

**MINISTRY OF SCIENCE AND HIGHER EDUCATION
RUSSIAN FEDERATION**

**FEDERAL STATE AUTONOMOUS EDUCATIONAL INSTITUTION OF
HIGHER EDUCATION
NORTH-CAUCASUS FEDERAL UNIVERSITY**

Methodological Guidelines
for Students on arranging and performing independent work
in the Discipline of "PULMONOLOGY"
for Students majoring (Specialty) in 31.05.01 General Medicine

INTRODUCTION

The purpose of the discipline is to acquire theoretical knowledge, skills, and practical skills in phthisiology in general, to learn how to perform and evaluate a number of diagnostic tests to detect tuberculosis, to develop an algorithm for making a preliminary diagnosis of tuberculosis in a general medical network and referring patients to anti-tuberculosis institutions, and to prepare students to solve professional tasks related to early detection, diagnosis, differential diagnosis, prevention, and treatment of tuberculosis.

Objectives of the discipline study:

- To get acquainted with the key concepts of phthisiology and the organization of the anti-tuberculosis service.
- Learn how to examine a patient with tuberculosis.
- To study nosological forms that fall within the competence of a TB doctor.
- Learn the most important approaches to treating tuberculosis.

Methodological Recommendations for Studying Theoretical Material

When performing the independent study of theoretical material, the student must follow the rules as set below. The working curriculum of the respective academic discipline shall be recommended to be used as the basis for such activity. According to the schedule of classroom lessons and independent work, a different number of hours is to be allocated for studying individual topics. A significant portion of the student's independent work should be allocated to mastering the material on the covered topic, writing a summary (notes) on the specified theoretical blocks, and searching for additional literature based on the NCFU library and via the Internet system. The lecture material shall not cover all theoretical material; the greater part of it must be mastered through independent work. Given the above, working with the recommended literature is mandatory. Special attention must be paid to the content of the main provisions and conclusions, the explanation of phenomena and facts, and the understanding of the practical application of the theoretical issues under consideration. In the process of this work, the student should strive to understand and memorize the main provisions of the material being considered, the examples illustrating it, as well as to understand the illustrative material. Preparation should be completed by drawing up a plan (summary/notes) on the material (issue) being studied. This allows for the creation of a concentrated, concise representation of the issues being studied. First, studying the recommended literature is to be done. Special attention must be paid to the content of the main provisions and conclusions, the explanation of phenomena and facts, and the understanding of the practical application of the theoretical issues under consideration.

During this work, the student should strive to understand and memorize the main provisions of the material being considered, the examples illustrating it, as well as to understand the illustrative material. Preparation should be completed by drawing up a plan (summary/notes) on the material (issue) being studied. This allows for the creation of a concentrated, concise representation of the issues being studied. If necessary, one should seek (advice) consultation from the instructor. When going to a consultation, it is necessary to thoroughly think through the questions that require clarification. Keeping records contributes to turning reading into an active process, mobilizing motor memory along with visual memory. The following should be born in mind: a student who systematically keeps records creates their own individual stock of auxiliary materials for a quick review of what has been read and for the mobilization of accumulated knowledge. Records are especially important and useful when they reflect the thoughts that arose during independent work.

It is important to develop the students' capacity to compare sources and to think through the material being studied.

Improving note-taking skills among students is of great importance.

The instructor may recommend the following main forms of recording to students: a plan (simple and detailed), excerpts, and theses (abstracts).

The results of note-taking can be presented in various forms.

- A plan is an outline of the read material, a brief (or detailed) list of questions reflecting the structure and sequence of the material.
- A detailed plan fully replaces a summary.
- A summary (notes) is a systematized, logical presentation of the source material. Four types of summaries are distinguished:
 - Outline-summary (Plan-notes) – this is an expanded, detailed plan in which sufficiently detailed records are provided for those points of the plan that need explanation.
 - Textual summary – this is the reproduction of the most important provisions and facts of the source.
 - Free summary – these are clearly and briefly formulated (stated) main provisions resulting from a deep understanding of the material. It may contain excerpts, quotations, and theses; part of the material may be represented by a plan.
 - Theme-based summary – this is compiled on the basis of studying a number of sources and gives a more or less exhaustive answer according to a certain scheme (issue).

