

# National Liver Histopathology EQA Scheme

Circulation H1  
Spring 2013

Histories and initial scoring

# About the liver EQA scheme

- Started in 1994 by Alastair Burt; JIW since 2004.
- 100 members, 2 circulations of 12 slides plus online virtual digital slides
- Responses – ‘morphology’ and ‘clinico-path’
- JIW collates, sends out summary for comment
  
- Emphasis on educational value
  - ‘Masterclass’ on topics suggested by spread of answers
  - ‘educational participation’ with MCQ self-test format
- Spreadsheet of responses on website afterwards
- Also other ‘liver pages’ includes CPD - powerpoints

Two specific items for discussion;

Virtual Pathology at the University of Leeds


Home Public Teaching Slide Library EQA Research Help

Liver EQA circulation A1

[<<< back to EQA Scheme page](#)


[EQA Meeting Discussion for circulation A1](#)

**Case number 326**  
Female 76 years  
Information provided:  
4 week history of painless jaundice. Bilirubin 12umol/L, ALT 40iu/L, AP 349iu/L, alb 41g/L, GGT 498iu/L, negative for HBV, HCV, Immunology: ANA 160, other serology negative (AMA, LKM etc.) IgG 23.4g/L (6-13) IgA 8.73g/L (0.8-3)  
Specimen: Needle biopsy of liver  
Macroscopic description: Single core 19mm in length




[Open with Zoomify](#)  
[Open with ImageScope](#)

**Case number 327**  
Female 61 years  
Information provided:  
Unexpected cirrhosis at lap chole  
Specimen: Liver core  
Macroscopic description: Fragmented core in 3 pieces



[Open with Zoomify](#)  
[Open with ImageScope](#)

**Case number 328**  
Female 53 years



326

**Responses**

**Morphology:**  
19 acute hepatitis  
11 acute hepatitis with bridging or confluent necrosis  
14 hepatitis  
7 chronic active hepatitis  
1 active hepatitis  
2 overlap autoimmune hepatitis/cholangitis  
1 hepatitis secondary to SLE (only diagnosis)  
1 autoimmune cholangitis (no mention of hepatitis)  
34 any of above with specific mention of prominent plasma cells

**Aetiology:**  
19 autoimmune hepatitis with no differential  
25 autoimmune hepatitis most likely  
25 differential includes drugs  
10 differential includes viral hepatitis  
5 autoimmune hepatitis among differential, not most likely  
1 lupoid hepatitis, no differential  
1 no mention of autoimmune hepatitis in differential

326

**Scoring and discussion.**  
Score 5 points for any answer including hepatitis except as indicated above. This case showed confluent bridging necrosis which is an important indicator of severity and should be included in the report. Chronicity requires connective tissue stains for accurate evaluation, so points were not deducted for diagnoses of chronic disease, although the consensus for this case was of acute disease. There were no histological or clinical features to suggest overlap with biliary disease. Hepatitis is rarely a component of the multisystem disease of SLE, and the serology given does not point to SLE.

Prominent plasma cells are an important feature contributing to the overall clinical diagnosis of autoimmune hepatitis and should be included in the report, but was not included in the EQA scoring.

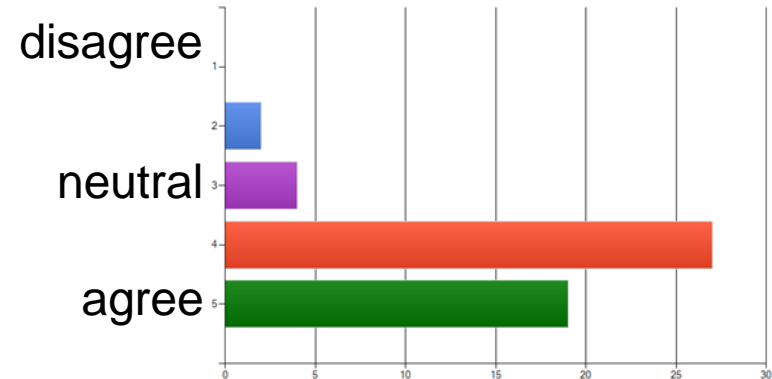
Aetiology: 5 points deducted for failure to include autoimmune in the diagnosis; lupoid hepatitis is an old terminology, and may be misleading – the current terminology is for a diagnosis of autoimmune hepatitis with additional comment on severity of necrosis, interface activity and chronicity.

# Should we separate tumour cases and medical cases in the EQA circulation in some way?

From members' questionnaire summer 2013

**Question 7. Slide circulations:  
the cases are appropriate for a specialist  
liver histopathology EQA**

45 agree, often strongly; 2 disagree



*A comment: 'could subdivide into liver medical and tumour'*

**For discussion: should participants be able to exempt themselves from tumour cases?**

**Question 8. What do you think about the balance of cases circulated?**

proportion of biopsies:resections is about right = 43 (84%)

should have more biopsies: 7 (13%)

should have more resections: 1 (2%)

**Previously circulations have contained a maximum of 4 tumour cases.**

**In H1 and I1 both had 6, reflecting bias towards more large blocks being submitted.**

**Result of discussion: limit tumour cases to maximum one third of cases circulated, and do not enable exemption from these.**

Should EQA response be Individual response or discussion?  
*“In practice, I discuss cases like this with my colleagues before issuing my report”*

Purpose of EQA scheme:

- educational
- ensure your opinion is in line with your peers
  - avoid ‘unconscious incompetence’
- scored in a way that can identify poor performance  
(not just a slide club)

Therefore:

Submitted responses must be by individual pathologist

No discussion of cases is allowed prior to submitting responses

A ‘disclaimer’ will be added to the response submission:

*“I will not discuss these cases with any colleague prior to submitting my answers”*

# Circulation H1

- 76 responses received
- 80% consensus = at least 61 responders give the diagnosis
- Suggested scoring, based on similar cases in the past:
  - no marks in red,
  - Half marks in brown
  - Questions about scoring in green
- Circulated to members before the meeting, request to comment on proposals: *5 sets of comments received.*
- Meeting discussion – agree or modify the suggested scoring  
This marking scheme is then applied to the submitted responses
- Three cases were deemed unsuitable for scoring – 410, 415, 420.  
Final score based on 9 cases.
- ‘Masterclass’ presentations:
  - intraductal papillary neoplasms - case H1/410 – Yoh Zen
  - Autoimmune hepatitis – case H1/421 – Stefan Hubscher

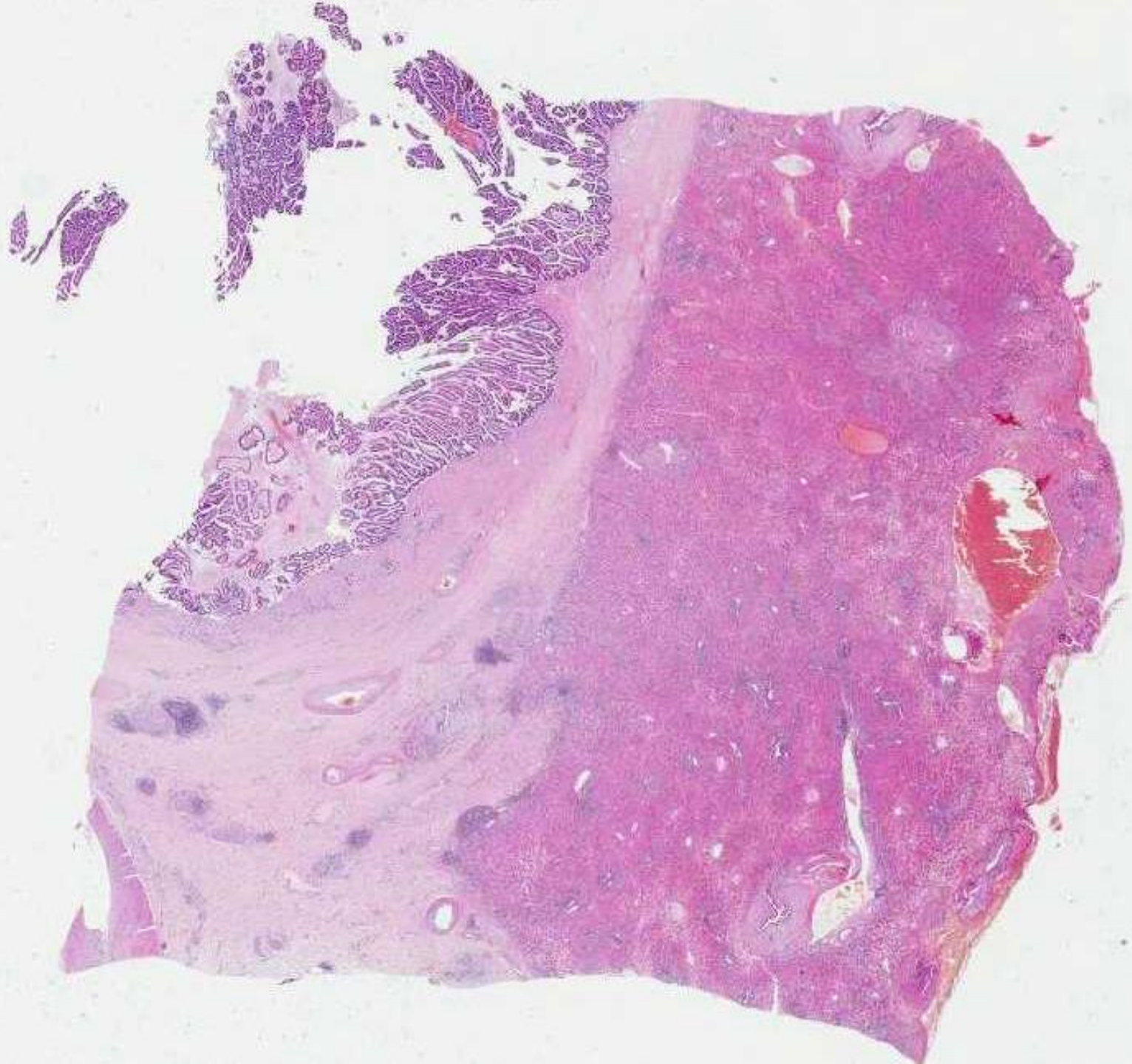
**Case H1/410**

**60, M**

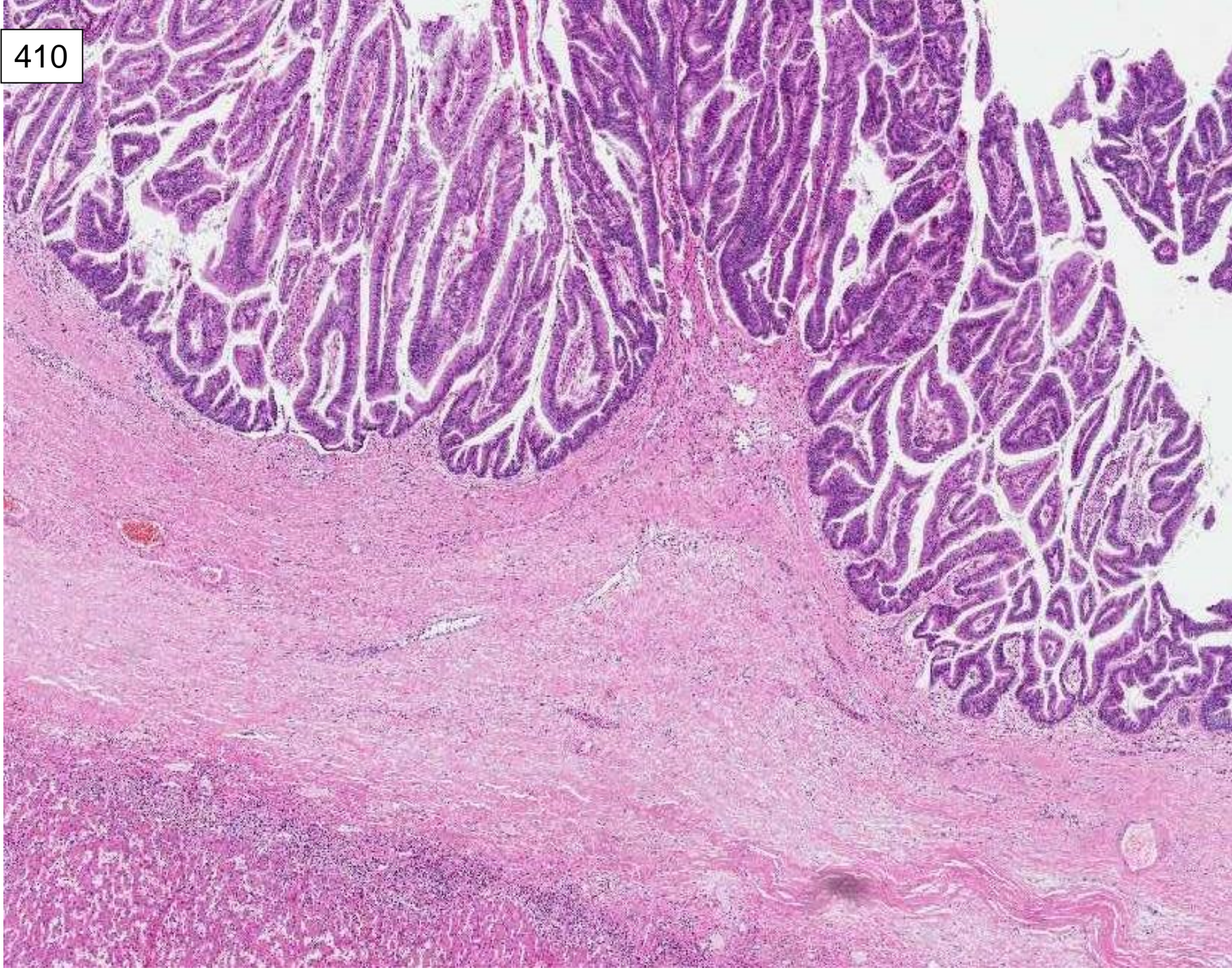
Choledochal cyst of left liver

120x80x50mm portion of L lobe well-defined central white solid & cystic lesion measuring 110mm max.

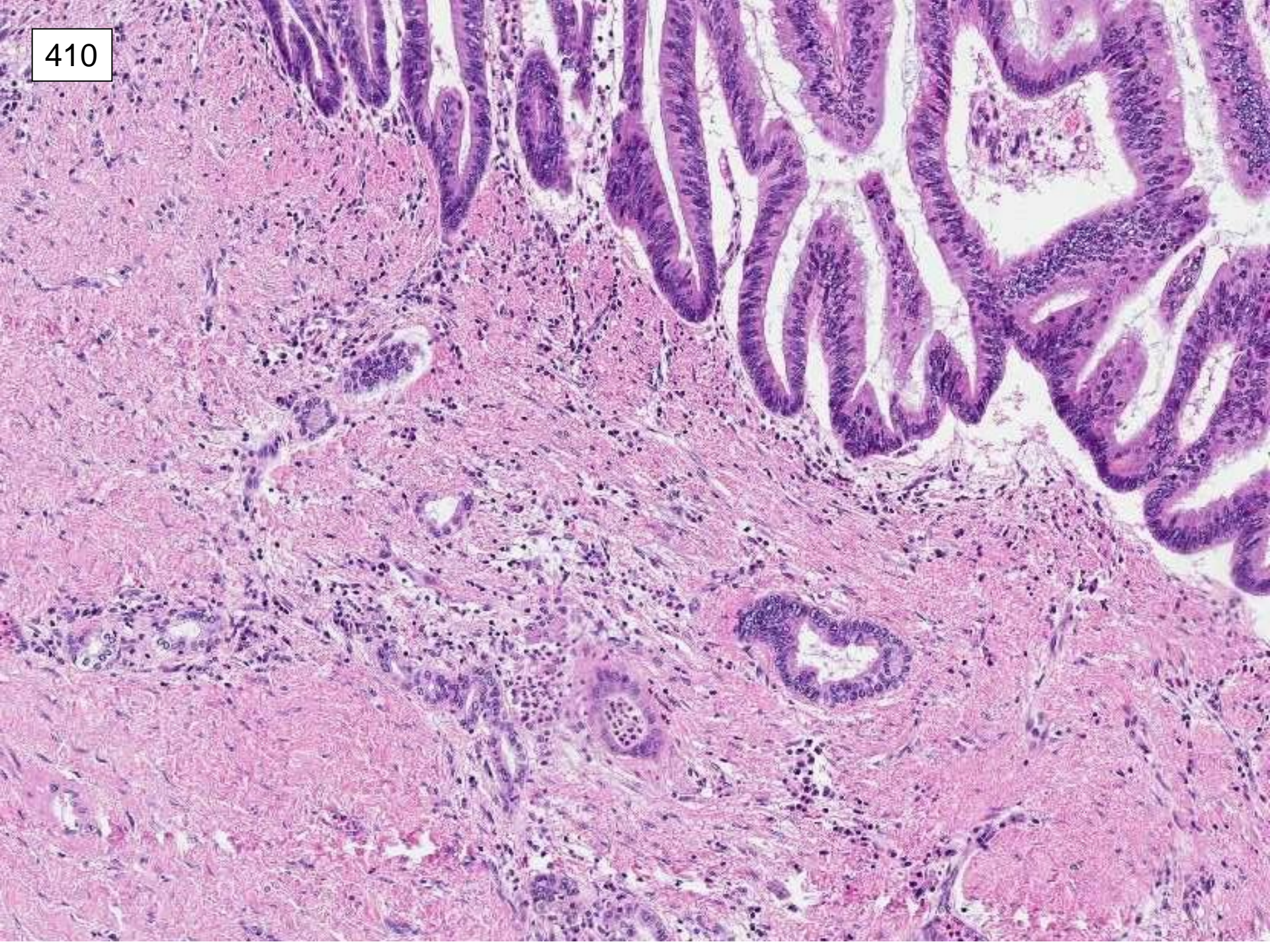
410



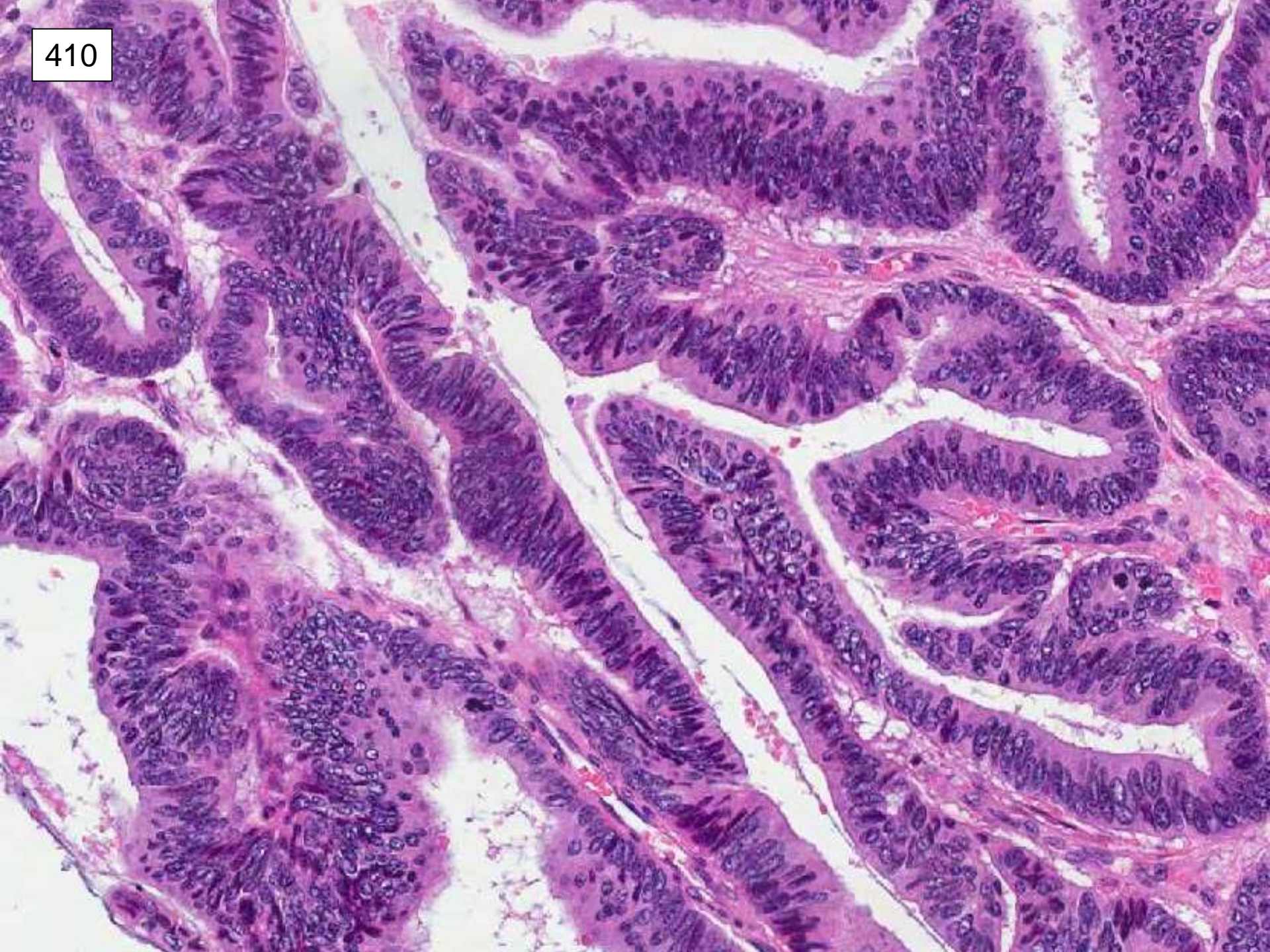
410



410



410



## Case H1/410 Choledochal cyst of left liver

Most responses included nature of cyst  
+ comment on neoplastic change.  
Various terminologies in use.

- 38 Intraductal papillary neoplasia
- 3 Mucinous cystic neoplasm
- 5 Cystadenoma
- 3 Borderline cystadenoma
- 6 Cystadenocarcinoma
- 3 Choledochal cyst
- 1 **Cholangiocarcinoma**
  - 1 neoplastic, probably carcinoma
  - 2 papillary tumour
- 2 Papillary adenoma
- 5 Papillomatosis
- 6 Papillary adenocarcinoma
- 1 Perihilar bile duct adenoma

1 **Papillary adenoma of gall bladder**

- 9 Dysplasia not mentioned
- 2 dysplasia, not graded
- 5 Low grade dysplasia
- 8 intermediate/moderate dysplasia
- 35 High grade dysplasia
- 3 In situ carcinoma
- 2 possible/probable invasion
- 1 **Invasive carcinoma**
- 4 **Cholangiocarcinoma**
- 1 **Adenocarcinoma NOS**

COMMENT:

? **Suitable for scoring**

At meeting: not suitable for scoring

## **Case H1/410** Choledochal cyst of left liver

Original diagnosis: carcinoma (arising in choledochal cyst).

Comment: Educational case: terminology should now be WHO 2010, = intraductal papillary neoplasia of bile duct, with comment on severity of dysplasia.

These may extend along the bile duct, and may block the duct with consequent formation of cystic lesion proximal to obstruction, and fibrosis of the cyst wall.

Unless a choledochal cyst had been documented in the past, or there are other lesions of fibropolycystic spectrum, it is not possible to determine if this had arisen in a choledochal cyst, or if the cyst is part of the tumour.

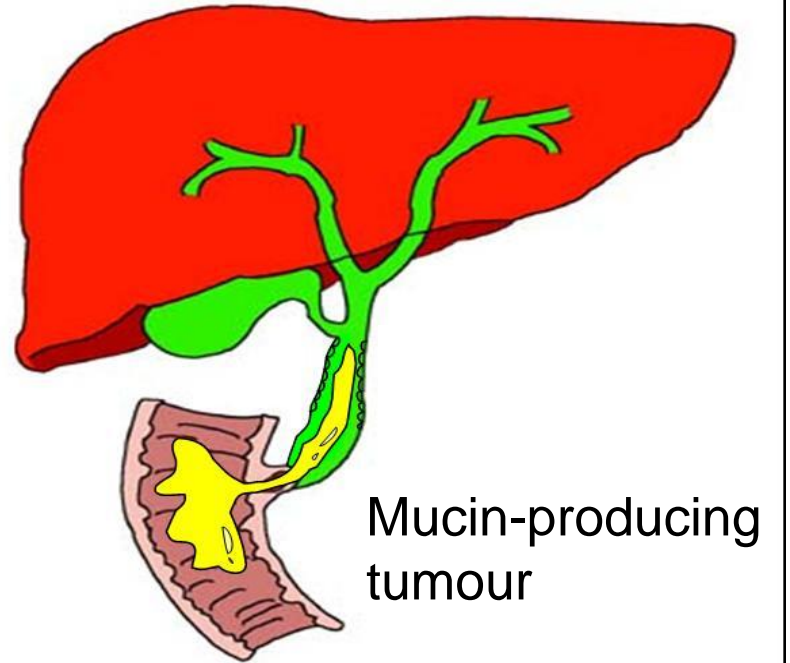
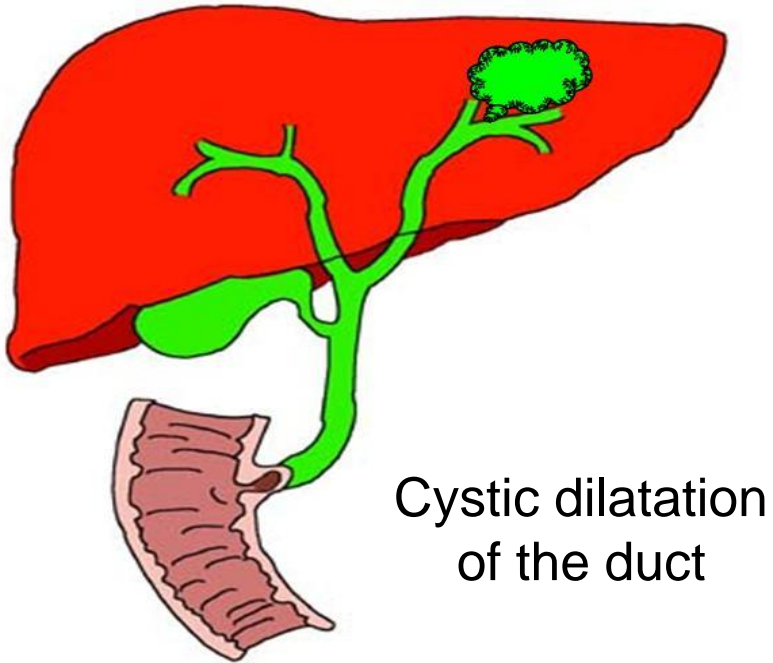
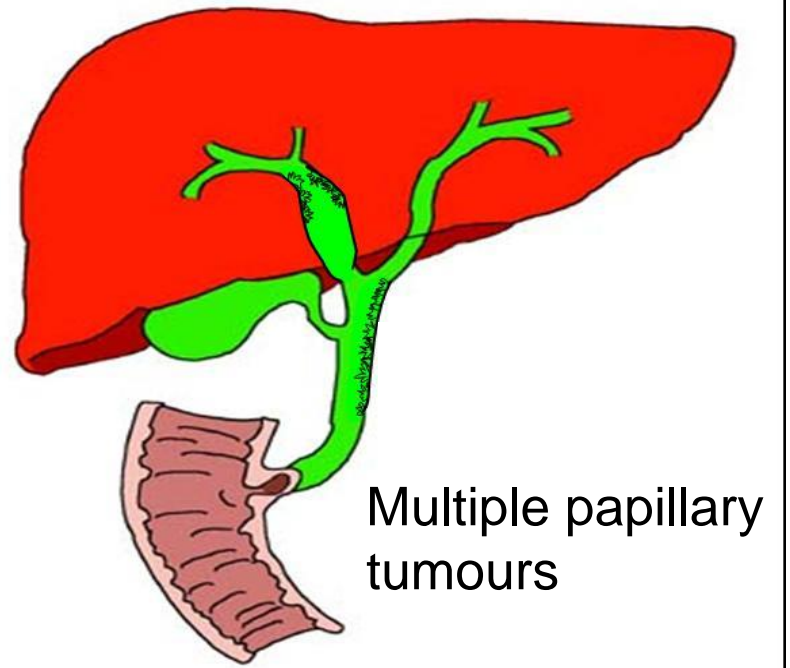
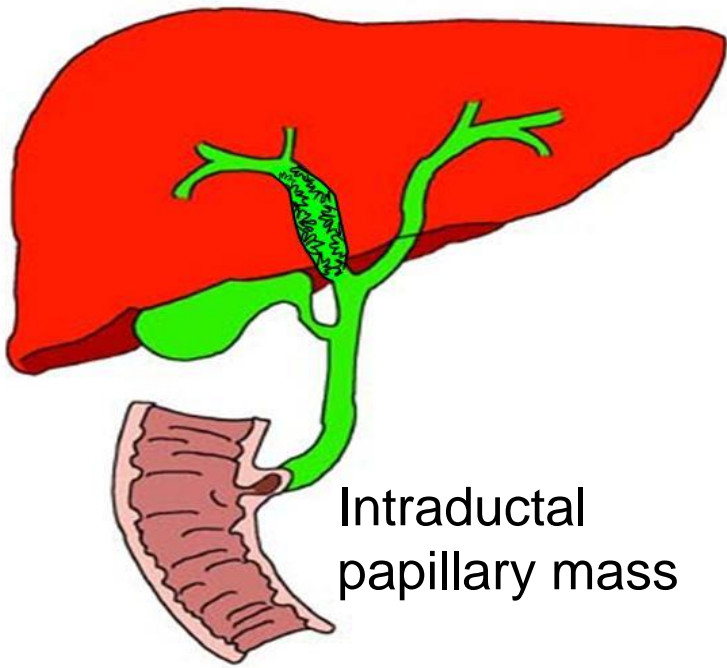
The absence of ovarian-like stroma is important in the differential from mucinous cystic neoplasm (previously = hepatobiliary cystadenoma with mesenchymal stroma).

Papillary cystic lesions of the liver have been re-classified to match the terminology and concepts in pancreatic pathology. .

- Biliary papilloma
- Biliary papillomatosis
- Papillary cholangiocarcinoma
- Mucin-producing bile duct neoplasm
- Biliary cystadenoma/adenocarcinoma  
(without ovarian-like stroma)



**Intraductal papillary neoplasm of the bile duct (IPNB)**



WHO Classification 2010

- Biliary papilloma
- Biliary papillomatosis
- Papillary cholangiocarcinoma
- Mucin-producing bile duct neoplasm
- Biliary cystadenoma/adenocarcinoma  
(without ovarian-like stroma)



Intraductal papillary neoplasm of the bile duct (IPNB)

- Biliary cystadenoma/adenocarcinoma with **ovarian-like stroma**



Mucinous cystic neoplasm (MCN) of the liver

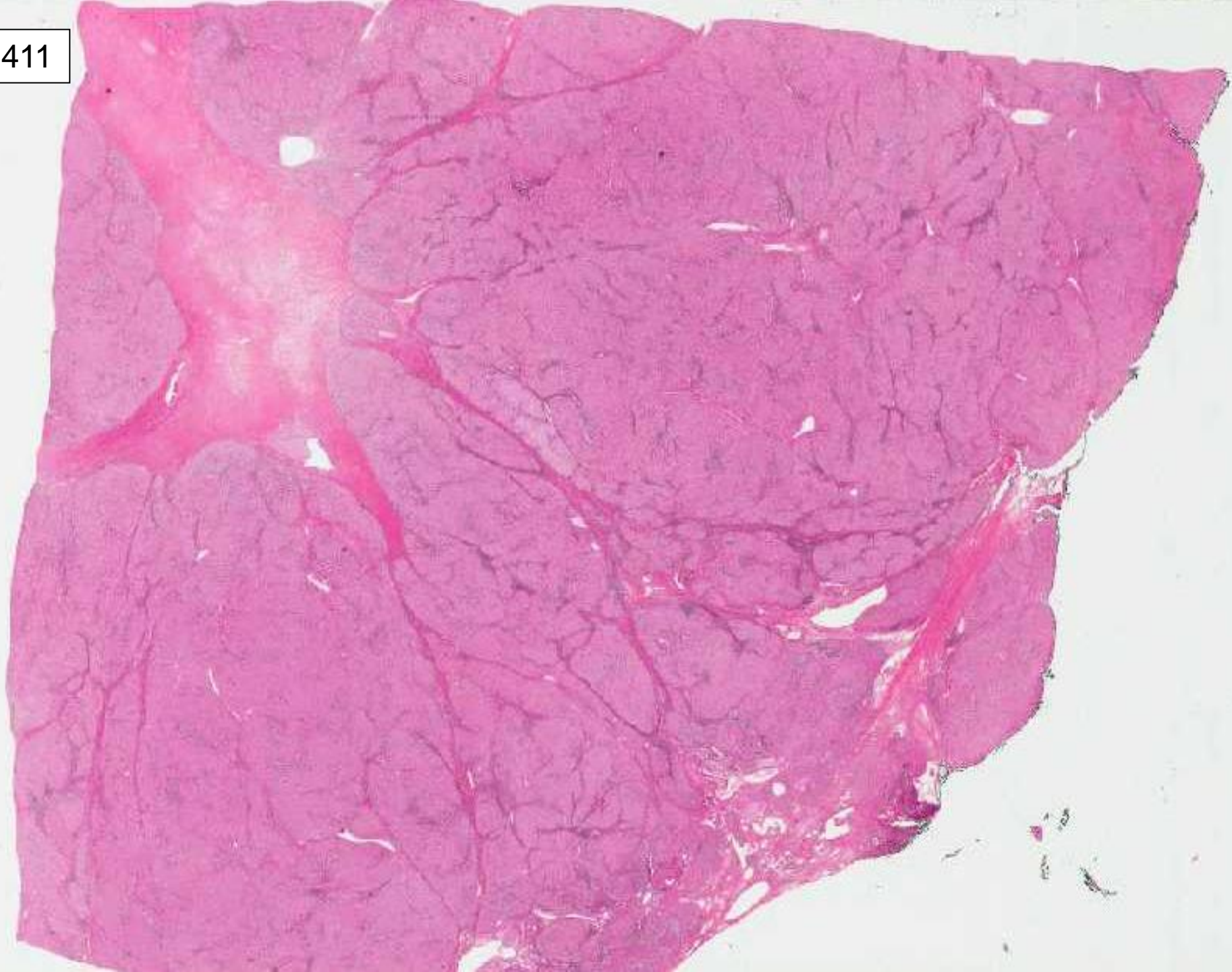
**Case H1/411**

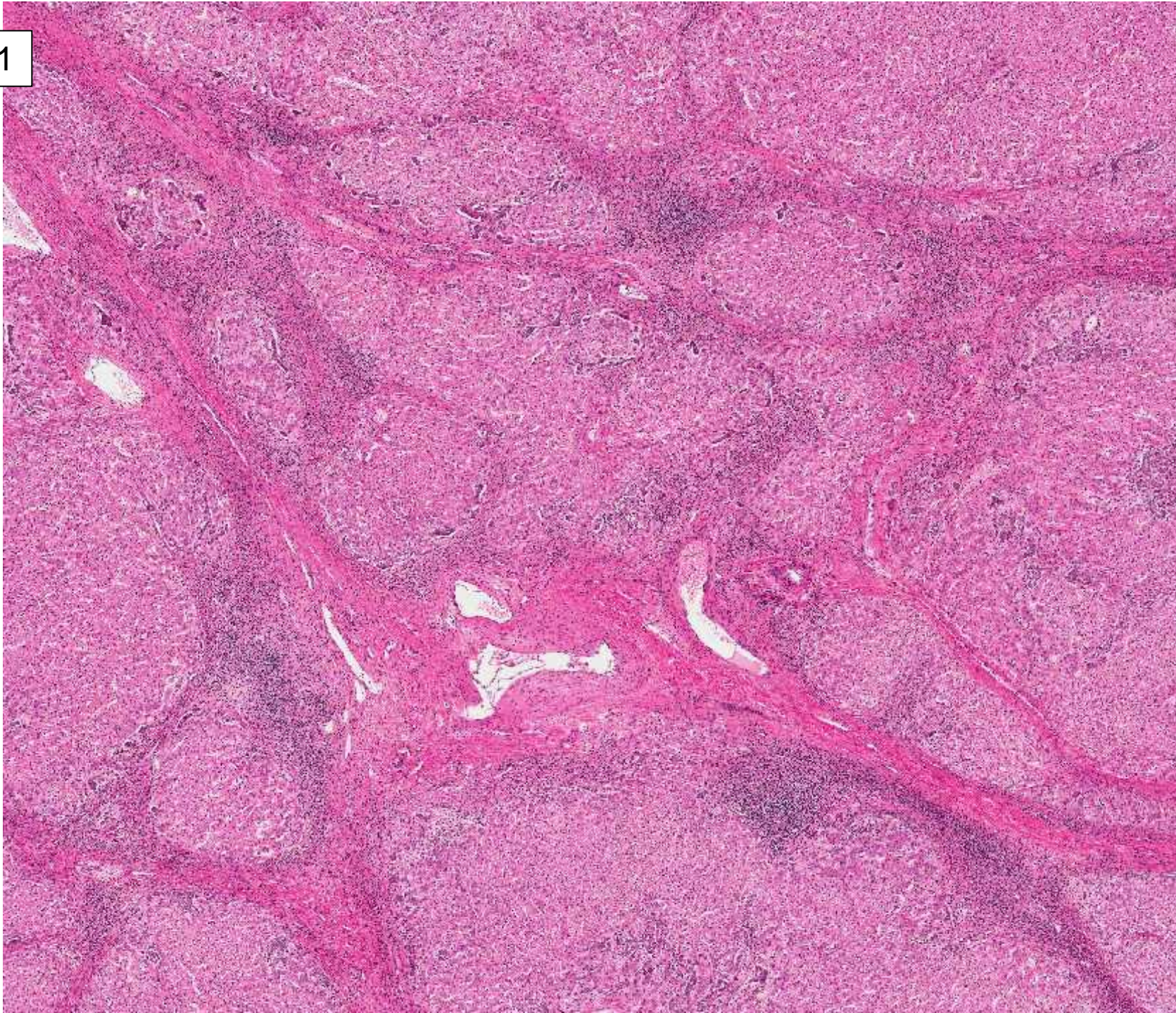
**Age 39, Female**

Liver Lesion segment VI

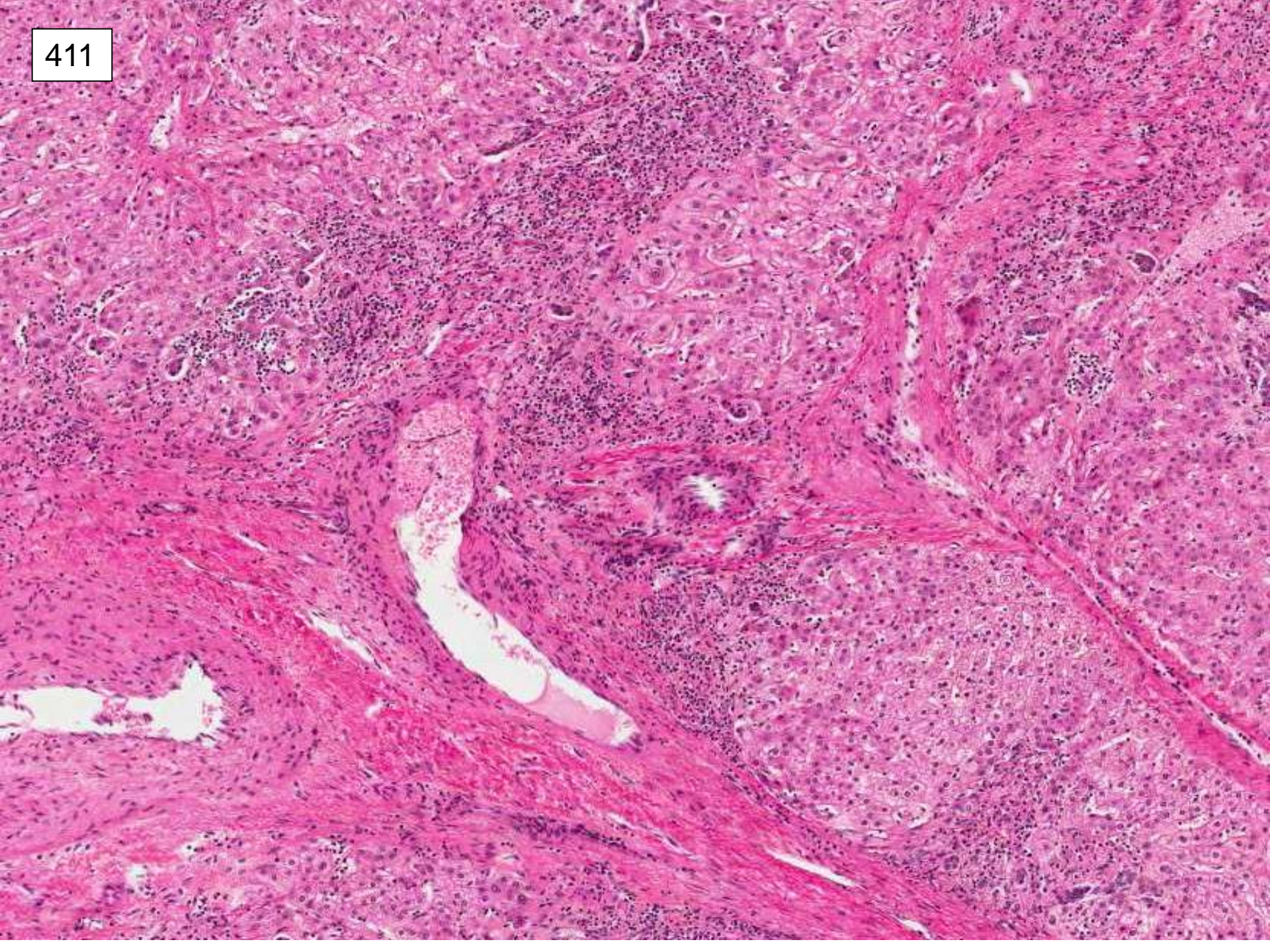
Wedge of liver 8x6.5x6cm, weighing 136g

411

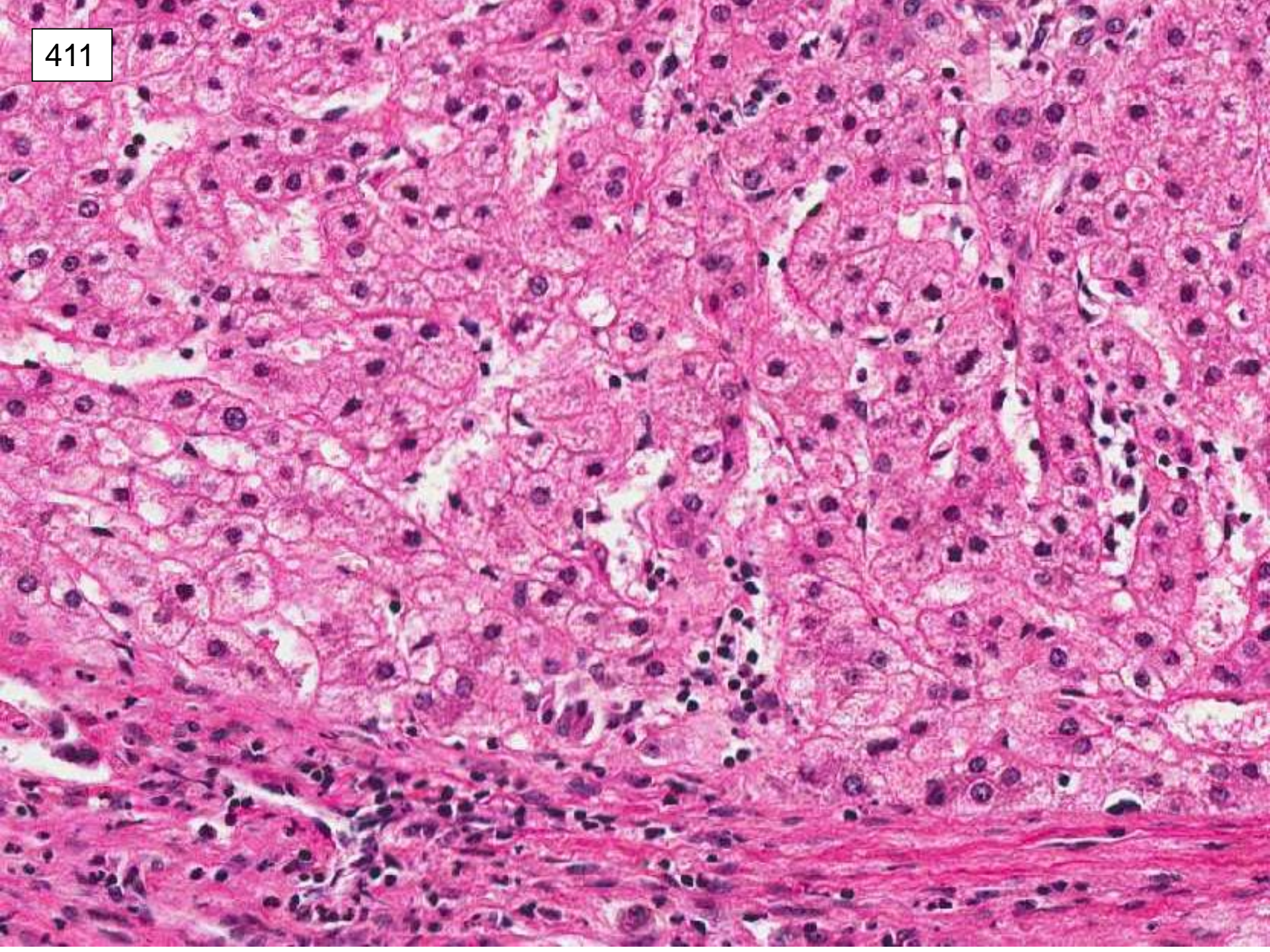




411



411



## Case H1/411 39 F

Liver Lesion segment VI

74 Focal nodular hyperplasia

2 Focal nodular hyperplasia, needs immunos to exclude inflammatory adenoma

Suggested scoring: accept all = agreed at meeting.

