

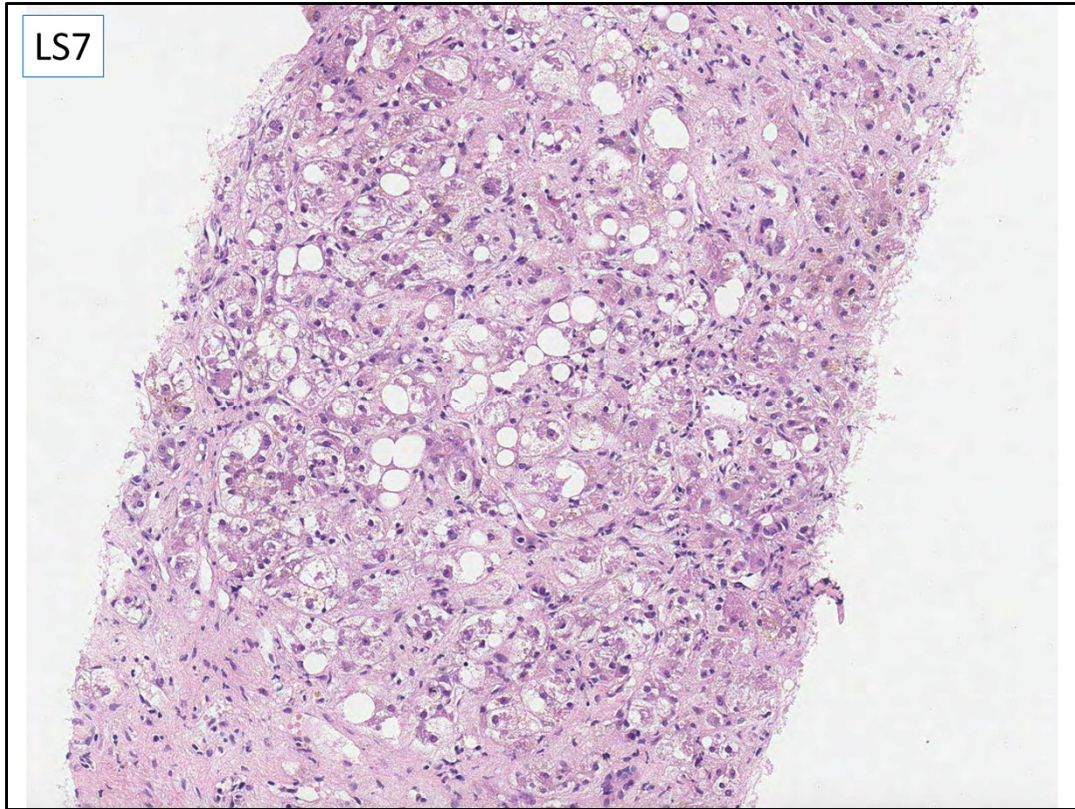
**Case LS7 25 M**

patient with subacute hepatic failure

Also van Gieson, DPAS, reticulin

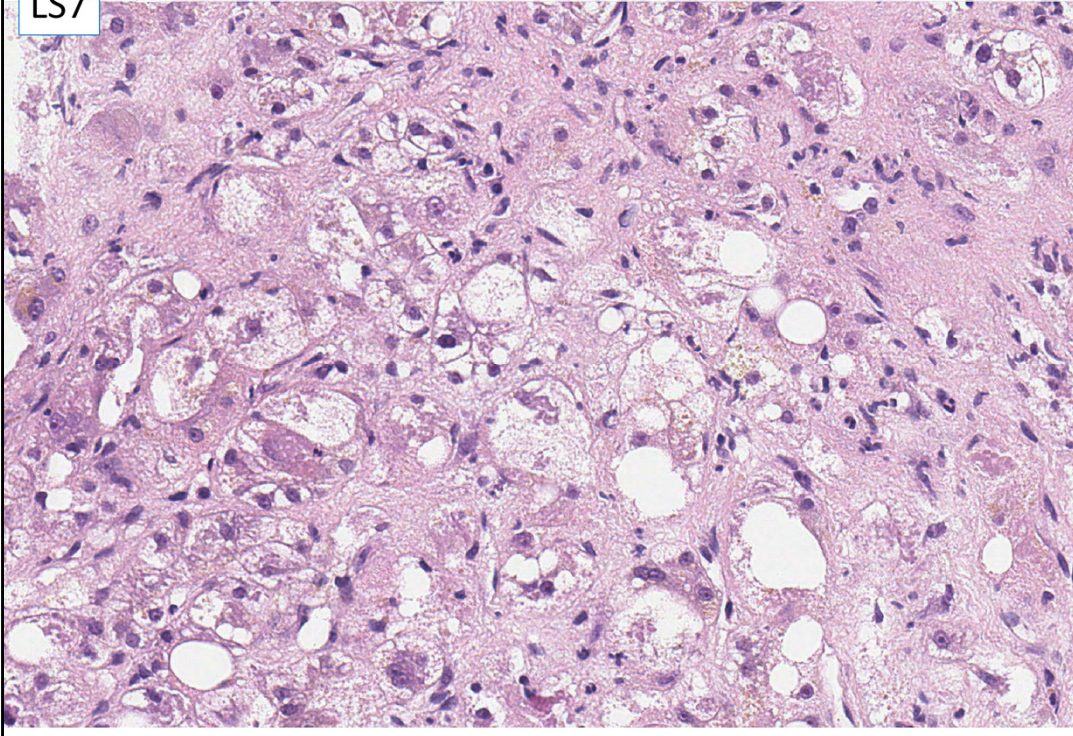


This is a transjugular biopsy – resulting in several, narrower cores.

