

**Focused course on Doppler modalities and advanced ultrasound techniques  
March 21-23; 2018 - Copenhagen, Denmark**

**Scientific organizers:**

Uffe Møller Døhn<sup>1</sup> • Lene Terslev<sup>1</sup> • Søren Torp-Pedersen<sup>2</sup>

<sup>1</sup>Center for Rheumatology and Spine Diseases and COPECARE

<sup>2</sup>Department of Radiology

Rigshospitalet, Glostrup

**Learning objective:** The learning objective of the course is, through theoretical lessons and hands-on sessions, to provide participants with an in-depth knowledge of Doppler physics, how to improve settings, interpret artefacts and pitfalls. Participants will also be introduced for the clinical use of Doppler in various rheumatic conditions, and for some technical advancement in musculoskeletal ultrasound.

**Participants:** Maximum 36 participants, and a minimum of 30. Registration is open for all interested, but it is recommended that participants have successfully completed at least the EULAR Basic ultrasound course.

**Course fee:** 800 € including three days course, teaching material and meals.

**Accommodation:** Rooms at the AC Bella Sky Hotel can be booked through the hotel at a special rate for 167€ per night up to 30 days before the course.

**Certificate:** Certificate of attendance will be provided by the end of the course.

**Registration and contact:** Organizing Secretary Linda Thomsen by mail:

[linda.jeannette.thomsen@regionh.dk](mailto:linda.jeannette.thomsen@regionh.dk) or phone: +45 3863 3014

**Deadlines:** Registration and payment must be completed before February 1<sup>st</sup> 2018. Cancellation by participants and refund of course fee is not possible after February 1<sup>st</sup>.

**Venue:**

AC Hotel Bella Sky

Center Boulevard 5, 2300 Copenhagen S

**The course is scientifically endorsed by:**

**eular**

fighting rheumatic & musculoskeletal  
diseases together

**Wednesday March 21<sup>st</sup>**

<b>13.30- 14.00</b>	<b>Arrival and registration</b>	All
<b>14.00 – 14.10</b>	<b>Welcome</b>	Uffe Møller Døhn & Lene Terslev
<b>14.10 – 14.30</b>	<b>Opening talk</b>	Mikkel Østergaard
<b>14. 30 - 15.00</b>	<b>Clinical relevance of detecting Doppler in joints</b>	Emilio Filippucci
<b>15.00 – 15.30</b>	<b>Doppler physics and factors with impact on signal</b>	Søren Torp-Pedersen
<b>15.30 – 15.45</b>	<b>Coffee</b>	All
<b>15.45 – 16.15</b>	<b>Doppler settings in joints (PRF, wall filter, frequency, gain, colour priority)</b>	Lene Terslev
<b>16.15 – 17.45</b>	<b>Hands-on (optimizing settings in patients)</b>	All
<b>17.45 – 18.10</b>	<b>Pitfalls in Doppler assessment (anatomy, joint position, external factors)</b>	Ingrid Möller
<b>18.10 – 18.40</b>	<b>Interactive session – Doppler in joints (feedback from workshop)</b>	All
<b>18.40 -19.00</b>	<b>Clinical relevance of optimizing Doppler</b>	Uffe Møller Døhn
<b>20.00</b>	<b>Dinner at the Hotel</b>	All

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**Thursday March 22<sup>nd</sup>**

8.30 – 9.00	Spectral Doppler	Søren Torp-Pedersen
9.00 – 10.00	Hands-on	All
10.00 -10.20	Semi-quantitative measuring of Doppler in arthritis	Hilde Hammer
10.20 – 10.40	Quantitative measuring of Doppler in arthritis (resistive index and pixel fraction)	Lene Terslev
10.40 – 11.00	Coffee	All
11.00 – 13.00	Hands-on (measuring Doppler)	All
13.00 – 14.00	Lunch	All
14.00 – 14.30	Interactive session – scoring (Feedback from workshop)	All
14.30 – 15.00	Normal versus pathological Doppler (cut off)	Esperanza Naredo
15.00 – 16.00	Status: Clinical application of Doppler in 1. RA 2. Spa 3. Gout and CPPD 4. Degenerative conditions	Marcin Szkudlarek Maria-Antonietta d'Agostino Hilde Hammer Annamaria Iagnocco
16.00 - 16.20	Coffee	All
16.20 – 17.00	Doppler artefacts and pitfalls	Søren Torp-Pedersen
17.00 – 17.45	Interactive session - Assessing artefacts and Quiz	All
17.45 – 18.00	Summary	Uffe Møller Døhn & Lene Terslev
19.00	Dinner	All

**Friday March 23<sup>rd</sup>**

8.30 – 9.00	Clinical relevance and optimizing settings in vessels	Andreas Diamantopoulos
9.00 – 9.20	Measuring Doppler in vessels	Uffe Møller Døhn
9.20 – 11.00	Hands-on (vessels)	All
11.00 – 11.20	Coffee	All
11.20 – 12.10	Advanced techniques and clinical application 1. Elastography 2. Needle tracking 3. Image fusion 4. Non-Doppler flow assessment 5. Contrast enhancement 6. 3D ultrasound	Annamaria Iagnocco Juhani Koski Mads Ammitzbøll-Danielsen Uffe Møller Døhn Maria-Antonietta d'Agostino Emilio Filippucci
12.10 -13.00	Lunch	All
13.00 – 14.30	Hands-on Advanced techniques and clinical application	All
14.30 – 14.45	Feedback hands-on	All
14.45 – 15.00	Closing remarks and course evaluation	Uffe Møller Døhn & Lene Terslev

**Teachers:**

*Andreas Diamantopoulos • Annamaria Iagnocco • Emilio Filippucci • Esperanza Naredo • Hilde Berner Hammer • Ingrid Möller • Juhani Koski • Lars Juul • Lene Terslev • Maria-Antonietta d'Agostino • Mads Ammitzbøll • Marcin Szkudlarek • Mikkel Østergaard • Søren Torp-Pedersen • Uffe Møller Døhn*