

Resona A20

Premium Ultrasound System for Radiology

Reveal What Matters



Reveal What Matters

By revealing the unseen, we empower you to embark on a transformative journey of discovery and understanding, enabling a deeper comprehension of human body and the world around us.

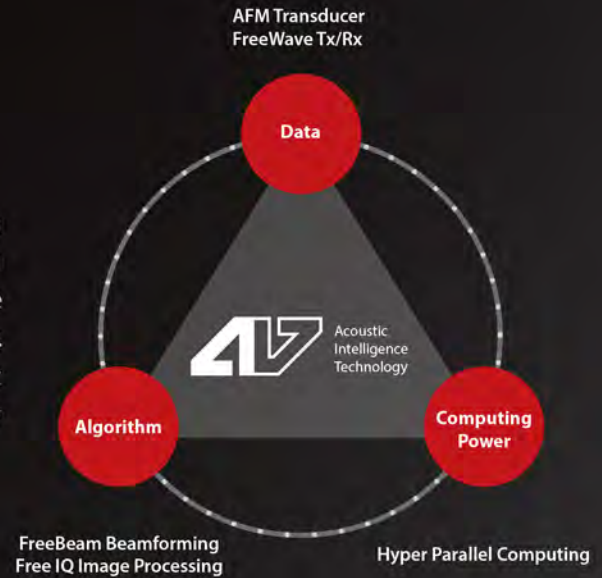
Driven by this mission, Mindray is about to release the premium ultrasound system - Resona A20. Powered by the Acoustic Intelligence Technology platform, it has pushed ultrasound imaging performance to a new level, helping clinical experts to achieve accurate diagnosis and academic exploration. Together, we can explore new horizons and push the boundaries of medical knowledge.



AIT Platform

Acoustic Intelligence Technology

The AIT Platform has achieved significant advancements in acoustic and electrical data, imaging algorithms, and system computing power. High-quality acoustic and electrical data are ensured by the AFM Transducer and FreeWave Tx/Rx Technology. Additionally, FreeBeam Beamforming and FreeIQ Intelligent Image Processing technology are dedicated to faithfully revealing tissue details.



AFM Transducer Technology

Acoustic Boost Technology

Diagram showing a cross-section of an acoustic transducer with 'Acoustic Boost Technology' and 'Piezoelectric Crystal' layers. A red arrow indicates a signal increase of '>50%'.

- Echo intensity increased by over 50%

Free Band Technology

Graph showing two overlapping frequency response curves. The x-axis is labeled 'Frequency'.

- More application coverage
- Enhanced harmonic image quality

Matrix Thin Slice Technology

Image of a blue probe tip emitting a light beam.

- Enhanced near-field resolution
- Improved uniformity
- Increased penetration in the far field
- Reduced volume artifacts

FreeWave Tx/Rx Technology

Diagram showing 'Arbitrary Wave' generation from '3 levels' and '5 levels' signals, and 'FreeWave Receive Sampling' compared to 'Traditional Receive Sampling'.

Hyper Parallel Computing

Image of a blue circuit board with glowing square patterns.

- Multi-core CPU
- Hyper Parallel Computing Units
- High Speed Data Transmission Channel

FreeIQ Processing Technology

Intelligent Pixel Compounding

Patient algorithms ensure the alignment of image pixels from different angles.

Intelligent Image Enhancement

- Extraction of various feature dimension layers
- Targeted processing for each layer
- Enhanced organizational characteristics across multiple dimensions

FreeBeam Beamforming Technology

Diagram on the left shows waveforms for 'FreeBeam', 'Fixed Window', and 'Unweighted' with annotations: 'Side Lobe Reduction Improve image contrast' and 'Main Lobe narrowing Improves spatial resolution'. On the right are three 'Sound Field Map' plots: 'ZST* Unweighted', 'ZST* Fixed Window', and 'FreeBeam Adaptive Beamforming', showing the reduction of side lobes and narrowing of the main lobe.

