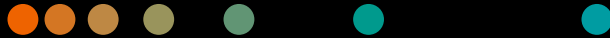


ACUSON Sequoia Ultrasound System

Clarify with Confidence

Crown Edition



ACUSON Sequoia

Delivering clinical excellence
across ultrasound specialties

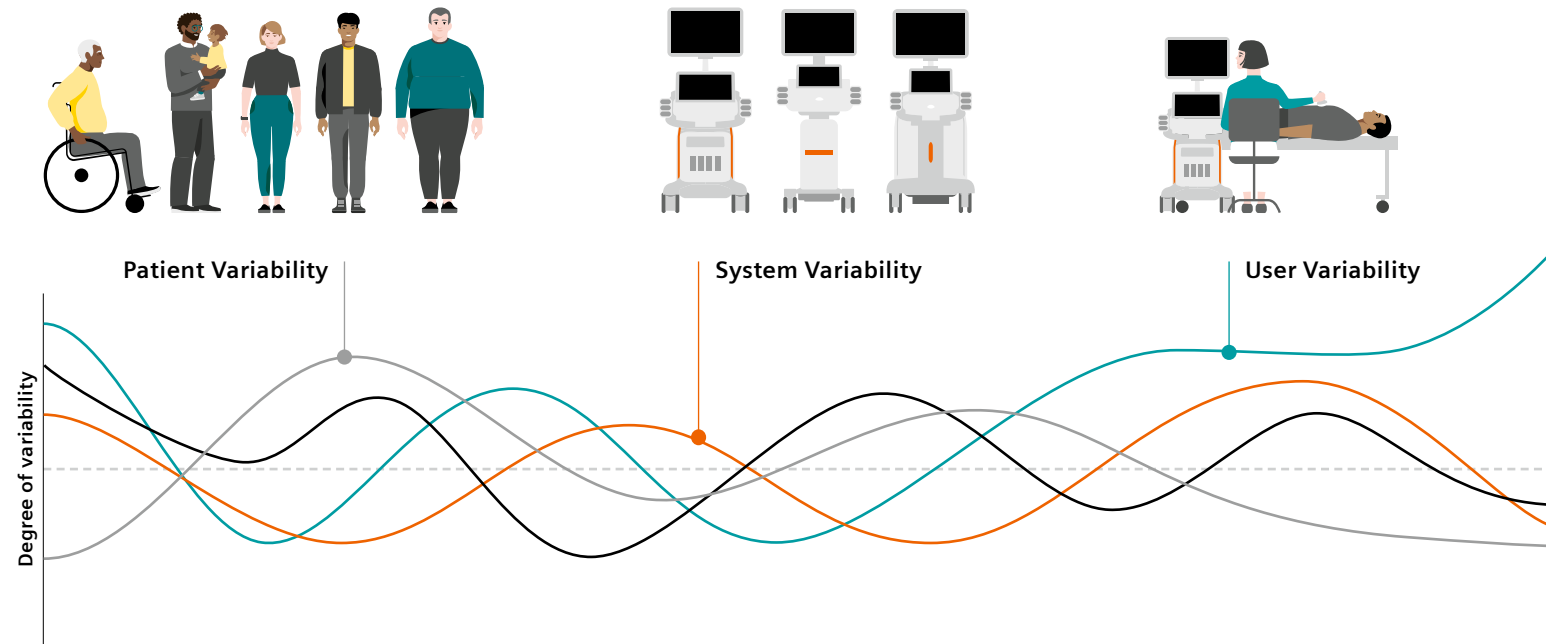
The ACUSON Sequoia is a fully featured Ultra-Premium ultrasound system that includes innovative imaging, proprietary technologies, best-in-class AI technology, and specialty transducers designed to improve diagnostic accuracy in nearly every clinical use case.

ACUSON Sequoia provides healthcare providers with advanced technologies and applications that intelligently respond to patient- and user-specific needs. Tailoring diagnosis and therapies to each patient's profile helps to improve clinical, operational and financial outcomes.





Ultrasound's potential has been limited by unwarranted variability



Ultrasound users are faced with a patient population that is increasingly harder to scan.

Ultrasound devices are complex products. Differences in technology can inhibit the user's ability to generate accurate and reproducible measurements during an exam.

Studies have demonstrated that significant intra- and inter-observer variability can pose a challenge to the standardization of care delivery.

