

# ARIETTA S70

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We strive to provide quality products and services for our customers.

We operate with regard for the environment.



## Hitachi Aloka Medical, Ltd.

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## Sense and Visualize Ultrasound

Hitachi Aloka Medical manufactured one of the world's first diagnostic ultrasound platforms, and today this imaging modality has become the first choice examination for many disorders. If the subtlest of changes not previously captured could now be seen, it would bring greater reassurance to both patients and doctors. The new brand "ARIETTA" is born out of the experience cultivated from the past and channelled into one force to create the new generation ultrasound platform to meet that challenge.

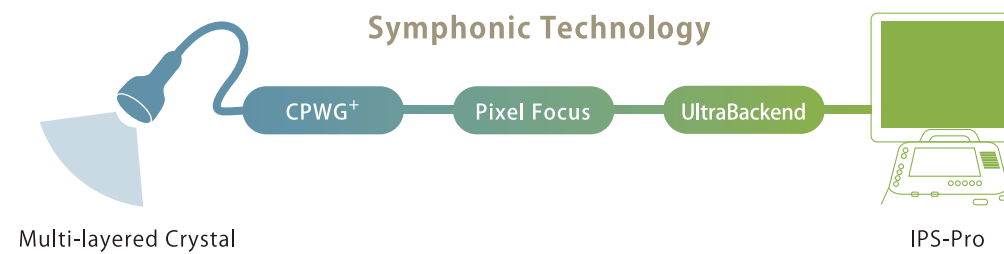
# ARIETTA S70



## Clearly defined technologies of ARIETTA S70 underpin the outstanding quality of diagnostic images

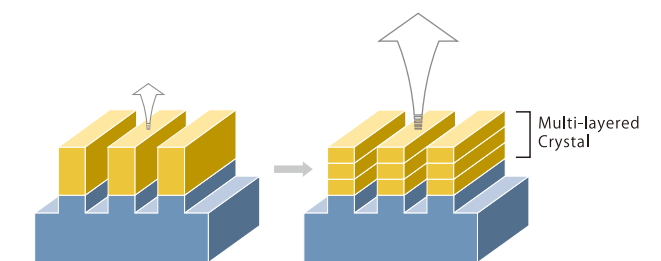
The clinical performance of a diagnostic ultrasound system is built on the quality of the individual ultrasound beams. The advanced architecture of the ARIETTA S70 has been redesigned, its unprecedented performance created by the commitment to produce the highest quality "sound". Clearly defined technologies capture the subtlest of changes, steering you towards a rapid and definitive diagnosis.

To see the subtlest of changes



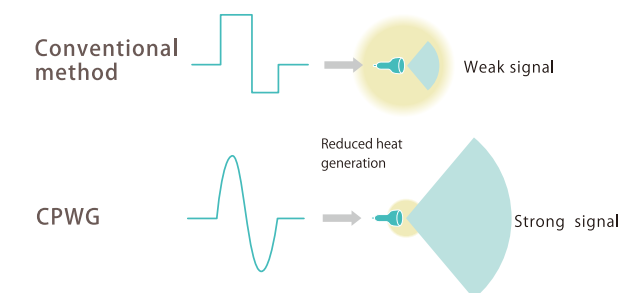
### Multi-layered Crystal technology

Multi-layered Crystal technology allows more efficient transmission and reception of the ultrasound pulse with minimal energy loss, increasing both the sensitivity and clarity of the images.



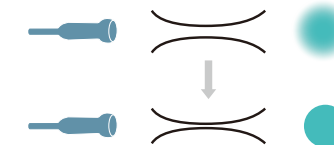
### Front-end technology

Integrating components of the probe connector suppresses noise and enhances S/N (signal to noise ratio). The Compound Pulse Wave Generator (CPWG<sup>+</sup>) produces efficient transmission waveform to obtain high sensitivity and resolution.



### Pixel Focus

Focusing at pixel level for increased precision and clear delineation of the region of interest.



