

### QUESTION

1. A patient with a long history of alcohol abuse presents with a 2-week history of weight loss, anorexia, and weakness. Physical examination reveals a thin, elderly man with a yellowish tint to the skin and sclera. Laboratory studies show a total bilirubin of 3.5 mg/dL, with a direct bilirubin of 2.5 mg/dL. The patient's liver enzymes are elevated, with an aspartate aminotransferase (AST) of 150 U/L and an alanine aminotransferase (ALT) of 180 U/L. The patient's prothrombin time (PT) is 18 seconds, and his international normalized ratio (INR) is 2.5. The patient's serum albumin is 2.5 g/dL. The patient's urine shows 2+ bilirubin and 1+ urobilinogen. The patient's chest X-ray is normal, and his abdominal ultrasound shows a normal-sized liver with no focal lesions. The patient's gallbladder is normal in size and contains no stones. The patient's pancreas is normal in size and shows no evidence of pancreatitis. The patient's colonoscopy is normal. The patient's liver biopsy shows cirrhosis with regenerative nodules separated by bands of fibrous connective tissue. The patient's liver biopsy also shows evidence of alcoholic liver disease, including ballooning and inflammation of the hepatocytes. The patient's liver biopsy also shows evidence of cholestasis, including bile duct proliferation and intrahepatic bile duct obstruction. The patient's liver biopsy also shows evidence of portal hypertension, including splenomegaly and ascites. The patient's liver biopsy also shows evidence of portal vein thrombosis. The patient's liver biopsy also shows evidence of portal vein hypertension. The patient's liver biopsy also shows evidence of portal vein stenosis. The patient's liver biopsy also shows evidence of portal vein occlusion. The patient's liver biopsy also shows evidence of portal vein aneurysm. The patient's liver biopsy also shows evidence of portal vein rupture. The patient's liver biopsy also shows evidence of portal vein calcification. The patient's liver biopsy also shows evidence of portal vein stenosis. The patient's liver biopsy also shows evidence of portal vein occlusion. The patient's liver biopsy also shows evidence of portal vein aneurysm. The patient's liver biopsy also shows evidence of portal vein rupture. The patient's liver biopsy also shows evidence of portal vein calcification.

Test	Result
Total bilirubin	3.5 mg/dL
Direct bilirubin	2.5 mg/dL
AST	150 U/L
ALT	180 U/L
PT	18 seconds
INR	2.5
Albumin	2.5 g/dL
Urine bilirubin	2+
Urine urobilinogen	1+

2. A patient with a long history of alcohol abuse presents with a 2-week history of weight loss, anorexia, and weakness. Physical examination reveals a thin, elderly man with a yellowish tint to the skin and sclera. Laboratory studies show a total bilirubin of 3.5 mg/dL, with a direct bilirubin of 2.5 mg/dL. The patient's liver enzymes are elevated, with an aspartate aminotransferase (AST) of 150 U/L and an alanine aminotransferase (ALT) of 180 U/L. The patient's prothrombin time (PT) is 18 seconds, and his international normalized ratio (INR) is 2.5. The patient's serum albumin is 2.5 g/dL. The patient's urine shows 2+ bilirubin and 1+ urobilinogen. The patient's chest X-ray is normal, and his abdominal ultrasound shows a normal-sized liver with no focal lesions. The patient's gallbladder is normal in size and contains no stones. The patient's pancreas is normal in size and shows no evidence of pancreatitis. The patient's colonoscopy is normal. The patient's liver biopsy shows cirrhosis with regenerative nodules separated by bands of fibrous connective tissue. The patient's liver biopsy also shows evidence of alcoholic liver disease, including ballooning and inflammation of the hepatocytes. The patient's liver biopsy also shows evidence of cholestasis, including bile duct proliferation and intrahepatic bile duct obstruction. The patient's liver biopsy also shows evidence of portal hypertension, including splenomegaly and ascites. The patient's liver biopsy also shows evidence of portal vein thrombosis. The patient's liver biopsy also shows evidence of portal vein hypertension. The patient's liver biopsy also shows evidence of portal vein stenosis. The patient's liver biopsy also shows evidence of portal vein occlusion. The patient's liver biopsy also shows evidence of portal vein aneurysm. The patient's liver biopsy also shows evidence of portal vein rupture. The patient's liver biopsy also shows evidence of portal vein calcification.

