

# Masterclass

SATURDAY, 30TH MAY 2026

# Immune-mediated liver disease

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# Masterclass

## Immune-mediated liver disease



# OUTLINE

**Focus on immune-mediate disease in the adult native liver**

**Primary biliary cholangitis**

**Autoimmune hepatitis**

**IgG4-related sclerosing cholangitis**

**Drug-induced autoimmune-like hepatitis**

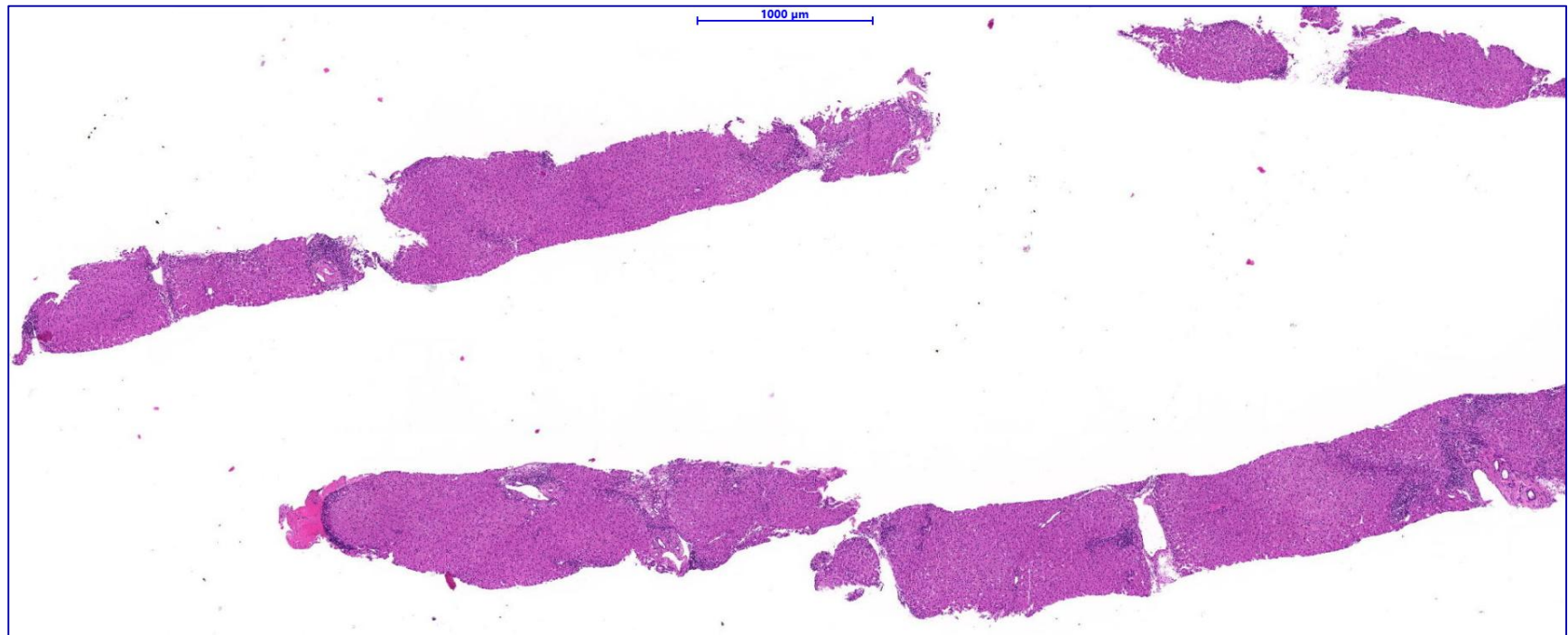
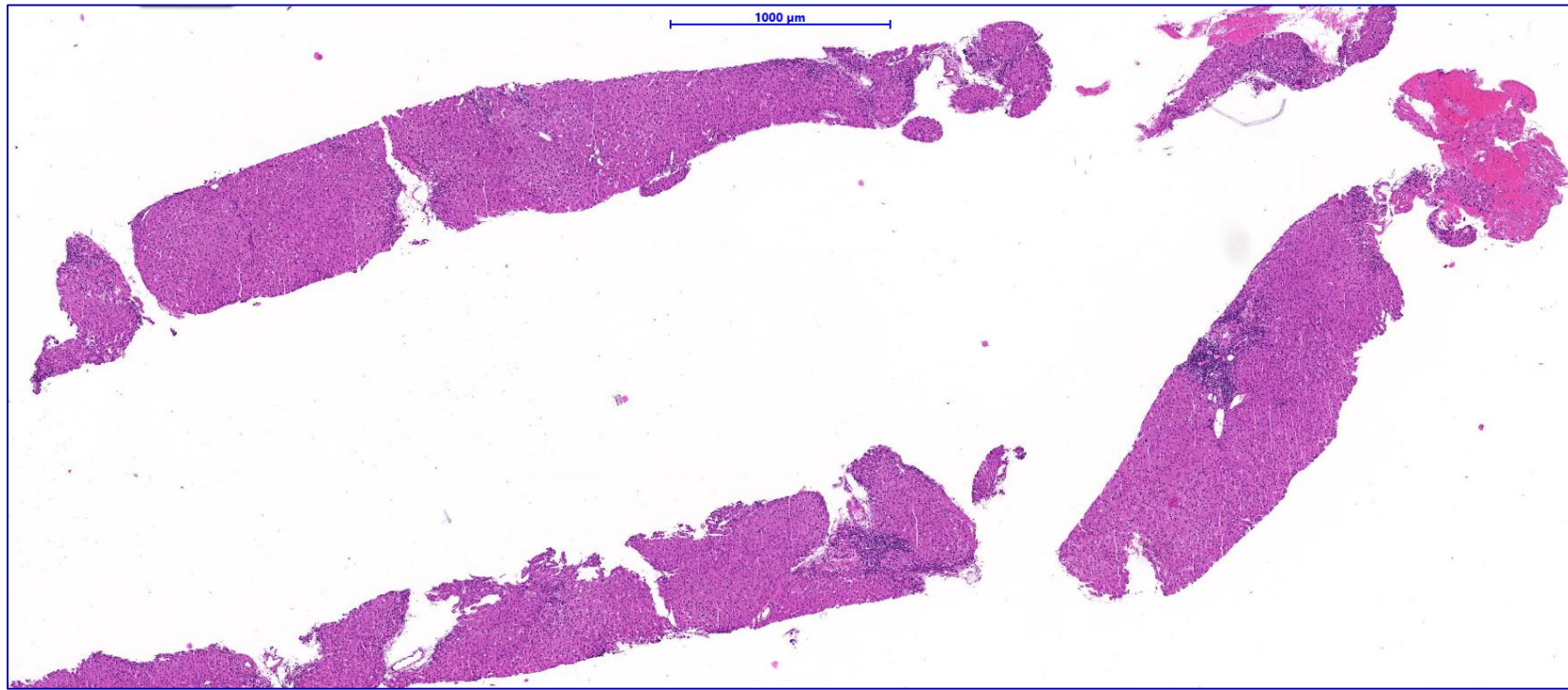
**Primary sclerosing cholangitis**

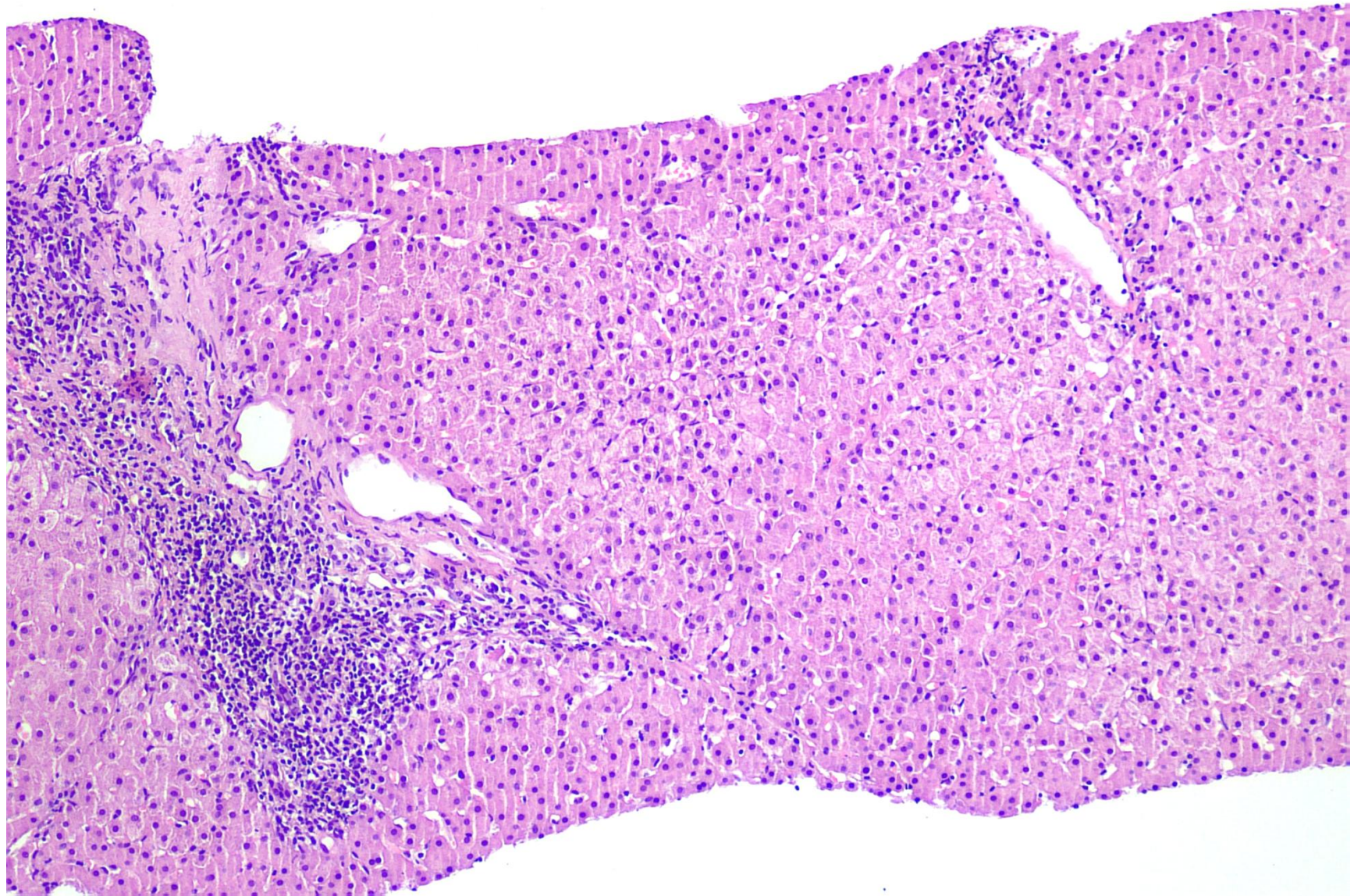
# Case History – 1

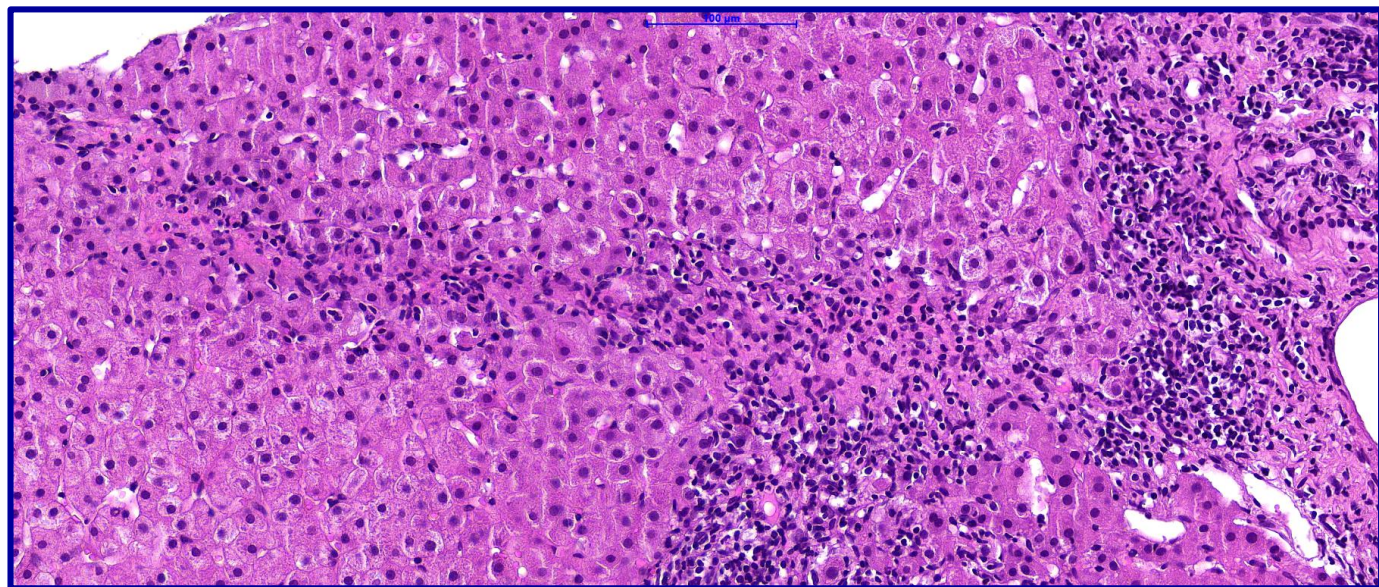
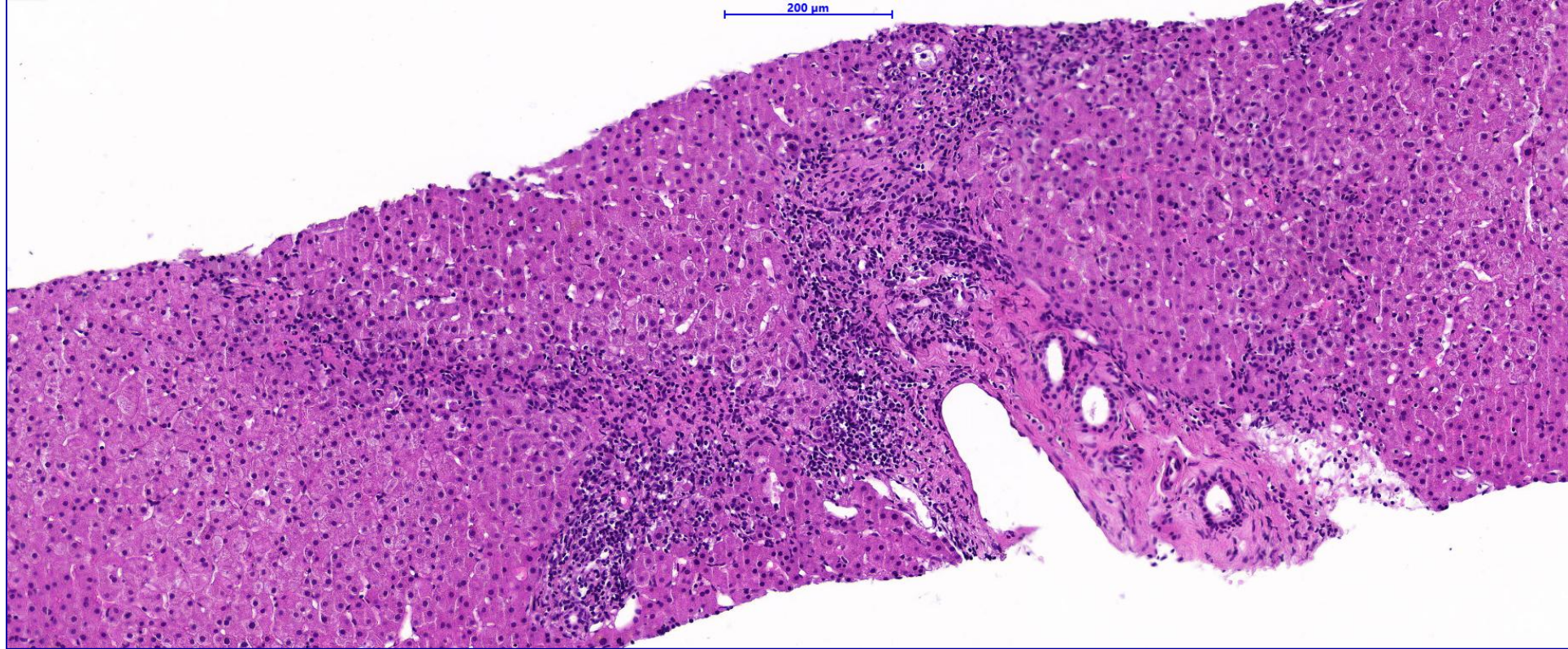
- 47-year-old woman
- Transaminasaemia for 18 months
- IgG upper limits of normal to mildly elevated
- No features of metabolic syndrome
- Viral screen negative (HBV, HCV, HIV, other hepatotropic viruses)
- Ceruloplasmin &  $\alpha$ 1-antitrypsin levels normal
- No alcohol, drug/herbal/supplement use
- Negative comprehensive autoantibody serology repeated in reference centre
- A needle liver biopsy was performed