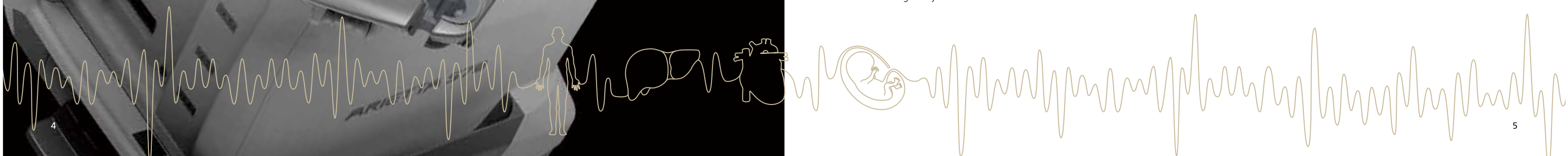
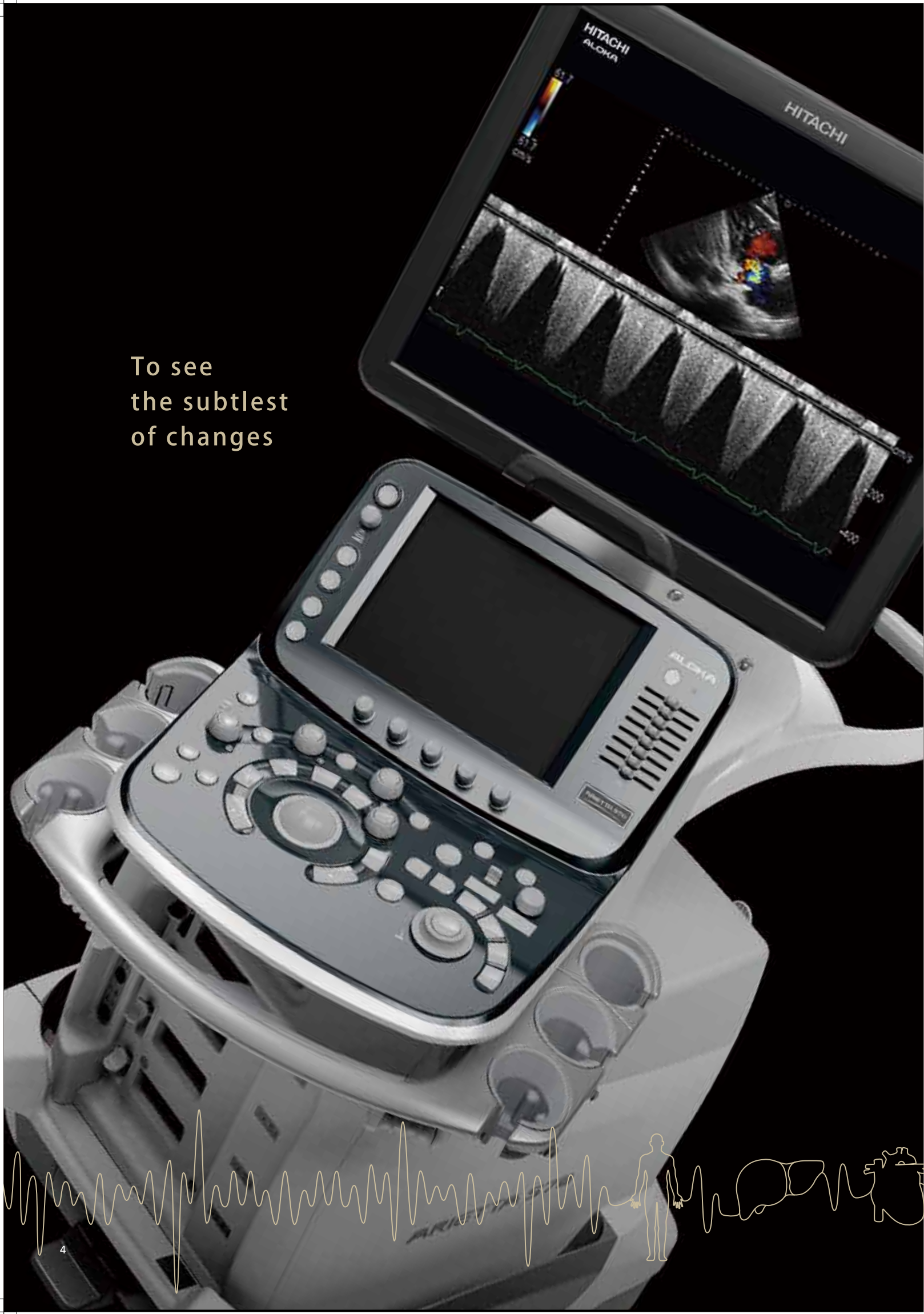
### IPS-Pro (In-Plane Switching) panel technology

With a high contrast ratio and wide viewing angle, the IPS-Pro monitor gives a rich representation of the displayed image.



### Back-end technology

Fully software-oriented, high-speed computing is employed in the back-end enabling powerful image processing producing images with outstanding clarity.



# ARIETTA

## Unparalleled scanning comfort supported by ARIETTA S70's usability

To realize the ideal that high quality diagnostic images can be achieved in any clinical setting, the ARIETTA S70 incorporates features that reduce stress and improve its ease-of-use. Detailed ergonomic design that meets recommended industry standards supports a comfortable working environment.



### Lighter by 45%

We have achieved a weight reduction of 45% compared to our previous models. Combined with the adoption of large-sized casters, it makes the system very mobile.

### User-friendly operation panel

Two-way multi rotary encoders enable the adjustment of many functions in one control, significantly reducing hand and arm movements. The large palm rest at the center of the operating console is designed to give optimum wrist support.



### Adjustable panel height for your ease of use

The panel height can be lowered to 70 cm, allowing the operator to perform lower extremity examinations with a safe, comfortable reach to the operating console.



10.5" touch screen panel

Palm rest

Smooth vertical movement with dual arm articulation

Transducer connectors

One-step caster lock mechanism



21" IPS-Pro high-resolution monitor

Multi rotary encoder

Gel warmer

Side pocket for storage



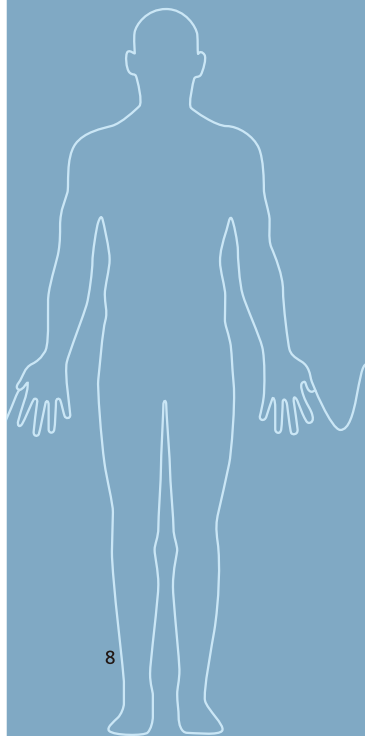


## Reduce patient-dependent variability for safer, more accurate and faster examinations

In the radiology field, high-level of accuracy and reliability are necessary to ensure early detection, precise diagnosis, and appropriate treatment. The ARIETTA S70 is equipped with advanced technologies that facilitate fast and accurate examinations.



