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**МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ  
ДЗ «ЛУГАНСЬКИЙ ДЕРЖАВНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ»  
ЗАПОРІЗЬКИЙ ДЕРЖАВНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ**

**PHTHISIOLOGY  
(ФТИЗИАТРІЯ)**

**Collection of test tasks for final module control for training of IV year students of  
phthiology course and for the training licensed exam “Step – 2” for VI year  
students of medical faculty**

**(Збірник тестових завдань для підготовки студентів ІV курсу медичних  
факультетів до підсумкового модульного контролю та студентів VI курсу  
медичних факультетів до інтегрованого ліцензійного іспиту „Крок-2”)**

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Poostovyi Yu.G., Dolynska M.G., Gritsova N.A., Baranova V.V., Raznatovskaya E.N. Phthiology: training methodical appliances. Collection of test tasks for final module control for training of IV year students of phthiology course and for the training licensed exam “Step – 2” for VI year students of medical faculty – Zaporozhye, 2013. – 140 p.

F 93 **Фтизіатрія: навчально-методичний посібник.** Збірник тестових завдань для підготовки студентів ІV курсу медичних факультетів до підсумкового модульного контролю та студентів VI курсу медичних факультетів до інтегрованого ліцензійного іспиту „Крок-2”. – Запоріжжя, 2013. – 140 с.

To improve the training of students, the quality of mastering of theoretical material, the formation of self-motivation and the ability to practise self-control, the group of authors have created training methodical appliances "Phthiology" The training methodical appliances covers issues included in the curriculum of the module “phthiology”. The manual consists of 600 tests, which cover material of all six content modules. Each task of the test control has only one correct answer, that students have to define.

Standards of answers to all the tests are given at the end of the collection that gives the student an opportunity to assess the level of his knowledge, to define gaps and weak spots

in knowledge and thus to get ready for a final module control and for an integrated licensed examination "Step-2 "in phthiology in the best way.

For students of medical universities of the IV level of accreditation.

З метою удосконалення підготовки студентів, поліпшення якості засвоєння теоретичного матеріалу, формування мотивації до самонавчання та вміння здійснювати самоконтроль колективом авторів створено навчально-методичний посібник «Фтизіатрія». У посібнику висвітлено питання, передбачені навчальною програмою з модулю фтизіатрія. Посібник складається з 600 тестових завдань, які охоплюють матеріал усіх 6 змістових модулів. Кожне завдання тестового контролю має тільки одну правильну відповідь, яку мають визначити студенти. Еталони відповідей до всіх тестових завдань наведено наприкінці збірника, що надає студентові змогу самостійно оцінити рівень своїх знань, виявити прогалини та слабкі місця в знаннях і, таким чином, щонайкраще підготуватися як до підсумкового модульного контролю, так і до інтегрованого ліцензійного іспиту „Крок-2” з фтизіатрії.

Для студентів вищих медичних навчальних закладів IV рівня акредитації.

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## Foreword

Training of foreign students according to the credit-module system requires increasing in percentage of independent work and motivation to the accumulation of knowledge, ability to analyze and make decisions independently, which involves dividing of the program content of the subject into comparatively small parts, integrated within the size and the content- thematic modules. Studying of each module is completed with final module control, compulsory part of which should be the standardized method of quality control of mastering the material, such as the using of tests in format of the integrated licensed examination "Step".

To improve the training of foreign students in the departments of Phthisiology, to improve the quality of theoretical material, the formation of self-motivation and the ability to practise self-control, the group of authors have created training methodical appliances "Phthisiology" (in English). The training methodical appliances covers issues included in the curriculum of the module "phthisiology". The manual consists of 600 tests, which cover material of all six content modules. Standards of answers to all the tests are given at the end of the collection that gives the student an opportunity to assess the level of their knowledge objectively, to identify gaps in their knowledge and, thus, to get ready for a final module control and for an integrated licensed examination "Step-2 "in phthisiology in the best way.

Moreover, the reform of high medical education in Ukraine, based on Bologna Declaration, involves the study of phthisiology by the 6th-year students, directing attention to applied questions of differential diagnosis of tuberculosis based on previously acquired knowledge. Therefore, this collection can be useful, especially in preparation for the final testing of 6th year students. The 4th-year students during the final module control in phthisiology, provided successful solving of proposed tests are able to get a significant number of points.

## Передмова

Навчання іноземних студентів за кредитно-модульною системою потребує збільшення відсотку самостійної роботи, мотивації до накопичення знань, вміння аналізувати та приймати рішення самостійно, що передбачає структурування змісту програми навчальної дисципліни на відносно невеликі за обсягом та об'єднані за змістом частини - змістові модулі. Вивчення кожного модуля завершується підсумковим модульним контролем, обов'язковою складовою якого має бути такий стандартизований метод контролю якості засвоєння матеріалу, як використання тестів формату інтегрованого ліцензійного іспиту "Крок".

З метою удосконалення підготовки іноземних студентів на кафедрах фтизіатрії, поліпшення якості засвоєння теоретичного матеріалу, формування мотивації до самонавчання та вміння здійснювати самоконтроль, колективом авторів створено збірник тестових завдань «Фтизіатрія» (англійською мовою). У збірнику висвітлено питання, передбачені навчальною програмою з модулю фтизіатрія. Посібник складається з 600 тестових завдань, які охоплюють матеріал усіх 6 змістових модулів. Еталони відповідей до всіх тестових завдань наведено наприкінці збірника, що надає студентові змогу об'єктивно оцінити рівень своїх знань, виявити недоліки в знаннях і, таким чином, щонайкраще підготуватися як до підсумкового модульного контролю, так і до інтегрованого ліцензійного іспиту „Крок-2” з фтизіатрії. Тим більше, що реформа вищої медичної освіти в Україні, на засадах Болонської декларації, передбачає вивчення фтизіатрії студентами 6-го курсу з направленням зору на прикладні питання диференційної діагностики туберкульозу з урахуванням набутих раніше знань. Отже, даний збірник має бути корисним, передусім, в процесі підготовки до випускного тестування студентів 6-го курсу. Студенти 4-го курсу на підсумковому модульному контролі з фтизіатрії, при умові успішного розв'язання запропонованих тестових завдань, отримують можливість набрати вагому кількості балів.

1.

35-year-old woman suffering from diabetes mellitus presented with a fever up to 38°C, dry cough. Broad-spectrum antibiotics showed no effect but produced a rash. CBC: RBC -  $4.2 \times 10^{12}$  /L, Hb - 130 g/L, WBC –  $99 \times 10^9$  /L, eosinophil -3%, band neutrophil -4%, segmented neutrophil -67%, lymphocyte-18%, monocyte -8%, ESR - 32 m.m/hour. Chest X-ray shows a consolidation area 3 cm in diameter in the left upper zone with hazy borders, not homogenous, connected to the lung root. Auscultation revealed diminished breath sounds in the same area. What's the most likely diagnosis?

- A. Eosinophilic pneumonia.
- B. Tuberculoma.
- C. Infiltrative tuberculosis.
- D. Lung abscess.
- E. Lung cancer.

2.

65-year-old woman suffering from diabetes mellitus presented with a fever up to 38°C, dry cough. Chest X-ray shows a triangular opacity in the right upper zone which apex is turned to the hilum. The lower border of the opacity is clear whereas upper – hazy. Around there are some satellite foci of low density and hazy borders. What's the most likely diagnosis?

- A. Interlobar pleurisy.
- B. Lung abscess.
- C. Lung cancer.
- D. Community acquired pneumonia.
- E. Infiltrative tuberculosis.

3.

50-year-old patient is brought to the emergency care unit complaining of pain in the left side, dyspnea, fever up to 38°C, dry cough. The disease started gradually two weeks before. In childhood suffered from tuberculosis of bronchial lymph nodes. Affected side is behind the breathing. Percussion and auscultation revealed dullness and absent breathing in this area correspondently. Right heart border is shifted to the right. P 98/mm, constant fibrillation. AFB haven't been revealed in sputum. Mantoux skin test 5 TU PPD-S – papule 16 mm in diameter. What's the most likely diagnosis?

- A. Tubercle pleurisy.
- B. Lung cancer.
- C. Infiltrative tuberculosis.
- D. Pulmonary embolism.
- E. Community acquired pneumonia.

4.

27-year-old patient complains of malaise, weight loss, productive cough with the mucoid sputum, T 37.2-37.5°C. On examination no abnormalities have been revealed. CBC: WBC -  $9,2 \times 10^9$ /L, lymphocyte-14%, ESR - 25 mm/hour. Mantoux skin test 5 TU PPD-S – papule 10 mm in diameter. Chest X-ray: several nodules of low density and hazy borders in the I-II right segments. What disease must be suspected?

- A. Infiltrative tuberculosis.
- B. Community acquired pneumonia.
- C. Focal tuberculosis
- D. Disseminative tuberculosis.
- E. Tuberculosis residuals.

5.

20-year-old patient has been ill for a week. Presented with complaints of fever up to 38.2-39.5°C, constant dry cough, night sweating, dyspnea. The disease started suddenly from sharp pain in chest right side aggravating while coughing, deep breathing. At the moment pain is much weaker. On examination: left side the dull percussion sound is heard up to IV rib, where the breathing is weakened significantly. Chest X-ray showed right side subtotal homogenous opacity with the upper oblique border. Mediastinum is shifted to the left. What's the most likely diagnosis?

- A. Community acquired pneumonia.
- B. Pleurisy.
- C. Pleurocirrhosis.
- D. Infiltrative tuberculosis.
- E. Spondylitis.

6.

22-year-old patient presented with right-side pleurisy. Chest X-ray showed left side opacity up to the IV rib with the upper oblique border. In the left lung S<sub>2</sub> several foci of moderate density with hazy borders are visible. Mantoux skin test – 14 mm papule with vesicles around. Pleural fluid test: protein level increased, lymphocytes are the predominant cell type. What is the most likely etiology?

- A. Tuberculosis.
- B. Lung cancer.
- C. Community acquired pneumonia.
- D. Collagenosis.
- E. Pleural mesothelioma.

7.

Chest X-ray of 25-year-old asymptomatic male detected several 5-7 mm foci of moderate density with hazy borders in the left lung S<sub>1-2</sub>. CBC: WBC –  $11.9 \times 10^9$  /L, eosinophil -3%, band neutrophil -4%, segmented neutrophil -70%, lymphocyte-15%, monocyte -8%, ESR - 22 mm/hour What's the most likely diagnosis?

- A. Focal pulmonary tuberculosis, infiltration phase.
- B. Disseminated tuberculosis, infiltration phase.
- C. Infiltrative pulmonary tuberculosis.
- D. Focal pulmonary tuberculosis, consolidation phase.
- E. Disseminated tuberculosis, consolidation phase.

8.

26-year-old coal miner with the occupational seniority of 4 years has been complaining of dyspnea and malaise for several weeks. Chest X-ray revealed total nodulation with the nodule diameter up to 4 mm. In right S<sub>1</sub> an infiltrative area of 3 cm in diameter with hazy borders appears. What could it be more likely due to?

- A. Disseminated lung cancer.
- B. Sarcoidosis.
- C. Pneumoconiosis.
- D. Coniotuberculosis.
- E. Tuberculosis.

9.

Chest X-ray of 9 year-old symptom-free child showed an infiltrative shadow in left subclavicle area connected to the hilum. Hilar lymph nodes are enlarged. The child lives with the grandmother, mother died of tuberculosis. Data about Mantoux skin test results are absent. What's the most likely diagnosis?

- A. Community acquired pneumonia.
- B. Infiltrative tuberculosis.
- C. Primary tubercle complex.
- D. Peripheral lung cancer.
- E. Eosinophilic pneumonia.

10.

19-year-old HIV-positive man presented to an infectious department with the suspected abdominal typhus. Is been sick for 3 weeks. Two days before condition has become worse dramatically. Severe headache, shortness of breathing, fever of 39.6°C, mental confusion appeared. On examination moderate meningeal syndrome is revealed, respiratory system shows no abnormality. Chest X-ray shows diffuse multiple 1-2 mm foci. What's the most likely diagnosis?

- A. Community acquired pneumonia.
- B. Disseminated lung cancer.
- C. Idiopathic pulmonary fibrosis.
- D. Meningococemia
- E. Miliary tuberculosis.

11.

40-year-old woman suffers from diabetes mellitus. Which ways of TB early detecting are the most suitable for the annual management?

- A. Sputum ZN-staining
- B. Mantoux skin test.
- C. PCR sputum test.
- D. Chest X-ray.
- E. Blood PCR test.

12.

27-year-old patient complains of productive cough with the mucoid sputum, chest pain in the right side. T 39°C. Has been treated by broad-spectrum antibiotics for a week without effect. On examination: dull percussion sound and few bubbling rales in the interscapular area. Chest X-ray shows dissemination of low density with hazy borders throughout lung tissue, but more evident in the upper zone. CBC: WBC -  $13,2 \times 10^9/L$ , lymphocyte-12%, ESR - 35 mm/hour. What's the most likely diagnosis?

- A. Disseminated tuberculosis.
- B. Disseminated lung cancer.
- C. Community acquired pneumonia.
- D. Sarcoidosis.
- E. Caseous pneumonia.

13.

38-year-old patient complains of subfebrile temperature, sweating, productive cough with sputum quantity up to 50 ml. Chest X-ray shows the cavity in the lower zone of right lung containing not much liquid and surrounded by 0.5-1.5 cm satellite shadows. In the right hilum there are calcified lymph nodes. Intensive broad-spectrum antibiotics showed no effect. What's the most likely diagnosis?

- A. Lung abscess.
- B. Tuberculosis.
- C. Bronchoectasis.
- D. Lung cancer.
- E. Suppurated cyst.



14.

42-year-old patient known as Schönlein-Henoch purpura case and receiving high-dose corticosteroid therapy complains of chills, severe weakness, shortness of breathing. On examination: P 102/m, RR 26/m. Lung percussion and auscultation detected no abnormality. Ankles are swelled. Mantoux skin test is negative. Chest X-ray shows diffuse multiple 1-2 mm foci. What's the most likely diagnosis?

- A. Miliary tuberculosis.
- B. Community acquired pneumonia.
- C. Focal tuberculosis.
- D. Schönlein-Henoch purpura progressing.
- E. Subacute disseminative tuberculosis.

15.

2-year-old child has a family contact with the smear-positive TB patient. Which minimal papule in Mantoux skin test with 5 PPD-S TU is supposed to be the positive result?

- A. 30mm.
- B. 25mm.
- C. 15mm.
- D. 10mm.
- E. 5mm.

16.

For TB patient isoniazid, rifampicin, streptomycin, pyrazinamide, vitamin C, had been administered. In a month he started to complain of diminished hearing and buzzing in the ears. Side effect of which administered drug can it be due to?

- A. Rifampicin.
- B. Isoniazid.
- C. Streptomycin.
- D. Pyrazinamide.
- E. Vitamin C.

17.

Chest X-ray of 16-year-old asymptomatic adolescent showed an infiltrative shadow in left lung S<sub>6</sub> connected to the hilum. Hilar lymph nodes are enlarged. A year ago Mantoux skin test conversion has been established. What's the most likely diagnosis?

- A. Primary tubercle complex.
- B. Infiltrative tuberculosis.
- C. Community acquired pneumonia.
- D. Peripheral lung cancer.
- E. Eosinophilic pneumonia.

18.

At 38-year-old symptom-free man solitary 5 cm opacity of moderate density with the crescent lucency and defined borders in the left lung S<sub>2</sub> the has been revealed. Which clinical type of TB is the most probable?

- A. Fibrous-cavernous.
- B. Infiltrative.
- C. Focal.
- D. Residual.
- E. Tuberculoma.

19.

Screening chest X-ray of 36-year-old man revealed bilateral dissemination mostly in upper zones with polymorphous nodules of different density on the pneumosclerotic background. Which clinical type of TB is the most probable?

- A. Subacute disseminated.
- B. Chronic disseminated.
- C. Miliary.
- D. Residuals.
- E. Fibrous-cavernous.

20.

40-year-old patient fell ill after supercooling. Fever up to 39°C, cough with sputum of stinking odor appeared. In the right upper zone bubbling rales are heard. CBC: WBC –  $17.9 \times 10^9$  /L, eosinophil -3%, band neutrophil -12%, segmented neutrophil -60%, lymphocyte-17%, monocyte -8%, ESR - 52 mm/hour. Chest X-ray showed 3 cm opacity in the right lung S<sub>3</sub> of moderate density with hazy regular borders and lucency inside. What's the most likely diagnosis?

- A. Destructive pneumonia.
- B. Infiltrative tuberculosis.
- C. Lung cancer.
- D. Tuberculoma.
- E. Lung cyst.

21.

Screening X-ray examination of 33-year-old asymptomatic male detected 4-cm opacity in the right lung S<sub>2</sub> of moderate density with hazy regular borders and lucency inside. What's the most likely diagnosis?

- A. Lung cancer.
- B. Community acquired pneumonia.
- C. Tuberculosis.
- D. Abscess.
- E. Lung cyst.

22.

40-year-old patient suffering from fibrous-cavernous tuberculosis presented with pulmonary hemorrhage. Which drugs must be administered in the first place?

- A. Antitussive.
- B. Procoagulants.
- C. Hypotensive.
- D. Expectorants.
- E. Drugs, decreasing vessel walls permeability.

23.

Patient with no previous tuberculosis history presented with fever up to 38°C, cough with mucous sputum. Chest X-ray showed 4 cm round opacity of moderate density with hazy regular borders and lucency inside in the left lung S<sub>2</sub>. On examination otherwise no abnormality are detected. CBC: WBC –  $7.9 \times 10^9$  /L, eosinophil -3%, band neutrophil -2%, segmented neutrophil -70%, lymphocyte-20%, monocyte -5%, ESR - 30mm/hour. ZN-staining detected AFB in the sputum. According to which category treatment regimen has to be designed in this case?

- A. V.
- B. I.
- C. II.

D. III.

E. IV.

24.

22-year-old smoker complains of malaise, weakness, tiredness, sweating. On physical examination no abnormality detected. Chest X-ray showed an opacity in the left lung apex of moderate density with hazy borders and several satellite foci of low density around. What's the most likely diagnosis?

A. Focal pulmonary tuberculosis.

B. Infiltrative tuberculosis.

C. Community acquired pneumonia.

D. Primary tubercle complex.

E. Tuberculoma.

25.

20-year-old patient complains of severe headache, diplopia, weakness, irritability, fever. On examination: T 37.5°C, left blepharoptosis, divergent strabismus, anisocoria S>D. Has been ill for 2-3 weeks. CSF test: fluid is slightly opaque, protein content - 1.4 g/l, pleocytosis 400/mm<sup>3</sup> mostly of lymphocyte type, glucose 3.3 mmol/l. What's the most likely diagnosis?

A. Staphylococcus meningitis.

B. Meningococcus meningitis.

C. Tubercle meningitis.

D. Syphilitic meningitis.

E. Herpes meningitis.

26.

18-year-old male presented with focal shadows of high density with distinct borders on the right lung apex. Last Mantoux skin test has been performed two year ago; papule size 17 mm. At the moment tuberculin test showed 5 mm result. Clinical and lab examination detected no abnormality. What's the most likely diagnosis?

A. Focal tuberculosis in the infiltration phase.

B. Focal tuberculosis in the consolidation phase.

C. Community acquired pneumonia.

D. Focal tuberculosis in the calcination phase.

E. Conglomerative tuberculoma.

27.

32-year-old alcohol abuser fell ill after supercooling. Fever up to 40° C, cough with 200ml/day sputum expectorating appeared. In the right lung lower zone bubbling rales are heard. CBC: WBC – 18.0×10<sup>9</sup>/L, eosinophil -3%, band neutrophil -8%, segmented neutrophil -64%, lymphocyte-15%, monocyte -10%, ESR - 45 mm/hour. Chest X-ray showed 6 cm thick-walls cavity with horizontal fluid level in the right lung S<sub>10</sub>. What's the most likely diagnosis?

A. Destructive pneumonia.

B. Fibrous-cavernous tuberculosis.

C. Lung cancer.

D. Tuberculoma.

E. Lung cyst.

28.

Patient is presented with tuberculosis. Chest X-ray showed 3.5 cm opacity in the right lung S<sub>2</sub> with hazy borders and lucency inside. Define the process phase.

- A. Infiltration.
- B. Consolidation.
- C. Infiltration and decay.
- D. Decay.
- E. Dissemination and decay.

29.

Screening X-ray examination of 37-year-old coal miner detected two high density foci in right lung S<sub>1-2</sub> on the fibrotic area background. On clinical and laboratory examination no abnormality detected. What's the most likely diagnosis?

- A. Focal tuberculosis.
- B. Pneumosclerosis.
- C. Coniotuberculosis
- D. Tuberculosis residuals.
- E. Pneumoconiosis.

30.

Screening X-ray examination of 22-year-old male detected several focal shadows of different size with hazy borders on both apices. The diagnosis of pulmonary tuberculosis established. What's the most likely clinical type of the disease?

- A. Focal.
- B. Infiltrative.
- C. Disseminated.
- D. Miliary.
- E. Residual.

31.

50-year-old patient complains of fever up to 38°C, cough with mucous sputum, dyspnea. Hasn't undergone X-ray examination for 7 year. Chest X-ray showed thick-walls 3×5 cm cavity on the right lung apex. The interlobar fissure and right hilum are elevated. Mediastinum is shifted to the right. In the lower zones of both lungs there a lot of low-density focal shadows. The diagnosis of pulmonary tuberculosis established. What's the most likely clinical type of the disease?

- A. Infiltrative.
- B. Chronic disseminated.
- C. Cirrhotic.
- D. Fibrous-cavernous.
- E. Subacute disseminated.

32.

44-year-old homeless patient presented with chills, dry cough, dyspnea. Has been ill for three weeks. The illness started suddenly. On examination: T 40°C, condition is grave, diffuse cyanosis is present. Painful ulcer is found on the tongue surface. All over lung fields tympanic percussion sound is noted. Auscultation revealed scattered dry and moisture rales. CBC: Hb - 100 g/L, WBC -  $9.2 \cdot 10^9$  /L, eosinophil-0%, band neutrophil-9%, segmented neutrophil-65%, lymphocyte-14%, monocyte -12%, ESR - 15 mm/hour. Sputum ZN-staining is positive. Mantoux skin test with 5 TU 15mm. Chest X-ray shows large bilateral foci mostly affecting apical zones and fusing to each other. What's the most likely clinical type of tuberculosis?

- A. Subacute disseminated.
- B. Focal.
- C. Miliary.

D. Chronic disseminated.

E. Infiltrative.

33.

34-year-old homeless patient presented with headache, chills, dry cough, dyspnea. The illness started suddenly. On examination: T 39-40°C, condition is grave, diffuse cyanosis is present. All over lung fields tympanic percussion sound is detected. Auscultation revealed no rales. CBC: Hb - 100 g/L, WBC -  $11.2 \cdot 10^9$  /L, eosinophil-0%, band neutrophil-9%, segmented neutrophil-65%, lymphocyte-14%, monocyte -12%, ESR - 35 mm/hour. Mantoux skin test with 5 TU is negative. Chest X-ray shows diffuse multiple tiny foci with hazy borders throughout lung tissue. What's the most likely clinical type of tuberculosis?

A. Focal.

B. Miliary.

C. Disseminated.

D. Meningitis.

E. Infiltrative.

34.

A family consists of 5 members. Father is a coal miner, mother is a housewife, son is a student, daughter is a nurse, grandmother – pensioner, suffers from diabetes mellitus. Who of them ISN'T exposed by the risk of the tuberculosis?

A. Grandmother.

B. Father.

C. Daughter.

D. Son.

E. Mother.

35.

29-year-old patient had been complaining of subfebrile temperature, night sweating, productive cough, dyspnea for 5 months. Auscultation revealed mixed breathing. Mantoux skin test showed papule of 10 mm. CBC: Hb 100 g/L, WBC -  $9.2 \times 10^9$  /L, eosinophil - 3%, band neutrophil - 4%, segmented neutrophil - 71%, lymphocyte - 14%, monocyte - 8%, ESR - 25 mm/hour. Chest X-ray detected multiple fusing foci of different shape and size having low density and hazy borders. In apico-posterior segments thin-walls cavities appear bilaterally. What's the most likely diagnosis?

A. Community acquired pneumonia.

B. Sarcoidosis.

C. Idiopathic pulmonary fibrosis.

D. Disseminated pulmonary tuberculosis.

E. Miliary tuberculosis.

36.

48-year-old patient complains of dyspnea, fever up to 38°C, weight loss, weakness, productive cough with mucoid sputum. The condition worsened gradually within a year. Hasn't undergone screening X-ray for 6 year. On examination: right hemithorax lags behind the breathing, percussion revealed dull sound over right upper lung zone, auscultation showed bronchial breathing and rare moisture rales in this area. ZN sputum test showed positive result. CBC: Hb - 100 g/L, WBC -  $9.0 \times 10^9$  /L, eosinophil - 3%, band neutrophil - 7%, segmented neutrophil - 65%, lymphocyte - 20%, monocyte - 5%, ESR - 28 mm/hour. Chest X-ray revealed cavity 5×4 cm in diameter with thick walls surrounded by advanced fibrotic area and polymorphic foci in the diminished right upper lobe. Which tuberculosis clinical type is the most likely?

A. Subacute disseminated.

- B. Fibrous-cavernous.
- C. Caseous pneumonia.
- D. Infiltrative.
- E. Chronic disseminated.

37.

Patient complains of stabbing pain in the right hemithorax, rapidly increasing dyspnea. Has been suffering from fibrous-cavernous tuberculosis for 6 year. On examination: the condition is grave, dyspnea at rest, cyanosis, RR 28 /min, P 120/min. Right hemithorax lags behind the breathing, intercostal spaces are smoothed, tympanic percussion sound and absent breathing over right hemithorax detected. Heart borders are shifted to the left. Which complication more likely could produce such dramatic worsening?

- A. Myocardial infarction.
- B. Pulmonary embolism.
- C. Atelectasis.
- D. Community acquired pneumonia.
- E. Spontaneous pneumothorax.

38.

38-year-old patient is complaining of dyspnea, subfebrile temperature, weight loss, weakness, productive cough with mucoid sputum for 4 months. Hasn't undergone screening X-ray for 7 year. On examination: auscultation showed bronchial breathing, rare moisture and dry rales throughout lung fields. CBC: Hb - 100 g/L, WBC -  $9.0 \times 10^9$  /L, eosinophil - 3%, band neutrophil - 7%, segmented neutrophil - 65%, lymphocyte - 20%, monocyte - 5%, ESR - 32 mm/hour. Chest X-ray: multiple polymorphic foci of different shape, size and density at the advanced fibrotic background. Which of tuberculosis clinical types is the most likely?

- A. Fibrous-cavernous.
- B. Chronic disseminated.
- C. Caseous pneumonia.
- D. Infiltrative.
- E. Subacute disseminated.

39.

37-year-old patient fell ill suddenly. High fever, cough, weakness appeared. The diagnosis of influenza was established. In a week the condition ameliorated after non-specific treatment (NSAID, liquid intake), but within next several weeks the "influenza" repeated three times. X-ray examination detected infiltrative tuberculosis with lung tissue decay. Choose the most suitable explanation of such a phenomenon.

- A. Lack of bronchial drainage.
- B. Tuberculosis and influenza combination.
- C. Misdiagnosis pneumonia.
- D. Hematogenous dissemination.
- E. Immunocompromised condition.

40.

Screening chest X-ray of 45-year-old symptom-free patient detected several foci of low density in the right apex. Physical and laboratory examination detected no abnormalities. What's the most likely diagnosis?

- A. Community acquired pneumonia.
- B. Lung cancer.
- C. Focal tuberculosis.

- D. Tuberculosis residuals.
- E. Disseminated tuberculosis.

41.

40-year-old patient presented with fever up to 38°C, chest pain, cough with muco-purulent sputum, sweating, weakness. Fell ill 3 weeks before. On examination: RR 20/min, P 98/min. On auscultation: moisture rales at a weakened breathing background in the right subclavian area detected. CBC: Hb 100 g/L, WBC –  $13.4 \times 10^9$  /L, eosinophil - 3%, band neutrophil - 10%, segmented neutrophil - 58%, lymphocyte - 24%, monocyte - 5%, ESR - 35 mm/hour. Sputum ZN-staining showed negative results. Mantoux skin test showed papule of 15 mm. Chest X-ray detected nonhomogenous opacity of the right lung upper lobe with hazy borders and lucency inside. A group of small low density foci is detected left-side, in the S<sub>1-2</sub>. What's the most likely diagnosis?

- A. Infiltrative tuberculosis at the phase of decay and dissemination.
- B. Disseminated tuberculosis at the phase of the decay.
- C. Fibrous-cavernous tuberculosis at the phase of the dissemination.
- D. Suppurated lung cyst.
- E. Community acquired pneumonia.

42.

47-year-old smoker presented with severe weakness, sweating, fever up to 37.5-38.0°C. Has been ill for 3 months. On examination: dull percussion sound and mixed breathing over both lung apices. CBC: Hb 120 g/L, WBC –  $12.2 \times 10^9$ /L, eosinophil -1%, band neutrophil -6%, segmented neutrophil - 75%, lymphocyte-17%, monocyte -1%, ESR - 28 mm/hour. Chest X-ray detected polymorphic foci of 2-8 mm on enriched lung patterns background mostly in upper lung regions. What's the most likely diagnosis?

- A. Community acquired pneumonia.
- B. Disseminated pulmonary tuberculosis.
- C. Sarcoidosis.
- D. Idiopathic pulmonary fibrosis.
- E. Miliary tuberculosis.

43.

29-year-old alcohol abuser presented to an infectious department with the suspected abdominal typhus. Has been sick for 3 weeks. Two days before condition has become worse dramatically. Severe headache, shortness of breathing, fever amounted 39.6° C, mental confusion appeared. On examination moderate meningeal syndrome is revealed, respiratory system shows no abnormality. Chest X-ray shows diffuse multiple 1-2 mm foci. What's the most likely diagnosis?

- A. Miliary tuberculosis.
- B. Disseminated lung cancer.
- C. Idiopathic pulmonary fibrosis.
- D. Community acquired pneumonia.
- E. Meningococemia.

44.

Patient is presented with infiltrative tuberculosis, MBT+ (M+C+) resist + (S, H, R, Q, K). No previous history of tuberculosis. What type of drug resistance is it?

- A. Acquired MDR.
- B. Primary MDR.
- C. Acquired XDR.
- D. Primary XDR.
- E. Initial drug resistance.

45.

26-year-old patient suffering from diabetes mellitus presented with malaise, increased temperature in the evening, appetite loss, and productive cough. Is been ill for 2 months. Received 2 weeks treatment course of broad spectrum antibiotics. General examination detected no abnormalities. Chest X-ray revealed nonhomogenic opacity of moderate density with hazy borders on left lung apex. What disease must be suspected first of all?

- A. Peripheral lung cancer.
- B. Pulmonary tuberculosis.
- C. Community acquired pneumonia.
- D. Central lung cancer.
- E. Benign pulmonary tumor.

46.

Patient suffering from disseminated tuberculosis complains of stabbing pain in the right hemithorax, rapidly increasing dyspnea. On examination: skin is pale, dyspnea at rest, RR 30/min, P 120/min. Right hemithorax lags behind the breathing, intercostal spaces are smoothed, tympanic percussion sound and absent breathing over right hemithorax detected. Heart borders are shifted to the left. Which complication is more likely?

- A. Spontaneous pneumothorax.
- B. Pulmonary embolism.
- C. Atelectasis.
- D. Community acquired pneumonia.
- E. Myocardial infarction.

47.

25-year-old homeless woman presented with complaints of productive cough with mucoid sputum, subfebrile temperature, weight loss, weakness. Hasn't been undergoing chest X-ray for 3 year. On examination: skin is pale, P 80/min, mixed breathing is detected in the right upper zone. Sputum ZN-staining showed negative results. CBC: Hb - 140 g/L, WBC -  $10.0 \times 10^9$  /L, eosinophil - 3%, band neutrophil - 9%, segmented neutrophil - 73%, lymphocyte - 14%, monocyte - 1%, ESR - 30 mm/hour. Tuberculosis is suspected. What's the most advisable first step of the diagnostic algorithm?

- A. Electrolyte test.
- B. Chest X-ray.
- C. Mantoux skin test.
- D. Sputum cultural test.
- E. Bronchoscopy.

48.

35-year-old obstetrician had been treated for tuberculosis 7 year ago. At the moment no complains, physical or laboratory abnormalities are detected. Chest X-ray has been stable for last 5 year: several small calcified foci on right lung apex. Make a conclusion about professional activity.

- A. Prohibited for a year.
- B. Prohibited.
- C. Allowed.
- D. Allowed after retreatment course.
- E. Allowed after chemoprophylaxis.

49.

20-year-old patient finished the full course of treatment for infiltrative tuberculosis, MBT+. At the moment no complaints are present, blood test is normal, cultural sputum test showed negative result,



chest X-ray detected cavity healing, infiltration partial resolution. Which recovery criteria are the most significant?

- A. Subjective feeling ameliorating and normal blood test.
- B. Normal blood test and positive trends in chest X-ray.
- C. Culture negativation and normal blood test.
- D. Culture negativation and positive trends on chest X-ray.
- E. All of the above.

50.

38-year-old agronomist complains of subfebrile fever, productive cough, night sweating, dyspnea, weight loss. Has been feeling unwell for a month. On examination: dull percussion sound above upper and middle zones, moisture rales at mixed breathing background in the interscapular space are found. Chest X-ray showed multiple fusing foci of moderate density in both upper lung zones. What's the most likely diagnosis?

- A. Disseminated tuberculosis.
- B. Actinomycosis.
- C. Pneumoconiosis.
- D. Community acquired pneumonia.
- E. Aspergilliosis.

51.

30-year-old alcohol abuser is been treated for pulmonary tuberculosis new case according to I category. After 2 weeks of treatment he started to complain of headache, memory decreasing, extremities paresthesias. Side effects of which drug is it more likely due to?

- A. Isoniazid.
- B. Streptomycin.
- C. Pyrazinamide.
- D. Rifampicin.
- E. Ethambutol.

52.

A patient hospitalized with infiltrative tuberculosis, MBT+, lives with his wife and 3-year-old child. Neither data about child's BCG vaccination, nor the cicatrix are been found. Thorough examination of the child detected no active TB signs. Mantoux skin test is negative. What is the most advisable dealing with the child?

- A. BCG-vaccination, then chemoprophylaxis.
- B. Chemoprophylaxis only.
- C. Mantoux skin test follow up.
- D. BCG-vaccination only.
- E. Chemoprophylaxis, then BCG-vaccination.

53.

41-year-old patient has been brought to the emergency department in grave condition complaining of severe pain in the right thoracic zone and dyspnea, appeared suddenly after physical exertion. On examination: P 122/m, RR 28/m, BP 80/60, lips and mucosa cyanosis, tympanic percussion sound and auscultative sounds weakened over right thoracic side, loud second sound over pulmonary trunk. Which examination is the most urgent?

- A. Videothoracoscopy.
- B. Chest X-ray.
- C. ECG.

- D. USS.
- E. CT scanning.

54.

45-year-old patient is been treated for caseous pneumonia within 10 month. Now sputum is smear-positive. Chest X-ray shows opacity in diminished right upper lobe, right hilum is elevated. No cavities revealed. Which clinical type of TB is it now?

- A. Fibrous-cavernous.
- B. Infiltrative.
- C. Cirrhotic.
- D. Residual.
- E. Tuberculoma.

55.

Patient has been treated for infiltrative tuberculosis MBT+ for 6 month. At the moment ring-like shadow stable for 2 month appears in the right upper lobe, the infiltration around resolved, MBT are not detected by all available means. Choose the most advisable further management.

- A. Surgery.
- B. Stopping any treatment.
- C. Considering the patient having chronic tuberculosis.
- D. Continuing treatment until the cavity healing.
- E. Changing the antibacterial treatment regimen.

56.

35-year-old coal miner having 3-year occupational seniority complains of low workability, sweating, cough with moderate quantity of mucoid sputum. On physical and routine laboratory examination no abnormalities were detected. Chest X-ray: several 5-7 mm nodules of low density with hazy borders in the right S<sub>1-2</sub>. What disease should be suspected?

- A. Infiltrative tuberculosis.
- B. Community acquired pneumonia.
- C. Focal tuberculosis.
- D. Coniotuberculosis.
- E. Tuberculosis residuals.

57.

28-year-old patient taking treatment for pulmonary tuberculosis presented with stabbing chest pain, increasing dyspnea. On examination: evident cyanosis, tympanic percussion sound over left hemithorax where breathing sounds are not found, mediastinum is shifted to the right. Chest X-ray detected left lung collapse up to ½ of the volume. Which of measures for critical aid will be the crucial?

- A. Ganglioblocker administration.
- B. Euphyllin administration.
- C. Thoracocentesis and air aspiration.
- D. Bronchoscopy.
- E. Artificial ventilation.

58.

28-year-old HIV-positive IV-drugs addict complains of increasing headache, vomiting, photophobia. Recovered from tuberculosis 7 year ago (before contracting HIV). Chest X-ray performed a month before detected small residuals in the lung tissue. On examination: T 39.1°C, left blepharoptosis, divergent

strabismus, neck stiffness, upper Brudzinsky symptom, left naso-labial fold is smoothed. What disease has to be suspected first of all?

- A. Meningeal tuberculosis.
- B. Herpes meningitis.
- C. Brain tuberculoma.
- D. Neuro-AIDS.
- E. Drug addiction related encephalopathy.

59.

28-year-old symptom-free male presented with several large nodules of moderate density with hazy borders in right lung S<sub>1-2</sub>. Physical examination, blood test and sputum ZN-staining detected no abnormalities. Mantoux skin test with 5 TU - 15 mm. Pulmonary tuberculosis is suspected. Which clinical form of the disease is the most likely?

- A. Tuberculoma.
- B. Infiltrative tuberculosis.
- C. Focal tuberculosis.
- D. Disseminated tuberculosis.
- E. Tuberculosis residuals.

60.

70-year-old patient presented in grave condition complaining of dyspnea, dry cough, severe weakness. On examination: patient is exhausted, auscultation detected mixed breathing. Chest X-ray shows diffuse multiple 1-2 mm foci throughout lung tissue, several calcification in lung root. Hb - 90 g/L, WBC –  $13.2 \cdot 10^9$  /L, eosinophil-0%, band neutrophil-10%, segmented neutrophil -65%, lymphocyte-14%, monocyte -12%, ESR - 30 mm/hour. Tuberculosis is suspected. Define the clinical form of the disease.

- A. Subacute disseminated.
- B. Chronic disseminated.
- C. Focal tuberculosis.
- D. Infiltrative tuberculosis.
- E. Miliary tuberculosis.

61.

28-year-old asymptomatic male presented having 2 cm round homogenous shadow with clear borders of high density on the right lung apex. Physical and routine laboratory examination showed no abnormalities. Mantoux skin test - papule 18 mm in diameter. What's the most likely diagnosis?

- A. Lung cancer.
- B. Tuberculoma.
- C. Angioma.
- D. Aspergillus mycetoma.
- E. Community acquired pneumonia.

62.

42-year-old patient presented with subfebrile temperature, malaise, shortness of breathing on moderate exertion, dry cough within 3 month. Physical examination detected mixed breathing over lung fields. Plain X-ray showed fusing foci of moderate density throughout upper lung zones and symmetric thin-walls cavities on both apices. Sputum ZN-staining showed positive result. Which clinical type of tuberculosis is the most probable?

- A. Subacute disseminated.
- B. Miliary.
- C. Fibrous-cavernous.

- D. Chronic disseminated.
- E. Cirrhotic.

63.

10-year-old child had been complaining of subfebrile temperature, appetite worsening, tiredness for 1.5 months. At the moment Mantoux test conversion with the papule size of 12 mm has been detected. On examination: nodular erythema on both shins, peripheral lymph nodes are enlarged in 6 groups. Which clinical form of tuberculosis could be suspected?

- A. Tuberculosis of intrathoracic lymph nodes.
- B. Pre-local tuberculosis.
- C. Primary complex.
- D. No reason to suspect tuberculosis.
- E. Any type of primary tuberculosis.

64.

19-year-old patient known to be exposed by family TB contact (father suffers from fibrous-cavernous tuberculosis) has been treated for infiltrative pulmonary tuberculosis during 2 month, receiving isoniazid, rifampicin, ethambutol, pyrazinamide. No condition ameliorating is observed, control X-ray demonstrated the disease progression. Smear test for AFB showed positive result. CBC: Hb 120 g/L, WBC –  $12.9 \times 10^9/L$ , eosinophil -3%, band neutrophil - 10%, segmented neutrophil -65%, lymphocyte-15%, monocyte -10%, ESR - 30 mm/hour. Which is the most likely reason of treatment failure?

- A. Short treatment term.
- B. Primary drug resistance.
- C. Secondary drug resistance.
- D. Incorrect drugs choice.
- E. Young age of the patient.

65.

4-year-old symptom-free child without remarkable risk factors for TB is presented having positive Mantoux skin test with 5 TU of PPD-S. Choose the papule size which corresponds to such conclusion.

- A. 15 mm.
- B. 10 mm.
- C. 5 mm.
- D. 2 mm.
- E. 1 mm.

66.

38-year-old patient was admitted to the emergency department with pulmonary bleeding started at the time of cough. Expectored about 300 ml of blood. No past history of pulmonary diseases discovered but patient has been noticing some fatigue, appetite loss, cough with mucoid sputum, subfebrile fever for 4 months. Chest X-ray detected thick-walls cavity in the diminished left upper lobe surrounded by polymorphic satellite foci. Which is the most likely reason of bleeding?