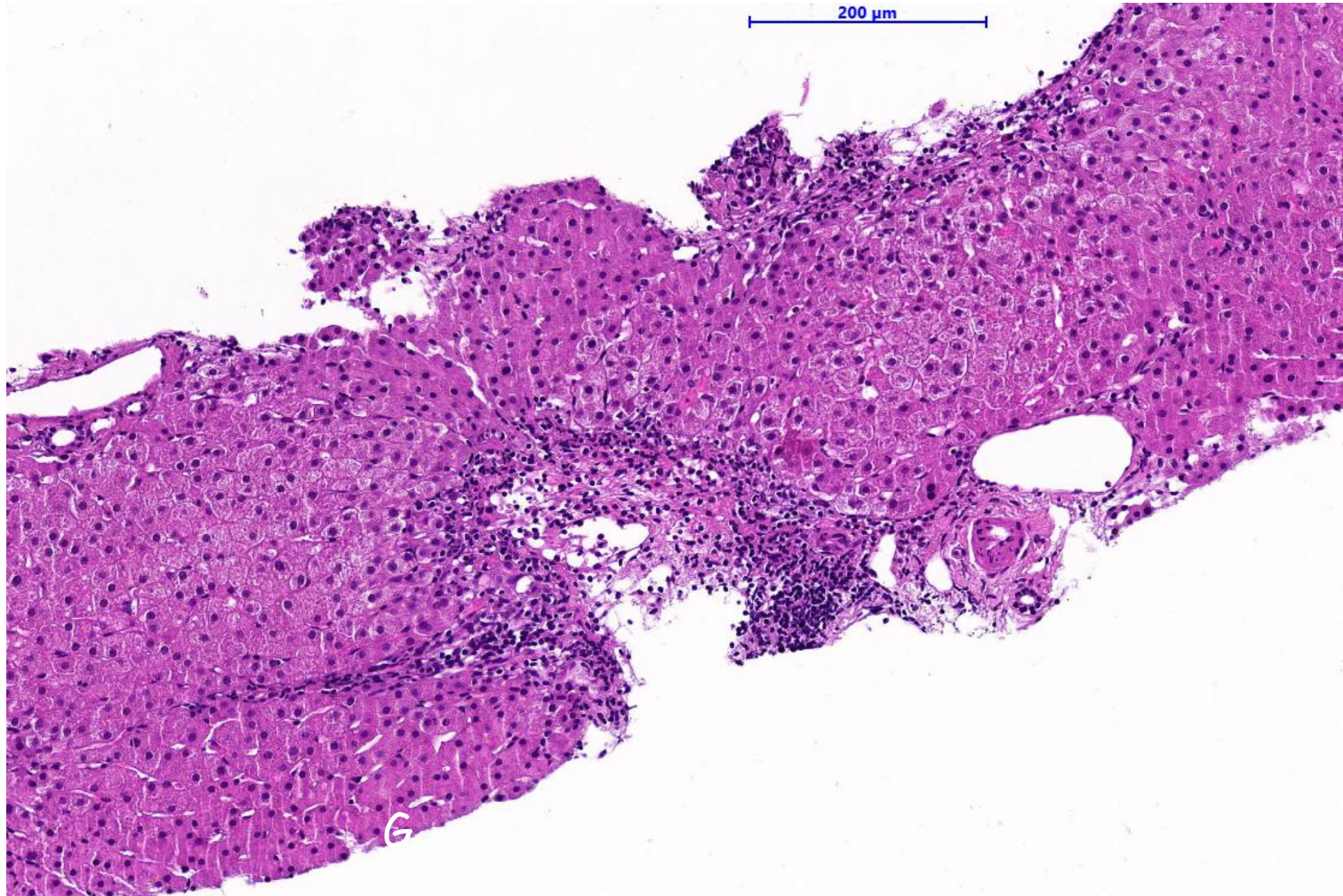
2000  $\mu\text{m}$

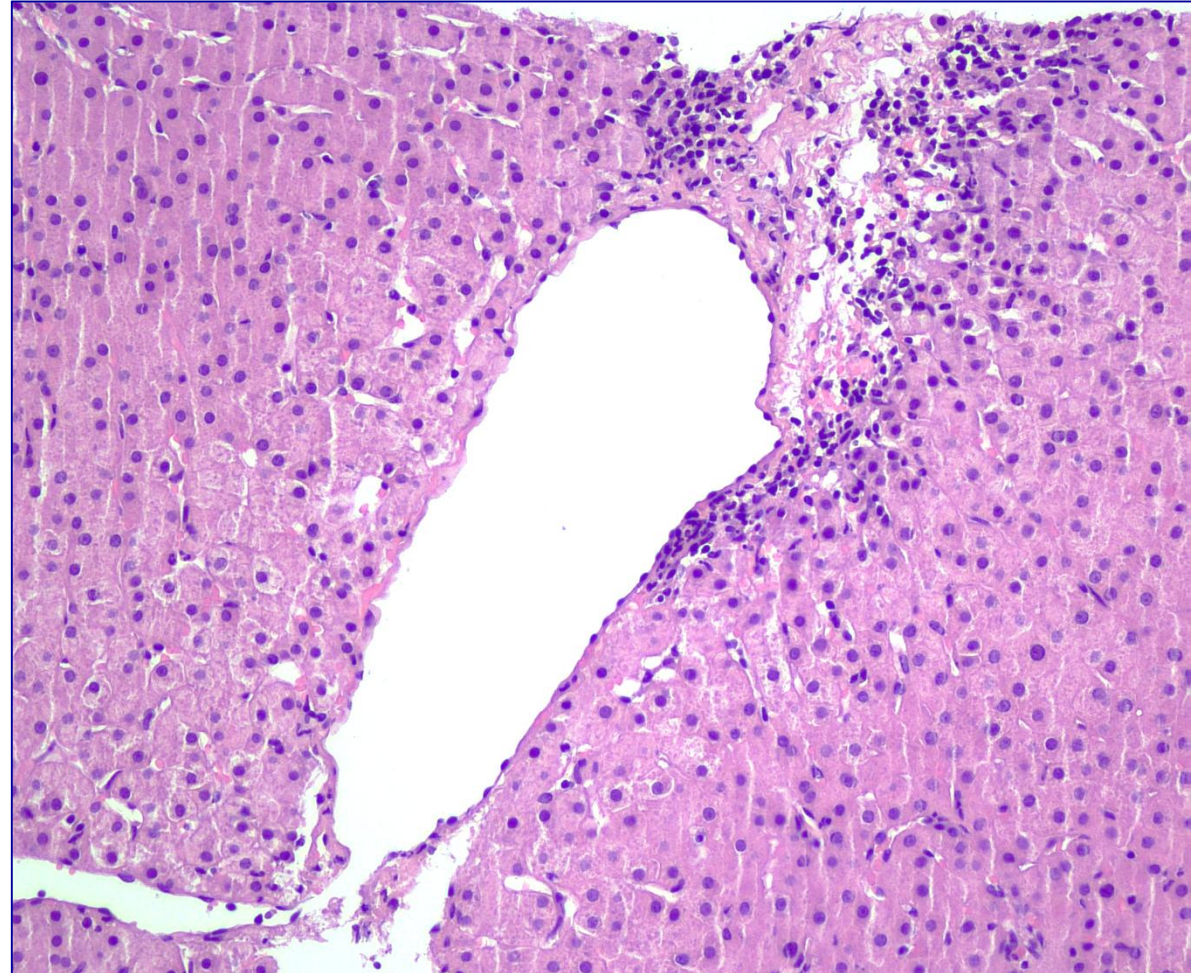
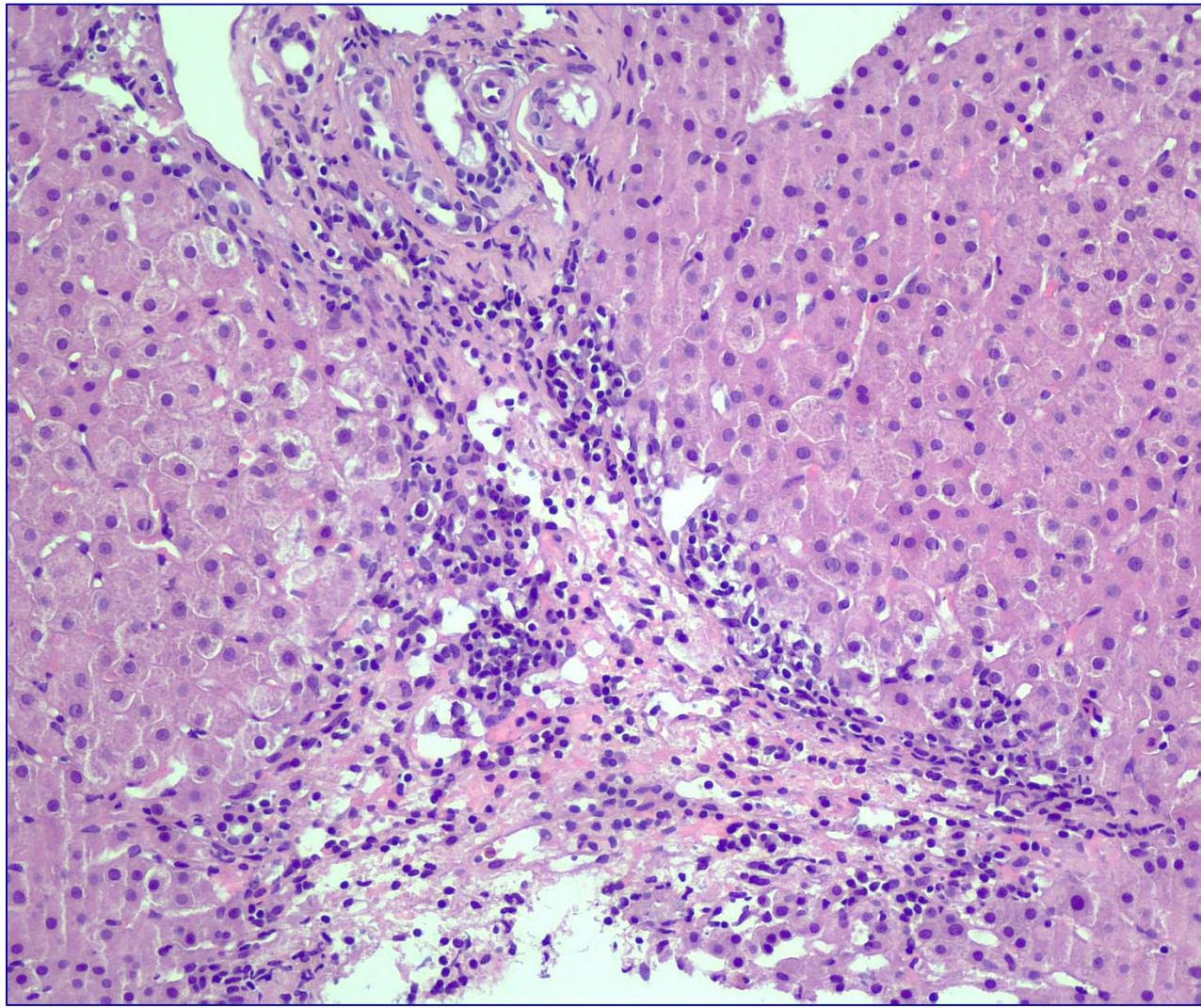


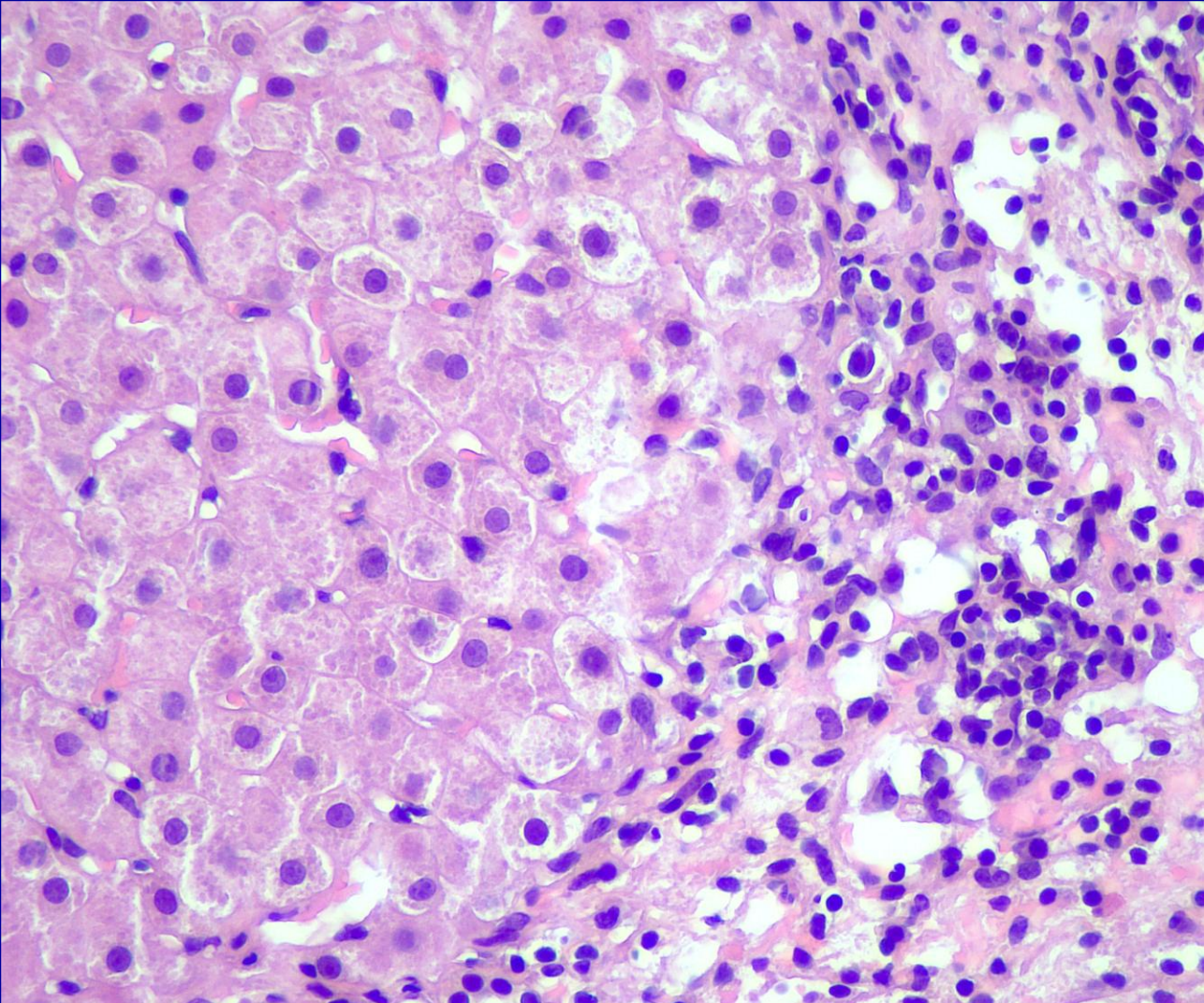
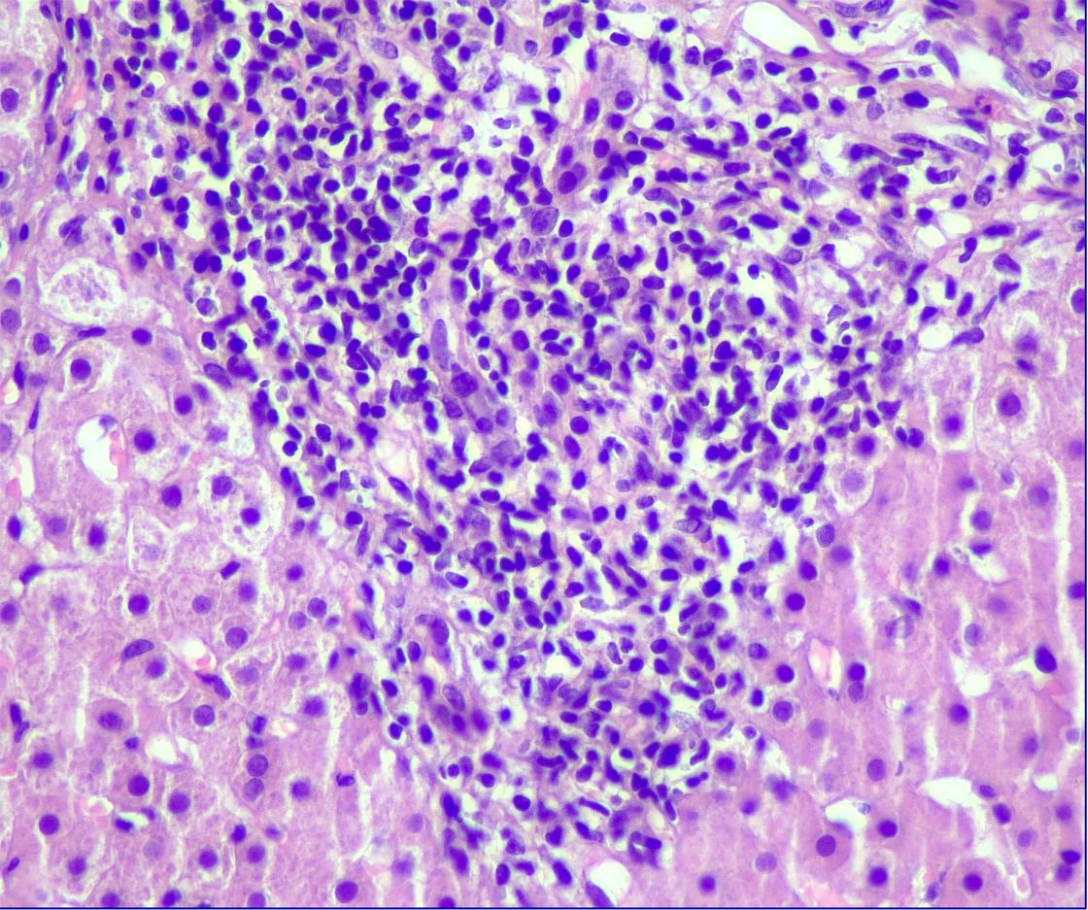


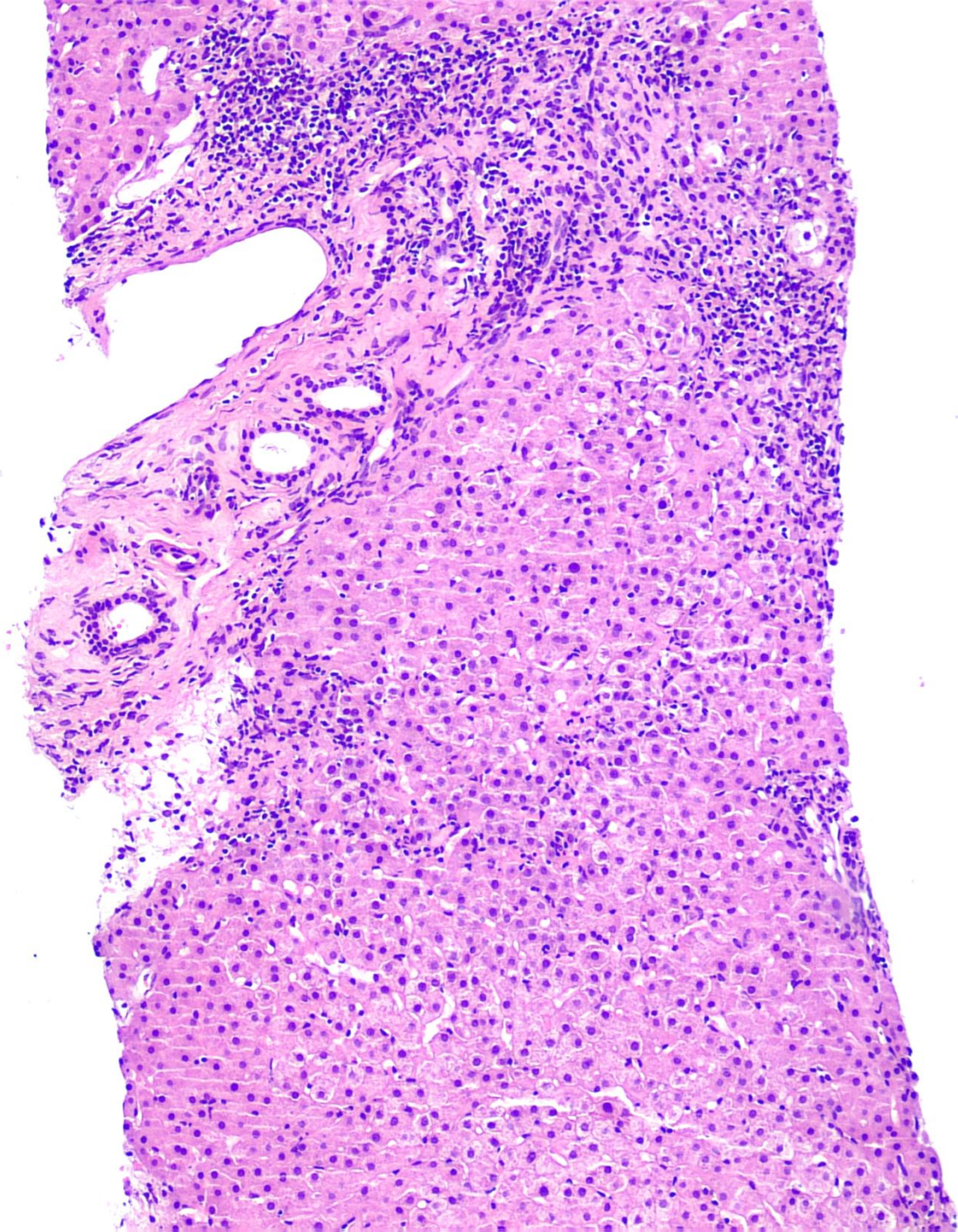


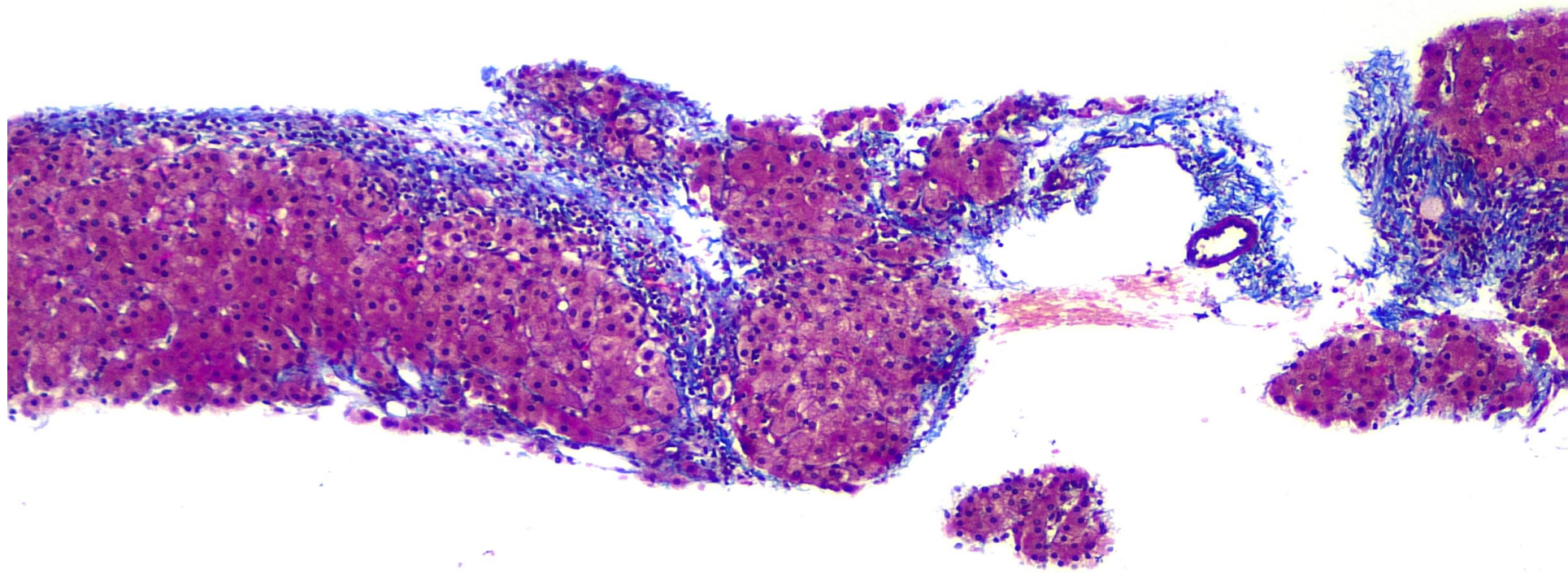
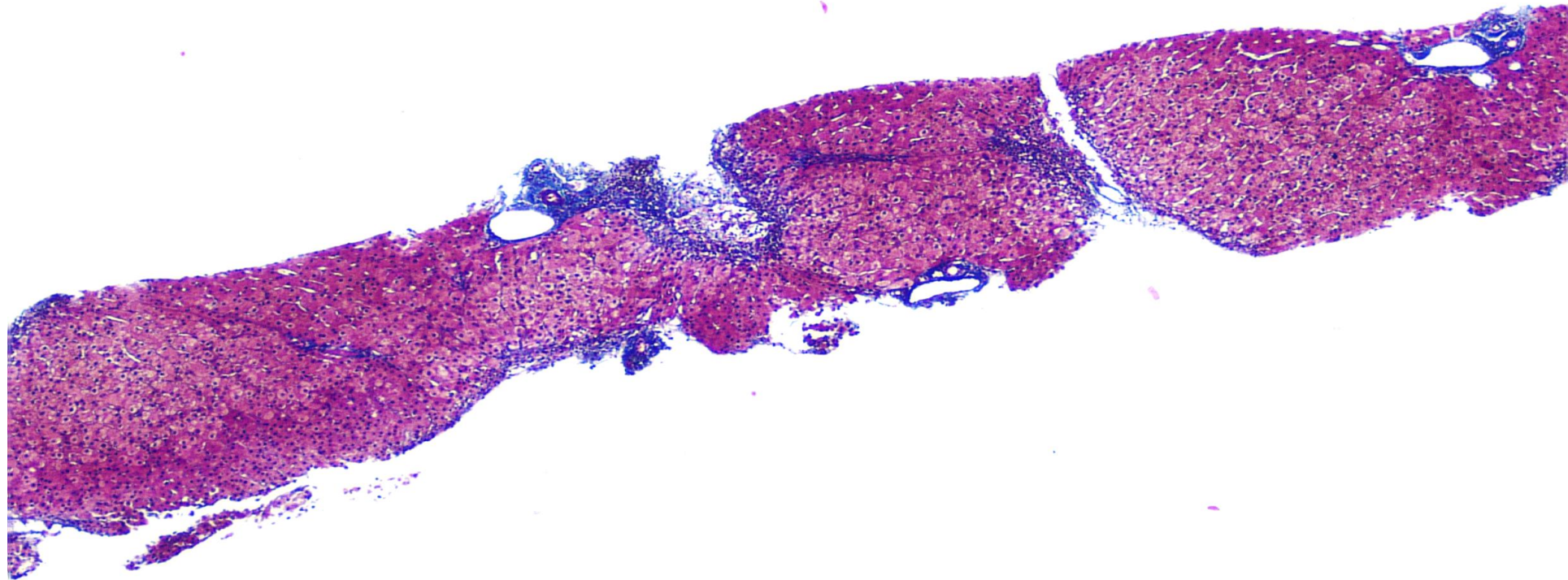


