Certificate in Clinician Performed Ultrasound

(CCPU)

Syllabus

Abdominal Aortic Aneurysm

(AAA)

Abdominal Aortic Aneurysm (AAA) Syllabus

Purpose:

This unit is designed to cover the theoretical and practical curriculum for Abdominal Aortic Aneurysm (AAA).

Prerequisites:

Learners should have completed the ASUM Physics Image Optimisation unit or accredited equivalent course.

Training:

Recognised either through attendance at an ASUM accredited AAA course or equivalent.

Assessments:

Learners are required to perform supervised ultrasound scans with documentation in a logbook as well as 2 formative and one final summative assessment to be awarded the CCPU certificate in AAA ultrasound.

Course Objectives

On completing this course learners should be able to demonstrate:

- Effective performance and interpretation of ultrasound in AAA
- An understanding of the implications of the measurement of the abdominal aorta in the clinical setting
- An understanding of the limitations of ultrasound of the abdominal aorta

Course Content

The course will present learners with the following material:

Anatomy:

- Vertebral body
- Aorta including measurement of diameter (outer wall to outer wall)
- IVC and how to distinguish from the IVC
- Coeliac axis
- Superior mesenteric artery
- Splenic vein
- Bowel
- Liver
- Free fluid

Imaging Skills:

- Imaging the aorta between the coeliac axis and the aortic bifurcation in both transverse and longitudinal views
- Annotating the aortic images in the above views and measuring the maximal transverse diameter

Diagnostic Criteria:

- Understanding the implications of the measurement of the abdominal aorta in the clinical setting
- The relation between aortic diameter and risk of rupture
- Differential diagnosis of abdominal pain that can mimic aortic rupture or coexist with an incidental abdominal aortic aneurysm

Teaching Methodologies for the AAA courses

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 3 hours of teaching time of which at least 1.5 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
- 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 (maximal candidate : tutor / machine ratio of 5:1). Models will include normal subjects and patients with appropriate pathologies.
- A post-test will be conducted at the end of the course as formative assessment.

Assessment and Logbook

- Evidence of satisfactory completion of training sessions
- Evidence of assessment of competence (summative assessment) signed off by a suitably qualified assessor (DDU, Radiologist, DMU or AMS or sonographer registered with NZ MRTB in the relevant field, CCPU in the relevant field or other qualification as approved by the CCPU board). The original completed competence assessment form is to be sent to ASUM with the candidate's completed log book.
- Logbook requirements need to be completed, and logbooks need to be submitted within two years of completing an accredited course.

Formative Assessments

- *2* formative assessments (directly supervised with suggestions and advice provided during the scan)

Summative Assessment

- Summative assessment is to be performed by a suitably qualified assessor (see above) using the competence assessment form supplied at the end of this document (or equivalent if deemed sufficient by ASUM at their discretion).

Logbook Requirements

- Evidence of completion of logbook signed off by a suitably qualified supervisor (see above).
- 15 AAA scans, including 3 positive (not necessarily directly supervised but compared to gold standard)
- 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 (DDU, Radiologist, DMU or AMS or sonographer registered with NZ MRTB in the relevant field, CCPU in the relevant field or other qualification as approved by the CCPU Board)

- At the discretion of the ASUM CCPU Certification Board candidates may be allowed an alternative mechanism to meet this practical requirement.

Minimal Imaging Sets

The following are proposed as minimal imaging sets for focused ultrasound examinations in this CCPU unit. It is understood that in many cases more images should be recorded to fully demonstrate the abnormality. In some cases the patient's condition will not allow the full set to be obtained (e.g. in an unstable trauma patient), in which case the clinician should record whatever images are obtainable during the time available to adequately answer the clinical question without allowing the ultrasound examination to interfere with ongoing medical treatment. If local protocols recommend more images for a particular examination, then these should be adhered to.

- transverse proximal abdominal aorta

- transverse distal abdominal aorta

- longitudinal abdominal aorta

- If aneurysm present then transverse image and longitudinal image at the point of largest diameter

- All images should have maximal diameter measurement (outer wall to outer wall).

ASUM CCPU Competence Assessment Form
AAA Ultrasound

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			
Prepare Environment			
Lights dimmed if possible			
Probe & Preset Selection			
Can change transducer			
Selects appropriate transducer			
Selects appropriate preset			
Data Entry			
Enter patient details			
Image Acquisition			
Optimisation (depth, freq, focus, gain)			
Identifies **Aorta trans**			
Vertebral body			
Aorta			
IVC			
Bowel			
Liver			
Trace aorta to bifurcation			
Measures aorta accurately			
Aorta Long			
Aorta			
IVC (distinguishes from aorta)			
Describes Appearance of AAA *>3cm = aneurysm*			
Appearance of thrombus			
Artefacts			
Identifies & explains the basis of common artefacts			
Record Keeping			
Labels & stores appropriate images			
Documents any pathology identified			
Completes report			
Each view adequate / inadequate			

Aortic Measurements			
Documents focussed scan only			
Describe findings briefly			
Integrates ultrasound findings with clinical assessment and explains how the findings might change management			

Machine Maintenance

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

For Formative Assessment Only:

Feedback of particularly good areas:

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_____

Agreed actions for development

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Examiner Signature:_____ Candidate Signature:_____

Examiner Name:_____ Candidate Name:_____

Date:_____