

## **Resona I9**

Diagnostic Ultrasound System

# Innovation, in every facet





# Innovation

The **Resona 19** provides an entirely new experience, thanks to the innovations it features both inside and out. It is characterized by those features that have always been decisive for advanced Mindray ultrasound systems: the revolutionary ZST<sup>+</sup> platform elevates ultrasound image quality to a higher level and provides excellent balance for spatial and temporal resolution, and tissue uniformity.

**Resona 19** delivers excellent imaging solutions in dedicated applications with extreme clarity, outstanding smartness, and superb diagnostic tools: such as high frame rate STE for consistent shear wave and precise tissue stiffness access, Smart Breast and Smart Thyroid for automatic and standard lesion analysis, and V Flow as a novel approach for comprehensive vascular hemodynamics.

You are instantly greeted by an ultrasound system design like nothing you've seen before - coupled with all the latest technologies. **Resona 19** boasts an intelligent iConsole control panel with customizable E-ink keys, full-space floating adjustments, foldable structure to one meter height, long battery running time, and super-silent design, along with many other high-quality features. These innovative design elements will help to reduce fatigue to a minimum during scans.





# Unlimited scanning flexibility beyond imagination

## iConsole--intelligent control panel

The intelligent and clinical exam-specific control panel layout is a breakthrough innovation designed to optimally adapt to different clinical scenarios, such as ABD, SMP, VAS, CAR, URO, OB and so on. Based on six special E-ink keys with digital screens, iConsole can adaptively adjust the layout and key functions during exam changing. User-define is available for personalized settings and the digital display on E-ink keys will not disappear even during power off.



## Full-space floating control panel

Instead of 4 or 6 directions adjustment, it can be optimally adjusted in full-space with an extremely broad range and easily locked at any position. So it easily fulfills various scanning requirements in different clinical scenarios for more comfort and care.



Stretch scanning



Crouch scanning



Over-bed scanning

# Thoughtful design for extreme convenience

- **23.8"** bezel-less full-screen with large images for immersive experience
- Eye-protecting monitor with adaptive brightness adjustment
- **15.6"** full-HD touch screen with intuitive interaction
- Short-cut switch of latest used probes and exams
- Elevated sockets for changing probes without bending
- **26dB** super-silent design as quiet as a bedroom



# Bring optimal patient care immediately

## Just fold it up and go

It can be folded to minimum 1 meter height and easily transported by MPV (Multi-Purpose Vehicle) for easy and timely mobile clinical service. 55cm body width allows easy door pass for quick access and imaging across clinical departments.



## Bedside exams without power cables

Long life battery allows up to 4 hours continuous ultrasound scanning. So you never need power cables even during bedside exams.



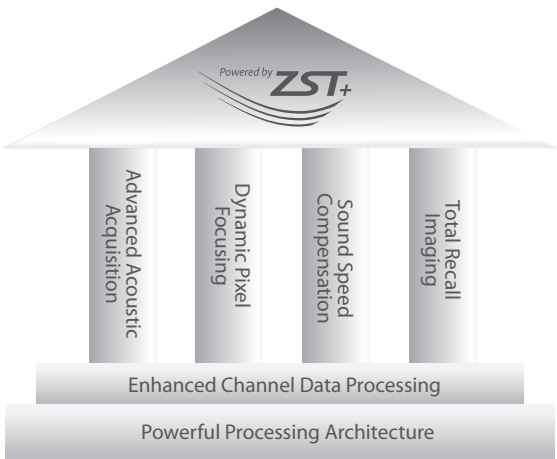
## Auto wake-up of residual power

When you hold the right handle during system stand-by or power-off the light indicator of residual power will be automatically activated for timely power reminder.

