

MINISTRY OF SCIENCE AND HIGHER EDUCATION OF THE RUSSIAN FEDERATION

**Federal State Autonomous Educational Institution of Higher Education
«National Research Lobachevsky State University of Nizhny Novgorod»**

Институт клинической медицины

УТВЕРЖДЕНО
решением Ученого совета ННГУ
протокол № 10 от 02.12.2024 г.

Working programme of the discipline
Faculty therapy and occupational diseases

Higher education level

Specialist degree

Area of study / speciality

31.05.01 - General Medicine

Focus /specialization of the study programme

General Medicine

Mode of study

full-time

Nizhny Novgorod

Year of commencement of studies 2025

1. Место дисциплины в структуре ОПОП

Дисциплина Б1.О.36 Факультетская терапия и профболезни относится к обязательной части образовательной программы.

2. Планируемые результаты обучения по дисциплине, соотнесенные с планируемыми результатами освоения образовательной программы (компетенциями и индикаторами достижения компетенций)

Формируемые компетенции (код, содержание компетенции)	Планируемые результаты обучения по дисциплине (модулю), в соответствии с индикатором достижения компетенции		Наименование оценочного средства	
	Индикатор достижения компетенции (код, содержание индикатора)	Результаты обучения по дисциплине	Для текущего контроля успеваемости	Для промежуточной аттестации
УК-8: Способен создавать и поддерживать в повседневной жизни и в профессиональной деятельности безопасные условия жизнедеятельности и для сохранения природной среды, обеспечения устойчивого развития общества, в том числе при угрозе и возникновении чрезвычайных ситуаций и военных конфликтов	УК-8.1: Обеспечивает безопасные и комфортные условия труда на рабочем месте, в т.ч. с помощью средств защиты. УК-8.2: Выявляет и устраняет проблемы, связанные с нарушениями техники безопасности на рабочем месте. УК-8.3: Осуществляет действия по предотвращению возникновения чрезвычайных ситуаций (природного и техногенного происхождения) на рабочем месте, в т.ч. с помощью средств защиты.	УК-8.1: <i>Ensure safe and comfortable working conditions at the workplace, including with the help of protective equipment.</i> УК-8.2: <i>Identify and eliminate problems related to workplace safety violations.</i> УК-8.3: <i>To take measures to prevent the occurrence of emergencies (of natural and man-made origin) in the workplace, including using protective equipment.</i>	Доклад-презентация	Экзамен: Ситуационные задания Зачёт: Тест
ОПК-3: Способен к противодействию применения допинга в спорте и борьбе с ним	ОПК-3.1: Информирован о фармакологических свойствах препаратов, используемых в качестве допинга и их влияние на организм человека ОПК-3.2: Разъясняет пагубность принудительного повышения спортивной работоспособности и побочные эффекты на организм. ОПК-3.3: Осуществляет мероприятия по профилактике применения допинга	ОПК-3.1: <i>Knows about the pharmacological properties of drugs used as doping and their effect on the human body</i> ОПК-3.2: <i>Explain the harmfulness of forced improvement of athletic performance and side effects on the body.</i> ОПК-3.3: <i>Implement measures to prevent the use of doping</i>	Дебаты	Зачёт: Круглый стол Экзамен: Контрольные вопросы

<p>ПК-10: Готовность к ведению медицинской документации, применению социально-гигиенических методик сбора и медико-статистического анализа информации о показателях здоровья населения и оценке качества оказания медицинской помощи с использованием основных медико-статистических показателей</p>	<p>ПК-10.1: Знать социально-гигиенические методики сбора и медико-статистический анализ информации о показателях здоровья населения ПК-10.2: Уметь собрать и проанализировать информацию о показателях здоровья населения ПК-10.3: Владеть навыками сбора и медико-статистического анализа информации показателей здоровья населения</p>	<p>ПК-10.1: <i>Knows social and hygienic methods of collecting and medical and statistical analysis of information on public health indicators</i></p> <p>ПК-10.2: <i>Is able to collect and analyze information about public health indicators</i></p> <p>ПК-10.3: <i>Possesses the skills of collecting and medico-statistical analysis of information on public health indicators</i></p>	<p>Доклад</p>	<p>Экзамен: Контрольные вопросы</p> <p>Зачёт: Дискуссионное обсуждение</p>
<p>ПК-11: Готовность к применению основных принципов организации и управления в сфере охраны здоровья граждан, в медицинских организациях и их структурных подразделениях, в том числе организации медицинской помощи при чрезвычайных ситуациях, в том числе медицинской эвакуации, управления в сфере охраны здоровья граждан, в медицинских организациях их структурных подразделениях, в том числе организации медицинской помощи при чрезвычайных ситуациях, в том числе медицинской эвакуации</p>	<p>ПК-11.1: Знать Конституцию Российской Федерации; законы и иные нормативные правовые акты Российской Федерации в сфере здравоохранения, защиты прав потребителей и санитарно-эпидемиологического благополучия населения; нормативные правовые акты, регулирующие вопросы здравоохранения; теоретические основы социальной гигиены и организации здравоохранения, медицинской статистики; теоретические и организационные основы государственного санитарно-эпидемиологического надзора и его обеспечения; системы управления и организацию труда в здравоохранении; статистику состояния здоровья населения; организацию скорой, первичной медико-санитарной медицинской помощи: специализированной, в том</p>	<p>ПК-11.1: <i>Knows the Constitution of the Russian Federation; laws and other regulatory legal acts of the Russian Federation in the field of healthcare, consumer rights protection and sanitary and epidemiological welfare of the population; regulatory legal acts regulating health issues; theoretical foundations of social hygiene and healthcare organization, medical statistics; theoretical and organizational foundations of state sanitary and epidemiological surveillance and its provision; systems of management and organization of labor in healthcare; statistics on the health status of the population; organization of emergency and primary health care: specialized, including high-tech medical care; organization of outpatient and polyclinic care for the population.</i></p> <p>ПК-11.2: <i>Is able to perform functional duties when working as part of special health units, formations and institutions of the disaster</i></p>	<p>Индивидуальное устное собеседование</p>	<p>Зачёт: Доклад-презентация</p> <p>Экзамен: Контрольные вопросы</p>

	<p>числе высокотехнологичной медицинской помощи; организацию амбулаторно-поликлинической помощи населению.</p> <p>ПК-11.2: Уметь выполнять функциональные обязанности при работе в составе специальных формирований здравоохранения, формирований и учреждений службы медицины катастроф; участвовать в организации и проведении санитарно-гигиенических мероприятий в ЧС, участвовать в организации и проведении противоэпидемических мероприятиях в ЧС, осуществлять основные мероприятия по защите населения, больных, медицинского персонала и медицинского имущества от поражающих факторов чрезвычайных ситуаций; участвовать в мероприятиях при обсервации и карантине.</p> <p>ПК-11.3: Владеть методами планирования деятельности медицинских организаций; методами экономического анализа состояния медицинской организации; использования законодательных и нормативно-правовых документов, регламентирующих функционирование системы здравоохранения Российской Федерации; навыками ведения служебной документацией в здравоохранении; навыками формирования и анализа учетно-отчетной документации медицинской организации, годовых отчетов</p>	<p>medicine service; participate in the organization and conduct of sanitary and hygienic measures in emergency situations, participate in the organization and conduct of anti-epidemic measures in emergency situations, carry out basic measures to protect the population, patients, medical personnel and medical property from the damaging factors of emergency situations; participate in surveillance and quarantine activities.</p> <p>ПК-11.3: He is proficient in methods of planning the activities of medical organizations; methods of economic analysis of the state of a medical organization; the use of legislative and regulatory documents regulating the functioning of the healthcare system of the Russian Federation; skills in maintaining official documentation in healthcare; skills in forming and analyzing accounting records of a medical organization, annual reports</p>		
ПК-3: Готовность	ПК-3.1: Знать методы	ПК-3.1:	Опрос	

<p>к сбору и анализу жалоб пациента, данных его анамнеза, результатов осмотра, лабораторных, инструментальных, патолого-анатомических и иных исследований в целях распознавания</p> <p>состояния или установления факта наличия или отсутствия заболевания, проведение дифференциальной диагностики</p>	<p>сбора анамнеза, жалоб, осмотра больного с терапевтической патологией для распознавания заболеваний, этиологию, патогенез, и клинику наиболее часто встречающихся заболеваний внутренних органов;</p> <p>современную классификацию, принципы и особенности основных методов клинических, лабораторных и инструментальных методов обследования, их диагностическое значение</p> <p>ПК-3.2: Уметь получить информацию о заболевании, интерпретировать жалобы, анамнез заболевания и жизни, данные, применить объективные методы обследования, выявить общие и специфические признаки заболевания; построить план обследования больного с учетом стандартов и интерпретировать дополнительные методы обследования (лабораторно-инструментальные) с учетом нормы</p> <p>ПК-3.3: Владеть методами сбора анамнеза, жалоб больного с терапевтической патологией; навыком составления плана дополнительного обследования больного; интерпретацией результатов лабораторных и инструментальных исследований и проведения дифференциальной диагностики</p>	<p>He knows the methods of collecting anamnesis, complaints, examination of a patient with therapeutic pathology for disease recognition, etiology, pathogenesis, and clinic of the most common diseases of internal organs; modern classification, principles and features of the main methods of clinical, laboratory and instrumental examination methods, their diagnostic significance</p> <p>ПК-3.2: He is able to obtain information about the disease, interpret complaints, anamnesis of the disease and life, data, apply objective examination methods, identify common and specific signs of the disease; build a patient examination plan taking into account standards and interpret additional examination methods (laboratory and instrumental) taking into account the norm.</p> <p>ПК-3.3: He knows the methods of collecting anamnesis, complaints of a patient with therapeutic pathology; the skill of drawing up a plan for additional examination of the patient; interpretation of the results of laboratory and instrumental studies and differential diagnosis</p>		<p>Экзамен: Кейс-задача</p> <p>Зачёт: Тест</p>
<p>ПК-4: Готовность к определению у пациента основных патологических состояний, симптомов, синдромов заболеваний,</p>	<p>ПК-4.1: Знать этиологию, патогенез заболеваний соответственно с Международной статистической классификацией болезней и проблем, связанных со</p>	<p>ПК-4.1: Knows the etiology and pathogenesis of gynecological diseases according to the International Statistical Classification of Diseases and Health-related Problems, X</p>	<p>Индивидуальное устное собеседование</p>	<p>Зачёт: Контрольные вопросы</p> <p>Экзамен:</p>

