

**FEDERAL STATE BUDGETARY EDUCATIONAL INSTITUTION OF  
HIGHER EDUCATION ROSTOV STATE MEDICAL UNIVERSITY  
MINISTRY OF HEALTH OF THE RUSSIAN FEDERATION  
Faculty of General Medicine**

APPROVED BY

The head of the department

Of educational programs

 /Belousova E.S./

(signature)

" 30 " August 2023 г.

**PROGRAM**

**STATE FINAL CERTIFICATION OF THE HIGHER EDUCATION  
PROGRAM "General Medicine"**

Speciality 31.05.01 General Medicine

Qualification: Physician

Form of study: full-time

Rostov-on-Don

2023

The GIA program is designed in accordance with the requirements of the Federal State Educational Standard for Higher Education in the speciality 31.05.01 "General Medicine" and the regulation on the procedure for conducting state final certification in higher education educational programs – specialty, bachelor's, and master's programs in Rostov State Medical University the Federal State Budgetary Educational Institution of Higher Education of the Ministry of Health of the Russian Federation, approved by the Rector's order No. 566 of 03.10.2017.

### **1. Purpose of the state final certification**

Determination of compliance of the results of mastering the educational program by graduates in the specialty 31.05.01 "General Medicine" with the requirements of the Federal State Educational Standard for Higher Education in the speciality 31.05.01 "General Medicine".

### **2. Tasks of the GIA**

Determination of the level of preparation of a graduate for performing professional tasks by types of professional activity: medical, organizational and managerial, research, defined by the Federal State Educational Standard for Higher Education; making a decision on awarding qualifications based on the results of the GIA.

**3. The field of professional activity** of graduates who have mastered the program "General Medicine" includes protecting the health of citizens by ensuring the provision of medical care in accordance with established requirements and standards in the field of healthcare.

**4. The objects of professional activity** of graduates who have mastered the program 31.05.01 General Medicine:

individuals (patients);

population;

a set of tools and technologies aimed at creating conditions for protecting the health of citizens.

**5. Types of professional activities** that graduates who have completed the program 31.05.01 General Medicine are preparing for:

medical;

organizational and managerial support.

scientific and research organization.

**6. A graduate who has mastered the program 31.05.01 General Medicine must have the following competencies:**

General cultural issues:

ability to think abstractly, analyze, and synthesize (OK-1);

ability to use the basics of philosophical knowledge to form a worldview position (OK-2);

ability to analyze the main stages and patterns of the historical development of society in order to form a civic position (OK-3);

ability to act in non-standard situations, to bear social and ethical responsibility for decisions made (OK-4);

readiness for self-development, self-realization, self-education, the ability to use methods and means of physical culture to ensure full-fledged social and professional activities (OK-6);

readiness to use first aid techniques and methods of protection in emergency situations (OK-7);

willingness to work in a team, tolerant perception of social, ethnic, confessional and cultural differences (OK-8).

#### General professional services:

readiness to solve standard tasks of professional activity using information, bibliographic resources, medico-biological terminology, information and communication technologies and taking into account the basic requirements of information security (OPK-1);

readiness for communication in oral and written forms in Russian and foreign languages for solving professional tasks (OPK-2);

ability to use the basics of economic and legal knowledge in professional activities (OPK-3);

ability and willingness to implement ethical and deontological principles in professional activities (OPK-4);

ability and willingness to analyze the results of their own activities to prevent professional mistakes (GPC-5);

readiness to maintain medical records (OPK-6);

readiness to use basic physical, chemical, mathematical and other natural science concepts and methods in solving professional problems (OPK-7);

readiness for medical use of medicines and other substances and their combinations in solving professional tasks (OPK-8);

ability to assess morphofunctional, physiological conditions and pathological processes in the human body for solving professional tasks (OPK-9);

readiness to ensure the organization of patient care and the provision of primary pre-medical health care (OPK-10);

readiness for the use of medical devices provided for in the procedures for providing medical care (OPK-11).

#### Professional services:

##### **medical activities:**

ability and readiness to implement a set of measures aimed at preserving and strengthening health and including the formation of a healthy lifestyle, prevention of the occurrence and (or) spread of diseases, their early diagnosis, identification of the causes and conditions of their occurrence and development, as well as aimed at eliminating the

harmful influence of environmental factors on human health (PC-1).

ability and readiness to conduct preventive medical examinations, medical examinations and follow-ups (PC-2);

ability and readiness to carry out anti-epidemic measures, organize protection of the population in hotbeds of particularly dangerous infections, in case of deterioration of the radiation situation, natural disasters and other emergency situations (PC-3);

ability and readiness to apply social and hygienic methods of collecting and medico-statistical analysis of information on population health indicators (PC-4);

readiness to collect and analyze patient complaints, medical history, examination results, laboratory, instrumental, patho-anatomical and other studies in order to recognize the condition or establish the fact of the presence or absence of the disease (PC-5);

ability to determine the patient's main pathological conditions, symptoms, syndromes of diseases, nosological forms in accordance with the International Statistical Classification of Diseases and Health-related Problems, X revision (PC-6);

readiness to conduct an examination of temporary disability, participate in a medical and social examination, and determine the biological death of a person (PC-7);

ability to determine the management tactics of patients with various nosological forms (PC-8);

readiness to manage and treat patients with various nosological forms in outpatient and day-care settings (PC-9);

readiness to provide medical care in case of sudden acute diseases, conditions, exacerbation of chronic diseases that are not accompanied by a threat to the patient's life and do not require emergency medical care (PC-10);

readiness to participate in the provision of emergency medical care in conditions requiring urgent medical intervention (PC-11);

readiness for physiological pregnancy and delivery (PC-12);

readiness to participate in providing medical assistance in emergency situations, including participation in medical evacuation (PC-13);

readiness to determine the need for the use of natural therapeutic factors, drug, non-drug therapy and other methods in patients in need of medical rehabilitation and spa treatment (PC-14);

readiness to teach patients and their relatives basic hygiene measures of a health-improving nature, self-monitoring skills of basic physiological indicators that contribute to the preservation and promotion of health, disease prevention (PC-15);

readiness for educational activities aimed at eliminating risk factors and developing healthy lifestyle skills (PC-16);

**organizational and managerial activities:**

ability to apply the basic principles of organization and management in the field of public health protection, in medical organizations and their structural divisions (PC-17),

readiness to participate in the assessment of the quality of medical care delivery using basic medical and statistical indicators (PC-18);

ability to organize medical care in emergency situations, including medical evacuation (PC-19);

**research activities:**

readiness to analyze and publicly present medical information based on evidence-

based medicine (PC-20);

ability to participate in scientific research (PC-21);

readiness to participate in the implementation of new methods and techniques aimed at protecting the health of citizens (PC-22).

**7. State final certification** under the program 31.05.01 General Medicine is conducted orally, in the form of a state exam in the form of an interview.

### **8. State Exam Program**

The interview includes answers to theoretical questions and solving situational problems of a professional nature. In this case, the degree of the graduate's ability to make optimal solutions to professional problems based on the integration of theoretical and practical knowledge obtained during the development of the educational program is subject to assessment.

*The final interview consists of the following sections and topics:*

- Names of sections included in theoretical questions and situational tasks:
  1. Pulmonology
  2. Cardiology
  3. Gastroenterology and hepatology
  4. Hematology
  5. Endocrinology

## SECTIONS FROM WORK PROGRAMS

### **9. List of questions:**

1. Chronic obstructive pulmonary diseases. Etiology. Pathogenesis. Classification. Treatment of exacerbations of chronic obstructive bronchitis.
2. Bronchial asthma: etiology, pathogenesis, classification, main clinical manifestations. Diagnostics. Complications. Modern principles of treatment of bronchial asthma.
3. Pneumonia: Causes, clinic, diagnosis, classification. Differential diagnosis of bronchitis and pneumonia, lobar pneumonia and exudative pleurisy.
4. Complications of pneumonia. Causes, clinic, and diagnosis. Principles of antibacterial therapy of pneumonia.
5. Bronchiectatic disease. Etiology. Pathogenesis. Clinic. Complications. Diagnostics. Treatment.
6. Lung cancer. Etiology. Morphology. Clinic. Differential diagnosis. Early diagnosis. Prevention.
7. Pleurisy. Etiology. Pathogenesis. Clinic. Diagnostic methods. Treatment.
8. Chronic pulmonary heart disease: clinic, diagnosis, differential diagnosis and treatment
9. Infectious endocarditis. Risk factors and etiology. Pathogenesis. Morphology. Causes of evolution and temporal features of the clinic. Treatment of infectious endocarditis.

10. Coarctation of the aorta. Pathogenesis of hemodynamic disorders. Clinic. The value of instrymen diagnostic methods.

11. Isolated pulmonary artery stenosis. Pathogenesis of hemodynamic disorders. Clinic. Methods of diagnostics.

12. Open ductus arteriosus. Pathogenesis of hemodynamic disorders. Stage of the current. Clinic. Diagnostic methods.

13. Ventricular septal defect. Pathogenesis of hemodynamic disorders. Flow stages. Clinic. The value of instrymen diagnostic methods.

14. Atrial septal defect. Pathogenesis of hemodynamic disorders. Flow stages. Clinic. Diagnostic methods.

15. Mitral defects. Etiology Hemodynamic disorders and compensation mechanisms in mitral stenosis, mitral insufficiency. Clinical manifestations. Complications.

16. Aortic malformations. Etiology Hemodynamic disorders and compensation mechanisms in aortic stenosis, aortic insufficiency. Clinical manifestations. Complications.

17. Defects of the tricuspid valve. Etiology of hemodynamic disorders and compensation mechanisms. Clinical manifestations. Complications.

18. Hypertension. Etiology. Risk factors. Pathogenesis. Classification by uroinnu blood pressure and by stratification risk groups.

19. Hypertension. Damage to target organs. Mechanisms and consequences of pathologic remodeling of the heart and blood vessels. Stages. Non-drug treatment methods.

20. Symptomatic arterial hypertension. Classification. Mechanisms of increasing blood pressure. Diagnostic methods.

21. Atherosclerosis. Epidemiology. Risk factors. Theories of pathogenesis. Primary and secondary prevention.

22. IHD. Risk factors. Pathogenesis. Classification. Prevention. Methods for diagnosing IHD

23. Angina pectoris. Classification. Characteristics of pain syndrome. Differential diagnosis with myocardial infarction.

24. Acute myocardial infarction. Classification. Periods. Clinical picture. Atypical invariants of the opening. Treatment.

25. Early and late complications of myocardial infarction. Clinical picture. Methods of diagnosis of complications of myocardial infarction. Treatment.

26. Chronic heart failure. Etiology. Pathogenesis. Clinic. Classification. Significance of instrumental diagnostic methods. Treatment of chronic cardiac insufficiency.

27. Neurocirculatory dystonia. Etiology. Pathogenesis. Classification. Clinic. Differential diagnosis. Treatment.

28. Myocarditis. Etiology and classification. Clinical picture. Methods for making diagnoses. Differential diagnostic. Modern approaches to treatment.

29. Hypertrophic cardiomyopathy. Etiology. Classification. Pathogenesis of hemodynamic disorders. Clinic. Diagnostic methods.

30. Dilated cardiomyopathy. Etiology. Pathogenesis of hemodynamic disorders. Clinic. Methods of analysis and diagnostics.

31. Pericarditis. Etiology. Pathogenesis. Classification. Clinical manifestations. Complications. Emergency care.

32. Atrial fibrillation and flutter. Etiology. Theories of pathogenesis. Clinic. ECG diagnostics. Treatment of respiratory arrhythmia and atrial flutter.

33. Paroxysmal tachycardia. Etiology. Pathogenesis. Clinic. ECG diagnostics. Management of supraventricular and ventricular paroxysmal tachycardia.

34. Extrasystole. Etiology. Mechanism of development. ECG diagnostics. Clinical significance.

35. Disorders of atrioventricular conduction. Etiology. Classification. Pathogenesis of hemodynamic disorders. Full cross block clinic. ECG diagnostics.

36. Chronic alcoholic liver disease. Pathogenesis. Clinic. Diagnostic methods. Differential diagnosis. Treatment.

37. Autoimmune hepatitis. Etiology. Pathogenesis. Morphology. Clinic. Diagnostic methods. Differential diagnosis. Treatment.

38. Liver failure. Etiology. Pathogenesis. Clinic. Diagnostic methods. Treatment.

39. Chronic viral hepatitis. Etiology. Pathogenesis. Pathogenesis of jaundice in chronic hepatitis. Clinical picture of chronic hepatitis. Diagnostics. Treatment of chronic hepatitis.

40. Cirrhosis of the liver. Etiology. Pathogenesis. Classification. Main clinical syndromes. Treatment of cirrhosis of the liver.

41. Liver cancer. Morphology. Clinic. Diagnostic methods. Differential diagnosis.

42. Irritable bowel syndrome. Etiology. Clinic. Diagnostic methods. Treatment.

43. Crohn's disease. Etiology. Pathogenesis. Morphology. Clinic. Complications. Diagnostic methods. Differential diagnosis. Treatment of Crohn's disease.

44. Non-specific ulcerative colitis. Etiology. Pathogenesis. Morphology. Clinic. Diagnostic methods. Differential diagnosis. Complications. Treatment of non-specific ulcerative colitis.

45. Peptic ulcer of the stomach and duodenum. Etiology. Pathogenesis. Clinic. Diagnostic methods. Differential diagnosis. Treatment of peptic ulcer disease.

46. Stomach cancer. Morphology. Clinic. Diagnostic methods. Differential diagnosis.

47. Chronic pancreatitis: etiology, pathogenesis, classification, clinic, diagnostic methods. Treatment of chronic pancreatitis.

48. Cholelithiasis. Etiology. Pathogenesis. Clinic. Methods of diagnostics. Differential diagnosis. Complications. Postcholecystectomy syndrome. Treatment.

49. Chronic cholecystitis and biliary dyskinesia. Etiology. Pathogenesis. Clinic. Diagnostic methods. Therapeutic measures for exacerbation of chronic cholecystitis and cholelithiasis.

50. Classification of hemorrhagic diatheses, types of bleeding. Laboratory methods for the diagnosis of hemorrhagic diathesis.

51. Hemophilia, pathogenesis, principles of diagnosis, clinical manifestations. Treatment of hemophilia.

52. Hemorrhagic vasculitis (Schonlein-Heinrich disease). Etiology. Pathogenesis. Clinical options. Treatment of hemorrhagic vasculitis (Schonlein-Heinrich disease).

53. Etiology, pathogenesis, classification of thrombocytopenia.

54. Idiopathic autoimmune thrombocytopenic purpura: pathogenesis, diagnosis, clinical manifestations. Treatment of idiopathic autoimmune thrombocytopenic purpura in children.

55. Acute leukemias. Etiology. Pathogenesis. Clinic. Diagnostic methods. Differential diagnosis. Principles and methods of treatment of acute leukemia.

56. Chronic lymphocytic leukemia. Etiology. Pathogenesis. Clinic. Classification. Diagnostic methods.

57. Chronic myeloid leukemia. Etiology. Pathogenesis. Clinic. Classification. Diagnostic methods.

58. Essential polycythemia. Etiology. Pathogenesis. Clinic. Diagnostic methods. Differential diagnosis with secondary erythrocytosis. Treatment of essential polycythemia.

59. Myeloma disease. Etiology. Pathogenesis. Classification. Diagnostic methods. Clinic. Treatment.

60. Lymphogranulomatosis. Etiology and pathogenesis. Morphology. Clinic. Classification. Diagnostic methods.

61. DVC-syndrome. Etiology, pathogenesis, classification, clinical manifestations, diagnosis, treatment.

62. Nephrotic syndrome. Etiology. Pathogenesis. Clinic. Diagnostic methods. Differential diagnosis. Treatment of nephrotic syndrome.

63. Chronic glomerulonephritis. Etiology. Pathogenesis. Clinic. Diagnostic methods. Treatment.

64. Acute glomerulonephritis. Etiology. Pathogenesis. Clinic. Diagnostic methods. Treatment.

65. Amyloidosis of the kidneys. Etiology. Pathogenesis. Clinic. Diagnostic methods. Treatment.

66. Chronic renal failure. Etiology. Pathogenesis. Clinic. Treatment of chronic renal failure. Indications for hemodialysis.

67. Chronic kidney disease. Modern principles of diagnosis and treatment.

68. Rheumatoid arthritis. Etiology. Pathogenesis of synovitis. Classification. Articular and extraarticular manifestations of rheumatoid arthritis. Diagnostic criteria for rheumatoid arthritis. Treatment of rheumatoid arthritis

69. Deforming osteoarthritis. Etiology. Pathogenesis. Morphology. Clinic of deforming osteoarthritis. Differential diagnosis of deforming osteoarthritis with rheumatoid arthritis. Diagnostic methods. Treatment of deforming osteoarthritis.

70. Gout. Etiology. Pathogenesis. Morphology. Clinic. Features of seizures. Stages of development. Complications. Differential diagnosis. Treatment of gout.

71. Etiology, pathogenesis, clinic, diagnosis and treatment of psoriatic arthropathy. Differential diagnosis with rheumatoid arthritis.

72. Ankylosing spondylitis. Etiology. Pathogenesis. Clinic. Complications. Treatment of ankylosing spondylitis.

73. Infectious arthropathies. Etiology. Pathogenesis. Clinic. Differential diagnosis. Treatment of infectious arthropathies.

74. Systemic lupus erythematosus. Etiology. Pathogenesis. Clinic. Differential diagnosis. Treatment of systemic lupus erythematosus.



75. Systemic scleroderma. Etiology. Pathogenesis. Clinic. Differential diagnosis. Treatment of systemic scleroderma.

76. Dermatomyositis. Etiology. Pathogenesis. Clinic. Differential diagnosis. Treatment of dermatomyositis.

77. Etiology, pathogenesis, clinic, diagnostics and treatment of nodular periarteritis.

78. Etiology, pathogenesis, clinic, diagnostics and treatment of obliterating thrombangiitis.

79. Etiology, pathogenesis, clinic, diagnostics and treatment of non-specific aortoarteriosis.

80. Hyperthyroidism: pathogenesis of clinical manifestations. Diagnostics. Differential diagnosis. Treatment of diffuse toxic goiter, indications for surgical treatment.

81. Hypothyroidism: classification, pathogenesis, classification of clinical manifestations. Diagnostics, differential diagnosis. Principles of hormone replacement therapy. Iodine deficiency states: clinical manifestations, prevention of iodine deficiency. Diagnostics and differential diagnosis in endemic goiter.

82. Type I diabetes mellitus: etiology, pathogenesis, classification, clinical picture. Modern principles of insulin therapy. Compensation criteria, self-monitoring.

83. Type II diabetes mellitus: risk factors, pathogenesis. Principles of early diagnosis. Modern approaches to treatment. Indications for insulin therapy.

84. Acute complications of diabetes mellitus. Pathogenetic variants of hyperglycemic com, causes of development. Emergency measures at the prehospital and inpatient stages of providing emergency care.

85. Hypoglycemic syndrome in clinical practice, classification of hypoglycemic conditions, causes of development in patients with diabetes mellitus. Urgent actions.

86. Late complications of diabetes mellitus. Diabetic micro- and macroangiopathy, polyneuropathy. Stages of development. Principles of treatment.

87. Hyper- and hypocorticism: etiology, pathogenesis, manifestations, diagnosis, complications and course, treatment.

88. Endemic goiter. Etiology. Pathogenesis. Clinical picture. Methods of prevention. Location.

89. Airborne infections: infectious mononucleosis, meningococcal infections, tuberculosis.

90. Airborne infections: SARS, flu, diphtheria, rubella.

91. Clinical diagnosis of influenza. Treatment of patients with influenza and acute respiratory viral infections on an outpatient basis.

92. Structure and management of healthcare in the Russian Federation, nomenclature of medical and preventive institutions.

93. Medical examination by experts and its types.

94. Organization of examination of temporary disability in a medical and preventive institution.

95. Disability of the population, concept, criteria, levels, structure, causes.

96. Organization of medical and social expertise, institutions, procedure for referral and delivery.

97. Organization of outpatient care for the population, institutions, their structure, performance indicators, modern forms of activity.

98. Organization of inpatient medical care, performance indicators, current performance indicators.

99. Legal, organizational, and methodological issues of health insurance in the Russian Federation.

100. The most important medical and social problems of public health (cardiovascular, oncological diseases, injuries and poisoning).

## **10. List of typical situational tasks with response standards**

**No. 1.** Patient A., 45 years old, engineer, complains of chills, fever up to 39 °C, dyspnea of an inspiratory nature during normal physical exertion, dry cough, pain during deep breathing and coughing in the right scapular region, general weakness, fatigue, sweating at night. I became acutely ill three days ago after hypothermia, when the above complaints appeared. I took antipyretic drugs with little effect. I went to the general practitioner of the district polyclinic. Due to the severity of the condition and suspected pneumonia, he was sent to the emergency room of the hospital at the place of residence. Medical history: works for 15 years as an engineer at a machine-building plant. He doesn't smoke. Previously, the doctor was not observed. Objectively: the general condition is severe. Skin with high humidity. Cyanosis of the lips. Height-175 cm, weight-72 kg. Waist circumference-100. There are no peripheral edemas. The peripheral lymph nodes are not enlarged. The temperature is 39 °C. The thorax is normosthenic. With deep breathing, there is a slight delay in the breathing of the right half of the chest. BDD - 24 per minute. On the right side of the scapular line, the percussion sound is dulled. When auscultation is performed on the right below the angle of the scapula, weakened vesicular respiration is heard, sonorous fine-bubbled wheezes. The heart rate is correct, the ratio of tones is normal, there is no noise. Heart rate – 110 beats per minute. Blood pressure is 100/60 mm Hg. With superficial palpation, the abdomen is soft, painless. Liver according to Kurlov - 9 × 8×7 cm, palpation of the lower edge is smooth, painless. The chair is decorated, without impurities. Urination is free and painless. Total blood count: erythrocytes -  $4.08 \times 10^{12}/l$ , hemoglobin - 120 g/l, leukocytes -  $13.2 \times 10^9 /l$ , juvenile - 2%, rods - 12%, segments - 56%, lymphocytes - 27%, monocytes - 3%, ESR - 38 mm/h. On the survey chest X-ray in direct and lateral projections: on the right, in the lower and middle lobes, darkening in the form of an infiltrate.

Questions:

1. Assume the most likely diagnosis.
2. Justify your diagnosis.
3. Make and justify a plan for additional examination of the patient.
4. What tactics and therapy does the patient need at admission? Justify your choice.

What are the criteria for the adequacy of therapy?

5. After 72 hours of treatment, signs of intoxication persist, fever (temperature 37.9 °C), BDD-22 per minute, there is purulent sputum. In the general blood test: leukocytes-  $11 \times 10^9 /l$ , neutrophils-82%, young forms-7%. What is your future treatment strategy? Justify your choice.

*Standard response:*

1. Community-acquired bacterial pneumonia (the causative agent is not specified), polysegmental with localization in the middle and lower lobes of the right lung, severe course, complicated by ODNI.

2. The stage of onset of the disease is usually expressed very clearly. The disease occurred acutely, chills suddenly appeared among full health, an increase in body temperature of 39°C, chest pain when coughing, headache, dry cough, general weakness is noted. There is dyspnea with BDD-24 in 1 minute, shortening of percussion sound, weakening of vesicular respiration on the right in the lower lobe, leukocytosis-more than  $13.2 \times 10^9 /l$ , rod-shaped shift to the left to young forms, X-ray signs - infiltration of lung tissue.

3. The patient is recommended: general blood test with determination of the level of red blood cells, hematocrit, leukocytes, platelets, leukocyte formula: on day 2-3 and after the end of antibacterial therapy; Methodical Center for Accreditation of specialists General medicine 2018 biochemical blood test (ALT, AST, bilirubin, albumin, creatinine, urea, glucose, electrolytes, fibrinogen, CRP): at admission and after 1 week in the presence of changes or clinical deterioration; pulse oximetry at admission and in dynamics; study of arterial blood gases: daily until normalization of indicators; chest X-ray: in dynamics (in the absence of the effectiveness of starting antibacterial pneumonia after 48-72 hours, after 3-4 weeks-assessment of the dynamics of pneumonia resolution); electrocardiography in standard leads; general sputum analysis and bacteriological examination of sputum to determine the causative agent of pneumonia and determine the sensitivity of the latter to antibacterial drugs; sputum for acid-resistant microorganisms. Bacteriological examination of blood. Procalcitonin level (correlates with the severity of the patient's condition, prognosis and etiology-higher for bacterial infection). Rapid tests for the detection of pneumococcal and legionella antigenuria.

4. The patient must be hospitalized. Bed rest mode. For ODN: oxygen therapy. In severe community-acquired pneumonia (CAP), the use of antibiotics should be urgent. A patient without risk factors for *P. aeruginosa* infection and aspiration. The drug of choice is intravenous administration of drugs (Ceftriaxone, Cefotaxime, Cefepime, Ceftaroline, Ertapenem or inhibitor-protected penicillins (Amoxicillin/Clavulanate 1,2 g intravenously drip 3 times a day)) in combination with intravenous macrolides (Clarithromycin, Azithromycin), Azithromycin-500 mg intravenously once a day for 3 days, after 3 days when the temperature normalizes, switch to oral administration of a drug of the same class: Amoxicillin/Clavulanate 1 g 2 times a day. Initial evaluation of the effectiveness of the initial regimen of antibacterial therapy should be carried out 48-72 hours after the start of treatment. Criteria for the adequacy of antibacterial therapy: body temperature below 37.5°C; no intoxication; no respiratory failure (BPD-less than 20 per minute); no purulent sputum; the number of white blood cells in the blood - less than  $10 \times 10^9 /l$ , neutrophils-less than 80%, juvenile forms-less than 6%; no negative dynamics in the level of blood pressure. radiograph - Ambrohexal 0.3 g 3 times a day orally.

5. Antibacterial therapy is ineffective. It is necessary to change the antibacterial therapy to respiratory fluoroquinolones. Of the fluoroquinolones, preference is given to Levofloxacin 500 mg 2 times a day intravenously, Moxifloxacin 400 mg intravenously. In case of ineffectiveness of antibacterial therapy, conduct an examination of the patient

to clarify the diagnosis, identify complications of community-acquired pneumonia, and evaluate the results of microbiological studies. To assess the need for diagnostic fibrobronchoscopy with bronchial biopsy and studies of bronchial flushing waters – bacterial culture, studies on acid-resistant microorganisms, atypical SCT cells of the chest organs in the presence of ineffectiveness of antibacterial therapy.

**No. 2** A 25-year-old patient, a driver, went to the district physician with complaints of episodes of suffocation with difficult exhalation, coughing with difficult sputum almost daily. Attacks of suffocation occur 2-3 times a week, more often at night, and pass spontaneously in an hour with the disappearance of all symptoms. Slight shortness of breath during exercise. I didn't take any medication. Considers himself ill for about 3 months. I applied for medical help for the first time. Since childhood, frequent bronchitis with exacerbations in the spring and autumn periods. He denies any other chronic diseases. There were no operations or injuries. Smokes 1.5 packs a day for 5 years. My mother has bronchial asthma, my father has hypertension. The allergic history is not burdened. It has no occupational hazards. On physical examination: the patient's condition is mild. Body temperature 36.7 °C. The skin is clean and moist. Height-175 cm, weight-81 kg. The peripheral lymph nodes are not enlarged. The thyroid gland is not enlarged. The thorax is normosthenic. On palpation, the chest is painless. BH – 18 per minute. When percussion – clear light sound. Limits of relative dullness of the heart: within the normal range. During auscultation – vesicular breathing is carried out in all departments, a small amount of dry, scattered, high-dyspnoeic wheezing is heard. Heart tones are clear and rhythmic. Pulse - 80 beats per minute of satisfactory filling and tension. Blood pressure - 120/80 mm Hg On palpation, the abdomen is soft and painless. Liver size according to Kurlov: 10×9×7 cm. There are no dysuric phenomena.

Questions:

1. Make a preliminary diagnosis.
2. Make a plan for laboratory and instrumental examination.
3. Make a treatment plan.
4. Justify medical and social expertise (MSE), contraindicated types of work.
5. Indicate the patient's indications for emergency hospitalization.

*Standard response:*

1. Non-allergic bronchial asthma, moderate course, first detected, uncontrolled. Respiratory failure of the 1st degree.
2. Examination plan: clinical blood test; ECG, spirometry; chest X-ray in two projections; general sputum analysis; consultation with a pulmonologist.
3. Treatment plan: smoking cessation; to stop an attack of the disease, use short-acting beta-2-adrenomimetics (Salbutamol or Fenoterol) by inhalation. For continuous use-a combination of low-dose inhaled corticosteroids (Fluticasone 100-250 mcg / day, Budesonide 200-400 mcg/day or Beclomethasone dipropionate 200-500 mcg/day) with long-acting beta-2 agonists (Salmeterol 100 mcg / day or Formoterol 9-18 mcg/day). Training in the self-management skills of bronchial asthma.
4. Temporarily disabled. Issue LN for 3-4 days. Disability in the moderate course of bronchial asthma continues until the process stabilizes. Heavy physical labor, contact with toxic substances, work in adverse weather conditions, long business trips, work in

hot shops, long walking, professional speech load are contraindicated. Rational employment through VK.

5. Unsatisfactory response to treatment ( $FEV_1 < 50\%$  of the required value after the use of bronchodilators). Symptoms of asthma exacerbation increase, or there is no positive dynamics within 3 hours after the start of urgent medical measures. There is no improvement within 4-6 hours after starting treatment with systemic corticosteroids.

**No. 3** Patient V. has been working as an engineer for 50 years, and he went to the district general practitioner with complaints of frequent coughing with a small amount of mucosal sputum, shortness of breath with moderate physical exertion. Cough and shortness of breath are noted within 5 years. During the last year, he has noticed an increase in shortness of breath and a decrease in body weight. Smokes for 23 years about 1.5-2 packs of cigarettes a day. For the last few months without deterioration. The general condition is satisfactory. The chest is emphysematous. Percussion sound over the pulmonary fields is boxy, vesicular breathing is weakened, dry wheezing on both sides (more on exhalation). BH – 20 per minute. The borders of the heart are normal. The heart tones are muted at the top, the rhythm is correct. Heart rate – 78 per minute. BP - 125/80 mm Hg Liver at the edge of the rib arch. There are no peripheral edemas. Clinical blood count: hemoglobin-139 g / l, leukocytes- $6.7 \times 10^9$  /L, monocytes-4%, basophils-1%, eosinophils-1%, neutrophils-69%, lymphocytes-25%, ESR-10 mm / h. Chest X-ray: light fields of increased transparency, light drawing is reinforced, deformed, shadow without features. No infiltrative changes were detected. Spirography indicators: VEL – 85% of the required value, FEV 1-57% of the required value. Pulse oximetry: oxygen saturation ( $SaO_2$ ) = 92%. ECG: sinus rhythm, correct, heart rate-76 per minute, vertical position of the electrical axis of the heart. Without significant changes. The body mass index is 18 kg / m<sup>2</sup>.

Questions:

1. Assume the most likely diagnosis.
2. Justify your diagnosis.
3. Are antibacterial drugs indicated? Justify your response. Name the recommended medications.
4. Create an individual rehabilitation program.
5. Conduct a disability assessment and justify your decisions

*Standard response:*

1. Chronic obstructive pulmonary disease (mixed phenotype) of moderate severity in remission. DN of the 1st degree. Moderate violations of the ventilation function of lungs, mainly of the obstructive type. Insufficient (deficit) body weight.
2. The diagnosis of "chronic obstructive pulmonary disease (COPD)" is established based on the patient's complaints (cough with mucosal sputum, shortness of breath), medical history (smokes for 23 years), examination data (barrel chest, box percussion sound, dry wheezing). The mixed phenotype was established on the basis of the same severity of signs of pulmonary emphysema and bronchitis. The average degree was determined based on a 50% (57%) decrease in FEV1 according to spirometry. The remission phase is established based on the mucosal nature of sputum, the absence of deterioration for several months. Respiratory failure of the 1st degree was established on

the basis of complaints of shortness of breath with moderate physical exertion and an oxygen saturation level of 92%. Underweight is determined based on a body mass index of less than 18.5 kg/m<sup>2</sup> (18 kg/m<sup>2</sup>).

3. Antibacterial drugs are not indicated, as the patient is in remission of the disease. Long-acting inhaled bronchodilators are recommended to reduce bronchial obstruction and prevent relapses (Tiotropium bromide, Glycopyrronium bromide, Formoterol, Salmeterol, Indacaterol, Olodaterol) or Theophylline. To quickly relieve symptoms, short-acting inhaled bronchodilators are used: Salbutamol, Fenoterol, or the combined drug Berodual (Fenoterol + Ipratropia bromide).

4. The patient is subject to dispensary observation by a district physician (for the third group of dispensary observation) with a multiplicity of examinations by a district physician and a pulmonologist 2 times a year. Examination by an otorhinolaryngologist or dentist – once a year for the purpose of sanitizing foci of infection. Clinical blood analysis, sputum analysis with testing for mycobacterium tuberculosis and bacteria, spirometry, fluorography, 6-minute walking test, ECG - 1 time per year. Individual rehabilitation program includes: anti-relapse treatment (long - acting bronchodilators, and for rapid relief of symptoms-short-acting); smoking cessation; vaccination to prevent pneumonia and flu; physical rehabilitation: breathing exercises with inspiratory load for 20 minutes 2-3 times a day (exhalation with resistance, exhalation through closed lips), physical training with a capacity of more than 60% of the maximum duration of 20-30 minutes per day (arm muscle training – dumbbell exercises, leg muscle training-walking, squat). Given the lack of body weight, nutritional support is necessary: include in the diet foods with a high protein content (animal protein content of 60% - dairy products, eggs, fish, meat), fats (dairy products, fatty fish, vegetable oil), minerals and vitamins (fresh fruits and vegetables), dietary supplements (Nutri-drink 200 ml 2 times a day between meals). Patient training for adherence to treatment. Psychological support. Sanatorium-resort treatment in sanatorium-resort organizations in the climatic zone of the patient's residence: climatic, balneological resorts with carbon dioxide and sodium chloride waters, mud.

5. Taking into account the average severity of COPD in remission and the patient's profession (engineer), the patient is able to work, since the profession is not contraindicated.

**No.4** A 75-year-old woman went to a district general practitioner with complaints of heart failure, palpitations, pain in the heart of a compressive nature and shortness of breath during less than normal activity, general weakness, fatigue, swelling on the legs. From the medical history, it is known that the patient has been suffering from IHD for 10 years. During the last three years, he has noticed interruptions and palpitations in the work of the heart. She Took Bisoprolol, Aspirin, Enalapril, And Nitroglycerin. Notes deterioration of the condition within a month, increased weakness, shortness of breath , swelling on the legs. From the family history: the patient's mother died at the age of 80 from ONMC. On examination: the condition is relatively satisfactory. BMI - 28 kg / m<sup>2</sup>. The skin is clean, normal color. Shin splints. In the lungs, respiration is vesicular, in the lower parts there are single silent wet wheezes. Percussion: the upper border of the heart is the III intercostal space along the left parasternal line, the right border is 1 cm outward from the right edge of the sternum in the fifth intercostal space, and the left border is 1.5

cm outward from the left mid-clavicular line in the fifth intercostal space. Heart sounds are muffled, arrhythmic, soft systolic murmur at the apex. Heart rate-96 beats per minute, blood pressure-130/80 mm Hg. Heart rate-86 beats per minute. DP=10 beats per minute. The abdomen is soft and painless on palpation. Liver along the edge of the right rib arch, spleen is not enlarged. There are no dysurias. The symptom of beating in the lumbar region is negative.

Questions:

1. Assume the most likely diagnosis.
2. Justify your diagnosis.
3. Make and justify a plan for additional examination of the patient.
4. Taking into account the CHA<sub>2</sub> DS<sub>2</sub>-VAS scale, the patient's risk of stroke and systemic thromboembolism is 4 points. Based on the HAS-BLED scale, the risk of bleeding is 1 point. What indirect anticoagulant would you recommend as part of a combination therapy? Justify your choice. What heart rate control medication would you recommend to your patient?
5. Schedule treatment according to the diagnosis.

*Standard response:*

1. IHD: stable angina pectoris of the third degree of tension. Permanent form of atrial fibrillation. H IIB. FC III.

2. The diagnosis of " IHD " is established on the basis of complaints of the patient about pain in the heart of a compressive nature with less than normal activity. The permanent form of FP is established with a duration of more than 3 years taken into account. Stage of NC with consideration of characteristic complaints and insufficiency in two circulatory circles.

3. The patient is recommended: general blood test, general urinalysis, INR, coagulogram, ASAT, ALT, Creatinine, Glucose, total protein, ECG; ECHO-KG to assess the thickness of the myocardial walls, diastolic and systolic function. 4. The risk of developing systemic thromboembolism in the patient is high, the risk of bleeding is low, therefore, you can prescribe Varvarin under the control of INR (start with 2.5 mg 1 time in the evening) or a new indirect anticoagulant (Dabigatran 150 mg 2 times a day or Rivaroxaban 20 mg 1 time a day). The patient leads an inactive lifestyle, so she should be recommended Digoxin to monitor her heart rate.

5. Warfarin 2.5 mg 1 time a day, in the evening (target INR level from 2 to 3), Digoxin 1 tablet a day, low-dose ACE inhibitors, for example, Perindopril 2.5 mg 1 time a day, Nitroglycerin for heart pain, statins, for example, Atorvastatin 20 mg 1 time in the evening, Veroshpiron 25 mg 2 times a day, Furosemide 1 tablet (40 mg) in the morning on an empty stomach 2 times a week (one week), possibly Metoprolol 12.5 mg 2 times a day.

**No.5** A 57-year-old man went to a local GP with complaints of periodic headaches, mainly in the occipital region, with an increase in blood pressure up to 170/90 mm Hg, when the weather changes, under stressful situations. From the medical history, it is known that the patient has been suffering from hypertension for about 5 years, but, despite the recommendations of doctors, he did not receive constant antihypertensive therapy. During the last visit to the general practitioner four months ago, blood pressure

of 160/90 mm Hg was recorded, albuminuria of 28 mg/day was detected in the urine test, and the total cholesterol level was 6.3 mmol/l in the biochemical blood test. Family history: 78-year-old mother suffers from hypertension, suffered from ONMC, 79-year-old father suffers from CHD, suffered from MI. On examination: the condition is relatively satisfactory. BMI - 31 kg / m<sup>2</sup>. Waist circumference - 106 cm, hip circumference - 101 cm. The skin is clean, normal color. The lungs have vesicular respiration and no wheezing. Heart tones are muted, rhythmic, accent II tones above the aortic projection. Heart rate-76 beats per minute, blood pressure-170/90 mm Hg. The abdomen is soft, palpation is painless in all parts. The liver and spleen are not enlarged. There are no dysurias. The symptom of beating in the lumbar region is negative. Total cholesterol-6.5 mmol / l, TG-2.6 mmol/L, HDL-C-0.8 mmol/L, fasting glucose-5.9 mmol/L, creatinine-96 mmol/l, GFR (according to the formula CKD-EPI) = 92 ml / min, albuminuria-50 mg/day.

Questions:

1. Assume the most likely diagnosis.
2. Justify your diagnosis.
3. Make and justify a plan for additional examination of the patient.
4. What group of antihypertensive medications would you recommend to the patient as part of a combination therapy? Justify your choice.
5. After 6 months of regular therapy (a combination of Amlodipine at a dose of 5 mg / day and a drug from the group of antihypertensive drugs selected in the last question, + Rosuvostatin 20 mg / day + diet) Blood pressure ranges from 120-130 / 70-80 mm Hg, fasting glucose-5.4 mmol / l, total cholesterol-5.0 mmol/L, TG-1.5 mmol/L, HDL-C-1.7 mmol/L, creatinine-108 mmol/L, GFR (according to the formula CKD-EPI) = 65.3 ml / min, albuminuria - 10 mg / day. What is your future treatment strategy? Justify your choice.

*Standard response:*

1. Arterial hypertension of stage II, grade II, CVD risk 4. Grade 1 obesity. Hyperlipidemia (metabolic syndrome). Chronic kidney disease stage I, albuminuria stage 2.
2. The diagnosis of "arterial hypertension (AH)" is established on the basis of the patient's complaints of increased blood pressure, anamnesis data (the patient notes an increase in blood pressure for 5 years); the determination of the degree of hypertension is based on the blood pressure figures measured during admission. The stage of hypertension is determined based on the presence of damage to the target organs (kidneys). The degree of CVD risk is determined based on the presence of metabolic syndrome, CKD. The diagnosis of "chronic kidney disease (CKD)" was determined by the presence of signs of kidney damage (albuminuria) for 3 or more months (anamnesic data) and a decrease in GFR. The diagnosis of "metabolic syndrome" is based on the presence of obesity, hypertension, dyslipidemia (increased TG and decreased HDL), fasting hyperglycemia.
3. The patient is recommended: daily blood pressure monitoring to assess the stability of blood pressure increase, daily blood pressure profile; ECG; ECHO-KG to assess the thickness of the myocardial walls, diastolic and systolic function; consultation with an ophthalmologist and ophthalmoscopy to assess the presence of hypertensive



ophthalmopathy; ultrasound of the kidneys to assess damage to the target organ of the kidneys.

4. ACE inhibitors or angiotensin II receptor antagonists. The choice of drugs from these groups is based on their nephroprotective properties. These groups of antihypertensive drugs are the "gold" standard in the treatment of patients with stage I-III CKD. Ramipril has the most proven nephroprotective properties from the group of ACE inhibitors, and Losartan from the group of angiotensin II receptor antagonists.

5. Leave antihypertensive therapy unchanged, continue dynamic monitoring. It is necessary to check the patient's diet and physical activity before performing a creatinine test. Currently, it is impossible to say that a decrease in GFR is a negative result, it may be due in particular to the fact that the glomeruli of the kidneys began to work without hyperfunction, and this value of GFR is true for this patient. Monitoring of renal function after 6 months. Therapy remains unchanged while maintaining GFR at the same values, maintaining the target BP figures after 6 months.

**No.6** A 52-year-old woman went to the district general practitioner with complaints of paroxysmal pain in the right hypochondrium, dryness and bitterness in the mouth, fever up to 37.2 °C. From the anamnesis: suffers from chronic cholecystitis, is observed by the general practitioner of the district. Five years ago, she was treated in a hospital. In the epicrisis, according to ultrasound, there are small stones in the gallbladder, the wall is thickened to 4 mm. Notes periodic paroxysmal pain in the right hypochondrium after an error in the diet. The last deterioration within two days is associated with the use of fatty foods. Heredity is burdened - the mother suffered from GI. On examination: the general condition is satisfactory, the skin and visible mucous membranes are clean, of normal color. Peripheral lymph nodes are not palpable. BDD - 18 beats per 1 minute. The lungs have vesicular respiration and no wheezing. Heart rate-92 beats per minute. Blood pressure-120/70 mm Hg. Heart tones are sonorous, rhythmic. Tongue is dry, overlaid with a white coating at the root. The abdomen is soft, sensitive in the right hypochondrium, the symptoms of Merfi and Kerr are positive, the liver is palpable along the edge of the rib arch, normal consistency, painless, the spleen is not palpable. There are no dysurias. Regular chair

Questions:

1. Assume the most likely diagnosis.
2. Justify your diagnosis.
3. Make a plan for the patient's examination. Name ultrasound signs of acute cholecystitis.
4. What is the patient's treatment strategy? Justify it.
5. What non-drug treatment is indicated for the patient?

*E-ticket of the response:*

1. Cholelithiasis with attacks of biliary colic, complicated by acute cholecystitis.
2. The diagnosis of "ZHKB" is established on the basis of characteristic complaints, objective examination data and ultrasound data. The diagnosis of "GI complication (acute cholecystitis)" was established taking into account the increase in body temperature, tachycardia during examination, dry tongue during examination, and positive Kerr and Murphy symptoms.

3. General blood analysis, general urinalysis, blood biochemistry (ASAT, ALT, ALP, GGTP, bilirubin), ultrasound of the abdominal cavity, FGDS, ECG. Ultrasound-signs of acute cholecystitis: thickening of the gallbladder wall more than 4 mm, revealing the "double contour" of the gallbladder wall.

4. The patient should be hospitalized in a surgical hospital, as there is a history of recurrent biliary colic, and with a real exacerbation, the patient developed a complication in the form of acute cholecystitis.

5. Diet therapy: 4-6 meals a day with the exception of products that increase the separation of bile, secretion of the stomach and pancreas. Smoked products, refractory fats and irritating condiments are excluded. The diet should include a large amount of fiber with the addition of bran, which not only normalizes intestinal motility, but also reduces the lithogenicity of bile

**No.7** A 36-year-old man went to the district general practitioner with complaints of sharp pain in the left hypochondrium radiating to the lower back, more on the left, flatulence. According to the patient, the pain increases in the supine position and decreases in the sitting position with a slight forward tilt. From the anamnesis: the day before I was at a friend's birthday party, I consumed fatty foods and alcohol. Notes that pain in the left hypochondrium after eating fatty, fried food, alcohol appeared earlier (for about 3 years). I didn't seek medical help. On examination, the general condition is closer to satisfactory. Temperature - 37.1°C. Correct build, slightly lower nutrition, BMI = 17.8 kg /m<sup>2</sup>. The skin and visible mucous membranes are clean, of normal color. The peripheral lymph nodes are not enlarged. Pulse - 78 beats per minute, rhythmic. Blood pressure is 115/75 mm Hg. Heart sounds are clear, rhythmic. In some cases, respiration is vesicular. The abdomen on palpation is painful in the area of the projection of the pancreas. The symptoms of Merfi and Ker, Shchetkin-Blumberg are negative. Liver +2 cm from under the edge of the costal arch, the edge is painless. The spleen is not palpable. Urination is free and painless. Unformed stools up to 3 times a day.

Questions:

1. Assume the most likely diagnosis.
2. Justify your diagnosis.
3. Draw up and justify the patient's examination plan to clarify the diagnosis.
4. Schedule a treatment.
5. Conduct a disability assessment

*Standard response:*

1. Chronic pancreatitis, acute stage.
2. The diagnosis is made taking into account the patient's characteristic complaints, medical history, and objective examination data. The diagnosis of chronic pancreatitis (CP) requires morphological examination of the pancreas and endoscopic retrograde cholangiopancreatography, which is not always available. In this patient, the diagnosis of "chronic calcifying pancreatitis" can be assumed. This form is characterized by a recurrent course with episodes of exacerbation, in the early stages resembling acute pancreatitis.

3. Mandatory research methods: general blood test, general urinalysis, ECG, coprogram, determination of amylase activity in blood serum and urine, lipase in blood

serum, glucose determination. Ultrasound of the pancreas. To clarify the option - to conduct a morphological examination of the pancreas and endoscopic retrograde cholangiopacratography. 4. Fasting for 3-5 days, then table # 5, cold on the epigastric region, analgesics (Metamizole sodium 50% 2 ml), antispasmodics (Duspatalin), antisecretory drugs (PPIs-Omeprazole, Rabeprazole or H2 blockers-Famotidine, Ranitidine), drugs that eliminate gastrointestinal motility disorders (Domperidone 10 mg 3 times a day).

5. The patient is temporarily disabled for up to 20-26 days (in the presence of external secretory insufficiency), up to 28-35 days (in the presence of both external secretory and intra-secretory pancreatic insufficiency).

**No.8** A 35-year-old male electrical engineer complains of severe weakness, shortness of breath, palpitations when climbing up to the 2nd floor, sweating at night, bruising all over the body, frequent nosebleeds for no apparent reason, gingival bleeding during oral hygiene, a feeling of heaviness in the right hypochondrium. Considers himself ill for about a month. Significant deterioration of health during the last week. Annually passes professional examinations, the last one-4 months ago, no pathology was detected. Denies chronic diseases. On examination: body temperature - 38.1 °C. The skin and visible mucous membranes are pale, moist, multiple ecchymoses of various localization and different stages of "flowering". There are no swellings. The peripheral lymph nodes are not enlarged. Above the lungs, clear lung sound, vesicular breathing, no wheezing. Blood pressure is 110/70 mm Hg. The limits of relative cardiac dullness are within the normal range. Heart sounds are rhythmic, clear, 98 per minute, soft systolic blowing noise at the apex. The belly is soft, painless. The lower edge of the liver is palpable at the level of the navel, dense, even, moderately painful; the surface of the liver is even, dense. in the left hypochondrium, the lower pole of the spleen is palpated 3 cm below the edge of the rib arch, dense, even, and moderately painful. The symptom of beating is negative on both sides, the kidneys are not palpable. In the laboratory. Total blood count: hemoglobin-76 g / l, red blood cells- $2.9 \times 10^{12}$ /L, color index-0.79, platelets- $21 \times 10^9$  /L, leukocytes- $35 \times 10^9$  /L, blasts-21%, eosinophils-0%, rod neutrophils-0%, segmented neutrophils-79%, lymphocytes - 0%, monocytes - 0%; ESR - 76 mm/h. General analysis of urine: yellow, clear, acidic pH, specific gravity-1016; protein, sugar-no, white blood cells-1-2 in the field of vision, epithelium-2 in the field of vision, red blood cells, cylinders, salts - no. Biochemical blood test: total bilirubin - 48.8 mmol / l, creatinine-0.196 mmol/L, glucose-4.3 mmol/L, total cholesterol-5.9 mmol/L, potassium-3.9 mmol/l, total protein-76 g/l, Coagulogram: APTT-50 s (norm-32-42 s), PTI-105%, fibrinogen-6 g/l.

Questions:

1. Assume the most likely diagnosis.
2. Justify your diagnosis.
3. Make and justify a plan for additional examination of the patient.
4. Make a treatment plan for this patient. Justify your choice.
5. Determine the patient's prognosis and ability to work.

*Standard response:*

1. Acute leukemia (unspecified variant). Metaplastic anemia, moderate severity. Moderate metaplastic thrombocytopenia. Severe hemorrhagic syndrome. Metaplastic nephropathy. CPN II B according to Ryabov.

2. The diagnosis is made on the basis of the selected syndromes: hemorrhagic, anemic, hyperplastic, intoxication. All syndromes are based on replacement of bone marrow with tumor tissue with replacement of normal bone marrow with blast cells and infiltration of all organs and systems with blast cells (normochromic normocytic anemia, thrombocytopenia, decreased SVR factors, decreased humoral and cellular immunity).

3. The patient is recommended: sternal puncture (myelogram) to confirm the diagnosis; cytochemical reaction on blast cells; immunophenotyping (most informative) – to establish the variant of acute leukemia. For further dynamics during chemotherapy: bilirubin fractions; GFR calculation. Ultrasound of the abdominal cavity. ECG. Markers of viral hepatitis.

4. Hospitalization in the Department of Hematology. Specific chemotherapy depending on the established variant of acute leukemia (acute myeloid leukemia or acute lymphocytic leukemia). Correction of anemia – red blood cell mass or washed red blood cells, FFP. Thromboconcentrate – no indications: hemorrhagic syndrome is primarily caused by liver infiltration and a decrease in the production of clotting factors (as indicated by the lengthening of APTT in normal PTI). Hepatoprotectors. Sorbents.

5. The prognosis is relatively unfavorable. With adequate therapy, it is possible to achieve remission and recovery. For the duration of treatment – complete disability, send to the ITU to determine the disability group, since therapy on average takes about 1.5 years.

**No.9** Patient M., 47 years old, went to the district general practitioner with complaints of general weakness, lethargy, poor appetite, and a feeling of heaviness in the epigastrium after eating. Such complaints have been bothering me for a long time, and I haven't been examined before. In addition, in the last 4 months, I began to notice the appearance of instability when walking, a feeling of "goosebumps" in the lower extremities, burning of the tongue. From the anamnesis, it is known that from a young age he knows about the presence of autoimmune thyroiditis (he is regularly observed by an endocrinologist, the TSH level is within normal values). Objectively: the condition is satisfactory. The skin is slightly pale, with normal humidity. From the side of the cardiovascular and respiratory systems without special features. The tongue is overlaid with white at the root, the papillae are smoothed. The abdomen is not swollen, soft, slightly sensitive in the epigastrium. There are no swellings. In a clinical blood test: hemoglobin-106 g / l, erythrocytes- $2.9 \times 10^{12}$ /L, color index-1.09, MCV-130, reticulocytes-1%, leukocytes- $4.9 \times 10^9$  /L, ESR-15 mmh, macrocytosis, anisocytosis, Jolly bodies. In a biochemical blood test: ALT - 32 U/L, AST - 30 U/L, amylase - 60 U/L, alkaline phosphatase - 59 U/l.

Questions:

1. Formulate a preliminary diagnosis.
2. Suggest a plan for further examination.
3. What specific immunological markers can confirm the diagnosis?
4. What changes in the endoscopic picture can be expected with FGDS?

5. Suggest a treatment plan.

*Standard response:*

1. Diagnosis: B12-deficient anemia, moderate severity, funicular myelosis. Chronic gastritis, type A. Autoimmune thyroiditis, euthyroidism.

2. Determination of the level of vitamin B12, folic acid, serum iron in the blood; determination of the level of gastrin, pepsinogen in the blood; FGDS with histological examination of biopsies and a helpil test. Consultation of a hematologist with a sternal puncture to detect a megaloblastic type of hematopoiesis.

3. Antibodies to gastric parietal cells and Castle's factor.

4. Phenomena of atrophy of the mucous membrane in the area of the stomach body.

5. Vitamin B12 in / m 100-200 mcg every other day-2 weeks, then 50-100 mcg 2 times a week for 6 months, then 50 mcg 1 time in 2 weeks; to eliminate the symptoms of dyspepsia - prokinetics (Domperidone, Motilium-10 mg 3-4 r/day).

**No. 10** Patient M. 21 years old became ill after hypothermia. The disease began with a fever of up to 39°C, pain and swelling in the knee, ankle and elbow joints, enlarged and painful submandibular lymph nodes. There is a bright blush on her cheeks. I am concerned about acute pain in the lower parts of the lungs when taking a deep breath, coughing. On examination: the condition is severe, the skin is pale, the submandibular lymph nodes are enlarged, slightly painful and compacted. Swelling of the knee, ankle and elbow joints, the skin above them is hot. Movement in these joints is painful. Discoid rashes in the decollete area. Pulse - 118 per minute, rhythmic. Blood pressure is 190/40 mm Hg. The right border of relative dullness of the heart is 1 cm shifted to the right from the right edge of the sternum, the upper one reaches the third rib, and the left one is 1.5 cm to the left of the left mid-clavicular line. Heart sounds are weakened, systolic murmur at the apex, gallop rhythm. In the lower-posterior parts of the lungs - hard breathing, pleural friction noise. Peripheral edema of the lower extremities. In blood tests – anemia, thrombocytopenia, leukopenia. Urine tests showed marked proteinuria, altered red blood cells, granular and waxy cylinders, and a daily protein loss of 4 g.

Questions:

1. Formulate a presumptive diagnosis.

2. Specify the diagnostic criteria for the underlying disease.

3. What complications of the underlying disease do you expect?

4. Select additional survey methods.

5. Explain your treatment strategy and choice of medications

*Standard response:*

1. Systemic lupus erythematosus, acute course, III degree of activity. Glomerulonephritis, a nephrotic form. Nephrotic syndrome. Polyarthritis. Myocarditis. Pleurisy. Pancytopenia. Erythema discoid.

2. Erythema on the cheeks, discoid erythema. Non-erosive arthritis of two or more peripheral joints with soreness or swelling. Pleurisy - pleuritic pain or pleural friction noise heard by a doctor. Kidney damage. High proteinuria. Hematological disorders: pancytopenia. To verify a reliable diagnosis of SLE, four or more of the 11 diagnostic criteria are required.

3. Lupus nephritis resulting in renal failure, heart failure. Hemorrhagic and infectious complications on the background of pancytopenia.

4. Immunological examination: antibodies to double-stranded DNA, or AT to Sm-antigen (Smith antigen), antinuclear factor, antibodies to cardiolipins. Comprehensive functional examination of the kidneys, kidney biopsy to clarify the morphological form of lupus nephritis. Echocardiography. X-ray examination of the chest organs. X-ray examination of joints. Coombs test to exclude autoimmune hemolytic anemia.

5. Immunosuppressive therapy. Prednisone 60 mg per day with a very gradual dose reduction after achieving a clinical effect and switching to a maintenance dose, Azathioprine 100 mg per day or Mycophenolate mofetil (selsept) 500 mg 2 times a day. Given the maximum degree of activity of the process, pulse therapy with Prednisone, Cyclophosphamide is possible. With an unfavorable clinical and morphological variant of lupus nephritis, based on the results of biopsy, pulse therapy with Methylprednisolone is possible. To prevent the side effects of corticosteroids, the use of potassium preparations, anabolic drugs, saluretics, antihypertensive agents (ACE inhibitors with a nephroprotective effect), antacids or proton pump inhibitors is indicated.

**No.11** Patient M., 30 years old, went to the polyclinic with complaints of severe pain and swelling of the joints of the hands, wrist and knee joints, pain when chewing in the mandibular joints, morning stiffness in the joints of the hands before 14-15 hours of the day, weight loss of 6 kg in the last 4 months, severe general weakness. From the anamnesis: about 7 months ago, pain first appeared in the joints of the hands, wrist, and then knee joints. I did not go to the doctors, I took Diclofenac on my own, and then Nimesulide with some positive effect. Against the background of taking these drugs, epigastric pain and heartburn occurred. On examination: moderate condition. Body temperature 37.4 ° C. The skin and visible mucous membranes are pale. Changes in the joints of the hands are shown in the figure. In the area of the left elbow joint, there are 2 subcutaneous dense nodular formations measuring 0.5×0.5 cm. The knee joints are deformed due to exudative changes, hyperthermia of the skin is determined on palpation, a positive symptom of balloting of the patella on both sides. DAS 28 = 5,6. In light cases, breathing with a hard tinge, no wheezing. BDD - 17 per minute. The heart sounds are muted, there is no noise, the rhythm is correct. Heart rate - 78 beats per minute. Blood pressure - 132/80 mm Hg. The abdomen on palpation is soft, moderately painful in the epigastrium and pyloroduodenal zone. The liver and spleen are not enlarged. In blood tests: hemoglobin - 86.4 g / l, leukocytes- $9.1 \times 10^9$  / l, platelets-219 thousand, ESR-76 mm / h (according to Westergren). Protein electrophoresis: albumins - 43.7%, globulins: 1 - 4,9%, 2 - 12,8%, - 12,4%, - 26,2%. CRP - 54.7 mg / l, rheumatoid factor (RF) - 22.1 U/l (norm 0-40 U/l). Serum iron – 6.2 mmol/l. Radiography of the hands: periarticular osteoporosis and single cysts in the epiphysis of the II-III metacarpal bones on the right, narrowing of the articular slits of both wrist joints, III-V on the left and II-III metacarpophalangeal proximal joints on the right. Esophagogastroduodenoscopy: bright hyperemia of the antral gastric mucosa with 3 erosive defects, mucosal folds are thickened.

Questions:

1. Formulate a detailed diagnosis.

2. Justify your diagnosis.
3. Make and justify a plan for additional examination of the patient.
4. What basic drug would you recommend as your first choice? Justify your choice.
5. Describe the changes in the joints of the hands in the figure below.

*Standard response:*

1. Rheumatoid polyarthritis, early stage, seronegative, non-erosive (radiological stage 2), activity 3 art., with extra-articular manifestations (rheumatoid nodules, weight loss). NSAID-gastropathy: erosive gastritis of the antrum of the stomach. Iron deficiency anemia, moderate severity.

2. The diagnosis of "rheumatoid arthritis" (RA) was established based on the presence of more than 4 diagnostic criteria: morning stiffness for more than 1 hour, polyarthritis, symmetrical, damage to the joints of the hands, the presence of rheumatoid nodules, X-ray changes (periarticular osteoporosis, narrowing of joint gaps). The early stage is established, since the duration of the disease is up to a year (7 months), seronegative due to the absence of rheumatoid factor in the blood (the level of the indicator does not exceed normal reference values), activity of the 3rd degree - due to the value of DAS 28=5,6. The diagnosis of "NSAID-gastropathy" is established, taking into account the data of EGDS and communication the occurrence of epigastric pain associated with NSAID use. The diagnosis of "moderate iron deficiency anemia" was established due to a decrease in hemoglobin levels and low serum iron values.

3. The patient is recommended to study an additional serological marker of rheumatoid arthritis, which has diagnostic and prognostic significance - anticitrullinic antibodies (ADCs); determination of the level of transferrin, ferritin and total iron binding capacity of the blood to assess the nature of anemia.

4. The drug of first choice for the initial treatment of early RA is Methotrexate 10-25 mg / week. in combination with glucocorticosteroids (Prednisone) 30 mg short course. Methotrexate belongs to the group of anti-rheumatic disease-modifying drugs and is a first-line drug, because it has a number of therapeutic effects: inhibits the formation of immunoglobulins by the immune system; blocks the formation of synoviocytes, which destroy connective tissue; prevents erosion of joint surfaces; leads to a decrease in inflammatory changes; gives a long-term effect (up to 3 months after withdrawal). Glucocorticosteroids (corticosteroids) have a powerful anti-inflammatory effect and are prescribed when the disease is highly active.

5. Deformation of II-V proximal interphalangeal and metacarpophalangeal joints of both hands due to exudative-proliferative changes.

**No.12** Patient M., 44 years old, complains of rapid fatigue, memory loss, drowsiness, chilliness, constipation, weight gain, hearing loss, hoarseness of voice at an appointment with a local therapist. From the medical history, it is known that these complaints arose 6 years ago for no apparent reason and developed gradually. During this time, the weight increased from 76 to 118 kg. In the anamnesis - repeated sore throats. On examination: the condition is satisfactory, height-165 cm, the skin is clean, dry, especially on the elbows, cold to the touch. His face is puffy and pale. Brushes are pasty. On the lower extremities there is a dense edema. The distribution of fat is uniform.

Palpable isthmus and both lobes of the thyroid gland, more right; the gland is dense, painless. Vesicular breathing, no wheezing. BH - 16 per minute. Boundaries of relative dullness of the heart: left-1.5 cm outward from the midclavicular line; right-1.5 cm outward from the right edge of the sternum. Heart tones are dramatically weakened. Pulse - 53 per minute, rhythmic. Blood pressure-90/70 mm Hg. The tongue is wet, with traces of teeth. The abdomen is enlarged due to fatty tissue and bloating. Palpation is painless. The liver is not enlarged. The stool is regular. Laboratory tests revealed TSH: 14 mIU/L (normal 0.4-4 mIU/L), St. T4-5.6 pmol / ml (10 pmol / 1-25 pmol/L, anti-TPO-364 IU / Ml (up to 30 IU / ml). Total blood count: red blood cells -  $3.5 \times 10^{12}/l$ , white blood cells -  $5.8 \times 10^9 /l$ , hemoglobin - 96 g/l. Blood cholesterol - 8.8 mmol/l. General urinalysis without pathology. Electrocardiography – reduced voltage of the teeth, bradycardia, flattening of the T-wave.

Questions:

1. Assume the most likely diagnosis.
2. Justify your diagnosis.
3. Draw up and justify the patient's examination plan necessary to confirm the diagnosis.
4. Prescribe treatment according to the standards of medical care.
5. 3 months after the prescribed pathogenetic therapy, the TSH level is 7.2 mIU/l.

Your next strategy

*Standard response:*

1. Autoimmune thyroiditis. Hypothyroidism, moderate severity (manifest), decompensated.
2. The diagnosis of "primary hypothyroidism" is established on the basis of the patient's complaints: rapid fatigue, memory loss, drowsiness, chilliness, constipation, weight gain, hearing loss, hoarseness of voice. Severity of hypothyroidism based on the developed clinical picture of the disease. An enlarged thyroid gland, an increase in the level of anti-TPO, indicating an autoimmune process - autoimmune thyroiditis.
3. The patient is recommended to perform an ultrasound of the thyroid gland to clarify the size, echogenicity of the tissue and its vascularization, thyroid scintigraphy.
4. Thyroid hormone replacement therapy (L-thyroxine). In patients younger than 55 years of age who do not have cardiovascular diseases, Lthyroxine is prescribed at a dose of 1.6-1.8 mcg/kg of body weight. Treatment begins with a full dose of the drug. The approximate initial dose for men is 100 mcg / day.
5. Increase the dose of L-thyroxine by 25 mcg

**No.13** A 52-year-old woman went to the district general practitioner with complaints of constant dry mouth, thirst, frequent urination, general weakness, and itching of the skin. Considers himself ill for six months, when there was dry mouth, thirst. A week ago, a skin itch appeared, which made me see a doctor. Works as a cook in a children's institution. In the anamnesis - 5 years of chronic pancreatitis. My mother suffered from diabetes. On examination: the condition is satisfactory. BMI - 36 kg / m<sup>2</sup> . Waist circumference – 106 cm, hip circumference – 109 cm. The skin is clean, and there are traces of scratches on the hands. In some cases, breathing is vesicular and there is no wheezing. Heart tones are rhythmic. Heart rate - 70 beats per minute. Blood pressure -



120/70 mm Hg. The abdomen is soft, painless on palpation in all parts. The liver and spleen of thenca are not enlarged. There is no dysuria In the tests: fasting blood glucose - 5.8 mmol/l, total cholesterol - 6.1 mmol/L, TG - 2.7 mmol/L, HDL-C - 1.0 mmol/l.

Questions:

1. Assume the most likely diagnosis. 2. Make a plan for additional examination of the patient.

3. As a result of the study, it was found that the patient's fasting blood glucose was 6.1 mmol / l, 2 hours after taking 75 g of glucose-11.1 mmol/l; HbA1c - 7.1%. Schedule a treatment. Justify your choice.

4. Give the patient nutrition recommendations.

5. After 6 months, the patient again came to the doctor's office. As a result of the therapy, the patient's weight decreased by 6 kg. HbA1c decreased by 0.5% and the individual goal was achieved. What is your future treatment strategy? Justify your choice.

*Standard response:*

1. Type 2 diabetes mellitus, target HbA1c < 7.0%. Grade 2 obesity. Hyperlipidemia (metabolic syndrome).

2. Repeated determination of glycemia in subsequent days, oral glucose tolerance test, determination of HbA1c.

3. The patient has grade 2 obesity and baseline HbA1c = 7.1%. Recommended lifestyle changes: diet, physical activity. Monotherapy: metformin, iDPP-4 or aGPP-1.

4. It is recommended to limit the caloric content of the diet in order to reduce body weight in moderation. This will also provide a positive effect on glycemic control, lipids. Maximum restriction of fats (primarily of animal origin) and sugars is required; moderate consumption of complex carbohydrates (starch) and protein is recommended. Recommend the use of carbohydrates in vegetables, whole grains, and dairy products. It is important to include in the diet foods rich in mono - and polyunsaturated fatty acids (fish, vegetable oil).

5. Leave the current therapy unchanged, as there is a decrease in body weight and the target level of HbA1c is reached. Continue dynamic monitoring. Control of HbA1c 1 time in 3 months. Self-monitoring of glycemia with a blood glucose meter.

**No. 14** A 24-year-old woman went to a local GP with complaints of weakness, fever up to 39.2 °C, pulling pains in the lumbar region, frequent, painful urination in small quantities. From the medical history, it is known that she considers herself a patient from the age of 14, when she first noticed the appearance of the above complaints, acute pyelonephritis was diagnosed, and treatment was carried out. In the next 2 years, repeated hospitalizations with similar complaints, a diagnosis of chronic pyelonephritis was made. At the age of 16, the patient was offered spa treatment, which gave positive results. Deterioration of the condition about 2 weeks ago, when chills appeared after hypothermia, body temperature increased to 39 °C, severe paroxysmal pain in the lumbar region, which radiated down the abdomen, accompanied by frequent painful urination. On examination: the condition is relatively satisfactory. Height-175 cm. Weight-64 kg. The skin is clean, normal color. There are no swellings. The lungs have vesicular respiration and no wheezing. The heart sounds are muted, rhythmic. Heart rate-70 beats

per minute, blood pressure-120/80 mm Hg. The abdomen is soft, palpation is painless in all parts. The liver and spleen are not enlarged. The symptom of beating in the lumbar region is positive on the right. Frequent painful urination. In the analyses: leukocytes- $8.9 \times 10^9 / l$ , ESR-36 mm / h, urea-4.3 mmol/L, creatinine-72.6 mmol/l, total protein-46 g / l. GFR-92 ml / min/1.73 m<sup>2</sup> . General analysis of urine: specific gravity-1009, protein-0.5, white blood cells-out of sight, mucus, squamous epithelial cells. Survey and excretory urography – the kidneys are usually located, no shadows of concretions were found. There is a mushroom-shaped deformity of the calyces, the necks are elongated, the pelvis is atonic. The contours of the kidneys are uneven, and the accumulation of contrast on the right side is reduced. Urodynamics is not disturbed.

Questions:

1. Assume the most likely diagnosis.
2. Justify your diagnosis.
3. Make and justify a plan for additional examination of the patient.
4. Make a differential diagnosis.
5. Suggest and justify the tactics of further treatment

*Standard response:*

1. Chronic primary right-sided pyelonephritis in the acute phase, recurrent form, without impaired renal function. CKD 1 tbsp.

2. The diagnosis of "pyelonephritis" was established on the basis of complaints (weakness, fever up to 39.2°C, pulling pains in the lumbar region, frequent, painful urination in small quantities); anamnesis data (acute pyelonephritis, which turned into a chronic form, its repeated exacerbation); examination data (positive symptom of beating right); data from blood and urine tests (increased ESR in the general blood test and leukocyturia); data from excretory urography (deformity of the calico-pelvic structure and reduced accumulation of contrast on the right). Primary pyelonephritis is established based on the lack of data for any pathological conditions of the urinary tract and kidneys that lead to the development of secondary pyelonephritis (ICD, ureteral stricture, pregnancy). Chronic pyelonephritis and recurrent course were established on the basis of anamnesis data (repeated relapses of acute pyelonephritis with the outcome in chronic pyelonephritis). The acute phase of chronic pyelonephritis is indicated by an increase in body temperature, leukocytosis in the blood, an increase in CRP, and a large number of white blood cells in the urine. Stage 1 CPD was determined based on a GFR level of 92 ml / min/1.73 m<sup>2</sup>, which corresponds to stage 1 CKD.

3. The patient is recommended to conduct a urine culture to identify the causative agent of the disease and its sensitivity to antibacterial therapy; ultrasound of the kidneys to determine the size of the kidneys, the presence of concretions in them; Rehberg test to determine the excretory function of the kidneys.

4. With chronic glomerulonephritis (characterized by increased blood pressure, the presence of protein in the urine in small amounts, hyaline cylinders, azotemia, decreased kidney function, not characterized by leukocyturia, bacteria in the urine, fever, leukocytosis). With acute pyelonephritis (the clinical picture and test data are identical, but there is no long-term anamnesis, the disease occurs for the first time, as with chronic pyelonephritis, unlike acute, a decrease in the concentration ability of the kidneys, an increase in creatinine and nitrogenous slags may occur). With urinary infection

(characterized by dysuric disorders, leukocyturia, bacteriuria, without signs of kidney damage (a symptom of tingling, changes in the size and function of the kidneys according to ultrasound and excretory urography).

5. Antibacterial therapy-the duration of therapy is from 5 days to 2 weeks. It is preferable to start treatment with parenteral administration of antibacterial agents, then switching to oral administration. Among modern drugs, fluoroquinolones (Tavanic (Levofloxacin) 250-500 mg 1 time a day) or beta-lactams are used. The third and fourth generation of cephalosporins, semi-synthetic or ureidopenicillins, monobactams, penems and beta-lactamase inhibitors are also used: Ceftriaxone (2 g 1 time a day intramuscularly), Cefazolin (1 g 3 times a day), Amoxicillin (0.5-1 g 3 times a day intramuscularly, 0.25 or 0.5 g 3 times a day inside), Ipipenem / Cilastin (0.5 g / 0.5 g 3 times a day intramuscularly), Amoxicillin/Clavulanic acid (Amoxiclav, Augmentin; 1 g 3 times a day intravenously, 0.25-0.5 g 3 times a day orally), Ampicillin/Sulbactam (Sultasin). Amikacin should be used in the treatment of patients with resistant strains. At the beginning of treatment with aminoglycosides, high doses are recommended (2.5-3 mg/ kg per day), which can then be reduced to maintenance (1-1.5 mg/kg per day). The frequency of administration can vary from 3 to 1 time a day (in the latter case, the administration of drugs at a dose of 5 mg/kg is recommended, which is considered more effective and less toxic). Detoxification therapy (NaCl 0.9% IV drip, glucose solution 5% iv drip). Drugs that improve renal blood flow (Trental). Antispasmodics (No-shpa, Baralgin). Anticoagulants (Heparin). Diet - limit spicy, spicy, fried, smoked products, seasonings. Restriction of table salt, alternation of protein and plant foods. Drink from slightly mineralized waters.

