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Federal State Budget Educational Institution
of Higher Education
Pacific State Medical University
of the Ministry of Health of the Russian Federation

APPROVED BY

Head of the Department of
Therapy (Internal Medicine) with Diagnostic
Radiology Course
_____ / Kabalyk M.A./
"14th" of April 2026

COLLECTION OF ASSESSMENT TOOLS
B1.V.02 Diagnostic radiology
of the basic educational program
of Higher Education

Specialty	**31.05.03 Dentistry for foreign students (English-language program)** (code, name)
Degree	Specialist's degree
Profile	02 "Healthcare" (in the field of providing health care in patients with dental pathology)
Mode of study	**Full-time**
Period of mastering the BEP	**5 years** (nominal length of study)
Department	of Therapy (Internal Medicine) with Diagnostic Radiology Course

Vladivostok, 2026

1. INTRODUCTION

1.1. Collection of Assessment Tools is a document that regulates the format, content, and types of assessment tools for continuous assessment, interim examination and final (state final) examination, and graded criteria for each type of assessment tools.

1.2. Assessment tools allows to evaluate the development of universal, general professional, and professional competencies (UCs, GPCs and PCs respectively) outlined in Federal State Educational Standard of Higher Education and defined in the basic educational program of higher education for the specialty 31.05.03 Dentistry for foreign students (English-language program), profile 02 "Healthcare" (in the field of providing health care in patients with dental pathology).

(BEP HE for the 31.05.03 Dentistry for foreign students (English-language program) specialty, section 3 Learning Outcomes Requirements of the Basic Educational Program of Higher Education)

2. DOCUMENT BODY

2.1. Types of Assessment, Formats of Assessment Tools

No.	Types of assessment	Assessment Tools Format
1	**Continuous assessment**	**Interview Questions**
		Mini-Case Studies
2	**Interim assessment**	**Interview Questions**
		Mini-Case Studies

3. The contents of assessment tools for continuous and interim examination are prepared by the teacher of the course

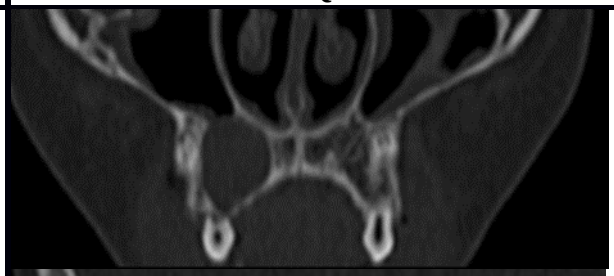
Interview Questions

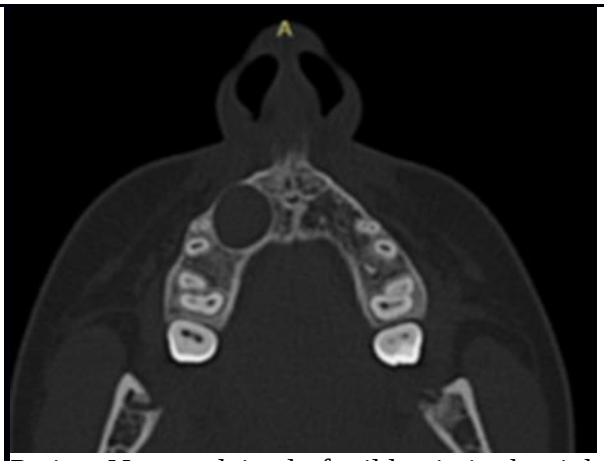
	Code	Competence description / name of labor function / name of work activity / text
S	31.05.03	Dentistry for foreign students (English-language program)
C	PC-1	ability and willingness to implement activities aimed at diagnosing dental diseases using digital health methods
F	A/01.7	Patient examination. Making a diagnosis
I		**ANSWER THE QUESTIONS**
		Diagnostic Radiology Methods. Radiation Safety. Contrast Agents. 1. Characteristics of X-ray radiation. Properties of X-rays that determine their use in medicine. 2. Principles of X-ray image formation. 3. Basic and specialized methods of X-ray examination, their types and characteristics. 4. X-ray imaging. Principle of the method, advantages and disadvantages. 5. Fluoroscopy. Principle of the method, advantages and disadvantages. 6. Computed tomography. Principle of the method, advantages and disadvantages. 7. Indications and contraindications for the use of radiation diagnostic methods.

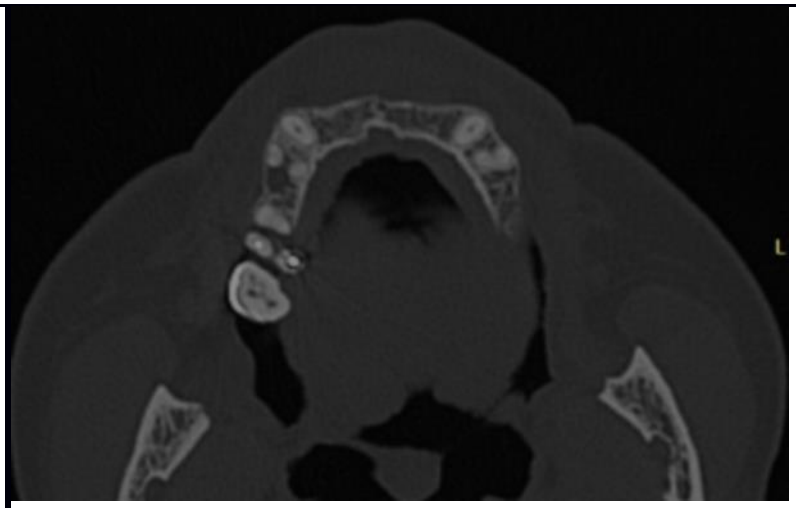
		8. Adverse reactions to contrast agent administration, principles of prevention and treatment, groups at increased risk of developing adverse reactions. 9. Principles of radiation safety in medical radiology. 10. Radioactivity, units of radioactivity. Dose, units of dose measurement. Radiation exposure monitoring. 11. Contrast agents for radiological diagnostics, their composition, indications for use **Radiographic anatomy of the teeth and jaws, and head and neck organs.** 1. Radiographic examination methods and their potential in diagnosing dental and jaw diseases. 2. Radiographic anatomy of the head. 3. Diagnostic radiology of paranasal sinus diseases. 4. Diagnostic radiology of brain tumors. 5. Diagnostic radiology of traumatic brain injuries. 6. Diagnostic radiology of cerebral strokes. **Diagnostic Radiology of anomalies of the dentoalveolar system, head, and neck. Radiographic diagnostics of traumatic injuries to the maxillofacial region** 1. Radiographic examination methods and their potential in diagnosing head and neck diseases. 2. Radiographic anatomy of bones and joints. 3. Radiographic symptoms of skeletal lesions. 4. Osteodensitometry. Radiographic signs of osteoporosis based on X-ray and computed tomography data. 5. Imaging methods for diagnosing joint and bone diseases. 6. Radiographic signs of fractures. 7. Radiographic signs of joint dislocations and subluxations. 8. Radiographic signs of metastatic skeletal lesions. 9. General radiographic signs of aseptic necrosis in joints. 10. Imaging diagnostics of osteomyelitis. 11. Imaging diagnostics of bone tumors. **Diagnostic Radiology of Inflammatory and Dystrophic Processes in the Maxillofacial Region** 1. Methods of radiation examination of the maxillofacial region. Types. Procedure. Indications and contraindications. 2. Diagnostic radiology of caries. Radiographic symptoms. Disease stages. 3. Diagnostic radiology of periodontitis. Forms of periodontitis. Radiographic symptoms. 4. Diagnostic radiology of periodontitis and periodontosis. Radiographic symptoms. Disease stages. 5. Diagnostic radiology of odontogenic osteomyelitis. Radiographic symptoms. Disease stages. 6. Diagnostic radiology of traumatic injuries of the mandible. Radiographic symptoms. Injury types. 7. Diagnostic radiology of traumatic injuries of the maxilla. Radiographic symptoms. Injury types. **Diagnostic Radiology of Cysts and Neoplasms of the Maxillofacial Region** 1. Diagnostic radiology of cysts and benign tumors of the jaws. Types.

