

**FEDERAL STATE BUDGET EDUCATIONAL
HIGHER EDUCATION INSTITUTION
"ROSTOV STATE MEDICAL UNIVERSITY"
MINISTRY OF HEALTH OF THE RUSSIAN FEDERATION**

FACULTY
TREATMENT AND PREVENTIVE

Evaluation materials
in the discipline "Propaedeutics of internal diseases"

(appendix to the work program of the discipline)

Speciality 05/31/01 General medicine

1. List of competencies formed by practice

general professional (OPK):

Code and name of general professional competence
OPK - 4 Able to use medical devices provided for in the procedure for providing medical care, as well as conduct examinations of the patient in order to establish a diagnosis
OPK - 7 Able to prescribe treatment and monitor its effectiveness and safety

2. Types of assessment materials in accordance with the competencies being developed

Name competencies	Types of assessment materials	number of tasks for 1 competency
OPK - 4 OPK - 7	<u>Open type tasks:</u> Selection tasks correct answer; Situational tasks <u>Closed type tasks:</u> Test tasks	75 with sample answers 25 with sample answers

OPK - 4; OPK - 7

Open type tasks:

Task 1. Instructions: enter the correct answer.

During examination, the doctor makes a diagnosis of _____ when detecting curvature of the spine to the side and posteriorly:

Response standard: Kyphoscoliosis.

Task 2. Instructions: enter the correct answer.

The maximum width of the Craning fields normally reaches ____ centimeters:

Response standard: Eight.

Task 3. Instructions: enter the correct answer.

Upon examination, an enlargement of the thyroid gland was revealed and its size on palpation exceeded the size of the distal phalanx of the patient's finger. The doctor determined the ____ degree of goiter:

Response standard: Second.

Task 4. Instructions: enter the correct answer.

With bronchospasm, whistling _____ wheezing is heard over the entire surface of the lungs:

Response standard: Dry.

Task 5. Instructions: enter the correct answer.

Normally, when the elastic walls of the alveoli are straightened over the surface of the lungs, _____ breathing is heard:

Response standard: Vesicular.

Task 6. Instructions: enter the correct answer.

Normally, in the jugular notch, when air swirls above and below the vocal cords, _____ breathing is heard:

Response standard: Bronchial.

Task 7. Instructions: enter the correct answer.

In case of lobar pneumonia in the flushing stage (impregnation of the walls of the alveoli with exudate), _____ can be heard above the lesion:

Response standard: Crepitation.

Task 8. Instructions: enter the correct answer.

With exudative pleurisy with accumulation of fluid in the pleural cavity, a _____ sound appears during percussion:

Response standard: Blunt.

Task 9. Instructions: enter the correct answer.

In bronchial asthma with an increase in the airiness of the lung tissue, upon percussion, _____ sound is determined:

Response standard: Boxed.

Task 10. Instructions: enter the correct answer.

Above a cavity in the lung with smooth walls and a diameter of more than 3 centimeters, located close to the surface of the chest in a patient with tuberculosis, upon percussion you can determine the _____ sound:

Response standard: Tympanic.

Task 11. Instructions: enter the correct answer.

When percussing the chest in phase 2 in a patient with a lung abscess, when it is not completely emptied above the affected area, a _____ sound can be detected:

Response standard: Dull – tympanic.

Task 12. Instructions: enter the correct answer.

The Rauchfuss-Grocco triangle with fluid accumulation in the pleural cavity is a zone corresponding to: _____

Response standard: Displacement of mediastinal organs to the healthy side.

Task 13. Instructions: enter the correct answer.

The X-ray picture of pulmonary emphysema corresponds to _____ airiness of the pulmonary fields:

Response standard: Promotion.

Task 14. Instructions: enter the correct answer. Dietrich's plugs consist of _____ pieces of lung tissue: *Response standard:* Necrotic.

Task 15. Instructions: enter the correct answer.

A mechanical obstruction in the upper respiratory tract causes _____ shortness of breath:

Response standard: Inspiratory.

Task 16. Instructions: enter the correct answer.

The effectiveness of taking nitroglycerin for stable angina: _____ *Sample answer:* Disappearance of pain through 1-3 min.

Task 17. Instructions: enter the correct answer.

Diastolic "cat purring" at the apex of the heart - sign: _____ *Sample answer:* Mitral valve stenosis.

Task 18. Instructions: enter the correct answer.

The appearance of a negative apex beat is a symptom of: _____

*Sample answer:*Adhesive pericarditis.

Task 19. Instructions: enter the correct answer.

The left contour of the heart in the frontal projection is presented: _____

Response standard: Descending part of the aortic arch, pulmonary trunk, left atrial appendage, left ventricle.

Task 20. Instructions: enter the correct answer. The main criteria for stable angina are: _____

*Sample answer:*Attacks of chest pain of a squeezing or pressing nature, provoked by physical activity and relieved by taking nitroglycerin for 1-3 minutes.

Task 21. Instructions: enter the correct answer.

The main diagnostic sign of stable angina is: _____ *Sample answer:* Stereotype of the occurrence and course of pain syndrome.

Task 22. Instructions: enter the correct answer.

Heart failure is: _____

*Sample answer:*Inability of the heart to provide perfusion of organs and tissues, necessary for normal functioning both at rest and during physical activity, without the participation of additional compensatory mechanisms.

Task 23. Instructions: enter the correct answer.

ECG signs of small focal myocardial infarction are as follows: _____

*Sample answer:*segment depression S-T, the appearance of a negative or biphasic T wave in dynamics, the QRS complex does not change (changes persist for at least 2 weeks).

Task 24. Instructions: enter the correct answer. Signs of polyarthritis in ARF are as follows: _____

*Sample answer:*Acute onset, damage to large joints, symmetry of damage joints, migrating nature of pain, absence of organic changes in joints, rapid response to etiological treatment (antibacterial therapy).

Task 25. Instructions: enter the correct answer.

Clinical variants of myocardial infarction include: _____ *Sample answer:* Anginal, abdominal, asthmatic, arrhythmic, cerebrovascular, peripheral, asymptomatic, combined.

Task 26. Instructions: enter the correct answer.

The leading mechanism of edema in nephrotic syndrome is _____ oncotic pressure of blood plasma:

Response standard: Decrease.

Task 27. Instructions: enter the correct answer.

Chronic renal failure is not characterized by _____: *Response standard:* Hypersthenuria.

Task 28. Instructions: enter the correct answer.

Normal daily diuresis is _____% of the volume of fluid drunk: *Response standard:* 65-75%.

Task 29. Instructions: enter the correct answer.

_____ glomerular filtration rate is a reliable sign of chronic kidney disease:

Response standard: Decrease.

Task 30. Instructions: enter the correct answer.

_____ is the inability to empty the bladder (urinary retention): *Response standard:* Ishuria.

Task 31. Instructions: enter the correct answer.

With _____ - leukemia, the patient has anemia, thrombocytopenia, blastosis in the peripheral blood:

Response standard: Ostrom.

Task 32. Instructions: enter the correct answer.

For B12-deficiency anemia, the nature of _____ type of hematopoiesis:

Response standard: Megaloblastic.

Task 33. Instructions: enter the correct answer.

Anisocytosis is a change in the _____ of an erythrocyte:

Response standard: Diameter.

Task 34. Instructions: enter the correct answer.

Hemorrhagic syndrome in the form of petechiae and ecchymosis is characteristic of _____:

Response standard: Thrombocytopenia.

Task 35. Instructions: enter the correct answer. The hyporegenerative nature of anemia indicates _____ hematopoiesis: *Response standard:* Aplasia.

Task 36. Instructions: Give answers to the questions.

Task. Patient K., 36 years old, has a fever of up to 38.5 C₀, cough with rusty sputum, pain in the right side of the chest. On examination, there was a lag in the act of breathing on the right half of the chest, dullness on percussion in the lower parts of the lungs along the paravertebral and scapular line from the 7th rib, and on auscultation – crepitus.

Questions for the problem:

1. What data indicate lobar compaction syndrome of pulmonary tissue.
2. What is the reason for the appearance of “rusty” color in the patient’s sputum?

Response standard:

1. Data: lag of the right half of the chest in the act of breathing, dullness of percussion sound, the presence of crepitus indicate the syndrome of lobar compaction of the pulmonary tissue.
2. The color of sputum is due to the appearance of hemosiderin in sputum during the stage of red hepatization in lobar pneumonia.

