**Ministry of healthcare of the Republic of Kazakhstan**

**The Kazakh Scientific Research Institute of Oncology and Radiology**

**SILLABUS**

**for students of the residency on the specialty 6R112000 "Radiation therapy"**

**Discipline**

**«Functional diagnosiсs in Radiotherapy and Oncology»**

The amount of teaching hours- 90 hours/ 2credits

including:

Practical training- 30 hours

Independent work - 60 hours

Form of control: examination

**Almaty, 2017**

The syllabus is compiled according to the Model curriculum, the Residency Educational Program for the specialty "Radiation Therapy", the Instruction Letter No. 8 for the development of educational and methodological documentation in the organizations of the Republic of Kazakhstan, which are preparing for the residency approved by the Republican Center for Innovative Technologies of Medical Education and Science of the Ministry of Health of the Republic of Kazakhstan on April 27 2010 (Protocol No. 4).

Approved at the meetingRadiological Board

(Protocol №7 from "August" 25, 2017)

**Responsible for discipline: DMSTelguziyevaZh.A.**

**PhD Savkhatova A.D.**

**Ishkinin E.I.**

**1.** **General information**

1.1 Kazakh Scientific Research Institute of Oncology and Radiology (address: Almaty, Abai Ave., 91)

1.2 Clinical base (clinical and diagnostic units KazNIIOiR): department Day hospital for radiotherapy, Department of Clinical dosimetry and physical and technical support of radiotherapy, Center for Head and Neck Tumors, Neurooncology Center, Mammology Center, Thoracic Oncology Center, Abdominal Oncology Center, Oncogynecology Center, Oncourology Center, Children's Oncology Center, Department of Hemoblastoses, Center for Tumors of Bones and Soft Tissues, Department of Radiation Diagnostics(functional diagnostics room).

1.3 Specialty: 6R112000 "Radiation therapy"

1.4 Discipline: “Functional diagnosis in Radiotherapy and Oncology»

1.5 The amount of teaching hours: 90 hours/2 credits

1.6 Information about the teachers

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **№** | **First and last name** | **Post** | **Academic degree** | **Priority**  **interests** |
| 1 | Telguziyeva  ZhannatAhmetbekovna | Chairman of the  Radiological Board | Doctor  of Medical Sciences | Radiation therapy |
| 2 | Esbayeva  Farida Shymyrtayevna | Doctor of  functional diagnostics | Assistant | Functional diagnostics |
| 3 | Savkhatova  AkmaralDosbolovna | Head of the department Day hospital of radiotherapy | PhD | Radiation therapy |
| 4 | Ishkinin  YevgenyIvanovich | Radiation Therapist  Oncourology Center | Assistant | Radiation therapy |

1.7 Contact information:

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Savkhatova A.D.: 8 707 985 74 39 (mob), e-mail: [akma\_s10@mail.ru](mailto:akma_s10@mail.ru)

Ishkinin E.I.: 8 777 233 29 63 (mob), e-mail: [ishkininy@gmail.com](mailto:ishkininy@gmail.com)

EsbayevaF.Sh.: 8 702 401 36 69 (mob)

1.8 Policies and Procedures. The policy of discipline consists in the consistent and purposeful implementation of the educational process. Teachers' requirements for residents are based on general principles of education in higher educational institutions of the Republic of Kazakhstan:

* compulsory clothing: standard medical gown or surgical form; indoor shoes; medical mask (carry)
* strict observance of labor discipline in basic institutions
* active participation in the educational process (preparation of theoretical material, solving situational problems and tests, mastering practical skills); attending classes
* compulsory maintenance of general and specialized medical documentation
* regular self-improvement (working in the library and with the Internet)
* adherence to the principles of medical ethics and deontology in relation to patients and colleagues
* timely informing mentors and the head of the department about temporary incapacity for work or other reasons for absence from the workplace
* penalties: if you miss 3 lessons for disrespectful reasons, work off in the form of night duty and prepare presentations on the topics of missed classes with subsequent protection. Passes of classes for valid reasons are worked out by self-preparation with protection of presentation on missed topics.

**2 Program**

**2.1 Introduction**

The training of highly qualified medical personnel with modern knowledge, skills and practical skills sufficient to provide qualified medical and diagnostic care is an important state task, the solution of which is possible only in the conditions of continuous postgraduate education. The training of qualified physicians - ray therapists is a complex and urgent problem. This program includes the amount of modern knowledge, skills and habits of a resident in a related specialty on the basis of the principles of evidence-based medicine with the preparation of qualified radiological and oncological medical personnel.

