Liver Update Cases BSG/ACP

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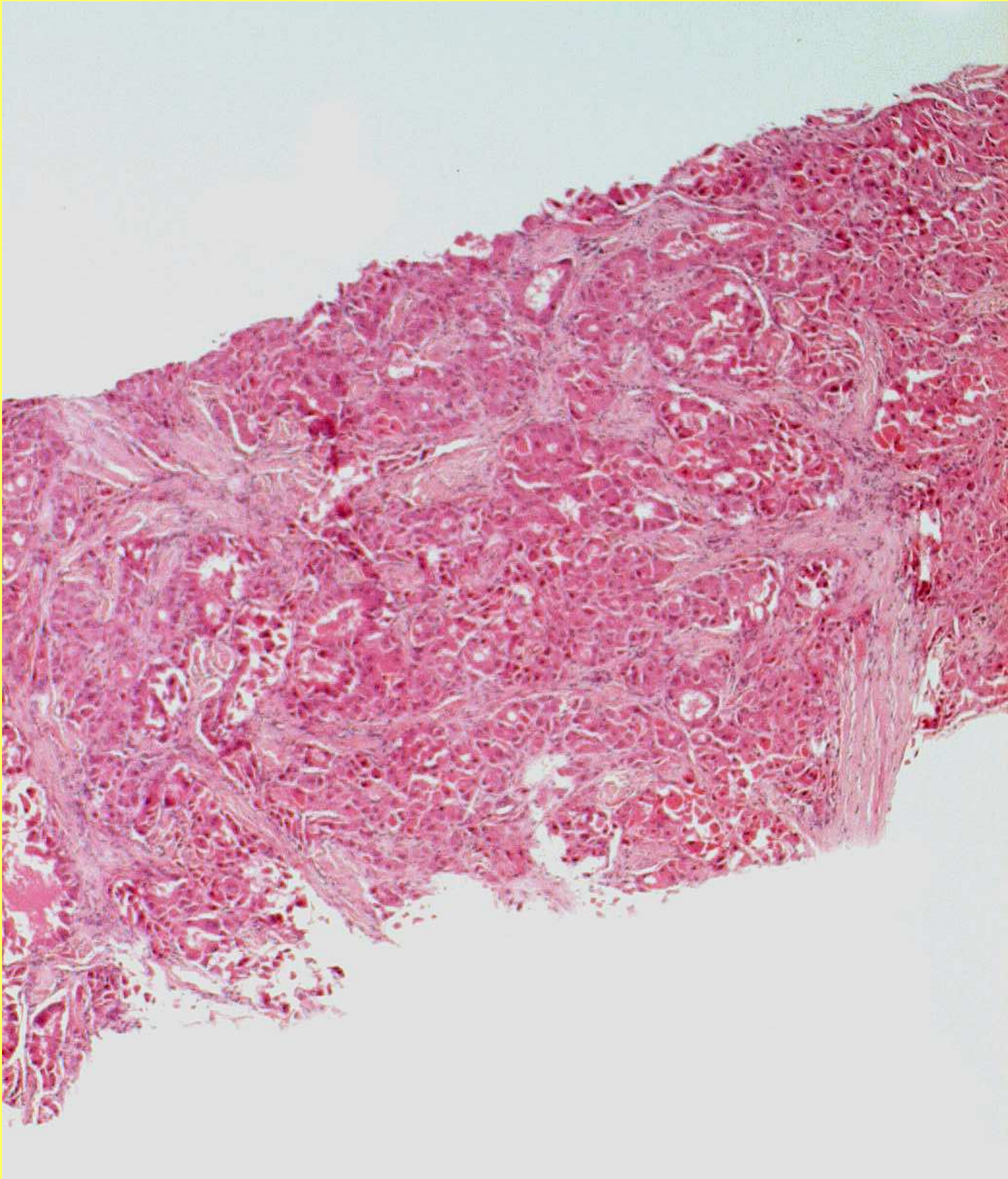
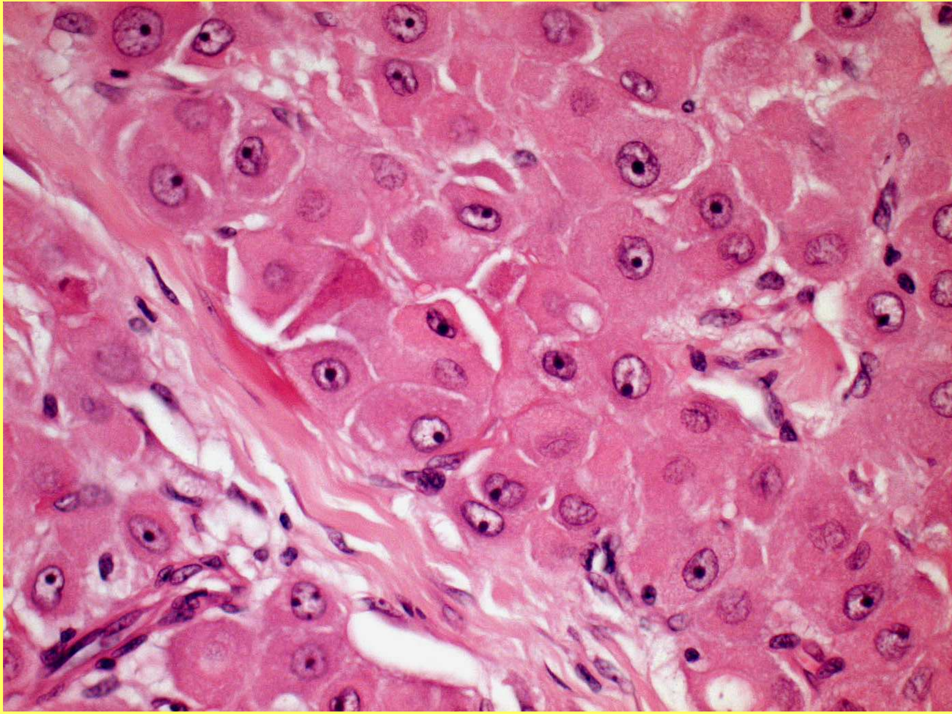
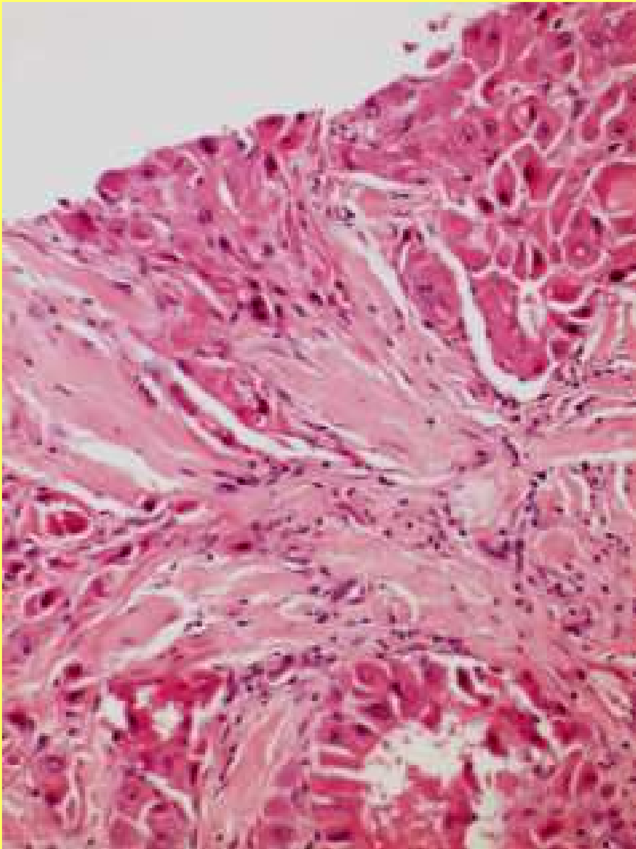
Cambridge

Case 1

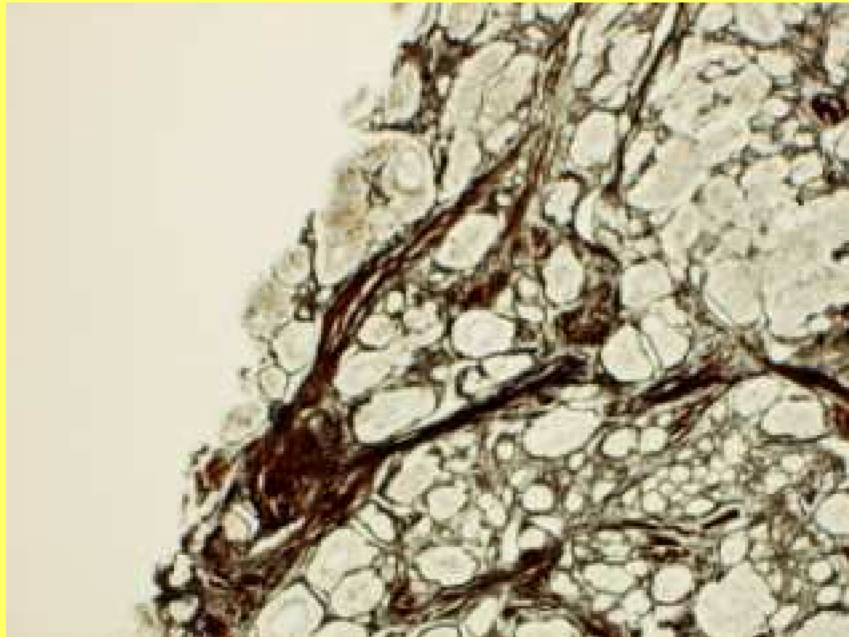
- 34year old female
- Abdominal pain
- 5cm mass in RUQ
- Targeted biopsy

