Certificate in Clinician Performed Ultrasound (CCPU) Syllabus

Basic Gynaecology

Australasian Society for Ultrasound in Medicine
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Basic Gynaecology Syllabus

Purpose

This unit is designed to cover the theoretical and practical curriculum for Basic Gynaecology ultrasound.

Prerequisites

Learners should have completed the Applied Physics in Ultrasound unit.

Course Objectives

On completing this course learners should be able to demonstrate:

- Demonstrate detailed understanding of the gross anatomical structure and surface anatomy of the relevant organ systems and the anatomical relationship to surrounding organs and structures.
- Produce optimised images of relevant pelvic organs
- Demonstrate normal uterine, endometrial and ovarian appearances in reproductive life and post menopause
- Recognise uterine, endometrial ovarian abnormalities
- Attain proficiency in image optimisation in order to enable appropriate diagnosis
- Recognise sonographic features that may be associated with significant acute pathology
- Understand limitations and pitfalls of basic gynaecological ultrasound

Note that early pregnancy ultrasound requirements are also described in the units Basic and Advanced Early pregnancy. These units may be undertaken concurrently (see logbook requirements)

Course Content

The course will present learners with the following material:

<u>Anatomy and Pathology:</u>

- Uterus
- Endometrium
- Recognise normal appearances of the endometrium and uterine corpus at varying stages of life.
- Recognising early intrauterine pregnancy (if relevant)

<u>Uterine pathology:</u>

- Recognise fibroids (position and size)
- Degeneration of fibroids
- Possible central degeneration in setting of pain over fibroid uterus
- Adenomyosis (ultrasound characteristics)
- Cervix
- Recognise normal appearances of the cervix at varying stages of life.
- Ovaries

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1. Ovarian location, mobility, size and appearance
2. Vascular supply and relationship
3. Appearance of physiological cyclic changes

Ovarian pathology:

- Measure and define a pathological cyst versus functional cysts
- Identify characteristics: dermoid and endometriomas
- Ovarian torsion
- HCL (haemorrhagic corpus luteum) and normal CL cyst
- Fallopian Tubes
- Bowel
- Recognition of peristalsis
- Bladder
- Recognise normal filling

Appearances of common significant acute pathologies including:

- Recognise Early Intrauterine Pregnancy
- Pelvic inflammatory disease
- Recognise free fluid in the pelvis (normal or excess)
- Recognise haemoperiteneum
- Recognise ectopic pregnancy: tubal, interstitial, ovarian, cervical and scar

Other pathologies:

- Congenital abnormalities
- Recognise IUCD in the uterine cavity
- Assess location of IUCD in cavity, use artefact to help
- Appearances associated with anovulation
- Polycystic appearance of one or both ovaries
- Increased endometrial thickness

Life cycle changes:

- Pre-menarchal
- Reproductive life
- Post-menopausal

Ultrasound Imaging Skills and Diagnostic Criteria:

- Be able to measure endometrial thickness in the sagittal plane in midline.
- Differentiate between proliferative and secretory endometrium and break in midline echo with polyp, etc.
- B-mode endometrial assessment

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- Endometrial pathologies
- Polyps
- Hyperplasia
- Carcinoma
- Tamoxifen therapy.
- Recognise abnormal cystic areas in the endometrium and subendometrium
- Characterisation of ovarian pathology
- Cystic or solid – sonographic definition
- Range of typical appearances of haemorrhage, corpus luteum, dermoid,
- Appearances and definition of polycystic ovaries
- All common pathologies may mimic each other
- Tub ovarian complex
- Current concepts regarding ovarian cancer screening
- Assessment of extra uterine pathology

Techniques, Physical Principles and Safety

- Appropriate transducers, artefacts, windows, standard images, image optimisation in the context of a gynaecological scan

Limitations and pitfalls:

- Understand limitations of transabdominal versus transvaginal scanning for the uterine and endometrial pathologies
- Recognise limitation of identifying endometrial pathology when late secretory or menstrual
- B-Mode endometrial assessment
- Understand limitations and pitfalls of ovarian pathology ultrasound
- Recognising when assessment is incomplete and needs to be extended
- Recognising the need for a formal scan and or complementary imaging modalities

Training

- Recognised through attendance at an ASUM accredited basic gynaecology course. (Please see the website for accredited providers)
- Evidence of the satisfactory completion of training course is required for unit award.

