APASL Single Topic Conference

MORPHOLOGICAL CHANGES OF THE LIVER ACCORDING TO ETIOLOGY IN CIRRHOTIC PATIENTS

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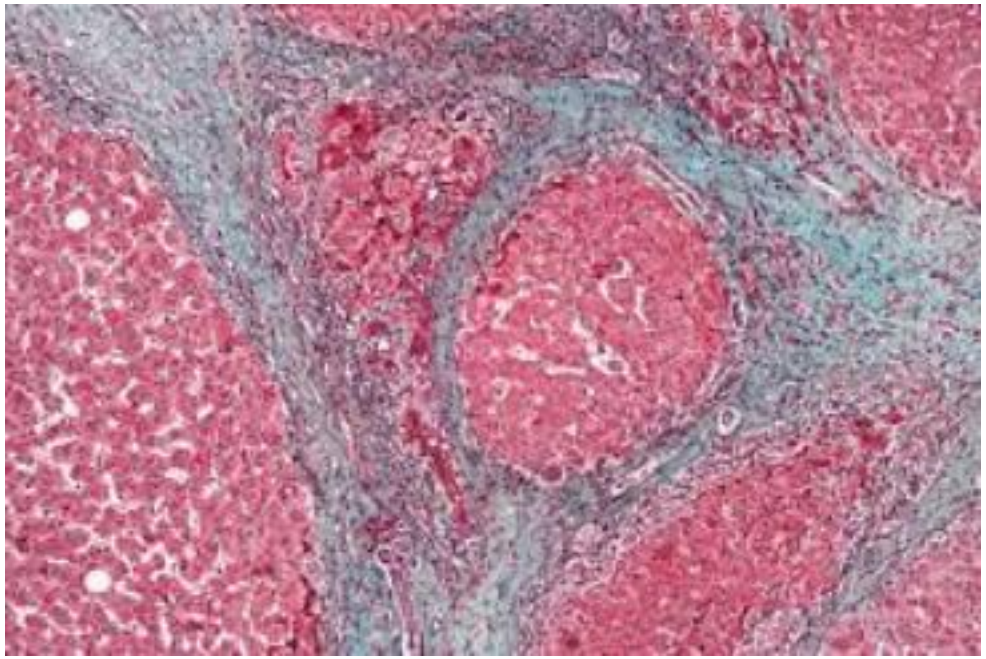
Liver Cirrhosis: Definition

