



MUSCULOSKELETAL ULTRASOUND IN SPORTS MEDICINE AND DEGENERATIVE DISEASES

Date: Saturday, 23.01.27

Venue:

Panorama Hotel
Analipseos 26 Panorama,
Thessaloniki, PC 55236, Greece

Participation fee: €600

Maximum number of participants: 15

Faculty: Prof Torsten Diekhoff, Radiologist

Target level of education: Advanced

Overview of the course

Musculoskeletal ultrasound has become an integral tool in both sports and degenerative medicine because it provides dynamic, real-time evaluation of soft-tissue structures without exposing patients to ionizing radiation. In sports medicine, it is widely used for the diagnosis and monitoring of muscle injuries, tendon and ligament pathology, joint effusions, and guided therapeutic interventions. In degenerative conditions, ultrasound facilitates the assessment of osteoarthritis-related changes, tendinopathies, bursitis, synovitis, and enthesopathies, while also enabling image-guided procedures such as aspirations and injections. Its accessibility, relatively low cost, and

ability to perform side-to-side comparisons during movement make ultrasound a valuable adjunct to clinical examination and other imaging modalities in the management of both athletic and age-related musculoskeletal disorders.

Learning objectives

- Understanding of the fundamental physics of ultrasonography
- Image optimization and operation, adjustment of ultrasound equipment
- Understanding of advanced cross sectional area ultrasound anatomy of the musculoskeletal system
- Identification of pathological findings in the most common sports injuries and degenerative pathologies, enhancing clinical assessment and diagnostic accuracy.
- Interpretation of normal/pathological findings in everyday clinical scenarios, with focus on three main joints: the wrist, the shoulder and the elbow.

Scientific programme

Program

Time	Theme
08:30 – 09:00	Registration - welcome
09:00	Brief welcome from Scientia
09:00-09:30	Theoretical part I: Shoulder – approach and pathologies •Standardized ultrasound approach to the rotator cuff, long head of biceps and subacromial space •Key sonoanatomy of tendons, bursae, AC joint and posterior glenohumeral recess •Typical pathologies: rotator cuff tears, tendinopathy, bursitis, calcifications and biceps instability •Dynamic assessment of impingement and tendon motion
09:30-11:00	Hands-on session: Shoulder

11:00-11:15	Short coffee break
11:15 – 11:45	Theoretical part I: Elbow – approach and pathologies •Compartment-based ultrasound approach to the anterior, medial, lateral and posterior elbow •Key sonoanatomy of common flexor and extensor tendons, collateral ligaments, distal biceps, triceps and nerves •Typical pathologies: epicondylopathy, distal biceps injury, ligament lesions, bursitis and ulnar neuropathy •Role of dynamic ultrasound for instability and nerve subluxation
11:45-13:15	Hands-on session: Elbow
13:15 – 13:45	Lunch break
13:45 – 14:15	Theoretical part III – Wrist and finger •Systematic assessment of dorsal and volar wrist compartments, tendons, nerves and small joints •Key sonoanatomy of extensor compartments, flexor tendons, pulleys, median nerve and joint recesses •Typical pathologies: tenosynovitis, trigger finger, De Quervain disease, ganglion cysts and carpal tunnel syndrome •Sonographic signs of inflammatory, degenerative and traumatic finger pathology
14:15 – 15:30	Hands-on session: Wrist and fingers

15:30 – 16:00

Theoretical part V – Musculoskeletal interventions

- Principles of safe ultrasound-guided needle placement
- Common targets: joints, bursae, tendon sheaths, cysts and perineural spaces
- Typical procedures: aspiration, injection, biopsy, lavage
- Practical focus on indication, anatomy, needle visibility and avoidance of neurovascular structures

16:00 – 17:00

Hands on – Musculoskeletal interventions in phantoms

17:00

Quiz – Conclusion