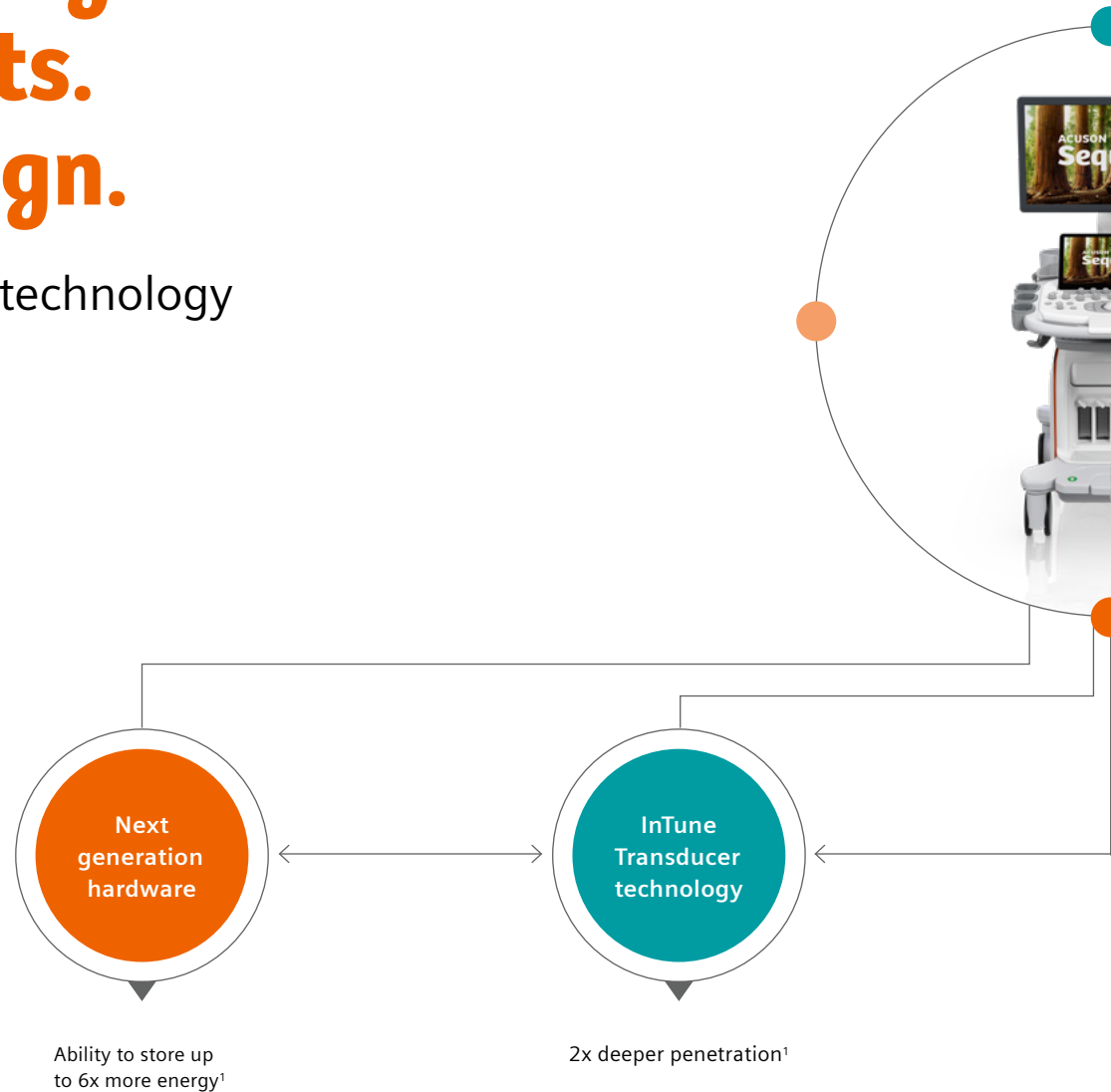
Intelligent Imaging. Expanded Insights. User-Driven Design.

