UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

SYLLABUS DEL CORSO

Diagnostics

2627-5-H4102D043-H4102D184M

Aims

Provide basic knowledge of the most important imaging modalities and their clinical use in the context of gastrointestinal radiology. The role of conventional and tomographic radiology, including hybrid techniques, will be illustrated. The main aim of the course is to document the potential of the different imaging techniques in the management of diseases, both elective and emergency. The discussion will follow a structured approach based on anatomical area.

1. Knowledge and understanding
   The student shall:

- know the basic physical principles of the main imaging techniques
- understand the clinical indications of radiological, nuclear medicine, and radiotherapy methods
- acquire general knowledge of the main clinical applications

2. Applying knowledge and understanding
   The student will be able to:

- identify the most appropriate imaging method
- provide a general interpretation of imaging findings
- understand the role of diagnostic imaging in clinical pathways

3. Making judgements
   The student shall:

- assess the benefits and risks of the different methods
- consider aspects of appropriateness and radiation protection
- develop a critical approach to requesting diagnostic examinations

4. Communication skills

The student will be able to:

- use appropriate medical terminology in the field of radiology
- correctly communicate basic indications and results
- interact with diagnostic imaging specialists

5. Learning skills
   The student shall:

- develop the ability to update knowledge independently
- consult and understand review articles
- integrate theoretical and clinical knowledge

Contents

Assess the effectiveness of digital conventional radiology, ultrasound, and the various digital tomographic techniques, such as CT and magnetic resonance imaging, in the diagnostic assessment of disease, with particular reference to appropriateness.

Detailed program

Role of conventional radiology in gastrointestinal diseases in elective and emergency-urgent settings. Value of CT and MRI as fundamental diagnostic tools in the management of inflammatory, degenerative, and neoplastic diseases of the gastrointestinal tract. Basic information will be provided regarding image interpretation in the most common clinical contexts. Selection of the imaging modality based on the clinical question, according to principles of diagnostic appropriateness. Advanced techniques for the quantification of liver stiffness and hepatic steatosis will be introduced. The different contrast agents will be presented, together with their specific characteristics.
The topics covered will include an in-depth discussion of imaging methods and image interpretation for:

- benign and malignant diseases of the gastrointestinal tract, colon, and rectum.
- benign and malignant diseases of the biliary tract and pancreas
- liver: benign incidental lesions, chronic disease, and malignant lesions; screening protocols
- cirrhosis and portal hypertension
- loco-regional treatments in interventional radiology

Prerequisites

Basic knowledge of human anatomy, phisiology, and general pathology.

Teaching form

5 two-hour lectures delivered in person in lecture-based format.

Textbook and teaching resource

Teaching materials presented during the lectures. Educational articles available on RadioGraphics RSNA.
Textbook of gastrointestinal radiology: Richard M Gore ed. Elsevier Health Europe

Semester

Second semester

Assessment method

Oral exam conducted in approximately 20-30 minutes. The exam is positively evaluated with a score of 18/30 or higher. Oral discussion with possible deepening of one or more topics. The questions proposed will be constructed in such a way to induce the student to understand the clinical use and significance of any of the most relevant imaging modalities.

Office hours

On appointment requested by email

Sustainable Development Goals

GOOD HEALTH AND WELL-BEING