LIVER 101 FOR THE ENDOSCOPIST

SAUMYA JAYAKUMAR, MD, FRCPC,
ABIM (INTERNAL MED, GI,
TRANSPLANT HEPATOLOGY)

JAN.25, 2025

- Nil financial

MR. GM

45 yo male with DMII, HTN, OSA presents for Lt flank abdominal pain, found to have nephrolithiasis.

Meds: Semaglutide, Insulin, Ramipril,

Labs

CBC: WBC 2.8; Hb 100 (MCV 102); plt 210

Chemistry: Na 133; K 4.4; Cr 110;

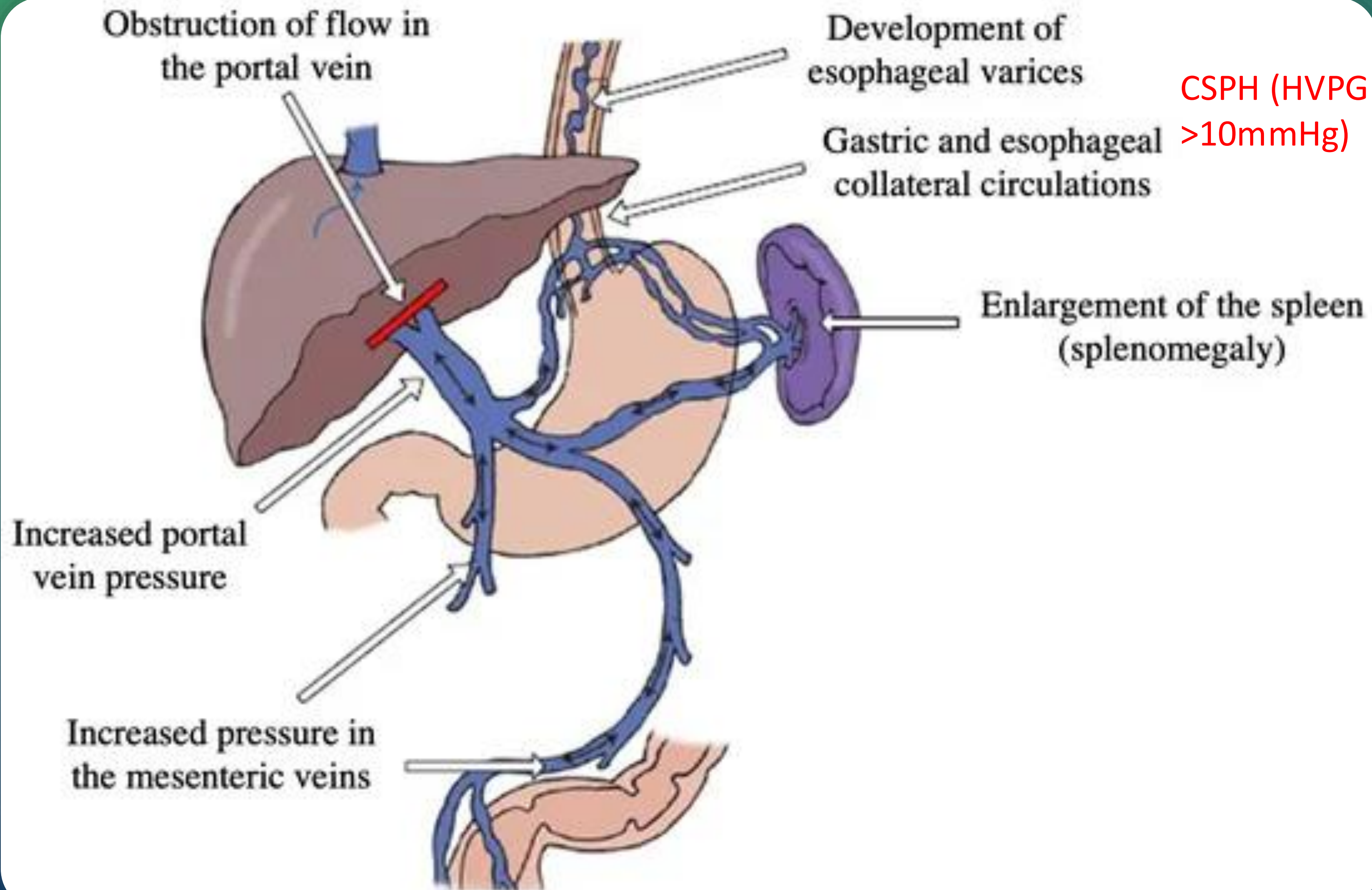
Liver: ALT 85; AST 75; GGT 100; ALP 140; Tbili 10; INR 1.2

Imaging: Nodular liver, no features of ascites

Q1 – DOES HE NEED A SCREENING EGD TO CHECK FOR VARICES?

