

Part 1

History:

A 66 year-old male patient with a background history of hypertension, and no history of liver disease, was found to have mildly deranged liver function tests as part of his annual hypertension review. Clinical examination was unremarkable, the patient was afebrile (T 36.8 °C), and other vital observations were within normal limits. Full blood count, urea and creatinine were within normal limits, but liver function tests revealed a mildly elevated ALT of 61iu/L (0-40), and GGT of 52iu/L (0-50). The patient subsequently underwent an US examination of the abdomen, which identified a large liver lesion in an otherwise normal liver with no imaging features of cirrhosis. MRI of the liver was performed for further characterisation (Fig 1). The patient subsequently underwent resection of the large mass, surgical pathology diagnosis withheld. Surveillance MRI was performed 4 months post-surgery (Fig 2). Taking the findings of the 4-month post-resection MRI into account, what specifically is the most likely diagnosis?

Figure listing:

Fig 1 – Selected axial images from a contrast-enhanced MRI liver performed with Gd-EOB-DTPA (Gadoxetic Acid) prior to liver resection. Sequence to be read left to right. (A) T2, T1 in, and opposed phase imaging; (B) T1 post contrast imaging performed in the late arterial, portal venous, and hepatobiliary phase.

Fig 2 - Selected axial images from a contrast-enhanced MRI liver performed with Gd-EOB-DTPA (Gadoxetic Acid) 4 months after liver resection. Sequences to be read left to right. (A) T2, T1 in, and

opposed phase imaging; (B) T1 post contrast imaging performed in the late arterial, and hepatobiliary phase (left to right).