**No.15** Patient E., 23 years old, a car mechanic, fell ill two weeks ago after hypothermia. An acute tonsillitis was diagnosed by a district physician at the place of residence. Amoxicillin therapy was recommended for 10 days, but after 3 days, due to a significant improvement in health and normalization of body temperature, the patient stopped treatment. Two weeks after these events, the patient noted the appearance of edema on the face, general weakness and malaise, decreased appetite, headache, and urine turned dark red and decreased its amount. Along with the above symptoms, the patient was concerned about abdominal and lower back pain. When measuring blood pressure-blood pressure 140/90 mm Hg On examination: the skin is pale. During auscultation of lungs, respiration is vesicular, there are no side respiratory noises, BPD – 17 per minute. The heart sounds are muted, the rhythm is correct. Blood pressure – 140 and 90 mm Hg Heart rate-90 beats per minute. The belly is soft, painless. The size of hepatic dullness according to Kurlov is 11 × 9×8 cm. Diuresis – 700 ml per day. A laboratory study was conducted. Total blood count: hemoglobin-136 g / l, leukocytes-10.8×10<sup>9</sup> /l, ESR-70 mm / h. General analysis of urine: relative density-1025, proteinuria-1.5 g / l, white blood cells-14-15 in the field of vision, red blood cells – completely cover the entire field of vision. Blood chemistry: total protein-62 g / l, albumin-39 g/l, cholesterol-4.5 mmol/l, urea-5.6 mmol/L, creatinine-110 mmol/L, GFR-79.4 ml / min/1.73 m<sup>2</sup> according to CKD-EPI, ASL-O – 1 titer:1000. Ultrasound of the kidneys: the kidneys are enlarged in size, the contours are even, the location is typical; differentiation of the parenchymal layers is disturbed, the echogenicity of the

parenchyma is moderately increased; the calico-pelvic system is free of deformities and ectasia.

Questions:

1. Assume the most likely diagnosis.
2. Justify your diagnosis.
3. Name the patient's examination plan.
4. Prescribe the necessary therapy.
5. Indicate in which cases immunosuppressive therapy is performed for this disease.

*Standard response:*

1. Acute post-streptococcal glomerulonephritis. Nephritic syndrome. Grade 1 arterial hypertension, risk 3.

2. The diagnosis of " acute post-streptococcal glomerulonephritis "(OPSGN) is established when clinical and laboratory signs of acute glomerulonephritis develop 1-6 weeks after the infection caused by group A beta-hemolytic streptococcus. The patient has characteristic changes in the urinalysis, there are indications of a previous streptococcal infection, and the dynamics of anti-streptococcal antibodies are characteristic.

3. Titer of anti-streptococcal antibodies (ASL-O, anti-streptogaluronidase, anti-streptokinase, anti-DNA-aza B, anti-NAD), CRP, serum complement level, antibodies to DNA. Urinalysis by Nechiporenko, urinalysis by Zimnitsky. A kidney biopsy is usually performed at an atypical course of OPSGN to exclude other possible diseases, as well as at a late onset of the disease without a clear connection with a recent streptococcal infection. Search for foci of infection.

4. Bed rest for severe edema, macrohematuria, moderate / severe hypertension, and heart failure (usually in the first 3-4 weeks). When the condition improves, the mode is gradually expanded. Diet: with limited salt intake (up to 1-2 g / day) and fluid intake in the acute period of the disease, especially with a rapid increase in edema, oliguria and hypertension. The volume of fluid is calculated based on diuresis for the previous day, taking into account extrarenal losses, fluid intake should not exceed diuresis by more than 200 ml with protein restriction up to 0.5 g / kg / day with a decrease in renal function of less than 60 ml / min (until normalization of GFR and blood creatinine levels, but not longer than 2-4 weeks). With severe edematous syndrome-diuretic therapy. With severe hypercoagulability - anticoagulant therapy. In case of rapid progression of OPSGN and/or detection of more than 30% of half-moons in the kidney biopsy, it is suggested to conduct "pulse therapy" with Methylprednisolone. If the nephrotic syndrome persists for more than 2 weeks, if the creatinine level is consistently elevated (without a tendency to further increase or normalize), and if it is impossible to perform a kidney biopsy, oral Prednisone therapy is recommended at a dose of 1 mg / kg / day for 1-2 months.

5. The timing of normalization of urine tests varies. Hematuria usually disappears after 3-6 months. Proteinuria decreases more slowly; in 15%, trace proteinuria can persist for more than a year. The slower decrease in proteinuria compared to the rate of hematuria disappearance and kidney function recovery is explained by the longer preservation of immune deposits in the glomerulus, especially in the subepithelial



ser.	sl	viscous	50	no	1-2	4-5	not dea	not dea.
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**FVD** Ventilation function of the lungs is significantly reduced by obstructive type, with a moderate decrease in VEL. After taking berotek, the bronchodilation coefficient is 25%

**Radiograph of the OGC:** The lung fields are transparent. The pulmonary-vascular pattern is reinforced in the lower parts. Lateral sinuses are free. The heart shadow is extended to the left. The aorta is elongated, compacted, and compacted.

1. Make a preliminary diagnosis.
2. Make a plan for laboratory and instrumental examination.
3. Make a treatment plan.
4. Justify medical and social expertise (MSE), contraindicated types of work.
5. Indicate the patient's indications for emergency hospitalization.

No. 2. A 45-year-old patient has been suffering from chronic bronchitis for 20 years, and has had asthma attacks for 10 years. An hour ago, suddenly, when coughing, He felt a sharp pain in his right chest cavity and suffocation.

Objectively: the condition is severe, the situation is forced - the patient is sitting, the body is covered with cold sweat, the skin is cyanotic. The right chest cavity is not involved in the respiratory tract, the right timpani is percussive, and the vocal tremor is weakened. Auscultative: on the right, breathing is not audible, on the left, hard, scattered bass dryness and py. BH - 36 per minute. The left border of the heart is determined by the middle axillary line, heart tones are muted, rhythmic. Pulse - 100 per minute. Blood pressure is 85/60 mm Hg. Hepatic dullness is not detected.

- 1) What complication occurred?
- 2) Research method confirming this complication?
- 3) How can we explain the development of respiratory failure, a decrease in blood pressure?
- 4) Pre-rendering and taktika of emergency care.

No. 3. Patient, 56 years old, low nutrition. He was admitted to the therapeutic department with complaints of fever up to 38°C, cough with difficult-to-separate sputum, shortness of breath during physical exertion, weakness, lack of appetite. On an X-ray about grams, the entire middle lobe of the right lung is obscured. Mediastinal organs without visible pathology. The right dome of diaphragm is somewhat behind in movement. The sinuses are free. In blood tests, moderate leukocytosis. ESR is 22 mm / hour. For moderate-duration pneumonia, treatment with antibiotics, sulfonamide preparations, as well as symptomatic and general restorative treatment was performed for 3 weeks.

There was an improvement in the patient's general condition and normalization of body temperature. When repeated blood tests: the number of white blood cells is normal, ESR is 35 mm/hour. During the control X-ray examination, the darkening of the entire middle lobe is preserved, however, the intensity of the shadow has significantly decreased.

- 1) What is your presumed diagnosis?

2) What diseases should be differentially diagnosed?

3) What research methods are needed to clarify the nature of the pathology?

No. 4. Patient K, 48 years old, at a therapist's appointment complains of suffocation attacks up to 8 times a day, relieved by bronchodilators, wheezing in the chest, shortness of breath when walking and talking, general weakness, rapid fatigue.

Suffers from chronic bronchitis for many years, smokes for more than 25 years. Suffocation attacks for six months. I did not receive basic therapy. He considers himself ill for six months, when the first attacks of suffocation began to appear. Medicinal and food allergic no. Plant sensitisation.

The general condition of the patient is relatively satisfactory, physical activity is significantly reduced. The skin and visible mucous membranes are pale. Varicose veins of the lower extremities.

When examined, the chest of a regular shape participates symmetrically in the act of breathing. Breathing is noisy on exhalation and exhalation. With percussion, the pulmonary sound, vocal tremor without features. During auscultation in the lungs, breathing is hard with multiple dry, sibilant wheezes of high timbre and high intensity. BDD = 26 per minute. The boundaries of the heart are within the normal range. Heart sounds are rhythmic, muted Heart rate = 88 per minute. Blood pressure on the left arm is 150/80 mmHg on the right arm 155/ 75 mmHg.

Data of laboratory and instrumental examination.

**General blood test**

Nv	Er	Lei	CP U US AG E	ES R	B	E	Mi	Y u	P	Wit h	L	M	Ret	Tro m
143	6,07	8,4		4	-	8	-	-	3	62	22	5	13‰	310

**The main biochemical parameters of the blood:** o. bilirubin = 18.5, direct = 2.80 mmol/l, o. protein = 71.5 g/l, creatinine = 86.0 mmol/l, K = 4.2, NNa = 139 mmol/l, fibrinogen = 2.6 g/l, glucose = 4.99 mmol/l.

**R-lungs** The lung fields are transparent. Sinuses are free. A heart shadow of the usual shape and size. Small pleural overlays in the apical areas on 2 sides

**FVD** The ventilation function of the lungs is moderately reduced by the obstructive type (with a normal VEL value). After inhalation of the drug, the bronchodilation coefficient according to FEV1 = 44%

1. Make a preliminary diagnosis.
2. Make a plan for additional follow-up.
3. Make a treatment plan.
4. Justify medical and social expertise (MSE), contraindicated types of work.
5. Indicate the patient's indications for emergency hospitalization.

No. 5. Patient P. 40 years old, accountant. After a summer vacation spent on the seashore, I began to notice increased fatigue, sweating, and an increase in temperature to 37.3°C..

During the examination, the therapist found: the skin is tan, the subcutaneous fat layer is well developed, the left half of the chest lags behind when breathing. Over the left supraclavicular region, there is a shortened percussionsound and weakened breathing, no wheezing.

In the blood test: ESR-20 mm / h, leuc. -  $6.0 \times 10^9/l$ , p/I-10%, s/I-57%, lymph. - 20%, mon. - 8%.

Sputum culture revealed Mycobacterium tuberculosis, which is sensitive to all tuberculostatic drugs.

X-ray of the chest organs: in segments 1-11 of the left lung, a group of shadows of medium and low intensity, rounded shape with vague contours, calcifications in the right root.

- 1) Formulate a clinical diagnosis and provide its rationale.
- 2) What period of tuberculosis does the process relate to in this patient? Primary? Secondary?
- 3) What conditions contributed to the development of active tuberculosis?
- 4) Prescribe a treatment.

No. 6. Upon admission to the hospital, a 60-year-old patient complained of pain in the right side of the chest, fever up to  $38^{\circ}\text{C}$ , shortness of breath, dry cough, hemoptysis, general weakness. Got sick about 2.5 months ago. When applying to the polyclinic, a diagnosis of acute chronic obstructive bronchitis was made, and treatment was prescribed: antibiotics, bronchodilators, antihistamines. However, the patient's condition did not improve. Bronchoscopy performed in the hospital revealed rigidity of the wall of the left main bronchus, its mucosa bleeds easily, and a lumpy tumor-like formation up to 1.5 cm in diameter is detected in the lumen.

- 1) What disease can be detected?
- 2) What should be done to verify the process?
- 3) Therapeutic tactics?

No. 7. The district doctor was called to the home of a 38-year-old patient who had a fever of up to  $38.5^{\circ}\text{C}$  on the eve, a cough with a small amount of sputum, pain in the left side with deep breathing and coughing. Before that, he was quite healthy. In the past, there were no lung diseases. Smokes 10 sigareth a day. Allergic to penicillin.

During the examination, the doctor found signs of focal pneumonia on the left side of the lower lobe. Pulse rate-82 per minute. Blood pressure-120/75 mm Hg Temperature - $37.8^{\circ}\text{C}$ .

- 1) The severity of pneumonia?
- 2) What signs of pneumonia could a doctor detect?
- 3) Is hospitalization required?
- 4) What antibacterial treatment is indicated?
- 5) What can be the side effects of treatment and what to do?

No. 8. A 40-year-old patient was admitted complaining of a cough with purulent-bloody sputum, shortness of breath, and fever up to  $39^{\circ}\text{C}$ . Ill acutely 5 days ago.



Objectively: the condition is serious. BH - 32 per minute. In the lungs on the right in the posterior-lower parts, there is a shortening of percussion sound, sonorous small-bubbling wet wheezes.

On the X-ray затемненные справа соответственно нижней доле не image, only a few cavities with a level are darkened on the right, corresponding to the lower lobe. Blood leukocytes –  $18 \times 10^9/l$  with a left shift.

- 1) Diagnosis of lung disease and its rationale?
- 2) Probable pathogen? How can I detect it?
- 3) What antibacterial treatment is indicated?
- 4) What should be monitored during treatment?
- 5) What treatment method should be discussed in addition to antibiotics?

No. 9. A 41-year-old patient was admitted with complaints of coughing with a small amount of sputum, fever, general weakness, and pain in the left side. I became acutely ill 3 days ago.

Objectively: the condition is of moderate severity. Temperature -  $37.6^{\circ}\text{C}$ . Below the left corner is a shortening of the percussion sound, hard breathing, wet sonorous small-bubble wheezes. Left-sided focal pneumonia was diagnosed. Penicillin treatment was performed at 500,000 units of 4 raper day. The patient's condition improved. On the 10th day of the disease, the patient's temperature rose again to  $38.5^{\circ}\text{C}$ , shortness of breath and pain in the left side increased. When percussion occurs on the left side of the lower half of the lung, there is pronounced dullness, weakened breathing, and bronchophonia.

X-ray diffraction results in homogeneous darkening with an oblique internal border.

- 1) What complication developed on the 10th day of the disease?
- 2) Necessary research to directly confirm this complication?
- 3) Evaluate your treatment strategy.
- 4) Schedule additional treatment.
- 5) Evaluate the patient's prognosis.

No. 10. A 29-year-old man became acutely ill: the temperature rose to  $38^{\circ}\text{C}$ , severe pain appeared in the left side when coughing and breathing. The condition is moderate, BH-24 per minute, mild cyanosis of the lips, prefers to lie on the left side. During percussion, the sound is slightly shortened to the left in the lower edema, in the axillary region the noise of pleural friction.

In the blood test: leuc. -  $12.5 \times 10^9/L$ , ESR-29 mm / h.

X-ray examination shows restricted mobility of the left dome of the diaphragm, calcified intrathoracic lymph nodes in the area of the right root.

- 1) Your clinical diagnosis and its rationale.
- 2) The most likely etiology of the disease?
- 3) What treatment is indicated for the patient?
- 4) What should be monitored during treatment?
- 5) What treatment method should be discussed in addition to antibiotics?

No. 11. A 28-year-old patient was hospitalized in the therapeutic department with complaints of pain in the right side of the chest, fever. After 2 weeks, the local therapist diagnosed acute respiratory infections, treatment failed and the patient was sent to the hospital with a diagnosis of "pneumonia". Treatment with penicillin and sulfonamides was started. The condition did not improve for 10 days.

X-ray examination revealed fluid in the right pleural cavity.

A pleural puncture removed 350 ml of serous exudate containing up to 80% lymphocytes and 4.2% protein. Rivalta test ( + ). Prednisone, kefzol, and antipyretics were added to the treatment. With repeated examination, the exudate is less, no other pathology is detected.

- 1) What do you think is the etiology of the disease and why?
- 2) At what stages of follow-up and treatment were medical errors made?
- 3) What treatment should have been given to the patient?

No. 12. A 20-year-old patient suffered severe left-sided lower lobe pneumonia. After discharge, the cough resumed, the temperature began to rise in the evenings, weakness gradually increased, chest pains and shortness of breath appeared. Subsequently, mucopurulent sputum with an admixture of blood began to stand out (up to 70 ml). After 6 months, puffiness of the face, puffiness, fingers of the hands in the form of "drumsticks" appeared.

X-ray images show a reticular and cellular character of the pulmonary pattern, segmental atelectasis in the lower lobe of the left lung.

- 1) Your diagnosis?
- 2) What tests should be performed to clarify the diagnosis?
- 3) The most likely etiology of the disease?
- 4) What treatment is indicated for the patient?
- 5) What should be monitored during treatment?

No. 13. A 52-year-old patient complains of shortness of breath even at rest, coughing with a small amount of mucosal sputum, weakness, fatigue. For many years he has been smoking and coughing with periodic exacerbations due to a cold. Over the past 3 years, he has been noticing gradually increasing shortness of breath, and in recent months there have been swelling on the shins.

Objectively: reduced nutrition. Cyanosis of the lips, acrocyanosis. Slight swelling on the lower legs. The chest is barrel-shaped, sedentary. In percussion, the sound has a boxy tint, the borders of the lungs are lowered by one edge. Breathing is hard, with an elongated exhalation, dry wheezing when exhaling. The cervical veins swell when lying down. There is pulsation in the epigastric region. Pulse rate-92 per minute. The liver is 5 cm below the edge of the costal arch.

Based on the above data, a diagnosis was made: chronic obstructive bronchitis, emphysema of the lungs, and pulmonary heart disease. Stage II pulmonary heart failure.

- 1) What are the signs of bronchial obstruction, what are additional studies to clarify its presence and severity?
- 2) How can I confirm the presence of a pulmonary heart?
- 3) What features in the blood test can be expected?

- 4) What are the methods to reduce the hemodynamic load on the right ventricle?
- 5) What is the cause of cyanosis?

No. 14. A 55-year-old patient was admitted for shortness of breath of an inspiratory nature, even with a small physical exertion, a slight cough. He was ill for about two years, during which there was a gradual increase in dyspnea, sometimes a low-grade fever. I lost 8 kg of weight.

Objectively: cyanosis, acrocyanosis, fingers in the form of "drumsticks". In the lungs, weakened vesicular respiration with shortened inhalation and exhalation. Crepitating wheezes on both sides under the shoulder blades, worse with deep breathing. RR - 28 per minute. Pulse - 88 per minute. Liver at the edge of the costal arch.

Chest radiography: diffuse reticular deformity of the pulmonary pattern, widespread bilateral infiltrative shadows and a decrease in transparency in the lower pulmonary fields.

- 1) Determine the type and degree of respiratory failure.
- 2) A differential diagnosis is made between chronic bronchitis, pulmonary tuberculosis, and fibrotic alveolitis. Give arguments "for" and "against" these diseases.
- 3) Methods for confirming the diagnosis?
- 4) Possible conclusion of VTE?
- 5) Treatment methods?

No. 15. A 52-year-old patient was admitted for fever with chills up to 38.5°C, weakness, shortness of breath when walking. Ill for 1 month after angina. At the age of 12, he suffered from acute polyarthritis. From the age of 36, a compensated heart defect was found.

Objectively: pallor of the skin and mucous membranes. In the lungs, in the posterior-lower parts, moist, non-ringing, fine-bubbled wheezes. Pronounced pulsation of the carotid arteries. Apical push in the V-VI intercostal spaces, split, enhanced. In the second intercostal space on the right, there is a diastolic murmur of a decreasing nature, extending down the left edge of the sternum, as well as a rough systolic murmur radiating to the neck. Pulse - 86 per minute, rhythmic, high, fast. Blood pressure is 150/40 mm Hg. The spleen is palpable at the edge of the costal arch.

ENT examination: decompensated chronic tonsillitis. Diagnosis of subacute infective endocarditis was made.

- 1) Give arguments for the diagnosis of endocarditis.
- 2) Probable pathogen.
- 3) Research to directly confirm the diagnosis of infective endocarditis?
- 4) Blood seeding gave the growth of green streptococcus. Your treatment strategy?
- 5) Criteria for the effectiveness of treatment? Duration of treatment?

No. 16. A 28-year-old patient was admitted with complaints of pain in the joints of the hands and feet, dizziness, fever up to 37.5°C.

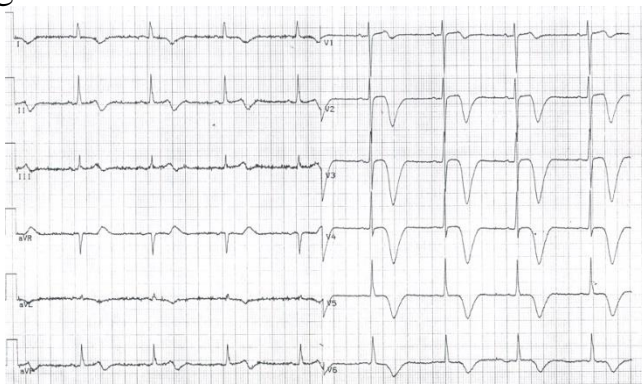
Objectively: the skin and visible mucous membranes are pale. Sharply increased pulsation of the carotid and subclavian arteries. Apical push in the VI intercostal space 1 cm to the left of the midclavicular line, diffused, intensified. Auscultation: protodiastolic

murmur at the Botkin-Erb point, weakening of the II tone on the aorta. Pulse - 90 per minute, rhythmic, fast, high. Blood pressure is 180/40 mm Hg. The liver is not enlarged, there is no edema.

ECG: levogram, left ventricular hypertrophy.

- 1) The diagnosis and its justification?
- 2) Direct and indirect signs of heart disease?
- 3) Additional research methods?
- 4) Treatment tactics?
- 5) Is surgical intervention possible?

No. 17. In the department, 12 hours ago, a patient was admitted with complaints of pain behind the sternum, not relieved by taking nitroglycerin. The patient is agitated upon admission, the skin is moist, pale, heart rate-96 beats / min, blood pressure-100/70 mm Hg.



1. What is your opinion about the diagnosis?
2. Give an ECG interpretation.
3. Additional methods of patient examination?
4. Tactics of patient management at the prehospital and inpatient stages.
5. Determine the prognosis and make recommendations for the patient's rehabilitation.

No. 18. A 42-year-old patient called the SMP due to complaints of severe weakness, dizziness, shortness of breath at the slightest physical exertion. About 3 years ago, I had acute respiratory viral infections. 5 days ago, subfebrile fever reappeared, then there were constant pains behind the sternum of moderate intensity, relieved in an upright position and taking analgin. The last 2 days of pain do not bother, but there was a feeling of heaviness in the right hypochondrium, pasty feet and shins. This morning I took 2 tablets of furosemide, excreted about 1.5 liters of urine. The condition worsened, shortness of breath increased, when trying to get up - a short loss of consciousness. The SMP team has been called.

On examination: moderate condition, conscious. It lies low, the shins are pasty. In the lungs, breathing is vesicular, there is no wheezing. BH - 22 per minute. The neck veins are swollen. The apical push is not detected. Heart tones are muffled. Pulse - 128 per minute, rhythmic. Blood pressure-110/90 mm Hg On inspiration, systolic blood pressure decreases by 20 mm Hg. Liver + 4 cm, sensitive on palpation. On the ECG -

sinus tachycardia. The amplitude of ventricular complexes in all leads is reduced, the T wave in all chestleads is smoothed.

- 1) How to assess the state of blood circulation?
- 2) How to assess the decrease in blood pressure on inspiration?
- 3) What is the cause of these violations?
- 4) Is there a link between furosemide use and clinical deterioration? Justify your response.
- 5) What urgent treatment method is indicated?

No. 19. A 55-year-old patient complaining of periodic anginaattacks during physical exertion, sometimes dizziness with short-term loss of consciousness. Nitroglycerin does not stop pain, increases dizziness. At a young age, a heart defect was found. These symptoms are about a year old.

Objectively: the heart is extended to the left by 2 cm, the apical push is not detected. Heart sounds are clear, there is a rather rough systolic murmur at the top and at the left edge of the sternum, decreases towards the base, and is not carried out on the neck. Blood pressure - 130/90 mm Hg Pulse-80 per minute.

On the ECG. signs of pronounced hypertrophy and overload of the leftventricle.

Upon admission, the patient was diagnosed with CHD, exertional angina, and sclerotic mitral valve insufficiency. Cerebrovascular insufficiency.

- 1) In what diseases, in addition to coronary artery atherosclerosis, can typical angina pectoris be observed?
- 2) How can systolic murmur and left ventricular hypertrophy be explained in this patient, in addition to mitral insufficiency?
- 3) What is the study to clarify the diagnosis? What is expected?
- 4) Why is nitroglycerin ineffective and poorly tolerated?
- 5) What treatment methods are recommended for this patient? Justify it.

No.20. A 60-year-old patient has had chest pains in the morning when walking for 10 years, which pass quickly when stopping ortaking nitroglycerin. Smokes 10 cigarettes a day. A few hours ago, intense pain developed behind the sternum, which was not completely stopped by nitroglycerin. He was hospitalized in BIT.

Objectively, height-170 cm, body weight-80 kg, blood pressure-120/80 mm Hg. st. Pulse-80 per minute, rhythmic. During the examination, repeated chest pains appeared, which required the use of morphine.

On the ECG: levogram, negative T in I, aVL, V<sub>5</sub>, V<sub>6</sub>.

ALT, AsAT repeatedly – 0.4-0.5 mmol / l / h

- 1) The underlying disease?
- 2) Evaluate the origin of pain attacks, arguments for and against myocardial infarction.
- 3) Methods of patient control?
- 4) Treatment tactics?

No. 21. A 57-year-old patient, an engineer, was taken to the NSR for intense chest pain that lasted more than 1 hour. Pressing, constricting, heavypains radiating to the

neck, jaw, and left shoulder, which do not calm down in a sitting position and after taking nitroglycerin, are not associated with breathing. Within 10 years, there is an increase in blood pressure to 190/110 mm Hg.

Objectively: BH - 20 per minute, no wheezing in the lungs. Pulse - 80 per minute, rhythmic blood pressure-150/90 mm Hg. Otherwise, no features.

1) What is the most likely diagnosis?

2) The diagnosis of myocardial infarction is confirmed by an ECG. Treatment started in BIT: droperidol, fentanyl, 1% intravenous nitroglycerin, strophanthin, heparin, clonidine. Specify the incorrect (excessive) treatment.

3) Examination was performed: ECG, ALT, blood test, blood gases and electrolytes, CSF, urea, blood bilirubin, central venous pressure. What studies are not needed, and what mandatory ones are not assigned?

4) From the 2nd day, you feel good, there is no pain or shortness of breath. Blood pressure-160/95 mm Hg Pulse-88 per minute, extrasystoles 4-6 minutes. What treatment is most indicated?

5) On day 20, there was pain in the left side of the chest when breathing, temperature-37.8°C, during auscultation, pleural friction noise. What complication should I think about? What additional treatment is required?

No. 22. A 54-year-old patient called the SMP due to complaints of intense pain behind the sternum radiating to the interscapular region, headache, and nausea. He has been suffering from hypertension for 6 years and does not regularly take antihypertensive drugs. Working blood pressure 140/80 mm Hg. Deterioration within b hours: increased headache, nausea. About 40 minutes ago, an attack of "tearing" pains behind the sternum appeared, later-with radiation to the interscapular region. On reception of nitroglycerin-strengthening of headaches.

When examined by the NSR doctor, the condition is moderate. My mind is clear. Hyperemia of the facial skin. There is no peripheral edema. In the lungs, the respiration is vesicular, with occasional dry, scattered wheezes. Systolic murmur over the aorta. Blood pressure - 230/120 mm Hg Pulse-88 per minute. Pulsation on the left radial artery is weakened. Liver at the edge of the costal arch. ECG-sinus rhythm, hypertrophy and overload of the left ventricle.

1) What complication of hypertensive crisis is supported by systolic murmur over the aorta and asymmetry of radial artery pulsation?

2) To what level should blood pressure be reduced?

3) Where in the best case scenario should the patient be hospitalized?

No. 23. A 21-year-old patient was admitted for examination for permanent tachycardia. An increased pulse rate has been found since childhood. She grew and developed normally, and was exempt from physical education. I suffered childhood infections, had repeated sore throats. Physically active. Emotionally labile, gets tired quickly.

Objectively: the temperature in the evenings is 37.1-37.3°C. Increased sweating, persistent red dermographism. The heart is not dilated; the tones are thunderous, at the apex there is a short blowing systolic murmur. Pulse - 112 in minutu. Blood pressure -

150/70 mm Hg In ergometry performed a load of 750 kg per minute with a pulse rate of 170 per minute and blood pressure of 190/70 mm Hg.

*ECG*: sinus tachycardia.

- 1) Evaluate the state of hemodynamics.
- 2) Evaluate your response to exercise.
- 3) A test with obzidane was performed.

1 hour after taking 60 mg of the drug, the pulse rate is 80 per minute; blood pressure is 130/80 mm Hg.

4) Absorption  $^{131}\text{I}$  by the thyroid gland is within the normal range; levels of thyroid hormones T3 and T4 in the blood are normal. Diagnosis?

- 5) What treatment is required?

No. 24. A 60-year-old patient, a teacher. I applied for shortness of breath when walking normally. 6 years ago, he suffered an anteroposterior myocardial infarction. Shortness of breath appeared 2 months ago. Not treated. Smokes one pack a day.

Objectively: height-165 cm, body weight-91 kg. Slight swelling of the neck, cyanosis of the lips. In the lungs, under the shoulder blades, there are a few wet, non-ringing wheezes. BH - 24 per minute. The heart is extended to the left by 2 cm, the tones are muted, systolic murmur in the aorta. Pulse-92 per minute, rhythmic. De-fit - 18 per minute. Blood pressure - 140/90 mm Hg Liver at the edge of the costal arch. *On the ECG*: atrial fibrillation, tachysystolic form.

- 1) Evaluate the state of hemodynamics.
- 2) What is expected on the ECG?
- 3) Risk factors for the disease?
- 4) Medical appointments?
- 5) Control of treatment?

No. 25. A 32-year-old patient called the home of the NSR for increased shortness of breath, palpitations, and leg edema that had been increasing over the past 2 weeks. 10 years - combined mitral heart disease. The last year regularly takes digoxin 0.25 mg 2 times a day, furosemide 0.04 daily.

On examination-acrocyanosis, massive swelling of the legs, feet, cervical veins are swollen. In the basal parts of the lungs - non-ringing small-bubble wheezes. BDD 26 per minute at rest. Heart tones of different sonority, systolic murmur at the apex. The rhythm is wrong. Heart rate-84-96 per minute, pulse-76-82 per minute. Blood pressure-100/70 mm Hg Liver + 6 cm.

On the ECG: right ventricular hypertrophy, atrial fibrillation, frequent polytopic, early ventricular extrasystole, sometimes-runs of ventricular tachycardia.

- 1) Assess the state of blood circulation.
- 2) The reason for the deterioration of the condition and rhythm disorders?
- 3) Are there any data available for mitral stenosis?
- 4) Emergency therapy?
- 5) Patient management tactics?

No.26. A 27-year-old woman was taken to the clinic 2 hours after a sudden onset of severe pain in her left leg. He has been suffering from mitral heart disease since childhood. In recent years, shortness of breath has been noted. Several times hemoptysis, twice there were attacks of atrial fibrillation.

Upon admission, the patient groans, is restless. The left foot and lower leg are darkly colored. The veins in the foot are empty ("groove symptom"). Movement in the fingers and ankle joint is limited. You can't step on your foot.

Palpation: the foot and shin are cold. The pulse on the dorsal, posterior tibial and popliteal arteries is not detected, on the femoral one it is strengthened. Sensitivity and pain sensitivity are reduced, deep-doubtful. The left calf muscle is soft, of normal density, slightly painful when compressed. Pulse 98 per minute, rhythmic, frequent extrasystoles.

At the apex of the heart, a flapping I tone, weak systolic and rough diastolic murmurs with presystolic amplification, accent and bifurcation of the II tone on the pulmonary artery. In the lungs, moist wheezing in the posterior parts.

- 1) What causes the sudden deterioration of the patient's condition?
- 2) Specify the most likely cause of the complication.
- 3) What special additional research methods are indicated?
- 4) What are the possible outcomes?
- 5) What treatment method is indicated?

No. 27. A 24-year-old patient complaining of shortness of breath when walking. In childhood-frequent sore throats, at the age of 15 - minor chorea, from the age of 20 they found noises in the heart. Shortness of breath for a year, received outpatient digoxin, periodically diuretics. Deterioration within a month.

Objectively: body weight-73 kg, height - 170 cm. There is no swelling. Increased pulsation of the carotid arteries. Apical push is amplified, diffused, in the VI intercostal space. On auscultation, there is a blowing protomesodiastolic murmur in the III-IV intercostal spaces to the left of the sternum and a rough systolic murmur in the II intercostal space to the right. Pulse - 80 per minute, rhythmic, full. Blood pressure-150/30 mm Hg. The liver is at the edge of the costal arch, pulsating.

During X-ray examination, the heart is of an aortic configuration, the apex is rounded, and the pulsation is reduced.

ECG: left ventricular hypertrophy, PQ=0.24 sec.

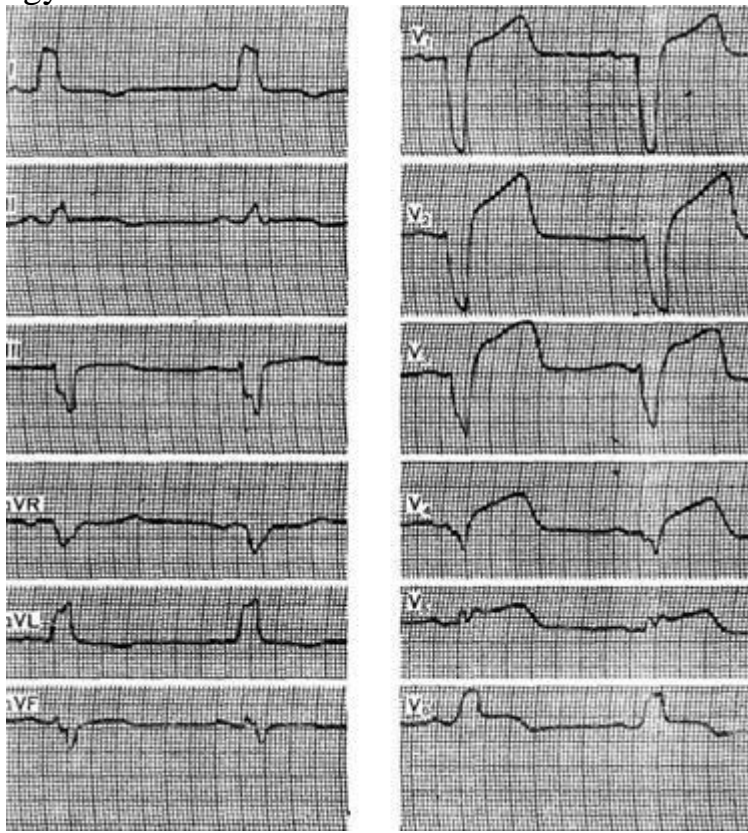
Blood test: HB-102 g / l, leuc. -  $9.0 \times 10^9/l$ , ESR-39 mm / h.

- 1) Diagnosis of heart disease, justification.
- 2) Etiology, phase of the process, state of blood circulation.
- 3) Additional tests for process activity.
- 4) Please indicate the three contradictions of the diagnosis made in the text.
- 5) Treatment of the underlying disease.

No. 28 Paramedic was called to the home of patient B., 40 years old, who complains of severe pain in the heart area of a pressing nature, radiating to the left arm, under the left shoulder blade, a burning sensation behind the sternum. The attack occurred 2 hours ago. Taking nitroglycerin had no effect. The disease is associated with a stressful situation at work.



Objectively: general condition of moderate severity, clear consciousness, temperature 36.8°C. The patient is restless and restless. The skin and visible mucous membranes are pale. Vesicular respiration, BPD 20 per minute. The heart sounds are rhythmic, muted. Heart rate 92 in min. Blood pressure 110/70 mm Hg Abdominal pathology was not detected.

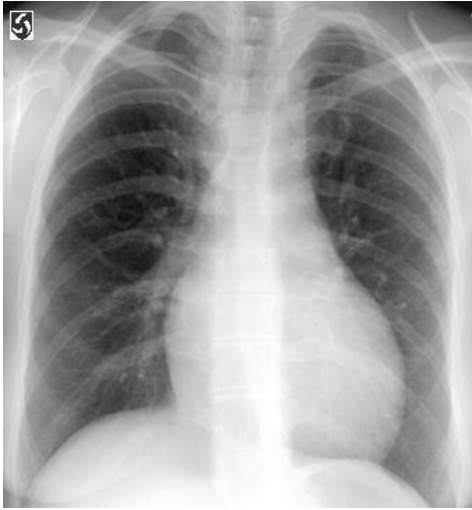


Questions:

1. Formulate and justify the presumed diagnosis
2. Name any additional research you need
3. List possible complications
4. Define your tactics in relation to the patient, tell us about the principles of treatment, prognosis and prevention of the disease
5. Give an ECG interpretation.

No. 29 Paramedic was called to the home of patient K., 57 years old. Complaints of headache in the occipital region, vomiting, dizziness, flickering of flies in front of the eyes. From the medical history, it turned out that these phenomena developed today in the afternoon. I haven't seen a doctor before. Headaches were bothered periodically for several years, but the patient did not attach any importance to them and did not go to the doctors.

Objectively: the temperature is 36.4°C. General condition of moderate severity. The skin is pale. Respiration is vesicular. The left border of relative cardiac dullness is 1 cm outward from the midclavicular line. Heart tones are muted, sharp accent of the 2nd tone on the aorta. Heart rate 92 v min., pulse firm, tense, 92 v min. Blood pressure 200/110 mm Hg Abdominal pathology was not detected.