- Yes
- No
- It depends

PORTAL HYPERTENSION



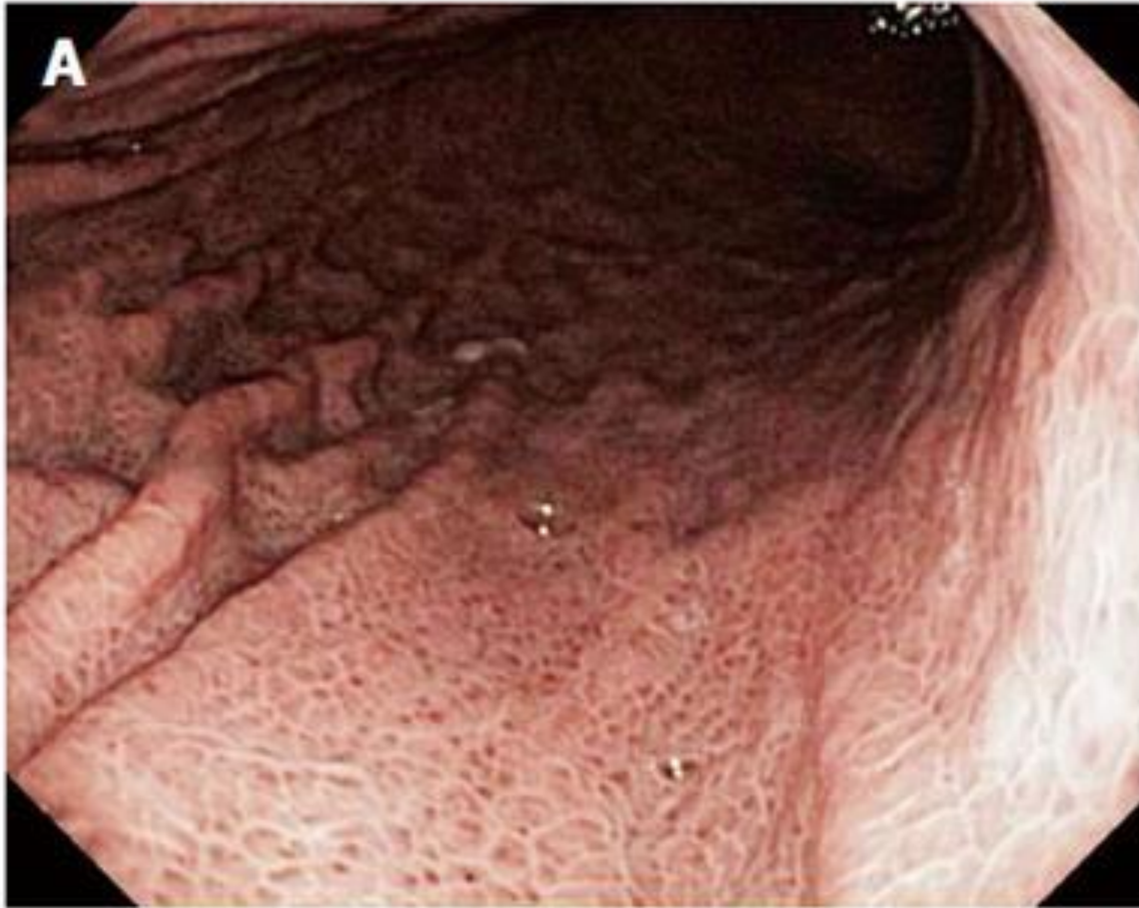
CSPH (HVPG >10mmHg)

