

Joint ESR/EFSUMB Session at ECR 2018

This year at ECR 2018, the joint ESR/EFSUMB session was **Elastography of Superficial Structures: Where are we now?** The session was moderated by Prof. Paul Sidhu EFSUMB President and Prof. Michel Claudon, Chairman of US working Group and an EFSUMB Past President.

- Thyroid US elastography: indications and limitations Vito Cantisani (Italy)

- Elastography of the breast: when should we assess tumour stiffness? Jonathan Carlsen (Denmark)
- Is there any value in tendon and nerve assessment? Andrea Klauser (Austria)
- Scrotal elastography: hype or real? Michele Bertolotto (Italy)

The session was very well attended and the room was crowded. The stimulating discussions were animated by several questions

on the widespread use of elastography of superficial structures, to understand the strengths and weaknesses of current applications, to be able to appreciate the potential in many fields and to be able to incorporate elastography into clinical practice.

Dr. Cantisani, Chairman of EFSUMB Publication and of Policlinico Umberto I, Univ. Sapienza, US and Diagnostic innovations Unit, provided the personal experience and

an update of the current literature, focusing especially on the already published recommendations by EFSUMB and WFUMB and anticipating the upcoming EFSUMB ones about US elastography thyroid nodule characterization. To date, only few papers have been published to compare the accuracy of strain and shear wave elastographic techniques. Both the techniques seem to be useful in the multiparametric ultrasound evaluation increasing the accuracy in this setting. Some premises have been shown by means of 2–3 and mechanical 3D US-elastography which is postulated to be useful especially for the planning and follow up on mini-invasive treatments.

For breast tumour diagnostics, Dr Carlsen stressed that elastography should be used in combination with B-mode examination. Both strain and shear wave elastography can be used, and it was discussed if strain elastography may be preferable for evaluation of stiff tumours, while shear wave elastography is more reliable in soft tumours. The ways of combining elastography with the BI-RADS classification has been the topic of many articles, and for comparative

evaluations of breast elastography studies, the awareness of the different combinations used is pivotal. Dr Carlsen concluded that both strain and shear wave elastography should mainly be used as an adjunct for assessing probably benign (BIRADS 3) and low-suspicion tumours (BIRADS 4a), where elastography can be used to either upgrade or downgrade tumours.

Despite the increasing number articles in the last years in musculoskeletal diseases, only a limited increase in evidence level is observed. For Achilles tendinopathy, ultrasound elastography increased in evidence level from D to B with an expert indication grade of 3. In addition, the use of ultrasound elastography was scored with evidence level B of and an indication grade of 1 for soft-tissue tumour examination. This is understandable as ultrasound elastography is designed to distinguish tissues with different stiffness and believed that ultrasound elastography for soft-tissue masses and nerve entrapment is a promising technique. We have to acknowledge that most published studies related to ultrasound elastography are pre-clinical or feasibility

studies, currently insufficient to increase the evidence level. However, the progressive implementation of musculoskeletal ultrasound with ultrasound elastography should produce studies with the potential to impact clinical practice. Prof. Klauser (Medical University Innsbruck) concluded, that at the moment elastography impacts on tendon disease with Level 1b, recommendation 1, whereas nerves show a lower level of 2b. Further longitudinal studies in order to verify impact of elastography in musculoskeletal disorders in clinical routine examination is still demanded.

Finally, Prof. Bertolotto from University of Trieste updated the current knowledge on Testis US elastography. He concluded that testicular lesions need a multiparametric assessment, mainly based on colour Doppler US and CEUS, reserving to US elastography an additional role.

The session will be repeated at EUROSON 2018 in Poznan, Poland from 6 to 9 September.