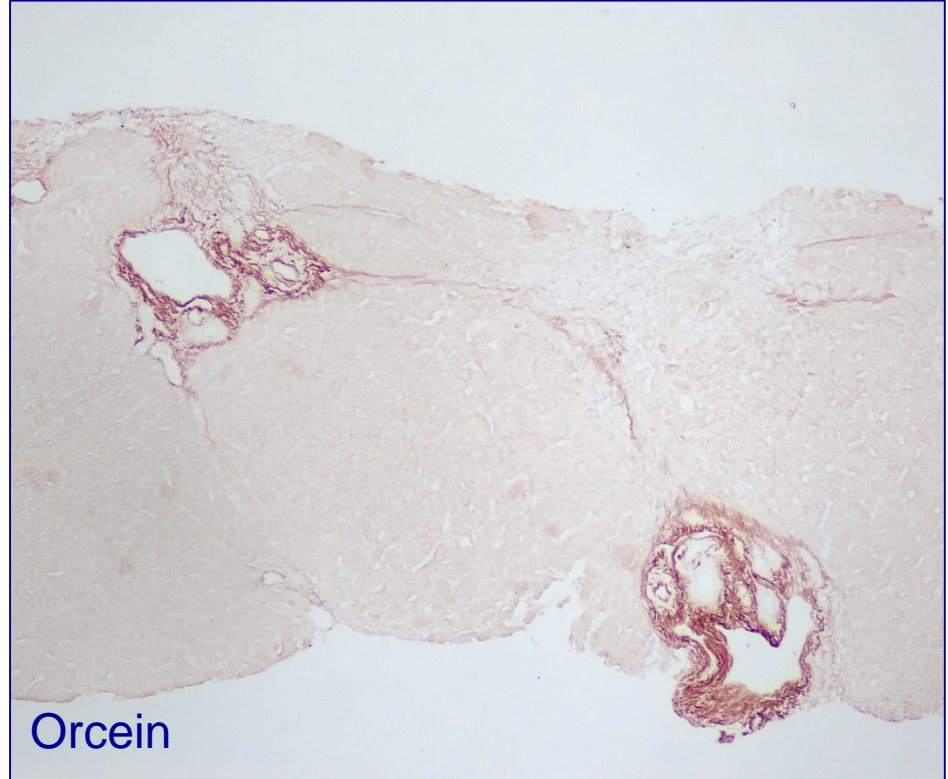
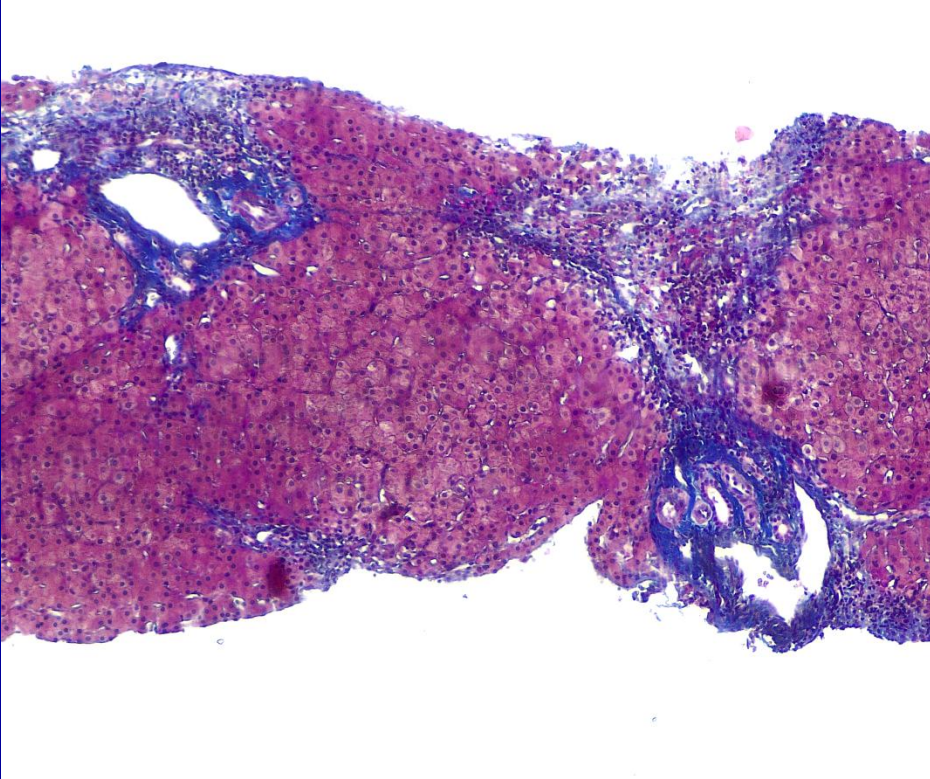




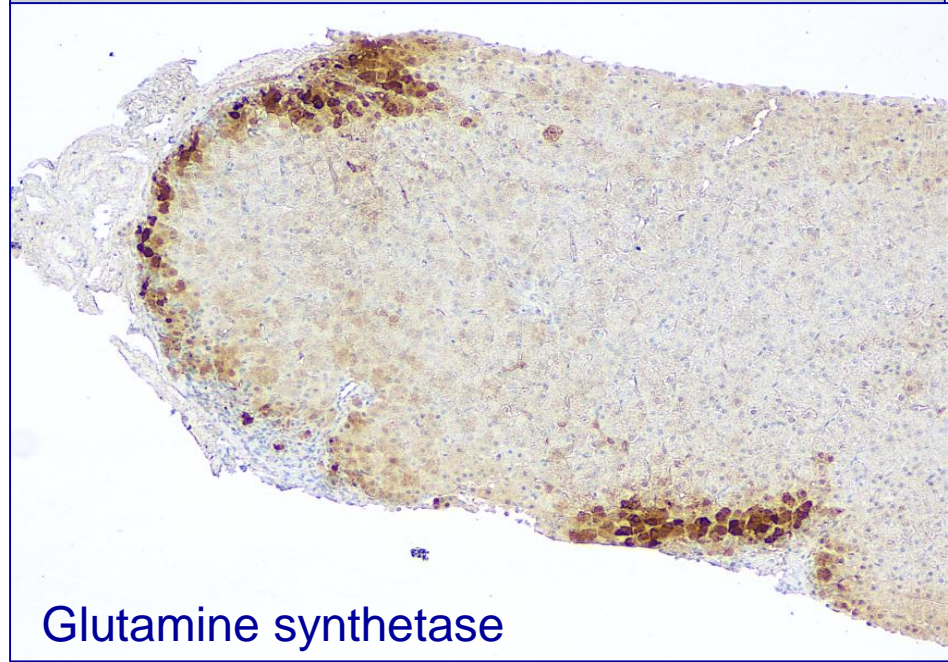
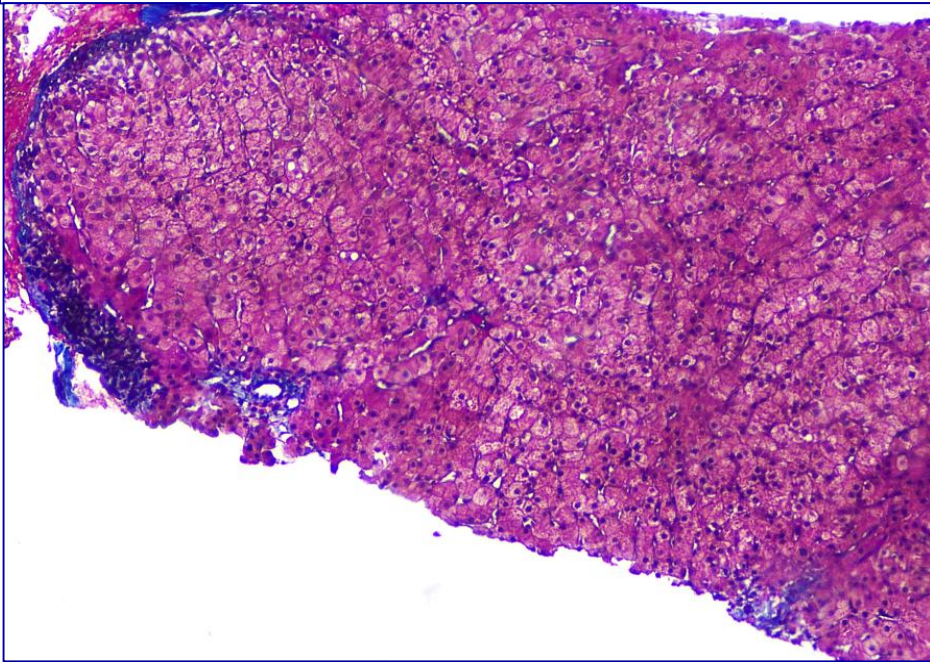




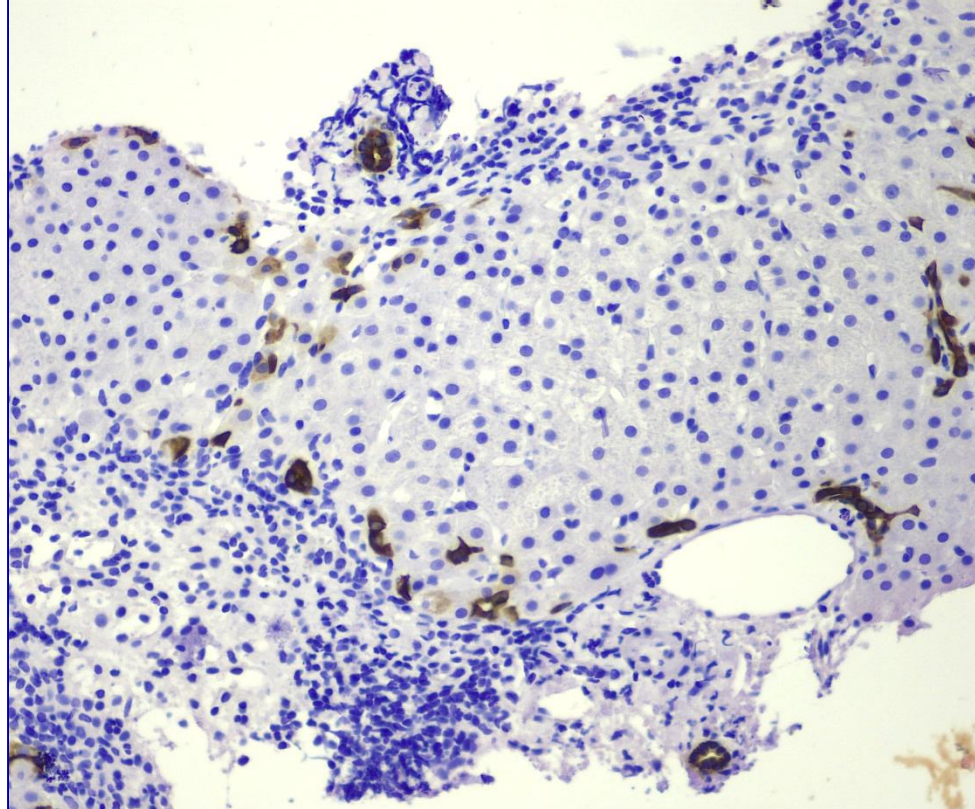




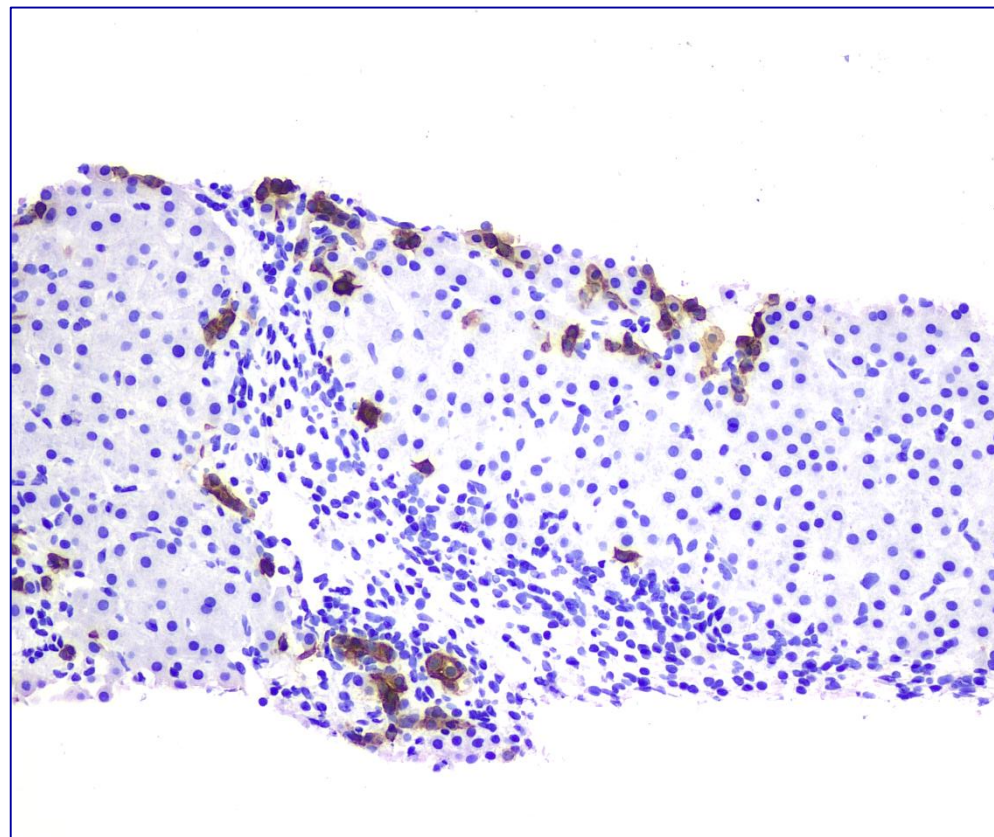
Orcein



Glutamine synthetase



Keratin 7



# What is the diagnosis in Case 1?

1. Autoimmune hepatitis
2. Burned-out metabolic-dysfunction associated steatohepatitis with advanced fibrosis
3. Drug-induced autoimmune-like hepatitis
4. Chronic viral hepatitis



# Case History – 2

- 54-year-old female with no relevant past medical history
- Melanoma stage IV who started treatment with Nivolumab and Ipilimumab in January 2026
- Before administration of the third dose of treatment, liver tests were found to be abnormal

# Case History – 2

Test	March 3 <sup>rd</sup> 2026
AST (U/L)	203
ALT (U/L)	248
ALP (U/L)	169
GGT (U/L)	98
Total bilirubin (mg/dL)	1.2
IgG (g/L)	10.2
INR	1.0

- Immunotherapy was withheld
- Viral hepatitis (HBV, HCV, HEV) markers negative
- Liver ultrasound rule-out M1
- ANA 1:80
- SMA negative
- AMA negative
- Liver tests were repeated after 72 h

# Case History – 2

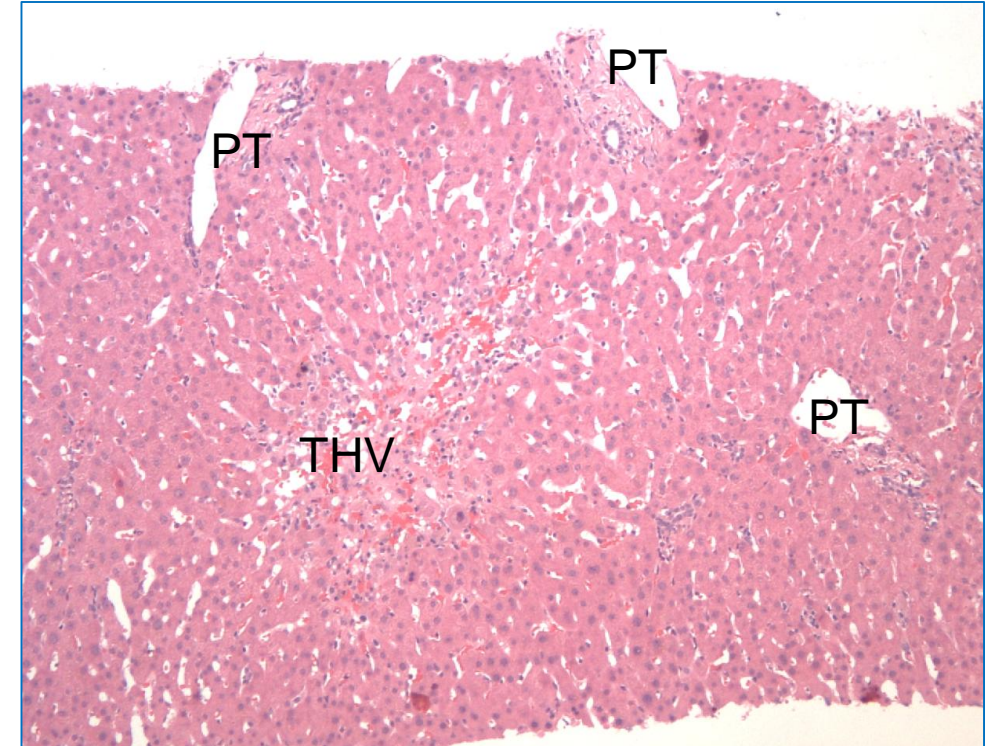
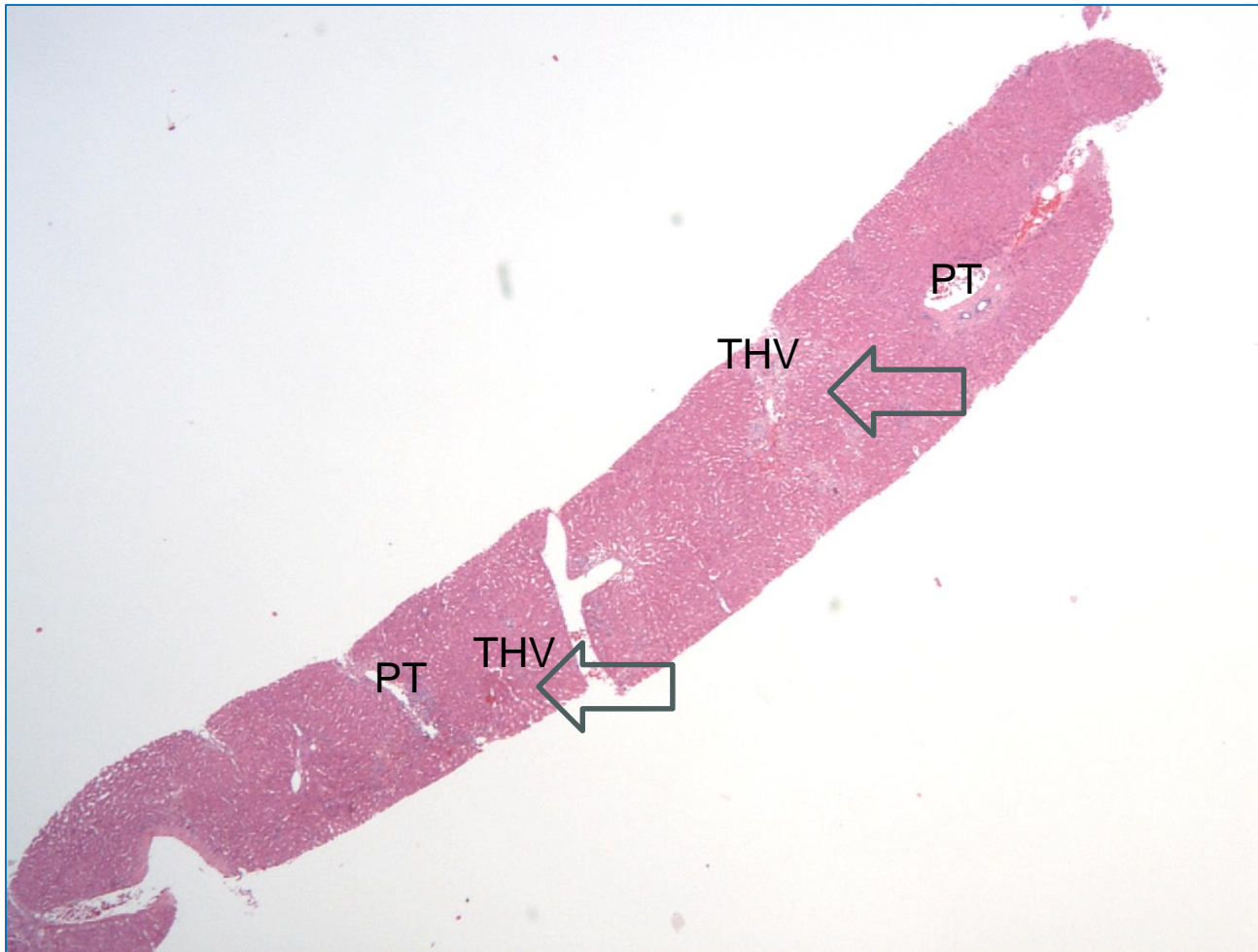
Test	March 3 <sup>rd</sup> 2026	March 6 <sup>th</sup> 2026
AST (U/L)	203	1056
ALT (U/L)	248	1239
ALP (U/L)	169	165
GGT (U/L)	98	240
Total bilirubin (mg/dL)	1.2	14.3
IgG (g/L)	10.2	10.7
INR	1.0	1.4

