# FDG PET/CT in Systemic Sarcoidosis: Multiorgan Manifestations and Key Pitfalls

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## Background

- Sarcoidosis is a multisystem granulomatous disease
- FDG PET/CT plays a critical role in disease assessment, biopsy, and monitoring.
- FDG uptake reflects active granulomatous inflammation

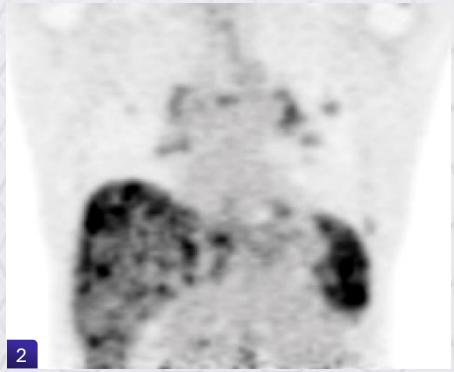
Physiologic - Whole-body FDG PET

- Uptake demonstrates intense brain uptake, homogeneous liver and splenic activity, and urinary excretion (Figure 1)

Thoracic Sarcoidosis - Fused FDG PET/CT

- Uptake shows classic symmetric FDG-avid bilateral hilar and mediastinal lymphadenopathy (Figure 2)
- Common pitfall: misinterpreting as malignancy or other causes of bilateral granulomatous inflammation


1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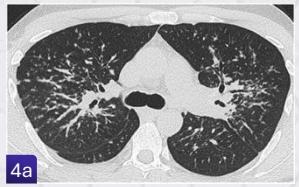
## Imaging Findings by System

Cardiac - Fused FDG PET/CT

- Uptake shows focal myocardial FDG uptake in the basal septum **after adequate myocardial suppression** (Figure 3)
- Common pitfall: physiologic myocardial uptake mimicking cardiac sarcoidosis


3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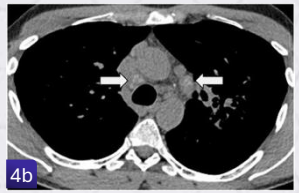
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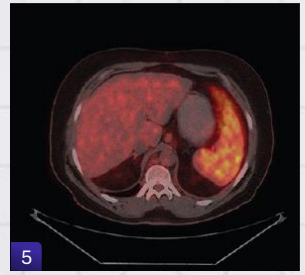
Pulmonary - Axial FDG PET/CT

- Uptake demonstrates FDG-avid perilymphatic pulmonary nodules (Figure 4a/b)
- Common pitfall: misinterpreting symmetric hilar uptake as lymphoma

Hepatosplenic – Axial FDG PET/CT

- Uptake showing diffuse splenic and hepatic FDG uptake without focal masses (Figure 5)
- Common pitfall: diffuse splenic uptake overcalled as lymphoproliferative disease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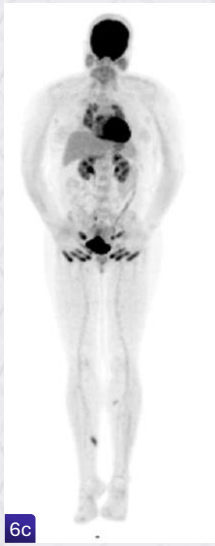
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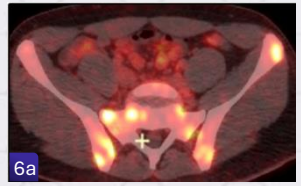
6a


6b

Osseous - FDG PET

- Uptake demonstrating multifocal marrow-based FDG-avid lesions without aggressive CT features (Figure 6a/b/c)
- Common pitfall: lesions mistaken for metastases