

*Malaysian Society of Rheumatology –
Targeted Ultrasound Initiative (MSR-TUI)*

Musculoskeletal Ultrasound in Rheumatology

Log Book

Name : _____

Designation : _____

Work Place : _____

Supervisor : _____







Normal Standard Scans

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Normal Standard Scans

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Pathological Scans

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Pathological Scans

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Pathological Scans

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Pathological Scans

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Pathological Scans

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APPENDIX I

MSR-TUI Recommendation on Minimal Requirements for Performing Musculoskeletal Ultrasound (MSUS) in Inflammatory arthritis

By: Dr Ong Yew Chong

Theoretical Knowledge

1. Surface markings and basic anatomy of the hand/wrist, elbow, shoulder, hip, knee and foot/ankle.
2. Indications and limitations of MSUS in Rheumatology.
3. Basic B-mode and Doppler concept and usage
4. B-mode and Doppler artefacts and pitfalls
5. Standard scans of the hand/wrist, elbow, shoulder, hip, knee and foot/ankle.
6. Normal findings and basic pathologies (synovial hypertrophy, synovial effusion, tendinosis/tenosynovitis/paratenonitis/tendon tear/tendon impingement, bursitis, enthesopathy, bone erosion, osteophyte, cartilage abnormalities (degenerative and crystal deposition), calcification).

Practical Skills

1. Proper acquisition processes: human and machine positioning with adequate skills in B-mode and Doppler optimization and image documentation.
2. Report writing.
3. Beginners are highly recommended to perform full standard scans of normal joints (to be familiar with normal MSUS images and anatomical variants) before proceeding to scanning pathological joints.
4. A logbook would be an added advantage (scans of normal joints and pathological structures).

Recommended Readings

1. EULAR online course on ultrasound
2. The 2017 EULAR standardised procedures for ultrasound imaging in rheumatology. Ingrid Möller, Iustina Janta, Marina Backhaus et al. Ann Rheum Dis 2017;0:1-6
3. Ultrasound of the Musculoskeletal System. S.Bianchi, C.Martinoli. Springer.
4. Musculoskeletal Ultrasound. John O'Neill. Springer.
5. Musculoskeletal Ultrasonography in Rheumatic Diseases. Yasser El Miedany. Springer.

APPENDIX II

Standardized MSUS Scans for ASPUS

By: Dr Ong Ping Seung & Dr Ong Yew Chong

1. Shoulder joint

- Anterior transverse & longitudinal long head biceps
- Anterior transverse & longitudinal subscapularis
- Anterior transverse & longitudinal supraspinatus
- Posterior transverse & longitudinal infraspinatus & teres minor
- Acromioclavicular joint (transverse)
- Glenohumeral joint (posterior & axillary transverse)
- Dynamic scan for impingement syndrome (coronal)

2. Elbow joint

- Anterior humeroradial (radio-capitulum) longitudinal scan
- Anterior humeroulnar (ulnar-trochlear) longitudinal scan
- Anterior transverse scan anterior joint recess
- Posterior longitudinal scan
- Posterior transverse scan
- Lateral longitudinal scan
- Medial longitudinal scan

3 (a) Wrist joint

- Dorsal longitudinal scan (radial)
- Dorsal longitudinal scan (median)
- Dorsal longitudinal scan (ulnar)
- Dorsal transverse scan (radial – ulnar)
- Volar transverse scan
- Volar longitudinal scan

3 (b) Hands

- Dorsal longitudinal MCPJ, PIPJ & DIPJ
- Dorsal transverse MCPJ, PIPJ & DIPJ
- Dorsal transverse MCPJ, PIPJ & DIPJ in flexion
- Palmar longitudinal MCPJ, PIPJ & DIPJ
- Palmar transverse MCPJ, PIPJ & DIPJ
- Lateral longitudinal 5th MCPJ & PIPJ
- Medial longitudinal 2nd MCPJ & PIPJ
- Palmar longitudinal 1st CMCJ
- Thenar longitudinal scan
- Thenar transverse scan

4. Hip joint

- Anterior longitudinal
- Anterior transverse
- Lateral longitudinal
- Lateral transverse

5. Knee joint

- Suprapatellar longitudinal
- Suprapatellar transverse in neutral position
- Suprapatellar transverse in maximal flexion
- Medial and lateral parapatellar transverse
- Prepatellar longitudinal
- Prepatellar transverse
- Infrapatellar longitudinal
- Infrapatellar transverse
- Medial longitudinal
- Lateral longitudinal
- Posterior medial longitudinal
- Posterior lateral longitudinal
- Posterior transverse

6 (a) Ankle joint

- Anterior longitudinal
- Anterior transverse
- Perimalleolar medial longitudinal
- Perimalleolar medial transverse
- Perimalleolar lateral longitudinal
- Perimalleolar lateral transverse
- Posterior longitudinal
- Posterior transverse

6 (b) Foot

- Dorsal longitudinal scan (midtarsal, tarso-metatarsal, MTPJ)
- Dorsal transverse scan (MTPJ)
- Plantar longitudinal scan (MTPJ)
- Plantar transverse scan (MTPJ)
- Lateral scan 1st & 5th MTPJ



Supported by:

abbvie