

## OBJECTIVES

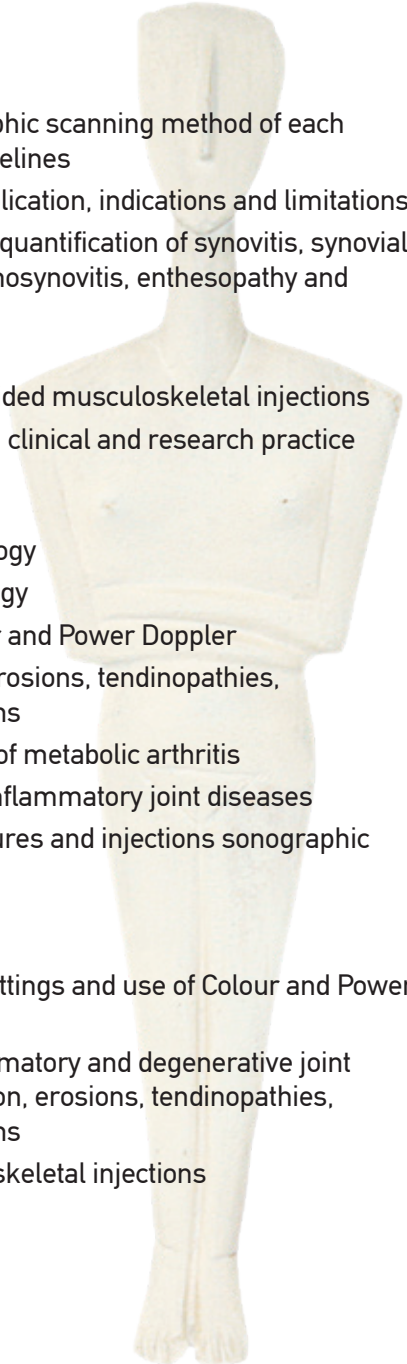
- To review the systematic standardized sonographic scanning method of each anatomical region, according to the EULAR guidelines
- To learn Colour and Power Doppler physics, application, indications and limitations
- To learn definition, ultrasound presentation and quantification of synovitis, synovial hypertrophy, effusion, erosion, tendinopathy, tenosynovitis, enthesopathy and degenerative lesions
- To assess, quantify and/or score joint lesions
- To learn basic skills to perform sonographic-guided musculoskeletal injections
- To understand the role of musculoskeletal US in clinical and research practice

## MAIN TOPICS

- Role of Colour and Power Doppler in rheumatology
- Colour and power Doppler physics and technology
- Applications, indication and limitations of Colour and Power Doppler
- Ultrasound presentation of synovitis, effusion, erosions, tendinopathies, tenosynovitis, enthesitis and degenerative lesions
- Role of ultrasound in diagnosis and monitoring of metabolic arthritis
- Role of ultrasound in monitoring patients with inflammatory joint diseases
- Standards of safety of ultrasound-guided punctures and injections sonographic system

## WORKSHOPS

- Practical handling of the ultrasound machine settings and use of Colour and Power Doppler technology
- Supervised scanning of the patients with inflammatory and degenerative joint disease focused on detection of synovitis, effusion, erosions, tendinopathies, tenosynovitis, enthesitis and degenerative lesions
- Supervised basic sonographic-guided musculoskeletal injections



## SCIENTIFIC PROGRAM

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Thursday, December 9<sup>th</sup>, 2021