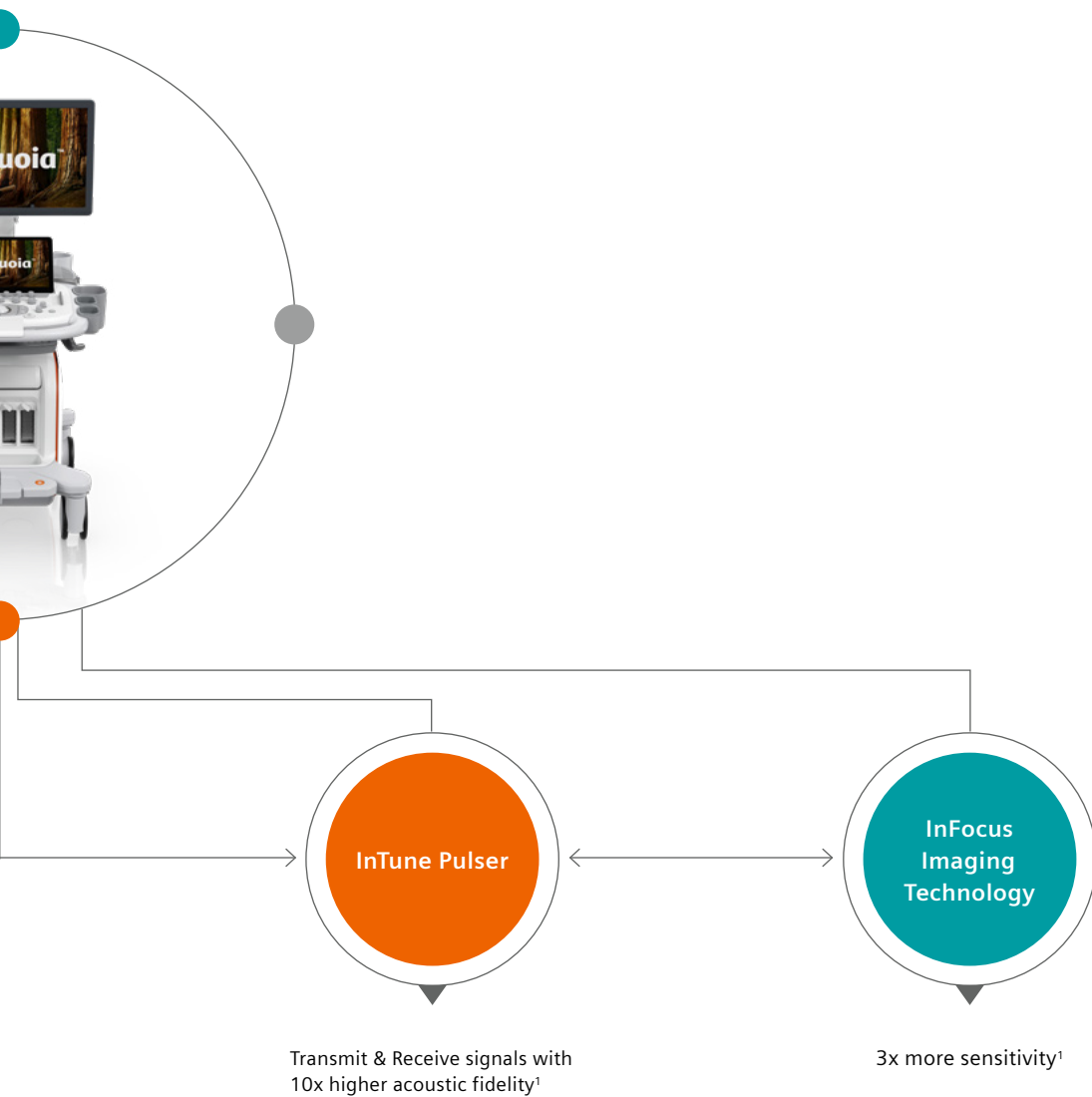
Powered by BioAcoustic imaging technology

Boost your clinical confidence with a system designed to enhance your expertise. The ACUSON Sequoia gives you the power to know more by maximizing the sensitivity and depth of your scans, while reducing variability across patients, systems and users.

An unmatched list of advanced application offerings allows clinicians to personalize ultrasound to a patient's specific needs.

Powerful AI-enabled tools and user-centric interfaces improve workflow efficiency allowing clinicians to focus more on their patients.





Intelligent Imaging

Experience powerful imaging and reduced variability with automation in each major mode and a wide selection of advanced transducers.



Expanded Insights

Expand your expertise with advanced tools and AI innovations designed to improve diagnostic accuracy and patient outcomes.



User-Driven Design

Embrace advanced productivity with AI powered tools and an intuitive design for the ultimate user experience.

AI that leads change

Healthcare professionals are facing multiple challenges: an increasing shortage of trained workforce, and the lack of standardization that drives better outcomes.

With the innovations onboard ACUSON Sequoia, we're addressing your challenges directly with practical AI that supports improvements in your quality of care and solves these issues in entirely new ways. We're making exams faster and more efficient to improve quality and throughput. We're reducing the amount

of manual movement required during an exam to mitigate injuries and fatigue. And we're reducing variability across patients, users and systems with proprietary AI and transducers.

Enabling you to make the most of your clinical team's time and talent, so they can focus on patient care.





Faster exams from
automated measurements



Fewer keystrokes with
automated labeling



Reduced strain and pain by
fewer manual movements



Easier protocol adherence
from automatic image ordering
achieved by AI and transducers



Increased standardization
achieved by AI and transducers

Intelligent Imaging

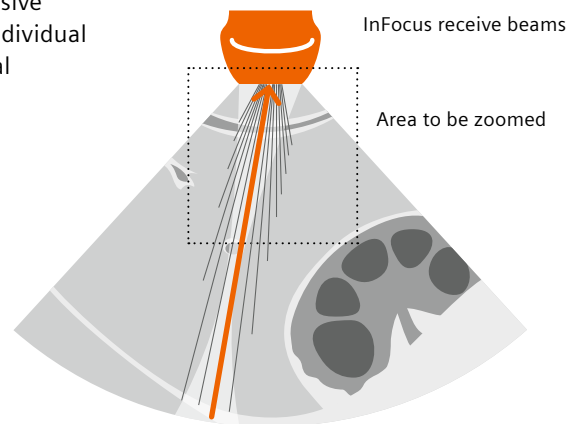
Powerful automation and advanced transducers for easier imaging