<p>нозологических форм в соответствии с Международной статистической классификацией болезней и проблем, связанных со здоровьем, X пересмотра</p>	<p>здоровьем X пересмотра ПК-4.2: Уметь определить основные симптомы, синдромы нозологических форм заболеваний в соответствии с Международной статистической классификацией болезней и проблем, связанных со здоровьем X пересмотра ПК-4.3: Владеть навыками постановки диагноза на основании симптомов, синдромов нозологических форм заболеваний в соответствии с Международной статистической классификацией болезней и проблем, связанных со здоровьем X пересмотра</p>	<p>revision ПК-4.2: <i>Is able to identify the main symptoms, syndromes of nosological forms of gynecological diseases in accordance with the International Statistical Classification of Diseases and Health-related Problems, X revision</i> ПК-4.3: <i>Possesses the skills of making a diagnosis based on the symptoms, syndromes of nosological forms of gynecological diseases in accordance with the International Statistical Classification of Diseases and Health-related Problems, X revision</i></p>		<p>Кейс-задача</p>
<p>ПК-5: Готовность к определению тактики ведения пациентов с учетом возраста, с различными нозологическими формами (разработка плана лечения, назначение медикаментозных и немедикаментозных средств согласно клиническим рекомендациям) в том числе оказание паллиативной медицинской помощи</p>	<p>ПК-5.1: Знать алгоритмы постановки диагноза и лечения и тактику ведения пациентов с различными нозологическими формами ПК-5.2: Уметь определять необходимую тактику ведения пациентов с различными нозологическими формами ПК-5.3: Владеть алгоритмами постановки диагноза и лечения и навыком определения тактики ведения пациентов с различными нозологическими формами</p>	<p>ПК-5.1: <i>He knows the algorithms of diagnosis and treatment and the tactics of managing patients with various nosological forms</i> ПК-5.2: <i>He is able to determine the necessary tactics for managing patients with various nosological forms.</i> ПК-5.3: <i>He knows the algorithms of diagnosis and treatment and the skill of determining the tactics of managing patients with various nosological forms.</i></p>	<p>Круглый стол</p>	<p>Экзамен: Ситуационные задания Зачёт: Тест</p>

3. Структура и содержание дисциплины

3.1 Трудоемкость дисциплины

	<p>очная</p>
<p>Общая трудоемкость, з.е.</p>	<p>9</p>

Часов по учебному плану	324
в том числе	
аудиторные занятия (контактная работа):	
- занятия лекционного типа	64
- занятия семинарского типа (практические занятия / лабораторные работы)	140
- КСР	3
самостоятельная работа	81
Промежуточная аттестация	36 Экзамен, Зачёт

3.2. Содержание дисциплины

(структурированное по темам (разделам) с указанием отведенного на них количества академических часов и виды учебных занятий)

Наименование разделов и тем дисциплины	Всего (часы)	в том числе			
		Контактная работа (работа во взаимодействии с преподавателем), часы из них			Самостоятельная работа обучающегося, часы
		Занятия лекционного типа	Занятия семинарского типа (практические занятия/лабораторные работы), часы	Всего	
0 Ф 0	0 Ф 0	0 Ф 0	0 Ф 0	0 Ф 0	
Gastritis	8	2	4	6	2
Pneumonia	8	2	4	6	2
COPD	8	2	4	6	2
Bronchial asthma	8	2	4	6	2
Hypertension	8	2	4	6	2
Acute rheumatic fever	9	2	4	6	3
Valvular heart diseases	13	4	6	10	3
Ischemic heart disease	12	4	4	8	4
Myocardial infarction	9	2	4	6	3
Tachyarrhythmias	11	4	4	8	3
Bradyarrhythmias	11	4	4	8	3
Infective endocarditis	9	2	4	6	3
Rheumatoid arthritis	8	2	4	6	2
Iron-deficiency anemia	8	2	4	6	2
GERD	8	2	4	6	2
Peptic ulcer disease	9	2	4	6	3
Chron's disease	6		4	4	2
Nonspecific ulcerative colitis	7		4	4	3

Liver cirrhosis	7		4	4	3
Complications of liver cirrhosis	7		4	4	3
Cholecystitis	7		4	4	3
Pancreatitis	7		4	4	3
Pyelonephritis	9	2	4	6	3
General questions of occupational medicine	9	2	4	6	3
Occupational allergy	9	2	4	6	3
Occupational dust diseases	11	4	4	8	3
Occupational disorders due to chemical agents	11	4	4	8	3
Occupational disorders due to physical agents	10	4	4	8	2
Glomerulonephritis. Acute and chronic	12	4	6	10	2
Irritable bowel syndrome	6		4	4	2
Hepatitis	6		4	4	2
Obesity	4		4	4	
Myocardial infarction complications	10	2	8	10	
Аттестация	36				
КСР	3			3	
Итого	324	64	140	207	81

Contents of sections and topics of the discipline

Topic 1. Gastritis. Etiology and pathogenesis. Clinical features. Definition. Classification. Physical examination. Laboratory and instrumental methods of examination. Complications. Non-pharmacological and pharmacological treatment. Peculiarities among elderly patients.

Topic 2 . Pneumonia. Etiology and pathogenesis. Clinical features. Definition. Classification. Physical examination. Laboratory and instrumental methods of examination. Complications. Non-pharmacological and pharmacological treatment. Peculiarities of pneumonia among elderly patients. Pneumonias in pregnant women. Medical rehabilitation after pneumonia.

Topic 3. COPD. Definition. Classification. Etiology and pathogenesis. Clinical features. Physical examination. Laboratory and instrumental methods of examination. Complications. Non-pharmacological and pharmacological treatment. Peculiarities of COPD among elderly patients. COPD in pregnant women. Medical rehabilitation.

Topic 4. Bronchial asthma. Definition. Classification. Etiology and pathogenesis. Clinical features. Physical examination. Laboratory and instrumental methods of examination. Complications. Non-pharmacological and pharmacological treatment. Peculiarities of bronchial asthma among elderly patients. Bronchial asthma in pregnant women. Medical rehabilitation after bronchial asthma.

Topic 5. Hypertension. Definition. Classification. Etiology and pathogenesis. Clinical features. Physical examination. Laboratory and instrumental methods of examination. Complications. Non-pharmacological and pharmacological treatment. Peculiarities among elderly patients. Hypertension in pregnant women.

Topic 6. Acute rheumatic fever. Etiology and pathogenesis. Clinical features. Definition. Classification. Physical examination. Laboratory and instrumental methods of examination. Complications. Non-pharmacological and pharmacological treatment. Medical rehabilitation

Topic 7. Valvular heart diseases. Etiology and pathogenesis. Clinical features. Definition. Classification.

Physical examination. Laboratory and instrumental methods of examination. Complications. Non-pharmacological and pharmacological treatment. Medical rehabilitation

Topic 8. Ischemic heart disease. Etiology and pathogenesis. Clinical features. Definition. Classification. Physical examination. Laboratory and instrumental methods of examination. Complications. Non-pharmacological and pharmacological treatment. Medical rehabilitation after

Topic 9. Myocardial infarction. Etiology and pathogenesis. Clinical features. Definition. Classification. Physical examination. Laboratory and instrumental methods of examination. Complications. Non-pharmacological and pharmacological treatment. Medical rehabilitation after Myocardial infarction

Topic 10. Tachyarrhythmias. Etiology and pathogenesis. Clinical features. Definition. Classification. Physical examination. Laboratory and instrumental methods of examination. Complications. Non-pharmacological and pharmacological treatment. Peculiarities of Tachyarrhythmias among elderly patients.

Topic 11. Bradyarrhythmias. Etiology and pathogenesis. Clinical features. Definition. Classification. Physical examination. Laboratory and instrumental methods of examination. Complications. Non-pharmacological and pharmacological treatment. Peculiarities of Bradyarrhythmias among elderly patients.

Topic 12. Infective endocarditis. Etiology and pathogenesis. Clinical features. Definition. Classification. Physical examination. Laboratory and instrumental methods of examination. Complications. Non-pharmacological and pharmacological treatment. Peculiarities of Infective endocarditis. among elderly patients. Infective endocarditis in pregnant women. Medical rehabilitation after Infective endocarditis.

Topic 13. Rheumatoid arthritis. Etiology and pathogenesis. Clinical features. Definition. Classification. Physical examination. Laboratory and instrumental methods of examination. Complications. Non-pharmacological and pharmacological treatment. Peculiarities of pneumonia among elderly patients. Rheumatoid arthritis in pregnant women. Medical rehabilitation

Topic 14. Iron-deficiency anemia. Etiology and pathogenesis. Clinical features. Definition. Classification. Physical examination. Laboratory and instrumental methods of examination. Complications. Non-pharmacological and pharmacological treatment. Peculiarities of Iron-deficiency anemia among elderly patients. Iron-deficiency anemia in pregnant women.

Topic 15. GERD. Etiology and pathogenesis. Clinical features. Definition. Classification. Physical examination. Laboratory and instrumental methods of examination. Complications. Non-pharmacological and pharmacological treatment. Peculiarities among elderly patients and pregnant women.

Topic 16. Peptic ulcer disease. Etiology and pathogenesis. Clinical features. Definition. Classification. Physical examination. Laboratory and instrumental methods of examination. Complications. Non-pharmacological and pharmacological treatment. Peculiarities among elderly patients.

Topic. Chron's disease. Etiology and pathogenesis. Clinical features. Definition. Classification. Physical examination. Laboratory and instrumental methods of examination. Complications. Non-pharmacological and pharmacological treatment. Peculiarities among elderly patients.

Topic Nonspecific ulcerative colitis. Etiology and pathogenesis. Clinical features. Definition. Classification. Physical examination. Laboratory and instrumental methods of examination. Complications. Non-pharmacological and pharmacological treatment. Peculiarities among elderly patients.

Liver cirrhosis. Etiology and pathogenesis. Clinical features. Definition. Classification. Physical examination. Laboratory and instrumental methods of examination. Complications. Non-pharmacological and pharmacological treatment. Peculiarities among elderly patients.

Complications of liver cirrhosis. Etiology and pathogenesis. Clinical features. Definition. Classification. Physical examination. Laboratory and instrumental methods of examination. Complications. Non-pharmacological and pharmacological treatment. Peculiarities among elderly patients.

Cholecystitis. Etiology and pathogenesis. Clinical features. Definition. Classification. Physical examination. Laboratory and instrumental methods of examination. Complications. Non-pharmacological and pharmacological treatment. Peculiarities among elderly patients.