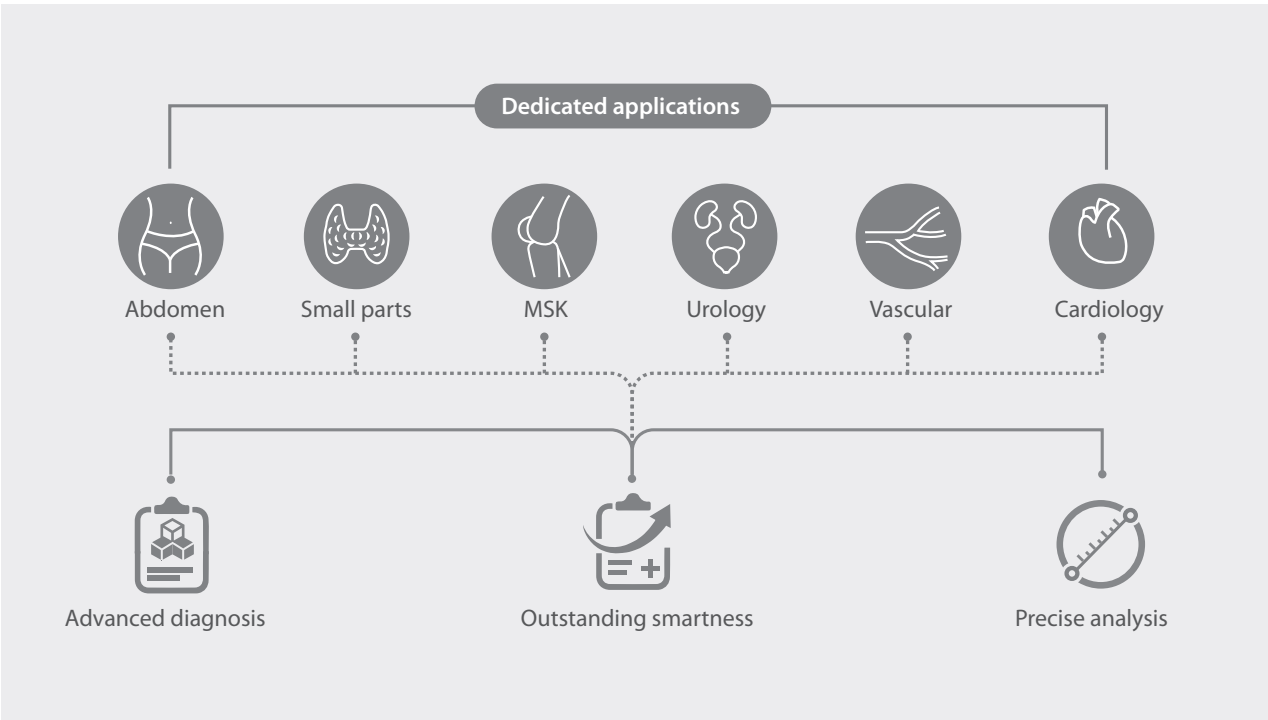


# Infinite imaging solutions powered by ZST<sup>+</sup>

The ZST<sup>+</sup> platform is an extraordinary innovation, representing an ultrasound evolution. Transforming ultrasound metrics from conventional beam-forming to channel data based processing. It overcomes the traditional trade-off limitation among spatial resolution, temporal resolution and tissue uniformity, delivering exceptional image quality for infinite imaging solutions with non-stop improvements.



**Resona 19** provides comprehensive clinical solutions for dedicated applications. Based on a deep insight of different clinical scenarios, it delivers all kinds of innovations in advanced diagnostic tools, outstanding smartness and precise analysis to significantly improve the diagnostic confidence, quality control and scanning efficiency.