Fully focused images in record time

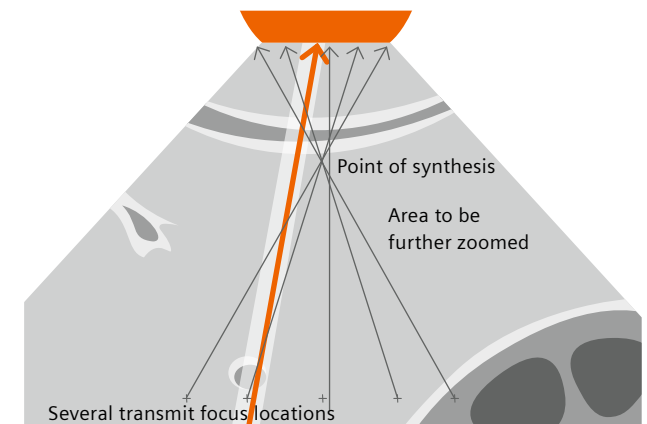
The ACUSON Sequoia ultrasound system's powerful architecture eliminates the need for conventional focal zones to create a fully focused image with faster frame rates than conventional systems.

InFocus uses synthesized, retrospectively focused transmit beams throughout the field of view that focuses at all depths. More information is harvested from the usual transmit sequence, using massive overlapping multibeam groups rather than individual or close parallel beam lines as in conventional systems. Secondary beamforming is enabled

with InFocus and physics-based delay technologies. Amplitude corrections can be made across transmit events to significantly sharpen the image and improve spatial resolution beyond what is typical for a given transducer frequency.



InFocus utilizes multiple simultaneous receive beams covering a region with a single transmit.



Many receive beams per transmit event leads to many interrogations per image point.

Get clearer deeper perspective

Next generation transducers specifically designed to produce optimal acoustics for each clinical use case. The acoustic matching between transducer and patient was optimized using advanced materials science and optimized test protocols, together with the electrical signal path between the transducer and system, resulting in superior signal fidelity.

Compact-pinless connectors further improve signal-to-noise ratio and feature one-handed plug and play connection.



DAX – Deep Abdominal Transducer with up to 73% color Doppler improvement.²



11M2 - microconvex transducer with single crystal technology. Supports Freehand 3D, Wide FOV, Slow flow, Clarify VE and gesture detection.³



HLX - High frequency linear with exceptional near field resolution. Bandwidth of 6 - 22 MHz and supports Freehand 3D, Slow flow, Next-Gen 2D SWE, Needle Enhancement and gesture detection.⁴

Boost your clinical confidence

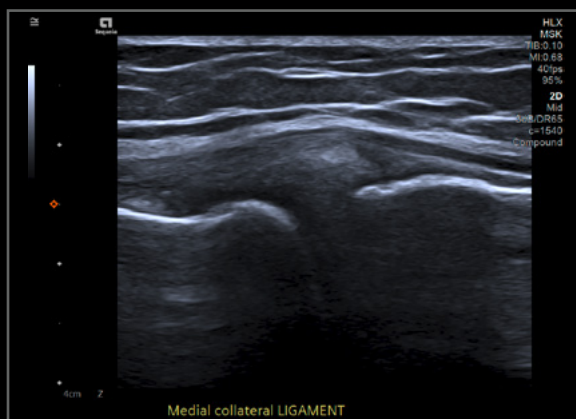
Scanning patients can be a daily challenge for many ultrasound users. Our new HLX, 11M2 and innovative DAX transducers are dedicated tools that allow you to see clearer and deeper, providing diagnostic confidence when you need it most.





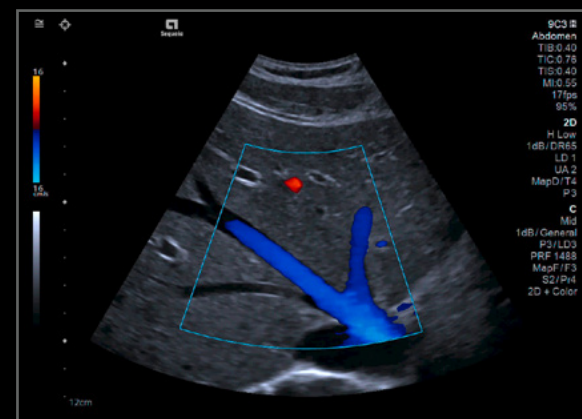
InFocus Imaging

Fully-focused imaging of the liver and right kidney utilizing InFocus Technology that delivers image uniformity throughout the field of view.



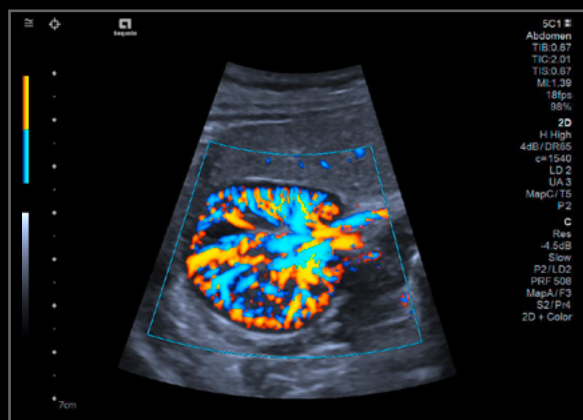
High Frequency Linear Transducer

Utilizing the high frequency HLX transducer, structures can be visualized in greater detail resolution as shown in this image of the medial collateral ligament.



