

### Question 33 – Week of March 25

45 year old white male underwent routine blood work as part of his life insurance application. His application was denied due to elevated liver tests. He has no significant past medical history and does not take any medication. His primary care provider performed hepatitis serology for A,B &C and it was negative. He presents to your office and further workup are as follows:

WBC 5 Hgb 15 PLT 200K

AST 45 ALT 56 ALP 570 Albumin 3.8 T.Bili 2.5 Indirect bili 0.3

INR 1.3 ANA + 1:80 Anti-smooth muscle antibody 1:40

Which of the following test is NOT consistent with the diagnosis of Primary Sclerosing Cholangitis?

- A. Normal serum ceruloplasmin
- B. ANCA positive
- C. Hepatic copper 70 micrograms/g
- D. Positive anti-mitochondrial antibody
- E. Elevated IgM level

**Answer: D**

AMA is highly sensitive and specific for Primary Biliary Cirrhosis(PBC) and rarely seen in Primary Sclerosing Cholangitis(PSC). IgM elevation is commonly seen in Primary Biliary Cirrhosis but also can be found in 40% of patients with PSC. Underlying cholestatic liver disease can cause elevation of hepatic copper content as well as urine copper, but not serum copper or ceruloplasmin.

Reference:

Angulo P, Peter JB, Gershwin ME et al. (2000) Serum antioantibodies in patients with primary sclerosing cholangitis. J Hepatol 32,182-187