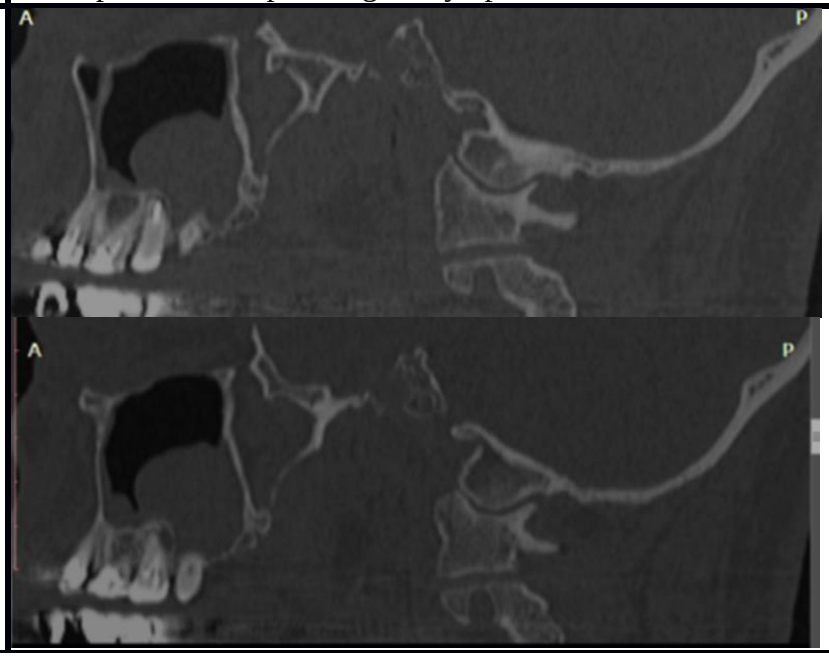
		Radiographic symptoms. 2. Diagnostic radiology of malignant tumors of the maxillofacial region. Types. Radiographic symptoms. 3. Diagnostic radiology of temporomandibular joint diseases. Examination methods. Radiographic symptoms. 4. Diagnostic radiology of salivary gland diseases. Examination methods. Radiographic symptoms. **Imaging diagnostics of infectious diseases of the head and neck. Imaging diagnostics of tumors of the head and neck** 1. Imaging diagnostics of infectious cysts of the jaws. Types. Radiographic symptoms. 2. Imaging diagnostics of infectious diseases of the maxillofacial region. Types. Radiographic symptoms. 3. Imaging diagnostics of septic arthritis of the temporomandibular joint. Research methods. Radiographic symptoms of diseases. 4. Imaging diagnostics of infectious diseases of the salivary glands. Research methods. Radiographic symptoms of diseases

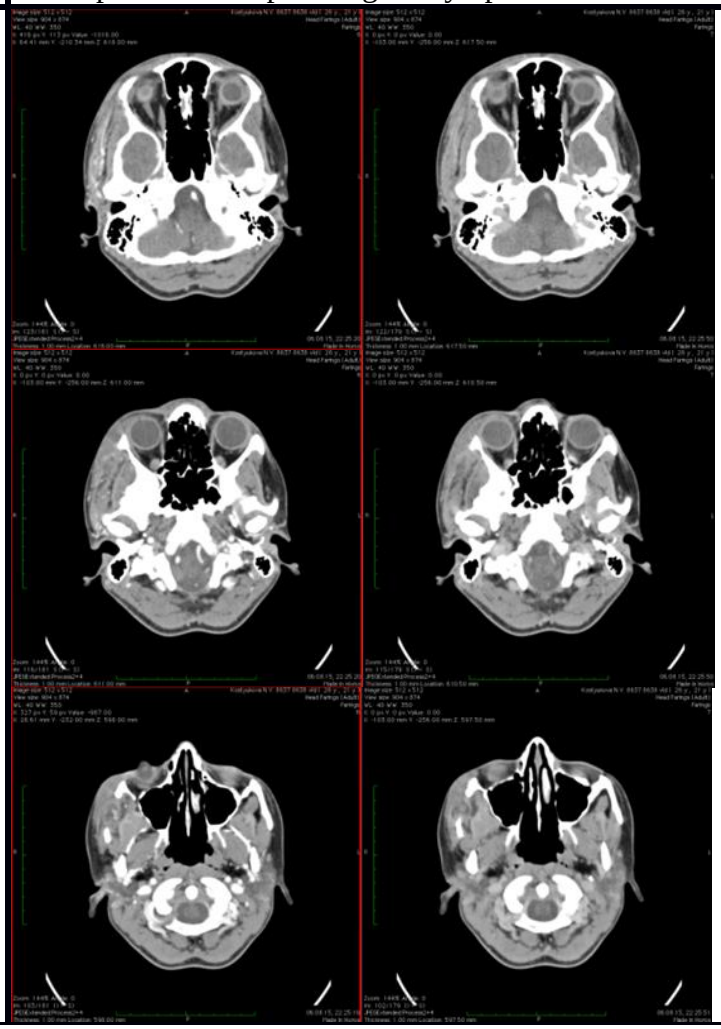
Standardized case studies for **B1.V.02 Diagnostic radiology** course

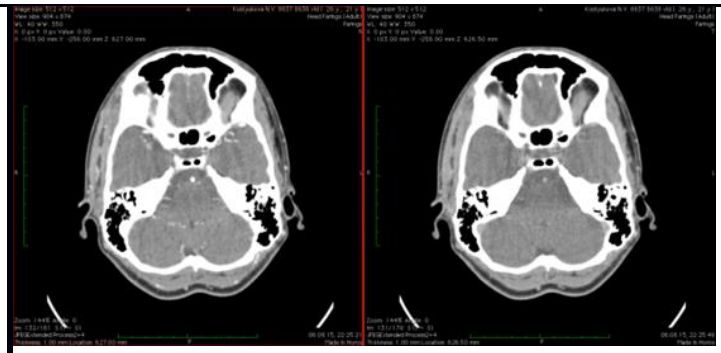
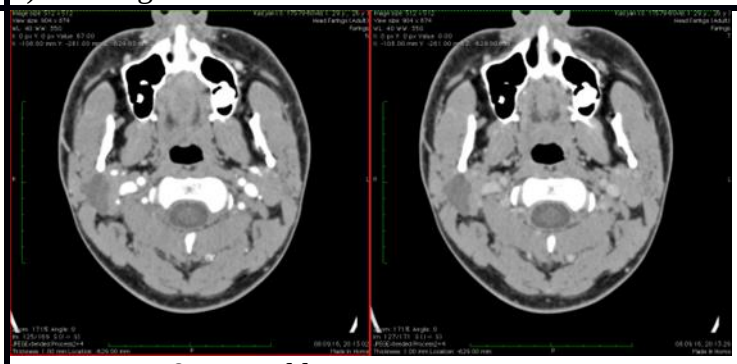
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S	31.05.03	Dentistry for foreign students (English-language program)
C	PC-1	ability and willingness to implement activities aimed at diagnosing dental diseases using digital health methods
F	A/01.7	Patient examination. Making a diagnosis
I		**READ THE PROVIDED CASE DESCRIPTION AND GIVE DETAILED ANSWERS TO THE QUESTIONS**
Q	1	 

