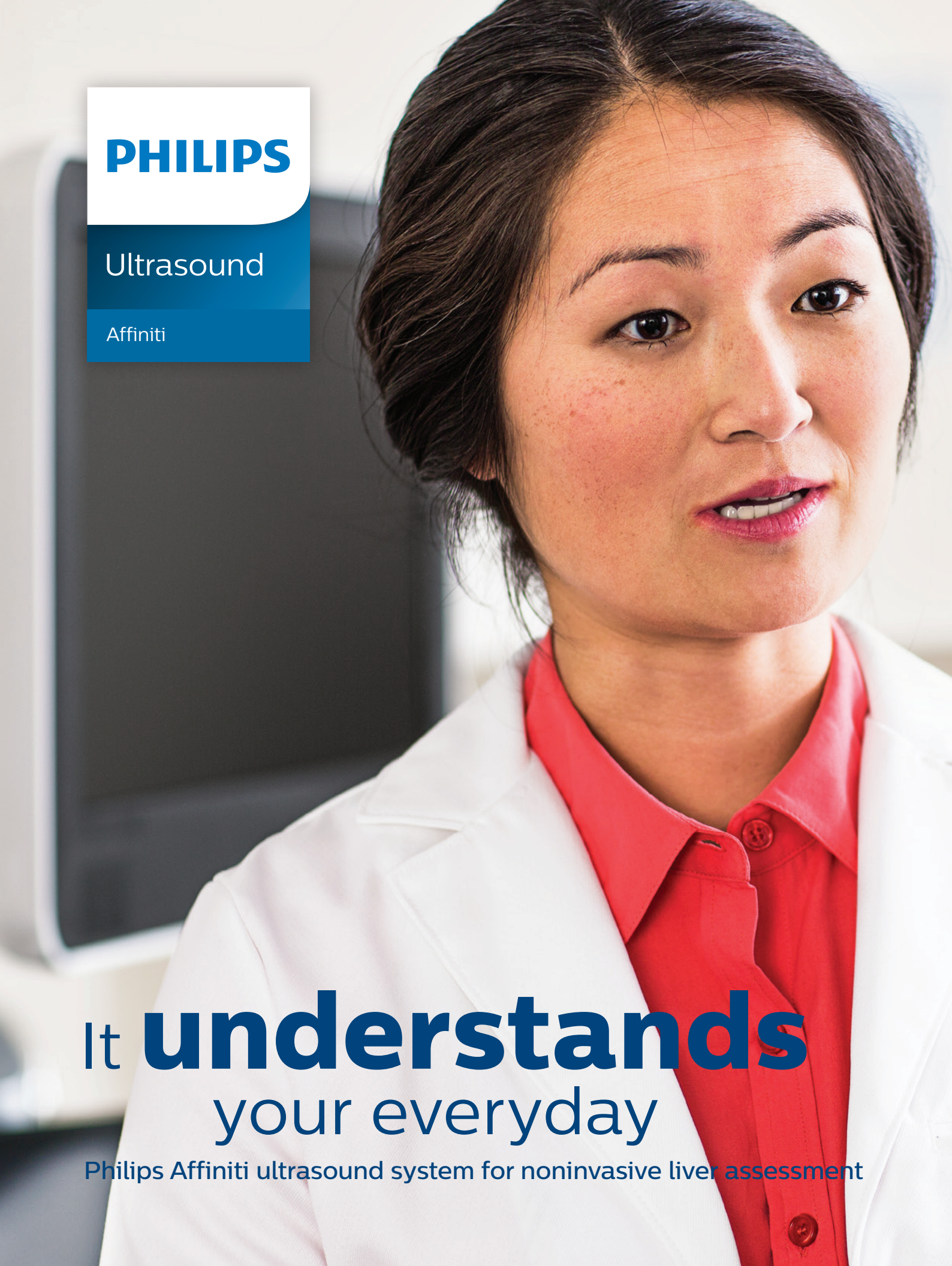


PHILIPS

Ultrasound

Affiniti

It **understands** your everyday

Philips Affiniti ultrasound system for noninvasive liver assessment

Confident assessment makes a difference

With early detection, patients at risk for developing liver fibrosis may be able to halt, delay, or possibly even reverse progression of the disease and reduce complications.

