

Cirrhosis

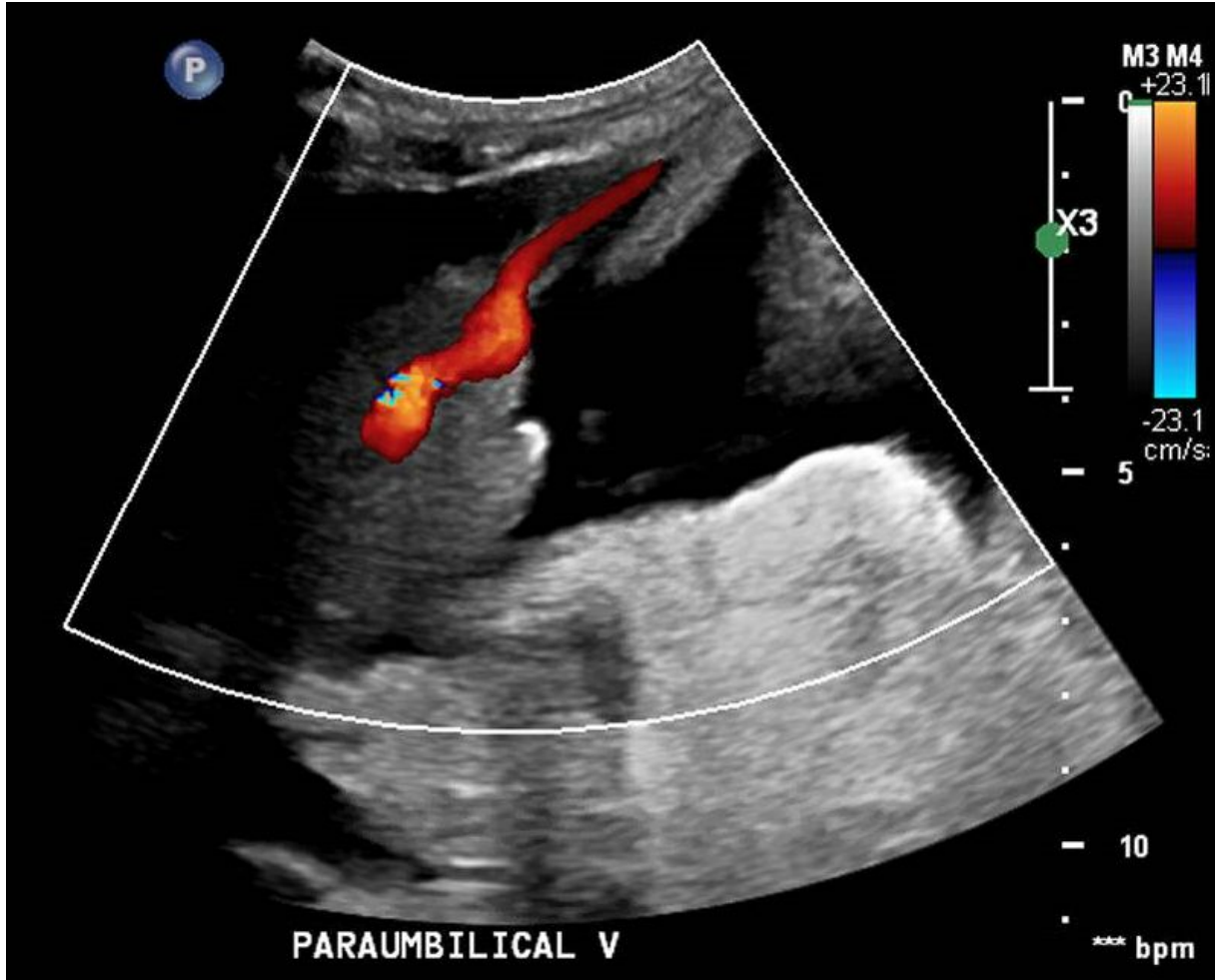
Ziyi Fan

Case

- CW is a 54 yo woman with history of EtOH/HCV cirrhosis presenting with abdominal distension and pain







US Liver

Liver:

Size: Shrunken

Echogenicity: Coarse and heterogeneous echotexture

Surface Contour: Nodular surface contour

Observation: Large recanalized paraumbilical vein

Fluid: Large volume ascites.