- A. Lung cancer.
- B. Community acquired pneumonia.
- C. Tuberculosis.
- D. Pulmonary abscess.
- E. Bronchoectases.

67.

10-year-old symptom-free child presented with Mantoux skin papule 14 mm. Received BCG vaccination on 5<sup>th</sup> day of life and at the age of 7 (scars diameter 5 mm and 2 mm correspondently). Previous tuberculin test history: at the age of 8 – papule 8 mm, at the age of 9 – 5 mm. Chest X-ray detected no abnormalities. What's your conclusion?

- A. Non-infected child.
- B. Tuberculin sensitivity conversion.
- C. Post-vaccinative reaction.
- D. Active tuberculosis.
- E. Latent tuberculosis.

68.

Screening chest X-ray of 27-year-old symptom-free female detected round 2.5 cm homogenic opacity of high density with distinct regular borders and several foci around in the left lung S<sub>1-2</sub>. CBC: Hb - 120 g/L, WBC –  $6.9 \times 10^9$ /L, eosinophil -3%, band neutrophil - 5%, segmented neutrophil - 65%, lymphocyte-23%, monocyte -4%, ESR - 2 mm/hour. Mantoux skin test showed the papule of 15 mm. What's the most likely diagnosis?

- A. Community acquired pneumonia.
- B. Pulmonary abscess.
- C. Focal tuberculosis.
- D. Lung cancer.
- E. Tuberculoma.

69.

45-year-old patient suffering from fibrous-cavernous tuberculosis presented with spontaneous pneumothorax. Choose necessary critical aid.

- A. Analgesia.
- B. Bed rest.
- C. Oxygen therapy.
- D. Thoracocentesis.
- E. All of the above.

70.

30-year-old female presented with chest pain, weakness, cough, hemoptysis. Has been ill for a week. On physical examination no abnormalities detected. CBC: Hb - 110 g/L, WBC –  $9.2 \times 10^9$ /L, eosinophil -3%, band neutrophil -4%, segmented neutrophil -71%, lymphocyte-14%, monocyte -8%, ESR - 20 mm/hour. Chest X-ray detected opacity of the moderate density with the hazy borders and lucency inside in the right S<sub>1-2</sub> surrounded by several satellite foci. What's the most likely diagnosis?

- A. Community acquired pneumonia.
- B. Infiltrative tuberculosis.
- C. Caseous pneumonia.
- D. Lung cancer.
- E. Pulmonary embolism.

71.

23-year-old female known to have valvular disease presented with chills, dyspnea, fever up to 38.9°C. On examination: dull percussion sound and crackling rales over both upper zones. Chest X-ray detected multiple fusing foci on both apical and medial lung zones. What's the most likely diagnosis?

- A. Subacute disseminated tuberculosis.
- B. Acute disseminated tuberculosis.
- C. Chronic disseminated tuberculosis.

- D. Pulmonary congestion.
- E. Community acquired pneumonia.

72.

A papule of 5 mm diameter with vesicle in center appeared at 13-year-old boy after Mantoux skin test. Appreciate the result.

- A. Doubtful.
- B. Positive.
- C. Hyperergic.
- D. Negative.
- E. Cannot be appreciated.

73.

40-year-old patient presented with cough excreting mucoid sputum, weakness, shortness of breathing, and fever up to 37.2-37.6°C in the evening. Has been ill for 1.5 month, fell ill after supercooling. On physical examination no abnormalities detected. Chest X-ray revealed numerous, somewhere fusing foci mostly affecting apical zones. What's the most likely diagnosis?

- A. Pneumoconiosis.
- B. Idiopathic pulmonary fibrosis.
- C. Disseminated carcinoma.
- D. Tuberculosis.
- E. Community acquired pneumonia.

74.

35-year-old chain-smoker coughing "the whole life" presented with increased quantity of sputum, fever up to 37.5°C, sweating at night, weight loss. Physical examination of respiratory system is unremarkable. CBC: Hb – 130 g/L, WBC –  $9.2 \times 10^9$  /L, eosinophil-2%, band neutrophil-4%, segmented neutrophil-65%, lymphocyte-21%, monocyte-8%, ESR - 20 mm/hour. Sputum test – grayish in color, L-14-16 field of view, ZN- staining is negative. Chest X-ray detected an opacity of the moderate density with the hazy borders and lucency inside in the right S<sub>1-2</sub> surrounded by several satellite foci. What's the most likely diagnosis?

- A. Infiltrative tuberculosis.
- B. Community acquired pneumonia.
- C. Fibrous-cavernous tuberculosis.
- D. Lung cancer.
- E. Pulmonary embolism.

75.

Fibrous-cavernous tuberculosis patient presented with severe headache and neck stiffness. Meningeal tuberculosis is suspected, but routine CSF test showed doubtful result. Choose the most advisable additional mean to detect the reason of meningeal syndrome.

- A. Sputum direct microscopy.
- B. CSF direct microscopy.
- C. CSF cultural test.
- D. CSF PCR.
- E. Sputum PCR.

76.

63-year-old male known to have left upper lobe infiltrative tuberculosis 5 year ago presented with productive cough, subfebrile fever, sweating at night, weight loss. Chest X-ray detected a 3 cm opacity of moderate density with the crescent lucency and defined borders surrounded by several satellite foci in the

S<sub>2</sub> of the left lung. Sputum test: L-1/3 field of view, ZN- staining is negative. No remarkable changes in CBC. Which of disease transformation is the most likely be present?

- A. Tuberculoma.
- B. Suppuration.
- C. Lung cancer.
- D. Benign tumor.
- E. Cyst.

77.

4-month infant did not receive BCG vaccination immediately after birth because of hemolytic jaundice. At the moment no abnormality detected. No TB contact has been discovered. Choose the most advisable dealing.

- A. Immediate BCG-vaccination.
- B. Vaccination at the age of 12 month after Mantoux skin test.
- C. Vaccination at the age of 6 month.
- D. Immediate Mantoux skin test, if negative - vaccination performing.
- E. Immediate Mantoux skin test, if positive - vaccination performing.

78.

At 2-year-old child, vaccinated on the 3<sup>rd</sup> day of life (cicatrix size 5 mm) at the age of 1 Mantoux test papule size was 10 mm, at the moment – 6 mm. Which type of Mantoux reactivity is it?

- A. Post-vaccine reaction.
- B. Latent tuberculosis.
- C. Early period of infection.
- D. Mantoux skin test conversion.
- E. Active tuberculosis.

79.

Make the conclusion about tuberculin test result of symptom-free 6-year-old child. At the moment papule size in Mantoux skin test is 7 mm, last year the result was negative. On examination no abnormality detected. Post-vaccine scar on the left humerus is of 3mm in diameter.

- A. No antituberculosis immunity.
- B. Latent tuberculosis, tuberculin test conversion.
- C. Long-existing latent tuberculosis.
- D. Active tuberculosis.
- E. Post-vaccine immunity.

80.

20-year-old woman parturiated a healthy baby 3 days ago presented with fever up to 38°C, productive cough. Further examination detected disseminated pulmonary tuberculosis dis+, MBT+ (M+, C 0). Which preventive measures for baby are the most advisable?

- A. Separation from mother. Breastfeeding prohibiting. Preventive isoniazid course for 3 month, then BCG-vaccination.
- B. Separation from mother, BCG-vaccination after Mantoux skin test. Breastfeeding prohibiting.
- C. Separation from mother. Breastfeeding prohibiting. Preventive isoniazid course for 3 month, then BCG-vaccination after Mantoux skin test.
- D. BCG-vaccination, breastfeeding isn't contraindicated. Separation from mother isn't necessary.
- E. BCG -vaccination and breastfeeding prohibiting. Separation from mother.

81.

28-year-old female presented with chest pain, weakness, cough with mucoid sputum, chills, dyspnea. Has been ill for a week. On physical examination: multiple crackling and bubbling rales over right hemitorax. CBC: Hb - 130 g/L WBC –  $17.2 \times 10^9/L$ , eosinophil -7%, band neutrophil - 16%, segmented neutrophil - 47%, lymphocyte-23%, monocyte - 7%, ESR - 35 mm/hour. Sputum test: L -1/2 field of view, erythrocyte - 30/field of view. Chest X-ray detected opacity of the moderate density with the hazy borders occupying right lower zone. Costo-diaphragmal sinus is not visible. What's the most likely diagnosis?

- A. Infiltrative tuberculosis.
- B Lung cancer.
- C. Caseous pneumonia.
- D. Community acquired pneumonia.
- E. Pulmonary embolism.

82.

9-year-old child presented after Mantoux skin test showed papule 12 mm. Received BCG-vaccination on the 5<sup>th</sup> day of life and at the age of 7 (scars diameter 5 mm and 6 mm respectively). Last year result – 5 mm. What's your conclusion?

- A. Tuberculin sensitivity conversion.
- B. Post-vaccinative reaction.
- C. Increased risk of active tuberculosis.
- D. Non-infected child.
- E. Long existing latent tuberculosis.

83.

37-year-old symptom-free male presented after mass X-ray. Chest X-ray discovered round opacity of 3 cm diameter, having high density and distinct borders in left S<sub>1</sub>. Consecutive CT-scanning detected crescent lucency on lower medial margin and draining bronchus involvement. Physical examination, blood, urine tests and bronchial lavage ZN-staining detected no abnormality. What's the most likely diagnosis?

- A. Infiltrative tuberculosis.
- B. Decaying tuberculoma.
- C. Decaying lung cancer.
- D. Benign tumors.
- E. Fibrous-cavernous tuberculosis.

84.

32-year-old female, who was exposed by family contact with TB-patient presented with food poisoning. Complains of nausea, vomiting, and abdominal pain. But thorough anamnesis regard revealed such complains as weakness, fatigue, slight dry cough, subfebrile temperature persisting for 2-3 months. What must be the first course of action in order to detect or rule out tuberculosis in this case?

- A. Mantoux skin test.
- B. Blood test.
- C. Chest X-ray.
- D. Sputum ZN-staining.
- E. Sputum PCR test.

85.

28-year-old woman was admitted to gynecological department in grave condition complaining of fever, weakness, cough with bloody sputum. Has been feeling unwell for 4 weeks, just after surgery for abdominal pregnancy. 2.5 month before finished treatment course for pneumonia, felt better but no control examination was performed. CBC: Hb – 90 g/L, WBC –  $14.2 \times 10^9/L$ , eosinophil -1%, band neutrophil - 10%, segmented neutrophil - 57%, lymphocyte-25%, monocyte -7%, ESR - 28 mm/hour.



Chest X-ray showed an opacity in the left lung apex of moderate density with hazy borders and several satellite foci of low density around. What's the most likely diagnosis?

- A. Sepsis.
- B. Health-care acquired pneumonia.
- C. Chorionepithelioma.
- D. Tuberculosis.
- E. Pulmonary embolism.

86.

15-year-old boy has been complaining of cough, weakness, fever for 20 days. After treatment by broad-spectrum antibiotics temperature decreased to subfebrile. ZN-sputum test showed negative result. Blood report: WBC -  $12.4.9 \times 10^9$  /L, eosinophil -7%, lymphocyte-19%, ESR - 30 mm/hour. Chest X-ray showed homogenous opacity of moderate density localized in the right upper zone and interflowing with widened and anhistic hilum. Which disease must be suspected first of all?

- A. Primary tuberculosis complex.
- B. Community acquired pneumonia.
- C. Influenza.
- D. Eosinophilic pneumonia.
- E. Lung cancer.

87.

31-year-old woman suffering from diabetes mellitus presented with dry cough, shortness of breathing, weakness and fever up to 39°C. Chest X-ray showed non-homogenous right lung upper zone infiltration with the large cavity and numerous foci in both lungs. What's your presumptual diagnosis?

- A. Disseminated tuberculosis.
- B. Infiltrative tuberculosis
- C. Community acquired pneumonia.
- D. Fibrous-cavernous tuberculosis.
- E. Lung abscess.

88.

38-year-old male presented with productive cough, night sweating, body weight loss about 10 kg, fever up to 37.5°C, dyspnea. Has been feeling ill for 2 months. It's known from past medical history that he sustained right side pleurisy of unrevealed reason 5 year before. Has not undergone X-ray examination for last 4 year. On examination: loud wheezing rales, bronchial breathing and pleural rub are heard over right apical zone, weakened breathing over right lower zone. Chest X-ray detected intensive homogenic opacity of reduced right upper lobe, several solitary foci of low density in right middle lobe and massive pleural coalescences. Sputum ZN-staining found no AFB. What's the most likely conclusion?

- A. Postpleurisy residuals.
- B. Postpneumonic cirrhosis.
- C. Community acquired pneumonia.
- D. Lung cancer.
- E. Right lung cirrhotic tuberculosis.

89.

21-year-old female presented with cough producing moderate quantity of sputum. Two year ago sustained pneumonia. Father died of pulmonary tuberculosis 10 year ago. On examination: percussion detected dull sound over right upper lobe, auscultation – bronchial breathing at this area. Blood test detected no abnormalities. ZN-staining of sputum showed negative result. On chest X-ray: right upper lobe is reduced and homogenously opaque, covering pleura is thickened, in elevated hilum numerous calcifications are

present. No significant changes were detected compared with X-ray archive. What's the most likely diagnosis?

- A. Infiltrative pulmonary tuberculosis.
- B. Cirrhotic pulmonary tuberculosis.
- C. Upper lobe atelectasis.
- D. Primary tuberculosis residuals.
- E. Community acquired pneumonia.

90.

A group of 14-year-old schoolchildren from community with high tuberculosis prevalence is presented. What is the most advisable mean for TB screening in this group?

- A. Mantoux skin test.
- B. Chest X-ray.
- C. CT-scanning.
- D. Routine blood and urine test.
- E. Physical examination.

91.

The diagnosis of pulmonary tuberculoma was been established in 35-year-old patient. Lung tissue decay is not visible on chest X-ray. Which is the most informative indirect sign of expected destruction?

- A. Intoxication.
- B. Hemoptysis.
- C. Chest pain.
- D. Cough.
- E. Bacteria discharging.

92.

27-year-old patient without previous history of the tuberculosis presented with fibrous-cavernous tuberculosis. Choose the category to which this case belongs.

- A. II.
- B. III.
- C. I.
- D. IV.
- E. V.

93.

17-year-old patient has been treated for infiltrative tuberculosis MBT+ (M+, C+) for 6 month. At the moment condition ameliorated, thick-wall ring-like shadow, stable for 2 month appears in the right upper lobe, the infiltration around resolved, MBT are not detected on ZN-staining but cultural test detects MBT resistant to isoniazid. Choose the most advisable further management.

- A. To perform surgery.
- B. To stop any treatment.
- C. To suppose the patient having chronic tuberculosis.
- D. To continue treatment until healing the cavity.
- E. To change the antibacterial treatment regimen.

94.

40-year-old coal miner with 10-year professional seniority fell ill a month before. The disease started from fever, sweating, appetite loss, later dyspnea, hoarseness. Chest X-ray detected multiple fusing foci

of low and moderate density. In middle and lower zones – diffuse web-like pneumofibrosis. Bronchoscopy revealed dust particles inclusions at mucosal surface. What disease should be suspected?

- A. Subacute disseminated tuberculosis.
- B. Coniotuberculosis.
- C. Antracosis.
- D. Occupational bronchitis.
- E. Miliary tuberculosis.

95.

30-year-old smoker complains of cough with mucoid sputum, increased temperature up to 37.6°C, dyspnea, weakness. Finished treatment course of broad-spectrum antibiotics without visible effect. Physical examination detected no abnormalities. CBC: Hb – 120 g/L, WBC –  $11.2 \times 10^9$ /L, eosinophil - 4%, band neutrophil - 8%, segmented neutrophil - 62%, lymphocyte-18%, monocyte -7%, ESR - 20 mm/hour. Chest X-ray detected nonhomogenous opacity about 3×2.5 cm with hazy borders in right upper lobe with track to the hilum. What's the most likely diagnosis?

- A. Eosinophilic pneumonia.
- B. Infiltrative tuberculosis.
- C. Community acquired pneumonia.
- D. Lung cancer.
- E. Pulmonary embolism.

96.

40-year-old alcohol and drug abuser discharged from imprisonment 2 months before, sought for medical care reporting that he is been coughing for last 3 year. At the moment complains of malaise, dyspnea, subfebrile fever. Chest X-ray detected multiple polymorphic foci of different density, size and shape mostly in upper and middle zones. On both apices thick-wall cavities are seen. Hilums are elevated. Sputum ZN-staining detected AFB. Tuberculosis is suspected. Define the clinical form of the disease.

- A. Chronic disseminated.
- B. Subacute disseminated.
- C. Fibrous-cavernous.
- D. Infiltrative.
- E. Miliary.

97.

39-year-old symptom-free female presented with solitary 3 cm opacity of moderate density with the crescent lucency on medio-inferior pole and defined borders in the right lung S<sub>2</sub>, surrounded by several satellite foci of low density. Apical pleura is thickened. Blood test reported no abnormalities. Mantoux skin test – papule of 15 mm. What's the most likely diagnosis?

- A. Infiltrative tuberculosis.
- B. Lung cancer.
- C. Tuberculoma.
- D. Eosinophilic pneumonia.
- E. Community acquired pneumonia.

98.

36-year-old female complains of fatigue, decreased workability, fever up to 37.2°C in the evening. From past medical history: 2 year before sustained pleurisy of unknown reason. Physical examination, bronchial lavage, ZN-staining detected no abnormality. CBC: Hb – 120 g/L, WBC –  $9.2 \times 10^9$  /L, eosinophil-2%, band neutrophil-8%, segmented neutrophil-65%, lymphocyte-24%, monocyte -1%, ESR - 35 mm/hour. Chest X-ray detected 4 cm opacity having low density, hazy borders and lucency inside in right lower zone. Around lots of satellite foci are detected. What's the most likely diagnosis?

- A. Benign tumor.
- B. Eosinophilic pneumonia.
- C. Community acquired pneumonia.
- D. Lung cancer.
- E. Infiltrative tuberculosis.

99.

37-year-old symptom-free male presented after mass X-ray. Chest X-ray discovered round opacity of 3 cm diameter having moderate density, irregular shape and indistinct borders in left S<sub>1</sub>. Consecutive CT-scanning detected radiant hypervascularisation of bordering area, lymphatic vessel track to the hilum. Previous chest X-ray made a year ago detected no abnormality. Physical examination, blood, urine tests and bronchial lavage ZN-staining detected no abnormality. What's the most likely diagnosis?

- A. Infiltrative tuberculosis.
- B. Tuberculoma.
- C. Benign tumors.
- D. Lung cancer.
- E. Aspergiloma.

100.

40-year-old homeless drug abuser presented with 3-year history of disseminated tuberculosis. Started treatment several times but never receive the complete course because of default. Which foci X-ray picture is the most expected?

- A. 2-4 mm, high density, different shape.
- B. 1-2 mm, moderate density, different shape.
- C. 5-10 mm high density, equal shape.
- D. Different size, shape and density.
- E. High density, different size and shape.

101.

32-year-old patient presented with chest pain and cough. His father died of tuberculosis. Hasn't undergone medical examination for 5 years. Chest X-ray revealed 3.5 cm round opacity of moderate density, with the crescent lucency and defined borders in the right lung S<sub>1-2</sub>; around there are a lot of satellite foci of low density with hazy borders. What's the most likely diagnosis?

- A. Tuberculoma.
- B. Community acquired pneumonia.
- C. Lung cancer.
- D. Tuberculosis residuals.
- E. Infiltrative tuberculosis.

102.

19-year-old female presented with headache, chills, dry cough, dyspnea. The illness started suddenly. Sustained 2 abortions 5 and 1 months before. On examination: T 39-40°C, condition is grave, diffuse cyanosis is present. All over lung fields tympanic percussion sound is detected. Auscultation revealed no rales. CBC: Hb - 90 g/L, WBC -  $10.2 \cdot 10^9$  /L, eosinophil-2%, band neutrophil-8%, segmented neutrophil-64%, lymphocyte-14%, monocyte -12%, ESR - 30 mm/hour. Mantoux skin test with 5 TU is negative. Chest X-ray shows diffuse multiple tiny foci with hazy borders. What's the most likely diagnosis?

- A. Health-care acquired pneumonia.
- B. Chorionepithelioma.

- C. Community acquired pneumonia.
- D. Focal tuberculosis.
- E. Miliary tuberculosis.

103.

57-year-old patient with unremarkable past medical history presented with dry and productive cough, malaise, weight loss, dyspnea, subfebrile fever, low extremities edema. On examination: labial cyanosis, boom-box percussion sound, wet and dry rales throughout lungs. Chest X-ray detected multiple middle density foci about 8-10 mm throughout lung tissue with caudo-apical type of spreading. Sputum ZN-staining detected no AFB. What's the most likely diagnosis?

- A. Disseminated lung cancer.
- B. Subacute disseminated tuberculosis.
- C. Fibrous-cavernous tuberculosis.
- D. Chronic disseminated tuberculosis.
- E. Chronic obstructive pulmonary disease.

104.

18-year-old female presented with chest pain, dry cough, aggravating shortness of breathing fever up to 38°C. Suffers from scleroderma, received corticosteroids. On examination: percussion and auscultation revealed dullness and absent breathing over left hemithorax respectively. Chest X-ray showed left side opacity up to the III rib with upper oblique border. CBC: Hb - 90 g/L WBC –  $12.0 \times 10^9$  /L, eosinophil - 5%, band neutrophil - 6%, segmented neutrophil - 65%, lymphocyte-23%, monocyte - 4%, ESR - 40 mm/hour. Mantoux skin – 18 mm papule with vesicle. Pleural fluid test: transparent, pale yellow, density - 1030, protein – 35 g/l, cell amount –  $9 \times 10^9$ /l, lymphocyte - 90 %. Chest X-ray performed immediately after removing the exudate detected no lung field abnormality. What's the most likely diagnosis?

- A. Hydrothorax, due to unknown reason.
- B. Tubercle pleurisy.
- C. Autoimmune pleurisy.
- D. Community acquired pneumonia.
- E. Pleural mesothelioma.

105.

28-year-old female presented with chest pain, dry cough, aggravating shortness of breathing, fever up to 38°C. Suffers from systemic lupus erythematosus. On examination: malar rash, percussion and auscultation revealed dullness and absence of breathing respectively over left hemithorax. Chest X-ray showed left side opacity up to the III rib with upper oblique border. CBC: Hb - 90 g/L, WBC –  $3.0 \times 10^9$  /L, eosinophil - 4%, band neutrophil - 6%, segmented neutrophil - 75%, lymphocyte-13%, monocyte - 4%, ESR - 40 mm/hour. Pleural fluid test: transparent, pale yellow, density - 1030, protein – 35 g/l, cell amount –  $9 \times 10^9$ /l, neutrophil - 90%. Chest X-ray performed immediately after exudate removing detects diffuse vessel patterns enrichment. What's the most likely diagnosis?

- A. Hydrothorax, due to unknown reason
- B. Tubercle pleurisy.
- C. Community acquired pneumonia.
- D. Autoimmune pleurisy.
- E. Pleural mesothelioma.

106.

32-year-old asymptomatic male without any past TB history presented with several foci of high density on the left lung apex. Physical and routine laboratory examination showed no abnormalities. Plain X-ray made 6 year ago showed the same feature. What's the most likely diagnosis?

- A. Focal pulmonary tuberculosis.

- B. Self-recovered tuberculosis residuals.
- C. Lung cancer.
- D. Tuberculoma.
- E. Disseminated tuberculosis.

107.

Mother noticed irritability, whining, tiredness, loss of appetite, irregular fever up to 37.8°C at 6-year-old boy. On Mantoux skin test 7 mm papule with vesicle appeared. CBC: Hb - 130 g/L WBC –  $4.9 \times 10^9/L$ , eosinophil -5%, band neutrophil - 9%, segmented neutrophil - 57%, lymphocyte- 23%, monocyte -6%, ESR - 30 mm/hour. On the chest X-ray: right hilum cross-sectional size up to 4 cm with hazy borders and convex contour. What's the most likely diagnosis?

- A. Intrathoracic lymph nodes tuberculosis.
- B. Pre-local tuberculosis.
- C. Hodgkin disease.
- D. Latent tuberculosis.
- E. Primary tubercle complex.

108.

6-year-old symptom-free child presented from tuberculosis hotbed. Father has been hospitalized with infiltrative tuberculosis, MBT+, (M+, C0). On clinical, instrumental and laboratory examination no abnormalities were detected. What's the most advisable further dealing with the child?

- A. No dealing is required.
- B. Treatment course according to I category.
- C. Antituberculosis drug preventive course.
- D. Treatment course according to III category.
- E. Observation only.

109.

25-year-old symptom-free male presented with 4-10 mm shadows in left S<sub>1-2</sub> detected on screening X-ray. Sputum test detected no mycobacteria. Mantoux skin test showed papule of 7 mm, CBC detected no abnormalities. Had been cured for tuberculosis in childhood. To which category this case belongs?

- A. I.
- B. II.
- C. III.
- D. IV.
- E. V.

110.

42-year-old patient known as rheumatoid arthritis case and so receiving high-dose corticosteroid therapy complains of chills, severe weakness, shortness of breathing. On examination: P 102/m, RR 26/m. Lung percussion and auscultation detected no abnormalities. Mantoux skin test is negative. Hb - 130 g/L, WBC –  $10.0 \times 10^9 /L$ , eosinophil -8%, band neutrophil -16%, segmented neutrophil -62%, lymphocyte-8%, monocyte -6%, ESR - 30 mm/hour. Chest X-ray shows numerous foci on both lung apices. What's the most likely diagnosis?

- A. Miliary tuberculosis.
- B. Community acquired pneumonia.
- C. Focal tuberculosis.
- D. Lung rheumatoid dissemination.
- E. Disseminated tuberculosis.

111.

28-year-old woman complains of infertility, constant pain in low abdomen. Husband suffers from fibrous-cavernous tuberculosis. Mantoux skin test showed papule of 22 mm with lymphangitis. Genital tuberculosis is suspected. What's the most likely localization?

- A. Uterus.
- B. Ovaria.
- C. Uterine tubes.
- D. Uterine cervix.
- E. Vagina.

112.

30-year-old inhabitant of shelter reported that 2 year ago he had been treated for infiltrative tuberculosis with lung tissue decay and bacterial discharging for 4 weeks but defaulted treatment. At the moment sputum ZN-staining is positive. Which disease transformation is the most likely?

- A. Into tuberculoma.
- B. Into fibrous-cavernous tuberculosis.
- C. Into cirrhotic tuberculosis.
- D. Recovering.
- E. All of the above.

113.

40-year-old alcohol abuser presented with cachexy, productive cough sometimes with blood streaks, subfebrile fever. Hasn't undergone X-ray examination for 10 year. On chest X-ray: in reduced left upper lobe 4×5 cm bean-like cavity is detected having thick walls, distinct inner and hazy outer borders, with a lot of fusing foci around. ZN-staining detected 15-20 AFB /field of view in sputum. What's the most likely diagnosis?

- A. Disseminated tuberculosis.
- B. Cirrhortic tuberculosis.
- C. Infiltrative tuberculosis.
- D. Fibrous-cavernous tuberculosis.
- E. Caseuos pneumonia.

114.

18-year-old patient presented with the calcified focus on the left lung apex and several high-density inclusions in the left hilum. Which clinical tuberculosis form is more likely to be followed by those residuals?

- A. Caseous pneumonia.
- B. Infiltrative tuberculosis.
- C. Fibrous-cavernous tuberculosis.
- D. Primary tuberculosis complex.
- E. Tubercle bronchodenitis.

115.

15-year-old boy presented with chest pain, dry cough, shortness of breathing fever up to 38°C. 6 month before Mantoux skin test conversion had been established. Preventive treatment was defaulted. On examination: bilateral erythema on shins; percussion and auscultation revealed dullness and absent breathing in the left lower area. Chest X-ray showed left side opacity up to the III rib with the upper oblique border. CBC: WBC –  $12.0 \times 10^9$  /L, ESR - 40 mm/hour. Mantoux skin test 18mm papule. Which reason of pleurisy is the most probable?

- A. Tuberculosis.
- B. Lung cancer.

- C. Community acquired pneumonia.
- D. Collagenosis.
- E. Pleural mesothelioma.

116.

13-year-old boy fell ill a month ago. Dry cough, tiredness, loss of appetite, poor school results appeared. 8 month before tuberculin test conversion has been detected and preventive drug course administered. On examination: skin is pale, peripheral lymph nodes of 5 groups are enlarged up to 1.5 cm, painless, elastic. In Mantoux skin test 17 mm papule appeared. In the blood test: leukocyte rate  $10.0 \times 10^9/L$ , ESR - 30 mm/hour detected. On the chest X-ray: right hilum is widened up to 3 cm with hazy borders. What's the most likely diagnosis?

- A. Primary tuberculosis complex
- B. Pre-local tuberculosis.
- C. Hodgkin disease.
- D. Latent tuberculosis.
- E. Intrathoracic lymph nodes tuberculosis.

117.

Woman living in the hostel presented with active pulmonary tuberculosis MBT+. Which are the most urgent intervention in the hostel?

- A. Screening plain X-ray.
- B. BCG-vaccination.
- C. Preventive chemotherapy.
- D. Screening CT-scanning.
- E. Screening Mantoux skin test.

118.

41-year-old patient was admitted to the emergency department in grave condition complaining of severe pain in the right thoracic zone and dyspnea that appeared suddenly after physical exertion. Past medical history: recovered from pulmonary tuberculosis 5 year ago, in treatment course collapsotherapy was used. On examination: P 122/m, RR 28/m, BP 80/60, lips and mucosa cyanosis, tympanic percussion sound and auscultative sounds weakened over right thoracic side, loud second sound over pulmonary trunk. Spontaneous pneumothorax is suspected. Which examination is the most advisable in order to evaluate the pleura defect?

- A. ECG.
- B. Chest X-ray.
- C. Videothoracoscopy.
- D. US-scanning.
- E. CT scanning

119.

60-year-old woman was admitted to emergency department with the diagnosis of community acquired pneumonia in a grave condition with signs of respiratory distress. After 2 weeks of intravenous broad-spectrum therapy the condition ameliorated but temperature is still subfebrile, X-ray shows numerous foci of low density on both apices, symmetric bilateral cavities of 3-4 cm in diameter. CBC: Hb - 110 g/L, WBC -  $12 \cdot 10^9 /L$ , eosinophil-5%, band neutrophil-7%, segmented neutrophil-50%, lymphocyte-28%, monocyte-10%, ESR -25 mm/hour. Sputum smear test detected no AFB. What's the most likely diagnosis?

- A. Severe community acquired pneumonia.
- B. Bilateral pulmonary abscesses.
- C. Eosinophilic pneumonia.



- D. Disseminated tuberculosis.
- E. Disseminated lung cancer.

120.

25-year-old coal miner presented with weakness, fatigue, rare dry cough. Physical examination and blood test detected no abnormalities. Chest X-ray detected several foci of different density on the right apex. What's the most likely diagnosis?

- A. Tuberculosis residuals.
- B. Focal tuberculosis.
- C. Coniotuberculosis.
- D. Disseminated tuberculosis.
- E. Lung cancer.

121.

37-year-old symptom-free male presented after mass X-ray discovering round opacity of high density, distinct borders of 3 cm diameter in left S<sub>2-3</sub>. What's the most likely diagnosis?

- A. Arterial aneurism.
- B. Tuberculoma.
- C. Benign tumors.
- D. Lung cancer.
- E. All the above.

122.

38-year-old female presented with fatigue, malaise, subfebrile fever. She's considering to be sick after flu. In past medical history: chronic obstructive pulmonary disease, chronic pyelonephritis. Her father suffered from pulmonary tuberculosis 3 year before. Patient received isoniazid preventive course but didn't undergo any examination. Physical examination, blood and urine tests, bronchial lavage ZN-staining detected any abnormalities. Chest X-ray discovered 2 round opacities having high density and distinct borders of 1.2 and 1 cm diameter in left S<sub>1</sub>. How could you qualify these changes?

- A. Numerous tuberculomas.
- B. Tuberculosis residuals.
- C. Focal tuberculosis.
- D. Benign tumors.
- E. Malignant tumors.

123.

22-year-old symptom-free patient is presented with several low density focal shadows of 3-5 mm diameter, with hazy borders in left S<sub>1-2</sub>. Physical examination and blood test detected no abnormalities. Sputum wasn't obtained. Mantoux skin test showed papule of 15 mm. What's the most likely diagnosis?

- A. Tuberculosis residuals.
- B. Community acquired pneumonia.
- C. Infiltrative tuberculosis.
- D. Lung cancer.
- E. Focal tuberculosis.

124.

50-year-old patient suffering from pulmonary tuberculosis presented with stabbing chest pain, dyspnea, tachycardia, which appeared suddenly on cough attack. On examination: right hemithorax lags behind the breathing, intercostal spaces are smoothed, tympanic percussion sound and absent breathing over right hemithorax detected. Chest X-ray detected several foci, limited fibrotic area and pleural coalescences on

right apex and an area without vessel patterns in the peripheral part of right hemithorax. Which complication is more likely?

- A. Pulmonary embolism.
- B. Atelectasis.
- C. Spontaneous pneumothorax.
- D. Community acquired pneumonia.
- E. Myocardial infarction.

125.

35-year-old patient has been feeling unwell for a month after flu. A week ago temperature arose again up to 38.2°C, productive cough appeared. Auscultation detected weakened breathing over left upper lobe. CBC: Hb - 130 g/L WBC –  $4.9 \times 10^9/L$ , eosinophil -3%, band neutrophil - 4%, segmented neutrophil - 67%, lymphocyte-18%, monocyte -8%, ESR - 15 mm/hour. Patient has been hospitalized with the diagnosis of community acquired pneumonia. Chest X-ray revealed homogenous shadow of low density 3×4 cm in left upper lobe, connected to the hilum by “track”. ZN sputum staining detected no AFB. Pulmonary tuberculosis is suspected. What’s the most advisable further course of action?

- A. Administering antituberculosis treatment, as the process is localized in upper lobe.
- B. Observation.
- C. Performing open lung biopsy.
- D. Administering broad-spectrum antibiotic treatment.
- E. Administering broad-spectrum antibiotics with antituberculosis activity.

126.

Patient is presented with infiltrative tuberculosis, MBT+ (M+C+) resist + (S, H, E, K). No previous history of tuberculosis. Which type of drug resistance is it?

- A. MDR.
- B. Simple drug resistance.
- C. XDR.
- D. Mono-drug resistance.
- E. Cannot be defined.

127.

60-year-old smoker presented with right side pleurisy. No previous disease are revealed in personal history but it’s known that he has been complaining of weakness, fatigue, dry cough and weight loss since last year. CBC: Hb - 90 g/L, WBC –  $4.2 \times 10^9/L$ , eosinophil -2%, band neutrophil -9%, segmented neutrophil -71%, lymphocyte-17%, monocyte -1%, ESR - 60 mm/hour. Pleural fluid test: bloody, neutrophils are predominant leukocyte type. Chest X-ray performed immediately after exudate removing detected intensive opacity with knobby borders in right lower lung zone. Which pleurisy cause is the most likely?

- A. Lung cancer.
- B. Non-specific pneumonia.
- C. Tuberculosis.
- D. Pancreatitis.
- E. Pleural mesothelioma.

128.

19-year-old patient presented with suddenly appeared hemoptysis. Otherwise no complaints are present. On examination: percussion detected dull sound over left upper lobe, on auscultation – bronchial breathing in this area. On chest X-ray: 5 cm opacity of the moderate density with the hazy borders and 1.5×1.2 cm lucency inside in the left upper lobe. What’s the most likely diagnosis?

- A. Infiltrative pulmonary tuberculosis.
- B. Destructive pneumonia.
- C. Peripheral lung cancer.
- D. Central lung cancer.
- E. Pulmonary embolism.

129.

50-year-old male suffering from fibrous-cavernous pulmonary tuberculosis (dis+) presented with pulmonary hemorrhage. Which mechanism of bleeding is the most likely?

- A. Pulmonary hypertension.
- B. Vessel wall remodeling.
- C. Vessel wall permeability increasing.
- D. Vessel wall involvement into decay area.
- E. All of the above.

130.

45-year-old smoker complains of productive cough, fever up to 38.6°C, chest pain, hemoptysis. Chest X-ray showed dense homogenic opacity in the right upper lobe of 3×4 cm with distinct borders. CBC: RBC -  $4.2 \times 10^{12}$  /L, WBC -  $12.8 \times 10^9$ /L, ESR - 35 mm/hour. Sputum is mucous, L. 10-12/field of view. Mantoux skin test - papule 12mm. What's the most likely diagnosis?

- A. Tuberculosis.
- B. Community acquired pneumonia.
- C. Lung cancer.
- D. Pulmonary embolism.
- E. No listed disease can be excluded.

131.

50-year-old woman from the community with high tuberculosis prevalence is looking for a job of confectioner. What's the prerequisite for employment?

- A. Negative Mantoux skin test.
- B. No TB-patient in the family.
- C. Normal chest X-ray.
- D. No clinical signs of tuberculosis.
- E. Negative sputum ZN-staining.

132.

23-year-old woman suffering from miliary tuberculosis parturiated a baby with body weight 3000 g. Which preventive measures for baby are the most advisable?

- A. Separation from mother. Breastfeeding prohibiting. Preventive isoniazid course for 3 month, then BCG-vaccination.
- B. Separation from mother. Breastfeeding prohibiting. Preventive isoniazid course for 3 month, then BCG-vaccination after Mantoux skin test.
- C. Separation from mother, BCG-vaccination after Mantoux skin test. Breastfeeding prohibiting.
- D. BCG-vaccination, breastfeeding isn't contraindicated. Separation from mother isn't necessary.
- E. BCG -vaccination and breastfeeding prohibiting. Separation from mother. Preventive isoniazid course for 3 month.

133.

Patient has been suffering from tuberculosis for 5 year. At the moment complains of fever up to 38°C, weight loss, weakness, productive cough, hemoptysis. On examination: condition is grave, percussion revealed dull sound over right upper lung zone, auscultation showed bronchial breathing in this area.

Sputum ZN-staining showed positive result. Chest X-ray revealed cavity 6 cm in diameter with thick walls surrounded by advanced fibrotic area and polymorphic foci. Which tuberculosis clinical type is the most likely?

- A. Infiltrative.
- B. Residuals.
- C. Caseous pneumonia.
- D. Fibrous-cavernous.
- E. Cirrhotic.

134.

Screening X-ray of the 20-year-old symptom-free student shows several 1-2 mm foci of moderate density in the right lung S<sub>1-2</sub>. On examination otherwise no abnormalities detected. Which clinical type of TB is the most probable?

- A. Focal.
- B. Residuals.
- C. Tuberculoma.
- D. Infiltrative.
- E. Disseminated.

135.

The patient has been treated for infiltrative pulmonary tuberculosis for 6 months. X-ray examination is detecting cavity of 5 cm diameter in the apex throughout this period. Choose the most advisable algorithm of further management.

- A. Upper lobe resection.
- B. Intra-bronchial drug introduction.
- C. Tissue stimulating.
- D. Collapse therapy.
- E. Prolonged continual phase of the treatment.

136.

Patient suffering from infiltrative tuberculosis presented with 4 cm tender infiltration of hazy borders and irregular shape in the right upper lobe. Define the type of infiltrate.

- A. Round.
- B. Lobitis.
- C. Cloud-like.
- D. Periscissuritis.
- E. Lobular.

137.

6-months infant, who had received BCG-vaccination on the 3<sup>rd</sup> day of life presented with femoral osteitis. On histological investigation caseous necrosis, giant epithelioid cells were detected. How this phenomenon should be explained?

- A. At young children nonspecific inflammation can mimic tuberculosis.
- B. It's bone tuberculosis.
- C. It's a diagnostic mistake, because BCG-vaccination rules active tuberculosis out at first year of life.
- D. It's a feature of disseminated BCG-infection.
- E. It's a paraspecific reaction.

138.

30-year-old IT-specialist without immunocompromise condition presented with 5 TU PPD-S Mantoux skin test papule of 7 mm. Which conclusion should be done?

- A. Any.
- B. Active tuberculosis.
- C. Depends on further examination result.
- D. Positive reaction.
- E. Negative reaction.

139.

Patient is presented with infiltrative tuberculosis. On chest X-ray: opacity is detected in the right middle zone, triangular-shaped, with hazy upper and distinct lower border. Name the radiological type of infiltrate.

- A. Asmann.
- B. Periscissuritis.
- C. Cloud-like.
- D. Linear.
- E. Atypical.

140.

Healthy 7-year-old girl from tuberculosis hotbed is presented. Didn't receive BCG-vaccination because of parents' refusing. At the moment they agree to carry out any recommendation. Mantoux test is negative. Choose the most adequate one.

- A. Separation from bacterial discharger, 6 month isoniazid preventive course, consecutive BCG-vaccination if Mantoux test is still negative.
- B. Separation from bacterial discharger, 6 month isoniazid preventive course. BCG-vaccination isn't needed.
- C. 6 month isoniazid preventive course, consecutive BCG-vaccination if Mantoux test is still negative. Separation isn't needed.
- D. Repeat Mantoux test in 3 months, after broad-spectrum antibiotic course. If negative – perform BCG-vaccination. Separation isn't needed.
- E. Separation from bacterial discharger, consecutive BCG-vaccination if Mantoux test is still negative, broad-spectrum antibiotic course.

141.