Methodological Guidelines for the Preparation for Practical Activities

When preparing for practical activities, the recommendation implies studying the control questions for the given lesson and the theoretical material from one's own notes.

The main form of work during the lessons is an interview (discussion). Each student must be ready to speak on all issues raised in the plan and demonstrate maximum activity during their consideration.

The speech must be constructed freely, convincingly, and with arguments. The instructor ensures that the speech is not reduced to a reproductive level (simple reproduction of the text); simple reading of the summary is also not allowed.

It is necessary for the speaker to show their own attitude towards what they are talking about, express their personal opinion and understanding, substantiate it, and be able to draw the correct conclusions from what has been said. In doing so, the student may refer to the entries in the summary, directly to the primary sources, use knowledge of previously studied disciplines, etc. In addition, to obtain a grade at an advanced level, students solve situational tasks based on the results of the mastered topics.

During the execution of practical works, a defense of practical skills is provided, the full list of which is specified in the fund of assessment tools.

Methodological Recommendations for the Preparation of Presentations and Reports

The report must contain elements of novelty; along with the fundamental aspect, an analysis of the current state of the problem under study must be carried out, as well as inclusion in regional issues. The report must include an introduction, a theoretical part, a conclusion, a list of literature, and a presentation that reveals the essence of the topic in graphs, pictures, diagrams, and formulas.

The report is recommended to be submitted on 1 printed sheet. The text of the work must be printed with 1.5 line spacing on one side of a standard sheet (A4) of white paper.

The text and other printed elements of the work must be black, and the contours of letters and signs must be clear, without halos and shading. The font must be Times New Roman, size 14. The titles of chapters and paragraphs are highlighted in bold. The sheet with text must have margins: left – 30 mm, right – 10 mm, top – 20 mm, bottom – 20 mm.

Page numbering of the text is done in the lower right corner of the sheet. It is necessary to number pages starting from the page where the Introduction is printed, on which the number 3 is placed. After that, all pages, including appendices, are numbered.

A space equal to two intervals is placed between the title of the chapter and the title of the paragraph of this chapter, and the title of the paragraph must not be separated from the text of this

paragraph by a space. The titles of paragraphs shall be separated from the text of the previous paragraph by a space equal to two intervals. Each chapter, as well as the introduction, conclusions, appendices, and the list of used literature, begin on a new page. The word Chapter is not to be written. Chapters have ordinal numbers within the entire work, designated by Arabic numerals (for example: 1, 2, 3), followed by a period.

The word **PARAGRAPH** or the paragraph symbol (§) is not placed in the title. Paragraphs have ordinal numbers within the chapters, designated by Arabic numerals (for example: 1.1. and 1.2.).

Headings of chapters and paragraphs in the text must be centered; a period shall not be placed at the end of the title of the chapter and paragraph. It is not allowed to hyphenate (transfer) a part of a word in a heading. 4.5. The numbering of tables and figures can be running (continuous) or relate to the number of the chapter and paragraph. For example, if a table or a figure is included in the text of the first paragraph of the second chapter, the numbering is as follows: Table 2.1.1., Fig. 2.1.1.

The last digit means the ordinal number of the table (or figure) in this paragraph.

The table is to be placed as the next page after the first mention of it in the text.

Recommended Literature.

