

**HITACHI**  
Inspire the Next

# Noblus

Advanced Versatile Ultrasound Scanner





**Advanced versatility for use:**  
in many different clinical settings  
for a wide variety of examinations

# Noblus

**Advanced Versatile Ultrasound Scanner**

Ultrasound imaging plays an essential part in medical diagnosis throughout today's healthcare environment. The Noblus is a versatile diagnostic ultrasound platform that can be easily adapted to the workplace. With its premium features and large user-friendly display, Noblus provides the performance needed for a wide variety of clinical imaging irrespective of the exam location.



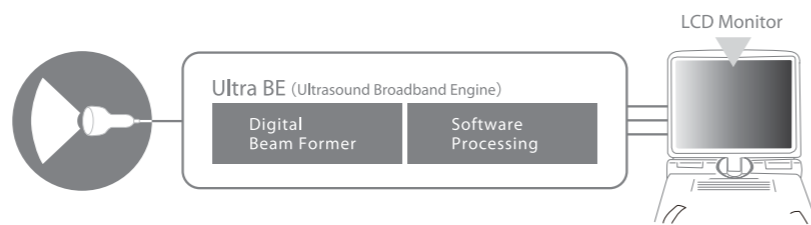
# Image quality and advanced functions ensure premium performance whatever the clinical application.

The Noblus has premium features that can be exploited in many different clinical situations. Although compact in design, the Noblus incorporates the powerful transmission and reception capability of the Ultra BE (Ultrasound Broadband Engine), enabling functions such as Real-time Tissue Elastography\* (RTE) and dynamic Contrast Harmonic Imaging\* (dCHI), modalities that can offer increased diagnostic confidence.



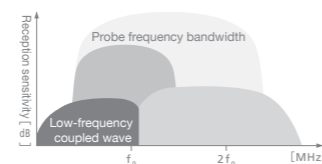
### Ultra BE (Ultrasound Broadband Engine)

Ultra BE, the ultrasound-specific digital signal processor at the core of the Noblus, provides advanced beam formation and sophisticated image processing giving a diagnostic performance normally reserved for high-end cart-based systems.



### HdTHI

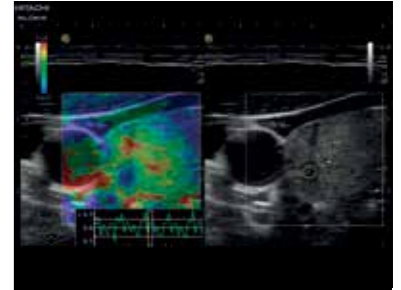
Uses Hitachi's own broadband technology to increase the harmonic frequency bandwidth resulting in both high resolution and excellent penetration.



Liver and gall bladder

### Real-time Tissue Elastography\*

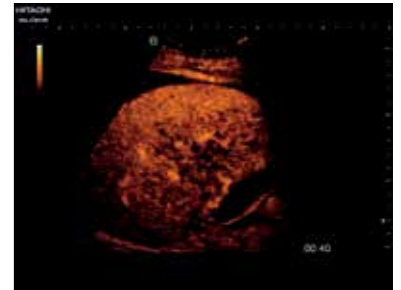
Displays the relative stiffness of tissue as a detailed colour map. It can enhance the visualisation of stiff lesions with similar echogenicity to the surrounding tissues that are not easily differentiated with B-mode imaging.



Stiff thyroid nodule

### Contrast Harmonic Imaging\*

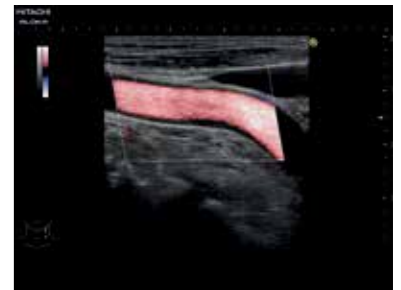
Features the Alternate Mode, a simultaneous real-time display of the fundamental B-mode and contrast-enhanced image, to facilitate anatomical correlation.



