

### QUESTION

1. A patient with a long history of alcohol abuse presents with a 2-week history of weight loss, weakness, and anorexia. Physical examination reveals a 10% weight loss, tachycardia, and a positive Tinel's sign. Laboratory studies show a serum albumin of 2.5 g/dL, a total bilirubin of 2.0 mg/dL, and a prothrombin time of 18 seconds. The patient's most likely diagnosis is:

A. Alcohol withdrawal  
B. Acute pancreatitis  
C. Wernicke's encephalopathy  
D. Cirrhosis  
E. Vitamin B12 deficiency

Option	Correct Answer	Explanation
A	Incorrect	Alcohol withdrawal typically presents with tremors, tachycardia, and hypertension, but not with weight loss or a positive Tinel's sign.
B	Incorrect	Acute pancreatitis is characterized by severe abdominal pain and elevated serum amylase and lipase levels.
C	Incorrect	Wernicke's encephalopathy is characterized by a triad of ophthalmoplegia, ataxia, and confusion.
D	Correct	Cirrhosis is characterized by weight loss, weakness, and anorexia. The physical examination findings of tachycardia and a positive Tinel's sign are consistent with cirrhosis. The laboratory studies show a low serum albumin, elevated total bilirubin, and a prolonged prothrombin time, all of which are consistent with cirrhosis.
E	Incorrect	Vitamin B12 deficiency is characterized by weakness, weight loss, and anorexia, but not by tachycardia or a positive Tinel's sign.

ANSWER: D  
DISCUSSION: The patient's symptoms and physical examination findings are consistent with cirrhosis. The laboratory studies show a low serum albumin, elevated total bilirubin, and a prolonged prothrombin time, all of which are consistent with cirrhosis.

### QUESTION



Option	Correct Answer	Explanation
A	Incorrect	Channel proteins are transmembrane proteins that provide a pore for the passage of small molecules and ions across the cell membrane.
B	Incorrect	Carrier proteins are transmembrane proteins that bind to a molecule and change shape to move it across the membrane.
C	Incorrect	Receptor proteins are transmembrane proteins that bind to a ligand and initiate a signal transduction pathway.
D	Correct	The diagram shows a small molecule moving through a protein embedded in the membrane, which is characteristic of a channel protein.
E	Incorrect	Enzymes are proteins that catalyze chemical reactions, but they are not typically shown moving molecules across the membrane.

ANSWER: D  
DISCUSSION: The diagram shows a small molecule moving through a protein embedded in the membrane, which is characteristic of a channel protein.