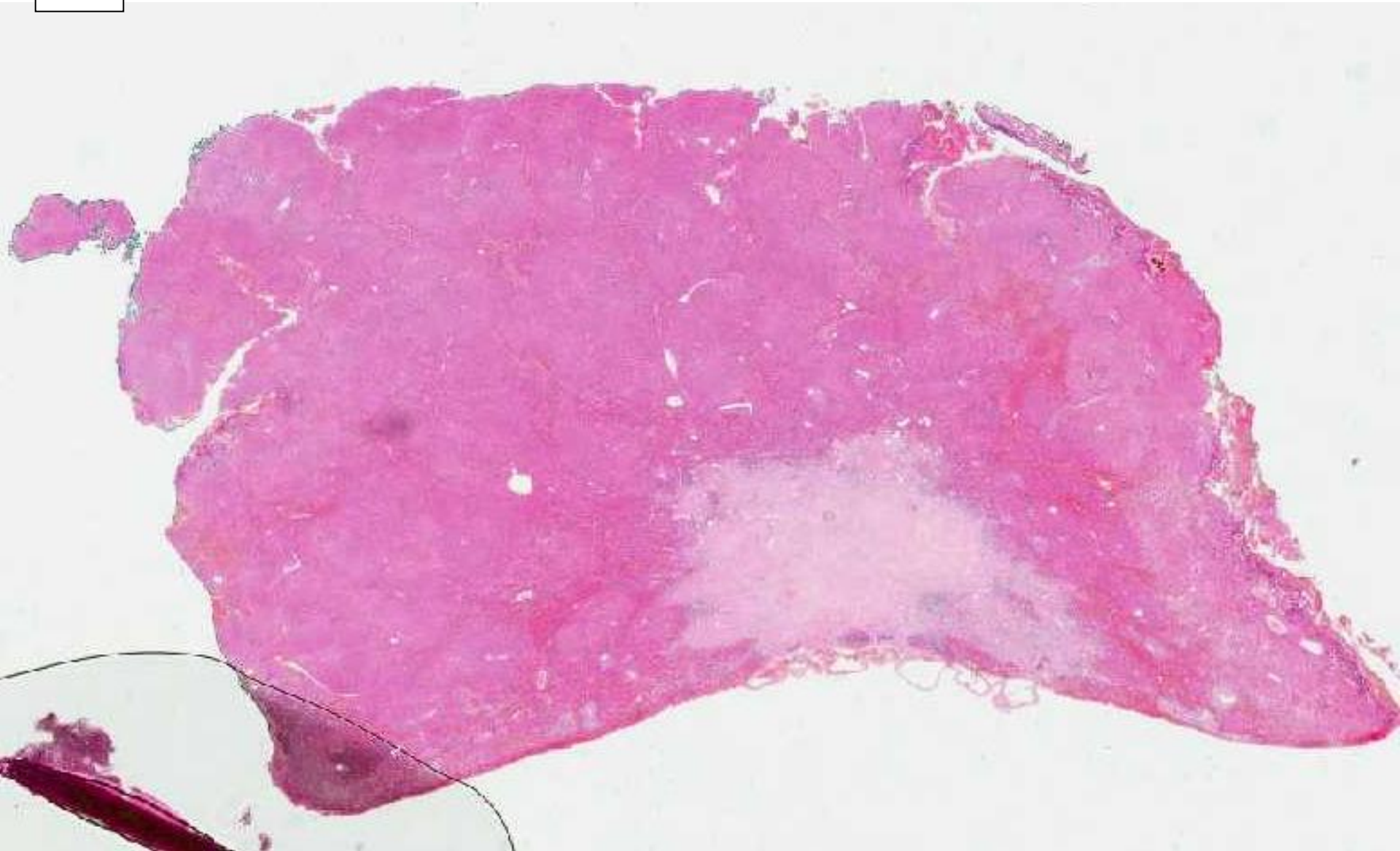
Original diagnosis: Focal nodular hyperplasia.

**H1/412**

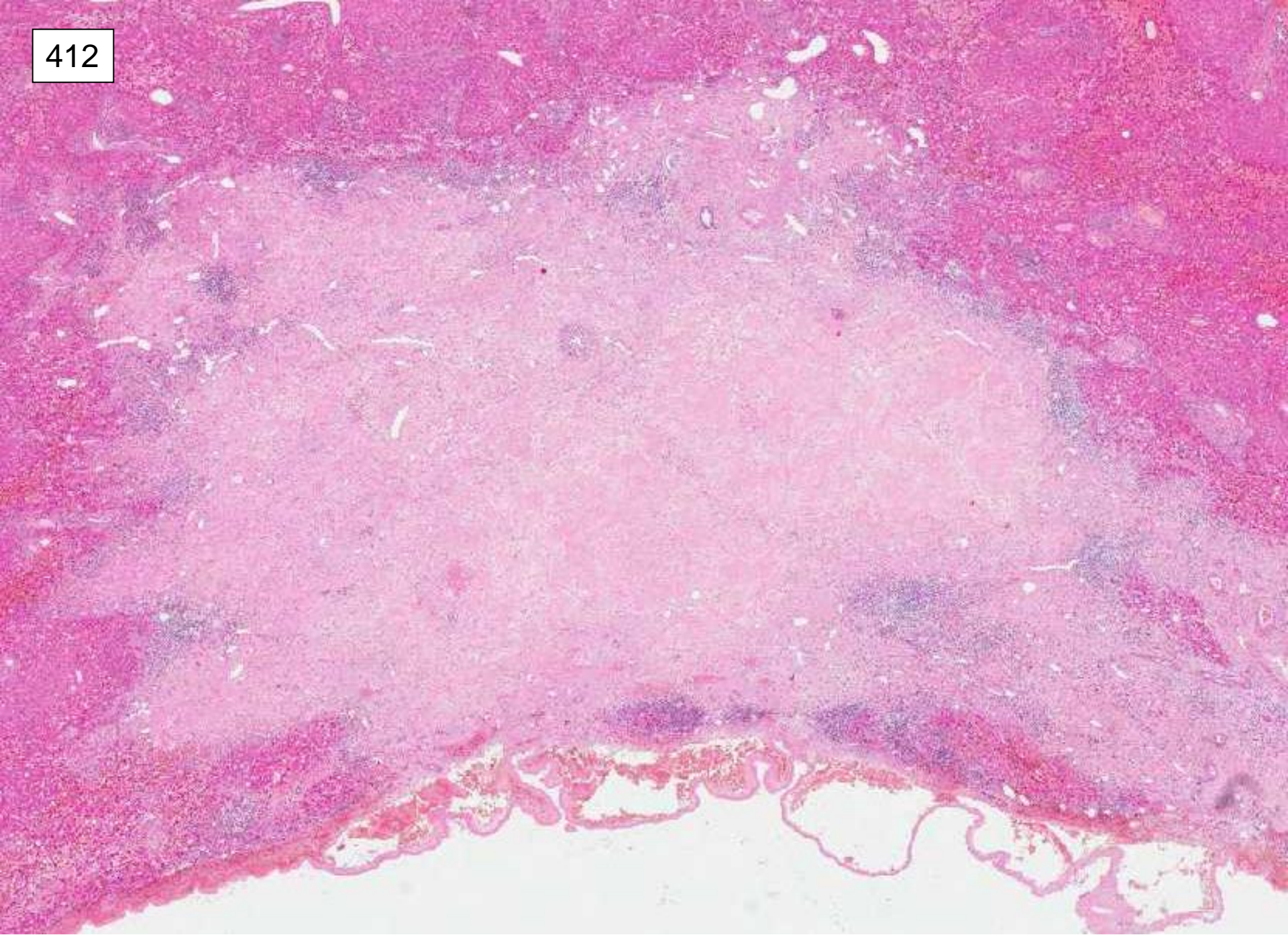
**Age 65, Male**

Colorectal Ca post chemo

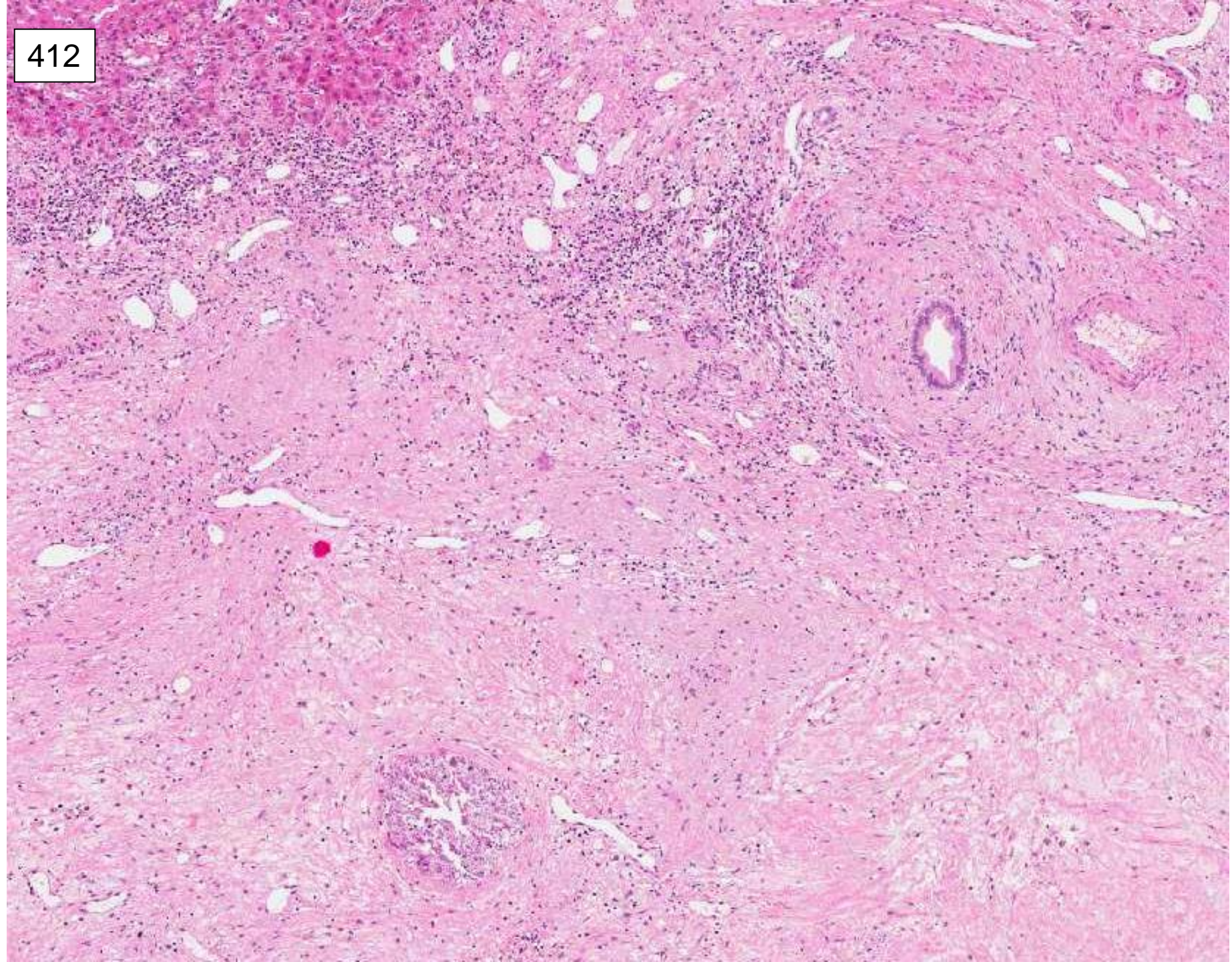
Wedge of liver 28x26x8mm with 11mm pale  
nodule under the capsule



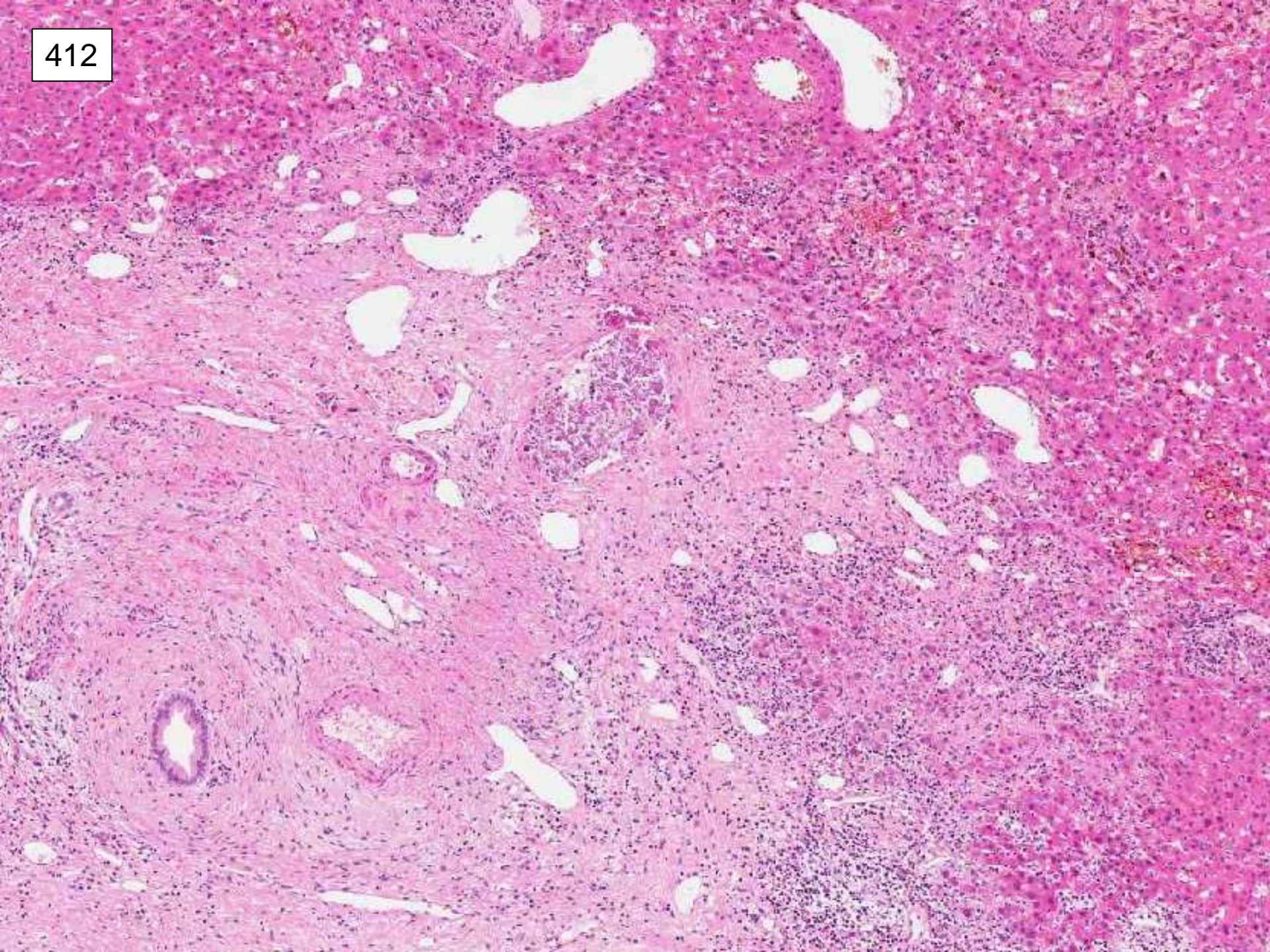
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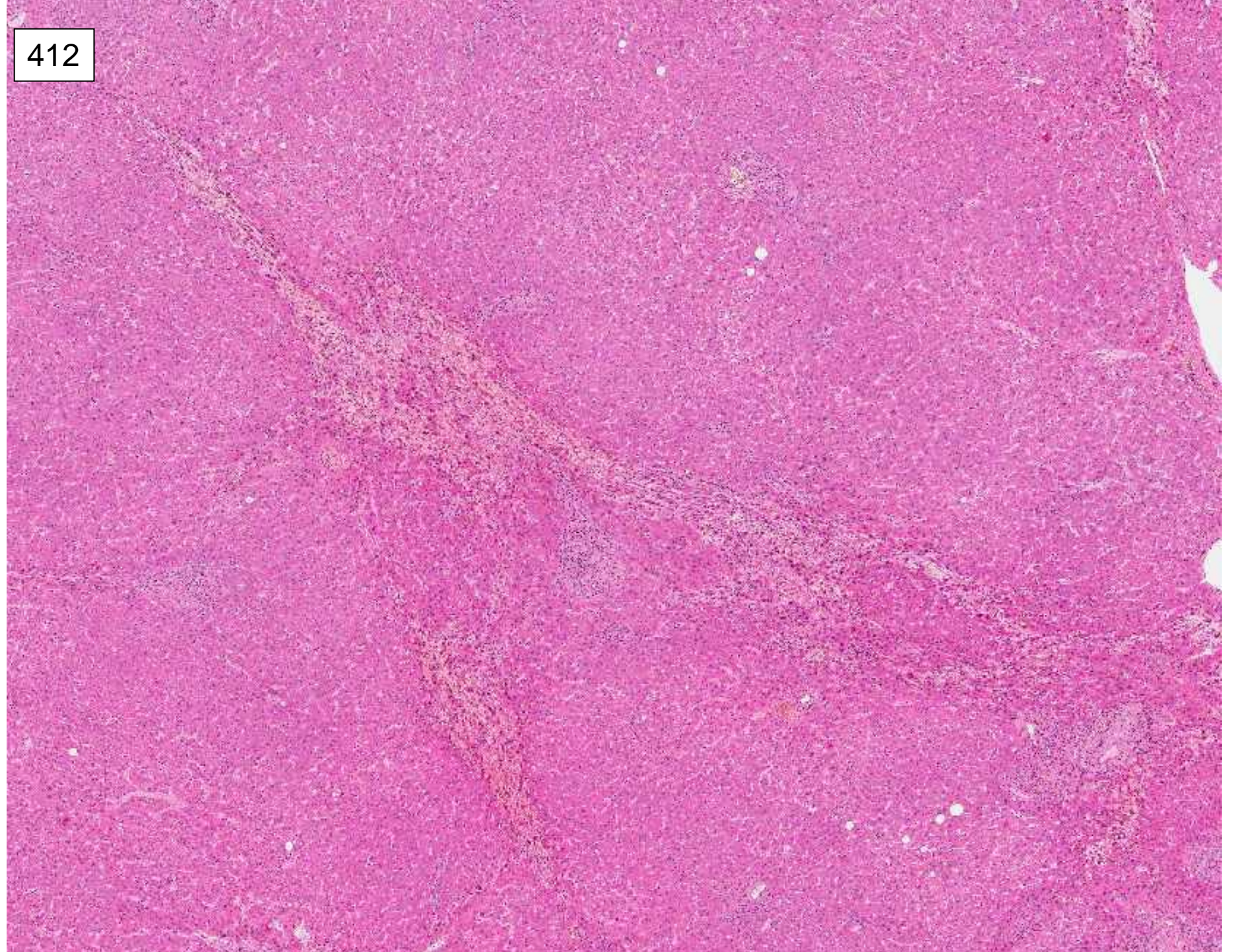
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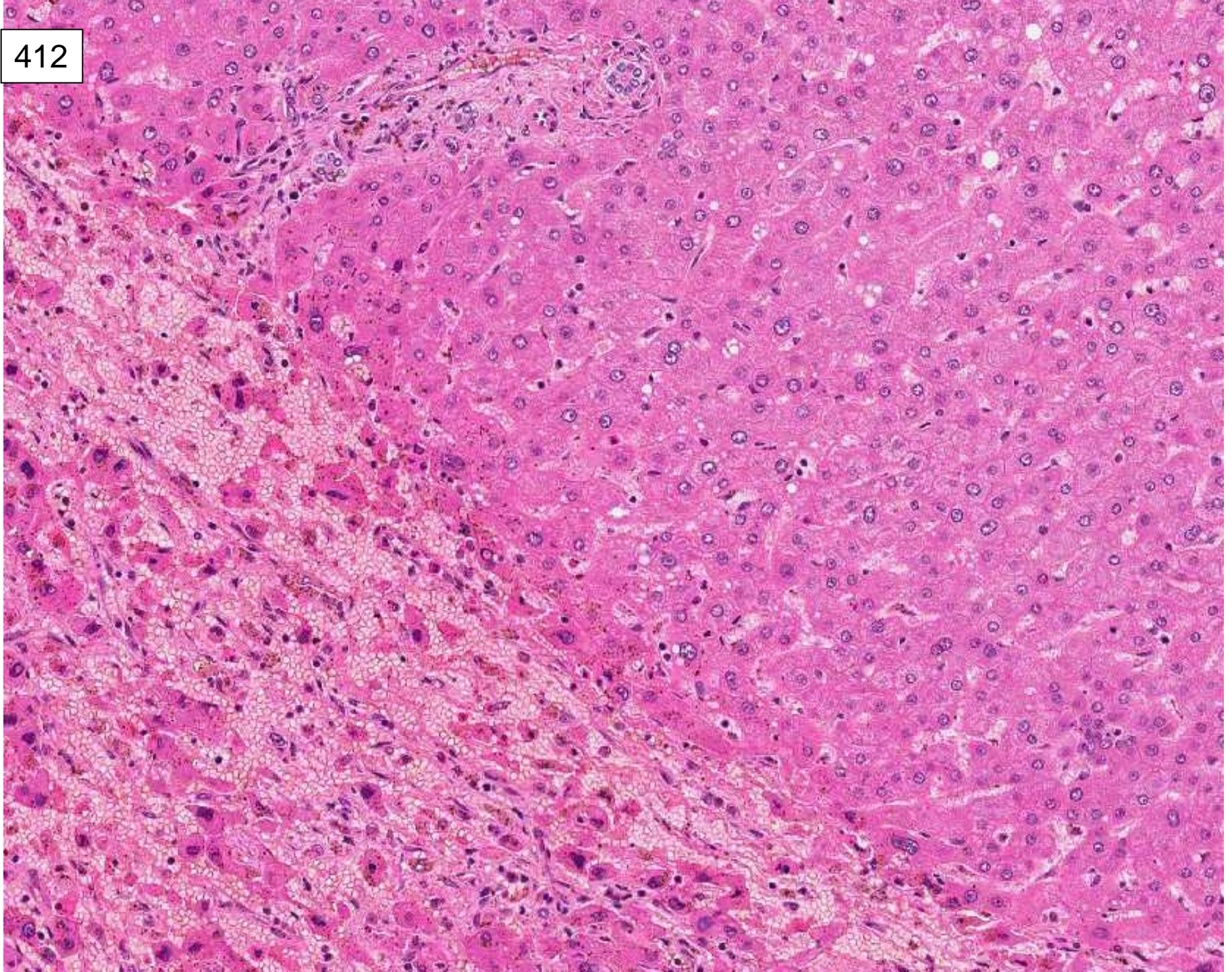
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# H1/412 Colorectal Ca post chemo

61 c/w complete response in met. Ca

6 Differential that includes complete response in met Ca, not first

4 Sclerosed haemangioma

1 'fibrous nodule, no specific features, not tumour

2 scar, old infarct

1 'solitary necrotic nodule, possibly sclerosed haemangioma'

40 Background SOS, NRH or equivalent

25 Background not mentioned

1 Background features due to SOL

2 Background normal/unremarkable

1 Outflow obstruction

1 'scar, congestion and nodularity akin to diffuse nodular hyperplasia'

Suggested scoring: accept all responses of definite or possible complete response in Ca  
Score 0 if nodule thought to have other cause  
background insufficient consensus for scoring  
At meeting: agree – check that possibility of regressed tumour is not mentioned.

# H1/412 Colorectal Ca post chemo

Original diagnosis:

regressed metastatic adenocarcinoma; fibrosis and calcification.

Comment: controversial case – any response indicating absence of malignancy could be considered correct. However, voted to use proposed scoring since there was sufficient evidence of necrosis of previous tumour to suggest this had been a metastasis, and this is clinically important to recognise.

The background liver shows characteristic changes of sinusoidal obstruction syndrome evolving into nodular regenerative hyperplasia, an intrinsic hepatotoxicity with oxaliplatin, seen in around 50% patients having neoadjuvant treatment with this drug prior to liver resection (insufficient comments on this, so not scored).

**H1/413**

**Age 63, Female**

Abnormal Liver function tests. History of Sarcoidosis ? Steatosis ? Fibrosis

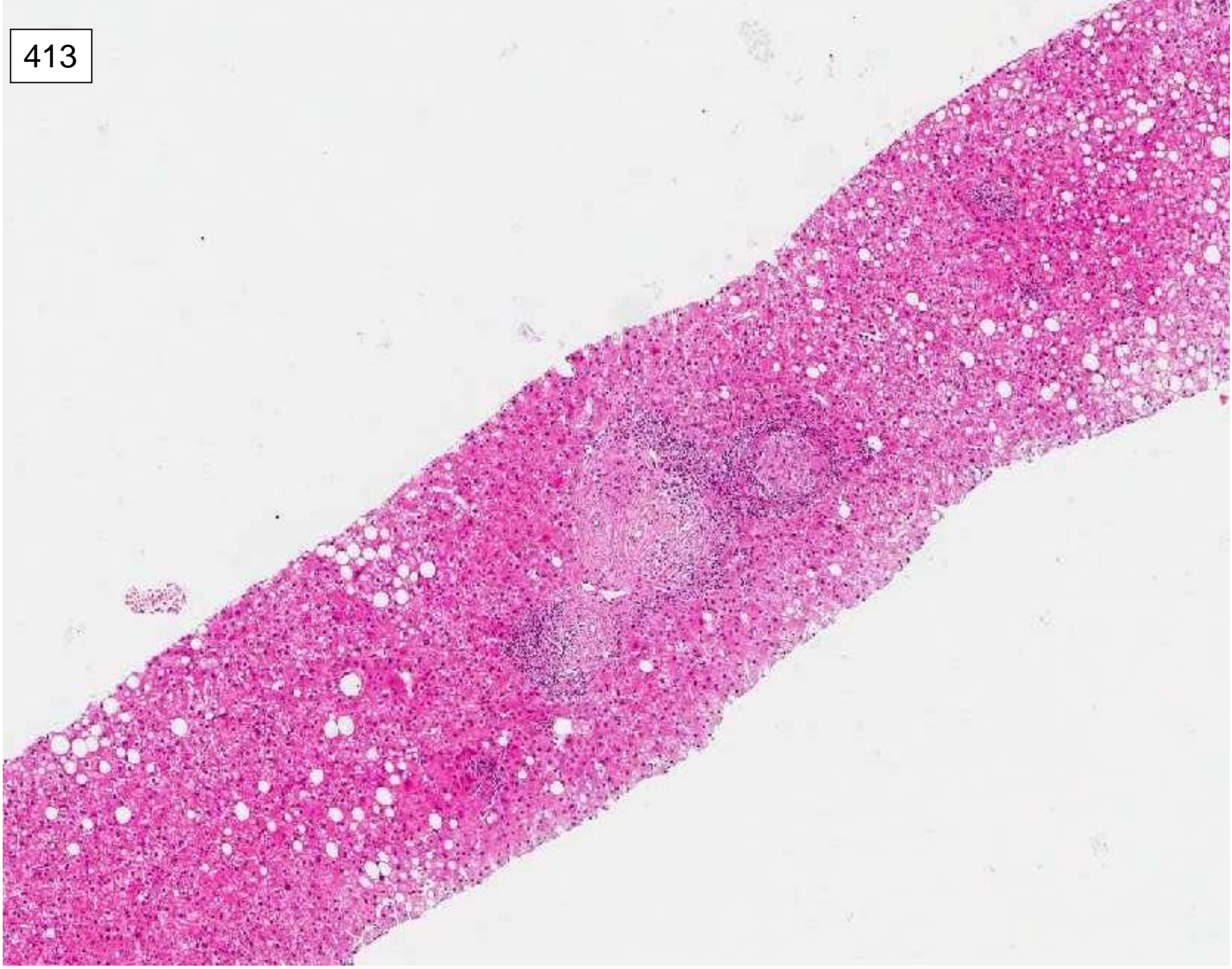
3 cores of liver combined length 40mm

(+retic, masson trichrome and van Gieson on website)

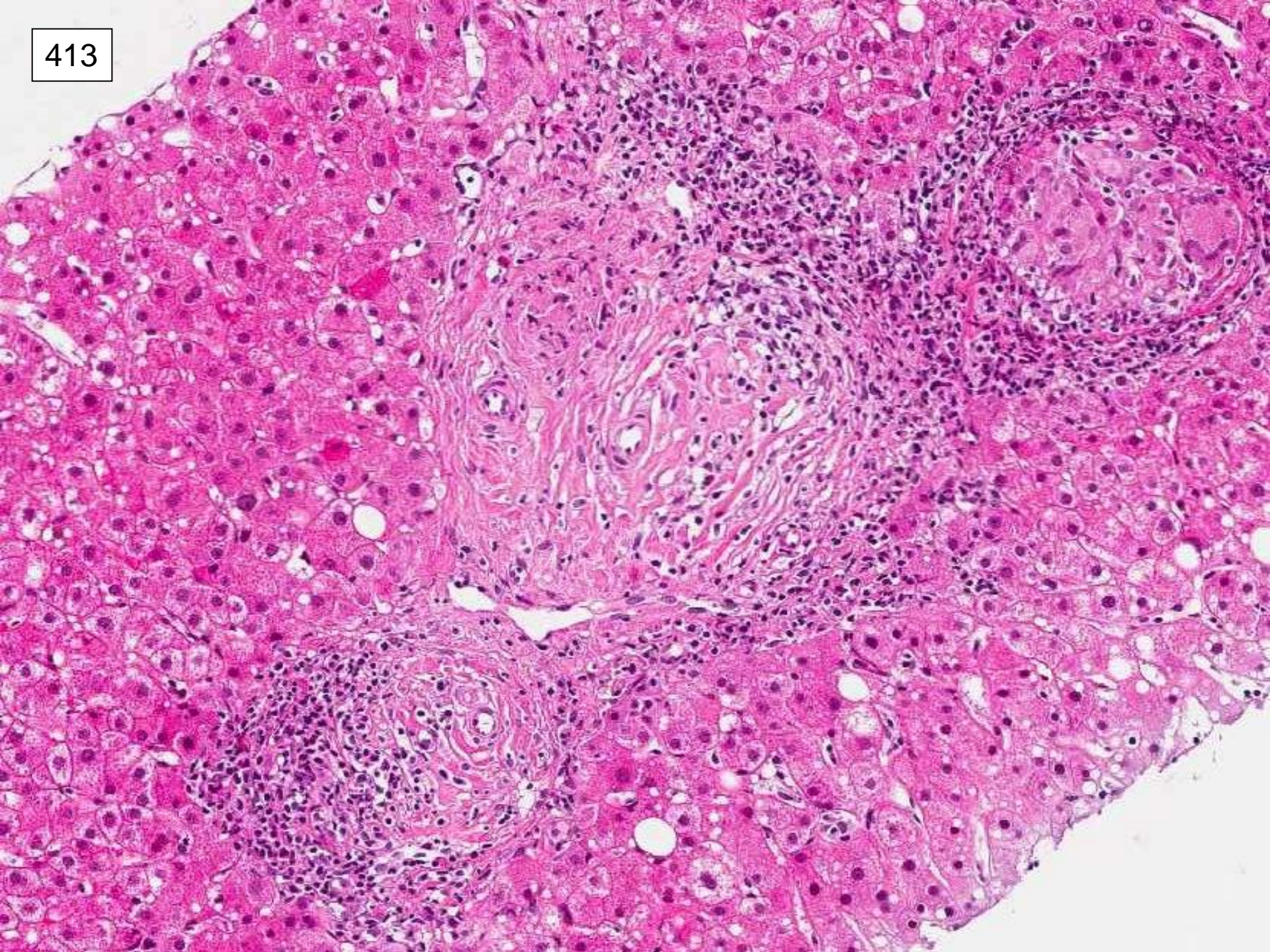
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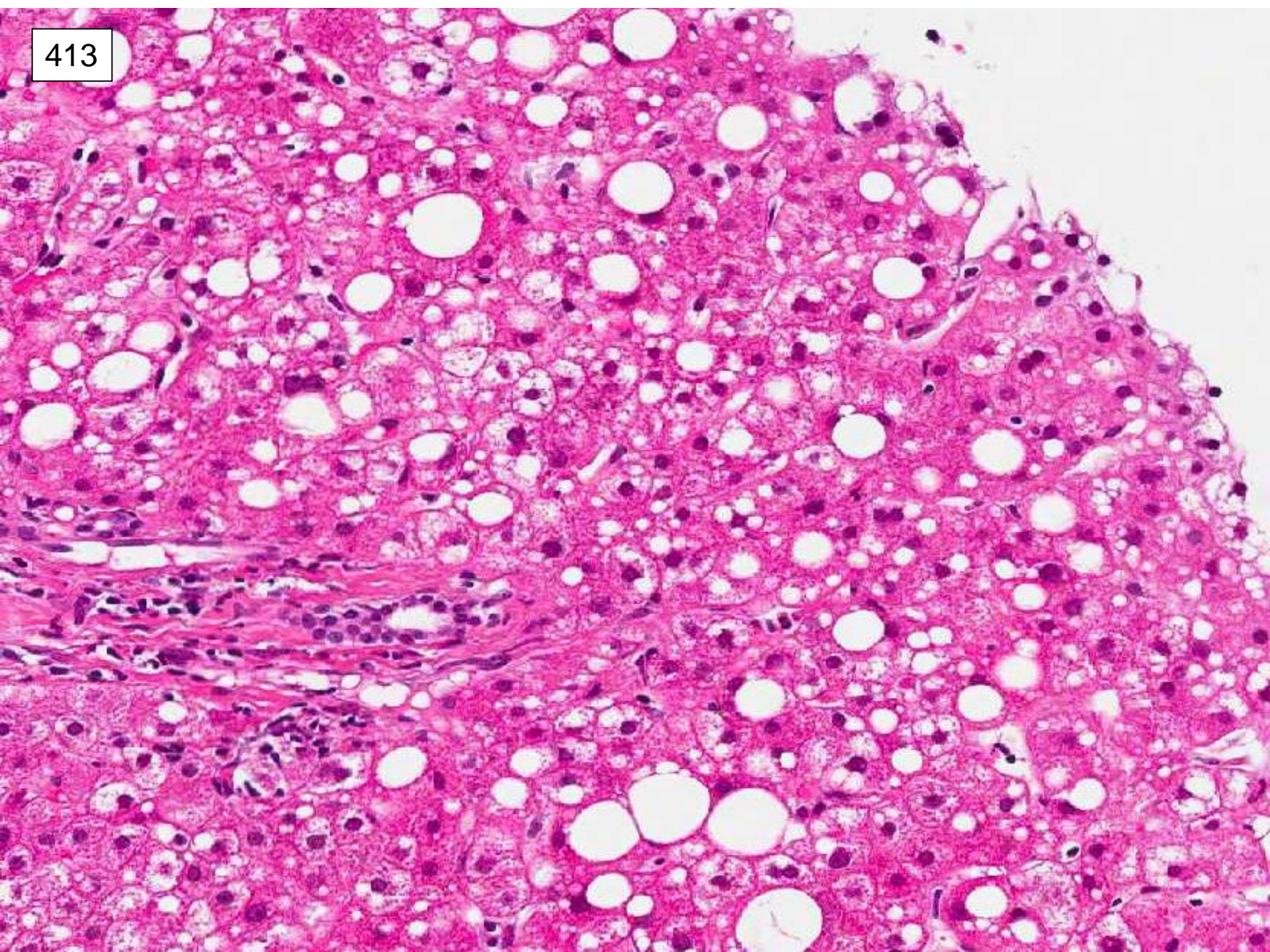
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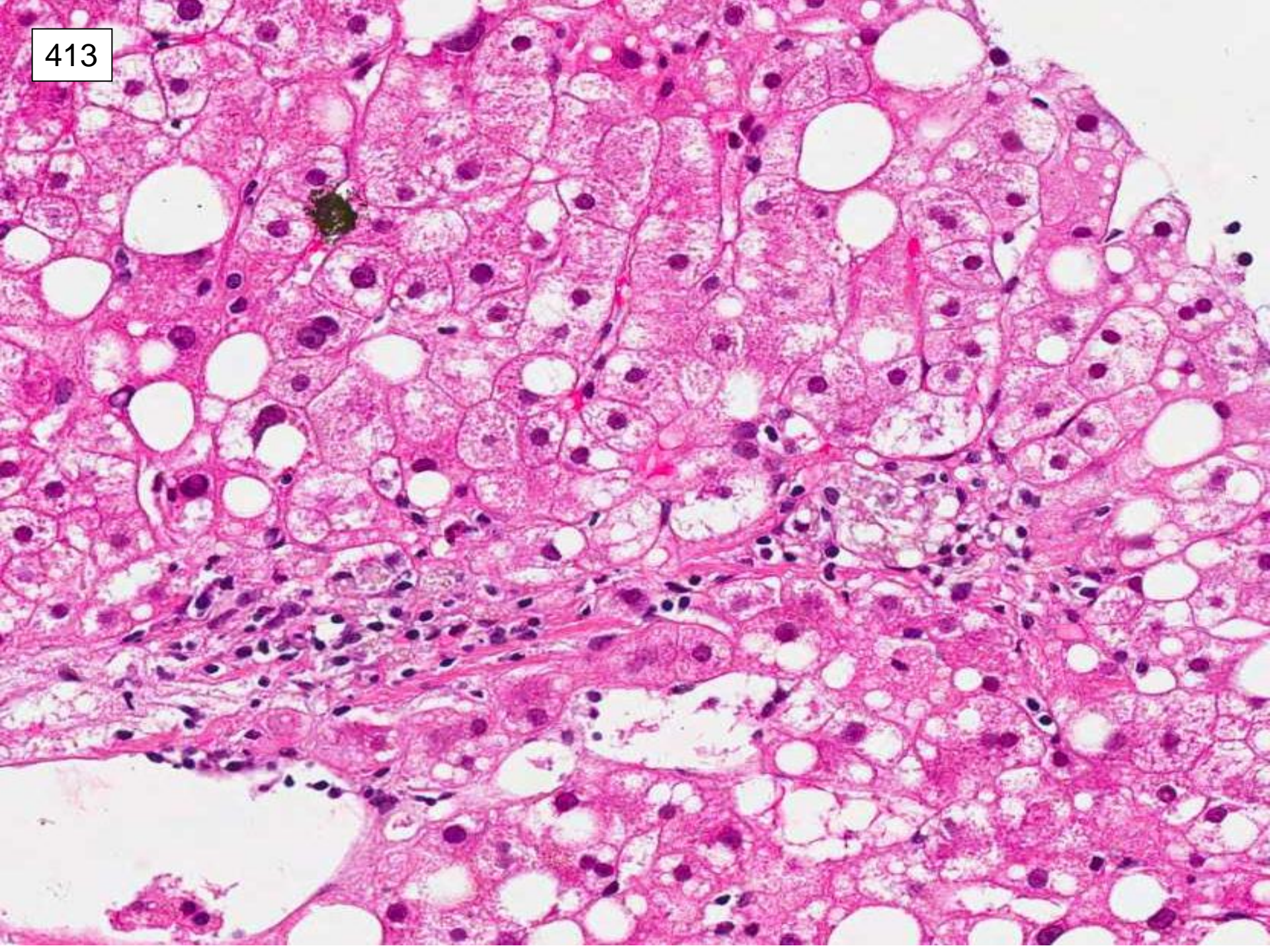
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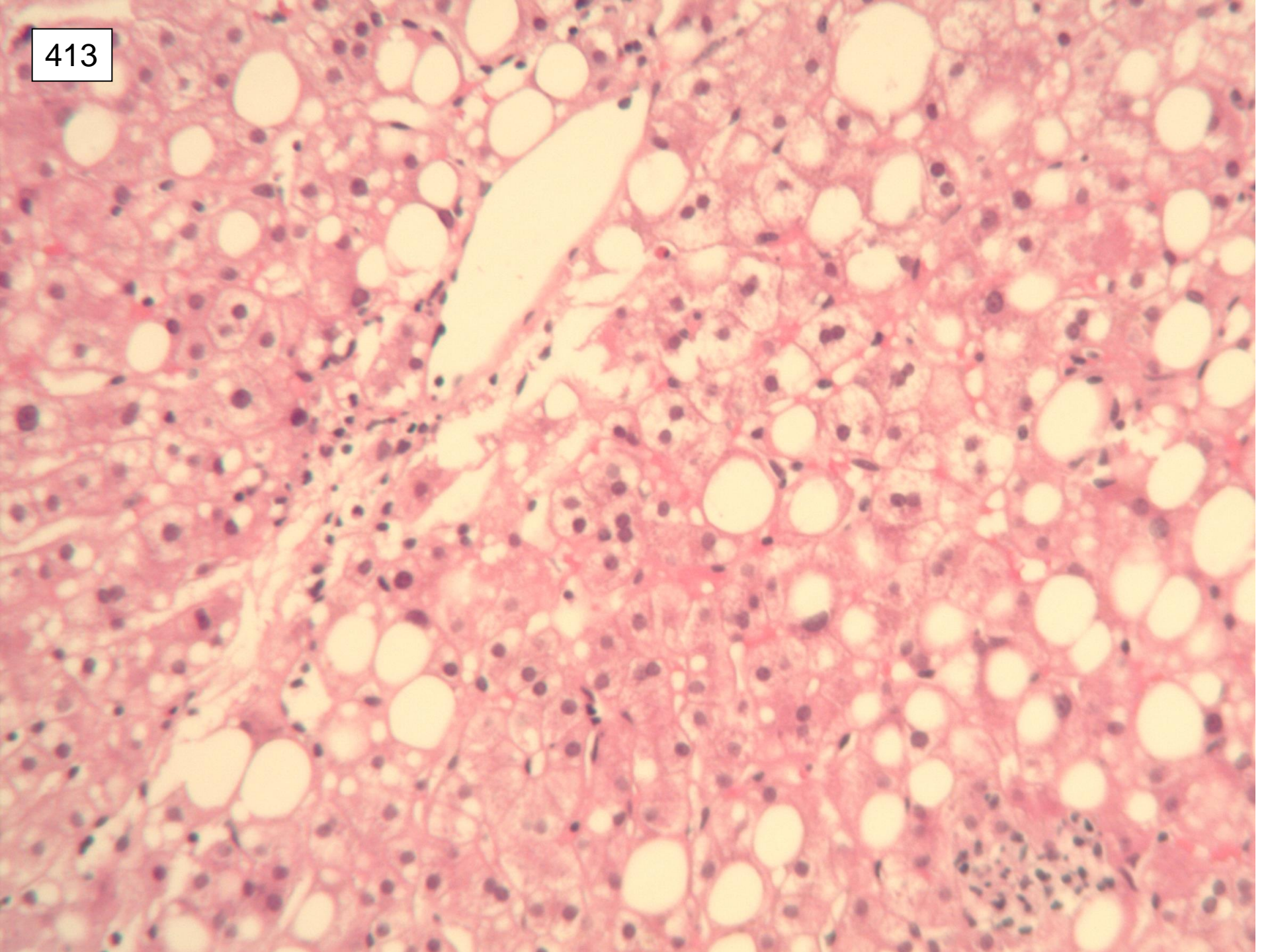
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413



413



# H1/413 63 F Abnormal Liver function tests.

History of Sarcoidosis ? Steatosis ? Fibrosis

57 Granulomas, c/w sarcoid

19 granulomas, c/w sarcoid  
exclude other causes

8 also ductopaenia

43 Steatosis

27 Steatohepatitis

2 Borderline steatohepatitis

2 Fatty change not mentioned

Suggested scoring: accept all with granulomas c/w sarcoid.