**RADIOLOGY  
CLEARLY  
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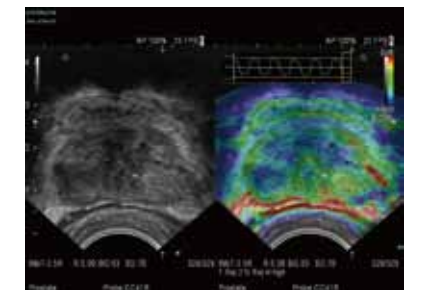
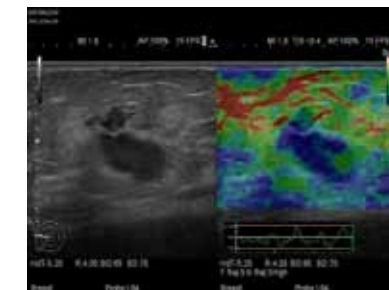
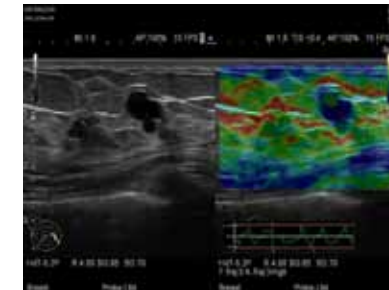


**ARIETTA**



## Real-time Tissue Elastography (RTE)

Real-time Tissue Elastography measures and displays tissue strain in real time to provide information of relative tissue stiffness. It has proven clinical value for routine use across a variety of different applications.



## Increase your diagnostic capabilities using contrast enhanced ultrasound

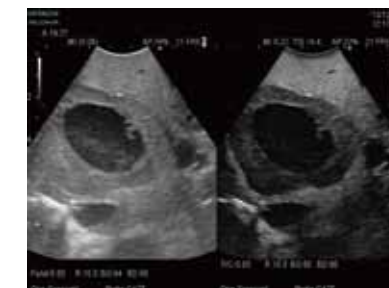
Contrast-specific software is supported for use with contrast agents operating with acoustic pressures from low to high MI, and is compatible with transducers for abdominal, cardiac and small parts transducers.



Liver cancer using C251 with Pulse Inversion

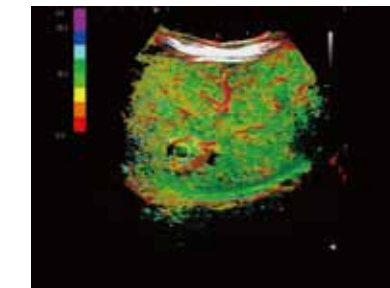
## Amplitude modulation

Achieve improved sensitivity at depth over that of conventional pulse inversion methods. Uniform contrast enhancement is seen in the liver from the near to far field.



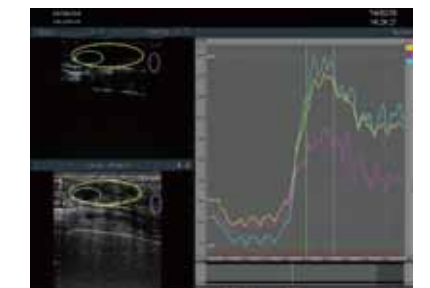
## Inflow-time Mapping (ITM)

ITM is a colored parametric display of time to peak enhancement for each pixel in the display, to better differentiate tissues by their speed of contrast agent uptake.



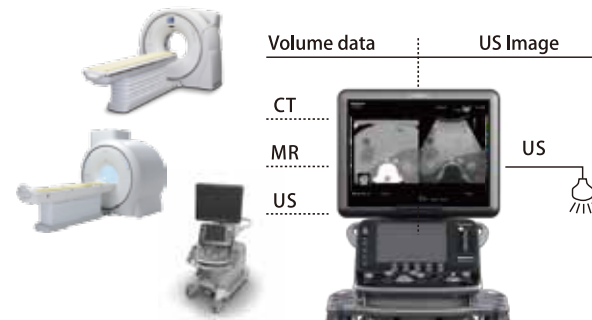
## Time intensity curves

Time intensity curves can be used to quantify and display changes in contrast agent enhancement with time after injection in selected regions of interest.

