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More Accurate Staging of Lymphoma It's About Knowing...

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PETNET Solutions

More Accurate Staging of Lymphoma

It's About Knowing...



Conventional staging modalities are useful but have their limitations.

- Diagnostic criteria based on size alone.¹
 - Benign lymph node enlargement may lead to overstaging.¹
 - Malignant small lymph nodes may be missed, leading to understaging.¹
- Limited detection of spleen, liver, and bone marrow involvement.¹
- Equivocal lesions frequently require additional imaging or biopsy.¹

PET and PET•CT positively influences the clinical management of patients.

"The diagnostic and prognostic accuracy of ¹⁸F-FDG PET for detecting lymphoma is exquisitely high and unequivocally superior to that of CT, so that PET•CT would not be expected to improve accuracy further. This notion was confirmed by several investigations with nearly 300 patients."

— Czernin J., et al²

PET provides the additional information to make patient management decisions.¹

- Evaluates patients for operability
- Detects mediastinal lymph node metastases
- Reveals distant metastases
- Helps assess tumor response to therapy

PET clearly distinguishes the increased metabolic activity of malignant tissues.

A summary of FDG-PET literature on lymphoma indicates its effectiveness				
Staging	Sensitivity	Specificity	NPV	PPV
PET	90% ³	93% ³	91% ³	74% ³
CT	81% ³	69% ³	87% ³	48% ³

Medicare recognizes the utility of PET and PET•CT in lymphoma.*

Diagnosis

- PET results may assist in avoiding an invasive procedure.
- PET results may assist in determining the optimal anatomic location to perform an invasive diagnostic procedure.**

Staging

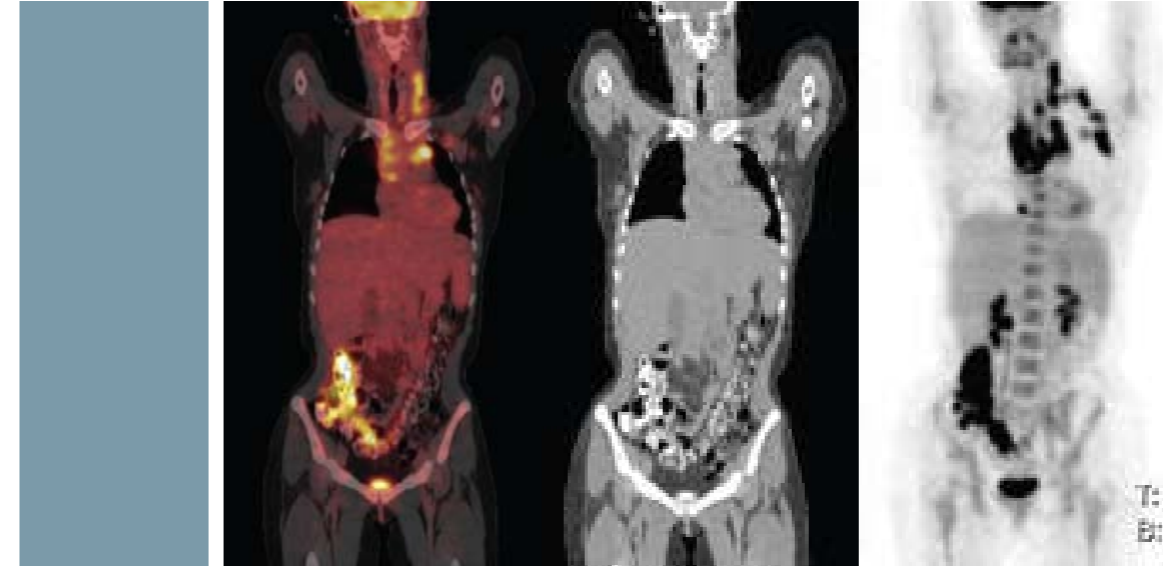
- Stage of lymphoma remains in doubt after completion of a standard diagnostic workup, including conventional imaging (e.g., MRI, CT, US), or
- PET could replace one or more conventional imaging studies when it is expected that the information is insufficient for the clinical management of the patient, and
- Clinical management of the patient would be different depending on the stage of the lymphoma.

Restaging

- PET is covered for restaging after the completion of treatment for detecting residual disease, detecting suspected recurrence, or to determine the extent of a known recurrence.

The ordering physician is responsible for documenting the medical necessity of the PET scan and that it meets the criteria.

PET reveals extent of metastases



Images courtesy of Mallinckrodt Institute of Radiology/Barnes-Jewish Hospital, St. Louis, MO, Dr. Barry Siegel

History

28 year old female with newly diagnosed Hodgkin's disease through left cervical lymph node biopsy.

PET•CT for initial staging

Extensive lymphadenopathy with markedly increased FDG uptake consistent with the patient's known history of Hodgkin's disease.



1. Delbeke D., Martin W.H., Morgan D.S., et al. "2-Deoxy-2-[F-18] fluoro-Dglucose imaging with positron emission tomography for initial staging of Hodgkin's disease and lymphoma," *Molecular Imaging and Biology*, Vol 4 (2002): 105-114.
2. Czernin J., Allen-Auerbach M., Schelbert H. Improvements in Cancer Staging with PET/CT: Literature-Based Evidence as of September 2006. *Journal of Nuclear Medicine*, Vol. 48 (suppl) (2007): 78S-88S
3. Gambhir S.S., Czernin J., Schwimmer J., Silverman D.H.S., Coleman R.E., Phelps M.E. "A tabulated summary of the FDG PET literature," *Journal of Nuclear Medicine*, Vol 42 (suppl) (2001): 1S-93S.

* Centers for Medicare & Medicaid Services. Medicare National Coverage Determinations Manual. Chapter 1, Part 4, Section 220.6. http://www.cms.hhs.gov/manuals/downloads/ncd103c1_Part4.pdf. Revised June 27, 2008.

** For most solid tumors, a tissue diagnosis is usually performed prior to PET scan. Medicare indicates PET would rarely be used in the diagnosis of lymphoma.