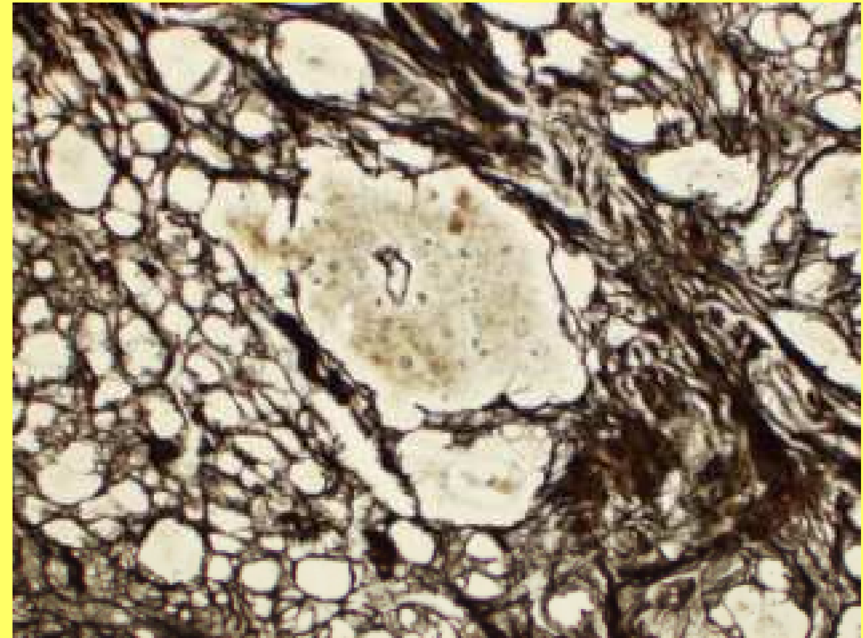


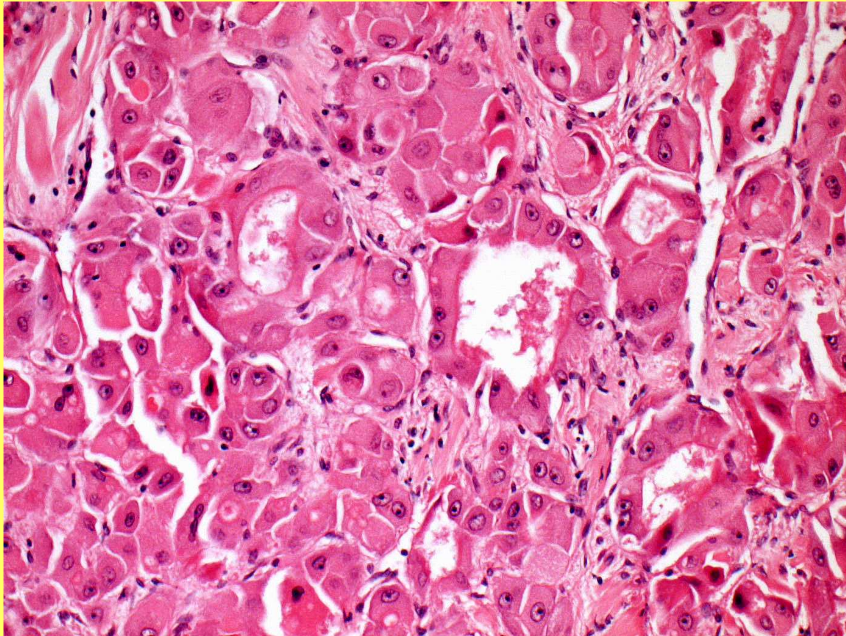




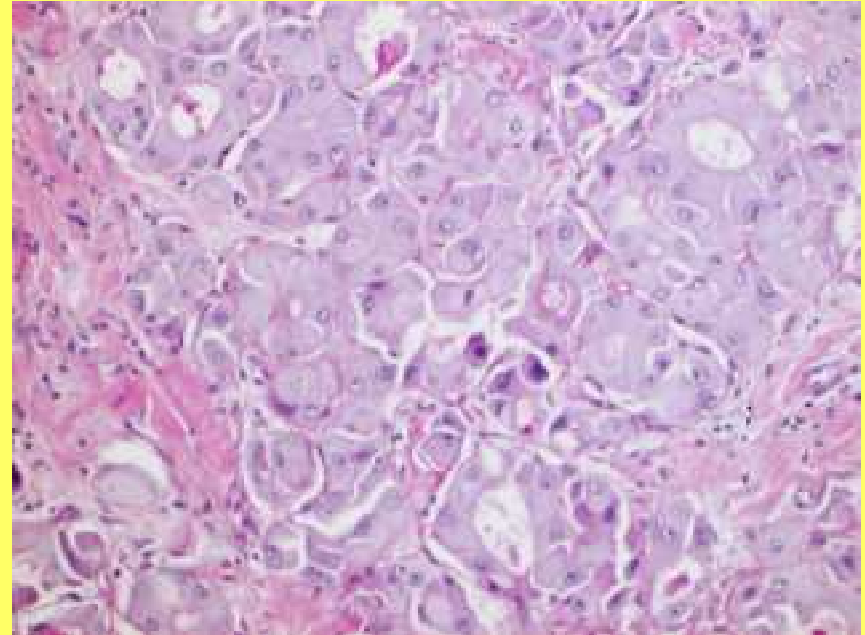
Reticulin







?glands



DPAS

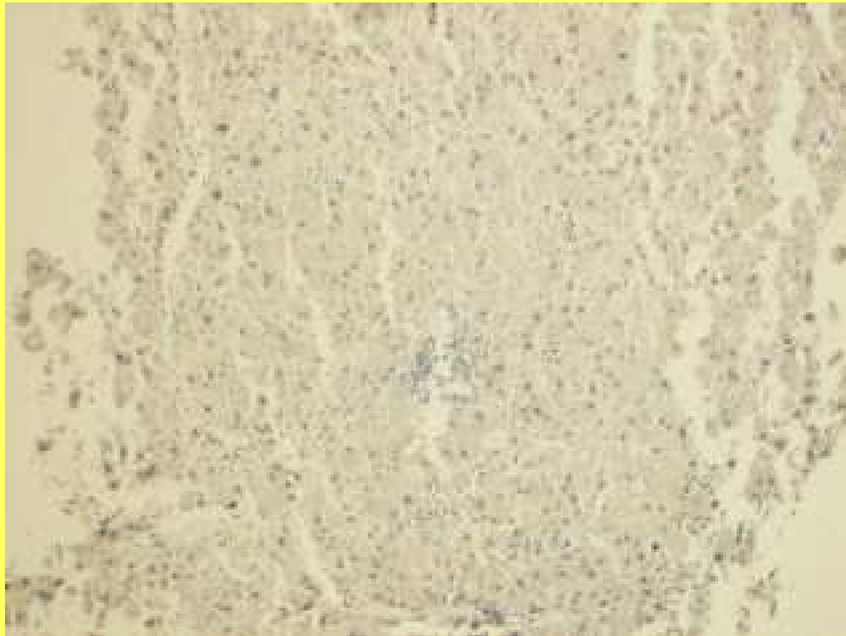
Differential Diagnosis

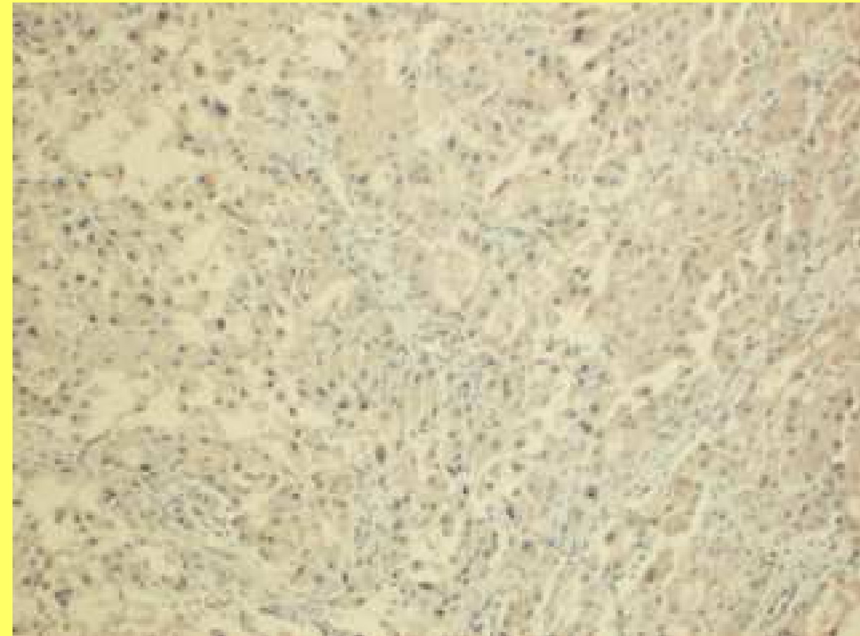
- Hepatocellular carcinoma
- Fibrolamellar hepatoma
- Adenoma
- Oncocytic renal cell carcinoma
- Adrenocortical carcinoma
- Neuroendocrine carcinoma