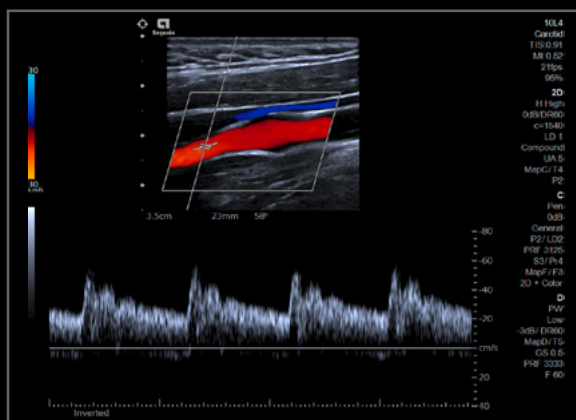
AutoFlash Color Suppression Technology

Reduce color flash artifacts without user interaction for improved color sensitivity and performance, even when a patient is actively breathing.



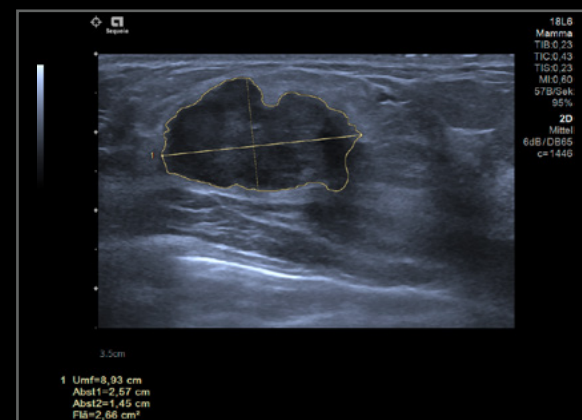
Slow Flow Color Doppler

Using smart filters and adaptive signal enhancement, slow flow can image smaller, low-flow vessels further into tissue like this kidney.



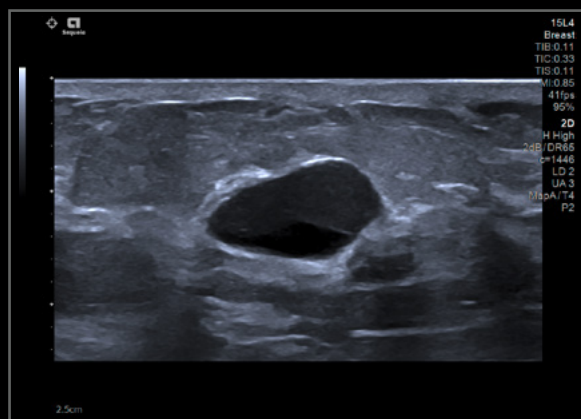
Auto Doppler and Spectral

Auto Doppler can reduce the number of exam keystrokes by more than 25%.⁵ It automatically places the Doppler gate for fast and accurate sampling of the flow velocity. Auto Spectral Doppler automatically optimizes the gain, baseline, scale, and wall filter, keeping operator adjustments to a minimum.



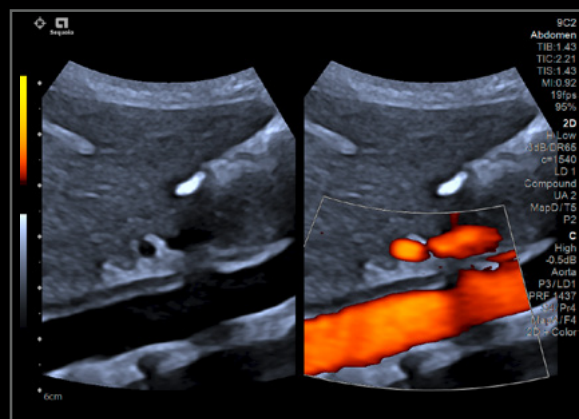
AutoCalcs

Delivers comprehensive measurements of complex lesions. Uses a machine learning algorithm that instantly calculates maximum length, AP and circumference improving measurement efficiency and variability.



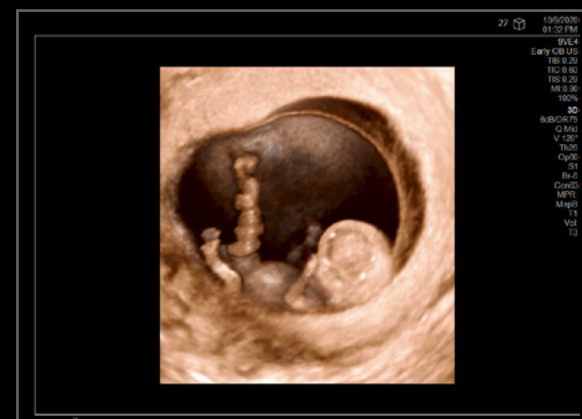
Speed of Sound Adjustment

Adjusting the speed of sound can improve contrast and detail resolution, which allows for the most accurate representation of different types of tissues, as shown in this image of a breast mass.



