

MODERN IMAGING TECHNIQUES OF PATIENT EVALUATION AND MONITORING

LEARNING OUTCOMES

KNOWLEDGE

- ACQUISITION OF THE BASIC CONCEPTS RELATED TO IMAGING INVESTIGATION METHODS, ACQUISITION OF THE MAIN INDICATIONS AND CONTRAINDICATIONS OF CONVENTIONAL RADIOLOGICAL, CT, ULTRASONOGRAPHIC, MAGNETIC RESONANCE AND RADIOISOTOPE EXAMINATIONS

SKILLS

- INTERPRETATION IN A CLINICAL CONTEXT OF THE IMAGES OBTAINED BY CONVENTIONAL RADIOLOGY, CT, ULTRASONOGRAPHY, MRI
- OPERATING WITH PROGRAMS DIGITAL DOCUMENTATION AND COMMUNICATION IN A LANGUAGE OF INTERNATIONAL CIRCULATION
- ORGANIZATION OF QUANTITATIVE AND QUALITATIVE CORRELATION ACTIVITIES OF SPECIFIC MEDICAL IMAGING WITH DIFFERENT LEVELS OF TRAINING UNDER CONDITIONS OF QUALIFIED ASSISTANCE

COMPETENCES

- RESPECTING THE NORMS OF PROFESSIONAL ETHICS AND DEONTOLOGY
- COMPLETING WORK TASKS IN CONDITIONS OF EFFICIENCY AND EFFECTIVENESS FOR THE ORGANIZATION
- RESPECTING THE NORMS OF PROFESSIONAL ETHICS AND DEONTOLOGY
- ACQUISITION OF ORAL AND WRITTEN COMMUNICATION SKILLS WITH PATIENTS

ECTS CREDITS

2 ECTS

<i>Theoretical courses</i>	<i>Teaching Methodology</i>	<i>Number of hours</i>
Historical data. Radiations X The properties of X -ray, Roentgen Diagnostic equipment, dosimetry, radiology protection, radiological image formation and laws. Formation of the computer image. The principle of image formation in ultrasound. The principle of imaging exploration through Magnetic Resonance.	<i>Oral presentation + multimedia, E-learning. Online platform</i>	2
Pleurpulmonary radioimaging: congenital malformations, bronchitis, pneumonia, bronchopneumons, suppurations, pneumoconiosis, tuberculosis, primary pulmonary tumors secondary; radiodiagnosis of pleural disorders	<i>Oral presentation + multimedia, E-learning. Online platform</i>	2
Radioimaging of mediastinum and diaphragm: mediastinum, medium, posterior pathology. Relaxation, diaphragmatic hernia. Pneumoperitoneum. Subfrenic abuse.	<i>Oral presentation + multimedia, E-learning. Online platform</i>	2



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Cardiovascular radioimaging: investigative methods, congenital malformations, radiological semiology of valvular lesions, acquired valvular lesions, pericardial diseases, aneurysms and dissection of the aorta, pulmonary thromboembolic disease	<i>Oral presentation + multimedia, E-learning. Online platform</i>	2
Radioimaging of the digestive tract: esophagus, stomach, thin intestine, colon, rectum. Radioimaging of the liver, biliary tract, pancreas, spleen	<i>Oral presentation + multimedia, E-learning. Online platform</i>	2
Urogenital radioimaging: IV, CT, US, IRM in urinary pathology, renal, ureteral, bladder, congenital malformations, renal infections, renal tumors. Radioimaging of the male genital tract: adenoma and prostate cancer. Radioimaging of the female genital tract: cysts and ovarian cancer, uterine fibroids.	<i>Oral presentation + multimedia, E-learning. Online platform</i>	2
Musculoskeletal radioimaging: investigation methods, bone elementary lesions, malformations, osteoarticular inflammation, oste-articular trauma, dystrophies, benign and malignant tumors.	<i>Oral presentation + multimedia, E-learning. Online platform</i>	2

Practical activities	Teaching Methodology	Number of hours
Visiting the workstations	Practical demonstrations, Case discussions from the laboratory casuistry	4
Cases from pleuropulmonary pathology: pneumonia, TB, pulmonary tumors, pleurisy, malformations, atelectasis, emphysema, pneumothoracic	Practical demonstrations, practical manoeuvres characteristics for pleuropulmonary pathology. Virtual laboratory	4
Cases of mediastinal pathology and diaphragm: thymus hyperplasia, goiter, Hodgkin's disease, mature teratoma, sarcoidosis, tumors of nervous origin, diaphragmatic hernias, pneumoperitoneum, underfrenal abscess	Practical demonstrations, practical manoeuvres characteristics for mediastinal pathology and diaphragm. Virtual laboratory	4
Stenosis/ insufficiency/ mitral disease, stenosis/ insufficiency/ aortic disease, pericarditis, coronary stenosis, tetralogy Fallot, aorta coarctation, aorta aneurysms, aorta dissection, pulmonary thrombolia	Practical demonstrations, practical manoeuvres characteristics for Cardiological pathology. Virtual laboratory	4
Megaesophagus, esophageal diverticuli, post-caustic stenosis, esophageal cancer, gastric ulcer, gastric cancer, duodenal ulcer, Crohn disease, Hirschprung disease, colon polyposis, intestinal occlusion, hepatic steatosis, hepatic cirrhosis, hepatic hemangioma, hepatocellular carcinoma,	Practical demonstrations, practical manoeuvres characteristics for the digestive tract. Virtual laboratory	4



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liver stasis , biliary lithiasis, acute pancreatitis, pancreatic cancer		
Renal lithiasis, renal cysts, hydronephrosis, acute and chronic pyelonephritis, renal TB, renal cancer, horseshoe kidney, bladder tumors, adrenal adenoma, uterine fibroleiomyoma, ovarian cancer, prostate adenoma, prostate cancer , urinary bladder tumors, adrenal adenoma, uterine fibroleiomyoma, ovarian cancer, prostate adenoma, prostate cancer	Practical demonstrations, practical manoeuvres characteristics for the urogenital pathology. Virtual laboratory	4
Fractures, dislocations, meniscus lesions, tendons and ligaments, coxarthrosis, gonarthrosis, spondylosis, rheumatoid polyarthritits, anchylopoetic spondylaty, benign and malignant bone tumors	Practical demonstrations, practical manoeuvres characteristics for the musculoskeletal pathology. Virtual laboratory	4

References

1. R.Weissleder, J.Wittenberg, M.Harishingani,J.Chen-Primer of diagnostic imaging-Elsevier Mosby, 2011.

Evaluation

<i>Course activities – percent of the final grade - 50%</i>	<i>Practical activities – percent of the final grade - 50%</i>
<i>Final mark</i>	

Training Methods

- *Lectures*
- *Independent Study*

Innovative Digital Training Methods

- *Virtual laboratory*
- *Online platform*
- *E-learning*

