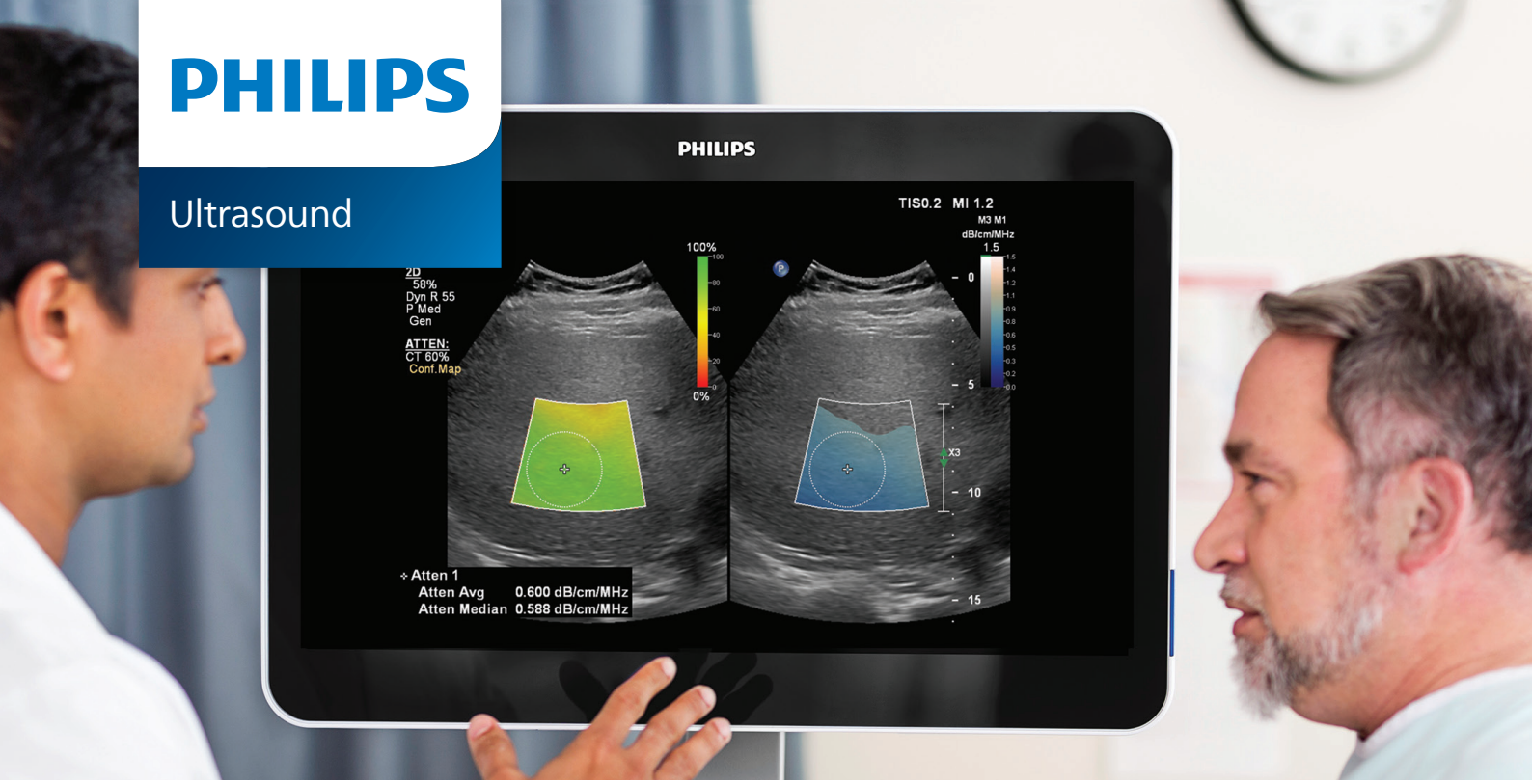
PHILIPS

Ultrasound



A multiparametric approach to liver health

Philips Liver Fat Quantification (LFQ) tools provide an accurate and reproducible method of measuring liver fat and may help in assessing liver steatosis.

Enhancing the ultimate liver solution, LFQ complements the current shear wave imaging solution to provide a comprehensive set of ultrasound-based liver assessment tools to assist clinicians with the evaluation of both steatosis and fibrosis. These tools are easy to use and available on multiple transducers, allowing clinicians to confidently assess the liver health of their patients.

The assessment of liver disease is largely focused on detecting fatty livers earlier, since fat accumulation in the liver can be reversed if found early enough.[1]

Current standard of care for liver disease management

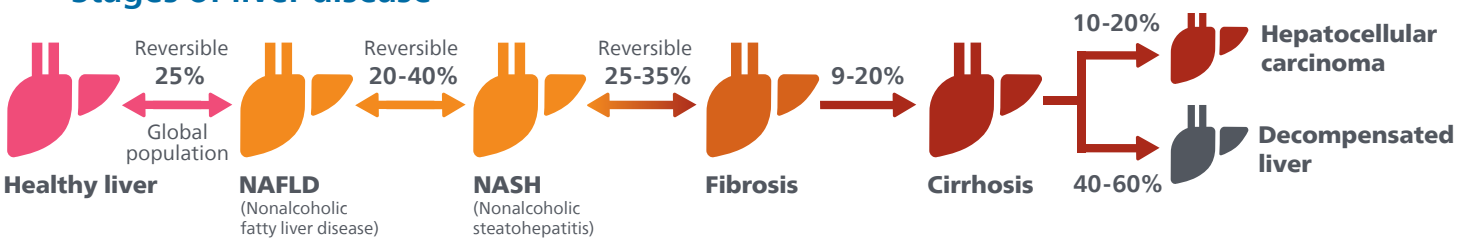
For both nonalcoholic fatty liver disease (NAFLD) and nonalcoholic steatohepatitis (NASH), the standard of care is to measure liver fat through biopsies and/or MR-PDFF (Proton Density Fat Fraction).