10-month-old infant hasn't been vaccinated just after birth because of neurological deficiency. At the moment no neurological abnormalities detected. Which are the most advisable prerequisite for vaccination?

- A. No prerequisites.
- B. Normal CD-4 level.
- C. Normal chest X-ray.
- D. Negative sputum ZN-staining.
- E. Negative Mantoux skin test.

142.

6-year-old child presented with weakness, irritability, subfebrile fever. Mantoux skin test showed papule of 17 mm, last year – negative. Chest X-ray showed no remarkable changes. Which diseases should be ruled out first of all?

- A. Chronic tonsillitis.
- B. Chronic pyelonephritis.

- C. Helmintosis.
- D. Pre-local tuberculosis.
- E. All the above.

143.

Patient suffering from fibrous-cavernous tuberculosis complains of stabbing pain in the right hemithorax, rapidly increasing dyspnea. On examination: skin is pale, dyspnea, RR 32/min, P 120/min, BP 90/60. Right hemithorax lags behind the breathing, intercostal spaces are smoothed, tympanic percussion sound and breathing absence over right hemithorax detected. Heart borders are shifted to the left. Which complication is more likely?

- A. Pulmonary embolism.
- B. Spontaneous pneumothorax.
- C. Atelectasis.
- D. Community acquired pneumonia.
- E. Myocardial infarction.

144.

28-year-old patient without any data about previous liver disease is undergoing treatment course for tuberculosis according to II category. After 2 weeks of treatment started to complain of nausea, loss of appetite; jaundice appeared. Biochemical test detected increasing level of AST, ALT. Which drug combination's side effect is it more likely due to?

- A. Ethambutol+isoniazid.
- B. Isoniazid + ethionamide.
- C. Ethambutol + pyrazinamide.
- D. Rifampicin + pyrazinamide.
- E. Rifampicin + streptomycin.

145.

23-year-old patient complains of fever, productive cough, sweating. Is been ill for a week. On chest X-ray: middle zone opacity of hazy borders and low density detected in the left lung. CBC: Hb - 140 g/L, WBC –  $17.0 \times 10^9$  /L, eosinophil - 3%, band neutrophil - 12%, segmented neutrophil - 70%, lymphocyte - 14%, monocyte - 1%, ESR - 50 mm/hour. What's the most likely diagnosis?

- A. Infiltrative tuberculosis.
- B. COPD.
- C. Community acquired pneumonia.
- D. Tuberculoma.
- E. Caseous pneumonia.

146.

32-year-old symptom-free school teacher presented after preemployment X-ray examination, which had detected several high density shadows up to 1 cm in diameter in both lungs and high density inclusions in both hilums. Past medical history: suffered from primary tuberculosis at childhood. Physical examination, blood, urine, sputum tests detected no abnormalities. Could professional activity be allowed to this patient?

- A. Depends on further cultural sputum test.
- B. Yes, after retreatment course.
- C. Yes, if Mantoux skin test is negative.
- D. Yes, but annual clinical examination including chest X-ray should be required.
- E. No.

147.

At 20-year-old symptom-free student focal pulmonary tuberculosis was detected on mass X-ray. Consecutive sputum smear and cultural test detected no bacterial discharging. Which investigation should be performed to his group mates and hostel neighbors?

- A. X-ray examination.
- B. Mantoux skin test.
- C. Immunogram.
- D. Sputum ZN-staining.
- E. All of the above.

148.

30-year-old woman finished treatment course for pulmonary infiltrative tuberculosis dis-, MBT- (M-, C-), a year ago, parturiated a healthy baby. Clinical examination of mother detected no exacerbation. Which preventive measures for baby are the most advisable?

- A. Separation from mother. Breastfeeding prohibiting. Preventive isoniazid course for 3 month, then BCG-vaccination.
- B. Separation from mother. Breastfeeding prohibiting. Preventive isoniazid course for 3 month, then BCG-vaccination after Mantoux skin test.
- C. Separation from mother, BCG-vaccination after Mantoux skin test. Breastfeeding prohibiting.
- D. BCG-vaccination, breastfeeding isn't contraindicated. Separation from mother isn't necessary.
- E. BCG -vaccination and breastfeeding prohibiting. Separation from mother.

149.

Patient with chronic disseminated tuberculosis presented with the acute chest pain, shortness of breathing. Which is the most urgent examination?

- A. ECG.
- B. Blood test.
- C. Spirography.
- D. Bronchoscopy.
- E. Chest X-ray.

150.

40-year-old patient suffering from fibrous-cavernous tuberculosis presented with shin edema. Urine test showed proteinuria, cylinderuria, hypostenuria. Serum creatinine level 200 mcmol/l. What's the most probable reason for these changes?

- A. Amiloidosis.
- B. Glomerulonephritis.
- C. Kidney tuberculosis.
- D. Pyelitis.
- E. Anti-TB drugs side effect.

151.

36-year-old patient suffering from fibrous-cavernous tuberculosis complains of stabbing pain in the right hemithorax, quickly increasing dyspnea. On examination: skin is pale, dyspnea at rest, P 120/min. Right hemithorax lags behind the breathing, intercostal spaces are smoothed, tympanic percussion sound and absent breathing over right hemithorax detected. Chest X-ray detected a huge cavity on right apex and an area without vessel patterns in the peripheral part of right hemithorax. Which complication is more likely?

- A. Pulmonary embolism.
- B. Spontaneous pneumathorax.
- C. Atelectasis.

- D. Community acquired pneumonia.
- E. Myocardial infarction.

152.

45-year-old patient from tuberculosis hotbed complains of fatigue, malaise, rise of temperature up to 37.3°C. On physical examination no abnormalities detected. CBC: Hb 105 g/L, WBC –  $13.0 \times 10^9/L$ , eosinophil -3%, band neutrophil -8%, segmented neutrophil - 64%, lymphocyte-20%, monocyte - 5%, ESR - 20 mm/hour. Which is the most advisable dealing to detect or rule out pulmonary tuberculosis in this case?

- A. Mantoux skin test.
- B. Respiratory facilities examination.
- C. Bronchial lavage smear test for MBT.
- D. Broad-spectrum antibiotic course.
- E. Chest X-ray.

153.

27-year-old patient has been treated for infiltrative tuberculosis of left upper lobe, dis+, MBT+ M+, C+ for 5 month. After treatment all the symptoms disappeared, cultural test for MBT became negative, no any physical or laboratory abnormalities were detected. X-ray examination revealed cavity healing, surrounding infiltration partially resolution. Choose the most advisable algorithm of further management.

- A. Prolonged continual phase of the treatment.
- B. Intrabronchial drug introduction.
- C. Tissue stimulation.
- D. Collapsotherapy.
- E. Surgery.

154.

30-year-old primary school teacher recovered from infiltrative pulmonary tuberculosis with lung tissue decay, MBT+ 3 year ago. After treatment cavity cicatrized, infiltration resolved, cultural sputum test is being negative for last 3 year. What's the most advisable further dealing?

- A. Administer treatment according to IV category, prohibit professional activity.
- B. Allow professional activity if no exacerbation occur within next 2 year.
- C. Finish treatment and observation, prohibit professional activity.
- D. Allow professional activity without any prerequisite, recommend annual chest X-ray.
- E. Allow professional activity if Mantoux skin test is negative.

155.

20-year-old patient complains of subfebrile temperature, weight loss, weakness, and cough. At childhood Mantoux skin test conversion was detected. On physical examination: no abnormalities have been detected. Blood test showed no abnormalities. Chest X-ray detected 4 cm opacity in the right apex, with hazy borders, lucency inside and lots of satellite foci around. What's the most likely diagnosis?

- A. Infiltrative tuberculosis.
- B. Residuals of self-cured tuberculosis.
- C. Tuberculoma.
- D. Community acquired pneumonia.
- E. Caseous pneumonia.

156.

12-year-old child presented with the suspicion for pneumonia. On chest X-ray pneumonia was ruled out but small calcifications in right hilum detected. No tuberculin test history is available, at the moment Mantoux test papule is 8 mm in diameter. What's the most advisable dealing?



- A. Antituberculosis treatment.
- B. Prolonged observation including annual chest X-ray and Mantoux test.
- C. Immediate cause of chemical prophylaxis.
- D. Immediate BCG-vaccination.
- E. Prolonged observation including annual blood and sputum test.

157.

45-year-old pulmonary tuberculosis patient presented with total painless hematuria and aching pain in loin area. Urine test: density 1018, leucocytes 30/ field of view, erythrocyte - total field of view protein 4.0g/l. Kidney tuberculosis is suspected. Choose the most suitable programme of further examination.

- A. Ultrasound kidney examination, biochemical blood test.
- B. Retrograde urography, direct sputum microscopy.
- C. Kidneys X-ray, tuberculin test.
- D. Intravenous urography, cultural and PCR urine test for MBT.
- E. Laparoscopy, direct urine microscopy.

158.

18-year-old patient has been complaining of pain in the left hip joint, malaise, sweating for 1.5 year. On examination: movements in the affected joint is limited, left leg is shortened, muscles atrophy on affected side is evident. CBC: WBC –  $9.9 \times 10^9$  /L, eosinophil -3%, band neutrophil -9%, segmented neutrophil - 70%, lymphocyte-14%, monocyte -4%, ESR - 32 mm/hour. X-ray of left hip joint showed advanced osteoporosis, femoral head and pelvic bone destruction, joint space constriction. What's the most likely diagnosis?

- A. Arthrosis deformans.
- B. Podagric arthritis.
- C. Tuberculosis of the hip joint.
- D. Gonorrheal arthritis.
- E. Osteochondritis deformans juvenilis.

159.

55-year-old female has been complaining of pain in the right hip joint for 3 year. Pain is more severe in the evening. On examination: movements in the affected joint limitation, left leg shortening, muscles atrophy. In CBC no abnormality detected. X-ray of left hip joint showed advanced osteoporosis, femoral head and pelvic bone osteophytes, joint space is constricted. What's the most likely diagnosis?

- A. Arthrosis deformans.
- B. Podagric arthritis.
- C. Tuberculosis of the hip joint.
- D. Gonorrheal arthritis.
- E. Osteochondritis deformans.

160.

50-year-old female had been treated for chronic pyelonephritis within 10 year without evident effect. At the moment she complains of weakness, sweating, weight loss, frequent urination (about 15 times a day). Blood test detected no abnormalities. In the urinalysis: density 1020, leukocytes - total field of view, erythrocytes 10-20/ field of view. Excretory urogram detected cavity up to 3 cm in diameter in the right kidney. Retrograde urography showed the urinary bladder volume of 25 ml. What's the most likely diagnosis?

- A. Pyonephrosis.
- B. Kidney cancer.
- C. Urinary system tuberculosis.

- D. Chronic pyelonephritis.
- E. Kidney cyst.

161.

25-year-old woman at the seventh week of pregnancy complains of weakness, sweating, dull pain in the loin area. Three year ago left kidney was removed after penetrating abdominal wound, husband is suffering from MDR-TB. Blood test detected no abnormality. Urinalysis: density – 1010, leucocyte – 0.5/field of view, erythrocyte – up to 25/field of view, PCR detected M.tuberculosis in urine resistant to isoniazid, rifampicin. Which is the most advisable dealing?

- A. Treatment course for tuberculosis according to I category, pregnancy saving.
- B. Individually designed treatment course for tuberculosis, pregnancy saving.
- C. Individually designed treatment course for tuberculosis, pregnancy termination.
- D. Treatment course for tuberculosis according to I category, pregnancy termination.
- E. Treatment course for tuberculosis according to II category, pregnancy saving.

162.

30-year-old patient suffering from diabetes mellitus complains of weakness, tiredness, weight loss (7 kg within 6 months), subfebrile fever. CBC: Hb 100 g/L, WBC –  $9.5 \times 10^9/L$ , eosinophil -2%, band neutrophil - 6%, segmented neutrophil - 70%, lymphocyte-18%, monocyte - 4%, ESR - 30 mm/hour. Urinalysis: Leucocyte – total field of view, erythrocyte – 10-20/field of view, density 1018. Chest X-ray showed no abnormalities. Intravenous urography detected cavity of 2 cm in diameter in right kidney. What's the most likely diagnosis?

- A. Kidney cancer.
- B. Diabetic nephropathy.
- C. Kidney tuberculosis.
- D. Kidney cyst.
- E. Pyonephrosis.

163.

30-year-old woman resorted to consultation for inability to conceive. From personal history: has been suffering from chronic salpingo-oophoritis for 3 year, 6 year ago recovered from pulmonary tuberculosis. Tuberculosis salpingitis is suspected. Choose the most advisable way to confirm or rule this diagnosis out.

- A. Plain abdominal X-ray.
- B. Abdominal ultrasound examination.
- C. X-ray histerosalpingography.
- D. Cervical Papanicolaou smear test.
- E. Cervical smear ZN-staining.

164.

37-year-old symptom-free female presented with 3×3.5 cm opacity of moderate density with the medial crescent lucency and defined borders surrounded by several satellite foci in the S<sub>2</sub> of the left lung. Mantoux test showed papule of 17 mm diameter. No remarkable changes in blood test were discovered. Choose the most likely diagnosis.

- A. Lung cancer.
- B. Aspergiloma.
- C. Tuberculoma.
- D. Benign tumor.
- E. Lung abscess.

165.

48-year-old male patient suffering from kidney tuberculosis complains of frequent painful urination (about 10 times a day). Which organ is more likely involved into inflammation?

- A. Ureter.
- B. Seminal vesicles.
- C. Testis.
- D. Epididymis.
- E. Urinary bladder.

166.

35-year-old patient with kidney tuberculosis complains if hemospermia. Which organ is more likely involved into inflammation?

- A. Ureter.
- B. Urethra.
- C. Prostate.
- D. Testis.
- E. Urinary bladder.

167.

15-year-old adolescent from tuberculosis hotbed complains of inconstant pain in the periumbilical area and unstable stool. Has been ill for 3 month. A year ago Mantoux skin test conversion established. Blood and urine tests are normal. Choose the most advisable additional examination.

- A. Rectoromanoscopy.
- B. Abdominal plain X-ray.
- C. Abdominal CT scanning.
- D. Colonography.
- E. Fibrogastroscopy.

168.

10-year-old boy has been complaining of non-localized abdominal pain, periodical diarrhea (about 2 times a week) within two months. He was exposed by the close contact with his grandfather suffering from smear-positive tuberculosis. On examination: malnutrition detected, skin is pale, peripheral lymph nodes are enlarged up to 1,5 cm, elastic; abdomen is moderately painful on palpation, especially along the line connecting right hypogastrium and left hypochondrium. Mantoux test conversion with the papule size of 12 mm has been detected. CBC: Hb – 115 g/L, WBC –  $10.3 \times 10^9$  /L, eosinophil - 2%, band neutrophil - 9%, segmented neutrophil - 70%, lymphocyte-17%, monocyte - 2%, ESR - 25 mm/hour. What's the most likely diagnosis?

- A. Spleen tuberculosis.
- B. Liver tuberculosis.
- C. Pancreas tuberculosis.
- D. Bowel tuberculosis.
- E. Mesenterial lymph nodes tuberculosis.

169.

10-year-old boy presented with high fever, profuse sweating, weight loss. Mother noticed solid motionless lymph node, enlarged up to 6 cm in diameter, with knobby contours in the right superclavicle area. Chest X-ray detected significant bilateral symmetric paratracheal intrathoracic lymph nodes enlargement with chimney-stalk appearance. Two year ago tuberculin sensitivity conversion was established but at the moment Mantoux skin test is negative. What's the most likely diagnosis?

- A. Intarothoracic lymph nodes tuberculosis.
- B. Leukemia.

- C. Hodgkin disease.
- D. Non- Hodgkin lymphoma.
- E. Measles.

170.

8-year-old child complains of weakness, sweating, tiredness. His mother noticed cervical lymphatic node enlargement about 2 month ago. 6 month before Mantoux skin test conversion was established. On examination: lymphatic node is about 3 cm in diameter, with central malacia and fistula, painful, motionless, crumb-like excretion are coming from fistula. Other lymphatic nodes aren't affected. CBC: Hb - 115 g/L, WBC -  $11.2 \cdot 10^9$  /L, eosinophil-2%, band neutrophil-9%, segmented neutrophil-51%, lymphocyte-32%, monocyte -6%, ESR - 30 mm/hour. What's the most likely diagnosis?

- A. Cancer metastasis.
- B. Tuberculosis of peripheral lymphatic node.
- C. Hodgkin lymphoma.
- D. Sarcoidosis.
- E. Acute leukemia.

171.

22-year-old HIV-positive IV-drug abuser presented with right neck lymph node enlargement. On examination: lymph node is 3 cm in diameter, elastic, moderately painful, movable, skin around is cyanotic. CBC: Hb - 100 g/L, WBC -  $4.4 \cdot 10^9$  /L, eosinophil -2%, band neutrophil -6%, segmented neutrophil -78%, lymphocyte-10%, monocyte -4%, ESR - 30 mm/hour, CD4+ 150/  $\mu$ L. Choose the most likely diagnosis.

- A. Purulent lymphadenitis.
- B. Peripheral lymph node tuberculosis.
- C. Hodgkin disease.
- D. Sarcoidosis.
- E. Leukemia.

172.

20-year-old man complains of subfebrile temperature, weakness, tiredness, peripheral lymph nodes enlargement. 6-months before participated in group drug using with syringes sharing. On examination: neck, supra- and subclavicle, cubital, axillary, inguinal lymph nodes are enlarged to 2 cm, elastic, movable, painless. In CBC no abnormality detected. Test for HIV showed the positive result. Previous test made a year before was negative. What's the most likely diagnosis?

- A. Acute HIV.
- B. HIV-associated peripheral lymph nodes tuberculosis.
- C. Hodgkin's diseases.
- D. Sarcoidosis.
- E. Leukemia.

173.

26-year-old woman suffering from diabetes mellitus of the I type with frequent decompensations presented with 10 week of pregnancy. On examination infiltrative pulmonary tuberculosis, MBT+, dis+ detected. Choose the most advisable management protocol.

- A. Treatment course for tuberculosis according to I category, insulintherapy, pregnancy saving.
- B. Treatment course for tuberculosis according to I category with half drug dosage, insulintherapy, pregnancy saving.
- C. Individually designed treatment course for tuberculosis, insulintherapy, pregnancy termination after initial phase finishing.
- D. Treatment course for tuberculosis according to I category, insulintherapy, pregnancy termination.

E. Treatment course for tuberculosis according to II category, insulintherapy, pregnancy saving.

174.

9-year-old boy has been brought to emergency department in grave condition. It's learnt from mother, that the child returned from school earlier than usually, complained of headache, refused eating and soon fell asleep. On examination: sopor, T 39°C, neck stiffness, on femur skin interflowing hemorrhagic rash detected. CSF test: fluid is turbid, protein 10.4 g/l, pleocytosis 1400/mm<sup>3</sup> mostly of neutrophilic type, glucose 0.3 mmol/l. What's the most likely diagnosis?

- A. Meningococcus meningitis.
- B. Brain tumor.
- C. Herpes meningitis.
- D. Tubercle meningitis.
- E. Measles.

175.

25-year-old HIV-positive drug addict presented with strong headache, fever, vomiting, gripping pain in the occipital area in attempt to put head down. 6 month ago discharged from anti TB hospital after initial phase of the treatment course for tuberculosis finishing. Ignored treatment continual phase, didn't visit the doctor. Which organ involving into tuberculosis is the most likely?

- A. Cervical muscles.
- B. Brain.
- C. Cervical spine.
- D. Stomach.
- E. Meninges.

176.

36-year-old male presented with chest pain, weakness, cough with mucoid sputum, appetite loss. On physical examination: T 37.8°C, otherwise no abnormalities detected. CBC: Hb 115 g/L, WBC – 10.0×10<sup>9</sup>/L, eosinophil - 4%, band neutrophil - 5%, segmented neutrophil - 75%, lymphocyte-15%, monocyte -1%, ESR - 25 mm/hour. Chest X-ray shows a triangular opacity in the right upper zone which apex is turned to the hilum. What's the most likely diagnosis?

- A. Pulmonary embolism
- B. Pulmonary cirrhosis.
- C. Community acquired pneumonia.
- D. Infiltrative tuberculosis.
- E. Pulmonary atelectasis.

177.

20-year-old sportsman presented with pleurisy. No previous diseases were revealed in personal history but it's known that last year he left active going in for sports and started to abuse alcohol. CBC: Hb - 130 g/L, WBC – 12.2×10<sup>9</sup>/L, eosinophil -2%, band neutrophil -9%, segmented neutrophil -71%, lymphocyte-17%, monocyte -1%, ESR - 30 mm/hour. Pleural fluid test: transparent, lymphocytes are the predominant cell type. Chest X-ray performed immediately after exudate removing detected no lung field abnormality. Which pleurisy cause is the most likely?

- A. Non-specific pneumonia.
- B. Lung cancer.
- C. Tuberculosis.
- D. Pancreatitis.
- E. Pleural mesothelioma.

178.

55-year-old smoker complains of weakness, fatigue, dry cough, mostly appearing at night, body weight loss about 10 kg, chest pain. CBC: Hb – 90 g/L, WBC –  $4.2 \times 10^9/L$ , eosinophil -4%, band neutrophil - 3%, segmented neutrophil - 67%, lymphocyte-22%, monocyte -4%, ESR - 60 mm/hour. Chest X-ray detected homogenous dense opacity up to IV rib in right hemitorax with upper oblique border. The diagnosis of pleural exudate had been established and toracocentesis had been performed. After evacuation of 2 L of turbid exudate (laboratory test: density - 1010, protein – 15 g/l, cell amount –  $3.8 \times 10^9/L$ , mostly of neutrophilic type, erythrocyte 30/L) chest X-ray detected 4 cm opacity with knobby borders, connected to hilum in right S<sub>4</sub>. After 4 day liquid accumulated again and upper border appeared at the level of II rib. What's the most likely diagnosis?

- A. Community acquired pneumonia.
- B. Lung cancer.
- C. Tubercle pleurisy.
- D. Idiopathic pleurisy.
- E. Infiltrative tuberculosis.

179.

Thoracoscopy detected multiple nodular formations with central decay on parietal and visceral pleura at 25-year-old patient with pleurisy. Chest X-ray, which was performed immediately, detected no abnormalities. Pleural exudate is hemorrhagic. Lymphocytes are the predominant cell type. What's the most likely diagnosis?

- A. Parapneumonic pleurisy.
- B. Paracarcinoid pleurisy.
- C. TB allergic pleurisy.
- D. Tuberculosis of pleura.
- E. TB empyema.

180.

28-year-old patient with disseminated tuberculosis presented with left side chest pain, which is ameliorating while lying on the affected side, dry cough, temperature rapid arising up to 38°C (earlier was about 37.2°C). Disseminated tuberculosis was detected about 2 months ago but patient denied treatment. On examination: dull percussion sound and weakened breathing in the left lower zone. Which complication is the most likely?

- A. Spontaneous pneumothorax.
- B. Myocardial infarction.
- C. Pleurisy.
- D. Myositis.
- E. Liver abscess.

181.

5-year-old child complains of everyday abdominal pain, nausea, tiredness, irritability, sleep disturbance, appetite loss, headache. The temperature is 37.3°C. Peripheral lymph nodes are enlarged in 5 groups. Blood test revealed eosinophilia. In stool probe the helminthes ova have been discovered. The child received BCG-vaccination on the 5th day of life, the scar diameter is 2 mm. Mantoux skin test showed the papule of 10 mm, whereas last year result was negative. Chest X-ray revealed no abnormalities. The differential diagnosis between pre-local tuberculosis and helminthes infestation is necessary. Which criteria combination is the most cogent argument pro pre-local tuberculosis in this case?

- A. Mantoux skin test showing papule 10 mm in diameter in the combination with intoxication and normal chest X-ray.
- B. Intoxication, lymph nodes enlargement, Mantoux skin test conversion.
- C. Normal chest X-ray, Mantoux skin test conversion, absence of other disease detected.
- D. Mantoux skin test conversion inconstant subfebrile temperature, multiple ymph nodes enlargement.

E. Eosinophilia, intoxication, Mantoux skin test conversion, absence of other disease detected.

182.

12-year-old boy suffers from chronic tonsillitis. Within last 2 year no exacerbation observed. Presented with bilateral erythema on shins, complains of tiredness, pains in joints, diminution of memory. On examination: pale skin, tachycardia, micropolyadenitis. Mantoux skin test conversion discovered. On chest X-ray no abnormality discovered. In blood test – anemia, ESR and leukocyte rate are moderately elevated. Rheumatism has been suspected. Which disease has to be included into differential diagnosis first of all?

- A. Chronic tonsillitis.
- B. Pre-local tuberculosis.
- C. Sarcoidosis.
- D. Leukemia.
- E. Helmintosis.

183.

7-year-old child from the tuberculosis hotbed presented with subfebrile temperature, appetite loss, irritability, tiredness, sweating. At the moment papule size in Mantoux skin test is 5 mm, last year the result was negative. On chest X-ray no abnormality detected. Choose the strongest argument pro pre-local tuberculosis.

- A. Mantoux skin test conversion and intoxication.
- B. Mantoux skin test conversion and normal chest X-ray.
- C. Intoxication and normal chest X-ray.
- D. Mantoux skin test conversion, intoxication and normal chest X-ray.
- E. TB contact.

184.

3-year-old child from the tuberculosis hotbed is presented with Mantoux test conversion and tuberculin hypersensitivity. On examination: physical growth and development are retarded. T 37.2°C. Nodular erythema on the shins. Posterior neck, supra- and subclavian, cubital, axillary lymph nodes are enlarged to 2 cm, elastic, movable, painless. Which examination is next in the further diagnostic algorithm?

- A. Radiological.
- B. PCR.
- C. Sputum test.
- D. Routine laboratory.
- E. Koch's test.

185.

A child suffering from chronic tonsillitis presented with complaints of subfebrile temperature, appetite worsening, sweating, tiredness, irritability, diminution of memory. At the moment Mantoux test conversion with the papule size of 12 mm has been detected. On examination anemia, peripheral lymph nodes enlargement are detected. On chest X-ray no abnormality is discovered. The diagnosis of pre-local tuberculosis has been established. What signs are the most specific for such a conclusion?

- A. Tiredness, irritability.
- B. Subfebrile temperature, peripheral lymph nodes enlargement.
- C. Sweating, tiredness.
- D. Appetite worsening, irritability.
- E. Anemia, chronic tonsillitis.

186.

9-year-old child from tuberculosis hotbed complains of fatigue, appetite loss, bilateral nodular skin erythema, continual subfebrile fever. Suffers from frequent angina. Submandibular and cervical lymph nodes are enlarged up to 3 cm in diameter. Mantoux skin test is negative. Chest X-ray showed no abnormalities. What disease might be suspected?

- A. Pre-local tuberculosis.
- B. Rheumatism.
- C. Chronic tonsillitis.
- D. Peripheral lymph nodes tuberculosis.
- E. Mantoux skin test conversion.

187.

5-year-old child presented with fever up to 38°C, appetite loss, and skin rash. At the moment Mantoux test with 5TU of PPD-S showed the papule size of 5 mm. Previous year results varied in limits 2-5 mm. Which clinical form of the tuberculosis could be suspected?

- A. Tuberculosis of intrathoracic lymph nodes.
- B. Pre-local tuberculosis.
- C. Primary complex.
- D. Any type of primary tuberculosis.
- E. No reason to suspect tuberculosis.

188.

11-year-old girl from tuberculosis hotbed presented after X-ray examination for rib fracture. Chest X-ray detected 0.5 cm opacity of high density with distinct borders in right S<sub>1-2</sub> and several high density inclusion of 0.5-0.6 cm diameter in right ahestic hilum. At the moment child is asymptomatic but a year ago felt fatigue, night sweating, and appetite loss. CBC: Hb 115 g/L, WBC – 5.2×10<sup>9</sup>/L, eosinophil - 4%, band neutrophil - 6%, segmented neutrophil - 65%, lymphocyte-21%, monocyte -3%, ESR - 5 mm/hour. Received BCG vaccination on the 5<sup>th</sup> day of life and at the age of 7 (scars diameter 5 mm and 6 mm respectively). Previous tuberculin test history: at the age of 8 – papule 8 mm, at the age of 9 – 12 mm, at the age of 10 – 10 mm, at the age of 11 – 10 mm. What's the most advisable further action?

- A. Broad-spectrum antibiotal test-treatment.
- B. CT-scanning, sputum smear and cultural test.
- C. Preventive course of isoniazid.
- D. Observation only.
- E. Antituberculosis treatment course according to category III.

189.

30-year-old inhabitant of shelter reported that 3 months ago he had been treated for focal tuberculosis MBT- during 4 weeks but defaulted treatment. At the moment sputum ZN-staining is positive. Which disease transformation is the most likely?

- A. Into tuberculoma.
- B. Into fibrous-cavernous tuberculosis.
- C. Into cirrhotic tuberculosis.
- D. Into infiltrative tuberculosis.
- E. All of the above.

190.

11-year-old child is presented with primary tuberculosis. Received BCG-vaccination at the 3<sup>rd</sup> day of his life and revaccination at the age of 7. Post-vaccine cicatrices – 4 mm and 5 mm. The disease was detected after screening Mantoux skin test. Choose the most expected Mantoux test history.



- A. At the age of 8 – papule 11 mm, at the age of 9 – 9 mm, at the age of 10 – 6 mm, at the age of 11 – 4 mm.
- B. At the age of 8 – papule 9 mm, at the age of 9 – 11 mm, at the age of 10 – 8 mm, at the age of 11 – 5 mm.
- C. At the age of 8 – papule 10 mm, at the age of 9 – 10 mm, at the age of 10 – 6 mm, at the age of 11 – 3 mm.
- D. At the age of 8 – papule 9 mm, at the age of 9 – 11 mm, at the age of 10 – 10 mm, at the age of 11 – 10 mm.
- E. At the age of 8 – papule 9 mm, at the age of 9 – 7 mm, at the age of 10 – 5 mm, at the age of 11 – 17 mm.

191.

9-year-old child presented with pre-local tuberculosis. Which chest X-ray picture is the most expected?

- A. Pulmonary pattern impoverishment in perihilar region.
- B. Pulmonary pattern enrichment in cortical region.
- C. No abnormality detected.
- D. Intrathoracic lymph nodes consolidation.
- E. Hilum enlargement with hazy borders.

192.

At 9-year-old child suffering from rheumatism Mantoux skin test showed the 8 mm papule. Previous year result – 11 mm. At the age of seven the child underwent revaccination, the scar size is 6 mm. TB contact with father living separately discovered. On examination no abnormality detected. Which data exclude latent tuberculosis in this case?

- A. Postvaccine reaction.
- B. Rheumatism.
- C. Absence of complaints.
- D. TB contact.
- E. Age.

193.

3-year-old child presented with suspicion of pre-local tuberculosis. Complains of subfebrile temperature, appetite loss, irritability, tiredness. On examination: skin is pale, cervicle, axillar, inguinal, cubital lymph nodes are enlarged up to pigeon egg size. On chest X-ray no abnormality detected. Which data can prove this diagnosis first of all?

- A. Mantoux skin test conversion.
- B. Other disease with similar symptoms excluding.
- C. TB contact exposure.
- D. CBC.
- E. All of the above.

194.

There were noticed appetite loss, tiredness, irritability, sleeping disorders, poor school results at an adolescent. Temperature control during 3 weeks detected subfebrile temperature. Further examination revealed pre-local tuberculosis. Which of morphological changes produce the intoxication in this case?

- A. Lymphatic tissue hyperplasia.
- B. Granulome at the inoculation place.
- C. Necrosis at the inoculation place.
- D. Exudation at the inoculation place.
- E. Non-specific reaction.

195.

8-year-old child suffering from rheumatism presented with weakness, sweating, poor school results, subfebrile fever, arthralgia. On examination: nodular shins erythema, micropolyadenitis were found, otherwise no abnormality detected. Mantoux skin test showed papule of 12 mm. Previous tuberculin test history: at the age of 1 – papule 5 mm, at the age of 2 – 3 mm, at the age of 3 – 2 mm, at the age of 4, 5, 6 – no papule, at the age of 7 – 10 mm. Post-vaccine cicatrices are absent. The child is exposed by the family contact with his grandfather. Chest X-ray revealed no abnormalities. Pre-local tuberculosis has been suspected. What's the principal reason for such a suspicion?

- A. Nodular erythema.
- B. Post-vaccine cicatrices absence.
- C. Mantoux test history.
- D. TB contact.
- E. Intoxication.

196.

5-year-old child from tuberculosis hotbed presented with fever up to 38.5°C, productive cough. Fell ill suddenly 2 days ago. CBC: Hb 105 g/L WBC –  $4.4 \times 10^9$ /L, eosinophil - 2%, band neutrophil - 4%, segmented neutrophil - 33%, lymphocyte-56%, monocyte -5%, ESR - 10 mm/hour. Physical examination and chest X-ray detected no abnormalities. Mantoux skin test history: at the age of 1 – papule 8 mm, at the age of 2 – 6, 3 – 5 mm, at the age of 4 – hyperemia, at the moment – negative result. Received BCG-vaccination at 3<sup>rd</sup> day of life, cicatrix size 4 mm. Isoniazid preventive course has been administered a month ago. What's the most likely diagnosis?

- A. Pre-local tuberculosis.
- B. Acute respiratory disease.
- C. Early period of tuberculi infection.
- D. Postvaccine reaction.
- E. Primary tubercle complex.

197.

12-year-old adolescent complains of weakness, increased temperature up to 37.3°C, slight cough, appetite loss. His father suffers from active tuberculosis. On further examination Mantoux test conversion is established. CBC: Hb – 120 g/L, WBC –  $11.2 \cdot 10^9$  /L, eosinophil-0%, band neutrophil-9%, segmented neutrophil-65%, lymphocyte-14%, monocyte-12%, ESR - 25 mm/hour. Physical examination revealed no remarkable changes. Pre-local tuberculosis diagnosis has been established. What examination data are lacking for such a conclusion?

- A. Bronchoscopy.
- B. Sputum cultural test.
- C. CT-scanning.
- D. Chest X-ray.
- E. Sputum ZN-staining.

198.

7-year-old child presented with Mantoux test conversion (papule size 17 mm, while previous year results were negative). At the moment: complains of appetite loss, fatigue, subfebrile fever. On examination shin nodular erythema and micropolyadenitis are detected. Blood test and chest X-ray revealed no abnormalities. Which of objective signs belong to paraspecific reactions?

- A. Nodular erythema.
- B. Mantoux test conversion.
- C. Mantoux hyperergic reaction.
- D. Peripheral lymph nodes enlargement.
- E. All of the above.

199.

12-year-old adolescent complains of weakness, increased temperature up to 37.3°C, slight cough, appetite loss. Father suffers from active tuberculosis. On further examination Mantoux test conversion is established. CBC: Hb – 120 g/L, WBC –  $11.2 \cdot 10^9$  /L, eosinophil-0%, band neutrophil-9%, segmented neutrophil-65%, lymphocyte-14%, monocyte -12%, ESR - 25 mm/hour. Physical examination revealed no remarkable changes. Chest X-ray detected perihilar enrichment of vessel patterns. Mild intrathoracic lymph nodes tuberculosis diagnosis has been established on this indirect sign. What examination data are lacking for such a conclusion?

- A. Bronchoscopy.
- B. Sputum cultural test.
- C. CT-scanning.
- D. Chest X-ray.
- E. Sputum ZN-staining.

200.

8-year-old child presented with pre-local tuberculosis. Choose the adequate treatment course duration.

- A. 2 months.
- B. 3 months.
- C. 4 months.
- D. 5 months.
- E. 6 months.

201.

40-year-old patient presented with new tuberculosis case (caseous pneumonia, dis.+, MBT+,(M+ C0), resist 0, Hyst.0. To which category this case belongs?

- A. I
- B. II
- C. III
- D. IV
- E. V

202.

30-year-old patient suffering from disseminated tuberculosis without lung tissue disintegration presented with slight hemoptysis. Which is the main principle of this complication?

- A. Hypocoagulation.
- B. Vessel walls rupturing
- C. Pulmonary embolism.
- D. Vessel walls permeability increasing.
- E. Fibrinolysis activation.

203.

43-year-old patient finished the complete course of treatment for caseous pneumonia. What's the most likely outcome?

- A. Several fibrotic foci.
- B. Cirrhosis.
- C. Fibrotic area (induration).
- D. Fibrous-cavernous tuberculosis.
- E. Bullas.

204.

60-year-old patient suffering from fibrous-cavernous tuberculosis for 10 year has been brought to the emergency department with hemoptysis. On examination: RR 22/min, P 90 /min, BP 100/60. Auscultation revealed a lot of diffuse moisture rales. Liver is enlarged, painful. Chest X-ray showed the large cavity with thick walls in the diminished right upper lobe surrounded by fibrotic area. All over left lung and in the lower zone of the right lung lots of high density foci are seen. Mediastinum is shifted to the right. ZN sputum staining showed positive result. What's the most likely principle of hemoptysis?

- A. Vessel walls rupturing.
- B. Hypocoagulation.
- C. Pulmonary embolism.
- D. Vessel walls permeability increasing.
- E. Fibrinolysis activation.

205.

Patient is presented with caseous pneumonia. Which radiological features the most expected?

- A. Homogenous opacity occupying the diminished upper lobe.
- B. Upper lobe diminishing.
- C. Nonhomogenous opacity with numerous lucencies occupying the upper lobe. In the lower lobe several foci of low density are found.
- D. Homogenous intensive opacity occupying the upper lobe. Interlobar fissure is defined and convex.
- E. Homogenous opacity of low density occupying the upper lobe. Interlobar fissure is defined and convex.

206.

40-year-old alcohol abuser known as fibrous-cavernous tuberculosis case has been brought into emergency department with the suspicion of pulmonary hemorrhage. The hemorrhage started just after consuming of 0.5 liter of alcohol. On examination: patient is expectorating sputum without blood streaks. All over lung fields lots of bubbling rales are heard. Abdomen is painful in the epigastric area. The doctor excluded pulmonary hemorrhage and suspected gastric bleeding. Which data allowed to do it?

- A. Epigastric pain.
- B. Alcohol abusing provoked the bleeding.
- C. Absence of blood streaks in the sputum.
- D. Absence of previous bleeding history.
- E. All of the above.

207.

29-year-old patient presented with caseous pneumonia. Which hemogram is the most expected?

- A. Hb - 130 g/L, WBC –  $6.2 \cdot 10^9$  /L, eosinophil -5%, band neutrophil -5%, segmented neutrophil - 61%, lymphocyte-25%, monocyte -4%, ESR - 10 mm/hour.
- B. Hb - 140 g/L, WBC –  $12.0 \cdot 10^9$  /L, eosinophil -3%, band neutrophil -7%, segmented neutrophil -71%, lymphocyte-16%, monocyte -3%, ESR - 25 mm/hour.
- C. Hb - 100 g/L, WBC –  $20.0 \cdot 10^9$  /L, eosinophil - 0%, band neutrophil -12%, segmented neutrophil -75%, lymphocyte-10%, monocyte -3%, ESR - 60 mm/hour.
- D. Hb - 90 g/L, WBC –  $15.0 \cdot 10^9$  /L, eosinophil -0%, band neutrophil -12%, segmented neutrophil -54%, lymphocyte-30%, monocyte -4%, ESR - 18 mm/hour.
- E. Hb - 130 g/L, WBC –  $10.0 \cdot 10^9$  /L, eosinophil -8%, band neutrophil -16%, segmented neutrophil -62%, lymphocyte-8%, monocyte -6%, ESR - 50 mm/hour.

208.

43-year-old patient has been treated for fibrous-cavernous tuberculosis within 6 months. X-ray examination is been detecting bean-like 2 cm cavity in right upper lobe throughout this period. Surgery is planning. Which additional examination is required for ultimate decision concerned to surgery?

- A. Angiography.
- B. CT-scanning.
- C. Bronchoscopy.
- D. US-scanning.
- E. Respiratory function evaluation.

209.

38-year-old patient presented with suspicion of caseous pneumonia. Which disease is to be ruled out first of all by means of differential diagnosing?

- A. Community acquired pneumonia.
- B. Encysted perisy.
- C. Lung cancer.
- D. Cirrhosis.
- E. Atelectasis.

210.

16-year-old patient was admitted to emergency department with profuse pulmonary bleeding. No history of pulmonary diseases was revealed. Choose minimal needed examination after bleeding arrest.

- A. Personal history analysis and physical examination.
- B. Blood, urine, sputum test.
- C. AP and lateral chest X-ray.
- D. Fibrobronchoscopy.
- E. All of the above.

211.

Patient is presented with pulmonary hemorrhage. Emergency doctor reported that he expectorated about 450 ml of blood. On examination: P 122/m, RR 28/m, BP 80/60. Define the degree of hemorrhage.

- A. I.
- B. II.
- C. III.
- D. IV.
- E. V.

212.

35-year-old male presented with chest pain, weakness, cough with “rusty” sputum, dyspnea. Has been ill for a week. On physical examination multiple crackling and bubbling rales over right hemitorax detected. CBC: Hb - 130 g/L WBC –  $19.2 \times 10^9/L$ , eosinophil -3%, band neutrophil - 11%, segmented neutrophil - 71%, lymphocyte-14%, monocyte -1%, ESR - 50 mm/hour. Chest X-ray detected opacity of the moderate density with the hazy borders occupying right lower zone. What’s the most likely diagnosis?

- A. Infiltrative tuberculosis.
- B. Community acquired pneumonia.
- C. Caseous pneumonia.
- D. Lung cancer.
- E. Pulmonary embolism.

