discipline: In the conditions of dynamic development and development of new technologies in the diagnosis and treatment of patients with oncological diseases, as well as at the stages of radiation therapy, it is necessary to qualitatively improve the knowledge and professional skills of a radiation oncologist in the field of artificial nutrition, nutritional support for cancer patients, the use of artificial pharmacological nutrition in cancer patients with anorexia syndrome-cachexia, as well as for the correction of protein-energy deficiency. a surgeon in this field. Taking into account the above, the process of studying the discipline is aimed at forming elements of specific competencies that contribute to a significant improvement in both the professional activity of a specialist and to improving the quality of medical care for patients with oncopathology.

11. Learning outcomes (competencies).

- Learning Outcome 1 Patient supervision: able to formulate a clinical diagnosis, prescribe a treatment plan according to the clinical protocols of diagnosis and treatment of the Ministry of Health of the Republic of Kazakhstan and evaluate its effectiveness based on evidence-based practice at all levels of oncological radiation care;

- Learning Outcome 2 Communication and collaboration: able to effectively interact with cancer radiation patients, their relatives, healthcare professionals in order to achieve the best results for the patient;

- Learning Outcome 3 Safety and Quality: able to assess risks and use the most effective methods to ensure a high level of safety and quality of oncological radiation care;

- Learning Outcome 4 Public Health: He is able to act within the legal and organizational framework of the healthcare system of the Republic of Kazakhstan in providing oncological radiation care, provide basic assistance in emergency situations, work as part of interprofessional teams to implement the policy of strengthening the health of the nation

12. Prerequisites: internship in the discipline "Oncology".

13. Post-requirements: Doctoral studies.

14. Literature:

Main:

1. Davydov, M. I. Oncology: textbook / Kazakh language. AUD. A. K. Koishybayev. - M.: GEOTAR-Media, 2018
2. Abisatov, H. A. General aspects of Clinical Oncology. 1 Ch.: учеб. "I don't know," he said. - Almaty: Evero, 2016.
3. Abisatov, H. A. General aspects of Clinical Oncology. 2 Ch.: учеб. "I don't know," he said. - Almaty: Evero, 2016
4. Yesenkulov, A. E. practical oncology: textbook / A. Yesenkulov . - Almaty: Evero, 2011.
5. radiation therapy (radiotherapy) [text]: textbook / Ed.Prof.G. E. Trufanov; Kaz.language.AUD.and responsible Ed.Prof."No," He Said. - 3-head.Edd.full. - M. : GEOTAR-media, 2020. - 224 p.p.
6. Sadykov S. S. Clinical Oncology: textbook in Kazakh Radiation therapy: S. S. Sadykov, zh. zh. Zholdybay, "I Don't Know," She Said. - Almaty: Evero, 2020 – - 296 P.

Additional:

1. Oncology. National leadership. Brief eruption: a guide / post-editor S. I. Chissova. - M. : Getar-Media, 2016.
2. Abisatov, H. A. Lecture on oncogynecological and oncurological. 1 t Lecture on oncogynecology:lecture / H. A. Abisatov, A. A. Baynazarova, A.M. Baiduvaliev. - Almaty: Evero, 2016.
3. Abisatov, H. A. Lecture on oncogynecological and oncurological. 2 t Lecture on oncurology:lecture / H. A. Abisatov, A. A. Baynazarova, A.M. Baiduvaliev. - Almaty: Evero, 2016

1. Department: «Surgery, Oncology and Traumatology»

2. Level of training: Residency

3. Educational program: «Radiation oncology».

4. Course: 1

5. Name of elective discipline: «Occupational safety in the radiological department».

6. Number of credits: 2 credits / 60 hours.

1. Purpose: To train a radiation oncologist specialist who meets the requirements of a professional educational standard, who possesses the required amount of knowledge, skills and practical skills for self-conducting diagnostic, therapeutic, rehabilitation and preventive measures in clinical practice.

2. The content of the discipline: The study of the discipline occupational safety in the radiological department is compiled taking into account the achievements of modern oncology and on the basis of many years of teaching experience. The discipline discloses complete information on ensuring the work regime and safety in the radiological department. Compliance with radiation safety standards and rules for working with ionizing radiation sources.

3. Tasks:

- in-depth development of knowledge on occupational safety issues in the radiological department;
- improvement of knowledge on modern principles of occupational safety and its organization in the radiological department;
- independent implementation of qualified medical care in the radiological department in compliance with the principles of occupational safety.

10. Justification of the choice of discipline: The problem of occupational safety in the radiological department is relevant and has difficulties considering the procedure of radiation therapy itself, the contingent of patients and the existing certain harmful factor for patients and the person of the clinic. Skilful organization of work is allowed to create good labor protection in order to minimize negative factors for patients and medical staff.

