

Clerkship Rotation: Diagnostic Radiology

OVERVIEW

This is a 2-week clerkship rotation in diagnostic radiology. This rotation will be done through both distance education and in-person. It consists of online learning resources, modules, small group teaching sessions and a self-assessment test at the end of the rotation. Radiology staff at the Selkirk Regional Health Center, Health Sciences Centre and St Boniface Hospital will be available for consultation, advice, and questions during this rotation.

COMMUNICATION WITH PRECEPTOR

It is expected that students communicate with the supervising radiologist if questions, concerns or other issues arise.

<p>UGME Radiology Program Director Dr. Colin Roscher</p> <p>Office hours: M-F between 12pm-1pm Phone: cell (204) 403-690-6006</p> <p>Work: Health Sciences Ctr Radiology Department Email: colin.roscher@umanitoba.ca</p>	<p>UGME Radiology Program Coordinator Julianna van den Beuken</p> <p>Office hours: M-F between 7am-3pm (working hybrid) Phone: cell (204) 295-8542 Email: jvandenbeuken2@hsc.mb.ca</p>
<p>UGME Health Sciences Centre (HSC) Site Preceptor Dr. Signy Holmes</p> <p>Email: sholmes@hsc.mb.ca</p>	<p>UGME St. Boniface Hospital (SBH) Site Preceptor Dr. Siuchan Sookhoo</p> <p>Email: ssookhoo@sbgh.mb.ca</p>

LEARNING OBJECTIVES (CanMEDS)

Medical Expert

- Become familiar with the role of multimodality Diagnostic Radiology and its role in in-patient and out-patient care
- Become familiar with anatomy on chest, abdominal and spine/musculoskeletal radiographs. Become familiar with basic brain, chest and abdomen anatomy on CT.
- Become familiar with common and important radiologic diagnoses, especially:
 - Cardiomegaly and pulmonary edema
 - Pneumothorax and pleural effusions
 - Airspace versus interstitial disease
 - Pulmonary nodules and masses
 - Lobar collapse
 - Mediastinal masses and adenopathy
 - ICU tubes and lines and common surgical devices including:

- Endotracheal tube, Oro/nasoenteric tubes, central venous catheters, Swan Ganz catheter, pleural drains, sternal wires, prosthetic cardiac valves, EKG leads, intra aortic balloon pump
- Pneumoperitoneum
- Abdominal calcifications
- Soft tissue masses in the abdomen
- Large and small bowel obstruction
- Fractures and dislocations
- Stroke, intracranial masses and hemorrhage
- Develop an improved ability to choose the appropriate imaging test for common medical concerns
- Develop a dependable, organ-specific approach to common imaging tests

Communicator

- Establish rapport and good communication with the supervising physicians

Collaborator

- Recognize and respect the roles, responsibilities and expertise of all healthcare professionals and understand how these integrate with diagnostic imaging

Manager

- Determine effective use of information technology
- Gain a better understanding of the allocation of healthcare resources

Health Advocate

- Promote and participate in patient safety
- Develop an improved ability to choose the appropriate imaging test for patients
- Gain a better understanding of the benefits and risks associated with radiologic procedures and a basic understanding of radiation safety

Scholar

- Ability to critically analyze their skills
- Shows motivation to improve their knowledge with reading and self-directed study

Professional

- Demonstrates integrity, honesty and punctuality

WEEK 1 – DISTANCE EDUCATION

PART 1 - REQUIRED READINGS

RESOURCE: Learning Radiology Website (<http://learningradiology.com/medstudents/medstudtoc.htm>)

SECTIONS: Using the learning resource provided, please follow the order listed below as you work through the following modules in each of the required sections.

1. Medical Student Lectures

- **Modules:**
 - 22 “Must-see” Diagnoses for Medical Students
 - Fundamentals of Chest Roentgenology
 - Approach to arthritis

2. Recognizing

- **Modules:**
 - Recognizing a technically adequate chest x-ray
 - Recognizing cardiomegaly
 - Recognizing the causes of an opacified hemithorax
 - Recognizing a pleural effusion
 - Recognizing congestive heart failure
 - Recognizing airspace versus interstitial disease
 - Recognizing a pneumothorax
 - Recognizing the placement of ICU tubes and lines
 - Recognizing free air
 - Recognizing abdominal calcifications
 - Recognizing soft tissue masses in the abdomen
 - Recognizing Fractures and Dislocations

PART 2 – SELF DIRECTED LEARNING MODULES

There are 4 teaching modules that the students are expected to go through. These modules consist of teaching, cases and a self-assessment quiz. The modules will be uploaded on Entrada. Modules are titled;

- Basics of Contrast Media
- Basics of Radiation Safety
- Imaging Appropriateness
- Radiology for the Wards

PART 3 – SCHEDULED TEACHING SESSIONS (IMPORTANT DETAILS**)**

Wednesday (1200-1300hrs)

On the first Wednesday of the rotation, students attend a chest teaching session with a Radiologist.