IHC

AE1/AE3, EMA

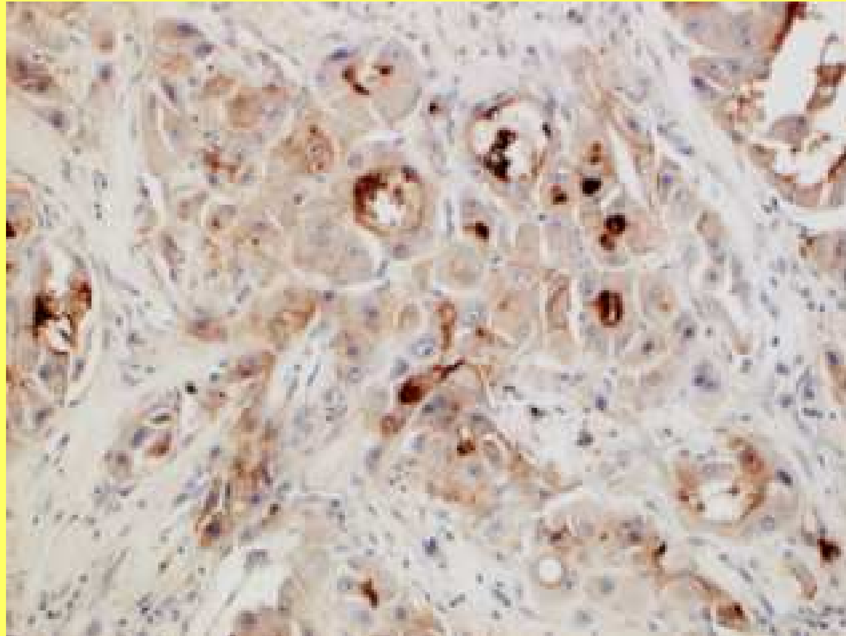
Synaptophysin, CD56



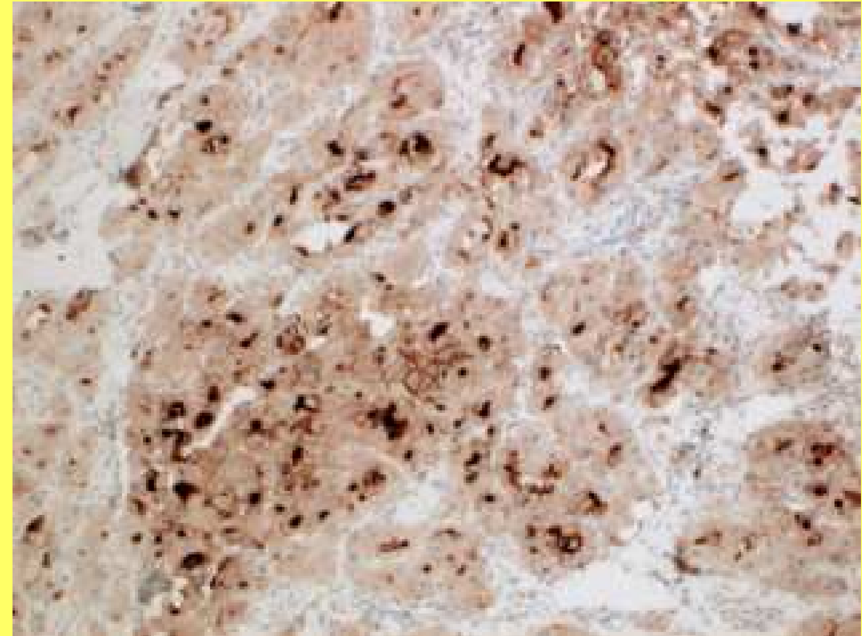


IHC

Polyclonal CEA

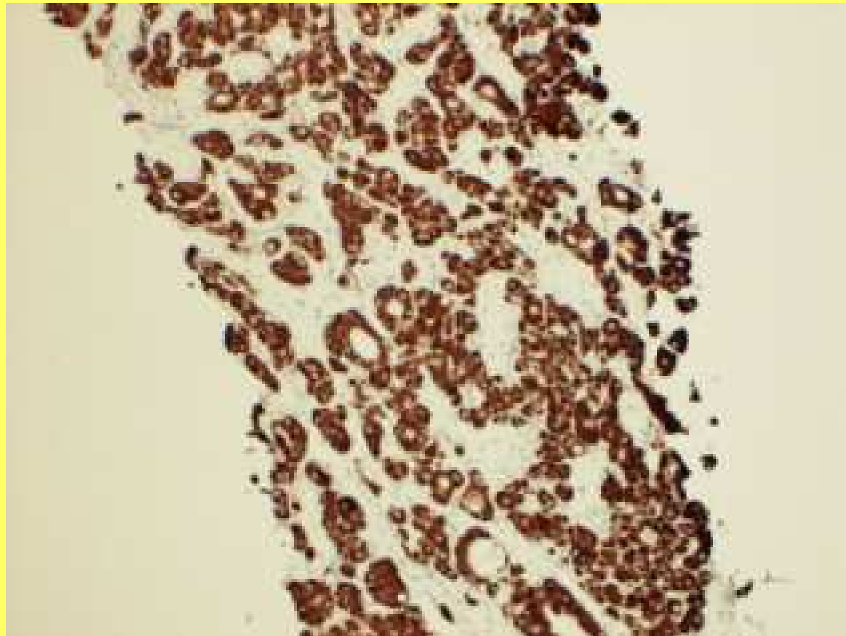


CD10

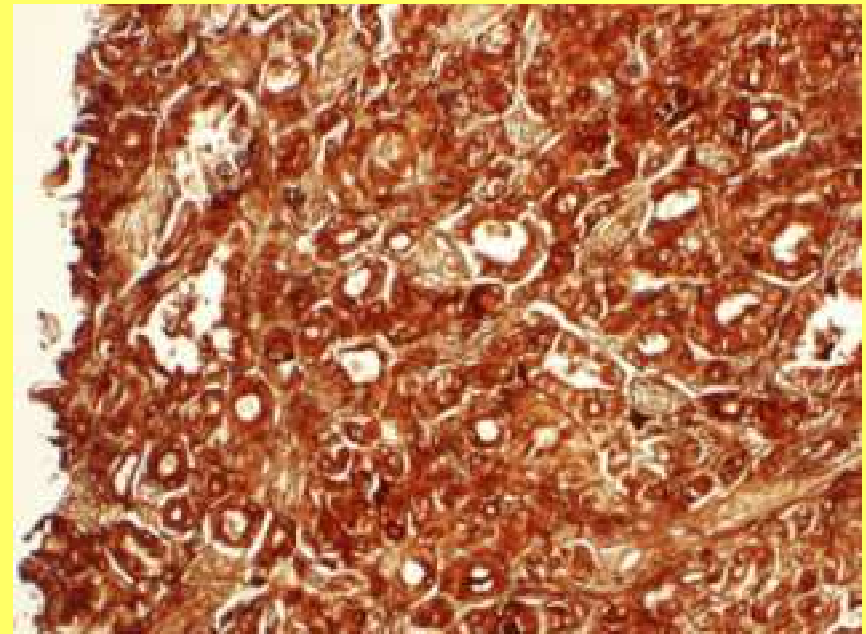


IHC

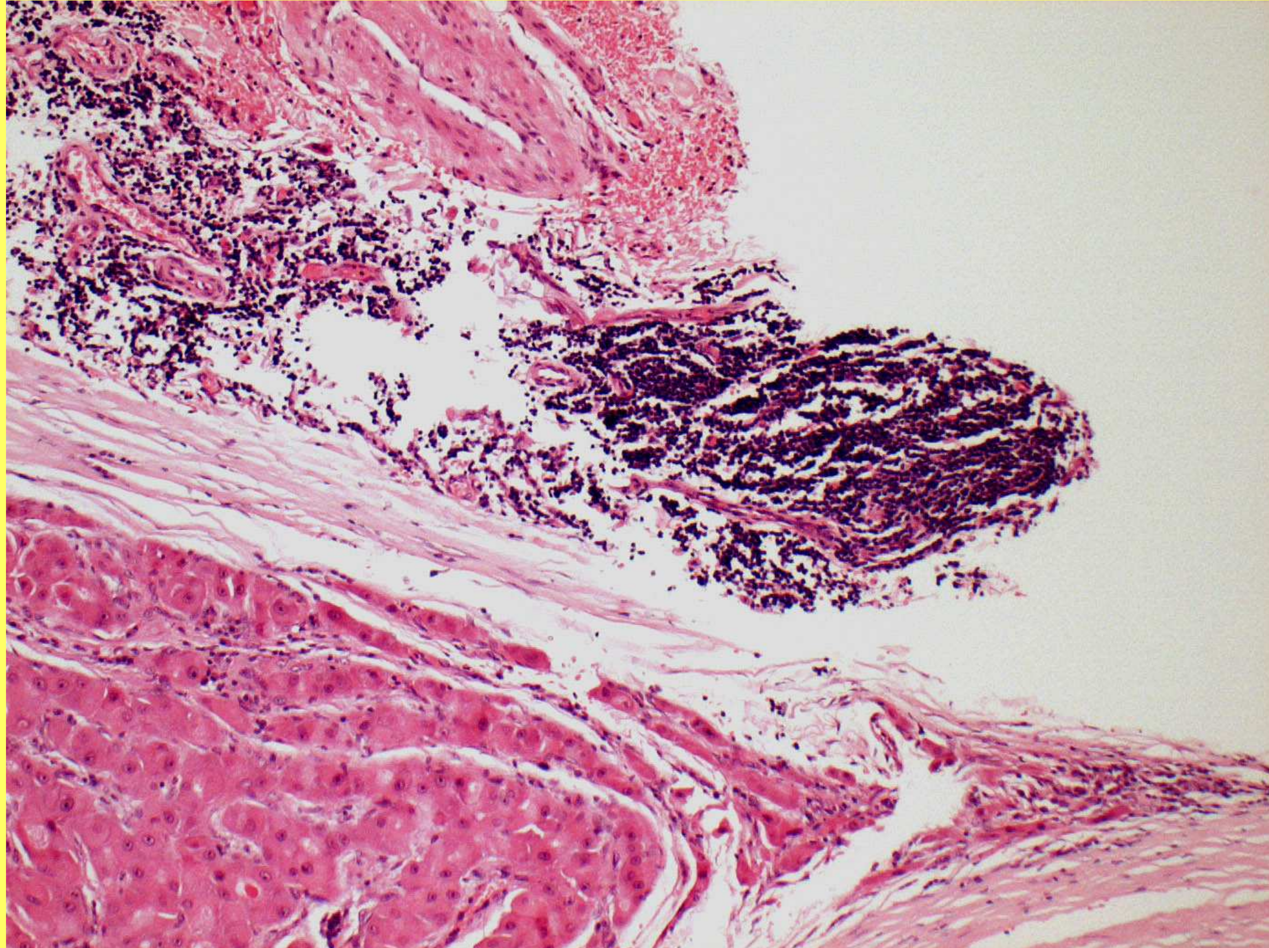
HepPar 1



Fibrinogen

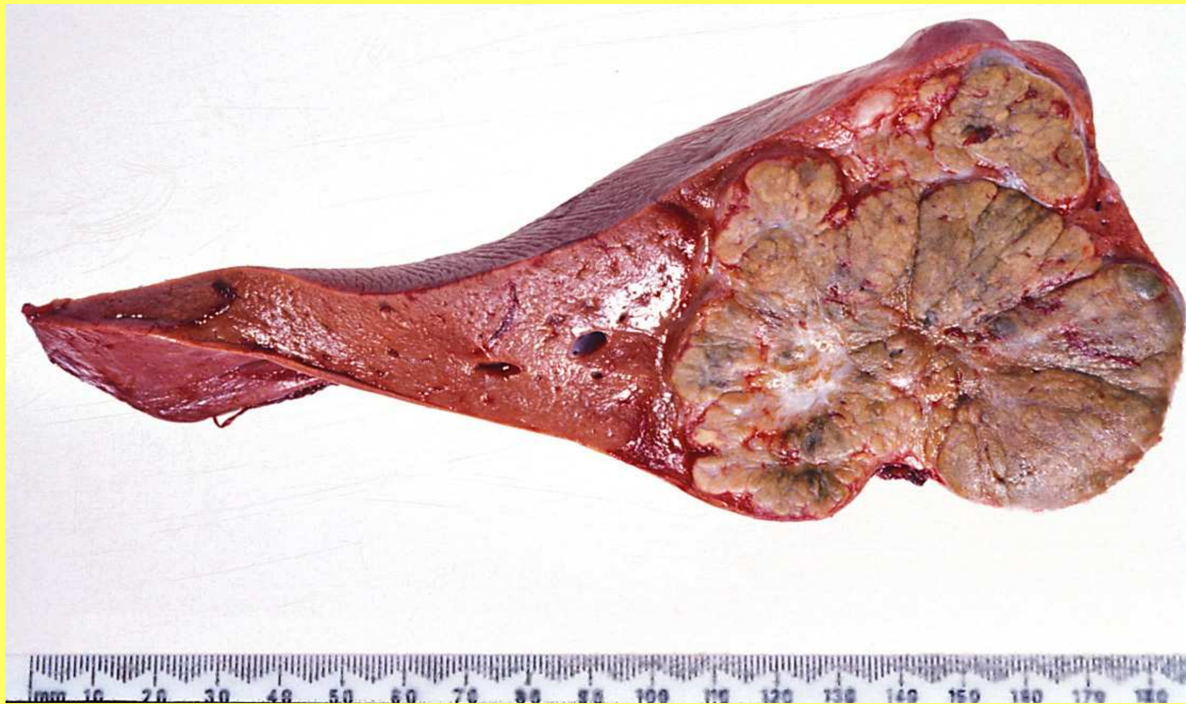


Eagle eyed…



Diagnosis

- Lymph node metastasis of Fibrolamellar hepatocellular carcinoma



- Partial liver resection 5 yrs previously; complete excision
- Now 5cm coeliac axis node
- May mimic FNH macroscopically

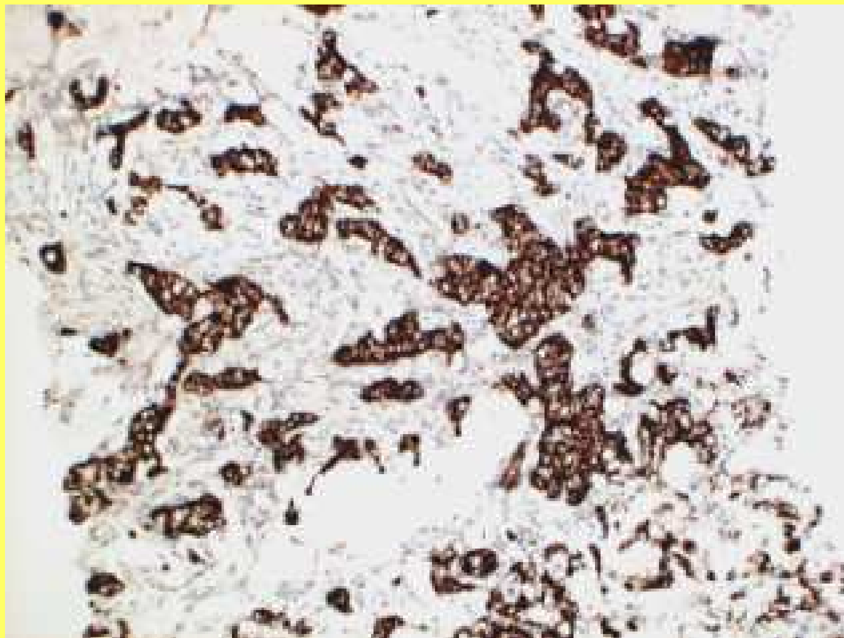
FLC

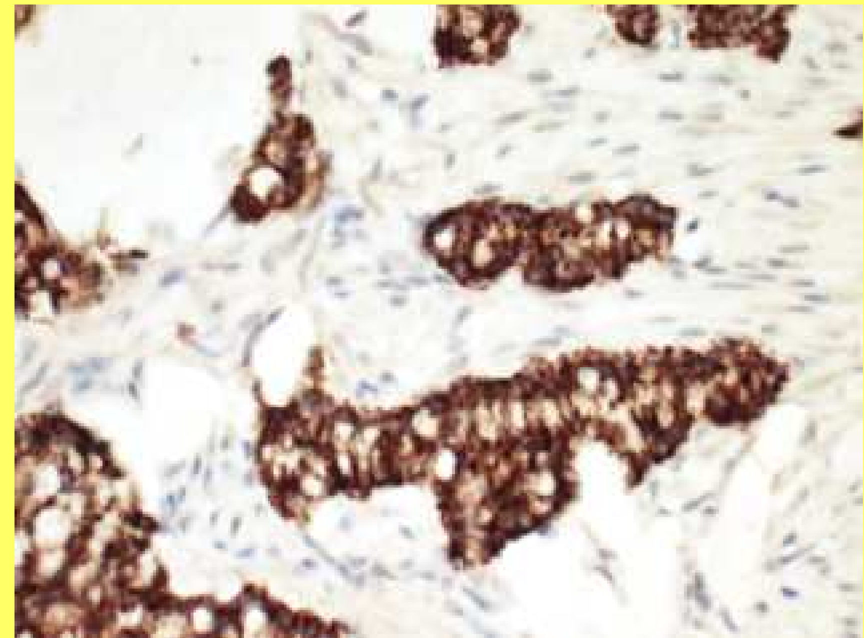
- Variant of HCC
- Not follow HCC geographical variation
- Non-cirrhotic liver of adolescents and young adults
- Better prognosis

- Remains A&W 6 months later

HepPar1… specificity

Many adenocarcinomas, particularly GI tract, are also positive

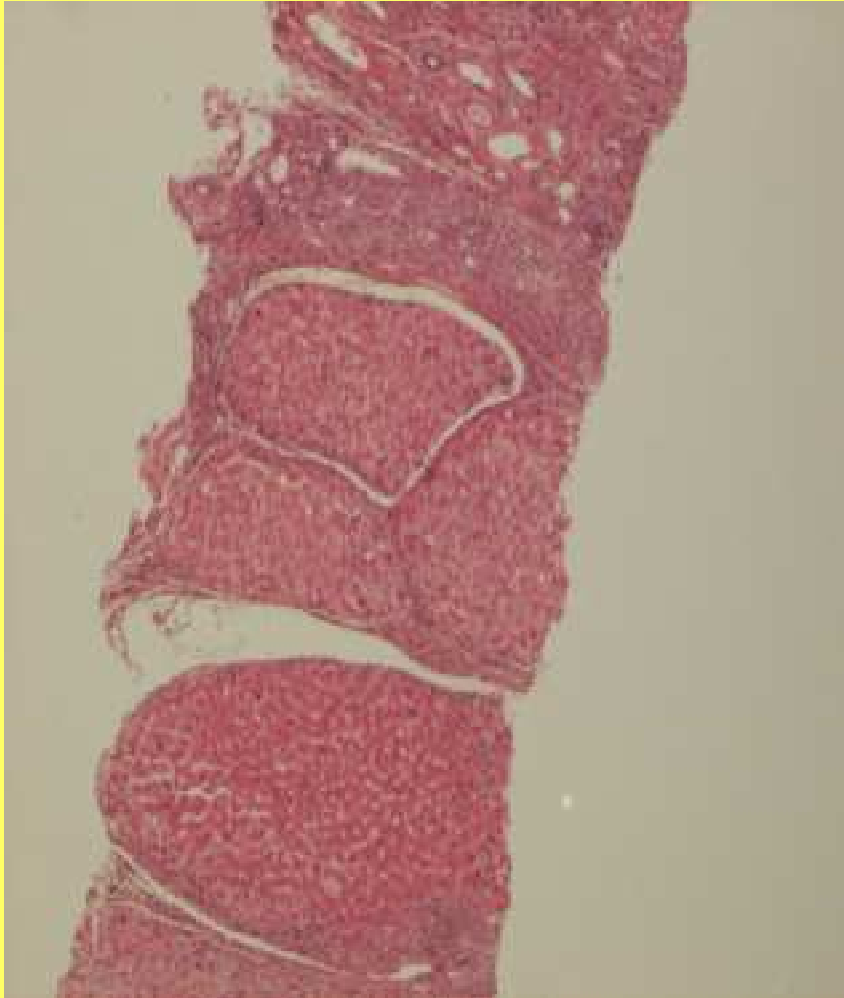


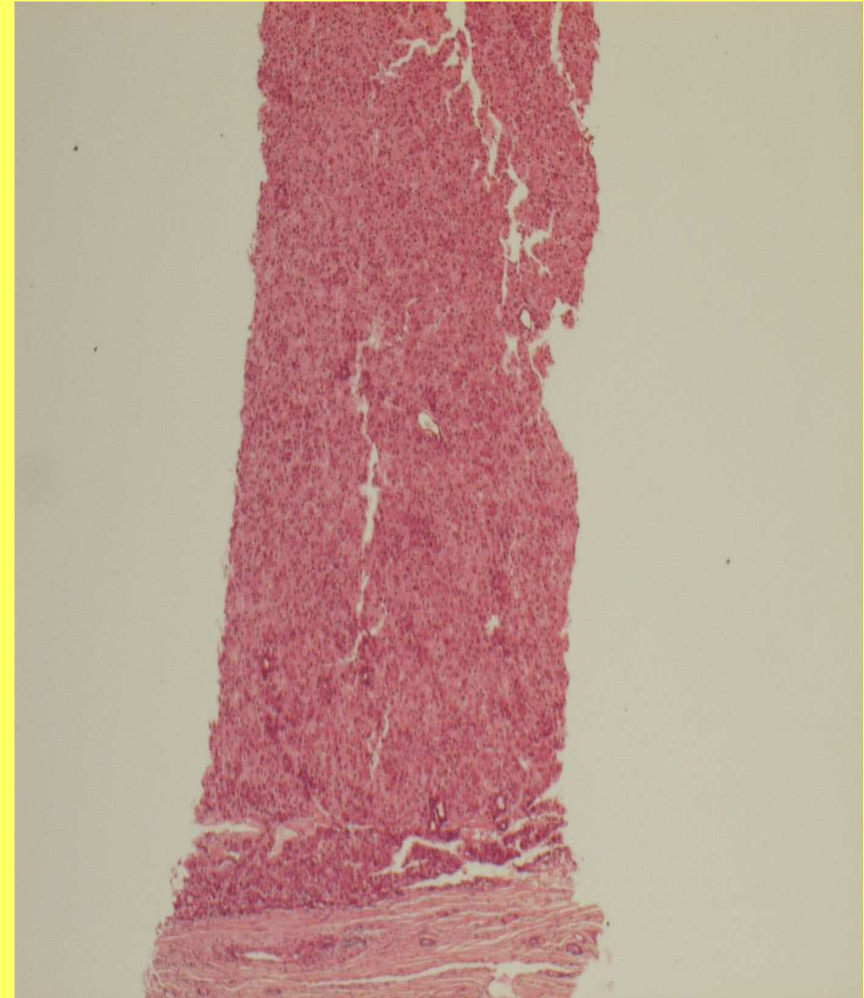


Case 2

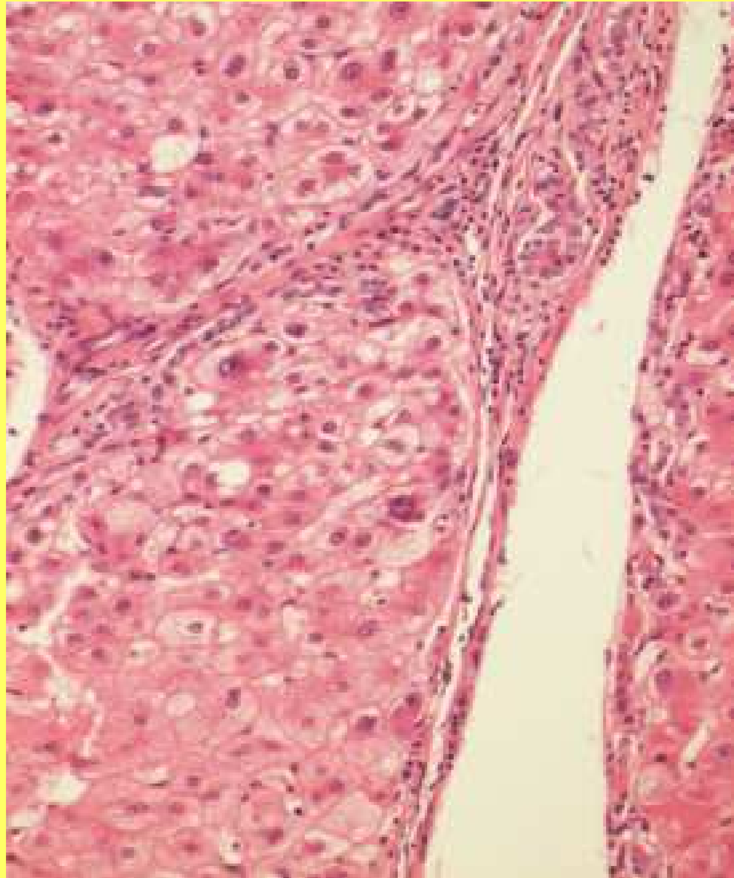
- 64yr old man presents with features of portal hypertension
- Thought to be cryptogenic
- 2cm mass identified on imaging

