

QUESTION
 A 65-year-old male patient with a long history of hypertension and hyperlipidemia presents to the clinic with a 2-week history of increasing fatigue, weight loss, and intermittent fevers. He reports that he has been unable to complete his usual activities of daily living. He has no cough, hemoptysis, or chest pain. He has no recent travel, sick contacts, or exposure to animals. He is on lisinopril, atorvastatin, and aspirin. His medical history is significant for type 2 diabetes mellitus, chronic kidney disease, and a recent myocardial infarction. He is currently on warfarin for a deep vein thrombosis. His physical examination is unremarkable. Laboratory studies show a hemoglobin of 10 g/dL, hematocrit of 30%, and a ferritin level of 100 ng/mL. A chest X-ray is normal. A CT scan of the chest shows a 2-cm nodule in the right upper lobe. A PET scan shows increased uptake in the nodule. A biopsy of the nodule shows a granulomatous reaction with multinucleated giant cells. The patient's most likely diagnosis is:

- ANSWER**
 A. Tuberculosis
 B. Sarcoidosis
 C. Fungal infection
 D. Lung cancer
 E. Metastatic disease

ANSWERS

The correct answer is B. Sarcoidosis. The patient's presentation is consistent with sarcoidosis, a systemic granulomatous disease of unknown etiology. The clinical features include fatigue, weight loss, and intermittent fevers, which are common in the acute phase of the disease. The physical examination is unremarkable, which is typical for sarcoidosis. Laboratory studies show a hemoglobin of 10 g/dL, hematocrit of 30%, and a ferritin level of 100 ng/mL. A chest X-ray is normal, which is also consistent with sarcoidosis. A CT scan of the chest shows a 2-cm nodule in the right upper lobe. A PET scan shows increased uptake in the nodule. A biopsy of the nodule shows a granulomatous reaction with multinucleated giant cells, which is characteristic of sarcoidosis.

Option A, Tuberculosis, is incorrect because the patient has no cough, hemoptysis, or chest pain. A chest X-ray is normal, and a CT scan shows a nodule in the right upper lobe. A PET scan shows increased uptake in the nodule. A biopsy of the nodule shows a granulomatous reaction with multinucleated giant cells, which is not typical for tuberculosis.

Option C, Fungal infection, is incorrect because the patient has no recent travel, sick contacts, or exposure to animals. A chest X-ray is normal, and a CT scan shows a nodule in the right upper lobe. A PET scan shows increased uptake in the nodule. A biopsy of the nodule shows a granulomatous reaction with multinucleated giant cells, which is not typical for a fungal infection.

Option D, Lung cancer, is incorrect because the patient has no cough, hemoptysis, or chest pain. A chest X-ray is normal, and a CT scan shows a nodule in the right upper lobe. A PET scan shows increased uptake in the nodule. A biopsy of the nodule shows a granulomatous reaction with multinucleated giant cells, which is not typical for lung cancer.

Option E, Metastatic disease, is incorrect because the patient has no recent travel, sick contacts, or exposure to animals. A chest X-ray is normal, and a CT scan shows a nodule in the right upper lobe. A PET scan shows increased uptake in the nodule. A biopsy of the nodule shows a granulomatous reaction with multinucleated giant cells, which is not typical for metastatic disease.