

Liver histopathology EQA Scheme

Circulation LQ Autumn 2017

UK Liver Pathology Group

Constitution September 2016

Committee – formed from interested members of the EQA scheme

Full members – members of the EQA scheme

Also associate, trainee and overseas members.

Full committee met four times in 2017.

Subcommittees for education, quality, research.

Interested? – sub-committees formed from those expressing an interest.

Chair – Stefan Hubscher. Secretary – Judy Wyatt.



UK Liver Pathology Group

The UK Liver Pathology Group (UKLPG) was formed in 2016 with the purpose:

To promote excellence in liver histopathology services in the UK and Ireland, across all levels of specialisation, through professional collaboration in education, quality assurance and research.



- [Future CPD activities](#) - including links for registration
- [Previous CPD archive](#) (activities from 2006 with CPD resources available)
 - Includes an original series of seminars presented by the late Professor Peter Scheuer
 - Lectures for trainee pathologists and students
 - Liver lectures from other UK CPD meetings
- [UK Liver Pathology EQA Scheme](#)
- [UKLPG - background and UKLPG committee meetings](#)
- [UKLPG - membership + how to join UKLPG](#)
- [Subcommittees](#)
- [Reference images for liver biopsy reporting](#)
- [Liver transplant pathology](#)
- [Paediatric liver pathology section](#)
- [Other professional documents](#)
- [Links to other sites](#)

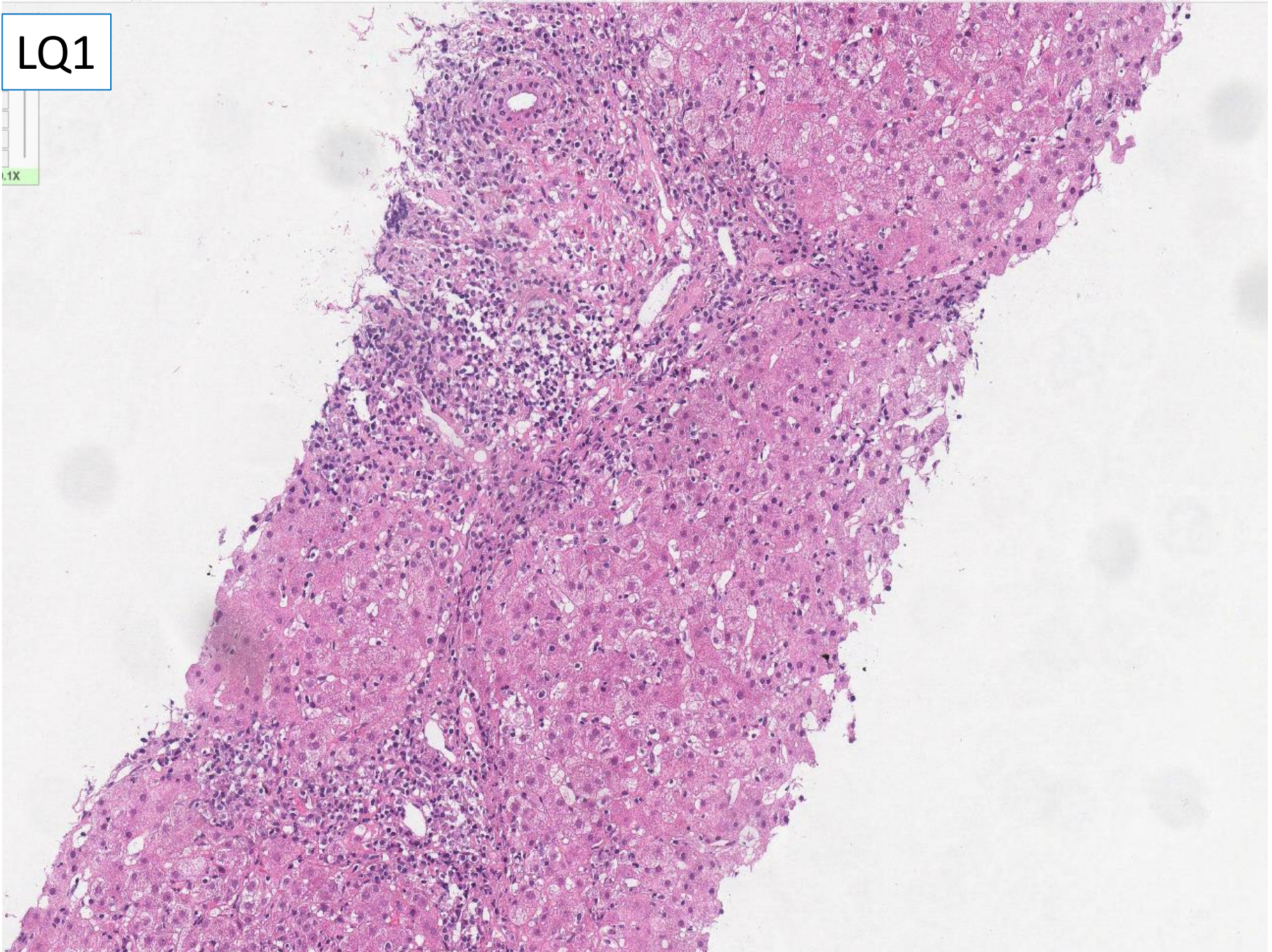
Case LQ1 60F

ALT 1102; Gamma GT 84; Raised IgG. Alk phosphatase normal.
ANA positive 1:80; Anti Smooth muscle AB positive. AMA negative. IgM normal.
History breast carcinoma

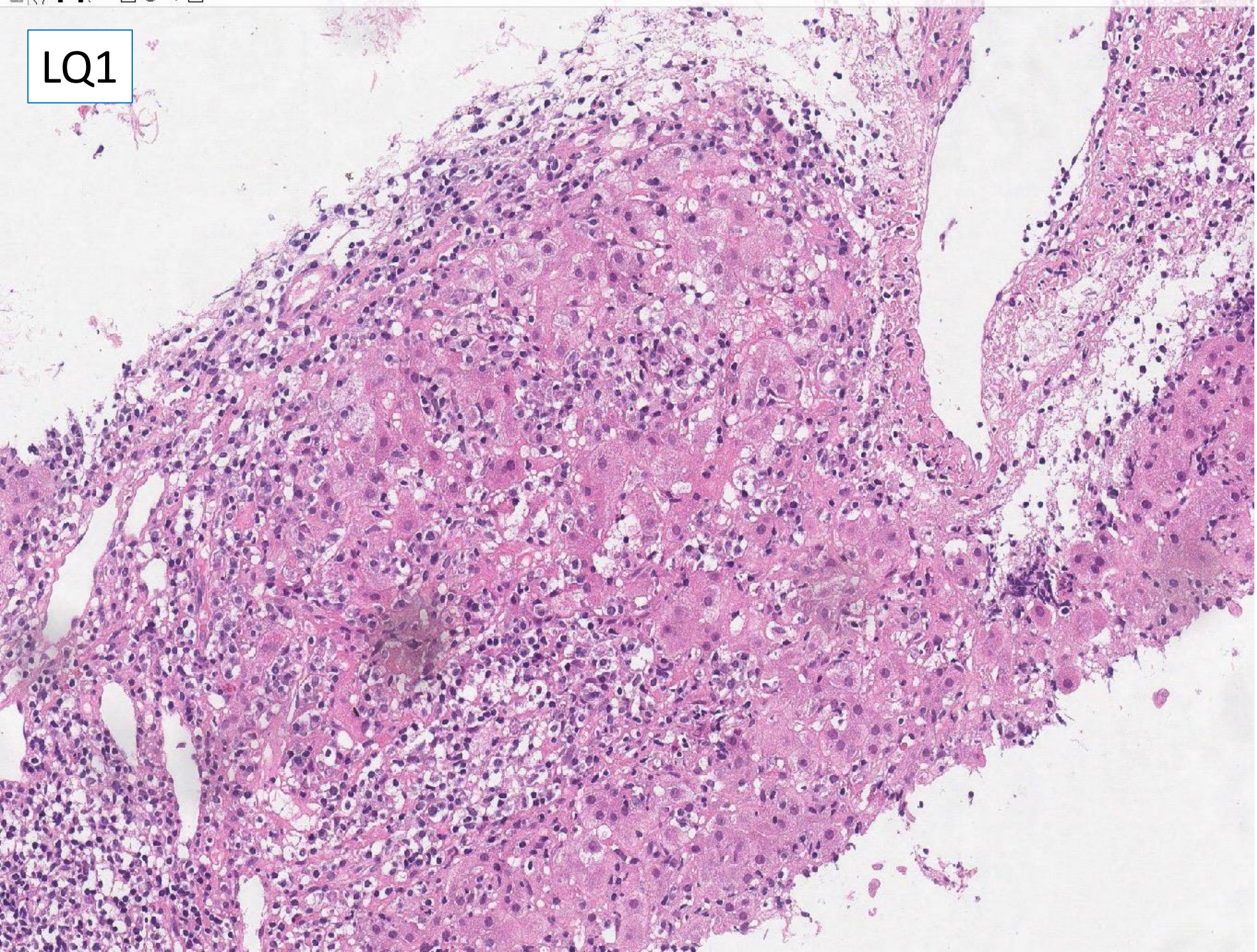


LQ1

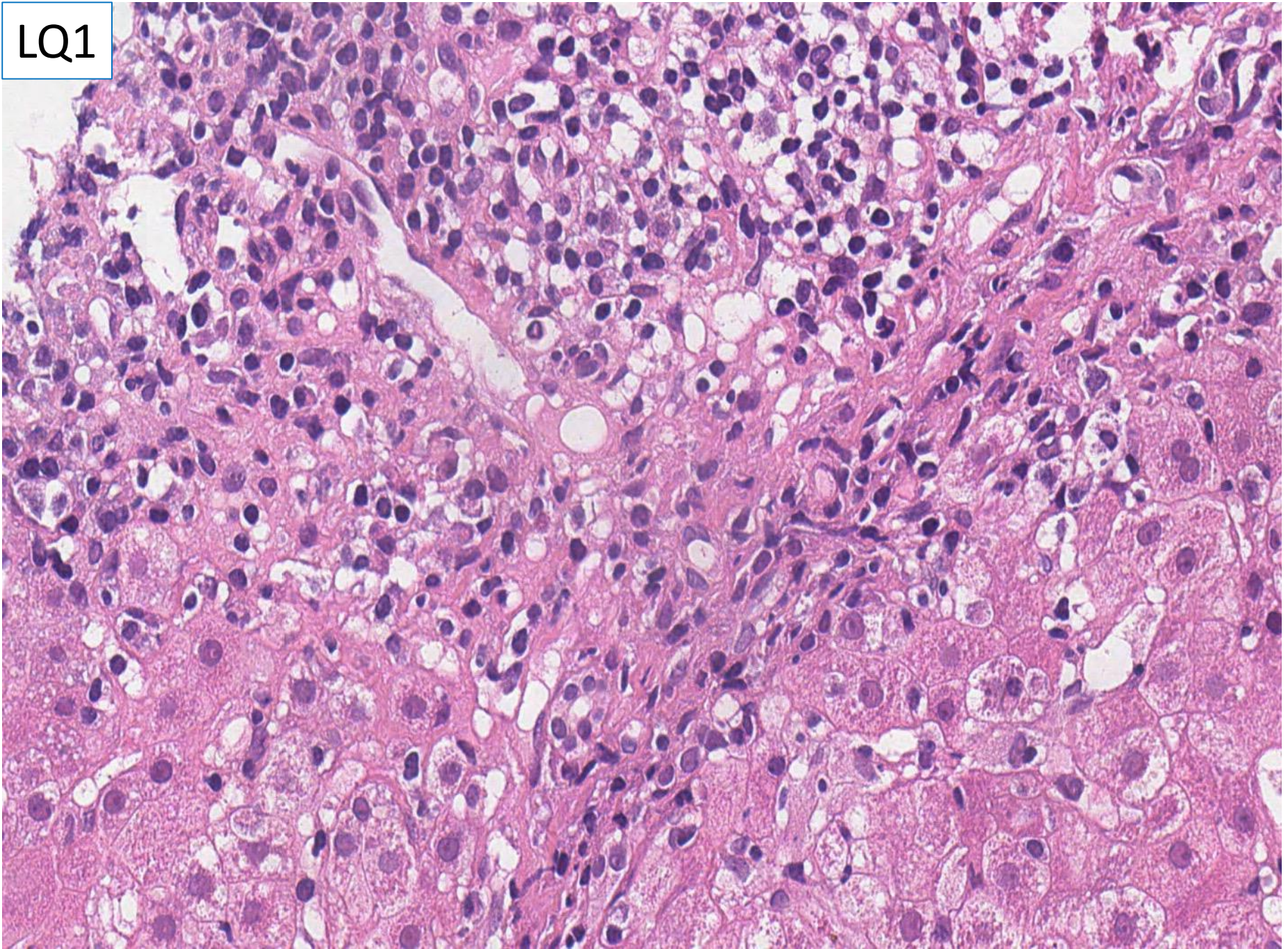
1X



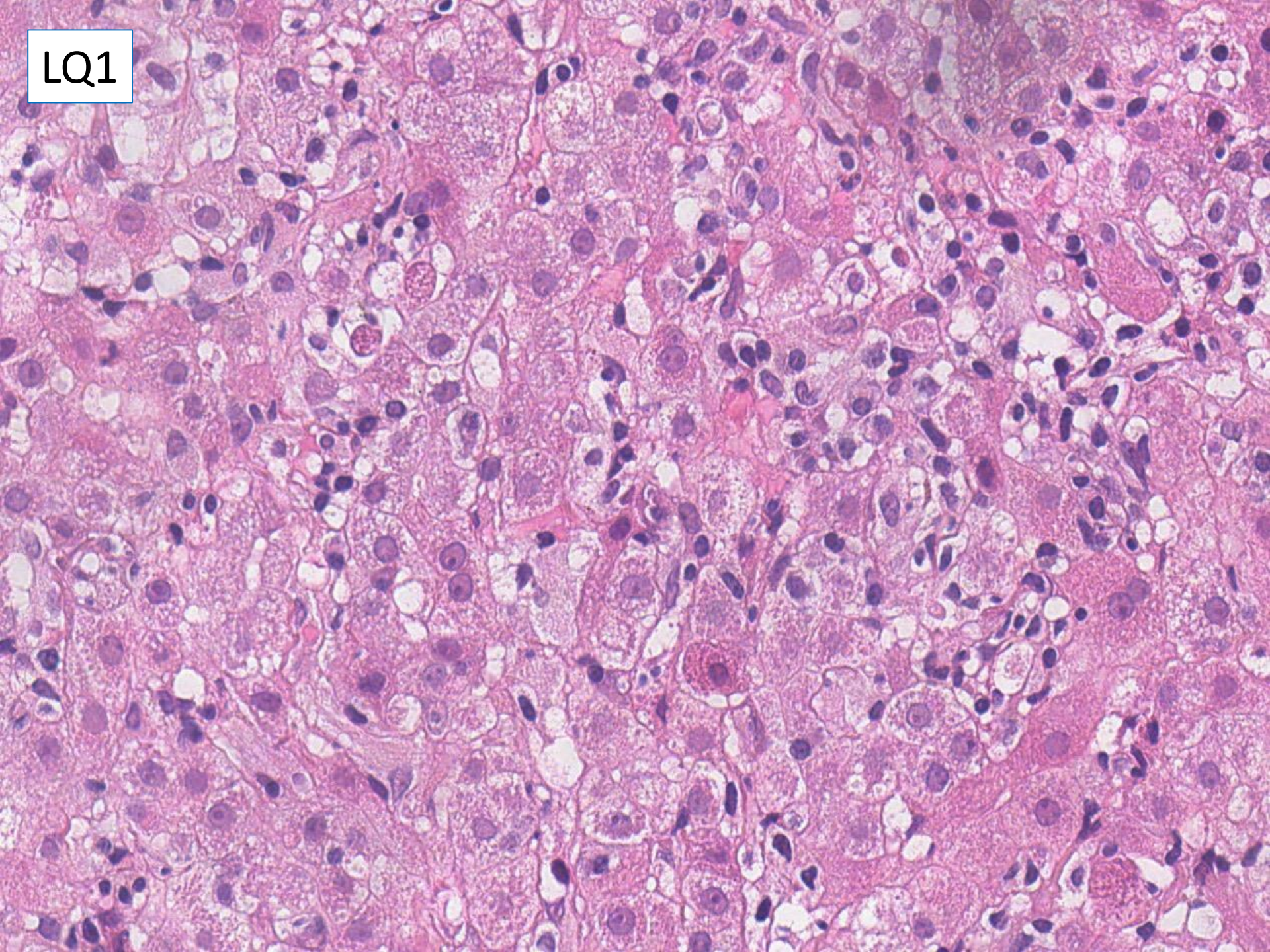
LQ1



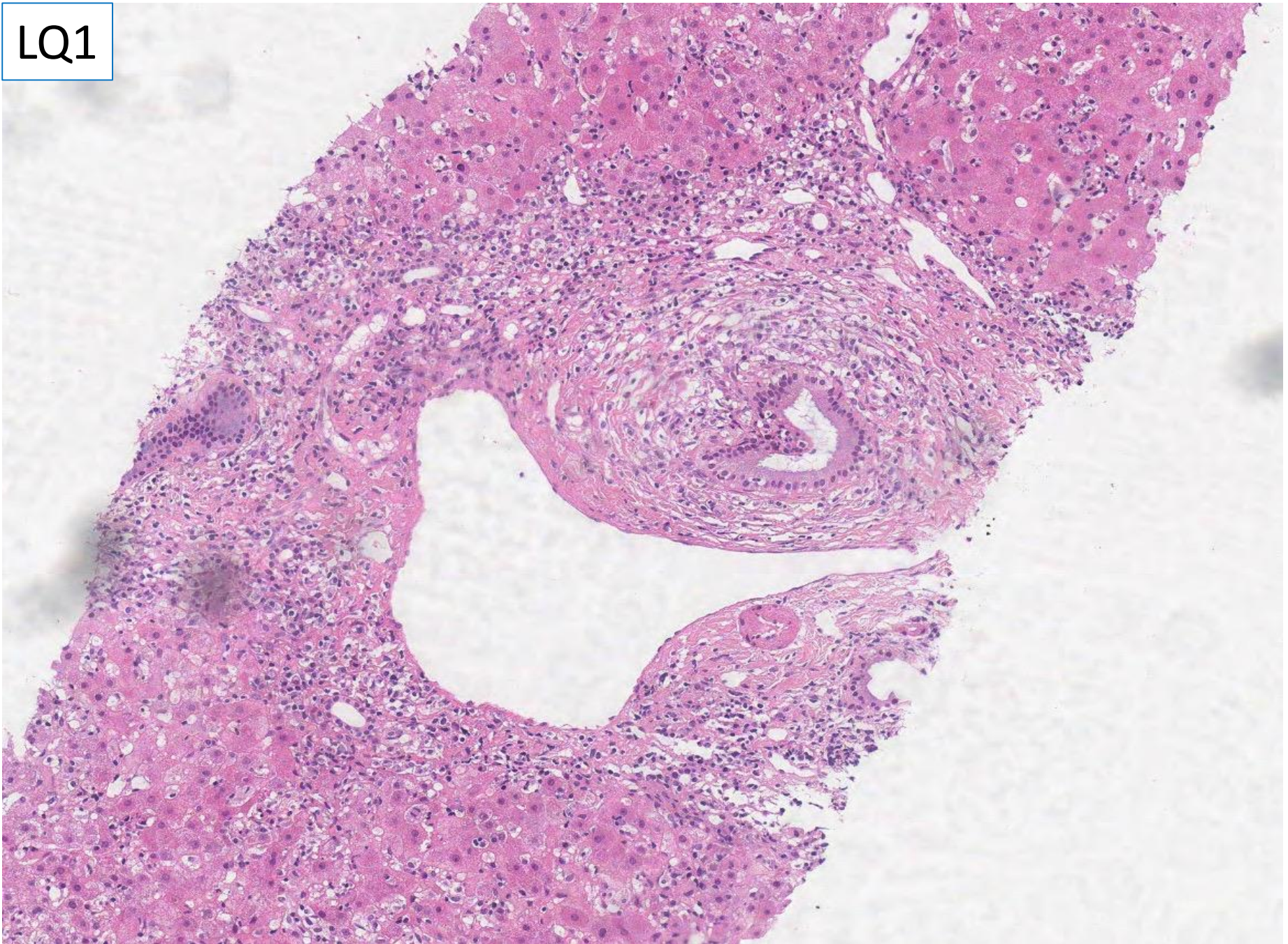
LQ1



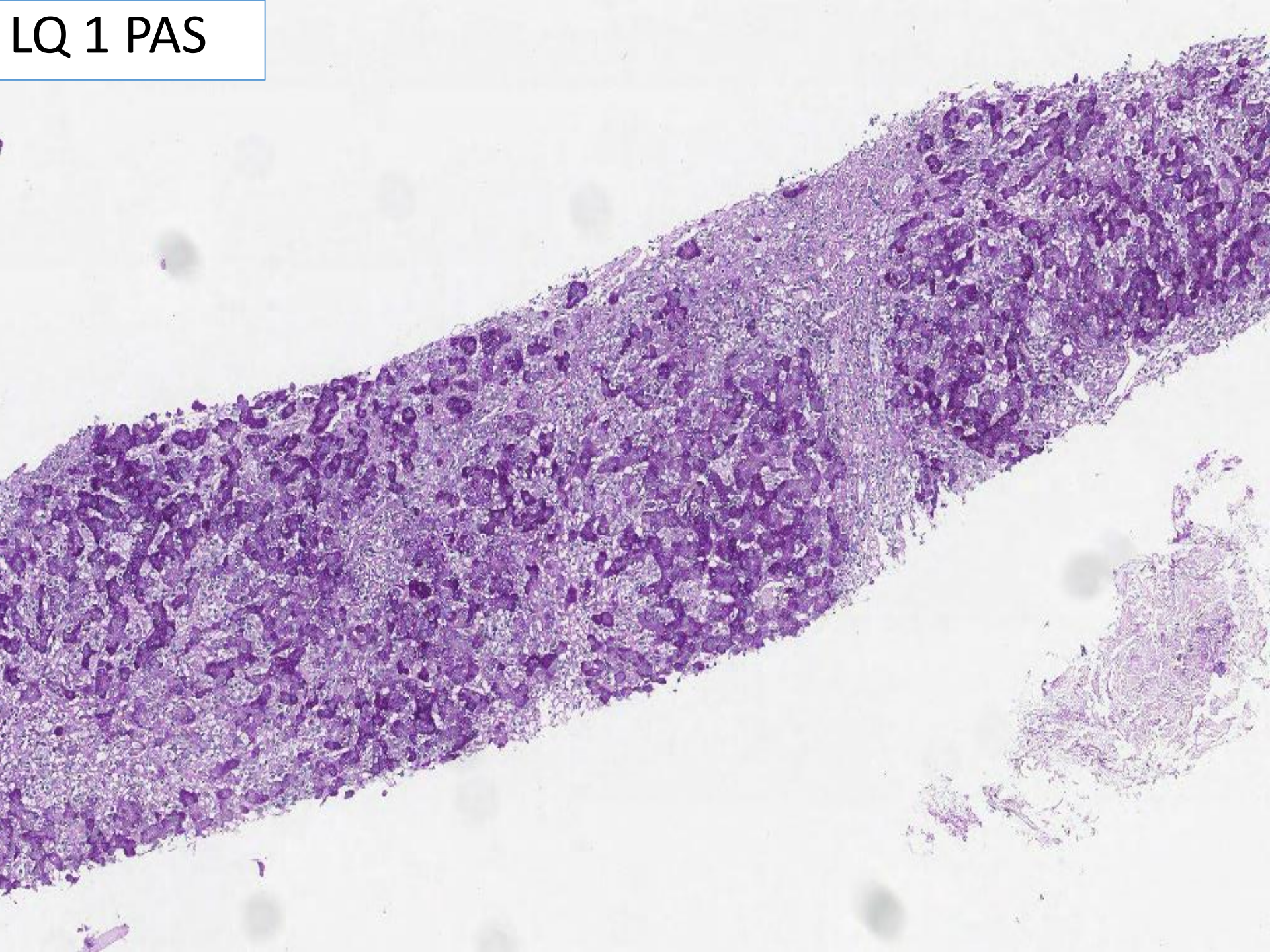
LQ1



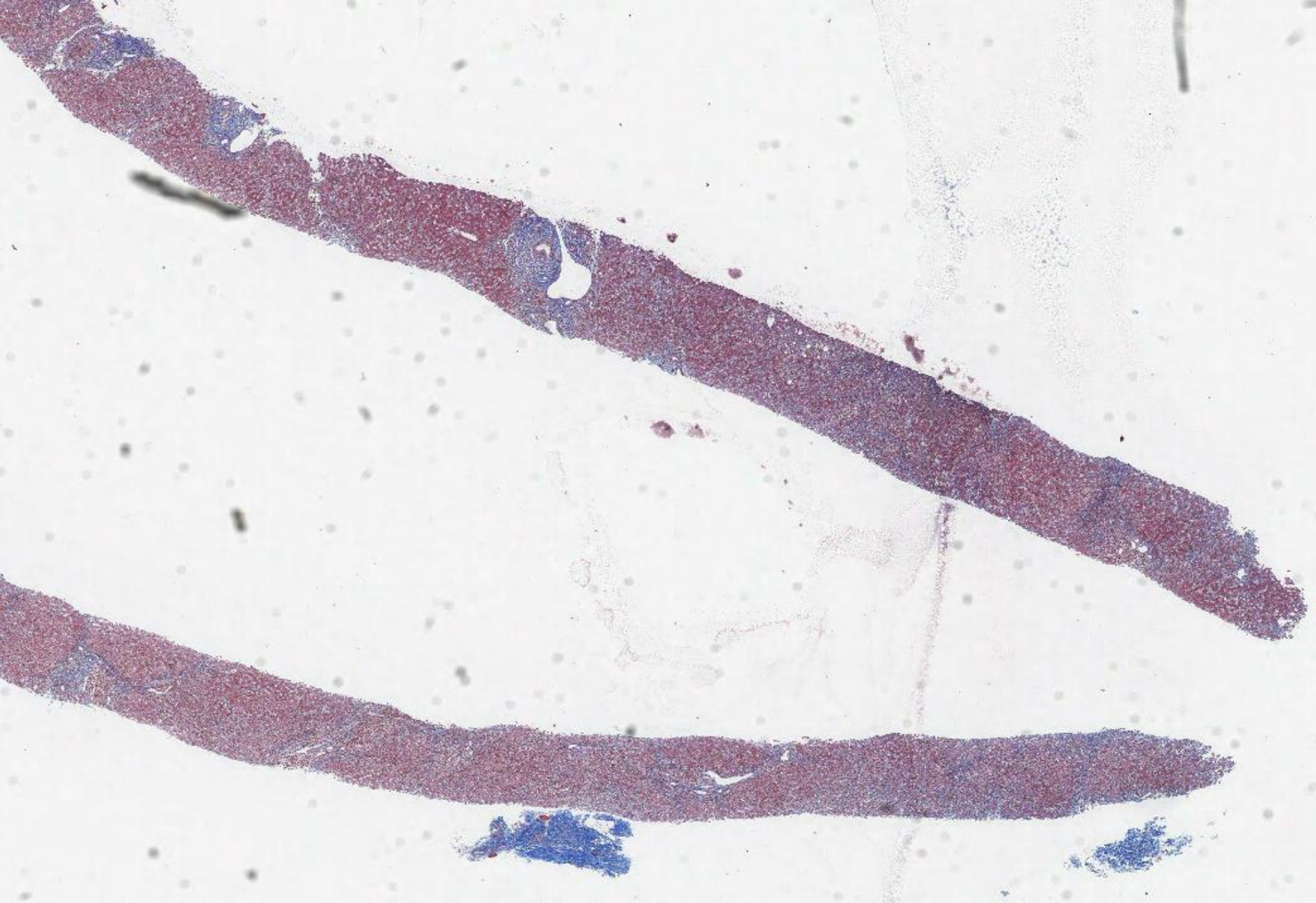
LQ1



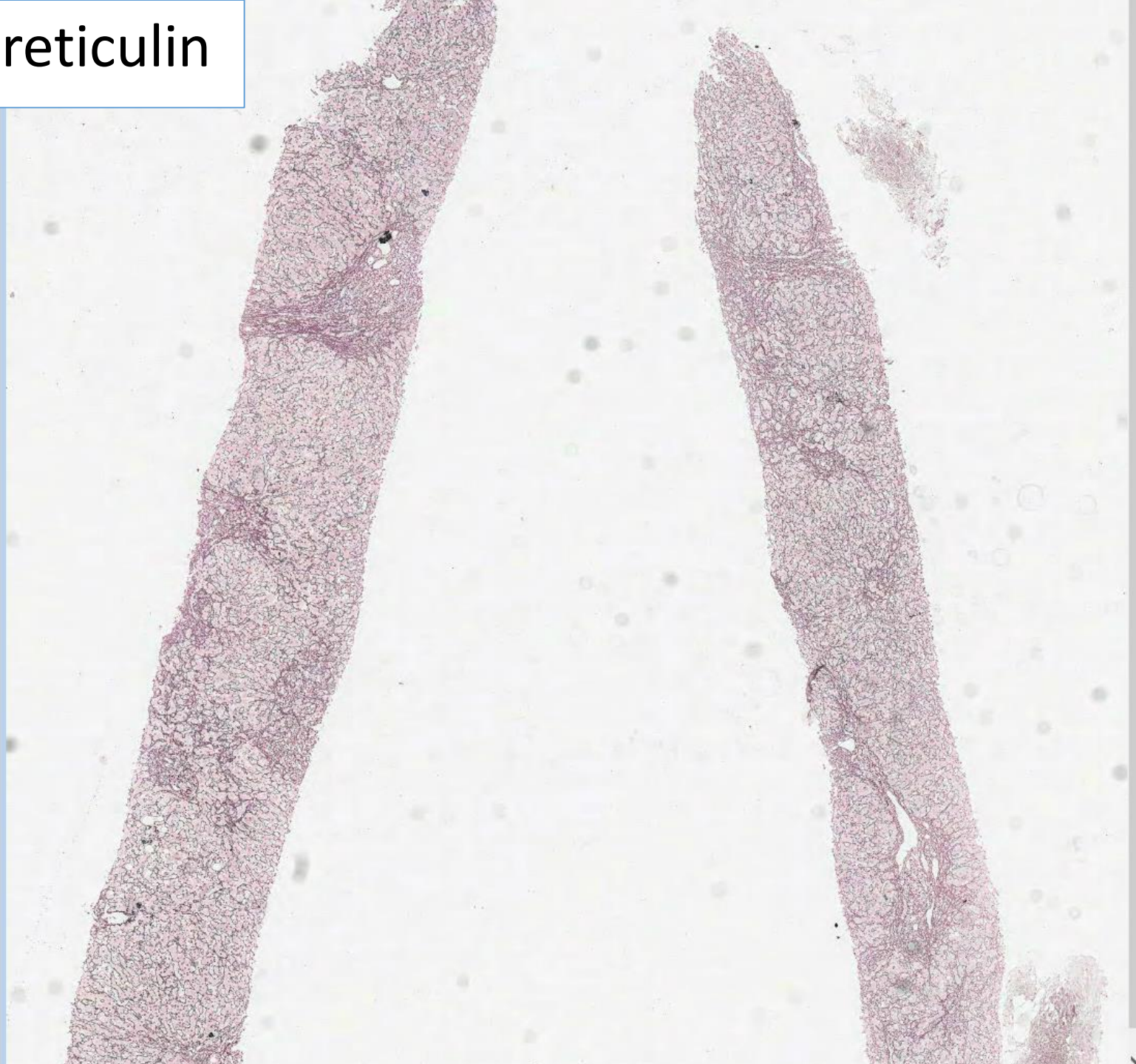
LQ 1 PAS



LQ 1 Masson trichrome



LQ 1 reticulin



Case LQ1 60F

ALT 1102; Gamma GT 84; Raised IgG. Alk phosphatase normal.
 ANA positive 1:80; Anti Smooth muscle AB positive. AMA negative. IgM normal.
 History breast carcinoma

Acute hepatitis c/w autoimmune hepatitis – <i>with any comment indicating necrosis/fibrosis/cirrhosis</i>	74
Of which: Confluent necrosis with bridging necrosis/collapse	32
No fibrosis, but bridging necrosis/collapse	9
<i>States there is no fibrosis, and doesn't mention confluent/bridging necrosis</i>	2
Fibrosis, NOS	18
Bridging fibrosis	31
<i>Probable/definite cirrhosis</i>	4
Of the above: Both acute necrosis/collapse and fibrosis	16
<i>Acute hepatitis c/w autoimmune hepatitis – with no comment on fibrosis/bridging necrosis</i>	9
Several commented on periductal fibrosis, ? PSC etc – not separately counted.	
<i>Acute hepatitis with possible malignant infiltration</i>	4
<i>Primary biliary cholangitis, cirrhosis</i>	2
<i>Hepatitis viral infection/chronic active hepatitis, evolving cirrhosis (autoimmune not mentioned)</i>	1

Consensus diagnosis: acute hepatitis consistent with autoimmune hepatitis.

Recognition that there is bridging necrosis and/or fibrosis. 74 responses included an opinion about fibrosis or acute hepatitis with bridging necrosis, with a majority view favouring at least some component of fibrosis (53/83).

Several commented in some way on periductal fibrosis ? PSC, need for additional stains, but we have not separately recorded those.

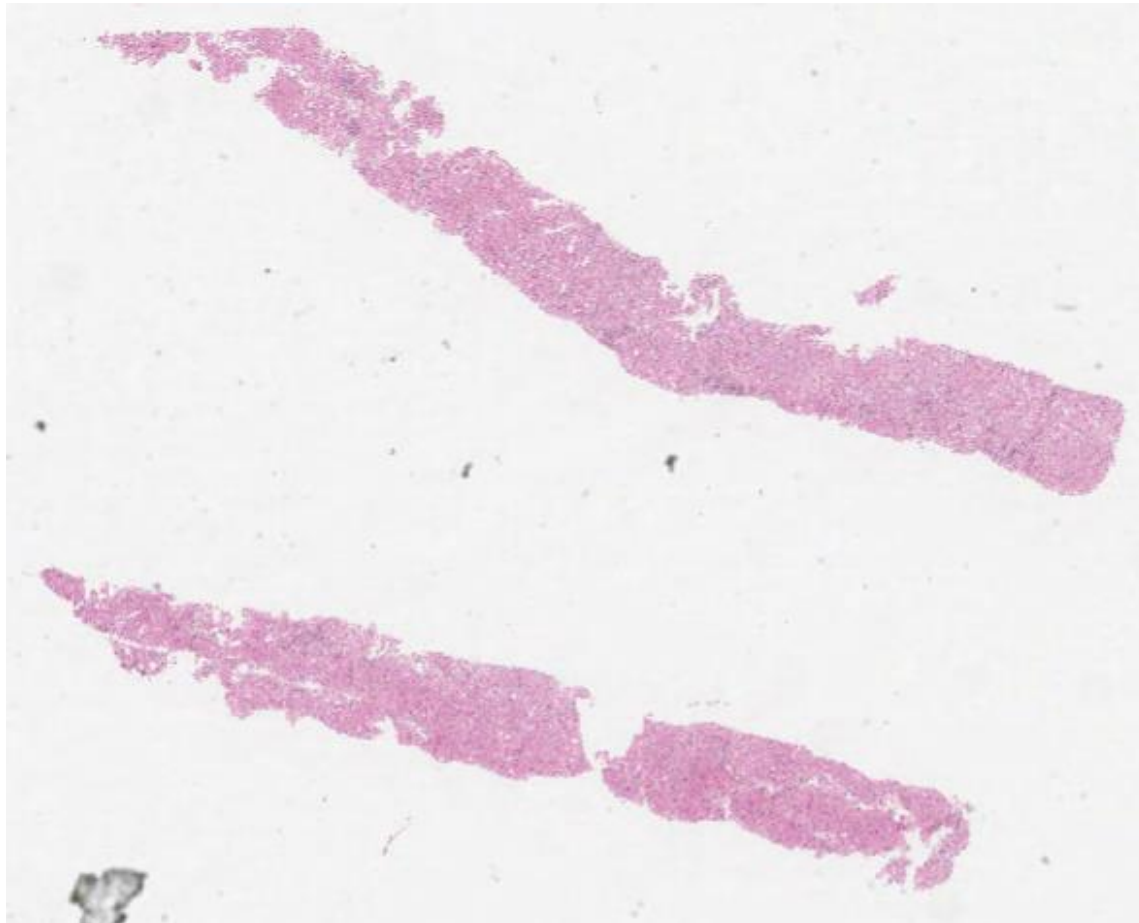
Case LQ1 60F

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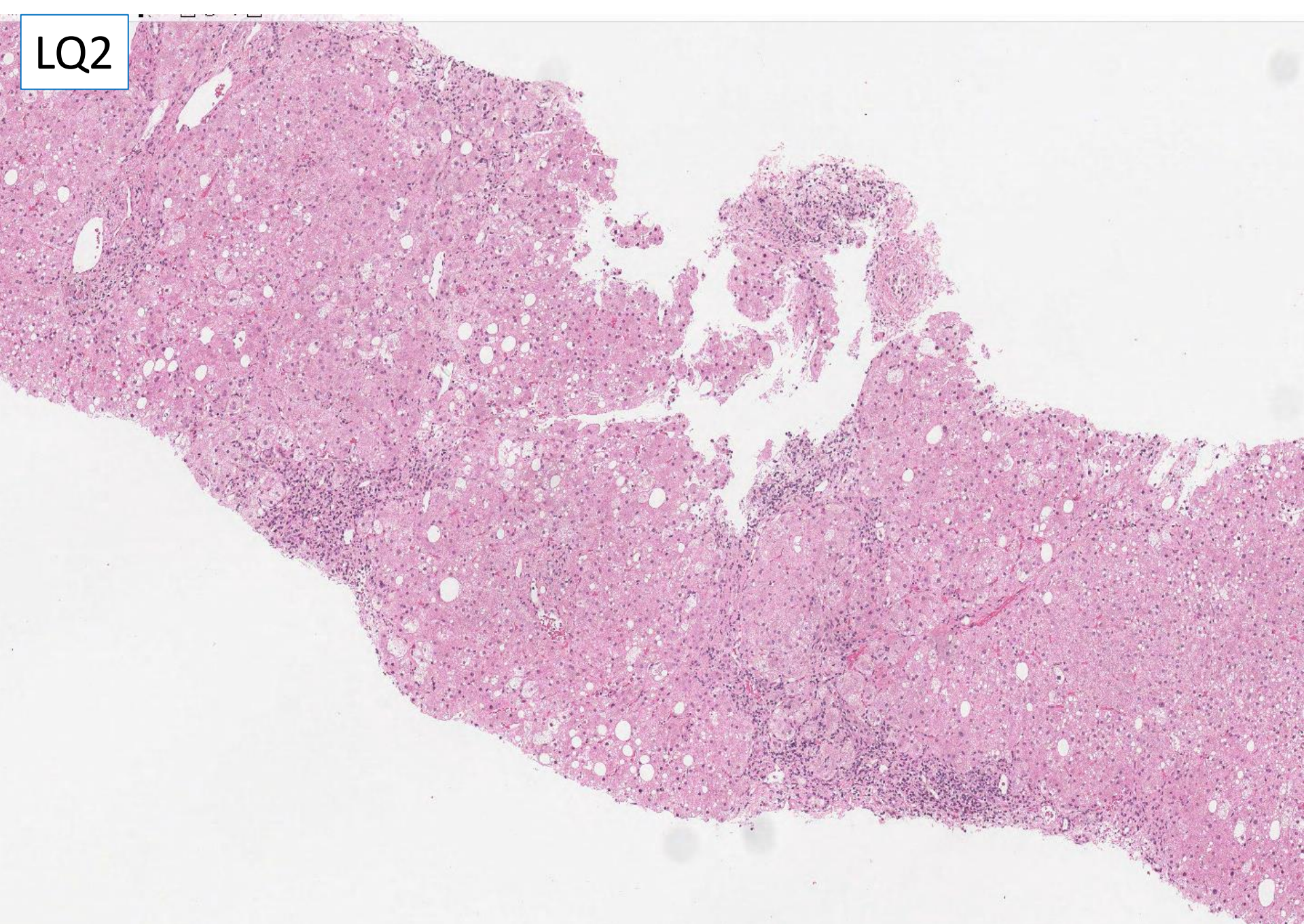
Acute hepatitis c/w autoimmune hepatitis – <i>with any comment indicating necrosis/fibrosis/cirrhosis</i>	74	From survey		
Of which: Confluent necrosis with bridging necrosis/collapse	32	10	5	0
No fibrosis, but bridging necrosis/collapse	9			
States there is no fibrosis, and doesn't mention confluent/bridging necrosis	2			
Fibrosis, NOS	18			
Bridging fibrosis	31			
Probable/definite cirrhosis	4	1	3	2
Of the above: Both acute necrosis/collapse and fibrosis	16			
Acute hepatitis c/w autoimmune hepatitis – <i>with no comment on fibrosis/bridging necrosis</i>	9			
Several commented on periductal fibrosis, ? PSC etc – not separately counted.				
Acute hepatitis with possible malignant infiltration	4	0	3	3
Primary biliary cholangitis, cirrhosis	2			
Hepatitis viral infection/chronic active hepatitis, evolving cirrhosis (autoimmune not mentioned)	1			

Case LQ2 63F

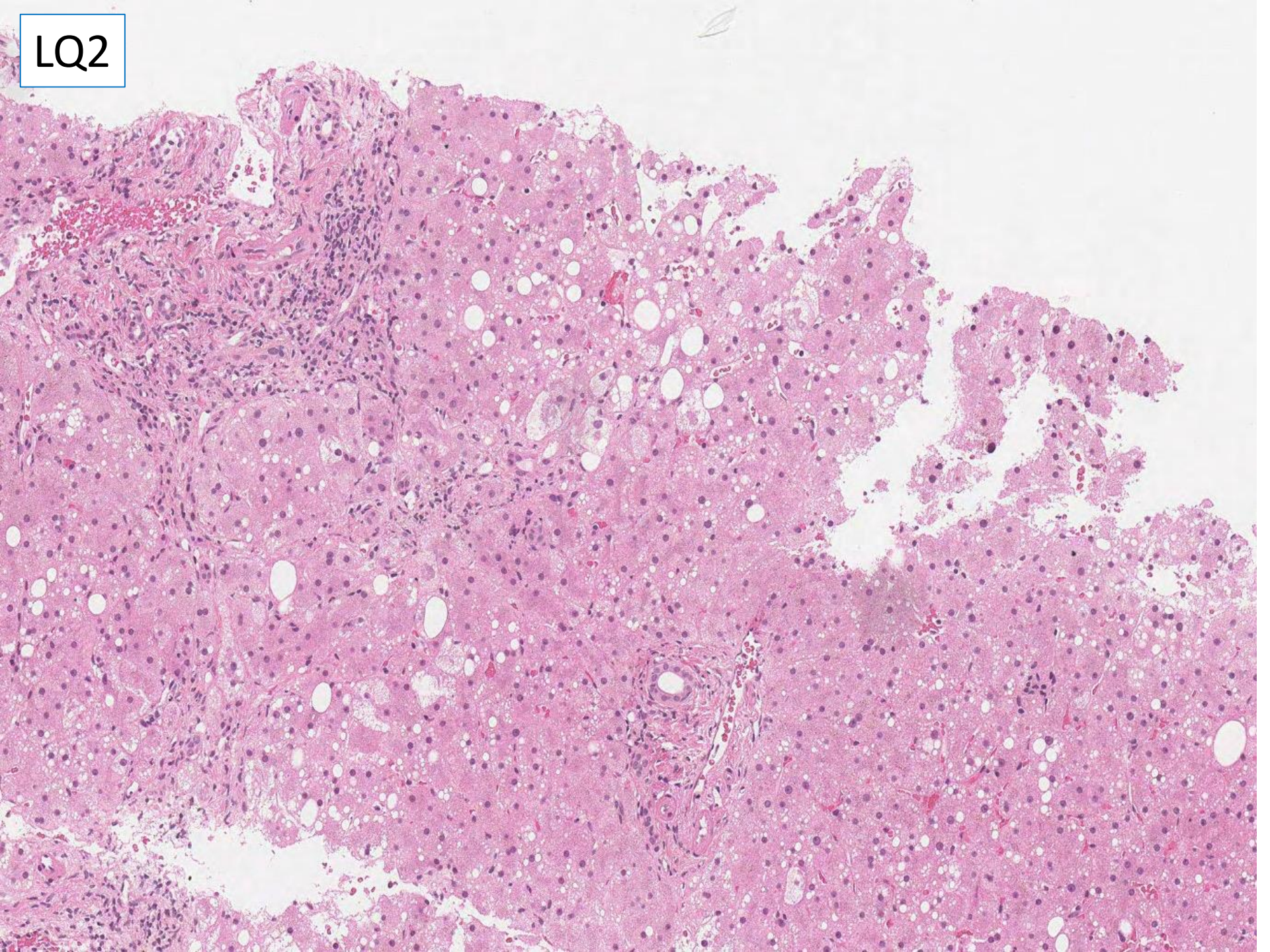
Chronic pancreatic insufficiency. Type 2 diabetic on insulin,
Deranged LFTs, fatty liver on ultrasound, elevated fibroscan



