UNIVERSITY OF NOVI SAD
FACULTY OF MEDICINE

Study Program: Doctoral Academic Studies in Biomedical Sciences

Course Title: POSITRON EMISSION TOMOGRAPHY

Teacher: Jasna M. Mihailović, Natasa M. Prvulović Bunovic, Marija D. Semnic

Course Status: elective

Number of ECTS: 20

Condition: -

Course Objectives

The aim of Positron Emission Tomography (PET) teaching is that students get basic information on positron emitters' application in diagnostics, clinical practice and medical researchs.

Expected outcome of the course:

The knowledge about the basics clinical indications for molecular imaging will enable doctoral students

1) to establish proper diagnostics and monitoring of treatment efficacy
2) to select adequate treatment algorithm

Course Content

Theoretical teaching

The physical principles of PET/CT imaging, description and usage of medical equipment, radiation protection and radiopharmaceuticals/short-life positron emitters. General indications for PET in clinical practice. Application of PET diagnostics in neurology, cardiology, .infection and inflammation, pediatrics, oncology-diagnostics and evaluation of treatment assessment of malignant tumors (head and neck tumors, lung cancer, breast cancer, neoplasmsm of digestive system, neoplasms of urogenitall system, haematological neoplams, endocrine and neuroendocrine tumors). The role of PET in radiotherapy planning . Physiological variation, pitfalls and artifacts.

Practical Teaching

Introduction to the physical basics and principles of PET/CT scanner, the principles of radiation protection. Presentation of normal distribution of positron emitters, physiological variation and artifacts. Presentation of tipical PET findings in oncology, neurology, cardiology, infection and inflammation.

Literature

1. Eugene C. Lin and Abass Alavi (Eds). PET and PET/CT Clinical Guide. Third Edition. Thieme, New York, 2019.
2. Mihailovic J, Goldsmith SJ, Killeen R. FDG PET/CT in Clinical Oncology. Case Based Approach with Teaching Points. Berlin Heidelberg: Springer Verlag, 2012.

Number of active teaching hours	**Theoretical Teaching:** 60	**Practical Teaching:** 45

Methods of Teaching

Interactive lectures and practices; Consultations; Essays

Knowledge assessment (maximum number of points 100)

activity during lectures: 15
practical teaching: 20
essay: 15
written exam: 50