



CONQUEST IMAGING

Ultrasound Basics Class Objectives

Diagnostic Ultrasound	Application for Diagnostic Ultrasound Ultrasound Imaging Modes 2D/3D/4D/Volumetric What the difference? Applications of Imaging Modes
Physical Principles	What is an ultrasound wave? Characteristics of the wave. Propagation in soft tissue Velocity, attenuation and frequency. What is echogenicity? Imaging liquids, solids and structures.
The Transducer	Types of transducers and transducer nomenclature. Types of beam forming, physical, electronic and why. Transducer limitations, where physics meets physical. Resolution, axial, lateral, contrast and more.
Types of Imaging Systems	Identifying your system. Basic ultrasound system blocks. Important differences between products.
Peripherals	Printers and hardcopy devices. VCRs and motion storage. Color or Black and White, what's important. Limitations.
Doppler	Doppler and the Doppler formula. Normal vascular flow in a low resistance vessel. Spectral Doppler overview. Color Doppler overview. PW versus CW Doppler. Operating parameters for Spectral, Color, PW and CW Imaging.
The Ultrasound Exam	Basics of image orientation. Ultrasound scan planes. System function that effect the image. Starting and exam basics.
Evaluating an Image	Phantom basics. Establishing a consistent setup. Evaluating important imaging components. Attenuation, physics rears its head again.
What's Coming?	Changes in hardware and software. New jargon. New Tools in Your Tool Box
Open Forum and Review	Review