





Simulation in Transvaginal & Transabdominal Ultrasound



The ScanTrainer Learning Pathway





Our revolutionary ScanTrainer simulators for **transvaginal** and **transabdominal** ultrasound education offer unique self-learning scanning experiences that replicate being taught one-to-one by an expert.

Offering structured **curriculum-based teaching**, ScanTrainer uses **real patient scans** with haptic feedback, gives real-time assisted guidance and facilitates assessment through measurement of key performance metrics - all in one comprehensive system. An essential addition to medical simulation centres and teaching hospitals, clinicians can now learn and develop their scanning skills from basic to advanced levels of practice with ScanTrainer's:

SCANTRAINER

- **Real-feel haptics**. A virtual patient whose shape, position and feel changes with every patient case.
- **ScanTutor**. A virtual tutor provides real-time on screen guidance helping trainees to identify structures and make measurements.
- Educational modules. Training programs designed across a number of clinical disciplines will teach basic through to advanced skills that can then be applied in context with real-life patient scenario cases.
- **Feedback.** After each lesson, the trainee can access comprehensive feedback to understand what they did wrong as well as what they did right.
- **Case library**. Contains real patient normal and abnormal ultrasound cases. Tutors can upload their own scans to create tailored training programs.
- Scanning and diagnostic skills assessment. Ensures defined competencies are achieved prior to clinical practice.

"ScanTrainer is simulation at its best, providing very realistic practice in necessary and potentially lifesaving skills that are otherwise quite difficult to teach at the bedside."

Dr Trish Henwood MD,

Emergency Ultrasound Fellow, Brigham and Women's Hospital, Boston USA



"Since implementing ScanTrainer into our programs, not a single student has failed the transvaginal obstetrics and gynaecology module."

Naomi Brown

Senior Lecturer and Ultrasound Course Lead, University of the West of England



To ensure safe patient examinations, simulated ultrasound practice comes into its own when teaching invasive transvaginal (TV) scanning procedures.

ScanTrainer ensures that trainees can gain extensive knowledge and practice in TV ultrasound. Providing a comprehensive and fully supportive self-directed educational experience, ScanTrainer will help trainees build confidence in this hard-to-learn skill and allow them to demonstrate the required levels of competence prior to scanning real patients.

- Learn TV probe handling skills to acquire accurate, diagnostic ultrasound images.
- Identify and interpret image relationships between anatomy and ultrasound views.
- Recognize pathology relevant to obstetrics and gynaecological practice.
- Learn diagnostic skills.

Cart option available. See page 7



Educational Modules for TV ultrasound

Extensive educational modules and training programs for obstetric and gynaecology residents, sonographers and midwives are available for use with ScanTrainer to teach core and advanced scanning skills in a range of scenarios.

See Page 14 for further details.



MEDICINE

"ScanTrainer has enabled our students to learn the way they want to, at the pace they need to."

Dr Vivien Gibbs University of the West of England

SCANTRAINER | Transabdominal Simulator

With the increasing availability of portable scanning devices, there is a growing interest among clinicians of multiple healthcare disciplines to acquire transabdominal (TA) ultrasound skills.

ScanTrainer provides a truly self-directed and structured learning solution for educators wishing to meet this growing demand and increase access to TA ultrasound training.

- Learn TA probe handling skills to acquire accurate, diagnostic ultrasound images on varied body shapes through the 'real-feel' haptic.
- Identify and interpret image relationships between anatomy and ultrasound views.
- Recognize pathology relevant to multiple clinical specialisms.
- Learn diagnostic skills.



Educational Modules for TA ultrasound

Extensive educational modules and training programs for clinicians and sonographers wishing to learn transabdominal ultrasound are available for use with ScanTrainer to teach core and advanced scanning skills in a range of scenarios.

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GENERAL MEDICAL

See Page 14 for further details.

The near-limitless degrees of movement available in handling an ultrasound transducer make probe manipulation a challenging skill to learn. The complex combination of sliding, rocking, tilting and rotation, how these affect the way in which the anatomy is displayed, and the very subtle transducer movements which are often required to optimise the image, can now be taught with ScanTrainer's unique probe manipulation module.

Using a sequence of 3-dimensional models and ScanTrainer's realistic haptic transducer and virtual patient, trainees are taught transducer movement skills and how to examine complex structures in a way which is simply not possible in live scanning. A series of engaging tests are used both to teach and assess skills levels.





Learn how the probe interacts with the 3d shape



Guide the ultrasound image with the probe to match the on-screen shapes



Our unique real-time virtual tutor replicates learning oneto-one with an expert, allowing for a truly self-directed learning experience. Trainees will be able to acquire complex, hard-to-learn ultrasound scanning skills in their own time and at their own pace.

Learn the theory

ScanTrainer comes complete with a range of learning resources that the trainee can study before beginning practical sessions on the simulator. These include:

- Expert videos for each assignment.
- Scanning technique schematics.
- Comprehensive text-book style references and notes.

Put theory into practice

ScanTutor provides real-time on-screen guidance, which helps the trainee learn to:

- Correctly manipulate the probe.
- Acquire quality images.
- Identify structures.
- Make measurements for accurate diagnosis.

Integrated into every learning module – it's like learning with a real expert and it's available 24/7!

Self-check progress

After each lesson, trainees can switch off ScanTutor and test their own skills performance against set metrics. If they do not master the lesson first time, they can switch ScanTutor back on to go over key learning points, take the test again and then move onto the next lesson.



