



**PHILIPS**

Ultrasound

**Philips EPIQ Elite and Affiniti**

# Redefining performance in abdominal ultrasound

Worldwide obesity has nearly tripled since 1975.<sup>1</sup> Both obesity and alcohol consumption, which are increasing in many parts of the world, are key risk factors for liver disease.<sup>2</sup>

Ultrasound is widely available, easy to use, more cost-effective than other imaging methods such as MR, and does not have the ionizing radiation of CT.<sup>3</sup> It can help clinicians reliably assess the abdomen and liver through comfortable scanning, thanks to Philips advances in transducer ergonomics.



# Confident imaging

The EPIQ Elite and Affiniti platforms bring ultimate ultrasound solutions for abdominal assessment, with clinically tailored tools designed to help elevate diagnostic confidence.

## C5-1 transducer

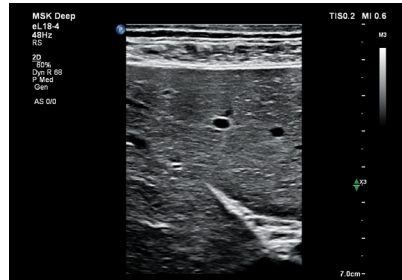
**PureWave crystal transducer technology** provides outstanding image quality, even in technically difficult patients.<sup>4</sup>



Liver imaging with the C5-1 transducer

## eL18-4 transducer

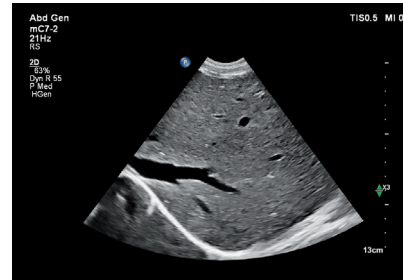
**High resolution and penetration** with the eL18-4 PureWave transducer.<sup>‡</sup>



Liver imaging with the eL18-4 transducer

## mC7-2 transducer

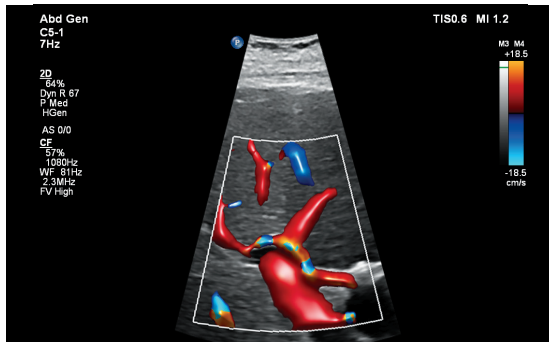
**Small footprint design** for abdominal and interventional procedures.



Liver imaging with the mC7-2 transducer

## Flow Viewer

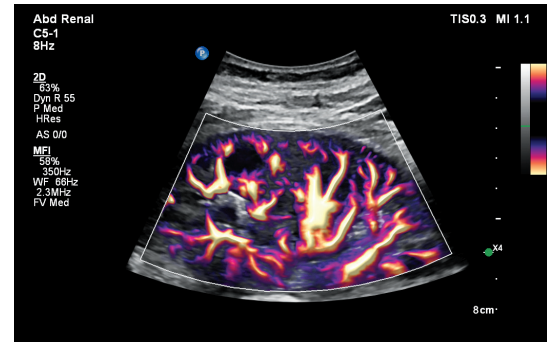
Defines vasculature with a **3D-like appearance** using both the velocity and power of the Doppler signal to accurately represent vascular flow topography.



