

Circulation T

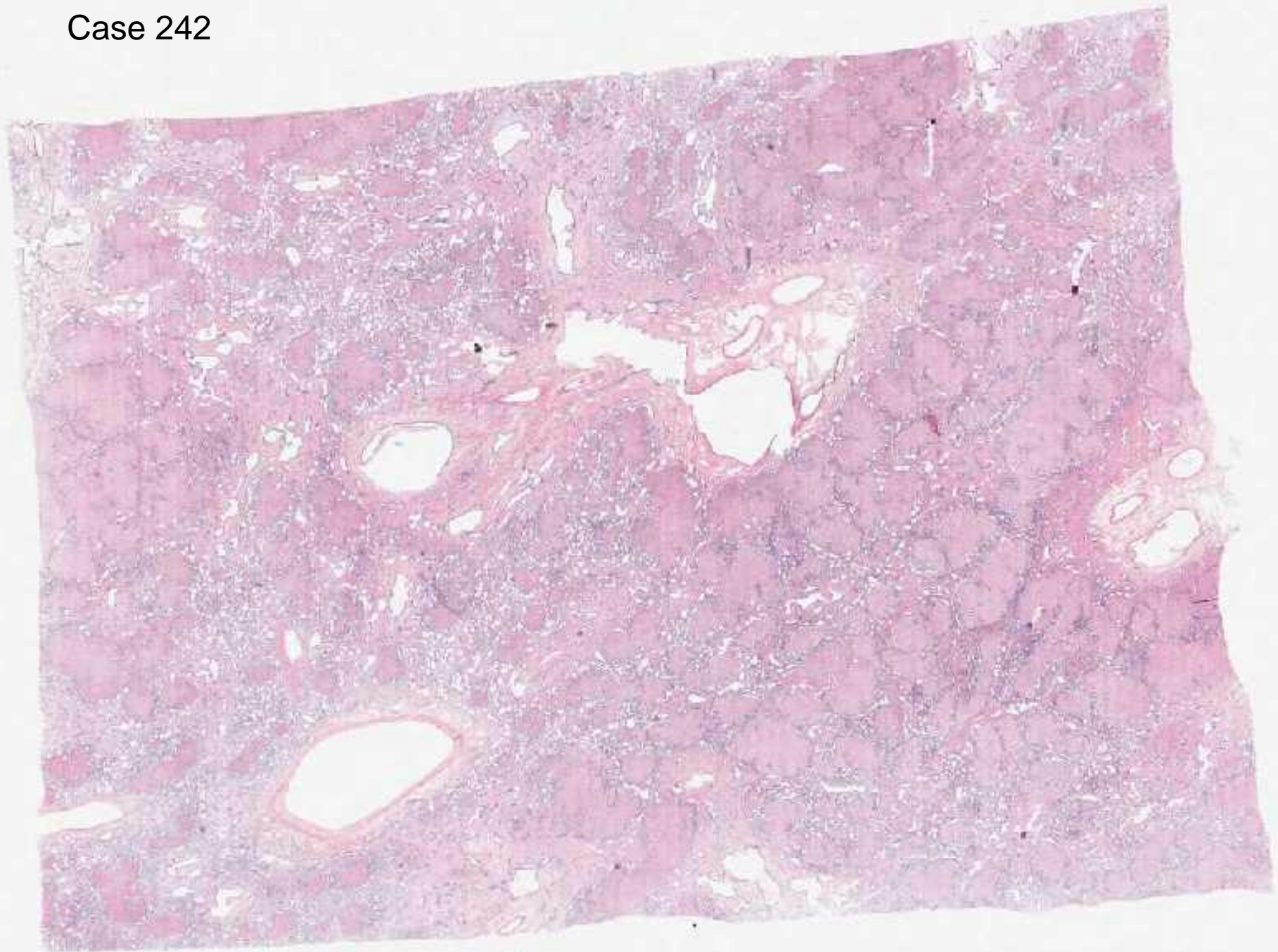
Manchester

July 5th 2006

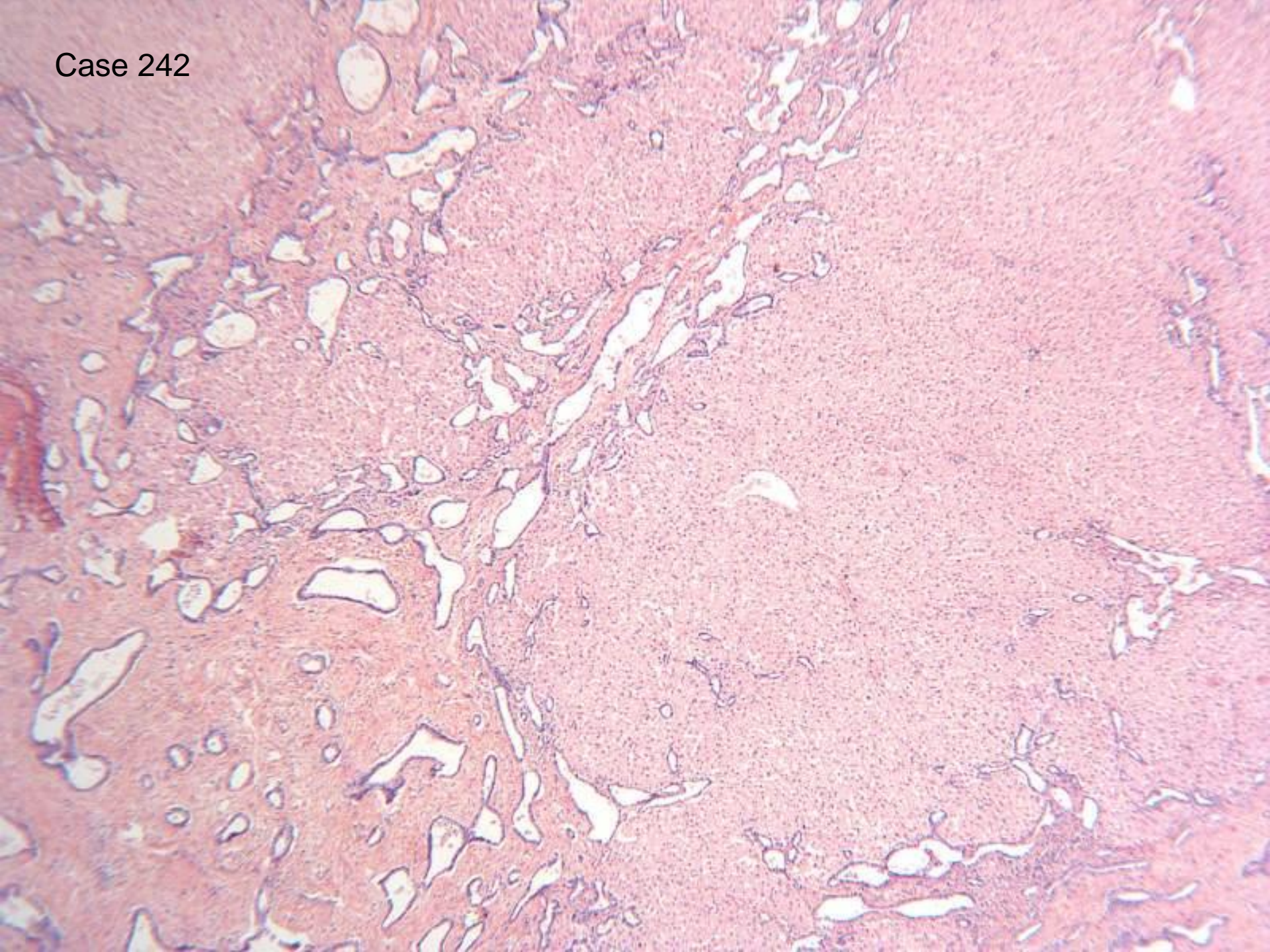
Case 242

- 8 year old female with polycystic disease
- Section from explanted liver.

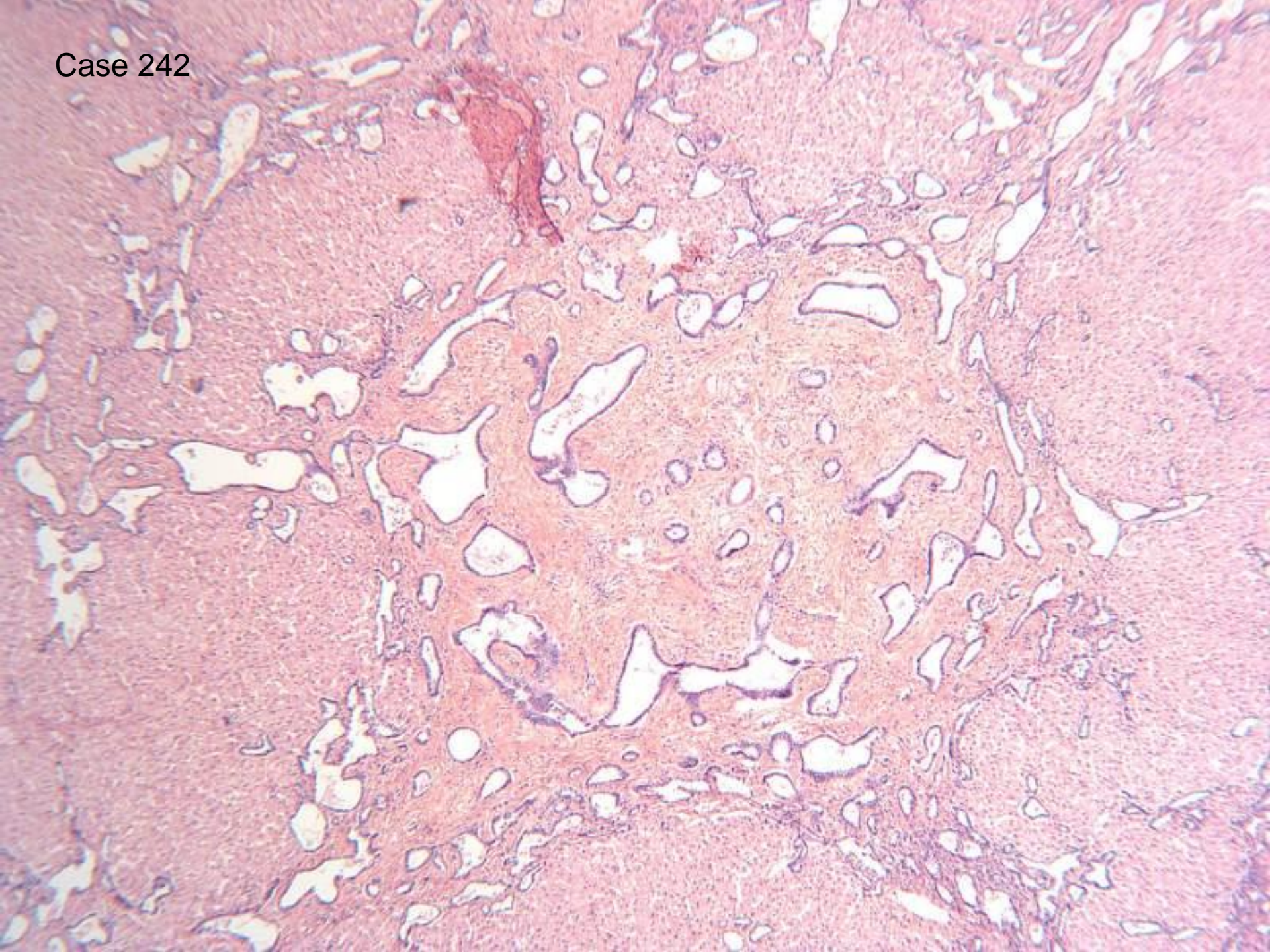
Case 242



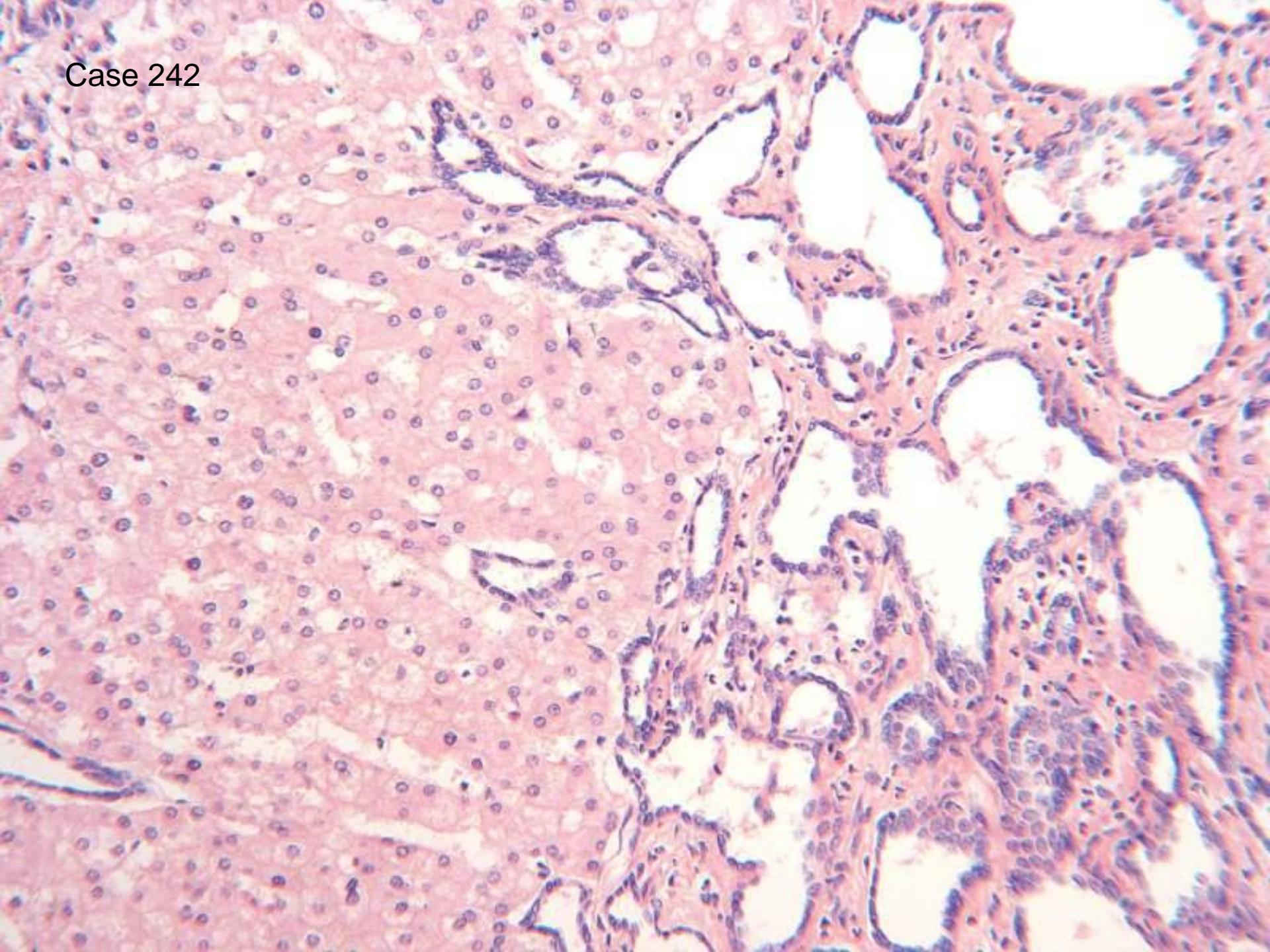
Case 242



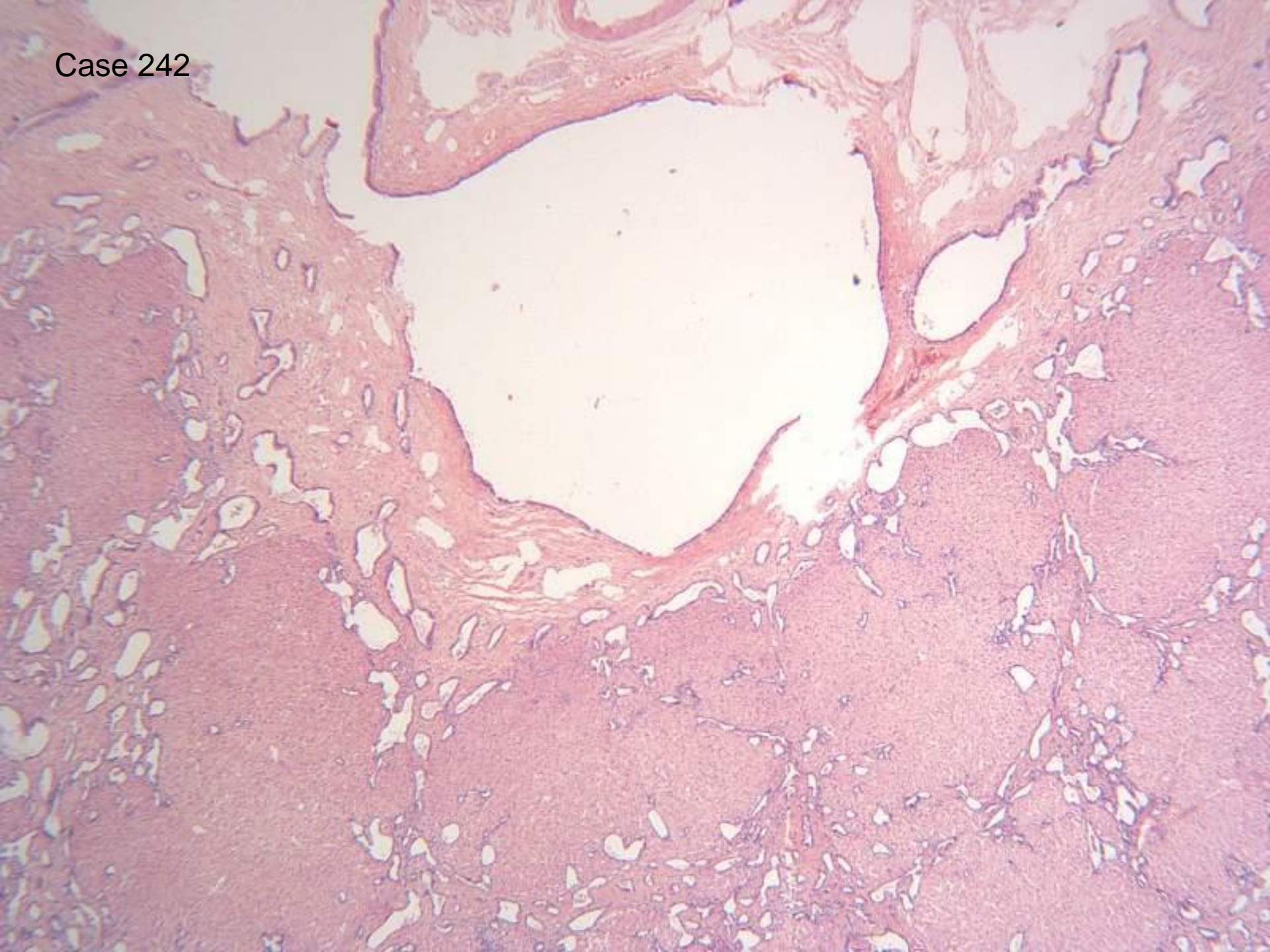
Case 242



Case 242



Case 242



Case 242

- 31 Congenital hepatic fibrosis
- 13 Autosomal recessive polycystic kidney disease
- 11 in the spectrum of polycystic disease
- 3 ductal plate malformation
- 3 ?caroli's

Case 242

Scoring: Accept all diagnoses

Discussion: The dilatation of large ducts against the background of congenital hepatic fibrosis indicates that this is an example of Caroli's syndrome (dilatation of intra-hepatic ducts + congenital hepatic fibrosis), rather than congenital hepatic fibrosis alone.

Case 242

Follow up:

The clinical details received with this liver were ' polycystic disease'.

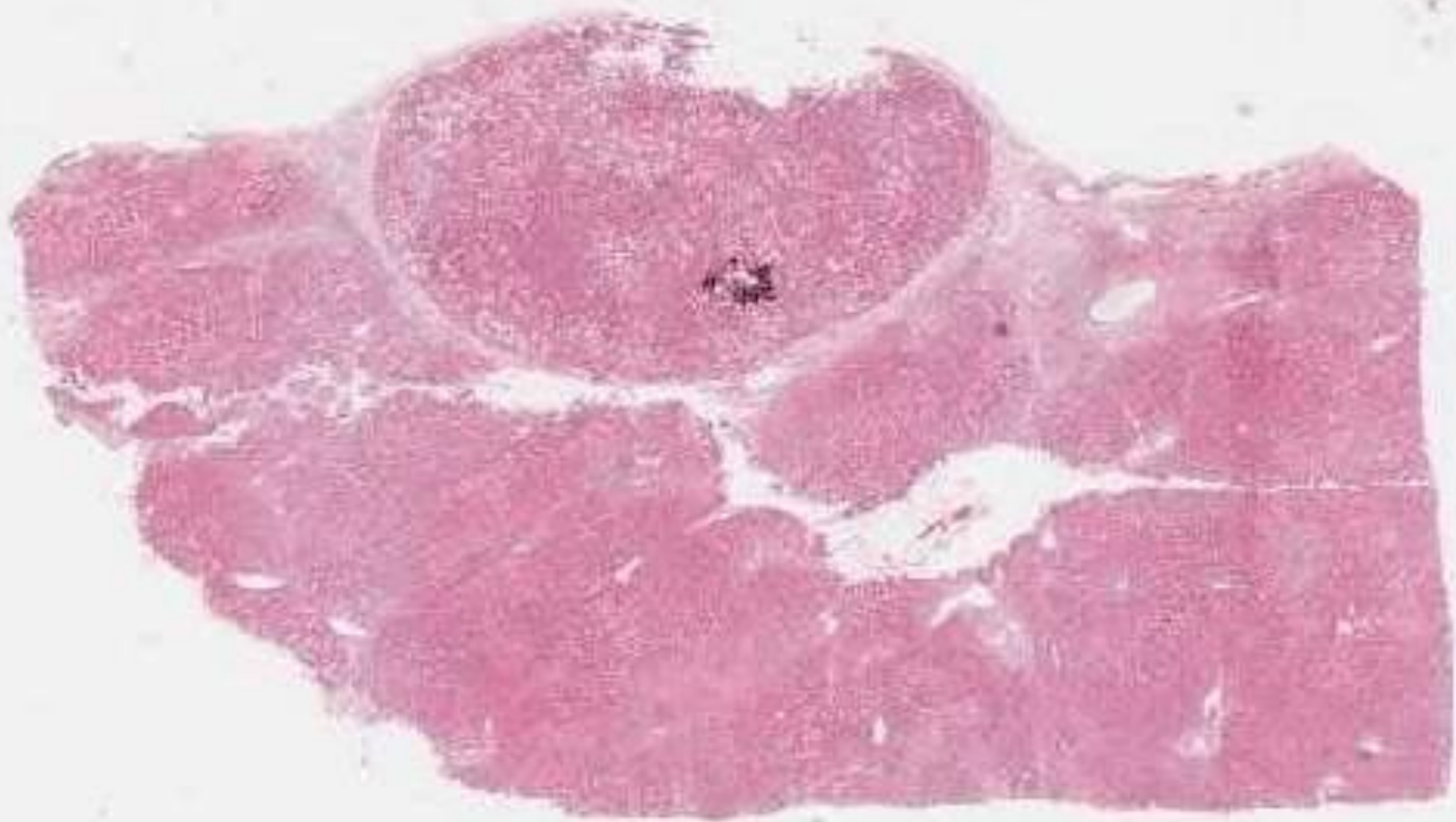
The patient had one episode of early acute rejection at which time we were also told that there had been a combined liver and kidney transplant performed as there had been previous bilateral nephrectomy in another hospital for cystic kidneys.

No further biopsies have been received and therefore the patient is presumed to be doing well.

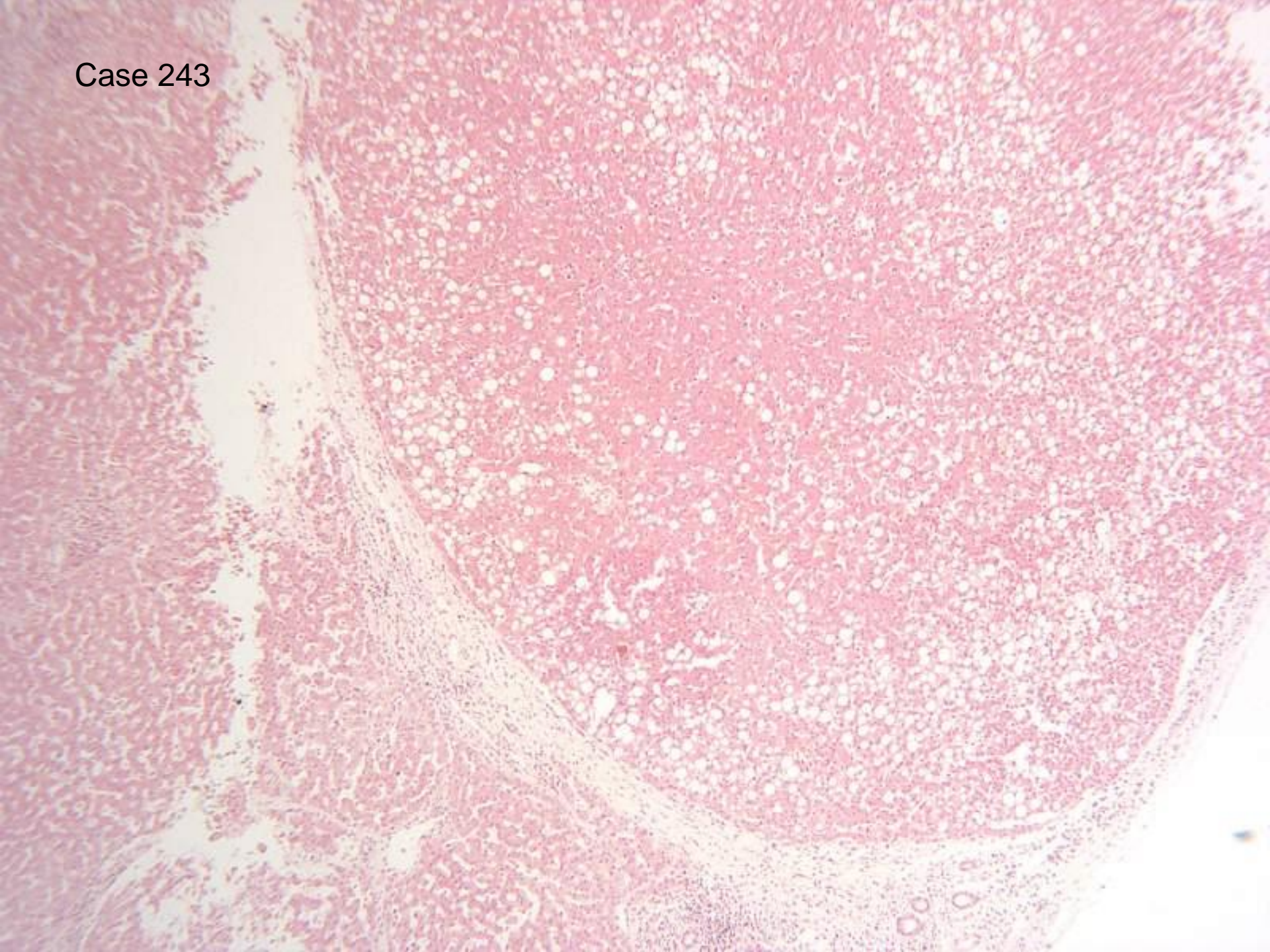
Case 243

- 58 female
- Liver nodule noted at time of organ transplantation
- Liver wedge biopsy
- 4mm pale tan nodule on wedge