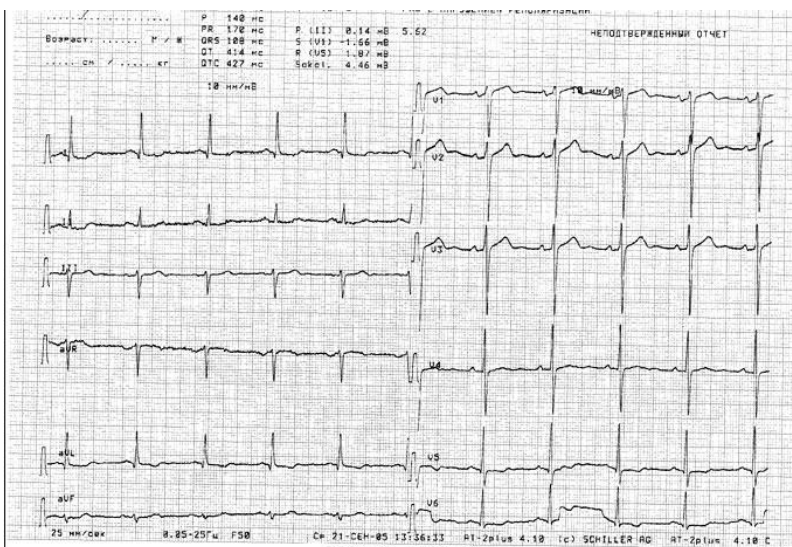


### Tasks

1. Formulate and justify the presumed diagnosis.
2. Give an interpretation of the X-ray examination of the lungs
3. Name the additional studies you need.
4. List possible complications.
5. Define your tactics in relation to the patient, tell us about the principles of treatment, prognosis and prevention of the disease.

No. 30 A 42-year-old patient O. applied to the paramedic with complaints of frequent headaches, periodic dizziness, numbness of the fingers, and poor sleep. When walking, there are constricting pains in the legs, the patient begins to limp, and at rest the pain disappears. Ill for about six months.

Objectively: the temperature is 36.5°C. The general condition is satisfactory. The skin is clean. Respiration is vesicular. The left border of relative cardiac dullness is 0.5 cm outward from the midclavicular line. The heart sounds are muted, the emphasis of the 2nd tone is on the aorta. Pulse 74 per minute, rhythmic, tense, on the arteries of the back of the foot pulsation is sharply reduced. Blood pressure 180/90 mm Hg Abdominal pathology was not detected.

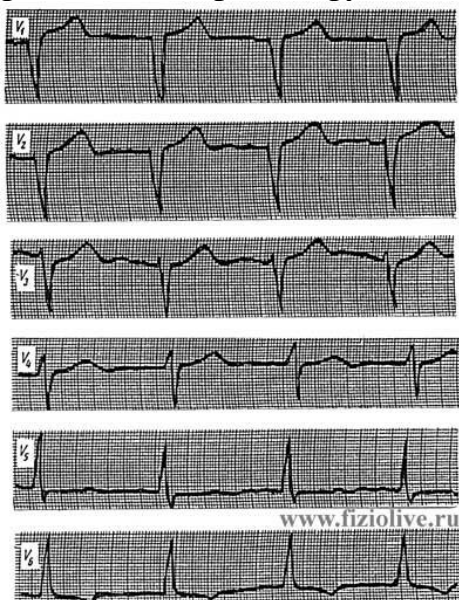


### Tasks

1. Formulate and justify the presumed diagnosis.
2. Name the additional studies you need.
3. Give an ECG interpretation
4. List possible complications.
5. Define your tactics in relation to the patient, tell us about the principles of treatment, prognosis and prevention of the disease.

No. 31 SMP was called by relatives of patient O., 42 years old . Complaints of frequent headaches, periodic dizziness, flickering of flies in front of the eyes, nausea, vomiting, short-term loss of consciousness. Previously, there were dizziness, but for honey. I didn't ask for help. Ill for about 4 years.

Objectively: the temperature is 36.6°C. General condition of moderate severity. The skin is clean. Respiration is vesicular. The left border of relative cardiac dullness is 0.5 cm outward from the midclavicular line. The heart sounds are sharply muted, the emphasis of the 2nd tone is on the aorta. Pulse 77 per minute, blood pressure 200/100 mm Hg. Abdominal pathology was not detected.



Questions:

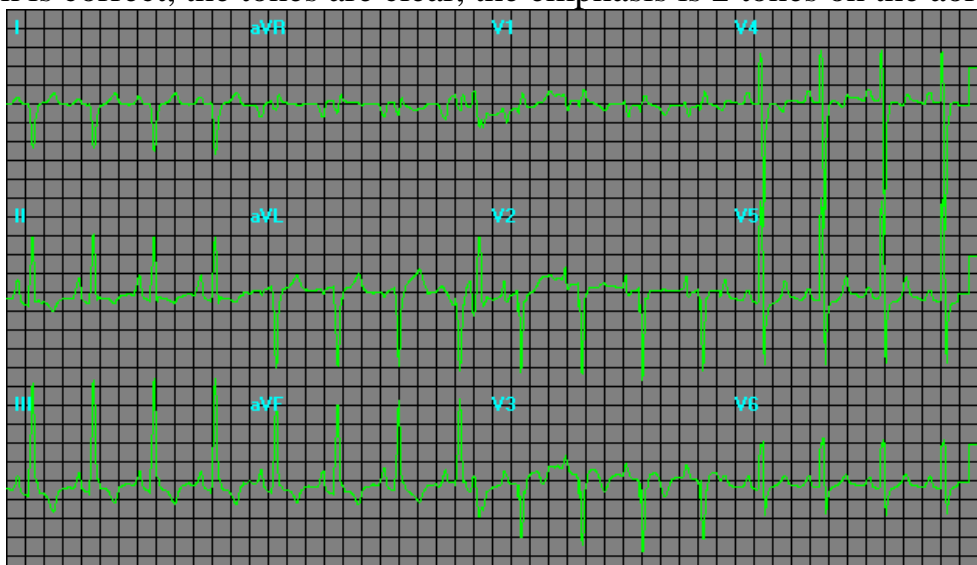
1. Formulate and justify the presumed diagnosis.
2. Name the additional studies you need.
3. Give an ECG interpretation
4. List possible complications.
5. Define your tactics in relation to the patient, tell us about the principles of treatment, prognosis and prevention of the disease.

No. 32 A 38-year-old patient was taken to the emergency department by an ambulance with complaints of a sharp headache in the temporal regions, nausea, a feeling of trembling in the body, chills, palpitations, and a feeling of fear.

The patient considers himself for 5 years, when in the first half of pregnancy there was an increase in blood pressure to 180/100 mm Hg. Subsequently, she periodically felt headaches, increased excitability, but did not consult a doctor. In the last 2 years, seizures

with the above-described complaints have appeared. Seizures were provoked by nervous tension and changes in weather conditions.

Objectively: The patient is agitated, her skin is pale and moist. Pulse is 122 v min., blood pressure is 200 / 105mmhg, the heart borders are extended to the left by 1 cm, the rhythm is correct, the tones are clear, the emphasis is 2 tones on the aorta.



Questions:

1. Your preliminary diagnosis.
2. Plan of necessary examination to clarify the diagnosis and expected results.
3. Give an ECG interpretation
4. Determine your tactics in relation to the patient, tell us about the principles of treatment, and the prognosis.

No. 33 Patient K., 68 years old, went to the paramedic with complaints of constant shortness of breath, sharply increasing with physical exertion, constant dull pains in the right hypochondrium, swelling on the legs, cough with mucosal sputum, general weakness. He has been suffering from coronary heart disease for many years, and had a myocardial infarction 2 years ago.

Objectively: the temperature is 36.4°C. The skin is moist, swollen on the feet and shins, acrocyanosis. Breathing is hard, and there are no audible wet wheezes in the lower parts. BDD 26 in min. The left border of relative cardiac dullness is determined by the left midclavicular line. Heart sounds are arrhythmic, muffled. Heart rate is 100 per minute. The tongue is covered with a white coating. The abdomen is soft, slightly painful in the right hypochondrium. The liver protrudes from under the edge of the costal arch along the mid-clavicular line by 2 cm, slightly painful.

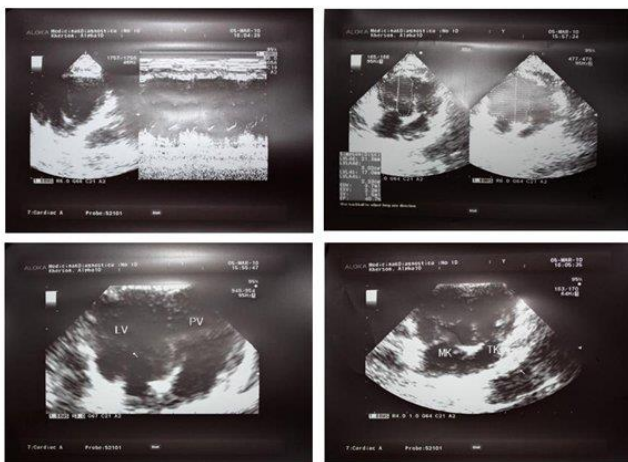


Questions:

1. Formulate and justify the presumed diagnosis.
2. Name the additional studies you need.
3. Give an ECG interpretation
4. List possible complications.
5. Define your tactics in relation to the patient, tell us about the principles of treatment, prognosis and prevention of the disease.

No. 34 Patient E, 47 years old, was admitted to the cardiology department with complaints of recurrent pain in the heart, shortness of breath during physical exertion (100 meters at a normal pace), weakness, rapid fatigue, swelling of the lower extremities in the evening.

Objectively; Skin and visible mucous membranes of normal color. Vesicular breathing, no wheezing. The heart sounds are muted, rhythmic. Blood pressure is 130/80 mmHg. The heart borders are extended by +1-1.5 cm to the left. The stomach is soft and / or painful. Stool and diuresis without features. Edema of the lower extremities (++).



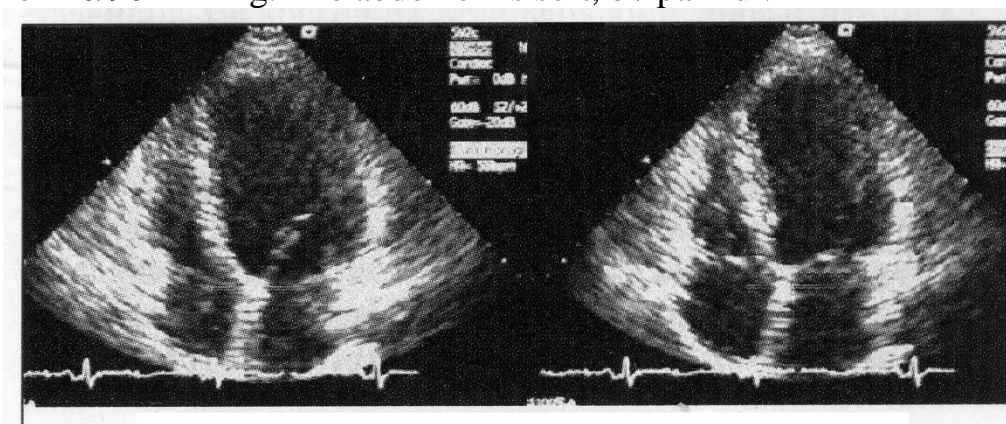
Questions:

1. Formulate and justify the presumed diagnosis.

2. Name the additional studies you need.
3. Give an interpretation of the ECHO KG results
4. Define your tactics in relation to the patient, tell us about the principles of treatment, prognosis and prevention of the disease.

No. 35 Patient I., 62 years old, went to the polyclinic with complaints of constant shortness of breath, palpitations, swelling of the legs, cough with mucosal sputum, general weakness. He has been suffering from coronary heart disease for many years. Moved 2 ims.

Objectively: the temperature is 36.6°C. The skin is moist, swollen on the feet and shins. Breathing is hard, and there are no audible wet wheezes in the lower parts. Dyspnea. The left border of relative cardiac dullness is determined by the left midclavicular line. The heart sounds are rhythmic, muted. Heart rate 86 in min. Blood pressure 140/90 mm Hg. The abdomen is soft, b / painful.



Questions:

1. What is your presumed diagnosis?
2. What should be differentiated from this pathology?
3. Give an interpretation of the ECHO KG results
4. Patient management tactics?

No. 36 A 32-year-old woman came to the paramedic with complaints of rapid fatigue, shortness of breath and palpitations that occur during homework, swelling on her legs. There was a brief loss of consciousness. The patient's condition has worsened in the last 4 months. From the transferred diseases notes acute respiratory infections

Objectively: the temperature is 36.7°C. The skin is clear and pale. In the lower parts of the lungs wet wheezing. Palpation at the base of the heart reveals a tremor, the apical push is detected in the 6th intercostal space along the left mid-clavicular line. Heart sounds are rhythmic, systolic murmur is heard in the second intercostal space to the right of the sternum . Heart rate 92 in min. Blood pressure 110/70 mm Hg Abdominal pathology was not detected.



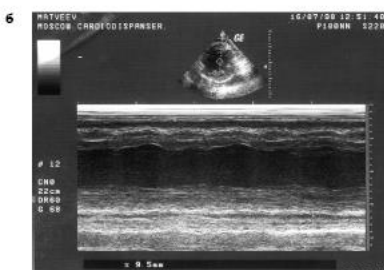


Questions:

1. Formulate and justify the presumed diagnosis.
2. Name the additional studies you need.
3. Give an interpretation of the X-ray results.
4. List possible complications.
5. Define your tactics in relation to the patient, tell us about the principles of treatment, prognosis and prevention of the disease.

No. 37 In the anamnesis for 5 years worried about pressing pain behind the chest during physical exertion, relieved by nitroglycerin. The frequency of seizures varied depending on physical activity from 1 to 4 per day. I regularly took lozen 10 mg a day, monomac 40 mg 2 times a day (morning and afternoon), cardioaspirin 100 mg 1 time a day. Over the past 3 weeks, despite the regular use of medications, I have noticed a change in the nature of chest pains: they have become more frequent up to 10-12 attacks per day, have become more prolonged, attacks at rest at night, shortness of breath with a slight load, cough with sputum have appeared.

Objectively: The skin is pale in color, moist wheezing in the lungs, heart tones are muffled, rhythmic, heart rate 72 per minute, blood pressure 130 \ 80 mmHg. Heart borders are extended to the left +1.5 cm. The abdomen is soft, but painful. The liver protrudes 2 cm from under the costal arch.

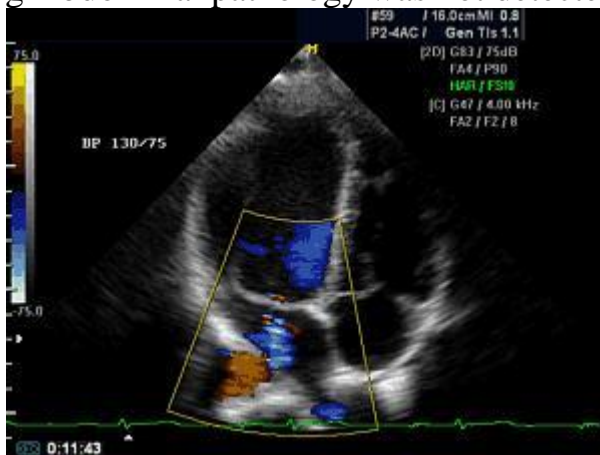


Questions:

1. Formulate the correct diagnosis.
2. Name any additional research you need
3. Give an interpretation of the ECHO KG results
4. What are the correct medical tactics?

No. 38 A 23-year-old man applied to the paramedic with complaints of rapid fatigue, shortness of breath and palpitations when performing physical work. Similar symptoms occurred 2 months ago. Last year, he was treated in a hospital for infectious endocarditis, and was discharged in a satisfactory condition.

Objectively: the temperature is 36.8°C. The general condition is satisfactory. On examination, there is a rhythmic shaking of the head, pulsation of the carotid arteries, capillary pulse is determined. The skin is clean. BDD 22 in min. Respiration is vesicular. The left border of the heart is determined by the left midclavicular line. Heart tones are rhythmic and clear. Diastolic murmur is detected in the second intercostal space to the right of the sternum and at the Botkin point. Heart rate 88 in min. Blood pressure 160/50 mm Hg Abdominal pathology was not detected.



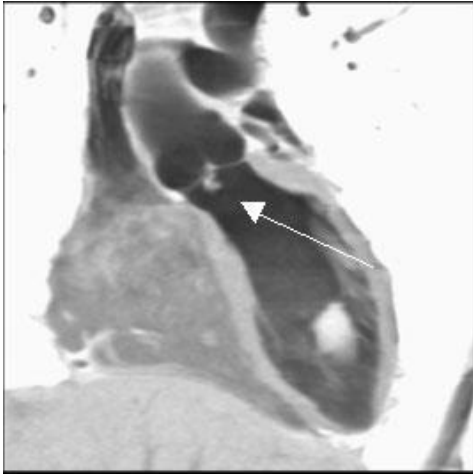
Questions:

1. Formulate and justify the presumed diagnosis.
2. Name the additional studies you need.
3. Give an interpretation of the ECHO KG results
4. List possible complications.
5. Define your tactics in relation to the patient, tell us about the principles of treatment, prognosis and prevention of the disease.

No. 40 An 18-year-old patient came to the polyclinic with complaints of subfebrile temperature, general weakness, and mild pain in the heart area. A history of frequent sore throats. The last sore throat was two weeks ago.

Objectively: the temperature is 37.4°C. The general condition is satisfactory. The skin is pale and moist. Respiration is vesicular. The left border of relative cardiac dullness is 0.5 cm outward from the midclavicular line. Heart sounds are muffled, arrhythmic, with a gentle systolic murmur at the apex. Heart rate 96 per minute Blood pressure 110/70 mm Hg. The tongue is clean, there are carious teeth. The tonsils are hypertrophied. No abdominal pathology was detected.



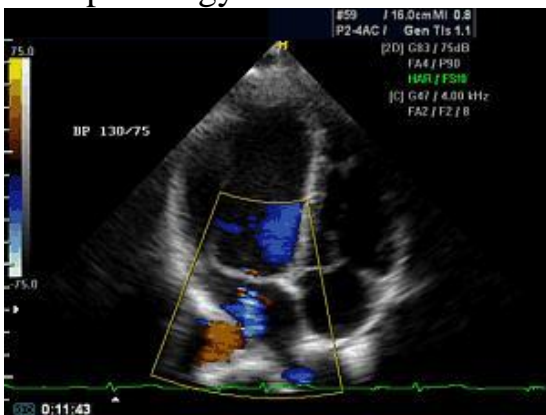


Questions:

1. Formulate and justify the presumed diagnosis.
2. Name the additional studies you need.
3. Perform a differential diagnosis
4. Give an interpretation of the ECHO KG results
5. List possible complications.
6. Define your tactics in relation to the patient, tell us about the principles of treatment, prognosis and prevention of the disease.

No. 41 Patient K., 25 years old, complained of shortness of breath, which worsened with physical exertion, and a dry cough. I had hemoptysis the day before. Deterioration of the condition is noted within a month.

Objectively: the temperature is 37.2°C. General condition of moderate severity. The skin and visible mucous membranes are cyanotic. Breathing is vesicular, and there are silent wet wheezes in the lower parts of the lungs. BDD 26 in min. Palpation in the area of the apex of the heart determines the symptom of "cat purring". The upper limit of relative cardiac dullness is determined in the second intercostal space. During auscultation at the apex of the heart, the 1st tone is flapping, diastolic noise, the 2nd tone accent is on the pulmonary artery. Heart rate 110 v min. Blood pressure 110/70 mm Hg Abdominal pathology was not detected.



Questions:

1. Formulate and justify the presumed diagnosis.
2. Name the additional studies you need.
3. Give an interpretation of the ECHO KG results

4. List possible complications.

5. Determine your tactics in relation to the patient, tell us about the principles of treatment, prognosis and prevention of the disease.

No. 42. The paramedic was called to the home of patient G., 18 years old, who complains of severe shortness of breath, palpitations that increase at the slightest movement. A patient with rheumatism from the age of 6, is on the dispensary register. The patient receives anti-relapse treatment. The deterioration of the condition is noted within 3 days, which is associated with hypothermia.

Objectively: the temperature is 37.2°C. General condition of moderate severity. The skin is clean and moderately moist. Weak breathing, occasional wet wheezing. BDD 50 in min. The left border of the heart is determined by the left midclavicular line. There is a rough systolic murmur above the apex, and the 1st tone is weakened here. Heart rate 98 per minute, rhythmic. Blood pressure is 120/70 mm Hg. The liver is not enlarged, there is no edema. The patient underwent surgical treatment.

Questions:

1. Formulate and justify the presumed diagnosis.

2. Name the additional studies you need.

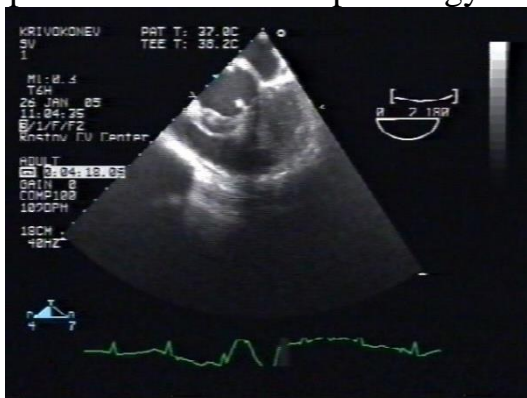
3. Perform a differential diagnosis.

4. List possible complications.

5. Define your tactics in relation to the patient, tell us about the principles of treatment, prognosis and prevention of the disease.

No. 43 An 18-year-old patient complained of low-grade fever, general weakness, and mild pain in the heart. A history of frequent sore throats. The last sore throat was two weeks ago.

Objectively: the temperature is 37.4°C. The general condition is satisfactory. The skin is pale and moist. Respiration is vesicular. The left border of relative cardiac dullness is 0.5 cm outward from the midclavicular line. Heart sounds are muffled, arrhythmic, with a gentle systolic murmur at the apex. Heart rate 96 per minute Blood pressure 110/70 mm Hg. The tongue is clean, there are carious teeth. The tonsils are hypertrophied. No abdominal pathology was detected.



Questions:

1. Formulate and justify the presumed diagnosis.

2. Name the additional studies you need.

3. Give an interpretation of the ECHO KG results

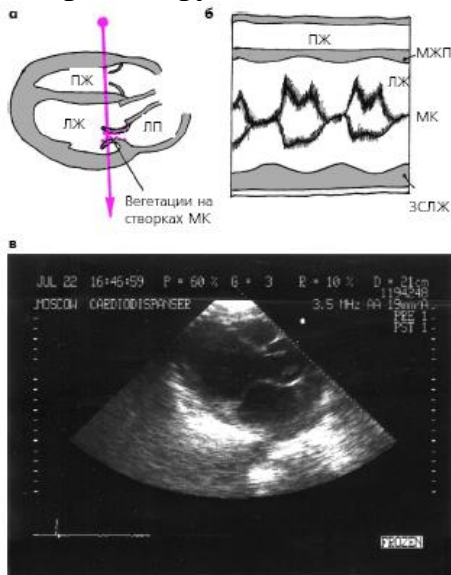
4. List possible complications.

5. Define your tactics in relation to the patient, tell us about the principles of treatment, prognosis and prevention of the disease.

No. 44. Patient K., 25 years old, complained of shortness of breath, which worsened with physical exertion, and a dry cough. I had hemoptysis the day before.

Deterioration of the condition is noted within a month. I had rheumatism two years ago .

Objectively: the temperature is 37.2°C. The general condition is moderate. The skin and visible mucous membranes are cyanotic. Breathing is vesicular, and there are silent wet wheezes in the lower parts of the lungs. BDD 26 in min. Palpation in the area of the apex of the heart determines the symptom of "cat purring". The upper limit of relative cardiac dullness is determined in the second intercostal space. During auscultation at the apex of the heart, the 1st tone is flapping, diastolic noise, the 2nd tone accent is on the pulmonary artery. Heart rate 110 v min. Blood pressure 110/70 mm Hg Abdominal pathology was not detected.



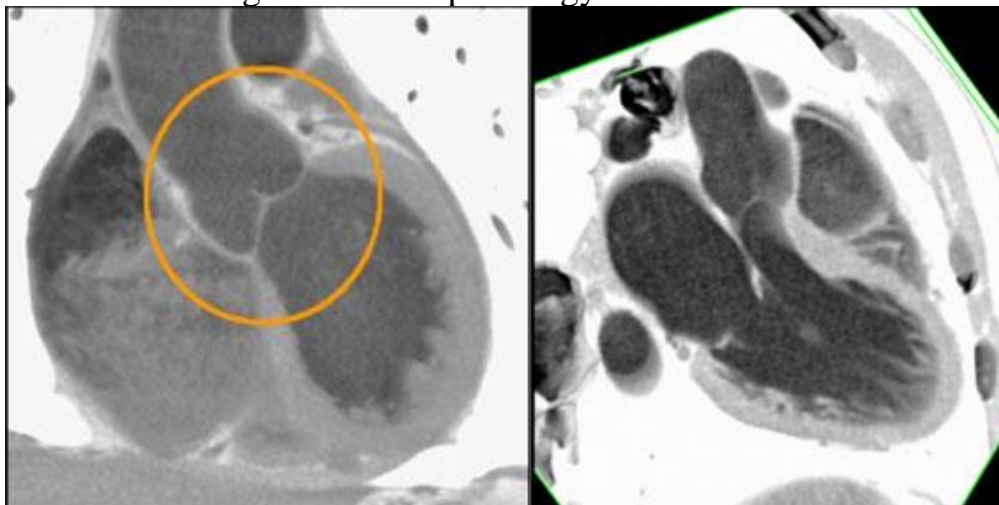
Questions:

1. Formulate and justify the presumed diagnosis.
2. Name the additional studies you need.
3. Give an interpretation of the ECHO KG results
4. List possible complications.
5. Determine your tactics in relation to the patient, tell us about the principles of treatment, prognosis and prevention of the disease.

No. 45. A 23-year-old man applied to a paramedic with complaints of rapid fatigue, shortness of breath and palpitation when performing physical work. Similar symptoms occurred 2 months ago. Last year, he was treated in a hospital for infectious endocarditis, and was discharged in a satisfactory condition.

Objectively: the temperature is 38.8°C. The general condition is satisfactory. On examination, there is a rhythmic shaking of the head, pulsation of the carotid arteries, capillary pulse is determined. The skin is clean. BDD 22 in min. Respiration is

vesicular. The left border of the heart is determined by the left midclavicular line. Heart tones are rhythmic and clear. Diastolic murmur is detected in the second intercostal space to the right of the sternum and at the Botkin point. Heart rate 88 in min. Blood pressure 160/50 mm Hg Abdominal pathology was not detected.

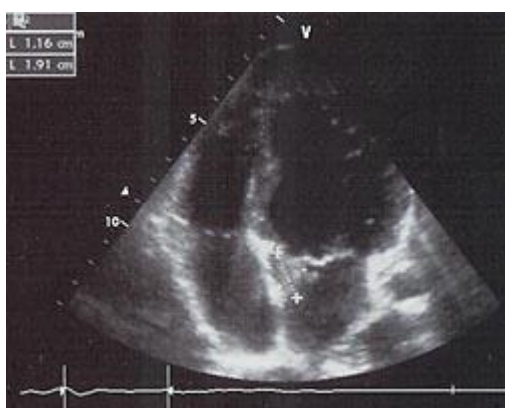


Questions:

1. Formulate and justify the presumed diagnosis.
2. Name the additional studies you need.
3. List possible complications.
4. Define your tactics in relation to the patient, tell us about the principles of treatment, prognosis and prevention of the disease.

No. 46. A 37-year-old male. Complaints of shortness of breath with minor physical exertion (walking on a flat surface), palpitations, attacks of suffocation at night, stopping in a sitting position and after taking 2 tablets of nitroglycerin. The above complaints appeared six months ago shortly after the flu, complicated by post-influenza pneumonia.

Objectively: The condition is of moderate severity. Acrocyanosis, pale skin. BH = 20 per minute.. Blood pressure = 110 \ 70 mm Hg. The borders of the heart are extended to the left by 3 cm. Heart tones are muffled, rhythmic, the rhythm of a gallop. In the lungs, on the background of weakened breathing, small-bubbly wet wheezing in the lower parts. The liver protrudes 3 cm from under the edge of the costal arch, slightly painful on palpation. Pasty legs and feet.



Questions:

1. Formulate and justify the presumed diagnosis.
2. Name the additional studies you need.

3. Give an interpretation of the ECHO KG results
4. List possible complications.
5. Determine your tactics in relation to the patient, tell us about the principles of treatment, prognosis and prevention of the disease.

No.47. A 43-year-old patient, a taxi driver. Complaints of epigastric diabetic pain, more often on an empty stomach, decrease after eating, heartburn, acid belching. Ill for 3 months. Smokes 20 years on 1-1. 5 packs of cigarettes a day. Within 10 years - chronic bronchitis. 5 years - rheumatoid arthritis, for which he often took nonsteroidal anti-inflammatory drugs.

Objectively: the wrist joints are thickened, without signs of inflammation. The language is overlaid. In the lungs, hard breathing, dry wheezing on inspiration. Pulse rate-92 per minute.

With EDGS, duodenitis was detected, an ulcer of the duodenal bulb 3x4 cm, antrum-gastritis.

- 1) What additional research is really needed?
- 2) What are the instructions for the regime and diet?
- 3) Treatment was prescribed: almagel 1 tbsp. 1. 3 times a day after meals, vikalin 1 t. 3 times, atropine 0.1% - 0.5 p / c 2 times, no-shpa 0.04 x 3 times, solcoseryl i / m, tazepam 1 t. at night. Evaluate the rationality of assignments? What are your suggestions for treatment correction?
- 4) After 5 weeks, there is no pain or soreness. Do I need repeated EGDS and maintenance treatment?

No.48. Patient 51 years old. He was admitted with complaints of a feeling of heaviness in the epigastricregion, rapid satiety, rotten belching, sharp weight loss. At least three days before admission, there was periodic heavy vomiting with remnants of food eaten the day before. For 7 years, he has been suffering from stomach ulcers with annual exacerbations.

Objectively: emaciated, the skin is dry, flabby, gathering in folds. The stomach is soft, "splashing noise", on an empty stomach below the navel blood pressure is 90/75 mm Hg. Positive Khvostek syndrome.

- 1) What complication can I think of?
- 2) What is expected during gastric X-ray examination?
- 3) Evaluate the state of water-electrolyte metabolism.
- 4) What changes in hematocrit are expected, residual nitrogen, relative density of urine?
- 5) Treatment tactics?

No.49. A 23-year-old patient was hospitalized with complaints of severe weakness and dizziness. About 6 hours ago there was a sharp weakness, cold sweat, twice there was a liquid stool like "coffee grounds". Until the moment of hospitalization, there were three cases of loose stools of black color. Pulse rate-120 per minute. Blood pressure -90/60 mm Hg HB-65 g / l, hematocrit-23%. Blood type AB(IV)+. An urgent gastroduodenoscopy revealed that the stomach contained a large amount of "coffee

grounds" colored fluid with an admixture of scarlet blood. On the anterior wall of the bulb of the duodenum 12, a deep ulcerative defect up to 1.5 cm in diameter is detected, from which blood actively flows. Endoscopically, the bleeding was not stopped.

- 1) What endoscopic methods of stopping bleeding can be used?
- 2) What should I do in this situation: continue conservative therapy or perform emergency surgery on the patient?
- 3) If a decision is made to operate on a patient, what operations can be performed in this case?
- 4) What will conservative therapy include?

No.50. A 32-year-old woman. The second pregnancy is 34 weeks. A history of chronic calculous cholecystitis. About 8 hours ago, there was a slight pain in the epigastric region. There was a single vomiting. After 1.5 hours, the pain shifted to the right hypochondrium. The pain is constant, without radiating. Body temperature-37.2°C. White blood cells -  $11.6 \times 10^9/l$ . The tongue is somewhat dry. The abdomen is enlarged due to the uterus. On palpation, it is tense in all parts, painful in the right hypochondrium in the lateral parts. Shchetkin's symptom is not expressed, Rovsing's is negative, Sitkovsky's is positive.

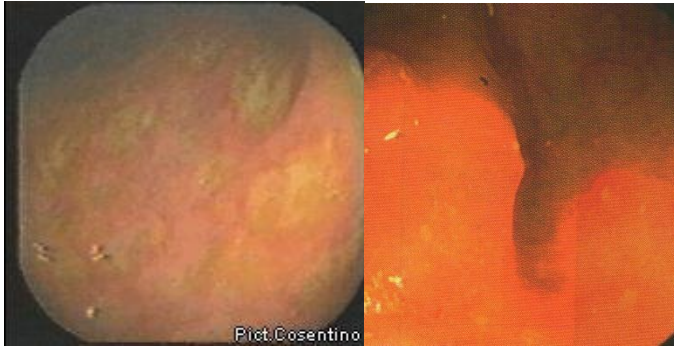
- 1) Your preliminary diagnosis?
- 2) What disease should be excluded and how?
- 3) Your treatment strategy?

No.51. A 65-year-old patient suffering from hypertension and atrial fibrillation is examined by the NSR doctor 4 hours after the onset of sleep deterioration. Complaints of sudden sharp abdominal pain, persistent, without clear localization. The patient groans loudly, tosses around, takes a knee-elbow position. At the time of examination, repeated vomiting with a fecal smell is observed. Half an hour ago there was a watery stool with a small admixture of blood. The condition is heavy, the face is pale, covered with cold sweat. Pulse-112 per minute, arrhythmic. Blood pressure is 160/90 mm Hg. Body temperature is normal. The tongue is dry. The abdomen is involved in the act of breathing, not swollen, soft. The pain during palpation does not increase. During percussion, areas of tympanitis alternate with areas of blunting, peristaltic noises are not heard. There is no pathology during rectal examination.

- 1) How to evaluate vomiting with a fecal smell?
- 2) Probable cause of abdominal pain?
- 3) How to explain the absence of peristaltic noises?
- 4) Tactics at the pre-hospital stage?

No.52. A 30-year-old patient P. complains of sharp pains in the right iliac region, which occurred acutely on the previous day after a plentiful meal at the festive table. Also worried about nausea, rumbling in the stomach, unstable stool, an increase in body temperature to 37.3 C. Palpation of the abdomen reveals moderate local soreness, as well as a dense tumor-like formation in this area. Multiple aftoid ulcers diffusely located on the hyperemic mucosa of the ileum, in its terminal part, were found in FCS.





- 1) What is the presumed diagnosis and with what diseases is a differential diagnosis made?
- 2) What additional research needs to be done?
- 3) Determine your treatment strategy for the patient?
- 4) Justify medical and social expertise (MSE), contraindicated types of work.

No.53. A 48-year-old woman. Previously, I often took antidepressants. Within 2 years, he notes intolerance to fatty foods, dull pain in the right hypochondrium, periodically diffuse itching, bone pain, pain and swelling of the wrist, knee, and interphalangeal joints, and tooth loss. Last 3 months, increasing jaundice, dark urine. The liver is 5 cm thick, the edge is rounded. Spleen – 16 x 12 cm.

Blood test: bound bilirubin - 144, free bilirubin-57 mmol / l, AsAT-216 nmol/L, ALT-283 nmol/L, ALP-222 mmol/L, cholesterol-9.1 mmol/l, prothrombin-65%. gamma globulins - 22%.

- 1) What is the leading syndrome in this patient?
- 2) Probable level of cholestasis (intrahepatic or extrahepatic)?
- 3) What research is conducted to clarify the patency of the biliary tract?
- 4) Diagnosis of liver disease?
- 5) What can contribute to the development of the disease?

No.54. A 28-year-old patient was transferred from an infectious diseases hospital. Complaints of weakness, poor appetite, jaundice of the skin and sclera. 5 days ago there were headaches, nausea, aching pains in the epigastric region, fever up to 38°C. After 2 days, jaundice with dark urine and light feces. 3.5 months ago I had contact with a patient with viral hepatitis. He was sent to an infectious diseases hospital, where, upon examination in the emergency department, the diagnosis of viral hepatitis was rejected and the patient was sent to the therapeutic department. Anamnesis of life without special features.

Objectively: pronounced jaundice of the skin and sclera. The temperature is normal. The abdomen is soft, not swollen, and painless. The liver is 4 cm below the edge of the costal arch, dense, with a sharp edge. The spleen is not palpable. The lymph nodes are not enlarged.

Bilirubin - 54.3 mmol/l. Thymol test - 12 units, sulemic test -1.4 ml, AsAT-2.10 mmol/l, AlAT-2.95 mmol/l. Alkaline phosphatase -4.1 UNITS.

Treatment was prescribed: table N5, prednisone 30 mg / day, sirepar 1 ml / m, allohol 1 table x 3 times, glucose 40% - 40.0 v/v, penicillin 500 thousand units x 6 times/m.

1) On what grounds did the infectious diseases hospital reject the diagnosis of viral hepatitis?

2) Probable diagnosis?

3) What biochemical syndromes have been identified?

4) What is the nature of jaundice?

5) Evaluate the prescribed treatment.

No.55. A 48-year-old patient. Complaints of enlargement and heaviness in the abdomen. In the past, he abused alcohol. Within 5 years, there was an increase in the liver. I noticed an increase in the abdomen 1 month ago.

