

# Cancer remission

By Erik Zeger, MD *Department of Hematology/Oncology*



Staging of cancer remains a challenge, but improved imaging precision helps us make such assessments—and it is altering treatment approaches.

An 81-year-old man came to me with swelling on the left side of his lower neck. The patient’s previous CT scan showed some calcification in the chest lymph nodes. When palpated, the large mass in his upper chest and neck was firm.

A fine-needle biopsy of the chest node followed by surgical biopsy confirmed diffuse, large B-cell (non-Hodgkins) lymphoma. Another CT scan confirmed lymphadenopathy and enlargement in the mediastinal nodes. Fortunately, a bone-marrow biopsy proved negative.

At this point, the challenge was to determine the extent of the disease. I turned to PET scanning, which showed lesions in the neck, abdomen, vicinity of the pancreas, and left axilla (*Figure 1 & 2*).

This told me the patient had Stage III cancer and a candidate for chemotherapy. Without the information from PET, the patient would have been treated with both chemotherapy and radiation therapy, which would not be appropriate in his case.

Over approximately twelve weeks, this patient underwent four cycles of chemotherapy. One month later, he went for a combined PET with CT scan where the previous nodal enlargement and neoplastic activity were no longer evident, and, importantly, PET showed no new areas of activity (*Figure 3*). The patient experienced a complete response. As a result, his treatment consisted of an additional two cycles of chemotherapy, rather than four.

CT scans can reveal enlargements, but they cannot pick up certain areas of increased metabolic activity that signify cancer tissue. PET assists us significantly both pre- and post-treatment.

image review

*Procedure:*

**CT with contrast; PET tumor imaging; PET-CT tumor imaging**

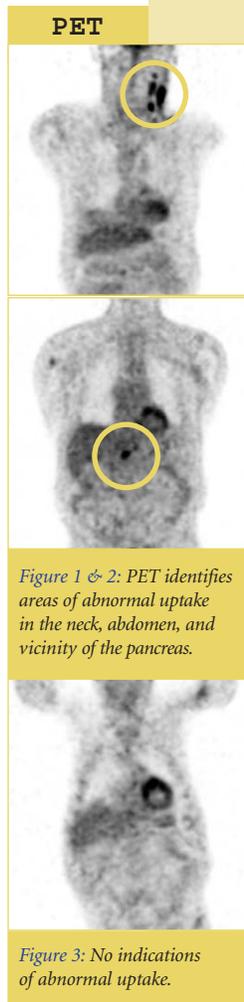
A whole body PET scan performed for staging of the patient’s known lymphoma showed expected marked FDG accumulation in the patient’s neck mass/masses, as well as the left axilla and lymph nodes in the peripancreatic region. The demonstration of these additional areas of disease changed the stage of the patient’s disease and appropriately changed his treatment regimen.

Additional areas of mild FDG accumulation were present in the mediastinum, thought to represent the patient’s known granulomatous disease.

One month into the patient’s treatment, subsequent whole-body PET/CT with CT scan examination demonstrated complete resolution of his lymphoma. The early demonstration of this complete response shortened his chemotherapy regimen by 2 cycles.

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(Study performed/read at Lankenau Hospital.)



*Figure 1 & 2: PET identifies areas of abnormal uptake in the neck, abdomen, and vicinity of the pancreas.*

*Figure 3: No indications of abnormal uptake.*

**Please call 610-526-2200 for more information or to schedule an appointment.**