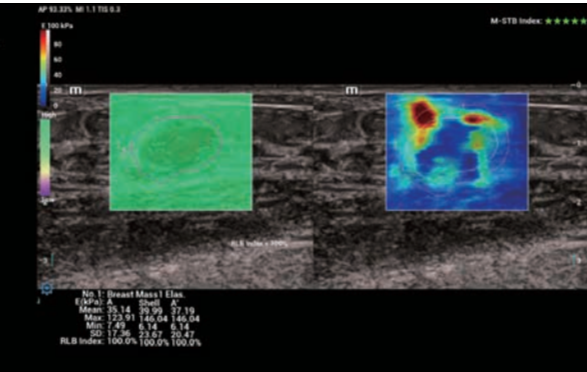
Infinite imaging solutions in dedicated applications



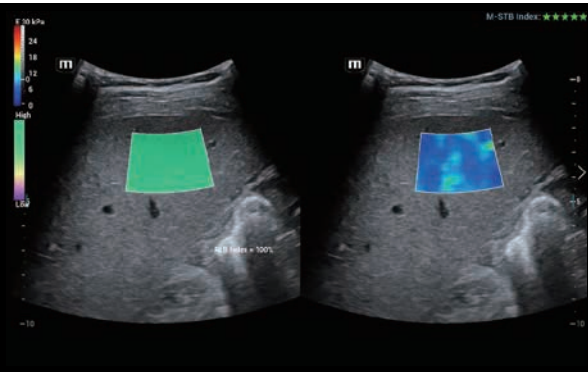
# Advanced diagnosis with innovations

## Innovative stiffness assessment -- HiFR STE

Thanks to the ZST<sup>+</sup> platform, the HiFR STE (High Frame Rate Sound Touch Elastography) enables up to 10 times faster STE frame rate than before with smooth and consistent shear wave imaging display. It provides more sensitive motion detection for better stability and more accuracy. The motion stability index and reliability map further enhance shear wave quality control for more reliable tissue stiffness assessment.



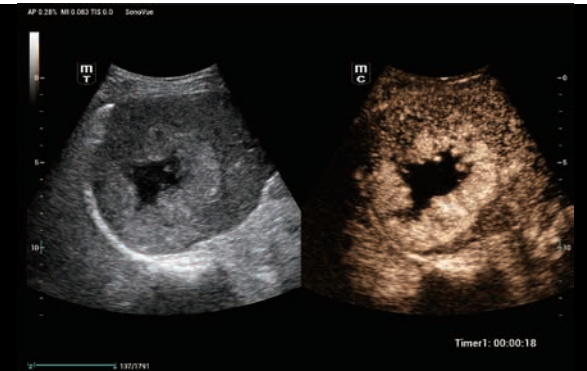
HiFR STE of breast cancer



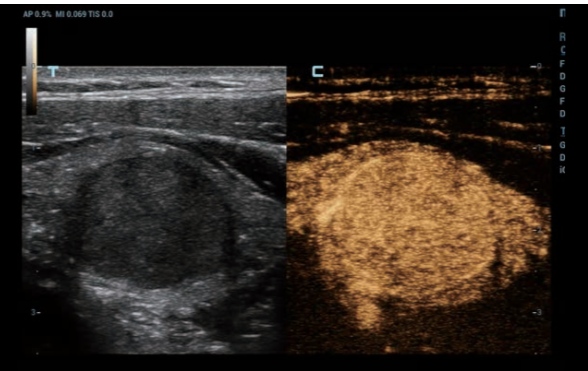
HiFR STE of liver

## Focal lesion diagnosis with perfusion -- UWN<sup>+</sup> Contrast Imaging

It detects and utilizes both the 2<sup>nd</sup> harmonic and non-linear fundamental signals, generating significantly enhanced images, resulting in greater sensitivity of minor signals and longer agent duration with lower MI. The Micro Flow Enhancement mode provides even better visualization of tiny vessel perfusion.



