

Samsung Medison is a global leading medical devices company. Founded in 1985, the company now sells cutting-edge medical devices including diagnostic ultrasound, digital X-ray and blood analyzer, around the world. The company has attracted global attention in the medical field with its R&D capabilities and advanced technologies. In 2011, Samsung Medison became an affiliate company of Samsung Electronics, integrating its IT, image processing, semiconductor and communication technologies into medical devices.

#### CT-RS80A with Prestige V3.0 -FTW-160415-EN

\* Prestige is a package of technologies for upgraded systems.

\* S-Vision is not the name of a function, but is the name of Samsung's ultrasound imaging technology.

\* S-Vue is not the name of a function, but is the name of Samsung's advanced transducer technology.

\* S-Tracking is not a function name but a package of Clear Track and Virtual Track.

\* In Canada and USA, a recommendation for whether the result is benign or malignant is not applied.

\* In Canada and USA, the selectable 3 modes included in S-Detect is not available. (High Sensitivity, High Accuracy, High Specificity)

\* In Canada and USA, strain value for ElastoScan is not applied.

\* Availability of some products, features, options and transducers mentioned in this catalog may vary from country to country and is subject to varying regulatory requirements.

\* This product, features, options and transducers are not commercially available in all countries. Due to regulatory reasons their future availability cannot be guaranteed. Please contact your local sales network for further details.

# Pushing the boundaries

## Ultrasound system RS80A with Prestige V3.0



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# SAMSUNG

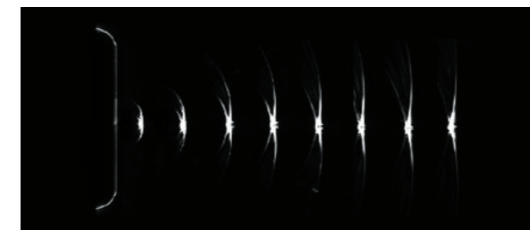
# Superior image quality for confident diagnosis



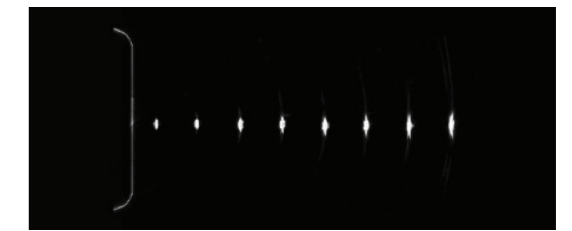
The **superior image quality of RS80A with Prestige** is built upon the successes of Samsung technologies. The **S-Vision architecture** together with features such as **S-Harmonic** and **HQ Vision** delivers **diagnostic confidence** when diagnosing challenging patients.

## S-Vision beamformer

The **S-Vision beamformer** demonstrates a clearer image that receives returning signals through a sophisticated digital filtering system resulting in **reduced side lobes, less noise and artifact**. It enhances the image quality with **better clarity and consistent results**.



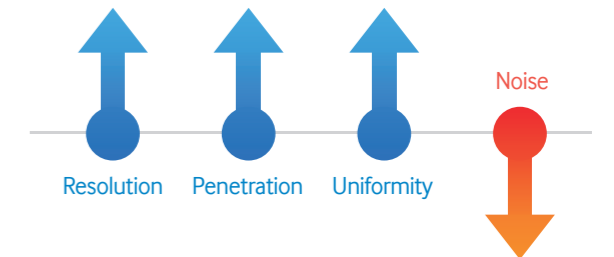
Conventional



RS80A

## S-Vision imaging engine

With the **S-Vision imaging engine** built into RS80A with Prestige, the digital signals **produce clear, detailed resolution and tissue uniformity** for various types of applications in general imaging.



## S-Harmonic

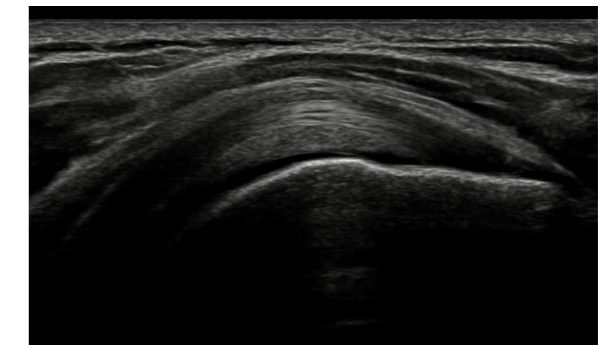
This **new harmonic technology** provides **greater image uniformity from near to far field while reducing signal noise**. Combined with S-Vue transducers and S-Vision imaging engine, S-Harmonic improves the image quality of RS80A with Prestige.



Liver in S-Harmonic

## HQ Vision

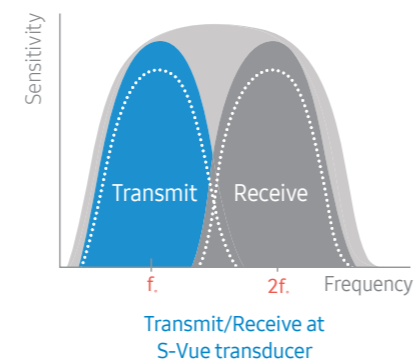
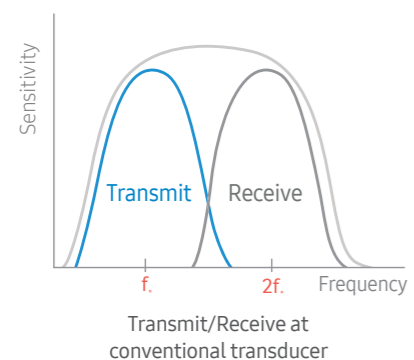
HQ Vision is new, advanced technology for **visualizing anatomical structures**. With improved image clarity, this feature helps **make a reliable diagnosis quickly**.



Shoulder in HQ Vision

## S-Vue transducer (Single-crystal technology)

RS80A with Prestige incorporates the next-generation **single-crystal technology**. Employing an innovative crystal design, S-Vue transducers provide more efficient piezoelectric properties, resulting in **wider bandwidths that enable better penetration and higher quality resolution** on even the most challenging of patients.