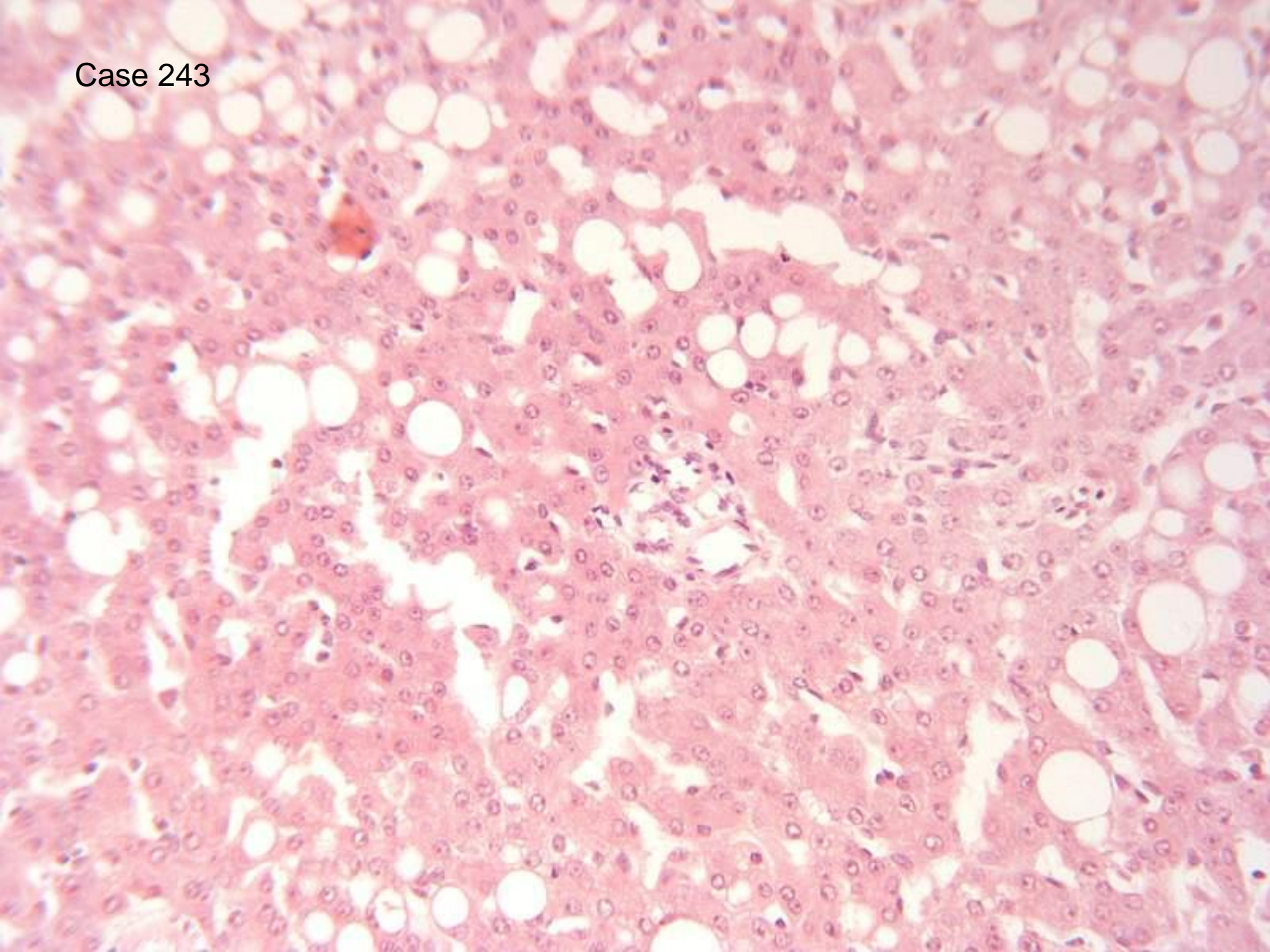
Case 243



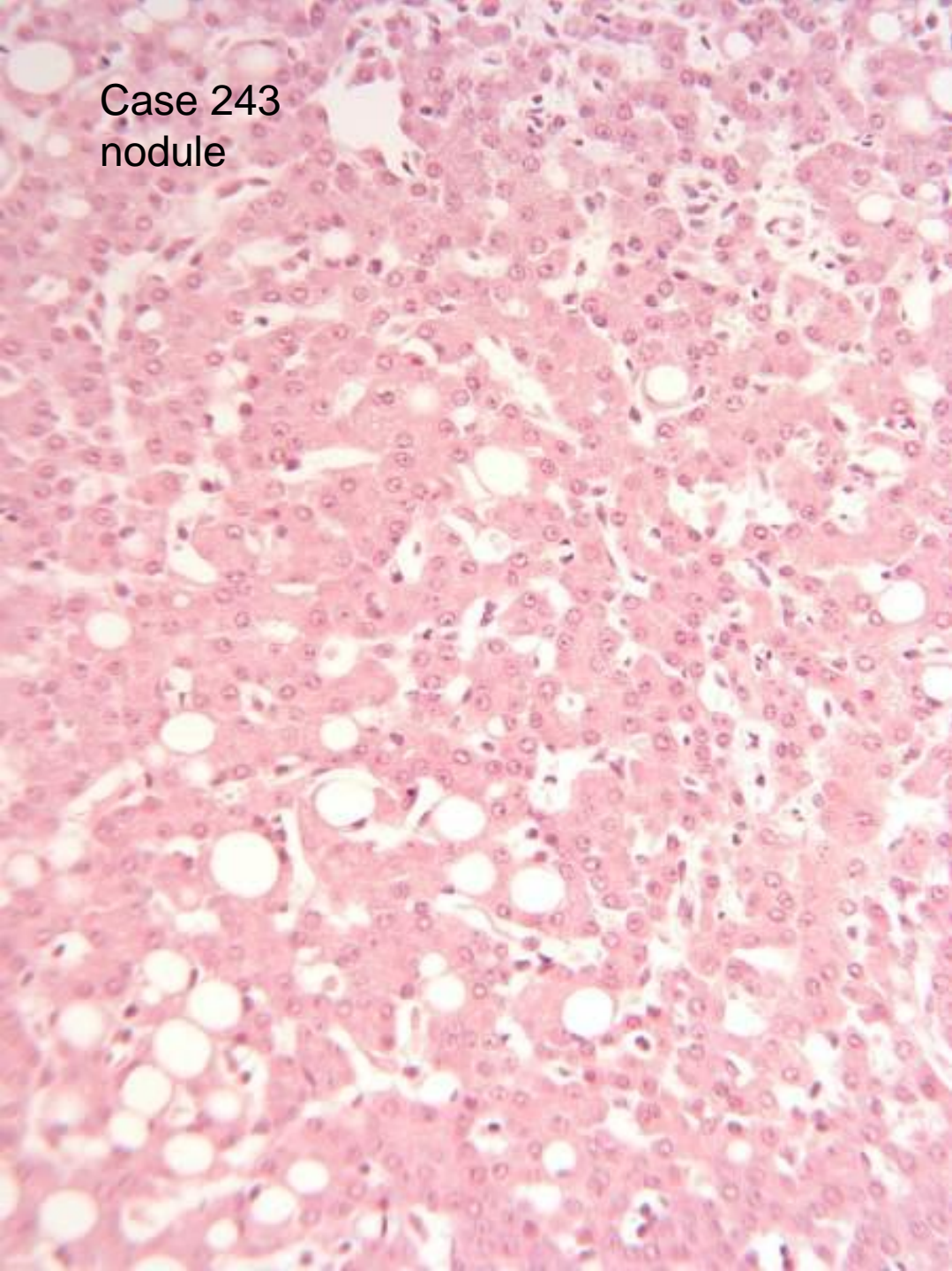
Case 243



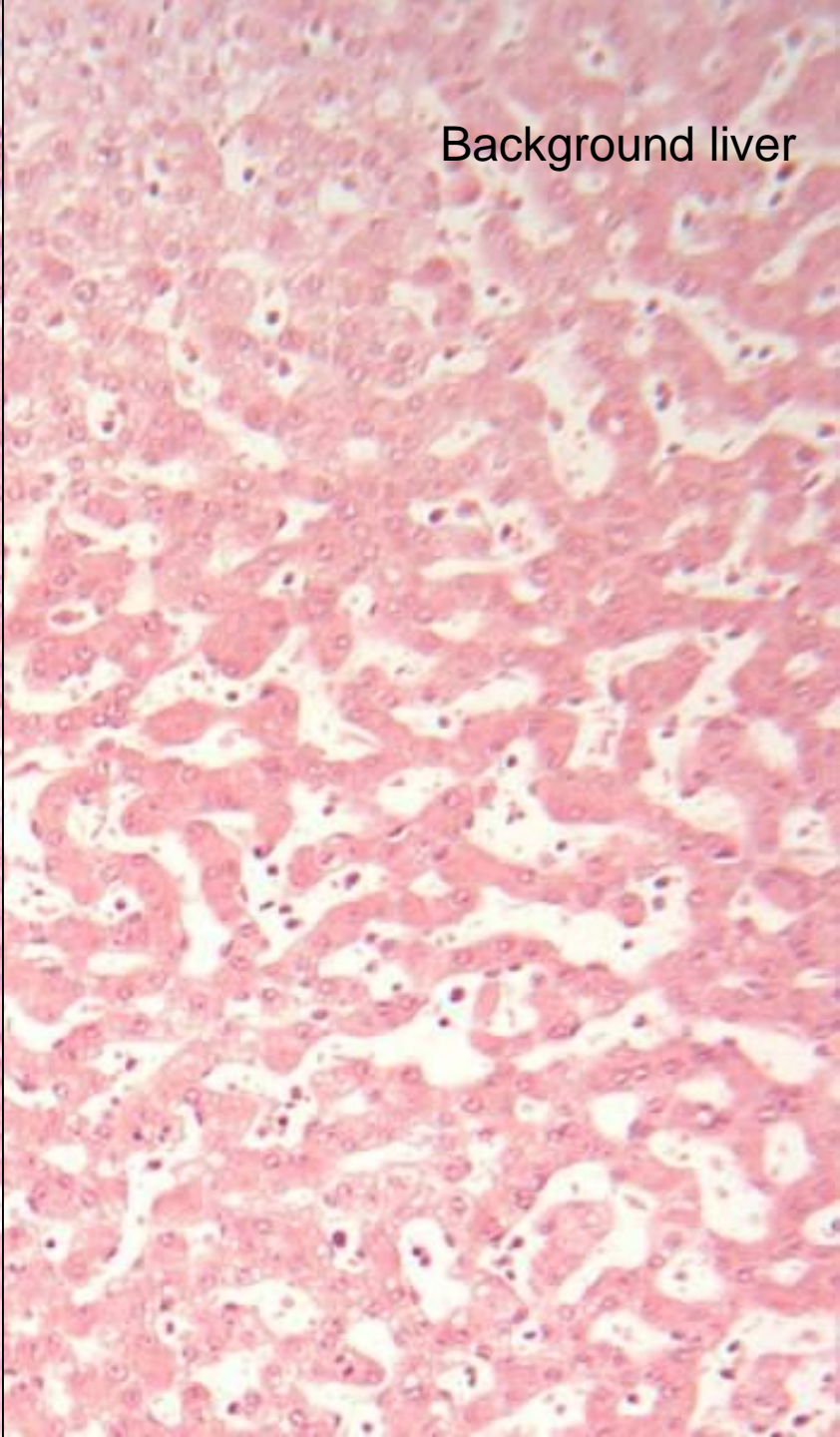
Case 243



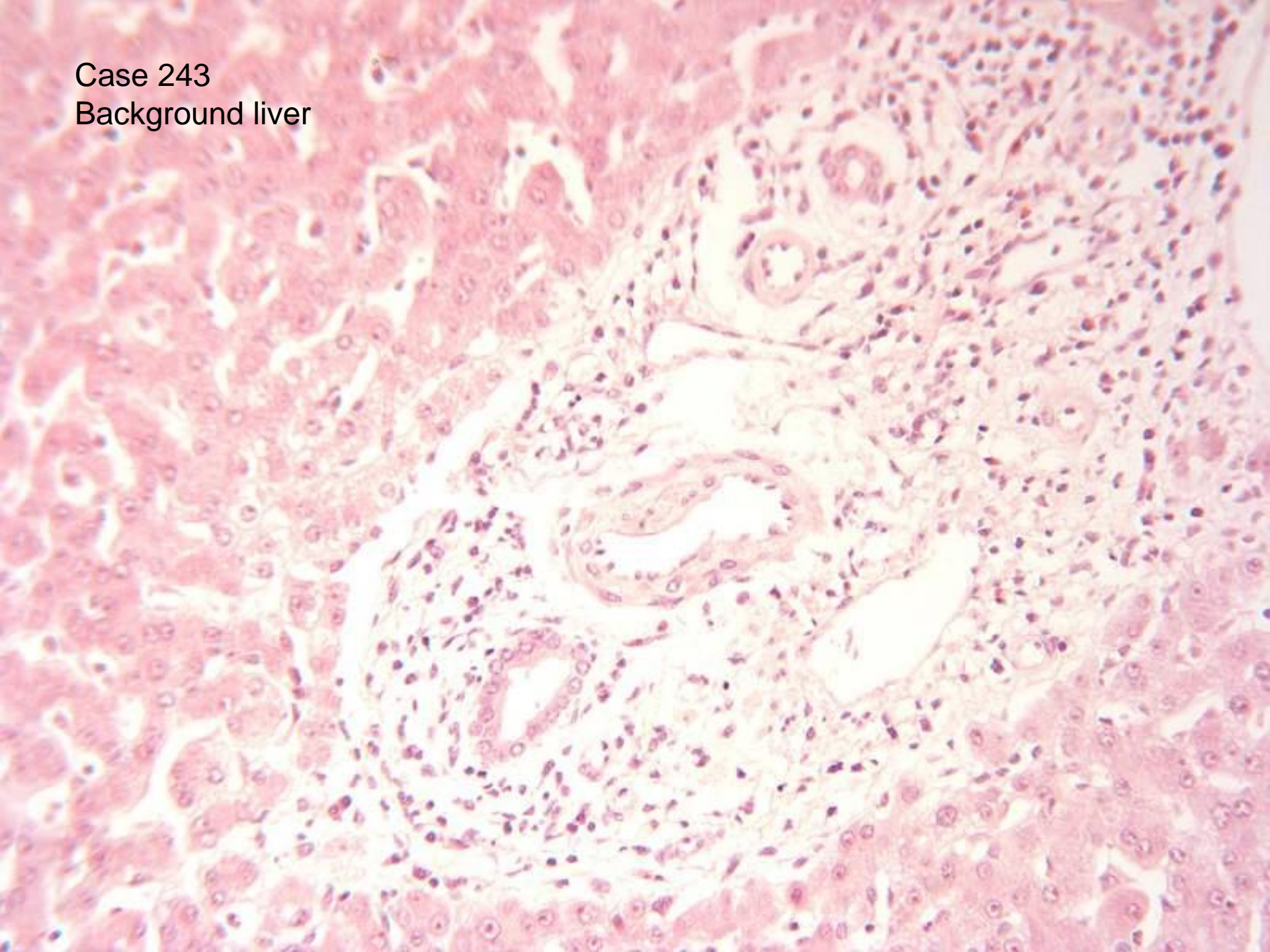
Case 243
nodule



Background liver



Case 243
Background liver



Case 243

- 41 adenoma
- 4 FNH or benign ? FNH
- 3 benign ?adenoma or FNH
- 3 regenerative or hyperplastic nodule
- 2 *regenerative nodular hyperplasia*
- 2 focal fatty change or adenoma
- 3 *focal steatosis*

comments:

steatosis in the adenoma 13

mild hepatitis in background liver 4

Case 243

Scoring: Accept responses that indicate this is a focal benign hepatocellular lesion (see comment)

Discussion: perhaps best characterized as a focal benign hepatocyte lesion – this lacks characteristics of adenoma (because it is encapsulated, with no unaccompanied arteries in the lesion) as well as lacking characteristics of focal nodular hyperplasia. Responses that did not indicate the focality of the lesion were rejected. Regenerative nodular hyperplasia is a diffuse change without fibrosis and focal steatosis is seen as a patch of fatty change within a group of liver cells with no architectural alteration.

Case 244

- 52 female
- Alcoholic liver disease, ? Cirrhosis
- 2 cores of tissue up to 10mm long
- (H&E and HVG slides)

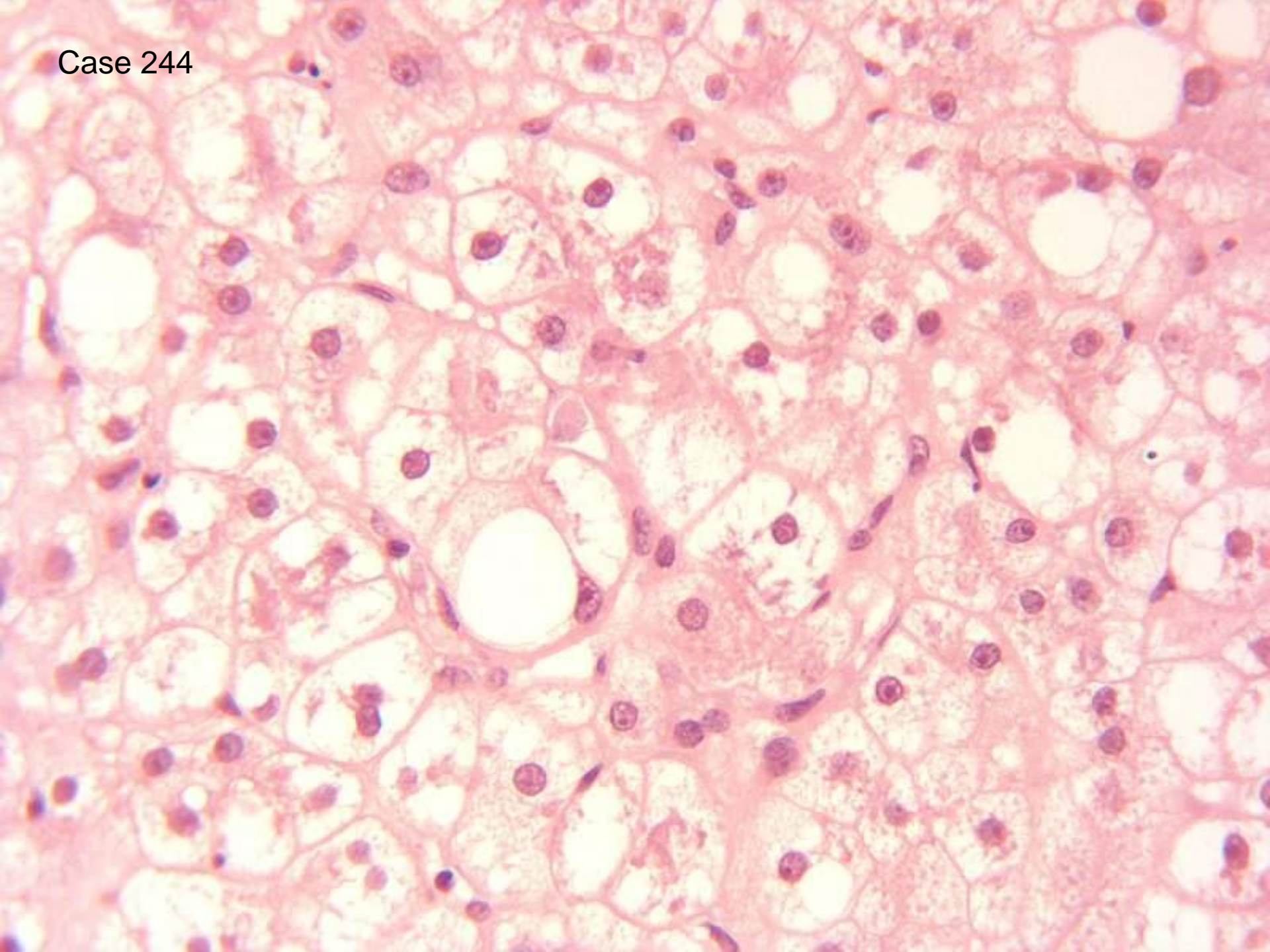
Case 244



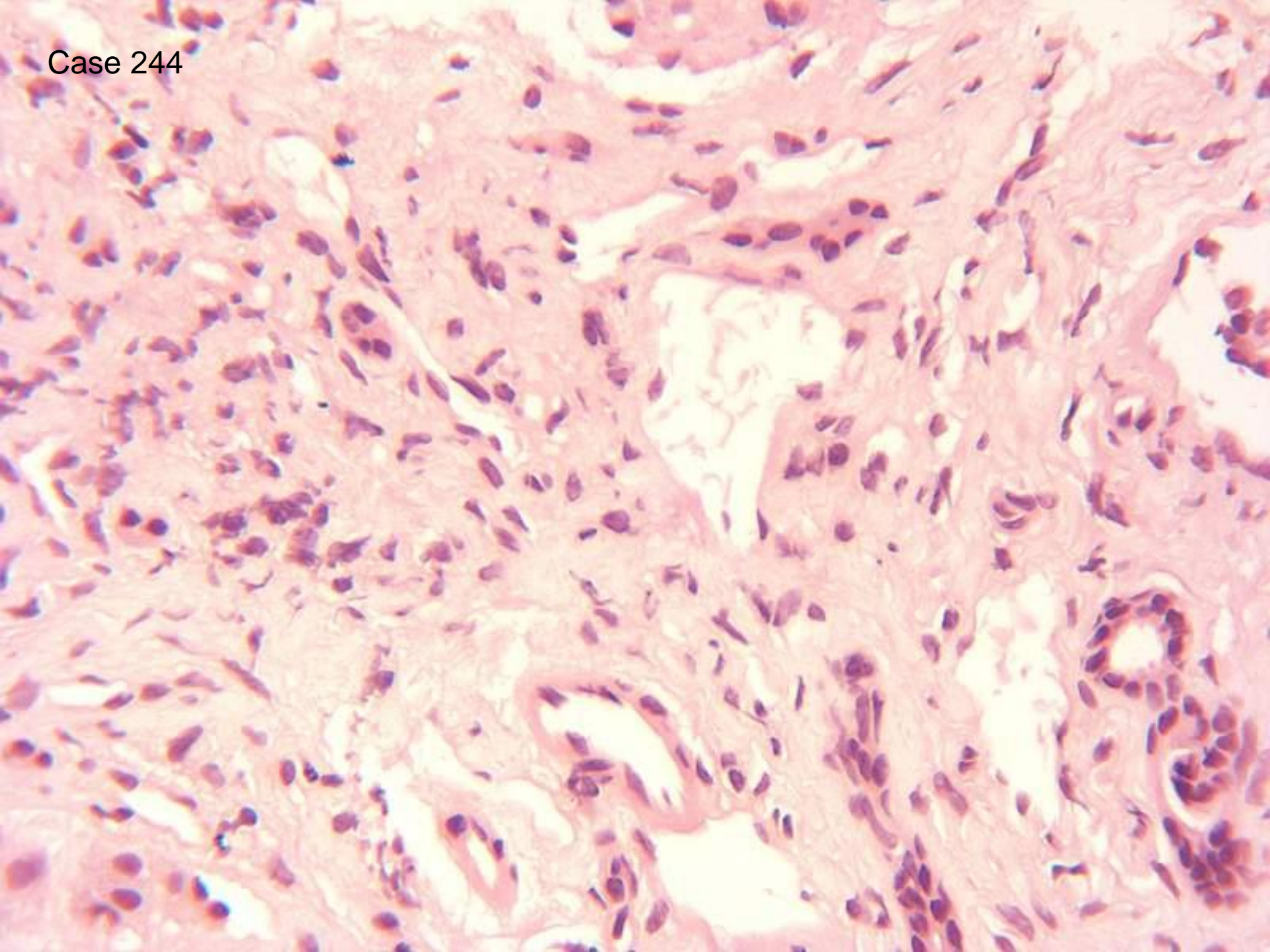
Case 244



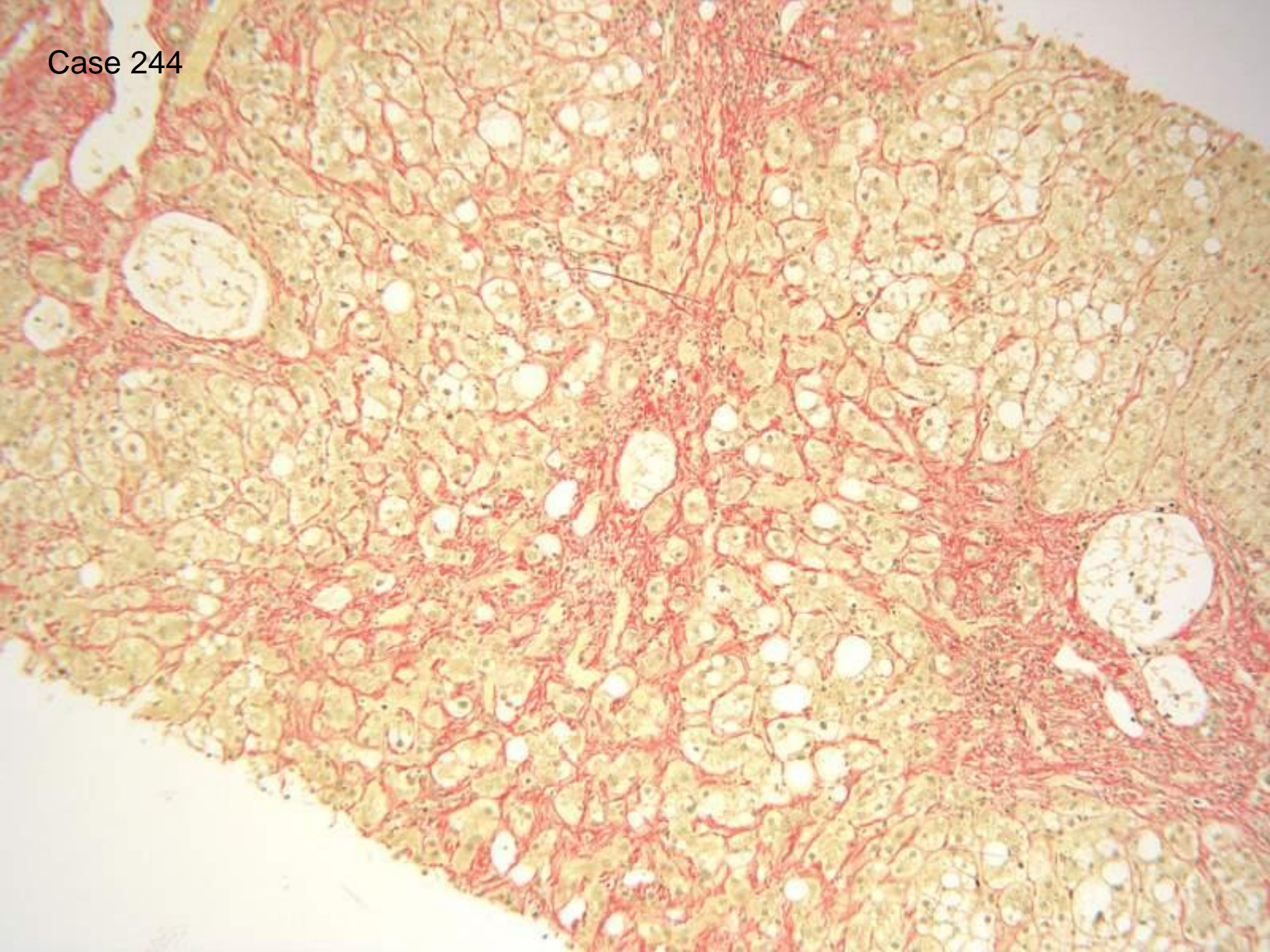
Case 244



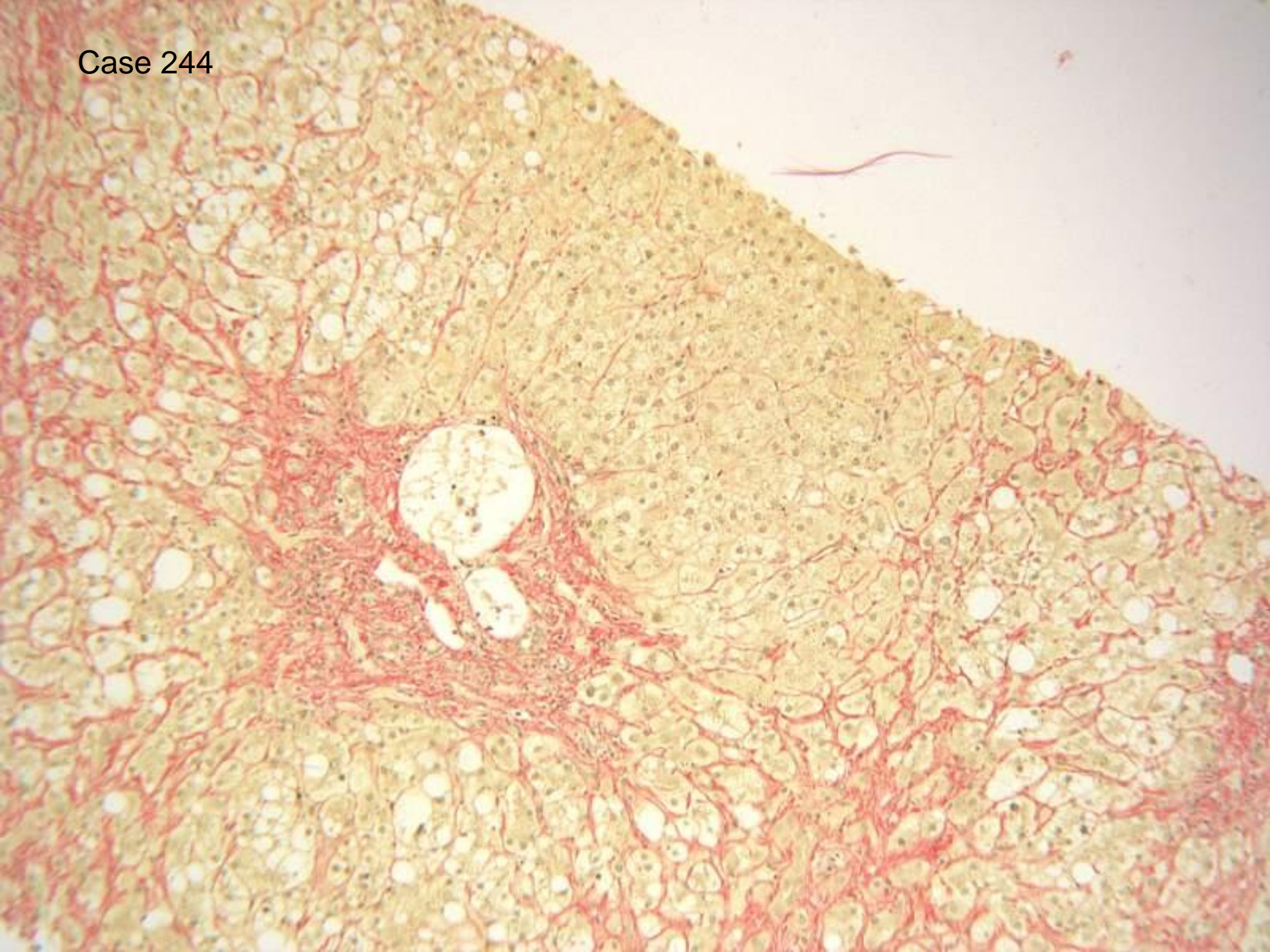
Case 244



Case 244



Case 244



Case 244

- 50 Alcoholic steatohepatitis
- 6 alcoholic liver disease, not otherwise specified
- 1 no mention of alcohol

- 20 severe fibrosis
- 18 developing/incomplete cirrhosis
- 3 early cirrhosis
- 11 Cirrhosis

- 2 central sclerosing hyaline necrosis

Comments: ? sickle cells 2

Case 245

Scoring: for full marks, answers require alcohol, steatohepatitis and at least marked fibrosis to be included in response; half marks if part is missing

Discussion around one use of alcohol in diagnosis – most diagnose alcoholic liver disease when there is a history of excessive alcohol consumption supplied, and suggest alcoholic aetiology if no history of alcohol is given. Anecdotally, this has caused problems where a given history of alcohol on the request form was subsequently found to be erroneous. However, pragmatically a case can be reported as consistent with alcohol if the alcohol history is supplied.