213.

23-year-old homeless man has been brought to the emergency department in grave condition complaining of shortness of breathing, chills, cough, severe weakness. Illness started a month ago from weakness, sweating, cough and subfebrile fever. Has been treated for community acquired pneumonia but condition aggravated. Sputum test revealed AFB. On examination: cachexy, skin is wet and pale, RR 28/min, BP

100/60 mm/Hg, P 88/min, T 39°C, dull percussion sound and numerous bubbling rales throughout left lung. CBC: Hb – 92 g/L, WBC –  $20.2 \cdot 10^9$  /L, eosinophil-0%, band neutrophil-12%, segmented neutrophil-62%, lymphocyte-14%, monocyte -12%, ESR - 55 mm/hour. Chest X-ray detected subtotal nonhomogenous dense opacity of left lung. What's the most likely diagnosis?

- A. Disseminated tuberculosis.
- B. Miliary tuberculosis.
- C. Caseous pneumonia.
- D. Fibrous-cavernous tuberculosis.
- E. Infiltrative tuberculosis.

214.

30-year-old IT-specialist without immunocompromised condition presented with 5 TU PPD-S Mantoux skin test papule of 17 mm. Which conclusion should be done?

- A. Negative reaction.
- B. Active tuberculosis.
- C. Depends on further examination result.
- D. Positive reaction.
- E. Any of those.

215.

43-year-old male with unremarkable past medical history went to a hike far from any dwelling. At night woke up from started pulmonary bleeding. What must be the first step of critical care taking into consideration the absence of specific facilities?

- A. Sedation, ice application, calcium chloride and ethamzylate intravenous administration.
- B. Horizontal position, ice application, extremities tourniquets, ascorbinic acid oral administration.
- C. Semisitting position, oral cavity freeing, extremities tourniquets bringing to a specialized unit as soon as possible.
- D. Semisitting position, antitussive drugs, hypertonic salt solution inside, sedation.
- E. Bringing to a specialized unit by any available means.

216.

Pulmonary hemorrhage started at patient with 5-year fibrous-cavernous tuberculosis history. Expectored about 100 ml of blood at the moment. P 102/m, RR 26/m, BP 90/60. Choose the most advisable critical aid before bringing the patient to emergency department.

- A. Ganglioblockers, calcium chlorine intravenously.
- B. Drinking of hypertonic salt solution, calcium chlorine intravenously.
- C. Euphyllin, vikasol, vitamin C.
- D. Tourniquets upon extremities, ganglioblockers, oral cavity control.
- E. Tourniquets upon extremities, vikasol, ethamsilat.

217.

45-year-old male with unremarkable past medical history wake up in the morning and found dry dark blood spot on his pillow. Arrived paramedics ruled pulmonary origin of hemorrhage out. What is the principle reason?

- A. Dark colour of blood.
- B. No data about cough which should awake the patient.
- C. No data about previous pulmonary diseases.
- D. Arrested bleeding.
- E. Not-foamy blood.

218.

32-year-old symptom-free school teacher presented after preemployment X-ray examination, which detected high density round shadow of 3 cm diameter in right upper zone with lucency at the side of “track” to the hilum, and 0.5 cm inclusion of high density in right hilum. Past medical history: suffered from primary tuberculosis at childhood. Physical examination, blood, urine, sputum tests have detected no abnormality. Could professional activity be allowed to this patient?

- A. Yes, without any prerequisites.
- B. Yes, after retreatment course.
- C. Yes, if Mantoux skin test is negative.
- D. No.
- E. Depends on further cultural sputum test.

219.

48-year-old male presented with scanty relapsing hemoptysis which started suddenly a month ago. Hemoptysis appeared as blood streaks in sputum several times a week. From past medical history: suffered from primary tuberculosis at childhood. Chest X-ray detected numerous high density 5-7 mm inclusions in right hilum. Otherwise no complaints, laboratory and objective abnormal finding are detected. Which mechanism of bleeding is the most likely?

- A. Pulmonary hypertension.
- B. Vessel wall remodeling.
- C. Vessel wall ulceration.
- D. Vessel wall permeability increasing.
- E. Vessel wall involvement into decay.

220.

47-year-old patient suffering from chronic pulmonary tuberculosis presented with right-flank pain. Past medical history: has been having active tuberculosis within 6 year, finished 3 treatment courses. No disease exacerbation has been detected within last 3 year. On examination: thorax is barrel-like; skin is pale and wet, T 37.2°C. Dull percussion sound and bronchial breathing over right upper zone is found. CBC and blood biochemical tests detected no abnormalities. Chest X-ray detected right upper lobe cirrhosis. Comparison with last year X-ray detected no progression. Abdominal CT-scanning detected 2 cm inclusion of high density in the right renal pelvis. What's the most likely diagnosis?

- A. Decompensated heart failure.
- B. Renal colic.
- C. Kidney tuberculosis.
- D. Chronic glomerulonephritis.
- E. Amyloidosis.

221.

45-year-old patient presented with infiltrative tuberculosis dis+, MBT+. Has been suffering from insulin-dependant diabetes mellitus since 30-year-old age. Which diet is the most advisable?

- A. Fat and simple carbohydrates reducing, animal protein and complex carbohydrates quantum satis.
- B. Salt and liquid reducing, potassium containing products enrichment, fat reducing, animal protein and complex carbohydrates quantum satis.
- C. Animal fats and simple carbohydrates reducing, animal protein and plant fats enrichment, complex carbohydrates quantum satis, vitamins A, C, E enrichment.
- D. Animal fats reducing, simple carbohydrates eliminating, complex carbohydrates reducing, animal protein and plant fats enrichment, vitamins A, C, E enrichment.
- E. No special recommendation.

222.

44-year-old patient suffers from infiltrative tuberculosis of the left lung S<sub>6</sub>, dis+, MBT+ complicated by relapsing hemoptysis. In the treatment regimen pneumoperitoneum has been used. What's the main purpose?

- A. Drug resistance avoiding.
- B. Compliance increasing.
- C. Therapy side effect avoiding.
- D. Hemoptysis treatment.
- E. All of the above.

223.

29-year-old patient is been treated for pulmonary tuberculosis new case dis-, MBT-, M-, C-resist 0, Hyst.0, 1 Category, 1 Cohort. Which is an average initial phase duration?

- A. 1 month.
- B. 2 months.
- C. 3 months.
- D. 4 months.
- E. 6 months.

224.

38-year-old female presented with fibrous-cavernous tuberculosis dis+, MBT+, resist+. At the moment the diseases progression has been established. Which diet is the most advisable?

- A. Fat and simple carbohydrates reducing, animal protein and complex carbohydrates quantum satis.
- B. Salt and liquid reducing, potassium containing products enrichment, fat reducing, animal protein and complex carbohydrates quantum satis.
- C. Animal fats and simple carbohydrates reducing, animal protein and plant fats enrichment, complex carbohydrates quantum satis, vitamins A, C, E enrichment
- D. Animal fats reducing, simple carbohydrates eliminating, complex carbohydrates reducing, animal protein and plant fats enrichment, vitamins A, C, E enrichment..
- E. No special recommendation.

225.

23-year-old patient admitted to the hospital with tuberculosis new case dis+, MBT-, M-,C-, resist 0, 3 Category, 2 Cohort. Which treatment phase has to be administered?

- A. Initial.
- B. Continual.
- C. Intermittent.
- D. Combine.
- E. Uninterrupted.

226.

Patient suffering from infiltrative pulmonary tuberculosis (new case, dis-, MBT-(M-, C-), resist 0, I category, I cohort finished the initial treatment phase. Which is the continual phase duration for this patient?

- A. 1 month.
- B. 2 months.
- C. 3 months.
- D. 4 months.
- E. 6 months.

227.



54-year-old patient presented with infiltrative tuberculosis dis+, MBT+. Routine in-patient examination detected insulin-independent diabetes mellitus. Which diet is the most advisable?

- A. Fat and simple carbohydrates reducing, animal protein and complex carbohydrates quantum satis.
- B. Salt and liquid reducing, potassium containing products enrichment, fat reducing, animal protein and complex carbohydrates quantum satis.
- C. Animal fats and simple carbohydrates reducing, animal protein and plant fats enrichment, complex carbohydrates quantum satis, vitamins A, C, E enrichment.
- D. Animal fats reducing, simple carbohydrates eliminating, complex carbohydrates reducing, animal protein and plant fats quantum satis, vitamins A, C, E enrichment.
- E. No special recommendation.

228.

Patient is presented with tuberculosis new case (focal tuberculosis, dis- MBT-(M-C-). According to which category treatment regimen has to be designed in this case?

- A. I.
- B. II.
- C. III.
- D. IV.
- E. V.

229.

58-year-old patient presented with tuberculosis new case (focal tuberculosis, dis-, MBT-(M-, C-). Patient's weight is 86 kg. Choose the recommended isoniazid dosage.

- A. 0.3 g once a day.
- B. 3.0 g three times a day.
- C. 0.6 g once a day.
- D. 0.9 g three times a day.
- E. 1.0 g twice a day.

230.

24-year-old female is been treated for tuberculosis uveitis . Which pathogenetic therapy is the most advisable in addition to antibacterial treatment at first weeks?

- A. NSAID.
- B. Tissue stimulators.
- C. Tuberculin.
- D. Corticosteroides.
- E. Sedatives.

231.

40-year-old patient presented with new tuberculosis case (disseminated tuberculosis, dis.+, MBT+ (M+ C+) resist 0 Hist.0. To which category this case belongs?

- A. I.
- B. II.
- C. III.
- D. IV.
- E. V.

232.

21-year-old patient presented with new tuberculosis case (disseminated tuberculosis, dis.+, MBT+, (M+ C+) resist 0 Hist.0. His weight is 60 kilograms. Choose the proper isoniazid dosage for this case.

- A. 0.9 g.
- B. 3.0 g.
- C. 0.6 g.
- D. 0.3 g.
- E. 1.0 g.

233.

23-year-old patient presented with tuberculosis pleurisy. Antibacterial treatment started. Which of pathogenetic remedies are the most important for this case?

- A. Vitamins.
- B. Corticosteroids.
- C. Immunomodulators.
- D. Hepatoprotectors.
- E. Tissue stimulators.

234.

46-year-old patient presented with left upper lobe infiltrative tuberculosis dis.+, MBT+(M+ C+), resist -, Hist.0. No previous TB history. To which category this case belongs?

- A. I.
- B. II.
- C. III.
- D. IV.
- E. V.

235.

38-year-old patient presented with chronic case (fibrous-cavernous left lung tuberculosis dis.+, MBT+, M+ C + resist +(H, S, Z), Hist.0. Patients weight is 52 kg. Define the appropriate rifampicin dosage.

- A. 0.9 g.
- B. 3.0 g.
- C. 0.6 g.
- D. 0.3 g.
- E. 1.0 g.

236.

70-year-old patient suffering from coronary heart disease is been treated for tubercle pleurisy new case. Which of I-line drugs should be avoided?

- A. Isoniazid.
- B. Rifampicin.
- C. Etambutol.
- D. Pyrazinamide.
- E. Streptomycin.

237.

49-year-old patient presented with infiltrative pulmonary tuberculosis new case, MBT+ (M+C+), dis+, resist+, I (S, H, R), II (Q, K). To which category this case belongs?

- A. I.
- B. II.
- C. III.
- D. IV.

E. V.

238.

38-year-old patient is treated for caseous pneumonia. Which of pathogenetic remedies is the most advisable apart from antibacterial treatment?

- A. Cytostatics.
- B. Diuretics.
- C. Antihistamines.
- D. Blood preparations.
- E. Corticosteroids.

239.

23-year-old patient has been treated for subacute disseminated tuberculosis complicated by relapsing hemorrhages for 3 months. Hemorrhages are repeating in spite of hemostatic therapy. X-ray examination has been detecting bilateral “stamped” cavities on both apices throughout this period. Surgery is planning. What additional examination is necessary to decide which side cavity produces the hemorrhage and has to be removed first?

- A. Angiography.
- B. Bronchoscopy.
- C. CT-scanning.
- D. Thorough auscultation at the moment of hemorrhage.
- E. Respiratory function evaluation.

240.

40-year-old patient presented with cough excreting mucoid sputum, weakness, shortness of breathing, fever up to 38.2-38.6°C in the evening. Has been ill for 5 days, fell ill after supercooling. Auscultation of his chest reveals rales in the right midlung, bilateral scattered wheezes. Chest X-ray revealed a homogenous opacity with low density in the right middle zone. What's the most likely diagnosis?

- A. Pneumoconiosis.
- B. Idiopathic pulmonary fibrosis.
- C. Disseminated carcinoma.
- D. Tuberculosis.
- E. Community acquired pneumonia.

241.

37-year-old patient presented with disseminated tuberculosis new case, dis+, MBT+ (M+,C +), resist.0, hist 0, category I. Choose the adequate drugs combination.

- A. Rifampicin, isoniazid, streptomycin, ethambutol, pyrazinamide.
- B. Rifampicin, isoniazid, streptomycin, ethambutol, ethionamide.
- C. Amykacin, isoniazid, streptomycin, ethambutol, ethionamide.
- D. Cyprofloxacin, streptomycin, ethambutol, pyrazinamide, cycloserine.
- E. Ethionamide, cycloserine, ciprofloxacin, amykacin.

242.

48-year-old male complains of decreased workability, weakness, sweating, subfebrile fever, body weight loss. Has been feeling ill for 3 months. Chest X-ray detected round opacity of 4 cm with distinct borders in left S<sub>4</sub> projection. What's the most advisable further course of action?

- A. Perform Mantoux skin test.
- B. Perform CT-scanning.
- C. Perform open lung biopsy.

- D. All of the above.
- E. Nothing of the above.

243.

19-year-old patient presented with focal pulmonary tuberculosis new case, dis-, MBT- (M-,C 0), resist.0, hist 0. Choose the adequate drugs combination.

- A. Ethionamide, cycloserine, ciprofloxacin, amykacin.
- B. Rifampicin, isoniazid, ethambutol, ethionamide.
- C. Rifampicin, isoniazid, ethambutol, pyrazinamide.
- D. Cyprofloxacin, ethambutol, pyrazinamide, cycloserine.
- E. Amykacin, isoniazid, ethambutol, ethionamide.

244.

28-year-old HIV-positive drug abuser is being treated for primary MDR-tuberculosis (resistance to H,R, Et, S, K).CD4+ level at the moment 250 cells/mm<sup>3</sup>. Which drug must be avoided in the individually designed regimen?

- A. Thioacetazone.
- B. Rifabutin.
- C. Ciprofloxacin.
- D. Pefloxacin.
- E. Cycloserine.

245.

38-year-old patient finished treatment course for infiltrative tuberculosis new case. A month after sought for consultation because of weight loss, subfebrile fever, productive cough. Further examination established disseminative tuberculosis. Choose the adequate drugs combination.

- A. Ethionamide, cycloserine, ciprofloxacin, amykacin.
- B. Rifampicin, isoniazid, streptomycin, ethambutol, ethionamide.
- C. Rifampicin, isoniazid, streptomycin, ethambutol, pyrazinamide.
- D. Cyprofloxacin, streptomycin, ethambutol, pyrazinamide, cycloserine.
- E. Amykacin, isoniazid, streptomycin, ethambutol, ethionamide.

246.

33-year-old patient is treated for tuberculosis new case (focal pulmonary tuberculosis) MBT- (M-C-), dis-, resist 0, Category 3, Cohort 1. Patient's weight is 84 kg. Choose the adequate dosage of rifampicin.

- A. 0.6 g.
- B. 6.0 g.
- C. 0.3 g.
- D. 0.45 g.
- E. 1.0 g.

247.

21-year-old patient is been treated for pulmonary tuberculosis new case (disseminated tuberculosis dis+, MBT+ (M+,C +), resist.-, hist 0, category I. Choose the necessary dosage of rifampicin.

- A. 1.0
- B. 1.2 g.
- C. 1.5 g.
- D. 0.6 g.
- E. 0.3 g.

248.

21-year-old patient is been treated for pulmonary tuberculosis new case (Infiltrative tuberculosis of right upper lobe dis+, MBT+ (M+,C +), resist.-, hist 0, category I. Choose the necessary dosage of ethambutol.

- A. 1.0
- B. 1.2 g.
- C. 1.5 g.
- D. 0.6 g.
- E. 0.3 g.

249.

64-year-old patient is being treated for pulmonary tuberculosis new case (disseminated tuberculosis dis+, MBT- (M-,C 0), resist.0, hist 0. Choose the necessary dosage of pyrasinamide.

- A. 1.0 g.
- B. 1.5 g.
- C. 2.0 g.
- D. 2.5 g.
- E. 3.0 g.

250.

30-year-old female being treated for pulmonary tuberculosis new case according to I category is taking oral contraception at the same time. After 3 months of treatment 7 weeks pregnancy was established. Which drug's side effect is the inefficient contraception more likely due to?

- A. Rifampicin.
- B. Streptomycin.
- C. Pyrasinamide.
- D. Isoniazid.
- E. Ethambutol.

251.

29-year-old patient is been treated for pulmonary tuberculosis within 3 weeks receiving isoniazid, rifampicin, streptomycin, pyrazinamide and ethambutol. Abdominal pain, nausea, vomiting and appetite loss appeared. To which medicine these side effects are more likely due to?

- A. Isoniazid.
- B. Pyrazinamide.
- C. Rifampicin.
- D. Ethambutol.
- E. Streptomycin.

252.

The patient is been treated for pulmonary tuberculosis receiving isoniazid, rifampicin, streptomycin, pyrazinamide and ethambutol. The 4<sup>th</sup> week of treatment visual impairment appeared. To which medicine this side effect is more likely due to?

- A. Isoniazid.
- B. Pyrazinamide.
- C. Rifampicin.
- D. Ethambutol.
- E. Streptomycin.

253.

61-year-old patient started initial treatment phase for infiltrative tuberculosis of left upper lobe, dis+, MBT+ (M+, C+). Isoniazid, rifampicin, streptomycin, pyrazinamide, ethambutol, had been administered. In two weeks diminished hearing and buzzing in the ears appeared. Side effect of which administered drug it can be due to?

- A. Rifampicin.
- B. Isoniazid.
- C. Ethambutol.
- D. Pyrazinamide.
- E. Streptomycin.

254.

48-year-old patient has been treated for infiltrative pulmonary tuberculosis for 6 month. X-ray examination is been detecting cavity of 5 cm in diameter in the right S<sub>6</sub> throughout this period. Choose the most advisable algorithm of further management.

- A. Prolonged continual phase of the treatment.
- B. Intrabronchial drug introduction.
- C. Tissue stimulating.
- D. Collapsotherapy.
- E. Surgery.

255.

54-year-old patient has been treated for chronic (fibrous-cavernous) left upper lobe tuberculosis for 6 month. Throughout the treatment period pulmonary bleeding took place, lung insufficiency was observed. At the moment X-ray examination detected left upper lobe reducing, thick-walls cavity of 5 cm diameter surrounded by polymorphic foci and fibrotic area in the left apex, mediastinum is shifted to the left. All over the rest of lung fields no abnormality is detected. Choose the most advisable algorithm of further management.

- A. Surgery.
- B. Intrabronchial drug introduction.
- C. Tissue stimulating.
- D. Collapsotherapy.
- E. Prolonged continual phase of the treatment.

256.

28-year-old patient has been treated for tuberculosis new case (infiltrative pulmonary tuberculosis) MBT-(M-C-), dis-, resist 0, Category 3, Cohort 3 for 4 month. Control chest X-ray detected round opacity of 4 cm in diameter with distinct borders and crescent lucency inside in right S<sub>2</sub>. Choose the most advisable further dealing.

- A. Going on continual treatment phase.
- B. Endobronchial drug introduction.
- C. Tissue stimulation.
- D. Affected segment resection.
- E. Artificial pneumothorax.

257.

26-year-old patient has been treated for left side caseous pneumonia within 2 months. General condition significantly ameliorated. Control chest X-ray detected dense nonhomogenous opacity of left lung upper zone with numerous neighbouring cavities of different size inside; in left lower zone lots of fusing foci appear. Right lung is intact. What's the most advisable further dealing?

- A. Continuing conventional treatment until cavities healing.

- B. Adding endobronchial antituberculosis drugs introduction.
- C. Performing pneumonectomy.
- D. Performing cavities resection.
- E. Performing upper segmentectomy.

258.

32-year-old patient has been treated for disseminate tuberculosis according to I category for 2 month. Smear sputum test is still positive at the moment. On chest X-ray: bilaterally in upper parts polymorphic fusing foci are found. On both apices thin-walls cavities about 3 cm in diameter are present. Which further dealing is the most advisable?

- A. Continuing conventional treatment initial phase.
- B. Performing upper lobes resection.
- C. Performing artificial pneumothorax.
- D. Transferring into conventional treatment continual phase.
- E. Transferring the category into 2<sup>nd</sup>.

259.

47-year-old patient has been treated for left upper lobe infiltrative tuberculosis within 3 months according to I category. General condition significantly ameliorated. Control chest X-ray detected dense nonhomogenous opacity of left lung upper zone with numerous neighbouring cavities of different size inside. Right lung is intact. What's the most advisable further dealing?

- A. Left upper lobe resection.
- B. Add endobronchial antituberculosis drugs introduction.
- C. Perform pneumonectomy.
- D. Continue conventional treatment until cavities healing.
- E. Add collapse therapy.

260.

20-year-old AIDS patient presented with CD 4+ level 80/ml. ART has been administered. Before treatment starting routine clinical examination was performed including chest X-ray, which showed no remarkable changes. After 2 month of treatment CD 4+ level arose up to 350/ml but on control X-ray disseminated tuberculosis was established. How could you explain it?

- A. Contracting infection.
- B. Lung changes were missed on first examination and progressed.
- C. It's false diagnosis.
- D. Immune reconstitution syndrome.
- E. Patient denied ART.

261.

6-year-old Indian-born child presented with headache, malaise, appetite loss, dry cough, shortness of breathing, fever 39-40°C. Has been feeling unwell for 10 days. On examination: T 39-40°C, skin is pale and wet. Peripheral lymph nodes are enlarged up to 7-8 mm, painless, elastic. All over lung fields tympanic percussion sound is detected. Auscultation revealed bubbling rales in the interscapular area. CBC: Hb - 130 g/L, WBC -  $9.2 \cdot 10^9$  /L, eosinophil -0%, band neutrophil -9%, segmented neutrophil -65%, lymphocyte-14%, monocyte -12%, ESR - 25 mm/hour. Mantoux skin test with 5 TU - papule 5 mm. Urinalysis: Leucocyte - 10-12/field of view, a trace of protein. Chest X-ray shows diffuse multiple 1-2 mm foci. What's the most likely diagnosis?

- A. Sepsis.
- B. Community acquired pneumonia.

- C. Idiopathic pulmonary fibrosis.
- D. Miliary tuberculosis.
- E. Disseminated lung cancer.

262.

The patient is suffering from subacute disseminative tuberculosis. Which complaints are the most expected?

- A. Malaise, tiredness, subfebrile temperature
- B. Subfebrile temperature, night sweating, appetite loss.
- C. Productive cough, subfebrile temperature, chest pain.
- D. Dry cough, sweating, shortness of breathing.
- E. All of the above.

263.

3-year-old child presented with miliary tuberculosis. Has been ill for 2 weeks. The general condition is grave. Which Mantoux skin test result is the most expected?

- A. Positive.
- B. Negative.
- C. Hyperergic.
- D. Doubtful.
- E. Any listed above.

264.

The patient is presented with subacute disseminated tuberculosis. Which CBC is the most expected?

- A. RBC –  $3.6 \times 10^{12}$  /L, Hb - 130 g/L, WBC –  $6.2 \cdot 10^9$  /L, eosinophil -5%, band neutrophil -5%, segmented neutrophil -61%, lymphocyte-25%, monocyte -4%, ESR - 10 mm/hour
- B. RBC –  $4.0 \times 10^{12}$  /L, Hb - 140 g/L, WBC –  $12.0 \cdot 10^9$  /L, eosinophil -3%, band neutrophil -7%, segmented neutrophil -71%, lymphocyte-16%, monocyte -3%, ESR - 25 mm/hour.
- C. RBC –  $3.9 \times 10^{12}$  /L, Hb - 110 g/L, WBC –  $14.0 \cdot 10^9$  /L, eosinophil -2%, band neutrophil -10%, segmented neutrophil -67%, lymphocyte-12%, monocyte -10%, ESR - 43 mm/hour.
- D. RBC –  $3.9 \times 10^{12}$  /L, Hb - 90 g/L, WBC –  $15.0 \cdot 10^9$  /L, eosinophil -0%, band neutrophil -12%, segmented neutrophil -54%, lymphocyte-30%, monocyte -4%, ESR - 18 mm/hour.
- E. RBC –  $5.3 \times 10^{12}$  /L, Hb - 130 g/L, WBC –  $20.0 \cdot 10^9$  /L, eosinophil -8%, band neutrophil -16%, segmented neutrophil -52%, lymphocyte-8%, monocyte -6%, ESR - 50 mm/hour.

265.

18-year-old patient presented with miliary tuberculosis. Which syndromes are the most expected?

- A. Asthenic, upper airway involvement, kidney insufficiency.
- B. Meningeal, lower airway involvement, acute liver insufficiency.
- C. Abdominal, kidney insufficiency, acute liver insufficiency.
- D. Meningeal, abdominal, lung insufficiency lower airway involvement.
- E. Asthenic, upper airway involvement, lower airway involvement.

266.

25-year-patient with no history of immunocompromised condition presented with subacute disseminated tuberculosis. With Mantoux test result is the most expected?

- A. Hyperergic.
- B. Doubtful.
- C. Negative.
- D. Positive.



E. Necrotic.

267.

A patient is presented with miliary tuberculosis. Appreciate the probability of bacterial expectorating.

- A. 100%.
- B. 80%.
- C. Disappearing.
- D. 30-50%.
- E. 15-20%.

268.

Choose the specific comparison for subacute disseminated tuberculosis radiological finding.

- A. „Starry sky”.
- B. „Chimney stalk”.
- C. „Weeping willow”.
- D. „Falling snow”.
- E. “Coin appearance”.

269.

Patient is presented at the second day of the disease. Miliary tuberculosis is being suspected but chest X-ray had not detected any abnormality. In what terms the examination is to be repeated?

- A. Next day.
- B. In 3-5 days.
- C. In 30-40 days.
- D. In 7-10 days.
- E. In 14-17 days.

270.

Patient is presented with chronic disseminated pulmonary tuberculosis. Which disease course is the most expected?

- A. Progressing slowly.
- B. Progressing rapidly.
- C. Recurrent.
- D. Benign.
- E. Wavy.

271.

53-year-old male with 10 year history of suffering from tuberculosis presented with pulmonary hemorrhage. Which mechanism of bleeding is the most likely?

- A. Pulmonary hypertension.
- B. Vessel wall remodeling.
- C. Vessel wall permeability increasing.
- D. Vessel wall involvement into decay area.
- E. All of the above.

272.

45-year-old homeless patient presented with cough, weight loss, dyspnea. On examination: patient is exhausted, skin is pale and wet, auscultation detected polymorphic rales over lung tissue, percussion - tympanic sound in lung lower region. CBC: Hb - 100 g/L, WBC -  $10.2 \times 10^9/L$ , eosinophil -3%, band neutrophil - 8%, segmented neutrophil -71%, lymphocyte-17%, monocyte -1%, ESR - 30 mm/hour.

Smear test for AFB showed positive result. On chest X-ray: on both reduced upper lobes polymorphic foci of different density are found, in both S<sub>2</sub> thick wall-cavities about 4 cm in diameter are present; lung roots are elevated and anhiestic. What's the most likely diagnosis?

- A. Focal tuberculosis.
- B. Miliary tuberculosis.
- C. Subacute disseminated tuberculosis
- D. Chronic disseminated tuberculosis.
- E. Infiltrative tuberculosis.

273.

28-year-old patient with head trauma in the past medical history is been treated for pulmonary tuberculosis new case according to I category. After 2 weeks of treatment an epileptic seizure developed. Which's drug side effect is it more likely due to?

- A. Ethambutol.
- B. Streptomycin.
- C. Pyrazinamide.
- D. Rifampicin.
- E. Isoniazid.

274.

37-year-old patient presented with disseminated tuberculosis relapse, dis+, MBT+ (M+,C +), resist.0, hist 0. Choose the adequate drugs combination for initial phase of treatment.

- A. Ethionamide, cycloserine, ciprofloxacin, amykacin.
- B. Rifampicin, isoniazid, streptomycin, ethambutol, ethionamide.
- C. Amykacin, isoniazid, streptomycin, ethambutol, ethionamide.
- D. Cyprofloxacin, streptomycin, ethambutol, pyrazinamide, cycloserine.
- E. Rifampicin, isoniazid, streptomycin, ethambutol, pyrazinamide.

275.

Specimen of the lung affected by subacute disseminated tuberculosis is analyzing. Which foci character is the most expected?

- A. Multiple 2-3 mm not fusing.
- B. Multiple 5-10 mm, fusing.
- C. Several 1-2 mm not fusing.
- D. Isolated 1-2 mm.
- E. Several 9-10 mm, fusing.

276.

60-year-old woman was admitted to emergency department with the diagnosis of community acquired pneumonia in a grave condition, with signs of respiratory distress. After 2 weeks of intravenous broad-spectrum antibiotic therapy the condition ameliorated but temperature is still subfebrile, X-ray shows an area of enriched vessel patterns in the right lung lower zone. CBC: Hb - 110 g/L, WBC -  $4.5 \cdot 10^9$  /L, eosinophil-1%, band neutrophil-5%, segmented neutrophil-65%, lymphocyte-28%, monocyte-1%, ESR - 15 mm/hour. Sputum smear test detected no AFB. What's the most likely diagnosis?

- A. Lung cancer
- B. Bilateral pulmonary abscesses.
- C. Eosinophilic pneumonia.
- D. Infiltrative tuberculosis.
- E. Severe community acquired pneumonia.

277.

28-year-old patient presented with HIV-associated disseminated tuberculosis. Has been known as HIV-positive for 6 year but has never taken antiretroviral therapy. CD 4+ level at the moment is 100 cell/ml. Choose the most advisable treatment sequence.

- A. Immediate administration of both anti-TB and antiretroviral therapy.
- B. Immediate administration of anti-TB treatment; antiretroviral therapy should be administered after initial phase finishing.
- C. Immediate administration of anti-TB treatment; antiretroviral therapy should be administered just after treatment course finishing.
- D. Immediate administration of anti-TB treatment; antiretroviral therapy should be administered between second and eighth week of anti-TB treatment.
- E. Immediate administration of antiretroviral treatment; anti-TB therapy should be administered after initial phase finishing.

278.

38-year-old patient presented with chronic disseminated tuberculosis exacerbation. Which hemogram is the most expected?

- A. Hb - 115 g/L, WBC –  $11.5 \cdot 10^9$  /L, eosinophil -2%, band neutrophil -9%, segmented neutrophil -63%, lymphocyte-14%, monocyte -12%, ESR - 28 mm/hour.
- B. Hb - 140 g/L, WBC –  $4.0 \cdot 10^9$  /L, eosinophil -3%, band neutrophil -5%, segmented neutrophil -69%, lymphocyte-21%, monocyte -2%, ESR - 5 mm/hour.
- C. Hb - 100 g/L, WBC –  $3.0 \cdot 10^9$  /L, eosinophil - 0%, band neutrophil -12%, segmented neutrophil -75%, lymphocyte-10%, monocyte -3%, ESR - 60 mm/hour.
- D. Hb - 120 g/L, WBC –  $15.0 \cdot 10^9$  /L, eosinophil -0%, band neutrophil -12%, segmented neutrophil -72%, lymphocyte-12%, monocyte -4%, ESR - 45 mm/hour.
- E. Hb - 130 g/L, WBC –  $25.0 \cdot 10^9$  /L, eosinophil -8%, band neutrophil -4%, segmented neutrophil -15%, lymphocyte-70%, monocyte -3%, ESR - 60 mm/hour.

279.

40-year-old patient has been treated for chronic laryngitis within several months without effect. At the moment painful ulcer upon tongue appeared. Regular X-ray examination established disseminated tuberculosis. Sputogenous oral cavity and larynx contamination are suspected. Which diagnostic mistake hindered earlier establishing of the diagnosis?

- A. Lack of oral cavity smear ZN-test, routine blood test.
- B. Lack of larynx biopsy, chest X-ray.
- C. Lack of Mantoux test, sputum ZN-staining.
- D. Lack of oral cavity smear PCR-test, routine blood test.
- E. All of the above.

280.

Patient is presented with chronic disseminated tuberculosis. Which radiological finding is the most expected?

- A. Polymorphic foci.
- B. Vessel pattern deformity.
- C. Basal emphysema.
- D. Hilum elevating (weeping willow).
- E. All of the above.

281.

36-year-old patient is brought to the emergency department with the suspicion for the spontaneous pneumothorax. Which examination is the most urgent?

- A. Physical examination.
- B. Bronchoscopy.
- C. Bronchography
- D. CT.
- E. Plain chest X-ray.

282.

23-year-old patient has been brought to the emergency department complaining of sharp chest pain appeared after exertion. On examination destructive disseminated tuberculosis complicated by spontaneous pneumothorax detected. What's the most likely principle of this complication?

- A. Congenital  $\alpha_1$  antitripsin deficiency.
- B. Pneumofibrosis.
- C. Pleural coalescences.
- D. Lung tissue disintegration.
- E. Smoking.

283.

Patient had been presented with spontaneous pneumothorax. After air aspiration the intrapleural pressure stays positive. Which is the most probable reason?

- A. Heart insufficiency.
- B. Lung insufficiency.
- C. Empyema.
- D. Fistula formation.
- E. All of the above above.

284.

52-year-old female suffering from severe asthma presented with spontaneous pneumothorax developed suddenly on exertion. 20 year before recovered from disseminated tuberculosis. Which morphological changes produced the disease more likely?

- A. Lung tissue disintegration.
- B. Pneumofibrosis.
- C. Emphysematic bullas.
- D. Pleural thickenings.
- E. Pleural adhesions.

285.

30-year-old student who had recovered from tuberculosis 4 year ago presented with spontaneous pneumothorax. Which of additional examinations is the most appropriate to detect the cause of the disease?

- A. Thoracoscopy.
- B. Lateral view X-ray.
- C. Bronchography.
- D. CT-scanning.
- E. US-scanning.

286.

Patient is presented with infiltrative tuberculosis. On chest X-ray triangular in shape opacity with hazy upper and distinct lower border is detected in the right middle zone. Name the radiological type of infiltrate.

- A. Asmann.
- B. Periscissuritis.
- C. Cloud-like.
- D. Linear.
- E. Atypical.

287.

27-year-old male presented with total right side spontaneous pneumothorax. What objective signs are the most expected?

- A. Lagging behind breathing, boomed percussion sound, broncho-vesicular breathing, scattered wheezes on the affected side. Mediastinum shifted to the affected side.
- B. Lagging behind breathing, tympanic percussion sound and absent breathing on the affected side. Mediastinum shifted to the unaffected side.
- C. Dull percussion sound, bronchial breathing, crackling rales on the affected side. Mediastinum shifted to the affected side.
- D. Lagging behind breathing, dull percussion sound, weakened vesicular breathing on the affected side. Mediastinum shifted to the affected side.
- E. Symmetric thorax, tympanic percussion sound and absent breathing on the affected side. Mediastinum shifted to the unaffected side.

288.

29-year-old symptom-free patient presented with 1.5 cm homogenous dense opacity with distinct borders, surrounded by fibrotic area in the right second intercostal space. Right hilum is anahistic, contains high density inclusions. It's known that patient recovered from tuberculosis. Which clinical form residual is the most likely?

- A. Tuberculoma.
- B. Focal tuberculosis.
- C. Intrathoracic lymph nodes tuberculosis.
- D. Disseminated tuberculosis.
- E. Primary complex.

289.

35-year-old patient presented with right-side spontaneous pneumothorax. On chest X-ray lung tissue is compressed for 1/3 of its volume. What's the most advisable first course of action?

- A. Bed regimen only.
- B. Pain killers, antitussive drugs.
- C. Thoracocentesis, air evacuation.
- D. Bed regimen, heart stimulation.
- E. Bed regimen, respiratory stimulation.

290.

32-year-old male recovered from infiltrative tuberculosis, which had complicated by pleurisy, 4 year ago. Now he is presented with spontaneous pneumothorax developed suddenly on exertion. Before this episode felt well, underwent regular medical check-up including chest X-ray examination a month before. Which morphological changes produced the disease more likely?

- A. Pleural adhesions.
- B. Pneumofibrosis.
- C. Emphysematic bullas.
- D. Lung tissue disintegration.
- E. Lung calcifications.

291.

The patient is presented with the valvular pneumothorax.. Which signs are the most expected?

- A. Increasing respiratory and heart insufficiency.
- B. Positive intarpleural pressure.
- C. Cyanosis.
- D. Visceral pleura defect detected on videothoracoscopy.
- E. All of the above.

292.

32-year-old patient recovered from left side upper lobe tuberculosis 15 year ago. Presented with spontaneous pneumathorax. On examination large bulla in the left upper lobe detected. Which treatment approach is the most advisable?

- A. Passive draining.
- B. Pleural cavity obliteration.
- C. Thoracoscopic ciagulation.
- D. Bulla resection.
- E. Active aspiration.

293.

36-year-old patient with no tuberculosis history presented with several 0.5 mm foci of low density on the left apex on the screening chest X-ray. Otherwise no abnormality detected. How could you appreciate this case if TB origin of the disease is proved?

- A. Fresh.
- B. Advanced.
- C. Chronic.
- D. Neglected.
- E. Latent.

294.

52-year-old patient has been suffering from tuberculosis for 3 year. Interrupted treatment several times. At the moment chest X-ray detected 4 cm thick-walls cavity surrounded by satellite foci and fibrotic area on the left lung apex. ZN-sputum staining showed positive result. Choose the type of this case.

- A. New case.
- B. Relapse.
- C. Chronic case.
- D. Case of doubtful activity.
- E. Neglected case.

295.

26-year-old patient finished the full course of treatment for new case (left upper lobe infiltrative tuberculosis) dis+ MBT+ (M+, C+). The cavity was healed, cultural test showed negative result. After 6 month next chest X-ray detected non-homogenous opacity in the right lung apex. ZN-staining detected AFB in sputum. Define this case.

- A. New case.
- B. Relapse.
- C. Chronic case.
- D. Treatment failure.
- E. Neglected case.

296.

15-year-old patient presented with 0.8 cm opacity in left S<sub>1</sub> detected on screening X-ray examination. Smear test for AFB showed negative result. It's known that the adolescent is infected by MBT since the age of 5, when Mantoux test conversion was detected. How this case is to be qualified?

- A. New case (primary tubercle complex) MBT- (M-C-), dis-, resist 0, Category 3.
- B. Chronic case (focal pulmonary tuberculosis) MBT- (M-C0), dis-, resist 0, Category 4.
- C. Relapse (infiltrative pulmonary tuberculosis) MBT- (M-C-), dis-, resist 0, Category 2.
- D. New case (focal pulmonary tuberculosis) MBT- (M-C0), dis-, resist 0, Category 3.
- E. New case (infiltrative pulmonary tuberculosis) MBT- (M-C0), dis-, resist 0, Category 3.

297.

48-year-old male presented with 3-year history of pulmonary tuberculosis. Despite starting treatment several times had never receive the complete treatment course. X-ray examination detected cavity of 5 cm in diameter in the left upper zone surrounded by fibrotic area and satellite foci. Hilum is elevated, mediastinum shifted to the left. Smear and cultural tests detected MBT resistant to streptomycin and isoniazid. Choose the correct diagnosis formulation.

- A. Pulmonary tuberculosis new case (Infiltrative tuberculosis of right lower lobe dis+, MBT+ (M+,C 0), resist.0, hist 0, category I).
- B. Pulmonary tuberculosis chronic case (Fibrous-cavernous tuberculosis of left upper lobe dis+, MBT+ (M+,C +), resist.+ (I:H,S), hist 0, category IV).
- C. Pulmonary tuberculosis chronic case (Infiltrative tuberculosis of left upper lobe dis+, MBT+ (M+,C +), resist.0, hist 0, category II).
- D. Pulmonary tuberculosis new case (Fibrous-cavernous tuberculosis of left upper lobe dis+, MBT+ (M+,C +), resist.+ (I:H,S), resist.0, hist 0, category III).
- E. Pulmonary tuberculosis new case (Infiltrative tuberculosis of left upper lobe dis+, MBT+ (M+,C -), resist.-, hist -, category II).

298.

23-year-old female presented with infiltration about 4 cm in diameter having moderate density, hazy borders and 1.5 cm cavity inside, which was detected in right lung S<sub>6</sub> on screening X-ray. Sputum ZN-staining showed positive result, cultural test is processing. No tuberculosis history or TB-contact was discovered. Choose the correct diagnosis formulation.

- A. Pulmonary tuberculosis new case (Infiltrative tuberculosis of right lower lobe dis+, MBT+ (M+,C 0), resist.0, hist 0, category I).
- B. Pulmonary tuberculosis new case (Infiltrative tuberculosis of right upper lobe dis+, MBT+ (M+,C 0), resist.0, hist 0, category I).
- C. Pulmonary tuberculosis new case (Infiltrative tuberculosis of right lower lobe dis+, MBT+ (M+,C 0), resist.0, hist 0, category II).
- D. Pulmonary tuberculosis new case (Infiltrative tuberculosis of right upper lobe dis-, MBT+ (M+,C 0), resist.0, hist 0, category III).
- E. Pulmonary tuberculosis new case (Infiltrative tuberculosis of right lower lobe dis+, MBT+ (M+,C -), resist.-, hist -, category II).