\* Compared with the conventional Samsung transducers

# Cutting-edge technology for diagnostic challenges

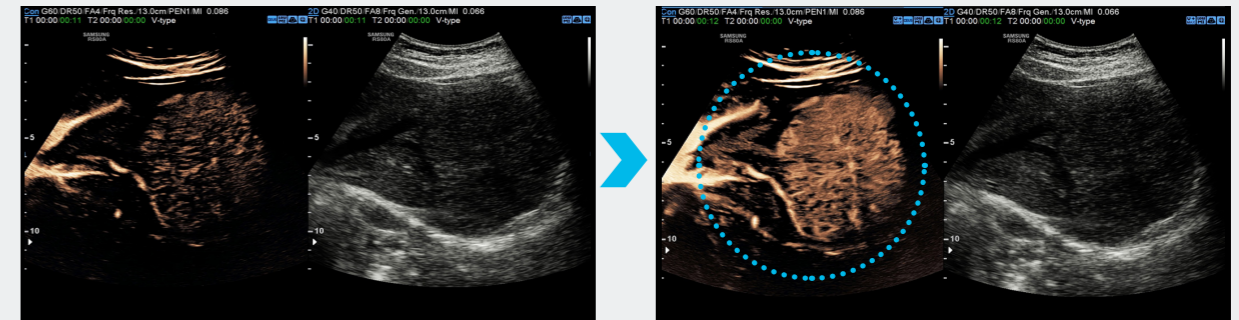
With advanced technologies like **CEUS+** and **S-Shearwave**, the number of biopsies can be reduced, lesions become visible and examinations are easier to perform.



## CEUS+

CEUS+ technology uses the unique properties of ultrasound contrast agents. When stimulated with low acoustic pressure, the oscillating microbubbles reflect both fundamental and harmonic frequency signals. In addition, Samsung's latest technologies, VesselMax and FlowMax, provide a clear visualization of vessels and blood flow for a more informed and confident diagnosis.

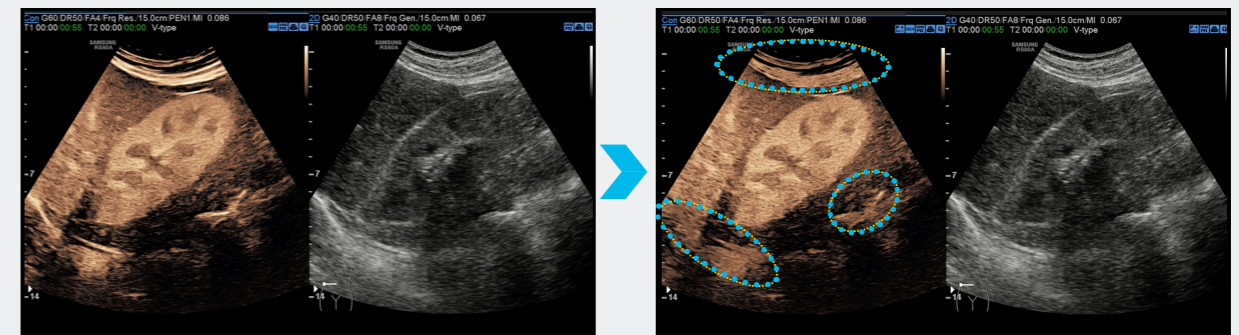
### VesselMax (Improved vessel visualization)



Liver without VesselMax

Liver with VesselMax

### FlowMax (Improved blood flow visualization)

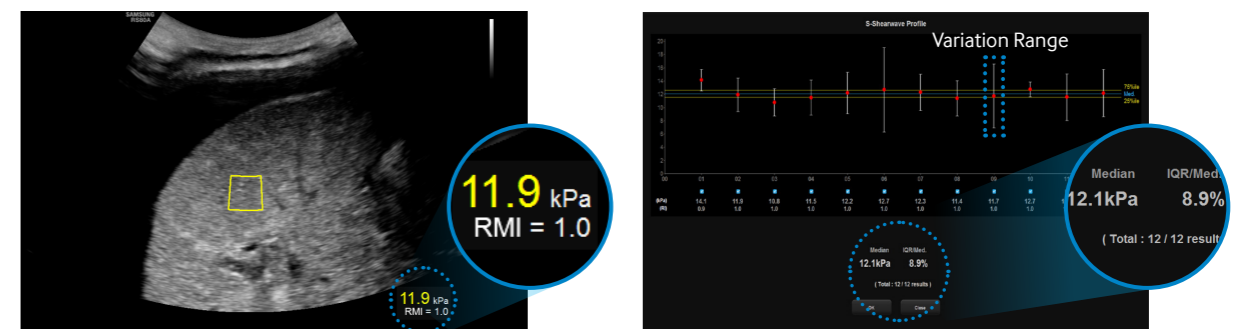


Kidney without FlowMax

Kidney with FlowMax

## S-Shearwave

S-Shearwave detects the speed of the shearwave propagated through the targeted lesion and displays the numerical measurement of stiffness in kPa or m/s together with a Reliable Measurement Index (RMI)\*. A graphic profile provides an intuitive Variation Range (VR) to depict uniformity of tissue stiffness within the Region of Interest (ROI). S-Shearwave is non-invasive, helping you to measure liver stiffness easily.



\* Reliable Measurement Index (RMI) : An indicator that computes the reliability of the calculated stiffness to support the selection of optimal measurements.

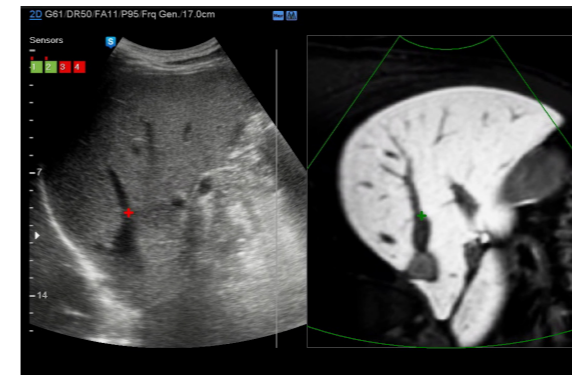
# Outstanding tools for interventional procedures

Samsung continues pushing the boundaries of ultrasound technology with leading technologies including **S-Fusion** and **S-Tracking** for **increased accuracy when performing interventional procedures**.

