

**METHODOLOGICAL INSTRUCTIONS FOR THE ORGANIZATION OF STUDENTS'
INDIVIDUAL WORK IN THE DISCIPLINE "DIAGNOSTICS AND TREATMENT OF
EXTRAPULMONARY TUBERCULOSIS" OF SPECIALTY 31.05.01 "INTERNAL
MEDICINE"**

Full-time education form

Introduced into the educational process by the decision of the Academic Committee of the IMEIK
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Introduction

A short description of the academic discipline "Diagnostics and treatment of extrapulmonary tuberculosis".

The methodological manual has been prepared in accordance with the requirements of the working program and contains methodological instructions on the main sections of the academic discipline "Diagnostics and treatment of extrapulmonary tuberculosis" according to the current study plan. The teaching aid is intended for organization of individual work of students of medical faculty, studying on specialty 31.05.01 "Internal Medicine".

Discipline "Diagnostics and treatment of extrapulmonary tuberculosis" refers to the variative part of B.1. In accordance with FSES 3+ EO (2015) and the curriculum of the specialty 31.05.01 ""Internal Medicine", approved by the rector of Ulyanovsk State University.

The content, requirements, conditions and procedure for the organization of independent work of students, taking into account the form of training are determined in accordance with the "Regulations on the organization of independent work of students", approved by the Academic Council of ULGU.

Types of SSW (Self-study work of students)

Name of the section / subject	Types of SSW	Current control
Section 1. Clinic and diagnosis of extrapulmonary tuberculosis	Study of educational material on the data of literature; Study of educational material according to the data of lectures; Training material development, solution tasks, test preparation work	Testing, task solving check
Section 2: Treatment, prevention of extrapulmonary tuberculosis: dispensary monitoring of extrapulmonary tuberculosis patients	Study of educational material on the data of literature; Study of educational material according to the data of lectures; Training material development, solution tasks, test preparation work, Project activities (making a plan to detect and prevent tuberculosis in the therapeutic area of the city clinic and in the therapeutic department of the central district hospital in-patient department)	Testing, task solving check.

The purpose of CRS in mastering the discipline

The purpose of CRS in learning the discipline "Diagnostics and treatment of extrapulmonary tuberculosis" is to develop knowledge, skills and competencies to interpret the results of general clinical laboratory, microbiological, immunological, radiological, endoscopic, functional, morphological tests and management of patients with various clinical forms of extrapulmonary tuberculosis.

CRS tasks in learning the discipline

- Obtaining knowledge on general clinical laboratory, microbiological, immunological, radiological, endoscopic, functional, morphological tests in various clinical forms of extrapulmonary tuberculosis.
- Mastering the principles of interpretation of the results of general clinical laboratory, microbiological, immunological, radiological, endoscopic, functional, morphological studies in various clinical forms of extrapulmonary tuberculosis.
- Mastering the principles of managing patients with various forms of extrapulmonary tuberculosis.

Expected results (competencies)

Code and name of the general professional competence	Code and name of the indicator of achievement of general professional competence
<p style="text-align: center;">UC2 -</p> <p>Able to manage the project at all stages of its life cycle</p>	<p>ID-1 UC2</p> <p>Know:</p> <p>Methods of detecting and preventing tuberculosis of extrapulmonary localizations in the therapeutic area of a city polyclinic;</p> <p>Methods of detection and prevention of tuberculosis of extrapulmonary localizations in the therapeutic department of the hospital central district hospital.</p> <p>ID-2 UC2</p> <p>Be able to:</p> <p>Identify officials who are direct executors in the implementation of the plan for the detection and prevention of extrapulmonary tuberculosis at the medical therapeutic area of the city polyclinic;</p> <p>Identify officials who are direct executors in the implementation of the plan for the detection and prevention of extrapulmonary tuberculosis in the therapeutic department of the hospital of the central district hospital.</p> <p>Identify the official who approves the plan for the detection and prevention of tuberculosis of extrapulmonary localizations in the therapeutic area of the city polyclinic;</p> <p>Identify the official who approves the plan for the detection and prevention of tuberculosis of extrapulmonary localizations in the therapeutic department of the inpatient department of the central district hospital.</p> <p>Identify officials to coordinate a plan for the detection and prevention of tuberculosis of extrapulmonary localizations in the medical therapeutic area of the city polyclinic;</p> <p>Identify officials to coordinate a plan for the detection and prevention of extrapulmonary TB in the therapeutic department of</p>