<https://zoom.us/j/96142108463?pwd=TnNuamtITUo5Wk1wVUpWLOJWa1Rudz09>

Meeting ID: 961 4210 8463

Password: 502450

Friday (1200-1245hrs)

On the first Friday of the rotation, students attend a neuroradiology teaching session with a Neuroradiologist.

<https://zoom.us/j/95119618347?pwd=cUU4dVdyTG9vbE1BelEwQUlaY0pjQT09>

Meeting ID: 951 1961 8347

Password: 129508

Friday (1400-1500hrs)

Quiz, details below in Part 6

PART 4 - RECOMMENDED READINGS

Additional resources

Radiology Assistant Website (<https://radiologyassistant.nl/>)

This is a resource for further self-directed study. It is recommended that each student goes through areas of interest or areas of weakness and/or areas that will help in their future career. The level of material is approximately a PGY 1 level and is slightly above the expected level of this course.

Additional on-line resources for self-directed learning include:

www.auntminnie.com

bonepit.com

www.radiologyassistant.nl

www.chestx-ray.com

www.ctisus.com

PART 5 – OFF SERVICE ACADEMIC TIME

On both Thursdays during the rotation, the students will be able to attend lectures from the departments of surgery, anesthesia and/or the UGME office as scheduled. The students will be excused from clinical duties in lieu of academic time.

PART 6 - QUIZ

Friday (1400-1500hrs)

Students complete a quiz online at UMLearn, **on their last day of Week 1 at 14:00**. Students will have 1-hour to complete the quiz. Should you experience any trouble accessing the quiz or have technical matters, please contact the Program Administrator at (204) 295-8542.

The quiz will be based on the above readings, teaching sessions and learning modules.

IMPORTANT: As of June 27, 2020, **UM Learn** requires a UM email address and password for access. For assistance, contact IST Service Desk, servicedesk@umanitoba.ca or (204) 474-8600

Steps to access quiz:

1. Log-in to UM Learn at and Log-in (link below)
<https://universityofmanitoba.desire2learn.com/d2l/login>
2. Top of the screen, select the icon beside the envelope
3. Select Course Name Select Course Name: UGME-3000-A01-Year 3 Medicine
4. Go to Assessments > Quizzes

5. Select the quiz called: Diagnostic Radiology, Virtual 2-Week Rotation Quiz
6. Start the quiz

Steps to access your grade for the quiz:

1. The grade will be available at 1500hrs following the quiz completion
2. Go to Assessments > Grades and User Progress
3. Click on your name > Go to Quizzes
4. Scroll down to the quiz called: Diagnostic Radiology, Virtual 2-Week Rotation Quiz

WEEK 2 – IN PERSON

PART 1 - SCHEDULED RADIOLOGY IN-PERSON

Radiology

Students will be assigned to **(2) full-days** of in-person Radiology at either site location, HSC or SBH. Each student will be paired with a Radiologist in specialty areas such as: MSK, Neuro, Abdo, Chest, Peds, Ultrasound. Each day, the student will be expected to get a paper evaluation form completed by a Resident or staff Radiologist.

Reporting Instructions 0900hrs

At Health Sciences Centre

Peds – Children’s Hospital, 2nd Floor, Ultrasound/Fluoroscopy, Blue Dr. Good Bear Zone
MSK – General Hospital, Main Floor XRAY Department, Green Owl Zone
Abdo – General Hospital, Main Floor, CT Dept JK111, Orange Bison Zone
Neuro /Neuro IR – General Hospital, Main Floor, MRI Department, Green Owl Zone
Chest – General Hospital, Main Floor, CT Dept, JK111, Orange Bison Zone
Ultrasound, General Hospital, 3rd Floor, Ultrasound Dept, Green Owl Zone

At St. Boniface Hospital

On the first day of your elective or selective rotation you are to report to the Main X-Ray Desk located in the Diagnostic Imaging Department (2nd floor St. Boniface Hospital) and introduce yourself to the clerk on duty. If assigned to SBH for your 2-day in-person; you will receive your SBH schedule from Liezel Jenson by email before your rotation.