CEUS of metastatic liver cancer

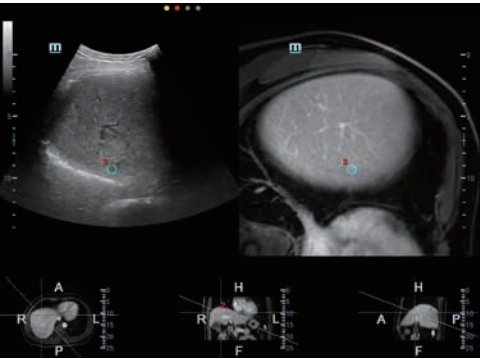


CEUS perfusion of thyroid adenoma



## Precise intervention -- Fusion Imaging

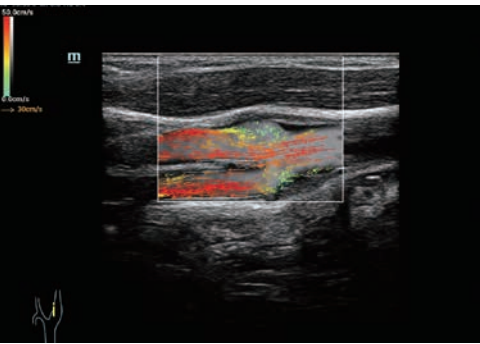
With CT/MRI navigation fusion imaging delivers precise tumor positioning, pathology diagnosis, intervention guidance and treatment evaluation. Mindray's innovative respiration compensation technology can help eliminate distortion and fusion inaccuracy caused by patient respiration, and brings the fusion precision to a new level.



Precise positioning of tiny liver lesion

## A novel approach of vascular hemodynamics -- V Flow

The color coded vector arrows indicate the velocity's magnitude and direction of blood cells. With ultra-high frame rate, it provides extremely vivid, accurate and angle-independent visualization of complex vascular hemodynamic profiles with comprehensive data information.



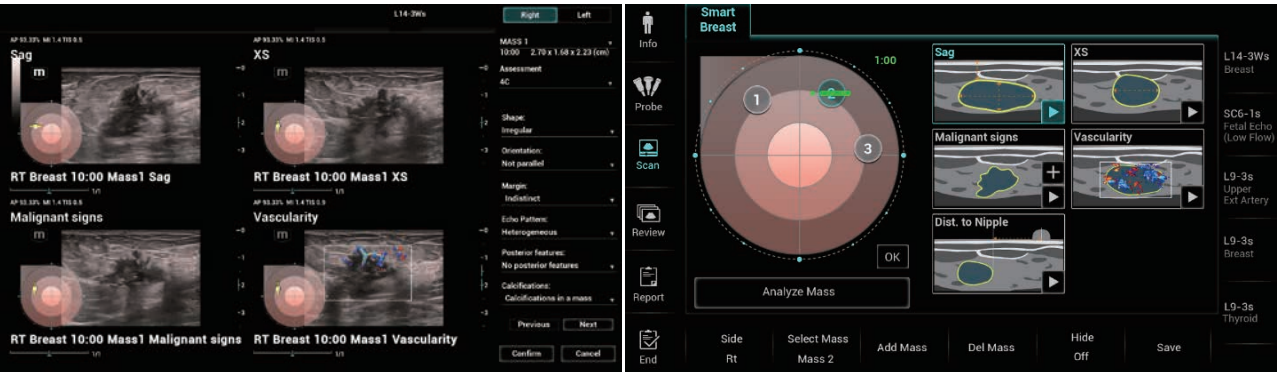
V Flow



# Increasing smartness with confidence

## Smart and accurate breast lesion diagnosis -- Smart Breast

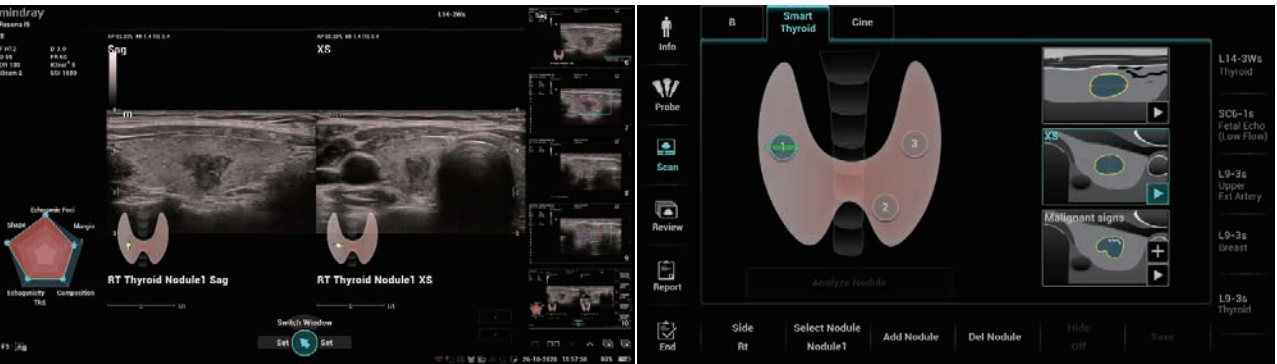
It's a smart breast lesion analysis system to make your routine breast scanning more accurate and productive. The smart BI-RADS analysis enables fully automatic lesion detection, measurement, annotation, analysis and reporting. The lesion-oriented scanning protocol effectively increases the performance of quality control. Additionally, the systematic multi-lesion management and multi-planes assessment further guarantee more diagnostic information and accuracy.