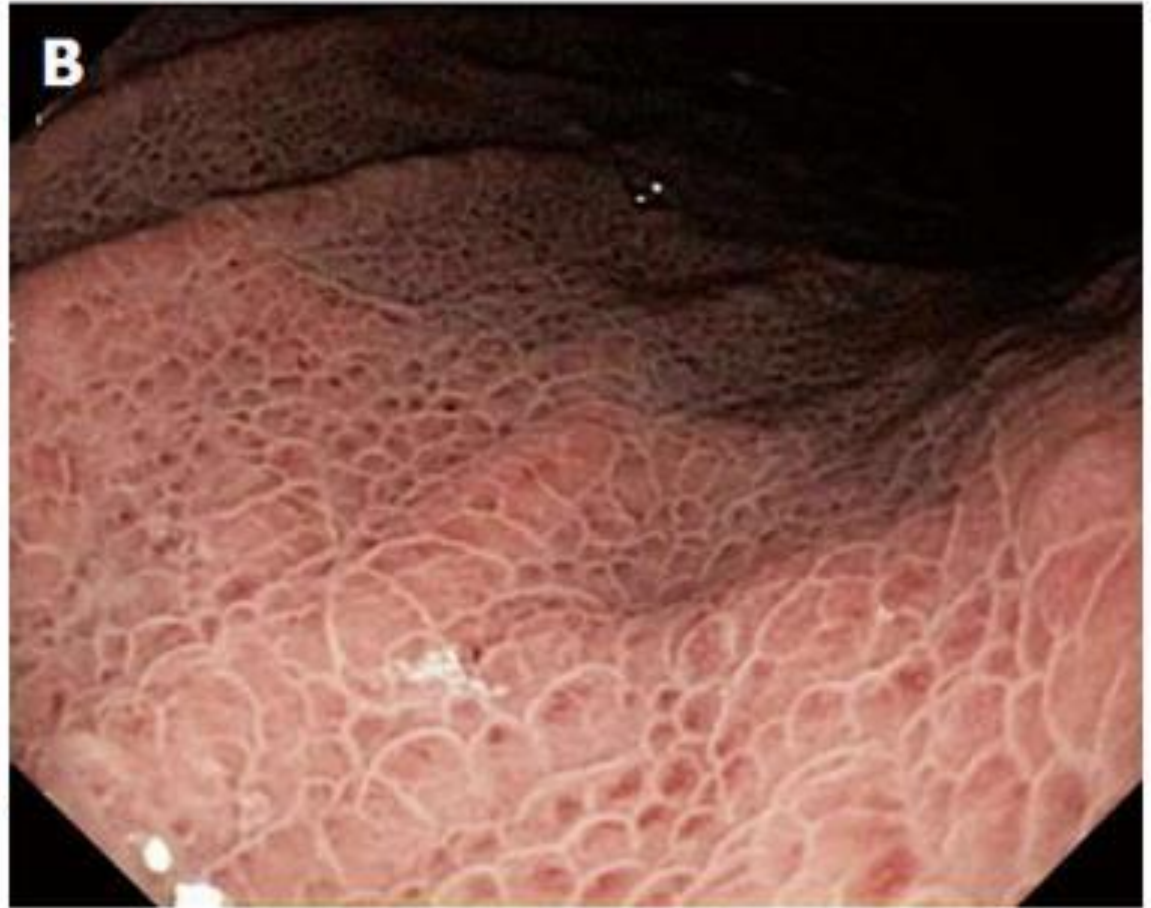
STAGES OF CIRRHOSIS AND PORTAL HYPERTENSION

Clinical stage	Non-cirrhotic clinical manifestations	Compensated disease, no EV	Compensated disease, with EV	Decompensation: ascites, variceal hemorrhage, HE
HVPG	<5mmHg	5-10mmHg	≥10mmHg	≥12mmHg
Histological features	Steatohepatitis, F1-F3 fibrosis	Thin septa, big nodules	Broad septa	Very broad septa, small nodules
Cellular alterations	Necroinflammation, fibrogenesis, endothelial dysfunction	Fibrogenesis with cross-linking, angiogenesis	Parenchymal extinction	Insoluble, acellular scar
Spontaneous regression				

Selicean S et-al. Hep Int 2021; 15

MANIFESTATIONS OF PORTAL HYPERTENSION IN GI TRACT





WHY SCREEN FOR VARICES IN CIRRHOSIS?

