Liver National EQA Scheme

Circulation Q

Birmingham, March 15th 2005

Images from circulations

- Virtualpathology@leeds.ac.uk/uvw
- View slides from current circulation,
- Aperio – see and navigate whole slide

Discussion on scoring cases:

Favour inclusive approach to scoring to avoid long discussion over how marks should be allocated on individual cases.

Half marks for partially correct responses

Main value of the meeting is from discussion of cases among participants

In future both morphology and a comment on clinicopathological correlation (where relevant) should be included for accepted diagnoses; this will be explicitly stated in correspondence with the next circulation.

Participants are not penalised for not including clinico-pathological information in the answers to the current circulation. Brief, one-word answers encouraged in other EQA schemes are often not appropriate for the liver EQA cases.

Slides and results from circulation Q

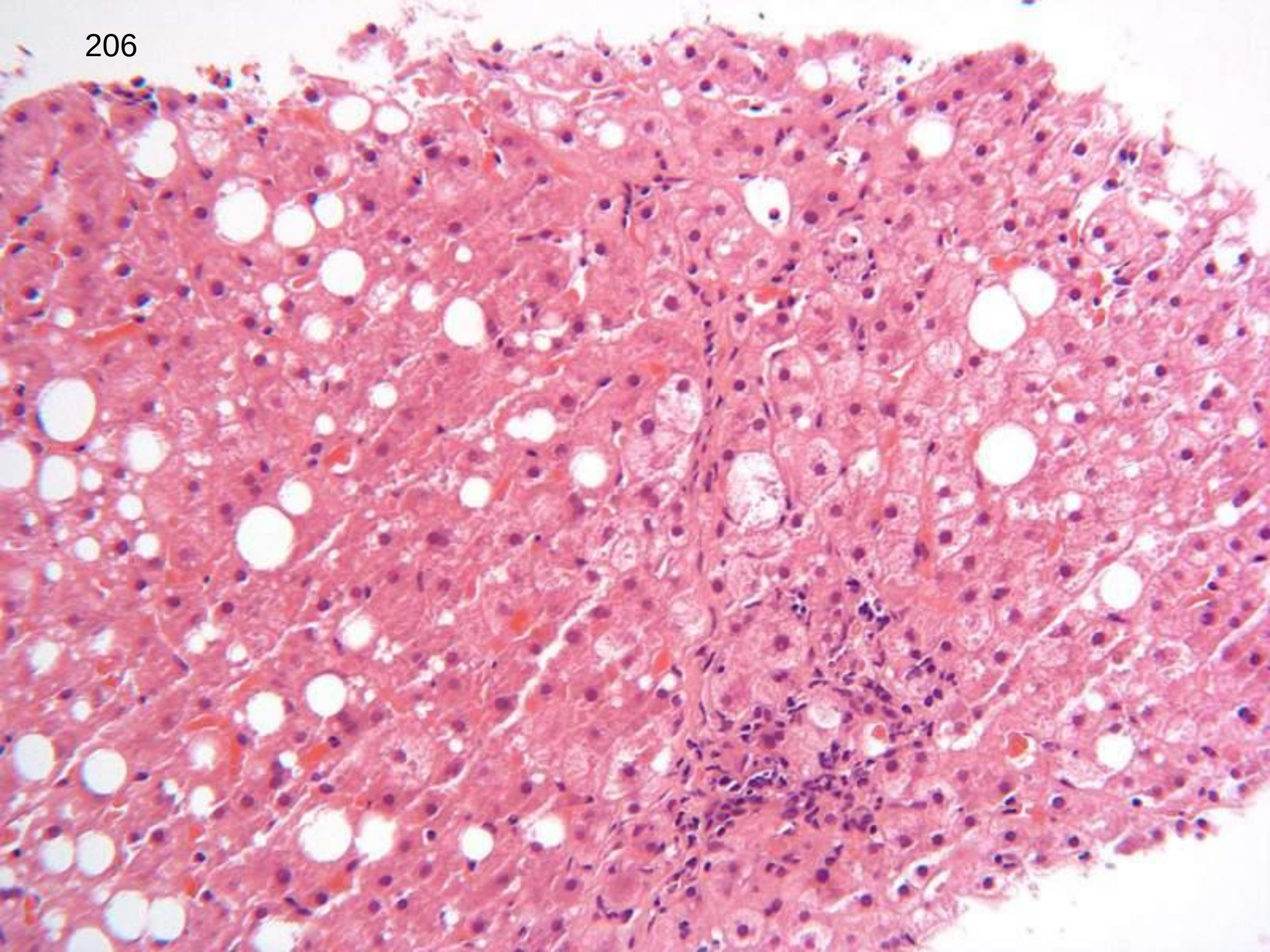
In the slides below, accepted diagnoses are in white, half marks in pink and excluded diagnoses in red

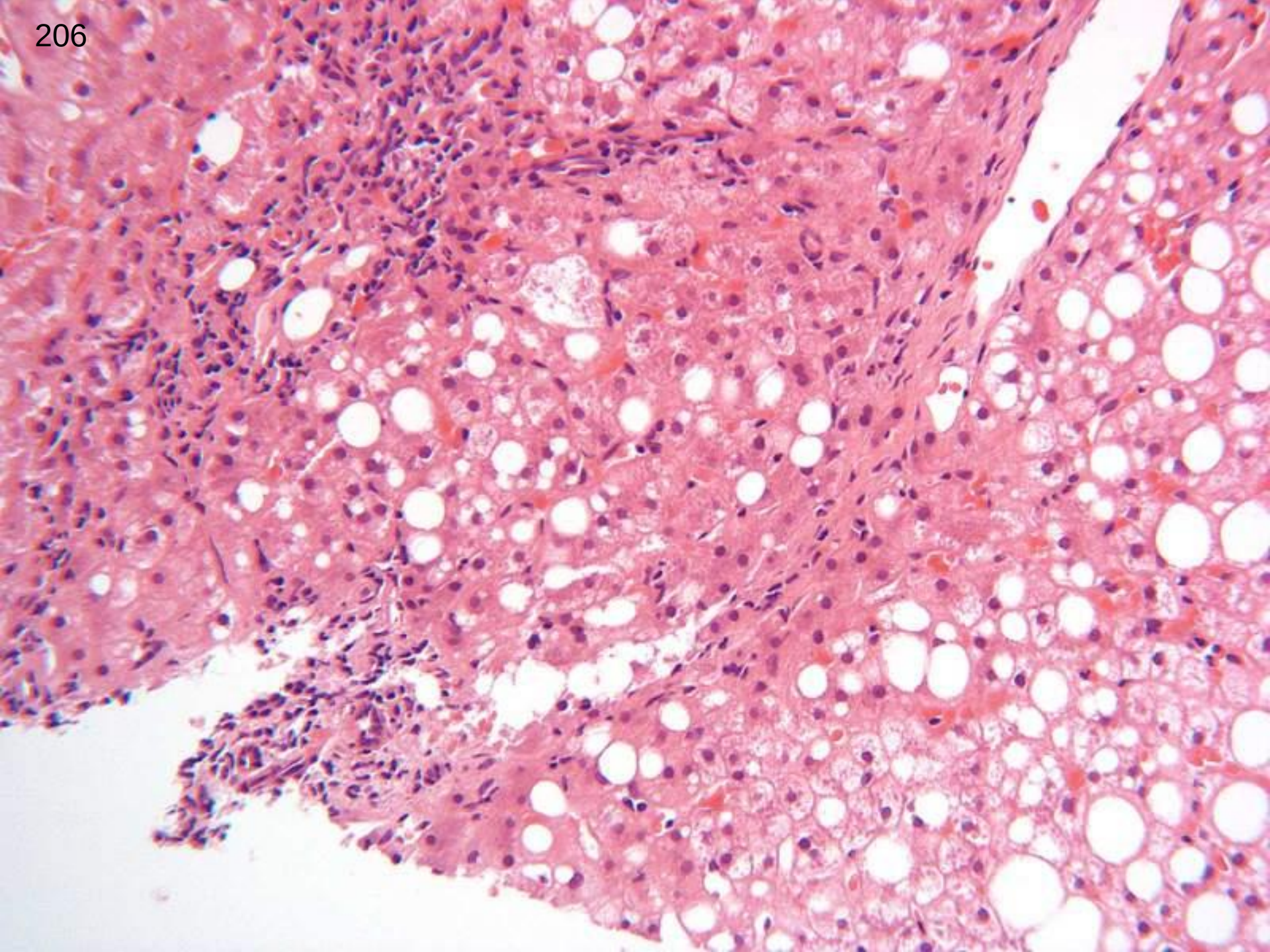
Case 206

- Raised LFTs, raised ANA, possible autoimmune. Type II diabetes

- Core of brown tissue measuring 1.5 x 1mm

206

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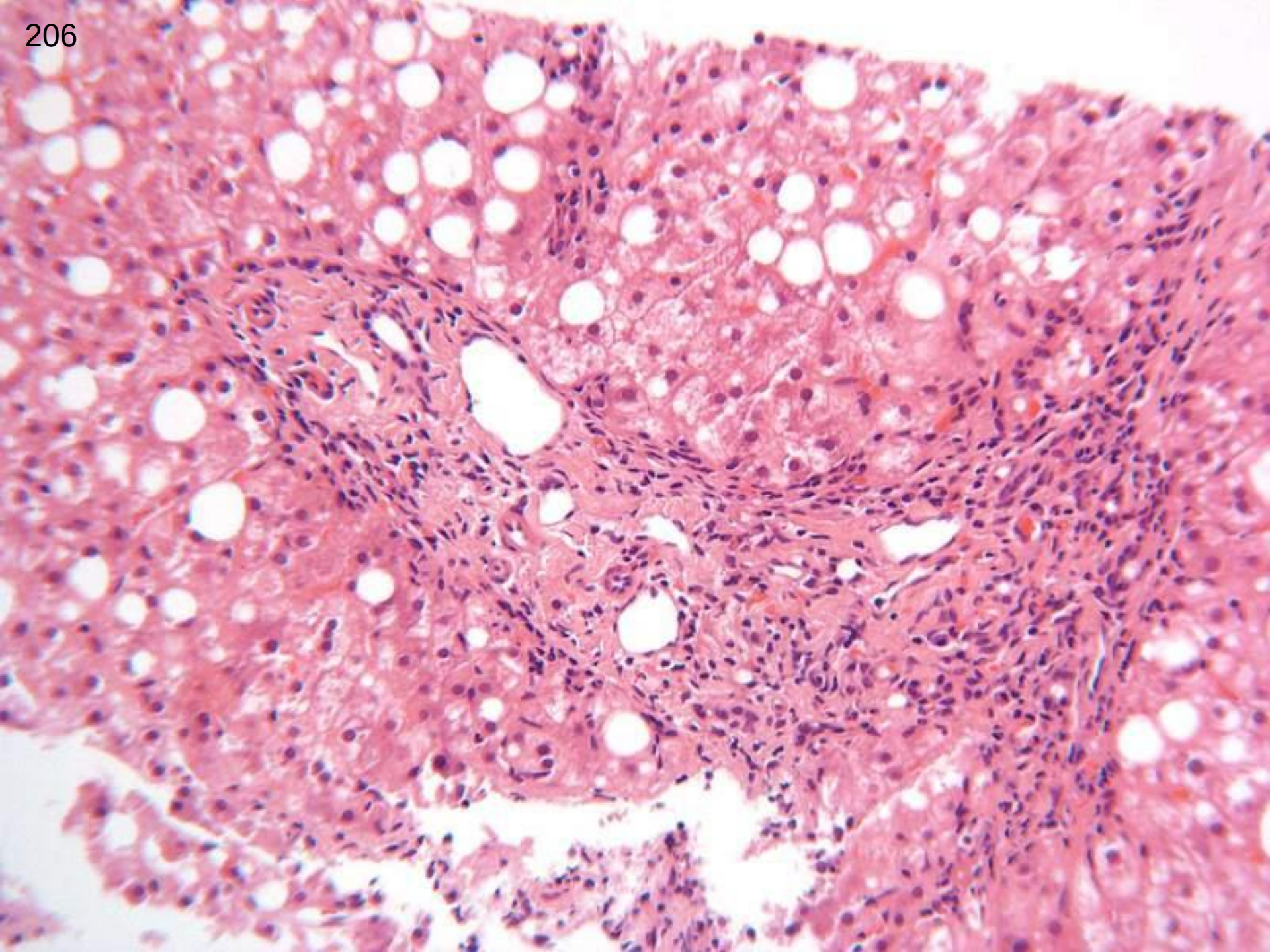
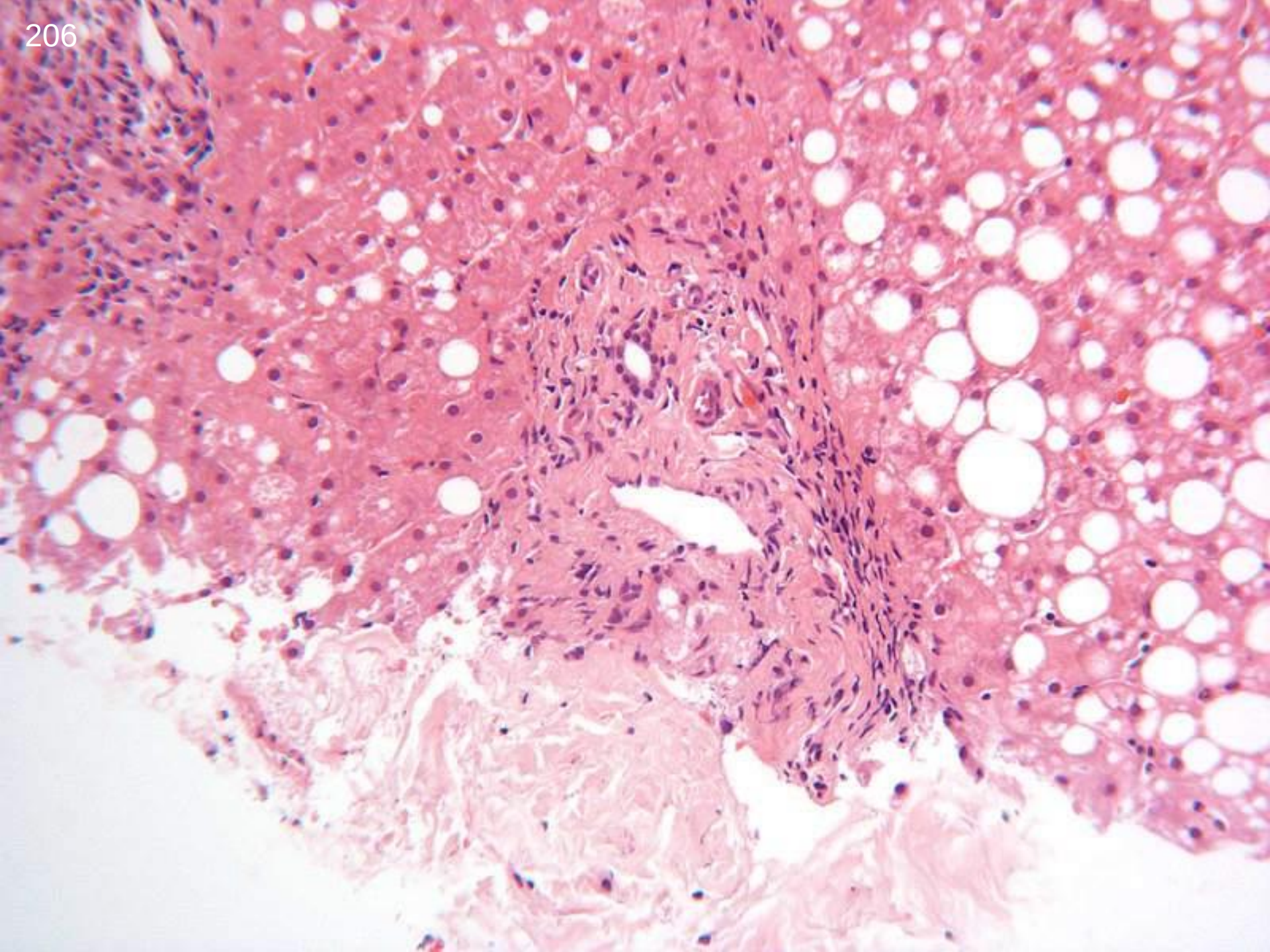




Case 206: diagnoses

51 NASH
Of which fibrosis mentioned by 41 – fibrosis NOS 5
slight fibrosis 4
Bridging fibrosis 25
Probable/early cirrhosis 6

1 autoimmune/hep C (NASH not mentioned)

1 chronic hepatitis and severe steatosis

1 autoimmune hepatitis type 1 with early cirrhosis, possible element of NASH

Case 206 diagnoses contd.

11 autoimmune not mentioned
12 not autoimmune
10 autoimmune unlikely
10 autoimmune as well as NASH

1 chronic hepatitis C or autoimmune

Comments:
15 exclude alcohol
4 do ubiquitin

Case 206

Comments during meeting:

since the clinical question related to autoimmune hepatitis, some comment on autoimmune hepatitis should be included in the answer. Most thought there was little or no evidence for autoimmune hepatitis.

model answer – the biopsy shows steatohepatitis; histology does not suggest a significant component of autoimmune hepatitis

further clinical information

No alcohol

ANA 1:320, later 1:640

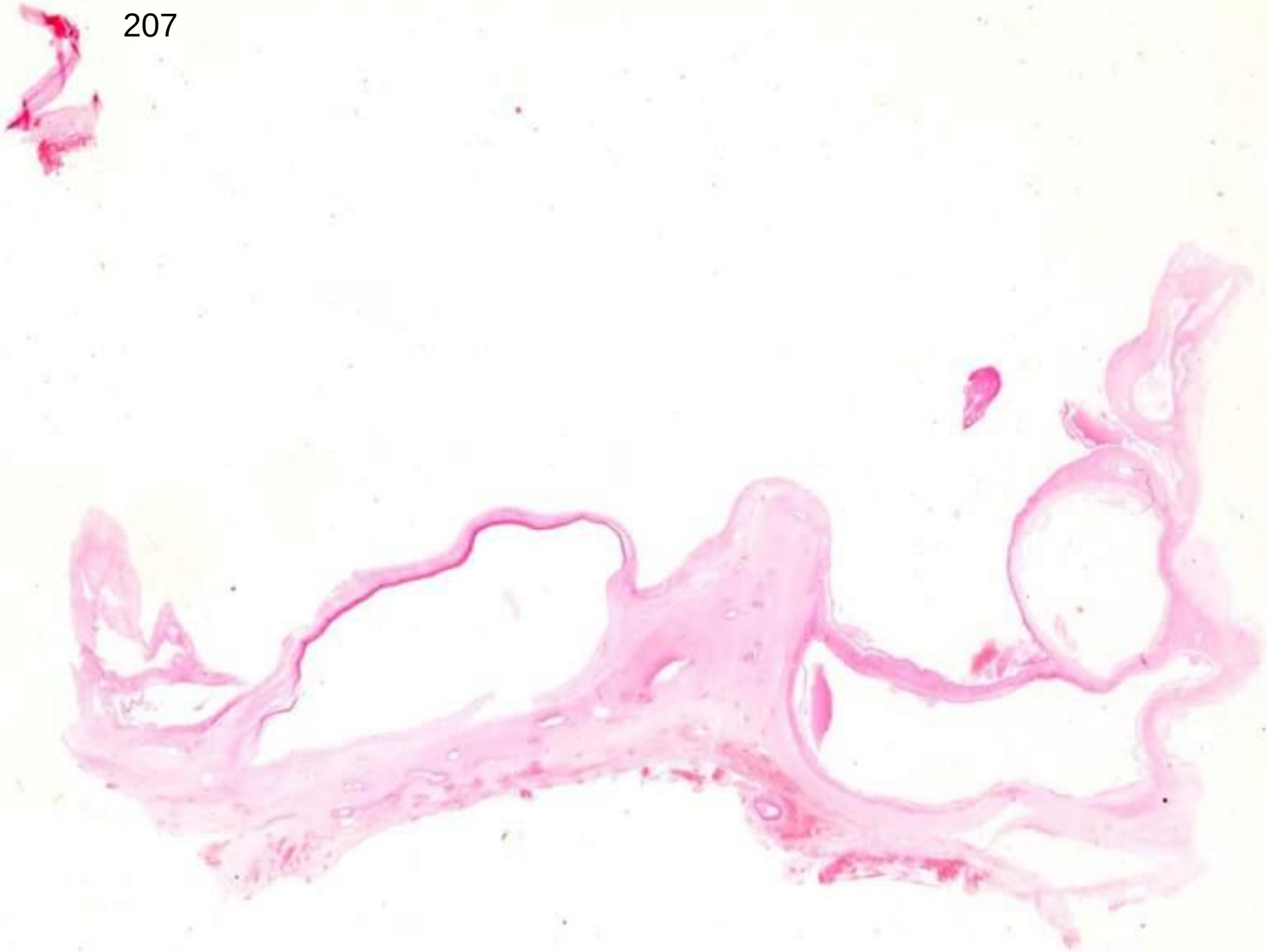
Globulin slightly raised, 39g/l

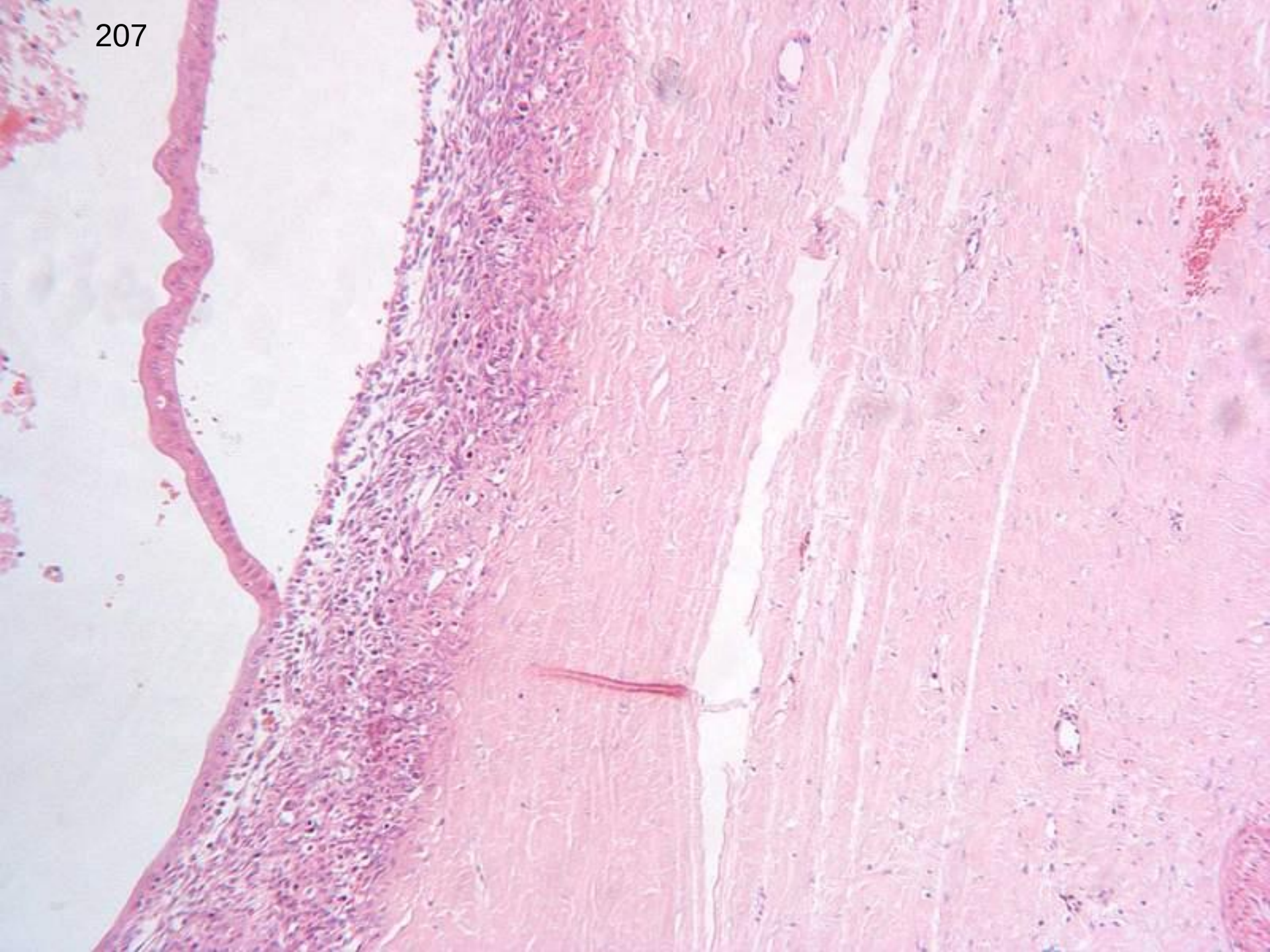
No steroids given because of diabetic control

Case 207

- Female, aged 53. Right upper quadrant pain. Irregular cystic lesion in liver. ?biliary cystic tumour, ?malignant.

- Multilocular cystic lesion measuring 17 cm in maximum dimension. Pus and serous fluid in the cysts.





