



General information and Course programme of the

**2<sup>nd</sup> MUSCULOSKELETAL SONOGRAPHY COURSE FOR  
RHEUMATOLOGISTS  
- INTERMEDIATE LEVEL -**

Zagreb, December 3<sup>rd</sup> – December 5<sup>th</sup>, 2018.



This course has been scientifically endorsed by **EULAR**

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fighting rheumatic & musculoskeletal  
diseases together



Naslovna fotografija je vlasništvo arhive Hrvatske turističke zajednice (HTZ). Autor: Davor Rostuhar

## ORGANIZATION AND COMMITTEE

### Scientific Director

Prof. Annamaria Iagnocco

### Executive director of the Course

Assist. Prof. Porin Perić, MD, PHD

### Faculty

The speakers will come from major European musculo-skeletal ultrasound research centers and are rheumatologists mostly involved in previous EULAR courses. The contacted faculty is:

**Peter Balint** Hungary, **Nemanja Damjanov** Serbia, **Hilde Berner-Hammer** Norway, **Annamaria Iagnocco** Italy, **Christian Dejaco** Austria, **Zunaid Karim** UK, **Francesco Porta** Italy, **Porin Perić** Croatia, **Goran Radunović** Serbia, **Wolfgang Schmidt** Germany

### Instructors

**Mislav Cerovec** Croatia, **Darija Granec** Croatia, **Tatjana Kehler** Croatia, **Kristina Kovač** Croatia, **Nadica Laktašić-Žerjavić** Croatia, **Miroslav Mayer** Croatia, **Mihaela Micu** Romania, **Tomislav Nemčić**, Croatia, **Francesco Porta** Italy, **Porin Perić** Croatia, **Goran Radunović** Serbia, **Violeta Vlad** Romania, **Christian Dejaco** Austria, **Zunaid Karim** UK

## GENERAL INFORMATION

### Course opening

Monday, December 3<sup>rd</sup>  
2018. - 12:00 h

### Participants

The number of participants is limited to 30.

### Course closing

Wednesday, December 5<sup>th</sup>  
2018. - 15:00 h

### Official language

English

**Congress Venue: Hotel Sheraton**, Kneza Borne 2, 10000 Zagreb, Croatia, [www.hotel-sheratonzagreb.com/hr](http://www.hotel-sheratonzagreb.com/hr)

**Reservations:** phone: +385 1 48 111 55, Fax: +385 1 48 189 14, e-mail: [zagreb@atlantis-travel.hr](mailto:zagreb@atlantis-travel.hr), [www.atlantis-travel.hr](http://www.atlantis-travel.hr)

**Scientific Organizer: Prof. Annamaria Iagnocco**

**Executive director of the Course: Porin Perić, MD, PHD Assistant Professor** - Department of Rheumatology, Clinical Hospital Center, Zagreb, Kišpatićeva 12, 10000 Zagreb, Croatia e-mail: [porin.peric@gmail.com](mailto:porin.peric@gmail.com)

**Organizing Secretariat: Croatian Society for Rheumatology** Šubićeva 9, 10000 Zagreb, Croatia  
Phone: +385 1 2388-171, Fax: +385 1 2388-289  
e-mail: [porin.peric@gmail.com](mailto:porin.peric@gmail.com)  
[www.reumatologija.org](http://www.reumatologija.org)

**Institutional  
Organizer:**

Clinical Hospital  
Center Zagreb,  
Department of  
Rheumatology,  
University of  
Zagreb, Croatia.

**Scientific  
Indorsement:**

European League  
Against Rheumatism  
(EULAR)  
Croatian Medical  
Association  
Croatian Society for  
Rheumatology

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**Musculoskeletal sonography course for rheumatologists, Zagreb 2018** is intended to be a combination of lectures and practical sessions. The course is consisted of theoretical talks and supervised hands-on scanning of healthy persons and/or patients with musculoskeletal disorders.

**Sponsorship:** Esaote, Olympus, Philips, MSD, GE, Abbvie, MSD, Pfizer.  
Esaote, Olympus, Phillips and GE will provide ultrasound equipment free of charge.

Sponsors will not have any influence on the course programme, scientific and other content, or speakers in any way.

The Course is in a proces of CME accreditation at the Croatian Ministry of Health.

Registration is intended to be opened for all EULAR member countries.

Formal evaluation of the course will be performed by all attendees at the end of the Course.

Registration fee: **1000 EUR** per person ( three days course). Food and accomodation are included in the price.

The number of participants will be 30 people.