Precise Imaging Diagnosis

Based on the AIT platform, Resona A20 provides clinicians with superior ultrasound imaging clarity for difficult clinical disease diagnosis. HD Scope⁺ is based on the innovative adaptive beamforming technology, which further reveals the tiny details of lesions with powerful ultrasound diagnostic capabilities.

AFM Transducers

Mindray's next-generation transducers incorporate advanced technologies to enhance energy conversion efficiency, provide ultra-wideband coverage, and improve acoustic focusing capabilities, ensuring precise clinical diagnoses.

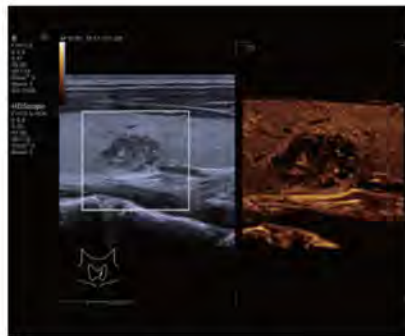


HD Scope⁺

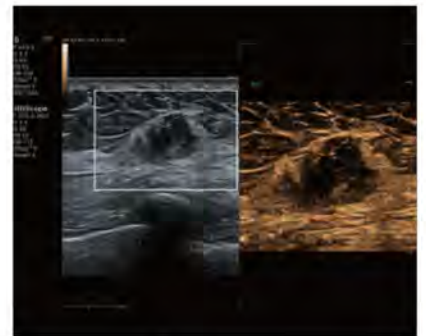
Powered by FreeBeam beamforming technology from the AIT platform, HD Scope⁺ can extract more effective echo information. Depending on specific clinical needs, target-focused image enhancement is achieved using FreeIQ processing technology. HD Scope⁺ and B-mode provide dual live imaging, revealing intricate details of lesions for deeper clinical insights.



Liver Cholangiocarcinoma



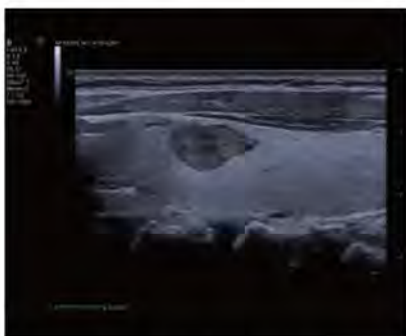
Thyroid Nodule



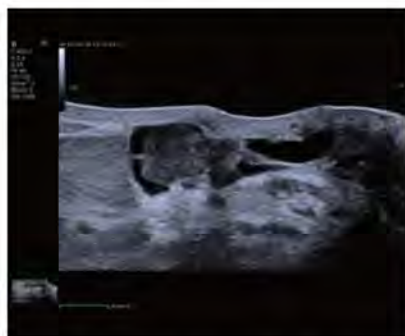
Breast Lesion

Ultra High Frequency Imaging

Resona A20's 18MHz, 24MHz and 33MHz transducers with AFM Transducer Technology are able to provide intricate details and definition of lesions for a wide range of applications.



Thyroid Nodule LM18-5WU



Breast Papilloma LM24-6WU



Median Nerve L33-8U

Advanced Imaging Technology

Advancements in ultrasound technology have transformed diagnostic capabilities from qualitative to quantitative analysis. Mindray's multi-parametric ultrasound solution integrates various imaging technologies, empowering clinicians with comprehensive tools. This innovation elevates clinical assessments from single parameter evaluations to multi-parameter analyses, ensuring more objective and accurate diagnoses.

UMA

The newly upgraded UMA captures minute low-speed blood flow with high sensitivity, high spatial resolution, and excellent motion artifact control. This enhancement has the potential to significantly improve diagnostic efficiency for organ perfusion evaluation and tumor research.

High sensitivity

High resolution

Better motion artifacts control



Breast Ductal Papilloma UMA



Renal artery UMA

Sound Touch Elastography

STE pushes the boundaries of image performance. With multiple quality control and intelligent tools, it intuitively and quantitatively evaluates tissue stiffness, making it highly effective for liver fibrosis and breast tumor assessments.