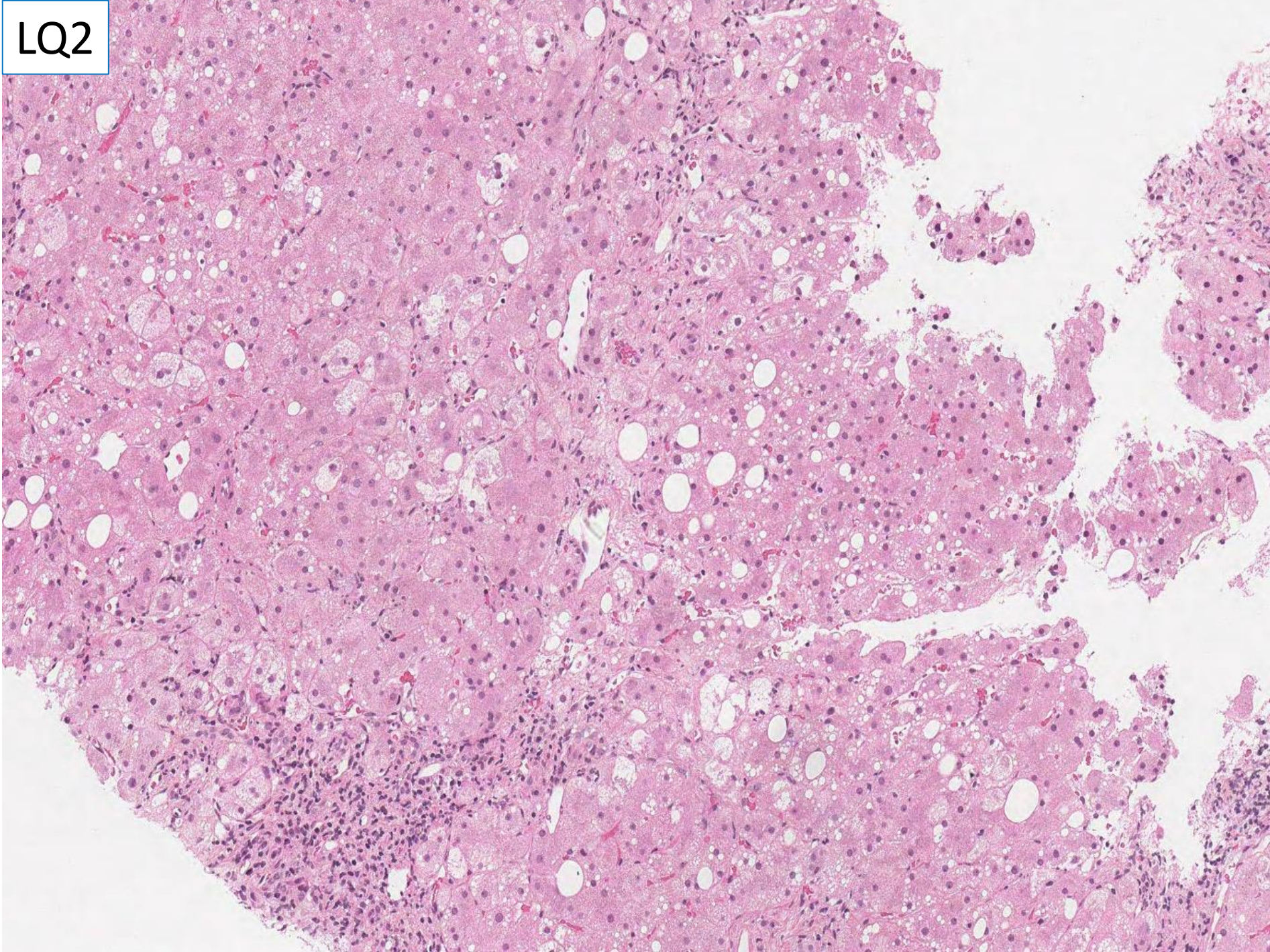
LQ2



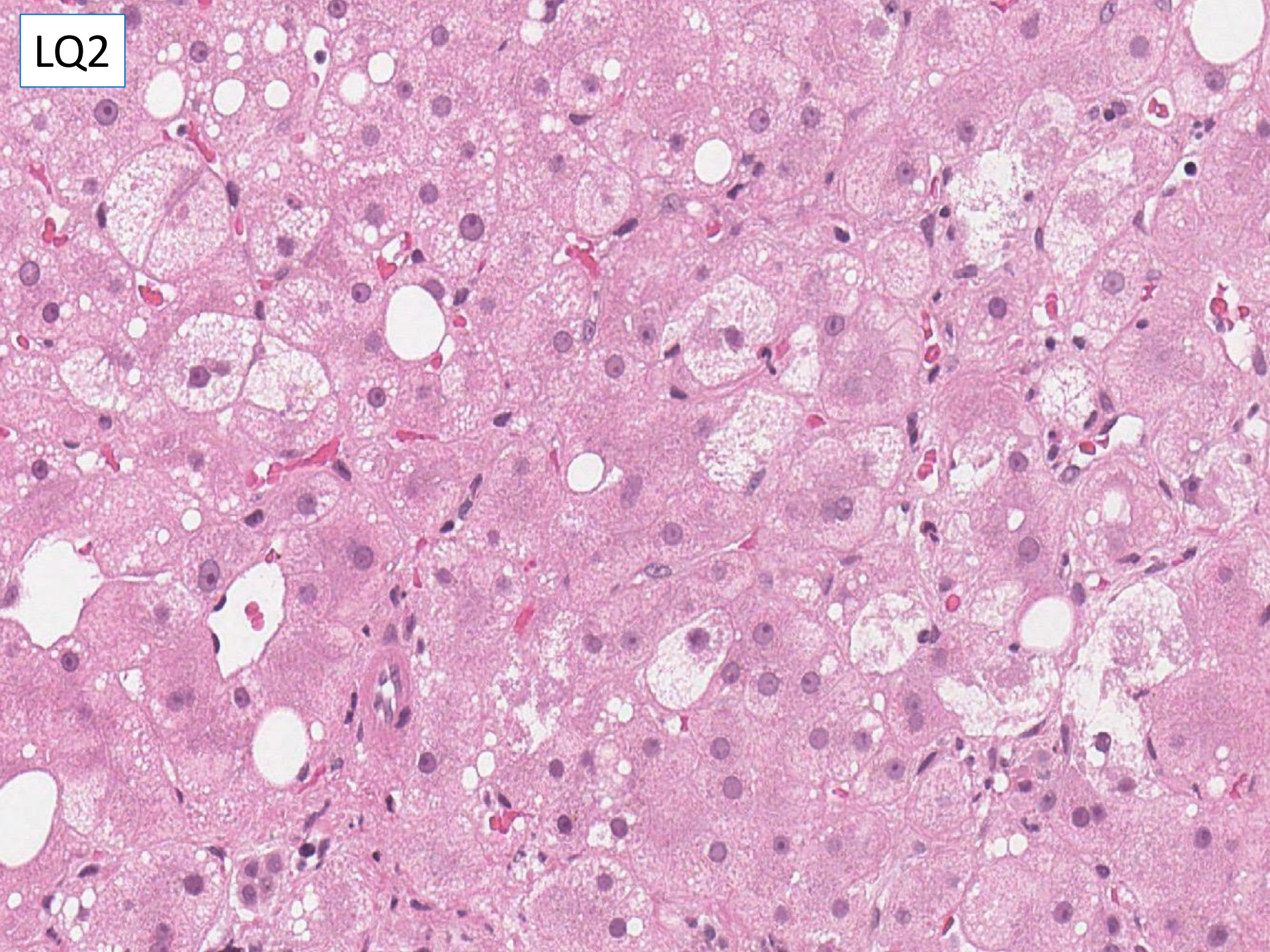
LQ2



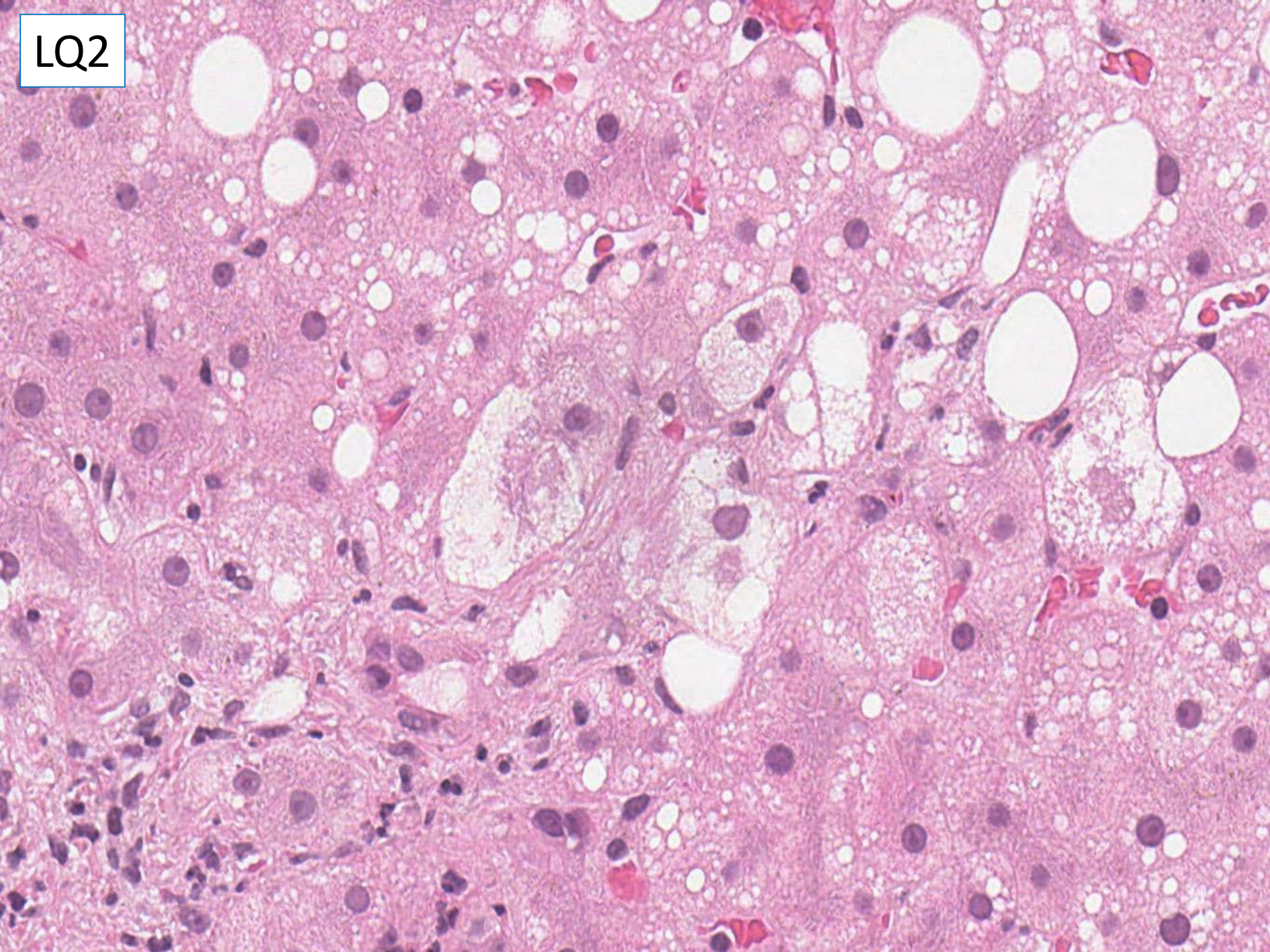
LQ2



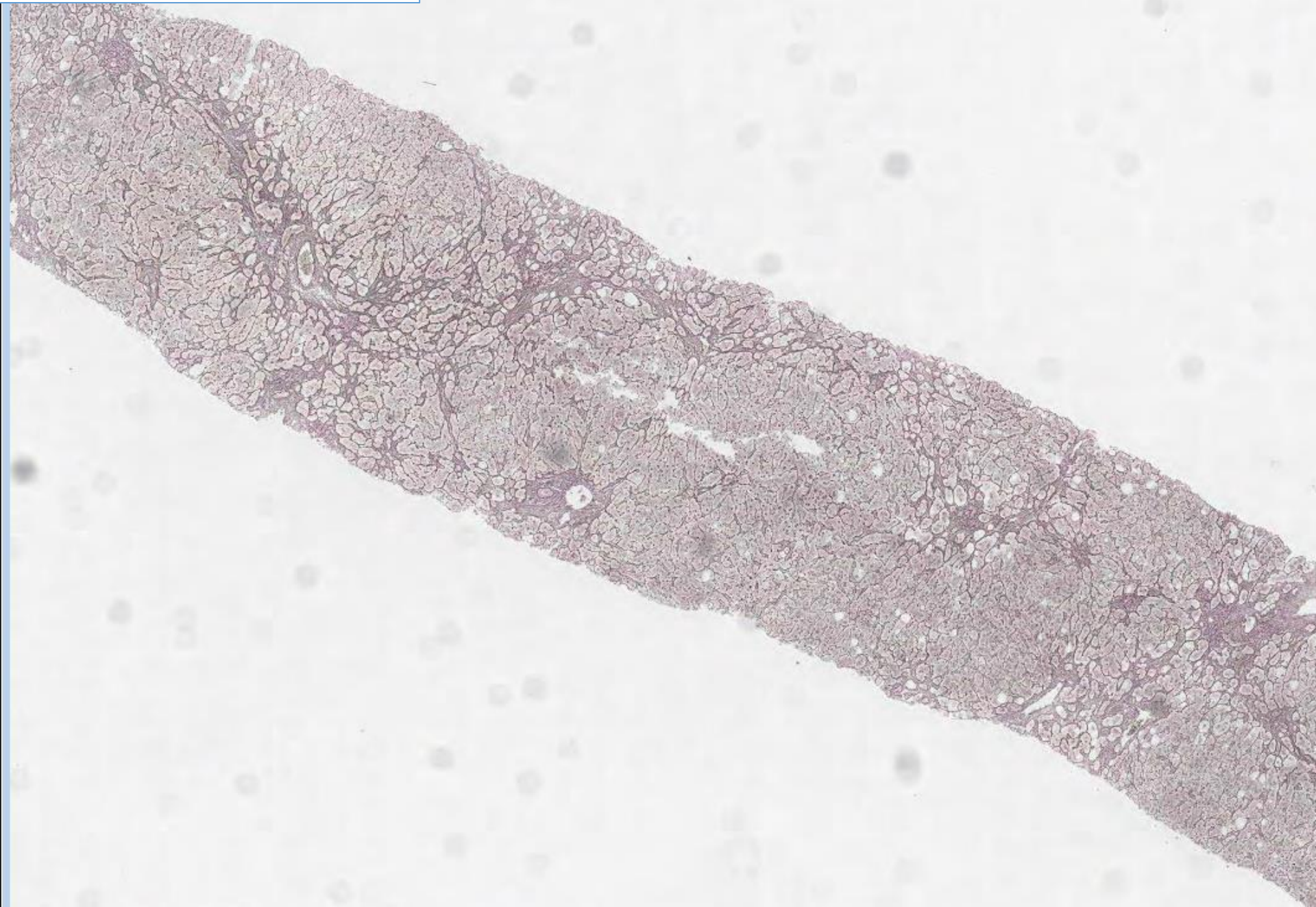
LQ2



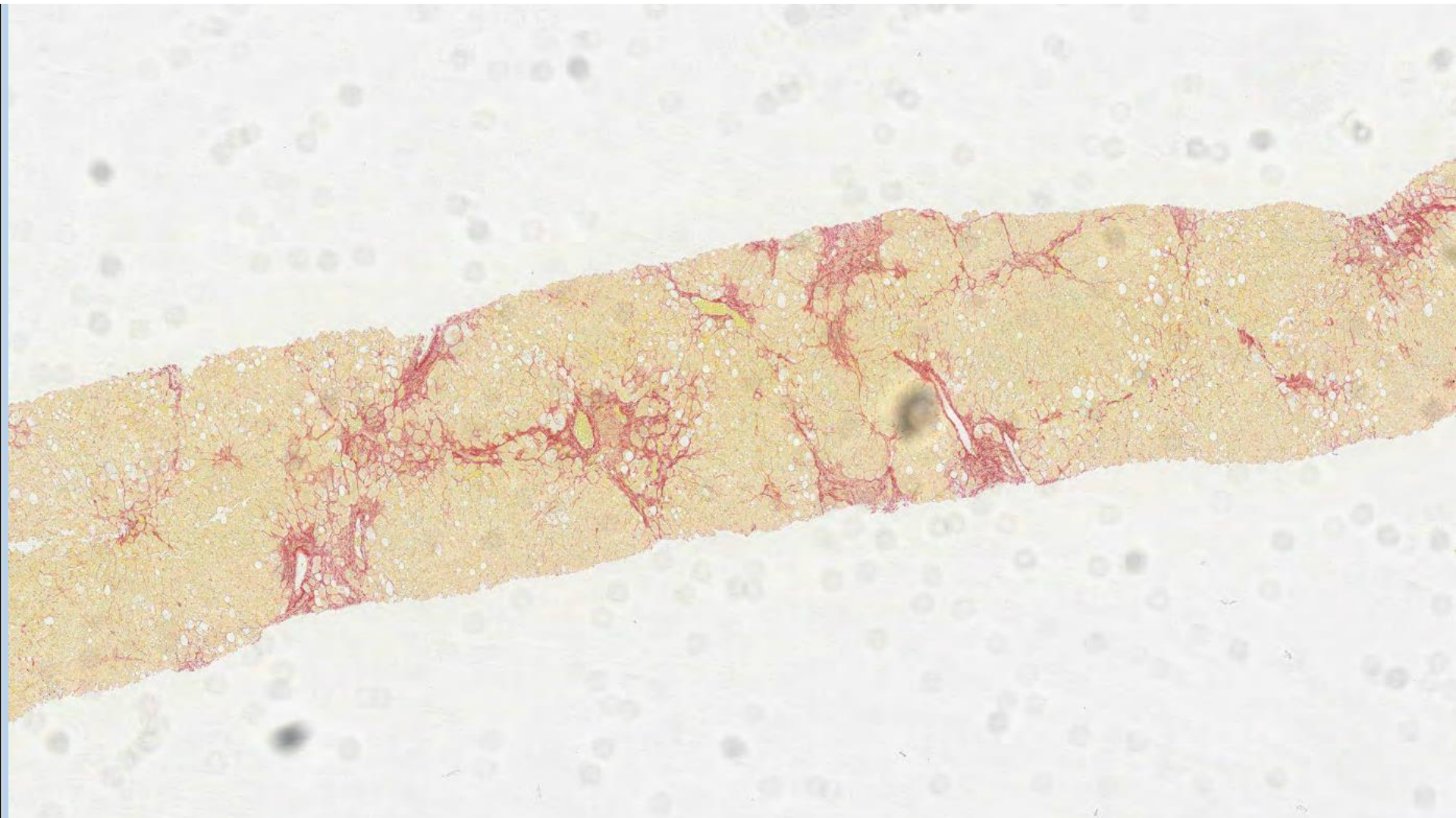
LQ2



LQ 2 reticulin



LQ 2 Picro sirius red



Case LQ2 63F

Chronic pancreatic insufficiency. Type 2 diabetic on insulin, Deranged LFTs, fatty liver on ultrasound, elevated fibroscan

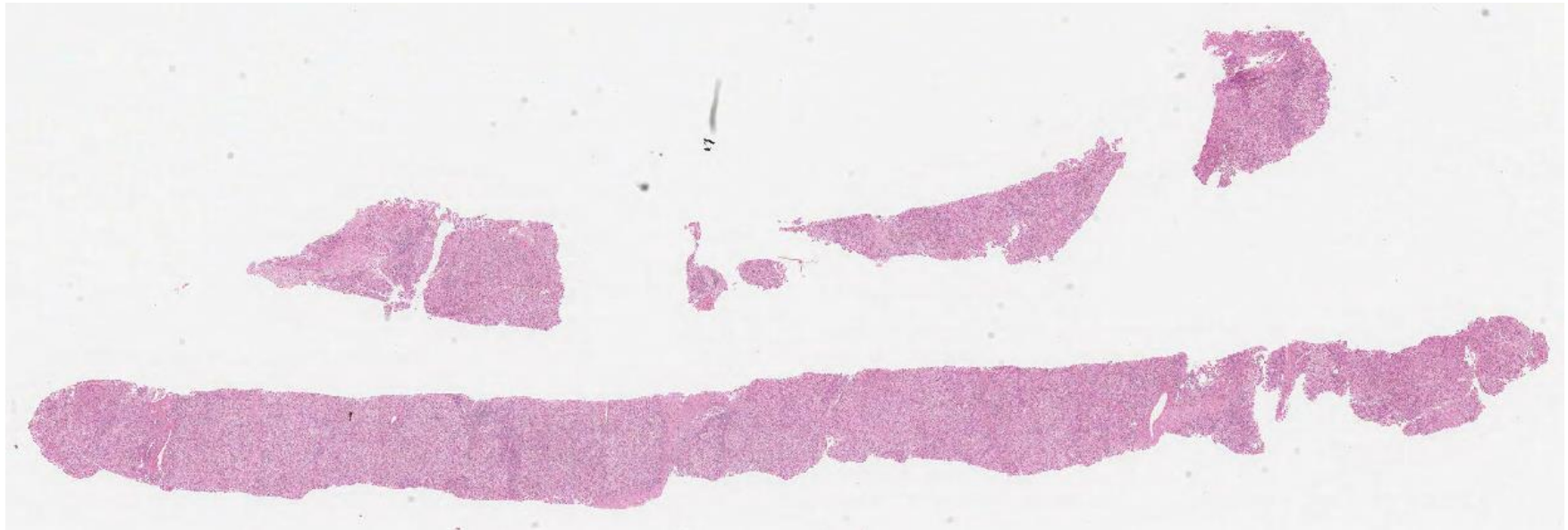
Steatohepatitis (or fatty liver hepatitis) or NASH abbreviation and implied steatohepatitis	75
Steatohepatitis features described but word not used	2
steatosis	3
Fibrosis – bridging or earlier stage	69
- Advanced/possible/developing cirrhosis	9
- Definite cirrhosis	1
Fibrosis stage not mentioned	1
Aetiology – NAFLD/NASH +/- mention of alcohol	69
Favours alcohol over non-alcoholic	5
No mention of aetiological factor	10

Consensus diagnosis: for full marks, a clear diagnosis of steatohepatitis, bridging fibrosis, and NAFLD the likely aetiology +/- consider alcohol

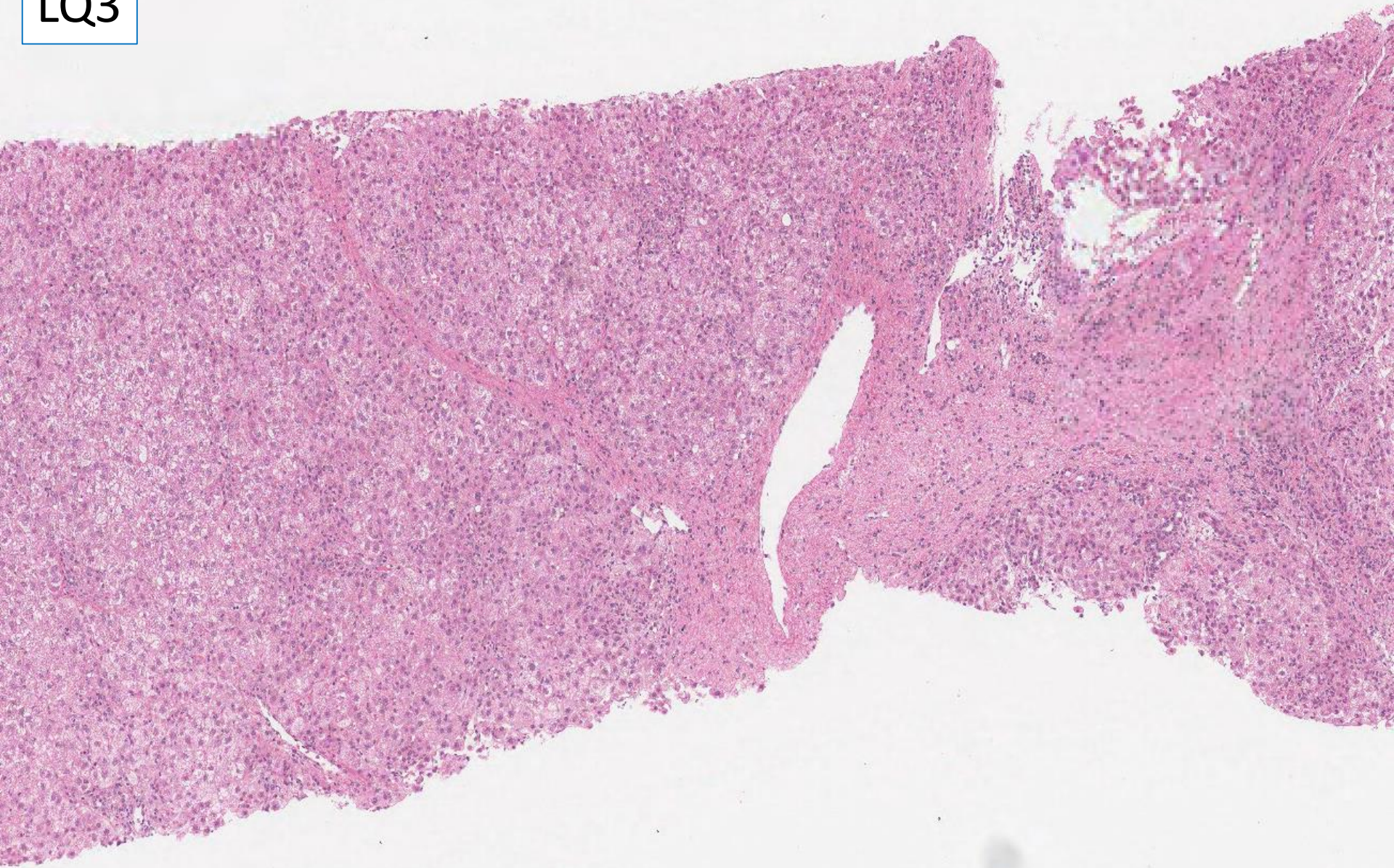
- For steatohepatitis described but word not used – score 10/5/0 = 1/5/0

Case LQ3 57M

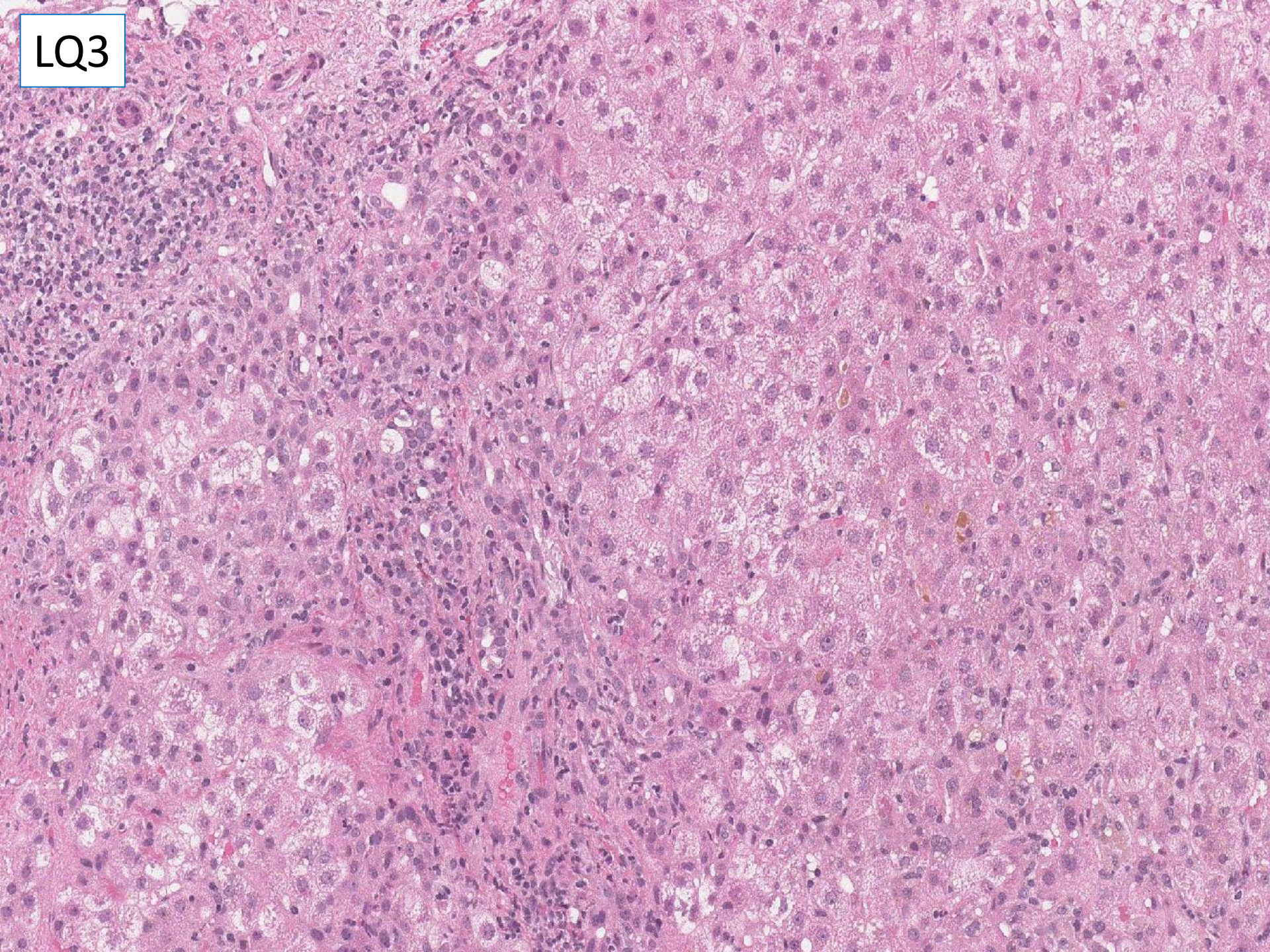
History of alcohol excess, currently abdominal pain, jaundice.
Liver screen normal, ?fatty liver on CT, oesophageal varices



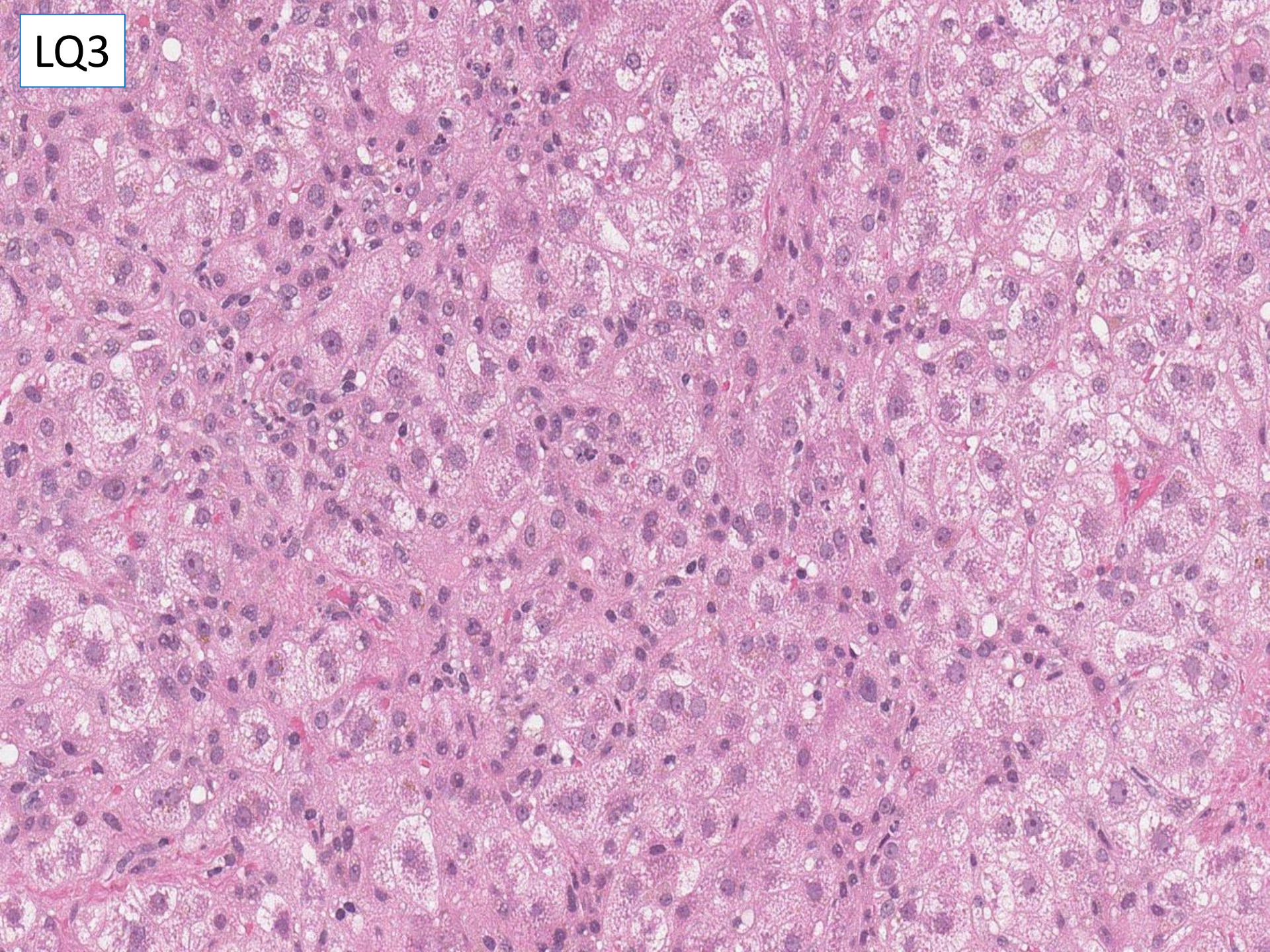
LQ3



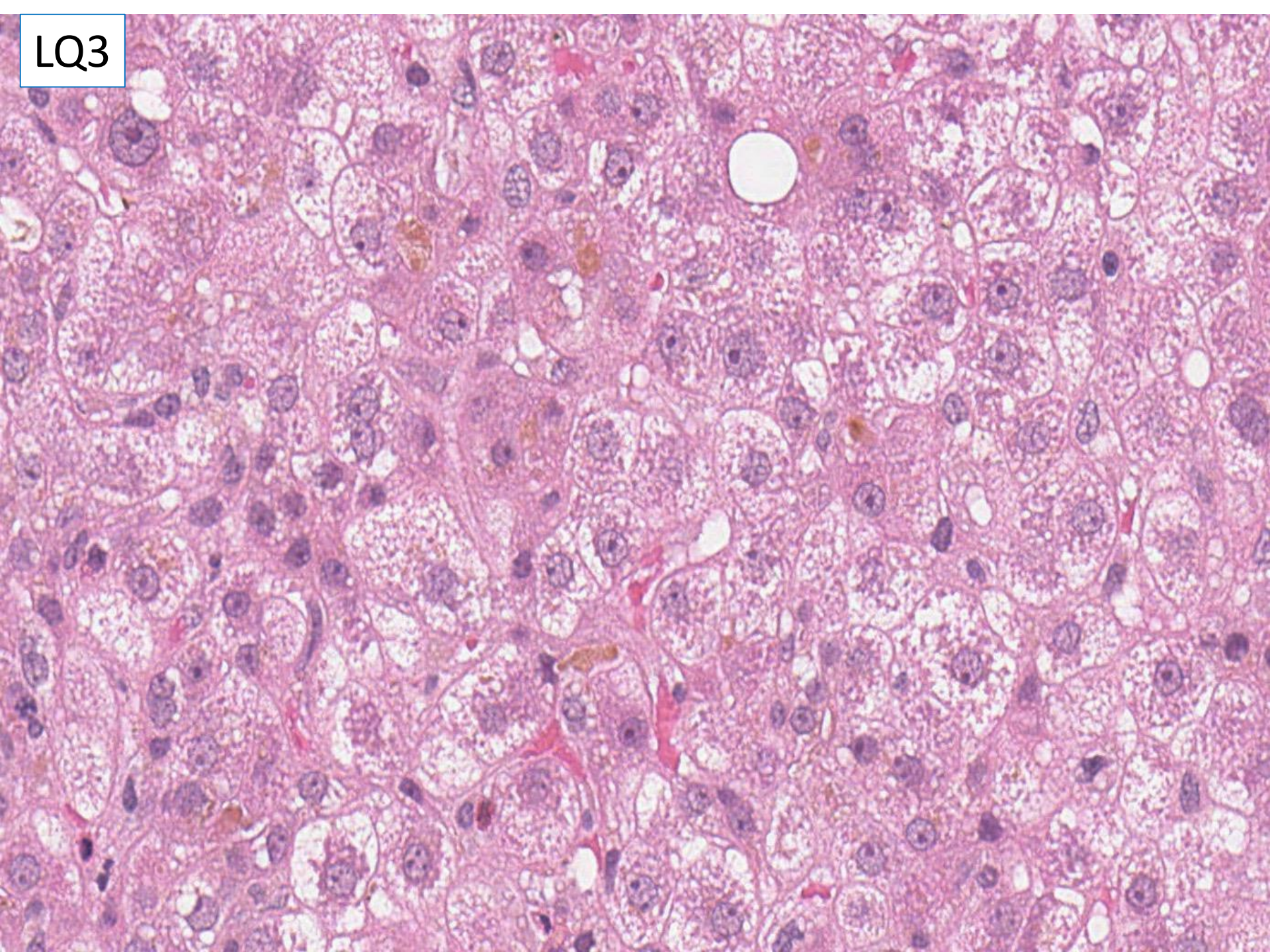
LQ3



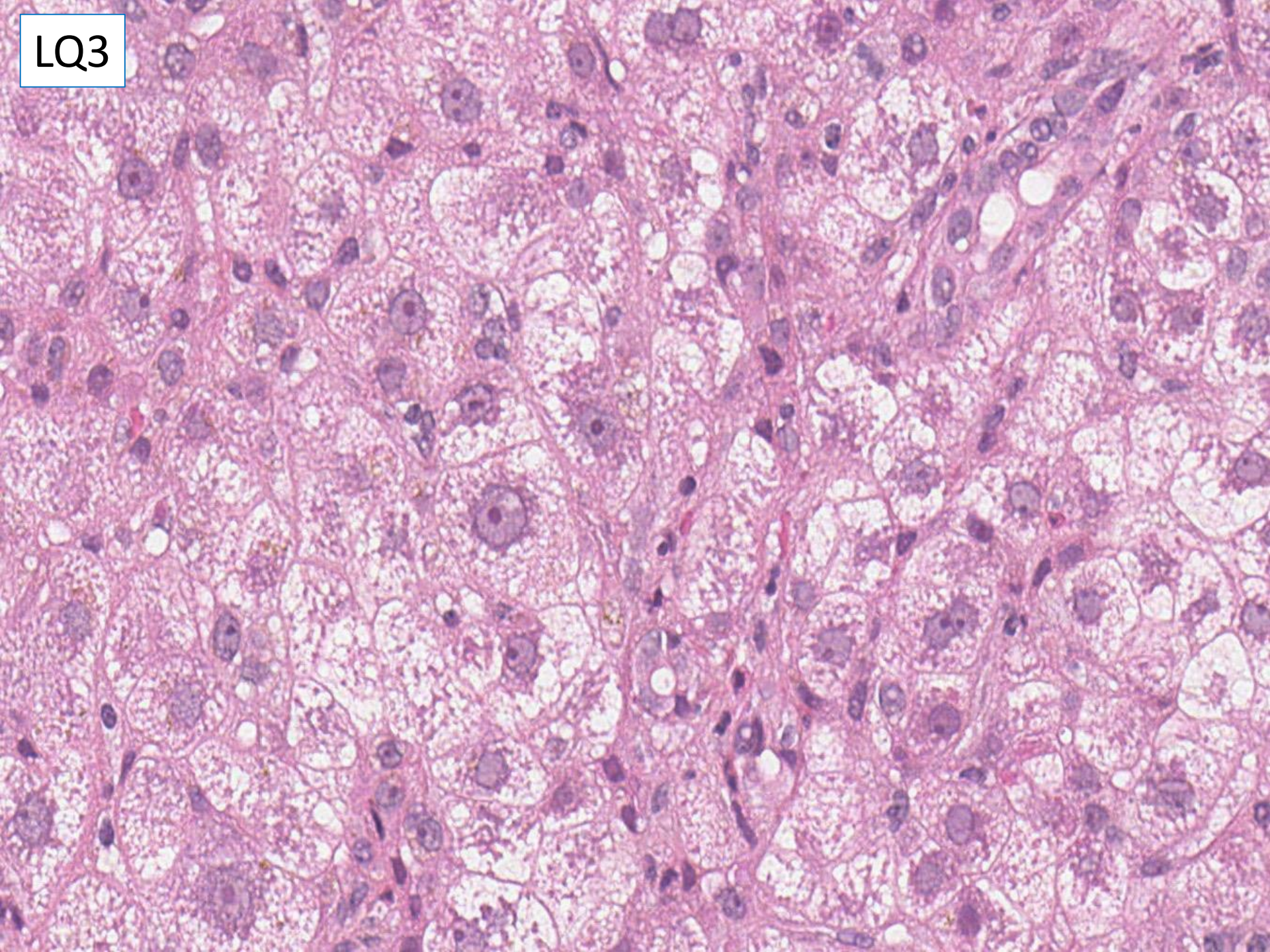
LQ3



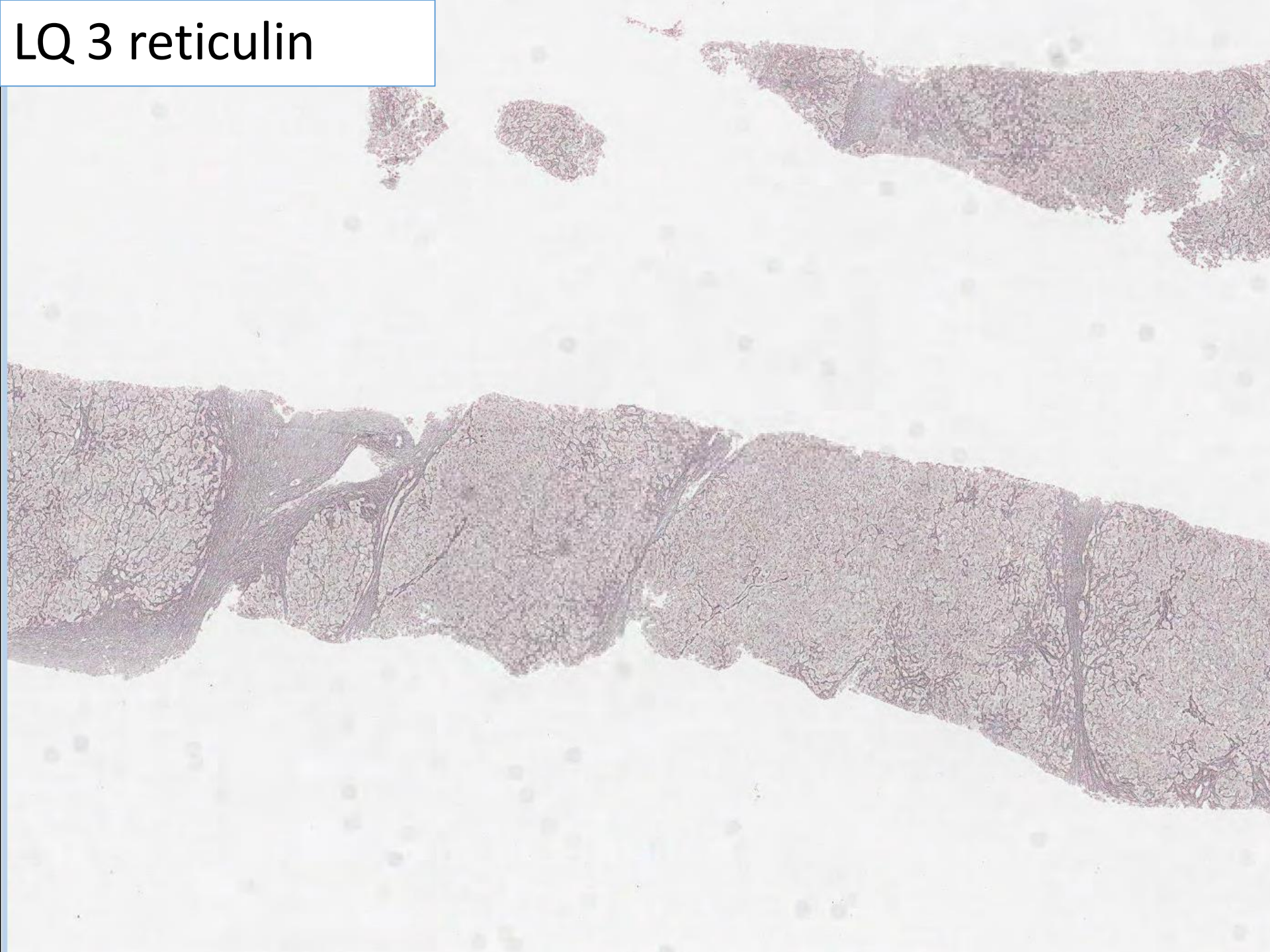
LQ3



LQ3



LQ 3 reticulin



Case LQ3 57M

History of alcohol excess, currently abdominal pain, jaundice.
Liver screen normal, ?fatty liver on CT, oesophageal varices

Cirrhosis or advanced fibrosis	82
No significant fibrosis	1
Consistent with ethanol or comment on alcohol	71
No mention of alcohol, abstinence, or reference to clinical history	9
Includes - Associated with fatty liver disease (alcohol not mentioned)	4
Comment on not typical for alcohol or uncertain cause	7
Co-diagnosis with	
acute lobular hepatitis/cholestatic hepatitis	25
Alcoholic hepatitis	25
Steatohepatitis NOS	7
Differential diagnosis / rule out:	
Biliary obstruction/ pancreatitis	13
DILI	20
Hepatitis virus	14
Infection/ sepsis	10
Acute hepatitis with cholestasis, background cirrhosis. ? drug or viral – does not look like alcohol	4
Cholestasis	55
No mention of cholestasis	28
Biliary disease as main diagnosis – PSC or PSC/PBC, no mention of alcohol	2

Consensus diagnosis:

cirrhosis with consideration of alcohol as the cause/contributing factor.