	<p>the inpatient department of the central district hospital.</p> <p>ID-3 UC2 Own: to make a comprehensive plan for the detection and prevention of tuberculosis of extrapulmonary localizations in the therapeutic area of the city clinic;</p> <p>to make a comprehensive plan for the detection and prevention of extrapulmonary tuberculosis in the therapeutic department of the inpatient department of the central district hospital.</p>
<p>PC2 - Readiness to collect and analyze patient complaints, data from his anamnesis, examination results, laboratory, instrumental, pathological and anatomical and other studies in order to recognize a condition or establish the presence or absence of a disease</p>	<p>ID-1 pc2 Know: methods of diagnosis, diagnostic capabilities of methods of direct examination of a patient with tuberculosis; modern methods of clinical, laboratory (clinical and biochemical analysis of blood and urine, examination of sputum on the MBT by the microscopic method with staining according to Tsil_Nelson, by flotation, inoculation, PCR, methods for determining the drug sensitivity of MBT), immunological (Mantoux test with 2 TE, with tuberculosis allergen recombinant, Koch test), instrumental examination of tuberculosis patients (including endoscopic, radiological methods, ultrasound diagnostics, computed tomography), histological (biopsies obtained during endoscopic examinations and surgical interventions, in sections).</p> <p>ID2-pc2 Be able to: determine the patient's status: collect anamnesis, epidemic history, interview the patient and / or his relatives, conduct a physical examination of the patient (examination, palpation, percussion, auscultation); to conduct a primary examination of systems and organs: respiratory, cardiovascular, blood and hematopoietic organs of the digestive, endocrine and urinary organs;</p> <p>outline the volume of additional studies in accordance with the prognosis of the disease, to clarify the diagnosis and obtain a reliable result.</p> <p>ID-3 pk2 Own: methods of general clinical objective examination (questioning, examination, palpation, percussion, auscultation) in a patient with tuberculosis; interpretation of the results of physical, laboratory, immunological, morphological, instrumental research methods in order to diagnose various forms of tuberculosis</p>
<p>PC4 Readiness to determine the need for the use of natural therapeutic factors, non-drug therapy and other methods in patients in need of medical</p>	<p>ID-1 pc4 Know: Indications and contraindications for the use of palliative surgical interventions in tuberculosis of extrapulmonary localization; Indications and contraindications for the use of radical surgical</p>

rehabilitation and spa treatment	<p>interventions in tuberculosis of extrapulmonary localizations; Indications and contraindications to sanatorium-resort treatment of tuberculosis of extrapulmonary localizations ID-2 pc4 Be able to: Identify Indications and contraindications for the use of palliative surgical interventions in tuberculosis of extrapulmonary localization; Identify Indications and contraindications for the use of radical surgical interventions in tuberculosis of extrapulmonary localizations Identify Indications and contraindications to sanatorium-resort treatment of tuberculosis of extrapulmonary localizations; ID-3 pc4 Own: The methodology for determining indications and contraindications to the use of palliative surgical interventions in tuberculosis of extrapulmonary localization; Methodology Determination of indications and contraindications for the use of radical surgical interventions in tuberculosis of extrapulmonary localization; Methodology Determination of indications and contraindications to the use of sanatorium-resort treatment of tuberculosis of extrapulmonary localizations.</p>
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Questions for self-preparation for lessons

Section 1. Clinic and diagnosis of extrapulmonary tuberculosis

Topic 1: Etiology, general concept of extrapulmonary tuberculosis pathogenesis and its pathomorphology. Classification of extrapulmonary tuberculosis. Methods of diagnostics of extrapulmonary tuberculosis.

Questions to the lesson:

- 1 General concept of extrapulmonary tuberculosis pathogenesis
- 2 Types of specific tissue reactions in extrapulmonary tuberculosis
- 3 Features of extrapulmonary tuberculosis causative agent
- 4 MDT variability, drug resistance as an expression of variability
- 5 MBT detection methods (bacterioscopic, bacteriological, molecular genetic - PCR)
- 6 Physical methods of diagnostics of extrapulmonary tuberculosis.
- 7 Laboratory methods of VLT diagnostics: general clinical, cytological, histological.
- 8 Immunological methods of diagnostics of VLT. Sample with tuberculosis recombinant allergen.
- 9 Tuberculinodiagnosis of VLT (Mantu sample with 2 TE, Koch sample)
- 10 Instrumental diagnosis of VLT
- 11 Methods of radiation diagnostics - radiological, ultrasonographic, CT, NMR.