Case 245

The criteria for steatohepatitis – Ballooned hepatocytes, Mallory bodies, and sinusoidal fibrosis in this case indicate that steatohepatitis is appropriate terminology even though there is no inflammatory cell component either in portal tracts or parenchyma. It was commented that as steatohepatitis resolves, the order of disappearance of features is polymorphs then fat then ballooning then Mallory's then fibrosis. As the lesion evolves over time, it is accepted to diagnose steatohepatitis without requiring the presence of inflammatory cells.

Case 244

Discussion contd:

Fibrosis – As long as vascular relationships appear preserved, as in this case, a diagnosis of established cirrhosis was probably not appropriate. Developing cirrhosis or severe fibrosis is more accurate here. Clearly there can be portal hypertension as a result of sinusoidal fibrosis without implying that cirrhosis has developed.

Sclerosing central hyaline necrosis, as answered by 2, is the most appropriate terminology in this case.

Follow-up information – Clinical history was of high alcohol (4 bottles of wine per night for the last 18 months), admitted with jaundice and liver failure and bleeding varicies. Varicies banded difficult to manage and eventually died from variceal haemorrhage.

Case 245

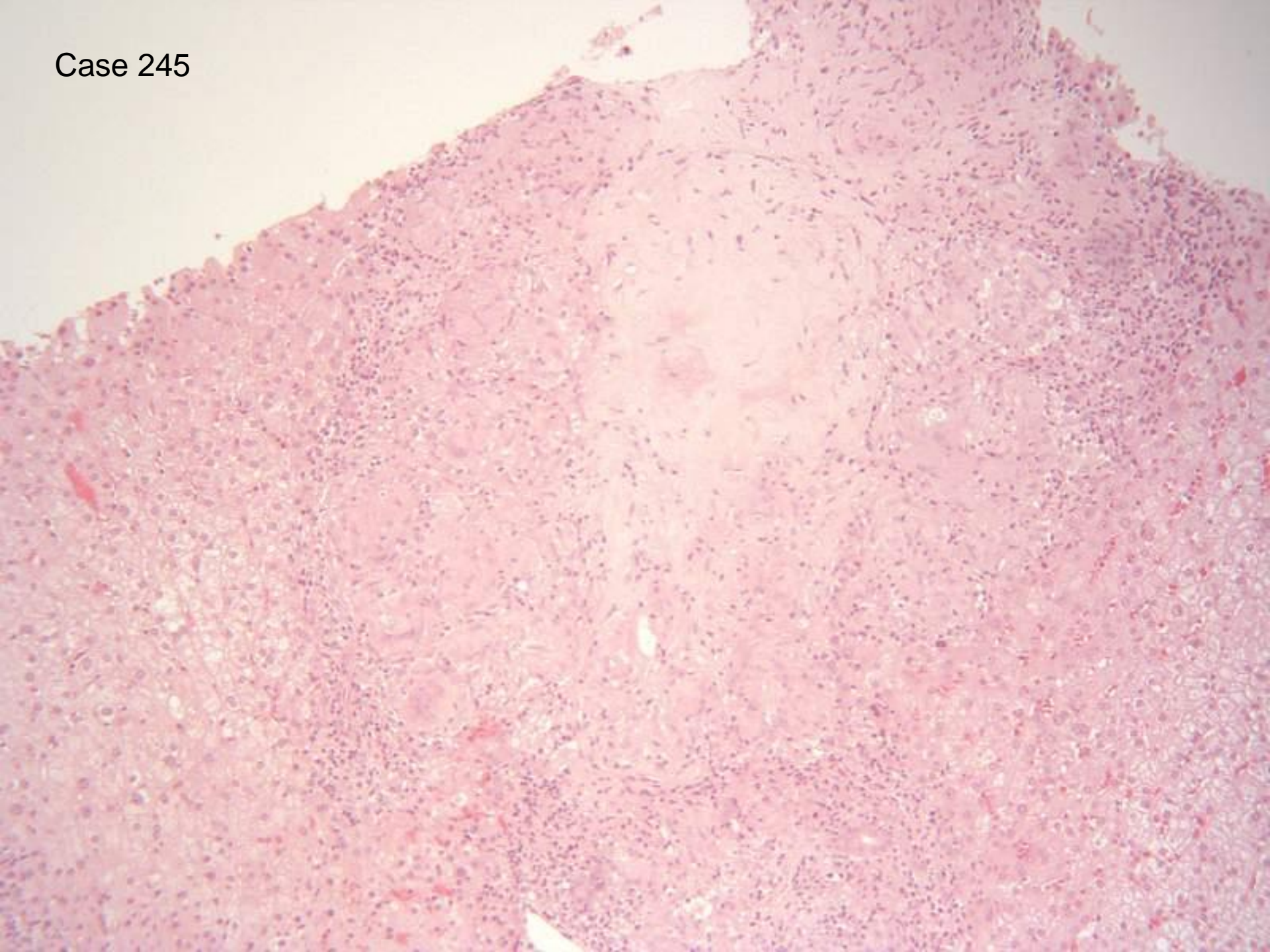
- 65 male
- History of SLE and sarcoidosis
- abnormal LFTs – alk phos 164, gamma GT 326,
- IgG 17.4, ANA 1:640, dsDNA >300, smooth muscle b ++

- Needle core 28mm long

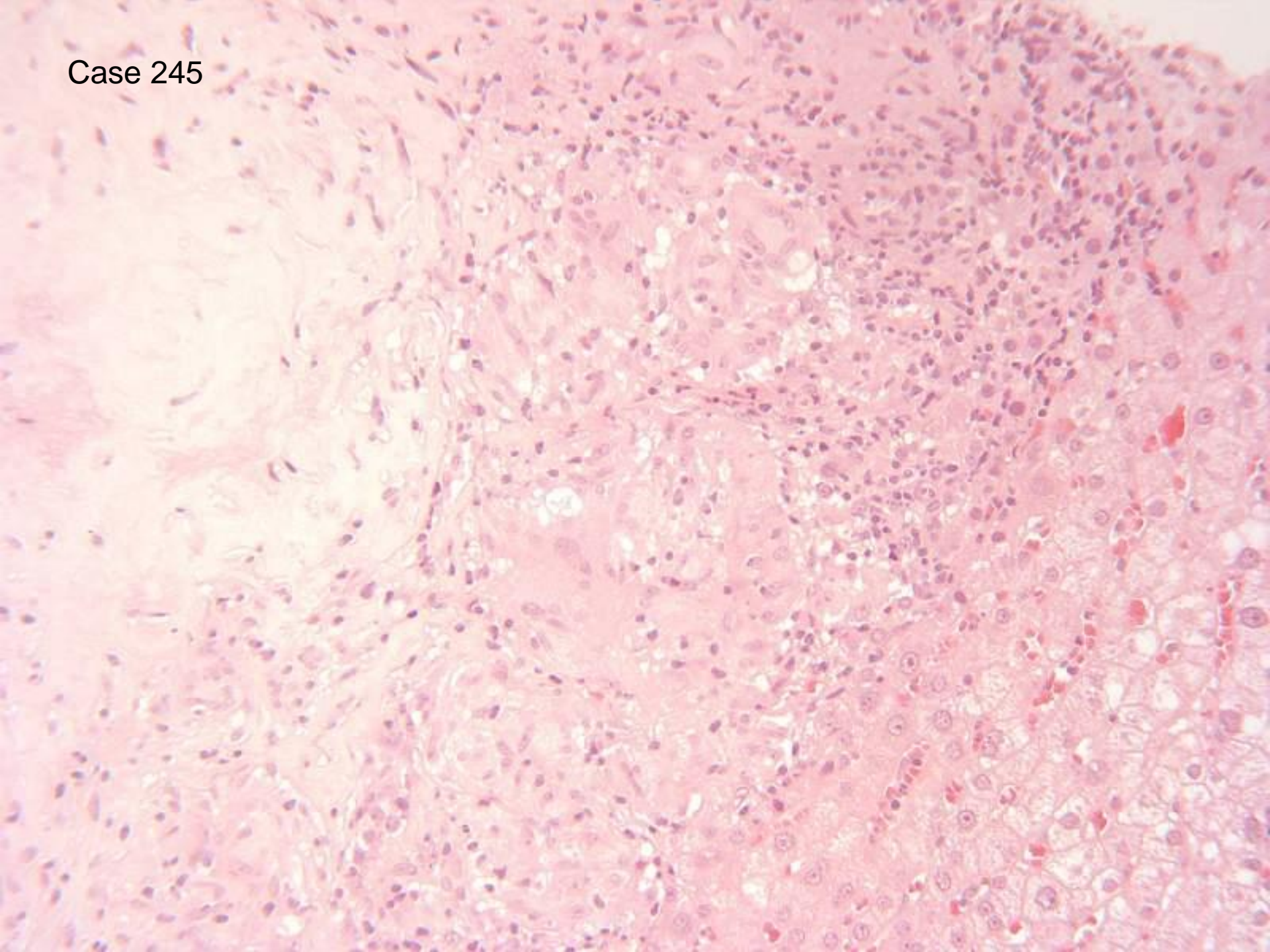
Case 245



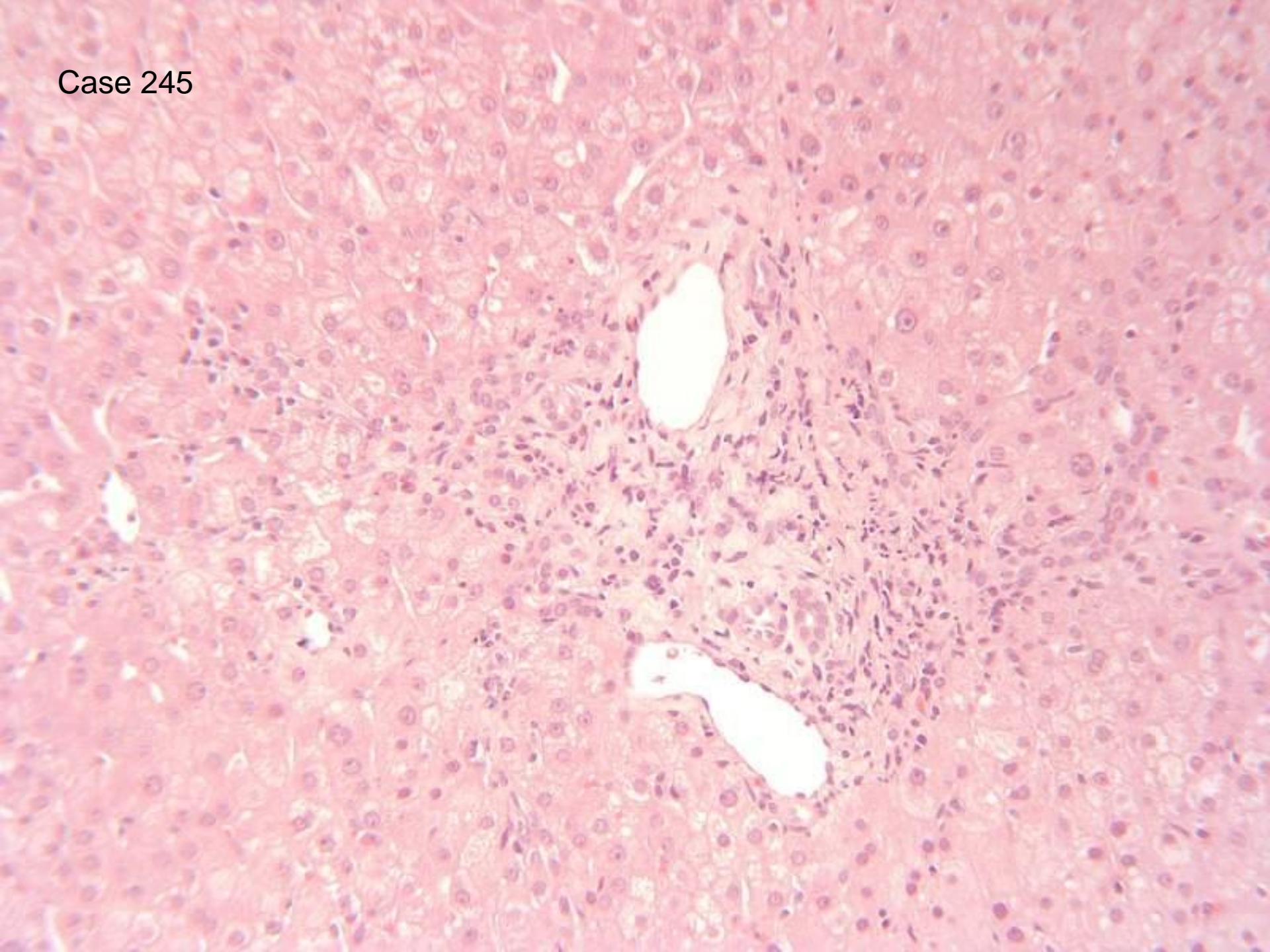
Case 245



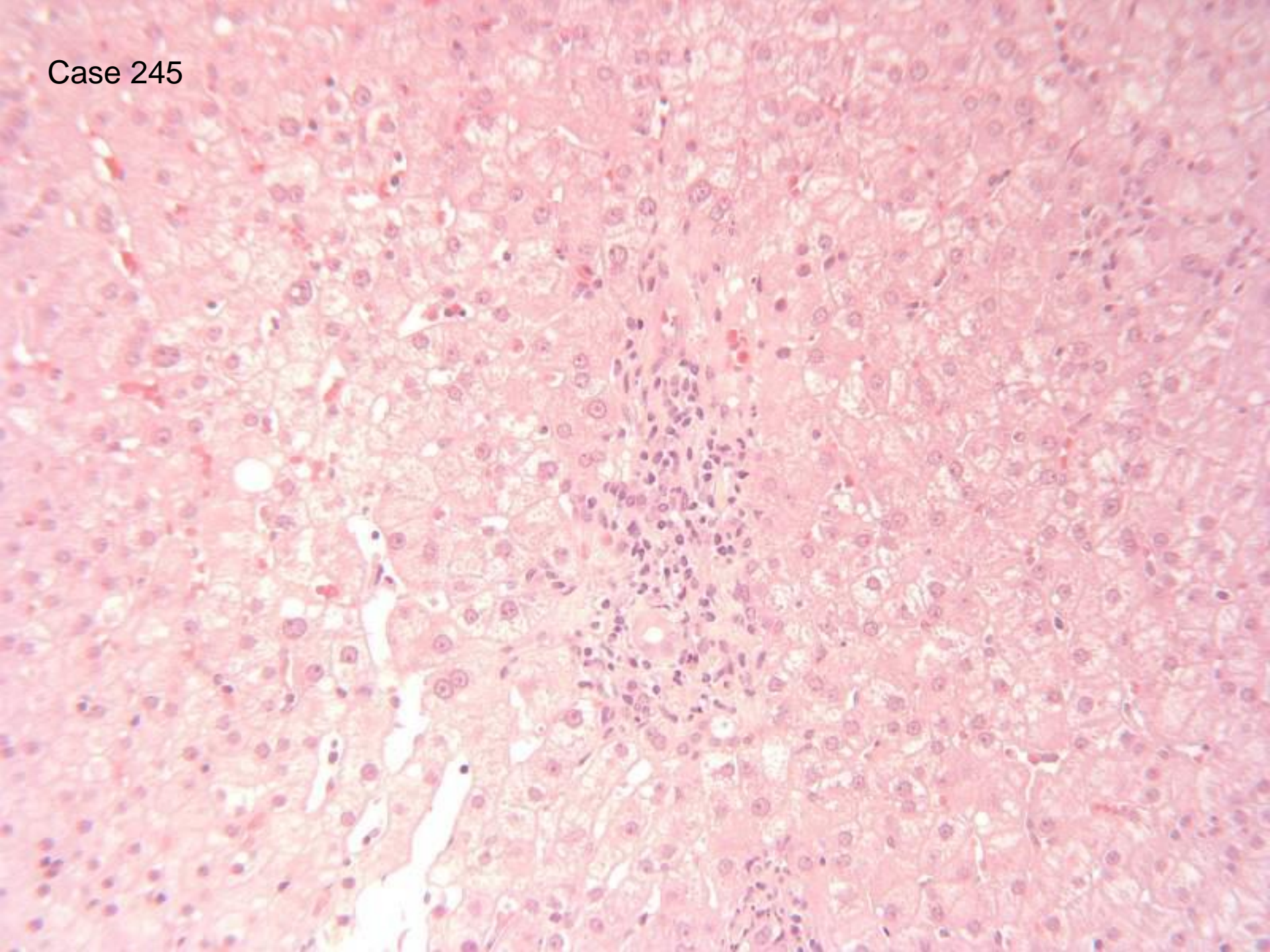
Case 245



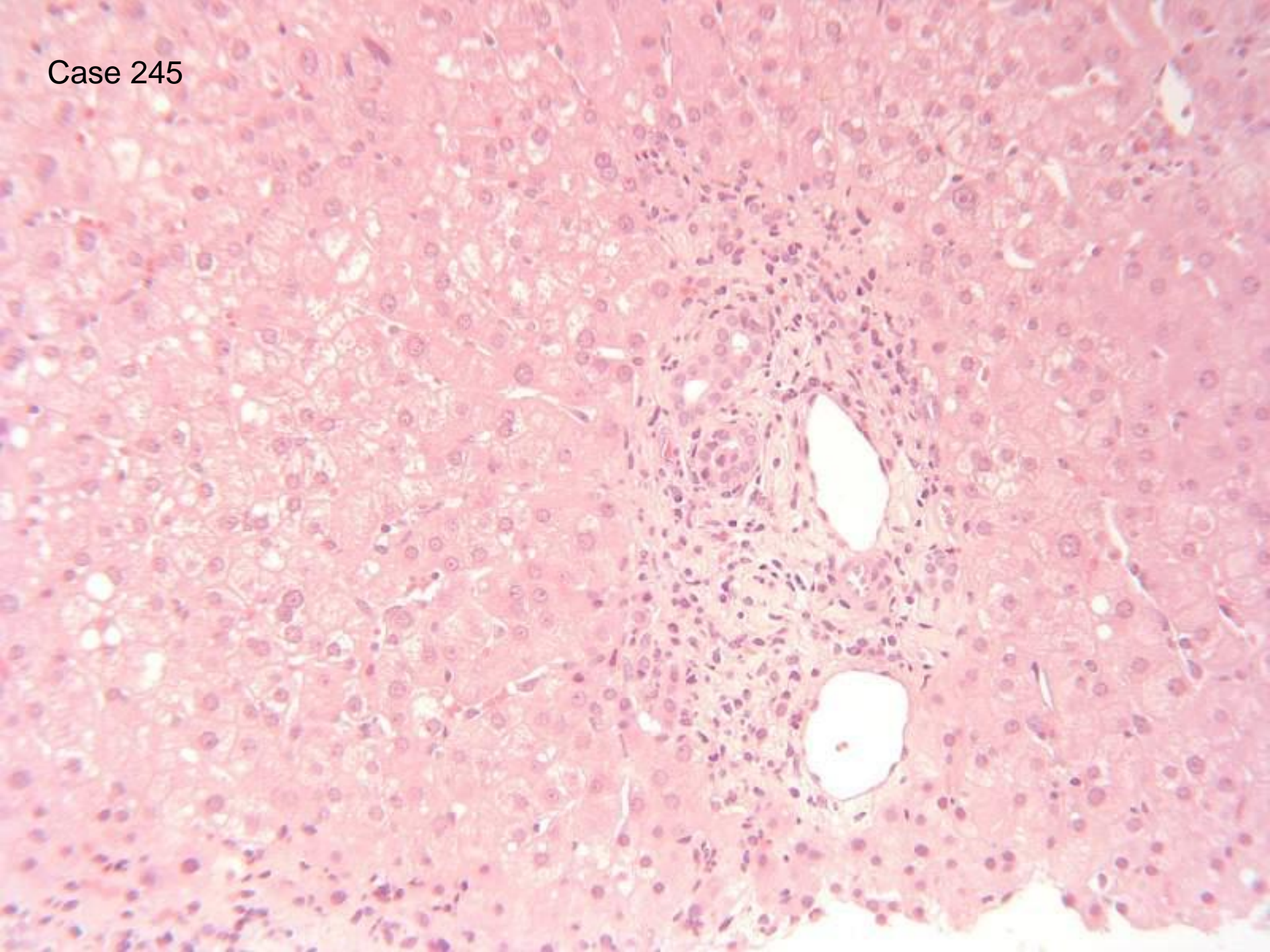
Case 245



Case 245



Case 245



Case 245

51 granulomas/granulomatous inflammation
3 granulomas not mentioned
2 slide missing

50 most likely sarcoidosis
3 sarcoidosis and/or SLE
1 sarcoidosis and AIH
1 sarcoidosis and AIH/SLE/PBC
1 sarcoidosis and veno-occlusive disease

exclude TB/request ZN 27

needs AMA 3

need copper-protein 4

comment that granulomas are a feature of SLE – several

Case 245

- *Scoring: Accept all diagnoses mentioning granulomas and sarcoidosis*
- Discussion: The auto-antibodies may be associated with the separate clinical diagnosis of SLE, but there is thought to be insufficient histological evidence to suggest a component of autoimmune hepatitis.

Case 245

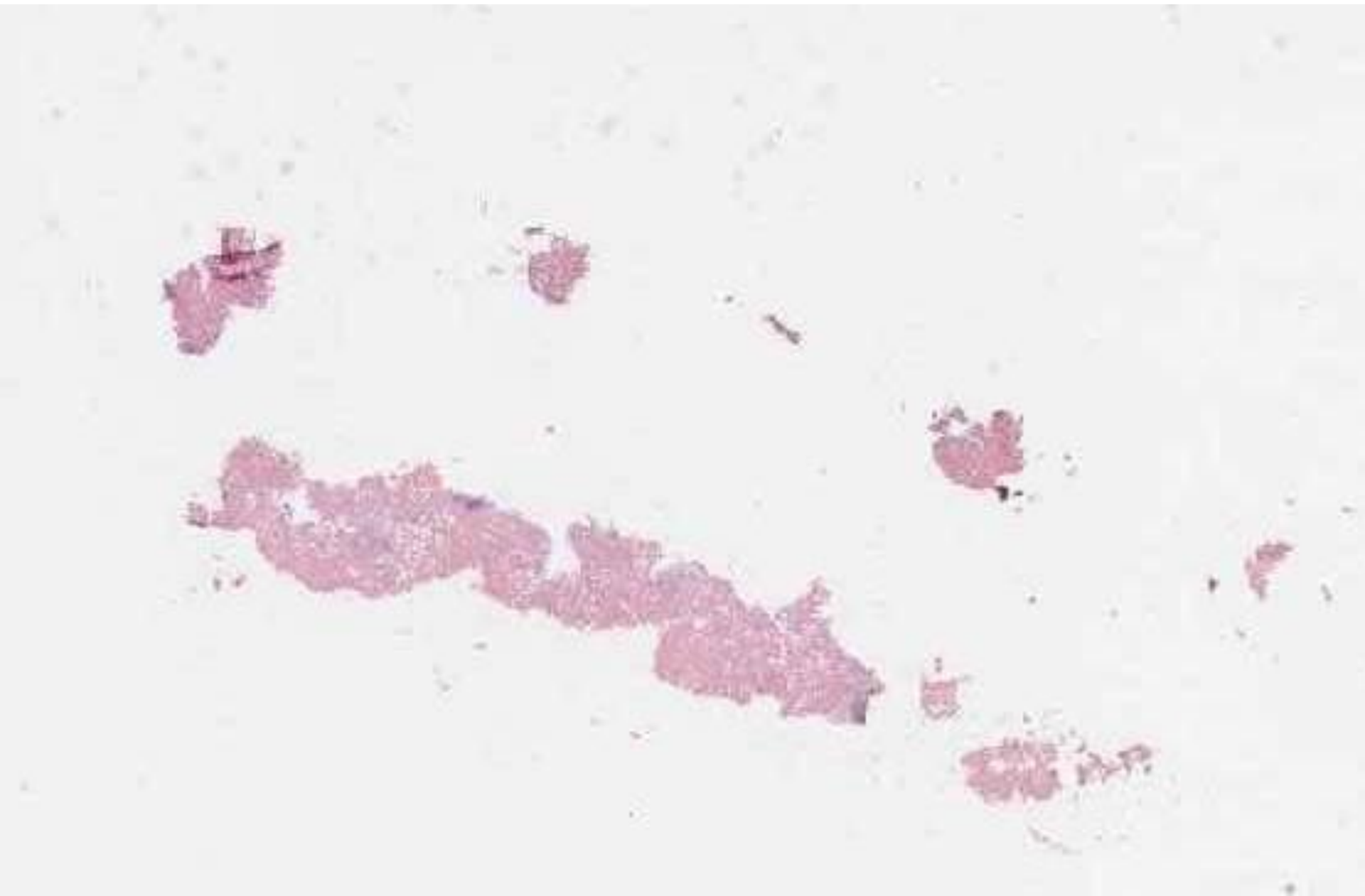
Follow up –

- Diagnosis: granulomatous hepatitis, most likely sarcoidosis
- Evidence for diagnosis of sarcoidosis:
- Clinical diagnosis sarcoidosis and SLE
- 1 year after this biopsy, developed granulomatous skin lesion, diagnosed as sarcoid
- AMA –ve
- LFTs currently normal apart from mildly raised GGT

