

MultiWave™ Ultrasound Imaging

The Aixplorer® with MultiWave Technology offers you unprecedented image quality and revolutionary real-time ShearWave™ Elastography to deliver assessment capabilities critical to your thyroid diagnostic challenges.

Impeccable Thyroid Image Quality

The Aixplorer leverages its software-based architecture: SonicSoftware™ to deliver never seen before clinical detail in B-mode imaging. This impeccable image quality displays morphological detail that facilitates the localization and characterization of lesions. Innovative technologies such as SuperRes™, SuperCompound™ and TissueTuner™ ensure superb image resolution, clarity and delineation.

ShearWave Elastography for Thyroid Imaging

Until now, conventional ultrasound imaging has been unable to demonstrate optimum visualization of thyroid nodule elasticity. Cutting edge ShearWave Elastography (SWE™) enables real-time, quantitative, tissue characterization for both thyroid nodules (cystic and solid) and neck lymph nodes. ShearWave Elastography is a user-skill independent and reproducible imaging technique that provides an easy to read color-coded elasticity map of tissue. Thanks to its millimetric spatial resolution ShearWave Elastography can image anatomically difficult areas and morphologically complex nodules or goiters which may include nodules of different composition (even greater than 50% cystic), size and elasticity.

In addition ShearWave Elastography may:

- Help improve the sensitivity of Fine Needle Aspirations (FNA).
- Help differentiate tissue stiffness prior to surgery leading to improved accuracy of ultrasound thyroid examinations of follicular neoplasms.
- Improve the accuracy of ultrasound examinations of neck lymph nodes.

AIXPLORER
MultiWave™



Key Features and Benefits

Q-Box™ Quantification Tool

Accurately measures, in real-time, true tissue elasticity in kilopascals. Several areas of interest can be compared and quantified simultaneously, even retrospectively.

Q-Box™ Ratio Tool

Compares stiffness of two regions as a ratio: nodule to normal tissue parenchyma. Difficult to characterize nodules can be followed over time using quantitative ShearWave Elastography.

TissueTuner™

Speed of sound correction tool that grants optimal resolution and better delineation of structures thanks to five settings that adjust parameters to match the speed of sound in the tissue being scanned.

Thy-RADS™ Documentation Tool

This feature, uniquely integrated into the Aixplorer system, provides a standardized, on screen descriptive checklist enabling quick identification and documentation for nodule characterization in thyroid pathology. Thy-RADS can be simultaneously applied on up to 8 thyroid nodules at a time. Descriptors include: nodule size, composition, orientation, palpability, vascularity and stiffness, among others.

Color Doppler Modes (dCPI, CFI, CPI)

Ultrasensitive flow imaging with post-processing options.

The SuperLinear™ 15-4 Transducer

This broadband transducer is designed to acquire the most accurate data possible for every thyroid exam. It harbors unique technology to provide both outstanding B-mode image quality and ShearWave Elastography performance.

The SuperCurved™ 6-1 Transducer

This broadband transducer is often used for large goiters particularly if visualization of deeper structures or nodules is required.

Significant Clinical Studies

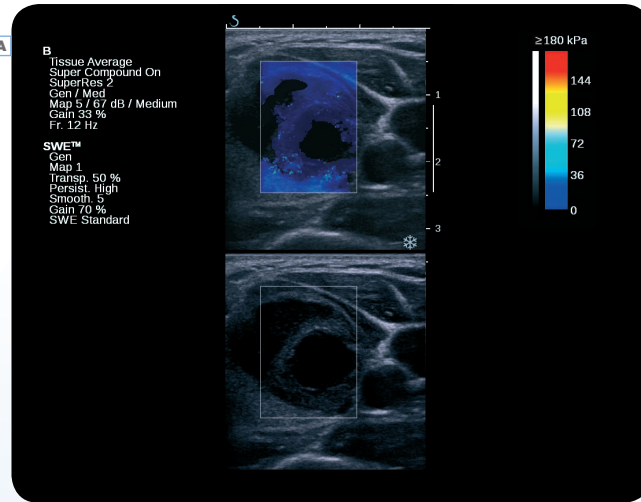
- Quantitative ShearWave Elastography as a Prognostic Implication of Papillary Thyroid Carcinoma (PTC): Elasticity Index Can Predict Extrathyroidal Extension (ETE). Park YJ et al. Ann Surg Oncol. 2013 Mar 6.
- A threshold value in ShearWave Elastography to rule out malignant thyroid nodules: a reality? Veyrieres JB et al. Eur J Radiol. 2012 Dec;81(12):3965-72
- ShearWave Elastography may add a new dimension to ultrasound evaluation of thyroid nodules: case series with comparative evaluation. Slapa RZ et al. J Thyroid Res. 2012;2012:657147.