? Lose 5 marks for no mention of steatosis = agreed

Discussed at meeting – comment on steatosis is required for full marks.

## **H1/413 63 F** Abnormal Liver function tests.

History of Sarcoidosis ? Steatosis ? Fibrosis

Original diagnosis:

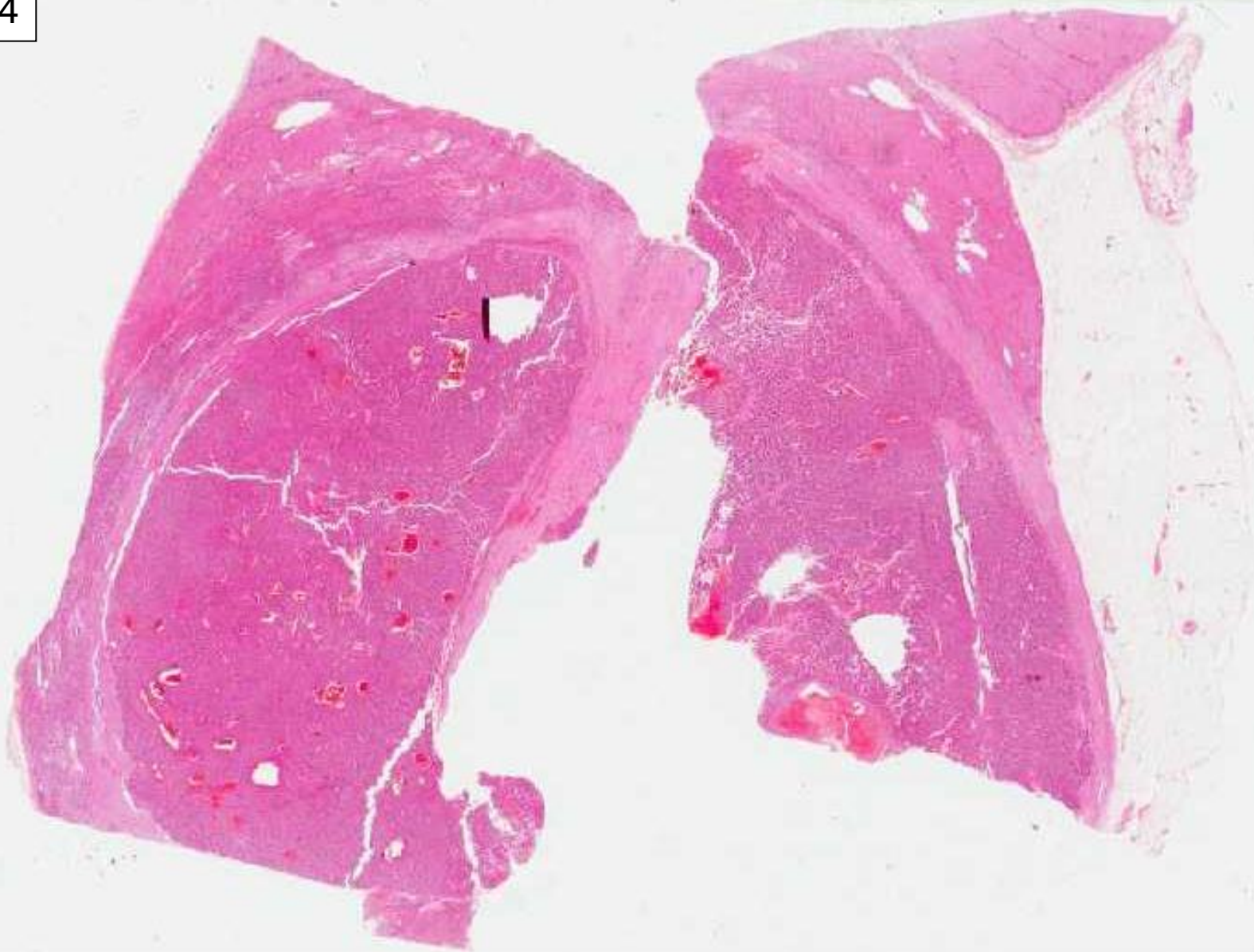
1. Granulomatous hepatitis with lymphocytic cuff in keeping with sarcoidosis
  2. Focal hyalinised collagen in relation to a few granulomas (MT stain)
  3. Background significant steatosis
- Discussion regarding additional diagnosis of fatty liver disease. This is required for full marks, since this is not a component of sarcoidosis and prompts investigation and management of background conditions (alcohol, metabolic syndrome).

**H1/414**

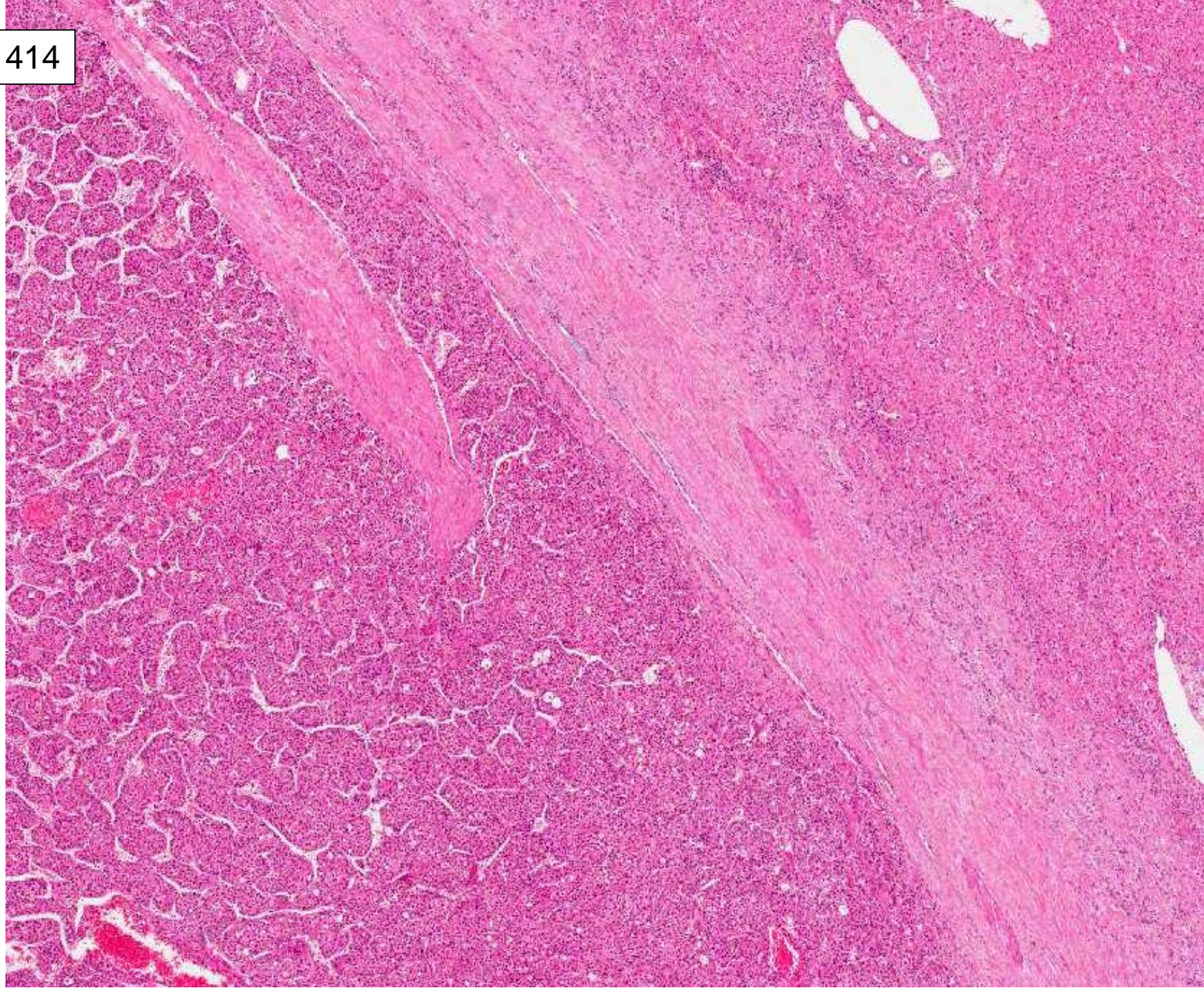
**Age 79, Female**

Lesion in left lobe of liver and CBD stone

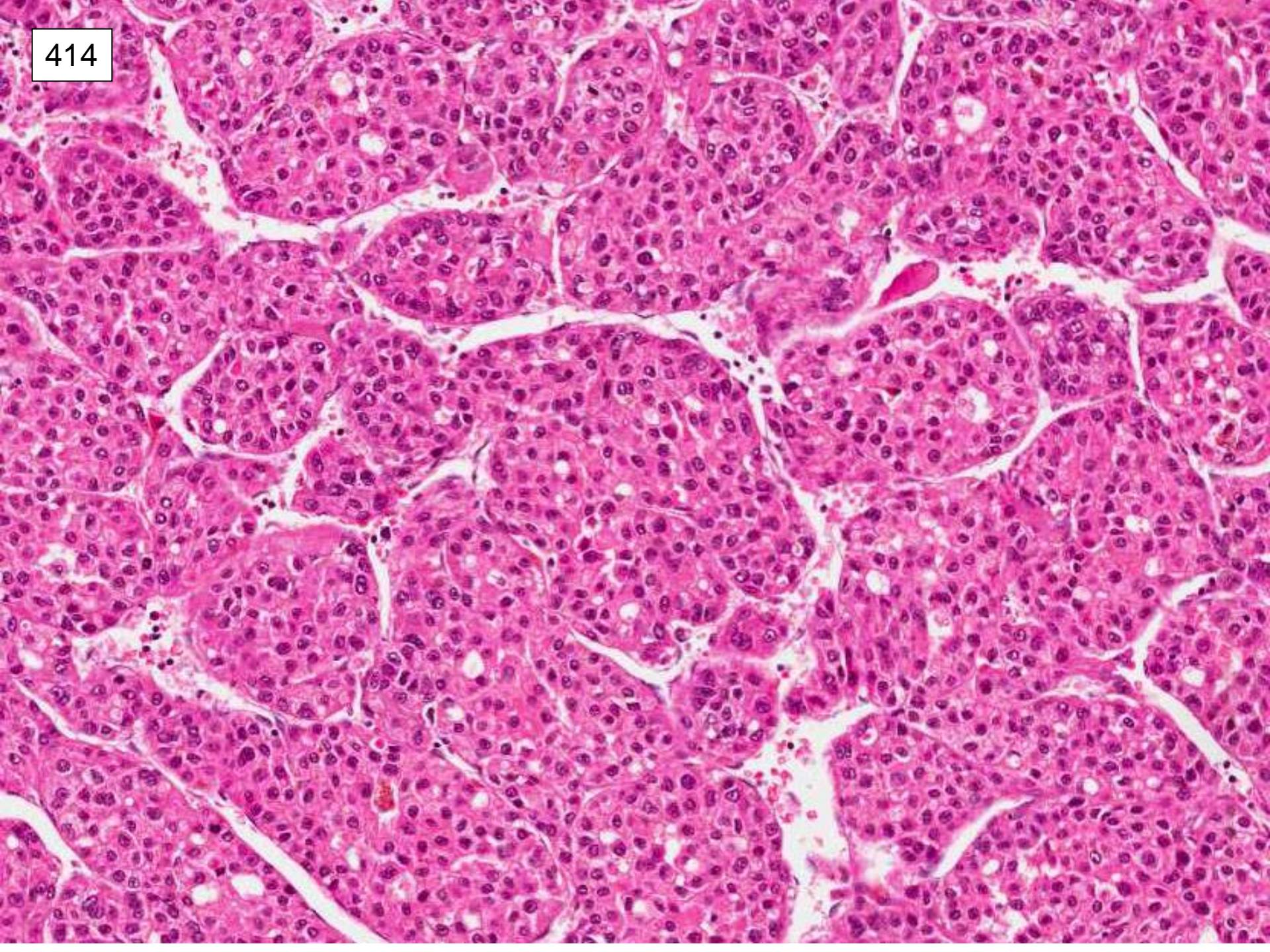
Circumscribed lesion 50x45x45mm and is red brown with central necrosis. CBD stones confirmed (also Shikata stain on website and photomic)

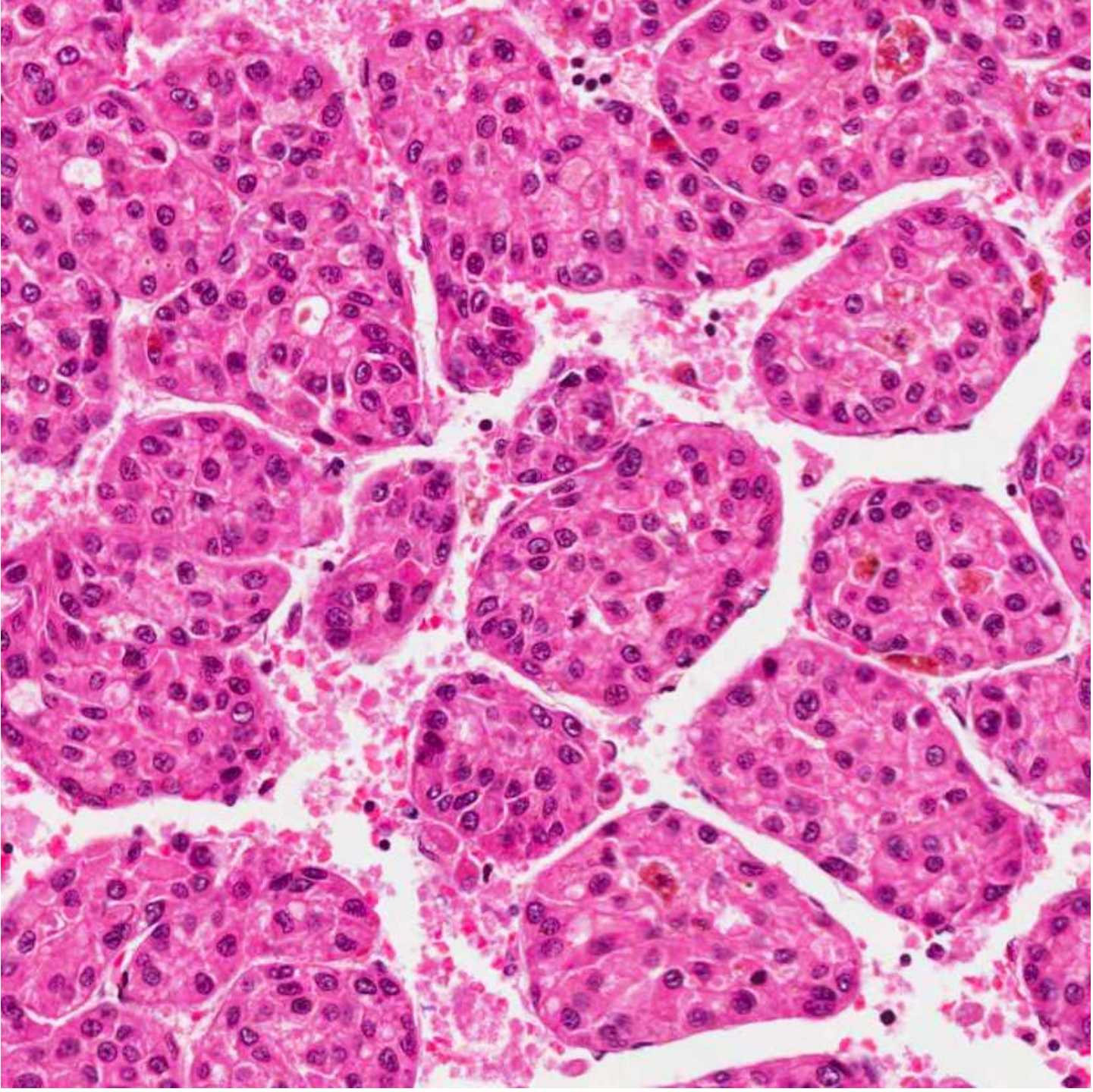


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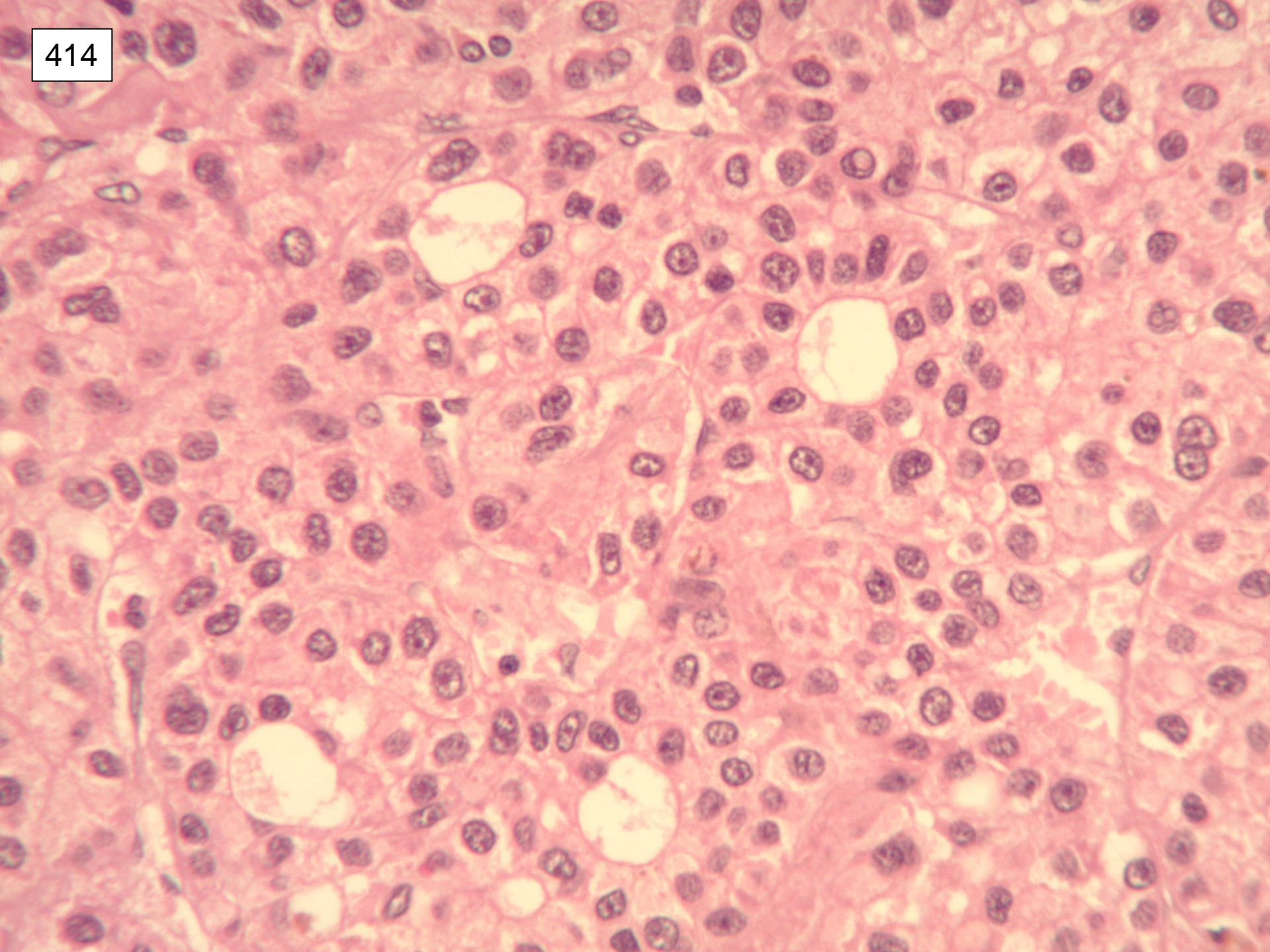


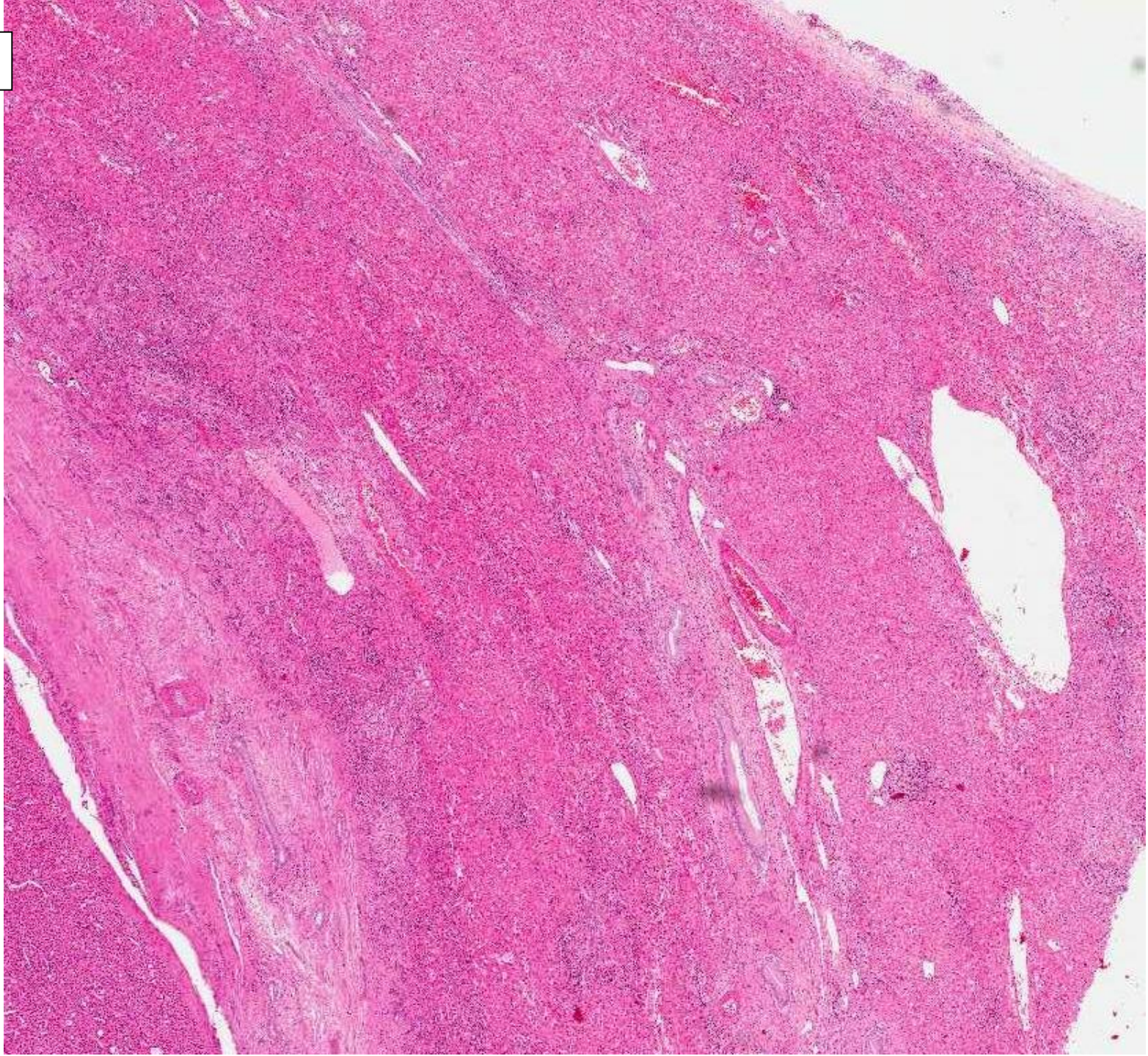
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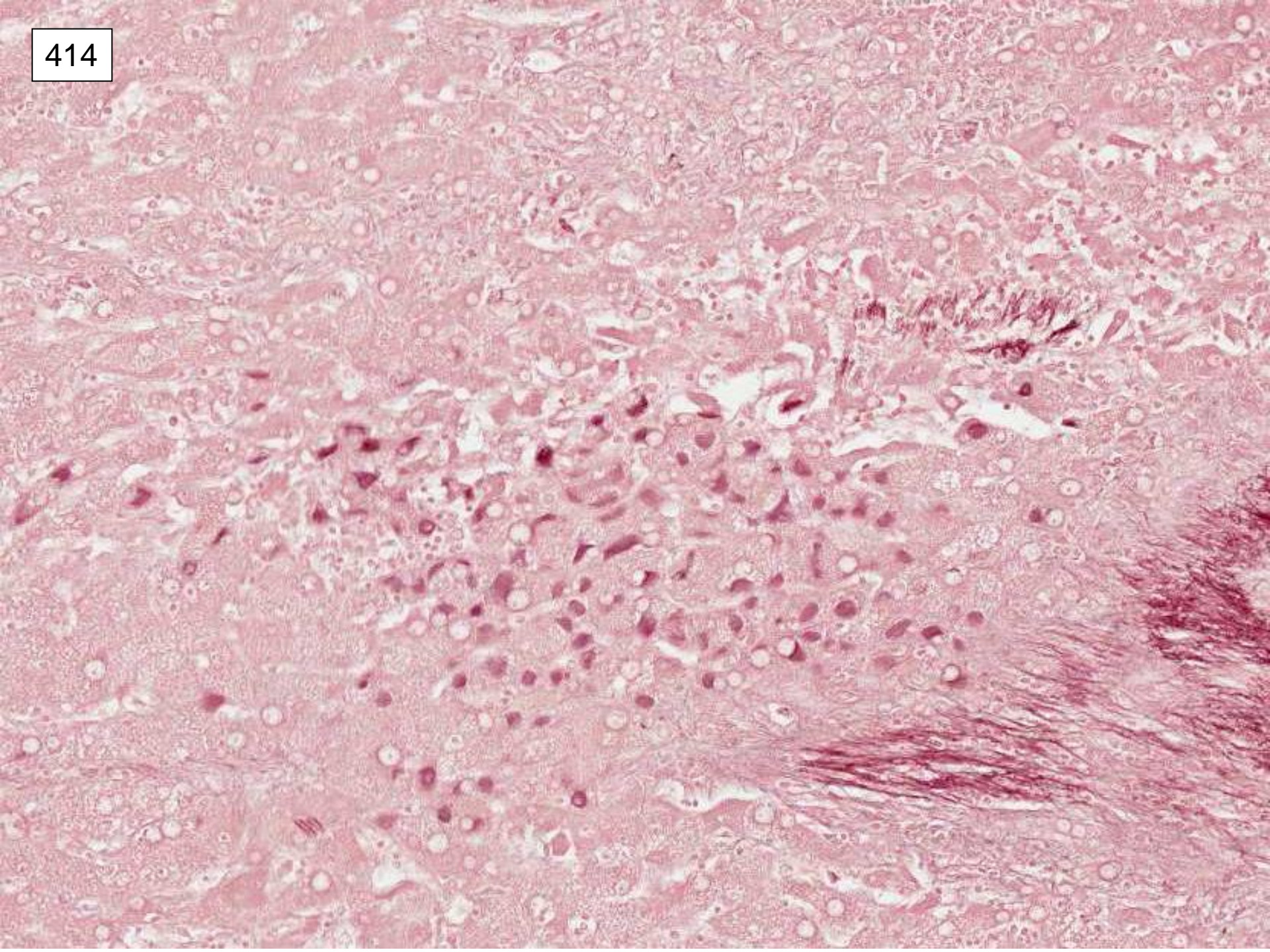


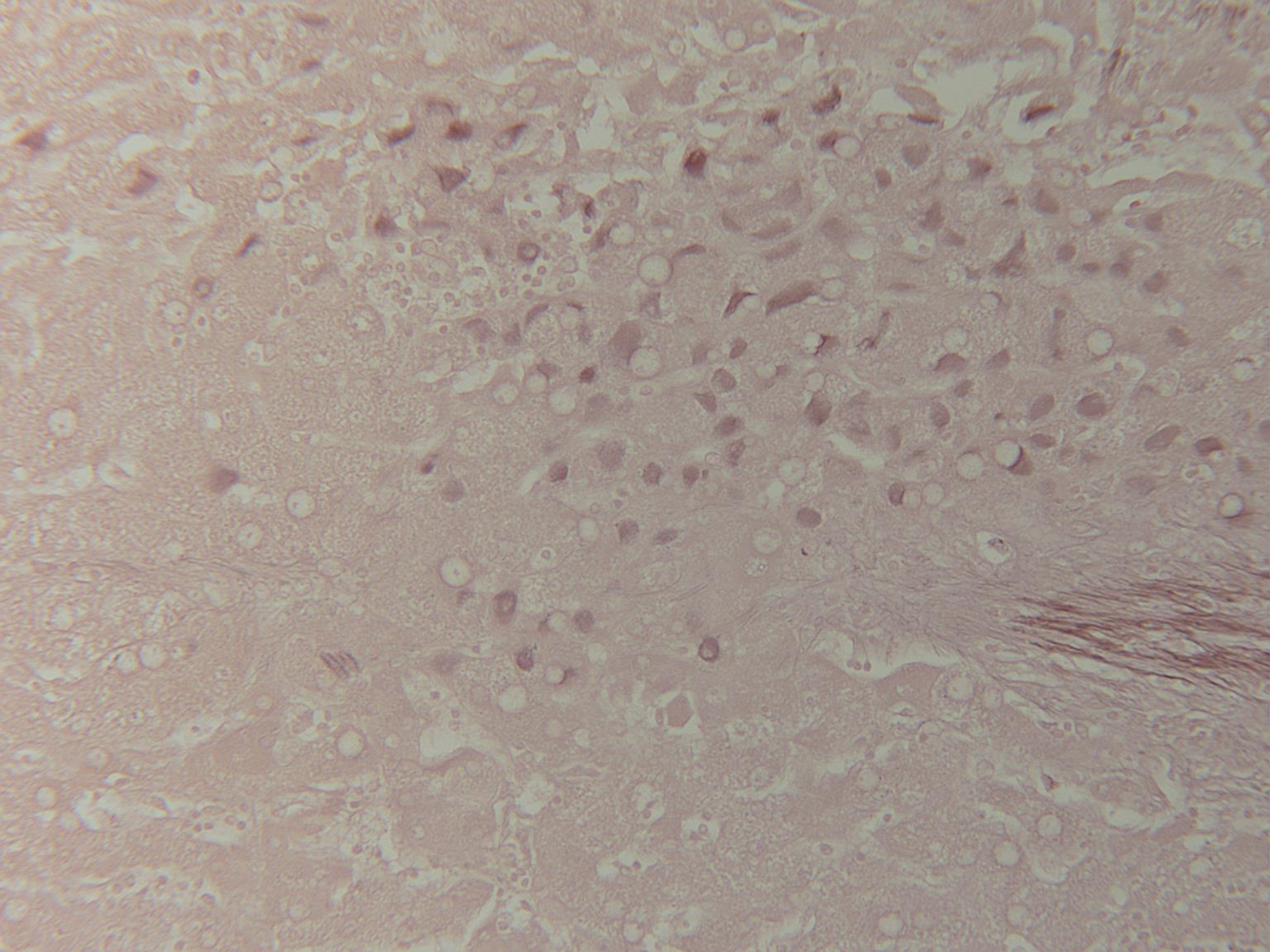
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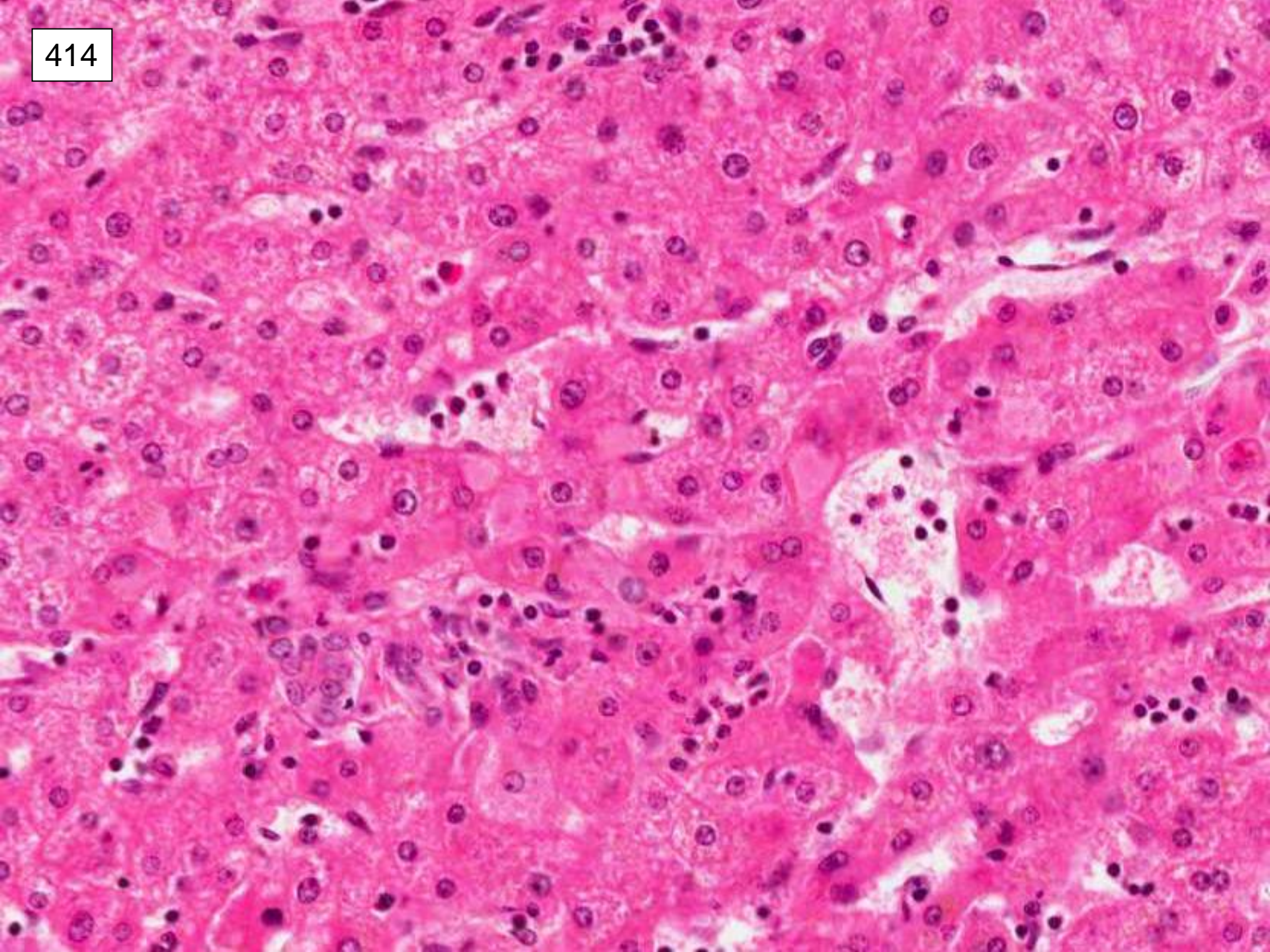




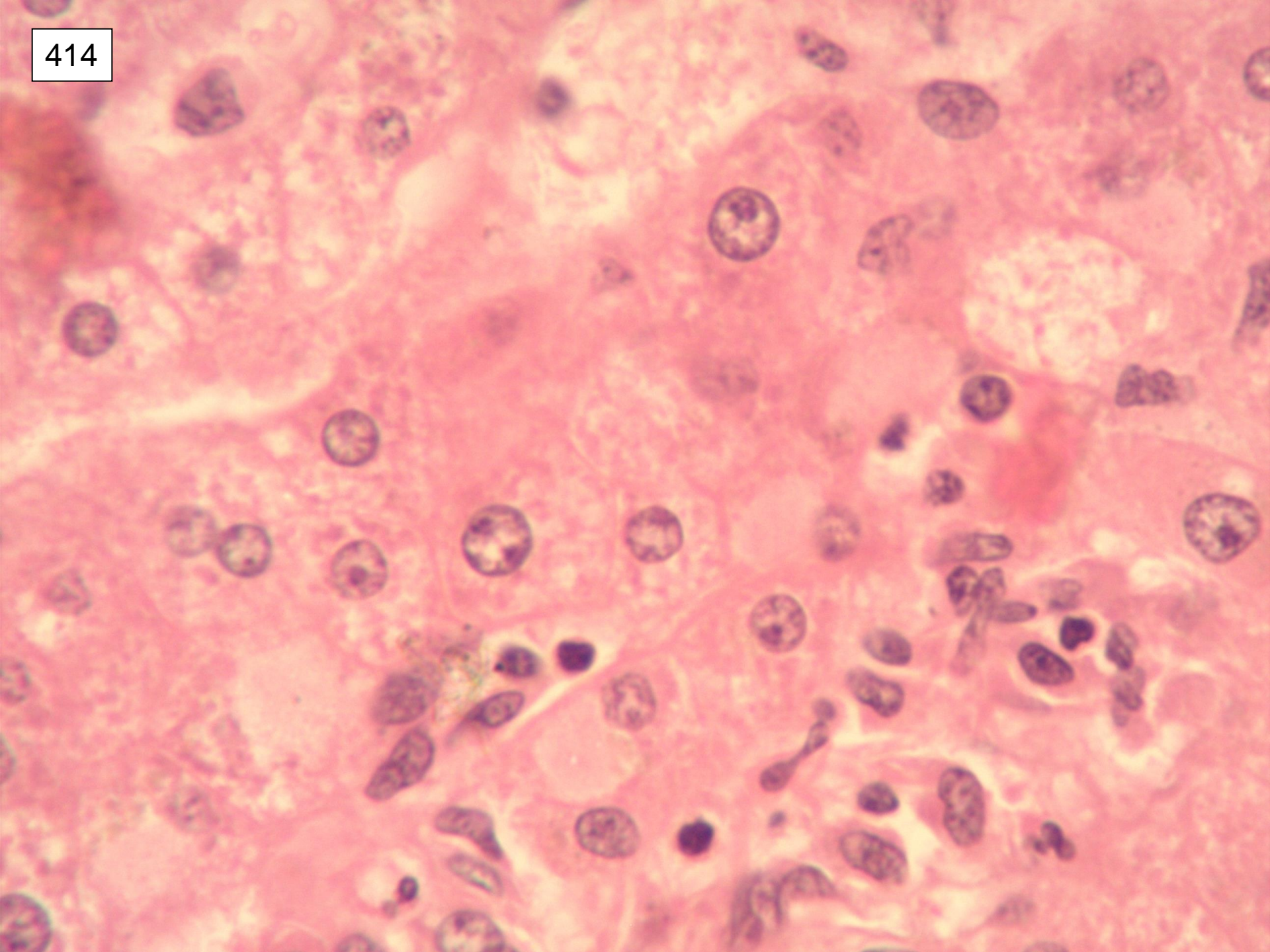




414



414



# H1/414 Lesion in left lobe of liver and CBD stone

70 Hepatocellular carcinoma  
4 HCC, with differential  
(adenoma or NET)

1 Liver cell adenoma

1 Neurendocrine tumour

Background:

48 ? Hepatitis B

31 non-cirrhotic

8 inad background liver to  
assess

12 background not mentioned

Lots – odd Orcein stain, can't  
interpret it

Suggested scoring: full marks for hepatocellular carcinoma, alone or with differential  
No marks for liver cell adenoma and neurendocrine tumour  
Can't score background liver  
Scoring agreed at meeting.