Liver imaging with the C5-1 transducer with Flow Viewer

## MicroFlow Imaging (MFI)

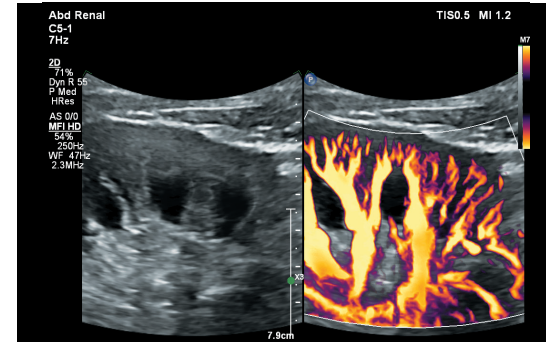
Provides remarkable sensitivity and detail in **assessing blood flow**.<sup>§</sup>



Renal imaging with the C5-1 transducer with MFI

## MicroFlow Imaging HD (MFI HD)

**Offers 2x the sensitivity and resolution<sup>§</sup>** of MFI in assessing blood flow.<sup>†</sup>



Renal imaging with the C5-1 transducer with MFI HD



\* Not available on all transducers.

\*\* Compared to release 7.0.

† Not available with the Affiniti ultrasound system.

‡ eL18-4 Resolution and penetration clinical case studies (2018).

§ Internal measured comparison on standards MFI to MFI HD using clinical targets and standard measurement methodology.

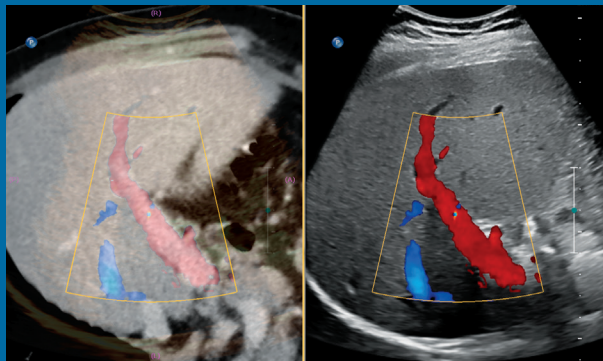




# Advanced insights

## Fusion and Navigation for abdomen

Auto Registration helps achieve successful alignment of CT or MR volumes to ultrasound in less than one minute<sup>5</sup> for the effective characterization of lesions. Gain more time to focus on the procedure ahead and spend less time on performing the registration necessary for accurate fusion.



Multimodality fusion imaging

## Microvascular Imaging Super Resolution Contrast-enhanced Ultrasound (CEUS) and Time of Arrival

Super Resolution MVI improves resolution by more than 200%.<sup>\*</sup> Time of Arrival provides concise visualization of the temporal patterns of perfusion while maintaining the superb spatial resolution offered by Super Resolution MVI.<sup>\*\*</sup>

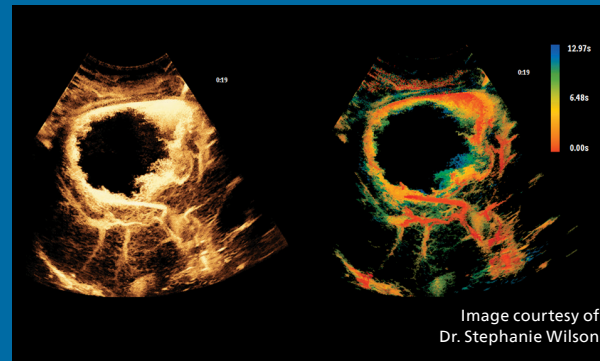
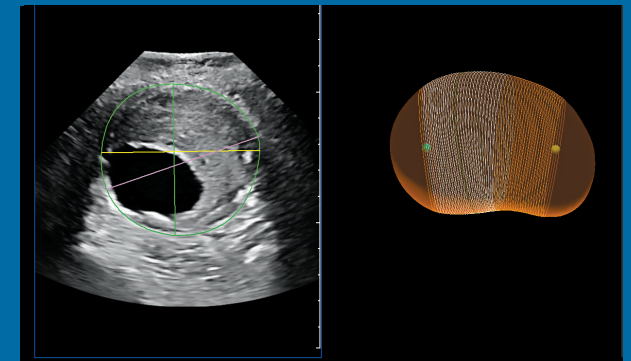


