

IAEA/ESNM Webinar Series on basic NM

Introduction to Nuclear Medicine in Neurology: bases for clinical use

Suggested Readings: Dementia

1. Ishii K., PET Approaches for Diagnosis of Dementia., *AJNR Am J Neuroradiol.* 2013 Aug 14.
2. Jack CR Jr. et al., Tracking pathophysiological processes in Alzheimer's disease: an updated hypothetical model of dynamic biomarkers., *Lancet Neurol.* 2013 Feb;12(2):207-16.
3. Chételat G. et al., Amyloid imaging in cognitively normal individuals, at-risk populations and preclinical Alzheimer's disease., *Neuroimage Clin.* 2013 Mar 5;2:356-65.
4. Vandenberghe R. et al., Amyloid PET in clinical practice: Its place in the multidimensional space of Alzheimer's disease., *Neuroimage Clin.* 2013 Apr 6;2:497-511.
5. Frisoni G. et al., Imaging markers for Alzheimer disease: which vs how., *Neurology.* 2013 Jul 30;81(5):487-500. Review.
6. Devous MD Sr., Functional brain imaging in the dementias: role in early detection, differential diagnosis, and longitudinal studies., *Eur J Nucl Med Mol Imaging.* 2002; 29:1685-96.
7. Silverman DHS., Brain 18F-FDG PET in the diagnosis of neurodegenerative dementias: comparison with perfusion SPECT and with clinical evaluations lacking nuclear imaging., *J Nucl Med.* 2004; 45: 594-607.
8. Nordberg A., PET imaging of amyloid in Alzheimer's disease. *Lancet Neurol.* 2004; 3: 519-27.
9. Mosconi L., Brain glucose metabolism in the early and specific diagnosis of Alzheimer's disease. FDG-PET studies in MCI and AD. *Eur J Nucl Med Mol Imaging* 2005;32:486-510.

Suggested Readings: Movement Disorders

1. Berti V, Pupi A, Mosconi L. PET/CT in diagnosis of movement disorders. *Ann N Y Acad Sci.* 2011 Jun;1228:93-108.
2. Morrish PK, Rakshi JS, Bailey DL, et al. Measuring the rate of progression and estimating the preclinical period of Parkinson's disease with [F-18] dopa PET. *J Neurosurg Psychiatry.* 1998; 64:314-319.
3. Varrone A, et al European multicentre database of healthy controls for [123I]FP-CIT SPECT (ENC-DAT): age-related effects, gender differences and evaluation of different methods of analysis. *Eur J Nucl Med Mol Imaging.* 2013, Jan;40(2):213-27.
4. Booij J, Knol RJ. SPECT imaging of the dopaminergic system in (premotor), Parkinson's disease. *Parkinsonism Relat Disord.* 2007;13 Suppl 3:S425-8

5. Hellwig S, et al [¹⁸F]FDG-PET is superior to [¹²³I]IBZM-SPECT for the differential diagnosis of parkinsonism. *Neurology*. 2012 Sep 25;79(13):1314-22
6. Booij J, Teune LK, Verberne HJ. The role of molecular imaging in the differential diagnosis of parkinsonism. *Q J Nucl Med Mol Imaging*. 2012, Feb;56(1):17-26.

Suggested Readings: Epilepsy

1. Kumar A, Chugani HT. The Role of Radionuclide Imaging in Epilepsy, Part 1: Sporadic Temporal and Extratemporal Lobe Epilepsy. *J Nucl Med* 2013; 54:1775–1781.
2. Kumar A, Chugani HT. The Role of Radionuclide Imaging in Epilepsy, Part 2: Epilepsy Syndromes. *J Nucl Med* 2013; 54:1924–1930.
3. Koepp MJ and Woermann FG. Imaging structure and function in refractory epilepsy. *Lancet Neurol* 2005; 4: 42-53
4. Goffin K et al. Neuronuclear assessment of patients with epilepsy. *Semin Nucl Med* 2008; 38:227-239.
5. Desai A et al. Interictal PET and ictal subtraction SPECT: Sensitivity in the detection of seizure foci in patients with medically intractable epilepsy. *Epilepsia* 2013;54:341–350.
6. Vivash L et al. 18F-Flumazenil: A g-Aminobutyric Acid A–Specific PET Radiotracer for the Localization of Drug-Resistant Temporal Lobe Epilepsy. *J Nucl Med* 2013; 54:1270–1277
7. Feldmann M et al. P-glycoprotein expression and function in patients with temporal lobe epilepsy: a case-control study. *Lancet Neurol* 2013; 12: 777–85.
8. Martinez A et al. The 5-HT_{1A} receptor and 5-HT transporter in temporal lobe epilepsy. *Neurology* 2013;80:1465–1471

Suggested Readings: Brain Tumors

1. Herholz K, Langen KJ, Schiepers C, Mountz JM. Brain tumors. *Semin Nucl Med*. 2012 Nov;42:356-70.
2. Del Sole A et al. Anatomical and biochemical investigation of primary brain tumors. *Eur J Nucl Med* 2001; 28:1851–72.
3. Jager PL et al. Radiolabeled Amino Acids: Basic Aspects and clinical Applications in Oncology. *J Nucl Med* 2001; 42:432–45.
4. Laverman P et al. Fluorinated amino acids for tumor imaging with positron emission tomography. *Eur J Nucl Med* 2002; 29:681–90.
5. Schaller B. Usefulness of positron emission tomography in diagnosis and treatment follow-up of brain tumors. *Neurobiol Dis* 2004; 15:437-48.
6. Del Sole A et al. Position of nuclear medicine techniques in the diagnostic work-up of brain tumors. *Q J Nucl Med Mol Imaging* 2004; 48:76-81.
7. Jacobs AH et al. Imaging in neurooncology. *NeuroRx* 2005; 2:333-47.
8. Grosu LA, Weber WA. PET for radiation treatment planning of brain tumors. *Radiother Oncol* 2010; 96:325-7.