Task 37. Instructions: Give answers to the questions.

Task. In patient A., 45 years old, with complaints of asthma attacks during the flowering period of poplars, examination revealed a barrel-shaped chest, percussion box sound over the entire surface of the lungs, Krenig fields up to 8 cm, lowering of the borders of the lungs by 1 cm along all lines. Auscultation – dry, wheezing wheezing over the entire surface of the lungs.

Questions for the problem:

1. What disease is indicated by complaints and physical examination data.

2. Specify the leading diagnostic method for bronchial obstruction syndrome with bronchial asthma.

Response standard:

1. Complaints (attacks of suffocation), physical examination data (barrel-shaped chest, boxy percussion sound, drooping of the borders of the lungs on both sides, expansion of Krenig's fields, dry and wheezing rales) indicate the presence of bronchial asthma.

2. The leading diagnostic method is spirometry (to confirm the hypothesis of airflow limitation, a decrease in FEV is important, and FEV ratios₁/FZZL less than 80%).

Task 38. Instructions: Give answers to the questions.

Task. Patient S., 62 years old, with complaints of dry mouth, polyuria up to 3 liters per day, underwent a glucose tolerance test, where blood sugar is determined on an empty stomach and 2 hours after a glucose load.

Questions for the problem:

1. What disease does the patient's complaints indicate?

2. What glucose level will indicate confirmation of the diagnosis. *Response standard:*

1. Patient complaints of dry mouth, polyuria up to 3 liters may indicate diabetes mellitus.

2. Based on the results of a glucose tolerance test, a glucose level of more than 11 mmol/l confirms the diagnosis of diabetes mellitus.

Task 39. Instructions: Give answers to the questions.

Task. A patient complains of shortness of breath after a chest injury. On examination, there is bulging of the intercostal spaces on the right and lag of this half of the chest during breathing. Percussion to the level of the 3rd rib produces a tympanic sound. Auscultation revealed the absence of vesicular breathing on the right and no breath sounds.

Questions for the problem:

1. What pulmonary syndrome does the physical examination indicate?

2. What additional research is needed to confirm the physical examination data and establish a final diagnosis.

Response standard:

1. Detection during examination - bulging of the intercostal spaces on the right and lag of this half of the chest when breathing, a tympanic sound during percussion and the absence of respiratory sounds are signs of pneumothorax syndrome.
2. To confirm the diagnosis, an X-ray examination of the chest organs is necessary (absence of vessels in the peripheral parts of the lung on the affected side; collapse of the lung; displacement of the mediastinum, change in the position of the diaphragm).

Task 40. Instructions: Give answers to the questions.

Task. Patient N., 28 years old, has attacks of shortness of breath with difficulty exhaling while working in a hairdresser while spraying hairspray. From the anamnesis: diathesis, hay fever since childhood. I do not smoke. Objectively: Percussion above the lungs reveals a clear pulmonary sound. The boundaries in the lungs are within normal limits. Auscultation reveals vesicular breathing, no wheezing.

Questions for the problem:

1. What pulmonary syndrome does the patient's complaints indicate?
2. Indicate the possible causes of attacks and the necessary diagnostic methods to confirm this.

Response standard:

1. According to the complaints, bronchial obstruction syndrome (bronchospasm, hypersecretion of mucus and inflammatory swelling of the bronchial mucosa) was identified.
2. The cause of attacks is presumably contact with environmental allergens (poplar fluff, occupational allergens - aerosols (varnishes and paints in a hairdresser's)). To confirm the diagnosis, it is necessary to conduct allergy tests (scarification intradermal tests with possible allergens).

Task 41. Instructions: Give answers to the questions.

Task. Patient N., 42 years old, complains of: shortness of breath with difficulty exhaling when walking on level ground, cough in the morning after getting out of bed, periodic release of mucous sputum. From the anamnesis: he has been smoking 20–30 cigarettes a day since the age of 16. Denies cardiovascular disease. Objectively: Percussion above the lungs reveals a clear pulmonary sound. Examination revealed thickening of the terminal phalanges of the fingers and flattening of the nail plate. NPV 22 per minute. There is harsh breathing in the lungs, dry wheezing of high and low timbre.

Questions for the problem:

1. What complaints indicate bronchial obstruction syndrome.

2. Specify the leading diagnostic method and the data required for confirmation hypotheses about the nature of the disease.

Response standard:

1. Complaints are related to partially irreversible airflow limitation – shortness of breath with difficulty exhaling.
2. The leading diagnostic method is spirometry (to confirm the hypothesis of airflow limitation, a decrease in FEV is important¹, and FEV ratios¹/FZZL less than 70%).

Task 42. Instructions: Give answers to the questions.

Task. Patient N., 32, 2 weeks after suffering an acute respiratory disease, pain in the right half of the chest, increasing with breathing, coughing and decreasing when lying on the sore side, weakness, dry cough and fever up to 37.8°C. Objectively: lag of the right half of the chest in the act of breathing. NPV 24 per minute. In the lower parts of the lungs on the right, a noise is detected, which is heard during inhalation and exhalation, does not change localization when coughing and persists during a test with imitation breathing (when holding the breath, movements of the anterior abdominal wall cause displacement of the layers of the visceral pleura).

Questions for the problem:

1. Specify the cause of pain in the right half of the chest.
2. Indicate objective data that confirm the assumption about the cause of the patient's pain syndrome.

Response standard:

1. The cause of complaints of pain in the right half of the chest may be damage to the pleura.
2. Damage to the pleura confirms the presence of noise (pleural friction noise), which is heard during inhalation and exhalation and persists during a test with imitation breathing.

Task 43. Instructions: Give answers to the questions.

Task. 2 weeks after the trip to the sea, patient N., 32 years old, began to complain of: palpitations during exercise and at rest, irritability, loss of body weight (by 3 kg over the last 2-3 months) against the background of good appetite and increased body temperature up to 37.5°C. A physical examination revealed the following deviations from the norm: pulse 115 per minute, rhythmic, heart rate 115 per minute. Blood pressure 145/80 mmHg. The thyroid gland upon examination and palpation is enlarged in size, displaceable,

painless, elastic consistency, mobile when swallowing. Marie's symptom (fine hand tremors) is noted.

Questions for the problem:

1. Indicate the possible cause of the patient's complaints.
2. Specify the leading diagnostic method.

Response standard:

1. A possible cause of the patient's complaints is diffuse toxic goiter.
2. The leading diagnostic method is a hormonal examination with the determination of thyroid hormones (TSH-thyroid-stimulating, thyroxine-T4, triiodothyronine-T3).

Task 44. Instructions: Give answers to the questions.

Task. Patient N., 62, with complaints of weakness, decreased performance, chilliness, drowsiness, decreased memory, decreased body temperature to 35.5. For 2 months during physical examination: pulse 50 per minute, heart rate 50 per minute. Blood pressure 110/70 mmHg. Upon examination and palpation, the thyroid gland is enlarged in size, displaceable, painless, dense-elastic consistency, mobile when swallowing. Marie's symptom (fine hand tremors) is negative. Teeth marks on the tongue, dry skin on the elbows. *Questions for the problem:*

1. Indicate the possible cause of the patient's complaints.
2. Specify the leading diagnostic method.

Response standard:

1. A possible cause of the patient's complaints is hypothyroidism.
2. The leading diagnostic method is hormonal examination with determination of thyroid hormones (TSH-thyroid-stimulating, thyroxine - T4, triiodothyronine -T3).

Task 45. Instructions: Give answers to the questions.

Task. If patient N., 62 years old, complained of: weakness, dry mouth, constant thirst (polydipsia), frequent and profuse urination (polyuria), nutritional-constitutional obesity of the 1st degree was revealed (BMI 32 kg/m²), decreased turgor skin, no smell of acetone from the mouth.

Questions for the problem:

1. Indicate the possible cause of the patient's complaints.
2. Specify the leading diagnostic method.

Response standard:

1. A possible cause of the patient's complaints is diabetes.
2. The leading diagnostic method is the determination of blood glucose, in particular the oral glucose tolerance test, where blood sugar is determined on an empty stomach and 2 hours after a glucose load. The appearance of blood sugar more than 11 mmol/l is a sign of diabetes mellitus.

Task 46. Instructions: Give answers to the questions.