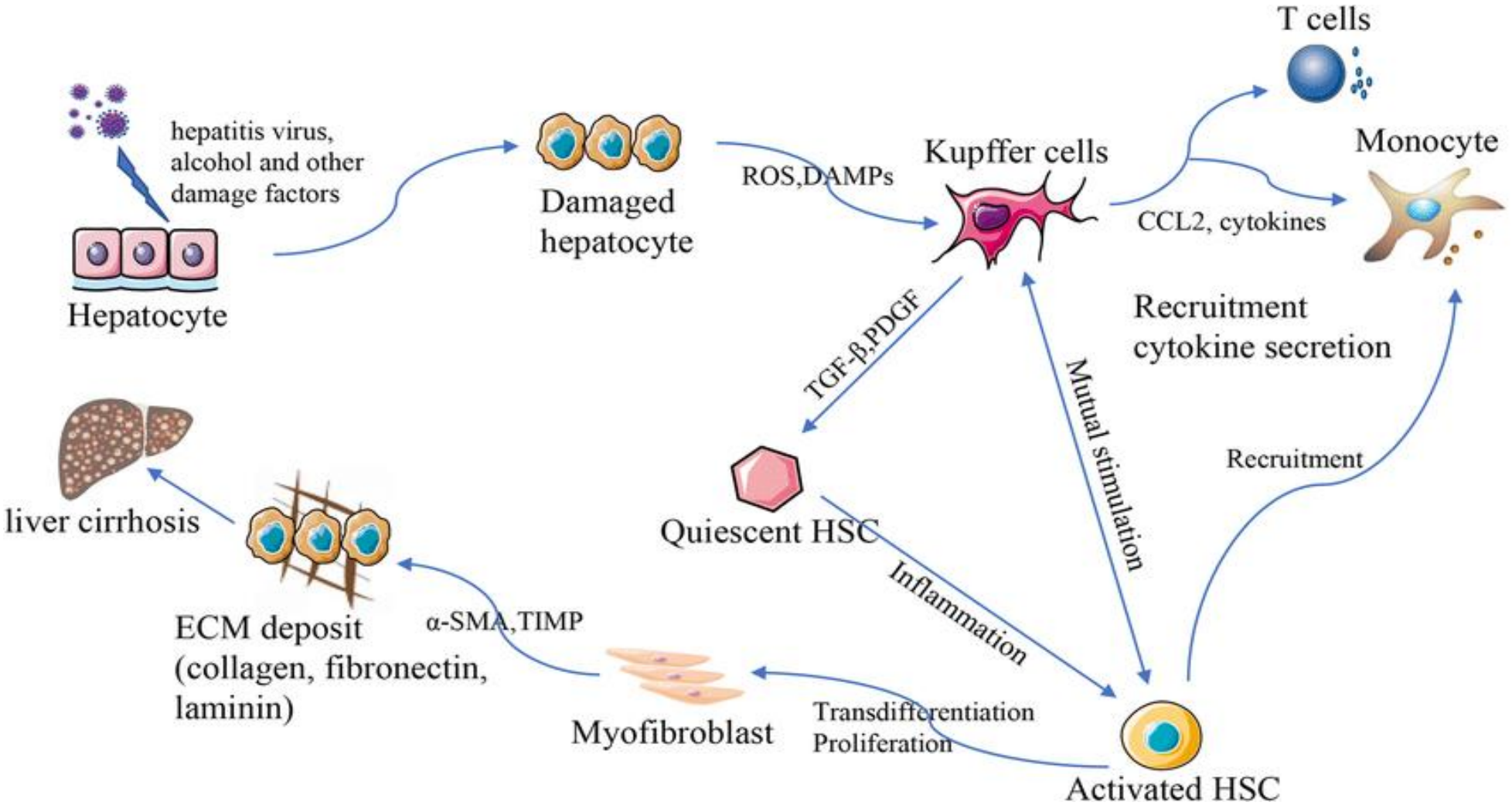
- Cirrhosis is refers to diffuse transformation of the liver into abnormal regenerative nodules, separated by fibrous bands.