## 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, entesitis 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 in rheumatology
- Use of the colour and power Doppler settings colour and power Doppler artefacts
- Ultrasound presentation of synovitis, effusion, erosions, tendinopathies, tenosynovitis, entesitis and degenerative lesions

- Use of colour and power Doppler to detect synovial and enthesal inflammation
- Assessment and quantification of structural joint damage (bone, tendons, ligaments)
- Role of ultrasound in diagnosis and monitoring of metabolic
- Role of ultrasound in assessment of skin
- Role of ultrasound in monitoring patients with inflammatory joint diseases
- Sonographic-guided periarticular and articular injections

## INTERMEDIATE COURSE PATHOLOGIES

- Joint synovitis, synovial hypertrophy, tenosynovitis
- Tendon calcification, enthesopathy, tendinosis, paratenonitis
- Tendon subluxation/luxation Intrasubstance tendon lesions, tendon impingement
- Complete tendon tear, partial tendon tear
- Bone erosions, osteophytes
- Ganglia and cysts
- Articular cartilage lesions, peri- and intra-articular microcrystal deposit
- Ligament, muscle, cartilage, fibrocartilage and synovial calcification

## WORKSHOP

- 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, entesitis and degenerative lesions.
- Supervised basic sonographic-guided musculoskeletal injections

## **EULAR Competency Assessment system for the MSUS intermediate courses, which consists of the following requirements:**

- Participants should have attended the EULAR introductory US online course, a EULAR basic MSUS course or a EULAR scientifically-endorsed basic MSUS course.
- Prior to acceptance to the course, applicants should send to the Faculty members a total of 6 normal examinations of each joint region in one Power Point file (i.e. shoulder, elbow, wrist & hand, hip, knee, ankle & foot), according to the EULAR Guidelines for Musculoskeletal Ultrasound in Rheumatology (Ref. Backhaus M, et al. Ann Rheum Dis 2001).

- Images should be presented in a power point file. Important: Each slide should include: - One imaged structure each in longitudinal and transverse plane - A legend with the anatomic area, imaged structure and scanning planes - Parameters of the ultrasound machine - Identity of the person scanned should be removed.
- The Faculty members need to provide assessment and feedback. Applicants might need to be asked to repeat the ultrasound examinations and submit the images again for assessment by the Faculty.
- Upon approval of the assessment, the applicant needs to be asked to register for the course.
- The organization and procedures for the above process should be provided by the convenor/organiser of the MSUS intermediate course
- Participants should be asked to bring a total of 60 normal ultrasound examinations (each in a power point presentation) on a USB stick to the course. The Faculty reserves the right to randomly request and audit the full set of ultrasound examinations from each participant.

**Scientific organizers of this intermediate MSUS course have previously organized 3 Basic-level MSUS courses scientifically endorsed by EULAR in the previous 5 years (2013, 2014, 2017)**

# SCIENTIFIC PROGRAMME

Monday, December 3<sup>rd</sup> 2018.

TIME	PROGRAMME
12:00 -14:00	Registration
12:00 -13:30	Lunch
14:00 -14:15	Welcome <b>A. Iagnocco, B. Anić, P. Perić</b>
14:15 -14:40	Entering test of knowledge
<b>Chairpersons: A. Iagnocco, Ch. Dejaco</b>	
14:40 -15:20	Sonographic pattern of the musculoskeletal tissues and technical characteristics and setting of ultrasound equipments for rheumatology ( <b>A. Iagnocco</b> )
15:20 - 16:00	Color Doppler and Power Doppler (i.e. basis, optimizing setting and applications) ( <b>Ch. Dejaco</b> )

TIME	PROGRAMME
16:00 -16:20	Coffee break
16:20 - 17:40	<b>Workshop:</b> Supervised practical handling on the US machine settings. Sonoanatomy: correct acquisition of images in normal musculoskeletal structures (muscles, tendons, bursae, ligaments, nerves, articular cartilage, joint space, joint recesses, joint capsules and bony profile). Colour and Power Doppler settings and its optimization.
17:40 - 18:40	Colour and Power Doppler artifacts ( <b>N. Damjanov</b> )

**Tuesday, December 4<sup>th</sup> 2018.**

TIME	PROGRAMME
09:00 - 10:20	<b>Workshop:</b> 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.
10:20-10:30	<b>Coffee break</b>
<b>Chairpersons: A. Iagnocco, P. Balint</b>	
10:30-11:00	Basic US lesions: synovitis, bony cortex and cartilage. Definition, detection and quantification. ( <b>H. Berner-Hammer</b> )
11:00-11:30	Basic US lesions: tendinopathies, tenosynovitis. ( <b>A. Iagnocco</b> )
11:30-12:00	Basic US lesions: enthesitis, enthesopathy. ( <b>P. Balint</b> )
12:00 - 13:00	<b>Workshop:</b> Supervised hands-on scanning of patients with inflammatory and degenerative joint and periarticular soft tissues disorders. How to detect and quantify musculoskeletal lesions