Two distinct areas

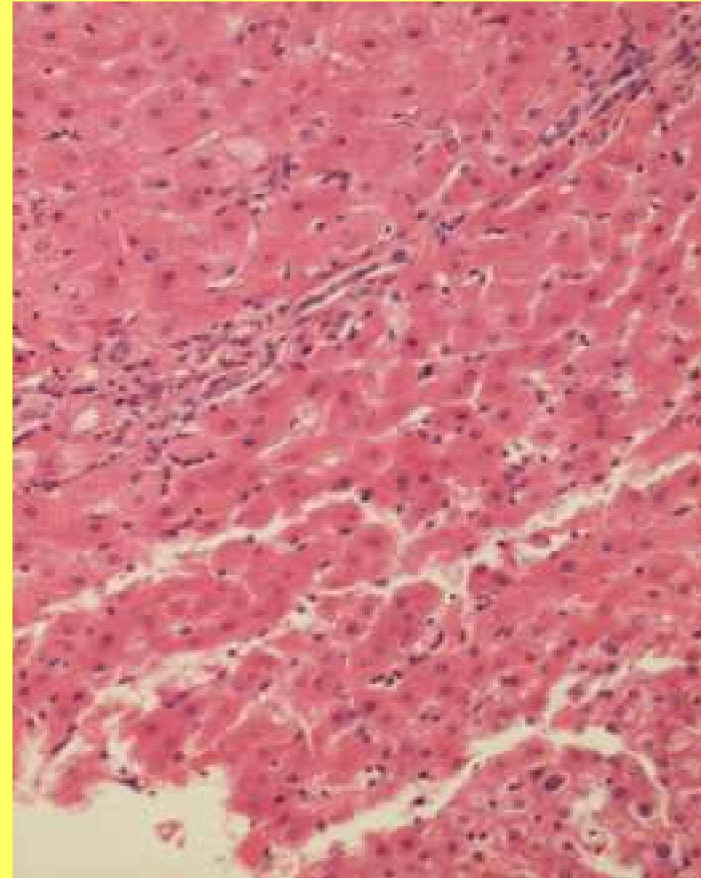




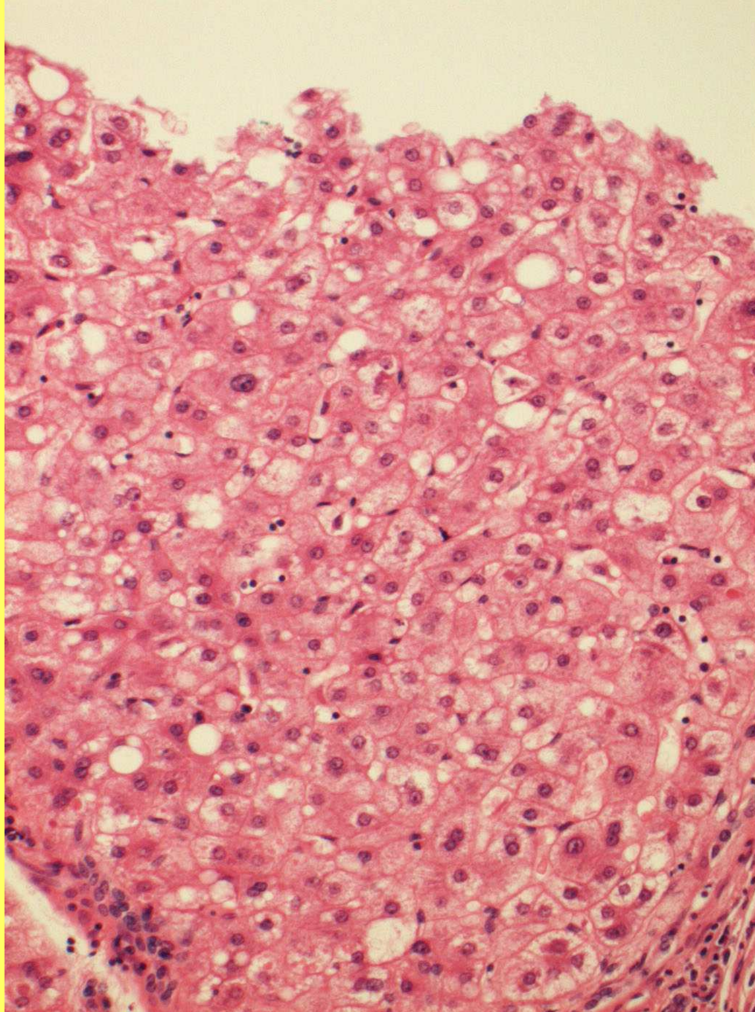
Slight inflammation

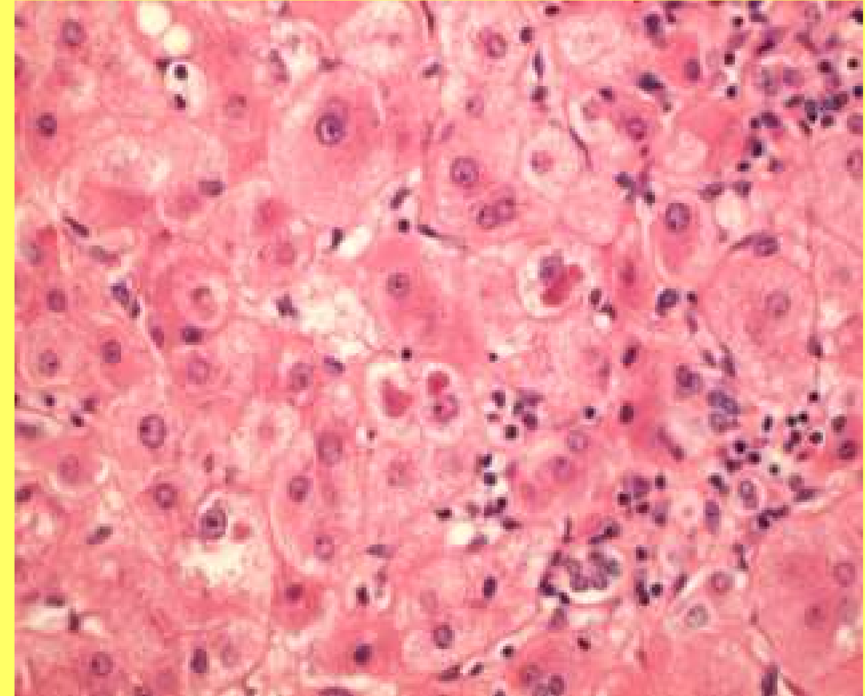


Eosinophilic cells



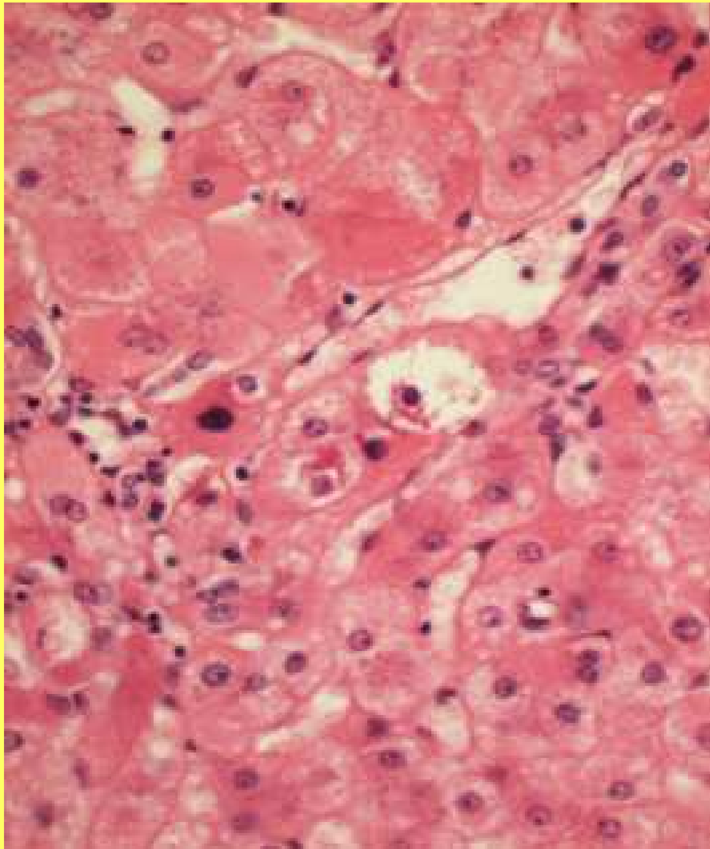
Clearing…steatosis?



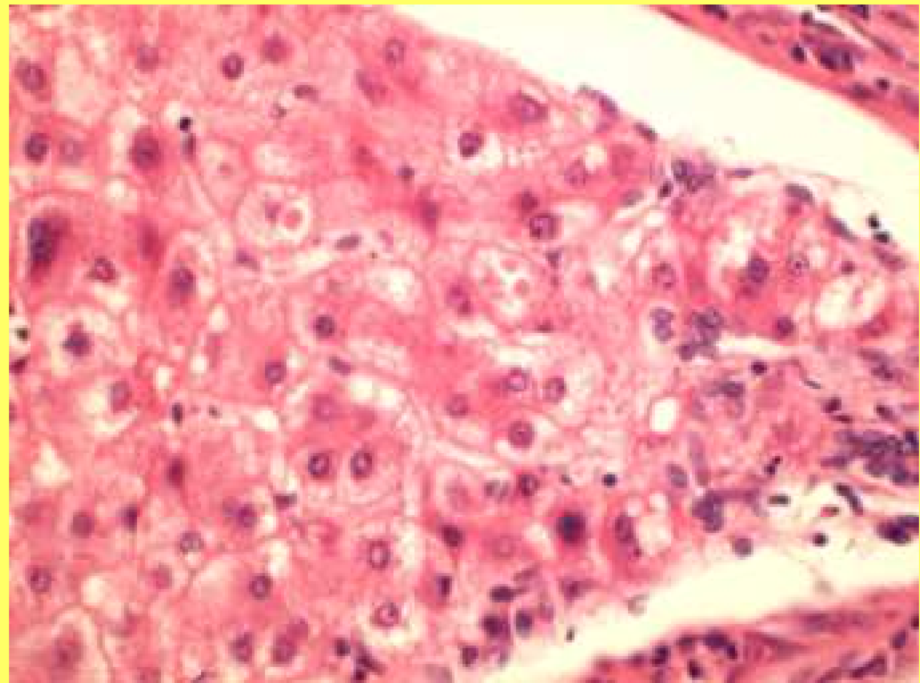


Cyto clumps…MBs?

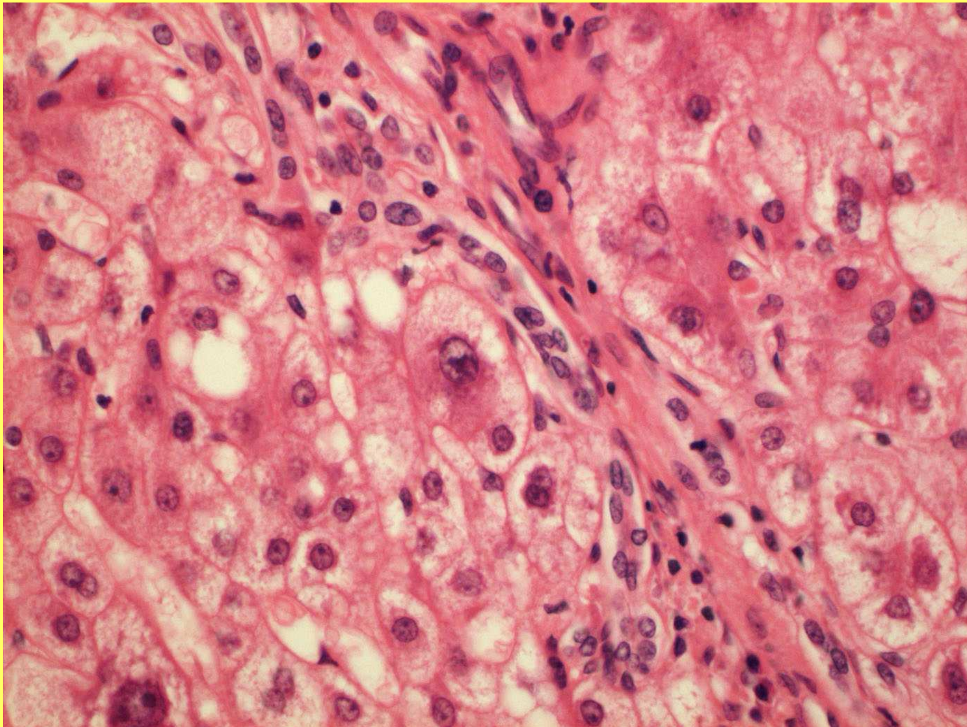
Ballooning?

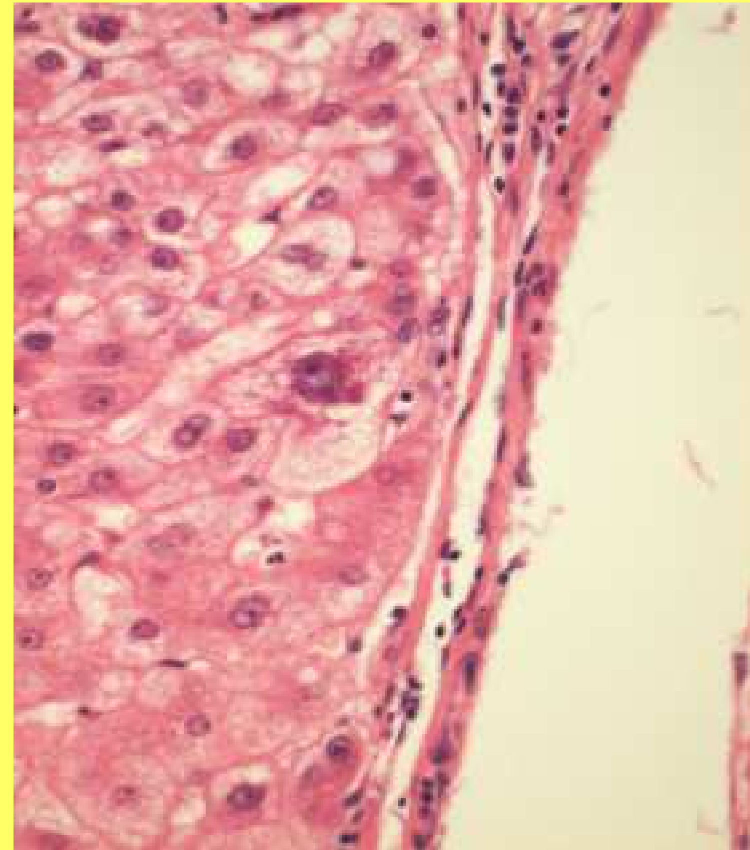


Cyto clumps…megamitochondria?



