

The Key Role of Nuclear Technology in Medical Diagnosis for: Neurological Diseases Focus on Dementia

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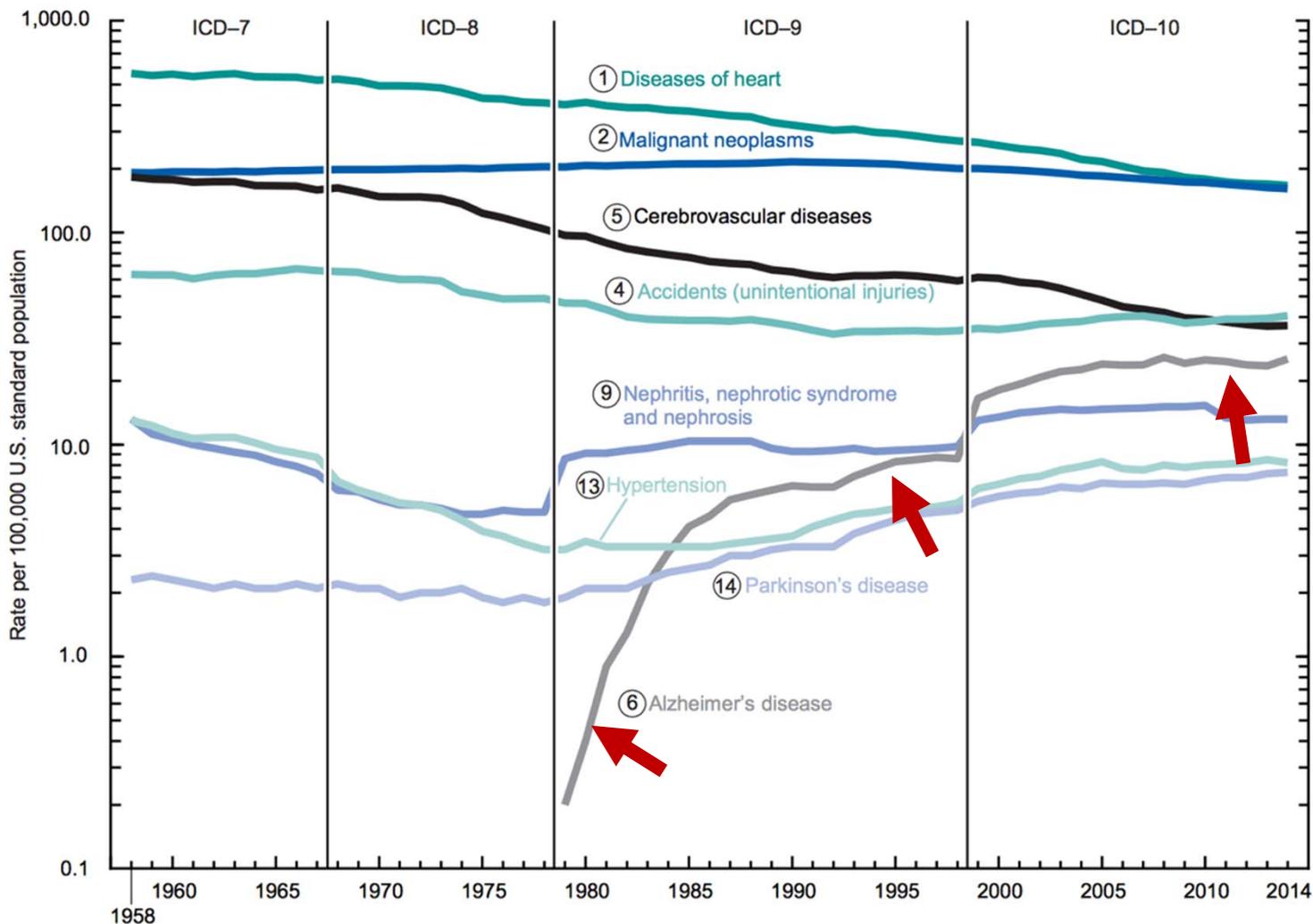
IAEA Scientific Forum

