

**MINISTRY OF HEALTH OF UKRAINE**

**ODESA NATIONAL MEDICAL UNIVERSITY**

**Faculty: medical №1**

**Department of propaedeutics of internal diseases and therapy**

**APPROVED BY.**



Vice-rector for scientific and pedagogical work

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**METHODOLOGICAL DEVELOPMENT  
FOR INDEPENDENT WORK OF HIGHER EDUCATION APPLICANTS  
IN THE ACADEMIC DISCIPLINE**

Faculty, course: dentistry , 3

Discipline: Propedeutics of internal medicine

Approved:

Meeting of the Department of Propedeutics of Internal Medicine and Therapy

Minutes №   1   from 30.08.2023

Head of the Department \_\_\_\_\_

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Topic: Preparation for practical classes - theoretical and development of methods of physical examination of the patient.

Purpose: To practice the main theoretical and practical skills used in the examination, namely, interviewing and general examination of the patient, physical examination of the respiratory system, physical examination of the circulatory system, physical examination of the digestive system, examination of the urinary and endocrine systems, ECG analysis

Basic concepts: history, palpation, percussion, auscultation, examination, electrocardiography.

Plan

1. Theoretical questions:

Determination of medical history, life history, patient complaints.

Methodology of interviewing the patient.

Approaches to the general examination of the patient.

Physical examination of respiratory organs.

Physical examination of circulatory organs.

Physical examination of digestive organs.

Physical examination of the ureter.

Physical examination of the endocrine system.

ECG analysis.

Questions for self-control:

What is the significance of general examination in general clinical diagnosis?

The patient's condition and criteria for its assessment.

Consciousness, criteria for assessing consciousness.

Types of impaired consciousness: blackout, stupor, sopor, coma; their reasons.

Name the types of the patient's position.

Name the main methods of examination of the patient.

Patient interview algorithm.

Algorithm for collecting the patient's history.

Percussion technique.

Approaches to physical examination of respiratory organs.

Approaches to physical examination of circulatory organs.

Approaches to physical examination of digestive organs.

Approaches to physical examination of the urinary tract.

Approaches to physical examination of the endocrine system.

ECG analysis algorithm.

Elements of ECG.

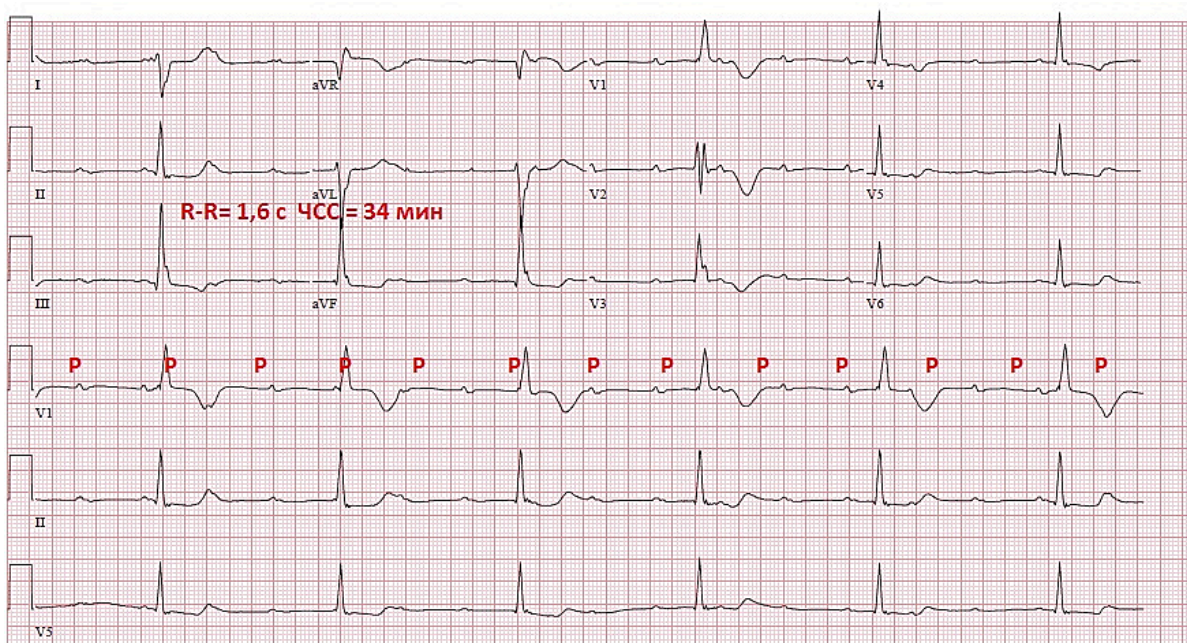
Approximate tasks for processing the theoretical material:

Compile a dictionary of basic concepts on the topic:

Item	Definition
Medical history	
History of life	
Physical examination methods	
ECG	
Diagnosis	
Discussion	
Discussion	

