

Goals & Objectives CanMeds

Rotation: VGH Ultrasound

899 West 12th Ave , Vancouver BC V5Z 1M9

Rotation Supervisor: Dr. Jean Buckley, alternate Dr. Silvia Chang

Level: PGY 2 - 5

During the course of the four years, residents will receive a total of six months of ultrasound training and are expected to develop graded responsibility as they rise from first to fourth year level. Guidance will be given to each resident at the commencement of a rotation, an interim evaluation will occur halfway through the rotation, and a final evaluation will be given at the end of each rotation. Each final evaluation will be submitted to the residency training program director.

All residents are expected to arrive in the department by 0800 hours and stay until the conclusion of the working day, approximately 1730 hours. Ongoing teaching and interaction with staff occurs throughout the day. If a resident is absent from his/her ultrasound rotation for any reason, he/she should give ample warning to Dr. Buckley (US Section Head) or Dr. Chang. Vacation and conference requests must be booked with Dr. Buckley or Dr. Chang in advance, at least two weeks prior to any planned absence from the rotation. A general US textbook (Diagnostic Ultrasound by Carol Rumack, Stephanie Wilson, J. William Charboneau) is available as a reference and must not be taken out of the reading room.

Medical Expert:

- Knowledge of US physics, artifacts and understanding imaging protocols, including use of different scanning probes and Doppler
- Knowledge of multi-planar anatomy
- Knowledge of clinical radiology and pathology
- Detects findings and interprets findings into an appropriate differential diagnosis
- Ability to summarize case, offer recommendations, understands treatment and clinical implications
- Knowledge of the procedure: indications, complications, appropriate alternatives, use of conscious sedation, post procedure care
- Basic technical ability: patient positioning, sterile technique, local anaesthetic, simple procedures
- Advanced technical ability: ability to perform more difficult procedures

More specifically:

PGY2(1st year resident) first month rotation: Should focus primarily on scanning with close supervision by a technologist and by the end of the month should be comfortable scanning most abdomen or pelvis cases, and should recognize normal anatomy. First-year residents will be assigned on a day-to-day basis to work with an individual technologist and will rotate through the various ultrasound rooms during the first month in the department. Each afternoon, the resident is to show the staff radiologist the images that he/she scanned that day so that he/she can get feedback on how to enhance their scanning technique.

PGY2 (1st year resident) second month: Will be introduced to common pathology including gallstones, biliary dilatation, hydronephrosis, intra-uterine and ectopic gestation. Exposed to Doppler screening for DVT and endovaginal scanning, although first years are expected to seek senior advice/supervision when performing these scans.

PGY3 (2nd year resident) and PGY4 (3rd year resident): Resident rotations in ultrasound will again emphasize hands-on ultrasound scanning with less technologist supervision. These residents should be comfortable with all aspects of normal/abnormal abdominal and pelvic scans including EV scans, DVT studies and assessment of renal/liver transplants. At this level, the resident will be given dedicated vascular ultrasound training to include carotid duplex, peripheral arterial and peripheral venous assessment, assessment of grafts and shunts. These residents will also be instructed in small parts imaging including thyroid, breast, scrotum, etc. PGY3 and PGY4 residents will be given exposure to intervention including aspiration and drainage of free fluid, fine needle aspiration biopsy and core biopsy as appropriate. Second/third year residents are expected to review all cases with a fellow or staff person in the department.

PGY5: Senior residents are expected to function in the capacity of a fellow/junior staff. At the initiation of the rotation, the resident should identify areas of specific weakness and/or interest and the training will help address these issues. Senior residents are expected to check cases, to review cases with staff, to consult with referring physicians, to initiate appropriate intervention (under supervision), and to report examinations as appropriate.

Seniors will be instructed and encouraged to perform various interventional procedures under ultrasound guidance, will be given further exposure to carotid duplex, and will be instructed on prostate ultrasound and biopsy technique.

Communicator:

- Establish therapeutic relationship with patients/families
- Obtain and synthesize relevant history from patients/families/communities
- Listen effectively
- Communicates effectively with patients, families and other health professionals.
- Demonstrate appropriate and timely communication of findings to referring physicians
- Able to obtain appropriate informed consent for US guided procedures
- Give accurate, concise, complete reports

Collaborator

- Respects, recognizes the roles of, and consult effectively with the healthcare team, including nurses and technologists
- Contribute effectively to other interdisciplinary team activities

LEADER ROLE:

- Implement processes to ensure personal practice improvement
- Set priorities and manage time to integrate practice and personal life
- Apply the science of quality improvement (ie discussion of potential audit) to contribute to improving systems of patient care
- Contribute to a culture that promotes patient safety, including recognition of patient safety issues, and utilization of health informatics to improve patient safety
- Demonstrate leadership skills to enhance health care

Health Advocate

- Understands benefits and limitations/risks related to ultrasound and ultrasound guided procedures
- Understands the appropriate use of ultrasound and rationalization of use of imaging resources

Scholar

- Effectively teaches others, including residents, medical students, patients and other health professionals
- Demonstrates continuous self-directed learning (reads around cases and topics)
- Demonstrates evidence based medical approach and critical appraisal with regards to radiology literature
- Develop, implement and monitor a personal continuing education strategy
- Contribute to development of new knowledge

Professional

- Deliver highest quality care with integrity, honesty and compassion
- Exhibit appropriate personal and interpersonal professional behaviours
- Practice medicine ethically consistent with obligations of a physician
- Demonstrates insight with regards to own limitations, strength and weaknesses, asks for help when appropriate
- Acceptance of constructive criticism

Reading List:

Recommended Textbooks:

1. Diagnostic Ultrasound. by Carol Rumack, Stephanie Wilson, J. William Charboneau. 3rd edition is in the reading room, note a new 4th edition has just come out (Dec 2010)
2. Ultrasound: The Requisites / Edition 2 by [Barbara Hertzberg](#), [Alfred B. Kurtz](#), [Barbara S. Hertzberg](#).

Reading around cases that the resident encounters during his/her rotation is mandatory. This can be done with Stat DX and the internet can provide many review articles (eg Radiographics).