**Nuclear Techniques
in Human Health**

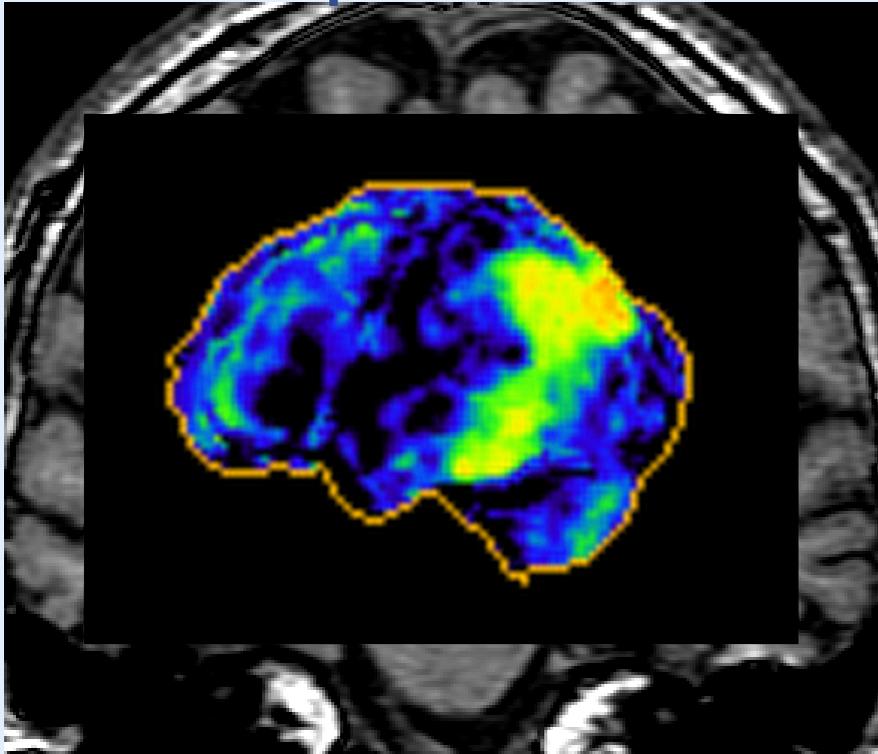
Prevention, Diagnosis, Treatment



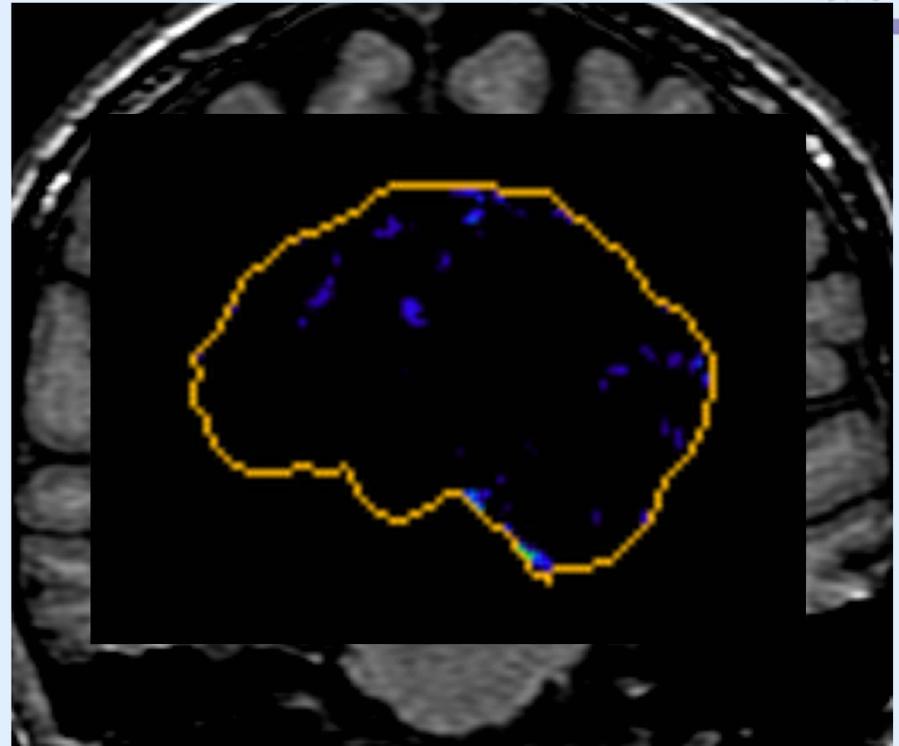
Age-adjusted Death Rate



FDG PET shows more marked abnormalities.
Which patient has Alzheimer's disease?