Task. Patient V., 58 years old, engineer, was taken to the hospital emergency department with complaints of frequent, erratic heartbeat, accompanied by shortness of breath with slight physical exertion, weakness, and unpleasant sensations in the heart area, which arose 2 hours ago while working at a summer cottage. History: feeling of palpitations, more often during exercise, has been noted over the past year. These episodes were short-lived and resolved spontaneously at rest. When analyzing the outpatient card over the past 2 years, repeatedly increased cholesterol levels were noted (7.6 mmol/l - low-density lipoproteins predominate). Objectively: the condition is of moderate severity, hypersthenic type of build. In the lungs, breathing is vesicular, there are no wheezes, respiratory rate is 19 per minute. The left border of the heart is in the V m/r, along the midclavicular line. Blood pressure - 150/100 mm Hg. Art. The pulse on the radial arteries is frequent, arrhythmic, frequency - 102 per minute. Pulse deficit 10 in 1 min. Heart sounds at the apex have inconsistent sonority, are arrhythmic, heart rate is 112 per minute. The abdomen is soft and painless. The liver is not enlarged.

Questions for the problem:

1. Make a preliminary diagnosis.
2. Plan for further examination of the

patient. *Sample answer:*

1. IHD: rhythm disturbance such as paroxysmal atrial fibrillation (tachysystolic form).
2. Follow-up examination plan: ECG, daily ECG Holter monitoring, CBC, OAM, blood glucose, lipid profile, coagulogram, cardiac ultrasound, consultation with an ophthalmologist, consultation with an endocrinologist.

Task 47. Instructions: Give answers to the questions.

Task. Patient D., 55 years old, a teacher in a high school, visited a cardiologist with complaints of a feeling of irregularities in the heart area. History: similar sensations noted

for about a year, however, over the last month, interruptions have become more frequent, often accompanied by weakness and even dizziness. The occurrence of interruptions is often associated with physical activity. He also notes periodic attacks of compressive pain behind the sternum during fast walking, which pass at rest. Objectively: the general condition is satisfactory, the skin is of normal color and moisture. In the lungs there is vesicular breathing, no wheezing. Blood pressure - 140/95 mm Hg. Art. Pulse - 74 per minute, arrhythmic. The boundaries of the heart are not changed. Heart sounds are muffled, arrhythmic - against the background of a regular rhythm, an extraordinary contraction or a longer interval between heartbeats is periodically detected, heart rate - 76 per minute. The abdomen is soft and painless. The liver is not enlarged. Laboratory data and instrumental research methods:

1. General blood test - HB - 144 g/l, l - $6.0 \times 10^9/l$, ESR - 4 mm/hour.
2. AST - 5 units/l, ALT - 4 units/l, CRP - 0, PTI - 102%, coagulability - 8 min., cholesterol - 7.8 mmol/l (low-density lipoproteins predominate).
3. Blood test for sugar - blood glucose - 4.5 mmol/l.
4. General urine analysis - beat. weight - 1020, no protein, no sugar, p - 1-2 in p/w.
5. ECG-polytopic extrasystole *Questions*

for the problem:

1. Make a preliminary diagnosis.
2. Follow-up plan. *Sample*

answer:

1. IHD: rhythm disturbance such as extrasystole (probably ventricular).
2. Follow-up plan: daily Holter monitoring, ECHO-CS, bicycle ergometry (treadmill test), consultation with an ophthalmologist.

Task 48. Instructions: Give answers to the questions.

Task. Patient S., 52 years old, undergoing treatment in the cardiology department with a diagnosis of coronary artery disease: large-focal myocardial infarction of the anterior wall of the left ventricle with a pathological Q wave, auscultation of the heart reveals a weakening of the first sound.



Questions for the problem:

1. In what phases of the cardiac cycle is the first heart sound formed, what are the components of the first sound.

2. Which component of the first tone is weakened and why.
3. What are the signs of a pathological Q wave, clinical interpretation.

Sample answer:

1. The first heart sound is formed in the phase of isovolumetric contraction of the ventricles (muscular and valvular components) and in the ejection phase (vascular component).
2. The muscle component of the first tone is weakened due to the fact that necrosis of a large area of the myocardium has occurred and myocardial contractility is significantly reduced.
3. Pathological Q wave in amplitude $> \frac{1}{4}$ of the corresponding R wave. This implies necrosis $> 50\%$ of the myocardial thickness, i.e. large-focal myocardial infarction.

Task 49. Instructions: Give answers to the questions.

Task. Patient R., A 45-year-old woman was admitted to the hospital with complaints of pain in the small joints of the hands, mainly 2-3 metacarpophalangeal, distal interphalangeal, wrist, stiffness in the above joints, as well as morning stiffness until 12.00 o'clock. From the anamnesis of the disease: the patient considers himself over the past 2 months, when the above symptoms gradually began to increase.

Objectively: Signs of inflammation of the above joints, slight ulnar deviation of the hands, weakening of the "grasp" symptom. On the extensor surface of the forearms, dense elastic, subcutaneous painless formations with a diameter of 2 cm were palpated. During examination, a general blood test showed an acceleration of ESR up to 35 mm/h, in the biochemical test - CRP ++, the presence of rheumatoid factor.

Questions for the problem:

1. Presumable diagnosis.
2. What diagnostic criteria are present in this patient? *Sample answer:*

1. Rheumatoid arthritis, rapidly progressive course, seropositive, moderate activity, NFS stage 2.
2. Symmetrical damage to small joints of the hands (metacarpophalangeal, proximal interphalangeal), morning stiffness, the presence of rheumatoid factor, rheumatoid nodules.

Task 50. Instructions: Give answers to the questions.

Task. Patient Ch., 61 years old, artist, complained of paroxysmal pain behind the sternum and in the left half of the chest, radiating to the arms, arising during physical activity, passing at rest within 3-4 minutes. Nitrates

didn't accept. History: since childhood, he was registered with a rheumatologist with a diagnosis of rheumatism with mitral heart disease. Heart pain began to bother me 2 years ago during physical activity. Objectively: The condition is satisfactory. The skin and mucous membranes are of normal color. In the lungs, breathing is vesicular. The boundaries of relative dullness of the heart are expanded to the left by 1.5 cm. Heart sounds are muffled and rhythmic. Heart rate - 76 per minute. Blood pressure 105/60 mmHg. Additional studies: ECG at rest - sinus rhythm with heart rate 70 per minute. There are no ischemic signs. Clinical analysis of blood and urine without pathology. Blood cholesterol 5.79 mmol/l. EchoCG: no myocardial hypertrophy was detected, contractile function was normal (EF - 60%), mitral valve insufficiency grade 1. *Questions for the problem:*

1. Make a preliminary diagnosis
2. Draw up a plan for further examination to verify the diagnosis.

Sample answer:

1. Preliminary diagnosis: IHD, angina pectoris 2-3 FC.
2. Necessary studies: Bicycle ergometry or treadmill test, Holter - ECG, lipid profile, blood glucose. If necessary, coronary angiography.

Comment: according to the clinical picture, there is latent coronary insufficiency, which can be verified by dosed physical activity on the ECG using bicycle ergometry, treadmill test or Holter ECG, which will identify ischemic signs that are not detected at rest. A lipidogram and glucose determination will help clarify the severity of atherosclerosis and exclude the burden of coronary artery disease with diabetes mellitus. For severe angina 3-4 FC, especially if the therapy is ineffective, coronary angiography and endovascular surgical treatment are performed.

Task 51. Instructions: Give answers to the questions.

Task. A 50-year-old man complained of constant pain in the epigastrium, worsening after eating, nausea, bloating, and weight loss of 5 kg. Pain in the epigastrium has been bothering me for 3 months, sharply intensifying after eating, which was the reason for refusing to eat at the height of the pain and progressive weight loss. Additionally, it was established that for 12 years he has been drinking alcohol almost daily in the amount of 200 - 250 ml of strong alcoholic drinks, smoking 1 - 2 packs of cigarettes per day.

Questions for the problem:

1. What is the preliminary diagnosis?

2. What diseases should be considered for differential diagnosis?
3. What studies need to be carried out to clarify the diagnosis.

Response standard:

1. Chronic pancreatitis.
2. Alcoholic liver disease. Gastric ulcer and gastric cancer.
3. Blood and urine amylase, lipase, complete blood count (leukocyte count), ultrasound of the blood pressure, endoscopy, exocrine function of the pancreas (coprogram, elastase I in feces).

Task 52. Instructions: Give answers to the questions.

