

Case of the Month—February 2005

FDG-PET for Metastatic Melanoma

History

The patient in this case is a 39-year-old male who had a melanoma in the left anterior chest wall and metastasis to the left axilla. He then underwent melanoma resection and axillary node dissection. His initial staging was Stage III. The patient is at high risk for local regional and systemic recurrence. One-and-a-half months after surgical treatment, the patient was seen by a radiation oncologist for possible postoperative adjuvant radiation therapy. A PET scan was ordered for staging the patient.

PET Findings

The FDG-PET scan demonstrated a focus of intense uptake in the left anterior chest wall near the axilla which is likely a rib lesion. There are also multiple foci of uptake in the right lower ribs and one left posterior rib. A focus of hypermetabolism is noted in the upper thoracic spine. Increased uptake is also noted in both humeri. There are two foci of uptake seen



Whole-body PET staging study

in the left iliac crest. These findings are consistent with osseous metastasis.

How Did PET Help?

PET in this case helped to detect unknown osseous metastasis and thus changed the stage of the disease. Before the PET, the patient

was thought to be Stage III (Clark's Level 4, T4b, N1b, M0). After the PET, the patient was upgraded to Stage VI. The findings of the PET study may have also impacted the planned adjuvant radiation treatment.

Discussion

Although there is a limited role for PET in staging asymptomatic patients with Stage I or Stage II melanoma, the vast majority of available literature suggests that FDG-PET is the most accurate imaging modality for identifying distant metastases in patients at high risk for harboring malignant lesions. Data also suggest that PET identifies a significant number of distant metastases in patients with locoregional disease. Patients with distant metastases also benefit from the identification of additional distant lesions and subsequent changes in their clinical management.

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NEPET at Holy Family Hospital
70 East Street
Methuen, MA 01844
(978) 689-4738

NEPET of Greater Lowell
Lowell General Hospital Cancer Center
295 Varnum Avenue
Lowell, MA 01854
(978) 458-9872

NEPET at Elliot Hospital
One Elliot Way
Manchester, NH 03103
(603) 663-2370

Massachusetts Mobile PET, P.C.
at Anna Jaques Hospital
25 Highland Avenue
Newburyport, MA 01950
(888) 560-4738

Massachusetts Mobile PET, P.C.
at Merrimack Valley Hospital
140 Lincoln Avenue
Haverhill, MA 01830
(888) 560-4738