## H1/414 Lesion in left lobe of liver and CBD stone

- Original diagnosis: hepatocellular carcinoma, moderately differentiated, background HBV infection.
- Comment: the orcein stain was confusing to many, and ground glass hepatocytes present but difficult to find. Insufficient consensus on background liver for scoring.
- The Orcein stain shows that the background liver is not cirrhotic – the risk of HCC in non-cirrhotic chronic hepatitis B is recognised, and screening for HCC is recommended for patients with fibrosis as well as those with cirrhosis.

**H1/415**

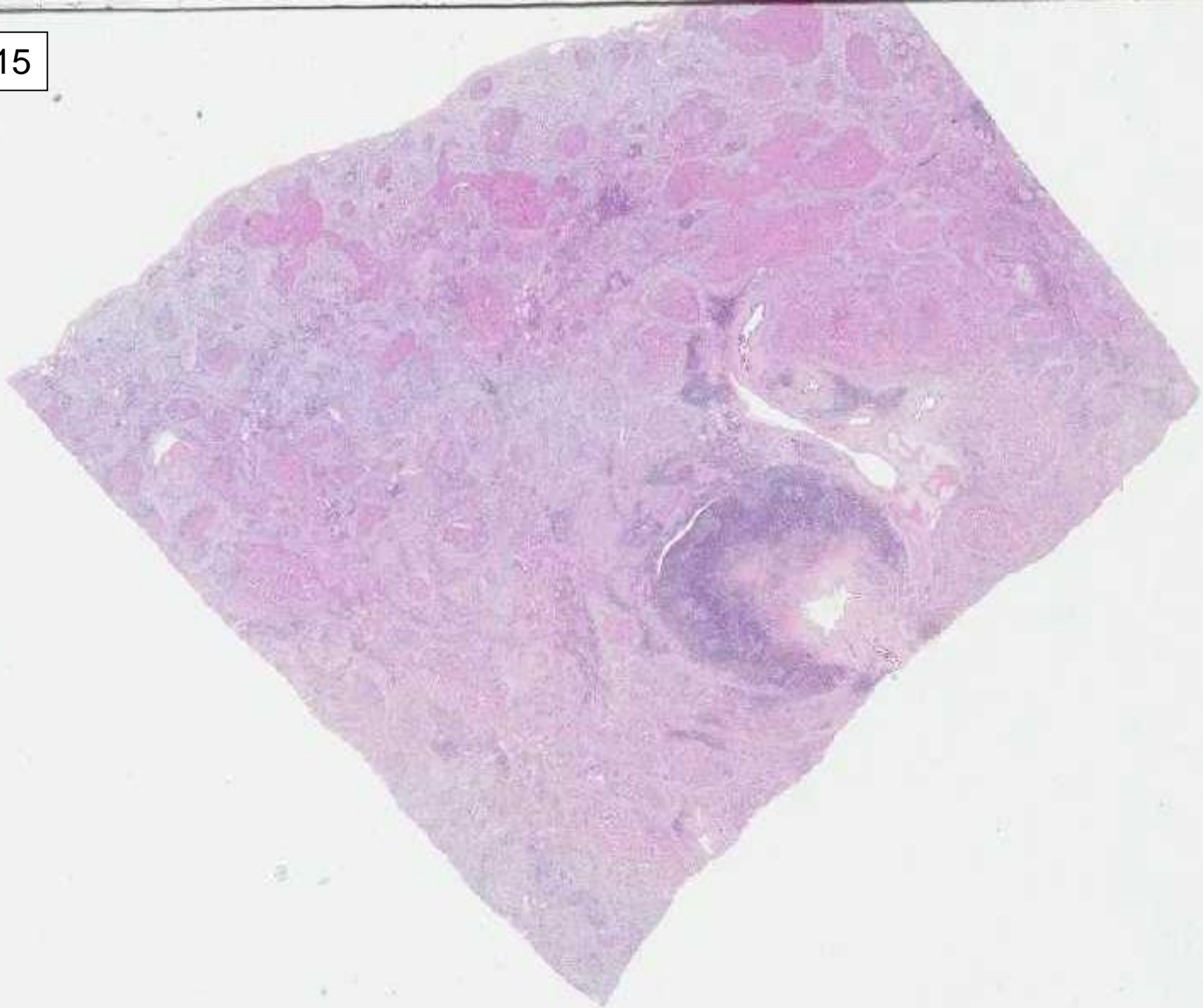
**Age 72, Female**

Right Liver Normal. Left Liver diffusely abnormal with enlarged hilar nodes

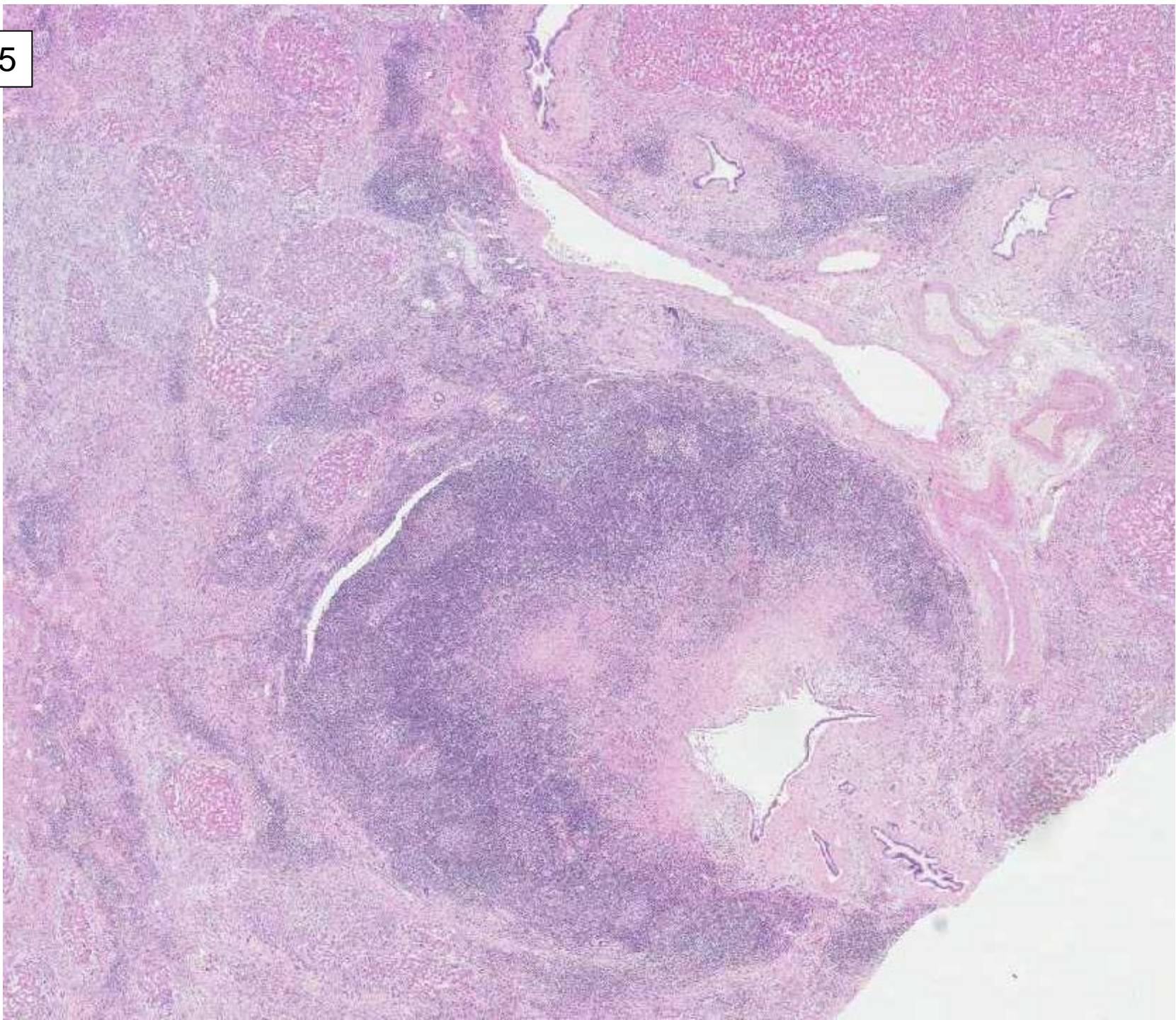
Left Liver - appears cirrhotic 145x110x60mm

N B Right liver NOT Cirrhotic on Biopsy

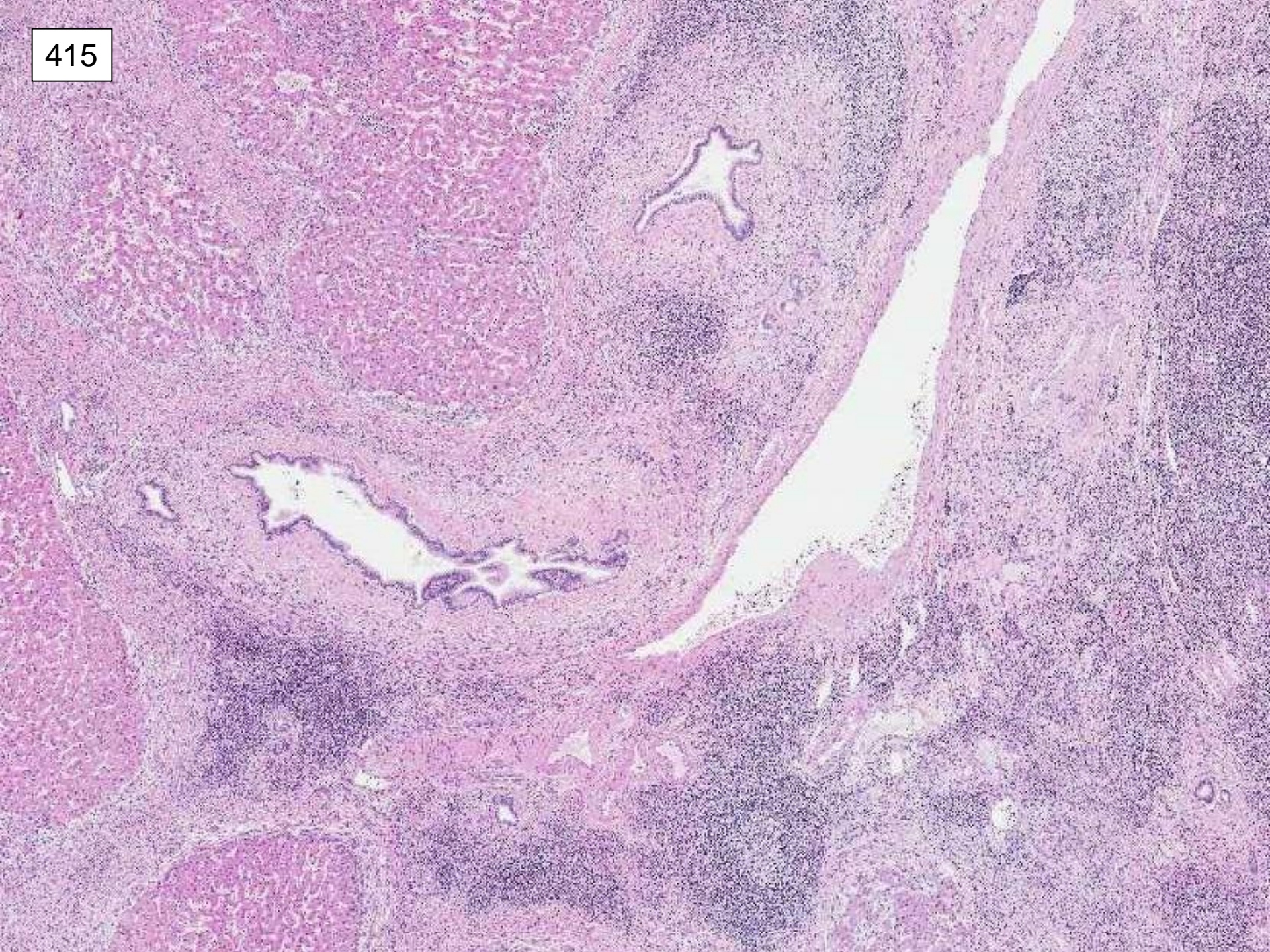
415



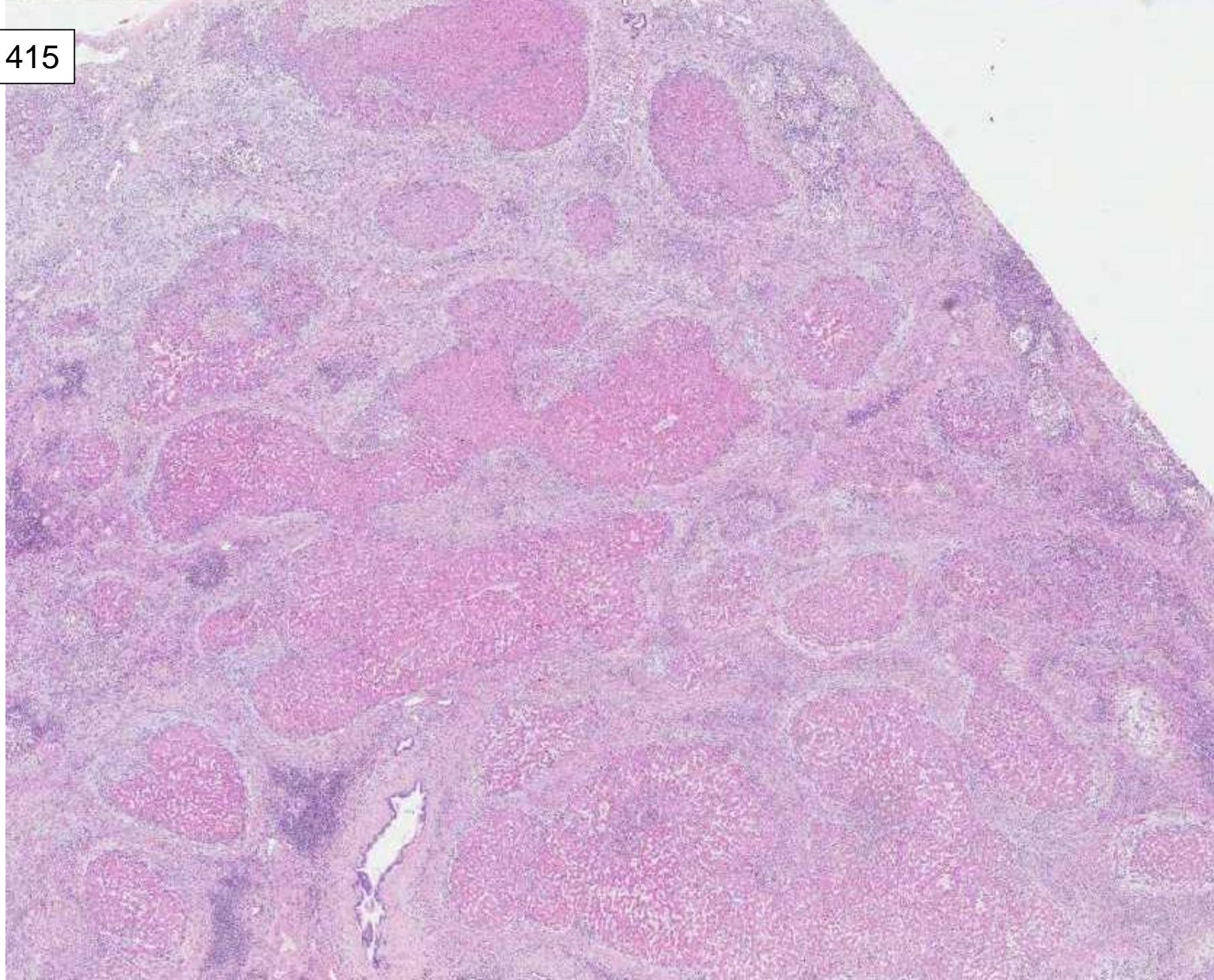
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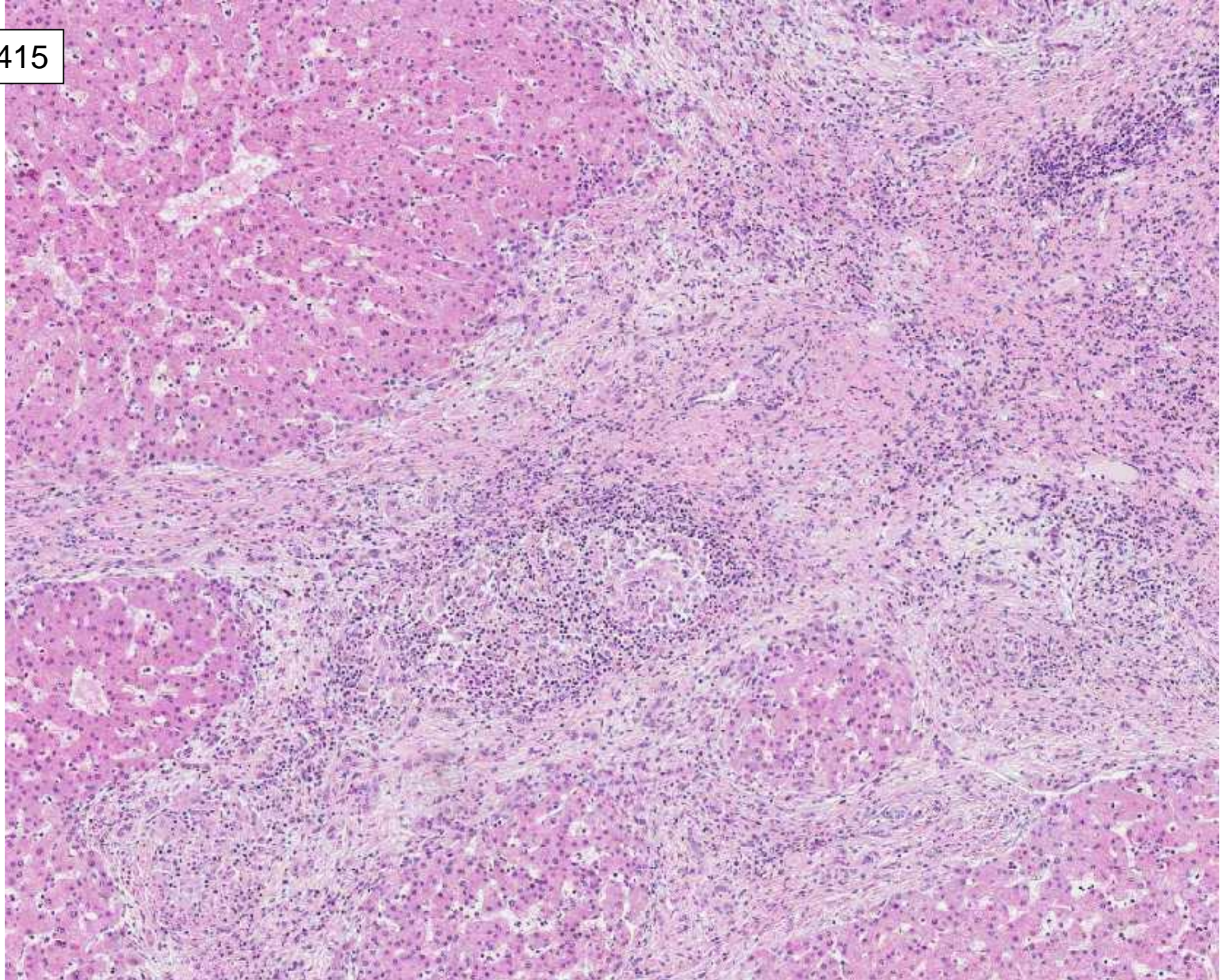
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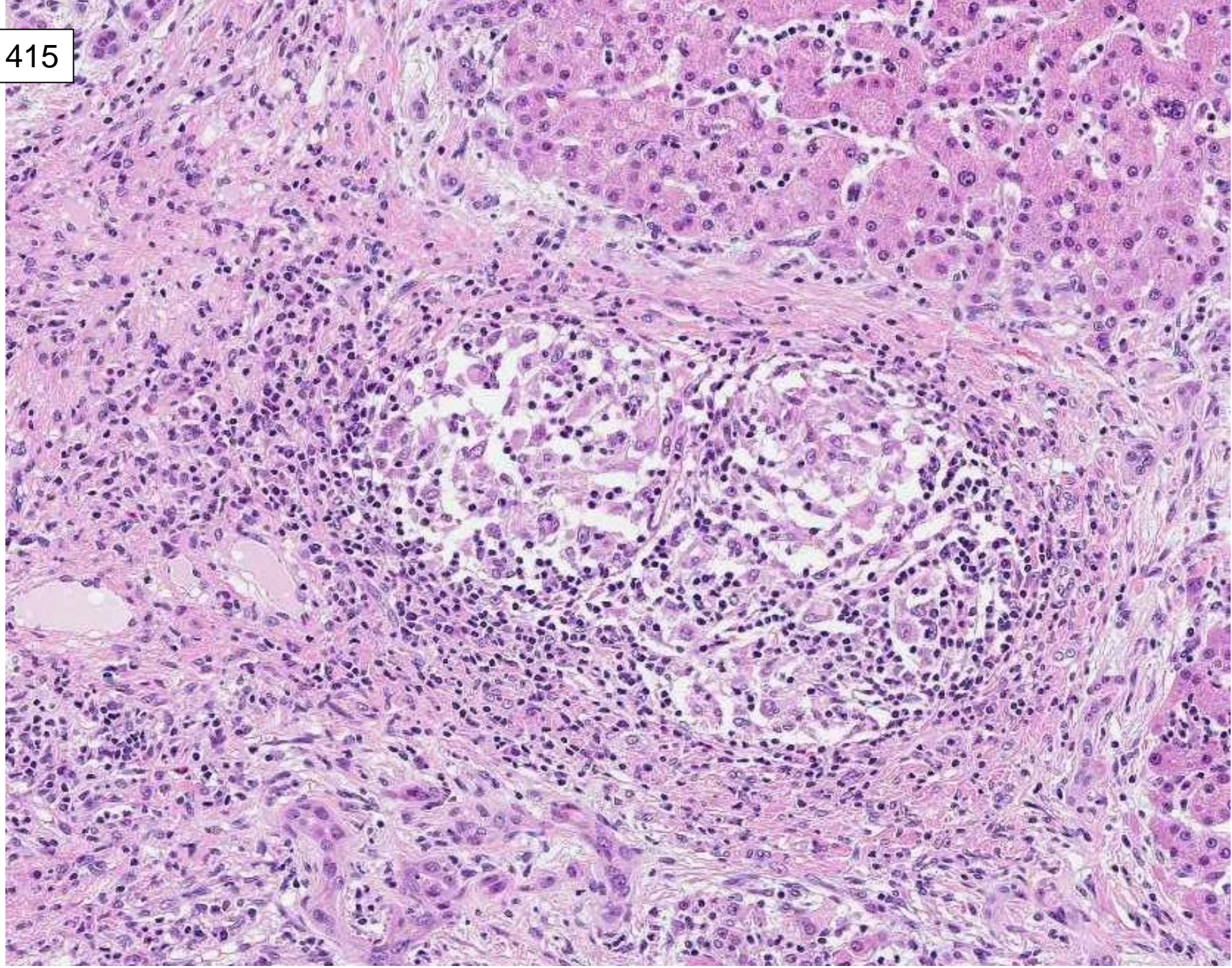
415

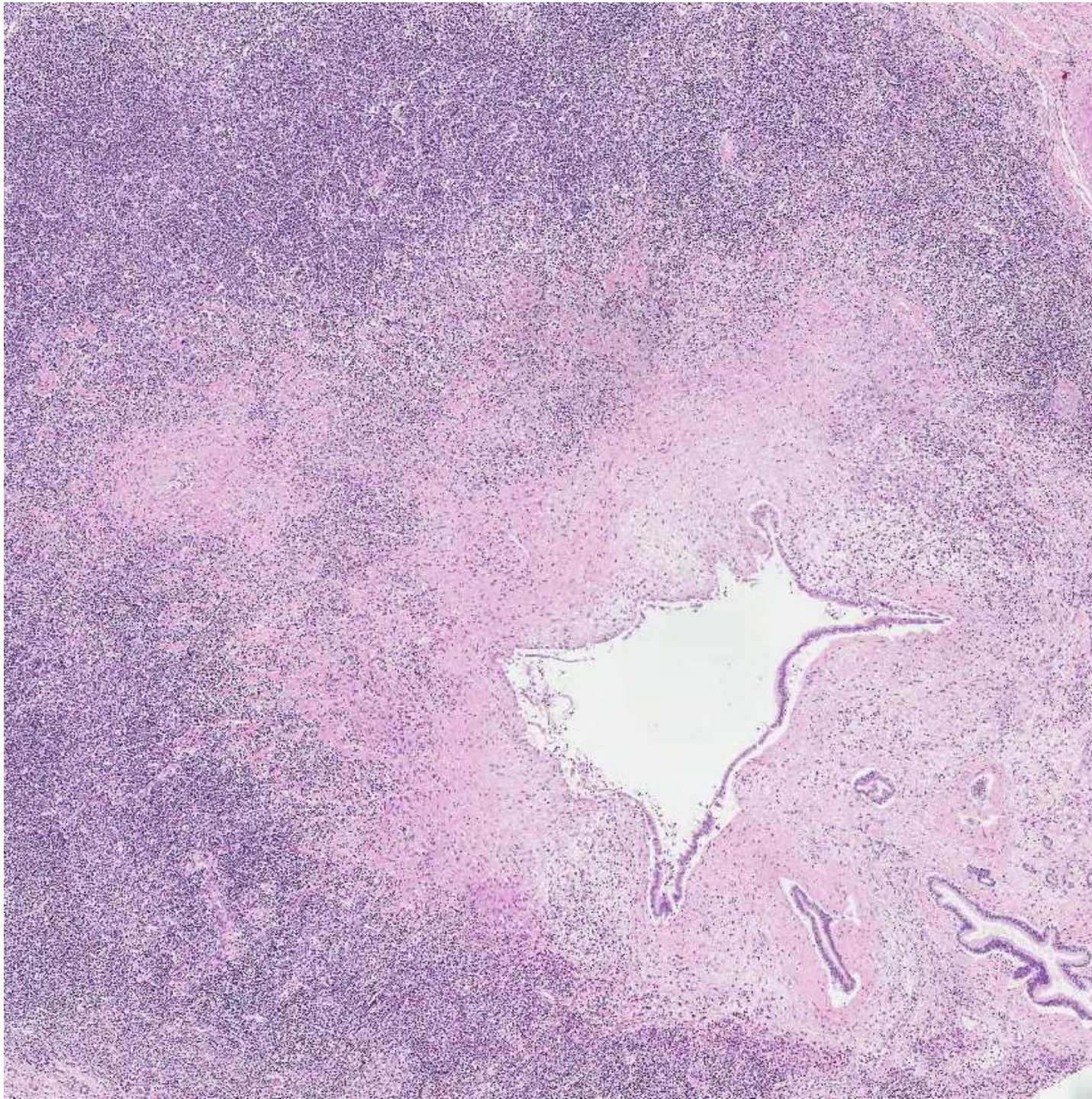


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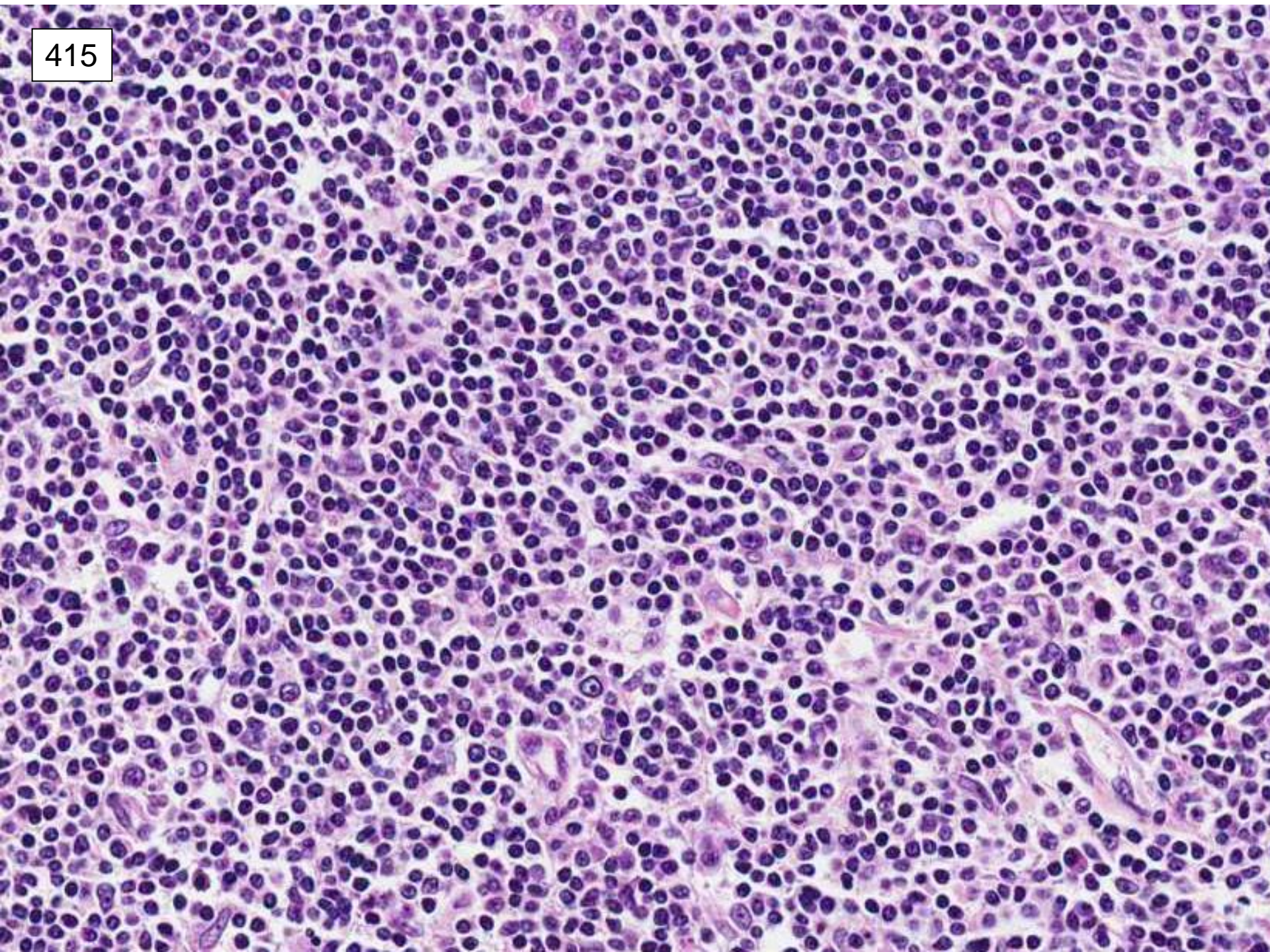


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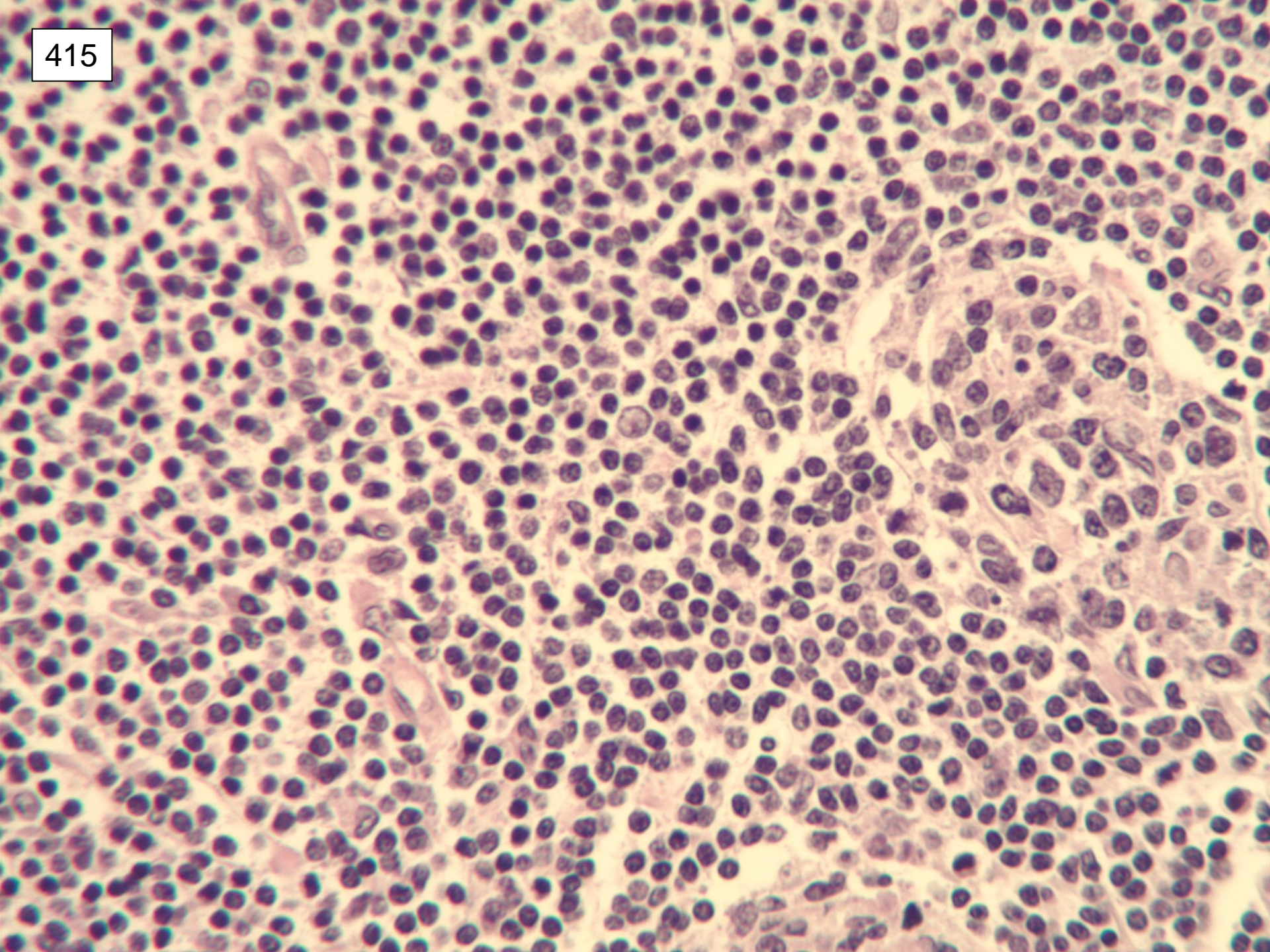




415



415



# H1/415 Right Liver Normal. Left Liver diffusely abnormal with enlarged hilar nodes

Description includes:

- 57 biliary, duct-centric
- 59 cirrhosis or cirrhosis-like
- 63 Granulomas

Diagnosis includes:

- 20 PSC
- 19 PBC
- 13 biliary obstruction
- 12 IgG4 disease
- 36 sarcoid
- 12 Exclude lymphoma
- 10 parasites
- 8 TB
- 1 'I bet this doesn't reach consensus scoring'

Other uncommon diagnoses include:

- 2 Caroli's disease
- 1 Oriental cholangiohepatitis
- 2 Stone disease
- 3 'exclude micronodular cirrhosis'
- 1 Focal nodular hyperplasia
- 1 Follicular cholangitis

Suggested scoring: **not suitable for scoring?**

**Or: Accept any with indication that this is a biliary disorder,  
score 0 for responses that do not mention or imply a biliary disease (=11 responses)**

Discussion at meeting : this case is unsuitable for scoring.

The diagnosis 'cirrhosis' is inappropriate, since we're told that the right liver is normal.

**H1/415** Right Liver Normal. Left Liver diffusely abnormal with enlarged hilar nodes

- Original diagnosis: nodular fibrosis with biliary features and granulomas.

Comment: the text answers were reviewed after the meeting - the range of terminology is so various that no scoring is possible for this case.

The left lobe shows the consequences of an inflammatory lesion affecting a main duct, with upstream long standing fibrosis and duct granulomas. This may be large duct PSC or be due to previous stone disease or surgery – the original pathology is not clear from this slide. Granulomatous inflammation around inflamed ducts is not uncommon in this situation, and does not imply underlying PBC.

