

Indication sheet

Accurate detection and localization of melanoma in PET imaging



The global incidence of melanoma continues to increase with 132,000 new cases annually.¹

“The prognosis of malignant melanoma is strongly related to the stage at which it is detected. Accurate identification of all sites of metastatic spread is essential before surgery.”²

“Accurate staging is critical for identification of potentially resectable distant lesions, to avoid unnecessary surgery when curative intent is not possible to assure appropriate treatment.”³

Whole-body PET/CT scans allows physicians to accurately evaluate melanoma patients.

PET/CT delivers unique utility in melanoma

- PET/CT is considered part of pre-operative workup in patients with surgically-treatable metastatic melanoma⁴
- PET/CT can help detect unexpected metastases which are missed or not imaged with conventional imaging.⁴

PET/CT accurate modality for detection of distant metastases^{4,5}

Sensitivity	95%
Specificity	95% ^{4,5}

PET/CT aides the physician in altering the course of therapy in melanoma patients.

- PET/CT imaging led to an overall treatment change in 64 percent of melanoma patients.²

Medicare recognizes the utility of PET and PET/CT in melanoma.⁶

Initial Treatment Strategy (formerly Diagnosis and Staging)

- To determine whether or not the beneficiary is an appropriate candidate for an invasive diagnostic or therapeutic procedure; or
- To determine the optimal anatomic location for an invasive procedure; or
- To determine the anatomic extent of tumor when the recommended anti-tumor treatment reasonably depends on the extent of the tumor

- To determine the extent of a known recurrence
- If it could potentially replace one or more conventional imaging studies when it is expected that conventional study information is insufficient for the clinical management of the patient

Restaging applies to testing after a course of treatment is completed, and is covered subject to the conditions above.

PET is not covered for initial staging of regional lymph nodes in melanoma patients.

Monitoring response to therapy

PET is covered for monitoring tumor response to treatment during the planned course of therapy (ie, when a change in therapy is being considered).

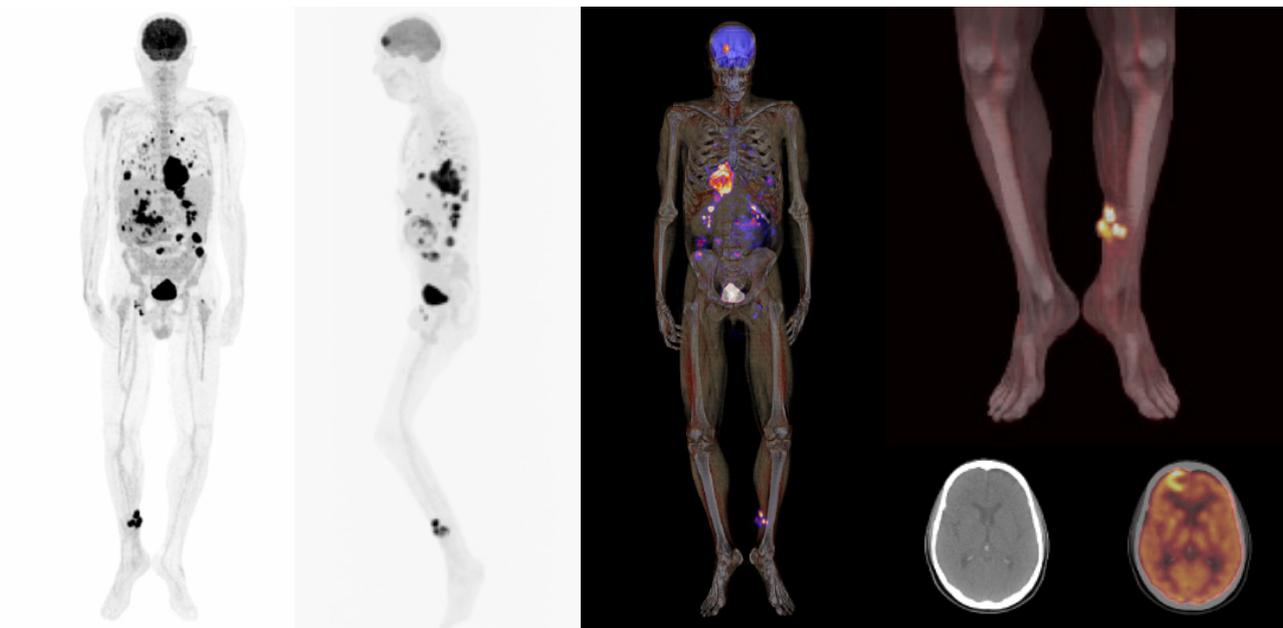
Subsequent Treatment Strategy (Restaging)

PET is covered for restaging:

- After completion of treatment for the purpose of detecting residual disease
- For detecting suspected recurrence or metastasis

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

Accurate staging to determine treatment in melanoma



Data courtesy of University of Tennessee Medical Center, Knoxville, Tennessee, USA

History

A 53-year-old patient was treated for onset of seizure. Initial head CT revealed right frontal lobe brain lesion. Further evaluation with MRI resulted in suspicion for metastatic disease. Stereotactic brain biopsy performed of lesion, pathology results consistent with metastatic melanoma.

A PET/CT was then ordered for evaluation of primary malignancy and extent of disease.

PET/CT findings

PET/CT scan was ordered for Initial Treatment Strategy (ITS) revealing:

1. Hypermetabolic skin lesion left calf, possibly represents primary lesion
2. Multiple lymph node involvement within abdominal and inguinal nodes
3. Large right lower lobe mass, numerous small lung nodules
4. Right frontal lobe brain mass consistent for metastatic disease

Overall evaluation

PET/CT has an increasing role in cancer patient management in localization of lesion detection offering a complete head-to-toe coverage of the patient in a single examination with an accurate and sensitive detection of tumor spread.²

¹ World Health Organization available at

<http://www.who.int/uv/faq/skincancer/en/index1.html>

² Pfannenber C, et al. Prospective comparison of ¹⁸F-fluorodeoxyglucose positron emission tomography/computed tomography and whole-body magnetic resonance imaging in staging of advanced malignant melanoma. *Eur J Cancer*. 2007; Feb;43(3):557-64.

³ Keu KV, et al. The clinical use of PET/CT in the evaluation of melanoma. *Methods Mol Biol*. 2014;1102: 553-80.

⁴ Bronstein Y, et al. PET/CT in the management of patients with stage IIIC and IV metastatic melanoma considered candidates for surgery: evaluation of the additive value after conventional imaging. *AJR Am J Roentgenol*. 2012; April;198(4): 902-8.

⁵ Xing, et al. Contemporary diagnostic imaging modalities for the staging and surveillance of melanoma patients: a meta-analysis. *J Natl Cancer Inst*. 2011;Jan;19;103(2):129-42.

⁶ CMS Publication 100-03, Medicare National Coverage Determinations Manual, Chapter 1, Part 4, Section 220.6). Available at http://www.cms.hhs.gov/manuals/downloads/ncd103c1_part4.pdf

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