In this discipline, the organization of the functional diagnostic room is presented. The main questions on the standards of examination of the functional status of oncological patients with methods for evaluating the results obtained in the course of primary diagnosis and in the specialized treatment of malignant tumors of various localities are consecrated.

**2.2 The purpose of the discipline** is to acquire and improve theoretical and practical knowledge on functional diagnostics in the practice of radiation therapist and oncologist.

**2.3 Tasks of the discipline:**

1) To form general knowledge on the standards of examination of the functional status of cancer patients.

2) To develop knowledge on the interpretation of the results of various methods of functional diagnosis in patients with malignant neoplasms.

3) To form knowledge on the principles of correction and treatment of various violations of the functional status of cancer patients.

**2.4** **Independent work**

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| --- | --- | --- |
| **№** | **Table of contents** | **Number**  **of hours** |
| 1 | Participation in polyclinic reception of patients with revealing of various functional disorders with registration of directions for additional special methods of examination. | 6 |
| 2 | Participation in clinical analysis of cancer patients | 6 |
| 3 | Inpatient reception and supervision of cancer patients | 6 |
| 4 | Participation in the management of medical documentation of cancer patients. | 6 |
| 5 | Studying of separate themes with the help of slides and other teaching aids. | 6 |
| 6 | Design of abstracts: "Methods for assessing the neurological status of neurooncological patients", "Evaluation of the functional state of the cardiovascular and pulmonary systems in cancer patients", "Methods for assessing the functional state of the gastrointestinal tract in cancer patients", "Methods for assessing the functional state of the urinary system oncological patients "," Methods for assessing the functional state of the endocrine glands  in cancer patients ". | 6 |
| 7 | Solution of clinical situation problems  on functional diagnostics | 6 |
| 8 | Participation in the Conference of specialist doctors, clinics and MDY other clinical units | 6 |
| 9 | Work in library with Internet | 6 |
| 10 | Formation of listener residency portfolio | 6 |
| **Total hours** | | **60** |

**2.5** **Recommended literature**

1. Zaluckij I. Oncology: a tutorial-Minsk: Lebedevka. NIS, 2007.-703 p.

2. BelogurovaM. Pediatric Oncology (for doctors).-, Lit., 2002.-351p.

3. DavydovM., Ghanaians Sh. Oncology.-m.: medicine, 2010 -920 p.

4. ChissovV., Darjalova S. Oncology.-m.; Medicine, 2007

5. NikiforovB.,Macko D.Brain tumor. Series "QuickStart"-Spb: Piter, 2003.-. 279-286.

6. Temples Y. Basis of diagnosis of syndromes of internal diseases-Spb., 2009.

7. SkoromecA., SkoromecA., Skoromec T. Neurological status and its interpretation (tutorial for the physicians). ed. by Prof.. DiakovaÌ.ì.-m.: Medpress-inform, 2013-256 p.

8. Anokhin M.Spirography in children.-m.: medicine, 2003.

9. Suvorov A. Clinical electrocardiography (with Atlas electrocardiograms).-m.: Medpress-inform, 2015.-264 p.

10. Yevsyukov E. Research methods of respiratory function in the pathology of the lungs-2014-32 p.

11. Axelrod A., Chomakhidze A., SyrkinA..Holter ECG: 2010-192 P.

12. Bova A. Functional diagnostics in practice therapist, 2007.-240 P.

Additional literature:

13. TelguziyevaZh., ZholdybayZh.,Shibanova A. etc. Cervical cancer: epidemiology, pathogenesis, diagnosis, treatment (review of literature)// «Hygiene, epidemiology and Immunology» -Almaty 2011,№2 (48)-P.12-15.

14.TelguziyevaZh., Goncharova T. Study of pharmacokinetics of methotrexate in tumors and in plasma of experimental animals // «Hygiene, epidemiology and immunobiology».-Almaty, 2011. -№4 (50)-Р.161-163.

15. TelguziyevaZh. Philippenko V., ZholdybayZh., Kim S. Application of techniques of complex medical visualization in an estimation chemoradiation therapy of the cancer are //ESTRO Anniversary.-London (UK), 8-12 May 2011-p. 309.

16. TelguziyevaZh. Metronomic chemotherapy with gemcitabine at radical irradiation of the cancer are//The 17th int. Meeting of the ESGO-Milan (Italy), September 11-14, 2011-p. 58.

17. TelguziyevaZh., Kim S., Bainazarova A. The survival rate of patients with cancer are at use of a combination of chemical radiomodificators and radical irradiation//The 18th International meeting of the ESGO-October 19-22, 2013. -Liverpool, UK. -P. 269.