# What would you think in Case 2 if you were the hepatologist?

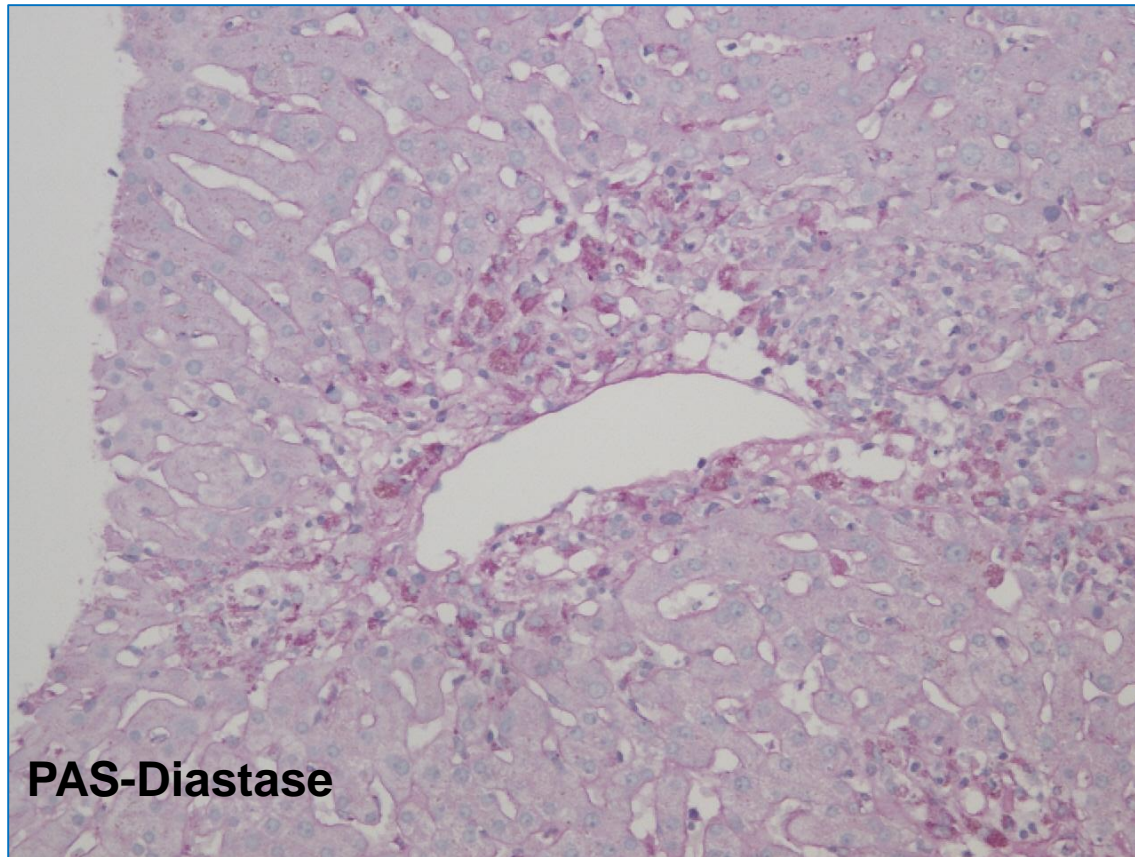


1. I think that the patient has an autoimmune hepatitis, and I would prescribe prednisone
2. I think that the patient has **CHILI** (checkpoint inhibitor-induced liver injury) and I would start prednisone 2 mg/kg/d
3. I think that the patient has **CHILI** (checkpoint inhibitor-induced liver injury) but I would like a liver biopsy
4. I have no idea and I will perform a liver biopsy

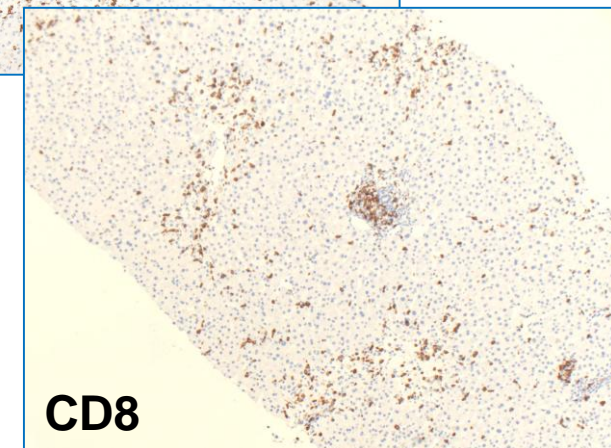
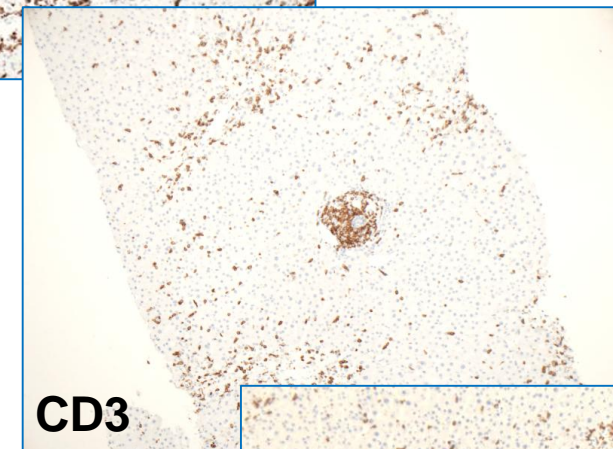
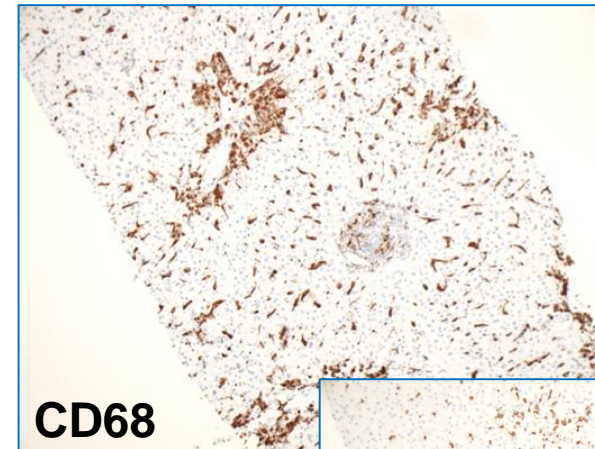
# Liver biopsy



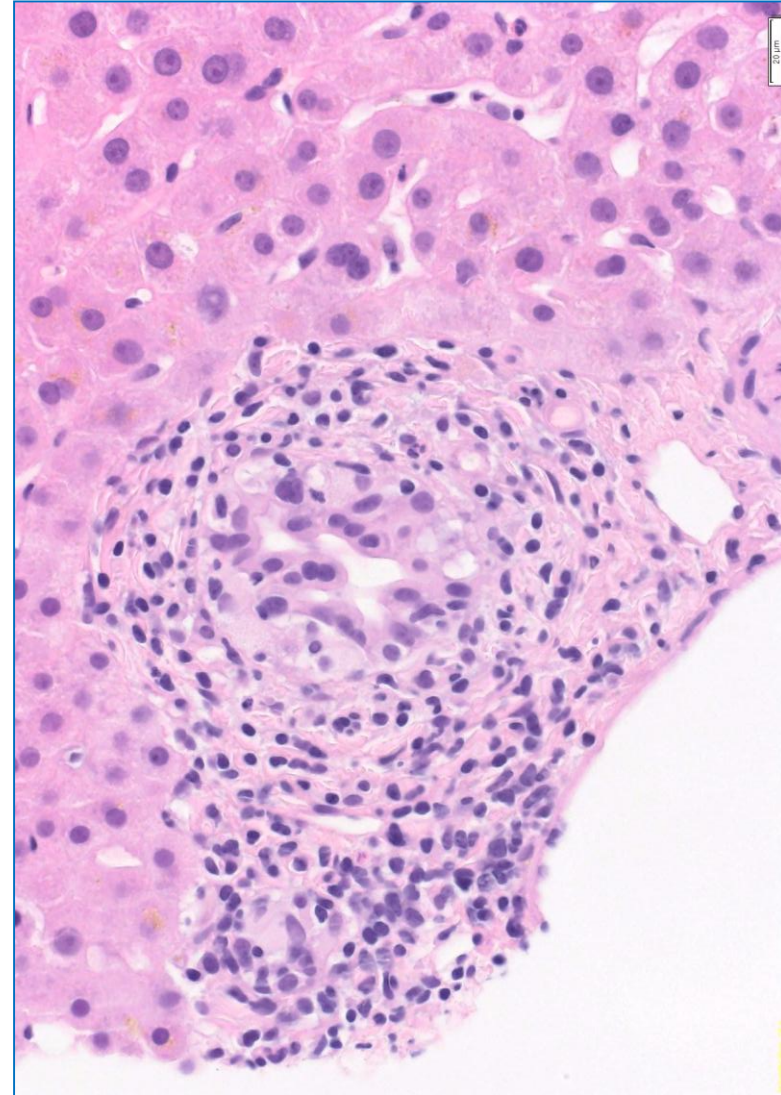
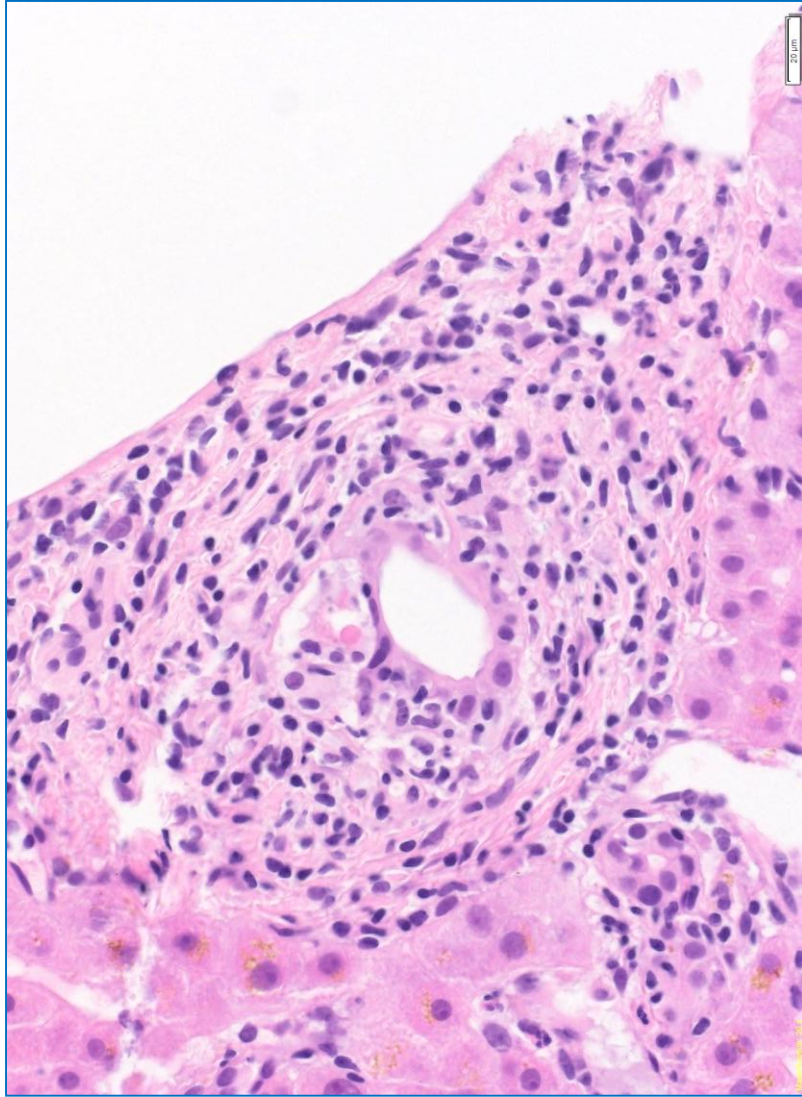
# Liver biopsy



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# Liver biopsy



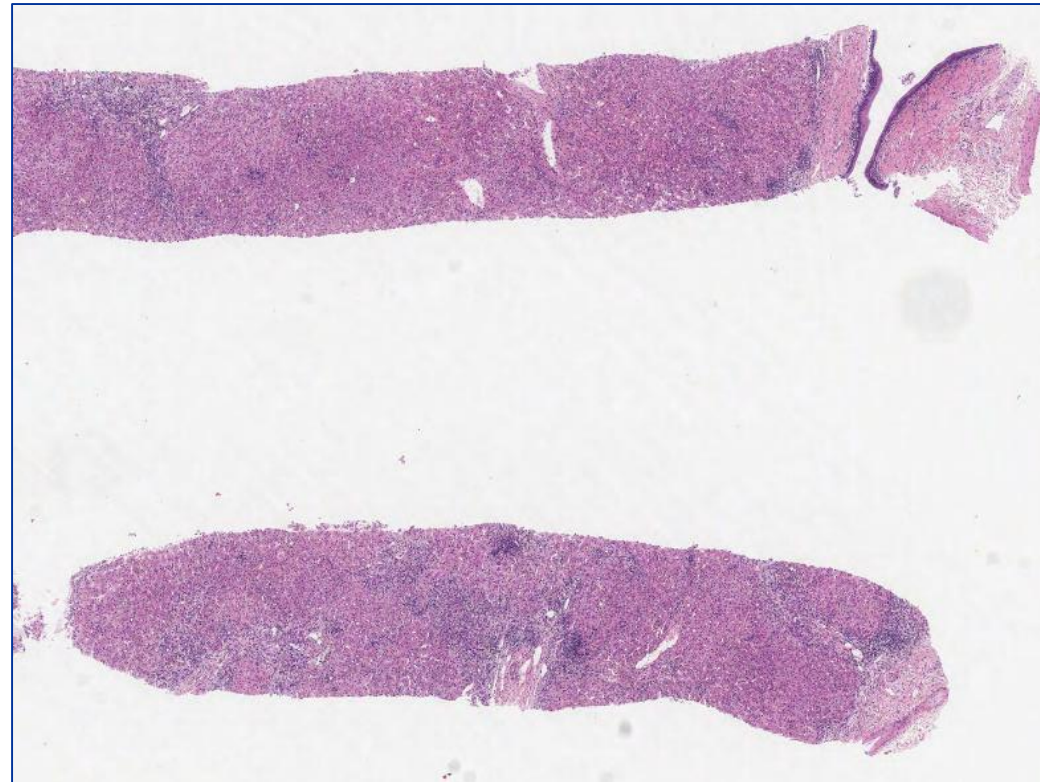
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# Case 3

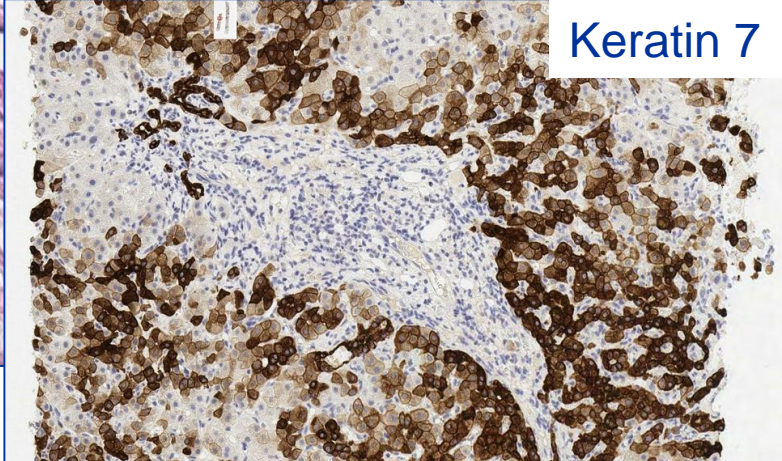
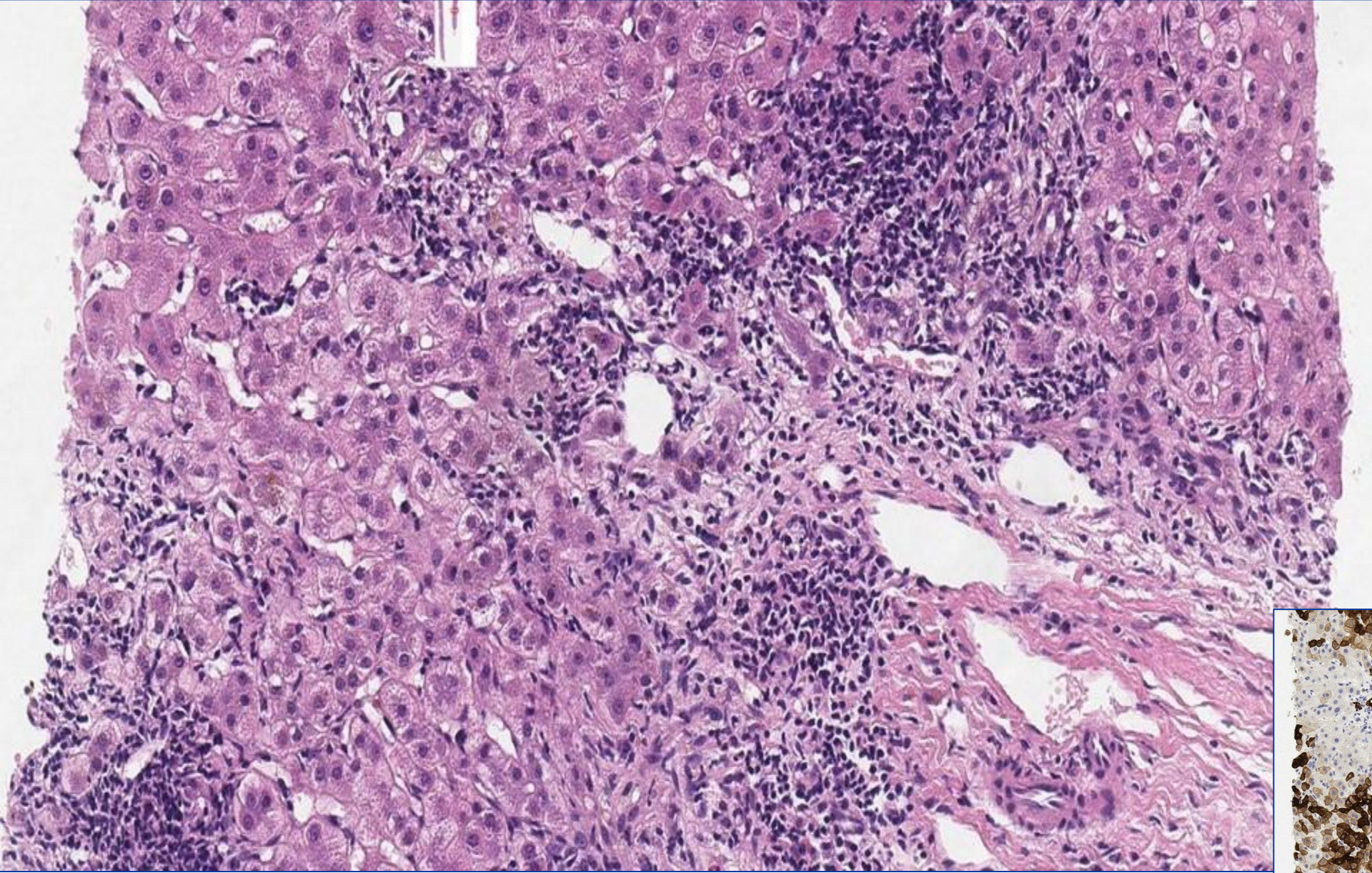
- Female 50 years
- PBC, UDCA non-responder. Elevated ALT **D.D. PBC-AIH variant??**
- ALT 255, ALP 615, bilirubin 53, IgG 15.5
- Clinically, cirrhosis: Fibroscan 15.6 kPa, impaired synthetic function

