

## SKILLS DEVELOPMENT & ENRICHMENT

The UltraSim is an invaluable tool for teaching students, residents and medical professionals new to the field of ultrasound imaging. Accelerated learning is easily achieved because the inconsistencies and limitations associated with live-patient scanning in the clinical setting are eliminated. Users rapidly develop scan plane orientation and cross-sectional anatomy recognition skills as they progress through each clinical case. In addition, the task-oriented, protocol driven educational materials help the user develop proper examination practices. Finally, the UltraSim's modules feature cases of varying difficulty to match the developing skills of participants, thus consistently providing a challenging educational experience.

Medical professionals with existing ultrasound imaging experience may use the UltraSim to cross-train by developing new skills or enriching existing ones. The UltraSim allows the experienced user to examine uncommon pathologies or practice difficult/sensitive procedures.

The UltraSim is a versatile educational system that may be adapted to different teaching styles. It allows medical educators the freedom to provide self-guided tutorial sessions for individuals, or conduct faculty assisted workshops and lectures to larger groups.

## SKILLS ASSESSMENT

One of the key benefits of the UltraSim's simulation technology is the ability to consistently assess an individual's skills with an objective, standardized methodology. Individuals can be evaluated using the same platform, clinical cases, tasks and questions. This approach is a powerful tool for documenting educational achievements, determining remediation requirements, pre-hire testing, and on-going competency assessment.



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# "Knowledge Through Experience"

# UltraSim<sup>®</sup>

ULTRASOUND TRAINING SIMULATOR

## The Ultrasound Training Simulator



Image shows the UltraSim UST 100 with full-torso mannequin, mock 3.5 MHz curved transducer and Abdomen Module 1 Clinical Case.

## SOLUTION

The UltraSim is the world's first simulation-based ultrasound training system. The UltraSim enables medical professionals to develop and enrich their ultrasound scanning and interpretation skills in a patient-free, controlled environment.

Clinical ultrasound requires highly skilled medical professionals. Academic institutions and continuing education programs that traditionally teach these skills are faced with decreased access to clinical training sites and higher educational costs. As a result, the need for high efficiency learning is significant.

The UltraSim allows medical professionals to achieve optimal educational outcomes through increased control over clinical case presentation, the freedom to learn at their own pace, and the ability to incorporate truly objective skills set assessment. The UltraSim is the answer to today's educational needs.

## ULTRASIM BENEFITS

- Patient-free, life-like, clinical training
- Increased control of clinical experiences and skills progression
- Objective method for evaluation and skills assessment
- Mistake-forgiving without critical consequences
- Diverse patient types, normal and abnormal cases
- Reproducible clinical experiences
- Location and environmental flexibility
- Minimal operating expenses

## TECHNOLOGY

The UltraSim's simulation capabilities originated from aviation simulation and medical imaging technologies. The synergistic combination of these powerful technologies creates a lifelike experience. UltraSim users perform "virtual" ultrasound examinations by scanning a human-like mannequin, accessing stored volumes of real patient ultrasound data. The UltraSim tracks the exact position, angle and movement of the probe in relation to the area of examination. As the probe moves across the mannequin, the on-screen image responds accordingly, providing a real time, authentic scanning experience.

## CURRICULUM

The UltraSim's task-oriented learning format is an innovative approach to ultrasound education. UltraSim's curriculum augments traditional methods of ultrasound education by bridging the inherent gaps associated with live patient scanning where case diversity, pathologies, and time constraints prevent access to a thorough clinical experience.

The curriculum is modular in format, focusing on anatomic areas (i.e. abdominal, obstetrics, vascular, etc). Each module includes a series of clinical cases available on CD ROMs, instructor manuals, user worksheets, and suggested curricula. Each clinical case contains case-specific data, exam protocols, educational tasks, patient clinical histories, reference images, and a thorough case analysis. Each module includes a variety of normal and abnormal cases which compares to the experience gained in a real clinical setting. This comprehensive approach to ultrasound education is easily integrated into any existing curriculum.



Instructor Manuals



Clinical Worksheets



Module CD ROMs