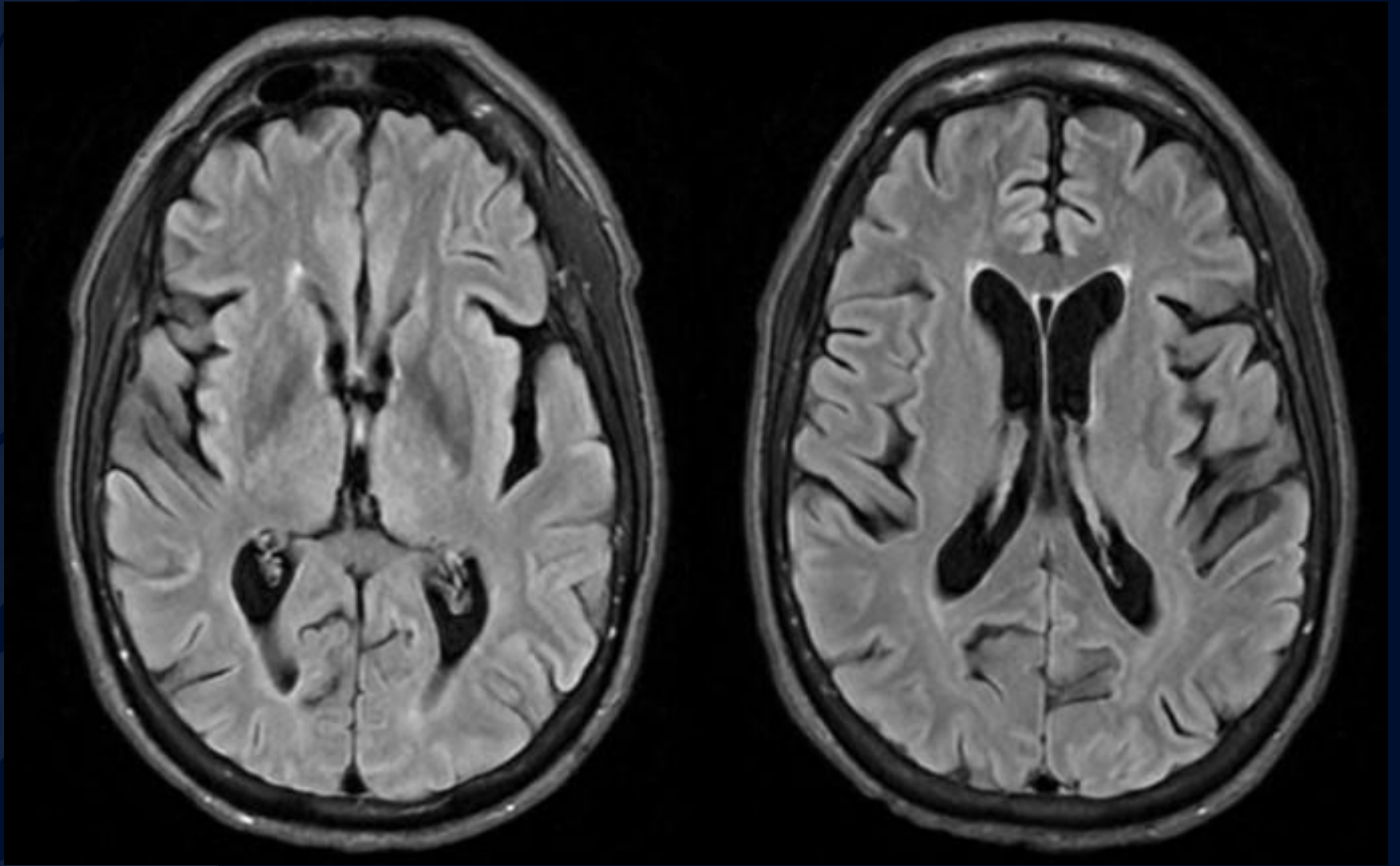


60-year-old man with 2-3 year history of functional decline and behavioral changes

