

**Certificate in Clinician Performed Ultrasound
(CCPU)
Syllabus**

**Abdominal Aortic Aneurysm
(AAA)**

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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 Applied Physics in Ultrasound unit.

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

Training

- Recognised through attendance at an ASUM accredited AAA 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 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 three (3) hours of teaching time of which at least one and a half (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 to ensure the required learning objectives are met.

Assessments

- Two (2) formative assessments of clinical skills, specifically related to the assessment of the abdominal aorta
- One (1) summative assessment of clinical skills, specifically related to the assessment of the abdominal aorta

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 and completed on **ADULT patients ONLY**.

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

Logbook Requirements

- Fifteen (15) AAA scans, including three (3) positives on **ADULT patients ONLY**
- 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.

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)			
<i>Identifies</i>	Aorta trans			
	Vertebral body			
	Aorta			
	IVC			
	Bowel			
	Liver			
	Trace aorta to bifurcation			
	Measures aorta accurately			
Aorta Long				
	Aorta			
	IVC (distinguishes from aorta)			
<i>Describes</i>	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: _____

Agreed actions for development _____

Examiner Signature: _____ Candidate Signature: _____

Examiner Name: _____ Candidate Name: _____

Date: _____