Task. A 30-year-old woman visited a gastroenterologist at her local clinic with complaints of nagging pain and heaviness in the right hypochondrium and epigastric region, occurring mainly after eating, nausea, and bitterness in the mouth. These complaints first appeared in the last trimester of pregnancy and have been disturbing for 10 months. Following a diet (excluding fatty, fried and spicy foods) did not bring significant relief. Objectively: palpation sensitivity in the area of the right hypochondrium, weakly positive Ortner's sign.

Questions for the problem:

1. Preliminary diagnosis and what diseases should be differentially diagnosed.
2. What studies need to be carried out to clarify the diagnosis.

Response standard:

1. Biliary dysfunction; differential diagnosis: chronic acalculous cholecystitis, cholelithiasis, functional dyspepsia.
2. Clinical, biochemical blood tests: bilirubin, fractions, AST, ALT, GGTP, alkaline phosphatase, clinical urine analysis, ultrasound of the abdominal organs (area of interest - gall bladder), endoscopy with examination of the major duodenal papilla.

Task 53. Instructions: Give answers to the questions.

Task. A 60-year-old patient consulted a gastroenterologist with complaints of dull, nagging pain in the right hypochondrium and bitterness in the mouth. Ultrasound results: in the cavity of the gallbladder there are multiple stones from 5 to 25 mm. From the anamnesis it is known that ultrasound of the abdominal organs has been performed annually for the last 7 years; 2 years ago, 3 stones ranging in size from 3 to 5 mm were detected in the gall bladder. During dynamic observation a year later, multiple stones were discovered, occupying 1/3 of the gallbladder cavity, the maximum size of stones being 11-13 mm.

Questions for the problem:

1. What is the preliminary diagnosis?
2. Patient management tactics.
3. What studies need to be carried out to assess the clinical situation of the diagnosis.

Response standard:

1. Cholelithiasis: chronic calculous cholecystitis.
2. The patient is advised to consult a surgeon and, in the absence of contraindications, planned surgical treatment - cholecystectomy.
3. It is necessary to assess the condition of the cardiovascular and respiratory systems. Clinical and biochemical blood tests: bilirubin, fractions, AST, ALT, GGTP, alkaline phosphatase, clinical urine test, endoscopy with examination of the major duodenal papilla.

Task 54. Instructions: Give answers to the questions.

Task. A 53-year-old man consulted a doctor due to difficulty swallowing solid food. For 10 years, he has been bothered by heartburn, increased salivation, and belching of air and eaten food. He did not seek medical help. I relieved heartburn with soda and occasionally with Almagel or Maalox. Over the past year, heartburn has become less of a concern, but dysphagia has arisen and gotten worse. The condition is satisfactory. Nutrition reduced. Hypersthenic body type. The skin is pale pink. The thyroid gland and lymph nodes are not palpable. Breathing is harsh and carried out over the entire surface of the chest. NPV 16 per minute. Heart sounds are rhythmic and muffled. Blood pressure 120/70 mm Hg. Art., pulse 65 per minute. The tongue is moist and covered with a white coating. The abdomen is soft and painless. The liver is not palpable. The spleen is not palpable. There is no swelling.

Questions for the problem:

1. What is the preliminary diagnosis?
2. What studies need to be carried out to clarify the diagnosis.

Response standard:

1. Gastroesophageal reflux disease; cicatricial stricture of the esophagus and/or esophageal cancer must be excluded.
2. Clinical blood test, ferritin, transferrin, serum iron, fecal occult blood test, endoscopy, X-ray examination of the esophagus with barium suspension.

Task 55. Instructions: Give answers to the questions.

Task. A 52-year-old patient was admitted to the clinic with complaints of pain in the epigastric region that occurs 20-30 minutes after eating, belching of air, and a loss of body weight of 3 kg over the past month. From the anamnesis: the above complaints first appeared in the fall (pain in the epigastric region began to occur 30-40 minutes after eating, I took no-shpa and soda on my own, with a short-term effect). The patient has noted a deterioration in his health over the past month, the pain syndrome has intensified, and at the height of the pain, vomiting of the "coffee grounds" type has been observed. An ambulance was called and the patient was taken to the emergency department. On examination, the abdomen is of regular shape, soft on superficial palpation, moderate muscle tension in the epigastrium, local pain in the epigastric region. On percussion, the dimensions of the liver according to Kurlov are 9 cm x 8 cm x 7 cm, the boundaries of the spleen are normal.

Questions for the problem:

1. What is the clinical diagnosis and its complications?
2. Name the risk factors for this disease.
3. Indicate what additional laboratory and instrumental studies need to be performed to clarify the diagnosis.

Response standard:

1. Gastric ulcer, acute stage. Complications: gastrointestinal bleeding, perforation, penetration, malignancy of the ulcer, cicatricial deformation.
2. Presence of *Helicobacter pylori*, taking NSAID medications, heredity, smoking, drinking alcohol.
3. Clinical and biochemical blood tests, clinical urine analysis, ultrasound of the abdominal organs, endoscopy with biopsy and morphological verification of the diagnosis, determination of the bacterium *Helicobacter pylori*.

Task 56. Instructions: Give answers to the questions.

Task. Patient K., 55 years old, complains of constant aching pain in the right hypochondrium, associated with errors in diet (increased after eating fatty foods), bitterness in the mouth, mainly in the morning. History of the disease. He considers himself sick for about 5 years, when he first began to complain of nausea, bitterness in the mouth, and aching pain in the right hypochondrium that occurred after errors in diet. She had not been examined before and took antispasmodics on her own. The condition worsened for about 2 days, when the pain in the right hypochondrium intensified, nausea, vomiting appeared,

increased body temperature to 37.2 C. She was hospitalized in the surgical department at her place of residence. On examination, the abdomen is of regular shape, soft on superficial palpation, moderate muscle tension in the epigastric region, local pain in the epigastric region. Upon percussion, the lower border of the liver according to Obratzsov along the midclavicular line + 3 cm from the edge of the costal arch, according to Kurlov 12 cm x 9 cm x 8 cm. On palpation, the edge of the liver is rounded, soft-elastic consistency, moderately painful on palpation. The spleen is not palpable.

Questions for the problem:

1. What is the clinical diagnosis
2. Name the risk factors for this disease.
3. List the complications characteristic of this pathology.

Response standard:

1. Cholelithiasis, chronic calculous cholecystitis
2. The main risk factors: family history, obesity, pregnancy.
3. Peritonitis, chronic pancreatitis, cholangitis, empyema of the gallbladder, obstruction of the biliary tract.

Task 57. Instructions: Give answers to the questions.

Task. A 32-year-old patient complains of severe skin itching, icteric discoloration of the skin and sclera, and dark urine. History of the disease. 1 year ago, after a cold that was not accompanied by an increase in temperature, she noted the appearance of severe skin itching in the lower half of the body and general weakness. I contacted a dermatologist and underwent treatment - without effect. Periodically notes a rise in temperature to 38°C, change in skin color - the color of the skin has taken on a dirty gray tint. The patient sought medical help due to persistent fever over the past month (body temperature rose to 38°C) and the presence of severe skin itching. On examination, the abdomen is of regular shape, soft and painless on superficial palpation. The dimensions of the liver according to Kurlov are 13 cm x 9 cm x 8 cm, upon palpation it has a dense consistency, the edge is sharp, moderately painful. The lower pole of the spleen is +1 cm at the edge of the costal arch.

Questions for the problem:

1. Formulate a preliminary diagnosis.
2. What additional laboratory and instrumental studies need to be carried out to clarify the diagnosis.

3. List the complications characteristic of this pathology.

Response standard:

1. Chronic hepatitis.
2. ELISA for viral hepatitis B and C, ultrasound of the abdominal organs, endoscopy, fibroelastography of the liver.
3. Hepatic coma, acute liver failure, liver cirrhosis, hepatocellular carcinoma.

Task 58. Instructions: Give answers to the questions.

Task. A 48-year-old patient has been suffering from gastritis since the age of twenty; a stomach ulcer was first diagnosed 12 years ago. Exacerbations were annual, usually in autumn-winter, lasting no more than 3-4 weeks. History of the disease. The present exacerbation began more than 4 months ago, the patient notes a constant nature of the pain, eating any food increases the pain in the epigastrium, irradiation to the back has appeared. His appetite has sharply worsened, although previously, even during exacerbations, his appetite was good, he did not lose weight, now, due to fear of increased pain and poor appetite, he eats little, has an aversion to meat foods, and has lost 12 kg in recent months. Within 3-4 weeks, belching with the smell of "rotten eggs" and hiccups began to bother me. The abdomen is soft, there is pain in the epigastrium. The dimensions of the liver according to Kurlov are 13 cm x 11 cm x 8 cm. On palpation, the edge of the liver is uneven, painful, and dense.

