

PET-CT CASE OF THE MONTH

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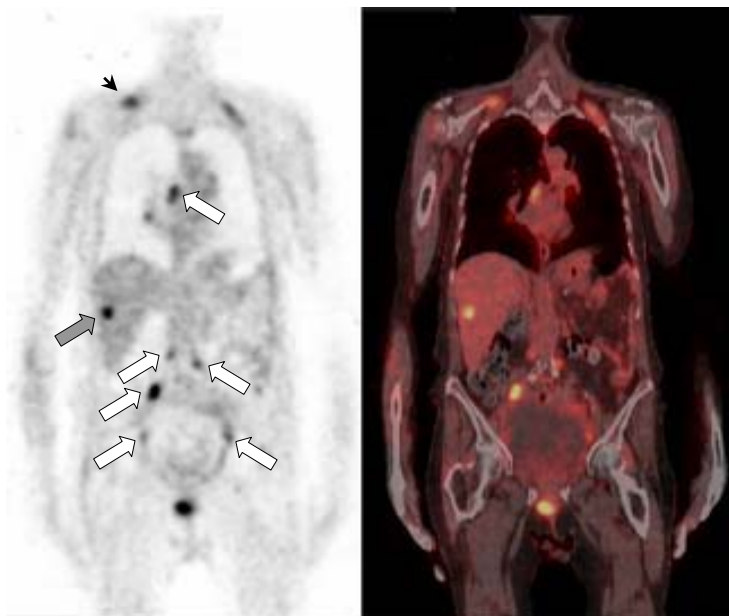


Fig. 1

This 76 year old woman presented with hematuria and was found to have a low grade bladder tumor, which was resected. She developed a high grade bladder recurrence three months later, which was treated with resection and intravesical chemotherapy. After three more months she complained of low back pain. An MRI of the lumbar spine followed by a CT of the pelvis showed a destructive lesion of the sacrum with surrounding soft tissue infiltration. A biopsy revealed metastatic moderately differentiated carcinoma consistent with the patient's bladder tumor. Approximately 10 weeks later, a PET-CT was ordered.

The PET-CT showed extensive FDG uptake in and around the sacrum, with multiple additional sites of skeletal involvement, including the right scapula, thoracic and lumbar vertebrae, the right acetabulum, and the left ischium (arrowheads). Abnormal FDG uptake was also present in pelvic and mediastinal lymph nodes (white arrows) and in a single hepatic focus (gray arrow).

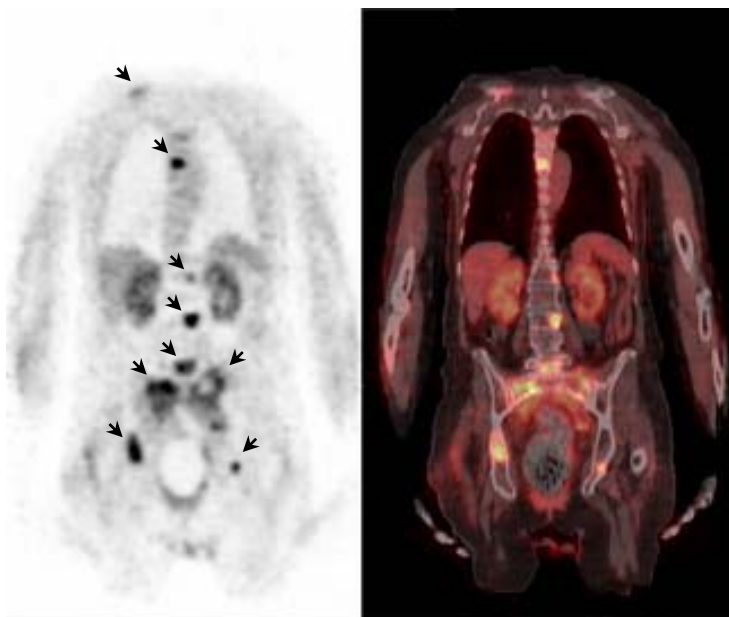


Fig. 2

How did the PET-CT help? :

PET-CT demonstrated extensive metastatic disease, rather than a localized metastasis in the sacral region. Inappropriate sacral radiotherapy was avoided and the patient was started on palliative treatment. There is not extensive data in the literature regarding PET and bladder cancer. However, available reports suggest that the sensitivity for metastases is quite good (77-100%)^{1,2}. Physiologic urine activity usually precludes assessment of the bladder itself.

(1) Urol Int. 2006;77:69-75

(2) Eur J Nucl Med. 1997;24:615-620