Pancreatitis. Etiology and pathogenesis. Clinical features. Definition. Classification. Physical examination. Laboratory and instrumental methods of examination. Complications. Non-pharmacological and pharmacological treatment. Peculiarities among elderly patients.

Pyelonephritis. Etiology and pathogenesis. Clinical features. Definition. Classification. Physical examination. Laboratory and instrumental methods of examination. Complications. Non-pharmacological and pharmacological treatment. Peculiarities among elderly patients.

Glomerulonephritis. Etiology and pathogenesis. Clinical features. Definition. Classification. Physical examination. Laboratory and instrumental methods of examination. Complications. Non-pharmacological and pharmacological treatment. Peculiarities among elderly patients.

General questions of occupational medicine. Definition. History. Occupational diseases of health care doctors. Occupational allergy. Occupational dermatitis. Occupational asthma.

Occupational dust diseases. Mechanism of adverse impact of smoke pollutant. Silicosis. Asbestosis. Byssinosis. Coal worker's pneumoconiosis. Etiology and pathogenesis. Clinical features. Definition. Classification. Physical examination. Laboratory and instrumental methods of examination. Complications. Non-pharmacological and pharmacological treatment. Preventive measures.

Occupational disorders due to chemical agents. Mercury poisoning. Lead poisoning. Etiology and pathogenesis. Clinical features. Definition. Classification. Physical examination. Laboratory and instrumental methods of examination. Complications. Non-pharmacological and pharmacological treatment. Primary prevention.

Occupational disorders due to physical agents. Hand-transmitted vibrations. Occupational musculoskeletal pain. Etiology and pathogenesis. Clinical features. Definition. Classification. Physical examination. Laboratory and instrumental methods of examination. Complications. Non-pharmacological and pharmacological treatment.

Irritable bowel syndrome. Etiology and pathogenesis. Clinical features. Definition. Classification. Physical examination. Laboratory and instrumental methods of examination. Complications. Non-pharmacological and pharmacological treatment. Peculiarities among elderly patients.

Hepatitis. Etiology and pathogenesis. Clinical features. Definition. Classification. Physical examination. Laboratory and instrumental methods of examination. Complications. Non-pharmacological and pharmacological treatment. Peculiarities among elderly patients.

Obesity. Etiology and pathogenesis. Clinical features. Definition. Classification. Physical examination. Laboratory and instrumental methods of examination. Complications. Non-pharmacological and pharmacological treatment.

Myocardial infarction complications. Cardiogenic shock. Congestive heart failure. Cardiac tamponade. Ventricular free wall rupture. Ventricular septal rupture. Ventricular aneurysm. Papillary muscle rupture

Практические занятия / лабораторные работы организуются, в том числе, в форме практической подготовки, которая предусматривает участие обучающихся в выполнении отдельных элементов работ, связанных с будущей профессиональной деятельностью.

На проведение практических занятий / лабораторных работ в форме практической подготовки отводится: очная форма обучения - 8 ч.

4. Учебно-методическое обеспечение самостоятельной работы обучающихся

Самостоятельная работа обучающихся включает в себя подготовку к контрольным вопросам и заданиям для текущего контроля и промежуточной аттестации по итогам освоения дисциплины приведенным в п. 5.

Case report writing in internal medicine. Manual. N.V.Zhdankina, N.Y. Grigoryeva, O.E. Vilkova. NNSU. 2021

5. Assessment tools for ongoing monitoring of learning progress and interim certification in the discipline (module)

5.1 Model assignments required for assessment of learning outcomes during the ongoing monitoring of learning progress with the criteria for their assessment:

5.1.1 Model assignments (assessment tool - Report-presentation) to assess the development of the competency YK-8:

1. Topic 1. Zarin intoxication (high difficulty level). The presentation plan: 1)Pathology, 2) The main symptoms, 3) Prognosis, 4) Prophylaxis, 5) Treatment*
2. Topic 2. Chemical weapons (high difficulty level). The presentation plan: 1) Chemical weapons in history, 2) Symptoms of exposure 3) Chemical contamination 4) Prevention and treatment**
3. Topic 3. Radiation emergencies (high difficulty level). The presentation plan: 1) Definition, 2) Causes, 3) Effects of radiation exposure 4) Prevention, 5) Treatment,6) Decontamination***
4. Topic 4. Nuclear emergencies (high difficulty level). The presentation plan: 1) Nuclear accidents, 2) Effects of nuclear exposure,3) Steps of management 4) Protection measures*
5. Topic 5. Job tasks and operations associated with carpal tunnel syndrome (average difficulty level). The presentation plan: 1) Safety instructions, 2) Occupations at risk,3) Symptoms, 4) Prognosis, 5) Treatment***
6. Topic 6. Operating room contaminations (average difficulty level). The presentation plan: 1)The main causes of operating room contaminations, 2) Safety instructions, 3) Occupations at risk, 4) Symptoms, 5) Treatment**
7. Topic 7. Allergic reactions (average difficulty level). The presentation plan: 1)Types of allergic reactions to the medications and chemical agents 2) Symptoms, 3) Prevention, 4) Treatment*
8. Topic 8. Occupational contact dermatitis (average difficulty level). The presentation plan: 1)Diagnosis of occupational contact dermatitis, 2) Occupations at risk, 3) Diagnosis, 4) Treatment and prevention **
9. Topic 9. Common occupational contact allergens:(average difficulty level). The presentation plan: 1)Diagnosis of occupational allergic dermatitis, 2) Occupations at risk, 3) Diagnosis, 4) Treatment and prevention ***
10. Topic 10. Two main types of contact dermatitis. The presentation plan: 1)Diagnosis of occupational dermatitis, 2) Occupations at risk, 3) Diagnosis, 4) Treatment and prevention *
11. Topic 11. Occupations with potential exposure to beryllium (low difficulty level). The presentation plan: 1)Diagnosis of berylliosis 2) Occupations at risk, 3) Diagnosis, 4) Treatment and prevention *
12. Topic 12. Coal Worker’s pneumoconiosis (low difficulty level). The presentation plan: 1)Diagnosis of berylliosis 2) Occupations at risk, 3) Diagnosis, 4) Treatment and prevention *
13. Topic 13. Asbestosis. (low difficulty level). The presentation plan: 1)The main symptoms of asbestosis 2) Classification, 3) Major occupational exposures, 4) Diagnosis, 5) Prevention, 6) Treatment*
14. Topic 14. Occupational diseases of doctors (low difficulty level). The presentation plan: 1) Classification, 2) Stress and mental health disorders, 3) Diagnosis, 4) Prevention? 5) Treatment**
15. Topic 15. Musculoskeletal disorders (low difficulty level). The presentation plan: 1) Classification, 2) Diagnosis, 3) Prevention, 4) Treatment**

Assessment criteria (assessment tool — Report-presentation)

Grade	Assessment criteria
outstanding	The student has exceeded the expectations and requirements of his assignments, tests and projects. He has demonstrated a thorough understanding of the subject ("Outstanding")
excellent	The student has met the expectations and requirements of his assignments, tests and projects. He has demonstrated a thorough understanding of the subject matter. The student has exceptional critical thinking and problem solving skills and has consistently produced high-quality work ("Excellent")
very good	The student has shown a good grasp of the course material, has the necessary skills and has created work of solid quality. The answer was nearly perfect, but there was one small error. ("Very good")
good	The student has generally performed well, but there may still be areas for improvement. The

Grade	Assessment criteria
	answer was correct, but there were some major errors ("Good")
satisfactory	The student has met the bare minimum of what is expected, but may need to improve in several areas. He has a basic understanding of the subject but likely lack in depth knowledge, critical thinking and analytical skills. The answer was partially correct, there were many major errors ("Satisfactory")
unsatisfactory	The student has demonstrated insufficient understanding of the material, has not kept up with the coursework or has submitted incomplete or careless work ("Unsatisfactory" or "Below Average")
poor	The student has not met the minimum standards of achievement for the course ("Poor" or "Fail").

5.1.2 Model assignments (assessment tool - Debates) to assess the development of the competency OIK-3:

1. Various attempts or history of Doping in sport. (high level difficulty) The plan of the debate : 1) What is doping? 2)Athletic performance -enhancing drugs, 3) International Olympic committee*
2. Various doping substances consumed by athletes (high level difficulty) The plan of the debate: 1).Types and technics of doping, 2) Anabolic steroids, 3) Danger to health 4) Anti-doping regulations 5) Conclusion**
3. Substances that are not forbidden but increase the performance of the athlete (medium difficulty level). The plan of the debate: 1). Prevalence, 2) Classification, 3) Detection4) Danger to health 5) Anti-doping regulations 6) Conclusion**
4. Substances which are not on the list of prohibited. (low difficulty level). The plan of the debate: 1) Substances with possible doping effect, 2) Classification, 3) Detection 4) Anti-doping regulations 5) Doping analysis 6) Conclusion***

Assessment criteria (assessment tool — Debates)

Grade	Assessment criteria
pass	The student has met the minimum standards of achievement for the course.
fail	The student has not met the minimum standards of achievement for the course. Is given if the standard has not been met and the basics have not been understood

5.1.3 Model assignments (assessment tool - Report) to assess the development of the competency IIK-10:

1. Myocardial infarction. Plan: 1.Definition. 2. Clinical criteria for the diagnosis of IM. 3. Treatment 4. PCI*

2. Atrial fibrillation. 1. Etiology, 2. Pathogenesis 3. Changes in the electrocardiogram 4. Treatment biochemical markers of myocardial necrosis, echocardiography.**
3. Acute coronary syndrome. 1. Definition. 2. Classification. 3. Biochemical markers of myocardial necrosis, echocardiography 4.MI treatment: goals and tactics.**
4. Thrombolytic therapy: 1. Drugs, 2. Indications, 3. Absolute and relative contraindications, 4.Control methods, 5. Side effects, 6. Treatment of bleeding.*
5. Stable angina. 1.Definition, 2. Classification, 3. Diagnosis, 4. Treatment*
6. ACS. 1. Unstable angina. 2. Options for the transformation of ACS.*
7. Coronary angiography. 1. Indications for coronary angiography and invasive treatment. 2. Contraindications**
8. Complications of MI, taking into account the period of its course. 1. Clinical features. 2. Diagnosis, 3. Treatment***
9. Cardiogenic shock. 1.Definition. 2.Pathogenesis. 3.Hemodynamic features. 4.Classification.*
10. The clinical picture of cardiogenic shock. 1.Diagnostics. 2. The role of echocardiography, ECG.*
11. The health status of the population. Why is it important to monitor the health status of the population?*
12. The goal of population health model 1.The difference between the target population and accessible population 2.What is population health and why is it important? 3.What are indicators of population health?***

Assessment criteria (assessment tool — Report)

Grade	Assessment criteria
outstanding	The student has exceeded the expectations and requirements of his assignments, tests and projects. He has demonstrated a thorough understanding of the subject ("Outstanding")
excellent	The student has met the expectations and requirements of his assignments, tests and projects. He has demonstrated a thorough understanding of the subject matter. The student has exceptional critical thinking and problem solving skills and has consistently produced high-quality work ("Excellent")
very good	The student has shown a good grasp of the course material, has the necessary skills and has created work of solid quality . The answer was nearly perfect, but there was one small error. ("Very good")
good	The student has generally performed well, but there may still be areas for improvement. The answer was correct, but there were some major errors ("Good")
satisfactory	The student has met the bare minimum of what is expected, but may need to improve in several areas. He has a basic understanding of the subject but likely lack in depth knowledge, critical thinking and analytical skills. The answer was partially correct, there were many major errors ("Satisfactory")
unsatisfactory	The student has demonstrated insufficient understanding of the material, has not kept up with the coursework or has submitted incomplete or careless work ("Unsatisfactory" or "Below Average")
poor	The student has not met the minimum standards of achievement for the course ("Poor" or "Fail").

