4th INTERNATIONAL MUSCULOSKELETAL ULTRASOUND COURSE
BASIC AND INTERMEDIATE LEVEL

Athens, November 30th – December 2nd 2017

The 4th International Ultrasound Course for Rheumatologists, taking place in Athens, Greece in 2017, intends to be a combination of lectures and practical sessions. It is going to be a two-level course – the basic and the intermediate – consisting of theoretical talks and supervised hands-on scanning of healthy persons and/or patients with musculoskeletal disorders.

**Sponsorship:** ABBVIE, BRISTOL-MYERS SQUIBB, ENORASIS, GLAXOSMITHKLINE, GENESIS PHARMA, JANSSEN CILAG, MSD, NOVARTIS, PFIZER, ROCHE, UCB. The total amount of sponsorship will not exceed 40% of the total cost for the Course. General Electric, Papapostolou, Esaote, Toshiba, Dormed, Medworks will provide ultrasound equipment free of charge. Sponsorships will cover part of the travel and accommodation expenses for the faculty, course venue and organization costs. Sponsors will not have any influence on the course program, scientific and other content, or speakers in any way.

**CME Credits**
The course will apply for EACCME/UEMS credits of continuing medical education.

**Registration**
Registration is intended to be open to all EULAR member countries. Participants registering for the basic MSUS course endorsed by EULAR will have priority if they have already participated in the EULAR Online Introductory US course.

**Participation fees**
The basic registration fee of 300 € includes admission to all conference sessions, workshops, conference kit, conference session materials, certificate of attendance. If accommodation (for two nights – single room) and coffee breaks and meals needed, the total course participation fee will be 750 €.
ORGANIZATION AND COMMITTEE

Scientific Director
Prof. Annamaria Iagnocco
Dipartimento Scienze Cliniche e Biologiche, Università degli Studi di Torino, Turin - Italy
e-mail: annamaria.iagnocco1@gmail.com

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

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
Amalia Raptopoulou, Greece
Arthur Bachta, Poland
Caterina Siagkri, Greece
Dimitris Karokis, Greece
Emilio Filippucci, Italy
Esperanza Naredo, Spain
Francesco Porta, Italy
Georgios Filippou, Italy
Giasna G. Kakavouli, Greece
Goran Radunović, Serbia
Ioannis Raftakis, Greece
Mihaela Micu, Romania
Nemanja Damjanov, Serbia
Peter Balint, Hungary
Slavica Prodanović, Serbia

Instructors:
Amalia Raptopoulou, Greece
Arthur Bachta, Poland
Caterina Siagkri, Greece
Dimitris Karokis, Greece
Emilio Filippucci, Italy
Francesco Porta, Italy
Georgios Filippou, Italy
Giasna G. Kakavouli, Greece
Goran Radunović, Serbia
Ioannis Papadopoulos, Switzerland
Ioannis Raftakis, Greece
Mihaela Micu, Romania
Slavica Prodanović, Serbia
Theodoros Natskos, Greece
Theodoros Dimitroulas, Greece
GENERAL INFORMATION

Course’s opening       Thursday, November 30th, 2017 - h 12.00
Course’s closing       Saturday, December 02nd, 2017- h 16:30
Participants           The number of participants in each of the Courses will be limited to 48
Official language      English
Congress Venue:        Wyndham Grand Athens Hotel
                        Athens, Greece

M.I.T.O.S. GROUP

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phone: +306944443326; +302351079839