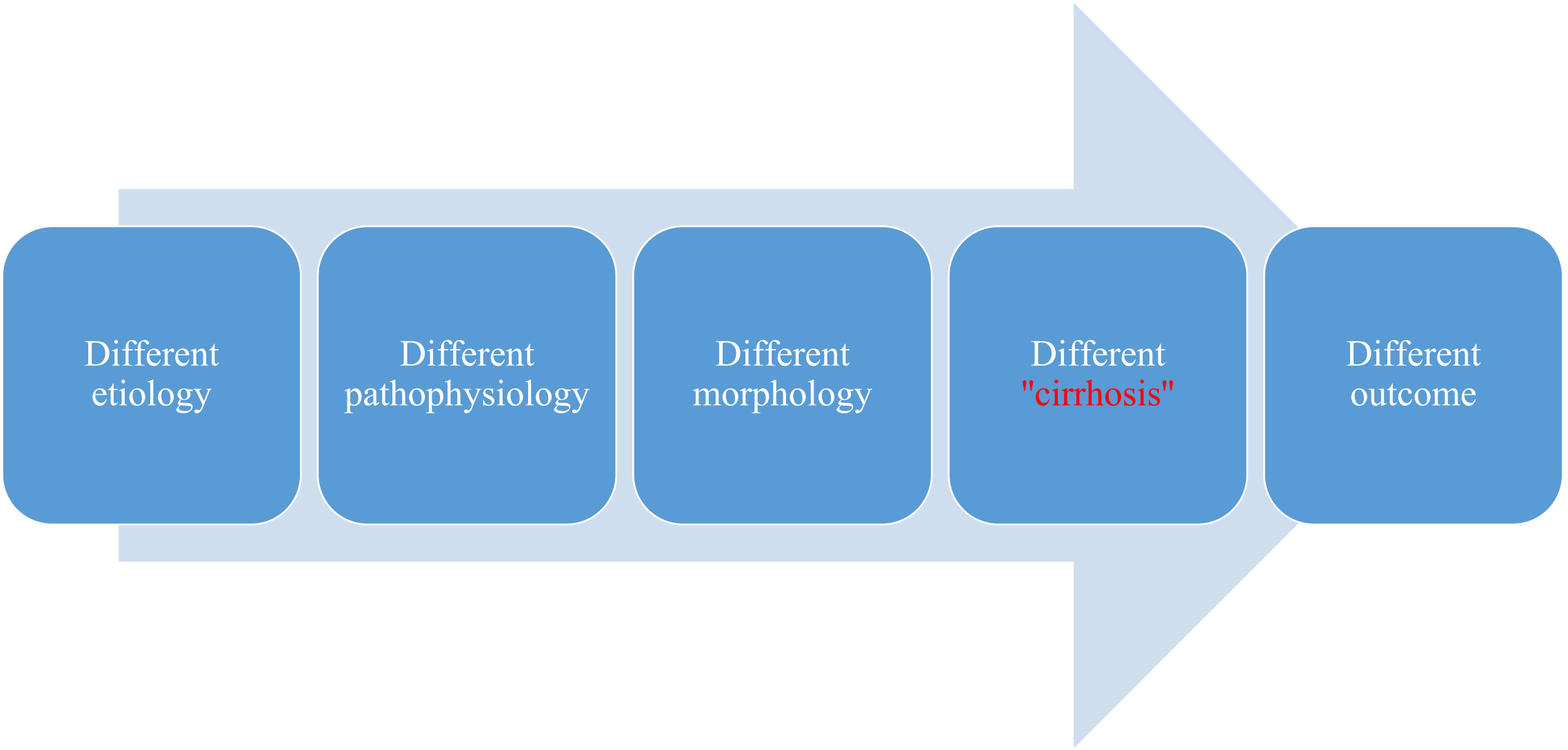


Cirrhosis: Etiology

1. Infectious (viral hepatitis...)
2. Metabolic disorders (NAFLD/MAFLD……)
3. Toxins (drugs…..)
4. Immunological disorders (autoimmune hepatitis…..)
5. Vascular/circulatory disorders (cardiac failure…)
6. Cryptogenic

Cirrhosis: Pathogenesis.



