UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Diagnostic and Therapy in Nuclear Medicine

2627-3-I0303D036-I0303D061M

Aims

The student will have to learn the basics of the main clinical applications of scintigraphic and PET investigations in the study of cardiovascular, respiratory, gastrointestinal, urogenital, locomotor, central nervous system, endocrine, inflammatory/infectious, paediatric and oncological pathologies. The student is also expected to learn the basics of therapeutic treatments in nuclear medicine (radiometabolic, radiioreceptor, radioligand and radioembolisation treatments of liver tumours)

Contents

Clinical notes, diagnostic path and clinical indications of scintigraphic and PET investigations in the cardiovascular, respiratory, gastrointestinal, urogenital, locomotor, neurological, endocrinological, infectious diseases, pediatric and oncology fields. Clinical indications for therapies with radiopharmaceuticals (radiometabolic, radioreceptor therapy, with radioligands and radioembolization treatments)

Detailed program

Scintigraphic investigations for the study of ischaemic heart disease, pathology of the respiratory system (acute and chronic pulmonary embolism), the gastrointestinal system (gastro-entero-pancreatic neuroendocrine tumours), the urogenital system (study of obstructive hydronephrosis nephro-vascular hypertension, transplanted kidney, vesicoureteral reflux, pyelonephritis, malformative diseases of the kidney), of the musculoskeletal system (study of complications of joint prostheses, non-oncological skeletal pathology, primary and secondary oncology) of the central nervous system (study of movement disorders and neurodegenerative diseases), of the endocrine system (non-oncological and oncological thyroid pathology, parathyroid gland pathology, adrenal gland pathology), study of inflammatory/infectious processes (infections of joint prostheses, diabetic foot endocarditis, vasculitis,

spondylodiscitis, fever of unknown origin, systemic and cardiac sarcoidosis), paediatric pathologies (lymphomas, sarcomas, neuroblastoma), oncological pathologies (PET oncology diagnostics, sentinel lymph node detection in breast cancer, melanoma and gynaecological cancers). General principles of the use of radiopharmaceuticals for therapeutic purposes; outlines of radiometabolic therapy of thyroid tumours, radioligand and radioreceptor therapy (neuroendocrine tumours, prostate cancer).

Prerequisites

Teaching form

10 frontal lessons of 2 hours carried out in attendance

Textbook and teaching resource

Fondamenti di medicina nucleare: Tecniche e applicazioni, Duccio Volterrani, Giuliano Mariani, Paola Anna Erba, ed. Springer.
The Teachers will provide further educational materials

Semester

First semester

Assessment method

Monza
Oral exam

Bergamo
5 multiple choice questions and oral exam

Office hours

By appointment required by mail

Sustainable Development Goals