

10th

International
Musculoskeletal
UltraSoundCourse
Basic & Intermediate Levels



**12
14 DEC
2024**

Whydham Grand
Athens
Greece

Under the Auspices



GREEK RHEUMATOLOGY SOCIETY
& PROFESSIONAL ASSOCIATION OF RHEUMATOLOGISTS (ERE-EPERE)

<https://mitoscourse2024.concopco.com>



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EUROPEAN ALLIANCE
OF ASSOCIATIONS
FOR RHEUMATOLOGY

GENERAL INFORMATION

ORGANIZATION AND COMMITTEE

Scientific Director

Prof. Annamaria Iagnocco

Dipartimento Scienze Cliniche e Biologiche, Università degli Studi di Torino, Turin, Italy

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Local Organizer

M.I.T.O.S. (Musculoskeletal Imaging Techniques: Ongoing Sonography - a Task Force for Greek Rheumatologists)

Organizing Committee

Giasna Giokits
Dimitrios Karokis
Ioannis Raftakis
Caterina Siagkri

Faculty

The speakers will come from major European musculoskeletal ultrasound research centers and are rheumatologists mostly involved in previous EULAR courses.

The contacted faculties are:

Faculties

Annamaria Iagnocco, Italy
Ahmed Abogamal, Egypt
Amalia Raptopoulou, Greece
Andrea DelleSedie, Italy
Andreas Diamantopoulos, Norway
Athanasios Fortis, Greece
Carlo Perricone, Italy
Caterina Siagkri, Greece
Dimitris Karokis, Greece
Emilio Filippucci, Italy
Giasna Giokits, Greece
Ioannis Raftakis, Belgium
Nemanja Damjanov, Serbia
Peter Balint, Hungary
Slavica Prodanović, Serbia

Scientific Committee

Giasna Giokits
Dimitrios Karokis
Ioannis Raftakis
Caterina Siagkri

Instructors

Ahmed Abogamal, Egypt
Amalia Raptopoulou, Greece
Andrea DelleSedie, Italy
Andreas Diamantopoulos, Norway
Athanasios Fortis, Greece
Carlo Perricone, Italy
Caterina Siagkri, Greece
Christos Georgakopoulos, Greece
Dimitris Karokis, Greece
Dimos Merinopoulos, Greece
Emilio Filippucci, Italy
Giasna Giokits, Greece
Ioannis Raftakis, Belgium
Nemanja Damjanov, Serbia
Pavlos Stamatis, Greece
Peter Balint, Hungary
Slavica Prodanović, Serbia
Theodoros Dimitroulas, Greece
Theodoros Natskos, Greece

GENERAL INFORMATION

Course's opening

Thursday, December 12th, 2024- h 12.30

Course's closing

Saturday, December 14th, 2024- h 16.45

Participants Official

The number of participants in each of the levels is limited

Language Congress

English

Venue

Wyndham Grand Hotel, Athens, Greece

Organizer

M.I.T.O.S. GROUP

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Contact and Technical Organizer



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Co Organizer Rheumatology Association of Serbia

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SPEAKERS – INSTRUCTORS

Annamaria Iagnocco

Professor of Rheumatology, Dipartimento Scienze Cliniche e Biologiche, Università degli Studi di Torino, Turin, Italy

Ahmed Abogamal

Professor of Rheumatology, Al-Azhar University, Consultant Rheumatologist, DUBAI-UAE, Scientific Chairman of EOS, EULAR Certified MSUS trainer, Scientific Director of the ARLAR MSUS group, Cairo, Egypt

Amalia Raptopoulou

MD, PhD, Rheumatologist, Veroia, Greece

Andrea Delle

SedieMD, Rheumatologist, Azienda Ospedaliero Universitaria Pisana, Pisa, Italy

Andreas P. Diamantopoulos

MD, PhD, MPH, Consultant Rheumatologist, Division of Internal Medicine, Department of Infectious Diseases, Akershus University Hospital, Oslo, Norway

Athanasios Fortis

MD, PhD, FEBOT, Clinical Director Orthopaedic Department, Panarkadian Hospital, Tripolis, Greece

Carlo Perricone

Associate Professor in Rheumatology, Rheumatology Department of Medicine and Surgery, University of Perugia, Italy

Caterina Siagkri

Rheumatologist, Scientific Associate of Hippocraton Hospital of Thessaloniki, Private Practice, Thessaloniki, Greece

Christos Georgakopoulos

MD, MSc, Medical Resident in Rheumatology, KAT General Hospital, Attica, Greece

Dimitris Karokis

MSc, Rheumatologist, General Secretary of the M.I.T.O.S. Group (Musculoskeletal Imaging Techniques: Ongoing Sonography), Patras, Greece

Dimos Merinopoulos

BS, MSc, MD, MRCP, Rheumatologist, Athens, Greece

Emilio Filippucci

Professor, MD, PhD, Clinica Reumatologica, Università Politecnica delle Marche, Jesi (Ancona), Italy

