

# PET-CT CASE OF THE MONTH

David W. Seldin, M.D. Franklin Square Hospital Center February 2008

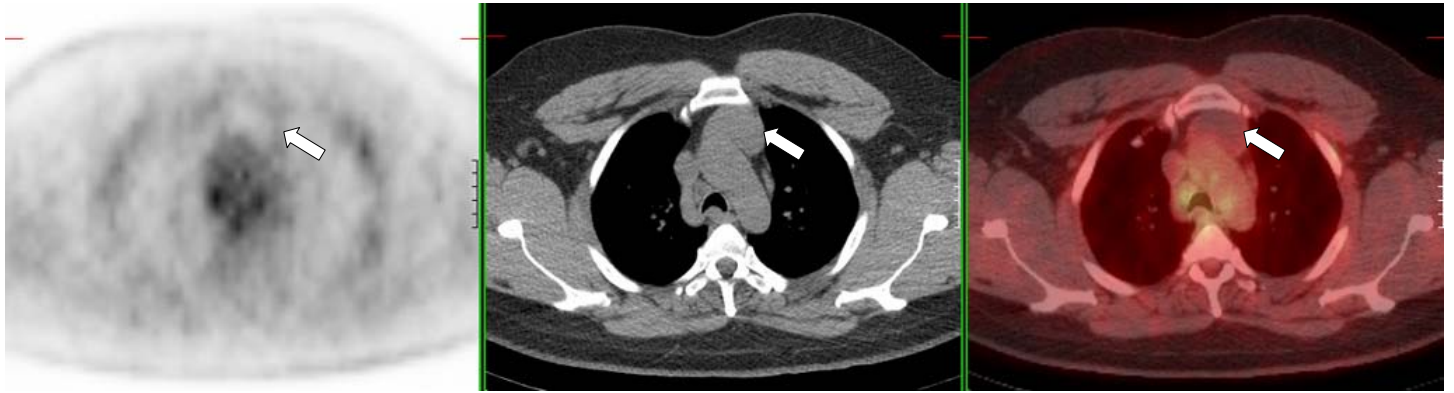


Fig. 1



Fig. 2

This 41 year old man was found to have an incidental anterior **mediastinal mass** on a CT scan obtained to evaluate for pulmonary embolism. A follow-up PET-CT scan was ordered to help determine whether this mass was more likely malignant or benign and to determine if there were other sites of involvement.

The PET-CT study showed that there was no increased FDG uptake in the anterior mediastinal mass (white arrows, Figure 1). A small focal area of increased tracer uptake was seen in the colon in the region of the splenic flexure (gray arrows, Figure 2). A biopsy of the mediastinal mass and a colonoscopy were subsequently performed. The mediastinal mass biopsy showed only benign fibrovascular tissue. The mass subsequently decreased in size on follow-up CT and was felt to likely represent a thymic cyst. Colonoscopy found a polyp near the splenic flexure which was removed. Pathology was consistent with a tubulovillous adenoma.

## How did the PET-CT help? :

The combination of a negative biopsy and low metabolic activity on the PET-CT study allowed the clinicians to follow the mediastinal mass without further invasive procedures. In a series of 31 patients with thymic tumors, three were found to have a thymic cyst with an average low SUV of 0.9 on FDG PET<sup>1</sup>.

Several recent articles have shown that focally increased tracer uptake in the colon is often due to malignant or benign pre-malignant lesions and should be investigated further<sup>2</sup>.

(1) J Nucl Med 1999;40:1595-1601

(2) J Nucl Med 2005;46:758-762