Cirrhotic liver

### Fine Flow

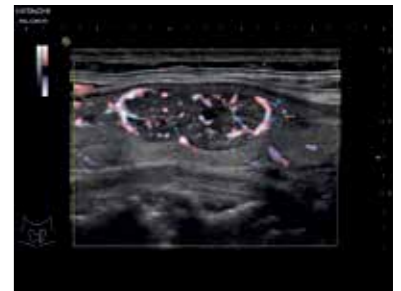
Supported by the Ultra BE, Fine Flow gives an accurate and detailed depiction of blood flow dynamics with exceptional spatial resolution and at high frame rates. Sensitivity for detection of very fine vessels is enhanced compared to conventional Colour Doppler.



Fine Flow in the carotid artery

### HI REZ

A tissue adaptive filter made possible by the high-speed processing of the Ultra BE, optimises contrast resolution, border enhancement and noise suppression without reducing frame rate.



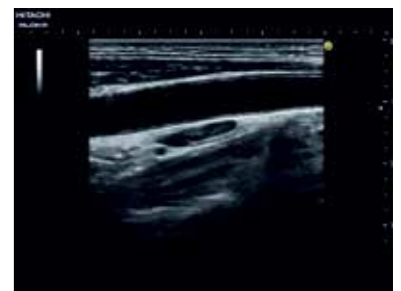
Fine Flow in complex thyroid nodule

### HI Com

Real-time spatial compounding technology using multiple beams on transmit and receive that is especially beneficial for clarifying luminal structures.



Multi-nodular thyroid



Common carotid artery

\*optional

The flexibility of the Noblus brings the clinical benefits of high-end ultrasound into new areas of healthcare.

## ABDOMEN



Abdominal aorta with branches



Several small gallstones



## OB/GYN

### 4Dshading\*

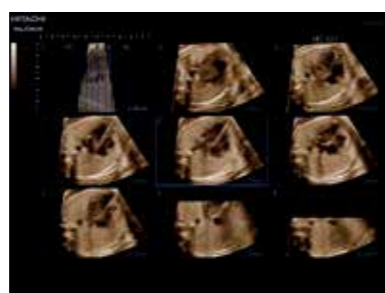
4Dshading is a rendering technology that simulates different positions of a virtual light source that can be freely positioned to give a more realistic appearance of natural shadows and skin texture to the 3D reconstructed image.



4Dshading



Transvaginal scan of embryo



STIC

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

For the fast-moving fetal heart, multi slice 3D volume data sets of one cardiac cycle are reconstructed for better observation of the normal and abnormal heart. Both Multi-Planar Reconstruction (MPR) and Multi Slice Imaging (MSI) displays are available.

## CARDIOVASCULAR

### IMT Measurement\*

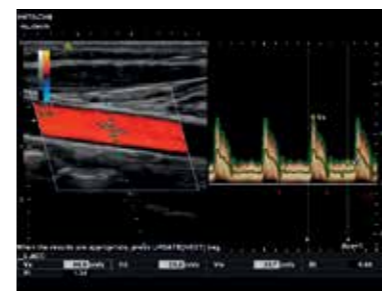
Automatic measurement of the Intima-Media Thickness (IMT). Max, mean, and three-point IMT measurements are calculated.



IMT measurement

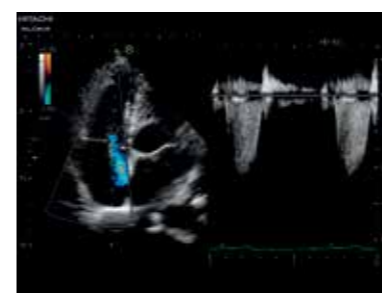
### Real-time Doppler Measurement Function

The real-time tracing of Doppler waveforms with automatic display of flow parameters can significantly reduce examination time.

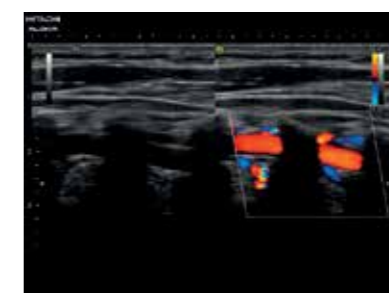


Auto Trace Doppler

### Steerable CW Doppler\*



Tricuspid regurgitation



Vertebral artery and vein



Long axis view of heart

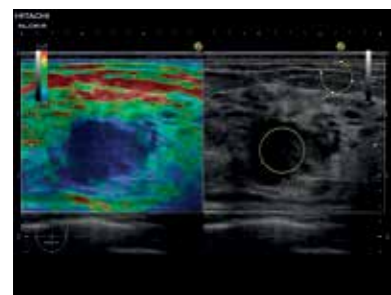
\*optional

Premium modalities that can be exploited in many different clinical situations.

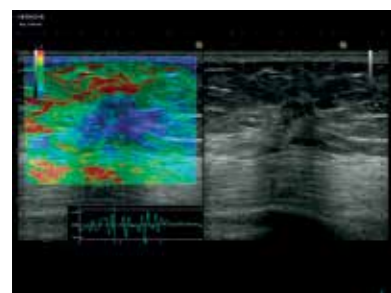
## BREAST

### Strain Ratio

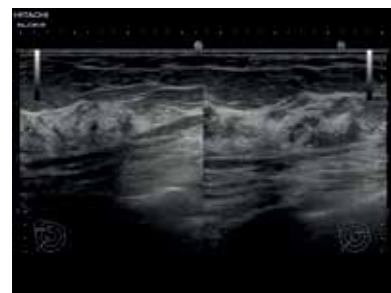
The Strain Ratio can be used to quantify the stiffness ratio between two selected regions of interest. For breast examinations, Assist Strain Ratio provides an automatic Fat Lesion Ratio (FLR) measurement once the calliper has been set at the centre of the lesion.



Fat Lesion Ratio



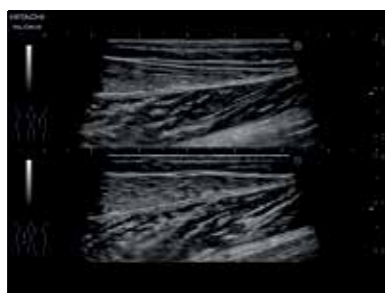
Stiff breast lesion



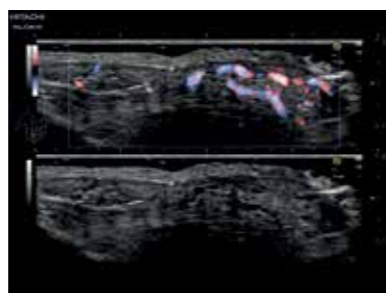
Mammary gland



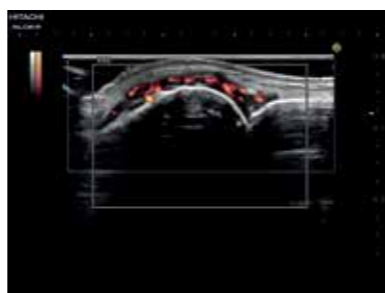
## MUSCULOSKELETAL / RHEUMATOLOGY



Up/down, dual image display



Fine Flow in finger



Vascularity measurement of the joint

## EMERGENCY & ICU



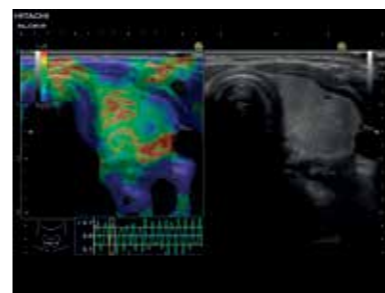
Aortic regurgitation



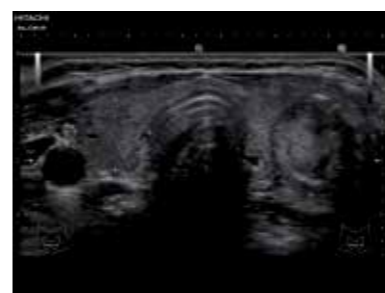
Gallstone



## THYROID



RTE of small thyroid nodule



Enlarged multi-nodular thyroid



## UROLOGY



Sagittal and transverse view of the testis

The versatile design of the Noblus allows it to be used in a wide variety of clinical settings.

Its flexibility ensures that the Noblus will meet your needs in optimum style, whether in the hospital or private practice environment: bedside imaging, in outpatient or private consultation rooms, on a desk, used seated or standing. Its monitor swings and tilts, and the unique space-saving design allows the operating console to fold up, providing more desk space between exams.

The Smart Touch feature enables intuitive operation, and wireless DICOM communication powerfully enhances your examination efficiency, irrespective of the location.



**Cart\***

A rugged cart with 5 swivel wheels is an option for the lightweight system that ensures easy mobility within the hospital and for positioning in confined locations.

**Built-in battery**

A built-in battery offers superb portability without system shutdown between examinations.

**Probe extension unit\***

Up to three active transducers can be connected when the probe extension unit is installed, including selected transducers from the HI VISION series.

**Wireless DICOM communication\***

Noblus can be connected to wireless networks. DICOM data can be transmitted through a Wireless LAN.



Flip up the operating panel to make more desk space.

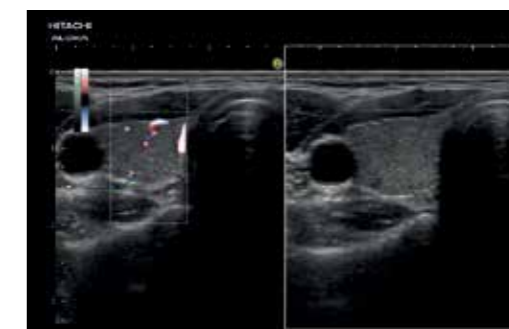


The monitor swings and tilts reducing unnecessary stretching by the examiner.



**Smart Touch**

The Smart Touch feature allows parameter adjustment by a direct touch on the screen, allowing you to maintain your focus on the ultrasound image.



**Compare Window**

Displays an image from a previous study, side by side with the current real-time image. Beneficial for follow-up examinations.

The Noblus is compatible with a wide range of transducers: from standard transducers for routine examinations through to specialist transducers for interventional, intraoperative and endocavity examinations.



Adjustable height for operation when seated or standing



Sufficient leg room when sitting



**Smile yellow, color of the sun**

How can examinations be made more friendly for patients? Hitachi's answer is "Smile Yellow". It was developed from the image of sunlight, with the aspiration that it will bring a smile to your patients' faces. With wavelengths similar to sunlight, Smile Yellow will maintain its bright and friendly colour, regardless of the ambient lighting, providing your patients with a calm, relaxing environment.

Smile Yellow is the colour chosen by the Hitachi Medical group for all their diagnostic imaging devices.



"Smile Yellow" colour used on the ECHELON Oval 1.5T MR System.

\*optional



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- Some photographs shown in this brochure include optional items.
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- Specifications and physical appearance may be changed without prior notice for improvement of performance.
- Be sure to read instruction manual for correct operation of the equipment.
- DICOM is a registered trademark of the National Electrical Manufacturers Association (NEMA), for its standards publications.

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 **Hitachi, Ltd.**

2-16-1, Higashi-Ueno, Taito-ku, Tokyo, 110-0015, Japan

Distributor for Europe

 **Hitachi Medical Systems Europe Holding AG**

Sumpfstrasse 13, 6300 Zug, Switzerland  
[www.hitachi-medical-systems.com](http://www.hitachi-medical-systems.com)