Giasna Giokits

MD, Consultant Rheumatologist, Scientific Associate of Hippocraton Hospital of Thessaloniki, 4th Department of Pathology, Private Practice Katerini, Greece

Ioannis Raftakis

Rheumatologist, Deputy Head of Clinic, Department of Rheumatology, CHUB rugmann, Brussels, Belgium

Nemanja Damjanov

MD, PhD, Full Professor of Internal Medicine, Rheumatology, Belgrade University School of Medicine, Director of Institute of Rheumatology, Belgrade, Serbia

Pavlos Stamatis

MD, MSc, PhD, Consultant Rheumatologist Sunderby Hospital Sweden, Affiliated researcher Lund University, Sweden

Peter V. Balint

FRCP (Glasgow), President of the Hungarian Association of Rheumatologists, Musculoskeletal Radiology Group Medical Imaging Clinic, Semmelweis University, Head of Department, Consultant Rheumatologist, 3rd Rheumatology Department, National Institute of Musculoskeletal Diseases, Budapest, Hungary

Slavica Prodanović

MD, PhD, Specialist of Internal Medicine- Rheumatologist, Chief of the Ultrasound Department, Institute of Rheumatology Klin, Ass. At School of Medicine University of Belgrade, Belgrade, Serbia

Theodoros Dimitroulas

Associate Professor of Rheumatology, School of Medicine, Aristotle University of Thessaloniki, Greece

Theodoros Natskos

Rheumatologist, Veroia, Greece

SCIENTIFIC PROGRAM INFORMATION

CONGRESS SECRETARIAT OPENING HOURS

Thursday, 1 December 2024	12:00 - 21:00
Friday, 2 December 2024	08:00 - 19:00
Saturday, 3 December 2024	08:30 - 17:00

CERTIFICATE OF ATTENDANCE

Participants can receive their certificate of attendance during the closing session on the 3rd of December 2024.

To receive the certificate of attendance, it is mandatory to complete and submit the evaluation form, at the Course Secretariat, before the closing session and to show the congress badge.

CONGRESS HALLS

Theory	Hera Meeting room	1 st floor
Workshop	Athina Meeting room	1 st floor
Exhibition	Foyer	1 st floor

BASIC LEVEL

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 equipment 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 MS US 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.

BASIC LEVEL

Thursday, December 12th, 2024

- 12.00 - 13.30** **Registration**
- 13.30 - 13.45** **Welcome**
A. Iagnocco, G. Giokits, D. Karokis
- 13.45 - 14.00** **J. Raftakis** Entering test of knowledge - Basic Level
 Chairpersons: **A. Iagnocco, J. Raftakis**
- 14.15 - 14.45** **J. Raftakis** Technical characteristics and setting of ultrasound equipments for Musculoskeletal diseases
- 14.45 - 15.00** **Mini break - Hall changing**
- 15.00 - 16.30** **Workshop:** Supervised practical handling of the ultrasound machine settings
- 16.30 - 17.00** **Break**
 Chairpersons: **C. Perricone, E. Filippucci**
- 17.00 - 17.25** **C. Perricone** History and basic physics of MSUS
- 17.25 - 18.00** **E. Filippucci** Normal tissue and joint anatomy; Sonographic pattern of the musculoskeletal tissues
- 18.00 - 18.30** **C. Perricone** Artifacts and misinterpretation in MSUS
- 18.30 - 19.30** **Workshop:** Supervised practical handling of the normal MSUS anatomy
- 19.30 - 20.00** **Workshop:** Hands-on session; normal MSUS anatomy and basic pathological findings
 Chairperson: **A. Iagnocco**
- 20.00 - 20.30** **A. Iagnocco** US Application in management of Musculoskeletal Disorders

BASIC LEVEL

Friday, December 13th, 2024

- Chairpersons: **A. Iagnocco, G. Giokits**
- 09.00 - 09.30** **N. Damjanov** Sonographic semiology; US and correlative anatomy and histology: articular cartilage lesions, cortical abnormalities; Basic pathology of tendons and ligaments (tendinosis, calcifications, tears)
- 09.30 - 10.00** **A. Iagnocco** Basic synovial US lesions: synovitis, synovial hypertrophy, tenosynovitis and bursitis; Definition, detection, and quantification
- 10.00 - 10.30** **P. Balint** Enthesitis and enthesopathy
- 10.30 - 11.00** **Break**
- 11.00 - 12.45** **Workshop:** US semiology: normal and basic pathological findings
- Chairpersons: **N. Damjanov, C. Siagkri**
- 12.45 - 13.15** **C. Siagkri** Standardized scanning of shoulder normal and basic pathological findings
- 13.15 - 13.45** **A. Raptopoulou** Standardized scanning of the elbow: normal and basic pathological findings
- 13.45 - 14.30** **Break**
- 14.30 - 17.00** **Workshop:** Supervised scanning technique of shoulder; supervised scanning technique of elbow; Normal and basic pathological findings
- Chairpersons: **D. Karokis, A. Fortis**
- 17.00 - 17.30** **D. Karokis** Standardized scanning of the wrist and hand: normal and basic pathological findings
- 17.30 - 18.00** **A. Fortis** Standardized scanning of the hip: normal and basic pathologic findings