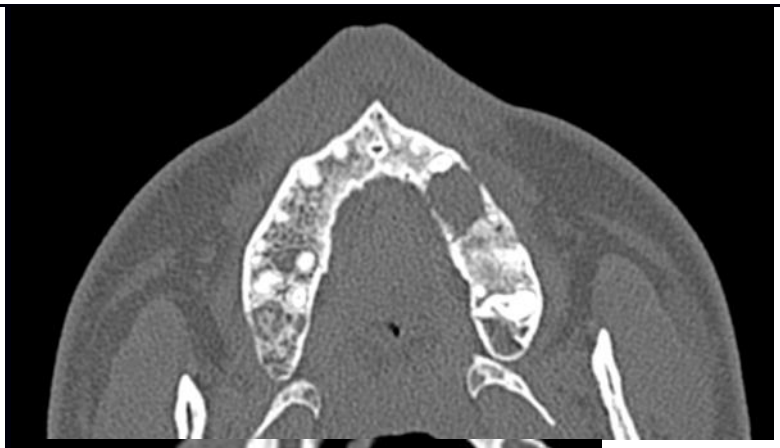
		 Patient N. complained of mild pain in the right maxillary region. 1. Localize the pathological process. 2. Identify the radiographic symptoms visible on the images (scans). 3. Which group of diseases may correspond to the radiographic symptoms of the lesion (dystrophy, dysplasia, tumor, tumor). 4. What morphological substrate (malignant or benign process) underlies the development of the pathological symptoms.
Q	2	

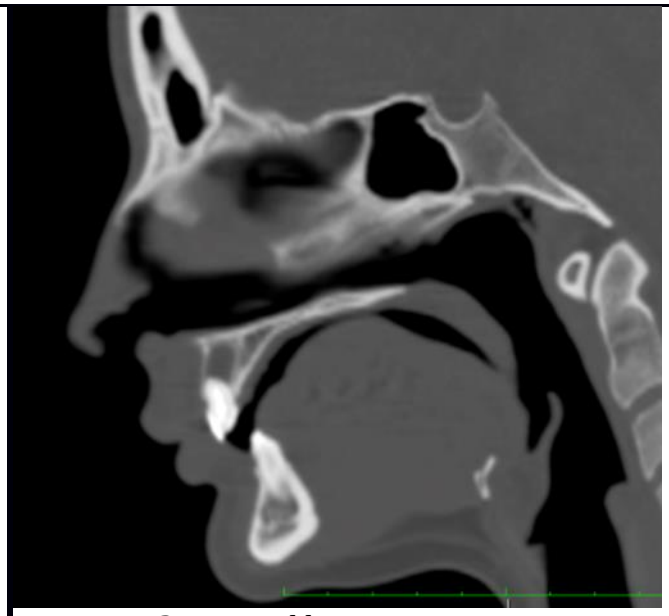
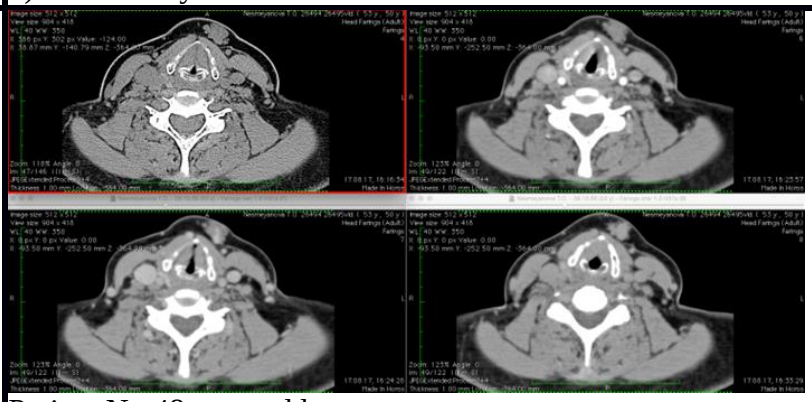
		 Patient B. complained of sensitivity and pain when biting on the right side. 1. Localize the pathological process. 2. Identify the radiographic signs visible on the images (scans). 3. Which group of diseases might the radiographic signs of the lesion correspond to (dystrophy, dysplasia, inflammation, tumor). 4. What morphological substrate (malignant or benign process) underlies the development of the pathological symptoms.
Q	3	 Patient E. complained of pain and bleeding gums in the right maxillary region and is struggling with the condition. 1. Localize the pathological process. 2. Identify the radiographic signs visible on the images (scans). 3. Which group of diseases might the radiographic signs of the lesion correspond to (dystrophy, dysplasia, inflammation, tumor). 4. What morphological substrate (malignant or benign process) underlies the development of the pathological symptoms.

Q	4	 Patient L. complained of severe aching pain at rest and when eating, as well as sensitivity to hot and cold. 1. Localize the pathological process. 2. Identify the radiographic signs visualized on the images (scans). 3. Which group of diseases might the radiographic signs of the lesion correspond to (dystrophy, dysplasia, inflammation, tumor). 4. What morphological substrate (malignant or benign process) underlies the development of the pathological symptoms
Q	5	

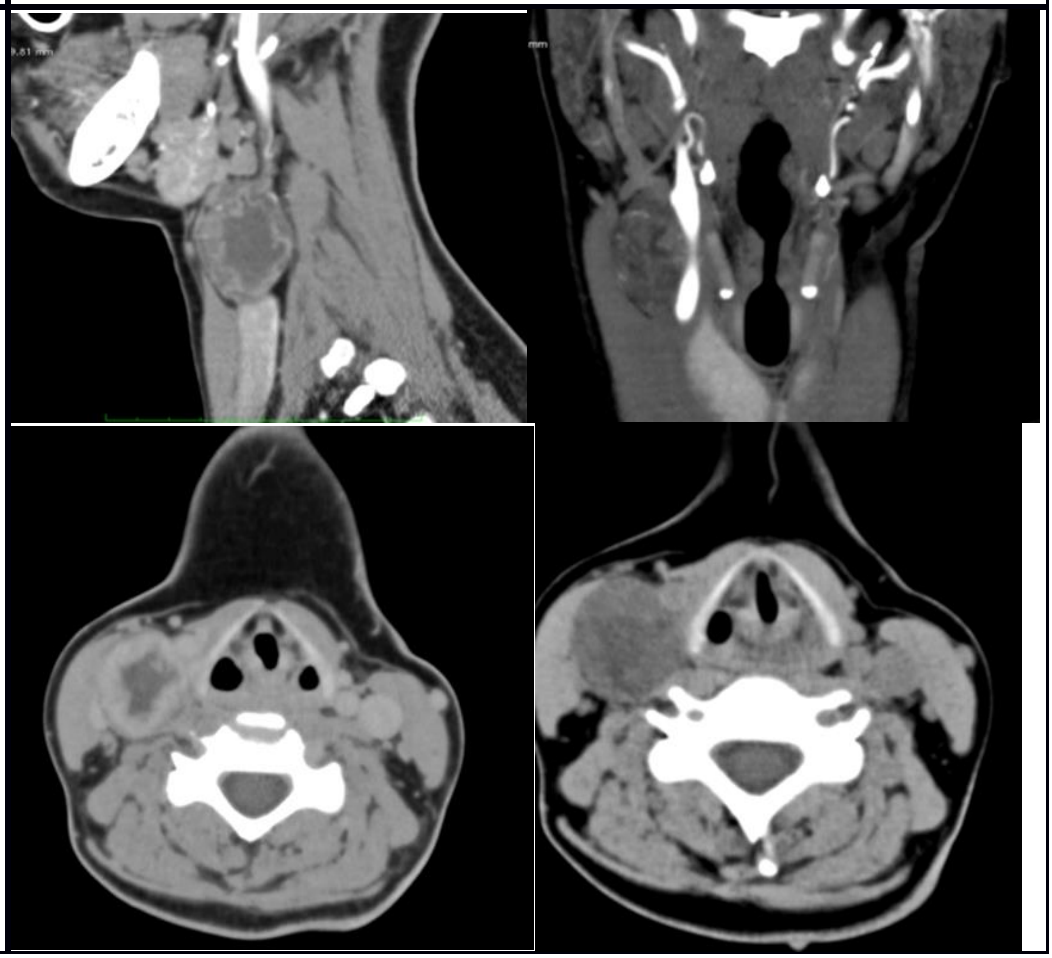
		 Patient A. complained of discomfort and discomfort in the oral cavity, bleeding when brushing teeth and biting hard foods. 1. Localize the pathological process. 2. Identify the radiographic signs visualized on the images (scans). 3. Which group of diseases may correspond to the radiographic signs of the lesion (dystrophy, dysplasia, inflammation, tumor). 4. What morphological substrate (malignant or benign process) underlies the development of the pathological symptoms.
Q	6	

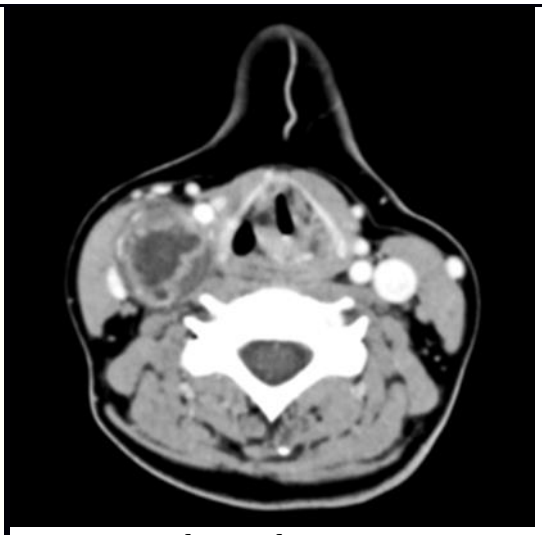
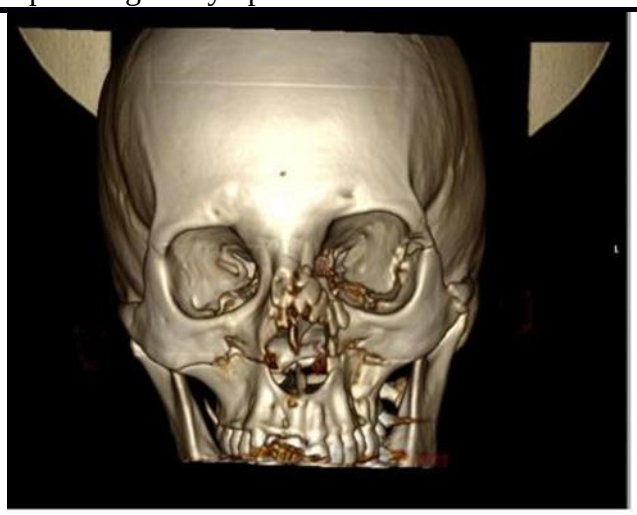
		 Patient K., 26 years old. The following is detected: - subcutaneously in the right temporal fossa, extending to the zygomatic and periorbital region, an additional tissue component with a well-developed vascular network, without clear contours, up to 10 mm thick in the temporal fossa and up to 19 mm in the periorbital region; - deformation of the body and arch of the zygomatic bone, similar to a consolidated depressed fracture (atrophic changes from prolonged pressure?); the bone contours are uneven and knobby; the bone is unevenly thinned and sclerotic; - similar sclerotic changes with uneven and knobby contours, extending to the frontal and sphenoid bones, the squama of the temporal bone, and then to the parietal bone. Answer options: 1) Sarcoma 2) Fibroma 3) Hemangioma
Q	7	 Patient K., 29 years old. An irregularly shaped mass with a density of approximately 20 U was detected in the right auricle, with no signs of contrast agent accumulation. No solid pathological structures were detected with contrast enhancement. The cervical lymph nodes showed no signs of hyperplasia. Answer options: 1) adenoma 2) cylindroma 3) sarcoma 4) retention cyst

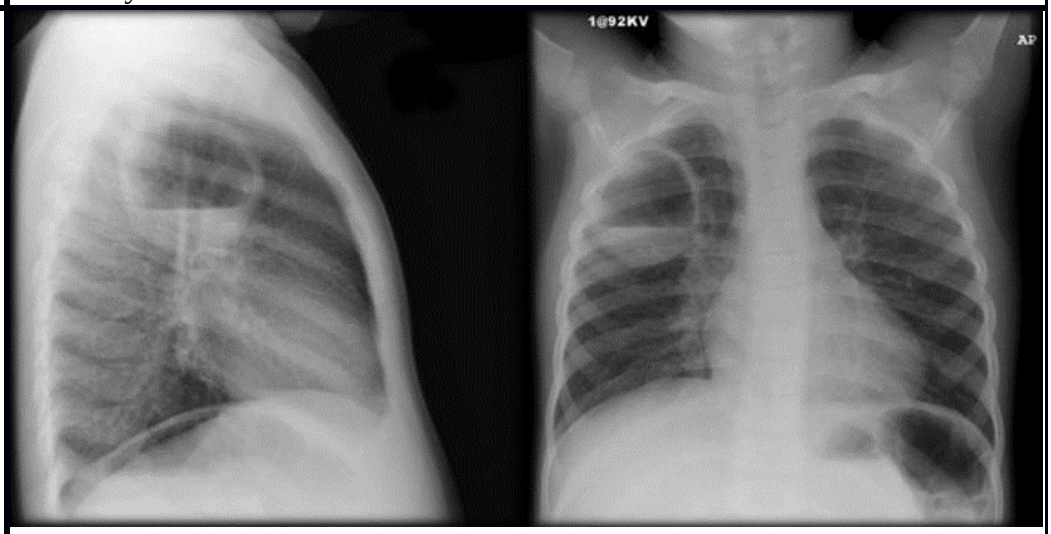
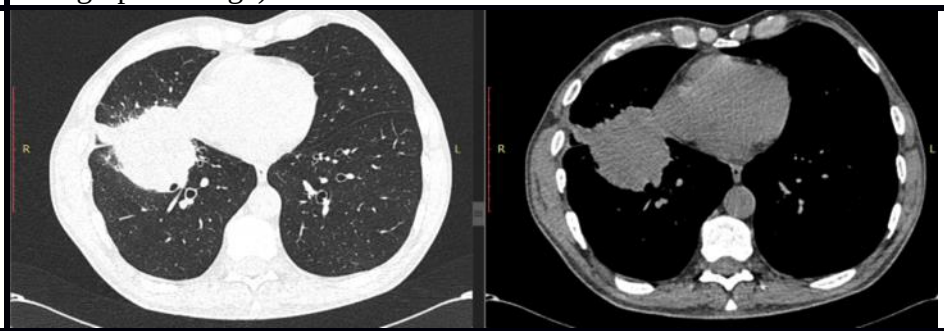
Q	8	  Patient P., 30 years old. On the left side of the upper jaw, in the area of the extracted fourth tooth, amid a defect in the alveolar process with small bone fragments up to 0.5-1.0 mm, a rounded formation with a density of approximately 60 UH, dimensions 10 x 12 x 14 mm, with a smooth contour is observed. Answer options: 1) residual cyst 2) radicular cyst
Q	9	

