

CRUS Update: The Next Chapter in Canadian Rheumatology Ultrasound

By Maria Bagovich, MD, FRCPC; Abe Chaiton, MD, FRCPC; and Lihi Eder, MD, PhD

We are thrilled to update you all on the recent activities of the Canadian Rheumatology Ultrasound Society (CRUS). Having the opportunity to be part of this dynamic group of rheumatologists has been a career highlight! CRUS promotes musculoskeletal ultrasound (MSUS) research and organizes practical educational courses for rheumatology practitioners from Canada and abroad.

Since 2009, we have seen the group grow and adapt through various challenges using innovation and collaboration as the key to success! CRUS's primary educational activity remains the basic course which teaches the fundamental principles of MSUS to rheumatologists. The course is held annually over two weekends in Toronto and includes didactic and hands-on learning, as well as virtual learning between the in-person sessions, as the learners submit scans to the tutors and receive feedback. Our world completely changed overnight in 2020 with the COVID-19 pandemic. With the help of Dr. Susan Barr (past president), Dr. Shirley Lake (basic course director), and Alyssa Long (project manager), we were able to adapt our basic course to an online platform. To evaluate the effectiveness of teaching, Dr. Shirley Lake has been leading an observational cohort study comparing learning outcomes from our online vs. historical in-person platforms.

Since 2022, our courses have gone back live; rising star Dr. Sahil Koppikar has helped elevate our basic course by assisting Dr. Lake in developing the CRUS basic course level 1 certificate.



CRUS group at basic course in Toronto.

CRUS also organizes an annual advanced course for those who are interested in expanding their knowledge in MSUS beyond basic skills. Our 2023 Ultrasound Guided Cadaveric Procedures course, held in Ottawa, was a success with Dr. Abe Chaiton, Dr. Johannes Roth, Dr. Mo Bardi, and Dr. Alessandra Bruns on Faculty. Ultrasound-guided procedures have been shown to improve the precision of local corticosteroid injections and improve patient satisfaction.

The learning never stops even for CRUS teachers! With her pedagogical prowess, Dr. Sibel Aydin (CRUS director) and Dr. Lihi Eder (CRUS President) organized a teach-the-teachers event in Ottawa (September 2023). Dr. Emilio Filippucci from Italy, a world-class sonographer, shared his approach to teaching MSUS with current CRUS ultrasound tutors. One of the barriers to expanding the use of MSUS in Canada is the lack of tutors in many rheumatology programs. CRUS aims to train more rheumatologists who can serve as tutors across the country.

Another effort to improve education is being led by Dr. Samar Aboulenain. She is leading an educational research study using evidence-based cognitive load theory to optimize the MSUS CRUS learning experience (Scanning Flashcards Study).

One of the recognized gaps in the field of MSUS teaching is the lack of a standardized curriculum for ultrasound teaching for residents. Dr. Maria Powell, our resident representative extraordinaire, led a project that



Dr. Mo Bardi and Dr. Lihi Eder teaching.



CRUS executive and basic course faculty social.

involved many CRUS expert sonographers, resulting in Canada's first-ever consensus recommendations on MSUS training. Dr. Powell's project was presented in a plenary session at the 2023 ACR meeting in San Diego.

As you can see, research is a big part of CRUS; we honour the spirit of research with our annual CRUS research award. This year, we received six excellent applications from early career rheumatologists to study various aspects of MSUS use in various rheumatic conditions. Our winner is Dr. Thomas Hahn (mentored by Dr. Mo Bardi) whose study will focus on vessel wall thickness and pathology in Giant Cell Arteritis.

Furthermore, an article about CRUS would not be complete without mentioning our current President, Dr. Lihi Eder. Dr. Eder has been recognized globally for her expertise in psoriatic arthritis and as an advocate for rheumatology MSUS. Recently, Dr. Eder has worked with Dr. Sibel Aydin and Dr. Gurjit Kaeley in developing an MSUS scoring system for psoriatic arthritis and validating a handheld MSUS device (Clarius).

We are proud to share our joy of MSUS with a wider audience. The development of our open access CRUS Ultrasonography Guides (eBooks), led by Dr. Johannes Roth, has been a great online success via our Twitter (X) social media account @crussurc. Our free online resources can be accessed at crus-surc.ca/educational-resources/. We thank our CRUS executive members Dr. Bagovich, Dr. Bardi, Dr. Chaiton, Dr. Penney, Dr. Stein,

Dr. Wilson, Dr. Aydin, Dr. Eder, Dr. Koppikar, Dr. Lake, Dr. Powell and Alyssa Benoit for all their contributions. We are grateful to AbbVie as a founding sponsor as well as Novartis, Eli Lilly Canada Inc, UCB Canada, Janssen, Amgen, Centurion, Esaote and General Electric for their ongoing support. As we look forward to our future, we are forever indebted to our founders (and past CRUS Presidents) Dr. Maggie Larché and Dr. Johannes Roth. We wish them both the greatest success in their new roles! Thank you all for sharing with us the joy of rheumatology MSUS! It's free to become a CRUS member, and we would love to have you join us at our next basic/advanced course — visit crus-surc.ca/courses for more information.

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