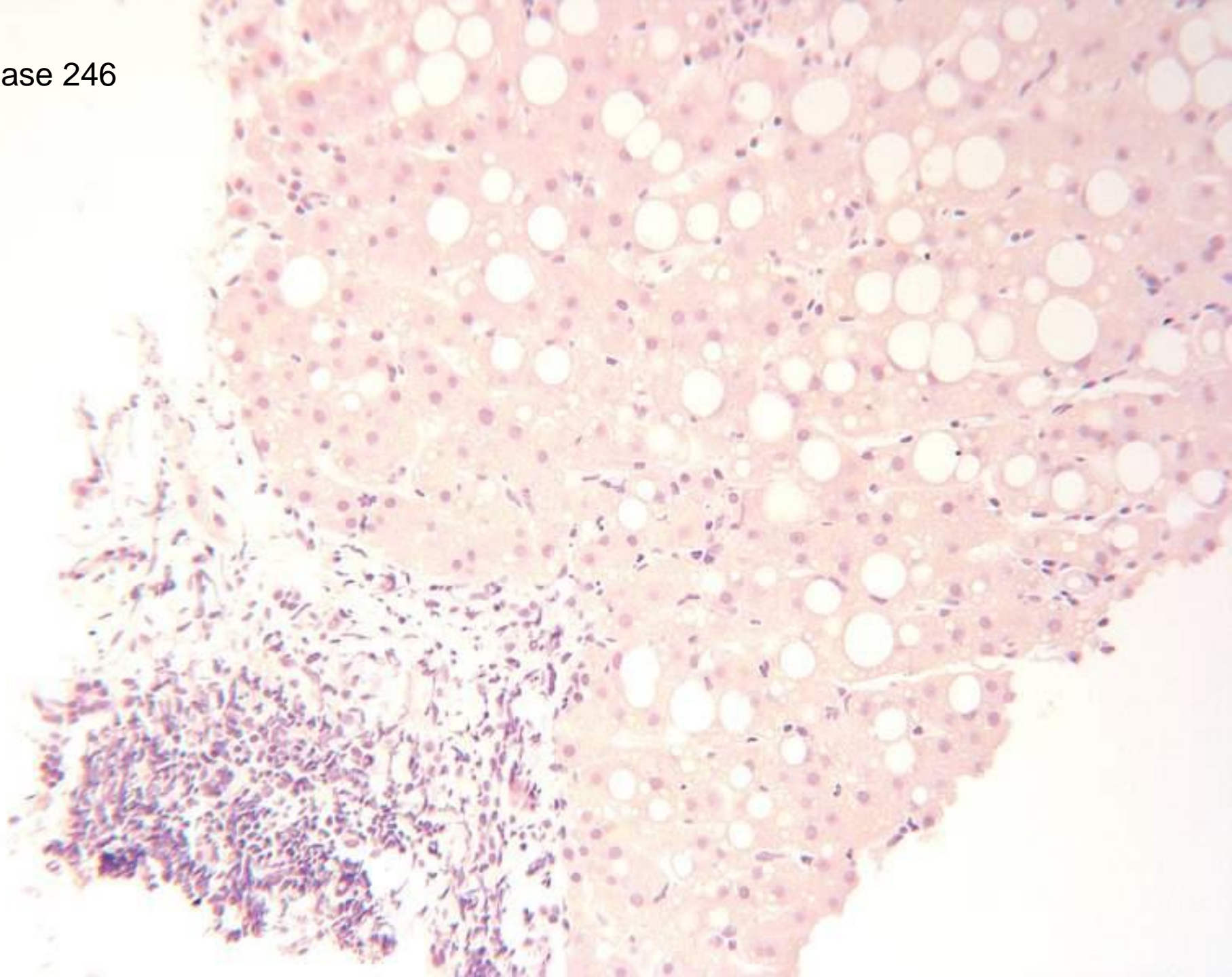
Case 246

- 55 M
- Hep C RNA positive genotype 1
- ? For treatment

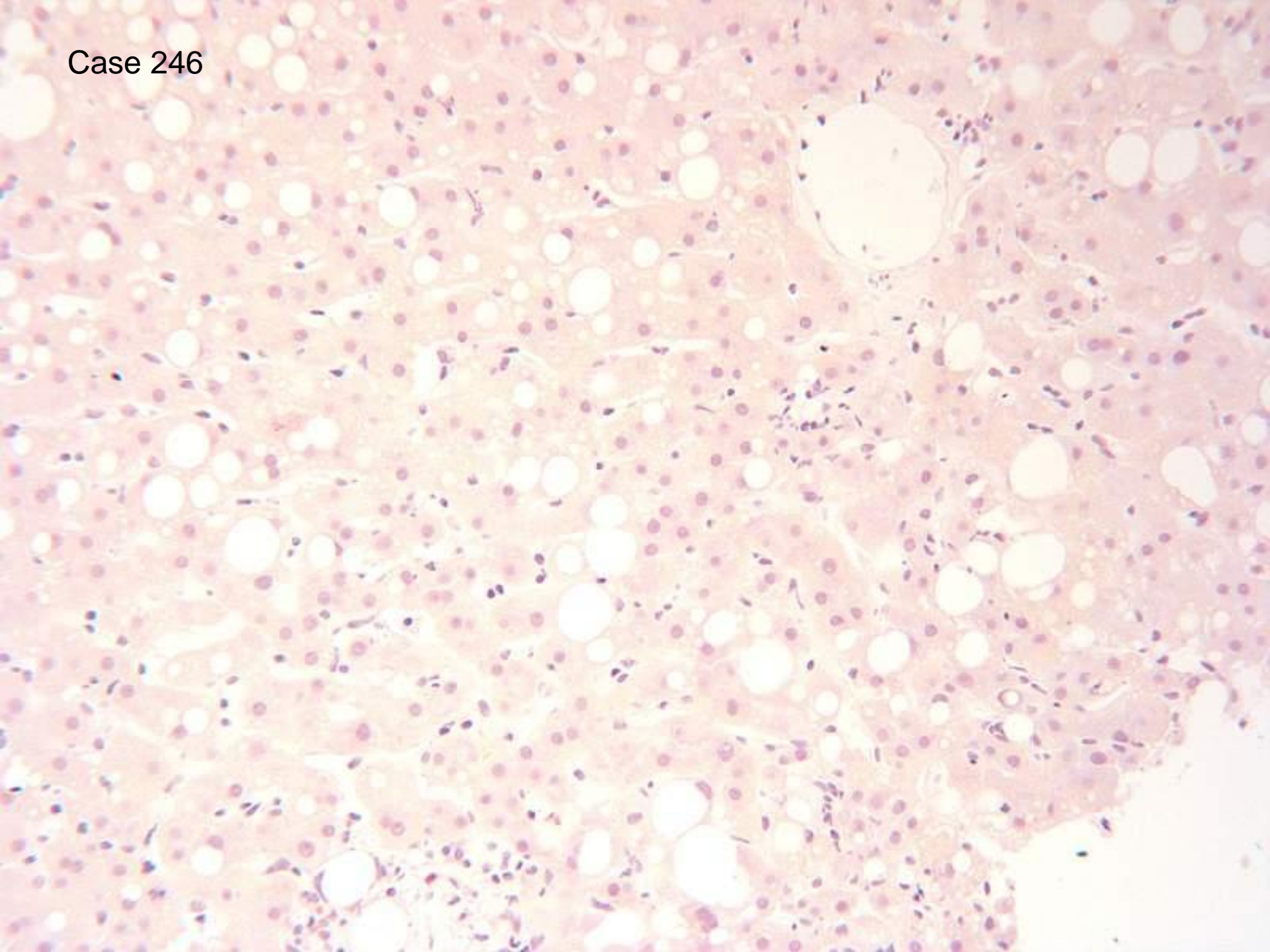
Case 246



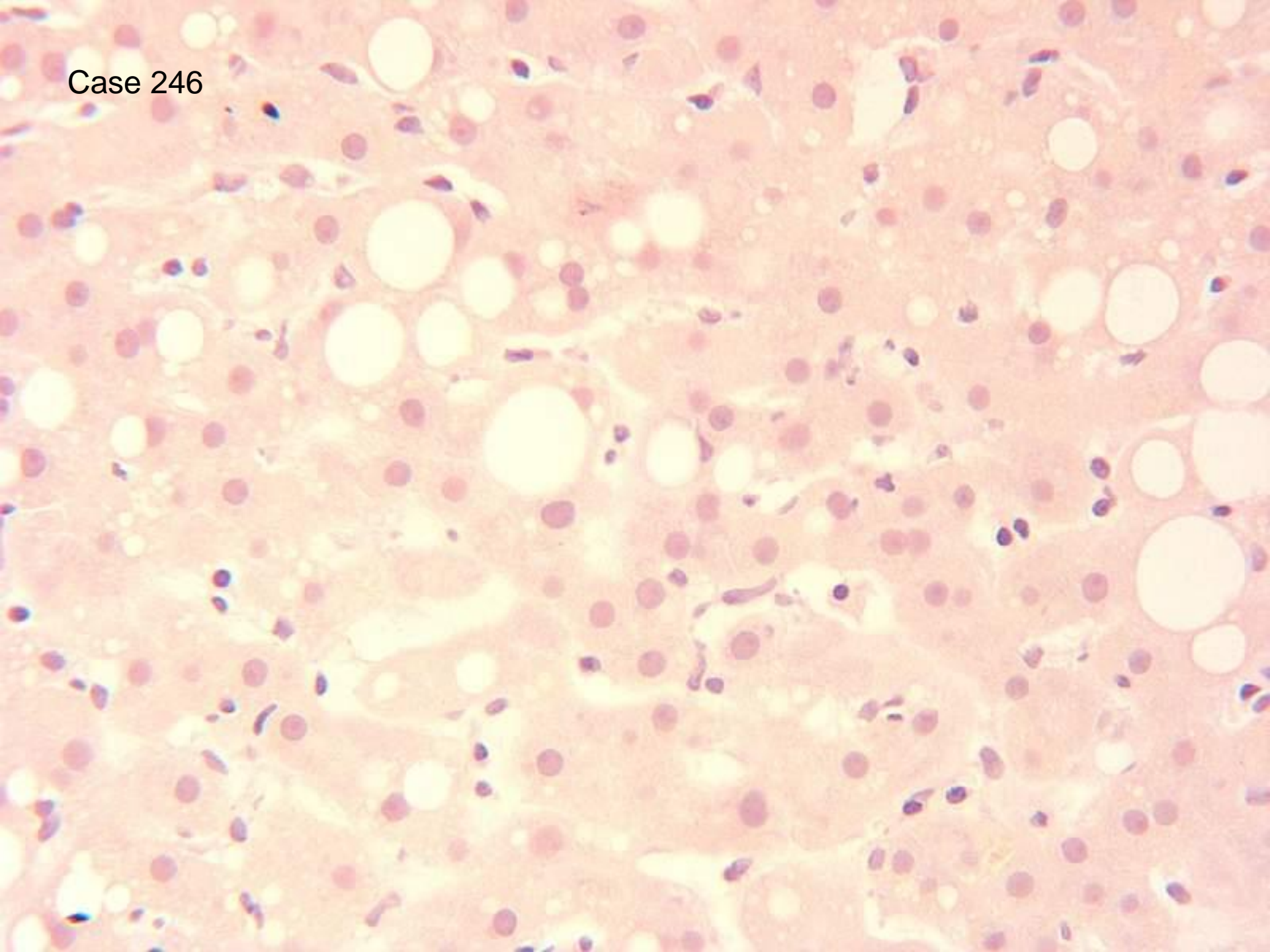
Case 246



Case 246



Case 246



Case 246

53 HCV

2 *hepatitis C not mentioned*

3 *steatohepatitis, lacking usual features of hepatitis C*

33 Also steatosis

3 Also steatohepatitis

Additional clinical cause for steatosis: 12

Histology would indicate treatment if clinically appropriate 13

Case 246 contd.

Severity:

No comment on grade or stage – 2

Mild chronic hepatitis 2

Moderate chronic hepatitis 1
inflammation

Rest – not possible to
assess fibrosis without
connective tissue stain

Text:inflammation		Ishak score - grade	
mild	5	5	5
Mild-moderate	2	6	12
Moderate	5	7	9
marked	2	8	2
		9	2
		10	1

Text - fibrosis		Ishak stage	
Mild	5	0	1
Mild-moderate	2	1	6
Bridging	5	2	12
Not marked	2	3	3

Case 246

Scoring: Reject answers that do not mention hepatitis C, or suggest the liver disease is other than due to hepatitis C; half marks if there is no comment on severity

Discussion: The table of degrees of severity included so that individual can place themselves amongst their peers. Some of the spread in severity may be due to the widely variable amount of tissue in the slides.

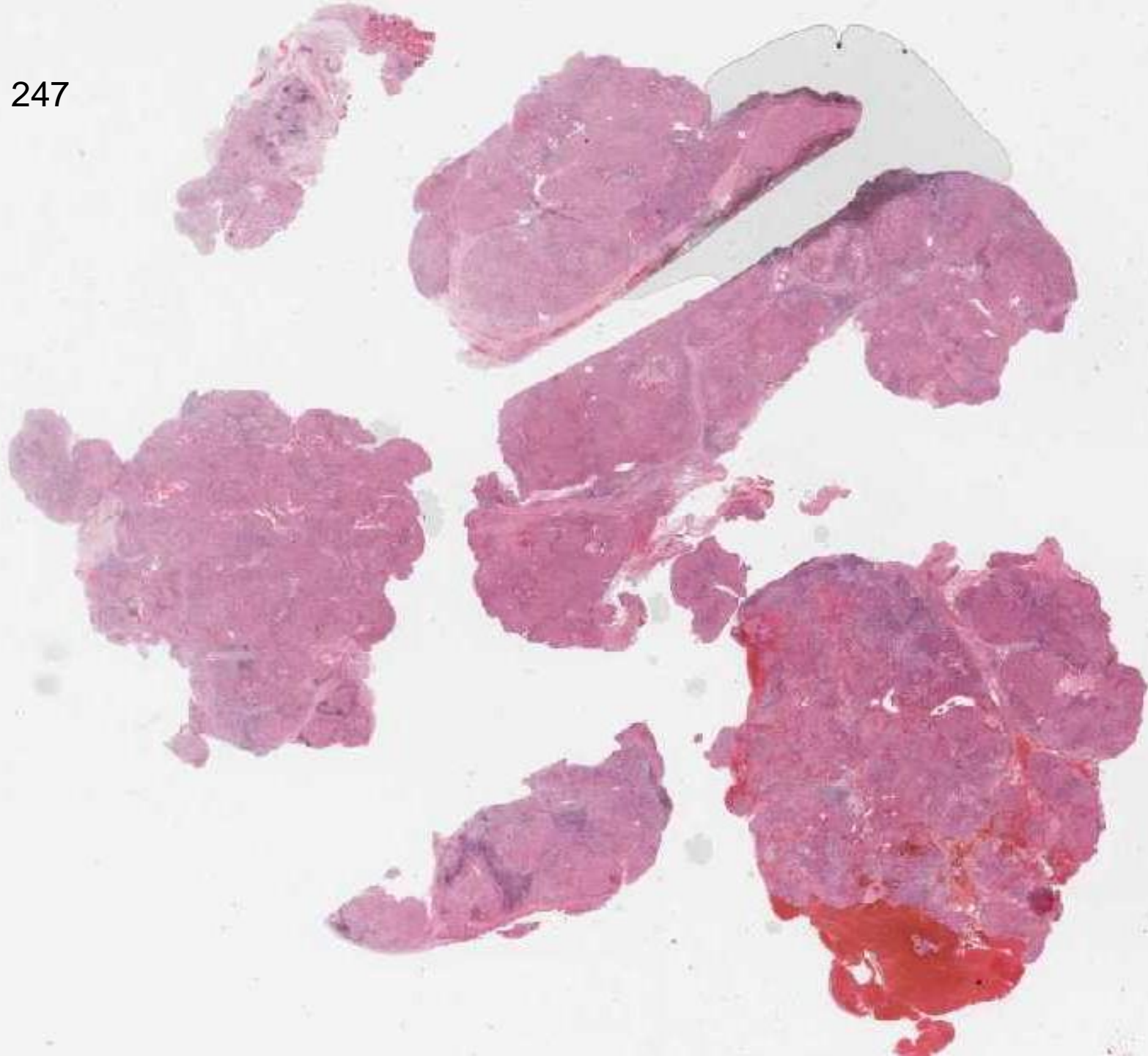
Case 246

- Follow up Dr Finlayson
- Ex-IVDU, was also drinking 2 bottles wine per day 4 months before biopsy, macrocytosis
- ALT 238
- USS coarse texture,
- HCV combination therapy started.

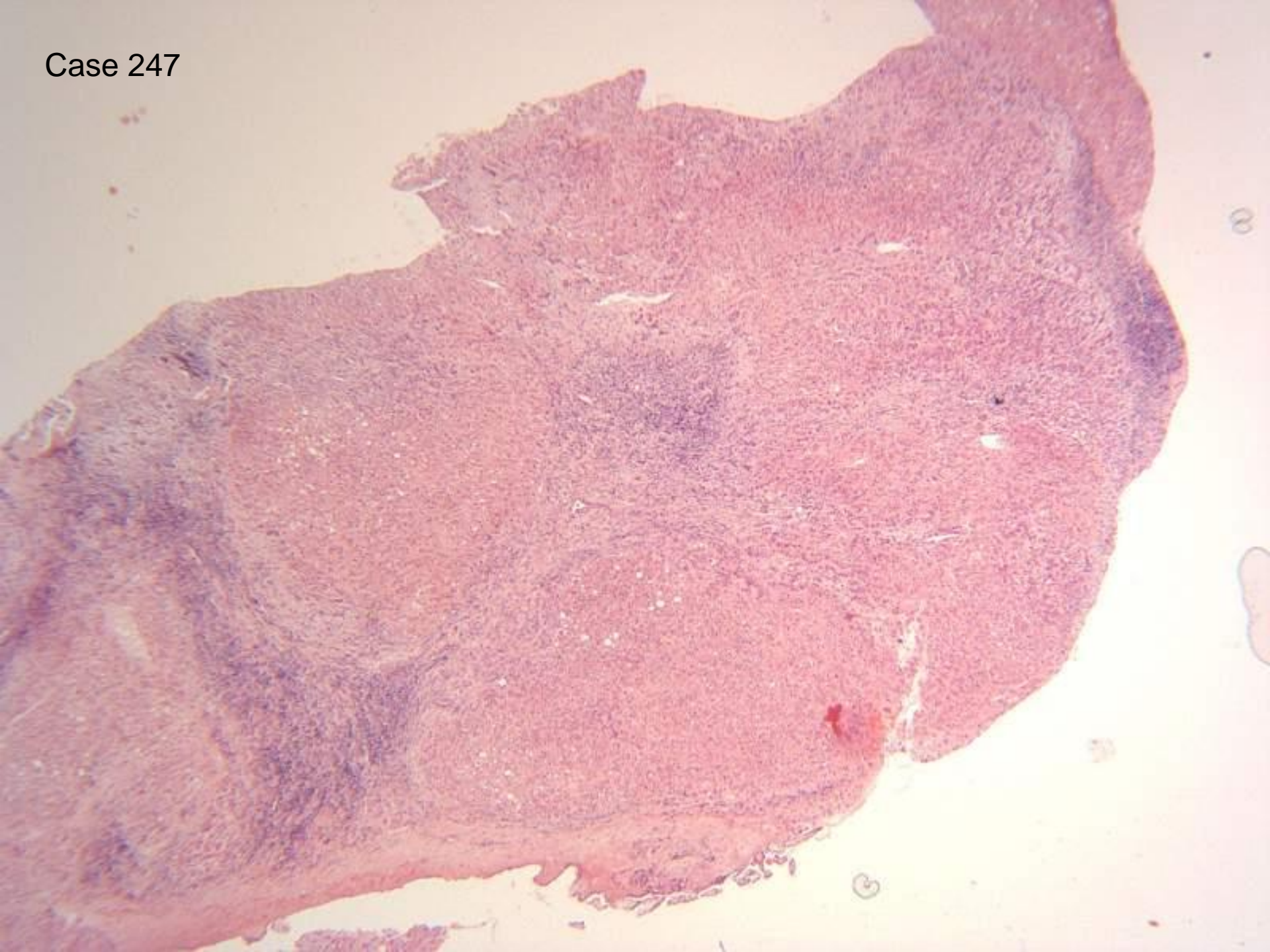
Case 247

- 40 M
- 6cm tumour in segment 8. probable focal nodular hyperplasia on imaging.
Incidental finding.
- Laparoscopic tumour resection
- Several pieces of granular brown tissue up to 1.5cm

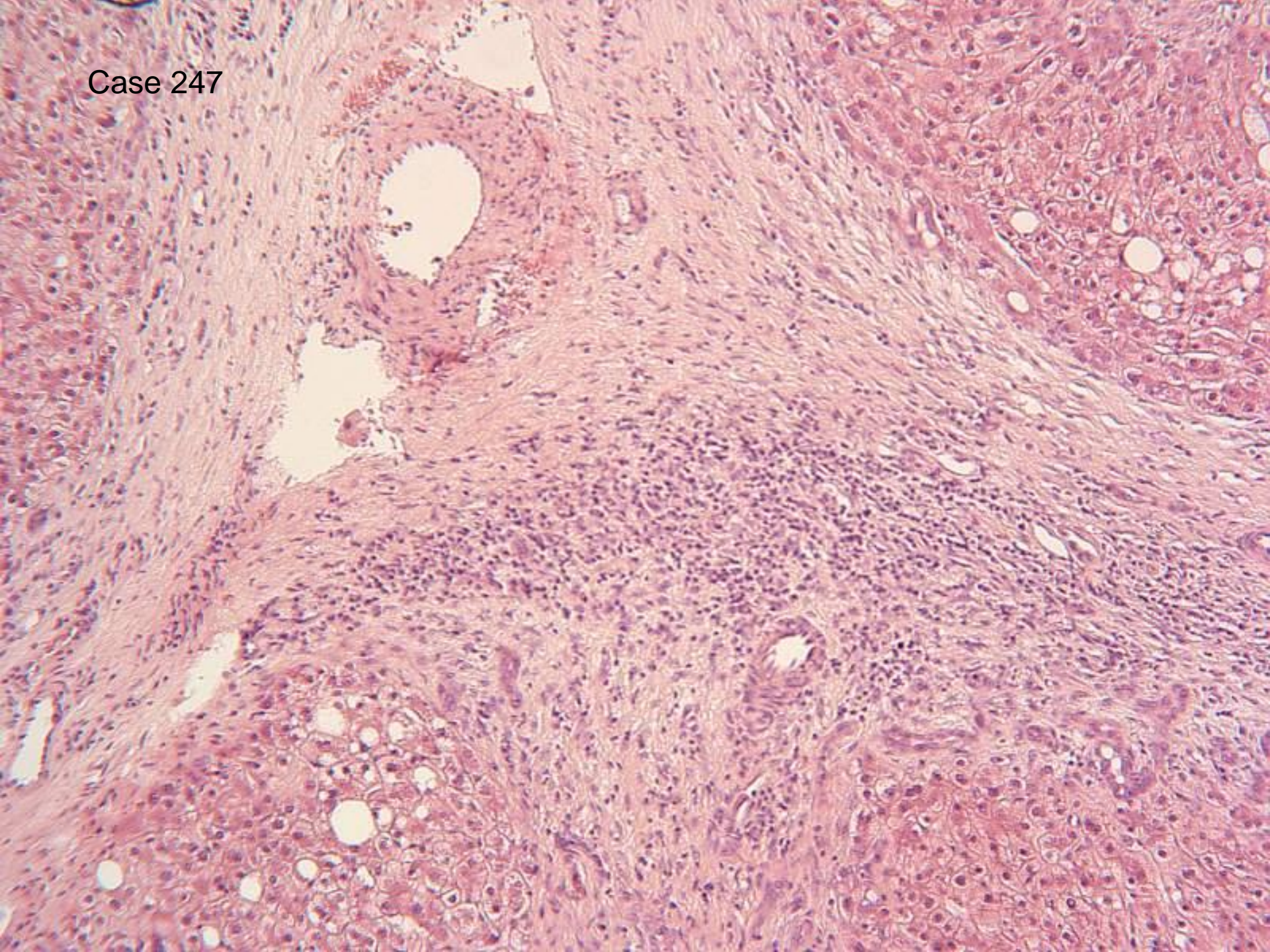
Case 247



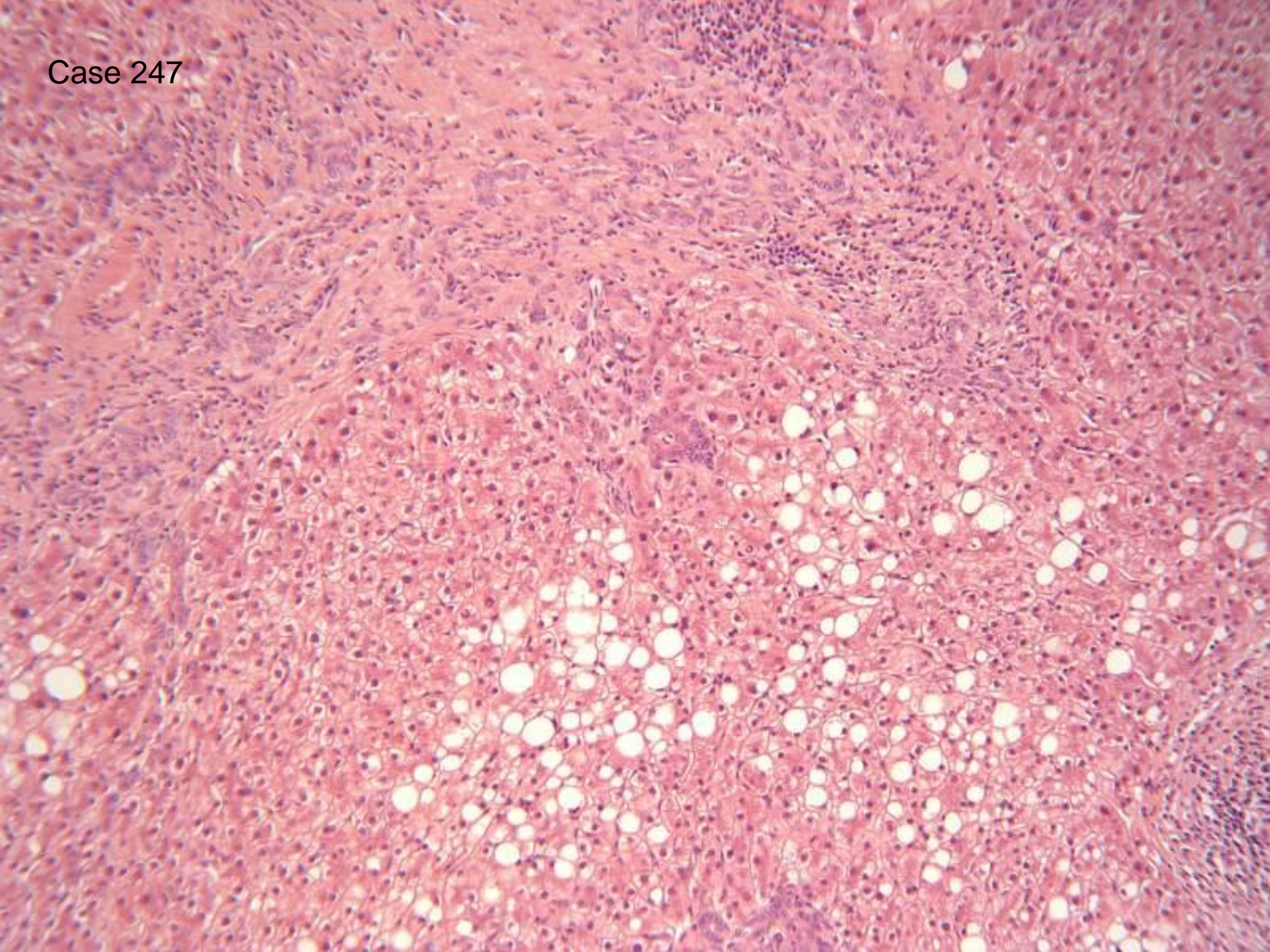
Case 247



Case 247



Case 247



Case 247

55 Focal nodular hyperplasia

2 ? telangiectatic FNH

1 ?cholangiocarcinoma

? state of background liver 7

Case 247

*Scoring: Accept all except
cholangiocarcinoma.*

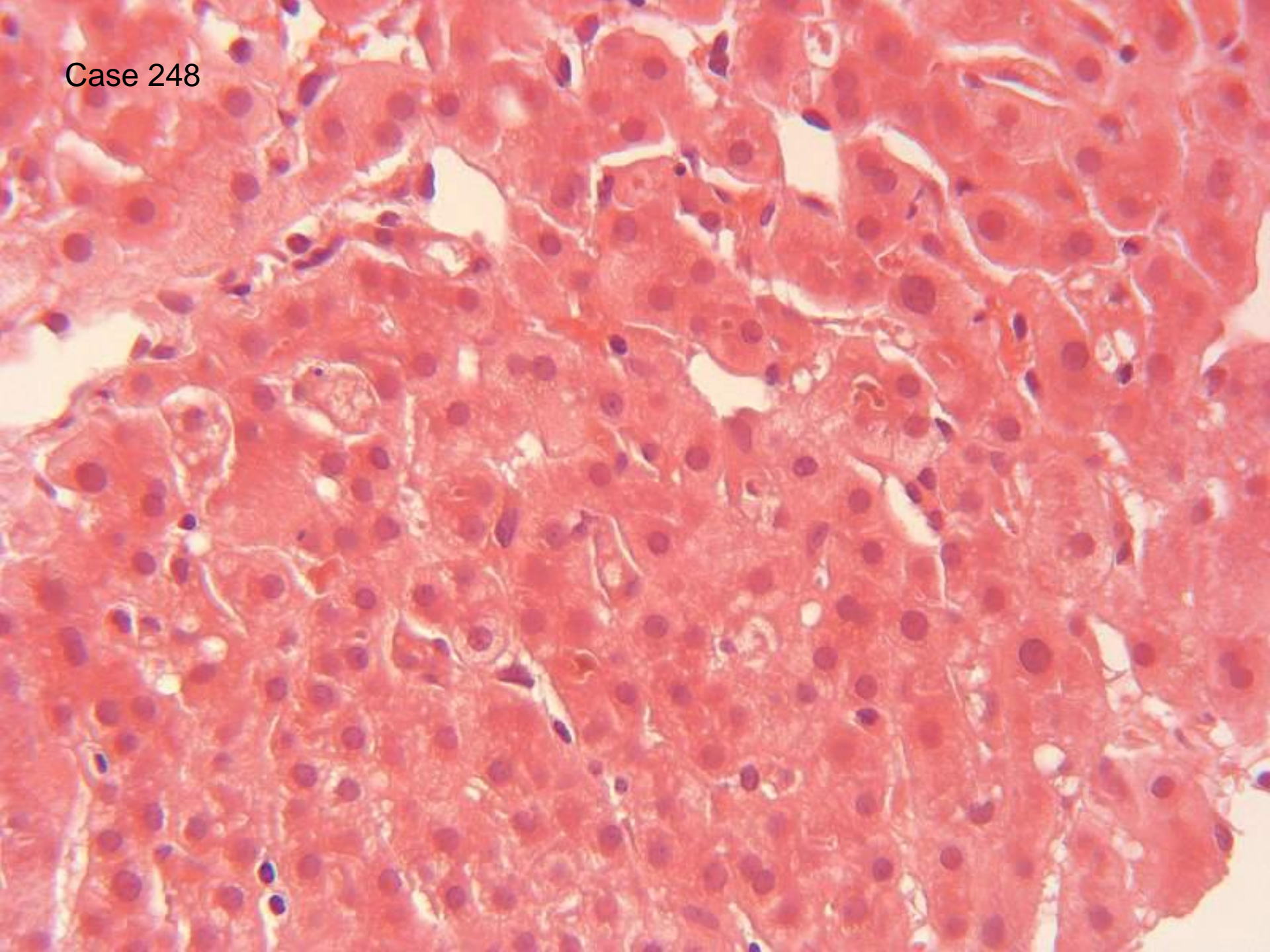
Case 248

- 77 M
- Jaundice. Special stains are negative for HBsAg, alpha 12 antitrypsin, copper, copper associated protein and haemosiderin.
- Core of brown tissue, 17x1mm

