Medical Imaging 2020/21

Exam information for 4th-year medical students

Medical Imaging Exam:

Students who have participated in at least 75% of the live (excluding pre-recorded) Medical Imaging education (lectures, consultations, practices) are eligible for the exam. The participation must be certified by signatures and stamps in the Practice Book.

The written exam includes 20 simple-choice test questions (20 points) and analysis of 5 radiological images (20 points). Radiological images are selected from the ”Downloadable images for the exam” uploaded to the website. The oral exam includes the presentation of two topics chosen from the topic lists (20-20 points).

The maximum points achievable is 80.

For a successful exam, the students must accomplish at least 50 % (10 points) at each part of the exam (test, image analysis, topic 1. and topic 2.). The two parts (written and oral) of the combined exam can be repeated separately, during the given semester.

The educational material includes the downloadable lectures and practices, the official book (Gunderman: Essential radiology, 2014) and the online e-learning notes (http://oftankonyv.reak.bme.hu).

Point limits:

excellent (5):	71-80 points
good (4):	61-70 points
satisfactory (3):	51-60 points
pass (2):	40-50 points
fail (1):	0-39 points

Topic Lists:

1st topic list – Radiological Modalities

1. Basic principles of conventional radiography; Strengths, weaknesses and role in clinical practice
2. Basic principles of fluoroscopy; Strengths, weaknesses and role in clinical practice
3. Basic principles of ultrasonography; Strengths, weaknesses and role in clinical practice
4. Basic principles of computed tomography; Strengths, weaknesses and role in clinical practice
5. Basic principles of magnetic resonance imaging; Strengths, weaknesses and role in clinical practice
6. Comparison of 3D imaging modalities (CT and MRI) and their role in radiological diagnosis; Dynamic CT and MRI
7. Basic principles of diagnostic nuclear medicine; Strengths, weaknesses and role in clinical practice
8. Comparison of angiographic techniques (DSA, CTA, MRA) and their role in clinical practice
9. Technical basis and main types of vascular radiological interventions; their role in clinical practice
10. Technical basis and main types of non-vascular radiological interventions; their role in clinical practice
11. Types and clinical use of radiocontrast agents; Contrast agent safety issues and contraindications; Adverse reactions of contrast material and their treatment
12. Preparation of a patient for an imaging study / radiological intervention

2nd topic list – Clinical Radiology

1. Imaging in acute chest pain; Role of „triple-rule-out" CT
2. Radiological appearance of circumscribed and diffuse lung disease; Role of HRCT in pulmonary imaging
3. Imaging of the mediastinum; Significance of the mediastinal compartments in differential diagnosis
4. Imaging of the acute abdomen
5. Radiological evaluation of the hepatobiliary diseases
6. Radiological evaluation of the kidneys and the urinary tract; Types of urography
7. Imaging in inflammatory bowel disease and gastrointestinal tumors
8. Imaging of ischemic and hemorrhagic stroke; Interventional radiological methods in stroke therapy
9. Neuroimaging in infections and tumors; Imaging in back pain
10. Breast Imaging; Radiological modalities and types of interventions used in breast mass evaluation
11. Imaging of female pevis; Radiology of the prostate and testicular diseases
12. Imaging of musculoskeletal trauma in adults and children
13. Imaging of musculoskeletal infections and tumors; Signs of malignancy of bone lesions in radiological modalities
14. Radiological interventions in hepatobiliary and urogenital diseases
15. Radiological evaluation of peripheral arterial and venous diseases; Interventional radiology in treatment of peripheral vascular diseases