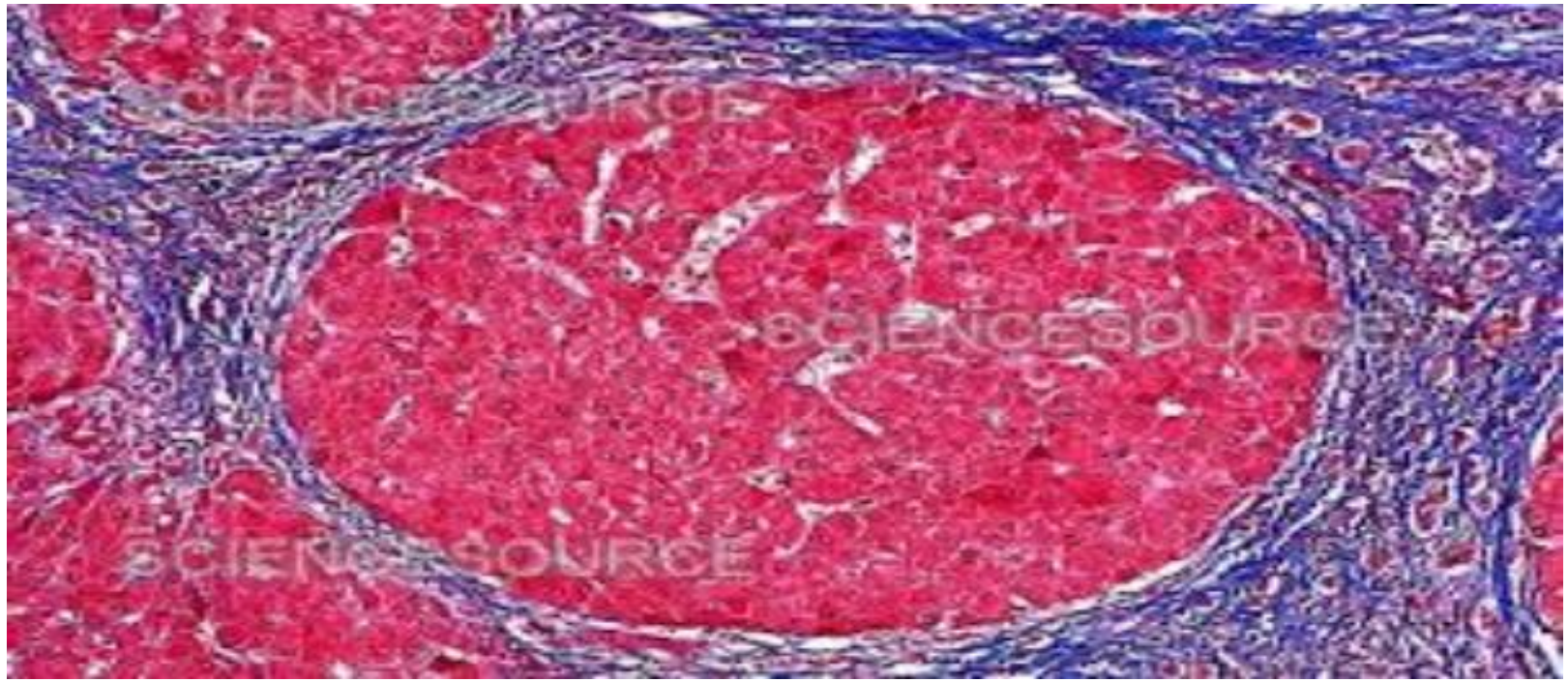

Different etiology
Different pathophysiology
Different morphology
Different "cirrhosis"
Different outcome

Morphological classification of cirrhosis: Gross