Superior imaging performance

Multiple quality control tools

Smart tools



Liver Cirrhosis STE

HiFR CEUS

HiFR CEUS offers ultra-fast imaging compared to traditional methods. By capturing detailed perfusion in the arterial phase, it enhances tumor diagnosis and the study of perfusion morphology.

6-8 times faster CEUS

More clear perfusion details in the arterial phase

Study on perfusion morphology of tumors



HCC HiFR CEUS

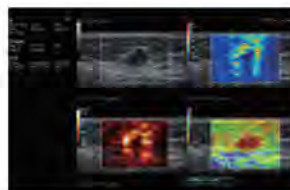
M Reference

M Reference is a multi-parametric combined analysis tool that enables real-time, same-slice, and same-screen MPUS diagnosis. Unlike traditional single ultrasound imaging, it offers multi-dimensional diagnostic information and quantitative evaluation indicators for diseases.

Multi-parametric combined analysis

Multi-parametric quantification tools

Real-time, one-screen assessments



Multi-parametric combined analysis



Multi-parametric quantification tools

Innovative Clinical Research

Equipped with a wide range of innovative imaging technologies, the Resona A20 supports clinicians in cutting-edge clinical research. Super Resolution CEUS (SR CEUS) reveals blood perfusion details at the micron level, aiding clinicians in the exploration of early microcirculatory changes in lesions. Additionally, STVi shear wave viscoelastography, a novel technique for assessing tissue viscosity, demonstrates great potential for studies on chronic liver diseases and tumors.

Super Resolution CEUS

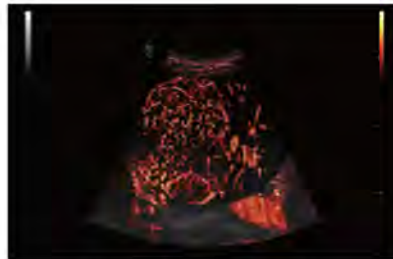
Powered by the AIT platform, the Resona A20 delivers an all-in-one integrated solution for super-resolution imaging, a capability previously difficult to achieve. SR CEUS reveals the intricate microcirculation details of lesions at the micron level, aiding in microcirculatory perfusion studies in oncology.

Micron level resolution



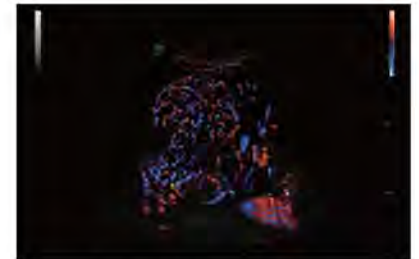
Focal Nodular Hyperplasia
UWN+ CEUS

Microvascular detection capabilities



Focal Nodular Hyperplasia
Blood Flow Density Map

Quantification tools



Focal Nodular Hyperplasia
Blood Flow Density Direction Map

STVi

STVi enables the quantitative evaluation of tissue viscosity and provides real-time multi-parameter imaging, offering a more comprehensive approach to imaging diagnosis and quantitative analysis of chronic liver diseases, breast lesions, and other conditions.

Dual quantitative coefficients

Multiple quantification tools

Chronic liver disease assessment

Breast tumor assessment



Breast Lesion
STVi



Liver Fibrosis
STVi

Quantitative Vascular Analysis Tools

The Resona A20 introduces a new generation of vascular quantitative analysis tools, featuring RF-data-based vascular pulse wave velocity and wall shear stress analysis. These advancements aid in the assessment of arterial vascular sclerosis.

Holo-PWV

V Flow and wall shear stress analysis



Carotid Artery
Holo-PWV



Carotid Artery
V Flow

A New Level of Image Clarity



Hepatic Hemangioma
B Mode



Hemangioma
HD Scope+



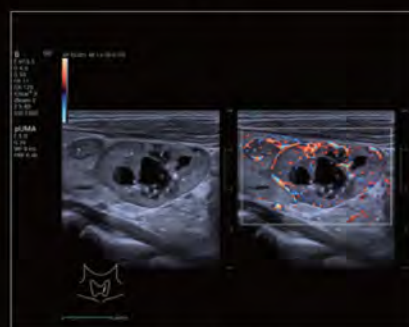
Liver Cancer
UMA



Thyroid Nodule
B Mode



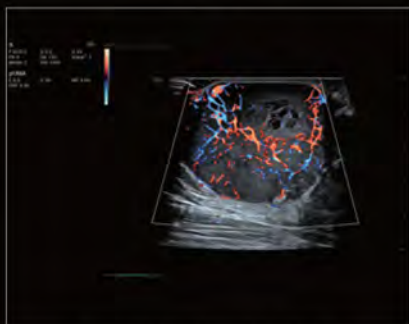
Thyroid Nodule
HD Scope+



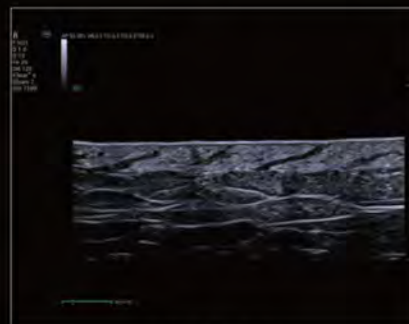
Thyroid Nodule
UMA



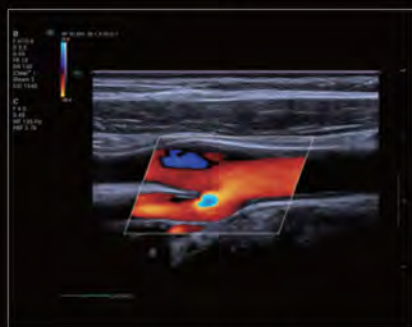
Breast Cancer
B Mode



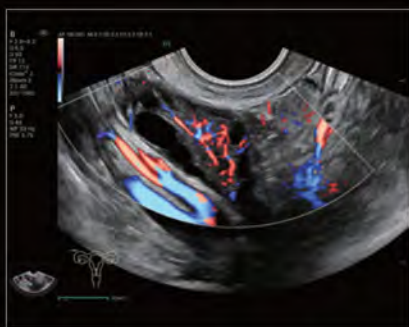
Metastatic Lymph Node
UMA



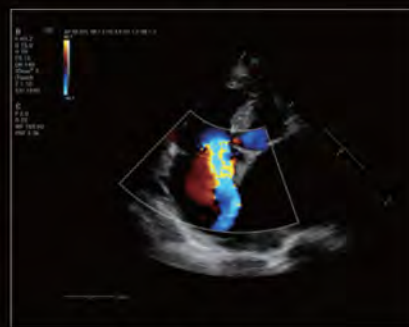
Hair Follicles
B Mode



Carotid Duplex
CDFI



Ovarian Blood Flow
Power Doppler



Cardiac Regurgitation
CDFI

Ensuring Better User Experience

By integrating technological aesthetics into ergonomic product design, the Resona A20 offers clinical experts high-definition image displays and a more convenient and efficient scanning experience for clinical diagnosis. Additionally, the power solution supporting battery scanning and an electronic motor expands the clinical application scenarios of ultrasound diagnosis.

27 inches HD Monitor

- HD Resolution
- Rich Grayscale Display
- Wide Viewing Angle

MAX Touch Screen

- HD Resolution
- High Sensitivity Touch Panel
- Wide Range Angle Adjustment

Touch Bar

- Quick Exam Mode Switch
- Multi Functional Display

Electrically Controlled Floating Panel

- Large Floating Range
- Flexible Positioning
- Simplicity Design

Cable Management

- Host Cover
- 5 Active Transducer Docking
- Anti-tangle design

Power Solution

- 1 hour Battery Scanning
- Electrical Walking Assistant