Teaching Methodologies for the Basic Gynaecology course

All courses accredited toward the CCPU will be conducted in the following manner:

- A pre-test shall be conducted at the commencement of the course which focuses learners on the main learning points.
- Each course shall comprise at least four (4) hours of teaching time of which at least two (2) hours shall be practical teaching. Stated times do not include the physics, artefacts and basic image optimization which should be provided if delegates are new to ultrasound.

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- Learners will receive reference material covering the course curriculum.
- The lectures presented should cover substantially the same material as the ones printed in this curriculum document.
- An appropriately qualified clinician will be involved in both the development and the teaching of the course and will be present for at least part of the course itself.
- The live scanning sessions for this unit shall include sufficient live patient models to ensure that each candidate has the opportunity to scan. Models will include normal subjects and patients with appropriate pathologies. If the latter are unavailable, there will be at least one image interpretation station demonstrating the appropriate pathology. Phantoms may also be used.
- A post-test will be conducted at the end of the course to ensure the required learning objectives are met.

Assessments

- Two (2) formative assessments of clincial skills, specificially related to the assessment of gynaecological ultrasound
- One (1) summative assessment of clincial skills, specificially related to the assessment of gynaecological ultrasound

All assessments are to be performed under the supervision of the Primary Clinical Supervisor using the competence assessment form supplied at the end of this document.

Please refer to section 8 of the CCPU Regulations for information regarding timing and exclusion of these assessments in the logbook.

Logbook Requirements

- Seventy-five (75) basic gynaecology scans, including:
  - A ratio of normal: abnormal 75%:25%
  - A maximum of fifty (50) scans can be in the setting of early pregnancy problems
  - The ovaries should be identified and commented upon in at least 50% of the logbook cases.
- A maximum of 50% paediatric cases (14 years and under) may be included in the logbook. Record in the column provided.
- All scans must be clinically indicated
- All cases must be compared with gold standard findings (such as comprehensive imaging, pathological findings or if these are unavailable then clinical course)
- All logbook cases must be signed off by a suitably qualified supervisor (see section 6 of the CCPU Regulations)
- At the discretion of the ASUM CCPU Certification Board candidates may be allowed an alternative mechanism to meet this practical requirement

Please note: All assessments and logbooks are required to be completed by the Primary Clinical supervisor as outlined in the CCPU regulations.

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ASUM CCPU Competence Assessment Form

Basic Gynaecology

Candidate: _____

Assessor: _____

Date: _____

Assessment type: Formative (feedback & teaching given during assessment for education) □

Summative (prompting allowed but teaching not given during assessment) □

To pass the summative assessment, the candidate must pass all components listed

	Competent	Prompted	Fail
Prepare patient			
Position			
Informed/Consent			
Prepare Environment			
Lights dimmed if possible			
Prepare Machine			
Correct position			
Probe & Preset Selection			
Can change transducer			
Selects appropriate transducer			
Selects appropriate preset			
Data Entry			
Enter patient/study details			
Image Acquisition			
Optimisation (depth, freq, focus, gain)			

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Transabdominal Scan		**Competent**	**Prompted**	**Fail**
Longitudinal view				
Technique	Tilts probe down into pelvis			
	Fans through pelvis from side to side			
Identifies	Uterus in LS			
	Position of uterus			
	Endometrium			
	Cervix			
	Vagina			
	Bowel			
	Bladder			
	Free fluid / where free fluid would collect			
	Ovaries (if seen, not essential)			
Transverse View				
Technique	Fans up and down through pelvis			
Identifies	Uterus			
	Endometrium			
	Cervix			
	Vagina			
	Bladder			
	Bowel			
	Free fluid / or where it would collect			
	Ovaries (if seen, not essential)			
If IUP Present				
Identifies	Sac (ideally can measure in 3 planes)			
	Describe typical features of sac			
	Rounded, echogenic rim, intradecidual			
	Yolk sac			
	Foetal pole			
	Ideally can measure CRL			
	Can demonstrate FHR			
	Ideally can measure FHR with M-mode			

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Use Preformatted Report to gestation			

Record Keeping	**Competent**	**Prompted**	**Fail**
Stores appropriate images			
Completes report			
Each view adequate / inadequate			
Documents focussed scan only			

Machine Maintenance

Cleans / disinfects ultrasound probe			
Stores machine and probes safely and correctly			

For Formative Assessment Only:

*Feedback of particularly good areas:*_____

*Agreed actions for development*_____

Examiner Signature:_____ Candidate Signature: _____

Examiner Name:_____ Candidate Name:_____

Date:_____

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