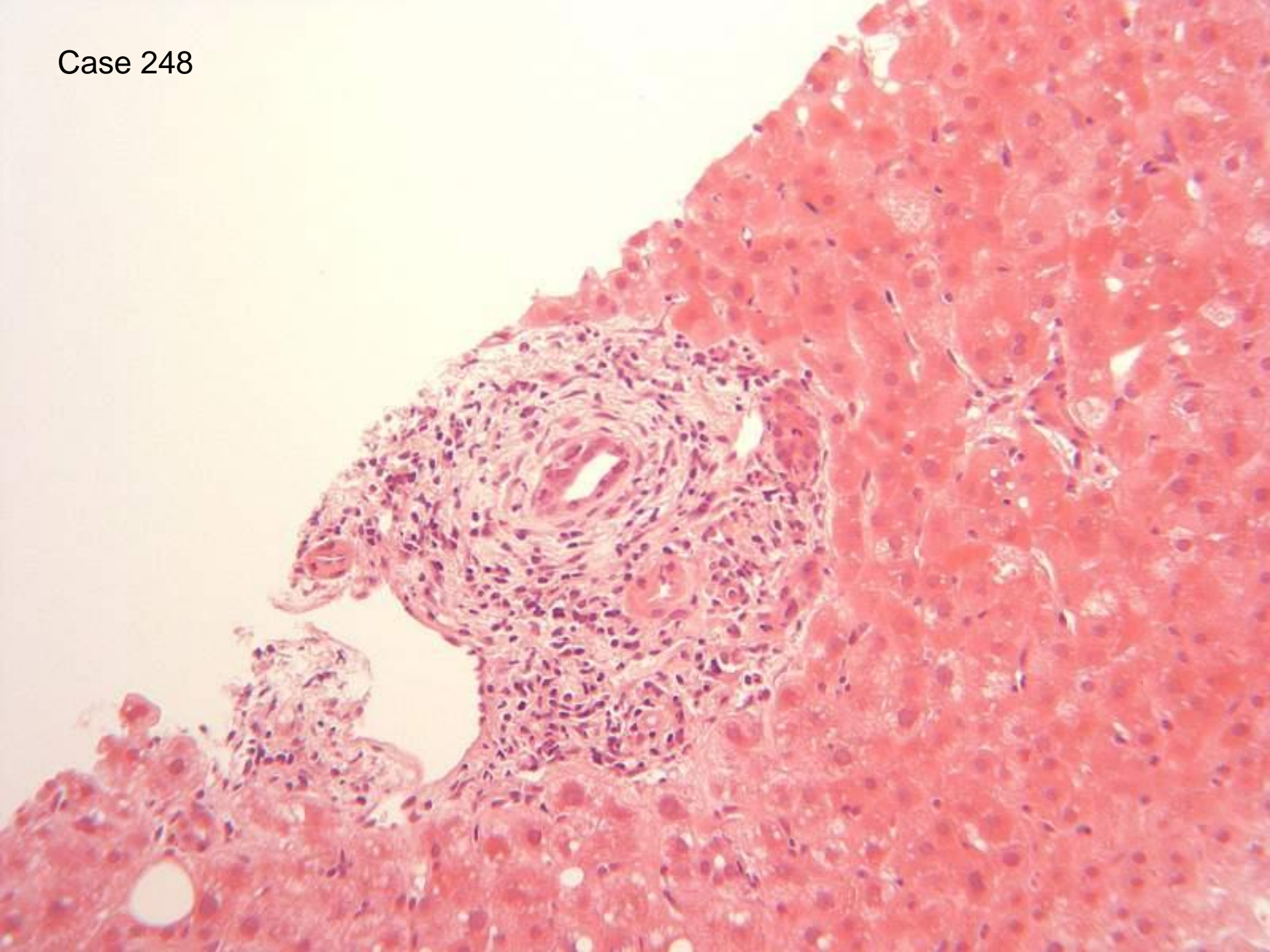
Case 248



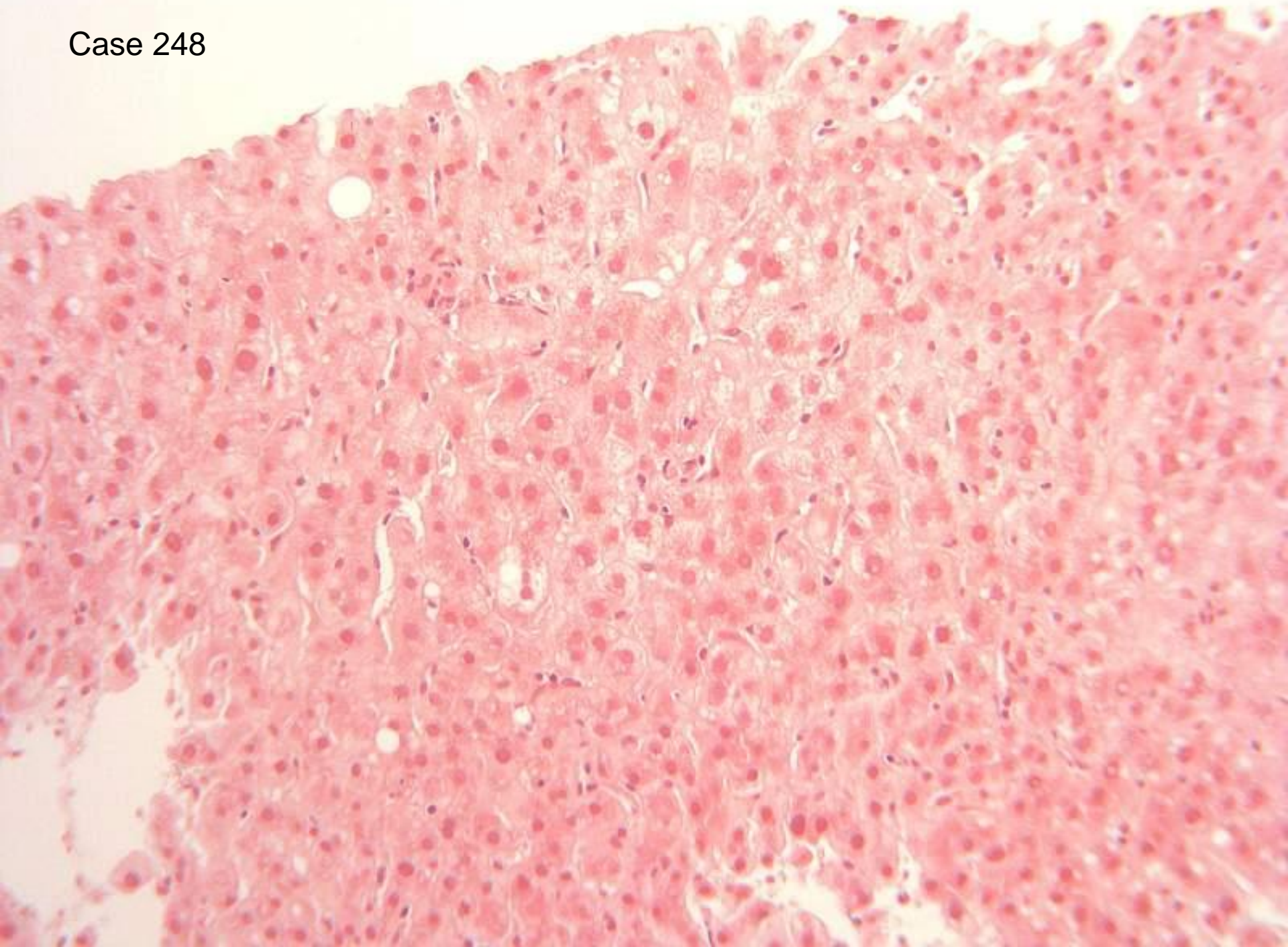
Case 248



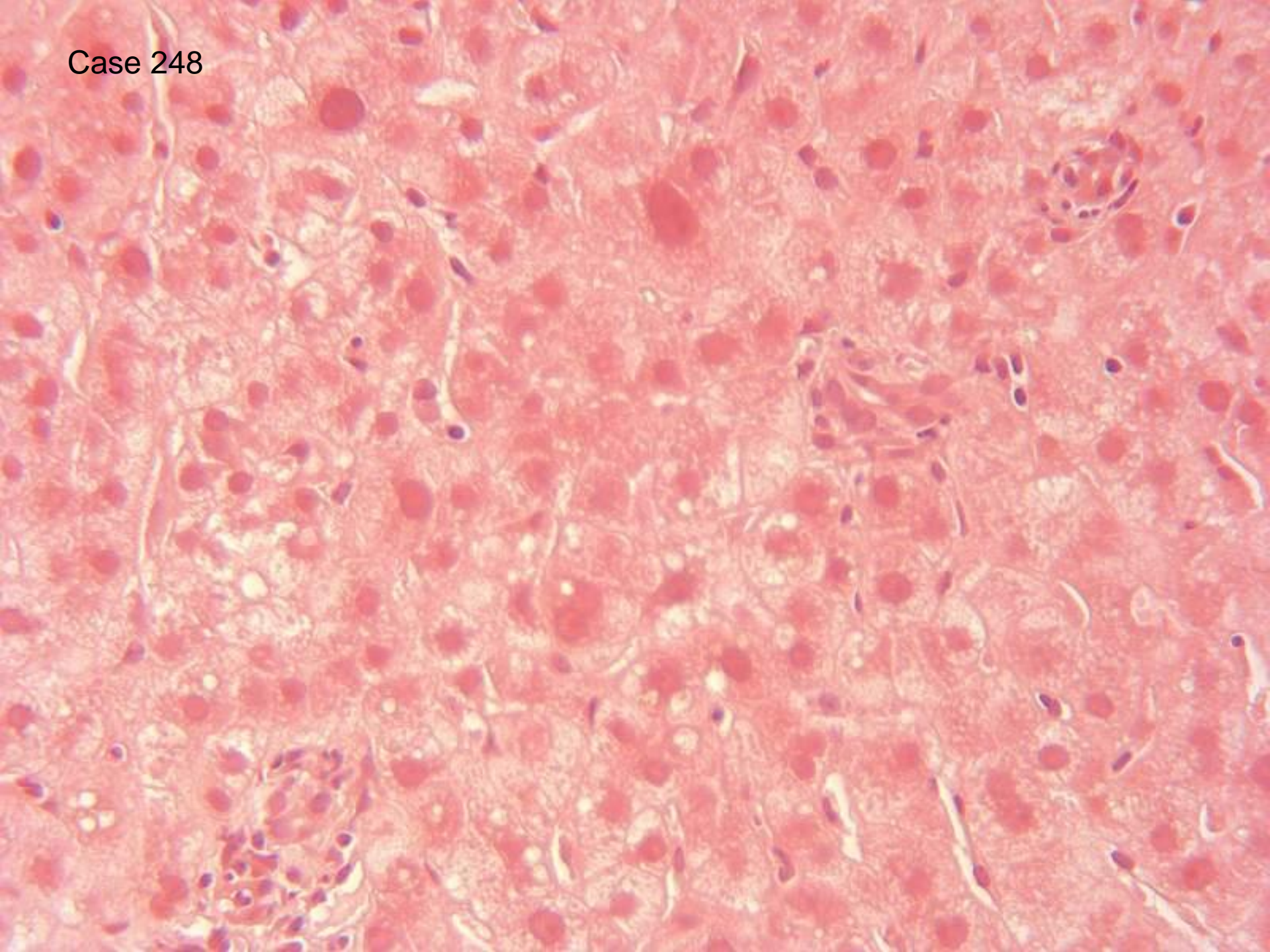
Case 248



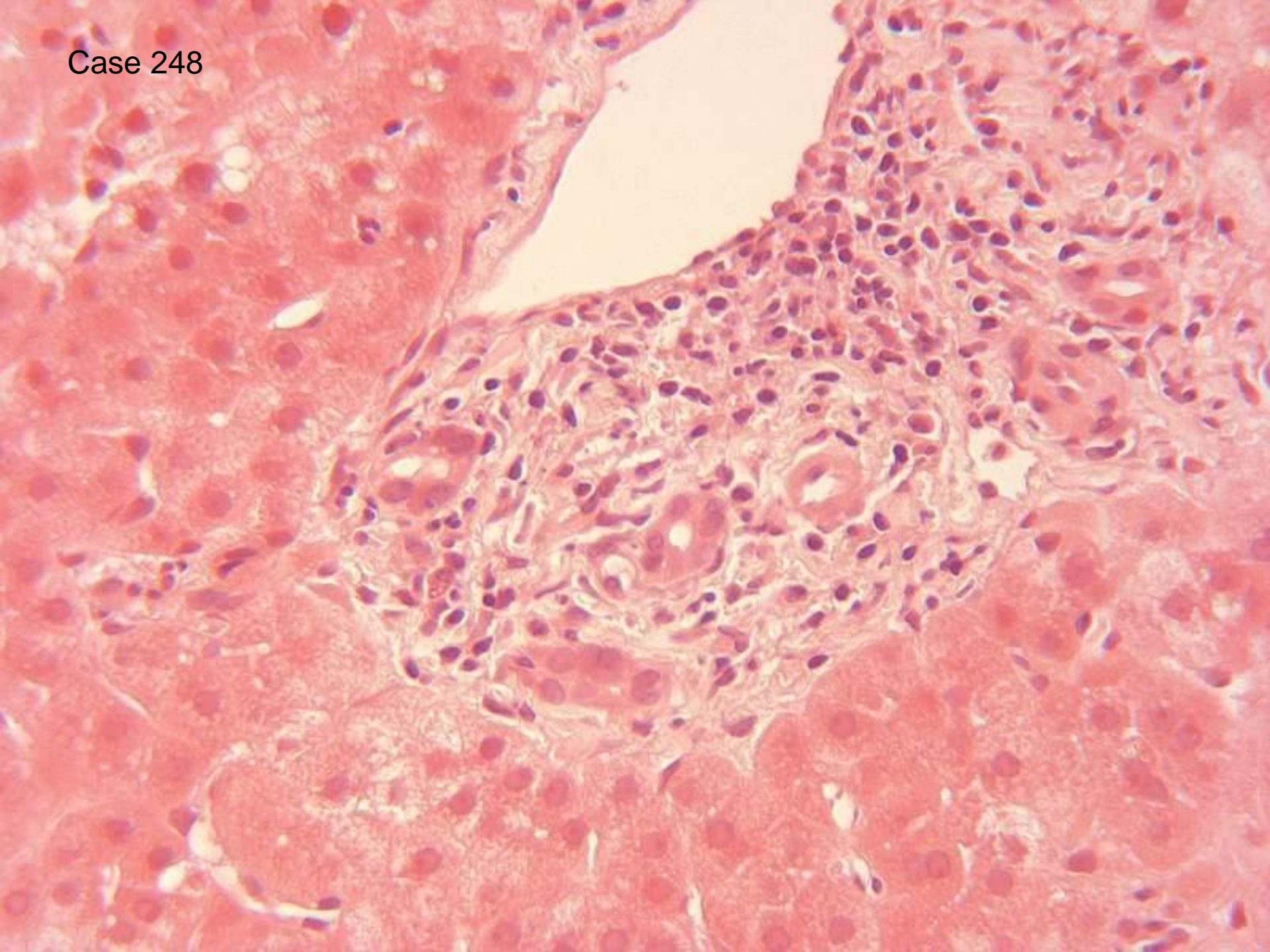
Case 248



Case 248



Case 248



Case 248

Morphology/only diagnosis:

- 33 Cholestasis \pm inflammation/ cholestatic hepatitis
- 4 cholestasis and cholangiolitis
- 11 PSC
- 4 large duct obstruction
- 1 PSC or large duct obstruction
- 1 chronic hepatitis with biliary features
- 2 no mention of cholestasis or biliary disease anywhere in answer

As main/most likely/only cause:

- 20 ?Drug reaction
- 10 ?PSC
- 4 ?large duct obstruction
- 1 ?ascending cholangitis

differential diagnosis including:

- 13 drugs
- 12 PSC
- 1 PBC
- 4 large duct obstruction

comments:

autoantibodies 6

ERCP 16

Several mentioned periductal fibrosis

No copper associated protein

therefore not PSC/PBC 2

Case 248

Scoring: Insufficient consensus for scoring.

Discussion: This was a cholestatic liver biopsy in which the changes appeared recent, and suggested of drugs.

Because of periductal fibrosis in one portal tract, several responses were PSC with no qualification. In practice, in view of the absence of any fibrosis, ductopaenia, or copper associated protein, this case lacks sufficient histological features to allow an unqualified diagnosis of PSC. Canalicular cholestasis would also be unusual in early stage PSC.

Case 248

Follow up –

- Diabetic, treated for foot ulcer with penicillin, then admitted with painless jaundice.
- US and CT negative.
- Fibrosis surrounding duct, so booked for MRCP. Autoantibodies and viral serology negative
- responded to prednisolone but developed perforated DU, surgically treated but died. No PM.
- Conclusion: painless jaundice most likely drug related.

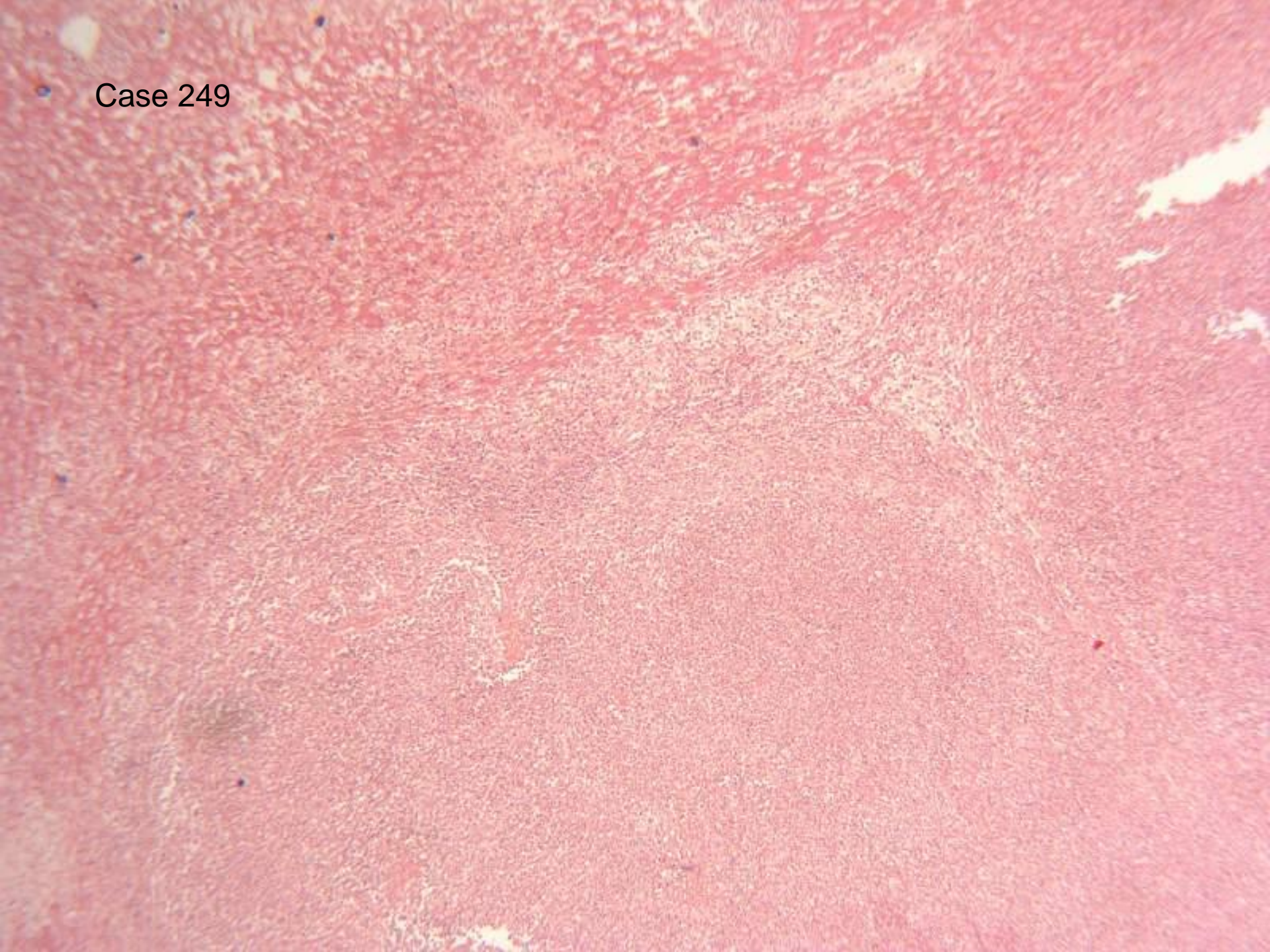
Case 249

- 37 F
- Liver biopsy – presented with non-specific illness/malaise. US – multiple lesions in liver, ?hydatid cysts, ?mets.
Also has lesions in spleen
- Wedge biopsy – piece of tissue measuring 2.5x1x1cm. The cut surface shows irregular white foci.

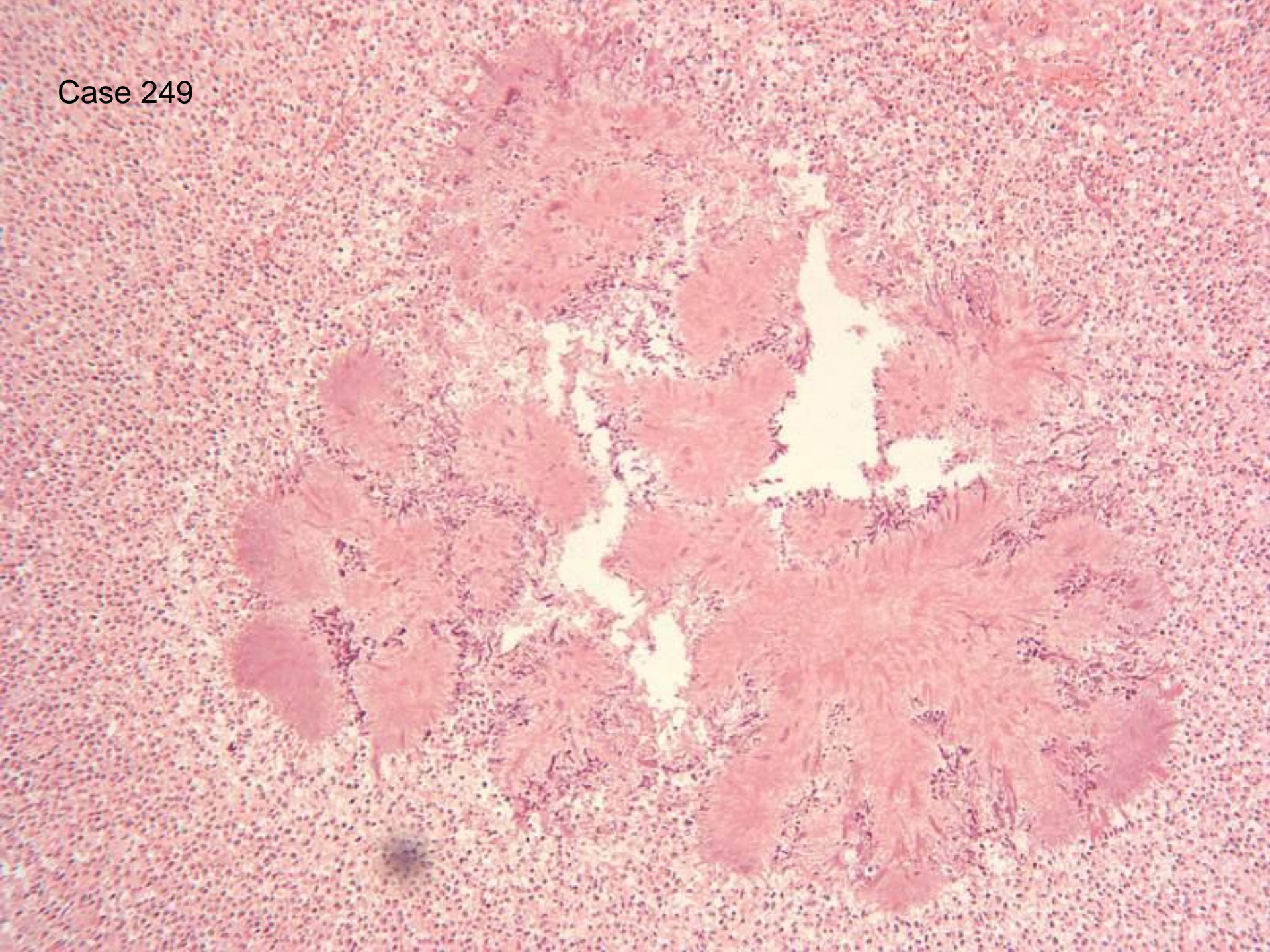
Cased 249



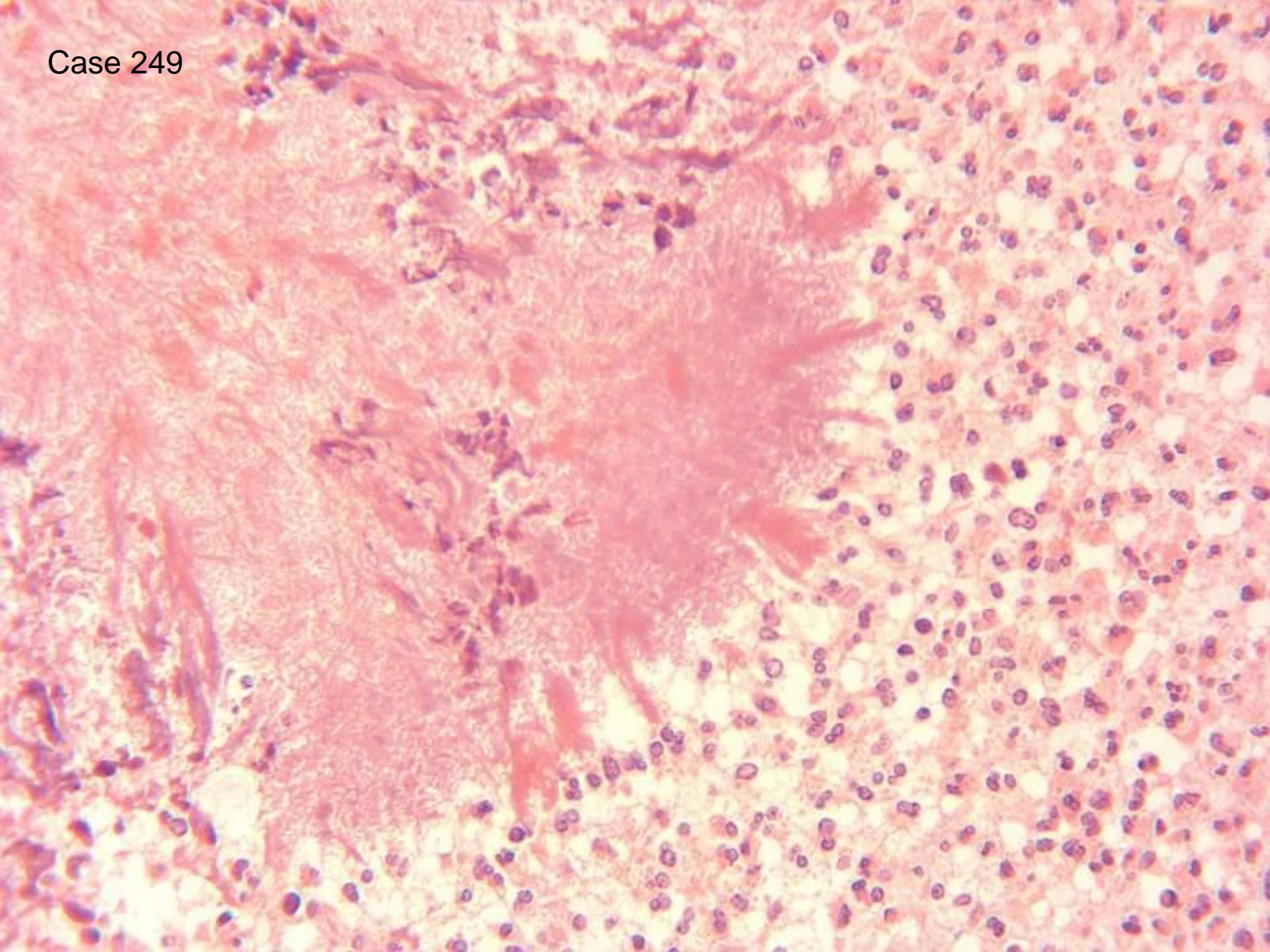
Case 249



Case 249



Case 249



Case 249

- 49 abscess with actinomycosis
- 2 *abscess with aspergillus*
- 1 *hydatid (saw hooklets)*
- 4 *abscess with no organisms mentioned*
- 1 *abscess with possible bacterial colonies*

Comments:

? primary source of infection 7

?immunocompromised 8

? IUCD 7

Case 249

Scoring: reject responses that do not include actinomycolosis

Discussion: Sufficiently characteristic for diagnosis of actinomycolosis, although in real life would require confirmation by Gram and Grocott stains. The importance of mentioning actinomycolosis was underlined by experience of a different case where this had been overlooked in original biopsy, resulting in multiple resections for unrecognized disseminated disease.

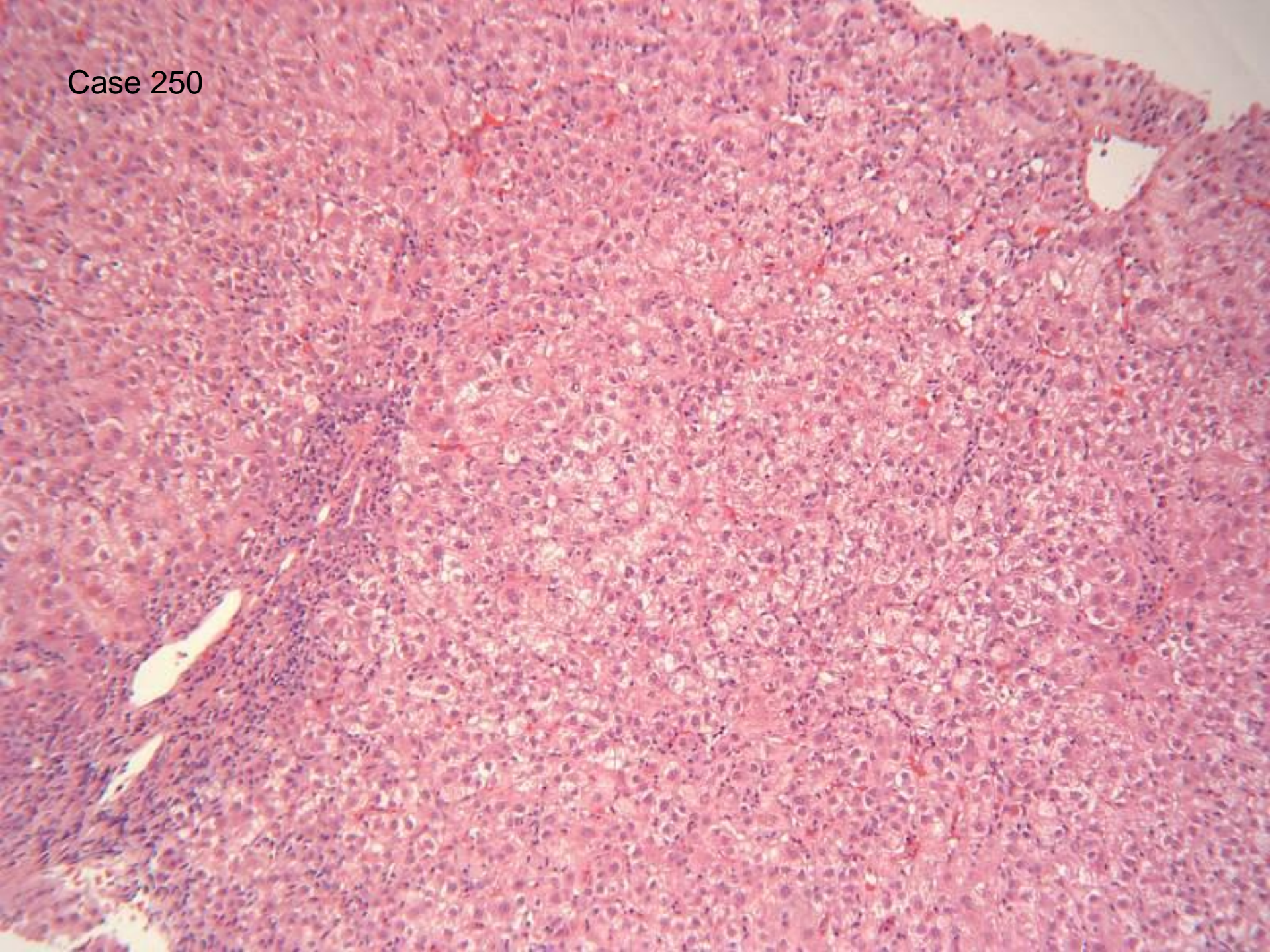
Case 250

- 58M
- Patient with ulcerative colitis on mesalazine (long term).
- Recent history of jaundice, AAT 1212; alk phos 230; total bilirubin 29;
- anti-smooth muscle antibody +++; antinuclear antibody 1:640; ferritin>2000; viral screen negative,
- no alcohol,
- no increase in collagen on connective tissue stains.