Questions for the problem:

1. Formulate a preliminary diagnosis.
2. What instrumental studies need to be performed on the patient to clarify the diagnosis.

Response standard:

1. Presumably you can think about stomach cancer
2. X-ray examination of the stomach, endoscopy with biopsy, CT scan of the thoracic and abdominal cavities.

Task 59. Instructions: Give answers to the questions.

Task. Patient N., 20 years old, complained of pain in the epigastrium 30-40 minutes after eating, heartburn, manifested by a burning sensation behind the sternum, and belching of air. History of the disease. The listed symptoms have been bothering me for about 2 months, I did not seek medical help, was not examined, to relieve pain I took antacids on the advice of relatives with a positive effect, for

In the last week there was no effect from taking these drugs, the pain syndrome intensified. On palpation of the abdomen, there is pain in the epigastric region, mainly on the left, there is no muscle tension, there are no symptoms of peritoneal irritation. The dimensions of the liver according to Kurlov are 9 cm x 8 cm x 7 cm; upon palpation, the edge is soft, elastic, painless. The spleen is not enlarged. According to the patient, the stool is regular, formed, without pathological impurities.

Questions for the problem:

1. Formulate and justify the clinical diagnosis.
2. What are the pains that occur 30 minutes after eating called?
3. List the main risk factors for this disease. *Response standard*

:

1. Chronic gastritis, unspecified.
2. Pain that occurs 30 minutes after eating is called "early".
3. Risk factors – Helicobacter pylori, taking NSAIDs, alcohol, heredity.

Task 60. Instructions: Give answers to the questions.

Task. Patient O., 20 years old, consulted a therapist with complaints of severe abdominal pain that occurs 3-4 hours after eating, on an empty stomach, often at night; the pain goes away after drinking milk. There is a tendency to constipation and weight loss. Appetite preserved. Considers himself sick for a year. From the anamnesis it turned out that the patient smokes a lot and abuses alcohol.

Objectively: general condition is satisfactory, the skin is pale, subcutaneous fat is developed satisfactorily. No pathology was detected from the lungs or cardiovascular system. The tongue is covered with a white-yellow coating. On palpation of the abdomen, sharp pain is noted to the right of the midline above the navel. The liver and spleen are not palpable.

Questions for the problem:

1. Formulate and justify the presumptive diagnosis.
2. Name the necessary additional research. *Response standard:*

1. Duodenal ulcer in the acute stage. Rationale: medical history, complaints of "hungry", "night" pain, disappear after drinking milk, weight loss with preserved appetite, smoking, alcohol abuse, severe abdominal pain in the projection of the duodenum upon palpation.

2. Clinical blood test, stool test for occult blood, endoscopy, determination of *Helicobacter pylori*.

Task 61. Instructions: Give answers to the questions.

Task. A 42-year-old man consulted a doctor with complaints of pain in the lower abdomen and left side, alternating diarrhea (frequent, small, liquid stools) and constipation, painful urge to defecate, and bloating. Worried about weakness, increased fatigue. Ill for several years. Objectively: body temperature 37.3°C. The condition is satisfactory. The skin is clean. Subcutaneous fat tissue is underdeveloped. No changes were detected in the lungs or heart. The tongue is moist, covered with a whitish coating. The abdomen is soft, moderately painful along the colon.

Questions for the problem:

1. Formulate and justify the presumptive diagnosis.
2. Name the necessary additional research. *Response*

standard:

1. Chronic colitis in the acute stage. Rationale: pain along the colon, unstable stool, tenesmus, flatulence, weakness, increased fatigue, duration of the disease; objective data: upon palpation, pain is noted along the colon.

2. Clinical blood test, biochemical blood test, coprogram, study of bacterial microflora of feces for dysbacteriosis, X-ray examination of the large intestine (irrigoscopy) \endoscopic examination of the large intestine (colonoscopy).

Task 62. Instructions: Give answers to the questions.

A 43-year-old woman came to the paramedic with complaints of prolonged aching pain to the left of the navel, radiating to the back, under the left shoulder blade, which occurs after eating fatty foods. Notes decreased appetite, nausea, and a feeling of heaviness in the epigastric region after eating. These symptoms have been bothering me for 4 months. He has been suffering from chronic cholecystitis for many years. Objectively: temperature 37.2°C. The condition is satisfactory. The skin is clean, dry, with a jaundiced tint. Subcutaneous fat tissue is overdeveloped. Lungs and heart without pathology. The tongue is coated with a whitish coating. The abdomen is soft, moderately painful in the upper half and in the left hypochondrium. *Questions for the problem:*

1. Formulate and justify the presumptive diagnosis.
2. Name the necessary additional research. *Response standard:*

1. Chronic pancreatitis in the acute stage. Rationale: medical history: aching pain in the abdomen of a girdling nature, radiating under the left shoulder blade, the connection of pain with eating fatty foods, decreased appetite, nausea, a feeling of heaviness in the epigastric region after eating, duration of the disease, concomitant pathology of the gallbladder. Objective data: subfebrile temperature, on examination: excessive development of subcutaneous fat, icteric skin tone, on palpation: pain in the projection of the pancreas.
2. Clinical blood test, clinical urine test, biochemical blood test, ultrasound examination of the pancreas.
3. Diabetes mellitus.

Task 63. Instructions: Give answers to the questions.

Task. A 45-year-old woman, a primary school teacher, was hospitalized with a diagnosis of irritable bowel syndrome. Complains of pain in the left iliac region and around the navel, intensifying before defecation, also notes bloating, profuse passage of gas, absence of stool for 3-4 days, and a feeling of incomplete bowel movement. He expresses doubts about the correctness of the doctor's diagnosis and is afraid of dying from intestinal cancer. From the anamnesis: he considers himself sick for a year. Lives alone. She underwent several courses of treatment with a psychotherapist for depression. The patient's father died at the age of 53 from an intestinal tumor. He eats irregularly, prefers meat products and baked goods. On examination: height 164 cm, weight 75 kg, the abdomen on palpation is moderately swollen and painful in the umbilical region and inferolateral parts of the abdomen.

Questions for the problem:

1. Formulate a preliminary diagnosis.
2. What research methods are appropriate to use to clarify the diagnosis. *Response standard:*
 1. IBS (irritable bowel syndrome).
 2. Clinical and biochemical blood tests, FCS with morphological examination of colon biopsy samples

Task 64. Instructions: Give answers to the questions.

Task. A 45-year-old patient, a builder, is undergoing hospital treatment for duodenal ulcer. During the evening rounds, he complained of general weakness, dizziness, and palpitations. From the anamnesis: the day before, tarry stools were observed, but the patient did not attach any significance to this, believing that this was due to the consumption of black currants. On examination: the skin and conjunctiva are pale, pulse 112 per minute, weak filling and tension, blood pressure 110/60 mm Hg. Art. The abdomen is soft on palpation, painful in the epigastrium.

Questions for the problem:

1. What complication of the underlying disease can be assumed.
2. Name the necessary additional research. *Response standard:*
 1. Gastrointestinal bleeding.
 2. EGDS.

Task 65. Instructions: Give answers to the questions.

Task. A 38-year-old female patient, a chief accountant, is undergoing hospital treatment with a diagnosis of chronic acalculous cholecystitis. Exacerbation. Complaints: dull, bursting pain in the right hypochondrium, poor tolerance to fatty and fried foods, bitterness in the mouth and nausea in the morning. From the anamnesis: it is known that he has been suffering from chronic cholecystitis for 3 years. Eats irregularly. He often eats river and lake fish, and believes that he has subjected it to sufficient heat treatment (frying pieces of fish for 3-5 minutes). On examination, pain is noted in the right hypochondrium, the liver is not palpable.

Questions for the problem:

1. Formulate a preliminary diagnosis.
2. Name the necessary additional research. *Response standard:*
 1. Chronic acalculous cholecystitis of parasitic etiology.
 2. Ultrasound of the abdominal organs, testing for parasitosis and helminthiasis.

Task 66. Instructions: Give answers to the questions.