Basic literature:

1. Bronchoscopy in the Diagnosis and Treatment of Respiratory Diseases / G. F. Palamarchuk, A. L. Akopov, A. I. Arsenyev [et al.]. – Saint Petersburg: Foliant, 2019. – 328 pp. – ISBN 978-5-93929-290-0. – Text: electronic version // Digital Educational Resource IPR SMART: [website]. – URL: <https://www.iprbookshop.ru/90208.html>;
2. Helberg, I. S. Pulmonology: A Textbook / I. S. Helberg, S. B. Wolf, E. N. Alexo. Minsk: Higher School Press, 2019. 368 pp. ISBN 978-985-06-3041-4. Text: electronic format // Digital educational resource IPR SMART: [website]. URL: <https://www.iprbookshop.ru/120093.html>.
3. Okorkov, A.N. Treatment of Diseases of Internal Organs. Vol. 1: Treatment of Diseases of the Respiratory Organs; Treatment of Diseases of the Digestive Organs / A.N. Okorkov. – 2nd ed. – Moscow: Medical Literature, 2021. – 547 pp. – ISBN 978-5-89677-011-1; 978-5-89677-007-7 (vol. 1). – Text: electronic format // Digital educational resource IPR SMART: [website]. URL: <https://www.iprbookshop.ru/108377.html>

Additional Literature:

1. Alemanova, G. D. Differential Diagnostics of Respiratory System Diseases: A Textbook for 6th Year Medical Students / G. D. Alemanova ; edited by L. Yu. Popov. - Orenburg : Orenburg State Medical Academy, 2010. - 88 p. -Text : electronic // Digital Educational Resource IPR SMART : [website]. - URL: <https://www.iprbookshop.ru/21808.html>
2. Breathing: A Study Guide / Compiled by V. A. Anzorov and S. V. Moryakina. - Grozny: Chechen State University, 2018. - 95 p. - Text: electronic // Digital Educational Resource IPR SMART : [website]. - URL: <https://www.iprbookshop.ru/107742.html>
3. Koshechkin, V. A. Tuberculosis and HIV Infection in Adults: A Study Guide / V. A. Koshechkin, V. N. Zimina, and V. I. Shirmanov. - Moscow: Russian University of Friendship of Peoples, 2014. - 316 p. - ISBN 978-5-209-05543-3. - Text: electronic // Digital Educational Resource IPR SMART: [website]. - URL: <https://www.iprbookshop.ru/22223.html>
4. Okorokov, A. N. Diagnostics of Internal Organ Diseases: Book 4. Diagnostics of Respiratory Diseases / A. N. Okorokov. - Moscow: Medical Literature, 2019. - 224 p. - ISBN 978-5-89677-214-9 (book 4), 978-5-89677-016-2. - Text: electronic // Digital Educational Resource IPR SMART: [website]. - URL: <https://www.iprbookshop.ru/95505.html>
5. Prilutskaya, S. K. Fundamentals of Phthysiology: Textbook / S. K. Prilutskaya, Yu. E. Prilutskaya. - Minsk: Republican Institute of Vocational Education (RIPO), 2015. - 284 p. - ISBN 978-985-503-497-2. - Text: electronic // Digital educational resource IPR SMART: [website]. - URL: <https://www.iprbookshop.ru/67704.html>

Internet resources:

1. <http://rudocor.net> / – Medical portal;
2. <http://www.e-reading.club> / – Comprehensive online library;
3. <https://dic.academic.ru> / – Dictionaries and encyclopedias;
4. <https://roszdravnadzor.gov.ru> / – Federal Service for Healthcare Supervision;
5. <https://www.rmj.ru> / – Russian Medical Journal

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Interview questions.

I. Historical information about tuberculosis. Clinical classification of tuberculosis. Anti-tuberculosis institutions.

1. Give a definition: what is tuberculosis?
2. List the main clinical forms of respiratory tuberculosis in children and adolescents.
3. List the main clinical forms of tuberculosis in adults.
4. Features of collecting anamnesis in persons with suspected tuberculosis and patients with tuberculosis.
5. List the main symptoms of tuberculosis.
6. The importance of correctly collecting a complete medical and life history of patients with tuberculosis.
7. What is the structure and basic principles of the work of anti-tuberculosis institutions.
8. What is the joint activity of the OLS, sanitary and epidemiological supervision bodies and anti-tuberculosis service in matters of prevention, detection and treatment of tuberculosis.
9. List the main methods of the mandatory diagnostic minimum examination (OMD) and DMI-1.
10. List the indications for using instrumental and surgical types of biopsies (DMI-2).
11. Grouping of patient groups subject to dispensary examination in the Kyrgyz Republic and the Russian Federation.