## AUTOANTIBODIES

Anti-AMA-M2 Ab	+
Anti-AMA M2 3E(BPO) Ab	+
Anti gp210 Ab	+
ANA screen	-
Anti-SMA	-
Anti-LKM	-

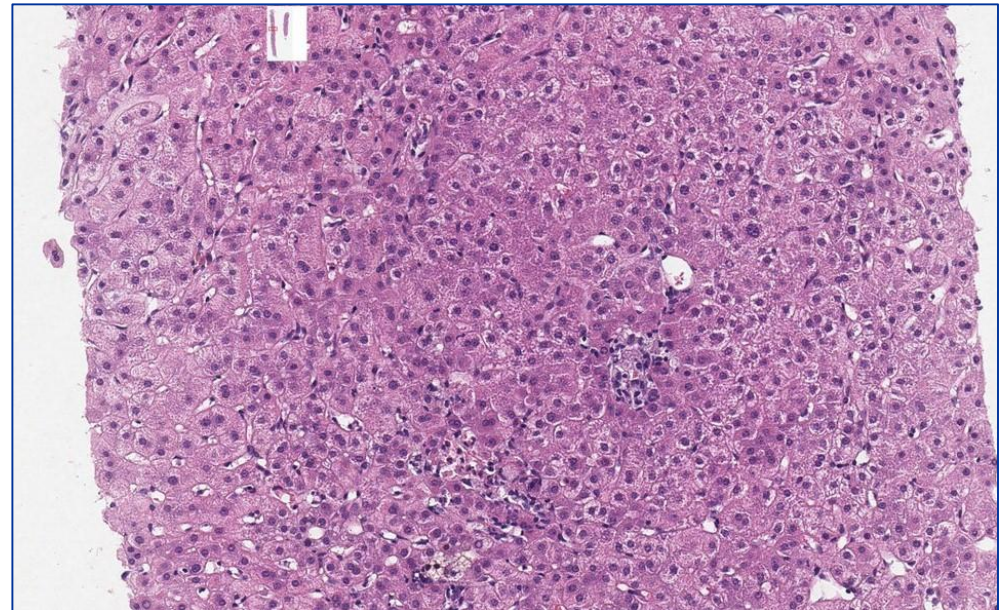
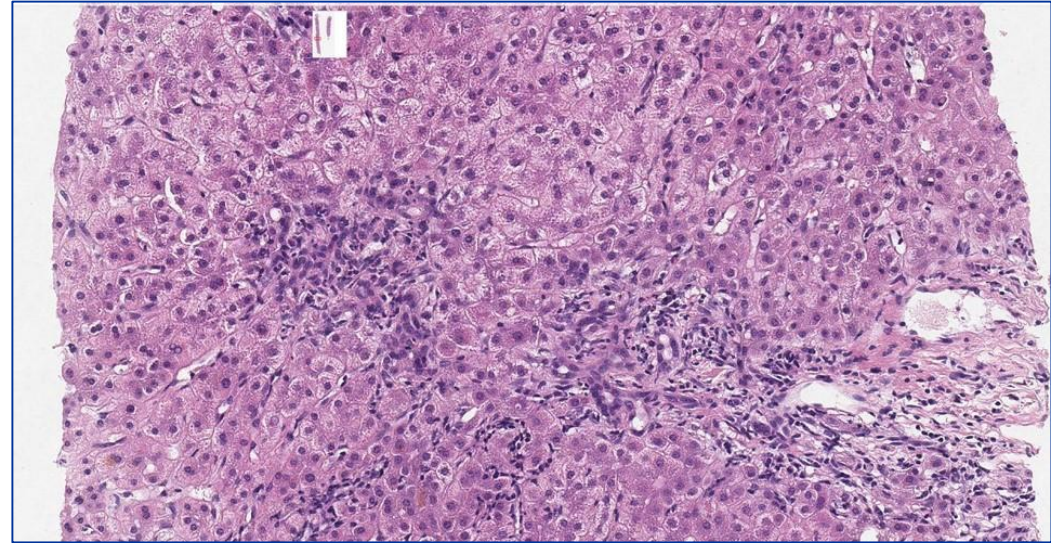
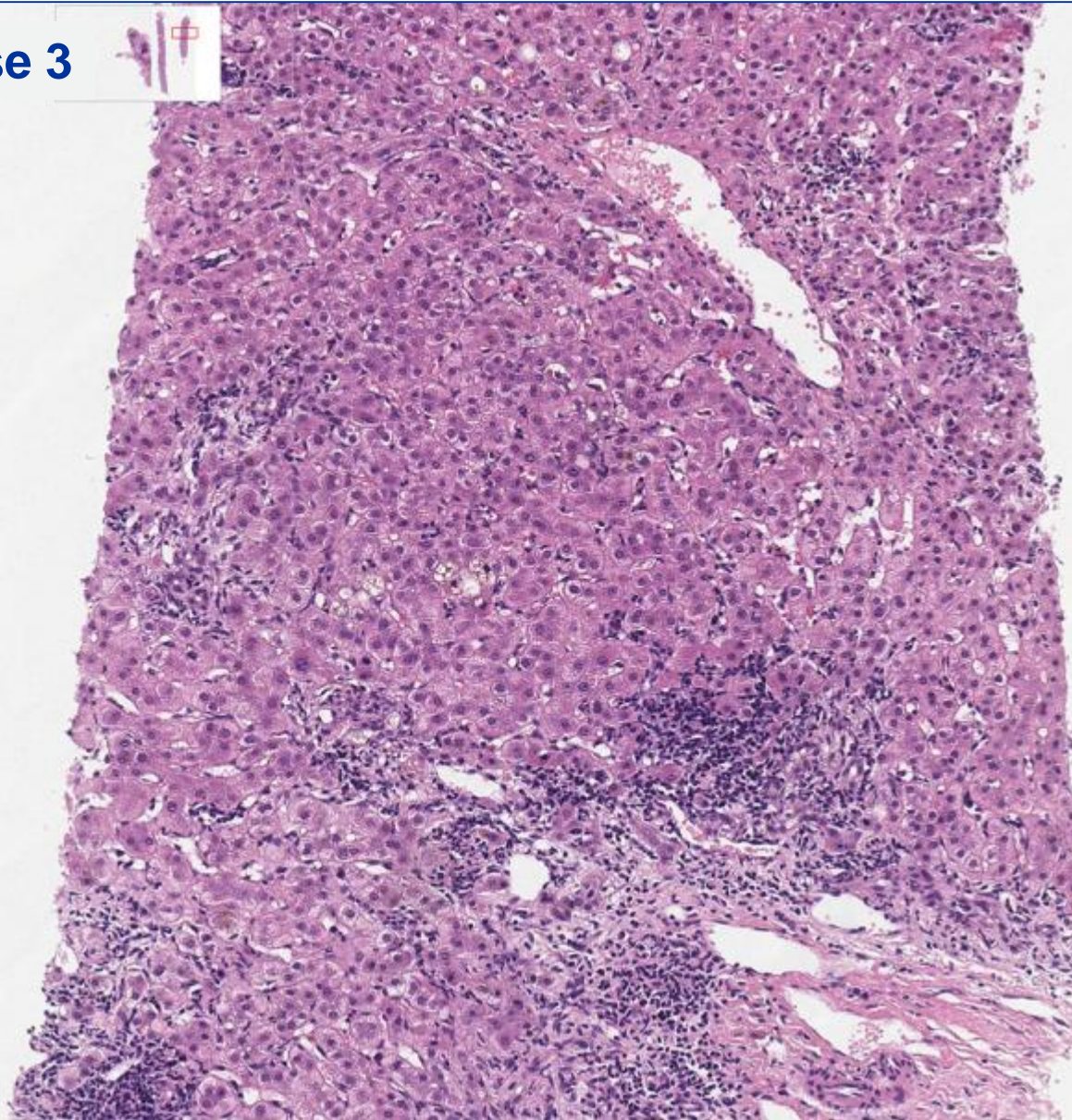


Case 3



Keratin 7

Case 3



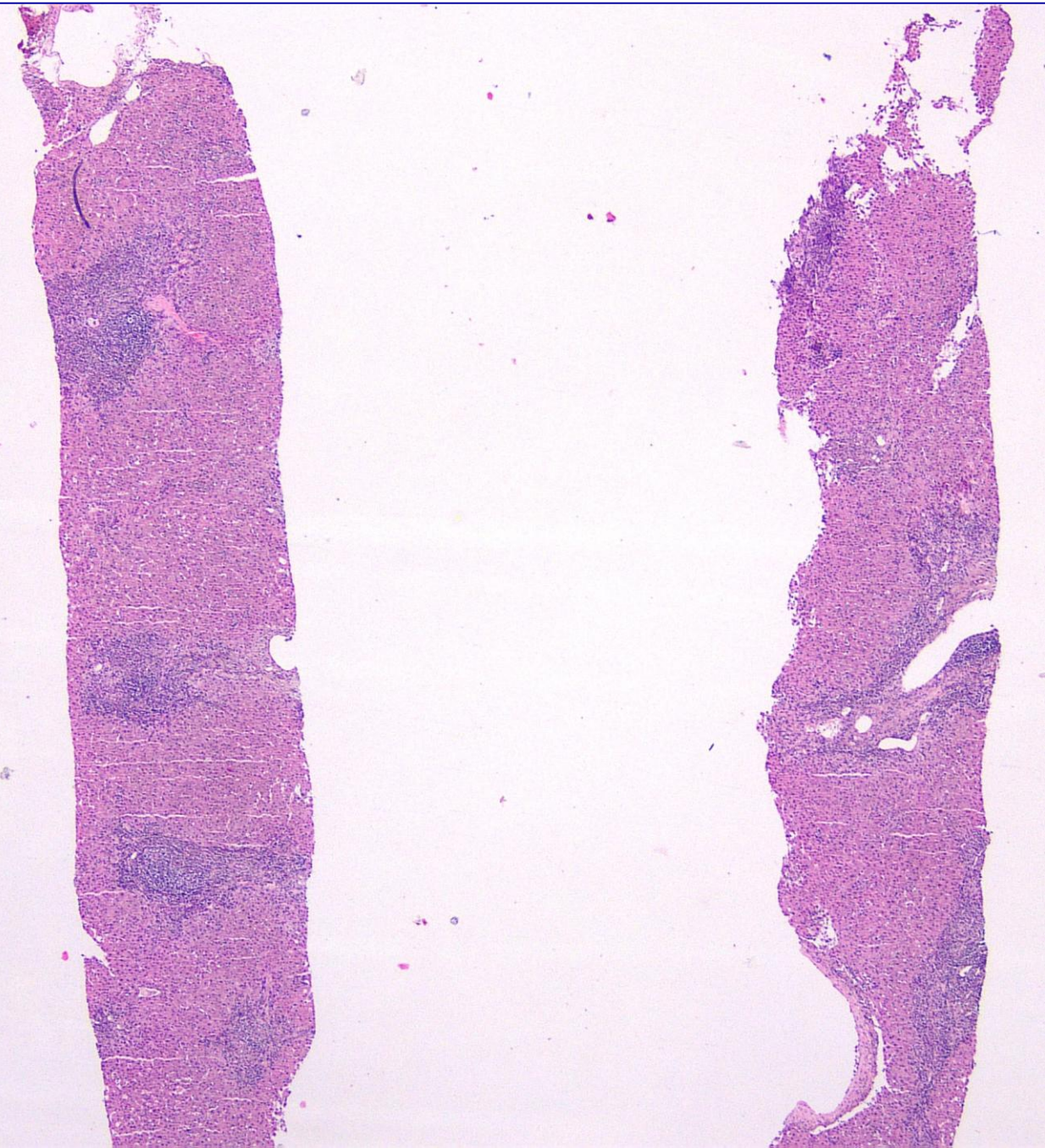
# What is the diagnosis in Case 3?

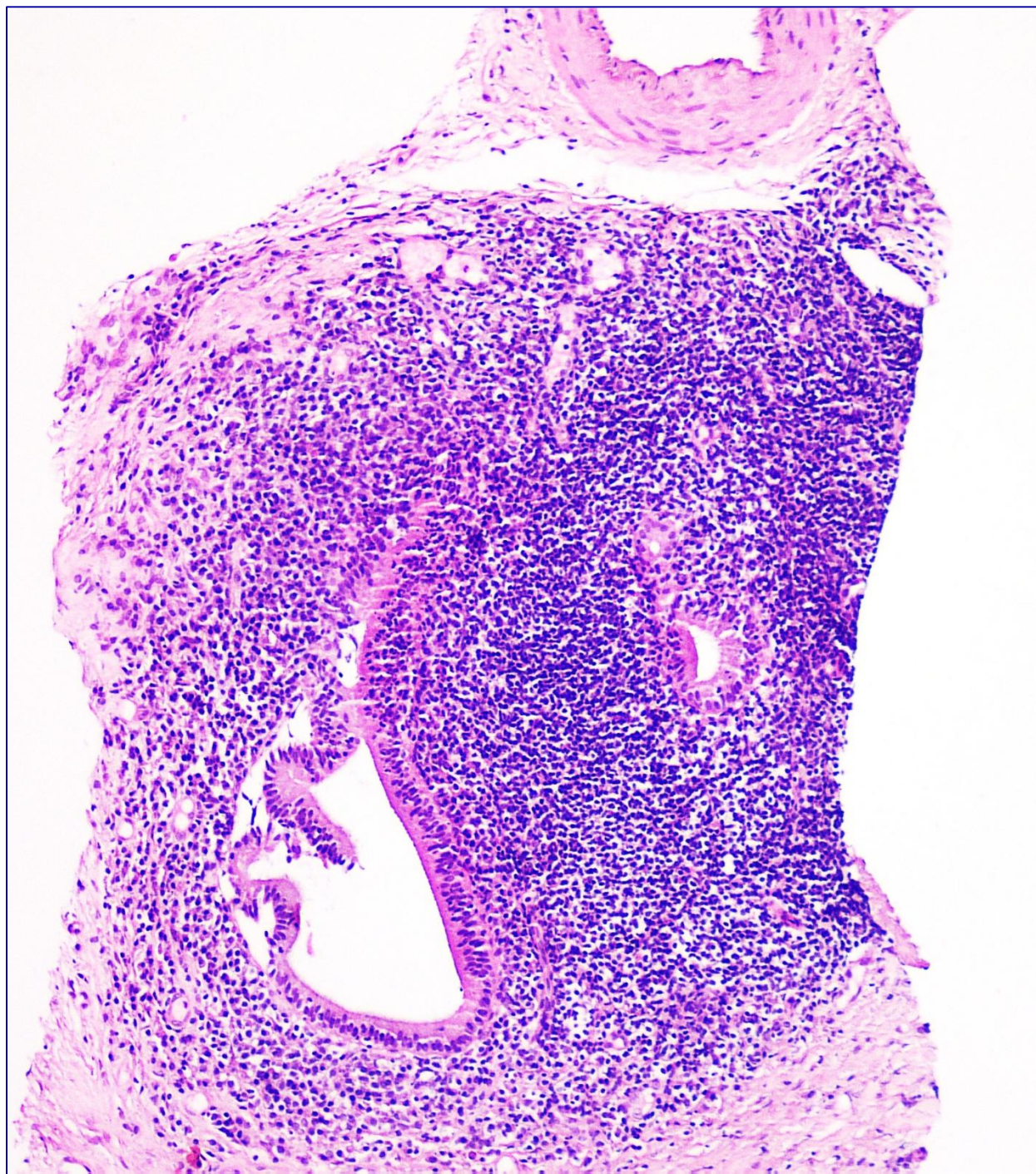
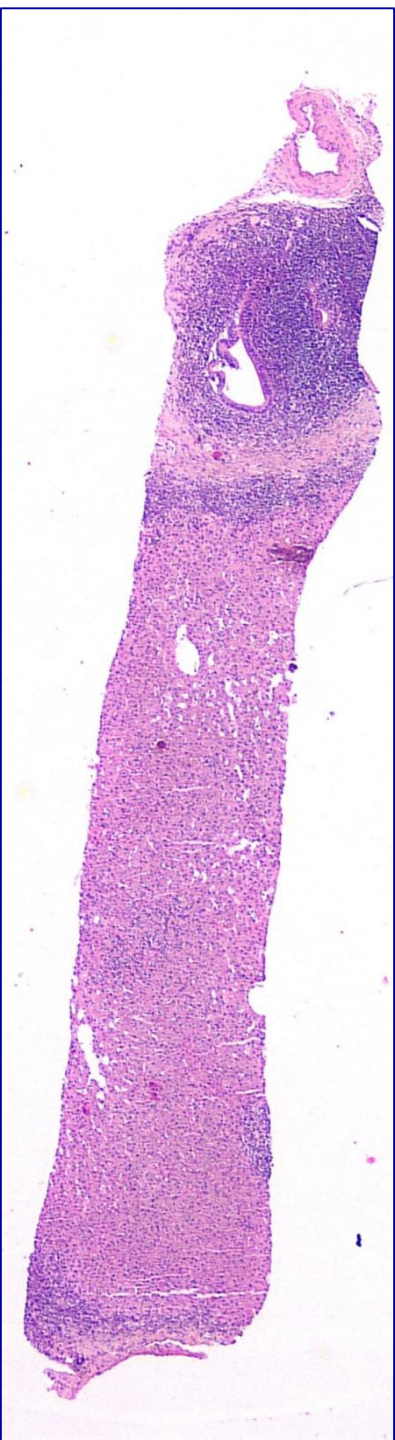
1. Autoimmune hepatitis
2. Variant PBC-AIH
3. Primary biliary cholangitis with prominent hepatic features within the histological spectrum of PBC
4. Primary sclerosing cholangitis

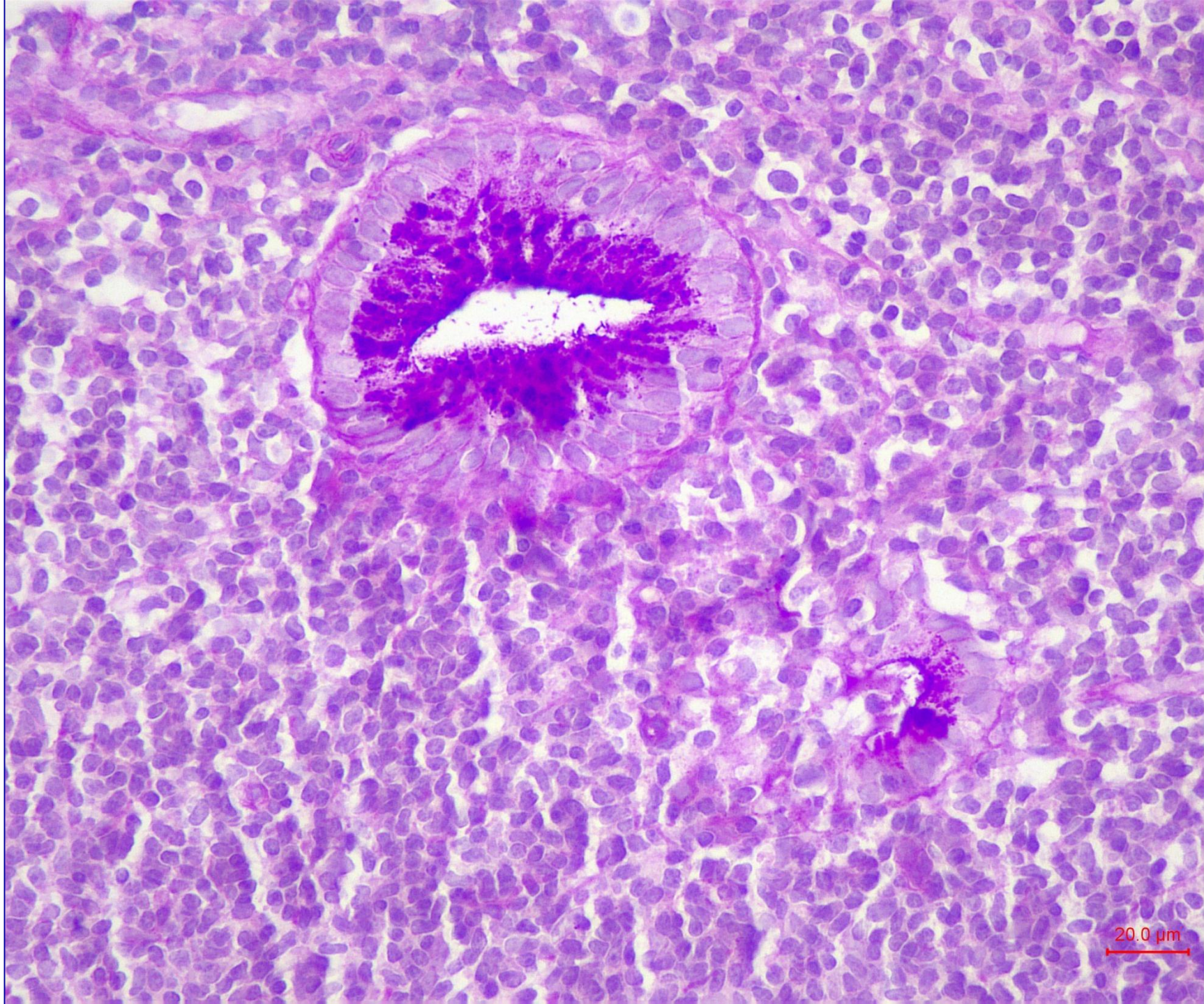
# Case History - 4

- 55-year-old woman
- insulin-dependent type II diabetes mellitus
- ↑↑ transaminases
- ↑↑↑ GGT/ALP
- normal total bilirubin
- HBV/HCV markers (-)
- ANA (+) 1/320, hypergammaglobulinemia
- Fibroscan 13.5 kPa