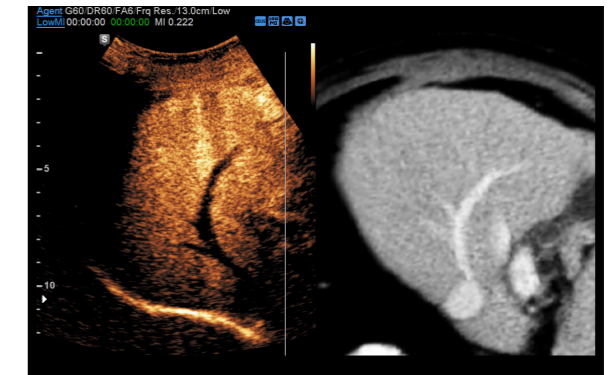


## S-Fusion

S-Fusion enables **simultaneous localization of a lesion using real-time ultrasound in conjunction with other 3D volumetric imaging modalities**. Where the image fusion method faces challenges such as relatively slow and inaccurate registration, Samsung offers a **quicker and more precise registration process**. S-Fusion allows **precise targeting during interventional procedures**. With S-Fusion, your system is ready for many advanced clinical procedures.



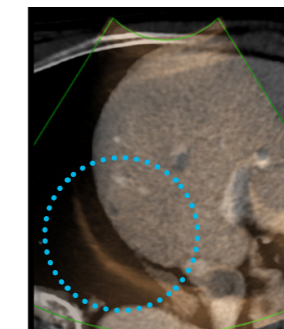
Positioning Auto registration



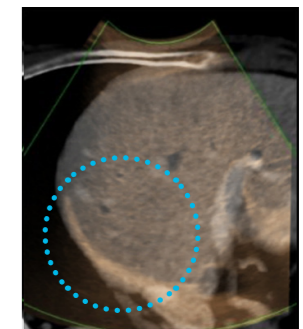
S-Fusion with CEUS+

## Respiration Auto

When performing fusion imaging of real-time US and previously recorded CT images, the difference of respiratory phase can cause registration gaps between the images. Samsung's Respiration Auto feature **minimizes these registration differences by generating a CT image of exhalation based on the acquired image of inhalation**. This respiration compensation technology makes the registration faster, helping eliminate fusion inaccuracy.



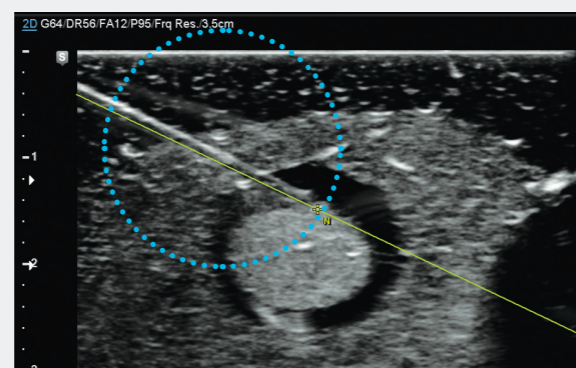
Overlay with US and CT images without Respiration Auto



Overlay with US and CT images with Respiration Auto

## S-Tracking

S-Tracking **increases accuracy during interventional procedures** by providing a simulated needle path and target mark within the live ultrasound image. **Clear Track**, one of two functions provided by S-Tracking, ensures accuracy by using a specialized needle with a sensor tip. S-Tracking also includes **Virtual Track** utilizing conventional needles to **provide both accuracy and economic benefit**.



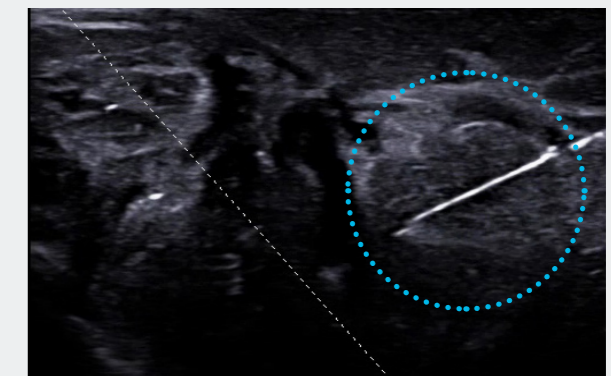
Clear Track

## NeedleMate™

NeedleMate™ ensures **precise needle targeting when performing commonly used interventional procedures**.

### Beam Steer

**Identifying the location of needles** (needle guidance & needle tips), Beam Steer provides the high level of **efficiency and safety in needle placement**.



Thyroid with NeedleMate™

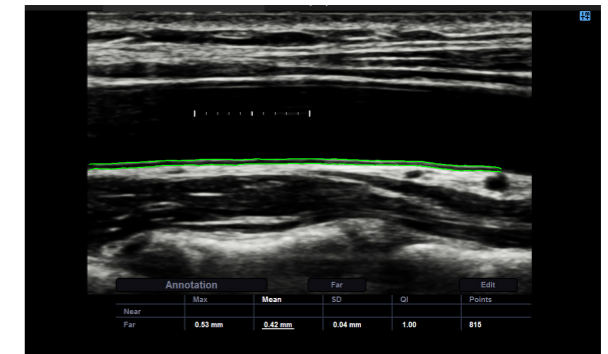
# Advanced cardiovascular diagnosis

The comprehensive suite of tools enables advanced cardiovascular diagnosis.



## Auto IMT+™

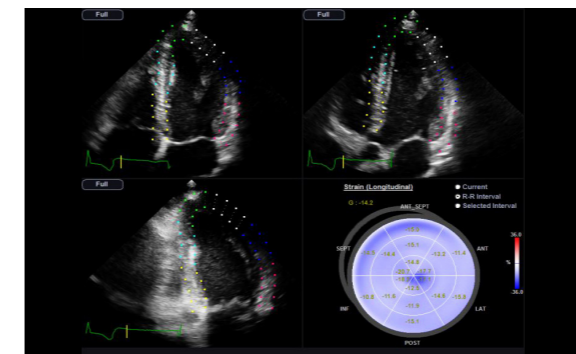
Auto IMT+™ is a screening tool to analyze a patient's potential risk of cardiovascular disease. It allows easy intima-media thickness measurement of both the anterior and posterior wall of the common carotid by the click of a button. This simple procedure enhances exam productivity and adds diagnostic value.