Image courtesy of Dr. Stephanie Wilson

Liver lesion with Super Resolution MVI and Time of Arrival

## Abdominal Aortic Aneurysm (AAA) Model

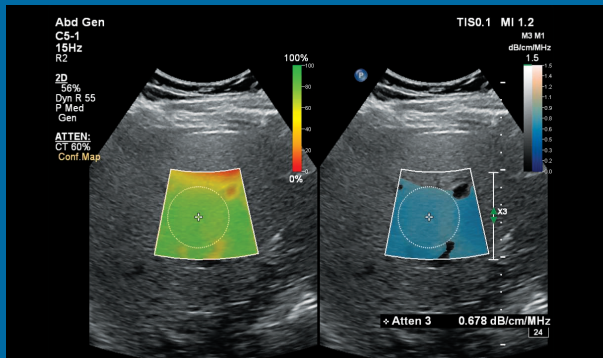
Segments and quantifies 3D ultrasound data for surveillance of native and post-EVAR AAAs with interoperator reproducibility superior<sup>†</sup> to that of 2D ultrasound.<sup>\*\*</sup>



Abdominal Aortic Aneurysm

## Liver Fat Quantification (LFQ)

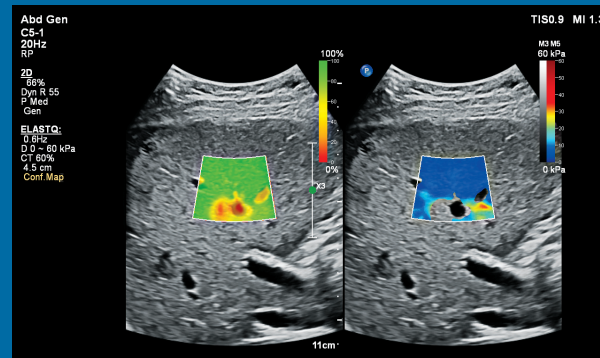
Rapid, noninvasive quantitative measure allows for more complete liver assessment and can be used to screen or patients with nonalcoholic fatty liver disease (NAFLD) or nonalcoholic steatohepatitis (NASH) and for surveillance of patients on therapy.<sup>6</sup>



LFQ with the C5-1 transducer

## ElastQ imaging

Real-time quantitative assessment of liver tissue stiffness. Features a Philips confidence map display for additional assurance that user measurements are from tissue areas with adequate shear wave propagation.



LFQ with the C5-1 transducer

“The widespread use of this technology in a general population could be helpful in screening for advanced chronic liver disease, especially considering that a complete study can be done in under three minutes using a noninvasive method for chronic liver disease.”<sup>\*\*</sup>

**Richard G. Barr, MD, PhD**

President, Radiology Consultant, Inc., Medical Director  
Southwoods Imaging, Youngstown, OH

<sup>\*</sup>Results may vary.

<sup>\*</sup> Compared to previous MVI capability.

<sup>\*\*</sup> Not available with the Affiniti ultrasound system.

<sup>†</sup> Ghulam QM, et al. Clinical validation of three-dimensional ultrasound for abdominal aortic aneurysm. Journal of Vascular Surgery. 2019. In Press. [www.jvascsurg.org/article/S0741-5214\(19\)31126-7/abstract](http://www.jvascsurg.org/article/S0741-5214(19)31126-7/abstract)

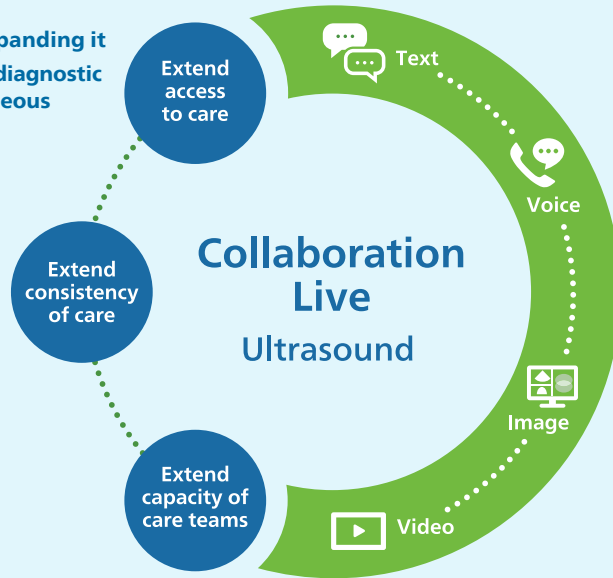


# Trusted partner

## Ultrasound Collaboration Live with Multi-party\*

Extend your team without expanding it  
Remote access to help elevate diagnostic confidence, now with simultaneous multi-party communication