No consensus on what else may be going on here.

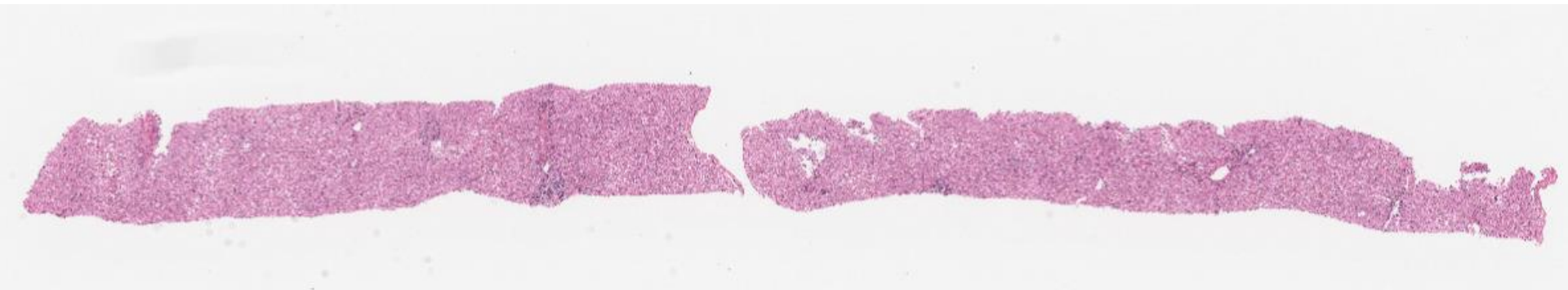
Case LQ3 57M

History of alcohol excess, currently abdominal pain, jaundice.
Liver screen normal, ?fatty liver on CT, oesophageal varices

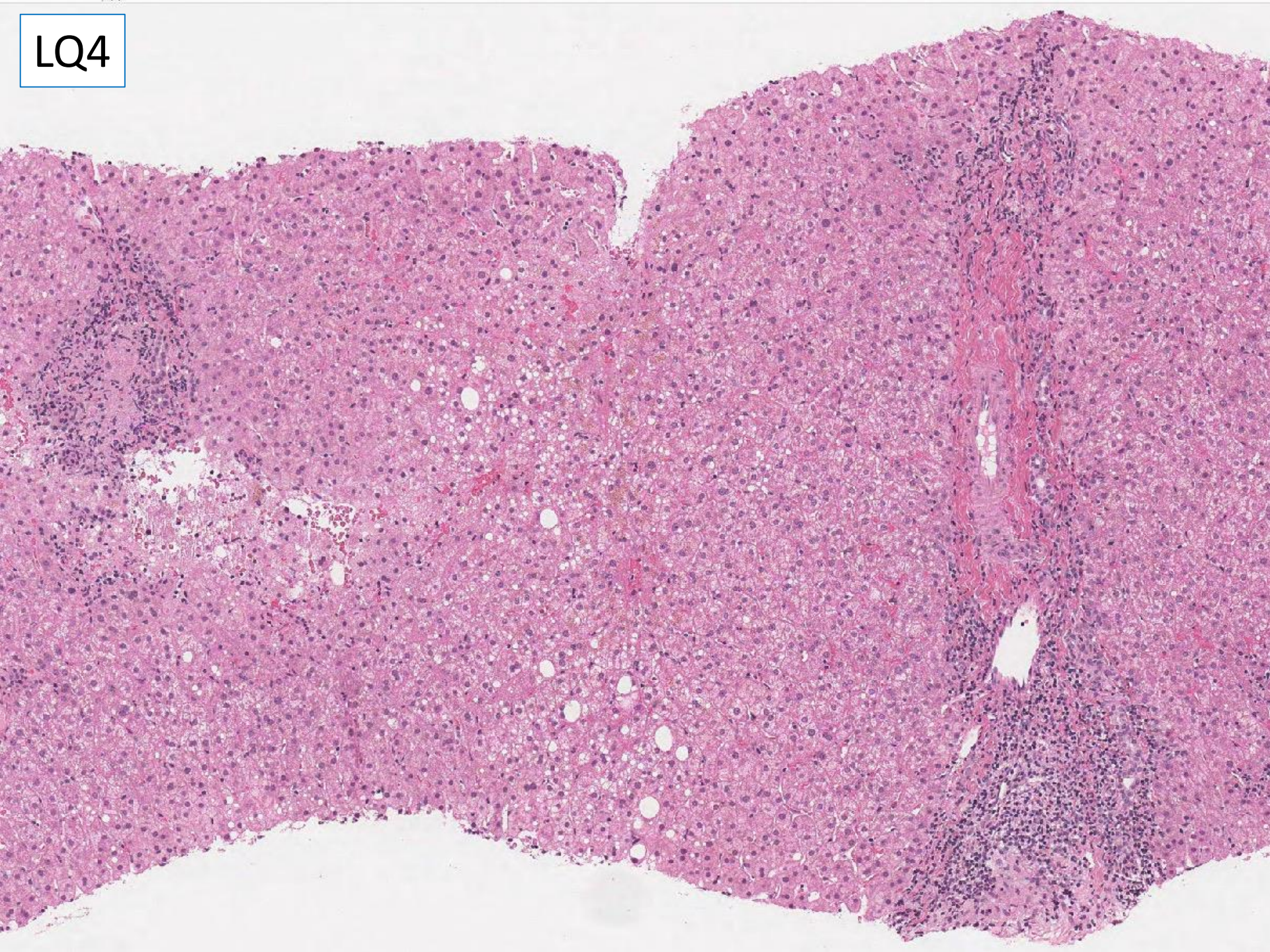
Cirrhosis or advanced fibrosis	82	Survey results:		
No significant fibrosis	1			
Consistent with ethanol or comment on alcohol	71	10	5	0
No mention of alcohol, abstinence, or reference to clinical history	9			
Includes - Associated with fatty liver disease (alcohol not mentioned)	4	1	5	0
Comment on not typical for alcohol or uncertain cause	7	2	1	2
Co-diagnosis with				
acute lobular hepatitis/cholestatic hepatitis	25			
Alcoholic hepatitis	25			
Steatohepatitis NOS	7			
Differential diagnosis / rule out:				
Biliary obstruction/ pancreatitis	13			
DILI	20			
Hepatitis virus	14			
Infection/ sepsis	10			
Acute hepatitis with cholestasis, background cirrhosis. ? drug or viral – does not look like alcohol	4	1	2	2
Cholestasis	55			
No mention of cholestasis	28			
Biliary disease as main diagnosis – PSC or PSC/PBC, no mention of alcohol	2			

Case LQ4 44M

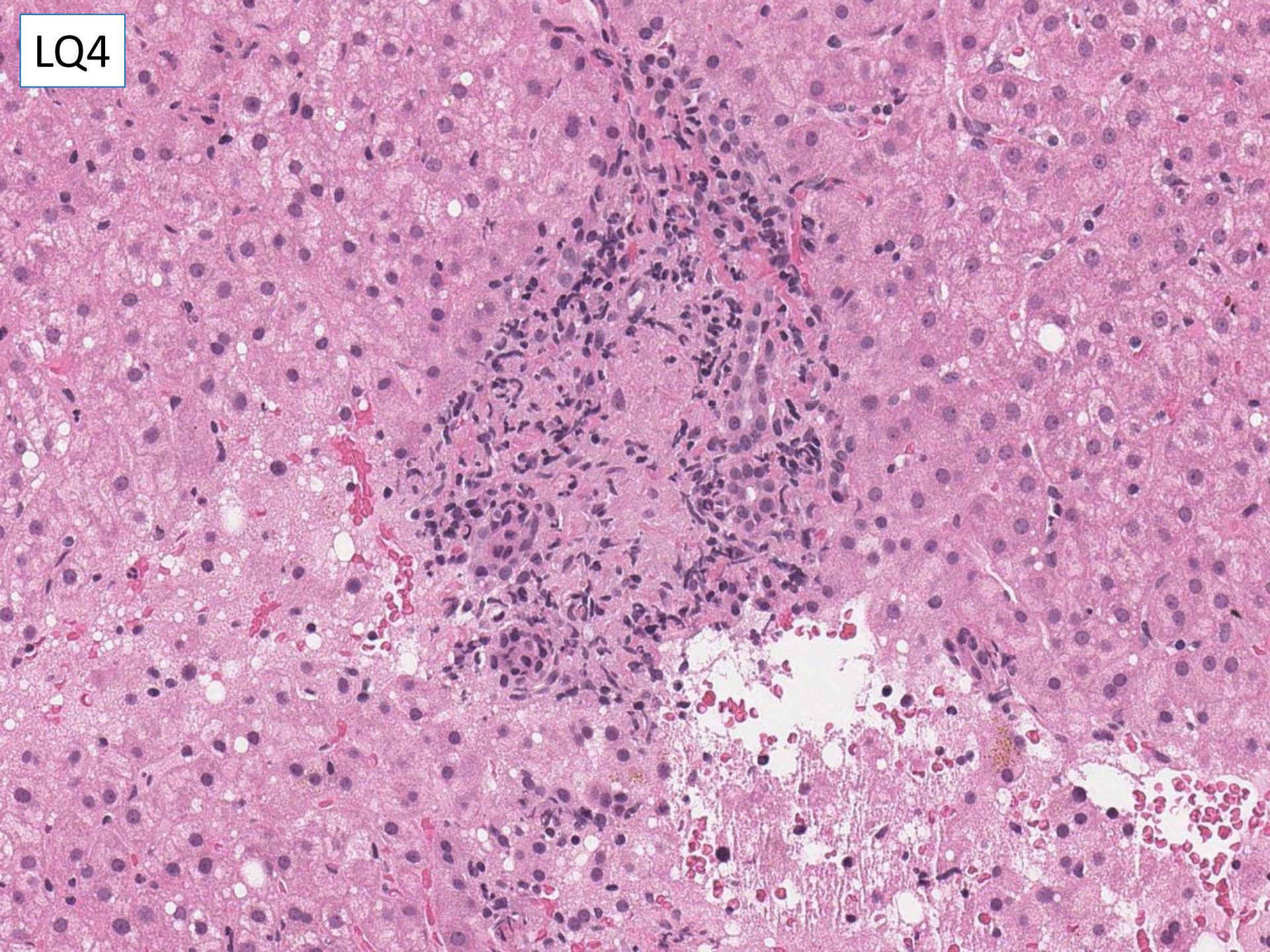
Abnormal LFTs, AMA strong +ve, fatty liver on ultrasound, ?PBC



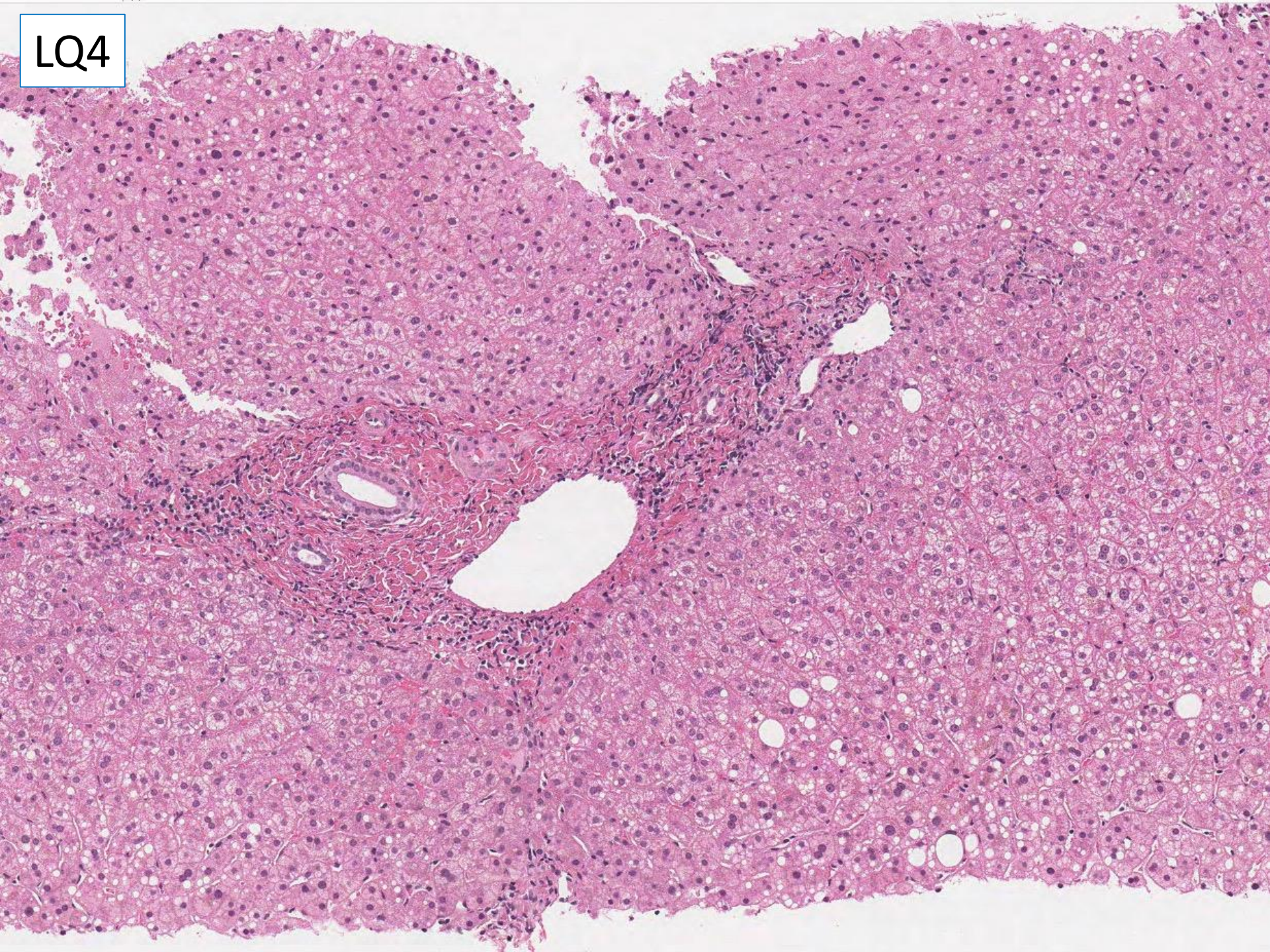
LQ4



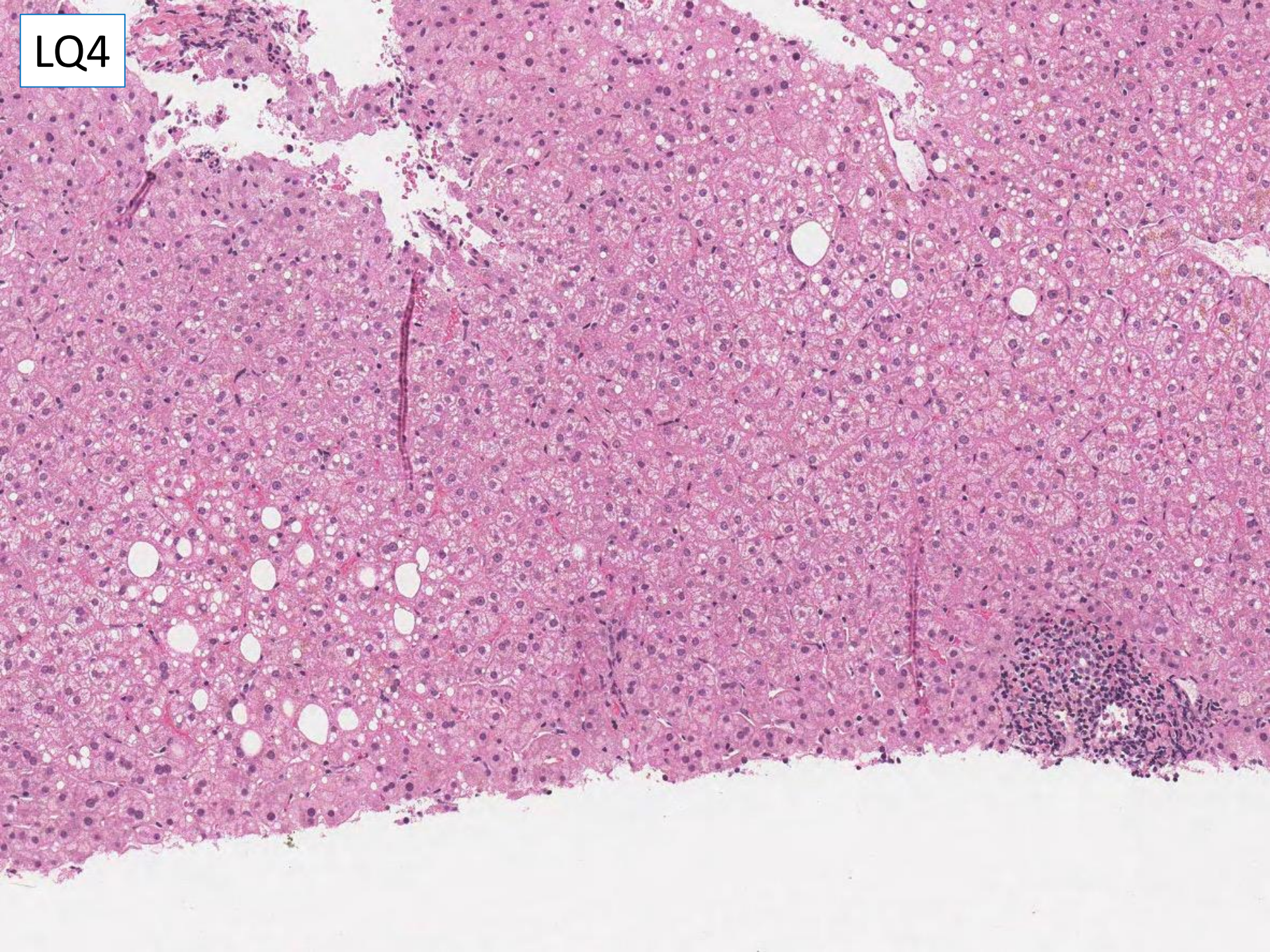
LQ4



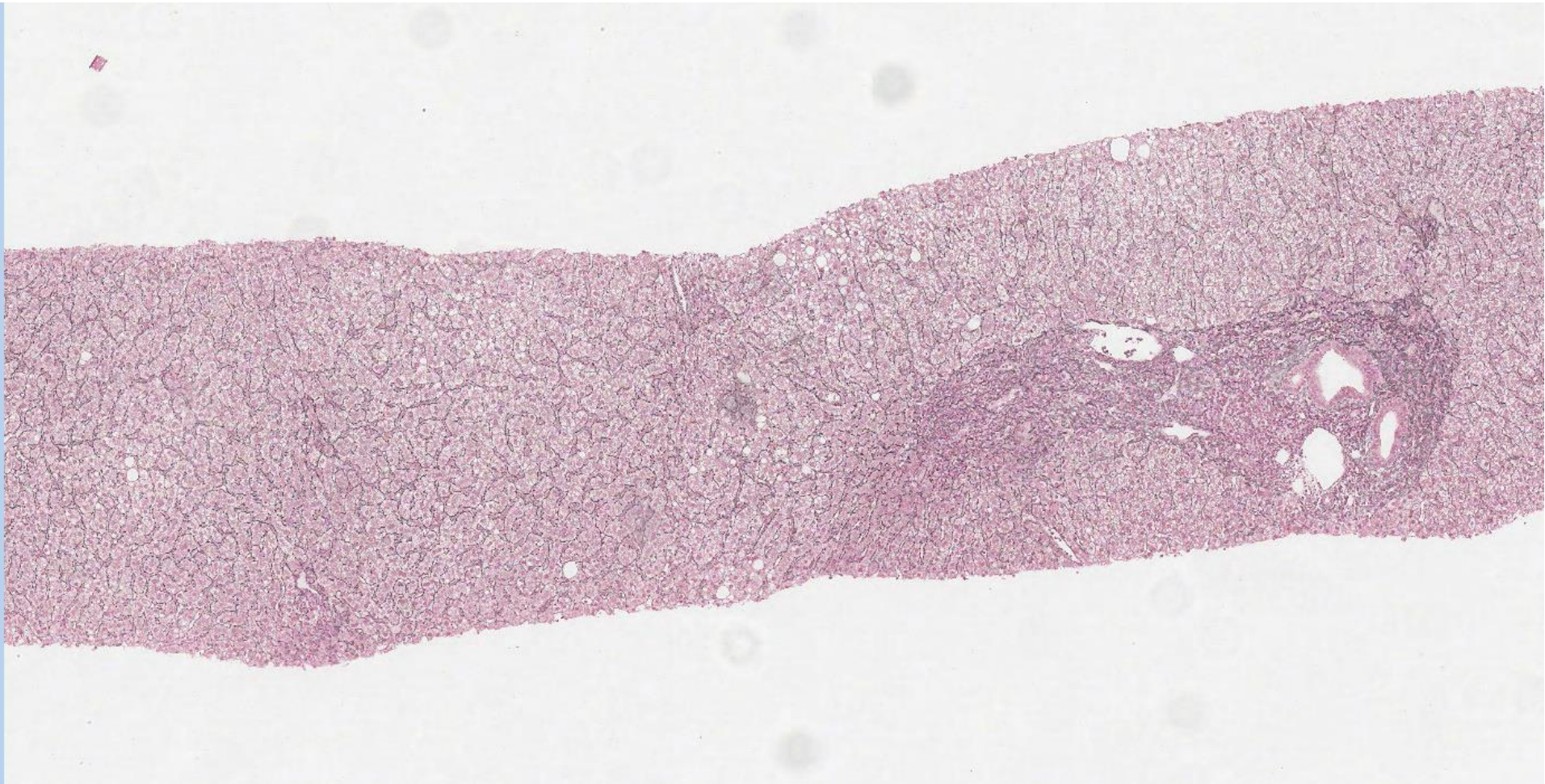
LQ4



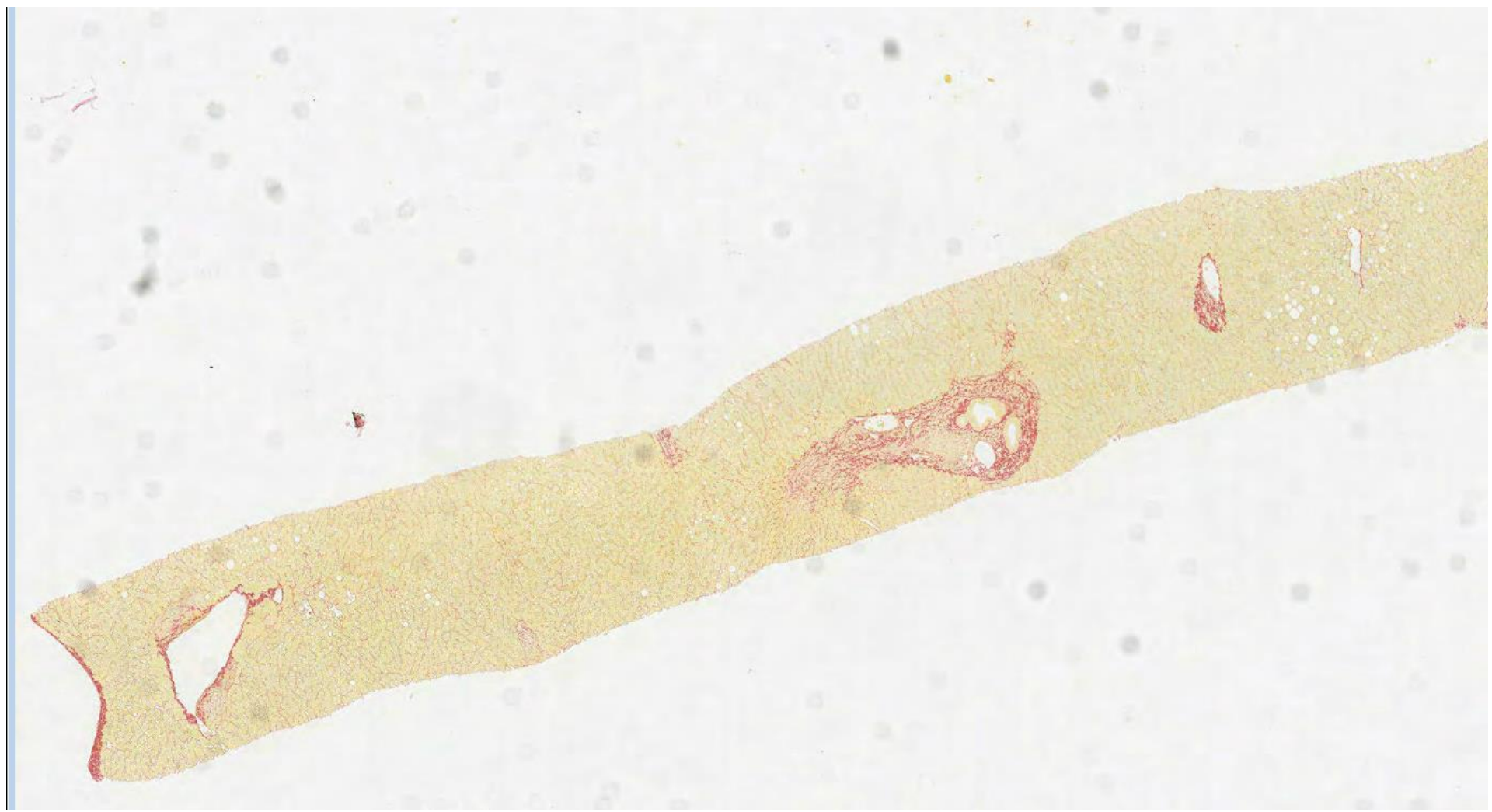
LQ4



LQ4 reticulin

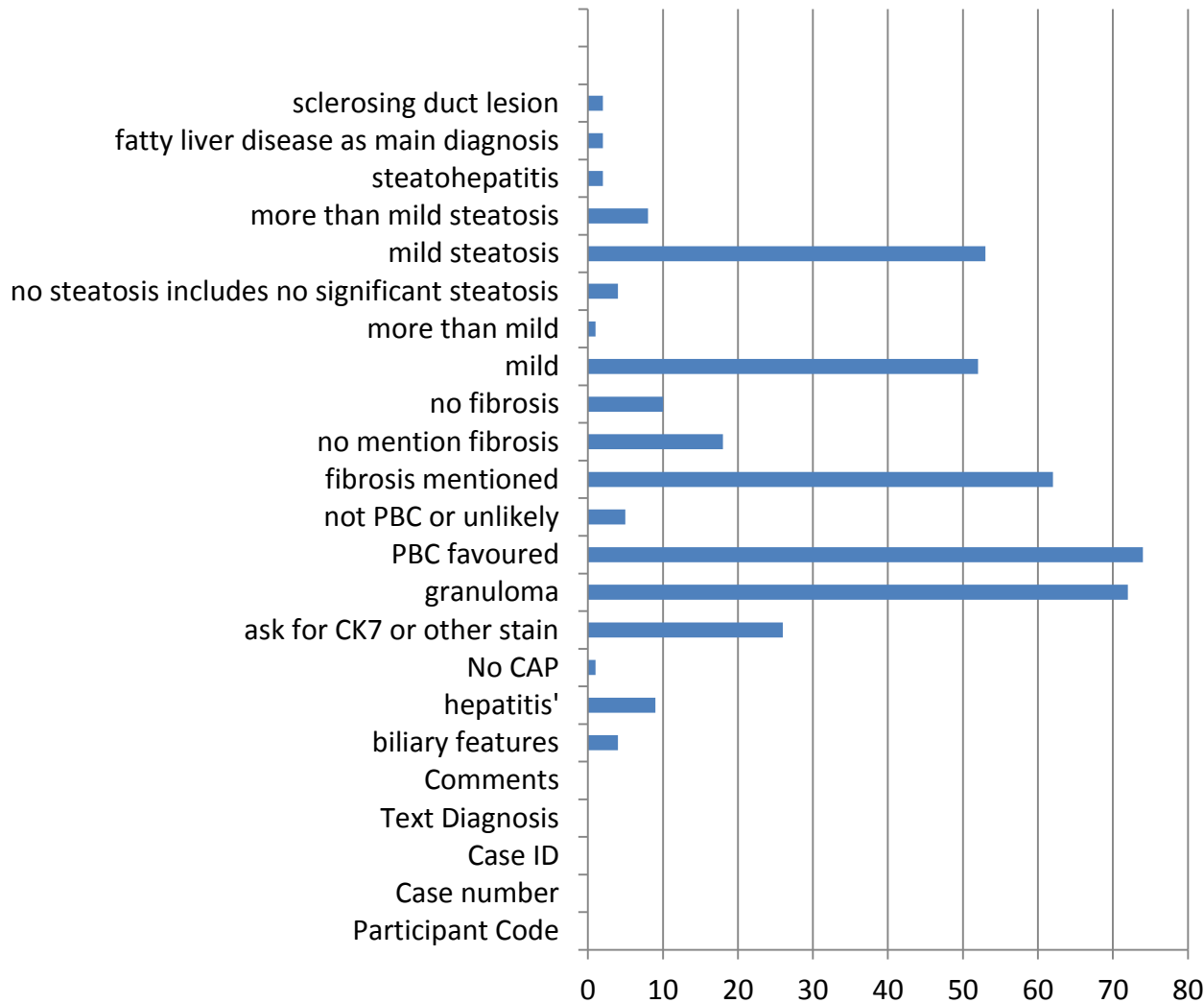


LQ 4 Picro Sirius red



Case LQ4 44M

Abnormal LFTs, AMA strong +ve, fatty liver on ultrasound, ?PBC



Consensus diagnosis

PBC (74, many said 'early' or 'because of AMA') as favoured diagnosis and presence of granulomas.

Majority mentioned fibrosis (62).

26 asked for extra stains (CK7)

One given benefit of doubt? Survey results: all vote for full marks

Masterclass: Alberto Quaglia

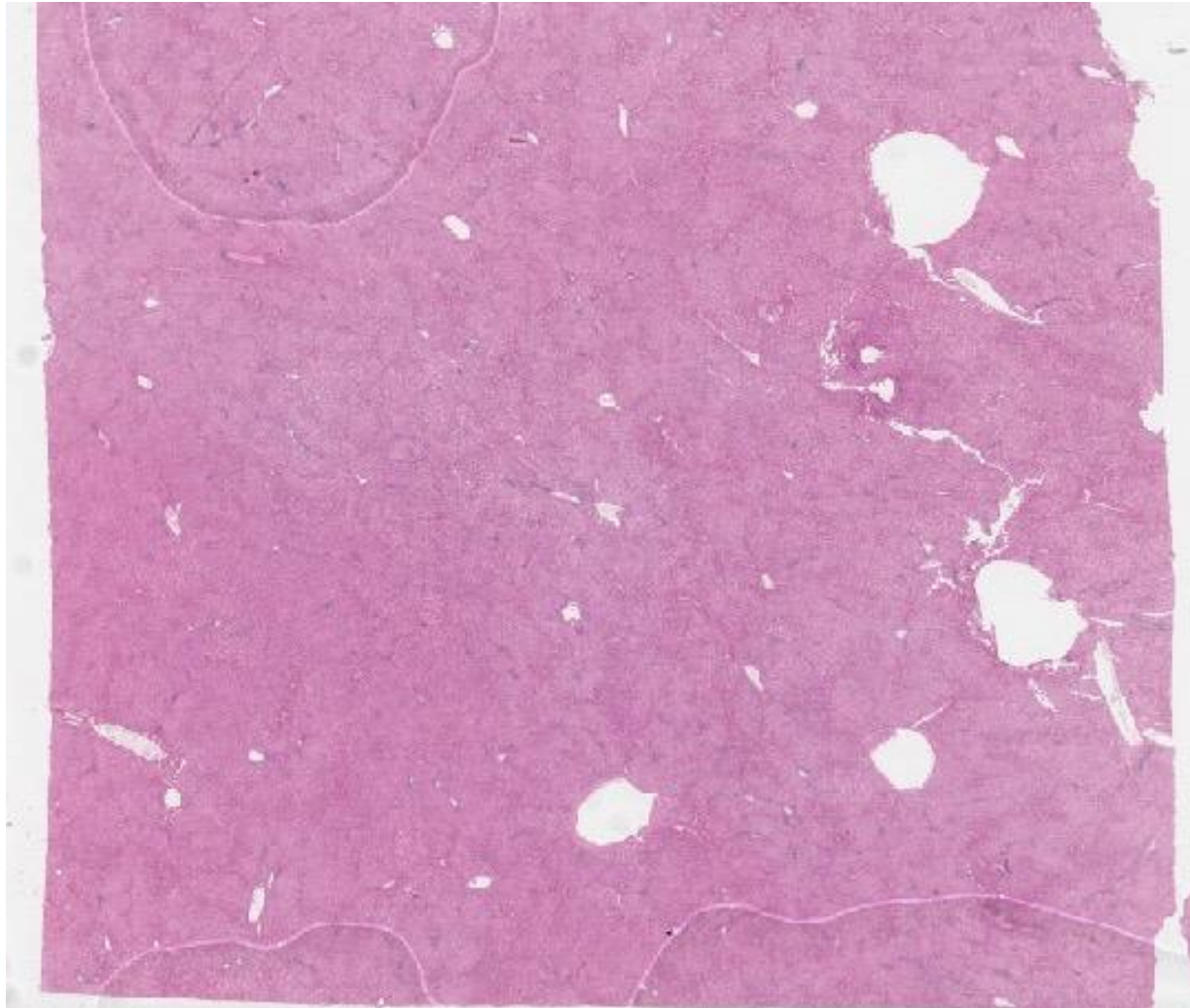
- Shikata, rhodamine and keratin 7 in biliary disease

Case LQ5 65F

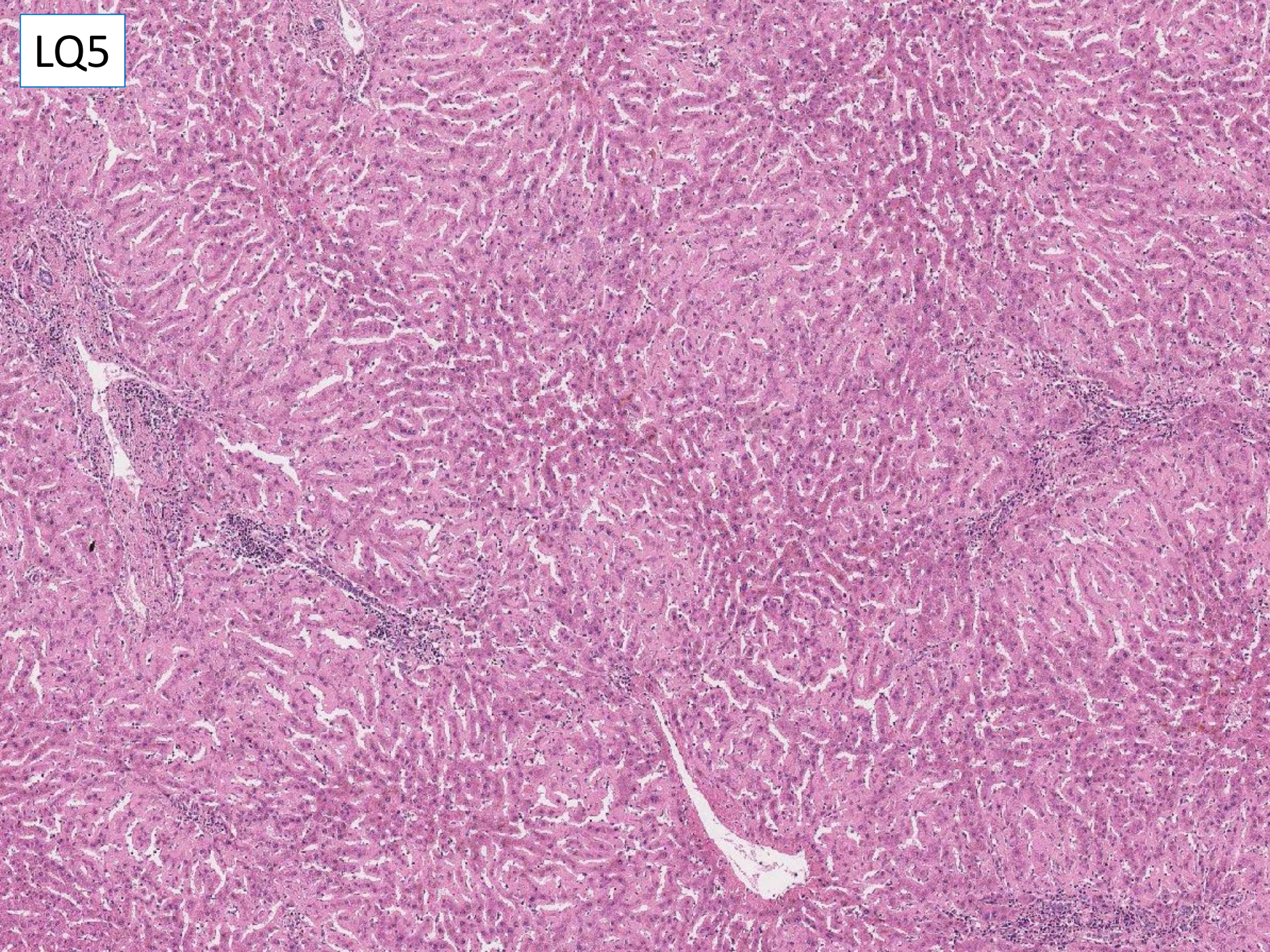
'Liver lesion segment 6/7'.

From electronic patient record IgG kappa paraproteinaemia.

