

## 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 the fevers occur in the late afternoon and are accompanied by night sweats. He has no cough, hemoptysis, or chest pain. He has a 20-pack-year smoking history and drinks alcohol socially. His medical history is significant for type 2 diabetes mellitus, chronic kidney disease (stage 3), and aortic stenosis. He is currently on lisinopril, atorvastatin, and metformin. His physical examination is notable for a temperature of 38.2°C, a heart rate of 98 bpm, a blood pressure of 145/90 mmHg, and a respiratory rate of 18 breaths per minute. There is no crackles or wheezes on lung auscultation. The heart examination reveals aortic stenosis with aortic regurgitation. The abdomen is soft and non-tender. The patient's laboratory workup shows a hemoglobin of 11.5 g/dL, a hematocrit of 35%, and a ferritin level of 150 ng/mL. His erythrocyte sedimentation rate (ESR) is 45 mm/h, and his C-reactive protein (CRP) is 12 mg/L. A chest X-ray shows no abnormalities. A CT scan of the chest with contrast reveals a 2-cm enhancing soft tissue mass in the right lower lobe. A PET-CT scan shows a focal area of increased FDG uptake in the right lower lobe, consistent with the CT findings. The patient's renal function is stable with a creatinine of 1.8 mg/dL. The patient's family history is significant for lung cancer in his father and colon cancer in his mother.

Question	Answer	Explanation
What is the most likely diagnosis?	Primary lung cancer	The patient's symptoms, physical examination, and imaging studies are consistent with a primary lung cancer. The CT scan shows a 2-cm enhancing soft tissue mass in the right lower lobe, and the PET-CT scan shows a focal area of increased FDG uptake in the right lower lobe, consistent with the CT findings.
What is the most likely histologic type of lung cancer?	Adenocarcinoma	Adenocarcinoma is the most common histologic type of lung cancer, especially in non-smokers and in the peripheral lung. The patient's smoking history is significant, but the location of the mass in the peripheral lung is more suggestive of adenocarcinoma.
What is the most likely cause of the patient's symptoms?	Systemic effects of lung cancer	The patient's symptoms of fatigue, weight loss, and intermittent fevers are likely due to the systemic effects of the lung cancer. The fevers are accompanied by night sweats, which is a common feature of lung cancer.
What is the most likely cause of the patient's anemia?	Chronic disease anemia	The patient's anemia is likely due to a chronic disease anemia, which is a common complication of lung cancer. The patient's ferritin level is elevated, which is consistent with a chronic disease anemia.

ANSWER CHOICES:

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