This 68-year-old woman was being reevaluated following a lumpectomy for left breast carcinoma three months earlier. A PET/CT scan was performed and showed a previously unsuspected left adrenal mass, with maximum SUV greater than that of the liver (3.1 vs. 2.5) and with a CT density of 27 HU. A follow-up MRI was not typical for adrenal adenoma. Further biochemical studies suggested a functioning pheochromocytoma, which was confirmed at surgery.

PET/CT and Adrenal Tumors:
Adrenal masses discovered on CT imaging are not uncommon, and may represent benign or malignant primary adrenal tumors, metastases or inflammatory lesions. Benign adrenal adenomas usually have FDG uptake lower than that of the liver and, due to lipid content, have attenuation values of < 10 HU. These two findings have a very high negative predictive value for malignancy. Some adenomas, most benign pheochromocytomas, and inflammatory lesions may have elevated FDG uptake and can be difficult to distinguish from malignant tumors and metastases.1-3

(1) J Clin Endocrinol Metab. 2009; 94:1713-1722
(2) J Clin Endocrinol Metab. 2009; 94:4757-4767
(3) Am J Roentgenol 2008; 191:1545-1551