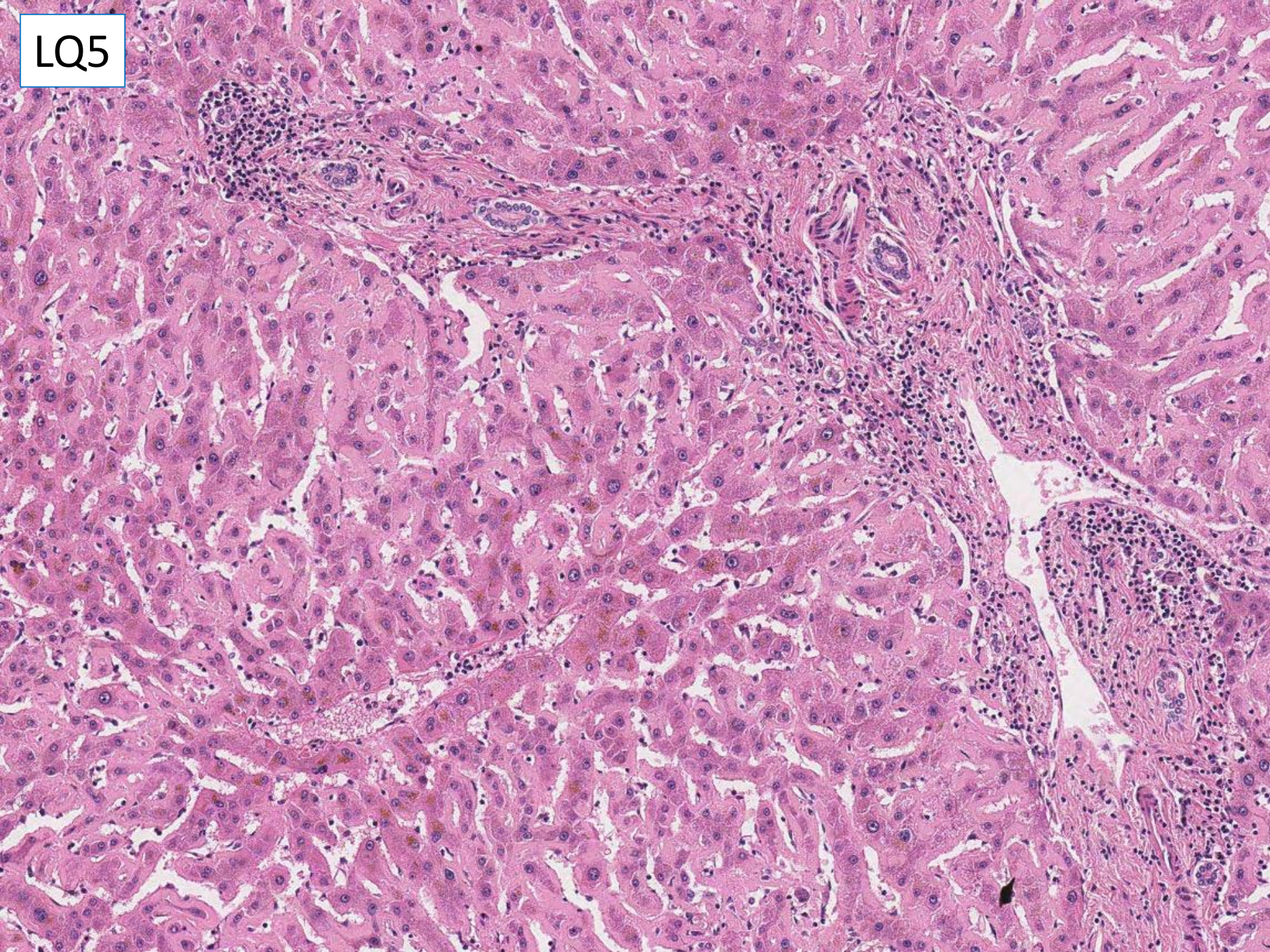
Section is from background liver



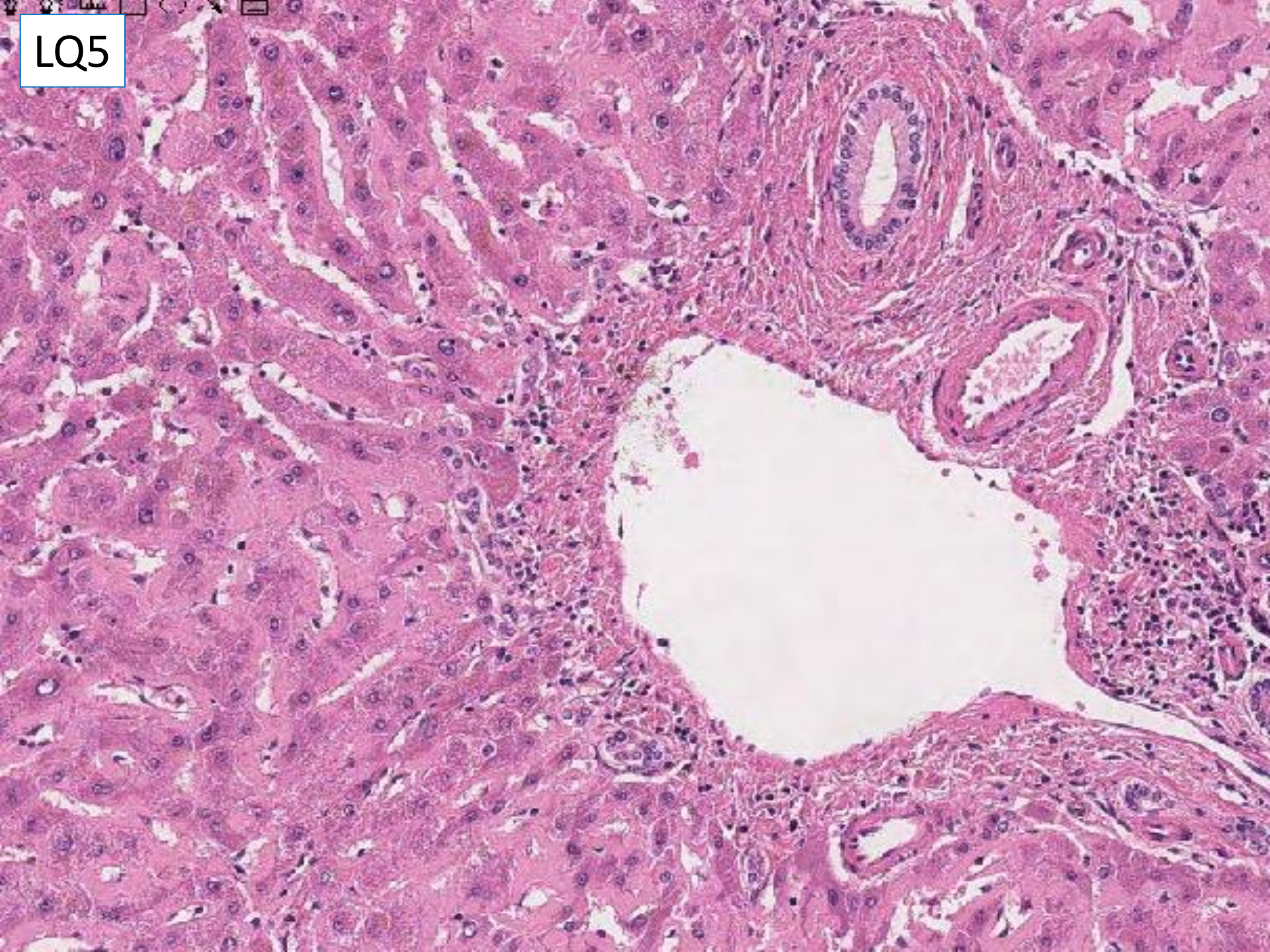
LQ5



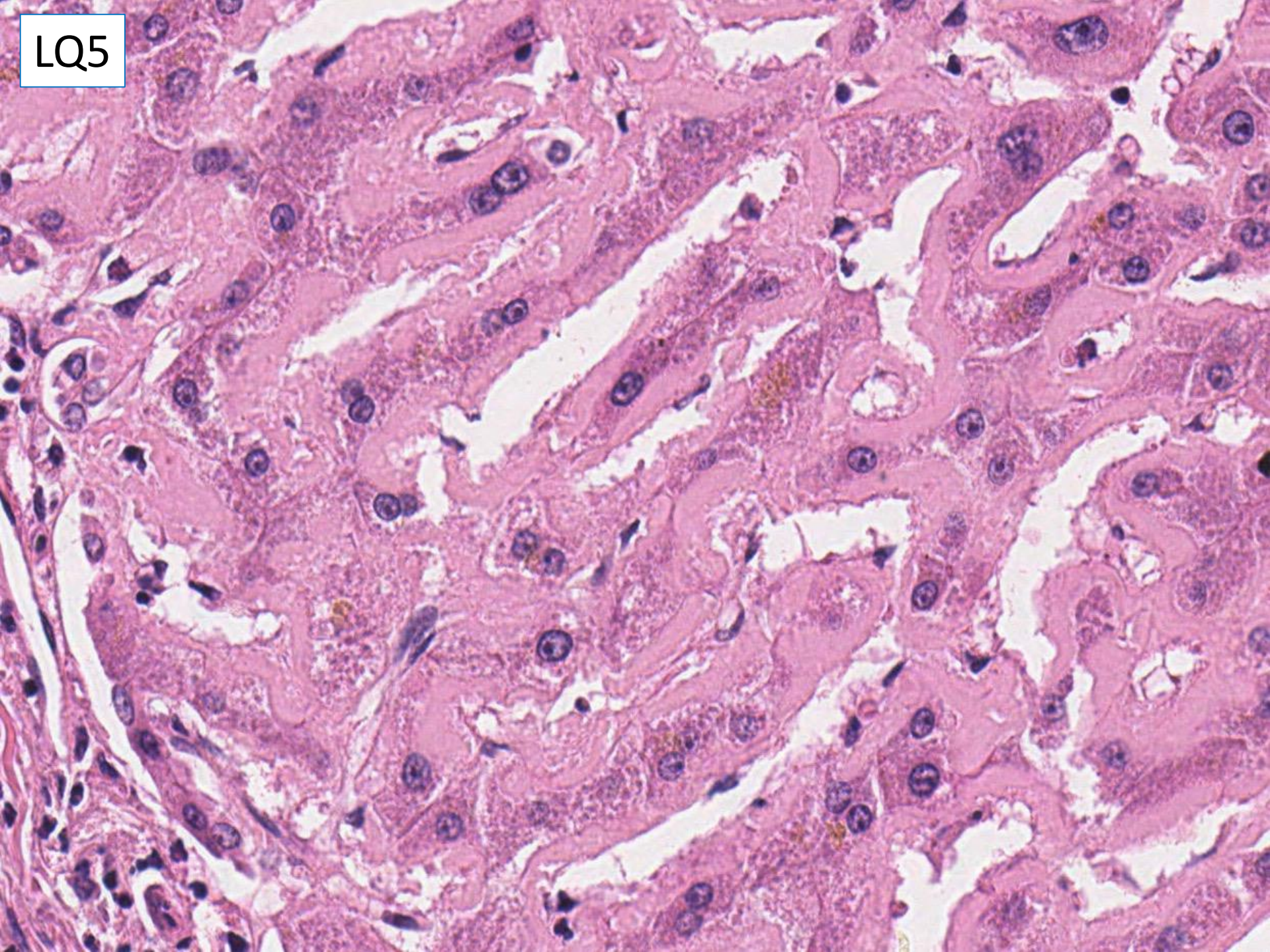
LQ5



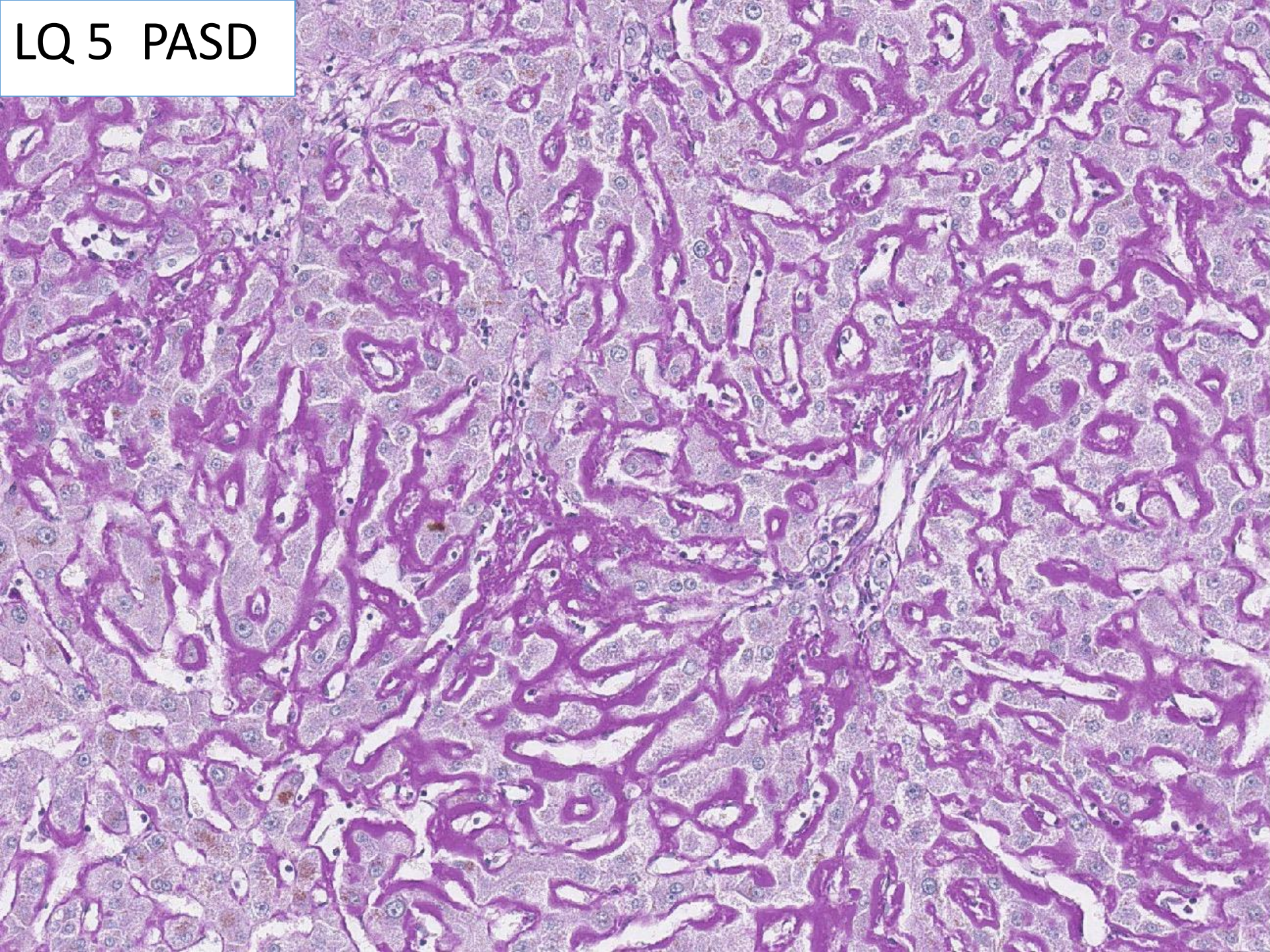
LQ5



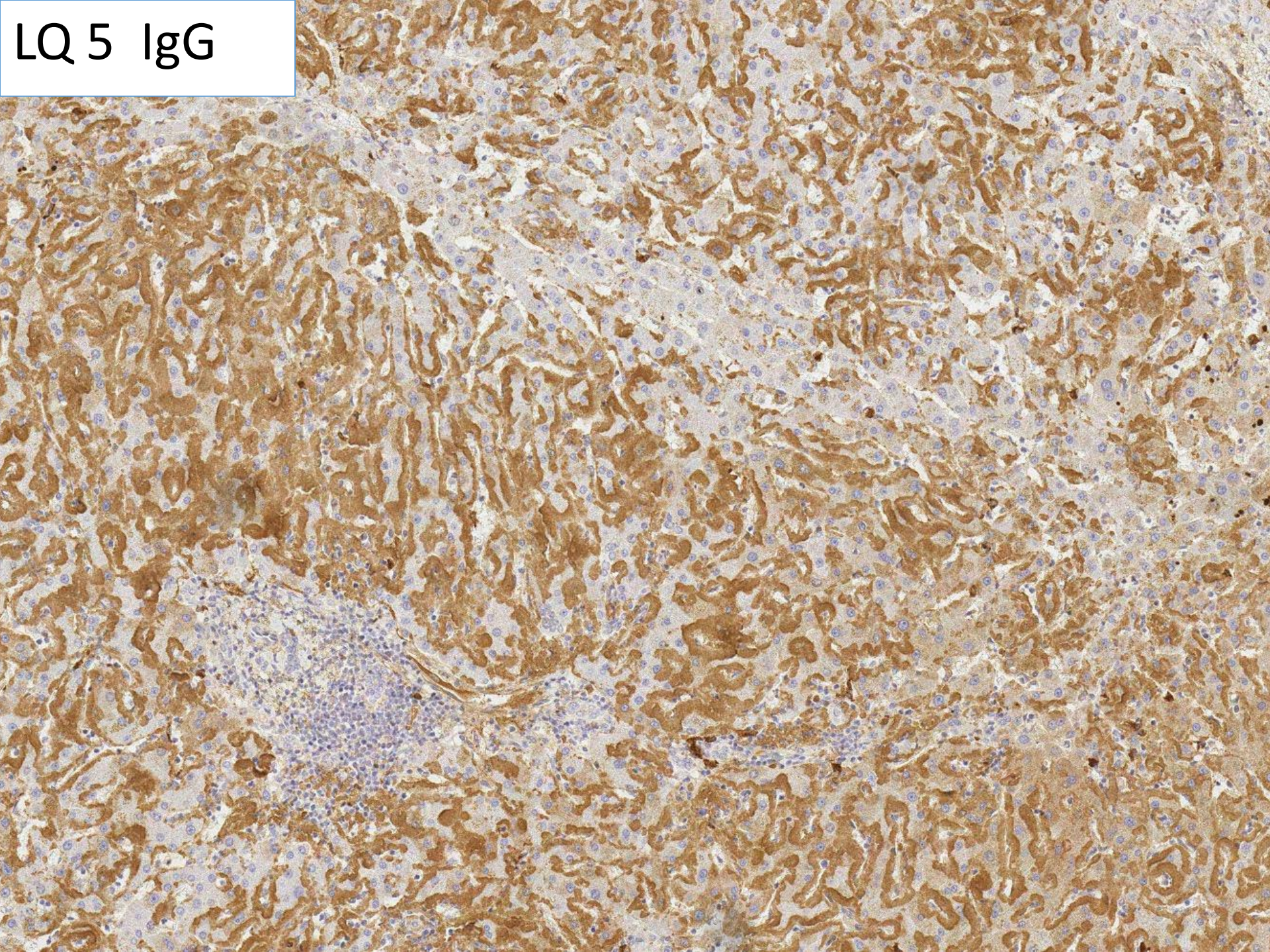
LQ5



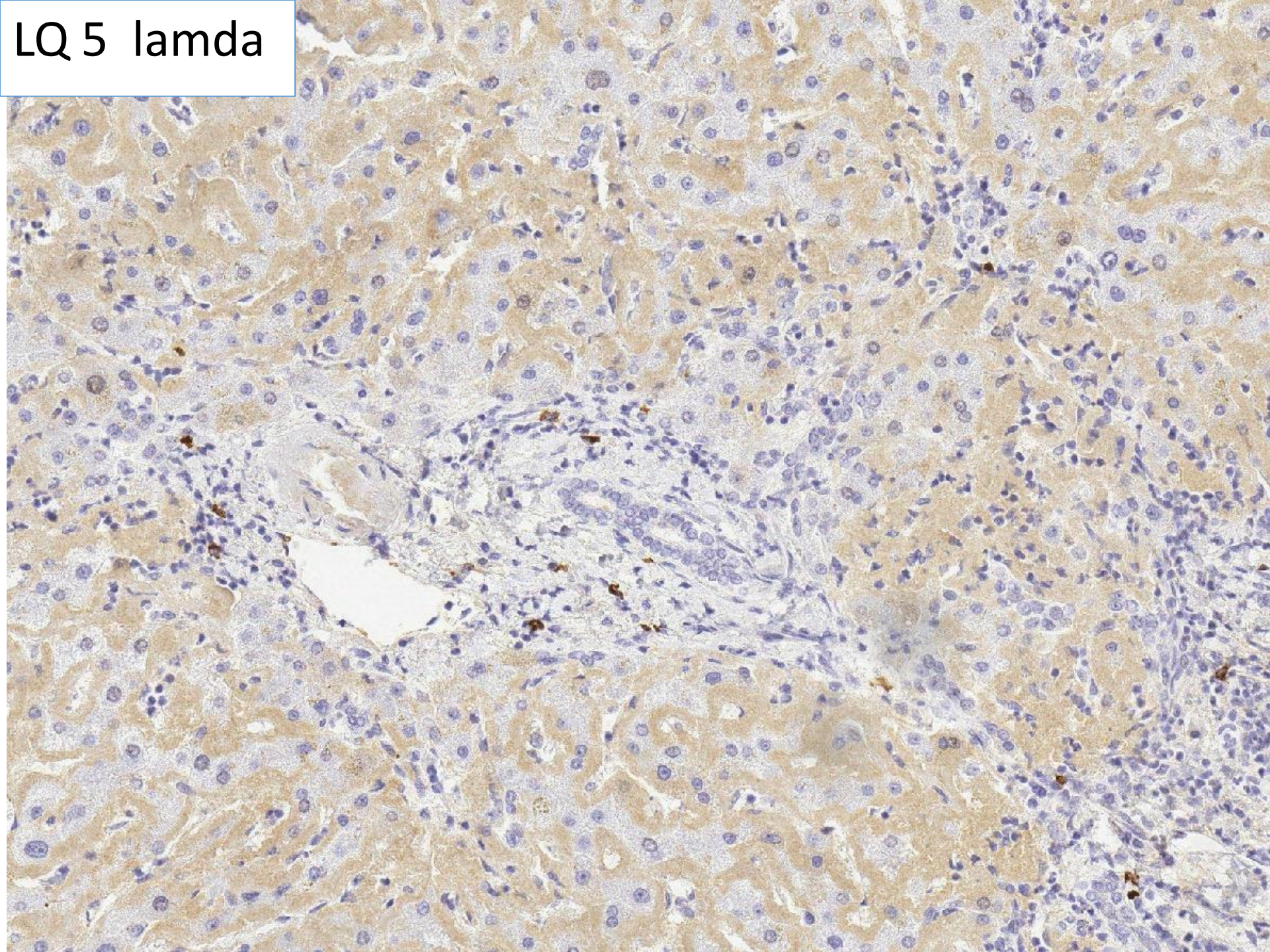
LQ 5 PASD



LQ 5 IgG



LQ 5 lamda

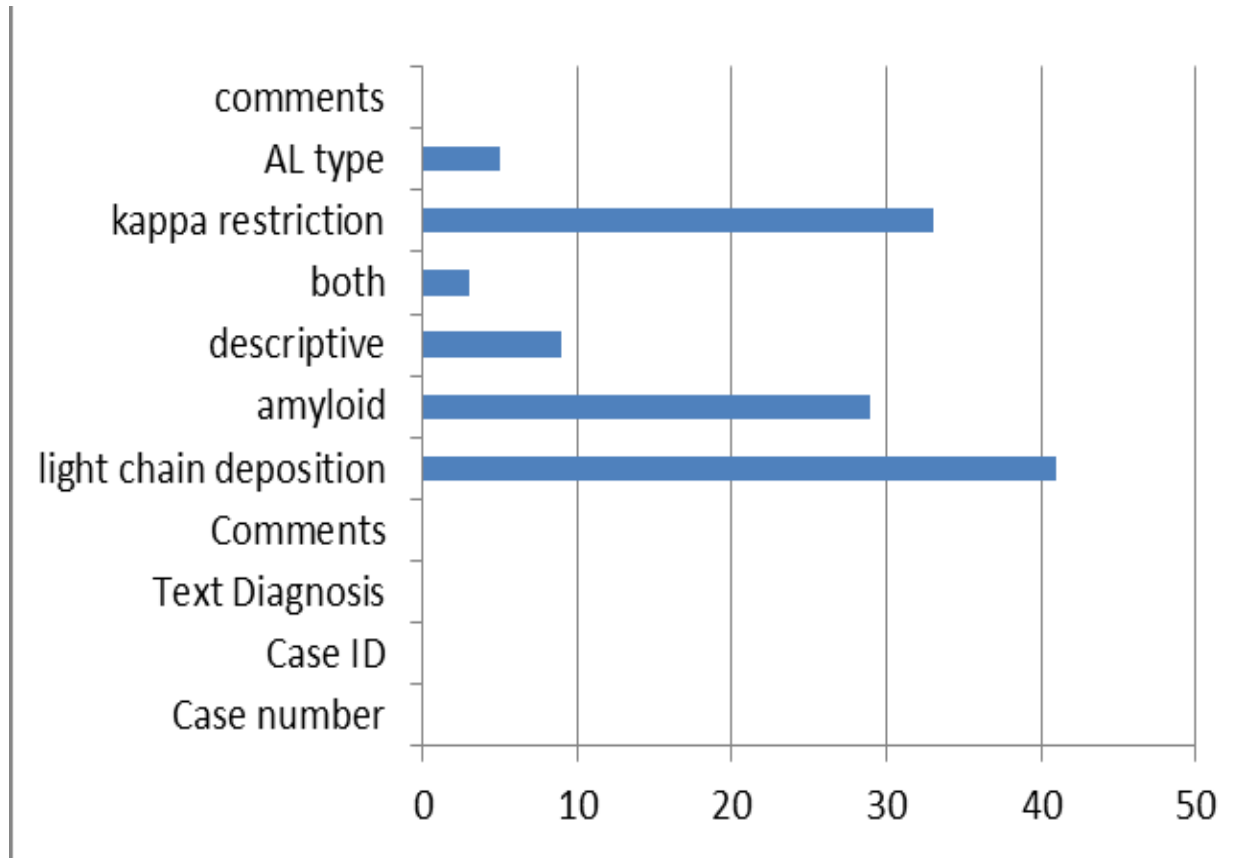


Case LQ5 65F

'Liver lesion segment 6/7'.

From electronic patient record IgG kappa paraproteinaemia.

Section is from background liver

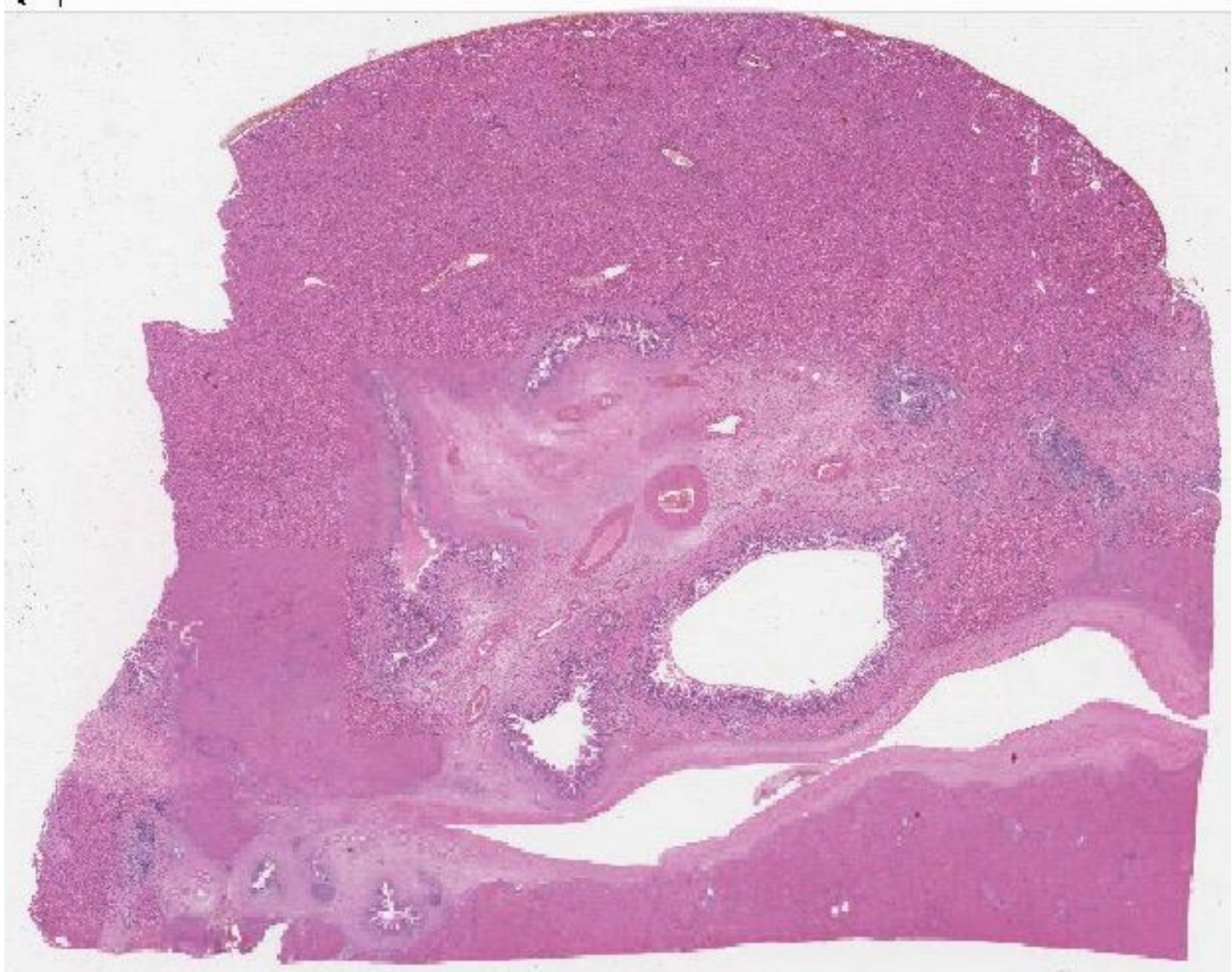


Consensus diagnosis:
Light chain deposition
disease
and/or amyloid

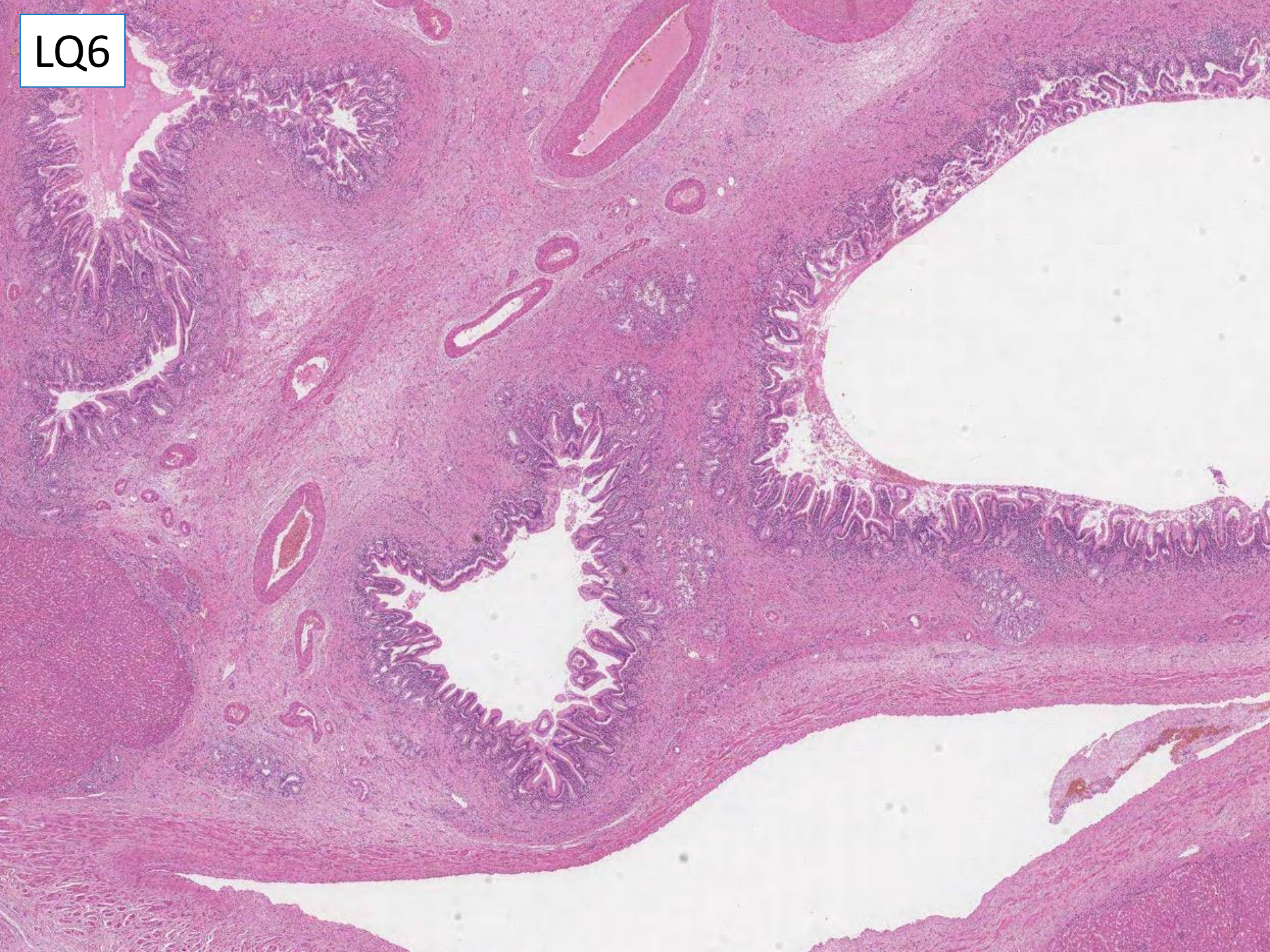
Just a description = 9
Or exclude case?

Case LQ6. 85M

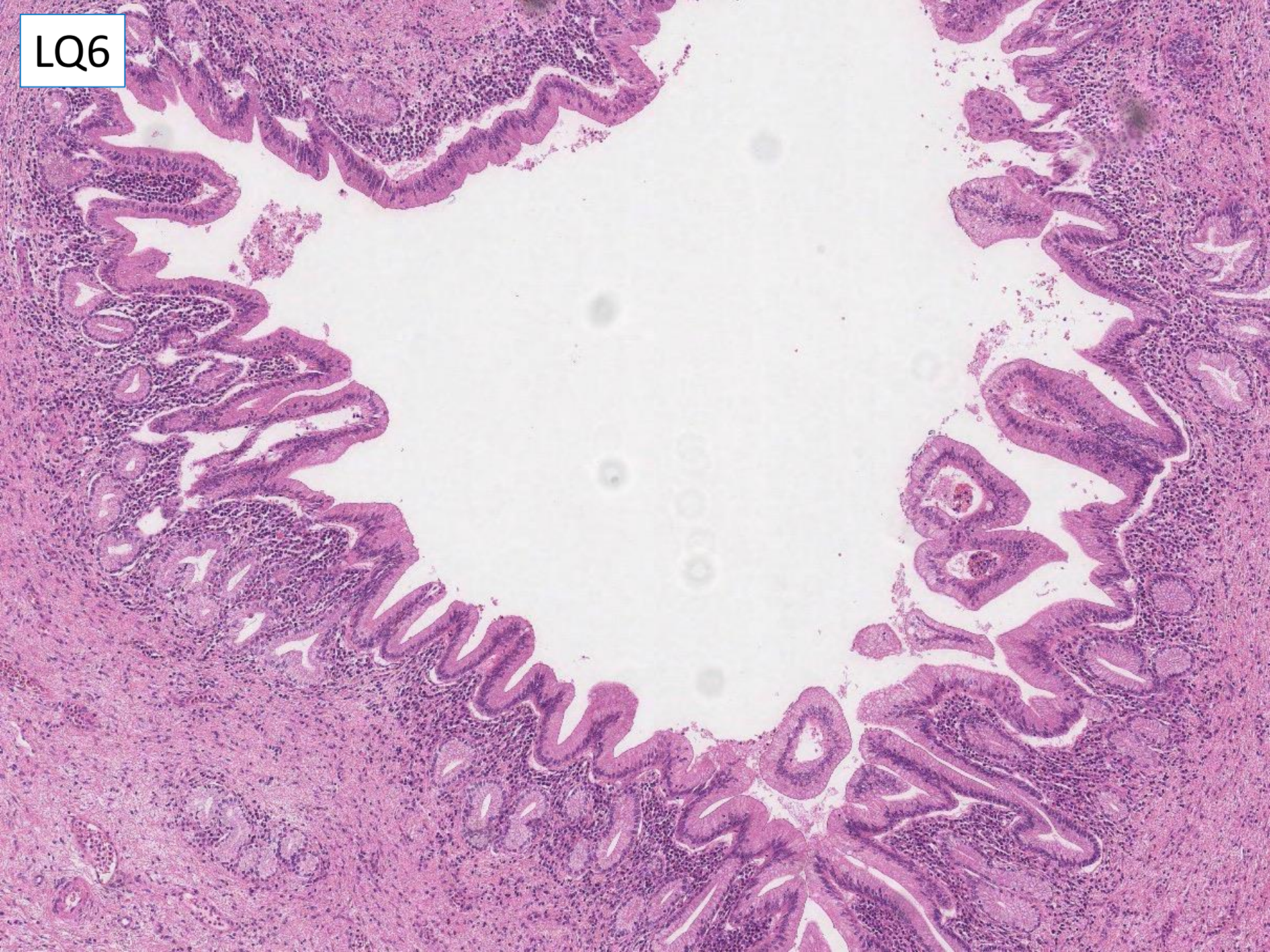
Recurrent abscess in left lobe of liver.



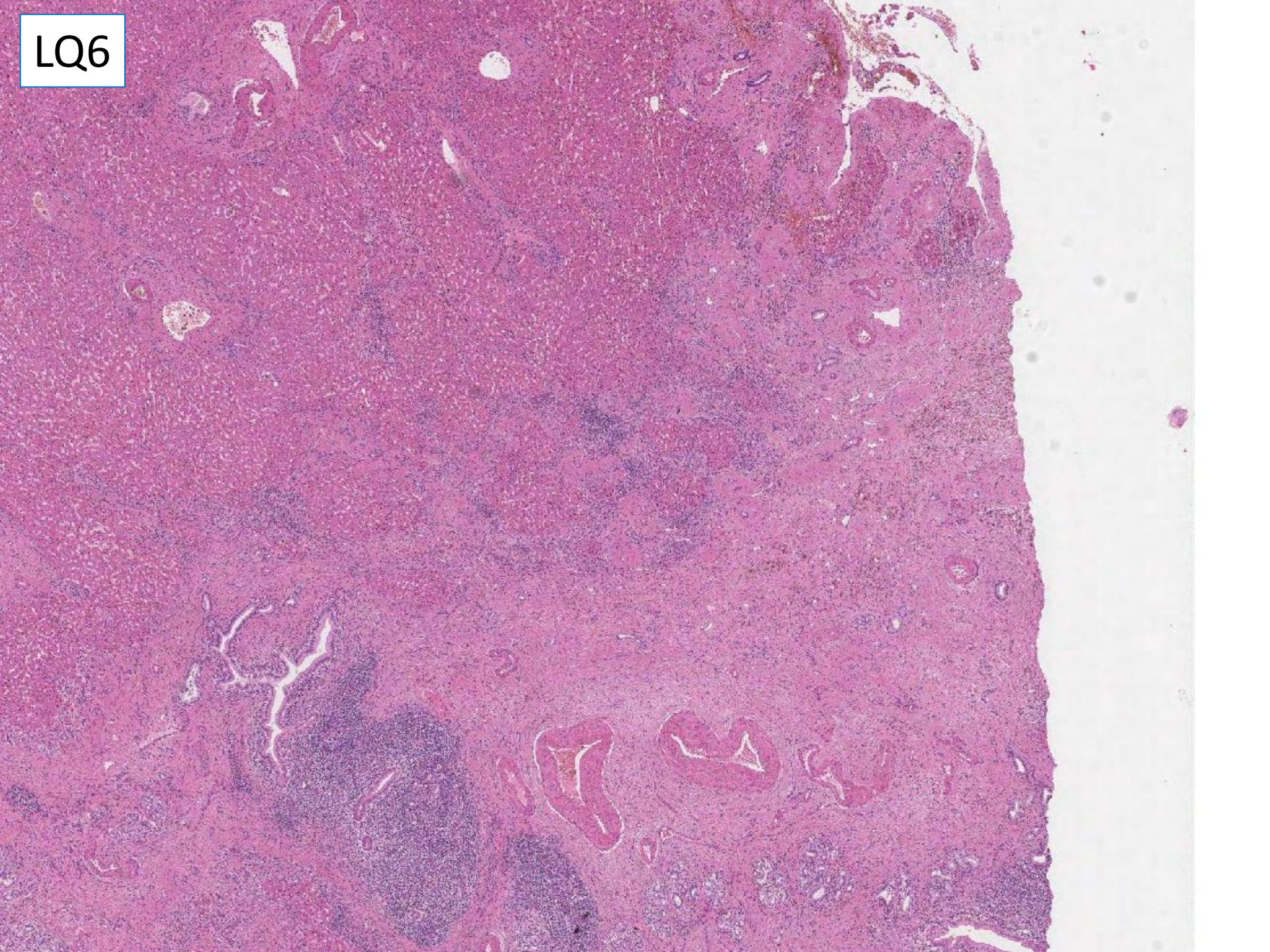
LQ6



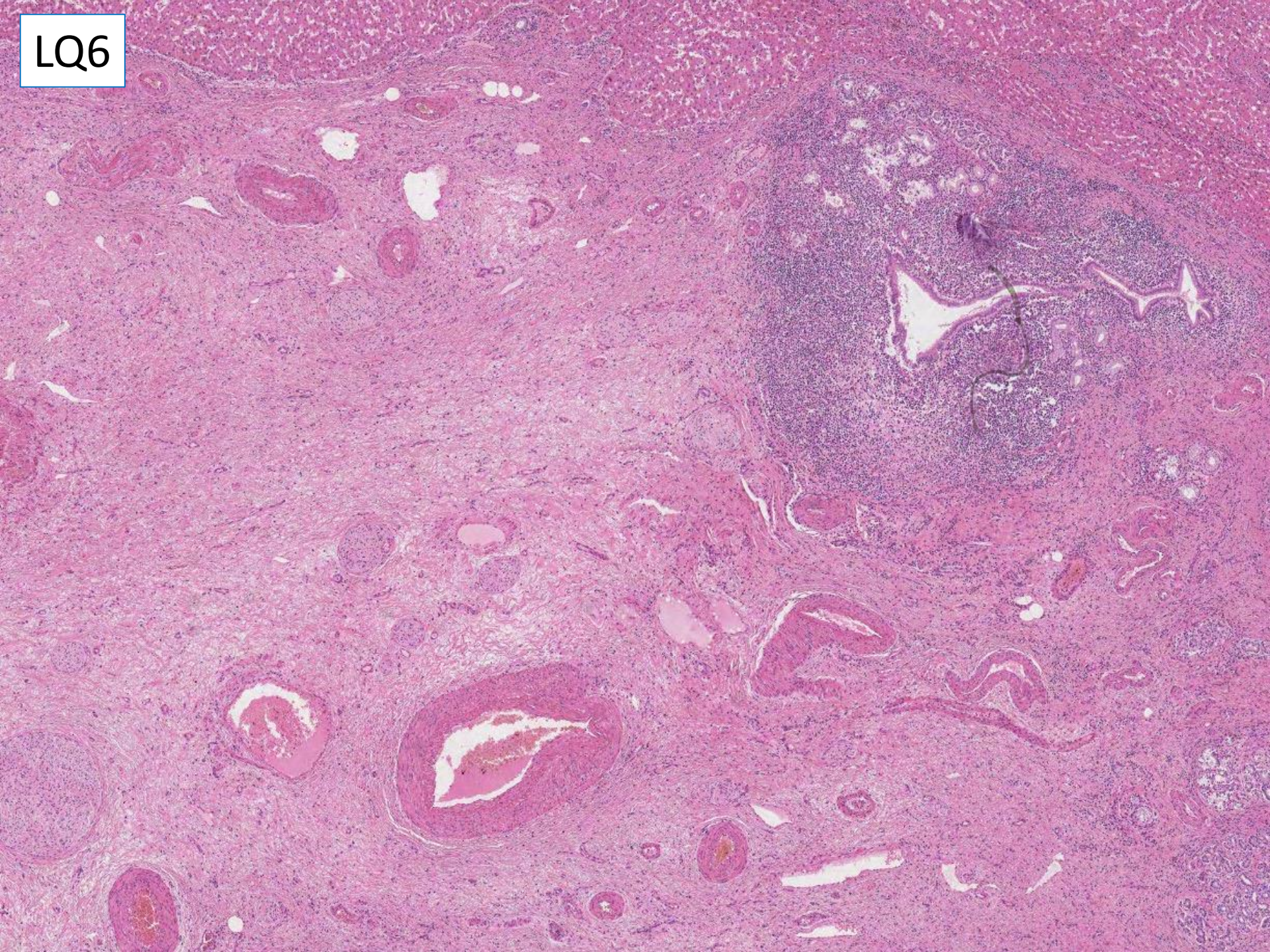
LQ6



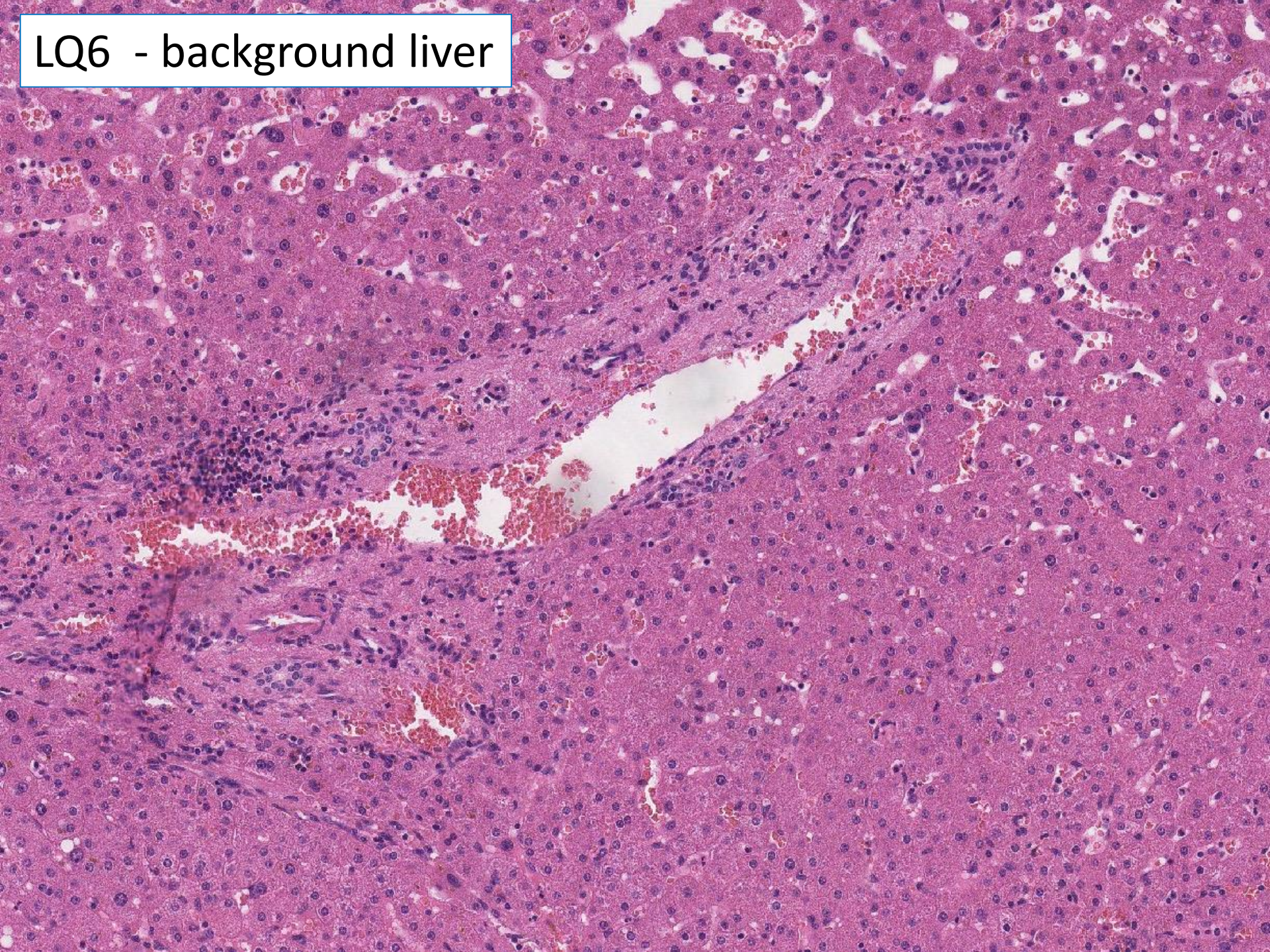
LQ6



LQ6



LQ6 - background liver



Case LQ6. 85M

Recurrent abscess in left lobe of liver.

Chronic cholangitis with differential diagnoses – primary sclerosing cholangitis, IgG4-related disease, gallstones, malformation/scarring	35
Intraduct papillary neoplasm of bile ducts (IPNB)/intraduct papillary mucinous neoplasm (IPMN)/biliary intra-epithelial neoplasia (BilIN)	20
Caroli’s disease	9
Choledochal cyst/Simple cyst	6
Biliary cystadenoma/mucinous cystadenoma	3
Hamartoma	3
Don’t know/no clear diagnosis/biliary lesion	3
IgG4-related disease (as only diagnosis)	1
Fungal abscess	1
Autoimmune hepatitis/hepatitis C overlap	1
Own case	1

Consensus diagnosis:

no consensus for this case.