299.

30-year-old patient presented with 0.8 cm opacity in left S<sub>1</sub> detected on screening X-ray examination. Smear test for AFB showed negative result. From past medical history: has been treated for hip joint tuberculosis 5 year ago. How this case is to be qualified?

- A. New case (infiltrative pulmonary tuberculosis) MBT- (M-C-), dis-, resist 0, Category 3.
- B. Chronic case (disseminated tuberculosis) MBT- (M-C0), dis-, resist 0, Category 4.
- C. New case (focal pulmonary tuberculosis) MBT- (M-C-), dis-, resist 0, Category 3.
- D. Relapse (focal pulmonary tuberculosis) MBT- (M-C0), dis-, resist 0, Category 2.
- E. New case (focal pulmonary tuberculosis) MBT- (M-C-), dis-, resist 0, Category 3.

300.

10-year-old homeless boy presented with infiltration in right lung S<sub>6</sub> about 4 cm in diameter, having moderate density, hazy borders and 1.5 cm cavity inside, numerous calcifications in both hilums. Sputum ZN-staining showed positive result, cultural test is processing. No tuberculosis history and TB-contact discovered. Choose the correct diagnosis formulation.

- A. Pulmonary tuberculosis new case (Primary complex of right lower lobe dis+, MBT+ (M+,C 0), resist.0, hist 0, category I).
- B. Pulmonary tuberculosis relapse (Infiltrative tuberculosis of right upper lobe dis+, MBT+ (M+,C 0), resist.0, hist 0, category II).
- C. Pulmonary tuberculosis residuals (Self-cures intrathoracic lymphatic nodes tuberculosis).
- D. Pulmonary tuberculosis new case (Infiltrative tuberculosis of right upper lobe dis-, MBT+ (M+,C 0), resist.0, hist 0, category III).
- E. Pulmonary tuberculosis new case (Infiltrative tuberculosis of right lower lobe dis+, MBT+ (M+,C 0), resist.-, hist -, category I).

301.

Patient who has been treated for pulmonary tuberculosis for 2.5 month shows positive cultural test for MBT. Mycobacteria are resistant to isoniazid and rifampicin. Which type of drug resistance is it??

- A. Primary MDR.
- B. Acquired MDR.
- C. Primary XDR.
- D. Acquired XDR.
- E. Initial drug resistance.

302.

Specimen of the lung affected by secondary tuberculosis is analyzing. Which feature is NOT expected?

- A. Fibrotic areas.
- B. Lymphatic vessels and nodes involvement.
- C. Disintegration.
- D. Lower lobe localization.
- E. Satellite foci.

303.

Specimen of the lung affected by primary tuberculosis is analyzing. Which feature is NOT expected?

- A. Disintegration.
- B. Lymphatic vessels and nodes involvement.
- C. T-memory cell presence.
- D. Lower lobe localization.
- E. Satellite foci.

304.

5-year-old child is a known case of primary tuberculosis. Which clinical form of the disease is the least expected?

- A. Miliary.
- B. Tuberculosis meningitis.
- C. Pleurisy.
- D. Infiltrative.
- E. Abdominal.



305.

6-year-old child presented with Mantoux test conversion. Choose the event which is NOT OBLIGATE for the case.

- A. Primary bacteriemia and bacterilimphia.
- B. Mycobacteria sedimentation in lymph nodes.
- C. Primary granuloma formation.
- D. Pre-local or local tuberculosis development.
- E. Mycobacteria sedimentation in parenchymal organs.

306.

32-year-old symptom-free school teacher recovered from infiltrative pulmonary tuberculosis 3 year ago is presented after detecting of two high density shadows up to 2 cm with distinct borders on the right apex by preemployment X-ray examination. Physical examination, blood, urine, sputum tests detected no abnormality. Could professional activity be allowed to this patient?

- A. Depends on further cultural sputum test.
- B. Yes, after retreatment course.
- C. Yes, if Mantoux skin test is negative.
- D. Yes, but annual clinical examination including chest X-ray should be required.
- E. No.

307.

Specimen of the lung affected by disseminated tuberculosis from AIDS patient with CD 4+ level 100 cell/ml is analyzing. Which feature is the most expected?

- A. Expanded caseous necrosis, numerous Lanhance cells, limited dissemination.
- B. Expanded colliquative necrosis, solitary Lanhance cells, scattered dissemination.
- C. Absence of necrotic mass, solitary Lanhance cells, scattered dissemination.
- D. Absence of necrotic mass, numerous Lanhance cells, limited dissemination.
- E. Expanded caseous necrosis, numerous Lanhance cells, scattered dissemination.

308.

Mantoux skin test is being performed in TB hotbed. Some patients are suspected to have decreased tuberculin sensitivity regardless latent tuberculosis because of different obstacles. Who would be included into this group?

- A. Patients with AIDS.
- B. HIV-positive.
- C. Alcohol abusers.
- D. Suffering from sexually transmitted diseases.
- E. All those.

309.

25-year-old male from tuberculosis hotbed presented with chest pain, chills, T 38°C, cough with mucopurulent sputum, dyspnea. Has been ill for three days. On physical examination: RR 28/min, P 100/min, multiple crackling and bubbling rales over upper part of right hemitorax. CBC: Hb - 130 g/L WBC -  $19.2 \times 10^9/L$ , eosinophil -3%, band neutrophil - 11%, segmented neutrophil -71%, lymphocyte-14%, monocyte -1%, ESR - 50 mm/hour. Chest X-ray detected opacity of the moderate density with the hazy borders occupying right upper zone. What's the most likely diagnosis?

- A. Lung cancer.
- B. Community acquired pneumonia.
- C. Primary tubercle complex.
- D. Non-Hodgkin lymphoma.

E. All of the above.

310.

At 27-year-old HIV-positive patient suffering from diarrhea chest X-ray detected bilateral numerous fusing foci. Sputum cultural test revealed the culture producing pale yellow pigment on light exposure. CD 4+ level is 150 cell/ml. Which type of mycobacteria was found?

- A. MAC.
- B. M. tuberculosis.
- C. M. bovis.
- D. M. africanum.
- E. L-Mtb.

311.

Patient attended his GP complaining of cough within 3 weeks, malaise, tiredness, subfebrile temperature. On examination infiltrative pulmonary tuberculosis localizing in right upper lobe, dis+, MBT+ has been detected. Which auscultative sounds are the most expected?

- A. Crackling rales
- B. Crepitation.
- C. Pleural friction.
- D. Bronchial breathing.
- E. Local bubbling rales.

312.

32-year-old patient has been hospitalized with some respiratory system disease suspicion. On examination subacute disseminated destructive pulmonary tuberculosis MBT+ detected. Which complaints are the most expected?

- A. Fever, headache, chest pain.
- B. Shortness of breathing attacks, dry cough, shins swelling.
- C. Moisture cough, weight loss, fever.
- D. Cough with rusty sputum, hectic fever, chest pain.
- E. Syncope, chest pain, shortness of breathing.

313.

45-year-old patient presented with fever and cough. Chest X-ray showed the 7 cm opacity with lucency inside of in the right upper lung zone and low density foci in the left S<sub>6</sub> projection. ZN-staining detected MBT. Choose the most expected anamnesis variant.

- A. Fell ill a week before, at the moment condition has ameliorated.
- B. Considers been ill “the whole life”, underwent lots of investigation with no result.
- C. Fell ill suddenly 2 days before.
- D. Considers been ill for several month, didn’t appeal to the doctor before.
- E. Fell ill a month before, on X-ray examination made a week ago detected no abnormality.

314.

35-year-old patient presented with pulmonary tuberculosis. It’s known that 3 year before he returned from the illegal immigration into Western Europe. At the moment is living alone, hasn’t stable employment, suffers from hyperthyroidism, sinusitis. Choose the most potent risk factor which might produce the disease.

- A. Immigration into Western Europe.
- B. Unemployment.
- C. Hyperthyroidism.

- D. Sinusitis.
- E. Absence of family.

315.

36-year-old smoker presented with chest pain, weakness, cough with mucoid sputum, appetite loss, T 37.8°C. Suffers from allergic rhinitis. Chest X-ray shows a cloudy opacity in the right upper zone with moderate density and indistinct borders. What disease has to be differentiated from this condition?

- A. Infiltrative tuberculosis.
- B. Lung cancer.
- C. Community acquired pneumonia.
- D. Eosinophilic pneumonia.
- E. All the above.

316.

20-year-old HIV-positive male been exposed by family contact with TB-patient is presented with fever, dry cough and dyspnea. Fell ill a day before. On examination: P 100/m, RR 28/m, BP 90/60. T 39°C. Lung percussion detected no abnormalities, on auscultation rare dry rales on mixed breathing background are found. CBC: Hb - 120 g/L, WBC –  $9.2 \cdot 10^9$  /L, eosinophil-4%, band neutrophil-7%, segmented neutrophil-55%, lymphocyte-14%, monocyte-10%, ESR - 25 mm/hour. Mantoux skin test is negative. ZN-staining showed negative result. Chest X-ray showed no abnormalities. What's the most advisable way to rule out or confirm tuberculosis in this case?

- A. To repeat sputum ZN-staining.
- B. To repeat chest X-ray after 7-10 days.
- C. To perform sputum cultural test.
- D. To repeat chest X-ray after 2 month.
- E. Tuberculosis is excluded because of negative Mantoux test.

317.

10-year-old child presented with hyperegic Mantoux test reaction. What's the most advisable first course of action?

- A. General physical examination, sputum and bronchial lavage test, bronchoscopy.
- B. General physical examination, Koch's test, CT-scanning.
- C. Antituberculosis preventive course.
- D. Observation, Mantoux test repeating after 3 months.
- E. General physical examination, risk factors analysis, routine blood and urine test, chest X-ray.

318.

Thoracoscopy detected no remarkable changes of pleura at 45-year-old patient with pleurisy. Chest X-ray, which was performed immediately detected 5 cm radiant nodular formation. Pleural exudate is hemorrhagic. What's the most likely diagnosis?

- A. Parapneumonic pleurisy.
- B. Tuberculosis of pleura.
- C. Paracancroid pleurisy.
- D. TB allergic pleurisy.
- E. TB empyema.

319.

Patient is presented with chronic tuberculosis. On auscultation amphoric breathing is detected over left upper zone. Upon what lung changes is this phenomenon testifying?

- A. Pleural effusion.
- B. Cirrhosis development.
- C. Dissemination.
- D. Huge cavity existence.
- E. Caseous necrosis.

320.

18-year-old patient presented with peripheral lymph nodes tuberculosis, complicated by fistula formation. Which CBC is the most expected?

- A. Hb - 90 g/L, WBC –  $6.2 \cdot 10^9$  /L, eosinophil -5%, band neutrophil -5%, segmented neutrophil -61%, lymphocyte-25%, monocyte -4%, ESR - 10 mm/hour.
- B. Hb - 140 g/L, WBC –  $12.0 \cdot 10^9$  /L, eosinophil -3%, band neutrophil -7%, segmented neutrophil -71%, lymphocyte-16%, monocyte -3%, ESR - 25 mm/hour.
- C. Hb - 100 g/L, WBC –  $20.0 \cdot 10^9$  /L, eosinophil - 0%, band neutrophil -12%, segmented neutrophil - 75%, lymphocyte-10%, monocyte -3%, ESR - 60 mm/hour.
- D. Hb - 120 g/L, WBC –  $15.0 \cdot 10^9$  /L, eosinophil -0%, band neutrophil -12%, segmented neutrophil -72%, lymphocyte-12%, monocyte -4%, ESR - 35 mm/hour.
- E. Hb - 130 g/L, WBC –  $25.0 \cdot 10^9$  /L, eosinophil -8%, band neutrophil -4%, segmented neutrophil -15%, lymphocyte-70%, monocyte -3%, ESR - 60 mm/hour.

321.

Screening chest X-ray of 36-year-old man revealed tuberculoma of the right upper lobe. Which X-ray description is the most appropriate for this case?

- A. Round like encapsulated nodule.
- B. Round like nodule with the defined borders on the normal background.
- C. Round like or oval opacity with the satellite foci around.
- D. Limited opacity connected to the hilum.
- E. Round like or oval opacity with defined knobby borders on the fibrotic background.

322.

29-year-old doctor finished treatment course for focal tuberculosis. Control X-ray examination no positive changes detected. Because of social indication segmental lung resection has been performed. Histological examination discovered tuberculoma. Which morphological type of the tuberculoma is the most likely?

- A. Pseudotuberculoma.
- B. Homogenous.
- C. Disintegrative.
- D. Conglomerate.
- E. Stratified.

323.

Patient suffering from S<sub>2</sub> tuberculoma presented with hemoptysis. Sputum ZN-staining showed positive result. The tuberculoma disintegration suspected. Which decay localization is the most expected?

- A. Central.
- B. Lower-medial.
- C. Apical.
- D. Caudal.
- E. Upper-lateral.

324.

23-year-old symptom-free teacher presented with the round opacity on the right lung apex. Choose the most advisable additional examination.

- A. Thorough anamnesis taking.
- B. CT-scanning.
- C. CBC.
- D. Sputum test for MBT.
- E. All of the above.

325.

14-year-old adolescent without remarkable risk factors for tuberculosis presented with Mantoux skin test result with 5 PPD-S TU of 10 mm. Which conclusion should be done?

- A. Positive reaction.
- B. Active tuberculosis.
- C. Depends on further examination result.
- D. Negative reaction.
- E. Any of listed.

326.

38-year-old agronomist complains of subfebrile fever, productive cough, night sweating, dyspnea, weight loss. Has been feeling unwell for a month. On examination: dull percussion sound above upper and middle zones, in the interscapular space moisture rales on mixed breathing background. Chest X-ray showed multiple fusing foci of moderate density in both upper lung zones. What's the most likely diagnosis?

- A. Disseminated tuberculosis.
- B. Actinomycosis.
- C. Pneumoconiosis.
- D. Community acquired pneumonia.
- E. Aspergilliosis.

327.

S<sub>2</sub> tuberculoma has been confirmed by needle biopsy at 45-year-old symptom-free doctor without tuberculosis past history. Sputum smear test detected no AFB. The formation size is approximately 4 cm. What's the most advisable further dealing?

- A. Conventional treatment according to I category.
- B. S<sub>2</sub> segmentectomy.
- C. Conventional treatment according to III category.
- D. Pulmonectomy.
- E. Observation only.

328.

52-year-old symptom-free patient presented with tuberculoma new case dis-, MBT-, M-, C0, resist 0. The opacity is located in right S<sub>3</sub>. After 2 month of treatment some doubts in diagnosis occurred because of weight loss, fatigue, anemia appeared. Which reason of round opacity origin must be ruled out first of all?

- A. Malignancy.
- B. Benign tumor.
- C. Aspergiloma.
- D. Cyst.
- E. Aneurism.

329.

HIV-positive patient is presented with cervical lymphadenitis. The doctor administered blood BACTEC test. In which case such analysis could be indicated?

- A. If miliary tuberculosis is suspected.
- B. If CD 4+ level is <200cells/mL.
- C. If biopsy material smear ZN-staining is positive.
- D. If mycobacteriosis is suspected.
- E. It's not indicated in this case.

330.

48-year-old male complains of decreased workability, weakness, sweating, subfebrile fever, weight loss. Has been feeling ill for 3 months. Chest X-ray detected round opacity of 4 cm with distinct borders in left S<sub>4</sub> projection. What's the most likely diagnosis?

- A. Encapsulated pleurisy.
- B. Lung cancer.
- C. Tuberculoma.
- D. All of the above.
- E. Nothing of the above.

331.

63-year-old patient has been treated for tuberculoma for 2 month. After that patient's condition aggravated, cough and hemoptysis appeared, round-like opacity enlarged. The suspicion of misdiagnosis appeared. Which disease other than tuberculosis is the most probable in this case?

- A. Lung cancer.
- B. Sarcoidosis.
- C. Community acquired pneumonia.
- D. Aspergilosis.
- E. Benign lung tumor.

332.

Chest X-ray of the 48-year-old patient complaining of weakness, dry cough and subfebrile temperature showed oval opacity 3 cm in diameter of moderate density with hazy borders and lucency on the superior pole in right lung upper part. 2 weeks before fell ill after supercooling with fever, cough, sweating. Now feels much better. On physical examination no abnormality detected. CBC: Hb - 120 g/L, WBC -  $12.3 \times 10^9$  /L, eosinophil -4%, band neutrophil -6%, segmented neutrophil -68%, lymphocyte-20%, monocyte -2%, ESR - 15 mm/hour. Sputum mucous, L. 10-12/field of view ; ZN-staining showed negative result. Bronchoscopy: diffuse endobronchitis. Which is the most advisable way for differential diagnosis between tuberculoma and pneumonia?

- A. Mantoux skin test.
- B. CT scanning.
- C. Fine-needle lung biopsy.
- D. Open lung biopsy.
- E. Broad-spectrum antibiotics test treatment.

333.

70-year-old patient presented with fever up to 39°C, chest pain, cough with muco-purulent sputum. Fell ill 3 days before. On examination: RR 20/min, P 98/min. On auscultation: moisture rales on the weakened breathing background in the right subclavian area detected. CBC: Hb 130 g/L, WBC -  $13.4 \times 10^9$  /L, eosinophil - 3%, band neutrophil - 8%, segmented neutrophil - 60%, lymphocyte- 24%, monocyte - 5%, ESR - 40 mm/hour. Sputum ZN-staining showed negative results. Chest X-ray detected 3 cm round

opacity with hazy borders of moderate density at the border between right S<sub>2</sub> and S<sub>3</sub>. At the differential diagnosing the pneumonia supposed more probable than TB. Which criteria allowed to make such a conclusion?

- A. Complaints and anamnesis.
- B. Objective data.
- C. Blood and sputum tests.
- D. Radiological examination.
- E. All of the above.

334.

27-year-old female presented with round 3 cm opacity in the left lung S<sub>2</sub> of high density with distinct regular borders and satellite foci around. Mantoux skin test – papule 20 mm. Otherwise no abnormalities detected. What's the most likely diagnosis?

- A. Tuberculoma.
- B. Eosinophilic pneumonia.
- C. Infiltrative tuberculosis.
- D. Lung abscess.
- E. Lung cancer.

335.

40-year-old symptom-free man presented with solitary 2×1.5 cm opacity of moderate density with defined borders in the II segment of the right lung. Which clinical type of TB is the most probable?

- A. Fibrous-cavernous.
- B. Tuberculoma.
- C. Focal.
- D. Residual.
- E. Infiltrative.

336.

35-year-old patient took the conventional treatment for tuberculoma within 4 months. No radiological changes are observed. What is the reason?

- A. It's secondary form of the disease.
- B. Frequent MDR in tuberculoma case.
- C. Absence of blood vessels inside.
- D. High tuberculin reactivity.
- E. Drainage block.

337.

Screening chest X-ray of 47-year-old smoker detected round 4 cm homogenic opacity of high density, with distinct regular borders in the left lung S<sub>1-2</sub>. CBC: Hb - 120 g/L WBC –  $6.9 \times 10^9$ /L, eosinophil -3%, band neutrophil - 5%, segmented neutrophil -65%, lymphocyte-23%, monocyte -7%, ESR - 2 mm/hour. What's the most advisable further action?

- A. Broad-spectrum antibiomatic test treatment.
- B. Observation.
- C. Test antituberculosis treatment.
- D. Surgery.
- E. Corticosteroids course.

338.

40-year-old symptom-free patient who hasn't been examined on X-ray for 4 year is presented with tuberculoma established after plain X-ray only. Which X-ray evidence is sufficient to establish such a diagnosis?

- A. Round dense shadow with hazy borders and lucency inside.
- B. Round dense homogenous shadow with distinct borders and inclusions of lime inside surrounded by several calcified foci.
- C. Round dense homogenous shadow with knobby contours and track to the hilum.
- D. Round dense homogenous shadow with distinct borders surrounded by normal lung tissue.
- E. Round non-homogenous shadow of low density with hazy borders surrounded by infiltration area.

339.

The surgical conference is selecting patients for surgery among those having tuberculomas. To whom of patients the surgery ISN'T suggested?

- A. Having 2-3 cm stable tuberculoma.
- B. With doubtful diagnosis of tuberculoma.
- C. Having 2-3 cm growing tuberculoma.
- D. Having 3-4 cm stable tuberculoma.
- E. Having 2-3 cm tuberculoma with decay.

340.

50-year-old coal miner having 30-year professional seniority presented with antracosis III stage. Mantoux skin test showed papule of 15 mm. Appreciate probability of active tuberculosis at the case.

- A. 70-80%.
- B. 60-70%.
- C. 50-60%.
- D. 30-40%.
- E. 10-20%.

341.

Screening chest X-ray of 18-year -old man revealed Gon's focus of the right S<sub>9</sub> and calcified hilar lymph nodes of the same lung. Previous chest X-ray at the age of 15 detected no abnormality. Patient had been exposed by the close contact with the smear positive TB-patient, underwent preventive isoniazid course, but hadn't been examined neither before nor after treatment. Which phase of primary tuberculosis complex is it?

- A. Infiltration.
- B. Calcification.
- C. Bipolarity.
- D. Consolidation.
- E. Desintegration.

342.

3-year-old child presented with primary tuberculosis complex. On examination: dull percussion sound, several bubbling rales over right upper zone. Choose the most expected radiological feature.

- A. Focal homogenous opacity with hazy borders in right subclavicular zone. Right hilum is slightly deformed, adjacent lung patterns enriched.
- B. Nonhomogenous opacity with hazy borders and lucency inside interflowing with the hilum in right subclavicular zone. Linear shadow of the interlobular pleura is visible.
- C. Homogenous 2 cm opacity of moderate density with hazy borders in the right S<sub>2</sub> connected to the hilum by peribronchial and perivascular shadows.



- D. Nonhomogenous opacity with hazy borders and lucency inside in the diminished upper lobe. Hilum is strained upward.
- E. Homogenous 0.9 cm round opacity with hazy borders in the right S<sub>2</sub>. Right hilum is deformed contains high density inclusions.

343.

10-year-old child presented with primary tuberculosis complex. Which X-ray feature is the most expected?

- A. Dense homogenous opacity in the right lower lung zone with hazy upper border. Diaphragm cupola and sinus are not visible. Left lung patterns enriched.
- B. Nonhomogenous opacity of moderate density, hazy borders and lucency inside in the right upper lung zone. Perifocal infiltration interflows with widened hilum.
- C. Homogenous 1.5 opacity in the right S<sub>2</sub> connected to the widened anhistous hilum by hazy linear shadows.
- D. Dense homogenous opacity in the right upper diminished lung lobe. Right diaphragm cupola at IV rib level. Right hilum is elevated and deformed.
- E. 0.9 cm subpleural opacity of high density, with distinct borders in the right upper zone. Right hilum is anhistous with high density inclusions.

344.

7-year-old child presented with primary tubercle complex. Chest X-ray detected opacity of moderate density 4 cm in diameter in the left S<sub>6</sub> connected to the widened hilum. Which phase of the disease is present?

- A. Initial.
- B. Infiltration.
- C. Calcification.
- D. Resolution.
- E. Residual.

345.

32-year-old symptom-free IT-specialist who had recovered from infiltrative pulmonary tuberculosis 3 year ago presented after preemployment X-ray examination, which detected two high density shadows up to 2 cm with distinct borders on the right apex. Physical examination, blood, urine, sputum tests detected no abnormality. Could the professional activity be allowed to this patient?

- A. Yes, without any prerequisites.
- B. Yes, after retreatment course.
- C. Yes, if Mantoux skin test is negative.
- D. Yes, but annual clinical examination including chest X-ray should be required.
- E. No.

346.

Patient discharges mycobacteria resistant to isoniazid, rifampicin, and ethambutol. How could you qualify this resistance profile?

- A. MDR.
- B. Monoresistance.
- C. Simple resistance.
- D. Usual resistance.
- E. XDR.

347.

11-year-old girl from tuberculosis hotbed presented with hyperergic Mantoux skin test. Chest X-ray detected homogenic 1.5 cm opacity of low density with hazy borders in right S<sub>1-2</sub>; perihilar vessel pattern is deformed and enriched, hilum is widened and anhistic. At the moment child is asymptomatic but a month ago felt fatigue, night sweating, appetite loss had been observed. CBC: Hb 115 g/L, WBC –  $9.2 \times 10^9/L$ , eosinophil - 4%, band neutrophil - 6%, segmented neutrophil - 65%, lymphocyte-21%, monocyte -3%, ESR - 19 mm/hour. What's the most advisable further action?

- A. Broad-spectrum antibiotal test-treatment.
- B. Preventional course of rifampicin and isoniazid.
- C. CT-scanning, sputum smear and cultural test.
- D. Observation only.
- E. Antituberculosis treatment course according to category III.

348.

4-year-old child presented with primary tuberculosis. Received BCG-vaccination at the age of 1 because of contraindications at the new-born period. Cicatrix size is 2 mm. Choose the most appropriate tuberculin test history.

- A. At the age of 1 – hyperemia only, at the age of 2 – papule 4 mm, at the age of 3 – hyperemia only, at the age of 4 – no reaction.
- B. At the age of 1 – no reaction, at the age of 2 – papule 17 mm, at the age of 3 – papule 10 mm, at the age of 4 – papule 2 mm.
- C. At the age of 1 – no reaction, at the age of 2 – papule 7 mm, at the age of 3 – papule 3 mm, at the age of 4 – papule 14 mm.
- D. At the age of 1 – papule 5 mm, at the age of 2 – papule 2 mm, at the age of 3 – papule 5 mm, at the age of 4 – papule 3 mm.
- E. At the age of 1 – no reaction, at the age of 2 – papule 9 mm, at the age of 3 – papule 7 mm, at the age of 4 – papule 4 mm.

349.

40-year-old symptom-free obstetrician without tuberculosis history presented after preemployment X-ray examination, which detected several high density inclusions in the right hilum. Physical examination, blood, urine, sputum tests detected no abnormality. Could professional activity be allowed to this patient?

- A. Yes, without any prerequisites.
- B. Yes, if sputum ZN-staining is negative.
- C. Yes, if Mantoux skin test is negative.
- D. No.
- E. Yes, but annual clinical examination including chest X-ray should be required.

350.

11-year-old girl from tuberculosis hotbed presented with hyperergic Mantoux skin test. Chest X-ray detected left side increased vascularisation in perihilar zone, mediastinal pleura accentuation. Hilum isn't overtly widened but anhistic. At the moment child is asymptomatic but a month ago felt fatigue, night sweating, and appetite loss. CBC: Hb 115 g/L WBC –  $9.2 \times 10^9/L$ , eosinophil - 4%, band neutrophil - 6%, segmented neutrophil - 65%, lymphocyte-21%, monocyte -3%, ESR - 19 mm/hour. What's the most advisable further action?

- A. Test broad-spectrum antibiotal treatment.
- B. CT-scanning, sputum smear and cultural test.
- C. Preventional course of rifampicin and isoniazid.
- D. Observation only.
- E. Antituberculosis treatment course according to category III.

351.

Screening examination revealed complicated primary tuberculosis complex in 13-year-old boy from tuberculosis nidus. Mantoux skin test with 5 TU showed 17 mm papule. On the chest X-ray: in the right upper lobe 3,5 cm opacity of the moderate density with the hazy borders and lucency inside 1,5×1,2 cm. The opacity is connected to the widened right hilum. In the S<sub>6</sub> of the both lungs there are groups of moderate density foci with hazy borders. Which is the main reason for supposing this case to be a complicated one?

- A. Living in the tuberculosis hotbed.
- B. Hyperergic tuberculin sensitivity.
- C. Disintegration and dissemination presence.
- D. Primary affect more than 1 cm in diameter.
- E. All of the above.

352.

10-year-old child fell ill 2 weeks before after supercooling. Fever, cough, weight loss, sweating appeared. On examination: skin is pale, painless enlarged lymph nodes detected in 6 peripheral groups. Breathing is weakened and percussion sound is dull in the interscapular area. Mantoux skin test showed papule of 6 mm with vesicle, previous year result was negative. CBC: WBC –  $12.3 \times 10^9$  /L, eosinophil -4%, band neutrophil -6%, segmented neutrophil -68%, lymphocyte-18%, monocyte -4%, ESR - 30 mm/hour. Chest X-ray showed nonhomogenous 2.5×3.5 opacity with hazy borders in the left S<sub>4,5</sub> interflowing with widened and anhistous hilum. CT-scanning detected enlarged hilum lymph nodes. What's the most likely diagnosis?

- A. Primary tuberculosis complex in the infiltration phase.
- B. Lymph nodes tuberculosis.
- C. Community acquired pneumonia.
- D. Lung cancer.
- E. Hodgkin disease

353.

7-year-old child presented with the upper lobe primary tuberculosis complex. The proper treatment has been administered. Chest X-ray at that moment: opacity of moderate density in the right upper lobe connected to the hilum. A month later parents defaulted treatment. Next month cough attacks with expiratory dyspnea, high fever appeared. CBC: WBC –  $18.9 \times 10^9$  /L, eosinophil -3%, band neutrophil - 10%, segmented neutrophil -58%, lymphocyte-21%, monocyte -8%, ESR - 52 mm/hour. Sputum ZN-staining detected MBT. On chest X-ray: dense total opacity of the diminished right upper lobe, hilum is widened up to 3.5 cm, elevated. Which complication developed?

- A. Primary affect decay.
- B. Upper lobe atelectasis.
- C. Upper lobe pneumonia.
- D. Upper lobe cirrhosis
- E. Interlobar pleurisy.

354.

7-year-old child presented with upper lobe primary tuberculosis complex. The proper treatment has been administered. Chest X-ray at that moment: opacity of moderate density in the right upper lobe connected to the hilum. A month later parents defaulted treatment. Next month cough attacks with expiratory dyspnea, high fever appeared. CBC: Hb 100 g/L, WBC –  $18.9 \times 10^9$  /L, eosinophil - 3%, band neutrophil - 10%, segmented neutrophil - 58%, lymphocyte - 21%, monocyte - 8%, ESR - 52 mm/hour. Sputum ZN-staining detected AFB. On chest X-ray: dense total opacity of the diminished right upper lobe, hilum is widened up to 3.5 cm, elevated. Choose the most proper additional examination in order to detect possible complication.

- A. CT-scanning.

- B. Laryngoscopy.
- C. Bronchoscopy.
- D. Thoracoscopy.
- E. Mantoux skin test.

355.

4-year-old child is presented with primary tuberculosis. BCG-vaccinated at the 3<sup>rd</sup> day of life, post-vaccine cicatrix – 4 mm. The disease was detected after screening Mantoux skin test. Choose the most expected Mantoux test history.

- A. At the age of 1 – papule 6 mm, at the age of 2 – 7 mm, at the age of 3 – 4 mm, at the age of 4 – 11 mm.
- B. At the age of 1 – no papule, at the age of 2 – 2 mm, at the age of 3 – no papule, at the age of 4 – 6 mm.
- C. At the age of 1 – papule 10 mm, at the age of 2 – 8 mm, at the age of 3 – 5 mm, at the age of 4 – 17 mm.
- D. At the age of 1 – 3 no data, at the age of 4 – 15 mm.
- E. All of the above.

356.

40-year-old alcohol abuser presented with pleurisy also complaining of severe abdominal pain, vomiting. The illness started acutely after alcohol excess accompanied by fatty meal consuming. CBC: Hb - 130 g/L WBC –  $17.2 \times 10^9/L$ , eosinophil -2%, band neutrophil -12%, segmented neutrophil -61%, lymphocyte-25%, monocyte -1%, ESR - 70 mm/hour. Pleural fluid test: transparent, neutrophils are predominant cell type. Chest X-ray performed immediately after exudate removing detected no lung field abnormality. Which pleurisy cause is the most likely?

- A. Non-specific pneumonia.
- B. Lung cancer.
- C. Tuberculosis.
- D. Pancreatitis.
- E. Pleural mesothelioma.

357.

20-year-old student presented with opacity of moderate density in the right lung S<sub>6</sub> connected to widened hilum. Abnormality has been revealed on ordinal X-ray examination. From past medical history: felt fatigue, listlessness, appetite and weight loss after his mother death of lung cancer 6 months ago. Once found blood streaks in sputum. Twice was treated for right side community acquired pneumonia 2 and 6 years ago. Mantoux skin test showed papule of 23 mm in diameter. Last year the result was negative. CBC: Hb – 120 g/L, WBC –  $10.2 \cdot 10^9 /L$ , eosinophil-4%, band neutrophil-9%, segmented neutrophil-60%, lymphocyte-18%, monocyte -8%, ESR – 34 mm/hour. What's the most correct conclusion?

- A. Primary tubercle complex.
- B. Lung cancer.
- C. Community acquired pneumonia.
- D. Non-Hodgkin lymphoma.
- E. Infiltrative tuberculosis.

358.

15-year-old adolescent presented with the diagnosis of primary tubercle complex established on the base of mass Mantoux test, which showed tuberculin test conversion and X-ray examination, which detected homogenous 1.8 cm opacity with hazy borders, connected to the widened hilum by “track”. What complaints are the most expected?

- A. Chills, fever, severe weakness, dyspnea in exertion, weight loss up to 7 kg within two weeks.

- B. Tiredness, inconstant subfebrile fever, slight cough.
- C. Chest pain, inconstant subfebrile fever, productive cough, hemoptisis.
- D. No complaints.
- E. Paroxysmal dry bitonal cough, night sweating, dyspnea on exertion, hoarseness.

359.

57-year-old patient discharged from 15-year imprisonment a year before, presented with dry and productive cough, body weight loss, malaise, dyspnea, subfebrile fever, low extremities edema. On examination: labial cyanosis, boom-box percussion sound, wet and dry rales throughout lungs. Chest X-ray detected multiple polymorphic foci of different density, size and shape throughout lung tissue with apico-caudal type of spreading. Hilums are elevated. Sputum ZN-staining detected no AFB. What's the most likely diagnosis?

- A. Fibrous-cavernous tuberculosis.
- B. Subacute disseminated tuberculosis.
- C. Chronic disseminated tuberculosis.
- D. Disseminated lung cancer.
- E. Chronic obstructive pulmonary disease.

360.

25-year-old patient presented with the Ghon's focus. No tuberculosis history discovered. Self-curing of which clinical type of tuberculosis could it be due to?

- A. Infiltrative.
- B. Tubercle bronchodenitis.
- C. Focal.
- D. Primary complex.
- E. Disseminated.

361.

6-year-old child underwent BCG vaccination on 5<sup>th</sup> day of life (scar diameter 5mm). Mantoux skin test showed papule of 10mm. Previous tuberculin test history: at the age of 1 – papule 8 mm, at the age of 2 – 5, at the age of 3 – 3 mm, at the age of 4 – 3 mm, at the age of 5 – 2 mm. What's your conclusion?

- A. Non-infected child.
- B. Postvaccinative reaction.
- C. Tuberculin sensitivity conversion.
- D. Active tuberculosis.
- E. Latent tuberculosis.

362.

Make a conclusion about tuberculin test result of symptom-free 11-year-old child. Mantoux skin showed hyperemia, previous year results decreased from 8, to 4 mm. On examination no abnormality detected. Revaccinated at the age of 7 (scar size 3 mm).

- A. No antituberculosis immunity.
- B. Post-vaccine immunity.
- C. Long-existing latent tuberculosis.
- D. Active tuberculosis.
- E. Latent tuberculosis, tuberculin test conversion.

363.

Make a conclusion about tuberculin test result of symptom-free 4-year-old child from the tuberculosis hotbed. At the moment Mantoux skin test is negative. Previous tuberculin test history: at the age of 1 – papule 8 mm, at the age of 2 – 5, at the age of 3 – 3 mm. On examination no abnormality detected. Post-vaccine scar on the left humerus is of 7 mm in diameter.

- A. Post-vaccine immunity.
- B. Latent tuberculosis, tuberculin test conversion.
- C. Long-existing latent tuberculosis.
- D. Active tuberculosis.
- E. Non-infected child.

364.

Make a conclusion about tuberculin test result of symptom-free 10-year-old child. At the moment Mantoux skin test showed papule of 6 mm. Previous tuberculin test history: at the age of 1 – papule 5 mm, at the age of 2 – 3 mm, at the age of 3 – 2 mm, at the age of 4 and 5 – no papule, at the age of 6 – 7 mm, at the age of 7 – 5 mm, at the age of 8 – 10 mm, at the age of 9 – 9 mm. Post-vaccine cicatrix – 4 mm, didn't receive revaccination. On examination no abnormality detected.

- A. Long-existing latent tuberculosis.
- B. Latent tuberculosis, tuberculin test conversion.
- C. Post-vaccine immunity.
- D. Active tuberculosis.
- E. Non-infected child.

365.

Additional examination was prescribed for the 12-year-old child after screening Mantoux skin test showed papule of 12 mm. Previous tuberculin test history: at the age of 8 – papule 5 mm, at the age of 9 – 3 mm, at the age of 10 – 7 mm, at the age of 11 – 5 mm. Choose the reason to consider the child having risk of tuberculosis.

- A. Mantoux skin test conversion.
- B. Lack of data about Mantoux test history before age of 8.
- C. Latent tuberculosis with increasing sensitivity.
- D. Low efficiency of BCG vaccination.
- E. Increased tuberculin sensitivity.

366.

7-year-old child received BCG vaccination on 5<sup>th</sup> day of life (scar diameter 5mm) presented after Mantoux skin test showed papule 10 mm. Previous tuberculin test history: no data before age of 4, at the age of 5 – papule 8 mm, at the age of 6 – 7. Chest X-ray, routine clinical and laboratory investigation detected no abnormalities. What's your conclusion?

- A. Non-infected child.
- B. Post-vaccinative reaction.
- C. Tuberculin sensitivity conversion.
- D. Latent tuberculosis.
- E. Active tuberculosis.

367.

5-year-old child presented after Mantoux skin test showed papule 11 mm. Received BCG-vaccination on 5<sup>th</sup> day of life (scar diameter 5 mm). Tuberculin test history: at the age of 1 – papule 10 mm, at the age of 2 – 8, at the age of 3 – 7 mm, at the age of 4 – 5 mm. What's your conclusion?

- A. Tuberculin sensitivity conversion.
- B. Post-vaccinative reaction.
- C. Non-infected child.
- D. Increased risk of active tuberculosis.

E. Long existing latent tuberculosis.

368.

14-year-old adolescent is presented after Mantoux skin test showed papule 13 mm. Received BCG-vaccination on the 5<sup>th</sup> day of life and at the age of 7 (scars diameter 5 mm and 6 mm respectively). Tuberculin test history after revaccination: at the age of 8 – hyperemia only, at the age of 9 – 3, at the age of 10 – 7 mm, at the age of 11 – 8 mm, at the age of 12 – 6 mm, at the age of 13 – 6 mm. What's your conclusion?

- A. Non-infected child.
- B. Post-vaccinative reaction.
- C. Tuberculin sensitivity conversion.
- D. Increased risk of active tuberculosis.
- E. Long existing latent tuberculosis.

369.

3-year-old child presented after Mantoux skin test showed papule 17 mm. Received BCG-vaccination on the 5<sup>th</sup> day of life (scar diameter 5 mm). Tuberculin test history: at the age of 1 – papule 5 mm, at the age of 2 – hyperemia only. What's your conclusion?

- A. Post-vaccinative reaction.
- B. Tuberculin sensitivity conversion.
- C. Non-infected child.
- D. Increased risk of active tuberculosis.
- E. Long existing latent tuberculosis.

370.

Three 6-year-old children presented after Mantoux skin test. All received BCG vaccination on the 3<sup>rd</sup> day of live. Who of them is at risk of tuberculosis? No additional risk factors have been revealed.

- A. At the moment papule is 13 mm, previous year history: at the age of 1 year – 5 mm, at the age of 2 – 9 mm, at the age of 3 – 8 mm, at the age of 4 – 10 mm, at the age of 5 – 7 mm.
- B. At the moment papule is 8 mm, previous year history: at the age of 1 year – 11 mm, at the age of 2 – 7 mm, at the age of 3 – 6 mm, at the age of 4 – 2 mm, at the age of 5 – hyperemia only.
- C. At the moment papule is 18 mm, previous year history: at the age of 1 year – 10 mm, at the age of 2 – 2 mm, at the age of 3 – 10 mm, at the age of 4 – 11 mm, at the age of 5 – 11 mm.
- D. Nobody.
- E. All are.

371.

In some community of high TB incidence screening Mantoux skin test was recommended for children. Which is the purpose of this intervention?

- A. TB incidence study.
- B. Children at risk revealing.
- C. Tuberculosis activity evaluation.
- D. Differential diagnosis of TB and non-TB diseases.
- E. Anti-TB immunity improving.

372.

In the high risk community screening Mantoux skin test has been performed. What's its main purpose?

- A. Cross-sectional epidemiological study of active TB incidence.
- B. Tuberculosis activeness evaluation.
- C. Cross-sectional epidemiological study of latent TB incidence.

- D. Differential diagnosis between TB and non-TB diseases.
- E. Follow-up tuberculosis outcomes study.

373.

14-year-old adolescent suffering from diabetes mellitus has to undergo BCG-revaccination. Last year supposed to be non-infected. Which examination is the obligate prerequisite for revaccination?

- A. Mantoux skin test.
- B. Chest X-ray.
- C. Sputum test.
- D. Blood test.
- E. All of the above.

374.

