

Question 11 – November 9

A 40 year old Asian male with a history of hepatitis B and Childs-Pugh class B cirrhosis is referred for a new solitary 3-cm lesion in the right lobe of the liver seen on ultrasound. Triphasic contrast-enhanced computed tomography (CT) shows arterial enhancement of the lesion without venous washout. The serum level of alpha-fetoprotein is 15 ng/mL. What is the next best step in management?

- A. Repeat CT scan in three months.
- B. Refer to interventional radiology for a biopsy of the lesion.
- C. Order a dynamic MRI scan.
- D. Treat the lesion with radiofrequency ablation.
- E. Proceed to orthotopic liver transplantation.

Answer: C

This patient presents with a lesion suspicious for hepatocellular carcinoma. In cirrhotic patients, nodules more than 2 cm in diameter can be diagnosed for HCC based on typical features on one imaging technique. In case of uncertainty or atypical radiological findings on dual imaging with both CT and MRI, diagnosis should be confirmed by biopsy. For the nonhistologic diagnosis of hepatocellular carcinoma, venous washout should be present either on dynamic CT or MRI. Therefore, abdominal dynamic MRI is a reasonable next step for the diagnosis of HCC in this patient with high suspicion for underlying HCC. Short-term follow-up is not appropriate given the high pre-test probability for HCC in this patient with multiple risk factors for underlying HCC including hepatitis B, cirrhosis, and elevated alpha-fetoprotein. A definite diagnosis should be made before treatment with radiofrequency ablation or liver transplantation.

References:

Bruix J, Sherman M. AASLD Practice Guideline: Management of Hepatocellular Carcinoma: An Update. *Hepatology* Vol. 53, No. 3, 2011.

EASL–EORTC Clinical Practice Guidelines: Management of hepatocellular carcinoma. *Journal of Hepatology* 2012 vol. 56 908–943