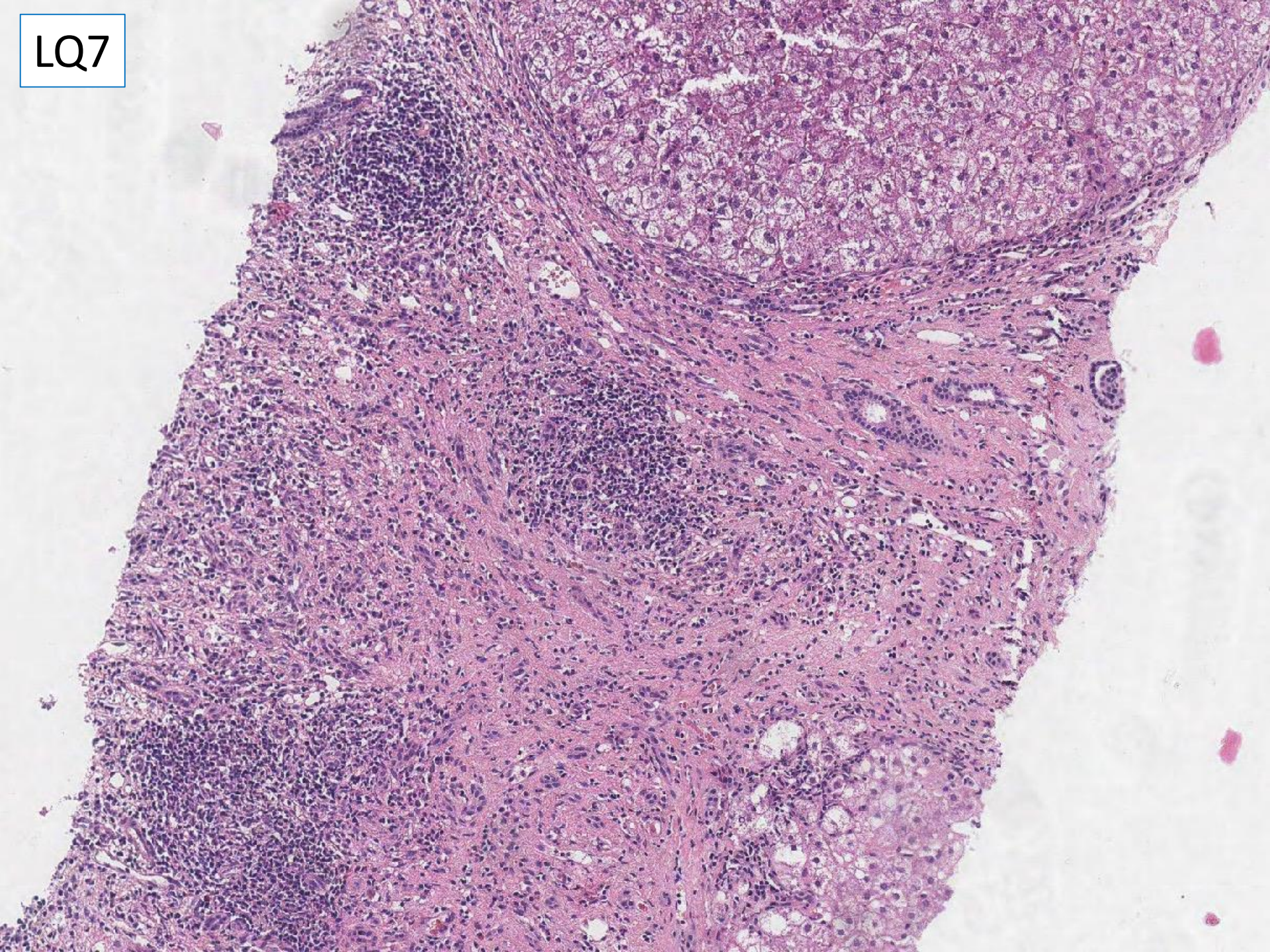
Not suitable for scoring

Case LQ7 60F

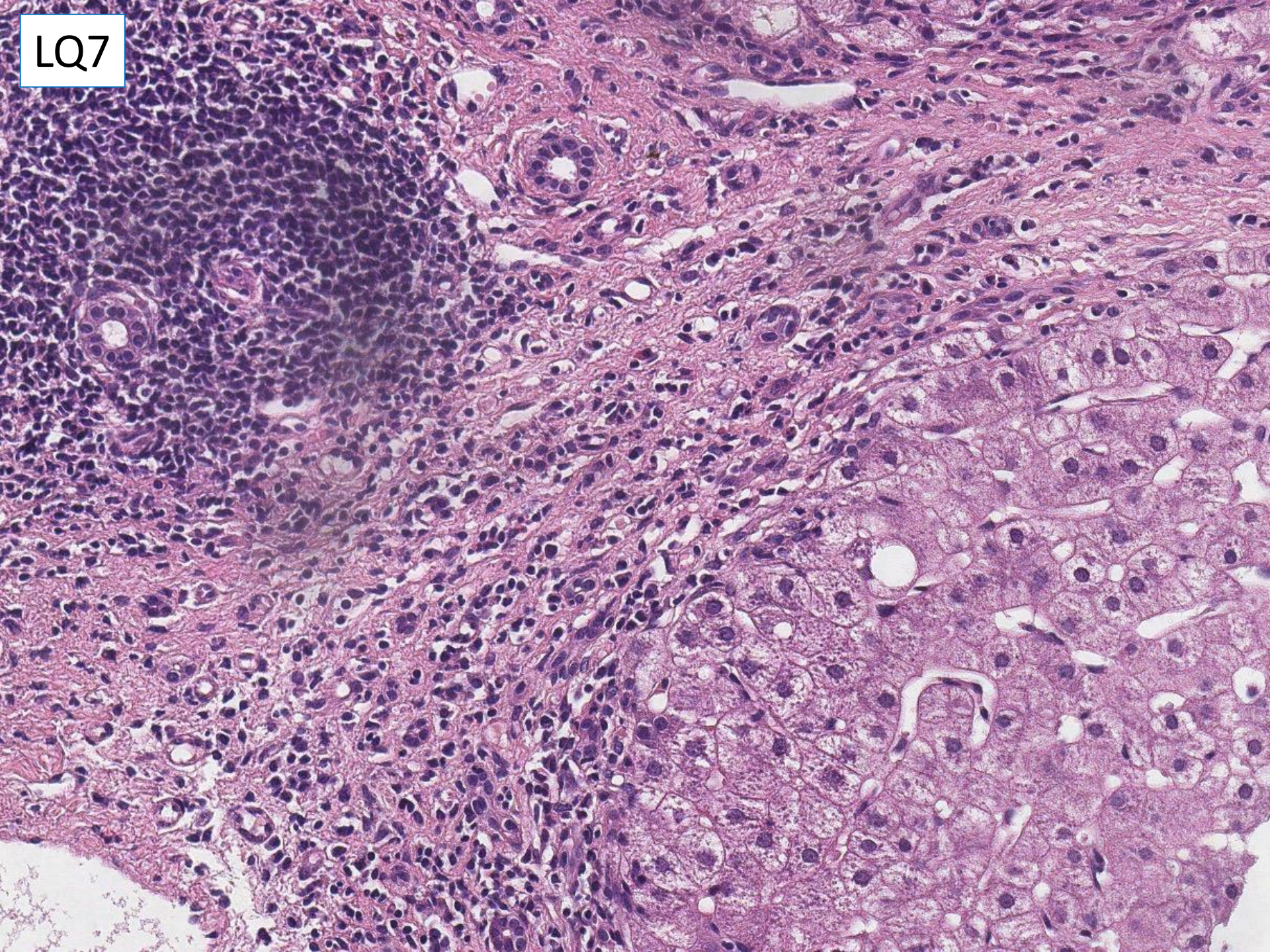
Chronic hepatitis C. Positive mitochondrial antibodies and raised IgG. Type II diabetes and obesity. Liver biopsy to rule out autoimmune hepatitis. (also VG, CK8/18)



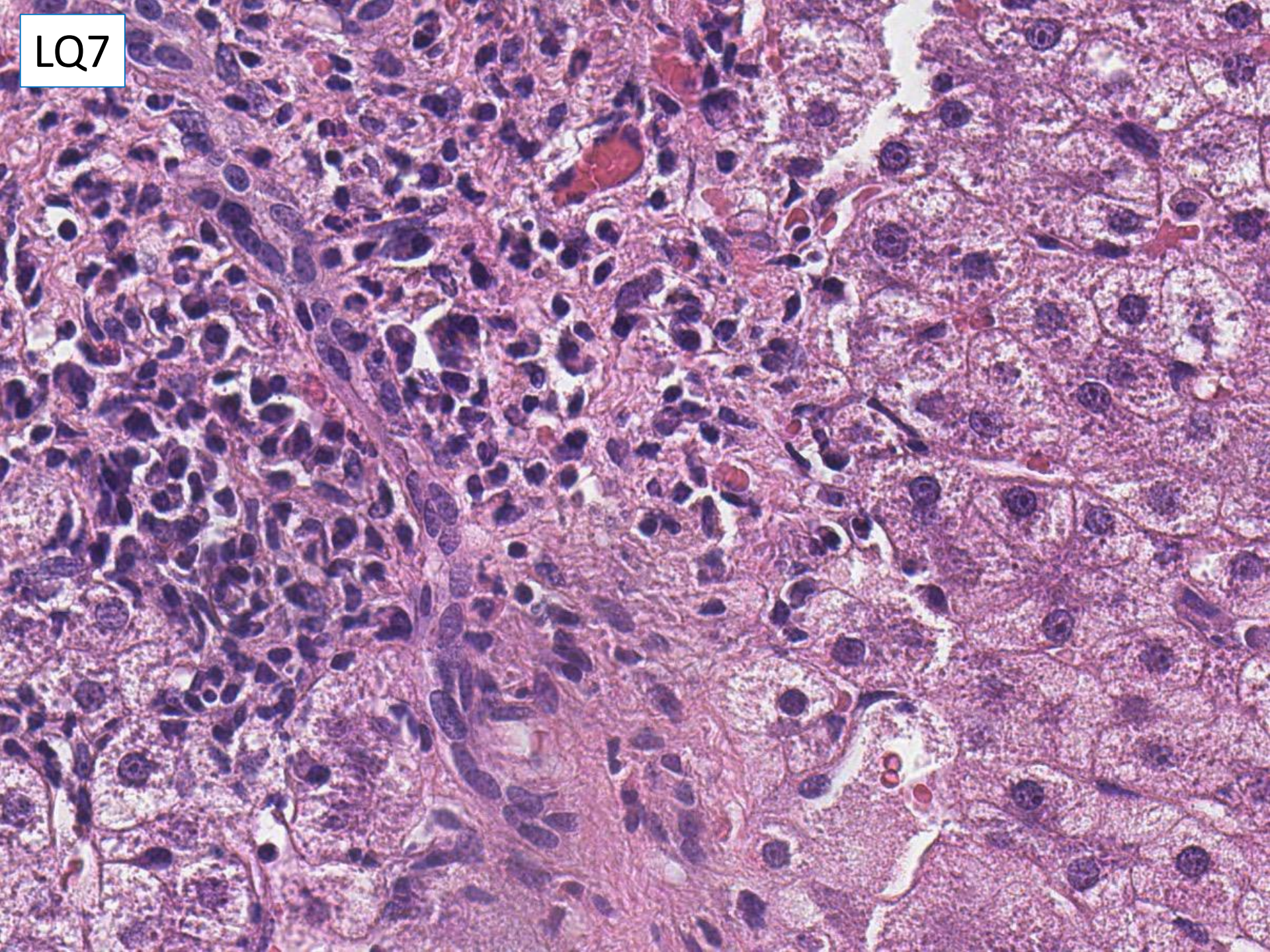
LQ7



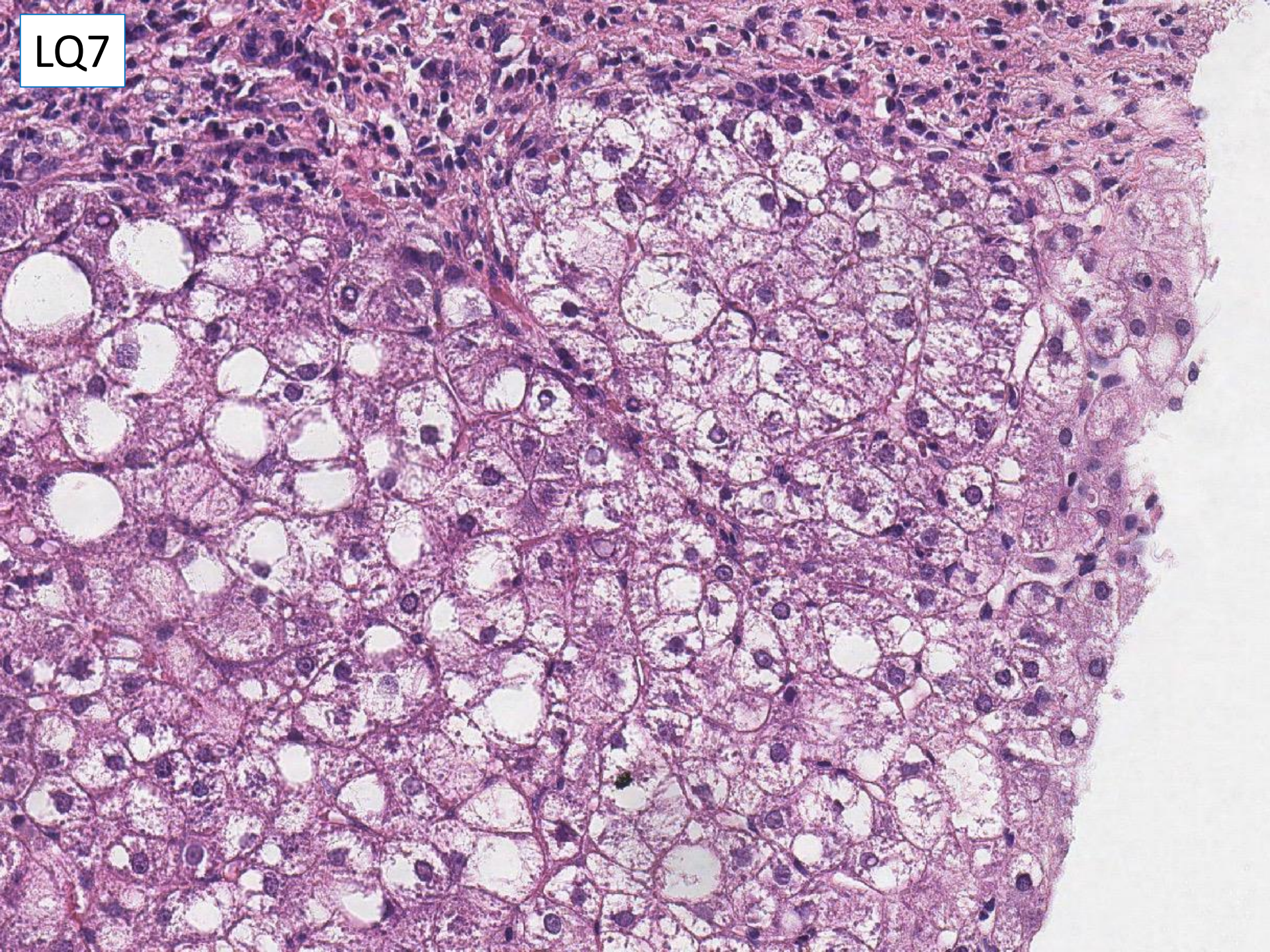
LQ7



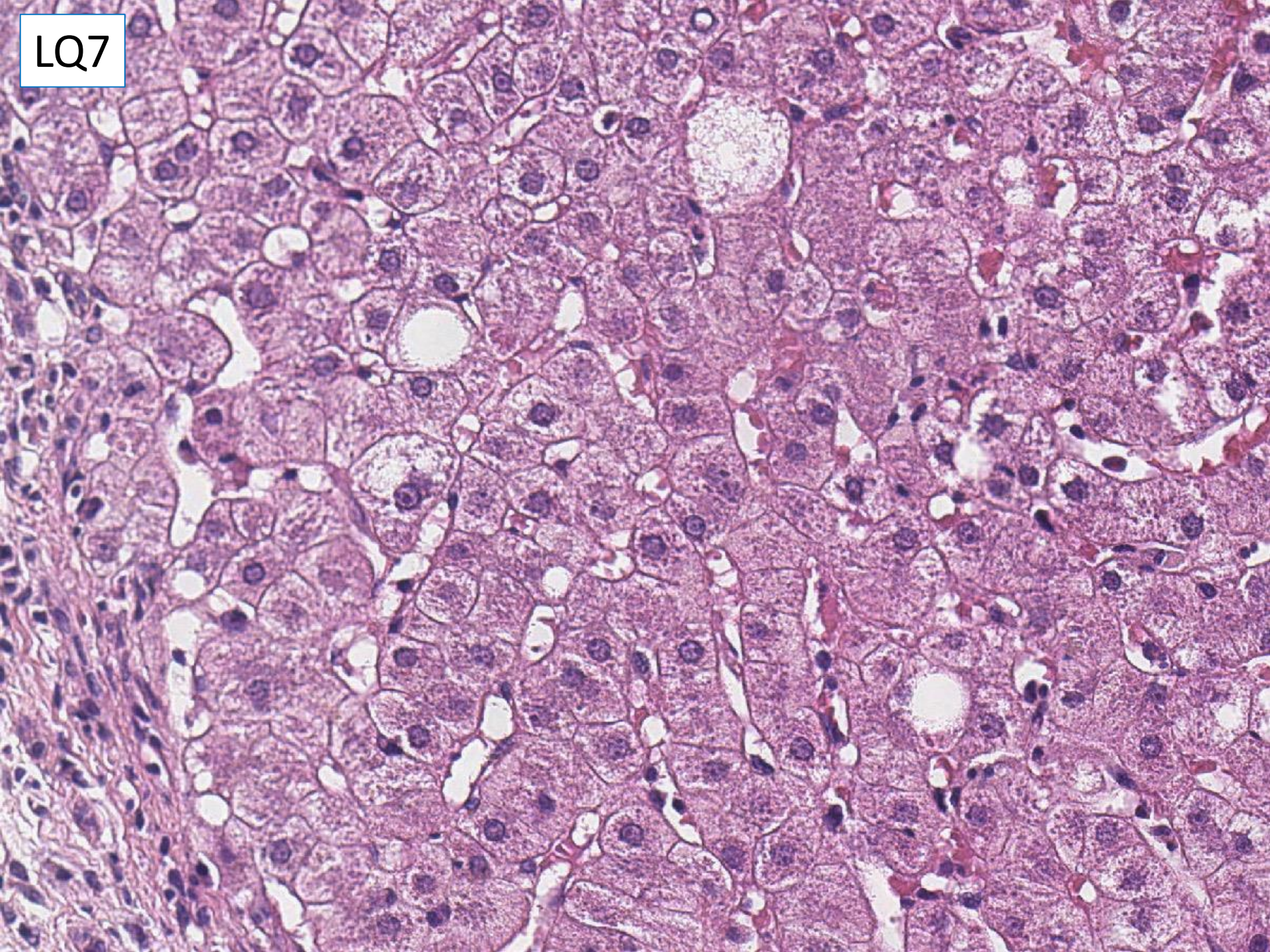
LQ7



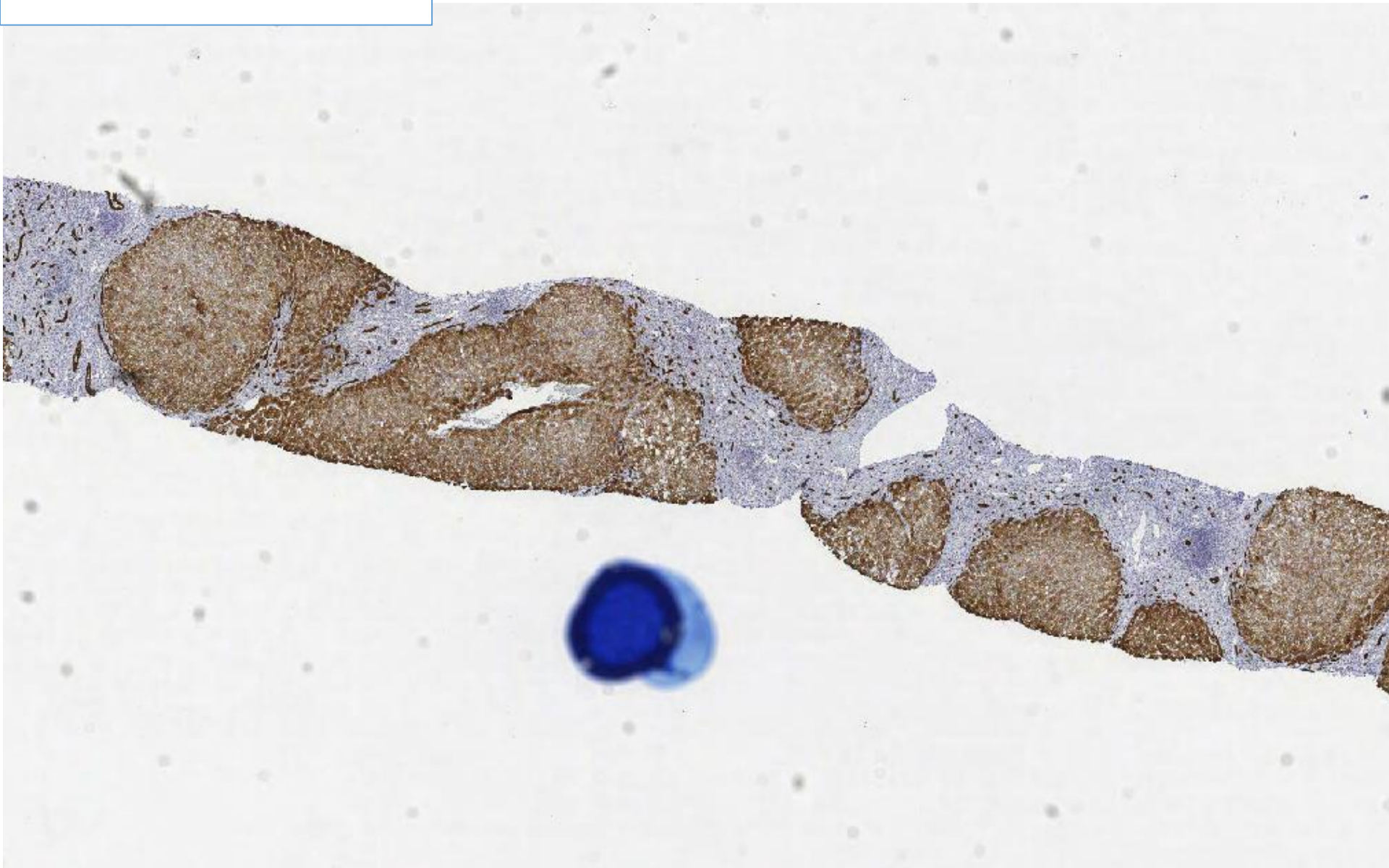
LQ7



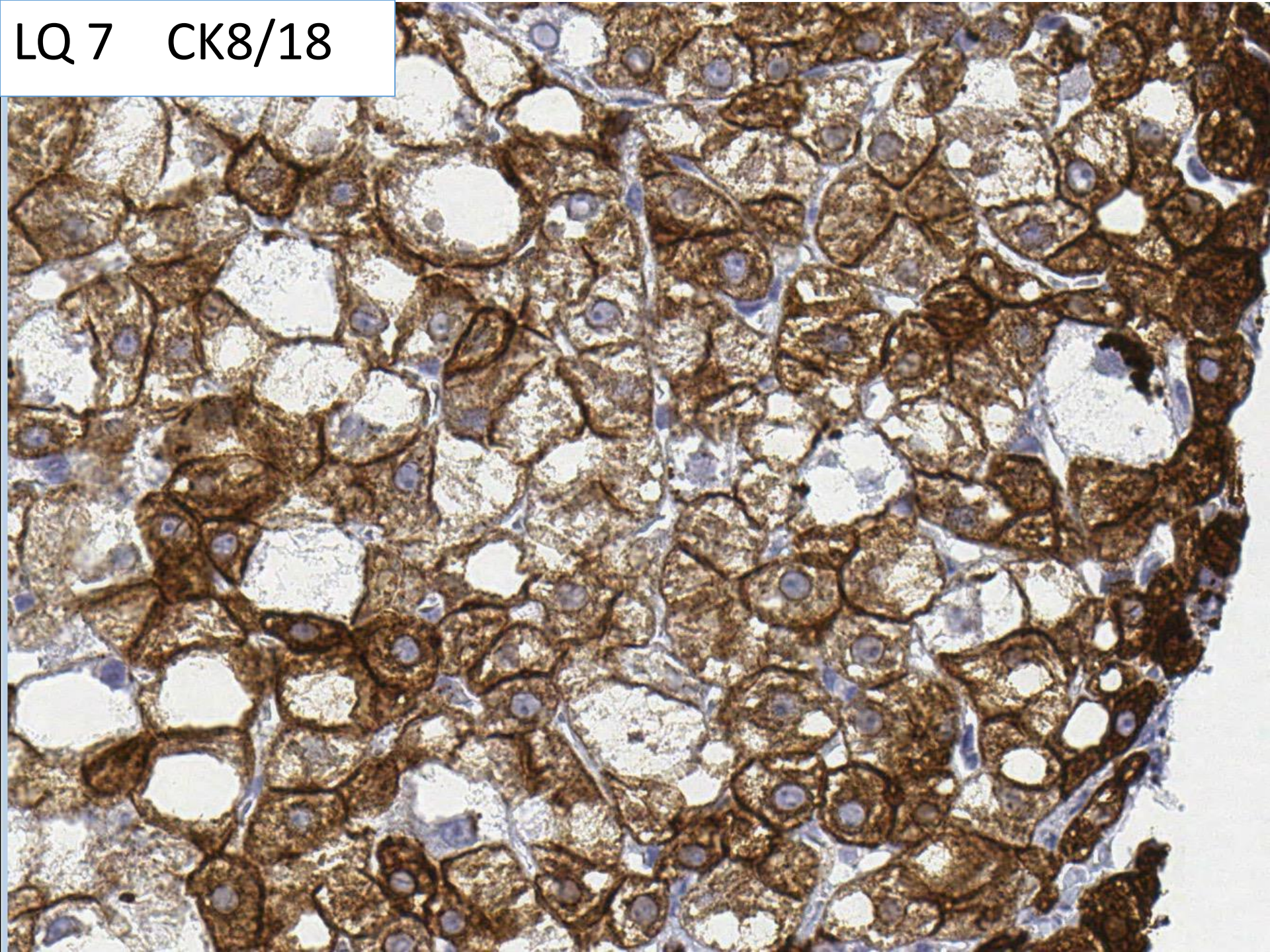
LQ7



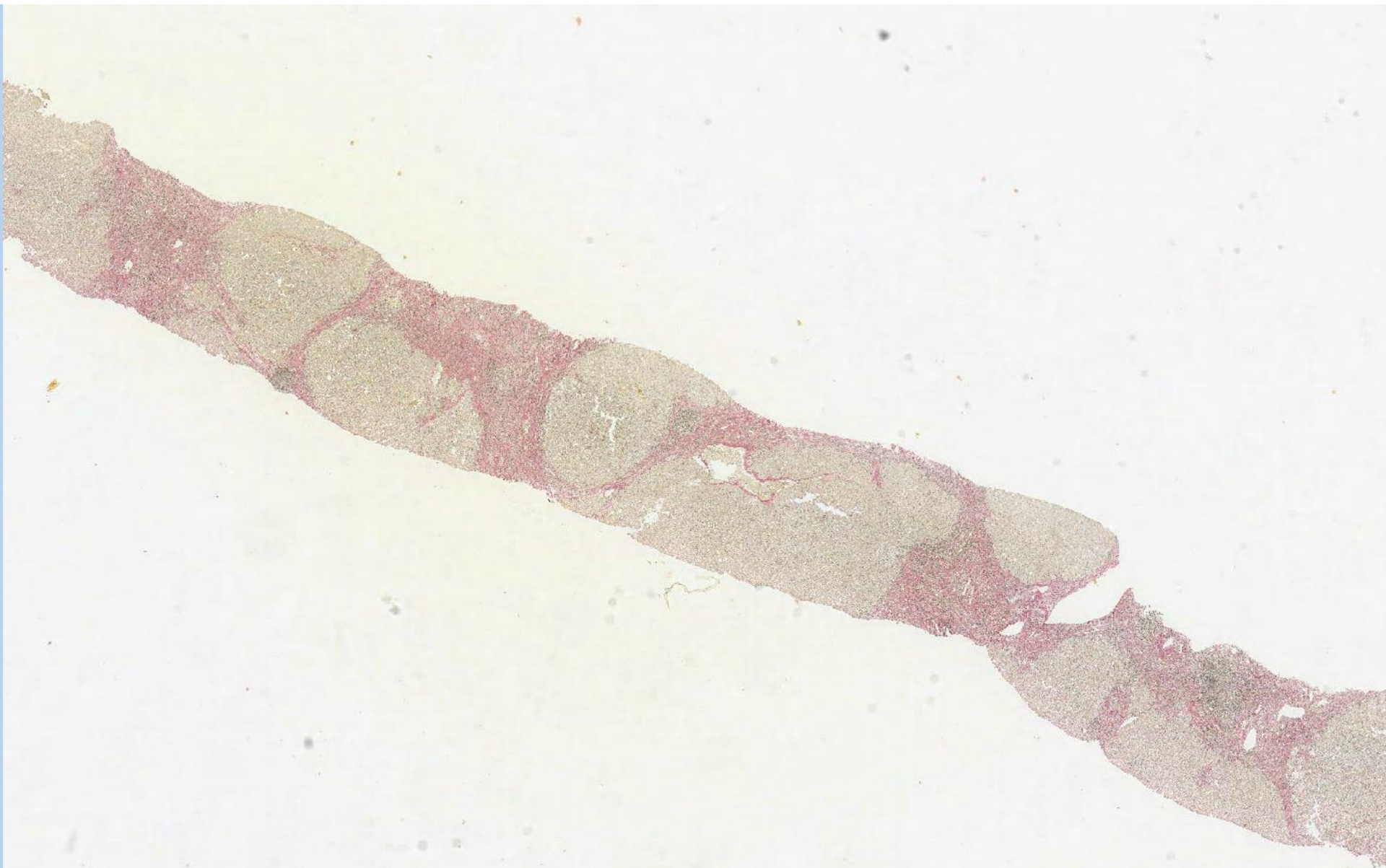
LQ 7 CK8/18



LQ 7 CK8/18



LQ 7 van Gieson



Case LQ7 60F

Chronic hepatitis C. Positive mitochondrial antibodies and raised IgG. Type II diabetes and obesity. Liver biopsy to rule out autoimmune hepatitis. (also VG, CK8/18)

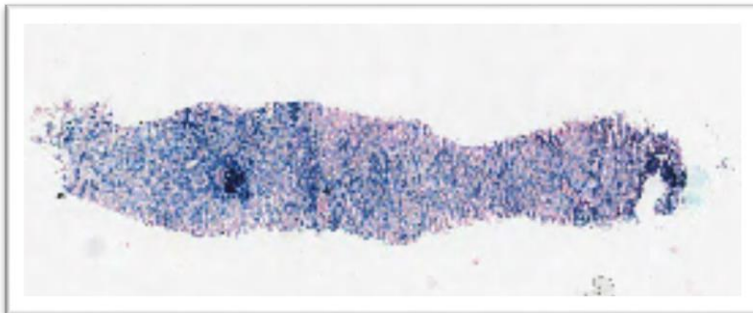
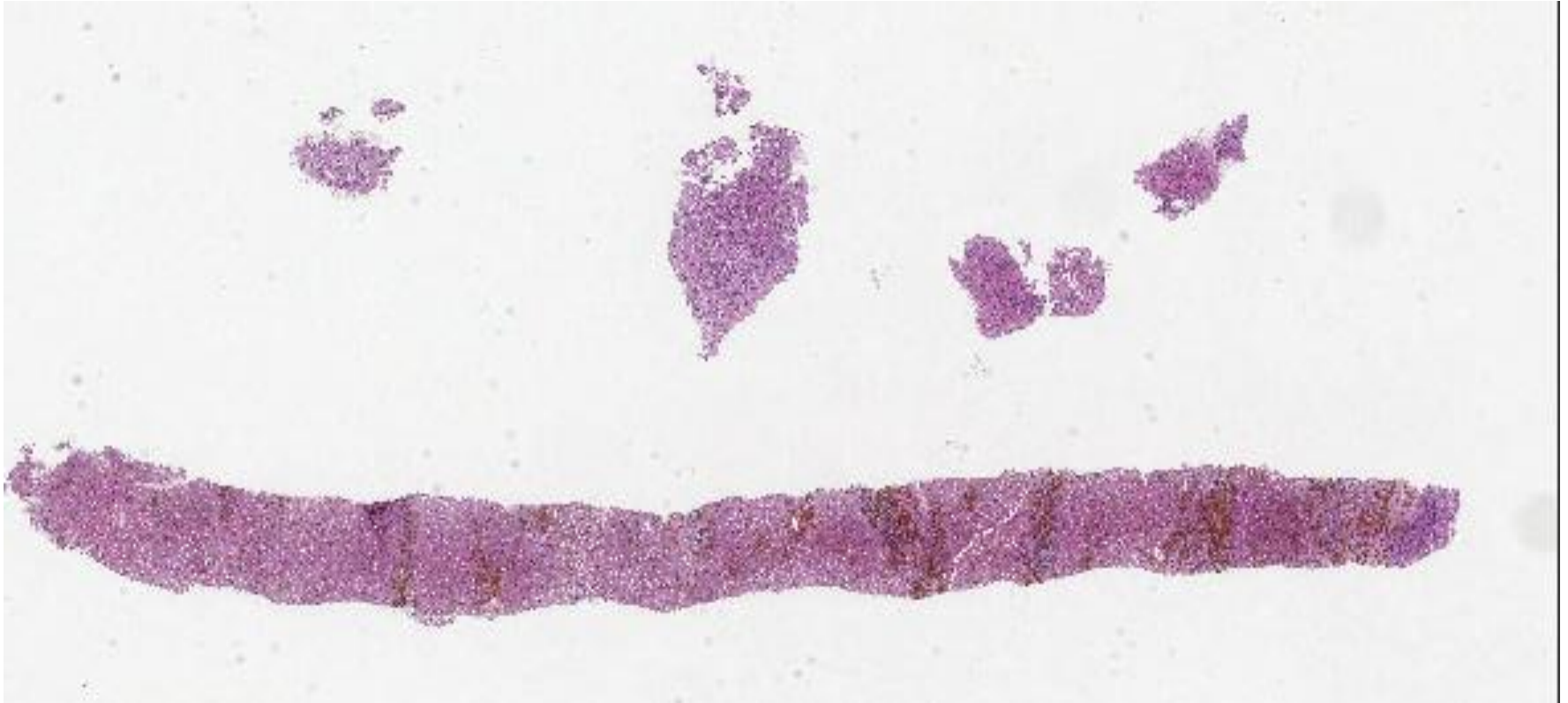
Cirrhosis	83
Hepatitis C	76
Hepatitis C not mentioned	4
Unlikely/not in keeping with hepatitis C	2
Hepatitis B	1
Non-alcoholic steatohepatitis	41
Describe features of steatohepatitis, but don't use that word	9
Steatosis	15
No steatohepatitis / no steatosis	6
Fatty liver disease not mentioned	11
Autoimmune hepatitis likely or possible	48
Not features of autoimmune hepatitis	21
Autoimmune hepatitis not mentioned	12
Primary biliary cholangitis/PBC likely or possible	17
No features of biliary disease	25
Biliary disease not mentioned	30
Needs Orcein/CK7 to look for biliary features	4
Overall:	
HCV only	10
HCV and steatohepatitis	17
HCV and autoimmune hepatitis, not PBC	14
HCV and PBC, not AIH	3
HCV and PBC and AIH - not steatohepatitis	6
Full house: HCV, steatohepatitis and autoimmune disease	26

Consensus response:
 cirrhosis, mixed aetiology - not just hepatitis C.
 But there is no consensus about the relative contributions of hepatitis C, steatohepatitis, and autoimmune disease either AIH or PBC.
 In practice this biopsy would need to be discussed at a CPC meeting.

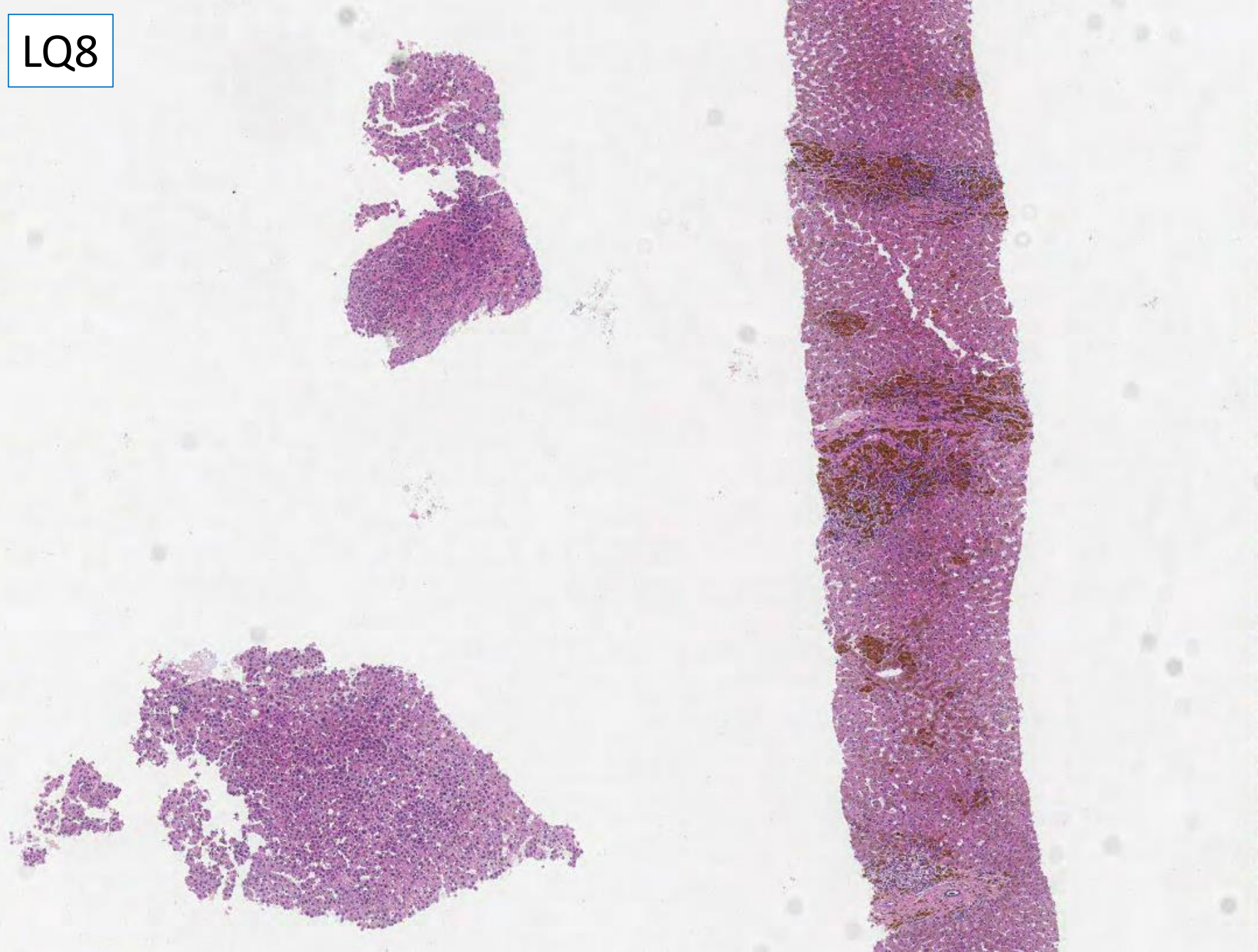
Hep C only – half marks

Case LQ8 69M

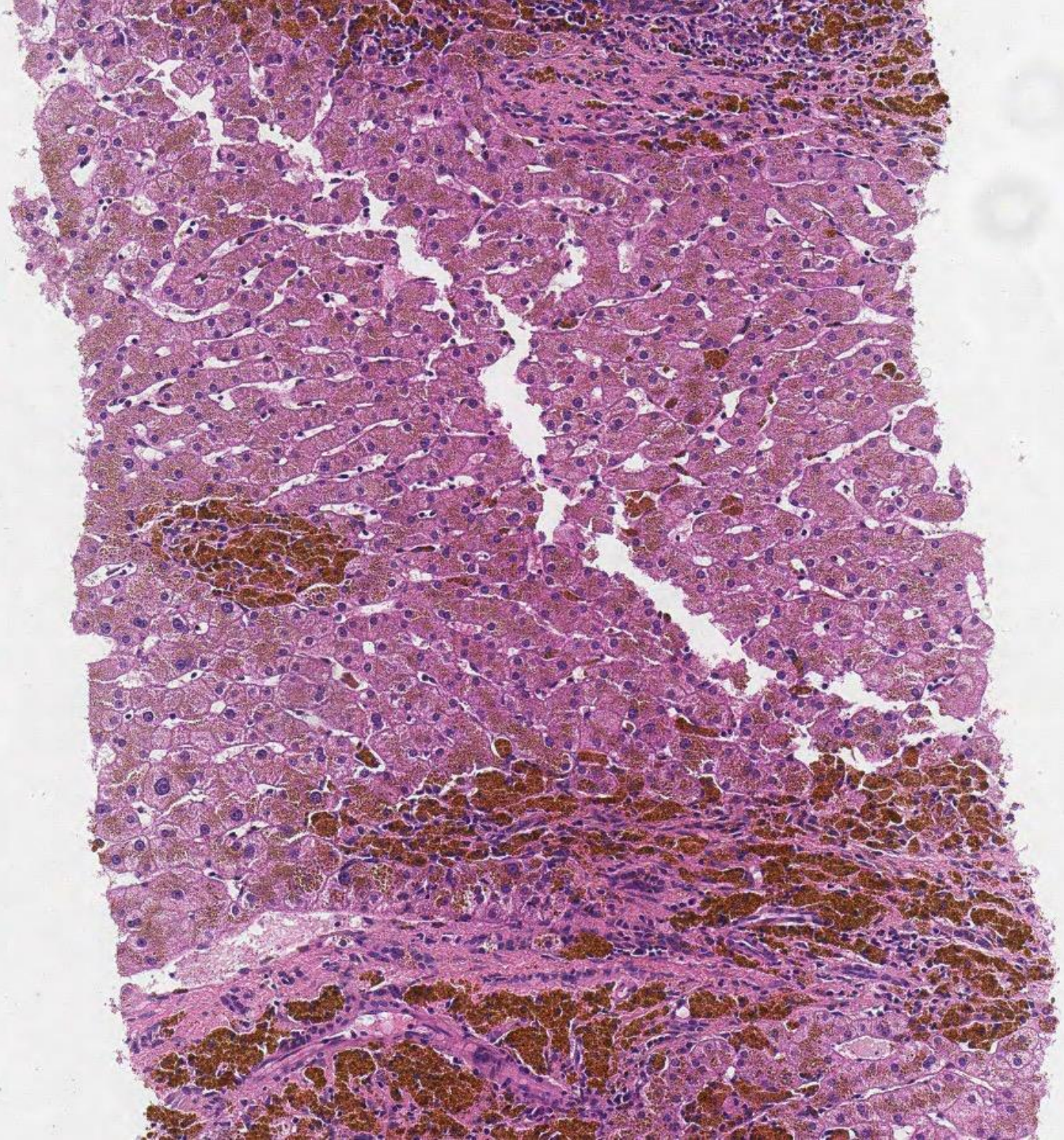
? HCC pre-ablation. 18G biopsy. Also Perls stain (little tissue left in block)