4-year-old child presented from the tuberculosis hotbed. At the moment Mantoux skin test is positive. Previous tuberculin tests were positive also. On examination no abnormality detected. Post-vaccine scar on the left humerus is of 7 mm in diameter. Choose possible conclusion.

- A. Post-vaccine immunity.
- B. Active pre-local tuberculosis.
- C. Long-existing latent tuberculosis.
- D. Active local tuberculosis.
- E. All of the above.

375.

Additional examination among children after screening Mantoux skin is planning. Who of them HAVE NOT to undergo such an examination?

- A. Having latent tuberculosis.
- B. Showed Mantoux skin test conversion.
- C. Having latent tuberculosis with high tuberculin reactivity level.
- D. Showed Mantoux skin test sensitivity increasing.
- E. Been exposed by recent close contact with TB patient.

376.

The doctor is selecting children been infected with TB among those with positive Mantoux test. Which category would not suppose been infected?

- A. Children with positive reaction within several year.
- B. Children with hyperergic reaction.
- C. Children with positive reaction within 1.5-2 year after BCG-vaccination.
- D. Children showing positive reaction at first.
- E. Children with increasing of tuberculin sensitivity within 1 year.

377.

4-year-old symptom-free child presented after performing mass Mantoux test with PPD-S 5 TU, which showed 10 mm papule. Previous year test result – 2 mm. Received BCG-vaccination on 3<sup>rd</sup> day of life. Choose possible conclusion.

- A. Active local tuberculosis.
- B. Active pre-local tuberculosis.
- C. Long-existing latent tuberculosis.
- D. Tuberculin test conversion.
- E. Post-vaccine immunity.



378.

A group of children with positive Mantoux skin test is presented for differentiation between post-vaccine reaction and latent tuberculosis. What criteria of post-vaccine reaction are acceptable?

- A. Papule up to 12 mm in diameter,
- B. Yearly decreasing reaction up to negative test in 4-5 year after vaccination.
- C. Infiltration disappears after week, doesn't leave pigmentation.
- D. Maximal size is observed after 1.5-2 year after vaccination.
- E. All of the above.

379.

Mantoux skin test is being performed in TB hotbed. Some patients are suspected to have decreased tuberculin sensitivity regardless latent tuberculosis because of different obstacles. Who would be included into this group?

- A. Smokers.
- B. Pregnant women.
- C. Patients receiving triiodothyronine.
- D. Patients receiving oral contraceptives.
- E. All of the above.

380.

Mass tuberculin test is planning in the kindergarten. The list of children for whom it isn't indicated is being created. What infants SHOULDN'T be included into this list?

- A. Recovered from chicken pox less than a month ago.
- B. Showed Mantoux test conversion on last year test.
- C. Having fever.
- D. Underwent Mantoux test less than a year ago.
- E. Receiving immunosuppressive treatment for different diseases.

381.

4-year-old child needs the conclusion about Mantoux test result. At the moment papule size is 5 mm. On examination no abnormalities detected. No contact with TB patients discovered. No TB risk factors exposure. Preceding year tuberculin test results are the similar. Which data are lacking to make a correct conclusion?

- A. Whether the child received BCG-vaccination.
- B. Physical growth and development.
- C. Social condition.
- D. Type of the BCG vaccine used.
- E. Incidence rate in the community.

382.

X-ray examination of asymptomatic 25-year-old nurse with no tuberculosis history detected several solid foci up to 2 mm on the left lung apex. Tuberculosis of doubtful activeness suspected. Which further dealing is the most advisable?

- A. Professional activity prohibiting.
- B. Test tuberculosis treatment.
- C. Mantoux skin test.
- D. Quantiferon Gold test.
- E. Segmentectomy.

383.

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- B. Mantoux skin test.
- C. Test tuberculosis treatment.
- D. Quantiferron Gold test.
- E. Segmentectomy.

384.

Patient is presented with fibrous-cavernous tuberculosis MBT+ (M+C+) resist + (S, H, R, Q, K). Had been treated several times unsuccessfully. Which type of drug resistance is it?

- A. Primary MDR.
- B. Acquired MDR.
- C. Primary XDR.
- D. Acquired XDR.
- E. Simple drug resistance.

385.

45-year-old patient fell ill suddenly after supercooling. High fever, sneezing, severe cough appeared. The diagnosis of influenza had been established. Desintoxicative therapy was administered. After a week he felt much better and returned to his work, but several episodes of the "influenza" repeated a short time later. After the last episode the chest X-ray revealed infiltrative tuberculosis and smear test showed positive result. How the condition ameliorating could be explained?

- A. Influenza treatment relieved patient's condition.
- B. Influenza preceded tuberculosis.
- C. It's occasional combination.
- D. Desintoxiation was effective.
- E. Bronchial drainage of cavity established.

386.

38-year-old male recovered from tuberculosis 5 year ago presented with upper lobe polysegmental pneumofibrosis. What diet is the most advisable?

- A. Fat and simple carbohydrates reducing, animal protein and complex carbohydrates quantum satis.
- B. No special recommendation.
- C. Animal fats reducing, simple carbohydrates eliminating, complex carbohydrates reducing, animal protein and plant fats quantum satis, vitamins A, C, E enrichment.
- D. Animal fats and simple carbohydrates reducing, animal protein and plant fats enrichment, complex carbohydrates quantum satis, vitamins A, C, E enrichment.
- E. Salt and liquid reducing, potassium containing products enrichment, fat reducing, animal protein and complex carbohydrates quantum satis.

387.

30-year-old IT-specialist without immunocompromised condition presented with 5 TU PPD-S Mantoux skin test papule of 4 mm. Which conclusion should be done?

- A. Positive reaction.
- B. Active tuberculosis.
- C. Depends on further examination result.
- D. Negative reaction.
- E. Any of listed.

388.

5-year-old girl missed the mass tuberculin campaign in her kindergarten because of sustained pneumonia. Last year Mantoux test result was hyperergic. 6 month before she was vaccinated for poliomyelitis. A week before quarantine for chicken pox was imposed in the kindergarten. The girl suffers from acute respiratory disease frequently but at the moment she's well. The pediatrician refused to perform Mantoux skin test. What's the reason?

- A. Sustained pneumonia.
- B. Frequent acute respiratory disease.
- C. Quarantine for chicken pox.
- D. Poliomyelitis vaccination.
- E. Previous hyperergic Mantoux test.

389.

24-year-old AIDS patient presented with 5 TU PPD-S Mantoux test papule of 5 mm. Which conclusion should be done?

- A. Positive reaction.
- B. Active tuberculosis.
- C. Depends on further examination result
- D. Negative reaction.
- E. Any.

390.

Quantiferon Gold test and mass tuberculin test were compared by specialist's boarder in order to be included into NTP as a preferred mean of case detecting in children. Quantiferon Gold test was been selected. Which of the following assertion ISN'T a reason of such choice?

- A. Quantiferon Gold test is more specific and sensitive.
- B. Quantiferon Gold test can distinguish latent tuberculosis and post-vaccine reaction.
- C. Quantiferon Gold test can distinguish latent and active tuberculosis.
- D. Quantiferon Gold test allows to avoid booster effect.
- E. Quantiferon Gold test allow to avoid allergy on tuberculin.

391.

At 38-year-old symptom-free man chest X-ray showed several dense 2-5 mm foci in left S<sub>1-2</sub>. 2 year ago received the complete treatment course for left lung focal tuberculosis. Now sputum ZN-test is negative. Choose the correct diagnosis.

- A. Left lung tuberculosis residuals.
- B. Chronic case.
- C. Relapse.
- D. New case (focal tuberculosis).
- E. New case (disseminated tuberculosis).

392.

A 32-year-old Indian-born female has been hospitalized for tuberculosis. Her family consists of husband and 3 children from 3 to 10-year-old. Which preventive measures for the family are the most advisable?

- A. X-ray examination, Mantoux skin test, sputum ZN-staining. If no tuberculosis detected, antituberculosis drugs preventive course.
- B. X-ray examination, Mantoux skin test for children, sputum ZN-staining. If no tuberculosis detected, antituberculosis drugs preventive course.
- C. X-ray examination, sputum ZN-staining. If no tuberculosis detected, BCG vaccination.

- D. BCG vaccination and antituberculosis drugs preventive course without any prerequisites.
- E. X-ray examination, Mantoux skin test, sputum ZN-staining, antituberculosis treatment according to III category.

393.

36-year-old patient having 4-year-old daughter has been hospitalized with pulmonary infiltrative tuberculosis, dis+, MBT+. Which is the most advisable dealing with his daughter?

- A. BCG vaccination, antituberculosis drugs preventive course without any prerequisites.
- B. X-ray examination, Mantoux skin test, sputum ZN-staining. If no tuberculosis detected, antituberculosis drugs preventive course.
- C. X-ray examination, sputum ZN-staining. If no tuberculosis detected, BCG vaccination.
- D. X-ray examination, Mantoux skin test. If no tuberculosis detected, antituberculosis drugs preventive course.
- E. X-ray examination, sputum ZN-staining. If no tuberculosis detected, antituberculosis drugs preventive course.

394.

6-month-old child vaccinated by BCG on 3<sup>rd</sup> day of the life presented with femoral osteitis. Which type of BCG complication should be suspected?

- A. Local.
- B. Generalized BCG-infection.
- C. Post-BCG syndrome.
- D. Allergic.
- E. Disseminated BCG-infection.

395.

65-year-old patient presented with infiltrative tuberculosis dis-, MBT-. Routine clinical examination detected glycemia fasting level of 8.0 mm/l. Which diet is the most advisable?

- A. Animal fats reducing, simple carbohydrates eliminating, complex carbohydrates reducing, animal protein and plant fats quantum satis, vitamins A, C, E enrichment.
- B. Salt and liquid reducing, potassium containing products enrichment, fat reducing, animal protein and complex carbohydrates quantum satis.
- C. Animal fats and simple carbohydrates reducing, animal protein and plant fats enrichment, complex carbohydrates quantum satis, vitamins A, C, E enrichment.
- D. Fat and simple carbohydrates reducing, animal protein and complex carbohydrates quantum satis.
- E. No special recommendation.

396.

23-year-old patient is undergoing treatment according to III category of tuberculosis cases. It is known that 5 years ago he had been exposed by severe head trauma. No previous neurological disorders reported. Suddenly the epileptic seizure developed. Which of the drugs could produce such a side effect?

- A. Rifampicin.
- B. Ethambutol.
- C. Streptomycin.
- D. Isoniazid.
- E. Pyrazinamide.

397.

Patient is being hospitalized with infiltrative pulmonary tuberculosis new case. Smear ZN-staining showed negative result. Specimen is being processed by BACTEC system. In which term the result should be expected?

- A. 1-2 hours.
- B. 1-2 days.
- C. 1-2 weeks.
- D. 1-2 months.
- E. It's not indicated in this case.

398.

Patient is presented with subacute disseminated tuberculosis. Sputum ZN-staining showed positive result. Cultural test results are not obtained yet. Choose the correct fragment of diagnosis writing down.

- A. MBT-, M+, C-, resist.0.
- B. MBT-, M+, C-, resist.-.
- C. MBT+, M+, C-, resist.0.
- D. MBT+, M+, C 0, resist.0.
- E. MBT-, M+, C 0, resist.-.

399.

24-year-old female is presented with the suspicion for uterine tube tuberculosis. Which mean of diagnosis confirmation is the most reliable?

- A. Histological investigation.
- B. Test treatment.
- C. Cervical smear ZN and cultural test.
- D. Tuberculin test.
- E. Cervical smear PCR test.

400.

Patient is presented with the suspicion for pulmonary tuberculosis. Which method of bacteria discharging detection does diagnostic "gold standard" include?

- A. Smear test + PCR.
- B. Smear test + cultural test.
- C. Biomarker test + cultural test.
- D. Biomarker test + PCR.
- E. All of the above.

401.

Screening chest X-ray of 32-year-old symptom-free man revealed 3 cm opacity of low density in the left lung S<sub>1-2</sub>; around there are a lot of satellite foci of low density with hazy borders. CT-scanning detected the central destruction inside the opacity. ZN sputum staining revealed AFB. Which phase of tuberculosis is it?

- A. Infiltration and dissemination.
- B. Infiltration, decay and dissemination.
- C. Infiltration and decay.
- D. Consolidation, decay and dissemination.
- E. Consolidation, infiltration and decay.

402.

45-year-old patient presented with infiltrative kidney tuberculosis. Do you suppose his family members to be exposed by TB contact?

- A. Depends on age.
- B. Depends on immune status.
- C. Depends living condition.
- D. Yes.
- E. No.

403.

28-year-old patient presented with infiltrative pulmonary tuberculosis MBT+, dis+, associated with chronic hepatitis C. At the moment liver biochemical tests are slightly elevated. Which drug must be excluded from the treatment regimen?

- A. Streptomycin.
- B. Isoniazid.
- C. Rifampicin.
- D. Pyrazinamide.
- E. Ethambutolum.

404.

Patient is presented with fibrous-cavernous tuberculosis of the left lung, MBT+ (M+C+) resist + (S, H, R) complicated by pulmonary hemorrhage. Previously several times was treated for tuberculosis with short-term effect. To which category this case belongs?

- A. I.
- B. II.
- C. III.
- D. IV.
- E. V.

405.

Patient finished the complete treatment course for new case (subacute disseminated tuberculosis) MBT- (M-,C-), dis-. There are no complaints and physical or laboratory abnormalities detecting. Chest X-ray reveals reducing the consolidated foci amount, diffuse pneumofibrosis. How could you define the treatment outcome?

- A. Finished treatment.
- B. Effective treatment.
- C. Recovery.
- D. Can't be appreciated.
- E. Doubtful activeness.

406.

27-year-old patient was treated for infiltrative tuberculosis of left upper lobe, dis+, MBT+ (M+,C+), resist+(I: E,S,R; II: Am, OfI, Km) for 5 month. After results analysis treatment failure was established. On what criteria could such a conclusion be based?

- A. Bacterial expectoration detected by smear-test within the total treatment period.
- B. Negative smear test transformation into positive.
- C. Interrupted treatment and positive smear test.
- D. Negative cultural transformation into positive.
- E. Any of the above.

407.

60-year-old patient suffering from chronic pulmonary tuberculosis presented with shortness of breathing at rest, extremities edema. Past medical history: has been having active tuberculosis within 6 year, finished 3 treatment courses with temporary effect. On examination: thorax is barrel-like, skin is pale and wet, T 37.2°C. RR 30/min, P90/min, BP100/60. Dull percussion sound and bronchial breathing over right upper zone, bubbling rales over both lower zones are found. Lower extremities hard edema is evident up to knee joints, liver is 3 cm lower the costal margin. Chest X-ray detected thick-wall 4 cm cavity occupying reduced right upper lobe, interlobal fissure is accented. Comparison with last year X-ray detected no progression. CBC: Hb - 100 g/L, WBC –  $9.2 \cdot 10^9$  /L, eosinophil-2%, band neutrophil-6%, segmented neutrophil-51%, lymphocyte-32%, monocyte -9%, ESR - 40 mm/hour. Urinalysis: density 1015, L – 2-10/field of view, protein – 0.09g/L. Intravenous urography detected no remarkable changes. Which condition is the most likely?

- A. Kidney tuberculosis.
- B. Decompensated heart failure.
- C. Pulmonary embolism.
- D. Chronic glomerulonephritis.
- E. Amyloidosis.

408.

26-year-old symptom-free male presented with hilar calcification found on mass X-ray. Otherwise no clinical, instrumental or laboratory abnormalities have been detected. What's the most advisable further dealing?

- A. No dealing is required.
- B. Treatment course according to I category.
- C. Observation only.
- D. Treatment course according to II category.
- E. Isoniazid preventive course.

409.

15-year-old adolescent from dairy farm keeping the cattle with tuberculosis, presented with cervical lymphadenitis. In the needle biopsy specimen cheesy decay material has been found, smear and cultural tests detected no MBT. Nonetheless, lymphatic nodes tuberculosis is being suspected taking epidemiological and clinical data into consideration. Which test could confirm or rule such a conclusion out best of all?

- A. Histological investigation.
- B. Chest X-ray.
- C. Mantoux test.
- D. Neck CT-scanning.
- E. Test treatment.

410.

Restaurant has bought a consignment of milk from farm susceptible for tuberculosis. What's the most advisable dealing?

- A. To utilize it after boiling within 15 min at least.
- B. To utilize it after momentary heating to 300°C.
- C. To utilize it after heating to 300°C within 15 min at least.
- D. To annihilate milk.
- E. To utilize it after momentary boiling.

411.

71-year-old patient suffering from chronic tuberculosis for last 15 year presented with the profuse pulmonary bleeding. Which is the main principle of the complication?

- A. Vessel walls permeability increasing
- B. Vessel walls necrosis.
- C. Hypocoagulation.
- D. Pulmonary hypertension.
- E. Fibrinolysis activation.

412.

58-year-old patient presented with cirrhotic tuberculosis complaining of shortness of breathing, shin edema. What's the most expected tuberculosis complication in this case?

- A. Lung edema.
- B. Spontaneous pneumothorax.
- C. Amyloidosis.
- D. Chronic obstructive pulmonary disease.
- E. Chronic heart insufficiency.

413.

45-year-old patient presented with cirrhotic tuberculosis involving left upper lobe. 6 years before has been treated for infiltrative tuberculosis. After treatment left upper lobe cirrhosis established. Worsening took place a month ago: fever and cough appeared. ZN-staining showed positive result. According to which category treatment regimen has to be designed in this case?

- A. I.
- B. II.
- C. III.
- D. IV.
- E. V.

414.

30-year-old doctor finished full course of treatment for cirrhotic tuberculosis. On chest X-ray: in reduced right upper lobe the dense homogenous opacity appears. Which is prerequisite for returning to the professional activity?

- A. Upper lobe surgical removing.
- B. Prolonged antibacterial treatment.
- C. Lifelong antibacterial treatment.
- D. Tissue stimulation.
- E. Sanatorium treatment.

415.

48-year-old patient finished the treatment course for new case of cirrhotic tuberculosis. At the moment there are no complaints. Cultural test showed negative result, blood test is normal. Chest X-ray detected total right upper lobe cirrhosis. Which type of surgery is the most advisable?

- A. Artificial pneumothorax.
- B. Right lung resection.
- C. Thoracoplasty.
- D. Artificial pneumoperitoneum.
- E. Pleurectomy.

416.



28-year-old symptom-free doctor is presented with pulmonary focal tuberculosis discovered on screening chest X-ray. Smear sputum test showed negative results. Could professional activity be permitted to him?

- A. No.
- B. Yes, immediately after complete treatment course.
- C. Yes.
- D. Depends on cultural test results after complete treatment course.
- E. Yes, 2 year after complete treatment course.

417.

45-year-old patient recovered from tuberculosis 5 year ago. As a residual left upper lobe cirrhosis developed. Underwent regular annual observation. Sought for a doctor's consultation because of productive cough and sweating that appeared month ago and body weight loss of 5 kg. Sputum ZN-staining detected AFB. Chest X-ray detected no progression. The diagnosis of cirrhotic tuberculosis has been established. Which intensity of bacterial discharging is expected?

- A. Constant spare.
- B. Constant massive.
- C. Recurring massive.
- D. Recurring spare.
- E. No bacteria expectoration.

418.

Patient is presented with chronic tuberculosis. On auscultation bronchial breathing is detected over left upper zone. For which lung changes may this phenomenon testify?

- A. Pleural effusion.
- B. Dissemination.
- C. Cirrhosis development.
- D. Huge cavity existence.
- E. Caseous necrosis.

419.

48-year-old symptom-free patient presented with several foci of high density in left S<sub>2</sub>. No tuberculosis history has been discovered. How could you qualify this case?

- A. New case.
- B. Relapse.
- C. Case of unknown activity.
- D. Primary case.
- E. Chronic case.

420.

Patient finished the complete treatment course for new case (subacute disseminated tuberculosis) MBT+ (M+,C+), dis+. No complaints, physical and laboratory abnormalities detected. Chest X-ray revealed diffuse pneumofibrosis, cavity scarring. Both smear and cultural test are negative. How could you define the treatment outcome?

- A. Completed treatment.
- B. Effective treatment.
- C. Recovery.
- D. Can't be appreciated.
- E. Doubtful activeness.

421.

43-year-old Indian-born patient presented with pneumonia. Mantoux skin test has been performed. The papule size is 10 mm. Does it mean the tuberculosis origin of the disease?

- A. Yes.
- B. No.
- C. Depends of pneumonia localization.
- D. Depends on tuberculosis history.
- E. Depends on pneumonia clinical course.

422.

40-year-old patient presented with cough excreting mucoid and purulent sputum, shortness of breathing, malaise. Has been ill for a month. 7 year ago suffered from pulmonary tuberculosis, received some treatment, but after finishing underwent no examination. .On clinical examination cirrhotic tuberculosis has been suspected. What is pathomorphological basis for this clinical type?

- A. Normal lung tissue substituting by the connective tissue with functional degradation and accompanying disintegration.
- B. Advanced connective tissue development.
- C. Chronic decay.
- D. Normal lung tissue substituting by the connective tissue with functional degradation.
- E. Chronic pulmonary dystrophy.

423.

48-year-old patient presented with thick-wall cavity on the right lung apex. Has been suffering from tuberculosis since the age of 25. Received two treatment courses 5 and 8 year ago. How could you qualify this case?

- A. New case.
- B. Relapse.
- C. Case of unknown activity.
- D. Primary case.
- E. Chronic case.

424.

42-year-old asymptomatic patient presented with right upper lobe opacity and reducing. Hasn't undergone X-ray for long time. Suspicion for cirrhotic tuberculosis and atelectasis appeared. Which additional examination is the most advisable in order to distinguish these conditions?

- A. Anamnestic data analysis.
- B. CT-scanning.
- C. Respiratory function appreciation.
- D. Bronchoscopy.
- E. Thoracoscopy.

425.

25-year-old football player presented with sever dyspnea on exertion. Has been feeling unwell for 3 months. On examination: auscultation detected scattered crackling rales. Blood test detected no abnormalities. On chest X-ray: diffuse interstitial enrichment. Lung fields are looked as through old glass. What's the most likely diagnosis?

- A. Pneumoconiosis.
- B. Disseminated carcinoma.
- C. Disseminated tuberculosis.

- D. Idiopathic pulmonary fibrosis.
- E. Community acquired pneumonia.

426.

30-year-old patient was directed for differential diagnosis between cirrhotic tuberculosis and encysted pleurisy. Which diagnostic mean is the most acceptable?

- A. Complains, case history and physical data analysis.
- B. Chest X-ray.
- C. CT-scanning.
- D. Thoracocentesis.
- E. Bronchoscopy.

427.

45-year-old patient fell is suddenly after super cooling. T 38.7°C. Complains of cough excreting sputum with the stinking odor. Auscultation revealed heterogeneous bubbling rales all over the right lung. CBC: WBC –  $16.0 \cdot 10^9$  /L, eosinophil -5%, band neutrophil -12%, segmented neutrophil -54%, lymphocyte-25%, monocyte -4%, ESR - 5 mm/hour. Chest X-ray showed 3 cm opacity of low density in the right lung S<sub>3</sub>; with the lucency inside. Which diagnosis is the most likely?

- A. Pneumonia and lung abscess.
- B. Infiltrative tuberculosis.
- C. Lung cancer.
- D. Pulmonary embolism.
- E. Pulmonary cyst.

428.

23-year-old coal miner presented with chest pain, fever up to 38°C. Fell ill a month before. Later shortness of breathing, hoarseness and cough with mucous sputum appeared. Chest X-ray showed multiple foci of moderate density in both upper lung zones fusing each other. In subclavicular area symmetric thin-walls cavities of 2 cm in diameter appear. What's your presumptual diagnosis?

- A. Pneumoconiosis.
- B. Disseminated tuberculosis.
- C. Sarcoidosis.
- D. Idiopathic pulmonary fibrosis.
- E. Community acquired pneumonia.

429.

22-year-old patient presented with cough, “rusty” sputum expectoration, episodes of clouded consciousness, fever up to 40.1°C, muscle pain. Fell ill suddenly. On examination: RR 36/m, dull percussion sound and crackling rales in the right subclavicle area. CBC: WBC –  $17.8 \times 10^9$  /L, eosinophil - 3%, band neutrophil - 16%, segmented neutrophil -52%, lymphocyte-10%, monocyte -7%, ESR - 39 mm/hour. What's the most likely diagnosis?

- A. Acute bronchitis.
- B. Pulmonary tuberculosis.
- C. Bronchoectasis.
- D. Influenza.
- E. Community acquired pneumonia.

430.

27-year-old HIV-positive patient complains of severe headache with photophobia, diplopia, weakness, irritability, fever up to 38.1°C. Got ill insidiously. At the moment presented on the 10<sup>th</sup> day of the disease. On examination: confused consciousness, neck stiffness, face asymmetry. CSF test: fluid is slightly

opaque, protein 2.4 g/l, fibrin film appeared in 24 hours, pleocytosis  $300/\text{mm}^3$  mostly of lymphocyte type, glucose 1.3 mmol/l. Glycemia 5.4 mmol/l. What's the most likely diagnosis?

- A. Staphylococcus meningitis.
- B. Tubercle meningitis.
- C. Herpes meningitis.
- D. Syphilitic meningitis.
- E. Meningococcus meningitis.

431.

19-year-old patient presented with high fever up to  $39^\circ\text{C}$ , dyspnea, dry cough. He just has finished the treatment course for leukemia. On examination: acrocyanosis, liver and spleen are moderately enlarged. Lung percussion detected boom-box sound, auscultation revealed no abnormalities. CBC: WBC –  $12.2 \times 10^9/\text{L}$ , eosinophil -1%, band neutrophil - 10%, segmented neutrophil - 67%, lymphocyte-12%, monocyte -10%, ESR - 45 mm/hour. No sputum expectorated. Mantoux skin test is negative. Chest X-ray shows diffuse multiple 1-2 mm foci. In the right hilum the calcified focus is detected. What's the most likely diagnosis?

- A. Community acquired pneumonia.
- B. Disseminated lung cancer.
- C. Idiopathic pulmonary fibrosis.
- D. Miliary tuberculosis.
- E. Leukemia progression.

432.

27-year-old HIV-negative patient complains of submandibular and superclavicular lymph nodes enlargement, profuse night sweating, fever up to  $38^\circ\text{C}$ . Chest X-ray showed bilateral symmetrical upper mediastinum widening. On histological examination of superclavicular lymph node specimen Sternberg cells were found. What's the most likely diagnosis?

- A. Hodgkin's disease.
- B. Nonspecific lymphadenopathy.
- C. Non-Hodgkin lymphoma.
- D. Tubercle bronchodinitis.
- E. Peripheral lymph nodes tuberculosis.

433.

55-year-old wine-grower presented with cough, night sweating, weight loss of 10 kg, fever up to  $37.5^\circ\text{C}$ , dyspnea. Has been feeling unwell for 3 months. On examination: auscultation detected polymorphic rales over lower zones, percussion - dull sound over that area. CBC: Hb - 100 g/L, WBC –  $5.2 \times 10^9/\text{L}$ , eosinophil -3%, band neutrophil - 8%, segmented neutrophil -71%, lymphocyte-17%, monocyte -1%, ESR - 70 mm/hour. On chest X-ray: throughout lung tissue but especially closer to diaphragm fusing foci of different size, with low density are found. What's the most likely diagnosis?

- A. Allergic pulmonary fibrosis.
- B. Idiopathic pulmonary fibrosis.
- C. Disseminated tuberculosis.
- D. Community acquired pneumonia.
- E. Disseminated carcinoma.

434.

23-year-old female fell ill 2 days ago after supercooling. Complains of cough with "rusty" sputum, fever up to  $39.0^\circ\text{C}$ , muscle and joint pain, severe weakness, shortness of breathing. On examination: face

hyperemia, RR 34/min, P 80/min, BP 110/60, dull percussion sound and moisture rales in interscapular space. CBC: Hb - 120 g/L WBC –  $19.2 \times 10^9/L$ , eosinophil -3%, band neutrophil - 13%, segmented neutrophil -65%, lymphocyte-19%, monocyte -0%, ESR - 50 mm/hour. Chest X-ray detected homogenous left lower lobe opacity of moderate density with hazy borders. What's the most likely diagnosis?

- A. Pneumoconiosis.
- B. Idiopathic pulmonary fibrosis.
- C. Community acquired pneumonia.
- D. Disseminated tuberculosis.
- E. Pulmonary embolism.

435.

40-year-old patient suffering from chronic pulmonary tuberculosis presented with abdominal pain, edema on extremities and face. Past medical history: has been having active tuberculosis within 6 year, finished 3 treatment courses with temporary effect. On examination: thorax is barrel-like, skin is pale and wet, T 37.2°C. Dull percussion sound and bronchial breathing over right upper zone are found. Lower extremities pasty edema is evident up to knee joints; liver is 3 cm lower the costal margin. Chest X-ray detected thick-wall 4 cm cavity occupying reduced right upper lobe; interlobal fissure is accented. Comparison with last year X-ray detected no progression. CBC: Hb - 100 g/L, WBC –  $9.2 \cdot 10^9 /L$ , eosinophil-2%, band neutrophil-6%, segmented neutrophil-51%, lymphocyte-32%, monocyte -9%, ESR - 40 mm/hour. Urinalysis: density 1055, L – 40-50/field of view, protein – 0.45g/L. Biochemical tests detected decreased albumin (25 g/L) and elevated serum creatinine level ( $159 \mu\text{mol/l}$ ). Intravenous urography detected blocked right kidney. Which condition is the most likely?

- A. Kidney tuberculosis.
- B. Decompensated heart failure.
- C. Pulmonary embolism.
- D. Chronic glomerulonephritis.
- E. Amyloidosis.

436.

37-year-old coal miner with 5-year professional seniority complains of cough with moderate quantity of sputum, increasing dyspnea. Has been feeling unwell for 2 month. CBC: Hb – 120 g/L, WBC –  $11.2 \cdot 10^9 /L$ , eosinophil-0%, band neutrophil-9%, segmented neutrophil-65%, lymphocyte-14%, monocyte -12%, ESR - 25 mm/hour. Chest X-ray showed multiple fusing foci of moderate density in both upper lung zones. In subclavian area symmetric thin-walls cavities 2 cm in diameter appear. What's the most likely diagnosis?

- A. Disseminated pulmonary tuberculosis.
- B. Pneumaconiosis.
- C. Disseminated lung cancer.
- D. Sarcoidosis.
- E. Miliary tuberculosis.

437.

16-year-old patient has been complaining of pain in the left hip joint, malaise, sweating for 1.5 year. On examination: inner rotation in the affected joint limitation, left leg shortening, muscles atrophy. Blood and urine tests showed no remarkable changes. Mantoux skin test 5mm, Mantoux test conversion 5 year ago. X-ray of left hip joint showed advanced osteoporosis, femoral bone head and pelvic bone destruction, joint space dilatation. What's the most likely diagnosis?

- A. Arthrosis deformans.
- B. Osteochondritis deformans juvenilis of hip.
- C. Podagric arthritis.

- D. Gonorrheal arthritis.
- E Tuberculosis of the hip joint.

438.

37-year-old symptom-free driver presented with several foci of low density and hazy borders in the left lung that were detected on ordinal X-ray examination. Past medical history: 40-pack-year history of cigarette smoking, allergy on honey, an episode of flu 3 weeks before. Objective examination, routine blood, urine and sputum ZN-tests showed no remarkable changes. What's the most likely diagnosis?

- A. Eosinophilic pneumonia.
- B. Community acquired pneumonia.
- C. Self-cured tuberculosis.
- D. Focal tuberculosis.
- E. Disseminated tuberculosis.

439.

26-year-old smoker presented with chest pain, scanty hemoptysis, weakness, cough with mucoid sputum, appetite loss, T 37.8°C. Suffers from allergic rhinitis. Has been feeling unwell for a month. Chest X-ray shows cloudy nonhomogenous opacity with moderate density and indistinct borders in the right upper zone. What's the most likely diagnosis?

- A. Benign tumor.
- B. Lung cancer.
- C. Community acquired pneumonia.
- D. Eosinophilic pneumonia.
- E. Infiltrative tuberculosis.

440.

19-year-old female, who had recovered from infiltrative tuberculosis a year ago is presented with severe pain in loin area, fever up to 38.5°C, frequent painful urination that appeared 5 days ago after supercooling (mountain hiking). On examination: skin is pale and wet, RR22/min, P100/min, BP 130/70. Both kidneys are easily palpable and tender. CBC: Hb 120 g/L, WBC –  $19.5 \times 10^9/L$ , eosinophil -2%, band neutrophil - 13%, segmented neutrophil - 70%, lymphocyte-14%, monocyte - 0%, ESR - 50 mm/hour. Urinalysis: Leucocyte – total field of view, erythrocyte – 10-20/field of view, density 1018. What's the most likely diagnosis?

- A. Pyelonephritis.
- B. Urhetritis.
- C. Kidney tuberculosis.
- D. Renal colic.
- E. Cystitis.

441.

Patient is presented with the new case (fibrous cavernous tuberculosis of the left lung, MBT+). To which category this case belongs?

- A. I
- B. II
- C. III
- D. IV
- E. V

442.

37-year-old alcohol abuser presented with 5 year history of tuberculosis. Previously defaulted treatment several times. At the moment lung cavity exists. ZN-staining showed positive result. According to which category treatment regimen has to be designed in this case?

- A. I.
- B. II.
- C. III.
- D. IV.
- E. V.

443.

41-year-old patient presented with fibrous-cavernous tuberculosis. 8 year before has been treated for infiltrative tuberculosis. After that defaulted medical check-up. Worsening took place 6 months ago: fever, dyspnea, appetite loss and cough appeared. Didn't recourse to the doctor. After bringing to the emergency department with severe hemoptysis the diagnosis mentioned above has been established. According to which category treatment regimen has to be designed in this case?

- A. I.
- B. II.
- C. III.
- D. IV.
- E. V.

444.

39-year-old patient presented with new case of fibrous-cavernous tuberculosis with limited lung lesion, MBT+ (M+C+) resist 0. On chest X-ray the 5 cm thick-walls cavity in the right lung S<sub>1-2</sub> surrounded by fibrotic area and 0.5-1.5 cm satellite shadows detected. What's the predictable recovery after conventional treatment probability?

- A. 65-75%.
- B. 50%.
- C. 15-30%.
- D. 1-5%.
- E. Over 80%.

445.

Patient is presented with 3-year history of fibrous-cavernous tuberculosis. Received several treatment courses according to I, II and IV category. At the moment finished palliative treatment course and feels better. Which is the most optimistic forecast for conventional treatment results?

- A. All of the below.
- B. Process stabilization.
- C. Cavity scaring.
- D. Condition ameliorating.
- E. Bacteria expectoration absence.

446.

42-year-old patient is been suffering from fibrous-cavernous tuberculosis for 2 year. Completed several courses of antibacterial treatment. At the moment no complaints are present. Smear ZN and cultural test showed positive results. Resistance to isoniazid, rifampicin, etambutol and ethionamide is detected. Chest X-ray detected 3 cm thick-wall cavity in the reduced left upper lobe. On the rest lung field no focal or infiltrative shadows detected. Which further treatment method is the most advisable?

- A. Artificial pneumothorax.
- B. Thoracoplastics.
- C. Left upper lobe resection.
- D. Artificial pneumoperitoneum.
- E. Cavernotomia.

447.

Specimen of lung tissue affected by fibrous-cavernous tuberculosis is being analyzed. Which feature ISN'T expected?

- A. Lymphoid infiltration.
- B. Caseous material.
- C. Three-layer cavity wall.
- D. Polymorphic foci.
- E. Fibrotic area.

448.

60-year-old patient suffering from insulin-dependent diabetes mellitus presented with disseminated tuberculosis new case, dis+, MBT+, M+, C+, resist.+ (S), finished full treatment course. Cavities are still present in both lungs, and sputum ZN-staining is positive. Which is the most probable reason of treatment failure?

- A. Drug resistance.
- B. Age.
- C. Diabetes mellitus.
- D. Low drug tolerance.
- E. Individual peculiarities.

449.

50-year-old patient suffering from chronic pulmonary tuberculosis presented with abdominal pain, extremities and face edema. Past medical history: has been having active tuberculosis within 6 year, finished 3 treatment courses with temporary effect. On examination: thorax is barrel-like, skin is pale and wet, T 37.2°C. Dull percussion sound and bronchial breathing over right upper zone is found. Lower extremities pasty edema is evident up to knee joints, liver is 3 cm lower the costal margin. Chest X-ray detected thick-wall 4 cm cavity occupying reduced right upper lobe, interlobal fissure is accented. Comparison with last year X-ray detected no progression. CBC: Hb - 100 g/L, WBC -  $9.2 \cdot 10^9$  /L, eosinophil-2%, band neutrophil-6%, segmented neutrophil-51%, lymphocyte-32%, monocyte -9%, ESR - 40 mm/hour. Urynalisis: density 1005, L - 2-10/field of view, protein - 33,9g/L, cylinders - hyalinic and granular -10/field of view. Biochemical tests detected decreased albumin (25 g/L) and elevated serum creatinine level (159mmol/l). Intravenous urography detected no remarkable changes. Which condition is the most likely?

- A. Decompensated heart failure.
- B. Kidney tuberculosis.
- C. Pulmonary embolism.
- D. Chronic glomerulonephritis.
- E. Amyloidosis.

450.

38-year-old patient complains of malaise, weight loss, productive cough with mucoid sputum, incidental blood streaks appearance, T 37.5-38.0°C. On examination: dull percussion sound and breathing weakening in the left intercostal space. Over subscapular zone moisture rales are heard. On the chest X-ray: in the left upper lobe 3.5 cm opacity of the moderate density with the hazy borders and 1.5×1.2 cm lucency inside surrounded by satellite foci is detected. Tuberculosis is suspected. Which data are lacking for full diagnosis formulation?



- A. Mantoux test result.
- B. Sputum test result.
- C. Blood test result.
- D. CT scanning result.
- E. All of the above.

451.

58-year-old patient suffering from fibrous-cavernous tuberculosis for 7 year and undergoing regular treatment courses is presented with the only complaint of dyspnea. ZN-sputum test revealed AFB. Chest X-ray revealed no progression. Which CBC is the most probable?

- A. RBC –  $3.6 \times 10^{12}$  /L, Hb - 130 g/L, WBC –  $6.2 \cdot 10^9$  /L, eosinophil -5%, band neutrophil -5%, segmented neutrophil -61%, lymphocyte-25%, monocyte -4%, ESR - 10 mm/hour
- B. RBC –  $4.0 \times 10^{12}$  /L, Hb - 140 g/L, WBC –  $12.0 \cdot 10^9$  /L, eosinophil -3%, band neutrophil -7%, segmented neutrophil -71%, lymphocyte-16%, monocyte -3%, ESR - 25 mm/hour.
- C. RBC –  $2.8 \times 10^{12}$  /L, Hb - 100 g/L, WBC –  $9.0 \cdot 10^9$  /L, eosinophil -10%, band neutrophil -10%, segmented neutrophil -58%, lymphocyte-12%, monocyte -10%, ESR - 35 mm/hour.
- D. RBC –  $3.9 \times 10^{12}$  /L, Hb - 90 g/L, WBC –  $15.0 \cdot 10^9$  /L, eosinophil -0%, band neutrophil -12%, segmented neutrophil -54%, lymphocyte-30%, monocyte -4%, ESR - 18 mm/hour.
- E. RBC –  $5.3 \times 10^{12}$  /L, Hb - 130 g/L, WBC –  $20.0 \cdot 10^9$  /L, eosinophil -8%, band neutrophil -16%, segmented neutrophil -52%, lymphocyte-8%, monocyte -6%, ESR - 50 mm/hour.

452.

36-year-old patient has been suffering from tuberculosis within 6 year. 4 year before the fibrous-cavernous tuberculosis has been established. What's the most expected radiological feature?

- A. Rigid cavity inside the emphysematic area.
- B. Thin-walls cavity surrounded by satellite foci.
- C. Number of neighbouring cavities, joined by common capsule.
- D. Thick-walls cavity in the diminished affected lobe, mediastinum shifting, polymorphic satellite foci.
- E. Multichamber cavity inside the fibrotic area.

453.

29-year-old patient presented with infiltrative tuberculosis. Has been ill for a year. No chest X-ray for previous 10 year. After 16-month ineffective treatment transformation into fibrous-cavernous tuberculosis took place. Which character of the bacteria expectoration is the most typical for such case?

- A. Recurring spare.
- B. Constant massive.
- C. Recurring massive.
- D. Constant spare.
- E. No bacteria expectoration.

454.

60-year-old smoker complains of dry cough, weight loss, hemoptysis, pain in the right humerus joint. On chest X-ray the 4 cm cavity with irregular knobby borders has been found in the right apex. Lung cancer and pulmonary tuberculosis are suspected. Which examination must be firstly performed to distinguish the diseases?

- A. CT-scanning.
- B. Blood test.
- C. Sputum ZN-staining.
- D. Sputum Gram staining.
- E. PCR test for MBT.

455.

HIV-positive patient from tuberculosis hotbed presented with cervical lymphadenitis. The doctor administered blood BACTEC test. In which case such analysis could be indicated?

- A. If miliary tuberculosis is suspected.
- B. If CD 4+ level is <200cells/mL.
- C. If biopsy material smear ZN-staining is positive.
- D. If mycobacteriosis is suspected.
- E. It's not indicated in this case.

456.

Choose the specific comparison for chronic disseminated tuberculosis radiological finding.

