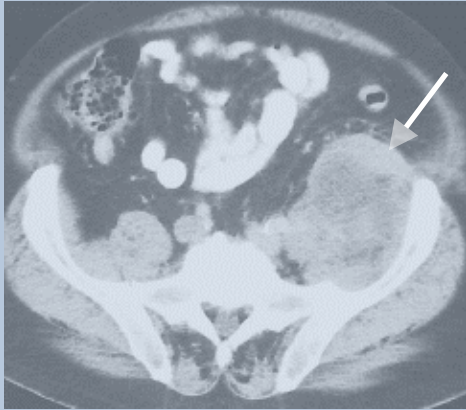
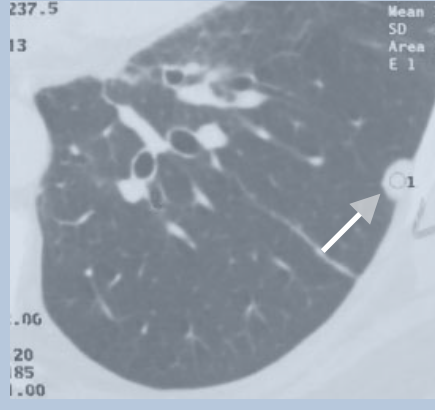


# Views You Can Use



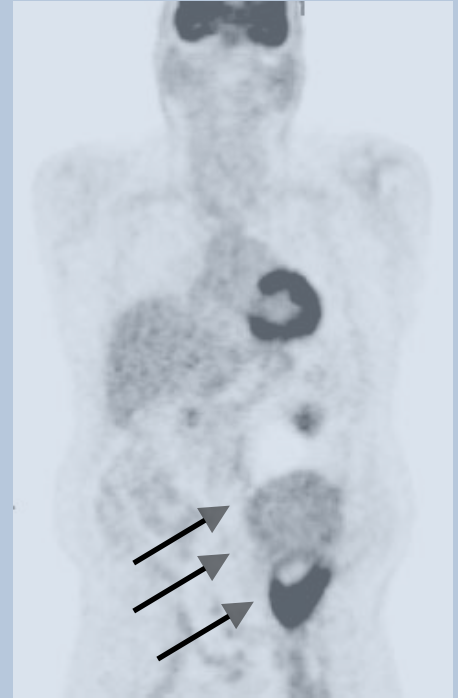
**Fig. 1**



**Fig. 3**



**Fig. 2**



**Fig. 4**

## 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.