


ОҢТҮСТІК ҚАЗАҚСТАН MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ	 SKMA -1979-	SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казакстанская медицинская академия»
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Catalog of elective disciplines for the 2023-2024 academic year

1. Department of Therapy and Cardiology

2. Level of training: residency

3. Specialty: 7R01105 "Hematology for adults, children"

4. Course: 1

5. Name of the elective discipline: Emergency hematology at the prehospital and hospital stages.

6. Purpose of the RE:

– Training of highly qualified, competitive hematologists who are able to meet the needs of society in providing medical care to hematological patients, apply and develop advanced innovative technologies in medicine, science and practice.

7. Tasks of the RE:

- Strengthen teamwork and leadership skills;
 - To consolidate the skills of basic medical diagnostic and preventive interventions;
 - To teach to make professional decisions based on the principles of evidence-based medicine;
 - To teach to comply with the requirements of medical ethics and deontology when carrying out expert, preventive and therapeutic and diagnostic measures;
 - To train doctors in hematology for adults and children, who have clinical thinking, who are well versed in complex pathology, who have in-depth knowledge of related disciplines.

8. Rationale for the choice of discipline

Residency in the educational program "Hematology for adults, children" is a form of postgraduate professional training that provides for in-depth study and detailed mastery of professional activities within this specialty.

9. Learning outcomes (competencies)

RE 1 Patient management: able to formulate a clinical diagnosis, prescribe a treatment plan and evaluate its effectiveness based on evidence-based practice at all levels of care for patients with hematological diseases.

RE 2 Communication and Collaboration: able to effectively interact with the patient with hematological pathology, his environment, healthcare professionals in order to achieve the best results for the patient


RE 3 Safety and quality: able to assess risks and use the most effective methods to ensure a high level of safety and quality of medical hematological care.

RE 4 Public health: is able to act within the legal and organizational framework of the healthcare system of the Republic of Kazakhstan in the specialty "Hematology for adults, children", provide basic assistance in emergency situations, work as part of interprofessional teams to implement the policy of strengthening the health of the nation

RE 5 Research: able to formulate adequate research questions, critically evaluate professional literature, effectively use international databases in their daily activities, participate in the work of a research team

RE 6 Training and Development: 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 hematology.

Knowledge (cognitive sphere)	Skills (psychomotor sphere)	Personal and professional competencies (relationships)
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	<ol style="list-style-type: none"> 1. Skills for conducting an initial examination of a patient with suspected hematological pathology. 2. Skills for the reasonable appointment of diagnostic studies to a patient with suspected hematological pathology. 3. The ability to correctly interpret the results of diagnostic studies of the patient in case of suspected hematological pathology. 4. Skills for the correct formulation of the diagnosis according to ICD10 when detecting hematological pathology. 5. Ability to timely identify complications of hematological diseases. 	<ol style="list-style-type: none"> 1. To identify the main symptoms and syndromes in adult and pediatric hematological practice during the initial examination of a patient with suspected hematological pathology. 2. Skills for interviewing a patient, taking anamnesis and differential diagnosis of hematological patients. 3. Skills for the reasonable appointment of diagnostic tests for a patient with suspected hematological pathology. 4. The ability to correctly interpret the results of diagnostic studies of a patient with suspected hematological pathology (general clinical, immunological, morphological studies of biopsy specimens, etc.).
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10. Prerequisite: Internal Medicine (BSc), Internship

11. Post-requisitioner: Hematology, Transfusiology

12. Literature:

main:

1. Vorobyov A.I. Guide to hematology. -M.: Newdiamed, 2002

2. Yavorsky L.I., Ryauzova L.Yu., Solovey D.Ya. myelodysplastic syndrome. Primary myelopoietic dysplasia.-Riga: Zinante, 1992

3. Kovaleva L.G. Acute leukemia-M.: Medicine, 1990 16. Turkina A.G. Guide to Hematology / Ed. I. Vorobiev.- M.: Newdiamed, 2002.

4. Clinical oncohematology, ed. M.A. Volkovoy.-2nd ed.-M.: Medicine, 2007 5. V. Hoffbrand, J. Pettit. Hematology. Atlas-reference book - editorial translation of E.R. Timofeev.-M.: Practice, 2007

6. W. Hoffbrand, J. Pettit. Hematology. Atlas-reference book - editorial translation of E.R. Timofeev.-M.: Practice, 2007

7. Fr.J.Shiffman. Pathophysiology of blood - ed. Yu.V.Natochina-M.- St. Petersburg: Publishing house BINOM-Nevsky dialect, 2000

1. Department: " Surgery-2"

2. Level of training: Residency


3. Educational program: «Traumatology-orthopedics, for adults and children»

4. Course: 3

5. Name of elective discipline: “Innovative technologies in traumatology and orthopedics”.

6. Number of credits: 4 credits / 120 hours.

7. Purpose: the acquisition of special knowledge necessary for the development of skills for the treatment of traumatological and orthopedic patients, the formation of diagnostic and traumatologic and orthopedic competencies.

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8. Tasks:

- The study of modern innovative methods of treating patients with trauma and orthopedic diseases;

9. Content of disciplines: The discipline studies modern methods of diagnosis and treatment, prevention of diseases of the organs of the musculoskeletal system. Early detection, timely implementation of adequate treatment of complications.

10. Justification of the choice of discipline: In the context of the dynamic development and development of new technologies for the diagnosis and treatment of injuries and orthopedic diseases, it is necessary to qualitatively improve the knowledge and professional skills of an orthopedic trauma surgeon in this area. Given 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 the quality of medical care for the population in the treatment of injuries and orthopedic diseases.

11. Learning outcomes (competencies).

№	Knowledge (cognitive sphere)	Skills (psychomotor sphere)	Personal and professional competencies (relationships)
	<ul style="list-style-type: none"> • Knows modern methods of diagnostics and differential diagnosis of injuries and orthopedic diseases. • Knows innovative conservative methods and the latest methods for surgical treatment of injuries and orthopedic diseases. 	<ul style="list-style-type: none"> • Able to assess the condition of the patient according to WHO recommendations. • Able to scientifically analyze the socio-biological, medical and social conditions and factors of the occurrence of injuries and orthopedic diseases. • Fluent in modern methods and techniques of surgical treatment of injuries and orthopedic diseases. • Able to establish contact with the patient / relatives for an effective treatment process, to involve the patient in the diagnosis and treatment process. 	<ul style="list-style-type: none"> • Based on the revealed data: medical history, examination, laboratory and instrumental methods of examination, the patient's condition, gives recommendations according to WHO, according to the clinical protocols of the Ministry of Health of the Republic of Kazakhstan. • Based on the principles of evidence-based medicine, builds a strategy and tactics for the management of patients with trauma and orthopedic diseases.


12. Prerequisites: internship in "Surgery".

13. Post requisites: doctoral studies.

14. Literature:

Primary:

1. Котельников Г.П., Краснов А.В., Мирошниченко В.Ф. Травматология.- 2009. -538с.
2. Гуманенко Е.К., Козлова В.К. Политравма. -2009. - 608 с.
3. Травматология и ортопедия в 4 томах. Том 3. Травмы и заболевания нижней конечности. Издательство: Гиппократ, 2008. - 1056 с.
4. Корнилов Н.В., Грязнухин Э.Г. Травматология и ортопедия, том 4. Травмы и заболевания таза, груди, позвоночника, головы. 2006. - 624 с.
5. Руководство для врачей в 4 томах под общей ред. Н.В. Корнилова. - С-Пб.,

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«Гиппократ», 2004. - 768 с.

6. Протоколы диагностики и лечения травм и заболеваний: для стационаров травматологического профиля. – Астана, 2013.

additional:

1. Гиршин С.Г. Травматология. Клинические лекции по неотложной травматологии. - Учебное пособие. - 2009.
2. Кондратьев А.Н. Неотложная нейротравматология. - 2009. - 192 с.
3. Клюквин И.Ю., Мигулева И.Ю., Охотский В.П. Травмы кисти. 2009 – 192
4. Дэвид Гранди, Эндрю Суэйн Травма спинного мозга. - 2008. - 128.
5. Котешева И.А. Травмы. Первая помощь и восстановительное лечение. - 2008. - 352 с
6. Соколов В.А. Множественные и сочетанные травмы. - 2006. - 518 с.

1. Department of Obstetrics and Gynecology

2. Level of training – internship

3. Educational program – 7R01132 “Obstetrics and gynecology for adults, children” 6B10101 «General medicine»

4. Course – 1, number of credits – 4, number of hours – 120.


5. Name of elective discipline – Hysteroresectoscopy in gynecology

Goal: Training in the elective discipline “Hysteroresectoscopy in gynecology” is the preparation of a highly qualified specialist obstetrician-gynecologist to work in gynecological departments and offices of polyclinics; improving knowledge, skills, skills based on modern scientific achievements in the field of gynecology. Formation of competencies for surgical interventions with the use of laparoscopic equipment for diagnosis and treatment in gynecological practice.

The content of the discipline: Currently, hysteroscopy allows not only to examine the inner surface of the uterus, but also to perform numerous operations with transcervical access. Continuous improvement of technological support is of great importance in the development of hysteroscopy. After determining by visual examination the nature of the intrauterine pathology, diagnostic hysteroscopy can switch to operative. It all depends on the type of pathology detected and the nature of the proposed operation. The level of modern endoscopic equipment and the possibilities of hysteroscopy today allow us to talk about a special section of operative gynecology – intrauterine surgery. Some types of hysteroscopic operations replace laparotomy, and sometimes hysterectomy, which is of great importance for women of reproductive age or elderly patients with severe somatic pathology, for whom a large volume of surgical interventions poses a risk to life.

Tasks:

1. To consolidate knowledge of issues of operative gynecology organization of obstetric and gynecological care, the basics of sanitary and epidemiological regime, measures for prevention and rehabilitation after frequent diseases and complications in gynecology. To teach to apply the principles of management in the organization of their work;
2. Mastering the basic methods of research in gynecology. Methods of diagnosis and treatment of the most common gynecological diseases;
3. mastering diagnostic, therapeutic manipulations and surgical operations in gynecological practice;
4. mastering knowledge on etiology, pathogenesis, clinical manifestations of gynecological diseases;

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5. mastering and consolidating the instrumental skills of gynecological examinations, the ability to conduct and correctly interpret instrumental research methods in gynecology;

6. formation of clinical thinking skills, mastering the principles of differential diagnosis, mastering the basic principles of prevention and treatment of diseases in gynecology;

7. to inculcate the principles of medical ethics, the foundations of clinical thinking, skills that ensure the solution of professional tasks and the application of the algorithm of medical activity to provide medical care in urgent, life-threatening conditions, prevention, diagnosis, treatment and rehabilitation of patients.

Justification:

Operative endoscopic gynecology is an independent section of endoscopic surgery, including operations on a woman's pelvic organs performed by laparoscopic and hysteroscopic approaches. Due to the rapid development of endoscopic methods of treatment in gynecology, there is a need to train residents in endoscopic surgical intervention skills, as well as to develop new, more rational reconstructive plastic and organ-preserving operations.

Learning outcomes (competencies)

1) Knowledge and understanding:

- demonstrates knowledge of the subject and tasks of gynecology;

2) Applying knowledge and understanding

- knows the methods of research and provision of primary medical care in obstetrics and gynecology;

- has the skills of pathology prevention in gynecology

3) Formation of judgments

- uses the acquired knowledge to understand the features of etiopathogenesis, clinic, complications in gynecological diseases;

- applies the acquired theoretical knowledge of gynecology for further study at the residency level;

4) Communication skills

- demonstrates communication skills when interacting with different people in different obstetric situations;

- Demonstrates professional behavior – responsibility, productivity, self-esteem, reflection;

5) Learning skills or learning abilities

Demonstrates readiness and ability to acquire new knowledge;

Prerequisites: Outpatient obstetrics, Outpatient gynecology, Gynecology in hospital -1

Post-requirements: Reproductive medicine and infertility, Oncogynecology.

Literature

Basic:

1. Willis K.R. Atlas of operative gynecology. - 2004.


2. Kozub N.I. Selected issues of practical endoscopy in gynecology. – Kharkiv, 2002 – 239s.

3. Ishchenko A.I., New technologies and minimally invasive surgery in gynecology. - M., 2004 – 136с.

Additional:

1. Ospanov O.B., Gubnik V.V., Malinovsky A.V. Laparoscopic surgery: a practical guide for doctors. – Astana, 2012

2. Toksanbayev A.T. Iatrogenic injuries of the urinary system in women. – Almaty, 2003.

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3. Prilepskaya V.N. Colposcopy. M., 2006.
4. Noble V.E. Ultrasound in emergency and critical conditions: a practical guide. – 2009.
5. Radzinsky V.E. Guide to practical classes in gynecology: textbook. - 2005.

- 1. Department of Obstetrics and Gynecology**
- 2. Level of training – internship**
- 3. Educational program – 7R01132 “Obstetrics and gynecology for adults, children” 6B10101 «General medicine»**
- 4. Course – 1, number of credits – 4, number of hours – 120.**
- 5. Name of elective discipline – Hysteroressectoscopy in gynecology**
- 6. Наименование элективной дисциплины – Management of pregnant and parturient women with COVID-19**

Goal: Training of an obstetrician-gynecologist capable of providing qualified medical care to pregnant women with common therapeutic diseases in accordance with the principles of evidence-based medicine and modern advances in medical and diagnostic technologies


The content of the discipline: Pregnancy is a physiological condition that creates a predisposition to respiratory viral infections. Due to physiological changes in the immune and cardiopulmonary systems, pregnant women are more likely to have severe respiratory viral infections. The percentage of mortality from SARS-CoV infection among pregnant women is up to 25%. Currently, there is insufficient data, which are contradictory, on the effect of COVID-19 on pregnant women and infants, there are no specific recommendations for pregnant women regarding the diagnosis and treatment of COVID-19.

Tasks:

1. Possess the skills of providing specialized medical care to pregnant women, basic therapeutic, diagnostic and preventive measures for therapeutic and acute diseases.
2. Be able to interpret laboratory and instrumental data in pregnant women with internal diseases.
3. Develop integration skills during individual examination and treatment of a specific clinical case in pregnant women; training in professional decision-making when prescribing rational therapy from the point of view of evidence-based medicine.
4. To develop knowledge of the principles and methods of forming a healthy lifestyle in the family and the person.
5. To develop the need for continuous development of knowledge and professional skills in the performance of professional duties.
6. Development of communication and teamwork skills, organization of diagnostic and therapeutic trends.

Justification:

This topic addresses the issues of management of pregnant and parturient women with COVID-19: diagnosis, differential diagnosis and treatment. When studying this discipline, the issues of mastering the basic principles of COVID-19 diagnosis in pregnant women, differential diagnosis, treatment and management of pregnant women are considered; to consolidate and improve propaedeutic skills in practice. The etiopathogenesis, the COVID-19 clinic, the comorbid condition, which will aggravate the condition of a pregnant woman, teaches differential diagnosis and an individual approach to the treatment of pregnant women with COVID-19, and also discusses ways to reduce maternal and perinatal mortality.

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Residents should learn the subtleties of medical ethics and deontology, a syndromic approach to the differential diagnosis of complex combined cases of COVID-19 during pregnancy, instilling the ability to choose a treatment method and medications taking into account individual drug tolerance, conducting an examination of the management of pregnant women.

Learning outcomes (competencies)

1) Knowledge and understanding:

- demonstrates knowledge of the subject and tasks of obstetrics and gynecology;

2) Applying knowledge and understanding

- knows the methods of research and provision of primary medical care in obstetrics and gynecology;

- has the skills of medical examination and prevention of pathology in obstetrics and gynecology;

3) Formation of judgments

- uses the acquired knowledge to understand the features of etiopathogenesis, clinic, complications and extragenital diseases during pregnancy;

- applies the acquired theoretical knowledge of obstetrics for further study at the residencies level;

4) Communication skills

- demonstrates communication skills when interacting with different people in different obstetric situations;

- Demonstrates professional behavior – responsibility, productivity, self-esteem, reflection;

5) Learning skills or learning abilities

Demonstrates readiness and ability to acquire new knowledge;

Prerequisites: Outpatient obstetrics

Post-requirements: Inpatient obstetrics

Literature

Basic:

1. Clinical protocol of diagnosis and treatment "Coronavirus infection (COVID-19) in pregnant women, women in labor and maternity" dated August 05, 2021 Protocol No.146 was approved by the Joint Commission on the Quality of Medical Services of the Ministry of Health of the Republic of Kazakhstan

2. <https://www.chestnet.org/Guidelines-and-Resources>Рекомендации АССТ, 2012

Additional:


1. Guyatt GH, Akl EA, Crowther M et al, MD ; Antithrombotic Therapy and Prevention of Thrombosis, 9th edition. Chest 2012; 141(2) (Suppl):7S–47S.

2. Nicolaidis AN. Prevention of venous thromboembolism. International Consensus Statement Guidelines compiled in accordance with the scientific evidence. J Vasc Br. 2002; 1:133-170.

3. Caprini JA, Arcelus JI, et al. State-of-the-art venous thromboembolism prophylaxis. Scope. 2001; 8:228-240.

4. Oger E. Incidence of venous thromboembolism: a community-based study in Western France. EPI-GETBP Study Group. Groupe d'Etude de la Thrombose de Bretagne Occidentale. Thromb Haemost. 2000; 83:657-660.

5. 2016 ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure European Heart Journal (2016) 37, 2129–2200 doi:10.1093/eurheartj/ehw128

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- 2. Level of training – internship**
- 3. Educational program – 7R01132 “Obstetrics and gynecology for adults, children” 6B10101 «General medicine»**
- 4. Course – 1, number of credits – 4, number of hours – 120.**
- 5. Name of elective discipline – Hysteroresectoscopy in gynecology**

Goal: Training in the elective discipline “Hysteroresectoscopy in gynecology” is the preparation of a highly qualified specialist obstetrician-gynecologist to work in gynecological departments and offices of polyclinics; improving knowledge, skills, skills based on modern scientific achievements in the field of gynecology. Formation of competencies for surgical interventions with the use of laparoscopic equipment for diagnosis and treatment in gynecological practice.


The content of the discipline: Currently, hysteroscopy allows not only to examine the inner surface of the uterus, but also to perform numerous operations with transcervical access. Continuous improvement of technological support is of great importance in the development of hysteroscopy. After determining by visual examination the nature of the intrauterine pathology, diagnostic hysteroscopy can switch to operative. It all depends on the type of pathology detected and the nature of the proposed operation. The level of modern endoscopic equipment and the possibilities of hysteroscopy today allow us to talk about a special section of operative gynecology – intrauterine surgery. Some types of hysteroscopic operations replace laparotomy, and sometimes hysterectomy, which is of great importance for women of reproductive age or elderly patients with severe somatic pathology, for whom a large volume of surgical interventions poses a risk to life.

Tasks:

1. To consolidate knowledge of issues of operative gynecology organization of obstetric and gynecological care, the basics of sanitary and epidemiological regime, measures for prevention and rehabilitation after frequent diseases and complications in gynecology. To teach to apply the principles of management in the organization of their work;
2. Mastering the basic methods of research in gynecology. Methods of diagnosis and treatment of the most common gynecological diseases;
3. mastering diagnostic, therapeutic manipulations and surgical operations in gynecological practice;
4. mastering knowledge on etiology, pathogenesis, clinical manifestations of gynecological diseases;
5. mastering and consolidating the instrumental skills of gynecological examinations, the ability to conduct and correctly interpret instrumental research methods in gynecology;
6. formation of clinical thinking skills, mastering the principles of differential diagnosis, mastering the basic principles of prevention and treatment of diseases in gynecology;
7. to inculcate the principles of medical ethics, the foundations of clinical thinking, skills that ensure the solution of professional tasks and the application of the algorithm of medical activity to provide medical care in urgent, life-threatening conditions, prevention, diagnosis, treatment and rehabilitation of patients.

Justification:

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approaches. Due to the rapid development of endoscopic methods of treatment in gynecology, there is a need to train residents in endoscopic surgical intervention skills, as well as to develop new, more rational reconstructive plastic and organ-preserving operations.

Learning outcomes (competencies)

1) Knowledge and understanding:

- demonstrates knowledge of the subject and tasks of gynecology;

2) Applying knowledge and understanding

- knows the methods of research and provision of primary medical care in obstetrics and gynecology;

- has the skills of pathology prevention in gynecology

3) Formation of judgments

- uses the acquired knowledge to understand the features of etiopathogenesis, clinic, complications in gynecological diseases;

- applies the acquired theoretical knowledge of gynecology for further study at the residency level;

4) Communication skills

- demonstrates communication skills when interacting with different people in different obstetric situations;

- Demonstrates professional behavior – responsibility, productivity, self-esteem, reflection;

5) Learning skills or learning abilities

Demonstrates readiness and ability to acquire new knowledge;

Prerequisites: Outpatient obstetrics, Outpatient gynecology, Gynecology in hospital -1

Post-requirements: Reproductive medicine and infertility, Oncogynecology.

Literature

Basic:

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Additional:

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3. Prilepskaya V.N. Colposcopy. M., 2006.

4. Noble V.E. Ultrasound in emergency and critical conditions: a practical guide. – 2009.

5. Radzinsky V.E. Guide to practical classes in gynecology: textbook. - 2005.

1. Department of Therapy and Cardiology


2. Level of training: residency

3. Specialty: 7R01105 "Hematology for adults, children"

4. Course: 1

5. Name of the elective discipline: Antitumor agents and immunosuppressants in hematology.

6. Purpose of the RE:

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– Training of highly qualified, competitive hematologists who are able to meet the needs of society in providing medical care to hematological patients, apply and develop advanced innovative technologies in medicine, science and practice.

7. Tasks of the RE:

- Strengthen teamwork and leadership skills;
 - To consolidate the skills of basic medical diagnostic and preventive interventions;
 - To teach to make professional decisions based on the principles of evidence-based medicine;
 - To teach to comply with the requirements of medical ethics and deontology when carrying out expert, preventive and therapeutic and diagnostic measures;
 - To train doctors in hematology for adults and children, who have clinical thinking, who are well versed in complex pathology, who have in-depth knowledge of related disciplines.

8. Rationale for the choice of discipline

Residency in the educational program "Hematology for adults, children" is a form of postgraduate professional training that provides for in-depth study and detailed mastery of professional activities within this specialty.

9. Learning outcomes (competencies)

RE 1 Patient management: able to formulate a clinical diagnosis, prescribe a treatment plan and evaluate its effectiveness based on evidence-based practice at all levels of care for patients with hematological diseases.

RE 2 Communication and Collaboration: able to effectively interact with the patient with hematological pathology, his environment, healthcare professionals in order to achieve the best results for the patient


RE 3 Safety and quality: able to assess risks and use the most effective methods to ensure a high level of safety and quality of medical hematological care.

RE 4 Public health: is able to act within the legal and organizational framework of the healthcare system of the Republic of Kazakhstan in the specialty "Hematology for adults, children", provide basic assistance in emergency situations, work as part of interprofessional teams to implement the policy of strengthening the health of the nation

RE 5 Research: able to formulate adequate research questions, critically evaluate professional literature, effectively use international databases in their daily activities, participate in the work of a research team

RE 6 Training and Development: 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 hematology.

Knowledge (cognitive sphere)	Skills (psychomotor sphere)	Personal and professional competencies (relationships)
	1. Skills for conducting an initial examination of a patient with suspected hematological pathology. 2. Skills for the reasonable appointment of diagnostic studies to a patient with suspected hematological pathology. 3. The ability to correctly interpret the results of diagnostic studies of	1. To identify the main symptoms and syndromes in adult and pediatric hematological practice during the initial examination of a patient with suspected hematological pathology. 2. Skills for interviewing a patient, taking anamnesis and differential diagnosis of hematological patients.

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	the patient in case of suspected hematological pathology. 4. Skills for the correct formulation of the diagnosis according to ICD10 when detecting hematological pathology. 5. Ability to timely identify complications of hematological diseases.	3. Skills for the reasonable appointment of diagnostic tests for a patient with suspected hematological pathology. 4. The ability to correctly interpret the results of diagnostic studies of a patient with suspected hematological pathology (general clinical, immunological, morphological studies of biopsy specimens, etc.).
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10. Prerequisite: Internal Medicine (BSc), Internship

11. Post-requisitioner: Hematology, Transfusiology

12. Literature:

main:

1. Vorobyov A.I. Guide to hematology. -M.: Newdiamed, 2002

2. Yavorsky L.I., Ryauzova L.Yu., Solovey D.Ya. myelodysplastic syndrome. Primary myelopoietic dysplasia.-Riga: Zinante, 1992

3. Kovaleva L.G. Acute leukemia-M.: Medicine, 1990 16. Turkina A.G. Guide to Hematology / Ed. I. Vorobiev.- M.: Newdiamed, 2002.

4. Clinical oncohematology, ed. M.A. Volkovoy.-2nd ed.-M.: Medicine, 2007 5. V. Hoffbrand, J. Pettit. Hematology. Atlas-reference book - editorial translation of E.R. Timofeev.-M.: Practice, 2007

6. W. Hoffbrand, J. Pettit. Hematology. Atlas-reference book - editorial translation of E.R. Timofeev.-M.: Practice, 2007

7. Fr.J. Shiffman. Pathophysiology of blood - ed. Yu.V. Natochina-M.- St. Petersburg: Publishing house BINOM-Nevsky dialect, 2000

1. Department of Therapy and Cardiology

2. Level of training: residency

3. Specialty: 7R01105 "Hematology for adults, children"

4. Course: 1

5. Name of the elective discipline: Clinical transfusiology.

6. Purpose of the EP:

– Training of highly qualified, competitive hematologists who are able to meet the needs of society in providing medical care to hematological patients, apply and develop advanced innovative technologies in medicine, science and practice.

7. Tasks of the OP:

- Strengthen teamwork and leadership skills;


- To consolidate the skills of basic medical diagnostic and preventive interventions;

- To teach to make professional decisions based on the principles of evidence-based medicine;

- To teach to comply with the requirements of medical ethics and deontology when carrying out expert, preventive and therapeutic and diagnostic measures;

- To train doctors in hematology for adults and children, who have clinical thinking, who are well versed in complex pathology, who have in-depth knowledge of related disciplines.

8. Rationale for the choice of discipline

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Residency in the educational program "Hematology for adults, children" is a form of postgraduate professional training that provides for in-depth study and detailed mastery of professional activities within this specialty.

9. Learning outcomes (competencies)

RE1 Patient management: able to formulate a clinical diagnosis, prescribe a treatment plan and evaluate its effectiveness based on evidence-based practice at all levels of care for patients with hematological diseases.

RE 2 Communication and Collaboration: able to effectively interact with the patient with hematological pathology, his environment, healthcare professionals in order to achieve the best results for the patient

RE 3 Safety and quality: able to assess risks and use the most effective methods to ensure a high level of safety and quality of medical hematological care.


RE 4 Public health: is able to act within the legal and organizational framework of the healthcare system of the Republic of Kazakhstan in the specialty "Hematology for adults, children", provide basic assistance in emergency situations, work as part of interprofessional teams to implement the policy of strengthening the health of the nation

RE 5 Research: able to formulate adequate research questions, critically evaluate professional literature, effectively use international databases in their daily activities, participate in the work of a research team

RE 6 Training and Development: 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 hematology.

Knowledge (cognitive sphere)	Skills (psychomotor sphere)	Personal and professional competencies (relationships)
	1. Skills for conducting an initial examination of a patient with suspected hematological pathology. 2. Skills for the reasonable appointment of diagnostic studies to a patient with suspected hematological pathology. 3. The ability to correctly interpret the results of diagnostic studies of the patient in case of suspected hematological pathology. 4. Skills for the correct formulation of the diagnosis according to ICD10 when detecting hematological pathology. 5. Ability to timely identify complications of hematological diseases.	1. To identify the main symptoms and syndromes in adult and pediatric hematological practice during the initial examination of a patient with suspected hematological pathology. 2. Skills for interviewing a patient, taking anamnesis and differential diagnosis of hematological patients. 3. Skills for the reasonable appointment of diagnostic tests for a patient with suspected hematological pathology. 4. The ability to correctly interpret the results of diagnostic studies of a patient with suspected hematological pathology (general clinical, immunological, morphological studies of biopsy specimens, etc.).

10. Prerequisite: Internal Medicine (BSc), Internship

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11. Post-requisitioner: Hematology, Transfusiology

12. Literature:

main:

1. Vorobyov A.I. Guide to hematology. -M.: Newdiamed, 2002
2. Yavorsky L.I., Ryauzova L.Yu., Solovey D.Ya. myelodysplastic syndrome. Primary myelopoietic dysplasia.-Riga: Zinante, 1992
3. Kovaleva L.G. Acute leukemia.-M.: Medicine, 1990 16. Turkina A.G. Guide to Hematology / Ed. I. Vorobiev.- M.: Newdiamed, 2002.
4. Clinical oncohematology, ed. M.A. Volkovoy.-2nd ed.-M.: Medicine, 2007 5. V. Hoffbrand, J. Pettit. Hematology. Atlas-reference book - editorial translation of E.R. Timofeev.-M.: Practice, 2007
6. W. Hoffbrand, J. Pettit. Hematology. Atlas-reference book - editorial translation of E.R. Timofeev.-M.: Practice, 2007
7. Fr.J. Shiffman. Pathophysiology of blood - ed. Yu.V. Natchina.-M.- St. Petersburg: Publishing house BINOM-Nevsky dialect, 2000

8. Жалпы гигиена [Электрондық ресурс] : оқулық / Ү. И.


1. **Department of Obstetrics and Gynecology**
2. **Level of training – internship**
3. **Educational program – 7R01132 “Obstetrics and gynecology for adults, children” 6B10101 «General medicine»**
4. **Course – 1, number of credits – 4, number of hours – 120.**
5. **Name of elective discipline – Hysteroressectoscopy in gynecology**
6. **Наименование элективной дисциплины – Management of pregnant and parturient women with COVID-19**

Goal: Training of an obstetrician-gynecologist capable of providing qualified medical care to pregnant women with common therapeutic diseases in accordance with the principles of evidence-based medicine and modern advances in medical and diagnostic technologies

The content of the discipline: Pregnancy is a physiological condition that creates a predisposition to respiratory viral infections. Due to physiological changes in the immune and cardiopulmonary systems, pregnant women are more likely to have severe respiratory viral infections. The percentage of mortality from SARS-CoV infection among pregnant women is up to 25%. Currently, there is insufficient data, which are contradictory, on the effect of COVID-19 on pregnant women and infants, there are no specific recommendations for pregnant women regarding the diagnosis and treatment of COVID-19.

Tasks:

1. Possess the skills of providing specialized medical care to pregnant women, basic therapeutic, diagnostic and preventive measures for therapeutic and acute diseases.
2. Be able to interpret laboratory and instrumental data in pregnant women with internal diseases.
3. Develop integration skills during individual examination and treatment of a specific clinical case in pregnant women; training in professional decision-making when prescribing rational therapy from the point of view of evidence-based medicine.
4. To develop knowledge of the principles and methods of forming a healthy lifestyle in the family and the person.

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5. To develop the need for continuous development of knowledge and professional skills in the performance of professional duties.

6. Development of communication and teamwork skills, organization of diagnostic and therapeutic trends.

Justification:

This topic addresses the issues of management of pregnant and parturient women with COVID-19: diagnosis, differential diagnosis and treatment. When studying this discipline, the issues of mastering the basic principles of COVID-19 diagnosis in pregnant women, differential diagnosis, treatment and management of pregnant women are considered; to consolidate and improve propaedeutic skills in practice. The etiopathogenesis, the COVID-19 clinic, the comorbid condition, which will aggravate the condition of a pregnant woman, teaches differential diagnosis and an individual approach to the treatment of pregnant women with COVID-19, and also discusses ways to reduce maternal and perinatal mortality.

Residents should learn the subtleties of medical ethics and deontology, a syndromic approach to the differential diagnosis of complex combined cases of COVID-19 during pregnancy, instilling the ability to choose a treatment method and medications taking into account individual drug tolerance, conducting an examination of the management of pregnant women.

Learning outcomes (competencies)

1) Knowledge and understanding:

- demonstrates knowledge of the subject and tasks of obstetrics and gynecology;

2) Applying knowledge and understanding

- knows the methods of research and provision of primary medical care in obstetrics and gynecology;

- has the skills of medical examination and prevention of pathology in obstetrics and gynecology;

3) Formation of judgments

- uses the acquired knowledge to understand the features of etiopathogenesis, clinic, complications and extragenital diseases during pregnancy;

- applies the acquired theoretical knowledge of obstetrics for further study at the residencies level;

4) Communication skills

- demonstrates communication skills when interacting with different people in different obstetric situations;

- Demonstrates professional behavior – responsibility, productivity, self-esteem, reflection;

5) Learning skills or learning abilities

Demonstrates readiness and ability to acquire new knowledge;

Prerequisites: Outpatient obstetrics

Post-requirements: Inpatient obstetrics


Literature

Basic:

1. Clinical protocol of diagnosis and treatment "Coronavirus infection (COVID-19) in pregnant women, women in labor and maternity" dated August 05, 2021 Protocol No.146 was approved by the Joint Commission on the Quality of Medical Services of the Ministry of Health of the Republic of Kazakhstan
2. <https://www.chestnet.org/Guidelines-and-Resources>РекомендацииАССР, 2012

Additional:

1. Guyatt GH, Akl EA, Crowther M et al , MD ; Antithrombotic Therapy and Prevention of Thrombosis, 9th edition. Chest 2012; 141(2) (Suppl):7S–47S.

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2. Nicolaidis AN. Prevention of venous thromboembolism. International Consensus Statement Guidelines compiled in accordance with the scientific evidence. J Vasc Br. 2002; 1:133-170.

3. Caprini JA, Arcelus JJ, et al. State-of-the-art venous thromboembolism prophylaxis. Scope. 2001; 8:228-240.

4. Oger E. Incidence of venous thromboembolism: a community-based study in Western France. EPI-GETBP Study Group. Groupe d'Etude de la Thrombose de Bretagne Occidentale. Thromb Haemost. 2000; 83:657-660.

5. 2016 ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure European Heart Journal (2016) 37, 2129–2200 doi:10.1093/eurheartj/ehw128

1. Department: "Surgery-2".

2. Level of training: Residency

3. Educational program: "Radiation oncology".

4. Course: 1

5. Name of elective discipline: "Nutrition logy 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

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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: akulyk / kazak til. aud. K. Kaishybaev's action. - M. : Getar-Media, 2018
2. Abisatov, H. A. General aspects of clinical oncology. 1 h. : textbook. manual / H. A. Abisatov, N. T. Dzhainakbayev, S. Or. Yesentaeva. - Almaty: Evero, 2016.
3. Abisatov, H. A. General aspects of clinical oncology. 2 hours : studies. manual / H. A. Abisatov, N. T. Dzhainakbayev, S. Or. Yesentaeva. - Almaty: Evero, 2016
4. Yesenkor Ak. Or. Practicalyok oncology: okulyk / A. Yesenkor . - Almaty: Evero, 2011.
5. Gantsev, G. H. Oncology: textbook / G. H. Gantsev. - M. : Medical Information Agency, 2006

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-2".

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

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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.


14. Literature:

Main:

1. Davydov, M. I. Oncology: akulyk / kazak til. aud. K. Kaishybaev's action. - M. : Getar-Media, 2018
2. Abisatov, H. A. General aspects of clinical oncology. 1 h. : textbook. manual / H. A. Abisatov, N. T. Dzhainakbayev, S. Or. Yesentaeva. - Almaty: Evero, 2016.
3. Abisatov, H. A. General aspects of clinical oncology. 2 hours : studies. manual / H. A. Abisatov, N. T. Dzhainakbayev, S. Or. Yesentaeva. - Almaty: Evero, 2016
4. Yesenkor Ak. Or. Practicalylyk oncology: okulyk / A. Yesenkor . - Almaty: Evero, 2011
5. Gantsev, G. H. Oncology: textbook / G. H. Gantsev. - M. : Medical Information Agency, 2006

Additional:

1. Oncology. National leadership. Brief eruption: a guide / post-editor S. I. Chissova. - M. : Getar-Media, 2016.

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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-2".

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

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

11. Post-requirements: Doctoral studies.

12. Literature:

Main:

1. Davydov, M. I. Oncology: akulyk / kazak til. aud. K. Kaishybaev's action. - M. : Getar-Media, 2018
2. Abisatov, H. A. General aspects of clinical oncology. 1 h. : textbook. manual / H. A. Abisatov, N. T. Dzhainakbayev, S. Or. Yesentaeva. - Almaty: Evero, 2016.
3. Abisatov, H. A. General aspects of clinical oncology. 2 hours : studies. manual / H. A. Abisatov, N. T. Dzhainakbayev, S. Or. Yesentaeva. - Almaty: Evero, 2016
4. Yesenkor Ak. Or. Practicalylyk oncology: okulyk / A. Yesenkor . - Almaty: Evero, 2011.
5. Gantsev, G. H. Oncology: textbook / G. H. Gantsev. - M. : Medical Information Agency, 2006

Additional:

1. Oncology. National leadership. Brief eruption: a guide / edited by 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-2".

2. Level of training: Residency

3. Educational program: "Radiation oncology".

4. Course: 2

5. Name of elective discipline: " Organization of work of the radiological department".

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

7. 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.


8. 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.

9. 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;

10. 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.

11. Learning outcomes (competencies)

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- 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.

Main:

1. Davydov, M. I. Oncology: akulyk / kazak til. aud. K. Kaishybaev's action. - M. : Getar-Media, 2018
2. Abisatov, H. A. General aspects of clinical oncology. 1 h. : textbook. manual / H. A. Abisatov, N. T. Dzhainakbayev, S. Or. Yesentaeva. - Almaty: Evero, 2016.
3. Abisatov, H. A. General aspects of clinical oncology. 2 hours : studies. manual / H. A. Abisatov, N. T. Dzhainakbayev, S. Or. Yesentaeva. - Almaty: Evero, 2016
4. Yesenkor Ak. Or. Practicalykc oncology: okulyk / A. Yesenkor . - Almaty: Evero, 2011.
5. Gantsev, G. H. Oncology: textbook / G. H. Gantsev. - M. : Medical Information Agency, 2006

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:** «Pediatrics-2»
- 2. Level of preparation:** Residency
- 3. Specialty:** 7R01131 «Neonatology»
- 4. Course:** 2
- 5. The name of the elective discipline** «Fundamentals of medical genetics in neonatology»
- 6. Number of credits:** 2
- 7. Purpose of the discipline:** the purpose of training a qualified neonatologist is to deepen the complex of fundamental knowledge, skills and abilities in the field of medical genetics for implementation in the professional activity of a neonatologist.
- 8. Objectives:**

- to form an extensive and deep volume of fundamental medical knowledge in the field of medical genetics, forming the professional competence of a doctor who is able to successfully solve their professional tasks;
- сформировать to form and improve the professional training of a specialist doctor who has a clinical mindset, is well-versed in hereditary and congenital pathology and has in-depth knowledge of medical genetics;
- подготовить prepare a specialist for independent professional diagnostic activities, who is able to conduct a differential diagnostic search based on modern genetic research methods;
- to improve the system of general and special knowledge and skills that allow the doctor to freely navigate in the organization of medical and genetic services, insurance medicine.

9. Justification of the choice of discipline: When studying this component, neonatologists will master the main directions of scientific research in the field of medical genetics, which are the prevention and timely diagnosis of hereditary diseases; monitoring of congenital malformations; development and implementation of programs for preventing the birth of newborns with congenital malformations in the practice of medical-genetic and obstetric services.; development and implementation in practice of medical-genetic centers of systems of biochemical and molecular-genetic prenatal and vital diagnostics of hereditary diseases associated with congenital metabolic disorders; study of molecular-genetic bases of hereditary diseases.

10. Result of training (competence):

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)
<p>Application:</p> <ul style="list-style-type: none"> - formation of knowledge of the basic laws of the development of hereditary diseases in the light of natural-scientific ideas about the structure and function of organs and systems of the child's body as a whole; - demonstrate competence in the diagnosis of hereditary diseases associated with congenital metabolic disorders; - readiness for abstract thinking, analysis, synthesis; 	<p>Accuracy: demonstrates the ability to perform medical procedures on dummies during an objective structured clinical examination.</p> <p>Articulation: accurately performs medical procedures on real or standardized patients.</p> <p>Affective Domain (Attitude/Behavior)</p> <p>Gives value: relationships with patients and medical staff during medical procedures.</p> <p>Organization:</p> <ul style="list-style-type: none"> -independent organizes medical procedures according to the list of the residency profile; -willingness to manage a team, to tolerate social, ethnic, religious and cultural differences. 	<p>Medical documentation:</p> <ul style="list-style-type: none"> - observe the ethical and deontological aspects of the work of a neonatologist; - to identify and assess the severity of risk factors for the development and progression of neonatal diseases, to identify early symptoms of diseases, to find out the family history, to comply with the norms of the sanitary and epidemiological regime; - get information about the disease; determine the need for special research methods (laboratory, radiological, functional, pathopsychological, medical-genetic), organize their implementation and

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		be able to interpret their results; - conduct a differential diagnosis; - assess the cause and severity of the patient's condition and take the necessary measures to remove the patient from this condition.
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11. Prerequisites: Neonatology in the hospital.

12. Postrequisites: profile disciplines

13. References


Main literature:

1. Neonatology: studies. manual : in 2 t / Shabalov N. P.-M.: GEOTAR-Media, 2019-704 p.
2. Neonatology: studies. manual in 2 t / Shabalov N. P.-M.: GEOTAR-Media, 2019-736 p.
3. Ginter, E. K. Hereditary diseases / ed. by E. K. Ginter, V. P. Puzyrev-Moscow: GEOTAR-Media, 2017. - 464 p.
4. Hereditary diseases : national guidelines / G. V. Baidakova [et al.]; ed. by E. K. Ginter, V. P. Puzyrev; Assoc.med. o-v in quality, Ros. o-vo med. geneticists. - Krat. ed. - Moscow: GEOTAR-Media, 2017. - 458 p.
5. Bochkov N. P., Hereditary diseases : a national guide / Edited by N. P. Bochkov, E. K. Ginter, V. P. Puzyrev-M.: GEOTAR-Media, 2013. - 936 p.

Additional literature:

1. Jones, K. L. Hereditary syndromes according to David Smith: atlas-reference = Smith's Recognizable Patterns of Human Malformation : Sixth Edition / K. L. Jones; translated from English by A. G. Azova [et al.], ed. by A. G. Azov. - Moscow: Praktika, 2011. - 998 p.
2. Khaitov R. M. Immunogenomics and human genodiagnostics : national guidelines / R. M. Khaitov, L. P. Alekseev, D. Yu. Trofimov. - M.: GEOTARMedia, 2017. - 255 p.
3. Newssbaum, Robert L. Medical genetics: a textbook for students of institutions of higher professional education, studying in the discipline "Medical genetics" / R. L. Newssbaum, R. R. McInnes, H. F. Willard; per. A. Sh. Latypova, ed. N. P. Bochkov. - M.: GEOTAR-Media, 2010. - 620 p.
4. Chuchalin, Alexander Grigoryevich. Encyclopedia of rare diseases / A. G. Chuchalin. - M.: GEOTAR-Media, 2014. - 672 p.
5. Paukov V. S., Pathology: manual / Ed. by V. S. Paukov, M. A. Paltsev, E. G. Ulumbekov-2nd ed., ispr. and add. - M.: GEOTAR-Media, 2015. - 2500 p.
6. Bochkov N. P., Puzyrev V. P., Smirnikhina S. A. Clinical Genetics-4th ed., add. and pererab. M., GEOTAR-Media, 2011.
7. Nyussbaum R. L. Medical Genetics: textbook. manual / R. L. Newssbaum, R. R. McInnes, H. F. Willard; translated from English. edited by N. P. Bochkov, trans. from English by A. S. Latypov. - M.: GEOTAR-Media, 2010.
8. Kishkun A. A. Manual of laboratory diagnostic methods / A. A. Kishkun. - 2nd ed., reprint. and additional-M.: GEOTAR-Media, 2014. - 760 p.

Electronic resources (for example: video, audio, digests):

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1. Sorvacheva T.N., Martinchik A.N., Pyrieva E.A. Comprehensive assessment of actual nutrition and nutritional status of children and adolescents: textbook - М.: GBOU DPO RMAPO, 2014. - 73 p.


<http://irbis.rmapo.ru/UploadsFilesForIrbis/8b4ba38a506a0008d1d0b92c42ed9df5.pdf>

2. WHO AnthroPlus for personal computers Manual: Software for assessing growth of the world's children and adolescents. Geneva: WHO, 2009 (<http://www.who.int/growthref/tools/en/>).

Medical sites:

1. med-site.narod.ru
2. www.medicusamicus.com
3. www.medprof.ru
4. www.rusmedserv.com/topsites/
5. www.doktor.ru.
6. medinfo.net
7. www.spasmex.ru
8. www.webmedinfo.ru
9. www.medicum.nnov.ru
10. medcompany.ru
11. meduniver.com
12. badis.narod.ru
13. studentdoctorprofessor.com.ua
14. www.med39.ru
15. www.kovostok.ru
16. www.drugme.ru
17. lepila.tyurem.net
18. top.medlinks.ru
19. doctor-doctor.ru
20. mepmed.ru

- 1. Department:** «Pediatrics-2»
- 2. Level of preparation:** Residency
- 3. Specialty:** 7R01130 «Pediatrics»
- 4. Course:** 2
- 5. The name of the elective discipline** «Modern aspects of a diyetaprofilaktika and dietotherapy in pediatrics»
- 6. Number of credits:** 2
- 7. Purpose of the discipline:** to train specialists in nutrition, trained in the methods of diet therapy for various diseases and able to conduct a differentiated diet therapy.
- 8. Objectives:**
 - development by residents of theoretical knowledge on the basics of rational and therapeutic nutrition in children;
 - study of special target diets for patients with cardiological, pulmonological, gastroenterological, nephrological, endocrinological pathologies, food allergies and some surgical diseases;
 - pathogenetic substantiation of diet therapy in case of malabsorption syndrome and food allergy;
 - study of the principles of enteral and parenteral nutrition of patients;


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- study of the principles of therapeutic nutrition in alimentary-dependent conditions in young children;
- to teach to make professional decisions based on the principles of evidence-based medicine;
- to instill appropriate communication skills when communicating with patients, interacting with colleagues;
- to instill the skills of moral, ethical and legal culture necessary for servicing patients in the conditions of functional diagnostics;
- develop a commitment to professional values such as altruism, compassion, empathy, responsibility, honesty, and confidentiality;
- Strengthen teamwork and leadership skills.

9. Justification of the choice of discipline: Acquisition of knowledge on the conduct of diet therapy for various diseases and the implementation of dynamic monitoring of the patient. Mastering skills for the preparation of special therapeutic diets for the nutrition of patients with non-communicable diseases.

10. Result of training (competence):

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)
<p>Application: Evaluation of studies, materials from professional literature on "Modern aspects of dietary prevention and diet therapy in pediatrics". Use international databases in your daily activities. Participate in the work of the research team;</p> <ul style="list-style-type: none"> - readiness for abstract thinking, analysis, synthesis; - assign a plan of laboratory and instrumental methods of examination; - interpret the results of laboratory and instrumental methods of examination; - provide assistance in case of complications. <p>Analysis: discusses and categorizes the knowledge of biomedical, clinical, social and behavioral sciences in specialized practice</p> <ul style="list-style-type: none"> - conducts a comprehensive assessment of laboratory and instrumental studies. <p>Rating:</p>	<p>Accuracy: demonstrates the ability to perform medical procedures on dummies during an objective structured clinical examination.</p> <p>Articulation: accurately performs medical procedures on real or standardized patients.</p> <p>Affective Domain (Attitude/Behavior)</p> <p>Gives value: relationships with patients and medical staff during medical procedures.</p> <p>Organization:</p> <ul style="list-style-type: none"> -independent organizes medical procedures according to the list of the residency profile; -willingness to manage a team, to tolerate social, ethnic, religious and cultural differences. 	<p>Medical documentation:</p> <ul style="list-style-type: none"> - readiness to identify pathological conditions, symptoms, disease syndromes, and nosological forms in newborns in accordance with the International Statistical Classification of Diseases and Health-related Problems; - medical documentation: registration of medical documentation for the specialty profile in accordance with the legislation in healthcare; - Knows the basics of rational and therapeutic nutrition in pediatrics. - Knows the principles of enteral and parenteral nutrition of sick children. - Knows how to make a diet for alimentary-dependent conditions in young children.

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- evaluate the results of UAC, OAM, biochemical blood tests, BAC. research, coprology, CBS. - appreciate the indicators of peak flowmetry, ultrasound, radiography, computed tomography, NMRI		
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11. Prerequisites: Children's diseases in the hospital.

12. Postrequisites: profile disciplines


13. References

Main literature:

1. Kildiyarova, R.R. Visual pediatric gastroenterology and hepatology (+ CD-ROM) / R.R. Kildiyarova, Yu.F. Lobanov. - M.: GEOTAR-Media, 2021. - 124 p.
2. Kildiyarova, R. R. Fundamentals of the formation of children's health. Textbook / R.R. Kildiyarova, V.I. Makarova, Yu.F. Lobanov. - M.: GEOTAR-Media, 2021. - 328 p.
3. Kildiyarova, R. R. Nutrition of a healthy and sick child / R.R. Kildiyarov. - M.: MEDpress-inform, 2022. - 128 p.
4. Kildiyarova, Rita Rafgatovna Nutrition of a healthy and sick child. Textbook / Kildiyarova Rita Rafgatovna. - M.: MEDpress-inform, 2020. - 927 p.
5. Clinical nutrition (educational manual). / Ed. T.Sh. Sharmanova. - Almaty, 1999.
6. Guide to dietetics. / Ed. Baranovsky A.Yu. - St. Petersburg, 2008. 800s
7. Sharmanov T.Sh. About the role, deficiency and prevention of the most important micronutrients. Publishing house: Raritet. 2009 -368 p.
8. Terekhin S.P.. Emdik tamaqtanu. Oku-adistemelik қырал. Karagandy, 2006. - 276 p.
9. Gurvich M.M. Diet in diseases of the digestive system. - M., 2006. - 288 p.

Additional literature:

1. Nutrition and health in Europe: a new basis for action. WHO Regional Publications, 2007. European Series, No. 96. Edited by: Aileen Robertson, Cristina Tirado, Tim Lobstein, Translated from English. A. Reshetova. 525 p.
2. http://www.who.int/dietphysicalactivity/publications/trs916/en/gsfao_obesity.pdf.
3. Obesity in the Pacific: too big to ignore. WHO Regional Office, Manila and the Government of Australia. Secretariat of the Pacific Community, 2005. P. 18.
4. The management of nutrition in Major Emergencies // WHO/UNHCR/IFRCRCS/WFP. - Geneva, WHO. - 2008.
5. Must A., Dallal G.E., Dietz W.H. Reference data for obesity: 85th and 95th percentile of body mass index (wt/ht²) // Am. J. Clin. Nutr. - 2009. - V. 53. - P. 839-846.
6. Dr Xavier Irz, Dr Bhavani Shankar and Dr C.S. Srinivasan. Dietary Recommendations in the Report of a Joint WHO/FAO Expert Consultation on Diet, Nutrition and the Prevention of Chronic Diseases. Geneva, 28 January - 1 February 2003, (WHO Technical Report Series 916, 2003): \$59
6. Nikulin B.A. Assessment and correction of immune status: a guide. - M. 2008. -376 p.
7. Askarova G.K. Allergodermatoses: eczema and atopic dermatitis (etiology, pathogenesis, clinic and treatment) - Karaganda, 2002. - 202 p.
8. Kishkun A.A. Clinical laboratory diagnostics: textbook. - M., 2008. 720s
10. Gankovskaya L.V. Clinical immunology and allergology: workshop for 5-6 course. - M., 2009.
11. Baranovsky A.Yu. Dietology 5th edition, revised and supplemented: - Peter, 2018. - 1024 p.

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12. State policy of the Russian Federation in the field of healthy nutrition: Report. - M.: Federal Service for Supervision of Consumer Rights Protection and Human Welfare, 2015. - 89 p.

13. Scientific foundations of healthy nutrition / ed. V.A. Tutelyan: - M.: Publishing house "Panorama", 2010. - 816 p.

14. Medical nutrition: modern approaches to the standardization of diet therapy / ed. V.A. Tutelyan [i dr.]. - Moscow: Dynasty, 2010. - 301 p.

Electronic resources (for example: video, audio, digests):

1. Sorvacheva T.N., Martinchik A.N., Pyrieva E.A. Comprehensive assessment of actual nutrition and nutritional status of children and adolescents: textbook - M.: GBOU DPO RMAPO, 2014. - 73 p.

<http://irbis.rmapo.ru/UploadsFilesForIrbis/8b4ba38a506a0008d1d0b92c42ed9df5.pdf>

2. WHO AnthroPlus for personal computers Manual: Software for assessing growth of the world's children and adolescents. Geneva: WHO, 2009 (<http://www.who.int/growthref/tools/en/>).

Medical sites:

1. med-site.narod.ru
2. www.medicusamicus.com
3. www.medprof.ru
4. www.rusmedserv.com/topsites/
5. www.doktor.ru.
6. medinfo.net
7. www.spasmex.ru
8. www.webmedinfo.ru
9. www.medicum.nnov.ru
10. medcompany.ru
11. meduniver.com
12. badis.narod.ru
13. studentdoctorprofessor.com.ua
14. www.med39.ru
15. www.kovostok.ru
16. www.drugme.ru
17. lepila.tyurem.net
18. top.medlinks.ru
19. doctor-doctor.ru
20. mepmed.ru

- 1. Department:** «Pediatrics-2»
- 2. Level of preparation:** Residency
- 3. Specialty:** 7R01106 «Children's oncology and hematology»
- 4. Course:** 1
- 5. The name of the elective discipline** «Modern aspects of rehabilitation in pediatric hematology oncology»
- 6. Number of credits:** 2
- 7. Purpose of the discipline:** Training of highly qualified, competitive pediatric oncologists and hematologists who are able to meet the needs of society in providing medical care to oncological and hematological sick children, apply and develop advanced innovative technologies in medicine, science and practice.

8. Objectives:

- to form clinical thinking and the ability to independently work with scientific literature on the discipline;
- develop the ability to analyze socio-biological, medico-social and epidemiological conditions and factors of the occurrence of diseases;
- to teach the resident the principles of diagnosis of diseases, reasonably prescribe laboratory, functional and instrumental methods of examination;
- improve the skill of manual examination of the patient, palpation, percussion and auscultation;
- to develop the skill of interpreting the results of a paraclinical examination of a patient;
- to teach the compilation of an algorithm for the differential diagnosis of diseases;
- to develop the skill of an informed choice of etiopathogenetic treatment;
- teach the basic principles of prevention;
- explain the application of legal documents regulating the activities of a pediatric hematologist, a pediatric oncologist;
- improve interpersonal communication skills with colleagues, patients and their parents;
- to stimulate the resident's desire for self-development and self-improvement, the choice of a professional trajectory;
- to develop the skill of working with medical literature, the ability to analyze literary and Internet sources.


9. Justification of the choice of discipline: In the elective discipline "Modern aspects of rehabilitation in pediatric oncohematology", a deeper and more complete mastering of the work of future pediatric oncohematologists is expected.

Pediatric rehabilitation is a form of treatment that results from the coordinated and complementary work of various medical and non-medical specialties used to identify and develop children's abilities, rehabilitate identified diseases and ensure the independence of the child at the highest level.

High-intensity treatment in pediatric hematology-oncology requires the organization of active medical and psychological and social rehabilitation of patients who have undergone treatment. Timely comprehensive rehabilitation can improve the results of therapy.

10. Result of training (competence):

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)
<p>Application: Evaluation of studies, materials from professional literature on pediatric oncology and hematology. Use international databases in your daily activities. Participate in the work of the research team;</p> <p>- readiness for abstract thinking, analysis, synthesis;</p>	<p>Accuracy: demonstrates the ability to perform medical procedures on dummies during an objective structured clinical examination.</p> <p>Articulation: accurately performs medical procedures on real or standardized patients.</p> <p>Affective Domain (Attitude/Behavior)</p>	<p>- readiness to identify pathological conditions, symptoms, disease syndromes, and nosological forms in newborns in accordance with the International Statistical Classification of Diseases and Health-related Problems;</p> <p>- medical documentation: registration of medical</p>

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<ul style="list-style-type: none"> - assign a plan of laboratory and instrumental methods of examination; - interpret the results of laboratory and instrumental methods of examination; - provide assistance in case of complications. <p>Analysis: discusses and categorizes the knowledge of biomedical, clinical, social and behavioral sciences in specialized practice</p> <ul style="list-style-type: none"> - conducts a comprehensive assessment of laboratory and instrumental studies. <p>Rating:</p> <ul style="list-style-type: none"> - evaluate the results of UAC, OAM, biochemical blood tests, BAC. research, coprology, CBS. - appreciate the indicators of peak flowmetry, ultrasound, radiography, computed tomography, NMRI 	<p>Gives value: relationships with patients and medical staff during medical procedures.</p> <p>Organization:</p> <ul style="list-style-type: none"> -independent organizes medical procedures according to the list of the residency profile; -willingness to manage a team, to tolerate social, ethnic, religious and cultural differences. 	<p>documentation for the specialty profile in accordance with the legislation in healthcare.</p>
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11. Prerequisites: Children's diseases in General medical practice.