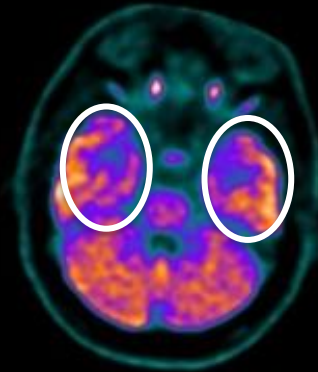
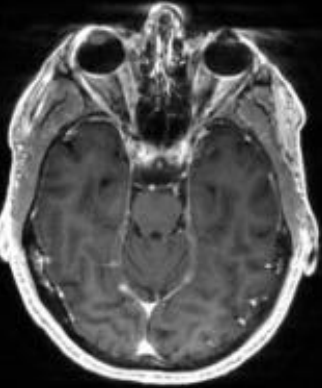
Anika Makol, MS3

Bharat Narapareddy, MD

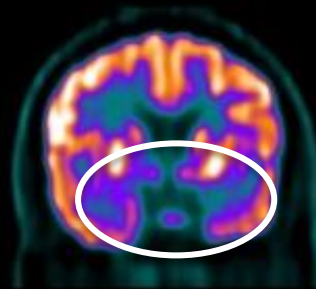
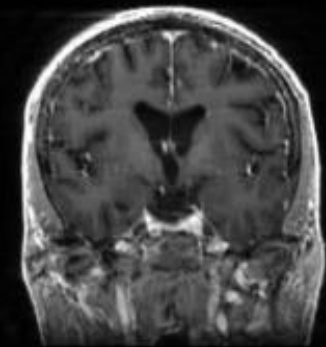
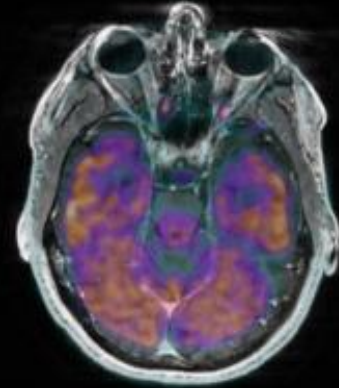
T2 FLAIR



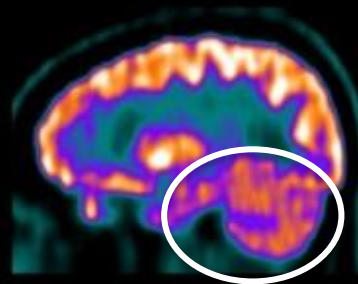
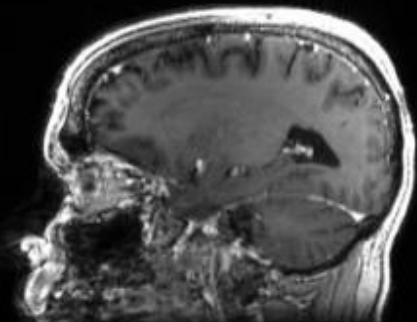
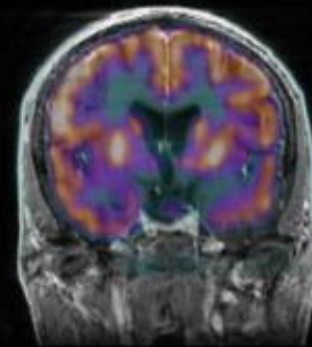
FDG-PET



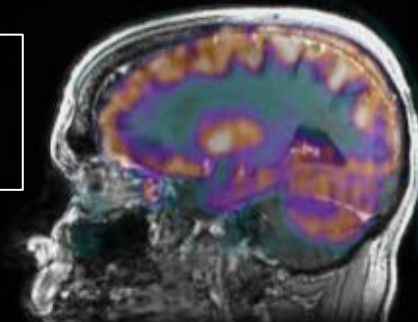
Hypometabolic activity bilaterally in mesial temporal lobes, slightly more severe on the left