A liver biopsy was performed

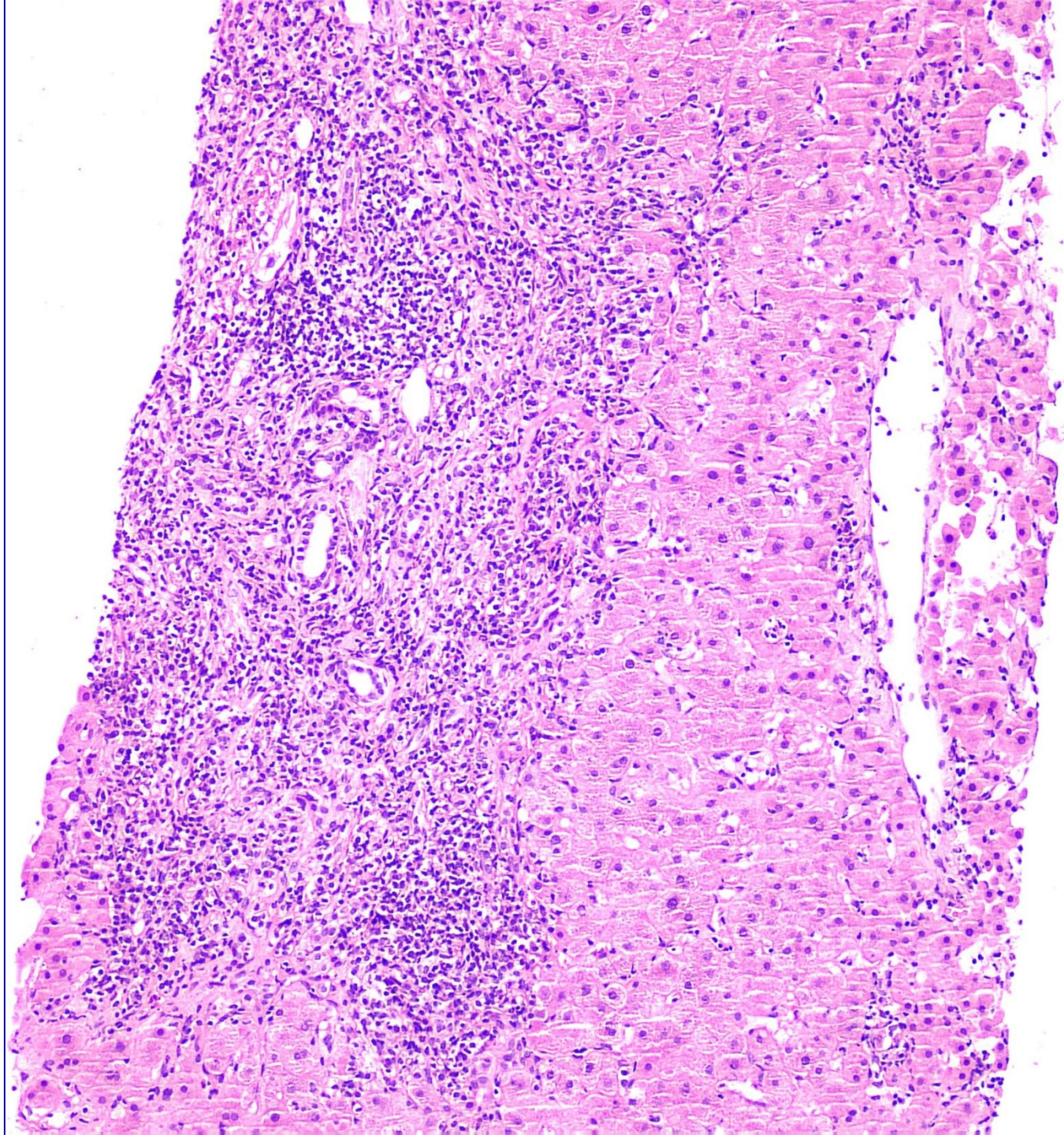




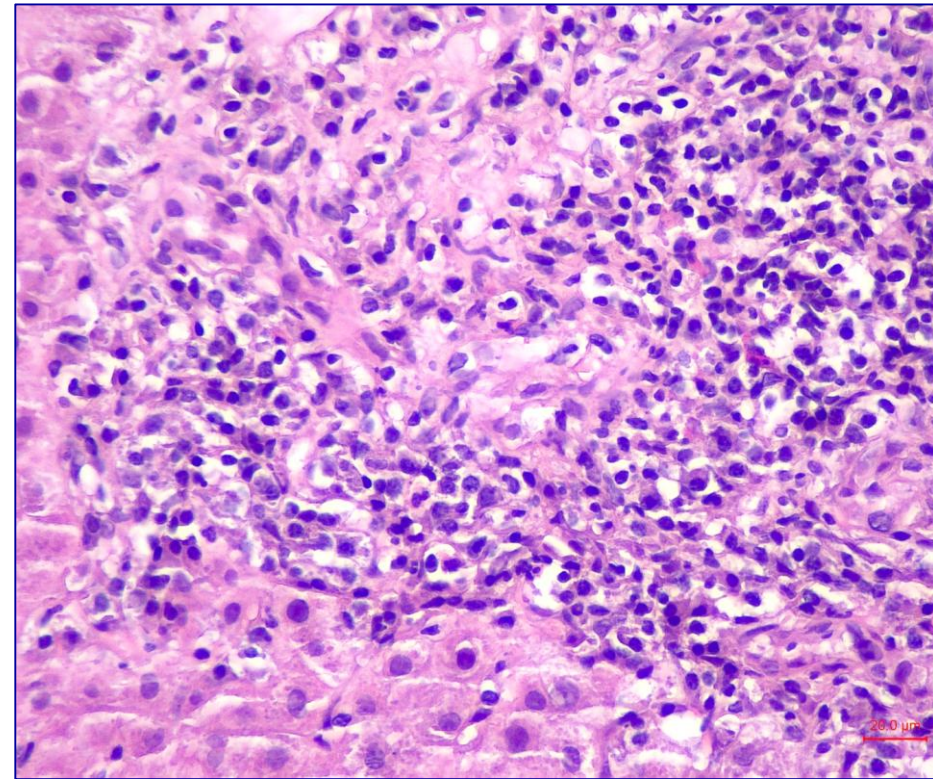


20.0 μm

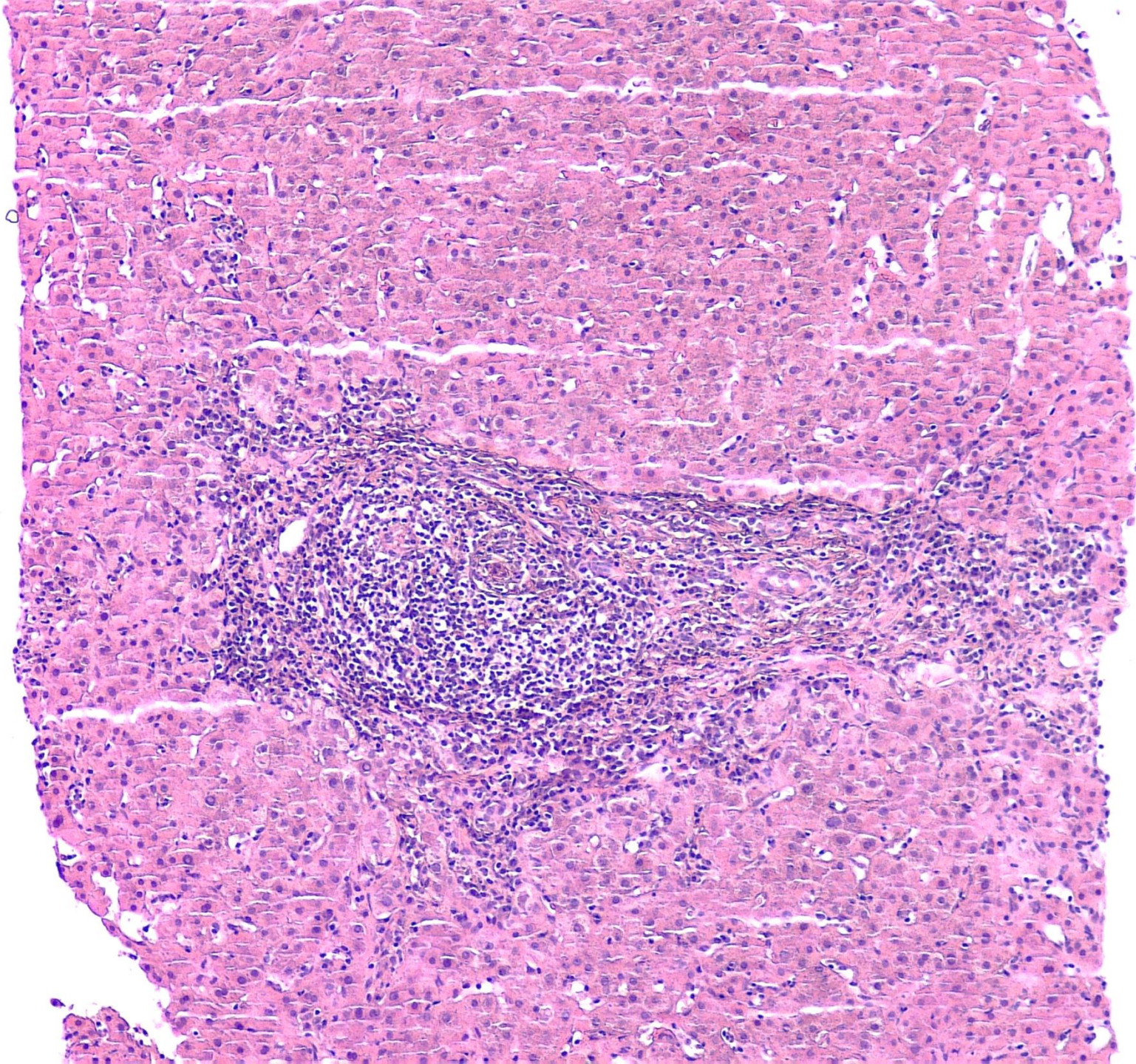
DPAS



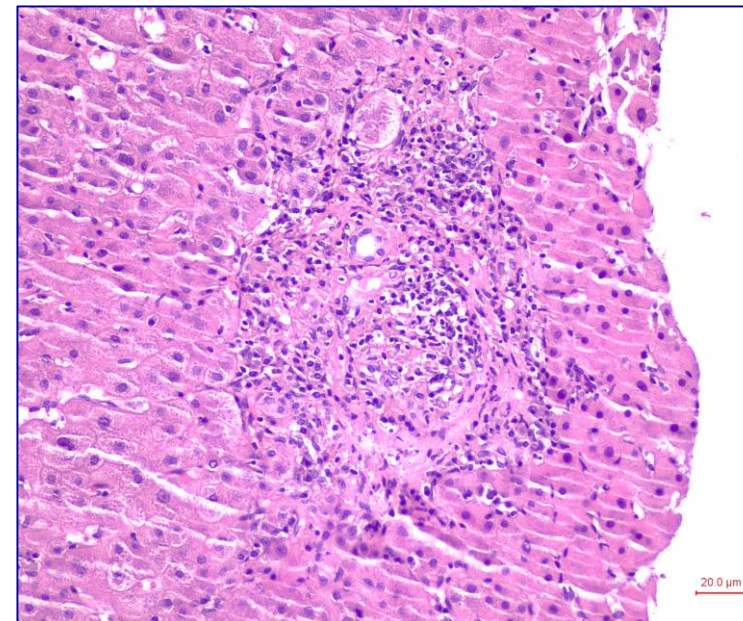
20.0  $\mu$ m



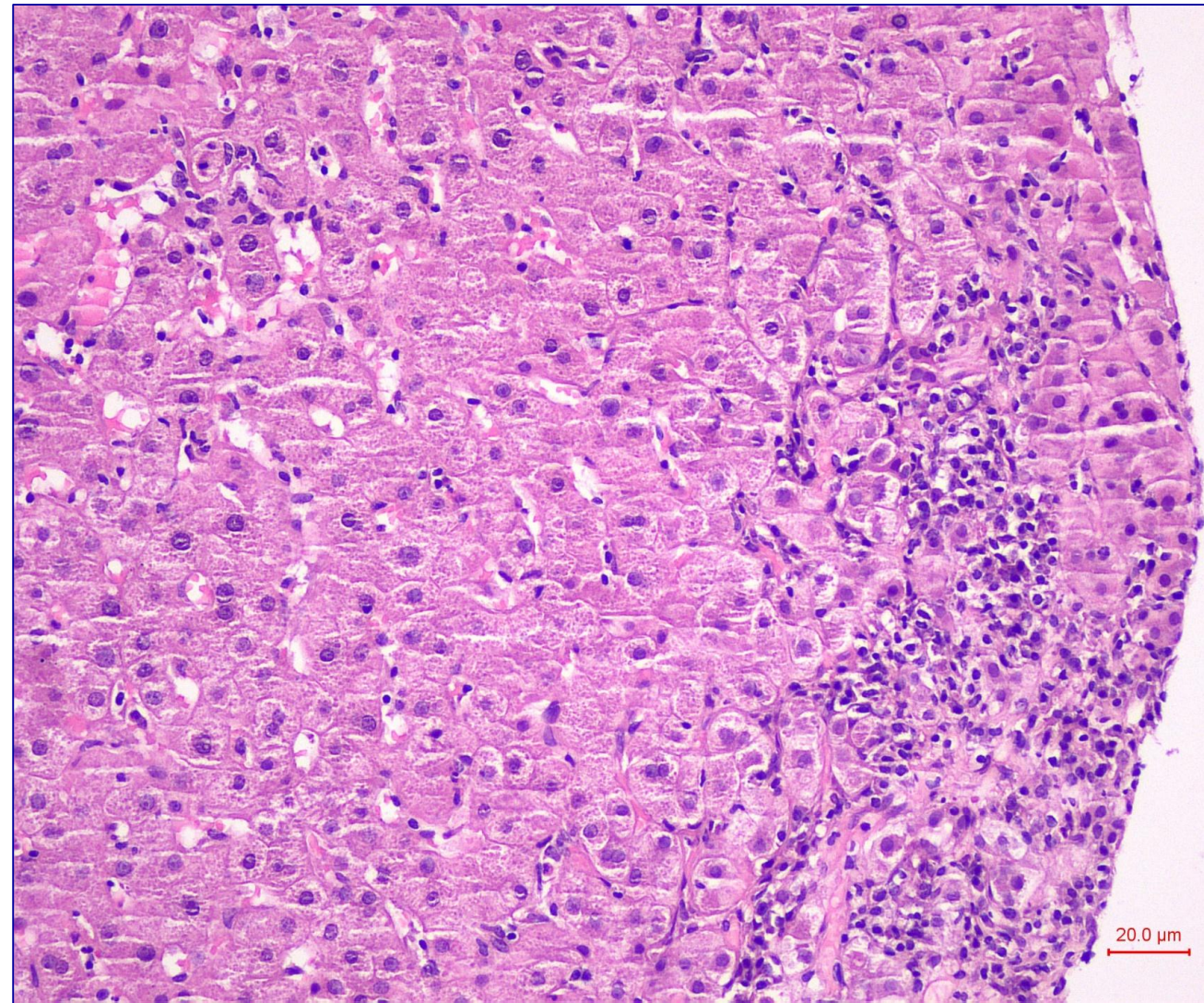
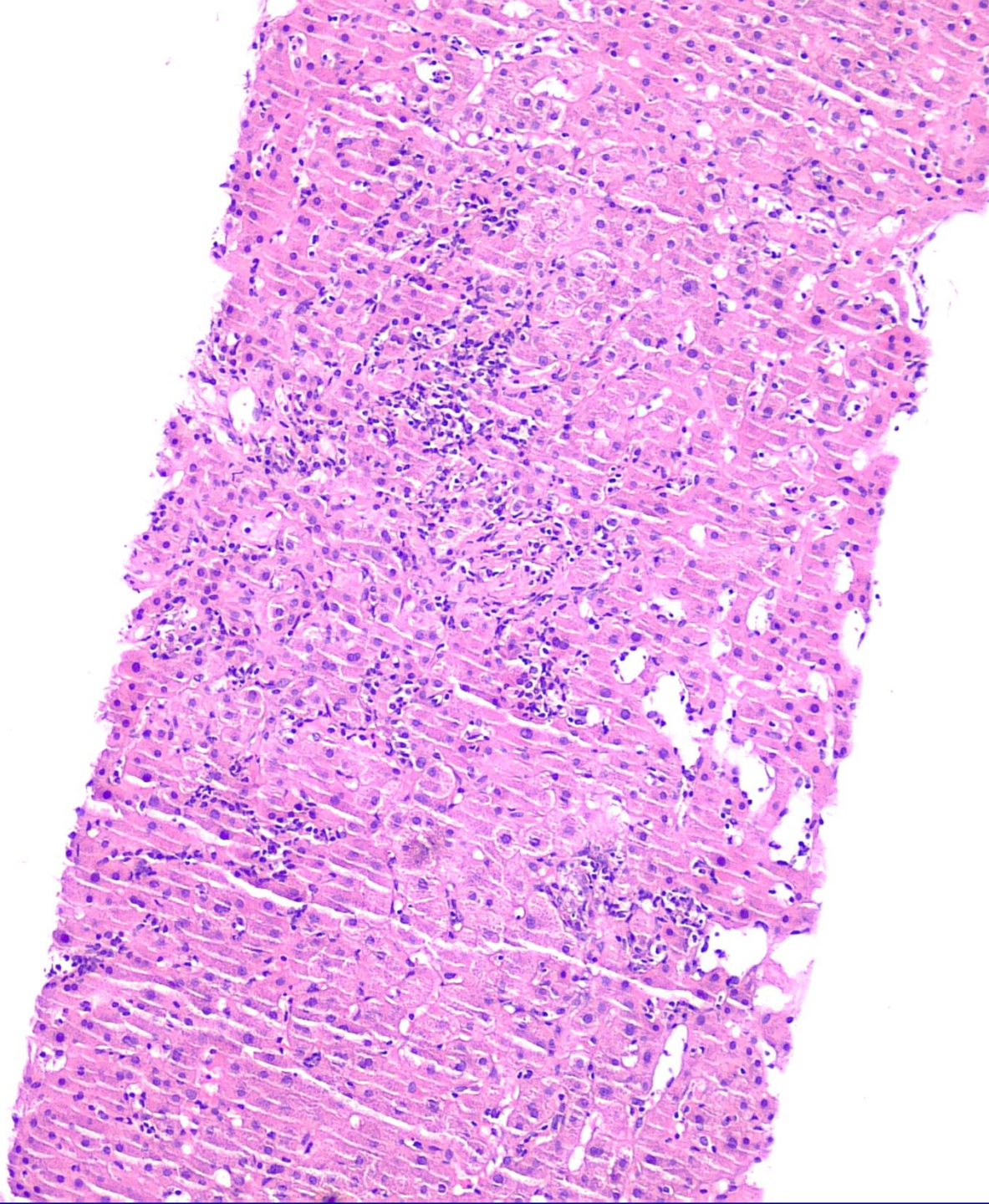
20.0  $\mu$ m