BASIC LEVEL

Saturday, December 14th, 2024

- 09.00 - 10.45** **Workshop:** Supervised hands-on scanning of patients with inflammatory and degenerative hand, wrist and hip
- 10.45 - 11.00** **Break**
- Chairpersons: **A. Iagnocco, J. Raftakis**
- 11.00 - 11.30** **J. Raftakis** Standardized scanning of the knee: normal and basic pathological
- 11.30 - 12.00** **S. Prodanović** Standardized scanning of the ankle and foot: normal and basic pathological findings
- 12.00 - 12.30** **C. Perricone** Image documentation; reporting US findings and diagnosis
- 12.30 - 13.15** **Break**
- 13.15 - 14.30** **Workshop:** Supervised hands-on scanning of patients with inflammatory and degenerative knee, ankle and foot
- Chairpersons: **G. Giokits, N. Damjanov**
- 14.30 - 15.00** **N. Damjanov** Basic skills in sonographi-guided arthrocentesis
- 15.00 - 15.45** **Workshop:** Basic skills in sonographic-guided arthrocentesis
- 15.45 - 16.00** **Exit test of knowledge**
- 16.00 - 16.30** **Closing remarks and certificate issue**

INTERMEDIATE LEVEL

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.

INTERMEDIATE LEVEL

Thursday, December 12th, 2024

- 12.00 - 13.30** **Registration**
- 13.30 - 13.45** **Welcome**
A. Iagnocco, G. Giokits, D. Karokis
- 14.00 - 14.15** **J. Raftakis** Entering test of knowledge - Intermediate Level
 Chairpersons: **A. Iagnocco, J. Raftakis**
- 14.15 - 14.45** **J. Raftakis** Technical characteristics and setting of ultrasound equipment for Musculoskeletal diseases
- 14.45 - 15.00** **Mini break - Hall changing**
 Chairpersons: **A. Iagnocco, A. Delle Sedie**
- 15.00 - 15.20** **A. Diamantopoulos** Doppler physics, technology and artefacts. Doppler setting optimization
- 15.20 - 15.40** **A. Diamantopoulos** 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** **Break**
- 16.30 - 18.30** **Workshop:** Supervised practical scanning of the different Doppler modalities. How to use and set the ultrasound equipment. The choice of the appropriate probe. Optimization of Doppler settings. PDUS artefacts
 Chairpersons: **A. Iagnocco, E. Filippucci**
- 18.30 - 19.00** **A. Iagnocco** B-mode and Doppler synovitis. Definition, detection, quantification and pitfalls
- 19.00 - 19.30** **E. Filippucci** B-mode and Doppler tenosynovitis. Definition, detection, quantification and pitfalls

INTERMEDIATE LEVEL

Friday, December 13th, 2024

- 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**
- 11.00 - 11.25** **N. Damjanov** B-mode 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** **A. Abogamal** US cartilage abnormalities. Definition, detection, quantification and pitfalls
- 12.15 - 12.45** **P. Balint** B-mode and Doppler enthesopathy and enthesitis. 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** **Break**

Chairpersons: **G. Giokits, C. Siagkri**
- 15.00 - 15.30** **A. Diamantopoulos** US diagnosis of hip pathology
- 15.30 - 16.00** **G. Giokits** US diagnosis of knee pathology
- 16.00 - 16.30** **C. Siagkri** US diagnosis of ankle and foot pathology
- 16.30 - 17.00** **Break**
- 17.00 - 19.00** **Workshop:** Supervised hands-on scanning of patients with lower extremity pathology

INTERMEDIATE LEVEL

Saturday, December 14th, 2024

- 09.00 - 09.30** Chairpersons: **J. Raftakis, D. Karokis**
G. Giokits 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** **Break**
- 10.45 - 12.45** **Workshop:** Supervised hands-on scanning of patients with upper extremity pathology
- 12.45 - 13.30** **Break**

Chairpersons: **E. Filippucci, A. Iagnocco**
- 13.30 - 13.50** **A. Iagnocco** US: a tool for diagnosis and outcome measure in RA
- 13.50 - 14.20** **E. Filippucci** Role of US in the diagnosis of crystal arthropathy and eriarticular tissue (gout, CPPD)

Chairpersons: **G. Giokits, N. Damjanov**
- 14.30 - 15.00** **N. Damjanov** Basic skills in sonographic-guided arthrocentesis
- 15.00 - 15.45** **Workshop:** Basic skills in sonographic-guided arthrocentesis
- 15.45 - 16:00** **Exit tests of knowledge**
- 16:00 - 16.30** **Closing remarks and certificate issues**