*Objectively:* telangiectasia on the skin of the trunk, hyperemia of the palms, the abdomen is enlarged in volume, the navel is smoothed, dullness below the navel and fluctuation are determined. The liver and spleen are not palpable. Diuresis - 700 ml. Blood bilirubin - 30 mmol / l, AsAT-0.8 mmol / ml / h, ALT-1.2 mmol / ml / h, prothrombin time-50%. Blood sodium - 135 mmol/l, potassium - 3.9 mmol/l, creatinine - 80 mmol/l, protein - 52 g/l.

1) Your full diagnosis?

2) What is the cause of ascites? Identify biochemical syndromes.

3) Make appointments for the first week.

4) What indicators should be observed?

5) What are the indications for ascites puncture and administration of plasma substitutes?

No.56. In a 23-year-old patient about 6 hours ago .there was a sharp weakness,cold sweat, twice there was vomiting like "coffee grounds". Until the moment of hospitalization, there were three cases of loose stools of black color.

1) From which part of the gastrointestinal tract did the bleeding occur?

2) What should be done to determine the source of bleeding?

3) What are the criteria for the severity of bleeding?

4) What can you do to stop the bleeding?

5) What are the indications for emergency surgery?

No.57. A 23-year-old patient was hospitalized with complaints of severe weakness and dizziness. About 6 hours ago there was a sharp weakness, cold sweat, twice there was vomiting like "coffee grounds". Until the moment of hospitalization , three times there was a liquid stool-melena. Pulse rate-120 per minute. Blood pressure-90/60 mm Hg, HB-64 g / l, hematocrit-23%.

1) What medications do you use as a hemostatic therapy?

2) What medications do you use as the first to replenish the volume of circulating blood?

3) What is the scope and composition (specifically) of transfusion therapy?



4) What blood is preferable to use for blood transfusion?

No.58. A 30-year-old patient who has been suffering from persistent constipation for many years. Recovers with difficulty 1 time in 3-4 days, fecal masses are solid, without admixture of mucus and blood. For 2 months, he takes laxatives (purgen).

*Objectively:* no special features, except for a decrease in the tone of the abdominal muscles. Digital examination of the rectum, irrigography without pathological changes.

- 1) Probable cause of constipation?
- 2) What is your opinion on taking laxatives?
- 3) What are your recommendations for medical treatment and their rationale?
- 4) What are your diet tips?
- 5) What are some other recommendations?

No.59. Patient K., 46 years old, was admitted with complaints of pain in the left hypochondrium radiating to the back, which occurs after eating and increases in the evening, nausea, loose stools up to 3 times a day, plentiful, fetid with remnants of undigested food, a feeling of bursting in the stomach. Medical history: used alcoholic beverages. Objectively: the skin and visible mucous membranes of the usual color, on the skin of the chest, back and abdomen, bright red spots are visible that do not disappear when pressed. The tongue is overlaid at the root with a white coating. The abdomen is soft and painful in the left hypochondrium and epigastric region. Liver at the edge of the costal arch. Heart rate-74 per minute, blood pressure-120/80 mmHg, BPD-19 per minute.

**Coprogram:**

Indicators	Results
Form	unexecuted
Colour	grayish
Smell	smelly
Muscle fibers: ○ undigested ○ digested	units in the field of view a significant number
Neutral fat	a significant number
Fatty acids	not detected
Fiber content: digestible	small quantity
indigestible	a significant number
Starch	a large number of
Iodophilic flora	a significant number
Undigested food	a significant number
Mucus	+
R-tsi: with acetic acid	weakly positive
with trichloroacetic acid	negative value
Red blood cells	-
White blood cells	-
Worm eggs	-

- 1) Formulate a presumptive diagnosis?
- 2) What are the necessary additional studies?
- 3) Do you rate the coprogram?
- 4) Determine your treatment strategy for the patient?

No.60. A 20-year-old patient was admitted in serious condition. Drowsiness, swelling of the face, legs, lower back, subcutaneous tissue of the abdomen. In the lungs, breathing is hard, in the posterior-lower parts there are moist, fine-bubbled wheezes. Heart tones are muted, with the emphasis of tone II on the aorta. Pulse rate-84 per minute. Blood pressure - 170/130 mm Hg Liver at the costal arch. Daily diuresis - 50 ml.

Urinalysis: relative density-1030, protein-3.3 g / l, erythr. - 100-150 in n/a., leuc. - 5-6 in n / a., hyaline and granular cylinders in large quantities.

Blood test: HB-100 g / l, er- $3.0 \times 10^{12}$ /l, leuc -  $9.5 \times 10^9$ /L, ESR -34 mm / h. Blood urea - 24.2 mmol / l, creatinine-520 mmol/L, serum potassium-7.0 mmol/l, sodium-126 mmol/l, chlorine-88 mmol/l, KSHS-pH-7.34.

On the ECG: sinus rhythm, PQ 0.26 s, violation of conduction along the right leg of the His bundle, T-waves are high, pointed, with a narrow base.

- 1) What is kidney disease and its form?
- 2) What is the form of kidney failure?
- 3) How to explain ECG changes?
- 4) What urgent measures should be taken?
- 5) What should I do if there is no effect?

No.61. A 60-year-old patient was admitted with complaints of headaches, shortness of breath, edema, and vision loss. For 20 years, he has been suffering from a severe form of diabetes mellitus, constantly receiving large doses of insulin. The last 5 years of his life have been marked by changes in urine, rising blood pressure, swelling on the face and legs.

Objectively: the condition is of moderate severity. Cyanosis of the lips, swelling of the legs. The heart is extended to the left by 2 cm, the tones are muted, there is a systolic murmur blowing on the aorta, and the accent is of tone II. Pulse - 88 per minute. Blood pressure - 200/100 mm Hg. The pulse on the right foot is palpable with difficulty. Urinalysis: specific gravity-1018, protein-6%, sugar-0.5%, leuc. - up to 30 v / r., er. - 2-3 v / r., creatinine - 92 mmol/l. Fundus - retinopathy.

ECG - signs of left ventricular hypertrophy.

- 1) How to interpret changes in urine tests, edema and increased blood pressure?
- 2) Evaluate the state of excretory function of the kidneys.
- 3) How to evaluate the pulse palpation data on the legs?
- 4) What additional survey methods are needed?
- 5) Formulate a treatment plan for the patient

No.62. A 35-year-old patient, 2 weeks after a febrile disease of unknown origin, developed facial edema, arterial hypertension up to 170/100 mm Hg, and changes in urine. The patient was diagnosed with acute glomerulonephritis.

- 1) What infection can lead to acute glomerulonephritis?

- 2) What changes in urine can be expected?
- 3) What is the pathogenesis of arterial hypertension?
- 4) How to determine kidney function?
- 5) What treatment will you prescribe?

No.63. A 40-year-old patient. Complaints of headaches, weakness, poor appetite, nausea, weight loss. 10 years ago, he suffered acute glomerulonephritis, followed by arterial hypertension. Deterioration of the condition for 3 months. A history of bronchial asthma (from the age of 10), periodically depressive states.

Objectively: body weight-60 kg, height - 180 cm. The skin is dry, turgor is reduced. There is no swelling. Pulse rate-80 per minute. Blood pressure-185/100 mm Hg. The liver is not 3 cm below the edge of the costal arch. Diuresis - 2.2 l.

ECG: left ventricular hypertrophy.

Blood urea - 55 mmol/l, creatinine - 600 mmol/L, sodium – 140 mmol/L, potassium - 4.2 mmol/L, HCO<sub>3</sub> - 16 mmol/L, protein - 74 g/l, calcium - 2 mmol/L, phosphorus - 2.3 mmol/l.

- 1) Diagnosis of the underlying disease? Kidney function?
- 2) Diet (protein, fat, carbohydrates, calories, salt, water, etc.)?
- 3) What is antihypertensive treatment?
- 4) What other activities?
- 5) What should I do if I develop end-stage renal failure?

No.64. A 49-year-old patient suffering from chronic glomerulonephritis developed increasing general weakness, headaches, anorexia, and weight loss.

On examination: the skin is dry, turgor is reduced. Blood pressure-90/70 mm Hg  
Pulse

-100 per minute. Blood sodium-128 mmol / l, potassium-4.4 mmol / l, creatinine-350 mmol/l, pH-3.25. Diuresis-600 ml / day.

Bloodtest: HB-78 g / l, hematocrit-27%, leuc. - 5. 1x10<sup>9</sup>/l, ESR-45mm / h.

- 1) What is the stage of kidney failure?
- 2) Assess the state of water-salt metabolism and CSF.
- 3) What treatment is indicated?
- 4) What are the causes of anemia in this patient?
- 5) Indications for hemodialysis?

No.65. A 25-year-old patient, who was ill 1.5 months ago, initially suffered from an acute respiratory illness (sore throat, runny nose, subfebrility). A few minutes after that, I noticed the appearance of edema on my face. Moderate arterial hypertension (BP - 150/100 mm Hg) was revealed during the visit to the doctor.

On examination: pastyness of the face, anterior abdominal wall, legs. No changes in the lungs. Heart - weak systolic murmur at the apex, pulse is rhythmic, 92 per minute. The abdomen is soft, the liver and spleen are not enlarged. Blood pressure - 150/100 mm Hg.

Blood test: HB-100 g / l, er. - 3. 2x10<sup>12</sup>/l, leuc. - 9. 8x10<sup>9</sup>/l, ESR-42mm / h.

Urinalysis: relative density-1013. Protein - 3.3%. In the sediment, trophocytes are 20-30 in n/a, leucocytes are 10-12 in n / a, and hyaline cylinders are 2-4 in n / a.

- 1) Formulate a diagnosis.
- 2) How to determine the excretory function of the kidneys?
- 3) Probable cause of anemia.
- 4) What additional survey methods are needed?
- 5) Treatment tactics?

No.66. A 26-year-old woman often suffers from colds. 9 years ago, during the medical examination, proteinuria was detected (1-1.5 g / day), which later periodically disappears or reaches 3-3.5 g/day for colds. 4 years ago, during the period of increased proteinuria, edema of the face and legs appeared, which passed after diuretic and glucocorticoid therapy. A month ago, the swelling reappeared. Present condition: the skin is pale, dry, slightly puffy on the face, hands, anterior abdominal wall, lower back, legs. Blunted and weakened breathing on both sides of the level of the 5th-6th rib.

Urinalysis: specific gravity-1028, protein-10.6 g / l, leuc. - 6-8 in p/s., erythr. - 2-3 in p / s., hyaline cylinders-3-5 in p / s., cholesterol crystals. Blood protein - 46 g/l, albumins - 22 g/l. Cholesterol - 10.9 mmol/l, urea - 5.8 mmol/l, creatinine - 92 mmol/l.

- 1) What disease does the patient have?
- 2) What form of the disease does the patient have?
- 3) What is the main mechanism of edema development?
- 4) Probable cause of changes in the lungs?
- 5) Name the laboratory signs of this syndrome in the patient.

No.67. A 31-year-old patient was admitted with complaints of swelling, pain in the lumbar region, and weakness. I got sick 2 years ago, when after cooling down, there were swelling on my face and legs, lower back pain. She was twice hospitalized and has been receiving prednisone 15 mg/day for a long time.

Objectively: height-162 cm, body weight-88 kg. "Moon-shaped" face, pronounced swelling of the legs, striae on the abdomen. Pallor of the skin and mucous membranes. Pulse rate-80 per minute. Blood pressure - 120/70 mm Hg.

Blood test: HB-102 g / l, leuc. -  $5.6 \times 10^9/l$ , ESR-58 mm / h.

In the analysis of urine: protein-6.6 g / l, erythr. - 10-15 in p/s., hyaline cylinders-5-6 in p/s.  
Blood glucose - 8.9 mmol/l.

- 1) Probable diagnosis of kidney disease?
- 2) What changes in blood proteins and lipids are expected?
- 3) What are the manifestations of prednisone treatment?
- 4) What diet should be recommended?
- 5) Medical treatment?

No.68. A 45-year-old patient suffering from chronic osteomyelitis of the right leg was found to have a change in urine: protein-3 g / l (4.5 g / day), leukemia - 5-10 in the r/r., er. - single in the r/r., hyaline cylinders - 5-10 in the preparation.

- 1) What kind of kidney disease can you think about?
- 2) What are the methods to confirm the diagnosis?
- 3) Given the daily proteinuria, what syndrome can be assumed?
- 4) What changes can be detected during a biochemical blood test?
- 5) What treatment is required for severe edema?

No.69. A 42-year-old patient was admitted with complaints of coughing with the discharge of copious sputum of a purulent nature, sometimes with a full mouth. More than 5 years, with periodic exacerbations.

Objectively: reduced nutrition, pallor of the skin and mucous membranes. Puffy face, puffy legs. Fingers in the form of "drumsticks". Pulse rate-80 per minute. Blood pressure-95/70 mm Hg. In the lungs, coarse sound, scattered wheezing, which decreases when coughing.

Blood test: HB-88 g / l, er. - 3.  $1 \times 10^{12}$  / l, leuc. -  $10.0 \times 10^9$  / l, ESR -46 mm / h.

Urinalysis: specific gravity - 1016, protein - 3.5 g/l, leuc. - 2-3 v/s, er. - single v/s, creatinine - 80 mmol/l.

- 1) A diagnosis of lung disease?
- 2) How to explain kidney damage?
- 3) How to prove the nature of kidney disease?
- 4) What additional survey methods are needed?
- 5) Treatment tactics?

No.70. A 40-year-old patient complains of headaches, weakness, poor appetite, nausea, and weight loss. 10 years - periodic attacks of renal colic, aching and pain when urinating. 5 years - arterial hypertension. Deterioration of 2 months. From childhood - bronchial asthma, intermittent migraine, depressive states.

Objectively: body weight-60 kg, height - 180 cm. The skin is dry, pale, turgor is reduced. Blood pressure - 140/100 mm Hg Pulse-80 per minute. In the lungs, scattered dry wheezing on exhalation.

Blood urea - 95 mmol/l, creatinine - 420 mmol/L, protein - 78 g/l, sodium - 145 mmol/L, potassium - 4.73 mmol/l, calcium - 2 mmol/l. Diuresis - 1200 ml.

- 1) What is the stage and possible cause of chronic kidney failure?
- 2) Evaluate the state of water and electrolyte metabolism.
- 3) Assign and justify a diet to this patient.
- 4) In the analysis of urine-white blood cells cover the field of vision, repeatedly: when seeding-the growth of Escherichia coli. What antibacterial treatment is indicated?
- 5) Do I need and what kind of antihypertensive treatment?

No.71. A 47-year-old patient was admitted to the clinic with complaints of pain in the right lumbar region, weakness, headache, and chills. The patient is sluggish, on palpation - the right kidney is sharply painful. During chromocystoscopy, indigo carmine is released from the left mouth at the 4th minute, but it is not detected on the right. On the

survey radiograph in the projection of the right ureter, a shadow is detected that is suspicious of a concretion, 0.6-0.8 cm.

- 1) Diagnosis of the disease?
- 2) What additional research needs to be done?
- 3) Therapeutic tactics?

No.72. A 45-year-old patient. Complaints of joint pain and stiffness, morning stiffness. Ill for 2 years. I took brufen without any visible effect. Delagil treatment was interrupted due to dizziness and blurred vision.

Objectively: slight swelling, soreness, and limited movement in the joints of the hands, wrist, and knee. Otherwise, no special features.

X-ray examination of joints: reduction of inter-articular gaps, fusion and single usures, osteoporosis of the articular ends of bones. ESR - 45 mm / h, Waaler-Rose reaction-1/64, latex test-1/160.

- 1) Formulate a complete diagnosis.
- 2) Given the ineffectiveness of previous treatment, the duration of the disease without remissions, and the activity of the process, there are indications for basic therapy with gold preparations. What diseases should be excluded before their appointment?
- 3) What is the treatment method?
- 4) What methods of monitoring the tolerability of treatment?
- 5) When can I expect a positive effect? What should I assign before it fully appears?

takes therapy for menorrhagia, notes the normalization of menstruation. Describe the changes in the analyses. What are your next steps?

№88. A 75-year-old woman, came to the appointment with complaints of intense constant pain in the lumbar region, which intensifies when turning the body and bending forward.

She considered herself ill for a week, when the above-mentioned pains appeared while working in the vegetable garden (harvesting potatoes). In order to reduce the pain syndrome she took baralgin - with insignificant effect.

From anamnesis: retired (previously worked as a teacher), she denies occupational hazards. Past surgeries: hysterectomy at the age of 44 (uterine fibroid), surgical menopause.

On examination: her condition is satisfactory. The skin is physiologically coloured. Height 160 cm, weight 52 kg, BMI 20.3 kg/m . Examination of the

musculoskeletal system shows increased thoracic kyphosis, emphasised lumbar lordosis. Painful palpation of spinous processes in the lumbar region. Vesicular breathing in the lungs, no rales, respiration rate 16 per minute. Heart tones muffled, rhythm correct, HR 64 per minute, BP 125/80 mmHg. The tongue is not covered, moist. The abdomen is soft, painless on palpation in all parts. Dimensions of the liver - 9(0)x8x7 cm. Spleen is not enlarged. Popping on the lumbar region is painless, no dysuria. Stools are formed once a day, without pathological impurities.

General blood analysis: erythrocytes -  $4,5 \times 10^{12}/l$ , haemoglobin - 130 g/l, leukocytes -  $7,8 \times 10^9/l$ .

$7.8 \times 10^9/l$ , basophils - 0%, eosinophils - 1%, segmented neutrophils - 73%, lymphocytes - 18%, monocytes - 8%, platelets -  $267 \times 10^9/l$ , COE - 14 mm/hour.

Urinalysis: pH - 6.8, specific gravity - 1018, protein and sugar - negative, leucocytes - 2-3 in the field of view.

Biochemical blood analysis: total protein - 74 g/l, alkaline phosphatase - 140 IU/l, AST - 16 IU/l, ALT - 22 IU/l, glucose - 4.5 mmol/l, creatinine - 75  $\mu\text{mol}/l$ .

X-ray of the lumbosacral spine shows anterior wedge deformity of L3 and L4.

Questions:

1. Suggest the most probable diagnosis.
2. Justify your diagnosis.
3. Make and justify a plan for additional examination of the patient.
4. Determine the plan of management of the patient using medication and non-medication methods (indicating the dosages of the drugs used).
5. The patient came for a second consultation after 2 years. According to the densitometry data, the T-criterion in the lumbar spine was -3.0 (at the beginning of treatment), -3.4 (after 1.5 years); in the hip, the T-criterion values were -2.2 and -

2.5, respectively. In addition, the patient had a low-energy fracture of the left radius 5 months ago. What is your further treatment tactics? Justify your choice.

№89. A 42-year-old woman, a manager, came to the appointment with complaints of pain and swelling in the area of II-IV proximal interphalangeal joints, II-III metacarpophalangeal joints, wrist joints, knee joints; morning stiffness in these joints until the middle of the day; weight loss by 4 kg over the last 2 months, weakness. During extra questioning she notes that she has become worse able to bear physical load: when climbing to the 3-4 floor there is shortness of breath and heart palpitations. She points out that due to pain and stiffness in the joints; she has become worse able to cope with her professional duties.

The patient considers himself ill for six months, when the above symptoms first appeared and gradually progressed. She did not consult a doctor, tried to rest more, and took analgin irregularly, without significant effect. Her condition worsened in the last two months, when joint pain increased significantly, stiffness appeared, weight loss, then weakness and palpitations. On the advice of a neighbour she took aspirin, diclofenac (daily for the last 1.5 months), with little positive effect.

On examination: the condition is satisfactory, the position is active, the temperature is 36.4°C. The skin is pale and dry. Height - 168 cm, weight - 54 kg, BMI - 19.1 kg/m . On examination of the musculoskeletal system II-IV proximal interphalangeal, II-III metacarpophalangeal joints, wrist, knee joints are swollen, painful on palpation, movements in them are limited. Balloting of the patellae, depression of the interosseous spaces on both hands is determined. The number of painful joints (CHBS) is 12, the number of swollen joints (CHPS) is 10. There is vesicular breathing in the lungs, no wheezing . HR - 16 per minute. The heart tones are clear, the rhythm is correct, HR - 104 per minute.

BP -120/80 mmHg. The tongue is not covered, moist. Abdomen of usual size and shape, involved in breathing, painless on palpation. The Liver is 9(0)x8x7 cm.



Spleen is not enlarged. Pounding on the lumbar region is painless. Feces are formed once a day, without pathological impurities. Urination 4-5 times a day, no dysuria.

General blood test: erythrocytes -  $3.3 \times 10^{12}/l$ , haemoglobin - 95 g/l, MSN - 24 pg, MCV - 75 fl, leukocytes -  $7.9 \times 10^9/l$ , basophils - 0%, eosinophils - 2%, segmented neutrophils - 69%, lymphocytes - 18%, monocytes - 11%, platelets -  $392 \times 10^9/l$ , COE -35 mm/hour.

General urine test: clear, specific gravity - 1010, reaction - slightly acidic, protein and sugar - absent, squamous epithelium - 4-6 in the field of view, leukocytes -3-5 in the field of view, erythrocytes, bacteria - absent.

Biochemical blood test: glucose - 4.8 mmol/l, creatinine - 85 mmol/l, CKF - 68 ml/min, bilirubin - 14.5 mmol/l, AST - 24 IU/l, ALT - 30 IU/l, uric acid - 224 mmol/l, **CRP** - 30.5 mg/l.

RF - 120 IU/L, the antinuclear factor is negative.

The patient's general self-assessment of health is 56 mm on the VAS scale.

Hand and foot radiography: periarticular osteoporosis, mainly in II-IV proximal interphalangeal, II-III metacarpophalangeal joints.

Questions:

1. Suggest the most likely diagnosis.
2. Justify your diagnosis.
3. Make and justify a plan for additional examination of the patient.
4. What drugs of symptomatic action would you prescribe to the patient for 5-7 days until the results of additional examination are obtained (with indication of dose and frequency of administration)? Justify your choice.
5. The patient was further examined: Serum iron - 6 mmol/l, OGSS - 58 mmol/l, ferritin - 115 ng/ml, vitamin B12 - 450 ng/ml, folic acid - 45 ng/ml,

Zimnitsky's test - without pathology, daily proteinuria - negative, on FGDS – hernia of the esophageal opening Grade II diaphragms, chronic gastritis; on lung fluorography - without pathology; gynecologist's examination - without pathology. Determine the further tactics of management of this patient. Justify your choice.

№90. A 72-year-old patient, a pensioner, came to a general practitioner with complaints of insomnia, memory loss, BP increase up to 160-170/65-70 mm Hg.

From the anamnesis it is known about BP increase up to max. 180/80 mmHg for 20 years, when the diagnosis of GB was first established. The therapy prescribed by a general practitioner was carried out irregularly. She takes captopril when her BP rises above 180 mmHg. Menopause is for more than 20 years. Hypodynamia after stopping work 6 years ago. There are no harmful habits. From the family anamnesis it is established that heredity on SSD is not aggravated.

On examination the condition is satisfactory. Height 162 cm, body weight 46 kg, BMI 17.7 kg/m<sup>2</sup>; OT 98 cm. The skin is clean, of normal colour, turgor is reduced. There is no peripheral edema. Vesicular breathing is over the whole surface of the lungs, there is no wheezing. HR - 18 per 1 min. Heart tones are muffled, rhythmic, the accent of the II tone above the aorta. BP - 162/62 mmHg. Pulse 76 per 1 min, rhythmic. Abdomen is soft, painless. The liver and spleen are not enlarged. Pounding in the projection of the kidneys is painless on both sides.

Questions:

1. Suggest the most probable diagnosis.
2. Justify the diagnosis made by you.
3. Which group of antihypertensive drugs would you recommend to the patient as part of combination therapy? Justify your choice.

4. After 6 months of regular antihypertensive therapy (drugs from the group of antihypertensive drugs selected in the previous question) + rosuvastatin 10 mg/day + diet - BP is within 140-150/65 mmHg, OXC 5.6; HDL-C 1.14; TG 1.9 mmol/l, LDL 3.6 mmol/l, SFC 63 ml/min, fasting sugar 5.2 mmol/l. ALT 50 U/L, AST 38 U/L, CFA 121 U/L. What is your further treatment tactics? Justify your choice.

5. Determine the plan of dispensary observation.

№91. A 56-year-old man, a pensioner, made an appointment with a local general practitioner with complaints of slight shortness of breath during normal physical activity, general weakness, rapid fatigue, swelling in the foot area.

From anamnesis it is known that 5 years ago he suffered a transmural myocardial infarction along the posterior wall of the left ventricle. He regularly takes bisoprolol 5 mg per day, perindopril 10 mg per day, rosuvastatin 20 mg per day. He does not use nitroglycerin. During the last year he started to notice increased shortness of breath, the appearance of swelling in the foot area in the evening.

Objectively: the condition is relatively satisfactory. Height 180 cm, weight 71 kg, BMI 21.9 kg/m<sup>2</sup>. The skin is moderately moist. Pasty of the lower extremities up to the lower third of the shin. There is vesicular breathing in the lungs, there is no wheezing. HR - 20 per 1 min. The heart tones are muted, the rhythm is correct, the systolic murmur is at the apex. HR - 62 per min. BP - 132/80 mm Hg. The abdomen is soft, painless. The liver protrudes 2 cm below the edge of the rib arch, dense-elastic consistency, smooth surface, rounded edge, painless on palpation. The spleen is not enlarged.

Pounding on the lumbar region is painless.

In the analyses: UAC, OAM within normal limits; BAC: fasting glucose - 4.9 mmol/l, creatinine - 82  $\mu$ mol/l, SCF (according to the formula CKD-EPI) - 92 ml/min, total cholesterol - 4, 5 mmol/l, TG - 1.2 mmol/l, HDL-C - 1.0 mmol/l, LDL-C - 2.3 mmol/l, AST 20 units/l, ALT 22 units/l, potassium - 4.1 mmol/l. ECG: sinus rhythm 65/min, pathological Q and negative T in III, aVF leads.

Questions:

1. Suggest the most probable diagnosis.
2. Justify your diagnosis.
3. Make and justify a plan for additional examination of the patient.
4. Does the patient need diuretic therapy? If yes, what groups of diuretics would you recommend to the patient as a part of combined therapy? Justify your choice.
5. What additional recommendations concerning non-pharmacological methods of treatment and rehabilitation should be given to the patient?

№92. A 64-year-old patient complains of limited mobility in the distal interphalangeal joints of both hands, which appeared about 12 years ago and is gradually progressing.

On examination, there are nodular thickenings in the area of distal interphalangeal joints of both hands, fingers are deformed, and mobility in these joints is limited. There is no pathology on the side of internal organs. Blood and urine analyses are within normal limits.

- 1) The name of nodular thickenings in the area of the affected joints?
- 2) Presumptive diagnosis?
- 3) Characteristic changes on X-ray of the joints?

#### 4) Treatment tactics?

№93. A 29-year-old patient complains of constant pain in the joints of the arms and legs at rest and when breathing, a significant limitation of the volume of movement in the extremities, especially before noon. She has been ill for 11 years. Since then, gradually increasing pain in the joints, limitation of movement in them. She was repeatedly treated in hospitals and sanatoriums. The real deterioration is a week before admission. The condition is satisfactory. From the side of internal organs: without pathology. Expressed deformation and defiguration of the joints. Ankylosis of the elbow joints. The hands are in the form of "walrus fins", atrophy of interosseous muscles. The volume of movements in the joints is sharply reduced, stiffness persists throughout the day.

Blood test: Hb - 90 g/l, ESR - 41 mm/hour. Waaler-Rose reaction - 1:32.

Radiography - osteoporosis, narrowing of joint cracking, ankylosis of the elbow joints, subluxations of the hand joints.

- 1) Establish the form, stage and phase of the disease?
- 2) What is expected on the E-ray of the joints?
- 3) What does the Waaler-Rose reaction mean?
- 4) What treatment is indicated?

№94. The patient is 45 years old. Complaints: sharp general weakness, a shortness of breath at rest, swelling in the heart area, chilliness and numbness of fingers. She has been ill for 16 years. The disease began with numbness and paleness of the fingers ("dead finger") especially in the cold. After 2 years, pain appeared in the muscles and gradually atrophy began to develop. In the last 2 years, shortness of breath, cyanosis, swelling of the legs have begun to increase.

Upon admission: severe condition, orthopnea, cyanosis. Face amimic. The skin on the fingers and toes is atrophic, slightly thickened in some places. Oedema of the legs and lumbar region. Muscles atrophic and dense. Dyspnoea, HR - 36 per minute. Right below the IV rib dulling, weakened breathing. The heart is significantly enlarged in all directions. On auscultation I tone is weakened, systolic murmur at the apex, accent and splitting of the II tone on the pulmonary artery. Pulse - 89-92 per minute, arrhythmic. The abdomen is enlarged due to ascites. The liver is dense, painful, protruding by 4 cm. Oliguria.

ECG: PQ=0.23 sec, T teeth in thoracic leads flattened.

- 1) How to explain the symptoms in the fingers and toes?
- 2) How to explain a shortness of breath and oedema?
- 3) How to explain the cardiac changes?
- 4) How to combine all the symptoms?
- 5) Treatment tactics?

№95. The patient is 24 years old. Complaints: headache, nausea, extreme weakness, joint pain. She has been ill for 3 years. The disease began with a high temperature, the appearance of erythematous rash on the trunk and limbs and macrohaematuria. A year later arthritis and generalised enlargement of lymph nodes appeared. The patient was hospitalised for severe pain in the heart area, where pericarditis was detected. The last deterioration occurred within two months.

Objectively: the condition of average severity. The nutrition is low. The skin is dry. Enlarged lymph nodes up to 1 cm in diameter are palpated. The joints are not changed. When palpating the muscles of the thighs there is painfulness. Breathing is vesicular. The heart is dilated in the transverse region, the tones are deaf, systolic murmur at the apex. The pulse is 108 per minute, rhythmic. BP - 150/90 mm Hg.

The liver protrudes from under the edge of the costal arch by 1.5 cm. The spleen is not palpable.

Blood test: NO - 72 g/l, leuc. -  $4.1 \times 10^9/l$ , ESR - 56 mm/hour.

Urine analysis: specific gravity - 1015, protein - 1.2%, er. - 40 p/zp, hyaline cylinders.

- 1) Possible causes of heart changes?
- 2) How to explain the urine changes?
- 3) How to confirm the diagnosis?
- 4) Treatment tactics?

№96. A 35-year-old patient was admitted with complaints of acute pain in the left knee joint, ankle, metacarpophalangeal joints, weakness, sweating, fever (up to  $40^{\circ}\text{C}$ ), painful urination, pain in the eyes, purulent discharge from the eyes. The patient's condition is moderately severe. Pale. Single submandibular lymph nodes are palpated. Swelling, redness and painfulness of these joints. Heart tones are muffled, HR - 92 per minute, breathing is vesicular, HR - 24 per minute.

Blood test: leuc. -  $11 \times 10^9/l$ , ESR - 47 mm/hour. The blood is sterile.

Urine test: leuc. - 25-30 in n/a.

Seeding of separated urethra: gram-positive bacilli and diplococci. The Bordet-Gengou reaction is negative.

- 1) Identify three pathological syndromes.
- 2) What is your diagnosis?
- 3) What additional urine test is indicated?
- 4) What does the negative Bordet-Gengou reaction mean?
- 5) Treatment tactics?

№97. The patient is 61 years old. Complaints of sharp pains in the right foot, acute at night. In the past he had two bouts of renal colic. He abused alcohol. For 5 years - pains in epigastric region. For 3 years – dyspnea(shortness of breath) during physical activity.

Objectively: body weight - 98 kg, height - 170 cm. In the area of the first metatarsophalangeal joint - redness, swelling, sharp pain when moving. A tophus on the lobe of the right ear. BP - 190/105 mm Hg.

On ECG: signs of left ventricular hypertrophy.

During gastroscopy - gastric ulcer on the small curvature.

Blood sodium - 145 mmol/l, potassium - 4.8 mmol/l, creatinine - 90 mmol/l, uric acid - 595 mmol/l.

- 1) The pathophysiology of the gouty crisis?
- 2) What are your prescriptions for the gouty crisis?
- 3) What is the treatment after the relief of the crisis?
- 4) What are your prescriptions for arterial hypertension?
- 5) The probable cause of renal colic?

№98. A 29-year-old patient was admitted with complaints of joint pain, fever with chills, weakness. 3 years ago, weakness and allergies appeared after childbirth. During the year - increased joint pains, frequent fever, erythematous skin rash, weight loss.

Objectively: there is a pale pink spotty rash on the chest, in the area of elbow joints and forearms. Swelling and painfulness of the elbow, wrist and knee joints with decreased mobility. Cervical and axillary lymph nodes are probed up to 1 cm in size. There is a pleural friction noise on the right side of the lungs. The liver is 4



cm below the edge of the costal arch, the spleen is palpated at the edge of the costal arch.

Blood test: Hb - 95 g/l, ESR - 54 mm/hour.

Urine test: relative density - 1012, protein - 2.6 g/l, erythritis. - 20-30 in p/zr.  
Cylinders hyaline and granular.

An assumption has been made about systemic lupus erythematosus (SLE).

- 1) List the syndromes of the disease.
- 2) What investigations are needed to confirm the diagnosis?
- 3) Evaluate the urine test. Are there indications for corticosteroid therapy?
- 4) What is the treatment regimen?
- 5) Are there indications for immunosuppressants?

№ 99. A 55-year-old patient suffers from obesity and hypertension. In recent years she began to gain weight especially sharply, there appeared drowsiness, chilliness, constipation. At present besides this she is worried about shortness of breath, swelling and headaches.

On examination: dryness and pallor of the skin. Swellings on the legs are hard. The subcutaneous fat layer is excessively developed. Pulse - 50 per minute. BP -90/40 mm Hg. The thyroid gland is not enlarged, palpable.

- 1) Make a diagnosis.
- 2) What changes in T3, T4 and TSH in the blood are expected?
- 3) What other additional methods of examination are necessary?
- 4) Prescribe treatment.

№100. The Patient P. is 30 years old. Suddenly lost consciousness in the workplace. The emergency doctor found out that the patient suffers from diabetes mellitus and injects insulin. He considered the patient's condition as ketoacidotic coma, short-acting insulin of 40 units was injected under the skin, after that the patient was taken to the clinic in a deep coma.

Objectively: unconscious. The skin is of normal moisture. BP - 125/80 mm Hg. Pulse - 96 per minute, satisfactory filling. There are no deviations from the internal organs. Glycaemia - 1.1 mmol/l, sugar in urine -2%.

- 1) What kind of coma are we talking about?
- 2) What should have been the tactics of the emergency doctor?
- 3) Why is it determined at a blood glucose level of 1.1 mmol/l sugar in urine?
- 4) Prescribe treatment.

№101. Patient 3., 67 years old. Complains of palpitations, interruptions, sometimes pain in the heart area, shortness of breath, swelling in the legs. For 2 years she was observed and treated at the polyclinic for coronary heart disease. Recently she has lost a lot of weight.

Objectively: the general condition is severe, the patient is malnourished, fussy, the skin is moist. Large tremor of hands. Thyroid gland of the II degree of enlargement, palpated when swallowing, dense. There are no eye symptoms. The heart tones are loud. Atrial fibrillation. The heart rate - 120 per minute. BP - 160/60 mm Hg. The lower edge of the liver protrudes from under the costal arch by 3 cm, pastosity of the shins.

- 1) Make a diagnosis.
- 2) What indicators of T3, T4 and TSH are expected?

3) What other additional examination methods are necessary?

4) Prescribe treatment.

№102. Patient S., 35 years old, was admitted to the clinic with complaints of general weakness, chilliness, headaches, hair loss, dry skin. She considers herself sick for a year. There was a severe uterine bleeding, after childbirth menstruation did not resume, the child was not fed due to lack of milk.

Objectively: uniform obesity, the skin is dry, pale and the thyroid gland is not palpable. The heart rate- 55 per minute. BP - 90/60 mm Hg. Heart sounds are muffled.

1) How to evaluate most of the symptoms?

2) What diagnosis can be made, taken into account the anamnesis after childbirth?

3) The probable cause?

4) What other additional examination methods are necessary?

5) Prescribe treatment.

№103. A 30-year-old patient noticed a round-shaped mass in the neck area. In 3 months it has slightly increased. There are no other complaints. The examination of internal organs did not reveal any changes.

Objectively: satisfactory nutrition, no tremor of hands. In the area of the thyroid gland (in the left lobe) is palpated node 2x2 cm, dense, movable, and painless. The lymph nodes are not enlarged. Antibodies to thyroglobulin in the blood are not detected. The blood content of T3, T4, and TSH is within normal limits.

1) What is the preliminary diagnosis?

2) Evaluate the functional state of the thyroid gland according to the clinical data.

3) Determine the amount of additional studies necessary to establish the final diagnosis. Evaluate their diagnostic value.

4) Possible pathohistological data?

