

Evidence Discussion (HD-8.2)

- Diagnosis is based on clinical features, neuropsychological testing, and brain imaging (preferably MRI) to rule out other structural disease. FDG-PET accurately discriminates Alzheimer's disease patients from normal subjects with a sensitivity of 96% and specificity of 100%.¹
- Metabolic (FDG) PET Brain is helpful by demonstrating patterns of abnormality more consistent with FTD than Alzheimer's disease. FDG-PET Brain has a sensitivity of 86% and specificity of 97.6% in evaluating individuals with FTD.² The use of FDG-PET increases diagnostic accuracy and confidence for both AD and FTD.² It is particularly helpful in cases of diagnostic uncertainty.²
- Recent research has examined the utility of PET/MRI for evaluation of patients with dementia. Due to the prolonged acquisition time, motion during a PET may lead to artifacts such as blurring of the images. Use of co-registration of PET with MRI can lead to better PET assessment especially with quantitative measurements^{3,5}. Utilization of PET/MRI provides greater confidence in reading images by permitting greater structural correlation. A recent study compared FDG-PET/CT and FDG-PET/MRI in a memory disorders clinic. The main findings were that FDG PET/MRI revealed more vascular pathology in 35% of patients, induced a change of the interpretation of FDG PET in 17% of patients, and was considered to influence patient management in 22% of patients.⁴

References

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