II. Microbiology and Pathological Anatomy of Tuberculosis.

1. The main pathogenic properties of the causative agent of tuberculosis.
2. Types of Mycobacterium tuberculosis, forms of variability.
3. Drug-resistant Mycobacterium tuberculosis, their properties.
4. L-forms, their properties, filterable forms. "Atypical" Mycobacterium.
5. Non-specific and specific stages of tuberculosis inflammation.
6. Alternative, exudative, and productive inflammatory processes. Structure tuberculosis granuloma.
7. Dynamics of pathomorphological changes depending on the stage of the disease, phase of the process and treatment.
8. Compare the informativeness of different laboratory methods of detection .Mycobacterium tuberculosis: bacterioscopy, the method of seeding.
9. Clinical significance of drug resistance.
10. List the advantages and disadvantages of bacterioscopic and bacteriological methods of research.

III. Immunology of Tuberculosis. Tuberculin Diagnostics.

1. Define tuberculin and its differences from the BCG vaccine. Name the types of tuberculins.
2. List the types of tuberculin tests and the main indications for their use.
3. Pathomorphology of tuberculin reactions.
4. List the goals and objectives of the Mantoux test with 2 TU.
5. Technique of the Mantoux test with 2 TU, evaluation of the results.

6. Methods of examining children and adolescents based on the results of the Mantoux test with 2 TU.
7. How to form groups of increased risk of disease
8. tuberculosis among children and adolescents by Mantoux test?
9. The purpose, technique of staging and evaluation of the results of Koch test.
10. Indications for staging and evaluation of the results of the graduated tuberculin test (adequate, equalizing, paradoxical).
11. To carry out differential diagnosis of infectious and postvaccinal sensitivity to tuberculin.

IV. Vaccination and revaccination with BCG and BCG-M. Chemoprophylaxis.

1. Define the term "BCG vaccine".
2. When and by whom was the first BCG vaccine obtained?
3. Types of BCG vaccine.
4. Method of obtaining BCG vaccine, methods of use, storage, and methods of administration (enteral, intradermal). Vaccination doses.
5. Indications and contraindications for vaccination and revaccination with BCG and BCG-M.
6. Technique of administering (injecting) BCG vaccine.
7. Monitoring the nature and course of the vaccination reaction to the BCG vaccine.
8. Evaluation of the effectiveness of BCG vaccination.
9. Classification of complications after vaccination and their frequency. Treatment.
10. Types of tuberculosis prevention.
11. The drug used for chemoprophylaxis: doses, timing, and indications.

V. X-ray diagnosis of pulmonary tuberculosis.

1. The role and significance of the fluorographic examination method. Digital fluorograph.
2. The possibilities of the radiosopic examination method.
3. X-ray photography as the main method of radiological examination, types of X-ray photography.
4. Algorithms for describing pathological formations in the lungs and mediastinum.
5. Tomography as an important additional method of radiological examination, its advantages.
6. Computed tomography (CT) and magnetic resonance imaging (MRI). Principles of work and indications for performance.
7. X-ray examination using contrast agents. (Bronchography, angiopneumography, fistulopleurography, pneumomediastinography, diagnostic pneumothorax), the main indications.
8. List the main diseases that manifest themselves with syndromes of opacification, dissemination, and rounded shadows.
9. List the main diseases that manifest themselves with syndromes of lucency, pathology of the root and mediastinum, and pulmonary pattern.

VI. Primary tuberculosis. Mantoux test "turning point". Tuberculosis intoxication in children and adolescents.

1. Definition of the term "primary tuberculosis".
2. Name the main objective and clinical signs of primary tuberculosis.
3. List the specific and nonspecific mechanisms of the body's defense against tuberculosis infection.
4. List the methods for detecting tuberculosis in children and adolescents.
5. "Tuberculosis intoxication in children and adolescents" as a nosological form.
6. The nature of paraspecific reactions and their morphological basis.
7. "Vortex" of tuberculin reactions as an objective sign of primary infection.
8. Changes in laboratory indicators and internal organs.
9. Clinical and radiological picture of tuberculosis intoxication.
10. Measures in the focus of tuberculosis infection – questioning and examination of contact persons, the need for immunization.
11. Factors and groups of increased risk of infection and tuberculosis among children and adolescent groups.
12. Dispensary supervision of sick children and adolescents (grouping of contingents).
13. Treatment of children and adolescents suffering from tuberculosis intoxication.