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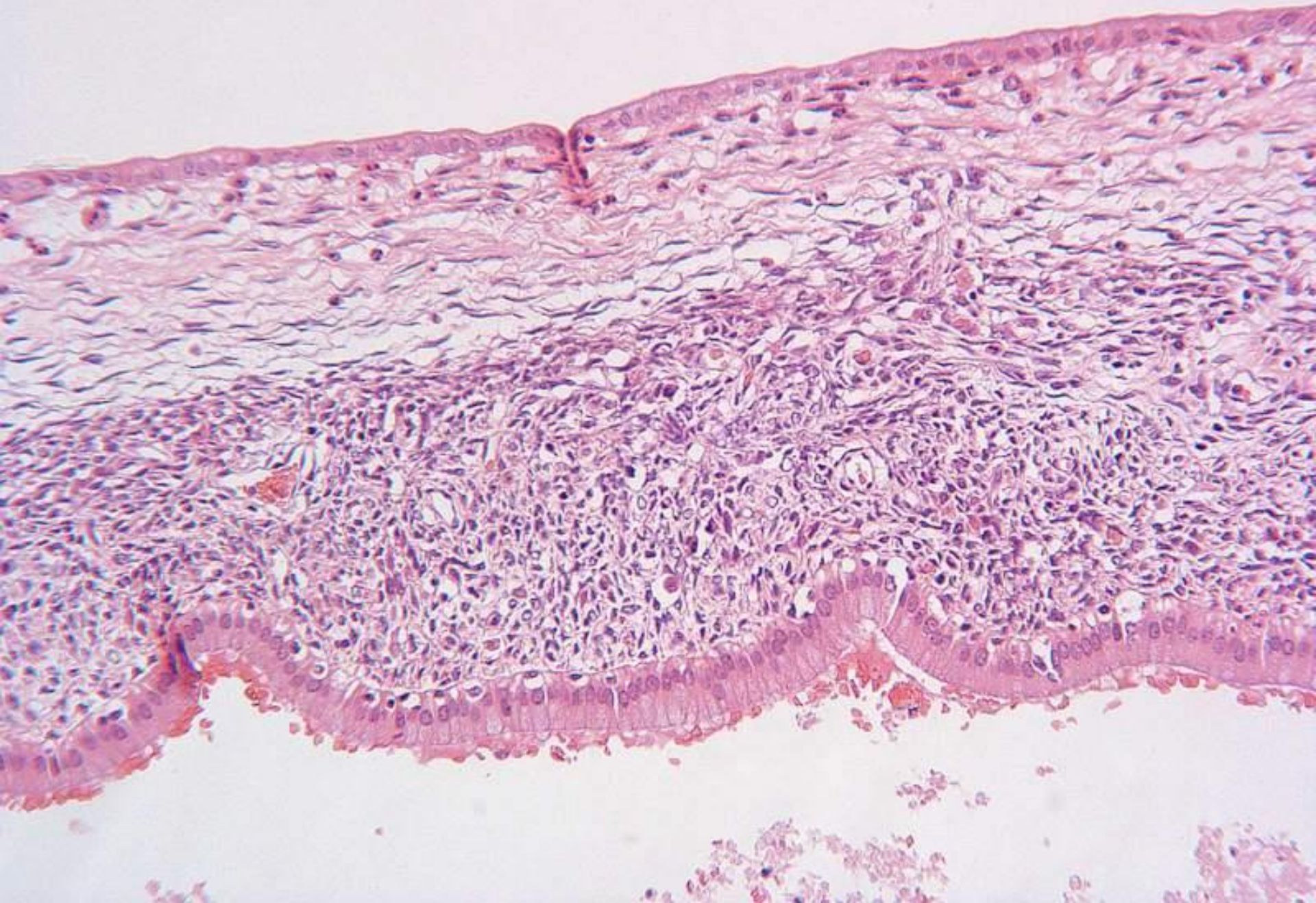

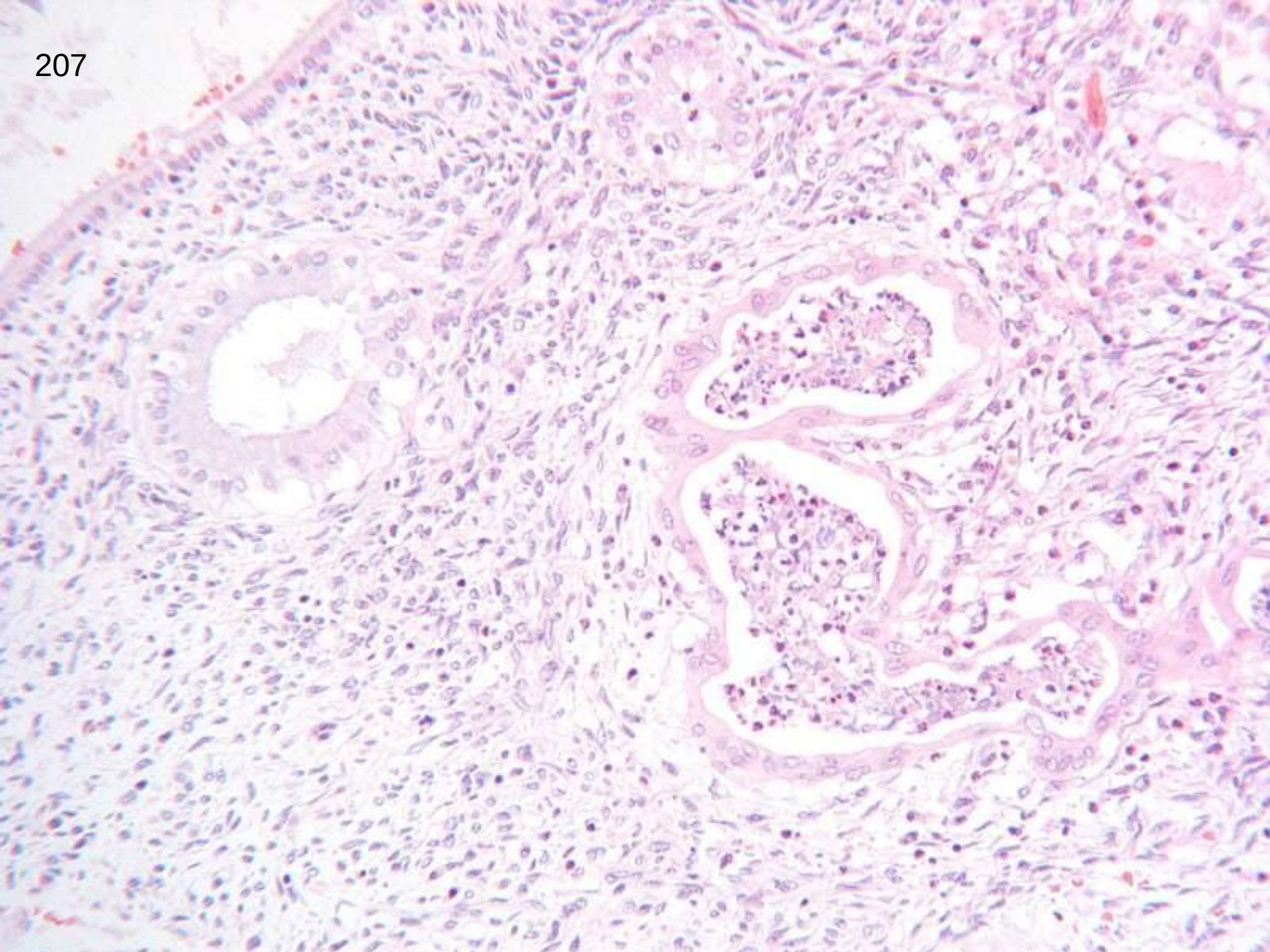
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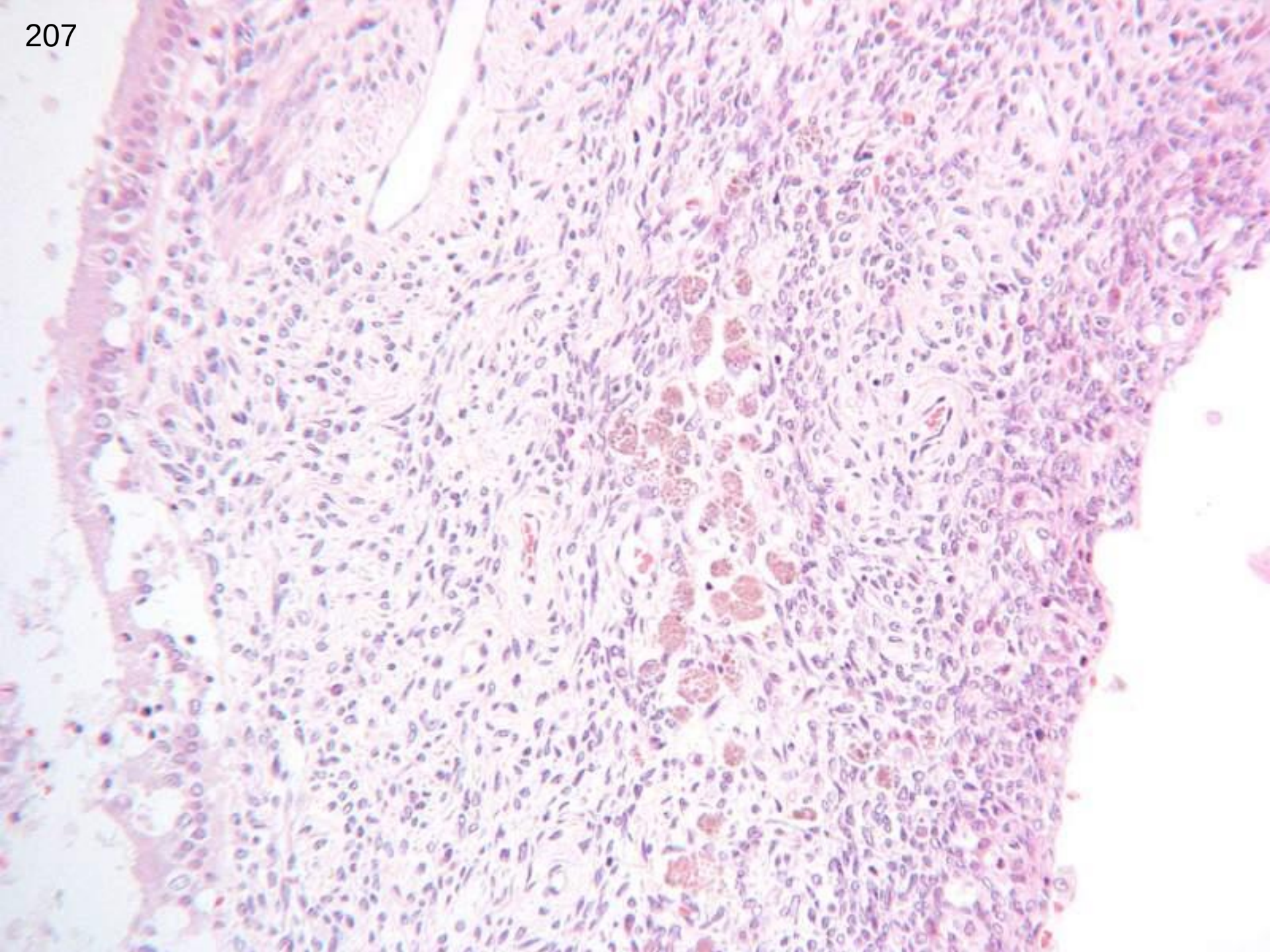


Case 207: diagnoses

28 cystadenoma with mesenchymal stroma
23 cystadenoma or biliary cystadenoma

2 Caroli's
2 biliary cyst ? autosomal dominant PCD
1 teratoma ? intermediate grade
1 cystic lesion ? Endometriosis

12 check multiple blocks
1 recurrence likely if not all excised.

Case 207 further clinical information

22 blocks taken; no malignancy

Excision complete

No evidence of polycystic disease

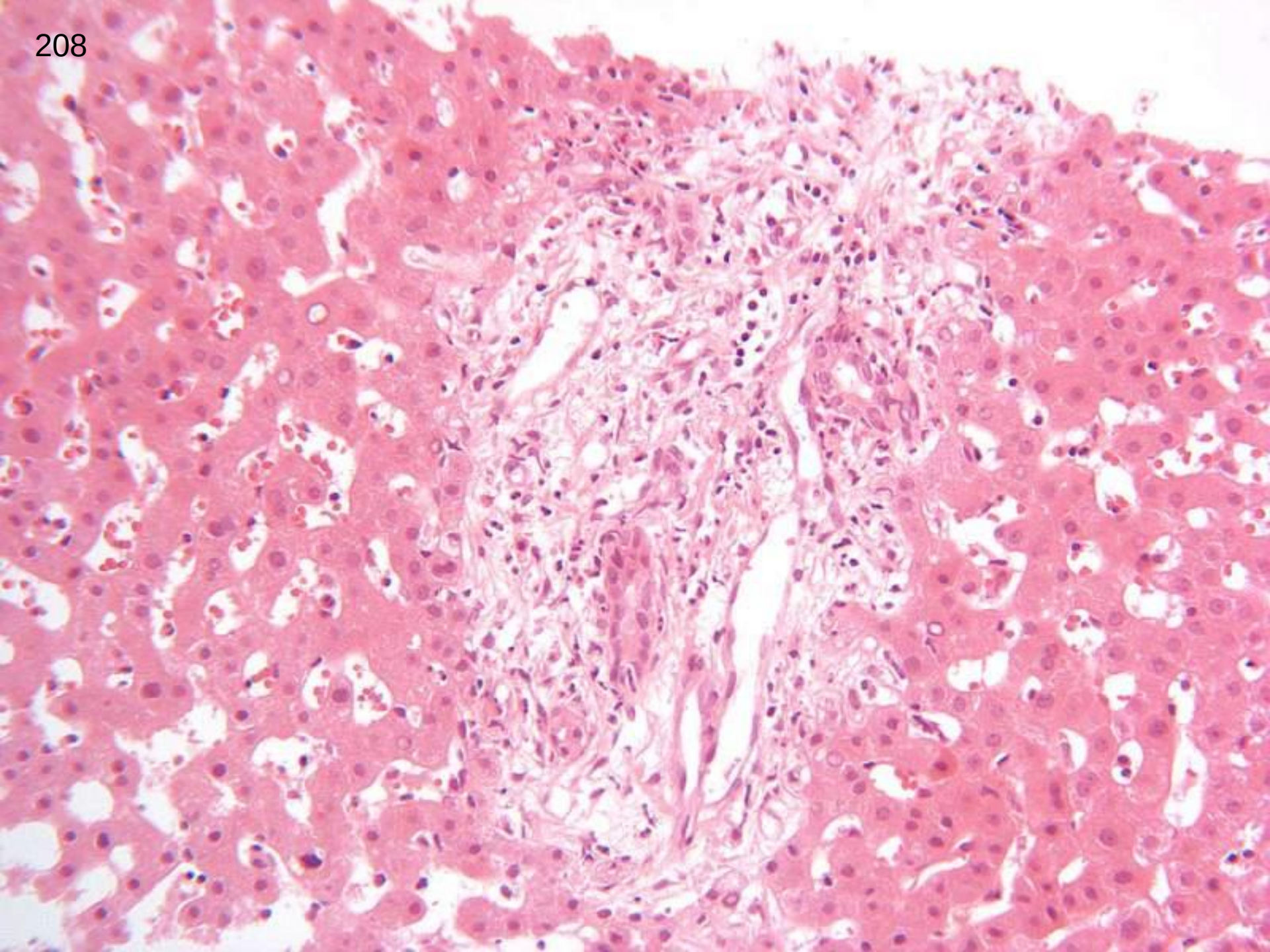
No recurrence

Case 208

- Acute liver failure, ?cause.
- Subsequent history of polydrug ingestion 3 weeks previous. (Social drug user). Specific drugs unknown

- One core of tissue measuring 2 cm

208



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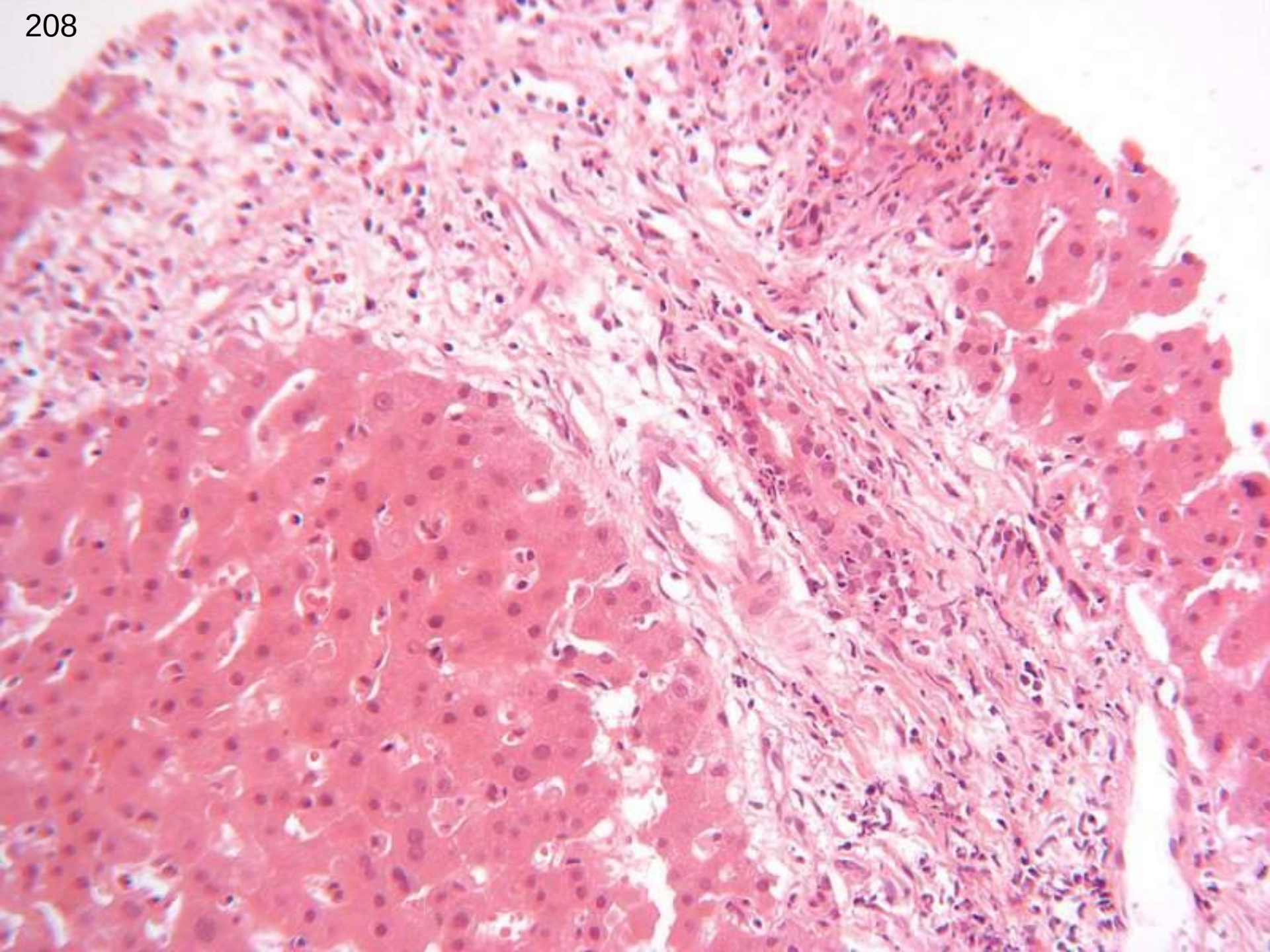

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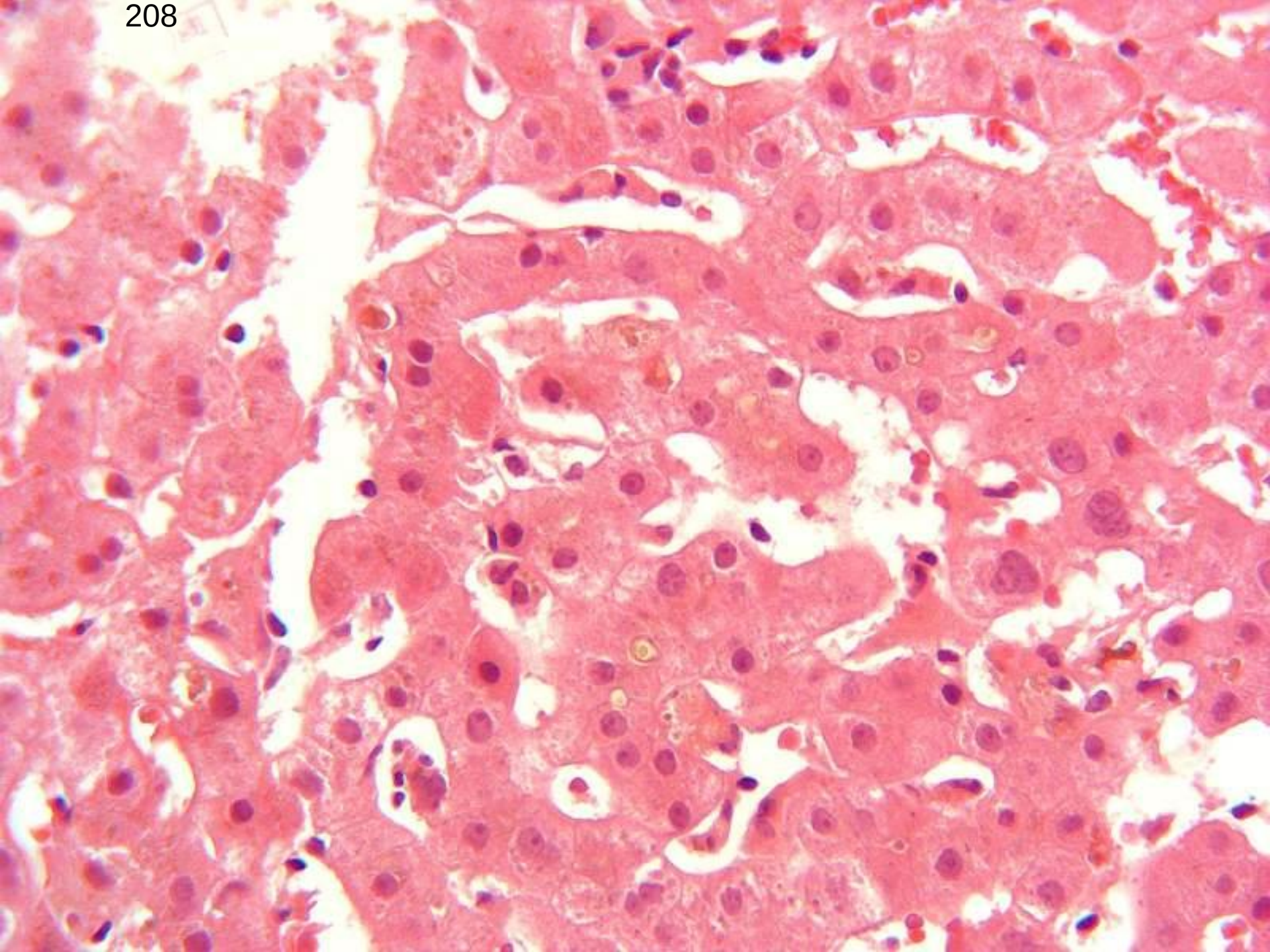


Case 208: diagnoses

35 drug induced hepatitis with cholangiopathy

9 cholestatic hepatitis consistent with drugs

4 biliary disease with drugs as possibility

of which 2 PSC ? drug (1 fluclox)

1 bile duct damage with granuloma ? drugs

1 ascending cholangitis ?sepsis/? Drugs

5 biliary disease, drugs not mentioned

of which 1 cholestatic hepatitis exclude duct obstruction

5 LBDO/sepsis

1 ?PBC/PSC/obstruction

Case 208: comments

15 exclude duct obstruction

5 more drug history

1 drugs and also ascending cholangitis

1 ?can ascending cholangitis be drug induced

2 exclude autoimmune

model answer: cholestasis with cholangiopathy: features could be a result of drugs but investigation of biliary tree recommended to exclude obstruction

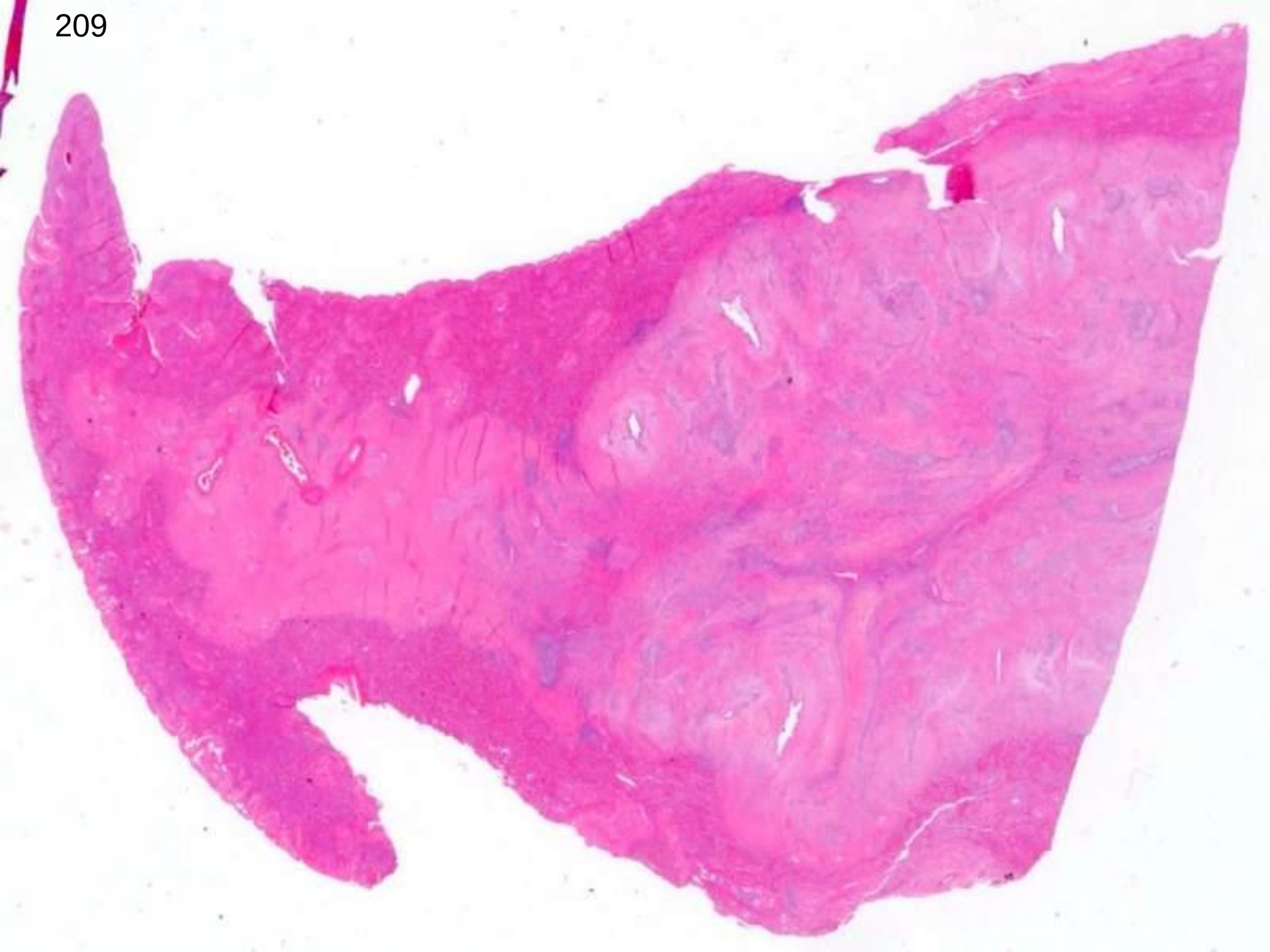
209

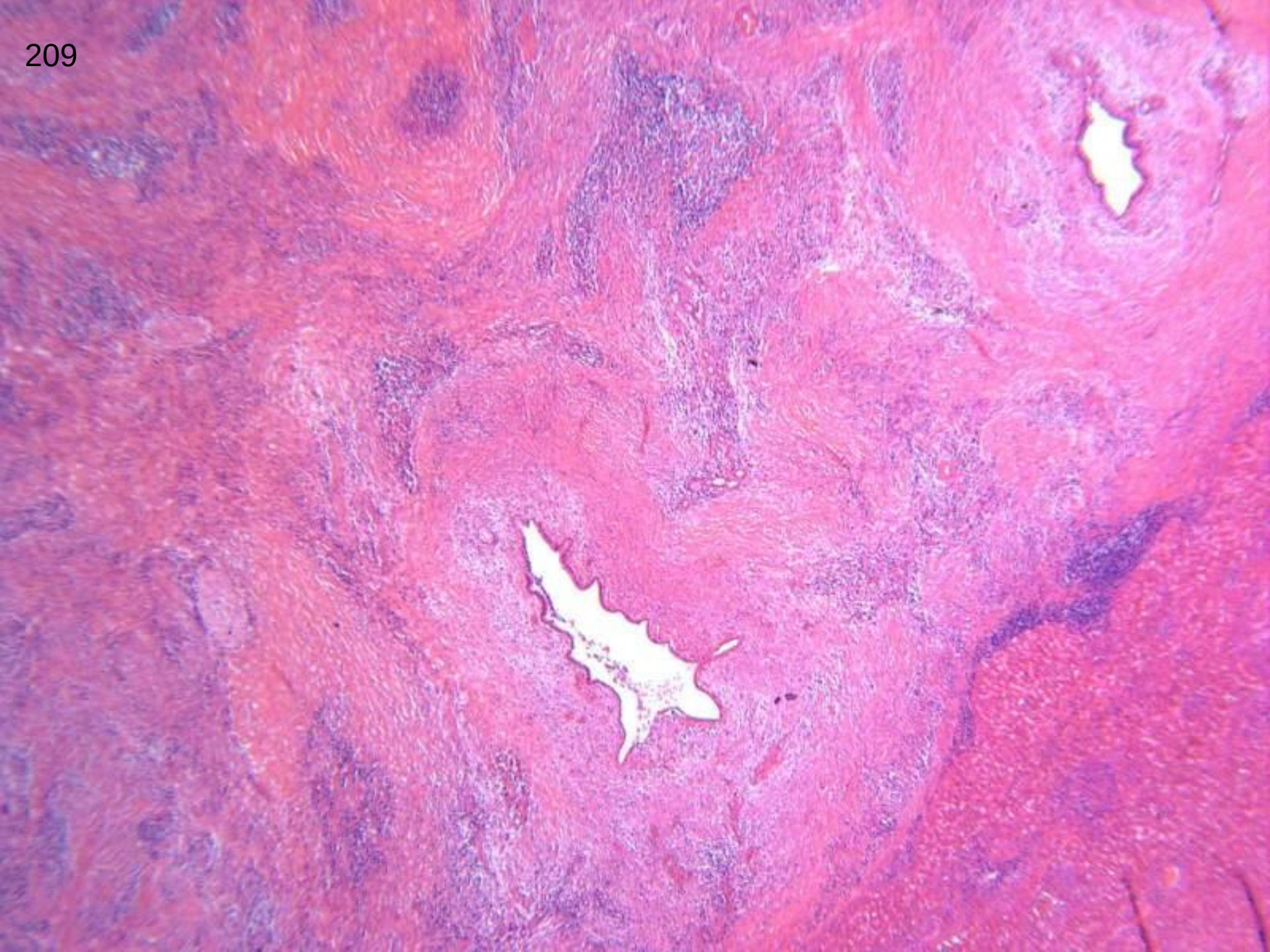
- Left lobe of liver

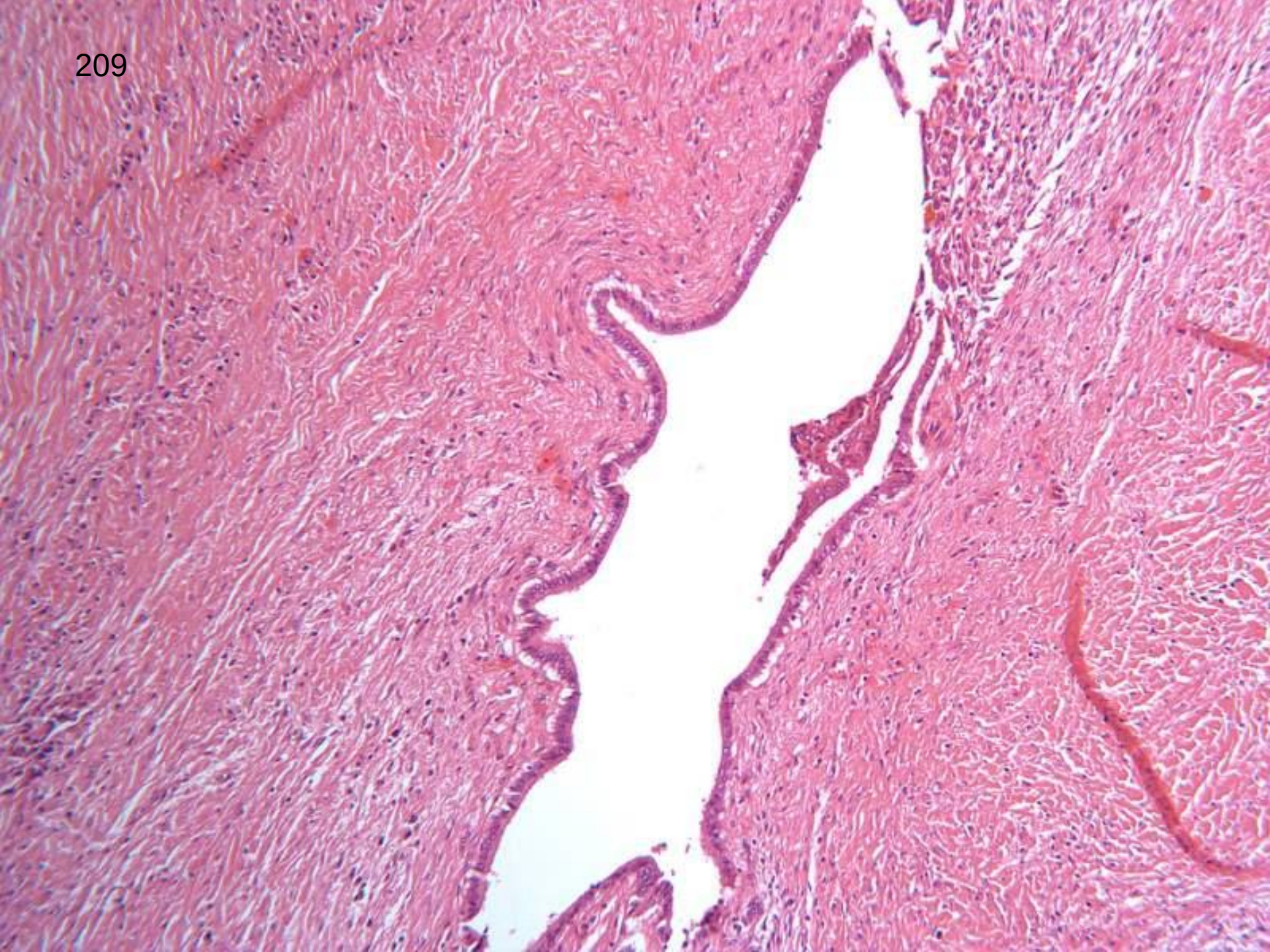
  clinically cholangiocarcinoma.