Case Studies

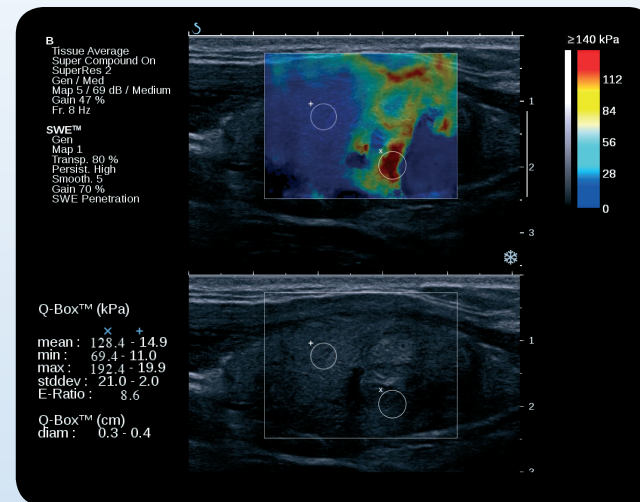
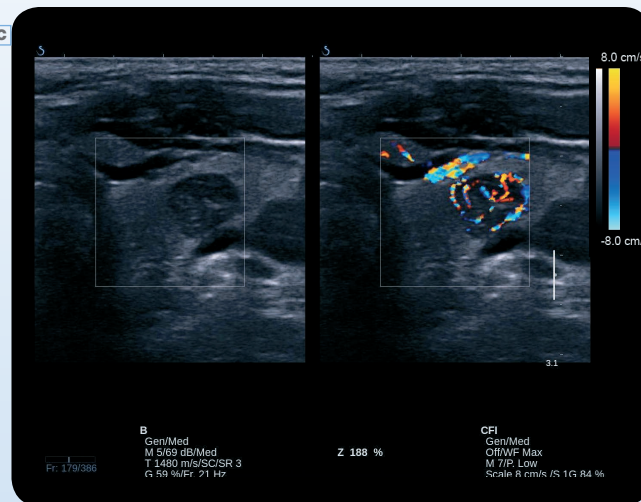
AIXPLORES
 MultiWave™

Soft benign cyst with coalescent nodules. Due to millimetric spatial resolution, ShearWave™ Elastography can image complex goiters and nodules, including those with greater than 50% cystic content.



Long heterogeneous nodule shows excellent B-mode image quality due to spatial compounding, good conspicuity (due to speckle reduction) and margin enhancement resulting in excellent contrast resolution. Optimal spatial resolution is achieved due to TissueTuner™ speed of sound adjustment capability.

Color Doppler includes Color Flow Imaging, Color Power Imaging and Directional Color Power Imaging for visualization of highly sensitive flow without motion artifacts. Side-by-Side mode allows the visualization of both B-mode and Color Doppler mode simultaneously.



Papillary carcinoma shows heterogeneous stiffness. The Q-Box™ ratio tool compares the stiffest part of the nodule to the normal parenchyma, in this case the nodule is eight times stiffer than the normal surrounding tissue. SWE™ is the only technology that can quantify every pixel inside a lesion.