VII. Primary Tuberculosis Complex (PTC), clinic, diagnosis, course.

VIII. Tuberculosis of intrathoracic lymph nodes (TVGLU), clinic, diagnosis, course.

1. Features of anamnesis, examination and examination in children with TVGLU and PTC.
2. Pathogenesis of primary tuberculosis.
3. Methods of early detection of tuberculosis in children and adolescents.
4. Clinical and radiological phases of PTC.
5. Clinical and radiological forms of TVGLU. Classification (schemes) of intrathoracic lymph nodes.
6. Complicated course of TVGLU and PTC.
7. Features of treatment of children and adolescents with tuberculosis.
8. Groups at increased risk of infection and tuberculosis among children and adolescents.
9. Measures in the focus of tuberculosis infection to identify contacts, their examination and establishment of hygienic and anti-epidemic regime.
10. Dispensary supervision of sick children and adolescents (grouping of contingents).

IX. Disseminated pulmonary tuberculosis. Miliary pulmonary tuberculosis.

Clinic, diagnosis, treatment.

1. Define the clinical variants of disseminated tuberculosis.
2. Describe the radiological picture of miliary pulmonary tuberculosis.
3. Describe the variety of clinical manifestations of miliary tuberculosis. Outcomes.
4. Clinical manifestations of subacute disseminated pulmonary tuberculosis.
5. Clinical manifestations of chronic disseminated pulmonary tuberculosis.
6. Complications of disseminated pulmonary tuberculosis.
7. X-ray picture of subacute disseminated pulmonary tuberculosis.
8. X-ray picture of chronic disseminated pulmonary tuberculosis.
9. Methods of identifying patients with disseminated pulmonary tuberculosis and, possibly, drug-resistant forms.
10. Diseases that often have to be differentiated with clinical variants of disseminated pulmonary tuberculosis.

X. Tuberculous meningitis. Clinic, diagnostics, treatment.

1. Define the clinical form "Tuberculous Meningitis".
2. Diagnosis of Tuberculous Meningitis.
3. Classification of Tuberculous Meningitis (types, according to the course).
4. The main periods of the clinical course of Tuberculous Meningitis.
5. List the symptoms of meningitis.
6. List the symptoms of cranial nerve damage.
7. List the symptoms of diencephalic damage.
8. Comparative characteristics of cerebrospinal fluid
9. in case of tuberculous, purulent, serous meningitis.
10. Complications of tuberculous meningitis, their treatment.
11. Complex treatment of tuberculous meningitis.

XI. Focal pulmonary tuberculosis. Pulmonary tubercles. Clinic and diagnostics. Analysis of patients.

1. Definition of the terms "focal pulmonary tuberculosis" and "pulmonary tuberculoma". Pathogenesis of secondary forms of pulmonary TB. Exogenous superinfection, endogenous reactivation.
2. The role of the fluorographic method in the early detection of limited forms of pulmonary tuberculosis.
3. The role of microbiological methods in detecting the causative agent of the disease in patients with pulmonary tuberculomas and focal pulmonary tuberculosis. The importance of microscopy .Sputum and bacteriological method (sputum culture) in clarifying the diagnosis.
4. Clinical manifestations and course of focal pulmonary tuberculosis. Outcomes.
5. Clinical manifestations and course of pulmonary tuberculomas. Outcomes.
6. Methods for determining the latent activity of focal pulmonary tuberculosis. Koch test.
7. X-ray signs of active and inactive foci.
8. X-ray signs of stable, progressive, and regressive tuberculomas.