Invasive ductal carcinoma of breast

## Productive and standard thyroid nodule assessment -- Smart Thyroid

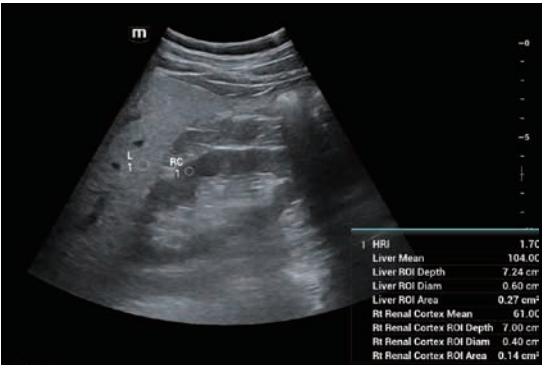
It's a smart thyroid nodule analysis and reporting tool to make your clinical routine of thyroid ultrasound more accurate and productive. The multi-planes based TI-RADS analysis enables more comprehensive and accurate thyroid nodule classification. Meanwhile the streamlined automated workflow provides more effective thyroid scanning.



Papillary carcinoma of thyroid

## Easy and fast evaluation of liver steatosis -- Smart HRI

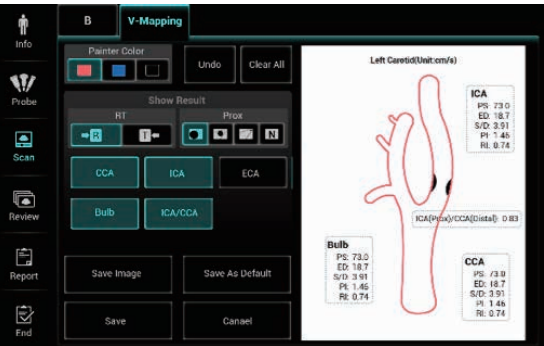
Smart hepatorenal index is an easy and fast liver steatosis quantitative assessment tool. Based on a 2D image, it enables auto organ recognition and auto brightness ratio calculation of liver and renal cortex. Smart HRI delivers more reliable and accurate data than traditional qualitative estimation.



Smart HRI

## Intuitive preoperative assessment of varicosity --- V-Mapping

Intuitively draw the vessel pathology on anatomy map showing on touchscreen. Related information and anatomy can be easily integrated in reports. It helps a lot in preoperative assessment of varicosity.