- Micronodular (nodules<3.0mm)
- Macronodular (nodules >3.0mm)
- Mixed

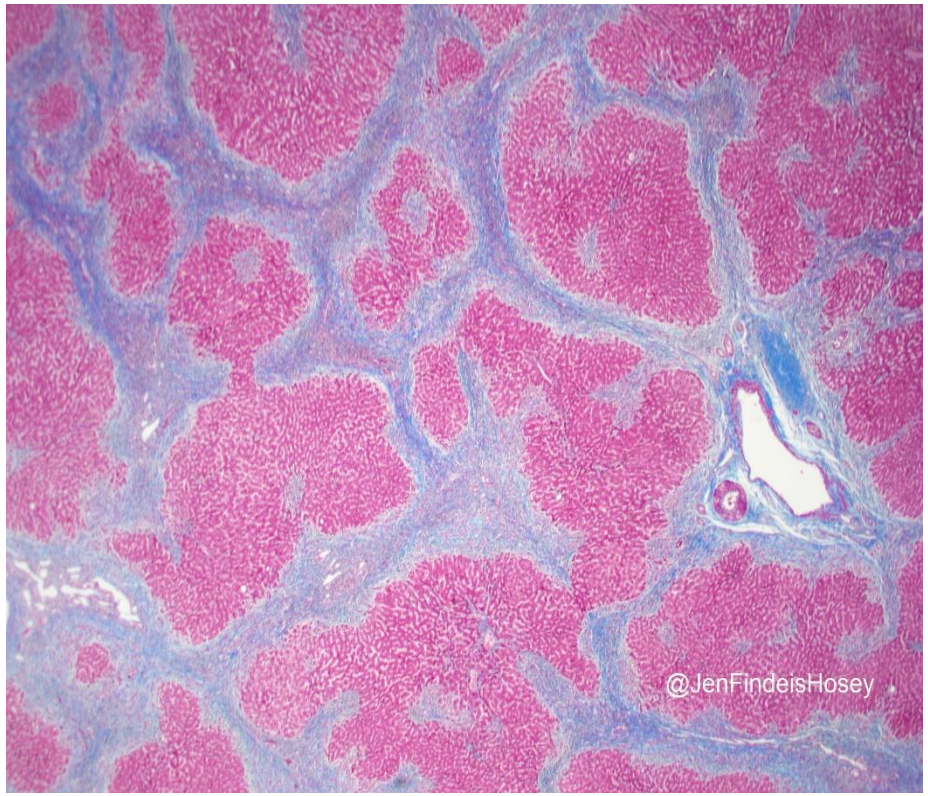
Liver cirrhosis: Microscopic subclassification