№104. A 40-year-old patient was admitted with complaints of weight loss about 10 kg for a year, sub-febrile, palpitations.

On examination: temperature - 37.1 ° C, low nutrition. Symptoms of Stelvag, Grefe, Mebius - positive. A slight tremor of the fingers of the outstretched hands. Heart tones are loud, rhythmic, tachycardia, systolic noise at the apex. The heart rate is 120 per minute. BP - 160/95 mmHg.

1) What is the presumptive diagnosis and its justification?

2) What are the causes of tachycardia and increase in blood pressure?

3) What researches methods are necessary to confirm the diagnosis?

4) What treatment is indicated?

5) What is missing in the description of objective data?

№105. The patient is 47 years old, has been suffering from diffuse thyrotoxic goiter of III degree for 5 years. The basic metabolism is +50%. Irritable, whiny. Notes weight loss of 7 kg during the last 8-9 months. In the last year she has noticed the appearance of heart palpitations, suffocation (especially at night). The heart rate is 120 per minute.

1) Determine the severity of the disease.

- 2) What kind of therapy is indicated?
- 3) What does the patient`s preparation for surgery include?
- 4) What is the criterion of the patient's readiness for surgery?
- 5) Which of the operations are you going to perform for this patient?

№106. The patient operated on diffuse thyrotoxic goiter, 3-4 hours after the operation started to complain of the feeling of «crawling goosebumps " on the body, unpleasant bumps in the cheekbone, the inability to straighten the fingers of hands due to pain and cramps arising when trying to do it.

- 1) How can this condition of the patient be explained?
- 2) What investigations can confirm your assumption?
- 3) What can be done to help the patient?

№107. The day before the patient had undergone subtotal subfascial resection of the left lobe of the thyroid gland for left-sided nodular euthyroid goiter of third degree. Complaints of weakness, malaise, pain in the side of the neck and difficulty swallowing. On examination: swelling of the left half of the neck from the left collarbone up to the lower jaw, with a transition to the front surface of the neck. There is a tension of tissues in this area. During palpation in the area of the postoperative wound, dark-coloured blood began to stand out in the graduate`s standing area. The heart rate is 94 per minute. BP is 100/65 mm Hg.

- 1) What complication of the early postoperative period has occurred?
- 2) What should be done?
- 3) Indicate the possible consequences of this complication of the early postoperative period.

№108. A year ago a 42-year-old patient was diagnosed with thyrotoxic adenoma of the right lobe of the thyroid gland was detected in a year ago. The diagnosis was confirmed by instrumental research methods. At polyclinic, the patient was prescribed iodine-containing preparations however her condition did not improve.

1) What instrumental and laboratory methods were used to confirm the diagnosis of thyrotoxic adenoma of the right lobe of the thyroid gland?

2) What would you do if you were a polyclinic doctor at the patient`s initial visit?

3) What are your further tactics?

№109. The examination revealed the visceropathic stage of diffuse thyrotoxic goitre of the third degree. Conservative therapy performed on an outpatient basis did not give a positive result, and the patient was suggested to undergo surgery.

1) What clinical manifestations of the disease allowed to diagnose visceropathic stage of thyrotoxicosis?

2) What should the patient`s preparation for the surgery include?

3) What kind of surgery do you intend to perform on this patient?

№110. A 36-year-old patient underwent subtotal resection of the thyroid gland for thyrotoxic goiter. 4 hours after the operation, the patient developed nausea, indomitable vomiting, agitation, unreasonable feeling of fear, temperature increased up to 40°C. The pulse is 120 per minute, arrhythmic. A sharp weakness. BP is 90/60 mm Hg.

1) What complication of the early postoperative period has developed on the patient?

2) What should preoperative preparation in patients with thyrotoxic goiter necessarily include to prevent this complication?

### 3) What should be done in this case?

№111. Patient G., 46 years old, came to the doctor with complaints of general weakness, malaise, rapid fatigue, decreased appetite, a feeling of heaviness in the right hypochondrium, nausea. The deterioration started 2 weeks ago.

From anamnesis: 10 years ago he suffered acute viral hepatitis B.

Objectively: temperature 37.3°C. The general condition is satisfactory. The skin is of ordinary colour. Sclera, soft palate clear, with a jaundiced tinge. Respiration is vesicular in the lungs. The heart tones are rhythmic, clear, HR 82 per minute, BP 120/80 mm Hg. The tongue is covered with yellowish coating. The abdomen is soft on palpation, moderately painful in the right hypochondrium. The liver protrudes from under the edge of the costal arch along the midclavicular line by 3 cm, moderately painful, uneven. The spleen is not palpated.

Ultrasound of the abdominal cavity revealed: hepatomegaly, the echostructure of the liver parenchyma is uneven, "heavy" due to areas of fibrosis, the overall echogenicity is increased, sound absorption is not changed.



#### Questions:

- 1) Formulate a preliminary diagnosis?
- 2) Name the necessary additional investigations to verify the diagnosis?

3) Give an interpretation of the ECHO CG.

4) What are the tactics in relation to the patient?

№112. Patient B., 58 years old, sought medical help with complaints of general weakness, malaise, nausea, a feeling of heaviness in the right hypochondrium, flatulence, skin itching, aching pains in the right hypochondrium, increasing after eating fatty food and physical activity, nosebleeds.

The anamnesis revealed the use of alcoholic beverages in large quantities for many years.

Objectively: the temperature is 36.9°C. The general condition is of moderate severity. The skin and visible mucous membranes are yellowish in colour, there are brown crusts in the right nasal passage. The tongue is smooth, moist, not covered. On the skin of the breast there are persistent local dilations of small vessels of the skin, consisting of a central part and ray-like branching vessels. The mammary glands are enlarged.

Respiration is weakened in the lower-lateral parts of the lungs, BPD is 23 per min. The heart tones are rhythmic, muffled. HR 92 per min, BP 140/90 mm Hg.

The abdomen is enlarged in size, moderately painful on palpation in the right hypochondrium. The liver protrudes 5 cm from under the edge of the costal arch along the midclavicular line, moderately painful, dense, uneven surface. The spleen protrudes from under the edge of the rib arch by 2 cm, painless.





Questions:

- 1) Formulate a preliminary diagnosis?
- 2) What is the differential diagnosis?
- 3) Give an interpretation of the changes presented on the photo.
- 4) What is the plan of examination and treatment?

№113. Patient A., 34 years old, came to the doctor with complaints of pulling pains in the right hypochondrium, increasing after eating (especially fatty and spicy), physical activity; liquid stools up to 3 times a day, without pathological impurities, decreased appetite, weigh losst by 15 kg during 3 months. From anamnesis: alcohol consumption for 2 years. Objectively: asthenic physique, height 173 cm, weight 52 kg. The mucous membrane of the oral cavity and lips is bright red in colour. The skin is jaundiced-pale, dry, atrophy of muscles of the upper shoulder girdle. The abdomen is slightly enlarged in size, with right hypochondrium soreness on palpation. There are no signs of peritoneal irritation. The liver protrudes from under the edge of the costal arch by 2.5 cm, dense, and the the edge is sharp. The spleen is not palpable.



Questions:

- 1) Formulate a preliminary diagnosis.

- 2) Justify the diagnosis.
- 3) Give an interpretation of the changes presented on the photo.
- 4) Make an examination plan.
- 5) Prescribe therapy

№ 114. Patient G., 59 years old, was admitted to the hospital with complaints of abdominal enlargement and feeling of distention, breathing difficulties, a decrease in body weight of more than 10 kg in 1 month, frequent nosebleeds. From anamnesis: denies systematic use of alcohol , works in agriculture. Objectively: consciousness is clear, there are angiomas at the edge of the nose, atrophy of the muscles of the upper shoulder girdle, dilation of the veins of the anterior abdominal wall, the presence of umbilical hernia. The abdomen is enlarged in size due to ascitic fluid, there is a positive symptom of fluctuation. Respiration is shallow, BPD is 25 per min, heart tones are rhythmic, muffled HR-94ud/m, BP 110/70 mmHg.

The patient underwent EFGDS, which revealed varicose veins of the oesophagus of the 3<sup>rd</sup> degree.



Questions:

- 1) What is the clinical diagnosis?
- 2) What additional investigations are necessary?
- 3) Give an interpretation of the changes presented on the photo.
- 4) List possible complications and methods of their treatment?

№115. Patient K., 29 years old, came to the doctor with complaints of a feeling of heaviness in the right hypochondrium, general weakness, decreased appetite, weight loss, temperature rise to 37. On examination - enlargement of the parotid salivary glands, absence of hair in the axillae, testicular atrophy. "Vascular asterisks" are determined on the skin of the breast. The lips are bright red in colour, the fingers change according to the type of "drumsticks". The abdomen is soft, painful in the right hypochondrium, the liver + 2 cm, painful, the surface is uneven.



Questions:

- 1) Formulate the clinical diagnosis?
- 2) What additional researches are necessary?
- 3) Give an interpretation of the changes presented on the photo.

4) List possible complications and methods of their treatment?

№116. Patient N., 46 years old, came to the general practitioner with complaints of skin itching, localised on the palms and soles, increasing at night, for which she was repeatedly treated by a dermatologist without any positive effect. During the last month she had night diarrhea, voluminous foamy stools, weight loss with increased appetite. Objectively: the skin is hyperpigmented, resembling blistered skin, the sclera is clear. Height 166 cm, weight 48 kg. The tongue is moist and clean. The abdomen is soft, painless. The liver protrudes from under the edge of the costal arch by 2 cm, dense, painless. Lungs and heart are unchanged.



Questions

- 1) What is the preliminary diagnosis?
- 2) With which diseases it is necessary to carry out a differential diagnosis?
- 3) Give an interpretation of the changes presented in the photo.
- 4) What kind of research is necessary to verify the diagnosis?
- 5) What are the therapeutic measures and prognosis of the disease?

№ 117. The patient, 58 years old, came to the general practitioner with complaints of dizziness, headaches, increased blood pressure up to 160/100 mmHg, skin itching, memory and attention disorders.

From the anamnesis: according to the patient's words he notes the appearance and increase of the above-mentioned complaints during a year, but he did not apply for specialized help.

Objective examination: the patient's condition is of moderate severity, the skin and pharynx are hyperemic. The sclers are injected. The plethoric syndrome. Lymph nodes, palpable, small, painless. There is vesicular breathing in the lungs, no wheezing. BPD is 16 per minute. The heart tones are rhythmic, muffled. HR = 78 beats per minute. BP 140/80 mm Hg. The abdomen is soft, palpationally painless. The liver is + 2 cm, the surface is smooth, painless on palpation. Spleen + 2 cm, tightly elastic consistency, painless. The distal parts of the lower extremities are hyperemic. Stool, diuresis without peculiarities. Pastosity of feet, shins.

Laboratory indicators:

General blood test:

b	BC	BC	t			ц		/я	/я	φ	н	p	T etic *	ESR mm/h
/1	10 <sup>12</sup> /l	10 <sup>9</sup> /l										10 <sup>9</sup> /l		
11	,3	6,5	8					2	8			30	8	1

Questions:

- 1) Your presumptive diagnosis?
- 2) Rationale for the diagnosis.
- 3) What researchers should be performed?
- 4) Treatment tactics?

№ 118. The patient, 68 years old, came to the general practitioner with complaints of dizziness, headaches, increased blood pressure up to 160/100 mmHg, skin itching, memory and attention disorders.

From the anamnesis: according to the patient he notes the appearance and increase of the above complaints during half a year, but he did not apply for specialised help.

Objective examination: the patient's condition is of moderate severity, the skin and pharynx are hyperemic. The sclerae are injected. The plethoric syndrome. Lymph nodes, accessible to palpation, small, painless. There is vesicular breathing in the lungs, no wheezing. BRD is 16 per minute. The heart tones are rhythmic, muffled. HR = 78 beats per minute. BP 140/80 mm Hg. The abdomen is soft, palpationally painless. The liver is + 2 cm, the surface is smooth, painless on palpation. Spleen + 2 cm, tightly elastic consistency, painless. The distal parts of the lower extremities are hyperemic. Stool, diuresis without peculiarities. Pastosity of feet, shins.

Laboratory indicators:

General blood test:

г	BC	BC	т		ц	/я	/я	ф	н	р	ети	SR
/л	$10^{12}/л$	$10^9/л$								$10^9/л$	с	м/ч
11	,3	6,5	8			2	8			30		

1 Questions:

- 1) Your presumptive diagnosis?
- 2) Rationale for the diagnosis.

3) What researchers should to be performed?

4) Treatment tactics?

№119. The patient, 48-year-old turned to the general practitioner with complaints of general weakness, enlargement of all groups of lymph nodes, heaviness in the left hypochondrium, sweating.

From the anamnesis: according to the patient, he notes the appearance and increase of the above complaints during 3 months, but she did not seek specialized help.

Objective examination: condition of moderate severity, the skin is pale in colour. All groups of lymph nodes were enlarged up to 3.0 cm in diameter, palpation free, dense, sedentary. There is a vesicular breathing in the lungs, no wheezing. BPD is 16 per minute. The heart tones are rhythmic, muffled. HR = 81 beats per minute. BP is 110/70 mm. Hg. The abdomen is soft, palpation free. The liver is + 2 cm, the surface is smooth, painless on palpation. Spleen + 3 cm, dense elastic consistency, painless. Stool, diuresis without peculiarities. No peripheral edema.

Laboratory indicators:

General blood test:

b	BC	BC	t			ц	/я	/я	ф	н	p	etic	SR
/l	10 <sup>1</sup>	10 <sup>9</sup>									10 <sup>9</sup>		m/h
	<sup>2</sup> /l	/l									/l		
00	,1	1	8						6		87		

Questions:

- 1) Your presumptive diagnosis?
- 2) Rationale for the diagnosis.
- 3) What researchers should be performed?
- 4) Treatment tactics?

№ 120. A 75-year-old woman came to the doctor on 05/21/2016 with complaints of palpitations.

From the anamnesis it is known that 3 months ago the patient suffered an acute inferior myocardial infarction with ST-segment elevation; the patient underwent coronary angiography - envelope branch stenosis of 85% was detected (PMLV stenosis of 45%, OV 45%), in connection with which trans-balloon angioplasty and PCI stenting with a drug-coated stent were performed. During three years, the patient was verified to have permanent atrial fibrillation. The patient had 2 attempts to restore rhythm with the help of electrical pulse therapy, which were unsuccessful.

On examination: the condition is of moderate severity. The skin is clean, of normal colour. There is a vesicular breathing in the lungs, no wheezing. Heart tones are muffled, arrhythmic. HR is 140 beats per min, pulse - 110 beats per min. BP - 110/80 mm Hg. The abdomen is soft, painless on palpation in all parts. Liver and spleen are not enlarged. No dysuria. Symptom of poking on the lumbar region is negative.

In analyses: total cholesterol - 4.8 mmol/l, TG - 2.5 mmol/l, HDL-C - 1.1 mmol/l; LDL-C - 3.2 mmol/l.



Questions:

1. Formulate the patient's diagnosis.
2. Justify your diagnosis.
3. Draw up and justify the plan of additional examination of the patient.
4. List the groups of drugs, terms of their use, which should be recommended for the patient. Justify their use
5. Taking into account the patient's complaints about palpitations, despite taking the drugs listed in the previous question, what is the further treatment tactics? Justify your choice.

№121. A 68-year-old man came to the doctor on 04/18/2016 with complaints of headache, dizziness, flickering of flies in front of the eyes.

It is known from the anamnesis that 3 months ago the patient suffered an acute inferior myocardial infarction with ST-segment elevation; the patient underwent coronary angiography - the right coronary artery stenosis was found to be 90%, (PMLV stenosis 35%, OV 30%), in connection with which transballoon angioplasty and stenting of PCA with drug-coated stent were performed.

It is known from anamnesis that for a long time he has been suffering from arterial hypertension with maximum increase of blood pressure figures up to 210/110 mm Hg, good health with arterial pressure of 120/70 mm Hg.

Bad habits: smoking 10 cigarettes a day for 20 years.

On examination: condition of moderate severity. The skin is clean, hyperemic. Breathing in the lungs is stiff, no wheezing. The heart tones are muffled, rhythmic. HR - 70 beats per minute, BP - 190/100 mm Hg. The abdomen is soft,

painless on palpation in all parts. The liver and spleen are not enlarged. No dysuria. The symptom of pounding on the lumbar region is negative.

In analyses: total cholesterol - 5.4 mmol/l, TG - 1.6 mmol/l, HDL-C - 1.1 mmol/l; LDL-C - 3.6 mmol/l.

Questions:

1. Suggest the most probable diagnosis.
2. Justify your diagnosis.
3. Draw up and justify a plan for additional examination of the patient.
4. List the groups of medications and the timing of their use, which should be recommended for permanent administration to the patient. Justify their use
5. After 2 months, the patient developed complaints of palpitations, he did not consult a doctor. During 5 days these complaints persisted, in connection with which he called an ambulance. Atrial fibrillation was registered on ECG. What is your further treatment tactics? Justify your choice.

№122. Patient N., 52 years old, a driver, came to the doctor with complaints of paroxysmal pain behind the sternum with irradiation to the left shoulder, scapula, occurring during fast walking, intense physical activity, accompanied by a feeling of fear, relieved at rest. He considers himself sick for two months, treated by a neurologist with the diagnosis of intercostal neuropathy.

He took analgin, diclofenac, physiotherapeutic procedures - without effect.

It is known from anamnesis that for about 5 years he has been suffering from arterial hypertension with maximum increase of BP up to 175/100 mm Hg, he does not receive constant antihypertensive therapy.

Heredity: father and elder brother suffered myocardial infarction under the age of 55.

Bad habits: smokes 20 cigarettes a day for 20 years; moderate alcohol consumption.

Objectively: the condition is relatively satisfactory. Height 170 cm, weight 98 kg. BMI - 33,91 kg/m<sup>2</sup>. Hypersthenic physique. The skin and visible mucous membranes are of normal colour. There are no peripheral edema. There is a vesicular breathing in the lungs, conducted in all parts, no wheezing. Percussion above the surface of the lungs is a clear pulmonary sound. BDD is 17 per min. Auscultation: there is a weakening of I tone at the apex of the heart, accent of II tone above the aorta. The heart tones are muffled, rhythmic. BP - 170/100 mm Hg. HR - 88 beats/min. The abdomen is soft, painless on palpation in all parts. The liver is not enlarged. Symptom of pounding on the lumbar region is negative. Physiological emissions are normal.

In analyses: total cholesterol - 5.6 mmol/l, TG - 2.4 mmol/l, HDL-C - 0.9 mmol/l, LDL-C - 3.57 mmol/l; creatinine - 89 mmol/l, GFR-EPI = 84 ml/min.

On the ECG: sinus rhythm, correct with HR - 88 beats/min. Hypertrophy of the left ventricular myocardium.

Questions:

1. Suggest the most probable diagnosis.
2. Justify the diagnosis you have made.
3. Draw up and justify a plan for additional examination of the patient.
4. Which group of medicines should be prescribed to the patient? Justify your choice.
5. Stress Echo-CG revealed deterioration of contractility in 4 segments. What are your further patient management tactics?

№123. Patient R. 55 years old, a mechanic, came to the general practitioner with complaints of compressive pain behind the sternum with irradiation to the interscapular space, mainly occurring when walking fast or climbing stairs for more than one flight at a normal pace, relieved by taking 1 tablet of nitroglycerin sublingually.

It is known from anamnesis that for the first time the chest pains occurred about two years ago, since then he did not notice any pronounced progression of the disease.

Bad habits: smokes for a long time 2 packs a day; abuses alcohol.

Objectively: the condition is relatively satisfactory. Body temperature is 36.6°C. Height - 162 cm, weight - 95 kg. BMI is 36.2 kg/m. Hypersthenic physique. The skin and visible mucous membranes are physiologically coloured and normally moist. There are no peripheral edema. Breathing in the lungs is stiff, conducted in all sections, no wheezing. BDD is 18 per min. Percussion revealed a shift of the left border of relative heart bluntness to the left by 0.5 cm. The heart tones are muffled, the rhythm is correct. BP -130/80 mmHg. HR - 87 beats/min. The abdomen is soft, painless on palpation in all parts, increased in volume due to subcutaneous fat layer. The liver does not protrude from under the edge of the costal arch. Symptom of poking on the lumbar region is negative. Physiological emissions are normal.

In analyses: total cholesterol - 6.2 mmol/l, TG - 2.5 mmol/l, HDL-C - 0.8 mmol/l, LDL-C - 4.2 mmol/l.

ECG: the rhythm is sinus, correct with HR of 76 beats/min. EOS deviation to the left. Hypertrophy of the left ventricle.

Questions:

1. Suggest the most probable diagnosis.

2. Justify your diagnosis.
3. Draw up and justify a plan for additional examination of the patient.
4. Prescribe and justify treatment.
5. Stress-echocardiography revealed deterioration of local myocardial contractility in 4 segments. What is your management tactic?

№124. A 54-year-old man came to a general practitioner for the first time for a medical check-up. He denies any chronic diseases and does not take any medications. His father died at the age of 74 from an acute myocardial infarction. His mother is alive, she is currently 80 years old, and is receiving treatment for arterial hypertension. He has a younger sibling for whom he states that they do not suffer from any chronic diseases. The patient does not smoke, does not drink alcohol, and has never used drugs. He leads a sedentary lifestyle, works as a financial counselor, and does not do physical exercises.

Objective physical examination shows no deviations from the norm in all organs and systems. HR is 80 beats per minute, BP is 127/82 mmHg, respiratory rate is 18 per minute. Height 170 cm, body weight 86 kg, body mass index (BMI) 29.8 kg/m<sup>2</sup>, waist circumference 98 cm.

Questions:

1. What additional studies should be performed on this patient as part of the first stage of the medical examination (after a survey to identify chronic non-infectious diseases and risk factors for their development, anthropometry and BP measurement)?
2. What studies should be carried out to identify the total cardiovascular risk in this patient?

3. What studies within the first and second stages of the medical examination are aimed at screening oncopathology in this patient?

4. According to the results of additional studies within the first stage of the medical examination, this patient has a total blood cholesterol level of 3.4 mmol/l, blood glucose level of 4.1 mmol/l, ECG without deviations from the norm. What is the total cardiovascular risk for this patient (according to SCORE)?

5. What recommendations for changing lifestyle would you give to the patient?

№125. A 55 year old man comes in with a chronic cough. He also notes the appearance of shortness of breath during physical activity. According to the patient, the cough has been getting worse recently. (During the conversation, you notice the smell of tobacco smoke from the patient). When interviewed, he admits that he has been smoking 1 packet of cigarettes daily for 35 years and has tried to stop smoking on his own, but without success. On examination, HR - 80 beats per minute, BP - 125/82 mmHg, respiratory rate is 16 per minute. The skin is of normal colour, pulse oximetry shows a saturation of 98%. Percussion sound over the pulmonary fields is clear, breathing with a hard tinge, single dry whistling rales are noted throughout the pulmonary fields. There are no deviations in other organs and systems. According to the results of spirometry, FVC is within the age norm, the FEV1/FVC ratio is 0.89, FEV1 is 81% of normal.

Questions:

1. What basic recommendations should be given to the patient?
2. Describe the role of health care providers in promoting smoking cessation.
3. What pharmacological support drugs for smoking cessation can be used?
4. What additional research methods should be prescribed for this patient?
5. Is it possible to diagnose chronic obstructive pulmonary disease (COPD) in this patient?

№126. A 51-year-old woman is undergoing medical examination. According to the woman, she is completely healthy, usually feels well and has no complaints. In medical history, at the age of 38 years, the uterus was removed for fibroids; the appendages were not removed.

After the age of 40, she underwent mammography at intervals of 2 years, all results were without deviations from the norm. She denies the presence of chronic diseases; no blood transfusions were performed. She takes multivitamins on her own daily and denies regular use of other medications. The family history is aggravated by breast cancer, which was diagnosed in the maternal grandmother at the age of 72 years.

The patient is married, works as a high school teacher, and denies smoking or drinking alcohol. She avoids dairy products in her diet because she believes she is “lactose intolerant.” SHE does not specifically engage in physical exercises, and walks irregular “to maintain health.” On physical examination, heart rate is 72 beats per minute, blood pressure is 118/78 mmHg, respiratory rate is 16 per minute, no deviations from the norm in organs and systems are detected.

#### Questions:

1. What screening for cervical malignancy is indicated for this patient?
2. What additional (to the previously completed survey to identify chronic non-infectious diseases and risk factors for their development and blood pressure measurement) studies are indicated at the first stage of medical examination?
3. At what interval is recommended for screening mammography for breast cancer in this patient?
4. What should be recommended to the patient to reduce the risk of developing osteoporosis?
5. How are the results of medical examination reflected in the medical documentation?

№127. During an examination at home, a 56-year-old man complains of intense chest pain that persists for 90 minutes. In the previous 2 weeks, he had experienced pain in the chest of a similar nature several times, mainly during physical activity, but it resolved on its own with rest within a few minutes. Today, the pain syndrome arose on the street while he was walking his dog; the pain decreased somewhat at rest, but, unlike previous episodes, it did not completely stop.

The patient describes the pain as “squeezing” and burning (“as if boiling water was poured into the chest”), with a feeling of shortness of breath and sweating. At present, no irradiation is noted, but in previous episodes of chest pain there was irradiation to the left arm. The patient denies the presence of any chronic diseases, but his wife says that he has not seen a doctor for many years. His wife insisted on calling a doctor because his younger brother suffered a myocardial infarction 6 months ago. The patient works as a department head in a commercial bank, smokes 1.5 packs of cigarettes per day for 30 years and occasionally drinks alcoholic beverages in the company of friends or colleagues.

On physical examination, height 182 cm, body weight 112 kg, and had a body temperature of 37.1°C. The skin is pale, the face is covered with small drops of sweat. Breathing is vesicular, no wheezing. Heart sounds are rhythmic, accent 2 tones on the aorta, no murmurs. Heart rate - 60 per minute, blood pressure - 190/95 mmHg, respiratory rate 18 per minute. The abdomen is soft, painless, the liver and spleen are not palpable. The shins are pasty, the pulsation in the arteries of the feet is satisfactory.

Questions:

1. Suggest the most probable diagnosis.
2. Justify your diagnosis.
3. Plan the initial examination of the patient.
4. What pre-hospital therapy should be given to the patient?



5. Is fibrinolytic (thrombolytic) therapy indicated at the prehospital stage? Justify your answer.

№128. A 47-year-old man is undergoing a follow-up appointment. Two weeks ago he suffered from a respiratory viral infection for which he came to you, and during the examination he was found to have elevated blood pressure up to 164/98 mmHg. The patient recalls that he was previously told about “high blood pressure,” but he does not remember the blood pressure values; according to him, no treatment was recommended. At present, the patient feels well and has no complaints. The patient does not smoke, drinks alcohol “like everyone else,” that is, “on holidays, and maybe a couple of bottles of beer on weekends.”

He doesn't do regular physical exercises and works sedentary. His father died of a stroke at the age of 69, his mother is alive and, according to the patient, healthy, at the age of 72. He has two elder brothers and is not aware that they have any chronic diseases.

On examination: height 177 cm, body weight 84 kg, waist circumference 103 cm, body temperature 36.7°C. The skin is of normal color, vesicular breathing, no wheezing, respiratory rate 14 per minute.

The boundaries of relative cardiac dullness on the left are 1 cm to the left of the left midclavicular line, on the right - along the right edge of the sternum, heart sounds are rhythmic, clear, heart rate - 78 per minute. Blood pressure - on the left arm 156/96 mmHg, on the right arm - 152/98 mmHg. There were no deviations from the norm in other organs and systems.

Questions:

1. Suggest the most probable diagnosis.
2. Justify your diagnosis.
3. Draw up and justify a plan for additional examination of the patient.

4. What non-pharmacological methods of treatment should be recommended to the patient?

5. What groups of antihypertensive drugs can be recommended to the patient? Justify your choice.

№129. A 24-year-old man complains of an increase in temperature up to 40°C, accompanied by chills; inspiratory shortness of breath with little physical exertion; pain in the heart area, not associated with physical activity, of moderate intensity, long-lasting.

From the anamnesis it is known that he has been using heroin for 4 years (injections into the cubital veins, groin area). 2 weeks before hospitalization, he noted an increase in temperature to 40°C. The patient took nonsteroidal anti-inflammatory drugs as antipyretics. After 3 days, the temperature dropped to 37.2-37.4°C, and the patient's health improved somewhat. However, 10 days later the fever returned and the patient was hospitalized.

On examination: the skin is pale and clean. Peripheral lymph nodes are not enlarged. BMI - 18 kg/m. Body temperature - 38.9°C. There is a vesicular breathing in the lungs, carried out in all sections. NPV - 18 per minute. The heart sounds are clear, at the base of the xiphoid process there is a systolic murmur, intensifying at the height of inspiration with breath holding. The accent of the 2nd tone is on a. pulmonalis. Blood pressure - 110/60 mm Hg. art., heart rate - 100 beats per minute. The abdomen is soft and painless on palpation. The liver protrudes 2 cm from under the edge of the costal arch, the edge of the liver is smooth. Swelling of the feet and legs. The effleurage symptom is negative on both sides. Urination is not impaired.

In the tests: erythrocytes -  $3.3 \times 10^{12}$  /l, hemoglobin - 126 g/l, leukocytes -  $15.8 \times 10^9$  /l, band neutrophils - 15%, ESR - 42 mm/h, serum albumin - 29 g/l, creatinine - 66  $\mu$ mol/l, GFR - 92 ml/min/1.73 m, CRP - 120 mg/l (normal - up to 5 mg/l). In general urine analysis: specific gravity - 1016, red blood cells - 0-1 in the field of view

When blood was cultured for sterility, *S. aureus*, sensitive to oxacillin and ceftriaxone, was isolated twice.

EchoCG data: the size of the heart chambers is not enlarged. Mitral valve: the leaflets are sealed, the nature of the movement of the leaflets is multidirectional. Tricuspid valve: the leaflets are compacted, thickened, an average echo-density structure is visualized on the middle and anterior leaflets measuring 1.86 and 1.11x0.89 cm; the nature of the movement of the valves is multidirectional, tricuspid regurgitation of the III-IV degree.

Questions:

1. Suggest the most probable diagnosis.
2. Justify your diagnosis.
3. Draw up and justify a plan for additional examination of the patient.
4. Patient management tactics, non-drug and drug therapy. Justify your choice.
5. What are your further treatment tactics? Justify your choice.

№130. Patient A. 45 years old, engineer. Complaints of chills, increased body temperature up to 39°C, inspiratory shortness of breath during normal physical activity, dry cough, pain with deep breathing and coughing on the right in the subscapular region, general weakness, fatigue, sweating at night.

He became acutely ill three days ago after hypothermia, when the above complaints appeared. He took antipyretic drugs with little effect. I contacted the local general practitioner at the clinic. Due to the severity of the condition and suspicion of pneumonia, he was sent to the emergency room of the hospital at his place of residence. History: Works for 15 years as an engineer at a machine-building plant. I do not smoke. I had not been seen by a doctor before.

Objectively: the general condition is serious. Skin with high humidity. Cyanosis of lips. Height - 175 cm, weight - 72 kg. Waist circumference - 100. There

is no peripheral edema. Peripheral lymph nodes are not enlarged. Temperature 39°C. The chest is normosthenic. When breathing deeply, there is some lag in breathing in the right half of the chest. NPV - 24 per minute. On the right along the scapular line there is a dullness of percussion sound. On auscultation on the right below the angle of the scapula, weakened vesicular breathing and ringing fine bubbling rales are heard.

The heart rhythm is correct, the tone ratio is normal, there are no noises. Heart rate - 110 beats per minute. Blood pressure - 100/60 mm Hg. Art. On superficial palpation the abdomen is soft and painless. The liver according to Kurlov is 9x8x7 cm, upon palpation the lower edge is smooth and painless. Faeces is clear, without impurities. Urination is free and painless.

General blood test: erythrocytes -  $4.08 \times 10^{12}$  /l, hemoglobin - 120 g/l, leukocytes -  $13.2 \times 10^9$ /l, young - 2%, rods - 12%, segments - 56%, lymphocytes - 27%, monocytes - 3 %,

ESR - 38 mm/h.

On a plain X-ray of the chest in direct and lateral projections: on the right in the lower and middle lobe there is a darkening in the form of an infiltrate.

Questions:

1. Assume the most likely diagnosis.
2. Justify your diagnosis.
3. Draw up and justify a plan for additional examination of the patient.
4. What tactics and therapy does the patient require upon admission? Justify your choice. Name the criteria for the adequacy of therapy.
5. After 72 hours during treatment, signs of intoxication persist, fever (temperature 37.9°C), respiratory rate - 22 per minute, purulent sputum is present. In the general blood test: leukocytes -  $11 \times 10^9$ /l, neutrophils - 82%, young forms - 7%. What are your further treatment tactics? Justify your choice.

№131. Patient S., 21 years old. Complaints of general weakness, fatigue, severe sweating, palpitations, interruptions in heart function, constant aching pain in

the heart area without irradiation, not associated with physical activity, low-grade fever, chilling, loss of appetite.

He has been feeling unwell for 2 months. Over the past 2-3 weeks, the condition has been aggravated by the appearance of shortness of breath with minor physical exertion. Over the past month, the patient lost 7 kg in weight.

Objectively: the condition is satisfactory, the body position is active, consciousness is clear, the skin is pale, has a light coffee tint, acrocyanosis, the skin is moist.

There are symmetrical petechial rashes on the inner sides of the forearms, thighs, and legs. Osler's nodes on the palms. Nails in the shape of watch glasses.

There is a percussion pulmonary sound above the lungs, the boundaries are within normal limits, vesicular breathing. Pulsation of the carotid and subclavian arteries is noted, the precordial area is not changed. The apical impulse in the fifth intercostal space is 0.5 cm outward from the midclavicular line, limited. The boundaries of relative cardiac dullness: left - 0.5 cm outward from the midclavicular line, upper - the edge of the 3rd rib, right - the right edge of the sternum. The first sound at the apex of the heart, the second sound at the aorta are weakened. At the level of 3-4 ribs at the left edge of the sternum and in the second intercostal space on the right, a decreasing protodiastolic murmur is heard. Heart rhythm is abnormal, single extrasystoles, heart rate – 140/min., pulse – 120/min., blood pressure – 160/50 mm Hg.

The abdomen is of regular shape, soft, painless on palpation. The liver protrudes from under the edge of the costal arch by 4 cm, the edge is even, smooth, rounded, moderately painful, dimensions according to Kurlov - 14-11-9 cm. The spleen protrudes according to Kurlov - 8x10 cm. The legs are swollen.

#### Questions

1. Indicate your preliminary diagnosis.
2. Draw up an examination plan indicating the main paraclinical studies.

3. Make a treatment plan indicating the diet and regimen of the main groups of medications

№132. Patient S., 56 years old. Complaints of sudden attacks of loss of consciousness, which begin with dizziness, “dark” circles before the eyes. According to his wife: loss of consciousness lasts about 20-30 seconds, accompanied by convulsive twitching of the limbs, sometimes involuntary urination. The attack suddenly stops and the patient does not remember what happened to him.

9 months ago he suffered an acute large-focal myocardial infarction in the region of the posterior wall of the left ventricle. Attacks of loss of consciousness appeared 2 days ago.

Objectively: general condition is satisfactory. The skin is clean and of normal color. Breathing is vesicular, no wheezing. The boundaries of relative cardiac dullness are moderately expanded to the left. Heart sounds are muffled, rhythm is correct. Pulse – 42 per minute. Blood pressure – 150/90 mm Hg. The abdomen is soft and painless on palpation. The liver is not palpable. Peripheral edema is not detected. An ECG taken in the emergency department showed sinus bradycardia, heart rate – 40 per minute. Scar changes on the posterior wall of the left ventricle.

#### Questions

1. Formulate a preliminary diagnosis.
2. Make an examination plan.
3. Make a treatment plan, indicating the regimen, diet, drug treatment (groups of drugs without specifying a specific drug), physical therapy and other treatment methods.

№133. Patient D., 52 years old, came to the clinic with complaints of thirst, dry mouth, frequent urination up to 3 times at night, frequent pain in the back of the head, fatigue during physical activity. These complaints have been bothering me for a year. From the anamnesis it was revealed that she had been overweight for many

years, led a sedentary lifestyle, and worked as an accountant. Headaches occur after stress at work. Dry mouth occurs after eating sweet foods, which the patient abuses. The patient had not previously consulted doctors. The mother has hypertension. She does not smoke. Allergic anamnesis is not aggravated.

On examination of the patient has an increased nutritional status. BMI 31 kg/m<sup>2</sup>, waist circumference (WA) 100 cm. Skin and mucous membranes are of normal color. Peripheral lymph nodes are not enlarged. In the lungs - percussion sound is pulmonary, auscultation - vesicular breathing, no wheezing, respiratory rate - 17 per minute. Heart sounds are weakened, the rhythm is correct, the accent of the second tone is over the aorta, heart rate is 64 beats. per minute, blood pressure - 180/100 mm Hg. The tongue is moist and clean, the abdomen is palpably painless, increased in volume due to subcutaneous fat. The dimensions of the liver according to Kurlov are 11\*10\*6 cm, protruding 2 cm from under the costal arch. The gallbladder is not palpable. The spleen is not enlarged. Pasternatsky's symptom is negative on both sides. Peripheral pulsation in the arteries of the feet is preserved and not reduced.

