Improving Assessment of Steatotic Liver Disease with Non-invasive Ultrasound-based Technique

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A Call to Arms

WHO, EASL, AASLD, and **APASL** are among the 17 organisations calling for global action on SLD,1 a leading cause of liver-related morbidity and mortality²

> Main risk factors:5

Obesity Type 2 diabete

Early detection and management of MASLD can prevent progression to MASH, resulting in:

- ▶ Better outcomes: ~10-25% of patients with MASH may develop advanced fibrosis and cirrhosis³
- Lower health and societal costs: In Europe, MASH was responsible for

up to €1,292 million

of healthcare costs and €41,536 to €90,379 million of DALY-related wellbeing costs in 20184

SLD is the new nomenclature for the metabolic-associated fatty liver disease spectrum, including:2

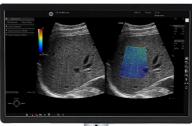
MASLD, formerly NAFLD²

- Caused by a build-up of fat in the liver⁶
- □ Usually asymptomatic⁵
- Affects more than one-third of adults. and more than one in 10 children1
- Control of the contro between 1991-20197

MASH, formerly NASH²

- The most severe form of MASLD⁸
- Can lead to cirrhosis, liver failure, and liver cancer9
- Over 16% of people with MASLD have MASH¹⁰

Ultrasound-Guided Attenuation Parameter (UGAP)







Non-invasive quantifiable image guided techniques expand adoption of ultrasound



GE HealthCare's UGAP solution, on the LOGIQ™ ultrasound portfolio:

- Automated measurement algorithm for optimum measurement range¹⁴
- Guided image acquisition for quantifiable, repeatable results
- Proven intra/interobserver reliability independent of:
 - breathing manipulations¹⁵
 - patient positioning¹⁵
 - patient diet status¹⁵
 - Recommended quick acquisition protocols for:
 - large-scale use
 - reproducible results, even for non-ultrasound experts, including nurses and technicians
 - Well correlated to MRI-PDFF, 13 with proven cut-off values 16

The Assessment Pathway

Liver biopsy remains the gold standard for detecting SLD,11 but:

it is invasive11

there is inter/intraobserver variabilitv11

MRI-PDFF is a non-invasive technique to accurately evaluate liver fat fraction,6 but:

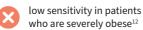


it is expensive6



there is limited access⁶

Traditional B-mode ultrasound:



requires specialist sonographer expertise13



UGAP is well correlated to MRI-PDFF13



cheaper and more accessible



provides staging information to guide management

Key Takeaways



MASLD is a global health emergency. Early diagnosis is key to preventing progression to MASH



Liver biopsy is invasive and unfeasible for large-scale screening



MRI-PDFF is well correlated with biopsy but not suitable for screening at-risk patients or monitoring therapy



Ultrasound is dependent on user expertise, and is less sensitive and more subjective than MRI-PDFF



UGAP is well correlated to MRI-PDFF. It offers. easy, quick, and repeatable quantitative measurement of steatosis



UGAP benefits both clinicians and patients, as it allows for early detection of MASLD, contributing to the more effective management of SLD

Abbreviations:

AASLD: American Association for the Study of Liver Diseases; APASL: Asian Pacific Association for the Study of the Liver; DALY: disability-adjusted life year; EASL: European Association for the Study of the Liver; MASH: metabolic dysfunction-associated steatohepatitis; MASLD: metabolic dysfunction-associated steatotic liver disease; MRI-PDFF: magnetic resonance imaging proton density fat fraction; NAFLD: non-alcoholic fatty liver disease; NASH: non-alcohol steatohepatitis; SLD: steatotic liver disease; UGAP: ultrasound-guided attenuation parameter; WHO: World Health Organization.

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