



Course
Outline

PRECISION MSK

INTRODUCTION TO ADVANCED MUSCULOSKELETAL ULTRASOUND

Diagnostic Ultrasound Course Curriculum

November 2025

DIAGNOSTIC COURSE DETAILS

Welcome!

This intensive 'Introduction to Advanced Musculoskeletal Ultrasound' course is meticulously designed for healthcare professionals seeking to develop comprehensive diagnostic and procedural ultrasound skills in musculoskeletal assessment. Building upon foundational knowledge, this program emphasises practical, hands-on experience under expert supervision, making it suitable for practitioners with existing experience who wish to advance their skills, as well as those with limited prior exposure looking for a robust entry point.

Our curriculum integrates fundamental principles of ultrasound physics, image optimisation, and quality assurance with advanced scanning techniques for complex anatomical structures. The course utilises a low delegate-to-tutor ratio and high-specification ultrasound machines to ensure personalised feedback and ample scanning time. Participants will enhance their ability to recognise pathology, understand the clinical implications of imaging findings, and confidently apply ultrasound in a rehabilitation and diagnostic setting.

Who Should Attend? This course is ideal for a wide range of healthcare professionals, including:

- GPs with a special interest in Musculoskeletal/Sports Medicine
- MSK Radiologists and Trainee Registrars
- Orthopaedic Surgeons
- Sports Medicine Consultants
- Physiotherapists
- Radiographers and Sonographers
- Podiatrists

Prerequisites: Attendees should be healthcare professionals with previous ultrasound experience or training, and ample clinical and anatomical knowledge.

For those practicing in the UK, registration with the relevant professional body (eg. GMC, HCPC, SOR) is required. For enrolment into the **Precision MSK Ultrasound Procedural Techniques course** and **Precision MSK Mentorship Programme**, at least one year of musculoskeletal scanning experience is recommended.

PRICING

Attendance to the **2-Day Diagnostic Ultrasound Course** will cost £575.00 (including VAT).

ADDITIONAL INFORMATION

- **Hands-on Focus:** The majority of the course time is dedicated to practical workshops and supervised scanning sessions with real-life patient models, ensuring extensive hands-on experience.
- **Expert Presenters and Tutors:** Learn from experienced physiotherapists and MSK radiologists with extensive scanning experience.
- **Low Delegate-to-Tutor Ratio:** Enjoy close supervision and personalised feedback with a ratio of one expert tutor per 3 delegates.
- **State-of-the-Art Equipment:** Access high-specification ultrasound machines (one machine per three delegates) for optimal learning.
- **Online Resources:** Gain exclusive access to pre-course materials and online content from expert tutors to prepare for and reinforce your learning.
- **Course Accreditation:** We are recognised by the Faculty of Sports and Exercise Medicine (FSEM) and British Society of Ultrasound Medicine (BSUM)
- **CPD Points:** As a course certified by FSEM and BMUS, you will be recognised with 11 credit points for your Continuing Professional Development (CPD) profile upon completion.
- **Mentorship:** Elevate your MSK sonography skills through a structured mentorship designed to power your professional development, allowing you to thrive and become an integral part of our professional community of motivated specialists seeking the highest standards of improvement.
- **Clinically Focused Curriculum:** The course emphasises how imaging findings influence clinical management, incorporating numerous case examples and encouraging discussion among attendees from various clinical backgrounds.

COURSE COORDINATORS



Dr Robert Henderson

Rob is a Consultant Diagnostic and Interventional Musculoskeletal and Paediatric Radiologist at Perth Children's Hospital (Western Australia). Having completed subspecialty fellowships in Paediatric Musculoskeletal Radiology at Perth Children's Hospital, followed by a series of Musculoskeletal Radiology fellowships at Imaging@Olympic Park in Melbourne (Australia), Royal Orthopaedic Hospital in Birmingham (UK) and University of Toronto Hospital Network (Canada) where he has a refined area of specialty interest across both paediatric and adult

musculoskeletal imaging in sports injury, spine, orthopaedics, and bone and soft tissue tumours. Rob has published widely in the musculoskeletal imaging literature and co-authored several book chapters on upper limb imaging.



Mr Paul Watson

Paul is a Consultant MSK Physiotherapist and Interventional MSK Sonographer, attaining his PgCert in MSK Ultrasound from Brunel University London. He is a registered Independent Prescriber, and holds a Diploma in MSK Medicine from the Faculty of Sports and Exercise Medicine. Paul has a vast range of experience in multiple community Rheumatology, Musculoskeletal, and Orthopaedic services, alongside MSK Radiology at the Royal Surrey Hospital in Guildford. His expertise materialises in applied MSK ultrasound in a point of care setting, honed from his wide experience across private practice, musculoskeletal services and radiology. He is an

advocate for the utility of MSK ultrasound in advanced clinical reasoning, and the importance of MSK ultrasound as a tool to streamline patient care.