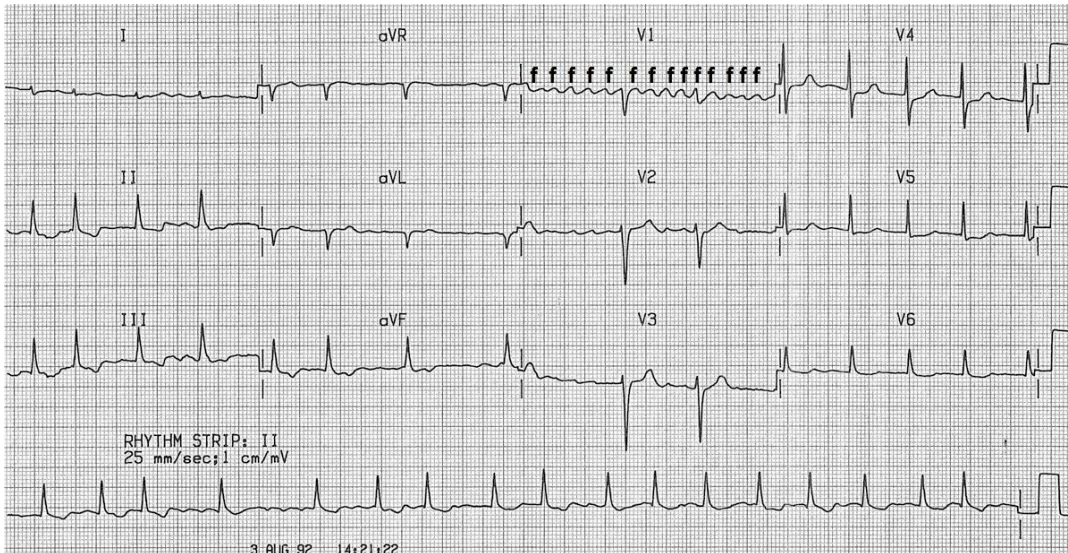
2. Practical works (tasks) that will be performed during the lesson:

***Patient K., 78 years old, turned to the doctor with complaints of weakness, shortness of breath, episodes of dizziness. During the examination, blood pressure = 160/60 mmHg, heart rate - 34 per minute. An ECG was taken. Give an analysis of rhythm disturbances on the ECG.***



Answer standard. The frequency of ventricular contractions (R-R interval = 1.6 seconds) on the ECG is 34 per 1 minute, the frequency of atrial contractions (R-R interval) is 100 per 1 minute. The atria contract in their own rhythm (with a frequency of 100 per 1 min), and the ventricles in their own with a frequency of = 34 per 1 min. Such changes are characteristic of complete atrioventricular blockade.

**Patient K., 70 years old, came to the doctor with complaints of palpitations and irregular pulse. During the examination, an arrhythmic pulse with a frequency of 78 per minute was detected, auscultatory heart rate = 98 per minute (pulse deficit = 20). Registered ECG. Give an analysis.**



Answer standard. Since during the examination of the patient, a pulse deficiency was found, and the P wave was absent on the ECG (f waves were recorded instead), the interval between the QRS complexes was different, these characteristics are pathognomonic for atrial fibrillation.

3. Test tasks for self-control:

**1. The P-Q interval is:**

- The time of passage of the impulse through the atria.
- Atrioventricular delay time.
- The time of passage of the impulse from the sinus node to the atrium.
- Time of passage of the pulse through the His system.
- Time of passage of the impulse through the atria, atrioventricular node, His system to the working myocardium.**

**2. Normally, the P-Q interval is equal to:**

- 0.05-0.06 s.
- 0.08-0.09 s.
- 0.10-0.12 s.
- 0.07-0.14 s.
- 0.12-0.12 s.**

**3. What ECG interval is used to determine the frequency of heart impulses?**

- P-Q
- QRS
- QRST
- R-R**

e. P-P

**4. What element of the ECG shows the conduction of the impulse through the AV junction?**

- a. **Segment P-Q**
- b. R-T interval
- c. Zubets R
- d. Zubets T
- e. QRS complex

**5. Which element of the ECG reflects the conduction of the impulse along the legs of the bundle of His?**

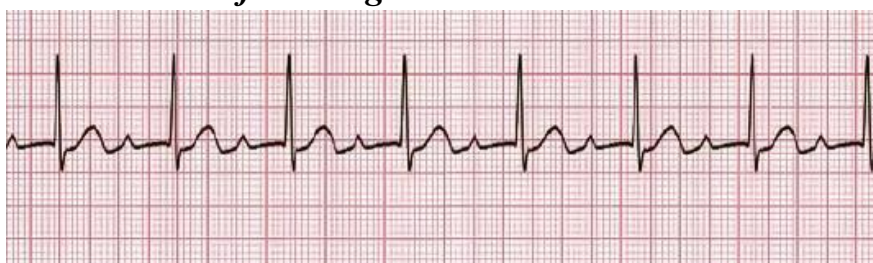
- a. Segment P-Q
- b. P-Q interval
- c. Zubets R
- d. Zubets T
- e. **QRS complex**

**6. Describe the following ECG:**



- a. Migration of the supraventricular pacemaker
- b. Rhythm with AV coupling with simultaneous excitation of the atria and ventricles.
- c. Rhythm with AV coupling with preliminary excitation of the ventricles.
- d. Rhythm with AV coupling with prior excitation of the atria.
- e. **Idioventricular rhythm.**

**7. Describe the following ECG:**



- a. Sinoatrial block,
- b. **Atrioventricular blockade of the first degree,**
- c. Atrioventricular block II degree,
- d. Atrioventricular blockade of the III degree,

**8. Describe the following ECG:**



- a. Sinoatrial block,
- b. Atrioventricular blockade of the first degree,
- c. ***Atrioventricular block II degree,***
- d. Atrioventricular blockade of the III degree,

**9. What does the examination of the patient begin with:**

- +A. From questioning.
- B. From an objective examination.
- V. From instrumental examination.
- G. From a laboratory examination.
- D. From any of the listed items..