Hypometabolic activity in bilateral anterior temporal lobes



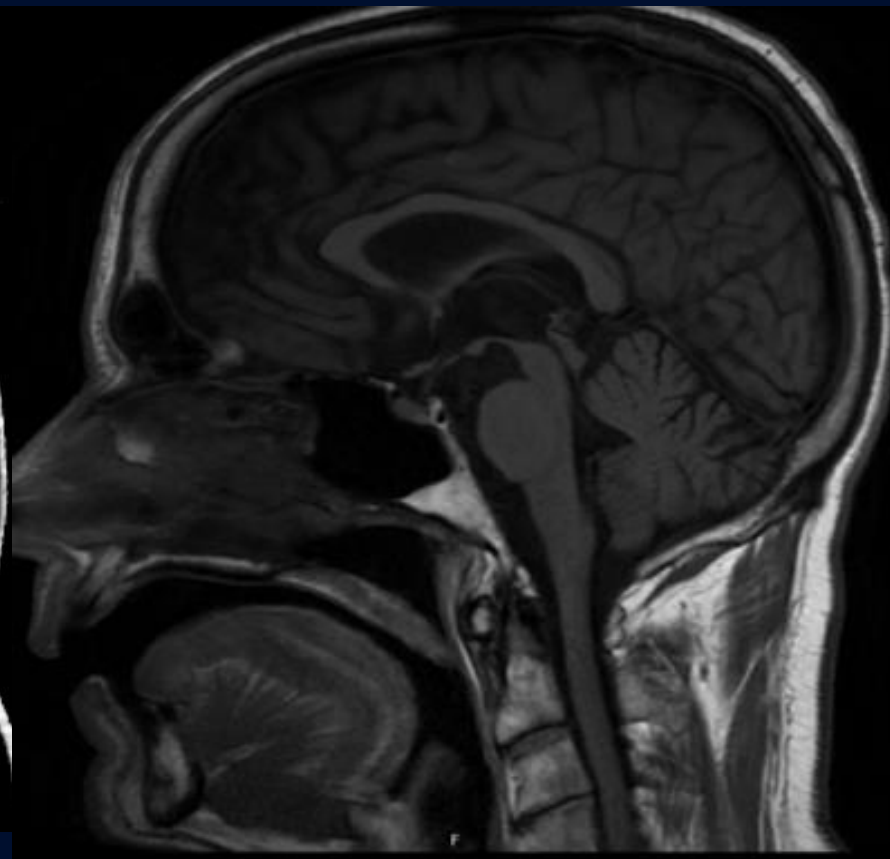
Hypometabolic activity in temporal lobe



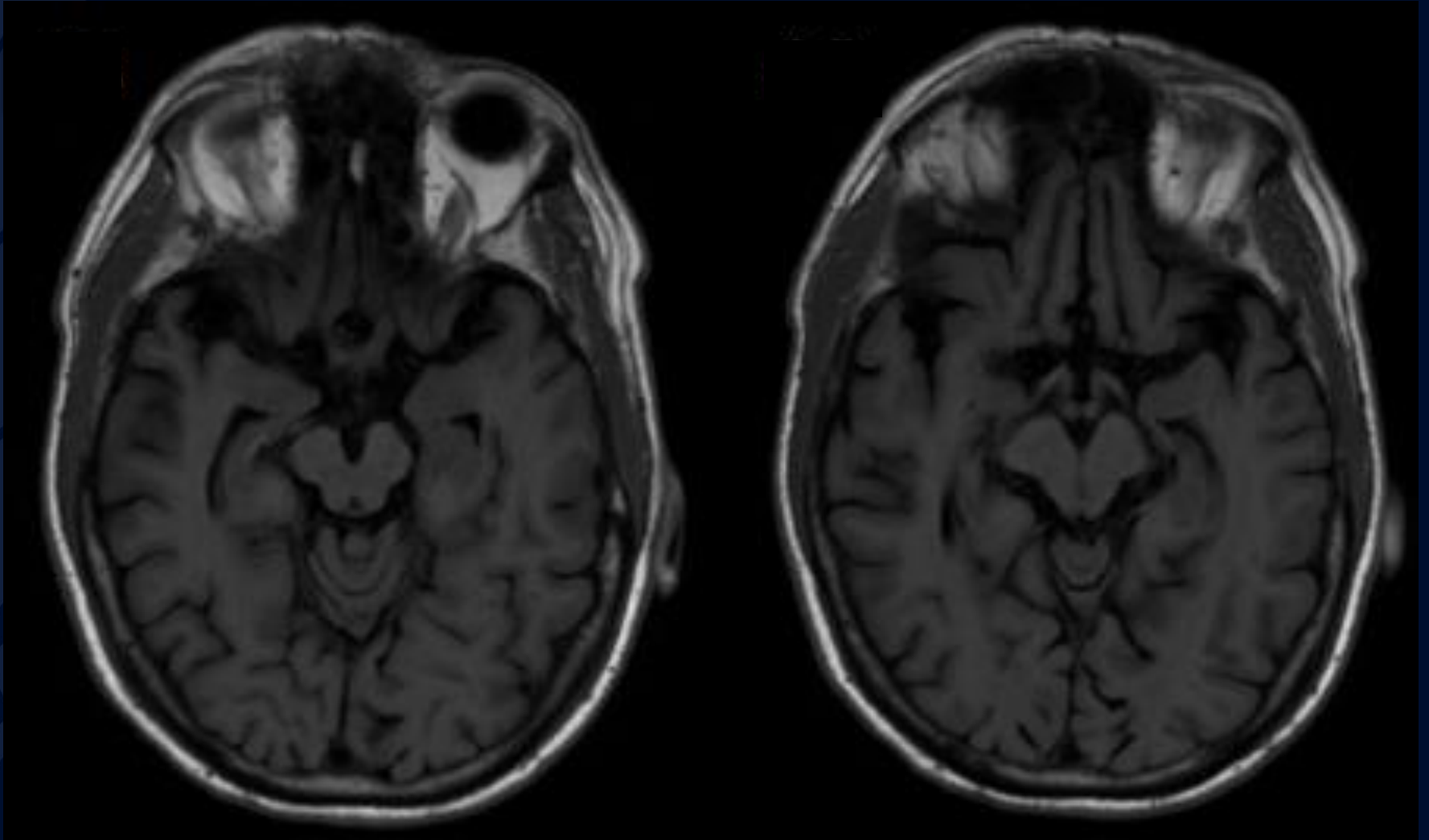
CT



T1



T1

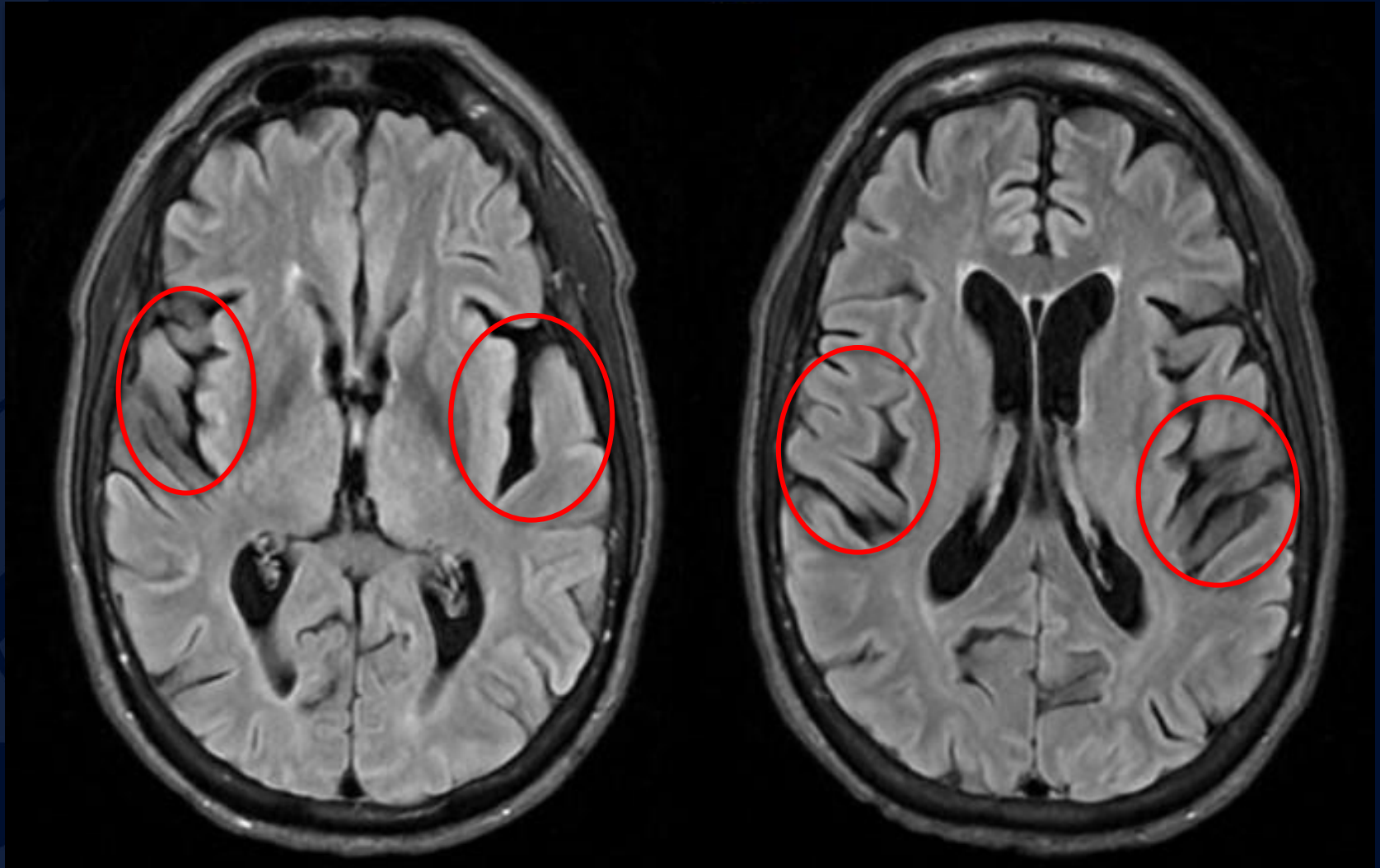


