

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 home oxygen therapy. Physical examination reveals a temperature of 38.2°C, heart rate of 100 bpm, and blood pressure of 140/90 mmHg. There is no lymphadenopathy, splenomegaly, or hepatomegaly. Lung examination is clear. Laboratory studies show hemoglobin of 10 g/dL, hematocrit of 30%, and leukocyte count of 12,000/mm³ with a left shift. Erythrocyte sedimentation rate is 45 mm/h, and C-reactive protein is 15 mg/L. Urinalysis is unremarkable. Chest X-ray shows no infiltrates.

ANSWER
 The patient's presentation is consistent with a systemic infectious process. The combination of fever, weight loss, and fatigue, along with laboratory findings of leukocytosis with a left shift and elevated inflammatory markers, points toward a bacterial infection. The absence of localizing signs on physical exam and chest X-ray suggests a systemic rather than a localized infection. Given the patient's immunocompromised state due to chronic kidney disease and recent myocardial infarction, the differential diagnosis includes bacterial endocarditis, tuberculosis, and disseminated fungal infection. The lack of cough and chest pain makes tuberculosis less likely. The absence of focal murmurs or embolic phenomena makes endocarditis less likely. The most likely diagnosis is a systemic bacterial infection, such as sepsis or a deep-seated abscess. Further workup should include blood cultures, procalcitonin, and possibly a CT scan to identify a source of infection.

ANSWERS TO CASES

Case 1
 The patient's symptoms of fatigue, weight loss, and intermittent fevers, along with laboratory findings of leukocytosis and elevated inflammatory markers, are consistent with a systemic infectious process. The absence of localizing signs on physical exam and chest X-ray suggests a systemic rather than a localized infection. Given the patient's immunocompromised state due to chronic kidney disease and recent myocardial infarction, the differential diagnosis includes bacterial endocarditis, tuberculosis, and disseminated fungal infection. The lack of cough and chest pain makes tuberculosis less likely. The absence of focal murmurs or embolic phenomena makes endocarditis less likely. The most likely diagnosis is a systemic bacterial infection, such as sepsis or a deep-seated abscess. Further workup should include blood cultures, procalcitonin, and possibly a CT scan to identify a source of infection.

Case 2
 The patient's presentation is consistent with a systemic infectious process. The combination of fever, weight loss, and fatigue, along with laboratory findings of leukocytosis with a left shift and elevated inflammatory markers, points toward a bacterial infection. The absence of localizing signs on physical exam and chest X-ray suggests a systemic rather than a localized infection. Given the patient's immunocompromised state due to chronic kidney disease and recent myocardial infarction, the differential diagnosis includes bacterial endocarditis, tuberculosis, and disseminated fungal infection. The lack of cough and chest pain makes tuberculosis less likely. The absence of focal murmurs or embolic phenomena makes endocarditis less likely. The most likely diagnosis is a systemic bacterial infection, such as sepsis or a deep-seated abscess. Further workup should include blood cultures, procalcitonin, and possibly a CT scan to identify a source of infection.