**Case H1/416**

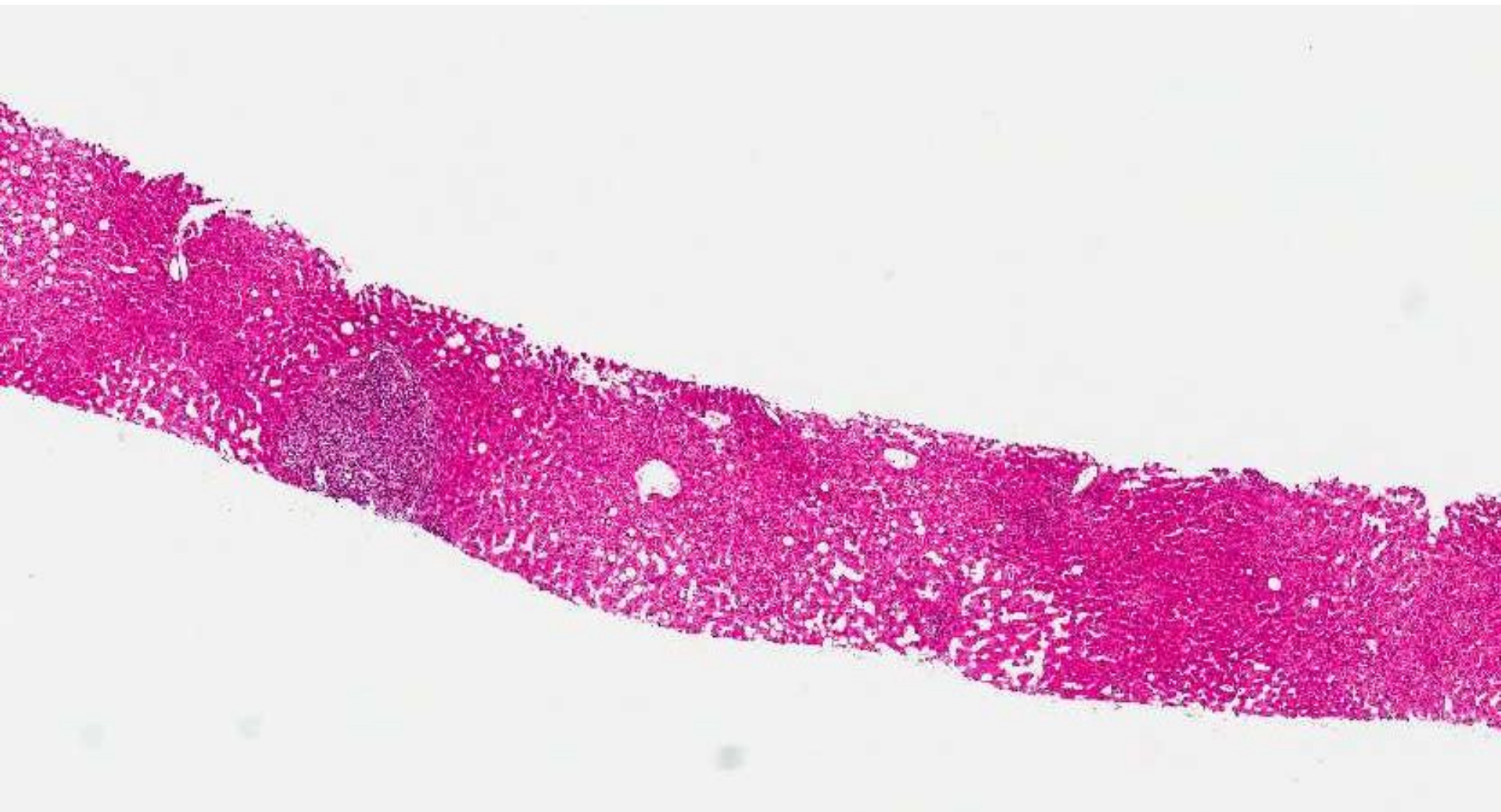
**Age 69, Female**

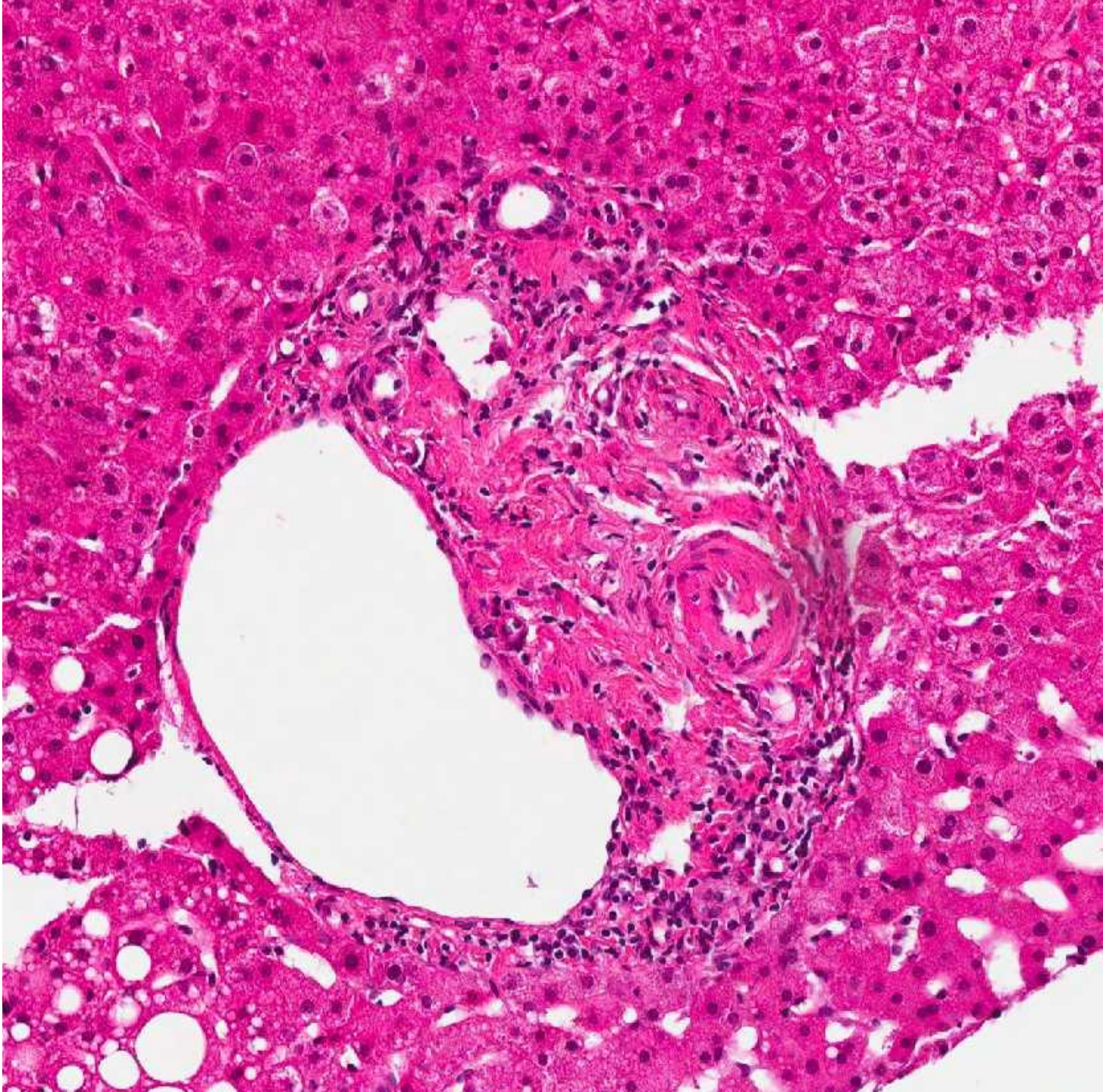
Raised alkaline phosphatase and Gamma GT, AMA  
Positive

Three cores of liver

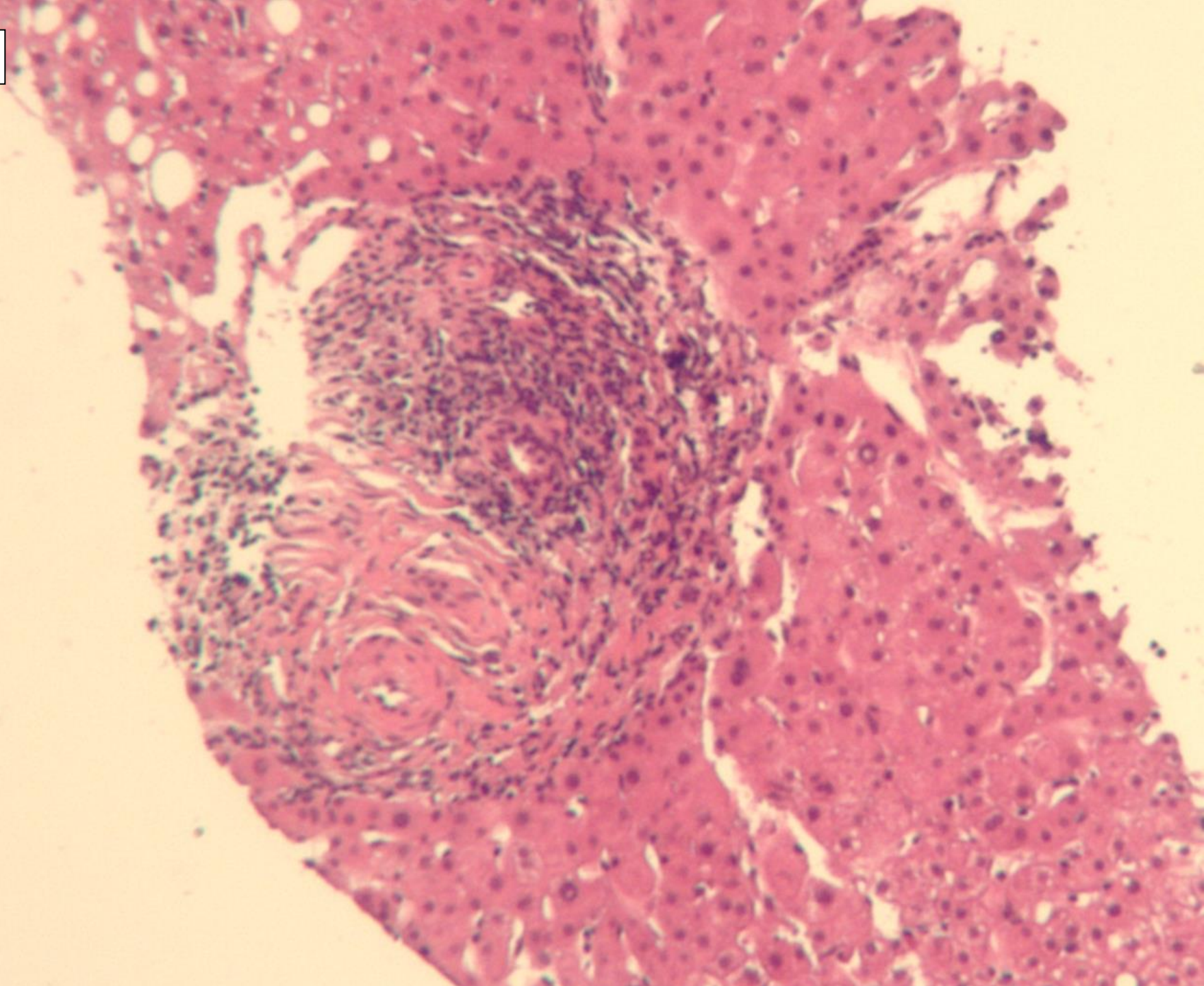
(also trichrome, retic and vG stains on website, and  
trichrome and retic photos)



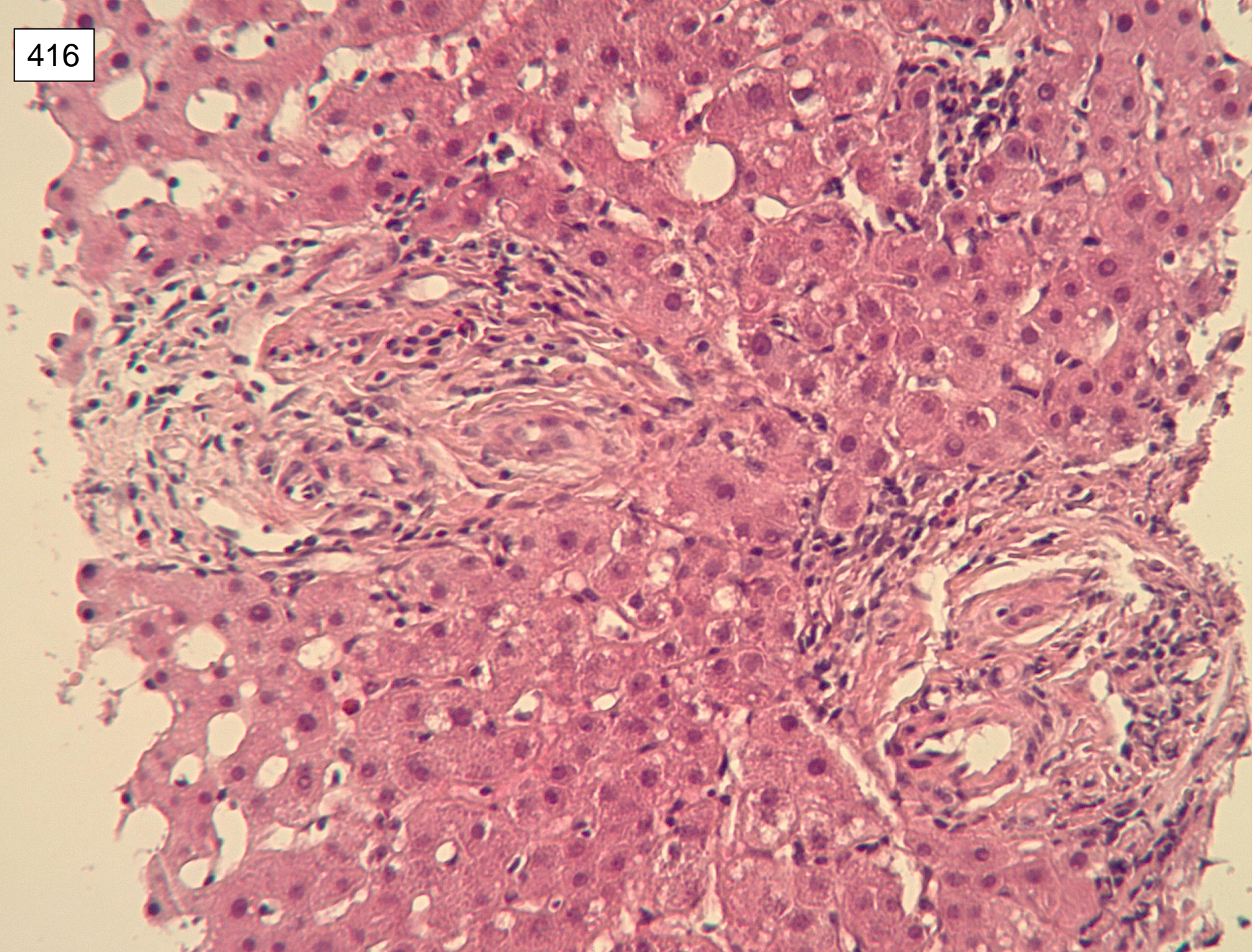


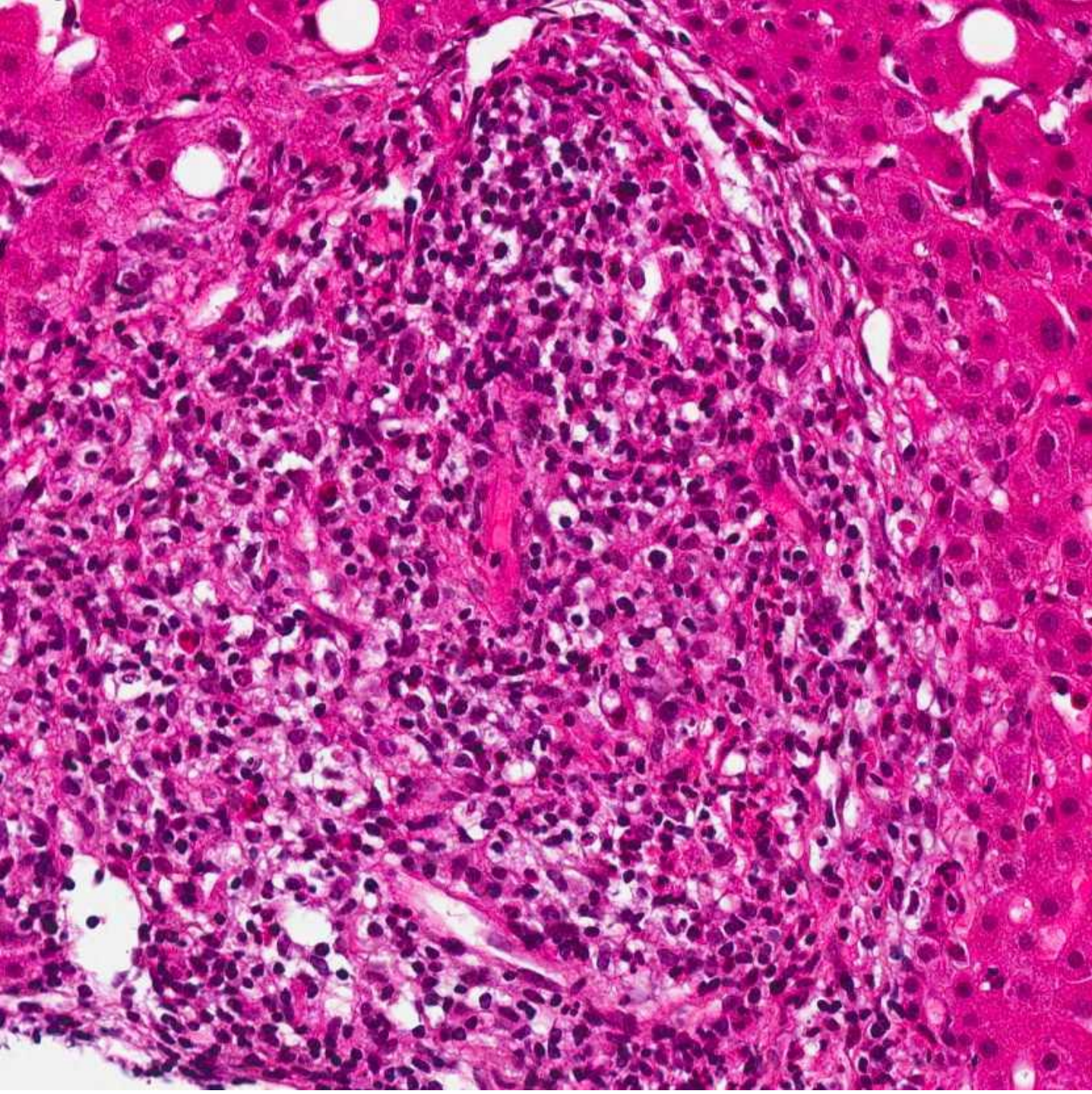


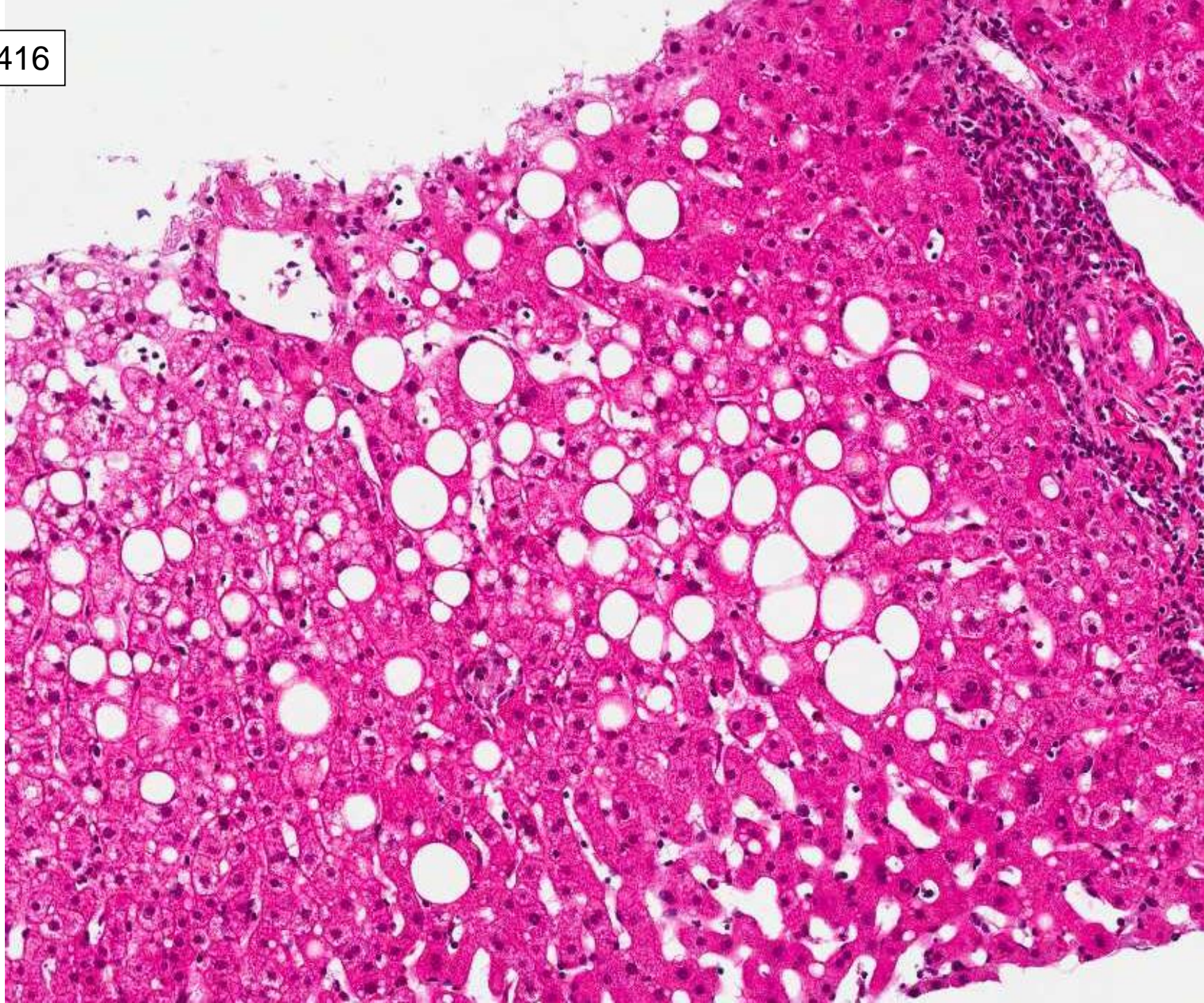
416



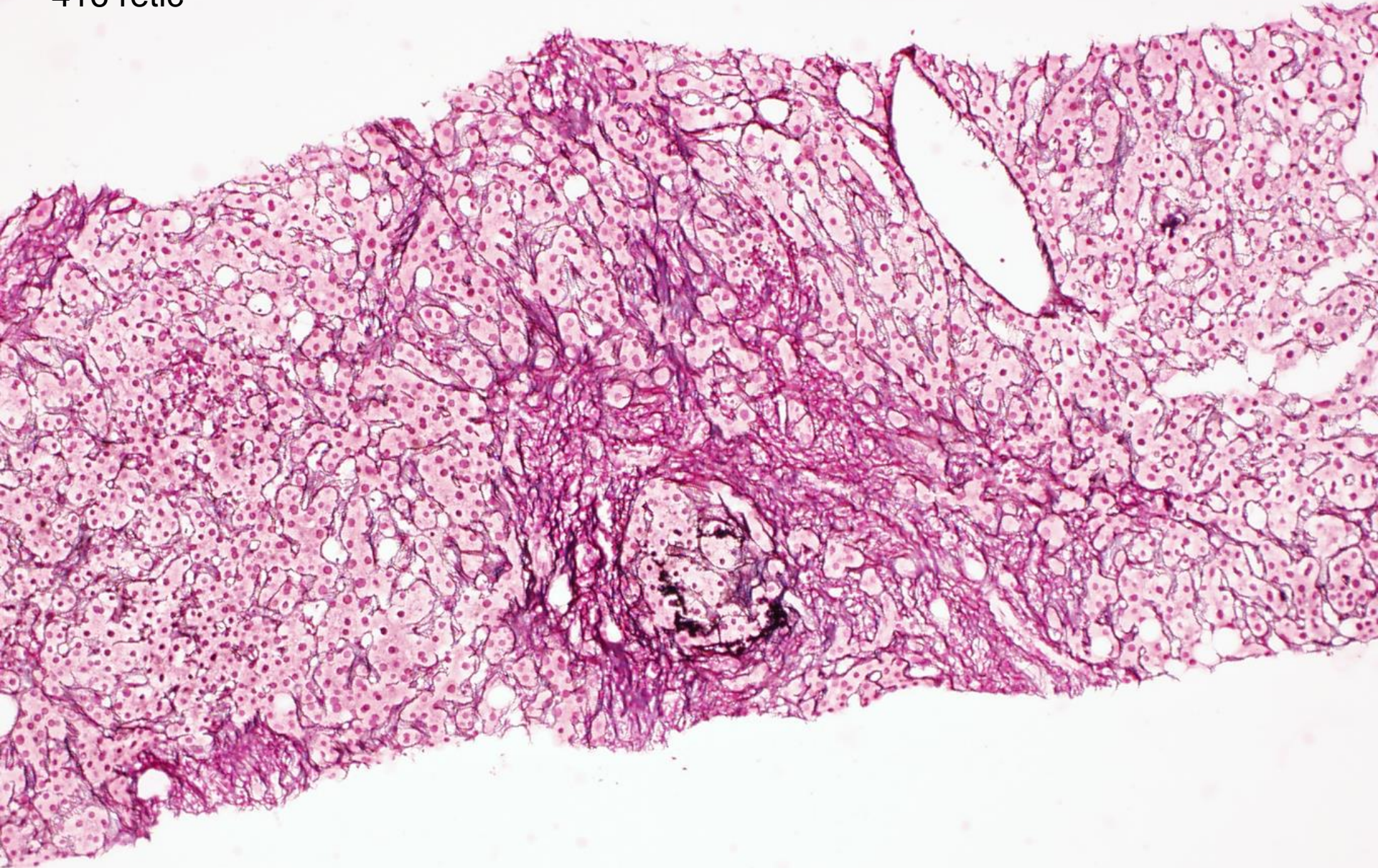
416



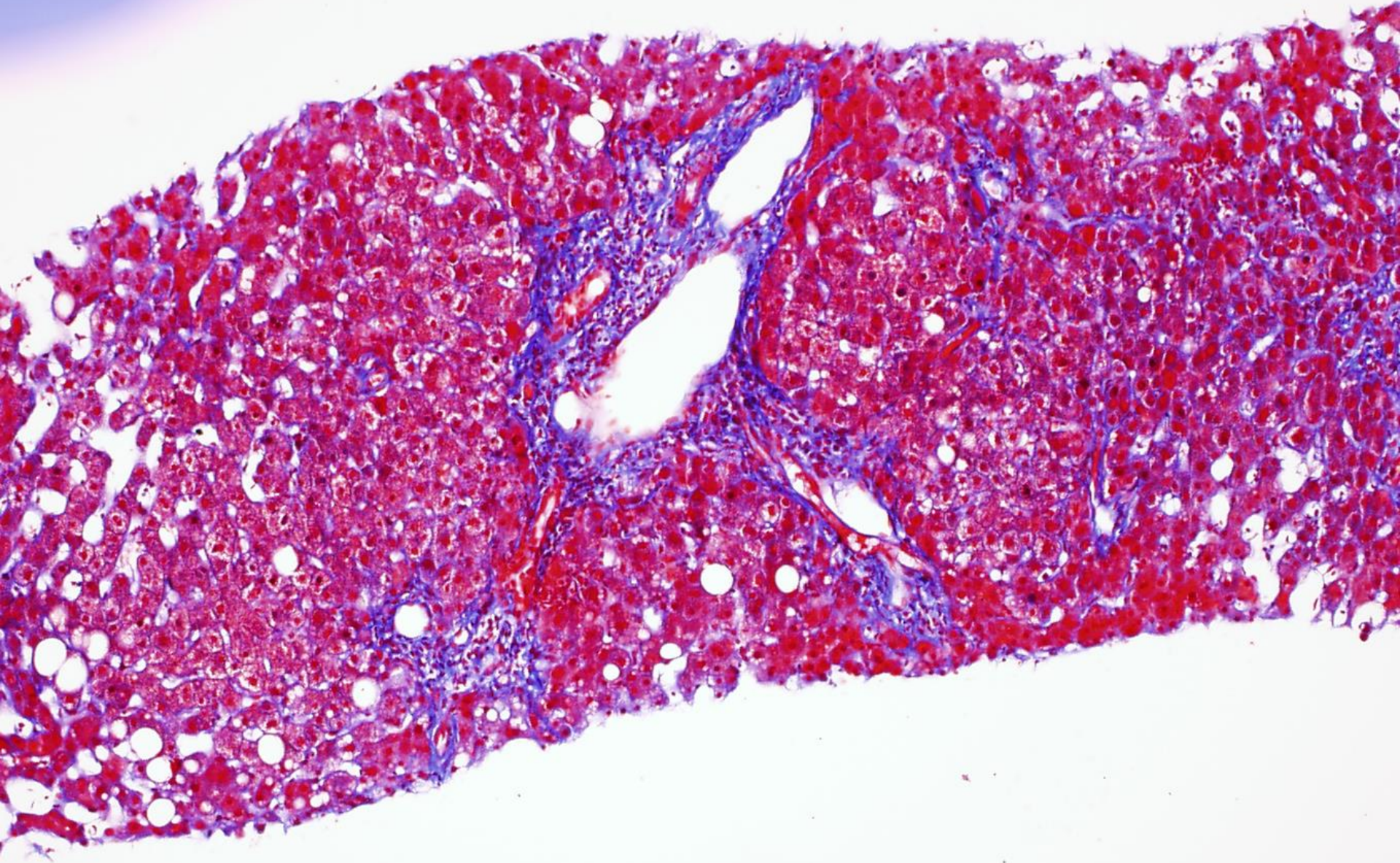




416 retic



416 masson trichrome



# Case H1/416 Age 69, Female

Raised alkaline phosphatase and Gamma GT, AMA Positive

72 PBC as definite diagnosis

1 ‘? Underlying chronic biliary disease (possibly PBC) needs CK7’

1 ‘? PBC more clinical details would be helpful’

1 ‘appearances would raise the possibility of PBC in the right clinical setting’

1 ‘c/w PBC chronic active hepatitis Metavir A2F4’

1 ? Overlap

2 ? Also vascular disease

55 steatosis

5 Steatohepatitis

15 steatosis not mentioned

Suggested scoring:

Accept all responses with definite PBC

Deduct 5 points if not definite?

Deduct 5 points if fatty liver disease not mentioned?

Scoring deductions agreed at meeting.

## Case H1/416 Age 69, Female

Raised alkaline phosphatase and Gamma GT, AMA Positive

- Original diagnosis: Primary biliary cirrhosis
- Comment: the history of AMA positive, raised alkaline phosphatase is sufficient for diagnosis of PBC, and so responses indicating that the diagnosis was not definite have marks deducted. The reason for biopsy in this case is unclear – biopsy is not now required for a diagnosis of PBC in this clinical setting.
- The marked variation in the degree of portal inflammation is characteristic of PBC, but would be unusual for AIH.
- Steatosis is not usually seen in PBC, and should be included in the report, since clinicians will need to consider the cause of fatty liver disease (check for alcohol and diabetes).
- Sinusoidal dilatation and nodular regenerative hyperplasia may be seen in early stage PBC, probably due to portal veins narrowed from portal inflammation.

**Case H1/417**

**Age 58, Male**

Jaundice ? Cause

1 core 12 mm

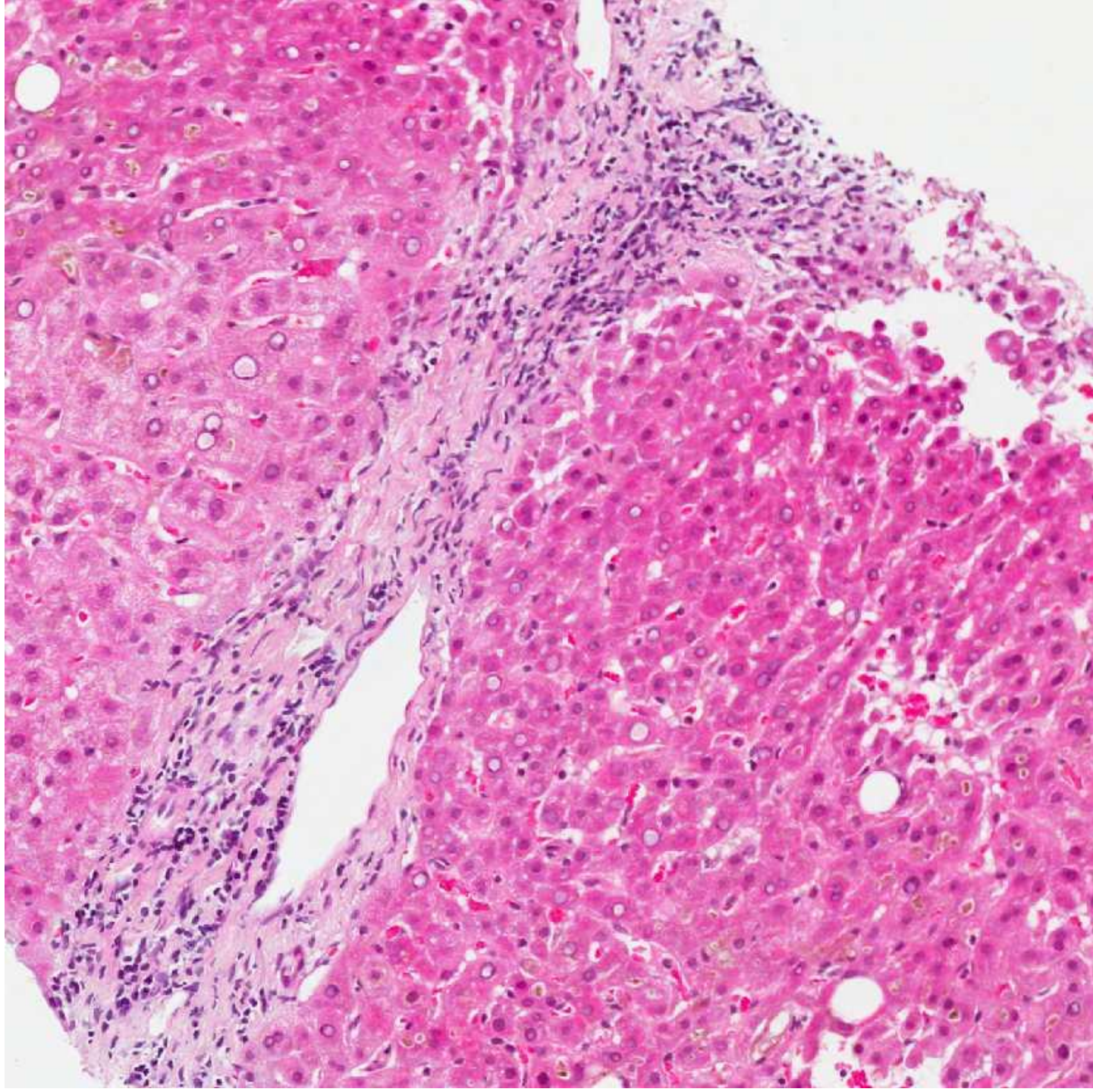
(also van Gieson on website and photo)



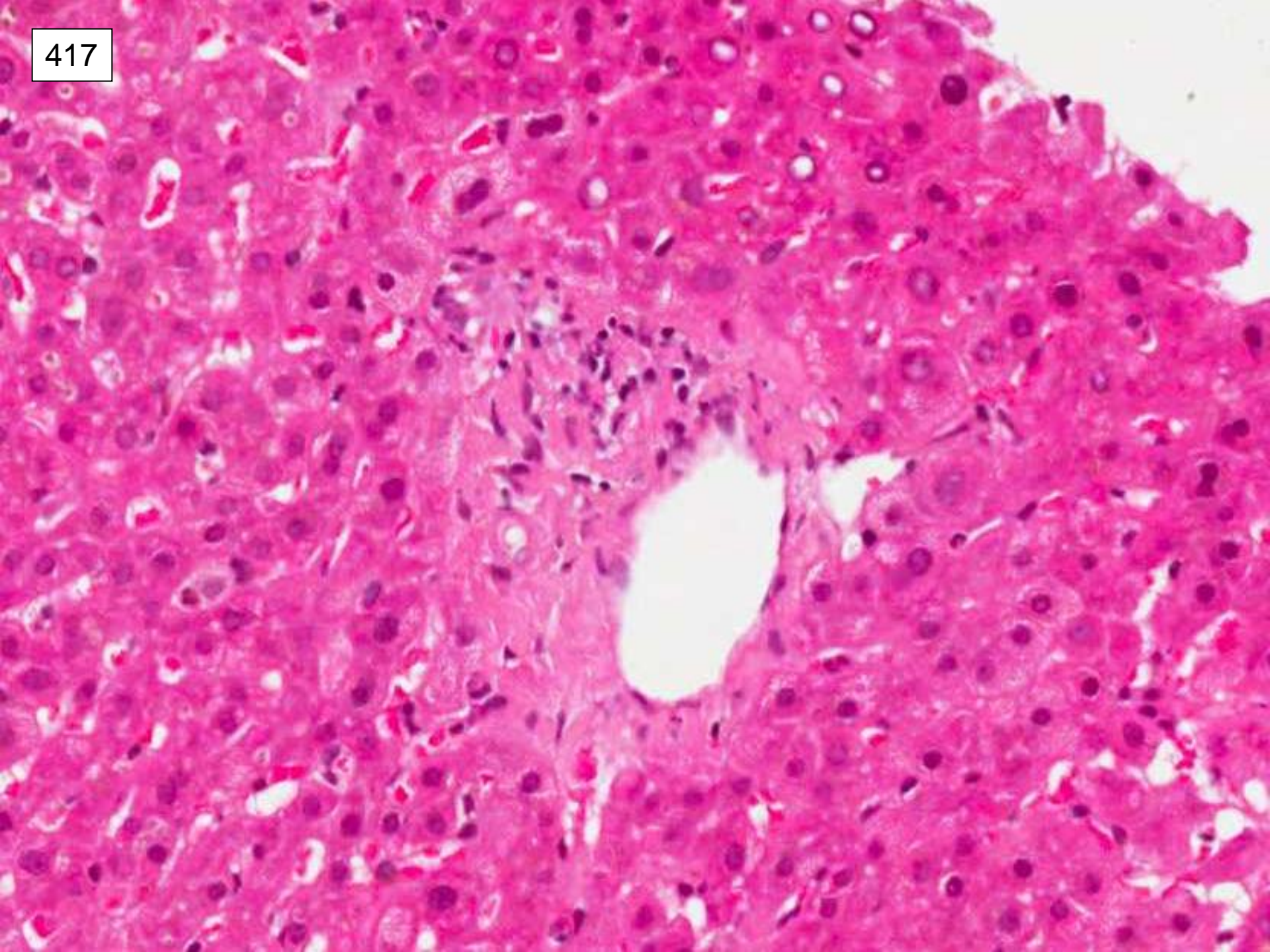
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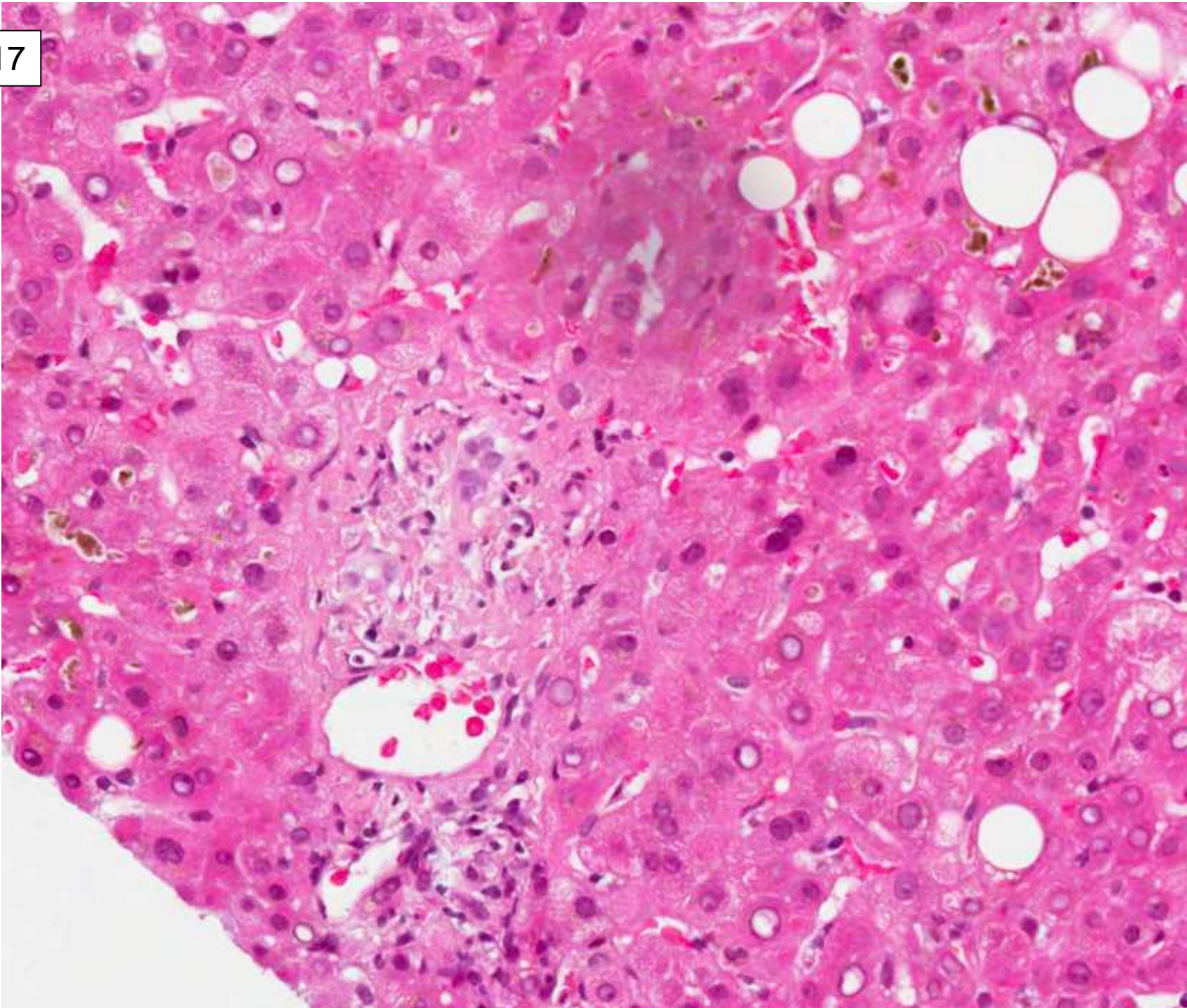
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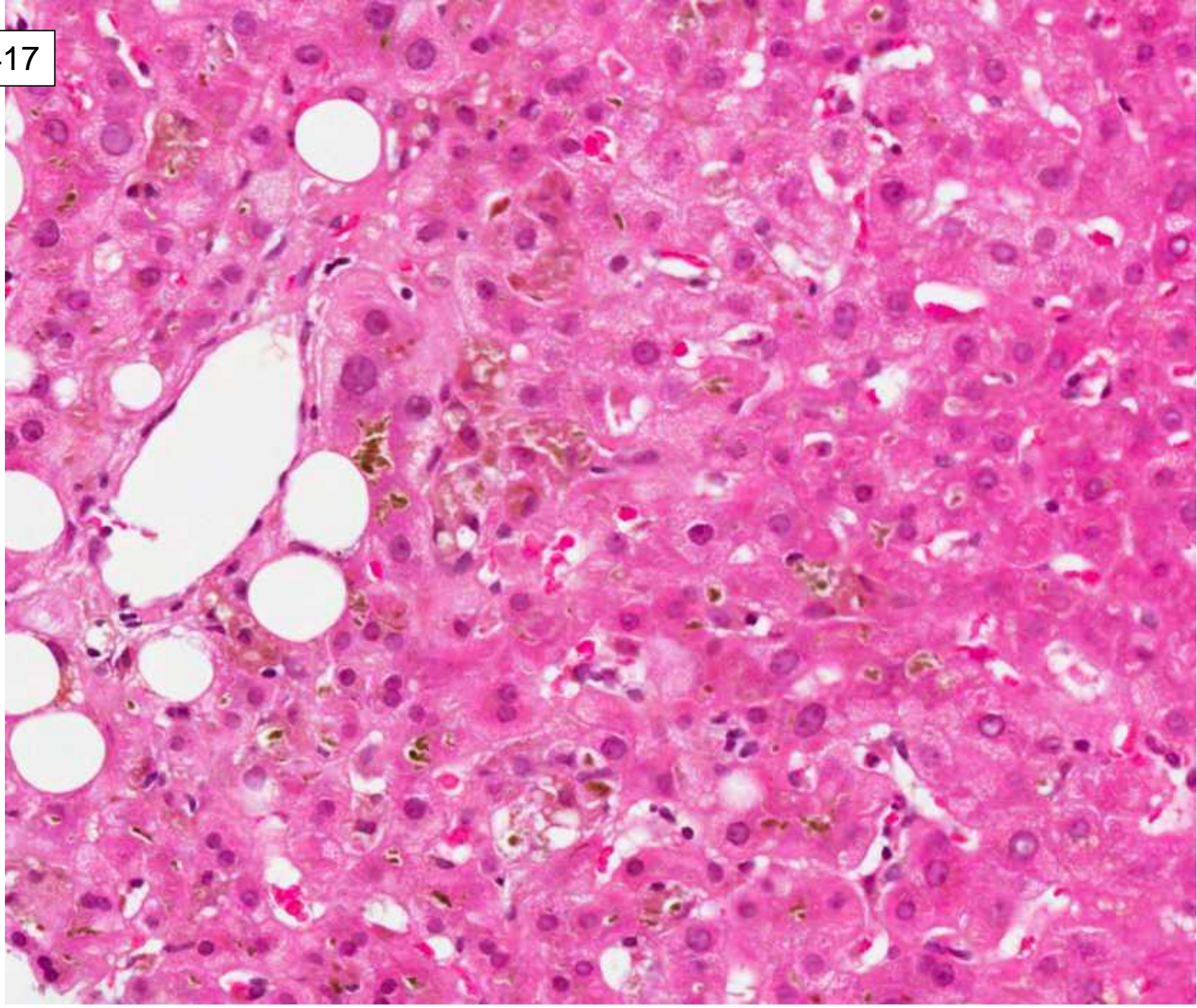
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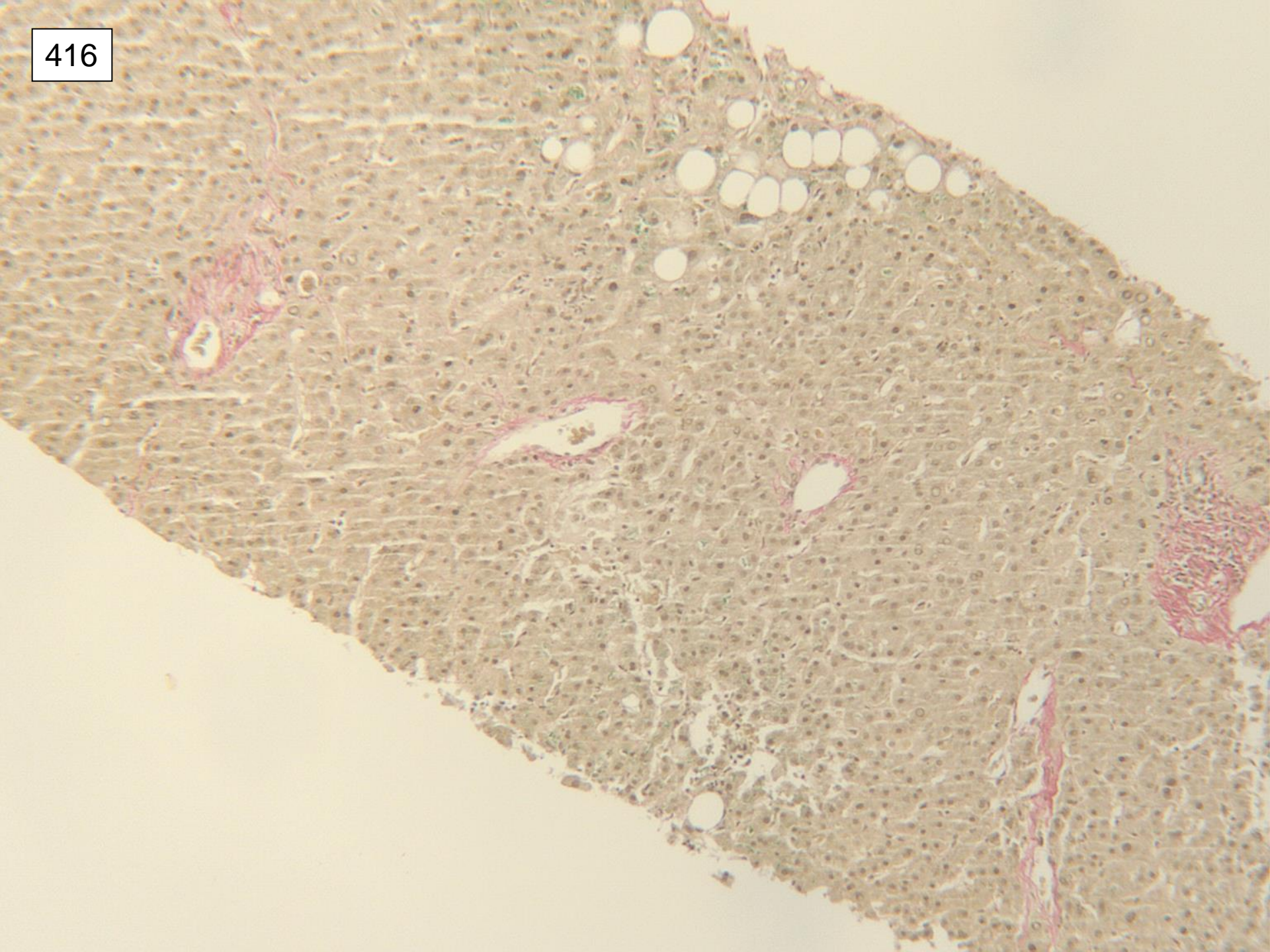
417



417



416



# Case H1/417 Age 58, Male

## Jaundice ? Cause

- |    |                         |    |   |
|----|-------------------------|----|---|
| 76 | Cholestasis             | 68 | Drugs +/- differential                            |
| 18 | with ductopaenia        | 7  | Drugs not mentioned*                              |
| 10 | With duct damage        | 20 | Duct obstruction*                                 |
|    |                         | 5  | Needs imaging                                     |
| 52 | Steatosis               | 8  | PSC*  |
| 17 | Steatosis not mentioned | 7  | Sepsis  |
|    |                         | 3  | Vanishing bile duct syndrome**                    |
|    |                         | 2  | PBC   |
|    |                         | 1  | 'acute cholestatic hepatitis' no cause suggested* |
|    |                         | 2  | GVHD/Chronic rejection*                           |
|    |                         | 1  | 'Obstructive (calculous) cholestasis'*            |

Suggested scoring:

For 10 marks need cholestasis and differential diagnosis that includes drugs

? Score 0 or 5 if drugs not mentioned.

