

Goals & Objectives CanMeds

VGH Emergency Rotation

899 West 12th Ave., Vancouver, BC V5Z 1M9

Total: 4 weeks

Level: PGY 2 - 5

Rotation Supervisor: Dr. Luck Louis

Residents are required to submit two teaching files by the end of the rotation.

Medical Expert:

- *Demonstrate diagnostic and therapeutic skills for ethical and effective patient care*
- *Access and apply relevant information to clinical practice*
- *Demonstrate effective consultation services with respect to patient care, education and legal opinions*

A) Musculoskeletal System / Head, Neck and Spine Trauma

1. Recognition of fractures, understand the role of other imaging techniques in the diagnostic workup of trauma.
2. Classification of fractures.
3. Identification of ancillary soft tissue findings in trauma, i.e., obliteration of fat planes (scaphoid fat plane, pronator quadratus fat plane), joint effusions.
4. Know what complications to look for with certain types of trauma and the radiographic techniques needed to demonstrate them, e.g. lipohearthrosis in knee trauma which is best demonstrated with a horizontal beam lateral view as is an air fluid level within the maxillary sinus.
5. Understand the concept of stable versus unstable fractures, particularly in relation to spine trauma, i.e. the three column concept in spine trauma.
6. Being able to distinguish acute from chronic traumatic lesions, i.e. chronic traumatic lesions have no overlying soft tissue swelling and have well corticated ossific fragments adjacent to the parent bone.
7. Be familiar with fractures having well known eponyms, i.e. Segond fractures, Bennett's, Jones', Colles', Barton's, hangman's, Jefferson's and clay-shoveller's fractures.
8. Being able to appropriately interpret a cervical spine film in the trauma setting. What it means to have a complete cervical spinal examination with reference to trauma. Being able to understand the concept of clearing a cervical spine series performed in evaluating trauma to the C spine. Where

deemed appropriate, utilizing computed tomography in clearing a C spine trauma and understanding the role of MRI in spine trauma.

B) Chest and Abdomen

1. Understand the role of chest radiography and CT in suspected acute trauma to the thorax, i.e. thoracic aortic injuries.
2. Differentiate between common incidental findings from those of acute pathology (e.g. pheboliths vs. calculi, diaphragmatic eventration vs. tear).
3. Demonstrate adequate competency in diagnosing common acute thoracic and abdominal conditions by x-ray and by CT (e.g. pneumothorax, pneumomediastinum, acute pulmonary edema, bowel obstruction, bowel ischemia, free air, etc.)

C) F.A.S.T. and Urgent Non-Trauma Ultrasound Examinations

F.A.S.T. (focused abdominal sonogram of trauma) - the resident during this rotation should demonstrate understanding of when performing a F.A.S.T. is clinically necessary .

Communicator:

- *establish therapeutic relationship with patients/families*
- *obtain and synthesize relevant history from patients/families/communities*
- *listen effectively*
- *discuss appropriate information with patients/families and the health care team*

The resident should prioritize cases by clinical need and promptly search out the referring ER physician to verbally communicate any serious, unexpected or unusual findings. This should be accomplished in addition to the standard dictated typed report. On the PACS, the emergency physicians document their findings for plain film exams. These findings should be recorded as part of the final report. If there is discrepancy between the radiologist and the emergency physician's interpretations, then these findings need to be verbally communicated to the emergency physician.

Collaborator

- *consult effectively with other physicians and health care professionals*
- *contribute effectively to other interdisciplinary team activities*

If a supplementary radiographic technique is necessary for further evaluation, this should be expeditiously organized between the radiologist and the technologist before issuing a final report. If another examination needs to be performed, i.e., a CT examination of the hip to definitively exclude a hip fracture, then this should be verbally communicated to the emergency physician that this is the radiologist's recommendation and if then indicated clinically, this should be triaged appropriately by the emergency radiology resident.

Be available and helpful to clinicians who seek your opinion or who are in need of clarification of a report. Establish effective relationships with the emergency staff physicians. When there is a clinical/radiological discrepancy, offer suggestions on how best to resolve these issues. There should be no hesitation in contacting the staff Emergency radiologist in regards to any of the radiologic findings when deemed appropriate, or in seeking advice.

D) F.A.S.T. and Urgent Non-Trauma Ultrasound Examinations

The Resident will help to triage, organize and perform ultrasound exams initiated by Emergency Medicine and other referring services, as required.

E) TRAUMA TEAM ACTIVATION

The emergency radiology resident will attend traumas in person (in the Trauma Bay) when the Trauma Team has been activated. The radiology resident should be available in helping and assisting the Trauma Team leader in interpreting the initial bedside x-rays requested and, where deemed appropriate, initiate further imaging investigations. The emergency radiology resident should not hesitate to contact the emergency radiology staff to seek advice or assistance.

Leader

- *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

- *identify the important determinants of health affecting patients*
- *contribute effectively to improved health of patients and communities*
- *recognize and respond to those issues where advocacy is appropriate*

Scholar

- *develop, implement and monitor a personal continuing education strategy*
- *critically appraise sources of medical information*
- *facilitate learning of patients, housestaff/students and other health professionals*
- *contribute to development of new knowledge*

Professional

- *deliver highest quality care with integrity, honesty and compassion*
- *exhibit appropriate personal and interpersonal professional behaviours*
- *practise medicine ethically consistent with obligations of a physician*

Reading List:

RECOMMENDED READING (for Reference Only):

Rogers L. *Radiology of Skeletal Trauma*

Harris and Mirvis. *Radiology of Acute Cervical Spine Trauma*

Stern. *Trauma Radiology Companion*

Greenspan. *Orthopedic Radiology: A Practical Approach*

Weir & Abrahams. *An Imaging Atlas of Human Anatomy*

Harris. *Emergency Radiology*