- A lobe of liver measuring 160 x 90 x 60mm. The cut surface shows a firm greyish white tumour 50 cx 30 x 20 mm with satellite nodules up to 5 mm in diameter.

209



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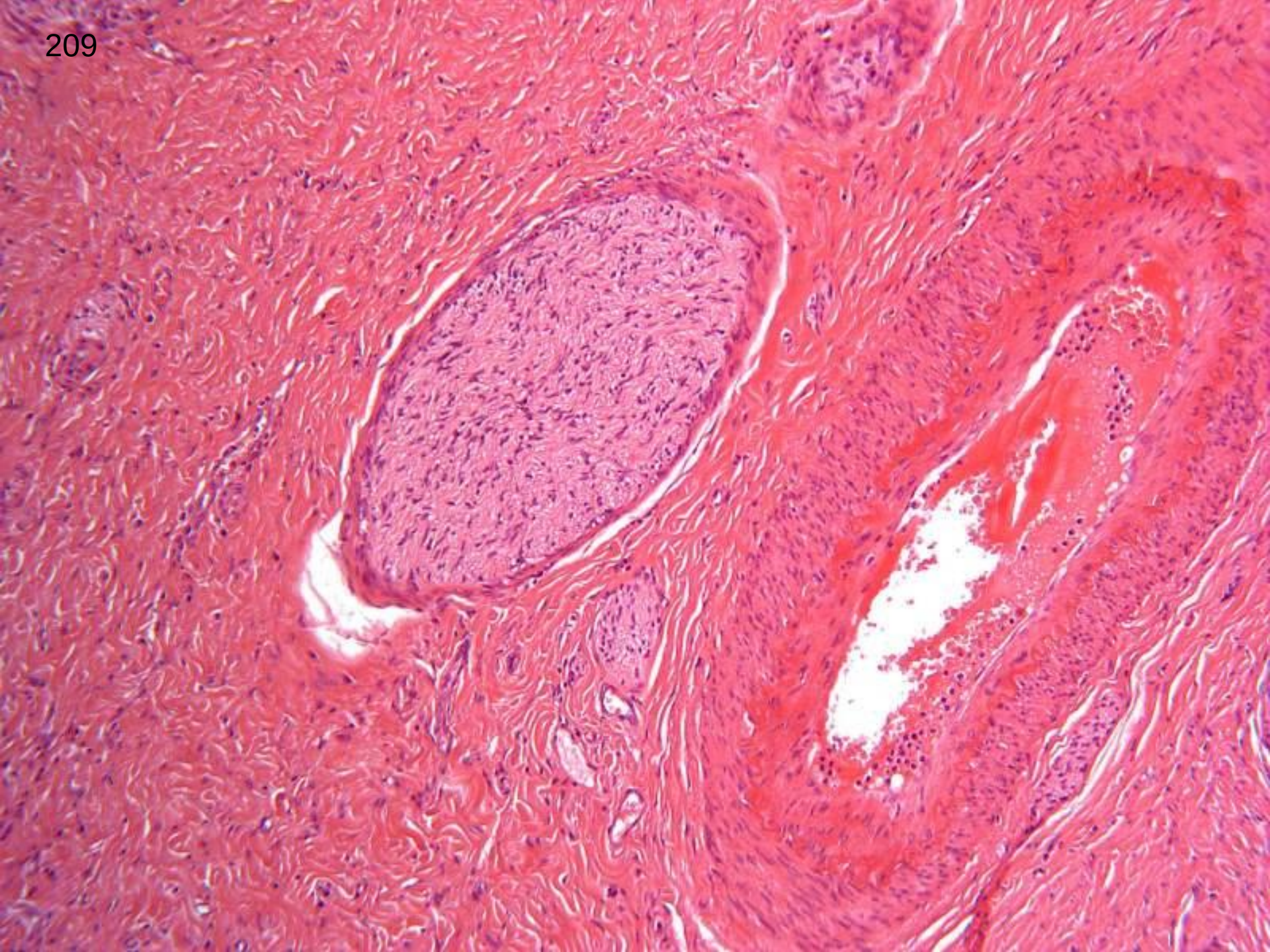
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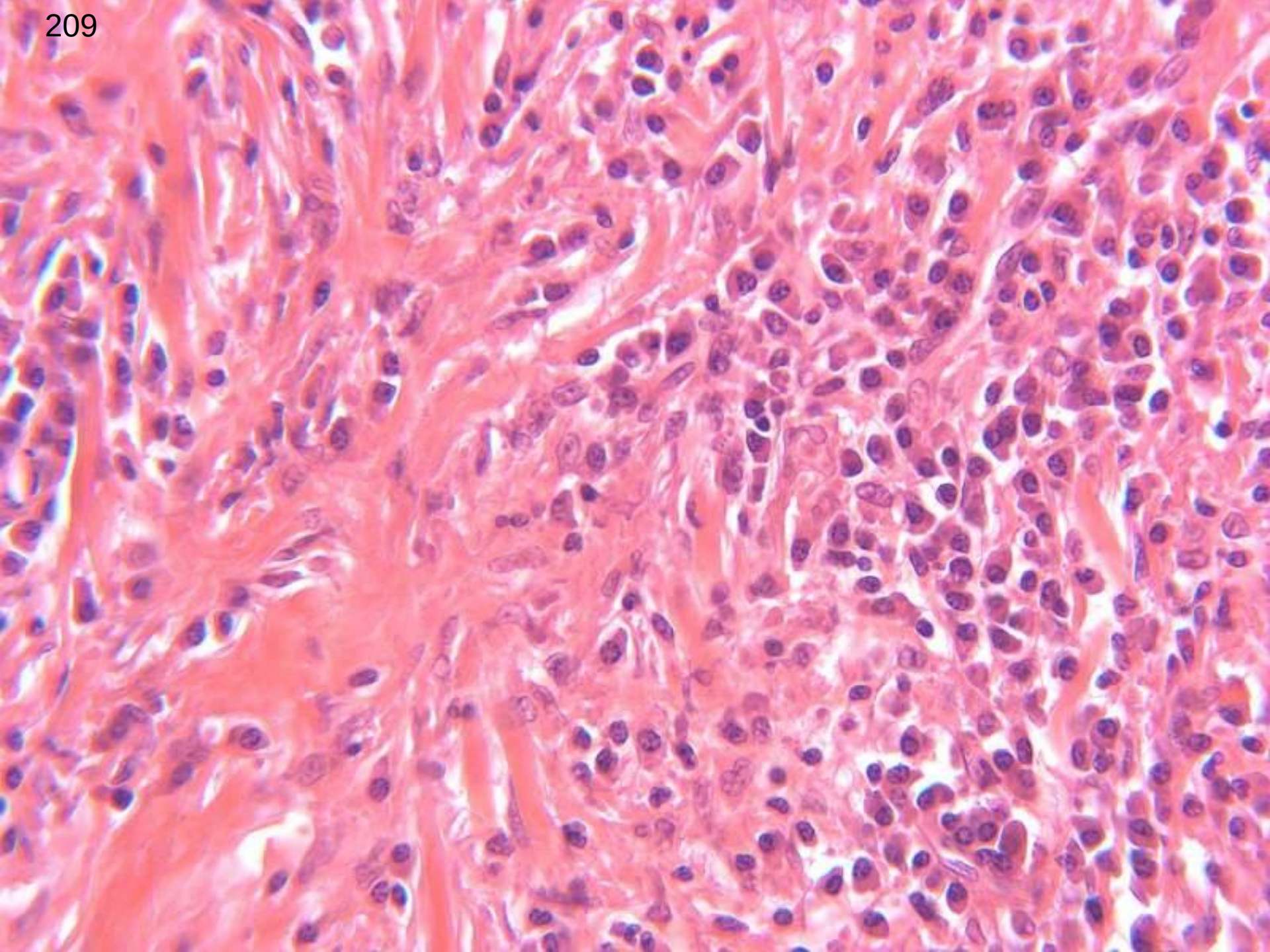
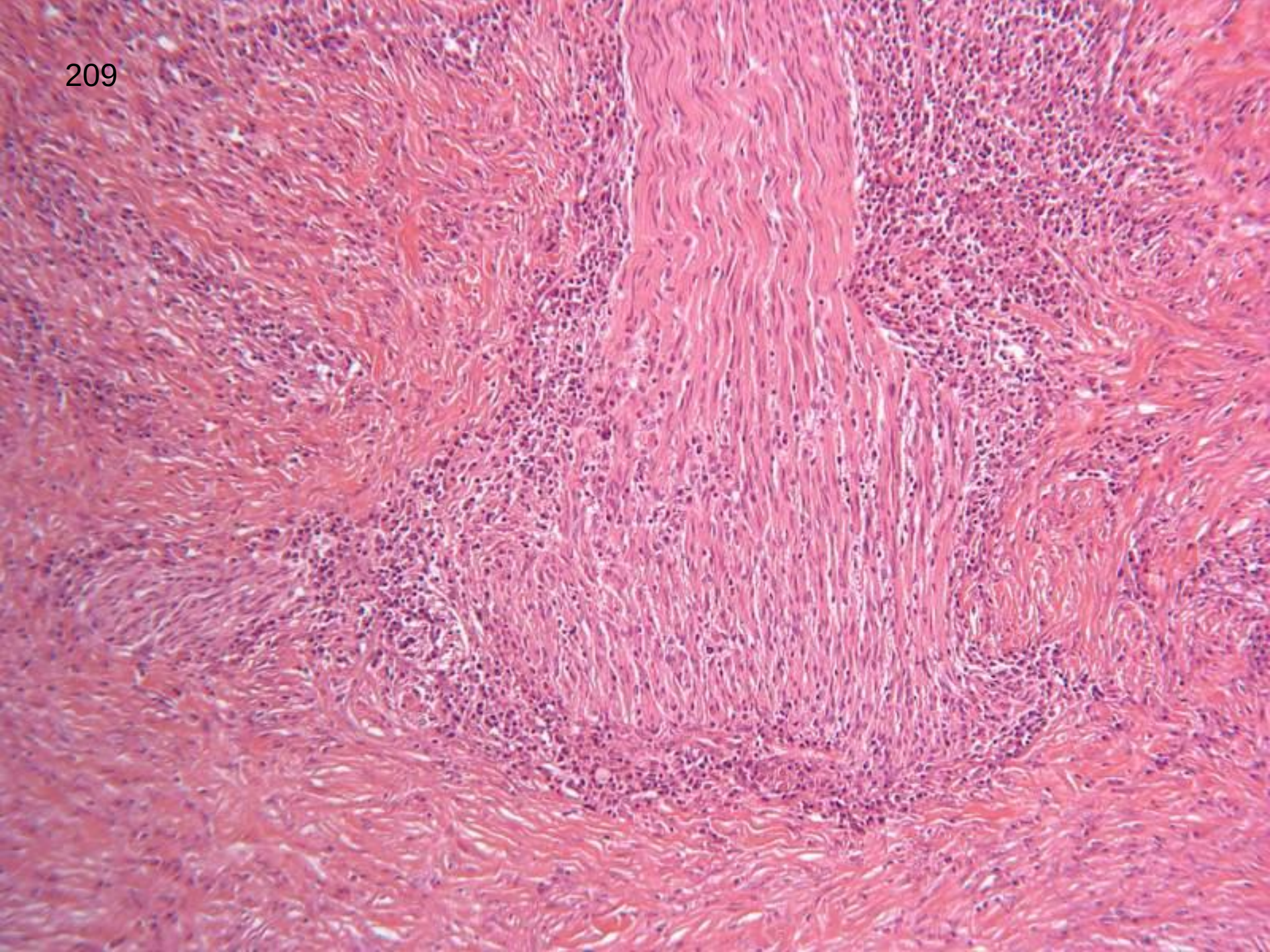



209

Case 209: diagnoses

This case excluded from scoring

30 inflammatory pseudotumour

10 hamartoma/mesenchymal hamartoma
3 inflammatory pseudotumour and/or hamartoma

3 inflammatory pseudotumour/ inflammatory myofibroblastic tumour
3 inflammatory myofibroblastic tumour

2 spindle cell tumour (neurofibroma, nerve sheath myxoma)
1 neurofibroma
1 cholangiofibroma, hamartoma or neurofibroma
1 neurovascular malformation/haemangioma
1 old infarct or inflamed hamartoma
3 scar/old infarct

Case 209: comments

14 commented on big nerves

6 ?underlying PSC/sclerosing pancreatitis

2 exclude biliary obstruction

2 exclude lymphoma

1 exclude follicular dendritic cell tumour

comments: no consensus in this case

'Inflammatory pseudotumour' in the liver develops in specific circumstances – resolving infection/abscess; primary sclerosing cholangitis; in association with sclerosing pancreatitis; some cases represent true neoplasm (inflammatory myofibroblastic tumour). The large nerves represent a response to damage, analogous to traumatic neuroma.

Further clinical information: good recovery, apart from biliary leak.

No underlying PSC or pancreatitis.

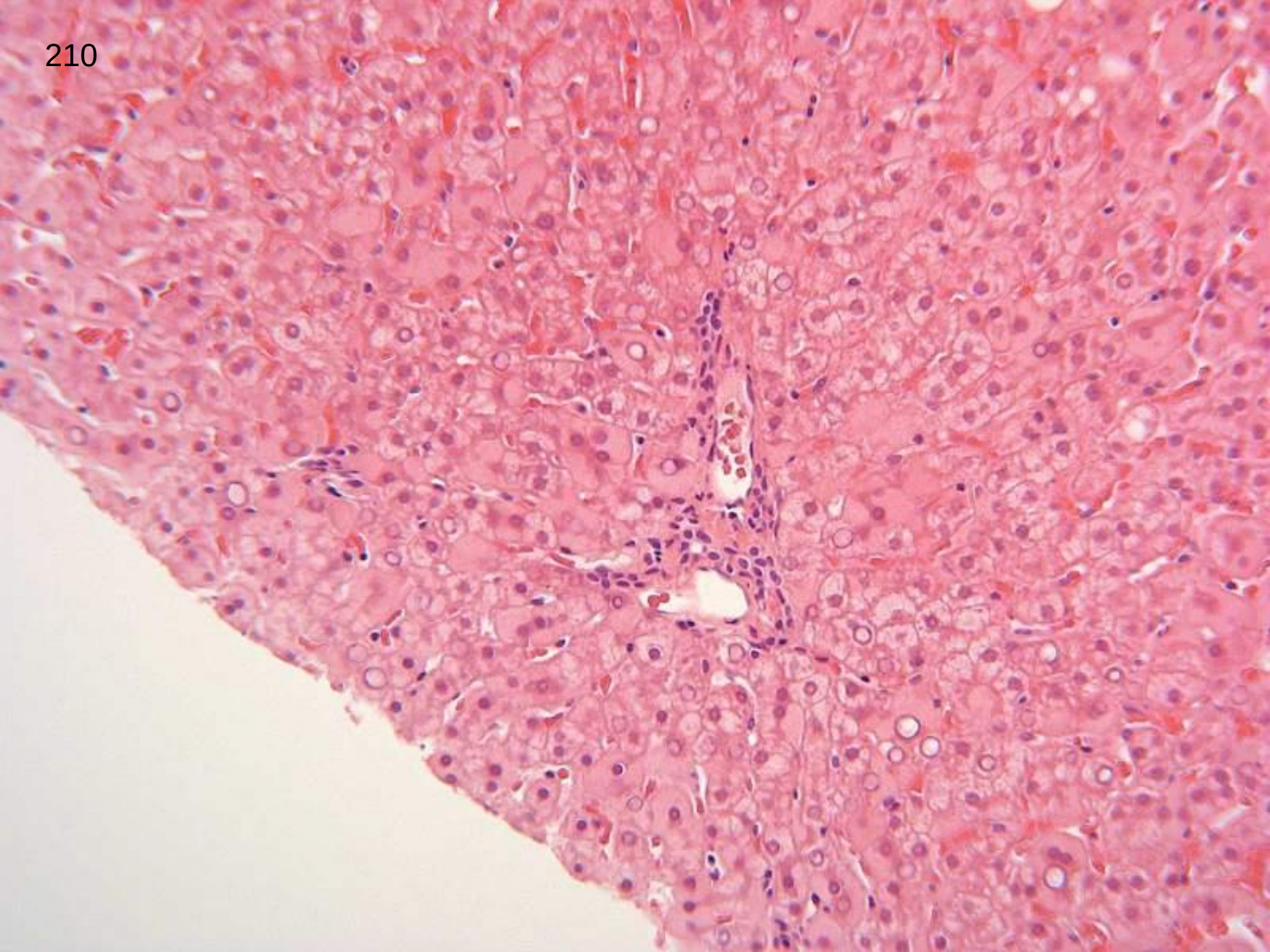
Ref: Dehner LP. The enigmatic inflammatory pseudotumours: the current state of our understanding, or misunderstanding. J Pathol 2000;192;277-9

Zen Y et al. IgG4-related sclerosing cholangitis with and without hepatic inflammatory pseudotumour and sclerosing pancreatitis-associated sclerosing cholangitis. Am J Surg Pathol 2004;28;1193-1203

210

- Hepatitis B positive, ?liver status. Previous biopsy 2000 (previous minimal clinical hepatitis, fibrosis score 1 (Knodell) with features of HBV

- Single core of tan tissue 15 mm in length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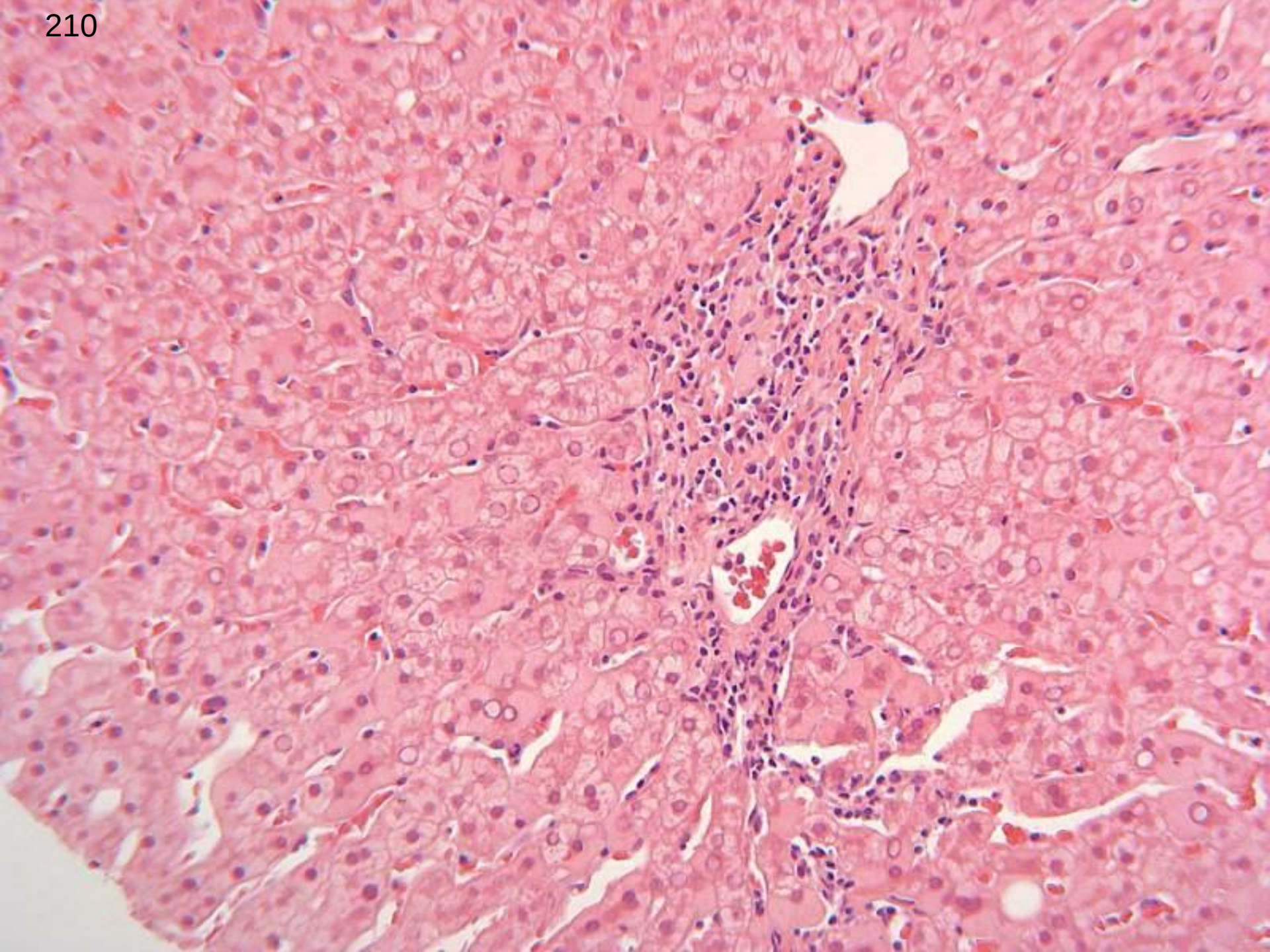
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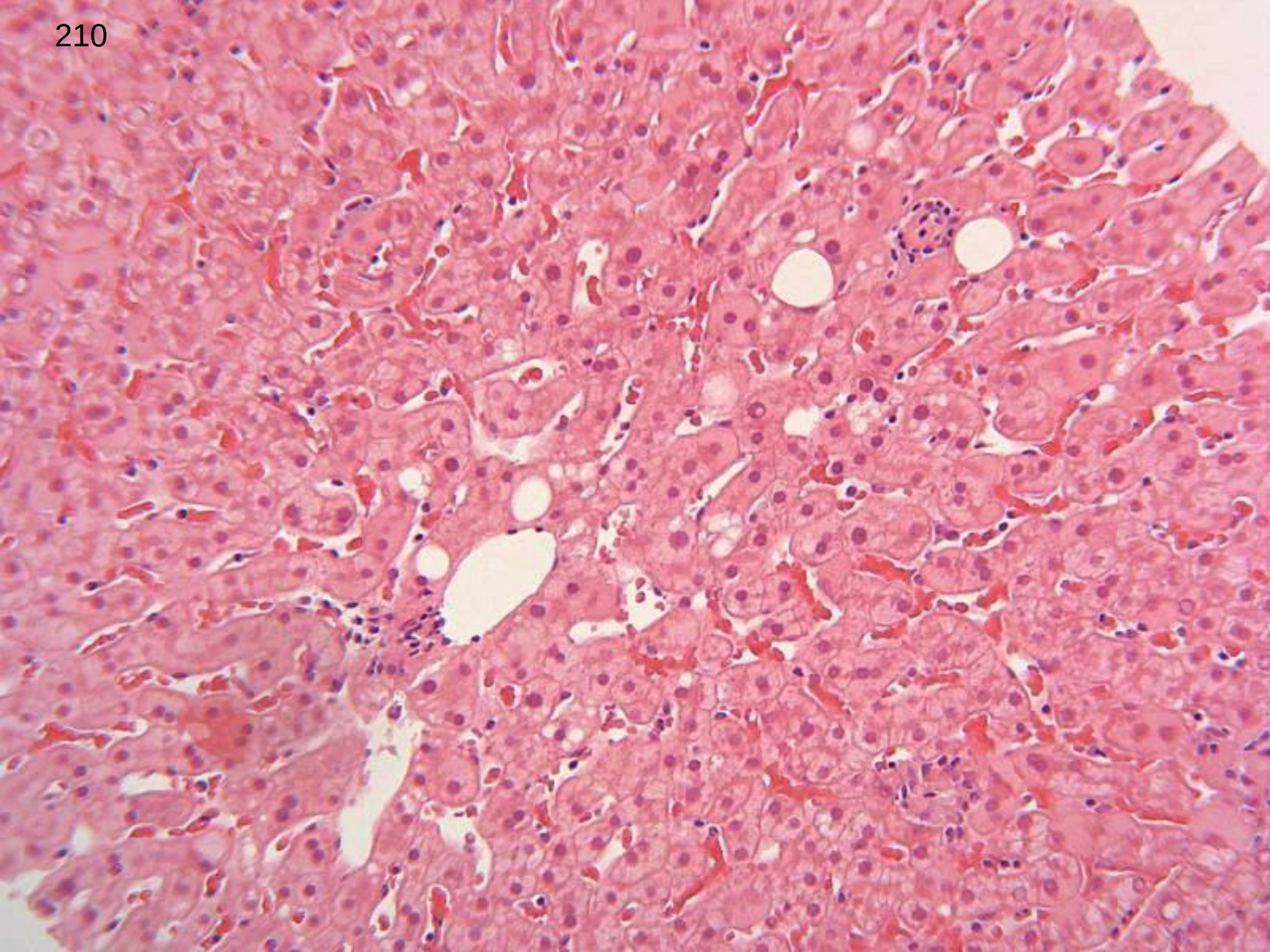
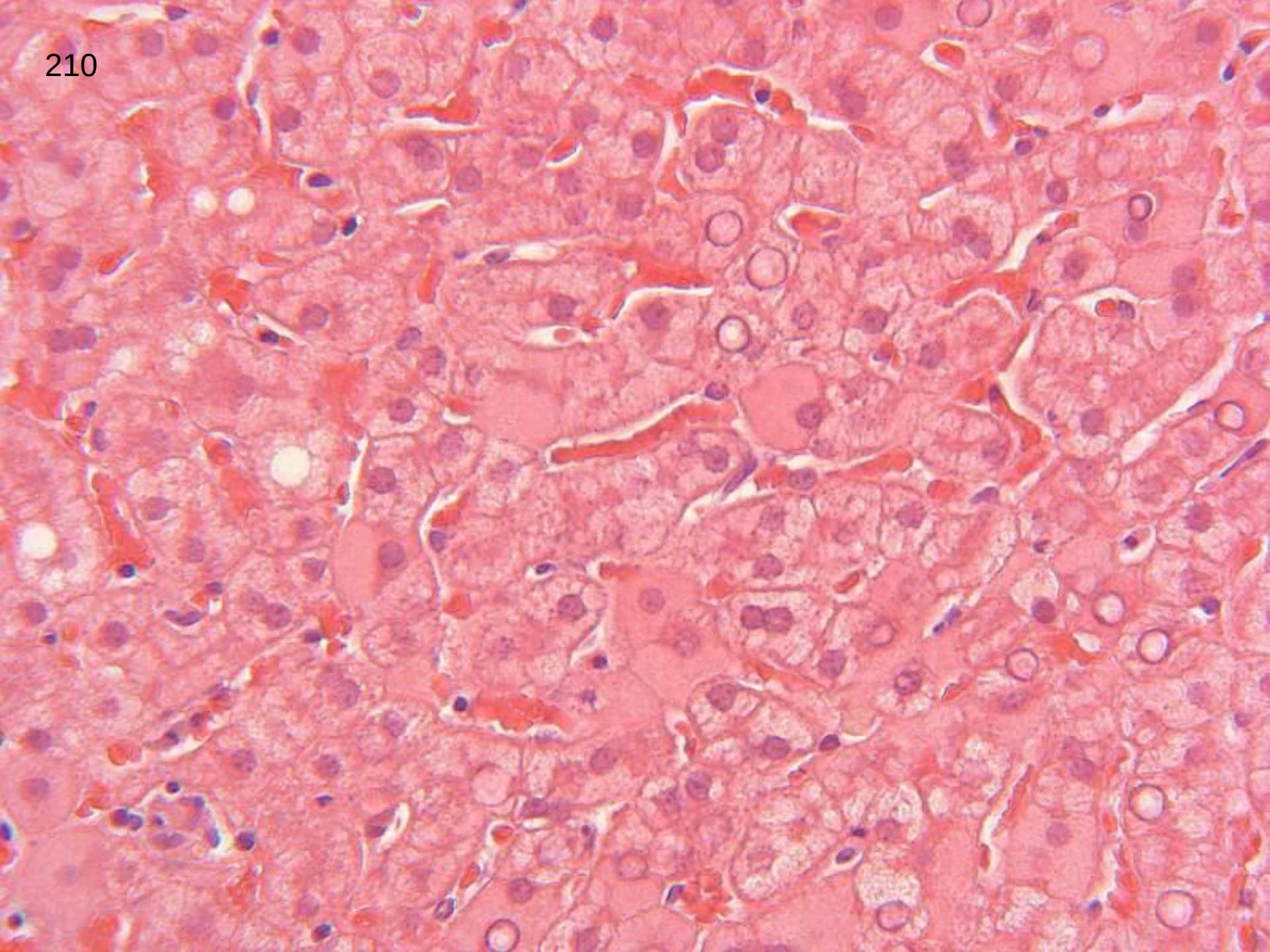