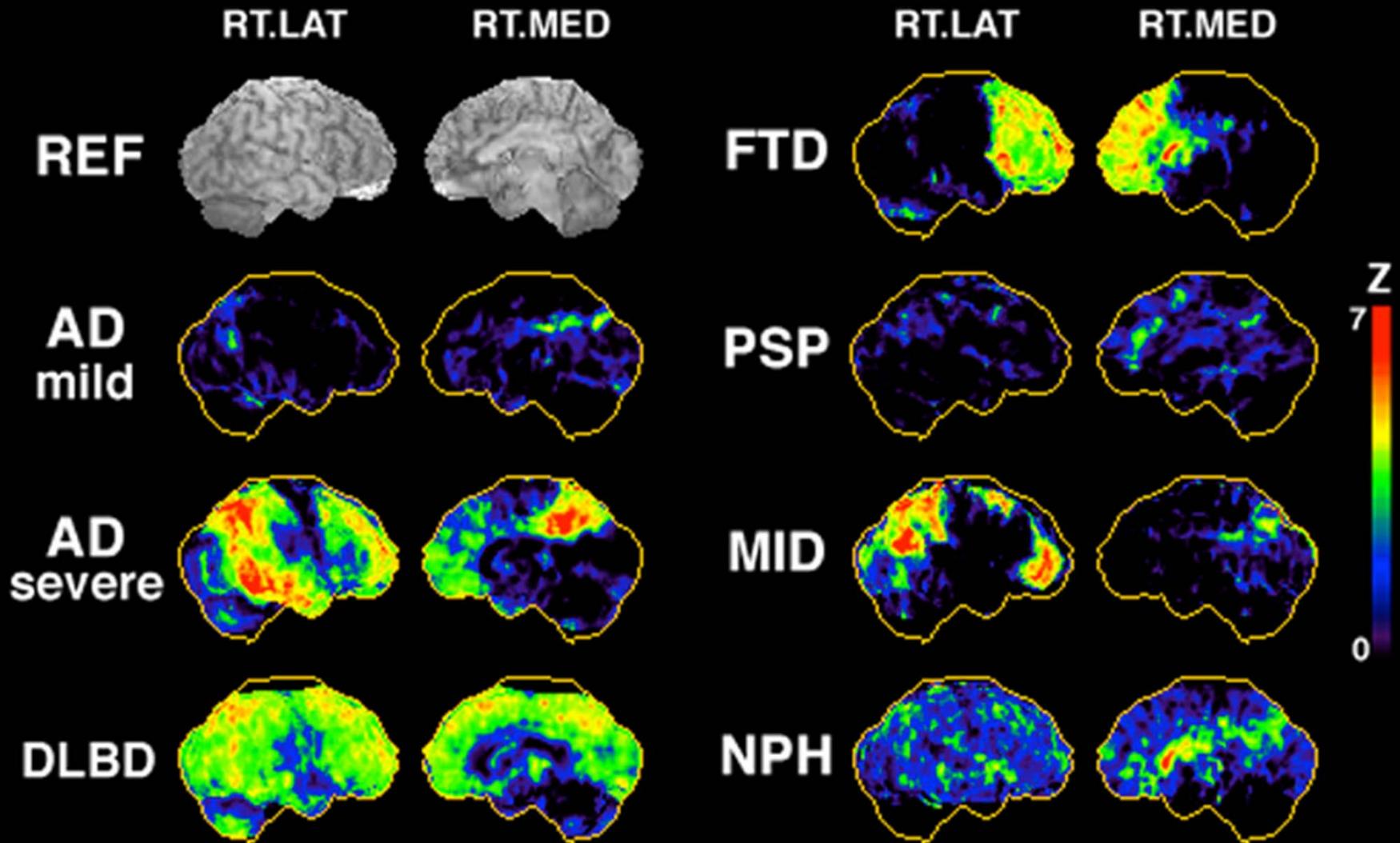


Alzheimer's disease

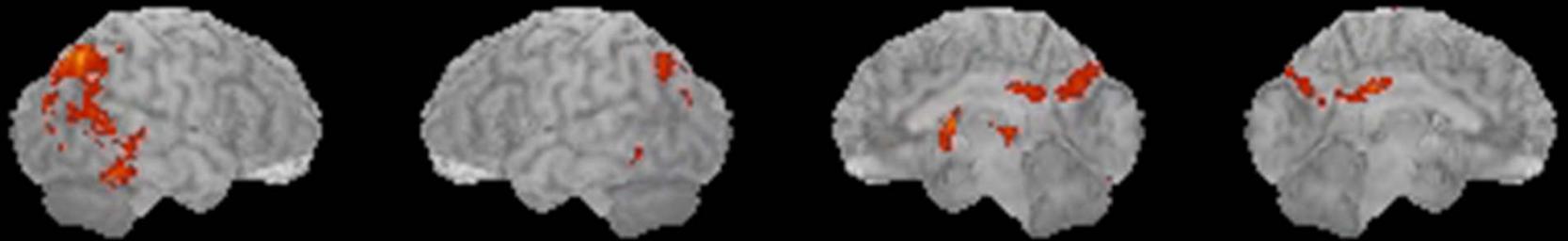


No dementia

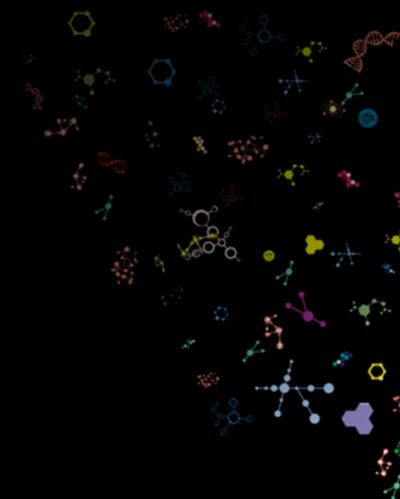