- 1. Nonbiliary type cirrhosis

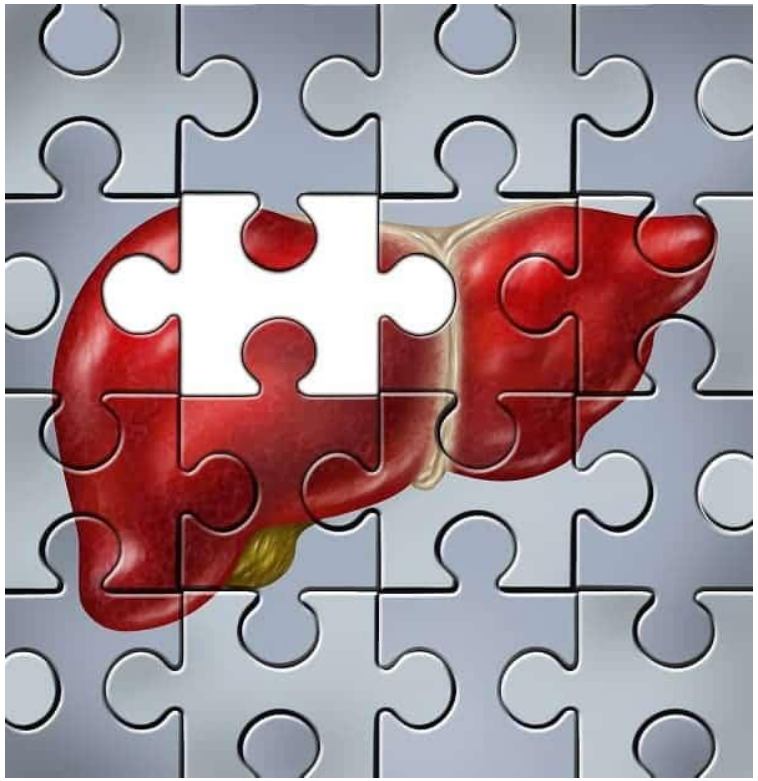


Liver cirrhosis: Microscopic subclassification
Biliary type

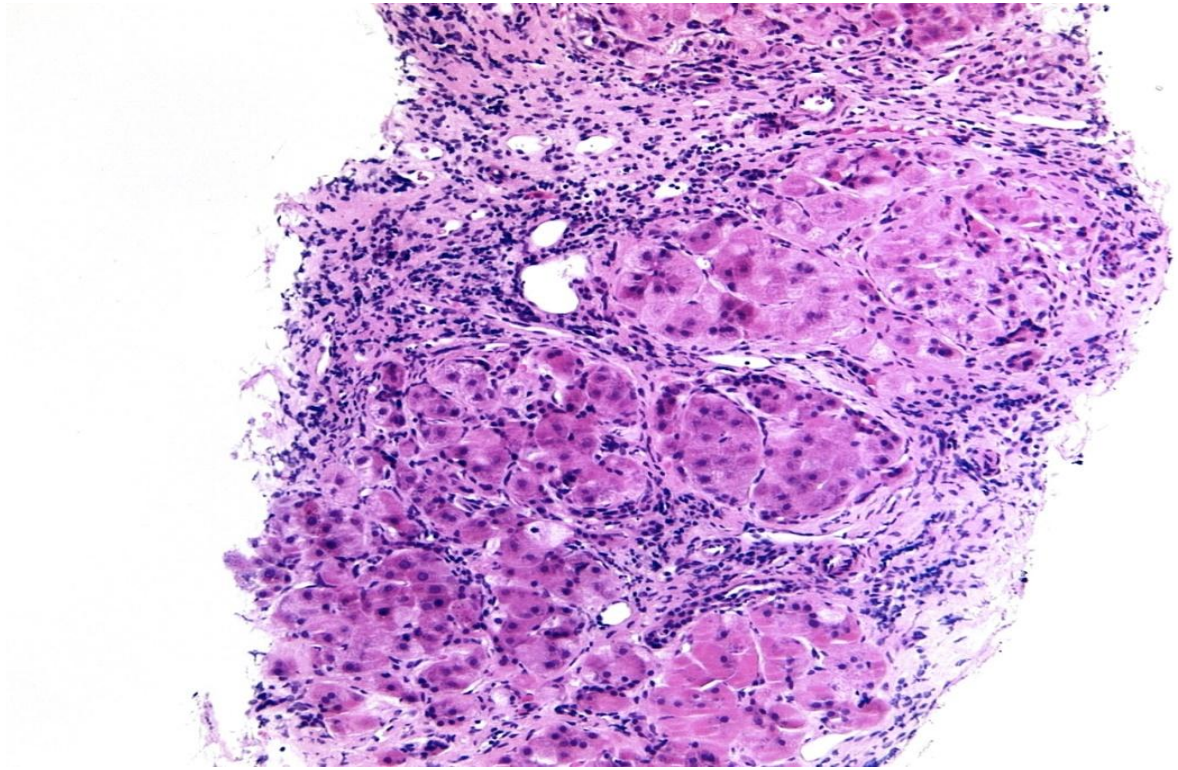
‘’JIGSAW’’ LIVER



‘’JIGSAW ‘’LIVER



‘’Alcoholic liver cirrhosis’’



Currently, morphological classification of cirrhosis is not used, because it requires an invasive procedure

But….

- In 2019, cirrhosis caused 1.48 million deaths, an increase of 8.1% compared to 2017, and its disability-adjusted life-years ranked 16th among all diseases.

World J Gastroenterol. 2022 Nov 7; 28(41): 5910–5930.