Task. A 24-year-old patient upon admission complains of swelling of the legs, face, lower back pain, bloody urine and a decrease in its daily excretion, weakness, malaise, headaches, and some blurred vision. From the anamnesis: she has been ill for 3 weeks. The disease began with a sore throat when swallowing and nasal congestion with profuse

purulent discharge, headaches, temperature up to 39-40°C. After 3 days, the temperature dropped and my health improved. A week ago, swelling of the face and legs appeared, and the urine turned red. I again noticed periodic rises in temperature to subfebrile levels. In the past, he noted repeated sore throats and exacerbations of sinusitis. Objectively: the skin is clean and pale. There is swelling of the face, especially in the eyelid area, and soft warm swelling of the legs and feet. Heart sounds are clear and loud. Heart rate – 80 beats per minute, blood pressure – 170/100 mm Hg. The abdomen is soft, painless on palpation. The liver and spleen are not enlarged. The kidneys are not palpable. The effleurage symptom is positive on both sides. There is no dysuria. During the examination: in the general blood test, HB 129 g/l, leukocytes 5.3×10^9 /l, ESR 27 mm/h; in general urine analysis, specific gravity 1018-1020, protein 0.99 g/l; er. – 40-50 in p/z., leuk. – 2-3 in p/z.

Questions for the problem:

1. Assume and justify the most likely diagnosis.
2. Draw up and justify your research plan.

Response standard:

1. Acute glomerulonephritis, edematous-hypertensive variant.

Kidney damage is indicated by a characteristic edematous syndrome (mild swelling of the legs and face) and the simultaneous presence of arterial hypertension with high diastolic pressure numbers, as well as lower back pain and discoloration of urine. Considering that these signs are associated with a rhinotonsillogenic infection suffered the day before, as well as the preserved specific gravity of urine in the presence of proteinuria and hematuria, a diagnosis of acute glomerulonephritis was made.

2. The patient is recommended: biochemical blood test for total protein and fractions, creatinine and urea, cholesterol and lipid spectrum, electrolytes, Reberg and Zimnitsky test; Ultrasound examination of the kidneys, ECG, consultation with an ENT doctor.

Task 67. Instructions: Give answers to the questions.

Task. A 28-year-old woman was sent to the hospital emergency room from the clinic; at the time of examination she complained of aching pain in the lumbar region, frequent urination mainly at night, an increase in temperature to 39°C, accompanied by chills, and weakness. From the anamnesis: 5 months ago, after hypothermia, pain appeared in the lower abdomen, frequent painful urination, pain in the lumbar region on the right, fever, for which she took antibiotics on her own, paracetamol for 5 days, the pain decreased, the temperature returned to normal, after self-medication she did not see a doctor applied. A week ago after

suffered from a respiratory infection, pain appeared in the lumbar region, frequent urination, temperature increased, for which she went to the clinic at her place of residence, where an examination was carried out: general blood test: Hb-118 g/l, er-3.2*10¹²/l : leuk-10.6* 10⁹/l, ESR-32 mm/h. General urine analysis: specific weight 1016, protein 0.3 g/l, leuk-entirely in the field of vision, hyaline casts 0-1, er-1-2 in the field of vision, creatinine 96 µmol/l. The patient was sent for inpatient treatment to the nephrology department. On examination: the condition is moderate. The skin is somewhat pale, the temperature is 38.2°C. There is a clear pulmonary sound over the lungs percussion, vesicular breathing on auscultation, no wheezing, respiratory rate 18 per minute. The boundaries of the heart are within normal limits. The heart sounds are clear, the rhythm is correct, heart rate is 96 per minute, blood pressure is 130/80 mmHg. Art. The abdomen is soft and painless. Pasternatsky's symptom is positive on both sides.

Questions for the problem:

1. Assume and justify the most likely diagnosis.
2. Draw up and justify your research plan.

Response standard:

1. Relapse of pyelonephritis without impairment of nitrogen excretion function of the kidneys. The diagnosis was established based on the patient's complaints: pain in the lumbar region, aching in nature, fever, nocturia. From the anamnesis: 5 months ago, after hypothermia, she noted pain in the lower abdomen, pain in the lumbar region, and frequent painful urination. During examination in the clinic: blood volume: HB 118 g/l, ESR 32 mm/h. Urine o/a: beat. weight-1016, lake. entirely, hyalium cylinders.
2. The patient is recommended: urine analysis according to Nechiporenko, according to Zimnitsky, survey urography, ultrasound examination of the kidneys to clarify the lesion, urine culture for flora and sensitivity to antibiotics, in order to prescribe effective antibacterial therapy and exclude antibiotic resistance.

Task 68. Instructions: Give answers to the questions.

Task. Patient V., 26 years old, complained of severe weakness, headache, nausea, swelling of the face, changes in urine (urine in the form of "meat slop"), a decrease in the amount of urine excreted per day to 700 ml with adequate fluid intake, swelling of the legs up to 1/3 of the shins. History of the disease: considers himself sick for two days, when in the morning after hypothermia (got caught in the rain in the evening and froze), swelling of the face and headache appeared (he took ketorol 1 tablet), then urine appeared in the form of "meat slop", the amount of excretion decreased per day urine up to 700 ml. Life history: grew and developed according to age. Denies bad habits. ORZ 1-2 times a year.

At the age of 15 he suffered from acute glomerulonephritis. Objectively: body temperature 37.2° C. General condition of moderate severity. The skin is dry, pale, puffy face, swelling on the legs up to 1/3 of the shins. The left border of relative cardiac dullness is determined by the left midclavicular line. Heart sounds are rhythmic and muffled. Heart rate - 78 per minute, blood pressure - 180/100 mmHg. The tongue is moist, covered with a whitish coating. The abdomen is soft and painless. The effleurage symptom is positive on both sides. *Questions for the problem:*

1. Formulate and justify a preliminary diagnosis.
2. Name the necessary additional research.
3. List possible complications. *Response*

standard:

1. Chronic glomerulonephritis in the acute stage. Rationale: complaints - weakness, shortness of breath, headache, nausea, swelling of the face; from the anamnesis - acute glomerulonephritis; connection between deterioration and hypothermia; objective data - upon examination: pale skin, puffiness of the face, swelling in the legs; upon percussion, expansion of the borders of the heart to the left; on auscultation: muffled heart sounds, arterial hypertension.
2. General blood test: possible leukocytosis, increased ESR; General urine analysis: hematuria, proteinuria, cylindruria; Biochemical blood test; urine analysis according to Zimnitsky. Ultrasound of kidneys MEP.
3. Acute heart failure, chronic renal failure.

Task 69. Instructions: Give answers to the questions.

Task. Patient I., 40 years old, consulted a doctor with complaints of dull, aching pain in the lumbar region on the right, headache, weakness, frequent urination, chills, and an increase in body temperature to 38°C. Objectively: examination of the oral cavity revealed multiple carious cavities. The skin and visible mucous membranes are pale, the pastiness of the face is noticeable, Pasternatsky's sign on the right is positive. Blood pressure is elevated 150\90 mm Hg, the left border of the heart is enlarged. Laboratory data: urine is cloudy, with flakes, alkaline reaction, beat. weight 1013. Leukocyturia. Nechiporenko test: leukocytes - 3000 (N up to 2000), erythrocytes - 1100 (N up to 1000). The total amount of urine is 3000 ml.

Questions for the problem:

1. Make a conclusion about the pathological process in the patient.
2. Explain the mechanism of development of this pathology.

3. Routes of infection into the kidneys, what route of infection is expected at the patient.

Response standard:

1. Acute right-sided pyelonephritis is a nonspecific infectious inflammation of the mucous membrane of the pelvis, calyces and renal parenchyma.
2. Penetration of infection into the kidneys is possible through a descending (hematogenous and lymphogenous) or ascending (urogenic) route. In the mechanism of infection penetration from the pelvis into the renal tissue, an important predisposing factor is disturbances in urodynamics and urostatics. Difficulties in the outflow of urine create favorable conditions for the introduction and proliferation of microbes, promote their advancement to the pelvis, increase urine pressure in it and the development of pyelorenal reflux, which facilitate the penetration of infection into the venous and lymphatic systems of the kidneys. In this case, inflammation of the mucous membrane of the calyces, pelvis, and interstitial tissue of the kidneys is initially noted. Further, the inflammation spreads to the epithelium of the tubules and glomeruli, which ultimately leads to disruption of the filtration and reabsorption mechanisms.
3. In this case, the most likely source of infection was carious teeth, and the spread of infection occurred hematogenously.

Task 70. Instructions: Give answers to the questions.