- 12.00 - 14.00    **Registration**
- 12.00 - 13.30    **Lunch**
- 13.30 - 13.45    **Welcome**  
**A. Iagnocco, G.Giokits-Kakavouli, D. Boubas, D. Vasilopoulos**
- 14.00 - 14.15    **J. Raftakis** - Entering test of knowledge
- Chairpersons: **A. Iagnocco, J. Raftakis**  
**J. Raftakis** - Technical characteristics and setting of ultrasound equipments for Musculoskeletal diseases
- 14.45 - 15.00    **Mini Break (hall changing)**
- Chairpersons: **A. Iagnocco, G. Filippou**
- 15.00 - 15.20    **G. Filippou** - Doppler physics, technology and artefacts. Doppler setting optimization
- 15.20 - 15.40    **G. Katsifis** - Application, indications and limitations of Doppler in musculoskeletal US
- 15.40 - 16.00    **A. Delle Sedie** - Colour Doppler and power Doppler. Correlations between US imaging and histopathological findings
- 16.00 - 16.30    **Coffee Break**
- 16.30 - 18.15    **Workshop:** Supervised practical scanning of the different Doppler modalities. How to use and set the ultrasound equipment. The choice of the appropriate probe. Optimisation of Doppler settings. PDUS artefacts
- Chairpersons: **A. Iagnocco, F. Porta**
- 18.15 - 18.45    **A. Iagnocco** - B-mode and Doppler synovitis. Definition, detection, quantification and pitfalls
- 18.45 - 19.15    **F. Porta** - B-mode and Doppler tenosynovitis. Definition, detection, quantification and pitfalls
- 20.00            **Dinner**
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## SCIENTIFIC PROGRAM

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Friday, December 10<sup>th</sup>, 2021

- 08.00 - 09.30     **Workshop:** US semiology-pathological findings
- 09.30 - 11.00     **Workshop:** Supervised hands-on scanning of patients with inflammatory and degenerative joint disorders; How to detect and quantify synovitis (including Power Doppler), cartilage and bony lesions
- Chairpersons: **P. Balint, G. Giokits-Kakavouli**
- 11.00 - 11.25     **A. Bachta** - B-mode and Doppler tendinosis and tendon tear. Definition, detection, quantification and pitfalls
- 11.25 - 11.50     **A. Abogamal** - US bone abnormalities. Definition, detection, quantification and pitfalls
- 11.50 - 12.15     **P. Balint** - B-mode and Doppler enthesopathy and enthesitis. Definition, detection, quantification and pitfalls
- 12.15 - 12.45     **A. Abogamal** - US cartilage abnormalities. Definition, detection, quantification and pitfalls
- 12.45 - 14.00     **Workshop:** Supervised hands-on scanning of patients with synovitis and tenosynovitis, enthesopathy/ enthesitis, tendinosis and tendon tear, bone and cartilage abnormalities
- 14.00 - 15.00     **Lunch**
- Chairpersons: **G. Giokits-Kakavouli, C. Siagkri**
- 15.00 - 15.30     **P. Mandl** - US diagnosis of hip pathology
- 15.30 - 16.00     **G. Giokits-Kakavouli** - US diagnosis of knee pathology
- 16.00 - 16.30     **C. Siagkri** - US diagnosis of ankle and foot pathology
- 16.30 - 17.00     **Coffee Break**
- 17.00 - 19.00     **Workshop:** Supervised hands-on scanning of patients with lower extremity pathology
- 20.00             **Dinner**
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## SCIENTIFIC PROGRAM

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**Saturday, December 11<sup>th</sup>, 2021**

- 09.00 - 09.30 Chairpersons: **J. Raftakis, D.Karokis**  
**G. Giokits-Kakavouli** - US diagnosis of shoulder pathology
- 09.30 - 10.00 **J. Raftakis** - US diagnosis of elbow pathology
- 10.00 - 10.30 **D. Karokis** - US diagnosis of wrist and hand pathology
- 10.30 - 10.45 **Coffee Break**
- 10.45 - 12.45 **Workshop:** Supervised hands-on scanning of patients with upper extremity pathology
- 12.45 - 13.30 **Lunch**
- 13.30 - 13.50 Chairpersons: **P. Mandl, A. Iagnocco**  
**A. Iagnocco** - US: a tool for diagnosis and outcome measure in Musculoskeletal ultrasound
- 13.50 - 14.20 **P. Mandl** - Role of US in the diagnosis of crystal arthropathy and periarticular tissue (gout, CPPD)
- 14.20 - 14.50 **N. Damjanov** - Basic skills in sonographic-guided arthrocentesis
- 14.50 - 15.50 **Workshop:** Basic skills in sonographic-guided arthrocentesis
- 16.00 - 16.15 Exit tests of knowledge and
- 16.15 - 16.45 Closing remarks and certificate issues