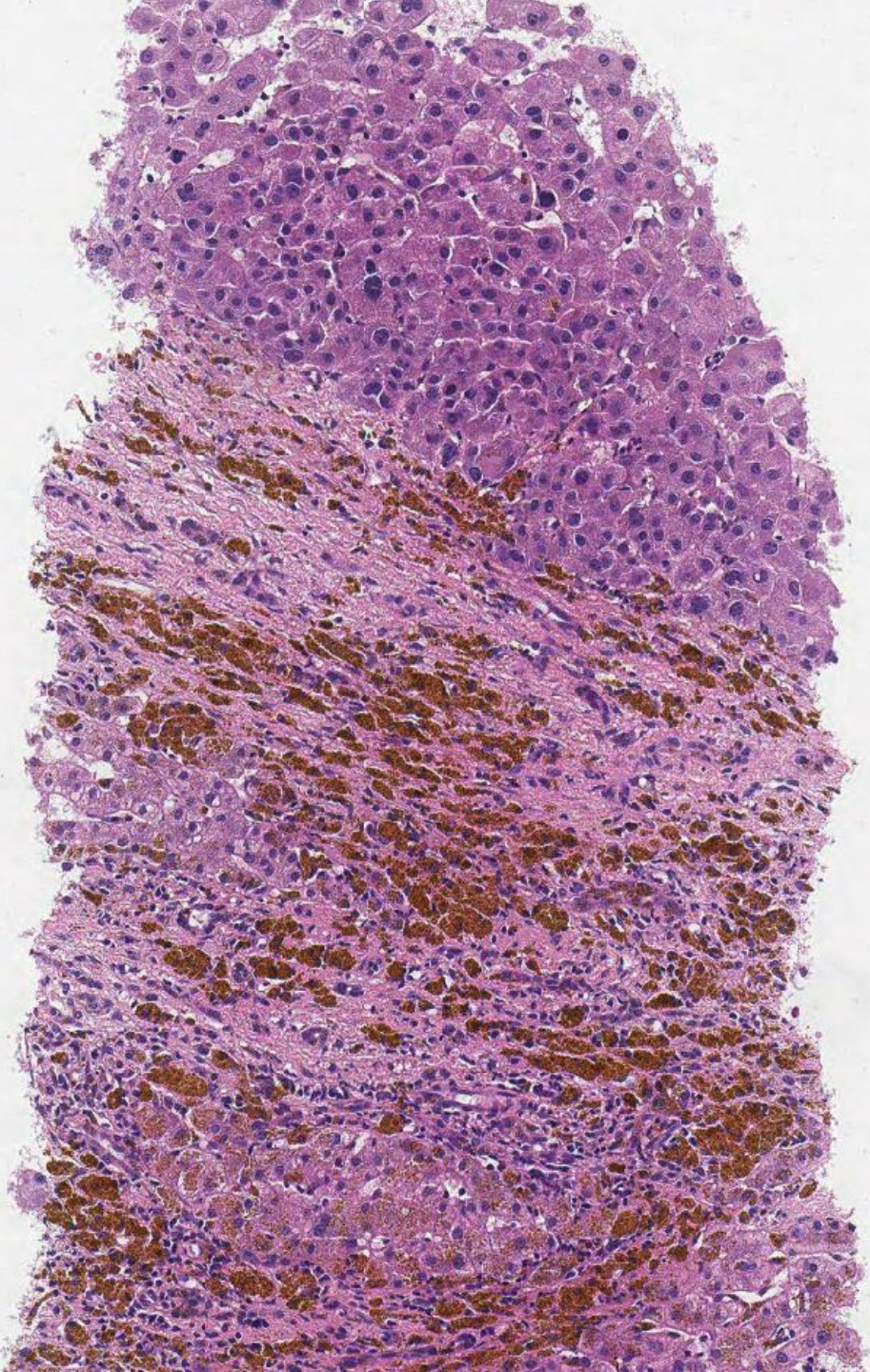
LQ8



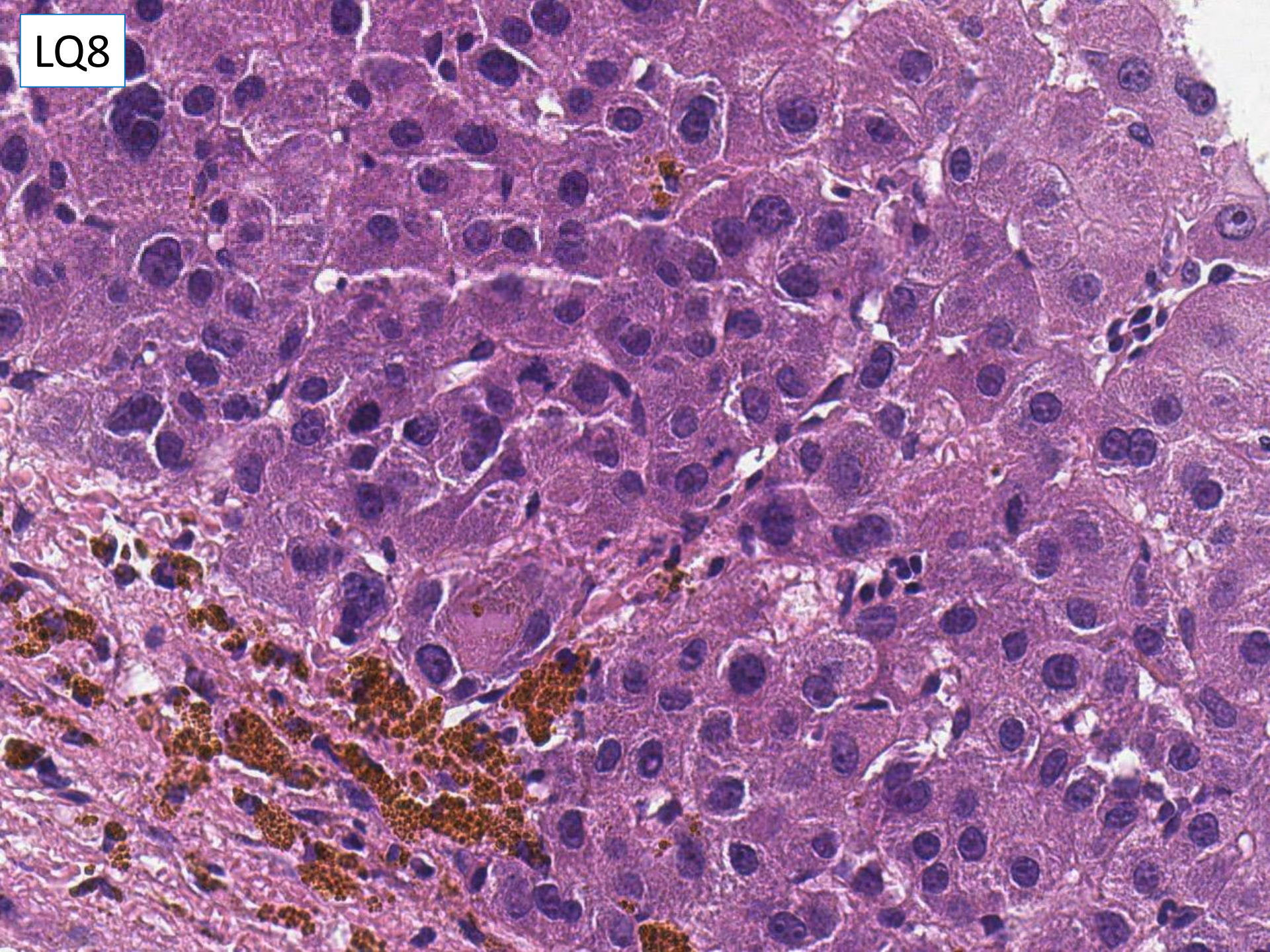
LQ8



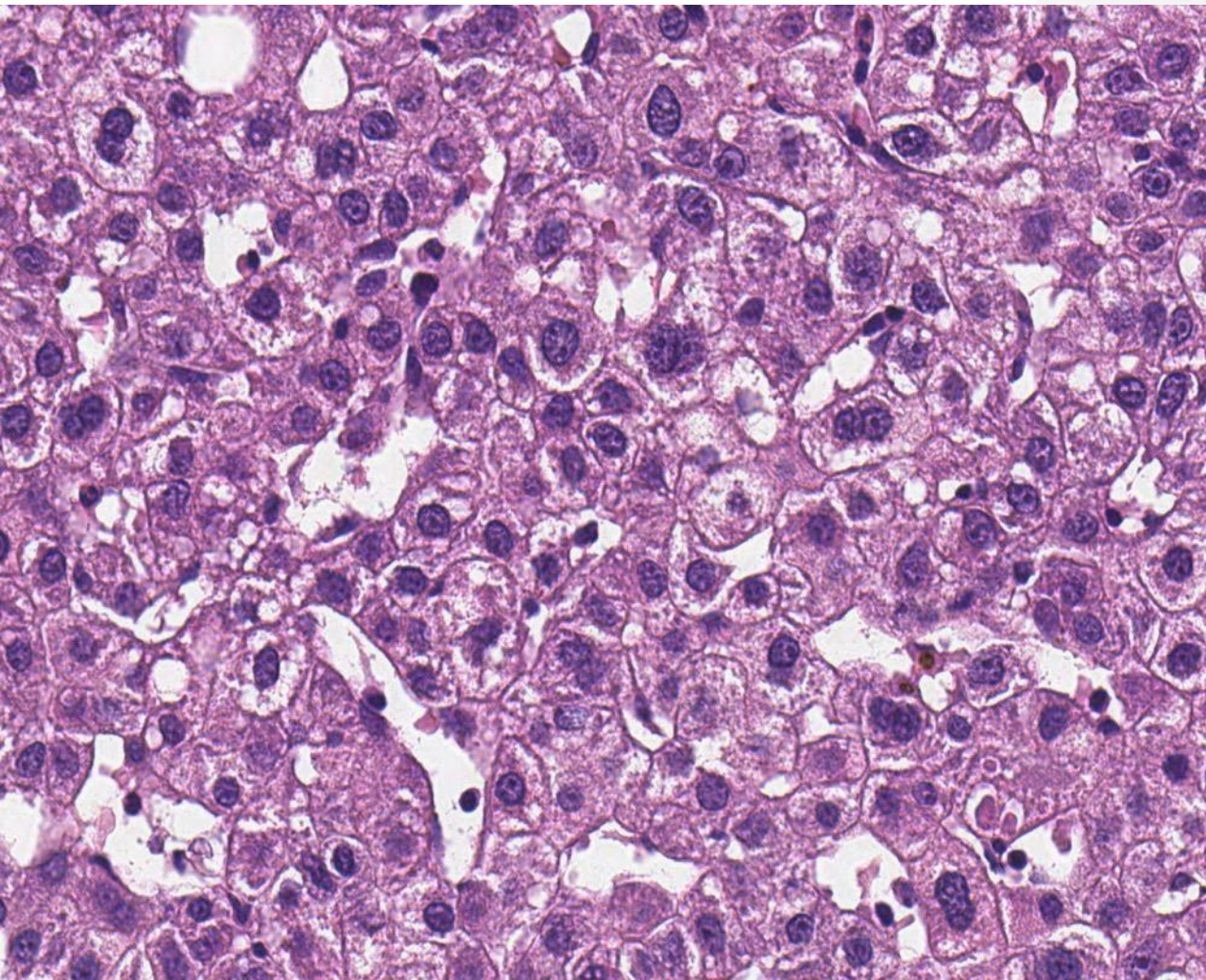
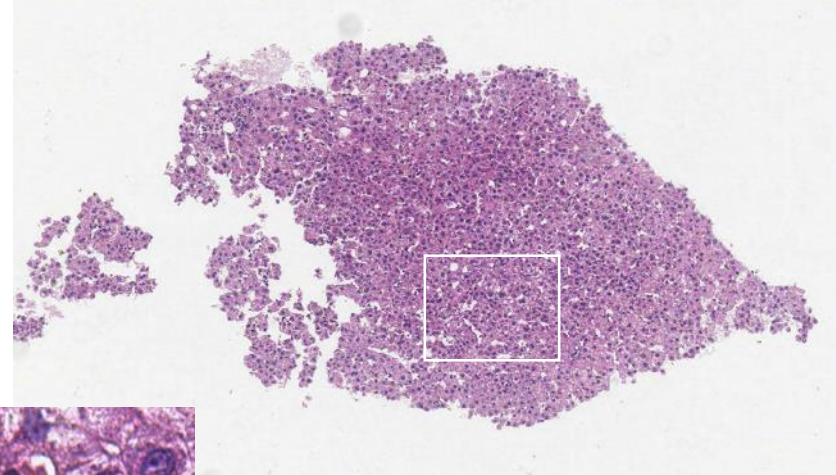
LQ8



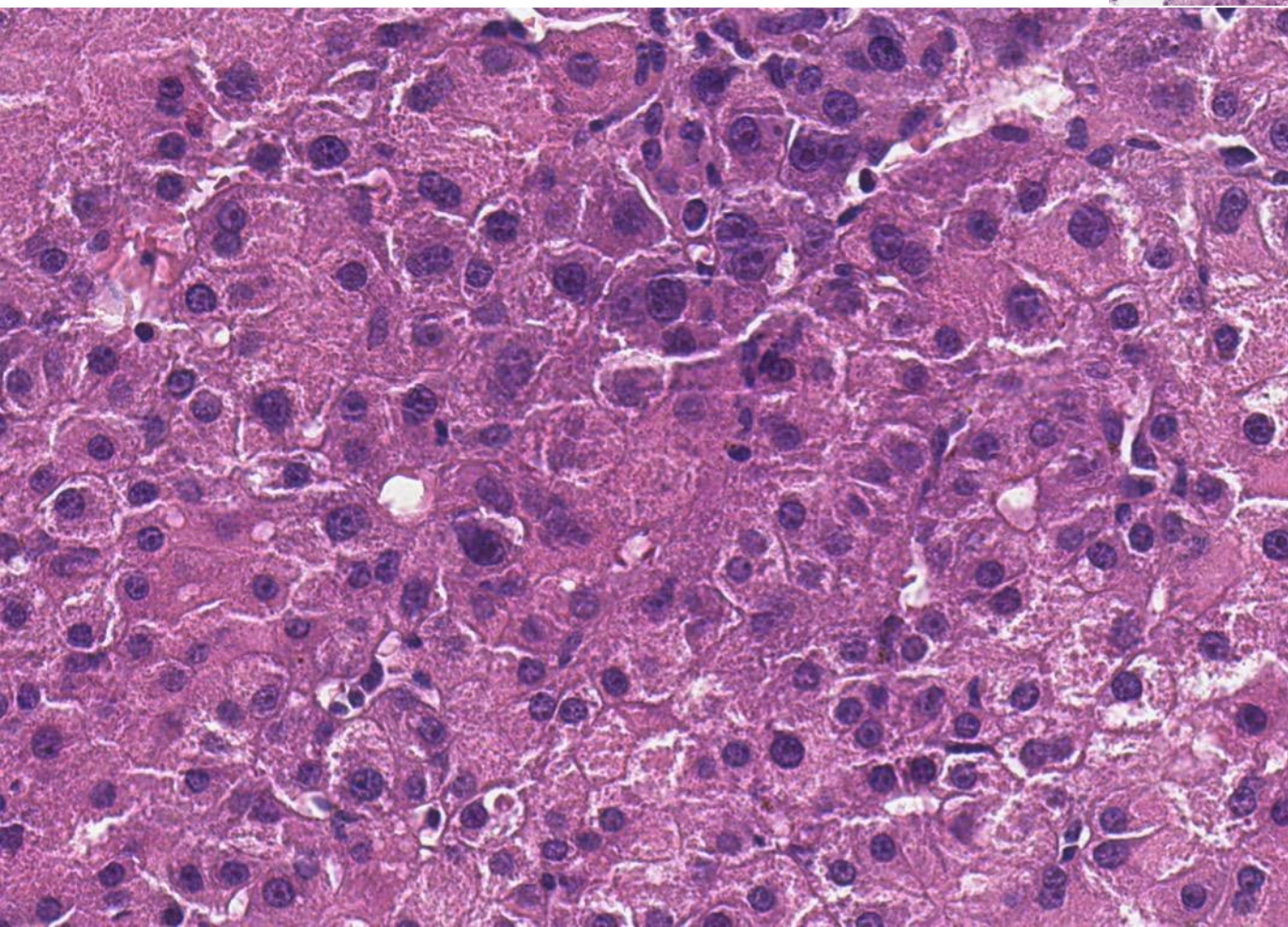
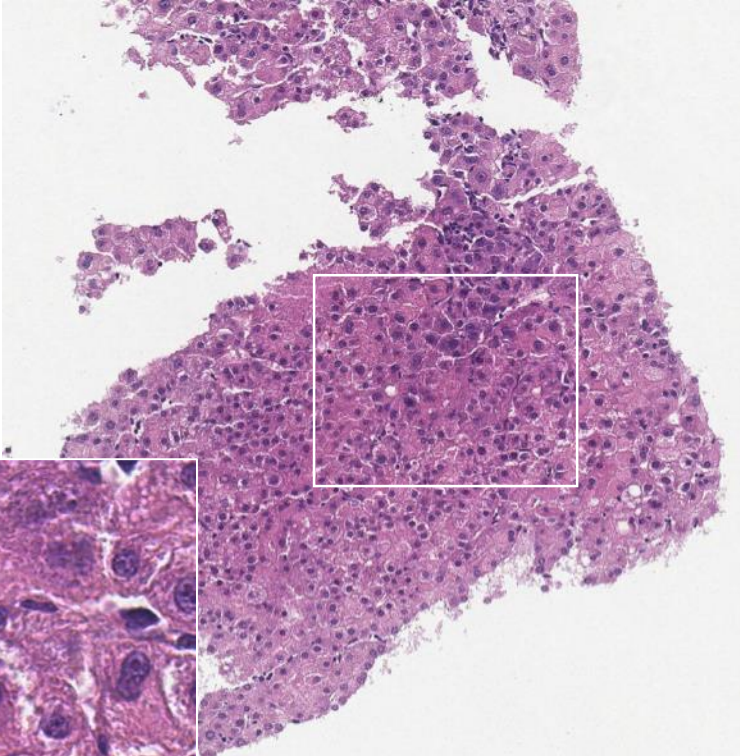
LQ8



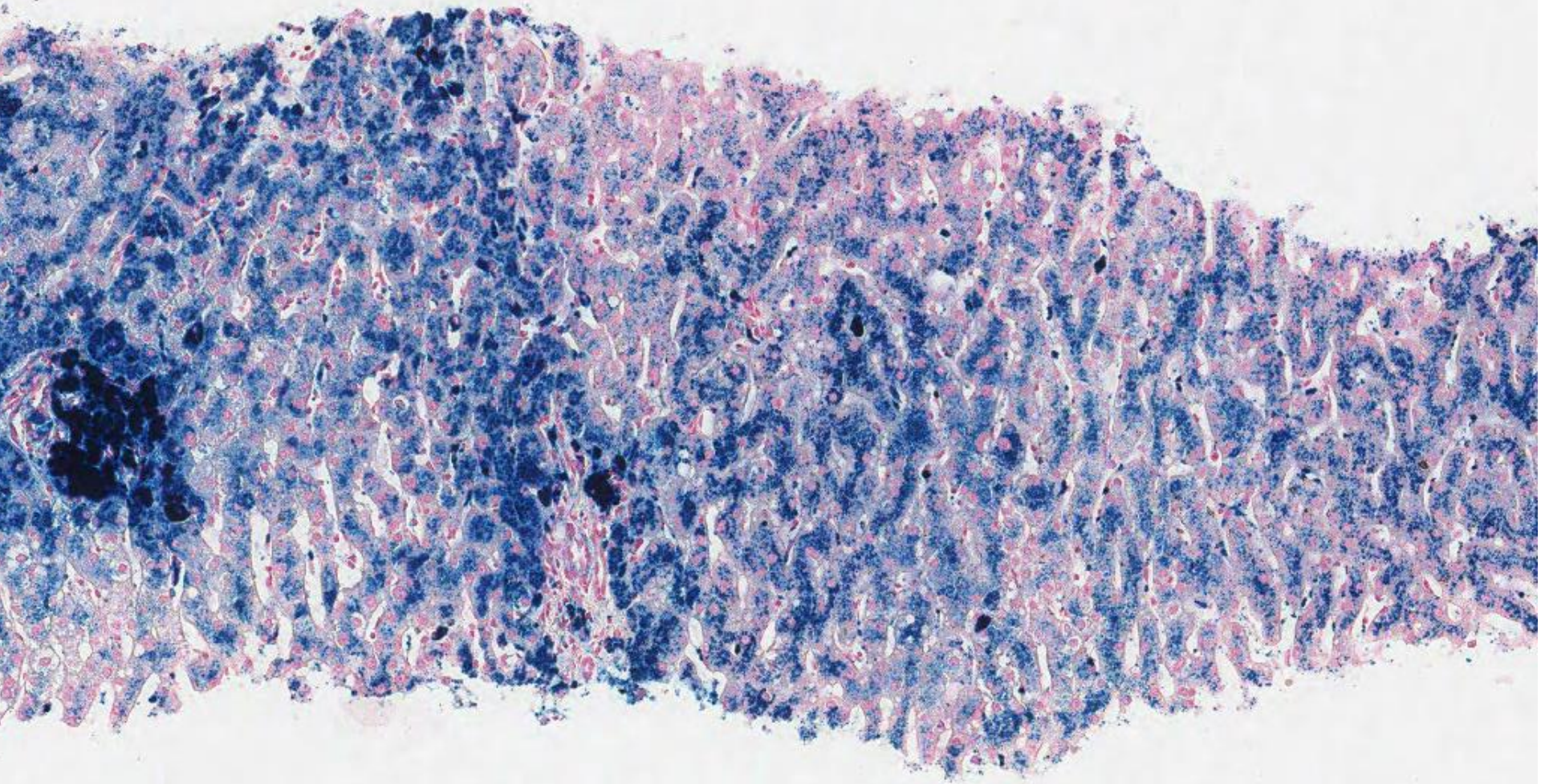
LQ8



LQ8



LQ 8 Perls



Case LQ8 69M

? HCC pre-ablation. 18G biopsy. Also Perls stain (little tissue left in block)

Hepatocellular carcinoma	50
Suspect HCC, do additional stains	17
HGDN or HCC	1
Small cell dysplasia	2
No HCC	3
No mention of a focal lesion	11
Severe iron overload and either haemochromatosis or discussion of possible cause	83
Of which Haemochromatosis/genetic cause/transfusion related?	78
No cause of siderosis	5
Cirrhosis probable or definite	9
Bridging fibrosis, portal fibrosis	14
'not cirrhotic'	10
Insufficient for stage/need special stains	16
No mention of stage	31

Consensus diagnosis:

hepatocellular carcinoma, or suspect HCC and do additional stains;

background iron overload, investigate for cause,

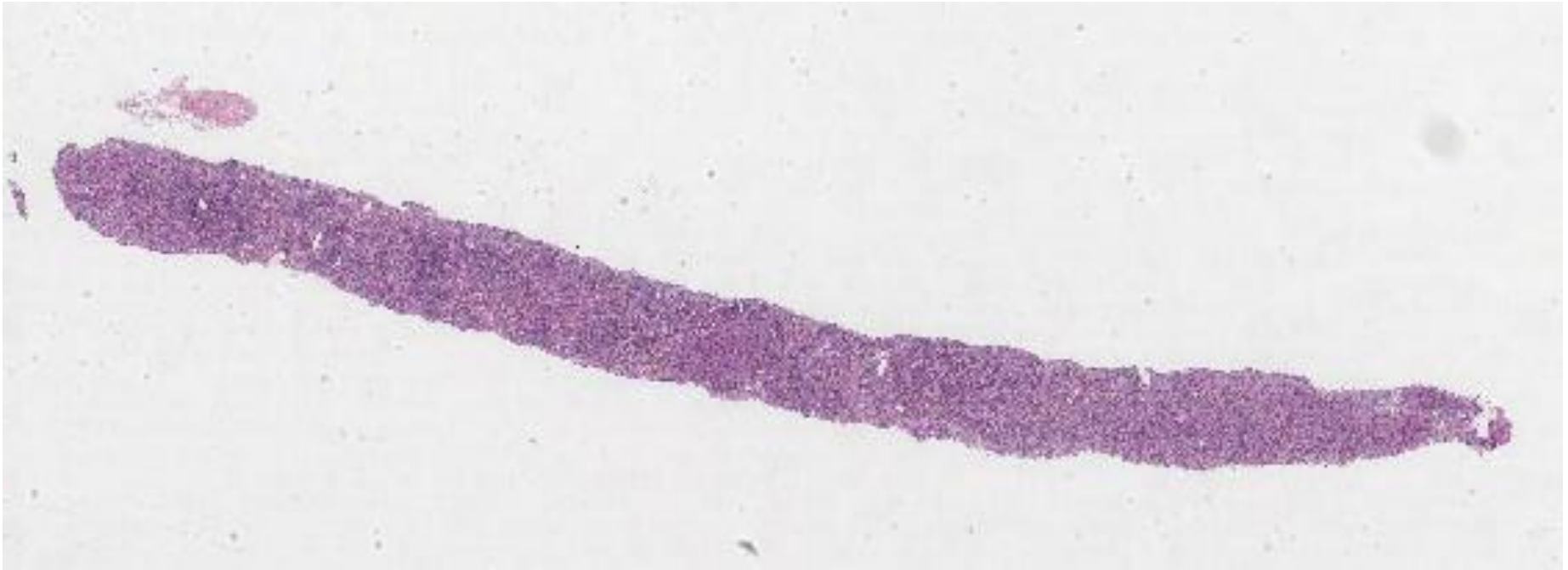
probably not cirrhotic but insufficient in the biopsy to assess the stage.

Survey results: Small cell dysplasia 0/2/3

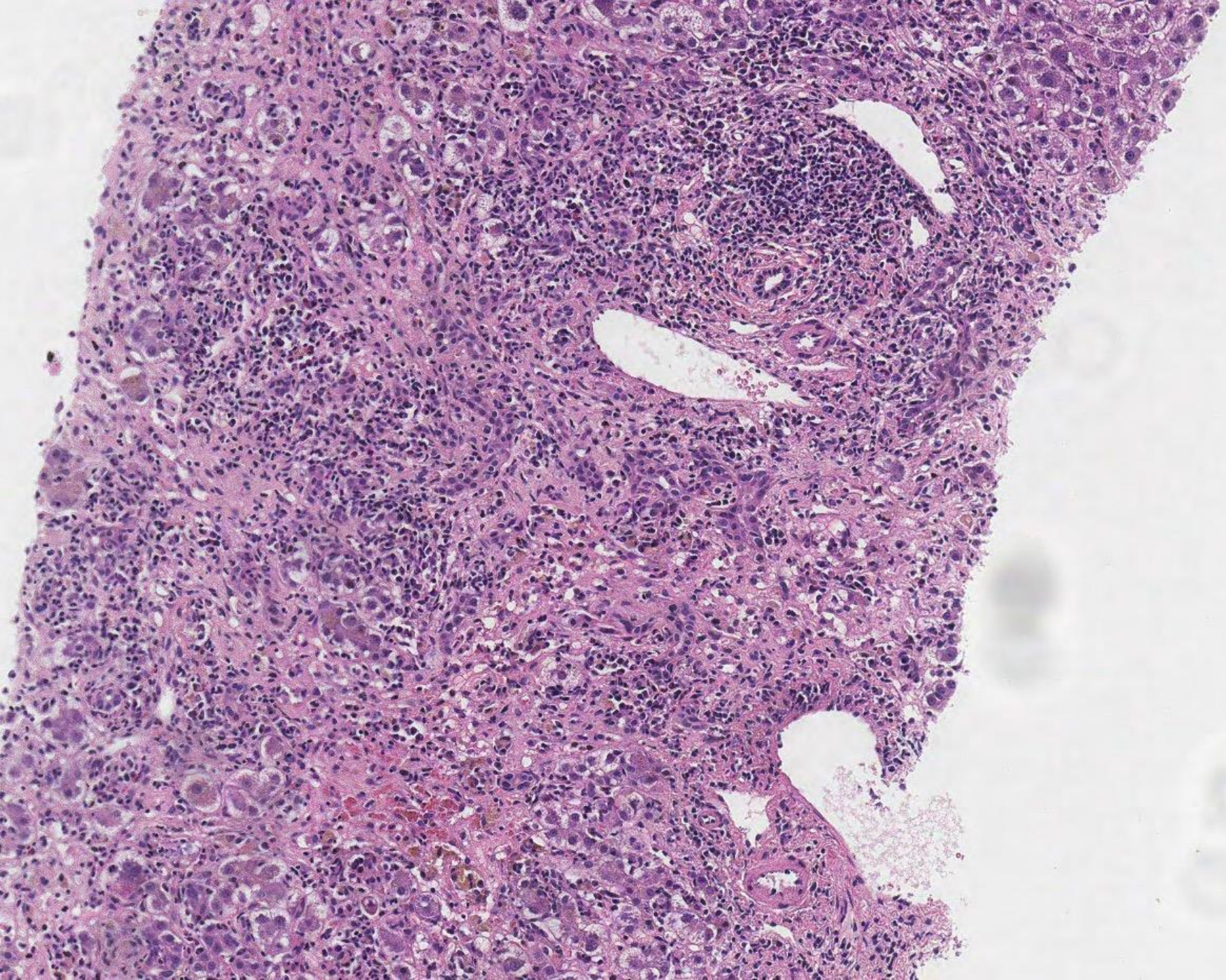
No cause for siderosis 0/5/1

Case LQ9 49F

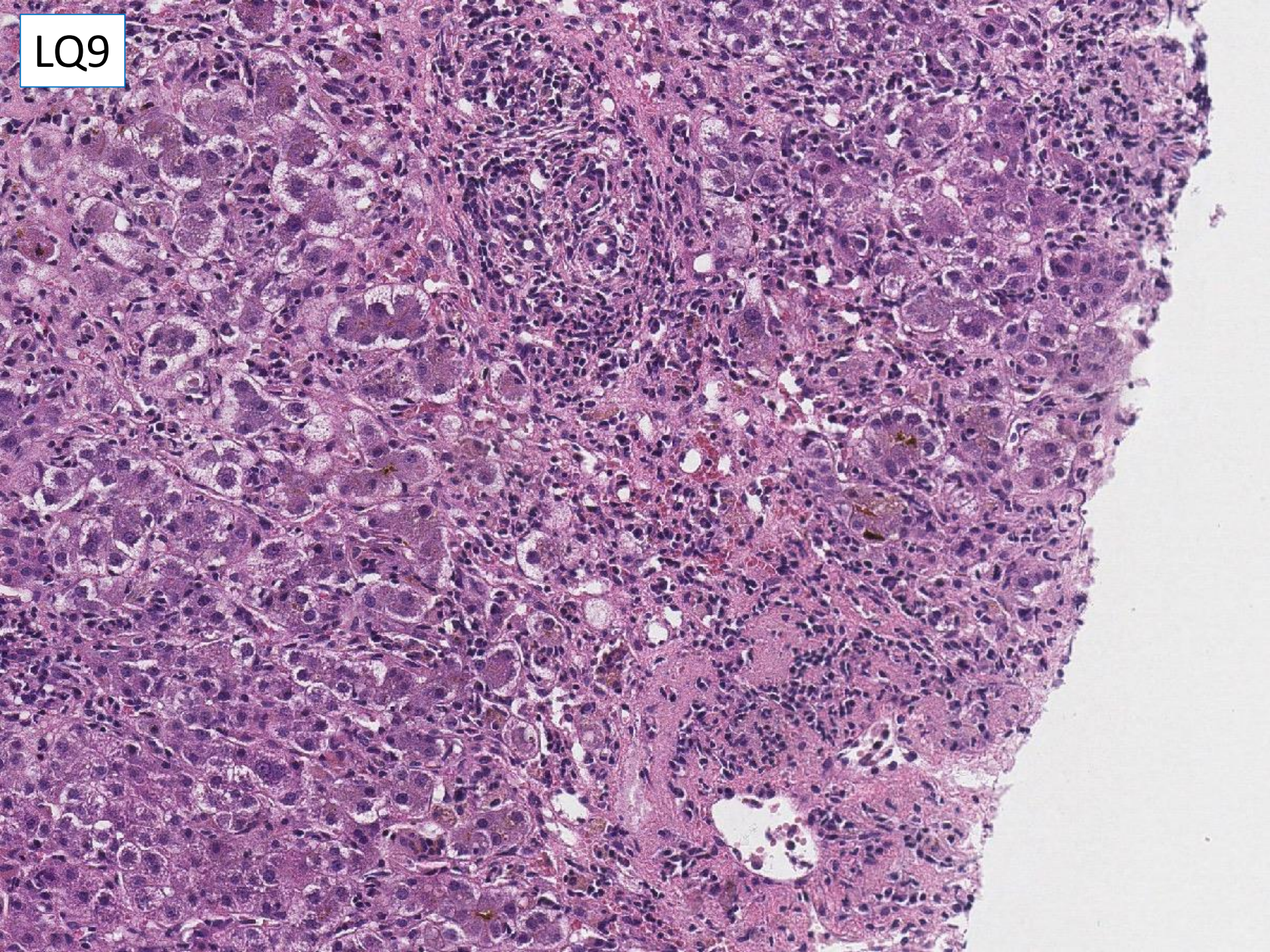
Acute Hepatitis. Liver biopsy. Additional information from urgent Liver biopsy booking from 'BG hypothyroidism. A/W Deranged LFT's. Acute hepatitis, Coagulopathy, high IgG hepatitis negative, ? Autoimmune hepatitis'.



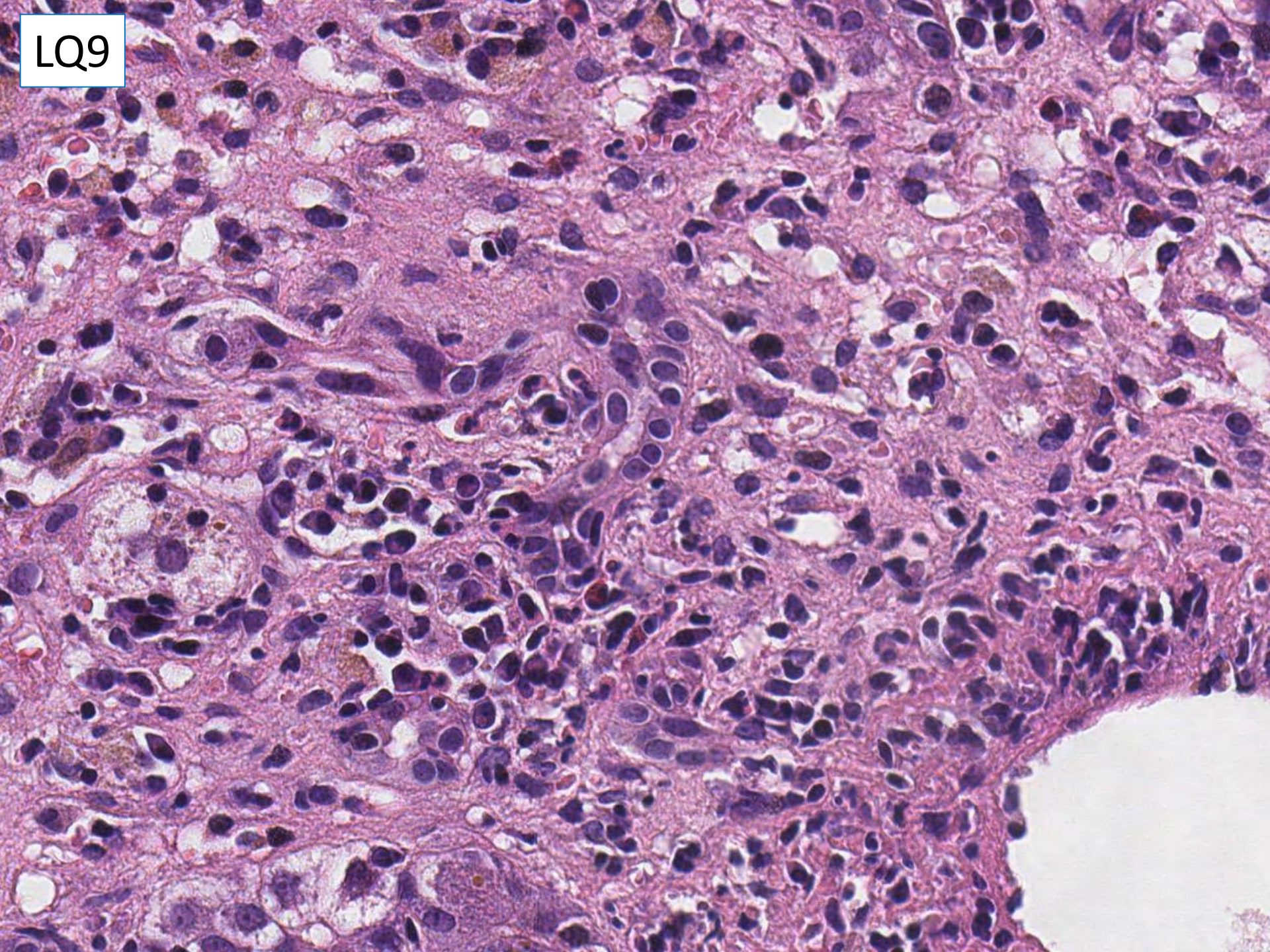
Also Reticulin, Shikata, PASD, van Gieson