210

Case 210: diagnoses

28 hepatitis B, minimal chronic hepatitis

22 hepatitis B, mild chronic hepatitis

2 HBV carrier with ground glass hepatocytes

3 ground glass hepatocytes in chronic hepatitis B infection

1 ground glass, steatosis, minimal inflammation, no fibrosis (hep B not mentioned)

Case 210: comments

20 nuclear vacuolation/ possible DM

2 check HDV

2 ? also hep C/drugs in view of fatty change

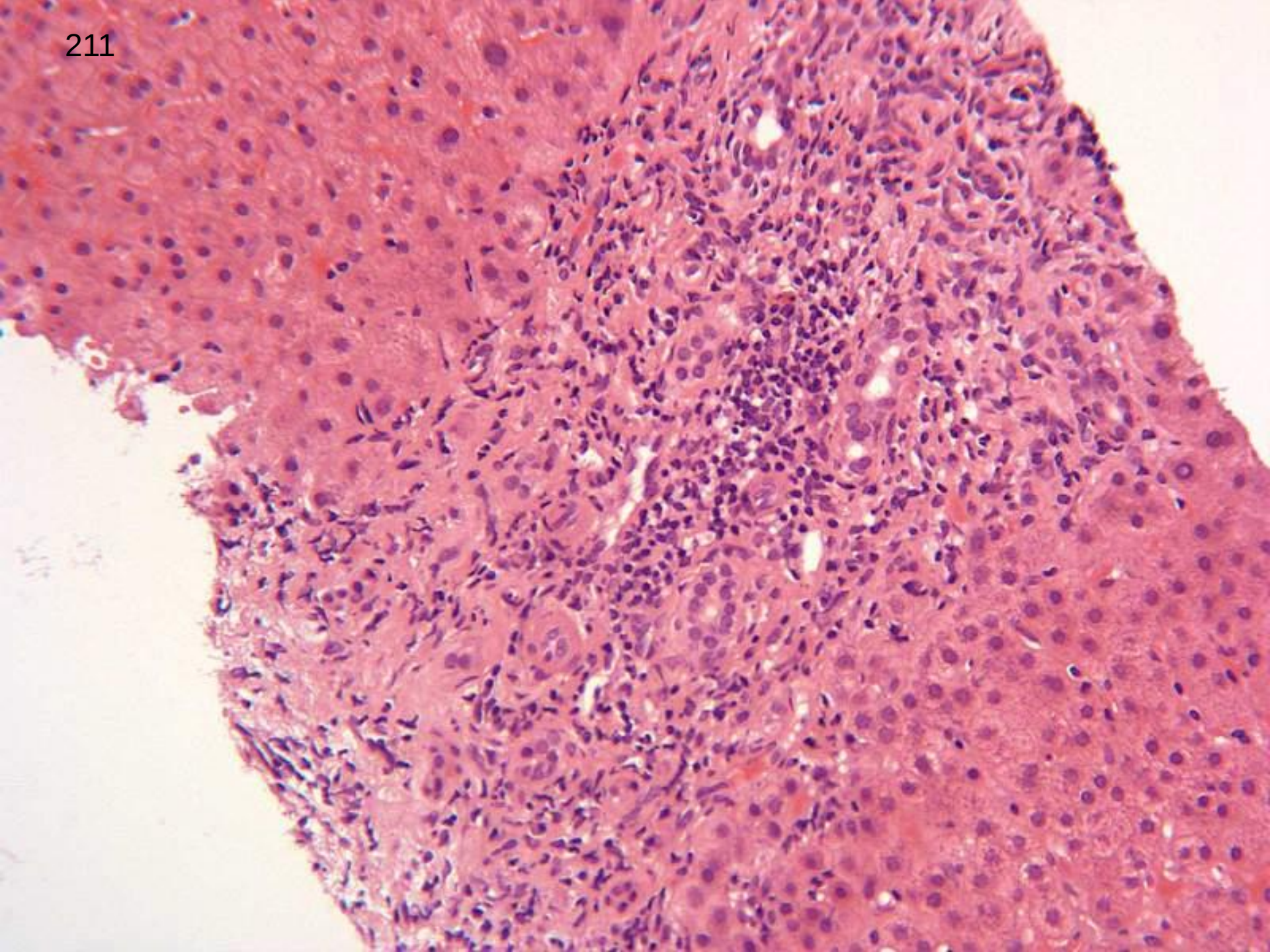
1 thickened central vein, exclude outflow obstruction ASH/NASH

211

- Worsening LFTs. Positive AMA M2. Ethanol intake, ?PBC, ?ethanol - induced liver disease

- Three pale brown strands up to 14 mm long

211



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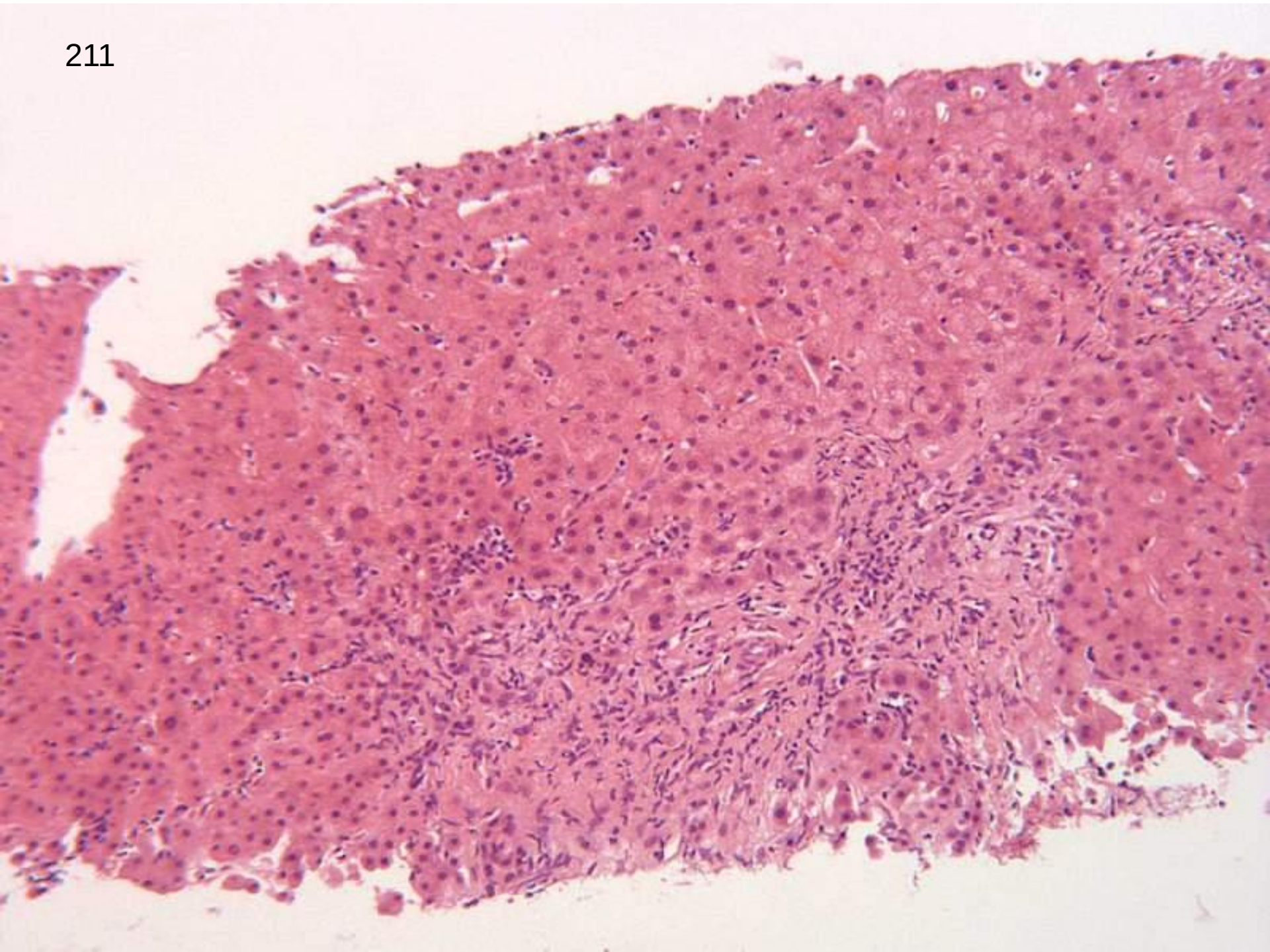

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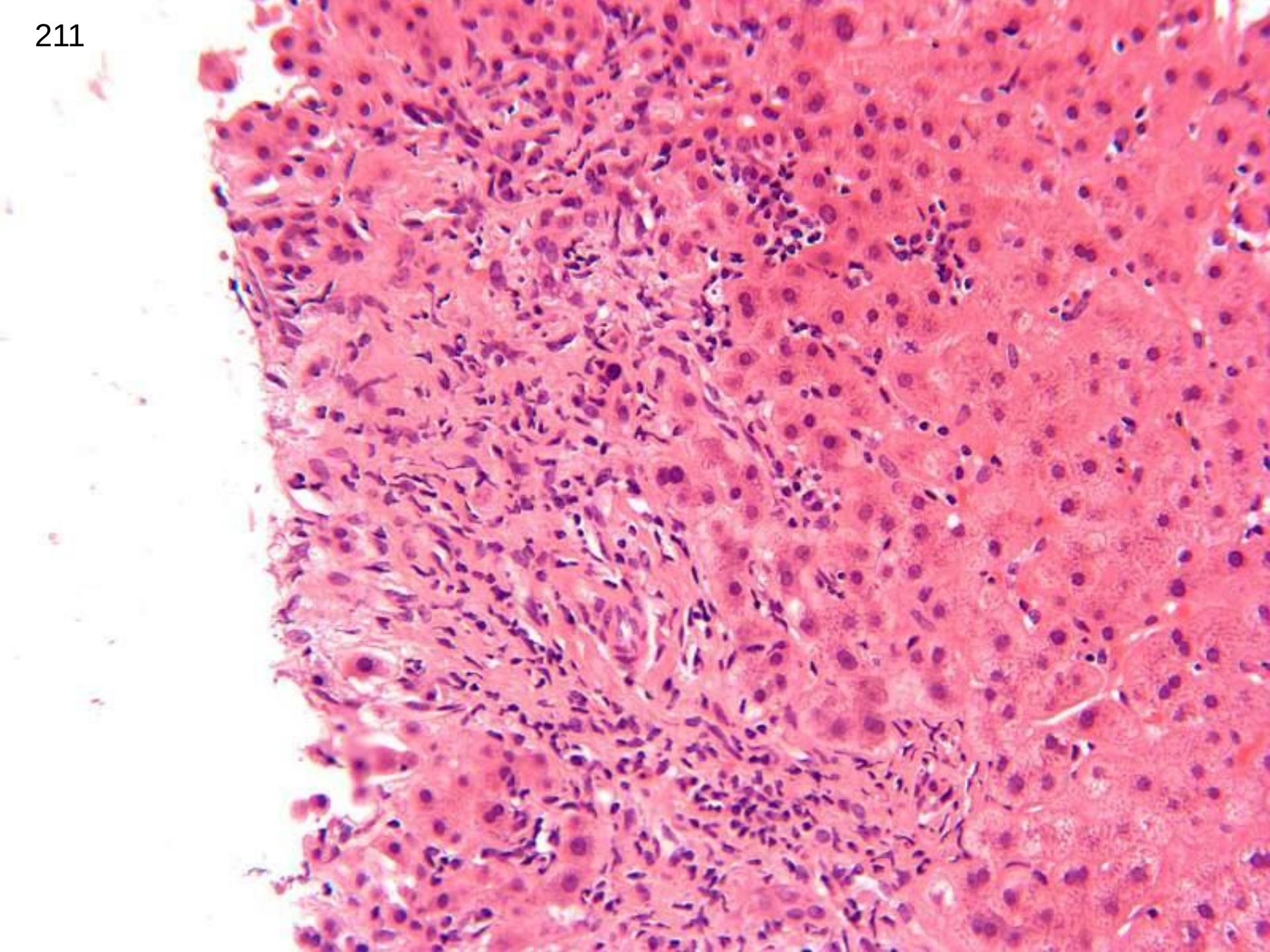


Case 211: diagnoses

49 PBC

1 chronic biliary disease
1 PBC/autoimmune overlap, active cirrhosis
1 autoimmune hepatitis
1 PBC with macro regenerative/dysplastic nodule, ?HCC
1 description only
1 inadequate

Case 211: comments

38 alcohol mentioned – no features of alcoholic liver disease

15 alcohol not mentioned

3 exclude PSC/overlap syndrome

2 needs ERCP

1 repeat biopsy

Further information from submitting pathologist:
no other autoantibodies.
ERCP not done

Comments: features of chronic cholestatic liver disease in patients with AMA is sufficient to make the diagnosis of PBC. Liver biopsy often unnecessary in PBC, unless clinical differential diagnosis; staging in PBC on biopsy does not have clinical value, in view of sampling variation. The absence of features of alcoholic liver disease is important in the answer in this case.

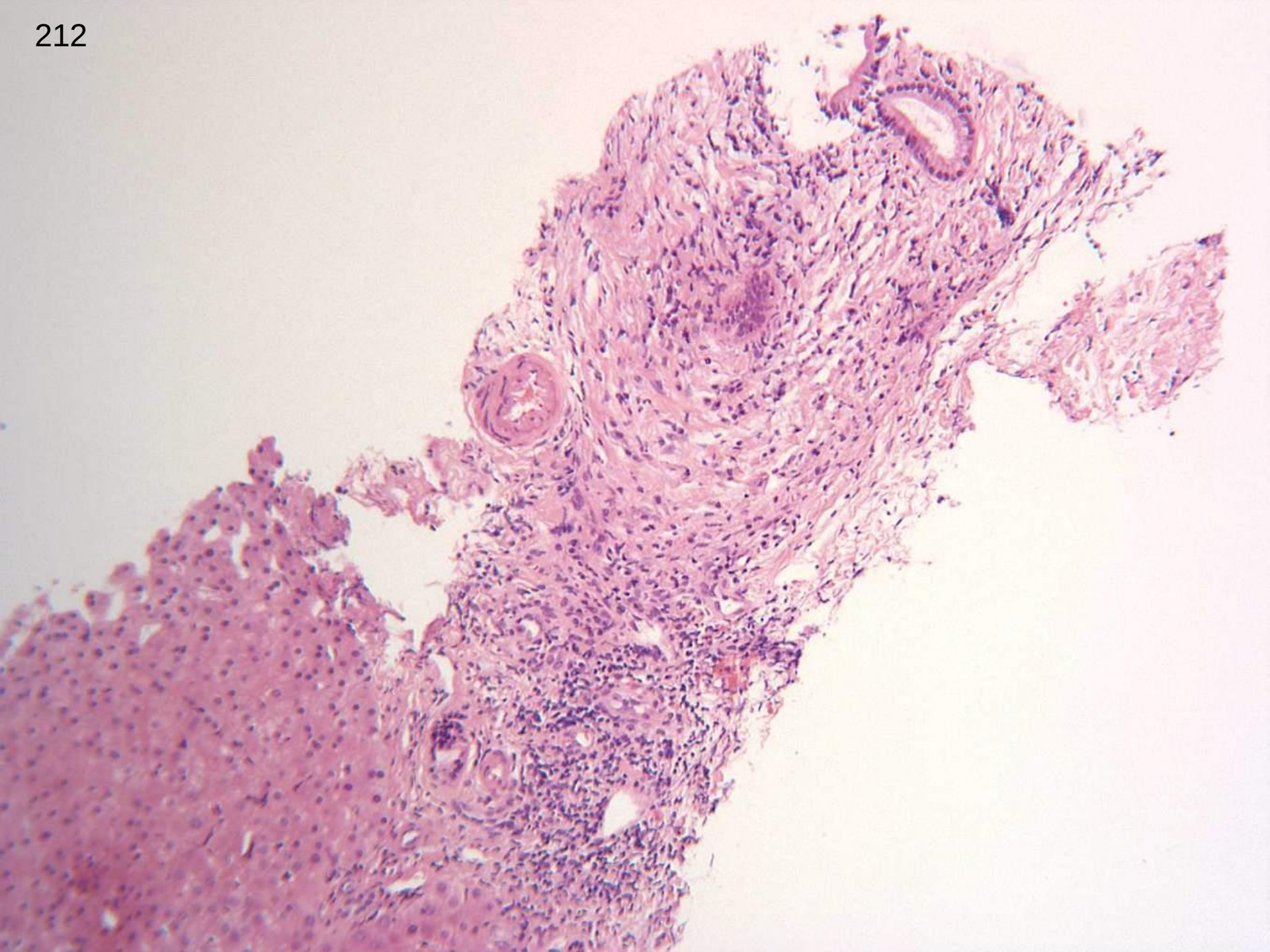
Model answer: Chronic biliary disease; in a patient with mitochondrial antibodies this is consistant with PBC. There are no histological features to suggest alcoholic liver disease.

212

- 62 year old female - Crohn's colitis. Worsening liver function tests

- Two strands of pale brown tissue measuring 14 mm and 10 mm in length

212



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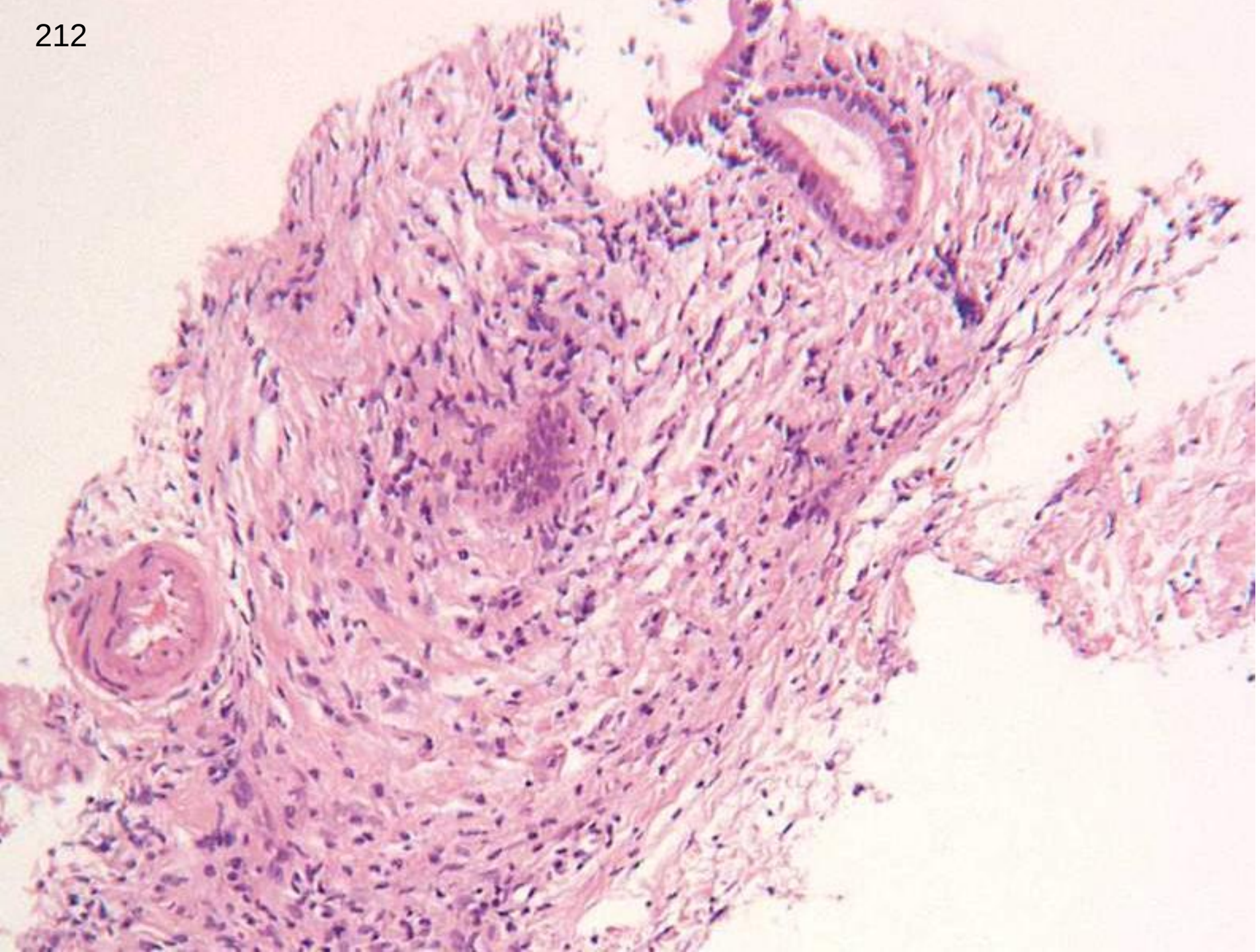

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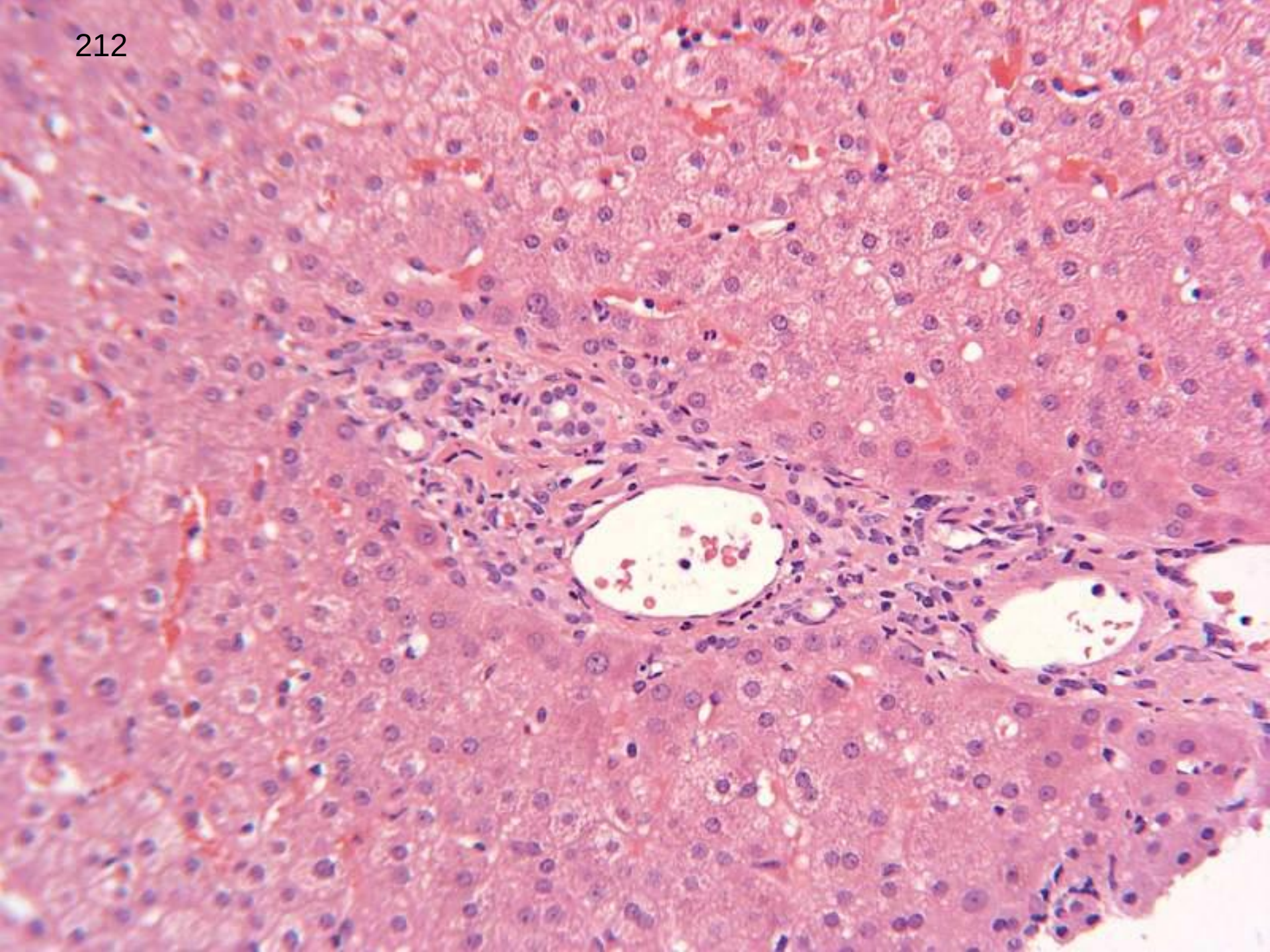
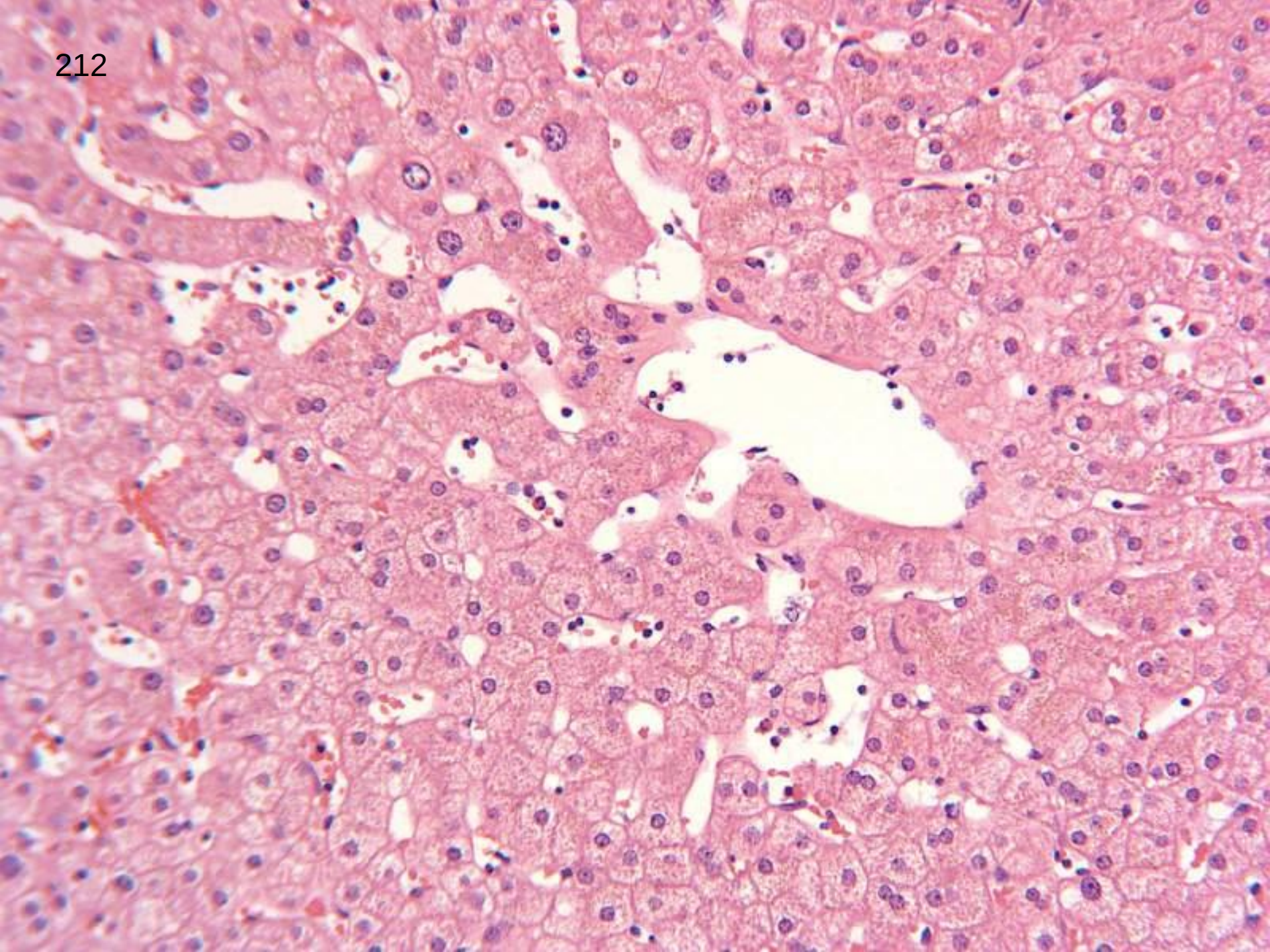



212

Case 212: diagnoses

case excluded from scoring, in view of variation in histological features among slides circulated; some slides probably lacked representative bile duct lesions..