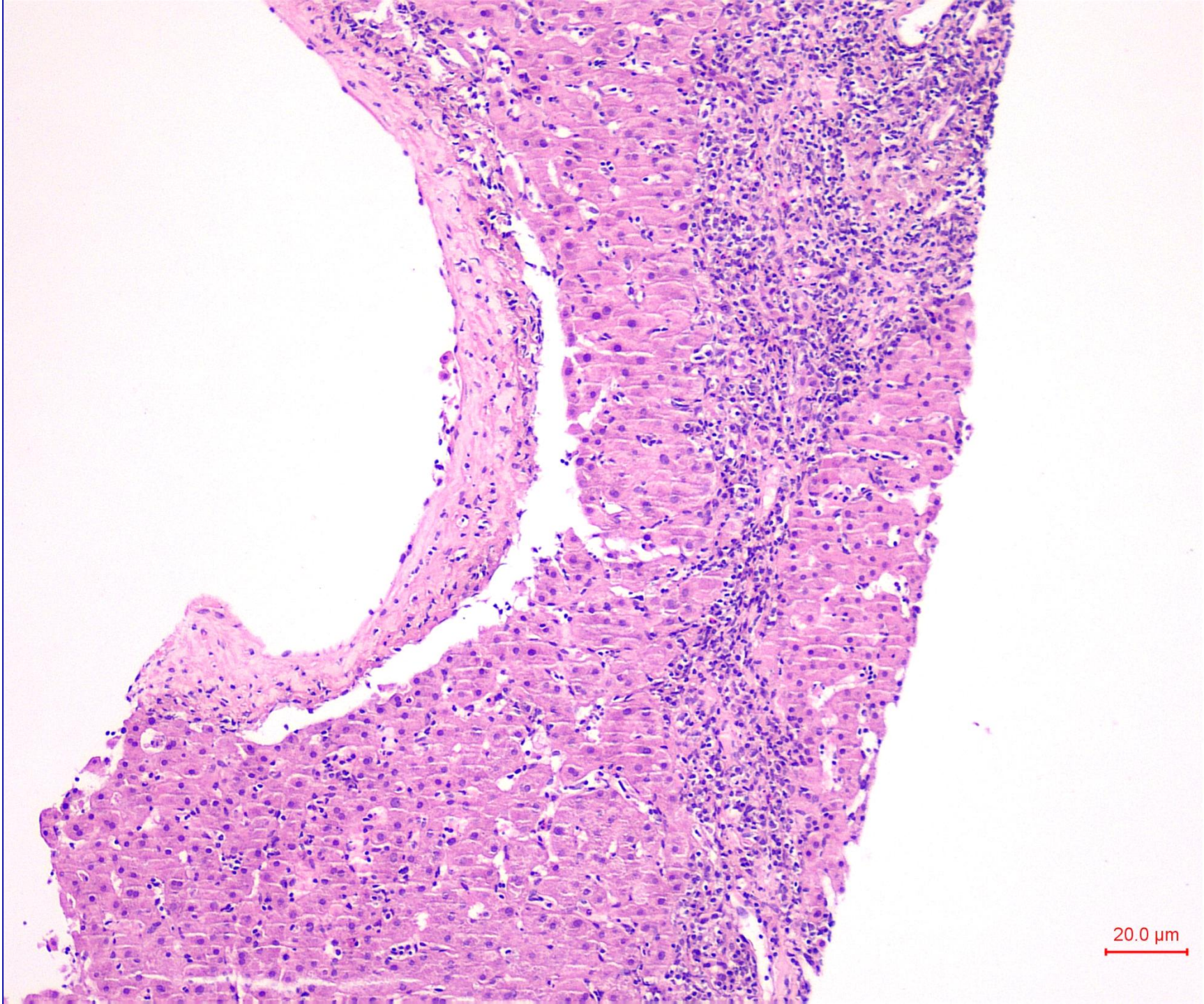


20.0  $\mu$ m

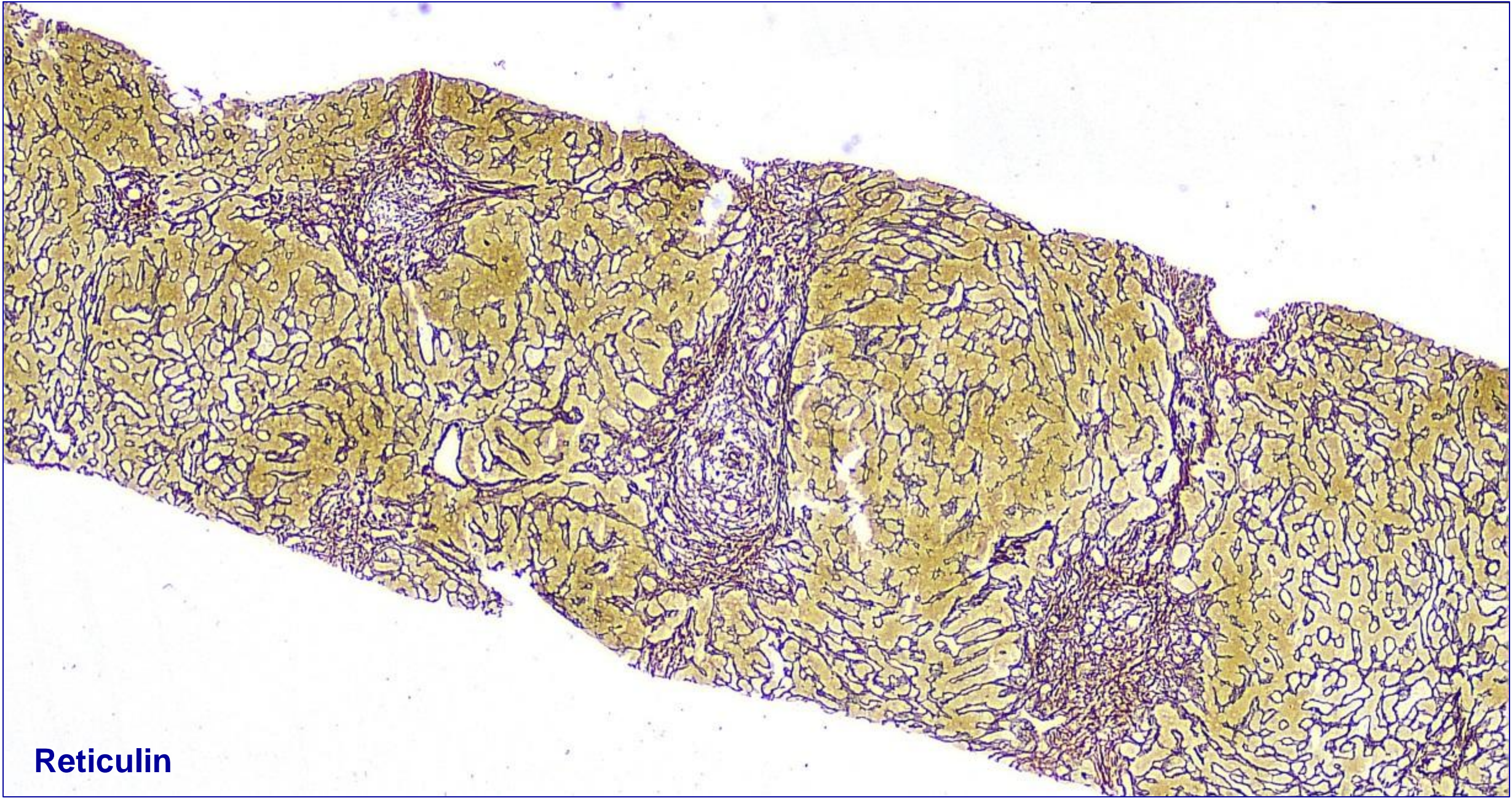


20.0  $\mu$ m

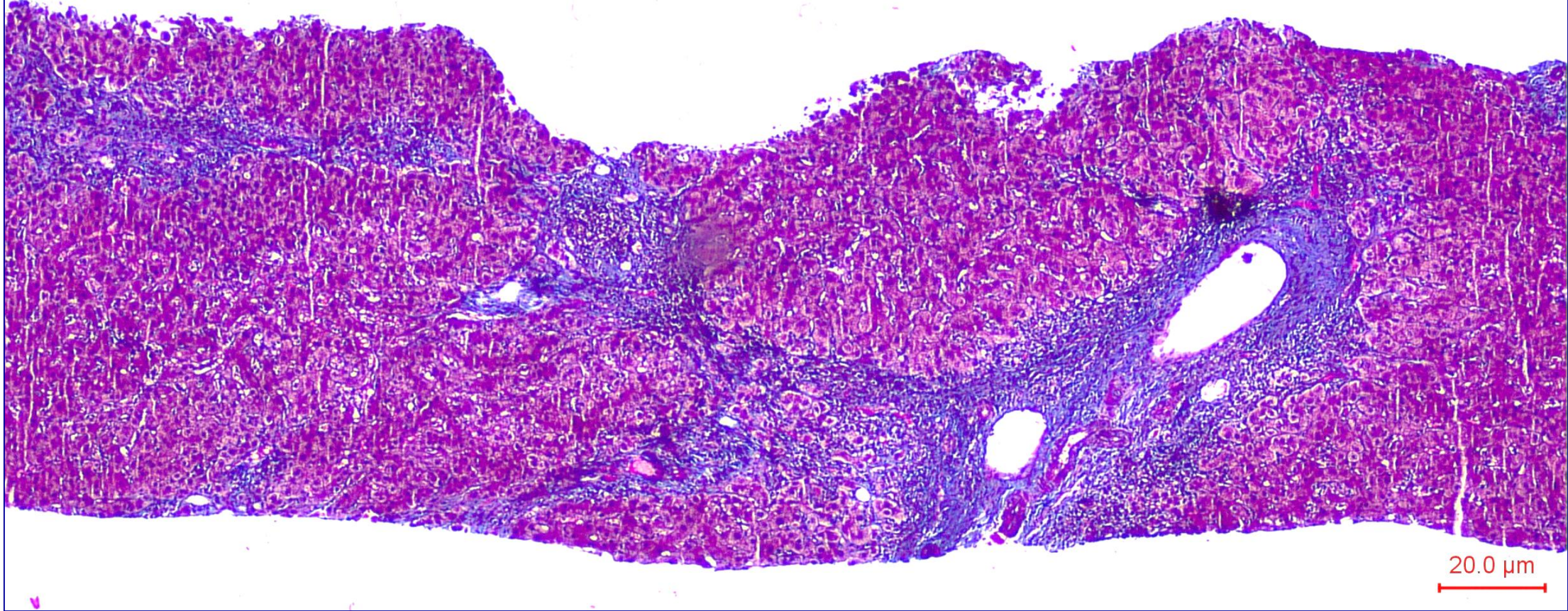




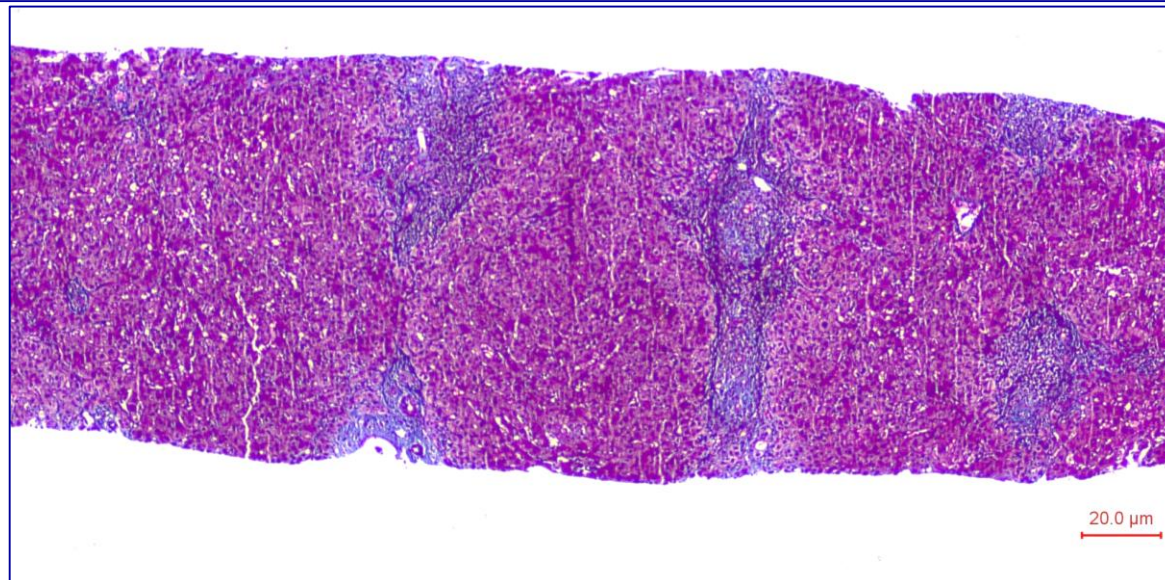
20.0  $\mu$ m

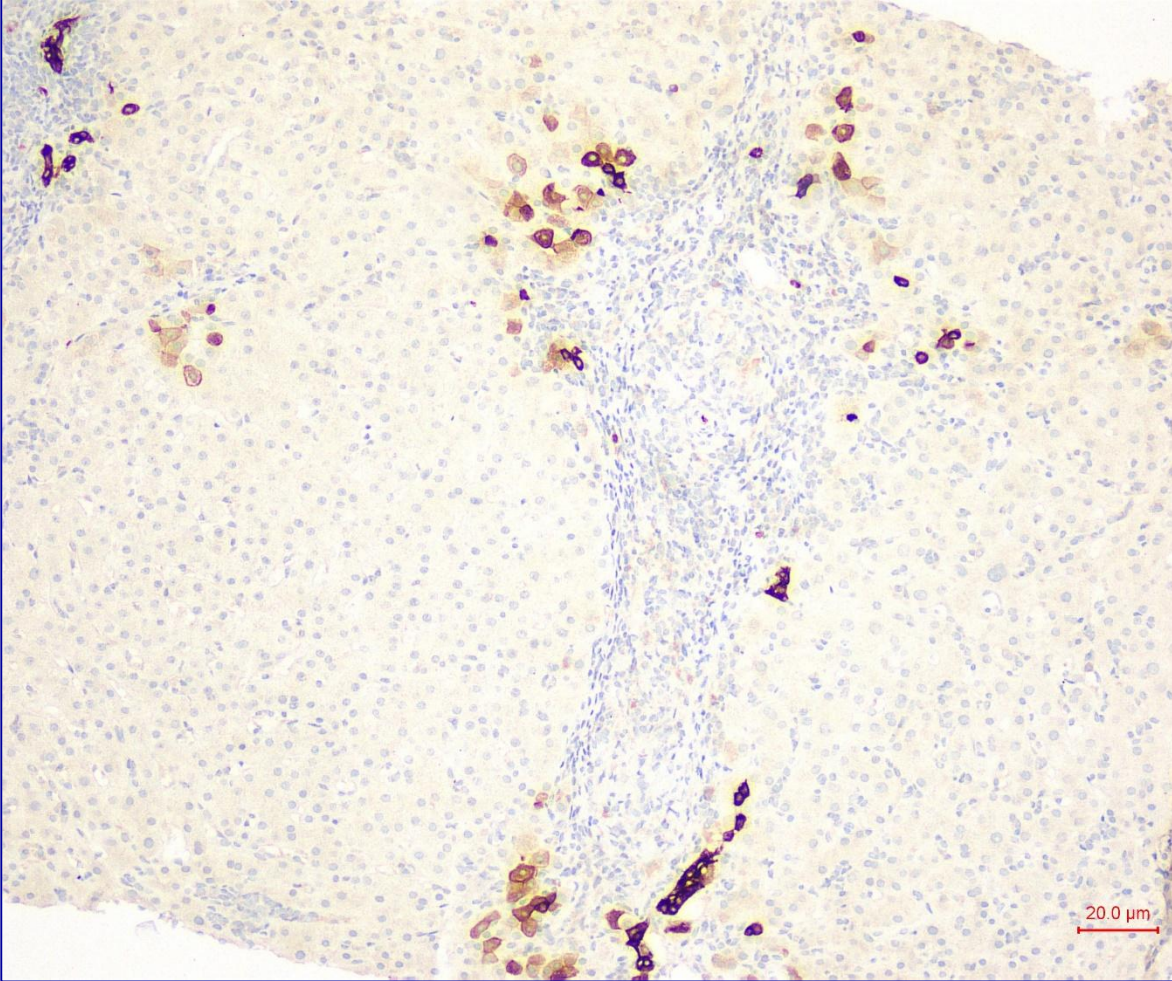


**Reticulin**

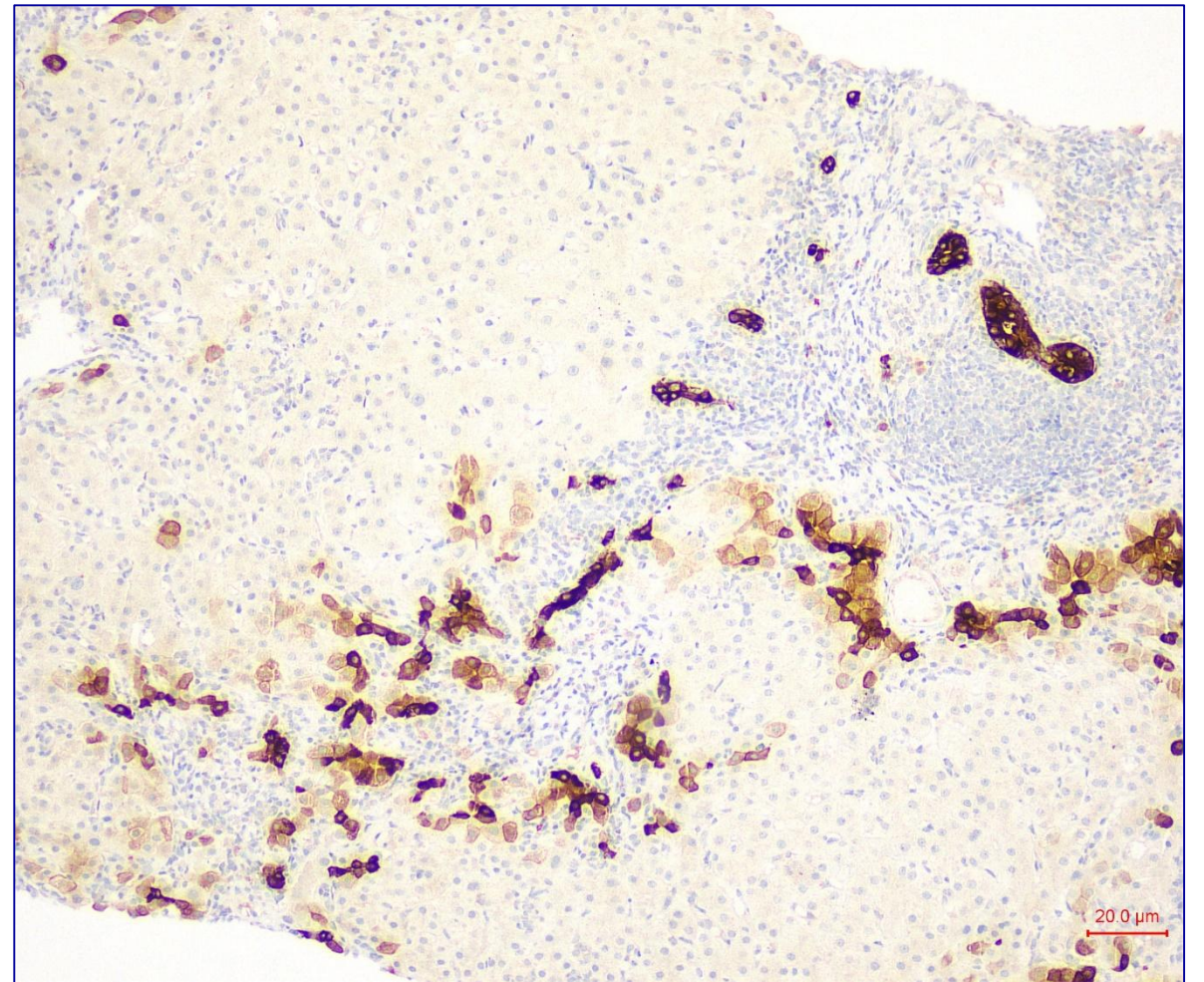


**Masson  
trichrome**





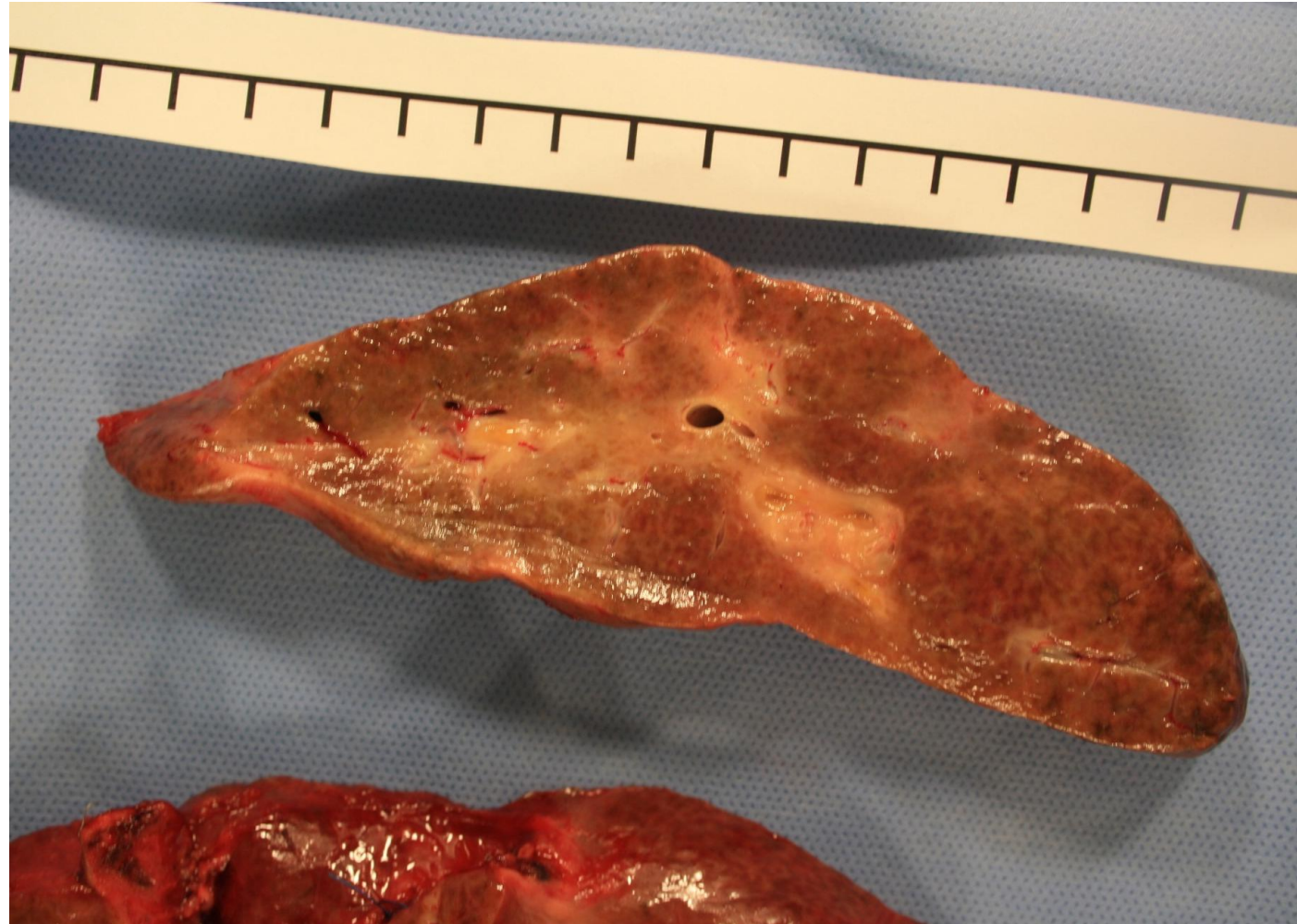
**Keratin 7**

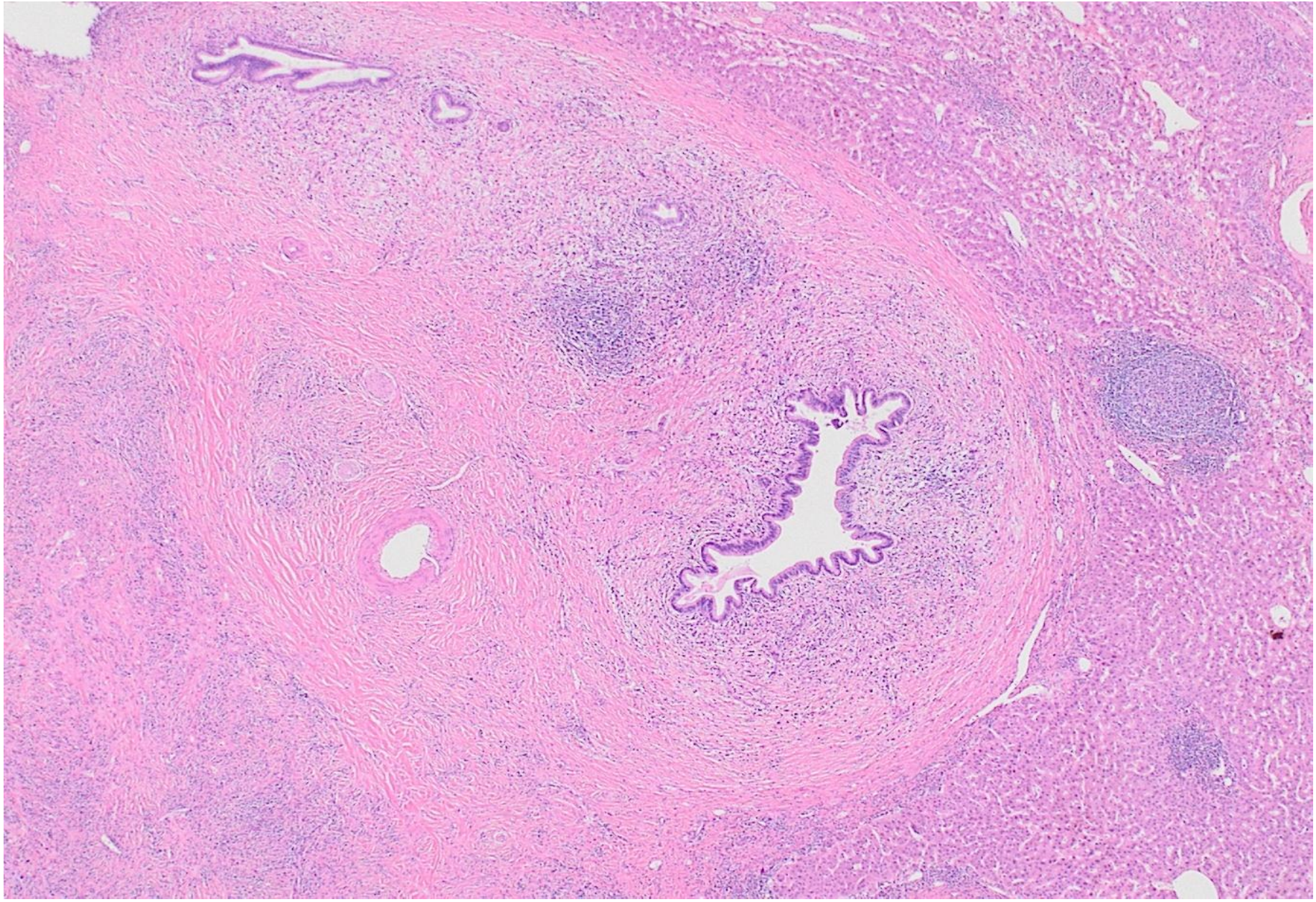


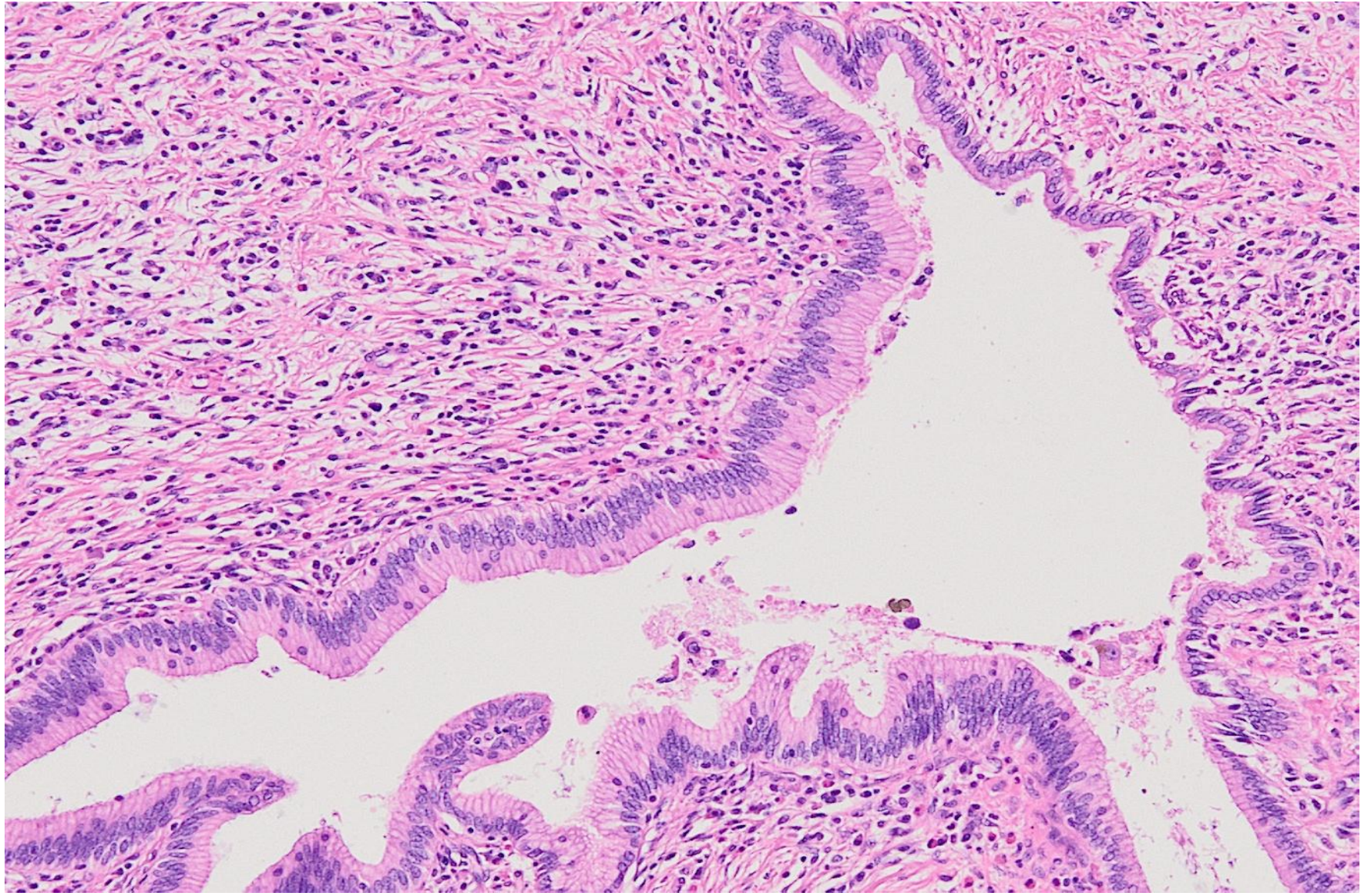
# Case History - 5

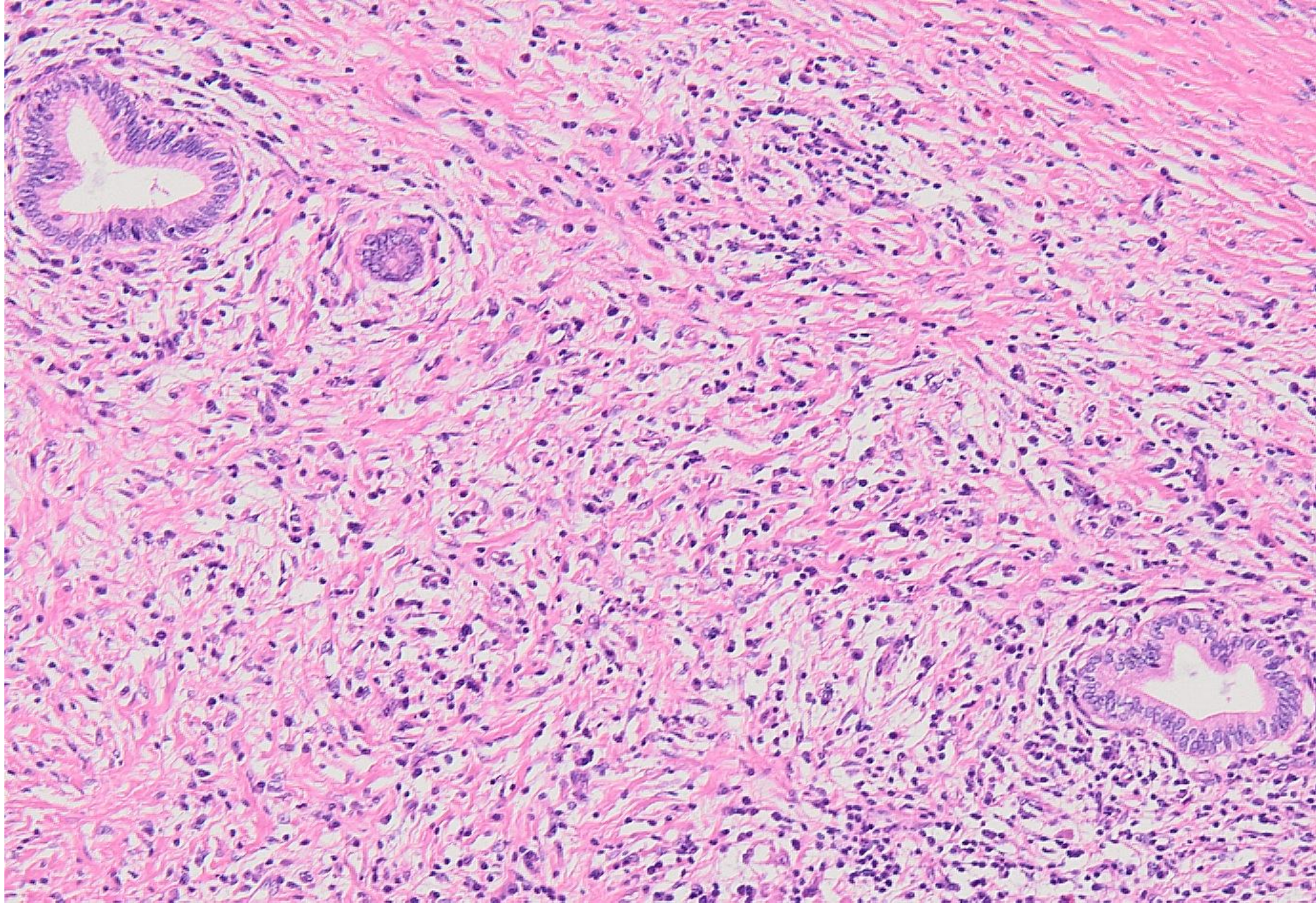
- 64-year-old male patient with elevated liver enzymes  
ALP 378, GGT 432, ALT 60, total bilirubin 0.6
- MRI: suspicious for carcinoma of the pancreatic head, portal vein thrombosis and liver metastasis
- Explorative laparotomy and 3 times liver frozen sections to exclude the diagnosis of metastatic pancreatic head carcinoma

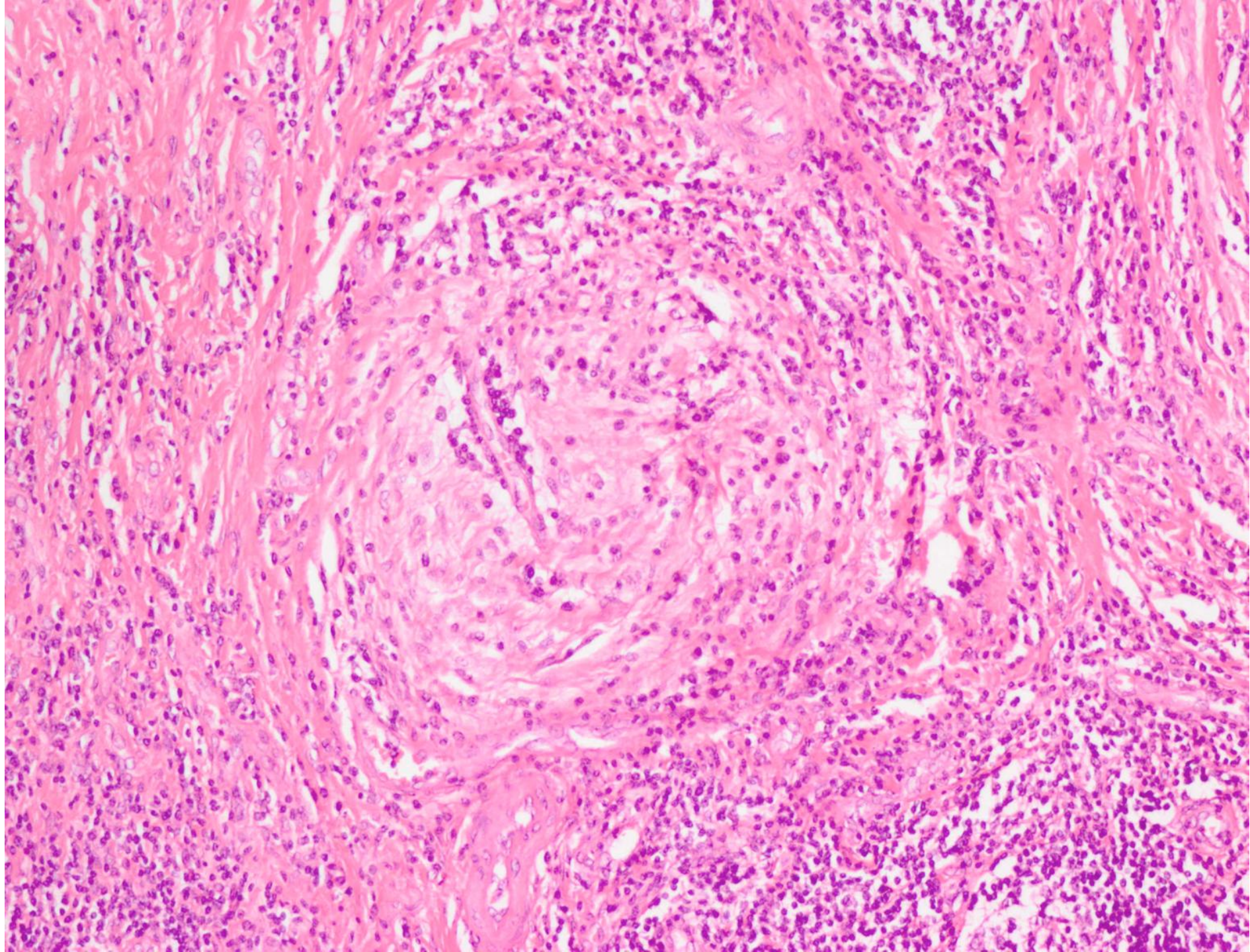
# Case 5 – Gross findings





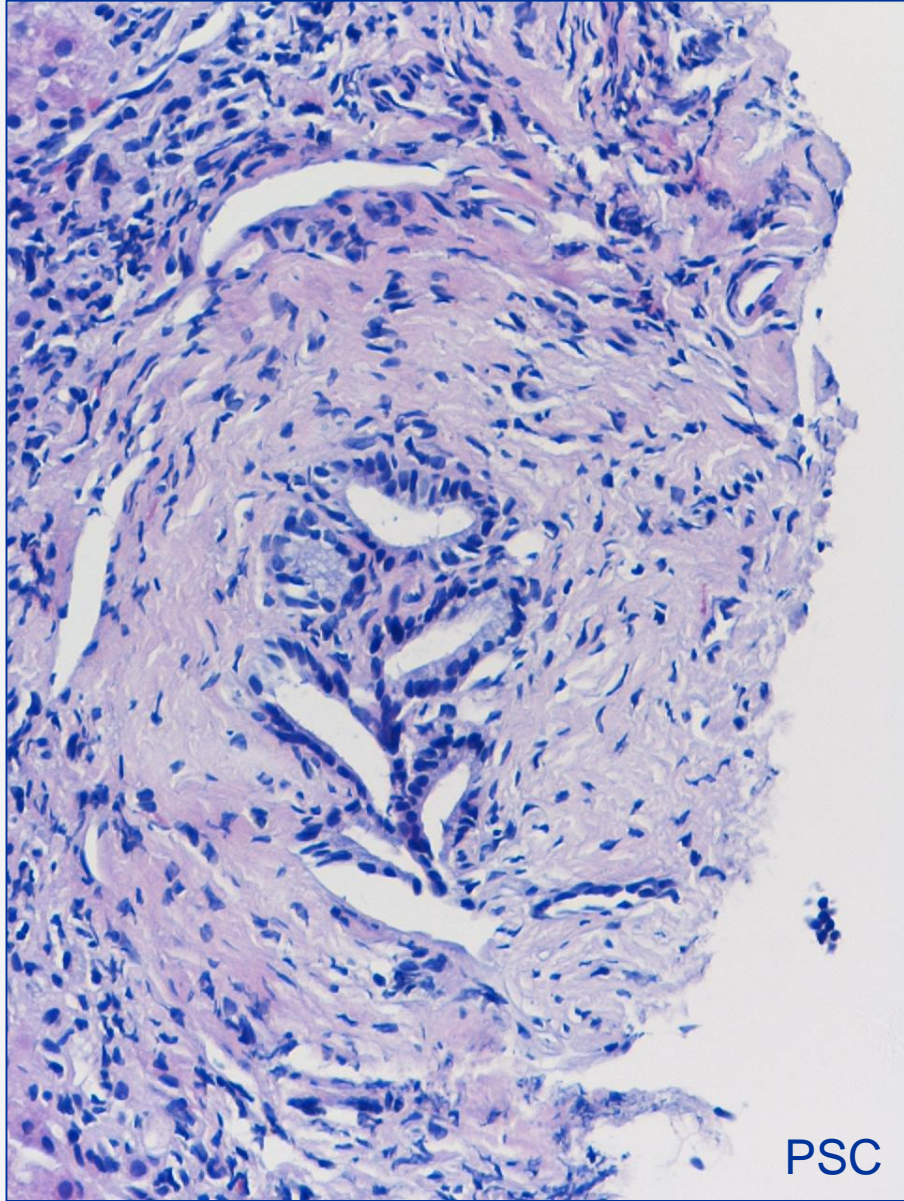






# What is the diagnosis in Case 5?

1. **Primary biliary cholangitis**
2. **Variant PBC-AIH**
3. **Primary sclerosing cholangitis**
4. **IgG4-related sclerosing cholangitis**



# Thank you!



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# Test your knowledge

**1. Which histological feature is not typical for autoimmune hepatitis?**

- A) lobular inflammation
- B) portal lymphoplasmacytic inflammation
- C) steatosis
- D) interface hepatitis

**2. Which sentence is correct for centrilobular injury in autoimmune hepatitis ?**

- A) It is the predominant histological finding in the majority of cases