18. TelguziyevaZh., Kim S., Bainazarova A. Perspectives of metronomic chemotherapy in the treatment of cancer are radiological//The 18th International meeting of the ESGO-October 19-22, 2013.-Liverpool, UK-P.794.

19. Ishkinin E., Ongarbaev B., TelguziyevaZh., Kim S. Availability of high-tech methods for the treatment of prostate cancer population in Kazakhstan//Oncology and radiology of Kazakhstan-Almaty, 2016.-№1 (39)-Р.50-54.

20. IshkininE., Ongarbaev B., Kim S., TelguziyevaZh.etc. Experience brachytherapy for prostate cancer //Oncology and Radiology Journal (special issue).-Almaty, 2017.-Р.108

21. IshkininE., Ongarbaev B., Kim S., TelguziyevaZh. etc. Experience brachytherapy for prostate cancer //Oncology and Radiology Journal (special issue).-Almaty, 2017.- P.161

22. Telguziyeva Zh., TrushchenkoO., Kaibarov M. Application of intensevly-modulated radiation therapy in the treatment of locally-common forms of malignant head and neck tumors.// Oncology and Radiology Journal (special issue). -Almaty, 2017. -P. 164

23. TelguziyevaZh.,Filippenko V. Patent №22356 invention «Method of treatment for cervical cancer» (15.03.2010)

24.Telguziyeva Zh.,Filippenko V. Patent №22490 invention «Method of treatment for cervical cancer» (17.05.2010)

25.Telguziyeva Zh.,Filippenko V. Patent №23075 invention «Method of integrated Ultrasound techniques to evaluate the efficiency of combined radiation therapy for cervical cancer» (15.11.2010)

26.TelguziyevaZh., BaimahashevaA., Filippenko V. etc Patent №23100 on invention «Method of treating patients with cervical cancer» (15.11.2010)

27.TelguziyevaZh.,Filippenko V., ZholdybayZh. etc. Patent №23404 from 15.12.2010 on the invention of «The way to improve the effectiveness of radiation therapy for cervical cancer»

28.Periodic protocols for diagnosis and treatment of malignant neoplasms (2012, 2015).

29.«The clinical guide to oncology» //Almaty, 2016.

30.Act implementing the master-class «High-tech radiotherapy-radiosurgery» in KazNIIOiR (31.03-04.04.2016)

31.Act implementing the master-class «High-tech radiation therapy radiation oncology (joint master class for radiologists and medical physicists)»in KazNIIOiR (28.06-02.07.2016)

32.Act implementing the master-class «High-tech radiation therapy radiation oncology» in KazNIIOiR (18.10-22.10.2016)

33.IshkininE., Kim V., Ibraimova M. etc. Radiation treatment of patients with kidney cancer with metastatic bone lesion // V Congress of oncologists and radiologists Kazakhstan-Almaty 2014.-№180-Р.106-107

34.IshkininE., Kim V., Antropova T. etc. Evolutionary development of radiotherapy for prostate cancer in the Republic of Kazakhstan // V Congress of oncologists and radiologists Kazakhstan-Almaty 2014.-No. 181-c. 107

35.Kim V., IshkininE., Almabek A. etc. Pre-radialtopometry training in 3d conformal and intensely-modulated radiation therapy, experiences in Kazakhstan // V Congress of oncologists and radiologists in Kazakhstan. -Almaty, 2014-No. 185-P. 109-110

36.Malignant tumors of testicular, prostate cancer, renal cell carcinoma, bladder cancer// Periodic protocols of diagnostics and treatment of malignancies.-Almaty, 2012.-325-377

37.Guide for the target groups of the male population screening for early detection of prostate cancer and ensure its quality// NurgaliyevN., Zhylkajdarova A., Ishkinin E., edited by m.d. Kyrgyz Republic Shmone, m.d., Prof. M.K. Alchinbaev-revision and additions. -Almaty, 2014. - 71 p. ISBN 978-601-80100-8-8

38.Early diagnosis of prostate cancer at the level of primary health care. Guidelines//ZhylkajdarovaA.,NurgaliyevN., Ishkinin E., edited by m.d. Kyrgyz Republic Author, revision and additions. -Almaty, 2014. -26 p. ISBN 978-601-80100-7-1

39.Ishkinin Y., Kim V., KossymbayevaY. Fractionation modes of radiation therapy for kidney cancer patients with bone metastasis//Irradiation and Oncology Journal of the ESTRO # 33, volIII supplement 1 april 2014, ISSN: 0167-8140 p 533 # EP-1372

The syllabus was developed in accordance with the working curriculum, discussed at the meeting of the Scientific Council of KazNIIOiR(Protocol №7from «August» 25, 2017).

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