Task. Patient P., 32 years old, consulted a doctor with complaints of general weakness, pain in the lumbar region, nausea, thirst, dry mouth, swelling, rare urination and a small amount of urine excreted per day. The disease began acutely, 5 days ago. He has a history of frequent sore throats and suffered from otitis media 2 weeks ago. Objectively: swelling in the face, feet, legs. The skin is dry, pale, hair is dull and brittle. Blood pressure is 165/105 mmHg, the left border of the heart is enlarged. Biochemical blood test: hypoproteinemia - 30 g/l (N - 60-80), hypercholesterolemia -13 mmol/l (N - 3-6 mmol/l), creatine level 0.3 mmol/l (N - 0.088-0, 18), urea 28 mmol/l (N - 14.2-28). High levels of antistreptolysin O in blood plasma. OAM: Total amount of urine 600 ml, density 1.040, protein 5 g/l glucose-no. In urine analysis according to Nechiporenko cyl. 300, erythr. 2000 (N up to 1000), lake. 2200 (N up to 2000), the presence of renal epithelium is noted. *Questions for the problem:*

1. Presumable pathology, syndromes characteristic of this pathology.
2. How to confirm the infectious etiology of this pathology.

Response standard:

1. Spicy diffuse glomerulonephritis, caused streptococcus (Antistreptolysin in the blood). The patient has signs of nephritic syndrome.

Hypersthenuria indicates preservation of tubular function. Oliguria, proteinuria, hematuria, arterial hypertension and azotemia indicate glomerular damage.

Apparently this is an acute process.

2. The cause of ODH is most often beta-hemolytic streptococcus, which is confirmed by the fact that the onset of nephritis is preceded by a streptococcal infection (angina), and the detection of antibodies to streptococcal exoenzymes (antistreptolysin O) in the blood.

Task 71. Instructions: Give answers to the questions.

Task. A 45-year-old patient was admitted to the hospital with complaints of general weakness and malaise. The following results were obtained from a blood test: red blood cells - $3.05 \times 10^{12}/l$, Hb - 62 g/l, color index - 0.6, platelets $180 \times 10^9/l$ leukocytes - $4.2 \times 10^9/l$. Leukocyte formula: band neutrophils - 6%, segmented neutrophils - 51%, lymphocytes - 40%, monocytes - 3%. Red blood cells are hypochromic. ESR - 15 mm/h.

Questions for the problem:

1. What deviations from the norm are shown in the blood test.
2. What disease can we think about in this case?
3. How red blood cells change in this disease. *Response*

standard:

1. Red blood cells, hemoglobin, color index are reduced, red blood cells are hypochromic.
2. Iron deficiency anemia.
3. Anisocytosis, poikilocytosis, hypochromia.

Task 72. Instructions: Give answers to the questions.

Task. During the blood test, the following results were obtained: red blood cells - $1.2 \times 10^{12}/l$; hemoglobin - 52 g/l; color index - 1.2; platelets - $80 \times 10^9/l$; leukocytes - $4 \times 10^9/l$. Leukocyte formula: myelocytes - 1%, metamyelocytes - 1%, band neutrophils - 8%, segmented neutrophils - 22%, lymphocytes - 67%, monocytes - 0.5%, eosinophils - 0.5%. Red blood cells are predominantly hyperchromic. Macro-megalocytes are found. Red blood cells with Jolly bodies. Giant hypersegmented neutrophils are found. Reticulocytes - 0.03%. ESR - 38 mm/h.

Questions for the problem:

1. What are the deviations from the norm in the given blood test?

2. What disease can we think about in this case?
3. What degenerative forms of red blood cells are found in a blood smear when this disease.

Response standard:

1. The indicators do not correspond to the norms: red blood cells are sharply reduced, hemoglobin is reduced, platelets are reduced. Leukocyte formula: hyperchromic erythrocytes with Jolly bodies, there are macro-megalocytes, hypersegmented neutrophils, ESR is increased.
2. B12 – deficiency anemia.
3. Erythrocytes with basophilic punctuation, with remnants of nuclei in the form of Jolly bodies and Cabot rings.

Task 73. Instructions: Give answers to the questions.

Task. A 16-year-old patient was hospitalized in the department for examination with complaints of sore throat when swallowing, bleeding gums, fever, chills. Blood test: Hb - 78 g/l, red blood cells - $2.5 \times 10^{12}/l$, color index - 0.96, leukocytes - $240 \times 10^9/l$. Leukocyte formula - basophils - 0%, eosinophils - 0%, band neutrophils - 1%, segmented - 0.5%, lymphoblasts - 95.5%, normoblasts - 3:100, reticulocytes - 1.3%, platelets - $18 \times 10^9 /l$, ESR - 60 mm/h. *Questions*

for the problem:

1. What are the deviations from the norm in the given blood test?
2. What disease can we think about in this case?
3. What is the name for the absence of maturing cells in the blood smear in this disease?

Response standard:

1. Hemoglobin is sharply reduced, red blood cells are reduced, and leukocytes are sharply increased. Leukocyte formula: segmented neutrophils are reduced, lymphoblasts are 95.5%, normoblasts, platelets are sharply reduced, ESR is increased.
2. Acute lymphoblastic leukemia.
3. Leukemic failure.

Task 74. Instructions: Give answers to the questions.

Task. After breakfast, blood was taken from a patient in the hospital for a general analysis. The number of leukocytes when counted in Goryaev's chamber is $12 * 10^9/l$. *Questions for the problem:*

1. What leukocytosis is observed in the patient.

2. List the conditions for preparing the patient before taking blood for a general analysis.

Response standard:

1. Physiological leukocytosis after eating.
2. Blood is taken in the morning, strictly on an empty stomach, sitting, after a 15-minute rest. It is recommended to avoid physical and emotional stress, smoking, drinking alcohol, and taking medications before taking blood.

Task 75. Instructions: Give answers to the questions.

Task. Patient S., 69 years old, was admitted to the clinic with complaints of: severe weakness, fatigue, shortness of breath when walking, palpitations, dizziness, burning tongue, decreased appetite, diarrhea, pain and numbness in the lower extremities, muscle weakness ("cotton legs"), low-grade fever. He was ill for about 2 years, at first he did not pay attention to weakness and fatigue, then muscle weakness, pain and numbness appeared in the lower extremities, for which he consulted a doctor and was hospitalized. Objectively: satisfactory condition, excess nutrition. The skin is pale with an icteric tint, the sclera is subicteric. Heart sounds are weakened, a quiet blowing systolic murmur is heard at the apex, a "topping noise" is heard at the jugular vein on the right, pulse - 107 per minute, rhythmic, soft. The tongue is moist, bright red in color, smooth - "varnished" (due to the pronounced smoothness of the papillae), there are single aphthae on the mucous membrane of the cheeks. The lower edge of the liver is palpated, protruding 2.0 cm from under the edge of the costal arch. The spleen is not palpable. When tapping the sternum, ribs and tibia, the patient feels pain. Clinical blood test: red blood cells - $2.1 \times 10^{12}/l$, Hb - 48 g/l, color.p. - 1.4, reticulocytes - no, platelets - $95 \times 10^9/l$, leukocytes - $3.0 \times 10^9/l$, ESR - 35 mm/hour. Hyperchromia of erythrocytes, pronounced anisocytosis (macrocytes, megalocytes), poikilocytosis, Jolly bodies, Cabot rings, polysegmentation of neutrophils were found.

Questions for the problem:

1. What pathology should we think about in the patient?
2. What studies need to be carried out to clarify the diagnosis and etiology of the disease.

Response standard:

1. B-12 deficiency anemia.
2. Concentration of vitamin B-12 in the blood.

Closed type tasks:

Task 1. Instructions: choose one correct answer.

When examining the patient, it was revealed that the chest was expanded, in a position of maximum inspiration, the ribs were horizontal, the intercostal spaces were narrow, and the shoulders were raised high. How can the identified changes be explained by: A.

Chronic bronchitis;

B. Lung abscess;

B. Lung cancer;

D. An attack of bronchial asthma; D.

Bronchiectasis.

Response standard: D. An attack of bronchial asthma.

Task 2. Instructions: choose one correct answer.

Select the signs characteristic of the emphysematous form of the chest: A.

The chest is narrowed;

B. The chest is expanded; B. The course

of the ribs is horizontal; G. The course

of the ribs is oblique;

D. The intercostal spaces bulge. *Response*

standard: B. The chest is expanded.