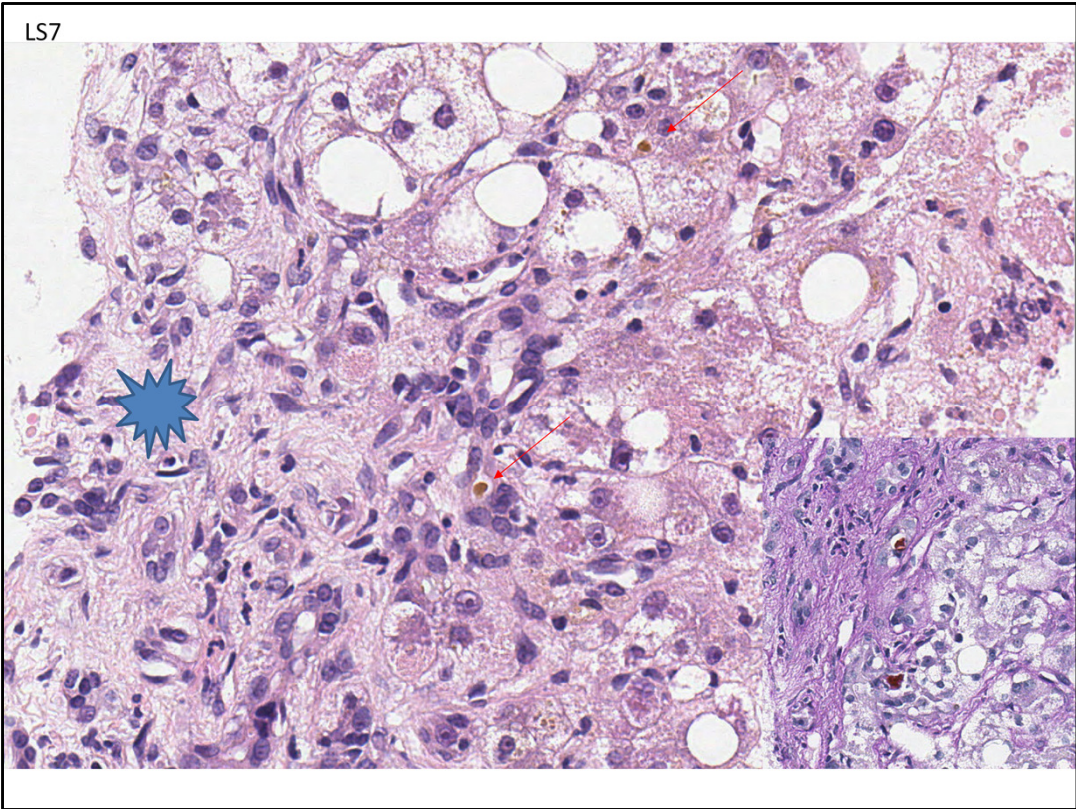


There is macrovesicular steatosis, together with marked irregularity of hepatocytes, lobular inflammatory cell infiltrate and pericellular fibrosis.