Mr Rishi Sharma

Mr. Sharma is a Consultant Level musculoskeletal clinician, from a background as a physiotherapist, moving into advanced practice in 2018. He completed a PgCert in Musculoskeletal Ultrasonography in 2019, and became the MSK Ultrasound Lead for Newham General Hospital in 2023. He has worked extensively across multiple hospitals within Barts Health NHS Trust and in Central London, developing a broad and in-depth understanding of musculoskeletal practice. Mr. Sharma is a licensed independent prescriber and still works as an Advanced MSK practitioner in a

community Orthopaedic service. His clinical expertise includes advanced level diagnostic ultrasound, ultrasound-guided injections, and advanced procedures such as hydrodistension/hydrodilation, fenestration tenotomy and barbotage. Mr. Sharma is also a dedicated educator and mentor in MSK ultrasound. He has successfully taught and supervised numerous healthcare professionals (including advanced practice physiotherapists, MSK sonographers, trainee radiologists and Orthopaedic surgeons) in diagnostic and ultrasound-guided injection techniques. He has a supportive and hands-on teaching approach, which makes complex procedures and decision-making accessible and practical for learners at all levels. He has mentored clinicians in foundation MSK ultrasound, all the way through to an advanced level, and brings a wealth of clinical experience and teaching expertise to this course.



Dr Adil Naeem

Adil is an experienced Musculoskeletal Radiologist with extensive expertise in diagnostic and interventional imaging. He completed his undergraduate medical training at the University of Manchester, followed by postgraduate Radiology training at the Royal North Shore Hospital in Sydney, prior to a post-fellowship at the renowned Oxford University Hospitals. His current and past appointments include an Honorary Consultant at Nuffield Orthopaedic Centre and Castlereagh Imaging, the leading musculoskeletal imaging service in Sydney. Dr Naeem has extensive experience in diagnosing a wide range of musculoskeletal conditions, and is involved in the care of professional athletes and the general public, both in the UK and internationally.



Mr Romain Haym

Romain is a Clinical Specialist Musculoskeletal Sonographer with extensive experience across London's top trusts, including London Independent, Homerton, Kingston, and King's College Hospitals. He has a MSc in Medical Ultrasound from the University of Bournemouth, and combines expert diagnostic MSK ultrasound and ultrasound-guided procedures with a background as an advanced physiotherapist and independent prescriber. He has treated elite athletes - from professional footballers to ballerinas - bringing precision and performance-driven care to every patient. An established educator and author, Romain wrote the "High-Volume Image-Guided Injections" chapter in Elsevier's Atlas of Interventional Orthopedic Procedures

DIAGNOSTIC COURSE SCHEDULE

Our 'Introduction to Advanced Musculoskeletal Ultrasound' course is structured over 2 days, with a balanced approach of didactic lectures, live demonstrations, and extensive hands-on practical sessions. The curriculum covers both lower and upper limb segments, integrating fundamental ultrasound principles with advanced anatomical and pathological insights.

Expected minimum skills:

- Basic sonoanatomy and fundamental ultrasound imaging techniques
- Ultrasound physics, equipment familiarity and image optimisation

DAY ONE (8 hours)		
TIME	UPPER LIMB	LECTURER
0830-0900	Registration	Group
0900-0920	Course Introduction	Henderson
0920-1000	Shoulder	Watson
1000-1040	Elbow/Forearm	Henderson
1040-1100	MORNING TEA	
1100-1140	Wrist	Sharma
1140-1220	Hand	Henderson
1220-1300	Upper Limb Diagnostic Scanning	Group
1300-1340	LUNCH TIME	
1340-1420	Upper Limb Diagnostic Scanning	Group
TIME	LOWER LIMB	LECTURER
1420-1500	Hip	Naeem
1500-1540	Thigh	Henderson
1540-1620	Knee	Watson
1620-1640	Summary	Henderson
DAY TWO (7 hours)		
TIME	LOWER LIMB	LECTURER
0900-0940	Ankle	Sharma
0940-1020	Foot	Henderson
1020-1100	Summary	Henderson
1100-1240	Lower Limb Diagnostic Scanning	Group
1240-1320	LUNCH TIME	
TIME	PRACTICAL SCANNING	
1300-onwards	Extended Scanning	Group
15:30-1600	Conclusion	Henderson

Patient Arrival

- Day 1 = 1130-1140h [departing 1430h]
- Day 2 = from 1000-1020h (leave after lunch)

DIAGNOSTIC COURSE OUTLINE: UPPER LIMB

1. Shoulder

Basic anatomy and scanning techniques [expected knowledge]

- Rotator cuff and musculature
- Long head biceps tendon
- AC joint
- Posterior joint
- Suprascapular notch

Advanced anatomy and sonoanatomy

- Pectoralis major
- Coracoacromial ligament
- Axillary fold
- Internal/external rotator intervals (SGHL/CHL)
- Suprascapular nerve

Pathology

- Proximal long head biceps tendinopathy
- Adhesive capsulitis
- Patterns of rotator cuff tendinopathy/tearing
- Paralabral cysts

