

# P.E.T. CASE OF THE MONTH

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Fig. 1

This 61 year old woman was ten years post successful treatment of small cell lung cancer. A CT scan was performed which showed a new 1.5 cm right lower lobe mass adjacent to the mediastinum, as well as enlargement of the left adrenal gland.

A PET scan was obtained (Fig. 1) which showed FDG uptake in the right lung nodule (arrow) and also in three retroclavicular foci (arrowheads) which were well visualized in the transaxial view (Fig. 2, arrowheads). Abnormal tracer uptake was also present in the left adrenal region (Fig. 1, white arrowhead). Review of the CT scan showed that the foci of retroclavicular uptake corresponded to lymph nodes that did not exceed the 1 cm CT size threshold for abnormality (Fig. 3, arrows). A biopsy of these N3 nodes was performed under ultrasound guidance and showed a non-small cell lung carcinoma. This tumor differed morphologically and by immunostaining from the patient's original tumor.

## How did the PET help? :

PET was able to show additional sites of disease that were in a location that was technically much easier to biopsy than the right lower lobe nodule reported on the CT scan, which was adjacent to major mediastinal blood vessels. The pathologic diagnosis was made without the need for a more invasive lung biopsy. PET also showed that the adrenal mass was not a commonly seen benign adenoma but actually an adrenal metastasis, upstaging the patient to Stage IV.

Recent reviews have shown that FDG PET is significantly more sensitive and specific than CT for the staging of non-small cell lung cancer<sup>1,2</sup>.

(1) Chest 2004;125:2300-2308

(2) Hematol Oncol Clin North Am 2005;19:219-235

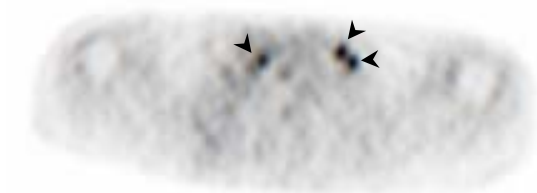


Fig. 2



Fig. 3

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This case and previous ones can be seen at  
[www.petcases.com](http://www.petcases.com)