

Focus: Cervical Cancer



Figure 1



Figure 2

History

A 59-year-old female with newly diagnosed cervical cancer. Initial clinical Stage IIB. An MRI was ordered to better delineate lymph node involvement. MRI of the pelvis reveals enlarged left iliac lymph node and possible retroperitoneal adenopathy. A PET scan was then ordered to help stage the patient.

Findings

FDG-PET demonstrated foci of intense uptake in bilateral iliac lymph nodes and retroperitoneal lymph nodes that are consistent with metastasis (Figure 1).

How Did PET Help?

PET confirmed the findings of MRI and detected additional foci of metastasis in the paraaortic and iliac regions. Based on the findings of MRI and PET, the patient's initial staging was upgraded to Stage IIIB.

Follow-up

Patient underwent radiation therapy. Her chemotherapy was not completed due to toxicity. A repeat PET was performed four months later and showed significant decrease in FDG uptake in the pelvis and retroperitoneal region, indicating positive response to radiation therapy in this area. However, the repeat FDG-PET study also shows progression of disease in the left supraclavicular region (Figure 2).

Discussion

In the detection of para-aortic lymph node metastasis, FDG-PET imaging has a sensitivity of 85.7%, a specificity of 94.4%, and an accuracy of 92%. When abdominal CT findings are negative, the use of FDG-PET can accurately detect para-aortic lymph nodal metastasis in patients with advanced cervical cancer(1). Whole-body FDG-PET is a sensitive and specific tool for the detection of recurrent cervical cancer in patients who have clinical findings suspicious for recurrence. The sensitivity and specificity of FDG-PET for detecting recurrent cervical cancer are 85.7 and 86.7%, respectively. The positive and negative predictive values are 85.7 and 86.7%, respectively.

In January 2005 the Center for Medicare services (CMS) approved coverage of FDG-PET for staging of cervical cancer patients.