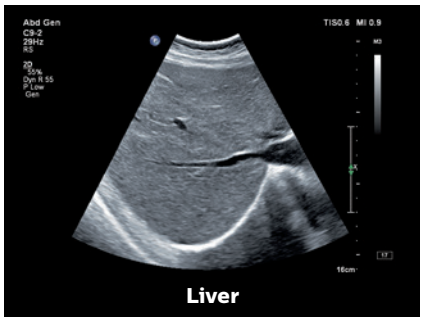
Ultrasound has been proven useful in evaluating liver disease, and the Philips Affiniti ultrasound system offers a range of helpful tools in assessing the liver. Capabilities include superb 2D imaging across patient types, visualization of vasculature with color Doppler, tumor assessment with contrast-enhanced ultrasound (CEUS)*, and liver stiffness assessment with ElastPQ.

Why ultrasound matters in liver examination

Liver fibrosis and cirrhosis affect millions of people worldwide. Causes range from alcoholism to Hepatitis B or C to hepatotoxic drugs such as chemotherapy. Currently, liver biopsy, which is the gold standard for diagnosis, is not only expensive, but also painful and associated with risk of complications. Biopsies often need to be repeated to monitor the progression of the disease. In addition, liver biopsies,[1] which rely on information from a small tissue sample, can also yield inaccurate results. Ultrasound, which reveals valuable information for diagnostic insight, is a noninvasive, cost-effective approach to liver assessment. Advanced imaging capabilities allow ultrasound to play a key role in assessing the liver across a range of patient types.

Diagnostic confidence for even technically difficult patients

Advanced imaging capabilities change patient management. Affiniti provides versatility in liver imaging across patient types, including technically difficult patients, children, patients with pacemakers, and those with ascites.

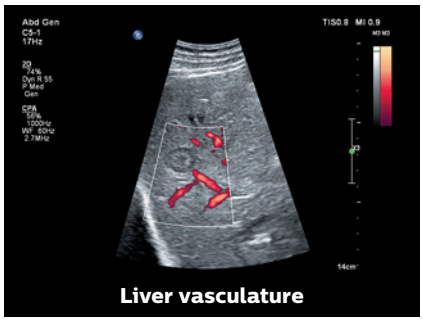


Liver

PureWave imaging increases penetration
PureWave transducers, including the C5-1 and C9-2 for abdominal imaging, are designed to increase penetration in technically difficult patients.

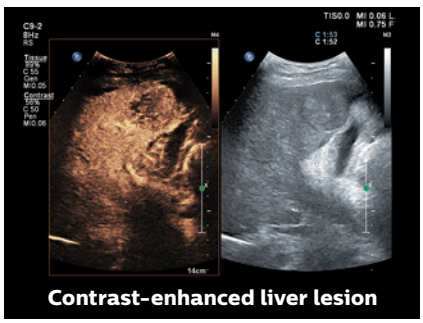
Liver and kidney

SonoCT and XRES offer superb images
SonoCT and XRES work in tandem to display superb images. Borders are well defined, tissue structure is differentiated, and irregularities seen in solid masses are well defined, allowing for quick diagnoses with confidence.



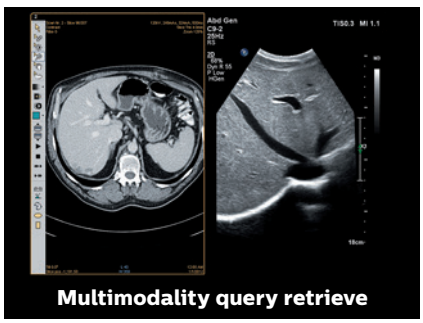
Liver vasculature

Color Power Angio (CPA) imaging for excellent sensitivity
CPA automatically adapts transmit and receive bandwidth processing based on the color box position, providing excellent sensitivity and color resolution.



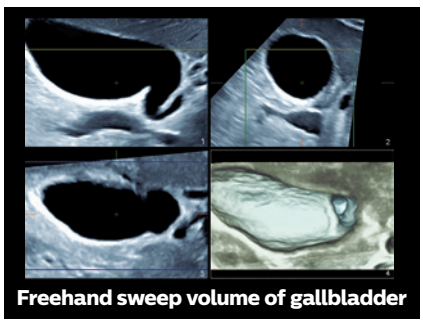
Contrast-enhanced liver lesion

CEUS* provides dynamic assessment
With Affiniti, you can easily add CEUS to nearly any exam. Affiniti provides immediate optimization of CEUS studies and exceptional performance across multiple agents and applications, which allows for dynamic assessment of organ and tumor perfusion in real time.



