Goals & Objectives CanMeds
VGH Neuroradiology MRI
VGH
899 West 12th Ave., Vancouver, BC V5Z 1M9

Total: # *Periods/modules/Rotations*

Level: PGY 2 - 5

Rotation Supervisor: Jason Shewchuk

Residents receive a minimum of three months training in neuroradiology during their residency. Those with an interest in this area, and particularly those who expect to make use of head and spine imaging during their practice, are encouraged to obtain additional training.

Residents will be assigned specific responsibilities on a monthly basis, and are expected to assume graded responsibility as they progress from PGY2 – PGY5. 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 end of each rotation. Each final evaluation will be submitted to the residency training program director.

During the first two years, the emphasis is on basic head and spine MRI interpretation, lumbar punctures and myelography. In senior years, residents will be more involved with on-line supervision of more complex MRI studies, as well as having increased responsibility for CT myelography. Residents are also expected to gain experience protocolling requisitions. Workdays are 0800 to 1700 hours, Monday to Friday. All inpatients MR scans until 1700h must be done before the day's work is complete. As time permits, residents are expected to help out with CT readout and ensure all inpatient CT studies done by 1700h are read out by the end of the work day.

Residents are required to submit two teaching files by the end of the rotation. These are to be in the format of a short powerpoint presentation to be shown during Friday morning Neuroradiology Interesting Case Rounds (0800-0900) in the Neuroradiology reading room.

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. Shewchuk in advance, at least two weeks prior to any planned absence from the rotation.

MEDICAL EXPERT

1. Basic Science

- to understand cross sectional and multi-planar anatomy for neuroradiology

- to understand MRI physics, technical parameters of image acquisition, artifacts

2. Diagnostic MRI

- to understand clinical radiology and pathology

- to understand imaging protocols, including use of contrast agents

- to detect and interpret findings into an appropriate differential diagnosis

- to summarize a case, offer recommendations, and understand treatment and clinical implications

3. Procedures

- to understand procedures: indications, complications, appropriate alternatives, use of conscious sedation, post procedure care

- to demonstrate basic technical ability: patient positioning, sterile technique, local anaesthetic, simple procedures

- to demonstrate advanced technical ability: performing more difficult procedures

COMMUNICATOR

- to communicate effectively with patients, families and other health professionals.

- to demonstrate appropriate and timely communication of findings to referring physicians

- to obtain appropriate informed consent when applicable

- to generate accurate, concise, complete reports

COLLABORATOR

- to respect, recognize the roles of, and effectively interact with the healthcare team, including nurses and technologists

- to fulfill 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

HEALTH ADVOCATE

- to understand benefits and risks related to imaging studies

- to understand the appropriate use of imaging studies and rationalization of use of imaging resources

SCHOLAR

- to effectively teach others, including residents, medical students and patients

- to demonstrate continuous self-directed learning (read around cases and topics)

- to demonstrate evidence-based medical approach and critical appraisal with regards to radiology literature

PROFESSIONAL

- to exhibit professional behaviour, displaying honesty, integrity and respect

- to exhibit ethical behaviour, sensitivity to gender/culture diversity

- to demonstrate satisfactory attendance and punctuality

- to have a good work ethic, enthusiasm, motivation

- to be reliable, responsible and conscientious

- to demonstrate insight with regards to own limitations, strength and weaknesses, and to ask for help when appropriate

- to accept constructive criticism

Teaching and Instruction

Teaching will take place in the following forms:

1. Daily review of all films reported with a staff radiologist, neuroradiologist or fellow;

2. Attendance at weekly Neuroscience Grand Rounds and Neurosurgery-Pathology correlative rounds on Wednesday morning;

3. Preparation and participation in weekly neuroradiology resident noon rounds at VGH, (usually held in the Radiology Seminar room); attendance of and participation in Interesting Neuro Cases Rounds (8am Friday mornings in the Neuro Reporting Room)

4. Residents are expected to attend all Department of Radiology Visiting Professor seminars and lectures, as well as special courses offered in specific years. Neuroradiology Visiting Professors alternate with other specialties.

Educational Facilities: Neuroradiology Library – Room 885A

Text Library

A collection of up-to-date textbooks is available in the Neuroradiology Library. These books may be taken out overnight but they must be brought back during the day as they are often used as references. Replacing them in the appropriate section (Brain, Spine, Anatomy, etc) is required. Residents wishing to use a book for days/weeks are encouraged to obtain their copy from the Biomedical or Woodward libraries. All textbooks removed from the Neuroradiology Library require sign-out. The sign-out sheet will be with Dr. Jason Shewchuk. Any textbook not returned to the Library will be considered property of the last resident to have signed it out, with appropriate charges paid back to the Division of

Neuroradiology by the resident.

Film Library

A large collection of teaching films is available. In addition, a database of interesting cases is maintained on the neuroradiology computer. A teaching file has been started and two neuroradiology lectures for medical students are on the Radiology Web Site. Radiology Grand Rounds are also available via the Web. Videos of 'core' lectures by well-known radiologists are also available, on most neuroradiology subjects. Residents can gain access to the Library after hours by asking hospital security to unlock the door (G 885.) Hospital photo ID is required.

Skull and Spine Models

A collection of models of the skull, petrous bones, and spine is also available in the Library. These models are an excellent learning tool, when viewed along with the x-rays in puzzling cases. These models are to not leave the Library except when taken out under the supervision of one of the Neuroradiology Staff.

N.B.: Please remember that no texts, models or teaching file films are to be left lying in the Department (especially in the reporting areas) after hours. All books and models should be returned to the Library at the end of the day.

Reading List:

A great deal of information is now available on the internet and a number of review articles are suggested on the Neuroradiology Division's website and UBC residents' website. Text books, however, still provide core reading for the radiology residents.

New editions of some of these texts are available in the hospital or UBC libraries. New textbooks are published every year. Many new textbooks are available on CD-ROM as well as in print. New books tend to concentrate on CT and MRI. Consult the preferences of other radiology residents to find the "one" that best meets your needs for the basic text, before investing in a number of textbooks.

For the first neuroradiology rotation, two core texts are recommended:

The Neuroradiology chapter in **Brant and Helms Fundamentals of Diagnostic Radiology.**

Neuroradiology: The Requisites. Yousem, Zimmerman and Grossman.

Additional text books below may be useful and are recommended as reading or for reference after the first rotation.

Castillo, Mauricio, **Neuroradiology Companion**, Lippincott Williams & Wilkins, **3rd Ed 2006**.

The **Diagnostic Imaging** series, by Drs Anne Osborn, Rick Hansberger and colleagues is a useful reference, with tomes on:

- **Anatomy (2006)**
- **Brain (2004)**

- **Spine (2005)**
- **Head and Neck (2004)** and others on other systems as well