

**Rotation: VGH MRI Abdo**  
**Vancouver General Hospital**  
**899 W 12th Avenue, Vancouver, BC V5Z 1M9**

**Total: # Periods/modules/Rotations**

**Level: PGY 2-5**

**Rotation Supervisor: Dr. Silvia Chang, alternate Dr. Alison Harris**

The abdominal MRI rotation at VGH accommodates PGY 3-5 residents and residents are expected to develop graded responsibility as they rise from second 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 reached by consensus will be submitted to the residency training program director.

Read out with staff usually occurs two days a week. The residents are also welcome to attend abdominal MRI Rounds on Wednesday at 12-1 pm (when Grand Rounds is not occurring) in the abdominal CT/MR reading room and attend MRI Prostate Rounds which are usually held once a month on the 3<sup>rd</sup> Tues from 5-6 pm in the US reading room.

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 this rotation for any reason, he/she should give ample warning to the Radiologist scheduled for that day. Vacation and conference requests must be booked with Dr. Chang in advance, at least two weeks prior to any planned absence from the rotation.

### **Medical Expert**

Knowledge of MR physics including:

- Understanding and being able to apply basic MR physics principles of spin echo, gradient echo (in and out of phase, 2D and 3D) and DWI sequences
- Understand factors affecting signal-to-noise ratio, spatial resolution and imaging time
- Recognize common MRI artifacts and be able to reduce (or eliminate) them
- Understand ancillary techniques such as fat suppression, spoiler gradients, saturation bands, and flow compensation
- Knowledge of MR safety
  - risks of contrast administration
- Knowledge of screening/contraindications, foreign implanted bodies
- Knowledge of cross sectional MR and multi-planar anatomy
- Knowledge of clinical radiology and pathology
- Acquire diagnostic skills in defining pathologic processes as depicted with MR and to correlate these findings with those of other modalities
- Detects findings and interprets findings into an appropriate differential diagnosis
- Ability to summarize case, offer recommendations, understands treatment and clinical implications

**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
- 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**

- Manages daily workflow in the department, including prioritization, protocoling and triage of cases, physician consultation and supervising of day-to-day operation
- Performs/interprets appropriate volume of case for level of training
- Reports are dictated and signed in a timely manner
- Utilize resources effectively to balance patient care, learning needs, and outside activities
- Allocate finite health care resources wisely
- Work effectively and efficiently in a health care organization
- Utilize information technology to optimize patient care, life-long learning and other activities

**Health Advocate**

- Understands benefits and limitations/risks related to MR imaging and MRI contrast agents.
- Understands the appropriate use of MR 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 Textbook

1. Abdominal-Pelvic MRI. By Richard Semelka. 4th edition. 2016.

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 (e.g., Radiographics).

**Other resources:**

A bank of MRI Prostate Cases is available for the residents to review. These cases come with answers including fusion biopsy results, teaching points and tips to avoid pitfalls.