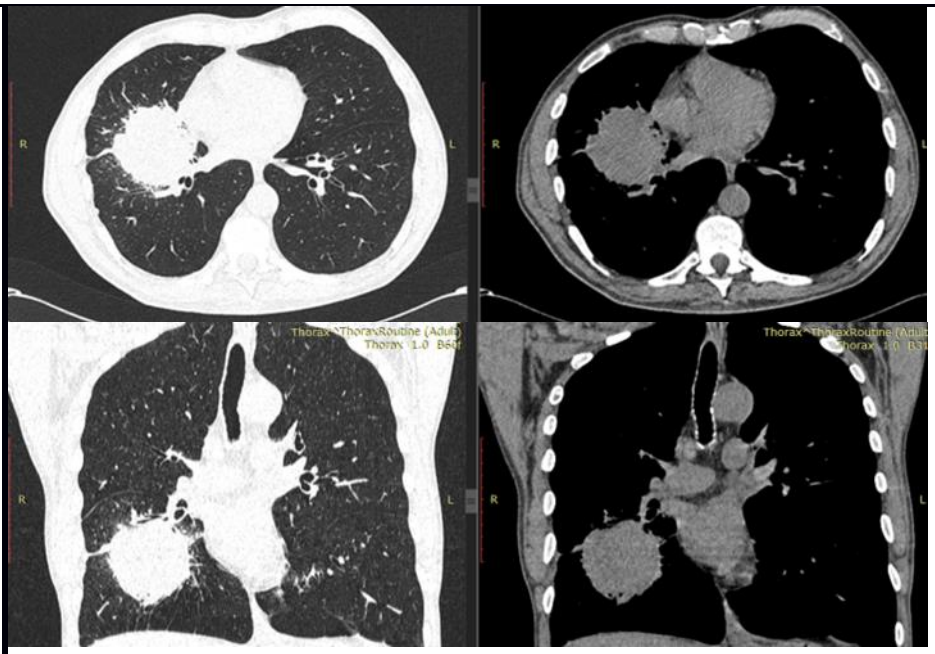
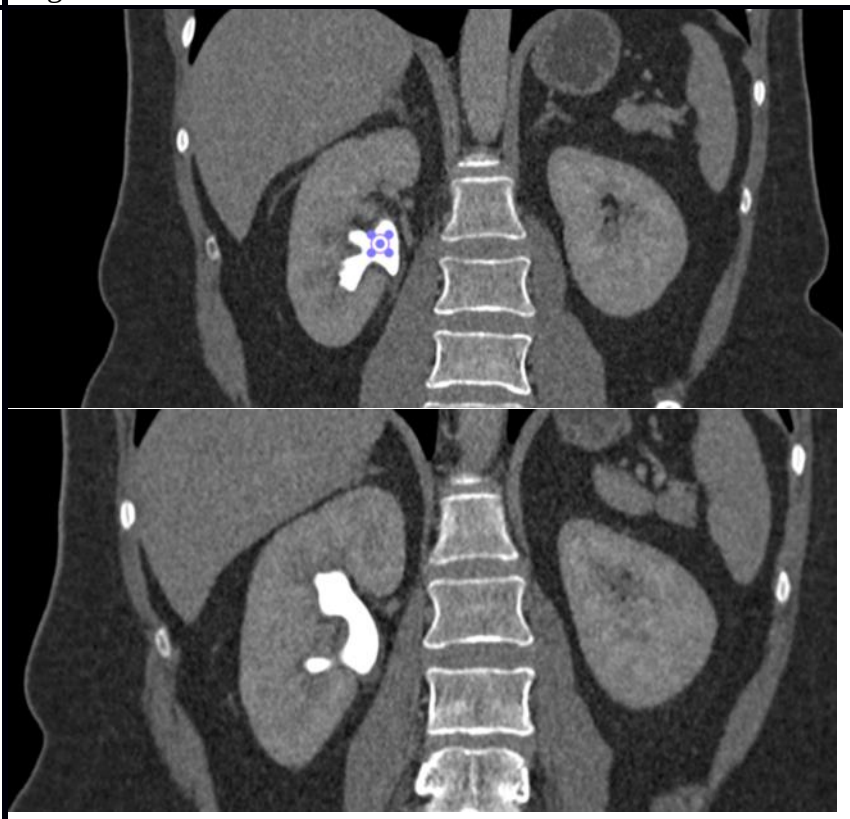
		 Patient D., 37 years old A periapical lesion measuring 4.6 x 6.0 x 7.9 mm (frontal x sagittal x vertical) was detected near the root of tooth 2.1, with no signs of contrast agent accumulation. Answer options: 1) residual cyst 2) radicular cyst
Q	10	 Patient N., 48 years old. An irregularly shaped mass measuring 19 x 11 x 18 mm (frontal x sagittal x vertical) is observed in the left subcutaneous fat at the level of the larynx. Contrast enhancement reveals heterogeneous active vascularization, predominantly in the venous phase, with the following density: native scanning 55 units, arterial phase 74 units, venous phase 113 units, delayed phase (at 9 minutes) 75 units. Lymph nodes of the neck: left and right internal jugular lymph nodes, supraclavicular and infraclavicular nodes with no signs of hyperplasia (up to 5 mm in size). Answer options: 1) liposarcoma 2) hemangioma 3) lipoma