Multimodality query retrieve

Fusion and navigation* for multimodality assessment
Easy-to-use image fusion is now available on Affiniti for abdominal applications, allowing you to increase the power of your ultrasound exam. Use multimodality query retrieve to view DICOM images such as MR, CT, and ultrasound, and even review them while live imaging.



Freehand sweep volume of gallbladder

Volume imaging
Advanced 3D capability available as mechanical or freehand sweep to demonstrate spatial correlation between anatomical structures.

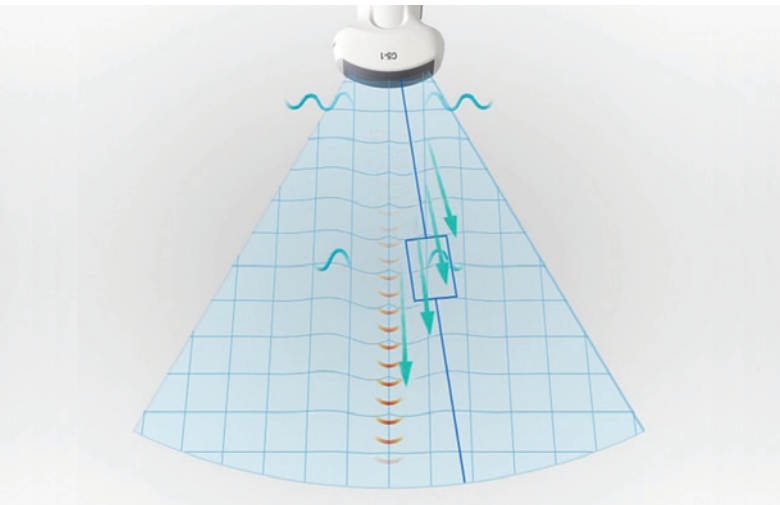
* Check for availability in your geography.

Workflow meets **wow**

Affiniti offers advances such as shear wave elastography to make it easy to bring noninvasive liver imaging into your practice.

Shear wave elastography for easy assessment
Philips ElastPQ liver stiffness assessment makes obtaining liver stiffness measurements surprisingly easy and fast, even for patients who are technically difficult to image.

Simplify liver assessment with noninvasive tools
Obtaining liver stiffness measurements with Philips shear wave elastography is noninvasive, making it a quick, simple step for sonographers and virtually painless for patients.



Philips elastography generates shear waves inside the liver by using acoustic force from a focused ultrasound beam. It then monitors shear wave propagation, measures the velocity, and displays results in a format that is easy to interpret.

Simple to add to your routine scans

Affiniti with Philips ElastPQ offers the ability to quickly and easily use shear wave elastography to assess liver stiffness.

When to use shear wave elastography

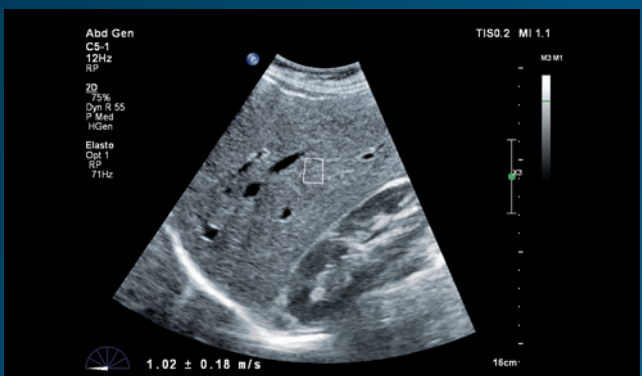
Liver shear wave elastography provides stiffness measurements for assessment of diffuse liver diseases and neoplastic lesions of the liver. It is noninvasive, so for some patients, shear wave elastography can turn what would otherwise be a series of painful, expensive biopsies into a well-tolerated method for follow-up and monitoring of the disease.

How long does it take?

Shear wave elastography is easy and fast. Perform a right intercostal scan of the liver, set the ROI between 1 and 2 cm below the liver capsule, avoiding vessels, and at a total depth of <8 cm. Press "Update". In less than a second, the measurement results are displayed on the image. The measurement is so fast that you can add it to your routine abdominal scans for critical data early in the diagnostic process and without compromising your lab schedule.

What do results look like?

