

Oncologic Imaging Rotation at the BC Cancer Agency

Level: PGY 4, 5

Rotation Supervisors:

Diagnostic Imaging: Dr. Charlotte Yong-Hing

Functional Imaging: Dr. Pete Tonseth

Introduction

The Oncologic Imaging rotation will be divided between the Diagnostic Imaging (DI) and Functional Imaging (FI) departments at the BCCA. The rotation objectives are categorized in accordance with the CanMEDS competency framework.

General Objectives:

1. Demonstrate an understanding of the utility of specific medical imaging examinations and their appropriate use in oncology, including CT, MRI and PET/CT
2. Supervise and perform these imaging studies to the required level of competence for obtaining certification by the Royal College
3. Know where to find references to the specific indications for PET/CT at BCCA
4. Obtain a general understanding of oncologic and non-oncologic indications for the use of PET/CT
5. Perform US, CT and Fluoroscopy-guided biopsies and procedures with supervision

Specific Objectives:

Medical Expert:

1. Demonstrate knowledge of anatomy and anatomic terms used in medical imaging related to oncology and radiation oncology
2. Demonstrate knowledge of clinical radiology and pathology with regards to the diagnosis and follow-up of malignancy
3. Demonstrate knowledge of tumour staging and its potential relevance to treatment
4. Integrate oncologic findings across multiple modalities
5. Understand the relevant imaging changes during medical and radiation oncologic therapies
6. Understand the CT and MRI protocols chosen for oncologic imaging
7. Demonstrate a general understanding of the physiology behind 18F-FDG PET/CT
8. Demonstrate knowledge of appropriate indications for PET/CT

Communicator:

1. Describe the elements of a good oncologic medical imaging report
2. Succinctly describe specific findings using appropriate anatomic terminology
3. Apply a systematic style of reporting
4. Understand the benefits of standardized medical imaging reports
5. Dictate and verify reports in a timely fashion
6. Communicate with referring clinicians when urgent findings are seen
7. When appropriate, dictate a PET/CT report and communicate findings to the referring physician
8. Obtain informed consent

Collaborator:

1. Actively participate in multi-disciplinary tumour board conferences
2. Consult effectively with other physicians and health care professionals
3. Function as a member of a multidisciplinary health care team
4. Consult with Radiation Oncology for radiation planning
5. Discuss selected patients and their PET/CT findings with the clinical team

LEADER ROLE:

1. Implement processes to ensure personal practice improvement
2. Set priorities and manage time to integrate practice and personal life
3. Apply the science of quality improvement (ie discussion of potential audit) to contribute to improving
4. systems of patient care
5. Contribute to a culture that promotes patient safety, including recognition of patient safety issues, and utilization of health informatics to improve patient safety
6. Demonstrate leadership skills to enhance health care

Health Advocate:

1. Explain the benefits and risks of investigations including population screening
2. List major risk factors for specific malignancies
3. Educate and advise on the use and misuse of MRI and CT
4. Identify a specific scenario where education regarding PET/CT should be delivered to foster appropriate use
5. List 3 groups who could benefit from knowledge of the utility of PET/CT

Scholar:

1. Competence in evaluation of the medical literature
2. Provide one current article on PET/CT for discussion
3. Provide one current article pertinent to general oncology imaging for discussion or prepare one interesting case for presentation to the group

Professional:

1. Arrive on time and ready to learn
2. Have a positive attitude and ask many questions
3. Punctuality, attendance, reliability and respect in the workplace
4. Able to accurately assess one's own performance, strengths, and weaknesses

Resident Duties

On the first day of the block the Resident should arrive in the Diagnostic Imaging (DI) Department on the 3rd Floor of the BCCA at 8:00 am and meet with Dr. Charlotte Yong-Hing or designate. An informal interim evaluation and the end of rotation ITER should be scheduled at this time. Residents will receive an orientation organized by the DI Secretary, Sandy Teng, on the first day of the block which will include training with the CAIS and iSite computer systems.

The resident should fill out the calendar given by Sandy listing the days they will be in the department.

Residents will spend Monday-Wednesday and Friday in DI and will be working with the body Radiologists

Oncologic Imaging Rotation

The Resident should follow the suggested weekly schedule, which may be modified pending the Resident's call schedule/vacation etc:

Monday	Tuesday	Wednesday	Thursday	Friday
Read CT cases	Read MRI cases	Read CT cases	PET/CT	Read MRI cases
SARCOMA Conf 8:00 - 9:30 AM	GI Conf 8:00 - 9:30 AM	GU Conf 8:00 - 9:00 AM		NEURO Conf 8:00 - 9:00 AM
HNC Conf 11:00 - 12:00 PM	LYMPHOMA Conf 10:00 - 12:00 PM	LUNG Conf 4:00 - 5:00 PM		
	GYNE Conf 4:30 - 5:30 PM			

Reading Cases:

- The Resident will meet with the assigned staff Radiologist in the morning to determine how the cases are divided and which procedures they will be performing.
- The Resident will review cases alone then with the staff Radiologist assigned to the case prior to reporting, preferably on the day the study was performed.

