History
The patient in this case, a 64-year-old male with a history of prostate cancer, was evaluated for severe abdominal pain and weight loss. In December 2003, initial CT images of the pelvis showed sigmoid diverticulosis as well as a 7.0-cm retroperitoneal mass lateral to the aorta and aortic bifurcation. Follow-up pathology reports showed positive B-Cell Lymphoma.

PET Findings
The initial PET scan in January 2004 (Figure 1) showed a large area of intense FDG uptake corresponding with the periaortic mass seen on the CT. This finding is consistent with the patient’s known history of lymphoma. The patient underwent chemotherapy treatment (Rituxin) and had a follow-up PET scan in March 2004 (Figure 2).

Comparison was made with the prior PET scan, and the finding was interval complete resolution along with mild increased FDG uptake in the bone marrow consistent with chemotherapy treatment. On a follow-up PET study performed in July 2004 (Figure 3) there was no focal uptake that would suggest recurrence, and the mild bone marrow uptake seen in the prior study has resolved.

How Did PET Help?
The initial PET study confirmed the patient’s diagnosis of lymphoma, with follow-up PET studies demonstrating the patient’s excellent and continued response to chemotherapy.

Discussion
Both Hodgkin’s and non-Hodgkin’s lymphoma can be imaged well with FDG PET. Residual lymphoma may remain for months, and this persistence cannot be identified by conventional anatomic imaging such as CT. Unlike CT studies, FDG PET imaging will show nearly all areas of lymphoma that are unresponsive to chemotherapy.

References: