October 9\textsuperscript{th} – 11\textsuperscript{th}, 2019
Innsbruck, Austria

This course is scientifically endorsed by:
Course opening: Wednesday, October 9th, 2019 – 16.00
Course closing: Friday, October 11th, 2019 – 18.15

Official course language: English

Congress Venue:
Hotel Grauer Bär
Universitätsstraße 5-7
6020 Innsbruck, Austria
www.innsbruck-hotels.at/hotel-grauer-baer/das-hotel

Scientific Organizers:

Christina Duftner, MD/PhD
Medical University Innsbruck/Tirol Kliniken
Clinical Department of Internal Medicine II
6020 Innsbruck, Austria

Christian Dejaco, MD/PhD, MBA
Medical University Graz
Department of Rheumatology and Immunology
8036 Graz, Austria

Senior-Organizer:

Michael Schirmer, MD
Medical University Innsbruck
Clinical Department of Internal Medicine II
6020 Innsbruck, Austria

Organizing Secretariat:

Margit Bonatti, Austria
E-mail: margit.bonatti@chello.at

Managed by Punctata GmbH andric.punctata@icloud.com in the name of the “Verein zur Förderung der Hämatologie, Onkologie und Immunologie”, Innsbruck, Austria
**GENERAL INFORMATION**

**Faculty / Instructors**  
*Peter Balint, MD (Budapest, Hungary), EULAR teacher*  
*Christian Dejaco, MD, PhD, MBA (Graz, Austria), EULAR teacher*  
*Christina Duftner, MD, PhD (Innsbruck, Austria), EULAR teacher*  
*Wolfgang Hartung, MD (Bad Abbach, Germany), EULAR teacher*  
*Annamaria Iagnocco, MD (Torino, Italy), EULAR teacher*  
*Andrea Klauser, MD (Innsbruck, Austria), EFSUMB teacher*  
*Peter Mandl, MD, PhD (Vienna, Austria), EULAR teacher*  
*Johannes Strunk, MD (Köln, Germany), EULAR teacher*

**Participants**  
The number of participants is limited to 25.

**Practical sessions**  
The number of participants per teacher in practical sessions is five at maximum.

**Course registration:**  
Course applications (with contact E-mail address, no specific form required) should be E-mailed to margit.bonatti@chello.at or faxed to +43-512-504-23415.  
For questions, please call +43-512-934148 or +43-650-8626301

Registration is open for all attendees specifically from EULAR member countries.

The course fee is **990 EUR** per participant (excl. taxes; lodging and food included).
OBJECTIVES (in accordance with EULAR guidelines)

- To learn basic normal musculoskeletal Ultrasonographic (MSUS) anatomy
- To learn basic pathological MSUS findings
- To learn the systematic standardized sonographic scanning method of each anatomical region
- Applications, indications and limitations of MSUS in rheumatology
- Image documentation
- Basics of Colour and Power Doppler application to detect synovial and entheseal inflammation

MAIN TOPICS

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

LIVE DEMONSTRATIONS

- To demonstrate standard scans according to EULAR guidelines
- To discuss common artefacts and pitfalls
WORKSHOPS
- Practical handling of the ultrasound system 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
- Supervised assessment of the basic sonographic symptoms or inflammation severity in grades

REQUIREMENTS OF ATTENDEES
- There is no experience in musculoskeletal sonography required to attend the basic level ultrasound course
**SCIENTIFIC PROGRAMME**

*Wednesday, October 9th, 2019*

16:00 - 17:00  *Registration*

17:00 - 17:15  Welcome (C. Duftner, G. Weiss, M. Schirmer)

**Application, indications and limitations of ultrasound in rheumatology**
*Chairperson:*  C. Dejaco

17:15 - 17:45  Applications and limitations of ultrasound in rheumatology (*P. Balint*)

**Ultrasound physics and technology**
*Chairperson:*  J. Strunk

17:45 - 18:00  Technical requirements, physics (*W. Hartung*)

18:00 - 18:30  How to optimize grey-scale and Doppler settings (*P. Balint*)

18:30 - 19:15  **Workshop 1:** optimizing ultrasound settings *(all faculty)*

**Satellite symposium (to be named)**
*Chairperson:*  to be named

19:15 - 19:45  

20.00  *Dinner*
Thursday, October 10th, 2019

Sonographic pattern of the different musculoskeletal tissues and standard sonographic scans of the wrist and hand  
Chairperson: W. Hartung

08:30 – 08:50  Sonographic pattern of the different musculoskeletal tissues (C. Duftner)

08:50 – 09:20  Systematic investigation of wrist and hand – normal MSUS anatomy (C. Duftner)

09:20 – 09:30  Live demonstration: Standard scans and normal MSUS anatomy of wrist and hands (C. Duftner)