12. Postrequisites: profile disciplines

13. References

Main literature:

1. Pediatric oncology : national guidelines / FSBI "N. N. Blokhin Russian Research Center of the Russian Academy of Medical Sciences", Research Institute of Pediatric Oncology and Hematology / M. D. Aliyev [et al.] ; edited by M. D. Aliyev. Moscow : RSC "Practical Medicine", 2012. pp. 377-399.
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3. Romashevskaya, I. P. Second malignant tumors in children and adolescents of the Republic of Belarus / I. P. Romashevskaya, N. N. Savva, A. A. Zborovskaya; edited by O. V. Aleynikova. Minsk, 2015. 120 p.
4. Lantskovsky, F. Pediatric hematology and oncology : translated from English / F. Lantskovsky. Moscow : Lori, 2005. 784 p.
5. Dispensary observation of children and adolescents with oncohematological diseases by a pediatrician of general practice / S. R. Varfolomeeva [et al.] // Oncohematology. 2008. No. 1-2. pp. 63-69.
6. Clinical protocols of the Ministry of Health of the Republic of Kazakhstan.

Additional literature:

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1. Rudneva, A. E. Observation of patients with hemoblastosis after the end of antitumor therapy / A. E. Rudneva, E. E. Ilyina // Oncohematology. 2014. No. 4. pp. 46-53.
2. Rehabilitation/habilitation of infants and young children in a specialized medical center for patients with blood diseases and malignant neoplasms / E. V. Zhukovskaya [et al.] // Russian Journal of Pediatric Hematology and Oncology. 2017. Vol. 4, No. 3. pp. 80-84.
3. Strategy of medical, psychological and social rehabilitation of children with hematological and oncological diseases / N. N. Volodin [et al.] // Oncohematology. 2015. No. 1. pp. 7-15.
4. Clinical protocol "Medical rehabilitation of children with oncological and oncohematological diseases" : approved by the resolution of the Ministry of Health. Rep. Belarus No. 52 dated 01.06.2017. Access mode : <http://www.pravo.by> . Access date : 20.05.2019.
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6. Sirota V.B., Bukenov A.M. Pediatric oncology: textbook. stipend. –Karaganda, 2015. – 128p.
7. Pediatric oncology: clinical recommendations for the treatment of patients with solid tumors / edited by M.Y. Rykov, V.G. Polyakov. — M. : GEOTAR-Media, 2017. — 368 p.
8. Clinical manifestations of oncological diseases in children / edited by V.G.Polyakov, M.Yu. Rykov — St. Petersburg : Mikhail Fursov Printing House, 2017. — 52 p.
9. Abisatov H.A. Clinical oncology: textbook. – Almaty: Arys Publishing House, 2007. – Vol. II. – 640 p.

Electronic resources (for example: video, audio, digests):

1. Higgins, K. Decoding of clinical laboratory analyses [Electronic resource] : monograph / K. Higgins ; translated from English by E. K. Vishnevskaya. - 7th ed. -Moscow : Knowledge Lab, 2016. - 587 p. <http://elib.kaznu.kz/>
2. Welsher, L. Z. Clinical oncology : selected lectures : [studies. manual for medical universities] / L. Z. Welsher, B. I. Polyakov, S. B. Peterson. - M. : GEOTAR-Media, 2019.

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| 2. www.medicusamicus.com | 12. badis.narod.ru |
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ОҢТҮСТІК ҚАЗАҚСТАН MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ		SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казахстанская медицинская академия»
Department of Pediatrics-2		044-68/11
Catalog of elective disciplines for the 2023-2024 academic year		1 page of 4

- 1. Department:** «Pediatrics-2»
- 2. Level of preparation:** Residency
- 3. Specialty:** 7R01106 «Children's oncology and hematology»
- 4. Course:** 1
- 5. The name of the elective discipline** «Pathomorphological diagnostics in pediatric oncology»
- 6. Number of credits:** 2

7. Purpose of the discipline: Training of highly qualified, competitive pediatric oncologists and hematologists who are able to meet the needs of society in providing medical care to oncological and hematological sick children, apply and develop advanced innovative technologies in medicine, science and practice.

Pathomorphology of hemoblastoses in children. Lymphomas. Pathomorphological diagnosis of lymphoid tumors. Pathomorphology of tumors of the central nervous system. Acute lymphoblastic leukemia. Solid tumors. Clinical and pathoanatomic approaches to the lifetime diagnosis of tumors. Methodology of research in pathomorphology of malignant tumors.

8. Objectives:

- to form clinical thinking and the ability to independently work with scientific literature on the discipline;
- develop the ability to analyze socio-biological, medico-social and epidemiological conditions and factors of the occurrence of diseases;
- to teach the resident the principles of diagnosis of diseases, reasonably prescribe laboratory, functional and instrumental methods of examination;
- совершенствовать improve the skill of manual examination of the patient, palpation, percussion and auscultation;
- to develop the skill of interpreting the results of a paraclinical examination of the patient;
- обуч to teach the compilation of an algorithm for the differential diagnosis of diseases;
- to develop the skill of an informed choice of etiopathogenetic treatment;
- научить teach the basic principles of prevention;
- разъяс explain the application of legal documents regulating the activities of a pediatric hematologist, a pediatric oncologist;
- improve interpersonal communication skills with colleagues, patients and their parents;
- to stimulate the resident's desire for self-development and self-improvement, the choice of a professional trajectory;
- to develop the skill of working with medical literature, the ability to analyze literary and Internet sources.

9. Justification of the choice of discipline: In the elective discipline "Pathomorphological diagnostics in pediatric oncology", a deeper and more complete mastering of the work of future pediatric oncogematologists is expected.

Knowledge of medical and social measures of medical rehabilitation is a set of measures aimed at restoring socially significant skills that have been disrupted due to the underlying disease and/or ongoing treatment, by reducing the severity of social insufficiency as much as possible and training in performing socially significant functions, taking into account the nature of life limitations, including using technical means of social rehabilitation.

Knowledge of medical and psychological measures of medical rehabilitation is a set of measures aimed at diagnosing and correcting the psychological problems of the rehabilitator, directly related or caused by the manifestations or consequences of the underlying and concomitant diseases.

Knowledge of indications for medical rehabilitation is the need for a complex of medical services aimed at restoring the normal functioning of the patient's body, disrupted as a result of the disease.


10. Result of training (competence):

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)
<p>Application: Evaluation of studies, materials from professional literature on pediatric oncology and hematology. Use international databases in your daily activities. Participate in the work of the research team;</p> <ul style="list-style-type: none"> - readiness for abstract thinking, analysis, synthesis; - assign a plan of laboratory and instrumental methods of examination; - interpret the results of laboratory and instrumental methods of examination; - provide assistance in case of complications. <p>Analysis: discusses and categorizes the knowledge of biomedical, clinical, social and behavioral sciences in specialized practice</p> <ul style="list-style-type: none"> - conducts a comprehensive assessment of laboratory and instrumental studies. <p>Rating:</p> <ul style="list-style-type: none"> - evaluate the results of UAC, OAM, biochemical blood tests, BAC. research, coprology, CBS. - appreciate the indicators of peak flowmetry, ultrasound, radiography, computed tomography, NMRI 	<p>Accuracy: demonstrates the ability to perform medical procedures on dummies during an objective structured clinical examination.</p> <p>Articulation: accurately performs medical procedures on real or standardized patients.</p> <p>Affective Domain (Attitude/Behavior)</p> <p>Gives value: relationships with patients and medical staff during medical procedures.</p> <p>Organization:</p> <ul style="list-style-type: none"> -independent organizes medical procedures according to the list of the residency profile; -willingness to manage a team, to tolerate social, ethnic, religious and cultural differences. 	<ul style="list-style-type: none"> - readiness to identify pathological conditions, symptoms, disease syndromes, and nosological forms in newborns in accordance with the International Statistical Classification of Diseases and Health-related Problems; - medical documentation: registration of medical documentation for the specialty profile in accordance with the legislation in healthcare.

11. Prerequisites: Children's diseases in General medical practice.

12. Postrequisites: profile disciplines

13. References

ОҢТҮСТІК ҚАЗАҚСТАН MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ	 SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казakhstanская медицинская академия»
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2. Oncology [Electronic resource] : national hands / [T. A. Fedorova et al.] ; edited by V. I. Chissov, M. I. Davydov. - Moscow : GEOTAR-Media, 2013. - 572 p.
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7. Pediatric oncology: clinical recommendations for the treatment of patients with solid tumors / edited by M.Y. Rykov, V.G. Polyakov. - M. : GEOTAR-Media, 2017. - 368 p.
8. Clinical manifestations of oncological diseases in children / edited by V.G. Polyakov, M.Yu. Rykov - St. Petersburg : Mikhail Fursov Printing House, 2017. - 52 p.
9. Clinical protocols of the Ministry of Health of the Republic of Kazakhstan.


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3. Sirota V.B., Bukenov A.M. Pediatric oncology: textbook. stipend. - Karaganda, 2015. - 128 p.
4. Pediatric oncology: clinical recommendations for the treatment of patients with solid tumors / edited by M.Y. Rykov, V.G. Polyakov. - M. : GEOTAR-Media, 2017. - 368 p.
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6. Abisatov H.A. Clinical oncology: textbook. - Almaty: Arys Publishing House, 2007. - Vol. II– - 640 p.
7. Monakhov B.V., Kaidarova D.R., Afonin G.A. Modern cancer prevention. - Almaty, 2009– - 196 p.

Electronic resources (for example: video, audio, digests):

1. Higgins, K. Decoding of clinical laboratory analyses [Electronic resource] : monograph / K. Higgins ; translated from English by E. K. Vishnevskaya. - 7th ed. -Moscow : Knowledge Lab, 2016. - 587 p. <http://elib.kaznu.kz/>
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Medical sites:

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Department of Pediatrics-2		044-68/11
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15. www.kovostok.ru
16. www.drugme.ru
17. lepila.tyurem.net
18. top.medlinks.ru
19. doctor-doctor.ru
20. mepmed.ru


- 1. Department:** «Pediatrics-2»
- 2. Level of preparation:** Residency
- 3. Specialty:** 7R01106 «Oncology and hematology for children»
- 4. Course:** 2
- 5. The name of the elective discipline** «Clinical Immunology in Pediatric Oncology»
- 6. Number of credits:** 2

7. Purpose of the discipline: Training of highly qualified, competitive pediatric oncologists and hematologists who are able to meet the needs of society in providing medical care to oncological and hematological sick children, apply and develop advanced innovative technologies in medicine, science and practice.

Pathomorphology of hemoblastoses in children. Lymphomas. Pathomorphological diagnosis of lymphoid tumors. Pathomorphology of tumors of the central nervous system. Acute lymphoblastic leukemia. Solid tumors. Clinical and pathoanatomic approaches to the lifetime diagnosis of tumors. Methodology of research in pathomorphology of malignant tumors.

8. Objectives:

- to form clinical thinking and the ability to independently work with scientific literature on the discipline;
- develop the ability to analyze socio-biological, medico-social and epidemiological conditions and factors of the occurrence of diseases;
- to teach the resident the principles of diagnosis of diseases, reasonably prescribe laboratory, functional and instrumental methods of examination;
- совершенствовать improve the skill of manual examination of the patient, palpation, percussion and auscultation;
- to develop the skill of interpreting the results of a paraclinical examination of the patient;

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Department of Pediatrics-2		044-68/11
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- обуч to teach the compilation of an algorithm for the differential diagnosis of diseases;
- to develop the skill of an informed choice of etiopathogenetic treatment;
- научить teach the basic principles of prevention;
- разьяс explain the application of legal documents regulating the activities of a pediatric hematologist, a pediatric oncologist;
- improve interpersonal communication skills with colleagues, patients and their parents;
- to stimulate the resident's desire for self-development and self-improvement, the choice of a professional trajectory;
- to develop the skill of working with medical literature, the ability to analyze literary and Internet sources.

9. Justification of the choice of discipline:

In the elective discipline "Clinical immunology in pediatric oncology", a deeper and more complete mastering of the work of future pediatric oncogematologists is expected.


Clinical immunology in pediatric oncology studies the principles of immunotherapy of immunodeficiency states, modern methods of immunodiagnostics, modern aspects of stem cell transplantation.

Immuno–oncology is an artificial stimulation of the immune system for the treatment of cancer, helping the immune system to fight the disease in a natural way. This is a program of fundamental research in the field of cancer immunology and the developing specialization of oncology. Cancer immunotherapy consists in the fact that antibodies of proteins of the immune system can detect and bind to molecules located on the surface of tumor antigens of cancer cells.

The complex therapy started in a timely manner makes it possible to improve the further prognosis of childhood oncological diseases.

10. Result of training (competence):

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)
<p>Application: Evaluation of studies, materials from professional literature on pediatric oncology and hematology. Use international databases in your daily activities. Participate in the work of the research team;</p> <ul style="list-style-type: none"> - readiness for abstract thinking, analysis, synthesis; - assign a plan of laboratory and instrumental methods of examination; - interpret the results of laboratory and instrumental methods of examination; - provide assistance in case of complications. 	<p>Accuracy: demonstrates the ability to perform medical procedures on dummies during an objective structured clinical examination.</p> <p>Articulation: accurately performs medical procedures on real or standardized patients.</p> <p>Affective Domain (Attitude/Behavior)</p> <p>Gives value: relationships with patients and medical staff during medical procedures.</p> <p>Organization:</p> <ul style="list-style-type: none"> -independent organizes medical procedures according to the list of the residency profile; 	<ul style="list-style-type: none"> - readiness to identify pathological conditions, symptoms, disease syndromes, and nosological forms in newborns in accordance with the International Statistical Classification of Diseases and Health-related Problems; - medical documentation: registration of medical documentation for the specialty profile in accordance with the legislation in healthcare.

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<p>Analysis: discusses and categorizes the knowledge of biomedical, clinical, social and behavioral sciences in specialized practice</p> <p>- conducts a comprehensive assessment of laboratory and instrumental studies.</p> <p>Rating:</p> <p>- evaluate the results of UAC, OAM, biochemical blood tests, BAC. research, coprology, CBS.</p> <p>- appreciate the indicators of peak flowmetry, ultrasound, radiography, computed tomography, NMRI</p>	<p>-willingness to manage a team, to tolerate social, ethnic, religious and cultural differences.</p>	
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11. Prerequisites: Children's diseases in General medical practice.

12. Postrequisites: profile disciplines


13. References

Main literature:

1. Pediatric oncology: nat. management / FSBI «Russian Cancer Research Center im. N. N. Blokhin RAMS», Research Institute of Pediatric Oncology and Hematology / M. D. Aliev [and others]; ed. M. D. Alieva. Moscow: RONTs "Practical Medicine", 2012. S. 377–399.
2. Kovalchuk L.V., Gankovskaya L.V., Meshkova R.Ya. Clinical immunology and allergology with the basics of general immunology: textbook.-- M.: GEOTAR-Media, 2014.—640p.
3. Immunology: workshop: textbook. allowance / Ed. L.V. Kovalchuk, G. A. Ignatieva, L. V. Gankovskaya. - M.: GEOTAR - Media, 2014. - 176 p.
4. Lantskovsky, F. Children's hematology and oncology: per. from English. / F. Lantskovsky. Moscow: Lori, 2005. 784 p.
5. Oncology [Electronic resource] / ed. ed. S. B. Peterson. - M. : GEOTARMedia, 2014.
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1. Kovalchuk L.V., Gankovskaya L.V., Meshkova R.Ya. Clinical immunology and allergology with the basics of general immunology: textbook.-- M.: GEOTAR-Media, 2014.—640p.
2. Immunology: workshop: textbook. allowance / Ed. L.V. Kovalchuk, G. A. Ignatieva, L. V. Gankovskaya. - M.: GEOTAR - Media, 2014. - 176 p.
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4. Allergology and immunology / ed. L.S. Namazova-Baranova, A.A. Baranova, R.M. Khaitova: The Union of Pediatricians of Russia [and others]. - M. : Publishing house "Pediater", 2020. - 512 p. — (Practical recommendations for pediatricians).
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Department of Pediatrics-2		044-68/11
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6. Vorobyov S.V., Emelin A.Yu., Kuznetsova R.N., Kudryavtsev I.V. The role of the immune response in the pathogenesis of Alzheimer's disease and the possibility of anti-inflammatory therapy // Neurological Bulletin. 2020; T. LII (3): 55-62.
7. Kadagidze Z.G., Chertkova A.I., Zabolina T.N., Korotkova O.V., Slavina E.G., Borunova A.A. New possibilities of regulation of the antitumor immune response // Malignant tumors. 2015. No. 1 (12). pp. 24-30.
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1. Higgins, K. Decoding of clinical laboratory analyses [Electronic resource] : monograph / K. Higgins ; translated from English by E. K. Vishnevskaya. - 7th ed. -Moscow : Knowledge Lab, 2016. - 587 p. <http://elib.kaznu.kz/>
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Medical sites:

1. med-site.narod.ru
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10. medcompany.ru
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20. mepmed.ru

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- 1. Department:** «Pediatrics-2»
- 2. Level of preparation:** Residency
- 3. Specialty:** 7R01106 «Children's oncology and hematology»
- 4. Course:** 2
- 5. The name of the elective discipline** «Palliative pediatric oncology»
- 6. Number of credits:** 2

7. Purpose of the discipline: The purpose of mastering the discipline "Palliative Care in Pediatric Oncology" is to develop the ability and readiness to solve professional problems aimed at providing timely and high-quality palliative care to children with oncological diseases.

8. Objectives:

- to form knowledge of the theoretical foundations of palliative care for children with incurable conditions in pediatric oncology;
- to form the skills and abilities of full-fledged high-quality and timely palliative care for malignant neoplasms in children;
- to form the skills of continuity in the provision of palliative care for malignant neoplasms in children;
- to form a stable skill in providing palliative care to patients with chronic pain syndrome in pediatric oncology.
- improve interpersonal communication skills with colleagues, patients and their parents;
- stimulate the resident's desire for self-development and self-improvement, the choice of a professional trajectory;
- develop the skill of working with medical literature, the ability to analyze literary and Internet sources.


9. Justification of the choice of discipline:

In the elective discipline "Palliative pediatric oncology", a deeper and more complete mastering of the work of future pediatric oncogematologists is expected.

Palliative pediatric oncology studies the ethical, psychosocial and organizational aspects of palliative care for children. Providing palliative and symptomatic care for tumors in children. Modern principles of radical and palliative treatment of sick children with malignant tumors. Symptom control and crisis situations in palliative care for children.

10. Result of training (competence):

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)
<p>Application: Evaluation of studies, materials from professional literature on pediatric oncology and hematology. Use international databases in your daily activities. Participate in the work of the research team;</p> <p>- readiness for abstract thinking, analysis, synthesis;</p>	<p>Accuracy: demonstrates the ability to perform medical procedures on dummies during an objective structured clinical examination.</p> <p>Articulation: accurately performs medical procedures on real or standardized patients.</p> <p>Affective Domain (Attitude/Behavior)</p>	<p>- readiness to identify pathological conditions, symptoms, disease syndromes, and nosological forms in newborns in accordance with the International Statistical Classification of Diseases and Health-related Problems;</p>

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<ul style="list-style-type: none"> - assign a plan of laboratory and instrumental methods of examination; - interpret the results of laboratory and instrumental methods of examination; - provide assistance in case of complications. <p>Analysis: discusses and categorizes the knowledge of biomedical, clinical, social and behavioral sciences in specialized practice</p> <ul style="list-style-type: none"> - conducts a comprehensive assessment of laboratory and instrumental studies. <p>Rating:</p> <ul style="list-style-type: none"> - evaluate the results of UAC, OAM, biochemical blood tests, BAC. research, coprology, CBS. - appreciate the indicators of peak flowmetry, ultrasound, radiography, computed tomography, NMRI 	<p>Gives value: relationships with patients and medical staff during medical procedures.</p> <p>Organization:</p> <ul style="list-style-type: none"> -independent organizes medical procedures according to the list of the residency profile; -willingness to manage a team, to tolerate social, ethnic, religious and cultural differences. 	<ul style="list-style-type: none"> - medical documentation: registration of medical documentation for the specialty profile in accordance with the legislation in healthcare.
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11. Prerequisites: Children's diseases in General medical practice.


12. Postrequisites: profile disciplines

13. References

Main literature:

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2. Oncology. National leadership. Brief edition: practical guide / Chissov V.I., Davydov M.I. - Moscow: GEOTAR-Media, 2017 - 576 p.
3. Oncology. Tests with visualization elements: a tutorial / Cherenkov V.G. - Moscow: GEOTAR-Media, 2017 - 240 p.
4. Symptom control in palliative medicine / edited by G. A. Novikov. - Moscow: GEOTAR-Media, 2013. - 248 p.
5. Ponomarenko, G. N. Rehabilitation of disabled people: national leadership / edited by G. N. Ponomarenko. - Moscow: GEOTAR-Media, 2018. - 736 p.
6. Ponktna, A. A. Legal regulation of palliative care / A. A. Ponkina, I. V. Ponkin. - Moscow: GEOTAR-Media, 2019. - 176 p.
7. Clinical protocols of the Ministry of Health of the Republic of Kazakhstan.

Additional literature:


ОҢТҮСТІК ҚАЗАҚСТАН MEDISINA АКАДЕМИАСЫ «Оңтүстік Қазақстан медицина академиясы» АҚ		SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казахстанская медицинская академия»
Department of Pediatrics-2		044-68/11
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6. Sirota V.B., Bukenov A.M. Pediatric oncology: textbook. allowance. -Karaganda, 2015. - 128s.
7. Pediatric oncology: clinical guidelines for the treatment of patients with solid tumors / ed. M.Yu. Rykova, V.G. Polyakov. - M. : GEOTAR-Media, 2017. - 368 p.
8. Clinical manifestations of oncological diseases in children / ed. V.G. Polyakova, M.Yu. Rykov - St. Petersburg. : Printing house of Mikhail Fursov, 2017. - 52 p.
9. Abisatov H.A. Clinical oncology: textbook. - Almaty: publishing house "Arys", 2007. - Т. II. – 640 p.

Electronic resources (for example: video, audio, digests):

1. Higgins, K. Decoding of clinical laboratory analyses [Electronic resource] : monograph / K. Higgins ; translated from English by E. K. Vishnevskaya. - 7th ed. -Moscow : Knowledge Lab, 2016. - 587 p. <http://elib.kaznu.kz/>
2. Clinical guidelines for the pharmacotherapy of persistent pain in children and adolescents / Association of professional participants in hospice care, Russian Society of Pediatric Oncologists, Association of Pediatric Anesthesiologists and Resuscitators, National Society of Pediatric Oncologists of Russia - Moscow, 2016. - 33 p.

Medical sites:

ОҢТҰСТІК ҚАЗАҚСТАН MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ	 SKMA -1979-	SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казахстанская медицинская академия»
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1. med-site.narod.ru
2. www.medicusamicus.com
3. www.medprof.ru
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12. badis.narod.ru
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15. www.kovostok.ru
16. www.drugme.ru
17. lepila.tyurem.net
18. top.medlinks.ru
19. doctor-doctor.ru
20. mepmed.ru


- 1. Department:** «Pediatrics-2»
- 2. Level of preparation:** Residency
- 3. Specialty:** 7R01106 «Children's oncology and hematology»
- 4. Course:** 2
- 5. The name of the elective discipline** «Palliative pediatric oncology»
- 6. Number of credits:** 2

7. Purpose of the discipline: The purpose of mastering the discipline "Palliative Care in Pediatric Oncology" is to develop the ability and readiness to solve professional problems aimed at providing timely and high-quality palliative care to children with oncological diseases.

8. Objectives:

- to form knowledge of the theoretical foundations of palliative care for children with incurable conditions in pediatric oncology;
- to form the skills and abilities of full-fledged high-quality and timely palliative care for malignant neoplasms in children;
- to form the skills of continuity in the provision of palliative care for malignant neoplasms in children;
- to form a stable skill in providing palliative care to patients with chronic pain syndrome in pediatric oncology.
- improve interpersonal communication skills with colleagues, patients and their parents;
- stimulate the resident's desire for self-development and self-improvement, the choice of a professional trajectory;
- develop the skill of working with medical literature, the ability to analyze literary and Internet sources.

9. Justification of the choice of discipline:

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In the elective discipline "Palliative pediatric oncology", a deeper and more complete mastering of the work of future pediatric oncogematologists is expected.

Palliative pediatric oncology studies the ethical, psychosocial and organizational aspects of palliative care for children. Providing palliative and symptomatic care for tumors in children. Modern principles of radical and palliative treatment of sick children with malignant tumors. Symptom control and crisis situations in palliative care for children.

10. Result of training (competence):

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)
<p>Application: Evaluation of studies, materials from professional literature on pediatric oncology and hematology. Use international databases in your daily activities. Participate in the work of the research team;</p> <ul style="list-style-type: none"> - readiness for abstract thinking, analysis, synthesis; - assign a plan of laboratory and instrumental methods of examination; - interpret the results of laboratory and instrumental methods of examination; - provide assistance in case of complications. <p>Analysis: discusses and categorizes the knowledge of biomedical, clinical, social and behavioral sciences in specialized practice</p> <ul style="list-style-type: none"> - conducts a comprehensive assessment of laboratory and instrumental studies. <p>Rating:</p> <ul style="list-style-type: none"> - evaluate the results of UAC, OAM, biochemical blood tests, BAC. research, coprology, CBS. - appreciate the indicators of peak flowmetry, ultrasound, radiography, computed tomography, NMRI 	<p>Accuracy: demonstrates the ability to perform medical procedures on dummies during an objective structured clinical examination.</p> <p>Articulation: accurately performs medical procedures on real or standardized patients.</p> <p>Affective Domain (Attitude/Behavior)</p> <p>Gives value: relationships with patients and medical staff during medical procedures.</p> <p>Organization:</p> <ul style="list-style-type: none"> -independent organizes medical procedures according to the list of the residency profile; -willingness to manage a team, to tolerate social, ethnic, religious and cultural differences. 	<ul style="list-style-type: none"> - readiness to identify pathological conditions, symptoms, disease syndromes, and nosological forms in newborns in accordance with the International Statistical Classification of Diseases and Health-related Problems; - medical documentation: registration of medical documentation for the specialty profile in accordance with the legislation in healthcare.

11. Prerequisites: Children's diseases in General medical practice.

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12. Postrequisites: profile disciplines

13. References

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1. Pediatric oncology. National leadership: hands. / ed. M. D. Aliev, V. G. Polyakov, G. L. Mentkevich and others; FSBI "N.N. Blokhin Russian Cancer Research Center" RAMS; Research Institute of Pediatric Oncology and Hematology. - M.: Publishing house. RONTs group, 2012. - 684 p.
2. Oncology. National leadership. Brief edition: practical guide / Chissov V.I., Davydov M.I. - Moscow: GEOTAR-Media, 2017 - 576 p.
3. Oncology. Tests with visualization elements: a tutorial / Cherenkov V.G. - Moscow: GEOTAR-Media, 2017 - 240 p.
4. Symptom control in palliative medicine / edited by G. A. Novikov. - Moscow: GEOTAR-Media, 2013. - 248 p.
5. Ponomarenko, G. N. Rehabilitation of disabled people: national leadership / edited by G. N. Ponomarenko. - Moscow: GEOTAR-Media, 2018. - 736 p.
6. Ponktna, A. A. Legal regulation of palliative care / A. A. Ponkina, I. V. Ponkin. - Moscow: GEOTAR-Media, 2019. - 176 p.
7. Clinical protocols of the Ministry of Health of the Republic of Kazakhstan.

Additional literature:


1. Abuzarova, G. R. Diagnosis and differentiated pharmacotherapy of chronic pain syndrome in cancer patients / G. R. Abuzarova. - Moscow: GEOTAR-Media, 2015. - 240 p.
2. Dvoynikov, S. I. Issues of palliative care in the activities of a nursing specialist: textbook / S. I. Dvoynikov, S. R. Babayan, Yu. A. Tarasova [and others]; edited by S. I. Dvoynikov. - Moscow: GEOTAR-Media, 2018. - 336 p.
3. Symptom control in palliative care. Ed. Novikova G.A. - M. : GEOTAR-Media, 2019. - 248 p.
4. Malyar, K. V. New forms of work in the organization of palliative care for children. V.2: scientific publication / K. V. Malyar; Foundation for Support of Children in Difficult Life Situations, City Clinical Hospital No. 9, Chelyabinsk, Charitable Foundation for Palliative Care «Pelikan». - Chelyabinsk: YuUGMU, 2016. - 56 p.
5. Ponkina, A.A. Legal regulation of palliative care. / Ponkina A.A., Ponkin I.V. - M. : GEOTAR-Media, 2019. - 176 p.
6. Sirota V.B., Bukenov A.M. Pediatric oncology: textbook. allowance. -Karaganda, 2015. - 128s.
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2. Clinical guidelines for the pharmacotherapy of persistent pain in children and adolescents / Association of professional participants in hospice care, Russian Society of Pediatric Oncologists, Association of Pediatric Anesthesiologists and Resuscitators, National Society of Pediatric Oncologists of Russia - Moscow, 2016. - 33 p.

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16. www.drugme.ru
17. lepila.tyurem.net
18. top.medlinks.ru
19. doctor-doctor.ru
20. mepmed.ru

- 1. Department:** «Pediatrics-2»
- 2. Level of preparation:** Residency
- 3. Specialty:** 7R01130 «Pediatrics»
- 4. Course:** 2
- 5. The name of the elective discipline:** «Clinical and laboratory diagnostics in Pediatrics»
- 6. Number of credits:** 2

7. Purpose of the discipline: Training of a pediatrician who has a volume of knowledge, skills and practical skills that meets modern requirements for independent interpretation of laboratory diagnostic methods of research.


8. Objectives:

- consolidate skills in interpreting the results of modern laboratory and instrumental methods of examination and diagnosis in various diseases in children;
- increase knowledge on modern methods of examination of diseases in children;
- to teach the maintenance of current medical medical and accounting and reporting documentation in accordance with modern standards in pediatrics;
- to teach the conduct of sanitary and educational work among the population, the formation of a healthy lifestyle in modern conditions;
- the need for continuous professional training and improvement of their knowledge and skills throughout their professional activities.

9. Justification of the choice of discipline:

In the elective discipline "Clinical and laboratory diagnostics in pediatrics", a deeper and more complete mastery of the work of pediatricians is expected. The ability to interpret the results of laboratory functional research methods is necessary for a young specialist to make an accurate diagnosis and conduct a differential diagnosis.

10. Result of training (competence):

ОҢТҮСТІК ҚАЗАҚСТАН MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ	 SKMA -1979-	SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казakhstanская медицинская академия»
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Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)
<p>Application: can apply his knowledge to problem solving in a new or unfamiliar environment related to his field of study;</p> <ul style="list-style-type: none"> - appoint a plan of laboratory and instrumental methods of examination; - interpret the results of laboratory and instrumental methods of examination; - to provide assistance in case of complications. <p>Analysis: discusses, categorizes knowledge of biomedical, clinical, social and behavioral sciences in specialized practice</p> <ul style="list-style-type: none"> - Conduct a comprehensive assessment of the conducted laboratory and instrumental studies. <p>Rating: Assess the results of the CBC, OAM, biochemical blood tests, tank. research, scatology, CBS. Evaluate the indicators of peak flowmetry, ultrasound, radiography, computed tomography, MRI</p>	<p>Accuracy: demonstrates the ability to perform medical procedures on dummies during OSKE.</p> <p>Articulation: accurately performs medical procedures on real or standardized patients.</p> <p>Gives value: relationships with patients and medical staff during medical procedures.</p> <p>Organization: independently organizes medical procedures according to the list of the internship profile.</p>	<p>Medical documentation: registration of medical documentation on the profile of the specialty in accordance with the legislation in health care.</p>


11. Prerequisites: biochemistry, biophysics, physiology.

12. Postrequisites: profile disciplines

13. References

Main literature:

1. Hittins K. - Deciphering clinical laboratory tests. Moscow. Bykom. Knowledge Lab. 2004, p.376 b.
2. Kamyshnikov V.S. "Clinical laboratory tests from A to Z and their diagnostic profiles". Moscow. Medpress-Inform. 2005
3. A.Yu. Vasiliev, E.B. Olkhov. Ultrasound diagnostics in emergency pediatric practice. Guide for doctors. GEOTAR. Media. 2010
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6. Clinical protocols of the Ministry of Health of the Republic of Kazakhstan.

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Additional literature:

1. I.V. Dvoryakovsky, G.V. Yatsyk. Ultrasonic diagnostics in neonatology. Publishing house "Atmosfera". 2009
2. Bazarbaeva A.A. Differential diagnosis of anemia in children: textbook.- Almaty, 2011.- 99 p.

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16. www.drugme.ru
17. lepila.tyurem.net
18. top.medlinks.ru
19. doctor-doctor.ru
20. mepmed.ru

1. **Department:** «Pediatrics-2»
2. **Level of preparation:** Residency
3. **Specialty:** 7R01130 «Pediatrics»
4. **Course:** 2
5. **The name of the elective discipline** «Clinical and laboratory diagnostics in Pediatrics»
6. **Number of credits:** 2

7. Purpose of the discipline: Training of a pediatrician who has a volume of knowledge, skills and practical skills that meets modern requirements for independent interpretation of laboratory diagnostic methods of research.

8. Objectives:

- consolidate skills in interpreting the results of modern laboratory and instrumental methods of examination and diagnosis in various diseases in children;
- increase knowledge on modern methods of examination of diseases in children;

- to teach the maintenance of current medical medical and accounting and reporting documentation in accordance with modern standards in pediatrics;
- to teach the conduct of sanitary and educational work among the population, the formation of a healthy lifestyle in modern conditions;
- the need for continuous professional training and improvement of their knowledge and skills throughout their professional activities.

9. Justification of the choice of discipline:


In the elective discipline "Clinical and laboratory diagnostics in pediatrics", a deeper and more complete mastery of the work of pediatricians is expected. The ability to interpret the results of laboratory functional research methods is necessary for a young specialist to make an accurate diagnosis and conduct a differential diagnosis.

10. Result of training (competence):

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)
<p>Application: can apply his knowledge to problem solving in a new or unfamiliar environment related to his field of study;</p> <ul style="list-style-type: none"> - appoint a plan of laboratory and instrumental methods of examination; - interpret the results of laboratory and instrumental methods of examination; - to provide assistance in case of complications. <p>Analysis: discusses, categorizes knowledge of biomedical, clinical, social and behavioral sciences in specialized practice</p> <ul style="list-style-type: none"> - Conduct a comprehensive assessment of the conducted laboratory and instrumental studies. <p>Rating: Assess the results of the CBC, OAM, biochemical blood tests, tank. research, scatology, CBS. Evaluate the indicators of peak flowmetry, ultrasound, radiography, computed tomography, MRI</p>	<p>Accuracy: demonstrates the ability to perform medical procedures on dummies during OSKE.</p> <p>Articulation: accurately performs medical procedures on real or standardized patients.</p> <p>Gives value: relationships with patients and medical staff during medical procedures.</p> <p>Organization: independently organizes medical procedures according to the list of the internship profile.</p>	<p>Medical documentation: registration of medical documentation on the profile of the specialty in accordance with the legislation in health care.</p>

11. Prerequisites: biochemistry, biophysics, physiology.

12. Postrequisites: profile disciplines

ОҢТҮСТІК ҚАЗАҚСТАН MEDISINA АКАДЕМИАСЫ «Оңтүстік Қазақстан медицина академиясы» АҚ		SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казакстанская медицинская академия»
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13. References

Main literature:

1. Hittins K. - Deciphering clinical laboratory tests. Moscow. Bykom. Knowledge Lab. 2004, p.376 b.
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3. A.Yu. Vasiliev, E.B. Olkhov. Ultrasound diagnostics in emergency pediatric practice. Guide for doctors. GEOTAR. Media. 2010
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1. I.V. Dvoryakovsky, G.V. Yatsyk. Ultrasonic diagnostics in neonatology. Publishing house "Atmosfera". 2009
2. Bazarbaeva A.A. Differential diagnosis of anemia in children: textbook.- Almaty, 2011.- 99 p.

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ОҢТҮСТІК ҚАЗАҚСТАН MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ	 SKMA -1979-	SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казахстанская медицинская академия»
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- 1. Department:** «Pediatrics-2»
- 2. Level of preparation:** Residency
- 3. Specialty:** 7R01130 «Pediatrics»
- 4. Course:** 2
- 5. The name of the elective discipline** «Clinical and laboratory diagnostics in Pediatrics»
- 6. Number of credits:** 2

7. Purpose of the discipline: Training of a pediatrician who has a volume of knowledge, skills and practical skills that meets modern requirements for independent interpretation of laboratory diagnostic methods of research.

8. Objectives:


- consolidate skills in interpreting the results of modern laboratory and instrumental methods of examination and diagnosis in various diseases in children;
- increase knowledge on modern methods of examination of diseases in children;
- to teach the maintenance of current medical medical and accounting and reporting documentation in accordance with modern standards in pediatrics;
- to teach the conduct of sanitary and educational work among the population, the formation of a healthy lifestyle in modern conditions;
- the need for continuous professional training and improvement of their knowledge and skills throughout their professional activities.

9. Justification of the choice of discipline:

In the elective discipline "Clinical and laboratory diagnostics in pediatrics", a deeper and more complete mastery of the work of pediatricians is expected. The ability to interpret the results of laboratory functional research methods is necessary for a young specialist to make an accurate diagnosis and conduct a differential diagnosis.

10. Result of training (competence):

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)
<p>Application: can apply his knowledge to problem solving in a new or unfamiliar environment related to his field of study;</p> <ul style="list-style-type: none"> - appoint a plan of laboratory and instrumental methods of examination; - interpret the results of laboratory and instrumental methods of examination; - to provide assistance in case of complications. <p>Analysis: discusses, categorizes knowledge of biomedical, clinical, social and behavioral sciences in specialized practice</p> <ul style="list-style-type: none"> - Conduct a comprehensive assessment of the conducted 	<p>Accuracy: demonstrates the ability to perform medical procedures on dummies during OSKE.</p> <p>Articulation: accurately performs medical procedures on real or standardized patients.</p> <p>Gives value: relationships with patients and medical staff during medical procedures.</p> <p>Organization: independently organizes medical procedures according to the list of the internship profile.</p>	<p>Medical documentation: registration of medical documentation on the profile of the specialty in accordance with the legislation in health care.</p>

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laboratory and instrumental studies. Rating: Assess the results of the CBC, OAM, biochemical blood tests, tank. research, scatology, CBS. Evaluate the indicators of peak flowmetry, ultrasound, radiography, computed tomography, MRI		
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11. Prerequisites: biochemistry, biophysics, physiology.

12. Postrequisites: profile disciplines

13. References

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15. www.kovostok.ru
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19. doctor-doctor.ru
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- 1. Department:** «Pediatrics-2»
- 2. Level of preparation:** Residency
- 3. Specialty:** 7R01130 «Pediatrics»
- 4. Course:** 2
- 5. The name of the elective discipline** «Clinical and laboratory diagnostics in Pediatrics»
- 6. Number of credits:** 2

7. Purpose of the discipline: Training of a pediatrician who has a volume of knowledge, skills and practical skills that meets modern requirements for independent interpretation of laboratory diagnostic methods of research.

8. Objectives:

- consolidate skills in interpreting the results of modern laboratory and instrumental methods of examination and diagnosis in various diseases in children;
- increase knowledge on modern methods of examination of diseases in children;
- to teach the maintenance of current medical medical and accounting and reporting documentation in accordance with modern standards in pediatrics;
- to teach the conduct of sanitary and educational work among the population, the formation of a healthy lifestyle in modern conditions;
- the need for continuous professional training and improvement of their knowledge and skills throughout their professional activities.

9. Justification of the choice of discipline:

In the elective discipline "Clinical and laboratory diagnostics in pediatrics", a deeper and more complete mastery of the work of pediatricians is expected. The ability to interpret the results of laboratory functional research methods is necessary for a young specialist to make an accurate diagnosis and conduct a differential diagnosis.

10. Result of training (competence):

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)
<p>Application: can apply his knowledge to problem solving in a new or unfamiliar environment related to his field of study;</p> <ul style="list-style-type: none"> - appoint a plan of laboratory and instrumental methods of examination; - interpret the results of laboratory and instrumental methods of examination; - to provide assistance in case of complications. <p>Analysis: discusses, categorizes knowledge of biomedical, clinical, social and behavioral sciences in specialized practice</p> <ul style="list-style-type: none"> - Conduct a comprehensive assessment of the conducted laboratory and instrumental studies. <p>Rating: Assess the results of the CBC, OAM, biochemical blood tests, tank. research, scatology, CBS. Evaluate the indicators of peak flowmetry, ultrasound, radiography, computed tomography, MRI</p>	<p>Accuracy: demonstrates the ability to perform medical procedures on dummies during OSKE.</p> <p>Articulation: accurately performs medical procedures on real or standardized patients.</p> <p>Gives value: relationships with patients and medical staff during medical procedures.</p> <p>Organization: independently organizes medical procedures according to the list of the internship profile.</p>	<p>Medical documentation: registration of medical documentation on the profile of the specialty in accordance with the legislation in health care.</p>


11. Prerequisites: biochemistry, biophysics, physiology.

12. Postrequisites: profile disciplines

13. References

Main literature:

1. Hittins K. - Deciphering clinical laboratory tests. Moscow. Bykom. Knowledge Lab. 2004, p.376 b.
2. Kamyshnikov V.S. "Clinical laboratory tests from A to Z and their diagnostic profiles". Moscow. Medpress-Inform. 2005
3. A.Yu. Vasiliev, E.B. Olkhov. Ultrasound diagnostics in emergency pediatric practice. Guide for doctors. GEOTAR. Media. 2010
4. M.K. Rybakov, V.V. Mitkov. Echocardiography in tables and diagrams. Desktop reference book. VIDAR. 2011.
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1. I.V. Dvoryakovsky, G.V. Yatsyk. Ultrasonic diagnostics in neonatology. Publishing house "Atmosfera". 2009
2. Bazarbaeva A.A. Differential diagnosis of anemia in children: textbook.- Almaty, 2011.- 99 p.


Electronic resources (for example: video, audio, digests):

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2. Clinical guidelines for the pharmacotherapy of persistent pain in children and adolescents / Association of professional participants in hospice care, Russian Society of Pediatric Oncologists, Association of Pediatric Anesthesiologists and Resuscitators, National Society of Pediatric Oncologists of Russia - Moscow, 2016. - 33 p.

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9. www.medicum.nnov.ru
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16. www.drugme.ru
17. lepila.tyurem.net
18. top.medlinks.ru
19. doctor-doctor.ru
20. mepmed.ru

1. **Department:** «Pediatrics-2»
2. **Level of preparation:** Residency
3. **Specialty:** 7R01130 «Pediatrics»
4. **Course:** 2
5. **The name of the elective discipline** «Clinical and laboratory diagnostics in Pediatrics»
6. **Number of credits:** 2
7. **Purpose of the discipline:** Training of a pediatrician who has a volume of knowledge, skills and practical skills that meets modern requirements for independent interpretation of laboratory diagnostic methods of research.
8. **Objectives:**
 consolidate skills in interpreting the results of modern laboratory and instrumental methods of examination and diagnosis in various diseases in children;
 increase knowledge on modern methods of examination of diseases in children;

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to teach the maintenance of current medical medical and accounting and reporting documentation in accordance with modern standards in pediatrics;
 to teach the conduct of sanitary and educational work among the population, the formation of a healthy lifestyle in modern conditions;
 the need for continuous professional training and improvement of their knowledge and skills throughout their professional activities.

9. Justification of the choice of discipline:

In the elective discipline "Clinical and laboratory diagnostics in pediatrics", a deeper and more complete mastery of the work of pediatricians is expected. The ability to interpret the results of laboratory functional research methods is necessary for a young specialist to make an accurate diagnosis and conduct a differential diagnosis.

10. Result of training (competence):

Knowledge

(cognitive sphere) Skills and abilities

(psychomotor sphere) Personal and professional competencies (relationships)

Application: can apply his knowledge to problem solving in a new or unfamiliar environment related to his field of study;

- appoint a plan of laboratory and instrumental methods of examination;
- interpret the results of laboratory and instrumental methods of examination;
- to provide assistance in case of complications.

Analysis: discusses, categorizes knowledge of biomedical, clinical, social and behavioral sciences in specialized practice

- Conduct a comprehensive assessment of the conducted laboratory and instrumental studies.

Rating:

Assess the results of the CBC, OAM, biochemical blood tests, tank. research, scatology, CBS.

Evaluate the indicators of peak flowmetry, ultrasound, radiography, computed tomography, MRI

Accuracy: demonstrates the ability to perform medical procedures on dummies during OSKE.

Articulation: accurately performs medical procedures on real or standardized patients.

Gives value: relationships with patients and medical staff during medical procedures.

Organization:

independently organizes medical procedures according to the list of the internship profile. Medical documentation: registration of medical documentation on the profile of the specialty in accordance with the legislation in health care.


11. Prerequisites: biochemistry, biophysics, physiology.

12. Postrequisites: profile disciplines

13. References

Main literature:

1. Hittins K. - Deciphering clinical laboratory tests. Moscow. Bykom. Knowledge Lab. 2004, p.376 b.
2. Kamyshnikov V.S. "Clinical laboratory tests from A to Z and their diagnostic profiles". Moscow. Medpress-Inform. 2005
3. A.Yu. Vasiliev, E.B. Olkhov. Ultrasound diagnostics in emergency pediatric practice. Guide for doctors. GEOTAR. Media. 2010
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2. Bazarbaeva A.A. Differential diagnosis of anemia in children: textbook.- Almaty, 2011.- 99 p. Electronic resources (for example: video, audio, digests):

1. Higgins, K. Decoding of clinical laboratory analyses [Electronic resource] : monograph / K. Higgins ; translated from English by E. K. Vishnevskaya. - 7th ed. -Moscow : Knowledge Lab, 2016. - 587 p. <http://elib.kaznu.kz/>

2. Clinical guidelines for the pharmacotherapy of persistent pain in children and adolescents / Association of professional participants in hospice care, Russian Society of Pediatric Oncologists, Association of Pediatric Anesthesiologists and Resuscitators, National Society of Pediatric Oncologists of Russia - Moscow, 2016. - 33 p.

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15. www.kovostok.ru
16. www.drugme.ru
17. lepila.tyurem.net
18. top.medlinks.ru
19. doctor-doctor.ru
20. mepmed.ru

1. Department: «Pediatrics-2»

2. Level of preparation: Residency

3. Specialty: 7R01130 «Pediatrics»


4. Course: 2

5. The name of the elective discipline «Clinical immunology and Allergology in hospital»

6. Number of credits: 2

7. Purpose of the discipline: Training of highly qualified, competitive pediatricians who are able to meet the needs of society in providing medical care to sick children, apply and develop advanced innovative technologies in medicine, science and practice.

8. Objectives:

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- to form clinical thinking and the ability to independently work with scientific literature on the discipline;
- develop the ability to analyze socio-biological, medico-social and epidemiological conditions and factors of the occurrence of diseases;
- to teach the resident the principles of diagnosis of diseases, reasonably prescribe laboratory, functional and instrumental methods of examination;
- совершенствовать improve the skill of manual examination of the patient, palpation, percussion and auscultation;
- to develop the skill of interpreting the results of a paraclinical examination of the patient;
- обуч to teach the compilation of an algorithm for the differential diagnosis of diseases;
- to develop the skill of an informed choice of etiopathogenetic treatment;
- научить teach the basic principles of prevention;
- explain the application of legal documents regulating the activities of a pediatrician;
- improve interpersonal communication skills with colleagues, patients and their parents;
- to stimulate the resident's desire for self-development and self-improvement, the choice of a professional trajectory;
- to develop the skill of working with medical literature, the ability to analyze literary and Internet sources.

9. Justification of the choice of discipline:

In the elective discipline "Clinical immunology and Allergology in hospital", a deeper and more complete mastery of the work of future pediatricians is expected.


Clinical immunology in pediatric oncology studies the principles of immunotherapy of immunodeficiency states, modern methods of immunodiagnostics, modern aspects of stem cell transplantation.

Immunology is an artificial stimulation of the immune system for the treatment of cancer, helping the immune system to fight the disease in a natural way. This is a program of fundamental research in the field of cancer immunology and the developing specialization of oncology. Cancer immunotherapy consists in the fact that antibodies of proteins of the immune system can detect and bind to molecules located on the surface of tumor antigens of cancer cells.

The complex therapy started in a timely manner makes it possible to improve the further prognosis of childhood oncological diseases.

10. Result of training (competence):

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)
Application: Evaluation of studies, materials from professional literature on Clinical immunology and Allergology in hospital. Use international databases in your daily activities. Participate in the work of the research team;	Accuracy: demonstrates the ability to perform medical procedures on dummies during an objective structured clinical examination. Articulation: accurately performs medical procedures on real or standardized patients. Affective Domain (Attitude/Behavior)	Medical documentation: - readiness to identify pathological conditions, symptoms, disease syndromes, and nosological forms in newborns in accordance with the International Statistical Classification of

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<p>- readiness for abstract thinking, analysis, synthesis;</p> <p>- assign a plan of laboratory and instrumental methods of examination;</p> <p>- interpret the results of laboratory and instrumental methods of examination;</p> <p>- provide assistance in case of complications.</p> <p>Analysis: discusses and categorizes the knowledge of biomedical, clinical, social and behavioral sciences in specialized practice</p> <p>- conducts a comprehensive assessment of laboratory and instrumental studies.</p> <p>Rating:</p> <p>- evaluate the results of UAC, OAM, biochemical blood tests, BAC. research, coprology, CBS.</p> <p>- appreciate the indicators of peak flowmetry, ultrasound, radiography, computed tomography, NMRI</p>	<p>Gives value: relationships with patients and medical staff during medical procedures.</p> <p>Organization:</p> <p>-independent organizes medical procedures according to the list of the residency profile;</p> <p>-willingness to manage a team, to tolerate social, ethnic, religious and cultural differences.</p>	<p>Diseases and Health-related Problems;</p> <p>- medical documentation: registration of medical documentation for the specialty profile in accordance with the legislation in healthcare.</p>
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11. Prerequisites: Children's diseases in the hospital.

12. Postrequisites: profile disciplines

13. References

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1. Clinical immunology and allergology with the basics of general immunology [Electronic resource]: textbook / Kovalchuk L.V., Gankovskaya L.V., Meshkova R.Ya. - M. : GEOTAR-Media, 2012. - 640 p.: ill. Chapter 12
<http://www.studmedlib.ru/book/ISBN9785970422410.html>
2. Immunology [Electronic resource]: textbook / R. M. Khaitov. - 2nd ed., revised. and additional - M. : GEOTAR-Media, 2015. - 528 p. : ill. Chapters 10, 13.
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4. Kovalchuk L.V., Gankovskaya L.V., Meshkova R.Ya. Clinical immunology and allergology with the basics of general immunology: a textbook.-- M.: GEOTAR-Media, 2014.—640p.
5. Immunology: workshop: textbook. allowance / Ed. L.V. Kovalchuk, G. A. Ignatieva, L. V. Gankovskaya. - M.: GEOTAR - Media, 2014. - 176 p.

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Additional literature:


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2. Immunology: workshop: textbook. allowance / Ed. L.V. Kovalchuk, G. A. Ignatieva, L. V. Gankovskaya. - M.: GEOTAR - Media, 2014. - 176 p.
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10. Khaitov R.M., Elisyutina O.G., Danilycheva I.V. Allergology and clinical immunology. Clinical guidelines. GEOTAR-Media, 2019. 352 p.

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2. Welsher, L. Z. Clinical oncology: fav. lectures: [proc. manual for medical universities] / L. Z. Velsher, B. I. Polyakov, S. B. Peterson. - M. : GEOTAR-Media, 2019.
3. <http://allergology.ru> - online medical journal for allergologists and immunologists;
4. <http://esid.org> – reference web page of the European Society of Immunodeficiencies.

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2. www.medicusamicus.com
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5. www.doktor.ru.
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16. www.drugme.ru
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18. top.medlinks.ru
19. doctor-doctor.ru
20. mepmed.ru

- 1. Department:** «Pediatrics-2»
- 2. Level of preparation:** Residency
- 3. Specialty:** 7R01106 «Children's oncology and hematology»
- 4. Course:** 2
- 5. The name of the elective discipline:** «Palliative pediatric oncology»
- 6. Number of credits:** 2

7. Purpose of the discipline: The purpose of mastering the discipline "Palliative Care in Pediatric Oncology" is to develop the ability and readiness to solve professional problems aimed at providing timely and high-quality palliative care to children with oncological diseases.

8. Objectives:

- to form knowledge of the theoretical foundations of palliative care for children with incurable conditions in pediatric oncology;
- to form the skills and abilities of full-fledged high-quality and timely palliative care for malignant neoplasms in children;
- to form the skills of continuity in the provision of palliative care for malignant neoplasms in children;
- to form a stable skill in providing palliative care to patients with chronic pain syndrome in pediatric oncology.
- improve interpersonal communication skills with colleagues, patients and their parents;
- stimulate the resident's desire for self-development and self-improvement, the choice of a professional trajectory;
- develop the skill of working with medical literature, the ability to analyze literary and Internet sources.

9. Justification of the choice of discipline:

In the elective discipline "Palliative pediatric oncology", a deeper and more complete mastering of the work of future pediatric oncogematologists is expected.

Palliative pediatric oncology studies the ethical, psychosocial and organizational aspects of palliative care for children. Providing palliative and symptomatic care for tumors in children. Modern principles of radical and palliative treatment of sick children with malignant tumors. Symptom control and crisis situations in palliative care for children.

10. Result of training (competence):

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)
<p>Application: Evaluation of studies, materials from professional literature on pediatric oncology and hematology. Use international databases in your daily activities. Participate in the work of the research team;</p> <ul style="list-style-type: none"> - readiness for abstract thinking, analysis, synthesis; - assign a plan of laboratory and instrumental methods of examination; - interpret the results of laboratory and instrumental methods of examination; - provide assistance in case of complications. <p>Analysis: discusses and categorizes the knowledge of biomedical, clinical, social and behavioral sciences in specialized practice</p> <ul style="list-style-type: none"> - conducts a comprehensive assessment of laboratory and instrumental studies. <p>Rating:</p> <ul style="list-style-type: none"> - evaluate the results of UAC, OAM, biochemical blood tests, BAC. research, coprology, CBS. - appreciate the indicators of peak flowmetry, ultrasound, radiography, computed tomography, NMRI 	<p>Accuracy: demonstrates the ability to perform medical procedures on dummies during an objective structured clinical examination.</p> <p>Articulation: accurately performs medical procedures on real or standardized patients.</p> <p>Affective Domain (Attitude/Behavior)</p> <p>Gives value: relationships with patients and medical staff during medical procedures.</p> <p>Organization:</p> <ul style="list-style-type: none"> -independent organizes medical procedures according to the list of the residency profile; -willingness to manage a team, to tolerate social, ethnic, religious and cultural differences. 	<ul style="list-style-type: none"> - readiness to identify pathological conditions, symptoms, disease syndromes, and nosological forms in newborns in accordance with the International Statistical Classification of Diseases and Health-related Problems; - medical documentation: registration of medical documentation for the specialty profile in accordance with the legislation in healthcare.


11. Prerequisites: Children's diseases in General medical practice.

12. Postrequisites: profile disciplines

13. References

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8. Clinical manifestations of oncological diseases in children / ed. V.G. Polyakova, M.Yu. Rykov - St. Petersburg. : Printing house of Mikhail Fursov, 2017. - 52 p.

9. Abisatov H.A. Clinical oncology: textbook. - Almaty: publishing house "Arys", 2007. - Т. II. – 640 p.

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2. Clinical guidelines for the pharmacotherapy of persistent pain in children and adolescents / Association of professional participants in hospice care, Russian Society of Pediatric Oncologists, Association of Pediatric Anesthesiologists and Resuscitators, National Society of Pediatric Oncologists of Russia - Moscow, 2016. - 33 p.