**10. Procedure for questioning the patient:**

- A. Passport data, patient's complaints, current medical history, patient's life history.
- +B. Complaints the patient anamnesis life the patient anamnesis current illness.
- V. Complaints the patient anamnesis life the patient anamnesis current illness, passport data.
- D. Passport data, results of objective examinations, complaints of the patient, anamnesis of the current illness, anamnesis of the patient's life.

. List of recommended literature (main, additional, electronic online information resources):

**Basic:**

1. Propedeutics of internal medicine: textbook / Yu.I. Decyk, O.H. Yavorskyi, E.M. Neiko and others; under the editorship O.H. Yavorsky – 6th ed., corr. and added - K.: VSV "Medicine", 2020. - 552 p. + 12 p. color incl.
2. Methods of objective examination in the clinic of internal diseases: training. manual / O.O. Yakymenko, O.E. Kravchuk, V.V. Klochko et al. - Odesa, 2013. - 154 p.
3. Diagnostic methods in the clinic of internal medicine: study guide / A.S. Svintsitskyi. -K.: VSV "Medicine", 2019. – 1008 pp. + 80 pp. color. incl.

**Additional:**

1. Methodology of examination of a therapeutic patient: teaching. manual / S.M. Andreychyn, N.A. Bilkevich, T.Yu. Chernets. – Ternopil: TDMU, 2016. – 260 p.

2. Questioning and physical examination of a patient with a therapeutic profile: Training. manual for students III-IV courses of medicine. of universities / V. E. Neiko, I. V. Tymkiv, M. V. Blyznyuk [and others]. – Iv.-Frankivsk: IFNMU, 2016. – 142 p.

***Electronic information resources:***

1. <http://moz.gov.ua> - Ministry of Health of Ukraine
2. [www.ama-assn.org](http://www.ama-assn.org) – American Medical Association /American Medical Association
3. [www.who.int](http://www.who.int) - World Health Organization
4. [www.dec.gov.ua/mtd/home/](http://www.dec.gov.ua/mtd/home/) - State Expert Center of the Ministry of Health of Ukraine
5. <http://bma.org.uk> – British Medical Association
6. [www.gmc-uk.org](http://www.gmc-uk.org) - General Medical Council (GMC)
7. [www.bundesaerztekammer.de](http://www.bundesaerztekammer.de) – German Medical Association
8. <https://onmedu.edu.ua/>
9. <http://www.kolos2401.net/load/>
10. <https://onmedu.edu.ua/kafedra/propedevtiki-vnutrishnih-hvorob-ta-terapii/>

Topic: Independent study of topics that are not part of the classroom lesson plan.

Purpose: Working out the main theoretical and practical foundations used in instrumental examination, namely instrumental methods of examination of respiratory organs, electrocardiographic examination in combined heart rhythm disorders, instrumental methods of cardiovascular system research, instrumental and laboratory methods of gastrointestinal tract research, syndrome heart failure: basic clinical and instrumental methods of examination, syndromes of remission of the function of the endocrine system.

Basic concepts: Additional examination methods, syndrome, symptom.

Plan

1 Theoretical questions:

electrocardiographic examination in combined heart rhythm disorders.

instrumental methods of cardiovascular system research.

laboratory methods of cardiovascular system research.

instrumental methods of research of the gastrointestinal tract.

laboratory methods of research of the gastrointestinal tract.

instrumental methods of heart failure syndrome research

laboratory methods of heart failure syndrome research.



instrumental methods of researching syndromes of remission of the function of the endocrine system.

laboratory methods of researching syndromes of remission of endocrine function.

instrumental methods of examination of respiratory organs.

laboratory methods of examination of respiratory organs.

Questions for self-control:

Name the main elements of the ECG.

ECG recording algorithm.

ECG analysis algorithm.

Classification of heart rhythm disorders.

Basic laboratory markers of cardiovascular diseases.

Instrumental methods of examination in cardiology, basic methods, indications and contraindications.

Basic laboratory markers of diseases of the gastrointestinal tract.

Instrumental methods of examination in cardiology, basic methods, indications and contraindications.

Main laboratory markers of heart failure.

Instrumental methods of examination of a patient with heart failure, basic methods, indications.

Basic laboratory markers of endocrinological diseases.

Instrumental examination methods in endocrinology, basic methods, indications and contraindications.

Basic laboratory markers of diseases of the respiratory system.

Instrumental examination methods in pulmonology, basic methods, indications and contraindications.

Approximate tasks for processing the theoretical material:

Term	Definition
Electrocardiography	
Ultrasound diagnostics	
X-ray diagnostics	
Computed tomography	

Magnetic resonance topography	
FRI-CT	
Scintigraphy	
Coronarography	
Computed tomography with contrast	
Biochemical study of blood	
Lipidogram	
Glucose tolerance test	
Spirometry	

2. Practical works (tasks) that will be performed during the lesson:

1. A 62-year-old man. He complains of general weakness, dry cough, shortness of breath, heaviness in the chest cavity. On objective examination, the right half of the chest lags behind during breathing, dullness is determined over the lower parts of the right lung by percussion, and breathing is not heard on auscultation. An X-ray of the chest cavity reveals intense homogeneous darkening up to the level of the 4th rib on the right. Mediastinal organs are shifted to the left side. Which disease in this patient should be thought of first of all?