Contact and Technical Organizer

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Fax: + 30 210 4190905
Email: tzombola@synthesispco.com
Web site: www.synthesispco.com
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.
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<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>12.00-14.00</td>
<td>Registration</td>
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<tr>
<td>12:00-13:45</td>
<td>Lunch</td>
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<tr>
<td>13:45-14:00</td>
<td>Welcome</td>
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<td></td>
<td><strong>A. Iagnocco, N. Damjanov, D. Karokis, D. Boumpas</strong></td>
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<tr>
<td>14:00-14:15</td>
<td>Entering test of knowledge – Basic Level</td>
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<td><strong>I. Raftakis</strong></td>
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<td>14.15-14.30</td>
<td>Entering test of knowledge – Intermediate Level</td>
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<td><strong>I. Raftakis</strong></td>
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<tr>
<td>14.30 –15.00</td>
<td>Sonographic pattern of the musculoskeletal tissues and technical</td>
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<td>characteristics and setting of ultrasound equipment for rheumatology</td>
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<td><strong>I. Raftakis</strong></td>
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<td>15.00-15.15</td>
<td>Mini break – Hall changing</td>
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<td>15.15-16.45</td>
<td>Workshop: Supervised practical handling of the ultrasound machine</td>
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<td>16.45-17.00</td>
<td>Coffee Break</td>
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<td>Chairpersons: <strong>F. Porta, A. Bachta</strong></td>
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<tr>
<td>17.00-17.25</td>
<td>History and basic physics of MSUS</td>
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<td><strong>A. Bachta</strong></td>
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<td>17.25-18.00</td>
<td>Normal tissue and joint anatomy. US and correlative anatomy and</td>
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<td><strong>G. Radunovic</strong></td>
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<td>18.00-18.30</td>
<td>Artifacts and misinterpretation in MSUS</td>
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<td><strong>F. Porta</strong></td>
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<td>18.30-19.30</td>
<td>Workshop: Supervised practical handling of the normal MSUS anatomy</td>
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<td>Chairpersons: <strong>D. Karokis, G.G. Kakavouli</strong></td>
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<tr>
<td>19.30-20.00</td>
<td>Doppler physics and techniques. Colour and Power Doppler settings and</td>
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<td><strong>E. Naredo</strong></td>
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<td>20.00-21.00</td>
<td>Workshop: Hands - on session. The Doppler basics - application</td>
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Friday, December 1st, 2017

Chairpersons: A. Iagnocco, G.G. Kakavouli

09.00-09.30  Sonographic semiology: tendinosis, partial and complete tendon tear, calcifications, articular cartilage lesions, cortical abnormalities, erosions - definition, detection and quantification
   N. Damjanov

09:30-10:00  Basic US lesions: synovitis, tenosynovitis and bursitis. Definition, detection and quantification
   A. Iagnocco

10:00-10:30  Enthesitis and enthesopathy
   P. Balint

10.30-11.00  Coffee Break

11.00-12.45  Workshop: US semiology: normal and basic pathological findings
   Chairpersons: N. Damjanov, C. Siagkri

12.45-13.15  Standardized scanning of shoulder normal and basic pathological findings
   C. Siagkri

13.15-13.45  Standardized scanning of the elbow: normal and basic pathological findings
   A. Raptopoulou

13.45-14.30  Lunch

14.30-17.00  Workshop: Supervised scanning technique of shoulder. Supervised scanning technique of elbow. Normal and basic pathological findings
   Chairpersons: P. Balint, G. Radunovic

17.00-17.30  Standardized scanning of the wrist and hand: normal and basic pathological findings
   D. Karokis

17.30-18.00  Standardized scanning of the hip: normal and basic pathologic findings
   M. Micu
Saturday, December 2nd, 2017

09.00-10.45  **Workshop:** Supervised hands-on scanning of patients with inflammatory and degenerative hand, wrist and hip

10.45-11.00  **Coffee Break**

Chairpersons: **G. Radunovic, A. Raptopoulou**

11.00-11.30  Standardized scanning of the knee: normal and basic pathological findings  
**G. Radunovic**

11.30-12.00  Standardized scanning of the ankle and foot: normal and basic pathological findings  
**S. Prodanović**

12.00-12.30  US Application in management of Musculoskeletal Disorders  
**A. Iagnocco**

12.30-14.00  **Workshop:** Supervised hands-on scanning of patients with inflammatory and degenerative knee, ankle and foot

Chairpersons: **G.G. Kakavouli, E. Filippucci**

14.00-14.30  Basic skills in sonographic guided arthrocentesis  
**E. Filippucci**

14.30-15.30  **Workshop:** Basic skills in sonographic-guided arthrocentesis

15.30-15.45  Exit test of knowledge and closing remarks

15.45-16.45  **Lunch and certificate issuing**
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, enthesitis 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.
THURSDAY, NOVEMBER 30th, 2017