In the general blood test: erythrocytes -  $4.4 \cdot 10^{12} / l$ , hemoglobin - 142 g / l, CP - 0.85, leukocytes  $5.6 \cdot 10^9 / l$ , leukocyte formula without features, ESR - 9 mm/h.

In general urine analysis: specific gravity - 1018, no protein, glucosuria ++, 2-3 leukocytes in the field of view, no red blood cells.

In the biochemical blood test: total cholesterol 6.9 mmol/l, triglycerides 3.6 mmol/l, HDL 0.9 mmol/l, blood glucose 9.2 mmol/l, HB A1c 7.6%. ALT 65 IU/l, AST 35 IU/l, total bilirubin 17  $\mu\text{mol/l}$ , direct 5  $\mu\text{mol/l}$ , indirect - 12 mmol/l. Amylase 60 units.

X-ray of the lungs - without pathology.

ECG - sinus rhythm, signs of left ventricular hypertrophy, heart rate 64 beats/min.

Ultrasound of the abdominal cavity - the liver is enlarged (12\*10\*7cm), unevenly compacted, "shiny", the gallbladder is not enlarged, the wall is 4 mm, suspended, there are no stones, the pancreas is unevenly compacted, not enlarged.

Questions:

1. Suggest the most probable diagnosis.
2. Justify your diagnosis.
3. Draw up and justify a plan for additional examination of the patient.
4. Prescribe therapy. Justify your choice.

5. After 6 months of regular therapy - blood pressure fluctuates between 150-160/90-95 mm Hg, fasting glucose - 5.4 mmol/l, HB A1c 6.5%, total cholesterol - 4.5 mmol/l, TG - 1.5 mmol/l, HDL-c - 1.2 mmol/l, creatinine - 88  $\mu$ mol/l, albuminuria -10 mg/day.

What are your further treatment tactics? Justify your choice.

№134. Patient T., 42 years old, was hospitalized in a hospital on the referral of a local general practitioner with complaints of weakness, drowsiness during the day, jaundice of the skin, a feeling of heaviness in the right hypochondrium, periodic nosebleeds after physical work, enlarged abdomen, swelling in the lower extremities in the area of the feet and legs.

History: heaviness in the right hypochondrium has been bothering me for the last 3 months. Over the past month, he has noted an increase in general weakness, an enlarged abdomen and jaundice. He has been drinking vodka 200 g daily for the last year and is being seen by a narcologist. He denies drug use. There were no blood transfusions or surgical interventions.

Objectively: the condition is of moderate severity. Consciousness is clear. Number Linking Test -40 sec. Height - 178 cm, weight - 62 kg. Skin of normal moisture, icteric. Spider veins are visible in the chest and upper back area. The sclera of the eyes is icteric. Swelling of the feet and lower third of the legs. In the lungs, breathing is vesicular, there are no adverse respiratory sounds. NPV - 18 per minute. On auscultation, heart sounds are rhythmic and there are no murmurs. Heart



rate -78 beats per minute. Blood pressure - 110/70 mm Hg. Art. The tongue is moist, crimson, the papillae are smoothed. The abdomen is increased in volume, the navel is smoothed, dilated, tortuous veins are visible on the anterior abdominal wall radially from the navel. In a lying position, the stomach is spread out. On palpation, it is soft and painful in the right hypochondrium.

The dimensions of the liver according to Kurlov are 15 x 15 x13 cm. The lower edge of the liver is dense and lumpy on palpation. The feces are formed, brown, without pathological impurities. The dimensions of the spleen are 15x12. Urination is free, painless, urine is dark yellow.

Complete blood count: red blood cells -  $4.1 \times 10^{12}$  /l; Hb - 122 g/l; color index -0.9%; platelets -  $98 \times 10^9$  /l, leukocytes -  $3.2 \times 10^9$  /l, eosinophils - 1%, band neutrophils - 4%, segmented neutrophils - 63%, lymphocytes - 29%, monocytes - 3%, ESR - 22 mm/h.

Biochemical tests: total bilirubin - 130  $\mu$ mol/l, direct bilirubin -100 mmol/l, ALT - 120 U/l, AST - 164 U/l. INR - 2, albumin - 28 g/l.

Fibrogastroduodenoscopy: varicose veins of the esophagus, stage I.

Ultrasound examination of the abdominal cavity: the anteroposterior size of the right lobe of the liver is 170 mm, the contours are clear and uneven. The parenchyma has unevenly diffusely increased echogenicity. The diameter of the portal vein is 16 mm. The gallbladder is of normal size, the contents are bile. The hepaticocholedochus is not dilated. The spleen is located usually, the structure is homogeneous, the parenchyma is of average echogenicity. The area of the spleen is 36.1 cm<sup>2</sup>. Free fluid in the abdominal cavity.

Questions:

1. Suggest the most probable diagnosis.
2. Justify your diagnosis.
3. Draw up and justify a plan for additional examination of the patient.
4. What tactics and therapy is required for the patient upon admission. Justify your choice.

## 5. What are the possible complications of this disease?

№135. Patient U., 24 years old, a paramedic, was sent to the hospital with complaints of pain with an inflammatory rhythm in the joints of the hands and ankles, and the presence of morning stiffness in the joints for up to 1 hour. He also notes an increase in body temperature to subfebrile levels in the evenings, the appearance of a rash on the face in the cheekbones, general weakness, and hair loss.

From the anamnesis: she considers herself sick for 2 years, when she began to notice the appearance of hyperemia of the skin of the face and neck in response to insolation. Since the summer of this year, after hyperinsolation (I was on vacation in the south) and overheating, erythematous rashes appeared on the neck and arms. Two weeks after returning home, she noted an increase in body temperature to febrile levels. At the place of residence, a diagnosis of acute respiratory infection was made, and therapy with antibacterial drugs was carried out without effect. Additional examination revealed protein in the urine. She was sent to the hospital.

On examination: the general condition is of moderate severity. Skin: erythematous rash in the form of a “butterfly” on the skin of the face and décolleté. Symmetrical swelling up to the lower third of the legs. Mucous membranes are clean. Breathing is vesicular, no wheezing. NPV - 17 per minute. Heart sounds are clear, the rhythm is correct. Heart rate - 92 beats per minute, blood pressure - 140/80 mm Hg. Art. The abdomen is soft, painless, the liver does not protrude from under the edge of the costal arch along the midclavicular line. Urination is free and painless. The feces are regular and formed.

Swelling in the area of the II, III metacarpophalangeal and II proximal interphalangeal joints, in the area of the ankle joints; limitation of movements due to pain, hand grip - 80%; no deformations.

Examination.

Complete blood test: erythrocytes -  $3.6 \times 10^{12} /l$ , hemoglobin - 86 g/l, platelets -  $100 \times 10^9 /l$ , leukocytes -  $1.6 \times 10^9 /l$ , eosinophils - 1%, band neutrophils - 8%, segmented neutrophils - 59%, lymphocytes - 25% , monocytes - 4%, ESR - 22 mm/

General urine analysis - turbid, color - yellow, density - 1.022, reaction - acidic, protein - 0.560 g/l, glucose - negative, leukocytes - 20-25 in the field of view.

Biochemical blood test: creatinine - 118  $\mu\text{mol/l}$ , urea - 8.8 mmol/l, total protein - 67 g/l, albumin - 45%, a1 - 4%, a2 - 15%, P - 9%, y - 27%, fibrinogen - 6.3 g/l. Antibodies to DNA and antinuclear factor - more than 200 U/ml.

Questions:

1. Suggest the most probable diagnosis.
2. Justify your diagnosis.
3. Draw up and justify a plan for additional examination of the patient.
4. What drug groups would you recommend to a patient as part of combination therapy? Justify your choice.
5. After 6 months of regular therapy and following recommendations: red blood cells -  $4.4 \times 10^{12} /l$ , hemoglobin - 119 g/l, platelets -  $210 \times 10^9 /l$ , leukocytes -  $5.1 \times 10^9 /l$ , fasting glucose - 4.9 mmol/l , total cholesterol - 4.9 mmol/l, creatinine - 108  $\mu\text{mol/l}$ , GFR (according to the CKD-EPI formula) = 60.3 ml/min; daily protein loss - 0.240 g/day. What are your further treatment tactics? Justify your choice.

№136. A 28-year-old man consulted a local general practitioner with complaints of an increase in body temperature to  $39.2^\circ\text{C}$  with chills, bleeding gums, the appearance of “bruises” on the skin for no apparent reason, and general weakness. He considered himself sick for 7 days, when the temperature increased, he took Paracetamol with a short-term effect. Weakness began to progressively increase, and bleeding began.

From the life history: he denies the presence of chronic diseases. Parents are healthy. Has a special secondary education and works as a technologist. Served in the army on a submarine.

Objectively: the condition is of moderate severity. Body temperature 37.5°C. The skin is pale, with normal moisture. On the skin of the lower extremities - ecchymosis; petechiae on the skin of the shoulders, forearms; in the oral cavity there are single petechial elements. On auscultation, breathing is vesicular, respiratory rate is 19 per minute. Heart sounds are muffled, the rhythm is correct. Heart rate - 92 beats per minute. Blood pressure - 100/65 mm Hg. Art. The abdomen is soft and painless on palpation. The edge of the liver is palpated 1 cm below the edge of the costal arch, dimensions according to Kurlov are 16x10x9 cm.

The spleen is palpable, elastic, painless, percussion dimensions 10x8 cm.

Complete blood test: erythrocytes -  $2.3 \times 10^{12}$ , Hb - 78 g/l, platelets -  $30 \times 10^9$ , leukocytes -  $28.9 \times 10^9$ , blasts - 32%, myelocytes - 0%, young neutrophils - 0%, band neutrophils - 5%, segmented neutrophils - 38, lymphocytes - 25, ESR - 30.

Questions:

1. What preliminary diagnosis can be made?
2. Justify your diagnosis.
3. What examinations should be ordered to clarify the diagnosis?
4. Select and justify the patient management tactics.
5. What complications are possible with this disease.

№137.

At an appointment with a local general practitioner in a clinic, a 61-year-old woman complains of the presence of painless tumor-like elastic formations on the side of the neck and in the axillary areas, as well as heaviness in the left hypochondrium when walking quickly, and increased sweating. The above-mentioned complaints appeared about a year ago and gradually increased.

Objectively: general condition is satisfactory. The skin and visible mucous membranes are of normal color. Conglomerates of enlarged submandibular, cervical, axillary, inguinal lymph nodes are palpated; on palpation - elastic, painless, inactive, the skin over them is not changed, symmetrically enlarged - cervical and

submandibular up to 2-3 cm, axillary up to 3-4 cm, inguinal up to 4 cm in diameter. In the lungs, breathing is vesicular, no wheezing is heard, respiratory rate is 18 per minute. Heart sounds are clear, heart rate is 78 beats per minute. Blood pressure - 120/80 mm Hg. Art. The abdomen is soft and painless. The edge of the liver does not protrude from under the edge of the costal arch. The spleen protrudes 2 cm from under the edge of the costal arch, the edge is elastic and painless.

General blood test: erythrocytes -  $3.6 \times 10^{12}$ , Hb - 129 g/l, platelets -  $200 \times 10^9$  /l, leukocytes -  $39 \times 10^9$  /l, band neutrophils - 2%, segmented neutrophils - 2%, lymphocytes - 92%, monocytes - 4%, ESR - 30 mm/h, Botkin-Gumprecht shadows - 1-2 in the field of view.

Questions:

1. What preliminary diagnosis can be made?
2. Justify your diagnosis.
3. What examinations need to be ordered to clarify the diagnosis?
4. Select and justify the patient management tactics.
5. What is the prognosis for this disease, and what are the possible complications?

№138. Patient L. has been working as a teacher for 48 years and came to the clinic with complaints of pain in the metacarpophalangeal, proximal interphalangeal joints of the hands, wrist, shoulder, ankle joints, and metatarsophalangeal joints of the feet; weakness in the hands; morning stiffness until lunchtime; low-grade fever in the evenings, general weakness.

From the anamnesis. Considers himself sick for about 3 months, when pain in the joints appeared. She did not seek medical help, was treated with non-steroidal anti-inflammatory ointments, without improvement. Over the past month, pain and swelling have appeared in the joints of the hands, feet, wrists and ankles, morning stiffness during the day, and low-grade body temperature. I lost 6 kg during my illness.

General condition is satisfactory. The skin is clean, cyanosis, and no edema. Peripheral lymph nodes are not enlarged. Breathing is vesicular, no wheezing. NPV

- 18 per minute. Heart sounds are clear, the rhythm is correct. Heart rate - 78 beats per minute. Blood pressure -120/70 mm Hg. Art. The abdomen is soft and painless. The liver is at the edge of the costal arch.

Local status: brushes are correct. II, III proximal interphalangeal joints and II, III metacarpophalangeal joints are painful and swollen. Pain in the wrist joints, shoulder joints. Right hand grip is 80%, left hand grip is 70%. Assessment of well-being on a visual analogue scale (VAS) - 60 mm.

#### Examination.

Complete blood test: erythrocytes -  $3.5 \times 10^{12} /l$ , hemoglobin - 131 g/l, leukocytes -  $8.6 \times 10^9/l$ , eosinophils - 1%, band neutrophils - 8%, segmented neutrophils - 55%, lymphocytes - 30%, monocytes - 6%, ESR - 54 mm/h.

Biochemical blood tests: glucose - 3.2 mmol/l, total bilirubin - 15  $\mu\text{mol/l}$ , creatinine - 54  $\mu\text{mol/l}$ ; total protein - 76 g/l, albumin - 50%, globulins:  $\alpha_1$  - 6%,  $\alpha_2$  - 14%,  $\beta$  - 12%,  $\gamma$  - 17%, CRP - 17.2 mg, fibrinogen - 5.8 g/l, uric acid - 0.24 mmol/l (normal 0.16-0.4 mmol/l).

Rheumatoid factor: ELISA - 62 IU/ml (normally up to 15 IU/ml). Antibodies to DNA are negative. ACCP >200 U/ml.

On x-rays of the hands and feet: the joint spaces are moderately narrowed at the level of the proximal joints of the hands. Single erosions are identified. The bone structure is changed due to epiphyseal osteoporosis at the level of the metacarpophalangeal joints, metatarsophalangeal joints, and single cyst-like clearings.

#### Questions:

1. Assume the most likely diagnosis.
2. Justify your diagnosis.
3. Draw up and justify a plan for additional examination of the patient.
4. Which group of drugs would you recommend to the patient as part of combination therapy? Justify your choice.

5. After 6 months of regular therapy: hemoglobin - 134 g/l, ESR - 38 mm/hour, CRP - 10.2 mg/l, RF - 17.2 IU/ml, serum iron - 19  $\mu$ mol/l. Pain persists in the II, III metacarpophalangeal, proximal interphalangeal joints of the hands, wrist joints, morning stiffness for up to 2-3 hours. What are your further treatment tactics? Justify your choice.

№139. Patient E. 23 years old, car mechanic. He got sick two weeks ago after hypothermia. A local doctor diagnosed acute tonsillitis. Amoxicillin therapy was recommended for a course of 10 days, but after 3 days, due to a significant improvement in well-being and normalization of body temperature, the patient stopped treatment. Two weeks after these events, the patient noted the appearance of swelling on the face, general weakness and malaise, decreased appetite, a headache, and urine became dark red in color and its quantity decreased. Along with the above symptoms, the patient was bothered by pain in the abdomen and lower back. When measuring blood pressure - blood pressure 140/90 mm Hg. Art.

On examination: the skin is pale. On auscultation of the lungs, breathing is vesicular, there are no adverse respiratory sounds, respiratory rate is 17 per minute. Heart sounds are muffled, the rhythm is correct. Blood pressure - 140 and 90 mm Hg. Art. Heart rate - 90 beats per minute. The abdomen is soft and painless. The dimensions of hepatic dullness according to Kurlov are 11 x 9x8 cm. Diuresis is 700 ml per day.

A laboratory study was carried out.

General blood test: hemoglobin - 136 g/l, leukocytes -  $10.8 \times 10^9/l$ , ESR - 70 mm/hour;

General urine analysis: relative density - 1025, proteinuria - 1.5 g/l, leukocytes - 14-15 per field of view, red blood cells - completely cover the entire field of view;

Biochemical blood test: total protein - 62 g/l, albumin - 39 g/l, cholesterol - 4.5 mmol/l, urea - 5.6  $\mu$ mol/l, creatinine - 110  $\mu$ mol/l, GFR - 79.4 ml /min/1.73 m<sup>2</sup> according to CKD-EPI, ASL-O titer - 1:1000.

Ultrasound of the kidneys: the kidneys are enlarged in size, the contours are smooth, the location is typical; the differentiation of parenchyma layers is impaired, the echogenicity of the parenchyma is moderately increased; pyelocaliceal system without deformations and ectasia.

Questions:

1. Suggest the most probable diagnosis.
2. Justify your diagnosis.
3. Name the patient's examination plan.
4. Prescribe the necessary therapy.
5. Indicate in what cases immunosuppressive therapy is carried out for this disease.

№140. A 69-year-old patient came to the local general practitioner with complaints of constant throbbing headaches in the temporal regions, decreased vision, aching pain in the muscles of the shoulders, knee, shoulder, and elbow joints, stiffness until 12 noon, and a weight loss of 5 kg over the past year.

History of the disease: he has been ill for 2 years, it began with pain in the joints and muscles, then headaches and decreased vision. Due to increased symptoms, she consulted a doctor.

Objectively: the condition is satisfactory. The skin and visible mucous membranes have a physiological color. Dense and tortuous temporal arteries were found, painful on palpation. Peripheral lymph nodes are not enlarged. There is no edema or synovitis. Breathing is vesicular, no wheezing. Heart sounds are clear and rhythmic. The abdomen is soft and painless.

General blood test: hemoglobin - 110 g/l, erythrocytes -  $3.3 \times 10^{12}/l$ , leukocytes -  $5 \times 10^9/l$ , ESR - 36 mm/h, band neutrophils - 5%, segmented neutrophils - 55%, lymphocytes - 34%, monocytes - 4%, eosinophils - 2%, basophils - 0%. CRP - 15 mg/dl.

Questions:



1. State the expected preliminary diagnosis.
2. Justify your diagnosis.
3. Make a plan for additional examination.
4. Differential diagnosis.
5. Treatment plan.

№141. Patient Z., 43 years old, complains of fatigue, weakness, headaches, shortness of breath when walking, pain in the knee joints that occurs when going down the stairs, “starting” pain, morning stiffness for 20 minutes, limited range of motion.

History of illness: he had been ill for about 4 years, when the above complaints appeared, he did not seek medical help, self-medicated, took herbal infusions, and periodically (1-2 times a year) massaged the joints and torso. The onset of the disease is gradual: moderate pain in the knee joints appeared after significant physical activity, in the evening hours and in the first half of the night, morning stiffness for 10 minutes.

Against the background of a relatively stable course of the disease, 2-3 times a year - deterioration of health: increased pain in the knee joints and the appearance of their swelling.

Anamnesis of life. Since adolescence and adolescence, significant weight gain was observed, which was associated with good nutrition and a sedentary lifestyle. He worked as an accountant, for the last 6 years - as deputy chief accountant of the enterprise. Hereditary history: the mother suffers from diabetes, the father died at the age of 52 from a myocardial infarction, and had some kind of joint disease. Doesn't smoke, doesn't abuse alcohol.

Objective status: satisfactory condition, correct physique, increased nutrition. Height - 180 cm, weight - 107 kg, waist circumference - 115 cm. The skin is clean, physiological in color. Peripheral lymph nodes are not enlarged. There is no peripheral edema. Muscle tone is normal. The joints are of normal shape, movements are not limited, crepitus in the knee joints when moving. Respiratory

system: respiratory rate - 18 per minute. Palpation of the chest is painless, vocal tremor is moderately weakened over the entire surface of the lungs. Percussion - pulmonary sound, auscultation - vesicular breathing on both sides, no wheezing. Cardiovascular system: the apical impulse is not palpable.

Percussion: the right border of relative cardiac dullness is 1 cm outward from the right edge of the sternum, the upper is the lower edge of the third rib, the left is 2 cm outward from the left midclavicular line. Heart sounds at the apex are moderately muffled, the accent of the second tone is over the aorta, heart rate is 84 beats per minute, the rhythm is correct. Blood pressure - 165/95 mm Hg. Art. Digestive system: the tongue and oral mucosa are pink and clean. The abdomen is enlarged in volume, symmetrical, participates in the act of breathing, and is soft. Palpation of the abdominal organs is difficult due to excess subcutaneous fat. The dimensions of the liver according to Kurlov are 9x8x7 cm. The dimensions of the spleen are 8x5 cm.

Laboratory and instrumental data.

Complete blood test: erythrocytes -  $4.9 \times 10^{12}$  /l, hemoglobin - 147 g/l, leukocytes -  $8.2 \times 10^9$ /l, eosinophils - 2%, band neutrophils - 1%, segmented neutrophils - 67%, lymphocytes - 25%, monocytes - 4%.

General urine analysis: relative density - 1019, protein - 0.033 g/l, single epithelium in the field of view.

Biochemical blood test: total protein - 68 g/l, albumin - 55%, globulins 45%, total bilirubin - 18  $\mu$ mol/l, direct - 13  $\mu$ mol/l, indirect - 5  $\mu$ mol/l, glucose - 6.4 mmol/ l, total cholesterol - 7.1 mmol/l, high-density lipoprotein cholesterol - 0.78 mmol/l, triglycerides - 2.6 mmol/l, fibrinogen content 5.3 g/l.

ECG: sinus rhythm, 80 per min. Horizontal floor. email axes. Left ventricular hypertrophy.

Questions:

1. State the expected preliminary diagnosis.
2. Justify your diagnosis.
3. Make a plan for additional examination.

4. Differential diagnosis.

5. Treatment plan.

№142. A 23-year-old patient consulted a local general practitioner with complaints of swelling of the face, eyelids, torso, and limbs, a decrease in the amount of urine excreted per day, weakness, and headache.

From the anamnesis it is known that he suffers from chronic tonsillitis. Similar symptoms first appeared 2 years ago, he was treated for a long time in the nephrology department, received prednisolone with a positive effect, and was discharged from the hospital in satisfactory condition. After discharge, he was not seen by a doctor or treated, although he periodically noted swelling on his face. 2 weeks ago I had a sore throat, after which my condition worsened sharply and the above complaints appeared. On examination, blood pressure was -150/95 mm Hg. art., heart rate - 92 beats per minute, respiratory rate - 22 per minute.

Examination data.

General blood test: erythrocytes -  $3.4 \times 10^{12}$  /l, hemoglobin - 124 g/l, color index - 0.89, leukocytes -  $5.4 \times 10^9$ /l, leukocyte formula - normal, ESR - 42 mm/h.

Biochemical study: total blood protein - 35.6 g/l, albumin - 33%, blood cholesterol - 9 mmol/l.

General urine analysis: specific gravity - 1012, protein - 5.4 g/l, leached red blood cells - 20-25 per field of view, waxy casts - 9-10 per field of view.

Questions:

1. Specify the main clinical and laboratory syndrome.
2. Formulate a presumptive diagnosis.
3. What additional studies are needed to clarify the diagnosis?
4. Prescribe treatment in accordance with clinical recommendations for the treatment of patients with this pathology.
5. What are the approximate periods of temporary disability for this disease?  
How often should clinical follow-up be carried out?

№143. An 18-year-old patient came to a local general practitioner with complaints of pain in the lumbar region, frequent urination, and chills.

From the anamnesis it is known that he often suffers from ARVI, periodically notes dull pain in the lower abdomen, against this background there is a low-grade fever; Sometimes there is painful urination.

On examination: the skin is of normal color, temperature is 37.8°C. In the lungs, breathing is vesicular, there are no wheezes. The number of respiratory movements is 20 per minute. Heart sounds are clear and rhythmic. Heart rate - 96 per minute. Pasternatsky's symptom is positive on both sides. Urination is frequent and painful. There is no swelling.

General blood test: hemoglobin - 114 g/l, erythrocytes -  $4.5 \times 10^{12}$  /l, leukocytes -  $18.5 \times 10^9$ /l, band neutrophils - 10%, segmented neutrophils - 70%, lymphocytes - 22%, monocytes - 9%, ESR - 28 mm/hour.

General urine analysis: alkaline reaction, protein - 0.06%, leukocytes - completely throughout the entire field of view, erythrocytes - 1-2 in the field of view, bacteria - a significant amount.

Ultrasound of the kidneys: the kidneys are located correctly, the size is at the upper limit of normal. The pyelocaliceal system is expanded on both sides.

Questions:

1. Assume the most likely diagnosis.
2. Justify your diagnosis.
3. Specify additional research methods to clarify the diagnosis.
4. Name the study necessary to prescribe adequate therapy.
5. Name the measures for dispensary observation of the patient when remission is achieved.

№144. Patient M., 24 years old, consulted a local general practitioner with complaints of headache, general weakness and fatigue, and loss of appetite.

From the anamnesis it is known that at the age of 14 years after suffering an acute respiratory infection, the patient developed facial swelling, low-grade fever persisted for 3-4 months, and there were changes in the urine. I was treated by a pediatrician for about a year “for nephritis” and received Prednisolone. For the last year I have felt well, there was no noticeable swelling. During the medical examination, an increase in blood pressure was detected - 140/90 mm. rt. Art. and facial pastiness. It was recommended to go to the clinic at your place of residence for examination and verification of the diagnosis.

On examination: normal build, BMI = 21 kg/m<sup>2</sup>, pale, dry skin, traces of scratching on the arms, lower back, torso, swelling of the face and hands. The tongue is dry, with a brownish coating. In the lungs, breathing is vesicular, there are no wheezes. The boundaries of relative cardiac dullness are expanded to the left by 1.5 cm from the midclavicular line. Pulse - 76 beats per minute, high. Blood pressure - 140/90 mm Hg. Art. The abdomen is soft, painless on palpation in all parts. The liver and spleen are not enlarged. The symptom of tapping in the lumbar region is negative. Notes a decrease in urine output. There is no swelling in the lower extremities.

Complete blood test: erythrocytes -  $3.2 \times 10^{12}$  /l, hemoglobin - 105 g/l, leukocytes -  $5.2 \times 10^9$ /l, band neutrophils - 4%, segmented neutrophils - 65%, eosinophils - 3%, monocytes - 5%, lymphocytes - 23%, ESR - 12 mm/h.

Biochemical blood tests: total cholesterol - 7 mmol/l, blood creatinine - 170  $\mu$ mol/l, blood urea - 11 mmol/l.

In urine tests: specific gravity - 1009, protein - 1.1%, leukocytes - 2-4 per field of view, leached erythrocytes - 7-10 per field of view, hyaline casts - 2-3 per field of view. Albuminuria - 250 mg/day. GFR (according to the CKD-EPI formula) - 55 ml/min.

Questions:

1. Suggest the most probable diagnosis.
2. Justify the proposed diagnosis.
3. Are additional studies needed to clarify the diagnosis?

4. What are the further tactics for managing the patient?

5. What group of drugs would you recommend to a patient as nephroprotective therapy? Justify your choice.

№145. An 18-year-old patient consulted a local general practitioner with complaints of abdominal pain, vomiting, and fever.

History: fell ill yesterday (according to the patient, after severe hypothermia), when he developed pain in the joints of his arms and legs, and his temperature rose to 38.5°C. In the morning, frequent vomiting, cramping abdominal pain, and bloating appeared.

Objectively: the patient has an increase in temperature to 38°C, a coated dry tongue. No pathology of the lungs or heart was detected. There is bloating and tension in the anterior abdominal wall, a positive Shchetkin-Blumberg sign. Pulse - 110 per minute. Blood pressure - 110/70 mm Hg. Art. There are abundant petechial rashes on the legs. Severe swelling and pain on palpation of the ankle, knee and wrist joints on the right and left.

General blood test: erythrocytes -  $4.2 \times 10^{12} / l$ , hemoglobin - 136 g/l, platelets -  $200 \times 10^9 / l$ , leukocytes -  $21.0 \times 10^9 / l$ , eosinophils - 12%, band - 10%, segmented - 68%, lymphocytes - 6%, monocytes - 4%, ESR - 42 mm/hour.

Biochemical blood tests: creatinine - 290  $\mu\text{mol/l}$ , AST - 17 U/l; ALT - 23 U/l, glucose - 4.9 mmol/l.

General urine analysis: specific gravity - 1021; protein - 0.068 g/l; leukocytes - 6-8 per field of view; red blood cells - 20-25 in the field of view, fresh, unchanged.

Questions:

1. Indicate the main syndrome in the clinical picture.

2. Formulate a presumptive diagnosis.

3. What diseases need differential diagnosis first?

4. What additional studies are needed to confirm the diagnosis?

5. Which groups of drugs and non-drug treatment methods are the most important in the treatment of this disease?

№146. A 30-year-old patient. She came to the clinic with complaints of frequent and painful urination, pain in the lumbar region on the right, the passage of cloudy urine, and an increase in body temperature to 37.6°C.

From the anamnesis: for the first time such manifestations were observed in the patient 10 years ago during pregnancy. Antibacterial therapy was carried out in the hospital, childbirth was without complications. There were no subsequent exacerbations of the disease. The condition worsened 5 days ago after hypothermia.

Objectively: the condition is of moderate severity. The skin is of normal color, there is no peripheral edema. Peripheral lymph nodes are not enlarged. The chest is of normal shape. Respiration rate - 20 per minute. In the lungs, breathing is vesicular, wheezing is not heard. The limits of relative cardiac dullness are within normal limits. Heart sounds are muffled, the rhythm is correct. Heart rate - 90 per minute. Blood pressure - 140/90 mm Hg. Art. The abdomen is soft and painless. The liver is at the edge of the costal arch. The symptom of effleurage is positive on the right.

Blood test: hemoglobin - 118 g/l, erythrocytes -  $4.0 \times 10^{12}/l$ , leukocytes -  $14.0 \times 10^9/l$ , eosinophils - 1%, band neutrophils - 10%, segmented neutrophils - 65%, lymphocytes - 20%, monocytes - 4%, platelets -  $200.0 \times 10^9/l$ , ESR - 24 mm/hour.

Biochemical blood parameters: creatinine - 0.08 mmol/l, urea - 6.5 mmol/l.

General urine analysis: specific gravity - 1010, protein - 0.07 mg/l, acidic reaction, leukocytes - 15-20 in the field of view, erythrocytes - 0-1 in the field of view.

Ultrasound of the kidneys: kidneys of normal shape and size. The renal collecting system is deformed and compacted. There are no stones.

Questions:

1. What diagnosis can be made?
2. What additional examination methods should be prescribed to the patient to clarify the diagnosis? Justify.
3. Is it possible to treat the patient on an outpatient basis? Indications for hospitalization.

4. List drugs for etiotropic therapy, duration of treatment and monitoring of treatment effectiveness.

5. What herbal medicine can be recommended during the period of remission of the disease?

№147. Patient K., 24 years old, a student, was hospitalized in the cardiology department. Complaints of shortness of breath when walking up to 100 m, increased shortness of breath in a horizontal position, palpitations, general weakness, swelling in the legs. Within 2 months, he notices the appearance of shortness of breath and weakness. A week ago, interruptions in the functioning of the heart and palpitations appeared, and from that time swelling appeared in the legs.

Among the diseases suffered, he noted acute respiratory infections, appendectomy in childhood, and influenza about 4 years ago.

Objectively: the general condition is serious. The skin is pale. Swelling of the legs, feet. Peripheral lymph nodes are not enlarged. Dullness of percussion sound in the lower parts of the lungs. Breathing is vesicular, crepitating rales in the lower parts, respiratory rate is 26 per minute. Apical impulse in the VI intercostal space 3 cm outward from the left midclavicular line. Borders of relative dullness of the heart: right 2 cm outward from the right edge of the sternum, upper - 2nd intercostal space along the left midclavicular line, left - along the anterior axillary line. Heart sounds are muffled, systolic murmur at the apex and at the V point of auscultation. The heart rhythm is incorrect, cf. Heart rate - 122 beats per minute, blood pressure - 100/80 mm Hg. Art., average pulse - 105 per minute, irregular. The dimensions of the liver according to Kurlov are 14>11>10 cm.

General blood test: hemoglobin - 125 g/l, leukocytes -  $4.0 \times 10^7/l$ , ESR - 10 mm/h. Chest X-ray revealed cardiomegaly syndrome. Echo-CS: dilatation of the left and right ventricles, diffuse hypokinesis, ejection fraction - 28%.

ECG: atrial fibrillation, cf. Heart rate - 132 per 1 min.



Questions:

1. Suggest the most probable diagnosis.
2. What changes in the myocardium are revealed by histological examination in this disease?
3. List the ECG signs of atrial fibrillation.
4. Prescribe treatment for this patient.
5. Does the patient need to restore sinus rhythm?

№148. A 56-year-old man consulted a local general practitioner with complaints that appeared after hypothermia: a cough with a small amount of difficult-to-discharge mucopurulent sputum, shortness of breath with slight physical exertion, and an increase in body temperature to 37.4°C.

Cough with sputum has been noted for 10 years. Exacerbations of the disease 3-4 times a year, mainly in cold, damp weather. About 2 years ago, shortness of breath appeared during physical exertion, and sputum began to come out with difficulty. The patient has been smoking 1 pack per day for 30 years.

On examination: the face is puffy, there is warm cyanosis, swelling of the neck veins on exhalation. The chest is barrel-shaped. Above the pulmonary fields there is a percussion sound with a box-like tint. Breathing is uniformly weakened, dry wheezing sounds are heard on both sides. NPV - 24 per minute. Heart sounds are muffled, emphasis of 2 tones is on the pulmonary artery, diastolic murmur is heard there, the rhythm is correct, heart rate is 90 beats per minute. Blood pressure - 120/80 mm Hg. Art. The abdomen is soft and painless. The liver and spleen are not palpable. There is no peripheral edema.

Blood test: hemoglobin - 168 g/l, leukocytes -  $9.1 \times 10^9/l$ , eosinophils - 1%, neutrophils - 73%, lymphocytes - 26%, ESR - 28 mm/h.

X-ray of the chest organs: pulmonary fields of increased transparency, the pulmonary pattern is strengthened, deformed, the vascular pattern is strengthened in

the center and depleted at the periphery, the roots of the lungs are expanded, the trunk of the pulmonary artery is bulging. No infiltrative changes were detected.

ECG: signs of right ventricular hypertrophy.

Spirography data: decrease in vital capacity - up to 80%, FEV1 - up to 32% of the required values.

Questions:

1. Formulate a clinical diagnosis.
2. What additional studies need to be performed to confirm the diagnosis?
3. Prescribe treatment.
4. Criteria for prescribing antibacterial therapy for this disease.
5. Determine the indications for hospitalization.

№149. Patient Z., 21 years old, disabled since childhood (cerebral palsy, mental retardation), was admitted to the clinic with her mother's complaints of fatigue, hair loss, loss of appetite, pale skin, perversion of taste (eats soil), unstable stool.

Life history: refused food if it included meat (according to my grandmother). She often ate soil. During this time, she was not observed by doctors, was not ill with anything, and was not given any preventive vaccinations.

Upon admission to the hospital, the condition was assessed as serious. The patient is lethargic, almost indifferent to her surroundings. Consciousness is clear and he reacts sluggishly to examination. The skin and visible mucous membranes are very pale. There are "jams" in the corners of the mouth. Vesicular breathing in the lungs. Heart sounds are rhythmic, muffled, and a systolic murmur of a soft timbre is heard at the apex and above the area of large vessels. The abdomen is soft, painless in all parts upon palpation. Liver +3 cm below the costal margin. The spleen is palpated at the edge of the hypochondrium, with a soft-elastic consistency. Urine is light, stool 1-2 times a day. Vision and hearing are not impaired. The sclera is light. Meningeal, cerebral and focal symptoms were not noted.

General blood test: hemoglobin - 60 g/l, erythrocytes -  $2.6 \times 10^{12}/l$ , reticulocytes - 0.4%, color index - 0.63, leukocytes -  $7.2 \times 10^9/l$ , band neutrophils - 2%, segmented neutrophils - 70%, eosinophils - 4%, lymphocytes - 16%, monocytes - 10%, ESR - 18 mm/h.

Biochemical blood test: total protein - 68 g/l, urea - 3.2 mmol/l, total bilirubin - 20.0  $\mu\text{mol}/l$ , serum iron - 4.1  $\mu\text{mol}/l$  (normal 10.6-33.6  $\mu\text{mol}/l$ ), iron-binding capacity of serum - 103  $\mu\text{mol}/l$  (normal 40.6-62.5), free hemoglobin is not determined.