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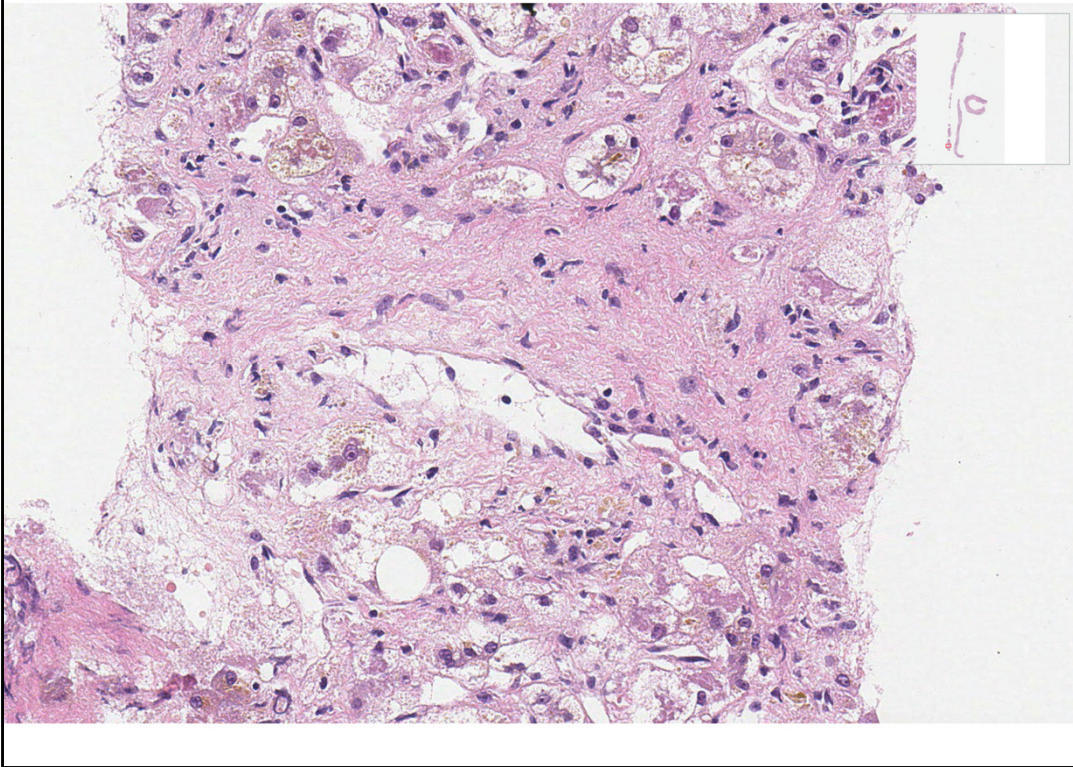


At high magnification – many of the hepatocytes are ballooned and contain Mallory Denk bodies.