12 Endoscopic examination methods in HLT diagnostics: FGDS, FKS, cystoscopy, diagnostic laparoscopy.

Topic 2. Tuberculosis of the brain tissue.

Questions to the topic:

- 1 Pathogenesis and pathological anatomy of tuberculosis meningitis
- 2 Basal and convexital tuberculosis meningitis; spinal cord tuberculosis
- 3 Clinical picture of tuberculosis meningitis in typical cases
- 4 Brain irritation symptoms
- 5 Symptoms of cranial nerve damage
- 6 Criteria for the diagnosis of tuberculosis meningitis
- 7 Exodus of tuberculosis meningitis.
- 8 Spinal puncture, liquor studies for tuberculosis meningitis
- 9 Differential diagnosis of tuberculosis meningitis
- 10 Atypical clinical variants of the onset of tuberculous meningitis: acute serous, acute abortion, acute purulent meningitis, acute psychosis, epileptoid, "acute abdominal".
- 11 Features of tuberculosis meningitis treatment

Topic 3: Tuberculosis of urinary organs, female and male genitals.

Questions to the topic:

- 1 Pathogenesis and pathological anatomy of the urinary system organs: kidney, ureter, bladder tuberculosis
- 2 Pathogenesis and pathological anatomy of genital tuberculosis in women
- 3 Pathogenesis and pathological anatomy of genital tuberculosis in men
- 4 Clinical picture, diagnosis and difdiagnosis of kidney tuberculosis
- 5 Clinical picture, diagnosis and difdiagnosis of ureterine and bladder tuberculosis
- 6 Cystoscopy, chromocystoscopy in diagnosis and difdiagnostics of tuberculosis of the urinary organs
- 7 Clinical picture, diagnosis and difdiagnosis of tuberculosis adnexitis
- 8 Clinical picture, diagnosis and difdiagnosis of tuberculosis endometritis
- 9 Hysterosalpingoscopy in diagnosis of female genital tuberculosis
- 10 Clinical picture, diagnosis and difdiagnostics of tuberculosis orchoepididymitis
- 11 Clinical picture, diagnosis and difdiagnosis of tuberculosis prostatitis

Topic 4: Tuberculosis of the osteo-articular system

Questions to the topic:

- 1 Pathogenesis and pathology of tuberculosis of bones and joints
- 2 Clinical picture of tuberculosis of bones and joints: intoxication syndrome, local symptoms
- 3 Clinical picture of tuberculosis spondylitis in the pre-spondylitic, spondylitic, postspondylitic stages
- 4 Clinical picture of tuberculosis coccitus and gonitis in the pre, arthritic and postartritic stages
- 5 Complications and outcomes of tuberculosis spondylitis
- 6 Complications and outcomes of tuberculosis coxitis and gonitis
- 7 Differential diagnosis of tuberculosis spondylitis
- 8 Differential diagnosis of tuberculosis coccitus and gonitis

Topic 5. Abdominal tuberculosis.

Questions to the topic:

- 1 Pathogenesis and pathologic anatomy of tuberculosis of the gastrointestinal tract
- 2 Pathogenesis and pathological anatomy of tuberculosis mesadenitis, tuberculosis of other intra-abdominal and retroperitoneal lymph nodes
- 3 Pathogenesis and pathologic anatomy of peritoneal tuberculosis
- 4 Pathogenesis and pathologic anatomy of tuberculosis of parenchymatous organs, abdominal cavity (liver and spleen)
- 5 Clinical picture of tuberculosis of gastrointestinal tract - intestine, stomach, esophagus
- 6 Clinical picture of tuberculosis mesadenitis, tuberculosis of other intra-abdominal and retroperitoneal lymph nodes
- 7 Clinical picture of peritoneal tuberculosis
- 8 Clinical picture of parenchymatous tuberculosis of abdominal organs (liver and spleen)
- 9 Complications of abdominal tuberculosis - bleeding, ulcer perforation, intestinal obstruction, etc.
- 10 Differential diagnosis of abdominal tuberculosis.
- 11 Exodus of abdominal tuberculosis

Topic 6: Tuberculosis of peripheral lymph nodes, skin and eyes.

