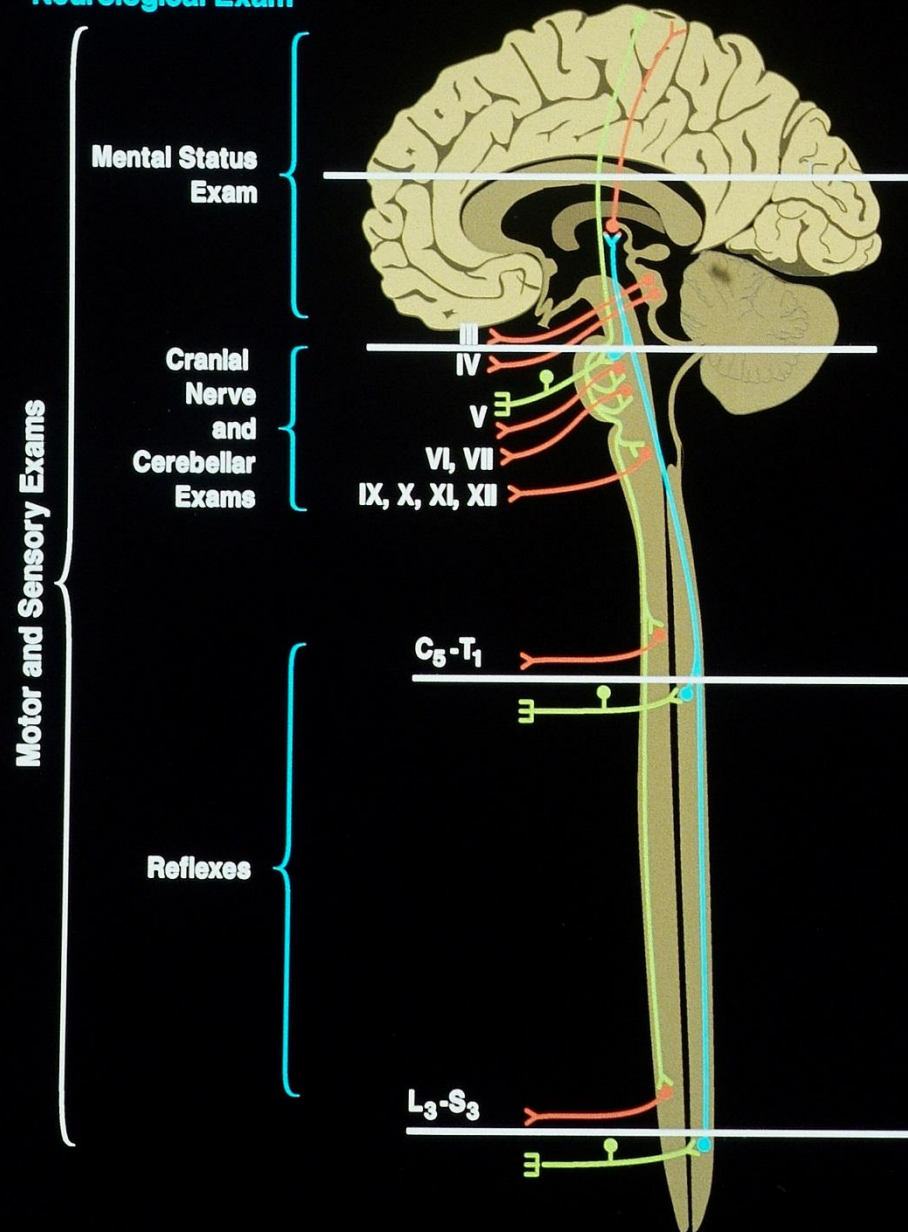


Lesion Localization in Neurologic Disease

Neurological Exam



Laboratory and Electrophysiological Evaluation I