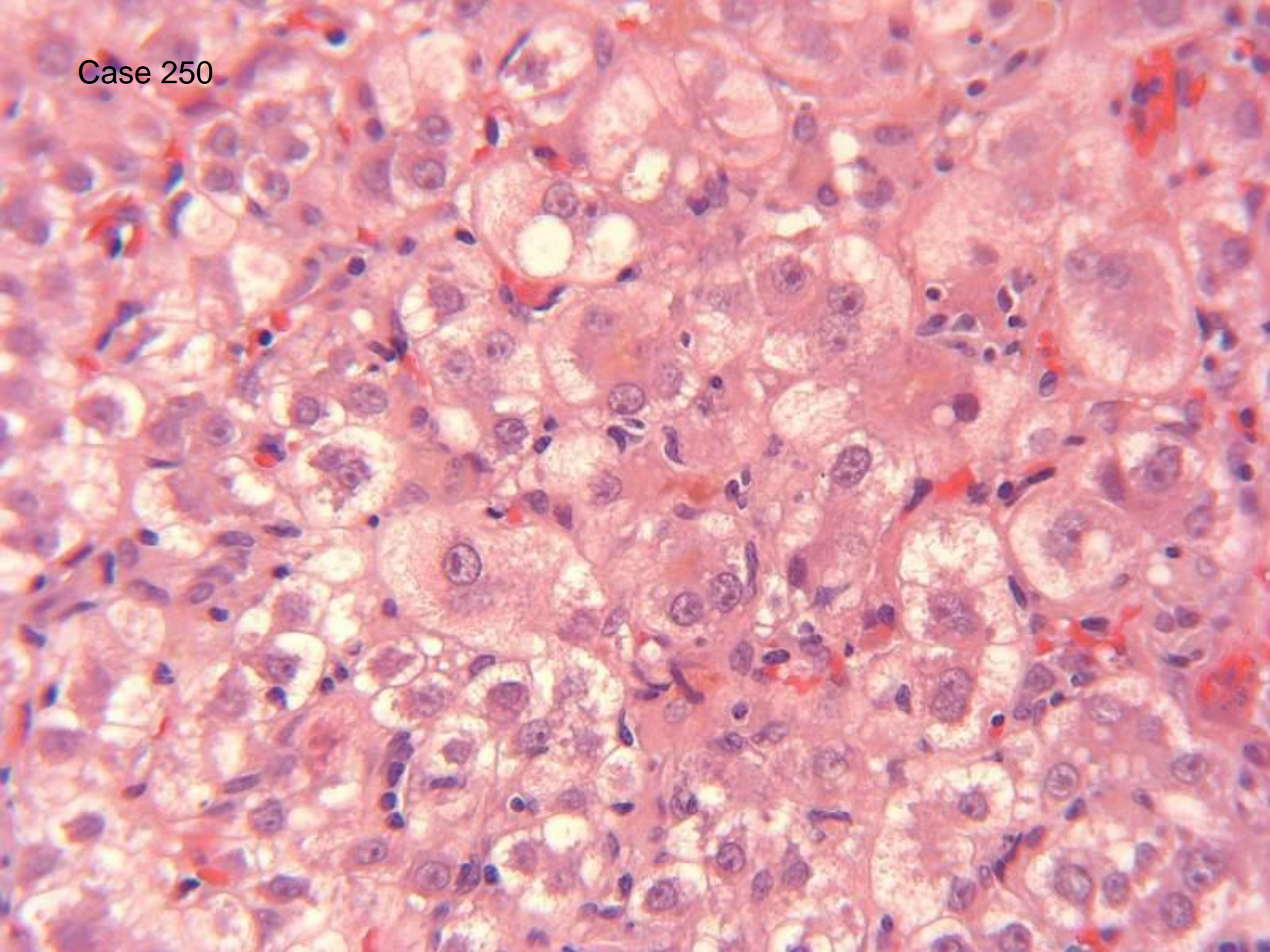
Case 250



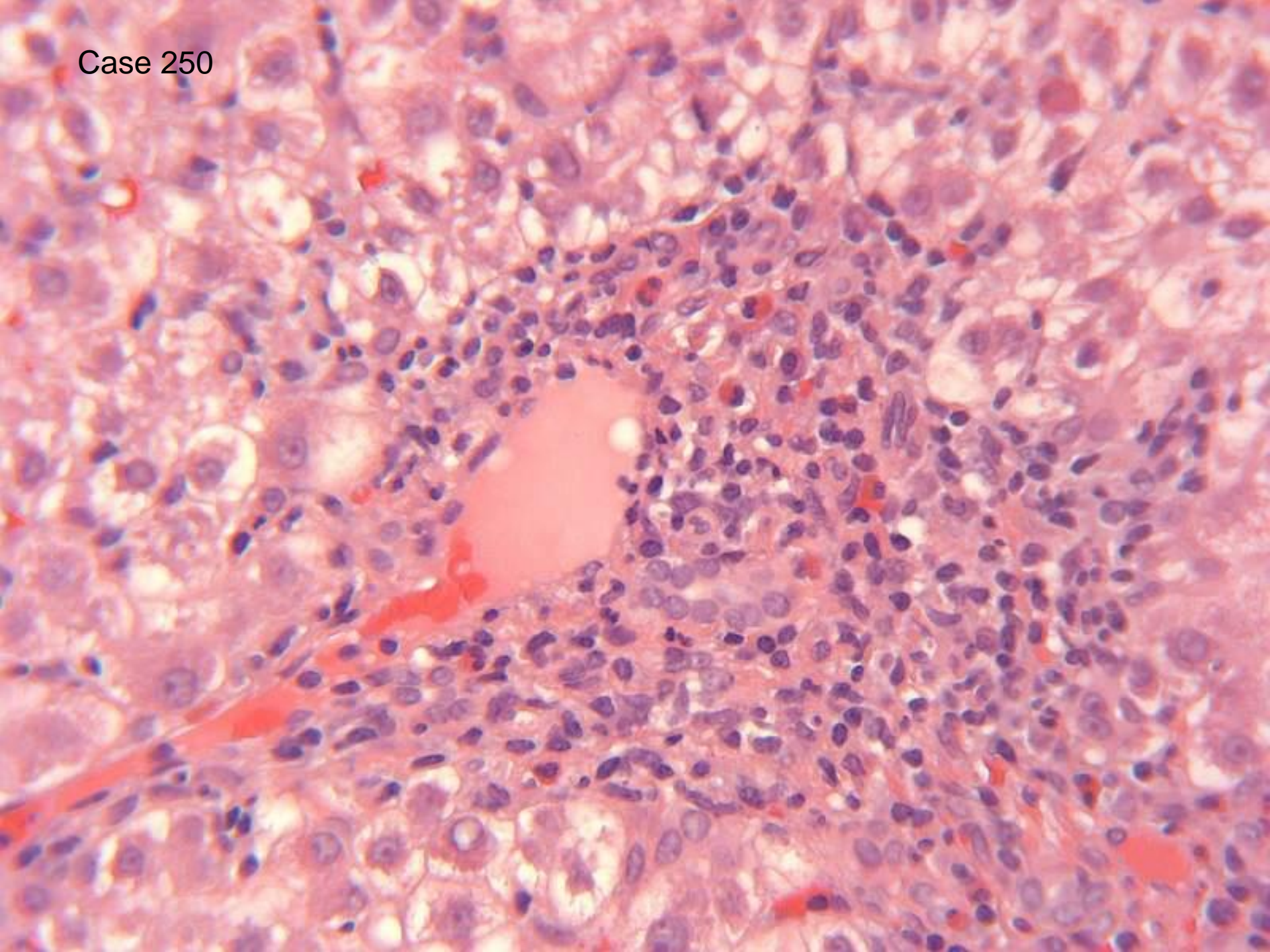
Case 250



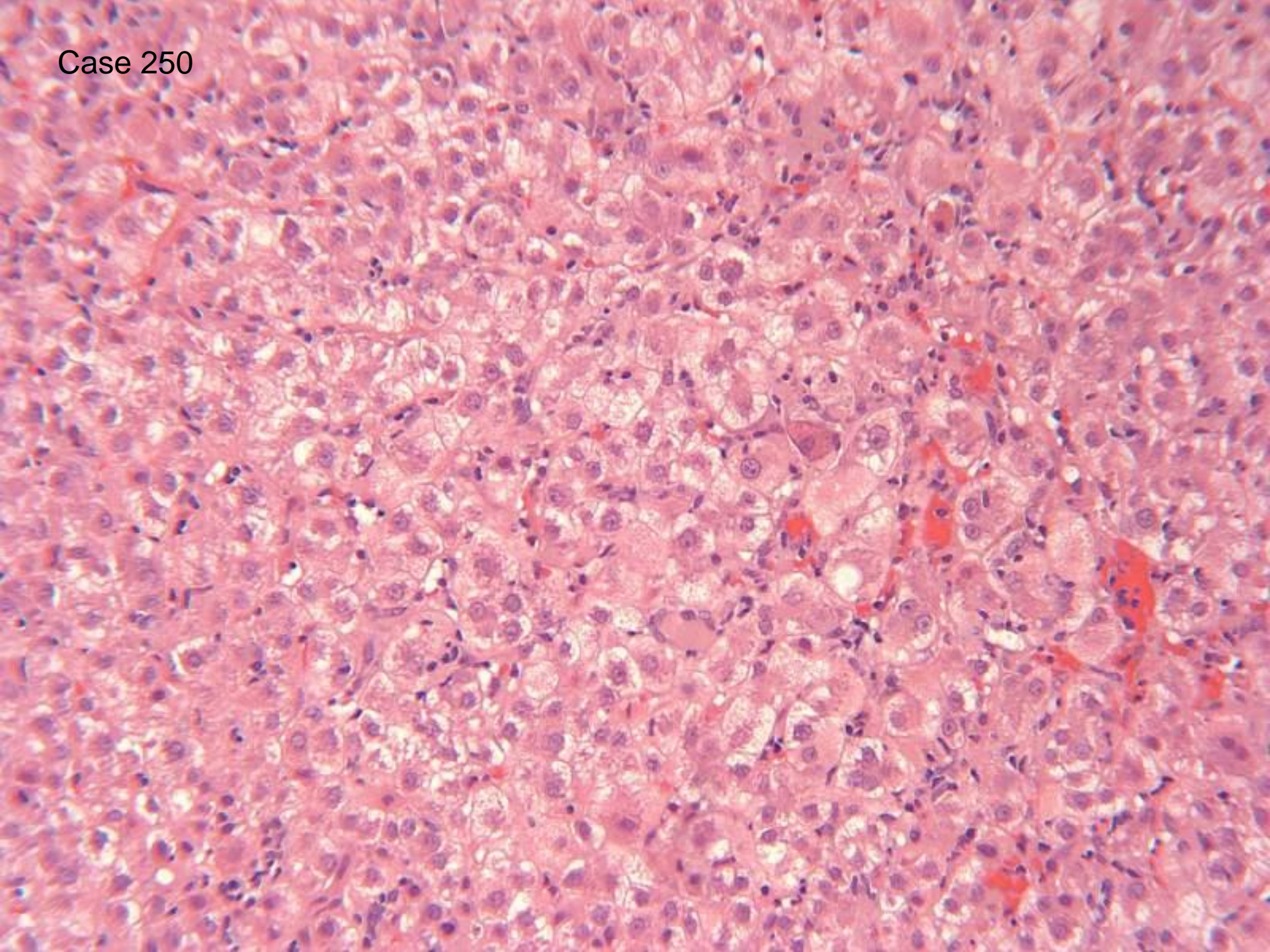
Case 250



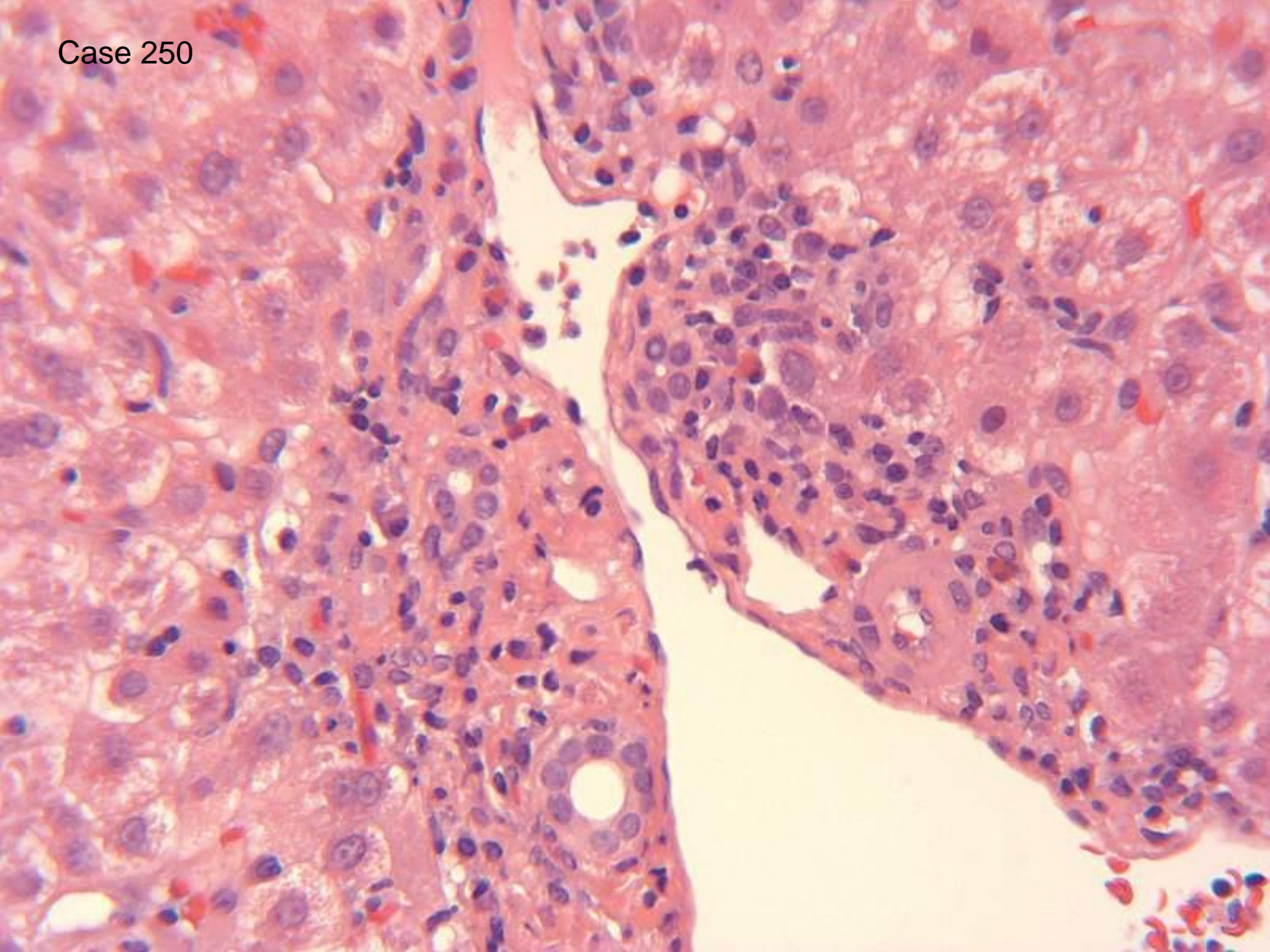
Case 250



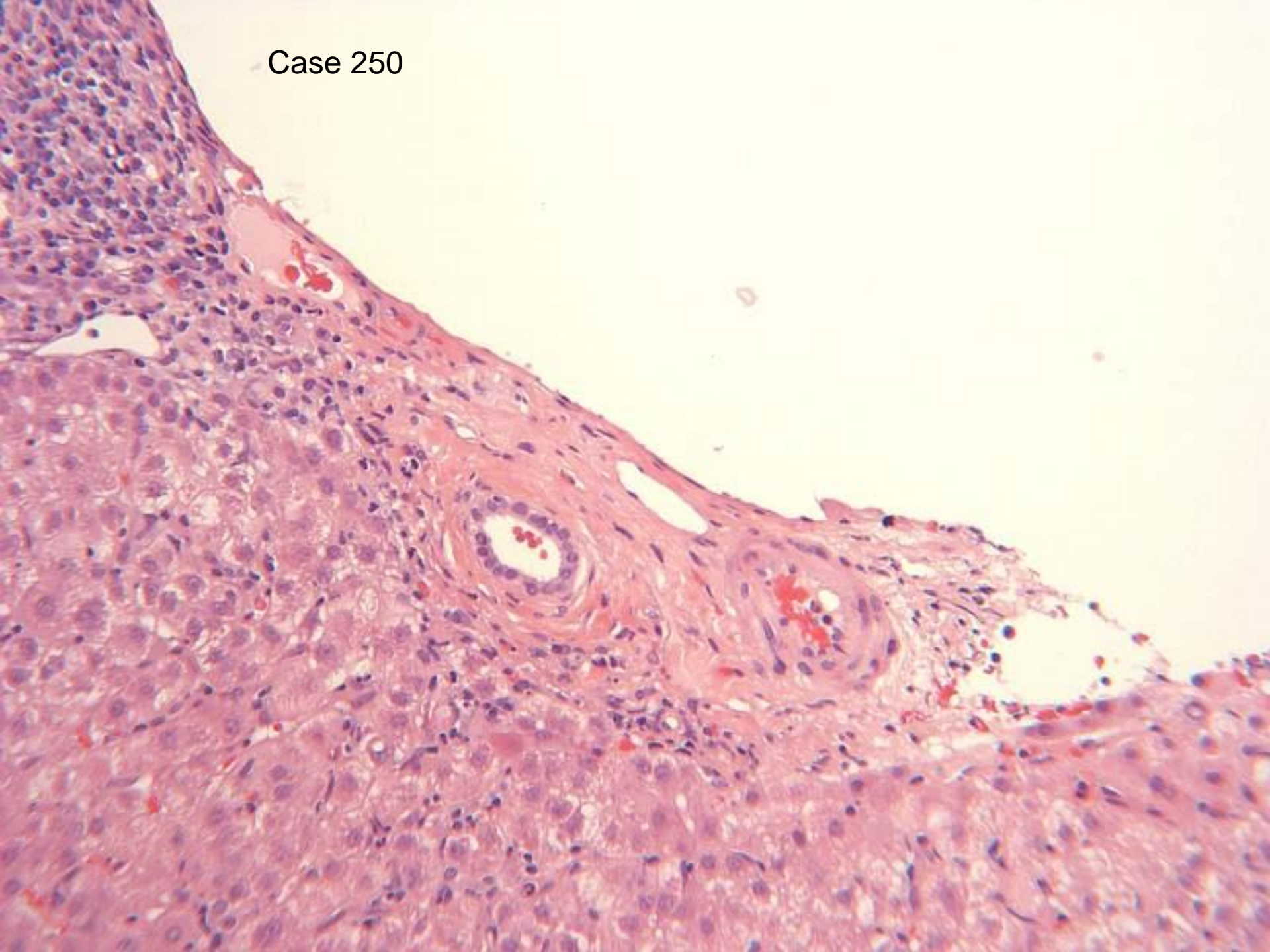
Case 250



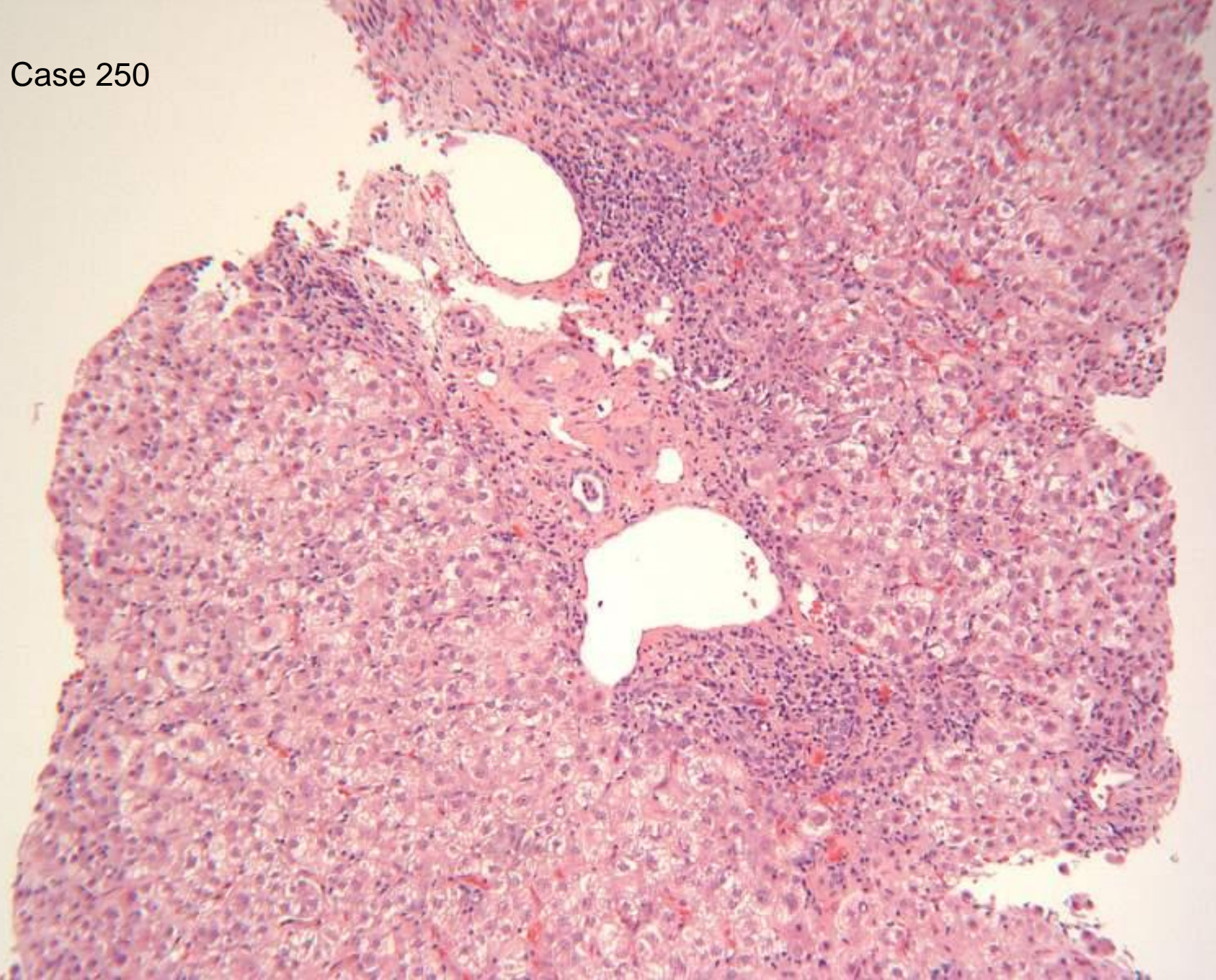
Case 250



Case 250



Case 250



Case 250

58 hepatitis, of which:

- 16 Hepatitis NOS
- 6 cholestatic hepatitis
- 14 acute hepatitis
- 4 subacute hepatitis
- 18 chronic hepatitis

7 no evidence of PSC

7 PSC a possibility

2 PSC/AIH overlap

2 alpha 1 antitrypsin deficiency
(both also diagnosed autoimmune hepatitis)

needs ERCP: 6

needs orcein 8

needs Perls 4

Aetiology:

- 31 autoimmune most likely or only diagnosis
- 16 drugs most likely or only diagnosis
- 5 drugs/AIH equal
- 2 viral/drugs/autoimmune equal
- 1 viral or drug

8 autoimmune included in differential

13 drugs included in differential

9 autoimmune not mentioned

21 drugs not mentioned

8 answer implies awareness of association of autoimmune hepatitis in long term users of mesalazine

(ref: Gut 99;44;886-8)

Case 250

Scoring: Responses that included hepatitis , aetiology of autoimmune and/or drug related accepted

Discussion: Terminology for Hepatitis as acute versus chronic – in this case there is no fibrosis and the inflammation is predominantly lobular, and the history is acute – therefore acute hepatitis would seem more appropriate. However, current terminology for autoimmune hepatitis is not to designate either acute or chronic, since these cannot be reliably be determined from histology, and acute presentations of autoimmune hepatitis are becoming well recognized.

Case 250

Discussion contd.

Aetiology – The presence of appropriate autoantibodies associated with hepatitic histology is sufficient for diagnosis of autoimmune hepatitis.

In this case portal tracts eosinophils are readily identified, whereas interface hepatitis with plasma cells is more difficult to find. Mesalazine is reported as causing chronic hepatitis with autoantibodies; whether Mesalazine had caused the hepatitis, could not be known, as steroids were given and mesalazine withdrawn at the same time.

(Ref: Deltenre et al. Mesalazine (5-ASA) induced chronic hepatitis. *Gut* 99;44;886-8).

Case 250

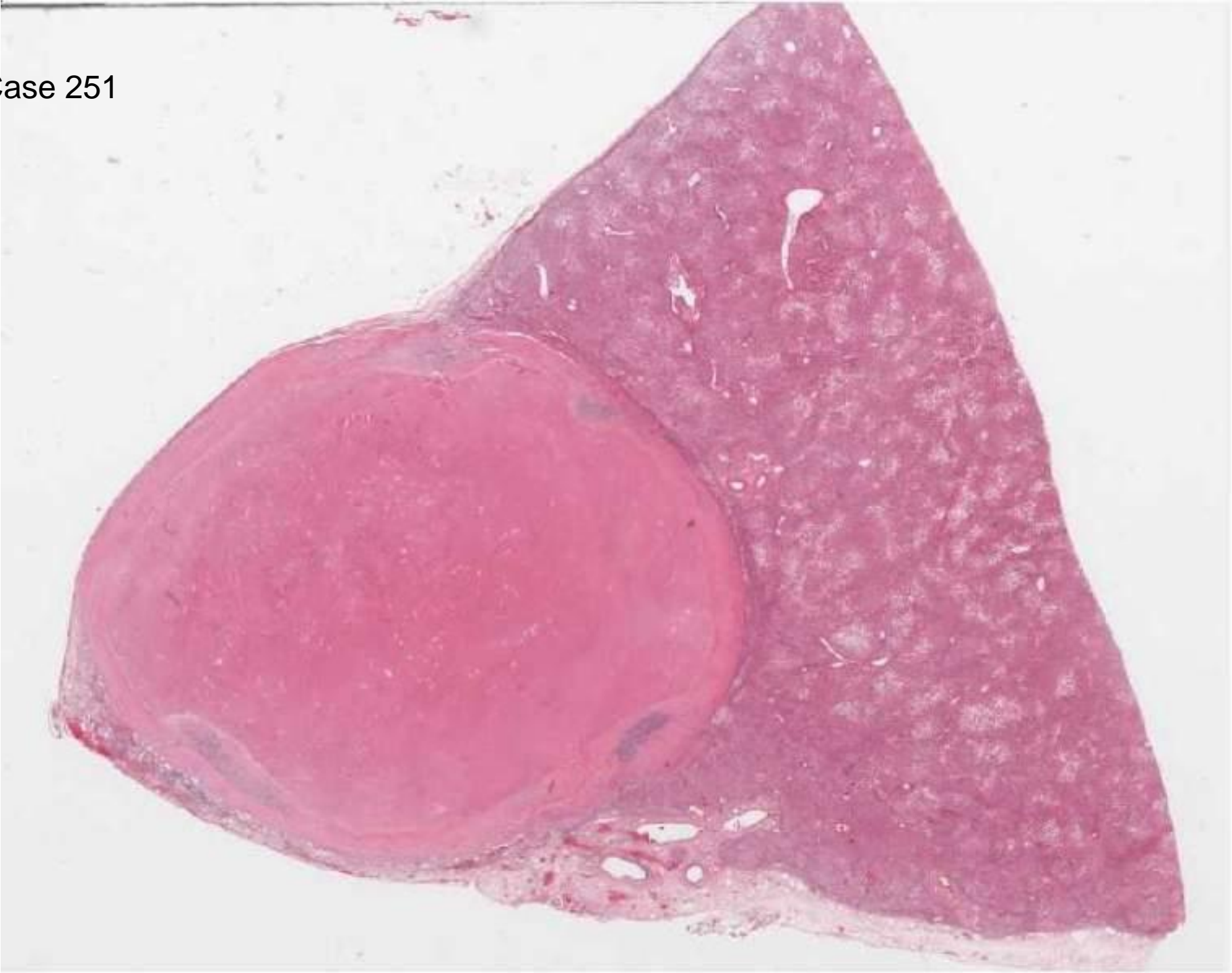
Follow up

- Patient had been taking mesalazine for several years prior to presentation
- The mesalazine was stopped after presentation.
- No other hepatotoxic drugs
- ERCP not done
- Perls stain negative
- Good response to steroids, LFTs normal and have remained so.