Each have drawbacks. Liver biopsy is invasive, higher risk, and subject to sampling error and interpretation variability. MRI-PDFF is well accepted, noninvasive, low risk and allows for 3D measurements. However, MRI-PDFF is costly and has limited access.[2]

Early detection of liver disease

Early screening and diagnosis is key to preventing progression from NAFLD to advanced and end-stage liver disease.[3]

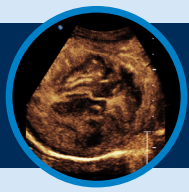
Stages of liver disease



Ultrasound technology

Continued advancements in ultrasound technology can allow clinicians to detect and stage liver disease earlier in its development, helping to provide patients with better opportunities to reverse their liver disease.[1]

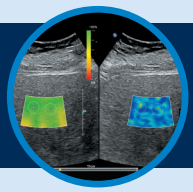
<2014



Traditional ultrasound liver assessment

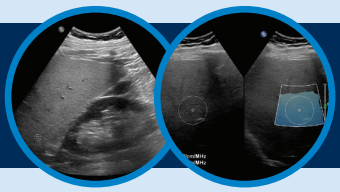
- B-mode
- Color/Doppler
- Contrast-enhanced ultrasound

>2014



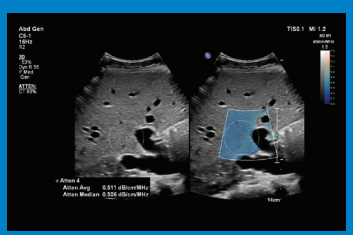
Shear wave elastography (fibrosis staging)

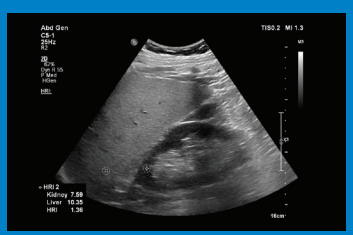
>2021



Attenuation/HRI imaging (liver fat quantification)*

Philips new attenuation and hepatorenal index (HRI) imaging tools allow clinicians to identify liver fat earlier than ever before at NAFLD and NASH stages.[4]





Noninvasive assessment of liver health

LFQ tools provide quantitative ultrasound parameters to assist physicians in the management of patients with fatty liver disease.

Enhanced patient and staff experience

Compared to traditional liver detection methods, LFQ and ElastQ imaging provide noninvasive, lower cost alternatives that are more readily available. Ultrasound liver assessment provides radiologists and hepatologists access to support tools for immediate diagnosis, which can reduce overall waiting times and patient anxiety.

LFQ is available on multiple transducers to help meet a wide range of patients from small adults and teenagers to technically difficult patients.

If caught in the early stages of development, fatty liver disease is reversible.

Early diagnosis can improve health outcomes and potentially reduce the cost of care, without the drawbacks of liver biopsy or MR imaging.

Enabled by Philips innovations

Philips Liver Fat Quantification complements Philips ElastQ shear wave imaging solution to provide a comprehensive set of ultrasound-based liver assessment tools to evaluate both steatosis and fibrosis. LFQ in combination with ElastQ and ElastPQ gives the healthcare provider a complete suite of noninvasive tools to assess disease severity. LFQ complements Philips Liver Quantification by adding attenuation imaging and HRI to ElastPQ, ElastQ as quantitative, multiparametric tools for assessing liver health.

EPIQ Elite

EPIQ Elite Premium ultrasound features powerful ***n***SIGHT Imaging architecture with our latest advances in image processing and transducer technology. EPIQ Elite continues to drive the ultimate solutions in general imaging and shared service capabilities, representing premium performance across all clinical segments. With EPIQ Elite, an exceptional level of clinical applications, workflow ease and advanced intelligence come together like never before to meet the challenges of today's most demanding practices.

LFQ is available on the C5-1 and mC7-2 transducers to help meet a wide range of patients from small adults and teenagers to technically difficult patients.

Affiniti

Philips Affiniti provides you with the tools to overcome your daily challenges so you can provide the best possible patient care. Versatile, affordable, easy to use, precise, and built to last. Affiniti 70 precision beamforming, combined with Philips PureWave technology and Tissue Specific Presets (TSP), makes imaging technically difficult patients easy. Philips exclusive PureWave technology provides acoustic efficiency in transducer tuning and system optimization that facilitate imaging of a wide range of patient types with few artifacts and enhanced penetration.

LFQ is available on the C5-1 PureWave transducer.

References

1. Younossi ZM. Non-alcoholic Fatty Liver Disease - A Global Public Health Perspective. J Hepatol. 2019;70(3):531-544. DOI: 10.1016/j.jhep.2018.10.033.
2. Loomba R. MRI-Proton Density Fat Fraction Treatment Response Criteria in Nonalcoholic Steatohepatitis. Hepatology. 2021;73(3):881–883. DOI: 10.1002/hep.31624.
3. Ramesh K, Rajeev N, Anand U. Non-alcoholic Fatty Liver Disease: Growing Burden, Adverse Outcomes and Associations. J Clin Transl Hepatol. 2020 Mar 28;8(1):76–86. DOI: 10.14218/JCTH.2019.00051. Epub 2019 Dec 28.
4. Ferraioli G, Berzigotti A, Barr RG, et al. Quantification of Liver Fat Content with Ultrasound: A WFUMB Position Paper. Ultrasound Med Biol. 2021;47(10):2803-2820. DOI: 10.1016/j.ultrasmedbio.2021.06.002.

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