Insufficient consensus to score on steatosis

Discussion at meeting: lose 5 marks if drugs not mentioned at all in report (checked responses)

## Case H1/417 Age 58, Male Jaundice ? Cause

- Original diagnosis: Cholestasis, suspect drug induced
- Follow up information – patient had flucloxacillin
- Comment: clinical history of flucloxacillin from GP only after enquiring as a result of biopsy findings.
- Senescent changes in bile ducts, with atrophic, withered epithelium and absent ducts in some portal tracts – ductopenic reaction. This indicates that the patient is likely to have prolonged jaundice but eventual recovery is usual.
- Steatosis is also present, and should be included in report (as in other cases) – but on this occasion there were insufficient comments for 80% consensus and so this aspect has not been included in the scoring.

**Case H1/418**

**Age 67, Male**

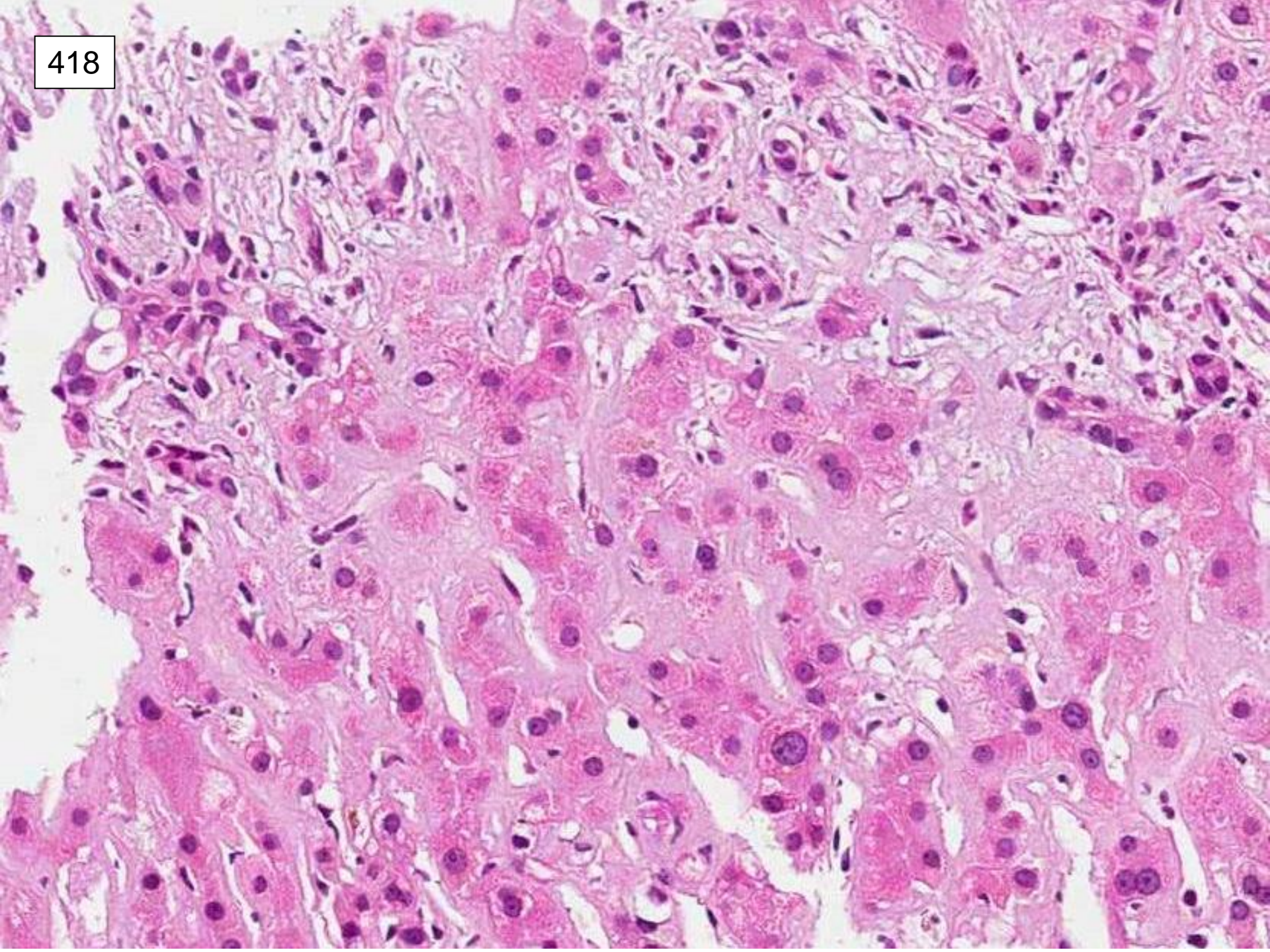
Rectal carcinoma deranged LFT's, cirrhosis and ascites ? Metastatic lesion

Liver cores 14 & 10mm long

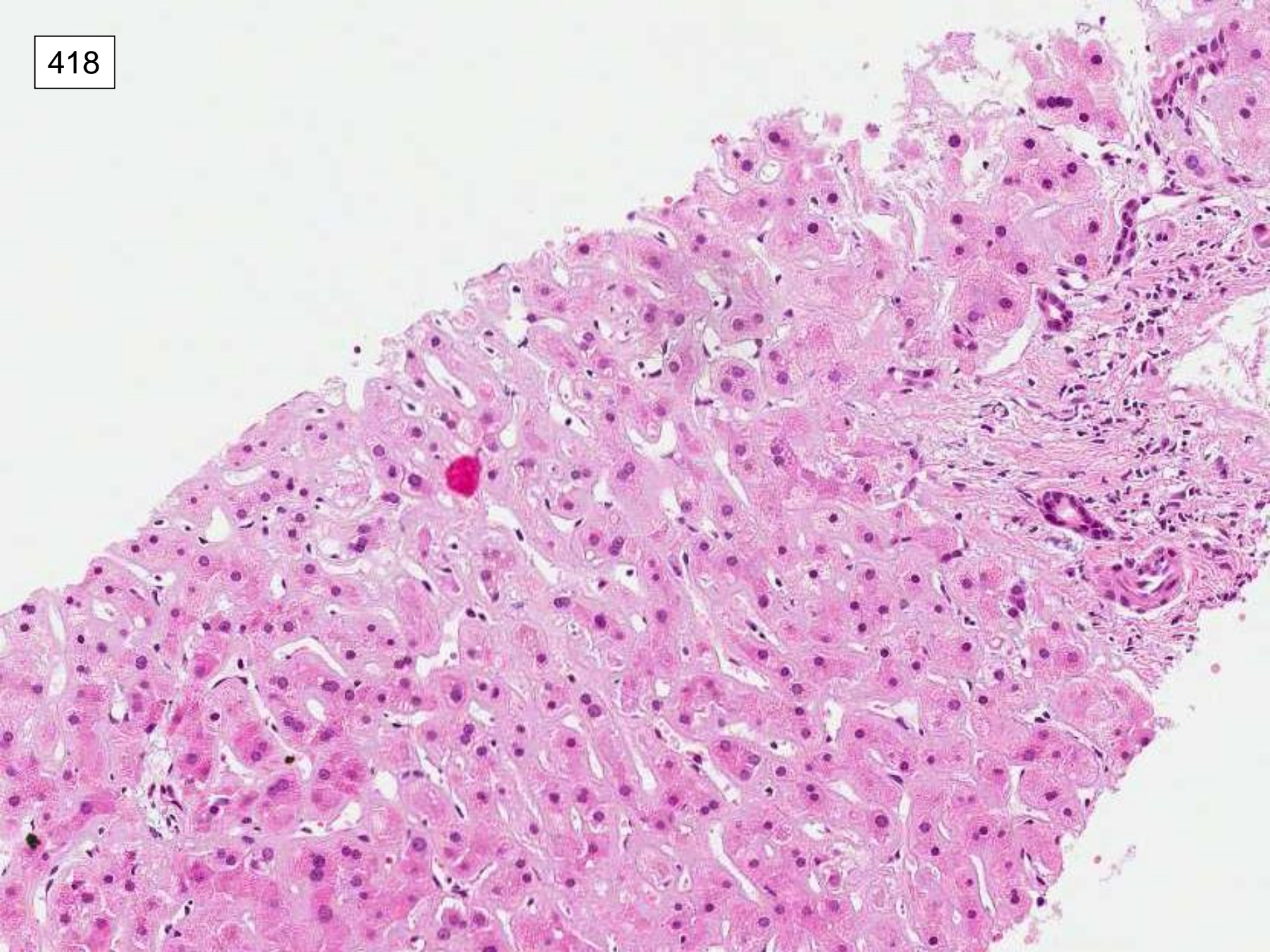
418



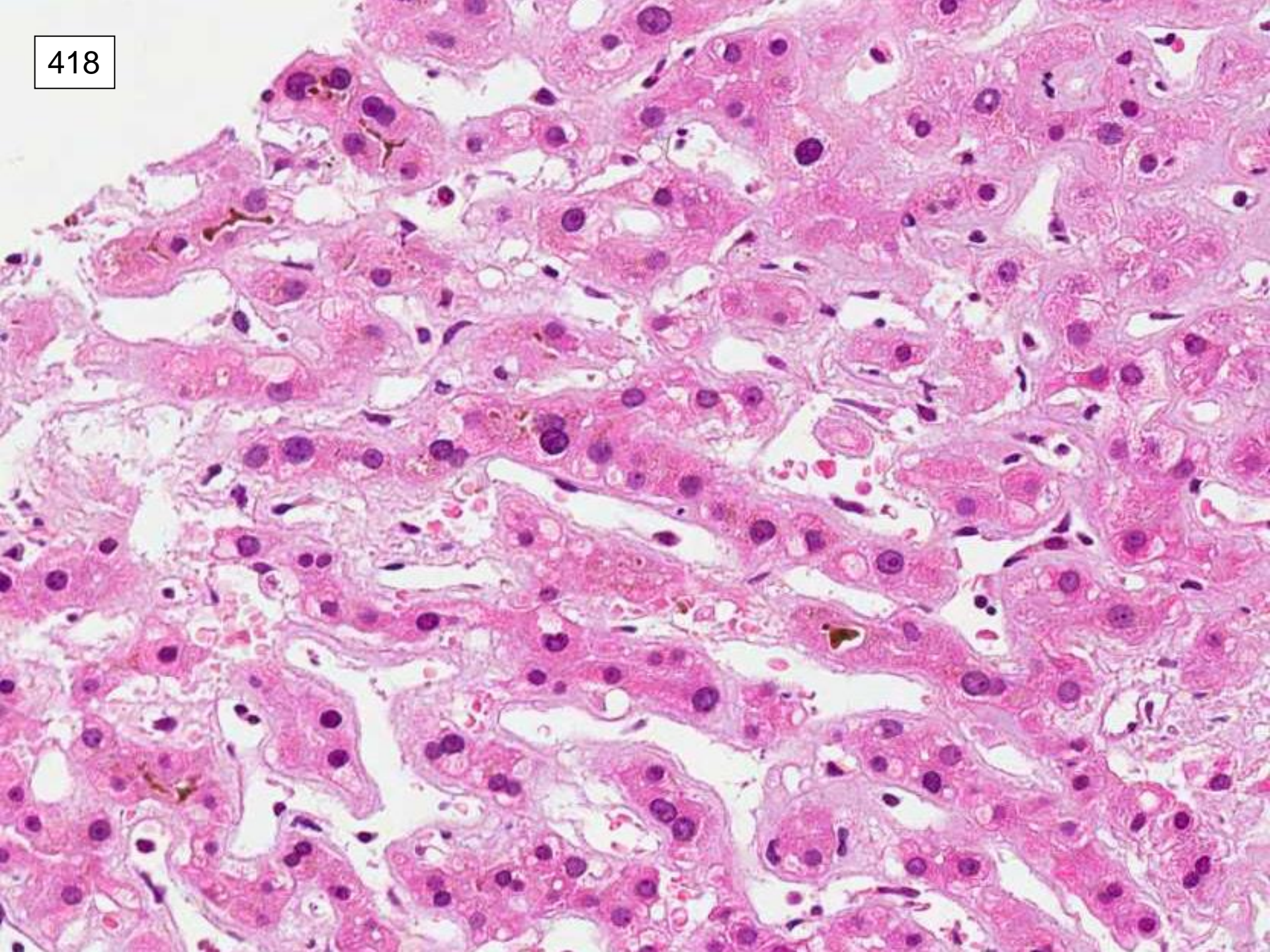
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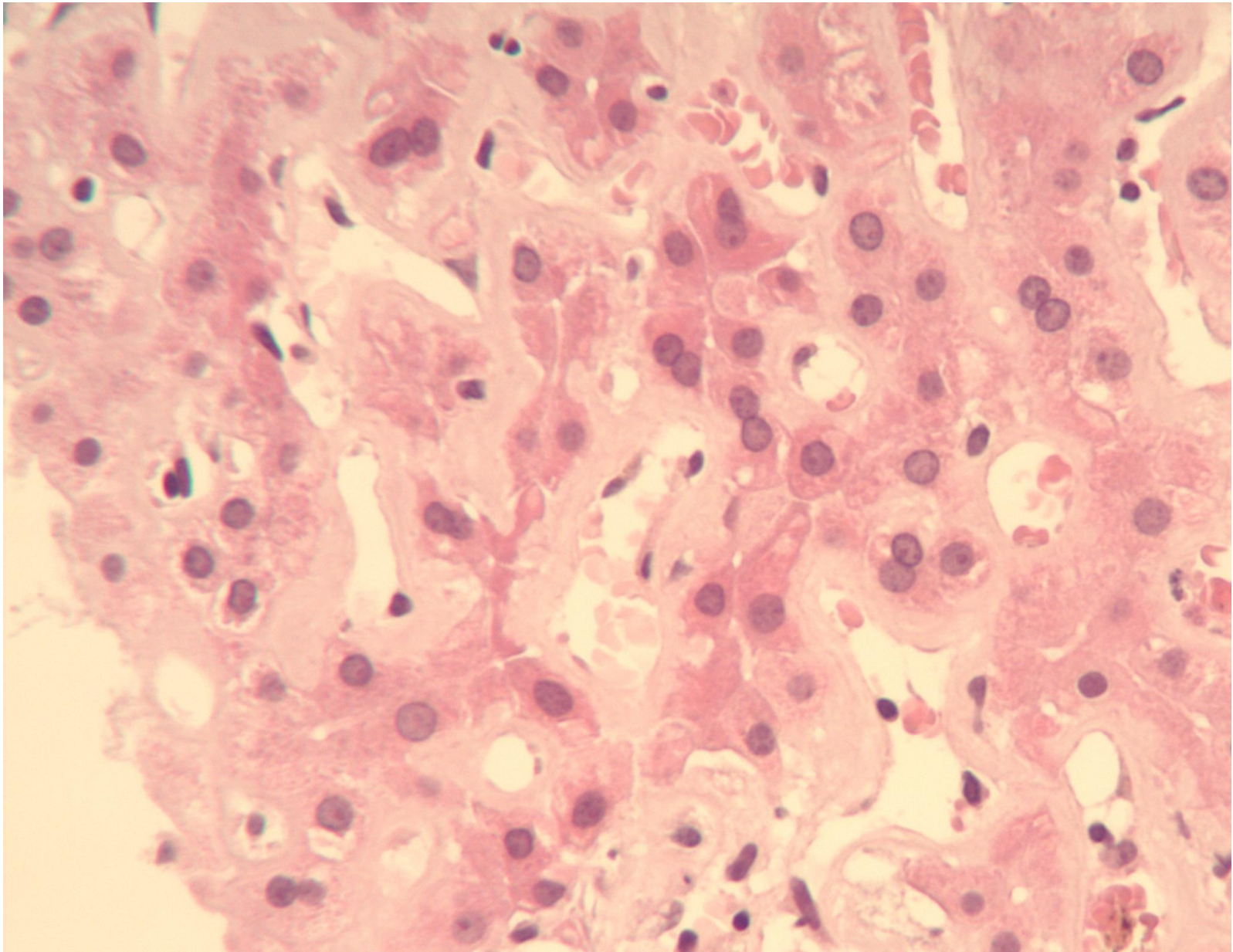


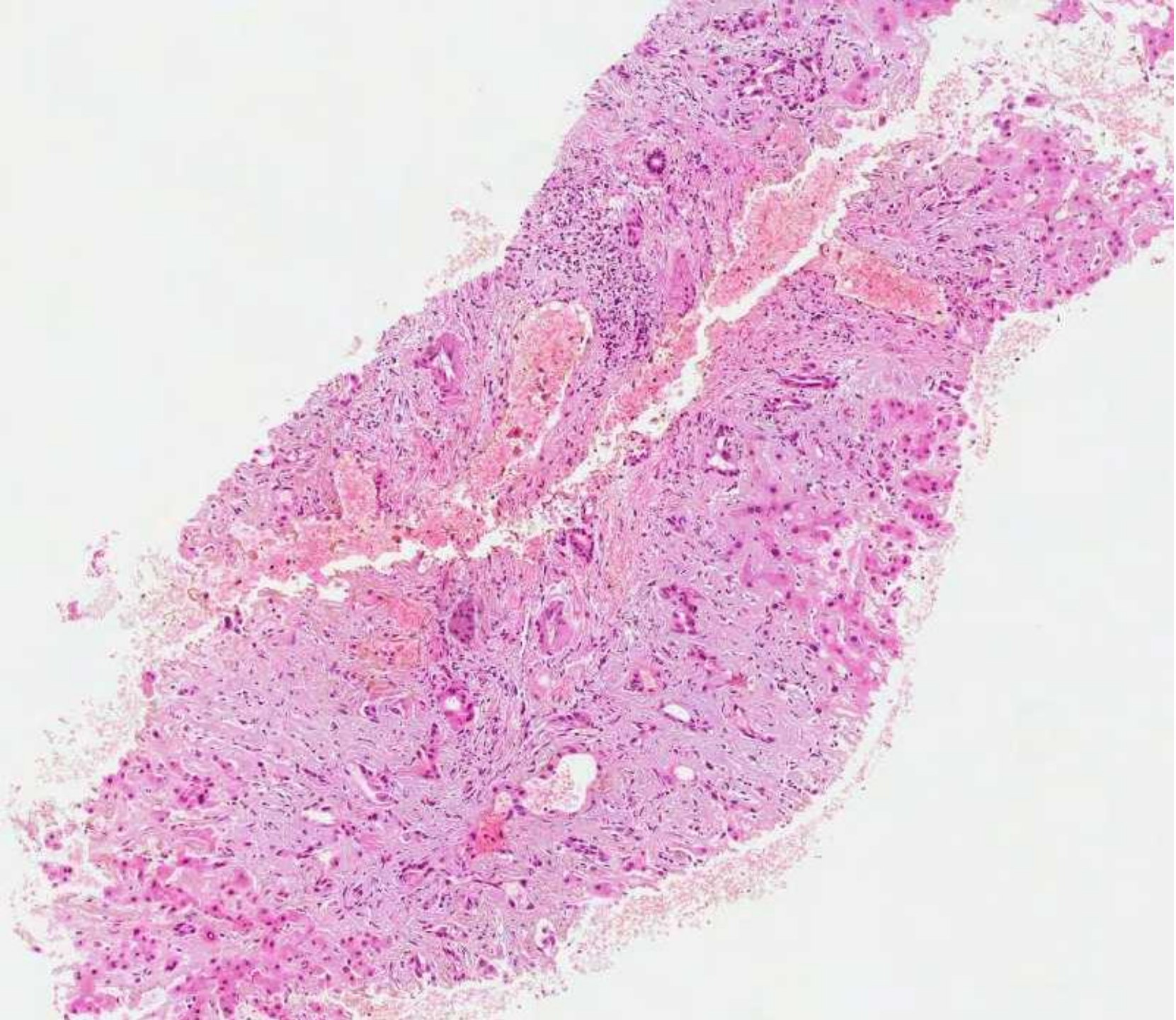
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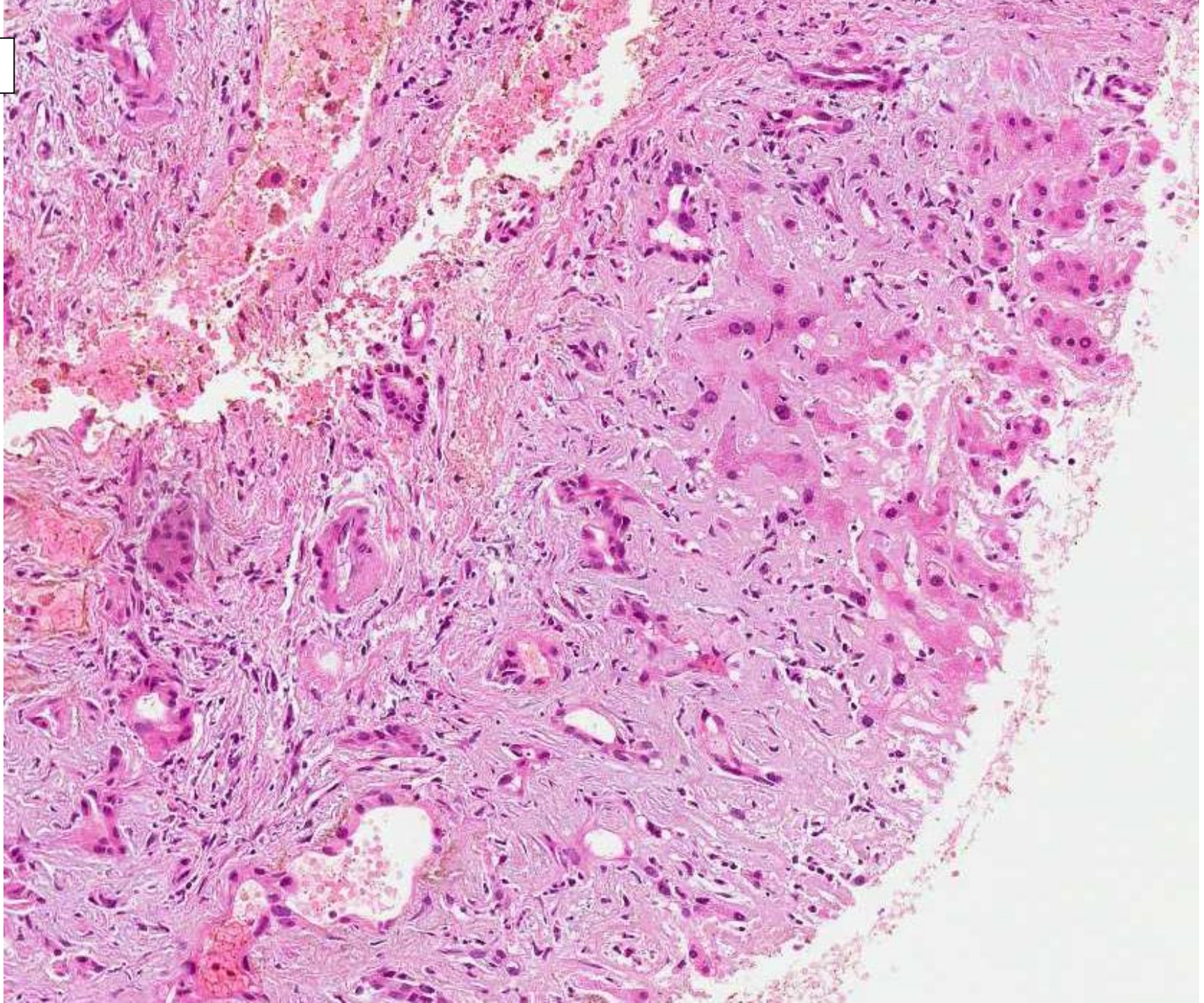
418







418



## Case H1/418 Age 67, Male

Rectal carcinoma deranged LFT's, cirrhosis and ascites

? Metastatic lesion

56 amyloid, +/- light chain deposition, +/- needs stains for amyloid

3 Amyloid in differential, not typical

1 Needs Congo red stain, amyloid not mentioned

16 Amyloid not mentioned  
(30 cholestasis)

7 adenocarcinoma/cholangio

(5 amyloid + Suspicious of malignancy, need more stains)

4 SOS/veno-occlusive/fibrosis

3 Large duct obstruction

2 Haemangioma

2 Peliosis

1 Mass effect adjacent to lesion

1 Chemotherapy hepatotoxicity

Suggestions for scoring: ? Unsuitable or –

Score 0 for definite adenocarcinoma, score 5 for no mention of amyloid

Discussion at meeting: accept proposed scoring for 10 marks needs some mention of amyloid +/- light chain disease.

## **Case H1/418 Age 67, Male**

Rectal carcinoma deranged LFT's, cirrhosis and ascites

? Metastatic lesion

- Original diagnosis: Amyloid (had trephine with myeloma after this biopsy).

Discussion: noted that the amorphous material in space of Disse and portal areas may be light chain deposition disease rather than amyloid, as the staining is atypical – no further details of original results are available. Most delegates have amyloid biopsies sent to the National Amyloidosis Centre at the Royal Free Hospital for further characterisation.

The atypia in small ductules at one end of the core was interpreted as neoplastic by some responders – scored 0 where this was stated unequivocally as adenocarcinoma,

**Case H1/419**

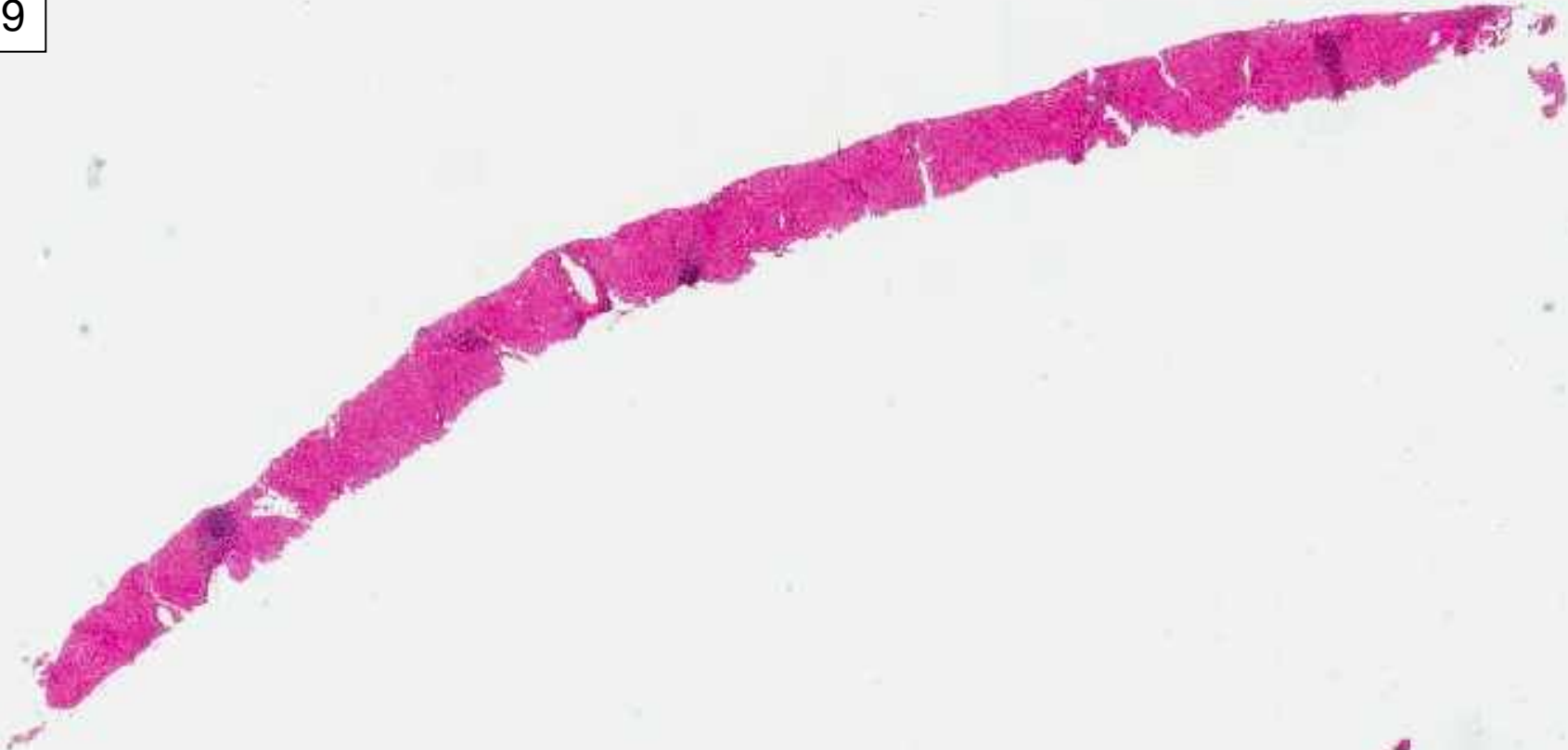
**Age 35, Male**

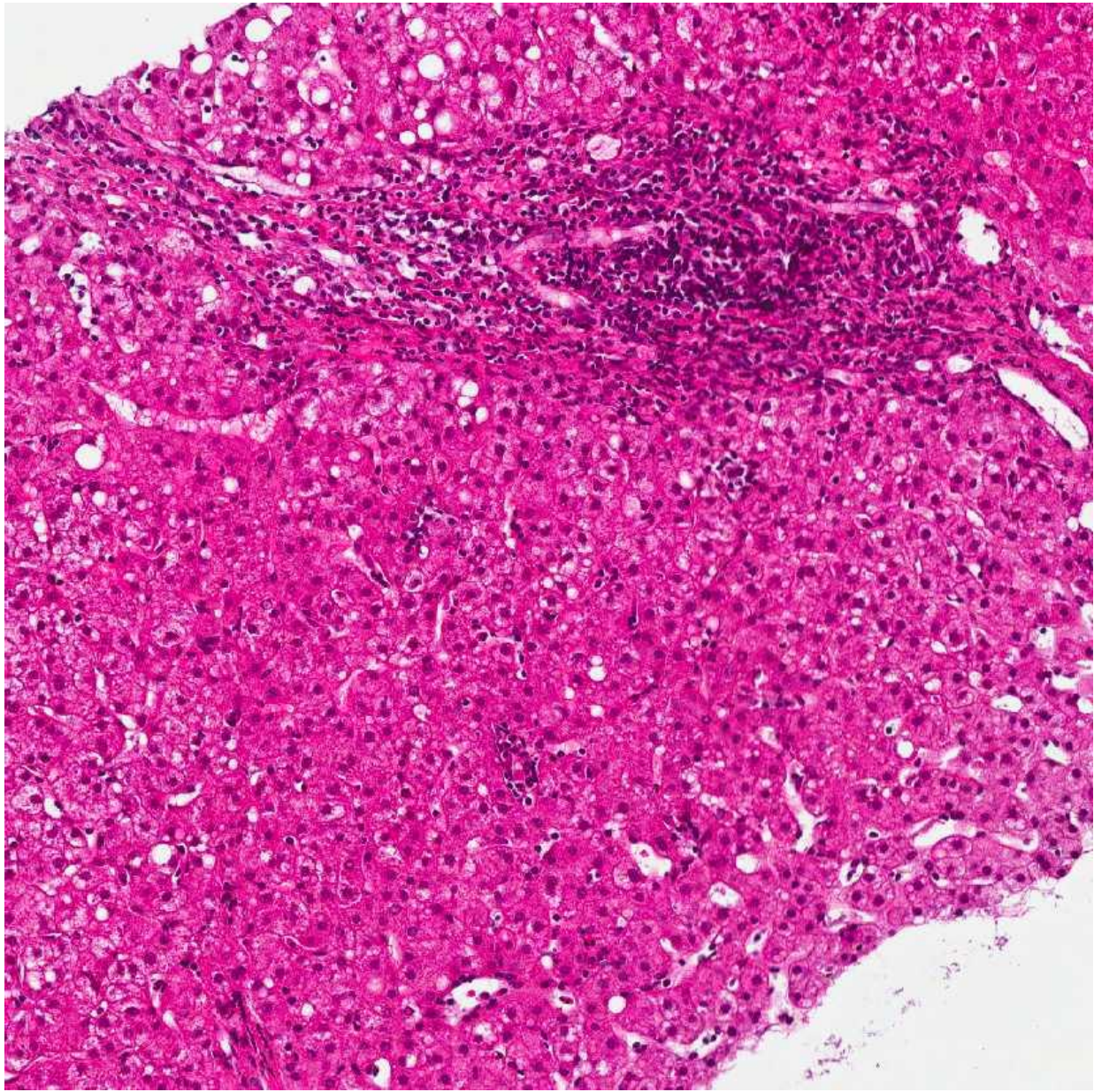
Hepatitis C. Fibrosis on fibroscan.

