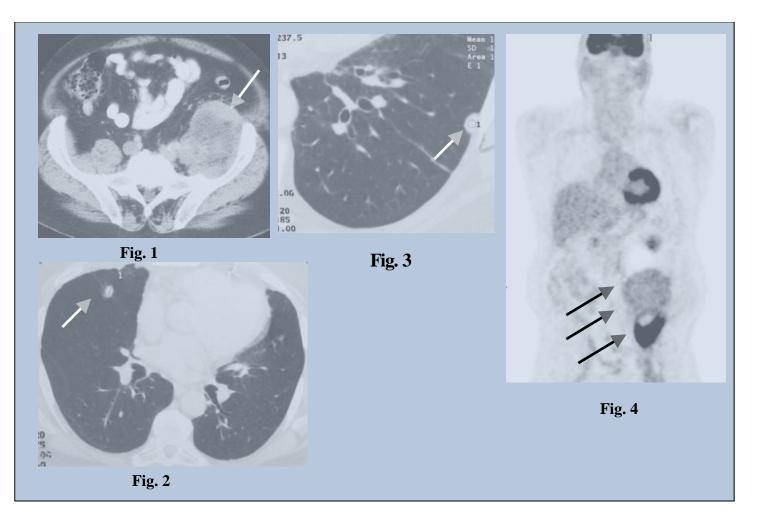
Views You Can Use



PET Case: Sarcoma

This 69-year-old man presented with left-sided lower back pain. A chest/abdomen/pelvis CT was obtained which showed a large retroperitoneal mass below the left kidney (Fig. 1) and multiple pulmonary nodules in both lungs suspicious for metastatic disease (Fig. 2 and 3). A biopsy of the retroperitoneal mass came back as atypical spindle cell **sarcoma**. A PET scan was obtained for staging which showed:

- Heterogeneous uptake in the retroperitoneal mass suggestive of a combination of necrosis, hemorrhage, and active tumor (Fig. 4).
- No appreciable FDG uptake in the lung nodules seen on CT, arguing against lung metastasis.

The patient underwent resection of the retroperitoneal mass. The pathology showed a necrotic hemorrhagic mass with upper pole of the tumor representing a well-differentiated low-grade liposarcoma and the lower pole representing a high-grade malignant fibrous histiocytoma.

The patient subsequently underwent CT guided biopsy of 3 lung nodules. Cytology was negative for malignant cells and only showed an anthracotic lymph node and granuloma. Proton beam irradiation of the tumor bed was subsequently initiated.

How Did PET Imaging Help?

The PET downstaged the patient by showing the absence of lung metastases thereby influencing the therapeutic plan.

In a recent meta-analysis including 441 soft tissue lesions (227 malignant, 214 benign), FDG PET was found to have a very good discriminating ability in the evaluation of intermediate/high grade malignant tumors versus benign lesions but offered inadequate discrimination between low grade tumors and benign lesions (1).

Reference

(1) J Nucl Med. 2003;44:717-724.

About Views You Can Use: This case was provided by Gabriel Soudry, MD, director of nuclear medicine at Franklin Square Hospital in Baltimore, MD. He regularly features examples of the benefits of PET on his outreach Web site at www.petcases.com. As a PET COE member, you may add your own contact information to these sheets and distribute them electronically or by printed hardcopy to referring physicians for educational purposes.