



Key: [Common competency framework competences](#) [Medical leadership framework competences](#) [Health inequality framework competences](#)

Module 5: Intermediate ultrasound of early pregnancy complications (2014)

Learning outcomes

The overall aim of this module is to ensure that the trainee understands indications for early pregnancy ultrasound examination, is able to perform a pelvic scan safely and competently and to report the findings in the clinical context.

The trainee should be able to:

- Take a proper clinical history
- Carry out ultrasound examination in the appropriate environment with respect to the patients privacy, cultural and religious needs
- Select the equipment which is appropriate for the examination and to optimise its settings
- Conduct the examination effectively in a gentle and considerate manner
- Understand the morphological features of normal early pregnancy
- Diagnose early pregnancy abnormalities such as miscarriage and ectopic pregnancy
- Understand the limits of their competence and the need to seek advice where appropriate
- Write a structured report
- Learn when to refer patients where appropriate

OSATS

Ultrasound diagnosis of normal early pregnancy

Ultrasound diagnosis of early embryonic demise

Ultrasound assessment of a woman with suspected ectopic pregnancy



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Knowledge criteria	GMP	Clinical competency	GMP	Professional skills and attitudes	GMP	Training support	Evidence/assessment
Principles of ultrasound examination <ol style="list-style-type: none"> 1. Physics 2. Safety 3. Machine set-up and operation 4. Patient care 5. Principles of report writing 6. Consent 7. Cultural diversity 	1,2	<p>Understand the principles of conducting a safe and appropriate ultrasound examination</p> <p>Use an ultrasound machine competently and independently</p>	1,2	<p>Safe use of the ultrasound machine</p> <p>Appropriate care of the patient during examination</p>	1,2,3,4	<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>
Documentation of scan <ol style="list-style-type: none"> 1. Understand need for accurate documentation of scan findings 2. Record and label images 3. Principles of reporting 	1,2	<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>	1,2	<p>Communicate scan findings to other health professionals</p>	1,2,3,4	<p>Supervised clinical learning sessions</p>	
Early pregnancy <p>Understand morphological features of normal early pregnancy</p> <p>Know principles of first trimester biometry and early dating scan</p> <p>Understand physiology of cardiac activity in first trimester</p> <p>Understand the diagnosis of multiple pregnancy, chorionicity and amnionity</p> <p>Understand criteria to diagnose miscarriage</p> <p>Understand the principles of ultrasound diagnosis of ectopic pregnancy</p>	1,2	<p>Ability to recognise the features of an early intrauterine gestational sac (halo, excentric location etc)</p> <p>Identify normal structure within the gestational sac: yolk sac, embryo, amniotic cavity</p> <p>Ability to identify extra-uterine pregnancy</p> <p>Ability to identify CS scar position</p> <p>Ability to measure size of gestational sac and crown length and where appropriate the yolk sac</p>	1,2	<p>Conduct scan to appropriate standard</p> <p>Ability to work within local protocols for standards in ultrasound</p> <p>Working in a multidisciplinary team</p> <p>Collaboration with consultant colleagues and colleagues in other specialties and departments</p> <p>Ability to communicate the results to patients</p> <p>Appropriate report writing and the need for onward referral and / or additional imaging</p>	1,2,3,4	<p>Mandatory education and training sessions</p> <p>Theoretical course (local or RCOG)</p> <p>RCOG green top guidelines on the management of early pregnancy complications and tubal ectopic pregnancy</p> <p>17 – Recurrent miscarriage</p> <p>21 – Tubal pregnancy</p> <p>25 – Early pregnancy loss</p> <p>38 – Trophoblastic neoplasia</p>	<p>OSATS</p> <p>Ultrasound diagnosis of normal early pregnancy</p> <p>Ultrasound diagnosis of early embryonic demise</p> <p>Ultrasound assessment of a woman with suspected ectopic pregnancy</p> <p>All OSATS include a section on 'appropriate probe selection'. It is expected that transabdominal and/or transvaginal approaches should be used as appropriate</p>

² GMC Good Medical Practice (GMP) Domains: Domain 1: Knowledge, skills and Performance Domain 2: Safety and quality Domain 3: Communication, Partnership and Teamwork. Domain 4: Maintaining Trust



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Knowledge criteria	GMP	Clinical competency	GMP	Professional skills and attitudes	GMP	Training support	Evidence/assessment
<p>Understand the management of women with pregnancy of unknown location (PUL)</p> <p>Knowledge of clinical and ultrasound findings suspicious of molar pregnancy</p>	1,2	<p>Ability to identify early cardiac activity and measure heart rate using M-mode. Ability to interpret heart rate in the clinical context</p> <p>Ability to establish the diagnosis of multiple pregnancy with confidence and to assess chorionicity and amnionity</p> <p>Ability to diagnose early embryonic demise based on assessment of gestational sac size and/or crown-rump length. Identify, assess and measure retained products of conception in women with incomplete miscarriages</p> <p>Ability to correlate clinical, morphological and biochemical findings</p> <p>Ability to evaluate adnexa in a systematic and effective way and to interpret the findings in a clinical context. Identify the site and the number of corpora lutea. Identify tubal and non-tubal ectopic pregnancy and examine for the presence of a yolk sac or an embryo. Assess the amount and quality of fluid in the pouch of Douglas</p> <p>Seek help with confirmation of diagnosis and further management</p>	1,2			Supervised structured clinical learning sessions	<p>Certificate of course attendance</p> <p>Log of experience</p>
<p>Communication</p> <p>Provide women with necessary information in a form they understand</p> <p>Communicate the information that has been given to patients to other health professionals</p> <p>Issue a written structured report</p>	1,2,3,4	<p>Provide parents with information about:</p> <ul style="list-style-type: none"> • Risk of pregnancy loss • Future fertility • Screening for chromosomal abnormalities later in pregnancy 	1,2,3,4	Communicate relevant information to patients and other health professionals	1,2,3,4		<p>Counselling of scan findings with parents</p> <p>Counselling of scan findings and abnormalities with women and their partners</p>

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Intermediate ultrasound in early pregnancy complications	Competence level						Not required <input type="checkbox"/>
	Level 1		Level 2		Level 3		
	Date	Signature	Date	Signature	Date	Signature	
Confirmation of the true intrauterine location of a pregnancy							
Confirmation of fetal viability							
Accurate measurement of MGSD, CRL							
Complete accurate assessment of the adnexae							
Accurate documentation of measurements and observations, including chart plotting							
Ability to identify extra-uterine pregnancy							
Ability to identify CS scar position							
Accurately record images							
Produce written summary and interpretation of results							
Issue structured written report							

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Intermediate ultrasound in early pregnancy complications	Competence level						Not required <input type="checkbox"/>
	Level 1		Level 2		Level 3		
	Date	Signature	Date	Signature	Date	Signature	
Communicating normal results to parents							
Communicating abnormal results to parents							
Arranging appropriate follow up or intervention							
Working in a multi-disciplinary team							



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



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Training courses or sessions		
Title	Signature of Educational Supervisor	Date

OSATS	Each OSATS should be successfully completed for Independent Practice on 3 occasions before the module can be signed off					
Ultrasound diagnosis of normal early pregnancy	Date		Date		Date	
	Signature		Signature		Signature	
Ultrasound diagnosis of early embryonic demise	Date		Date		Date	
	Signature		Signature		Signature	
Ultrasound assessment of a woman with suspected ectopic pregnancy	Date		Date		Date	
	Signature		Signature		Signature	

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