DEBATE

The PET/CT imaging is really helpful in diagnosing Alzheimer’s disease?
Estimates: > 5 millions in US
6th cause of death in the US
3rd, just behind HD and cancer in the very old

“AD is complex, and it is unlikely that any one drug or other intervention will successfully treat it”
1906 : Dr. Alois Alzheimer

abnormal clumps : Amyloid plaques

tangled bundles of fibers : Neurofibrillary, or tau, tangles
1968 : FDG synthesis

1970’s : 18F-FDG synthesis

August, 1976 : Brain images
Two normal human volunteers, Abass Alavi, University of Pennsylvania
FDG-PET Cerebral metabolism in AD

normal                    early AD
late AD
Imaging Brain Amyloid in AD with Pittsburgh Compound-B

Klunk E et al, Ann Neurol 2004

67-yrs HC
79-yrs AD patient (MMSE 21)
Tau-PET Patterns with Cognitive Impairment

Memory

Visuospatial

Language

Roche's Lead Tau Tracer:
Ro6958948 binds areas expected to contain tau in a patient with AD.

Close Match: Areas of T807/AV1451 uptake align with regions associated with cognitive deficits.
FDG PET/CT IMPACT ON DECISION MAKING IN ONCOLOGY

**LUNG CANCER**

- **operate**
  - CR
  - PR

- **do not operate**

**LYMPHOMA (interim)**

- **operate**
  - CR
  - PR

- **do not operate**
For an actually untreatable disease...

Is there room for imaging?
Let’s debate!

Prof. G. Arsos
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