Liver biopsy

- Indications
 - Diagnosis
 - Unknown etiology
 - Coexisting disorders
 - Focal/diffuse abnormalities on imaging
 - FUO
 - Prognosis
 - Disease severity, esp degree of fibrosis
 - Management
 - Disease specific treatments
 - Initiation of treatment
 - Monitoring progression, response

Table 4. Use of Liver Biopsy in Clinical Practice

	Diagnosis	Staging	Prognosis	Management
Hepatitis B	-	++++	+(+)	++
Hepatitis C	-	++++	+(+)	++++
Hemochromatosis	+	++++	+(+)	+
Wilson Disease	++	++++	+	-
AI-AT	+	+++	+(+) (depends on whether lung disease)	(+)
AIH	+++	++++	+(+)	++++
PBC	++ (AMA-negative; ? overlap syndrome)	++++	+++	++
PSC	++ (small duct disease; overlap syndrome?)	+	-	(+)
Alcohol	+(+)	+++	++	(+)
NAFLD/NASH	+++	+++	+(+)	(+)
HCC	++ (depends on size)	-	-	++++
Other focal lesions	++	-	-	++
Infiltrative	++++	+(+)	(+)	+(+)
DILI	++	+	+	+
Acute liver failure	+(+)	-	-	++ (depends on diagnosis)
Post-OLT	++++	+++	+(+)	+++

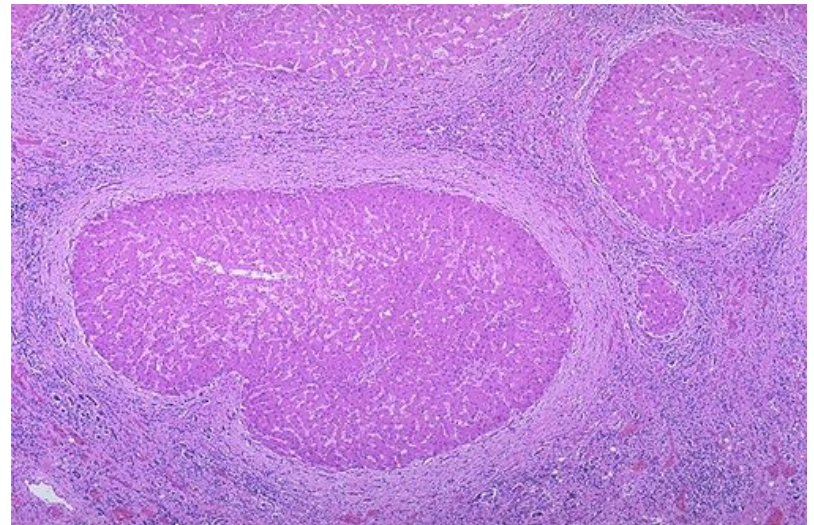
Abbreviations: A1-AT, alpha1-anti-trypsin disease; AIH, autoimmune hepatitis; AMA, antimitochondrial antibody; DILI, drug-induced liver injury; HCC, hepatocellular carcinoma; NAFLD/NASH, nonalcoholic fatty liver disease/nonalcoholic steatohepatitis; OLT, orthotopic liver transplantation; PBC, primary biliary cirrhosis; PSC, primary sclerosing cholangitis.

Nonfocal liver biopsy

- Percutaneous
- US guided
 - Real-time visualization
 - No ionizing radiation
 - Quick, less expensive
 - Reduced pain
- Core
 - Irregular distribution
 - Long and wide, ideally 3 cm, 16 gauge needle
- Main complication:
Bleeding