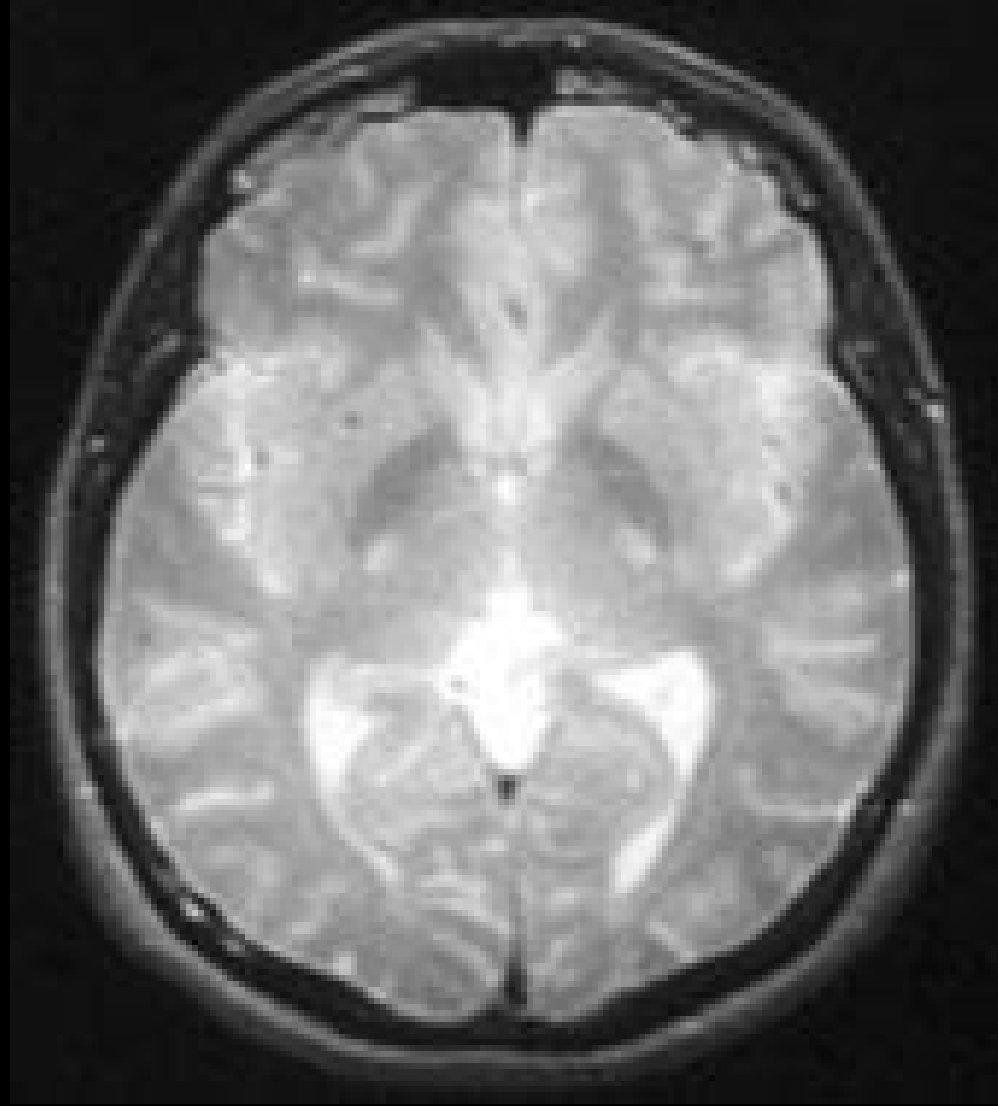
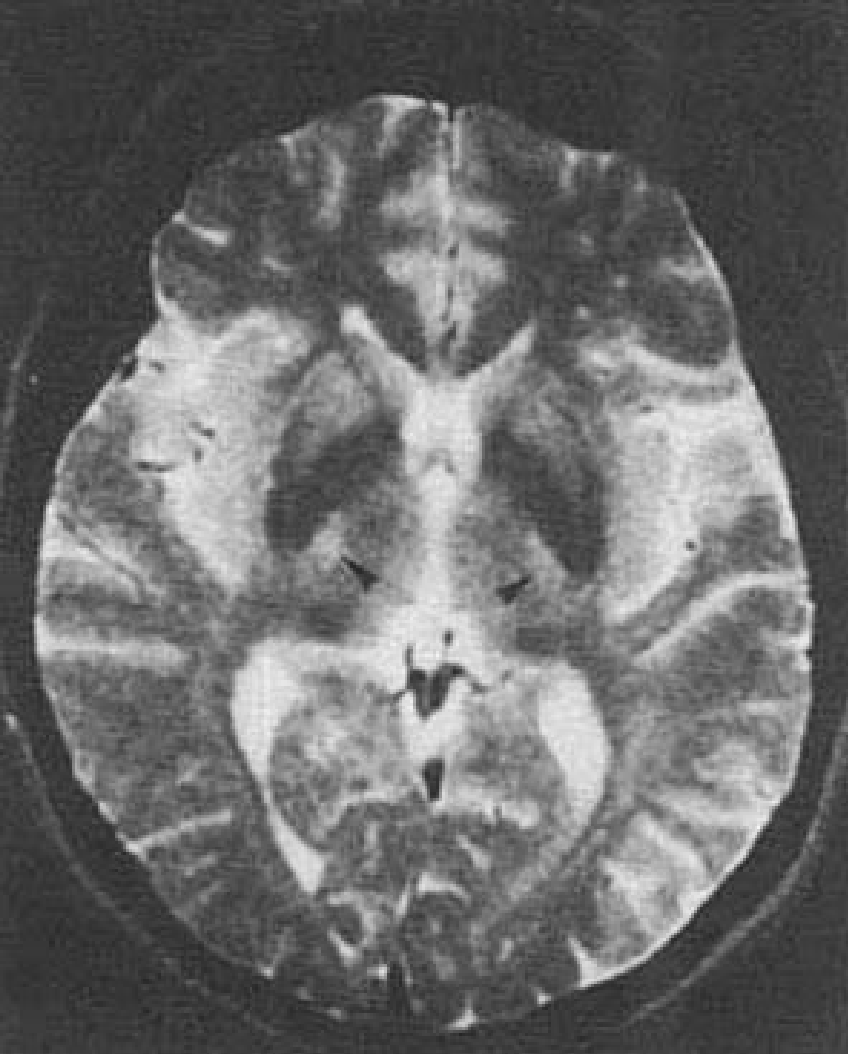
- Normal CBC, chemistry panel, thyroid function tests, RPR, and vitamin B12 levels.
- Normal CSF studies (1965 and 1970).
- Normal Pantopaque myelograms (1965, 1970), showing the absence of any compressive lesions involving the cervical spinal cord or the region of the foramen magnum.

