# Noninvasive Assessment of Fibrosis & Steatosis

Imaging-based noninvasive liver disease assessment (NILDA) for staging hepatic fibrosis and quantifying steatosis, and its role relative to blood-based tests and biopsy.

**2024 AASLD Practice Guideline**
Imaging-Based Noninvasive Liver Disease Assessment of Hepatic Fibrosis and Steatosis
Hepatology 2024;80:672–712

STRENGTH · Strong · Conditional · Ungraded

## 1 Who Should Get Imaging-Based NILDA

| STATEMENT | STRENGTH |
|---|---|
| **GS1 —** Chronic HCV, chronic HBV, and NAFLD: use imaging-based NILDA to detect significant fibrosis (F2–4), advanced fibrosis (F3–4), and cirrhosis (F4) | Strong |
| **GS2 —** ALD or chronic cholestatic liver disease: use imaging-based NILDA to detect advanced fibrosis (F3–4) and cirrhosis (F4) | Conditional |

## 2 Choice of Modality for Fibrosis Staging

| STATEMENT | STRENGTH |
|---|---|
| **GS3 —** Use US-based elastography or MRE to stage fibrosis in CLD; consider MRE when concomitant cross-sectional imaging is needed or US-elastography accuracy may be compromised | Ungraded |
| **GS4 —** Incorporate imaging-based NILDA into initial fibrosis staging — more accurate than blood-based NILDA | Conditional |
| **GS5 —** Combine blood-based and imaging-based NILDA for initial staging, particularly to detect significant (F2–4) and advanced (F3–4) fibrosis | Conditional |

**Modalities:** transient elastography (TE), 2D/point shear-wave elastography (SWE), and magnetic resonance elastography (MRE) are the principal US- and MRI-based liver stiffness measurement (LSM) tools used for fibrosis staging.

## 3 Limitations & Longitudinal Monitoring

| STATEMENT | STRENGTH |
|---|---|
| **GS6 —** Do not use imaging-based NILDA as a standalone test to assess fibrosis regression or progression | Ungraded |
| **GS7 —** Interpret longitudinal LSM change within individualized clinical context, considering NILDA modifiers and other supportive evidence of clinical course | Ungraded |
| **GS8 —** In treated HBV/HCV, use the pre-antiviral-therapy LSM as the most accurate longitudinal prognostic parameter (limited evidence once viral suppression/eradication achieved) | Ungraded |

## 4 Steatosis Assessment

| STATEMENT | STRENGTH |
|---|---|
| **GS9 —** TE-CAP has good diagnostic accuracy to grade steatosis and can be used in clinical practice | Ungraded |
| **GS10 —** TE-CAP and MRI-PDFF/MRS are superior to blood-based NILDA and should be used for hepatic steatosis assessment where available | Ungraded |

## 5 Pediatric Population

| STATEMENT | STRENGTH |
|---|---|
| **GS11 —** Insufficient evidence to recommend one imaging-based NILDA over another for fibrosis or steatosis assessment in children | Ungraded |

Liver histology remains an imperfect reference standard, but AASLD recommends blood- and imaging-based NILDA as initial tests before considering biopsy for fibrosis staging in CLD.

Sterling RK, Duarte-Rojo A, Patel K, et al. AASLD 2024 Practice Guideline on Imaging-Based Noninvasive Liver Disease Assessment of Hepatic Fibrosis and Steatosis. *Hepatology*. 2024;80(3):672–712.