High Frequency Curved Transducer

The new 9C2 high frequency curved single crystal transducer provides superior detail and contrast resolution in pediatric imaging.



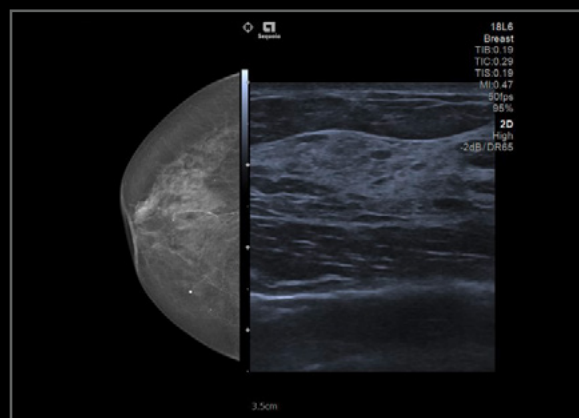
Volume Imaging

3D/4D imaging allows you to visualize anatomy in new dimensions for improved confidence as demonstrated in this surface rendering of an early OB.



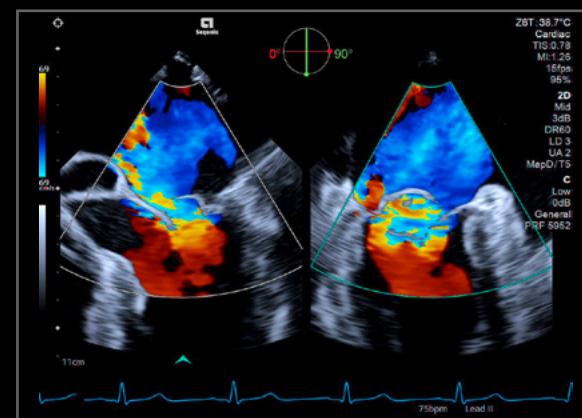
Single Crystal Technology

See highly detailed resolution like never before with the 11M2 micro-convex transducer as shown in this midline image of a pediatric pancreas.



Modality Compare

Easily pinpoint regions of interest and improve procedural efficiency by importing and viewing previous patient studies alongside real-time ultrasound images.



Bi-plane with Color Doppler

Bi-Plane+ image of mitral valve prolapse with Color Doppler demonstrates severe regurgitation utilizing the Z6T transesophageal transducer.



Expanded Insights

Advanced tools and applications that deliver deeper clinical insights

Improve diagnostic accuracy and confidence

The ACUSON Sequoia ultrasound system is designed for outstanding performance and features, including AI for Abdomen and Shared Services, contrast-enhanced ultrasound (CEUS), and elastography. It sets a new standard in quantifying liver fat through the Ultrasound Derived Fat Fraction (UDFF).

With its industry leading performance, the ACUSON Sequoia ultrasound system enables healthcare professionals to access the clinical information needed for personalized precision medicine.

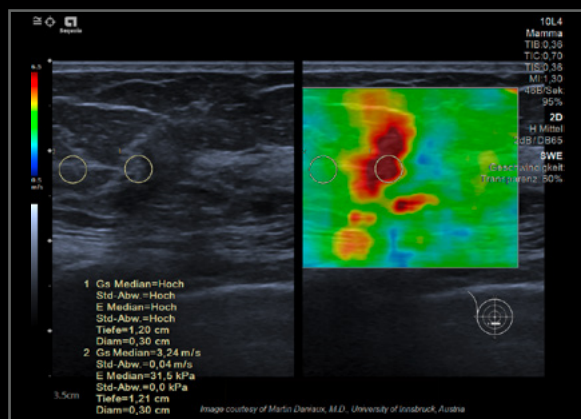
The ACUSON Sequoia is addressing clinical use cases leveraging the comprehensive advanced applications toolbox offered by the ACUSON Sequoia ultrasound system – from quantification and characterization of tissue to interventional procedures.



Next gen breast 2D-SWE to characterize breast lesions as benign or malignant.

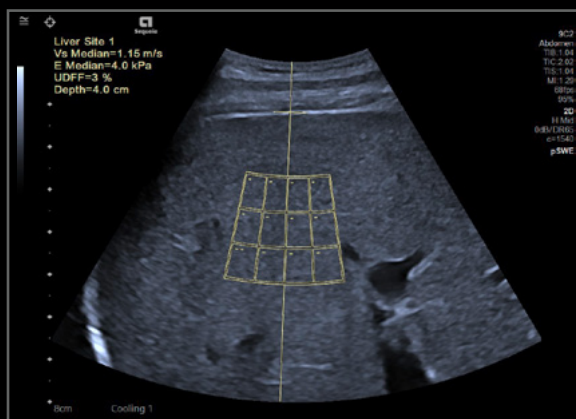


AI Abdomen automatically recognizes and labels 17 anatomical views and calculates 12 key measurements in milliseconds.



