

Syllabus for nuclear medicine

General part

1. Diagnostic performances of imaging techniques
Sensitivity & detection rate
Specificity
Diagnostic accuracy
Impact on patient management
Positive and negative predictive value
2. Radioactive decay α
3. Radioactive decay $\beta +$
4. Radioactive decay $\beta -$
5. Radioactive decay γ
6. Main commonly used radionuclides in conventional scintigraphic imaging: ^{99m}Tc , ^{123}I ,
7. Main nuclides used in PET imaging: ^{18}F , ^{11}C
8. Main commonly used radionuclides in radionuclide therapy: ^{131}I , ^{90}Y
9. Interaction of radiation with matter
10. Detection of radiation
11. Positive and negative imaging in nuclear medicine

Functional imaging of nuclear medicine in endocrinology (indications, contraindications, radiopharmaceuticals, type of imaging, realization of the examination)

12. Scintigraphy of the thyroid gland
13. Accumulation test of the thyroid gland
14. Scintigraphy of the parathyroid gland
15. Functional imaging of neuroendocrine tumours of the digestive tract and of the lung
16. Functional imaging of neuroendocrine neuroendocrine tumours of the pancreas
17. Functional imaging of neuroendocrine tumours of the sympathetic and parasympathetic autonomic nervous system

Functional imaging of nuclear medicine in pneumology (indications, contraindications, radiopharmaceuticals, type of imaging, realization of the examination)

18. Perfusion / ventilation lung scintigraphy

Functional imaging of nuclear medicine in nephrology (indications, contraindications, radiopharmaceuticals, type of imaging, realization of the examination)

19. Dynamic renal scintigraphy
20. Static renal scintigraphy

Functional imaging of nuclear medicine in exploration of osteoarticular system

(indications, contraindications, radiopharmaceuticals, type of imaging, realization of the examination)

21. Bone scintigraphy in non-oncological indications in children and adults
22. Bone scintigraphy in primary malignant bone tumors
23. Bone scintigraphy in secondary malignant bone tumors

Diagnosis of inflammation (indications, contraindications, radiopharmaceuticals, type of imaging, realization of the examination)

24. Scintigraphy with labeled leukocytes
25. Scintigraphy with labeled antibodies
26. FDG (18F) PET in the diagnosis of infection and inflammation

Basic terms in oncologic diagnostic

27. Clinical situations: diagnosis, staging, restaging, searching for recurrent disease, occult recurrence of disease
28. Non FDG(18F) tracers in oncology (basic overview: FCH(18F), FDOPA(18F), FNa(18F))

Main indications for FDG (18F) PET in oncology (indications, contraindications, type of imaging, the realization of the examination)

29. Functional imaging of brain tumours
30. Functional imaging of head and neck
31. Functional imaging of malignant lung tumours
32. Functional imaging of malignant tumours of digestive tube (excluding neuroendocrine tumours)
33. Functional imaging hepatobiliary tract malignant tumor
34. Functional imaging of malignant tumors of the pancreas
35. Functional imaging hemoblastómov
36. Functional representation of malignancy of breast cancer
37. Functional representation of malignancy of prostate cancer

Treatment of open emitters (indications, contraindications, Radiopharmaceuticals / medical devices, principles of treatment)

38. Thyrotoxicosis
39. Thyroid cancer
40. Neuroendocrine tumours
41. Selective internal radiotherapy of inoperable liver tumors
42. Metabolic treatment of bone metastases