Up to six users can quickly and securely talk, text, screen share and video stream directly from the ultrasound system for access to multiple clinical resources at a distance.\*\*



### Flexible financing

Innovative solutions tailored to you, with the financial flexibility to manage capital budgets and return on investment, supporting your continued growth.



### Defense-in-depth security

Philips ultrasound is developed for security as well as clinical capability.<sup>9</sup>



### Award-winning service

Philips has ranked #1 in ultrasound service for nearly 30 years in a row.<sup>†</sup>



### Comprehensive clinical education

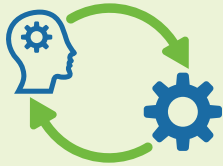
To improve operational efficiency and support patient care.



### A world leader in sustainability

Philips is committed to lifecycle circularity for its systems.<sup>‡</sup>

\* EPIQ and Affiniti ultrasound systems release 10.0.  
 \*\* Contract required. Collaboration Live is intended for remote diagnostic use on release 9.0 or higher.  
 † Philips is rated number one in overall service performance for ultrasound for 28 consecutive years in the annual IMV ServiceTrak survey in the USA.  
 ‡ Philips again achieved a #2 ranking in the leading sustainability benchmark in Dow Jones Sustainability Indices and achieved second place in 2020 on the Wall Street Journal's "100 Most Sustainably Managed Companies in the World" list.



## Intuitive experience

### HD MAX display\*

**40%** brighter  
than OLED display technology\*\*  
**+ 38%** more viewing area  
with MaxVue full-screen imaging†

### Tablet-like interface

Dramatically reduces reach and button pushes, with **40% to 80% less reach** and **15% fewer steps**.‡



### Superb ergonomics

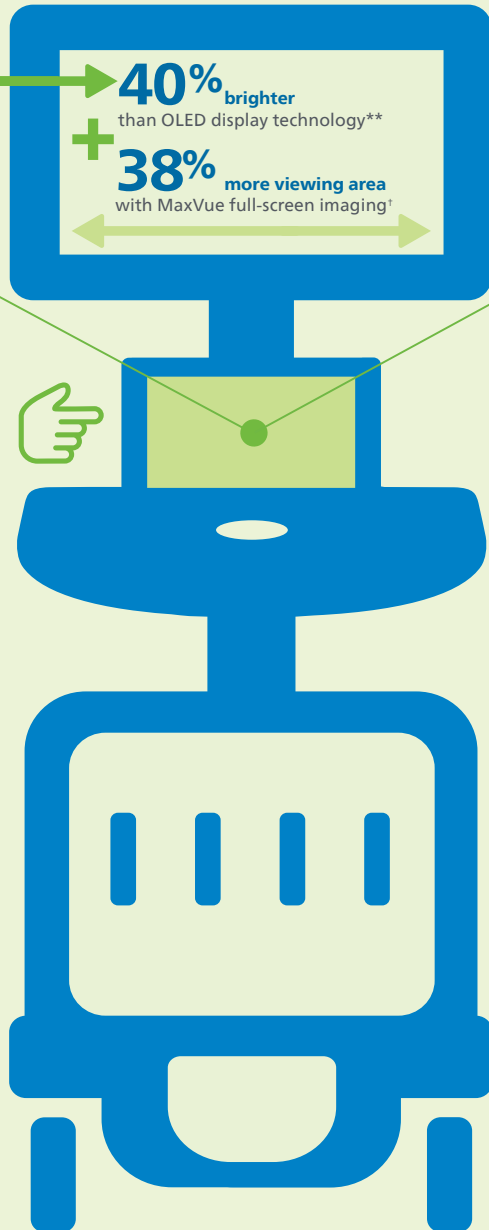
More than 80% of sonographers experience work-related pain, and more than 20% of them suffer a career-ending injury.‡

**Multiple degrees of articulation for both control panel and monitor offer 720° of freedom for scanning comfort.**



### SmartExam

**Enhances user workflow with system-guided protocols** that can be easily customized to suit your needs, and with Image Reorder, you can select and move images within thumbnail views.