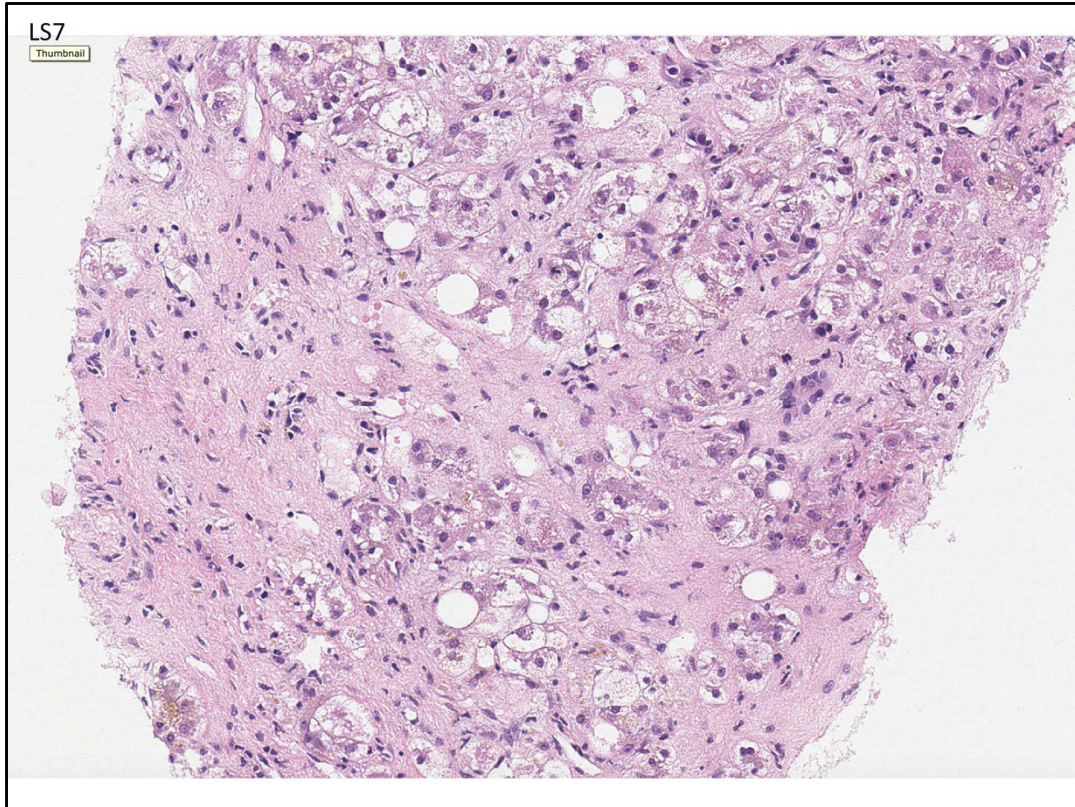


At the edge of a portal area (star) there is a bile plug in a ductule (arrow), better seen on the PASD stain (inset). Bile plugs are also present in some canaliculi.

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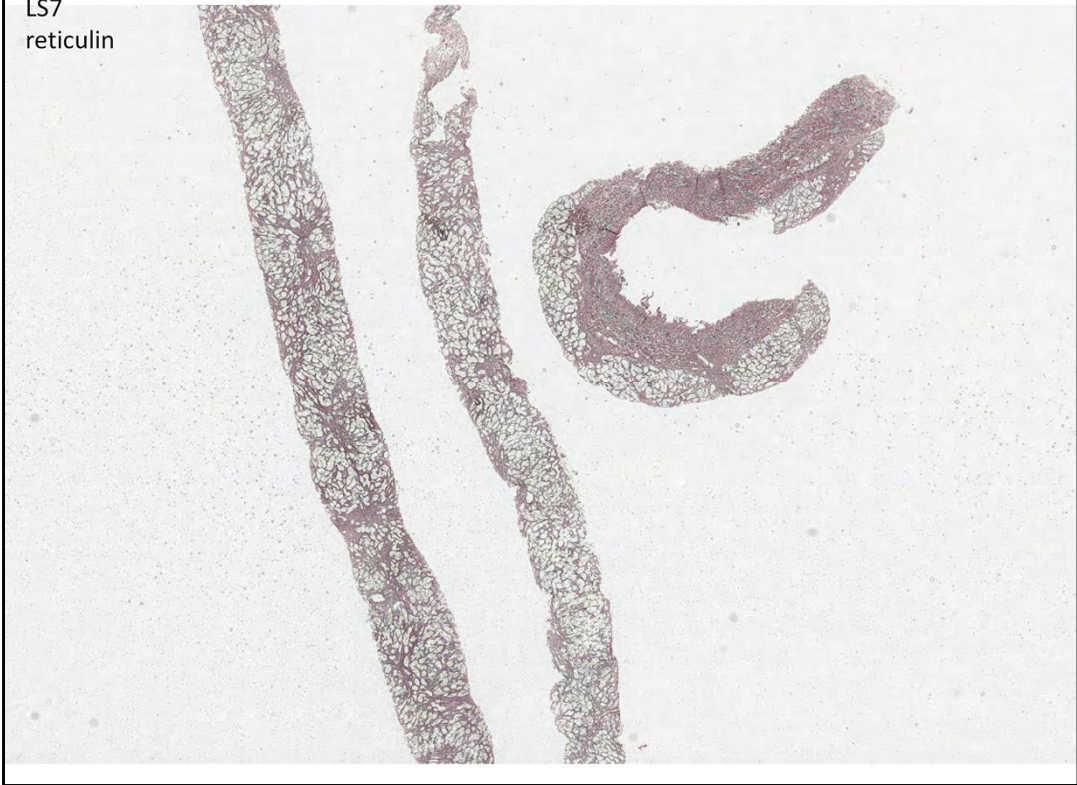