TIME	PROGRAMME
13:00 - 14:00	<b>Lunch</b>
<b>Chairpersons: P. Perić, F. Porta</b>	
14:30 - 14:50	Basic US lesions: cartilage and bone lesions in osteoarthritis. ( <b>F. Porta</b> )
14:50 - 15:15	Standardized scanning of the inflammatory and degenerative shoulder. ( <b>P. Perić</b> )
15:15 - 15:40	Standardized scanning of the inflammatory and degenerative elbow ( <b>Ch. Dejaco</b> )
15:40 - 16:00	Standardized scanning of the inflammatory and degenerative hip. ( <b>W. Schmidt</b> )
16:00 - 16:20	<b>Coffee break</b>
16:20 - 18:20	<b>Workshop:</b> Supervised hands-on scanning of patients with inflammatory and degenerative shoulder, elbow, hip



**Wednesday, December 5<sup>th</sup> 2018.**

TIME	PROGRAMME
<b>Chairpersons: P. Perić, G. Radunović</b>	
09:00 - 09:25	Standardized scanning of the inflammatory and degenerative hand and wrist. ( <b>H. Berner-Hammer</b> )
09:25 - 09:50	Standardized scanning of the inflammatory and degenerative ankle and foot. ( <b>G. Radunović</b> )
09:50 - 10:15	Role of US in the diagnosis of crystal arthropathy. ( <b>Z. Karim</b> )
10:15 - 10:40	Standardized scanning of the inflammatory and degenerative knee. ( <b>W. Schmidt</b> )
10:40 - 11:00	Coffee break
11:00 - 11:40	<b>Workshop:</b> Supervised hands-on scanning of patients with inflammatory and degenerative hand, and wrist

TIME	PROGRAMME
11:40 - 12:30	<b>Workshop:</b> Supervised hands-on scanning of patients with inflammatory and degenerative knee, ankle and foot
12:30 - 13:15	Basic skills in sonographic-guided arthrocentesis. ( <b>N. Damjanov</b> )
13:15 - 14:30	<b>Workshop:</b> Basic skills in sonographic-guided arthrocentesis
14:30 - 15:00	Exit test of knowledge and closing remarks
15:00 - 16:00	Lunch and certificate issuing

## REGISTRATION

### Registration fees:

This 3-day course fee will be **1000 EUR** per participant (lodging and food is included in the course price).

It is recommended to make reservation of accommodation directly to Atlantis Travel agency:

Email: zagreb@atlantis-travel.hr

Phone: +385 1 48 111 55

Fax: +385 1 48 189 14

Registration deadline: **July 30<sup>th</sup> 2018.**

### Registration fee includes:

- 2 nights in single room, BB, hotel Sheraton - 03 - 05.12.2018.
- Admission to all conference sessions
- Conference KIT
- Conference session materials
- Certificate of attendance and CME certificate
- Coffee breaks and lunches, as specified in the program

### Registration instructions:

To register for the Course you must fill in the form and send it, together with the payment of the registration fee to the Organizational Secretariat.

No registrations will be made without payment of the registration fee.

The Organizational Secretariat will inform the participant that he or she has been registered for the Course.

**BANK DETAILS:**

Raiffeisen bank Austria dd  
Address: Petrinjska 59, Zagreb  
In favour of : Atlantis Travel d.o.o.  
IBAN: HR 4324840081500155209  
SWIFT CODE : RZBHHR2X  
Reference number : 83-2018

**BANK DETAILS:****(for payment in Kunas)**

Atlantis Travel d.o.o.  
Petrinjska 59, Zagreb,  
Account: HR5524840081100439430  
Reference number : 83-2018

***Please ask proforma invoice!***

**Amount should be net of bank  
commission !**

**Methods of payment:**

The registration fee may be paid by bank transfer. Kuna and foreign currency account of Atlantis Travel.

The copy of bank transfer must be sent together with the registration form to the Organizational Secretariat. No registration will be made without payment.

**Cancellations:**

The Secretariat must be informed in writing of any cancellations. Eighty percent of the sum paid will be refunded for cancellations made before **July 30<sup>th</sup> 2018**. No money will be refunded for cancellations made after that date.

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For more information, please visit the web sites:

[www.reumatologija.org](http://www.reumatologija.org) | [www.eular.org](http://www.eular.org) |  
[www.atlantis-travel.hr](http://www.atlantis-travel.hr)



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