### CIVCO Verza biopsy guide§

Directly attaches to the transducer, allowing needle guidance with a minimal blind zone.

### Image duplication screen

Displays a duplicate monitor image on the touchscreen for **enhanced workflow** during interventional procedures.

### Next Gen AutoSCAN

**Improves image uniformity**, adaptively adjusting image brightness at every pixel, reducing rib shadowing and the need for user adjustment while also improving transducer plunkability. **Reduces button pushes by up to 54% with pixel-by-pixel real-time optimization.**¶

### Post-processing controls

**Reduces the need for repeat scans.** 84% of users reported that rescanning the patient due to unsatisfactory image quality resulting from inappropriate image settings could be avoided.‡



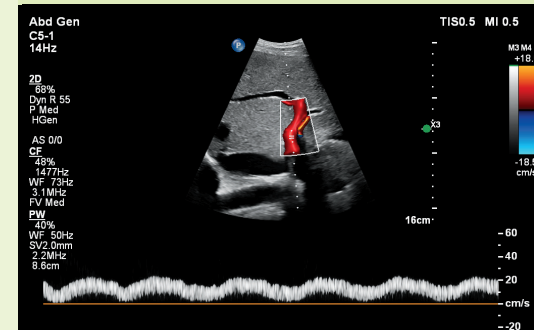
### Battery backup

**Enables near-instantaneous boot-up** through a battery life of 45 minutes. One of the greenest systems we've ever designed, EPIQ consumes **25% less power** than our legacy premium ultrasound system.‡§



Reduces number of button pushes by

**68%**<sup>8</sup>



Abdominal imaging with the C5-1 transducer

### Auto Doppler

Adjusts optimal flow sensitivity and resolution, reducing **10 steps to 3 steps** and also reducing the number of repetitive button pushes by an average of **68%**.<sup>8</sup>

Uses **25%** less power



\* Not available with the Affiniti ultrasound system.  
\*\* Internal specification comparison of OLED on EPIQ CVx vs. EPIQ HD MAX.  
† Compared to our previous monitor without MaxVue.  
‡ 2013 engineering study comparing Philips iU22 ultrasound system with EPIQ.  
§ Not available on all transducers.  
¶ When comparing release 10 performance to release 7 performance.  
# Based on a sample size of n=37 users.  
§§ Compared to its predecessor product, iU22.

1. World Health Organization Fact Sheet. Obesity and overweight. June 9, 2021. [www.who.int/news-room/fact-sheets/detail/obesity-and-overweight](http://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight).
2. Cheemerla S, Balakrishnan M. Global epidemiology of chronic liver disease. *Clin Liver Dis.* 2021;17(5):365-370. doi.org/10.1002/cld.1061.
3. RadiologyInfo.Org: [www.radiologyinfo.org/en/info/genus](http://www.radiologyinfo.org/en/info/genus).
4. Chen J, Panda R, Savord B. Realizing dramatic improvements in the efficiency, sensitivity and bandwidth of ultrasound transducers: Philips PureWave crystal technology. Koninklijke Philips N.V. Aug 2006. 2014;203(6):W715-W723. doi:10.2214/AJR.13.12061.
5. Auto Registration Timing Study Report, 2015.
6. Barr R. Philips Expert Perspectives. Quantifying liver fat with ultrasound. Document number 452299273191, Nov 2021.
7. Society of Diagnostic Medical Sonography, Industry Standards for the Prevention of Musculoskeletal Disorders in Sonography, May 2003.
8. Philips Auto Doppler Clinical Study, Dec 2011.
9. Philips EPIQ and Affiniti Security white paper, document number 452299180531, April 2023.

**Find out more at [www.philips.com/gi](http://www.philips.com/gi)**

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