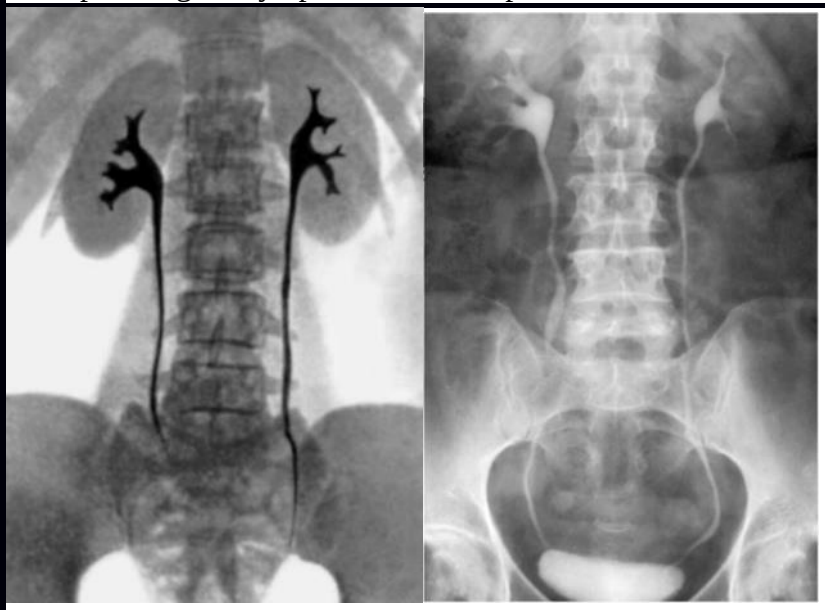
Q	11	

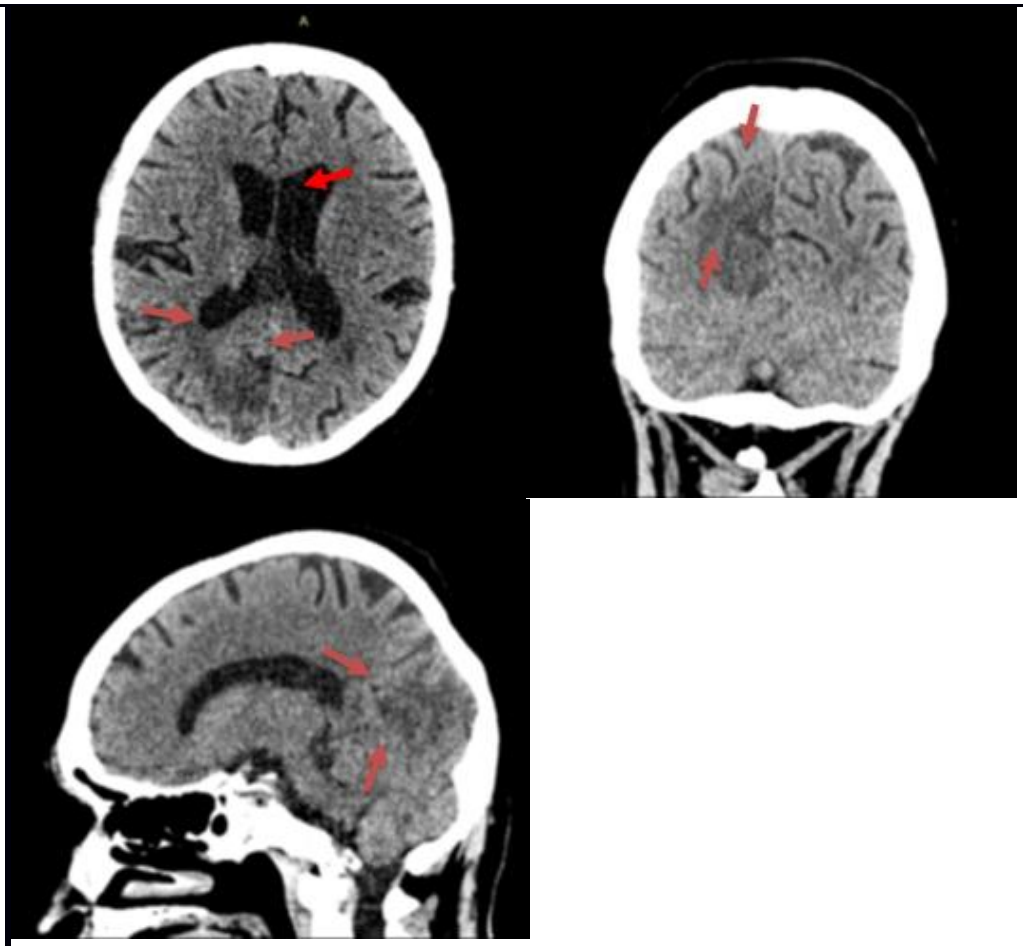
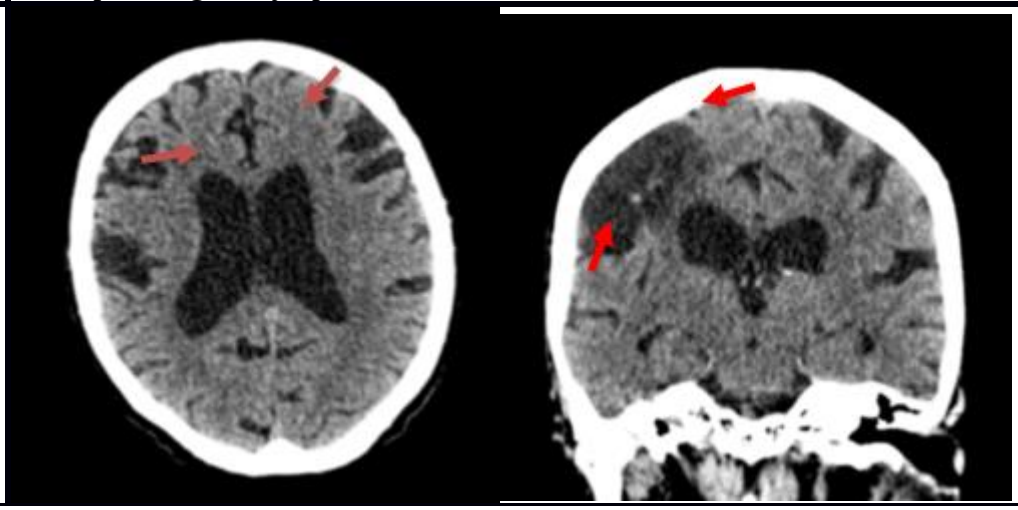
		 A 38-year-old patient presented with complaints of impaired nasal breathing, forehead pain, and fever. A CT scan of the paranasal sinuses was prescribed. Questions: 1) Determine the location of the pathological process. 2) Identify the radiographic symptoms visualized on the images (scans). 3) Which group of diseases might the radiographic symptoms of lesions (dystrophy/dysplasia/inflammation/tumor) correspond to? 4) What morphological substrate (benign/malignant) underlies the development of the pathological symptoms? 5) Conduct a differential diagnosis between the acute and chronic forms of the disease.
Q	12	