Large hyperchromatic nuclei

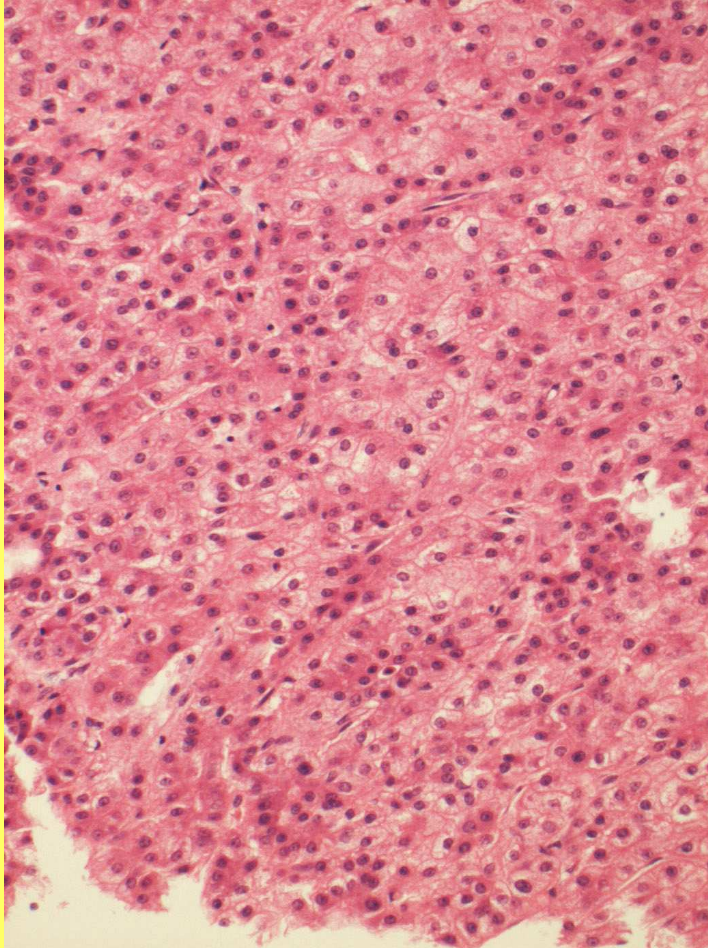


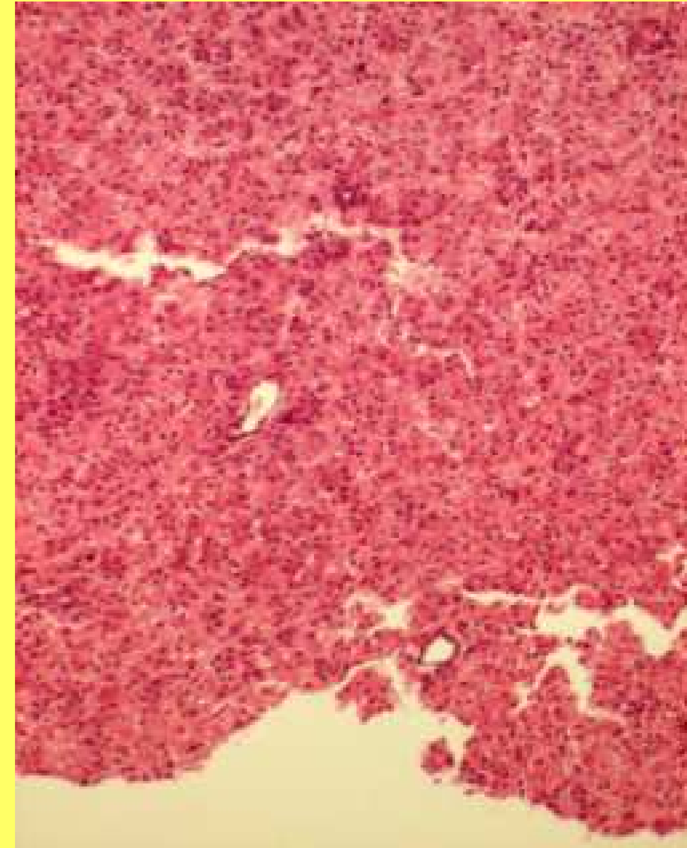


No septa/PTs

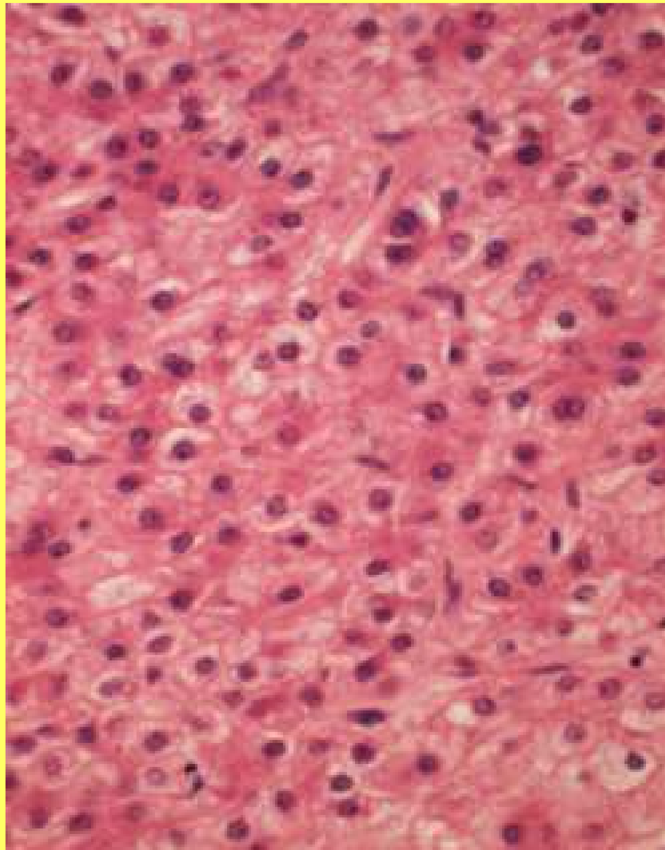
Other area

Single arterioles

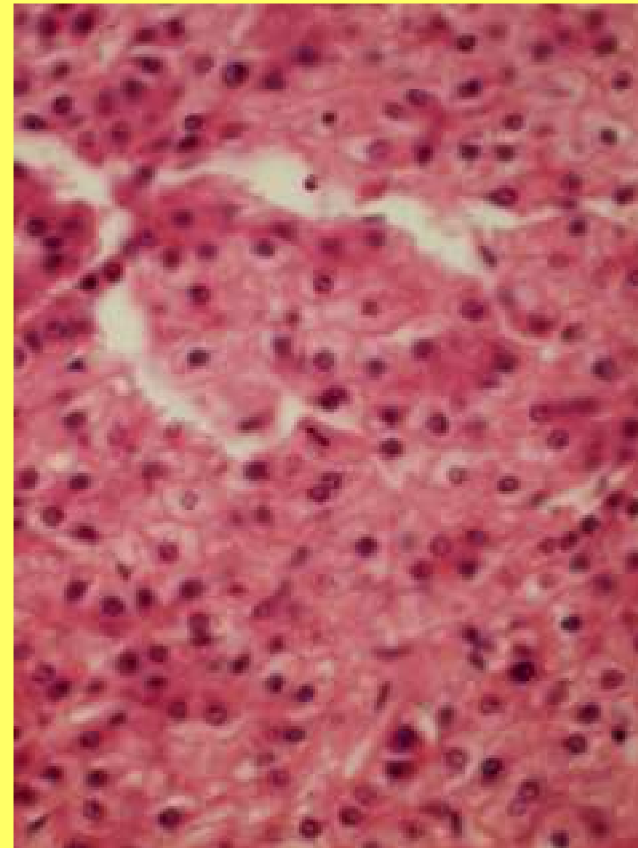




↑ N:C ratio…unifrom



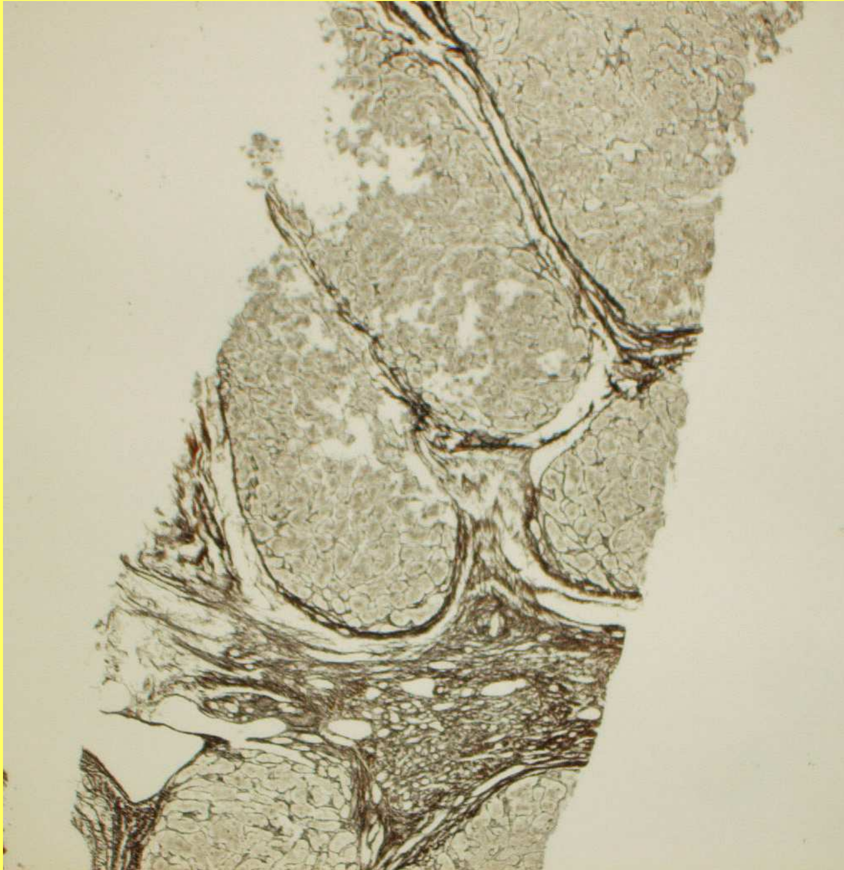
mitosis

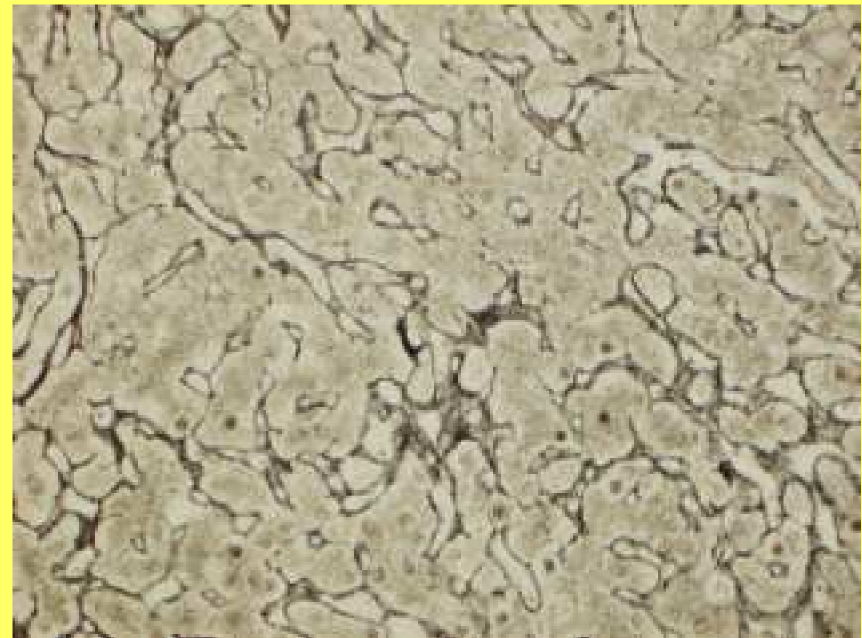


Differential Diagnosis

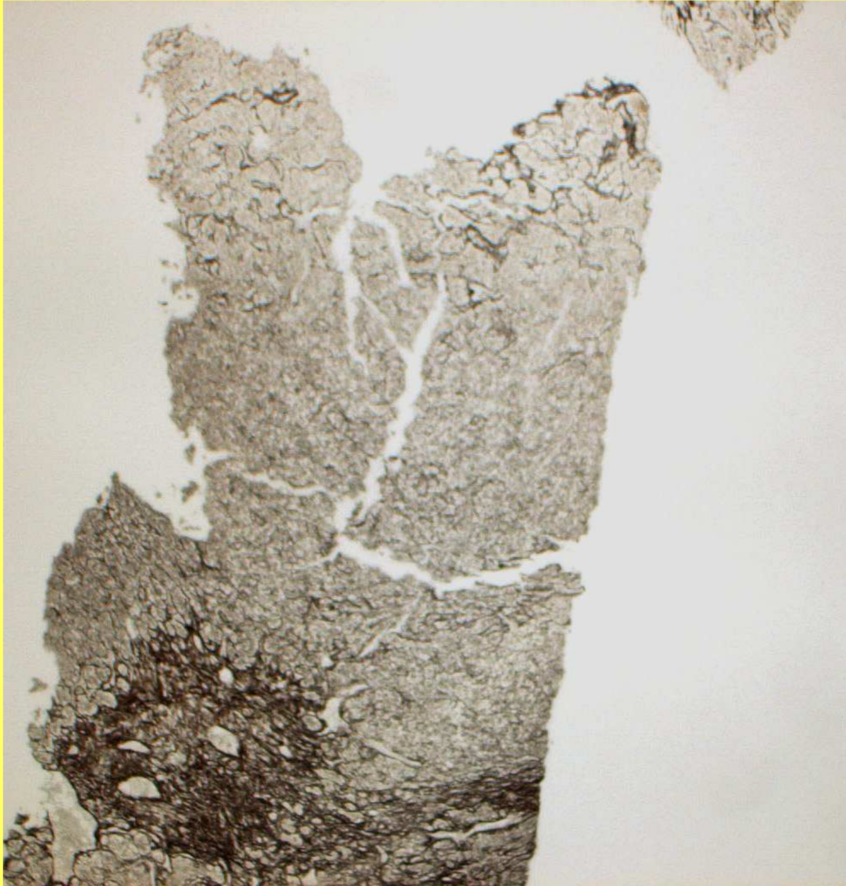
- Cirrhosis with…
- Large Regenerative nodule (macroregenerative)
- FNH like nodule
- Adenoma?
- Dyplastic nodule
- Hepatocellular carcinoma