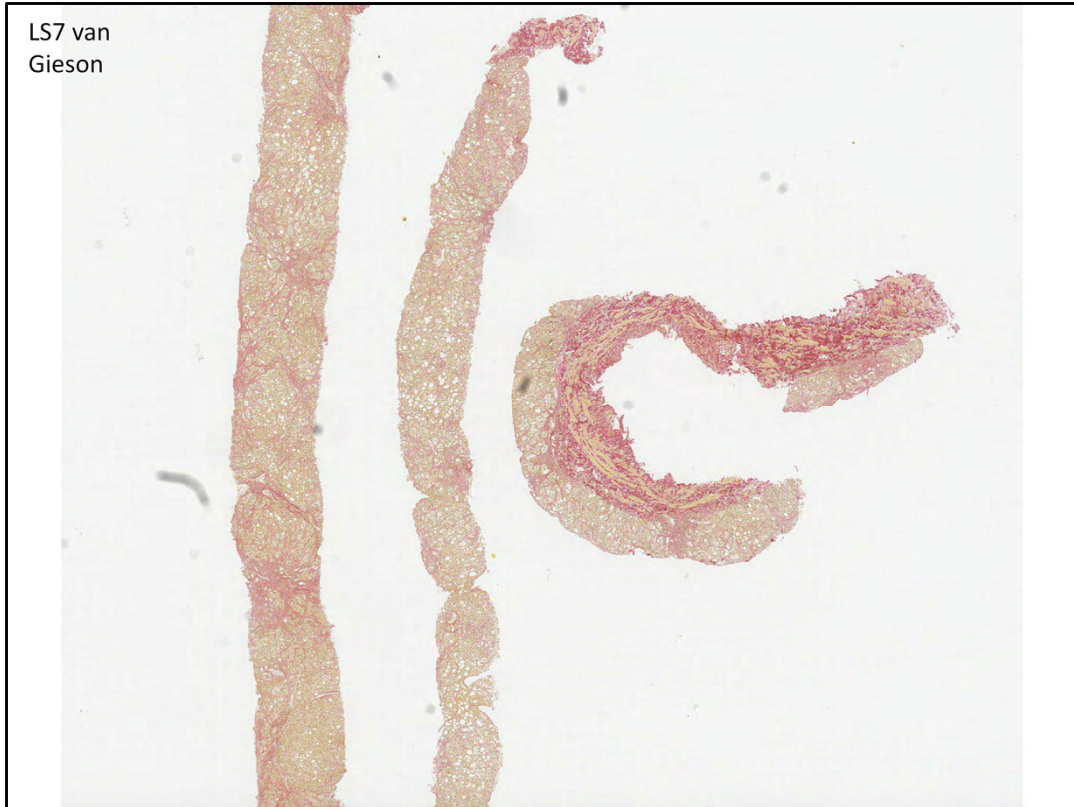
A thickened hepatic venule, with adjacent hepatocytes showing ballooning, bilirubinostasis, and marked pericellular fibrosis.