Questions to the topic:

- 1 Pathogenesis and pathatomy of peripheral lymph node tuberculosis
- 2 Pathogenesis and pathological anatomy of skin tuberculosis
- 3 Pathogenesis and pathological anatomy of eye tuberculosis
- 4 Clinical picture of tuberculosis of peripheral lymph nodes in the initial stage, the stage of caseose without decay, abscess and fistulous stages
- 5 Bacteriological and histological criteria for the diagnosis of peripheral lymph node tuberculosis

- 6 Differential diagnosis of tuberculosis of peripheral lymph nodes with malignant lymphadenopathies, sarcoidosis, felonosis, AIDS, neck side cysts
- 7 Clinical manifestations and differential diagnosis of tuberculosis lupus with syphilis and lupus red
- 8 Clinical manifestations and difdiagnosis of papulonecrotic skin tuberculosis with vulgar acne rash
- 9 Clinical manifestations and differential diagnosis of scrofuloderma with chronic deep peptic ulcer pyoderma
- 10 Clinic and differential diagnosis of inductive erythema with thrombophlebitis
- 11 Clinic of hematogenic lesions of eyeball shells (anterior uveitis, peripheral uveitis, choreoretinitis, panuveitis)
- 12 Clinic of eye protection apparatus tuberculosis (eyelid skin, tear glands)
- 13 Clinic Tuberculosis allergic eye diseases in primary tuberculosis infection (allergic keratoconjunctionitis)
- 14 Clinic of visual lesions in CNS tuberculosis (involvement of otorhinolaryngeal nerves in tuberculous meningitis)

Section 2: Treatment, prevention and detection of extrapulmonary tuberculosis. Dispensary surveillance of extrapulmonary tuberculosis patients.

Topic 7: General principles of tuberculosis treatment and peculiarities of extrapulmonary tuberculosis treatment.

Questions to the topic:

- 1 General principles of tuberculosis treatment: complexity, duration, continuity, continuity, staging
- 2 General principles of specific chemotherapy - combination, account of the mechanism of action of drugs, account of sensitivity of the causative agent, account of side effects, account of related diseases, account of individual tolerance.
- 3 Main antituberculosis drugs: isoniazid, rifampicin, streptomycin, pyrazinamide, ethambutol: mechanism of action, side effects and methods of their elimination
- 4 Reserve antituberculous drugs: canamycin, etionamide, protionamide, PASK, products of Ofloxacin: mechanism of action, side effects, ways of their elimination
- 5 Pathogenetic means to limit inflammatory response (GCS, NPVP, heparin)
- 6 Pathogenetic means for the prevention of fibrosis (hyaluronidase, pyrogenal, penicillamine)
- 7 Desensitizing
- 8 Microbial immunomodulators - BCG vaccine, tuberculin, pyrogenal, prodigiosan, ribomunil, sodium nucleinate
- 9 Immunomodulators of endogenous origin - thymus extract, immunophan; Cytokines - interleukin -2 human recombinant, interleukin -1 β human recombinant, interferon leukocytic human.

10 Synthetic and semi-synthetic immunomodulators - levamisole, glutoxime, polyoxidonium, lycopide

11 Pathogenetic drugs for the elimination of side effects

12 Radical methods of surgical treatment of extrapulmonary tuberculosis

13 Palliative treatments for extrapulmonary tuberculosis

14 Peculiarities of treatment of extrapulmonary tuberculosis: local application of medicines, immobilization in complex treatment of bone and joint tuberculosis.

Topic 8. Prevention and detection of extrapulmonary tuberculosis. Dispensary surveillance.