11. Learning outcomes (competencies)

- **Learning outcome 1 Patient supervision:** able to formulate a clinical diagnosis, prescribe a treatment plan according to the clinical protocols of diagnosis and treatment of the Ministry of Health of the Republic of Kazakhstan and evaluate its effectiveness based on evidence-based

practice at all levels of oncological radiation care;

- **Learning Outcome 2 Communication and collaboration:** able to effectively interact with cancer radiation patients, their relatives, healthcare professionals in order to achieve the best results for the patient;

- **Learning Outcome 3 Safety and Quality:** able to assess risks and use the most effective methods to ensure a high level of safety and quality of oncological radiation care;

- **Learning Outcome 4 Public Health:** He is able to act within the legal and organizational framework of the healthcare system of the Republic of Kazakhstan in providing oncological radiation care, provide basic assistance in emergency situations, work as part of interprofessional teams to implement the policy of strengthening the health of the nation

12. Prerequisites: internship in the discipline "Oncology".

13. Post-requirements: Doctoral studies.

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1. Department: «Surgery, Oncology and Traumatology»

2. Level of training: Residency

3. Educational program: «Radiation oncology».

4. Course: 1

5. Name of elective discipline: «Clinical pharmacology in radiation therapy».

6. Number of credits: 2 credits / 60 hours.

5. Purpose: To train a radiation oncologist specialist who meets the requirements of a professional educational standard, who possesses the required amount of knowledge, skills and practical skills for self-conducting diagnostic, therapeutic, rehabilitation and preventive measures in clinical practice.

6. Content of the discipline: The content of the discipline presents clinical pharmacology in radiation therapy. Pharmacological preparations used in the course of radiation therapy, their use, indications, contraindications, side effects, as well as possible complications, and ways of their correction are given.

7. Tasks:

- In-depth study of theoretical and methodological foundations clinical pharmacology in radiation therapy;

- Improvement of knowledge and skills in radiation therapy with the possible application of clinical pharmacology methods at the stages of possible corrections;
- To conduct an in-depth study of the application of modern fundamentals of clinical pharmacology in patients with radiation therapy;

8. Justification of the choice of discipline: A direction in medicine formed on the basis of interdisciplinary integration of clinical pharmacology and radiation therapy, which allows to carry out radiation therapy using methods of clinical pharmacology. Conducting pharmacological support during the period of radiation therapy allows to increase the effectiveness of radiation therapy, prevent and correct negative consequences and possible complications.

9. Learning outcomes (competencies)

- Training result 1 Patient supervision: able to formulate a clinical diagnosis, prescribe a treatment plan according to the clinical protocols of diagnosis and treatment of the Ministry of Health of the Republic of Kazakhstan and evaluate its effectiveness based on evidence-based practice at all levels of oncological radiation care;
- Learning Outcome 2 Communication and collaboration: able to effectively interact with cancer radiation patients, their relatives, healthcare professionals in order to achieve the best results for the patient;
- Learning Outcome 3 Safety and Quality: able to assess risks and use the most effective methods to ensure a high level of safety and quality of oncological radiation care;
- Learning Outcome 4 Public Health: He is able to act within the legal and organizational framework of the healthcare system of the Republic of Kazakhstan in providing oncological radiation care, provide basic assistance in emergency situations, work as part of interprofessional teams to implement the policy of strengthening the health of the nation

10. Prerequisites: internship in the discipline "Oncology".

11. Post-requirements: Doctoral studies.

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1. **Level of training:** Residency
2. **Educational program:** «Radiation oncology».
3. **Course:**2
4. **Name of elective discipline:** « Organization of work of the radiological department».
5. **Number of credits:** 2 credits / 60 hours.
6. **Objective:** To form students' knowledge and practical skills on the optimal organization of work in the radiological department and the use of modern methods of radiation therapy in clinical medicine for oncological diseases.
7. **Content of the discipline:** The discipline presents up-to-date information on the organization of the work of the radiological department. The principles of radiation therapy of patients with malignant tumors at the stages of preoperative and postoperative irradiation are given. The choice of the most optimal method of irradiation and the organization of the work of the radiological department at the same time.
8. **Tasks:**
 - In-depth study of the theoretical and methodological foundations of the organization of the work of the radiological department at the stages of radiation therapy;
 - Improvement of knowledge and skills on the organization of the work of the radiological department in the treatment of oncological diseases;
 - Conduct an in-depth study of modern radiation treatments in oncology;
9. **Justification of the choice of discipline:** A section in medicine formed on the basis of interdisciplinary integration of radiation therapy, which allows to carry out radiation interventions for therapeutic purposes in various oncological diseases.
10. **Learning outcomes (competencies)**
 - Learning outcome 1 Patient supervision: able to formulate a clinical diagnosis, prescribe a treatment plan according to the clinical protocols of diagnosis and treatment of the Ministry of Health of the Republic of Kazakhstan and evaluate its effectiveness based on evidence-based practice at all levels of oncological radiation care;
 - Learning Outcome 2 Communication and collaboration: able to effectively interact with cancer radiation patients, their relatives, healthcare professionals in order to achieve the best results for the patient;
 - Learning Outcome 3 Safety and Quality: able to assess risks and use the most effective methods to ensure a high level of safety and quality of oncological radiation care;
 - Learning Outcome 4 Public Health: He is able to act within the legal and organizational framework of the healthcare system of the Republic of Kazakhstan in providing oncological radiation care, provide basic assistance in emergency situations, work as part of interprofessional teams to implement the policy of strengthening the health of the nation
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12. **Post-requirements:** Doctoral studies.

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4. oncurology:lecture / H. A. Abisatov, A. A. Baynazarova, A.M. Baiduvaliev. - Almaty: Evero, 2016