

University of Calgary Internal Medicine Residency Program Point-of-care Ultrasound (POCUS) and Procedural Program

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The Calgary Internal Medicine Residency Program has an active state-of-the-art point-of-care ultrasound (POCUS) and procedural training program, which includes:

- 1) **Outstanding access to ultrasound machine at all sites:** In EVERY hospital, in EVERY emergency department, and in EVERY Medical Teaching Unit (MTU) ward there is a machine that can be used by internal medicine. Many of our machines are also set up to wirelessly transmit clips and images to a secure server. This helps to enhance educational experiences as your clips can be reviewed by preceptors remotely.
- 2) **Access to world-class faculty:** Our program is run by nationally/internationally known experts with specialized training in ultrasound and education. Five of our faculty have completed formalized one-year fellowship training in POCUS, two of whom also have specialized training in medical education. Our program explicitly takes educational principles into consideration during curriculum design.
- 3) **POCUS selective:** We offer four to six blocks of elective time yearly to select learners. In this elective, you will receive dedicated hands-on POCUS training, supervised scanning, independent scanning, procedural training, and faculty guided image review. This year we were able to offer a range of experiences including pulmonary scanning with respirologists, bowel scanning with gastroenterologists, rotations through different teaching sites in order to maximize your learning with different POCUS experts, a half day in interventional radiology/ultrasound to see procedures performed by radiologists and a half day in the lumbar puncture clinic. Monthly echo rounds with cardiology is also a part of this rotation. Learners are expected to complete 150 scans during their block and attend weekly ultrasound half day where POCUS landmark articles are discussed. Determinate scans may count towards partial requirements for those interested in challenging the limited core certifications from the Canadian Point of Care Ultrasound Society.
- 4) **Didactic and Hands-on Training:** At the beginning of each academic year, we provide a one-hour lecture (with or without hands-on training) during Bootcamp. Throughout the year, three professional sonographers provide a total of 24 hours of direct hands-on scanning training with small groups of residents (3 learner per sonographer) during academic half day. This gives our learners excellent opportunity to hone scanning skills.
- 5) **Procedural Training:** Our program owns a full array of partial-task trainers. Our simulators for central lines, paracentesis, thoracentesis, knee arthrocentesis, and lumbar puncture are ultrasound-compatible. We also own simulators for arterial blood gas sampling and intubation, nasogastric tube insertion and arterial blood gas sampling simulators, which are not ultrasound-compatible. Procedures are currently being taught in our highly rated procedural bootcamps,

which are held annually. Learners also have the opportunity to learn and perform supervised bedside procedures through the POCUS elective described above, as well as in clinical rotations.

- 6) **Super users:** we offer a 20 hour curriculum for select super users (n=5-6) yearly through academic half day where super users will receive dedicated ultrasound training through hands-on, didactics and faculty-guided image review. Once certified, these super users are then expected to help teach their peers (and spread the good news that is ultrasound).
- 7) **Online Resources:** We host the national open access website (www.cimus.ca). One of our more popular videos has been viewed over 18,000 times since its upload in 2016: <https://www.youtube.com/watch?v=sz7M9ZahEUY&t=33s>

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