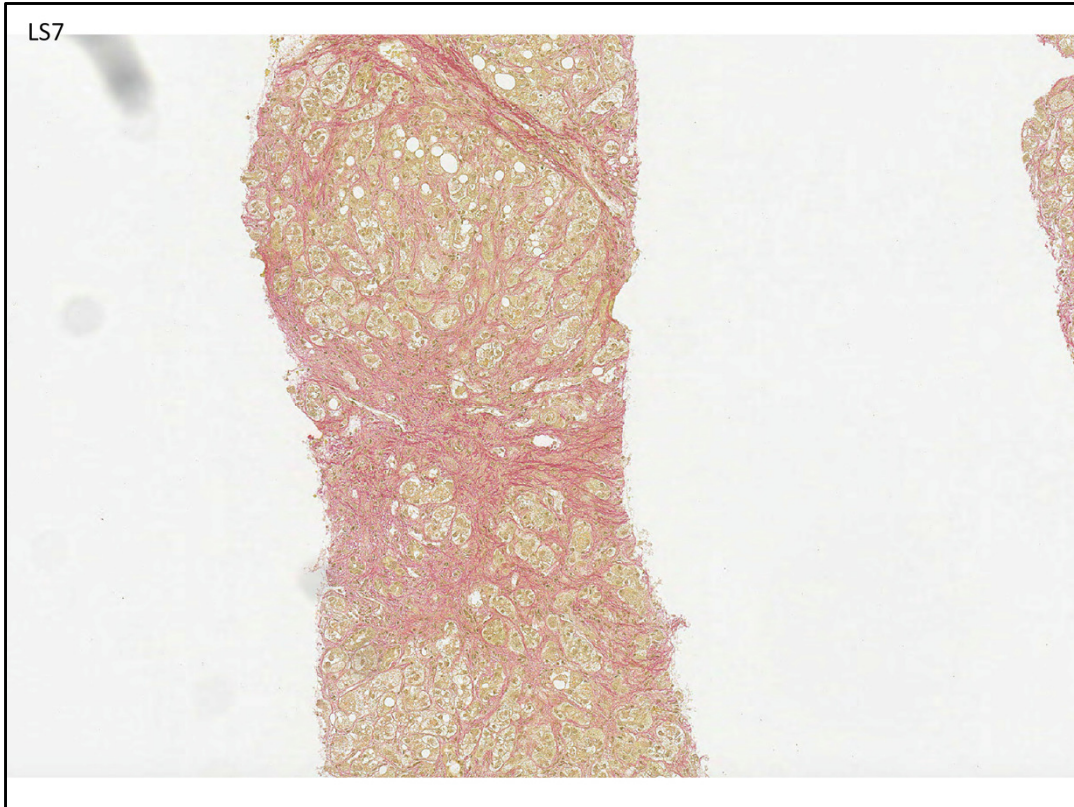
The features are uniform along the biopsy core – rather than areas of hepatocyte ballooning with associated inflammation and elsewhere regenerative nodules of more normal-appearing hepatocytes.

LS7  
reticulin





Low mag – there is part of the hepatic vein wall in the curved fragment on the right – this is from longitudinal scraping down the hepatic vein wall when the transjugular biopsy is taken. Otherwise the fibrosis is diffuse in the lobules, without forming septa surrounding regenerative nodules.



Dense pericellular fibrosis is well seen at higher power, while the original hepatic vein branch in this area is obscured by the fibrosis.

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B	Alcoholic foamy degeneration
C	Steatohepatitis, suggests alcohol related
D	Steatohepatitis, probably NASH
E	Subacute hepatitis with collapse

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#### Correct response: C

The biopsy shows the features diagnostic of steatohepatitis – hepatocyte ballooning with Mallory Denk bodies, together with inflammatory cell infiltrate and steatosis. In this example, the severity of the steatohepatitis, the dense pericellular fibrosis with obliteration of hepatic venules ('central sclerosing hyaline necrosis') and the canalicular cholestasis are the features which are very characteristic of alcohol related steatohepatitis. The histology report should direct the clinicians to enquire about alcohol intake if this is not in the initial clinical information. This histology is what is typically seen in a patient with the clinical features of 'acute alcoholic hepatitis'.

#### Comments on other options:

A. Fatty change and fibrosis – while both these features are present, they do not describe the full histological picture, either its severity or likely clinical cause.

B. Alcoholic foamy degeneration – refers to a characteristic morphology of microvesicular steatosis – tiny fat droplets which do not displace the nucleus and may be undiscernible without a fat stain (needs frozen section specimen). This is often seen in patches with features of steatohepatitis elsewhere in the biopsy – in which case is an indication of alcoholic rather than non-alcoholic cause.

D. Steatohepatitis, probably NASH. If a biopsy shows steatosis with hepatocyte ballooning and inflammatory infiltrate, it fulfils the criteria for steatohepatitis, which may be due to alcohol related or non-alcoholic causes. In most biopsies from patients with steatohepatitis, taken in the course of investigations for abnormal liver enzymes

(rather than subacute hepatic failure) it is not possible to distinguish the aetiology from the histological features.

E. Subacute hepatitis with collapse – areas of confluent necrosis with a few surviving swollen hepatocytes can look quite similar to the picture here – and may include bilirubinostasis, and also steatosis if that was present in the liver before the hepatitis. The differences include the variation along the biopsy – in subacute hepatitis, areas of confluent necrosis are typically areas of complete loss of hepatocytes with portal areas in close proximity, separated by areas of nodular hepatocyte regeneration which do not show ballooning or inflammation. In these nodular areas, cell plates are widened as a result of regeneration and hepatocytes are near-normal.