

QUESTION

1. A patient with a long history of chronic kidney disease (CKD) is being treated with a diuretic. The patient's serum potassium level is 2.8 mEq/L. The patient is also taking a beta-blocker. The patient's blood pressure is 150/90 mmHg. The patient's creatinine level is 2.5 mg/dL. The patient's hemoglobin level is 10 g/dL. The patient's hematocrit level is 30%. The patient's white blood cell count is 10,000/mm³. The patient's platelet count is 150,000/mm³. The patient's serum calcium level is 8.5 mg/dL. The patient's serum phosphorus level is 3.5 mg/dL. The patient's serum magnesium level is 0.8 mg/dL. The patient's serum sodium level is 135 mEq/L. The patient's serum chloride level is 98 mEq/L. The patient's serum bicarbonate level is 22 mEq/L. The patient's serum lactate level is 0.5 mmol/L. The patient's serum glucose level is 100 mg/dL. The patient's serum insulin level is 5 mU/L. The patient's serum C-peptide level is 0.5 ng/mL. The patient's serum HbA_{1c} level is 7.5%. The patient's serum ferritin level is 100 ng/mL. The patient's serum transferrin saturation level is 20%. The patient's serum iron level is 50 µg/dL. The patient's serum total iron-binding capacity level is 250 µg/dL. The patient's serum albumin level is 3.5 g/dL. The patient's serum globulin level is 3.5 g/dL. The patient's serum total protein level is 7.0 g/dL. The patient's serum albumin-to-globulin ratio level is 1.0. The patient's serum creatinine level is 2.5 mg/dL. The patient's serum urea nitrogen level is 15 mg/dL. The patient's serum creatinine clearance level is 15 mL/min. The patient's estimated glomerular filtration rate level is 15 mL/min. The patient's serum parathyroid hormone-related protein level is 100 pg/mL. The patient's serum parathyroid hormone level is 100 pg/mL. The patient's serum parathyroid hormone-related protein level is 100 pg/mL. The patient's serum parathyroid hormone level is 100 pg/mL.

Parameter	Value	Reference Range
Serum Potassium	2.8 mEq/L	3.5-5.0 mEq/L
Serum Calcium	8.5 mg/dL	8.8-10.0 mg/dL
Serum Phosphorus	3.5 mg/dL	2.5-4.5 mg/dL
Serum Magnesium	0.8 mg/dL	0.7-1.1 mg/dL
Serum Sodium	135 mEq/L	136-145 mEq/L
Serum Chloride	98 mEq/L	98-106 mEq/L
Serum Bicarbonate	22 mEq/L	22-28 mEq/L
Serum Lactate	0.5 mmol/L	<2.0 mmol/L
Serum Glucose	100 mg/dL	70-100 mg/dL
Serum Insulin	5 mU/L	2-20 mU/L
Serum C-peptide	0.5 ng/mL	0.5-2.0 ng/mL
Serum HbA _{1c}	7.5%	<5.7%
Serum Ferritin	100 ng/mL	20-200 ng/mL
Serum Transferrin Saturation	20%	20-50%
Serum Iron	50 µg/dL	50-150 µg/dL
Serum TIBC	250 µg/dL	250-450 µg/dL
Serum Albumin	3.5 g/dL	3.5-5.0 g/dL
Serum Globulin	3.5 g/dL	2.0-3.5 g/dL
Serum Total Protein	7.0 g/dL	6.0-8.0 g/dL
Serum Albumin-to-Globulin Ratio	1.0	1.0-2.0
Serum Creatinine	2.5 mg/dL	0.6-1.2 mg/dL
Serum Urea Nitrogen	15 mg/dL	8-20 mg/dL
Serum Creatinine Clearance	15 mL/min	90-120 mL/min
Estimated GFR	15 mL/min	90-120 mL/min
Serum PTHrP	100 pg/mL	<10 pg/mL
Serum PTH	100 pg/mL	<65 pg/mL

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ANSWER



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