MedaPhor’s 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:

- **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

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The ScanTrainer Learning Pathway

- **Pre-clinical Training**
  - Theory
  - Hands-on skill repetition
  - Skills assessment
  - Clinical practice
- **Clinical Training**
  - Diagnostic assessment
  - Certification
  - Continuous professional development
- **Ongoing**
  - Certification
  - Continuous professional development
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.

“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

Learn Transvaginal Ultrasound
Educational Modules for TV ultrasound

- 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.

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.
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.

“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

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.

• 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.

See Page 14 for further details.
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.

Integrating 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.

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.

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

Our unique real-time virtual tutor replicates learning one-to-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.

Traffic light display of the virtual probe demonstrates correct orientation

“It’s like learning with a real expert and it’s available 24/7!”
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 specialty. 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 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.
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.

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.

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.

Case Library

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

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

Set new patient cases for extended learning and practice.

ScanTrainer Cloud has been awarded official Accredited Provider status by The CPD Standards Office.
Doctors and sonographers in the UK, Europe, Australia, New Zealand and the Middle East can gain CPD points by completing ScanTrainer’s curriculum-based general medicine, obstetrics, gynaecology and emergency medicine ultrasound modules.

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.

Available on an annual subscription basis and 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 cloud-enabled ScanTrainer system around the world.

Access remote online support
Online support from our Technical Support Team.

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.

Available on an annual subscription basis and FREE for the first year with every new ScanTrainer purchase, users can:

Learn anytime, anywhere
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Teach anytime, anywhere
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Share resources
Tutors can share bespoke case studies with any other equivalent cloud-enabled ScanTrainer system around the world.

Access remote online support
Online support from our Technical Support Team.
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, dFAST 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

Contact Our Customer Service Team

UK MedaPhor Ltd
Cardiff Medicentre
Health Park
Cardiff, CF14 4UJ
+44 (0) 2920 756 534

USA MedaPhor North America Inc.
13010 Morris Road
Building 1, Suite 600
Alpharetta, GA 30004
+1 (770) 777 8191

sales@medaphor.com | www.medaphor.com
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.

MedaPhor 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.