12.00-14.00  **Registration**
12.00-13.45  **Lunch**
13.45-14.00  **Welcome**

A. Iagnocco, N. Damjanov, D. Karokis, D. Boumpas

14.00-14.15  **Entering test of knowledge - Basic Level**
I. Raftakis

14.15-14.30  **Entering test of knowledge - Intermediate Level**
I. Raftakis

Chairpersons: N. Damjanov, I. Raftakis

14.30-15.00  **Sonographic pattern of the musculoskeletal tissues and technical characteristics and setting of ultrasound equipments for rheumatology**
I. Raftakis

15.00-15.15  **Mini break – Hall changing**

Chairpersons: E. Naredo, D. Karokis

15.15-15.45  **Colour Doppler and Power Doppler (i.e. basis, optimizing setting and applications)**
E. Naredo

15.45-16.15  **Colour and Power Doppler artifacts**
G. Filippou

16.15-16.45  **Coffee Break**


Chairpersons: A. Iagnocco, P. Balint

18.30-19.00  **B-mode and Doppler synovitis, tenosynovitis, tendinosis and tendon tear. Detection and pitfalls**
P. Balint

19.00-19.30  **Basic US lesions: cartilage and bone lesions in osteoarthritis**
F. Porta
SCIENTIFIC PROGRAM

Friday, December 1st, 2017

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: *A. Iagnocco, G. Kakavouli*

11.00-11.20  Basic US lesions: tendinopathies, tenosynovitis. Validation and scoring of synovial, tenosynovial inflammation  *A. Iagnocco*

11.20-11.45  Basic US lesions: synovitis, bony cortex and cartilage. Definition, detection and quantification  *G. Filippou*

11.45-12.15  Basic US lesions: enthesitis, enthesopathy and validation and scoring of entheseal inflammation  *P. Balint*

12.15-12.45  Carpal Tunnel Syndrome & Ultrasound  *E. Filippucci*

12.45-14.00  **Workshop:** Supervised hands-on scanning of patients with inflammatory and degenerative joint and periarticular soft tissues disorders. How to detect and quantify musculoskeletal lesions

14.00-15.00  **Lunch**

Chairpersons: *F. Porta, G.G. Kakavouli*

15.00-15.30  Standardized scanning of the inflammatory and degenerative shoulder  *G.G. Kakavouli*

15.30-16.00  Standardized scanning of the inflammatory and degenerative elbow  *I. Raftakis*

16.00-16.30  Standardized scanning of the inflammatory and degenerative hand and wrist  *D. Karokis*

16.30-17.00  **Coffee Break**

17.00-19.00  **Workshop:** Supervised hands-on scanning of patients with inflammatory and degenerative shoulder, elbow, hand and wrist
SCIEntIFIC ProGRaM

saturDay, December 2nd, 2017

ChaIrpersons: C. Siagkri, E. Filippucci

09.00-09.30 Standardized scanning of the inflammatory and degenerative hip
M. Micu

09.30-10.00 Standardized scanning of the inflammatory and degenerative knee
G.G. Kakavouli

10.00-10.30 Standardized scanning of the inflammatory and degenerative ankle and foot
C. Siagkri

10.30-10.45 Coffee Break

10.45-11.30 Workshop: Supervised hands-on scanning of patients with inflammatory and degenerative hip

11.30-12.30 Workshop: Supervised hands-on scanning of patients with inflammatory and degenerative knee, ankle and foot

Chairpersons: C. Siagkri, A. Iagnocco

12.30-13.00 Role of US in the diagnosis of crystal arthropathy
E. Filippucci

13.00-13.30 US in sport medicine and traumatic conditions
A. Bachta

13.30-14.00 Basic skills in sonographic-guided arthrocentesis
N. Damjanov

14.00-15.00 Workshop: Basic skills in sonographic-guided arthrocentesis

15.00-15.15 Exit tests of knowledge and closing remarks

15.15-16.45 Lunch and certificate issuingg
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<th><strong>APPLICATION FORM</strong></th>
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<td><strong>Double room</strong></td>
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Fill in total amount of participation ……………. €

**Applicant’s Signature**

Application form should be signed and sent by fax: +30 210 4190905
Or scanned and sent by e-mail: tzombola@synthesispc0.com
Musculoskeletal Imaging Techniques
Ongoing Sonography
A task force for Greek Rheumatologists