9. The tactics of a CSM doctor, GSV doctor, and other specialists when detecting focal and rounded shadows on X-ray images.
10. The role and significance of biopsy methods in the diagnosis of tuberculomas and other rounded formations in the lungs.
11. The significance of surgical methods in the treatment of tuberculomas.

XII. Acute and disseminated forms of pulmonary TB. Caseous pneumonia. Infiltrative pulmonary tuberculosis.

1. Definition of the terms of clinical forms "Infiltrative pulmonary tuberculosis" and "Caseous pneumonia".
2. The concept of acute-progressive forms of tuberculosis.
3. Risk factors for the occurrence of these forms of TB.
4. Methods of detection, diagnosis and differential diagnosis of these forms of pulmonary tuberculosis.
5. The role of the radiological method in the detection of these forms of pulmonary tuberculosis.
6. Features of the morphological nature of inflammation and the acute course of the process as a result of a state of severe immunodeficiency in patients with caseous pneumonia.
7. The importance of sputum microscopy and bacteriological methods (sputum culture) in making a diagnosis and monitoring treatment.
8. Features of the clinical manifestations and course of these forms of tuberculosis.
9. Possible complications and their management. Outcomes of the disease.
10. Comprehensive treatment of patients with disseminated forms of TB.

XIII. Destructive (chronic) forms of secondary pulmonary tuberculosis: cavitary, fibro-cavitary, and cirrhotic.

1. Definition of terms of chronic destructive forms of pulmonary tuberculosis.
2. Clinical manifestations and nature of the course of the disease.
3. Complications, their elimination. Outcomes of the disease.
4. Characteristic signs of the radiological picture of these forms of pulmonary tuberculosis.
5. Methods of detection, diagnosis and differential diagnosis of chronic destructive forms.
6. The importance of sputum microscopy and bacteriological method (sputum culture) in the diagnosis, treatment control and determination of LU forms.
7. The problem of drug resistance and its impact on treatment outcomes.
8. Comprehensive treatment of patients with chronic destructive forms of pulmonary tuberculosis.
9. The importance of timely surgical intervention in the treatment of patients with chronic tuberculosis.
10. Measures in the focus of chronic tuberculosis infection, including the examination of contact persons, current and final disinfection, and the treatment of the patient.

XIV. Extra-pulmonary forms of tuberculosis. Exudative pleuritis.

1. Define extrapulmonary tuberculosis.
2. Pathogenesis and classification of tuberculous pleuritis.
3. Structure of pleural sheets and mechanism of formation of pleural fluid.
4. X-ray and clinical features of fibrinous (dry) pleuritis.
5. X-ray and clinical features of exudative pleuritis.
6. Possible complications, outcomes, principles of treatment.
7. Pleural empyema (clinical features, diagnosis, and treatment).
8. Determine the management tactics for patients with exudative pleuritis.
9. Identify risk groups for extrapulmonary tuberculosis and determine the scope of patient monitoring.

XV. Tuberculosis of peripheral and mesenteric lymph nodes. Tuberculosis of bones and joints. Tuberculosis of the genitourinary system.

1. Describe the epidemiological situation of extrapulmonary TB in the KR.
2. List the methods of examination and diagnostics for the purpose of timely detection of extrapulmonary forms of TB.
3. Features of the course of tuberculous spondylitis – phases of the disease (prespondylitic, spondylitic, postspondylitic).

4. Features of the course of tuberculosis of large joints, phases of the disease (prearthritic, arthritic, postarthritic), complications.
5. Features of the course of tuberculosis of the genitourinary system – frequency and clinic of lesions of different parts of the MPS.
6. Features of the course of tuberculosis of peripheral lymph nodes – pathomorphology, clinic, complications.
7. Features of the course of tuberculous spondylitis – phases of the disease (prespondylitic, spondylitic, postspondylitic). Possible complications, outcomes, principles of treatment.
8. List the radiological signs of tuberculous lesions of bones and joints and their differential diagnosis with other lesions of the bone-joint apparatus.
9. Causes of late detection of extrapulmonary forms of tuberculosis.
10. The algorithm of action of general medical network doctors in case of suspicion of tuberculosis of various localizations.

