

**QUESTION**  
 A 65-year-old male patient with a long history of hypertension and a recent diagnosis of type 2 diabetes mellitus is being treated with lisinopril and metformin. He reports feeling increasingly fatigued and has noticed some swelling in his lower extremities. His blood pressure is 150/95 mmHg, heart rate is 100 bpm, and oxygen saturation is 96% on room air. Physical examination reveals bilateral lower extremity edema and a clear lung field. Laboratory tests show a serum sodium of 130 mEq/L, serum potassium of 3.5 mEq/L, and a serum creatinine of 1.8 mg/dL. The patient's most likely condition is:

- ANSWER**  
 A. Acute kidney injury  
 B. Heart failure  
 C. Hypokalemia  
 D. Metformin toxicity  
 E. Secondary hyperparathyroidism

## EXPLANATION

The patient's symptoms and physical findings are consistent with heart failure. The presence of bilateral lower extremity edema and a clear lung field suggests a diagnosis of right-sided heart failure. The patient's blood pressure is elevated, and his heart rate is tachycardic, which are common findings in heart failure. The laboratory tests show a serum sodium of 130 mEq/L, which is slightly low, and a serum potassium of 3.5 mEq/L, which is slightly low. The serum creatinine of 1.8 mg/dL is slightly elevated, but this is likely due to the patient's long history of hypertension and the fact that he is on metformin, which can cause a slight increase in creatinine. The patient's most likely condition is heart failure.