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ОҢТҮСТІК ҚАЗАҚСТАН MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ		SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казakhstanская медицинская академия»
Department of Pediatrics-2		044-68/11
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7. www.spasmex.ru
8. www.webmedinfo.ru
9. www.medicum.nnov.ru
10. medcompany.ru
11. meduniver.com
12. badis.narod.ru
13. studentdoctorprofessor.com.ua
14. www.med39.ru
15. www.kovostok.ru
16. www.drugme.ru
17. lepila.tyurem.net
18. top.medlinks.ru
19. doctor-doctor.ru
20. mepmed.ru

- 1. Department:** «Pediatrics-2»
- 2. Level of preparation:** Residency
- 3. Specialty:** 7R01130 «Pediatrics»
- 4. Course:** 2
- 5. The name of the elective discipline:** «Clinical and laboratory diagnostics in Pediatrics»
- 6. Number of credits:** 2

7. Purpose of the discipline: Training of a pediatrician who has a volume of knowledge, skills and practical skills that meets modern requirements for independent interpretation of laboratory diagnostic methods of research.

8. Objectives:


- consolidate skills in interpreting the results of modern laboratory and instrumental methods of examination and diagnosis in various diseases in children;
- increase knowledge on modern methods of examination of diseases in children;
- to teach the maintenance of current medical medical and accounting and reporting documentation in accordance with modern standards in pediatrics;
- to teach the conduct of sanitary and educational work among the population, the formation of a healthy lifestyle in modern conditions;
- the need for continuous professional training and improvement of their knowledge and skills throughout their professional activities.

9. Justification of the choice of discipline:

In the elective discipline "Clinical and laboratory diagnostics in pediatrics", a deeper and more complete mastery of the work of pediatricians is expected. The ability to interpret the results of laboratory functional research methods is necessary for a young specialist to make an accurate diagnosis and conduct a differential diagnosis.

10. Result of training (competence):

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)
Application: can apply his knowledge to problem solving in	Accuracy: demonstrates the ability to perform medical	Medical documentation: registration of medical documentation on the

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<p>a new or unfamiliar environment related to his field of study;</p> <ul style="list-style-type: none"> - appoint a plan of laboratory and instrumental methods of examination; - interpret the results of laboratory and instrumental methods of examination; - to provide assistance in case of complications. <p>Analysis: discusses, categorizes knowledge of biomedical, clinical, social and behavioral sciences in specialized practice</p> <ul style="list-style-type: none"> - Conduct a comprehensive assessment of the conducted laboratory and instrumental studies. <p>Rating: Assess the results of the CBC, OAM, biochemical blood tests, tank. research, scatology, CBS. Evaluate the indicators of peak flowmetry, ultrasound, radiography, computed tomography, MRI</p>	<p>procedures on dummies during OSKE.</p> <p>Articulation: accurately performs medical procedures on real or standardized patients.</p> <p>Gives value: relationships with patients and medical staff during medical procedures.</p> <p>Organization: independently organizes medical procedures according to the list of the internship profile.</p>	<p>profile of the specialty in accordance with the legislation in health care.</p>
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11. Prerequisites: biochemistry, biophysics, physiology.

12. Postrequisites: profile disciplines

13. References


Main literature:

1. Hittins K. - Deciphering clinical laboratory tests. Moscow. Bykom. Knowledge Lab. 2004, p.376 b.
2. Kamyshnikov V.S. "Clinical laboratory tests from A to Z and their diagnostic profiles". Moscow. Medpress-Inform. 2005
3. A.Yu. Vasiliev, E.B. Olkhov. Ultrasound diagnostics in emergency pediatric practice. Guide for doctors. GEOTAR. Media. 2010
4. M.K. Rybakov, V.V. Mitkov. Echocardiography in tables and diagrams. Desktop reference book. VIDAR. 2011.
5. M.I. Lykov. Ultrasound diagnostics in pediatrics. VIDAR 2007.
6. Clinical protocols of the Ministry of Health of the Republic of Kazakhstan.

Additional literature:

1. I.V. Dvoryakovskiy, G.V. Yatsyk. Ultrasonic diagnostics in neonatology. Publishing house "Atmosfera". 2009
2. Bazarbaeva A.A. Differential diagnosis of anemia in children: textbook.- Almaty, 2011.- 99 p.

Electronic resources (for example: video, audio, digests):

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2. Clinical guidelines for the pharmacotherapy of persistent pain in children and adolescents / Association of professional participants in hospice care, Russian Society of Pediatric Oncologists, Association of Pediatric Anesthesiologists and Resuscitators, National Society of Pediatric Oncologists of Russia - Moscow, 2016. - 33 p.

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6. medinfo.net
7. www.spasmex.ru
8. www.webmedinfo.ru
9. www.medicum.nnov.ru
10. medcompany.ru
11. meduniver.com
12. badis.narod.ru
13. studentdoctorprofessor.com.ua
14. www.med39.ru
15. www.kovostok.ru
16. www.drugme.ru
17. lepila.tyurem.net
18. top.medlinks.ru
19. doctor-doctor.ru
20. mepmed.ru

- 1. Department:** «Pediatrics-2»
- 2. Level of preparation:** Residency
- 3. Specialty:** 7R01130 «Pediatrics»
- 4. Course:** 2
- 5. The name of the elective discipline** «Clinical immunology and Allergology in hospital»
- 6. Number of credits:** 2

7. Purpose of the discipline: Training of highly qualified, competitive pediatricians who are able to meet the needs of society in providing medical care to sick children, apply and develop advanced innovative technologies in medicine, science and practice.

8. Objectives:

- to form clinical thinking and the ability to independently work with scientific literature on the discipline;
- develop the ability to analyze socio-biological, medico-social and epidemiological conditions and factors of the occurrence of diseases;
- to teach the resident the principles of diagnosis of diseases, reasonably prescribe laboratory, functional and instrumental methods of examination;

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- совершенствовать improve the skill of manual examination of the patient, palpation, percussion and auscultation;
- to develop the skill of interpreting the results of a paraclinical examination of the patient;
- обуч to teach the compilation of an algorithm for the differential diagnosis of diseases;
- to develop the skill of an informed choice of etiopathogenetic treatment;
- научить teach the basic principles of prevention;
- explain the application of legal documents regulating the activities of a pediatrician;
- improve interpersonal communication skills with colleagues, patients and their parents;
- to stimulate the resident's desire for self-development and self-improvement, the choice of a professional trajectory;
- to develop the skill of working with medical literature, the ability to analyze literary and Internet sources.

9. Justification of the choice of discipline:

In the elective discipline "Clinical immunology and Allergology in hospital", a deeper and more complete mastery of the work of future pediatricians is expected.


Clinical immunology in pediatric oncology studies the principles of immunotherapy of immunodeficiency states, modern methods of immunodiagnostics, modern aspects of stem cell transplantation.

Immunology is an artificial stimulation of the immune system for the treatment of cancer, helping the immune system to fight the disease in a natural way. This is a program of fundamental research in the field of cancer immunology and the developing specialization of oncology. Cancer immunotherapy consists in the fact that antibodies of proteins of the immune system can detect and bind to molecules located on the surface of tumor antigens of cancer cells.

The complex therapy started in a timely manner makes it possible to improve the further prognosis of childhood oncological diseases.

10. Result of training (competence):

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)
Application: Evaluation of studies, materials from professional literature on Clinical immunology and Allergology in hospital. Use international databases in your daily activities. Participate in the work of the research team; - readiness for abstract thinking, analysis, synthesis; - assign a plan of laboratory and instrumental methods of examination;	Accuracy: demonstrates the ability to perform medical procedures on dummies during an objective structured clinical examination. Articulation: accurately performs medical procedures on real or standardized patients. Affective Domain (Attitude/Behavior) Gives value: relationships with patients and medical staff during medical procedures. Organization: -independent organizes medical procedures according	Medical documentation: - readiness to identify pathological conditions, symptoms, disease syndromes, and nosological forms in newborns in accordance with the International Statistical Classification of Diseases and Health-related Problems; - medical documentation: registration of medical documentation for the specialty profile in

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<p>- interpret the results of laboratory and instrumental methods of examination;</p> <p>- provide assistance in case of complications.</p> <p>Analysis: discusses and categorizes the knowledge of biomedical, clinical, social and behavioral sciences in specialized practice</p> <p>- conducts a comprehensive assessment of laboratory and instrumental studies.</p> <p>Rating:</p> <p>- evaluate the results of UAC, OAM, biochemical blood tests, BAC. research, coprology, CBS.</p> <p>- appreciate the indicators of peak flowmetry, ultrasound, radiography, computed tomography, NMRI</p>	<p>to the list of the residency profile;</p> <p>-willingness to manage a team, to tolerate social, ethnic, religious and cultural differences.</p>	<p>accordance with the legislation in healthcare.</p>
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11. Prerequisites: Children's diseases in the hospital.


12. Postrequisites: profile disciplines

13. References

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1. Clinical immunology and allergology with the basics of general immunology [Electronic resource]: textbook / Kovalchuk L.V., Gankovskaya L.V., Meshkova R.Ya. - M. : GEOTAR-Media, 2012. - 640 p.: ill. Chapter 12
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2. Immunology [Electronic resource]: textbook / R. M. Khaitov. - 2nd ed., revised. and additional - M. : GEOTAR-Media, 2015. - 528 p. : ill. Chapters 10, 13.
<http://www.studmedlib.ru/book/ISBN9785970433454.html>
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4. Kovalchuk L.V., Gankovskaya L.V., Meshkova R.Ya. Clinical immunology and allergology with the basics of general immunology: a textbook.-- M.: GEOTAR-Media, 2014.—640p.
5. Immunology: workshop: textbook. allowance / Ed. L.V. Kovalchuk, G. A. Ignatieva, L. V. Gankovskaya. - M.: GEOTAR - Media, 2014. - 176 p.
6. Lantskovsky, F. Children's hematology and oncology: per. from English. / F. Lantskovsky. Moscow: Lori, 2005. 784 p.
7. Oncology [Electronic resource] / ed. ed. S. B. Peterson. - M. : GEOTARMedia, 2014.
8. Clinical protocols of the Ministry of Health of the Republic of Kazakhstan.

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5. Baldueva I.A., Nekhaeva T.L., Novik A.V., Danilova A.B., Pipia N.P., Shcherbakov A.M., Belyaev A.M. Antitumor vaccines based on dendritic cells // Priroda. 2018. No. 6 (1234). pp. 14-19.
6. Vorobyov S.V., Emelin A.Yu., Kuznetsova R.N., Kudryavtsev I.V. The role of the immune response in the pathogenesis of Alzheimer's disease and the possibility of anti-inflammatory therapy // Neurological Bulletin. 2020; T. LII (3): 55-62.
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9. Fundamentals of clinical immunology and allergology: textbook. allowance / ed. L.S. Namazova-Baranova, L.V. Gankovskaya, N.G. Astafieva - M.: Pediatr, 2016. - 152 p.
10. Khaitov R.M., Elisyutina O.G., Danilycheva I.V. Allergology and clinical immunology. Clinical guidelines. GEOTAR-Media, 2019. 352 p.

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1. Higgins, K. Decoding of clinical laboratory tests [Electronic resource]: monograph / K. Higgins; per. from English. E. K. Vishnevskaya. - 7th ed. -M. : Lab. knowledge, 2016. - 587 p. <http://elib.kaznu.kz/>
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3. <http://allergology.ru> - online medical journal for allergologists and immunologists;
4. <http://esid.org> – reference web page of the European Society of Immunodeficiencies.

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|-----------------------------------|-----------------------|
| 1. med-site.narod.ru | 14. www.med39.ru |
| 2. www.medicusamicus.com | 15. www.kovostok.ru |
| 3. www.medprof.ru | 16. www.drugme.ru |
| 4. www.rusmedserv.com/topsites/ | 17. lepila.tyurem.net |
| 5. www.doktor.ru. | 18. top.medlinks.ru |
| 6. medinfo.net | 19. doctor-doctor.ru |
| 7. www.spasmex.ru | 20. mepmed.ru |
| 8. www.webmedinfo.ru | |
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| 10. medcompany.ru | |
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- 1. Department:** «Pediatrics-2»
- 2. Level of preparation:** Residency
- 3. Specialty:** 7R01131 «Neonatology»
- 4. Course:** 2
- 5. The name of the elective discipline** «Clinical laboratory diagnostics in neonatology»
- 6. Number of credits:** 2

7. Purpose of the discipline: improving the quality of research, the use of modern equipment and new research methods that require highly qualified personnel and a modern approach to the automation of laboratory research in clinical and experimental medicine in connection with the rapid expansion of the range of biochemical and general clinical analyses and the volume of work of clinical and diagnostic laboratories for future neonatologists.


8. Objectives:

- study of the organizational foundations of the work of clinical and diagnostic laboratories;
- study of the metabolism of the newborn body in normal and pathological conditions;
- development of modern laboratory research methods;
- interpretation of the obtained research results on the basis of knowledge of the theoretical foundations;

9. Justification of the choice of discipline: In the elective discipline "Clinical laboratory diagnostics in neonatology", a deeper and more complete mastering of the work of future neonatologists is expected. The ability to interpret the results of laboratory functional research methods is necessary for a young specialist to make an accurate diagnosis and conduct a differential diagnosis.

10. Result of training (competence):

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)
<p>Application: can apply his knowledge when solving a problem in a new or unfamiliar environment related to his field of study;</p> <ul style="list-style-type: none"> - readiness for abstract thinking, analysis, synthesis; - assign a plan of laboratory and instrumental methods of examination; - interpret the results of laboratory and instrumental methods of examination; - provide assistance in case of complications. <p>Analysis: discusses and categorizes the knowledge of biomedical, clinical, social and behavioral sciences in specialized practice</p>	<p>Accuracy: demonstrates the ability to perform medical procedures on dummies during an objective structured clinical examination.</p> <p>Articulation: accurately performs medical procedures on real or standardized patients.</p> <p>Affective Domain (Attitude/Behavior)</p> <p>Gives value: relationships with patients and medical staff during medical procedures.</p> <p>Organization:</p> <ul style="list-style-type: none"> -independent organizes medical procedures according to the list of the residency profile; -willingness to manage a team, to tolerate social, ethnic, 	<p>Medical documentation: - readiness to identify pathological conditions, symptoms, disease syndromes, and nosological forms in newborns in accordance with the International Statistical Classification of Diseases and Health-related Problems;</p> <ul style="list-style-type: none"> - medical documentation: registration of medical documentation for the specialty profile in accordance with the legislation in healthcare.

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- conducts a comprehensive assessment of laboratory and instrumental studies. Rating: - evaluate the results of UAC, OAM, biochemical blood tests, BAC. research, coprology, CBS. - appreciate the indicators of peak flowmetry, ultrasound, radiography, computed tomography, NMRI	religious and cultural differences.	
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11. Prerequisites: Neonatology in the hospital.

12. Postrequisites: profile disciplines

13. References

Main literature:

1. Kukshin A. A. Clinical laboratory diagnostics [Elektr, Res.]: study.manual / A. A. Kukshin, - M.: GEOTAR-Media, 2015. - 976s.: pl, - Access from the EBS " Student Consultant»
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5. M. I. Lykov. Ultrasound diagnostics in pediatrics. VIDAR 2017.
6. Clinical protocols of the Ministry of Health of the Republic of Kazakhstan.


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2. Bazarbaeva A. A. Differential diagnosis of anemia in children: a textbook.- Almaty, 2011. - 99 p.
3. Kishkun A. A. Manual of laboratory diagnostic methods / A. A. Kishkun. - 2nd ed., reprint. and additional-M.: GEOTAR-Media, 2014. - 760 p.
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5. Makarenko Yu. M. Laboratory diagnostics. Biochemical research / Yu. M. Makarenko, N. S. Sidorenko. - Rostov n/A: NAUKA, 2013. - 48 p.

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2. Clinical guidelines for the pharmacotherapy of persistent pain in children and adolescents / Association of professional participants in hospice care, Russian Society of Pediatric Oncologists, Association of Pediatric Anesthesiologists and Resuscitators, National Society of Pediatric Oncologists of Russia - Moscow, 2016. - 33 p.

Medical sites

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13. studentdoctorprofessor.com.ua
14. www.med39.ru
15. www.kovostok.ru
16. www.drugme.ru
17. lepila.tyurem.net
18. top.medlinks.ru
19. doctor-doctor.ru
20. mepmed.ru

- 1. Department:** «Pediatrics-2»
- 2. Level of preparation:** Residency
- 3. Specialty:** 7R01131 «Neonatology»
- 4. Course:** 2
- 5. The name of the elective discipline** «Clinical pharmacology in neonatology»
- 6. Number of credits:** 2

7. Purpose of the discipline: the purpose of mastering the discipline is to form professional competencies among resident neonatologists aimed at developing the ability to present a complete system of theoretical foundations of clinical pharmacology; factors that contribute to changes in metabolism, the effects of drugs that increase the risk of side effects, and the willingness to organize high-quality pharmacotherapy and full-fledged drug provision for newborns.

8. Objectives:


- formation of scientific knowledge about the general patterns and specific mechanisms of the occurrence, development, main manifestations and outcomes of diseases in newborns;
- осво master special knowledge and skills in the field of clinical pharmacology;
- диагност diagnose diseases and emergency conditions in newborns in accordance with the International Statistical Classification of Diseases and Health-Related Problems;
- научить teach to justify the use of pathogenetically based drug therapy;
- formation of ideas about the mechanism of action, pharmacokinetics, pharmacodynamics, side effects, indications and contraindications, dosage regimen of drugs in neonatology;
- to justify pharmacotherapy in a particular patient, to determine the route of administration, regimen and dose of drugs, to evaluate the effectiveness and safety of treatment for various diseases in newborns;
- обуч train the management of accounting records in medical organizations at all stages of providing medical care to newborns;

- совершенствовать improve the methodology in working with patients and their relatives, medical personnel, educating doctors with proper deontological and ethical principles and skills;
- to participate in the solution of individual research and scientific-applied tasks for the development of new methods of prevention, diagnosis, treatment in neonatology.

9. Justification of the choice of discipline: In the elective discipline "Clinical Pharmacology in Neonatology", a deeper and more complete development of the work of future neonatologists is expected. The process of studying the discipline is aimed at forming the readiness of a specialist who has acquired knowledge in the field of clinical pharmacology, to improve the conduct of individual pharmacotherapy, including in the specialty of neonatology, to contribute to the prevention, timely detection and treatment of side effects of drugs, to ensure more appropriate preparation of applications for medicines and to monitor the correctness of their use.

10. Result of training (competence):

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)
<p>Application:</p> <ul style="list-style-type: none"> - pharmacodynamics, pharmacokinetics, pharmacogenetics and their significance in assessing the effectiveness and safety of treatment; - metabolism and interaction, monitoring of side effects of drugs, basic principles of drug testing; - computer science, the study of computer information and search systems for clinical pharmacology, the development of a pharmacological form of a medical institution, the principles of pharmacotherapy and clinical pharmacology of medicines for diseases of the cardiovascular, bronchopulmonary system, drugs used in neonatology and in emergency conditions, anti-inflammatory and antimicrobial drugs used in neonatology for infectious diseases; - principles of pharmacotherapy and clinical pharmacology of drugs that regulate the function of hemostasis, urinary system, diseases of the digestive system and pathology of the nervous 	<p>Accuracy: demonstrates the ability to perform medical procedures on dummies during an objective structured clinical examination.</p> <p>Articulation: accurately performs medical procedures on real or standardized patients.</p> <p>Affective Domain (Attitude/Behavior)</p> <p>Gives value: relationships with patients and medical staff during medical procedures.</p> <p>Organization:</p> <ul style="list-style-type: none"> -independent organizes medical procedures according to the list of the residency profile; -willingness to manage a team, to tolerate social, ethnic, religious and cultural differences. 	<p>Medical documentation:</p> <ul style="list-style-type: none"> - readiness to identify pathological conditions, symptoms, disease syndromes, and nosological forms in newborns in accordance with the International Statistical Classification of Diseases and Health-related Problems. - Medical documentation: registration of medical documentation on the specialty profile in accordance with the legislation in healthcare.

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system in newborns.		
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11. Prerequisites: Neonatology in the hospital.

12. Postrequisites: profile disciplines

13. References

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2. Petrov V. I. Clinical pharmacology and pharmacotherapy in real practice [Electronic resource]: master class: textbook / V. Petrov, I. - M. : GEOTAR-Media, 2015. - Access mode: <http://www.studentlibrary.ru>
3. Rational antimicrobial therapy [Electronic resource]: a guide for practicing physicians / ed. by S. V. Yakovlev. - 2nd ed., reprint. and add. - M.: Litterra, 2015. - (Rational pharmacotherapy). - Access mode: <http://www.studentlibrary.ru>
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2. Doctor's consultant. Electronic medical library: EBS. - Moscow: LLC GK "GEOTAR". - URL: <http://www.rosmedlib.ru>
3. Web of Science / Clarivate Analytics. - URL: <http://apps.webofknowledge.com> (Naitoekt).
5. Scientific electronic library - URL: elibrary.ru

Medical sites:

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4. www.rusmedserv.com/topsites/
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7. www.spasmex.ru
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19. doctor-doctor.ru
20. mepmed.ru

- 1. Department:** «Pediatrics-2»
- 2. Level of preparation:** Residency
- 3. Specialty:** 7R01130 «Pediatrics»
- 4. Course:** 2
- 5. The name of the elective discipline** «Functional diagnostics in Pediatrics»
- 6. Number of credits:** 2

7. Purpose of the discipline: Formation and consolidation of deep knowledge, skills and abilities of residents in industrial, scientific and pedagogical practice for conducting research work of residents in the specialty «Pediatrics».

8. Objectives:

- Consolidation of practical skills and theoretical foundations of functional diagnostics in cases often encountered in pediatric cardiology, pulmonology, neurology;
- adoption of specialized decisions based on the principles of evidence-based medicine;
- mastering communication skills in relationships with patients and colleagues;
- formation of a moral and ethical culture, which is supported during the observation and examination of patients;
- development of practical values, principles of altruism, mercy, responsibility, honesty and confidentiality;
- formation of leadership qualities and ability to work in a group;
- ability to independently work with scientific literature on the topic and form clinical thinking;
- formation of the ability to analyze socio-biological, medico-social and epidemiological conditions and factors of diseases;
- appointment of laboratory, functional and instrumental methods of examination;
- develop the ability to work with medical literature, the ability to analyze literary and Internet sources;
- ability to independently work with scientific literature on the topic and form clinical thinking;

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- development of the ability to analyze socio-biological, medical-social and epidemiological conditions and factors of diseases;
- teaching the intern the principles of diagnosing diseases, prescribing methods of laboratory, functional and instrumental examination;
- Improving the skills of manual examination of the patient, palpation, percussion and auscultation;
- development of the ability to interpret the results of paraclinical examination of the patient;
- to teach how to draw up an algorithm for the differential diagnosis of diseases;
- development of the ability to choose the right etiopathogenetic treatment;
- teach the basic principles of prevention;
- explain the application of legal acts regulating the activities of a pediatrician;
- Improving communication skills with colleagues, patients and their parents;
- to stimulate the desire of the resident for self-development and self-improvement, for the choice of a professional trajectory;

9. Justification of the choice of discipline: In the elective discipline «Functional diagnostics in Pediatrics», a deeper and more complete mastering of the work of future pediatric oncohematologists is expected.

The work program of the topic included the main sections of topical problems of functional diagnostics in pediatrics: indications, contraindications for functional diagnostics in children of different ages, functional diagnostics and interpretation of research results, functional diagnostics in congenital heart defects. Daily blood pressure monitoring. The method of spirographic research in children. Diagnosis of hyperactivity of the lungs in children and adolescents. Theoretical foundations of clinical physiology of the cardiovascular system. The structure of the conduction system of the heart. ECG parameters for rhythm disturbances in children. Normal ECG parameters. The mechanism of development of rhythm disturbances. Ultrasound of the heart. Physical and technical bases of echocardiogram, echocardiogram method. Echocardiography in various pathologies of the heart. Ultrasound diagnosis of diseases of the thyroid gland, diseases of the abdominal cavity. Electroencephalography. echoencephalography. Electromyography.

10. Result of training (competence):

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)
<p>Application: Evaluation of studies, materials from professional literature on functional diagnostics in pediatrics. Participate in the work of the research team;</p> <ul style="list-style-type: none"> - readiness for abstract thinking, analysis, synthesis; - assign a plan of laboratory and instrumental methods of examination; - interpret the results of laboratory and instrumental methods of examination; 	<p>Accuracy: demonstrates the ability to perform medical procedures on dummies during an objective structured clinical examination.</p> <p>Articulation: accurately performs medical procedures on real or standardized patients.</p> <p>Affective Domain (Attitude/Behavior)</p> <p>Gives value: relationships with patients and medical staff during medical procedures.</p> <p>Organization:</p>	<p>Medical documentation:</p> <ul style="list-style-type: none"> - readiness to identify pathological conditions, symptoms, disease syndromes, and nosological forms in newborns in accordance with the International Statistical Classification of Diseases and Health-related Problems; - medical documentation: registration of medical documentation for the

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<p>- provide assistance in case of complications.</p> <p>Analysis: discusses and categorizes the knowledge of biomedical, clinical, social and behavioral sciences in specialized practice</p> <p>- conducts a comprehensive assessment of laboratory and instrumental studies.</p> <p>Rating:</p> <p>- evaluate the results of UAC, OAM, biochemical blood tests, BAC. research, coprology, CBS.</p> <p>- appreciate the indicators of peak flowmetry, ultrasound, radiography, computed tomography, NMRI</p>	<p>-independent organizes medical procedures according to the list of the residency profile;</p> <p>-willingness to manage a team, to tolerate social, ethnic, religious and cultural differences.</p>	<p>specialty profile in accordance with the legislation in healthcare.</p>
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11. Prerequisites: Children's diseases in the hospital.

12. Postrequisites: profile disciplines


13. References

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1. Functional diagnostics in cardiology [Electronic resource]: in two volumes / under ed. L.A. Bokeria [i dr.]. - M.: Publishing house of the NCSSH them. Bakuleva RAMS, 2005. - G. 1. - 296 p. - Access from EBS "Physician's Consultant. EMB".
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10. Yu.M. Belozarov. Children's cardiology / - M.: "MED press-inform", 2004. - 590 p.
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13. Oskolkova M.K., Kupryanova O.O. Electrocardiography in children - M.: Medicine, 2006.
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2. Doctor's consultant. Electronic medical library: EBS. - Moscow: LLC GK "GEOTAR". - URL: <http://www.rosmedlib.ru>
3. Web of Science / Clarivate Analytics. - URL: <http://apps.webofknowledge.com> (Naitoekt).
5. Scientific electronic library - URL: elibrary.ru

Medical sites:

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| 2. www.medicusamicus.com | |
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| 11. meduniver.com | |
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| 13. studentdoctorprofessor.com.ua | |
| 14. www.med39.ru | |
| 15. www.kovostok.ru | |
| 16. www.drugme.ru | |
| 17. lepila.tyurem.net | |
| 18. top.medlinks.ru | |
| 19. doctor-doctor.ru | |



1. Department: «Pediatrics-2»

2. Level of preparation: Residency

3. Specialty: 7R01106 «Children's oncology and hematology»

4. Course: 2

5. The name of the elective discipline «Palliative pediatric oncology»

6. Number of credits: 2

7. Purpose of the discipline: The purpose of mastering the discipline "Palliative Care in Pediatric Oncology" is to develop the ability and readiness to solve professional problems aimed at providing timely and high-quality palliative care to children with oncological diseases.

8. Objectives:

to form knowledge of the theoretical foundations of palliative care for children with incurable conditions in pediatric oncology;

to form the skills and abilities of full-fledged high-quality and timely palliative care for malignant neoplasms in children;

to form the skills of continuity in the provision of palliative care for malignant neoplasms in children;

to form a stable skill in providing palliative care to patients with chronic pain syndrome in pediatric oncology.

improve interpersonal communication skills with colleagues, patients and their parents;

stimulate the resident's desire for self-development and self-improvement, the choice of a professional trajectory;

develop the skill of working with medical literature, the ability to analyze literary and Internet sources.

9. Justification of the choice of discipline:

In the elective discipline "Palliative pediatric oncology", a deeper and more complete mastering of the work of future pediatric oncogematologists is expected.

Palliative pediatric oncology studies the ethical, psychosocial and organizational aspects of palliative care for children. Providing palliative and symptomatic care for tumors in children. Modern principles of radical and palliative treatment of sick children with malignant tumors. Symptom control and crisis situations in palliative care for children.

10. Result of training (competence):

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)
<p>Application: Evaluation of studies, materials from professional literature on pediatric oncology and hematology. Use international databases in your daily activities. Participate in the work of the research team;</p> <p>- readiness for abstract thinking, analysis, synthesis;</p> <p>- assign a plan of laboratory and instrumental methods of examination;</p>	<p>Accuracy: demonstrates the ability to perform medical procedures on dummies during an objective structured clinical examination.</p> <p>Articulation: accurately performs medical procedures on real or standardized patients.</p> <p>Affective Domain (Attitude/Behavior)</p> <p>Gives value: relationships with patients and medical staff during medical procedures.</p>	<p>- readiness to identify pathological conditions, symptoms, disease syndromes, and nosological forms in newborns in accordance with the International Statistical Classification of Diseases and Health-related Problems;</p> <p>- medical documentation: registration of medical documentation for the</p>



<p>- interpret the results of laboratory and instrumental methods of examination;</p> <p>- provide assistance in case of complications.</p> <p>Analysis: discusses and categorizes the knowledge of biomedical, clinical, social and behavioral sciences in specialized practice</p> <p>- conducts a comprehensive assessment of laboratory and instrumental studies.</p> <p>Rating:</p> <p>- evaluate the results of UAC, OAM, biochemical blood tests, BAC. research, coprology, CBS.</p> <p>- appreciate the indicators of peak flowmetry, ultrasound, radiography, computed tomography, NMRI</p>	<p>Organization:</p> <p>-independent organizes medical procedures according to the list of the residency profile;</p> <p>-willingness to manage a team, to tolerate social, ethnic, religious and cultural differences.</p>	<p>specialty profile in accordance with the legislation in healthcare.</p>
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11. Prerequisites: Children's diseases in General medical practice.

12. Postrequisites: profile disciplines

13. References

Main literature:

1. Pediatric oncology. National leadership: hands. / ed. M. D. Aliev, V. G. Polyakov, G. L. Mentkevich and others; FSBI "N.N. Blokhin Russian Cancer Research Center" RAMS; Research Institute of Pediatric Oncology and Hematology. - M.: Publishing house. RONTs group, 2012. - 684 p.
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3. Oncology. Tests with visualization elements: a tutorial / Cherenkov V.G. - Moscow: GEOTAR-Media, 2017 - 240 p.
4. Symptom control in palliative medicine / edited by G. A. Novikov. - Moscow: GEOTAR-Media, 2013. - 248 p.
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3. Symptom control in palliative care. Ed. Novikova G.A. - M. : GEOTAR-Media, 2019. - 248 p.



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5. Ponkina, A.A. Legal regulation of palliative care. / Ponkina A.A., Ponkin I.V. - M. : GEOTAR-Media, 2019. - 176 p.

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8. Clinical manifestations of oncological diseases in children / ed. V.G. Polyakova, M.Yu. Rykov - St. Petersburg. : Printing house of Mikhail Fursov, 2017. - 52 p.

9. Abisatov H.A. Clinical oncology: textbook. - Almaty: publishing house "Arys", 2007. - Т. II. – 640 p.


Electronic resources (for example: video, audio, digests):

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2. Clinical guidelines for the pharmacotherapy of persistent pain in children and adolescents / Association of professional participants in hospice care, Russian Society of Pediatric Oncologists, Association of Pediatric Anesthesiologists and Resuscitators, National Society of Pediatric Oncologists of Russia - Moscow, 2016. - 33 p.

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- 1. Department:** «Pediatrics-2»
- 2. Level of preparation:** Residency
- 3. Specialty:** 7R01106 «Oncology and hematology for children»
- 4. Course:** 2
- 5. The name of the elective discipline:** «Clinical Immunology in Pediatric Oncology»
- 6. Number of credits:** 2

7. Purpose of the discipline: Training of highly qualified, competitive pediatric oncologists and hematologists who are able to meet the needs of society in providing medical care to oncological and hematological sick children, apply and develop advanced innovative technologies in medicine, science and practice.

Pathomorphology of hemoblastoses in children. Lymphomas. Pathomorphological diagnosis of lymphoid tumors. Pathomorphology of tumors of the central nervous system. Acute lymphoblastic leukemia. Solid tumors. Clinical and pathoanatomic approaches to the lifetime diagnosis of tumors. Methodology of research in pathomorphology of malignant tumors.

8. Objectives:


- to form clinical thinking and the ability to independently work with scientific literature on the discipline;
- develop the ability to analyze socio-biological, medico-social and epidemiological conditions and factors of the occurrence of diseases;
- to teach the resident the principles of diagnosis of diseases, reasonably prescribe laboratory, functional and instrumental methods of examination;
- совершенствовать improve the skill of manual examination of the patient, palpation, percussion and auscultation;
- to develop the skill of interpreting the results of a paraclinical examination of the patient;
- обуч to teach the compilation of an algorithm for the differential diagnosis of diseases;
- to develop the skill of an informed choice of etiopathogenetic treatment;
- научить teach the basic principles of prevention;
- разъяс explain the application of legal documents regulating the activities of a pediatric hematologist, a pediatric oncologist;
- improve interpersonal communication skills with colleagues, patients and their parents;
- to stimulate the resident's desire for self-development and self-improvement, the choice of a professional trajectory;
- to develop the skill of working with medical literature, the ability to analyze literary and Internet sources.

9. Justification of the choice of discipline:

In the elective discipline "Clinical immunology in pediatric oncology", a deeper and more complete mastering of the work of future pediatric oncogematologists is expected.

Clinical immunology in pediatric oncology studies the principles of immunotherapy of immunodeficiency states, modern methods of immunodiagnostics, modern aspects of stem cell transplantation.

Immuno-oncology is an artificial stimulation of the immune system for the treatment of cancer, helping the immune system to fight the disease in a natural way. This is a program of fundamental research in the field of cancer immunology and the developing specialization of oncology. Cancer immunotherapy consists in the fact that antibodies of proteins of the immune system can detect and bind to molecules located on the surface of tumor antigens of cancer cells.

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The complex therapy started in a timely manner makes it possible to improve the further prognosis of childhood oncological diseases.


10. Result of training (competence):

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)
<p>Application: Evaluation of studies, materials from professional literature on pediatric oncology and hematology. Use international databases in your daily activities. Participate in the work of the research team;</p> <ul style="list-style-type: none"> - readiness for abstract thinking, analysis, synthesis; - assign a plan of laboratory and instrumental methods of examination; - interpret the results of laboratory and instrumental methods of examination; - provide assistance in case of complications. <p>Analysis: discusses and categorizes the knowledge of biomedical, clinical, social and behavioral sciences in specialized practice</p> <ul style="list-style-type: none"> - conducts a comprehensive assessment of laboratory and instrumental studies. <p>Rating:</p> <ul style="list-style-type: none"> - evaluate the results of UAC, OAM, biochemical blood tests, BAC. research, coprology, CBS. - appreciate the indicators of peak flowmetry, ultrasound, radiography, computed tomography, NMRI 	<p>Accuracy: demonstrates the ability to perform medical procedures on dummies during an objective structured clinical examination.</p> <p>Articulation: accurately performs medical procedures on real or standardized patients.</p> <p>Affective Domain (Attitude/Behavior)</p> <p>Gives value: relationships with patients and medical staff during medical procedures.</p> <p>Organization:</p> <ul style="list-style-type: none"> -independent organizes medical procedures according to the list of the residency profile; -willingness to manage a team, to tolerate social, ethnic, religious and cultural differences. 	<ul style="list-style-type: none"> - readiness to identify pathological conditions, symptoms, disease syndromes, and nosological forms in newborns in accordance with the International Statistical Classification of Diseases and Health-related Problems; - medical documentation: registration of medical documentation for the specialty profile in accordance with the legislation in healthcare.

11. Prerequisites: Children's diseases in General medical practice.

12. Postrequisites: profile disciplines

13. References

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Main literature:

1. Pediatric oncology: nat. management / FSBI «Russian Cancer Research Center im. N. N. Blokhin RAMS», Research Institute of Pediatric Oncology and Hematology / M. D. Aliev [and others]; ed. M. D. Alieva. Moscow: RONTs "Practical Medicine", 2012. S. 377–399.
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3. Immunology: workshop: textbook. allowance / Ed. L.V. Kovalchuk, G. A. Ignatieva, L. V. Gankovskaya. - M.: GEOTAR - Media, 2014. - 176 p.
4. Lantskovsky, F. Children's hematology and oncology: per. from English. / F. Lantskovsky. Moscow: Lori, 2005. 784 p.
5. Oncology [Electronic resource] / ed. ed. S. B. Peterson. - M. : GEOTARMedia, 2014.
6. Clinical protocols of the Ministry of Health of the Republic of Kazakhstan.


Additional literature:

1. Kovalchuk L.V., Gankovskaya L.V., Meshkova R.Ya. Clinical immunology and allergology with the basics of general immunology: textbook.-- M.: GEOTAR-Media, 2014.—640p.
2. Immunology: workshop: textbook. allowance / Ed. L.V. Kovalchuk, G. A. Ignatieva, L. V. Gankovskaya. - M.: GEOTAR - Media, 2014. - 176 p.
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5. Baldueva I.A., Nekhaeva T.L., Novik A.V., Danilova A.B., Pipia N.P., Shcherbakov A.M., Belyaev A.M. Antitumor vaccines based on dendritic cells // Priroda. 2018. No. 6 (1234). pp. 14-19.
6. Vorobyov S.V., Emelin A.Yu., Kuznetsova R.N., Kudryavtsev I.V. The role of the immune response in the pathogenesis of Alzheimer's disease and the possibility of anti-inflammatory therapy // Neurological Bulletin. 2020; T. LII (3): 55-62.
7. Kadagidze Z.G., Chertkova A.I., Zabolotina T.N., Korotkova O.V., Slavina E.G., Borunova A.A. New possibilities of regulation of the antitumor immune response // Malignant tumors. 2015. No. 1 (12). pp. 24-30.
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9. Fundamentals of clinical immunology and allergology: textbook. allowance / ed. L.S. Namazova-Baranova, L.V. Gankovskaya, N.G. Astafieva - M.: Pediatr, 2016. - 152 p.
10. Khaitov R.M., Elisyutina O.G., Danilycheva I.V. Allergology and clinical immunology. Clinical guidelines. GEOTAR-Media, 2019. 352 p.

Electronic resources (for example: video, audio, digests):

1. Higgins, K. Decoding of clinical laboratory analyses [Electronic resource] : monograph / K. Higgins ; translated from English by E. K. Vishnevskaya. - 7th ed. -Moscow : Knowledge Lab, 2016. - 587 p. <http://elib.kaznu.kz/>
2. Welsher, L. Z. Clinical oncology : selected lectures : [studies. manual for medical universities] / L. Z. Welsher, B. I. Polyakov, S. B. Peterson. - M. : GEOTAR-Media, 2019.

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1. med-site.narod.ru
2. www.medicusamicus.com
3. www.medprof.ru
4. www.rusmedserv.com/topsites/
5. www.doktor.ru.
6. medinfo.net
7. www.spasmex.ru
8. www.webmedinfo.ru
9. www.medicum.nnov.ru
10. medcompany.ru
11. meduniver.com
12. badis.narod.ru
13. studentdoctorprofessor.com.ua
14. www.med39.ru
15. www.kovostok.ru
16. www.drugme.ru
17. lepila.tyurem.net
18. top.medlinks.ru
19. doctor-doctor.ru
20. mepmed.ru

- 1. Department:** «Pediatrics-2»
- 2. Level of preparation:** Residency
- 3. Specialty:** 7R01130 «Pediatrics»
- 4. Course:** 2
- 5. The name of the elective discipline** «Clinical immunology and Allergology in hospital»
- 6. Number of credits:** 2

7. Purpose of the discipline: Training of highly qualified, competitive pediatricians who are able to meet the needs of society in providing medical care to sick children, apply and develop advanced innovative technologies in medicine, science and practice.

8. Objectives:

- to form clinical thinking and the ability to independently work with scientific literature on the discipline;
- develop the ability to analyze socio-biological, medico-social and epidemiological conditions and factors of the occurrence of diseases;
- to teach the resident the principles of diagnosis of diseases, reasonably prescribe laboratory, functional and instrumental methods of examination;
- совершенствовать improve the skill of manual examination of the patient, palpation, percussion and auscultation;
- to develop the skill of interpreting the results of a paraclinical examination of the patient;
- обуч to teach the compilation of an algorithm for the differential diagnosis of diseases;
- to develop the skill of an informed choice of etiopathogenetic treatment;
- научить teach the basic principles of prevention;
- explain the application of legal documents regulating the activities of a pediatrician;
- improve interpersonal communication skills with colleagues, patients and their parents;
- to stimulate the resident's desire for self-development and self-improvement, the choice of a professional trajectory;

- to develop the skill of working with medical literature, the ability to analyze literary and Internet sources.

9. Justification of the choice of discipline:

In the elective discipline "Clinical immunology and Allergology in hospital", a deeper and more complete mastery of the work of future pediatricians is expected.


Clinical immunology in pediatric oncology studies the principles of immunotherapy of immunodeficiency states, modern methods of immunodiagnostics, modern aspects of stem cell transplantation.

Immunology is an artificial stimulation of the immune system for the treatment of cancer, helping the immune system to fight the disease in a natural way. This is a program of fundamental research in the field of cancer immunology and the developing specialization of oncology. Cancer immunotherapy consists in the fact that antibodies of proteins of the immune system can detect and bind to molecules located on the surface of tumor antigens of cancer cells.

The complex therapy started in a timely manner makes it possible to improve the further prognosis of childhood oncological diseases.

10. Result of training (competence):

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)
<p>Application:</p> <p>Evaluation of studies, materials from professional literature on Clinical immunology and Allergology in hospital. Use international databases in your daily activities. Participate in the work of the research team;</p> <ul style="list-style-type: none"> - readiness for abstract thinking, analysis, synthesis; - assign a plan of laboratory and instrumental methods of examination; - interpret the results of laboratory and instrumental methods of examination; - provide assistance in case of complications. <p>Analysis: discusses and categorizes the knowledge of biomedical, clinical, social and behavioral sciences in specialized practice</p>	<p>Accuracy: demonstrates the ability to perform medical procedures on dummies during an objective structured clinical examination.</p> <p>Articulation: accurately performs medical procedures on real or standardized patients.</p> <p>Affective Domain (Attitude/Behavior)</p> <p>Gives value: relationships with patients and medical staff during medical procedures.</p> <p>Organization:</p> <ul style="list-style-type: none"> -independent organizes medical procedures according to the list of the residency profile; -willingness to manage a team, to tolerate social, ethnic, religious and cultural differences. 	<p>Medical documentation:</p> <ul style="list-style-type: none"> - readiness to identify pathological conditions, symptoms, disease syndromes, and nosological forms in newborns in accordance with the International Statistical Classification of Diseases and Health-related Problems; - medical documentation: registration of medical documentation for the specialty profile in accordance with the legislation in healthcare.

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- conducts a comprehensive assessment of laboratory and instrumental studies. Rating: - evaluate the results of UAC, OAM, biochemical blood tests, BAC. research, coprology, CBS. - appreciate the indicators of peak flowmetry, ultrasound, radiography, computed tomography, NMRI		
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11. Prerequisites: Children's diseases in the hospital.

12. Postrequisites: profile disciplines


13. References

Main literature:

1. Clinical immunology and allergology with the basics of general immunology [Electronic resource]: textbook / Kovalchuk L.V., Gankovskaya L.V., Meshkova R.Ya. - M. : GEOTAR-Media, 2012. - 640 p.: ill. Chapter 12
<http://www.studmedlib.ru/book/ISBN9785970422410.html>
2. Immunology [Electronic resource]: textbook / R. M. Khaitov. - 2nd ed., revised. and additional - M. : GEOTAR-Media, 2015. - 528 p. : ill. Chapters 10, 13.
<http://www.studmedlib.ru/book/ISBN9785970433454.html>
3. Clinical immunology and allergology with the basics of general immunology [Text]: [proc. for universities] / L. V. Kovalchuk, L. V. Gankovskaya, R. Ya. Meshkova. - M. : GEOTAR-Media, 2012.
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6. Lantskovsky, F. Children's hematology and oncology: per. from English. / F. Lantskovsky. Moscow: Lori, 2005. 784 p.
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Additional literature:

1. Immunology. Atlas [Electronic resource]: textbook / Khaitov R.M., Yarilin A.A., Pinegin B.V. - M. : GEOTAR-Media, 2011. - 624 p.: ill. Chapter 2.
<http://www.studmedlib.ru/book/ISBN9785970418581.html>
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3. Immunotherapy. Guide for doctors. Ed. Khaitova R.M. and Ataulakhanov R.I. M.: GEOTAR-Media, 2014—672 p.
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5. Baldueva I.A., Nekhaeva T.L., Novik A.V., Danilova A.B., Pipia N.P., Shcherbakov A.M., Belyaev A.M. Antitumor vaccines based on dendritic cells // Priroda. 2018. No. 6 (1234). pp. 14-19.
6. Vorobyov S.V., Emelin A.Yu., Kuznetsova R.N., Kudryavtsev I.V. The role of the immune response in the pathogenesis of Alzheimer's disease and the possibility of anti-inflammatory therapy // Neurological Bulletin. 2020; T. LII (3): 55-62.
7. Kadagidze Z.G., Chertkova A.I., Zabolina T.N., Korotkova O.V., Slavina E.G., Borunova A.A. New possibilities of regulation of the antitumor immune response // Malignant tumors. 2015. No. 1 (12). pp. 24-30.
8. Novikov D.K. Clinical immunology and allergology: textbook /D. K. Novikov, P. D. Novikov, N. D. Titova. - Minsk: Higher School, 2019. - 495 p.
9. Fundamentals of clinical immunology and allergology: textbook. allowance / ed. L.S. Namazova-Baranova, L.V. Gankovskaya, N.G. Astafieva - M.: Pediatr, 2016. - 152 p.
10. Khaitov R.M., Elisyutina O.G., Danilycheva I.V. Allergology and clinical immunology. Clinical guidelines. GEOTAR-Media, 2019. 352 p.

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1. Higgins, K. Decoding of clinical laboratory tests [Electronic resource]: monograph / K. Higgins; per. from English. E. K. Vishnevskaya. - 7th ed. -M. : Lab. knowledge, 2016. - 587 p. <http://elib.kaznu.kz/>
2. Welsher, L. Z. Clinical oncology: fav. lectures: [proc. manual for medical universities] / L. Z. Velsher, B. I. Polyakov, S. B. Peterson. - M. : GEOTAR-Media, 2019.
3. <http://allergology.ru> - online medical journal for allergologists and immunologists;
4. <http://esid.org> – reference web page of the European Society of Immunodeficiencies.

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1. med-site.narod.ru
2. www.medicusamicus.com
3. www.medprof.ru
4. www.rusmedserv.com/topsites/
5. www.doktor.ru.
6. medinfo.net
7. www.spasmex.ru
8. www.webmedinfo.ru
9. www.medicum.nnov.ru
10. medcompany.ru
11. meduniver.com
12. badis.narod.ru
13. studentdoctorprofessor.com.ua
14. www.med39.ru
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17. lepila.tyurem.net
18. top.medlinks.ru
19. doctor-doctor.ru
20. mepmed.ru

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1. Department of Neurology, Psychiatry, Rehabilitology and Neurosurgery

2. Residency

3. **Educational program:** "Physical medicine and rehabilitation for adults, children"

4.2 course

5. **Discipline:** "Medical rehabilitation of patients with respiratory diseases"

6. **Number of credits:** 4 credits

7. **The purpose of the discipline:** mastering the skills of medical and preventive measures aimed at restoring patients with pulmonary pathology.

8. Tasks:


- Train residents to diagnose a rehabilitation diagnosis according to the ICF based on clinical manifestations
- to train residents-rehabilitators, professional skills in rehabilitation, ready for independent professional activity
- Train residents to provide all methods of rehabilitation measures, as well as qualified medical care in case of emergency.
- Train residents to prescribe adequate differentiated treatment at various stages of rehabilitation.

9. **Rationale for the choice of discipline:** "Medical rehabilitation of patients with respiratory diseases" therapeutic and preventive measures aimed at restoring patients with respiratory diseases. This aspect of rehabilitation is associated with therapeutic measures throughout the entire observation of the patient, and is carried out by the rehabilitation doctor of all health facilities. The urgency of this problem is increasing every year: if over the past decades, overall mortality and mortality from cardiovascular diseases has been declining, then mortality from COPD has increased by 28%.

Physical rehabilitation includes the appointment of various means of physical rehabilitation (exercise therapy, various types of massage, ergotherapy, physiotherapy, preformed and natural factors). This discipline involves a more in-depth study of modern rehabilitation measures and methods of additional research aimed at the rehabilitation of patients with respiratory diseases (adults and children),

10. Learning Outcomes

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Skills & Abilities (psychomotor sphere)
Knows the issues of organizing rehabilitation, inpatient care for the adult population in need of rehabilitation. Knows anatomy and topographic anatomy, radiology. Knows the main issues of normal and pathological physiology of the respiratory system. He has an understanding of the etiology, classification of	Knows: clinical symptomatology and syndromology of respiratory diseases in adults and children, their prevention, diagnosis and treatment; - syndromological and topical diagnostics, clinical symptoms of borderline conditions in DN2-3; -differential diagnosis of respiratory diseases and methods of its rehabilitation;	Able to establish the most trusting relationship with the patient, his relatives, colleagues, and other employees Applies knowledge in establishing professional, personal and corporate contacts. Strive to improve professional communication skills with students, teachers, patients, observing the rules of dentology and subordination

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respiratory diseases, general and additional examination methods used in a rehabilitation clinic, modern principles of medical rehabilitation in pulmonological practice in adults and children.	- outcomes and prognosis of rehabilitation; - the basics of pharmacotherapy, physiotherapy, therapeutic massage, and exercise therapy, acupuncture and other methods of treatment used in the rehabilitation clinic; - independent conduct and evaluation of diagnostic procedures (diet, non-traditional methods of treatment and prevention).	
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11. Prerequisites: normal anatomy, pathological anatomy, normal physiology, pathology, histology, pulmonology.

12. Postrequisites: internal medicine, « Physical medicine and rehabilitation for adults, children»


13. Literature

Main:

1. Directory of medical and social expertise and rehabilitation. / ed. Korobova M.V. SPb. 2010
2. Zabolotnykh I.I., Kantemirova R.K. Clinical and expert diagnosis of rehabilitation diagnoses according to the ICF St. Petersburg, 2008: 209p.
3. Galyanov A.A., Lebedeva N.N., Shestakov V.P. Evaluation of the effectiveness of the rehabilitation of disabled people, taking into account the provisions of the international classification of functioning, disability and health // Sat. mater. n.-pr. conference “Actual issues of development and evaluation of the effectiveness of an individual rehabilitation program in modern conditions. Khabarovsk, 2011, st.97-105.4. Pustyrkina L.S. Medico-social aspects of disability, examination and rehabilitation of patients and disabled people with the consequences of surgical treatment of gastric and duodenal ulcers. - M., 2010

Additional:

1. References 1. Pritchard D., Petrilla A., Hallinan S., Taylor D.H. Jr., Shabert V.F., Dubois R.V. What Contributes Most to High Healthcare Costs Healthcare costs in patients with high resources. J Manag Care Spec Pharm. 2016; 22:102-9. 2. Murray S.J., Lopez A.D. Measuring the global burden of disease. N Engl J Med. 2013; 369:448-5
3. DALY and HALE co-authors GBD 2015. Global, regional and national disability-adjusted life years (DALYs) for 315 diseases and injuries and healthy life expectancy (HALE), 1990–2015: a systematic analysis for the study of the global burden of disease, 2015. Lancet. 2016; 388 (10053): 1603-58.
4. World Health Organization. World Report on Disability. Geneva: WHO; 2011. Available at: http://www.who.int/disabilities/world_report/2011/report/en/
5. Bickenbach J, Rubinelli S, Stuckey G. Being or experiencing a disability: two perspectives on the social response to disability. J Rehabil Med. 2017; 49:543-

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1. Department: Department of Neurology, Psychiatry, Rehabilitation and Neurosurgery

2. Level of training: residency

3. Educational program: 7R01120 "Adult and children's neurosurgery"

4. Course: 3

5. Name of the elective discipline: Children's Surgery

6. Number of credits: 4

7. Objective: to get acquainted with the peculiarities of diagnosis and treatment of children with various urgent surgical diseases and injuries of the abdominal cavity, chest and purulent-inflammatory diseases of soft tissues, bones and joints. Teach techniques for diagnosing emergency surgical conditions using the path of syndrome diagnosis, teach first aid, as well as diagnostic algorithms at the hospital stage

8. Content of the discipline: Pediatric surgery is the most important component of modern medical science. The field of activity of specialists engaged in this area of the median-surgical treatment of congenital malformations and acquired diseases in children-extends to a very large and most promising part of the population. Considering the directions of scientific and practical activity in this medical field, we can say that pediatric surgery is all surgery that has been transferred to childhood, but with numerous anatomical and physiological features.

9. Tasks:

1. advanced development of theoretical issues of pediatric surgery;
2. improvement of practical skills based on modern diagnostic principles;
3. interpretation of the results of the examination from the point of view of evidence-based medicine, methods of preoperative preparation and methods of performing surgical interventions;
4. independent implementation of qualified medical care for children with various conditions and diseases that require surgical treatment.

10. Reason for choosing the discipline: The discipline "Pediatric Emergency Surgery" is intended for students of the residency program to gain in-depth knowledge on the organization of emergency care for the children's population.

11. Learning outcomes:


1. conducting differential diagnostics, substantiating the clinical diagnosis, prescribing the necessary instrumental and laboratory examination methods to patients, including children, according to the protocols, interpreting the results of additional examination methods, prescribing adequate therapy according to the treatment protocols;
2. conducting medical examinations of healthy and sick people, including children;
3. registration of medical documentation provided for by the legislation on healthcare;
4. carrying out the necessary anti-epidemic measures in case of detection of an infectious disease;
5. interpret endoscopic, X-ray, ultrasound, MRI, and CT data.

12. Prerequisites: Normal anatomy, Topographical anatomy, Pediatrics, basic radiology diagnostics

13. Post-requests: pediatric surgery


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8. Курбатов Д.Г., Щетинин В.В. Малоинвазивная хирургия мужских половых органов – М., 2005.
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10. Баиров Г.А. Срочная хирургия детей. – СПб. Питер 2015. 398 с.
11. Бунятян А.А., Мизикова В.М. Рациональная фармакоанестезиология – М., 2018.
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14. Дурнов Л.А., Голдобенко Г.В. Детская онкология – М., 2002.
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17. Исаков Ю.Ф., Белобородова Н.В. Сепсис у детей – М., 2020
18. Котловский В.И. Эндоскопическая хирургия у детей – М. 2014

1. **Department:** Department of Neurology, Psychiatry, Rehabilitation and Neurosurgery
2. **Level of training:** Residency
3. **Educational program:** 7R01120 "Adult, children's neurosurgery"
4. **Course:** 4
5. **Name of elective discipline:** Intensive care in surgical patients
6. **Number of credits:** 4
7. **Purpose:** training in the diagnosis of critical conditions of various etiologies, the use of modern methods of resuscitation and intensive care in providing care to patients.
8. **The content of the discipline:** Resuscitation, intensive care is a set of measures used to treat severe, life-threatening conditions and providing for the use of a large complex of therapeutic measures, including intravenous infusions, prolonged artificial ventilation, electro-pacing, dialysis methods, etc.
9. **Tasks:**
 1. study of the main issues of the organization of the anesthesiological and resuscitation service and its modern capabilities;
 2. training in the diagnosis of critical conditions of various etiologies;
 3. training in methods of monitoring the effectiveness and safety of prescribed therapy to a patient in critical condition;
 4. to form the skills and abilities necessary in the activity of a doctor to provide a complex of resuscitation measures in case of sudden circulatory arrest and terminal conditions.
10. **Justification of the choice of discipline:** This discipline is intended for those who entered the residency in the specialty "Neurosurgery, including children's" in the absence of credits in the discipline "Resuscitation, intensive care" at the previous level of the educational program.
11. **Learning outcomes:**
 1. Patient supervision: 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.
 2. Communication and collaboration: able to effectively interact with the patient, his environment, healthcare professionals in order to achieve the best results for the patient.

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3. Safety and quality: able to assess risks and use the most effective methods to ensure a high level of safety and quality of medical care.

4. Public health: He is able to act within the right and organizational field of the healthcare system of the Republic of Kazakhstan in his specialty, provide basic assistance in emergency situations, work as part of interprofessional teams to implement the policy of strengthening the health of the nation.

5. Research: 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 the research team.

12. 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.

13. Prerequisites: Normal anatomy, pathophysiology, basics of intensive care

14. Post-requirements: intensive care and resuscitation

15. Literature: Анестезиология и реаниматология: учебн. пособие/ О.Т. Прасмыцкий, С.С. Грачев. – Минск: Новое зрение, 2017. – 304с.

1. Анестезиология и реаниматология: учебное пособие в 2 томах./ С.А.Сумин, М.В. Руденко, И. М. Бородин. – М.: ООО «Медицинское информационное агентство», 2010. – 872с.

2. Клиническая анестезиология/ Дж. Эдвард Морган-мл., Мэри С. Михаил, Майкл Дж. Марри. – Бином, 2017. – 1216с.

3. Детская анестезиология, реаниматология и интенсивная терапия: Практическое руководство/ В.В. Курек, А.Е. Кулагин. – М.: ООО «Издательство «Медицинское информационное агентство», 2011. – 992с.

4. Основы интенсивной терапии и анестезиологии в схемах и таблицах: учебное пособие/ под ред. М.Ю. Кирова, В.В. Кузькова. – Изд. 5-е перераб. и доп. Архангельск: Северный государственный медицинский университет, 2016. – 256с.

5. Внутривенные анестетики: учебное пособие/ А.Е. Кулагин. – Минск, 2007. – 43с.

6. Анестезиология в схемах и таблицах/ Лоис Л. Бриди, Дон Дидлман, Сьюзан Х. Нурили; пер. с англ. ; под. общ. ред. проф. А.М. Овечкина. – М.: МЕДпресс-информ, 2016. – 656с.

7. Основы анестезиологии и реаниматологии в вопросах и ответах: учебн.- метод. пособие. В 2 ч. Ч. 1/ О.Т. Прасмыцкий, О.Б. Павлов. – Минск: БГМУ. 2015. – 91с.


8. Манипуляции при местной анестезии и интенсивной терапии: учебн.- метод. пособие для курса по выбору студента/ О.Т. Прасмыцкий, О.Б. Павлов. – Минск: БГМУ, 2016. – 56с.

9. Неонатология. Практические рекомендации: пер. с нем./ Р. Рооз, О. Генцель-Боровичени, Г. Прокитте. – М: Мед.лит., 2013. – 592с.

10. Клиническая анестезиология/ П.Дж. Бараш, Б.Ф. Куллен, Р.К. Стэлтинг. М.: Мед. лит., 2010. -720с.


11. Алгоритм действий при критических состояниях в анестезиологии. Рекомендации Всемирной федерации обществ анестезиологов/ Брюс Маккормик.- Изд. 2-е перераб. и доп. Архангельск: Северный государственный медицинский университет, 2014. – 119с.

12. Особенности анестезиологического обеспечения и интенсивной терапии в акушерской практике: учебн.-метод. пособие/ И.З. Ялонецкий и др. – Минск: БГМУ, 2015. – 95с.

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13. Экстренная медицина: пер. с англ./ под ред. Д. Спригингса. - М.: Мед. лит., 2008. – 544с.
14. Интенсивная терапия: современные аспекты/ под ред. Дэррил Сью,
15. Дженайн Винч; пер. с англ.; под общ. ред. Л.В. Колотилова. – 2-е изд. – М.: МЕДпресс-информ, 2010. – 336с.
16. Основы гемодиализа/ Е.А. Стецюк. – М.: «Гэотар-Мед», 2001. – 400с.
17. Механическая вентиляция легких/ О.Е. Сатишур. – М.: Мед.лит., 2007. – 352с.
18. Местная анестезия. Практическое руководство/ Майкл Ф. Малрой и др. – Бином. Лаборатория знаний, 2017. – 400с.
19. Периферическая регионарная анестезия. Атлас/ Г. Майер, Й. Бюттнер. – Бином. Лаборатория знаний, 2015. – 260с.
20. Атлас по анестезиологии/ Н. Ревер и др. – МЕДпресс-информ, 2009. – 392с.
21. Водно-электролитный и кислотно-основной баланс/ Хейтц У., Горн . – Бином. Лаборатория знаний, 2015. – 359с.

1. **Department:** Department of Neurology, Psychiatry, Rehabilitation and Neurosurgery
2. **Level of training:** Residency
3. **Educational program:** 7R01120 "Adult, children's neurosurgery"
4. **Course:** 4
5. **Name of elective discipline:** Inpatient angiosurgery
6. **Number of credits:** 4
7. **Purpose:** The practice is to gain experience in solving real professional tasks.
8. **Content of the discipline:** Vascular surgery is a surgical specialization in which vascular diseases affecting arteries, veins or lymphatic vessels are treated with drug therapy, minimally invasive catheter procedures and surgical reconstruction.
9. **Tasks:** consolidation of theoretical knowledge gained in the process of theoretical training of a resident doctor formation of professional competencies of a cardiovascular surgeon.
10. **Justification of the choice of discipline:** Training of highly qualified, competitive specialists in angiosurgery for adults and children who will be able to work independently, contributing to improving the health of the population of the Republic of Kazakhstan through continuing education using international standards of diagnosis and treatment.
11. **Learning outcomes:**
 1. Describes in detail the anatomy of blood vessels. Accurately (unmistakably) conducts a focused angiological examination, including all additional relevant maneuvers.
 2. Constantly revises the diagnostic differential series in response to changes in the clinical picture. Diagnoses acute vascular pathology.
 3. Correctly determines the need and purpose of consulting specialists of vascular subspecialties if additional examination or treatment is necessary.
 4. Consults patients with an emotionally difficult clinical situation, such as vision loss; uses appropriate techniques to "report bad news".
 5. Recognizes and reports on events related to patient safety (including errors and potential medical errors); safely and effectively transfers and transfers patients for further management in simple and complex clinical situations. Takes the initiative to improve quality and helps in the development, implementation and analysis of quality improvement projects.
12. **Training and development:** carries out activities based on evidence-based data: Critically evaluates scientific literature and clinical recommendations. Includes relevant evidence-based

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information in the patient management plan. Critically adapts recommendations to the individual characteristics and preferences of the patient. Understands the limits of evidence-based medicine in the treatment of patients. He continuously improves himself professionally and promotes the education of others: he trains medical workers in formal conditions (for example, nursing training, a training conference for residents). Provides mentoring to medical students. Develops its own curriculum independently with an accurate assessment of competence and areas for further improvement.

12. 13. Prerequisites: The previous level of education of persons wishing to master the residency educational programs – basic medical education, higher medical education, internship.

13. 14. Post-requirements: angiosurgery

14. 15. Literature: Комаров А.Л., Панченко Е.Л., Деев А.Д. и др. "Течение перемежающейся хромоты и прогноз больных атеросклеротическим поражением артерий нижних конечностей" Ангиология и сосудистая хирургия том 6 № 2/2011.

2. Бураковский В.И., Бокерия Л.А. "Сердечнососудистая хирургия". Медицина, 2014 г.

3. В.М. Буянов, Ю.А. Нестеренко "Хирургия" Медицина 1990г. Стр. 614-615.

4. Покровский А.В. Клиническая ангиология: 2 т. Медицина, 2014. 1. Т. 2. - 360 с.

5. Затевахин И.И., Комраков В.Е. "Проблема хирургической инфекции у больных с облитерирующими заболеваниями аорты и артерий конечностей //"Ангиология и сосудистая хирургия. - 2016. - Т. 1, № 9. - С. 15.

6. Клиническая ангиология: рук-во для врачей: А.В. Покровский. Медицина, 2004.

7. Газетов Б.М., Калинин А.П. "Хирургические заболевания у больных сахарным диабетом".

8. Гурьева И.В., Кузина И.В., Воронин А.В. и др." Синдром диабетической стопы".

9. Долинин В.А., Лебедев Л.В., Перегудов И.Г. "Техника хирургических операций на сосудах". - СПб. 1996 г. - 144 с.

10. Г.Н. Родионова, И.В. Авдеенко, В.С. Доронин "Справочник фельдшера" Москва 2015 г.

12. М.М. Курепина, А.П. Ожигова, А.А. Никитина. М.: Владос, "Анатомия человека" 2013 г. Стр. 134-13. Российские рекомендации «Диагностика и лечение больных с заболеваниями периферических артерий». 2017. Стр. 45.

1. Department of Neurology, Psychiatry, Rehabilitology and Neurosurgery

2. Residency

3. Educational program: "Physical medicine and rehabilitation for adults, children"

4. Course- 2

5. Discipline: "Nutritive support in medical rehabilitation"


6. Number of credits: 4 credits

7. The purpose of the discipline: mastering the skills of therapeutic and preventive measures aimed at restoring patients in need of additional nutrition

8.Tasks:

- Train residents to diagnose malnutrition by clinical manifestations, determine the grounds for nutritional support
- Educate residents-rehabilitators on methods of assessing nutritional status, assessing nutritional status, drawing up a nutrition plan and its methods.
- Educate residents on the use of nutritional support: enteral nutrition and parenteral nutrition.
- Train residents to provide psychotherapeutic assistance to cachectic patients (socio-psychological aspect)

9. Rationale for the choice of discipline: "Nutritional support in medical rehabilitation."

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This discipline involves a more in-depth study of nutrition in patients (adults and children). It is now well known that early adequate nutritional support, represented by various combinations of parenteral and enteral nutrition methods, is the most effective method for correcting protein and energy metabolism disorders at the current stage of medical development. . Studying the discipline "Nutritive Support in Medical Rehabilitation", the resident gains an understanding of the principles of using an additional source of protein nutrition. One of the means of achieving early rehabilitation is the desire to restore the usual diet and mobility already in the first days of the postoperative period..

10. Learning Outcomes

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Skills & Abilities (psychomotor sphere)
<ul style="list-style-type: none"> - issues of organization of rehabilitation, assessment of nutritional status -Determination of the patient's need for macro- and micronutrient energy - Determination of the way of conducting nutrients (nutrient support technologies) - Knows the skills of introducing nutrients. - Has an idea about the etiology of asthenia in adults and children. 	<ul style="list-style-type: none"> Knows the clinical symptomatology and syndromology of diseases of the musculoskeletal system in adults and children; - owns the skills of appointment and use of TSR; - outcomes and prognosis of nutritional nutrition, rehabilitation potential; - monitoring the effectiveness and safety of nutritional support - independent conduct and evaluation of diagnostic procedures (diet, non-traditional methods of treatment and prevention 	<ul style="list-style-type: none"> Able to establish the most trusting relationship with the patient, his relatives, colleagues, and other employees Applies knowledge in establishing professional, personal and corporate contacts. Strive to improve professional communication skills with students, teachers, patients, observing the rules of dentology and subordination


11. Prerequisites: normal anatomy, pathological anatomy, normal physiology, pathology, traumatology, neurology, cardiology.

12. Postrequisites: neurology, traumatology, physical medicine and rehabilitation for adults and children”

13. Literature

Main:

1. Directory of medical and social expertise and rehabilitation. / ed. Korobova M.V. SPb. 2010
2. Zabolotnykh I.I., Kantemirova R.K. Clinical and expert diagnosis of rehabilitation diagnoses according to the ICF St. Petersburg, 2008: 209p.
3. Galyanov A.A., Lebedeva N.N., Shestakov V.P. Evaluation of the effectiveness of the rehabilitation of disabled people, taking into account the provisions of the international classification of functioning, disability and health // Sat. mater. n.-pr. conference “Actual issues of development and evaluation of the effectiveness of an individual rehabilitation program in modern conditions. Khabarovsk, 2011, st.97-105.

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4. Pustyrkina L.S. Medico-social aspects of disability, examination and rehabilitation of patients and disabled people with the consequences of surgical treatment of gastric and duodenal ulcers. - M., 2010

Additional:

1. References 1. Pritchard D., Petrilla A., Hallinan S., Taylor D.H. Jr., Shabert V.F., Dubois R.V. What Contributes Most to High Healthcare Costs Healthcare costs in patients with high resources. J Manag Care Spec Pharm. 2016; 22:102-9. 2. Murray S.J., Lopez A.D. Measuring the global burden of disease. N Engl J Med. 2013; 369:448-5
3. DALY and HALE co-authors GBD 2015. Global, regional and national disability-adjusted life years (DALYs) for 315 diseases and injuries and healthy life expectancy (HALE), 1990–2015: a systematic analysis for the study of the global burden of disease , 2015 . Lancet. 2016; 388 (10053): 1603-58.
4. World Health Organization. World Report on Disability. Geneva: WHO; 2011. Available at: http://www.who.int/disabilities/world_report/2011/report/en/
5. Bickenbach J, Rubinelli S, Stuckey G. Being or experiencing a disability: two perspectives on the social response to disability. J Rehabil Med. 2017; 49:543-

1. Department of Neurology, Psychiatry, Rehabilitology and Neurosurgery

2. Residency

3. Educational program: "Physical medicine and rehabilitation for adults, children"

4. 1 course

5. Discipline: "Medical and technical means in the system of medical rehabilitation"

6. Number of credits: 4 credits


7. The purpose of the discipline: mastering the skills of medical and preventive measures aimed at restoring patients in need of technical devices. This aspect of rehabilitation is associated with therapeutic measures throughout the entire observation of the patient, and is carried out by the rehabilitation doctor of all health facilities. Physical rehabilitation includes the appointment of various technical means of physical rehabilitation (ortho, neuro).

8. Tasks:

- Train residents to diagnose a rehabilitation diagnosis according to the ICF based on clinical manifestations
- To train residents-rehabilitators, professional skills in rehabilitation, ready for independent professional activity
- Train residents to use TSR in disabled patients with various diseases of the musculoskeletal system.
- Train residents to prescribe this or that TCP to patients at various stages of rehabilitation

9. Rationale for the choice of discipline: "Medical and technical means in the system of medical rehabilitation."

An important role in addressing issues of social and economic independence of the disabled belongs to the technical means of rehabilitation. Provision of the disabled TCP is an expense obligation of the Republic of Kazakhstan and is carried out by the authorized body, which is currently the Social Insurance Fund of the Republic of Kazakhstan. Medical and social indications for the provision of TCP are determined by the institutions of medical and social expertise and are drawn up in an individual program for the rehabilitation of a disabled person. The fundamental position of the goal of providing disabled people with means of rehabilitation should be their medical, functional and social adequacy. Depending on the nature of the anatomical defect, organic

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changes, functional disorders, technical means of rehabilitation should provide compensation or elimination of persistent restrictions on the life of disabled people. At the same time, they should contribute to the realization of the social purpose of rehabilitation: the restoration of the ability to self-service, movement, education, employment, social adequacy.

This discipline involves a more in-depth study of the use of TSR in patients with disabilities (adults and children)

Studying the discipline "Medico-technical means in the system of medical rehabilitation", the resident acquires an understanding of the principles of the use of TSR, as well as the quality of life and issues of social rehabilitation of patients with various diseases.

10. Learning outcomes

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Skills & Abilities (psychomotor sphere)
-Knows the issues of organizing rehabilitation, inpatient care for the adult population in need of rehabilitation. -Knows anatomy and topographic anatomy, radiology. -Knows the main issues of normal and pathological physiology. Has ideas about the etiology, classification of the disease of the musculoskeletal system, general and additional examination methods used in the rehabilitation clinic, modern principles of medical rehabilitation in the practice of a rehabilitation therapist in adults and children.	-Knows: clinical symptomatology and syndromology of diseases of the musculoskeletal system in adults and children ; - owns the skills of assigning and using TCP; - outcomes and prognosis of rehabilitation, rehabilitation potential; - the basics of physiotherapy, therapeutic massage, and exercise therapy, acupuncture and other methods of treatment used in the rehabilitation clinic; - independent conduct and evaluation of diagnostic procedures (nutrition, non-traditional methods of treatment and prevention).	Able to establish the most trusting relationship with the patient, his relatives, colleagues, and other employees Applies knowledge in establishing professional, personal and corporate contacts. Strive to improve professional communication skills with students, teachers, patients, observing the rules of dentology and subordination


11. Prerequisites: normal anatomy, pathological anatomy, normal physiology, pathology, traumatology, neurology, cardiology.

12. Postrequisites: neurology, traumatology, «Physical medicine and rehabilitation for adults and children»

13. Literature

Main :

1. Directory of medical and social expertise and further. / ed. Korobova M.V. SPb. 2010
2. Zabolotnykh I.I., Kantemirova R.K. Clinical and expert diagnosis of rehabilitation diagnoses according to the ICF St. Petersburg, 2008: 209p.

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3. Galyanov A.A., Lebedeva N.N., Shestakov V.P. Evaluation of the effectiveness of the rehabilitation of disabled people, taking into account the provisions of the international classification of functioning, disability and health // Sat. mater. n.-pr. conference "Actual issues of developing and evaluating the effectiveness of an individual rehabilitation program in modern conditions. Khabarovsk, 2011, pp. 97-105.

4. Pustyrkina L.S. Medico-social aspects of disability, examination and rehabilitation of patients and disabled people with the consequences of surgical treatment of gastric and duodenal ulcers. - M., 2010

Additional:

1. References 1. Pritchard D., Petrilla A., Hallinan S., Taylor D.H. Jr., Shabert V.F., Dubois R.V. What Contributes Most to High Healthcare Costs Healthcare costs in patients with high resources. J Manag Care Spec Pharm. 2016; 22:102-9.

2. Murray S.J., Lopez A.D. Measuring the global burden of disease. N Engl J Med. 2013; 369:448-57.

3. DALY and HALE co-authors GBD 2015. Global, regional and national disability-adjusted life years (DALYs) for 315 diseases and injuries and healthy life expectancy (HALE), 1990–2015: a systematic analysis for the study of the global burden of disease, 2015. Lancet. 2016; 388 (10053): 1603-58.

4. World Health Organization. World Report on Disability. Geneva: WHO; 2011. Available at: http://www.who.int/disabilities/world_report/2011/report/en/

5. Bickenbach J, Rubinelli S, Stuckey G. Being or experiencing a disability: two perspectives on the social response to disability. J Rehabil Med. 2017; 49:543-9

1. Department of Neurology, Psychiatry, Rehabilitology and Neurosurgery

2. Residency

3. Educational program: "Physical medicine and rehabilitation for adults, children"

4. 2 course

5. Discipline: "Medical rehabilitation of patients with respiratory diseases"

6. Number of credits: 4 credits

7. The purpose of the discipline: mastering the skills of medical and preventive measures aimed at restoring patients with pulmonary pathology.

8. Tasks:


- Train residents to diagnose a rehabilitation diagnosis according to the ICF based on clinical manifestations

- to train residents-rehabilitators, professional skills in rehabilitation, ready for independent professional activity

- Train residents to provide all methods of rehabilitation measures, as well as qualified medical care in case of emergency.

- Train residents to prescribe adequate differentiated treatment at various stages of rehabilitation.

9. . Rationale for the choice of discipline: "Medical rehabilitation of patients with respiratory diseases" therapeutic and preventive measures aimed at restoring patients with respiratory diseases. This aspect of rehabilitation is associated with therapeutic measures throughout the entire observation of the patient, and is carried out by the rehabilitation doctor of all health facilities. The urgency of this problem is increasing every year: if over the past decades, overall mortality and

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mortality from cardiovascular diseases has been declining, then mortality from COPD has increased by 28%.

Physical rehabilitation includes the appointment of various means of physical rehabilitation (exercise therapy, various types of massage, ergotherapy, physiotherapy, preformed and natural factors). This discipline involves a more in-depth study of modern rehabilitation measures and methods of additional research aimed at the rehabilitation of patients with respiratory diseases (adults and children),

10. Learning Outcomes


Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Skills & Abilities (psychomotor sphere)
<p>Knows the issues of organizing rehabilitation, inpatient care for the adult population in need of rehabilitation.</p> <p>Knows anatomy and topographic anatomy, radiology.</p> <p>Knows the main issues of normal and pathological physiology of the respiratory system.</p> <p>He has an understanding of the etiology, classification of respiratory diseases, general and additional examination methods used in a rehabilitation clinic, modern principles of medical rehabilitation in pulmonological practice in adults and children.</p>	<p>Knows:</p> <p>clinical symptomatology and syndromology of respiratory diseases in adults and children, their prevention, diagnosis and treatment;</p> <p>- syndromological and topical diagnostics, clinical symptoms of borderline conditions in DN2-3;</p> <p>- differential diagnosis of respiratory diseases and methods of its rehabilitation;</p> <p>- outcomes and prognosis of rehabilitation;</p> <p>- the basics of pharmacotherapy, physiotherapy, therapeutic massage, and exercise therapy, acupuncture and other methods of treatment used in the rehabilitation clinic;</p> <p>- independent conduct and evaluation of diagnostic procedures (diet, non-traditional methods of treatment and prevention).</p>	<p>Able to establish the most trusting relationship with the patient, his relatives, colleagues, and other employees</p> <p>Applies knowledge in establishing professional, personal and corporate contacts.</p> <p>Strive to improve professional communication skills with students, teachers, patients, observing the rules of dentology and subordination</p>

11. Prerequisites: normal anatomy, pathological anatomy, normal physiology, pathology, histology, pulmonology.

12. Postrequisites: internal medicine, « Physical medicine and rehabilitation for adults, children»

13. Literature

Main:

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1. Department of Neurology, Psychiatry, Rehabilitology and Neurosurgery

2. Residency

1. **Educational program:** "Physical medicine and rehabilitation for adults, children"

3. **1 course**

4. **Discipline:** "Medical and technical means in the system of medical rehabilitation"

5. **Number of credits:** 4 credits

6. **The purpose of the discipline:** mastering the skills of medical and preventive measures aimed at restoring patients in need of technical devices. This aspect of rehabilitation is associated with therapeutic measures throughout the entire observation of the patient, and is carried out by the rehabilitation doctor of all health facilities. Physical rehabilitation includes the appointment of various technical means of physical rehabilitation (ortho, neuro).

8. Tasks:

- Train residents to diagnose a rehabilitation diagnosis according to the ICF based on clinical manifestations
- To train residents-rehabilitators, professional skills in rehabilitation, ready for independent professional activity
- Train residents to use TSR in disabled patients with various diseases of the musculoskeletal system.
- Train residents to prescribe this or that TCP to patients at various stages of rehabilitation

9. **Rationale for the choice of discipline:** "Medical and technical means in the system of medical rehabilitation."


An important role in addressing issues of social and economic independence of the disabled belongs to the technical means of rehabilitation. Provision of the disabled TCP is an expense obligation of the Republic of Kazakhstan and is carried out by the authorized body, which is currently the Social Insurance Fund of the Republic of Kazakhstan. Medical and social indications for the provision of TCP are determined by the institutions of medical and social expertise and are drawn up in an individual program for the rehabilitation of a disabled person. The fundamental position of the goal of providing disabled people with means of rehabilitation should be their medical, functional and social adequacy. Depending on the nature of the anatomical defect, organic changes, functional disorders, technical means of rehabilitation should provide compensation or elimination of persistent restrictions on the life of disabled people. At the same time, they should contribute to the realization of the social purpose of rehabilitation: the restoration of the ability to self-service, movement, education, employment, social adequacy.

This discipline involves a more in-depth study of the use of TSR in patients with disabilities (adults and children)

Studying the discipline "Medico-technical means in the system of medical rehabilitation", the resident acquires an understanding of the principles of the use of TSR, as well as the quality of life and issues of social rehabilitation of patients with various diseases.

10. Learning outcomes

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Skills & Abilities (psychomotor sphere)
-Knows the issues of organizing rehabilitation, inpatient care for the adult population in need of rehabilitation.	-Knows: clinical symptomatology and syndromology of diseases of the musculoskeletal system in adults and children ;	Able to establish the most trusting relationship with the patient, his relatives, colleagues, and other employees

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<p>-Knows anatomy and topographic anatomy, radiology.</p> <p>-Knows the main issues of normal and pathological physiology.</p> <p>Has ideas about the etiology, classification of the disease of the musculoskeletal system, general and additional examination methods used in the rehabilitation clinic, modern principles of medical rehabilitation in the practice of a rehabilitation therapist in adults and children.</p>	<p>- owns the skills of assigning and using TCP;</p> <p>- outcomes and prognosis of rehabilitation, rehabilitation potential;</p> <p>- the basics of physiotherapy, therapeutic massage, and exercise therapy, acupuncture and other methods of treatment used in the rehabilitation clinic;</p> <p>- independent conduct and evaluation of diagnostic procedures (nutrition, non-traditional methods of treatment and prevention).</p>	<p>Applies knowledge in establishing professional, personal and corporate contacts.</p> <p>Strive to improve professional communication skills with students, teachers, patients, observing the rules of dentology and subordination</p>
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11. Prerequisites: normal anatomy, pathological anatomy, normal physiology, pathology, traumatology, neurology, cardiology.

12. Postrequisites: neurology, traumatology, «Physical medicine and rehabilitation for adults and children»


13. Literature

Main :

1. Directory of medical and social expertise and further. / ed. Korobova M.V. SPb. 2010
2. Zabolotnykh I.I., Kantemirova R.K. Clinical and expert diagnosis of rehabilitation diagnoses according to the ICF St. Petersburg, 2008: 209p.
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Additional:

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5. Bickenbach J, Rubinelli S, Stuckey G. Being or experiencing a disability: two perspectives on the social response to disability. J Rehabil Med. 2017; 49:543-9

1. Department of Neurology, Psychiatry, Rehabilitology and Neurosurgery

2. Residency

3. **Educational program:** "Physical medicine and rehabilitation for adults, children"

4. 2 course

5. **Discipline:** "Nutritive support in medical rehabilitation"

6. **Number of credits:** 4 credits

7. **The purpose of the discipline:** mastering the skills of therapeutic and preventive measures aimed at restoring patients in need of additional nutrition

8.Tasks:

- Train residents to diagnose malnutrition by clinical manifestations, determine the grounds for nutritional support
- Educate residents-rehabilitators on methods of assessing nutritional status, assessing nutritional status, drawing up a nutrition plan and its methods.
- Educate residents on the use of nutritional support: enteral nutrition and parenteral nutrition.
- Train residents to provide psychotherapeutic assistance to cachectic patients (socio-psychological aspect)


9. **Rationale for the choice of discipline:** "Nutritional support in medical rehabilitation."

This discipline involves a more in-depth study of nutrition in patients (adults and children). It is now well known that early adequate nutritional support, represented by various combinations of parenteral and enteral nutrition methods, is the most effective method for correcting protein and energy metabolism disorders at the current stage of medical development. .

Studying the discipline "Nutritive Support in Medical Rehabilitation", the resident gains an understanding of the principles of using an additional source of protein nutrition. One of the means of achieving early rehabilitation is the desire to restore the usual diet and mobility already in the first days of the postoperative period..

10. Learning Outcomes

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Skills & Abilities (psychomotor sphere)
<ul style="list-style-type: none"> - issues of organization of rehabilitation, assessment of nutritional status -Determination of the patient's need for macro- and micronutrient energy - Determination of the way of conducting nutrients (nutrient support technologies) - Knows the skills of introducing nutrients. 	<ul style="list-style-type: none"> Knows the clinical symptomatology and syndromology of diseases of the musculoskeletal system in adults and children; - owns the skills of appointment and use of TSR; - outcomes and prognosis of nutritional nutrition, rehabilitation potential; - monitoring the effectiveness and safety of nutritional support 	<ul style="list-style-type: none"> Able to establish the most trusting relationship with the patient, his relatives, colleagues, and other employees Applies knowledge in establishing professional, personal and corporate contacts. Strive to improve professional communication skills with students, teachers,

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- Has an idea about the etiology of asthenia in adults and children.	- independent conduct and evaluation of diagnostic procedures (diet, non-traditional methods of treatment and prevention	patients, observing the rules of dentology and subordination
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11. Prerequisites: normal anatomy, pathological anatomy, normal physiology, pathology, traumatology, neurology, cardiology.

12. Postrequisites: neurology, traumatology, physical medicine and rehabilitation for adults and children”

13. Literature


Main:

1. Directory of medical and social expertise and rehabilitation. / ed. Korobova M.V. SPb. 2010
2. Zabolotnykh I.I., Kantemirova R.K. Clinical and expert diagnosis of rehabilitation diagnoses according to the ICF St. Petersburg, 2008: 209p.
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4. Pustyrkina L.S. Medico-social aspects of disability, examination and rehabilitation of patients and disabled people with the consequences of surgical treatment of gastric and duodenal ulcers. - M., 2010

Additional:

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4. World Health Organization. World Report on Disability. Geneva: WHO; 2011. Available at: http://www.who.int/disabilities/world_report/2011/report/en/
5. Bickenbach J, Rubinelli S, Stuckey G. Being or experiencing a disability: two perspectives on the social response to disability. J Rehabil Med. 2017; 49:543-

1. **Department:** Department of Neurology, Psychiatry, Rehabilitation and Neurosurgery
2. **Level of training:** residency
3. **Educational program:** 7R01120 "Adult and children's neurosurgery"
4. **Course:** 4
5. **Name of elective discipline:** Neurology in hospital
6. **Number of credits:** 4

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Objective: To develop professional competence in the field of neurological services for the student of the residency program in the specialty "Neurology, including children".

7. Content of the discipline: Neurology is a field of science that studies a wide range of problems related to both the normal functioning and pathology of the human nervous system. Modern neurology integrates a large number of related specialties, such as anatomy, physiology, biochemistry, immunology, molecular biology, genetics, and others, to address the etiology and pathogenesis of diseases of the nervous system.

8. Tasks:

1. determine the neurosurgical pathology.
2. conduct and appoint a clinical examination of the patient, demonstrate skills in determining symptom complexes in neurosurgical diseases of the brain and spinal cord with knowledge of the topographic anatomy of the brain, spinal cord, CNS vessels and peripheral nervous system;
3. actively communicate with patients and their relatives, involving them in discussions and participation in the treatment process. ;
4. assess the risks of possible complications in the treatment of neurosurgical patients;;
5. act in accordance with the legislation of the Republic of Kazakhstan when providing care to patients with neurosurgical diseases.

9. The basis for choosing a discipline: From a practical point of view, neurology solves the problems of diseases that today occupy a leading place in disability and mortality of the world's population.

10. Learning outcomes:

1. able to formulate a clinical diagnosis, prescribe a treatment plan, and evaluate its effectiveness based on evidence-based practice at all levels of care.
2. Communication and collaboration: It is able to effectively interact with the patient, his environment, and healthcare professionals in order to achieve the best results for the patient.
3. Safety and quality: able to assess risks and use the most effective methods to ensure a high level of safety and quality of medical care.
4. Public health: He is able to act within the right and organizational field of the health system of the Republic of Kazakhstan in his specialty, provide basic assistance in emergency situations, work as part of interprofessional teams to implement the national health promotion policy.
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 the research team.


11. Training and development: able to learn independently and train other members of the professional team, actively participate in discussions, conferences and other forms of continuous professional development.

12. Prerequisites: normal CNS anatomy, topical diagnostics

13. Post-requests: Neurology


14. References: : Бадалян Л.О. Невропатология (для медвузов), М.2018

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2. Анатомия человека. Т.3. Нервная система / Билич Г.Л., Крыжановский В.А., 2015, 792 стр.
3. Неврологические симптомы, синдромы и болезни. Энциклопедический справочник
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13. Никифоров А.С. Общая неврология: учебное пособие для послевузовского образования. А.С. Никифоров, Е.И. Гусев. М.: ГЭОТАР-Медиа, 2017 г.
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23. Atlas of the Human Brain, Third Edition /Juergen K. Mai, George Paxinos, Thomas Voss , 2008, 271 p.
24. Neuroanatomy Through Clinical Cases, Second Edition, Text with Interactive eBook (Blumenfeld, Neuroanatomy Through Clinical Cases)/ Hal Blumenfeld, 2014, 1006 p.

1. **Department:** Department of Neurology, Psychiatry, Rehabilitation and Neurosurgery
2. **Level of training:** residency
3. **Educational program:** 7R01120 "Adult and children's neurosurgery"
4. **Course:** 4
5. **Name of elective discipline:** Methods of neuroimaging and functional diagnostics
6. **Number of credits:** 4
7. **Objective:** to provide the doctor with a full range of systematic theoretical knowledge and professional skills in all sections of this discipline, to form a professional competence in the field of neurological services for the student of the residency program in the specialty "Neurosurgery, including children".
8. **Content of the discipline:** Methods of neuroimaging and functional diagnostics (adult, children) designed for resident trainees to gain in-depth knowledge of the functional cabinet, classification and metrological characteristics of equipment for functional diagnostics of diseases of the nervous system, neuroradiological methods for diagnosing neurological diseases, and interpretation of results.
9. **Tasks:**
 1. Mastering the theoretical foundations in the diagnosis of brain diseases.

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2. Improving knowledge about the methods and principles of radiological examination of the patient;
3. Improving knowledge of the normal radial anatomy of the central nervous system and spine;
4. Acquisition of practical brain imaging skills. Drawing up a conclusion based on the results of the analysis

10. Justification of the discipline: Improvement of professional skills of examination of the patient with the use of radiation research methods to identify symptoms and syndromes of damage to the central nervous system and spine.

11. Learning outcomes:

1. Patient supervision: Able to formulate a clinical diagnosis, prescribe a treatment plan, and evaluate its effectiveness based on evidence-based practice at all levels of care.
2. Communication and collaboration: It is able to effectively interact with the patient, his environment, and healthcare professionals in order to achieve the best results for the patient.
3. Safety and quality: able to assess risks and use the most effective methods to ensure a high level of safety and quality of medical care.
4. Public health: He is able to act within the right and organizational field of the health system of the Republic of Kazakhstan in his specialty, provide basic assistance in emergency situations, work as part of interprofessional teams to implement the national health promotion policy.
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 the research team.


12. Abouttraining and development: able to learn independently and train other members of the professional team, actively participate in discussions, conferences and other forms of continuous professional development

13. Prerequisites: topographic anatomy, radiology, neuroradiology.

14. Post-requirements: radiology

15. References: Diagnostic Imaging Brain 3rd Edition Osborn, Salzman, Jhaveri. 2016,2018г.


1. Диагностическая нейрорадиология. В.Н. Корниенко, И.Н. Пронин. 2014г.
2. Медицинская рентгенология. Л.Б. Линденбратен, Л.Б. Наумов. 2014г.
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5. «Магнитно-резонансная томография в нейрохирургии» Москва 1997 год, Коновалов А.Н.
6. «Общее руководство по радиологии» Германия 2020 год, Holger Pettersson.
7. «Лучевая диагностика травм головы и позвоночника» Санкт- Петербург 2017 год, Г.Е.Труфанов.
8. «Неотложная радиология» Москва 2009 год, Б.Маринчека.
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1. **Department:** Department of Neurology, Psychiatry, Rehabilitation and Neurosurgery
2. **Level of training:** residency
3. **Educational program:** 7R01120 "Adult and children's neurosurgery"
4. **Course:** 3
5. **Name of elective discipline:** Oncology in hospital
6. **Number of credits:** 4

Objective: to continue the clinical training of a doctor, to acquire and improve their theoretical and practical skills in conducting a comprehensive examination for the diagnosis of cancer, to master the methods of therapeutic treatment of cancer patients, as well as surgical manipulations and surgical interventions to the extent necessary for independent work of a resident doctor of a polyclinic and hospital.


1. **Content of the discipline:** This academic discipline is intended for additional training in the residency program in the specialty "Oncology in hospital". This program reflects modern aspects of theoretical and practical oncology, new directions and methods of examination and treatment of cancer patients. The program is an educational and methodological document that defines organizational forms of additional training for doctors with a previous level of education and work experience in the specialties of therapeutic, pediatric, general medical practice, as well as in the specialties of surgical profile.
2. **Tasks:**
 1. deepening and expanding the range of knowledge and skills in specialties by participating in rounds and clinical reviews of leading employees of departments and centers, professors of the department, attending lectures on topical issues of oncology;
 2. acquisition of solid skills for proper examination of patients;
 3. mastering the methods of endoscopic research in oncology and methods of material collection for incisional and puncture biopsies, methods of tissue material collection for endoscopic studies, methods of taking smears-prints for cytological research;
 4. mastering methods of preparing patients for basic X-ray examinations;
 5. mastering methods of radiation therapy in cancer patients;
 6. mastering methods of drug therapy (chemotherapy, hormone therapy, immunotherapy, immunocorrection, etc.) in cancer patients;
 7. mastering the technique of removing benign skin formations, drainage of the pleural cavity according to Bulau, familiarization (participation in operations as an assistant) with radical operations performed in various localizations, including combined, expanded and reconstructive plastic ones.
8. **The basis for choosing a discipline:** From a practical point of view, neurology solves the problems of diseases that today occupy a leading place in disability and mortality of the world's population.
9. **Learning outcomes:**
 6. able to formulate a clinical diagnosis, prescribe a treatment plan, and evaluate its effectiveness based on evidence-based practice at all levels of care.
 7. Communication and collaboration: It is able to effectively interact with the patient, his environment, and healthcare professionals in order to achieve the best results for the patient.
 8. Safety and quality: able to assess risks and use the most effective methods to ensure a high level of safety and quality of medical care.
 9. Public health: He is able to act within the right and organizational field of the health system of the Republic of Kazakhstan in his specialty, provide basic assistance in emergency situations, work as part of interprofessional teams to implement the national health promotion policy.

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10. 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 the research team.
10. **Training and development:** able to learn independently and train other members of the professional team, actively participate in discussions, conferences and other forms of continuous professional development.
11. **Prerequisites:** normal CNS anatomy, pathological anatomy, surgical skills
12. **Post-requests:** oncology
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- 1. Department:** «Pediatrics-2»
- 2. Level of preparation:** Residency
- 3. Specialty:** 7R01130 «Pediatrics»
- 4. Course:** 2
- 5. The name of the elective discipline** «Clinical immunology and Allergology in hospital»
- 6. Number of credits:** 2

7. Purpose of the discipline: Training of highly qualified, competitive pediatricians who are able to meet the needs of society in providing medical care to sick children, apply and develop advanced innovative technologies in medicine, science and practice.

8. Objectives:

- to form clinical thinking and the ability to independently work with scientific literature on the discipline;

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- develop the ability to analyze socio-biological, medico-social and epidemiological conditions and factors of the occurrence of diseases;
- to teach the resident the principles of diagnosis of diseases, reasonably prescribe laboratory, functional and instrumental methods of examination;
- совершенствовать improve the skill of manual examination of the patient, palpation, percussion and auscultation;
- to develop the skill of interpreting the results of a paraclinical examination of the patient;
- обуч to teach the compilation of an algorithm for the differential diagnosis of diseases;
- to develop the skill of an informed choice of etiopathogenetic treatment;
- научить teach the basic principles of prevention;
- explain the application of legal documents regulating the activities of a pediatrician;
- improve interpersonal communication skills with colleagues, patients and their parents;
- to stimulate the resident's desire for self-development and self-improvement, the choice of a professional trajectory;
- to develop the skill of working with medical literature, the ability to analyze literary and Internet sources.

9. Justification of the choice of discipline:

In the elective discipline "Clinical immunology and Allergology in hospital", a deeper and more complete mastery of the work of future pediatricians is expected.


Clinical immunology in pediatric oncology studies the principles of immunotherapy of immunodeficiency states, modern methods of immunodiagnostics, modern aspects of stem cell transplantation.

Immunology is an artificial stimulation of the immune system for the treatment of cancer, helping the immune system to fight the disease in a natural way. This is a program of fundamental research in the field of cancer immunology and the developing specialization of oncology. Cancer immunotherapy consists in the fact that antibodies of proteins of the immune system can detect and bind to molecules located on the surface of tumor antigens of cancer cells.

The complex therapy started in a timely manner makes it possible to improve the further prognosis of childhood oncological diseases.

10. Result of training (competence):

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)
Application: Evaluation of studies, materials from professional literature on Clinical immunology and Allergology in hospital. Use international databases in your daily activities. Participate in the work of the research team; - readiness for abstract thinking, analysis, synthesis;	Accuracy: demonstrates the ability to perform medical procedures on dummies during an objective structured clinical examination. Articulation: accurately performs medical procedures on real or standardized patients. Affective Domain (Attitude/Behavior)	Medical documentation: - readiness to identify pathological conditions, symptoms, disease syndromes, and nosological forms in newborns in accordance with the International Statistical Classification of Diseases and Health-related Problems;

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<ul style="list-style-type: none"> - assign a plan of laboratory and instrumental methods of examination; - interpret the results of laboratory and instrumental methods of examination; - provide assistance in case of complications. <p>Analysis: discusses and categorizes the knowledge of biomedical, clinical, social and behavioral sciences in specialized practice</p> <ul style="list-style-type: none"> - conducts a comprehensive assessment of laboratory and instrumental studies. <p>Rating:</p> <ul style="list-style-type: none"> - evaluate the results of UAC, OAM, biochemical blood tests, BAC. research, coprology, CBS. - appreciate the indicators of peak flowmetry, ultrasound, radiography, computed tomography, NMRI 	<p>Gives value: relationships with patients and medical staff during medical procedures.</p> <p>Organization:</p> <ul style="list-style-type: none"> -independent organizes medical procedures according to the list of the residency profile; -willingness to manage a team, to tolerate social, ethnic, religious and cultural differences. 	<ul style="list-style-type: none"> - medical documentation: registration of medical documentation for the specialty profile in accordance with the legislation in healthcare.
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11. Prerequisites: Children's diseases in the hospital.

12. Postrequisites: profile disciplines

13. References

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2. Welsher, L. Z. Clinical oncology: fav. lectures: [proc. manual for medical universities] / L. Z. Velsher, B. I. Polyakov, S. B. Peterson. - M. : GEOTAR-Media, 2019.
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Medical sites:

ОҢТҮСТІК ҚАЗАҚСТАН MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ	 SKMA -1979-	SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казахстанская медицинская академия»
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1. med-site.narod.ru
2. www.medicusamicus.com
3. www.medprof.ru
4. www.rusmedserv.com/topsites/
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6. medinfo.net
7. www.spasmex.ru
8. www.webmedinfo.ru
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15. www.kovostok.ru
16. www.drugme.ru
17. lepila.tyurem.net
18. top.medlinks.ru
19. doctor-doctor.ru
20. mepmed.ru

- 1. Department:** «Pediatrics-2»
- 2. Level of preparation:** Residency
- 3. Specialty:** 7R01131 «Neonatology»
- 4. Course:** 2
- 5. The name of the elective discipline** «Clinical laboratory diagnostics in neonatology»
- 6. Number of credits:** 2

7. Purpose of the discipline: improving the quality of research, the use of modern equipment and new research methods that require highly qualified personnel and a modern approach to the automation of laboratory research in clinical and experimental medicine in connection with the rapid expansion of the range of biochemical and general clinical analyses and the volume of work of clinical and diagnostic laboratories for future neonatologists.


8. Objectives:

- study of the organizational foundations of the work of clinical and diagnostic laboratories;
- study of the metabolism of the newborn body in normal and pathological conditions;
- development of modern laboratory research methods;
- interpretation of the obtained research results on the basis of knowledge of the theoretical foundations;

9. Justification of the choice of discipline: In the elective discipline "Clinical laboratory diagnostics in neonatology", a deeper and more complete mastering of the work of future neonatologists is expected. The ability to interpret the results of laboratory functional research methods is necessary for a young specialist to make an accurate diagnosis and conduct a differential diagnosis.

10. Result of training (competence):

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)

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<p>Application: can apply his knowledge when solving a problem in a new or unfamiliar environment related to his field of study;</p> <ul style="list-style-type: none"> - readiness for abstract thinking, analysis, synthesis; - assign a plan of laboratory and instrumental methods of examination; - interpret the results of laboratory and instrumental methods of examination; - provide assistance in case of complications. <p>Analysis: discusses and categorizes the knowledge of biomedical, clinical, social and behavioral sciences in specialized practice</p> <ul style="list-style-type: none"> - conducts a comprehensive assessment of laboratory and instrumental studies. <p>Rating:</p> <ul style="list-style-type: none"> - evaluate the results of UAC, OAM, biochemical blood tests, BAC. research, coprology, CBS. - appreciate the indicators of peak flowmetry, ultrasound, radiography, computed tomography, NMRI 	<p>Accuracy: demonstrates the ability to perform medical procedures on dummies during an objective structured clinical examination.</p> <p>Articulation: accurately performs medical procedures on real or standardized patients.</p> <p>Affective Domain (Attitude/Behavior)</p> <p>Gives value: relationships with patients and medical staff during medical procedures.</p> <p>Organization:</p> <ul style="list-style-type: none"> -independent organizes medical procedures according to the list of the residency profile; -willingness to manage a team, to tolerate social, ethnic, religious and cultural differences. 	<p>Medical documentation: - readiness to identify pathological conditions, symptoms, disease syndromes, and nosological forms in newborns in accordance with the International Statistical Classification of Diseases and Health-related Problems;</p> <ul style="list-style-type: none"> - medical documentation: registration of medical documentation for the specialty profile in accordance with the legislation in healthcare.
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11. Prerequisites: Neonatology in the hospital.


12. Postrequisites: profile disciplines

13. References

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5. www.doktor.ru.
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7. www.spasmex.ru
8. www.webmedinfo.ru
9. www.medicum.nnov.ru
10. medcompany.ru
11. meduniver.com
12. badis.narod.ru
13. studentdoctorprofessor.com.ua
14. www.med39.ru
15. www.kovostok.ru
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18. top.medlinks.ru
19. doctor-doctor.ru
20. mepmed.ru

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- 1. Department:** «Pediatrics-2»
2. Level of preparation: Residency
3. Specialty: 7R01131 «Neonatology»
4. Course: 2
5. The name of the elective discipline «Clinical pharmacology in neonatology»
6. Number of credits: 2

7. Purpose of the discipline: the purpose of mastering the discipline is to form professional competencies among resident neonatologists aimed at developing the ability to present a complete system of theoretical foundations of clinical pharmacology; factors that contribute to changes in metabolism, the effects of drugs that increase the risk of side effects, and the willingness to organize high-quality pharmacotherapy and full-fledged drug provision for newborns.


8. Objectives:

- formation of scientific knowledge about the general patterns and specific mechanisms of the occurrence, development, main manifestations and outcomes of diseases in newborns;
- осво master special knowledge and skills in the field of clinical pharmacology;
- диагност diagnose diseases and emergency conditions in newborns in accordance with the International Statistical Classification of Diseases and Health-Related Problems;
- научить teach to justify the use of pathogenetically based drug therapy;
- formation of ideas about the mechanism of action, pharmacokinetics, pharmacodynamics, side effects, indications and contraindications, dosage regimen of drugs in neonatology;
- to justify pharmacotherapy in a particular patient, to determine the route of administration, regimen and dose of drugs, to evaluate the effectiveness and safety of treatment for various diseases in newborns;
- обуч train the management of accounting records in medical organizations at all stages of providing medical care to newborns;
- совершенствовать improve the methodology in working with patients and their relatives, medical personnel, educating doctors with proper deontological and ethical principles and skills;
- to participate in the solution of individual research and scientific-applied tasks for the development of new methods of prevention, diagnosis, treatment in neonatology.

9. Justification of the choice of discipline: In the elective discipline "Clinical Pharmacology in Neonatology", a deeper and more complete development of the work of future neonatologists is expected. The process of studying the discipline is aimed at forming the readiness of a specialist who has acquired knowledge in the field of clinical pharmacology, to improve the conduct of individual pharmacotherapy, including in the specialty of neonatology, to contribute to the prevention, timely detection and treatment of side effects of drugs, to ensure more appropriate preparation of applications for medicines and to monitor the correctness of their use.

10. Result of training (competence):

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)
Application: - pharmacodynamics, pharmacokinetics, pharmacogenetics and their significance in assessing the	Accuracy: demonstrates the ability to perform medical procedures on dummies during an objective structured clinical examination.	Medical documentation: - readiness to identify pathological conditions, symptoms, disease syndromes, and nosological forms in

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<p>effectiveness and safety of treatment;</p> <ul style="list-style-type: none"> - metabolism and interaction, monitoring of side effects of drugs, basic principles of drug testing; - computer science, the study of computer information and search systems for clinical pharmacology, the development of a pharmacological form of a medical institution, the principles of pharmacotherapy and clinical pharmacology of medicines for diseases of the cardiovascular, bronchopulmonary system, drugs used in neonatology and in emergency conditions, anti-inflammatory and antimicrobial drugs used in neonatology for infectious diseases; - principles of pharmacotherapy and clinical pharmacology of drugs that regulate the function of hemostasis, urinary system, diseases of the digestive system and pathology of the nervous system in newborns. 	<p>Articulation: accurately performs medical procedures on real or standardized patients.</p> <p>Affective Domain (Attitude/Behavior)</p> <p>Gives value: relationships with patients and medical staff during medical procedures.</p> <p>Organization:</p> <ul style="list-style-type: none"> -independent organizes medical procedures according to the list of the residency profile; -willingness to manage a team, to tolerate social, ethnic, religious and cultural differences. 	<p>newborns in accordance with the International Statistical Classification of Diseases and Health-related Problems.</p> <ul style="list-style-type: none"> - Medical documentation: registration of medical documentation on the specialty profile in accordance with the legislation in healthcare.
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11. Prerequisites: Neonatology in the hospital.


12. Postrequisites: profile disciplines

13. References

Main literature:

1. Shabalov, N. P. Neonatology [Text]: textbook. manual : in 2 volumes / N. P. Shabalov. - 6th ed., ispr. and add. - M.: GEOTAR-Media, 2016. - Vol. 1. - 928 p. (1 copy)
2. Shabalov, N. P. Neonatology [Text]: textbook. manual : in 2 volumes / N. P. Shabalov. - 6th ed., ispr. and add. - M.: GEOTAR-Media, 2016. - Vol. 2. - 880 p. (1 copy)
3. Shabalov, N. P. Neonatology [Electronic resource]: textbook. manual : in 2 volumes / N. P. Shabalov. - 6th ed., ispr. and add. - M.: GEOTAR-Media, 2016. - Vol. 1. - 704 p. - Access mode: <http://www.studentlibrary.ru/book/ISBN9785970437940.html>
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4. Clinical pharmacology: national guidelines [Electronic resource] / ed. by Yu. B. Belousov, V. G. Kukes, V. K. Lepakhin, V. I. Petrov-M.: GEOTAR-Media, 2014. - <http://www.rosmedlib.ru/>
5. Petrov V. I. Medicine, based on evidence [Electronic resource]: textbook. manual for universities and postgraduate studies. education of doctors / Petrov V. I., Nedogoda S. V.-M.: GEOTAR-Media, 2012. - 141 p.: ill. - Access mode: <http://www.studentlibrary.ru>
6. Clinical pharmacology. General questions of clinical pharmacology [Electronic resource]: practicum: textbook / D. A. Sychev [et al.]; edited by V. G. Kukes. - M.: GEOTAR-Media, 2013. - 224 p.: ill. - Access mode: <http://www.studentlibrary.ru/>.
7. Begg E. Clinical pharmacology [Text] : [textbook. ed.] / E. Begg; translated from the English

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1. Scopus / Elsevier Inc., Reed Elsevier. - Philadelphia: Elsevier B.V., PA. - URL: <http://www.scoDus.com/> (National project)
2. Doctor's consultant. Electronic medical library: EBS. - Moscow: LLC GK "GEOTAR". - URL: <http://www.rosmedlib.ru>
3. Web of Science / Clarivate Analytics. - URL: <http://apps.webofknowledge.com> (Naitoekt).
5. Scientific electronic library - URL: elibrary.ru

Medical sites:

1. med-site.narod.ru
2. www.medicusamicus.com
3. www.medprof.ru
4. www.rusmedserv.com/topsites/
5. www.doktor.ru.
6. medinfo.net
7. www.spasmex.ru
8. www.webmedinfo.ru
9. www.medicum.nnov.ru
10. medcompany.ru
11. meduniver.com
12. badis.narod.ru
13. studentdoctorprofessor.com.ua
14. www.med39.ru
15. www.kovostok.ru
16. www.drugme.ru
17. lepila.tyurem.net
18. top.medlinks.ru
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- 1. Department:** «Pediatrics-2»
- 2. Level of preparation:** Residency
- 3. Specialty:** 7R01130 «Pediatrics»
- 4. Course:** 2
- 5. The name of the elective discipline** «Functional diagnostics in Pediatrics»
- 6. Number of credits:** 2

7. Purpose of the discipline: Formation and consolidation of deep knowledge, skills and abilities of residents in industrial, scientific and pedagogical practice for conducting research work of residents in the specialty «Pediatrics».

8. Objectives:

- Consolidation of practical skills and theoretical foundations of functional diagnostics in cases often encountered in pediatric cardiology, pulmonology, neurology;
- adoption of specialized decisions based on the principles of evidence-based medicine;
- mastering communication skills in relationships with patients and colleagues;
- formation of a moral and ethical culture, which is supported during the observation and examination of patients;
- development of practical values, principles of altruism, mercy, responsibility, honesty and confidentiality;
- formation of leadership qualities and ability to work in a group;
- ability to independently work with scientific literature on the topic and form clinical thinking;
- formation of the ability to analyze socio-biological, medico-social and epidemiological conditions and factors of diseases;
- appointment of laboratory, functional and instrumental methods of examination;
- develop the ability to work with medical literature, the ability to analyze literary and Internet sources;
- ability to independently work with scientific literature on the topic and form clinical thinking;
- development of the ability to analyze socio-biological, medical-social and epidemiological conditions and factors of diseases;
- teaching the intern the principles of diagnosing diseases, prescribing methods of laboratory, functional and instrumental examination;
- Improving the skills of manual examination of the patient, palpation, percussion and auscultation;
- development of the ability to interpret the results of paraclinical examination of the patient;
- to teach how to draw up an algorithm for the differential diagnosis of diseases;
- development of the ability to choose the right etiopathogenetic treatment;
- teach the basic principles of prevention;
- explain the application of legal acts regulating the activities of a pediatrician;
- Improving communication skills with colleagues, patients and their parents;
- to stimulate the desire of the resident for self-development and self-improvement, for the choice of a professional trajectory;

9. Justification of the choice of discipline: In the elective discipline «Functional diagnostics in Pediatrics», a deeper and more complete mastering of the work of future pediatric oncohematologists is expected.


The work program of the topic included the main sections of topical problems of functional diagnostics in pediatrics: indications, contraindications for functional diagnostics in children of different ages, functional diagnostics and interpretation of research results, functional diagnostics

in congenital heart defects. Daily blood pressure monitoring. The method of spiropgraphic research in children. Diagnosis of hyperactivity of the lungs in children and adolescents. Theoretical foundations of clinical physiology of the cardiovascular system. The structure of the conduction system of the heart. ECG parameters for rhythm disturbances in children. Normal ECG parameters. The mechanism of development of rhythm disturbances. Ultrasound of the heart. Physical and technical bases of echocardiogram, echocardiogram method. Echocardiography in various pathologies of the heart. Ultrasound diagnosis of diseases of the thyroid gland, diseases of the abdominal cavity. Electroencephalography. echoencephalography. Electromyography.

10. Result of training (competence):

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)
<p>Application: Evaluation of studies, materials from professional literature on functional diagnostics in pediatrics. Participate in the work of the research team;</p> <ul style="list-style-type: none"> - readiness for abstract thinking, analysis, synthesis; - assign a plan of laboratory and instrumental methods of examination; - interpret the results of laboratory and instrumental methods of examination; - provide assistance in case of complications. <p>Analysis: discusses and categorizes the knowledge of biomedical, clinical, social and behavioral sciences in specialized practice</p> <ul style="list-style-type: none"> - conducts a comprehensive assessment of laboratory and instrumental studies. <p>Rating:</p> <ul style="list-style-type: none"> - evaluate the results of UAC, OAM, biochemical blood tests, BAC. research, coprology, CBS. - appreciate the indicators of peak flowmetry, ultrasound, radiography, computed tomography, NMRI 	<p>Accuracy: demonstrates the ability to perform medical procedures on dummies during an objective structured clinical examination.</p> <p>Articulation: accurately performs medical procedures on real or standardized patients.</p> <p>Affective Domain (Attitude/Behavior)</p> <p>Gives value: relationships with patients and medical staff during medical procedures.</p> <p>Organization:</p> <ul style="list-style-type: none"> -independent organizes medical procedures according to the list of the residency profile; -willingness to manage a team, to tolerate social, ethnic, religious and cultural differences. 	<p>Medical documentation:</p> <ul style="list-style-type: none"> - readiness to identify pathological conditions, symptoms, disease syndromes, and nosological forms in newborns in accordance with the International Statistical Classification of Diseases and Health-related Problems; - medical documentation: registration of medical documentation for the specialty profile in accordance with the legislation in healthcare.

11. Prerequisites: Children's diseases in the hospital.

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12. Postrequisites: profile disciplines

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Department of Pediatrics-2		044-68/11
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2. Doctor's consultant. Electronic medical library: EBS. - Moscow: LLC GK "GEOTAR". - URL: <http://www.rosmedlib.ru>
3. Web of Science / Clarivate Analytics. - URL: <http://apps.webofknowledge.com> (Naitoekt).
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4. www.rusmedserv.com/topsites/
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- 1. Department:** «Pediatrics-2»
- 2. Level of preparation:** Residency
- 3. Specialty:** 7R01131 «Neonatology»
- 4. Course:** 2
- 5. The name of the elective discipline** «Fundamentals of medical genetics in neonatology»
- 6. Number of credits:** 2

7. Purpose of the discipline: the purpose of training a qualified neonatologist is to deepen the complex of fundamental knowledge, skills and abilities in the field of medical genetics for implementation in the professional activity of a neonatologist.


8. Objectives:

- to form an extensive and deep volume of fundamental medical knowledge in the field of medical genetics, forming the professional competence of a doctor who is able to successfully solve their professional tasks;
- сформировать to form and improve the professional training of a specialist doctor who has a clinical mindset, is well-versed in hereditary and congenital pathology and has in-depth knowledge of medical genetics;
- подготовить prepare a specialist for independent professional diagnostic activities, who is able to conduct a differential diagnostic search based on modern genetic research methods;
- to improve the system of general and special knowledge and skills that allow the doctor to freely navigate in the organization of medical and genetic services, insurance medicine.

9. Justification of the choice of discipline: When studying this component, neonatologists will master the main directions of scientific research in the field of medical genetics, which are the prevention and timely diagnosis of hereditary diseases; monitoring of congenital malformations; development and implementation of programs for preventing the birth of newborns with congenital malformations in the practice of medical-genetic and obstetric services.; development and implementation in practice of medical-genetic centers of systems of biochemical and molecular-genetic prenatal and vital diagnostics of hereditary diseases associated with congenital metabolic disorders; study of molecular-genetic bases of hereditary diseases.

10. Result of training (competence):

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)
<p>Application:</p> <ul style="list-style-type: none"> - formation of knowledge of the basic laws of the development of hereditary diseases in the light of natural-scientific ideas about the structure and function of organs and systems of the child's body as a whole; - demonstrate competence in the diagnosis of hereditary diseases associated with congenital metabolic disorders; - readiness for abstract thinking, 	<p>Accuracy: demonstrates the ability to perform medical procedures on dummies during an objective structured clinical examination.</p> <p>Articulation: accurately performs medical procedures on real or standardized patients.</p> <p>Affective Domain (Attitude/Behavior)</p> <p>Gives value: relationships with patients and medical staff during medical procedures.</p>	<p>Medical documentation:</p> <ul style="list-style-type: none"> - observe the ethical and deontological aspects of the work of a neonatologist; - to identify and assess the severity of risk factors for the development and progression of neonatal diseases, to identify early symptoms of diseases, to find out the family history, to comply with the norms

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analysis, synthesis;	Organization: -independent organizes medical procedures according to the list of the residency profile; -willingness to manage a team, to tolerate social, ethnic, religious and cultural differences.	of the sanitary and epidemiological regime; - get information about the disease; determine the need for special research methods (laboratory, radiological, functional, pathopsychological, medical-genetic), organize their implementation and be able to interpret their results; - conduct a differential diagnosis; - assess the cause and severity of the patient's condition and take the necessary measures to remove the patient from this condition.
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11. Prerequisites: Neonatology in the hospital.

12. Postrequisites: profile disciplines


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- 1. Department:** «Pediatrics-2»
- 2. Level of preparation:** Residency
- 3. Specialty:** 7R01130 «Pediatrics»
- 4. Course:** 2
- 5. The name of the elective discipline** «Modern aspects of a diyetaprofilaktika and dietotherapy in pediatrics»
- 6. Number of credits:** 2

7. Purpose of the discipline: to train specialists in nutrition, trained in the methods of diet therapy for various diseases and able to conduct a differentiated diet therapy.


8. Objectives:

- development by residents of theoretical knowledge on the basics of rational and therapeutic nutrition in children;
- study of special target diets for patients with cardiological, pulmonological, gastroenterological, nephrological, endocrinological pathologies, food allergies and some surgical diseases;
- pathogenetic substantiation of diet therapy in case of malabsorption syndrome and food allergy;
- study of the principles of enteral and parenteral nutrition of patients;
- study of the principles of therapeutic nutrition in alimentary-dependent conditions in young children;
- to teach to make professional decisions based on the principles of evidence-based medicine;
- to instill appropriate communication skills when communicating with patients, interacting with colleagues;
- to instill the skills of moral, ethical and legal culture necessary for servicing patients in the conditions of functional diagnostics;
- develop a commitment to professional values such as altruism, compassion, empathy, responsibility, honesty, and confidentiality;
- Strengthen teamwork and leadership skills.

9. Justification of the choice of discipline: Acquisition of knowledge on the conduct of diet therapy for various diseases and the implementation of dynamic monitoring of the patient. Mastering skills for the preparation of special therapeutic diets for the nutrition of patients with non-communicable diseases.

10. Result of training (competence):

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)
<p>Application: Evaluation of studies, materials from professional literature on "Modern aspects of dietary prevention and diet therapy in pediatrics". Use international databases in your daily activities. Participate in the work of the research team;</p> <p>- readiness for abstract thinking, analysis, synthesis;</p>	<p>Accuracy: demonstrates the ability to perform medical procedures on dummies during an objective structured clinical examination.</p> <p>Articulation: accurately performs medical procedures on real or standardized patients.</p> <p>Affective Domain (Attitude/Behavior)</p>	<p>Medical documentation:</p> <p>- readiness to identify pathological conditions, symptoms, disease syndromes, and nosological forms in newborns in accordance with the International Statistical Classification of Diseases and Health-related Problems;</p>

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<ul style="list-style-type: none"> - assign a plan of laboratory and instrumental methods of examination; - interpret the results of laboratory and instrumental methods of examination; - provide assistance in case of complications. <p>Analysis: discusses and categorizes the knowledge of biomedical, clinical, social and behavioral sciences in specialized practice</p> <ul style="list-style-type: none"> - conducts a comprehensive assessment of laboratory and instrumental studies. <p>Rating:</p> <ul style="list-style-type: none"> - evaluate the results of UAC, OAM, biochemical blood tests, BAC. research, coprology, CBS. - appreciate the indicators of peak flowmetry, ultrasound, radiography, computed tomography, NMRI 	<p>Gives value: relationships with patients and medical staff during medical procedures.</p> <p>Organization:</p> <ul style="list-style-type: none"> -independent organizes medical procedures according to the list of the residency profile; -willingness to manage a team, to tolerate social, ethnic, religious and cultural differences. 	<ul style="list-style-type: none"> - medical documentation: registration of medical documentation for the specialty profile in accordance with the legislation in healthcare; - Knows the basics of rational and therapeutic nutrition in pediatrics. - Knows the principles of enteral and parenteral nutrition of sick children. - Knows how to make a diet for alimentary-dependent conditions in young children.
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11. Prerequisites: Children's diseases in the hospital.


12. Postrequisites: profile disciplines

13. References

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Additional literature:

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7. Askarova G.K. Allergodermatoses: eczema and atopic dermatitis (etiology, pathogenesis, clinic and treatment) - Karaganda, 2002. - 202 p.
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<http://irbis.rmapo.ru/UploadsFilesForIrbis/8b4ba38a506a0008d1d0b92c42ed9df5.pdf>
2. WHO AnthroPlus for personal computers Manual: Software for assessing growth of the world's children and adolescents. Geneva: WHO, 2009 (<http://www.who.int/growthref/tools/en/>).

Medical sites:

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| 1. med-site.narod.ru | 15. www.kovostok.ru |
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| 7. www.spasmex.ru | |
| 8. www.webmedinfo.ru | |
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- 1. Department:** «Pediatrics-2»
- 2. Level of preparation:** Residency
- 3. Specialty:** 7R01106 «Children's oncology and hematology»
- 4. Course:** 1
- 5. The name of the elective discipline** «Modern aspects of rehabilitation in pediatric hematology oncology»
- 6. Number of credits:** 2

7. Purpose of the discipline: Training of highly qualified, competitive pediatric oncologists and hematologists who are able to meet the needs of society in providing medical care to oncological and hematological sick children, apply and develop advanced innovative technologies in medicine, science and practice.

8. Objectives:

- to form clinical thinking and the ability to independently work with scientific literature on the discipline;
- develop the ability to analyze socio-biological, medico-social and epidemiological conditions and factors of the occurrence of diseases;
- to teach the resident the principles of diagnosis of diseases, reasonably prescribe laboratory, functional and instrumental methods of examination;
- improve the skill of manual examination of the patient, palpation, percussion and auscultation;
- to develop the skill of interpreting the results of a paraclinical examination of a patient;
- to teach the compilation of an algorithm for the differential diagnosis of diseases;
- to develop the skill of an informed choice of etiopathogenetic treatment;
- teach the basic principles of prevention;
- explain the application of legal documents regulating the activities of a pediatric hematologist, a pediatric oncologist;
- improve interpersonal communication skills with colleagues, patients and their parents;
- to stimulate the resident's desire for self-development and self-improvement, the choice of a professional trajectory;
- to develop the skill of working with medical literature, the ability to analyze literary and Internet sources.


9. Justification of the choice of discipline: In the elective discipline "Modern aspects of rehabilitation in pediatric oncohematology", a deeper and more complete mastering of the work of future pediatric oncohematologists is expected.

Pediatric rehabilitation is a form of treatment that results from the coordinated and complementary work of various medical and non-medical specialties used to identify and develop children's abilities, rehabilitate identified diseases and ensure the independence of the child at the highest level.

High-intensity treatment in pediatric hematology-oncology requires the organization of active medical and psychological and social rehabilitation of patients who have undergone treatment. Timely comprehensive rehabilitation can improve the results of therapy.

10. Result of training (competence):

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)
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<p>Application: Evaluation of studies, materials from professional literature on pediatric oncology and hematology. Use international databases in your daily activities. Participate in the work of the research team;</p> <ul style="list-style-type: none"> - readiness for abstract thinking, analysis, synthesis; - assign a plan of laboratory and instrumental methods of examination; - interpret the results of laboratory and instrumental methods of examination; - provide assistance in case of complications. <p>Analysis: discusses and categorizes the knowledge of biomedical, clinical, social and behavioral sciences in specialized practice</p> <ul style="list-style-type: none"> - conducts a comprehensive assessment of laboratory and instrumental studies. <p>Rating:</p> <ul style="list-style-type: none"> - evaluate the results of UAC, OAM, biochemical blood tests, BAC. research, coprology, CBS. - appreciate the indicators of peak flowmetry, ultrasound, radiography, computed tomography, NMRI 	<p>Accuracy: demonstrates the ability to perform medical procedures on dummies during an objective structured clinical examination.</p> <p>Articulation: accurately performs medical procedures on real or standardized patients.</p> <p>Affective Domain (Attitude/Behavior)</p> <p>Gives value: relationships with patients and medical staff during medical procedures.</p> <p>Organization:</p> <ul style="list-style-type: none"> -independent organizes medical procedures according to the list of the residency profile; -willingness to manage a team, to tolerate social, ethnic, religious and cultural differences. 	<ul style="list-style-type: none"> - readiness to identify pathological conditions, symptoms, disease syndromes, and nosological forms in newborns in accordance with the International Statistical Classification of Diseases and Health-related Problems; - medical documentation: registration of medical documentation for the specialty profile in accordance with the legislation in healthcare.
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11. Prerequisites: Children's diseases in General medical practice.

12. Postrequisites: profile disciplines

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6. Sirota V.B., Bukenov A.M. Pediatric oncology: textbook. stipend. –Karaganda, 2015. – 128p.

7. Pediatric oncology: clinical recommendations for the treatment of patients with solid tumors / edited by M.Y. Rykov, V.G. Polyakov. — M. : GEOTAR-Media, 2017. — 368 p.

8. Clinical manifestations of oncological diseases in children / edited by V.G.Polyakov, M.Yu. Rykov — St. Petersburg : Mikhail Fursov Printing House, 2017. — 52 p.


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Electronic resources (for example: video, audio, digests):

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2. Welsher, L. Z. Clinical oncology : selected lectures : [studies. manual for medical universities] / L. Z. Welsher, B. I. Polyakov, S. B. Peterson. - M. : GEOTAR-Media, 2019.

Medical sites:

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1. med-site.narod.ru
2. www.medicusamicus.com
3. www.medprof.ru
4. www.rusmedserv.com/topsites/
5. www.doktor.ru.
6. medinfo.net
7. www.spasmex.ru
8. www.webmedinfo.ru
9. www.medicum.nnov.ru
10. medcompany.ru
11. meduniver.com
12. badis.narod.ru
13. studentdoctorprofessor.com.ua
14. www.med39.ru
15. www.kovostok.ru
16. www.drugme.ru
17. lepila.tyurem.net
18. top.medlinks.ru
19. doctor-doctor.ru
20. mepmed.ru

- 1. Department:** «Pediatrics-2»
- 2. Level of preparation:** Residency
- 3. Specialty:** 7R01106 «Children's oncology and hematology»
- 4. Course:** 1
- 5. The name of the elective discipline** «Pathomorphological diagnostics in pediatric oncology»
- 6. Number of credits:** 2

7. Purpose of the discipline: Training of highly qualified, competitive pediatric oncologists and hematologists who are able to meet the needs of society in providing medical care to oncological and hematological sick children, apply and develop advanced innovative technologies in medicine, science and practice.

Pathomorphology of hemoblastoses in children. Lymphomas. Pathomorphological diagnosis of lymphoid tumors. Pathomorphology of tumors of the central nervous system. Acute lymphoblastic leukemia. Solid tumors. Clinical and pathoanatomic approaches to the lifetime diagnosis of tumors. Methodology of research in pathomorphology of malignant tumors.

8. Objectives:

- to form clinical thinking and the ability to independently work with scientific literature on the discipline;
- develop the ability to analyze socio-biological, medico-social and epidemiological conditions and factors of the occurrence of diseases;
- to teach the resident the principles of diagnosis of diseases, reasonably prescribe laboratory, functional and instrumental methods of examination;
- совершенствовать improve the skill of manual examination of the patient, palpation, percussion and auscultation;
- to develop the skill of interpreting the results of a paraclinical examination of the patient;
- обуч to teach the compilation of an algorithm for the differential diagnosis of diseases;

- to develop the skill of an informed choice of etiopathogenetic treatment;
- научить teach the basic principles of prevention;
- разьяс explain the application of legal documents regulating the activities of a pediatric hematologist, a pediatric oncologist;
- improve interpersonal communication skills with colleagues, patients and their parents;
- to stimulate the resident's desire for self-development and self-improvement, the choice of a professional trajectory;
- to develop the skill of working with medical literature, the ability to analyze literary and Internet sources.

9. Justification of the choice of discipline: In the elective discipline "Pathomorphological diagnostics in pediatric oncology", a deeper and more complete mastering of the work of future pediatric oncogematologists is expected.


Knowledge of medical and social measures of medical rehabilitation is a set of measures aimed at restoring socially significant skills that have been disrupted due to the underlying disease and/or ongoing treatment, by reducing the severity of social insufficiency as much as possible and training in performing socially significant functions, taking into account the nature of life limitations, including using technical means of social rehabilitation.

Knowledge of medical and psychological measures of medical rehabilitation is a set of measures aimed at diagnosing and correcting the psychological problems of the rehabilitator, directly related or caused by the manifestations or consequences of the underlying and concomitant diseases.

Knowledge of indications for medical rehabilitation is the need for a complex of medical services aimed at restoring the normal functioning of the patient's body, disrupted as a result of the disease.

10. Result of training (competence):

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)
<p>Application: Evaluation of studies, materials from professional literature on pediatric oncology and hematology. Use international databases in your daily activities. Participate in the work of the research team;</p> <ul style="list-style-type: none"> - readiness for abstract thinking, analysis, synthesis; - assign a plan of laboratory and instrumental methods of examination; - interpret the results of laboratory and instrumental methods of examination; - provide assistance in case of complications. 	<p>Accuracy: demonstrates the ability to perform medical procedures on dummies during an objective structured clinical examination.</p> <p>Articulation: accurately performs medical procedures on real or standardized patients.</p> <p>Affective Domain (Attitude/Behavior)</p> <p>Gives value: relationships with patients and medical staff during medical procedures.</p> <p>Organization:</p> <ul style="list-style-type: none"> -independent organizes medical procedures according to the list of the residency profile; 	<ul style="list-style-type: none"> - readiness to identify pathological conditions, symptoms, disease syndromes, and nosological forms in newborns in accordance with the International Statistical Classification of Diseases and Health-related Problems; - medical documentation: registration of medical documentation for the specialty profile in accordance with the legislation in healthcare.

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<p>Analysis: discusses and categorizes the knowledge of biomedical, clinical, social and behavioral sciences in specialized practice</p> <p>- conducts a comprehensive assessment of laboratory and instrumental studies.</p> <p>Rating:</p> <p>- evaluate the results of UAC, OAM, biochemical blood tests, BAC. research, coprology, CBS.</p> <p>- appreciate the indicators of peak flowmetry, ultrasound, radiography, computed tomography, NMRI</p>	<p>-willingness to manage a team, to tolerate social, ethnic, religious and cultural differences.</p>	
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11. Prerequisites: Children's diseases in General medical practice.

12. Postrequisites: profile disciplines


13. References

Main literature:

1. Pathological anatomy : national guidelines / G. N. Berchenko [et al.] ; gl. ed.: M. A. Fingers, L. V. Kaktursky, O. V. Zairatyants ; Russian Society of Pathologists, Assoc. med. - M. : GEOTAR-Media, 2013. - 1259 p. : ill. - (National Guidelines).
2. Oncology [Electronic resource] : national hands / [T. A. Fedorova et al.] ; edited by V. I. Chissov, M. I. Davydov. - Moscow : GEOTAR-Media, 2013. - 572 p.
3. Radiation therapy [Electronic resource] : [study. for higher Prof. education] / [G. E. Trufanov, M. A. Asaturyan, G. M. Zharikov, V. N. Malakhovsky] ; edited by G. E. Trufanov. - Moscow : GEOTAR-Media, 2013. - 208 p.
4. Zaprudnov, A.M. Children's diseases: [study. for higher Prof. education] : in 2 t. t. 1 / A.M. Zaprudnov, K. I. Grigoriev, L. A. Kharitonova-- 2nd ed., reprint. and additional – Moscow : GEOTAR-Media, 2013-- 768 p.
5. Zaprudnov, A.M. Children's diseases: [study. for higher Prof. education] : in 2 t. t. 2 / A.M. Zaprudnov, K. I. Grigoriev, L. A. Kharitonova-- 2nd ed., reprint. and additional – Moscow : GEOTAR-Media, 2013. - 752 p.
6. History of pediatric oncology / edited by M.Y. Rykov, V.G. Polyakov - St. Petersburg : Mikhail Fursov Printing House, 2015. - 208 p.
7. Pediatric oncology: clinical recommendations for the treatment of patients with solid tumors / edited by M.Y. Rykov, V.G. Polyakov. - M. : GEOTAR-Media, 2017. - 368 p.
8. Clinical manifestations of oncological diseases in children / edited by V.G. Polyakov, M.Yu. Rykov - St. Petersburg : Mikhail Fursov Printing House, 2017. - 52 p.
9. Clinical protocols of the Ministry of Health of the Republic of Kazakhstan.

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2. Abisatov H.A. Clinical oncology: textbook. - Almaty: publishing house "Arys", 2007. - Т. I. - 608 s
3. Sirota V.B., Bukenov A.M. Pediatric oncology: textbook. stipend. - Karaganda, 2015. - 128 p.
4. Pediatric oncology: clinical recommendations for the treatment of patients with solid tumors / edited by M.Y. Rykov, V.G. Polyakov. - M. : GEOTAR-Media, 2017. - 368 p.
5. Clinical manifestations of oncological diseases in children / edited by V.G. Polyakov, M.Yu. Rykov - St. Petersburg : Mikhail Fursov Printing House, 2017. - 52 p.
6. Abisatov H.A. Clinical oncology: textbook. - Almaty: Arys Publishing House, 2007. - Vol. II - 640 p.
7. Monakhov B.V., Kaidarova D.R., Afonin G.A. Modern cancer prevention. - Almaty, 2009 - 196 p.

Electronic resources (for example: video, audio, digests):

1. Higgins, K. Decoding of clinical laboratory analyses [Electronic resource] : monograph / K. Higgins ; translated from English by E. K. Vishnevskaya. - 7th ed. -Moscow : Knowledge Lab, 2016. - 587 p. <http://elib.kaznu.kz/>
2. Welsher, L. Z. Clinical oncology : selected lectures : [studies. manual for medical universities] / L. Z. Welsher, B. I. Polyakov, S. B. Peterson. - M. : GEOTAR-Media, 2019.

Medical sites:

ОҢТҮСТІК ҚАЗАҚСТАН MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ		SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казахстанская медицинская академия»
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1. med-site.narod.ru
2. www.medicusamicus.com
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9. www.medicum.nnov.ru
10. medcompany.ru
11. meduniver.com
12. badis.narod.ru
13. studentdoctorprofessor.com.ua
14. www.med39.ru
15. www.kovostok.ru
16. www.drugme.ru
17. lepila.tyurem.net
18. top.medlinks.ru
19. doctor-doctor.ru
20. mepmed.ru

- 1. Department:** «Pediatrics-2»
- 2. Level of preparation:** Residency
- 3. Specialty:** 7R01130 «Pediatrics»
- 4. Course:** 2
- 5. The name of the elective discipline** «Clinical and laboratory diagnostics in Pediatrics»
- 6. Number of credits:** 2

7. Purpose of the discipline: Training of a pediatrician who has a volume of knowledge, skills and practical skills that meets modern requirements for independent interpretation of laboratory diagnostic methods of research.


8. Objectives:

- consolidate skills in interpreting the results of modern laboratory and instrumental methods of examination and diagnosis in various diseases in children;
- increase knowledge on modern methods of examination of diseases in children;
- to teach the maintenance of current medical medical and accounting and reporting documentation in accordance with modern standards in pediatrics;
- to teach the conduct of sanitary and educational work among the population, the formation of a healthy lifestyle in modern conditions;
- the need for continuous professional training and improvement of their knowledge and skills throughout their professional activities.

9. Justification of the choice of discipline:

In the elective discipline "Clinical and laboratory diagnostics in pediatrics", a deeper and more complete mastery of the work of pediatricians is expected. The ability to interpret the results of laboratory functional research methods is necessary for a young specialist to make an accurate diagnosis and conduct a differential diagnosis.

10. Result of training (competence):

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Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)
<p>Application: can apply his knowledge to problem solving in a new or unfamiliar environment related to his field of study;</p> <ul style="list-style-type: none"> - appoint a plan of laboratory and instrumental methods of examination; - interpret the results of laboratory and instrumental methods of examination; - to provide assistance in case of complications. <p>Analysis: discusses, categorizes knowledge of biomedical, clinical, social and behavioral sciences in specialized practice</p> <ul style="list-style-type: none"> - Conduct a comprehensive assessment of the conducted laboratory and instrumental studies. <p>Rating: Assess the results of the CBC, OAM, biochemical blood tests, tank. research, scatology, CBS. Evaluate the indicators of peak flowmetry, ultrasound, radiography, computed tomography, MRI</p>	<p>Accuracy: demonstrates the ability to perform medical procedures on dummies during OSKE.</p> <p>Articulation: accurately performs medical procedures on real or standardized patients.</p> <p>Gives value: relationships with patients and medical staff during medical procedures.</p> <p>Organization: independently organizes medical procedures according to the list of the internship profile.</p>	<p>Medical documentation: registration of medical documentation on the profile of the specialty in accordance with the legislation in health care.</p>


11. Prerequisites: biochemistry, biophysics, physiology.

12. Postrequisites: profile disciplines

13. References

Main literature:

1. Hittins K. - Deciphering clinical laboratory tests. Moscow. Bykom. Knowledge Lab. 2004, p.376 b.
2. Kamyshnikov V.S. "Clinical laboratory tests from A to Z and their diagnostic profiles". Moscow. Medpress-Inform. 2005
3. A.Yu. Vasiliev, E.B. Olkhov. Ultrasound diagnostics in emergency pediatric practice. Guide for doctors. GEOTAR. Media. 2010
4. M.K. Rybakov, V.V. Mitkov. Echocardiography in tables and diagrams. Desktop reference book. VIDAR. 2011.
5. M.I. Lykov. Ultrasound diagnostics in pediatrics. VIDAR 2007.
6. Clinical protocols of the Ministry of Health of the Republic of Kazakhstan.

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Additional literature:

1. I.V. Dvoryakovsky, G.V. Yatsyk. Ultrasonic diagnostics in neonatology. Publishing house "Atmosfera". 2009
2. Bazarbaeva A.A. Differential diagnosis of anemia in children: textbook.- Almaty, 2011.- 99 p.

Electronic resources (for example: video, audio, digests):

1. Higgins, K. Decoding of clinical laboratory analyses [Electronic resource] : monograph / K. Higgins ; translated from English by E. K. Vishnevskaya. - 7th ed. -Moscow : Knowledge Lab, 2016. - 587 p. <http://elib.kaznu.kz/>
2. Clinical guidelines for the pharmacotherapy of persistent pain in children and adolescents / Association of professional participants in hospice care, Russian Society of Pediatric Oncologists, Association of Pediatric Anesthesiologists and Resuscitators, National Society of Pediatric Oncologists of Russia - Moscow, 2016. - 33 p.

Medical sites:

ОҢТҮСТІК ҚАЗАҚСТАН MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ		SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казахстанская медицинская академия»
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2. www.medicusamicus.com
3. www.medprof.ru
4. www.rusmedserv.com/topsites/
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6. medinfo.net
7. www.spasmex.ru
8. www.webmedinfo.ru
9. www.medicum.nnov.ru
10. medcompany.ru
11. meduniver.com
12. badis.narod.ru
13. studentdoctorprofessor.com.ua
14. www.med39.ru
15. www.kovostok.ru
16. www.drugme.ru
17. lepila.tyurem.net
18. top.medlinks.ru
19. doctor-doctor.ru
20. mepmed.ru

- 1. Department:** «Pediatrics-2»
- 2. Level of preparation:** Residency
- 3. Specialty:** 7R01130 «Pediatrics»
- 4. Course:** 2
- 5. The name of the elective discipline** «Clinical immunology and Allergology in hospital»
- 6. Number of credits:** 2

7. Purpose of the discipline: Training of highly qualified, competitive pediatricians who are able to meet the needs of society in providing medical care to sick children, apply and develop advanced innovative technologies in medicine, science and practice.

8. Objectives:

- to form clinical thinking and the ability to independently work with scientific literature on the discipline;
- develop the ability to analyze socio-biological, medico-social and epidemiological conditions and factors of the occurrence of diseases;
- to teach the resident the principles of diagnosis of diseases, reasonably prescribe laboratory, functional and instrumental methods of examination;
- совершенствовать improve the skill of manual examination of the patient, palpation, percussion and auscultation;
- to develop the skill of interpreting the results of a paraclinical examination of the patient;
- обуч to teach the compilation of an algorithm for the differential diagnosis of diseases;
- to develop the skill of an informed choice of etiopathogenetic treatment;
- научить teach the basic principles of prevention;
- explain the application of legal documents regulating the activities of a pediatrician;
- improve interpersonal communication skills with colleagues, patients and their parents;

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- to stimulate the resident's desire for self-development and self-improvement, the choice of a professional trajectory;
- to develop the skill of working with medical literature, the ability to analyze literary and Internet sources.

9. Justification of the choice of discipline:

In the elective discipline "Clinical immunology and Allergology in hospital", a deeper and more complete mastery of the work of future pediatricians is expected.


Clinical immunology in pediatric oncology studies the principles of immunotherapy of immunodeficiency states, modern methods of immunodiagnostics, modern aspects of stem cell transplantation.

Immunology is an artificial stimulation of the immune system for the treatment of cancer, helping the immune system to fight the disease in a natural way. This is a program of fundamental research in the field of cancer immunology and the developing specialization of oncology. Cancer immunotherapy consists in the fact that antibodies of proteins of the immune system can detect and bind to molecules located on the surface of tumor antigens of cancer cells.

The complex therapy started in a timely manner makes it possible to improve the further prognosis of childhood oncological diseases.

10. Result of training (competence):

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)
<p>Application:</p> <p>Evaluation of studies, materials from professional literature on Clinical immunology and Allergology in hospital. Use international databases in your daily activities. Participate in the work of the research team;</p> <ul style="list-style-type: none"> - readiness for abstract thinking, analysis, synthesis; - assign a plan of laboratory and instrumental methods of examination; - interpret the results of laboratory and instrumental methods of examination; - provide assistance in case of complications. <p>Analysis: discusses and categorizes the knowledge of biomedical, clinical, social and behavioral sciences in specialized practice</p>	<p>Accuracy: demonstrates the ability to perform medical procedures on dummies during an objective structured clinical examination.</p> <p>Articulation: accurately performs medical procedures on real or standardized patients.</p> <p>Affective Domain (Attitude/Behavior)</p> <p>Gives value: relationships with patients and medical staff during medical procedures.</p> <p>Organization:</p> <ul style="list-style-type: none"> -independent organizes medical procedures according to the list of the residency profile; -willingness to manage a team, to tolerate social, ethnic, religious and cultural differences. 	<p>Medical documentation:</p> <ul style="list-style-type: none"> - readiness to identify pathological conditions, symptoms, disease syndromes, and nosological forms in newborns in accordance with the International Statistical Classification of Diseases and Health-related Problems; - medical documentation: registration of medical documentation for the specialty profile in accordance with the legislation in healthcare.

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- conducts a comprehensive assessment of laboratory and instrumental studies. Rating: - evaluate the results of UAC, OAM, biochemical blood tests, BAC. research, coprology, CBS. - appreciate the indicators of peak flowmetry, ultrasound, radiography, computed tomography, NMRI		
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11. Prerequisites: Children's diseases in the hospital.

12. Postrequisites: profile disciplines


13. References

Main literature:

1. Clinical immunology and allergology with the basics of general immunology [Electronic resource]: textbook / Kovalchuk L.V., Gankovskaya L.V., Meshkova R.Ya. - M. : GEOTAR-Media, 2012. - 640 p.: ill. Chapter 12
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3. Clinical immunology and allergology with the basics of general immunology [Text]: [proc. for universities] / L. V. Kovalchuk, L. V. Gankovskaya, R. Ya. Meshkova. - M. : GEOTAR-Media, 2012.
4. Kovalchuk L.V., Gankovskaya L.V., Meshkova R.Ya. Clinical immunology and allergology with the basics of general immunology: a textbook.-- M.: GEOTAR-Media, 2014.—640p.
5. Immunology: workshop: textbook. allowance / Ed. L.V. Kovalchuk, G. A. Ignatieva, L. V. Gankovskaya. - M.: GEOTAR - Media, 2014. - 176 p.
6. Lantskovsky, F. Children's hematology and oncology: per. from English. / F. Lantskovsky. Moscow: Lori, 2005. 784 p.
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3. Immunotherapy. Guide for doctors. Ed. Khaitova R.M. and Ataulakhanov R.I. M.: GEOTAR-Media, 2014—672 p.
4. Allergology and immunology / ed. L.S. Namazova-Baranova, A.A. Baranova, R.M. Khaitova: The Union of Pediatricians of Russia [and others]. - M. : Publishing house "Pediater", 2020. - 512 p. — (Practical recommendations for pediatricians).

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3. <http://allergology.ru> - online medical journal for allergologists and immunologists;
4. <http://esid.org> – reference web page of the European Society of Immunodeficiencies.

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7. www.spasmex.ru
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11. meduniver.com
12. badis.narod.ru
13. studentdoctorprofessor.com.ua
14. www.med39.ru
15. www.kovostok.ru
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17. lepila.tyurem.net
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19. doctor-doctor.ru
20. mepmed.ru

ОҢТҮСТІК ҚАЗАҚСТАН MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ	 SKMA -1979-	SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казакстанская медицинская академия»
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- 1. Department:** «Pediatrics-2»
- 2. Level of preparation:** Residency
- 3. Specialty:** 7R01131 «Neonatology»
- 4. Course:** 2
- 5. The name of the elective discipline** «Clinical laboratory diagnostics in neonatology»
- 6. Number of credits:** 2

7. Purpose of the discipline: improving the quality of research, the use of modern equipment and new research methods that require highly qualified personnel and a modern approach to the automation of laboratory research in clinical and experimental medicine in connection with the rapid expansion of the range of biochemical and general clinical analyses and the volume of work of clinical and diagnostic laboratories for future neonatologists.


8. Objectives:

- study of the organizational foundations of the work of clinical and diagnostic laboratories;
- study of the metabolism of the newborn body in normal and pathological conditions;
- development of modern laboratory research methods;
- interpretation of the obtained research results on the basis of knowledge of the theoretical foundations;

9. Justification of the choice of discipline: In the elective discipline "Clinical laboratory diagnostics in neonatology", a deeper and more complete mastering of the work of future neonatologists is expected. The ability to interpret the results of laboratory functional research methods is necessary for a young specialist to make an accurate diagnosis and conduct a differential diagnosis.

10. Result of training (competence):

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)
<p>Application: can apply his knowledge when solving a problem in a new or unfamiliar environment related to his field of study;</p> <ul style="list-style-type: none"> - readiness for abstract thinking, analysis, synthesis; - assign a plan of laboratory and instrumental methods of examination; - interpret the results of laboratory and instrumental methods of examination; - provide assistance in case of complications. <p>Analysis: discusses and categorizes the knowledge of biomedical, clinical, social and behavioral sciences in specialized practice</p>	<p>Accuracy: demonstrates the ability to perform medical procedures on dummies during an objective structured clinical examination.</p> <p>Articulation: accurately performs medical procedures on real or standardized patients.</p> <p>Affective Domain (Attitude/Behavior)</p> <p>Gives value: relationships with patients and medical staff during medical procedures.</p> <p>Organization:</p> <ul style="list-style-type: none"> -independent organizes medical procedures according to the list of the residency profile; -willingness to manage a team, to tolerate social, ethnic, 	<p>Medical documentation: - readiness to identify pathological conditions, symptoms, disease syndromes, and nosological forms in newborns in accordance with the International Statistical Classification of Diseases and Health-related Problems;</p> <ul style="list-style-type: none"> - medical documentation: registration of medical documentation for the specialty profile in accordance with the legislation in healthcare.

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- conducts a comprehensive assessment of laboratory and instrumental studies. Rating: - evaluate the results of UAC, OAM, biochemical blood tests, BAC. research, coprology, CBS. - appreciate the indicators of peak flowmetry, ultrasound, radiography, computed tomography, NMRI	religious and cultural differences.	
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11. Prerequisites: Neonatology in the hospital.

12. Postrequisites: profile disciplines

13. References

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1. Kukshin A. A. Clinical laboratory diagnostics [Elektr. Res.]: study.manual / A. A. Kukshin, - M.: GEOTAR-Media, 2015. - 976s.: pl, - Access from the EBS " Student Consultant»
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6. Clinical protocols of the Ministry of Health of the Republic of Kazakhstan.


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2. Bazarbaeva A. A. Differential diagnosis of anemia in children: a textbook.- Almaty, 2011. - 99 p.
3. Kishkun A. A. Manual of laboratory diagnostic methods / A. A. Kishkun. - 2nd ed., reprint. and additional-M.: GEOTAR-Media, 2014. - 760 p.
4. Physiology and pathology of hemostasis [Electronic resource]: textbook. manual / edited by N. I. Stuklov. - M.: GEOTAR-Media, 2016. - Access from the EBS "Consultant of the doctor".
5. Makarenko Yu. M. Laboratory diagnostics. Biochemical research / Yu. M. Makarenko, N. S. Sidorenko. - Rostov n/A: NAUKA, 2013. - 48 p.

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2. Clinical guidelines for the pharmacotherapy of persistent pain in children and adolescents / Association of professional participants in hospice care, Russian Society of Pediatric Oncologists, Association of Pediatric Anesthesiologists and Resuscitators, National Society of Pediatric Oncologists of Russia - Moscow, 2016. - 33 p.

Medical sites:

ОҢТҮСТІК ҚАЗАҚСТАН MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ		SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казakhstanская медицинская академия»
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1. med-site.narod.ru
2. www.medicusamicus.com
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9. www.medicum.nnov.ru
10. medcompany.ru
11. meduniver.com
12. badis.narod.ru
13. studentdoctorprofessor.com.ua
14. www.med39.ru
15. www.kovostok.ru
16. www.drugme.ru
17. lepila.tyurem.net
18. top.medlinks.ru
19. doctor-doctor.ru
20. mepmed.ru


- 1. Department:** «Pediatrics-2»
- 2. Level of preparation:** Residency
- 3. Specialty:** 7R01106 «Oncology and hematology for children»
- 4. Course:** 2
- 5. The name of the elective discipline** «Clinical Immunology in Pediatric Oncology»
- 6. Number of credits:** 2

7. Purpose of the discipline: Training of highly qualified, competitive pediatric oncologists and hematologists who are able to meet the needs of society in providing medical care to oncological and hematological sick children, apply and develop advanced innovative technologies in medicine, science and practice.

Pathomorphology of hemoblastoses in children. Lymphomas. Pathomorphological diagnosis of lymphoid tumors. Pathomorphology of tumors of the central nervous system. Acute lymphoblastic leukemia. Solid tumors. Clinical and pathoanatomic approaches to the lifetime diagnosis of tumors. Methodology of research in pathomorphology of malignant tumors.

8. Objectives:

- to form clinical thinking and the ability to independently work with scientific literature on the discipline;
- develop the ability to analyze socio-biological, medico-social and epidemiological conditions and factors of the occurrence of diseases;
- to teach the resident the principles of diagnosis of diseases, reasonably prescribe laboratory, functional and instrumental methods of examination;
- совершенствовать improve the skill of manual examination of the patient, palpation, percussion and auscultation;
- to develop the skill of interpreting the results of a paraclinical examination of the patient;
- обуч to teach the compilation of an algorithm for the differential diagnosis of diseases;

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- to develop the skill of an informed choice of etiopathogenetic treatment;
- научить teach the basic principles of prevention;
- разъяс explain the application of legal documents regulating the activities of a pediatric hematologist, a pediatric oncologist;
- improve interpersonal communication skills with colleagues, patients and their parents;
- to stimulate the resident's desire for self-development and self-improvement, the choice of a professional trajectory;
- to develop the skill of working with medical literature, the ability to analyze literary and Internet sources.

9. Justification of the choice of discipline:

In the elective discipline "Clinical immunology in pediatric oncology", a deeper and more complete mastering of the work of future pediatric oncogematologists is expected.


Clinical immunology in pediatric oncology studies the principles of immunotherapy of immunodeficiency states, modern methods of immunodiagnostics, modern aspects of stem cell transplantation.

Immuno–oncology is an artificial stimulation of the immune system for the treatment of cancer, helping the immune system to fight the disease in a natural way. This is a program of fundamental research in the field of cancer immunology and the developing specialization of oncology. Cancer immunotherapy consists in the fact that antibodies of proteins of the immune system can detect and bind to molecules located on the surface of tumor antigens of cancer cells.

The complex therapy started in a timely manner makes it possible to improve the further prognosis of childhood oncological diseases.

10. Result of training (competence):

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)
<p>Application: Evaluation of studies, materials from professional literature on pediatric oncology and hematology. Use international databases in your daily activities. Participate in the work of the research team;</p> <ul style="list-style-type: none"> - readiness for abstract thinking, analysis, synthesis; - assign a plan of laboratory and instrumental methods of examination; - interpret the results of laboratory and instrumental methods of examination; - provide assistance in case of complications. 	<p>Accuracy: demonstrates the ability to perform medical procedures on dummies during an objective structured clinical examination.</p> <p>Articulation: accurately performs medical procedures on real or standardized patients.</p> <p>Affective Domain (Attitude/Behavior)</p> <p>Gives value: relationships with patients and medical staff during medical procedures.</p> <p>Organization: -independent organizes medical procedures according to the list of the residency profile;</p>	<ul style="list-style-type: none"> - readiness to identify pathological conditions, symptoms, disease syndromes, and nosological forms in newborns in accordance with the International Statistical Classification of Diseases and Health-related Problems; - medical documentation: registration of medical documentation for the specialty profile in accordance with the legislation in healthcare.

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<p>Analysis: discusses and categorizes the knowledge of biomedical, clinical, social and behavioral sciences in specialized practice</p> <p>- conducts a comprehensive assessment of laboratory and instrumental studies.</p> <p>Rating:</p> <p>- evaluate the results of UAC, OAM, biochemical blood tests, BAC. research, coprology, CBS.</p> <p>- appreciate the indicators of peak flowmetry, ultrasound, radiography, computed tomography, NMRI</p>	<p>-willingness to manage a team, to tolerate social, ethnic, religious and cultural differences.</p>	
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11. Prerequisites: Children's diseases in General medical practice.

12. Postrequisites: profile disciplines


13. References

Main literature:

1. Pediatric oncology: nat. management / FSBI «Russian Cancer Research Center im. N. N. Blokhin RAMS», Research Institute of Pediatric Oncology and Hematology / M. D. Aliev [and others]; ed. M. D. Alieva. Moscow: RONTs "Practical Medicine", 2012. S. 377–399.
2. Kovalchuk L.V., Gankovskaya L.V., Meshkova R.Ya. Clinical immunology and allergology with the basics of general immunology: textbook.-- M.: GEOTAR-Media, 2014.—640p.
3. Immunology: workshop: textbook. allowance / Ed. L.V. Kovalchuk, G. A. Ignatieva, L. V. Gankovskaya. - M.: GEOTAR - Media, 2014. - 176 p.
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1. Kovalchuk L.V., Gankovskaya L.V., Meshkova R.Ya. Clinical immunology and allergology with the basics of general immunology: textbook.-- M.: GEOTAR-Media, 2014.—640p.
2. Immunology: workshop: textbook. allowance / Ed. L.V. Kovalchuk, G. A. Ignatieva, L. V. Gankovskaya. - M.: GEOTAR - Media, 2014. - 176 p.
3. Immunotherapy. Guide for doctors. Ed. Khaitova R.M. and Ataulakhanov R.I. M.: GEOTAR-Media, 2014—672 p.
4. Allergology and immunology / ed. L.S. Namazova-Baranova, A.A. Baranova, R.M. Khaitova: The Union of Pediatricians of Russia [and others]. - M. : Publishing house "Pediater", 2020. - 512 p. — (Practical recommendations for pediatricians).
5. Baldueva I.A., Nekhaeva T.L., Novik A.V., Danilova A.B., Pipia N.P., Shcherbakov A.M., Belyaev A.M. Antitumor vaccines based on dendritic cells // Priroda. 2018. No. 6 (1234). pp. 14-19.


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6. Vorobyov S.V., Emelin A.Yu., Kuznetsova R.N., Kudryavtsev I.V. The role of the immune response in the pathogenesis of Alzheimer's disease and the possibility of anti-inflammatory therapy // Neurological Bulletin. 2020; T. LII (3): 55-62.
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8. Novikov D.K. Clinical immunology and allergology: textbook /D. K. Novikov, P. D. Novikov, N. D. Titova. - Minsk: Higher School, 2019. - 495 p.
9. Fundamentals of clinical immunology and allergology: textbook. allowance / ed. L.S. Namazova-Baranova, L.V. Gankovskaya, N.G. Astafieva - M.: Pediatr, 2016. - 152 p.
10. Khaitov R.M., Elisyutina O.G., Danilycheva I.V. Allergology and clinical immunology. Clinical guidelines. GEOTAR-Media, 2019. 352 p.

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2. Welsher, L. Z. Clinical oncology : selected lectures : [studies. manual for medical universities] / L. Z. Welsher, B. I. Polyakov, S. B. Peterson. - M. : GEOTAR-Media, 2019.

Medical sites:

ОҢТҮСТІК ҚАЗАҚСТАН MEDISINA АКАДЕМИАСЫ «Оңтүстік Қазақстан медицина академиясы» АҚ		SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казахстанская медицинская академия»
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1. med-site.narod.ru
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12. badis.narod.ru
13. studentdoctorprofessor.com.ua
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15. www.kovostok.ru
16. www.drugme.ru
17. lepila.tyurem.net
18. top.medlinks.ru
19. doctor-doctor.ru
20. mepmed.ru


- 1. Department:** «Pediatrics-2»
- 2. Level of preparation:** Residency
- 3. Specialty:** 7R01106 «Children's oncology and hematology»
- 4. Course:** 2
- 5. The name of the elective discipline** «Palliative pediatric oncology»
- 6. Number of credits:** 2

7. Purpose of the discipline: The purpose of mastering the discipline "Palliative Care in Pediatric Oncology" is to develop the ability and readiness to solve professional problems aimed at providing timely and high-quality palliative care to children with oncological diseases.

8. Objectives:

- to form knowledge of the theoretical foundations of palliative care for children with incurable conditions in pediatric oncology;
- to form the skills and abilities of full-fledged high-quality and timely palliative care for malignant neoplasms in children;
- to form the skills of continuity in the provision of palliative care for malignant neoplasms in children;
- to form a stable skill in providing palliative care to patients with chronic pain syndrome in pediatric oncology.
- improve interpersonal communication skills with colleagues, patients and their parents;
- stimulate the resident's desire for self-development and self-improvement, the choice of a professional trajectory;
- develop the skill of working with medical literature, the ability to analyze literary and Internet sources.

9. Justification of the choice of discipline:

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In the elective discipline "Palliative pediatric oncology", a deeper and more complete mastering of the work of future pediatric oncogematologists is expected.

Palliative pediatric oncology studies the ethical, psychosocial and organizational aspects of palliative care for children. Providing palliative and symptomatic care for tumors in children. Modern principles of radical and palliative treatment of sick children with malignant tumors. Symptom control and crisis situations in palliative care for children.

10. Result of training (competence):

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)
<p>Application: Evaluation of studies, materials from professional literature on pediatric oncology and hematology. Use international databases in your daily activities. Participate in the work of the research team;</p> <ul style="list-style-type: none"> - readiness for abstract thinking, analysis, synthesis; - assign a plan of laboratory and instrumental methods of examination; - interpret the results of laboratory and instrumental methods of examination; - provide assistance in case of complications. <p>Analysis: discusses and categorizes the knowledge of biomedical, clinical, social and behavioral sciences in specialized practice</p> <ul style="list-style-type: none"> - conducts a comprehensive assessment of laboratory and instrumental studies. <p>Rating:</p> <ul style="list-style-type: none"> - evaluate the results of UAC, OAM, biochemical blood tests, BAC. research, coprology, CBS. - appreciate the indicators of peak flowmetry, ultrasound, radiography, computed tomography, NMRI 	<p>Accuracy: demonstrates the ability to perform medical procedures on dummies during an objective structured clinical examination.</p> <p>Articulation: accurately performs medical procedures on real or standardized patients.</p> <p>Affective Domain (Attitude/Behavior)</p> <p>Gives value: relationships with patients and medical staff during medical procedures.</p> <p>Organization:</p> <ul style="list-style-type: none"> -independent organizes medical procedures according to the list of the residency profile; -willingness to manage a team, to tolerate social, ethnic, religious and cultural differences. 	<ul style="list-style-type: none"> - readiness to identify pathological conditions, symptoms, disease syndromes, and nosological forms in newborns in accordance with the International Statistical Classification of Diseases and Health-related Problems; - medical documentation: registration of medical documentation for the specialty profile in accordance with the legislation in healthcare.

11. Prerequisites: Children's diseases in General medical practice.

ОҢТҮСТІК ҚАЗАҚСТАН MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ		SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казakhstanская медицинская академия»
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12. Postrequisites: profile disciplines

13. References

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2. Oncology. National leadership. Brief edition: practical guide / Chissov V.I., Davydov M.I. - Moscow: GEOTAR-Media, 2017 - 576 p.
3. Oncology. Tests with visualization elements: a tutorial / Cherenkov V.G. - Moscow: GEOTAR-Media, 2017 - 240 p.
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5. Ponomarenko, G. N. Rehabilitation of disabled people: national leadership / edited by G. N. Ponomarenko. - Moscow: GEOTAR-Media, 2018. - 736 p.
6. Ponkina, A. A. Legal regulation of palliative care / A. A. Ponkina, I. V. Ponkin. - Moscow: GEOTAR-Media, 2019. - 176 p.
7. Clinical protocols of the Ministry of Health of the Republic of Kazakhstan.

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2. Dvoynikov, S. I. Issues of palliative care in the activities of a nursing specialist: textbook / S. I. Dvoynikov, S. R. Babayan, Yu. A. Tarasova [and others]; edited by S. I. Dvoynikov. - Moscow: GEOTAR-Media, 2018. - 336 p.
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8. Clinical manifestations of oncological diseases in children / ed. V.G. Polyakova, M.Yu. Rykov - St. Petersburg. : Printing house of Mikhail Fursov, 2017. - 52 p.
9. Abisatov H.A. Clinical oncology: textbook. - Almaty: publishing house "Arys", 2007. - Т. II. – 640 p.

Electronic resources (for example: video, audio, digests):

1. Higgins, K. Decoding of clinical laboratory analyses [Electronic resource] : monograph / K. Higgins ; translated from English by E. K. Vishnevskaya. - 7th ed. -Moscow : Knowledge Lab, 2016. - 587 p. <http://elib.kaznu.kz/>
2. Clinical guidelines for the pharmacotherapy of persistent pain in children and adolescents / Association of professional participants in hospice care, Russian Society of Pediatric Oncologists, Association of Pediatric Anesthesiologists and Resuscitators, National Society of Pediatric Oncologists of Russia - Moscow, 2016. - 33 p.

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Medical sites:

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1. med-site.narod.ru
2. www.medicusamicus.com
3. www.medprof.ru
4. www.rusmedserv.com/topsites/
5. www.doktor.ru.
6. medinfo.net
7. www.spasmex.ru
8. www.webmedinfo.ru
9. www.medicum.nnov.ru
10. medcompany.ru
11. meduniver.com
12. badis.narod.ru
13. studentdoctorprofessor.com.ua
14. www.med39.ru
15. www.kovostok.ru
16. www.drugme.ru
17. lepila.tyurem.net
18. top.medlinks.ru
19. doctor-doctor.ru
20. mepmed.ru

1. Кафедра: «Педиатрия-2»

2. Уровень подготовки: Резидентура

3. Специальность: 7R01130 «Педиатрия»

4. Курс: 2

5. Название элективной дисциплины: «Функциональная диагностика в педиатрии»

6. Количество кредитов: 2

7. Цели: Формирование и закрепление глубоких знаний, умений и навыков резидентов в производственной, научно-педагогической практике для проведения научно-исследовательской работы резидентов по специальности «Педиатрия».

8. Задачи:

- Закрепление практических навыков и теоретических основ функциональной диагностики в случаях, часто встречающихся в детской кардиологии, пульмонологии, неврологии;
- принятие специализированных решений на основе принципов доказательной медицины;
- овладение коммуникативными навыками в отношениях с пациентами и коллегами;
- формирование морально-этической культуры, которая поддерживается при наблюдении и обследовании больных;
- развитие практических ценностей, принципов альтруизма, милосердия, ответственности, честности и конфиденциальности;
- формирование лидерских качеств и умения работать в группе;
- умение самостоятельно работать с научной литературой по теме и формировать клиническое мышление;
- формирование умения анализировать социально-биологические, медико-социальные и эпидемиологические условия и факторы возникновения заболеваний;
- назначение лабораторных, функциональных и инструментальных методов обследования;

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- развивать умение работать с медицинской литературой, умение анализировать литературные и интернет-источники;
- умение самостоятельно работать с научной литературой по теме и формировать клиническое мышление;
- развитие умения анализировать социально-биологические, медико-социальные и эпидемиологические условия и факторы возникновения заболеваний;
- обучение ординатора принципам диагностики заболеваний, назначения методов лабораторного, функционального и инструментального обследования;
- совершенствование навыков мануального осмотра больного, пальпации, перкуссии и аускультации;
- развитие умения интерпретировать результаты параклинического обследования больного;
- научить составлять алгоритм дифференциальной диагностики заболеваний;
- развитие умения выбирать правильное этиопатогенетическое лечение;
- обучить основным принципам профилактики;
- разъяснить применение нормативно-правовых актов, регулирующих деятельность врача-педиатра;
- совершенствование навыков общения с коллегами, пациентами и их родителями;
- стимулировать стремление резидента к саморазвитию и самосовершенствованию, к выбору профессиональной траектории;

9. Обоснование выбора дисциплины:

В элективной дисциплине «Функциональная диагностика в педиатрии» предполагается более глубокое и полное освоение работы будущих врачей-педиатров.

В рабочую программу темы вошли основные разделы актуальных проблем функциональной диагностики в педиатрии: показания, противопоказания к проведению функциональной диагностики у детей разного возраста, проведение функциональной диагностики и интерпретация результатов исследований, функциональная диагностика при врожденных пороках сердца. Суточный мониторинг артериального давления. Метод спирографического исследования у детей. Диагностика гиперактивности легких у детей и подростков. Теоретические основы клинической физиологии сердечно-сосудистой системы. Строение проводящей системы сердца. Показатели ЭКГ при нарушениях ритма у детей. Нормальные параметры ЭКГ. Механизм развития нарушений ритма. УЗИ сердца. Физико-технические основы эхокардиограммы, метод эхокардиограммы. Эхокардиография при различных патологиях сердца. Ультразвуковая диагностика заболеваний щитовидной железы, заболеваний органов брюшной полости. Электроэнцефалография. Эхоэнцефалография. Электромиография.

10. Результат обучения (компетенции):

Знания (когнитивная сфера)	Умения и навыки (психомотрная сфера)	Личностные и профессиональные компетенции (отношения)
Применение: - Оценка исследований, материалов из профессиональной литературы по функциональной диагностики в педиатрии.	Точность: демонстрирует способности выполнения медицинских процедур на муляжах при проведении ОСКЕ. Артикуляция: точно выполняет медицинские	Медицинская документация: - готовность к определению у детей патологических состояний, симптомов, синдромов заболеваний, нозологических форм в

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<p>Использовать международные базы данных в своей повседневной деятельности.</p> <p>Участвовать в работе исследовательской команды.</p> <ul style="list-style-type: none"> - готовность к абстрактному мышлению, анализу, синтезу; - назначать план лабораторных и инструментальных методов обследования; - интерпретировать результаты лабораторных и инструментальных методов обследования; - оказывать помощь при возникновении осложнений. <p>Анализ: обсуждает, разделяет на категории знания биомедицинских, клинических, социальных и поведенческих наук в специализированной практике</p> <ul style="list-style-type: none"> - проводит комплексную оценку проведенных лабораторно-инструментальных исследований. <p>Оценка:</p> <ul style="list-style-type: none"> - оценить результаты ОАК, ОАМ, биохимических анализов крови, бак. исследований, копрологии, КОС. - оценить показатели пикфлоуметрии, УЗИ, рентгенографии, компьютерной томографии, ЯМРТ. 	<p>процедуры на реальных или стандартизированных пациентах.</p> <p>Аффективный домен (Отношение/поведение)</p> <p>Наделяет ценностью: взаимоотношения с пациентами и медицинским персоналом при проведении медицинских процедур.</p> <p>Организация: самостоятельное организует проведение медицинских процедур согласно перечню профиля резидентуры.</p> <ul style="list-style-type: none"> - готовность к управлению коллективом, толерантно воспринимать социальные, этнические, конфессиональные и культурные различия. 	<p>соответствии с Международной статистической классификацией болезней и проблем, связанных со здоровьем.</p> <ul style="list-style-type: none"> - Медицинская документация: оформление медицинской документации по профилю специальности согласно законодательству в здравоохранении.
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11. Пререквизиты: Детские болезни в стационаре.

12. Постреквизиты: профильные дисциплины.

