

**OBJECTIVES:**

- To learn technical characteristics and setting of ultrasound equipment for rheumatology.
- To learn the systematic standardized sonographic scanning method of each anatomical region, according to the EULAR guidelines.
- To learn basic normal musculoskeletal ultrasonographic (MSUS) anatomy.
- To learn basic pathological MSUS findings.

**MAIN TOPICS:**

- Ultrasound physics and technology, technical characteristics of ultrasound equipments in rheumatology, applications, indications and limitations of MSUS.
- MSUS anatomy, artifacts and misinterpretation in MSUS.
- Standardized sonographic scanning method of each anatomical region (shoulder, elbow, wrist and hand, hip, knee, ankle and foot) according to the EULAR guidelines.
- Basic pathological sonographic findings (tendinosis, tenosynovitis, partial and complete tendon tear, enthesopathy, bursitis, calcifications, articular cartilage lesions, cortical abnormalities, erosions and joint synovitis).
- Reporting MSUS findings and diagnosis.

**WORKSHOPS:**

- Practical handling of the ultrasound machine settings.
- Supervised identification of musculoskeletal sonoanatomy.
- Supervised standardized sonographic scanning of the shoulder, elbow, wrist and hand, hip, knee, ankle and foot.
- Supervised hands-on scanning of patients with basic musculoskeletal lesions.

## SCIENTIFIC PROGRAM

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**Thursday - November 28<sup>th</sup>, 2019**

- 12:00 - 14:00 **Registration**
- 12:00 - 13:30 **Lunch**
- 13:30 - 13:45 **Welcome**  
**G.G. Kakavouli, D. Boumpas, D. Vasilopoulos**
- 13:45 - 14:00 Entering test of knowledge - Basic Level  
**J. Raftakis**  
Chairpersons: **D. Karokis, J. Raftakis**
- 14:15 - 14:45 Technical characteristics and setting of ultrasound equipments for Musculoskeletal diseases  
**J. Raftakis**
- 14:45 - 15:00 **Mini break - hall changing**  
Chairpersons: **F. Porta, A. Bachta**
- 15:00 - 15:25 History and basic physics of MSUS  
**A. Bachta**
- 15:25 - 16:00 Musculoskeletal anatomy. Sonographic pattern of the musculoskeletal tissues  
**G. Filippou**
- 16:00 - 16:30 Artifacts and misinterpretation in MSUS  
**F. Porta**
- 16:45 - 17:00 **Coffee break**
- 17:00 - 18:00 **Workshop:** Supervised use of the US equipment and settings
- 18:00 - 19:00 **Workshop:** Supervised Ultrasound assessment of the normal musculoskeletal tissues  
Chairpersons: **D. Karokis, G. Kampakis**
- 19:00 - 19:30 Image documentation; reporting of US findings  
**G. Kampakis**
- 19:30 - 21:00 **Workshop:** Supervised ultrasound scanning in people with Musculoskeletal Diseases
- 21:00 **Dinner**

## SCIENTIFIC PROGRAM

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**Friday, November 29<sup>th</sup>, 2019**

Chairpersons: **P. Balint, G.G. Kakavouli**

- 09:00 - 09:30 Sonographic semiology: US and correlative anatomy and histology: articular cartilage lesions, cortical abnormalities; Basic pathology of tendons and ligaments (tendinosis, calcifications, tears)  
**N. Damjanov**  
**Live demo - A. Delle Sedie**
- 09:30 - 10:00 Basic synovial US lesions: Enthesitis and enthesopathy  
**P. Balint**
- 10:00 - 10:30 Standardized scanning of the wrist and hand: normal and basic pathological findings  
**D. Karokis**  
**Live demo - P. Balint**
- 10:30 - 11:00 **Coffee break**
- 11:00 - 12:45 **Workshop:** US semiology: normal and basic pathological findings (abnormalities of hyaline cartilage, cortical bone, synovial membrane, tendons, ligaments, bursae)  
Chairpersons: **N. Damjanov, C. Siagkri**
- 12:45 - 13:15 Standardized scanning of the shoulder normal and basic pathological findings  
**C. Siagkri**  
**Live demo - N. Damjanov**
- 13:15 - 13:45 Standardized scanning of the elbow: normal and basic pathological findings  
**A. Raptopoulou**  
**Live demo - N. Damjanov**
- 13:45 - 14:30 **Lunch**
- 14:30 - 17:00 **Workshop:** Supervised scanning of the shoulder and the elbow. Normal and basic pathological findings  
Chairpersons: **P. Balint, A. Iagnocco**
- 17:00 - 17:30 Basic synovial US lesions: synovitis, synovial hypertrophy, tenosynovitis and bursitis; Definition, detection and quantification  
**A. Iagnocco**
- 17:30 - 18:00 Standardized scanning of the hip: normal and basic pathologic findings  
**G. Kampakis**  
**Live demo - P. Balint**
- 20:00 **Dinner**

## SCIENTIFIC PROGRAM

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**Saturday, November 30<sup>th</sup>, 2019**

- 09:00 - 10:45 **Workshop:** Supervised Ultrasound scanning of the hand, wrist and hip.  
Normal and basic pathological findings.
- 10:45 - 11:00 **Coffee Break**  
Chairpersons: **A. Iagnocco, S. Prodanovic**
- 11:00 - 11:30 Standardized scanning of the knee: normal and basic pathological findings  
**J. Raftakis**  
**Live demo - A. Delle Sedie**
- 11:30 - 12:00 Standardized scanning of the ankle and foot: normal and basic  
pathological findings  
**S. Prodanovic**  
**Live demo - A. Delle Sedie**
- 12:00 - 12:30 Application of US in the management of Musculoskeletal Diseases  
**A. Iagnocco**
- 12:30 - 13:30 **Light lunch**
- 13:15 - 14:45 **Workshop:** Supervised ultrasound scanning of the knee, ankle and foot.  
Normal and basic pathological findings.  
Chairpersons: **G.G. Kakavouli, N. Damjanov**
- 14:45 - 15:15 Basic skills in sonographic guided arthrocentesis  
**N. Damjanov**
- 15:15 - 16:15 **Workshop:** Basic skills in sonographic-guided arthrocentesis
- 16:15 - 16:30 Exit test of knowledge
- 16:30 - 16:45 Closing remarks and certificate issue