- A. Atelectasis of the right lung. as a complication of central cancer
- B. Caseous pneumonia
- C. Cirrhosis of the right lung
- D. Right-sided exudative pleurisy \*
- E. Acute right-sided polysegmental pneumonia

2. A 52-year-old man has had hypertension for 10 years. For the last 2 years, he has been taking enalapril at a dose of 5 mg per day. Arterial pressure is more often 160-170/100-110 mm Hg. On the ECG, an increase in the amplitude of the R wave, a skew-outward shift of the ST segment and a negative T wave in leads I, aVL, V5, V6. Which of the listed ECG conclusions is the most likely?

- A. complete blockade of the left leg of the bundle of His
- B. left ventricular hypertrophy with systolic overload\*
- C. myocardial infarction without a Q wave in the anterior-lateral wall of the left ventricle
- D. focal changes in the anterior-lateral wall of the left ventricle
- E. left ventricular extrasystole

3. Test tasks for self-control:

1. Patient P., 55 years old, complains of chest pain, which bothers him after physical or emotional stress, shortness of breath, palpitations. What additional questions should the doctor ask about the pain?

- A. Character, intensity
- B. Duration, irradiation
- S. What is accompanied by?
- D. Provocative and mitigating factors
- E. \*All answers are correct

2. Patient M., 58 years old, complains of general weakness, shortness of breath with minor physical exertion, swelling of the lower extremities that appear in the second half of the day, palpitations with physical exertion or after eating, often with increased blood pressure, nausea bothers him. Damage to which system comes to the fore?

- A. Gastrointestinal tract
- V. Dykhalnaya
- S. \*Cardiovascular
- D. Urinary

E. Endocrine

3. Patient S., 40 years old, complains of high blood pressure and swelling on the face and lower limbs (first appeared on the face). During examination, blood pressure - 160/100 PS - 80/xv., swellings on the eyelids are more pronounced in the morning, on the legs they are localized to the upper third of the thighs, the skin above them is pale, warm to the touch, when pressed, the swellings are soft. From the anamnesis, it is known that a month ago the patient suffered from hypothermia and fell ill with angina and was taking ampicillin. What is the origin of swelling?

A. Damage to the endocrine system

B. Damage to the cardiovascular system

S. \*Kidney damage

D. Allergic reaction to medication

E. All answers are incorrect

4. Physical examination of the patient revealed tenderness on palpation of the abdomen in the epigastric area, a positive Mendelian symptom. For which pathological condition can the specified changes be characteristic?

a. Duodenal ulcer in the exacerbation phase

b. Gastroesophageal reflux disease

c. Chronic gastritis in the exacerbation phase \*

d. Esophagitis in the acute phase

e. Chronic enteritis in the exacerbation phase

5. Fecal occult blood analysis makes it possible to detect:

a. Decreased hemoglobin level

b. Intestinal obstruction

c. Gastrointestinal bleeding \*

d. Gallstone disease

e. Worm infestation

6. A 49-year-old patient with a history of stable angina pectoris, functional class II. He was admitted to the cardiology department with complaints of chest pains of a compressive nature, which appeared suddenly and were not relieved by nitroglycerin. Objectively: Ps – 108 bpm, BP – 120/80 mm Hg, single extrasystoles. On the ECG: heart rate – 108 bpm, rarely – left ventricular extrasystoles, depression of the ST segment in I, aVL and high, sharp T waves in V2, V3, V4 leads. What is the most likely diagnosis?

A. Angina is stable, FC IV.

B. Angina is stable, FC II.

C. Myocardial infarction.

D. Angina is unstable.\*

E. Angina variant.

7. The patient is 27 years old, with a history of acute rheumatic fever. He complains of shortness of breath during significant physical exertion, periodic attacks of palpitations. Objectively: acrocyanosis, Ps - 98 bpm, arrhythmic, BP - 105/70 mm Hg. The upper limit of the relative dullness of the heart along the upper edge of the II rib, the upper limit of the absolute dullness of the heart coincides with the upper limit of the relative dullness of the heart. The first tone at the apex is amplified, a three-part rhythm is heard, the accent of the second tone over the pulmonary artery, a presystolic murmur over the apex and at the fifth point of auscultation. What is the most likely diagnosis?

A. Defect of the interventricular membrane.

B. Insufficiency of the mitral valve.

C. Mitral valve prolapse.

D. Stenosis of the left atrioventricular opening.\*

E. Insufficiency of the aortic valve.

8. A 24-year-old patient with a history of severe acute viral infection a month ago. He complains of pain in the lower third of the chest on the left, periodic attacks of palpitations, shortness of breath with minor physical exertion, weakness, sweating. During the last three weeks, a subfebrile temperature has been maintained. Recently, he notes an increase in temperature to 39-40°C, chills. Objectively: the skin is pale with a moderate jaundice shade, there are bruises, tachycardia, above the aorta - systolic and diastolic murmurs of varying intensity. On palpation, the liver and spleen are enlarged. What is the most likely preliminary diagnosis?

- A. Left-sided lower lobe pneumonia.
- B. Infectious endocarditis.\*
- C. Kidney abscess.
- D. Rheumatic attack.
- E. Splenic infarction.

9. Patient M., 62 years old, complains of cough with sputum in the form of "raspberry jelly", weakness, loss of body weight. He has been smoking cigarettes for 40 years.