Typical Daily Schedule

0900hrs-1030hrs – Review cases with staff and/or resident
1030hrs-1230hrs - Self-directed learning and lunch
1230hrs-1430hrs - Review cases with staff and/or resident
1430hrs-1530hrs - Self-directed learning
1530hrs-1630hrs – Educational rounds

Nuclear Medicine Exposure for Medical Students

Students will be assigned to **(1) full day** of in-person Nuclear Medicine at either site location, HSC or SBH. The student will be expected to get a paper evaluation form completed by a Resident or staff physician.

Please ensure to bring your white lab coat with you.

Welcome to your exposure to Nuclear medicine.

The purpose of this experience is to introduce you to the specialty of Nuclear Medicine by observing some common Nuclear Medicine studies and by spending time with one of the physicians to gain insight into the day to day responsibilities of a Nuclear Medicine physician. The exposure should provide you with some context as to the role of Nuclear Medicine within the scope of Diagnostic Imaging.

St Boniface Hospital

Physicians: Dr. Bill Leslie (Section head) bleslie@sbch.mb.ca

Dr. Mark Bryanton

Location **Nuclear Medicine C3 SBGH** Ph: 204-237-2748

- Please present to the reception area at the Nuclear Medicine department at 9:00 a.m. You will be met by one of the physicians.
- Please bring a lab coat with you

Health Sciences Centre

Physicians: Dr. Bohdan Bybel (Section Head) bbybel@hsc.mb.ca

Dr. Jongho Kim

Dr. Sheryl Stern (Program Director) sstern@hsc.mb.ca

Location: **Nuclear Medicine, Level 1 Purple Bear – Clinic F** Ph: 204-787-3375

- Please present to the reception area at 9:00 a.m. where you will be met by one of the physicians.
- Please bring a lab coat with you

Schedule

At both hospitals your morning will be spent in the cardiac stress lab observing exercise and pharmacologic stress testing, and with one of the technologists in the camera room observing the acquisition and processing of common Nuclear Medicine studies.

In the afternoon you will spend time with one of the Nuclear Medicine physicians reviewing and reporting studies from the day.

Medical students at both hospitals are excused to attend daily Radiology rounds at 3:30 pm, as well as the Radiology Academic Half Day, held every Wednesday afternoon.

If you are unable to attend on the day you are assigned, please e-mail either Dr. Leslie at SBGH, or Dr. Bybel at HSC., or phone the reception desk at your assigned hospital and leave a message. If you have any questions, or concerns, feel free to contact Dr. Sheryl Stern, Program Director at sstern@hsc.mb.ca.

Radiation Oncology

Students will be assigned to **(1) full day** of in-person Radiation Oncology at CancerCare Manitoba, MacCharles Site (675 McDermot Avenue). The student will be expected to get a paper evaluation form completed by a Radiation Oncologist. Clinics are in-person.

Academic day

Thursday will be an academic day, consisting of lectures from anesthesia, surgery and/or the UGME office, as well as self-directed study time for the students.

Radiology Education Rounds and Resources

It is expected that students will attend any education rounds during their clinical **(in person)** days on the radiology service. You will receive an email from the Radiology Program Administrator with the education sessions for:

- Educational Rounds are held on Mondays, Tuesdays, Thursdays and Fridays at 3:30. The rounds alternate between sites, and are held in GG147 (HSC) and A2071-3 at St. Boniface Hospital. (The two sites are linked through a zoom meeting with the links sent out at beginning of the week)
- Grand Rounds take place a couple of times a month over the noon hour on Thursday
- Academic ½ days are held on Wednesdays from 1:00-4:00. The academic ½ days alternate between sites, and are held in GG147 (HSC) and A2071-3 at St. Boniface Hospital. (The two sites are linked through a zoom meeting with the links sent out at beginning of the week)

EVALUATION

A Preceptor FITER will be sent from Entrada and a formal evaluation of the students will be completed. Student FITER evaluation will be based on;

1. Self-assessment

- Short answer, radiology style OSCE quiz. This will be done online by the students.

2. Participation, professionalism and knowledge during teaching sessions

- The students will be evaluated on active participation and oral presentation skills

3. Daily Assessments (from in person days)

- Students will collate the completed daily evaluations and scan back to the program administrator on the last day of your rotation.

The student is responsible for collecting each of the completed daily evaluations and scan them by PDF and email to the UGME Program Administrator jvandenbeuken2@hsc.mb.ca on the last day of the rotation. The final ITAR is completed by the UGME director using the feedback provided from the collected evaluations