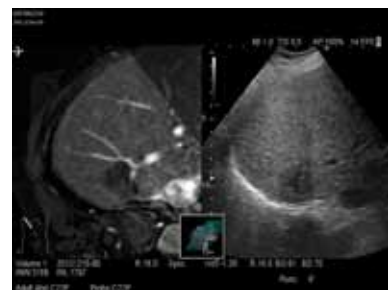


## Real-time Virtual Sonography (RVS)

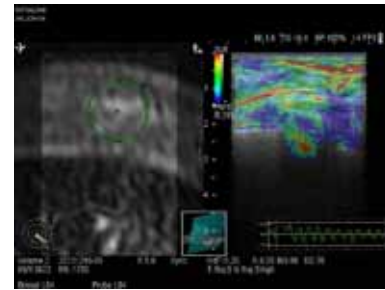
RVS merges real-time ultrasound with previously acquired CT, MR, PET or ultrasound images. It allows a direct comparison of lesions taking advantage of the strengths of each imaging modality.



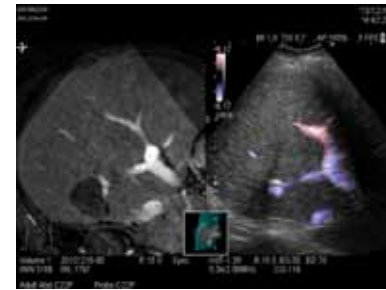
The position of a lesion in the ultrasound image can be more precisely determined with reference to the CT or MR image.



Liver (Used with Contrast Harmonic Imaging)



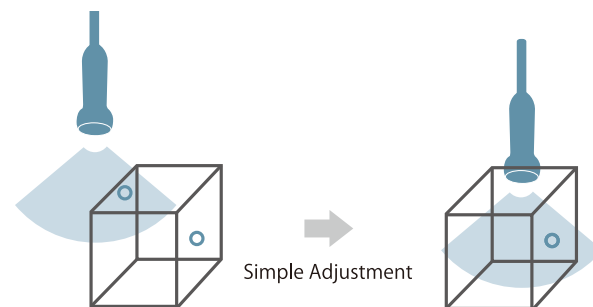
Mammary gland (Used with RTE)



Liver (Used with eFLOW)

## Simple adjustment

A simple alignment method using a single internal reference mark can be used when organ positions change slightly, for example, when creating an artificial pleural effusion, or when patient posture changes.



## Micro-convex transducer for biopsy procedures

This transducer with a small footprint permits easy access and angulation of the scan plane from narrow intercostal spaces. Supports intercostal access for biopsy of liver segments V – VIII and can be used in conjunction with RVS to offer superior image guidance for RFA treatment.



**SURGERY CLEARLY DEFINED**

## Emerging technologies offer optimum support for surgical precision

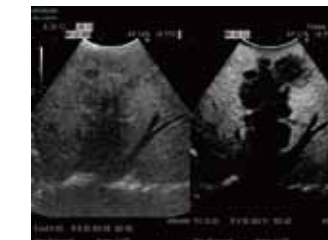
A diverse selection of transducers provide versatility for different surgical approaches. Advanced imaging modalities offer support that can lead to safer, more accurate diagnosis and treatment.

### T-shaped finger-grip transducer

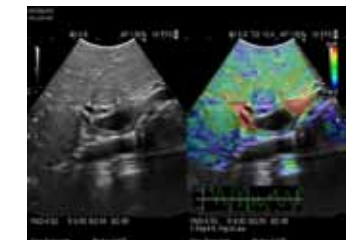
Scanning stability is achieved by gripping the transducer between fingers.

This T-shape transducer can be used to image in a transverse plane from the liver surface.

Contrast enhanced ultrasound and Real-time Tissue Elastography are offered in addition to high-definition B-mode and Doppler imaging.



Liver Metastasis (Used with Contrast Harmonic Imaging)



Liver Metastasis (Used with RTE)

### Various scanning approaches for safe surgery

Choose a transducer to match your particular surgical approach from our wide-ranging specialty lineup. Each transducer is designed for compactness and lightweight for easy operation while providing excellent performance.



Intraoperative linear transducer

### 4-way laparoscopic transducer

Flexible laparoscopic transducer with vertical and horizontal flexion.





