PET-CT CASE OF THE MONTH

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Fig. 1

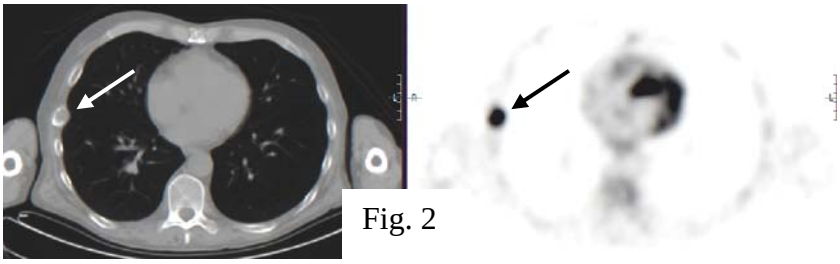

Fig. 2

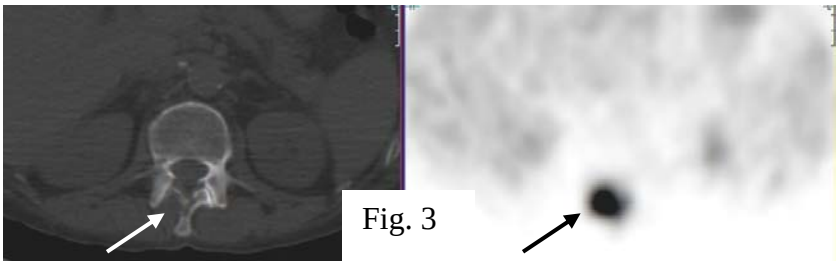

Fig. 3

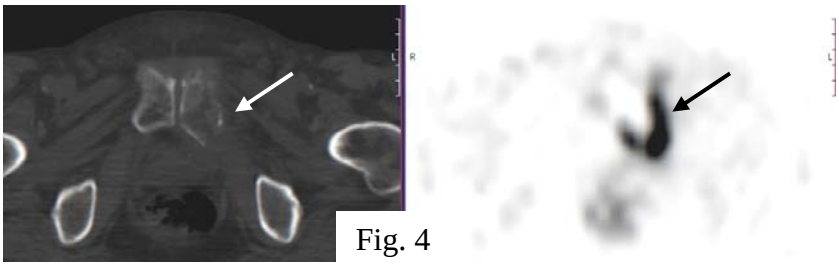

Fig. 4

This 60 year old man presented to the Emergency Room with shortness of breath. A chest x-ray showed an ill-defined left lung density. CT scan showed this density to be a 2.4 cm lingular nodule, without evidence of adenopathy or other abnormalities. A follow-up PET-CT scan was ordered to help evaluate this nodule for malignancy.

The PET-CT showed marked increased FDG uptake in the lingular nodule (Fig. 1). In addition, three other sites of uptake were seen, in the regions of the right ribs, the upper lumbar spine, and the left pubic region (Figs. 2-4). Superimposition of the PET data with the CT images acquired as part of the exam, the latter three sites were seen to be lytic, expansile bone lesions. These finding were felt to be consistent with a left lung cancer with bone metastases. There was no evidence of hilar or mediastinal metastases.

How did the PET-CT help? :

PET-CT was able to show not only the **malignant lung tumor** but that there were distant metastases, upstaging the patient to Stage IV. The CT portion of the study was able to document that the metastases were in bone and to exclude benign etiologies.

Recent studies have shown that PET, and in particular PET-CT, are the preferred methods for staging patients with nonsmall cell lung carcinoma[1,2].

(1) Ann Thorac Surg 2004;78:1017-23
(2) J Thorac Cardiovasc Surg 2003;126:1943-51

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This case and previous ones can be seen at **www.petcases.com**