A large, stylized oak leaf graphic in a dark blue color, positioned on the left side of the slide. It features detailed vein patterns and a lobed edge.

?

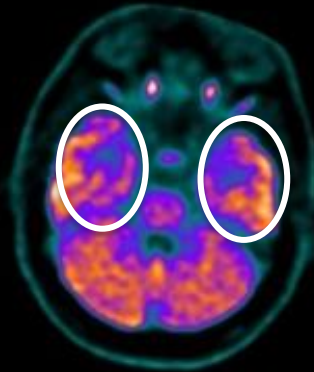
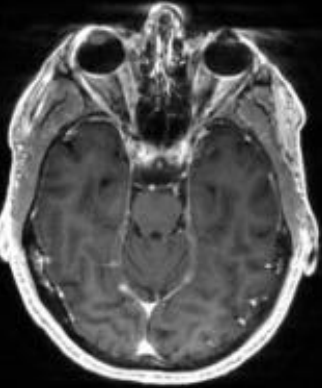
Progressive Supranuclear Palsy

T2 FLAIR

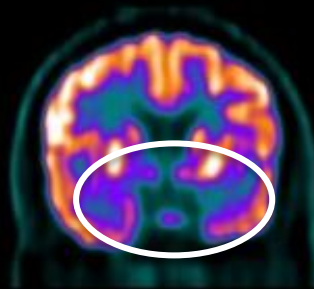
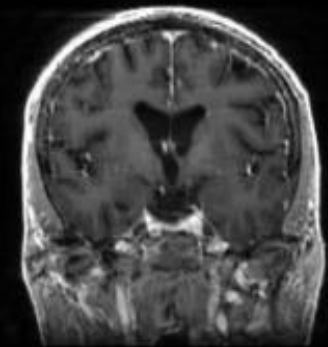
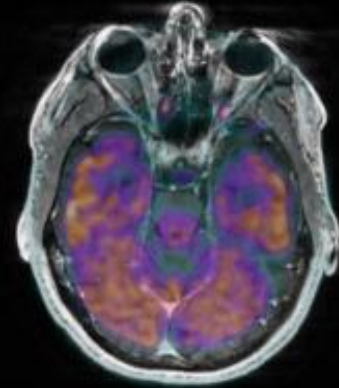


Increased size of sulci, with left greater than right side, indicating parenchymal loss of temporal lobes