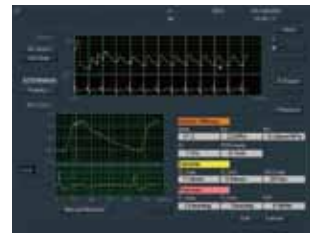
## Monitoring of vessels throughout the body aids early detection

The ARIETTA S70 is equipped with a variety of tools which enable different approaches for examination of the heart and vessels throughout the body. Unprecedented clarity of imaging can lead to a more definitive examination.



### Flow Mediated Dilatation (FMD)

For non-invasive evaluation of endothelial function.



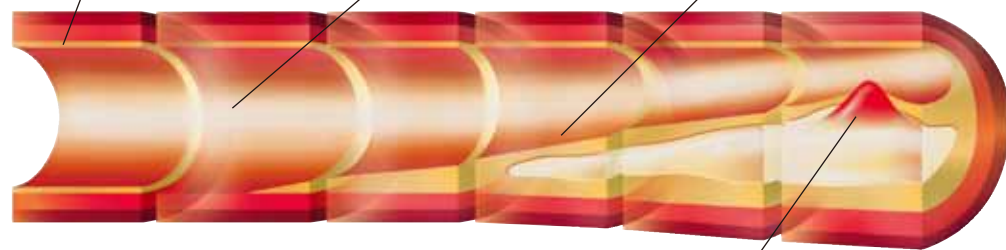
### Evaluation of early atherosclerosis (eTracking)

Uses the raw data as it tracks the RF signal from the arterial wall to analyse changes in vessel diameter in real time.



### Automated IMT (Intima-media Thickness) Measurement

From a designated ROI on a long-axis view of the vessel, maximum and mean IMT is automatically extracted.



### Wave Intensity (WI)

The wave intensity evaluates the way in which the heart interacts with the arterial system. WI is a calculation based on changes in blood pressure and flow velocity obtained at an arbitrary point in the circulatory system.



### Linear CW mode for evaluation of blood flow

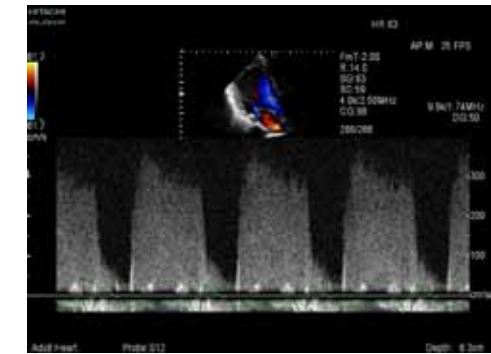
With CW Doppler mode, an accurate evaluation of high grade stenoses is attainable with the high frequency linear imaging transducers.

# ARIETTA



## Cardiac function evaluation

We aim to provide transducers optimized for subjects of all ages, and to minimize patient dependent variability in order to reduce exam time and enhance workflow.

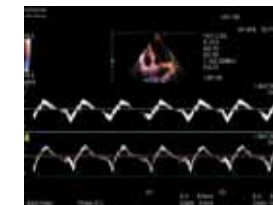


## Features to reduce examination time



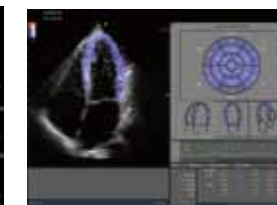
### EyeballIEF

Automatic tracing of the endocardium based on a built-in database of multiple tracings.



### Dual Gate Doppler

Enables observation of Doppler waveforms from two separate locations during the same heart cycle. Measurements such as the E/e' ratio can be measured, eliminating beat-to-beat variation.



### 2D Tissue Tracking (2D TT)

Provides precise quantitative measurements and information such as: longitudinal and radial strain, torsion rotation angle, displacement, wall thickening to quantify myocardial mechanics.