V-Mapping

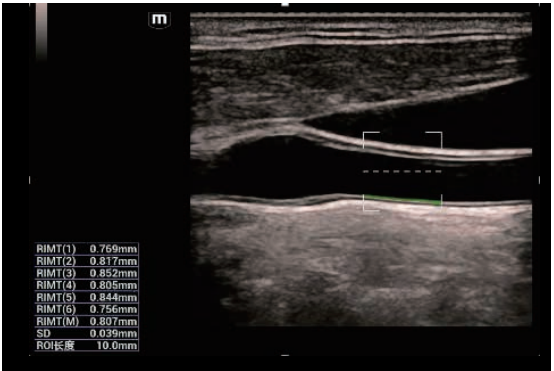




# Precise analysis and measurements

## IMT evaluation with higher accuracy -- RIMT

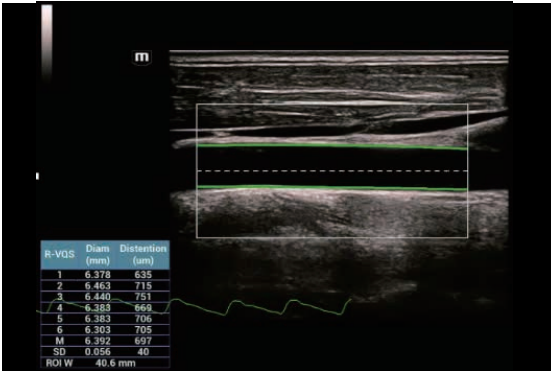
The RF-Data based IMT is image-independent and delivers automatic and extremely accurate IMT statistics of 6 cardiac cycles in real time.



RIMT

## Precise hardness analysis of vessel wall -- R-VQS

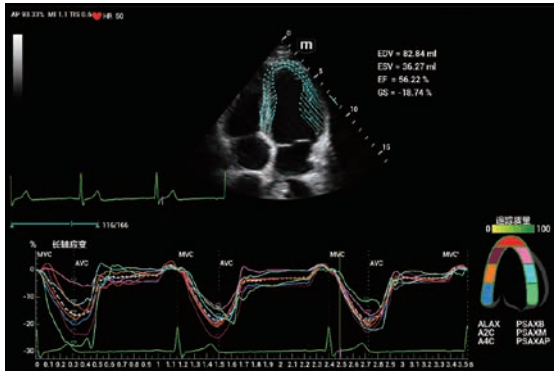
R-VQS provides precise analysis with vessel hardness coefficient & pulse wave velocity. It helps for early diagnosis and prevention of artery atherosclerosis.



R-VQS

## Angle-independent myocardial movement evaluation -- TT QA

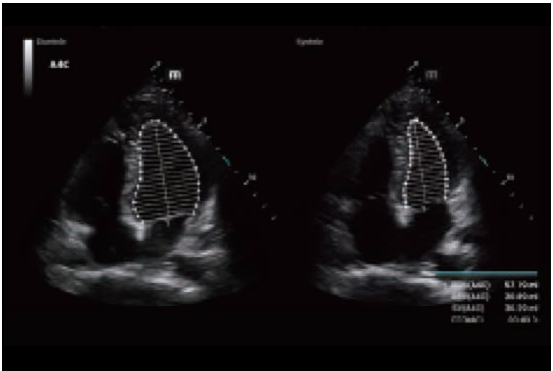
TT QA tracks the myocardial motion by detection of 2D speckle patterns, and provides angle-independent and precise evaluation of myocardial movement.



TT QA

## Easy measurements of cardiac function --- Auto EF

Auto EF is a smart way to analyze 2D echo clips to auto recognize diastolic & systolic frames and output a series of measurements to evaluate left ventricle function.

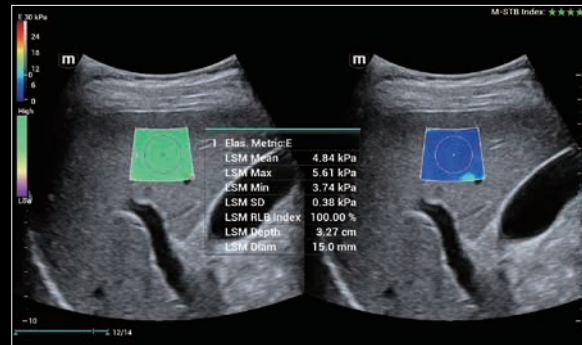


Auto EF





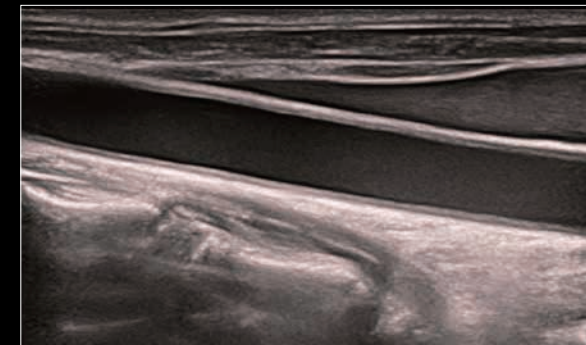
# Superb confidence with extreme clarity