You can think that the patient:

\*AND. Lung cancer

- B. Bronchiectatic disease
- S. Croupous pneumonia
- D. Tuberculosis of the lungs
- E. Lung abscess

10. Patient K., 36 years old, complains of shortness of breath, cough with the release of moderate-quality mucous-purulent sputum, a feeling of heaviness in the right side. During the examination, the doctor found the absence of a voice tremor, a dull lung sound, and the absence of vesicular breathing on the right below the angle of the scapula.

What pathological process is most likely to be thought of:

- A. Lung emphysema

## V. Pneumothorax

\*WITH. Exudative pleurisy

D. Dry pleurisy

E. Compression atelectasis

11. A patient with a heart defect complains of shortness of breath, hemoptysis, palpitations. The examination revealed: cyanosis of the lips, tip of the nose, cyanotic blush on the cheeks, pulsation in the epigastric area, which intensifies during inhalation, swelling of the lower legs. The pulse on the left radial artery is less filling than on the right. Blood pressure 120/70 mmHg.

What caused these pulse signs?

A. Aneurysm of the aortic arch

B. Enlarged left ventricle

S. Enlarged left atrium\*

D. Thrombosis of the left radial artery

E. High blood pressure

12. Complaints of palpitations, shortness of breath with minor physical exertion for 15 years and has been suffering from mitral heart disease. On examination, acrocyanosis, "butterfly" on the cheeks, half-sitting position. A heart impulse is observed in the intercostal space to the middle from the mid-clavicular line. Pulsations in the epigastrium, in the II intercostal space on the left. impulse in U When palpating the area of the heart, where will the diastolic cat's purr be determined?

A. Apex of the heart\*

B. Second intercostal space on the left

C. Second intercostal space on the right

D. Epigastric area

E. Jugular fossa

13. During the examination of the patient, it was found: a) when percussing the borders of the heart - an increase in the upper border; b) during auscultation of the heart – a quail melody at the top, an accent of the II tone over the pulmonary artery; c) on the ECG, the P wave is two-humped, with a width of 0.12 seconds in I, II, AVL, V5, V6. This is typical for:

- A. \*Left atrial hypertrophy in mitral stenosis
- B. Left atrial hypertrophy in mitral insufficiency
- S. Hypertrophy of the left ventricle in stenosis of the aortic orifice
- D. Hypertrophy of the right ventricle with stenosis of the pulmonary artery
- E. Hypertrophy of the left ventricle and left atrium

Topic: Preparation for differential assessment

Purpose: Preparation for differential assessment. Repetition of topics covered during the academic year. Repetition of theoretical and practical questions and differential assessment according to the list of questions and skills presented on

Basic concepts: Examination methods, syndrome, symptom, additional examination methods, history.

Plan

1. Theoretical questions:

### **Questions for preparing for the final inspection**

1. Internal medicine propaedeutics as a scientific discipline, its goals and tasks. Scheme of medical history. Medical history.
2. Procedure for interviewing the patient. The main and additional complaints of the patient. The importance of history in the study of the patient. Scheme of medical history.
3. General examination of the patient. Assessment of the patient's general condition. Gradations of the severity of the condition, their clinical characteristics. Assessment of consciousness. Variants of impaired consciousness and their clinical signs, diagnostic significance.
4. General overview. Position of the patient in bed. Assessment criteria and clinical characteristics of constitutional types.
5. General examination of the patient. Assessments of consciousness. The face of a



patient with pathology of internal organs: variants, and their clinical characteristics and diagnostic significance.

6. General overview. Evaluation criteria of skin and visible mucous membranes and subcutaneous fat layer. Examination of the skin in normal conditions and in diseases of internal organs and their diagnostic significance.

7. General overview. Examination of lymph nodes, sequence of palpation and characteristics of lymph node properties, diagnostic value of changes.

8. General overview. Methods of measuring body temperature, types of temperature curves and their diagnostic value in various diseases.

9. Complaints of patients with respiratory diseases: chest pain, cough, shortness of breath and suffocation - details of complaints, diagnostic significance.

10. Shortness of breath in diseases of the respiratory organs: definition of the concept, types, causes and mechanism of occurrence. Detailing and diagnostic value of shortness of breath in diseases of the respiratory organs. Definition of the concept of "suffocation", types, causes and mechanisms of occurrence.

11. Cough in diseases of the respiratory organs: definition of the concept of "cough", types, causes and mechanism of its occurrence. Detailing and diagnostic value of cough in respiratory diseases.

12. Hemoptysis in diseases of the respiratory organs and pulmonary bleeding: definition of concepts, causes and mechanisms of their occurrence. Detailing and diagnostic value of hemoptysis and pulmonary bleeding.

13. Data of a general examination of the chest, types of breathing. Pathological types of breathing, their diagnostic value. Options for changing the shape of the chest.

14. Palpation of the chest - vocal tremor: definition of the concept and mechanism of occurrence. Variations of vocal tremor in pathology and their diagnostic value. The diagnostic value of increasing the general and local resistance of the chest in diseases of the respiratory organs.

15. Lung percussion. Name the types of percussion sound. Pulmonary percussion sound and its physical properties. Characteristics of the percussion sound over the lungs are normal.

16. Auscultation of the lungs. Basic respiratory noises: mechanism of occurrence, clinical characteristics in a healthy person, physiological variants. Changes in the main breath sounds in pathology.

17. Auscultation of the lungs. Side respiratory noises. Causes and mechanism of their occurrence, clinical characteristics. Diagnostic value. Differences of secondary respiratory noises from each other.