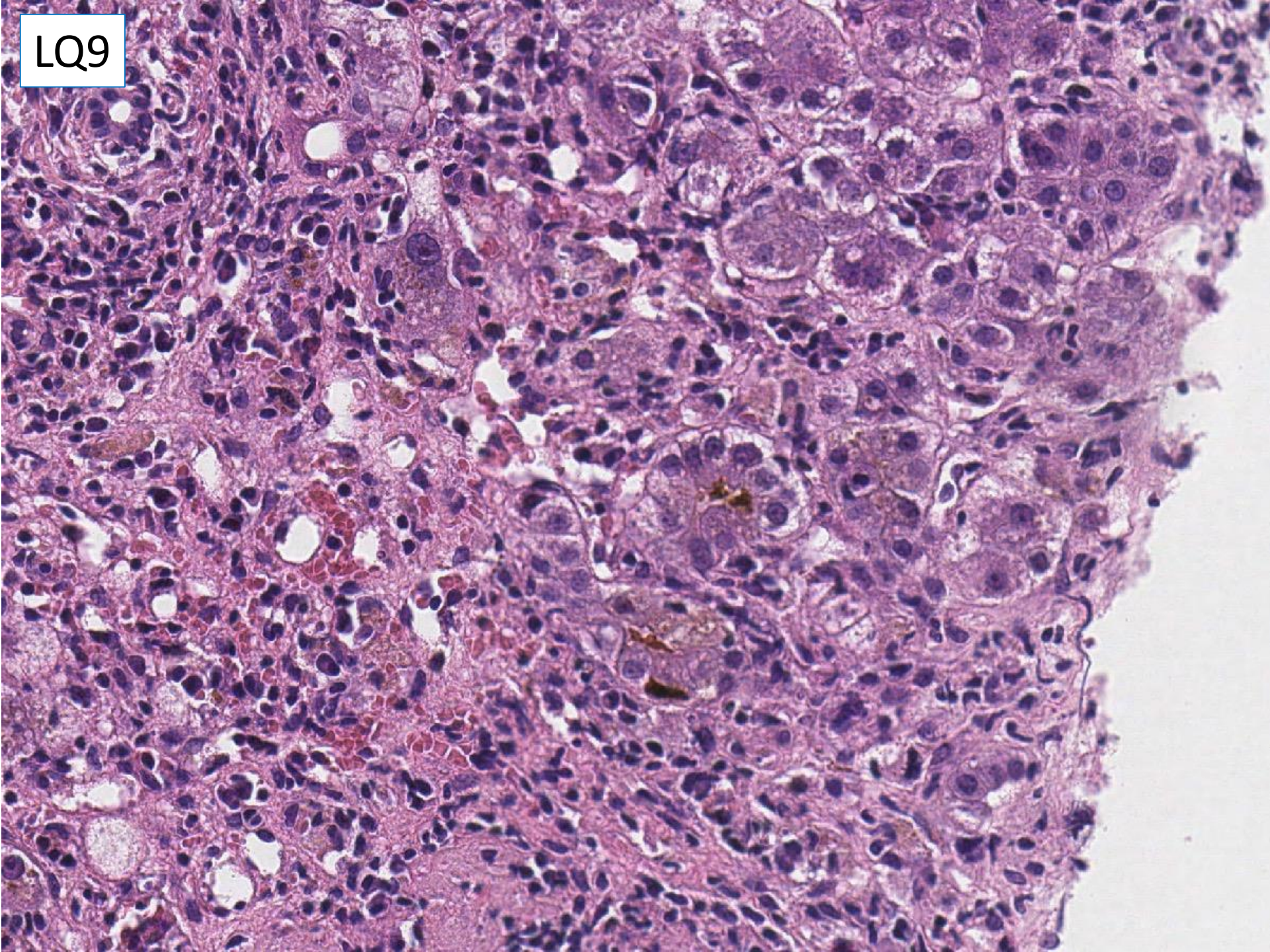
LQ9



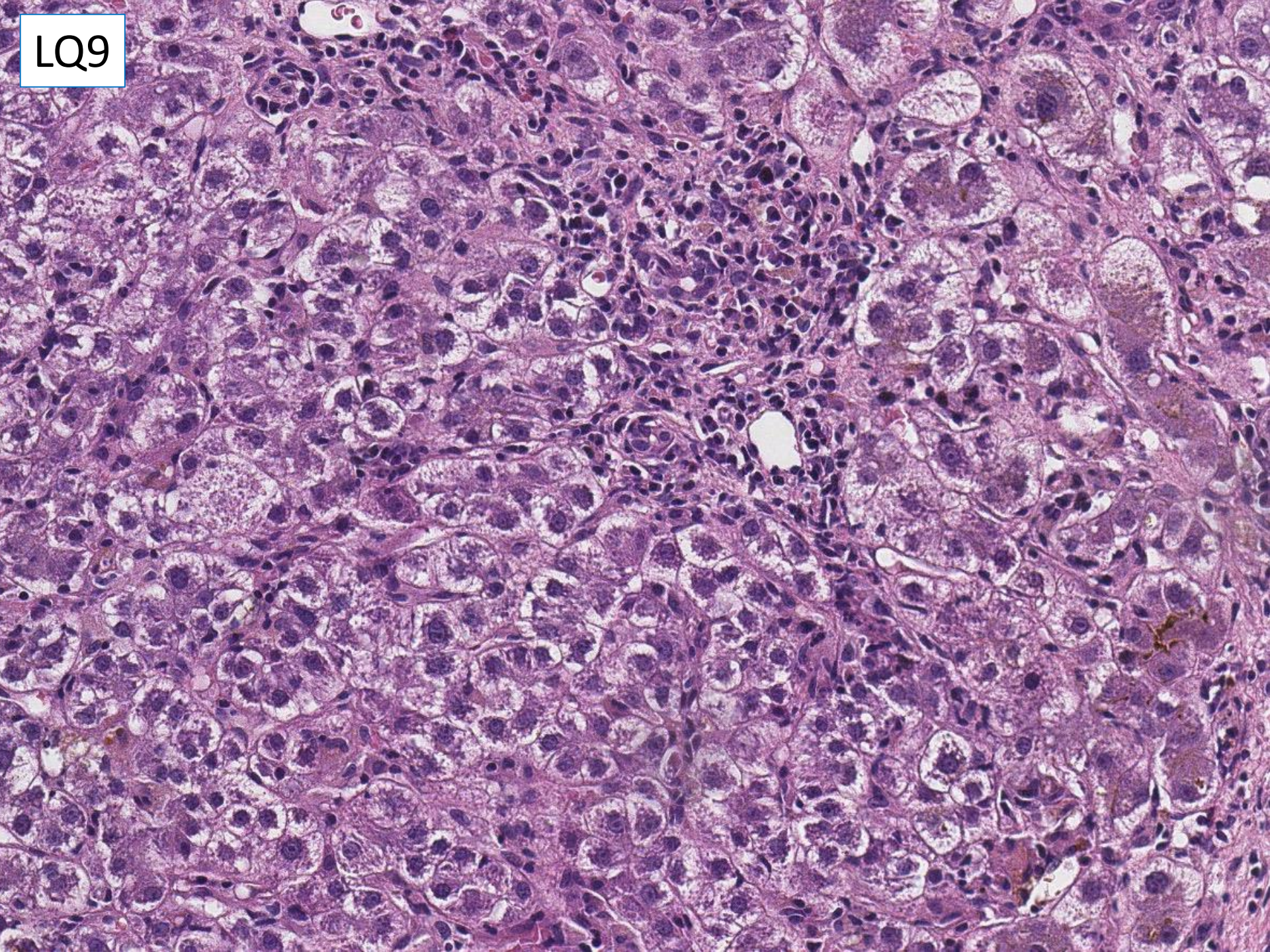
LQ9



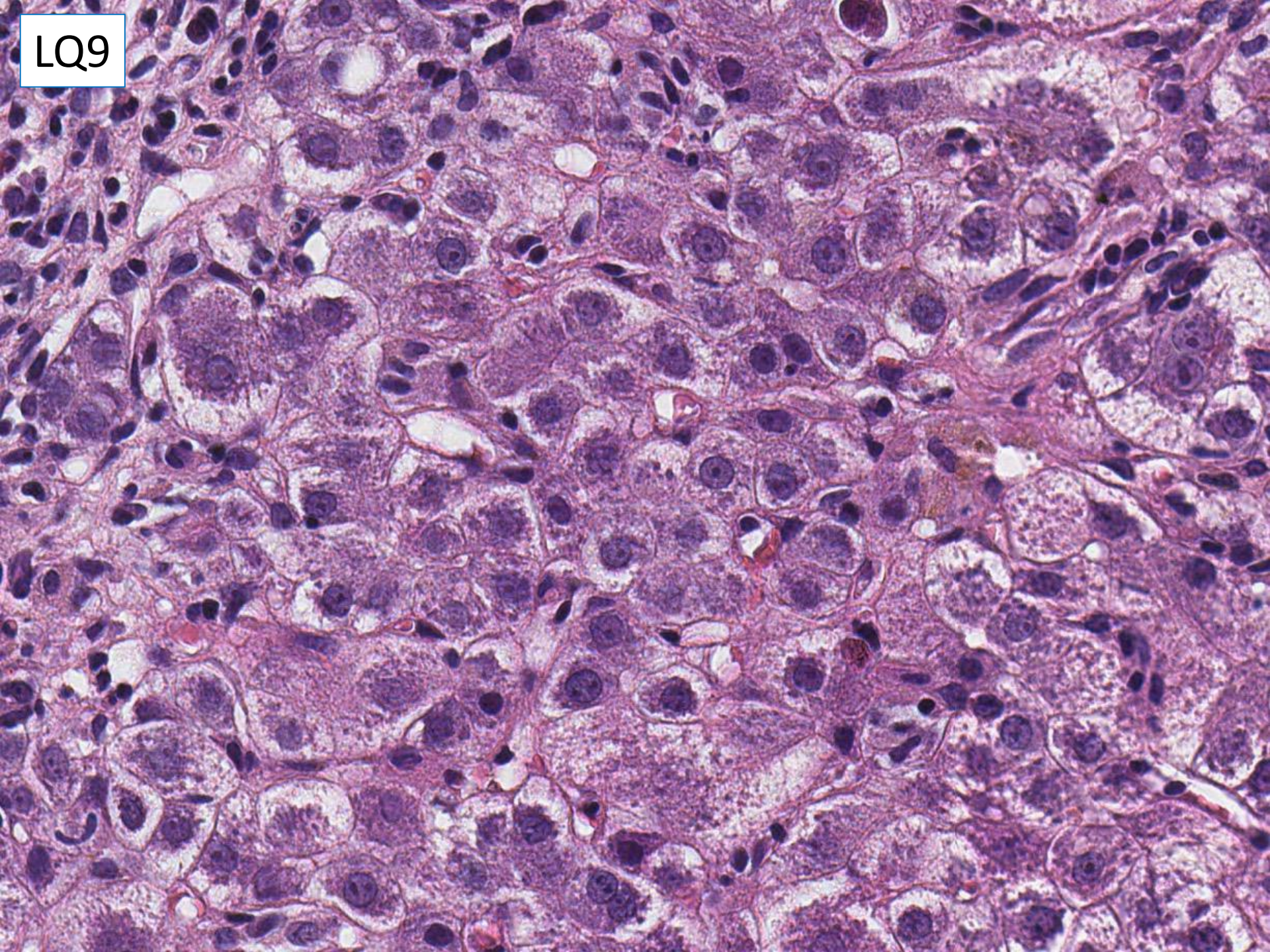
LQ9



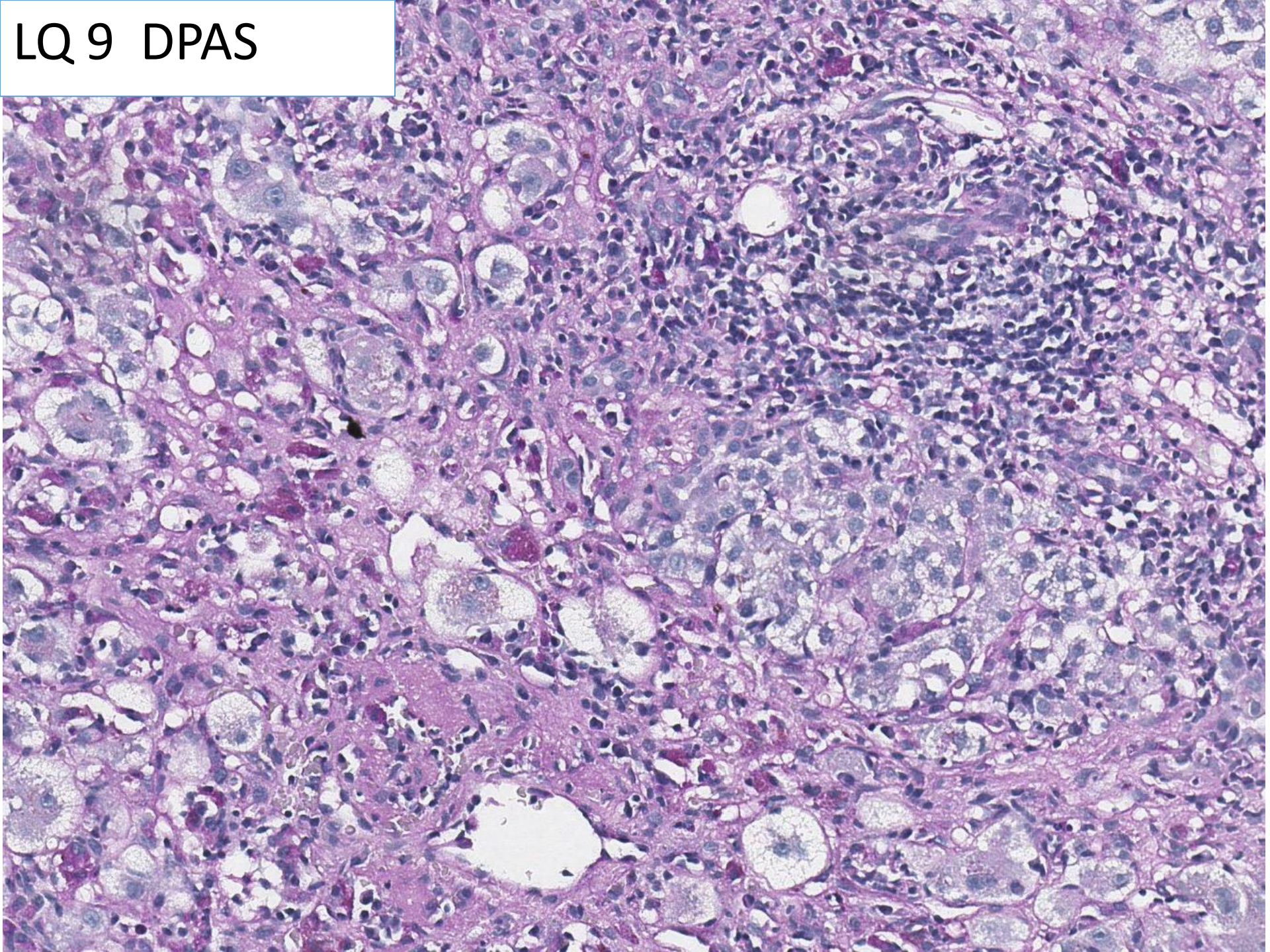
LQ9



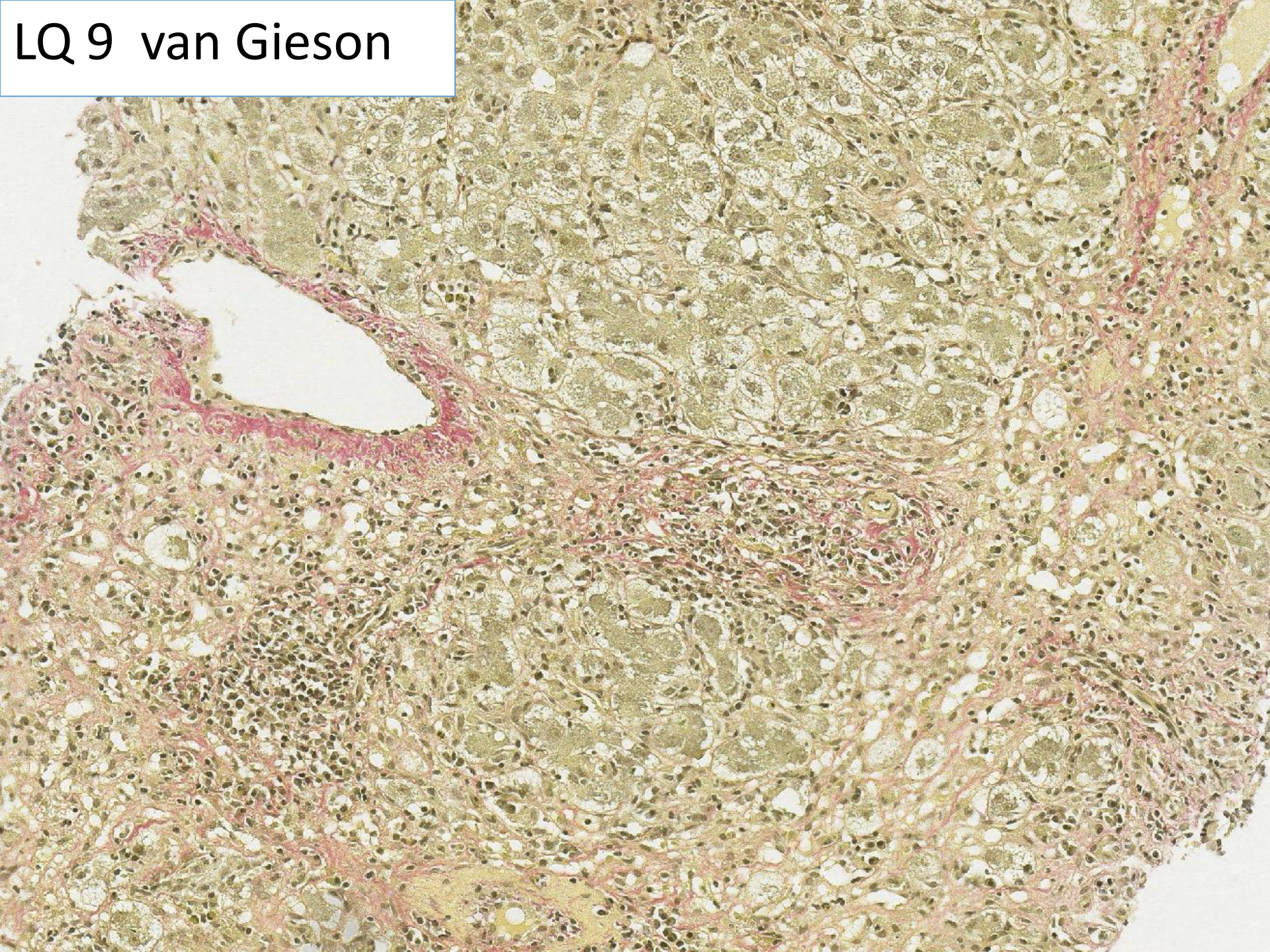
LQ9



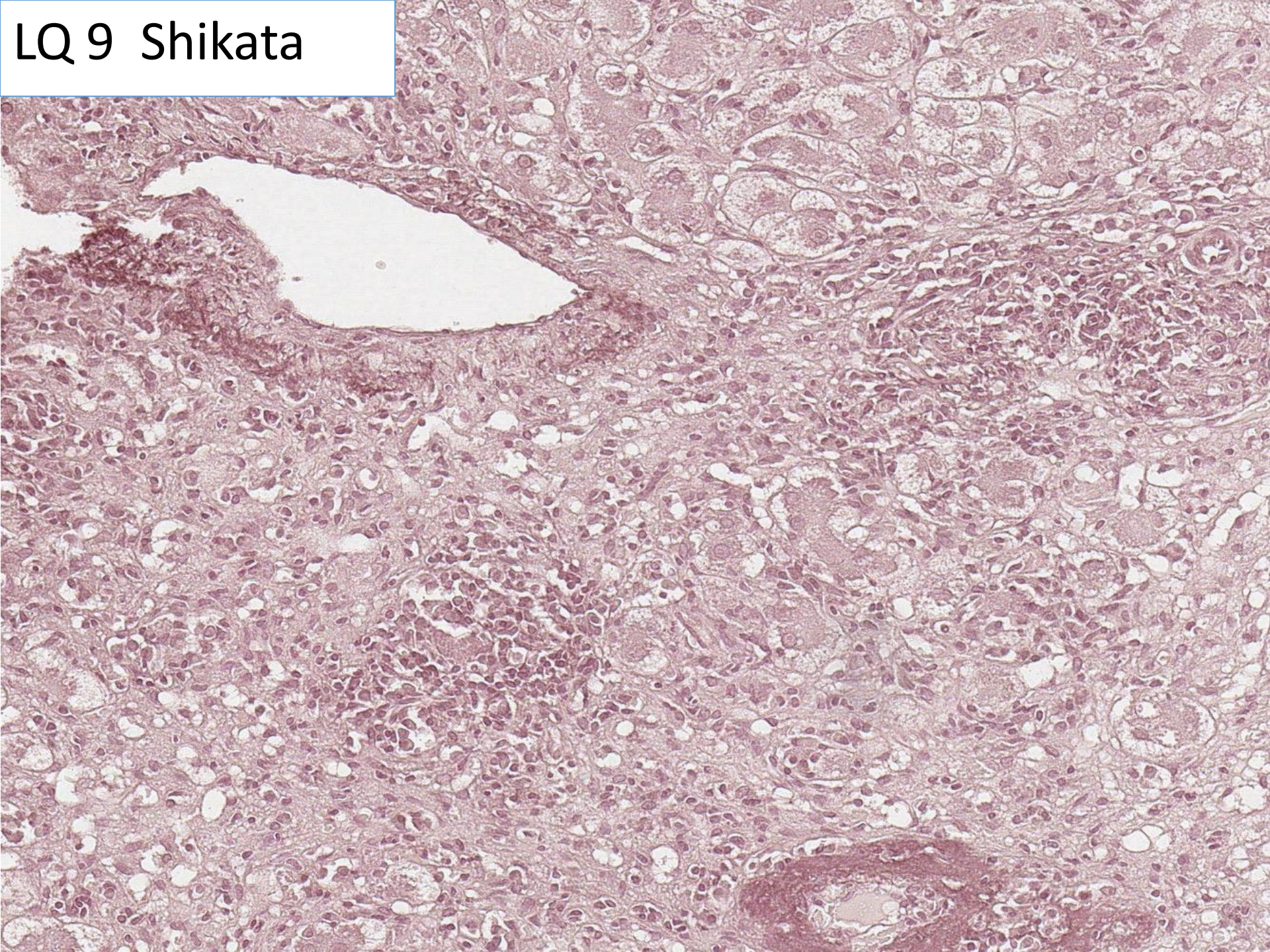
LQ 9 DPAS



LQ 9 van Gieson



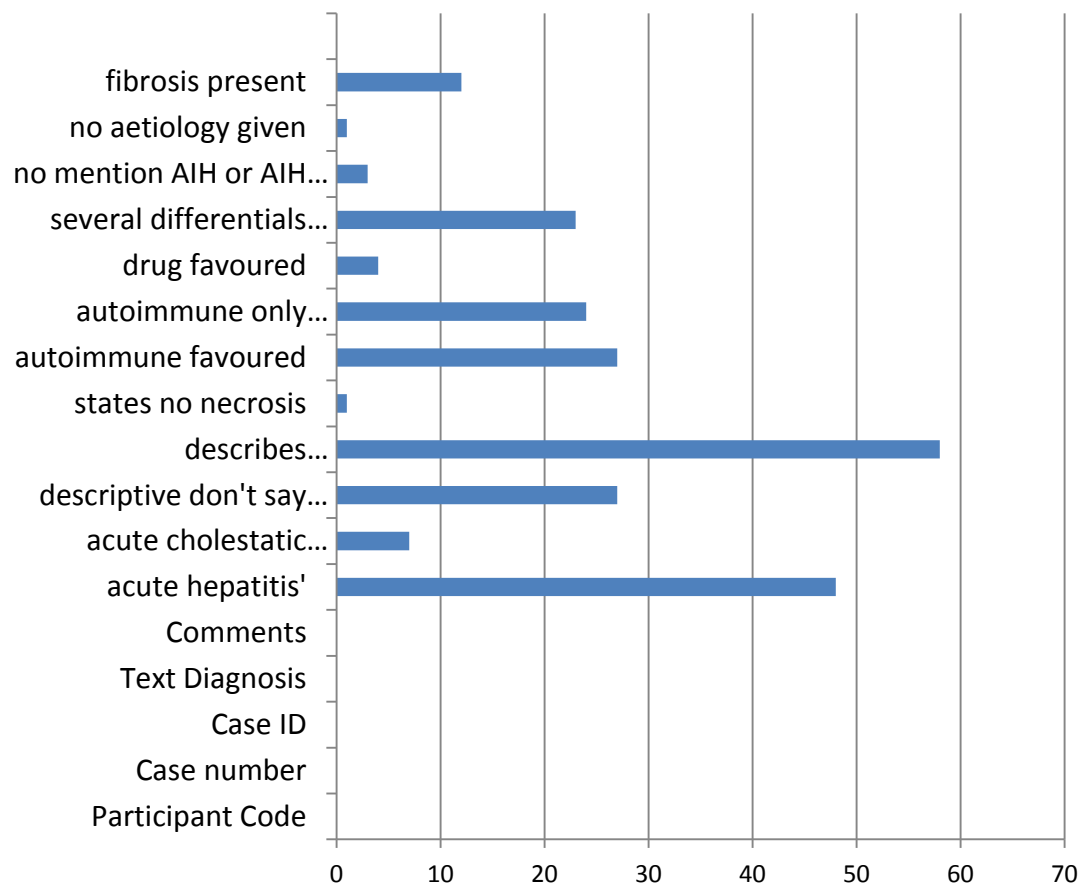
LQ 9 Shikata



Case LQ9 49F

Acute Hepatitis. Liver biopsy.

Additional information from urgent Liver biopsy booking form: hypothyroidism. deranged LFT's. Acute hepatitis, Coagulopathy, high IgG, hepatitis negative, ? Autoimmune hepatitis'.



Consensus diagnosis:

If acute hepatitis combined with 'acute cholestatic hepatitis' and descriptions which might have included 'hepatitis' NOS or 'active' = 82/83.

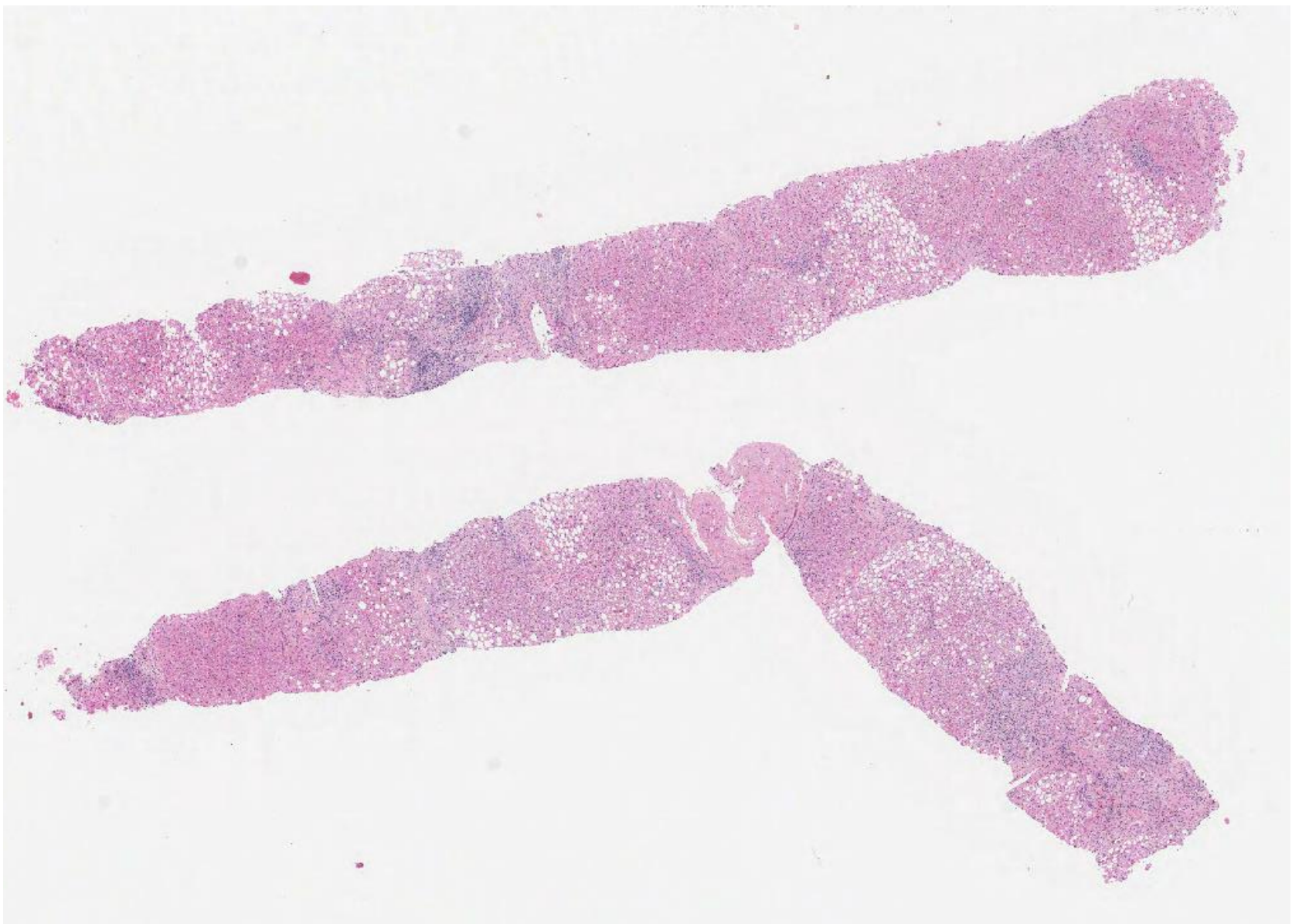
Autoimmune aetiology mentioned by 76/83

12 included fibrosis, of which
1 cirrhosis
5 bridging fibrosis
6 mild/early

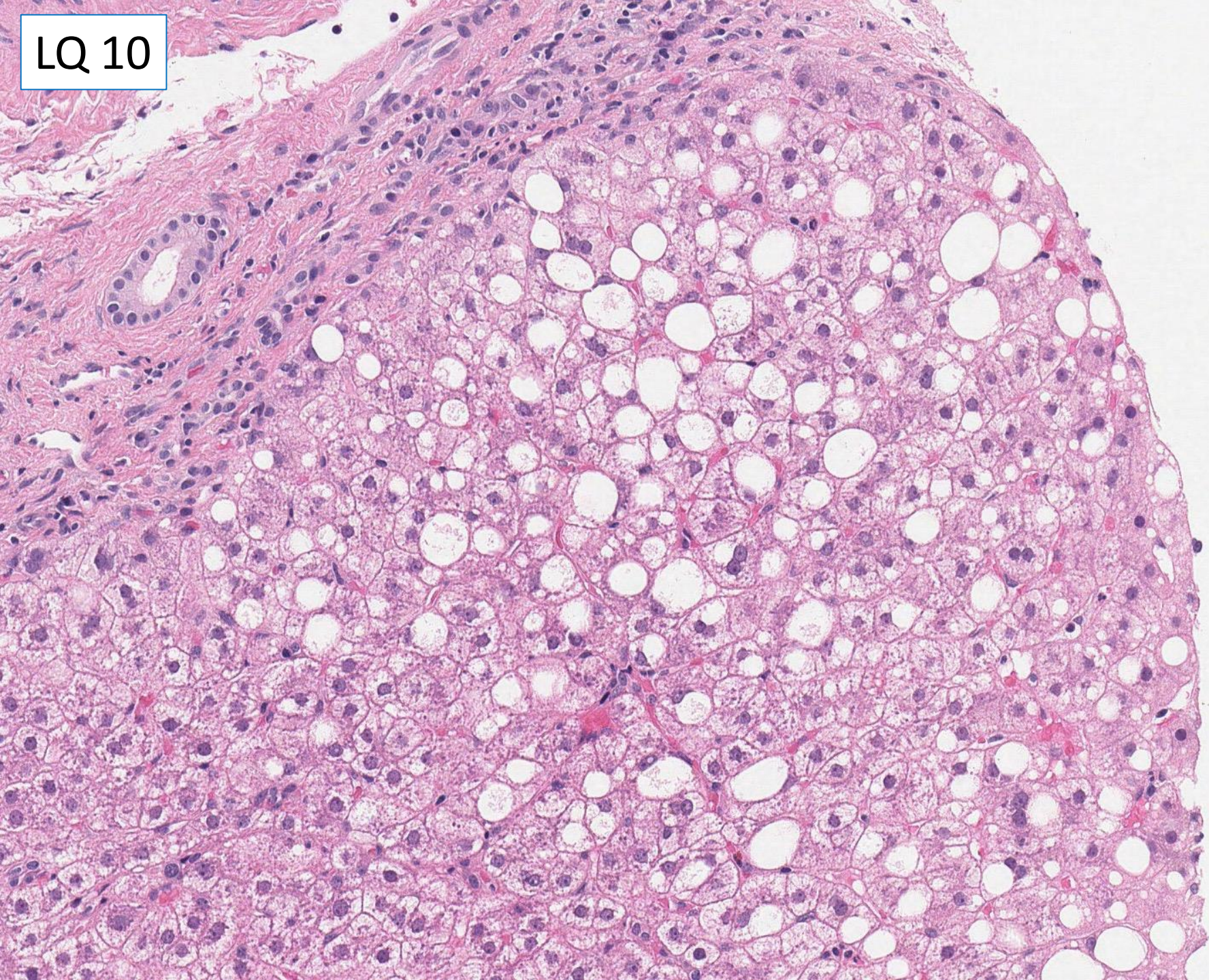
Aetiology – response includes autoimmune: 76. no aetiology mentioned 1: drugs +/- viral: 4

Case LQ10 53F

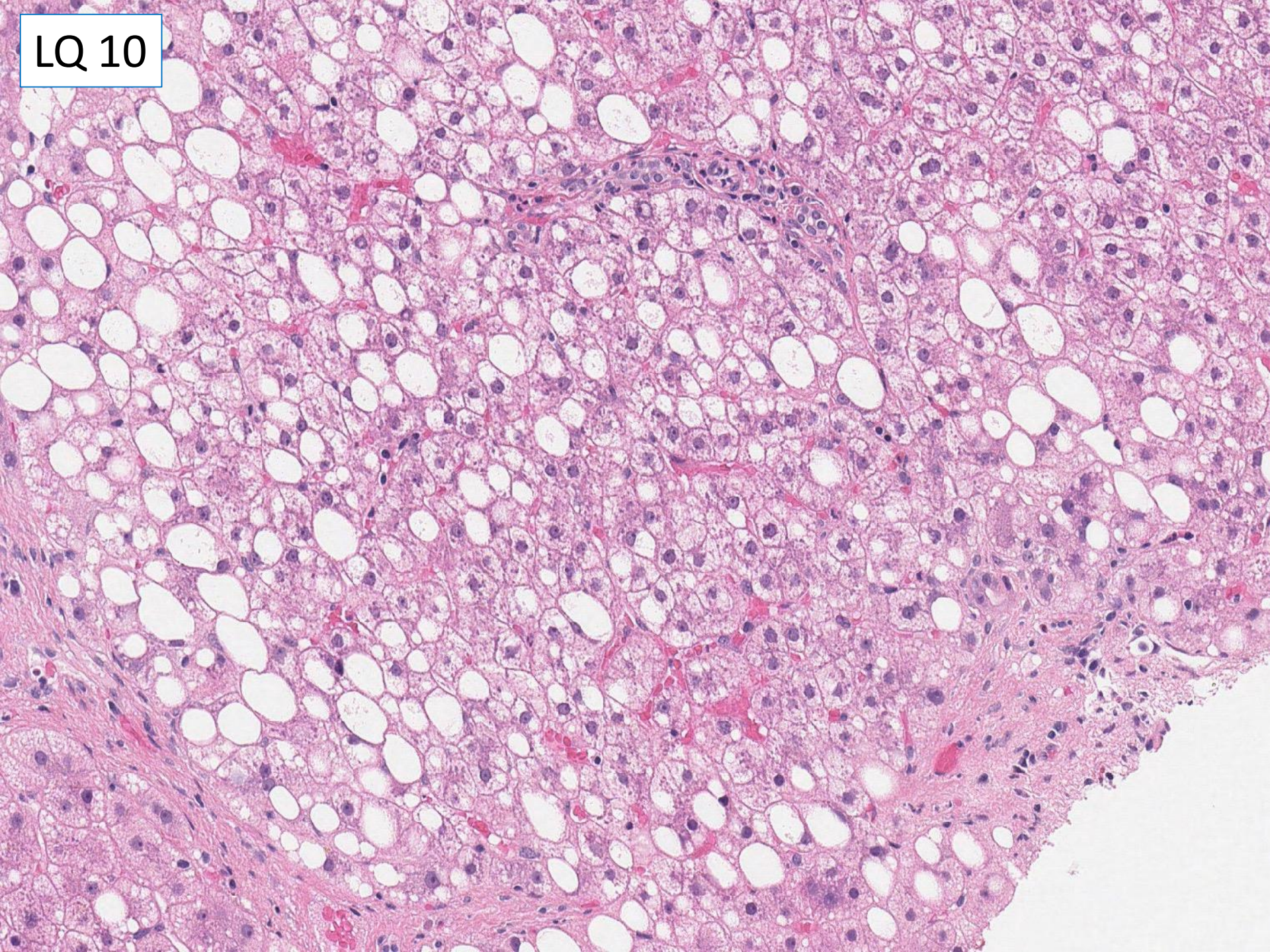
Increased fibroscan (11) ?NAFLD ?degree of fibrosis.