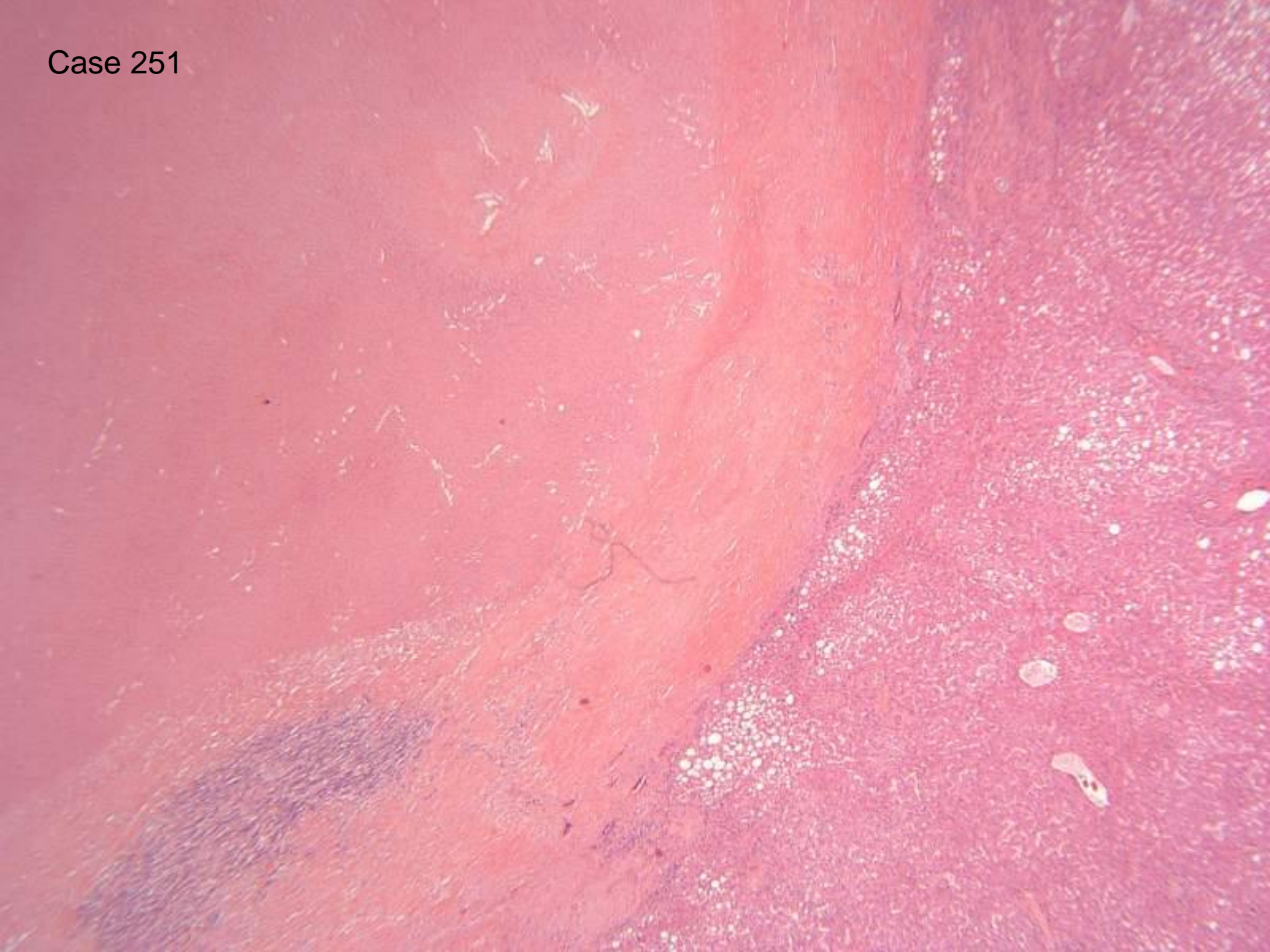
Case 251

- 76 M
- Previous Dukes' B carcinoma of transverse colon, 1 year earlier. Now has recurrence at ileo-sigmoid anastomosis. Site resected and solitary nodule ? metastasis seen in gallbladder bed and resected.
- Segment 5 liver: 62g wedge of liver measuring 7x4.5x3.5cm. WShite nodular lesion on cutting this measuring 2cm diameter. Firm white appearance.

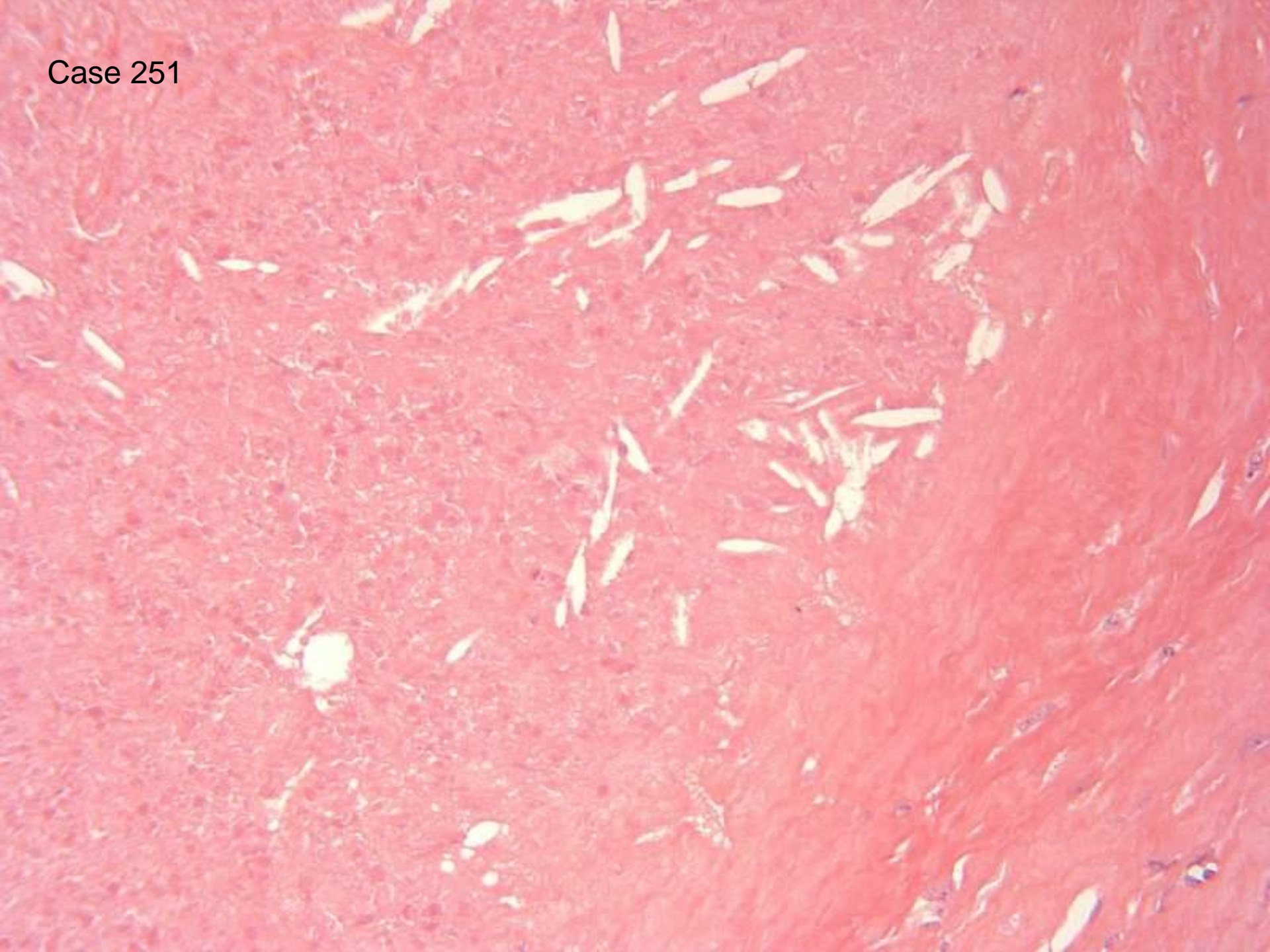
Case 251



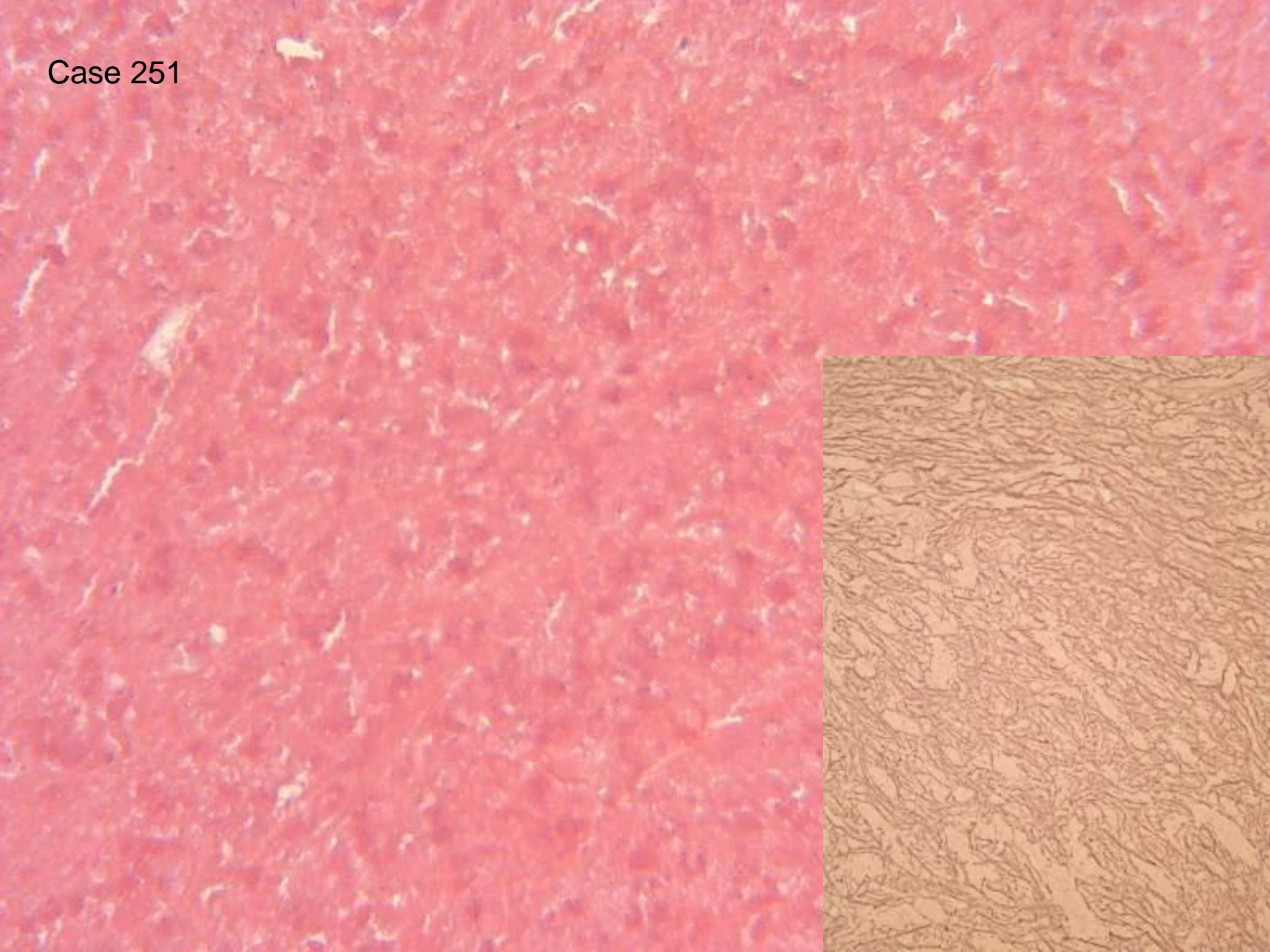
Case 251



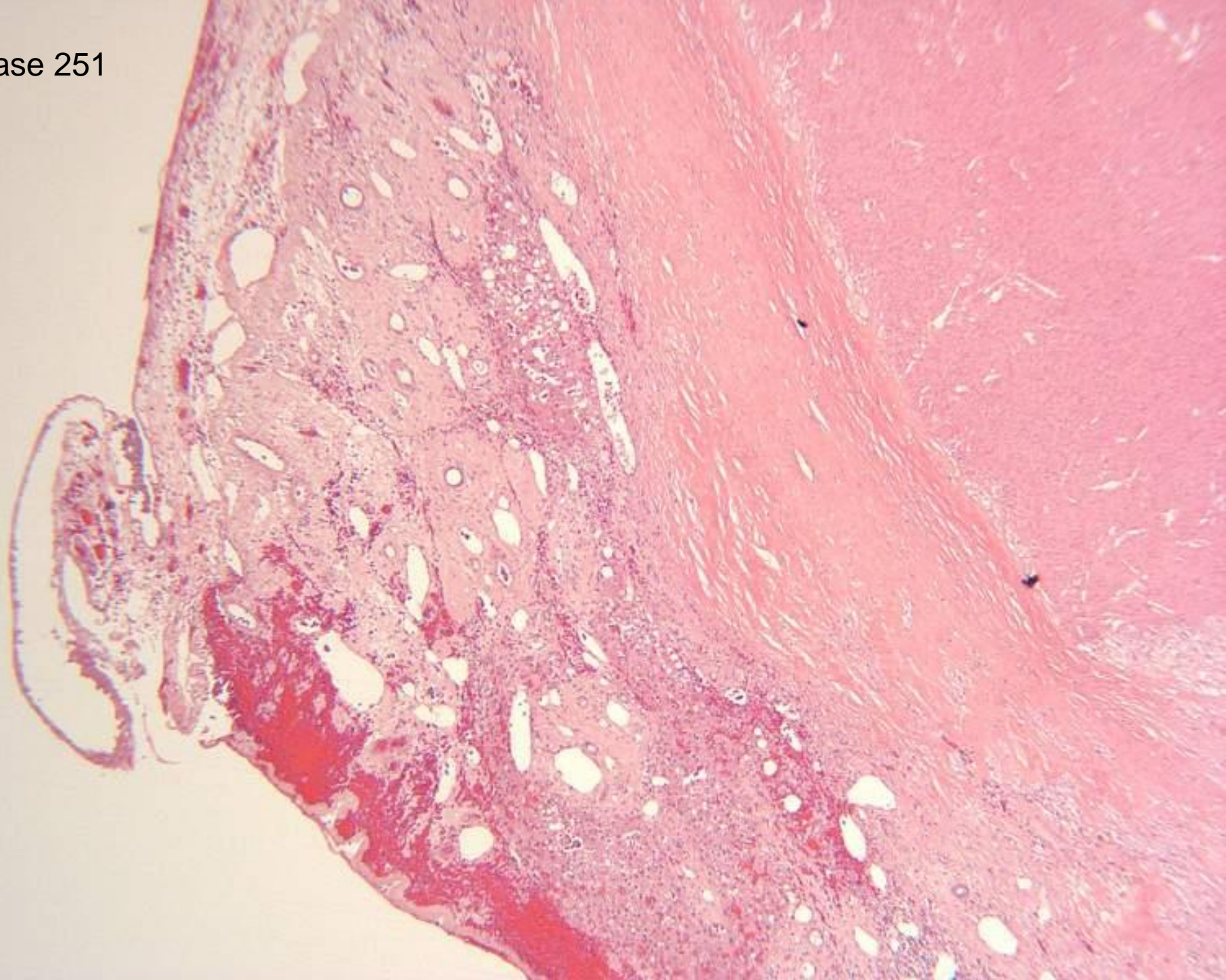
Case 251



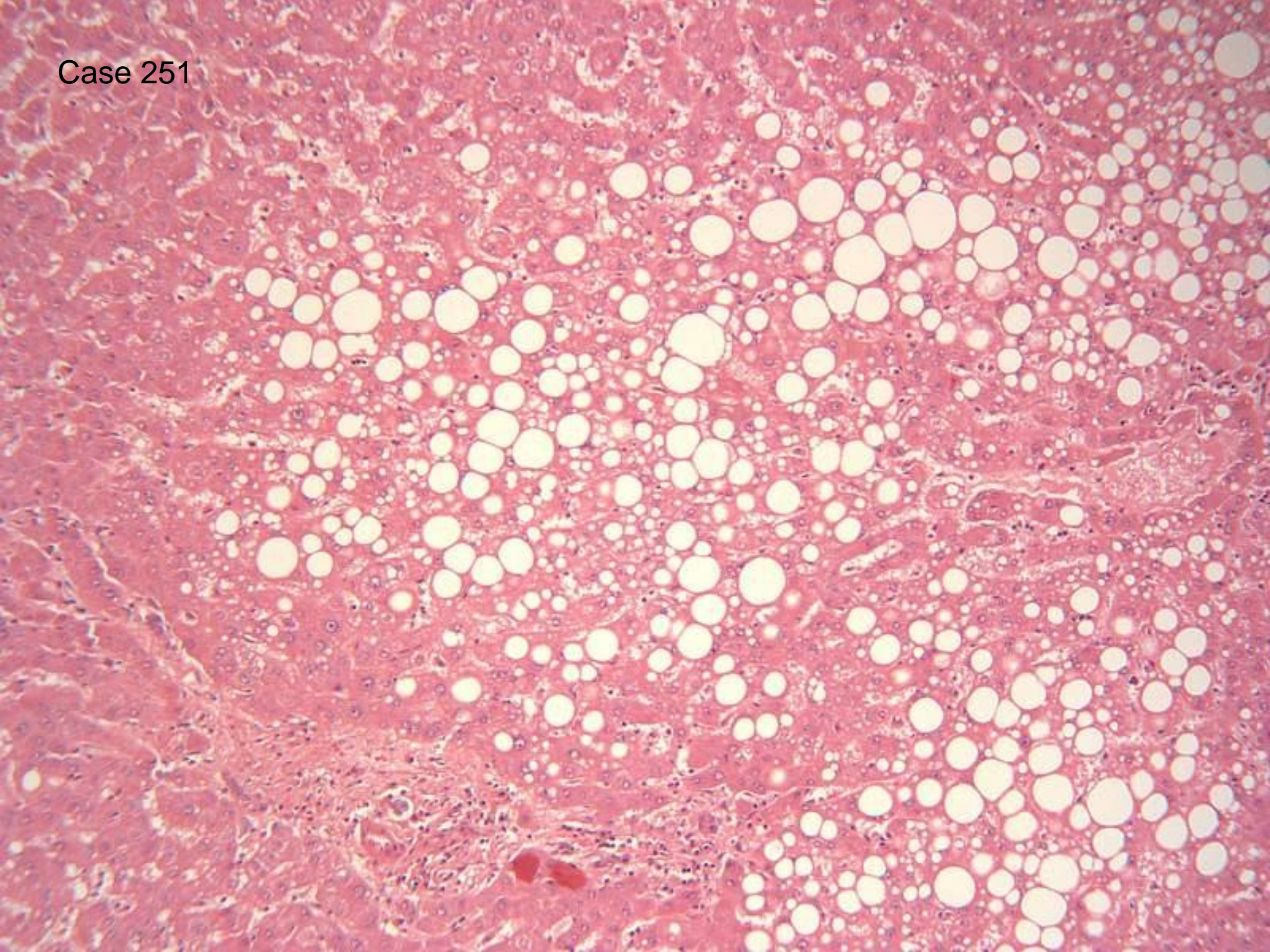
Case 251



Case 251



Case 251



Case 251

- 43 solitary necrotic nodule
- 6 infarcted nodular lesion ? metastasis
- 1 chemotherapy induced necrosis of metastasis
- 1 consistent with metastatic adenocarcinoma
- 1 fibrous nodule
- 1 infarcted pseudotumour
- 1 inflammatory pseudotumour
- 1 nodule with pigmented ghost cells ?? melanoma ?? adenoma
- 2 infarction , no malignancy

and steatosis 18

and steatohepatitis 2

differential includes post treatment metastasis 10

no evidence that this was a metastasis 19

? previous surgery (gall bladder) 4

? previous chemotherapy 13

lymphoma possible 2

needs ZN 2

needs reticulin 4

needs cytokeratin IHC 6

Case 251

Scoring: insufficient concensus for scoring

Discussion; Solitary necrotic nodule as originally described was a small hyalinised nodule with some surrounding palisading histiocytes, believed to be attributed to parasitic infection. Thus different from the histology in this case, which is larger with clearly central necrosis that was originally cellular.

Participants have seen examples of post-chemotherapy metastases with this histology, although in the absence of any identifiable tumour morphology, an origin as metastatic carcinoma could not be confirmed. The history of previous chemotherapy was not available when slides were circulated.

Although the correct answer was tumour regression following chemotherapy, there was not sufficient consensus to allow scoring.

Case 251

Follow up

- Diagnosis: solitary necrotic nodule
- Dukes B adenocarcinoma resected 1 year previously, liver mets seen at that time.
- Oxaliplatin chemotherapy prior to liver resection;
- (the cholecystectomy was at the time of this liver resection, not previously)
- All of the nodule was blocked – no viable adenocarcinoma, subsequently immunohistochemistry shows no positivity for epithelial markers.

Case 252

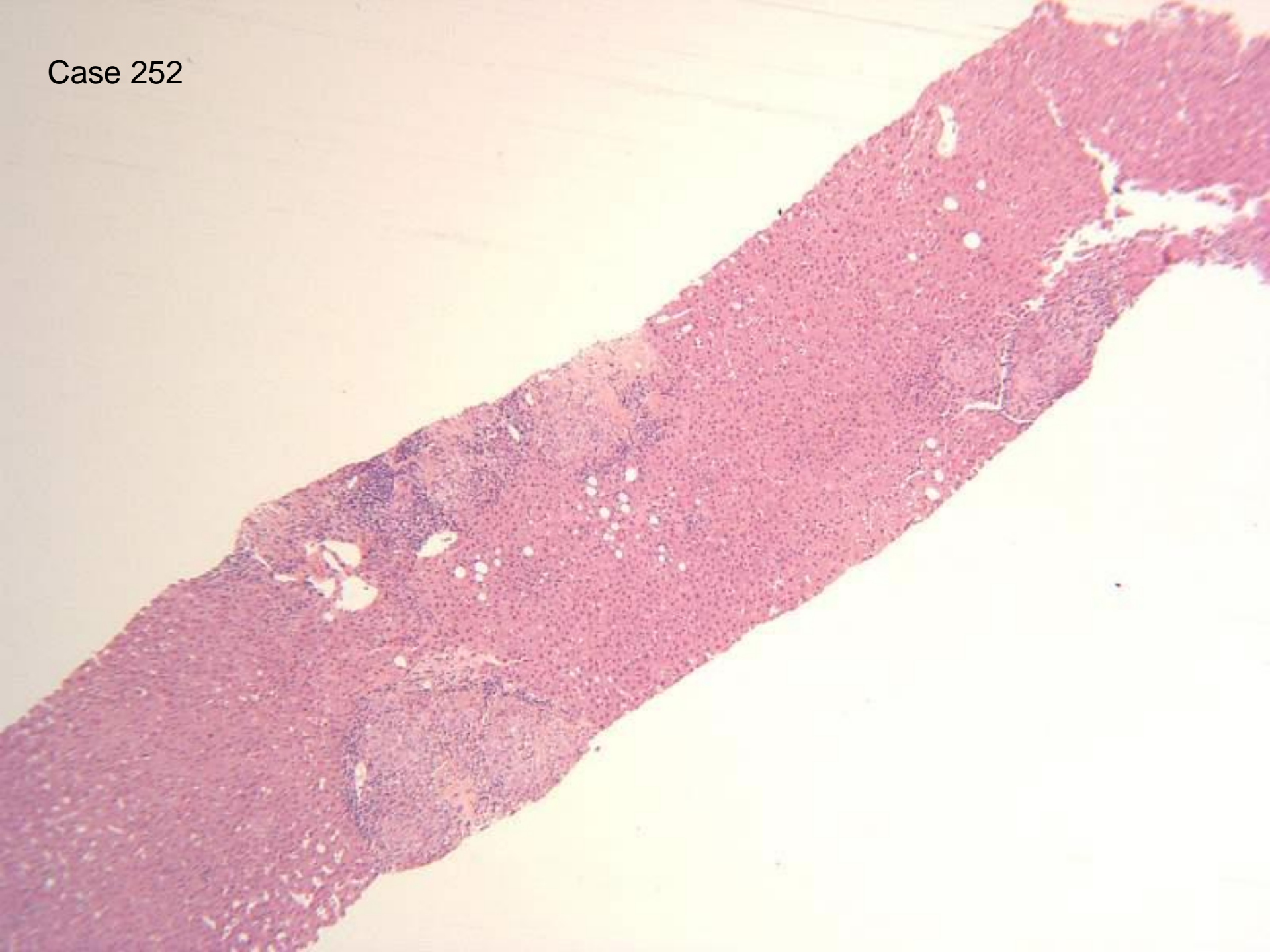
- 58 F
- Abnormal liver function tests, alp phos 253, GGT 395.
- Autoantibodies negative apart from smooth muscle antibodies +++
- History of rheumatoid arthritis and thyroid disease. ?autoimmune hepatitis.
- -ve ZN on biopsy