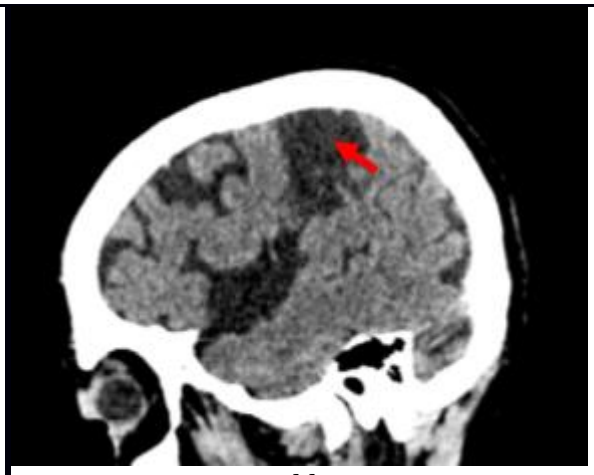
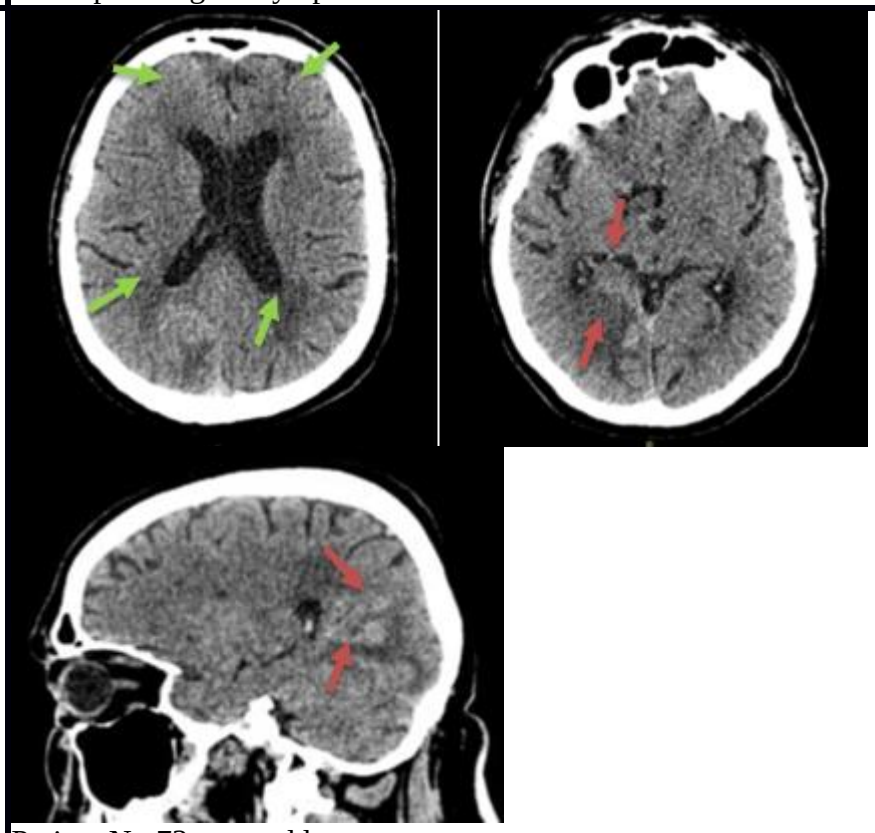
		 During an endocrinologist appointment, a 32-year-old patient was diagnosed with a tumor in the right carotid triangle. A CT scan revealed a mass actively accumulating contrast media. Questions: 1) Determine the location of the pathological process. 2) Identify the radiographic symptoms visualized on the images (scans). 3) Which group of diseases might the radiographic symptoms of lesions (dystrophy/dysplasia/inflammation/tumor) correspond to? 4) What morphological substrate (benign/malignant) underlies the development of pathological symptoms?
Q	13	  1. Identify the type of bone disorder: Fracture (correct)

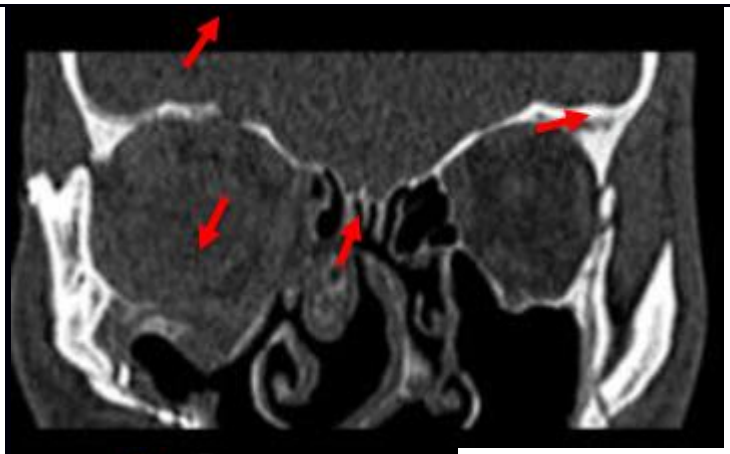
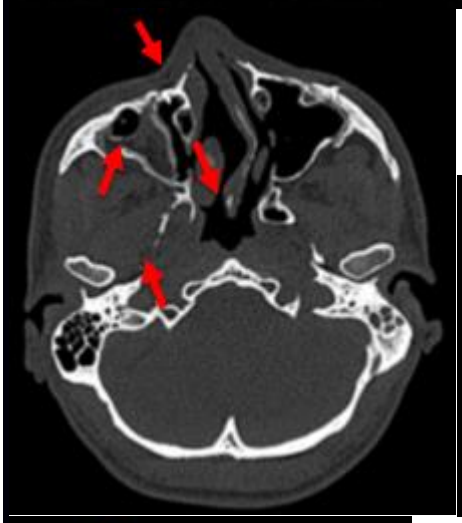
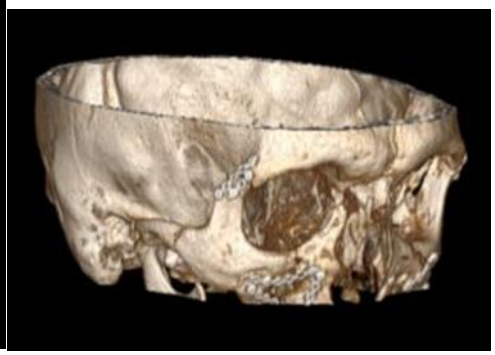
		Developmental anomaly 2. How should this disorder be classified? Alveolar process fracture on the right Anomaly of cleft maxilla and hard palate Fracture of the maxilla Fracture of the nasal bones Progenia Le Fort fracture (correct) 3. Identify early complications of a Le Fort fracture Injury and displacement of the eyeball (correct) Injury to blood vessels and nerves (correct) Subcutaneous emphysema of the face (correct) Osteomyelitis
Q	14	 An 8-month-old child was admitted to the clinic with complaints, according to his parents, of a fever of up to 39 degrees Celsius and a short-term cough with sputum production. Localize the pathological process Identify the radiographic symptoms visualized in the images Which group of diseases might these radiographic symptoms correspond to (inflammation, tumors, etc.) Predict your radiographic conclusion (which disease is most consistent with this radiographic image)
Q	15	

		 A 57-year-old patient complains of cough with sputum and increased body temperature. Identify and localize the pathological process. What other conditions should this disease be differentiated from? What additional radiographic examinations should you perform for differential diagnosis?
Q	16	 A patient presented to the clinic complaining of severe pain in her right lower back. After an ultrasound, she was recommended to undergo an abdominal CT scan with contrast, which revealed a calculus in her right kidney with a density of 1100 HU. What type of calculus was detected in this patient, and what condition is it associated with?

