

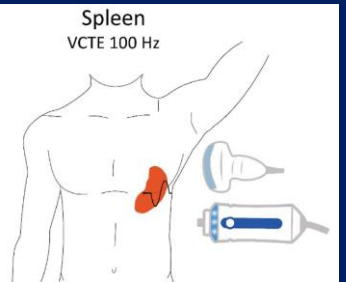


# Emory Faculty Retroflexions: Spleen Stiffness Measurement in Cirrhosis

Katherine Sorrentino, MD in Discussion with Tina Pham Hang, MD



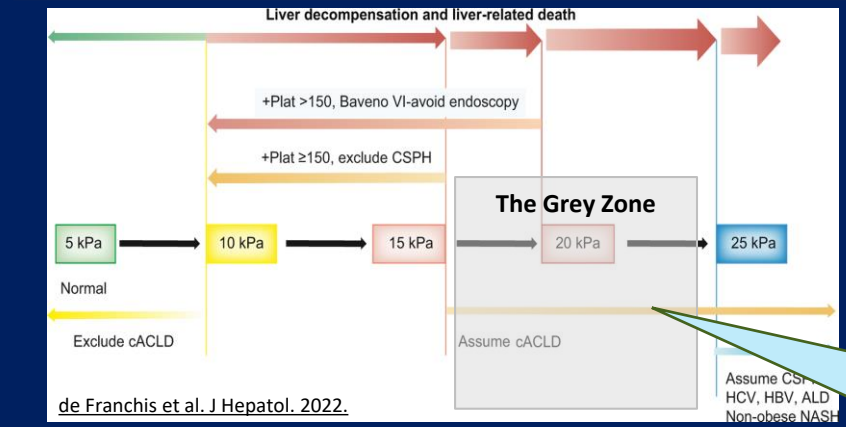
## What is Spleen Stiffness Measurement (SSM)?



- In 2020, the FDA approved the FibroScan® 630 (Expert) as the first device to measure liver stiffness measurement (LSM) and spleen stiffness measurement (SSM).
- Uses transient-elasticography (TE) to measure spleen stiffness.

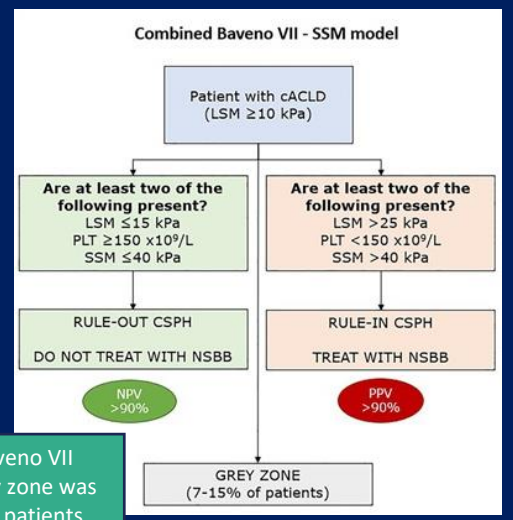
Mladenovic et al. Clin Liver Dis (2022)

## Recall the "Rule of Five" for LSM by TE



- The "Rule of Five" denotes the dose-response relationship between LSM by TE and higher risk of decompensation, liver related event, or mortality REGARDLESS of etiology of liver disease.
- For patients with LSM between 15-25 kPa ("The Grey Zone"), it can be challenging to identify those who are at high risk of decompensation.

Spleen stiffness can serve as a helpful, noninvasive adjunctive measurement in predicting clinically significant portal hypertension (CSPH) As demonstrated with the Combined Baveno VII-SSM model by [Dajti et al.](#)



With Baveno VII alone, grey zone was 55-60% of patients.

Dr. Hang: For patients in the "grey zone": High kPa + plt >150 OR low kPa + plt <150 I'll perform SSM at the same time as LSM. There is a concern that LSM may underestimate severity of portal HTN severity and risk of esophageal variceal bleed, so SSM is thought to help guide diagnosis for these patients.

## SSM Limitations

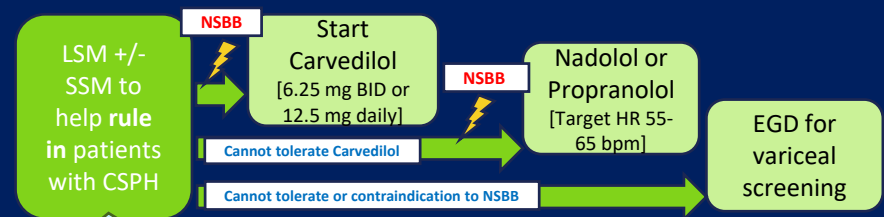
- SSM is more technically challenging to obtain compared to LSM. It also requires separate training.
- Only the M probe (A) is validated – many patients need the XL probe (B) on which SSM cannot be obtained.
- Most studies utilizing SSM are based on cirrhosis of viral etiology -> more research is needed to determine if SSM cutoffs should differ for ALD/MASH cirrhosis.



Echosens FibroScan® probes

## Impact on Patient Care

Incorporating SSM may be helpful in patients with CSPH and minimizing need for EGD or Nonselective β-blockers (NSBB).



Dr. Hang: At the Atlanta VA we use a cutoff of 46 kPa for spleen stiffness.



Click the link below to check out our original visual abstract on "Preventing Decompensation in Cirrhosis"