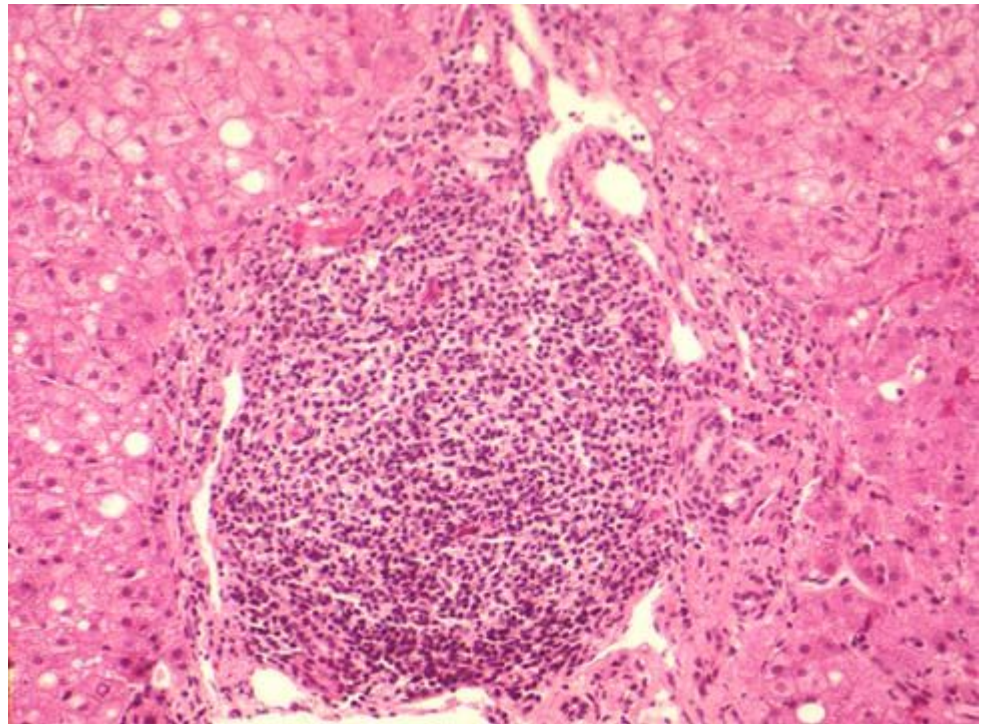
Pathology

- Formalin fixation
- Histochemical
 - H & E
 - Masson trichrome
- Immunohistochemical
- Regenerative nodules surrounded by fibrous connective tissue



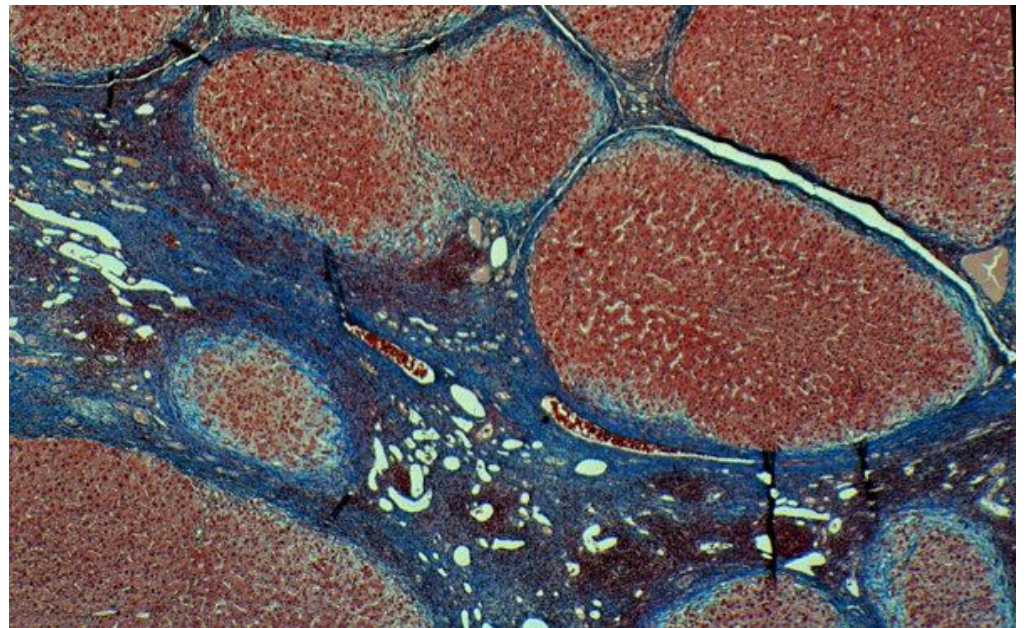
HCV cirrhosis

- Periportal fibrosis, septal fibrosis
- Sinusoidal lymphocytic infiltrate



Alcoholic cirrhosis

- Mallory bodies
- Centrilobular perivenular fibrosis



Treatment

- Slow/reverse progression of liver disease
 - Abstinence from EtOH
 - Anti-virals for HCV
- Prevent superimposed insults
 - Vaccinations
 - Avoid hepatotoxins
- Prevent/manage complications

Prognosis

- Compensated: median survival > 12 yrs
- Decompensated: median survival \leq 6 mos if Child-Pugh \geq 12 or MELD \geq 21
 - If hx of hospitalization for acute liver-related illness, \leq 6 mos if Child-Pugh \geq 12 or MELD \geq 18

Sources

- [Clin Mol Hepatol](#). 2017 Dec; 23(4): 302–307.
- [Hepatology](#). 2009 Mar;49(3):1017-44.
- [https://webpath.med.utah.edu/LIVEHTML/LIVERIDX.html#
2](https://webpath.med.utah.edu/LIVEHTML/LIVERIDX.html#2)
- <http://www.pathologyoutlines.com/topic/livercirrhosisalcoholic.html>
- <https://www.pathologyoutlines.com/topic/liverhepC.html>
- Uptodate article on cirrhosis