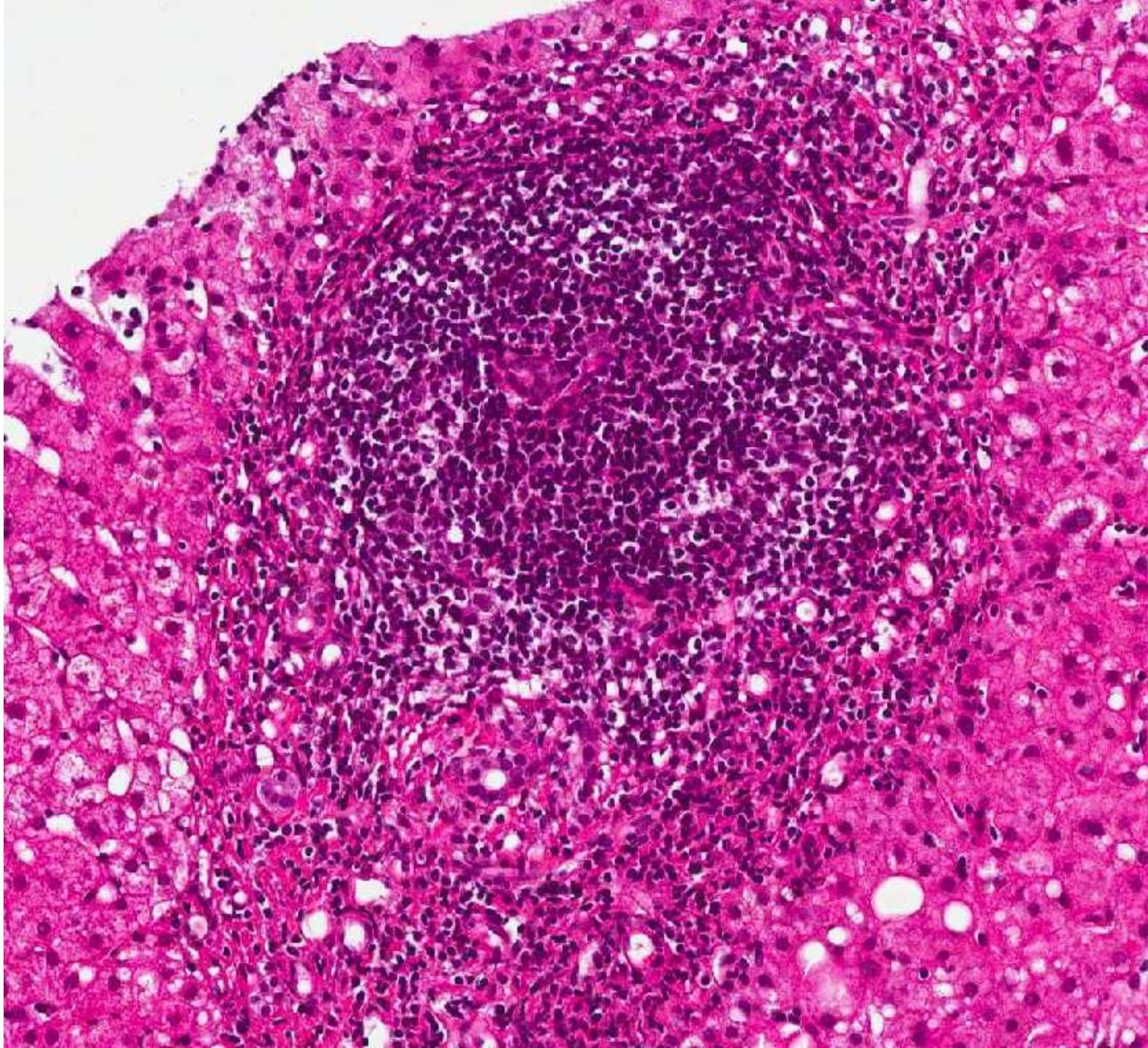
Two cores of liver

(also retic, masson trichrome and van Gieson on website, and retic photo)

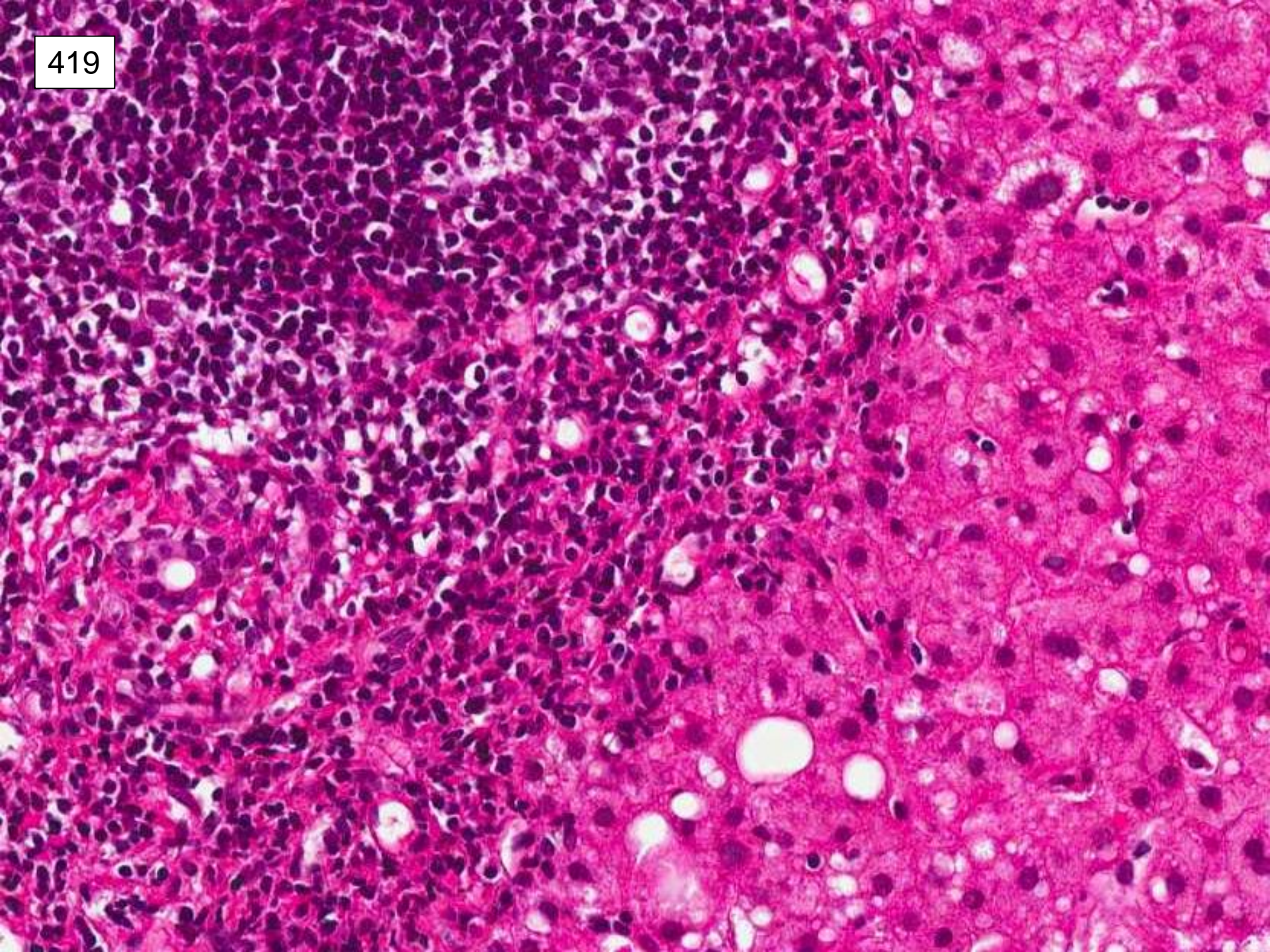
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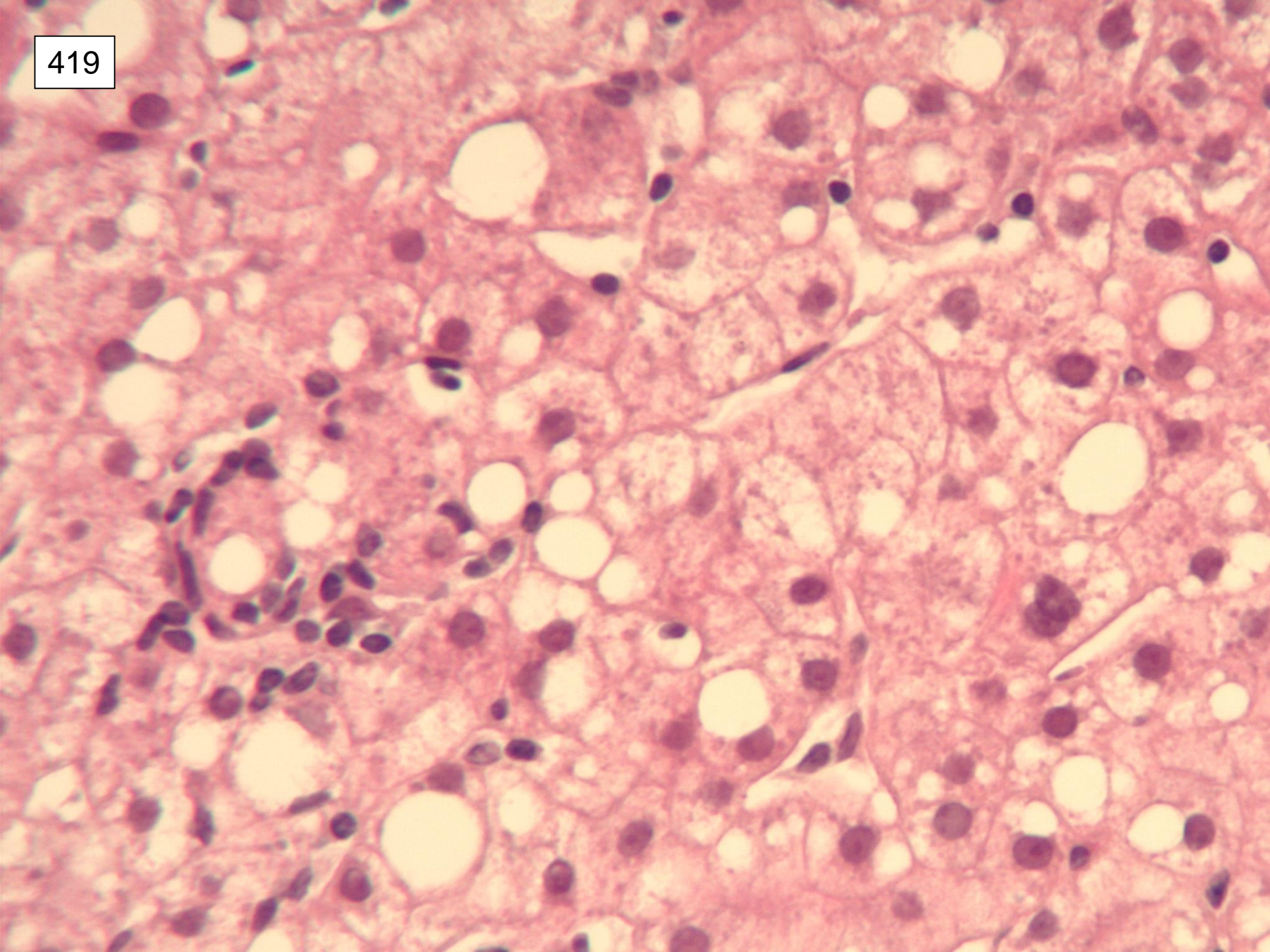




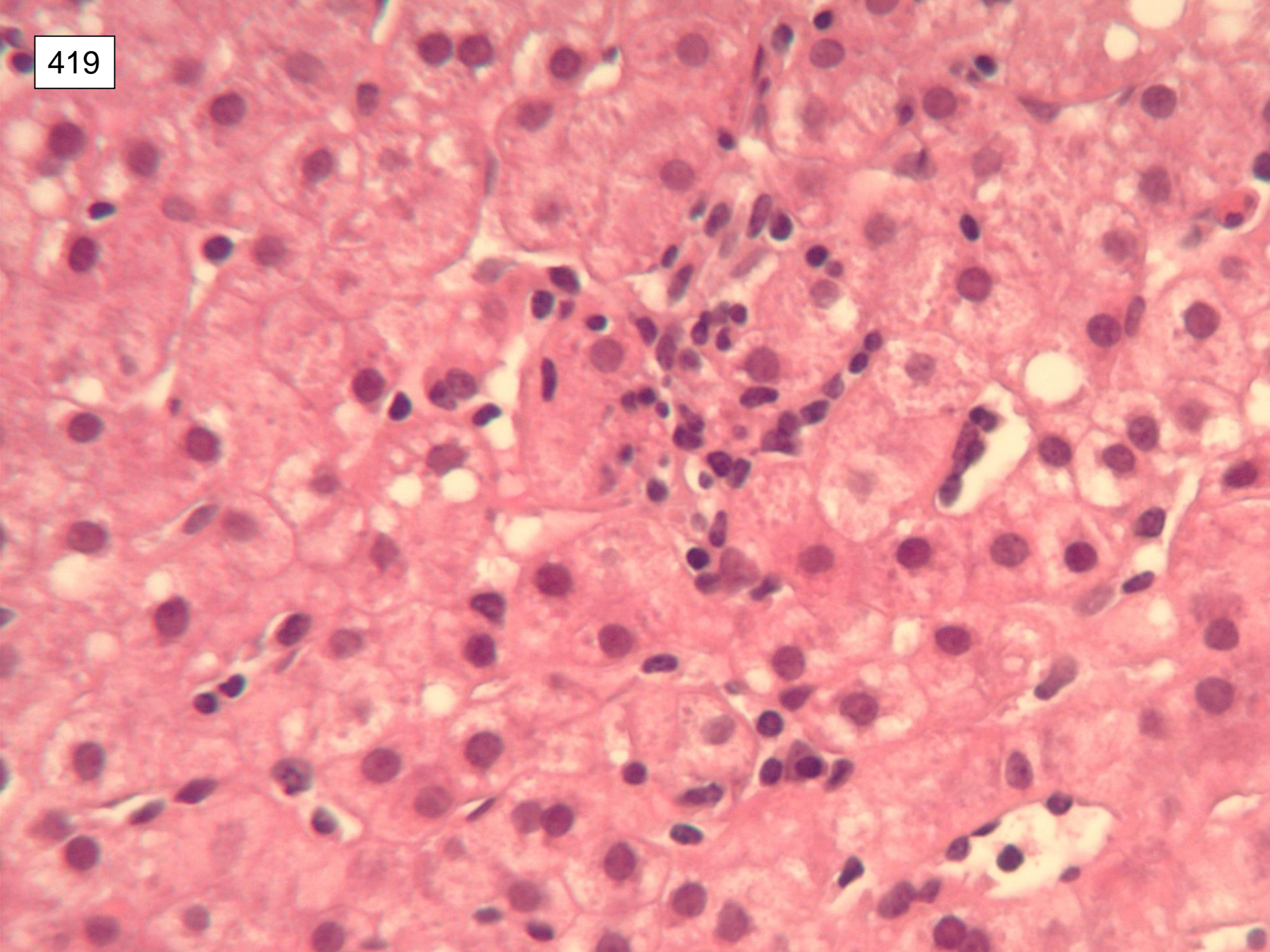
419



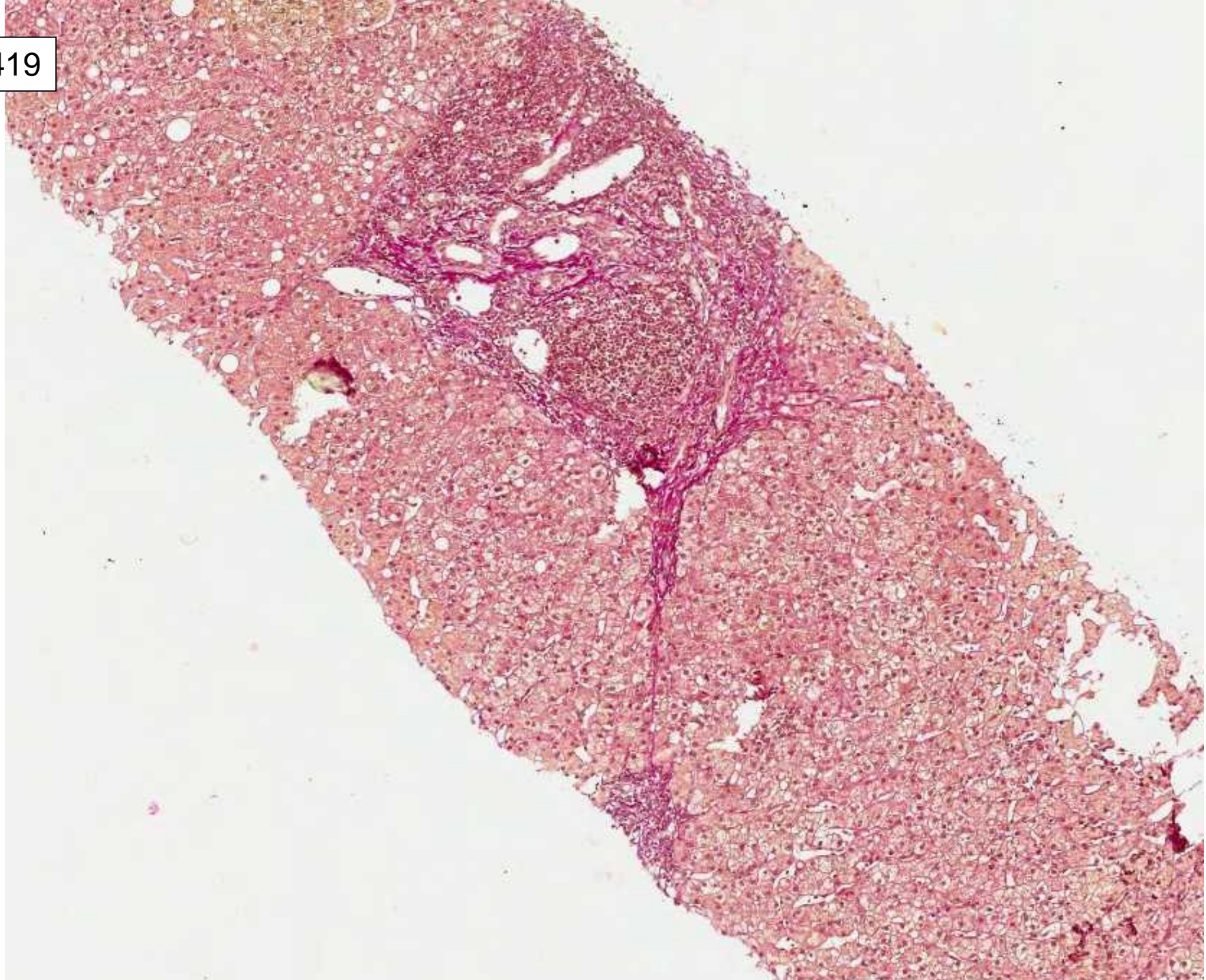
419



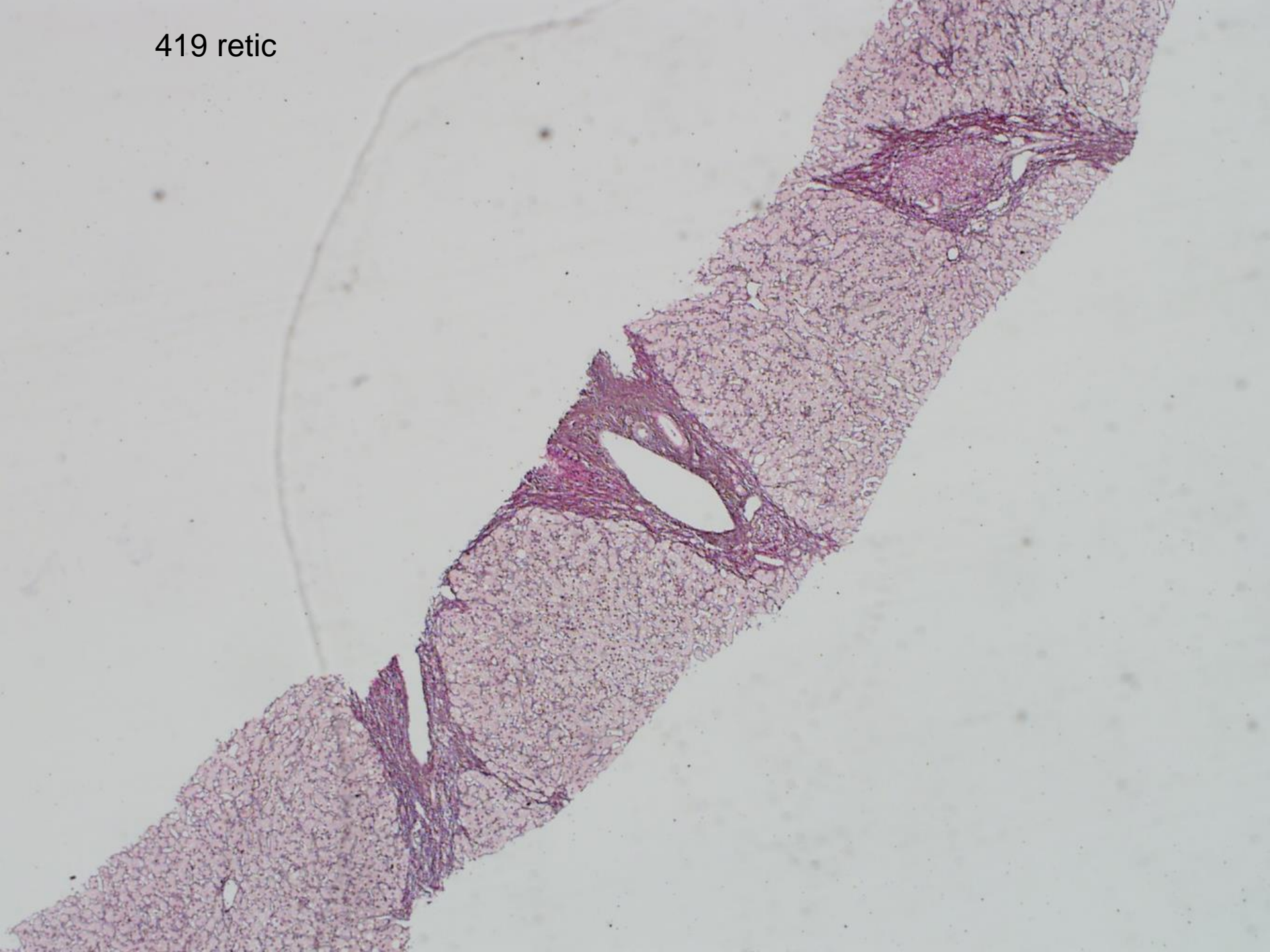
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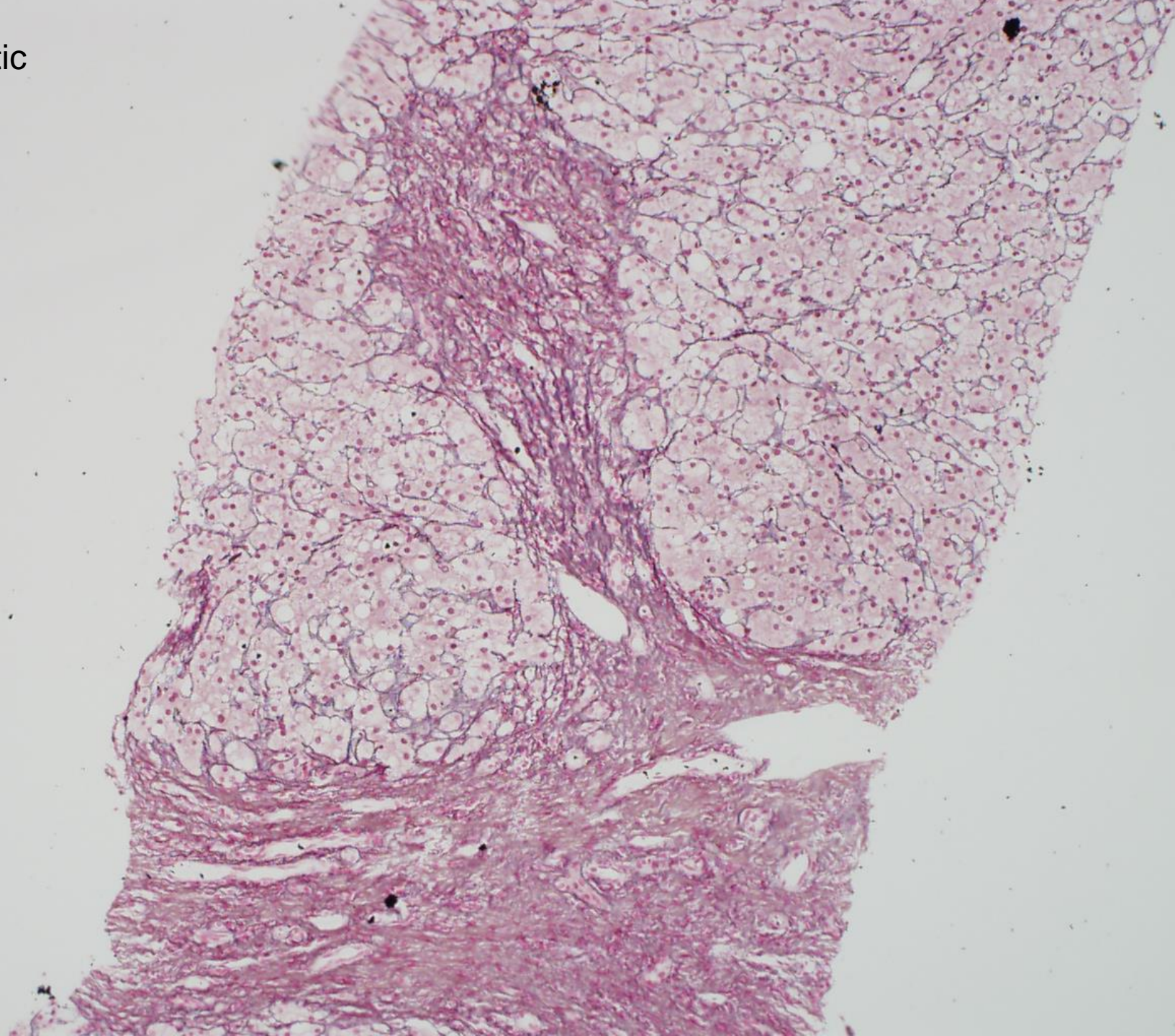
419



419 retic



419 retic



# Case H1/419 Age 35, Male

Hepatitis C. Fibrosis on fibroscan.

74 Hepatitis C

1 hepatitis C not mentioned

1 hepatitis B

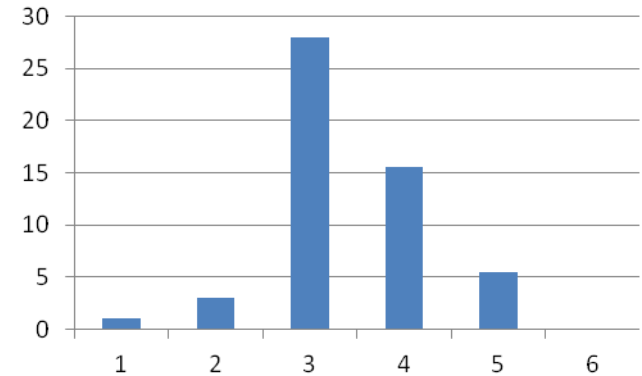
42 Steatosis

1 Steatohepatitis

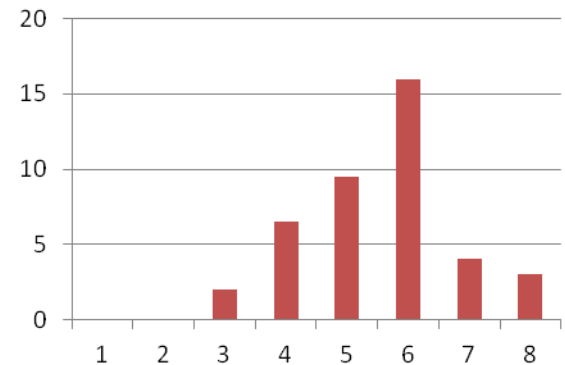
1 No stage or grade mentioned

7 no comment on severity

Ishak stage (n=53)



Ishak grade (n=41)



Suggestion for scoring:

For 10 points, need hepatitis C and indication of severity

Score 0 if hep C not mentioned or hepatitis B

Score 0 if no stage, score 5 if no severity

Discussion: accept proposed scoring

Metavir: one each of :

A1F1, A2F3, A1F2 A2F3, A2F4

17 Various text descriptions of stage

23 Various text descriptions of grade

## **Case H1/419 Age 35, Male**

Hepatitis C. Fibrosis on fibroscan.

- Original diagnosis: Chronic hepatitis C. Moderate necroinflammatory activity, bridging fibrosis.
- Comment: Histograms of Ishak grade and stage given for reference.
- A comment on severity in terms of stage and grade is required for all viral hepatitis biopsies; this can be by the use of a staging system or as free text.
- Responses should indicate that the features are in keeping with chronic viral hepatitis C.

**Case H1/420**

**Age 81, Female**

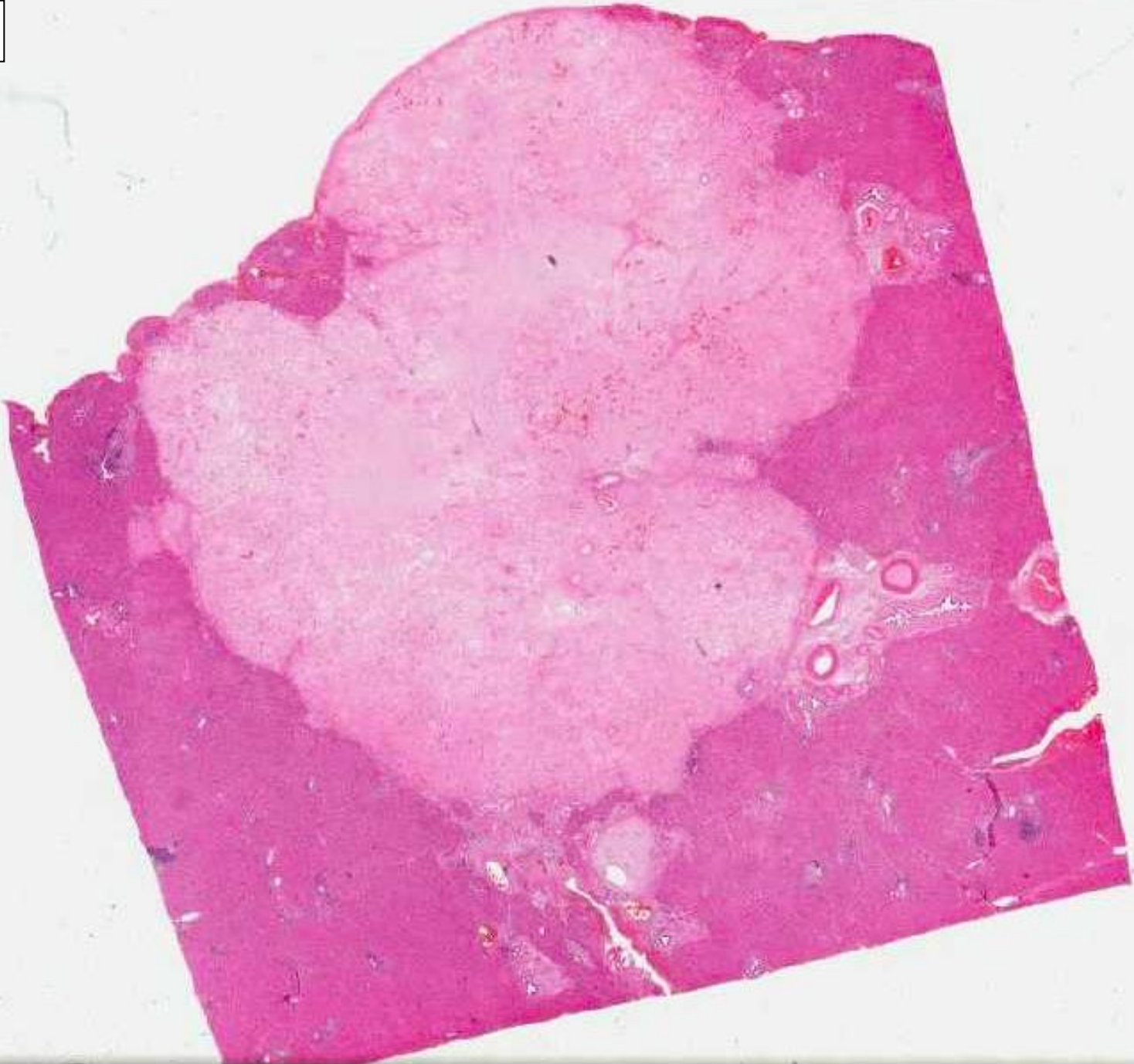
Gastric GIST (downstaged with Glivec)

Liver resection for lesion L lateral segment

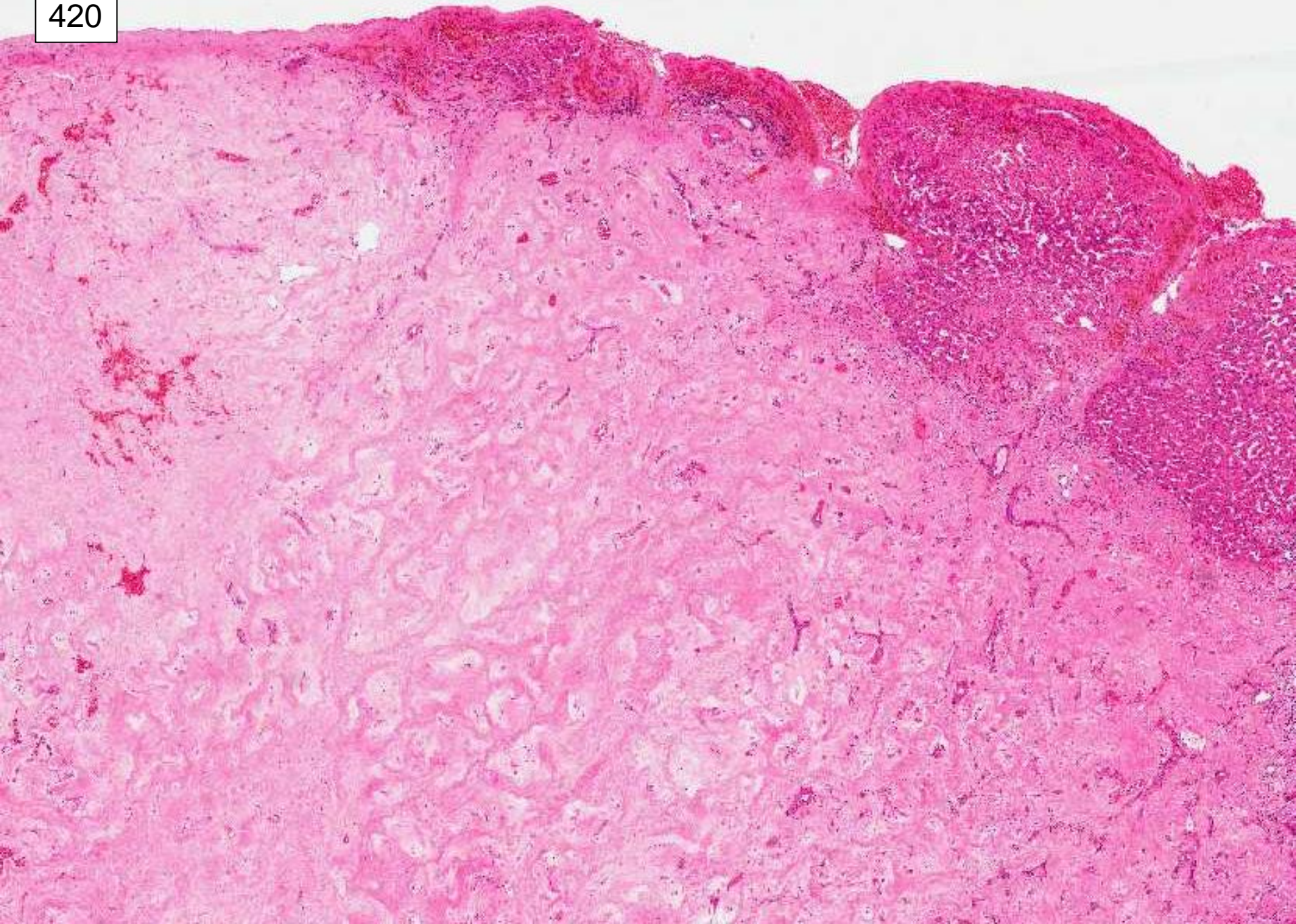
Wedge of liver 110x70x35 containing one well defined beige tumour 30mm

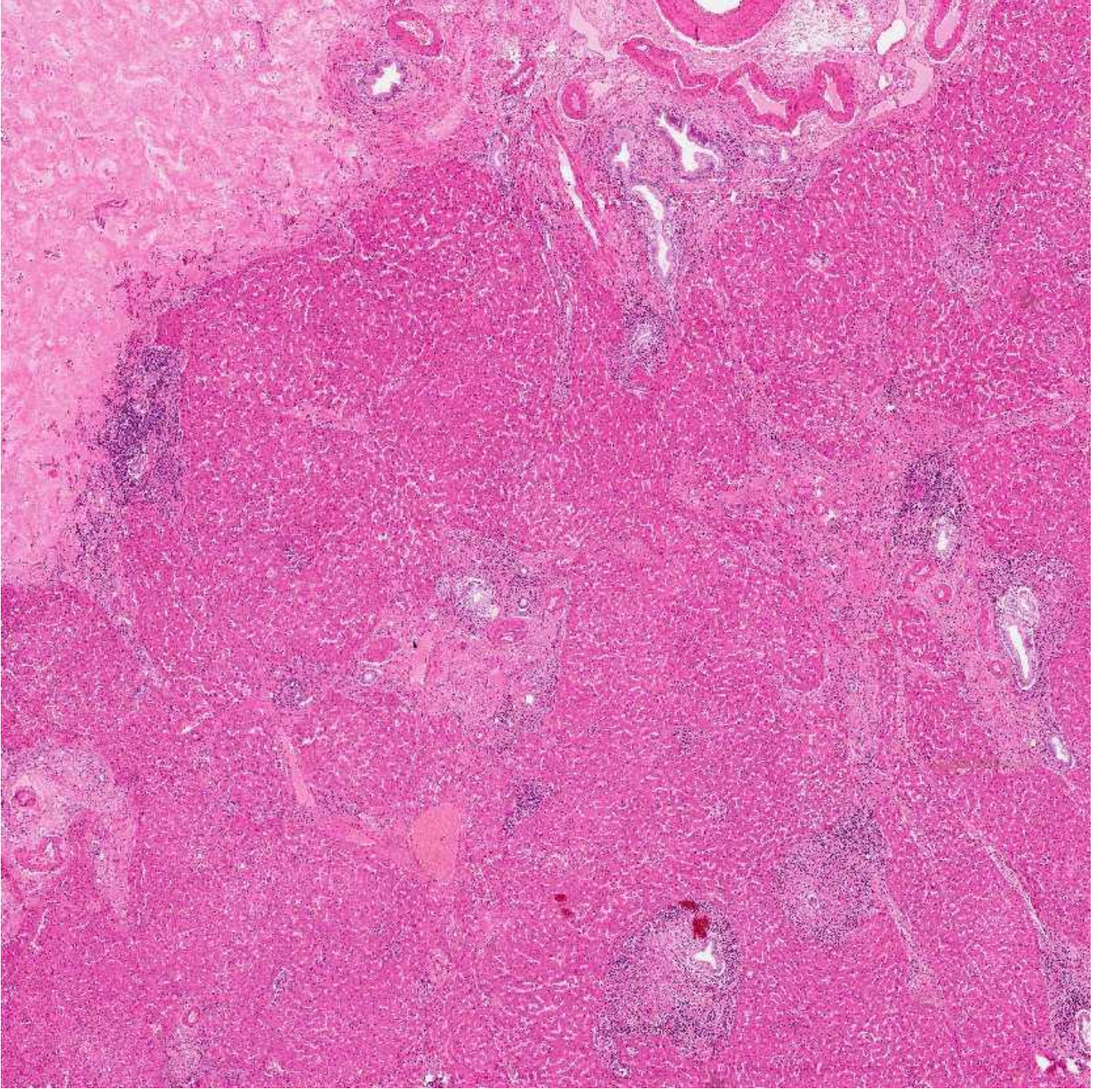
(also EVG stain on website and photo)