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13. Список литературы:

Основная литература:

1. Функциональная диагностика в кардиологии [Электронный ресурс]: в двух томах / под ред. Л.А. Бокерия [и др.]. - М.: Издательство НЦССХ им. Бакулева РАМН, 2005. - Г. 1. – 296 с. - Доступ из ЭБС «Консультант врача. ЭМБ».
2. Науменко Е.И. Особенности электрокардиографии у детей: методические указания для студентов педиатрического отделения – Саранск, ООО «Референт», 2007. – 44 с.
3. Осколкова М.К., О.О. Куприянова. Электрокардиография у детей, - М.: Медицина, 2004. – 350 с.
4. Под ред. С.В.Грачева, Г.Г.Иванова, А.Л.Сыркина. Новые методы электрокардиографии/.- М.:
5. Руксин В.В. Краткое руководство по неотложной кардиологии. СПб Информ мед, 2009г
6. Миндубаева, Ф. А. Основы функциональной диагностики : учеб.-методическое пособие / Ф. А. Миндубаева, Е. Ю. Салихова ; М-во здравоохранения РК; КарГМУ. - Алматы : Эверо, 2014. - 164 с.

Дополнительная:

1. Кардиология : национальное руководство / ред. Е. В. Шляхто. - 2-е изд. - Москва : ГЭОТАР - Медиа, 2015. - 800 с.
2. Простой анализ ЭКГ: Интерпретация. Дифференциальный диагноз / ГансХольгерЭберт. - Пер. с англ. - М : Логосфера, 2010. - 280с.
3. Зенков Л. Р., Клиническая электроэнцефалография (с элементами эпилептологии) - 2-е изд. - Москва: Изд-во МЕДпресс-информ, 2002. - 360 с. 1
4. Аксельрод А.С., Чомахидзе П.Ш., Сыркин А.Л. Нагрузочные ЭКГ-тесты: 10 шагов к практике / под ред. А.Л. Сыркина - Москва: Изд-во МЕДпрессинформ, 2008. - 200с.
5. Макаров Л.М., ЭКГ в педиатрии - 3-е изд. - Москва: Изд-во МЕДПРАКТИКА-М, 2013. - 694с.
6. Аксельрод А.С., Чомахидзе П.Ш., Сыркин А.Л. Холтеровское мониторирование ЭКГ: возможности, трудности, ошибки / под ред. А.Л. Сыркина - Москва: Изд-во МЕДпресс-информ, 2008. - 186с.
7. Азбука ЭКГ и Боли в сердце / Ю.И. Зудбинов. - Изд. 13-е. - Ростов-наДону: Феникс, 2011. - 235 с. - (Медицина) Доступ из ЭБС «Консультант врача. ЭМБ».
8. Физиологические основы электроэнцефалографии: (Учебно-методич. пособие) / Г.Ш. Гафиятуллина ; РостГМУ. - Ростов н/Д : Изд-во РостГМУ, 2007. - 70с.
9. Клиническая эпилептология (с элементами нейрофизиологии): руководство для врачей /Л.Р. Зенков. - Изд. 2-е, испр. и доп. - Москва: МИА, 2010.- 408 с.
10. Ю.М. Белозеров. Детская кардиология /– М.: «МЕД пресс-информ», 2004. – 590 с.
11. О.Л. Бокерия. Электростимуляция сердца у детей /– М.: Медпрактика-М, 2005. – 137 с.
12. Кушаковский М.С., Журавлева Н.Б. Аритмии и блокады сердца: атлас электрокардиограмм. - Л. Медицина, 2007.
13. Осколкова М.К., Куприянова О.О. Электрокардиография у детей – М.:Медицина, 2006.
14. Шиллер Ю. Практическая эхокардиография. М.-2006 г.

Қазақ тілінде:

1. Миндубаева, Ф. А. Функционалды диагностика негіздері : оқу құралы / Ф. А. Миндубаева, А. Х. Шандаулов. - Алматы : Эверо, 2016. - 152 бет. с.
 2. Мұстафина К.А., Маймаков Т.А., Кемельбеков К.С., Қарсыбаева К.Р., Жұмабеков Ж.Қ. «Бала ауруларының пропедевтикасы»: оқулық.Шымкент -2019ж., 460 бет.
- Электронные ресурсы (например: видео, аудио, дайджесты):**

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1. Scopus / Elsevier Inc., Reed Elsevier. - Philadelphia: Elsevier B.V., PA. - URL: <http://www.scoDus.com/> (Нацпроект)
 2. Консультант врача. Электронная медицинская библиотека : ЭБС. - Москва : ООО ГК «ГЭОТАР». - URL: <http://www.rosmedlib.ru>
 3. Web of Science / Clarivate Analytics. - URL: <http://apps.webofknowledge.com> (Нацпроект).
 5. Научная электронная библиотека - URL: elibrary.ru
- Медицинские сайты:**

1. med-site.narod.ru
2. www.medicusamicus.com
3. www.medprof.ru
4. www.rusmedserv.com/topsites/
5. www.doktor.ru.
6. medinfo.net
7. www.spasmex.ru
8. www.webmedinfo.ru
9. www.medicum.nnov.ru
10. medcompany.ru
11. meduniver.com
12. badis.narod.ru
13. studentdoctorprofessor.com.ua
14. www.med39.ru
15. www.kovostok.ru
16. www.drugme.ru
17. lepila.tyurem.net
18. top.medlinks.ru
19. doctor-doctor.ru
20. mepmed.ru

1. Department: Family Medicine

2. Residency (family medicine)

3. Of educational programs: Family Medicine

4. Course II

5. The name of the elective discipline: Good clinical practice

6. Number of credits: 2

7. Purpose: training of a family physician with the skills necessary to participate effectively in clinical trials conducted in accordance with the ethical principles laid down in the 1964 Declaration of Helsinki by the World Medical Association and reflected in the Standard and Regulatory Requirements.

8. Tasks:

- to teach to form students' skills and abilities to conduct scientific research in accordance with the requirements of regulatory documents governing the rules and principles of scientific research.
- develop skills in determining the rights, safety and well-being of research subjects;
- train in the skills of analyzing information (preclinical and clinical) about the investigational drug is provided in sufficient volume to justify the proposed clinical trial.

9. Discipline content: • Standard and principles of good clinical practice. Study rationale and design. The rights, safety and well-being of research subjects. Informed consent of research subjects. Researcher's qualifications and obligations. Clinical trial protocol. List of the main documents of the clinical trial. Procedure for providing safety information during clinical trials. The structure and content of the clinical trial report.

10. Justification for the choice of discipline: This discipline, like the Standard, is part of a quality assurance system and sets out the rules for conducting research with human participation as a subject, as well as documenting and presenting the results of such research. The principles set out in this Standard also apply to clinical trials that have an impact on the safety and well-being of the individual who is the subject of the research.

The subject is intended for resident physicians on essential issues of good clinical practice.

11. Learning outcomes:

LO1 *Patient curation:* able to formulate a clinical diagnosis, prescribe a plan for treatment and prevention interventions and evaluate their effectiveness across the entire spectrum of diseases,

regardless of the patient's age, gender, and problem, based on evidence-based practice at the primary health care level

LO2 *Communication and collaboration*: able to effectively interact with the patient, members of his family and the community in which he lives, with other professionals working in the primary level (social workers, psychologists and other employees in PHC institutions) in order to achieve the best results for the patient

LO3 *Safety and quality*: able to assess risks and use the most effective methods to ensure a high level of safety and quality of medical care during diagnostic and therapeutic interventions at the primary health care level

LO4 *Public Health*: able to act within the legal and organizational framework of health system of the Republic of Kazakhstan when carrying out diagnostic, therapeutic and preventive interventions in primary health care, provide basic assistance in emergency situations, work as part of interprofessional teams to implement the nation's health promotion policy

LO5 *Research*: able to formulate adequate research questions, critically evaluate special literature in the field of family medicine, effectively use international databases in their daily activities, participate in the work of the research team.

LO6 *Training and development*: able to study independently and train other members of the professional team, to actively participate in discussions, conferences and other forms of continuous professional development in the field of family medicine.

12. Prerequisites: internal diseases, childhood diseases

13 Postrekvizity: continuing education courses. Scientific information

14.Literature:

the main

- 1.Вялов, С. С. Общая врачебная практика: неотложная медицинская помощь [Текст] : учебное пособие / С. С. Вялов. - 6-е изд. ; Рек. Учебно-методическим объединением по мед. и фармацевтическому образованию вузов России. - М. : Медпресс-информ, 2014. - 112 с
- 2.Кузнецов, Н. А. Уход за хирургическими больными [Текст] : учебник / Н. А. Кузнецов, А. Т. Бронтвейн ; М-во образования и науки РФ. - ; Рек. ГОУ ВПО "Первый Моск. гос. мед. ун-т им. И. М. Сеченова". - М. : ГЭОТАР - Медиа, 2013. - 288 с. : ил.
- 3.Дюсупова, А. А. Актуальные вопросы кардиологии [Текст] : учеб. пособие / А. А. Дюсупова, Алт. А. Дюсупова. - ; Утв. и разрешено к печати реш. Учеб.-метод. совета ГМУ г. Семей. - Алматы : Эверо, 2014. - 382 с.
- 4.Кишкун, А. А. Клиникалық лабораториялық диагностика [Мәтін] : оқу құралы / қазақ тіл. ауд. А. Ж. Сейтебетова. - М. : ГЭОТАР - Медиа, 2017. - 960 бет. С
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- 1.Триединство науки, образования и клинической практики (на примере модели "UNICLinic" КазНМУ им. С. Д. Асфендиярова) [Текст] : методические рек. / А. А. Аканов [и др.]. - Алматы : Каз НМУ им. С. Д. Асфендиярова, 2017. - 40 с.
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2. Менгилбекова, Ж. Н. Шымкент қаласындағы бедеулікпен күйзелетін әйелдерге көрсетілетін мамандандырылған көмектің клиникалық- ұйымдастыру түрлерінің сапасын арттыру жағдайларын сараптау және ғылыми түрде бағалау [Электронный ресурс] : дис. ... магистр акад. дәрежесін алу / Ж. Н. Менгилбекова. - Электрон. текстовые дан. (633Мб). - Шымкент : ОҚМФА, 2015. - 61бет
- 3.Ревматология: Клиникалық ұсыныстар [Электронный ресурс] : оқулық / Е. Л. Насонов [ж/б.] ; қаз тіл. ауд. Ш. Т. Жукушева. - 2-ші бас., өңд. толық. - Электрон. текстовые дан. (1,42Мб). - М. : ГЭОТАР - Медиа, 2015. - 512 бет. эл. опт. диск (CD-ROM).
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- 7.Клиническая лабораторная диагностика. Национальное руководство. Том -1. Автор: Долгов В.В., Меньшиков В.В. Год издания: 2012 Размер: 47.53 МБ/<https://kingmed.info/>

1.Department: Family Medicine

2. Residency (family medicine)

3.Of educational programs:Family Medicine

4. Course II

5. The name of the elective discipline: Rational pharmacotherapy in the practice of a family doctor

6.Number of credits: 2

7. Purpose: training of a family doctor with skills related to the methods of therapy and the rational use of drugs used in the treatment of diseases at the PHC level, taking into account the clinical protocols of the Republic of Kazakhstan and international treatment standards.

8.Tasks:

- to teach the skills of applying unified clinical treatment protocols as guidelines and recommendations for action, taking into account the levels of evidence in the pharmacotherapy of diseases at the PHC level;
- to form the skills of clinical thinking and an integrated approach in choosing an individual rational pharmacotherapy for diseases of patients with comorbid conditions based on the study of scientific material;
- to teach the skills of filling out the accounting and reporting documentation of the carried out pharmacotherapy of certain nosologies, acceptable for the use of analytical material for scientific purposes.
- to develop skills for teaching patients and their relatives the basic rules of taking necessary drugs for emergency prescription in outpatient settings and at home

9.Discipline content: Goals and objectives of the rational use of drugs used in the treatment of diseases at the PHC level, taking into account the evidence base of drugs. Rational pharmacotherapy in the practice of a family doctor of cardiovascular pathology. Rational

pharmacotherapy of diseases of the gastrointestinal tract. Rational pharmacotherapy of respiratory organs and allergies. Rational pharmacotherapy for endocrine and rheumatic diseases. Application of unified treatment protocols in pharmacotherapy of diseases of the blood system. Pharmacotherapy for diseases of the urinary system. Features of pharmacotherapy for children, pregnant women and elderly patients.

10. Justification for the choice of discipline: Safety of a medicinal product is a positive characteristic of a medicinal product based on a comparative analysis of its effectiveness and an assessment of the risk of harm to human life and health.

The basic principles of rational pharmacotherapy are validity, minimization, rationality, efficiency, controllability, individualization. Pharmacotherapy must be effective and safe. The effectiveness of a drug is a characteristic of the degree of positive influence of a drug on the

course or duration of a disease, prevention of pregnancy, rehabilitation of patients by internal or external use.

Rational pharmacotherapy is classified as a synthetic discipline; it is based on modern methods of clinical diagnostics, methodology of evidence-based medicine and clinical pharmacology.

The successes of pharmacotherapy of the last decade are closely related to the development of the principles and technologies of evidence-based medicine, on the basis of which justified pharmacotherapy is regulated. The results of the studies (level of evidence A) contribute to the introduction of new technologies into clinical practice aimed at slowing the progression of the disease and delaying severe and lethal complications. Evidence-based medicine justifies and expands the indications for long-term and even lifelong drug use.

The course is intended for resident physicians on basic internal medicine issues.

11. Learning outcomes:

LO1 *Patient curation:* is able to formulate a clinical diagnosis, prescribe a plan of therapeutic and prophylactic interventions and assess their effectiveness across the entire spectrum of diseases, regardless of age, gender and patient problem based on evidence-based practice, advise patients and their families on rational pharmacotherapy at the level of primary health care. health care

LO2 *Communication and collaboration:* able to effectively interact with the patient, members of his family and the community in which he lives, with other professionals working in primary care (social workers, psychologists and other staff in PHC settings) in order to achieve the best results for the patient

LO3 *Safety and quality:* is able to assess risks and use the most effective methods of pharmacotherapy to ensure a high level of safety and quality of medical care during diagnostic and treatment-and-prophylactic interventions at the level of primary health care

LO4 *Public Health:* is able to act within the legal and organizational field of the health care system of the Republic of Kazakhstan when carrying out preventive and curative interventions at the level of primary health care, provide basic and extended assistance in emergency situations, work as part of interprofessional teams to implement the policy of strengthening the health of the nation.

LO5 *Research:* able to formulate adequate research goals and objectives, objectively and critically evaluate the special literature on pharmacotherapy, effectively use international databases in their daily activities, participate in the work of the research team.

LO6 *Training and development:* is capable of continuous self-study and training of other members of the professional team, active participation in discussions, conferences and other forms of continuous professional development in the field of dietetics.

12. Prerequisites: internal diseases, childhood diseases, clinical pharmacology

13 Postrekvizity: continuing education courses. Scientific information

14.Literature:

the main

1. Орманов, Н. Ж. Асқорыту ағзалары ауруларының фармакотерапиясы [Мәтін] : оқу құралы / Н. Ж. Орманов, Г. Ж. Садырханова, Т. Ж. Орманов. - Шымкент : "RISO", 2013. - 180 бет
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- Орманов, Н. Ж. Ревматологиялық фармакотерапия [Мәтін] : оқу құралы / Н. Ж. Орманов. - Алматы : ЭСПИ, 2021. - 180 бет.
- Орманов, Н. Ж. Ревматологиялық фармакотерапия [Мәтін] : оқу құралы / Н. Ж. Орманов. - Алматы : ЭСПИ, 2021. - 180 бет.
4. Кардиологиялық фармакотерапия [Мәтін] : оқулық / Н. Ж. Орманов [ж/б] ; ҚР денсаулық сақтау және әлеуметтік даму министрлігі. ОҚМФА. - Шымкент : ОҚМФА, 2015. - 216 бет
5. Дәнекер ұлпалар ауруларының фармакотерапиясы [Мәтін] : оқулық / З. А. Керимбаева [ж.б.]. - Алматы : Эверо, 2016. - 184 б.
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Additional

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2. Жалпы дәрігерлік практика: ұлттық нұсқаулық. 2 томдық. 2 том [Мәтін] : нұсқаулық / Қазақ тіліне ауд. Қ. Ә. Әлиханова. - М. : ГЭОТАР - Медиа, 2016. - 896 б.
3. Общая врачебная практика. В 2 т. Т. 1 [Текст] : национальное рук. / под ред. И. Н. Денисова, О. М. Лесняк. - ; Ред. под эгидой АСМОК. - М. : ГЭОТАР - Медиа, 2013. - 976 с
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5. Орманов, Н. Ж. Дәрілердің өзара әсерлесуінің жүктілік, бүйрек және бауыр жетіспеушілігіндегі жағдайы [Мәтін] : оқу құралы / Н. Ж. Орманов, Т. Н. Орманов, Л. Р. Қашқымбаева. - Алматы : Эверо, 2014. - 184 бет
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5. Майский, В. В. Фармакология с общей рецептурой [Электронный ресурс] : учебник для мед. училищ и колледжей / В. В. Майский, Р. Н. Аляутдин. - 3-е изд., доп. и перераб. -

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8. Федюкович, Николай Иванович/Фармакология [Текст] : учебник / Н. И. Федюкович, Э. Д. Рубан. - 10-е изд., доп. и перераб. - М.: Ростов-на-Дону : Феникс, 2013. - 700, [1] с. <https://elib.kaznu.kz/>
9. Фармакология с основами фармакотерапии Стикеева Р.К. , 2014/ <https://aknurpress.kz/>
10. Фармакология негіздері. Манатова К.К., Уржанов К.Д. , 2018/ <https://aknurpress.kz/>
11. Фармакология негіздері және рецептурасы. Шайдаров М.З., Мұхамбетов Д.Д., Мусин М.Н., Бүркітбаева С.С., Жусупова Г.Д. , 2018/ <https://aknurpress.kz/>
12. Фармакология -I. (ЖАЛПЫ МЕДИЦИНА ФАКУЛЬТЕТТЕРІНІҢ СТУДЕНТТЕРІНЕ АРНАЛҒАН ОҚУ ҚҰРАЛЫ). Стикеева Р.К. , 2014/ <https://aknurpress.kz/>
13. Фармакология-1/Учебное пособие. Стикеева Р.К. , 2014/ <https://aknurpress.kz/>
14. Стикеева, Р.К. Фармакология с основами фармакотерапии: Учебное пособие. - Караганда: АҚНҰР, 2014/ <http://rmebrk.kz/>
15. Фармакология: Учебник . / под ред. А.А. Свистунова, В.В. Тарасова. - М.: Лаборатория знаний, 2017.
16. Фармакология: Қазақ және орыс тілдеренді практикалық сабақтарға арналған = руководство к практическим занятиям на казахском и русском языках. / Г.М. Пичхадзе, Д.М. Кадырова, И.И. Ким, М. Карбаева. - М.: Литгерра, 2017. - 640б. <http://rmebrk.kz/>

1. Department: Family Medicine

2. Residency (family medicine)

3. Of educational programs: Family Medicine

4. Course II

5. The name of the elective discipline: Radiation diagnostics in the practice of a family doctor

6. Number of credits: 2

7. Purpose: training of a family doctor with theoretical and practical skills and knowledge about the possibilities of methods of radiation diagnostics and treatment of diseases of organs and systems using physical influences (electromagnetic and corpuscular radiation and ultrasound).

8. Tasks:

- to form the residents' skills and abilities to conduct radiation diagnostics in accordance with the requirements of regulatory documents governing the rules and principles of conducting radiation diagnostics.
- study of the physical foundations of ionizing and non-ionizing studies used in medicine for diagnostic purposes;
- studying the principles of forming images of internal organs using various types of radiation;
- formation of the foundations of clinical thinking based on the analysis of ray images for the future practice of a doctor;
- the formation of professional skills in examining a patient using radiation research methods to identify symptoms and syndromes of major diseases of organs and systems.

9. Discipline content: Legal foundations of medical practice. The history of radiation diagnostics. Fundamentals of X-ray Research. Organization of a radiation diagnostics service. Physicotechnical fundamentals of radiology and other methods of radiation diagnostics. Radiation safety in X-ray

examinations. Radiation diagnostics of diseases of the head and neck. Radiation diagnosis of diseases of the musculoskeletal system. Radiation diagnostics of diseases of internal organs. Radiation diagnostics in pediatrics.

10. Justification for the choice of discipline: This discipline, as well as the Standard, is part of the quality assurance system and establishes the rules for conducting radiation diagnostics with the participation of a person as a subject, as well as documenting and presenting the results of radiation diagnostics. The principles set out in this Standard also apply to radiation research that has an impact on the safety and well-being of the person acting as the research subject.

The subject is intended for resident doctors on the main issues of radiation diagnostics in the practice of a family doctor

11. Learning outcomes:

LO1 *Patient curation:* able to formulate a clinical diagnosis, prescribe a plan for treatment and prevention interventions and evaluate their effectiveness across the entire spectrum of diseases, regardless of the patient's age, gender, and problem, based on evidence-based practice at the primary health care level

LO2 *Communication and collaboration:* able to effectively interact with the patient, members of his family and the community in which he lives, with other professionals working in the primary level (social workers, psychologists and other employees in PHC institutions) in order to achieve the best results for the patient

LO3 *Safety and quality:* able to assess risks and use the most effective methods to ensure a high level of safety and quality of medical care during radiology diagnostics and treatment and preventive interventions at the primary health care level

LO4 *Public Health:* able to act within the legal and organizational framework of health system of the Republic of Kazakhstan when carrying out diagnostic, therapeutic and preventive interventions in primary health care, provide basic assistance in emergency situations, work as part of interprofessional teams to implement the nation's health promotion policy

LO5 *Research:* is able to formulate adequate research goals and objectives, critically evaluate the special literature in the field of radiation diagnostics, effectively use international databases in their daily activities, participate in the work of the research team.

LO6 *Training and development:* able to self-educate and educate other members of the professional team, actively participate in discussions, conferences and other forms of continuing professional development in the field of radiation diagnostics.

12. Prerequisites: internal diseases, childhood diseases

13 Postrekvizity: continuing education courses. Scientific information

14.Literature:

the main

1. Труфанов Г. Еспенбетова, М. Ж. Объективный структурированный клинический экзамен в системе подготовки семейных врачей [Текст] : учеб. пособие / М. Ж. Еспенбетова ; М-во здравоохранения РК; Учеб.-методическая секция при КазГМА по спец. высш. и послевузовского образования; СГМА. - ; Утв. и разрешено к печати учеб.-метод. секцией при КазГМА. - Алматы : Эверо, 2013. - 280 с

2. Избранные вопросы по подготовке врачей общей практики. Т. 1 [Текст] : учеб. пособие / М-во здравоохранения РК; ГМУ г. Семей ; ред. М. Ж. Еспенбетова. - ; Утв. и разрешено к печати Учеб.-метод. совета ГМУ г. Семей. - Алматы : Эверо, 2013.

3. Сәулелі диагностика [Мәтін] : оқулық / РФ білім және ғыл. министрлігі ; Г. Е. Труфановтың редакциясымен; қазақ тіліне ауд. А. Б. Ахметбаева; жауапты ред. А. Қ. Ахметбаева. - ; И. М. Сеченов атындағы ГОУ ВПО "Бірінші Москва мемл. мед. ун-ті" ұсынған. - М. : ГЭОТАР - Медиа, 2014. - 576 бет. с

4. Лучевая диагностика [Текст] : учебник / М-во образования и науки РФ ; под ред. Труфанова Г. Е. - ; Рек. ГОУ ВПО "Первый МГМУ им. И. С. Сеченова" . - М. : ГЭОТАР - Медиа, 2013. - 496 с. : ил

Additional

1.Общая врачебная практика. В 2 т. Т. 1 [Текст] : национальное рук. / под ред. И. Н. Денисова, О. М. Лесняк . - ; Ред. под эгидой АСМОК. - М. : ГЭОТАР - Медиа, 2013. - 976 с

2.Жалпы дәрігерлік практика: ұлттық нұсқаулық. 2 томдық. 1 том [Мәтін] : нұсқаулық / Қазақ тіліне ауд. Қ. Ә. Әлиханова. - М. : ГЭОТАР - Медиа, 2016. - 992 б. с. : ил.

3.Хамзабаев, Ж. Х. Диагностическая и интервенционная радиология при вазоренальной гипертензии (От простой рентгенографии до интервенционной радиологии) [Текст] : монография / Ж. Х. Хамзабаев. - Алматы : Эверо, 2015. - 316 с

Electronic publications

13.Основы лучевой диагностики и терапии. Национальное руководство Терновой С.К. Год издания: 2012 Размер: 68.22 МБ/<https://kingmed.info/>

1.Department: Family Medicine

2. Residency (family medicine)

3. Of educational programs: Family Medicine

4. Course II

5. The name of the elective discipline: Dietetics

6. Number of credits: 2

7. Purpose: training of a family doctor with the skills necessary for effective counseling of patients and their families on the organization of rational nutrition, taking into account the norms of physiological needs, the biological properties of food in diet therapy of diseases at the PHC level.

8.Tasks:

- to teach skills to determine the characteristics of the initial clinical, nutritional, metabolic, mineral, hormonal, enzyme and psychological status in patients;
- to form the skills of effective counseling on differentiated correction by nutritive and metabolic means for various pathologies (diseases of the respiratory system, cardiovascular system, digestion, kidneys, urinary tract, etc.);
- to teach the skills of filling out accounting and reporting documentation within the framework of the organization and implementation of therapeutic nutrition and the development of individual menus, taking into account the norms of physiological needs, biological properties of food products in diet therapy of diseases.
- to develop skills for teaching patients and their relatives the basic rules of rational nutrition and diet therapy when carrying out health-improving, preventive, medical-diagnostic and rehabilitation measures in an outpatient clinic and at home

9. Discipline content: Modern methods for assessing the nutritional status of patients. Alimentary-dependent diseases and conditions. Nutritional and metabolic correction of nutritional status in cardiovascular diseases. Alimentary factor in the prevention and treatment of diseases of the digestive system and blood system. Features of nutrition of children and pregnant women. Pathogenetic foundations of diet therapy for allergies and diseases of the osteoarticular, urinary systems. Nutritional therapy for endocrine disorders.

10. Justification for the choice of discipline: At present, there is no doubt about the exceptional role of nutrition in the preservation and regulation of the most important national resource - the health of citizens, which is directly related to the industrial and economic potential of the country. The rate of negative dynamics of alimentary-dependent pathology is formed mainly in childhood and in the working-age population. At the same time, negative tendencies are deliberately preventable.

Adequate therapeutic and prophylactic nutrition, as a direction of practical restorative medicine, being an important stage of therapeutic and prophylactic measures, allows, on the one hand, to purposefully restore functional reserves and adaptive abilities of the body, impaired as a result of the disease, on the other hand, to carry out individual differentiated anti-relapse treatment in patients with chronic diseases, prevention of their complications and improves their quality of life. The subject is intended for resident physicians on basic nutritional issues.

11. Learning outcomes:

LO1 *Patient curation*: able to formulate a clinical diagnosis, prescribe a plan for treatment and prevention interventions and evaluate their effectiveness across the entire spectrum of diseases, regardless of the patient's age, gender, and problem, based on evidence-based practice at the primary health care level

LO2 *Communication and collaboration*: able to effectively interact with the patient, members of his family and the community in which he lives, with other professionals working in the primary level (social workers, psychologists and other employees in PHC institutions) in order to achieve the best results for the patient

LO3 *Safety and quality*: able to assess risks and use the most effective methods to ensure a high level of safety and quality of medical care during diagnostic and therapeutic interventions at the primary health care level

LO4 *Public Health*: able to act within the legal and organizational framework of health system of the Republic of Kazakhstan when carrying out diagnostic, therapeutic and preventive interventions in primary health care, provide basic assistance in emergency situations, work as part of interprofessional teams to implement the nation's health promotion policy

LO5 *Research*: able to formulate adequate research questions, critically evaluate special literature in the field of family medicine, effectively use international databases in their daily activities, participate in the work of the research team.

LO6 *Training and development*: able to study independently and train other members of the professional team, to actively participate in discussions, conferences and other forms of continuous professional development in the field of family medicine.

12. Prerequisites: internal diseases, childhood diseases

13 Postrekvizity: continuing education courses. Scientific information

14.Literature:

the main

1.Нутрициология [Мәтін] : оқулық / Л. З. Тель [ж. б.]. - М. : "Литтерра", 2015. - 512 бет. +эл. опт. диск (CD-ROM).

2.Нутрициология [Текст] : учебник / Л. З. Тель. [и др.]. - Алматы : Эверо, 2012. - 600 с.

3.Основы рационального питания [Текст] : учебное пособие / под ред. М. М. Лапкина. - ; мин-во образования и науки РФ. Рек. ФГАУ "Федеральный ин-т развития образования". - М. : ГЭОТАР - Медиа, 2017.

Additional

1.Гигиена питания [Текст] : учеб.-методическое пособие / сост. М. В. Ли, А. Б. Бужикеева, Е. Ю. Ушанская. - Алматы : Эверо, 2014. - 210 с

2.Абдуллаева, А. А. Оқушылардың салауатты тамақтану негіздері [Мәтін] : әдістемелік оқу құралы = Основы здорового питания школьников : методическое пособие / А. А. Абдуллаева, Г. Н. Досжанова. - Алматы : Эверо, 2014. - 114 бет.

3.Основы здорового питания людей пожилого и старческого возраста [Текст] : методическое пособие = Қарт және егде жастағы адамдарға арналған салауатты тамақтану негіздері : Әдістемелік оқу құралы / С. А. Исакова [и др.]. - Алматы : Эверо, 2014. - 68 с.

4.Основы здорового питания беременных и кормящих матерей [Текст] : методическое пособие / Е. Д. Даленов [и др.]. - ; Утв. и рек. на засед. Учен. Совета Ин-та проблем питания. - Алматы : Эверо, 2014. - 80 с

5.Ахметова, С. В. Диетология детского возраста [Текст] : руководство / С. В. Ахметова. - Алматы : Эверо, 2012

6.Терехин, С. П. Қазіргі таңда нутрициологияның өзекті сұрақтары кесте және схема түрінде [Мәтін] : оқу-әдістемелік құрал / С. П. Терехин, С. В. Ахметова, Қ. Е. Амреева. - ; ҚММУ ҒЫЛЫМ кеңесімен бекітілді. - Алматы : Эверо, 2012. - 334 бет.

Электронды басылымдар

1. Кучма, В. Р. Балалар мен жасөспірімдер гигиенасы [Электронный ресурс] : оқулық / В. Р. Кучма. - Электрон. текстовые дан. (45,6 Мб). - М. : ГЭОТАР - Медиа, 2016. - 464 бет. эл. опт. диск (CD-ROM).
2. Омаров, Руслан/Основы рационального питания [Электронный ресурс] : учеб. пособие / Р. С. Омаров, О. В. Сычева; М-во Сельского хоз. РФ, СтГАУ. - Ставрополь : АГРУС, 2014. - <http://rmebrk.kz/>
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4. Рысқалиева, Б.Ж. Тамақтану гигиенасы: Оқу құралы. / Жәңгір хан атындағы Батыс Қазақстан аграрлық-техникалық университеті. - Орал: Жәңгір хан атындағы БҚАТУ, 2020. - 123б. <http://rmebrk.kz/>
5. Демеуова, Б.М. Тамақтанудың қазіргі жүйелері мен тұжырымдамалары: Оқу-әдістемелік құрал. - Алматы: «Тұран» Университеті, 2020. - 69б.
Алимарданова, М.К., Зарицкая, Н.Е.
6. Балалар тамақтану өнімдерінің технологиясы: Оқу құралы. - Алматы: АТУ, 2015. - 180б. <http://rmebrk.kz/>
7. Азық-түлік шикізаты және тағам өнімдерінің қауіпсіздігі [Электрондық ресурс] : оқулық / М. Ж. Еркебаев [және т.б.] ; ҚР Білім және ғылым м-гі. - Алматы : [б. ж.], 2013. - 279, <https://elib.kaznu.kz/>
8. Жалпы гигиена [Электрондық ресурс] : оқулық / Ү. И. Кенесариев [және т. б.]; ҚР Білім және ғылым м-гі, С. Ж. Асфендияров атын. ҚазҰМУ. - Алматы : Б.и., 2013. - 65б. <https://elib.kaznu.kz/>
9. Емдік тағам/Ерманова С.А. , 2012/<https://aknurpress.kz/>
Дұрыс тамақтану негіздері/Бейсенбаев А.Ю., Жандарбекова Д.Д., Кожабекова Г.А. , 2016/<https://aknurpress.kz/>

1. Department: Family Medicine

2. Residency (family medicine)

3. Of educational programs: Family Medicine

4. Course II

5. The name of the elective discipline: Good clinical practice

6. Number of credits: 2

7. Purpose: training of a family physician with the skills necessary to participate effectively in clinical trials conducted in accordance with the ethical principles laid down in the 1964 Declaration of Helsinki by the World Medical Association and reflected in the Standard and Regulatory Requirements.

8. Tasks:

- to teach to form students' skills and abilities to conduct scientific research in accordance with the requirements of regulatory documents governing the rules and principles of scientific research.
- develop skills in determining the rights, safety and well-being of research subjects;
- train in the skills of analyzing information (preclinical and clinical) about the investigational drug is provided in sufficient volume to justify the proposed clinical trial.

9. Discipline content: • Standard and principles of good clinical practice. Study rationale and design. The rights, safety and well-being of research subjects. Informed consent of research subjects. Researcher's qualifications and obligations. Clinical trial protocol. List of the main documents of the clinical trial. Procedure for providing safety information during clinical trials. The structure and content of the clinical trial report.

10. Justification for the choice of discipline: This discipline, like the Standard, is part of a quality

assurance system and sets out the rules for conducting research with human participation as a subject, as well as documenting and presenting the results of such research. The principles set out in this Standard also apply to clinical trials that have an impact on the safety and well-being of the individual who is the subject of the research.

The subject is intended for resident physicians on essential issues of good clinical practice.

11. Learning outcomes:

LO1 Patient curation: able to formulate a clinical diagnosis, prescribe a plan for treatment and prevention interventions and evaluate their effectiveness across the entire spectrum of diseases, regardless of the patient's age, gender, and problem, based on evidence-based practice at the primary health care level

LO2 Communication and collaboration: able to effectively interact with the patient, members of his family and the community in which he lives, with other professionals working in the primary level (social workers, psychologists and other employees in PHC institutions) in order to achieve the best results for the patient

LO3 Safety and quality: able to assess risks and use the most effective methods to ensure a high level of safety and quality of medical care during diagnostic and therapeutic interventions at the primary health care level

LO4 Public Health: able to act within the legal and organizational framework of health system of the Republic of Kazakhstan when carrying out diagnostic, therapeutic and preventive interventions in primary health care, provide basic assistance in emergency situations, work as part of interprofessional teams to implement the nation's health promotion policy

LO5 Research: able to formulate adequate research questions, critically evaluate special literature in the field of family medicine, effectively use international databases in their daily activities, participate in the work of the research team.

LO6 Training and development: able to study independently and train other members of the professional team, to actively participate in discussions, conferences and other forms of continuous professional development in the field of family medicine.

12. Prerequisites: internal diseases, childhood diseases

13 Postrekvizity: continuing education courses. Scientific information

14.Literature:

the main

1.Вялов, С. С. Общая врачебная практика: неотложная медицинская помощь [Текст] : учебное пособие / С. С. Вялов. - 6-е изд. ; Рек. Учебно-методическим объединением по мед. и фармацевтическому образованию вузов России. - М. : Медпресс-информ, 2014. - 112 с

2.Кузнецов, Н. А. Уход за хирургическими больными [Текст] : учебник / Н. А. Кузнецов, А. Т. Бронтвейн ; М-во образования и науки РФ. - ; Рек. ГОУ ВПО "Первый Моск. гос. мед. ун-т им. И. М. Сеченова". - М. : ГЭОТАР - Медиа, 2013. - 288 с. : ил.

3.Дюсупова, А. А. Актуальные вопросы кардиологии [Текст] : учеб. пособие / А. А. Дюсупова, Алт. А. Дюсупова. - ; Утв. и разрешено к печати реш. Учеб.-метод. совета ГМУ г. Семей. - Алматы : Эверо, 2014. - 382 с.

4.Кишкун, А. А. Клиникалық лабораториялық диагностика [Мәтін] : оқу құралы / қазақ тіл. ауд. А. Ж. Сейтебетова. - М. : ГЭОТАР - Медиа, 2017. - 960 бет. С

5.Еспенбетова, М. Ж. Объективный структурированный клинический экзамен в системе подготовки семейных врачей [Текст] : учеб. пособие / М. Ж. Еспенбетова ; М-во здравоохранения РК; Учеб.-методическая секция при КазГМА по спец. высш. и послевузовского образования; СГМА. - ; Утв. и разрешено к печати учеб.-метод. секциейпри КазГМА. - Алматы : Эверо, 2013. - 280 с

Additional

- 1.Триединство науки, образования и клинической практики (на примере модели "UNICLinic" КазНМУ им. С. Д. Асфендиярова) [Текст] : методические рек. / А. А. Аканов [и др.]. - Алматы : Каз НМУ им. С. Д. Асфендиярова, 2017. - 40 с.
- 2.Кишкун, А. А. Руководство по лабораторным методам диагностики [Текст] : руководство / А. А. Кишкун. - 2-е изд., перераб. и доп. - М. : ГЭОТАР - Медиа, 2014. - 760 с. : ил
- 3.Ақанов, А. Б. Қазақстан Республикасында клиникалық тәжірибеге нұсқаулықтарды енгізудің әдіснамасы [Мәтін] : әдістемелік ұсыным = Методология внедрения руководств клинической практики в Республике Казахстан : методич. рек. / А. Б. Ақанов, К. Р. Рүстемова, А. Х. Раскалиева. - Астана : Филин, 2011. - 30 бет

Electronic publications

1.Department: Family Medicine

2. Residency (family medicine)

3. Of educational programs: Family Medicine

4. Course II

5. The name of the elective discipline: Radiation diagnostics in the practice of a family doctor

6. Number of credits: 2

7. Purpose: training of a family doctor with theoretical and practical skills and knowledge about the possibilities of methods of radiation diagnostics and treatment of diseases of organs and systems using physical influences (electromagnetic and corpuscular radiation and ultrasound).

8.Tasks:

- to form the residents' skills and abilities to conduct radiation diagnostics in accordance with the requirements of regulatory documents governing the rules and principles of conducting radiation diagnostics.
- study of the physical foundations of ionizing and non-ionizing studies used in medicine for diagnostic purposes;
- studying the principles of forming images of internal organs using various types of radiation;
- formation of the foundations of clinical thinking based on the analysis of ray images for the future practice of a doctor;
- the formation of professional skills in examining a patient using radiation research methods to identify symptoms and syndromes of major diseases of organs and systems.

9. Discipline content: Legal foundations of medical practice. The history of radiation diagnostics. Fundamentals of X-ray Research. Organization of a radiation diagnostics service. Physicotechnical fundamentals of radiology and other methods of radiation diagnostics. Radiation safety in X-ray examinations. Radiation diagnostics of diseases of the head and neck. Radiation diagnosis of diseases of the musculoskeletal system. Radiation diagnostics of diseases of internal organs. Radiation diagnostics in pediatrics.

10. Justification for the choice of discipline: This discipline, as well as the Standard, is part of the quality assurance system and establishes the rules for conducting radiation diagnostics with the participation of a person as a subject, as well as documenting and presenting the results of radiation diagnostics. The principles set out in this Standard also apply to radiation research that has an impact on the safety and well-being of the person acting as the research subject.

The subject is intended for resident doctors on the main issues of radiation diagnostics in the practice of a family doctor

11. Learning outcomes:

LO1 *Patient curation*: able to formulate a clinical diagnosis, prescribe a plan for treatment and prevention interventions and evaluate their effectiveness across the entire spectrum of diseases, regardless of the patient's age, gender, and problem, based on evidence-based practice at the primary health care level

LO2 *Communication and collaboration*: able to effectively interact with the patient, members of his family and the community in which he lives, with other professionals working in the primary level (social workers, psychologists and other employees in PHC institutions) in order to achieve the best results for the patient

LO3 *Safety and quality*: able to assess risks and use the most effective methods to ensure a high level of safety and quality of medical care during radiology diagnostics and treatment and preventive interventions at the primary health care level

LO4 *Public Health*: able to act within the legal and organizational framework of health system of the Republic of Kazakhstan when carrying out diagnostic, therapeutic and preventive interventions in primary health care, provide basic assistance in emergency situations, work as part of interprofessional teams to implement the nation's health promotion policy

LO5 *Research*: is able to formulate adequate research goals and objectives, critically evaluate the special literature in the field of radiation diagnostics, effectively use international databases in their daily activities, participate in the work of the research team.

LO6 *Training and development*: able to self-educate and educate other members of the professional team, actively participate in discussions, conferences and other forms of continuing professional development in the field of radiation diagnostics.

12. Prerequisites: internal diseases, childhood diseases

13 Postrekvizity: continuing education courses. Scientific information

14.Literature:

the main

1. Труфанов Г. Еспенбетова, М. Ж. Объективный структурированный клинический экзамен в системе подготовки семейных врачей [Текст] : учеб. пособие / М. Ж. Еспенбетова ; М-во здравоохранения РК; Учеб.-методическая секция при КазГМА по спец. высш. и послевузовского образования; СГМА. - ; Утв. и разрешено к печати учеб.-метод. секцией при КазГМА. - Алматы : Эверо, 2013. - 280 с

2. Избранные вопросы по подготовке врачей общей практики. Т. 1 [Текст] : учеб. пособие / М-во здравоохранения РК; ГМУ г. Семей ; ред. М. Ж. Еспенбетова. - ; Утв. и разрешено к печати Учеб.-метод. совета ГМУ г. Семей. - Алматы : Эверо, 2013.

3. Сәулелі диагностика [Мәтін] : оқулық / РФ білім және ғыл. министрлігі ; Г. Е. Труфановтың редакциясымен; қазақ тіліне ауд. А. Б. Ахметбаева; жауапты ред. А. Қ. Ахметбаева. - ; И. М. Сеченов атындағы ГОУ ВПО "Бірінші Москва мемл. мед. ун-ті" ұсынған. - М. : ГЭОТАР - Медиа, 2014. - 576 бет. с

4. Лучевая диагностика [Текст] : учебник / М-во образования и науки РФ ; под ред. Труфанова Г. Е. - ; Рек. ГОУ ВПО "Первый МГМУ им. И. С. Сеченова" . - М. : ГЭОТАР - Медиа, 2013. - 496 с. : ил

Additional

1. Общая врачебная практика. В 2 т. Т. 1 [Текст] : национальное рук. / под ред. И. Н. Денисова, О. М. Лесняк . - ; Ред. под эгидой АСМОК. - М. : ГЭОТАР - Медиа, 2013. - 976 с

2. Жалпы дәрігерлік практика: ұлттық нұсқаулық. 2 томдық. 1 том [Мәтін] : нұсқаулық / Қазақ тіліне ауд. Қ. Ә. Әлиханова. - М. : ГЭОТАР - Медиа, 2016. - 992 б. с. : ил.

3. Хамзабаев, Ж. Х. Диагностическая и интервенционная радиология при вазоренальной гипертензии (От простой рентгенографии до интервенционной радиологии) [Текст] : монография / Ж. Х. Хамзабаев. - Алматы : Эверо, 2015. - 316 с

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1. Жалпы дәрігерлік практика. Ұлттық нұсқаулық. 2 т. Т1. [Электронный ресурс] : оқулық / ред. И. Н. Денисов ; қаз. тіліне ауд. Қ. Ә. Әлиханова. - Электрон. текстовые дан. (110Мб). - М. : ГЭОТАР - Медиа, 2016. - 992 бет. эл. опт. диск (CD-ROM).
2. Лучевая диагностика. Т.1 [Электронный ресурс] : учебник / под ред. Г. Е. Труфанова. - Электрон. текстовые дан. (81,6 Мб). - М. : Изд. группа "ГЭОТАР-Медиа", 2011. - 416 с. эл. опт. диск (CD-ROM) : ил. - (Электронный учебник).
3. Сәулелі диагностика [Электронный ресурс] : оқулық / қазақ тіл. ауд. А. Б Ахметбаева ; ред. басқ. Г. Е. Труфанов. - Электрон. текстовые дан. (421Мб). - М. : ГЭОТАР - Медиа, 2014. - 576б. с.
4. Лучевая диагностика заболеваний органов дыхания и средостения [Электронный ресурс] : учебное пособие / Е. Б. Бекмуратов [и др.] ; М-во здравоохранения и социального развития РК. ЮКГФА. - Электрон. текстовые дан. - Шымкент : [б. и.], 2016. - эл. опт. диск
5. Труфанов, Г. Е. Лучевая терапия. Т. 2 [Электронный ресурс] : учебник / Г. Е. Труфанов, М. А. Асатуриян, Г. М. Жаринов. - Электрон. текстовые дан. (41,7 Мб). - М. : Издательская группа "ГЭОТАР- Медиа", 2010. - 192 с. эл. опт. диск (CD-ROM). - (Электронный учебник
6. Атлас лучевой анатомии человека [Электронный ресурс] : атлас / В. И. Филимонов [и др.]. - Электрон. текстовые дан. (54,1 Мб). - М. : ГЭОТАР - Медиа, 2010. - 452 эл. опт. диск (CD-ROM) : ил. - (Электронный учебник)
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8. Патоморфология и лучевая диагностика некоторых заболеваний легких/Серикбай М.Қ. , 2020/<https://aknurpress.kz/>
9. Лучевая диагностика и терапия в акушерстве и гинекологии. Национальное руководство. Адамян Л.В., Демидов В.Н., Гус А.И., Терновой С.К. Год издания: 2012 Размер: 43.99 МБ/<https://kingmed.info/>
10. Лучевая диагностика заболеваний костей и суставов Бургенер Ф.А., Кормано М., Пудас. Т. Год издания: 2011 Размер: 24.6 МБ/<https://kingmed.info/>
11. Лучевая диагностика болезней сердца и сосудов. Национальное руководство. Коков Л.С. Год издания: 2011 Размер: 47.23 МБ/<https://kingmed.info/>
12. Лучевая диагностика в травматологии и ортопедии МакКиннис Линн Н. Год издания: 2015 Размер: 114.04 МБ/<https://kingmed.info/>
13. Основы лучевой диагностики и терапии. Национальное руководство Терновой С.К. Год издания: 2012 Размер: 68.22 МБ/<https://kingmed.info/>

Catalog of elective disciplines for the 2023-2024 academic year

1. **Department:** " Surgery-2"
2. **Level of preparation:** Residency
3. **Educational program:** «Adult oncology».
4. **Course:** 2
5. **Name of the elective discipline:** "Innovative technologies in Oncology".
6. **Number of credits:** 4 credits / 120 hours.

7. Goal: to acquire special knowledge necessary for the development of skills and abilities of innovative methods of diagnosis and treatment of oncopathology, the formation of modern diagnostic and therapeutic competencies.

8. Tasks:

- Improvement of knowledge on innovative methods of diagnosis and treatment of oncopathology
- Expanding knowledge and skills in the interpretation of modern laboratory, invasive and non-invasive methods of examination, conducting differential diagnostics of patients with cancer;
- Study of modern innovative methods of diagnosis and treatment of cancer patients

9. Content of disciplines: Fundamentals of modern innovative technologies in the diagnosis and treatment of malignant neoplasms; primary, secondary, and tertiary cancer prevention; management of cancer services; use of information technologies.

10. Justification of the choice of discipline: In the conditions of dynamic development and development of new technologies for diagnosis and treatment of oncopathology, it is necessary to improve the knowledge and professional skills of a formation of elements of specific competencies that contribute to a significant improvement as a professional activity and the improvement of quality of rendering of medical care in the treatment of cancer

11. Learning outcomes (competencies).

№	Knowledge (cognitive sphere)	skills (psychomotor sphere)	Personal and professional competencies (relationships)
1	Knows modern methods of diagnosis and dif. diagnostics of cancer Knows innovative methods of conservative and the latest methods of surgical treatment of cancer.	<ul style="list-style-type: none"> • Able to assess the patient's condition according to who recommendations. • Can scientifically analyze socio-biological, medical-social and epidemiological conditions and factors of oncopathology. • Possesses modern methods and techniques of surgical treatment • * Is able to establish contact with the patient /relatives for an effective treatment process, involve the patient in the process of diagnosis and treatment. 	<ul style="list-style-type: none"> • Based on the identified data of anamnesis, examination, laboratory and instrumental examination of the patient, makes recommendations according to the who, according to the clinical protocols of MOH. • Based on the principles of evidence-based medicine, builds a strategy and tactics for managing patients with oncopathology.

12. Prerequisites: internship in the specialty "Surgery, GP".

13. Post requisites: doctoral studies.

14. Literature:

Primary:

1. Давыдов М.И. «Онкология» учебник. Перевод на каз язык Ә.К. Қойшыбаев. – М. ГЭОТАР – Медицина 2018
2. Абисатов Х.А. Общие аспекты клинической онкологии. 1 ч. Уч. пособие/ Х.А. Абисатов, Н.Т. Джайнакбаев, С.Е.Есентаева.-Алматы ЭВЕРО 2016
3. Абисатов Х.А. Общие аспекты клинической онкологии. 2 ч. Уч. пособие/ Х.А. Абисатов, Н.Т. Джайнакбаев, С.Е.Есентаева.-Алматы ЭВЕРО 2016

Additional:

1. Онкология. Национальное руководство. Краткое издание. Руководство/ под ред В.И. Чиссова.- М ГЭОТАР – Медиа. 2016
2. Абисатов Х.А. Лекции по онкогинекологии и онкоурологии. 1 т. Лекции по онкогинекологии: лекции Х.А. Абисатов, А.А. Байназарова, А.М. Байдувалиев – Алматы:

Эверо 2016

3. Абисатов Х.А. Лекции по онкогинекологии и онкоурологии. 2 т. Лекции по онкогинекологии: лекции Х.А. Абисатов, А.А. Байназарова, А.М. Байдувалиев – Алматы: Эверо 2016
4. Маммология : Национальное руководство / гл. редактор В.П. Харченко, Н.И. Рожкова. – М. ГЭОТАР - Медиа 2009
5. Ганцев Х. Ш. Онкология: Учебник- М МИА, 2006-488с.

1. Department: " Surgery-2"

2. Level of preparation: Residency

3. Educational program: «Adult oncology».

4. Course: 2

5. Name of the elective discipline: "Interventional oncoradiology (chemotherapy)".

6. Number of credits: 4 credits / 120 hours.

7. Goal: to Develop knowledge, skills, and skills to provide interventional care (radiation and chemotherapy) in oncopathology.

8. Tasks:

- increasing knowledge of interventional technologies in the diagnosis and treatment of cancer;
- increasing knowledge of modern methods of diagnosis and differential diagnosis of critical conditions in Oncology
- deepening of knowledge, skills and skills in preoperative preparation of cancer patients, assessment of the initial state of the patient, determination of the risk of interventional therapy, anesthesia and tactics of intensive care in the postoperative period.

9. Content of disciplines: The discipline of radiology, which studies the methods of treating various oncological diseases by using percutaneous approaches, catheters and other low-traumatic instruments, without anesthesia, under the control of radiation imaging methods using vascular and non-vascular interventional interventions.

10. Justification of the choice of discipline: The frequency of oncological diseases requiring interventional interventions, in terms of diagnosis and treatment, does not tend to decrease. Complications in the result of the diagnostical and tactical errors are often fatal. In this regard, it is very important to improve practical skills in providing emergency cancer care and management tactics for patients with urgent conditions.

11. Learning outcomes (competencies)

№	Knowledge (cognitive sphere)	skills (psychomotor sphere)	Personal and professional competencies (relationships)
1	Knows the methods of diagnosis and treatment of cancer . Has the terminology of oncological and surgical diseases, knowledge of modern scientific achievements of medicine in the field of Oncology. Knows the methods of involving the patient in the process of diagnosis and	• Able to assess the patient's condition according to who recommendations. • Can scientifically analyze socio-biological, medico-social and epidemiological conditions and factors of oncological pathologies. • Is able to establish contact with the patient /relatives for an effective treatment process, involve the patient	• Demonstrates knowledge of the basics of healthcare legislation and regulatory legal acts regulating the activities of health authorities and individual medical organizations in the Republic of Kazakhstan; • Based on the revealed data: anamnesis, examination, laboratory-instrumental methods of examination, the patient's condition, makes recommendations according to who, according to the protocols of

treatment, the basics of professional attitude to the patient, professional relations with colleagues and medical staff.	in the process of diagnosis and treatment.	the Ministry of health of the Republic of Kazakhstan. <ul style="list-style-type: none"> Based on the principles of evidence-based medicine, builds a strategy and tactics for managing patients suffering from cancer.
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12. Prerequisites: internship in the specialty "Surgery, GP".

13. Post requisites: doctoral studies.

14. Literature:

Primary:

1. Давыдов М.И. «Онкология» учебник. Перевод на каз язык Ә.К. Қойшыбаев. – М. ГЭОТАР – Медицина 2018
2. Абисатов Х.А. Общие аспекты клинической онкологии. 1 ч. Уч. пособие/ Х.А. Абисатов, Н.Т. Джайнакбаев, С.Е.Есентаева.-Алматы ЭВЕРО 2016
3. Абисатов Х.А. Общие аспекты клинической онкологии. 2 ч. Уч. пособие/ Х.А. Абисатов, Н.Т. Джайнакбаев, С.Е.Есентаева.-Алматы ЭВЕРО 2016

Additional:

1. Онкология. Национальное руководство. Краткое издание. Руководство/ под ред В.И. Чиссова.- М ГЭОТАР – Медиа. 2016
2. Абисатов Х.А. Лекции по онкогинекологии и онкоурологии. 1 т. Лекции по онкогинекологии: лекции Х.А. Абисатов, А.А. Байназарова, А.М. Байдувалиев – Алматы: Эверо 2016
3. Абисатов Х.А. Лекции по онкогинекологии и онкоурологии. 2 т. Лекции по онкогинекологии: лекции Х.А. Абисатов, А.А. Байназарова, А.М. Байдувалиев – Алматы: Эверо 2016
4. Маммология : Национальное руководство / гл. редактор В.П. Харченко, Н.И. Рожкова. – М. ГЭОТАР - Медиа 2009
5. Ганцев Х. Ш. Онкология: Учебник- М МИА, 2006-488с.

1. Department: " Surgery-2"

2. Level of preparation: Residency.

3. Educational program: «Adult oncology».

4. Course: 2

5. Name of the elective discipline: "Basics of oncurology".

6. Number of credits: 4 credits / 120 hours.

7. Goal: to improve knowledge and clinical skills in providing specialized care in oncurology.

8. Tasks:

- In-depth knowledge of urology and oncurology;
- Improvement of knowledge on modern principles of diagnostics and differential diagnostics in patients with renal and urinary tract oncopathology;
- Independent implementation of qualified medical care for various conditions and diseases in oncurology that require surgical intervention.

9. Content of disciplines: Covers the main methods of diagnosis and treatment of malignant formations of the genitourinary system, the principles and stages of surgical, chemotherapeutic or radiation treatment of diseases of the urooncological profile, methods of diagnosis, prevention and treatment of complications. Know the basic principles of palliative care for patients with malignant neoplasms of the genitourinary system.

10. Substantiation of the choice of discipline: The problem of diagnosis and surgical treatment of cancer of the kidneys and urinary tract continues to be relevant due to the high level of morbidity, the complexity of early diagnosis of pathology, the frequency of metastasis and limited

opportunities for radical surgical treatment. Improvement of methods of diagnostics and surgical treatment is aimed at reducing the hospital stay of patients due to the healing time and early rehabilitation.