LQ 10



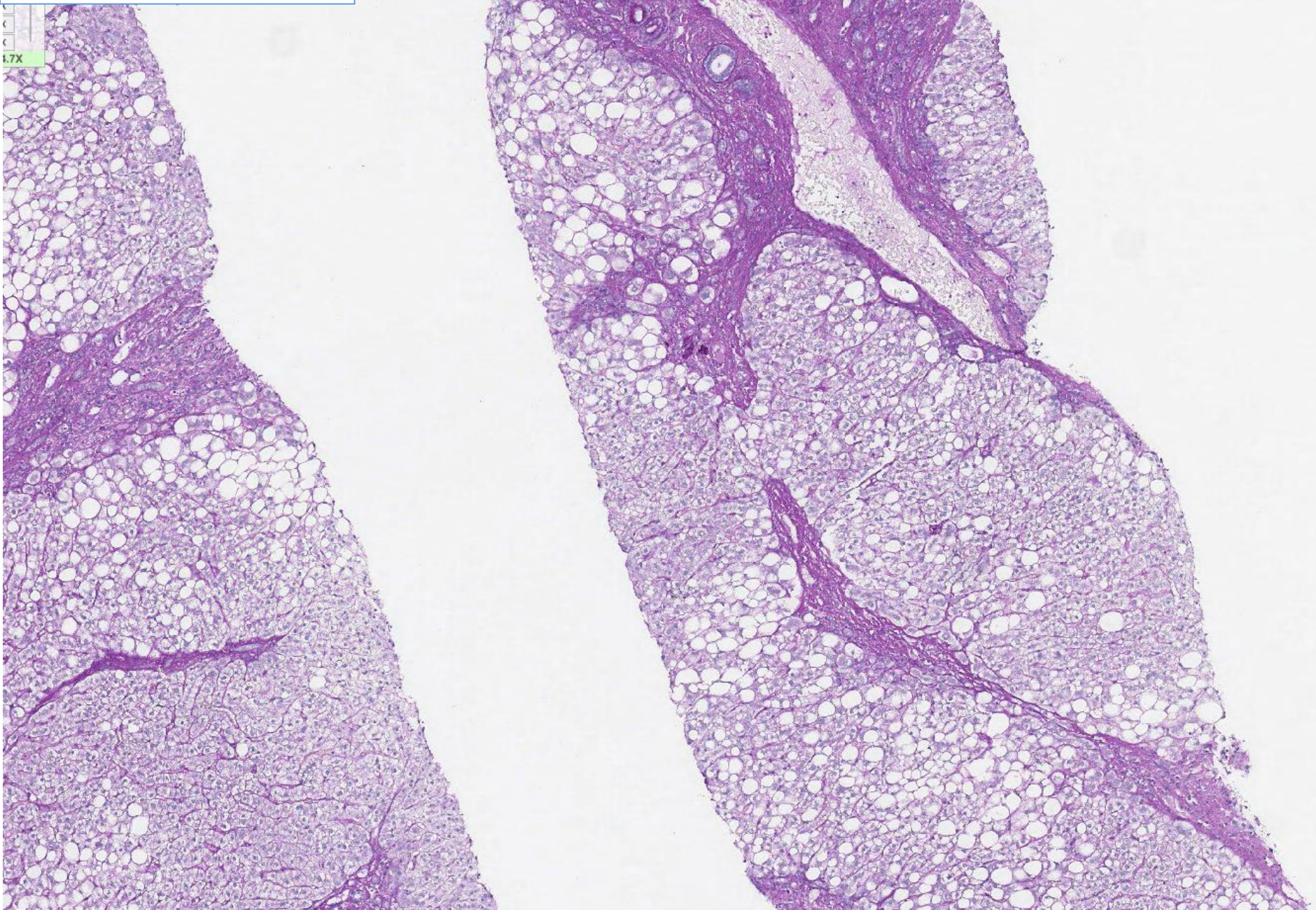
LQ 10



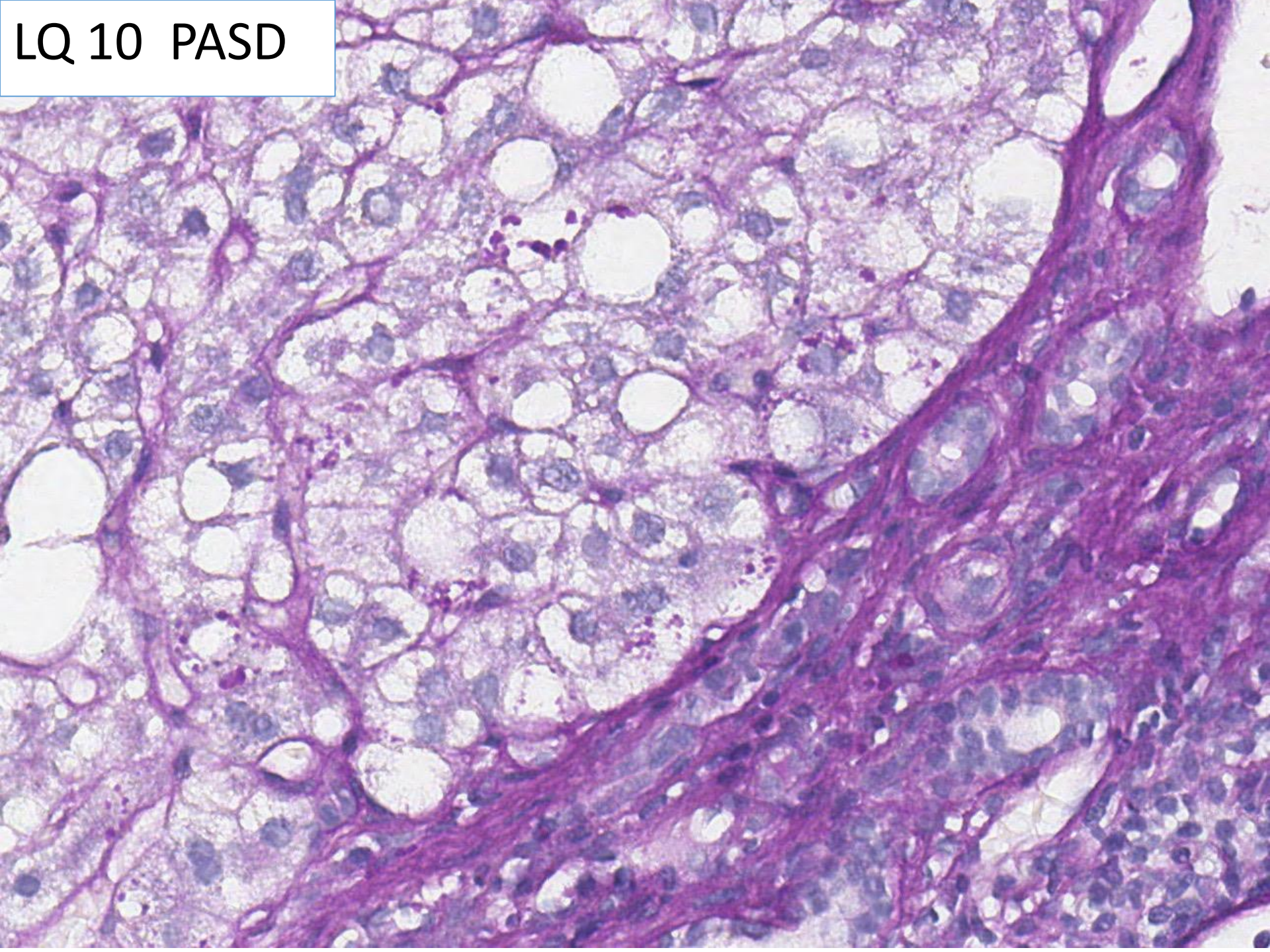
LQ 10 van Gieson



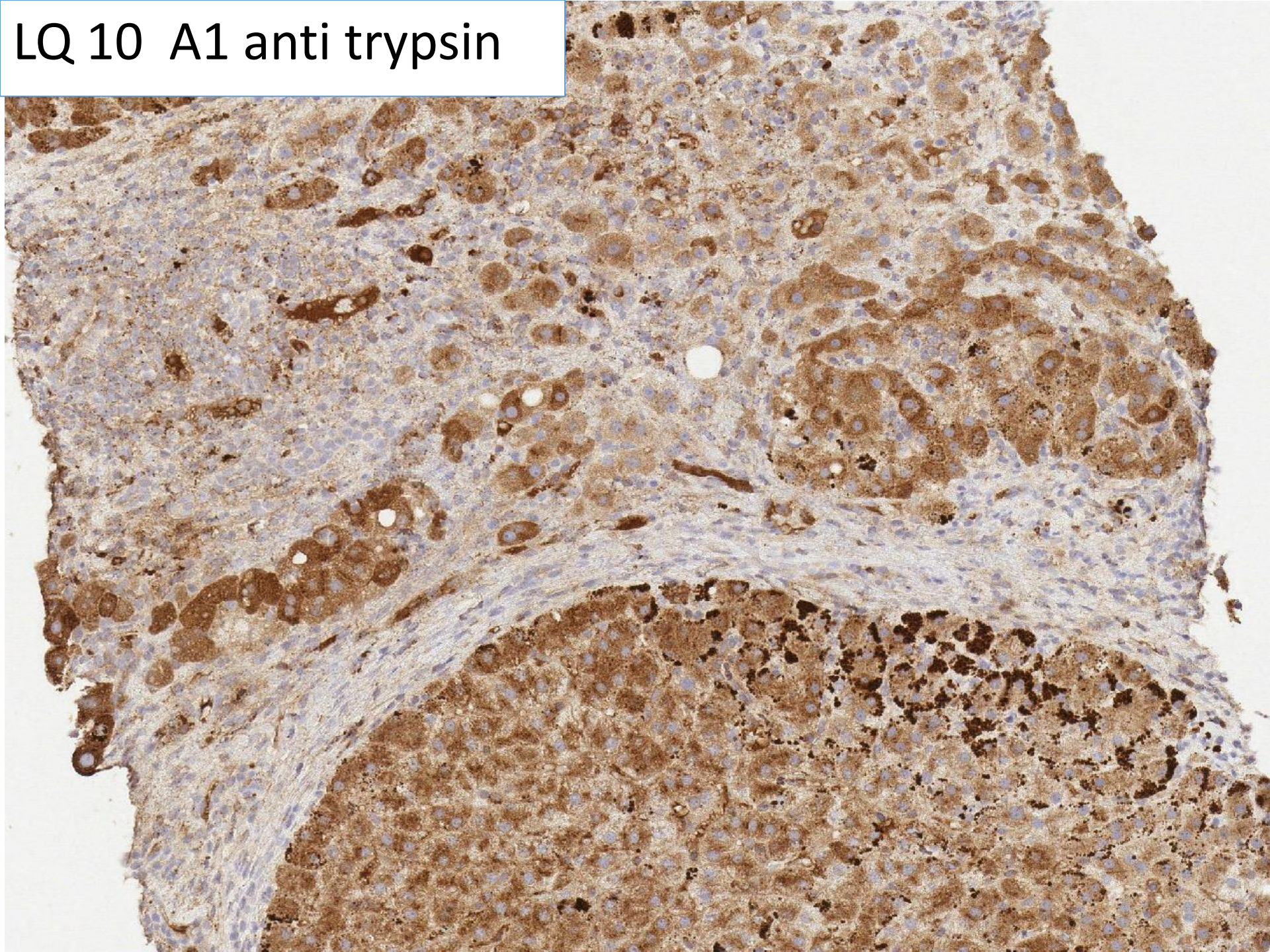
LQ 10 PASD



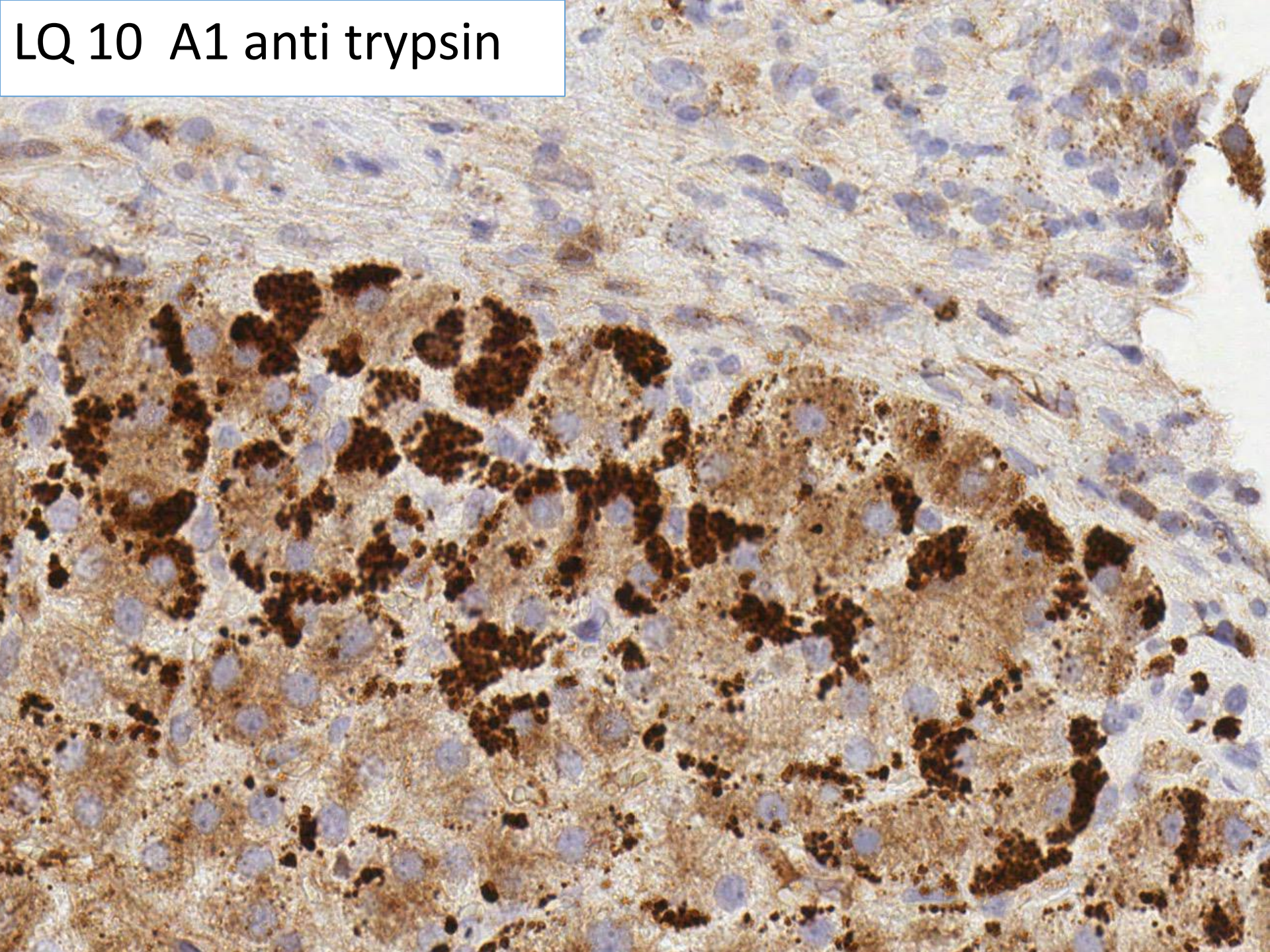
LQ 10 PASD



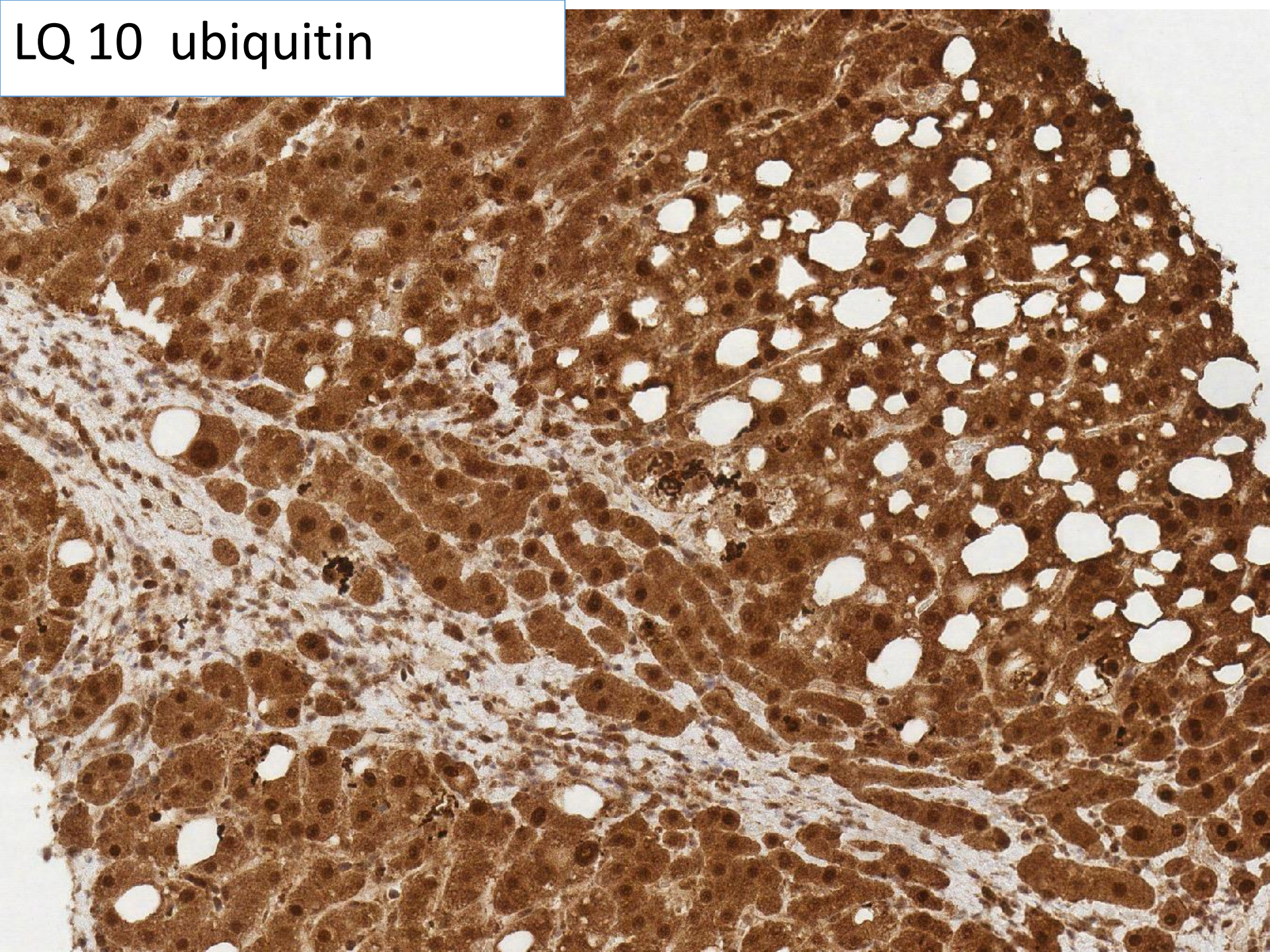
LQ 10 A1 anti trypsin



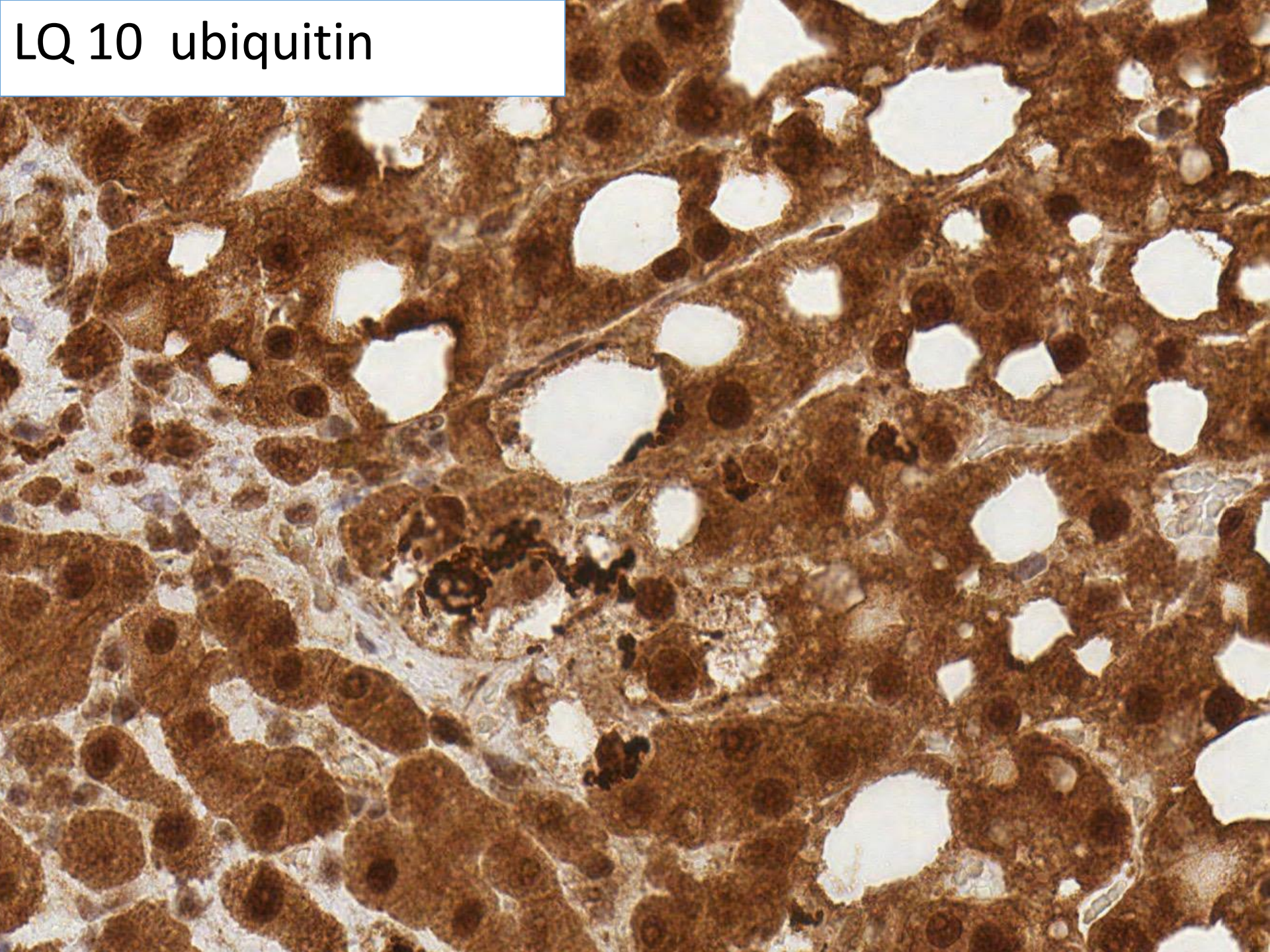
LQ 10 A1 anti trypsin



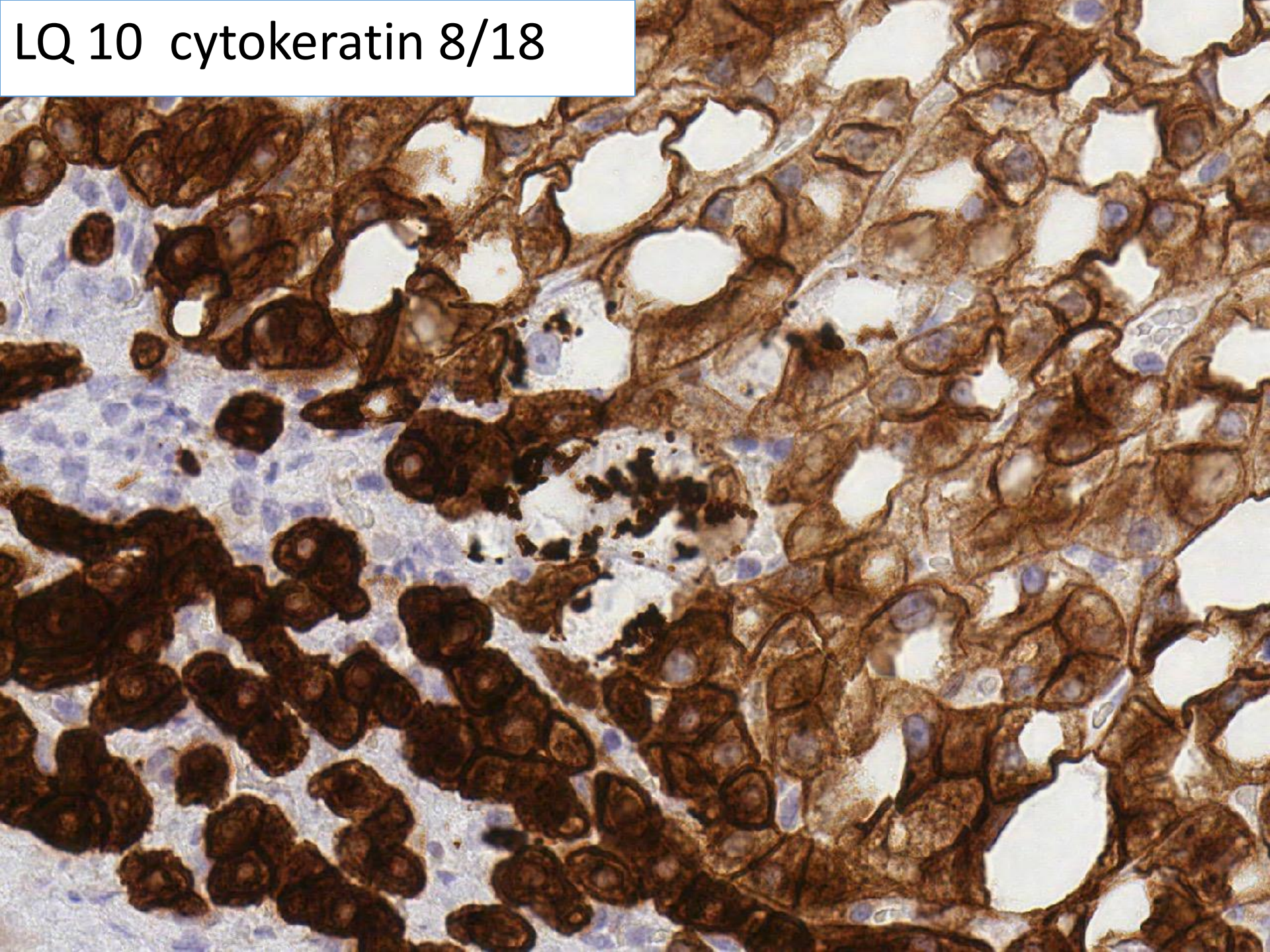
LQ 10 ubiquitin



LQ 10 ubiquitin

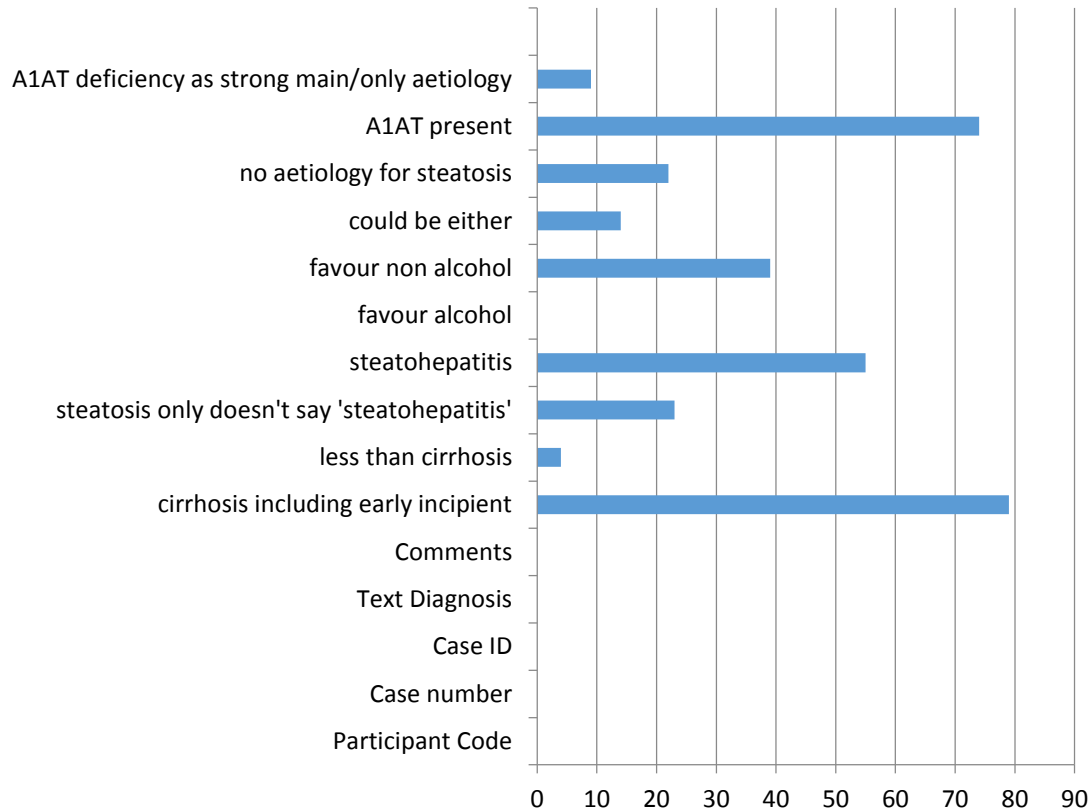


LQ 10 cytokeratin 8/18



Case LQ10 53F

Increased fibroscan (11) ?NAFLD ?degree of fibrosis.



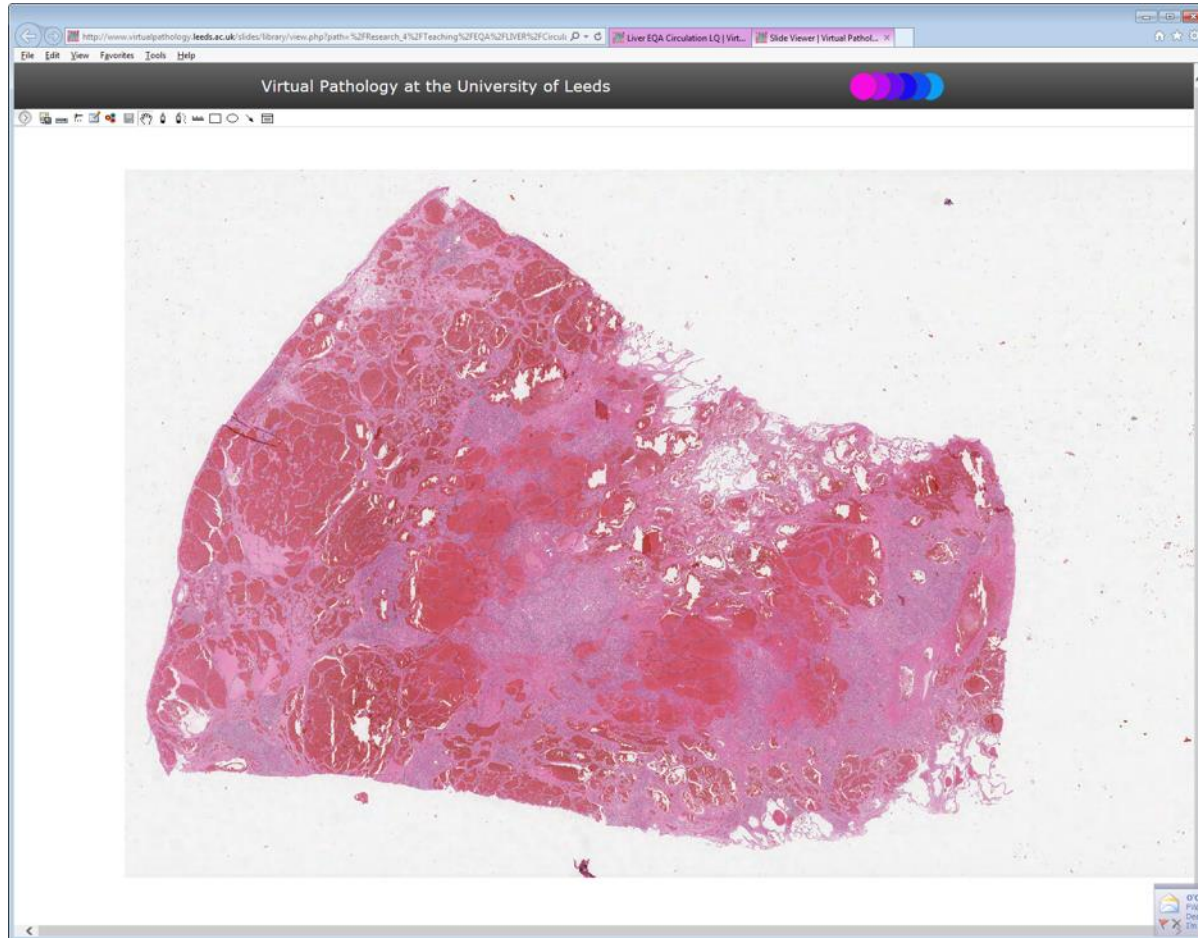
Consensus diagnosis: cirrhosis and the presence of A1AT globules

– variable interpretations offered as to relevance, most had fatty liver disease (majority steatohepatitis) as main diagnosis with possibility of additional A1AT disease and recommended further Ix.

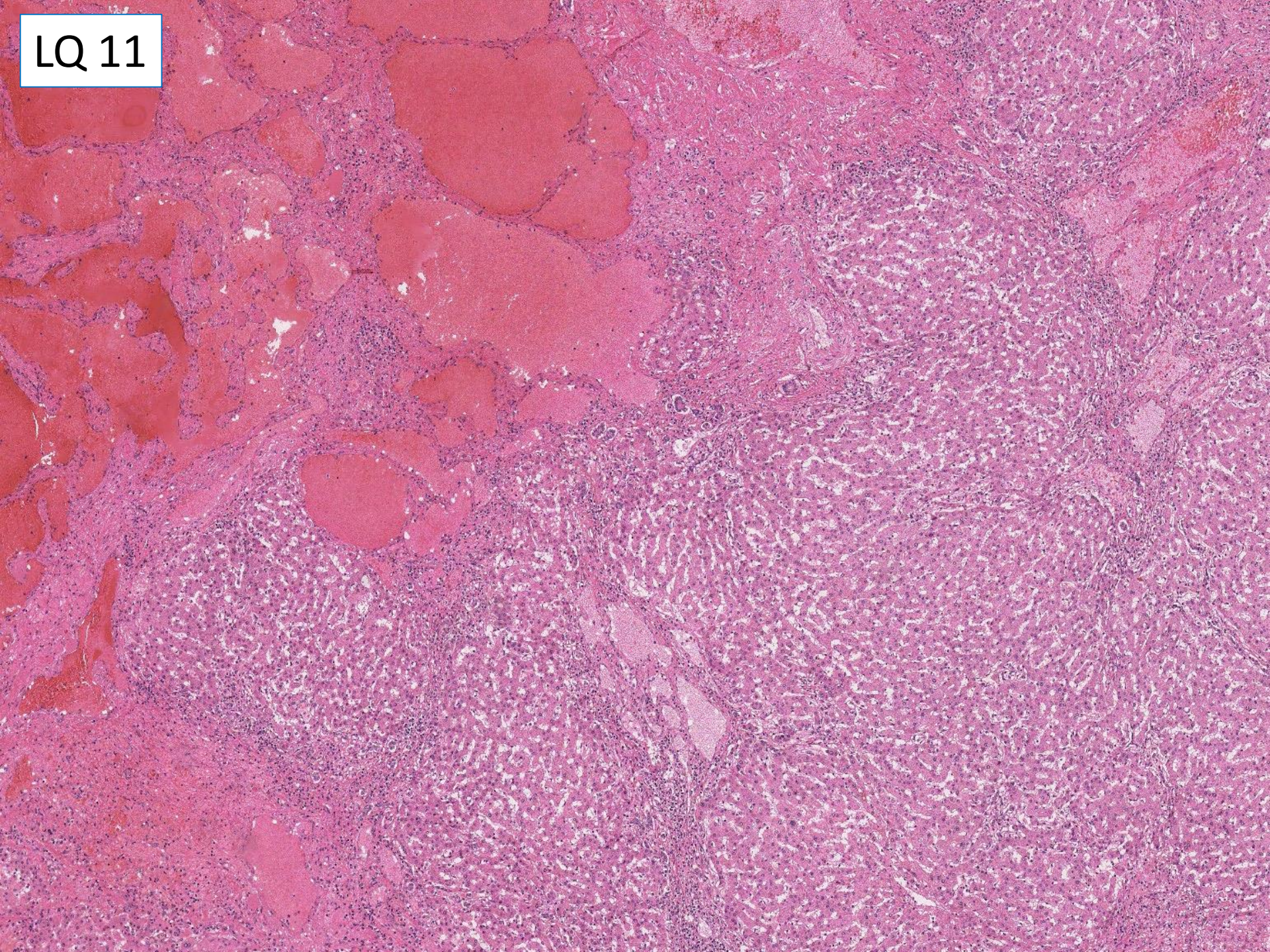
Suggested scoring: half marks if: Less than cirrhosis = 4 of which:
Ishak 5/6, Advanced bridging fibrosis and nodularity, Bridging fibrosis x2
No mention A1AT at all = 9; A1AT deficiency given as main diagnosis = 9

Case LQ11 59M

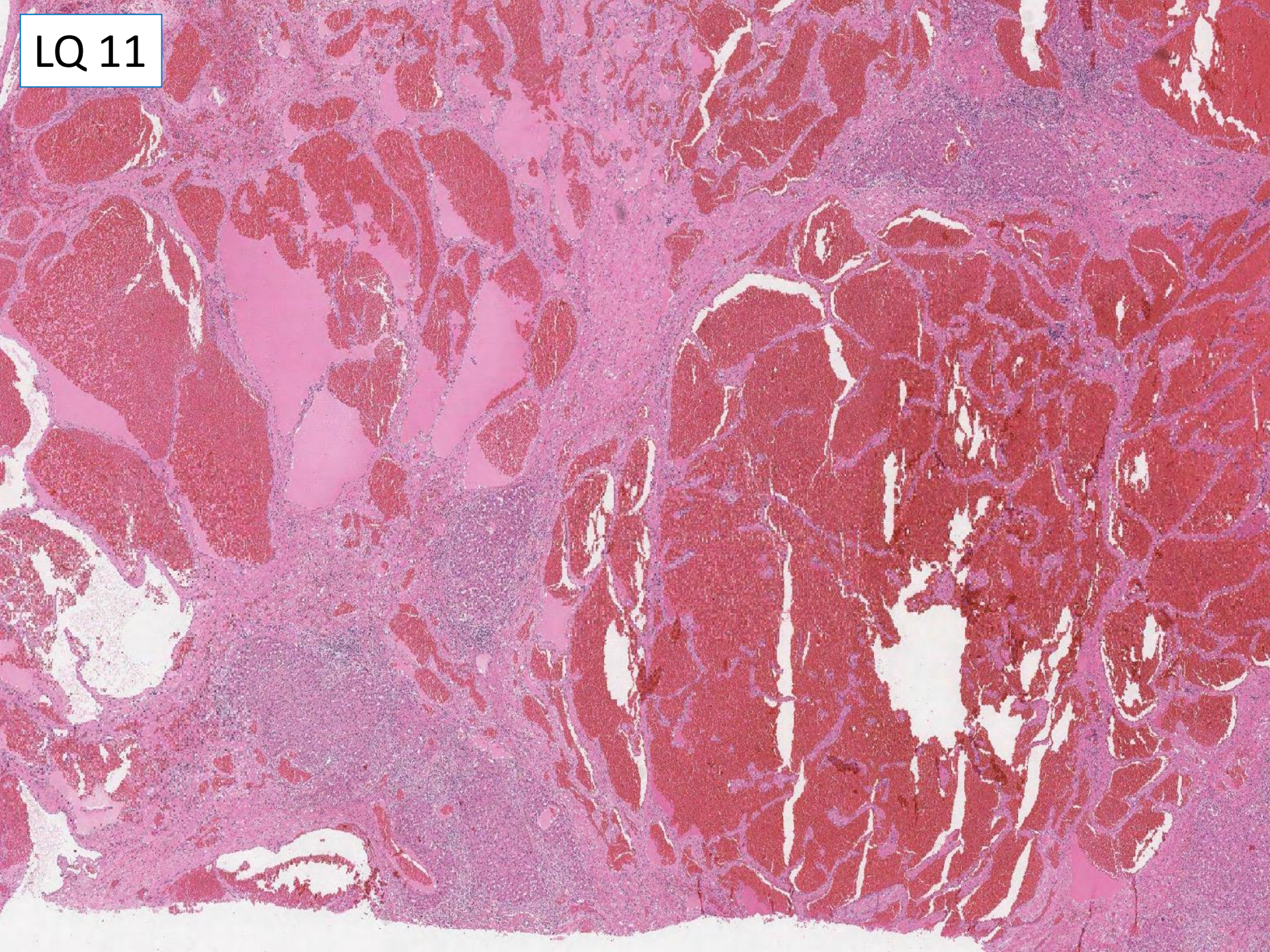
Intra-abdominal mass involving right lobe of liver



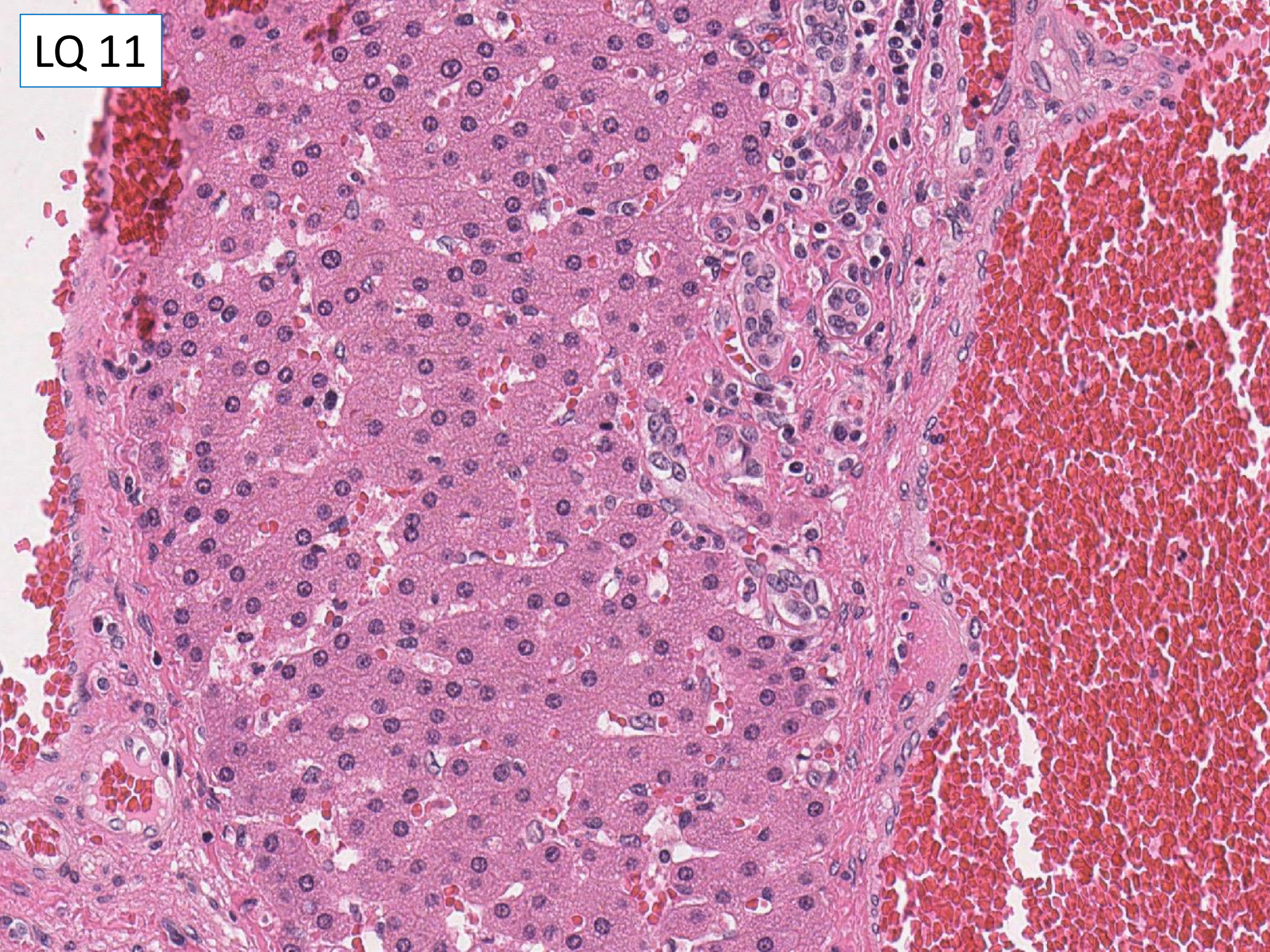
LQ 11



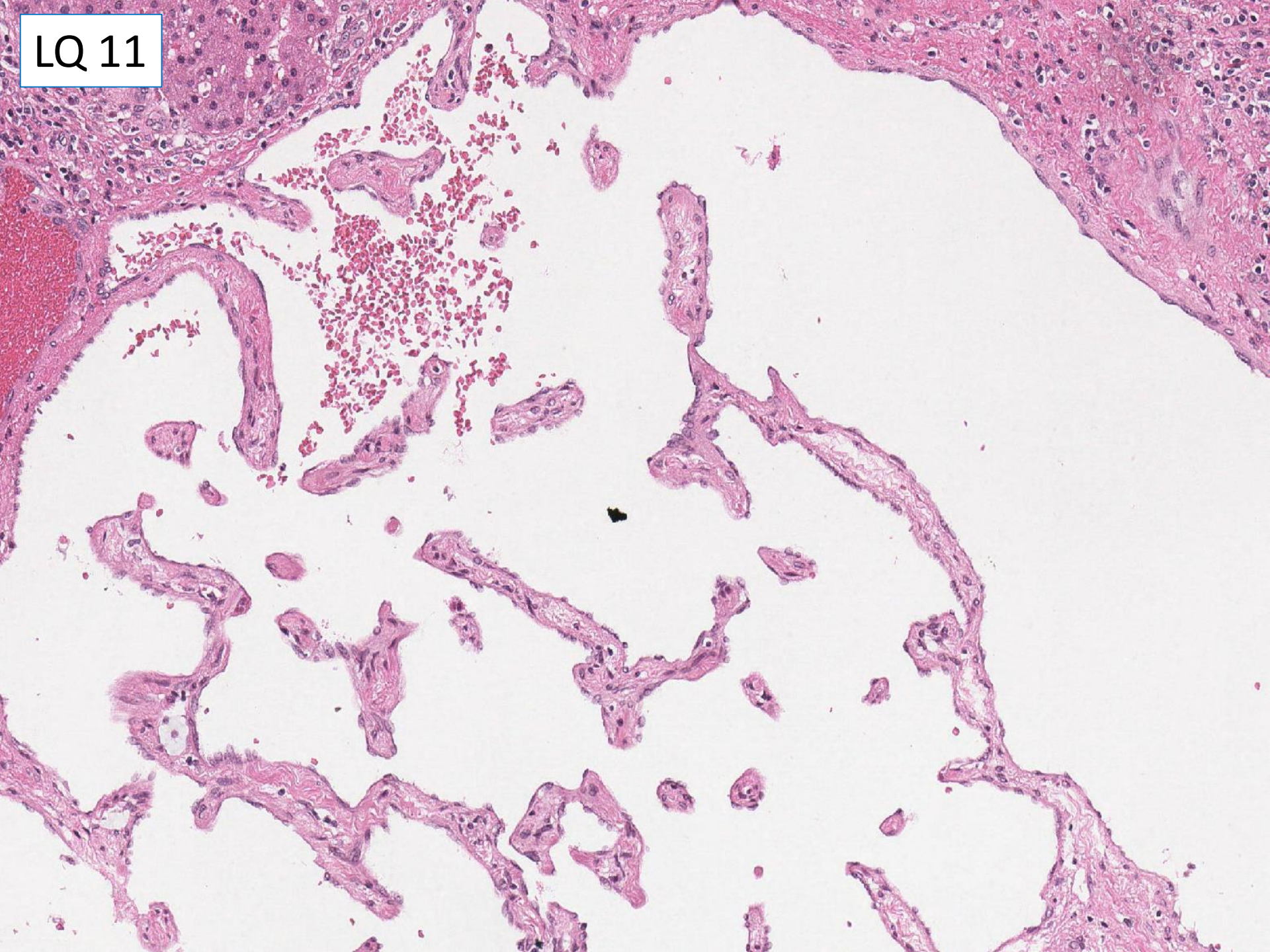
LQ 11



LQ 11



LQ 11



Case LQ11 59M

Intra-abdominal mass involving right lobe of liver

Cavernous haemangioma	53
Haemangioma	27
Cavernous haemangioma with atypia	1
haemangioma with atypia	1
Haemangioma, rule out malignancy: intravascular papillary hyperplasia	1

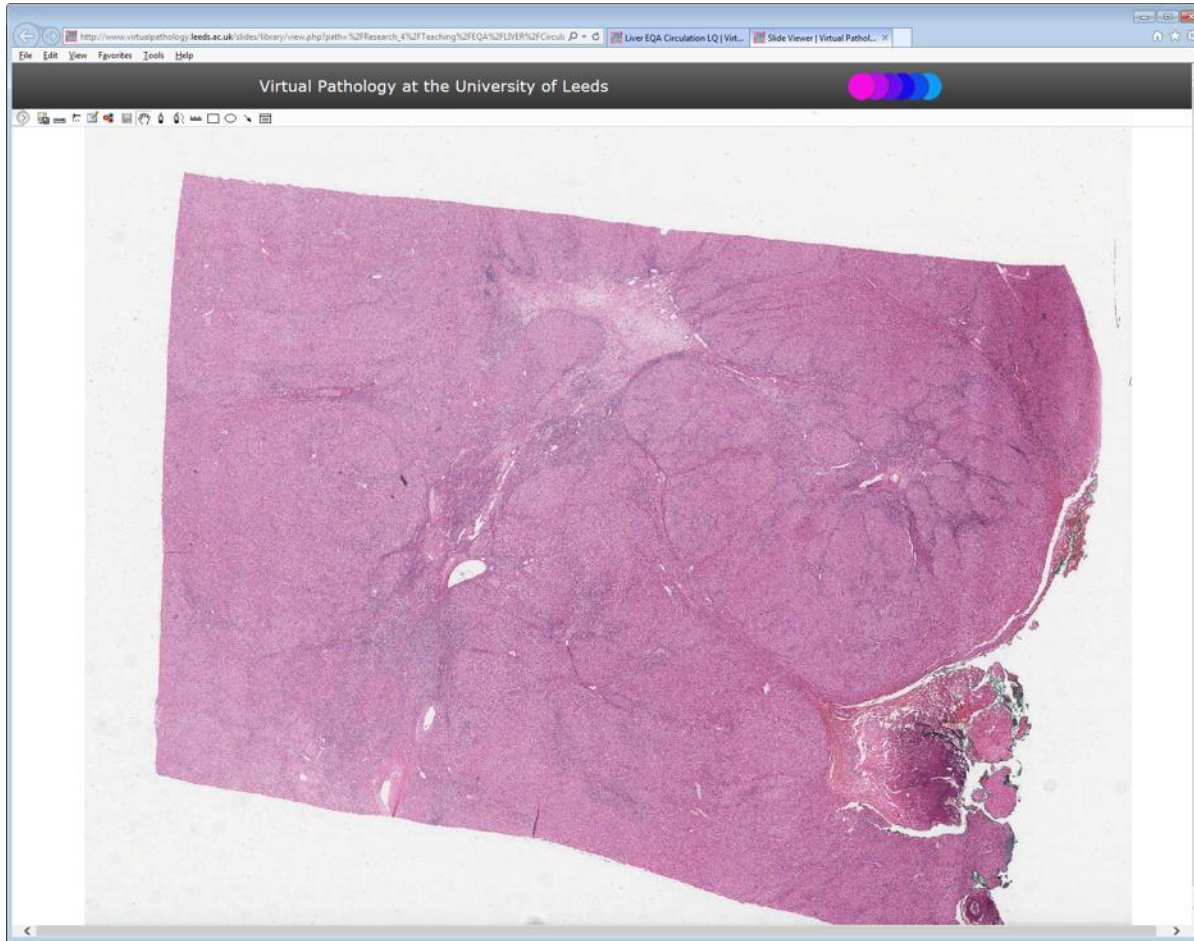
Consensus: Cavernous haemangioma or haemangioma.

Suggested scoring: For full marks, either cavernous haemangioma or haemangioma (cavernous haemangioma in WHO classification).

How to score responses with atypia or rule out malignancy? 0 / 4 / 2

Case LQ12 28M

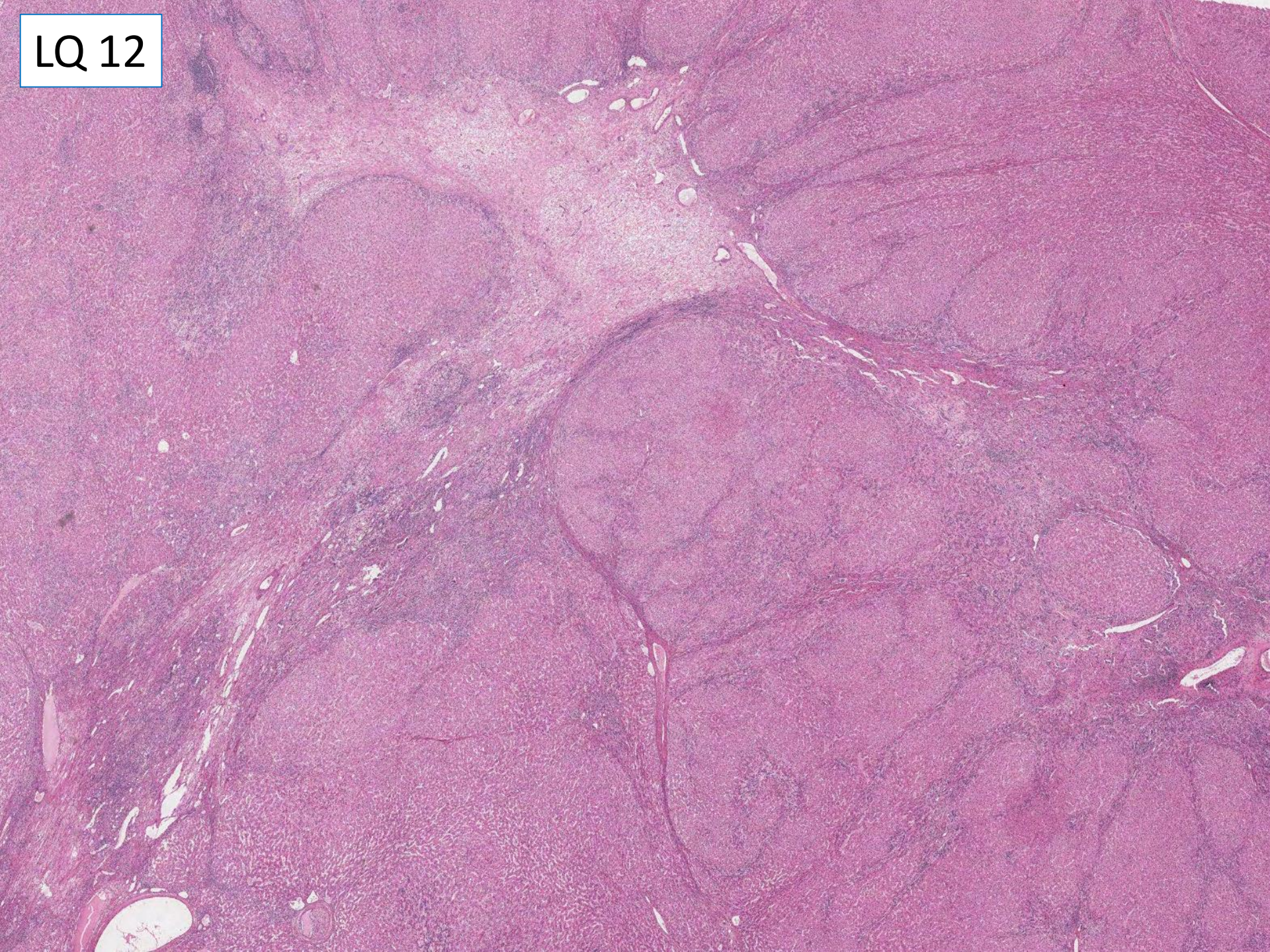
Lesion left lobe liver. Liver resection 135x95x60mm with a circumscribed lesion 35x32x24mm



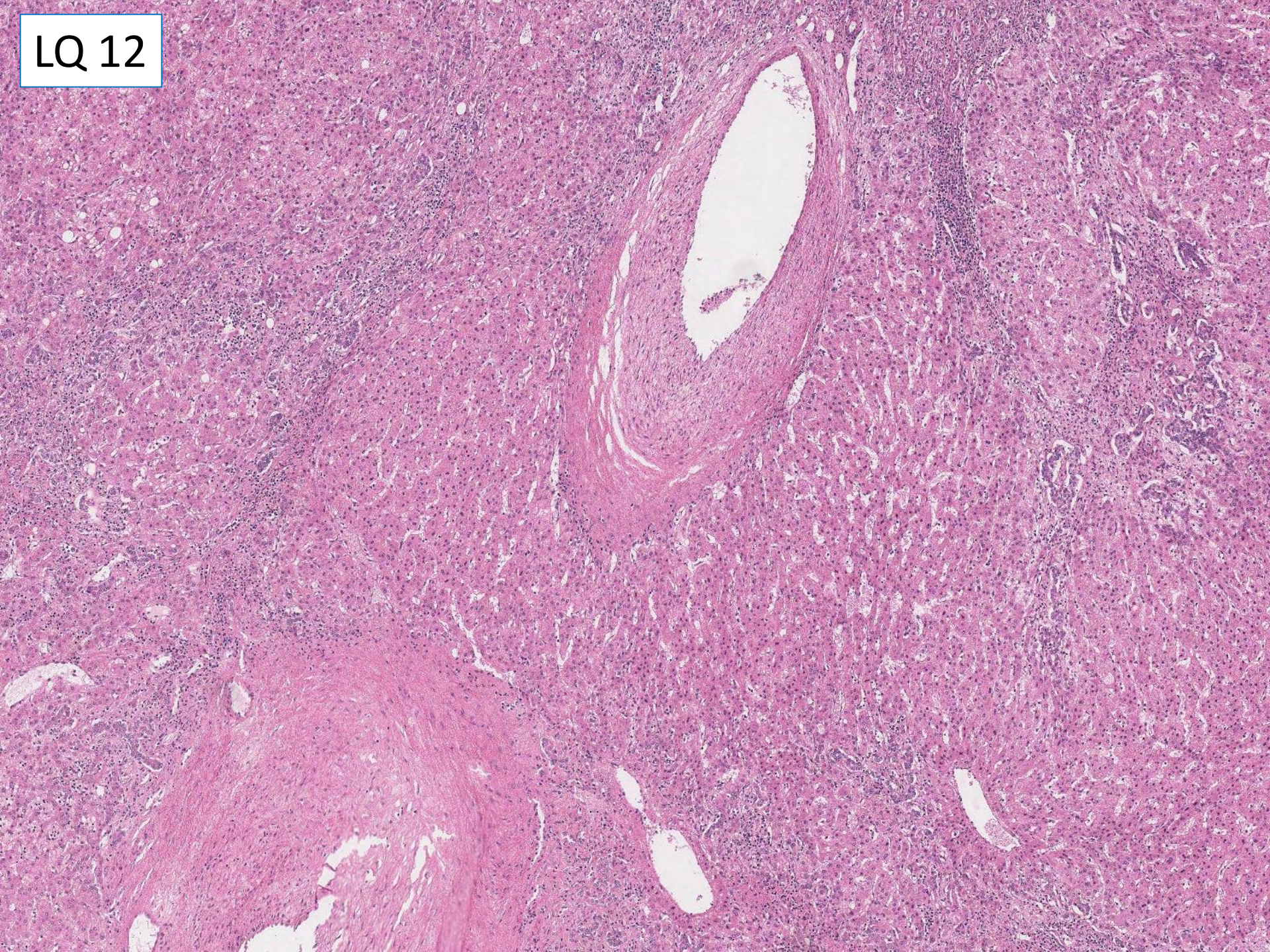
LQ 12 – edge of lesion / background liver



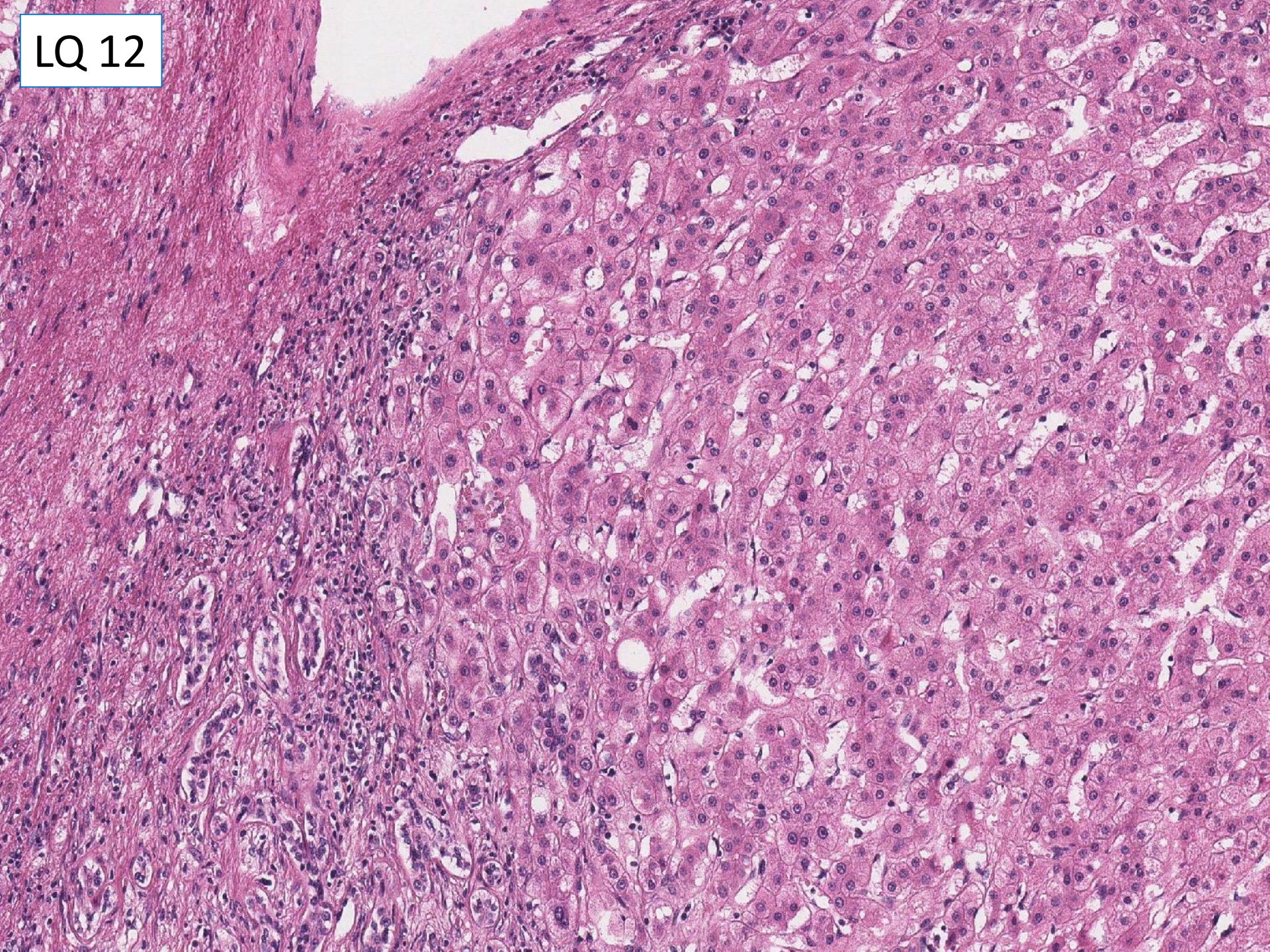
LQ 12



LQ 12



LQ 12



Case LQ12 28M

Lesion left lobe liver. Liver resection 135x95x60mm with a circumscribed lesion 35x32x24mm

Focal nodular hyperplasia	82
Hepatic adenoma - - do stains to confirm.	1

Consensus diagnosis: focal nodular hyperplasia.



UK Liver Pathology Group

Opportunity for more discussion

The end