5.1.4 Model assignments (assessment tool - Individual oral interview) to assess the development of the competency ПК-11:

1. Medical evacuation. 1. Systems of evacuation, 2 procedures of medical evacuation*
2. Carbon monoxide poisoning. 1. Cause, 2. Symptoms,3. Prevention, 4. Treatment*
3. Lead poisoning. 1.Causes, 2. Symptoms, 3. Diagnosis, 4. Treatment**
4. Toxic gases: 1. The inhalable poison, 2. Sources, 3. Causes and effects**
5. Chelating agents: 1. Classification, 2. Definition, 3. Properties, 4. Types, 5. Applications***

5.1.5 Model assignments (assessment tool - Individual oral interview) to assess the development of the competency ПК-4:

1. Hypertension in pregnancy: 1. Diagnosis, 2. Treatment, 3. Prevention of complications*
2. Pyelonephritis. 1. Pyelonephritis in pregnancy, 2. Symptoms, 3. Diagnosis, 4. Treatment**
3. Pneumonia. 1. Pneumonia in pregnancy. 2. Treatment of viral pneumonia. 3. Treatment of bacterial pneumonias in pregnant woman**
4. COPD. 1. Definition. 2. Risk factors. 3. Pathogenesis. 4. Clinical features. 5. Physical examination. 6. Laboratory and instrumental investigations. 7.Principles of treatment.***
5. Bronchial asthma. 1. Definition. 2. Etiology and pathogenesis.3. Clinical features. 4.Physical examination. 5.Laboratory and instrumental investigations. 6.Complications. 7.Treatment*
6. Infective endocarditis. 1.Definition. 2.Etiology. 3.Pathogenesis. 4.Clinical picture. 5.Diagnostic criteria. 6.Treatment. 7.Prevention**
7. Duke criteria for infective endocarditis. 1. Diagnosis 2. Treatment*
8. Third -degree atrioventricular block. 1.Etiology. 2. Pathogenesis. 3. Classification. 4. Clinical features. 5.ECG criteria. 6.Management.*
9. Acute Glomerulonephritis 1.Etiology. 2. Pathogenesis. 3. Classification. 4. Clinical features. 5.ECG criteria. 6.Management.**
10. Chronic Glomerulonephritis 1.Etiology. 2. Pathogenesis. 3. Classification. 4. Clinical features. 5.ECG criteria. 6.Management.***

Assessment criteria (assessment tool — Individual oral interview)

Grade	Assessment criteria
outstanding	The student has exceeded the expectations and requirements of his assignments, tests and projects. He has demonstrated a thorough understanding of the subject ("Outstanding")
excellent	The student has met the expectations and requirements of his assignments, tests and projects. He has demonstrated a thorough understanding of the subject matter. The student has exceptional critical thinking and problem solving skills and has consistently produced high-quality work ("Excellent")
very good	The student has shown a good grasp of the course material, has the necessary skills and has created work of solid quality . The answer was nearly perfect, but there was one small error. ("Very good")
good	The student has generally performed well, but there may still be areas for improvement. The answer was correct, but there were some major errors ("Good")
satisfactory	The student has met the bare minimum of what is expected, but may need to improve in several areas. He has a basic understanding of the subject but likely lack in depth knowledge, critical thinking and analytical skills. The answer was partially correct, there were many major

Grade	Assessment criteria
	errors ("Satisfactory")
unsatisfactory	The student has demonstrated insufficient understanding of the material, has not kept up with the coursework or has submitted incomplete or careless work ("Unsatisfactory" or "Below Average")
poor	The student has not met the minimum standards of achievement for the course ("Poor" or "Fail").

5.1.6 Model assignments (assessment tool - Interview) to assess the development of the competency IIK-3:

1. Ischemic heart disease: 1. Progressive angina. 2. Definition. 3. Classification. 4. Diagnosis (ECG, echocardiography, cardiac enzyme studies). 5. Medical treatment. **
2. Rheumatic fever. 1. Etiology. 2. Therapy, 3 Prophylaxis.*
3. Chronic pancreatitis. 1. Etiology and pathogenesis. 2. Clinical features. 3. Diagnosis. 4. Treatment*
4. Chronic occupational bronchitis. 1. Etiology, 2. Diagnosis. 3. Treatment**
5. Chronic glomerulonephritis. 1. Etiology. 2. Pathogenesis. 3. Classification. 4. Clinical types. 5. Diagnosis. 6. Treatment**
6. Mitral stenosis. 1. Etiology and hemodynamic disorders. 2. Clinical features. 3. Investigations. 4. Therapy. 5. Indications for surgical management***
7. Occupational allergic diseases . 1. Classification. 2. Occupational allergens, 3. Diagnosis, 4. Prevention*
8. Acute pyelonephritis. 1. Etiology. 2. Pathogenesis. 3. Clinical features. 4. Diagnosis. 5. Treatment and prophylaxis*
9. Rheumatoid arthritis. 1. Definition. 2. Diagnosis. 3. Classification, 4. Management**

Assessment criteria (assessment tool — Interview)

Grade	Assessment criteria
pass	The student has met the minimum standards of achievement for the course.
fail	The student has not met the minimum standards of achievement for the course. Is given if the standard has not been met and the basics have not been understood

5.1.7 Model assignments (assessment tool - Round table) to assess the development of the competency IIK-5:

1. Old patients. 1. Peculiarities of diagnosis. 2. The clinical and therapeutic challenge of treating older patients in clinical practice.*
2. Geriatric palliative care. 1. Challenges and strategies, 2. Dosages. 3. Drugs*
3. Pharmacotherapy. 1. Optimization of pharmacotherapy in elderly patients. 2. Types of drugs*
4. Critically ill older patients. 1. Diagnosis, 2. Treatment**

5. Medical comorbidities in older patients. 1. Classification. 2. Treatment**

Assessment criteria (assessment tool — Round table)

Grade	Assessment criteria
pass	The student has met the minimum standards of achievement for the course.
fail	The student has not met the minimum standards of achievement for the course. Is given if the standard has not been met and the basics have not been understood

5.2. Description of scales for assessing learning outcomes in the discipline during interim certification

Шкала оценивания сформированности компетенций

Уровень сформированности компетенций (индикатора достижения компетенций)	плохо	неудовлетворительно	удовлетворительно	хорошо	очень хорошо	отлично	превосходно
	не зачтено			зачтено			
<u>Знания</u>	Отсутствие знаний теоретического материала. Невозможность оценить полноту знаний вследствие отказа обучающегося от ответа	Уровень знаний ниже минимальных требований. Имели место грубые ошибки	Минимально допустимый уровень знаний. Допущено много негрубых ошибок	Уровень знаний в объеме, соответствующем программе подготовки . Допущено несколько негрубых ошибок	Уровень знаний в объеме, соответствующем программе подготовки . Допущено несколько несущественных ошибок	Уровень знаний в объеме, соответствующем программе подготовки и. Ошибок нет.	Уровень знаний в объеме, превышающем программу подготовки.
<u>Умения</u>	Отсутствие минимальных умений. Невозможность оценить наличие умений вследствие отказа обучающегося от ответа	При решении стандартных задач не продемонстрированы основные умения. Имели место грубые ошибки	Продемонстрированы основные умения. Решены типовые задачи с негрубыми ошибками. Выполнены все задания, но не в полном объеме	Продемонстрированы все основные умения. Решены все основные задачи с негрубыми ошибками. Выполнены все задания в полном объеме, но некоторые с недочетами	Продемонстрированы все основные умения. Решены все основные задачи. Выполнены все задания в полном объеме, но некоторые с недочетами .	Продемонстрированы все основные умения. Решены все основные задачи с отдельными несущественными недочетами и, выполнены все задания в полном объеме	Продемонстрированы все основные умения. Решены все основные задачи. Выполнены все задания, в полном объеме без недочетов
<u>Навыки</u>	Отсутствие базовых навыков.	При решении стандартных задач не	Имеется минимальный набор	Продемонстрированы базовые	Продемонстрированы базовые	Продемонстрированы навыки	Продемонстрирован творческий

Невозможность оценить наличие навыков вследствие отказа обучающегося от ответа	продемонстрированы базовые навыки. Имели место грубые ошибки	навыков для решения стандартных задач с некоторым и недочетами	навыки при решении стандартных задач с некоторым и недочетами	навыки при решении стандартных задач без ошибок и недочетов	при решении нестандартных задач без ошибок и недочетов	подход к решению нестандартных задач
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Scale of assessment for interim certification

Grade		Assessment criteria
pass	outstanding	All the competencies (parts of competencies) to be developed within the discipline have been developed at a level no lower than "outstanding", the knowledge and skills for the relevant competencies have been demonstrated at a level higher than the one set out in the programme.
	excellent	All the competencies (parts of competencies) to be developed within the discipline have been developed at a level no lower than "excellent",
	very good	All the competencies (parts of competencies) to be developed within the discipline have been developed at a level no lower than "very good",
	good	All the competencies (parts of competencies) to be developed within the discipline have been developed at a level no lower than "good",
	satisfactory	All the competencies (parts of competencies) to be developed within the discipline have been developed at a level no lower than "satisfactory", with at least one competency developed at the "satisfactory" level.
fail	unsatisfactory	At least one competency has been developed at the "unsatisfactory" level.
	poor	At least one competency has been developed at the "poor" level.