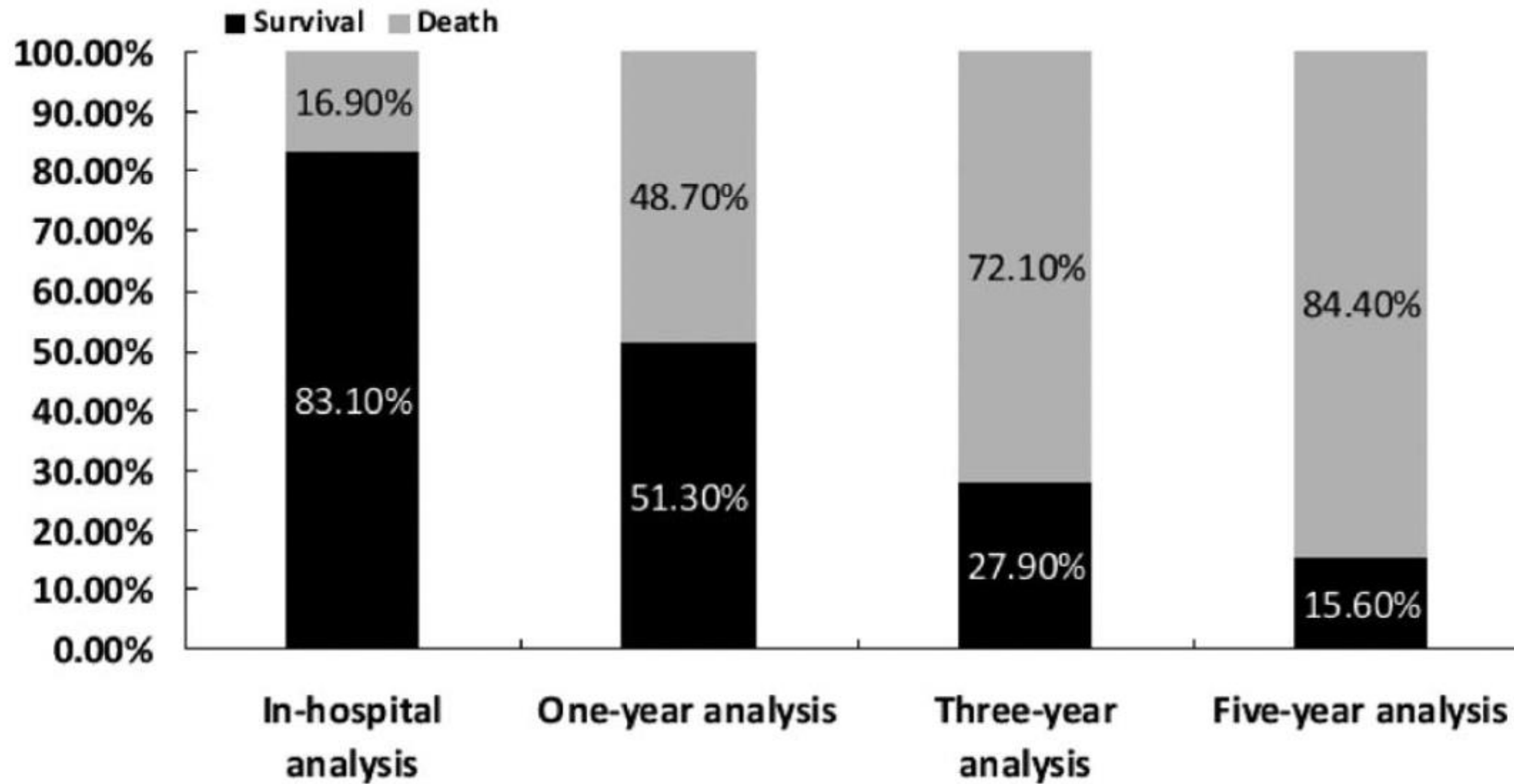
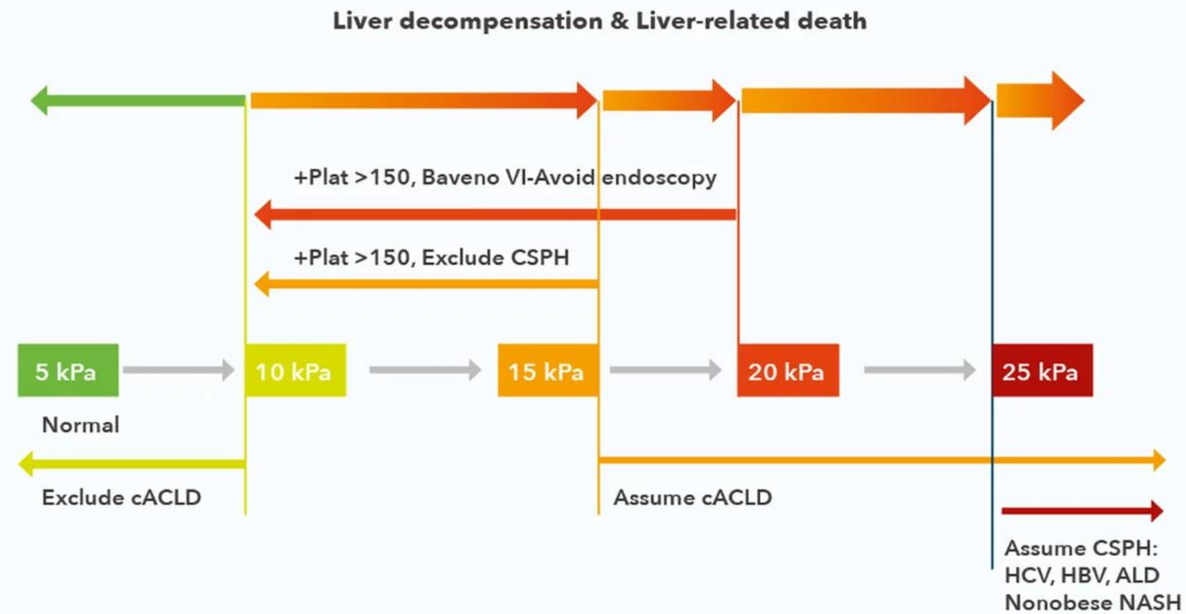