Reticulin

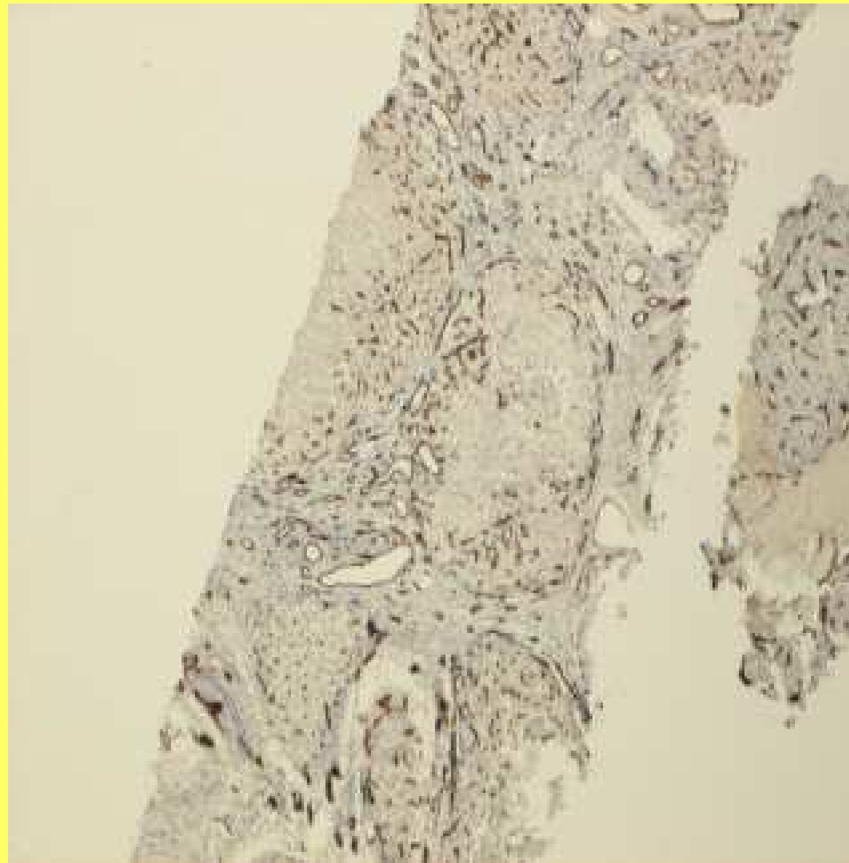




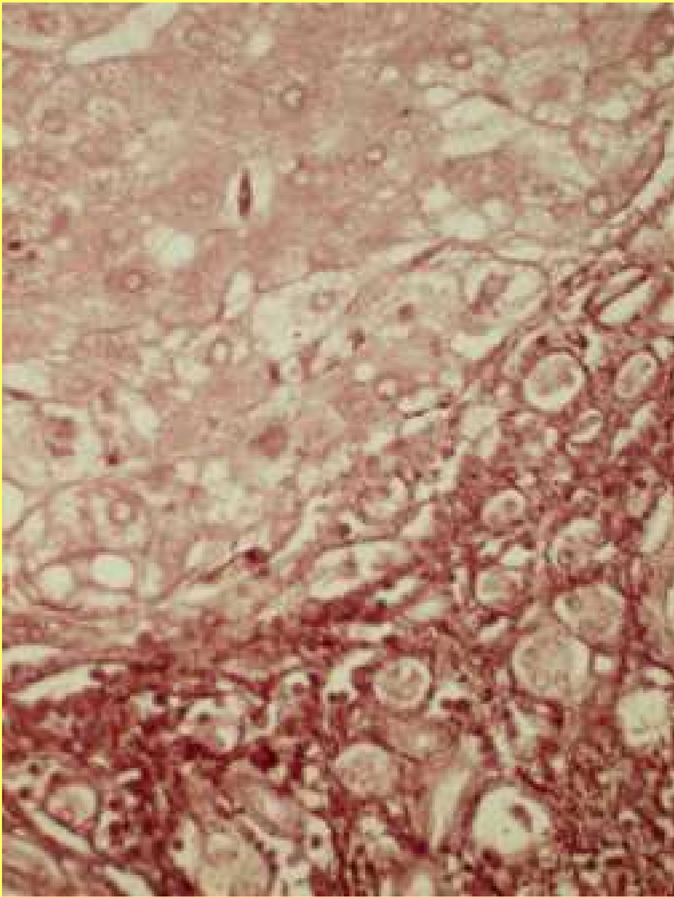
Reticulin

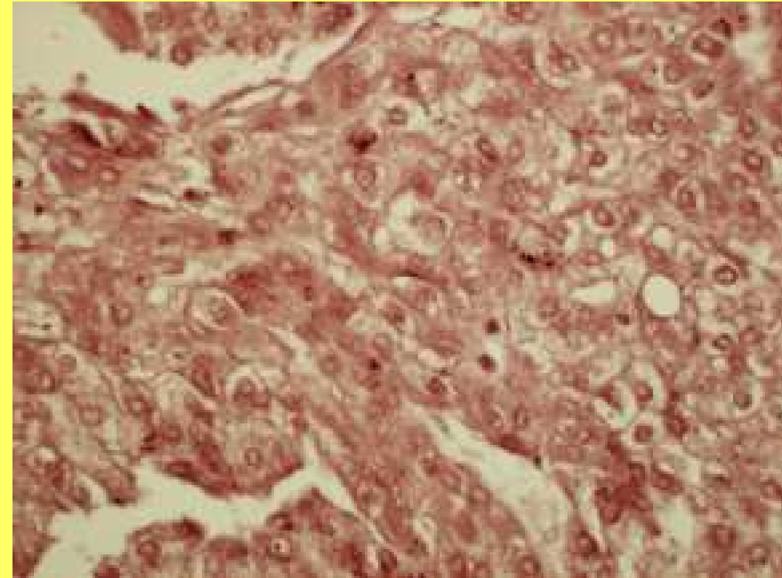


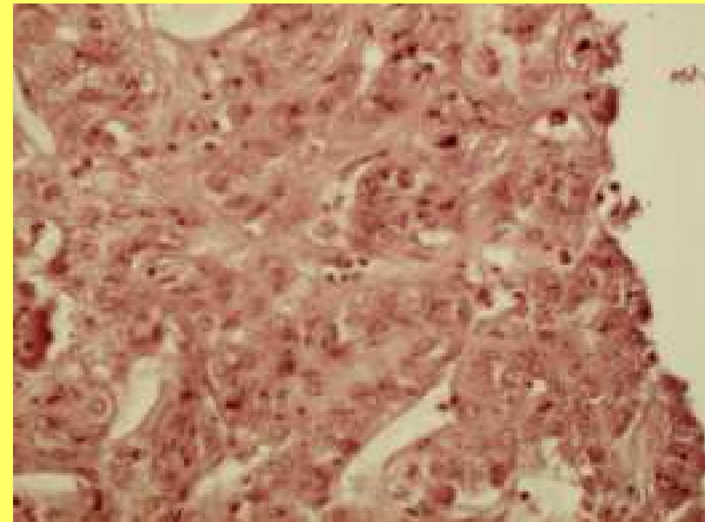
IHC CD34



Copper Associated Protein

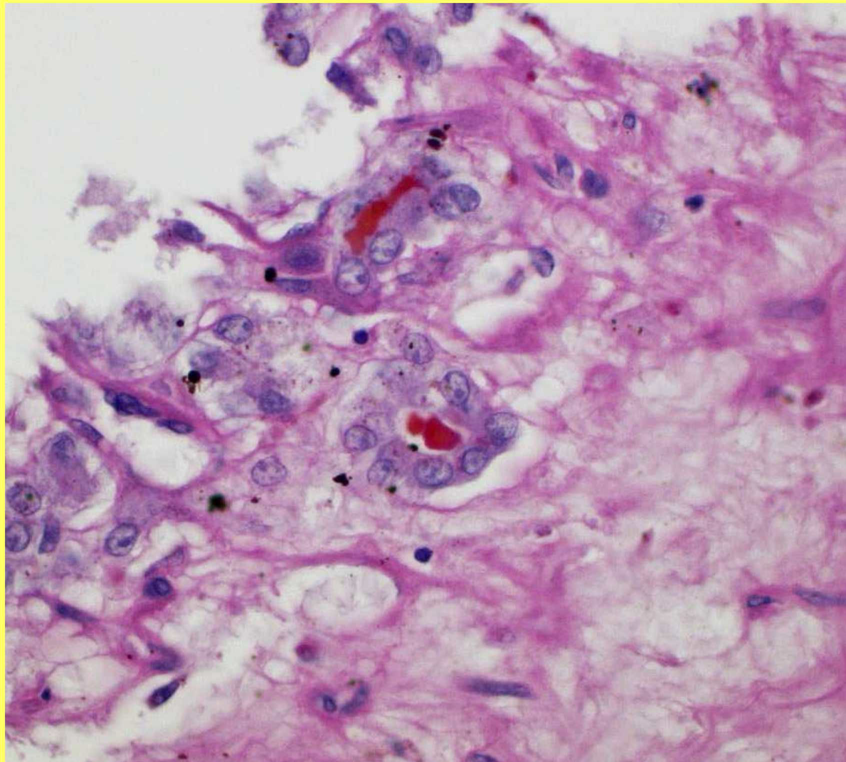




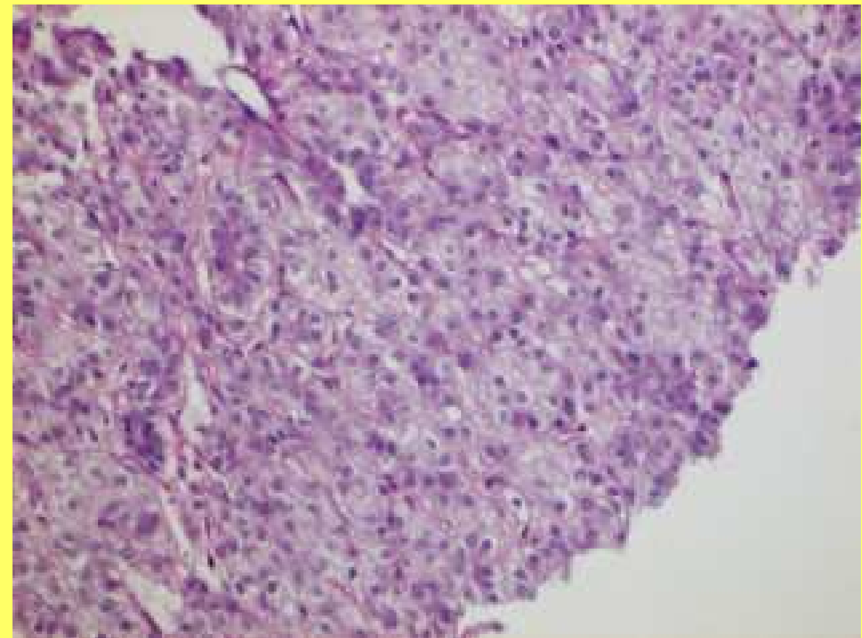


DPAS…lesion

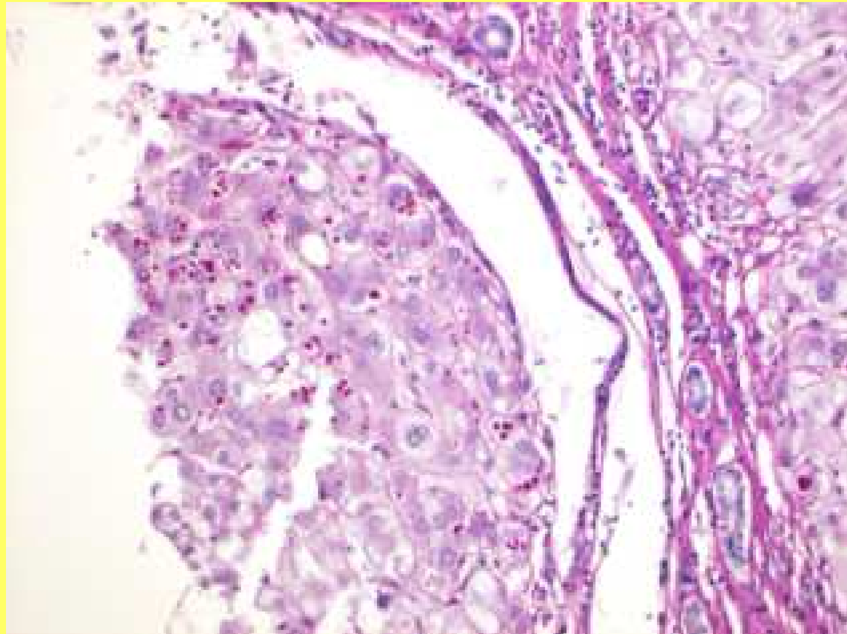
Bile plugs

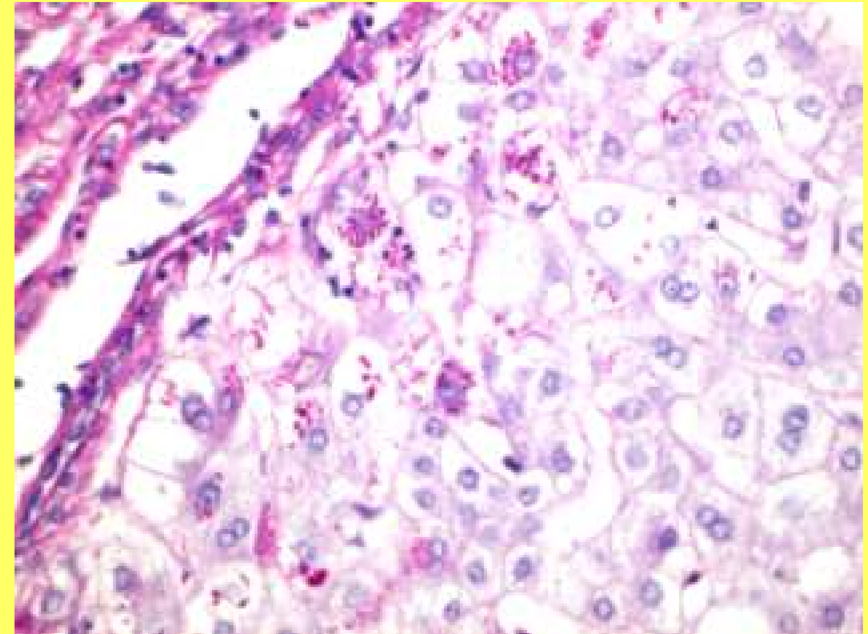


Nile else



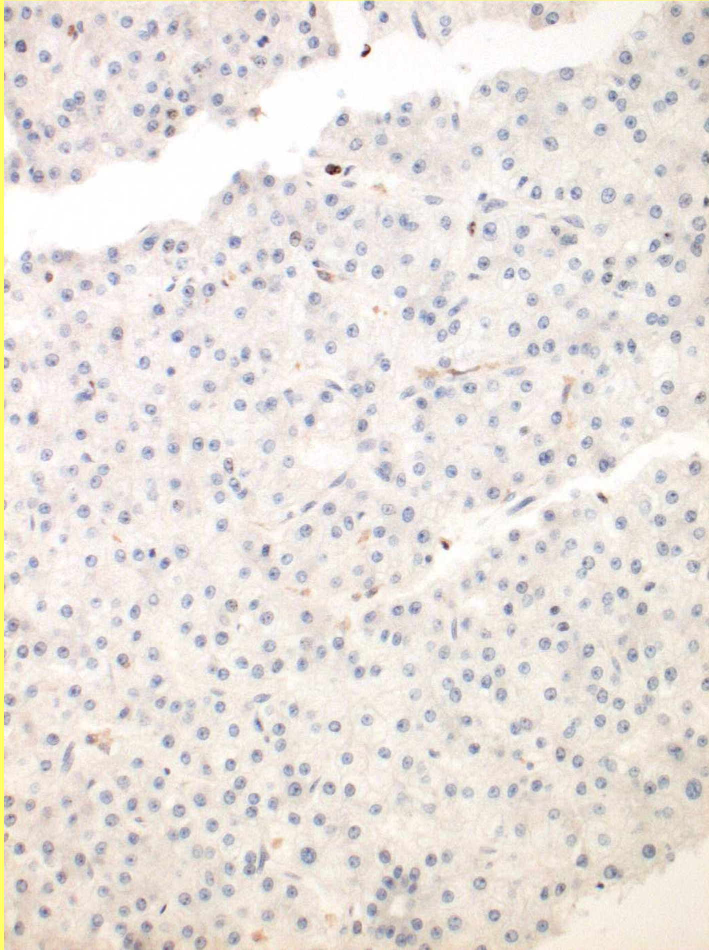
DPAS elsewhere



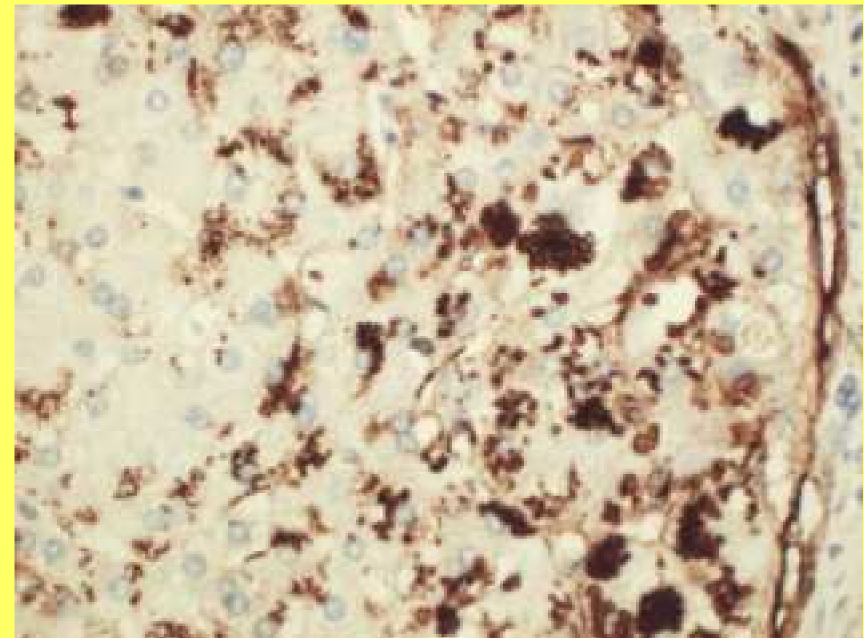


IHC

Mib1



PiZ



Diagnosis

- Well differentiated hepatocellular carcinoma
- Abnormal phenotype for Alpha-1Antitypsin
- Evidence of steatohepatitic injury – presumed NAFLD (Non Alcoholic Fatty Liver Disease)
- Large cell change (large cell dysplasia)