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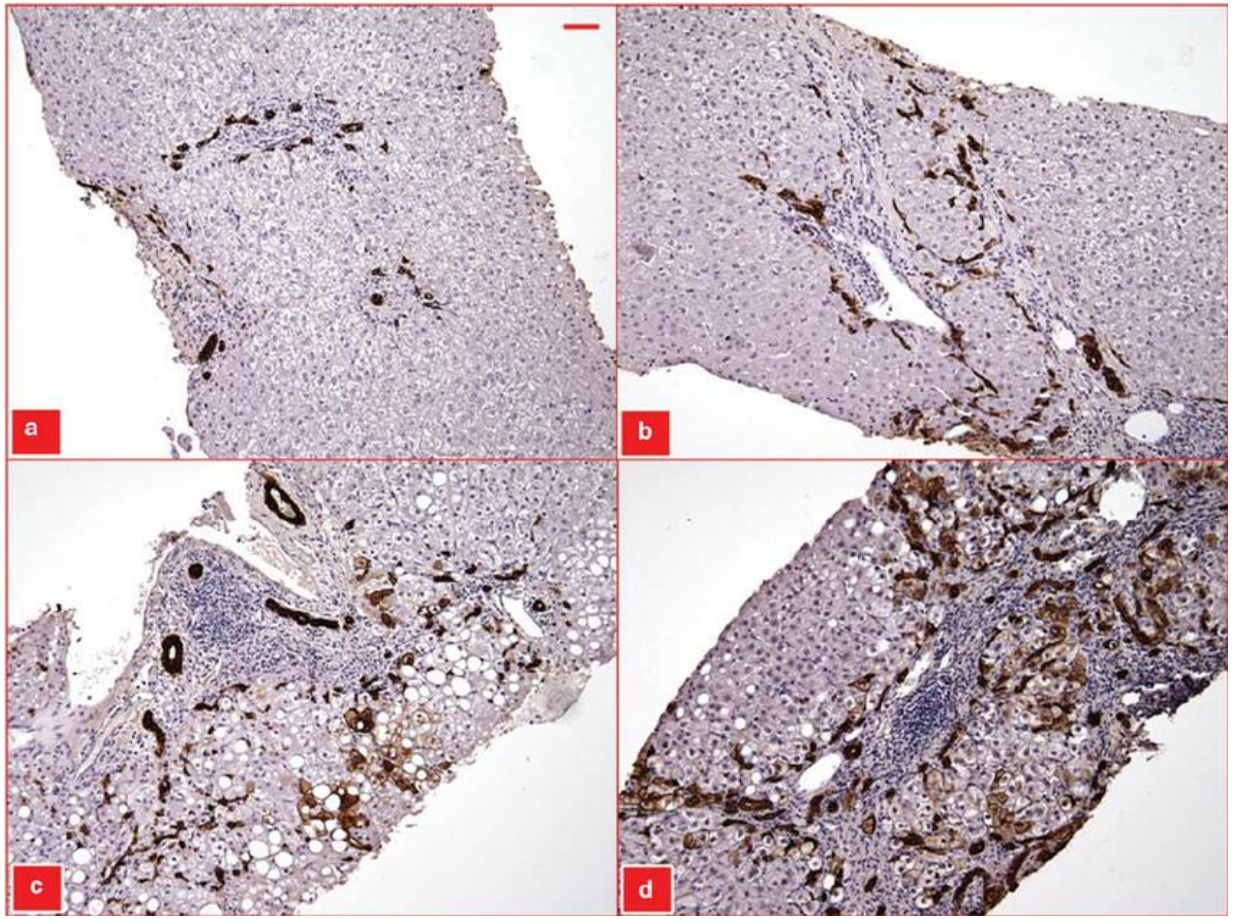
«New is well forg**otten old**»

IHC biomarkers

- FGF23-alcoholic liver cirrhosis
- Ck7-biliary type cirrhosis
- Cd34 expression related to recurrent hepatocellular carcinoma
- Ubiquitin, p62, CK18: Mallory-Denk bodies are stained-excessive expression is a poor prognostic factor for alcoholic/MAFLD-associated liver cirrhosis

Ck7 expression



Liver cirrhosis and HCC

Who would, and who would not develop HCC in cirrhotic patients depends on gene signature ..

Higher proportions of resting mast cells, neutrophils, CD8 T cells, and total T cells were found to be enriched in HCC patients with low risk score, while only activated mast cells was found to be higher at patients with high risk score, which indicates the immune-enriched phenotype in low-risk patients and immune-depleted phenotype in high-risk patients.

J Oncol. 2021; 2021: 9949492.

Published online 2021 Jul 20. doi: 10.1155/2021/9949492

Take home masseges

1. Correlating morphological findings with underlying etiological factors is important to enhance diagnostic precision, treatment efficacy in liver cirrhosis, and prediction of complications.

2. Liver biopsy remains an important tool for the management of liver cirrhosis.

Thank you