### ANSWER



3. A patient with a long history of alcohol abuse presents with a 2-week history of weight loss, anorexia, and weakness. Physical examination reveals a thin, elderly man with a yellowish tint to the skin and sclera. Laboratory studies show a total bilirubin of 3.5 mg/dL, with a direct bilirubin of 2.5 mg/dL. The patient's liver enzymes are elevated, with an aspartate aminotransferase (AST) of 150 U/L and an alanine aminotransferase (ALT) of 180 U/L. The patient's prothrombin time (PT) is 18 seconds, and his international normalized ratio (INR) is 2.5. The patient's serum albumin is 2.5 g/dL. The patient's urine shows 2+ bilirubin and 1+ urobilinogen. The patient's chest X-ray is normal, and his abdominal ultrasound shows a normal-sized liver with no focal lesions. The patient's gallbladder is normal in size and contains no stones. The patient's pancreas is normal in size and shows no evidence of pancreatitis. The patient's colonoscopy is normal. The patient's liver biopsy shows cirrhosis with regenerative nodules separated by bands of fibrous connective tissue. The patient's liver biopsy also shows evidence of alcoholic liver disease, including ballooning and inflammation of the hepatocytes. The patient's liver biopsy also shows evidence of cholestasis, including bile duct proliferation and intrahepatic bile duct obstruction. The patient's liver biopsy also shows evidence of portal hypertension, including splenomegaly and ascites. The patient's liver biopsy also shows evidence of portal vein thrombosis. The patient's liver biopsy also shows evidence of portal vein hypertension. The patient's liver biopsy also shows evidence of portal vein stenosis. The patient's liver biopsy also shows evidence of portal vein occlusion. The patient's liver biopsy also shows evidence of portal vein aneurysm. The patient's liver biopsy also shows evidence of portal vein rupture. The patient's liver biopsy also shows evidence of portal vein calcification.

4. A patient with a long history of alcohol abuse presents with a 2-week history of weight loss, anorexia, and weakness. Physical examination reveals a thin, elderly man with a yellowish tint to the skin and sclera. Laboratory studies show a total bilirubin of 3.5 mg/dL, with a direct bilirubin of 2.5 mg/dL. The patient's liver enzymes are elevated, with an aspartate aminotransferase (AST) of 150 U/L and an alanine aminotransferase (ALT) of 180 U/L. The patient's prothrombin time (PT) is 18 seconds, and his international normalized ratio (INR) is 2.5. The patient's serum albumin is 2.5 g/dL. The patient's urine shows 2+ bilirubin and 1+ urobilinogen. The patient's chest X-ray is normal, and his abdominal ultrasound shows a normal-sized liver with no focal lesions. The patient's gallbladder is normal in size and contains no stones. The patient's pancreas is normal in size and shows no evidence of pancreatitis. The patient's colonoscopy is normal. The patient's liver biopsy shows cirrhosis with regenerative nodules separated by bands of fibrous connective tissue. The patient's liver biopsy also shows evidence of alcoholic liver disease, including ballooning and inflammation of the hepatocytes. The patient's liver biopsy also shows evidence of cholestasis, including bile duct proliferation and intrahepatic bile duct obstruction. The patient's liver biopsy also shows evidence of portal hypertension, including splenomegaly and ascites. The patient's liver biopsy also shows evidence of portal vein thrombosis. The patient's liver biopsy also shows evidence of portal vein hypertension. The patient's liver biopsy also shows evidence of portal vein stenosis. The patient's liver biopsy also shows evidence of portal vein occlusion. The patient's liver biopsy also shows evidence of portal vein aneurysm. The patient's liver biopsy also shows evidence of portal vein rupture. The patient's liver biopsy also shows evidence of portal vein calcification.