IMT measurement with Auto IMT+™

## Strain+

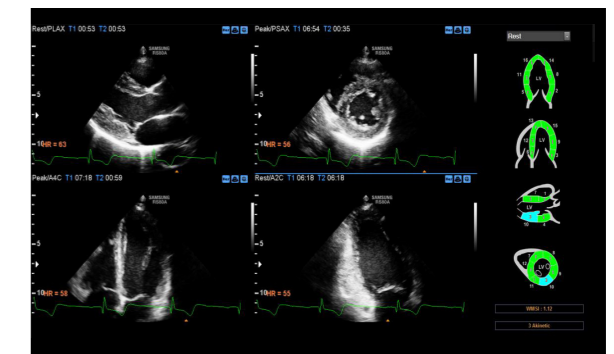
Strain+ quantitatively displays a Bull's Eye which shows left ventricular motion and dyssynchrony at a glance.



Strain+

## Stress Echo

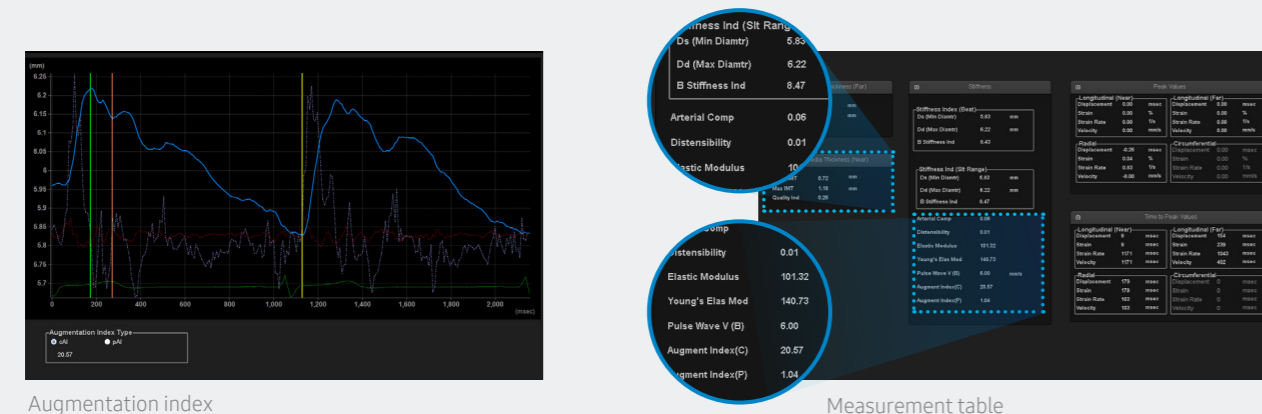
The Stress Echo package includes wall motion scoring and reporting. It includes exercise Stress Echo, pharmacologic Stress Echo, diastolic Stress Echo and free programmable Stress Echo.



Stress Echo

## Arterial Analysis (Advanced detection of functional changes of vessels)

Arterial Analysis detects functional changes of vessels, providing measurement values such as the stiffness, intima-media thickness and pulse wave velocity of the common carotid artery (CCA). Since the functional changes occur before morphological changes, this technology supports the early detection of cardiovascular disease.

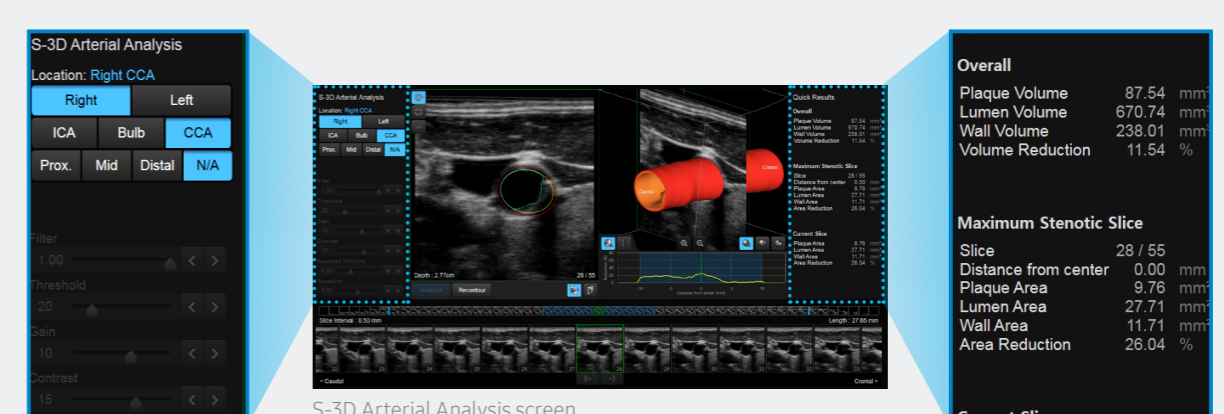


Augmentation index

Measurement table

## S-3D Arterial Analysis (Innovative volume measurement of arterial plaque)

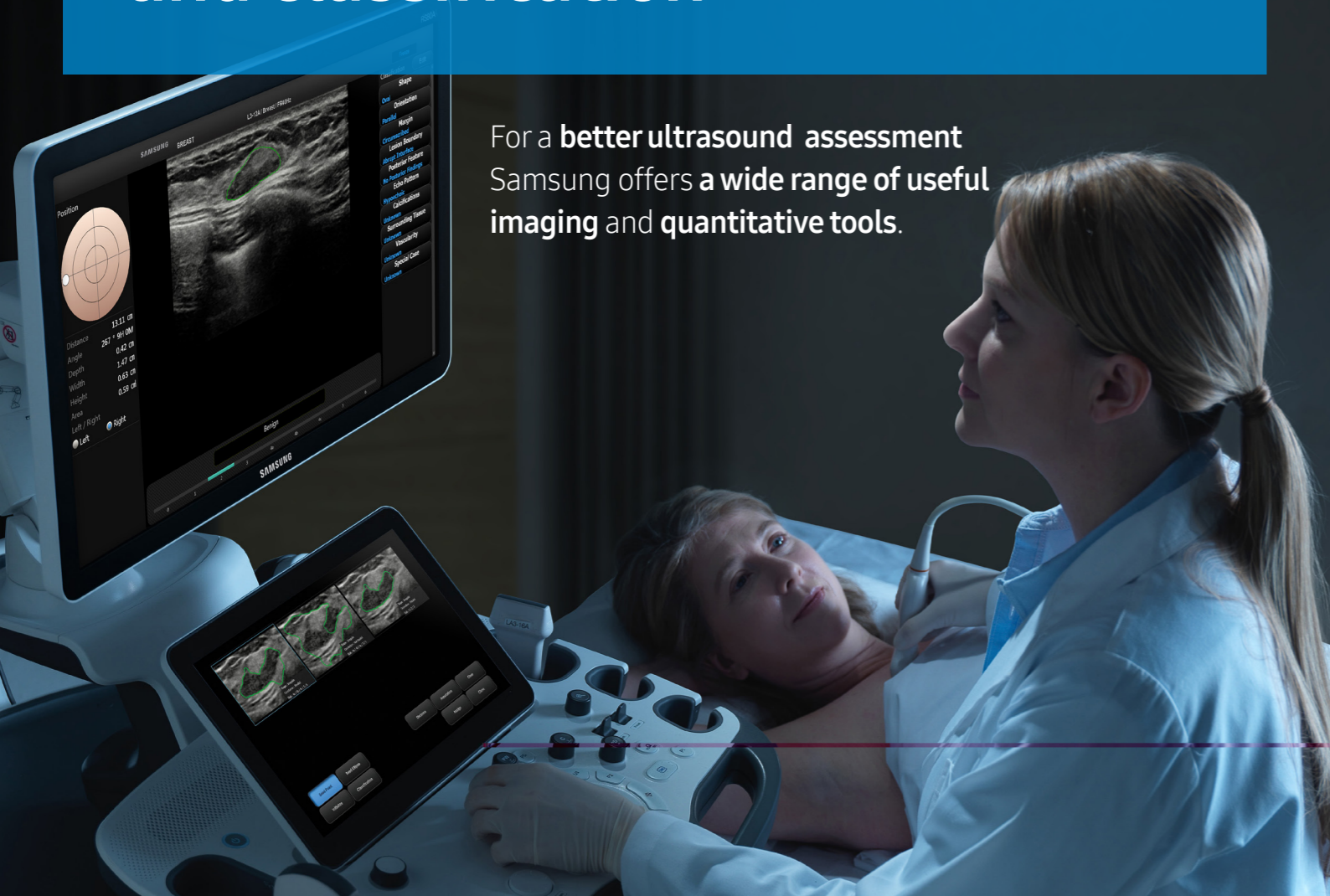
S-3D Arterial Analysis simplifies volume measurement of arterial plaque, providing 3D vessel modeling. With Samsung's S-3D Arterial Analysis, obtaining information on the arterial plaque volume is surprisingly fast and easy even on difficult patients. In addition, it allows you to track the morphological changes of the artery.



S-3D Arterial Analysis screen

# Standardized analysis and classification

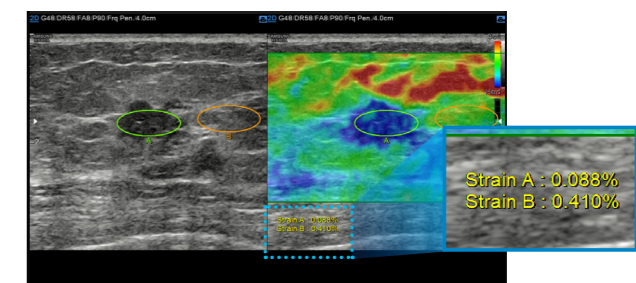
For a **better ultrasound assessment** Samsung offers a wide range of useful **imaging and quantitative tools**.



## ElastoScan™

### E-Strain

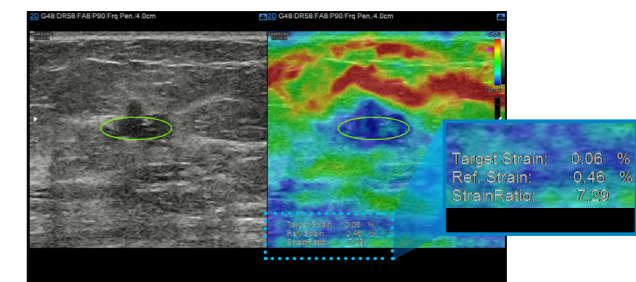
E-Strain is designed to enable **quick and easy calculation of the strain ratio** between two regions of interest for day-to-day practice. Simply by setting the two targets, you can receive accurate, consistent results and make informed decisions in **many types of diagnostic procedures**.



Breast mass with E-Strain

### E-Breast™

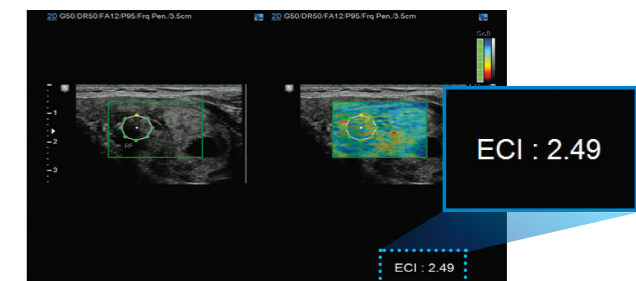
E-Breast™ is a technology that calculates the strain ratio between the selected target and surrounding fatty tissues. Unlike conventional ultrasound elastography, **E-Breast™ requires only one ROI** to be selected by the user. This simplified process **enhances consistency and reduces the chance of error** by eliminating the step of manual selection of the surrounding fatty tissue region.



Breast mass with E-Breast™

### E-Thyroid™

E-Thyroid™ provides an **assessment of thyroid lesions** by incorporating an index for suspicious areas. E-Thyroid™ images are generated using pulsations from the adjacent Carotid Artery, **eliminating the need for manual transducer compression** and offering greater consistency.



Thyroid nodule with E-Thyroid™

## S-Detect™

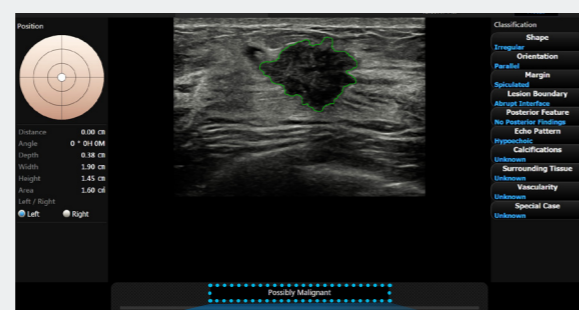
### S-Detect™ for Breast

S-Detect™ for Breast employs **\*BI-RADS® scores** for standardized analysis and classification of suspicious lesions. It provides the **characteristics of displayed lesion** and a **recommendation on whether the lesion is benign or malignant** by adopting advanced detection algorithm. **With \*3 selectable sensitivity modes**, S-Detect™ for Breast can help **users perform a breast biopsy with confidence**. Such technology assists in a more **accurate diagnosis**, while **reducing the time users spend** in repetitive tasks.

\* 3 selectable sensitivity modes

- High Sensitivity** Detecting any lesions that have a small chance of being malignant.
- High Accuracy** Providing higher accuracy in classifying whether a lesion is benign or malignant, compared to other modes (Default).
- High Specificity** Detecting suspicious lesions that have a higher chance of being malignant.

\* BI-RADS® : Breast Imaging-Reporting and Data System (2013)

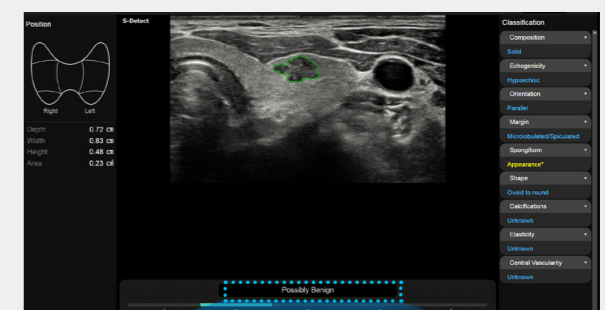


Possibly Malignant

### S-Detect™ for Thyroid

S-Detect™ for Thyroid uses the advanced technology based on **\*K-TIRADS, RUSS and ATA guideline** in detecting and classifying suspicious thyroid lesions **semi-automatically**. This state-of-the-art technology helps you diagnose your patients with confidence and ease, providing accurate, consistent results and an **automatic reporting feature**.

\* K-TIRADS : Korean-Thyroid Imaging Reporting and Data System  
 RUSS : Russ' TIRADS  
 ATA : American Thyroid Association



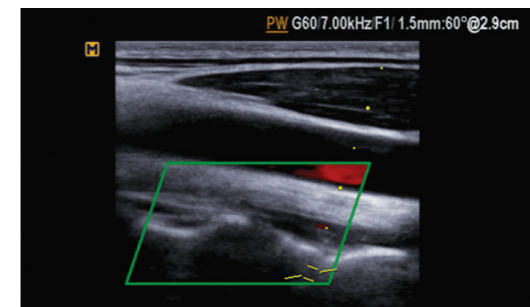
Possibly Benign

# Enhanced workflow for greater throughput

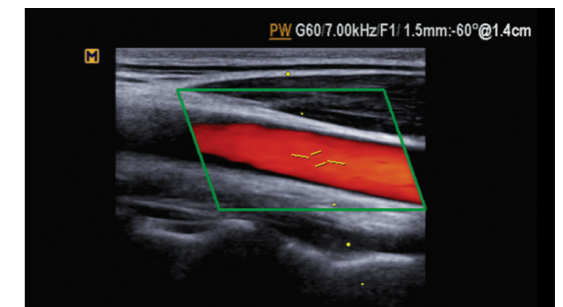


## Advanced QuickScan™

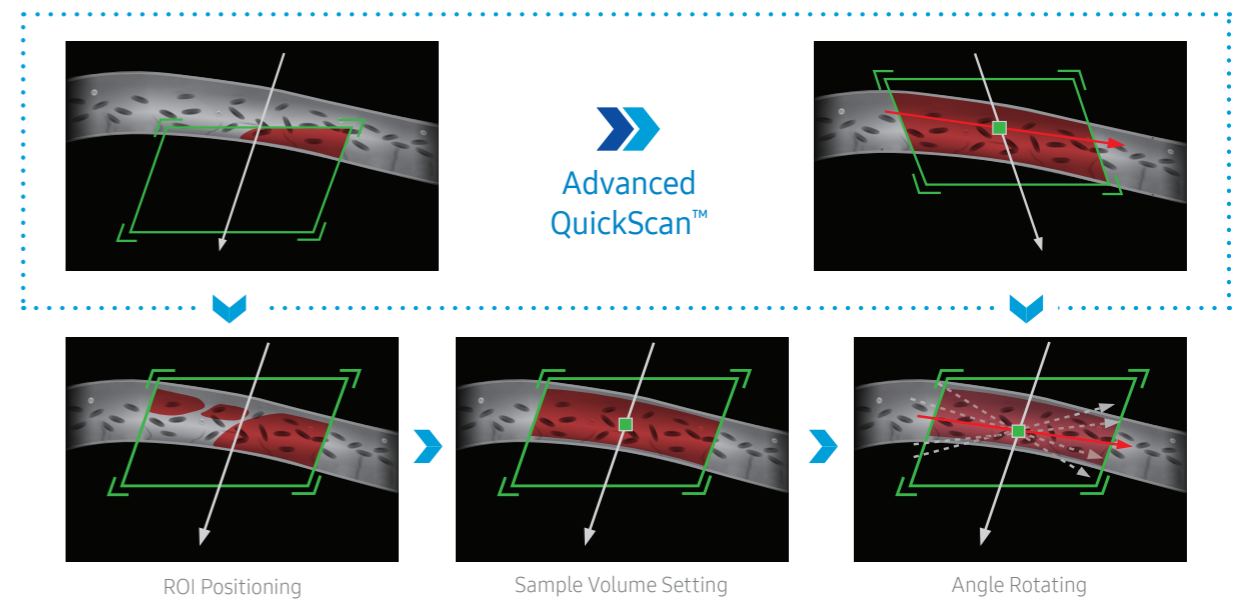
Advanced QuickScan™ technology provides intuitive optimization of gray scale and Doppler parameters. One touch of the QuickScan™ button maximizes workflow by adjusting functions including color gain and color box location.



CCA Doppler without QuickScan™

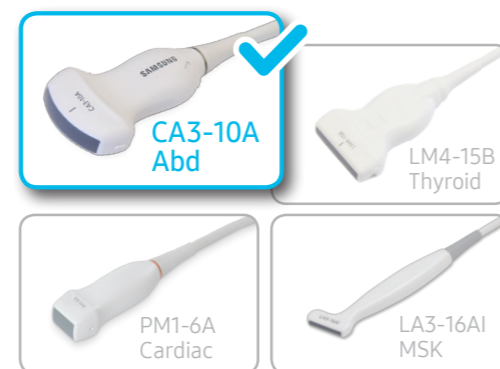


CCA Doppler with QuickScan™



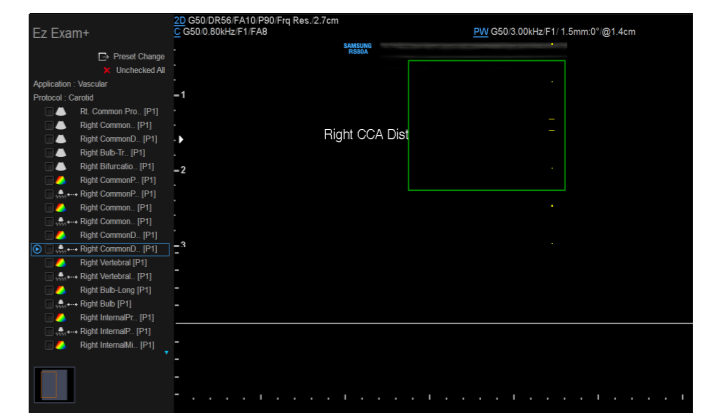
## Quick Preset

With one touch, the user can select the most common transducer and preset combinations. Quick Preset maximizes efficiency to make a full day of scanning simple and easy.



## EZ-Exam+™

EZ-Exam+™ transforms multiple ultrasound investigation steps into a streamlined process. It enables users to build a fast and convenient diagnostic environment by storing optimized, preferred protocols with the EZ-Exam+™ function control.

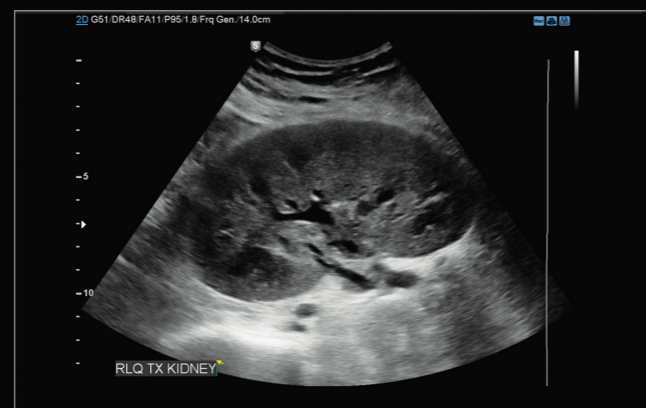


EZ-Exam+™

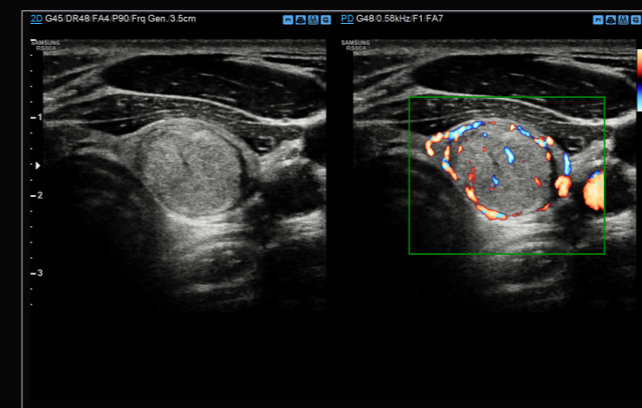
# Image gallery



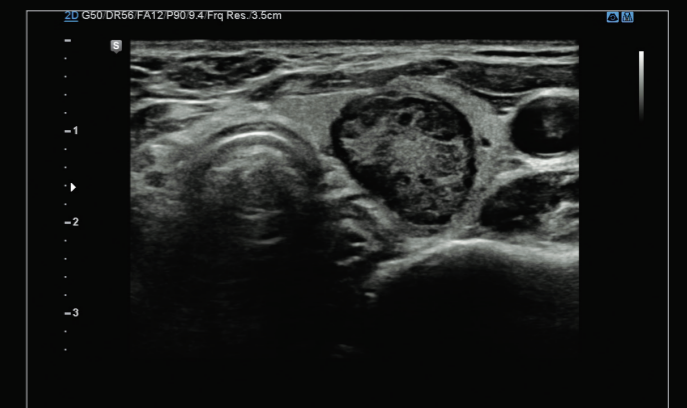
Bowel



Kidney transplantation



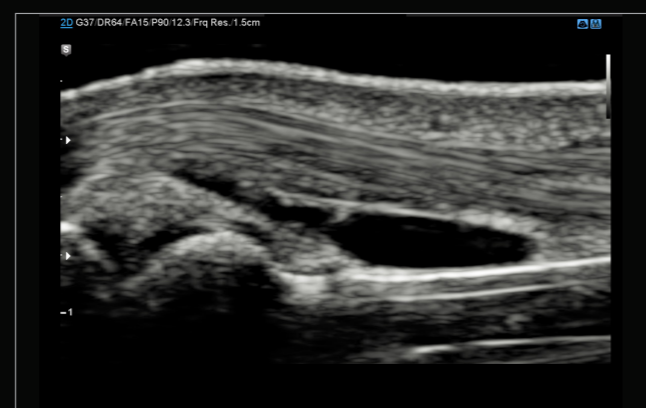
Thyroid nodule



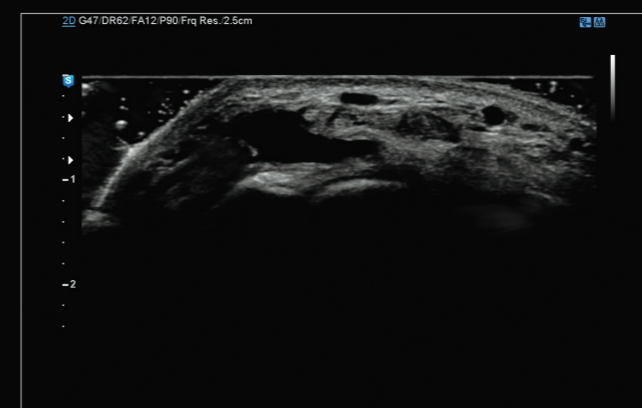
Thyroid nodule



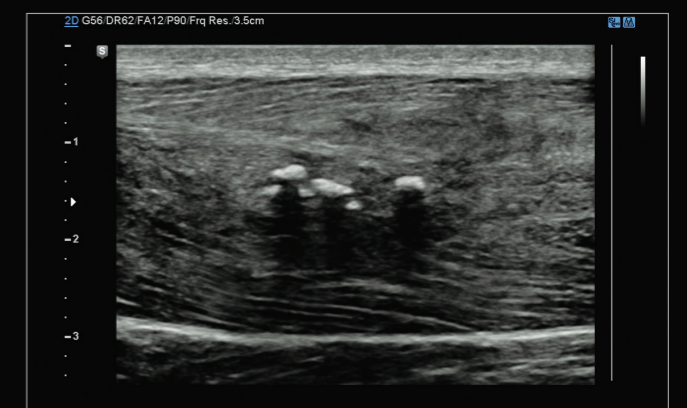
Pediatric spine



Finger ganglion



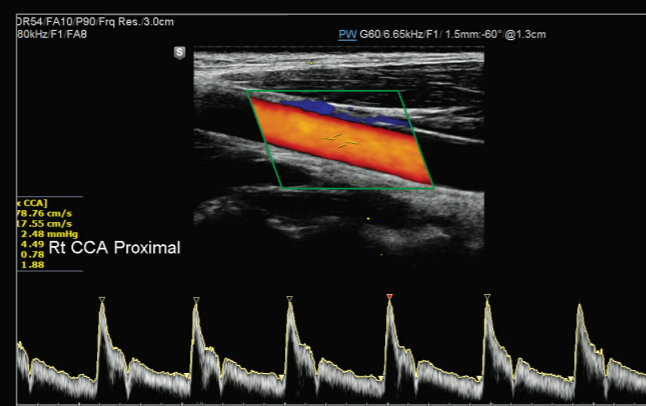
Wrist ganglion



Quadriceps



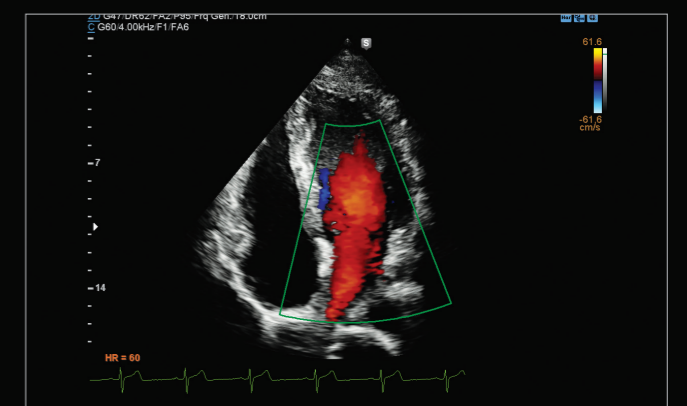
Breast mass



Carotid artery



Panoramic



4 Chambers



# Leading edge design for your convenience



## Folding monitor

The folding monitor enables safe and secure transport.



## 13.3-inch tilting touch screen

The tilting touch screen adjusts to accommodate user viewing preference in any scanning environment.



## 6 way adjustable control panel

The RS80A with Preige's 6 way adjustable control panel optimizes work environment to reduce repetitive stress. When off-mode, the control panel returns to home position for easier mobility.



## 23-inch LED display

The RS80A with Prestige features a 23-inch high definition LED display delivering excellent contrast resolution, image clarity and vibrant color in any lighting condition.



## Simplified console design

The simplified control panel including 3D Navigator and intuitive grouping of console buttons streamlines system interaction for efficient patient scanning.



## Swivel lock

A single pedal controls a swivel lock mechanism to conveniently secure console in place and accommodates efficient movement during a variety of scanning procedures.

# Comprehensive selection of transducers

## Curved array transducers



S-Vue

**CA3-10A**

• Application : abdomen, obstetrics, gynecology



S-Vue

**CA1-7A**

• Application : abdomen, obstetrics, gynecology, contrast



**CA2-8A**

• Application : abdomen, obstetrics, gynecology



**CF4-9**

• Application : pediatric, vascular

## Linear array transducers



**LM4-15B**

• Application : small parts, vascular, musculoskeletal



**LA4-18B**

• Application : small parts, vascular, musculoskeletal



**L3-12A**

• Application : small parts, vascular, musculoskeletal



**LA3-16A**

• Application : small parts, vascular, musculoskeletal



**LA2-9A**

• Application : small parts, vascular, musculoskeletal, abdomen



**L7-16**

• Application : small parts, vascular, musculoskeletal



**LA3-16AI**

• Application : musculoskeletal

## Volume transducers



S-Vue

**CV1-8A**

• Application : abdomen, obstetrics, gynecology



**V5-9**

• Application : obstetrics, gynecology, urology



**V4-8**

• Application : abdomen, obstetrics, gynecology



**LV3-14A**

• Application : musculoskeletal, small parts, vascular

## Phased array transducer



**PM1-6A**

• Application : cardiac, TCD, abdomen



**PA3-8B**

• Application : cardiac, pediatric, abdomen



**PA4-12B**

• Application : cardiac, pediatric

## CW transducer



**CW6.0**

• Application : cardiac



**DP2B**

• Application : cardiac

## TEE transducer



**MMPT 3-7**

• Application : cardiac

## Endo-cavity transducer



**E3-12A**

• Application : obstetrics, gynecology, urology

\* Some of the transducers may not be available in some countries.