18. Physical and microscopic properties of sputum according to general sputum analysis and their diagnostic significance. Properties of pleural fluid and their diagnostic value in respiratory diseases. Data of chemical and microscopic examination of pleural fluid and their diagnostic value.

19. Methods of studying the function of external breathing and their diagnostic possibilities. Spirometry. Types of respiratory disorders according to spirometry.

20. Pulmonary tissue compaction syndrome. Diagnosis of the syndrome based on the

results of the survey and physical examination (palpation, percussion, auscultation). Causes of occurrence. Additional research methods.

21. Syndrome of bronchial obstruction of the lungs. Diagnosis of the syndrome based on the results of the survey and physical examination (palpation, percussion, auscultation). Causes of occurrence. Additional research methods.

22. Syndrome of fluid accumulation in the pleural cavity. Diagnosis of the syndrome based on the results of the survey and physical examination (palpation, percussion, auscultation). Causes of occurrence. Additional research methods.

23. Syndrome of accumulation of air in the pleural cavity. Diagnosis of the syndrome based on the results of the survey and physical examination (palpation, percussion, auscultation). Causes of occurrence. Additional research methods.

24. Syndrome of the presence of a cavity in the lungs. Diagnosis of the syndrome based on the results of the survey and physical examination (palpation, percussion, auscultation). Causes of occurrence. Additional research methods.

25. Syndrome of increased airiness of the lungs. Diagnosis of the syndrome based on the results of the survey and physical examination (palpation, percussion, auscultation). Causes of occurrence. Additional research methods.

26. Respiratory failure syndrome: definition of the concept, types, causes and mechanisms of occurrence. Types of ventilation disorders, causes of their occurrence.

27. Croupous pneumonia: etiology, classification, results of clinical examination, main syndromes, complications and principles of treatment.

28. Bronchopneumonia: etiology, classification, results of clinical examination, main syndromes, complications and principles of treatment.

29. Acute and chronic bronchitis (COPD): etiology, classification, clinical data, main syndromes, complications, principles of treatment.

30. Pleurisy: etiology, results of clinical examination, main syndromes, complications, principles of treatment.

31. Purulent lung diseases (lung abscess, bronchiectasis): etiology, clinical examination results, complications, treatment principles.

32. The main complaints in diseases of the circulatory system and their diagnostic value.

33. Coronogenic and non-coronogenic pains in the area of the heart: causes and mechanism of their occurrence, details and their diagnostic value. Differences between coronary and non-coronary pains.

34. Shortness of breath in diseases of the cardiovascular system: definition of the concept of "shortness of breath", causes and mechanism of shortness of breath. Suffocation attack.

35. Data of a general review and review by region for diseases of the cardiovascular system. Overview of the precordial region. Diagnostic value.

36. Heart palpation. The main characteristics of apical and cardiac impulses. The diagnostic value of palpation of the heart, the "cat's purring symptom."

37. Causes and diagnostic value of displacement and expansion of the right border of relative cardiac dullness. Diagnostic value of displacement and expansion of the left border of relative cardiac dullness. Causes and diagnostic value of vascular bundle expansion.

38. The mechanism of formation of the first tone. Causes of strengthening and

weakening of the first tone of the heart in normal and pathological conditions. The mechanism of formation of the II tone. Definition of the concept of accent II tone and its weakening in normal and pathological conditions. The concept of bifurcation and splitting of the II tone. Canceled I tone and II tone.

39. Pathological heart tones. Mechanism of formation of III and IV tones, mitral valve opening tone.

40. Classification of noises heard during auscultation of the heart and blood vessels, the mechanism of their occurrence. Differences between organic and functional noises.

41. Pulse properties. Characteristics of pulse properties in a healthy person. Changes in pulse properties in pathology and their diagnostic significance.

42. Blood pressure measurement methods, WHO standards. Concept of mild, moderate, severe, systolic arterial hypertension and definition of hypotension.

43. Methods of laboratory and instrumental diagnosis of diseases of the cardiovascular system, and their diagnostic possibilities. Methodology and technique of electrocardiogram registration. ECG signs of hypertrophy of the heart. Read the ECG with hypertrophy of the chambers of the heart.

44. Clinical and electrocardiographic diagnosis of atrial fibrillation and atrial flutter. Read the ECG with atrial fibrillation and flutter.

45. Clinical and electrocardiographic diagnosis of supraventricular and ventricular extrasystole. Read the ECG with extrasystole.

46. Clinical and electrocardiographic diagnosis of heart blocks. Read the ECG with post-expiratory and longitudinal heart blocks.

47. Electrocardiographic diagnosis of myocardial infarction. Read the ECG with MI.

48. Mitral stenosis: causes, mechanisms of hemodynamic compensation and decompensation; main complaints, the mechanism of their occurrence, clinical characteristics, diagnostic methods.

49. Mitral valve insufficiency: causes, mechanisms of hemodynamic compensation and decompensation; main complaints, the mechanism of their occurrence, clinical characteristics, diagnostic methods.

50. Aortic valve stenosis: causes, mechanisms of hemodynamic compensation and decompensation; main complaints, the mechanism of their occurrence, clinical characteristics, diagnostic methods.

51. Aortic valve insufficiency: causes, mechanisms of hemodynamic compensation and decompensation; main complaints, the mechanism of their occurrence, clinical characteristics, diagnostic methods.