420

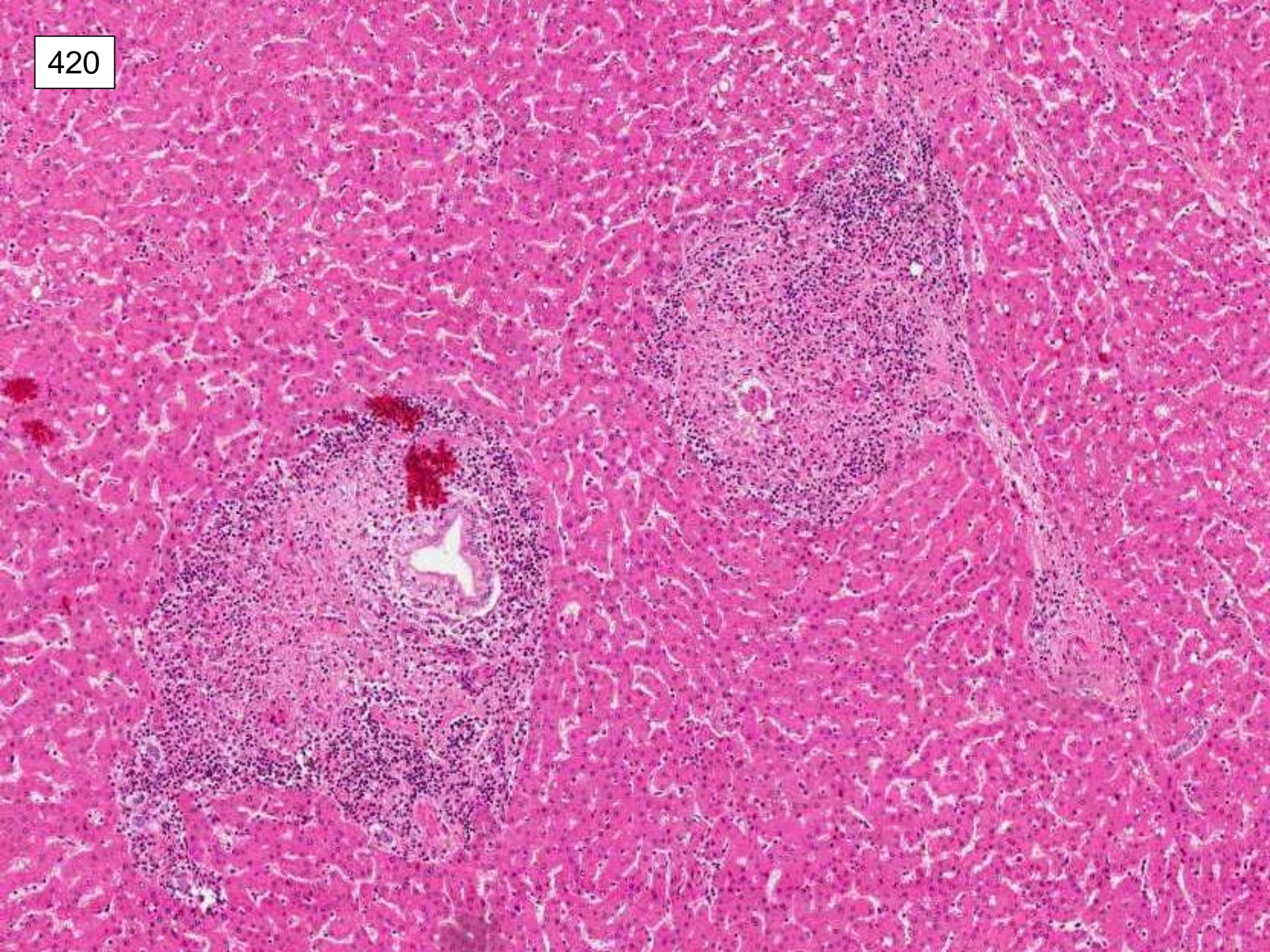


420

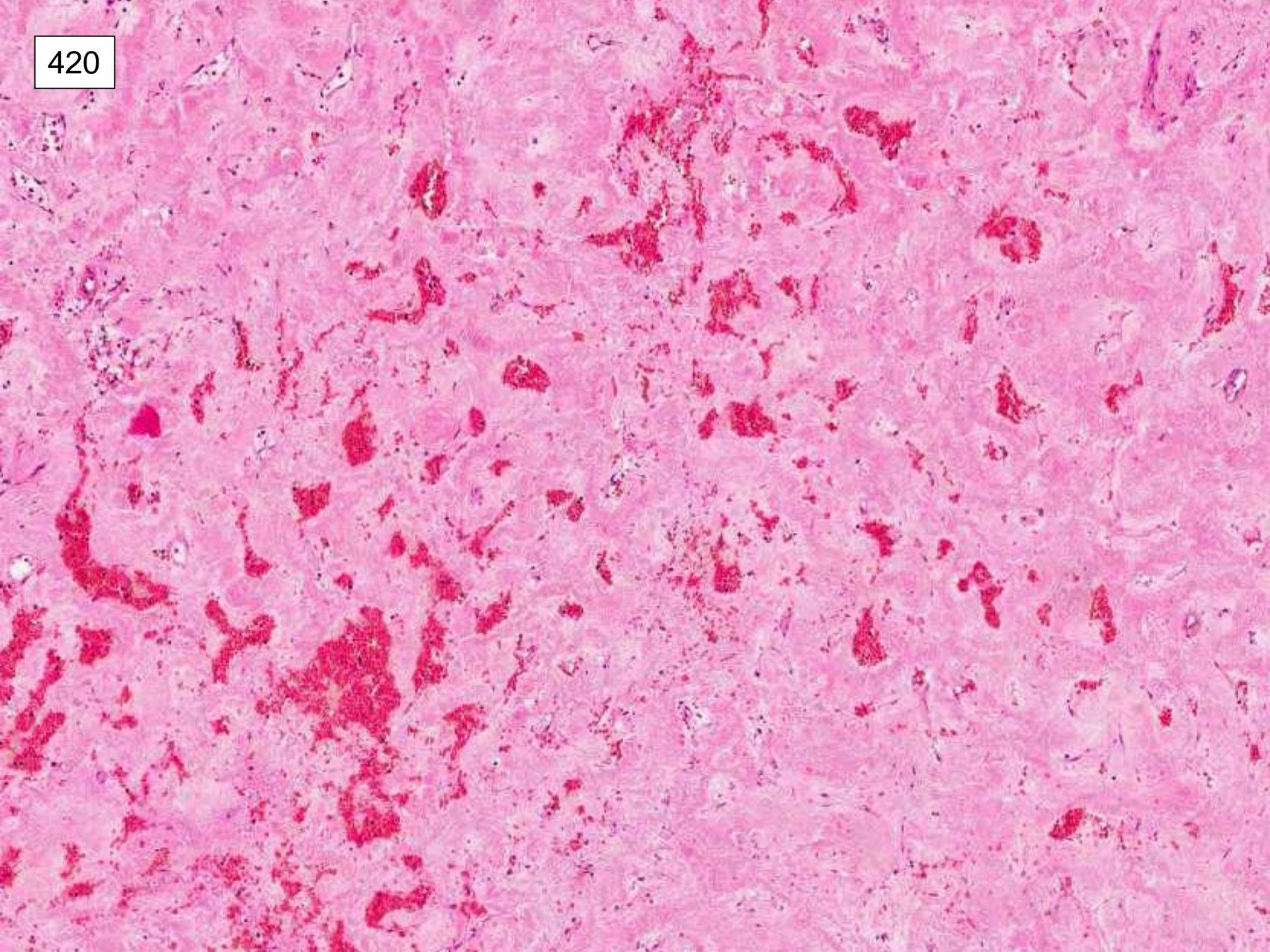




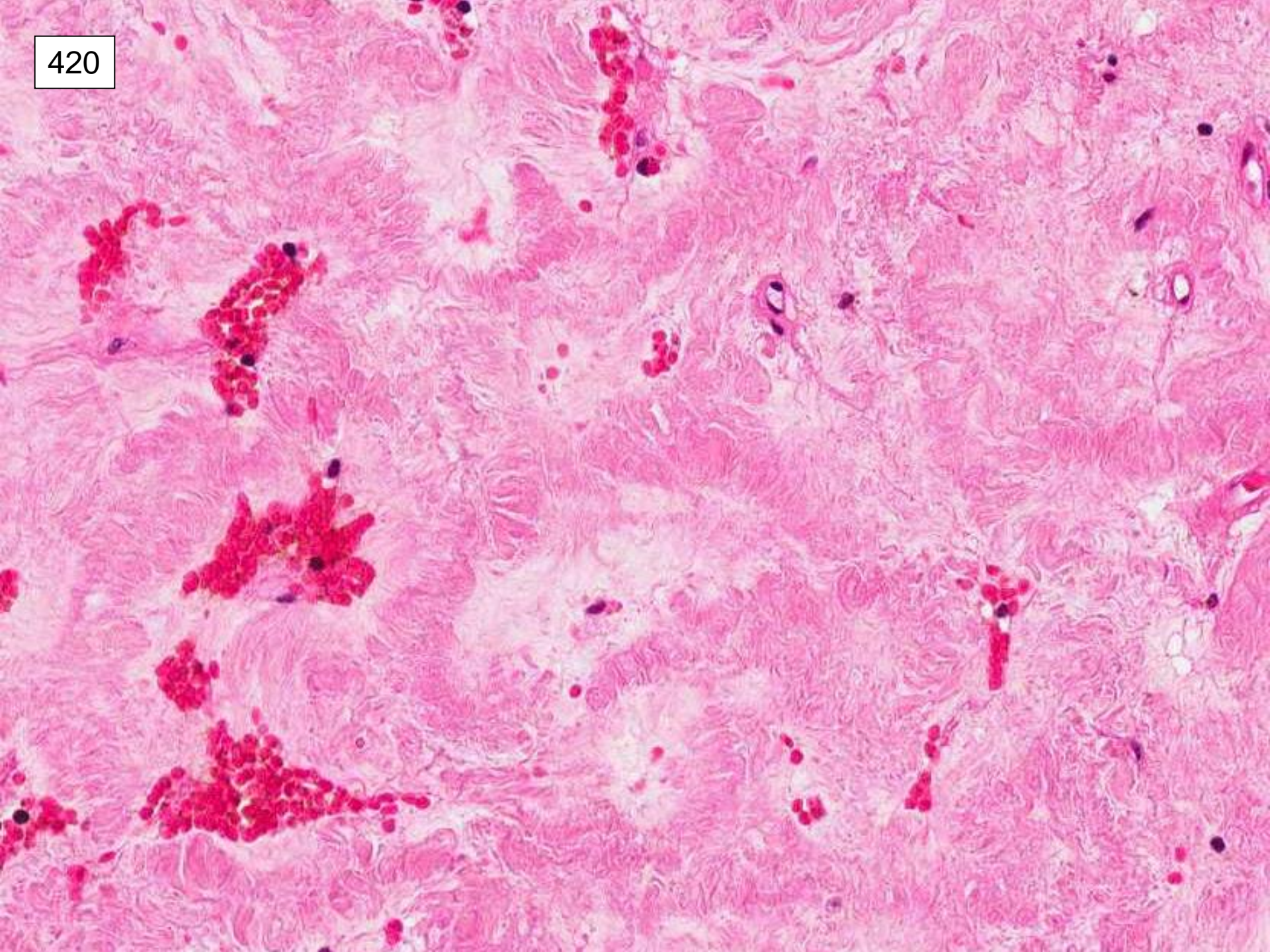
420



420



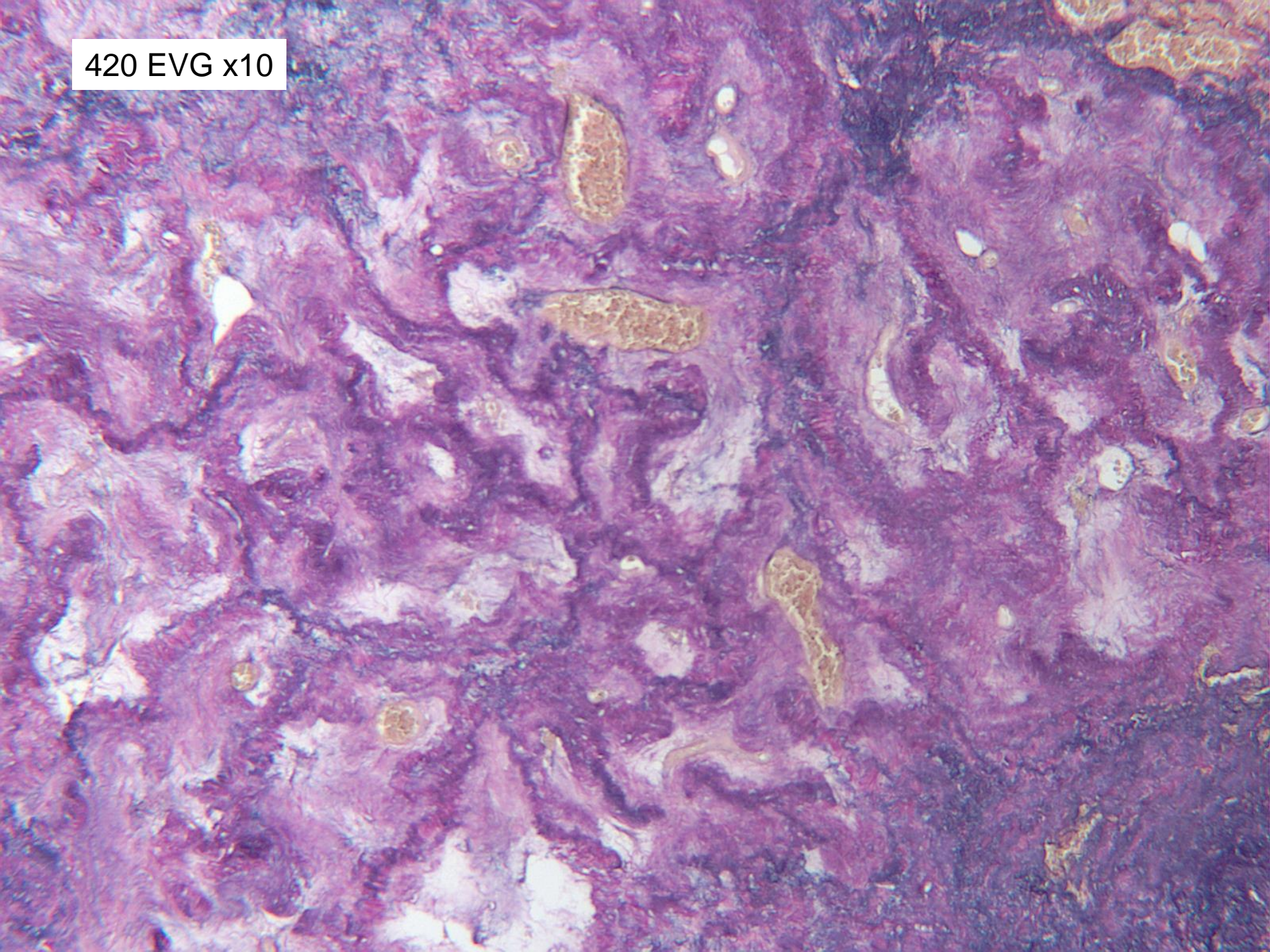
420



420 EVG x2.5



420 EVG x10



# Case H1/420

# Age 81, Female

## Gastric GIST (down-staged with Glivec)

### Lesion:

- 33 sclerosed haemangioma
- 5 Sclerosed h'gioma or regressed GIST post Glivec
- 19 Fibrous nodule c/w GIST post Glivec
- 11 Unequivocal diagnosis GIST post Glivec
- 2 Solitary fibrous nodule
- 3 Fibrosis or scar NOS
- 1 Elastotic nodule/elastoma
- 2 Mesenchymal hamartoma
- 1 'no residual viable metastatic tumour'

### Background liver:

- 40 No comment on background
- 18 Portal inflammation with granulomas
- 9 Portal inflammation
  
- 11 exclude PBC
- 8 Background SOL effect
- 3 Exclude biliary disease
- 4 Chronic biliary disease
- 1 Exclude sarcoid
- 2 Background due to Glivec

Suggestions for scoring: unsuitable for scoring!

Agreed at meeting: not for scoring

## Case H1/420

Age 81, Female

Gastric GIST (down-staged with Glivec)

- Original diagnosis: I think this is a sclerosed haemangioma but have sent this to ..... for confirmation
- There was no consensus on this case and so it was unsuitable for scoring.
- In practice, it was considered that there is sufficient clarity of the haemangioma architecture and some residual red blood cells in spaces to allow this diagnosis to be made.

**Case H1/421**

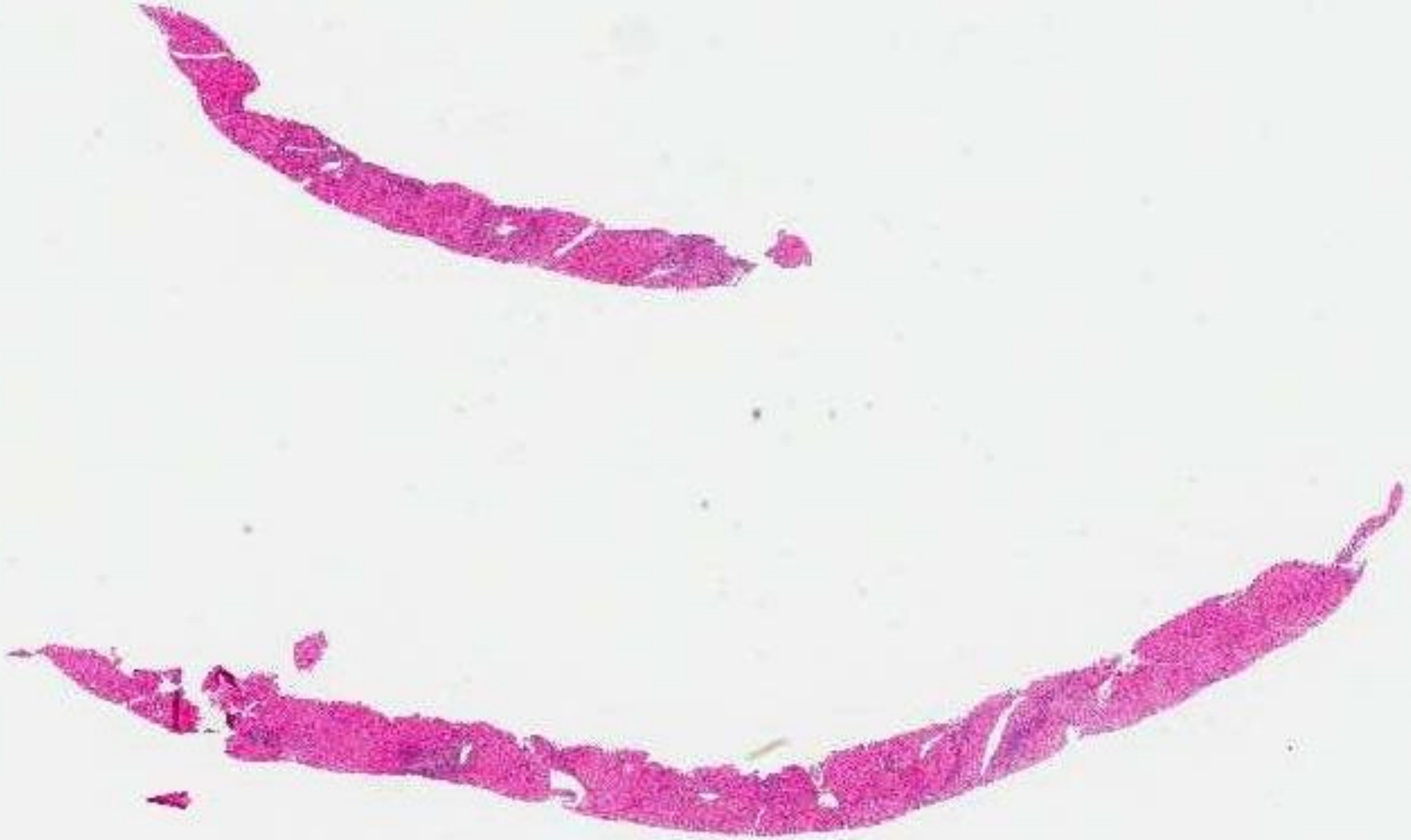
**Age 58, Female**

Deranged liver function tests. Positive anti-smooth muscle antibody ? Autoimmune hepatitis

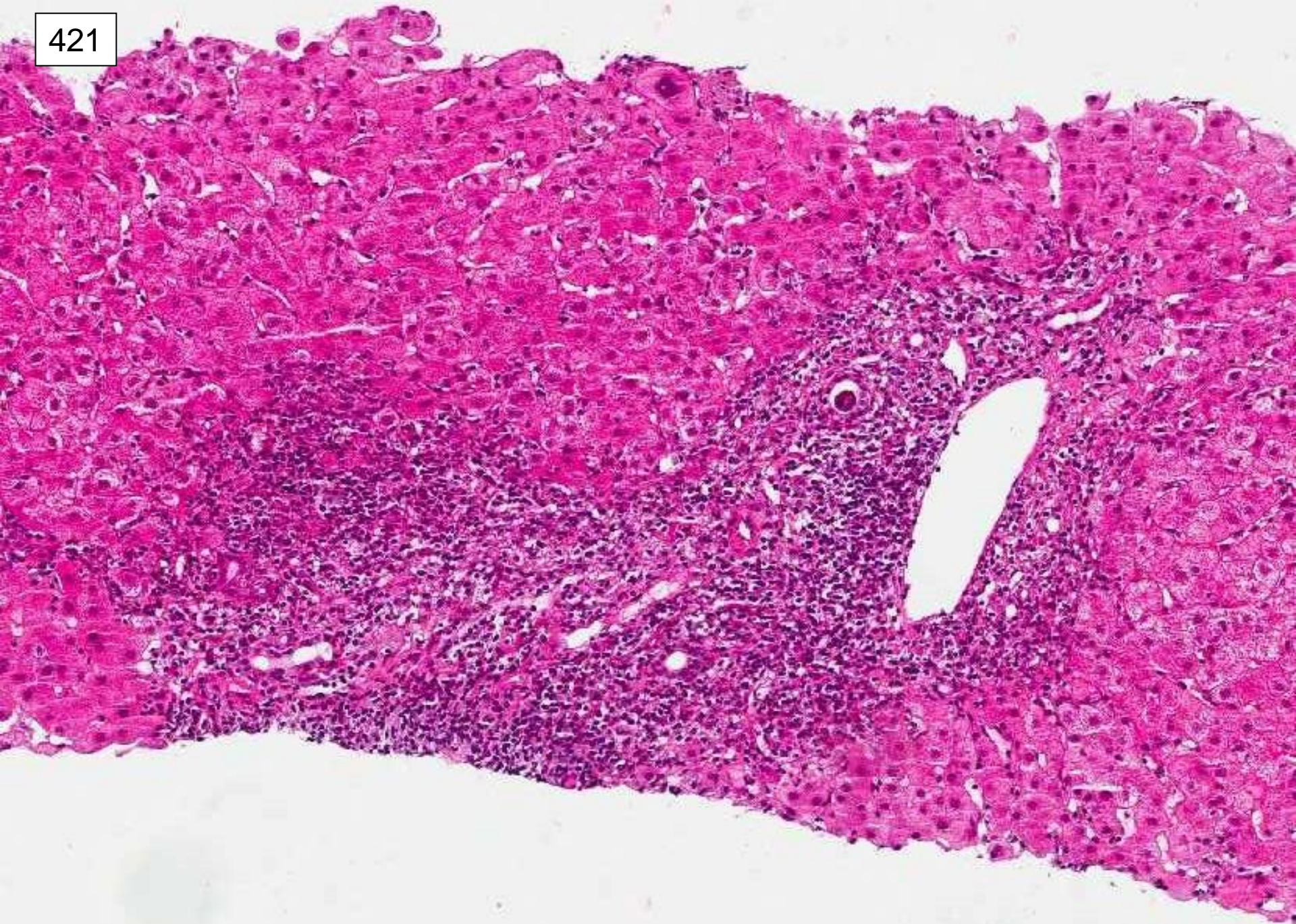
Three cores and some fragments

(also Masson trichrome and reticulin on website, no photos)

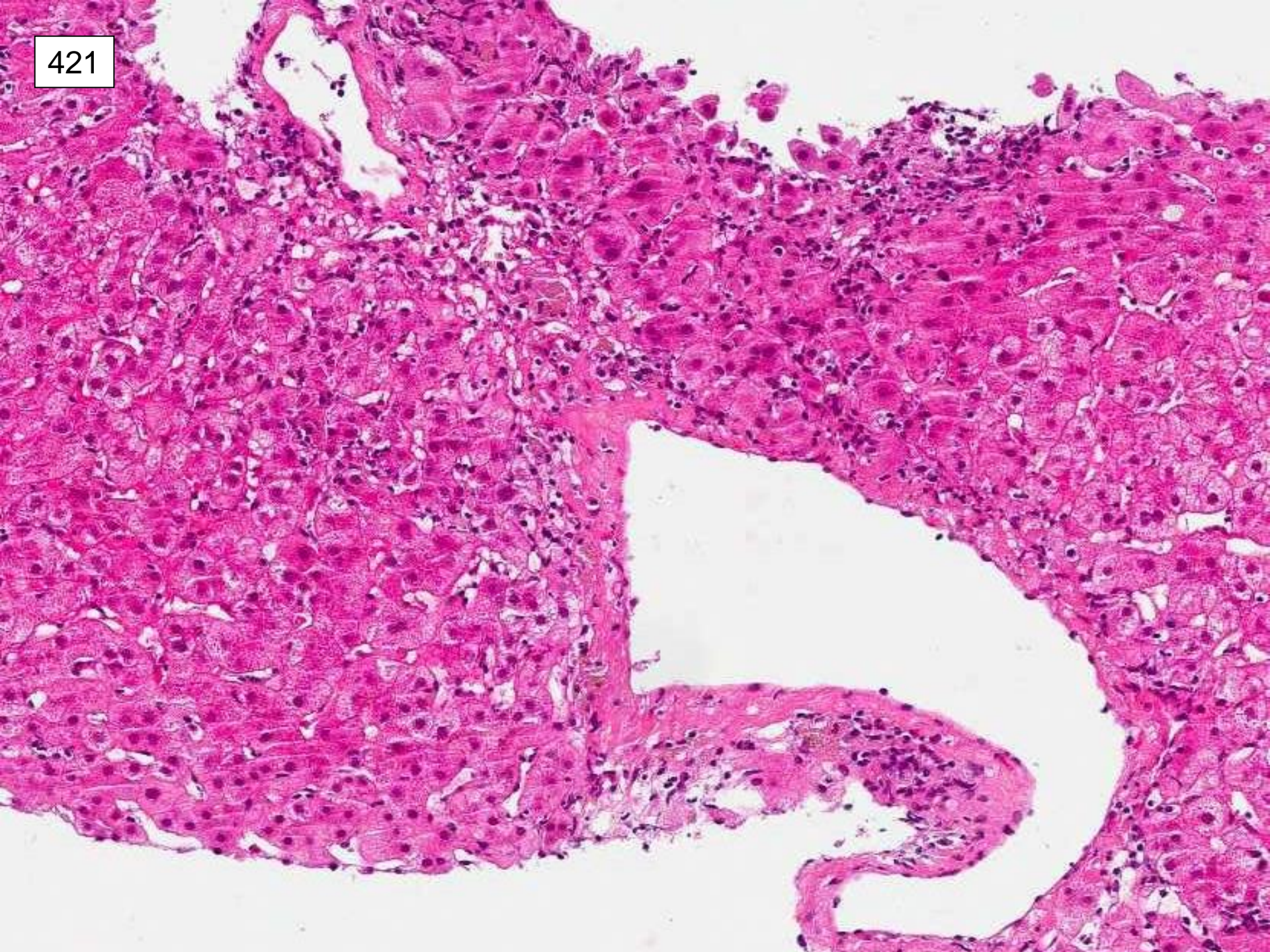
421



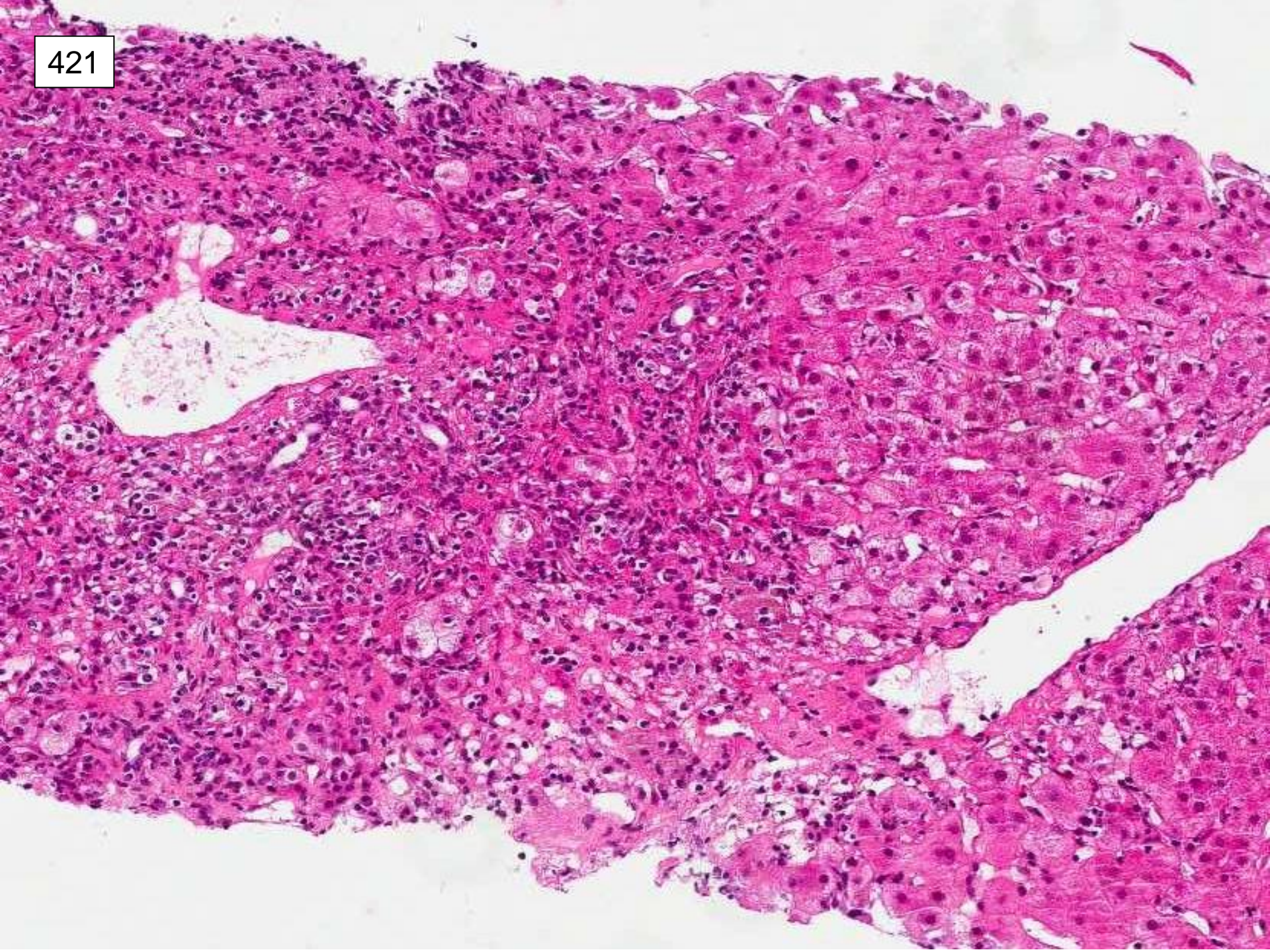
421



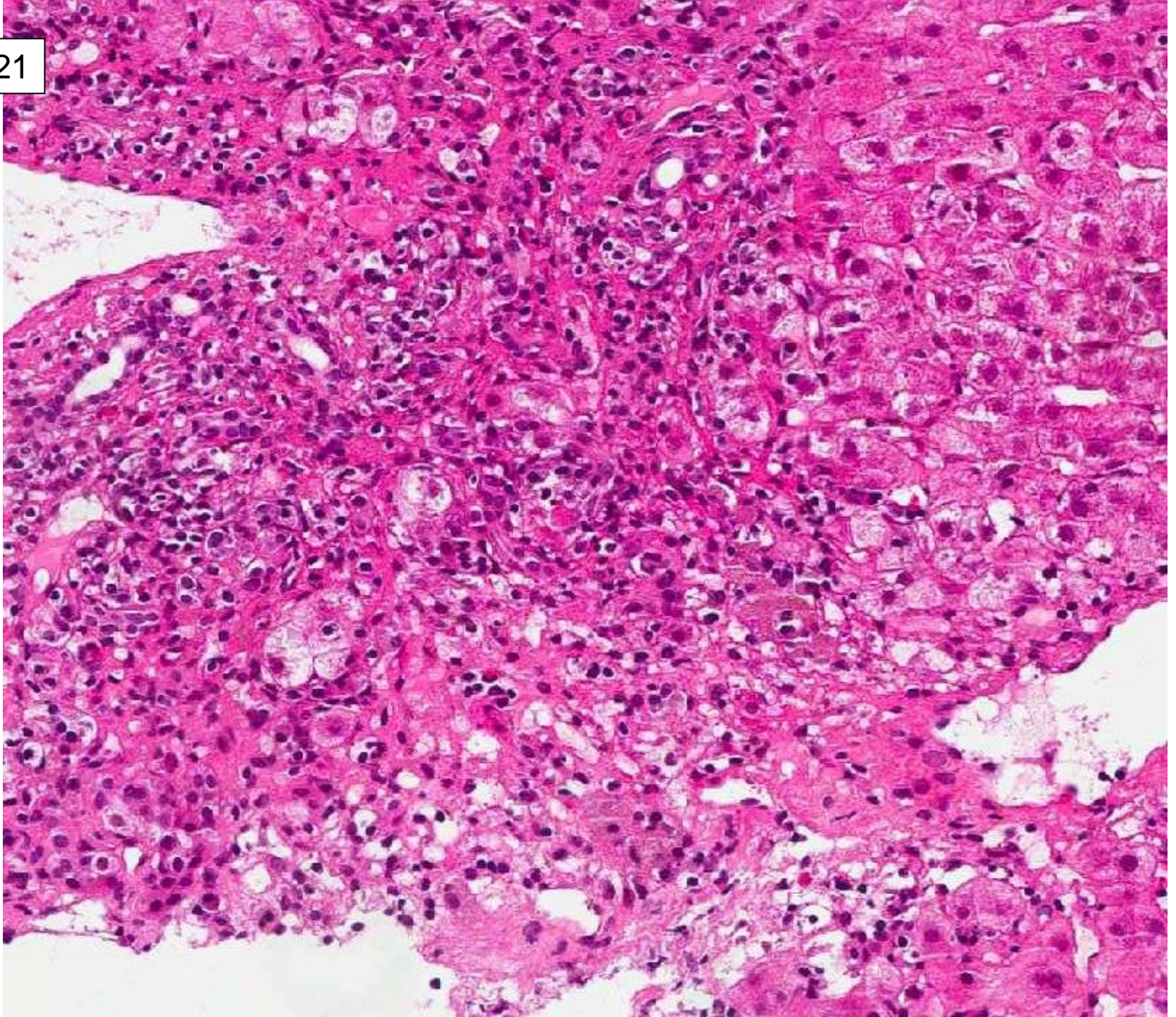
421



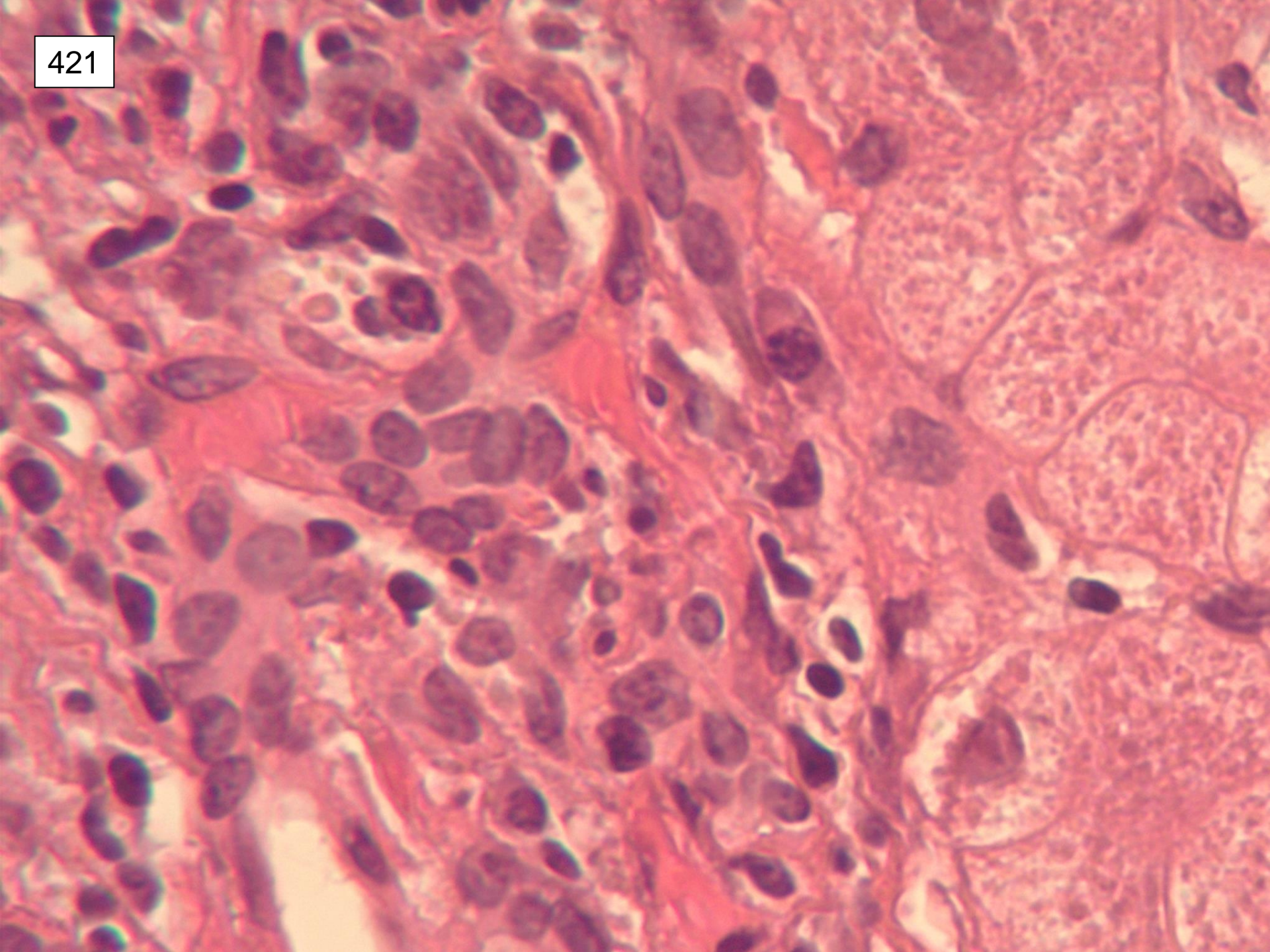
421



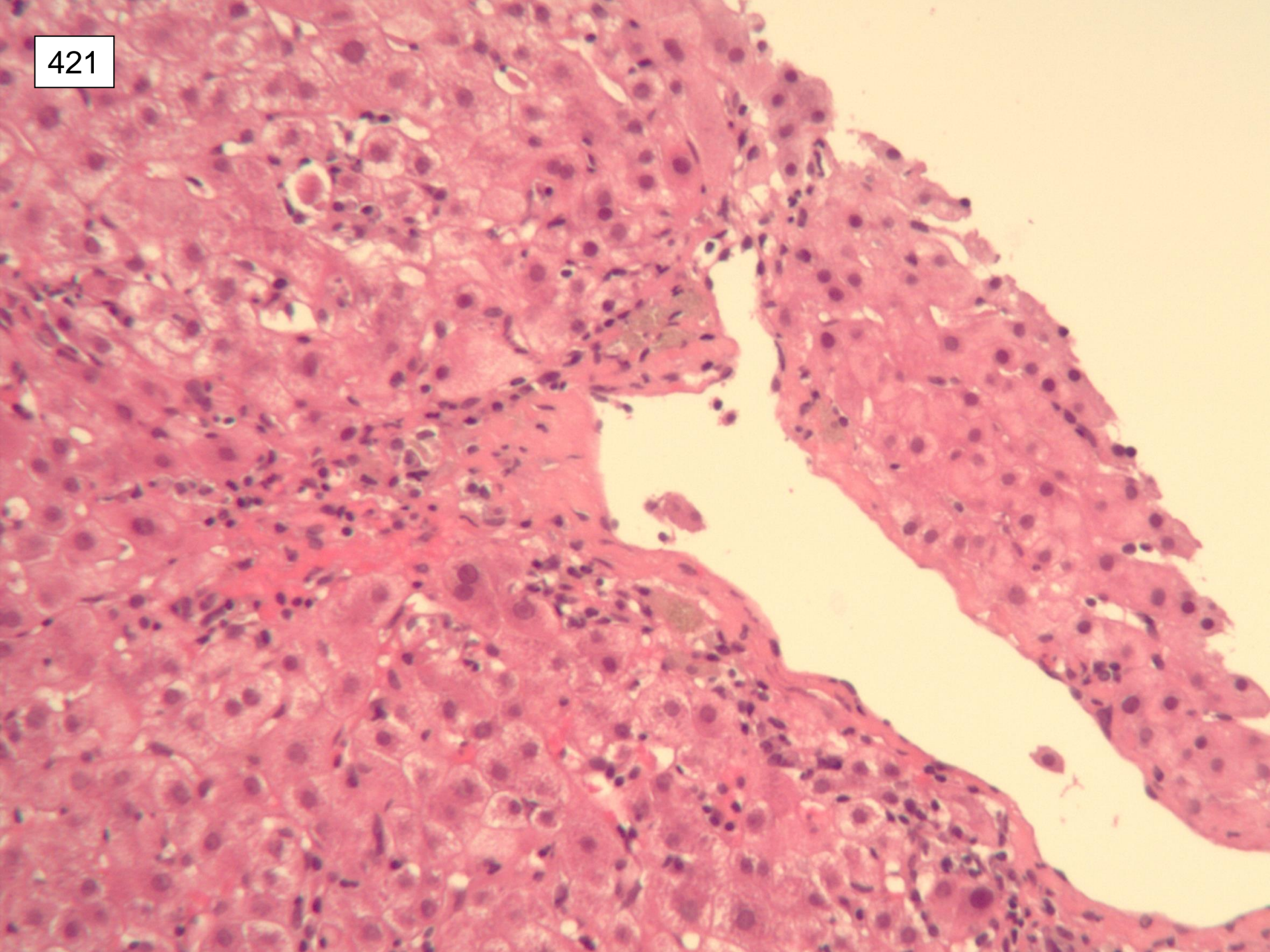
421



421



421



## Case H1/421 Age 58, Female

Deranged liver function tests.

Positive anti-smooth muscle antibody ? Autoimmune hepatitis

### Morphology includes:

- 43 Plasma cells
- 50 Interface hepatitis
- 44 Lobular inflammation
- 5 Confluent necrosis
- 23 Bridging necrosis
- 15 Bridging fibrosis
  
- 5 Acute
- 4 Subacute
- 19 Chronic
- 2 Severe fibrosis, incipient cirrhosis

### Clinico-path includes:

- 14 Autoimmune hepatitis
- 61 c/w autoimmune hepatitis  
+/- differential
  
- 1 Not AIH – exclude foreign material,  
drug reaction
  
- 30 Exclude virus and/or drugs
- 5 No biliary features
- 6 Possible biliary overlap

Suggested scoring: score 10 for autoimmune hepatitis, alone or with differential

Discussion at meeting: scoring accepted

## **Case H1/421 Age 58, Female**

Deranged liver function tests.

Positive anti-smooth muscle antibody ? Autoimmune hepatitis

- Original Diagnosis: Autoimmune hepatitis:  
no significant fibrosis.

Comment: Severe degree of portal inflammation with interface hepatitis although plasma cells are infrequent.

Evidence of confluent necrosis with bridging in this biopsy – looks recent, but need connective tissue stains (the trichrome stain supplied is very dark) to evaluate properly and exclude longer standing fibrosis.

See masterclass slides that follow:

Liver EQA - Case 421  
Autoimmune Hepatitis

# Role of Liver Biopsy in the Diagnosis of AIH

1. Establishing/confirming the diagnosis

2. Assessing disease severity

- Inflammatory activity
- Fibrosis

# Role of Liver Biopsy in the Diagnosis of AIH

## **Routine use of liver biopsy still recommended in recent expert reviews and national/international guidelines documents**

- International Autoimmune Hepatitis Group (Hennes , Hepatology 2008)
- AASLD Practice Guidelines (Manns , Hepatology 2010)
- Invited Review (Lohse & Mieli-Vergani, J Hepatol 2011)
- British Society of Gastroenterology Guidelines (Gleeson 2012)

## **Others suggest mainly useful in cases where other findings are equivocal or atypical:**

- Autoantibodies in low titre or absent ( “autoantibody –negative” AIH )
- Features suggesting an alternative diagnosis (e.g. fatty liver disease or biliary disease)

# Autoimmune Hepatitis – Laboratory Investigations

## Diagnostic Criteria

Biochemistry	Hepatic LFTs •Raised AST/ALT
Immunology	Autoantibodies •ANA, SMA (type 1) •LKM , LC-1 (type 2)  Immunoglobulins •Raised IgG
Histology	Presence of typical/compatible features Absence of atypical features (e.g. biliary features)

### Chronic AIH - Typical Histological Features (Hennes 2008)

Portal lymphocytic /lymphoplasmacytic infiltrate (few/no plasma cells in 1/3<sup>rd</sup> - Gleeson 2012)

1. Interface hepatitis
2. Hepatocyte rosettes
3. Emperipolesis

Case 421 - all 3 “typical features” present

# Autoimmune Hepatitis - Assessment of Inflammatory Activity

## Interface Hepatitis

- Presence/severity at presentation predicts development of fibrosis / cirrhosis
- Indication for commencing immunosuppression
- Mild activity (e.g. Ishak score <4-6) in older person may be grounds for not treating with immunosuppression (Gleeson 2012)

## Lobular inflammation

- Typically plasma cell rich
- Often mainly perivenular (“central perivenulitis”), may be diffuse
- More severe cases associated with confluent / bridging necrosis
  - Increased risk of progression to cirrhosis - up to 80% (Cjaza 2007, Manns 2010)
  - “Absolute indication” for treatment with immunosuppression
- May present as acute hepatitis / acute liver failure

## Autoimmune Hepatitis – Assessment of Fibrosis

- 25-33% of patients have cirrhosis at presentation  
(Lohse 2011, Gleeson 2012)
  - Includes cases with acute presentation  
(important to distinguish true cirrhosis from post-necrotic collapse)
- Patients with cirrhosis at presentation
  - Have worse outcome (Feld 2005, Verma 2007, Landeira 2012)
  - Less responsive to immunosuppression (Muratori 2009, Efe 2012)
    - But reversal of cirrhosis following treatment can occur (Czaja 2007)
  - At risk of developing HCC - approx 0.5 -1%/year  
(Yeoman 2008, Migita 2012, Hino-Arinaga 2012)

The end of H1