11. Learning outcomes (competencies)

№	Knowledge (cognitive sphere)	skills (psychomotor sphere)	Personal and professional competencies (relationships)
	<ul style="list-style-type: none"> • Demonstrates knowledge of the subject and tasks of the discipline • Knows the principles of organization of surgical care in Oncourology. Knowledge of risk groups and the role of health education in reducing surgical infection of the genitourinary tract and malignancy. Knows the ethical and social aspects of clinical oncurology. 	<ul style="list-style-type: none"> • Able to assess the patient's condition according to who recommendations. • Can scientifically analyze socio-biological, medico-social and epidemiological conditions and risk factors for oncopathology in urology. • Can execute the main forms of accounting and reporting documentation. Can make diagnoses according to the ICD 10 classification. • Is able to carry out measures for the prevention of surgical diseases, is able to interpret the results of various studies in oncurology. 	<ul style="list-style-type: none"> • Able to interpret the data of laboratory and instrumental methods of examination (clinical and biochemical analyses, ultrasound, ECG, R-images, MRI, etc.) current and in dynamics. • Able to conduct clinical observations in the field of this discipline • Able to formulate their own conclusions in the form of recommendations on advanced methods of diagnosis, treatment, and reduction of kidney and urinary tract diseases. • Able to present personal opinions, formalize in the form of a literature review, report, abstract presentation, project and present at practical classes, meetings of the scientific circle, scientific conferences, etc. • Able to master modern methods of diagnosis and treatment in Oncology. • * Able to search and research data on cancer incidence, risk factors, anti-epidemic measures, etc. MPs is Able to properly inform and train hospital patients in the simplest methods of prevention

12. Prerequisites: internship in the specialty "Surgery, GP".

13. Post requisites: doctoral studies.

14. Literature:

Primary:

1. Давыдов М.И. «Онкология» учебник. Перевод на каз язык Ә.К. Қойшыбаев. – М. ГЭОТАР – Медицина 2018
2. Абисатов Х.А. Общие аспекты клинической онкологии. 1 ч. Уч. пособие/ Х.А. Абисатов, Н.Т. Джайнакбаев, С.Е.Есентаева.-Алматы ЭВЕРО 2016
3. Абисатов Х.А. Общие аспекты клинической онкологии. 2 ч. Уч. пособие/ Х.А. Абисатов, Н.Т. Джайнакбаев, С.Е.Есентаева.-Алматы ЭВЕРО 2016

Additional:

1. Онкология. Национальное руководство. Краткое издание. Руководство/ под ред В.И. Чиссова.- М ГЭОТАР – Медиа. 2016
2. Абисатов Х.А. Лекции по онкогинекологии и онкоурологии. 1 т. Лекции по онкогинекологии: лекции Х.А. Абисатов, А.А. Байназарова, А.М. Байдувалиев – Алматы: Эверо 2016
3. Абисатов Х.А. Лекции по онкогинекологии и онкоурологии. 2 т. Лекции по онкогинекологии: лекции Х.А. Абисатов, А.А. Байназарова, А.М. Байдувалиев – Алматы: Эверо 2016

4. Маммология : Национальное руководство / гл. редактор В.П. Харченко, Н.И. Рожкова. – М. ГЭОТАР - Медиа 2009
5. Ганцев Х. Ш. Онкология: Учебник- М МИА, 2006-488с.

1.Department: Family Medicine

2. Residency (family medicine)

3. Of educational programs: Family Medicine

4. Course II

5. The name of the elective discipline: Dietetics

6. Number of credits: 2

7. Purpose: training of a family doctor with the skills necessary for effective counseling of patients and their families on the organization of rational nutrition, taking into account the norms of physiological needs, the biological properties of food in diet therapy of diseases at the PHC level.

8.Tasks:

- to teach skills to determine the characteristics of the initial clinical, nutritional, metabolic, mineral, hormonal, enzyme and psychological status in patients;
- to form the skills of effective counseling on differentiated correction by nutritive and metabolic means for various pathologies (diseases of the respiratory system, cardiovascular system, digestion, kidneys, urinary tract, etc.);
- to teach the skills of filling out accounting and reporting documentation within the framework of the organization and implementation of therapeutic nutrition and the development of individual menus, taking into account the norms of physiological needs, biological properties of food products in diet therapy of diseases.
- to develop skills for teaching patients and their relatives the basic rules of rational nutrition and diet therapy when carrying out health-improving, preventive, medical-diagnostic and rehabilitation measures in an outpatient clinic and at home

9. Discipline content: Modern methods for assessing the nutritional status of patients. Alimentary-dependent diseases and conditions. Nutritional and metabolic correction of nutritional status in cardiovascular diseases. Alimentary factor in the prevention and treatment of diseases of the digestive system and blood system. Features of nutrition of children and pregnant women. Pathogenetic foundations of diet therapy for allergies and diseases of the osteoarticular, urinary systems. Nutritional therapy for endocrine disorders.

10. Justification for the choice of discipline: At present, there is no doubt about the exceptional role of nutrition in the preservation and regulation of the most important national resource - the health of citizens, which is directly related to the industrial and economic potential of the country. The rate of negative dynamics of alimentary-dependent pathology is formed mainly in childhood and in the working-age population. At the same time, negative tendencies are deliberately preventable.

Adequate therapeutic and prophylactic nutrition, as a direction of practical restorative medicine, being an important stage of therapeutic and prophylactic measures, allows, on the one hand, to purposefully restore functional reserves and adaptive abilities of the body, impaired as a result of the disease, on the other hand, to carry out individual differentiated anti-relapse treatment in patients with chronic diseases, prevention of their complications and improves their quality of life. The subject is intended for resident physicians on basic nutritional issues.

11. Learning outcomes:

LO1 *Patient curation:* able to formulate a clinical diagnosis, prescribe a plan for treatment and prevention interventions and evaluate their effectiveness across the entire spectrum of diseases, regardless of the patient's age, gender, and problem, based on evidence-based practice at the primary health care level

LO2 *Communication and collaboration:* able to effectively interact with the patient, members of his family and the community in which he lives, with other professionals working in the primary

level (social workers, psychologists and other employees in PHC institutions) in order to achieve the best results for the patient

LO3 *Safety and quality*: able to assess risks and use the most effective methods to ensure a high level of safety and quality of medical care during diagnostic and therapeutic interventions at the primary health care level

LO4 *Public Health*: able to act within the legal and organizational framework of health system of the Republic of Kazakhstan when carrying out diagnostic, therapeutic and preventive interventions in primary health care, provide basic assistance in emergency situations, work as part of interprofessional teams to implement the nation's health promotion policy

LO5 *Research*: able to formulate adequate research questions, critically evaluate special literature in the field of family medicine, effectively use international databases in their daily activities, participate in the work of the research team.

LO6 *Training and development*: able to study independently and train other members of the professional team, to actively participate in discussions, conferences and other forms of continuous professional development in the field of family medicine.

12. Prerequisites: internal diseases, childhood diseases

13 Postrekvizity: continuing education courses. Scientific information

14.Literature:

the main

1.Нутрициология [Мәтін] : оқулық / Л. З. Тель [ж. б.]. - М. : "Литтерра", 2015. - 512 бет. +эл. опт. диск (CD-ROM).

2.Нутрициология [Текст] : учебник / Л. З. Тель. [и др.]. - Алматы : Эверо, 2012. - 600 с.

3.Основы рационального питания [Текст] : учебное пособие / под ред. М. М. Лапкина. - ; мин-во образования и науки РФ. Рек. ФГАУ "Федеральный ин-т развития образования". - М. : ГЭОТАР - Медиа, 2017.

Additional

1.Гигиена питания [Текст] : учеб.-методическое пособие / сост. М. В. Ли, А. Б. Бужикеева, Е. Ю. Ушанская. - Алматы : Эверо, 2014. - 210 с

2.Абдуллаева, А. А. Оқушылардың салауатты тамақтану негіздері [Мәтін] : әдістемелік оқу құралы = Основы здорового питания школьников : методическое пособие / А. А. Абдуллаева, Г. Н. Досжанова. - Алматы : Эверо, 2014. - 114 бет.

3.Основы здорового питания людей пожилого и старческого возраста [Текст] : методическое пособие = Қарт және егде жастағы адамдарға арналған салауатты тамақтану негіздері : Әдістемелік оқу құралы / С. А. Исакова [и др.]. - Алматы : Эверо, 2014. - 68 с.

4.Основы здорового питания беременных и кормящих матерей [Текст] : методическое пособие / Е. Д. Даленов [и др.]. - ; Утв. и рек. на засед. Учен. Совета Ин-та проблем питания. - Алматы : Эверо, 2014. - 80 с

5.Ахметова, С. В. Диетология детского возраста [Текст] : руководство / С. В. Ахметова. - Алматы : Эверо, 2012

6.Терехин, С. П. Қазіргі таңда нутрициологияның өзекті сұрақтары кесте және схема түрінде [Мәтін] : оқу-әдістемелік құрал / С. П. Терехин, С. В. Ахметова, Қ. Е. Амреева. - ; ҚММУ ҒЫЛЫМ кеңесімен бекітілді. - Алматы : Эверо, 2012. - 334 бет.

1. **Department** of Therapy and Cardiology

2. **Level of training:** Residency

3. **Specialty:** 7R01101 " Cardiology adult, children"

4. **Course:** 3

5. **Name of elective discipline:** Rehabilitation of cardiological and cardiosurgical patients.

6. The purpose of EP:

– Training of a qualified cardiologist with a system of universal, professional competencies, capable and ready for independent professional activity in outpatient and specialized care, including the use of high-tech medical services.

7. Objectives of EP:

- Consolidate teamwork skills and leadership qualities;
- To consolidate the skills of basic medical diagnostic and preventive interventions;
- Teach to make professional decisions based on the principles of evidence-based medicine;
- Teach to comply with the requirements of medical ethics and deontology when conducting expert, preventive and therapeutic diagnostic measures;
- To train doctors in cardiology for adults and children who have clinical thinking, are well-versed in complex pathology, and have in-depth knowledge of related disciplines.

8. Justification of the choice of discipline

Residency in the educational program " Cardiology adult, children" is a form of postgraduate professional training, providing in–depth study and detailed mastery of professional activity within this specialty.

9. Learning outcomes (competencies)

P01 Patient management: able to formulate a clinical diagnosis, prescribe a treatment plan and evaluate its effectiveness based on evidence-based practice in highly specialized cardiac care.

P02 Communication and Collaboration: Able to communicate effectively with the cardiac patient, their environment, healthcare professionals in order to achieve the best patient outcomes

RO3 Safety and Quality: Able to assess risks and use the most effective methods to ensure a high level of safety and quality in highly specialized cardiac care.

P04 Public health: is able to act within the legal and organizational framework of the healthcare system of the Republic of Kazakhstan in his specialty, provide basic cardiological care in emergencies, work as part of interprofessional teams to implement the policy of promoting the health of the nation

P05 Research: able to formulate adequate research questions, critically evaluate professional literature, effectively use international databases in their daily activities, participate in the work of a research team.

RO6 Learning 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.

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)
	<ol style="list-style-type: none">1. Skills of conducting an initial examination of a patient with suspected cardiological pathology.2. Skills of reasoned appointment of diagnostic tests to a patient with suspected cardiological pathology.3. The ability to correctly interpret the results of diagnostic studies of a patient with suspected cardiological pathology.4. Skills of correct formulation of the diagnosis according to ICD 10 in the detection of cardiological pathology.5. The ability to timely identify complications of cardiological diseases.	<ol style="list-style-type: none">1. To identify the main symptoms and syndromes in adult and pediatric cardiology practice during the initial examination of a patient with suspected cardiac pathology.2. Skills for interviewing a patient, taking anamnesis and differential diagnosis of cardiac diseases.3. Skills for the reasonable appointment of diagnostic studies to a patient with suspected cardiac pathology.4. The ability to correctly interpret the results of diagnostic studies of a patient with suspected cardiac pathology.

10. Requesitter: Bachelor. Internship.

11. Post-Requesitter: Cardiologist.

12. Literature:

basic:

1. Diseases of the heart according to Braunwald. Guide to Cardiovascular Medicine / edited by Peter Libby, Robert O. Bonnow, Douglas L. Mann, Douglas P. Zipes. Translation from English under the general editorship of R.G. Oganov. - M.: Reed Elsevier, 2010, 4 volumes.
2. Pediatric cardiology, edited by J. Hoffman. M.: 2006.
3. P.Kh. Janashia, N.M. Shevchenko, S.V. Olishenko. Emergency cardiology. "Binom", Moscow, 2010 -288 p.
4. Cardiology. National leadership / edited by Yu.N. Belenkova, R.G. Oganova (Series "National Guidelines", developed and recommended by the All-Russian Scientific Society of Cardiology and the Association of Medical Societies for Quality. Recommended by the Educational and Methodological Association for Medical and Pharmaceutical Education of Russian Universities as a textbook for the system of postgraduate professional education of doctors) - M.: Geotar -Media, 2008 - 1232 p.
5. Clinical guidelines. Cardiology / Ed. Yu.M. Belenkova, R.F. Oganova, Moscow, 2007
6. Clinical guidelines. Patient management standards. Ed. A.A. Baranov. M.: 2007.
7. Emergency cardiology. V.V. Ruksin. Guide for Physicians - 6th Edition Revised and Expanded. - St. Petersburg: Nevsky dialect; M.: Binom. Geotar-Media, 2009
8. Emergency cardiology /Ed. Chazova E.I. Moscow, Eksmo, 2011. 223 p.
9. A. D. Petrushina, L. A. Malchenko, L. N. Kretinina. Emergency conditions in children. Moscow, "Medical book", publishing center "Academy", ed. NGMA, 2002 - 90 p.
10. Guidelines for the rational use of medicines (formula). M.: 2007.
11. Cardiovascular diseases in the elderly / Ed. A.I. Dyadyka, A.E. Bagria. Kyiv, "People in white", 2013. -171 p.
12. A.V. Suvorov, O.A. Suslova, G.N. Zubeeva, I.V. Konyukhova, Yu.N. Kuzmenko. Emergency conditions for cardiac arrhythmias. Publisher: Nizhny Novgorod, Nizhgma, 2012. - 96 p.
13. A.S. Sharykin. Congenital heart defects. Guide for pediatricians, cardiologists, neonatologists. - M.: Publishing house "Teremok", 2005.- 384 p.
14. A.S. Sharykin. Perinatal cardiology. Moscow, "Magic Lantern", 2007.-264p.
15. Efficacy and safety of drug therapy in primary and secondary prevention of cardiovascular diseases. VNOK recommendations, 2011 - 71 p.

1. Department of Therapy and Cardiology

2. Level of training: Residency

3. Specialty: 7R01101 " Cardiology adult, children"

4. Course: 3

5. Name of elective discipline: Sports cardiology.

6. The purpose of EP:

– Training of a qualified cardiologist with a system of universal, professional competencies, capable and ready for independent professional activity in outpatient and specialized care, including the use of high-tech medical services.

7. Objectives of EP:

- Consolidate teamwork skills and leadership qualities;

- To consolidate the skills of basic medical diagnostic and preventive interventions;

- Teach to make professional decisions based on the principles of evidence-based medicine;

- Teach to comply with the requirements of medical ethics and deontology when conducting expert, preventive and therapeutic diagnostic measures;

- To train doctors in cardiology for adults and children who have clinical thinking, are well-versed in complex pathology, and have in-depth knowledge of related disciplines.

8. Justification of the choice of discipline

Residency in the educational program " Cardiology adult, children" is a form of postgraduate professional training, providing in–depth study and detailed mastery of professional activity within this specialty.

9. Learning outcomes (competencies)

P01 Patient management: able to formulate a clinical diagnosis, prescribe a treatment plan and evaluate its effectiveness based on evidence-based practice in highly specialized cardiac care.

P02 Communication and Collaboration: Able to communicate effectively with the cardiac patient, their environment, healthcare professionals in order to achieve the best patient outcomes

RO3 Safety and Quality: Able to assess risks and use the most effective methods to ensure a high level of safety and quality in highly specialized cardiac care.

P04 Public health: is able to act within the legal and organizational framework of the healthcare system of the Republic of Kazakhstan in his specialty, provide basic cardiological care in emergencies, work as part of interprofessional teams to implement the policy of promoting the health of the nation

P05 Research: able to formulate adequate research questions, critically evaluate professional literature, effectively use international databases in their daily activities, participate in the work of a research team.

RO6 Learning 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.

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)
	1. Skills of conducting an initial examination of a patient with suspected cardiological pathology. 2. Skills of reasoned appointment of diagnostic tests to a patient with suspected cardiological pathology. 3. The ability to correctly interpret the results of diagnostic studies of a patient with suspected cardiological pathology. 4. Skills of correct formulation of the diagnosis according to ICD 10 in the detection of cardiological pathology. 5. The ability to timely identify complications of cardiological diseases.	1. To identify the main symptoms and syndromes in adult and pediatric cardiology practice during the initial examination of a patient with suspected cardiac pathology. 2. Skills for interviewing a patient, taking anamnesis and differential diagnosis of cardiac diseases. 3. Skills for the reasonable appointment of diagnostic studies to a patient with suspected cardiac pathology. 4. The ability to correctly interpret the results of diagnostic studies of a patient with suspected cardiac pathology.

10. Requesitter: Bachelor. Internship.

11. Post-Requesitter: Cardiologist.

12. Literature:
basic:

1. Diseases of the heart according to Braunwald. Guide to Cardiovascular Medicine / edited by Peter Libby, Robert O. Bonnow, Douglas L. Mann, Douglas P. Zipes. Translation from English under the general editorship of R.G. Oganov. - M.: Reed Elsevier, 2010, 4 volumes.

2. Pediatric cardiology, edited by J. Hoffman. M.: 2006.

3. P.Kh. Janashia, N.M. Shevchenko, S.V. Olishenko. Emergency cardiology. "Binom", Moscow, 2010 -288 p.
4. Cardiology. National leadership / edited by Yu.N. Belenkova, R.G. Oganova (Series "National Guidelines", developed and recommended by the All-Russian Scientific Society of Cardiology and the Association of Medical Societies for Quality. Recommended by the Educational and Methodological Association for Medical and Pharmaceutical Education of Russian Universities as a textbook for the system of postgraduate professional education of doctors) - M.: Geotar -Media, 2008 - 1232 p.
5. Clinical guidelines. Cardiology / Ed. Yu.M. Belenkova, R.F. Oganova, Moscow, 2007
6. Clinical guidelines. Patient management standards. Ed. A.A. Baranov. M.: 2007.
7. Emergency cardiology. V.V. Ruksin. Guide for Physicians - 6th Edition Revised and Expanded. - St. Petersburg: Nevsky dialect; M.: Binom. Geotar-Media, 2009
8. Emergency cardiology /Ed. Chazova E.I. Moscow, Eksmo, 2011. 223 p.
9. A. D. Petrushina, L. A. Malchenko, L. N. Kretinina. Emergency conditions in children. Moscow, "Medical book", publishing center "Academy", ed. NGMA, 2002 - 90 p.
10. Guidelines for the rational use of medicines (formula). M.: 2007.
11. Cardiovascular diseases in the elderly / Ed. A.I. Dyadyka, A.E. Bagria. Kyiv, "People in white", 2013. -171 p.
12. A.V. Suvorov, O.A. Suslova, G.N. Zubeeva, I.V. Konyukhova, Yu.N. Kuzmenko. Emergency conditions for cardiac arrhythmias. Publisher: Nizhny Novgorod, Nizhgm, 2012. - 96 p.
13. A.S. Sharykin. Congenital heart defects. Guide for pediatricians, cardiologists, neonatologists. - M.: Publishing house "Teremok", 2005.- 384 p.
14. A.S. Sharykin. Perinatal cardiology. Moscow, "Magic Lantern", 2007.-264p.
15. Efficacy and safety of drug therapy in primary and secondary prevention of cardiovascular diseases. VNOK recommendations, 2011 - 71 p.

1. Department of Therapy and Cardiology

2. Level of training: Residency

3. Specialty: 7R01101 " Cardiology adult, children"

4. Course: 3

5. Name of elective discipline: Cardiovascular diseases in pregnant women.

6. The purpose of EP:

– Training of a qualified cardiologist with a system of universal, professional competencies, capable and ready for independent professional activity in outpatient and specialized care, including the use of high-tech medical services.

7. Objectives of EP:

- Consolidate teamwork skills and leadership qualities;
- To consolidate the skills of basic medical diagnostic and preventive interventions;
- Teach to make professional decisions based on the principles of evidence-based medicine;
- Teach to comply with the requirements of medical ethics and deontology when conducting expert, preventive and therapeutic diagnostic measures;
- To train doctors in cardiology for adults and children who have clinical thinking, are well-versed in complex pathology, and have in-depth knowledge of related disciplines.

8. Justification of the choice of discipline

Residency in the educational program " Cardiology adult, children" is a form of postgraduate professional training, providing in–depth study and detailed mastery of professional activity within this specialty.

9. Learning outcomes (competencies)

P01 Patient management: able to formulate a clinical diagnosis, prescribe a treatment plan and evaluate its effectiveness based on evidence-based practice in highly specialized cardiac care.

P02 Communication and Collaboration: Able to communicate effectively with the cardiac patient, their environment, healthcare professionals in order to achieve the best patient outcomes

RO3 Safety and Quality: Able to assess risks and use the most effective methods to ensure a high level of safety and quality in highly specialized cardiac care.

P04 Public health: is able to act within the legal and organizational framework of the healthcare system of the Republic of Kazakhstan in his specialty, provide basic cardiological care in emergencies, work as part of interprofessional teams to implement the policy of promoting the health of the nation

P05 Research: able to formulate adequate research questions, critically evaluate professional literature, effectively use international databases in their daily activities, participate in the work of a research team.

RO6 Learning 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.

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)
	<ol style="list-style-type: none"> 1. Skills of conducting an initial examination of a patient with suspected cardiological pathology. 2. Skills of reasoned appointment of diagnostic tests to a patient with suspected cardiological pathology. 3. The ability to correctly interpret the results of diagnostic studies of a patient with suspected cardiological pathology. 4. Skills of correct formulation of the diagnosis according to ICD 10 in the detection of cardiological pathology. 5. The ability to timely identify complications of cardiological diseases. 	<ol style="list-style-type: none"> 1. To identify the main symptoms and syndromes in adult and pediatric cardiology practice during the initial examination of a patient with suspected cardiac pathology. 2. Skills for interviewing a patient, taking anamnesis and differential diagnosis of cardiac diseases. 3. Skills for the reasonable appointment of diagnostic studies to a patient with suspected cardiac pathology. 4. The ability to correctly interpret the results of diagnostic studies of a patient with suspected cardiac pathology.

10. Requesitter: Bachelor. Internship.

11. Post-Requesitter: Cardiologist.

12. Literature:
basic:

1. Diseases of the heart according to Braunwald. Guide to Cardiovascular Medicine / edited by Peter Libby, Robert O. Bonnow, Douglas L. Mann, Douglas P. Zipes. Translation from English under the general editorship of R.G. Oganov. - M.: Reed Elsevier, 2010, 4 volumes.
2. Pediatric cardiology, edited by J. Hoffman. M.: 2006.
3. P.Kh. Janashia, N.M. Shevchenko, S.V. Olishvko. Emergency cardiology. "Binom", Moscow, 2010 -288 p.
4. Cardiology. National leadership / edited by Yu.N. Belenkova, R.G. Oganova (Series "National Guidelines", developed and recommended by the All-Russian Scientific Society of Cardiology and the Association of Medical Societies for Quality. Recommended by the Educational and Methodological Association for Medical and Pharmaceutical Education of Russian Universities as a textbook for the system of postgraduate professional education of doctors) - M.: Geotar -Media, 2008 - 1232 p.
5. Clinical guidelines. Cardiology / Ed. Yu.M. Belenkova, R.F. Oganova, Moscow, 2007
6. Clinical guidelines. Patient management standards. Ed. A.A. Baranov. M.: 2007.

7. Emergency cardiology. V.V. Ruksin. Guide for Physicians - 6th Edition Revised and Expanded. - St. Petersburg: Nevsky dialect; M.: Binom. Geotar-Media, 2009
8. Emergency cardiology /Ed. Chazova E.I. Moscow, Eksmo, 2011. 223 p.
9. A. D. Petrushina, L. A. Malchenko, L. N. Kretinina. Emergency conditions in children. Moscow, "Medical book", publishing center "Academy", ed. NGMA, 2002 - 90 p.
10. Guidelines for the rational use of medicines (formula). M.: 2007.
11. Cardiovascular diseases in the elderly / Ed. A.I. Dyadyka, A.E. Bagria. Kyiv, "People in white", 2013. -171 p.
12. A.V. Suvorov, O.A. Suslova, G.N. Zubeeva, I.V. Konyukhova, Yu.N. Kuzmenko. Emergency conditions for cardiac arrhythmias. Publisher: Nizhny Novgorod, Nizhgma, 2012. - 96 p.
13. A.S. Sharykin. Congenital heart defects. Guide for pediatricians, cardiologists, neonatologists. - M.: Publishing house "Teremok", 2005.- 384 p.
14. A.S. Sharykin. Perinatal cardiology. Moscow, "Magic Lantern", 2007.-264p.
15. Efficacy and safety of drug therapy in primary and secondary prevention of cardiovascular diseases. VNOK recommendations, 2011 - 71 p.

1. Department of Therapy and Cardiology

2. Level of training: Residency

3. Specialty: 7R01109 "Adult, children's nephrology"

4. Course: 1

5. Name of elective discipline: Principles, methods and monitoring of immunosuppressive therapy of kidney disease.

6. The purpose of EP:

– Training of a qualified nephrologist with a system of universal, professional competencies, capable and ready for independent professional activity in outpatient and specialized care, including the use of high-tech medical services..

7. Objectives of EP:

- Consolidate teamwork skills and leadership qualities;
- To consolidate the skills of basic medical diagnostic and preventive interventions;
- Teach to make professional decisions based on the principles of evidence-based medicine;
- Teach to comply with the requirements of medical ethics and deontology when conducting expert, preventive and therapeutic diagnostic measures;
- To train doctors in adult and pediatric neurology who have clinical thinking, are well-versed in complex pathology, and have in-depth knowledge of related disciplines.

8. Justification of the choice of discipline

Residency in the educational program "Adult Nephrology, children's" is a form of postgraduate professional training, providing in–depth study and detailed mastery of professional activity within this specialty.

10. Learning outcomes (competencies)

EP 1 Patient supervision: he 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 for patients with kidney diseases.

EP 2 Communication and Collaboration: able to effectively interact with a patient with kidney disease, his environment, healthcare professionals in order to achieve the best results for the patient

EP 3 Safety and Quality: 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 kidney diseases.

EP 4 Public health: He is able to act within the legal and organizational framework of the healthcare system of the Republic of Kazakhstan in the specialty “Nephrology, including children's”, provide basic assistance in emergency situations, work as part of interprofessional teams to implement the policy of strengthening the health of the nation

EP 5 Research: able to formulate adequate research questions, critically evaluate professional literature on nephrology, effectively use international databases in their daily activities, participate in the work of the research team

EP 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 in the field of nephrology.

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)
	<ol style="list-style-type: none"> 1. Skills of conducting an initial examination of a patient with suspected neurological pathology. 2. Skills of reasoned appointment of diagnostic tests to a patient with suspected neurological pathology. 3. The ability to correctly interpret the results of diagnostic studies of a patient with suspected nephrological pathology. 4. Skills of correct formulation of the diagnosis according to ICD 10 in the detection of neurological pathology. 5. The ability to timely identify complications of neurological diseases. 	<ol style="list-style-type: none"> 1. To collect complaints, anamnesis of illness and life in patients with diseases and (or) impaired renal function (their legal representatives) 2. To carry out examination, palpation, percussion, auscultation of patients with diseases and (or) impaired renal function 3. Interpret and analyze information received from patients with diseases and (or) impaired renal function (their legal representatives) 4. Substantiate and plan the scope of instrumental studies in patients with diseases and (or) impaired renal function: ultrasound (hereinafter referred to as ultrasound), nephroscintigraphy, computed tomography, magnetic resonance imaging (hereinafter referred to as MRI), excretory urography - in accordance with current medical care procedures, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care 5. Analyze the results of imaging and functional methods of examination of patients with diseases and (or) impaired renal function: ultrasound of the kidneys and urinary tract, ultrasound dopplerography of renal vessels, excretory urography, magnetic resonance imaging, computed tomography, daily monitoring of blood pressure 6. Substantiate the need to refer patients with kidney diseases and (or) impaired renal function for

		<p>consultation with specialist doctors in accordance with the current procedures for providing medical care, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care</p> <p>7. To use medical devices in the examination of patients with kidney diseases and (or) impaired renal function in accordance with the current procedures for the provision of medical care, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care, to ensure the safety of their use</p> <p>8. Interpret and analyze the results of examination by specialist doctors of patients with diseases and (or) impaired renal function.</p>
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10. Requesitter: Internal disease.

11. Post-Requesitter: Nephrology

12. Literature:

basic:

1. Nephrology. National leadership. Short edition. Edited by N.A. Mukhin – M.: GEOTAR-Media – 2014. – 608 p.

2. A.V. Smirnov, V.A. Dobronravov, A.S. Rumyantsev, I.G. Kayukov. Acute kidney injury.– M.: LLC "Publishing House "Medical Information Agency" – 2015. 488 p.: ill.

3. A.V. Smirnov, A.G. Kucher, I.G. Kayukov, A.M. Yesyan. Guidelines for therapeutic nutrition for patients with chronic kidney disease. 2nd edition.– St. Petersburg: "Levsha Publishing House. St. Petersburg" – 2014. – 240 p.

4. National recommendations. Chronic kidney disease: basic principles screening, diagnosis, prevention and treatment approaches. Edited by A.V. Smirnov – St. Petersburg: "Levsha Publishing House. St. Petersburg" – 2012. – 52 p.

additional literature:

1. V.G. Sipovsky, N.M. Khmel'nitskaya. Applied aspects of ultrastructural diagnostics of glomerulopathies. – SPb.: LLC "IPK "Beresta" – 2014. – 64 p.: ill.

2. V.G. Sipovsky, N.M. Khmel'nitskaya, A.V. Smirnov. Methodological foundations of pathomorphological diagnosis of non-tumor pathology of the kidneys.- St. Petersburg: LLC "IPK "Beresta" – 2014. – 44 p.: ill.

3. A.A. Yakovenko, A.S. Rumyantsev, A.G. Kucher. Diagnostics and monitoring

malnutrition in patients receiving treatment with programmed hemodialysis. A manual for doctors.– St. Petersburg: Publishing house "Elmore" – 2014. – 37 p.

4. A.A. Yakovenko, A.S. Rumyantsev, A.G. Kucher. Mechanisms of development of malnutrition in patients receiving treatment with programmed hemodialysis.– St. Petersburg: Publishing house "Elmore" – 2014. – 40 p.

1. **Department** of Therapy and Cardiology
2. **Level of training:** Residency
3. **Specialty:** 7R01109 "Adult, children's nephrology"
4. **Course:** 1
5. **Name of elective discipline:** Methods of renal replacement therapy.
6. **The purpose of EP:**
 - Training of a qualified nephrologist with a system of universal, professional competencies, capable and ready for independent professional activity in outpatient and specialized care, including the use of high-tech medical services..
7. **Objectives of EP:**
 - Consolidate teamwork skills and leadership qualities;
 - To consolidate the skills of basic medical diagnostic and preventive interventions;
 - Teach to make professional decisions based on the principles of evidence-based medicine;
 - Teach to comply with the requirements of medical ethics and deontology when conducting expert, preventive and therapeutic diagnostic measures;
 - To train doctors in adult and pediatric nephrology who have clinical thinking, are well-versed in complex pathology, and have in-depth knowledge of related disciplines.

8. Justification of the choice of discipline

Residency in the educational program "Adult Nephrology, children's" is a form of postgraduate professional training, providing in-depth study and detailed mastery of professional activity within this specialty.

11. Learning outcomes (competencies)

EP 1 Patient supervision: he 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 for patients with kidney diseases.

EP 2 Communication and Collaboration: able to effectively interact with a patient with kidney disease, his environment, healthcare professionals in order to achieve the best results for the patient

EP 3 Safety and Quality: 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 kidney diseases.

EP 4 Public health: He is able to act within the legal and organizational framework of the healthcare system of the Republic of Kazakhstan in the specialty “Nephrology, including children's”, provide basic assistance in emergency situations, work as part of interprofessional teams to implement the policy of strengthening the health of the nation

EP 5 Research: able to formulate adequate research questions, critically evaluate professional literature on nephrology, effectively use international databases in their daily activities, participate in the work of the research team

EP 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 in the field of nephrology.

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)
	1. Skills of conducting an initial examination of a patient with suspected neurological pathology.	1. To collect complaints, anamnesis of illness and life in patients with diseases and (or) impaired renal

	<p>2. Skills of reasoned appointment of diagnostic tests to a patient with suspected neurological pathology.</p> <p>3. The ability to correctly interpret the results of diagnostic studies of a patient with suspected nephrological pathology.</p> <p>4. Skills of correct formulation of the diagnosis according to ICD 10 in the detection of neurological pathology.</p> <p>5. The ability to timely identify complications of neurological diseases.</p>	<p>function (their legal representatives)</p> <p>2. To carry out examination, palpation, percussion, auscultation of patients with diseases and (or) impaired renal function</p> <p>3. Interpret and analyze information received from patients with diseases and (or) impaired renal function (their legal representatives)</p> <p>4. Substantiate and plan the scope of instrumental studies in patients with diseases and (or) impaired renal function: ultrasound (hereinafter referred to as ultrasound), nephroscintigraphy, computed tomography, magnetic resonance imaging (hereinafter referred to as MRI), excretory urography - in accordance with current medical care procedures, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care</p> <p>5. Analyze the results of imaging and functional methods of examination of patients with diseases and (or) impaired renal function: ultrasound of the kidneys and urinary tract, ultrasound dopplerography of renal vessels, excretory urography, magnetic resonance imaging, computed tomography, daily monitoring of blood pressure</p> <p>6. Substantiate the need to refer patients with kidney diseases and (or) impaired renal function for consultation with specialist doctors in accordance with the current procedures for providing medical care, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care</p> <p>7. To use medical devices in the examination of patients with kidney diseases and (or) impaired renal</p>
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		<p>function in accordance with the current procedures for the provision of medical care, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care, to ensure the safety of their use</p> <p>8. Interpret and analyze the results of examination by specialist doctors of patients with diseases and (or) impaired renal function.</p>
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10. Requesitter: Internal disease.

11. Post-Requesitter: Nephrology

12. Literature:

basic:

1. Nephrology. National leadership. Short edition. Edited by N.A. Mukhin – M.: GEOTAR-Media – 2014. – 608 p.

2. A.V. Smirnov, V.A. Dobronravov, A.S. Rumyantsev, I.G. Kayukov. Acute kidney injury.– M.: LLC "Publishing House "Medical Information Agency" – 2015. 488 p.: ill.

3. A.V. Smirnov, A.G. Kucher, I.G. Kayukov, A.M. Yesyan. Guidelines for therapeutic nutrition for patients with chronic kidney disease. 2nd edition.– St. Petersburg: "Levsha Publishing House. St. Petersburg" – 2014. – 240 p.

4. National recommendations. Chronic kidney disease: basic principles screening, diagnosis, prevention and treatment approaches. Edited by A.V. Smirnov – St. Petersburg: "Levsha Publishing House. St. Petersburg" – 2012. – 52 p.

additional literature:

1. V.G. Sipovsky, N.M. Khmel'nitskaya. Applied aspects of ultrastructural diagnostics of glomerulopathies. – SPb.: LLC "IPK "Beresta" – 2014. – 64 p.: ill.

2. V.G. Sipovsky, N.M. Khmel'nitskaya, A.V. Smirnov. Methodological foundations of pathomorphological diagnosis of non-tumor pathology of the kidneys.- St. Petersburg: LLC "IPK "Beresta" – 2014. – 44 p.: ill.

3. A.A. Yakovenko, A.S. Rumyantsev, A.G. Kucher. Diagnostics and monitoring malnutrition in patients receiving treatment with programmed hemodialysis. A manual for doctors.– St. Petersburg: Publishing house "Elmore" – 2014. – 37 p.

4. A.A. Yakovenko, A.S. Rumyantsev, A.G. Kucher. Mechanisms of development of malnutrition in patients receiving treatment with programmed hemodialysis.– St. Petersburg: Publishing house "Elmore" – 2014. – 40 p.

1. Department of Therapy and Cardiology

2. Level of training: Residency

3. Specialty: 7R01109 "Adult, children's nephrology"

4. Course: 1

5. **Name of elective discipline:** Tactics of observation and methods of rehabilitation of patients after kidney transplantation.

6. **The purpose of EP:**

– Training of a qualified nephrologist with a system of universal, professional competencies, capable and ready for independent professional activity in outpatient and specialized care, including the use of high-tech medical services..

7. **Objectives of EP:**

- Consolidate teamwork skills and leadership qualities;
- To consolidate the skills of basic medical diagnostic and preventive interventions;
- Teach to make professional decisions based on the principles of evidence-based medicine;
- Teach to comply with the requirements of medical ethics and deontology when conducting expert, preventive and therapeutic diagnostic measures;
- To train doctors in adult and pediatric nephrology who have clinical thinking, are well-versed in complex pathology, and have in-depth knowledge of related disciplines.

8. **Justification of the choice of discipline**

Residency in the educational program "Adult Nephrology, children's" is a form of postgraduate professional training, providing in–depth study and detailed mastery of professional activity within this specialty.

12. **Learning outcomes (competencies)**

EP 1 Patient supervision: he 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 for patients with kidney diseases.

EP 2 Communication and Collaboration: able to effectively interact with a patient with kidney disease, his environment, healthcare professionals in order to achieve the best results for the patient

EP 3 Safety and Quality: 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 kidney diseases.

EP 4 Public health: He is able to act within the legal and organizational framework of the healthcare system of the Republic of Kazakhstan in the specialty “Nephrology, including children's”, provide basic assistance in emergency situations, work as part of interprofessional teams to implement the policy of strengthening the health of the nation

EP 5 Research: able to formulate adequate research questions, critically evaluate professional literature on nephrology, effectively use international databases in their daily activities, participate in the work of the research team

EP 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 in the field of nephrology.

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)
	1. Skills of conducting an initial examination of a patient with suspected neurological pathology. 2. Skills of reasoned appointment of diagnostic tests to a patient with suspected neurological pathology. 3. The ability to correctly interpret the results of diagnostic studies of a patient with suspected neurological pathology. 4. Skills of correct formulation of the diagnosis according to ICD 10 in the detection of neurological pathology.	1. To collect complaints, anamnesis of illness and life in patients with diseases and (or) impaired renal function (their legal representatives) 2. To carry out examination, palpation, percussion, auscultation of patients with diseases and (or) impaired renal function 3. Interpret and analyze information received from patients with diseases and (or) impaired renal function (their legal representatives)

	<p>5. The ability to timely identify complications of neurological diseases.</p>	<p>4. Substantiate and plan the scope of instrumental studies in patients with diseases and (or) impaired renal function: ultrasound (hereinafter referred to as ultrasound), nephroscintigraphy, computed tomography, magnetic resonance imaging (hereinafter referred to as MRI), excretory urography - in accordance with current medical care procedures, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care</p> <p>5. Analyze the results of imaging and functional methods of examination of patients with diseases and (or) impaired renal function: ultrasound of the kidneys and urinary tract, ultrasound dopplerography of renal vessels, excretory urography, magnetic resonance imaging, computed tomography, daily monitoring of blood pressure</p> <p>6. Substantiate the need to refer patients with kidney diseases and (or) impaired renal function for consultation with specialist doctors in accordance with the current procedures for providing medical care, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care</p> <p>7. To use medical devices in the examination of patients with kidney diseases and (or) impaired renal function in accordance with the current procedures for the provision of medical care, clinical recommendations (treatment protocols) on the provision of medical care, taking into account the standards of medical care, to ensure the safety of their use</p> <p>8. Interpret and analyze the results of examination</p>
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		by specialist doctors of patients with diseases and (or) impaired renal function.
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10. Requesitter: Internal disease. Internship

11. Post-Requesitter: Nephrology

12. Literature:

basic:

1. Nephrology. National leadership. Short edition. Edited by N.A. Mukhin – M.: GEOTAR-Media – 2014. – 608 p.

2. A.V. Smirnov, V.A. Dobronravov, A.S. Rummyantsev, I.G. Kayukov. Acute kidney injury.– M.: LLC "Publishing House "Medical Information Agency" – 2015. 488 p.: ill.

3. A.V. Smirnov, A.G. Kucher, I.G. Kayukov, A.M. Yesyan. Guidelines for therapeutic nutrition for patients with chronic kidney disease. 2nd edition.– St. Petersburg: "Levsha Publishing House. St. Petersburg" – 2014. – 240 p.

4. National recommendations. Chronic kidney disease: basic principles screening, diagnosis, prevention and treatment approaches. Edited by A.V. Smirnov – St. Petersburg: "Levsha Publishing House. St. Petersburg" – 2012. – 52 p.

additional literature:

1. V.G. Sipovsky, N.M. Khmel'nitskaya. Applied aspects of ultrastructural diagnostics of glomerulopathies. – SPb.: LLC "IPK "Beresta" – 2014. – 64 p.: ill.

2. V.G. Sipovsky, N.M. Khmel'nitskaya, A.V. Smirnov. Methodological foundations of pathomorphological diagnosis of non-tumor pathology of the kidneys.- St. Petersburg: LLC "IPK "Beresta" – 2014. – 44 p.: ill.

3. A.A. Yakovenko, A.S. Rummyantsev, A.G. Kucher. Diagnostics and monitoring malnutrition in patients receiving treatment with programmed hemodialysis. A manual for doctors.– St. Petersburg: Publishing house "Elmore" – 2014. – 37 p.

4. A.A. Yakovenko, A.S. Rummyantsev, A.G. Kucher. Mechanisms of development of malnutrition in patients receiving treatment with programmed hemodialysis.– St. Petersburg: Publishing house "Elmore" – 2014. – 40 p.

1. Department of Therapy and Cardiology

2. Level of training: residency

3. Specialty: 7R01105 "Hematology for adults, children"

4. Course: 1

5. Name of the elective discipline: Emergency hematology at the prehospital and hospital stages.

6. Purpose of the RE:

– Training of highly qualified, competitive hematologists who are able to meet the needs of society in providing medical care to hematological patients, apply and develop advanced innovative technologies in medicine, science and practice.

7. Tasks of the RE:

- Strengthen teamwork and leadership skills;

- To consolidate the skills of basic medical diagnostic and preventive interventions;

- To teach to make professional decisions based on the principles of evidence-based medicine;

- To teach to comply with the requirements of medical ethics and deontology when carrying out expert, preventive and therapeutic and diagnostic measures;
- To train doctors in hematology for adults and children, who have clinical thinking, who are well versed in complex pathology, who have in-depth knowledge of related disciplines.

8. Rationale for the choice of discipline

Residency in the educational program "Hematology for adults, children" is a form of postgraduate professional training that provides for in-depth study and detailed mastery of professional activities within this specialty.

9. Learning outcomes (competencies)

RE 1 Patient management: able to formulate a clinical diagnosis, prescribe a treatment plan and evaluate its effectiveness based on evidence-based practice at all levels of care for patients with hematological diseases.

RE 2 Communication and Collaboration: able to effectively interact with the patient with hematological pathology, his environment, healthcare professionals in order to achieve the best results for the patient

RE 3 Safety and quality: able to assess risks and use the most effective methods to ensure a high level of safety and quality of medical hematological care.

RE 4 Public health: is able to act within the legal and organizational framework of the healthcare system of the Republic of Kazakhstan in the specialty "Hematology for adults, children", provide basic assistance in emergency situations, work as part of interprofessional teams to implement the policy of strengthening the health of the nation

RE 5 Research: able to formulate adequate research questions, critically evaluate professional literature, effectively use international databases in their daily activities, participate in the work of a research team

RE 6 Training and Development: 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 hematology.

Knowledge (cognitive sphere)	Skills (psychomotor sphere)	Personal and professional competencies (relationships)
	1. Skills for conducting an initial examination of a patient with suspected hematological pathology. 2. Skills for the reasonable appointment of diagnostic studies to a patient with suspected hematological pathology. 3. The ability to correctly interpret the results of diagnostic studies of the patient in case of suspected hematological pathology. 4. Skills for the correct formulation of the diagnosis according to ICD10 when detecting hematological pathology. 5. Ability to timely identify complications of hematological diseases.	1. To identify the main symptoms and syndromes in adult and pediatric hematological practice during the initial examination of a patient with suspected hematological pathology. 2. Skills for interviewing a patient, taking anamnesis and differential diagnosis of hematological patients. 3. Skills for the reasonable appointment of diagnostic tests for a patient with suspected hematological pathology. 4. The ability to correctly interpret the results of diagnostic studies of a patient with suspected hematological pathology (general clinical, immunological, morphological studies of biopsy specimens, etc.).

10. Prerequisite: Internal Medicine (BSc), Internship

11. Post-requisitioner: Hematology, Transfusiology

12. Literature:

main:

1. Vorobyov A.I. Guide to hematology. -M.: Newdiamed, 2002

2. Yavorsky L.I., Ryauzova L.Yu., Solovey D.Ya. myelodysplastic syndrome. Primary myelopoietic dysplasia.-Riga: Zinante, 1992

3. Kovaleva L.G. Acute leukemia-M.: Medicine, 1990 16. Turkina A.G. Guide to Hematology / Ed. I. Vorobiev.- M.: Newdiamed, 2002.

4. Clinical oncohematology, ed. M.A. Volkovoy.-2nd ed.-M.: Medicine, 2007 5. V. Hoffbrand, J. Pettit. Hematology. Atlas-reference book - editorial translation of E.R. Timofeev.-M.: Practice, 2007

6. W. Hoffbrand, J. Pettit. Hematology. Atlas-reference book - editorial translation of E.R. Timofeev.-M.: Practice, 2007

7.Fr.J.Shiffman. Pathophysiology of blood - ed. Yu.V.Natochina-M.- St. Petersburg: Publishing house BINOM-Nevsky dialect, 2000

1. Department of Therapy and Cardiology

2. Level of training: residency

3. Specialty: 7R01105 "Hematology for adults, children"

4.Course: 1

5. Name of the elective discipline: Antitumor agents and immunosuppressants in hematology.

6. Purpose of the RE:

– Training of highly qualified, competitive hematologists who are able to meet the needs of society in providing medical care to hematological patients, apply and develop advanced innovative technologies in medicine, science and practice.

7. Tasks of the RE:

- Strengthen teamwork and leadership skills;

- To consolidate the skills of basic medical diagnostic and preventive interventions;

- To teach to make professional decisions based on the principles of evidence-based medicine;

- To teach to comply with the requirements of medical ethics and deontology when carrying out expert, preventive and therapeutic and diagnostic measures;

- To train doctors in hematology for adults and children, who have clinical thinking, who are well versed in complex pathology, who have in-depth knowledge of related disciplines.

8. Rationale for the choice of discipline

Residency in the educational program "Hematology for adults, children" is a form of postgraduate professional training that provides for in-depth study and detailed mastery of professional activities within this specialty.

9. Learning outcomes (competencies)

RE 1 Patient management: able to formulate a clinical diagnosis, prescribe a treatment plan and evaluate its effectiveness based on evidence-based practice at all levels of care for patients with hematological diseases.

RE 2 Communication and Collaboration: able to effectively interact with the patient with hematological pathology, his environment, healthcare professionals in order to achieve the best results for the patient

RE 3 Safety and quality: able to assess risks and use the most effective methods to ensure a high level of safety and quality of medical hematological care.

RE 4 Public health: is able to act within the legal and organizational framework of the healthcare system of the Republic of Kazakhstan in the specialty "Hematology for adults, children", provide basic assistance in emergency situations, work as part of interprofessional teams to implement the policy of strengthening the health of the nation

RE 5 Research: able to formulate adequate research questions, critically evaluate professional literature, effectively use international databases in their daily activities, participate in the work of a research team

RE 6 Training and Development: 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 hematology.

Knowledge (cognitive sphere)	Skills (psychomotor sphere)	Personal and professional competencies (relationships)
	1. Skills for conducting an initial examination of a patient with suspected hematological pathology. 2. Skills for the reasonable appointment of diagnostic studies to a patient with suspected hematological pathology. 3. The ability to correctly interpret the results of diagnostic studies of the patient in case of suspected hematological pathology. 4. Skills for the correct formulation of the diagnosis according to ICD10 when detecting hematological pathology. 5. Ability to timely identify complications of hematological diseases.	1. To identify the main symptoms and syndromes in adult and pediatric hematological practice during the initial examination of a patient with suspected hematological pathology. 2. Skills for interviewing a patient, taking anamnesis and differential diagnosis of hematological patients. 3. Skills for the reasonable appointment of diagnostic tests for a patient with suspected hematological pathology. 4. The ability to correctly interpret the results of diagnostic studies of a patient with suspected hematological pathology (general clinical, immunological, morphological studies of biopsy specimens, etc.).

10. Prerequisite: Internal Medicine (BSc), Internship

11. Post-requisitioner: Hematology, Transfusiology

12. Literature:

main:

1. Vorobyov A.I. Guide to hematology. -M.: Newdiamed, 2002

2. Yavorsky L.I., Ryauzova L.Yu., Solovey D.Ya. myelodysplastic syndrome. Primary myelopoietic dysplasia.-Riga: Zinante, 1992

3. Kovaleva L.G. Acute leukemia-M.: Medicine, 1990 16. Turkina A.G. Guide to Hematology / Ed. I. Vorobiev.- M.: Newdiamed, 2002.

4. Clinical oncohematology, ed. M.A. Volkovoy.-2nd ed.-M.: Medicine, 2007 5. V. Hoffbrand, J. Pettit. Hematology. Atlas-reference book - editorial translation of E.R. Timofeev.-M.: Practice, 2007

6. W. Hoffbrand, J. Pettit. Hematology. Atlas-reference book - editorial translation of E.R. Timofeev.-M.: Practice, 2007

7. Fr.J.Shiffman. Pathophysiology of blood - ed. Yu.V.Natochina-M.- St. Petersburg: Publishing house BINOM-Nevsky dialect, 2000

1. Department of Therapy and Cardiology

2. Level of training: residency

3. Specialty: 7R01105 "Hematology for adults, children"

4.Course: 1

5. Name of the elective discipline: Clinical transfusiology.

6. Purpose of the EP:

– Training of highly qualified, competitive hematologists who are able to meet the needs of society in providing medical care to hematological patients, apply and develop advanced innovative technologies in medicine, science and practice.

7. Tasks of the OP:

- Strengthen teamwork and leadership skills;

- To consolidate the skills of basic medical diagnostic and preventive interventions;

- To teach to make professional decisions based on the principles of evidence-based medicine;

- To teach to comply with the requirements of medical ethics and deontology when carrying out expert, preventive and therapeutic and diagnostic measures;

- To train doctors in hematology for adults and children, who have clinical thinking, who are well versed in complex pathology, who have in-depth knowledge of related disciplines.

8. Rationale for the choice of discipline

Residency in the educational program "Hematology for adults, children" is a form of postgraduate professional training that provides for in-depth study and detailed mastery of professional activities within this specialty.

9. Learning outcomes (competencies)

RE1 Patient management: able to formulate a clinical diagnosis, prescribe a treatment plan and evaluate its effectiveness based on evidence-based practice at all levels of care for patients with hematological diseases.

RE 2 Communication and Collaboration: able to effectively interact with the patient with hematological pathology, his environment, healthcare professionals in order to achieve the best results for the patient

RE 3 Safety and quality: able to assess risks and use the most effective methods to ensure a high level of safety and quality of medical hematological care.

RE 4 Public health: is able to act within the legal and organizational framework of the healthcare system of the Republic of Kazakhstan in the specialty "Hematology for adults, children", provide basic assistance in emergency situations, work as part of interprofessional teams to implement the policy of strengthening the health of the nation

RE 5 Research: able to formulate adequate research questions, critically evaluate professional literature, effectively use international databases in their daily activities, participate in the work of a research team

RE 6 Training and Development: 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 hematology.

Knowledge (cognitive sphere)	Skills (psychomotor sphere)	Personal and professional competencies (relationships)
	<ol style="list-style-type: none">1. Skills for conducting an initial examination of a patient with suspected hematological pathology.2. Skills for the reasonable appointment of diagnostic studies to a patient with suspected hematological pathology.3. The ability to correctly interpret the results of diagnostic studies of the patient in case of suspected hematological pathology.4. Skills for the correct formulation of the diagnosis	<ol style="list-style-type: none">1. To identify the main symptoms and syndromes in adult and pediatric hematological practice during the initial examination of a patient with suspected hematological pathology.2. Skills for interviewing a patient, taking anamnesis and differential diagnosis of hematological patients.3. Skills for the reasonable appointment of diagnostic tests for a patient with suspected hematological pathology.

	according to ICD10 when detecting hematological pathology. 5. Ability to timely identify complications of hematological diseases.	4. The ability to correctly interpret the results of diagnostic studies of a patient with suspected hematological pathology (general clinical, immunological, morphological studies of biopsy specimens, etc.).
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10. Prerequisite: Internal Medicine (BSc), Internship

11. Post-requisitioner: Hematology, Transfusiology

12. Literature:

main:

1. Vorobyov A.I. Guide to hematology. -M.: Newdiamed, 2002

2. Yavorsky L.I., Ryauzova L.Yu., Solovey D.Ya. myelodysplastic syndrome. Primary myelopoietic dysplasia.-Riga: Zinante, 1992

3. Kovaleva L.G. Acute leukemia-M.: Medicine, 1990 16. Turkina A.G. Guide to Hematology / Ed. I. Vorobiev.- M.: Newdiamed, 2002.

4. Clinical oncohematology, ed. M.A. Volkovoy.-2nd ed.-M.: Medicine, 2007 5. V. Hoffbrand, J. Pettit. Hematology. Atlas-reference book - editorial translation of E.R. Timofeev.-M.: Practice, 2007

6. W. Hoffbrand, J. Pettit. Hematology. Atlas-reference book - editorial translation of E.R. Timofeev.-M.: Practice, 2007

7. Fr.J.Shiffman. Pathophysiology of blood - ed. Yu.V.Natochina-M.- St. Petersburg: Publishing house BINOM-Nevsky dialect, 2000

1. Department of Therapy and Cardiology

2. Level of training: residency

3. Specialty: 7R01102 "Rheumatology for adults, children"

4. Course: 1

5. Name of the elective discipline: Pregnancy and rheumatic diseases.

6. Purpose of the OP:

– Training of highly qualified, competitive rheumatologists who are able to meet the needs of society in providing medical care to rheumatological patients, apply and develop advanced innovative technologies in medicine, science and practice.

7. Tasks of the OP:

- Strengthen teamwork and leadership skills;

- To consolidate the skills of basic medical diagnostic and preventive interventions;

- To teach to make professional decisions based on the principles of evidence-based medicine;

- To teach to comply with the requirements of medical ethics and deontology when carrying out expert, preventive and therapeutic and diagnostic measures;

- To train doctors in adult and pediatric rheumatology, who have clinical thinking, who are well versed in complex pathology, who have in-depth knowledge of related disciplines.

8. Rationale for the choice of discipline

Residency in the educational program "Adult and Pediatric Rheumatology" is a form of postgraduate professional training that provides for in-depth study and detailed mastery of professional activities within this specialty.

9. Learning outcomes (competencies)

PO1 Patient care: able to formulate a clinical diagnosis, prescribe a treatment plan and evaluate its effectiveness based on evidence-based practice at all levels of care for patients with rheumatic diseases.

PO2 Communication and Collaboration: Able to communicate effectively with the patient with rheumatological pathology, his environment, healthcare professionals in order to achieve the best results for the patient

PO3 Safety and quality: able to assess risks and use the most effective methods to ensure a high level of safety and quality of medical rheumatological care.

PO4 Public health: is able to act within the legal and organizational framework of the health care system of the Republic of Kazakhstan in the specialty “Adult and pediatric rheumatology”, provide basic assistance in emergency situations, work as part of interprofessional teams to implement the policy of strengthening the health of the nation

PO5 Research: able to formulate adequate research questions, critically evaluate professional literature, effectively use international databases in their daily activities, participate in the work of a research team

PO6 Training and Development: 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 rheumatology.

Knowledge (cognitive sphere)	Skills (psychomotor sphere)	Personal and professional competencies (relationships)
	<ol style="list-style-type: none"> 1. Skills for conducting an initial examination of a patient with suspected rheumatological pathology. 2. Skills for the reasonable appointment of diagnostic tests for a patient with suspected rheumatological pathology. 3. The ability to correctly interpret the results of diagnostic studies of a patient with suspected rheumatological pathology. 4. Skills for the correct formulation of the diagnosis according to ICD10 in the detection of rheumatological pathology. 5. The ability to timely determine the complications of rheumatological diseases. 	<ol style="list-style-type: none"> 1. Skills for conducting an initial examination of a patient with suspected rheumatological pathology. 2. Skills for the reasonable appointment of diagnostic tests for a patient with suspected rheumatological pathology. 3. The ability to correctly interpret the results of diagnostic studies of a patient with suspected rheumatological pathology. 4. Skills for the correct formulation of the diagnosis according to ICD10 in the detection of rheumatological pathology. 5. The ability to timely determine the complications of rheumatological diseases. <ol style="list-style-type: none"> 1. To identify the main symptoms and syndromes in adult and pediatric rheumatological practice during the initial examination of a patient with suspected rheumatological pathology. 2. Skills for interviewing a patient, taking anamnesis and differential diagnosis of Raynaud's syndrome, articular, skin, febrile syndromes. 3. The ability to assess the activity of the process, the severity of the articular syndrome: determining the number of painful joints (TJS), the number of swollen joints (TJJ), a general assessment of the state of

		<p>health according to the patient and the doctor (100 mm visual analogue scale - VAS cm)</p> <p>4. Skills for the reasonable appointment of diagnostic tests for a patient with suspected rheumatological pathology.</p> <p>5. Ability to assess the activity of rheumatic diseases (indices DAS28, BASDAI, Selena/Sledai, etc.).</p> <p>6. Skills for assessing the level of functional insufficiency in identifying a pathological process in the framework of rheumatology.</p> <p>7. The ability to correctly interpret the results of diagnostic studies of a patient with suspected rheumatological pathology (general clinical, immunological, morphological studies of biopsy specimens of connective tissue, synovial membrane, etc.).</p>
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10. Prerequisites: Internal Medicine (Bachelor), Internship

11. Postrequisites: Adult rheumatology.

12. Literature: main:

1. Pediatric rheumatology. Topical issues: textbook for medical schools: UMO / I. L. Nikitina [and others]. - Rostov n / a: Phoenix, 2007; Chita: Chita state. honey. Academy, 2007. - 94 p. : ill. - (The medicine). - Bibliography: p. 93. - ISBN 978-5-222-11683-8.