46 PSC of which

5 non-specific histology
2 no features of PSC
2 early chronic biliary disease
1 pericholangitis

1 NRH, ?azathioprine, no mention of biliary disease

Case 212: comments

13 do orcein

17 needs imaging

3 do levels

1 check IBD really Crohn's and not UC

3 AMA

comments: in some slides the diagnosis of PSC could not have been suggested without the clinical history of Crohn's colitis.

PSC occurs in patients with Crohn's disease who have colitis with similar frequency to patients with UC.

Further information from submitting pathologist:

ERCP typical of PSC

Orcein focally positive

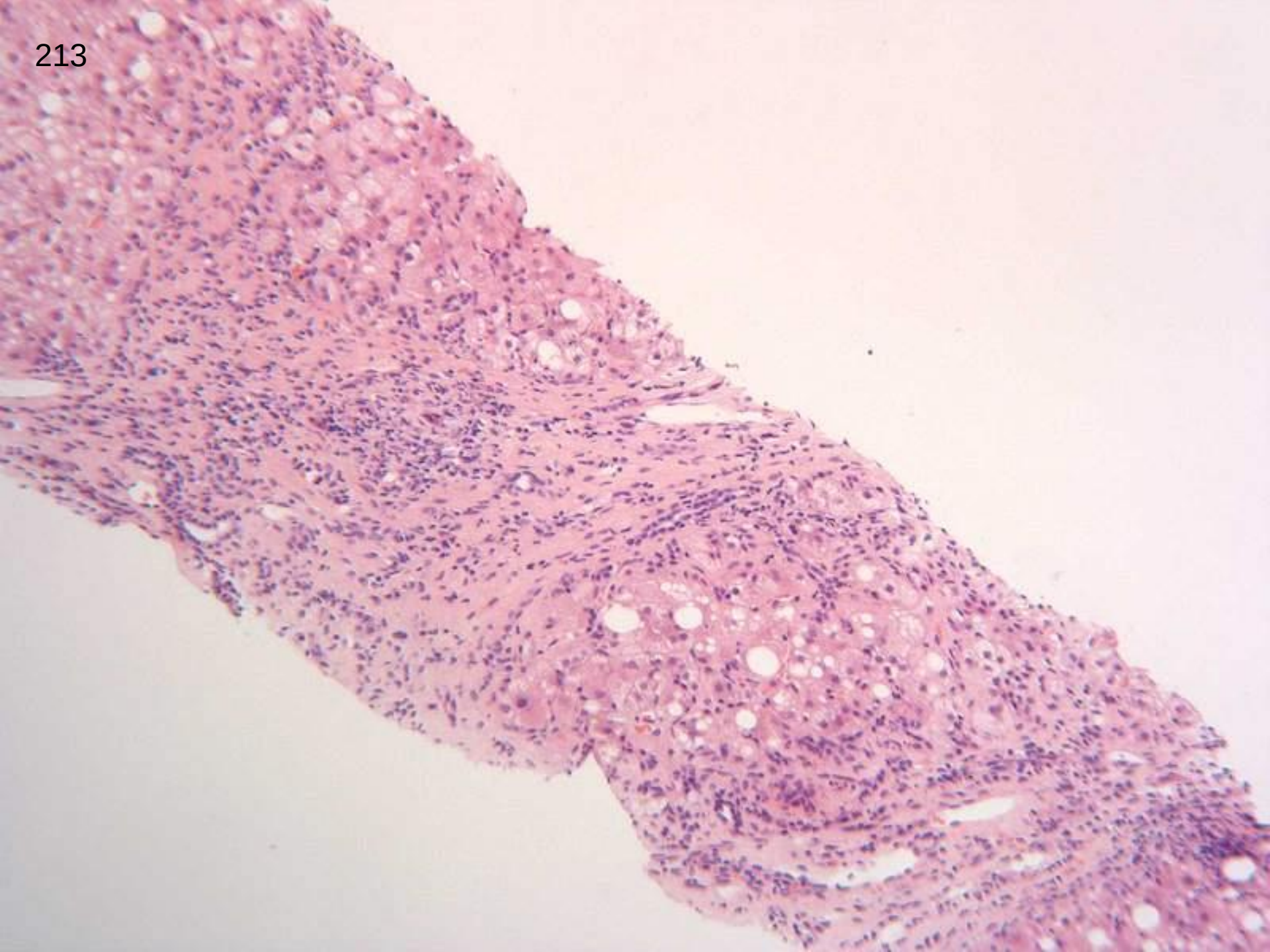
AMA negative

213

- 40 year old female, Hep C positive. Retroviral disease

- Two cores of tissue

213



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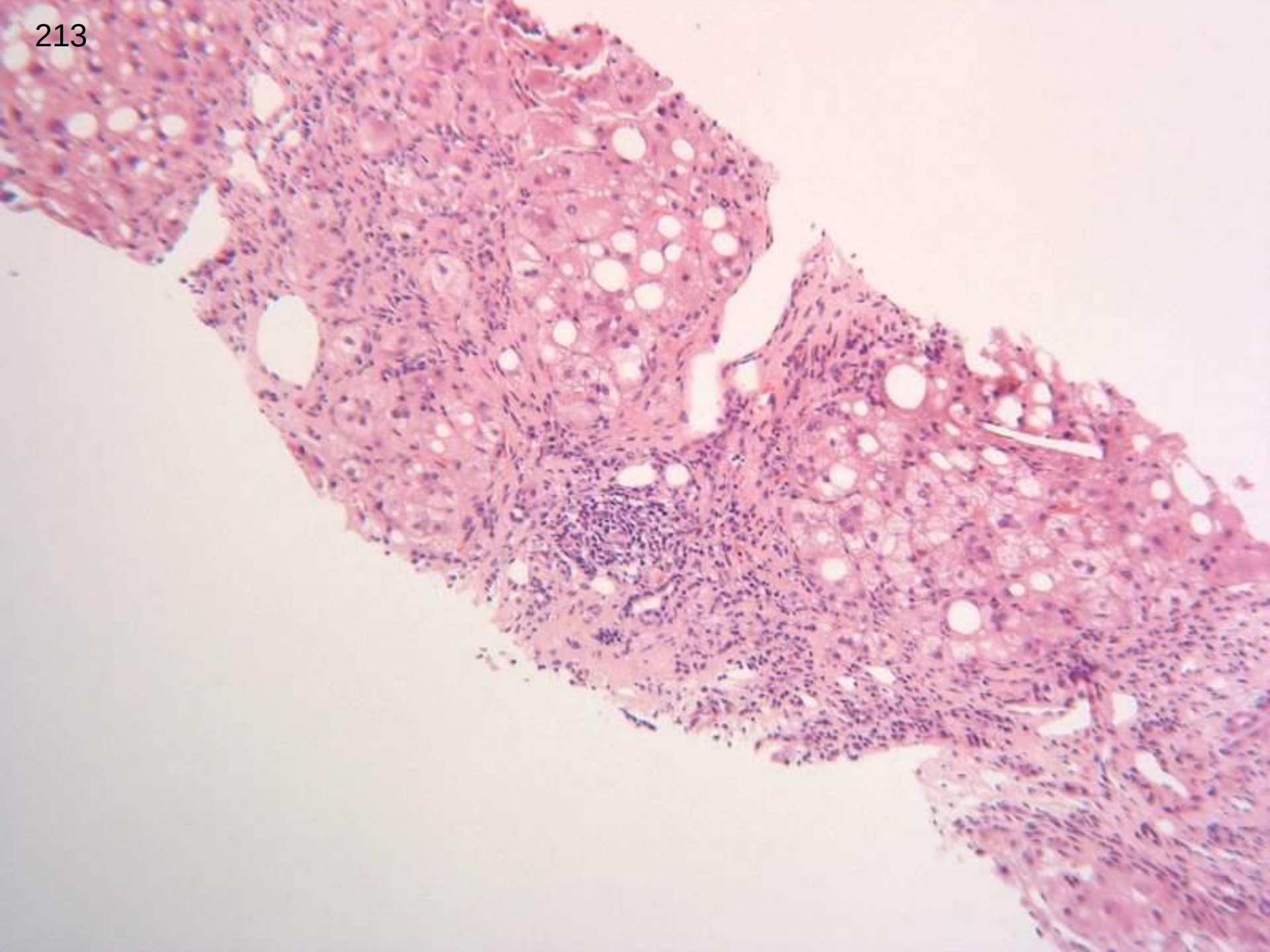
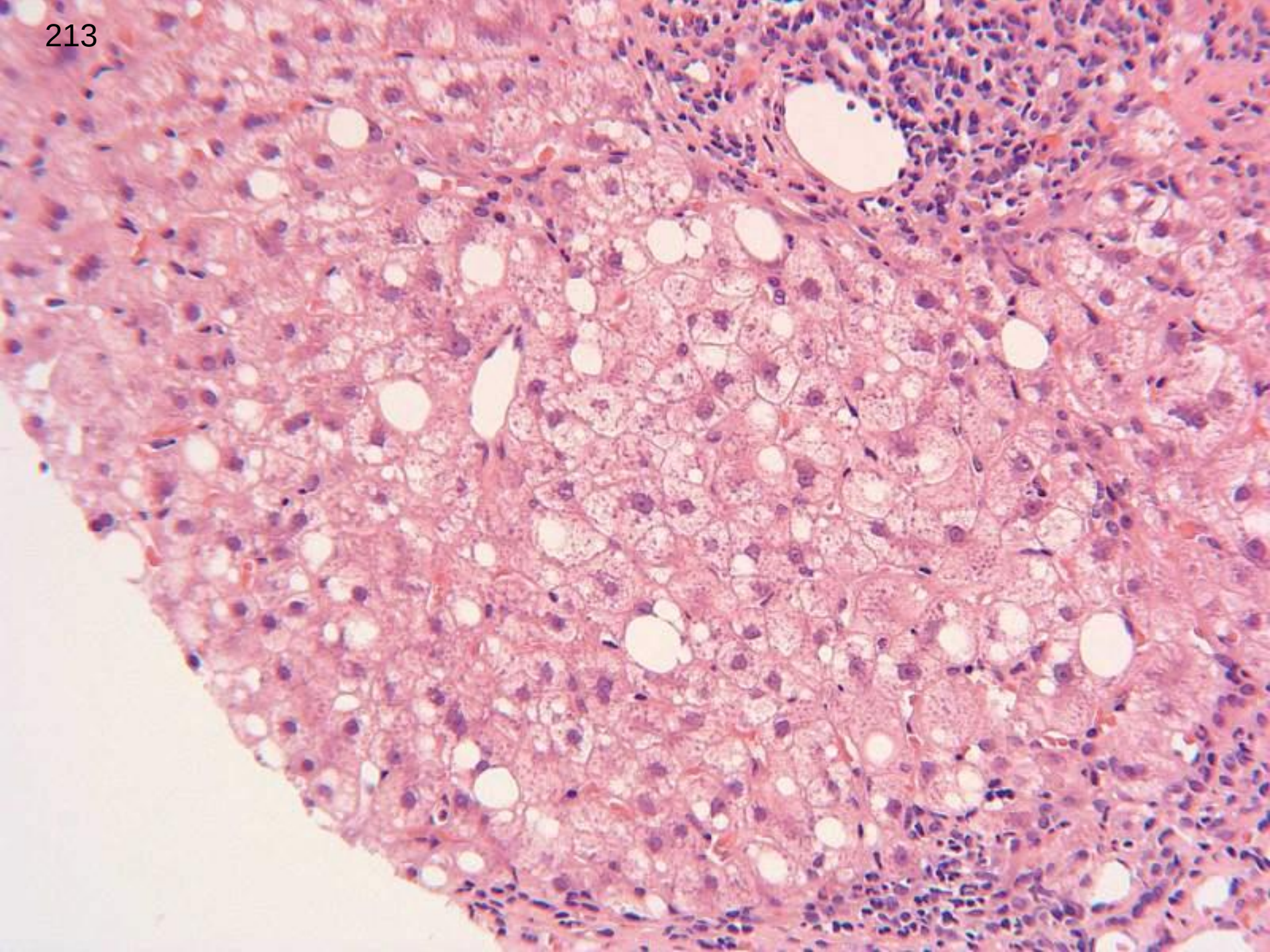
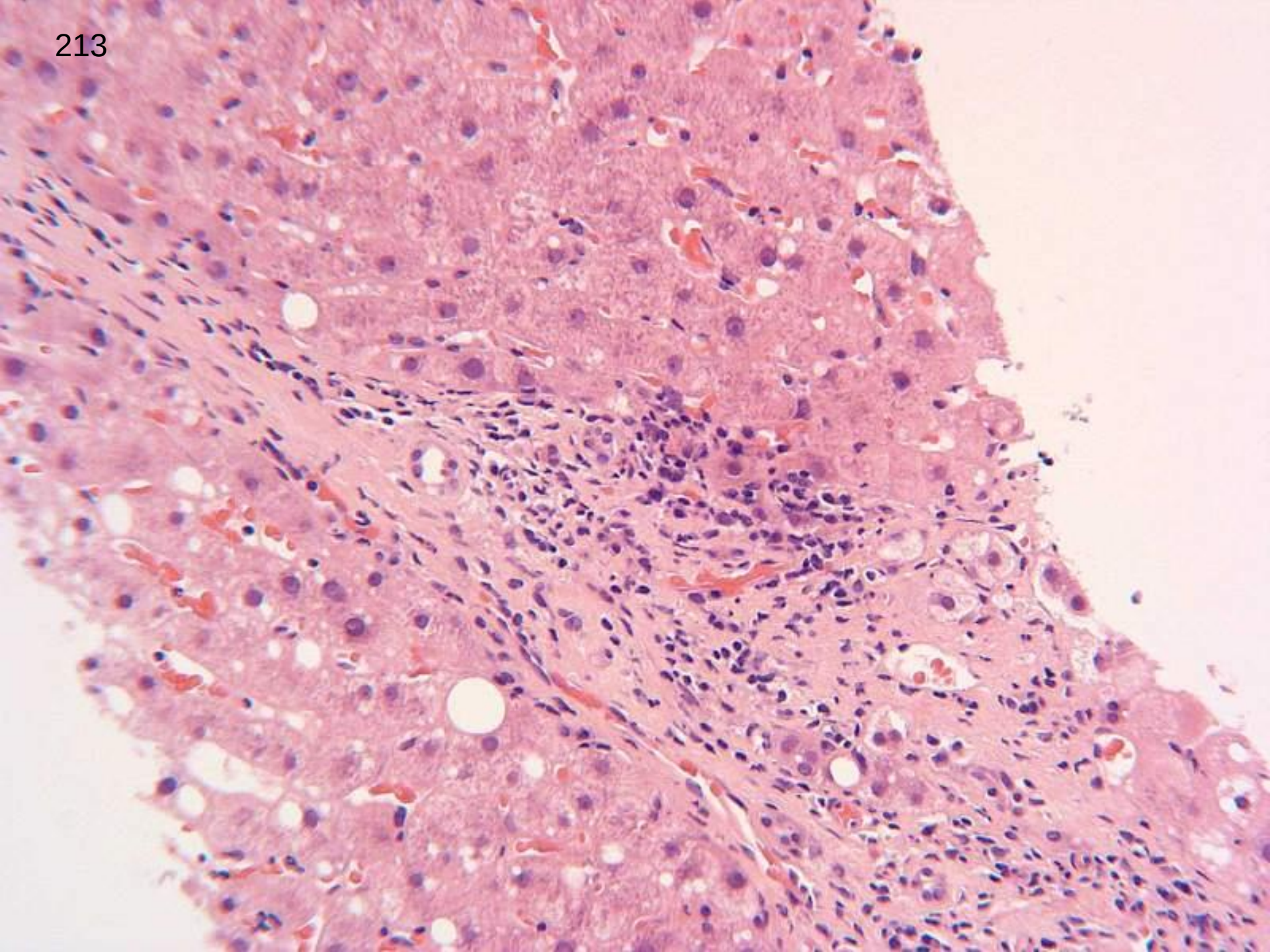






Case 213: diagnoses

42 hepatitis C, cirrhosis – probably or early or definite or NOS

8 hepatitis C, with fibrosis, no mention of cirrhosis

2 cirrhosis, hepatitis C not mentioned

1 AIDS cholangiopathy and hepatitis (hep C not mentioned)

Case 213: comments

20 comment on steatosis
6 Steatohepatitis
6 ? Alcohol

12 exclude other infections
5 accelerated by HIV
1 ground glass ?HBV
1 ?FCH
2 ? drug related steatosis
1 ballooning ? cause
1 CMV inclusions
1 Mallory's

stage	No. pathologists	grade	No. pathologists
3	2	4	5
4	1	5	6
5	3	6	1
5-6	4	7	1
6	8	8	1

Case 213:

Comments: hepatitis C fibrosis progresses more rapidly in patients who also have HIV. Staging disease not possible without connective tissue stain.

additional clinical information

Known heavy drinker with depressive illness

Treated with HAART for 10 years

On treatment with interferon and ribavirin

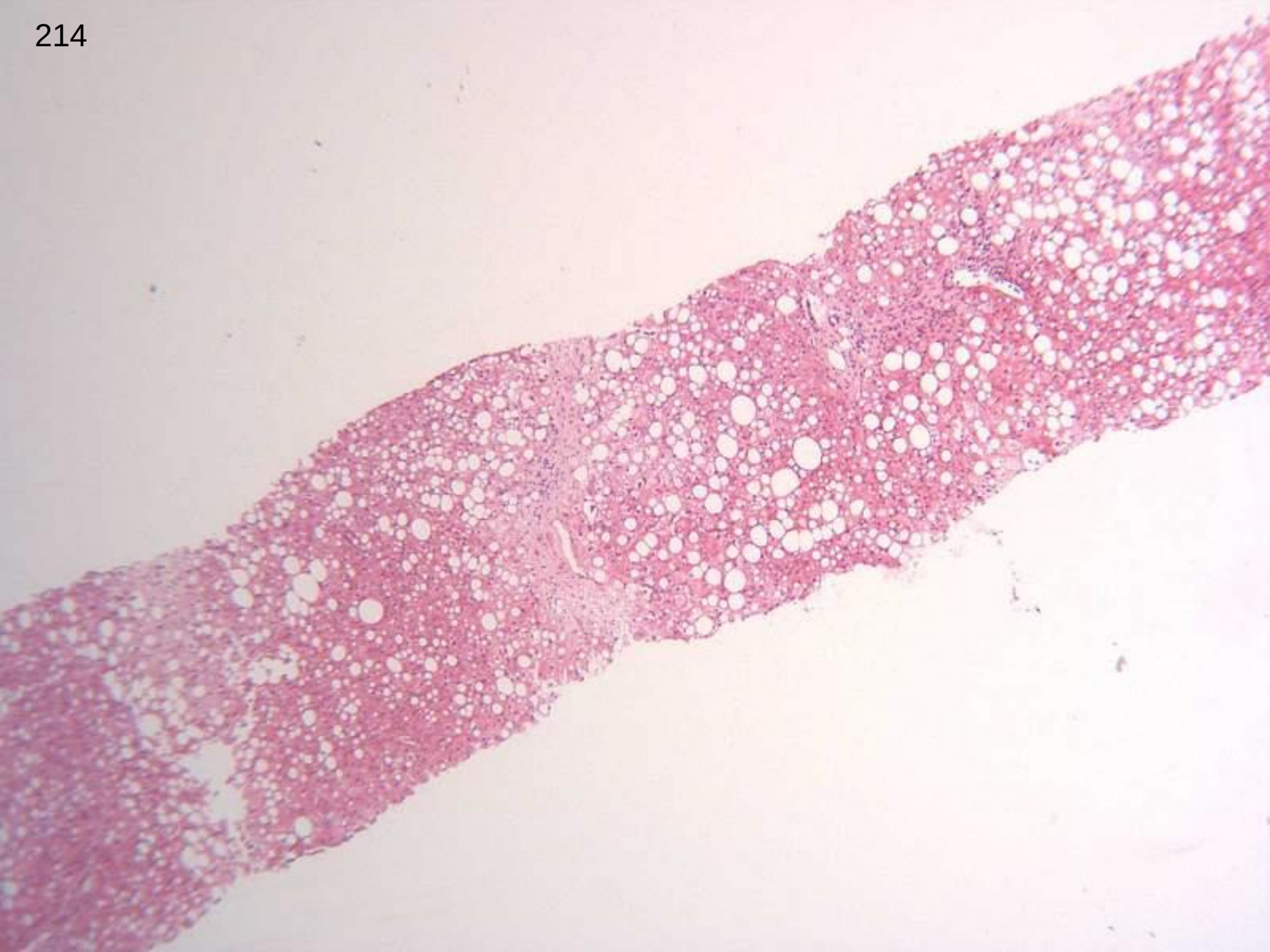
214

- 64 year old male with deranged LFTs, (transaminases persistently over 100); fatty liver on ultrasound; raised ferritin.

Perls stain showed mild iron deposition in hepatocytes and Kupffer cells (score 1/4)

- Core of yellow tissue, 14 mm long.

214



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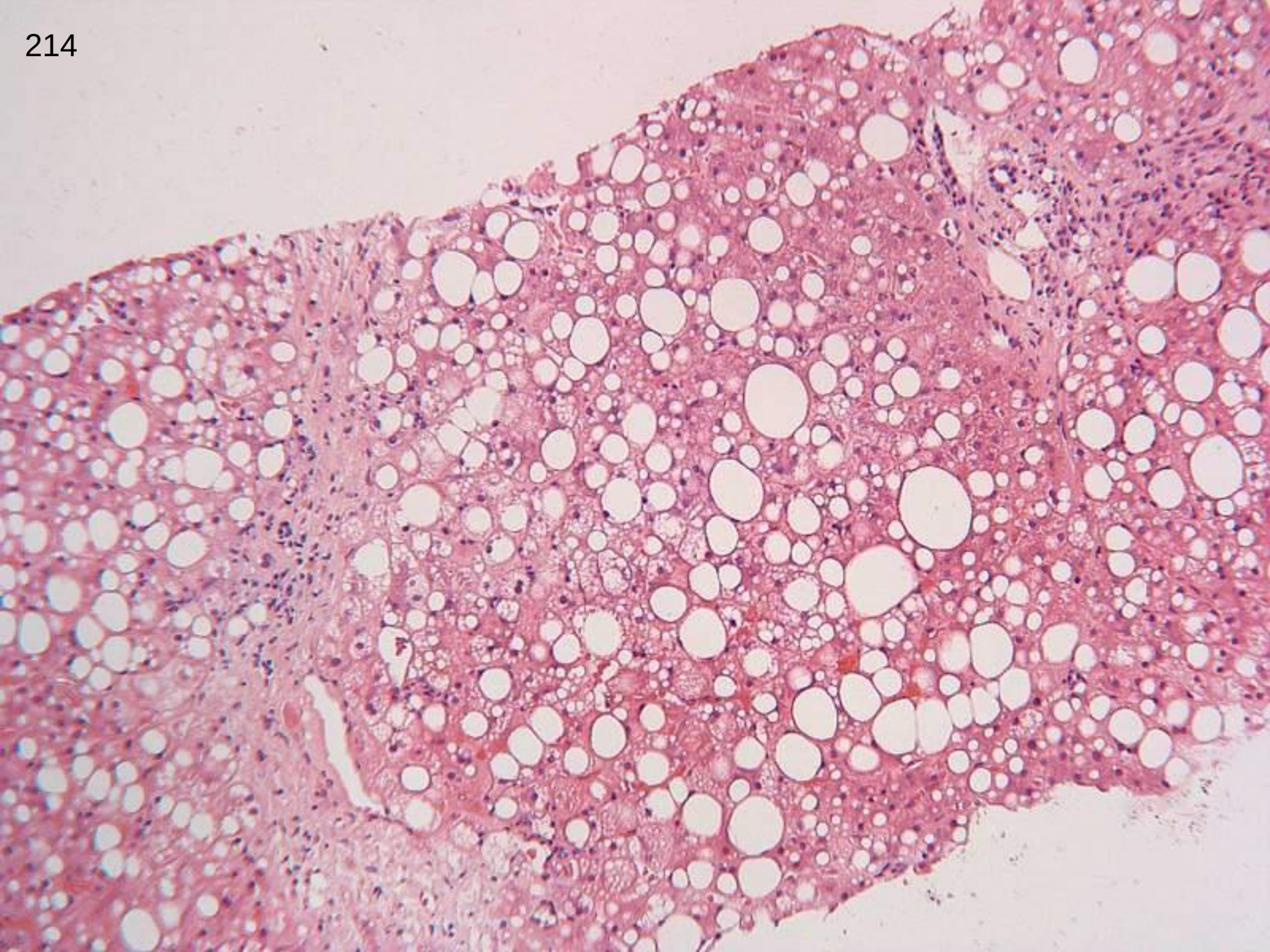