09:30 – 10:30  Workshop 2: Supervised practical session on healthy subjects: Standard scans and normal MSUS anatomy of wrist and hands (all faculty)

10:30 - 11:00  Coffee break

Standard sonographic scans and normal MSUS anatomy of the elbow and shoulder  
Chairperson: C. Duftner

11:00 – 11:30  Systematic investigation of the elbow – normal MSUS anatomy (C. Dejaco)

11.30 - 11:45  Live demonstration: Standard scans and normal MSUS anatomy of the elbow (C. Dejaco)
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<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>11:45 – 13.00</td>
<td><strong>Workshop 3</strong>: Supervised practical session on healthy subjects: Standard scans and normal MSUS anatomy of elbow <em>(all faculty)</em></td>
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<td>13:00 - 14:00</td>
<td><strong>Lunch</strong></td>
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<td>14:00 - 14:30</td>
<td>Systematic investigation of the shoulder – normal MSUS anatomy <em>(J. Strunk)</em></td>
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<td>14:30 - 14:45</td>
<td><strong>Live demonstration</strong>: Standard scans and normal MSUS anatomy of the shoulder <em>(J. Strunk)</em></td>
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<td>14:45 - 16:00</td>
<td><strong>Workshop 4</strong>: Supervised practical session on healthy subjects: Standard scans and normal MSUS anatomy of shoulder <em>(all faculty)</em></td>
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<td>16:00 - 16:30</td>
<td><strong>Coffee Break</strong></td>
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**Standard sonographic scans and normal MSUS anatomy of the hip and knee**

*Chairperson: J. Strunk*

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<tr>
<td>16:30 - 16:45</td>
<td>Systematic investigation of the hip – normal MSUS anatomy <em>(W. Hartung)</em></td>
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<td>16:45 - 17:00</td>
<td><strong>Live demonstration</strong>: Standard scans and normal MSUS anatomy of the hip <em>(W. Hartung)</em></td>
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<td>17:00 - 17:45</td>
<td><strong>Workshop 5</strong>: Supervised practical session on healthy subjects: Standard scans and normal MSUS anatomy of hip <em>(all faculty)</em></td>
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<td>17:45 - 18:15</td>
<td>Systematic investigation of the knee – normal MSUS anatomy <em>(P. Balint)</em></td>
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18:15 - 18:30  **Live demonstration**: Standard scans and normal MSUS anatomy of the knee (*P. Balint*)

18:30 - 19:30  **Workshop 6**: Supervised practical session on healthy subjects: Standard scans and normal MSUS anatomy of knee (*all faculty*)

**Satellite symposium (to be named)**  
*Chairperson*: to be named  
19:30 - 20:00  ....

20:15  **Dinner**
Friday, Oktober 11th, 2019

**Standard sonographic scans and normal MSUS anatomy of the ankles and feet**
*Chairperson: P. Mandl*

08:30 - 09:00 Systematic investigation of the ankles and feet – normal MSUS anatomy (*P. Mandl*)

09:00 - 09:15 **Live demonstration**: Standard scans and normal MSUS anatomy of the ankles and feet (*P. Mandl*)

09:15 - 10:30 **Workshop 7**: Supervised practical session on healthy subjects: Standard scans and normal MSUS anatomy of ankles and feet (*all faculty*)

10:30 - 11:00 **Coffee break**

**Basic pathologies, image documentation, MSUS artefacts and pitfalls**
*Chairperson: C. Dufner*

11:00 - 11:30 Basic course pathologies part 1: Synovitis, Bursitis, Tenosynovitis (*A. Iagnocco*)

11:30 - 12:00 Basic course pathologies part 2: Erosions, Osteophytes, Enthesitis (*P. Mandl*)

12:00 – 12:15 Image documentation and reporting ultrasound findings and diagnosis (*C. Dejaco*)

12:15 - 12:45 MSUS artefacts and pitfalls (*J. Strunk*)
12:45 - 14:00  *Lunch*

14:00 - 15:00  **Workshop 8:** Supervised practical session on patients: Basic course pathologies (*all faculty*)

*What we learnt so far....*

*Chairperson:*  C. Dejaco

15:00 - 15:30  **Live demonstration:** Standard scans and normal MSUS anatomy of wrists, hands, elbow and shoulder (*J. Strunk*)

15:30 - 16:00  **Live demonstration:** Standard scans and normal MSUS anatomy of hips, knees, ankle and feet (*W. Hartung*)

16:00 - 18:00  **Workshop 9:** Supervised practical session on healthy subjects: Standard scans and normal MSUS anatomy of wrist, hands, elbow, shoulder, hip, knee (*all faculty*)

18:00 - 18:15  **Summary, closing remarks and evaluation** (*M. Schirmer*)
This course is supported by: