PENTAX Medical EUS
Advancing Patient Care Through the Colors of Sound
PENTAX Medical EUS
Advancing Care Through a Deeper Understanding

RADIAL: 360-DEGREE PANORAMIC ULTRASOUND
The PENTAX Medical Radial EUS Endoscope orchestrates 140-degree, forward-viewing, high-resolution video optics for direct guidance with a 360-degree ultrasound image for panoramic visualization.

- 360-degree radial ultrasound; 140-degree, forward-viewing, high-resolution video.
- 2.4mm diameter integrated working channel.
- Advanced digital ultrasound technology incorporating five selectable frequencies.

LINEAR: REDEFINING ULTRASOUND
The PENTAX Medical Linear EUS Endoscope joins high-resolution video definition and the layer defining of ultrasound to drive a market-leading image technology.

- 120-degree ultrasound sector angle.
- 3.8mm diameter integrated working channel with elevator.
- 10mm radius ultrasound convex array for perfect anatomical conformance.

HITACHI SONOELASTOGRAPHY
Hitachi Sonoelastography is an ultrasound imaging technique where low-amplitude, low-frequency waves are spread through internal organs. Real-time Doppler technology is used to image the resulting vibration patterns, providing previously unattainable information about the relative stiffness of suspicious tissue.

PENTAX Medical and Hitachi are leading the way for this novel technology regarding its application in GI—to exciting results.

ENDOBRONCHIAL ULTRASOUND WITH GUIDED TBNA (EBUS)
Unlike conventional TBNA relying on “blind” aspirations, PENTAX Medical brings together the color and resolution of true video with cutting-edge ultrasound technology. Our uniquely angled design gives an uncompromising 75-degree ultrasound scanning angle with real-time visualization of the needle tip. This increases aspiration efficiency and detection, always keeping patient care and your needs in the forefront.
With the new HI VISION™ Preirus™, PENTAX Medical is delivering a next generation ultrasound platform that elevates the art of effective imaging, offering superior performance, enhanced diagnostic confidence and increased therapeutic potential.

The HI VISION Preirus is unlike any other ultrasound platform on the market today. It combines ultra high-speed processing with advanced compounding, innovative filter techniques, image blending and a dual encoding/decoding process. Individually, these offer greater control and flexibility; collectively, they deliver superior penetration, and temporal, spatial, and contrast resolution, resulting in quality images for every patient, every time.

HITACHI SONOELASTOGRAPHY

Based on hand palpation, the key method used by physicians to diagnose disease, sonoelastography is a very intuitive and simple technique of using sound waves and freehand endoscopic compression to mimic palpation. Using high-speed processing, high-contrast color images are shown to represent tissue stiffness. Stiffer structures are displayed in blue as this color allows easier visualization over the grey scale image underlay. The color mapping is robust to variations in speed and degree of compression making sonoelastography accurate and reproducible using the freehand technique with endoscopic ultrasound. The simultaneous, real-time display gives the operator anatomical correspondence between tissue elasticity and the B-Mode image. Real-time elastography is a simple technique that can be incorporated into the routine endoscopic ultrasound exam.
PENTAX Medical EUS
Advancing Patient Care Through the Colors of Sound

Endoscopic Ultrasound (EUS) brings imaging technologies to the forefront of advancing patient care. Going beyond the layers, the colors of sound bring to life information you need to make confident decisions with unparalleled accuracy. With PENTAX Medical’s market-leading EUS solutions—in concert with our ultrasound partner, Hitachi®—radial, linear, sonoelastography, and EBUS-guided TBNA form a product offering in endoscopic image quality and ease-of-use handling.
Product Information

HI VISION™ Preirus™:

• **Hi-Compound** – Combines frequency and spatial compounding, literally scanning the image from multiple angles. This provides exceptional contrast and detail resolution that results in greater diagnostic confidence.

• **Hi-Resolution** – Driven by the HI VISION Preirus high-speed processing components, Hi-Resolution’s tissue-adaptive filter technique performs tens of thousands of spatial imaging processing operations in real time to reduce speckle and noise in the image.

• **Sonoelastography** – An ultrasound imaging technique where low-amplitude, low-frequency waves are spread through internal organs. Real-time Doppler technology is used to image the resulting vibration patterns, providing previously unattainable information about the relative stiffness of suspicious tissue.

• **Dual Coded B Imaging** – The Preirus platform uses a unique hybrid of coding specific to the transmit signal with decoding and summing of the receive signals. This results in a fourfold increase in amplitude to improve high-frequency penetration while maintaining image resolution.

• **User-Friendly Design** – The award-winning ergonomic design of the Preirus offers maximum comfort whether you’re performing a routine examination or complex interventional procedure. The Smart Touch user interface is on the LCD for intuitive scan parameter adjustment and the Patient Specific Selector (PSS) allows you to customize and save scan parameters which can be switched simultaneously by one-key operation.