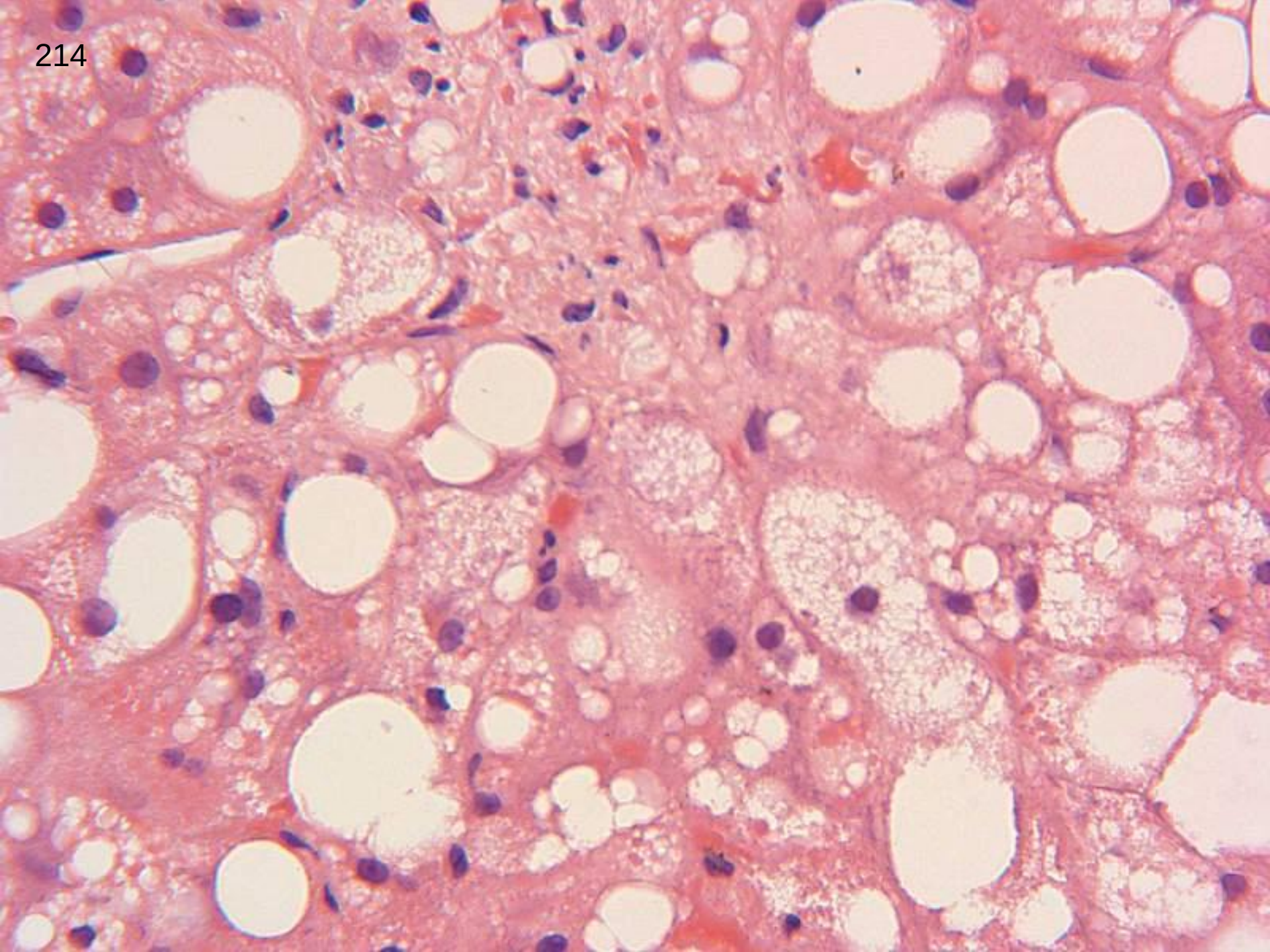
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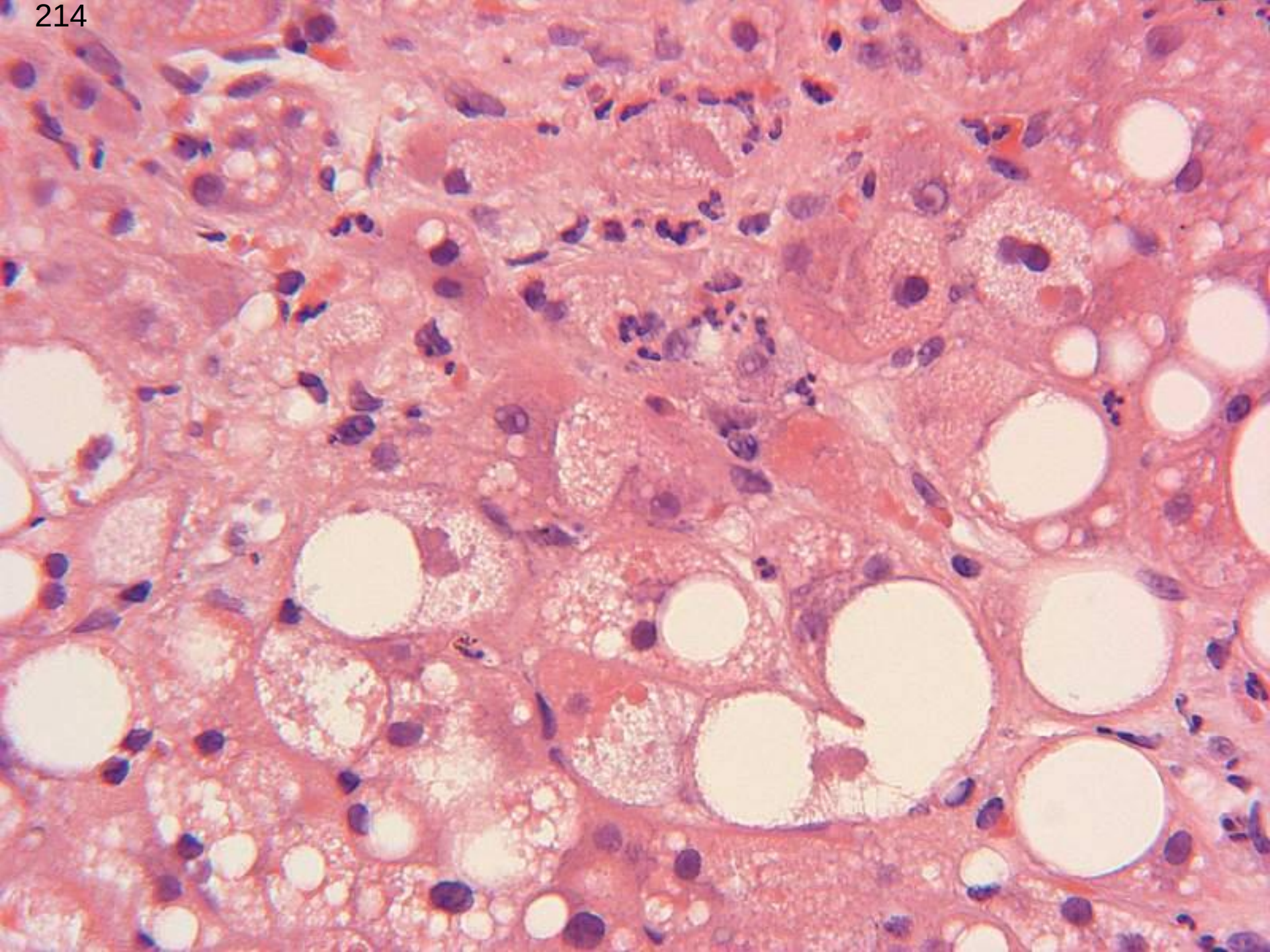
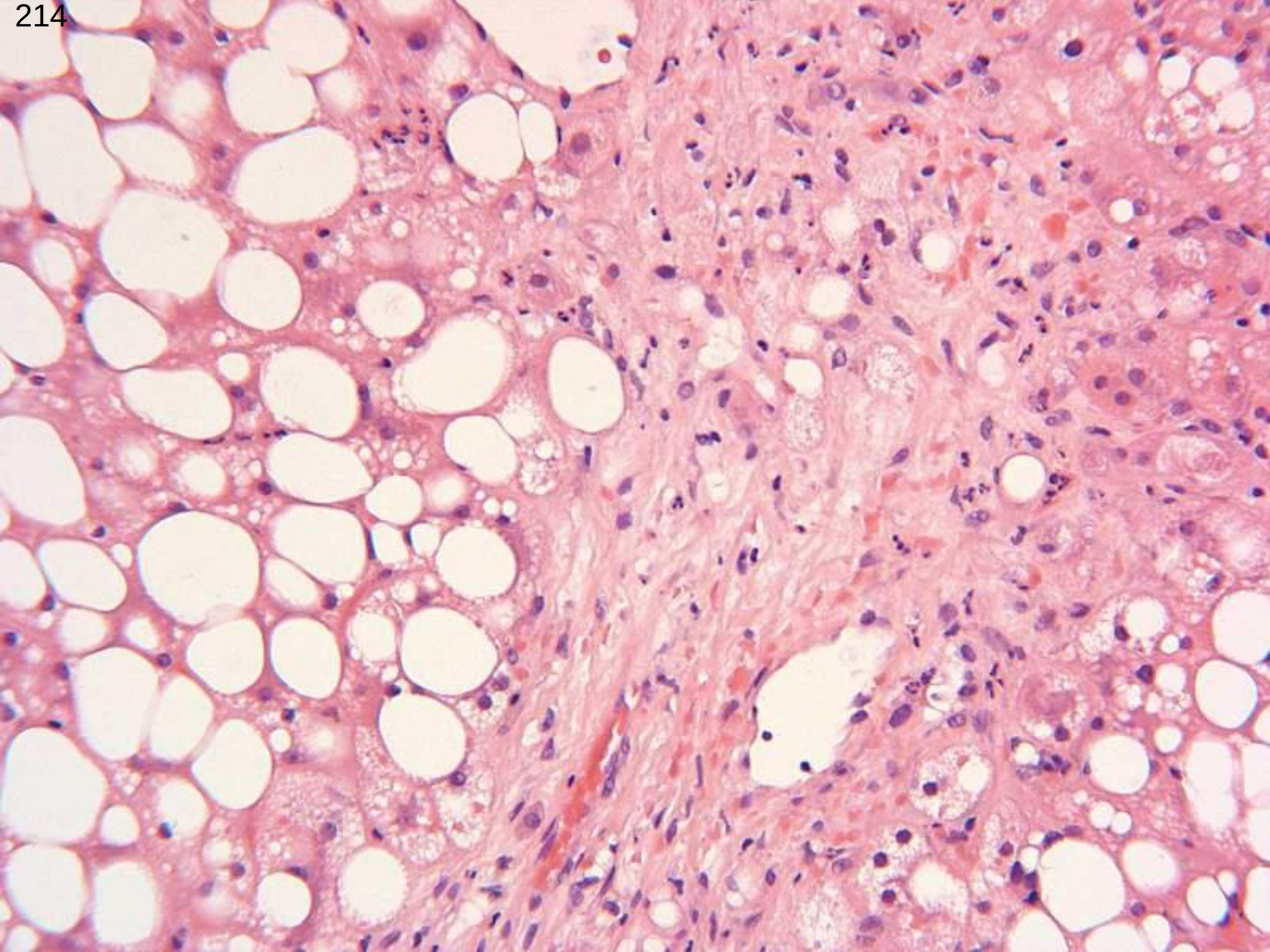
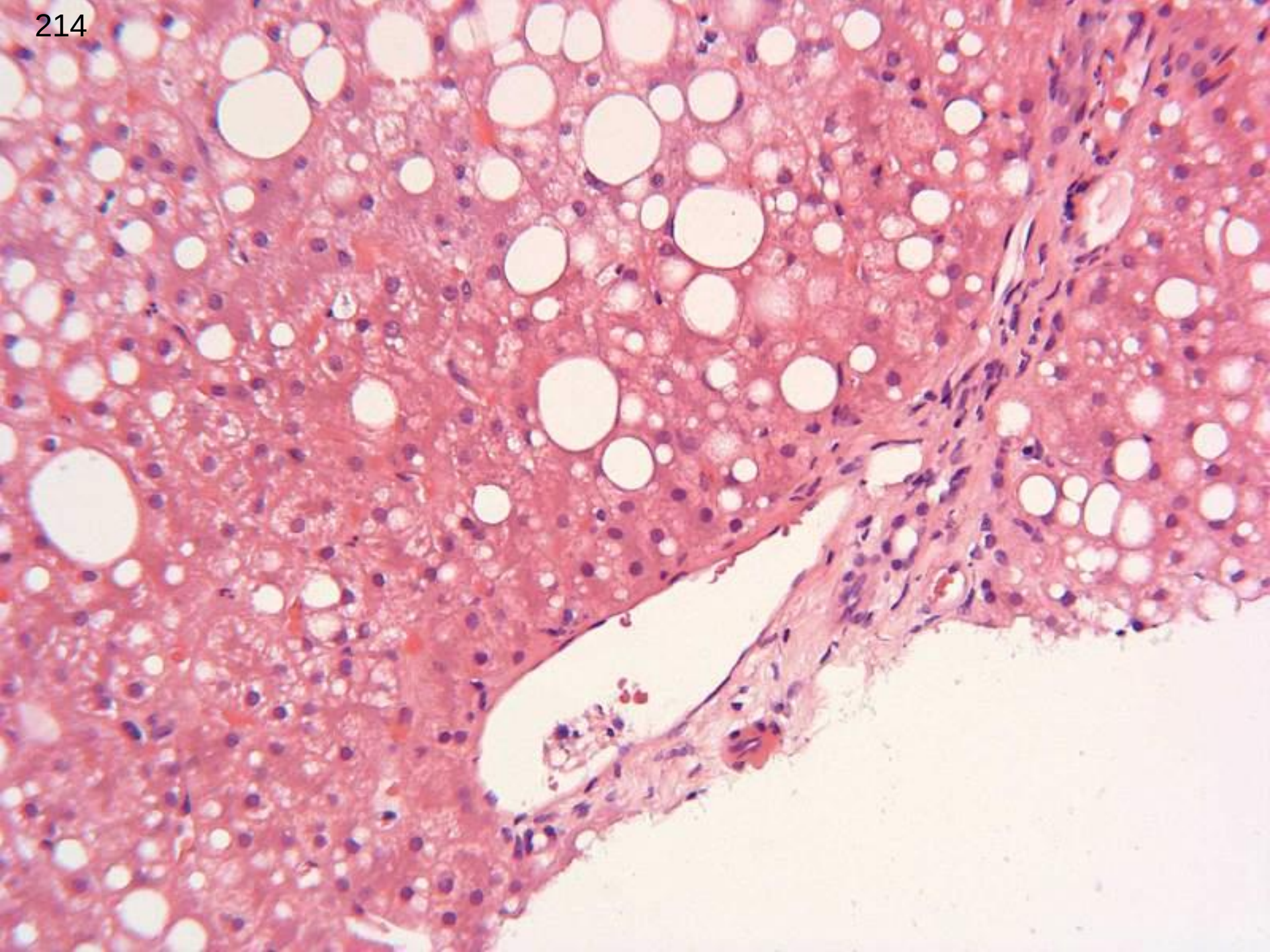






Case 214: diagnoses

47 steatohepatits, comment on aetiology

- 23 ASH/NASH
- 24 more likely alcoholic than NASH

2 alcoholic liver disease

3 steatohepatitis, no comment on aetiology

1 severe steatosis, special stains to assess fibrosis, aetiology not mentioned

Case 214: comments

14 need alcohol history

9 pericellular fibrosis/central hyaline sclerosis

6 investigations for Haemochromatosis

4 iron secondary

2 ?globules in hepatocytes, needs PASD

2 Ubiquitin

Comments: *prominent central hyaline sclerosis in this case, and lack of nuclear glycogenation are features that favour alcoholic steatohepatitis over NASH. This degree of iron positivity in a 64 year old man with alcoholic liver disease would not suggest Haemochromatosis.*

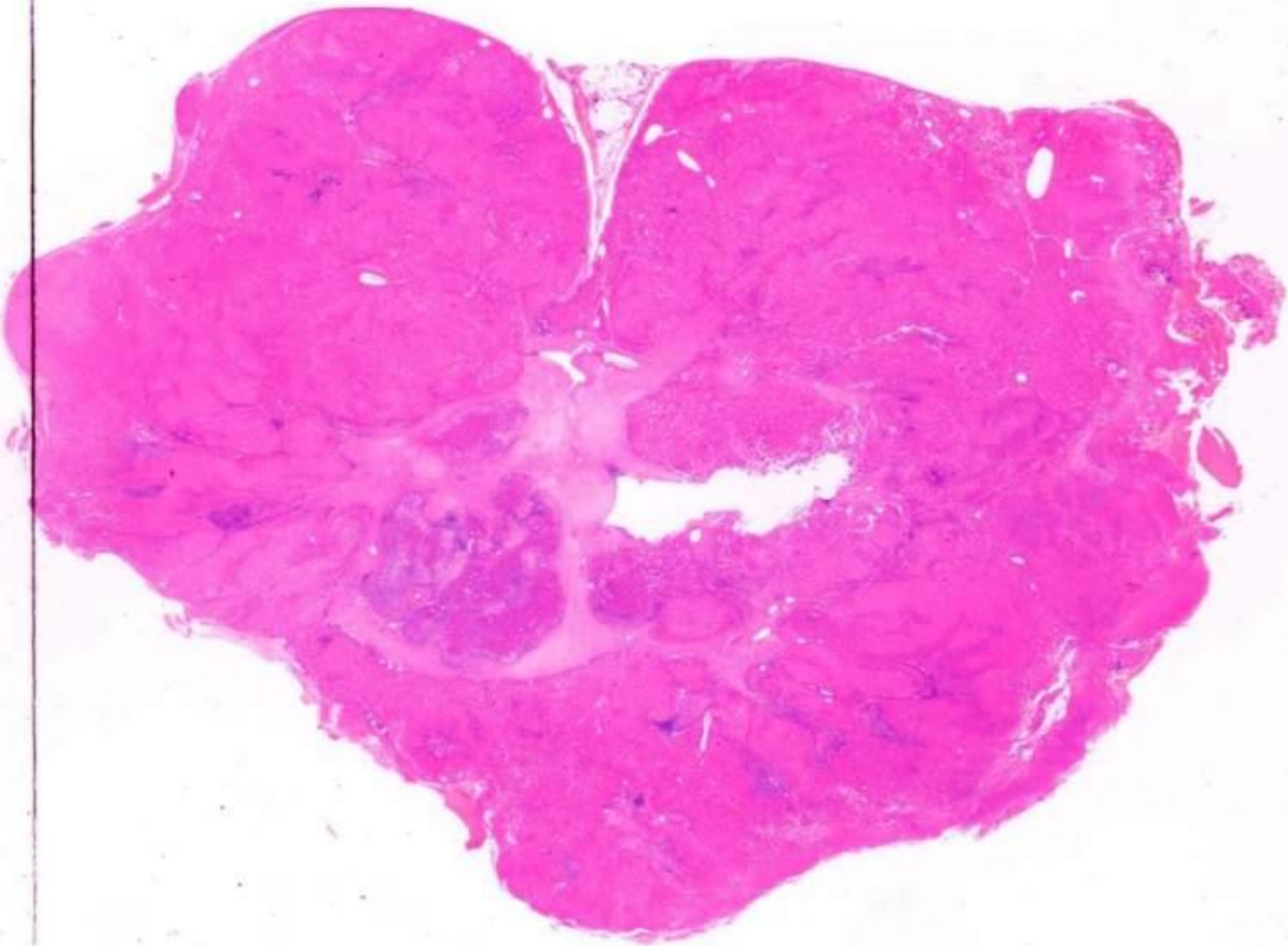
215

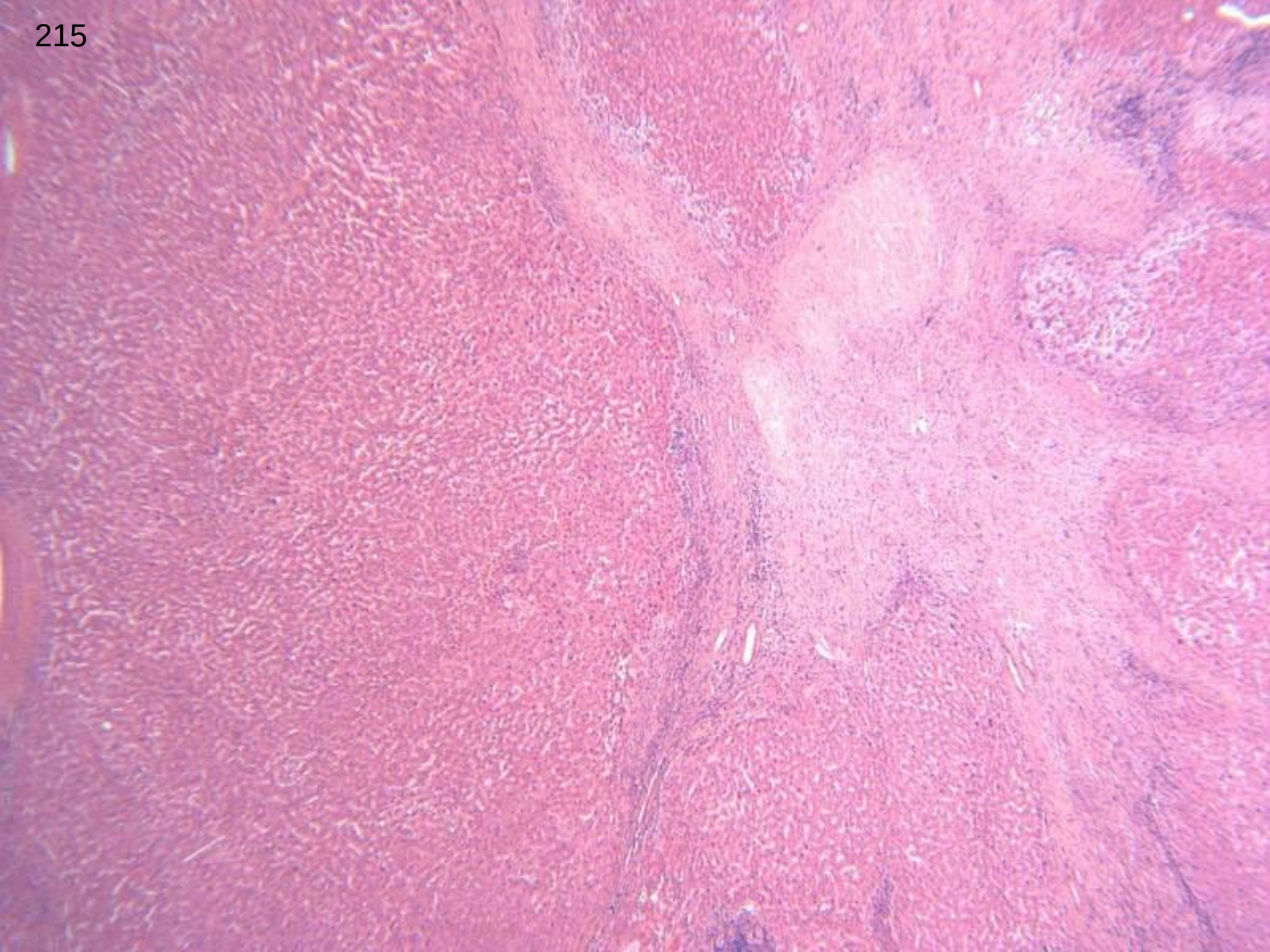
- 70 year old male.

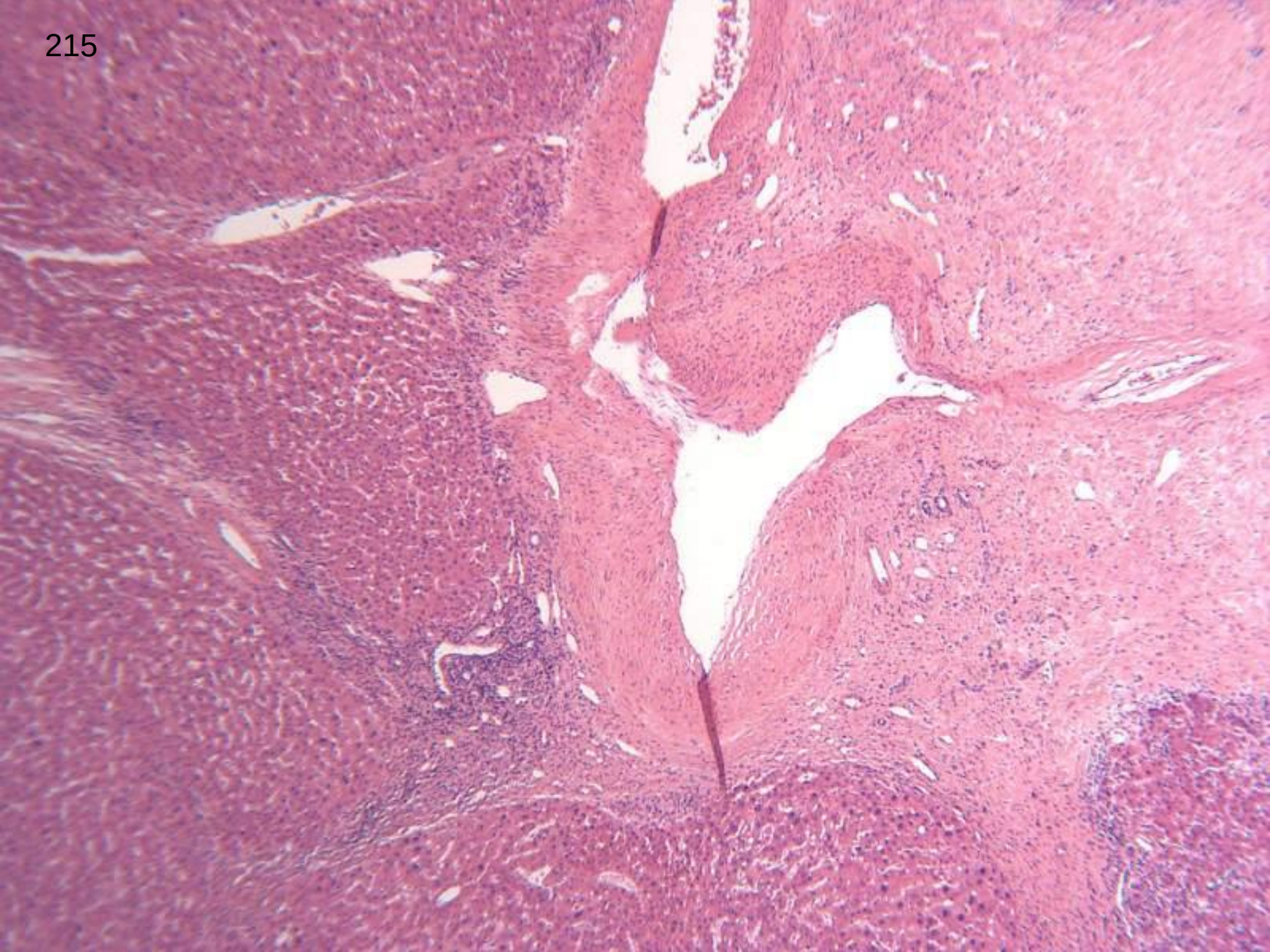
  Well defined liver nodule noted during subtotal colectomy for colonic carcinoma. ?metastases

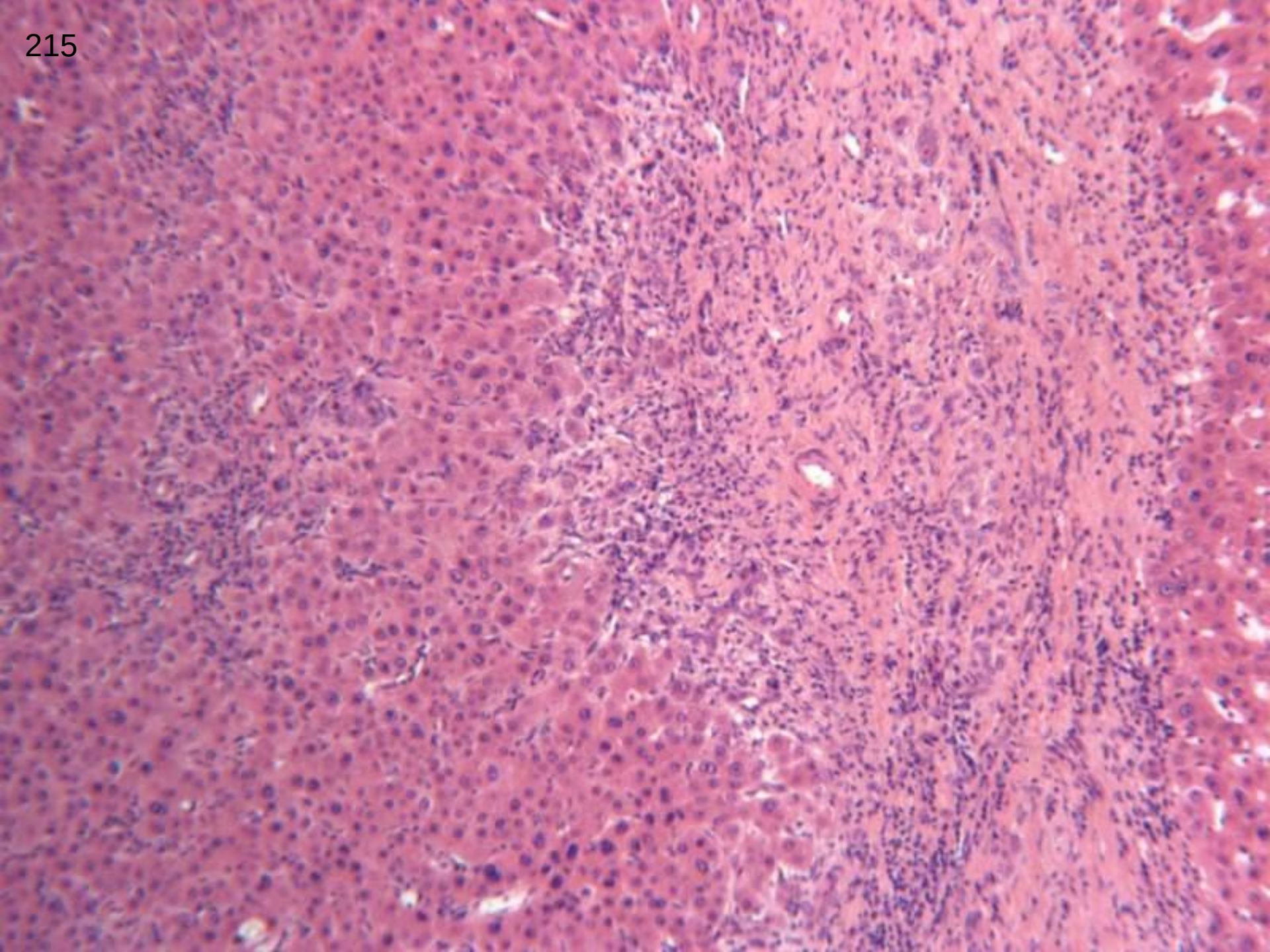
- Irregular nodule measuring 3 x 2.1 x 1.5cms

215





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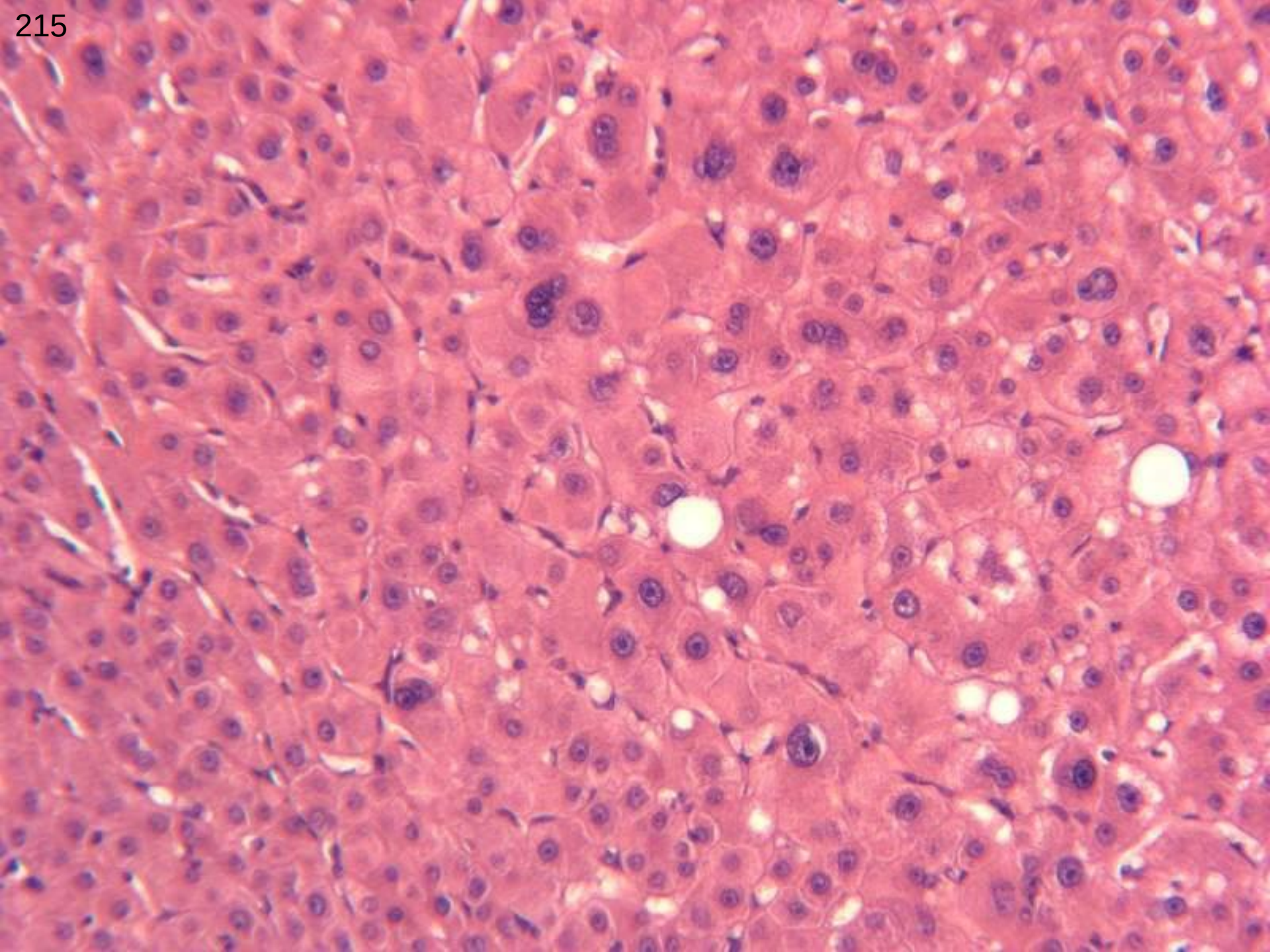


Case 215: diagnoses

53 FNH

1 scar, ?FNH

Comments:

1 Large cell change

1 liver cell dysplasia

2 immunohistochemistry

1 ?HBV status

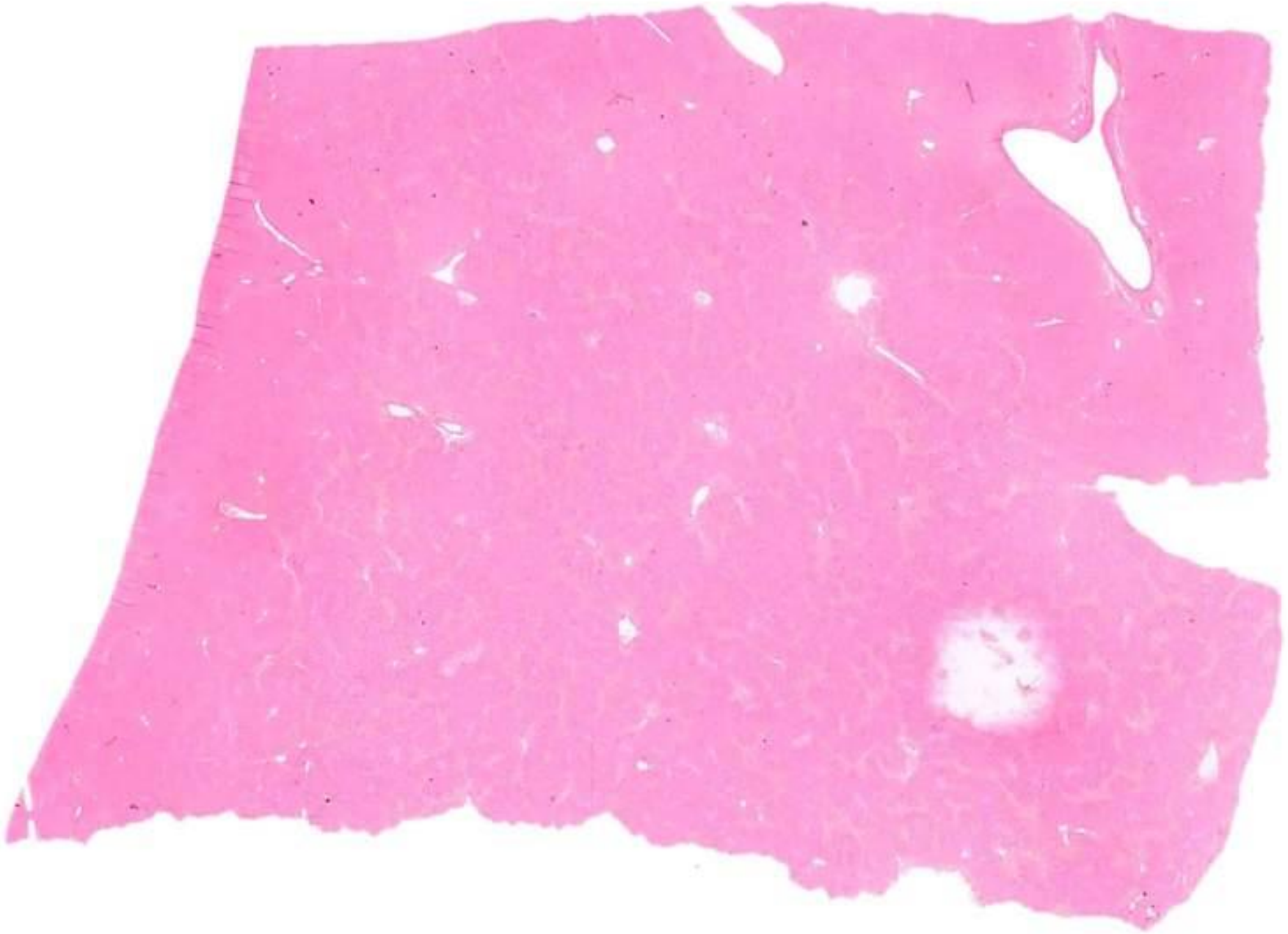
1 FNH with central atypical nodules, needs more blocks

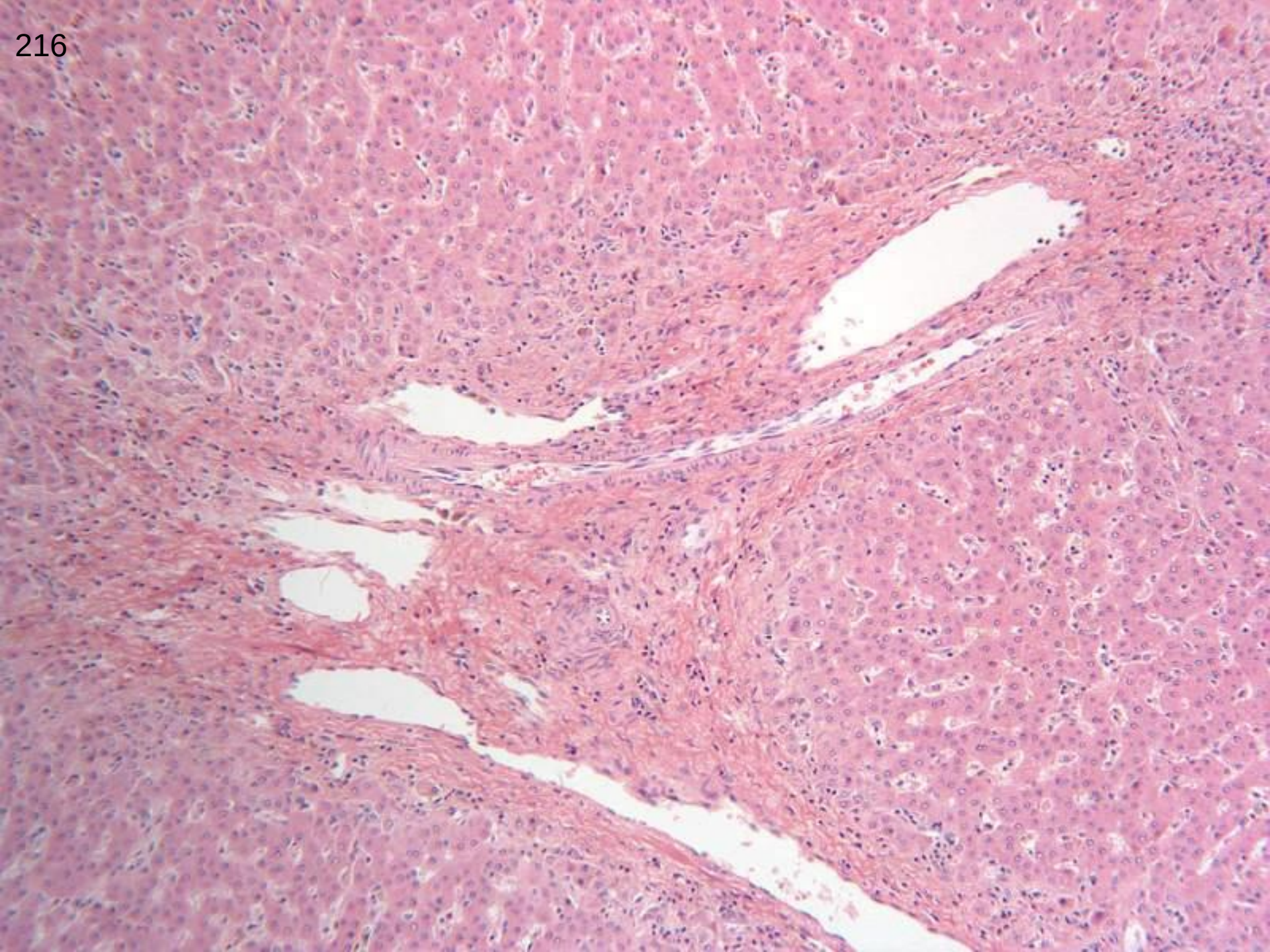
comments: large cell change may occur in FNH, and characterises one of the atypical variants of FNH identified by Nguyen et al (Am J Surg Pathol 1999;23;1441-54)

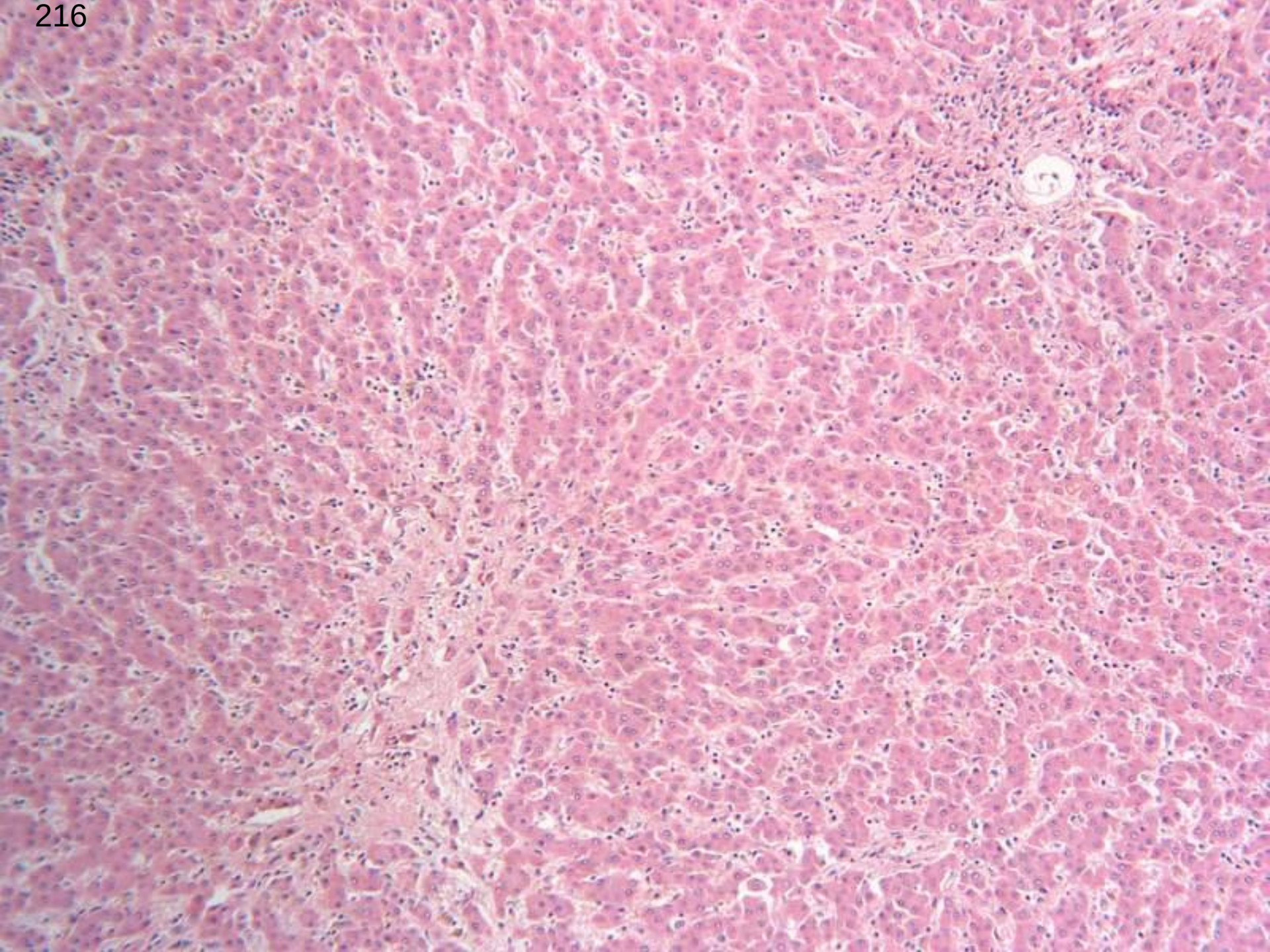
216

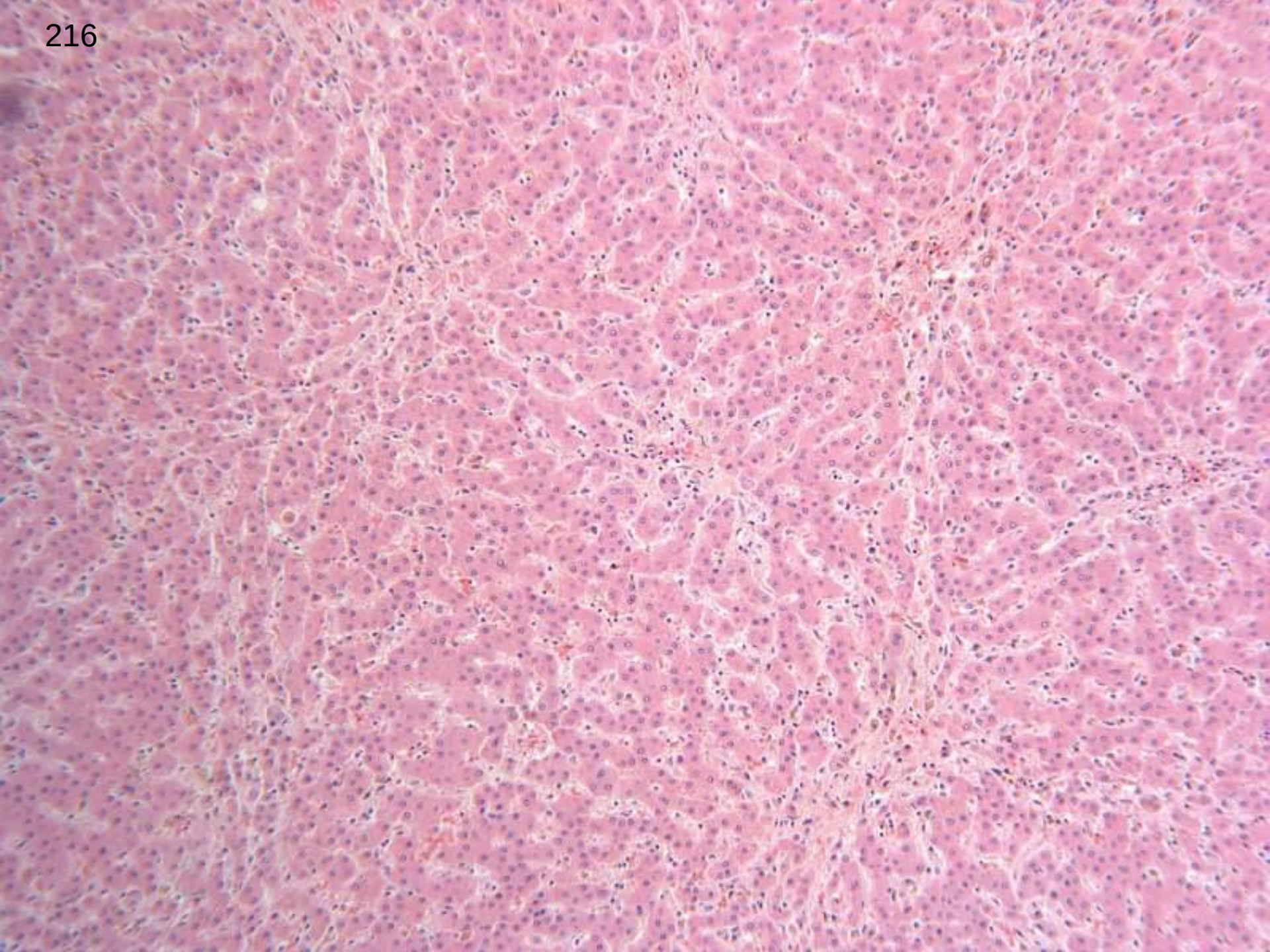
- 6 year old male with pruritis. Congenital heart disease. Triangular facies

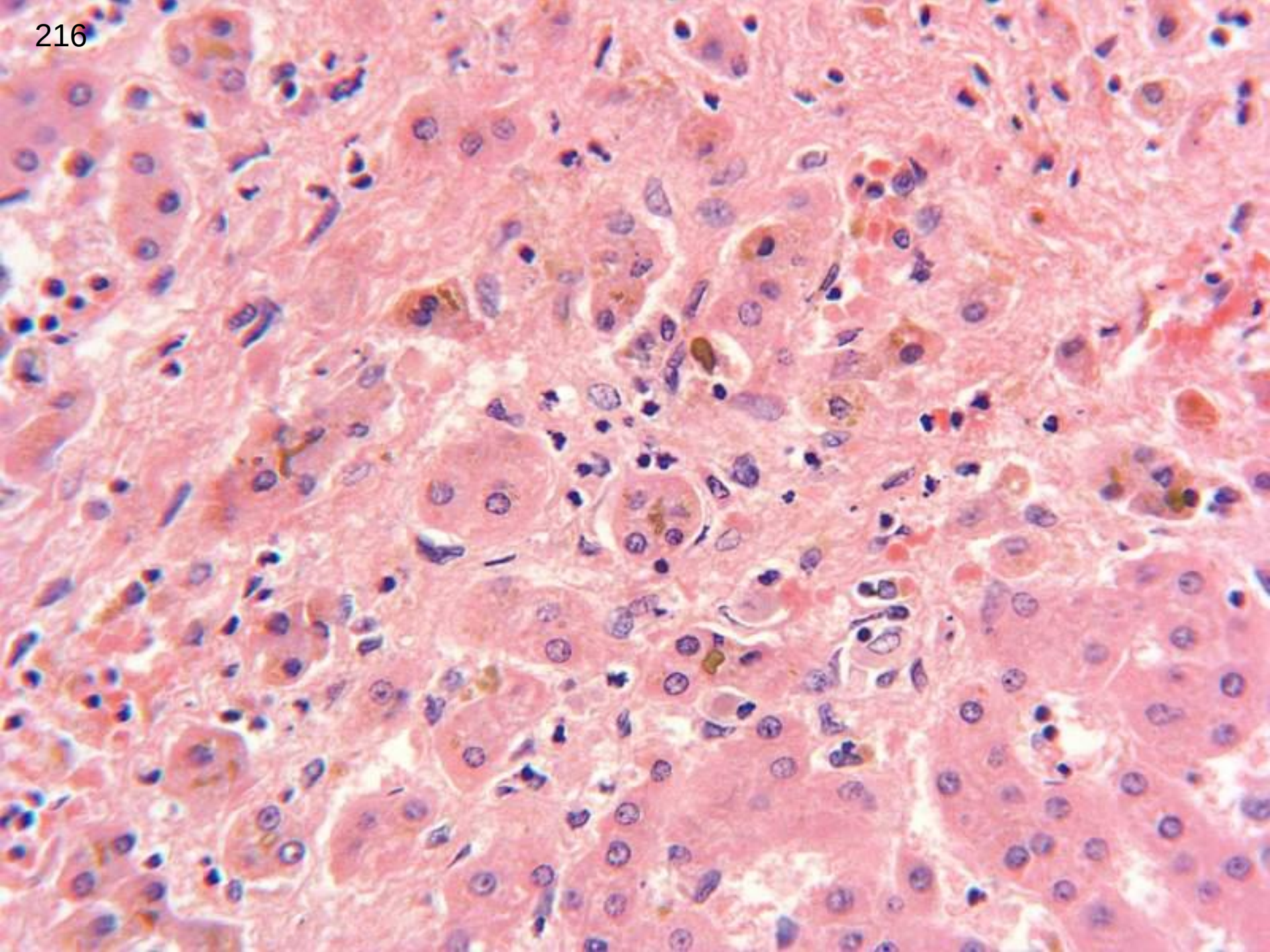
- Liver measuring 13 x 12 x 6 cms











Case 216: diagnoses

48 Alagille's syndrome/ arteriohepatic dysplasia

3 syndromic paucity but exact syndrome not given

1 biliary atresia (Alagille's syndrome)

2 differential diagnosis includes biliary atresia

1 paucity of intrahepatic ducts, NOS

1 absence of bile ducts, cholestasis

1 extreme form of chronic venous congestion, reverse lobulation cirrhosis

comments: absence of intrahepatic ducts: clinical information is characteristic of Alagille's syndrome allowing specific diagnosis to be made.