Traffic light display of the virtual probe demonstrates correct orientation



Real-time on screen visual guidance helps the trainee to orientate the probe, identify structures and make measurements.

"It's like learning with a real expert and it's available 24/7!"

A progressive and structured approach to gain mastery of ultrasound practice is a fundamental concept of the ScanTrainer system.

Extensive curriculum-based education modules and patient cases across multiple healthcare disciplines allow trainees not just to develop their scanning skills, but to scan and diagnose pathologies that would rarely be encountered in a traditional training environment.









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It's a simple step-by step process...

Learning Resources

Introduction to the basic principles, including ultrasound physics.

Probe Manipulation Skills

Hand-eye co-ordination & 3d visualisation module.

Skills Learning Modules

Learn how to scan by speciality. SCANTUTOR built into all learning modules.

Skills Assessment

All learning modules have in-built metric assessment to test your scanning skills.

Case Learning

Access the 500+ patient cases in the cloud based case library. Includes 300+ structured cases to learn to recognise and diagnose pathology.

Case Exam

Selected patient cases that use multiple-choice questions to test your diagnostic skills.



"ScanTrainer is very much central to our strategy for ultrasound learning, teaching and assessment and we've only scratched the surface of what it can do."

Heather Venables University of Derby

Monitor Progress

Tutors and trainees can check progress status through to curriculum completion.

ScanTrainer Examine brings all the newly mastered theoretical and practical ultrasound skills together into an assessment tool to test students' diagnostic skills in transvaginal and transabdominal ultrasound.

ScanTrainer Examine has been designed to support the assessment processes and responsibilities of teaching hospitals and professional examination bodies. It offers users access to a cloud based library of over 500 patient cases to comprehensively test a clinician's scanning and diagnostic skills.





Create your own patient cases and design your own curricula...

Take a 3D single sweep scan.



Upload the data file into the Case Generator to create a ScanTrainer patient case with virtual anatomy and haptic feel.



Publish your new patient case locally or globally in the ScanTrainer Case Library.



Set new patient cases for extended learning and practice.

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SCANTRAINER'

SCANTRAINER | Cloud

ScanTrainer Cloud offers users a ground-breaking range of new features and educational tools that will optimize the teaching scope and learning potential for both the tutor and trainee.

Our support plans are available on a subscription basis for 12, 24 or 26 months and are **FREE** for the first year with every new ScanTrainer purchase, users can:

Learn anytime, anywhere

With remote access, trainees can access the system's extensive learning resources from their PC, laptop or tablet to carry out pre-learning or revision.

Teach anytime, anywhere

Likewise, remote access allows tutors to set tasks and review trainees progress at a time and place that suits them in their busy schedules!

Share resources

Tutors can share bespoke case studies with any other equivalent cloudenabled ScanTrainer system around the world.

Access remote online support

Online support from our Technical Support Team.

Case Generator

Case Generator is a unique feature of the ScanTrainer Cloud service. By enabling tutors to upload their own scans and create their own patient cases, bespoke training programs can be created, which address the specific teaching points a tutor may wish to make.

Tutors can choose to publish their cases locally for sole use by their own trainees, or share globally with other ScanTrainer Cloud users around the world via the Cloud Case Library.



ScanTrainer Cloud enables users to share their own scans and bespoke training modules within their own institution as with their professional peers worldwide.

Our Support Plans will give you the peace of mind that your simulator is always ready to use, so that you can focus on what really matters - your students!

ScanTrainer has a number of transvaginal and transabdominal education packages to help tutors save time and get their simulation programs up and running quickly and effectively. These packages are ideal for:

- Obstetric & Gynaecology residents
- Sonographers
- Midwives
- Radiology residents
- Emergency Medicine practitioners
- Simulation Centres

Here are just two examples:

Transabdominal Education Pack

Core Skills Modules:

Obs & Gynae: 12-week dating scan, 20-week fetal anomaly scan, 28-week fetal growth scan & gynaecology General Medical: Upper abdomen, including liver, gall bladder, bile ducts, pancreas, spleen, kidneys, aorta, bladder Emergency Medicine: FAST and eFAST

Advanced Skills Modules:

Liver segments, eFAST AAA, 20-week FASP scan & IUFD with Doppler

Super Assessment modules:

Each containing 10 randomised patient cases: Upper abdomen, FAST and eFAST

Transvaginal Education Pack

Core Skills Modules:

Gynaecology Core Skills module and Obstetric Core Skills module

Advanced Skills Modules:

Obstetrics: Cervical length, ectopic pregnancy, twin pregnancy, miscarriage, early pregnancy

Gynaecology: IUCD package, fibroid, ovarian cyst, ovarian masses





OBSTETRICS





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EMERGENCY

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Intelligent Ultrasound Limited is present in most countries throughout the world, either through its direct sales teams or via our Distribution Partners.



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ScanTrainer is recognized globally as one of the leading simulation systems for education in transvaginal and transabdominal ultrasound. Initiated and developed by leading clinicians in obstetrics and gynaecology at the University Hospital of Wales, it is considered to be the most effective, self-directed simulation solution for realistic training in ultrasound.

Intelligent Ultrasound is proud to work closely with healthcare educators from around the world to develop market leading simulators and learning systems that will help better prepare and support clinicians in the care of their patients.



www.intelligentultrasound.com

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