Feature	LGD nod	HGD nod	Well HCC
Reticulin	N	N	N or ↓
No. of cells	1-2	2-3	2-3
↑n:c ratio	≥ 2	x2-3	≥ x2-3
Pseudogland	No	Frequent	Frequent
Hyperchromasia	No	Yes	Yes
Pleomorphism	No	Mild	moderate
Steatosis	No	Occasional	Frequent
Arterioles	Rare	Frequent	Frequent
Stromal invasion	Absent	Absent	Present

After M Kojiro Pathology of HCC, 2006

Insulin Resistance related HCC

- Does NASH lead to HCC?
  - 641 cirrhotics with HCC
  - 44 of these had ‘cryptogenic’ cirrhosis
  - Of these CC pts
    - More obesity (41% vs 16%; p=.0086)
    - More diabetes (50% vs 20%; p=.0034)
    - More frequent raised triglycerides (p=.0003)
    - More insulin resistant

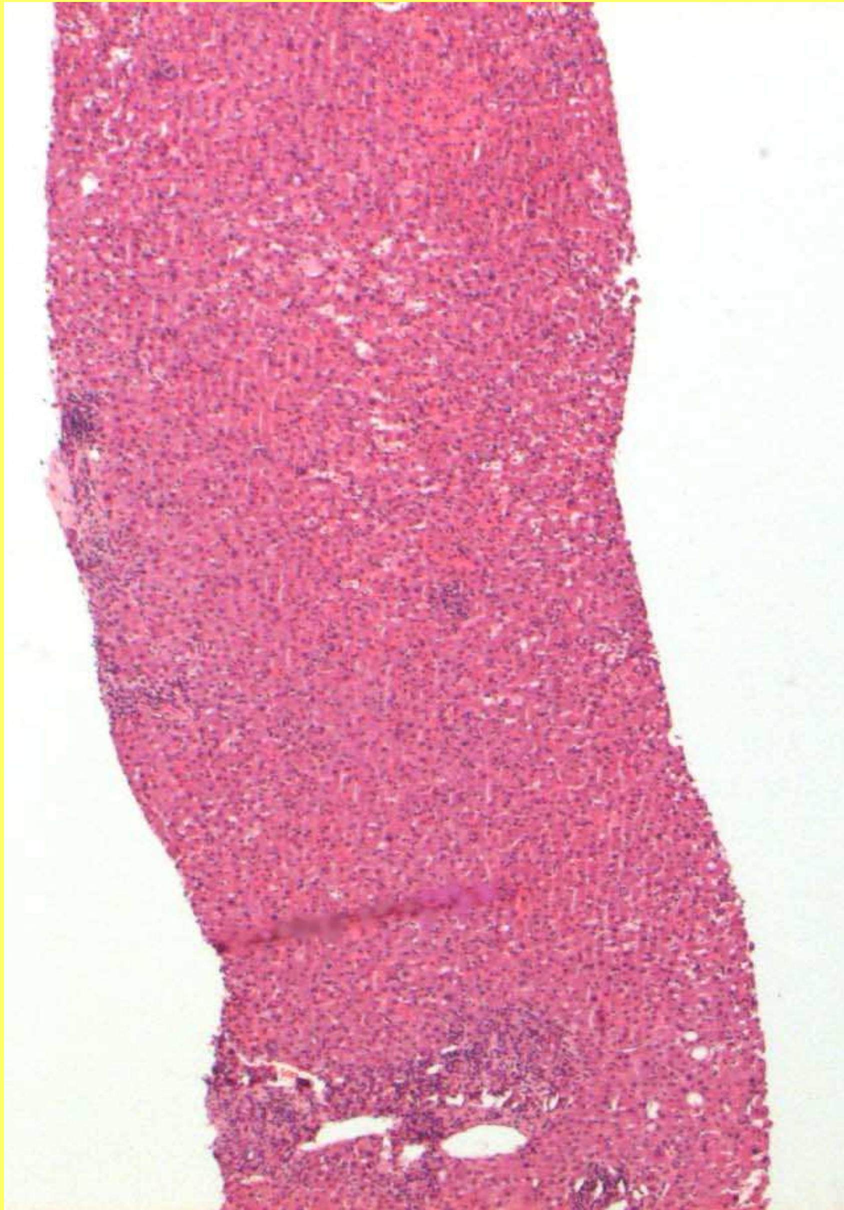
Bugianesi et al, Gastro 2002

Case 3

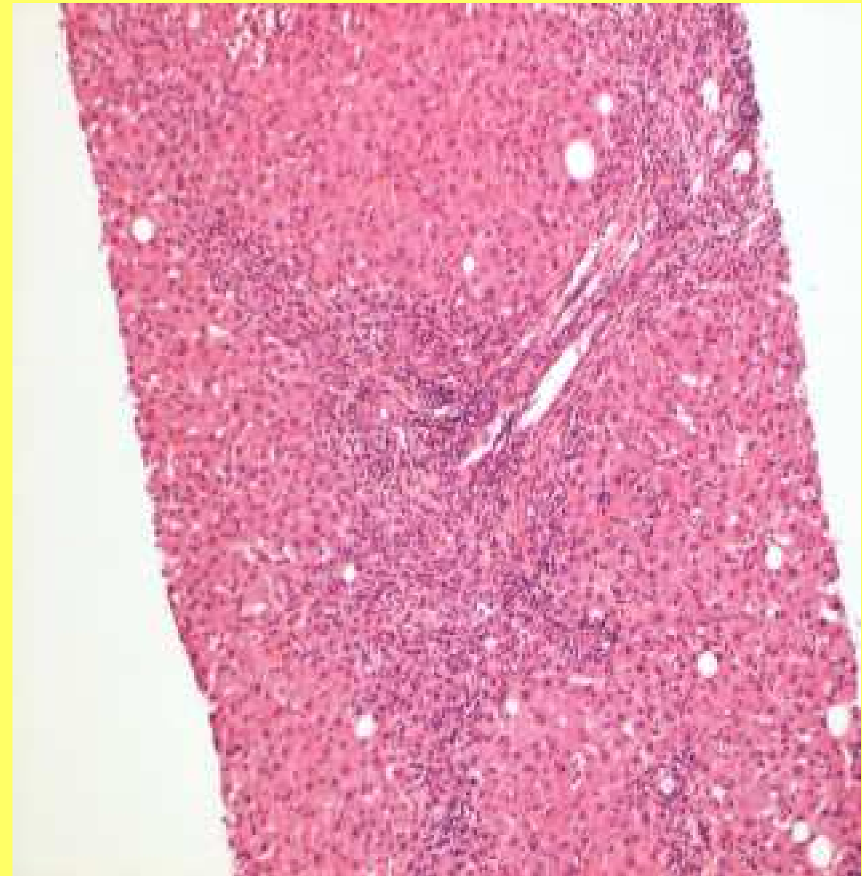
- 24 year female
- Vague abdominal pain, haemoglobin 9g/dl
- Imaging shows 8cm mass in liver