Task 3. Instructions: choose one correct answer.

When examining the patient, it was revealed: an increase in the anterior - posterior size of the chest due to the protruding forward in the form of a keel of the sternum, the costal cartilages at the point of transition to the bone are thickened. What pathological shape of the chest does the patient have:

A. Emphysematous;

B. Paralytic;

B. rachitic;

G. Funnel-shaped;

D. Scaphoid.

Response standard: V. Rachitic.

Task 4. Instructions: choose one correct answer.

The emergency doctor determined that the patient's breathing was deep, rare, with large respiratory movements, accompanied by a loud noise. What type of breathing disorder does the patient have:

- A. Kussmaul breathing;
- B. Respiration Biota;
- B. Cheyne-Stokes breathing; D.
- Grocco's breathing;
- D. Mixed type of breathing. *Response standard:* A. Kussmaul breathing.

Task 5. Instructions: choose one correct answer.

Increased vocal tremors, tympanic percussion sound, bronchial and sometimes amphoric breathing, an abundance of moist rales in a limited area, profuse purulent sputum "a mouth full" is observed in the syndrome:

- A. Increased airiness of the lungs; B.
- Seals of lung tissue;
- B. Hydrothorax;
- G. Pneumothorax;
- D. Cavities in the lung.

Response standard: D. Cavities in the lung.

Task 6. Instructions: Choose one correct answer.

The quail rhythm, heard at the first point of auscultation, is characteristic of: A. Mitral valve insufficiency;

- B. Myocarditis;
- B. Mitral valve stenosis; G.
- Myocardial infarction;
- D. Complete atrioventricular block. *Response*

standard: B. Mitral valve stenosis.

Task 7. Instructions: Choose one correct answer.

One of the signs of large-focal myocardial infarction on the ECG is: A.

- Prolongation of the QT interval;
- B. Pathological Q wave; B.
- Negative T wave;

- D. Absence of the P wave;
- D. Widening and deformation of the QRS complex. *Sample answer:*B. Pathological tooth Q.

Task 8. Instructions: Choose one correct answer. The main diagnostic criteria for ARF do not include: A.

- Polyarthritis;
- B. Ring-shaped erythema; B. Erythema nodosum;
- G. Sydenham's chorea;
- D. Myocarditis.

*Sample answer:*B. Erythema nodosum.

Task 9. Instructions: Choose one correct answer.

The reasons leading to the appearance of pulsus differens include all of them, with the exception of: A. Mitral valve stenosis;

- B. Tumors of the mediastinum;
- B. Enlarged mediastinal lymph nodes; G. Substernal goiter;
- D. Hypertension.

*Sample answer:*D. Hypertension.

Task 10. Instructions: Choose one correct answer.

The properties of the pulse determined on the radial artery include everything, except: A. Filling;

- B. Voltage;
- B. Deficit;
- G. Strength;
- D. Rhythm.

*Sample answer:*G. Strength.

Task 11. Instructions: Choose one correct answer. Which of the following symptoms refers to dyspepsia syndrome: A. Nausea;

- B. Vomiting;

B. Heartburn;

G. Belching;

D. All of the above.

Response standard: D. All of the above.

Task 12. Instructions: Choose one correct answer. The chronic course of abdominal pain has a duration: A. More than 3 weeks;

B. More than 3 months; B.

More than 3 years;

G. More than 3 days;

D. There is no correct answer. *Response*

standard: B. More than 3 months.

Task 13. Instructions: Choose one correct answer. When palpating the abdomen, it should begin: A. From the painful area;

B. From an area symmetrical to the painful

one; B. From a painless area;

G. From the epigastric region;

D. From the most convenient area for palpation.

Response standard: B. From a painless area.

Task 14. Instructions: Choose one correct answer. With deep palpation of the abdomen, a skin fold is formed: A. Parallel to the axis of the palpated organ;

B. Perpendicular to the axis of the palpated organ; B.

At an angle of 45° to the axis of the palpated organ;

D. Depending on the patient's position;

D. Depending on the position of the doctor.

Response standard: B. Perpendicular to the axis of the palpated organ.

Task 15. Instructions: Choose one correct answer.

What data during auscultation of the abdomen will indicate diffuse peritonitis: A. Normal intestinal motility;

- B. Sharply increased (violent) intestinal motility; B.
Weakening of intestinal motility;
D. Lack of intestinal peristalsis ("deafening silence"); D.
Vascular murmurs.

Response standard: D. Lack of intestinal peristalsis ("deafening silence").

Task 16. Instructions: choose one correct answer. Nephrotic syndrome includes the following symptoms: 1. Edema;

2. Hematuria;
3. Proteinuria;
4. Leukocyturia;
5. Hypoproteinemia.

Possible answers:

- A. Correct 2, 3, 4;
B. True 1, 2;
B. Correct 1, 2, 4; D.
True 1, 3, 5; D. 1, 2, 3,
4 are correct.

*Sample answer:*G. Correct1, 3, 5.

Task 17. Instructions: choose one correct answer. Nephritic syndrome includes the following symptoms: 1. General swelling;

2. Pastiness and swelling mainly on the face;
3. Hypertension;
4. Urinary syndrome;
5. Hypoproteinemia.

Possible answers:

- A. Correct 2, 3, 4;
B. True 1, 2;
B. Correct 1, 2, 4; D.
True 2, 3, 4; D. 1, 2, 3,
4 are correct.

*Sample answer:*G. Correct2, 3, 4.

Task 18. Instructions: choose one correct answer. Uremia syndrome occurs when more than: A. 10% of the renal parenchyma is lost;

B. 2% of renal parenchyma; B.

50% of the renal parenchyma; G.

75% of the renal parenchyma; D.

90% of the renal parenchyma.

*Sample answer:*G.75% of renal parenchyma.

Task 19. Instructions: choose one correct answer. Urine the color of "meat slop" is characteristic of: A. Acute pyelonephritis;

B. Acute glomerulonephritis; B.

Kidney amyloidosis;

G. Nephrotic syndrome; D.

Urinary tract infections.

Response standard: B. Acute glomerulonephritis.

Task 20. Instructions: choose one correct answer.

The patient's presence of acute unilateral pain in the lumbar region with irradiation to the groin area after a bumpy ride or excessive physical activity is characteristic of: A.

Paranephritis;

B. Acute pyelonephritis; B.

Acute glomerulonephritis; G.

Urolithiasis;

D. Chronic glomerulonephritis. *Sample*

*answer:*G. Urolithiasis.

Task 21. Instructions: choose one correct answer. The term "anemia" means:

A. Decrease in total blood volume;

B. Decrease in circulating blood volume; B. Decrease in the concentration of red blood cells in the blood; D.

Decrease in hemoglobin concentration in the blood;

D. Decrease in the total number of red blood cells and/or hemoglobin content per unit volume of blood.

Response standard: D. Decrease in the total number of red blood cells and/or hemoglobin content per unit volume of blood.

Task 22. Instructions: choose one correct answer. Iron deficiency anemia is characterized by: A. Jaundice;

B. Hepatosplenomegaly;

V. Koilonychia;

G. Aerophagia;

D. Numbness of the limbs. *Response*

standard: V. Koilonychia.

Task 23. Instructions: choose one correct answer.

In what type of anemia is there an increase in color index of more than 1.05: A.

Aplastic anemia;

B. Hemolytic anemia; B.

Normochromic anemia; G. B

12-deficiency anemia; D. Iron

deficiency anemia.

Response standard: G. B 12-deficiency anemia.

Task 24. Instructions: choose one correct answer.

"Leukemic failure" is:

A. Absence of myeloblasts in the presence of all other myeloid forms;

B. Absence of polymorphonuclear granulocytes in the presence of their precursors; B. Absence of promyelocytes, myelocytes, metamyelocytes in the presence of myeloblasts and polymorphonuclear granulocytes;

D. Absence of monocytes in the presence of all generations of granulocytes;

D. Significant decrease or complete absence of neutrophilic leukocytes. *Response standard:* B.

Absence of promyelocytes, myelocytes, metamyelocytes in the presence of myeloblasts and polymorphonuclear granulocytes.

Task 25. Instructions: choose one correct answer.

The diagnosis of leukemia is obvious in the presence

of: A. Anemia;

B. Ulcerative-necrotic lesions; B.

Enlarged lymph nodes;

G. Blastemia in peripheral blood; D.

Hemorrhages.

Response standard: G. Blastemia in peripheral blood.