2. Elbow/Forearm

Basic anatomy and scanning techniques [expected knowledge]

- Distal biceps
- Distal triceps
- Common flexor/extensor origins
- Anterior (coronoid) and posterior (olecranon) joint spaces
- Ulnar, median and radial nerves
- Cubital tunnel

Advanced anatomy and sonoanatomy

- Radial and ulnar ligaments
- Radial nerve

Pathology

- Distal biceps tendinopathy and tearing
- Medial and lateral epicondylitis and tearing
- Ulnar neuropathy and subluxation
- Median/radial nerve entrapment

3. Wrist

Basic anatomy and scanning techniques [expected knowledge]

- Flexor and extensor tendons
- Carpal tunnel
- Median and ulnar nerves

Advanced anatomy and sonoanatomy

- Scapholunate and lunotriquetral ligaments
- Guyon canal
- Pisotriquetral joint
- Flexor carpi ulnaris
- TFCC complex

Pathology

- De Quervain tenosynovitis
- Proximal and distal intersection syndromes
- Tenosynovitis
- Distal radioulnar joint and radiocarpal synovitis
- Ganglions - origin mapping

4. Hand

Basic anatomy and scanning techniques [expected knowledge]

- Flexor and extensor tendons
- Extensor insertion

Advanced anatomy and sonoanatomy

- Volar plate
- Flexor pulleys
- MCP joint extensor apparatus
- Ulnar nerve (Deep and superficial branches)
- Radial nerve path wrist and hand.

Pathology

- Pulley thickening A1-A5
- Trigger finger (stenosing tenosynovitis)
- Ligament injury - thumb MCP joint UCL/RCL
- Stener lesion
- Dupuyten contracture
- Ganglion
- Pulley injuries

DIAGNOSTIC COURSE OUTLINE: LOWER LIMB

5. Hip

Basic anatomy and scanning techniques [expected knowledge]

- Hip joint
- Iliopsoas tendon
- Gluteal tendon
- Rectus femoris

Advanced anatomy and sonoanatomy

- Piriformis
- Proximal ITB
- Trochanteric/subgluteal/ischiogluteal bursal space
- Hamstring origin
- Iliopsoas bursa

Pathology

- Hip synovitis and effusion
- Iliopsoas bursitis
- Gluteal tendinopathy
- Piriformis syndrome
- Trochanteric/subgluteal/ischiogluteal bursitis
- Hamstring tendinopathy

6. Thigh

Basic anatomy, sonoanatomy and scanning techniques [expected knowledge]

- Quadriceps muscles
- Hamstring muscles
- Adductor muscles

Advanced anatomy and sonoanatomy

- Femoral neurovascular bundle
- Sciatic nerve
- Lateral femoral cutaneous nerve
- Inguinal canal/hernia

Pathology

- Muscle, myofascial, myotendinous/myoaponeurotic, tendon injuries
- Lateral femoral cutaneous nerve impingement
- Proximal ITB friction
- Sciatic nerve + sciatic nerve schwannoma

7. Knee

Basic anatomy and scanning techniques [expected knowledge]

- Quadriceps/patellar tendons
- Medial and lateral collateral ligaments
- Joint space and suprapatellar recess
- Popliteal fossa and neurovascular bundle

Advanced anatomy and sonoanatomy

- Meniscal margins
- Pes anserinus
- Semimembranosus

- Patellofemoral cartilage
- Medial patella femoral ligament.
- Biceps femoris

Pathology

- Baker cyst (expected)
- Synovitis and joint effusion
- Distal ITB friction syndrome
- Parameniscal cyst
- Osteoarthritis

8. Ankle

Basic anatomy and scanning techniques [expected knowledge]

- Lateral ligamentous complex
- Deltoid ligaments
- Achilles
- Anterior and posterior joint
- Flexor, extensor and peroneal tendons

Advanced anatomy and sonoanatomy

- Flexor, extensor and peroneal retinaculum
- Retrocalcaneal bursa
- Anterior tibial, posterior tibial, superficial peroneal and sural nerves
- Sub-talar joint and lateral gutter
- Sinus tarsi

Pathology

- Medial and lateral ligament injuries
- Tibialis anterior and posterior tendinopathy and tenosynovitis
- Peroneal tendinopathy and subluxation
- Achilles tendinopathy, tears and peritendinous inflammation
- Osteoarthritis

9. Foot

Basic anatomy and scanning techniques [expected knowledge]

- Plantar fascia and aponeurosis
- Flexor, extensor and peroneal tendons
- Great toe MTP metatarsosesamoid joints

Advanced anatomy and sonoanatomy

- Plantar plates
- Intermetatarsal joint space
- Lis Franc joint
- Medial calcaneal nerve branch
- Flexor digitorum

Pathology

- Plantar fasciopathy (central/lateral band)
- Osteoarthritis
- Painful os peroneum syndrome
- Intersection syndrome (master knot of Henry)
- FHL tendon sheath effusion