

Ultrasound Rotation Goals & Objectives

St. Paul's Hospital

Level: PGY 2 – 5

Rotation Supervisor: Jacquie Brown

During the four year residency program in diagnostic radiology, residents will receive a total of six months of training in ultrasound and are expected to develop graded responsibility as they progress through the training years. Guidance will be given to each resident at the commencement of the rotation, an interim evaluation will occur halfway through the rotation, and a final evaluation will be given at the rotation's end. Each final evaluation will be submitted to the residency training program director.

Major programs in SPH include cardiovascular, gastrointestinal, chest services, renal and infectious disease. SPH is also the major center in Western Canada for the treatment of HIV patients. A busy obstetrical unit is also part of the care delivered by SPH with over 2,000 deliveries annually. Thus, residents in their US rotation will be exposed to a wide range of pathologies and will experience a combination of both in and out patient imaging. As we have a dedicated MSK rotation that includes the opportunity to learn MSK Ultrasound, exposure to this area is more limited on this rotation and includes primarily shoulder ultrasound.

There is also ample opportunity to develop expertise in ultrasound guided biopsies including thyroid, liver and renal biopsies.

Residents are expected to review cases independently, consolidate findings, formulate a differential diagnosis and management plan prior to discussing the case with the staff radiologist.

Objectives:

Medical Expert

Develops knowledge of US physics including artifacts, scanning protocols and Doppler, and principles of US image acquisition.

Develops ability to critically appraise a sonographic image/study suggesting changes in technical parameters which may enhance image quality or diagnostic utility

Develops knowledge of abdominal and pelvic pathologies seen in clinical practice, as well as cross sectional anatomy.

Develops knowledge of obstetrical ultrasound through the three trimesters.

Develops the ability to integrate findings to form a clinically useful differential diagnosis and management plan.

Understands the implications that imaging findings have on treatment and management decisions.

Shows competence in manual and procedural skills.

Given the operator dependent nature of ultrasound, residents in their first two months are expected to spend the majority of their time learning to scan efficiently and effectively. They will be assigned on a day to day basis to work with an individual technologist and will rotate through the various ultrasound rooms concentrating on abdominal, pelvic including endovaginal assessment as well as DVT examinations. First trimester obstetrical scanning will also be experienced.

In their subsequent rotations, hands-on ultrasound scanning will again be emphasized.

Exposure to pathology will be broadened to include more complex vascular cases including carotid and graft imaging as well as small parts imaging to include the thyroid, scrotum, and prostate gland. Residents at this time will also gain experience in second and third trimester obstetrical ultrasound.

Communicator

Dictates accurate, concise and useful reports in an expedient manner following discussion of the case with the staff radiologist.

Communicates all time sensitive important findings to the clinical team/ordering physician.

Communicates effectively with patients, families, and other health professionals.

Obtains informed consent from patients and their families in an appropriate fashion.

Collaborator

Consults effectively with the clinical team including physicians, nurses, technologists and clerical support staff. Fulfills consultant role (for level of training)

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

Scholar

Develops and monitors a personal continuing education strategy, including teaching other residents and students.

Shows competence in the evaluation of medical literature.

Professional

Demonstrates integrity, honesty and compassion in both personal and professional behaviours.

Demonstrates insight into one's personal strengths and weaknesses.

Demonstration of ethical behaviour, satisfactory attendance, punctuality, level of responsibility and reliability expected of a radiology resident.

Reading List:

Diagnostic Ultrasound by Carol Rumack, Stephanie Wilson and J. William Charboneau.

3rd edition in US reading room. 4th edition just released.

Reading around cases encountered during daily practice is mandatory.