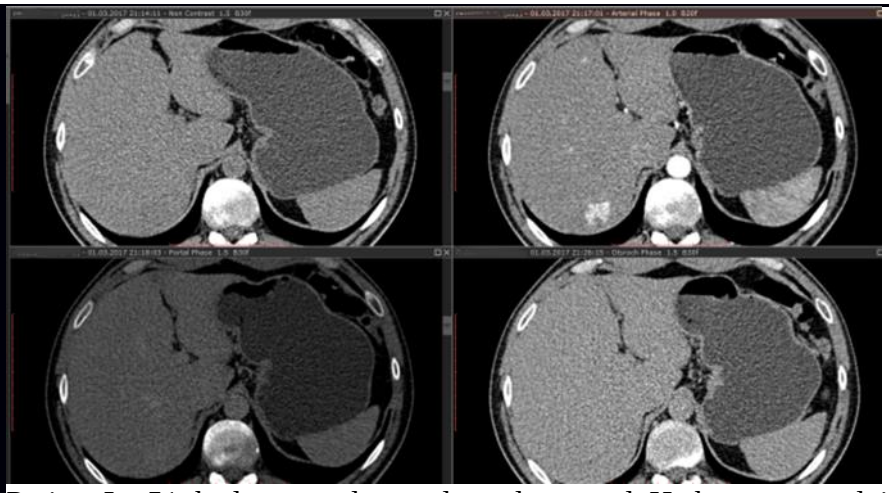
Q	17	 A patient presented to the clinic complaining of frequent, painful urination and blood in the urine. A mass was detected on the posterior wall of the bladder that accumulated contrast media (native 26 U, arterial 53 U, delayed 42 U). What disease does this patient have? What morphological substrate (benign/malignant) underlies the development of these pathological symptoms? Which specialist consultation is needed?
Q	18	 What type of X-ray diagnostic is depicted in these images? What are the indications and contraindications for this type of examination? What structures of the cerebral hemisphere do you see here?

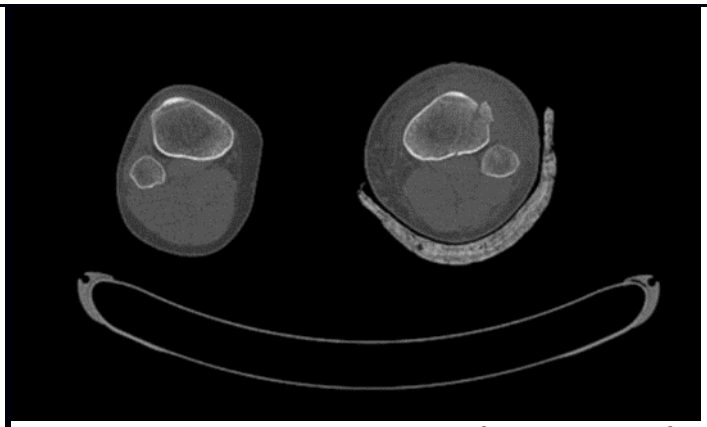
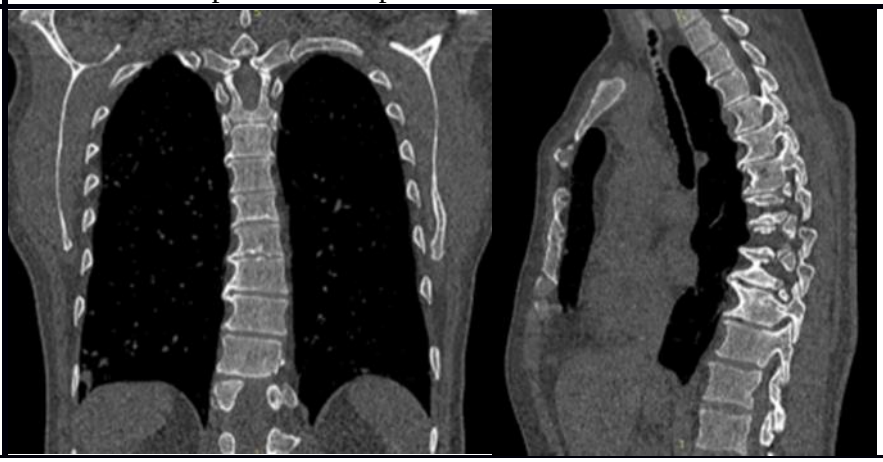
Q	19	 Patient Z., 87 years old. 1) Localize the pathological process. 2) Identify the radiographic symptoms visualized on the scans. 3) What group of diseases might the radiographic symptoms correspond to (dystrophies, dysplasias, inflammation, tumors)? 4) What morphological substrate (benign/malignant) underlies the development of the pathological symptoms?
Q	20	

		 Patient M., 74 years old. 1) Localize the pathological process. 2) Identify the radiographic symptoms visualized on the scans. 3) What group of diseases might the radiographic symptoms correspond to (dystrophies, dysplasias, inflammation, tumors)? 4) What morphological substrate (benign/malignant) underlies the development of the pathological symptoms?
Q	21	 Patient N., 73 years old. 1) Localize the pathological process. 2) Identify the radiographic symptoms visualized on the scans. 3) What group of diseases might the radiographic symptoms correspond to (dystrophies, dysplasias, inflammation, tumors)? 4) What morphological substrate (benign/malignant) underlies the development of the pathological symptoms?

Q	22	    Patient S., 33 years old. 1) Localize the pathological process. 2) Identify the radiographic symptoms visualized on the scans. 3) What group of diseases might the radiographic symptoms correspond to (dystrophies, dysplasias, inflammation, tumors)? 4) What morphological substrate (benign/malignant) underlies the development of the pathological symptoms?

Q	23	 Patient N., 53, presented to the clinic complaining of upper abdominal discomfort, pain, loss of appetite, and weight loss. 1. Localize the pathological process (liver, spleen, stomach, jejunum). 2. Assess contrast agent uptake (mean) (native phase (without contrast), arterial phase, venous phase). 3. Purpose of intravenous contrast administration. What are the contraindications for contrast. 4. Write a conclusion. Recommendations for further patient management.

Q	24	 Patient L., 51, had a mass detected on ultrasound. He has no complaints of pain or discomfort. The purpose of the examination is to clarify the diagnosis. 1. Localize the pathological process (liver, stomach, spleen, vertebral body). 2. Is intravenous contrast necessary? 3. What is the purpose of filling the stomach with fluid before performing a CT scan? 4. Provide an x-ray report (adenoma, fibroglandular hematoma, abscess, hemangioma).
Q	25	 

		 A 28-year-old woman complained of pain in her left knee after a fall. A CT scan was performed. What anatomical structure is affected? What radiographic signs of damage are visible on the images (scans)? What disease can be suspected? What are the possible complications of this disease?
Q	26	 A 27-year-old man complained of elbow pain after falling on his arm with his entire body. A lateral radiograph was performed. 1. What anatomical structure is affected? 2. What radiographic signs of the lesion are visible on the images (scans)? 3. What disease can be suspected? 4. What are the possible complications of this disease?
Q	27	

		 A 65-year-old patient complained of spinal pain. A CT scan was performed. 1. What anatomical structure is affected? 2. What radiographic signs of the lesion are visible on the images (scans)? 3. What disease can be suspected?

4. Assessment criteria for learning outcomes

"Pass" is given to a student who has shown a sufficiently strong knowledge of the basic concepts of the subject; is able to complete specific practical tasks outlined in the program with no outside help, use recommended reference material, and correctly evaluate the results.

"Fail" is given to a student who has significant gaps in knowledge of the basic concepts of the subject, is not able reach the correct solution to a specific practical task outlined in the curriculum even with outside help.