

## Goals & Objectives CanMeds

### Rotation: Angiography

VGH

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

**Total:** Junior/Senior Residents

**Rotation Supervisor:** Dr. Gerald Legiehn

This rotation offers the opportunity for the resident to participate in all general angiography procedures in the Department of Radiology at VGH. The interventional radiology fellow and staff person will supervise resident activities. When starting out the residents will not be expected to do any interventional procedures but as they gain experience, they may assist the angiographer with these procedures. The number of cases to be done by residents will depend upon their level of ability and experience, as well as the caseload on that particular day. Teaching and supervision in general angiography is intense; the staffperson will always be available when the resident performs and dictates cases.

Most of what the resident will learn in general angiography will be from his/her experience in performing the procedures, supplemented by teaching and reading. If a resident wishes to take a second two months in general angiography in her/his senior year (and this is recommended for those who will be doing angiography in their radiology careers), they will then have the opportunity of doing basic angioplasty, e.g., iliac and femoral angioplasty, on their own.

#### **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*

By the end of two months the resident should have sound knowledge of basic techniques for performing peripheral angiography and aortography, renal angiography and visceral (abdominal) angiography, venography, and CVP line placement including Hickman lines.

The resident should also have a basic background in interventional angiography including angioplasty, stenting, embolization procedures, TIPS and IVC filters.

If the resident so chooses, by the end of a second two-month rotation, he/she will also gain experience in interventional angiography.

The resident will do all peripheral venograms.

After hours callback is optional. Emergency arteriography is often the most interesting aspect of angiography. If the resident is particularly interested, she/he is welcome to participate in and do some of these cases. If the resident chooses to do a second two months in angiography (and she/he should do so if they plan on performing angiography in their radiology careers), they should participate in the angiography callback. This will allow them to gain some experience and expertise in performing emergency procedures such as therapeutic embolization of trauma cases, GI bleeds, etc.

**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 doing a rotation in general angiography is to see all patients on who she/he is performing angiography beforehand to explain the procedure to them.

The resident will report all angiograms that they performed under supervision of the attending radiologist.

The resident is to record all necessary data on patients in the angiography 'black book'.

**Collaborator**

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

In regard to interventional cases (transluminal angioplasty and embolization procedures): As the resident gains experience in doing angiography, she/he will begin assisting the attending radiologist or interventional fellow in doing interventional procedures. The resident may do basic angioplasty on his/her own (at the discretion of the attending radiologist) during a second rotation in angiography. The resident is encouraged to perform CVC and Hickman Line placements as well.

**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**

- *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*

Angiography teaching file: A minimum of two cases per week are to be entered. All cases are to be checked with Dr. Legiehn

### **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:**

DYER, RAY. Handbook of Basic Vascular and Interventional Radiology. Churchill Livingstone 1993. Excellent 'quick and dirty' introductory textbook. Can be read in less than a week. Is available to each

resident during their rotation from Dr Morris. Please return at the end of rotation as only one copy available.

WOJTOWYCZ, MYRON. Handbook of Interventional Radiology and Angiography, Second Edition. Mosby 1995. Another good short basic text. More detail than Dyer but fewer illustrations. Can be borrowed from Dr Morris.

KADIR S. Diagnostic Angiography. WB Saunders Co., 1986

A little dated but contains lots of information on angio findings, disease processes. Technique section dated.

VALJI, KARIM. Vascular & Interventional Radiology, WB Saunders Co., 1998

ABRAMS H. Angiography, Third Edition, 1983.

This is the major reference textbook for vascular radiology. It is strictly reference only.

KANDARPA KRISHNA. Handbook of Cardiovascular and Interventional Radiologic Procedures. Little, Brown and Co., (new edition every two years).

Pocketsize book for quick reference on various facets of interventional radiology. Useful for those interested in doing more than just basic angiography.