Figure 3. Mortality rates of acute esophageal variceal bleeding.

Liu Chueh-Ling et-al et-al. Medicine 2016

VARICEAL SCREENING IN CIRRHOSIS



Baveno VII Consensus Guidelines 2021

Q1 – DOES HE NEED A SCREENING EGD TO CHECK FOR VARICES?

- Yes
- No
- It depends

MANAGEMENT OF VARICES

- Endoscopic management
  - Primary
    - No Hx of variceal bleeding
    - NSBB, variceal ligation, or both
  - Secondary
    - Prior variceal bleed, goal is to prevent repeat episodes of bleeding
    - Both endoscopic and pharmacological management
- Pharmacological management
  - Non-selective beta blockers (NSBB)

- Endoscopic Management:
  - Banding
  - APC
  - Sclerotherapy
  - Gluing

ENDOSCOPIC MANAGEMENT OF ESOPHAGEAL VS GASTRIC VARICES

- Esophageal varices:
  - Can do primary prophylaxis with endoscopic therapy in medium-large varices or in varices with high risk stigmata
  - Banding/ligation preferred
  - AVOID GLUING OF ESOPHAGEAL VARICES

- Gastric varices:
  - No role for primary prophylaxis with endoscopic therapy except in very large varices or those with high risk stigmata
  - Endoscopic treatment of choice is gluing of varices
  - Avoid banding of gastric varices

The therapeutic window of beta-blockers in cirrhosis

Fig. 1. Spectrum of chronic liver disease and map of the clinical ranges in which NSBBs are likely to benefit patients. Red: Unlikely to benefit; Yellow: Benefit uncertain or small; Green: Strong data to support benefit. ACLF, acute-on-chronic liver failure; AKI, acute kidney injury; cACLD, compensated advanced chronic liver disease; CSPH, clinically significant portal hypertension; HVPG, hepatic venous pressure gradient; NSBBs, non-selective beta-blockers; RCT, randomised controlled trial.

Blasco-Algora S et-a;.BMJ Open Gastro 2016;3
Albillos A and Krag A. J Hep 2023; 78

SUMMARY

- Not all patients with cirrhosis need screening EGD – use Fibroscan and platelets to guide you (platelets >150 and Fibroscan <20 don’t usually require EGD)
- GI Manifestations of PHTN – varices, portal hypertensive gastropathy
- Management of esophageal varices:
  - Primary prophylaxis vs secondary prophylaxis
  - Endoscopic vs pharmacologic
- Management of gastric varices:
  - Endoscopic therapy with gluing only if high risk stigmata
- Non-selective beta-blockers will decrease portal pressures
  - Carvedilol is NSBB of choice

QUESTIONS?