Differential Diagnosis



Early Diagnosis



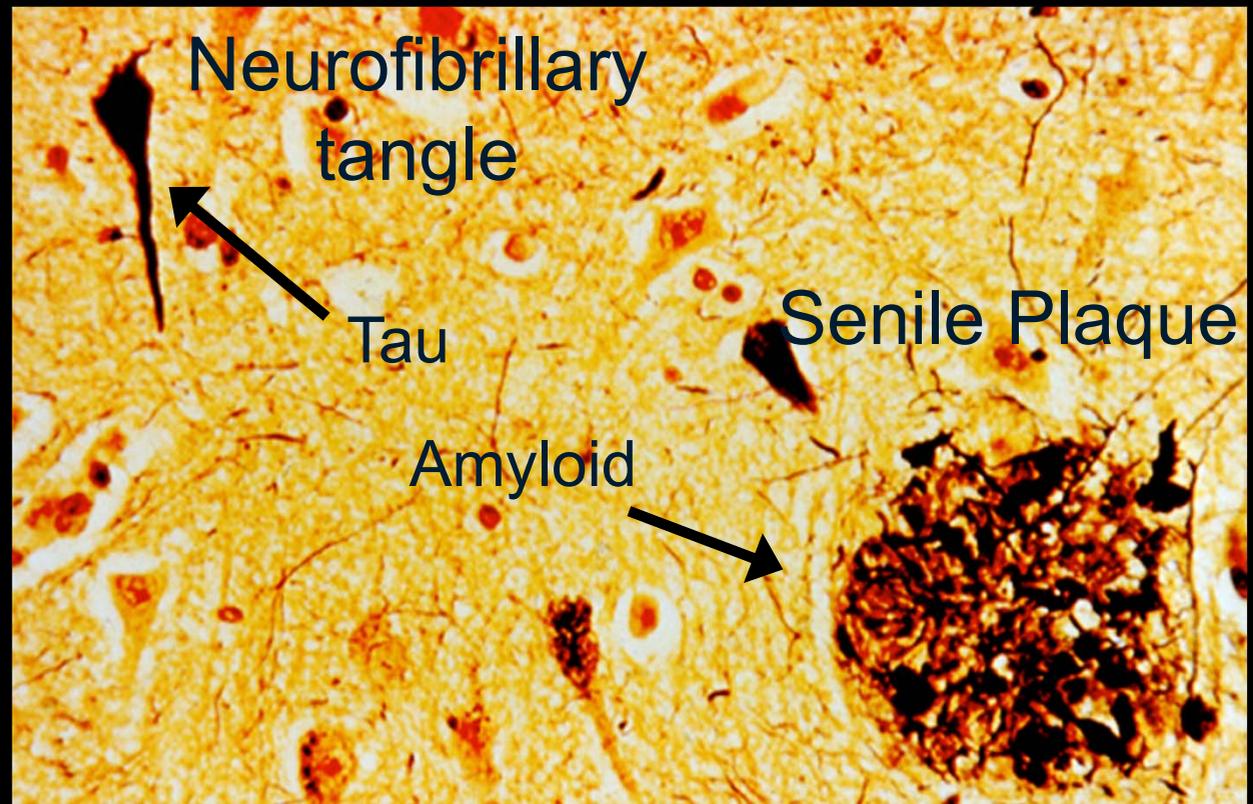
Progression of Alzheimer's disease revealed by PET



