

# P.E.T. CASE OF THE MONTH

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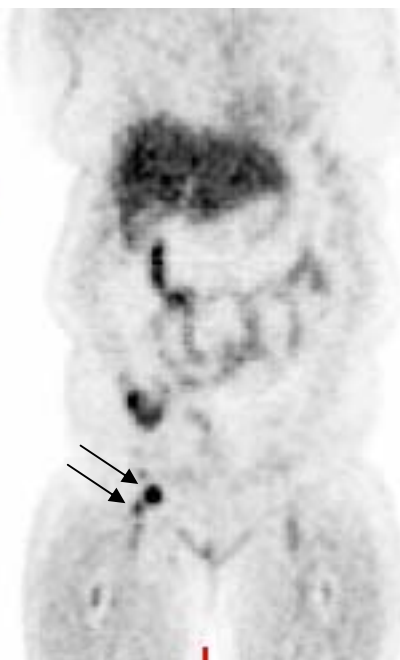


Fig. 1



Fig. 2



Fig. 3

This 44 year old lady had surgical resection of a **melanoma** lesion in the anterior aspect of her right foreleg 5 years prior. On follow-up examination, she was found to have a palpable enlarged node in the right inguinal region.

A P.E.T. scan was obtained for restaging purposes, which showed:

- Positive inguinal nodes (Fig. 1)
- Positive external iliac nodes (Fig. 2)
- Four foci of melanoma recurrence in the medial aspect of the right thigh (Fig. 3)

The patient underwent wide resection of the skin and subcutaneous tissue of the right inner thigh (4 X 12 inches dimension) and iliac-inguino-femoral lymphadenectomy. Pathologic examination of the specimen with careful thin sectioning of the subcutaneous fat was performed guided by the P.E.T. images. All the sub-cutaneous nodules seen on the P.E.T. scan in the right inner thigh were positive for metastatic melanoma. Positive nodes were also identified in the deep and superficial groin contents. One year later, the patient is clinically free of disease.

How did the P.E.T. help: The P.E.T. allowed identification of multiple sites of melanoma recurrence and guided both the surgeon and the pathologist in the management of the patient.

In a study involving 76 melanoma patients undergoing 103 P.E.T. scans, the sensitivity and specificity of P.E.T. was reported at 94.2% and 83.3% respectively compared to 55.3% and 84.4% respectively, for CT scanning (1). In another study to investigate whether and how P.E.T. altered clinical decision in treatment of melanoma patients, P.E.T. had a major impact and resulted in management changes in 53% of the patients (2).

(1) Ann Surg 1998;227(5):764-771

(2) Mol Imag Biol 2002;4:185-190