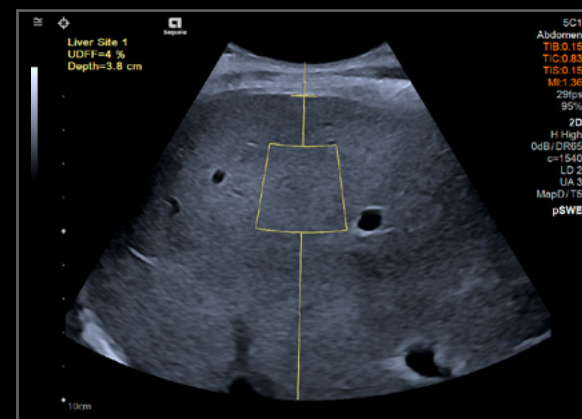
Next Generation 2D-SWE

Experience greater sensitivity in the detection and visualization of malignant breast lesions with Next-Gen Breast Elastography.



Auto pSWE

Rapidly reduce liver elastography acquisition time up to 75%⁶ by acquiring up to 15 valid pSWE measurements in less than 5 seconds.



UDFF

Show strong diagnostic performance for assessing severity of hepatic steatosis in adults and children.⁷



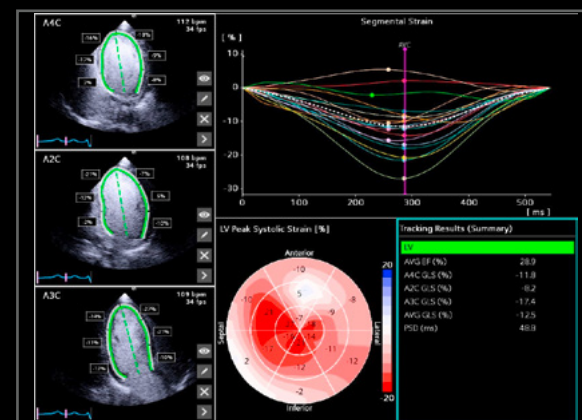
AI Abdomen

AI powered imaging recognizing and labeling 17 views in a routine abdominal exam, along with placing a body marker on the image. It can be used with or without protocol scanning.



AI Abdomen Measure

AI Abdomen – powerful AI tool for imaging that can automatically perform up to 12 routine measurements during an abdominal exam, including the common bile duct demonstrated in this image.



2D Heart^{AI} – Contrast Quantification

The AI-powered 2D Heart^{AI} feature provides single-click analysis of size, function, and bull's-eye analysis with segmental strain curves. Measurements can be performed on contrast enhanced images and does not require an ECG.



User-Driven Design

Designed by users for a best-in-class operator experience

The variability inherent in the ultrasound scanning process can pose a challenge for users. In an effort to eliminate variability, Siemens Healthineers hosted 170 workshops with 365 ultrasound users worldwide to create an ultrasound system designed by users, for users.

Leveraging automation, machine learning and listening to ultrasound users, every detail was re-imagined to reduce complexity and improve the user experience.

Preferred by users

Overall usability of an ultrasound system determines how well advanced technologies and diagnostic tools are able to expand healthcare professional's clinical capabilities. The ACUSON Sequoia ultrasound system was evaluated by an independent user experience design and development company in terms of user performance and user satisfaction.

The ACUSON Sequoia ultrasound system earned a system usability score (SUS) of 86% and user preference score of 82%, scoring higher than the conventional ultrasound systems participating in the study.⁷





Reducing variability and operator burden

170

workshop sessions

with 365
ultrasound users⁸



Designed with

- 1-Click registration
- Gesture detecting transducers
- UltraArt Universal image processing

Resulting in

- + Reduced variability between users
- + Reduced scan time
- + Automated protocols
- + Reduced Repetitive Strain Injuries (RSI)



User-Driven Design

Increase productivity with built in automation and AI



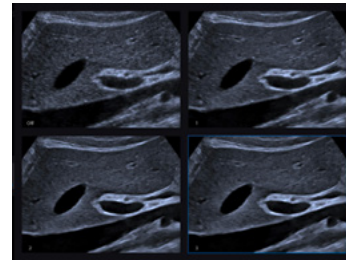
1-touch registration

Machine learning technology automatically selects the correct transducer and exam type for a patient scan supporting a seamless workflow.



Gesture detecting transducers

Tap on the transducer handle to quickly activate and start scanning with the ACUSON Sequoia ultrasound system's unique sensor technology.



UltraArt universal imaging technology

Exclusive UltraArt universal image technology allows users to select their image preference from a real-time touch screen display.



Virtual Workstation

Establish a connection to a remote computer or server to access remote applications directly from the ultrasound system.



24" Barco monitor

Dual-layer technology medical imaging display brings image consistency from the exam room to reading room.