5.3 Model control assignments or other materials required to assess learning outcomes during the interim certification with the criteria for their assessment:

5.3.1 Model assignments (assessment tool - Situational tasks) to assess the development of the competency УК-8

1. A 58-year-old male with 20 pack year smoking history was referred for evaluation of progressive dyspnea and nonproductive cough. His past medical history was significant for hypertension, hyperlipidemia and diabetes mellitus. He previously worked as a stone crusher at a talc mine for 15 years. Physical examination was significant for inspiratory bibasilar crackles, auscultated over the posterolateral chest at the mid to late phase of inspiration. The crackles were unaffected by coughing. Chest X-ray revealed small, irregular opacities distributed throughout the lung fields, but which were more prominent in the lower zones. Besides there was loss of definition of the heart border and hemidiaphragms. There was the presence of bilateral pleural thickening. Besides there was diaphragmatic and pericardial calcification. Pulmonary function test revealed moderate restrictive lung disease. Laboratory test results include the following: routine urinary and blood studies were normal, and liver and renal function tests were normal. (high difficulty level)

1. What is the diagnosis of the patient? Criteria for the diagnosis?(asbestosis: occupational exposure, symptoms,X-ray)
2. What medical evaluation should be undertaken? (sputum test- asbestos bodies)

3. Differential diagnosis of the disease? (silicosis,tb)

2.A 50-year-old man with no history of smoking, presented to hospital with symptoms of cough, which was initially dry with increased intensity for the past 6 months and progressive breathlessness for 8 months, which had increased during the last week and diffuse chest pain, which was more on the left side. There was no history of fever, hemoptysis, joint pain or skin rashes. By a year ago he had worked in a stone crushing factory for 11 year; 7–8 h/day. On examination of the chest, there was hyper-resonant note on percussion with diminished vesicular breath sounds in both lung fields with scattered fine crackles. Complete blood count, renal function and liver function tests showed no abnormality. Chest X-ray showed bilateral small nodular type opacities in both lung fields, with a predilection for the upper lung zones. The lesions in the hilar lymph nodes calcified in an “egg shell” patten. The patient belonged to the poor socioeconomic background and could not afford CT of the thorax. (low difficulty level)

1. What is the diagnosis of the patient? Criteria for the diagnosis? (silicosis: symptoms, X-ray)
2. What professionals can develop this disease (mining, miling)
3. What are the most common complications? (cor pulmonale, tb,RF)

3.A 48-year-old man visited his family physician for cold-induced blanching and pain in his fingers, which started in the right third and fourth digits and spread to all digits bilaterally over a period of 4 years. Fingers begin to turn white in a cold environment or when cold objects were touched. He also mentioned concomitant finger numbness and tingling. He had no history of cardiovascular or neurologic disease, diabetes mellitus, thyroid disease, arthritis, or connective tissue disease. He also had no history of frostbite or carpal tunnel syndrome. There was no family history of primary Raynaud phenomenon or connective tissue disease. He was not taking any medications. He was a smoker with a 10 pack-year history. He had worked as an underground miner for 15 years and had used hand-held, high-intensity vibrating tools, including large drills and air chisels, on a regular basis. He had normal vital signs and no remarkable findings on cardiovascular, neurologic, and musculoskeletal examinations. He was referred to an occupational medicine clinic for further assessment.

(low difficulty level)

1. What is the diagnosis of the patient? (vibrational disease)
2. What recommendations can you give for the patient? Prescribe the treatment. (physiotherapeutic procedures, reflexotherapy, vitamins, Ca-channel blockers)

4.A 40-year-old dentist presented to the clinic with memory loss, headache, anxiety, excitability, fearfulness, insomnia, memory loss, depression, fatigue, gingival pain, stomatitis, numbness in the arms and legs. He had been suffering from abdominal and neck pains since a period of 3 months and for 20 days he also had experienced pain in his extremities. The patient had not fever, vomiting or diarrhea, but had reduced appetite. The physical examination revealed the following: body temperature 37°C; heart rate 110/min; respiration rate 28/min; and arterial blood pressure 100/70 mmHg. The general condition was moderate, however the patient showed fatigue. The diffused sensitivity was present while the extremities were palpated. On examination other systems were found to be normal. Whole blood analysis results were as follows: leukocyte count: $4.3-10.3 \times 10^6$ L; Hb 100 g/L; PLT count: 99×10^9 L. The erythrocyte sedimentation rate was 30 mm/ h. Serum biochemistry parameters were as follows: aspartate aminotransferase 40 U/ L; alanine aminotransferase 60 U /L. Blood and urea mercury levels were 20,4 µg dL (normal range: 0-10 µg dL). Urinary analysis shows density: 1036; pH: 5; protein: >300; glucose: negative; ketone: trace. Other parameters were within the normal range. Electromyography (EMG) was performed due to severe numbness in the extremities, and showed rare fibrillation potentials and dense fasciculation muscle potentials in the distal muscles.

(low difficulty level)

1. Formulate the diagnosis. (mercury intoxication)
2. What is the best biomarker for chronic long-term exposure? (the level of mercury in the blood)
3. Treatment of intoxication. (chelating agents)

5.A 30-year-old man presented to hospital with a 4-day history of progressive fatigue, apathy, arthralgias, epigastric pain without radiation and visual disturbance. One year ago, he noted impaired concentration, and loss of libido. He denied any significant medical history and had never had surgery. His occupational history was remarkable for he had been working in the area of science for the last 3 years. His exposures in the laboratory included cadmium, lead, alcohols

and silicone. He reported that he performed most of his work under a hood and wore gloves in order to minimize any exposure.

Physical examination revealed pallor and a blue-gray pigmentation on the gums. His vital signs were stable. On physical examination, there were no signs of peritonitis, but neurological examination revealed weakness of the distal extensor muscle. Laboratory evaluation revealed a hemoglobin level of 100 g/L. Excretion of aminolevulinic acid is more than 70 $\mu\text{mol/g}$ of creatinine. Reticulocytosis was 30%, quantity of basophilic-granular erythrocytes is 50 on 10000. Serum biochemistry parameters were as follows: aspartate aminotransferase 45 U/L; alanine aminotransferase 65 U/L. Imaging included a CT scan and an abdominal ultrasound, neither of which revealed any abnormalities.

(low difficulty level)

1. Formulate the diagnosis. (lead intoxication)
2. Treatment of acute and chronic intoxication. (Chelating agents)

5.3.2 Model assignments (assessment tool - Situational tasks) to assess the development of the competency PIK-5

Case 1

Charlotte White is a 75-year-old woman who presents to the Hospital with complaints of heartburn and acidic taste in her mouth three to four times a week over the past 4 months. She states that her symptoms are worse at night, particularly when she goes to bed. She finds that her heartburn worsens and she coughs a lot at night, which keeps her awake. She has had difficulty sleeping over this time period and feels fatigued during the day. She reports no difficulty swallowing food or liquids. She has tried Omeprazole capsules 10 mg once daily for the past 3 weeks. This has reduced the frequency of her symptoms to 2–3 days per week, but they are still bothering her. She is suffering from Asthma and type 2 Diabetes Mellitus. She drinks one to two glasses of wine 1–2 days per week. She does not use tobacco. Subjective data: Heart Rate - 77, Blood pressure- 135/80, Temperature 36,7 °C, Breathing rate -18, SpO₂ 97%. Oriented to person, place, and time. Dry oral mucosa. Normal cardiac exam. Equal breath sounds to the bases, no adventitious sounds. No abdominal pain or tenderness noted. No peripheral edema.*

1. Which diagnosis is most probable? (GERD)

Case 2

A 71-year-old woman was referred to a Gastroenterology Clinic from primary care provider due to consistent discomfort and significant weight loss and a tarry stool in the early morning which she had never experienced before. She presented with a 3-month history of burning pain in the epigastric abdomen and chest which radiated toward her back. Her pain worsened after taking aspirin and drinking coffee, and was relieved after taking antacids. She had previously lost 10 kg in 2 months due to decreased intake caused by the feeling of bloating, early fullness and stomachaches between meals. She also reported nausea and vomiting. She expressed concern especially because the food appeared undigested when she vomited. She also reported doubling her NSAID intake due to increased knee pain. She looked pale and exhausted when she entered the clinic.**

Vital Signs and Measurements

1. BP: 135/85 mm Hg
2. HR: 99 bpm
3. RR: 21 b / min
4. Temperature: 36.1 °C
5. Pulse oxygenation: 99%
6. Height: 167 cm
7. Weight: 58.2 kg

Past medical history

1. Gastritis with *Helicobacter pylori* (*H. pylori*) infection, diagnosed 5 years ago. Resolved with pharmacotherapy, frequent recurrence.
2. Heart attack 3 months ago, has started taking aspirin since then.
3. Osteoarthritis, diagnosed 3 years ago. Long-term use of the non-steroidal anti-inflammatory drug (NSAID) since diagnosis.

4. Acute pancreatitis 5 years ago, resolved with pharmacotherapy, no recurrence.
5. Chronic obstructive pulmonary disease, diagnosed 11 years ago.
6. Diabetes Mellitus and hypertension diagnosed 6 years ago.
7. No surgical history.

