



August 2013

## Module 1: Basic: Early pregnancy (8-12 weeks) ultrasound

All trainees entering at ST1 level will be required to complete **both** basic modules *by the end of ST3*.

The aims of this module are:

1. For trainees to become familiar with ideal machine set up and use of the transabdominal probe (including probe orientation)
2. To gain competence in undertaking a basic 'dating scan' using transabdominal scanning between 8-12 weeks gestation
3. To encourage an acute awareness of what can and cannot be seen using the transabdominal route in early pregnancy.

In many cases, transvaginal (TV) ultrasound skills are required in early pregnancy to confirm or refute pregnancy site and viability/non-viability (examples include earlier gestation <8 weeks, maternal obesity, empty bladder, retroverted uterus etc). Trainees are required to gain the TAS competences outlined in this module but should avail themselves of opportunities to gain exposure to, and experience in, use of the TV probe. This is not mandatory within the module and will depend on the availability of resources within units. A specific module will be developed to facilitate confirmation of competence in the use of TV scanning in the foreseeable future.

Completing the two basic ultrasound modules is a very important achievement and can act as a stepping stone for further supervised training and acquisition of more advanced ultrasound competences. Completion of the two basic modules does not imply that a trainee is automatically ready for independent practice in diagnostic ultrasound (particularly in out of hours unsupervised assessment in early pregnancy). Please note that assessment before 8 weeks gestation and use of transvaginal ultrasound are not covered within the present basic modules.

Care should be taken in delegating decisions about clinical management of patients to trainees who have completed only the basic modules (particularly where management relies on the ultrasound findings). The expected utilization of ultrasound skills, both within and out of hours and whether supervised or not, should be determined and agreed by the local ultrasound supervisor in the context of local protocols for ultrasound scanning (i.e. completion of the basic modules is not in itself an automatic qualification for all elements of independent, unsupervised ultrasound practice).

We encourage all trainees to maintain a formal log of ongoing ultrasound experience once basic competence has been confirmed.

### Learning outcomes

To be able to carry out appropriate:

- ultrasound identification of an intrauterine pregnancy



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- ultrasound identification of cardiac activity
- basic first trimester biometry
- referral as required

Trainees should maintain an awareness of the limits of their own competencies

**OSATS**

Trans-abdominal ultrasound examination of early (8-12 week) pregnancy



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Knowledge criteria	Clinical competency	Professional skills and attitudes	Training support	Evidence/ Assessment
<p><b>Principles of ultrasound examination</b></p> <ul style="list-style-type: none"> <li>• Physics</li> <li>• Safety</li> <li>• Machine set-up and operation</li> <li>• Patient care</li> <li>• Principles of report writing</li> <li>• Consent</li> <li>• Cultural Diversity</li> </ul>	<p>Understand the principles of conducting a safe and appropriate ultrasound examination</p> <p>Use an ultrasound machine competently and independently</p>	<p>Safe use of the ultrasound machine</p> <p>Appropriate care of the patient during examination</p>	<p>Course including both:</p> <p>Theory</p> <p>Practical demonstration of machine use and reporting</p>	<p>Certificate of attendance at course</p> <p>Case based discussion</p>
<p><b>Documentation of scan</b></p> <p>Understand need for accurate documentation of scan findings</p> <p>Record and label images</p> <p>Principles of reporting</p>	<p>Record scan findings clearly and accurately and keep appropriate hard copy or video records of anomalies.</p> <p>Know limits of own ability and when to refer for further opinion</p>	<p>Communicate scan findings to other health professionals</p>	<p>Supervised clinical learning sessions</p>	



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Knowledge criteria	Clinical competency	Professional skills and attitudes	Training support	Evidence/ Assessment
<p><b>Normal ultrasound findings</b></p> <ol style="list-style-type: none"> <li>1. Understand morphological features of normal early pregnancy 8-12 weeks.</li> <li>2. Understand physiology of cardiac activity in first trimester.</li> <li>3. Understand principles of gestational sac diameter and crown-rump length measurements</li> <li>4. Understand the principles of differences between normal intrauterine gestation sac and a pseudosac</li> <li>5. Understand diagnostic problems which may occur e.g. empty bladder, obese women and those with large uterine fibroids</li> <li>6. Know when to refer for a TV scan</li> </ol>	<p>Ability to identify the features of a normal gestational sac and confirm its intrauterine location.</p> <p>Ability to measure gestational sac size and crown-rump length.</p> <p>Ability to identify early cardiac activity using B-mode.</p> <p>Identify fetal number</p> <p>Recognise limits of competency</p> <p>Know limits of own ability and when to refer for further opinion</p>	<p>Conduct scan to appropriate standard</p>	<p>Mandatory education and training sessions</p> <p>Theoretical course (local or RCOG)</p> <p>The majority of learning opportunities will encompass supervised clinical learning sessions, often within the standard clinic or ward setting (e.g. dating scans in antenatal clinic)</p> <p>Attendance at first trimester scans and the Early Pregnancy Assessment Unit (EPAU)</p> <p>Personal study – Textbooks of obstetric ultrasound</p> <p>Relevant green top guidelines</p> <p>Guidance on Ultrasound Procedures in Early Pregnancy (published jointly with the Royal College of Radiologists)</p>	<p>OSATS: Trans-abdominal ultrasound examination of early (8-12 week) pregnancy</p> <p>Log of experience</p> <p>Case based discussion</p> <p>Certificate of course attendance</p>



Module 1: Basic early pregnancy (8-12 weeks) ultrasound logbook						
Skill	Competence level					
	Level 1		Level 2		Level 3	
	Date	Signature	Date	Signature	Date	Signature
Safe use of US machine and correct settings						
Probe orientation, probe care and infection control (transabdominal)						
Confirmation of intrauterine location of pregnancy						
Detection of fetal cardiac activity						
Measurement of gestational sac diameter and crown rump length.						
Accurate documentation of measurements						
Producing written summary and interpretation of results						
Communicating normal results to parents						
Communicating abnormal results to parents						
Arranging appropriate referral, follow up or intervention						
Working in a multi-disciplinary team						



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<b>OSATS</b>	<b>Each OSATS should be successfully completed for Independent Practice on 3 occasions before the module can be signed off</b>					
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Transabdominal ultrasound examination of early (8-12 week) pregnancy	Date		Date		Date	
	Signature		Signature		Signature	

<b>Training courses or sessions</b>		
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Title	Signature of subspecialty training programme supervisor	Date

<b>Authorisation of signatures (to be completed by the clinical trainers)</b>	
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Name of clinical trainer (please print)	Signature of clinical trainer



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<b>COMPLETION OF MODULE</b>		
<b>I confirm that all components of the module have been successfully completed:</b>		
<b>Date</b>	<b>Name of educational supervisor</b>	<b>Signature of educational supervisor</b>