- A. „Starry sky”.
- B. „Chimney stalk”.
- C. “Coin appearance”.
- D. „Falling snow”.
- E. „Weeping willow”.

457.

40-year-old patient presented with cirrhotic tuberculosis involving left upper lobe. 6 year before has been treated for fibrous-cavernous tuberculosis. After treatment left upper lobe cirrhosis established. 2 year after tuberculosis of the hip joint had been established. Finished complete treatment course. Worsening took place a month ago: fever and cough appeared. ZN-staining showed positive result. According to which category treatment regimen is to be designed in this case?

- A. I.
- B. II.
- C. III.
- D. IV.
- E. V.

458.

31-year-old patient complains of weakness, fatigue, decreased workability, shortness of breathing on exertion, dry cough. Is being ill for a year. Condition insidiously aggravated. Hasn't undergone screening X-ray for 6 year. On examination: weight deficiency about 15 kg, P 90/m, RR 24/m, bronchial breathing over left upper lobe and dull percussion sound upon that area. On chest X-ray: thick-walls cavity of 3 cm in the diminished left upper lobe, surrounded by polymorphic satellite foci, upper mediastinum is shifted to the left. Fibrous-cavernous tuberculosis is suspected. Which diseases should be excluded by differential diagnosis?

- A. Cyst.
- B. Lung cancer.
- C. Lung abscess.
- D. Limited spontaneous pneumothorax.
- E. All of the above.

459.

52-year-old male discharged from imprisonment underwent screening X-ray examination and sputum test. Chest X-ray detected thick-wall giant cavity of irregular shape in the destroyed left upper lobe, numerous scattered, somewhere fusing foci of low density in both lungs. Sputum ZN-staining showed positive result. Which conclusion should be done?

- A. Fibrous-cavernous tuberculosis.
- B. Disseminated tuberculosis.
- C. Infiltrative tuberculosis.
- D. Tuberculosis residuals.
- E. Needs for further clinical investigation.

460.

Specimen of lung tissue affected by fibrous-cavernous tuberculosis is been analyzing. One of the slides is described the following way: its wide area, generated by granulations, containing lymphocytes, giant epithelioid and Lanhance cells, lymphatic and blood vessels. Which part of specimen is it?

- A. Inner cavity wall layer.
- B. Medium cavity wall layer.
- C. Outer cavity wall layer.
- D. Fibrotic area.
- E. Non-affected lung area.

461.

52-year-old patient presented with the coniotuberculosis. Which I-line drug is advisable to be excluded from the treatment regimen?

- A Isoniazid.
- B. Rifampicin.
- C. Pyrazinamide.
- D. Streptomycin.
- E. Ethambutolum.

462.

60-year-old patient suffering from antracosilicosis presented with dyspnea, chest pain, dizziness, subfebrile fever for 3 month, abdominal pain. Which sign is the most susceptible for tuberculosis?

- A. Dyspnea.
- B. Chest pain.
- C. Abdominal pain.
- D. Dizziness.
- E. Fever.

463.

55-year-old coal miner is a known case of antracosilicosis. Regular examination detected pulmonary tuberculosis. Which data more likely suggest such conclusion?

- A. Dyspnea aggravation.
- B. New nodules on chest X-ray appearance.
- C. Dry cough.
- D. Headache.
- E. Fever, weight loss.

464.

53-year-old patient presented with coniotuberculosis. At the moment dyspnea is the only complaint. On examination: T 36.9°C, diffuse rales all over lung fields. Otherwise no abnormality detected. Which hemogram is the most expected?

- A. Hb - 130 g/L, WBC –  $6.2 \cdot 10^9$  /L, eosinophil -5%, band neutrophil -5%, segmented neutrophil -61%, lymphocyte-25%, monocyte -4%, ESR - 10 mm/hour.

- B. Hb - 100 g/L, WBC – 20.0·10<sup>9</sup> /L, eosinophil - 0%, band neutrophil -12%, segmented neutrophil - 75%, lymphocyte-10%, monocyte -3%, ESR - 60 mm/hour.
- C. Hb - 140 g/L, WBC – 12.0·10<sup>9</sup> /L, eosinophil -3%, band neutrophil -7%, segmented neutrophil -71%, lymphocyte-16%, monocyte -3%, ESR - 25 mm/hour.
- D. Hb - 90 g/L, WBC – 15.0·10<sup>9</sup> /L, eosinophil -0%, band neutrophil -12%, segmented neutrophil -54%, lymphocyte-30%, monocyte -4%, ESR - 18 mm/hour.
- E. Hb - 130 g/L, WBC – 10.0·10<sup>9</sup> /L, eosinophil -8%, band neutrophil -16%, segmented neutrophil -62%, lymphocyte-8%, monocyte -6%, ESR - 50 mm/hour.

465.

49-year-old patient having 19-year miner's seniority presented with destructive infiltrative pulmonary tuberculosis. Which degree of bacteria discharging is the most expected?

- A. High continual.
- B. High intermittent.
- C. Moderate continual.
- D. Moderate intermittent.
- E. No discharging.

466.

50-year-old coal miner with 30-year professional seniority presented with complains of dyspnea, chest pain, dry cough, weight loss and subfebrile fever. The suspicion for tuberculosis appeared before any specific examination started. What is the reason?

- A. Weight loss and fever.
- B. Dry cough and chest pain.
- C. Dry cough and dyspnea.
- D. Weight loss and chest pain.
- E All of the above.

467.

36-year-old male presented with productive cough, fever up 38.0°C, right side chest pain, severe weakness, shortness of breathing. Fell ill a week ago. Past medical history: recovered from right upper lobe infiltrative tuberculosis 8 year ago. After recovering upper lobe fibrosis developed. On examination: skin is wet, moisture rales in interscapular space. Chest X-ray detected homogenous opacity in right upper and middle zone. Comparison with previous films discovered no progression. Sputum ZN-staining showed negative result in triplicate. What's the most advisable first course of action in order to differentiate tuberculosis relapse and pneumonia?

- A. Broad-spectrum antibiomatic test-treatment.
- B. Preventional course of rifampicin and isoniazid.
- C. CT-scanning.
- D. Observation only.
- E. Test antituberculosis treatment.

468.

Patient suffering from subacute disseminated tuberculosis is presented with painful ulceration on tongue surface. Histological examination confirms tuberculosis origin of the lesion. Which way of contamination is the most probable in this case?

- A. Lymphogenous.
- B. Hematogenous.
- C. Broncogenous.
- D. Sputogenous.
- E. Lymphohematogenous.

469.

32-year-old symptom-free IT-specialist recovered from infiltrative pulmonary tuberculosis 3 year ago presented after preemployment X-ray examination, which detected two high density shadows up to 2 cm with distinct borders on the right apex. Physical examination, blood, urine, sputum tests detected no abnormality. Could professional activity be allowed to this patient?

- A. No.
- B. Yes, after retreatment course.
- C. Yes, if Mantoux skin test is negative.
- D. Yes, without any prerequisites.
- E. Yes, but annual clinical examination including chest X-ray should be required.

470.

65-year-old pensioner with 40-year miner seniority has been suffering from pneumoconiosis for 15 year. At the moment is presented with pulmonary infiltrative tuberculosis. Which finding is the most expected?

- A. Hilar calcification.
- B. Pleural thickening.
- C. Scanty bacterial expectoration.
- D. Pneumofibrosis.
- E. All of the above.

471.

58-year-old coal miner has been suffering from coniotuberculosis for 2 year. Which clinical type of the disease is impossible in these circumstances?

- A. Focal.
- B Infiltrative.
- C. Miliary.
- D. Tuberculoma.
- E. Fibrous-cavernous.

472.

60-year-old patient presented with dyspnea, chest pain, dizziness, appetite loss, subfebrile fever, dry cough. Has been unwell for 1 month. On examination: skin is pale, dull percussion sound and weakened breathing over both lungs lower lobes. On chest X-ray: symmetric bilateral dissemination, affecting mostly lower lobes. Foci of different size, moderate density, hazy borders, somewhere fusing. CBC: Hb - 90 g/L, WBC -  $3.9 \times 10^9$  /L, eosinophil -3%, band neutrophil -4%, segmented neutrophil -67%, lymphocyte-18%, monocyte -8%, ESR - 62 mm/hour. What's the most likely diagnosis?

- A. Disseminated tuberculosis.
- B. Community acquired pneumonia.
- C. Chronic obstructive pulmonary disease.
- D. Diffuse lung tissue fibrosis.
- E. Disseminated lung cancer.

473.

50-year-old patient suffering from antracosilicosis presented with fever, cough, chest pain. Two year ago has been treated for focal tuberculosis. On examination: dull percussion sound and breathing weakening in the left intercostal space. Over subscapular zone moisture rales are heard. CBC: Hb - 125 g/L, WBC -  $14.0 \times 10^9$  /L, eosinophil -3%, band neutrophil - 17%, segmented neutrophil -65%, lymphocyte-20%, monocyte -5%, ESR - 38 mm/hour. In sputum - L. 20-30/field of view, ZN-staining is negative. Chest X-ray showed 6×8cm opacity of moderate density, hazy borders, nonhomogenous, with 3×2,5 lucency

inside. The differential diagnosis between pneumonia and tuberculosis relapse is necessary. Choose the most advisable approach.

- A. Antituberculosis drug course.
- B. Broad-spectrum antibiotic course.
- C. Bronchoscopy.
- D. CT-scanning.
- E. Open lung biopsy.

474.

25-year-old patient presented with fever about 38.0°C and dyspnea. Several days before right side stabbing pain appeared. The pain decreases while lying on the affected side. Fatigue, weakness, dry cough has been observed for a month. On examination: affected side lags behind the breathing. Percussion and auscultation revealed dullness and absent breathing in this area correspondently. CBC: Hb - 120 g/L, WBC –  $13.3 \times 10^9$  /L, eosinophil - 4%, band neutrophil - 10%, segmented neutrophil - 68%, lymphocyte - 15%, monocyte - 2%, ESR - 35 mm/hour. Chest X-ray detected no opacities in the lung fields, right costo-diaphragmal sinus is opaque. What's the most likely diagnosis?

- A. Infiltrative tuberculosis.
- B. Disseminated tuberculosis.
- C. Community acquired pneumonia.
- D. Exudative pleurisy.
- E. Fibrinous pleurisy.

475.

42-year-old patient presented with stabbing chest pain appeared on exertion. On examination: normal percussion and auscultation sounds were found, pain aggravates on pressing upon intercostal spaces. CBC: WBC –  $6.9 \times 10^9$  /L, eosinophil -3%, band neutrophil - 5%, segmented neutrophil -65%, lymphocyte-23%, monocyte -7%, ESR - 2 mm/hour. Chest X-ray detected no abnormality. What's the most likely diagnosis?

- A. Pneumonia, complicated by pleurisy.
- B. Myositis.
- C. Intercostal neuralgia.
- D. Spontaneous pneumothorax.
- E. Pulmonary embolism.

476.

38-year-old patient fell ill suddenly. Chest pain in left side, cough, fever up to 38°C appeared. Pain is increasing on cough, lying position on right side and deep breathing. On examination dull percussion sound and crackling rales on weakened breathing background over left hemithorax are found. CBC: Hb - 120 g/L, WBC –  $18.2 \cdot 10^9$  /L, eosinophil-0%, band neutrophil-15%, segmented neutrophil-55%, lymphocyte-20%, monocyte-10%, ESR - 65 mm/hour. Chest X- ray detected homogenous opacity of moderate density in left lower zone: costodiaphragmal sinus is not visible. What's the most likely diagnosis?

- A. Pneumonia complicated by pleurisy.
- B. Infiltrative tuberculosis complicated by pleurisy.
- C. Lung cancer.
- D. Exudative pleurisy.
- E. Dry pleurisy.

477.

68-year-old male with deep vein thrombosis in anamnesis presented with moderate right side chest pain, dyspnea and hemoptysis. Symptoms appeared suddenly 3 hours ago. On examination: diffuse cyanosis,

dyspnea at rest, RR 32/min, P 100/min, BP 100/60, crackling rales in right middle and lower zone. Blood test showed no remarkable changes. On chest X-ray in AP and lateral view in reduced right middle lobe intensive triangular opacity appears, costo-diaphragmal angle is unclear. What's the most likely diagnosis?

- A. Infiltrative tuberculosis.
- B. Community acquired pneumonia.
- C. Fibrous-cavernous tuberculosis.
- D. Lung cancer.
- E. Pulmonary embolism.

478.

84-year-old patient of nursing home exposed by TB contact is presented with headache, fever up to 38°C, dry cough, dyspnea. Is being ill for 2 weeks, condition has aggravated insidiously. On examination: condition is grave, diffuse cyanosis is present. All over lung fields tympanic percussion sound is detected. Auscultation revealed no rales. CBC: Hb - 100 g/L, WBC –  $11.2 \cdot 10^9$  /L, eosinophil-0%, band neutrophil-9%, segmented neutrophil-65%, lymphocyte-14%, monocyte -12%, ESR - 35 mm/hour. Mantoux skin test is negative. Chest X-ray shows diffuse multiple separate foci with hazy borders throughout lung tissue, inclusions of high density in both hilar zones. What's the most likely diagnosis?

- A. Focal tuberculosis.
- B. Miliary tuberculosis.
- C. Lung cancer.
- D. Chronic obstructive pulmonary disease.
- E. Community acquired pneumonia.

479.

26-year-old female presented with chest pain, dry cough, shortness of breathing, and fever up to 38° C. On examination: percussion and auscultation revealed respectively dullness and absence of breathing over left hemithorax area. Chest X-ray showed left side opacity up to the III rib with the upper oblique border. Mantoux skin test – 18 mm papule. Which reason of pleurisy is the most probable?

- A. Collagenosis.
- B. Lung cancer.
- C. Community acquired pneumonia.
- D. Tuberculosis.
- E. Pleural mesothelioma.

480.

40-year-old male with unremarkable past medical history presented with right side pleurisy. CBC: Hb - 130 g/L, WBC –  $18.2 \times 10^9$ /L, eosinophil -2%, band neutrophil - 15%, segmented neutrophil -65%, lymphocyte-17%, monocyte -1%, ESR - 60 mm/hour. Pleural fluid test: turbid, neutrophiles are predominant leukocyte type (80%). Chest X-ray, which was performed immediately after exudate removing detected low density homogenous opacity with hazy borders in right lower lung zone. Which pleurisy cause is the most likely?

- A. Lung cancer.
- B. Tuberculosis.
- C. Non-specific pneumonia.
- D. Pancreatitis.
- E. Pleural mesothelioma.

481.

45-year-old worker of asbestos factory with 25 years of seniority presented with moderate constant chest pain especially at night, aggravating shortness of breathing, dry cough, weakness, decrease of appetite,

weight loss. Has been feeling unwell for 6 month. On examination: T 36.6°C, right thoracic side is behind of breathing, dull percussion sound lower right scapula angle, breathing isn't heard in this area. CBC: Hb - 90 g/L, WBC –  $7.5 \times 10^9$  /L, eosinophil – 2%, band neutrophil - 5%, segmented neutrophil - 70%, lymphocyte-15%, monocyte -8%, ESR - 64 mm/hour. Chest X-ray showed left side opacity up to the III rib with the upper oblique border. Pleural fluid is opaque, bloody, density - 1030, protein – 36 g/l, cell amount –  $2 \times 10^9$ /l, neutrophil -60 %, atypical cells are found. What's the most likely diagnosis?

- A. Pleural mesothelioma.
- B. Lung cancer.
- C. Community acquired pneumonia.
- D. Collagenosis.
- E. Tuberculosis pleurisy.

482.

66-year-old patient recovered from myocardial infarction 2 year ago presented with legs edema, ascitis, dyspnea. On examination: acrocyanosis, RR 30/min, dull percussion sound below both scapulas. Chest X-ray showed bilateral opacities up to the III rib with the upper oblique borders. Pleural fluid is opaque, yellow, density - 1010, protein – 15 g/l, cell amount –  $0.8 \times 10^9$ /l. CBC: Hb - 100 g/L, WBC –  $5,2 \times 10^9$  /L, eosinophil -1%, band neutrophil -2%, segmented neutrophil -70%, lymphocyte-22%, monocyte -3%, ESR - 12 mm/hour. What's the most likely diagnosis?

- A. Paracancroid pleurisy.
- B. Cardiogenic hydrothorax.
- C. Parapneumonic pleurisy.
- D. Tubercle pleurisy.
- E. Pulmonary embolism.

483.

Patient discharges mycobacteria resistant to isoniazid, rifampicin, ciprofloxacin and amikacin. How could you qualify this resistance profile?

- A. Simple resistance.
- B. Monoresistance.
- C. MDR.
- D. Usual resistance.
- E. XDR.

484.

35-year-old female complains of constant severe headache, high fever, frequent (up to 3 times a day) vomiting, bringing no relief. Has been ill for 3 weeks. The disease started insidiously from slight headache, subfebrile temperature. On examination: neck stiffness, upper Brudzinsky symptom, divergent strabismus, ptosis detected. Chest X-ray detected thick-walls cavity in the left upper lobe. Sputum ZN-staining showed the positive result. CSF test: fluid is transparent, protein 2.0 g/l, pleocytosis  $400/\text{mm}^3$  mostly of lymphocyte type, glucose 0.6 mmol/l. Glycemia 3.8 mmol/l. Choose the most correct diagnosis formula.

- A. Fibrous-cavernous tuberculosis.
- B. Disseminated tuberculosis.
- C. Tubercle meningitis.
- D. Infiltrative tuberculosis.
- E. Generalized tuberculosis.

485.



3-year-old child admitted to emergency department complains of severe headache, sore throat. Has been ill for 6 hours. On examination: fever up to 40°C, clouded consciousness, neck stiffness, Kernig's and Brudzinsky's signs, on femoral surfaces hemorrhagic interfluent rash. Chest X-ray detected no abnormalities. CSF test: fluid is turbid, protein 15.0 g/l, pleocytosis 1500/mm<sup>3</sup> mostly of neutrophilic type, glucose 1.6 mmol/l. Glycemia 4.8 mmol/l. What's the most likely diagnosis?

- A. Meningococcal meningitis.
- B. Tubercle meningitis.
- C. Secondary purulent (staphylococcal) meningitis.
- D. Herpetic meningitis.
- E. Meningism.

486.

19-year-old patient has been treated for sinusitis for 5 days. Complains of headache, vomiting, fever up to 40°C. At childhood suffered from primary tuberculosis. On examination neck stiffness, Kernig's, Brudzinsky symptoms detected. CBC: Hb - 130 g/L, WBC -  $19.5 \cdot 10^9/L$ , eosinophil-1%, band neutrophil-17%, segmented neutrophil-54%, lymphocyte-20%, monocyte-8%, ESR - 45 mm/hour. Glycemia 5.5 mmol/L. CSF test: fluid is turbid, protein 7.4 g/l, pleocytosis 3000/mm<sup>3</sup> mostly of neutrophilic type, glucose 1.3 mmol/L. Chest X-ray detected several calcifications in the right hilum. What's the most likely diagnosis?

- A. Herpes meningitis.
- B. Meningococcus meningitis.
- C. Secondary purulent meningitis.
- D. Syphilitic meningitis.
- E. Tubercle meningitis.

487.

26-year-old female was admitted to emergency department in a grave condition. Has been ill for a week. Complains of fever up to 39°C, appetite and weight loss, weakness, headache. On examination: Herpes labialis, mental confusion, moderate neck stiffness, Kernig and Brudzinsky signs has been detected. Chest X-ray detected no abnormalities. CBC: Hb - 130 g/L, WBC -  $11.0 \times 10^9 /L$ , eosinophil - 1%, band neutrophil - 15%, segmented neutrophil - 56%, lymphocyte- 20%, monocyte - 8%, ESR - 30 mm/hour. Sputum ZN-staining detected no AFB. CSF test: fluid is transparent, protein 0.25 g/l, pleocytosis up to 200/mm<sup>3</sup>, glucose 3.6 mmol/L. Glykemia 5.5 mmol/L. Which principle of meningeal syndrome is the most likely?

- A. Tuberculosis.
- B. Meningococcal.
- C. Typhoid.
- D. Herpes.
- E. Intoxication due to pneumonia.

488.

28-year-old male presented with suspicion for community acquires pneumonia in a grave condition. Is being ill for a week. Complains of dyspnea, fever up to 39°C, appetite and weight loss, weakness, productive cough with mucoid sputum, headache (for last 3 days). On examination: moderate neck stiffness is detected. Chest auscultation revealed weakened breathing and some bubbling rales over left lower zone. Chest X-ray detected 5 cm-sized round homogenous opacity of moderate density, with hazy borders in left lower zone. CBC: Hb - 130 g/L, WBC -  $20.0 \times 10^9 /L$ , eosinophil - 1%, band neutrophil - 15%, segmented neutrophil - 56%, lymphocyte- 20%, monocyte - 8%, ESR - 50 mm/hour. Sputum ZN-staining detected no AFB. CSF test: fluid is transparent, protein 0.25 g/l, pleocytosis up to 10/mm<sup>3</sup>, glucose 3.6 mmol/l. Which principle of meningeal syndrome is the most likely?

- A. Tuberculosis.

- B. Meningococcal.
- C. Viral.
- D. Typhoid.
- E. Intoxication due to pneumonia.

489.

Patient with tuberculosis meningitis presented with the facial asymmetry, loss of nasolabial fold, mouth right angle drooping, sail symptom. What pair of cranial nerves is more likely involved?

- A. IX.
- B. III.
- C. XII.
- D. VI.
- E. VII.

490.

Patient with tuberculosis meningitis presented with the tongue deviation. Which cranial nerve pair is more likely involved?

- A. III.
- B. XII.
- C. IX.
- D. VI.
- E. VII.

491.

Patient with tuberculosis meningitis presented with the convergent strabismus. Which cranial nerve pair is more likely involved?

- A. IX.
- B. III.
- C. XII.
- D. VI.
- E. VII.

492.

32-year-old patient presented with miliary tuberculosis. On 10<sup>th</sup> day of illness neck stiffness, Kernig's, Brudzinsky symptoms appeared. A bit later left eye fissure enlargement, tongue deviation to the right, aphonia, dysphagia were noticed. Which cranial nerve pair is more likely involved?

- A. IX.
- B. VII.
- C. XII.
- D. All of the above.
- E. No listed.

493.

Patient with tuberculosis meningitis presented with the dysarthria, dysphagia. Which cranial nerve pair is more likely involved?

- A. IX.
- B. III.
- C. XII.
- D. VI.
- E. VII.

494.

Specimen of lymph node affected by HIV-associated tuberculosis is analyzing. Which finding is the most expected?

- A. Lanthane cells, lymphocytes, monocytes, no decay.
- B. Central caseous necrosis, Lanthane cells, lymphocytes, monocytes.
- C. Central caseous necrosis, lymphocytes, monocytes.
- D. Central colliquative necrosis, lymphocytes, monocytes.
- E. Central colliquative necrosis, Lanthane cells, lymphocytes, monocytes.

495.

28-year-old patient presented with HIV-associated miliary tuberculosis. Have never taken antiretroviral therapy. Is been known as HIV-positive for 6 year. CD 4+level at the moment is 200 cell/ $\mu$ L. Choose the most advisable treatment sequence.

- A. Immediate administration of both anti-TB and antiretroviral therapy.
- B. Immediate administration of anti-TB treatment; antiretroviral therapy should be administered after initial phase finishing.
- C. Immediate administration of anti-TB treatment; antiretroviral therapy should be administered just after treatment course finishing.
- D. Immediate administration of anti-TB treatment; antiretroviral therapy should be administered between second and eighth week of anti-TB treatment.
- E. Immediate administration of antiretroviral treatment; anti-TB therapy should be administered after initial phase finishing.

496.

40-year-old patient is undergoing treatment for AIDS of III clinical stage. At the moment the CD 4+ level is 100 cell/ $\text{mm}^3$ . Chest X-ray detected no abnormalities. Mantoux skin test is negative. Which measure to prevent tuberculosis is necessary?

- A. BCG revaccination.
- B. Isoniazid preventive course after antiretroviral therapy finishing.
- C. Treatment according to DOTS I category.
- D. Treatment according to DOTS II category.
- E. Immediate isoniazid preventive course.

497.

19-year-old IV-drug abuser presented with high fever, shortness of breathing, severe headache, vomiting, neck stiffness. On examination generalized lymphadenopathy has been detected. Chest X-ray shows diffuse multiple 1-2 mm foci. Sputum ZN-staining is negative. Mantoux skin test is negative. What's the most advisable next course of action?

- A. Blood PCR for MBT.
- B. Quantiferon gold test.
- C. CT-scanning.
- D. HIV-test.
- E. Open lung biopsy.

498.

21-year-old woman at 16<sup>th</sup> weeks of pregnancy presented with focal tuberculosis new case. Sputum ZN-staining detected no AFB. Which is the most advisable dealing?

- A. Treatment course for tuberculosis according to III category, pregnancy saving.
- B. Individually designed treatment course for tuberculosis, pregnancy saving.

- C. Individually designed treatment course for tuberculosis, pregnancy termination.
- D. Treatment course for tuberculosis according to III category, just after childbearing.
- E. Treatment course for tuberculosis according to I category, pregnancy saving.

499.

At 35-year-old woman suffering from chronic pulmonary tuberculosis dis+, MBT+ 12 weeks pregnancy is detected. Sensitivity to antituberculosis drugs is saved. At the moment finished the intensive phase of treatment course according to IV category. Smear and cultural test detected no mycobacteria, but 2 cm bean-like cavity in right upper lobe is still present. Otherwise no systemic abnormalities e.g. kidney or heart failure aren't detected. Which is the most advisable dealing?

- A. Individually designed treatment course, pregnancy termination.
- B. Immediate treatment cessation, pregnancy saving.
- C. Standard treatment course continual phase, pregnancy termination.
- D. Individually designed treatment course, pregnancy saving.
- E. Standard treatment course continual phase, pregnancy saving.

500.

24-year-old female presented in grave condition with miliary tuberculosis. On examination: RR 32/min, P 110/min, BP 80/50, fever of 39.6°C, mental confusion, menigeal syndrome. Chest X-ray shows diffuse multiple 1-2 mm foci. Gynecological examination detected 6 week pregnancy. What's the most advisable further dealing?

- A. Individually designed treatment course for tuberculosis, pregnancy saving.
- B. Treatment course for tuberculosis according to I category, resolution concerning to pregnancy management after the condition ameliorating.
- C. Individually designed treatment course for tuberculosis, pregnancy termination.
- D. Treatment course for tuberculosis according to I category, pregnancy termination.
- E. Treatment course for tuberculosis according to II category, pregnancy saving.

501.

17-year-old female complains of constant severe headache, high fever, frequent (up to 3 times a day) vomiting, bringing no relief. Has been ill for 3 weeks. The disease started insidiously from slight headache, subfebrile temperature. Two months before sustained criminal abortion, then went to the sea-beach. Symptoms appeared just after returning. On examination: neck stiffness, upper Brudsky symptom, divergent strabismus, left mouth angle is drooped. CSF test: CSF test: fluid is slightly opaque, protein 3.0 g/l, fibrin film appeared in 24 hours, pleocytosis 600/mm<sup>3</sup> mostly of lymphocyte type, glucose 1.6 mmol/l. Glykemia 4.8 mmol/l. What's the most likely diagnosis?

- A. Staphylococcus meningitis.
- B. Tubercle meningitis.
- C. Herpes meningitis.
- D. Meningococcus meningitis.
- E. Brain chorionepithelioma.

502.

25-year-old woman at fifteen weeks of pregnancy suffers from infiltrative pulmonary tuberculosis dis+, MBT+. Which is the most advisable dealing?

- A. Individually designed treatment course for tuberculosis, pregnancy termination after initial phase finishing.
- B. Treatment course for tuberculosis according to I category with half drug dosage, pregnancy saving.
- C. Treatment course for tuberculosis according to I category, pregnancy saving.
- D. Treatment course for tuberculosis according to I category, pregnancy termination.
- E. Treatment course for tuberculosis according to II category, pregnancy saving.

503.

26-year-old woman suffering from pulmonary infiltrative tuberculosis dis+, MBT+ bore healthy baby. Which preventive measures for baby are the most advisable?

- A. Separation from mother, breastfeeding prohibiting. Preventive isoniazid course for 3 month, then BCG-vaccination after Mantoux skin test.
- B. BCG-vaccination. Breastfeeding prohibiting. Separation from mother isn't necessary
- C. Separation from mother, BCG-vaccination and breastfeeding are prohibited.
- D. Separation from mother, BCG-vaccination after Mantoux kin test. Breastfeeding is prohibited.
- E. BCG -vaccination and breastfeeding prohibiting. Separation from mother. Preventive isoniazid course for 3 month.

504.

26-year-old woman suffering from pulmonary infiltrative tuberculosis dis-, MBT- (M-, C-) parturiated a healthy baby. Which preventive measures for baby are the most advisable?

- A. Separation from mother, BCG-vaccination. Breastfeeding prohibiting.
- B. Separation from mother, BCG-vaccination after Mantoux skin test. Breastfeeding prohibiting.
- C. BCG-vaccination and breastfeeding prohibiting. Separation from mother isn't necessary.
- D. Separation from mother, breastfeeding prohibiting. Preventive isoniazid course for 3 month, then BCG-vaccination after Mantoux skin test.
- E. BCG -vaccination and breastfeeding prohibiting. Separation from mother. Preventive isoniazid course for 3 month.

505.

29-year-old patient is presented with focal pulmonary tuberculosis. Choose the most appropriate chest X-ray description.

- A. Opacity less than 1 cm in diameter.
- B. Predominantly unilateral multiple opacities less than 1 cm in diameter.
- C. One or several opacities less than 1 cm in diameter in 1-2 segments.
- D. One or multiple opacities less than 1 cm in diameter in 1-2 segments
- E. Uni- or bilateral multiple opacities less than 1 cm in diameter.

506.

In the city A. the focal tuberculosis hasn't been discovered for several year whereas general incidence rate is high. Which is the most probable reason?

- A. Lack of screening chest X-ray in risk groups.
- B. Lack of screening sputum ZN-staining in risk groups.
- C. Lack of screening Mantoux test in risk groups.
- D. Lack of screening test for HIV in risk groups.
- E. Endemic disease peculiarities.

507.

30-year-old man from tuberculosis hotbed with unremarkable past medical history was invited for additional examination because of 0.5 cm focus in left S<sub>1</sub> found on chest X-ray performed because of family TB contact exposure. Focal tuberculosis is suspected. Which clinical course is the most expected?

- A. Insidious aggravating.
- B. Asymptomatic.
- C. Acute.

- D. Subacute.
- E. Wavy.

508.

32-year-old female presented with subfebrile fever, weakness, night sweating, inconstant dry cough. From past medical history: has been suffering from protracted flu every spring and autumn within last 5 year. Didn't seek for medical care. Hasn't undergone screening X-ray for 7 year. Further X-ray examination detected several polymorphic foci on both lungs apices. Self-cured tuberculosis is suspected. Which preliminary clinical form was more likely?

- A. Focal.
- B. Infiltrative.
- C. Infiltrative with the decay.
- D. Disseminated.
- E. All the above.

509.

42-year-old symptom free male presented with several foci of high density on left apex that were found on screening chest X-ray. From past medical history: had been exposed by TB family contact 3 year ago. Two 0.5 mm foci were detected at the same place. Denied further examination. Which of methods is the most important for disease activity assessment?

- A. All the below listed.
- B. Test treatment.
- C. Clinical investigation.
- D. Tuberculin skin test.
- E. Sputum and blood laboratory test.

510.

32-year-old female presented with subfebrile fever, weakness, night sweating, inconstant dry cough. From past medical history: had suffered from protracted flu for two month a year ago. Didn't seek for medical care. Hasn't undergone screening X-ray for 7 year. Further X-ray examination detected three 2-4 mm foci of high density on left lung apex. Which was the most likely preliminary clinical form of tuberculosis?

- A. Infiltrative.
- B. Focal.
- C. Infiltrative with the decay.
- D. Disseminated.
- E. All of the above.

511.

Screening X-ray examination of 26-year-old asymptomatic patient without tuberculosis history detected several solid foci on the fibrotic area background in the left lung S<sub>2</sub>. On examination no abnormality detected. Choose the most advisable further management protocol.

- A. Chest CT scanning.
- B. Bronchoscopy.
- C. Open lung biopsy.
- D. Follow-up observation.
- E. Test treatment course.

512.

19-year-old patient presented with focal tuberculosis new case. At the moment complains of dry cough, weakness, subfebrile temperature. ZN-staining and cultural tests detected no MBT. According to which category treatment regimen has to be designed in this case?

- A. I.
- B. II.
- C. III.
- D. IV.
- E. V.

513.

28-year-old woman in 6 month after delivery presented with fever, cough, night sweating. On examination left lung focal tuberculosis, dis-, MBT- detected. 8 year ago recovered from pulmonary tuberculosis. According to which category treatment regimen has to be designed in this case?

- A. I.
- B. II.
- C. III.
- D. IV.
- E. V.

514.

25-year-old patient with focal tuberculosis defaulted treatment. Otherwise no diseases detected. Which is the most predictable result?

- A. Self-curing.
- B. Transformation into infiltrative tuberculosis.
- C. Transformation into tuberculoma.
- D. Transformation into cirrhotic tuberculosis.
- E. Transformation into miliary tuberculosis.

515.

25-year-old patient finished the full treatment course for focal pulmonary tuberculosis. Which residuals are the most expected?

- A. Cirrhosis.
- B. Fibrosis.
- C. Consolidated foci.
- D. Complete resolution.
- E. Calcification.

516.

30-year-old symptom-free patient is presented with 2 cm round opacity in the left S<sub>2</sub> detected on the screening chest X-ray. No anamnestic data indicated the risk of TB. What's the most advisable algorithm to exclude or confirm tuberculosis in this case?

- A. To perform sputum ZN-staining, sputum PCR-test, CT-scanning.
- B. To repeat chest X-ray after 7-10 days, sputum PCR-test, CT-scanning.
- C. To perform sputum cultural test, lateral view X-ray, CT-scanning.
- D. To repeat chest X-ray after 2 month, needle biopsy, segmentectomy.
- E. To perform CT-scanning, needle biopsy, segmentectomy.

517.

28-year-old male from tuberculosis hotbed presented with swelling in anterior cervical area. Peripheral lymphatic nodes tuberculosis is suspected. What's the most advisable first course of examination?

- A. Sputum ZN-staining.
- B. Oral cavity smear ZN-staining.
- C. Lymphatic node biopsy.
- D. Mantoux skin test.
- E. All of the above.

518.

23-year-old male suffering from infiltrative pulmonary tuberculosis (new case, dis+) presented with pulmonary hemorrhage. Which mechanism of bleeding is the most likely?

- A. Pulmonary hypertension.
- B. Vessel wall remodeling.
- C. Vessel wall permeability increasing.
- D. Vessel wall involvement into decay area.
- E. All of the above.

519.

38-year-old female without previous TB medical history presented with pleurisy. Thoracoscopy with biopsy approved tuberculosis of pleura. At the moment: condition is grave, T 39°C, RR 28/min, P100/min. Chest X-ray performed before thoracoscopy detected fluid in left hemithorax at the level of II rib. Choose the category to which this case belongs.

- A. I.
- B. II.
- C. III.
- D. IV.
- E. V.

520.

38-year-old HIV-positive patient presented with pleurisy and peripheral lymphatic nodes tuberculosis. No previous TB history discovered. Choose the category to which this case belongs.

- A. II.
- B. III.
- C. I.
- D. IV.
- E. V.

521.

40-year-old patient presented with left upper lobe infiltrative tuberculosis dis+, MBT+(M+ C 0) resist 0 Hyst.0. Sustained tuberculosis at childhood. To which category this case belongs?

- A. I
- B. II
- C. III
- D. IV
- E. V

522.

53-year-old patient finished the treatment course for infiltrative pulmonary tuberculosis localized in the right S<sub>6</sub> MBT-, dis-. No complication, treatment side effects, taking drugs irregularity detected. Which residuals are the most expected?

- A. Tuberculoma.



- B. Transformation into fibrous-cavernous tuberculosis.
- C. Pneumoirrhis.
- D. Multiple bullas.
- E. Fibrotic area.

523.

36-year-old patient complains of weakness, subfebrile fever, sweating, weight loss for 5 kg. Has been unwell for 3 months. Recently condition worsened, episodes of slight hemoptysis appeared. On examination left lung infiltrative tuberculosis, dis+, MBT+ detected. How could you characterize the disease onset?

- A. Asymptomatic.
- B. Acute.
- C. Typhoid.
- D. Meningeal.
- E. Insidious.

524.

28-year-old patient presented with fever, chest pain, cough, night sweating. Fell ill suddenly. Chest X-ray detected homogenous opacity in the right upper zone. Which disease do you suspect?

- A. Community acquired pneumonia.
- B. Lung cancer.
- C. Pulmonary embolism.
- D. Pulmonary tuberculosis.
- E. All of the above.

525.

40-year-old patient fell ill after supercooling. Fever up to 39°C, cough with mucoid sputum appeared. In the right upper zone bubbling rales are heard. CBC: WBC –  $12.9 \times 10^9$  /L, eosinophil -3%, band neutrophil - 7%, segmented neutrophil - 65%, lymphocyte - 17%, monocyte - 8%, ESR - 32 mm/hour. ZN-staining showed positive result. Chest X-ray detected 3 cm opacity in the right lung S<sub>2</sub> of moderate density and irregular shape with hazy borders and lucency inside. The diagnosis of infiltrative pulmonary tuberculosis was established. Choose the infiltrate type.

- A. Lobitis.
- B. Cloud-like.
- C. Round.
- D. Lobular.
- E. Periscissuritis.

526.

50-year-old patient from tuberculosis hotbed, who is known to suffer from diabetes mellitus complains of cough with muco-purulent sputum, weakness, appetite loss, fever up to 38.6°C. Has been ill for a week. On examination: P 122/m, RR 28/m, BP 80/60. Dull percussion sound and crackling rales in right lower zone. CBC: Hb - 110 g/L, WBC –  $11.2 \cdot 10^9$  /L, eosinophil-3%, band neutrophil-9%, segmented neutrophil-64%, lymphocyte-19%, monocyte-5%, ESR -25 mm/hour. Sputum ZN-staining is negative. Chest X- ray detected homogenous opacity of moderate density in right middle zone connected to hilum. Bronchoscopy revealed purulent right lower lobe endobronchitis. Differential diagnosis between pneumonia and infiltrative tuberculosis is conducted. What's the most advisable first course of action?

- A. Broad-spectrum antibiotics course.
- B. Koch's test.
- C. CT-scanning.
- D. Needle biopsy.

E. Ventilation test.

527.

25-year-old HIV-positive IV-drug abuser presented with bilateral apical lung dissemination. Which mean ISN'T necessary in the diagnostic algorithm first course?

- A. Sputum ZN-staining.
- B. Sputum cultural test.
- C. Immunogram.
- D. CBC.
- E. Lung biopsy.

528.

65-year-old chain smoker complains of dry cough, dyspnea, body weight loss, hemoptysis. Has been unwell for 6 months. On examination: skin is pale and flabby, RR 26/min, P 86/min. Auscultation detected weakened breathing in right lower zone. On chest X-ray dense opacity in right midlung fusing to hilum is detected. CBC: Hb – 100 g/L WBC –  $9.0 \times 10^9$  /L, eosinophil - 1%, band neutrophil - 10%, segmented neutrophil - 64%, lymphocyte- 15%, monocyte - 10%, ESR - 50 mm/hour. Sputum ZN-staining detected no AFB. Lung cancer and pulmonary tuberculosis are suspected. What is the first step of differential diagnosis?

- A. Bronchoscopy.
- B. Mantoux test.
- C. Sputum test for atypical cells.
- D. Open lung biopsy.
- E. ECG.

529.

65-year-old smoker presented with fever up to 38°C, body weight loss, weakness, productive cough, hemoptysis. No remarkable history of pulmonary diseases discovered. Previous chest X-ray a year before was normal. Sputum ZN-staining and consecutive cultural test showed negative result. Chest X-ray revealed cavity 6 cm in diameter with thick walls on the left apex. The diagnosis of fibrous-cavernous tuberculosis has been established and treatment course according to I category was administered. After 2 month of treatment there was no amelioration, control X-ray detected the same size and feature of cavity, left hilum widening. Which reason of treatment failure should be ruled out first of all?

- A. Inappropriate case category definition.
- B. MDR-TB.
- C. Low treatment adherence.
- D. Inadequate drug regimen.
- E. Lung cancer misdiagnosis as tuberculosis.

530.

60-year-old patient presented with malaise, subfebrile temperature, weight loss. At the moment any “thoracic” complaints are absent. Chest X-ray detected nonhomogenic opacity in right S<sub>6</sub> connected to the hilum by “track”. Month before was hospitalized with flu (severe course, which appeared by high fever, respiratory distress); discharged after condition amelioration but X-ray examination wasn't perform. Which disease should be suspected first of all?

- A. Community acquired pneumonia.
- B. Infiltrative tuberculosis.
- C. Pulmonary embolism.
- D. Lung cancer.
- E. Health care acquired pneumonia.

531.

Screening X-ray examination of the 18-year-old asymptomatic male with no previous diseases history detected widening of the right hilum. Choose the possible reason.

- A. Tuberculosis.
- B. Sarcoidosis.
- C. Hodgkin disease.
- D. Lymphoma.
- E. All of the above.

532.

Chest X-ray of the patient with tuberculosis showed a lot of foci up to 1 cm in diameter all over lung tissue but especially in upper zones. Foci are fusing each other. In the left apical area there is a thin-wall cavity 4 cm in diameter. Which radiological syndrome is described?