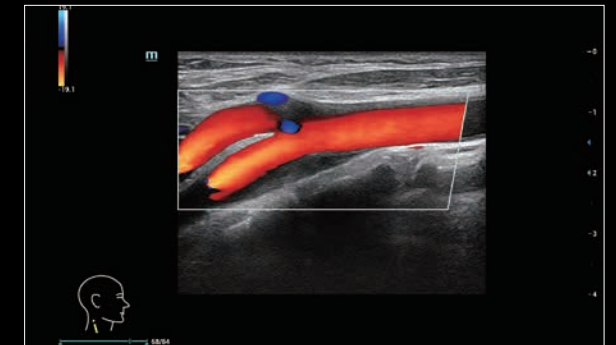
Liver HiFR STE



Bowel image



Common carotid artery



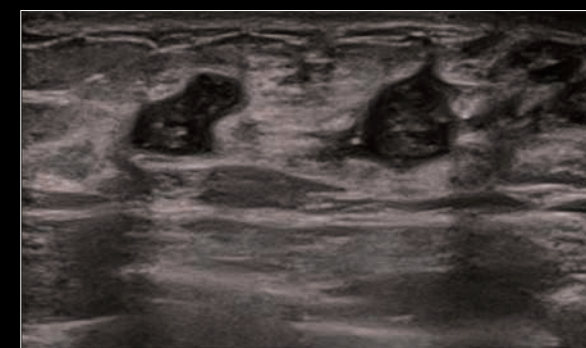
Carotid artery stenosis



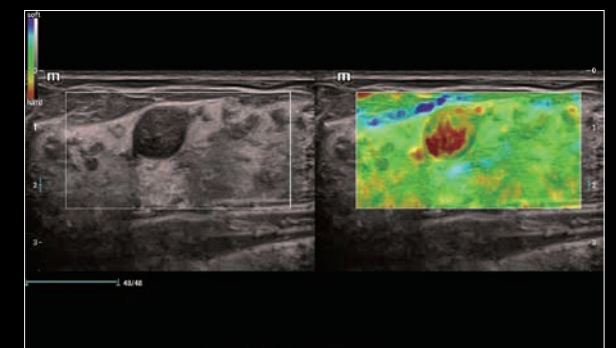
Liver hemangioma



Renal flow perfusion



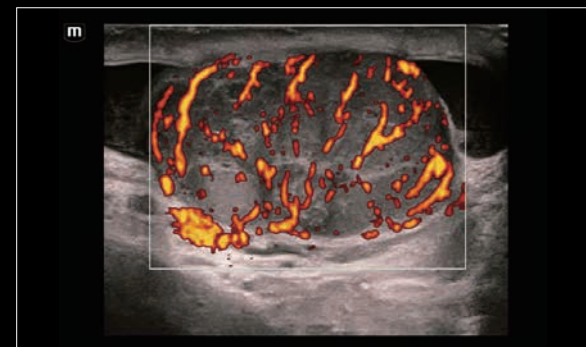
Breast mass



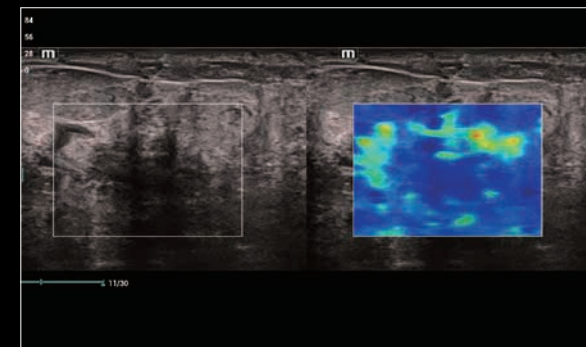
Breast mass elastography