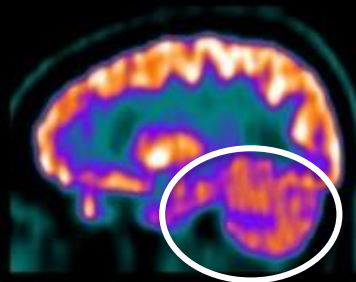
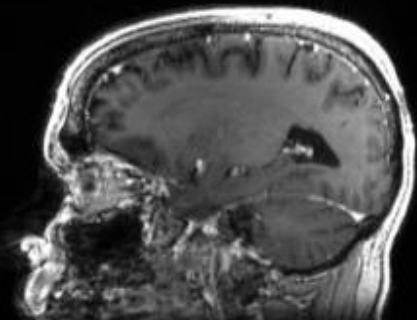
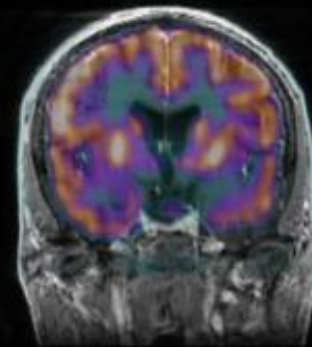
FDG-PET



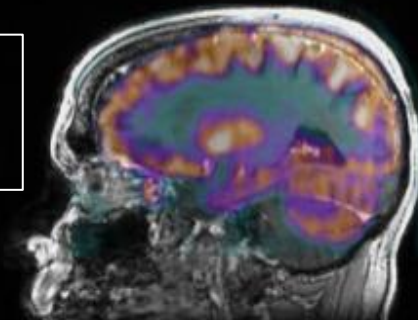
Hypometabolic activity bilaterally