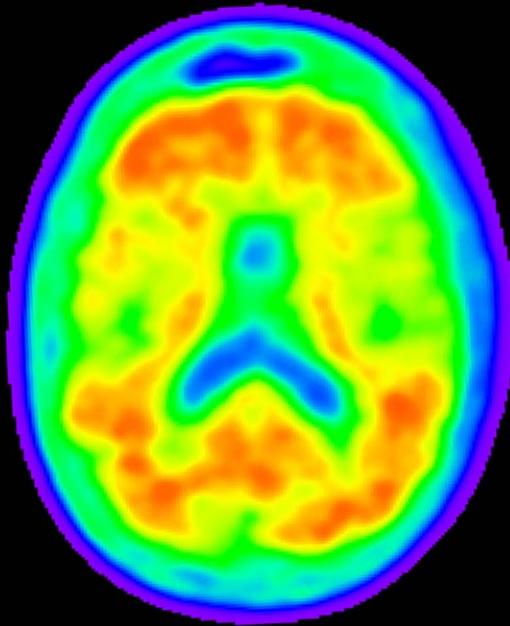
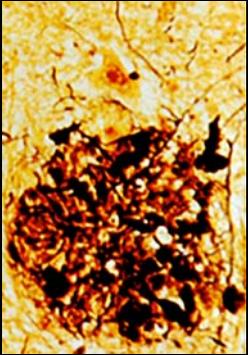
Abnormal Molecules in Alzheimer's Disease



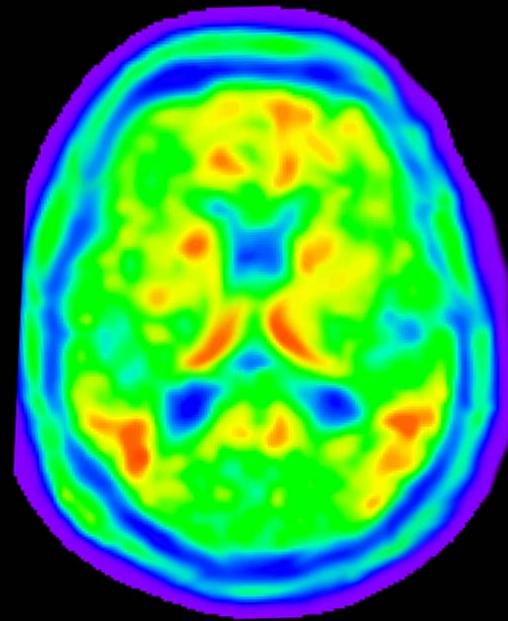
VA North Texas Health System



Imaging Abnormal Molecules in Living Patients



Amyloid PET



Tau PET



Molecular Imaging for Brain Disorders

- Guide clinical management and treatment
- Support patient's family and caregivers
- Assist drug development



Enhancing Capacity of Neuroimaging and Biomarkers: Application in Early-stage Alzheimer's Disease with Comorbidities





Thank you