Noninvasive Assessment of Portal Hypertension

Blood- and imaging-based noninvasive tests (NILDA) for detecting clinically significant portal hypertension (CSPH) and monitoring its progression.

2024 AASLD Practice Guideline
Noninvasive Liver Disease Assessment of Portal Hypertension
Hepatology 2024;80:1042-1070

STRENGTH Conditional Ungraded

1 Detecting CSPH — Blood & LSM-Based Tests

STATEMENT	STRENGTH
GS1 — Against using currently available blood-based markers or thrombocytopenia alone to detect CSPH (HVPG ≥10 mmHg)	Conditional
GS2 — Use combination of LSM + platelet count to assess for CSPH	Conditional
GS3 — Against using LSM to quantify higher degrees of portal hypertension (HVPG ≥12 mmHg)	Conditional

Rule-in/rule-out cutoffs for CSPH: LSM ≥25 kPa rules in CSPH; LSM ≤15 kPa rules out CSPH. Between 15–25 kPa, combine with platelet count for greater accuracy — e.g., LSM ≥15 kPa + platelets <110,000/μL suggests CSPH (requires clinical judgment). Spleen stiffness measurement (SSM) >40 kPa may also be used to detect CSPH (rapidly evolving). Platelet count <150,000/μL alone has poor performance for CSPH despite being a recognized threshold for variceal screening.

2 Longitudinal Monitoring

STATEMENT	STRENGTH
GS4 — Serial LSM + platelet count may be followed to monitor for CSPH progression in patients without baseline CSPH whose underlying liver disease is active/uncontrolled	Ungraded
GS5 — Use caution with LSM or SSM to detect longitudinal changes in portal hypertension (HVPG) in patients being treated for liver disease or known portal hypertension	Conditional

3 Predicting Clinical Outcomes

STATEMENT	STRENGTH
GS6 — Insufficient evidence to support blood- or imaging-based NILDA to predict clinical outcomes in patients with CLD and CSPH	Ungraded

Studies of blood- and imaging-based NILDA to predict CSPH are rapidly emerging for both uncontrolled and treated primary liver disease (e.g., eradicated HCV) — additional data anticipated as the field evolves.

4 Practical Application at the Bedside

FINDING	INTERPRETATION / NEXT STEP
LSM <15 kPa	CSPH effectively excluded — routine cirrhosis follow-up, no urgent variceal workup needed on this basis alone
LSM 15–25 kPa	Indeterminate zone — add platelet count; LSM ≥15 kPa + platelets <110,000/μL suggests CSPH but requires clinical correlation
LSM ≥25 kPa	CSPH effectively confirmed — proceed per portal hypertension/varices guidance (Card 7) for surveillance and prophylaxis planning
SSM >40 kPa	Supportive of CSPH; an evolving modality — interpret alongside LSM/platelets, not as a standalone test
On antiviral/HCV-cure or PH treatment	Use LSM/SSM trends cautiously — treatment itself can lower stiffness independent of true portal pressure change

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