in mesial temporal lobes, slightly more severe on the left



Hypometabolic activity in bilateral anterior temporal lobes

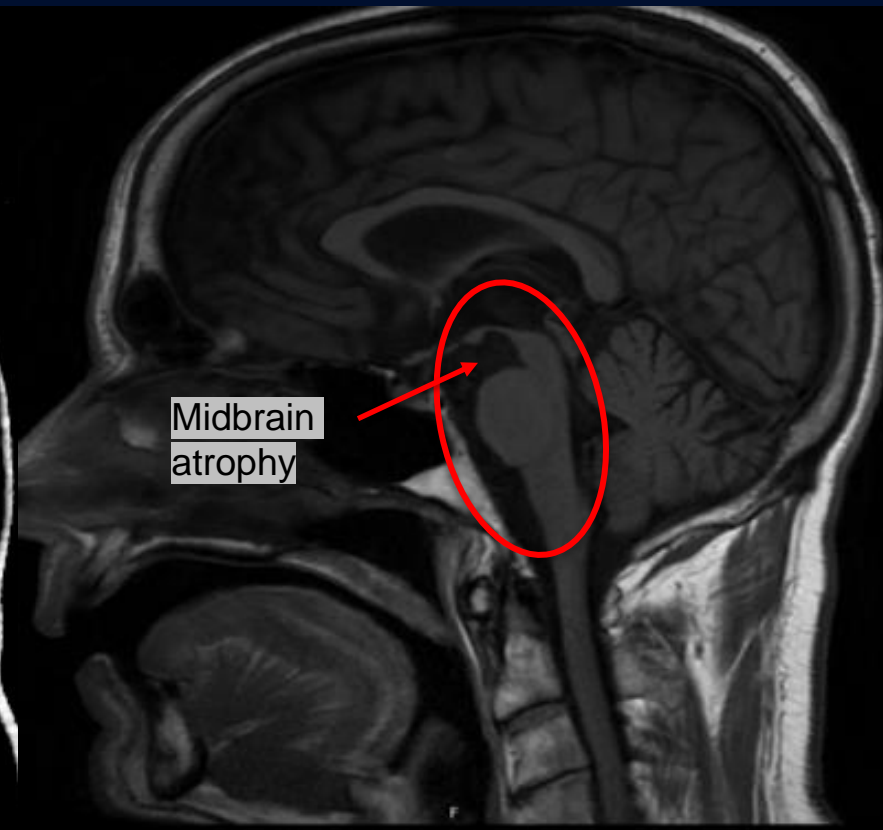
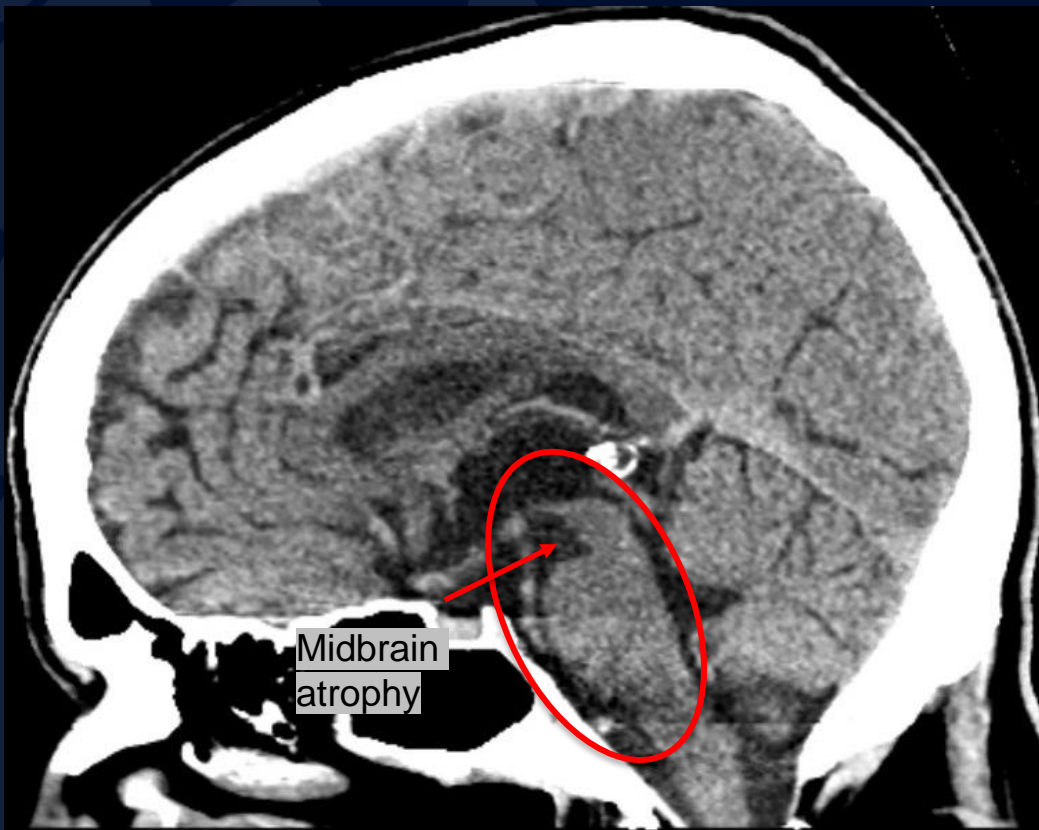


