

P.E.T. CASE OF THE MONTH

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Fig. 1
Coronal projection

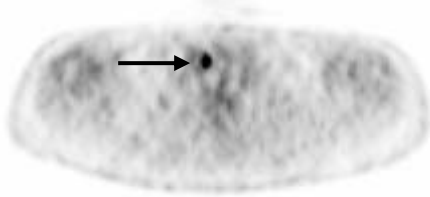


Fig. 2
Transverse projection

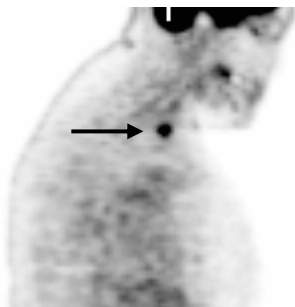


Fig. 3
Sagittal projection

This 48 year old lady underwent a PET scan for evaluation of lung nodules seen on a recent chest CT. No increased FDG uptake was noted in the lung nodules. However, a small focal area of intense tracer accumulation was present in the region of the thyroid gland to the right of the midline (Fig. 1,2,3). No thyroid nodule was palpable on physical examination.

A thyroid ultrasound was obtained which showed a solid nodule in the mid portion of the right thyroid lobe.

A fine needle aspiration-biopsy of the thyroid nodule was performed. The cytology was atypical. The patient underwent a total thyroidectomy. The pathology showed a 1 cm papillary **thyroid carcinoma**.

How did the PET help? The PET scan revealed a “thyroid incidentaloma”

A recent study reported a retrospective review of 4525 patients, without a history of thyroid disease who underwent FDG-PET imaging. One hundred and two of 4525 FDG-PET examinations (2.3%) demonstrated previously unsuspected thyroid lesions. Eighty-seven of 102 patients had no thyroid histology obtained because of other malignancies. Fifteen patients had thyroid biopsy: 7 (47%) were found to have thyroid cancer.

The authors concluded that given the risk of malignancy, patients with new thyroid lesions on PET scan should have a tissue diagnosis if it will influence outcome and management (1).

(1) Risk of malignancy in thyroid incidentaloma identified by FDG PET. Surgery 2001;130:941-6

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This case and previous cases can be seen at
www.petcases.com