CASE SUMMARY
A 52-year-old man presented with a patchy black pigmented lesion in the plantar aspect of the left foot, which was diagnosed as a malignant melanoma. The patient underwent wide local excision of the melanomatous lesion along with sentinel lymph node removal. The lymph node was negative for metastasis. Four weeks later the patient was referred for 18F FDG PET/CT.

IMAGING FINDINGS
18F FDG PET/CT showed an FDG-avid linear, heterogeneously enhancing soft-tissue lesion of approximately 4.8 cm in length in the medial aspect of left thigh, anterior to the left sartorius muscle, suggesting in-transit metastasis (Figure 1). It also revealed postoperative changes in left foot. No other lesions were identified to suggest distant metastasis. Final histopathology of this lesion could not be obtained as the patient was lost to follow-up.

DIAGNOSIS
In-transit metastasis of malignant melanoma

DISCUSSION
The incidence of malignant melanoma, once a rare cancer, has risen, with an average incidence ranging from 2% to 20% in most developed countries. Lymph nodal and in-transit metastases in malignant melanoma have significant prognostic value, but detection of in-transit metastases is challenging.

Malignant melanoma often metastasizes through lymphatic channels to the skin or subcutaneous tissues, as well as to regional lymph nodes. Skin and subcutaneous lesions that occur within 2 cm of the primary tumor are known as satellite lesions, while those that occur beyond 2 cm are considered in-transit metastases. Sentinel lymph node biopsy (SLNB) is the standard management approach for regional node metastasis. However, SLNB cannot detect in-transit metastases, which account for most locoregional recurrences. High-frequency ultrasound is considered the best modality for detecting and diagnosing in-transit metastases due to its high accuracy in detecting smaller lesions. However, this technique has several limitations, including its dependence on operator skill, availability of an expert radiologist, and long study-performance time (at least 30-40 min for each limb or body area). Sentinel lymph node biopsy was negative for metastases in our patient. Hence, he was referred for 18F FDG PET/CT scan as a part of metastatic workup, which showed in-transit metastasis in addition to postoperative changes in left foot.

CONCLUSION
Although 18F FDG PET/CT is relatively less sensitive (especially in detecting smaller lesions) compared to high-frequency ultrasound, it has better specificity and is less dependent on operator skill. In addition, the modality...
can serve as a “one-stop shop” investigation due to its ability to detect distant metastases.

REFERENCES

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