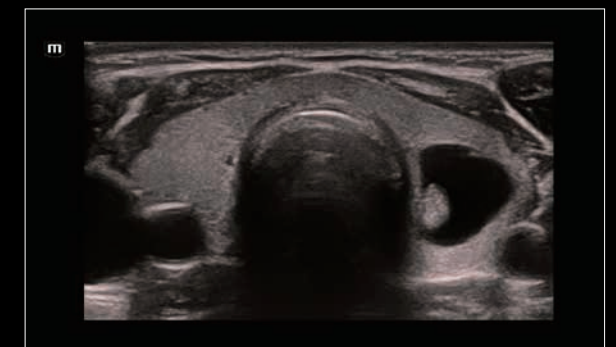
Bladder tumor



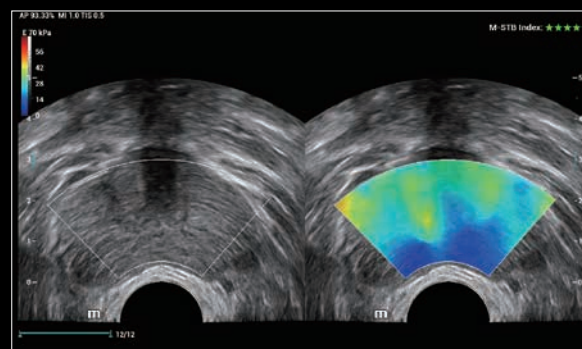
Testis power flow



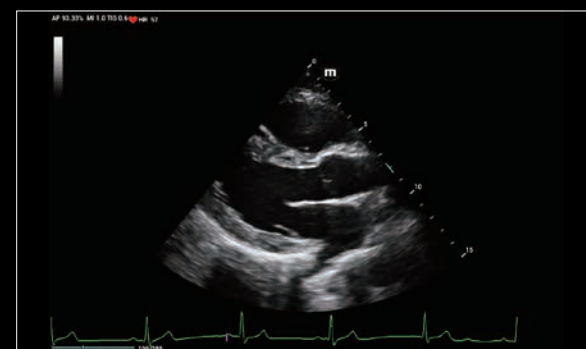
Breast mass STE



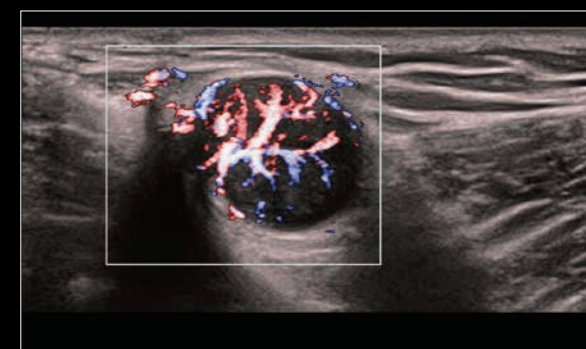
Thyroid nodule



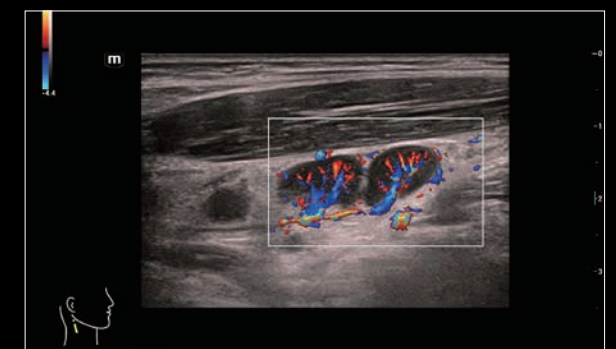
Prostate STE



Adult heart



Metastatic lymph node HR Flow



Cervical lymph node Glazing Flow