Pertinent social history

1. Hobbies include drinking, eating spicy food, watching dramas and talkshow.
 2. Has smoked for 30 years, even after the diagnosis of COPD, still cannot quit smoking.
- Which diagnosis is most probable? (Peptic ulcer)

Case 3

A 69-year-old woman presented to the hospital with generalized weakness. Her medical history included hypertension. She had undergone mitral valve replacement (MVR) for mitral valve prolapse 1 month earlier. Her blood pressure was 100/60 mmHg, her breathing rate was 13 breaths/minute, her heart rate was 125 beats/minute, and her body temperature was 36,5 °C. She appeared acutely ill and was dehydrated. The result of an initial chest x-ray was normal, and the patient's electrocardiogram showed sinus tachycardia. Transesophageal echocardiography (TEE) showed hyperdynamic echogenic material attached to the prosthetic MV. Suddenly she developed a generalized seizure with decreased mentation. Brain computed tomography (CT) and magnetic resonance imaging revealed acute hemorrhage with perilesional edema in the bilateral cerebellum causing obstructive hydrocephalus. She was transferred to the intensive care unit.**

1. Which diagnosis is most probable? (Endocarditis)
2. How should this case be treated? (Antibiotics)

Case 4

A 71-year-old woman presented with generalized weakness and headache. Her medical history included diabetes mellitus and hypertension. Her physical examination revealed her blood pressure was 163/81 mmHg and her pulse rate was 91 beats/minute. Brain CT revealed a chronic left subdural frontotemporal hemorrhage. Generalized edema developed because of acute kidney injury (creatinine level 0,86 - 1,89 mg/dl). The patient developed a fever (38,1 °C) after 3 weeks, without a definite source of infection. Transesophageal echocardiography TEE revealed a globular, mobile, echogenic mass (1.91 × 1.0 cm) attached to the tricuspid valve. Blood cultures revealed *Staphylococcus aureus*. Coronary angiography observed no significant coronary obstruction, but a large saccular aneurysm was detected in the infrarenal abdominal aorta. CT indicated this was a newly developed abdominal aortic aneurysm (maximum diameter 5.2 cm) that had not been present 2 years previously. ***

1. Which diagnosis is most probable? (Endocarditis)
2. What studies would you like to perform to confirm the diagnosis? (DUKE criteria)

Case 5

A 77-year-old man presented to the Hospital with very severe lower abdominal pain that woke him from sleep. The pain was constant in nature, scoring 10 out of 10 in severity, but did not radiate and no exacerbating factors were reported. The pain was associated with vomiting. There was no medical or family history of note. He had no urinary or respiratory symptoms, took no medications. On examination, he appeared flushed, with tenderness in the lower abdomen and peritonism that was markedly worse over the left iliac fossa. He was tachycardic with a heart rate of 130 bpm, blood pressure of 100/70 mm Hg, a temperature of 36,7°C and a respiratory rate of 21 bpm. The abdominal X-ray revealed intraperitoneal air and free air was seen under both hemidiaphragms in the chest radiograph ***

1. Which diagnosis is most probable? (Perforated ulcer)
2. How should this case be treated?(Intravenous fluid, antibiotics, PPIs, nasogastric tube placement, surgery Omental Graham patch)

Assessment criteria (assessment tool — Situational tasks)

Grade	Assessment criteria
outstanding	The student has exceeded the expectations and requirements of his assignments, tests and projects. He has demonstrated a thorough understanding of the subject ("Outstanding")
excellent	The student has met the expectations and requirements of his assignments, tests and projects. He has demonstrated a thorough understanding of the subject matter. The student has exceptional critical thinking and problem solving skills and has consistently produced high-quality work ("Excellent")
very good	The student has shown a good grasp of the course material, has the necessary skills and has created work of solid quality. The answer was nearly perfect, but there was one small error. ("Very good")
good	The student has generally performed well, but there may still be areas for improvement. The answer was correct, but there were some major errors ("Good")
satisfactory	The student has met the bare minimum of what is expected, but may need to improve in several areas. He has a basic understanding of the subject but likely lack in depth knowledge, critical thinking and analytical skills. The answer was partially correct, there were many major errors ("Satisfactory")
unsatisfactory	The student has demonstrated insufficient understanding of the material, has not kept up with the coursework or has submitted incomplete or careless work ("Unsatisfactory" or "Below Average")
poor	The student has not met the minimum standards of achievement for the course ("Poor" or "Fail").

5.3.3 Model assignments (assessment tool - Test) to assess the development of the competency YK-8

1. WHAT ARE THE MAIN COMPLICATIONS OF SILICOSIS?*

1. Cor pulmonale;
2. Respiratory insufficiency;
3. Susceptible to tuberculosis;
4. Chronic bronchitis.

(Correct 1-4)

2. WHAT STATEMENTS ARE CORRECT ABOUT SILICOSIS?***

1. Silicosis is a parenchymal lung disease;
2. Silicosis results from the inhalation of silicon dioxide;
3. Silicosis results from the inhalation of silica in a crystalline form.

(Correct 1-3)

3. SILICA IS A MAJOR COMPONENT OF:*

1. Rock;
2. Sand;
3. Water;
4. Oil.
5. (Correct 1,2)

4.TYPES OF SILICOSIS:*

1. Chronic simple silicosis;
2. Acute silicosis;
3. Subacute accelerated silicosis.

(1-3)

5.THE DIAGNOSIS OF ASBESTOSIS IS MADE BY:**

1. Thorough exposure history;
2. Clinical examination;
3. Imaging studies;
4. Pulmonary function testing.

(1-4)

6.WHAT ARE THE MAIN SYMPTOMS OF ASBESTOSIS?*

1. Cough;
2. Dyspnea;
3. Chest pain;
4. Vomiting.

(1-3)

7.The sputum of a patient with asbestoses reveals:*

1. asbestos bodies;
2. pus;
3. erythrocytes.

(1)

8.WHAT ARE SYNONYMS OF COAL WORKERS `PNEUMOCONIOSIS?***

1. Carboconiosis;
2. Black lung disease;
3. Silicosis;
4. Asbestosis.

(1,2)

9.COAL WORKERS `PNEUMOCONIOSIS RESULTS FROM BREATHING IN DUST FROM: *

1. Coal;
2. Graphite;
3. Manmade carborne.

(1-3)

10.WHAT COMPLICATIONS OF COAL WORKERS `PNEUMOCONIOSIS DO YOU KNOW?***

1. Cor pulmonale;

2. COPD;
3. Chronic bronchitis;
4. Respiratory failure.
5. (1-4)

5.3.4 Model assignments (assessment tool - Test) to assess the development of the competency ПК-3

1.SPIROMETRY CONFIRMATION OF COPD IS BASED ON FEV1/FVC RATIO THAT SHOULD BE LESS THAN*

1. 0,1
2. 0,2
3. 0,3
4. 0,7

2. THE MAIN SYMPTOMS OF COPD ARE:*

1. chest pain
2. breathlessness
3. cough
4. vomiting

3. THE MAIN SYMPTOMS OF ASTHMA ARE:*

1. chest pain
2. breathlessness
3. cough
4. temperature

4. NIGHT EPISODES OF WHEEZING ARE COMMON FOR:**

1. asthma
2. pneumonia
3. pleurisy
4. pericarditis

5.THE TREATMENT FOR ASTHMA INCLUDES:*

1. inhaled corticosteroids
2. inhaled β_2 -agonists
3. oral corticosteroids
4. mucolytics

6.THE MAIN TRIGGERS OF ASTHMA ARE:**

1. allergens
2. stress
3. physical exertion
4. dust

7.THE MAIN ETIOLOGICAL FACTORS OF COPD ARE:***

1. smoking
2. occupational exposures
3. alpha 1- antitrypsin deficiency
4. spicy food

8.THE TREATMENT OF COPD INCLUDES:*

1. inhaled corticosteroids
2. inhaled salmeterol
3. inhaled ipratropium bromide
4. mucolytics

9.GOLD CLASSIFICATION OF COPD IS BASED ON:*

1. X-ray changes

2. Spirometry
 3. ECG
 4. sputum test
- Answers

1 4

2 2-3

3 2-3

4 1

5 1-4

6 1-4

7 1-3

8 1-4

9 2

5.3.5 Model assignments (assessment tool - Test) to assess the development of the competency ΠΚ-5

1. THE COMMON SYMPTOMS ASSOCIATED WITH PLEURAL EFFUSION ARE:*

1. chest pain
2. breathlessness
3. cough
4. wheezes

(1-3)

2. THE MAIN CAUSES OF TRANSUDATE ARE:*

1. heart failure
2. hepatic cirrhosis
3. infections
4. tb

(1,2)

3. THE MAIN CAUSES OF EXUDATE ARE:**

1. Tumors
2. pulmonary infections
3. heart failure
4. hepatic cirrhosis

(1,2)

4. CRITERIA FOR SEVERE COMMUNITY ACQUIRED PNEUMONIA ARE:*

1. respiratory failure
2. age 65
3. confusion
4. multi-lobar infiltrates

(1-3)

5. OUT-PATIENT EMPIRIC THERAPY FOR COMMUNITY – ACQUIRED PNEUMONIA WITHOUT COMORBIDITIES INCLUDES:**

1. High dose of Amoxicillin
2. Doxycycline
3. Macrolide

6. OUT-PATIENT EMPIRIC THERAPY FOR COMMUNITY – ACQUIRED PNEUMONIA WITH COMORBIDITIES INCLUDES:*

1. combination therapy with β -lactam: Amoxicillin/Clavulanate
2. oral 3rd generation cephalosporin + Macrolide
3. Doxycycline.
4. monotherapy with respiratory Fluoroquinolone

7. THE TREATMENT FOR ASTHMA INCLUDES:**

1. inhaled corticosteroids
2. inhaled β_2 -agonists
3. oral corticosteroids
4. mucolytics

(1-4)

8. THE MAIN TRIGGERS OF ASTHMA ARE:**

1. allergens
2. stress
3. physical exertion
4. dust

(1-4)

9. THE MAIN ETIOLOGICAL FACTORS OF COPD ARE:**

1. smoking
2. occupational exposures
3. alpha 1- antitrypsin deficiency
4. spicy food

(1-3)

10. THE TREATMENT OF COPD INCLUDES:**

1. inhaled corticosteroids
2. inhaled salmeterol
3. inhaled ipratropium bromide
4. mucolytics

(1-4)

11. GOLD CLASSIFICATION OF COPD IS BASED ON:**

1. X-ray changes
2. ECG
3. FEV1, FEV1/RVC
4. sputum test

(3)

Assessment criteria (assessment tool — Test)

Grade	Assessment criteria
pass	More than 60% of the correct answers
fail	Less than 60% of the correct answers

5.3.6 Model assignments (assessment tool - Round table) to assess the development of the competency ОПК-3

1. Substances that are dopant only if certain doses are exceeded (high difficulty level)
2. Doping analysis (high difficulty level)
3. Development of anti doping regulation (low difficulty level)
4. Anti-doping agencies (low difficulty level)
5. Social and economic nature of professional sport (low difficulty level)

Assessment criteria (assessment tool — Round table)

Grade	Assessment criteria
pass	The student has met the minimum standards of achievement for the course.
fail	The student has not met the minimum standards of achievement for the course. Is given if the standard has not been met and the basics have not been understood