- 3 fragments of liver, combined length 14mm

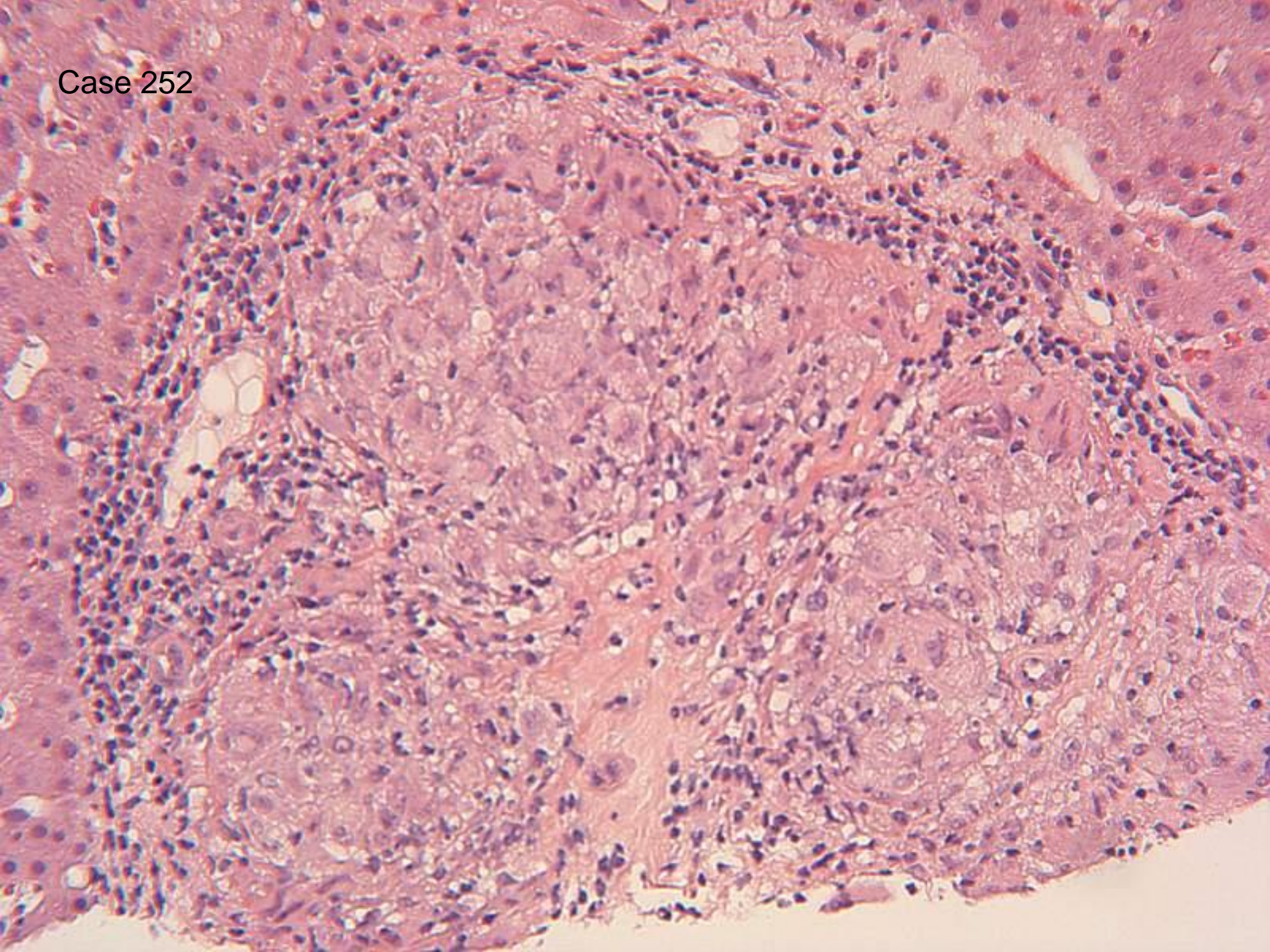
Case 252



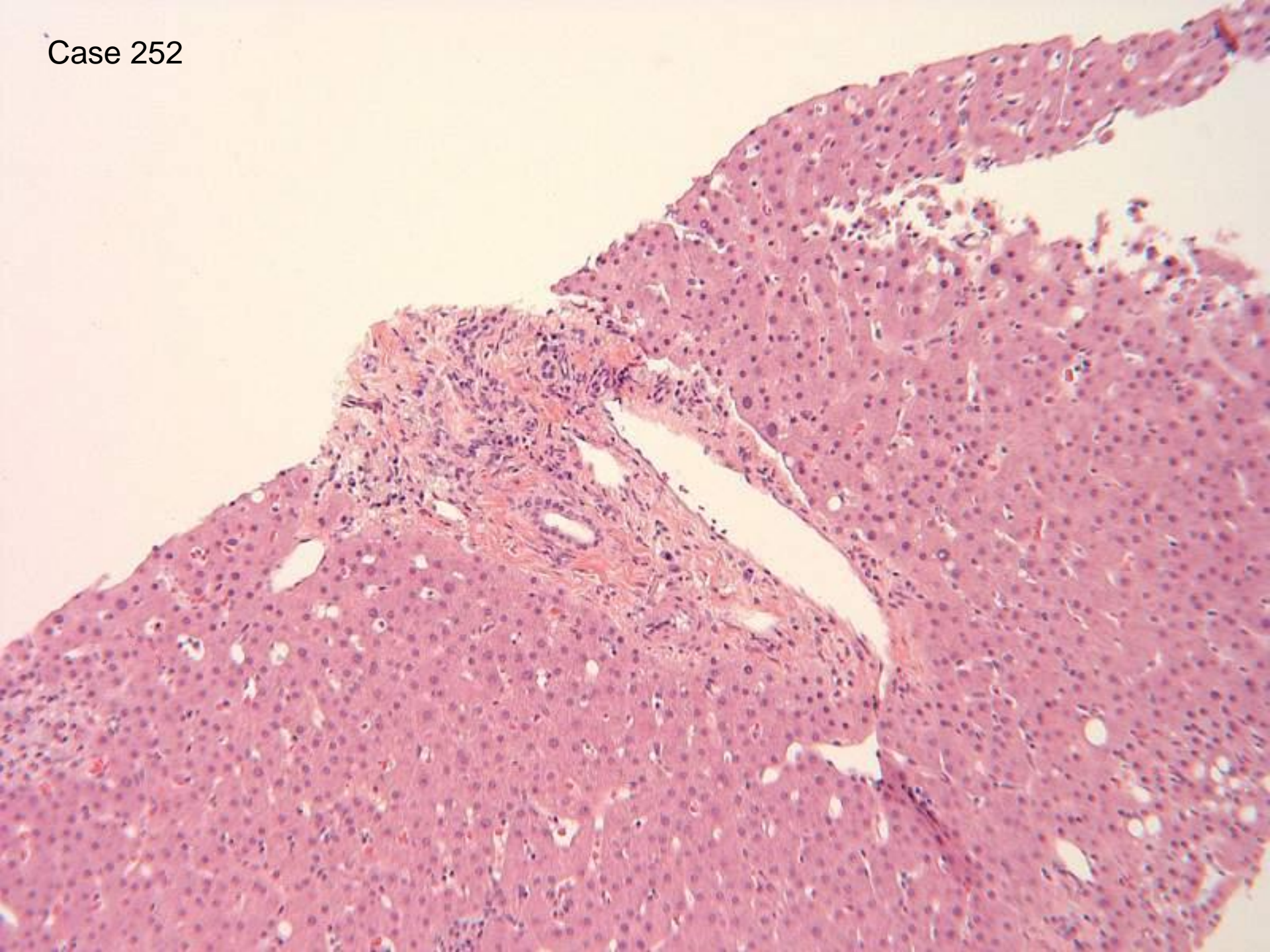
Case 252



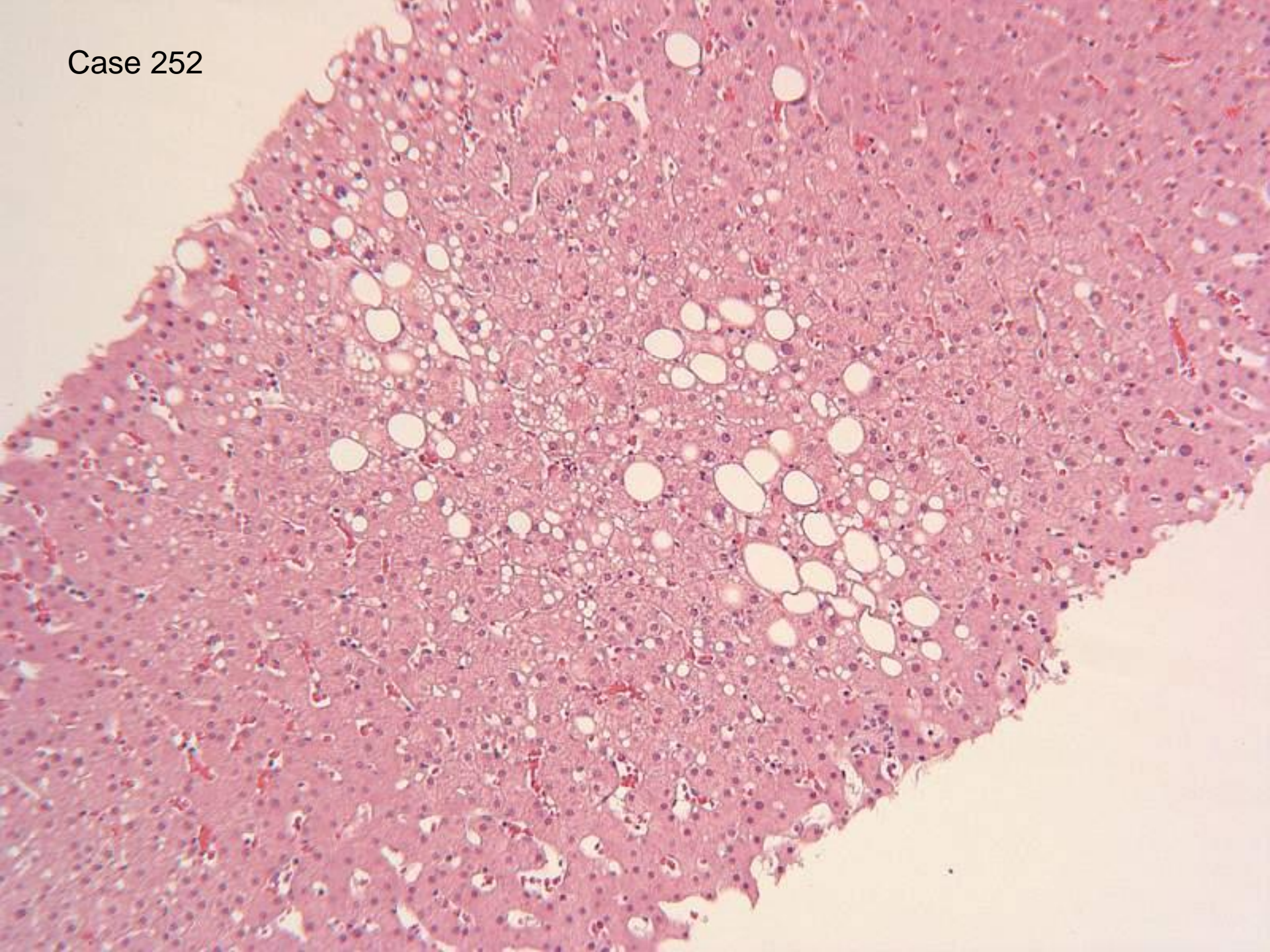
Case 252



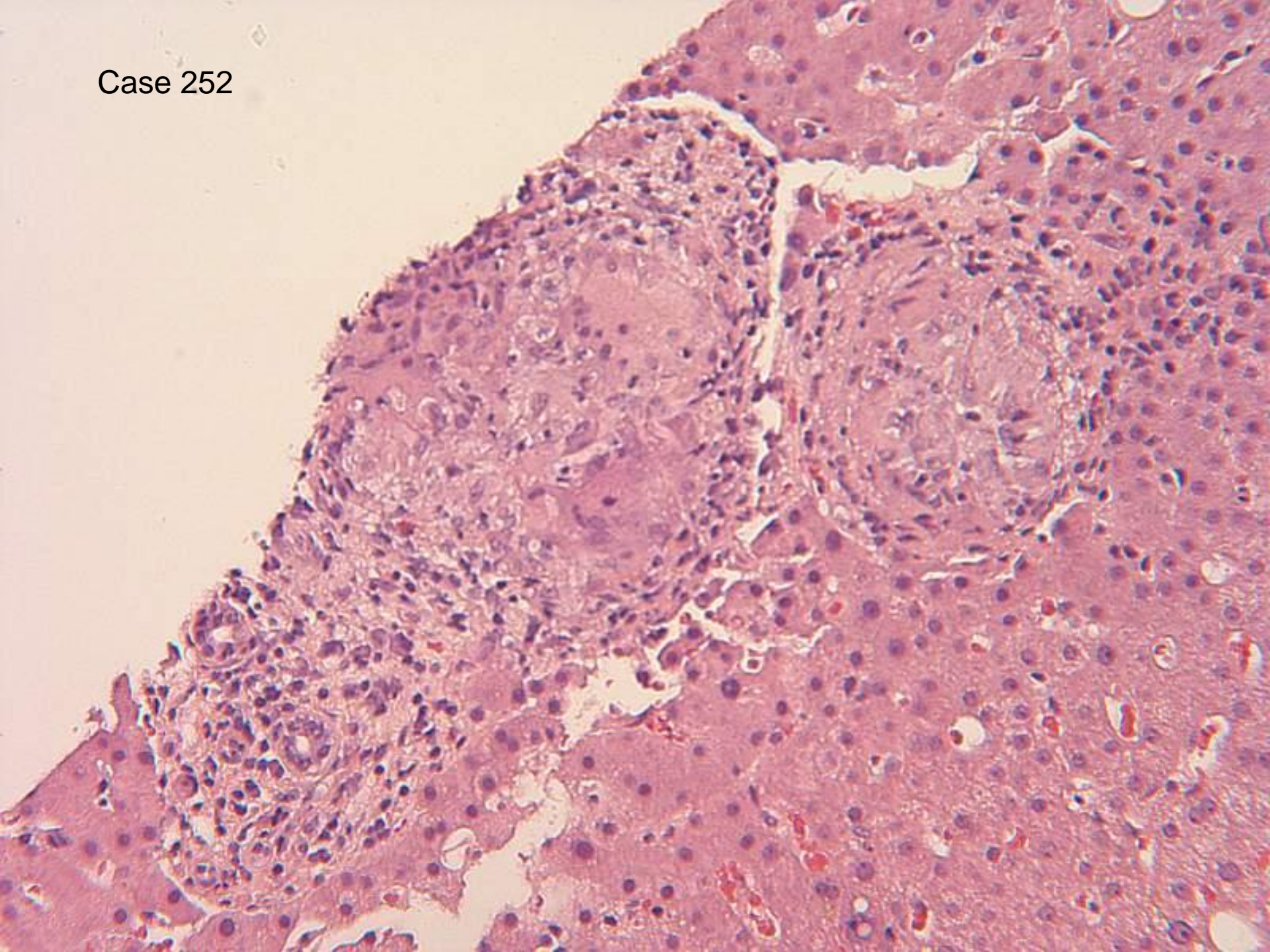
Case 252



Case 252



Case 252



Case 252

- 49 granulomas/granulomatous hepatitis, with further comment about aetiology
- 4 granulomatous hepatitis, no further comment
- 4 granulomas and ductopaenia
- 3 PBC as main diagnosis, with differential
- 1 PBC as only diagnosis without qualification

Aetiology:

- 32 sarcoidosis
- 21 TB must be excluded (stated in diagnosis box)
- 12 TB not mentioned anywhere or implied in comments
- 8 sarcoid/TB/PBC/drug with no preference
- 6 AMA –ve PBC a possibility
- 11 differential diagnosis includes drugs
- 4 granulomas associated with rheumatoid arthritis

Further information required:

- ZN – lots
- AMA 4
- Orcein 4
- CXR 3
- Drug history 3

Case 252

Scoring; Reject PBC as only diagnosis without qualification

Discussion: Correct answer required recognition of granulomas, with some discussion of differential. The biopsy was not considered diagnostic of PBC without qualification. There are no mitochondrial antibodies. Definitive clinical diagnosis not yet available.

Case 252

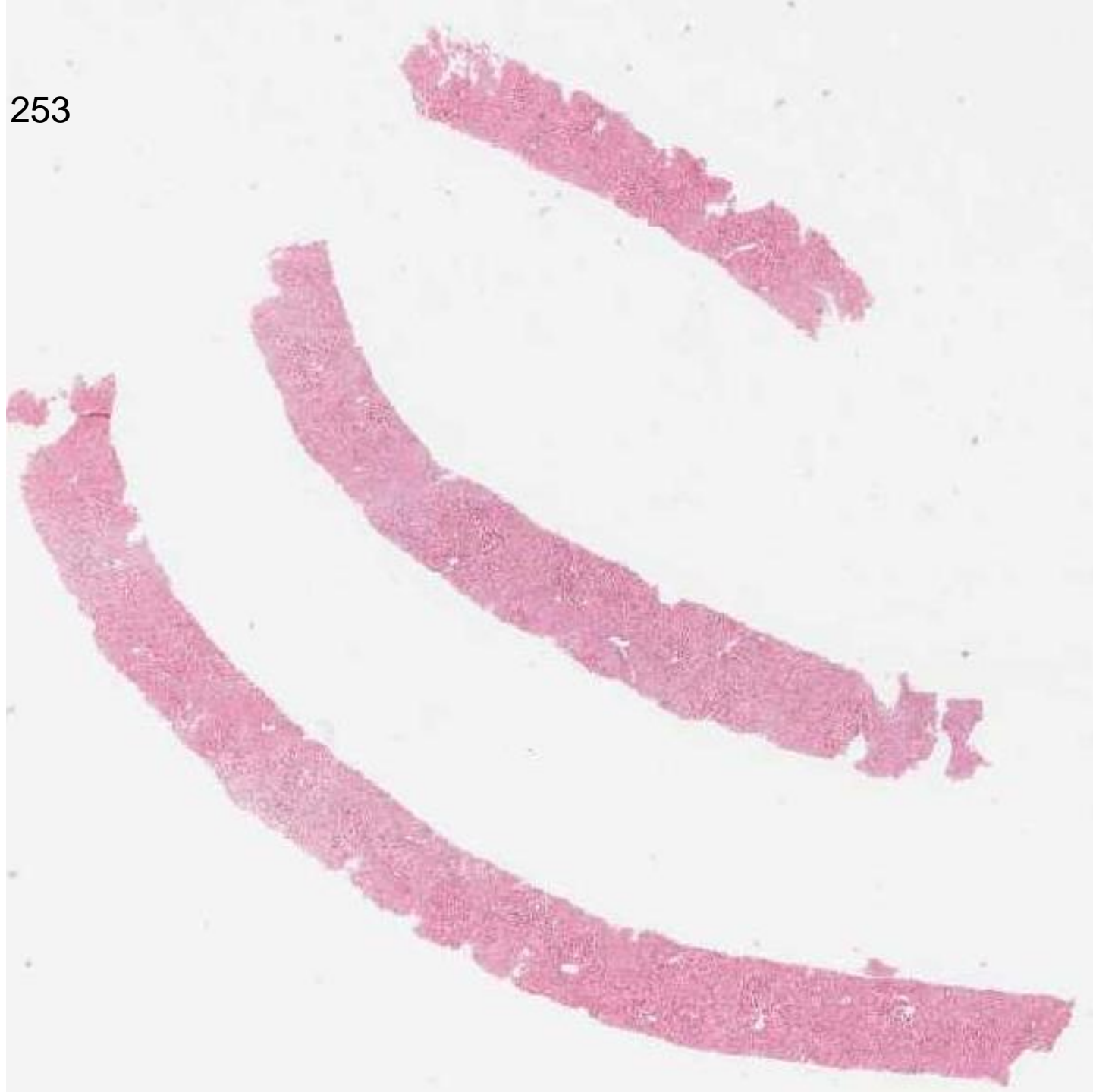
Follow up:

- Diagnosis: Granulomatous hepatitis
- Multiple levels through the biopsy showed no evidence of bile duct damage associated with the granulomas
- Anti mitochondrial antibodies were negative

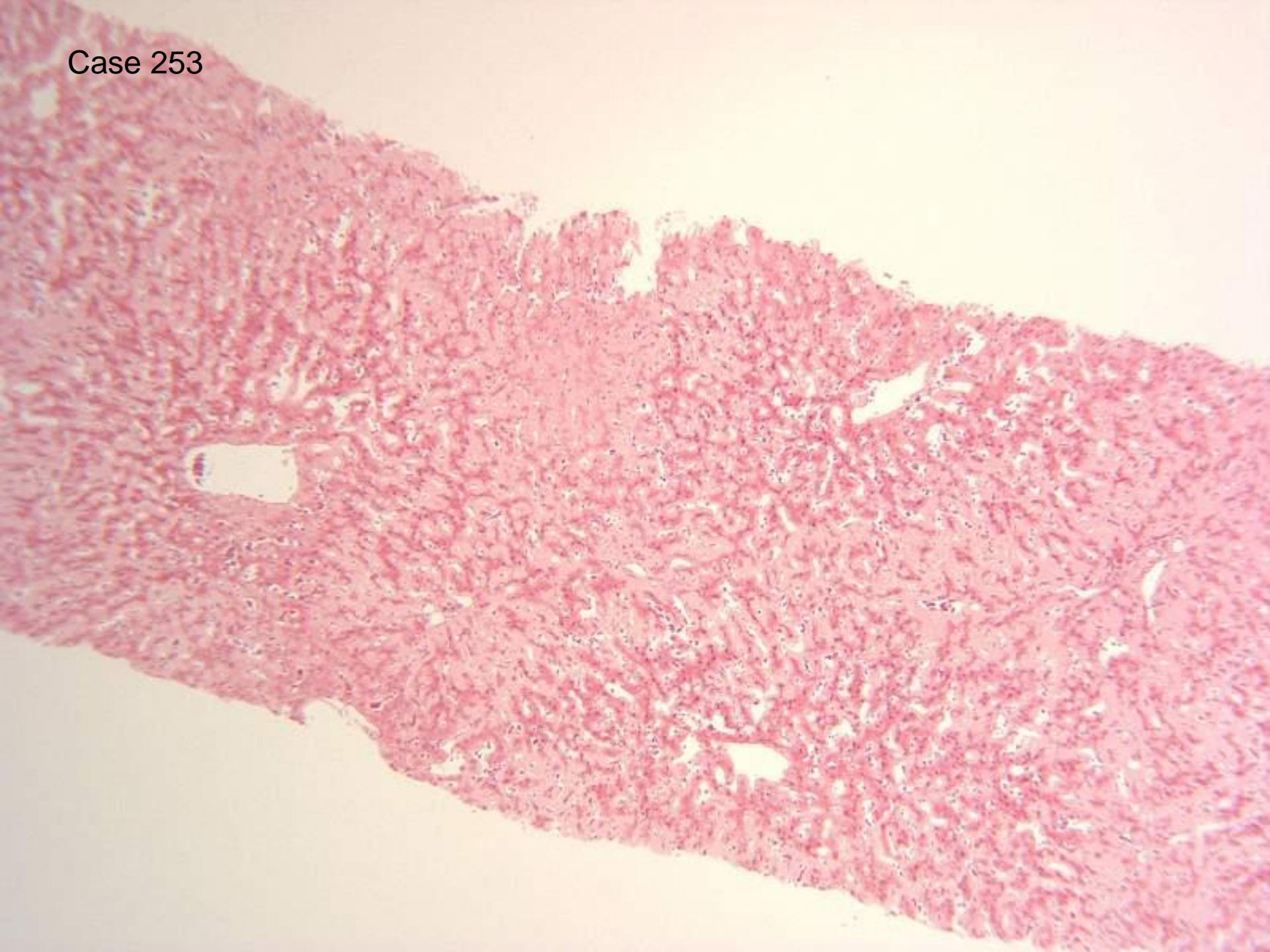
Case 253

- 56 M
- Hepatomegaly, GGT 450, alcoholic history
- 3 tan cores of tissue, from 7-20 mm

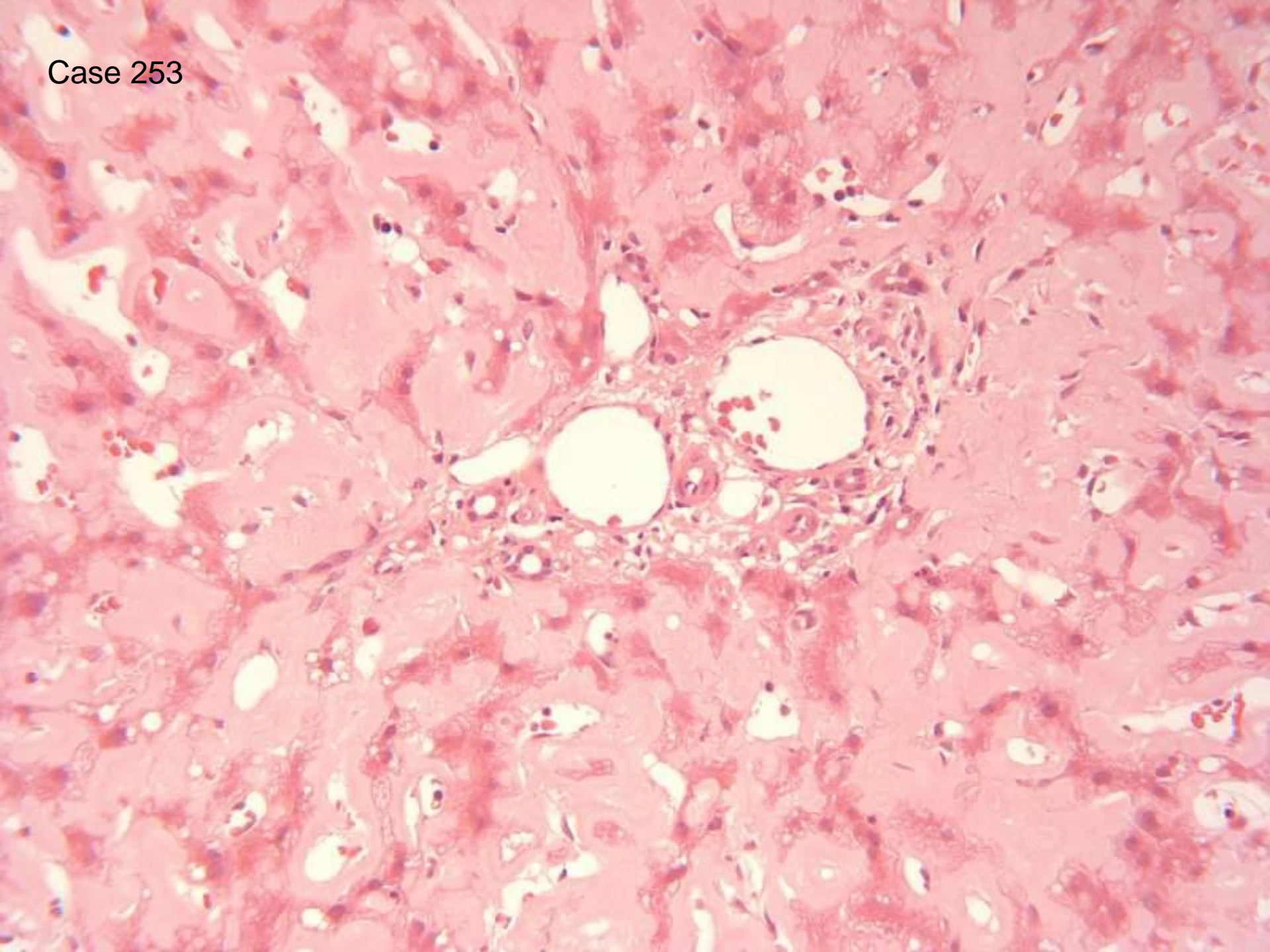
Case 253



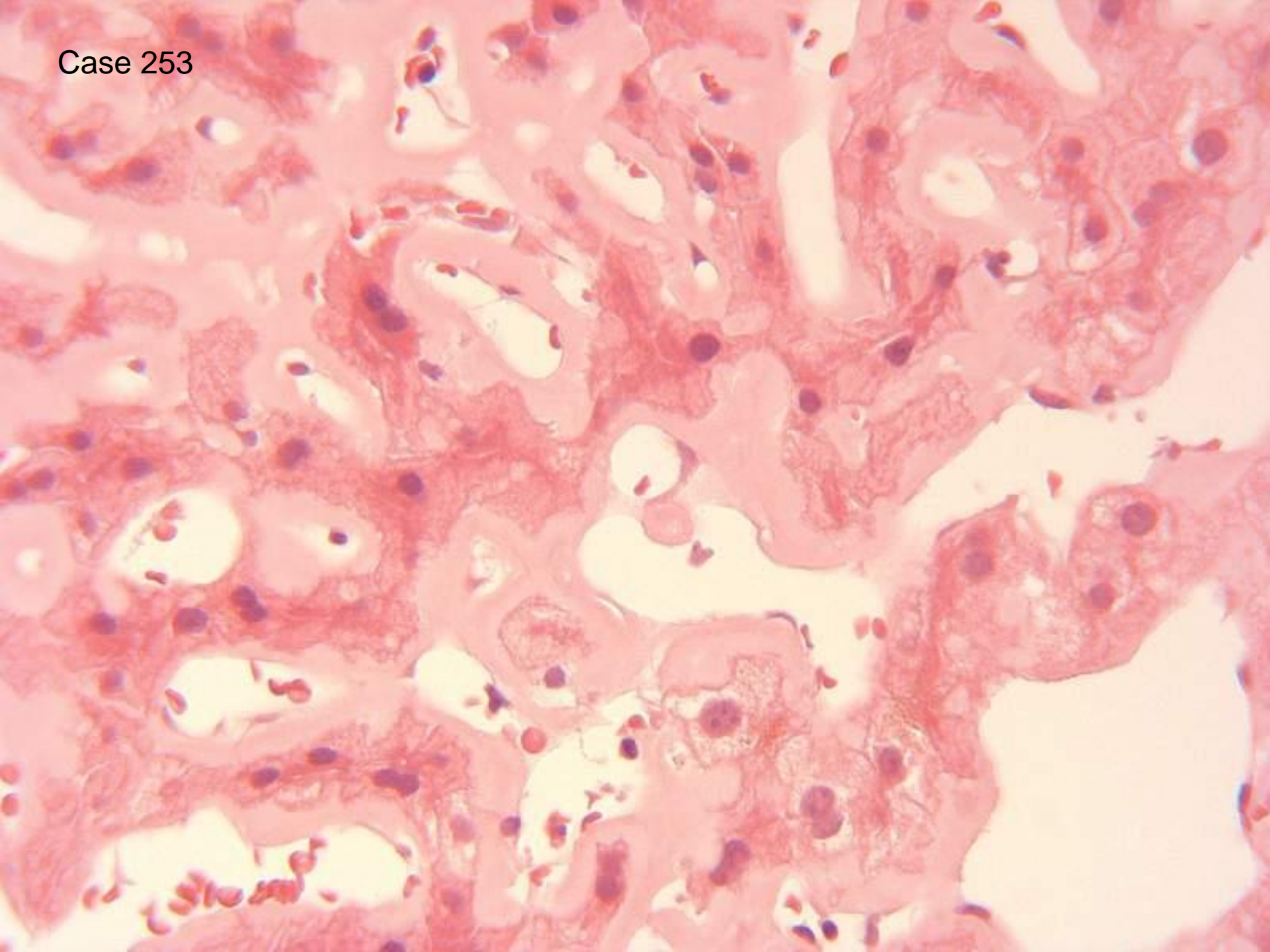
Case 253



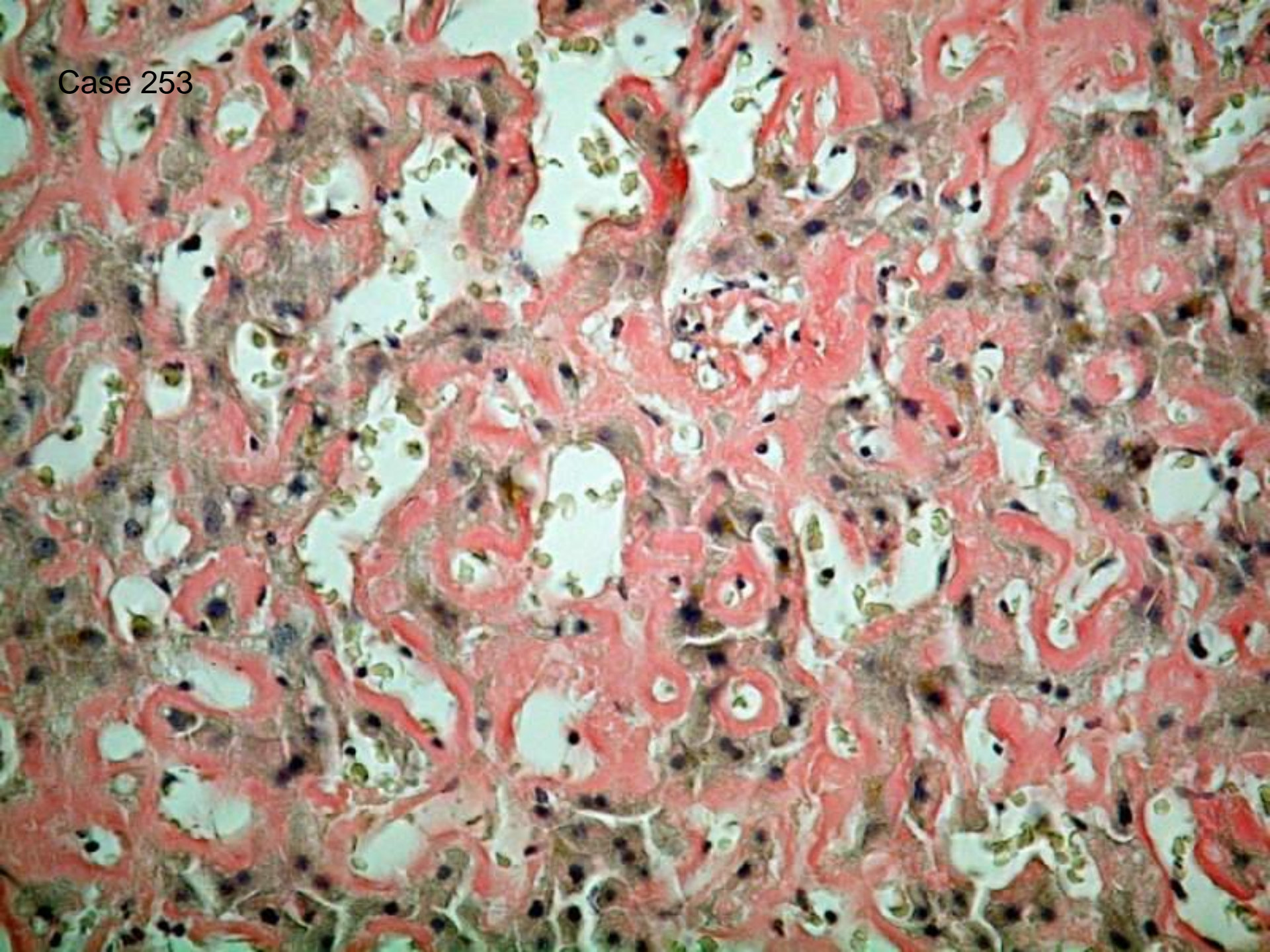
Case 253



Case 253



Case 253



Case 253

57 amyloid

1 no answer

(number of words in answer varies from 0 to 81!)

differential of light chain deposition disease, if Congo red
negative 4

some comment on clinical differential diagnosis 25

Case 253

Scoring: accept all responses

Follow up:

Further investigation showed normal renal and cardiac function, no paraprotein or Bence Jones but there was immunoparesis and 10% plasma cells in marrow.

Referral to national amyloid centre for SAP scan confirmed uptake in Liver and Spleen and a high level of free AL light chain in blood.

He has been started on high dose chemo.