Hypometabolic activity in temporal lobe



CT

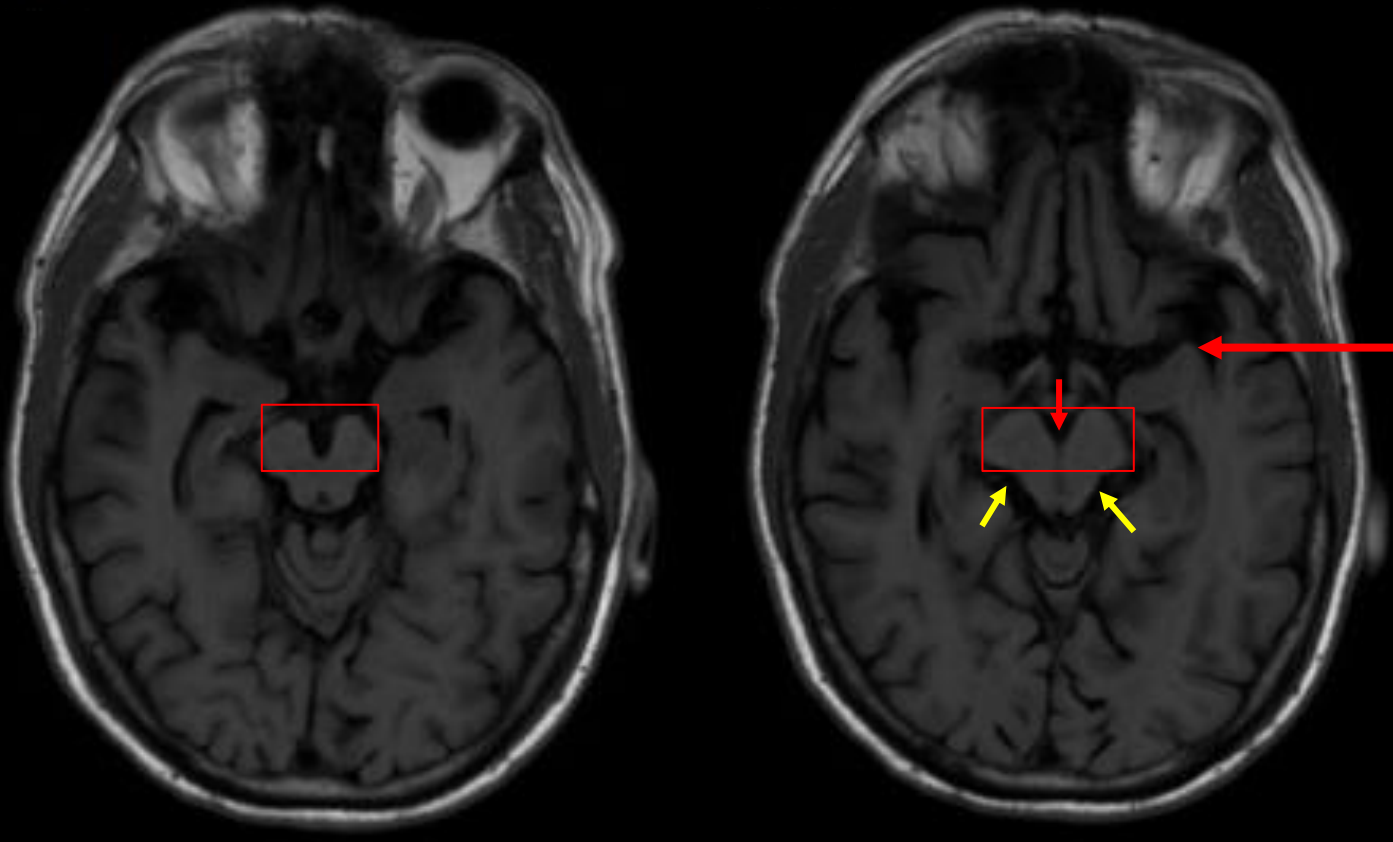
T1



Hummingbird sign:

- Pons forms the body
- Atrophic midbrain forms the head
- Beak is formed by the optic chiasm

T1



Morning Glory/Mickey Mouse Sign:

- Loss of lateral convex margin of tegmentum of midbrain (**golden**) with deep interpeduncular cistern (**red**)

Mickey mouse sign

Progressive Supranuclear Palsy with Frontal Lobe Presentation

- **Epidemiology:**
 - ~6 per 100,000 persons
- **Etiology:**
 - Build-up of tau protein aggregates that may be due to genetic mutations, toxins, or infectious agent
- **Presentation:**
 - Early: gait difficulty and falls, non-specific dizziness, generalized motor slowing, personality change, executive dysfunction, resting tremor, insomnia
 - Later: worsening parkinsonism, dysarthria, dysphagia, frontal cognitive difficulties, eye movement abnormalities
- **Diagnosis:**
 - Challenging as the variant shares a similar presentation to behavioral variant FTD
 - MRI:
 - Atrophy of midbrain: Hummingbird sign/morning glory sign, Midbrain to pons ratio < 0.52
 - Atrophy of frontal and temporal lobe: hypometabolism on FDG-PET
- **Treatment:**
 - no curative treatment
 - Physical and occupational therapy – management of cognitive, motor, and gait aspects

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- Rascovsky, K., Hodges, J. R., Knopman, D., Mendez, M. F., Kramer, J. H., Neuhaus, J., van Swieten, J. C., Seelaar, H., Dopper, E. G., Onyike, C. U., Hillis, A. E., Josephs, K. A., Boeve, B. F., Kertesz, A., Seeley, W. W., Rankin, K. P., Johnson, J. K., Gorno-Tempini, M. L., Rosen, H., Prioleau-Latham, C. E., ... Miller, B. L. (2011). Sensitivity of revised diagnostic criteria for the behavioural variant of frontotemporal dementia. *Brain: a journal of neurology*, 134(Pt 9), 2456–2477. <https://doi.org/10.1093/brain/awr179>