### Stress Echo

Multiple dynamic images taken before and after stress are simultaneously reproduced for effective evaluation of ischemic conditions and viability of cardiac muscle.

### Various Transesophageal (TE) Transducer

TE transducer are designed for patient comfort, maintaining excellent image quality and features in the amazingly fine probe shape.

- Rotary-plane TE transducer
- Motorized TE transducer



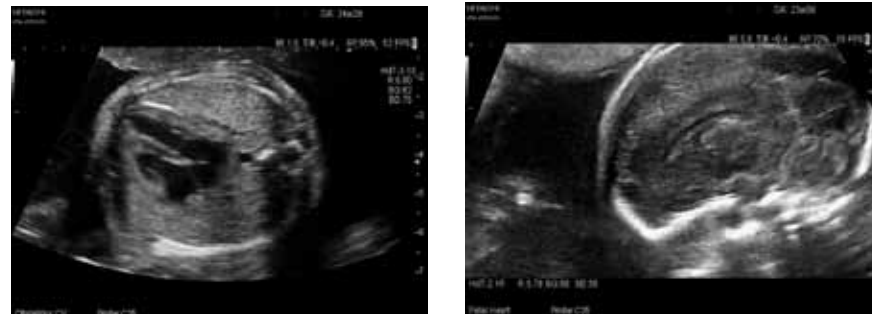
**CARDIOLOGY  
CLEARLY  
DEFINED**

## Reassurance delivered with more accurate, earlier diagnoses

Accurate diagnosis of maternal and fetal well-being can be realized using a diverse range of advanced functions that offer more reliable diagnostic information, providing reassurance to parents.

### High-resolution B-mode imaging

Clarity of detail in B-mode imaging is essential for fetal ultrasound examinations: to define the pregnancy, to observe fetal growth, and to exclude anomalies.



### Clinical Benefits of eFLOW

eFLOW is a flow mapping technology with exceptional spatial resolution. With accurate and detailed depiction of blood flow dynamics, both fine and larger vessels can be accurately presented.



### Accurate diagnosis in the 2nd & 3rd trimesters

Congenital heart disease is a leading cause of infant mortality. We offer basic and more advanced features for detailed, reliable assessment of the fetal heart.



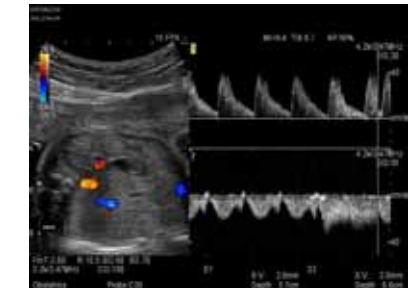
#### Spatio-temporal Image Correlation (STIC)

For the fast-moving fetal heart, multi slice 3D volume data sets of one heart cycle are reconstructed for better observation of the normal and abnormal heart.



#### Dynamic Slow-motion Display (DSD)

Display of a real-time image and its slow-motion counterpart side by side on one screen. Offers detailed observation of fast moving structures such as the fetal heart.



#### Dual Gate Doppler

Allows a Doppler measurement from two different locations simultaneously during the same heart cycle.

### Prediction of potential premature delivery

With Real-time Tissue Elastography, the anterior part of the cervix is displayed in a red and green colouring, indicating that this cervix is softening in the 2nd trimester.

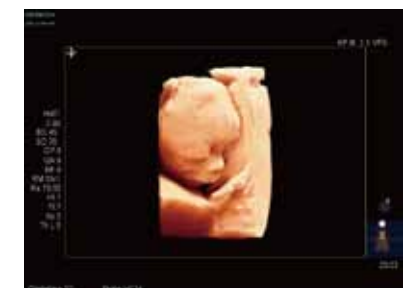


### Real-time 3D (4D)

Excellent surface rendering algorithms enhance detection and evaluation of fetal anomalies, and a better understanding can often be obtained when viewed with multi-slice imaging.



3D imaging can contribute to detection of malformations.



4Dshading

WOMEN'S  
HEALTH  
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