



UNIVERSITÀ  
DEGLI STUDI DI MILANO-BICOCCA

## COURSE SYLLABUS

### Diagnostic and Therapy in Nuclear Medicine

2425-3-I0303D036-I0303D061M

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#### Aims

The student will have to learn the fundamental notions on the main clinical applications of scintigraphic and PET investigations in the study of cardiovascular, respiratory, gastrointestinal, urogenital, locomotor, central nervous system, endocrine system, inflammatory/infectious pathologies, pediatric and oncological pathologies. The student will also have to learn the basic notions relating to therapeutic treatments in nuclear medicine (radiometabolic, radioreceptor therapy, with radioligands and radioembolization treatments).

#### 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 ischemic heart disease, pathologies of the respiratory system (acute and chronic pulmonary embolism), of the gastrointestinal system (gastro-entero-pancreatic neuroendocrine tumors), of the urogenital system (study of obstructive hydronephrosis, nephro-vascular hypertension, of the transplanted kidney, of vesicoureteral reflux, pyelonephritis, malformative diseases of the kidney), of the musculoskeletal system (complicated joint prostheses, non-oncological skeletal pathology, primary and secondary oncological), of the central nervous system (study of movement disorders and neurodegenerative diseases), of the endocrine system (non-oncological and oncological thyroid pathology, pathologies of the parathyroid glands, pathology of the adrenal glands), study of inflammatory/infectious processes (infections of joint prostheses, diabetic

foot, endocarditis, vasculitis, spondylodiscitis, fever of unknown origin, systemic and cardiac sarcoidosis), pediatric pathologies (lymphomas, sarcomas, neuroblastoma), oncological pathologies (PET oncology diagnostics, search for the sentinel lymph node in breast cancer, melanoma and gynecological tumors) . General principles of the use of radiopharmaceuticals for therapeutic purposes; notes on radiometabolic therapy of thyroid tumors, neuroendocrine tumors, prostate cancer.

## **Prerequisites**

## **Teaching form**

10 frontal lessons of 2 hours carried out in attendance

## **Textbook and teaching resource**

The Teachers will provide educational materials

## **Semester**

First semester

## **Assessment method**

5 multiple choice questions and oral exam

## **Office hours**

By appointment required by mail

## **Sustainable Development Goals**

GOOD HEALTH AND WELL-BEING | QUALITY EDUCATION

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