52. Arterial hypertension syndrome: causes and mechanism of development; complaints of patients, results of clinical examination of patients. Complication.

53. Hypertensive disease and symptomatic arterial hypertension. Clinical picture. Classification. Laboratory and instrumental methods of diagnosis. Principles of treatment.

54. CHD: syndrome of acute and chronic coronary insufficiency: definition. Main complaints and examination results of patients with angina pectoris. Instrumental and laboratory methods of diagnosis in angina pectoris syndrome. Principles of treatment.

55. CHD: myocardial infarction. Clinical picture. Classification. Diagnostic methods.

Principles of treatment.

56. Chronic heart failure syndrome. Definition, clinical picture, classification by stages and functional classes, diagnostic methods. Principles of treatment.
57. The main complaints of patients with diseases of the gastrointestinal tract, their characteristics and semiological significance. Examination data of patients with pathology of the gastrointestinal tract and their semiological significance. Examination of the oral cavity, abdomen, their clinical significance.
58. Abdominal palpation. Objectives and tasks during superficial and deep palpation of the abdomen. Division of the abdomen into anatomical regions.
59. Fractional study of the secretory activity of the stomach with a thin probe, method of conducting. Kay's test (histamine test) - interpretation of results.
60. Methodology and goals of performing duodenal sounding. Study of duodenal contents.
61. Acute and chronic gastritis: classification, main symptoms and syndromes, clinical, laboratory and instrumental methods of diagnosis.
62. The main syndromes and symptoms of peptic ulcer disease of the stomach and duodenum. Diagnostic methods. Complication.
63. The main symptoms and syndromes in diseases of the liver and biliary tract. Hepatitis. Clinical picture, main syndromes. Diagnostic methods.
64. Jaundice syndrome, pathogenetic classification, detection methods. Laboratory diagnostics. Differential diagnosis of jaundice.
65. Portal hypertension syndrome. Cirrhosis. Clinical, laboratory and instrumental methods of diagnosis.
66. The main complaints of patients with urinary diseases, the mechanism of their development and semiological significance.
67. Characteristic signs during examination of patients with pathology of the urinary system. Results of palpation and percussion of the kidneys. Edema syndrome in kidney disease. Mechanism of occurrence, features of renal and cardiac edema.
68. Mechanism of development of arterial hypertension syndrome in kidney diseases. Peculiarities of blood pressure profile in kidney pathology. Complication of renal arterial hypertension.
69. Urinary syndrome with kidney disease. Clinical and laboratory signs of urinary syndrome.
70. Nephrotic syndrome in kidney pathology. Causes, symptomatology and clinical and laboratory diagnostics.
71. Syndrome of chronic renal failure. Etiology, clinical signs. Diagnosis of CKD syndrome.
72. Chronic glomerulonephritis: etiology, symptomatology, laboratory data, principles of treatment.
73. Chronic pyelonephritis: etiology, symptomatology, laboratory data, principles of treatment.
74. Typical complaints and physical examination data in diseases of hematopoietic organs. Palpation and percussion of the spleen.

75. Anemia syndrome. Clinical and laboratory signs of anemia. Iron deficiency anemia. Clinical picture. Principles of treatment.

76. Hemorrhagic syndrome. Types of bleeding. Laboratory diagnosis of hemorrhagic diathesis.

77. Hemoblastosis. Definition of the concept. Clinical picture. Main syndromes. Changes in blood analysis in hemoblastosis (chronic myelo- and lymphocytic leukemia).

78. Diabetes mellitus: etiology, symptomatology, classification of diabetes mellitus, data of additional studies. Complications of diabetes and principles of treatment. Types of coma in diabetes. Diagnosis of hyper- and hypoglycemic coma. Treatment.

79. Diseases of the thyroid gland - hyperthyroidism and hypothyroidism: etiology, clinical picture, diagnosis, complications, principles of treatment.

Approximate tasks for processing the theoretical material:

Term	Definition
General blood test	
General analysis of urine	
Pneumonia	
Bronchial asthma	
COPD	
Arterial hypertension	
Coronary heart disease	
Heart failure	
Gastritis	
Jaundice	
Pyelonephritis	
Glomerulonephritis	
Chronic kidney disease	
Diabetes	
Anemia	

## 2. Practical works (tasks) that will be performed during the lesson:

1. Decoding the ECG. Interpretation of found changes.
  2. Evaluate clinical blood analysis.
  3. Evaluate the clinical urinalysis.
  4. Evaluate the clinical analysis of sputum.
  5. Methodology of examination and palpation of the chest.
  6. Methodology of comparative lung percussion.
  7. The technique of topographic percussion of the lungs.
  8. Determination of the excursion of the lower edge of the lungs
  9. Lung auscultation technique.
  10. Techniques for performing bronchophonia of the lungs
  11. Technique of palpation of the precordial region.
  12. Methodology for assessment of apical shock
  13. The method of assessment of cardiac impulse
  14. Technique of heart percussion. Determination of the limits of relative dullness of the heart.
  15. Technique of heart percussion. Determination of the limits of absolute dullness of the heart.
  16. Technique of heart percussion. Determination of the boundaries of the vascular bundle
  17. Method of auscultation of the heart.
  18. Arterial pulse research methodology. Pulse properties.
  19. Blood pressure measurement technique.
  20. Technique of superficial abdominal palpation.
  21. Technique of deep abdominal palpation.
  22. The method of determining the lower border of the stomach.
  23. Methodology for determining liver boundaries according to Kurlov.
  24. Liver palpation technique.
  25. Kidney palpation technique.
  26. Percussion of the kidneys is a symptom of parsnip and its diagnostic significance
  27. Determining the size of the spleen by percussion method
  28. Method of palpation of the spleen.
  29. Methods of palpation of lymph nodes, determination of edema.
  30. Method of palpation of the thyroid gland.
3. Test tasks for self-control:

**The presence of which diseases in the patient must be clarified?**

- A. Tuberculosis.
- B. Venereal diseases.
- B. Viral hepatitis.
- G. AIDS.
- +D. All of the above is listed.

