Teaching NeuroImages: Mills syndrome
Metabolic and structural neuroimaging aids to the diagnostic examination of a 57-year-old woman with a 3-year history of progressive right-sided weakness (first arm, then leg) and dysarthria disclosed right-sided weakness, spasticity, hyperreflexia, and Babinski sign. There were no signs of lower motor neuron disease or sensory involvement on clinical and electroneuromyographic examinations. MRI and [18F]FDG-PET results are shown in the figure. CSF and serum screening were normal. Mills syndrome (progressive hemiparesis) due to primary lateral sclerosis is a rare phenotype of motor neuron disease.1 Neuroimaging is essential to not only rule out alternative etiologies but also demonstrate functional and anatomic involvement of pyramidal tract.2

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AUTHOR CONTRIBUTIONS
Fábio H.G. Porto: study concept and design, acquisition of data, and analysis and interpretation. Artur M. Coutinho: study concept and design, acquisition of data, and analysis and interpretation. Leandro T. Lucato: study concept and design, acquisition of data, and analysis and interpretation. Carlos Alberto Buchpiguel: critical revision of the manuscript for important intellectual content and study supervision. Ricardo Nitrini: critical revision of the manuscript for important intellectual content and study supervision.

ACKNOWLEDGMENT
The authors thank Dr. Kirk R. Daffner for review of the manuscript.

STUDY FUNDING
No targeted funding reported.

DISCLOSURE
The authors report no disclosures relevant to the manuscript. Go to Neurology.org for full disclosures.

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Teaching NeuroImages: Mills syndrome: Metabolic and structural neuroimaging aids to the diagnostic
Neurology 2016;87:e54
DOI 10.1212/WNL.0000000000002921

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