5.3.7 Model assignments (assessment tool - Control questions) to assess the development of the competency ОПК-3

1. What is doping in sports?(low difficulty level)
2. What is the world anti-doping code? (medium difficulty level)
3. How does insulin administration increase athletic performance? (low difficulty level)
4. Doping is widespread in many professional sports. Do you think it is evil?(high difficulty level)
5. What drugs are used for doping?(low difficulty level)
6. What are the most widely known types of blood doping? (low difficulty level)
7. Current doping testing procedure (high difficulty level)

5.3.8 Model assignments (assessment tool - Control questions) to assess the development of the competency ПК-10

1. What are the main indicators of population health? (low difficulty level)

2. How is population health analytics used to improve population health? (low difficulty level)
3. What are the benefits of population health analytics? (high difficulty level)
4. How is population health data collected?(low difficulty level)
5. What is population health analytics?(high difficulty level)
6. what are the main components of population health analytics?(medium difficulty level)

5.3.9 Model assignments (assessment tool - Control questions) to assess the development of the competency ΠΚ-11

1. Non-ionizing radiation. Types and characteristics of radiation (low difficulty level)
2. Types of ionizing radiation (medium difficulty level)
3. Four stages of acute radiation syndrom (high difficulty level)
4. Carbon monoxide poisoning. Causes. Symptoms. Treatment options. (low difficulty level)
5. Lead poisoning. Occupational history. Symptoms. Diagnostic investigations. Prevention. Treatment options. Mercury poisoning. Occupational history. Symptoms. Diagnostic investigations. Prevention. Treatment options. (medium difficulty level)
6. Ionizing radiations injuries. Acute radiation syndrome. Causes. Symptoms. Diagnostic investigations. Treatment options. (low difficulty level)
7. Evacuation after a nuclear accidents (low difficulty level)
8. Evacuation procedures for natural gas system incidents (high difficulty level)

Assessment criteria (assessment tool — Control questions)

Grade	Assessment criteria
outstanding	The student has exceeded the expectations and requirements of his assignments, tests and projects. He has demonstrated a thorough understanding of the subject ("Outstanding")
excellent	The student has met the expectations and requirements of his assignments, tests and projects. He has demonstrated a thorough understanding of the subject matter. The student has exceptional critical thinking and problem solving skills and has consistently produced high-quality work ("Excellent")
very good	The student has shown a good grasp of the course material, has the necessary skills and has created work of solid quality . The answer was nearly perfect, but there was one small error. ("Very good")
good	The student has generally performed well, but there may still be areas for improvement. The answer was correct, but there were some major errors ("Good")
satisfactory	The student has met the bare minimum of what is expected, but may need to improve in several areas. He has a basic understanding of the subject but likely lack in depth knowledge, critical thinking and analytical skills. The answer was partially correct, there were many major errors ("Satisfactory")
unsatisfactory	The student has demonstrated insufficient understanding of the material, has not kept up with the coursework or has submitted incomplete or careless work ("Unsatisfactory" or "Below Average")
poor	The student has not met the minimum standards of achievement for the course ("Poor" or

Grade	Assessment criteria
	"Fail").

5.3.10 Model assignments (assessment tool - Control questions) to assess the development of the competency ПК-4

1. ECG signs of atrial fibrillation.*
2. ECG signs of atrial flutter.*
3. ECG signs of extrasystoles.*
4. ECG signs of ventricular tachycardia**
5. ECG signs of Mobitz type 1 second degree AV block**
6. ECG signs of Mobitz type 2 second degree AV block**
7. ECG of LV hypertrophy **
8. First-degree AV block electrocardiogram*
9. Complete AV block electrocardiogram*
10. Third-degree atrioventricular block. Etiology. Clinical features. Methods of examination. Treatment.***
11. Rheumatoid arthritis. Definition. Classification. Etiology and pathogenesis. Clinical features. Physical examination. Laboratory and instrumental investigations. Complications. Management.***
12. X - ray features of Rheumatoid arthritis.**
13. X- ray features of Pneumonia.**

Assessment criteria (assessment tool — Control questions)

Grade	Assessment criteria
pass	The student has met the minimum standards of achievement for the course.
fail	The student has not met the minimum standards of achievement for the course. Is given if the standard has not been met and the basics have not been understood

5.3.11 Model assignments (assessment tool - Discussion) to assess the development of the competency ПК-10

Topics:

1. How is the health of a country measured? (low difficulty level)
2. What are three components of population health?(high difficulty level)
3. What are the main outcomes in the population health framework? (medium difficulty level)

4. How do you calculate total population? (low difficulty level)
5. What are the indicators of health? (high difficulty level)

Assessment criteria (assessment tool — Discussion)

Grade	Assessment criteria
pass	The student has met the minimum standards of achievement for the course.
fail	The student has not met the minimum standards of achievement for the course. Is given if the standard has not been met and the basics have not been understood

5.3.12 Model assignments (assessment tool - Report-presentation) to assess the development of the competency ПК-11

1. Ionizing radiation injuries (low difficulty level)
2. Acute radiation injury(low difficulty level)
3. Chronic radiation injury(high difficulty level)
4. Medical management of acute radiation injury (medium difficulty level)
5. Localized cutaneous effects of radiation(low difficulty level)

Assessment criteria (assessment tool — Report-presentation)

Grade	Assessment criteria
pass	The student has met the minimum standards of achievement for the course.
fail	The student has not met the minimum standards of achievement for the course. Is given if the standard has not been met and the basics have not been understood

5.3.13 Model assignments (assessment tool - Case-task) to assess the development of the competency ПК-3

CASE STUDY 1.

A 19-year-old man presents with a history of recurrent episodes of cough with a small amount of viscose sputum and wheeze after walking 300 meters. He has recently started to go to a gym and his episodes of wheeze have worsened.

His respiratory rate is 22 breath/ min, pulse rate is 76 beats/min, the blood pressure is 100/60. He has the mild expiratory wheeze to be heard on auscultation of his chest.

His peak expiratory flow rate is 340L/min (Normal level is 400 L/min). On X-ray there is a hyperinflated chest. The ECG is normal. (low difficulty level)

1. What is your diagnosis? (bronchial asthma)
2. Make up a list of necessary diagnostic tests and procedures. (spirometry)
3. Prescribe the treatment (inhaled corticosteroids, bronchodilators)

CASE STUDY 2.

A 45-year-old male presents to the emergency department with acute onset of breathlessness. He has had recurrent, episodic attacks of wheezing, cough, dyspnea, itchy red eyes, nasal discharge, stuffiness, and occasional chest tightness for past 2 years. The frequency and the severity of the symptoms have increased for the past 1 month with the patient waking up with these symptoms. He has a history of eczema.

Physical examination reveals respiratory rate of 22/min and diffuse wheezing all over the lung fields. Pulmonary function test shows FEV1/FVC (forced expiratory volume at 1 second [FEV1]/forced ventilatory capacity [FVC]) of 0,65. Forced expiratory volume at 1 second is 60% of predictive and post-bronchodilator therapy the FEV1 increases to 74% of predictive. (high difficulty level)

1. Which diagnosis is most probable? (Bronchial asthma)
2. What is the therapy in this patient (inhaled corticosteroids, bronchodilators)

CASE STUDY 3

A 60-year-old female was admitted to hospital. One day prior to admission the patient had cough with yellowish sputum, persistent fever -38,2 Celsius, and pain in the chest. She self-medicated with paracetamol, but she noticed no changes and developed breathlessness. (medium difficulty level)

- Blood pressure: 130/70
- Temperature: 38 C
- Pulse rate: 80 bpm
- Respiratory rate: 25 breath/min
- Auscultation: dry crackles with the localization in the right lower lobe

X-ray: triangular shadow in the right lower lobe

1. What is your diagnosis? (Pneumonia)
2. Make up a list of necessary diagnostic tests and procedures.(chest X-ray)
3. What methods are the most effective in treatment of the disease? (Antibiotics)

CASE STUDY 4.

A 25-year-old man presents with a history of cough with a small amount of white sputum and wheeze. Last night he awoke from sleep with shortness of breath and chest tightness

His respiratory rate is 25 breath/ min, pulse rate is 70 beats/min, the blood pressure is 120/80. He has the mild expiratory wheeze to be heard on auscultation of his chest.(low difficulty level)

1. What is your diagnosis? (Bronchial asthma)
2. Make up a list of necessary diagnostic tests and procedures. (spirometry)
3. What methods are the most effective in treatment of the disease? (inhaled corticosteroids, bronchodilators)

CASE STUDY 5.

A 60-year-old man was admitted to hospital with shortness of breath which progressively increased in severity for the past week. The shortness of breath was associated with wheeze. There was cough with production of mucoid sputum. (low difficulty level)

He has been suffering from intermittent chronic cough for 3 years. He has also been having persistent breathlessness for 2 years.

On physical examination he had tachypnoea, the respiratory rate -28 breaths per minutes. He had increased anterior posterior diameter of the chest. On auscultation-there were rhonchi and wheezes.

- Pulse rate - 80 beats a minute
- Blood pressure -130/80
- Temperature - 37 degrees Celsius

On X-ray there was a hyperinflated chest. The ECG was normal.

1. What is your diagnosis? (COPD)
2. Make up a list of necessary diagnostic tests and procedures. (spirometry)
3. What methods are the most effective in treatment of the disease? (bronchodilators, inhaled corticosteroids)

5.3.14 Model assignments (assessment tool - Case-task) to assess the development of the competency ΠΚ-4

1. A 30-year-old woman who is in her 6th month of gestation suddenly develops an obvious fever and shaking chills, along with nausea and vomiting. She also has some dysuria with urgency and frequency, but she did not notice any urinary symptoms prior to the onset of fever and chills. Shortly after the fever and chills appear, she develops flank pain, becomes concerned, and comes to see you for advice. Her vital signs are: temperature - 38,0°C, pulse rate – 100 beats per minute, respiratory rate – 19 breaths per minute, and blood pressure - 115/70 mm Hg. Physical examination reveals marked tenderness on deep pressure in right costovertebral angle, but there are no other remarkable findings. The fetal heart tones are present at a rate of 130 to 140/minute. Microscopic examination of the urine sample reveals the presence of Gram-negative rod-shaped bacterial cells, leukocytes, and leukocyte casts. The urine culture detects 10⁶ bacterial cells/mL Gram-negative that has red colonies on agar. The blood culture is negative. A CBC shows Hb 130 g/L, RBC 4,75x10¹²/L, WBC count 13,8 x 10⁹/L, and differential count 75 segs, 7 bands, 13 lymphocytes, 4 monocytes, and 1 eosinophil, ESR- 33 mm/h. (medium level)

1. What is your preliminary diagnosis and how can you confirm it? (pyelonephritis)
2. What is the most likely causative agent and how should this case be treated? (E coli, antibiotics)

A 25-year-old woman presents to the Hospital with a 1-day history of left flank pain and vomiting. She describes the pain as sharp, constant, and worse with touch. Her husband observed her sweating and shivering the night before. She has also experienced a loss of appetite. In the waiting room, she vomits. Two weeks prior to her visit, she describes having dysuria and suprapubic pressure. She has a history of frequent cystitis. Physical Exam: Heart Rate - 100 beats per minute, Blood pressure- 130/80 mm Hg, Temperature 37,8 °C, Breathing rate -18 breaths per minute, SpO₂ 97%. Appears in mild discomfort. No respiratory distress. Oriented to person, place, and time. Dry oral mucosa. No facial edema. Mild tachycardia, otherwise normal cardiac exam. Equal breath sounds to the bases, no adventitious sounds. Abdomen was non-distended, soft, no masses, no evidence of hepatosplenomegaly. Marked tenderness on deep pressure in left costovertebral angle. Peripheral pulses present, equal. No peripheral edema. Urinalysis: pH 7.5, leukocytes (++) , bacteria (++) , protein (++) . Culture: E. coli positive (reported after 24 hours in lab). A CBC shows Hb 130 g/L, RBC 4,75x10¹²/L, WBC count 13,8 x 10⁹/L, and differential count 74 segs, 7 bands, 13 lymphocytes, 4 monocytes, and 2 eosinophils, ESR- 28 mm/h.