- A. Dissemination.
- B. Subtotal opacity.
- C. Focal opacity.
- D. Lung pattern enrichment.
- E. Ring-like opacity.

533.

Chest X-ray of 31-year-old patient detected 2.5 cm round homogenous opacity with distinct borders of moderate density in the left lung S<sub>3</sub>, surrounded by cirrhotic area. Which radiological syndrome is it?

- A. Limited opacity.
- B. Focal shadow.
- C. Round-like opacity.
- D. Total opacity.
- E. Subtotal opacity.

534.

15-year-old girl presented with the suspicion for tubercle bronchadenitis. Which radiological finding could confirm this suspicion?

- A. Structural hilum.
- B. Non-homogenous hilum.
- C. Cross-sectional size 1.8 cm.
- D. Ahistic hilum.
- E. No inclusions.

535.

36-year-old patient presented with subfebrile fever, malaise and cough with mucoid sputum. Has been feeling unwell for a month. On examination: dull percussion sound and weakened breathing over left upper lobe. Smear test for AFB showed positive result. CBC: Hb - 130 g/L, WBC -  $11.9 \times 10^9$  /L, eosinophil - 3%, band neutrophil - 8%, segmented neutrophil - 63%, lymphocyte - 18%, monocyte - 8%, ESR - 32 mm/hour. The diagnosis of TB has been established. Which is the ordinal mean to detect the certain clinical form of the disease?

- A. Routine clinical examination.
- B. Laboratory.
- C. Radiological.
- D. Functional.
- E. All of the above.

536.

Patient suffering from infiltrative tuberculosis, MBT+, lives with his wife and 5-year-old child. No data about child's BCG vaccination and cicatrix were found. Thorough examination of the child detected no active TB signs. Mantoux skin test history: at the age of 1 – papule 8 mm, at the age of 2 – 5 mm, at the age of 3 – papule 12 mm, at the age of 4 – 13 mm, at the age of 5 – 13 mm. Thorough examination detected no tuberculosis. Which is the most advisable dealing with the child?

- A. BCG-vaccination, then chemoprophylaxis.
- B. Chemoprophylaxis only.
- C. Mantoux skin test follow up.
- D. BCG-vaccination only.
- E. Chemoprophylaxis, then BCG-vaccination.

537.

60-year-old patient is presented with lung dissemination syndrome with 1 cm separate foci of high density affecting mostly lower lobes. Which diagnosis SHOULD BE RULED OUT from the list of differential diagnosis?

- A. Lung cancer.
- B. Malignancy metastasis.
- C. Community acquired pneumonia.
- D. Collagenosis.
- E. Disseminated tuberculosis.

538.

Chest X-ray protocol is presented. Spinous processes of the first three thoracic vertebrae are visible, the medial ends of both clavicles are equidistant from the spinous process of the vertebra between them, five rib interspaces are seen anteriorly, above the diaphragm, borders of differently dense tissue are distinct, vessel patterns are seen throughout lung tissue except area 1.5 cm from chest wall and 3 cm from the apices. Define which technical standard ISN'T met.

- A. Degree of inspiration.
- B. Exposure.
- C. Position.
- D. Centralization.
- E. All are met.

539.

Chest X-ray protocol is presented. Spinous processes of the first six thoracic vertebrae are visible, the medial ends of both clavicles are equidistant from the spinous process of the vertebra between them, six rib interspaces are seen anteriorly, above the diaphragm, borders of differently dense tissue are distinct, vessel patterns are seen throughout lung tissue except area 1.5 cm from chest wall and 3 cm from the apices. Define which technical standard ISN'T met.

- A. Degree of inspiration.
- B. Centralization.
- C. Position.
- D. Exposure.
- E. All are met.

540.

Chest X-ray protocol is presented. Spinous processes of the first three thoracic vertebrae are visible, the medial ends of both clavicles are equidistant from the spinous process of the vertebra between them, six rib interspaces are seen anteriorly, above the diaphragm, borders of differently dense tissue are distinct,

vessel patterns are seen throughout lung tissue except area 1.5 cm from chest wall and 3 cm from the apices. Define which technical standard ISN'T met.

- A. Degree of inspiration.
- B. Centralization.
- C. Position.
- D. Exposure.
- E. All are met.

541.

25-year-old asymptomatic male presented with round opacity in the left lung S<sub>2</sub> detected on the screening chest X-ray. Which additional examination is the most advisable in order to reveal the reason of the syndrome?

- A. Bronchoscopy.
- B. MRI.
- C. CT-scanning.
- D. Lateral view X-ray.
- E. Roentgenoscopy.

542.

Chest X-ray showed massive dense homogenous opacity in the left upper lung lobe. Skelton is deformed: left hemithorax diminished, intercostal spaces narrowed. Left hilum and diaphragm cupola are elevated. Mediastinum is shifted to the left. Which disease can these changes be due to?

- A. Lung atelectasis.
- B. Cirrhotic tuberculosis.
- C. Pulmonary cirrhosis.
- D. Upper lobe aplasia.
- E. All of the above.

543.

Chest X-ray of 53-year-old patient detected massive dense nonhomogenous opacity occupying total left upper lobe. Diaphragm cupolas position: right-side – on the level of V rib, left side –1cm above. Mediastinum is shifted to the left. Which radiological conclusion is the most correct?

- A. Fibrous-cavernous tuberculosis.
- B. Cirrhosis of any etiology.
- C. Inflammation of any etiology.
- D. Emphysema.
- E. Pulmonary embolism.

544.

23-year-old refugee has not any complains. Which examination is the most advisable in order to rule tuberculosis out?

- A. Chest anterior-posterior X-ray.
- B. CT-scanning.
- C. Partial X-ray.
- D. Chest lateral view X-ray.
- E. Bronchoscopy.

545.

23-year-old patient presented with stabbing chest pain, increasing dyspnea. On examination: evident cyanosis, tympanic percussion sound over left hemithorax where breathing sounds are not found,

mediastinum is shifted to the right. Spontaneous pneumothorax is suspected. Which of radiological examinations is the most advisable at the moment?

- A. Chest X-ray, lateral view.
- B. Plain chest X-ray, AP view.
- C. CT-scanning.
- D. Right side plain X-ray.
- E. Bronchography.

546.

12-year-old child exposed by contact with uncle suffering from tuberculosis presented with papule of 15 mm in diameter with vesicle in Mantoux skin test. On examination: weight deficiency, delayed physical development and growth, skin is pale, cervical, superclavicular, subclavian, axillar lymph nodes are enlarged. Otherwise no abnormalities detected. Blood test also detected no abnormalities. On chest X-ray slight widening and anhistic appearance of right hilum are found. Tuberculosis of intrathoracic lymph nodes is suspected. What's the most advisable further examination?

- A. Lateral view X-ray.
- B. Bronchography.
- C. Bronchoscopy.
- D. Chest CT-scanning.
- E. Partial right hemithorax X-ray.

547.

Chest X-ray protocol of 28-year-old patient is presented. Spinous processes of the first three thoracic vertebrae are visible, the medial ends of both clavicles are equidistant from the spinous process of the vertebra between them, six rib interspaces are seen anteriorly, above the diaphragm, borders of differently dense tissue are distinct, vessel patterns are seen throughout lung tissue including cortical zone. Hilum cross-sectional size – 2.5 cm. In perihilar area foci like shadows along vessel walls are seen. Define whether any abnormality is detected.

- A. It's normal X-ray.
- B. Focal opacity.
- C. Dissemination.
- D. Vessel patterns enrichment.
- E. Hilum enlargement.

548.

After chest X-ray analysis of adult patient radiologist suggested the diagnosis of tuberculosis. Which finding meets such suggestion more likely?

- A. Diffuse vessel patterns enrichment.
- B. Limited homogenous opacity in left S<sub>8</sub>.
- C. Unilateral hilum widening.
- D. Bilateral hilum widening.
- E. Bilateral apical dissemination.

549.

Specimen of lung tissue affected by cirrhotic tuberculosis is being analyzed. No exacerbation has been taken place within last 5 year. Which feature ISN'T expected?

- A. Cavitation.
- B. Cirrhotic mass.
- C. Caseous material.
- D. Polymorphic foci.

E. Fibrotic area.

550.

Patient known been suffering from tuberculosis is presented with left upper lobe infiltration. Sputum ZN-staining showed positive result. Lung tissue disintegration is suspected. What is the most advisable way to check this suspicion?

- A. CT-scanning.
- B. Bronchocopy.
- C. Videothoracoscopy.
- D. Lateral view X-ray.
- E. Bronchography.

551.

14-year-old adolescent presented with weakness, fatigue, weight loss, fever. Chest X-ray detected bilateral lymph hilar nodes enlargement. Which disease is the most probable?

- A. Tubercle bronchdenitis.
- B. Nonspecific adenopathy.
- C. Hodgkin's disease.
- D. Non-Hodgkin lymphoma.
- E. All of the above.

552.

16-year-old adolescent presented with weakness, sweating, weight loss, fever. Chest X-ray revealed hilum widening, more evident in the anterior mediastinum. Which reason of this phenomena is less probable?

- A. Thyreoid gland tumor.
- B. Bronchial lymph nodes tuberculosis.
- C. Thymoma.
- D. Ascendance aorta aneurisma.
- E. Pericardial cyst.

553.

10-year-old girl known having latent tuberculosis since the age of five presented with high fever, profuse sweating, weight loss. Chest X-ray detected significant bilateral symmetric intrathoracic lymph nodes enlargement. At the moment Mantoux skin test is negative. Which reason of lymphadenopathy is the least of all probable?

- A. Tuberculosis.
- B. Leukemia.
- C. Hodgkin disease.
- D. Non- Hodgkin lymphoma.
- E. All of the above.

554.

11-year-old boy fell ill suddenly with temperature up to 40°C, profuse sweating, weakness, appetite loss. On examination: in the right superclavicle area the enlarged up to 4 cm in diameter unmovable lymph node with knobby contours is found, otherwise no abnormality detected. Chest X-ray revealed upper mediastinum symmetric widening ("chimney stalk" symptom). Mantoux skin test is negative, previously has been positive for last 4 year. In CBC: leukocyte rate  $16.0 \times 10^9/L$ , ESR - 50 mm/hour detected. What's the most likely diagnosis?

- A. Intrathoracic lymph nodistuberculosis.

- B. Non-Hodgkin lymphoma.
- C. Hodgkin disease.
- D. Purulent lymphogenitis.
- E. Sarcoidosis.

555.

Several children are presented with different clinical forms of primary tuberculosis. What is the best tool to distinguish each one?

- A. Tuberculin skin test.
- B. Complaints analysis.
- C. Physical examination.
- D. Chest X-ray.
- E. Sputum test.

556.

5-year-old child presented with cough, sweating, and moderate fever. Is been sick for three weeks, but temperature were normal until the last day. Mantoux skin test showed 13 mm papule, previous results were negative. Had been exposed by family contact with tuberculosis patient. On examination: skin is pale, micropolyadenitis, otherwise no abnormalities detected. Chest X-ray detected significant right hilum widening, border of lung root is hazy. CBC: Hb - 110 g/L, WBC –  $12 \cdot 10^9$  /L, eosinophil-5%, band neutrophil-7%, segmented neutrophil-50%, lymphocyte-28%, monocyte-10%, ESR -25 mm/hour. Choose the most likely clinical form of tuberculosis.

- A. Infiltrative tubercle bronchodentitis.
- B. Tumor-like tubercle bronchodentitis.
- C. Mild tubercle bronchodentitis.
- D. Residual of tubercle bronchodentitis
- E. Primary complex.

557.

7-year-old child presented with fever up to 38.0°C, dry cough. Fell ill suddenly, 5 days ago. Past medical history: has been exposed by TB contact 6 months before; just after exposure Mantoux skin test showed papule of 6 mm in diameter, chest X-ray was normal. Didn't receive preventive treatment course. On examination: dull percussion sound and weakened breathing in the interscapular area, Mantoux skin test 15 mm. CBC: Hb - 100 g/L, WBC –  $9.2 \cdot 10^9$  /L, eosinophil-0%, band neutrophil-9%, segmented neutrophil-75%, lymphocyte-4%, monocyte -12%, ESR - 25 mm/hour. Chest X-ray: right hilum cross-sectional size about 5 cm, lateral contour is convex and distinct. What's the most likely diagnosis?

- A. Residual of primary tuberculosis.
- B. Perihilar pneumonia.
- C. Intrathoracic lymph nodes tuberculosis, mild form.
- D. Intrathoracic lymph nodes tuberculosis, infiltrative form.
- E. Intrathoracic lymph nodes tuberculosis, tumor-like form.

558.

3-year-old child presented with cough, whining, irritability, moderate fever. Mantoux skin test showed 18 mm papule, previous results were negative. Had been exposed by family contact with tuberculosis patient. On examination: skin is pale, micropolyadenitis (five groups of lymphatic nodes are enlarged), dull percussion sound and weakened breathing over right upper zone. Chest X-ray detected significant right hilum widening, right upper lobe is opaque and reduced. Right diaphragm cupola located at the level of IV rib. CBC: Hb - 110 g/L, WBC –  $12 \cdot 10^9$  /L, eosinophil-5%, band neutrophil-7%, segmented neutrophil-54%, lymphocyte-24%, monocyte-10%, ESR -25 mm/hour. Tumorous type of lymph node tuberculosis established. Choose the most likely disease complication.



- A. Caseous pneumonia.
- B. Right upper lobe atelectasis.
- C. Apical pleurisy.
- D. Community acquired pneumonia.
- E. Pulmonary embolism.

559.

The 4-day healthy newborn presented for decision concerning to BCG vaccination. Previous child in this family died of generalized post-BCG-disease. Which of the decisions is correct?

- A. Vaccination is indicated.
- B. Vaccination should be delayed until age of 7 year if Mantoux test is negative at that moment.
- C. Vaccination should be delayed until age of 3 month if Mantoux test is negative at that moment.
- D. Decision concern vaccination should be taken after isoniazid preventive course.
- E. Vaccination is contraindicated.

560.

5-year-old child had been presented after mass Mantoux test, which showed 7 mm papule with vesicle. Previous year results: at the age of 1 – 7 mm, at the age of 2 – 5 mm, at the age of 3 – hyperemia only, at the age of 4 – negative. On objective examination micropolyadenia, subfebrile fever are detected. Chest X-ray detected no abnormalities. The diagnosis of pre-local tuberculosis had been established and treatment course according to III category has been started. Patient received complete treatment course. After a year control X-ray detected several inclusions of high density in both hilar zones. The diagnosis retrospectively was changed into mild bronchodinitis. How could such phenomenon be explained?

- A. Lymphatic nodes less than 0.5 mm are not visible before consolidation.
- B. Enlarged lymphatic nodes were missed on first X-ray.
- C. Because of improper treatment pre-local tuberculosis progressed into mild bronchodinitis.
- D. Lymphatic nodes consolidation and calcification is the normal evolution of pre-local tuberculosis.
- E. It's individual reaction.

561.

The newborn's mass is 3000 g. No contraindications for BCG-vaccination detected. Which vaccine dosage do you recommend?

- A. 0.005 mg.
- B. 0.025mg.
- C. 0.05mg.
- D. 0.25 mg.
- E. 0.5 mg.

562.

The premature newborn's mass was 1700 g. Which BCG vaccine dosage do you recommend after 2300 g mass attainment?

- A. 0.05 mg.
- B. 0.005 mg.
- C. 0.25 mg.
- D. 0.025 mg.
- E. 0.5 mg.

563.

The nurse is performing BCG-vaccination. Choose the type and correct place of injection.

- A. Intracutaneous at the border between upper and middle third of right humerus.
- B. Intracutaneous at the border between upper and middle third of left humerus.
- C. Subcutaneous at the border between upper and middle third of left humerus.
- D. Subcutaneous at the border between upper and middle third of right humerus.
- E. Intracutaneous into upper third of left humerus.

564.

The premature newborn is presented in order to define the term of BCG-vaccination. The previous child in this family suffered from BCG-ostitis. What's your conclusion about the term of vaccination?

- A. After 2300 g mass attainment.
- B. At the age of 3 month.
- C. At the age of 3 month.
- D. Vaccination is contraindicated.
- E. After 3000 g mass attainment.

565.

26-year-old woman recovered from pulmonary infiltrative tuberculosis 2 year before, parturied a healthy baby. Which is the most advisable decision concerning BCG vaccination?

- A. Permitted at ordinal term.
- B. Prohibited.
- C. After 3-month isoniazid course.
- D. After Mantoux skin test at the age on 3<sup>rd</sup> month.
- E. After Mantoux skin test at the age on 3-5<sup>th</sup> day.

566.

14-year-old girl known to be BCG-vaccinated is presented with cheloid cicatrix at the left humerus. How could this finding be qualified?

- A. It isn't related to BCG, cicatrix appearance is due to other intervention or accidental wound.
- B. Generalized BCG complication.
- C. Post-BCG syndrome.
- D. Local BCG complication.
- E. Disseminated BCG complication.

567.

Healthy woman exposed by close TB contact (husband suffers from pulmonary tuberculosis) parturied a healthy newborn with body mass 3100 g. What's your decision concerning to BCG-vaccination?

- A. Vaccination after 3 month preventive antituberculosis course if Mantoux skin test is negative.
- B. Vaccination on 3-5 day of life if Mantoux skin test is negative.
- C. Vaccination after 3 month preventive antituberculosis course regardless Mantoux skin test.
- D. Vaccination on 3-5 day of life without prerequisites, strict bacterial discharger separation from infant.
- E. Vaccination on 3-5 day of life without prerequisites, subsequent Mantoux skin test.

568.

The 4-day healthy newborn presented for decision concerning to BCG vaccination. Grandmother died of chronic MDR-tuberculosis 2 month ago. Which of the decisions is correct?

- A. Vaccination is strictly indicated. Infant can be discharged home only after final hotbed disinfection and all family members check up.
- B. Vaccination is contraindicated.

- C. Vaccination is strictly indicated. Consecutive treatment course for tuberculosis taking the grandmother resistance profile into consideration must be administered.
- D. Decision concern vaccination should be taken after isoniazid preventive course.
- E. Decision concern vaccination should be taken after Mantoux test.

569.

Healthy 3-day neonate has been vaccinated by BCG-vaccine. Which of normal reactions is expected?

- A. Transient regional lymphatic nodes enlargement.
- B. Skin reaction at the place of injection.
- C. Transient subfebrile fever, slight different group lymphatic nodes enlargement.
- D. Transient liver and spleen enlargement.
- E. Slight cough.

570.

31-year-old female presented with disseminated pulmonary tuberculosis MBT+ (M-, C+). Patient lives with her family including adults only, living standard is satisfactory. Patient is been treated in hospital. Appreciate the level of the tuberculosis hotbed epidemiological hazard.

- A. High.
- B. Unknown.
- C. Moderate.
- D. Doubtful.
- E. Low.

571.

Choose the most advisable preventive measures for 13-year-old child exposed by contact with father suffering from MBT+ tuberculosis taking into account that on examination active tuberculosis is excluded, Mantoux skin test papule is 17 mm in diameter. The child hasn't received the revaccination at the age of 7 because of positive tuberculin test.

- A. Separation from father, isoniazid preventive course.
- B. Observation, immunomodulator administration.
- C. Separation from father, revaccination.
- D. Observation, revaccination.
- E. Follow-up Mantoux test observation in order to conclude whether preventive treatment is advisable.

572.

Choose the most advisable preventive measures for 5-year-old child exposed by contact with mother suffering from MBT+ tuberculosis taking into account that on examination active tuberculosis is excluded, Mantoux skin test is negative for last 4 year and the child received vaccination on 3<sup>rd</sup> day of life (scar size 3 mm).

- A. Separation from mother, revaccination.
- B. Observation, immunomodulator administration.
- C. Separation from mother, isoniazid preventive course.
- D. Observation, revaccination.
- E. Follow-up Mantoux test observation in order to conclude whether preventive treatment is advisable.

573.

The preventive antituberculosis measures among children having hyperergic Mantoux skin test reaction are planning. Which children haven't to receive antituberculosis drug preventive course?

- A. Suffering from asthma, diabetes mellitus.
- B. Exposed by close contact with bacteria discharger.

- C. Showed Mantoux skin test conversion.
- D. Showed Mantoux skin test sensitivity increasing.
- E. With detected active tuberculosis.

574.

Three 3 year-old children presented after Mantoux skin test. All received BCG vaccination on 3<sup>rd</sup> day of live. Who of them is at risk of tuberculosis? No additional risk factors have been revealed.

- A. At the moment papule is 8 mm, previous year 10 mm.
- B. At the moment papule is 6 mm, previous year 8 mm.
- C. At the moment papule is 4 mm, previous year 6 mm.
- D. All are.
- E. Nobody.

575.

Three 6-year-old children presented after Mantoux skin test. All received BCG vaccination on 3<sup>rd</sup> day of life. Who of them is at risk of tuberculosis? No additional risk factors have been revealed.

- A. At the moment papule is 8 mm, previous year results: at the age of 1 – 5mm, 2 – 9 mm, 3 – 7 mm, 4 – 5 mm, 5 – hyperemia only.
- B. At the moment papule is 5 mm with vesicle, previous year results: at the age of 1 – 11 mm, 2 – 10 mm, 3 – 6 mm, 4 – 5 mm, 5 – 12mm.
- C. At the moment papule is 13 mm, previous year results: at the age of 1 – 5 mm, 2 – 7 mm, 3 – 15 mm, 4 – 12 mm, 5 – 7 mm.
- D. All are.
- E. Nobody.

576.

30-year-old healthy woman with body weight 55 kg from tuberculosis hotbed is presented. Choose the adequate dosage and taking regimen for isoniazid preventive course.

- A. 0.6 g per day for two month twice a year.
- B. 0.3 g per day for three month twice a year.
- C. 0.3 g per day for two month once a year.
- D. 0.6 g per day for three month once a year.
- E. All are acceptable.

577.

Cultural test detected MDR tuberculosis in patient suffering from fibrous-cavernous for 5 year, who received several treatment courses without significant effect. All family members were examined, no tuberculosis cases were detected. Choose the most advisable preventive course for these people.

- A. Ethambutol -15-20 mg/kg + pyrasinamide - 20-25 mg/kg for 3 months.
- B. Isoniazid 5-10 mg/kg for 6 months.
- C. Isoniazid 5-10 mg/kg + rifampicin 10 mg/kg for 3 months.
- D. Rifampicin 10 mg/kg for 3 months.
- E. All are advisable.

578.

7-year-old child without discovered risk factors for tuberculosis presented after Mantoux test conversion. Clinical investigation ruled active tuberculosis out. What's the most advisable dealing?

- A. Treatment according to I category.
- B. Isoniazid preventive course.
- C. Treatment according to III category.

- D. Rifampicin preventive course.
- E. Observation only.

579.

6-year-old child with body weight 30 kg from tuberculosis hotbed is presented. Father has been hospitalized with disseminated tuberculosis, MBT+.(M+, C0). Choose the adequate dosage and taking regimen for isoniazid preventive course.

- A. 0.15 g per day for six month.
- B. 0.15 g per day for two month once a year.
- C. 0.3 g per day for six month.
- D. 0.3 g per day for two month once a year.
- E. 0.6 g per day for two month once a year.

580.

The 4-day premature newborn presented for decision concerning to BCG vaccination. Body mass 2000 g. Which of the decisions is correct?

- A. Vaccination is indicated.
- B. Vaccination is contraindicated.
- C. Vaccination should be delayed until body mass 2500 g attainment if Mantoux test is negative at that moment.
- D. Decision concern vaccination should be taken after isoniazid preventive course.
- E. Vaccination should be delayed until body mass 3000 g attainment, regardless Mantoux test result.

581.

33-year-old male presented with subacute disseminated tuberculosis MBT+ (M-, C+). Patient lives with his family, including two children of 3 and 12 years old. In 10 months after treatment start, two negative culture results received, and completed clinical recovering established. How long the epidemiological hazard in the hotbed exists?

- A. Two year after negative culture result.
- B. One year after negative culture result.
- C. During the total treatment course.
- D. During the initial treatment phase.
- E. Stays forever.

582.

The family including father suffering from MBT- (by ZN-test) tuberculosis and two children of 5 and 10 year old lives in a separated house. Appreciate the level of the tuberculosis hotbed epidemiological hazard.

- A. Doubtful.
- B. Low.
- C. Moderate.
- D. High.
- E. Unknown.

583.

The danger of tuberculosis hotbed is appreciating. Which ranking criterion is of top priority?

- A. Nationality.
- B. Children, adolescents, pregnant women presence.
- C. Living standards.
- D. Income.

E. Bacteria discharging.

584.

The patient is presented with pulmonary tuberculosis. The tuberculosis hotbed hazard is appreciating. Which criterion SHOULD N'T be taken into account?

- A. Bacterial expectoration.
- B. Clinical form of tuberculosis.
- C. Living standards.
- D. Presence of children and pregnant women.
- E. Behavioral peculiarities.

585.

31-year-old female presented with infiltrative pulmonary tuberculosis MBT+ (M-, C+). Patient lives with her family including adults only, living standard is satisfactory. Patient is been treated in hospital. Appreciate the level of the tuberculosis hotbed epidemiological hazard.

- A. Doubtful.
- B. Moderate.
- C. Unknown.
- D. High.
- E. Low.

586.

31-year-old male presented with infiltrative pulmonary tuberculosis MBT+ (M-, C+), resist+(H,R,S). Patient lives with her family including adults only, living standard is satisfactory. Appreciate the level of the tuberculosis hotbed epidemiological hazard.

- A. High.
- B. Moderate.
- C. Unknown.
- D. Doubtful.
- E. Low.

587.

31-year-old female presented with infiltrative pulmonary tuberculosis MBT+ (M+, C+). Patient lives with her family including adults only, living standard is satisfactory. Patient is being treated in hospital. Appreciate the level of the tuberculosis hotbed epidemiological hazard.

- A. High.
- B. Moderate.
- C. Unknown.
- D. Doubtful.
- E. Low.

588.

31-year-old male finished the initial phase of treatment course for infiltrative pulmonary tuberculosis MBT+, dis+(M-, C+), resist-. Control cultural test result isn't obtained yet but cavity formation scarred. Patient lives with her family including adults only, living standard is satisfactory. Appreciate the level of the tuberculosis hotbed epidemiological hazard.

- A. High.
- B. Moderate.
- C. Low.
- D. Doubtful.

E. Unknown.

589.

31-year-old male presented with infiltrative pulmonary tuberculosis. Sputum ZN-staining is negative, but cultural test result isn't obtained yet. Patient lives with his family including a child at the age of 5 and pregnant wife, living standard is satisfactory. Appreciate the level of the tuberculosis hotbed epidemiological hazard.

- A. High.
- B. Moderate.
- C. Unknown.
- D. Doubtful.
- E. Low.

590.

New antituberculosis institution is been equipping. Which type of environmental control should be recommended for laboratory facilities?

- A. Air filtration.
- B. Directed air flow.
- C. Natural ventilation.
- D. Negative pressure.
- E. UV irradiation.

591.

The farm with cattle sick with tuberculosis caused by *Mycobacteria bovis* detected. Appreciate the level of the tuberculosis hotbed epidemiological hazard.

- A. Doubtful.
- B. Low.
- C. Unknown.
- D. High.
- E. Moderate.

592.

80-year-old patient presented with testis tuberculosis. He lives with his 50-year-old daughter. Appreciate the hotbed potential danger.

- A. Low.
- B. Moderate.
- C. High.
- D. Unknown.
- E. Doubtful.

593.

Spouses suffering from tuberculosis lives in the separate house. Both excrete mycobacteria occasionally, show high treatment compliance. Appreciate the level of the tuberculosis hotbed epidemiological hazard.

- A. Doubtful.
- B. Low.
- C. Moderate.
- D. High.
- E. Unknown.

594.

35-year-old patient presented with infiltrative lung tuberculosis, MBT-. He lives with his pregnant wife. Appreciate the hotbed potential danger.

- A. Low.
- B. Moderate.
- C. High.
- D. Unknown.
- E. Doubtful.

595.

The nurse is conducting sanitary education in the tuberculosis hotbed. Which recommendation concern to sputum processing should be done?

- A. Putting into sewage.
- B. Collecting into tissue with consecutive wash.
- C. Collecting into changeable vial with consecutive UV-irradiation.
- D. Collecting into changeable vial with consecutive high-temperature processing.
- E. Collecting into a disposable container with consecutive throwing away.

596.

The danger of tuberculosis hotbed is appreciating. Which criterion is the most aggravating?

- A. Nationality.
- B. Profession.
- C. Gender of the patient discharging mycobacteria.
- D. Education.
- E. Children, adolescents, pregnant women presence.

597.

TB-patient is supposed to be massive MBT discharger according to sputum cultural test. Which amount of colonies does such conclusion presume?

- A. 100-200 .
- B. 200-500.
- C. More than 500.
- D. All of the above.
- E. Any of the above.

598.

Patient who had suffered from chronic tuberculosis died at home. Which measure to decrease disease transmission inside this hotbed should be taken?

- A. Repairs.
- B. Disinfectants dispersion.
- C. Usual cleansing.
- D. Cleansing using chlorine solution.
- E. UV processing.

599.

TB-patient is supposed to be insignificant MBT discharger according to sputum ZN-staining. Which amount test result does such conclusion presume?

- A. Solitary AFB on slide.
- B. Cannot be appreciated on staining only, cultural test is needed.
- C. Solitary AFB on field of view.
- D. Up to 10 AFB on slide.
- E. Negative.



600.

New antituberculosis institution is been equipping. Which cleaning assertion concerned to upholstered furniture should be recommended?

- A. It should be washed daily.
- B. It should be processed by UV radiation.
- C. It should be avoided.
- D. It should be processed by disinfectants.
- E. It should be removed when bacteria discharger is not wearing mask.

## CORRECT ANSWERS

1. C 26. D 51. A 76. A 101. A 126. B 151. B 176. D  
 2. E 27. A 52. E 77. D 102. E 127. A 152. E 177. C  
 3. A 28. C 53. B 78. A 103. A 128. A 153. A 178. B  
 4. C 29. D 54. C 79. B 104. B 129. E 154. D 179. D  
 5. B 30. A 55. A 80. C 105. D 130. E 155. A 180. C  
 6. A 31. D 56. C 81. D 106. B 131. C 156. B 181. D  
 7. A 32. A 57. C 82. A 107. A 132. B 157. D 182. B  
 8. E 33. B 58. A 83. B 108. C 133. D 158. C 183. E  
 9. C 34. E 59. C 84. C 109. B 134. A 159. A 184. A  
 10. E 35. D 60. E 85. D 110. E 135. A 160. C 185. B  
 11. D 36. B 61. B 86. A 111. C 136. C 161. C 186. B  
 12. A 37. E 62. A 87. B 112. B 137. D 162. C 187. E  
 13. B 38. B 63. E 88. E 113. D 138. E 163. C 188. C  
 14. A 39. A 64. B 89. D 114. D 139. B 164. C 189. D  
 15. E 40. C 65. A 90. A 115. A 140. A 165. E 190. E  
 16. C 41. A 66. C 91. E 116. E 141. E 166. C 191. C  
 17. A 42. B 67. B 92. C 117. A 142. E 167. C 192. A  
 18. E 43. A 68. E 93. A 118. C 143. B 168. E 193. E  
 19. B 44. D 69. E 94. B 119. D 144. D 169. C 194. B  
 20. A 45. B 70. B 95. B 120. B 145. C 170. B 195. C  
 21. C 46. A 71. A 96. A 121. E 146. D 171. B 196. B  
 22. C 47. B 72. C 97. C 122. B 147. A 172. A 197. D  
 23. B 48. C 73. D 98. E 123. E 148. D 173. D 198. A  
 24. B 49. D 74. A 99. D 124. C 149. E 174. A 199. C  
 25. E 50. A 75. D 100. D 125. D 150. A 175. E 200. E

201. A 226. D 251. C 276. E 301. A 326. A 351. C 376. C  
 202. D 227. D 252. D 277. D 302. B 327. B 352. A 377. D  
 203. D 228. C 253. E 278. A 303. C 328. A 353. B 378. E  
 204. A 229. A 254. E 279. B 304. D 329. D 354. C 379. B  
 205. C 230. D 255. A 280. E 305. D 330. D 355. E 380. B  
 206. C 231. A 256. D 281. E 306. E 331. A 356. D 381. A  
 207. C 232. D 257. C 282. D 307. C 332. E 357. A 382. B  
 208. C 233. B 258. A 283. D 308. A 333. E 358. B 383. C  
 209. A 234. A 259. A 284. C 309. B 334. A 359. C 384. D  
 210. E 235. C 260. D 285. A 310. A 335. B 360. D 385. E  
 211. B 236. E 261. D 286. B 311. E 336. C 361. C 386. B  
 212. B 237. D 262. E 287. B 312. C 337. D 362. B 387. D  
 213. C 238. E 263. B 288. E 313. D 338. B 363. E 388. C  
 214. D 239. B 264. C 289. C 314. B 339. A 364. A 389. A  
 215. C 240. E 265. D 290. A 315. E 340. A 365. C 390. C  
 216. D 241. A 266. D 291. E 316. B 341. B 366. D 391. A  
 217. B 242. C 267. C 292. D 317. E 342. B 367. A 392. B  
 218. D 243. C 268. D 293. A 318. C 343. C 368. D 393. D  
 219. C 244. A 269. D 294. C 319. D 344. D 369. B 394. E  
 220. B 245. C 270. E 295. B 320. D 345. D 370. E 395. A  
 221. D 246. A 271. E 296. D 321. C 346. A 371. B 396. D  
 222. D 247. D 272. D 297. B 322. D 347. E 372. C 397. C  
 223. B 248. B 273. E 298. A 323. B 348. C 373. A 398. D  
 224. C 249. C 274. E 299. D 324. E 349. E 374. E 399. A  
 225. A 250. A 275. B 300. E 325. C 350. B 375. A 400. B

401. B 426. C 451. B 476. A 501. B 526. A 551. E 576. B  
 402. E 427. A 452. D 477. E 502. C 527. E 552. B 577. A  
 403. C 428. B 453. B 478. B 503. A 528. A 553. A 578. B  
 404. D 429. E 454. C 479. D 504. D 529. E 554. C 579. A  
 405. A 430. B 455. E 480. C 505. C 530. B 555. D 580. C  
 406. E 431. D 456. E 481. A 506. A 531. E 556. A 581. B  
 407. B 432. A 457. D 482. B 507. B 532. A 557. E 582. D  
 408. C 433. E 458. E 483. E 508. E 533. C 558. B 583. E  
 409. A 434. C 459. A 484. B 509. A 534. D 559. E 584. B  
 410. A 435. A 460. B 485. A 510. B 535. C 560. A 585. B  
 411. D 436. A 461. D 486. C 511. E 536. B 561. C 586. A  
 412. E 437. B 462. E 487. D 512. C 537. E 562. D 587. A  
 413. B 438. D 463. E 488. E 513. B 538. A 563. B 588. C  
 414. A 439. E 464. C 489. E 514. B 539. D 564. E 589. C  
 415. B 440. A 465. C 490. B 515. D 540. E 565. A 590. D  
 416. D 441. A 466. A 491. D 516. E 541. C 566. C 591. E  
 417. D 442. D 467. A. 492. D 517. C 542. E 567. D 592. A  
 418. C 443. B 468. D 493. A 518. D 543. B 568. A 593. B  
 419. C 444. D 469. E 494. A 519. A 544. A 569. B 594. C  
 420. B 445. E 470. E 495. B 520. C 545. B 570. C 595. D  
 421. B 446. C 471. C 496. E 521. B 546. D 571. A 596. E  
 422. A 447. A 472. E 497. D 522. E 547. D 572. C 597. D  
 423. E 448. C 473. B 498. A 523. E 548. E 573. E 598. A  
 424. D 449. E 474. D 499. E 524. E 549. C 574. E 599. B  
 425. D 450. B 475. C 500. B 525. B 550. A 575. D 600. C

## EXERCISES CORRESPONDENCE TO THE VI COURSE TOPICS

1. Tuberculosis epidemiology. Tuberculosis as a global humanity challenge.

34, 44, 126, 131, 146, 154, 218, 261, 293, 301, 306, 308, 314, 340, 345, 346, 349, 371, 372, 379, 384, 392, 416, 421, 469, 483, 506, 581.

2. General approach for case detecting.

1, 2, 3, 4, 5, 6, 7, 11, 15, 17, 20, 25, 27, 28, 29, 41, 47, 63, 65, 67, 72, 73, 75, 78, 79, 81, 82, 84, 85, 89, 90, 91, 99, 100, 106, 114, 115, 121, 122, 125, 127, 128, 130, 138, 142, 145, 147, 149, 152, 156, 157, 162, 163, 167, 169, 174, 178, 179, 181, 182, 183, 184, 185, 186, 187, 190, 191, 192, 193, 195, 196, 197, 198, 199, 207, 208, 209, 210, 212, 214, 217, 220, 239, 240, 242, 262, 263, 264, 265, 266, 267, 268, 269, 270, 275, 276, 279, 280, 287, 295, 296, 297, 298, 299, 300, 302, 303, 307, 308, 309, 311, 312, 313, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 328, 329, 330, 332, 333, 338, 341, 342, 343, 344, 347, 348, 350, 351, 354, 355, 356, 358, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 387, 388, 389, 390, 391, 397, 398, 399, 400, 401, 404, 405, 406, 409, 417, 418, 419, 420, 421, 423, 424, 425, 426, 427, 429, 432, 433, 434, 435, 437, 440, 441, 447, 450, 451, 452, 453, 454, 455, 456, 458, 460, 462, 463, 464, 465, 466, 467, 470, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 497, 505, 506, 507, 508, 509, 511, 516, 517, 520, 521, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 560, 574, 575.

3. Primary tuberculosis definition and clinical types. Pre-local tuberculosis. Bronchial lymph nodes tuberculosis. Primary tubercle complex. Clinical feature, radiological finding, treatment, outcomes. Complications. Differential diagnosis. Disseminated tuberculosis. Miliary tuberculosis. Tuberculosis of nervous system and meninges. Clinical variants and outcomes. Differential diagnosis. Tubercle pleurisy.

9, 10, 14, 15, 17, 25, 33, 43, 58, 60, 63, 67, 86, 89, 102, 104, 105, 106, 107, 114, 115, 116, 142, 168, 169, 170, 174, 175, 177, 179, 180, 181, 182, 183, 184, 185, 186, 190, 191, 193, 194, 196, 197, 198, 199, 200, 261, 263, 265, 267, 269, 288, 304, 305, 316, 318, 341, 342, 343, 344, 348, 352, 353, 354, 355, 356, 357, 358, 360, 365, 368, 373, 430, 431, 432, 474, 475, 476, 478, 481, 482, 485, 486, 487, 488, 489, 490, 491, 492, 493, 500, 501, 534, 552, 553, 554, 555, 556, 557, 558, 560.

4. Post-primary tuberculosis clinical types. Tuberculosis complications.

1, 2, 3, 4, 5, 6, 7, 12, 13, 18, 19, 21, 24, 26, 27, 28, 30, 31, 32, 35, 38, 39, 40, 41, 42, 44, 45, 50, 54, 56, 59, 60, 61, 62, 68, 70, 74, 76, 81, 85, 87, 88, 91, 95, 96, 97, 98, 99, 101, 103, 111, 112, 113, 119, 120, 123, 125, 127, 128, 129, 133, 134, 136, 139, 150, 155, 158, 159, 160, 164, 165, 166, 176, 178, 189, 195, 203, 205, 208, 209, 212, 213, 220, 239, 240, 262, 266, 267, 270, 272, 273, 274, 276, 279, 282, 286, 312, 313, 321, 322, 323, 324, 326, 328, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 359, 382, 385, 391, 401, 422, 423, 425, 427, 428, 429, 433, 434, 435, 436, 437, 438, 439, 440, 444, 445, 447, 452, 453, 456, 458, 459, 460, 465, 467, 468, 472, 473, 476, 479, 480, 484, 505, 506, 507, 508, 510, 516, 526, 528, 529, 530, 531, 548, 549.

5. Principles and approaches to tuberculosis treatment. Prophylaxis. Tuberculosis associated with other disease.

1, 2, 8, 10, 11, 14, 16, 23, 29, 45, 48, 49, 51, 52, 55, 56, 58, 64, 71, 77, 80, 83, 87, 92, 93, 94, 105, 108, 109, 110, 117, 120, 131, 132, 135, 137, 140, 141, 144, 146, 148, 153, 154, 161, 162, 171, 172, 173, 175, 188, 200, 201, 208, 218, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 232, 233, 234, 235, 236, 237, 238, 239, 241, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 287, 310, 316, 327, 329, 336, 337, 339, 340, 347, 353, 386, 389, 392, 393, 394, 395, 396, 402, 403, 404, 406, 407, 408, 410, 411, 412, 413, 414, 415, 428, 430, 436, 441, 442, 443, 444, 445, 448, 449, 456, 457, 461, 463, 466, 470, 471, 494, 495, 496, 497, 498, 499, 500, 502, 503, 504, 512, 513, 514, 515, 519, 520, 522, 527, 529, 536, 555, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594.

6. Critical conditions care in pulmonary tuberculosis clinics at adults, children and adolescents.

22, 37, 46, 53, 57, 66, 69, 118, 124, 129, 143, 149, 151, 202, 204, 206, 210, 211, 215, 216, 217, 219, 222, 239, 271, 281, 282, 283, 284, 285, 287, 289, 290, 291, 411, 518.