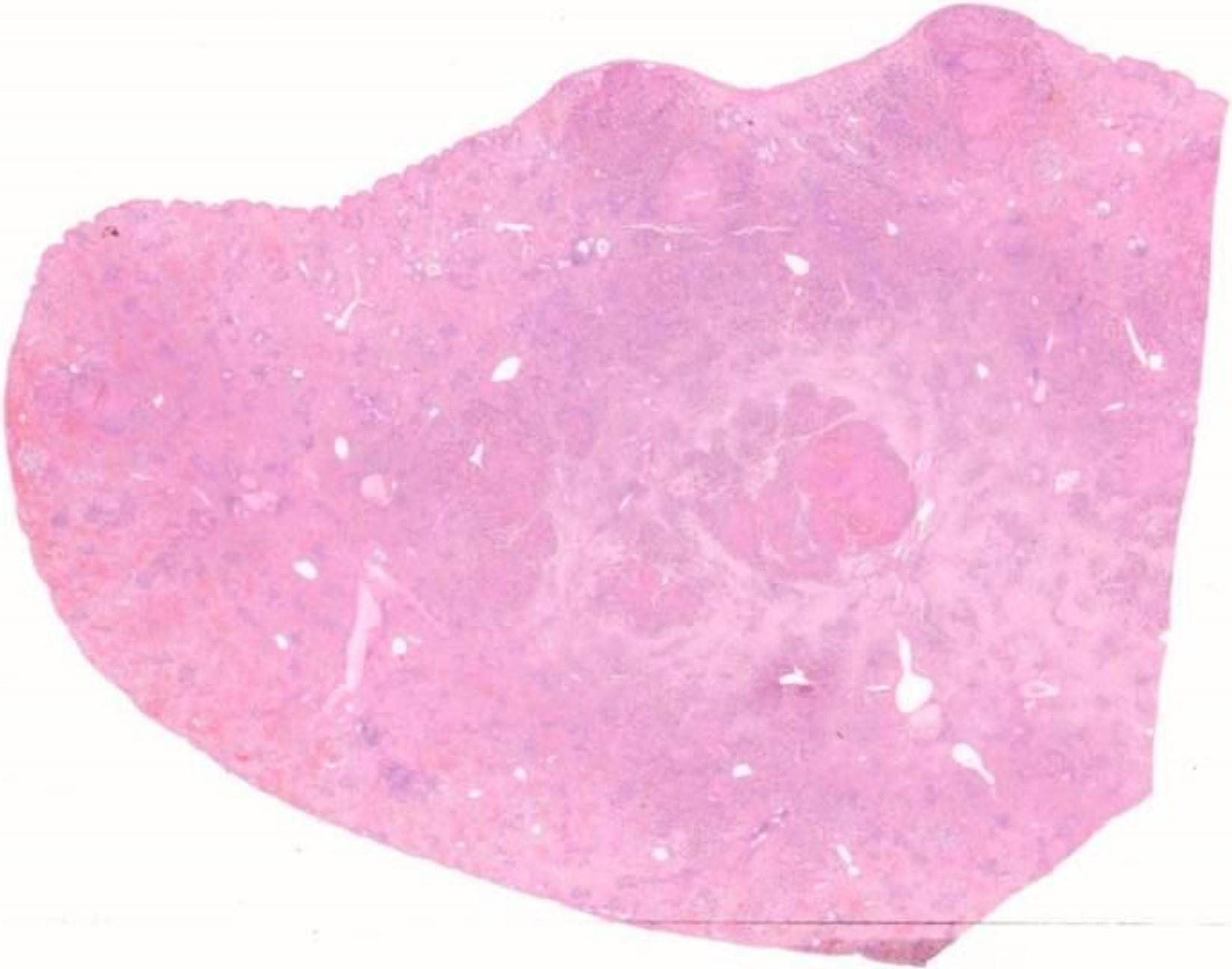
217

- 14 year old female. Acute liver failure. LKM antibody positive, also insulin dependant diabetes

- Liver measuring 520 gms, wrinkled capsular surface,

  Cut surface - soft dark, occasional yellow nodules up to 5 mm

217



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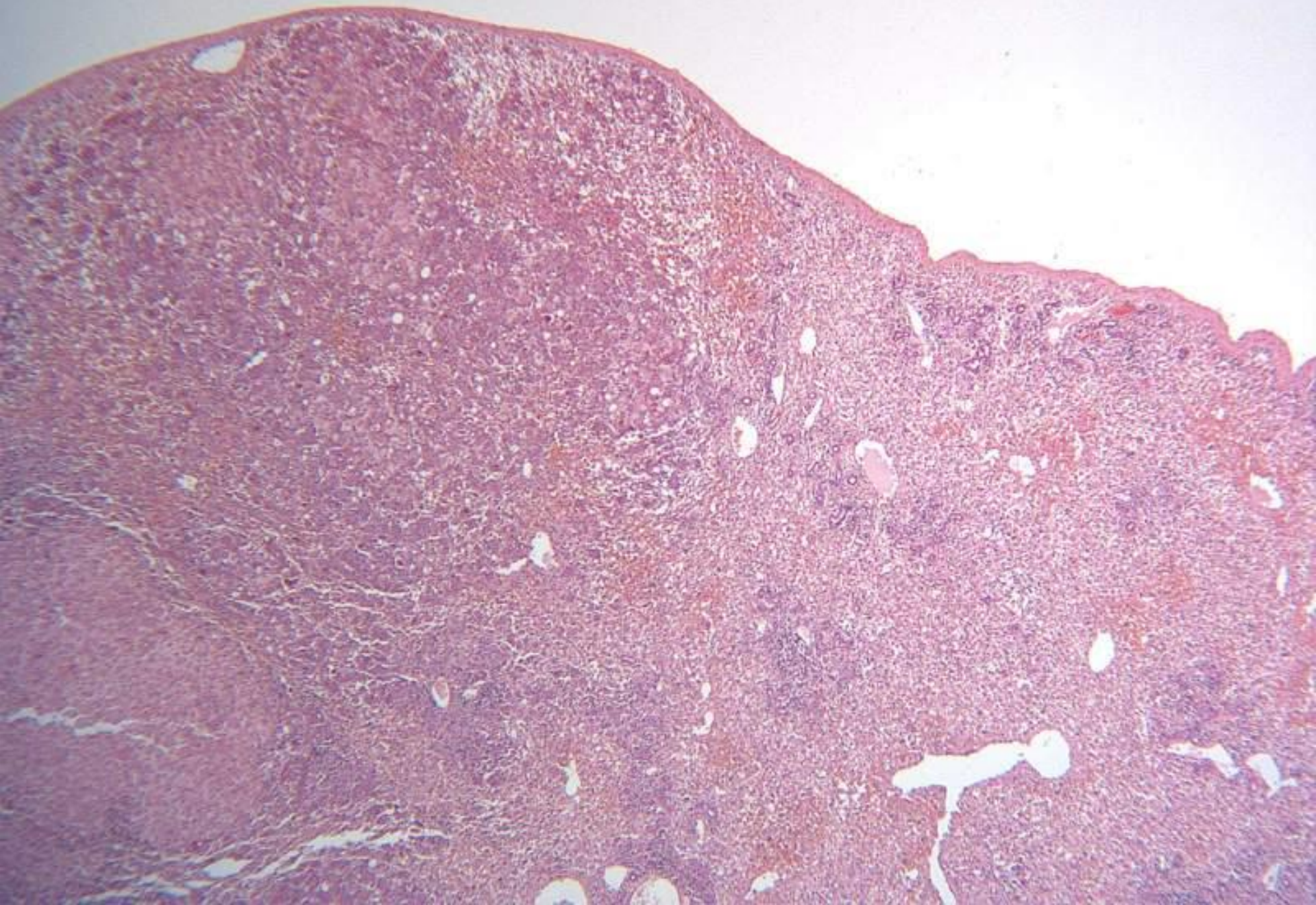

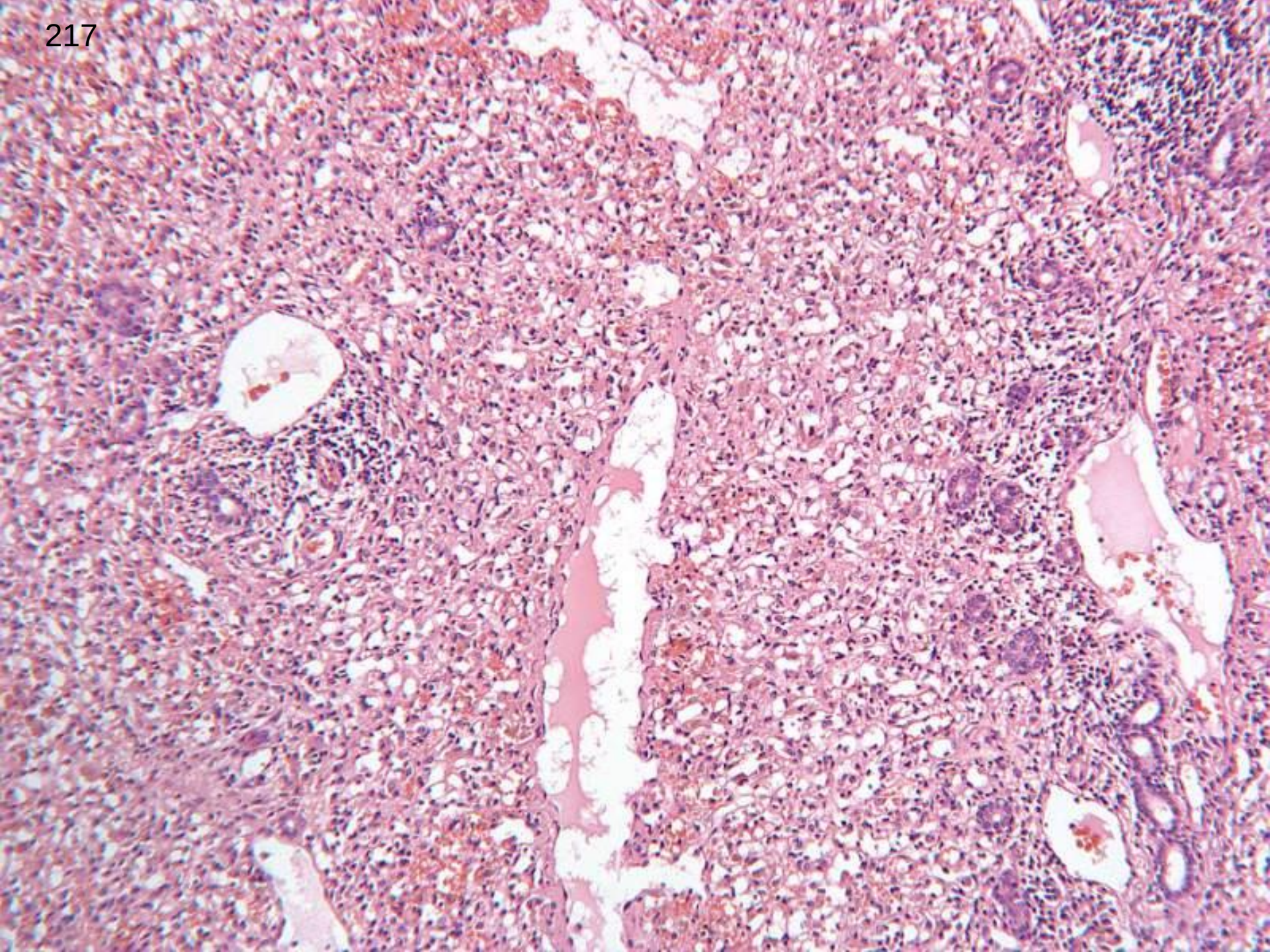

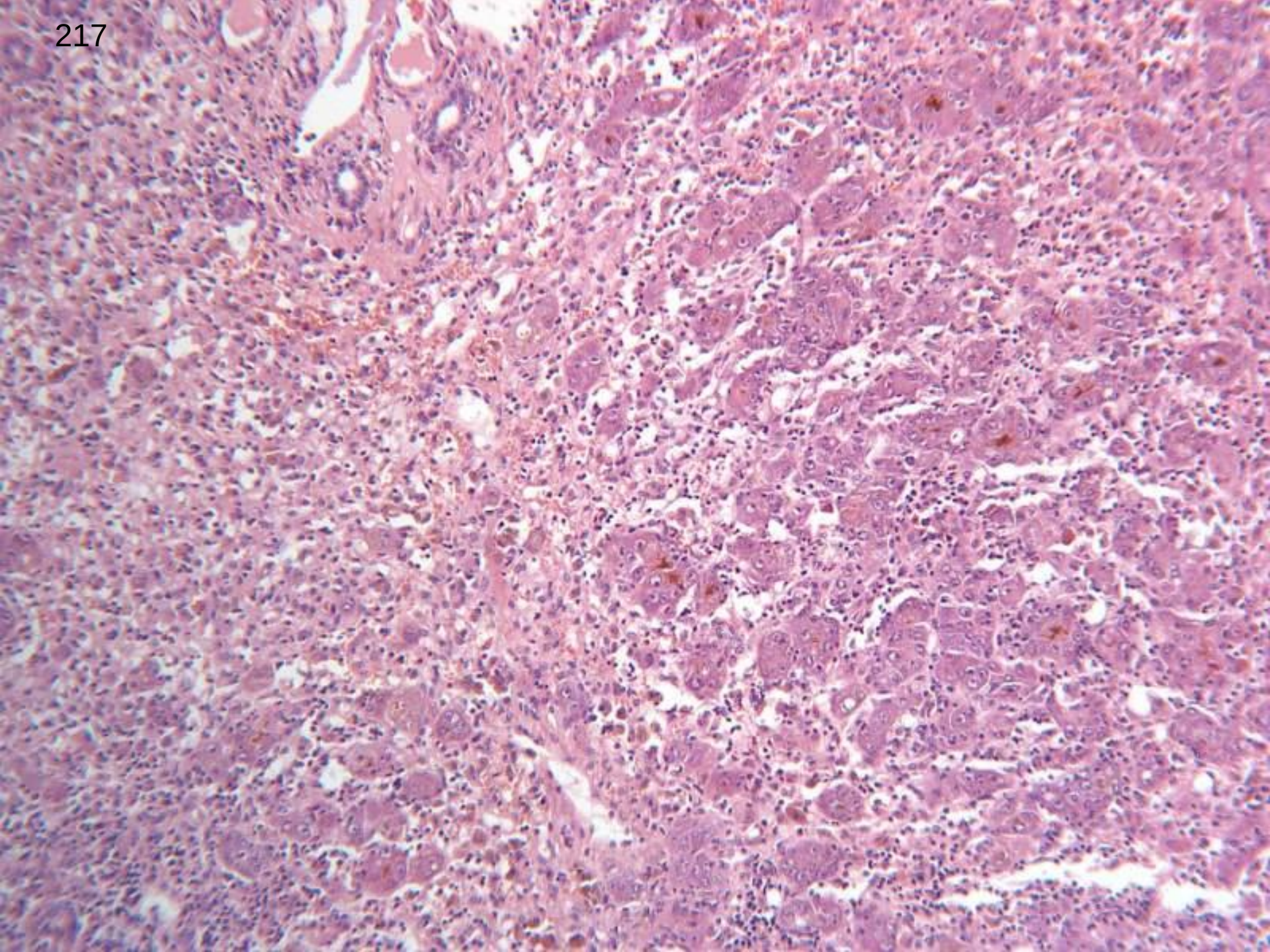

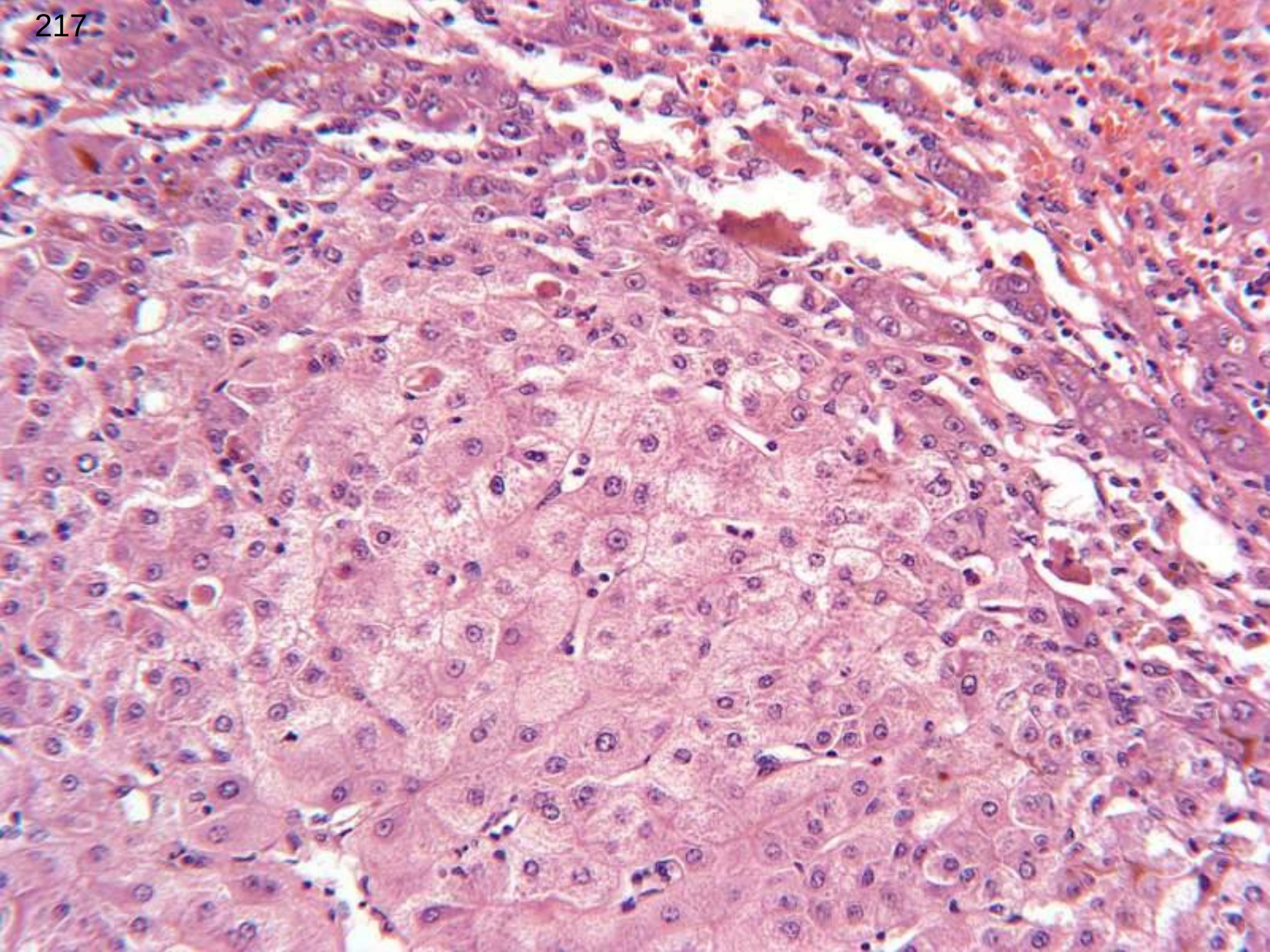

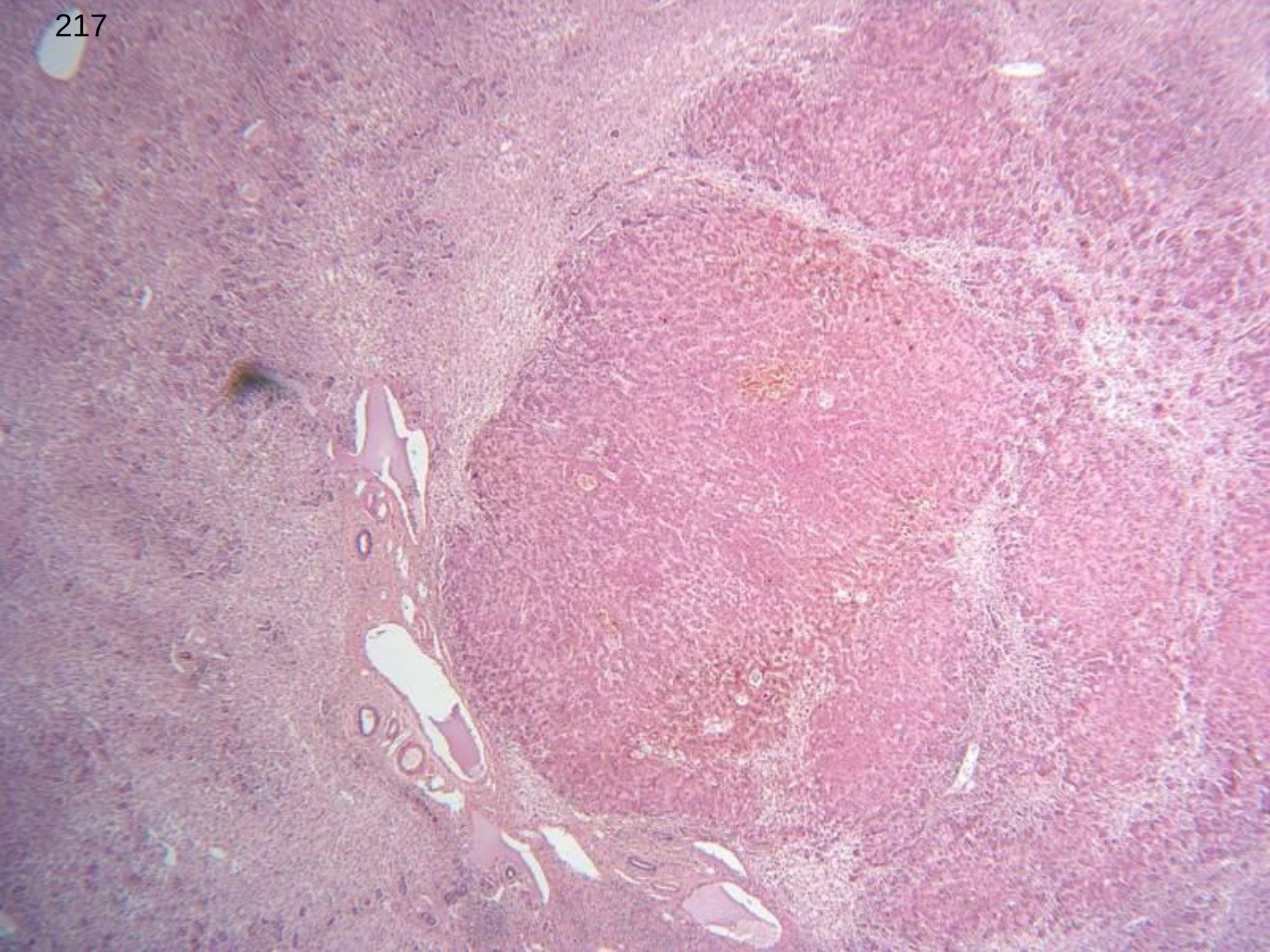

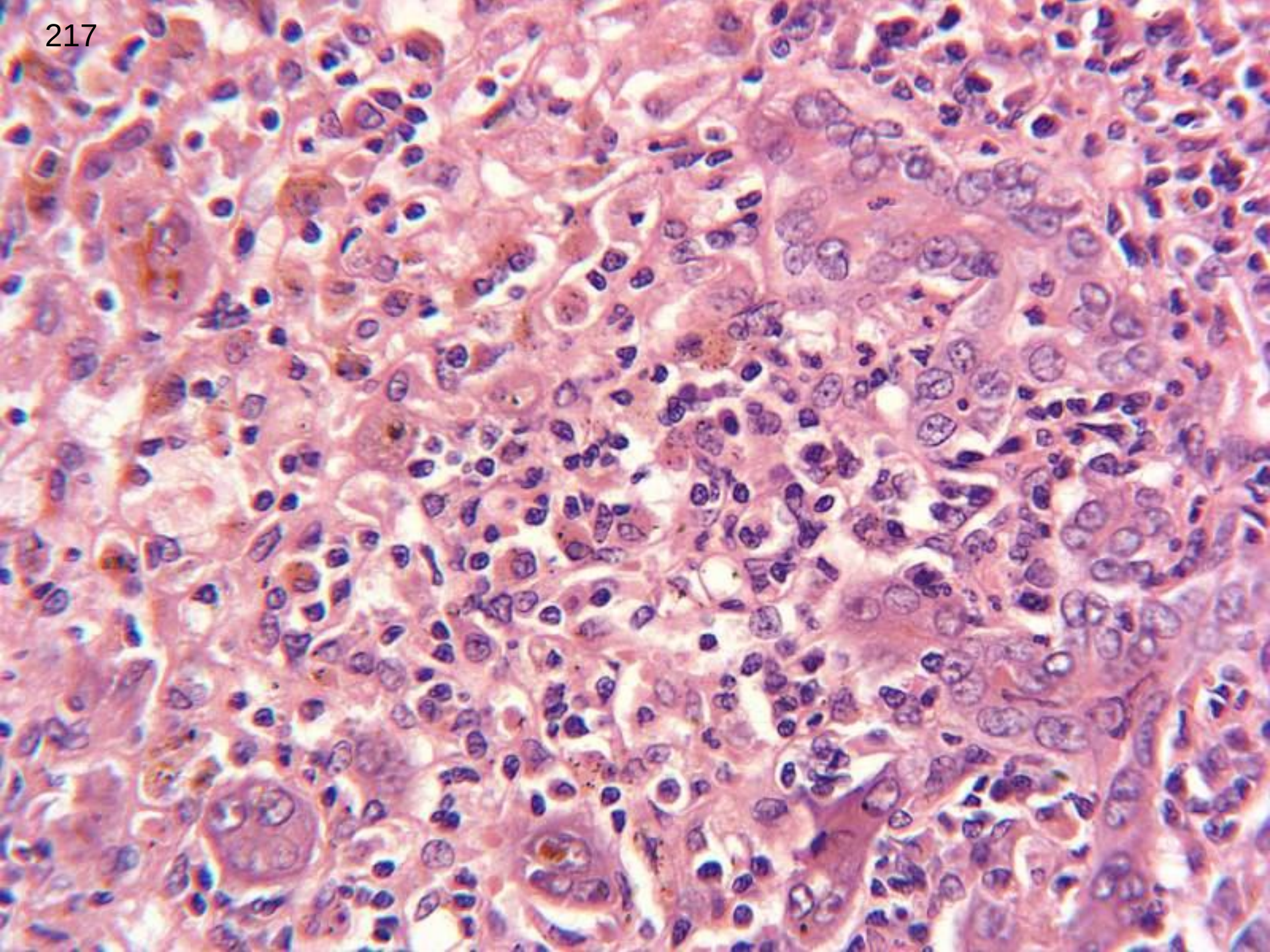

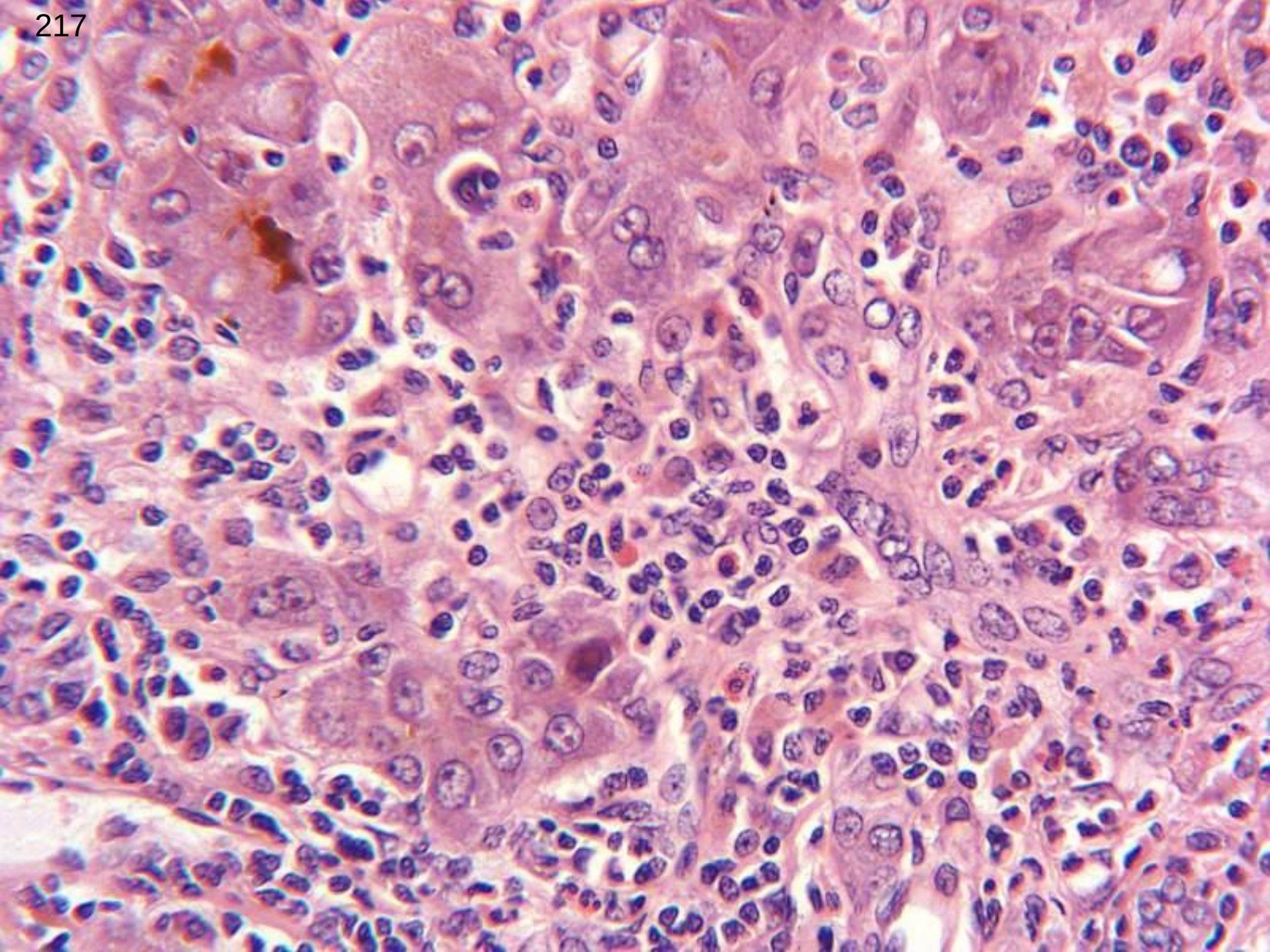

Case 217:diagnoses

46 massive/confluent/panacinar necrosis, fulminant
1 marked regeneration with collapse, c/w autoimmune

1 autoimmune hepatitis with severe liver damage
1 diffuse cholestatic necrosis and regenerative changes

3 active cirrhosis, fatty change
1 biliary cirrhosis
1 autoimmune chronic hepatitis with cirrhosis and NASH
1 Rosai-Dorfmann disease or Langhans cell histiocytosis – needs immunos

Case 217: diagnoses

45 autoimmune,
of which 17 autoimmune, type II
1 ?autoimmune/?drug/?viral
6 autoimmune not mentioned

Autoimmune, but
7 exclude viral/drug
1 exclude Wilson's
1 exclude underlying chronic disease
1 ? autoimmune polyendocrinology syndrome

comments: about 25% of autoimmune hepatitis has acute presentation. Autoimmune hepatitis can be classified according to aut- antibodies present, type II has anti-LKM antibodies and tends to affect young females, often with severe/fulminant disease.

Histology in severe acute hepatitis does not generally distinguish the aetiology (viral, autoimmune, drugs or acute seronegative hepatitis).

model answer: hepatitis with confluent panacinar necrosis consistent with fulminant hepatic failure; in a patient with anti-liver kidney microsomal (LKM) antibodies this is most likely due to autoimmune hepatitis.