Laboratory and Electrophysiological Evaluation II

- EMG of the upper and lower limbs and the paraspinal muscles bilaterally showed no signs of LMN lesions or denervation (i.e., no fibrillations, positive sharp waves, fasciculations).
- NCS were entirely normal, except for signs of mild bilateral carpal tunnel syndromes.

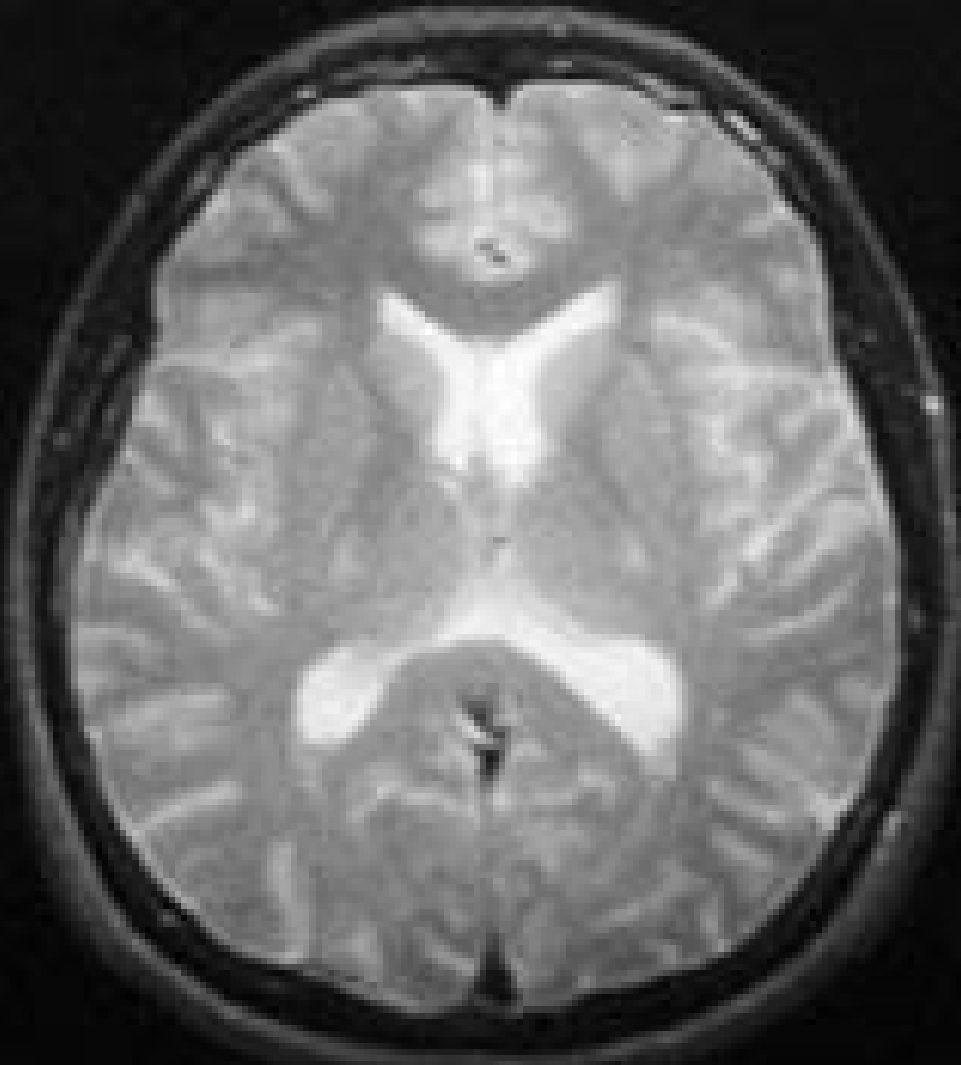
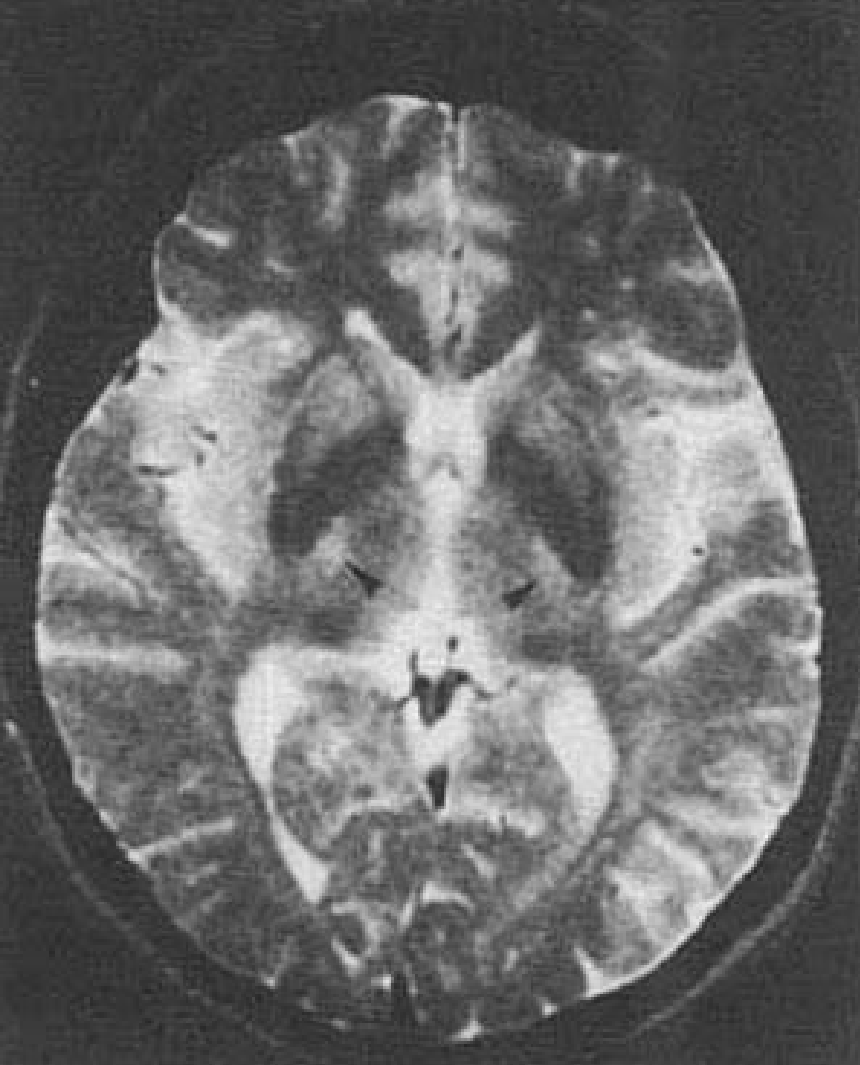
Examples of Evaluations of Similar Patients, One with PLS (Left) and One with ALS (Right): Using Modern MRI Imaging