2. Clinical guidelines "Rheumatology", 2nd edition corrected and supplemented / ed. E.L. Nasonov. - M.: GEOTAR-Media, 2010. - 738 p.

3. Rheumatology: national leadership: textbook for the system of postgraduate professional education of doctors: UMO / Assoc. honey. o-in in quality, Assoc. rheumatologists of Russia; under the editorship of: E. L. Nasonova, V. A. Nasonova. - M. : GEOTAR-Media, 2008. - 720 p. : ill. - (National Guidelines) (National Health Project). - Item decree: p. 711-714. - ISBN 978-5-9704-0672-4

4. Rheumatology: textbook: for use in the educational process of educational organizations implementing higher education programs in the specialties 05/31/01 "General Medicine", 05/31/02 "Pediatrics": / A. A. Usanova [and others]; ed. A. A. Usanova; Ministry of Education and Science of the Russian Federation. - M. : GEOTAR-Media, 2018. - 407 p., [6] p. ill. : ill. - Bibliography: p. 372. - ISBN 978-5-9704-4275-3

1. Department of Therapy and Cardiology

2. Level of training: residency

3. Specialty: 7R01102 "Rheumatology for adults, children"

4. Course: 1

5. Name of the elective discipline: Immunological tests in rheumatology.

6. Purpose of the OP:

– Training of highly qualified, competitive rheumatologists who are able to meet the needs of society in providing medical care to rheumatological patients, apply and develop advanced innovative technologies in medicine, science and practice.

7. Tasks of the OP:

- Strengthen teamwork and leadership skills;
 - To consolidate the skills of basic medical diagnostic and preventive interventions;
 - To teach to make professional decisions based on the principles of evidence-based medicine;
 - To teach to comply with the requirements of medical ethics and deontology when carrying out expert, preventive and therapeutic and diagnostic measures;
 - To train doctors in adult and pediatric rheumatology, who have clinical thinking, who are well versed in complex pathology, who have in-depth knowledge of related disciplines.

8. Rationale for the choice of discipline

Residency in the educational program "Adult and Pediatric Rheumatology" is a form of postgraduate professional training that provides for in-depth study and detailed mastery of professional activities within this specialty.

9. Learning outcomes (competencies)

PO1 Patient care: able to formulate a clinical diagnosis, prescribe a treatment plan and evaluate its effectiveness based on evidence-based practice at all levels of care for patients with rheumatic diseases.

PO2 Communication and Collaboration: Able to communicate effectively with the patient with rheumatological pathology, his environment, healthcare professionals in order to achieve the best results for the patient

PO3 Safety and quality: able to assess risks and use the most effective methods to ensure a high level of safety and quality of medical rheumatological care.

PO4 Public health: is able to act within the legal and organizational framework of the health care system of the Republic of Kazakhstan in the specialty "Adult and pediatric rheumatology", provide basic assistance in emergency situations, work as part of interprofessional teams to implement the policy of strengthening the health of the nation

PO5 Research: able to formulate adequate research questions, critically evaluate professional literature, effectively use international databases in their daily activities, participate in the work of a research team

PO6 Training and Development: 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 rheumatology.

Knowledge (cognitive sphere)	Skills (psychomotor sphere)	Personal and professional competencies (relationships)
	1. Skills for conducting an initial examination of a patient with suspected rheumatological pathology. 2. Skills for the reasonable appointment of diagnostic tests for a patient with suspected rheumatological pathology. 3. The ability to correctly interpret the results of diagnostic studies of a patient with suspected rheumatological pathology. 4. Skills for the correct formulation of the diagnosis according to ICD10 in the detection of rheumatological pathology.	1. Skills for conducting an initial examination of a patient with suspected rheumatological pathology. 2. Skills for the reasonable appointment of diagnostic tests for a patient with suspected rheumatological pathology. 3. The ability to correctly interpret the results of diagnostic studies of a patient with suspected rheumatological pathology. 4. Skills for the correct formulation of the diagnosis according to ICD10 in the detection of rheumatological pathology. 5. The ability to timely determine the complications of rheumatological diseases. 1. To

	<p>5. The ability to timely determine the complications of rheumatological diseases.</p>	<p>identify the main symptoms and syndromes in adult and pediatric rheumatological practice during the initial examination of a patient with suspected rheumatological pathology. 2. Skills for interviewing a patient, taking anamnesis and differential diagnosis of Raynaud's syndrome, articular, skin, febrile syndromes. 3. The ability to assess the activity of the process, the severity of the articular syndrome: determining the number of painful joints (TJS), the number of swollen joints (TJJ), a general assessment of the state of health according to the patient and the doctor (100 mm visual analogue scale - VAS cm) 4. Skills for the reasonable appointment of diagnostic tests for a patient with suspected rheumatological pathology. 5. Ability to assess the activity of rheumatic diseases (indices DAS28, BASDAI, Sclera/Sledai, etc.). 6. Skills for assessing the level of functional insufficiency in identifying a pathological process in the framework of rheumatology. 7. The ability to correctly interpret the results of diagnostic studies of a patient with suspected rheumatological pathology (general clinical, immunological, morphological studies of biopsy specimens of connective tissue, synovial membrane, etc.).</p>
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10. Prerequisites: Internal Medicine (Bachelor), Internship

11. Postrequisites: Adult rheumatology.

12. Literature: main:

1. Pediatric rheumatology. Topical issues: textbook for medical schools: UMO / I. L. Nikitina [and others]. - Rostov n / a: Phoenix, 2007; Chita: Chita state. honey. Academy, 2007. - 94 p. : ill. - (The medicine). - Bibliography: p. 93. - ISBN 978-5-222-11683-8.

2. Clinical guidelines "Rheumatology", 2nd edition corrected and supplemented / ed. E.L. Nasonov. - M.: GEOTAR-Media, 2010. - 738 p.

3. Rheumatology: national leadership: textbook for the system of postgraduate professional education of doctors: UMO / Assoc. honey. o-in in quality, Assoc. rheumatologists of Russia; under the editorship of: E. L. Nasonova, V. A. Nasonova. - M. : GEOTAR-Media, 2008. - 720 p.

: ill. - (National Guidelines) (National Health Project). - Item decree: p. 711-714. - ISBN 978-5-9704-0672-4

4. Rheumatology: textbook: for use in the educational process of educational organizations implementing higher education programs in the specialties 05/31/01 "General Medicine", 05/31/02 "Pediatrics": / A. A. Usanova [and others]; ed. A. A. Usanova; Ministry of Education and Science of the Russian Federation. - M. : GEOTAR-Media, 2018. - 407 p., [6] p. ill. : ill. - Bibliography: p. 372. - ISBN 978-5-9704-4275-3

1. Department of Therapy and Cardiology

2. Level of training: residency

3. Specialty: 7R01102 "Rheumatology for adults, children"

4. Course: 1

5. Name of the elective discipline: The use of biological preparations in rheumatological diseases.

6. Purpose of the OP:

– Training of highly qualified, competitive rheumatologists who are able to meet the needs of society in providing medical care to rheumatological patients, apply and develop advanced innovative technologies in medicine, science and practice.

7. Tasks of the OP:

- Strengthen teamwork and leadership skills;

- To consolidate the skills of basic medical diagnostic and preventive interventions;

- To teach to make professional decisions based on the principles of evidence-based medicine;

- To teach to comply with the requirements of medical ethics and deontology when carrying out expert, preventive and therapeutic and diagnostic measures;

- To train doctors in adult and pediatric rheumatology, who have clinical thinking, who are well versed in complex pathology, who have in-depth knowledge of related disciplines.

8. Rationale for the choice of discipline

Residency in the educational program "Adult and Pediatric Rheumatology" is a form of postgraduate professional training that provides for in-depth study and detailed mastery of professional activities within this specialty.

9. Learning outcomes (competencies)

PO1 Patient care: able to formulate a clinical diagnosis, prescribe a treatment plan and evaluate its effectiveness based on evidence-based practice at all levels of care for patients with rheumatic diseases.

PO2 Communication and Collaboration: Able to communicate effectively with the patient with rheumatological pathology, his environment, healthcare professionals in order to achieve the best results for the patient

PO3 Safety and quality: able to assess risks and use the most effective methods to ensure a high level of safety and quality of medical rheumatological care.

PO4 Public health: is able to act within the legal and organizational framework of the health care system of the Republic of Kazakhstan in the specialty "Adult and pediatric rheumatology", provide basic assistance in emergency situations, work as part of interprofessional teams to implement the policy of strengthening the health of the nation

PO5 Research: able to formulate adequate research questions, critically evaluate professional literature, effectively use international databases in their daily activities, participate in the work of a research team

PO6 Training and Development: 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 rheumatology.

Knowledge (cognitive sphere)	Skills (psychomotor sphere)	Personal and professional competencies (relationships)
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	<ol style="list-style-type: none"> 1. Skills for conducting an initial examination of a patient with suspected rheumatological pathology. 2. Skills for the reasonable appointment of diagnostic tests for a patient with suspected rheumatological pathology. 3. The ability to correctly interpret the results of diagnostic studies of a patient with suspected rheumatological pathology. 4. Skills for the correct formulation of the diagnosis according to ICD10 in the detection of rheumatological pathology. 5. The ability to timely determine the complications of rheumatological diseases. 	<ol style="list-style-type: none"> 1. Skills for conducting an initial examination of a patient with suspected rheumatological pathology. 2. Skills for the reasonable appointment of diagnostic tests for a patient with suspected rheumatological pathology. 3. The ability to correctly interpret the results of diagnostic studies of a patient with suspected rheumatological pathology. 4. Skills for the correct formulation of the diagnosis according to ICD10 in the detection of rheumatological pathology. 5. The ability to timely determine the complications of rheumatological diseases. <ol style="list-style-type: none"> 1. To identify the main symptoms and syndromes in adult and pediatric rheumatological practice during the initial examination of a patient with suspected rheumatological pathology. 2. Skills for interviewing a patient, taking anamnesis and differential diagnosis of Raynaud's syndrome, articular, skin, febrile syndromes. 3. The ability to assess the activity of the process, the severity of the articular syndrome: determining the number of painful joints (TJS), the number of swollen joints (TJJ), a general assessment of the state of health according to the patient and the doctor (100 mm visual analogue scale - VAS cm) 4. Skills for the reasonable appointment of diagnostic tests for a patient with suspected rheumatological pathology. 5. Ability to assess the activity of rheumatic diseases (indices DAS28, BASDAI, Selena/Sledai, etc.). 6. Skills for assessing the level of functional insufficiency in identifying a pathological process in the framework of rheumatology. 7. The ability to correctly interpret the results of diagnostic studies of
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		a patient with suspected rheumatological pathology (general clinical, immunological, morphological studies of biopsy specimens of connective tissue, synovial membrane, etc.).
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10. Prerequisites: Internal Medicine (Bachelor), Internship

11. Postrequisites: Adult rheumatology.

12. Literature: main:

1. Pediatric rheumatology. Topical issues: textbook for medical schools: UMO / I. L. Nikitina [and others]. - Rostov n / a: Phoenix, 2007; Chita: Chita state. honey. Academy, 2007. - 94 p. : ill. - (The medicine). - Bibliography: p. 93. - ISBN 978-5-222-11683-8.

2. Clinical guidelines "Rheumatology", 2nd edition corrected and supplemented / ed. E.L. Nasonov. - M.: GEOTAR-Media, 2010. - 738 p.

3. Rheumatology: national leadership: textbook for the system of postgraduate professional education of doctors: UMO / Assoc. honey. o-in in quality, Assoc. rheumatologists of Russia; under the editorship of: E. L. Nasonova, V. A. Nasonova. - M. : GEOTAR-Media, 2008. - 720 p. : ill. - (National Guidelines) (National Health Project). - Item decree: p. 711-714. - ISBN 978-5-9704-0672-4

4. Rheumatology: textbook: for use in the educational process of educational organizations implementing higher education programs in the specialties 05/31/01 "General Medicine", 05/31/02 "Pediatrics": / A. A. Usanova [and others]; ed. A. A. Usanova; Ministry of Education and Science of the Russian Federation. - M. : GEOTAR-Media, 2018. - 407 p., [6] p. ill. : ill. - Bibliography: p. 372. - ISBN 978-5-9704-4275-3

1. Department of Therapy and Cardiology

2. Level of training: residency

3. Specialty: 7R01108 "Endocrinology for adults, children"

4. Course: 1

5. Name of the elective discipline: Fundamentals of replacement therapy in endocrinology.

6. Purpose of the OP:

– Training of highly qualified, competitive endocrinologists who are able to meet the needs of society in providing medical care to endocrinological patients, apply and develop advanced innovative technologies in medicine, science and practice.

7. Tasks of the OP:

- Strengthen teamwork and leadership skills;
 - To consolidate the skills of basic medical diagnostic and preventive interventions;
 - To teach to make professional decisions based on the principles of evidence-based medicine;
 - To teach to comply with the requirements of medical ethics and deontology when carrying out expert, preventive and therapeutic and diagnostic measures;
 - To train doctors in adult and pediatric endocrinology who have clinical thinking, who are well versed in complex pathology, who have in-depth knowledge of related disciplines

8. Rationale for the choice of discipline

Residency in the educational program "Endocrinology for adults, children" is a form of postgraduate professional training that provides for in-depth study and detailed mastery of professional activities within this specialty.

9. Learning outcomes (competencies)

PO1 Patient management: 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 for patients with diseases of the endocrine system.

PO2 Communication and Collaboration: able to effectively interact with the patient with endocrine pathology, his environment, healthcare professionals in order to achieve the best results for the patient

PO3 Safety and quality: able to assess risks and use the most effective methods to ensure a high level of safety and quality of medical endocrinological care.

PO4 Public health: is able to act within the legal and organizational framework of the healthcare system of the Republic of Kazakhstan in the specialty “Adult and Pediatric Endocrinology”, provide basic assistance in emergency situations, work as part of interprofessional teams to implement the policy of strengthening the health of the nation

PO5 Research: able to formulate adequate research questions, critically evaluate professional literature, effectively use international databases in their daily activities, participate in the work of a research team

PO6 Training and Development: 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 endocrinology.

Knowledge (cognitive sphere)	Skills (psychomotor sphere)	Personal and professional competencies (relationships)
	<ol style="list-style-type: none"> 1. Skills for conducting an initial examination of a patient with suspected endocrine pathology. 2. Skills for the reasonable appointment of diagnostic tests for a patient with suspected endocrine pathology. 3. The ability to correctly interpret the results of diagnostic studies of a patient with suspected endocrine pathology. 4. Skills for the correct formulation of the diagnosis according to ICD10 in identifying the pathology of the endocrine system. 5. Skills for assessing the level of functional insufficiency of the endocrine system when a pathological process is detected in it in patients with endocrine diseases. 6. The ability to timely determine the complications of diseases of the endocrine system. 	<ol style="list-style-type: none"> 1. The ability, under the supervision of a mentor, to reasonably prescribe diagnostic tests for a patient with suspected endocrine pathology. 2. The ability, under the supervision of a mentor, to correctly interpret the results of diagnostic and laboratory studies of a patient with suspected endocrine pathology. 3. The ability, under the supervision of a mentor, to assess the level of functional insufficiency of the endocrine system when a pathological process is detected in it in patients with endocrine diseases

10. Prerequisite: Internal Medicine (Bachelor), Internship

11. Post-requisite: Endocrinology in obstetrics and gynecology.

12. Literature:

main:

1. Mohr L., Staehelin R. Guide to internal medicine. Diseases of glands with internal secretion, constitutional anomalies and metabolic diseases; Medical contemporary - M., 2012. - 314 p.

2. Aleshin B.V. Development of goiter and pathogenesis of goiter disease; State medical publishing house of the Ukrainian SSR - M., 2016. - 192 p.

3. Ametov AS Selected lectures on endocrinology; Medical Information Agency - M., 2014. - 496 p.
4. Anastasia Osokina und Olga Barbarash Acute coronary syndrome and type 2 diabetes mellitus; LAP Lambert Academic Publishing - M., 2011. - 116 p.
5. Astamirova Kh., Akhmanov M. Big encyclopedia of a diabetic; Eksmo - M., 2013. - 416 p.
6. Balabolkin M. I. Diabetology: monograph. ; Medicine - M., 2011. - 672 p.
7. Balabolkin M. I., Klebanova E. M., Kreminskaya V. M. Fundamental and clinical thyroidology; Medicine - M., 2013. - 816 p.
8. Balabolkin M. I., Lukyanchikov V. S. Clinical and therapy of critical conditions in endocrinology; Health - M., 2011. - 150 p.
9. Baranov VG Guide to internal diseases. Diseases of the endocrine system and metabolism; State publishing house of medical literature - M., 2015. - 304 p.
10. Baranovsky A. Yu. Diseases of malnutrition. Treatment and prevention. Recommendations of a professor-gastroenterologist: monograph. ; Science and technology - M., 2015. - 304 p.
11. Vasiliev V. N., Chugunov V. S. Sympathetic-adrenal activity in various functional states of a person: monograph. ; Medicine - M., 2016. - 272 p.

1. Department of Therapy - 1

2. Level of training: residency

3. Specialty: 7R01108 "Endocrinology for adults, children"

4. Course: 1

5. Name of the elective discipline: Pregnancy and endocrine pathology.

6. Purpose of the OP:

– Training of highly qualified, competitive endocrinologists who are able to meet the needs of society in providing medical care to endocrinological patients, apply and develop advanced innovative technologies in medicine, science and practice.

7. Tasks of the OP:

- Strengthen teamwork and leadership skills;

- To consolidate the skills of basic medical diagnostic and preventive interventions;

- To teach to make professional decisions based on the principles of evidence-based medicine;

- To teach to comply with the requirements of medical ethics and deontology when carrying out expert, preventive and therapeutic and diagnostic measures;

- To train doctors in adult and pediatric endocrinology who have clinical thinking, who are well versed in complex pathology, who have in-depth knowledge of related disciplines

8. Rationale for the choice of discipline

Residency in the educational program "Endocrinology for adults, children" is a form of postgraduate professional training that provides for in-depth study and detailed mastery of professional activities within this specialty.

9. Learning outcomes (competencies)

PO1 Patient management: 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 for patients with diseases of the endocrine system.

PO2 Communication and Collaboration: able to effectively interact with the patient with endocrine pathology, his environment, healthcare professionals in order to achieve the best results for the patient

PO3 Safety and quality: able to assess risks and use the most effective methods to ensure a high level of safety and quality of medical endocrinological care.

PO4 Public health: is able to act within the legal and organizational framework of the healthcare system of the Republic of Kazakhstan in the specialty "Adult and Pediatric Endocrinology", provide basic assistance in emergency situations, work as part of interprofessional teams to implement the policy of strengthening the health of the nation

PO5 Research: able to formulate adequate research questions, critically evaluate professional literature, effectively use international databases in their daily activities, participate in the work of a research team

PO6 Training and Development: 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 endocrinology.

Knowledge (cognitive sphere)	Skills (psychomotor sphere)	Personal and professional competencies (relationships)
	<ol style="list-style-type: none"> 1. Skills for conducting an initial examination of a patient with suspected endocrine pathology. 2. Skills for the reasonable appointment of diagnostic tests for a patient with suspected endocrine pathology. 3. The ability to correctly interpret the results of diagnostic studies of a patient with suspected endocrine pathology. 4. Skills for the correct formulation of the diagnosis according to ICD10 in identifying the pathology of the endocrine system. 5. Skills for assessing the level of functional insufficiency of the endocrine system when a pathological process is detected in it in patients with endocrine diseases. 6. The ability to timely determine the complications of diseases of the endocrine system. 	<ol style="list-style-type: none"> 1. The ability, under the supervision of a mentor, to reasonably prescribe diagnostic tests for a patient with suspected endocrine pathology. 2. The ability, under the supervision of a mentor, to correctly interpret the results of diagnostic and laboratory studies of a patient with suspected endocrine pathology. 3. The ability, under the supervision of a mentor, to assess the level of functional insufficiency of the endocrine system when a pathological process is detected in it in patients with endocrine diseases

10. Prerequisite: Internal Medicine (Bachelor), Internship

11. Post-requisite: Endocrinology in obstetrics and gynecology.

12. Literature:

main:

1. Mohr L ., Staehelin R. Guide to internal medicine. Diseases of glands with internal secretion, constitutional anomalies and metabolic diseases; Medical contemporary - M., 2012. - 314 p.

2. Aleshin B.V. Development of goiter and pathogenesis of goiter disease; State medical publishing house of the Ukrainian SSR - M., 2016. - 192 p.

3. Ametov AS Selected lectures on endocrinology; Medical Information Agency - M., 2014. - 496 p.

4. Anastasia Osokina und Olga Barbarash Acute coronary syndrome and type 2 diabetes mellitus; LAP Lambert Academic Publishing - M., 2011. - 116 p.

5. Astamirova Kh., Akhmanov M. Big encyclopedia of a diabetic; Eksmo - M., 2013. - 416 p.

6. Balabolkin M. I. Diabetology: monograph. ; Medicine - M., 2011. - 672 p.

7. Balabolkin M. I., Klebanova E. M., Kreminskaya V. M. Fundamental and clinical thyroidology; Medicine - M., 2013. - 816 p.

8. Balabolkin M. I., Lukyanchikov V. S. Clinical and therapy of critical conditions in endocrinology; Health - M., 2011. - 150 p.
9. Baranov VG Guide to internal diseases. Diseases of the endocrine system and metabolism; State publishing house of medical literature - M., 2015. - 304 p.
10. Baranovsky A. Yu. Diseases of malnutrition. Treatment and prevention. Recommendations of a professor-gastroenterologist: monograph. ; Science and technology - M., 2015. - 304 p.
11. Vasiliev V. N., Chugunov V. S. Sympathetic-adrenal activity in various functional states of a person: monograph. ; Medicine - M., 2016. - 272 p.

1. Department of Therapy and Cardiology

2. Level of training: residency

3. Specialty: 7R01108 "Endocrinology for adults, children"

4. Course: 1

5. Name of the elective discipline: School of Diabetes.

6. Purpose of the OP:

– Training of highly qualified, competitive endocrinologists who are able to meet the needs of society in providing medical care to endocrinological patients, apply and develop advanced innovative technologies in medicine, science and practice.

7. Tasks of the OP:

- Strengthen teamwork and leadership skills;
 - To consolidate the skills of basic medical diagnostic and preventive interventions;
 - To teach to make professional decisions based on the principles of evidence-based medicine;
 - To teach to comply with the requirements of medical ethics and deontology when carrying out expert, preventive and therapeutic and diagnostic measures;
 - To train doctors in adult and pediatric endocrinology who have clinical thinking, who are well versed in complex pathology, who have in-depth knowledge of related disciplines

8. Rationale for the choice of discipline

Residency in the educational program "Endocrinology for adults, children" is a form of postgraduate professional training that provides for in-depth study and detailed mastery of professional activities within this specialty.

9. Learning outcomes (competencies)

PO1 Patient management: 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 for patients with diseases of the endocrine system.

PO2 Communication and Collaboration: able to effectively interact with the patient with endocrine pathology, his environment, healthcare professionals in order to achieve the best results for the patient

PO3 Safety and quality: able to assess risks and use the most effective methods to ensure a high level of safety and quality of medical endocrinological care.

PO4 Public health: is able to act within the legal and organizational framework of the healthcare system of the Republic of Kazakhstan in the specialty “Adult and Pediatric Endocrinology”, provide basic assistance in emergency situations, work as part of interprofessional teams to implement the policy of strengthening the health of the nation

PO5 Research: able to formulate adequate research questions, critically evaluate professional literature, effectively use international databases in their daily activities, participate in the work of a research team

PO6 Training and Development: 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 endocrinology.

Knowledge (cognitive sphere)	Skills (psychomotor sphere)	Personal and professional competencies (relationships)
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	<p>1. Skills for conducting an initial examination of a patient with suspected endocrine pathology.</p> <p>2. Skills for the reasonable appointment of diagnostic tests for a patient with suspected endocrine pathology.</p> <p>3. The ability to correctly interpret the results of diagnostic studies of a patient with suspected endocrine pathology.</p> <p>4. Skills for the correct formulation of the diagnosis according to ICD10 in identifying the pathology of the endocrine system.</p> <p>5. Skills for assessing the level of functional insufficiency of the endocrine system when a pathological process is detected in it in patients with endocrine diseases.</p> <p>6. The ability to timely determine the complications of diseases of the endocrine system.</p>	<p>1. The ability, under the supervision of a mentor, to reasonably prescribe diagnostic tests for a patient with suspected endocrine pathology.</p> <p>2. The ability, under the supervision of a mentor, to correctly interpret the results of diagnostic and laboratory studies of a patient with suspected endocrine pathology.</p> <p>3. The ability, under the supervision of a mentor, to assess the level of functional insufficiency of the endocrine system when a pathological process is detected in it in patients with endocrine diseases</p>
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10. Prerequisite: Internal Medicine (Bachelor), Internship

11. Post-requisite: Endocrinology in obstetrics and gynecology.

12. Literature:

main:

1. Mohr L ., Staehelin R. Guide to internal medicine. Diseases of glands with internal secretion, constitutional anomalies and metabolic diseases; Medical contemporary - M., 2012. - 314 p.
2. Aleshin B.V. Development of goiter and pathogenesis of goiter disease; State medical publishing house of the Ukrainian SSR - M., 2016. - 192 p.
3. Ametov AS Selected lectures on endocrinology; Medical Information Agency - M., 2014. - 496 p.
4. Anastasia Osokina und Olga Barbarash Acute coronary syndrome and type 2 diabetes mellitus; LAP Lambert Academic Publishing - M., 2011. - 116 p.
5. Astamirova Kh., Akhmanov M. Big encyclopedia of a diabetic; Eksmo - M., 2013. - 416 p.
6. Balabolkin M. I. Diabetology: monograph. ; Medicine - M., 2011. - 672 p.
7. Balabolkin M. I., Klebanova E. M., Kreminskaya V. M. Fundamental and clinical thyroidology; Medicine - M., 2013. - 816 p.
8. Balabolkin M. I., Lukyanchikov V. S. Clinical and therapy of critical conditions in endocrinology; Health - M., 2011. - 150 p.
9. Baranov VG Guide to internal diseases. Diseases of the endocrine system and metabolism; State publishing house of medical literature - M., 2015. - 304 p.
10. Baranovsky A. Yu. Diseases of malnutrition. Treatment and prevention. Recommendations of a professor-gastroenterologist: monograph. ; Science and technology - M., 2015. - 304 p.
11. Vasiliev V. N., Chugunov V. S. Sympathetic-adrenal activity in various functional states of a person: monograph. ; Medicine - M., 2016. - 272 p.

1. Department of Therapy and Cardiology

2. **Level of training:** Residency
3. **Specialty:** 7R01104 "Gastroenterology adult, children"
4. **Course:** 1
5. **Name of elective discipline:** Enzyme immunoassay (ELISA) and polymerase chain reaction (PCR)-diagnostics in gastroenterology and hepatology. Indirect elastography.

6. The purpose of EP:

– Training of a qualified gastroenterologist with a system of universal, professional competencies, capable and ready for independent professional activity in outpatient and specialized care, including the use of high-tech medical services.

7. Objectives of EP:

- Consolidate teamwork skills and leadership qualities;
- To consolidate the skills of basic medical diagnostic and preventive interventions;
- Teach to make professional decisions based on the principles of evidence-based medicine;
- Teach to comply with the requirements of medical ethics and deontology when conducting expert, preventive and therapeutic diagnostic measures;
- To train doctors in gastroenterology for adults and children who have clinical thinking, are well-versed in complex pathology, and have in-depth knowledge of related disciplines.

8. Justification of the choice of discipline

Residency in the educational program "Gastroenterology adult, children" is a form of postgraduate professional training, providing in-depth study and detailed mastery of professional activity within this specialty..

13. Learning outcomes (competencies)

EP 1 Patient supervision: 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 for patients with diseases of the gastrointestinal tract.

EP 2 Communication and Collaboration: able to effectively interact with a patient with impaired gastrointestinal tract, his environment, healthcare professionals in order to achieve the best results for the patient

EP 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 for patients with disorders of the main functions of the gastrointestinal tract.

EP 4 Public health: He is able to act within the legal and organizational framework of the healthcare system of the Republic of Kazakhstan in the specialty “Gastroenterology, including children's ”, provide basic assistance in emergency situations, work as part of interprofessional teams to implement the policy of strengthening the health of the nation.

EP 5 Research: he is able to formulate adequate research questions, critically evaluate the professional literature on gastroenterology, effectively use international databases in his daily activities, participate in the work of the research team.

EP 6 Training and development: 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 in the field of gastroenterology

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)
	1. Skills of conducting an initial examination of a patient with suspected gastroenterological pathology. 2. Skills of reasoned appointment of diagnostic tests to a patient with suspected gastroenterological pathology.	1. To collect complaints, anamnesis of life, anamnesis of illness from a patient (his legal representative) with a disease and (or) the state of the digestive system 2. Analyze and interpret information

	<p>3. The ability to correctly interpret the results of diagnostic studies of a patient with suspected gastroenterological pathology.</p> <p>4. Skills of correct formulation of the diagnosis according to ICD 10 in the detection of gastroenterological pathology.</p> <p>5. The ability to timely identify complications of gastroenterological diseases.</p>	<p>received from a patient (his legal representative) with a disease and (or) the state of the digestive system</p> <p>3. To examine a patient with a disease and (or) the state of the digestive system</p> <p>4. Analyze and interpret the results of a physical examination of a patient (palpation, percussion, auscultation) with a disease and (or) condition digestive system</p> <p>5. Formulate a preliminary diagnosis and make a plan for laboratory and instrumental studies</p> <p>6. Interpret the results of an instrumental examination of a patient with a disease and (or) the state of the digestive system (X-ray and X-ray of the chest and abdominal cavity, ultrasound examination of the abdominal cavity, esophagoduodenoscopy, rectoromanoscopy, colonoscopy, pH-metry, manometry, computer and magnetic resonance imaging)</p> <p>7. Justify the need to refer a patient with the disease and (or) the state of the digestive system to specialist doctors</p> <p>8. Interpret and analyze the conclusions received from specialist doctors</p> <p>9. To assess the severity of the disease and (or) the state of the digestive system of patients</p> <p>10. To establish a diagnosis, taking into account the ICD, for a patient with a disease and (or) a state of the digestive system.</p>
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10. Requesitter: Internal disease. Internship.

11. Post-Requesitter: Transplantology in the profile of the main specialty. Hepatology

12. Literature:

basic:

1. Gastroenterology and hepatology: diagnosis and treatment: a guide for doctors / edited by A.V. Kalinin, A.F. Loginov, A.I. Khazanov. – 2nd ed., reprint. and additional – M. : MEDpress-inform, 2011. – 864 p.
2. Gastroenterology. Diseases of adults / under the general editorship of prof. L.B. Lazebnik, prof. P.L. Shcherbakov. – M.: MK, 2011. – 512 p.: ill.
3. Gastroenterology: national guidelines / Edited by V.T.Ivashkin, T.L.Lapina. – M.: GOETAR-Media, 2008. – 704s.
4. Hypoallergenic diet: theoretical justification and practical aspects / Vologzhanin D.A., Pershko A.M., Dobrenko V.A. // lecture for practitioners. – St. Petersburg, 2013.27s

5. Grigoriev P.Ya., Yakovenko A.V. Clinical gastroenterology. M.: Medical Information Agency, 2004. 704 p.
6. Diagnostics of malnutrition in intestinal diseases / Ivanov S.V., Uspensky Yu.P., Fomin Yu.A. // textbook. - St. Petersburg: LLC "Workshop CENTURY", 2017. - 84c.
7. Intestinal dysbiosis. Guidelines for diagnosis and treatment / edited by E.I. Tkachenko, A.N. Suvorov. - St. Petersburg: InformMed, 2013. – 269
8. Differential diagnosis of diarrheal syndrome / Uspensky Yu.P., Fominykh Yu.A., Baryshnikova N.V. // educational and methodical manual. - St. Petersburg: Printing house Sprinter, 2017. – 51c..
9. Zvenigorodskaya L.A. Atherosclerosis and digestive organs. M.: Publishing house "Medpraktika-M", 2011. - 312 p.
10. Instrumental methods of digestive organs research / Uspensky Yu.P., Fominykh Yu.A., Smirnova A.S. // textbook. – Informed, 2013

1. Department of Therapy and Cardiology

2. Level of training: Residency

3. Specialty: 7R01104 "Gastroenterology adult, children"

4. Course: 1

5. Name of elective discipline: Methodology of pH-metry and interpretation of results.

6. The purpose of EP:

– Training of a qualified gastroenterologist with a system of universal, professional competencies, capable and ready for independent professional activity in outpatient and specialized care, including the use of high-tech medical services.

7. Objectives of EP:

- Consolidate teamwork skills and leadership qualities;
- To consolidate the skills of basic medical diagnostic and preventive interventions;
- Teach to make professional decisions based on the principles of evidence-based medicine;
- Teach to comply with the requirements of medical ethics and deontology when conducting expert, preventive and therapeutic diagnostic measures;
- To train doctors in gastroenterology for adults and children who have clinical thinking, are well-versed in complex pathology, and have in-depth knowledge of related disciplines.

8. Justification of the choice of discipline

Residency in the educational program "Gastroenterology adult, children" is a form of postgraduate professional training, providing in–depth study and detailed mastery of professional activity within this specialty..

14. Learning outcomes (competencies)

PO1 Patient supervision: 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 for patients with diseases of the gastrointestinal tract.

PO2 Communication and Collaboration: able to effectively interact with a patient with impaired gastrointestinal tract, his environment, healthcare professionals in order to achieve the best results for the patient

RO3 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 for patients with disorders of the main functions of the gastrointestinal tract.

PO4 Public health: He is able to act within the legal and organizational framework of the healthcare system of the Republic of Kazakhstan in the specialty “Gastroenterology, including children's ”, provide basic assistance in emergency situations, work as part of interprofessional teams to implement the policy of strengthening the health of the nation.

RO5 Research: he is able to formulate adequate research questions, critically evaluate the professional literature on gastroenterology, effectively use international databases in his daily activities, participate in the work of the research team.

RO6 Training and development: 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 in the field of gastroenterology

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)
	<ol style="list-style-type: none"> 1. Skills of conducting an initial examination of a patient with suspected gastroenterological pathology. 2. Skills of reasoned appointment of diagnostic tests to a patient with suspected gastroenterological pathology. 3. The ability to correctly interpret the results of diagnostic studies of a patient with suspected gastroenterological pathology. 4. Skills of correct formulation of the diagnosis according to ICD 10 in the detection of gastroenterological pathology. 5. The ability to timely identify complications of gastroenterological diseases. 	<ol style="list-style-type: none"> 1. To collect complaints, anamnesis of life, anamnesis of illness from a patient (his legal representative) with a disease and (or) the state of the digestive system 2. Analyze and interpret information received from a patient (his legal representative) with a disease and (or) the state of the digestive system 3. To examine a patient with a disease and (or) the state of the digestive system 4. Analyze and interpret the results of a physical examination of a patient (palpation, percussion, auscultation) with a disease and (or) condition digestive system 5. Formulate a preliminary diagnosis and make a plan for laboratory and instrumental studies 6. Interpret the results of an instrumental examination of a patient with a disease and (or) the state of the digestive system (X-ray and X-ray of the chest and abdominal cavity, ultrasound examination of the abdominal cavity, esophagoduodenoscopy, rectoromanoscopy, colonoscopy, pH-metry, manometry, computer and magnetic resonance imaging) 7. Justify the need to refer a patient with the disease and (or) the state of the digestive system to specialist doctors 8. Interpret and analyze the conclusions received from specialist doctors 9. To assess the severity of the disease and (or) the state of the digestive system of patients 10. To establish a diagnosis, taking into account the ICD, for a patient with a disease and (or) a state of the digestive system.

10. Requesitter: Internal disease. Internship.

11. Post-Requsitter: Gastroenterology

12. Literature:

basic:

1. Gastroenterology and hepatology: diagnosis and treatment: a guide for doctors / edited by A.V. Kalinin, A.F. Loginov, A.I. Khazanov. – 2nd ed., reprint. and additional – M. : MEDpress-inform, 2011. – 864 p.
2. Gastroenterology. Diseases of adults / under the general editorship of prof. L.B. Lazebnik, prof. P.L. Shcherbakov. – M.: MK, 2011. – 512 p.: ill.
3. Gastroenterology: national guidelines / Edited by V.T.Ivashkin, T.L.Lapina. – M.: GOETAR-Media, 2008. – 704s.
4. Hypoallergenic diet: theoretical justification and practical aspects / Vologzhanin D.A., Pershko A.M., Dobrenko V.A. // lecture for practitioners. – St. Petersburg, 2013. 27s
5. Grigoriev P.Ya., Yakovenko A.V. Clinical gastroenterology. M.: Medical Information Agency, 2004. 704 p.
6. Diagnostics of malnutrition in intestinal diseases / Ivanov S.V., Uspensky Yu.P., Fomin Yu.A. // textbook. - St. Petersburg: LLC "Workshop CENTURY", 2017. - 84c.
7. Intestinal dysbiosis. Guidelines for diagnosis and treatment / edited by E.I. Tkachenko, A.N. Suvorov. - St. Petersburg: InformMed, 2013. – 269
8. Differential diagnosis of diarrheal syndrome / Uspensky Yu.P., Fominykh Yu.A., Baryshnikova N.V. // educational and methodical manual. - St. Petersburg: Printing house Sprinter, 2017. – 51c..
9. Zvenigorodskaya L.A. Atherosclerosis and digestive organs. M.: Publishing house "Medpraktika-M", 2011. - 312 p.
10. Instrumental methods of digestive organs research / Uspensky Yu.P., Fominykh Yu.A., Smirnova A.S. // textbook. – Informed, 2013

1. Department of Therapy and Cardiology

2. Level of training: Residency

3. Specialty: 7R01104 "Gastroenterology adult, children"

4. Course: 1

5. Name of elective discipline: Features of management of patients after liver transplantation..

6. The purpose of EP:

– Training of a qualified gastroenterologist with a system of universal, professional competencies, capable and ready for independent professional activity in outpatient and specialized care, including the use of high-tech medical services.

7. Objectives of EP:

- Consolidate teamwork skills and leadership qualities;
- To consolidate the skills of basic medical diagnostic and preventive interventions;
- Teach to make professional decisions based on the principles of evidence-based medicine;
- Teach to comply with the requirements of medical ethics and deontology when conducting expert, preventive and therapeutic diagnostic measures;
- To train doctors in gastroenterology for adults and children who have clinical thinking, are well-versed in complex pathology, and have in-depth knowledge of related disciplines.

8. Justification of the choice of discipline

Residency in the educational program "Gastroenterology adult, children" is a form of postgraduate professional training, providing in–depth study and detailed mastery of professional activity within this specialty..

15. Learning outcomes (competencies)

PO1 Patient supervision: 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 for patients with diseases of the gastrointestinal tract.

PO2 Communication and Collaboration: able to effectively interact with a patient with impaired gastrointestinal tract, his environment, healthcare professionals in order to achieve the best results for the patient

RO3 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 for patients with disorders of the main functions of the gastrointestinal tract.

PO4 Public health: He is able to act within the legal and organizational framework of the healthcare system of the Republic of Kazakhstan in the specialty “Gastroenterology, including children's ”, provide basic assistance in emergency situations, work as part of interprofessional teams to implement the policy of strengthening the health of the nation.

RO5 Research: he is able to formulate adequate research questions, critically evaluate the professional literature on gastroenterology, effectively use international databases in his daily activities, participate in the work of the research team.

RO6 Training and development: 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 in the field of gastroenterology

Knowledge (cognitive sphere)	Skills and abilities (psychomotor sphere)	Personal and professional competencies (relationships)
	<ol style="list-style-type: none"> 1. Skills of conducting an initial examination of a patient with suspected gastroenterological pathology. 2. Skills of reasoned appointment of diagnostic tests to a patient with suspected gastroenterological pathology. 3. The ability to correctly interpret the results of diagnostic studies of a patient with suspected gastroenterological pathology. 4. Skills of correct formulation of the diagnosis according to ICD 10 in the detection of gastroenterological pathology. 5. The ability to timely identify complications of gastroenterological diseases. 	<ol style="list-style-type: none"> 1. To collect complaints, anamnesis of life, anamnesis of illness from a patient (his legal representative) with a disease and (or) the state of the digestive system 2. Analyze and interpret information received from a patient (his legal representative) with a disease and (or) the state of the digestive system 3. To examine a patient with a disease and (or) the state of the digestive system 4. Analyze and interpret the results of a physical examination of a patient (palpation, percussion, auscultation) with a disease and (or) condition digestive system 5. Formulate a preliminary diagnosis and make a plan for laboratory and instrumental studies 6. Interpret the results of an instrumental examination of a patient with a disease and (or) the state of the digestive system (X-ray and X-ray of the chest and abdominal cavity, ultrasound examination of the abdominal cavity, esophagoduodenoscopy, rectoromanoscopy, colonoscopy, pH-metry, manometry, computer and magnetic resonance imaging) 7. Justify the need to refer a patient with the disease and (or) the state

		<p>of the digestive system to specialist doctors</p> <p>8. Interpret and analyze the conclusions received from specialist doctors</p> <p>9. To assess the severity of the disease and (or) the state of the digestive system of patients</p> <p>10. To establish a diagnosis, taking into account the ICD, for a patient with a disease and (or) a state of the digestive system.</p>
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10. Requesitter: Internal disease. Internship.

11. Post-Requesitter: Transplantology in the profile of the main specialty

12. Literature:

basic:

1. Gastroenterology and hepatology: diagnosis and treatment: a guide for doctors / edited by A.V. Kalinin, A.F. Loginov, A.I. Khazanov. – 2nd ed., reprint. and additional – M. : MEDpress-inform, 2011. – 864 p.
2. Gastroenterology. Diseases of adults / under the general editorship of prof. L.B. Lazebnik, prof. P.L. Shcherbakov. – M.: MK, 2011. – 512 p.: ill.
3. Gastroenterology: national guidelines / Edited by V.T.Ivashkin, T.L.Lapina. – M.: GOETAR-Media, 2008. – 704s.
4. Hypoallergenic diet: theoretical justification and practical aspects / Vologzhanin D.A., Pershko A.M., Dobrenko V.A. // lecture for practitioners. – St. Petersburg, 2013.27s
5. Grigoriev P.Ya., Yakovenko A.V. Clinical gastroenterology. M.: Medical Information Agency, 2004. 704 p.
6. Diagnostics of malnutrition in intestinal diseases / Ivanov S.V., Uspensky Yu.P., Fomin Yu.A. // textbook. - St. Petersburg: LLC "Workshop CENTURY", 2017. - 84c.
7. Intestinal dysbiosis. Guidelines for diagnosis and treatment / edited by E.I. Tkachenko, A.N. Suvorov. - St. Petersburg: InformMed, 2013. – 269
8. Differential diagnosis of diarrheal syndrome / Uspensky Yu.P., Fominykh Yu.A., Baryshnikova N.V. // educational and methodical manual. - St. Petersburg: Printing house Sprinter, 2017. – 51c..
9. Zvenigorodskaya L.A. Atherosclerosis and digestive organs. M.: Publishing house "Medpraktika-M", 2011. - 312 p.
10. Instrumental methods of digestive organs research / Uspensky Yu.P., Fominykh Yu.A., Smirnova A.S. // textbook. – Informed, 2013

1. Department: " Surgery-2".

2. Level of training: Residency.

3. Educational program: «Traumatology-orthopedics, for adults and children»

4. Course: 3

5. Name of elective discipline: “Age features in traumatology and orthopedics”

6. Number of credits: 2 credits / 90 hours.

7. Purpose: to deepen the knowledge and clinical skills of providing specialized care in traumatology and orthopedics.

8. Tasks:

- advanced knowledge on traumatology and orthopedics;
- improving knowledge on modern principles of diagnosis and differential diagnosis in patients with pathology of the musculoskeletal system;

- independent implementation of qualified medical care for various conditions and diseases in traumatology and orthopedics, taking into account the peculiarities in childhood and old age.

9. Content of disciplines: The discipline studies modern methods of diagnosis and treatment, prevention of diseases of the organs of the musculoskeletal system. Early detection, timely implementation of adequate treatment of complications.

10. Justification of the choice of discipline: The problem of treating injuries and diseases of the musculoskeletal system continues to be relevant due to the high level of mortality and disability, the complexity of early diagnosis of pathology, the high frequency of complications and the limited ability to conduct adequate and complete treatment of patients with modern methods. Improvement of surgical treatment methods is aimed at reducing the hospital stay of patients due to the healing time and early rehabilitation.

11. Learning outcomes (competencies)

№	Knowledge (cognitive sphere)	Skills (psychomotor sphere)	Personal and professional competencies (relationships)
	<ul style="list-style-type: none"> • Demonstrates knowledge of the subject and objectives of the discipline • Knows the principles of organizing trauma care in the Republic of Kazakhstan. • Knows risk groups and the role of health education in reducing trauma pathology. Principles of injury prevention. • Knows the diagnosis and prophylaxis of AIDS. • Knows the ethical and social aspects of clinical traumatology and orthopedics. 	<ul style="list-style-type: none"> • Able to assess the condition of the patient according to WHO recommendations. • Able to scientifically analyze the socio-biological, medical, social and epidemiological conditions and factors of the occurrence of injuries. • Able to draw up the main forms of accounting and reporting documentation. • Able to make diagnoses according to the classification ICD 10. • Able to conduct measures to prevent injuries and orthopedic diseases. • Able to interpret the results of various studies in traumatology and orthopedics. 	<ul style="list-style-type: none"> • Able to interpret data from laboratory and instrumental examination methods (clinical and biochemical analyzes, ultrasound, ECG, R-images, MRI, etc.) current and in dynamics. • Able to conduct clinical observations in the field of this discipline • Able to formulate their own conclusions in the form of recommendations on advanced methods of diagnosis, treatment, reduction of injuries and orthopedic diseases. • Able to keep records and records using computer technology, database archiving • Able to present personal judgments, draw up in the form of a review of literature, a report, abstracts of presentations, projects and present at practical classes, meetings of the scientific circle, scientific and practical conferences, etc. • Able to master modern methods of diagnosis and treatment in traumatology and orthopedics. • Able to conduct research and scientific development of data on injuries, risk factors, in order to prevent and reduce injuries. • Able to conduct the correct informing and training of hospital patients on the simplest methods of injury prevention.

12. Prerequisites: internship in the specialty "Surgery".

13. Post requisites: doctoral studies.

14. Literature:

Primary:

1. Котельников Г.П., Краснов А.В., Мирошниченко В.Ф. Травматология.- 2009. -538с.
2. Гуманенко Е.К., Козлова В.К. Политравма. -2009. - 608 с.
3. Травматология и ортопедия в 4 томах. Том 3. Травмы и заболевания нижней

конечности. Издательство: Гиппократ, 2008. - 1056 с.

4. Корнилов Н.В., Грязнухин Э.Г. Травматология и ортопедия, том 4. Травмы и заболевания таза, груди, позвоночника, головы. 2006. - 624 с.
5. Руководство для врачей в 4 томах под общей ред. Н.В. Корнилова. - С-Пб., «Гиппократ», 2004. - 768 с.
6. Протоколы диагностики и лечения травм и заболеваний: для стационаров травматологического профиля. – Астана, 2013.

Additional:

1. Гиршин С.Г. Травматология. Клинические лекции по неотложной травматологии. - Учебное пособие. - 2009.
2. Кондратьев А.Н. Неотложная нейротравматология. - 2009. - 192 с.
3. Клюквин И.Ю., Мигулева И.Ю., Охотский В.П. Травмы кисти. 2009 – 192 с.
4. Дэвид Гранди, Эндрю Суэйн Травма спинного мозга. - 2008. - 128.
5. Котешева И.А. Травмы. Первая помощь и восстановительное лечение. - 2008. -352
6. Соколов В.А. Множественные и сочетанные травмы. - 2006. - 518 с.

1. Department: " Surgery-2".

2. Level of training: Residency

3. Educational program: «Traumatology-orthopedics, for adults and children»

4. Course: 3

5. Name of elective discipline: “Inpatient replacement technologies in the diagnosis and treatment of trauma and orthopedic patients”.

6. Number of credits: 2 credits / 90 hours.

7. Purpose: the acquisition of special knowledge necessary for the development of skills for the treatment of traumatological and orthopedic patients, the formation of diagnostic and traumatologic and orthopedic competencies.

8. Tasks:

- The study of modern hospital-replacement methods for treating patients with trauma and orthopedic diseases;

9. Content of disciplines: The discipline studies modern methods of diagnosis and treatment, prevention of diseases of the organs of the musculoskeletal system. Early detection, timely implementation of adequate treatment of complications.

10. Justification of the choice of discipline: In the context of the dynamic development and development of new technologies for the diagnosis and treatment of injuries and orthopedic diseases, it is necessary to qualitatively improve the knowledge and professional skills of an orthopedic trauma surgeon in this area. Given 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 the quality of medical care for the population in the treatment of injuries and orthopedic diseases.

11. Learning outcomes (competencies).

№	Knowledge (cognitive sphere)	Skills (psychomotor sphere)	Personal and professional competencies (relationships)
	<ul style="list-style-type: none"> • Knows modern methods of diagnostics and differential diagnosis of injuries and orthopedic diseases. 	<ul style="list-style-type: none"> • Able to assess the condition of the patient according to WHO recommendations. • Able to scientifically analyze the socio-biological, medical and social conditions and factors of the 	<ul style="list-style-type: none"> • Based on the revealed data: medical history, examination, laboratory and instrumental methods of examination, the patient’s condition, gives recommendations according to WHO, according to the clinical

<ul style="list-style-type: none"> • Knows conservative methods and the latest methods for surgical treatment of injuries and orthopedic diseases. 	<p>occurrence of injuries and orthopedic diseases.</p> <ul style="list-style-type: none"> • Fluent in modern methods and techniques of surgical treatment of injuries and orthopedic diseases. • Able to establish contact with the patient / relatives for an effective treatment process, to involve the patient in the diagnosis and treatment process. 	<p>protocols of the Ministry of Health of the Republic of Kazakhstan.</p> <ul style="list-style-type: none"> • Based on the principles of evidence-based medicine, he builds a strategy and tactics for managing patients with trauma and orthopedic diseases.
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12. Prerequisites: internship in "Surgery".

13. Post requisites: doctoral studies.

14. Literature:

Primary:

1. Котельников Г.П., Краснов А.В., Мирошниченко В.Ф. Травматология.- 2009. -
2. Гуманенко Е.К., Козлова В.К. Политравма. -2009. - 608 с.
3. Травматология и ортопедия в 4 томах. Том 3. Травмы и заболевания нижней конечности. Издательство: Гиппократ, 2008. - 1056 с.
4. Корнилов Н.В., Грязнухин Э.Г. Травматология и ортопедия, том 4. Травмы и заболевания таза, груди, позвоночника, головы. 2006. - 624 с.
5. Руководство для врачей в 4 томах под общей ред. Н.В. Корнилова. - С-Пб., «Гиппократ», 2004. - 768 с.
6. Протоколы диагностики и лечения травм и заболеваний: для стационаров травматологического профиля. – Астана, 2013.

additional:

1. Гиршин С.Г. Травматология. Клинические лекции по неотложной травматологии. - Учебное пособие. - 2009.
2. Кондратьев А.Н. Неотложная нейротравматология. - 2009. - 192 с.
3. Клюквин И.Ю., Мигулева И.Ю., Охотский В.П. Травмы кисти. 2009 – 192
4. Дэвид Гранди, Эндрю Суэйн Травма спинного мозга. - 2008. - 128.
5. Котешева И.А. Травмы. Первая помощь и восстановительное лечение. - 2008. -
6. Соколов В.А. Множественные и сочетанные травмы. - 2006. - 518 с.

1. Department: " Surgery-2".

2. Level of training: Residency

3. Educational program: «Traumatology-orthopedics, for adults and children»

4. Course: 3

5. Name of elective discipline: “Sports traumatology and orthopedics”.

6. Number of credits: 2 credits / 90 hours.

7. Purpose: To form knowledge, skills, and skills for providing emergency care in critical conditions in athletes and the prevention of various injuries and pathologies.

8. Tasks:

- In-depth knowledge of emergency situations in acute sports injuries and diseases;
- increase knowledge on modern diagnostic methods and differential diagnosis of critical conditions in sports traumatology;
- deepening knowledge, preoperative preparation of patients with acute sports injury and pathology, assessing the initial condition of the patient, determining the risk of surgery, anesthesia and tactics of intensive care in the postoperative period.

9. Content of disciplines: The discipline studies modern methods of diagnosis and treatment, prevention of diseases of the organs of the musculoskeletal system. Early detection, timely implementation of adequate treatment of complications.

10. Justification of the choice of discipline: The frequency of sports injuries and diseases in athletes requiring emergency interventions does not tend to decrease. Severe complications as a result of diagnostic and tactical errors often result in an athlete's disability and inability to pursue a sports career. In this regard, it is very important to improve practical skills in providing emergency care and management tactics for patients with sports injuries and diseases.

11. Learning outcomes (competencies)

№	Knowledge (cognitive sphere)	Skills (psychomotor sphere)	Personal and professional competencies (relationships)
1	<ul style="list-style-type: none"> • Fluent in the diagnosis and treatment of acute sports injuries and diseases. • Owns the terminology of injuries and illness, knowledge in the field of modern scientific achievements of sports medicine. • Knows the methods of patient involvement in the process of diagnostics and treatment, the formation of patient compliance, the basics of professional attitude to the patient, professional relations with colleagues and medical staff. 	<ul style="list-style-type: none"> • Able to assess the condition of the patient according to WHO recommendations. • Able to scientifically analyze the socio-biological, medical and social conditions and factors in the occurrence of sports injuries and diseases. • Able to establish contact with the patient / relatives for an effective treatment process, to involve the patient in the process of diagnostics and treatment. 	<ul style="list-style-type: none"> • Demonstrates knowledge of the basics of healthcare legislation and regulatory legal acts regulating the activities of health authorities and individual medical organizations in the Republic of Kazakhstan; • Based on the revealed data: medical history, examination, laboratory and instrumental methods of examination, the patient's condition, gives recommendations according to WHO, according to the protocols of the Ministry of Health of the Republic of Kazakhstan. • Based on the principles of evidence-based medicine, he builds a strategy and tactics for the management of athletes with injuries and diseases.

12. Prerequisites: internship in the specialty "Surgery".

13. Post requisites: doctoral studies.

14. Literature:

1. Primary:

1. Котельников Г.П., Краснов А.В., Мирошниченко В.Ф. Травматология.- 2009. -538с.
2. Травматология и ортопедия в 4 томах. Том 3. Травмы и заболевания нижней конечности. Издательство: Гиппократ, 2008. - 1056 с.
3. Корнилов Н.В., Грязнухин Э.Г. Травматология и ортопедия, том 4. Травмы и заболевания таза, груди, позвоночника, головы. 2006. - 624 с.
4. Руководство для врачей в 4 томах под общей ред. Н.В. Корнилова. - С-Пб., «Гиппократ», 2004. - 768 с.
5. Протоколы диагностики и лечения травм и заболеваний: для стационаров травматологического профиля. – Астана, 2013.

additional:

1. Кондратьев А.Н. Неотложная нейротравматология. - 2009. - 192 с.
2. Клюквин И.Ю., Мигулева И.Ю., Охотский В.П. Травмы кисти. 2009 – 192 с.
3. Дэвид Гранди, Эндрю Суэйн Травма спинного мозга. - 2008. - 128.
4. Котешева И.А. Травмы. Первая помощь и восстановительное лечение. - 2008. -352с