XVI. General principles and methods of treating patients with various forms and manifestations of tuberculosis.

1. Organization of TB patients treatment in KR.
2. List the basic principles of TB patients treatment.
3. Justify the principles of timeliness, complexity, rationality, duration, continuity.
4. Justify the principles of continuity of treatment, taking into account age, concomitant diseases, drug sensitivity.
5. Characteristics of PTP, methods of eliminating their side effects.
6. Methods of pathogenetic treatment of TB patients.
7. Explain the mechanism of action and indications for the use of collapse therapy.
8. Specify the role and methods of surgical treatment for patients with pulmonary tuberculosis.
9. Determine the outcomes of treatment for patients with tuberculosis.
10. The importance of hygiene and dietary regimes and spa treatment.
11. Temporary disability and work of the Medical and Social Expert Commission.

XVII. National TB programs. DOTS and DOTS PLUS strategies, the new WHO Stop TB strategy (STOP TB).

1. The main provisions of the National Program for the Control of Tuberculosis in the Kyrgyz Republic (accessibility, free provision, guaranteed service).
2. The main objectives of the National Programs "Tuberculosis – 1 and 2".
3. The main objectives of the National Programs "Tuberculosis – 3".
4. The stages of implementing the DOTS strategy in the Kyrgyz Republic.
5. The WHO classification of tuberculosis from an epidemiological perspective.
6. The results of implementing the DOTS strategy in the republic.
7. Name the 5 principles of the DOTS strategy.
8. What are the principles and terms of TB patients' treatment, according to the DOTS strategy.
9. What chemotherapy drugs are used in the treatment of newly diagnosed TB patients?
10. Describe the active methods of TB detection, and which population groups they are used among.

XVIII. Identification and Diagnosis of Tuberculosis Patients in the Modern Conditions of the Kyrgyz Republic and the Russian Federation.

1. Organization of detection of TB patients according to the DOTS strategy in the world and in the KR.
2. The main methods and ways (passive and active) of detection of TB patients.
3. The main indications for bacterioscopy, the advantages and disadvantages of the method.
4. The technique and timing of collecting sputum.
5. The role of primary health care in the detection of TB patients.
6. Interpret the results of microscopic examination of sputum in accordance with the WHO algorithm for detecting cases of tuberculosis.
7. Adult population groups subject to mandatory annual preventive examinations using fluorography.
8. Adolescent and child population groups subject to mandatory annual preventive examinations using tuberculin diagnostics.

9. Monitoring system for all activities related to the implementation of the National Tuberculosis Program.
10. The main reasons for the late detection of tuberculosis in polyclinics and general medical facilities.

XIX. Treatment of tuberculosis patients from the perspective of the DOTS strategy.

Combined infection HIV/AIDS and tuberculosis.

1. Principles of treatment of TB patients according to the DOTS strategy.
2. Justify the principle of treatment controllability (KKhT).
3. Name the HP for the treatment of newly detected patients.
4. Name the types of patients and standard treatment regimens for the first category of DOTS.
5. Name the types of patients and standard treatment regimens for the second category of DOTS.
6. Name the types of patients and standard treatment regimens for the third category of DOTS.
7. Terms of control and criteria for assessing the effectiveness of treatment by microscopy sputum.
8. Outcomes of treatment according to the DOTS strategy.
9. Clinical manifestations of combined HIV/AIDS infection and tuberculosis.

XX. Drug-resistant (DR) tuberculosis, mechanisms of development. Treatment features MDR-TB.

1. The main epidemiological indicators of LU in the Kyrgyz Republic and in the world.
2. The concept of drug resistance, including the multidrug-resistant case of TB (MDR-TB).
3. Types of LU (primary, secondary, combined, monoresistance, polyresistance, MDR-TB, XDR TB, XXDR TB).
4. Mechanisms of drug resistance development.
5. The reasons for the formation of drug resistance.
6. Identification and diagnosis of MDR-TB patients. (bacteriological method).
7. Understanding of modern methods of accelerated diagnosis of tuberculosis and resistance (BACTEC, PCR).
8. Basic principles of treatment of MDR-TB patients under the DOTS – Plus program according to the WHO recommendations.
9. Name the reserve-line CP for treatment of patients with multiresistant forms of TB.
10. The problem of TB in prisons.

