



**Nuclear Medicine**

**Gabriel Soudry, MD**  
[gabriel.soudry@medstar.net](mailto:gabriel.soudry@medstar.net)  
Director, Nuclear Medicine and PET-CT  
Services

## Pituitary Adenoma

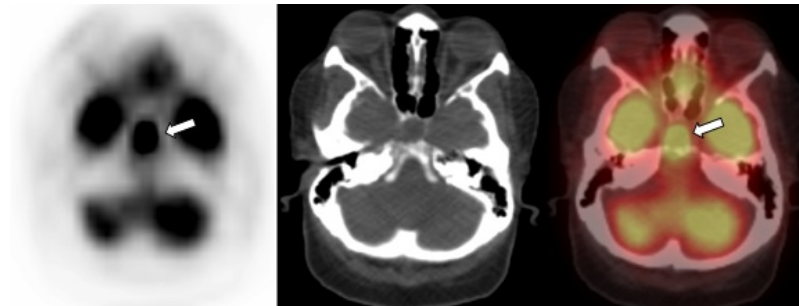


Fig. 1



Fig. 2

This 62 year old woman was diagnosed with left breast cancer seven months earlier. A follow-up PET-CT performed to assess her response to treatment showed an incidental area of increased tracer uptake in the pituitary fossa with widening of the sella (maximum SUV 16.8) (Figs. 1 and 2, arrow). A brain MRI showed an enlarged pituitary gland measured at 1.4 X 1.3 X 1.0 cm. Subsequent blood work revealed an elevated serum prolactin level at 190ng/mL (Normal: 1.9-25). The mass was resected and a pituitary adenoma was confirmed.

### How did the PET-CT help?

The PET-CT scan identified the pituitary adenoma before it enlarged further and produced symptoms. Incidental pituitary adenomas are a rare finding on PET scans, with a reported incidence of less than 0.1%. These often show markedly elevated tracer uptake, with macroadenomas generally showing more uptake than microadenomas<sup>1-3</sup>.

- Eur J Nucl Med Mol Imaging. 2010;37:2334-2343
- J Neuroimaging. 2010;20:393-396
- Clin Nucl Med 2006;31:42– 43