Image and measurement results are displayed in kPa or m/s. Results displayed include mean and median values, and standard deviation. If measurement reliability is low, "0.00 kPa" will be displayed as the result. The Elastic Modulus E [kPa] is calculated using the equation $E = 3\rho Vs$ where Vs [m/s] is defined as the shear wave propagation velocity and ρ as tissue density.



Liver elastography point quantification

Key takeaways for Philips ElastPQ liver stiffness assessment*

- Easily combine a routine ultrasound imaging exam of the liver anatomy with targeted tissue stiffness values
- Evaluate and obtain a baseline stiffness value in patients with chronic liver disease
- Follow up patients under treatment to monitor progression, stabilization, or regression of liver disease
- Help avoid the need for liver biopsies when elastography results are consistent with other clinical findings

* Courtesy of Richard G. Barr, MD, PhD, FACR, Diagnostic Radiology, Southwoods Imaging, Youngstown, Ohio.

Comfort meets **competence**

Designed around your everyday workflow, Affiniti offers walk-up usability, favorable ergonomics, and convenient mobility. We understand the reality of tight spaces, high patient volume, technically difficult patients, and time constraints, and we've designed Affiniti with thoughtful details to help lighten your workload.

Walk-up usability

The intuitive, intelligently designed user interface and system architecture have been validated by studies that show that users with ultrasound experience require minimal training on use of the system to be able to complete an exam.[2]

Reduced reach and button pushes

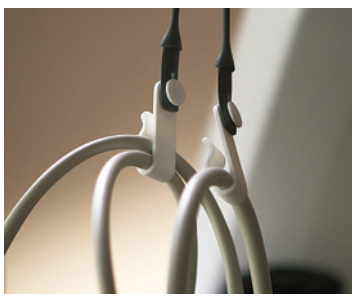
To enhance exam efficiency, Affiniti is designed with relevant, easy-to-learn controls placed right at your fingertips, streamlining workflow. Because 80% of ultrasound clinicians experience work-related pain, and more than 20% suffer a career-ending injury,[3] we've designed our tablet-like touchscreen interface to reduce reach and button pushes.

Scanning comfort

Affiniti is designed for comfort during a full day of scanning. The control panel with 180° of movement and generously sized 54.6 cm (21.5 in) articulating monitor enhance scanning comfort whether standing or sitting. The touchscreen is one of the largest in its class, so you can easily make selections and control scanning while focusing on your patients.

Ready when you need it

At just 83.5 kg (184 lb), Affiniti is one of the lightest systems in its class and is 16% lighter than its predecessor.* With its small footprint and fold-down monitor, maneuvering the system down hallways and into tight spaces is easy. When an exam is finished, a full suite of DICOM and PC format capabilities make it simple to share information. Structured reporting facilitates patient workflow by giving you the ability to transfer measurements, images and reports over a network, and wireless capability and easy connection to printers helps you document exams.



You won't notice it's there unless it's gone, but users have reported that easy clip, our innovative cable management solution, keeps cables tangle-free and reduces damage while decreasing cable strain to enhance comfort while scanning.

* HD15.

Built to withstand the rigors of daily use, Affiniti offers low operating costs and is backed by Philips support and value-added services. With a low total cost of ownership, Affiniti is a wise choice.

A **smart** investment

Enhance uptime
The modular design of Affiniti offers enhanced reliability and allows for rapid repair. Philips remote services* monitoring helps correct issues using a standard Internet connection, reducing the need for on-site service calls.

Responsive relationships
The value of a Philips ultrasound system extends far beyond technology. Every Affiniti system comes with access to our award-winning service organization, competitive financing, and educational programs to help you get the most out of your system.

Doing more for you
Smart service options* are designed to reduce disruption to your everyday workflow. We also offer technology to keep your data secure, and education and utilization reports for wise decision-making every step of the way.

Exceptional serviceability
The system features a superb modular design for rapid repair.

Service Request button for immediate access to Philips support.

Affiniti consumes nearly

40%

less power

than its predecessor.†
It consumes less energy than a toaster, which can help you save on energy and cooling costs.

* Not all services available in all geographies; contact your Philips representative for more information. May require service contract.
† HD15.

1. Barr R. Noninvasive liver fibrosis assessment. Philips White Paper, Jan 2016.
2. 2014 internal workflow study comparing Affiniti to HD15.
3. Society of Diagnostic Medical Sonography, Industry Standards for the Prevention of Musculoskeletal Disorders in Sonography, May 2003.

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