- The resident should find the paper requisitions for all cases they dictate and give the requisitions directly to the stenographers at the end of the day.
- The resident can work off the list on CAIS or iSite but should not dictate without the paper requisitions.
- Cases can't be "reserved" on iSite so there should be clear communication with the radiologists about who is responsible for which cases.
- The Resident should avoid clinical trial cases with TMF forms.
- In particular, the resident should review head and neck with Dr. Martin as often as possible.
- The resident should let the stenographers know when their last day of work is with a few days advance notice. The resident is responsible for signing all their reports at the end of the rotation.

Procedures:

- The Resident should participate in/perform US and Fluoro- guided procedures as per the daily schedule on CAIS.
- The Resident should participate in/perform the 10:00 CT guided biopsy, if applicable.

Conferences:

- In the first week the Resident is expected to attend but not necessarily prepare cases for conferences.
- In subsequent weeks the Resident is expected to prepare and present conference cases with the assistance of the assigned Radiologist.
- At the beginning of the week the resident should approach/email the radiologist assigned to each conference to discuss case preparation/presentation.
- In particular, the resident should review the head and neck and neuro conference cases with Dr. Martin and attend the HNC and Neuro conferences each week.

PET/CT:

- Residents will spend Thursdays in the Functional Imaging (FI) department for PET/CT.

Radiation Oncology:

- The Resident may spend part of one afternoon in Radiation Oncology learning about radiation planning and contouring.

Useful CAIS Resource Codes

CT list: VACT

MRI list: VAMRI

US lists (including US-guided procedures): VAUS and VAUS2

PET/CT lists: VAPET1 and VAPET2

Useful Phone Numbers

Service Desk (IT): 604-675-4299

Chris Lam: 604-877-6000 x 672141

Fellow/Resident room: 604-877-6000 x672760

DI Secretary (Sandy Teng):604-877-6000 x672261

Dictation system x676202

Computer Access

Our in-house IT/PACS support person is Chris Lam (ext 672141). Chris can help you with these steps on your first day.

Prior your arrival, DI secretary, Sandy Teng will have sent you instructions regarding your login ids and passwords. You will have the following:

1. Login ID to PHSA domain firstname.lastname. First time login password will be assigned by IT and e-mailed to you from Sandy

If you already have an ID for access to BC Children's & Women's, Sandy will ask for BCCA application to be added to your profile.

If you have not used your login ID for many months or have forgotten it, please call Service desk to have it reset : 604-675-4299, 2

You cannot use your VCHA or other HA login ID.remote web access is allowed if needed

2. PHSA Care Connect access – This is linked to your PHSA login ID and will auto login and authenticate from e-Health viewer icon or within the CAIS imaging application. Please note that each Health Authority is a different login. Sandy will have applied for your access and Chris Lam will show you how to access the imaging.
3. Login ID for Philips IntelliSpace PACS will be assigned on your first day. Chris Lam will help you create filters and display layouts.

4. In case you are not able to login on your first day there is a generic DI login code to PHSA domain.

login ID : difiles1 password :hockey2 - you can use this to review patient chart until your id is sorted out

Clinical and imaging systems you need access to:

1. CAIS (Schedule Inquiry 4). Required for DI and FI departments (for FI also require Action List within Schedule Inquiry 4)

- Each workstation at BCCA stores a user profile, so each first time login on a workstation requires a setup of CAIS icons and printer assignment. Chris lam will demonstrate for you.

Instructions: Windows Start, Programs, BCCA applications , CAIS icons. A purple screen will display, enter 1 (VCC site). A batch file will download the CAIS icons (do not be alarmed at the error messages)

2. Dictation system

- For dictation access in DI you will use a generic Resident code for dictation (600077) The FI department will assign you an individual ID. Please note there is a change in dictation systems to mmodal and requires is an MSP number - FI will sort out a code for you.
- Dictation process in DI:
 1. Resident dictates.
 2. Transcription routes reports to Resident action list in CAIS.
 3. Resident will edit reports in CAIS and only select “ next”. Residents must NEVER select “sign” or “sign + next”.
 4. Resident must write down the BCCA ID numbers for reports they have edited and give the numbers to the transcriptionists. Transcriptionists will then route to appropriate Radiologist for sign-off in CAIS.
- Dictation process for FI:
 1. Resident dictates
 2. Report verified on action list
 3. Report routed to FI physician for sign-off

3. Philips IntelliSpace Radiology (DI/FI)

- iSite radiology access assigned by Chris Lam - See her if you have issues with image display and management

4. GE Advantage Workstation (FI)

- Access from FI

5. Segami (FI)

- Access from FI

6. Printer assignment

Each printer in the department will have a label with print [\\servername\Printer](#) to assign printer.

Select windows start, settings, printers and faxes.

Add printer and follow onscreen instructions for a networked printer.

Work Stations

In DI there are two reporting stations in the Resident/fellow reporting room in the clerical area. Staff Radiologist office stations depending on availability.

Suggested Reading

Silverman. Oncologic imaging

Hricak, Husband, Panicek eds. Oncologic imaging: Essentials of reporting common cancers.

Gouliamos et al eds. Imaging in clinical oncology

Lockers

Pending availability, lockers may be provided. Inquire with Karen Locken, clerical supervisor.

Resident Evaluations

The Resident's day-to-day performance will be evaluated. The end of rotation evaluation will be done by a committee of BCCA Radiologists. It is the responsibility of the Resident to ensure that the end of rotation evaluation is both completed by the committee and reviewed with the Resident by the rotation supervisor within one or two weeks of completing the rotation.