Questions to the topic:

1 Methods of specific prevention of extrapulmonary tuberculosis

2 Methods of nonspecific prevention of extrapulmonary tuberculosis

3 Primary chemoprophylaxis of extrapulmonary tuberculosis

4 Secondary chemoprophylaxis of extrapulmonary tuberculosis

5 Primary activities in the focus of extrapulmonary tuberculosis infection

6 Current activities in the focus of extrapulmonary tuberculosis infection

7 Work of the general network for prevention of extrapulmonary tuberculosis: risk groups for extrapulmonary tuberculosis

8 Work of the general network for detection of extrapulmonary tuberculosis: preventive bacteriological (study of urine on MBT), surveillance of patients with chronic kidney diseases, diseases of the gastrointestinal tract, hepatobiliary system, musculoskeletal system, HIV-infected persons

9 Dispensary groups for patients with extrapulmonary tuberculosis

List of practical skills on CRS

1 Interpretation of histological examination results of organ and tissue samples of TB patients

Interpretation of clinical OAC, OAM, biochemical blood tests for extrapulmonary tuberculosis 2.

3) Evaluation of the results of bacterioscopic and bacteriological examination of the materials for tuberculosis pathogen

4) Interpretation of the results of general clinical, biochemical study of liquor

5. Interpretation of the results of general clinical, biochemical study of ascitic fluid content

6. Interpretation of immunological research results in extrapulmonary tuberculosis - Mantu samples with 2 TE.

7. Interpretation of immunological test results in extrapulmonary tuberculosis - sample with tuberculosis recombinant allergen.

8. Interpretation of the results of immunological tests in extrapulmonary tuberculosis - Koch samples
9. Interpretation of immunologic research results in case of extrapulmonary tuberculosis - Grinchar-Karpilovsky sample
10. Interpretation of FBC, FGDS, laparoscopy, cystoscopy in extrapulmonary tuberculosis
11. Interpretation of X-ray examination results in various forms of extrapulmonary tuberculosis
12. Interpretation of ultrasound and CT results in various forms of extrapulmonary tuberculosis
13. Development of a treatment and management plan for patients with extrapulmonary tuberculosis under care
14. Drawing up a plan of measures to detect and prevent extra-pulmonary tuberculosis in the paediatric ward.

EDUCATIONAL-METHODICAL AND INFORMATION SUPPORT OF DISCIPLINE

a) List of recommended literature

a) Core reading:

1. Koshechkin, V. A. Phthisiatry : textbook. / Koshechkin V. A. - Москва : ГЭОТАР-Медиа, 2019. - 256 с. - ISBN 978-5-9704-5302-5. - Текст : электронный // ЭБС "Консультант студента" : [сайт]. - URL : <https://www.studentlibrary.ru/book/ISBN9785970453025>.
2. Yushchuk, N. D. Infectious diseases : textbook / Yushchuk N. D. , Vengerov Yu. Ya. - Москва : ГЭОТАР-Медиа, 2020. - 464 с. - ISBN 978-5-9704-5504-3. - Текст : электронный // ЭБС "Консультант студента" : [сайт]. - URL : <https://www.studentlibrary.ru/book/ISBN9785970455043.html>

b) Supplementary reading:

1. Tarasova L. G. Orofacial tuberculosis: clinic, diagnosis, differential diagnosis / L. G. Tarasova. - Томск : Издательство СибГМУ, 2020. - 102 с. - ISBN 9785985911596. - Текст : электронный // ЭБС "Букап" : [сайт]. - URL : <https://www.books-up.ru/ru/book/orofacial-tuberculosis-clinic-diagnosis-differential-diagnosis-10782954/>
2. Budritsky A. M. Methodics instructions for practical training in Phthisiopulmonology : for the 4-th courses students of medical faculty / A. M. Budritsky, N. V. Vasilenko, N. S. Pravada. - Витебск : ВГМУ, 2020. - 104 с. - ISBN 9789854669700. - Текст : электронный // ЭБС "Букап" : [сайт]. - URL : <https://www.books-up.ru/ru/book/methodics-instructions-for-practical-training-in-phthisiopulmonology-12145454/>

c) Educational and methodical literature

1. Savonenkova L. N.

Methodological instructions for the organization of students' individual work in the discipline «Diagnostics and treatment of extrapulmonary tuberculosis» for specialty 31.05.01 «General medicine» / L. N. Savonenkova; Ulyanovsk State University, Institute of Medicine, Ecology and Physical culture. - Ulyanovsk : UISU, 2022. - Неопубликованный ресурс; На англ. яз. - URL: <http://lib.ulsu.ru/MegaPro/Download/MObject/11525>. - Режим доступа: ЭБС УлГУ. - Текст : электронный.

Approved by the head of Department of Faculty Therapy



____ Ruzov V.I.

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