- Targeted biopsy

No fibrosis…general acini

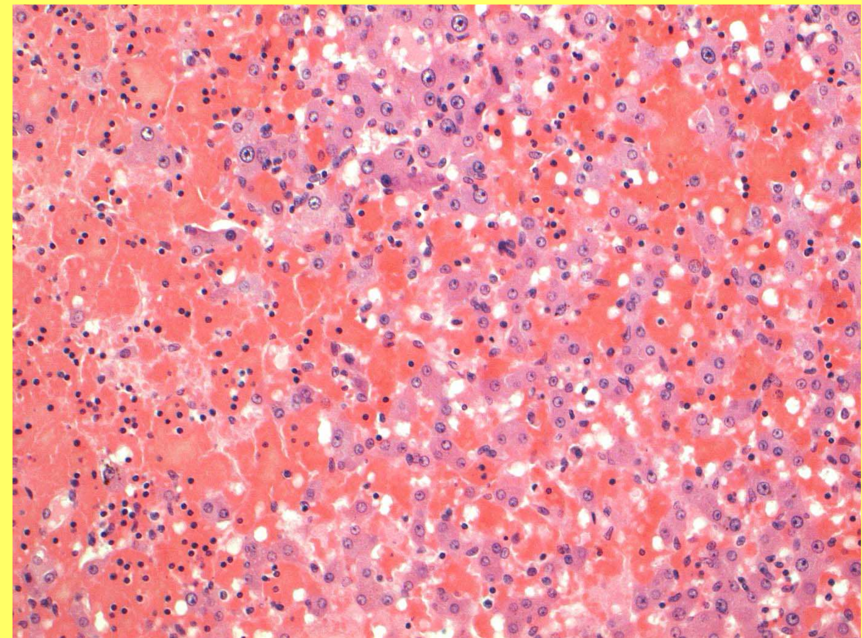


Inflamed PT/septa

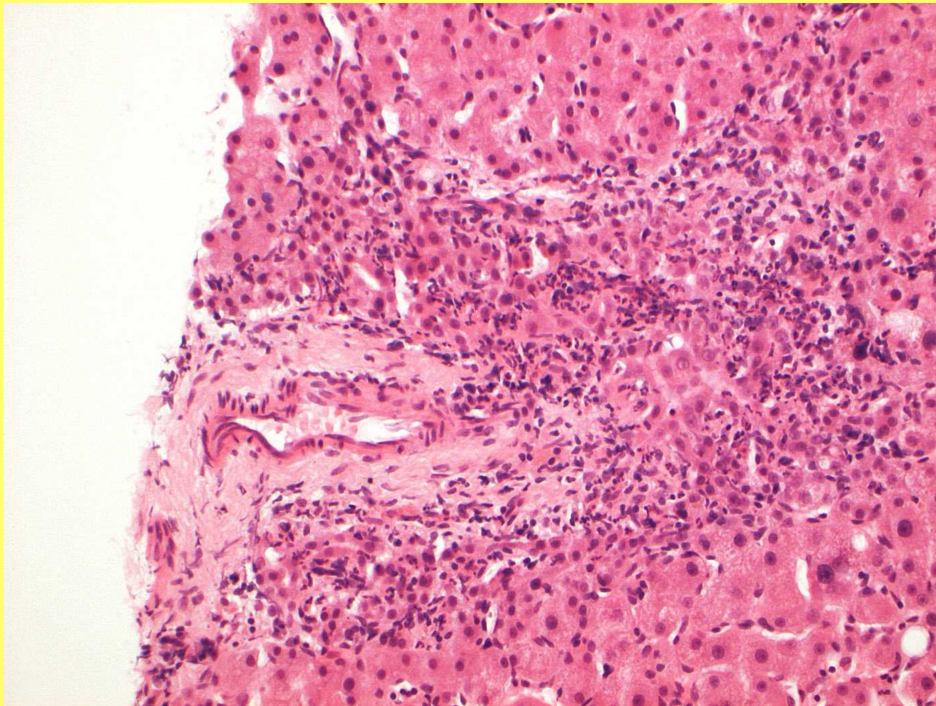


Sinusoidal dilatation

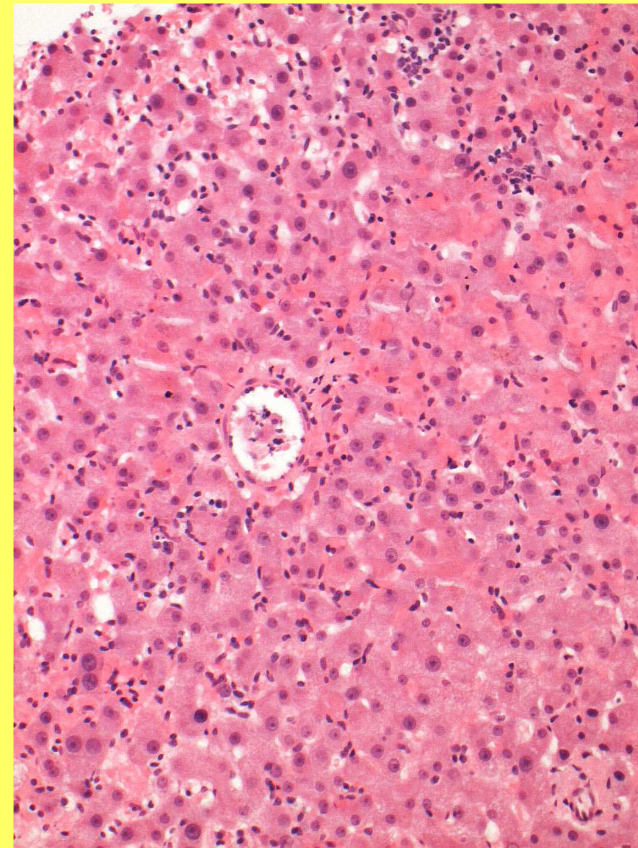
Congestion



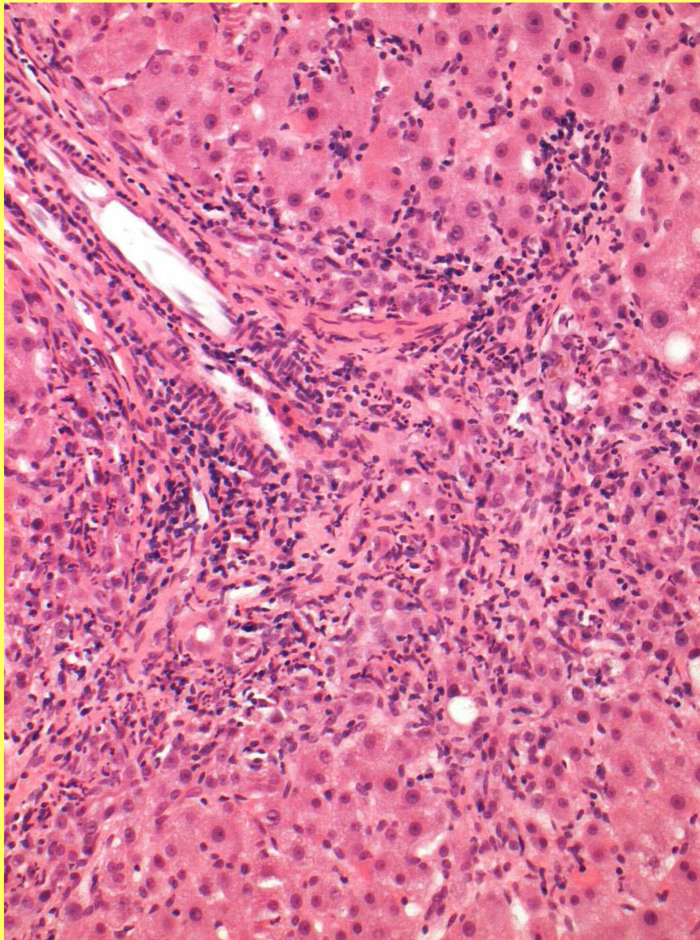
Large BV in PT



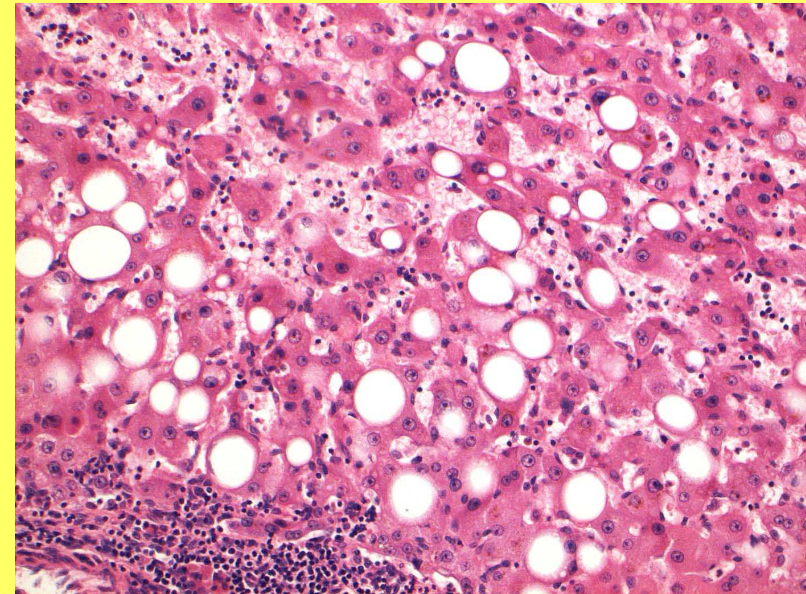
Single arterioles



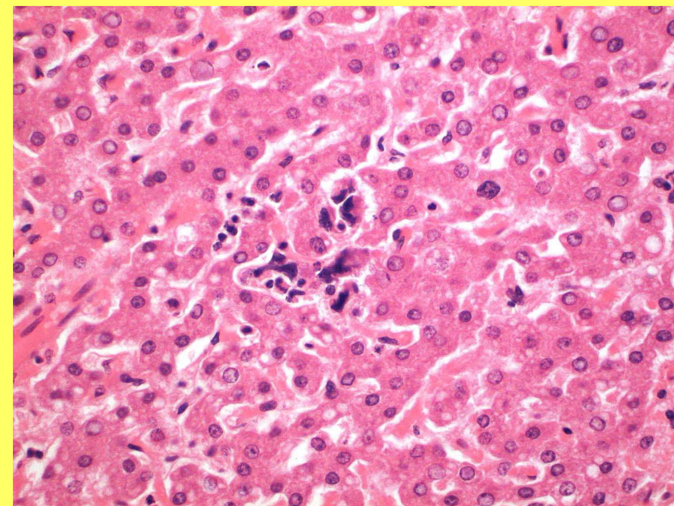
Infammed ductular reaction



Steatosis



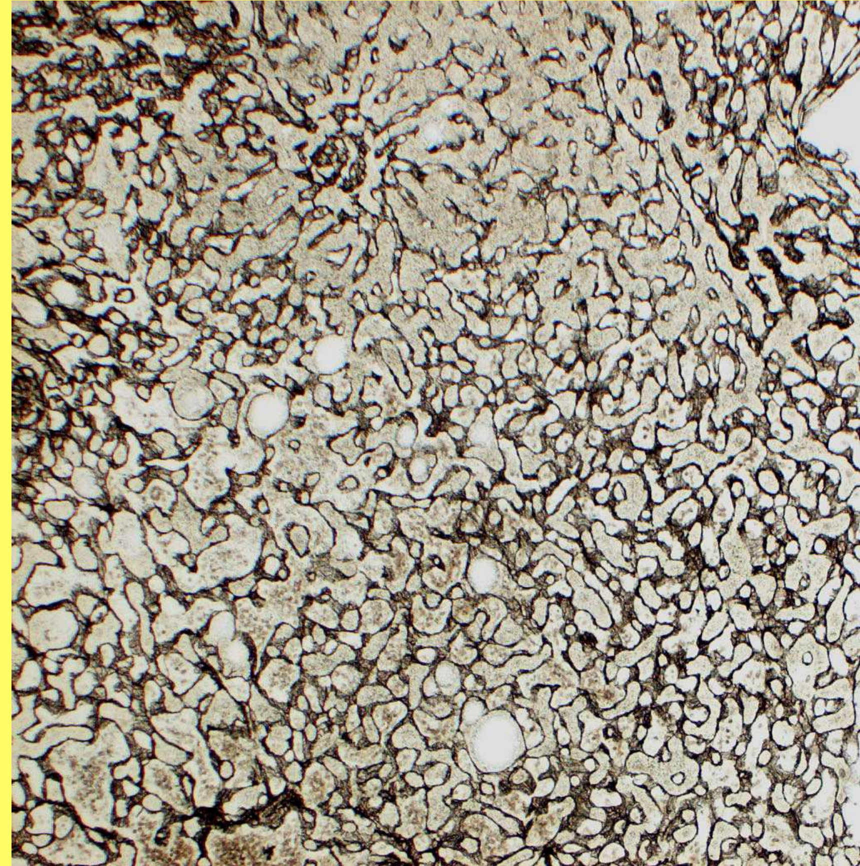
EMH



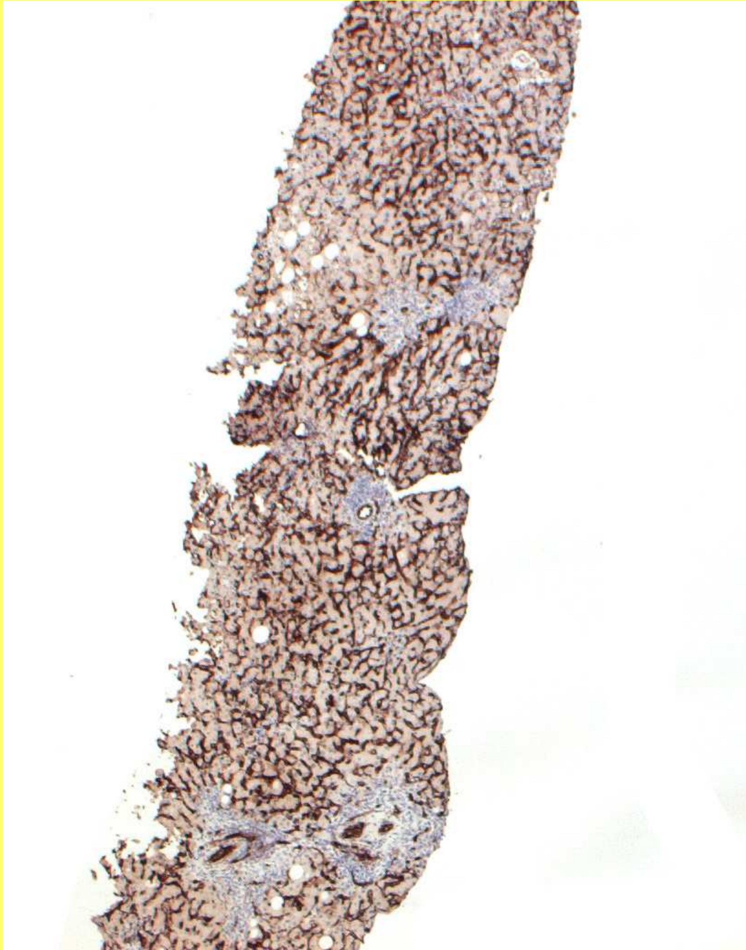
Differential Diagnosis

- Focal Nodular Hyperplasia
- Adenoma
- Hepatocellular carcinoma
- Bile duct adenoma
- Other

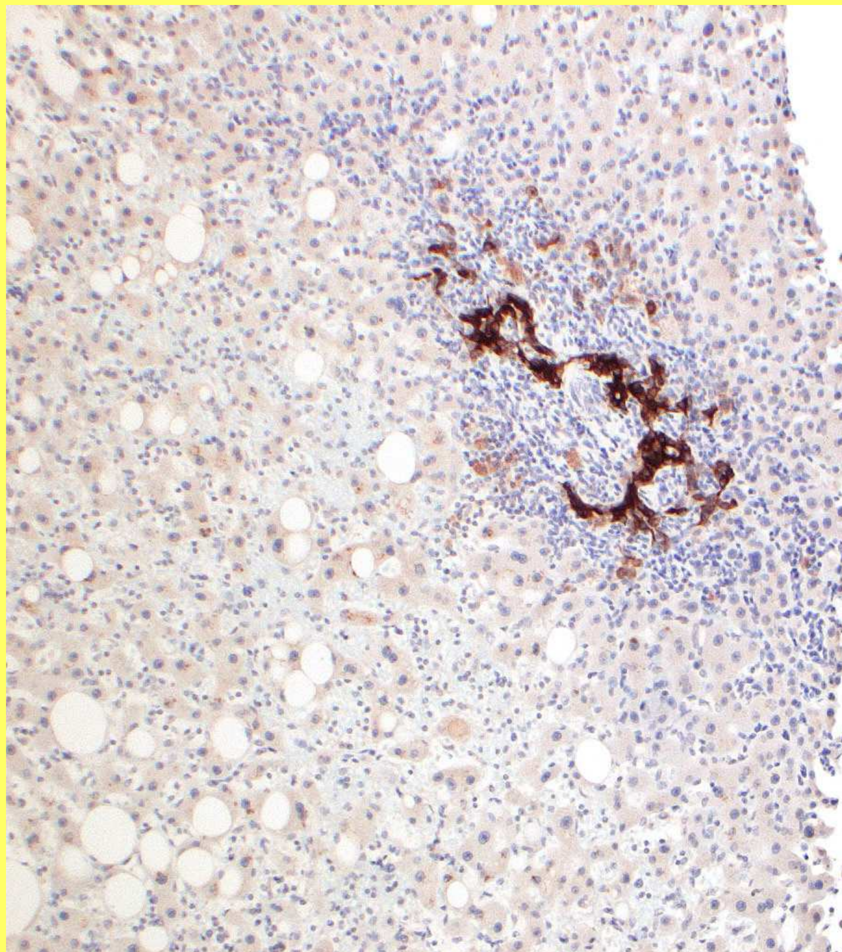
Reticulin



IHC CD34



CK19



Mib1

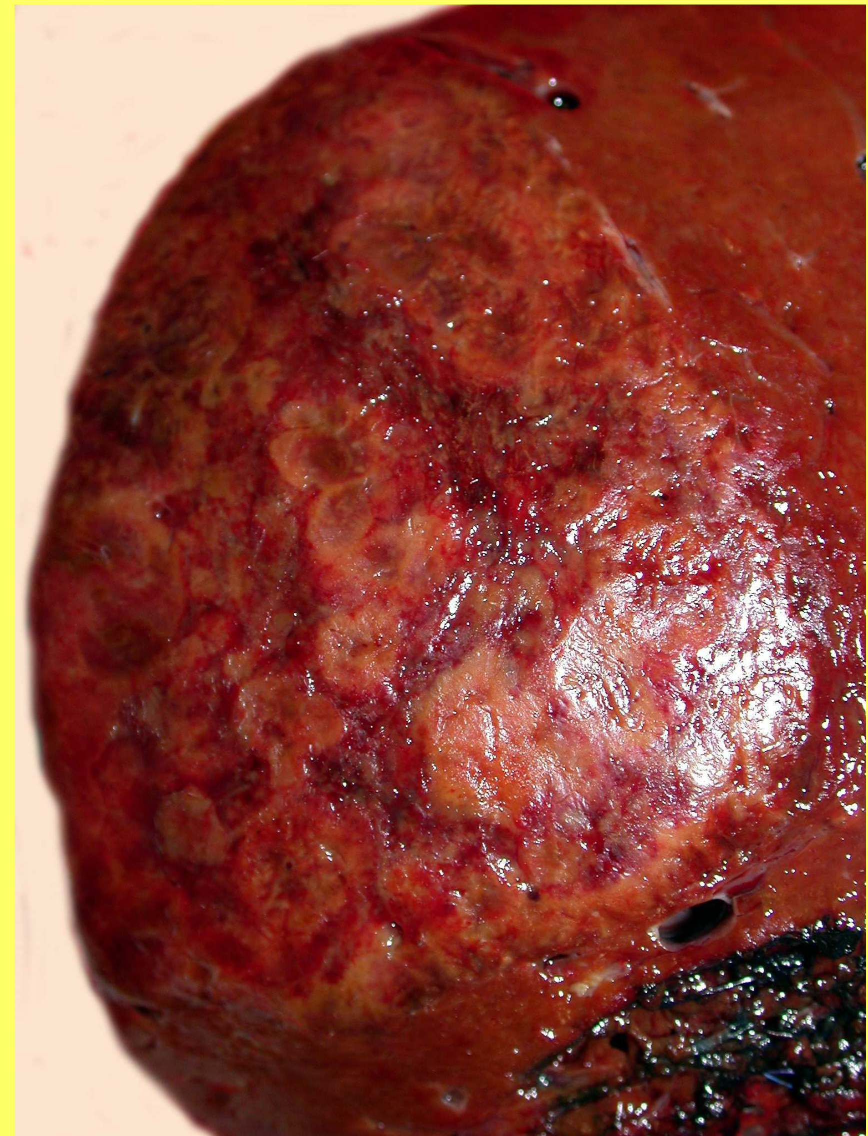
Diagnosis

- Telangiectatic Focal Nodular Hyperplasia
- Described in 2004 (Paradiset al. Gastroneterology 2004;126:1323-9)
- Behaves more like an adenoma than FNH

Bioulac-Sage et al. Gastro 2005; 128:1211-1218

Telangiectatic FNH

- 6 constant features
  - Soft tumour
  - Partially preserved acinar structure
  - Sinusoidal dilatation
  - PT-like with 1+ dystrophic arteries
  - Inflammatory infiltrate
  - Ductular reaction



	Tel FNH n=13	**FNH** n=28	**Adenoma** n=17
Female	92%	96%	76%
Age mean yr	40	37	40
O.C. use	91%	96%	85%
Multiple	69%	29%	53%
Haemorrhage	77%	4%	53%
Monoclonality	100%	39%	100%
HNF1α	0	0	53%

Bioulac-Sage et al. Gastro
2005; 128:1211-1218