

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 has been experiencing increasing fatigue and weakness over the past few weeks. His most recent laboratory tests show a hemoglobin level of 10.5 g/dL, a hematocrit of 32%, and a mean corpuscular volume (MCV) of 85 fL. The reticulocyte count is 0.5%. The patient's renal function is stable, with a serum creatinine level of 1.2 mg/dL. What is the most likely cause of his anemia?

- ANSWER**
 A. Iron deficiency anemia
 B. Vitamin B12 deficiency
 C. Folate deficiency
 D. Chronic kidney disease
 E. Hemolytic anemia

EXPLANATION

The patient's anemia is most likely due to iron deficiency. The clinical presentation of fatigue and weakness, along with the laboratory findings of a low hemoglobin level, low hematocrit, and a low MCV (microcytic anemia), are characteristic of iron deficiency. The reticulocyte count is low, which is consistent with a chronic, non-hemolytic anemia. The patient's renal function is stable, ruling out chronic kidney disease as the cause. There is no information provided about the patient's diet or other potential causes of iron deficiency.

Iron deficiency anemia is a common cause of microcytic anemia. It is often caused by inadequate dietary intake of iron, blood loss, or impaired iron absorption. The low MCV and low reticulocyte count are key indicators. In this case, the patient's stable renal function and the absence of other obvious causes point towards iron deficiency as the most likely diagnosis.