- B) It may represent an early stage of the disease
- C) Hepatocellular necrosis is unusual
- D) It is an exclusive finding in 10% of the cases

**3. Which sentence is correct for autoimmune hepatitis?**

- A) Liver biopsy is not required to establish the diagnosis
- B) Histology is different from that of drug-induced autoimmune like hepatitis
- C) Special stains for elastic fibers are not needed for accurate staging of fibrosis
- D) Successful immunosuppressive treatment leads to fibrosis regression

# Test your knowledge

**1. Which histological feature is not typical for autoimmune hepatitis?**

- A) lobular inflammation
- B) portal lymphoplasmacytic inflammation
- C) steatosis
- D) interface hepatitis

**Answer:** C) Steatosis

**2. Which sentence is correct for centrilobular injury in autoimmune hepatitis ?**

- A) It is the predominant histological finding in the majority of cases
- B) It may represent an early stage of the disease
- C) Hepatocellular necrosis is unusual
- D) It is an exclusive finding in 10% of the cases

**Answer:** B) it may represent an early stage of the disease

**3. Which sentence is correct for autoimmune hepatitis?**

- A) Liver biopsy is not required to establish the diagnosis
- B) Histology is different from that of drug-induced autoimmune like hepatitis
- C) Special stains for elastic fibers are not needed for accurate staging of fibrosis
- D) Successful immunosuppressive treatment leads to fibrosis regression

**Answer:** D) Successful immunosuppressive treatment leads to fibrosis regression