- Marti-Fabregas J, Pujol J. Selective involvement of the pyramidal tract on magnetic resonance imaging in primary lateral sclerosis. *Neurology* 1990;40:1799-1800. (Left-sided images)
- Case #50. www.basichumanneuroanatomy.com. (Right-sided images)



Horizontal T2W MRI Scan

Adapted from: Marti-Fabregas J, Pujol J.
Neurology 1990;40:1799-1800

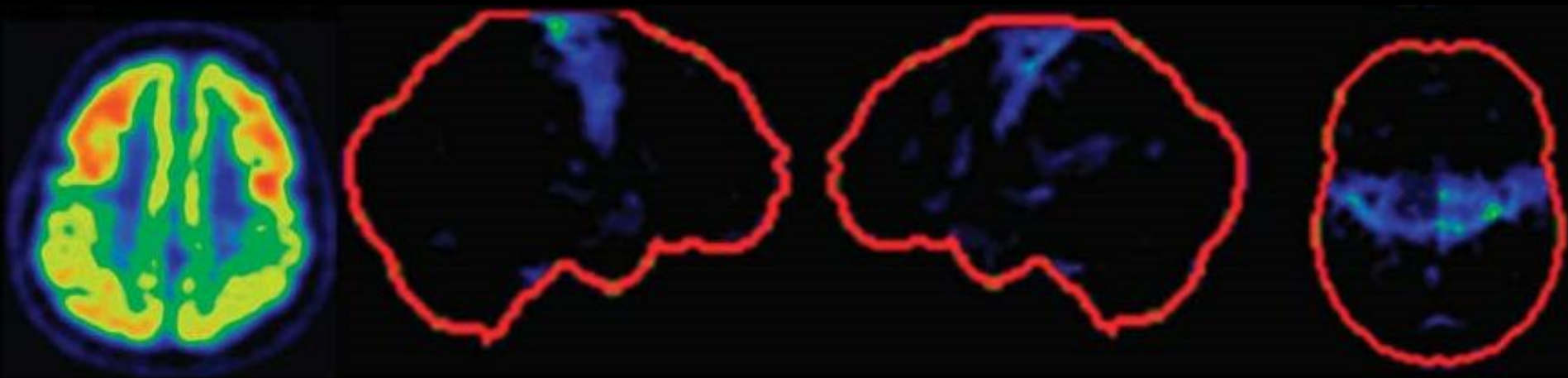


Horizontal T2W MRI Scan

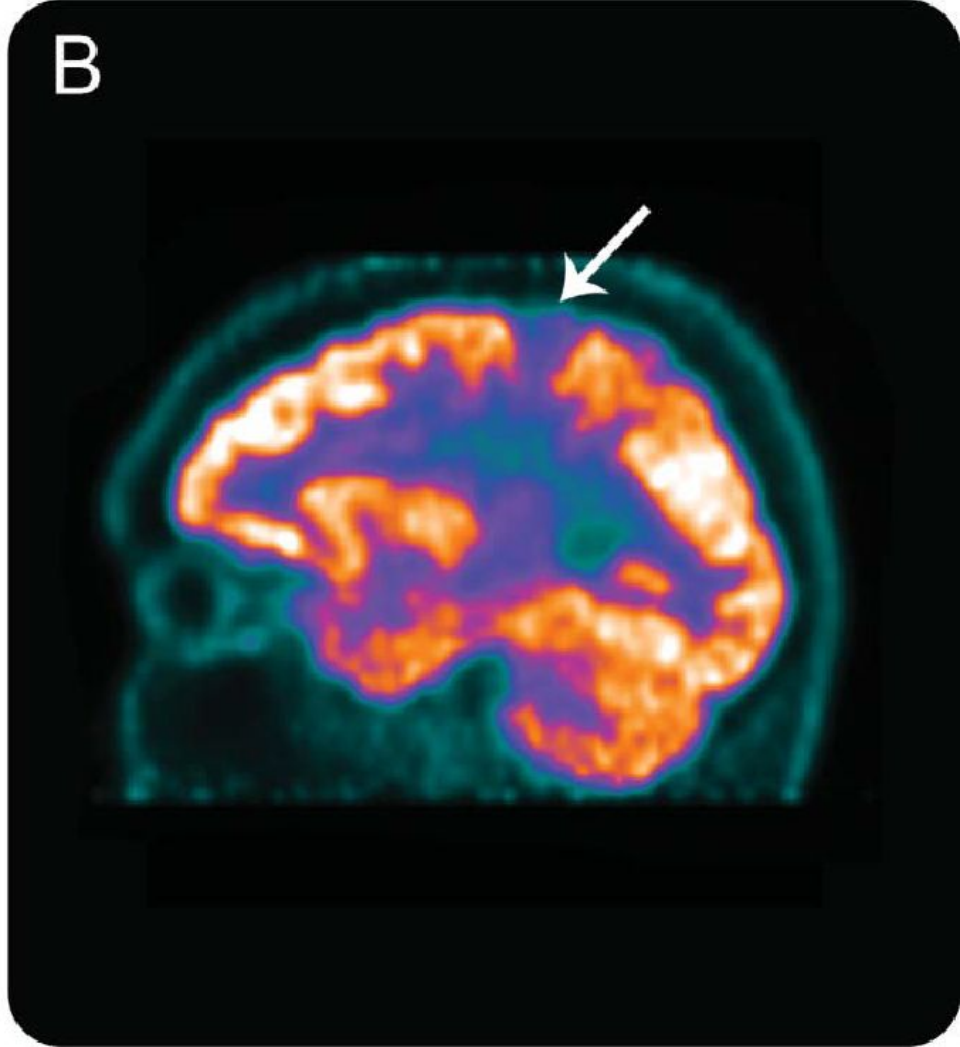
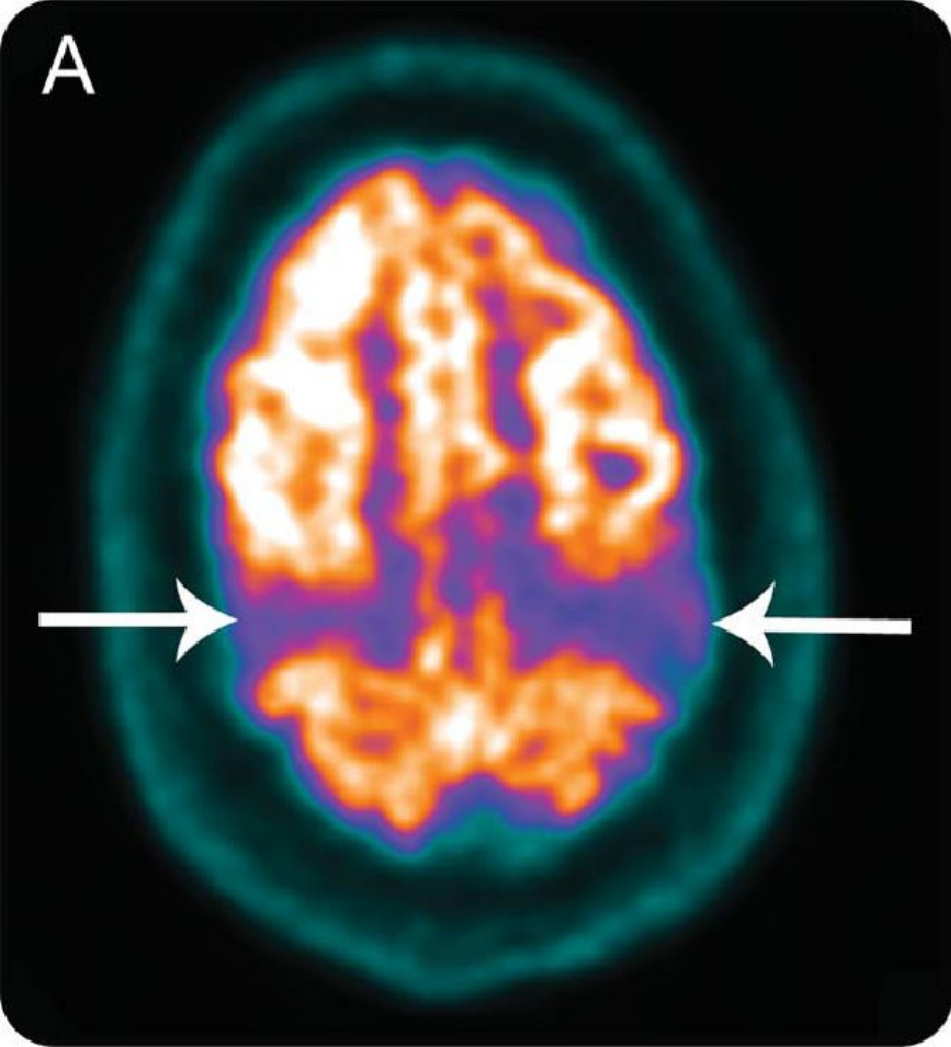
Adapted from: Marti-Fabregas J, Pujol J.
Neurology 1990;40:1799-1800

Two Similar Examples of Patients with Primary Lateral Sclerosis: Studied with FDG-PET Scanning

- Claassen DO, Josephs KA, Peller PJ. The stripe of primary lateral sclerosis. *Arch Neurol* 2010;67:122-125.
- Cosgrove J, Jamieson S, Chowdhury FU. Hypometabolism of the primary motor cortex in primary lateral sclerosis: The stripe sign. *Neurology* 2015;84:e206.



Horizontal (Left), Right Lateral, Left Lateral, and Superior (Right)
FDG-PET Scans



Horizontal [A] & Sagittal [B] FDG-PET Scans