Smaller intuitive touch display

A 13.3" touch screen provides an enhanced user interface that improves ergonomics and workflow.

Integrated gel warmer

An integrated gel warmer can be placed on either side of the system.

Larger storage areas

One integrated storage bin and storage shelf option.

Central locking and steer pedals

A central locking mechanism eliminates the need to lock each wheel individually, enhancing maneuverability.

Floating control panel

Designed to fit every room and workflow, the control panel can swivel 180 degrees for seamless workflow.

Customer Service

Solutions designed for maximum performance

With Siemens Healthineers, you have options when it comes to protecting your ultrasound investment with a service contract. Whether you choose our full service support that gives you peace of mind, a shared service contract that empowers your in-house biomedical engineers, or something in-between, our experts are here when you need them.

Kinectus Remote Service

Kinectus remote service is a secure, easy-to-use, cloud-based solution that keeps your ultrasound system connected, your software up to date, all while minimizing service costs and adhering to current security and compliance guidelines.

Powered by AWS (Amazon Web Services), Kinectus enables quicker resolution via remote technical support and remote application support. It also provides faster updates through on-demand and automatic remote software updates – all with a secure connection.

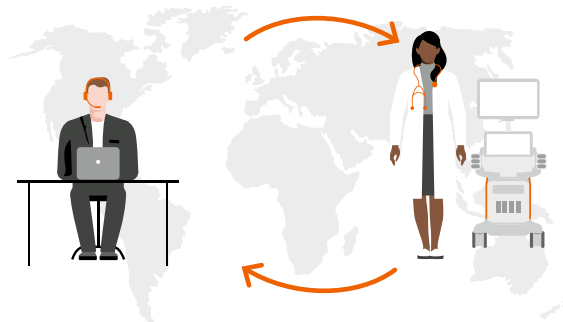
Software Upgrades

TechUp 18 protects your investment with a service contract including a software upgrade program.

This program guarantees eligible customers to receive at least one software upgrade every 18 months. Software upgrade may include enhancements to existing software licenses and workflow improvements.

TechUp Now is our newest and most flexible software upgrade package. Extend the lifespan of your ACUSON Sequoia ultrasound fleet with regular software upgrades throughout your service contract. TechUp Now also gives you the freedom to choose whether to upgrade when a new software release comes out, allowing you to maintain uninterrupted staff workflow.

TechUp 18 and TechUp NOW are add-on options for qualifying service contracts to help enhance the investment in your Siemens Healthineers ultrasound system.







Why Siemens Healthineers?

We pioneer breakthroughs in healthcare.
For everyone. Everywhere. Sustainably.

At Siemens Healthineers, we pioneer breakthroughs in healthcare. For everyone. Everywhere. Sustainably. As a leader in medical technology, we want to advance a world in which breakthroughs in healthcare create new possibilities with a minimal impact on our planet. By consistently bringing innovations to the market, we enable healthcare professionals to innovate personalized care, achieve operational excellence, and transform the system of care.

Our portfolio, spanning in vitro and in vivo diagnostics to image-guided therapy and cancer care, is crucial for clinical decision-making and treatment pathways. With the unique combination of our strengths in patient twinning, precision therapy, as well as digital data, and artificial intelligence (AI), we are well positioned to take on the greatest challenges in healthcare. We will continue to build on these strengths to help overcome the world's most threatening diseases, enable efficient operations, and expand access to care.

We are a team of more than 71,000 Healthineers in over 70 countries passionately pushing the boundaries of what is possible in healthcare to help improve the lives of people around the world.



Keeping you protected from Cyber Threat

The Windows 10 operating system and state-of-the-art cybersecurity program protects the privacy of your data and strengthens your systems' resiliency from external cyberattacks.

The scientific overlay is not that of the individual pictured and is not from a device of Siemens Healthineers.

The products/features mentioned in this document may not be commercially available in all countries. Due to regulatory reasons their future availability cannot be guaranteed. Please contact your local Siemens Healthineers organization for further details. Standalone clinical images may have been cropped to better visualize pathology.

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syngo VVI is a trademark of Siemens Healthcare GmbH.

¹ Data on file.

² Link to publication: [https://www.clinicalimaging.org/article/S0899-7071\(22\)00242-X/fulltext](https://www.clinicalimaging.org/article/S0899-7071(22)00242-X/fulltext)

³ Compared to 9C3 transducer

⁴ Compared to 18L6 transducer

⁵ Data on file. Keystroke is defined as any interaction with the ultrasound machine including touchscreen taps and swipes, mouse movement, flat key presses, soft key twists, and soft key presses.

⁶ Data on file. Many variables exist in the customer environment including sonographer techniques, which may affect individual customer experience.

⁷ Macadamian Usability Test Study using the ACUSON Sequoia. Study result data on file. More information also available at www.macadamian.com.

⁸ Macadamian Technologies

* Diagnostic performance indicates Area Under Receiver Operating Characteristic (AUROC $\geq$ 0.88).

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