Fecal occult blood test (three times): negative.

Questions:

1. State the expected preliminary diagnosis.
2. Justify your diagnosis.
3. Make a plan for additional examination.
4. Differential diagnosis.
5. Treatment plan.

№150. Patient K., 39 years old, consulted a local general practitioner with complaints of a dry cough, fever up to  $37.5^{\circ}\text{C}$ , general weakness, and chest pain when breathing. There is a history of hypothermia. Objectively: pale skin, slight lag of the right half of the chest when breathing. When percussing the lungs, there is a clear pulmonary sound over the entire surface of the lungs. On auscultation: weakened breathing and pleural friction noise on the right side below the angle of the scapula.

X-ray examination of the chest organs - without pathology.

Questions:

1. Formulate a preliminary diagnosis.
2. Justify your diagnosis.
3. Indicate the scope of further examination required to clarify the diagnosis.
4. What diseases require differential diagnosis of this condition?

5. As the disease progressed, cough and chest pain decreased, severe shortness of breath appeared, and upon clinical examination, dullness of percussion tone, weakening of vesicular breathing and vocal tremor in the lower parts of the right lung appeared. What instrumental examination should be repeated and for what purpose?

№151. A 32-year-old woman consulted a local general practitioner with complaints about attacks of suffocation becoming more frequent over the last month; they were accompanied by wheezing, a cough audible at a distance, with the release of a small amount of viscous sputum, after which relief followed. Similar conditions have been bothering me for about 2 years, and have not been examined. History of allergic rhinitis. The deterioration of the condition is associated with the transition to a new job in the library. Over the past month, symptoms have occurred daily, at night 3 times a week, and interfere with activity and sleep

Objectively: general condition is satisfactory. Normosthenic constitution. The skin is pale pink, there are no rashes. There is no peripheral edema. Breathing over the lungs is harsh, scattered dry wheezing sounds are heard. NPV - 18 per minute. The heart sounds are clear, the rhythm is correct, heart rate is 72 beats per minute. Blood pressure - 120/80 mm Hg. Art. The abdomen is soft and painless on palpation.

Complete blood count: erythrocytes -  $4.2 \times 10^{12}$  /l, hemoglobin - 123 g/l, leukocytes -  $4.8 \times 10^9$ /l, eosinophils - 16%, segmented neutrophils - 66%, lymphocytes - 18%, monocytes - 2%, ESR - 10 mm/h.

General sputum analysis: mucous membrane, leukocytes - 5-7, squamous epithelium - 7-10 in the field of view, detritus in a small amount, Kurschmann spirals.

X-ray of the lungs. No infiltrative shadows are detected in the lungs. Diaphragm, heart shadow, sinuses without features.

Spirotest. Initial data: vital capacity - 82%, FEV1 - 62%, FVC - 75%. 15 minutes after inhalation of 800 mcg of Salbutamol: FEV1 - 78%.

### Questions:

1. Formulate a clinical diagnosis. Justify the severity of the disease.
2. How is a bronchodilator test performed? Evaluate the results.
3. What studies need to be done to confirm the diagnosis?
4. Prescribe treatment.
5. Are there indications for prescribing inhaled glucocorticoids in this case?

№152. A 36-year-old patient was referred to the clinic by a local physician with complaints of severe weakness, dizziness, spots before the eyes, shortness of breath during exercise, periodic stabbing pain in the heart area, and a tendency to eat chalk and dough.

History: weakness and fatigue have been noted for about 6 years; she has not consulted a doctor. During pregnancy 2 years ago, the hemogram revealed mild anemia; she did not receive iron supplements. The condition worsened for about 2 weeks, when shortness of breath and pain in the heart appeared. Obstetric and gynecological history: hyperpolymenorrhea since the age of 12, pregnancies - 5, childbirth - 2, medical abortions - 3.

Past diseases: colds, duodenal ulcer, chronic pyelonephritis.

Objectively: the skin is pale and dry. Nails with transverse striations, stratify. Peripheral lymph nodes are not palpable. There is vesicular breathing in the lungs, no wheezing. Heart sounds are muffled, the rhythm is regular, systolic murmur is at the apex of the heart. Heart rate - 92 beats per minute. Blood pressure - 100/60 mm Hg. Art. The tongue is moist, the papillae are smoothed. The liver and spleen are not palpable. The effleurage symptom is negative on both sides.

General blood test: hemoglobin - 82 g/l, red blood cells -  $3.2 \times 10^{12}$  /l, color index - 0.7, reticulocytes - 13%, platelets -  $180 \times 10^9$ /l, leukocytes -  $4.2 \times 10^9$ /l, band neutrophils - 6% , segmented neutrophils - 62%, lymphocytes -29%, monocytes - 3%, ESR - 18 m/h; anisocytosis, hypochromia of erythrocytes.

The iron content in the blood serum is 4.0  $\mu\text{mol/l}$ , the total iron-binding capacity of the serum is 86.4  $\mu\text{mol/l}$ , transferrin saturation is 5.0%, serum ferritin is 10  $\mu\text{g/l}$ .

Questions:

1. Make a preliminary diagnosis of the patient.
2. What can cause systolic murmur at the apex of the heart?
3. What laboratory and instrumental research methods should be prescribed to the patient to clarify the diagnosis?
4. Prescribe treatment. Justify the choice of therapy.
5. What recommendations could you give to the patient for secondary prevention of the disease?

№153. A 53-year-old woman consulted a local general practitioner with complaints of heartburn and chest pain that appeared after eating and physical activity. He also notes increased pain when bending over and in a horizontal position. From the anamnesis it is known that heartburn has been bothering me for about 20 years. Not examined. Over the past 2 months, evidence of chest pain has appeared. On examination: condition is satisfactory. Body mass index (BMI) - 39 kg/m. The skin is of normal color and clean. In the lungs there is vesicular breathing, no wheezing. Heart sounds are clear, rhythmic, heart rate - 72 beats per minute, blood pressure - 120/80 mm Hg. Art. On palpation, the abdomen is soft and painless. Liver along the edge of the costal arch. Dimensions - 10>9>8 cm. The spleen is not palpable. Fibergastroduodenoscopy data: erosions were detected in the lower third of the esophagus, occupying about 40% of the circumference of the esophagus.

Questions:

1. Suggest the most probable diagnosis.
2. Justify your diagnosis.
3. Draw up and justify a plan for additional examination of the patient.
4. Give non-drug recommendations to the patient.

5. What drug treatment would you recommend to the patient? Justify your choice

№154. A 60-year-old man consulted a local general practitioner with complaints of pain in the epigastrium 20 minutes after eating, vomiting, which brought relief, and lost 7 kg in a month. Epigastric pain has been bothering me for about 2 months. On examination: condition is satisfactory. The skin is of normal color and clean. In the lungs there is vesicular breathing, no wheezing. Heart sounds are clear, rhythmic, heart rate - 72 beats per minute, blood pressure - 120/80 mm Hg. Art. On palpation, the abdomen is soft, painful in the epigastrium. Liver along the edge of the costal arch. Dimensions - 10x9x8 cm. The spleen is not palpable. A fibrogastroduodenoscopy was performed: in the middle third of the stomach there was an ulcerative defect 3 cm in diameter, a biopsy was taken.

Questions:

1. Formulate a preliminary diagnosis.
2. Justify your diagnosis.
3. Create a differential diagnosis plan.
4. Make a plan for additional examination.
5. What drug treatment would you recommend to the patient? Justify your choice.

№155. A 35-year-old patient came to the clinic with complaints of loose stool mixed with blood 5-6 times a day, increased body temperature up to 37.5°C, weakness, dizziness, pain in the ankle, elbow, and shoulder joints.

I fell ill about 2 months ago, when my body temperature increased and joint pain appeared. Several courses of antibacterial therapy were carried out, as a result of which loose stools appeared.

Objectively: the skin is pale and clean. On palpation, the abdomen is soft, painful in the iliac regions. The liver does not protrude from under the edge of the

costal arch. The dimensions of the liver according to Kurlov are 10x9x8 cm. The spleen is not palpable.

In the general blood test: red blood cells -  $3.2 \times 10^{12}$  /l, hemoglobin - 61 g/l, leukocytes -  $11 \times 10^9$ /l, platelets -  $350 \times 10^9$ %, ESR - 30 mm/h.

Questions:

1. Formulate a preliminary diagnosis.
2. Justify your diagnosis.
3. Create a differential diagnosis plan.
4. Make a plan for additional examination.
5. Formulate and justify the treatment plan.

№156. Patient S., 25 years old, was admitted to the hospital with complaints of cough with a large amount of mucopurulent sputum (up to 300 ml/day) with an unpleasant odor; hemoptysis, fever up to  $39^{\circ}\text{C}$ , malaise, shortness of breath. It is known that about 2 weeks ago he was treated for pneumonia, but left the department on his own and continued treatment as an outpatient. Worsening about 2 days ago.

Objectively: low nutrition, pale skin. Pulse - 94 per minute, rhythmic, blood pressure - 100/70 mm Hg. Art. The borders of the heart are shifted to the right by 1.5 cm, the heart sounds are muffled, the accent of the second tone is over the pulmonary artery. A box sound is detected by percussion above the lungs on the left. Breathing is vesicular, weakened. On the left in the lower sections, sonorous moist medium- and fine-bubble rales are heard. BH - 24 per minute.

Questions:

1. Assume the most likely diagnosis.
2. Justify your diagnosis.
3. Draw up and justify a plan for additional examination of the patient.
4. Justify the patient's treatment tactics.
5. Does the patient have indications for surgical treatment? Justify.



№157. Patient M., 52 years old, came to the clinic with complaints of unmotivated weakness, increased fatigue, a constant feeling of heaviness in the left hypochondrium, decreased appetite, and a feeling of rapid satiety. These complaints appeared about 5 months ago and gradually became more pronounced.

Upon examination, attention is drawn to the enlargement of the spleen (protrudes 6 cm from under the edge of the costal arch).

Blood test: hemoglobin - 105 g/l, color index - 0.94, leukocytes -  $68.3 \times 10^9/l$  (promyelocytes - 1%, neutrophilic myelocytes - 2%, neutrophilic metamyelocytes - 6%, neutrophilic band cells - 14%, neutrophilic segmented cells - 58%, lymphocytes - 9%, eosinophils - 2%, basophils - 7%, monocytes - 1%), platelets -  $440 \times 10^9/l$ . Neutrophil alkaline phosphatase activity is reduced.

Questions:

1. Assume and justify the most likely diagnosis.
2. Make a plan for additional examination of the patient to confirm the diagnosis.
3. Which blood test indicators for this patient do not correspond to the chronic stage of the disease, justify your answer.
4. Cytogenetic analysis revealed the presence of a Ph chromosome; in accordance with clinical signs, the patient was stratified into the intermediate risk category. Indicate the initial treatment strategy for this patient.
5. Name the signs of complete hematological remission in the treatment of this disease. Justify your answer.

№158. Patient P., 70 years old, came to the clinic with complaints of increased fatigue, unmotivated weakness, a feeling of heaviness in the left hypochondrium, and a decrease in body weight of 8 kg over the past month. History: arterial hypertension, duodenal ulcer.

Upon examination, attention is drawn to the enlargement of the lymph nodes in the area of the anterior surface of the neck, in the supraclavicular and axillary

cavities. Lymph nodes are painless, relaxed, mobile, and have an elastic consistency. The spleen is enlarged (+5 cm).

Blood tests: hemoglobin - 98 g/l, leukocytes -  $30 \times 10^9/l$ , of which 50% are lymphocytes, platelets -  $130 \times 10^9/l$ , ESR - 16 mm/h.

In the blood smear, lymphocytes are of normal size, "smeared" cells, Gumprecht's shadows are detected.

Questions:

1. Assume the most likely diagnosis.
2. Draw up and justify a plan for additional examination of the patient. What examination method should be carried out first? Justify your answer.
3. Determine the stage of the disease in this patient. Justify your answer.
4. Which drug is the optimal prescription in this case?
5. Name the possible causes of death of patients with this disease.

№159. A 42-year-old patient, a housewife, consulted a local general practitioner with the following complaints: for several years she periodically noted general weakness and an unmotivated rise in temperature to subfebrile levels. A month ago, after an acute respiratory infection, moderate pain and swelling appeared in the II and III metacarpophalangeal joints, II, III, IV proximal interphalangeal joints of both hands, and wrist joints; morning stiffness for 3 hours. Joint syndrome was accompanied by an increase in body temperature to 37.3°C. She performs housework with difficulty.

Objectively: the skin is of normal color and clean. Breathing is vesicular, no wheezing. The left border of relative cardiac dullness along the midclavicular line. Heart sounds are rhythmic. Blood pressure - 130/80 mm Hg. Art. There is deformation of the above joints due to exudative-proliferative phenomena, diffuse pain, active and passive movements are limited and painful.

General blood test: leukocytes -  $9.0 \times 10^7/l$ , ESR - 35 mm/hour.

Biochemical blood test: rheumatoid factor (RF) - 1:80. Antibodies to cyclic citrullinated peptide (ACCP) - 375.8 U/ml.

X-ray of the hand joints: periarticular osteoporosis, narrowing of the joint space, and isolated bone abnormalities were detected.

Questions:

1. Suggest the most probable diagnosis.
2. Justify your diagnosis.
3. Draw up and justify a plan for additional examination of the patient.
4. What will be the treatment tactics for this disease?
5. What basic drug is advisable to prescribe in this case and why?

№160. A 65-year-old patient, a pensioner, came to the clinic with complaints of general weakness, fatigue, palpitations, shortness of breath during exercise, nausea, belching, and heaviness in the epigastrium. Signs of gastric dyspepsia for about 15 years. In the last six months, weakness, palpitations, shortness of breath on exertion, and numbness of the lower extremities have appeared. I didn't go to the doctors.

Objectively: the general condition is of moderate severity. The skin is pale, slight yellowing of the skin and sclera are lemon-colored. The face is puffy. Height - 160 cm, body weight - 68 kg. Vesicular breathing in the lungs. The borders of the heart are shifted to the left by 1 cm, the sounds are slightly muffled, heart rate is 90 per minute, blood pressure is 130/80 mm Hg. Art.

The tongue is crimson in color, the papillae are smoothed. The abdomen is soft and painless. The liver protrudes 1 cm from under the edge of the costal arch, the spleen is not enlarged.

Clinical blood test: hemoglobin - 70 g/l, erythrocytes -  $2.9 \times 10^{12}$  /l, color index - 1.3, reticulocytes - 0.1%, leukocyte formula without features, ESR -30 mm/hour, MCV - 70 fl. The blood smear revealed hypersegmented neutrophils, Jolly bodies, and Cabot rings.

Questions:

1. What is the most likely diagnosis for this patient?
2. Justify your diagnosis.
3. Make a plan for additional examination of the patient.
4. What are your further treatment tactics?
5. Indicate the probable causes of this disease.

№161. A 20-year-old patient comes to the clinic with complaints of general weakness, dizziness, icteric discoloration of the skin and sclera. A week ago, after hypothermia, the temperature rose to 38°C, there were catarrhal symptoms for 3 days, for which he took Paracetamol. The temperature returned to normal, but icteric discoloration of the skin and sclera and increasing weakness appeared. There have also been episodes of jaundice in the past.

Objectively: the patient's condition is moderate. The skin is pale icteric in color with a lemon tint, the sclera is icteric. Pulse - 90 per minute, rhythmic, blood pressure - 110/80 mm Hg. Art. Vesicular breathing in the lungs. The abdomen is soft and painless. Liver at the edge of the costal arch, spleen +3 cm. Clinical blood test: hemoglobin - 90 g/l, red blood cells -  $3.1 \times 10^{12} / l$ , color index - 0.9, reticulocytes - 3%, leukocyte formula - without features, ESR - 10 mm/hour. Blood bilirubin is 33  $\mu\text{mol/l}$ , the reaction is indirect.

Questions:

1. What is the most likely diagnosis for this patient?
2. Justify your diagnosis.
3. Make a plan for additional examination of the patient.
4. What are your further treatment tactics?
5. What complications of the disease may develop in the patient?

## 12. Evaluation criteria for the interview

### Mark Descriptors

strength of knowledge of the basic processes of the studied subject area  
ability to explain the essence of phenomena, processes, draw conclusions logically  
and consistency of the answer

excellent high strength of theoretical knowledge, ability to diagnose diseases,  
identify causes and conditions of their occurrence and development,

determination of the main pathological conditions, symptoms, syndromes of  
diseases, nosological forms in a patient;

determination of tactics of management of patients with different nosological  
forms. high ability to explain the essence of clinical phenomena and processes, draw  
conclusions and generalisations;

confident ability to analyse patient's complaints, anamnesis data, examination  
results, laboratory, instrumental, pathological and other investigations in order to  
recognise the condition or establish the presence or absence of the disease. high  
logicality and consistency of the answer; confident command of terminological  
apparatus;

depth and completeness of disclosure of the topic;

the answers are reasoned, examples are given.

good strength of theoretical knowledge, ability to diagnose diseases, identify  
causes and conditions of their occurrence and development,

determination of the patient's basic pathological conditions, symptoms,  
syndromes of diseases, nosological forms;

determination of tactics of management of patients with different nosological  
forms.

The ability to explain the essence of clinical phenomena and processes, draw conclusions and generalisations;

ability to analyse the patient's complaints, anamnesis data, examination results, laboratory, instrumental, pathological, anatomical and other investigations in order to recognise a condition or establish the presence or absence of a disease. One or two inaccuracies are allowed. logicality and consistency of the answer; mastery of terminological apparatus;

completeness of the topic;

the answers are reasoned.

satisfactory sufficient strength of theoretical knowledge, satisfactory ability to diagnose diseases, identify causes and conditions of their occurrence and development,

determination of the main pathological conditions, symptoms, syndromes of diseases, nosological forms in a patient;

satisfactory ability to determine the tactics of management of patients with different nosological forms.

Satisfactory ability to explain the essence of clinical phenomena and processes, make conclusions and generalisations;

satisfactory ability to analyse patient's complaints, anamnesis data, examination results, laboratory, instrumental, pathological, anatomical and other investigations in order to recognise a condition or establish the presence or absence of a disease. Two to three inaccuracies in the answer are allowed. satisfactory Logicality and consistency of the answer, mastery of terminological apparatus.

unsatisfactory insufficient strength of theoretical knowledge, poor ability to diagnose diseases, identify causes and conditions of their occurrence and development,

determination of the main pathological conditions, symptoms, syndromes of diseases, nosological forms in a patient;

determination of tactics of management of patients with different nosological forms.

More than three inaccuracies or errors in the answer are allowed. unsatisfactory ability to explain the essence of clinical phenomena and processes, draw conclusions and generalisations;

unsatisfactory ability to analyse patient's complaints, anamnesis data, examination results, laboratory, instrumental, pathological, anatomical and other investigations in order to recognise a condition or establish the presence or absence of a disease. More than three inaccuracies or errors in the answer are allowed. lack of logic and consistency of the answer; unsatisfactory command of terminological apparatus; insufficient disclosure of the topic, difficulties in argumentation of answers.

### 13. Recommendations to students on preparation for the state examination.

Interdisciplinary state examination is the final stage of mastering the educational programme, a mechanism for evaluating the results of training and establishing the conformity of the level of professional training of graduates to the requirements of FSES HE. Preparation for the exam contributes to consolidation, deepening and systematisation of knowledge in the context of their use in solving complex, practice-oriented problems, close to the real professional medical activity.

The state examination takes place in the form of an interview on the questions of the tasks that include all sections of the GIA programme.

To fully prepare for the state final certification, the student should make maximum use of all recommended teaching and learning resources - textbooks, teaching and learning aids, as well as his/her own lecture notes. The notes will help to orientate more quickly in the topic, as they contain the main questions on the topic in a concise, concentrated form.

It is extremely important for students to attend the consultation held before the interdisciplinary state examination. At the consultation there is an opportunity to ask questions to the teacher on those sections and topics that cause difficulties.

The following requirements are imposed on the graduate's answer at the state examination: the answer must strictly correspond to the volume of the ticket; fully disclose the content of the questions of the ticket; comply with the norms and rules of public speaking; be clear, well-founded, logical.

During the answer, the student must be ready for additional or clarifying questions. Additional questions are asked by members of the State Commission within the framework of the ticket and are usually related to an incomplete answer and are aimed at clarifying the student's answer.

It is important that the student competently distributes the time allocated for preparation for the state final certification. The student should systematically prepare for the exam.

It is recommended to organise the stages of work with the notes and academic literature as follows:

1. Prepare the necessary information and reference and recommended educational and methodological literature to obtain comprehensive information on each topic of the examination programme.

2. Clarify the availability of content and the amount of material in lectures and educational literature to disclose the issue. Preparation for the disclosure of the problem by different sources is a guarantee of deep and thorough preparation.



3. Supplement the notes with missing information on certain aspects, without which a complete answer is impossible.

Memo on passing the exam:

Preparation for the answer - 40 minutes.

1. Read the content of the task carefully, focusing on the key words.

2. On the oral answer sheet, you can make a plan of your answer, outlining the key points and their relationship; it is also convenient to make brief notes structuring your answer.

3 Pay attention to what you say at the beginning of your answer. It is better to begin your statement with something you have a strong conviction about.

4. respond to the substance of the task questions.

5. The examiners welcome it if the student does not read from the sheet of paper, but freely presents the material, focusing on a pre-determined plan.

6. Show business conversation skills: listen to the examiner's questions attentively, without interrupting; express gratitude for the questions asked; if a question is not clear, ask again or clarify it.

14. List of recommended literature for preparation for the state examination

14.1 Basic literature.

1. Internal Medicine: textbook: in 2 volumes. Volume 1: [edited by V.S. Moiseev, A.I. Martynov, N.A. Mukhin. - 3rd edition, revised and supplemented. - Moscow: GEOTAR-Media, 2015. - 958 c.

2. Internal diseases: textbook: in 2 volumes. Volume 2: [rec. GBOU VPO "First Moscow State Medical University named after I.M. Sechenov]: for university

students / edited by V.S. Moiseev, A.I. Martynov, N.A. Mukhin. - 3rd edition, revised and additional - Moscow: GEOTAR-Media, 2015. - 895 c.

3. Internal diseases: textbook: [rec. GOU VPO "Perv. Moscow State Medical University named after I.M. Sechenov"]: / V.I. Makolkin, S.I. Ovcharenko, V.A. Sulimov. - 6th ed., revision and supplement. - Moscow: GEOTAR-Media, 2011. - 764 c.

4. Endocrinology: textbook: [rec. UMO]: for students of universities / I.I. Dedov, G.A. Melnichenko, V.V. Fadeev. Fadeev. - 2nd edition, revision and addendum - Moscow: GEOTAR-Media, 2014. - 422 c.

5. Storozhakov G.I. Polyclinic therapy [Text]: textbook for universities, studying on speciality 060101.65 "Lech. business" on discz. "Polyclinic therapy" / Storozhakov G.I., Chukaeva I.I., Aleksandrov A.A. - 2nd edition, revision and supplement. - Moscow: GEOTAR-Media, 2012. - 636, [4] c. : ill. + 1 CDROM.

#### 14.2. Additional literature.

1. Internal Medicine. Tests and situational tasks: textbook: [rec. GOU VPO "I.M. Sechenov Moscow Medical Academy"]: for university students / V.I. Makolkin, V.A. Sulimov, S.I. Ovcharenko, N.S. Morozova. - Moscow: GEOTAR-Media, 2011. - 295 c.

2. Main directions in the treatment of patients with chronic heart failure / G.I. Storozhakov, G.E. Gendlin. - Moscow: Miklosh, 2008. - 312c.

3. Prevention of cardiovascular diseases / R.G. Oganov, S.A. Shalnova, A.M. Kalinina. - Moscow: GEOTAR-Media, 2009. - 216c.

4. Nasonov E.L., Rational pharmacotherapy of rheumatic diseases / V.A. Nasonova, E.L. Nasonov, R.T. Alekperov [et al]; ed. by V.A. Nasonova, E.L. Nasonova. - Moscow: Litterra, 2007. - 434 c.

5. Rational therapy of rheumatoid arthritis / E.L. Nasonov, N.V. Chichasova. - Moscow: Miklosh, 2010. - 240 c.

6. Elderly patient and infection: a manual for doctors / L.I. Dvoretzky, S.V. Yakovlev. - Moscow: GEOTAR-Media, 2008. - 368c.

7. Gardner D. Basic and clinical endocrinology. Book 1 / Gardner, Shobek; per. with Engl. V.I. Kandror [et al]; ed. by G.A. Melnichenko. - Moscow: Binom, 2010. - 463c.

8. Gardner D. Basis and clinical endocrinology. Book 2 / David Gardner, Dolores Shobek; per. from English. ed. by G.A. Melnichenko. - Moscow: Binom, 2011. - 696c.

9. Endocrinology. Clinical recommendations: textbook / edited by I.I. Dedov, G.A. Melnichenko. - Moscow: GEOTAR-Media, 2007. - 304c.

### 3.3. Internet resources

	ELECTRONIC EDUCATIONAL RESOURCES	Access to the resource
1	Electronic Library of RostSMU. - URL: – URL: <a href="http://109.195.230.156:9080/opac/">http://109.195.230.156:9080/opac/</a>	Access unlimited
2	Student's Consultant [Kits: "Medicine. Health Care. HE"; "Medicine. Health Care. SPO"; "Psychological Sciences"]. : Electronic library system. - Moscow : Politehresurs LLC. - URL: <a href="https://www.studentlibrary.ru">https://www.studentlibrary.ru</a> + opportunities for inclusive education	Access unlimited
3	Physician's consultant. Electronic medical library : Electronic library system. - Moscow : LLC "Higher school of organisation and management of health care. Complex medical consulting". - URL: <a href="http://www.rosmedlib.ru">http://www.rosmedlib.ru</a> + opportunities for inclusive education	Access unlimited
4	Scientific electronic library eLIBRARY. - URL: <a href="http://elibrary.ru">http://elibrary.ru</a>	Open

		access
5	National Electronic Library. - URL: <a href="http://нэб.рф/">http://нэб.рф/</a>	Access from library computers
6	DB of Springer Nature publishing house. URL: <a href="https://link.springer.com">https://link.springer.com</a> by IP-addresses of RostGMU and remotely after registration, remotely through KIAS RFBR <a href="https://kias.rfbr.ru/reg/index.php">https://kias.rfbr.ru/reg/index.php</a>	Access unlimited
7	<b>Wiley Online Library</b> / John Wiley & Sons. - URL: <a href="http://onlinelibrary.wiley.com">http://onlinelibrary.wiley.com</a> by IP-addresses of RostGMU and remotely after registration (National project)	Access unlimited
8	<b>Wiley.</b> Full-text collection of electronic journals. <b>Medical Sciences Journal Backfile</b> : archive – URL : <a href="https://onlinelibrary.wiley.com/">https://onlinelibrary.wiley.com/</a> by IP-addresses of RostGMU and remotely after registration (National Project) Indefinite	Indefinite subscription
9	<b>Sage Publication</b> : [Full-text collection of electronic book eBook Collections]. – URL: <a href="https://sk.sagepub.com/books/discipline">https://sk.sagepub.com/books/discipline</a> by IP-addresses of RostGMU (National Project)	Indefinite subscription
10	<b>Ovid Technologies</b> : [Full-text archival collection of journals Lippincott Williams and Wilkins Archive Journals]. – URL: <a href="https://ovidsp.ovid.com/autologin.cgi">https://ovidsp.ovid.com/autologin.cgi</a> by IP-addresses RostGMU (National Project)	Indefinite subscription
11	Questel database Orbit Premium edition : patent search database <a href="http://www.orbit.com/">http://www.orbit.com/</a> by IP-addresses of RostGMU (National Project)	Access restricted
12	<b>Wiley</b> :official site;section «Open Access» / John Wiley & Sons. – URL: <a href="https://authorservices.wiley.com/open-research/open-access/browse-journals.html">https://authorservices.wiley.com/open-research/open-access/browse-journals.html</a>	Open Access Content
13	Russian education. Single window of access: federal portal. - URL: <a href="http://www.edu.ru/">http://www.edu.ru/</a> . – New educational environment.	Open access
14	Federal Centre of Electronic Educational Resources. - URL: <a href="http://srtv.fcior.edu.ru/">http://srtv.fcior.edu.ru/</a>	Open access
15	Electronic Library of the Russian Foundation for Basic Research (RFBR). - URL: <a href="http://www.rfbr.ru/rffi/ru/library">http://www.rfbr.ru/rffi/ru/library</a>	Open Access

16	Federal Electronic Medical Library of the Ministry of Health of Russia. - URL: <a href="https://femb.ru/femb/">https://femb.ru/femb/</a>	Open Access
17	<b>Cochrane Library</b> : official website; «Open Access» section. - URL: <a href="https://cochranelibrary.com/about/open-access">https://cochranelibrary.com/about/open-access</a>	Open Access Content
18	Cochrane Russia : the Russian branch of the Cochrane Collaboration / RMANPO. – URL: <a href="https://russia.cochrane.org/">https://russia.cochrane.org/</a>	Open Access Content
19	Webmedinfo.ru : site [open information and educational medical resource]. - Moscow. - URL: <a href="https://webmedinfo.ru/">https://webmedinfo.ru/</a>	Open access
20	<b>Univadis from Medscape</b> : nternational medical portal. - URL: <a href="https://www.univadis.com/">https://www.univadis.com/</a> [Regularly updated database of unique information and educational medical resources].	Free registration
21	<b>Med-Edu.ru</b> : Med-Edu.ru : medical educational video portal. - URL: <a href="http://www.med-edu.ru/">http://www.med-edu.ru/</a> . Free registration	Open access
22	Doctor's world : professional portal [information resource for doctors and students].- URL: <a href="https://mirvracha.ru">https://mirvracha.ru</a> .	Free registration
23	<b>DoctorSPB.ru</b> : information and reference portal about medicine [for students and doctors]. - URL: <a href="http://doctorspb.ru/">http://doctorspb.ru/</a>	Open access
24	MEDVESTNIK : portal of Russian doctor [library, knowledge base]. - URL: <a href="https://medvestnik.ru">https://medvestnik.ru</a>	Open access
25	<b>PubMed</b> : electronic search engine [on biomedical research of the National Centre for Biotechnology Information (NCBI, USA)]. - URL: <a href="https://pubmed.ncbi.nlm.nih.gov/">https://pubmed.ncbi.nlm.nih.gov/</a>	Open access
26	Cyberleninka Open Science Hub : an open scientific electronic library of foreign language publications. – URL: <a href="https://cyberleninka.org/">https://cyberleninka.org/</a>	Open Access Content
27	Scientific heritage of Russia : electronic library / MSC RAS. - URL: <a href="http://www.e-heritage.ru/">http://www.e-heritage.ru/</a>	Open Access
28	<b>KOOb.ru</b> : electronic library of books on medical psychology. - URL: <a href="http://www.koob.ru/medical_psychology/">http://www.koob.ru/medical_psychology/</a>	Open Access
29	Presidential library : website. - - URL: <a href="https://www.prlib.ru/collections">https://www.prlib.ru/collections</a>	Open Access
30	<b>SAGE Openaccess</b> : open access resources / Sage Publications. Open Access Content – URL: <a href="https://uk.sagepub.com/en-gb/eur/open-access-at-sage">https://uk.sagepub.com/en-gb/eur/open-access-at-sage</a>	Open Access Content

31	<b>EBSCO &amp; Open Access</b> : open access resources. . – URL: <a href="https://www.ebsco.com/open-access">https://www.ebsco.com/open-access</a>	Open Access Content
32	<b>Lvrach.ru</b> : medical scientific and practical portal [the largest professional resource for doctors and medical community, created on the basis of scientific and practical journal "treating doctor"]. - URL: <a href="https://www.lvrach.ru/">https://www.lvrach.ru/</a>	Open Access
33	<b>ScienceDirect</b> : official site; section «Open Access» / Elsevier. - URL: <a href="https://www.elsevier.com/open-access/open-access-journals">https://www.elsevier.com/open-access/open-access-journals</a>	Open Access Content
34	<b>Taylor &amp; Francis. Dove Medical Press. Open access journals</b> : Open access journals : open access journals. – URL: <a href="https://www.tandfonline.com/openaccess/dove">https://www.tandfonline.com/openaccess/dove</a>	Open Access Content
35	<b>Taylor &amp; Francis. Open access books</b> : books of open access– URL: <a href="https://www.routledge.com/our-products/open-access-books/taylor-francis-oa-books">https://www.routledge.com/our-products/open-access-books/taylor-francis-oa-books</a>	Open Access Content
36	<b>Thieme. Open access journals</b> : open access journals / Thieme Medical Publishing Group . – URL: <a href="https://open.thieme.com/home">https://open.thieme.com/home</a>	Open Access Content
37	<b>Karger Open Access</b> : Open Access Content / S. Karger AG. – URL: <a href="https://www.karger.com/OpenAccess/AllJournals/Index">https://www.karger.com/OpenAccess/AllJournals/Index</a>	Open Access Content
38	Archive of scientific journals / NEICON.- URL: <a href="https://arch.neicon.ru/xmlui/">https://arch.neicon.ru/xmlui/</a>	Open Access
39	Russian doctor : site [news for doctors and archive of medical journals] / ID "Russian doctor". - URL: <a href="https://rusvrach.ru/">https://rusvrach.ru/</a>	Open Access
40	<b>Directory of Open Access Journals</b> : [full-text journals from 121 countries, including medicine, biology, chemistry]. - URL: <a href="http://www.doaj.org/">http://www.doaj.org/</a>	Open Access
41	<a href="http://freemedicaljournals.com">Free Medical Journals.</a> - URL: <a href="http://freemedicaljournals.com">http://freemedicaljournals.com</a>	Open Access
42	<a href="http://www.freebooks4doctors.com">Free Medical Books.</a> - URL: <a href="http://www.freebooks4doctors.com">http://www.freebooks4doctors.com</a>	Open Access
43	<a href="http://www.scientific-publications.net/ru/">International Scientific Publications.</a> – URL: <a href="http://www.scientific-publications.net/ru/">http://www.scientific-publications.net/ru/</a>	Open Access
44	Eco-Vector : portal of scientific journals / IT-platform of the Russian GC "ECO-Vector". - URL: <a href="http://journals.eco-vector.com/">http://journals.eco-vector.com/</a>	Open Access
45	Medline.ru : scientific biomedical journal : online electronic edition. - URL: <a href="http://www.medline.ru">http://www.medline.ru</a>	Open Access
46	Medical Bulletin of the South of Russia : electronic journal / RostGMU. - URL: <a href="http://www.medicalherald.ru/jour">http://www.medicalherald.ru/jour</a>	Open Access
47	Urology Herald ("Urology Herald") : electronic journal / RostGMU. – URL: <a href="https://www.urovest.ru/jour">https://www.urovest.ru/jour</a>	Open Access

48	South-Russian Journal of Therapeutic Practice / RostGMU. – URL: <a href="http://www.therapeutic-j.ru/jour/index">http://www.therapeutic-j.ru/jour/index</a>	Open Access
49	Rubricator of clinical recommendations of the Ministry of Health of Russia. -. - URL: <a href="https://cr.minzdrav.gov.ru/">https://cr.minzdrav.gov.ru/</a>	Open Access
50	FBUZ "Information and Methodological Centre" of Rospotrebnadzor : official website. – URL: <a href="https://www.crc.ru">https://www.crc.ru</a>	Open Access
51	Ministry of Health of the Russian Federation : official website. - URL: <a href="https://minzdrav.gov.ru">https://minzdrav.gov.ru</a>	Open Access
52	Federal Service for Supervision of Health Care : official website. - URL: <a href="https://roszdravnadzor.gov.ru/">https://roszdravnadzor.gov.ru/</a>	Open Access
53	World Health Organisation : official website. - URL: <a href="http://who.int/ru/">http://who.int/ru/</a>	Open Access
54	Ministry of Science and Higher Education of the Russian Federation : official website. - URL: <a href="http://minobrnauki.gov.ru/">http://minobrnauki.gov.ru/</a> (Yandex search engine)	Open Access
55	Modern problems of science and education : electronic journal. Network edition. - URL: <a href="http://www.science-education.ru/ru/issue/index">http://www.science-education.ru/ru/issue/index</a>	Open Access
56	Dictionaries and encyclopaedias on Akademika. - URL: <a href="http://dic.academic.ru/">http://dic.academic.ru/</a>	Open Access
57	Official Internet portal of legal information. - URL: <a href="http://pravo.gov.ru/">http://pravo.gov.ru/</a>	Open Access
58	Education in Russian : educational portal / Pushkin State Institute of Russian Language. - URL: <a href="http://pushkininstitute.ru/">http://pushkininstitute.ru/</a>	Open Access
59	<b>History. RF.</b> [Main historical portal of the country]. - URL: <a href="https://histrf.ru/">https://histrf.ru/</a>	Open Access
60	Other open resources can be found at: <a href="http://rostgmu.ru">http://rostgmu.ru</a> → Library → Electronic Catalogue → Open Internet Resources → further by keyword...	