Recommended Literature.

Basic literature:

4. Bronchoscopy in the Diagnosis and Treatment of Respiratory Diseases / G. F. Palamarchuk, A. L. Akopov, A. I. Arsenyev [et al.]. – Saint Petersburg: Foliant, 2019. – 328 pp. – ISBN 978-5-93929-290-0. – Text: electronic version // Digital Educational Resource IPR SMART: [website]. – URL: <https://www.iprbookshop.ru/90208.html>;
5. Helberg, I. S. Pulmonology: A Textbook / I. S. Helberg, S. B. Wolf, E. N. Alexo. Minsk: Higher School Press, 2019. 368 pp. ISBN 978-985-06-3041-4. Text: electronic format // Digital educational resource IPR SMART: [website]. URL: <https://www.iprbookshop.ru/120093.html> .
6. Okorkov, A.N. Treatment of Diseases of Internal Organs. Vol. 1: Treatment of Diseases of the Respiratory Organs; Treatment of Diseases of the Digestive Organs / A.N. Okorkov. – 2nd ed. – Moscow: Medical Literature, 2021. – 547 pp. – ISBN 978-5-89677-011-1; 978-5-89677-007-7 (vol. 1). – Text: electronic format // Digital educational resource IPR SMART: [website]. URL: <https://www.iprbookshop.ru/108377.html>

Additional Literature:

1. Alemanova, G. D. Differential Diagnostics of Respiratory System Diseases: A Textbook for 6th Year Medical Students / G. D. Alemanova ; edited by L. Yu. Popov. - Orenburg : Orenburg State Medical Academy, 2010. - 88 p. -Text : electronic // Digital Educational Resource IPR SMART : [website]. - URL: <https://www.iprbookshop.ru/21808.html>

2. Breathing: A Study Guide / Compiled by V. A. Anzorov and S. V. Moryakina. - Grozny: Chechen State University, 2018. - 95 p. - Text: electronic // Digital Educational Resource IPR SMART : [website]. - URL: <https://www.iprbookshop.ru/107742.html>
3. Koshechkin, V. A. Tuberculosis and HIV Infection in Adults: A Study Guide / V. A. Koshechkin, V. N. Zimina, and V. I. Shirmanov. - Moscow: Russian University of Friendship of Peoples, 2014. - 316 p. - ISBN 978-5-209-05543-3. - Text: electronic // Digital Educational Resource IPR SMART: [website]. - URL: <https://www.iprbookshop.ru/22223.html>
4. Okorokov, A. N. Diagnostics of Internal Organ Diseases: Book 4. Diagnostics of Respiratory Diseases / A. N. Okorokov. - Moscow: Medical Literature, 2019. - 224 p. - ISBN 978-5-89677-214-9 (book 4), 978-5-89677-016-2. - Text: electronic // Digital Educational Resource IPR SMART: [website]. - URL: <https://www.iprbookshop.ru/95505.html>
5. Prilutskaya, S. K. Fundamentals of Phthisiology: Textbook / S. K. Prilutskaya, Yu. E. Prilutskaya. - Minsk: Republican Institute of Vocational Education (RIPO), 2015. - 284 p. - ISBN 978-985-503-497-2. - Text: electronic // Digital educational resource IPR SMART: [website]. - URL: <https://www.iprbookshop.ru/67704.html>

Internet resources:

6. <http://rudocor.net> / – Medical portal;
7. <http://www.e-reading.club> / – Comprehensive online library;
8. <https://dic.academic.ru> / – Dictionaries and encyclopedias;
9. <https://roszdravnadzor.gov.ru> / – Federal Service for Healthcare Supervision;
10. <https://www.rmj.ru> / – Russian Medical Journal