(high level of difficulty)

1. Which diagnosis is most probable? (pyelonephritis)
2. How should this case be treated? (antibiotics)

Alli Robin is a 56-year-old woman who presents to the Hospital with complaints of heartburn and acidic taste in her mouth three to four times a week over the past 4 months. She states that her symptoms are worse at night, particularly when she goes to bed. She finds that her heartburn worsens and she coughs a lot at night, which keeps her awake. She has had difficulty sleeping over this time period and feels fatigued during the day. She reports no difficulty swallowing food or liquids. She has tried Omeprazole capsules 10 mg once daily for the past 3 weeks. This has reduced the frequency of her symptoms to 2–3 days per week, but they are still bothering her. She is suffering from Asthma and type 2 Diabetes Mellitus. She is married with two children. She drinks one to two glasses of wine 5–6 days per week. She does not use tobacco. Her father died at age 70 of gastric cancer. Subjective data: Heart Rate - 78 beats per minute, Blood pressure- 135/80 mm Hg, Temperature 36,6 °C, Breathing rate -18 breaths per minute, SpO₂ 97. Oriented to person, place, and time. Dry oral mucosa. Normal cardiac exam. Equal breath sounds to the bases, no adventitious sounds. No abdominal pain or tenderness noted. No peripheral edema. (low level of difficulty)

1. Which diagnosis is most probable? (GERD)

2. How should this case be treated? (antacids, proton pump inhibitors, alginate)

A 65-year-old woman was referred to the Hospital due to consistent discomfort and significant weight loss. She presented with a 1-month history of periodical burning pain in the epigastric abdomen. Her pain worsened immediately after food intake and after taking aspirin and drinking coffee, and was relieved after taking antacids. She had previously lost 3 kg in 2 months due to decreased intake caused by the feeling of bloating, early fullness and stomachaches between meals. She also reported nausea and vomiting. She expressed concern especially because the food appeared undigested when she vomited. She also reported doubling her NSAID intake due to increased knee pain. She looked pale and exhausted when she entered the clinic.

Vital Signs and Measurements: BP: 130/80 mm Hg, HR: 80 bpm, temperature: 36,1 °C, pulse oxygenation: 99%, height: 167 cm, weight: 58,2 kg

Past medical history: Gastritis with *H. pylori* infection, diagnosed 5 years ago. Resolved with pharmacotherapy, frequent recurrence; Heart attack 3 months ago, has started taking aspirin since then; Osteoarthritis, diagnosed 3 years ago. Long-term use of the NSAID since diagnosis; No surgical history.

Pertinent family history: Mother died from gastric cancer at age 67 years old.

Pertinent social history: Has worked full-time as a driver for 30 years; Hobbies include drinking, eating spicy food; Has smoked for 30 years, even after the diagnosis of COPD, still cannot quit smoking.

1. Which diagnosis is most probable? (peptic ulcer)
2. What studies would you like to perform to confirm the diagnosis? (esophagogastroduodenoscopy, H pylori detection)
3. How should this case be treated? (eradication therapy)

A 20-year-old man presented to the hospital with a 4-day history of progressive fatigue, apathy, arthralgias, epigastric pain without radiation and visual disturbance. One year ago, he had noted 1 impaired concentration, and loss of libido. He denied any significant medical history and had never had surgery. His occupational history was remarkable for he had been working in the area of science for the last 3 years. His exposures in the laboratory included cadmium, lead, alcohols and silicone. He reported that he performed most of his work under a hood and wore gloves in order to minimize any exposure.

Physical examination revealed pallor and a blue-gray pigmentation on the gums. His vital signs were stable. On physical examination, there were no signs of peritonitis, but neurological examination revealed weakness of the distal extensor muscle. Laboratory evaluation revealed a hemoglobin level of 100 g/L. Excretion of aminolevulinic acid is more than 70 mkmol/g of creatinine. Reticulocytosis was 30%, quantity of basophilic-granular erythrocytes is 50 on 10000. Serum biochemistry parameters were as follows: aspartate aminotransferase 45 U/ L; alanine aminotransferase 65 U/ L. Imaging included a CT scan and an abdominal ultrasound, neither of which revealed any abnormalities. (low level difficulty)

1. Formulate the diagnosis. (lead intoxication)
2. Treatment of intoxication.(chelating agent)

Assessment criteria (assessment tool — Case-task)

Grade	Assessment criteria
outstanding	The student has exceeded the expectations and requirements of his assignments, tests and projects. He has demonstrated a thorough understanding of the subject ("Outstanding")
excellent	The student has met the expectations and requirements of his assignments, tests and projects. He has demonstrated a thorough understanding of the subject matter. The student has exceptional critical thinking and problem solving skills and has consistently produced high-quality work ("Excellent")
very good	The student has shown a good grasp of the course material, has the necessary skills and has created work of solid quality . The answer was nearly perfect, but there was one small error. ("

Grade	Assessment criteria
	Very good")
good	The student has generally performed well, but there may still be areas for improvement. The answer was correct, but there were some major errors ("Good")
satisfactory	The student has met the bare minimum of what is expected, but may need to improve in several areas. He has a basic understanding of the subject but likely lack in depth knowledge, critical thinking and analytical skills. The answer was partially correct, there were many major errors ("Satisfactory")
unsatisfactory	The student has demonstrated insufficient understanding of the material, has not kept up with the coursework or has submitted incomplete or careless work ("Unsatisfactory" or "Below Average")
poor	The student has not met the minimum standards of achievement for the course ("Poor" or "Fail").

6. Учебно-методическое и информационное обеспечение дисциплины (модуля)

Основная литература:

1. Harwood-Nuss' Clinical Practice of Emergency Medicine. - Lippincott Williams & Wilkins, 2021. - 1 online resource. - ISBN 9781975111601. - ISBN 9781975111595. - Текст : электронный., <https://e-lib.unn.ru/MegaPro/UserEntry?Action=FindDocs&ids=856136&idb=0>.
2. Azin Alizadehasl, Editor. Practical Cardiology Review: A Self-assessment Tool. - Cambridge Scholars Publishing, 2019. - 1 online resource. - ISBN 9781527539778. - ISBN 9781527537293. - Текст : электронный., <https://e-lib.unn.ru/MegaPro/UserEntry?Action=FindDocs&ids=856074&idb=0>.
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Дополнительная литература:

1. Martynov A.I. Internal Diseases. Volume I : учебник / Martynov A.I.; Kobalava Z.D.; Moiseev S.V. - Москва : ГЭОТАР-Медиа, 2022. - 688 с. - ISBN 978-5-9704-6766-4., <https://e-lib.unn.ru/MegaPro/UserEntry?Action=FindDocs&ids=808997&idb=0>.
2. Thomas Ciesielski. Washington Manual® General Internal Medicine Consult. - Lippincott Williams & Wilkins, 2017. - 1 online resource. - ISBN 9781496381972. - ISBN 9781496346322. - Текст : электронный., <https://e-lib.unn.ru/MegaPro/UserEntry?Action=FindDocs&ids=856238&idb=0>.
3. Joshua M. Liao. Internal Medicine Evidence. - Lippincott Williams & Wilkins, 2017. - 1 online resource. - ISBN 9781496387455. - ISBN 9781496343550. - Текст : электронный., <https://e-lib.unn.ru/MegaPro/UserEntry?Action=FindDocs&ids=856239&idb=0>.
4. Objective status description in the clinic of internal diseases. Instructions for 2–3d year medical

students / Parfenova N. N., Timofeev E. V., Reeva S. V., Isakov V. A., Malev E. G., Mogileva I. I. - Санкт-Петербург : СПбГПМУ, 2022. - 16 с. - Книга из коллекции СПбГПМУ - Медицина. - ISBN 978-5-907565-83-8., <https://e-lib.unn.ru/MegaPro/UserEntry?Action=FindDocs&ids=867854&idb=0>.

5. The scheme of medical history in the clinic of the internal diseases: work book / Nyrsultanova S. D., Bekov E. K., Mirzo E. I., Appasova E. S. - Караганда : КарГМУ, 2012. - 28 с. - Книга из коллекции КарГМУ - Медицина., <https://e-lib.unn.ru/MegaPro/UserEntry?Action=FindDocs&ids=799338&idb=0>.

Программное обеспечение и Интернет-ресурсы (в соответствии с содержанием дисциплины):

ЭБС «Юрайт». Режим доступа: <http://biblio-online.ru>.

ЭБС «Консультант студента». Режим доступа: <http://www.studentlibrary.ru>.

ЭБС «Лань». Режим доступа: <http://e.lanbook.com/>.

ЭБС «Znanium.com». Режим доступа: www.znanium.com.

7. Материально-техническое обеспечение дисциплины (модуля)

Учебные аудитории для проведения учебных занятий, предусмотренных образовательной программой, оснащены мультимедийным оборудованием (проектор, экран), техническими средствами обучения, компьютерами.

Помещения для самостоятельной работы обучающихся оснащены компьютерной техникой с возможностью подключения к сети "Интернет" и обеспечены доступом в электронную информационно-образовательную среду.

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