**When determining voice tremors, they use:**

- A. By deep sliding palpation;
- B. Penetrating palpation;
- +S. Bimanual palpation;
- D. By the fluctuation method.

**When percussing the lungs over the entire surface, more on the front surface, a box sound is determined. Your diagnostic assumption.**

- A. Cavern in the lung
- B. Pneumothorax
- C. *Emphysema of the lungs* +
- D. Obturational atelectasis of the lungs
- E. Exudative pleurisy

**What is the basis of crepitation?**

- A. A. Stenosis of the lumen of the bronchi
- B. B. The presence of a cavity containing liquid and air
- C. B. Deglutition of stuck alveoli on inhalation, on the walls of which fibrin has been deposited
- D. G. The presence of bronchiectasis filled with pus
- E. D. Friction of inflamed pleural sheets

**A 48-year-old patient complains of an attack of pain behind the sternum, which does not stop for more than 30 minutes, pain of a squeezing and burning nature, accompanied by radiation to the left shoulder, arm, under the left shoulder blade. What pathology can be thought of based on the patient's complaints?**

- A. Angina
- B. *Myocardial infarction*
- S. Myocarditis
- D. Cardiac asthma attack
- E. Thromboembolism of the pulmonary artery

**II tone on the pulmonary artery increases in case of:**

- A. tricuspid insufficiency;
- B. pulmonary artery stenosis;
- C. +pulmonary hypertension;
- D. arterial hypertension;

**A 30-year-old patient complains of shortness of breath when walking, heart pain and palpitations. Objective state of moderate severity, acrocyanosis.**

**Auscultatively: I tone at the apex is weakened, rough systolic noise at the apex, emphasis of the II tone on a. pulmonalis. What pathology can you think of?**

- A. Insufficiency of aortic valves
- +V. Insufficiency of the mitral valve
- C. Stenosis of aortic valves
- D. Mitral stenosis
- E. Insufficiency of the tricuspid valve

**What bioelectrical process does the T wave reflect?**

- A. Repolarization of the left ventricle
- B. Repolarization of the left atrium
- S. Repolarization of both atria
- D. Depolarization of both atria
- +E. *Repolarization of both ventricles*

**What is the ECG sign of ventricular flutter?**

- A. Tachycardia-bradycardia syndrome
- B. Alternation of different shape, amplitude and polarity of the P wave
- C. There is no regular relationship between the P wave and the QRS complex
- D. Disappearance of the R wave
- +E. *The ECG has the form of a sinusoid*

**A 60-year-old patient complains of constant intense pain in the right hypochondrium, weight loss, and loss of appetite. The skin is icteric with a greenish tint. The lower edge of the liver protrudes to the level of the navel, stony density, large nodule. In the urine - bilirubin +++++, they did not have it.**

**What type of jaundice can you think of?**

- A - parenchymatous
- +B - mechanical
- C - hemolytic
- D is false

**The patient's X-ray examination showed a decrease in the size of one of the kidneys. This can be beneficial:**

- +A. chronic pyelonephritis
- B. acute pyelonephritis
- B. the presence of cysts in the kidney tissue
- G. amyloidosis of the kidneys
- D. acute glomerulonephritis

**When examining the urine according to Zimnitsky, patient K. found: specific gravity of 1 serving - 1012, 2 servings - 1011, 3 servings - 1010, 4 servings - 1012, 6 servings - 1010, 7 servings - 1012, 8 servings - 1013. The presence of which can a pathological symptom be assumed in the patient?**

- A. Hypersthenuria
- +B. Hyposthenuria
- B. Leukocyturia
- M. Uraturia



D. Hematuria

**A 21-year-old patient came to the clinic because of painful and prolonged menstruation, which takes the form of bleeding. General weakness, dizziness, tinnitus, shortness of breath, hair loss and brittle nails are a concern. Blood analysis: HB-56 g/l; er-2.8 t/l; CPU-0.6; leuk.-2.5 g/l; ESR-14 mm/h, platelets 139 g/l; reticulocytes-4.5%; anisocytosis with a tendency to microcytosis, hypochromia. Which of the diagnoses is possible?**

+A. iron deficiency anemia;

B. B12 deficiency anemia;

S. autoimmune anemia;

D. aplastic anemia;

E. Werlhof's disease.

**Patient M., 40 years old, complains of thirst (drinks up to 4 liters of water per day), dry mouth, weakness and itching of the skin. Objectively: height-170 cm, weight-58 kg. Skin and mucous membranes are dry. Tones of the heart are sonorous, clear. Pulse-90 in 1 min. rhythmic, blood pressure -120/80 mm Hg. In the lungs - without features. The language is dry. Abdomen is soft, painless. What disease should the doctor think about?**

A. Chronic nephritis.

B. Myocarditis.

+S. Diabetes.

D. Hypothyroidism.

E. Thyrotoxicosis.