Certificate in Clinician Performed Ultrasound

(CCPU)

Syllabus

Rheumatology

Australasian Society for Ultrasound in Medicine
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ACN 001 679 161 ABN 64 001 679 161

Rheumatology Syllabus

Purpose

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

Prerequisites

Learners should have completed the Applied Physics in Ultrasound unit.

Course Objectives

On completing this course learners should be able to demonstrate:

- A detailed understanding of the gross anatomical structure and surface anatomy of the relevant organ systems and the anatomical relationship to surrounding organs and structures.
- An understanding of an approved protocol for ultrasound examination
- Effective performance and interpretation of Rheumatologic ultrasound including:
- Image optimization
- Providing accurate measurements when necessary
- Describing the diagnostic criteria for the conditions/pathologies listed in the syllabus
- The origin of the artefacts which commonly occur in this examination;
- An understanding of the limitations of Rheumatologic ultrasound

Course Content

The course will present learners with the following material:

- Anatomy
- Gross anatomy
- Relational anatomy between adjacent organs and structures
- Pathology
- Musculoskeletal ultrasound physics
- Clinical application/relevance
- Indications including ultrasound guided injections
- Musculoskeletal ultrasound equipment
- Machine function/operation

<u>Techniques, Physical Principles and Safety:</u>

- Appropriate transducers
- Artefacts
- Windows
- Standard images

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- Image optimisation in the context of a rheumatologic scan

Imaging Skills:

- Patient/probe position
- Planes and system of examination
- Image optimisation
- Dynamic assessment
- Colour Doppler
- Power Doppler

Specific Anatomy and Pathology:

A) Hand and Wrist	**B) Elbow**
Synovial thickening	Synovial thickening
Synovial fluid/effusion	Synovial fluid/effusion
Bone erosion	Bone erosion
Tenosynovitis	Tenosynovitis
Tendinopathy	Tendinopathy
Tendon nodule	Tendon nodule
Tendon rupture	Tendon rupture
Ganglion	Medial epicondylitis
Ultrasound guided aspiration /injection	Lateral epicondylitis
Enthesitis	Olecranon bursitis
Calcified cartilage	Ultrasound guided aspiration
Carpal tunnel syndrome	Ultrasound guided injection
Monitoring disease activity	Enthesitis
Monitoring disease progression	Calcified cartilage
Ligament tear	Monitoring disease activity
	Monitoring disease progression
C) Shoulder	**D) Hip**
Synovial thickening	Synovial thickening
Synovial fluid/effusion	Synovial fluid/effusion
Bone erosion	Bursitis
Complete rotator cuff tear	Ultrasound guided aspiration
Calcific tendonitis	Ultrasound guided injection
Bicipital tendonitis	Bone erosion
Ruptured biceps tendon	Calcified cartilage
Subacromial bursitis	Monitoring disease activity
Ultrasound guided aspiration	
Ultrasound guided injection	

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Tendinopathy	
Dislocated biceps tendon	
Enthesitis	
Calcified cartilage	
Partial rotator cuff tear	
Subacromial impingement	
Spinoglenoid and suprascapular notch ganglions	
Monitoring disease activity	
Monitoring disease progression	
Ligament tear	
E) Knee	**F) Ankle and Posterior Foot**
Synovial thickening	Synovial thickening
Synovial fluid/effusion	Synovial fluid/effusion
Bone erosion	Tenosynovitis
Quadriceps tendon rupture	Tendinopathy
Patellar tendonitis	Tendon rupture
Patellar tendinopathy	Achilles tendinopathy
Patellar tendon rupture	Achilles tendon rupture
Bursitis	Bursitis
Popliteal cyst	Ultrasound guided aspiration
Ultrasound guided aspiration	Ultrasound guided injection
Ultrasound guided injection	Bone erosion
Enthesitis	Enthesitis
Meniscal cyst	Plantar fasciitis
Collateral ligament tear	Calcified cartilage
Calcified cartilage	Paratendonitis
Quadriceps tendonitis	Plantar fascia rupture
Quadriceps tendinopathy	Ankle ligament enthesopathy
Meniscal tear	Monitoring disease activity
Monitoring disease activity	Monitoring disease progression
Monitoring disease progression	Ankle ligament tear
Collateral ligament enthesopathy	
Ligament tear	
Other ligament pathology	
G) Forefoot	
Synovial thickening	
Synovial fluid/effusion	
Bone erosion	
Tenosynovitis	
Ganglion	

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Ultrasound guided injection	
Tendinopathy	
Tendon nodule	
Tendon rupture	
Ultrasound guided aspiration	
Enthesitis	
Calcified cartilage	
Intermetatarsal bursitis	
Morton's neuroma	
Monitoring disease activity	
Monitoring disease progression	
Ligament tear	

Training

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

Teaching Methodologies

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 six (6) hours of teaching time of which at least three (3) 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. Models will include normal subjects and patients with appropriate pathologies. If the latter are unavailable, there will be at least one image interpretation station with cineloops demonstrating the appropriate pathology.
- 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 rheumatologic ultrasound
- One (1) summative assessment of clinical skills, specifically related to the assessment of rheumatologic ultrasound

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

Logbook Requirements

- 225 supervised rheumatology scans, including:
    - Fifty (50) shoulder
    - Thirty (30) hand/wrist
    - Twenty (20) hips
    - Twenty (20) knees
    - Twenty (20) elbow
    - Sixty (60) foot/ankle
    - Twenty-five (25) guided injections
    - At least five (5) positives for shoulder and foot/ankle
    - At least three (3) positives for hand/wrist, hips, knees and elbow
- All logbook cases must be signed off by a suitably qualified supervisor (see section 6.0 of the CCPU Regulations)
- Up to 50% of scans can be non-clinically indicated.
- All logbook scans must be real-time scans.
- Scans conducted on simulators cannot be included in the logbook
- The 'Comparison with Further Imaging or Clinical Outcome' column should describe the further imaging or the final outcome of the patient. In this column, candidates must compare at **least 50% of their logbook findings to further imaging**, this includes stating the imaging method and commenting on whether the further imaging confirmed, contradicted, or expanded on their findings
- At the discretion of the ASUM CCPU Certification Board candidates may be allowed an alternative mechanism to meet this practical requirement
- Those cases that involve a procedural component must be signed off by a suitable assessor who performs those procedures themselves.

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 Formative Assessment Form

Rheumatology

Candidate: _____

Assessor: _____

Date: _____

Assessment type: Formative 1 (feedback & teaching given during assessment for education) ☐

Formative 2 feedback & teaching given during assessment for education) ☐

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)			
Demonstrates appropriate Images			
Demonstrates appropriate images of common abnormalities			
Artefacts			
Identifies & explains the basis of common artefacts			
Record Keeping			
Labels & stores appropriate images			

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Documents any pathology identified			
Completes report:			
Each view adequate / inadequate			
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:_____

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ASUM CCPU Competence Summative Assessment Form

Rheumatology

Candidate: _____

Assessor: _____

Date: _____

Assessment type: 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)			
Demonstrates appropriate Images			
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Completes report:			
Each view adequate / inadequate			
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Describe findings briefly			
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Machine Maintenance

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

Supervisor Declaration

*Once the candidate has met the minimum assessment and logbook criteria, the supervisor may choose to recommend the candidate to the CCPU board for credentialing in Rheumatology CCPU.
I _____(supervisor name) am satisfied that _____(candidate's name) has demonstrated the minimum requirement for competency in Rheumatology on _____(date).

Supervisor Signature: _____

Candidate Signature: _____

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