

Diagnostic Radiology and Breast Imaging

1. Rotation Name

Diagnostic Radiology and Breast Imaging

2. Educational Purpose of the Rotation

The Diagnostic Radiology and Breast Imaging rotation is designed to provide the sub-specialty resident the experience of interpreting radiology studies in the various techniques used in diagnostic and interventional imaging. Topics covered during this rotation include indications and choices of imaging modality for initial and follow up evaluation of oncologic disorders. There will be an emphasis on value of breast mammography as screening, follow up, or diagnostic modality.

3. Staffing of the Rotation

This rotation is supervised by Dr. David Anderson, Director of the Breast Center of Lansing. Dr. Anderson is the only attending radiologist who will be supervising the residents during this rotation.

4. Resources

Sub-specialty residents attend Dr. Anderson's office activities at the Breast Center of Lansing. Additional resources include attending the Breast Interdisciplinary Clinic (IDC) at Breslin Cancer Center.

5. Patients

The attending physician maintains ultimate responsibility for patient care. As the residents' understanding and competencies increase, so does their role in participating in the initial and preliminary interpretation of diagnostic studies and recommending further studies as indicated. Also residents will take a role in informing patients and referring physicians of study result.

6. Responsibilities

Goal: During this rotation, residents will understand the standard reporting categories of breast mammography (BIRADS), breast ultrasound technique and performance, computed tomography scanning and magnetic resonance imaging indications, limitations and interpretation methodology. Also residents will have the opportunity to watch and provide limited help in performing image-guided breast biopsy.

Duties: The oncology resident is expected to:

- a. Participate in the daily activities of the center including reading of performed studies.
- b. Be responsible for follow-up of the result with patients and their referring physicians.
- c. Be prepared to discuss all aspects of radiological findings as it relates to significant findings, progress and treatment plans.
- d. Attend the Breast Interdisciplinary Clinic (IDC) at Breslin Cancer Center.
- e. Participate with Dr. Anderson in discussing the result of breast imaging with patients.
- f. Read and be prepared to discuss key literature including articles as listed in the recommended reading section.

7. Instructional Methods

A variety of instructional modalities are included. All sub-specialty residents are required to read ACR/BI-RADS Breast Imaging Reporting and Data System published by the American College of Radiology. Sub-specialty residents will observe a technician to gain expertise in placing the patient in an optimal position for any given study. Safety precautions and the expected exposure to ionizing radiation from diagnostic studies to the procedure operator will be always reinforced. Methods to check for radiation exposure and safety in the work place will be reviewed and applied during the residents' rotation. They are also expected to participate in patients' monitoring after an image-guided biopsy and schedule follow up as necessary. This will give them the opportunity to know and observe potential complications of such a procedure. Additionally, all faculty members are responsible for the following educational guidelines:

1. Supervision of the resident in accordance with the supervision policy.
2. Respond promptly to the resident's questions/concerns.
3. Organize and conduct four hours of formal teaching/week, utilizing appropriate lectures, teaching material and literature.
4. Provide the resident with ongoing performance feedback and opportunities for skill progression.
5. Increase the resident's level of responsibility as his/her individual skill level progresses.

8. Evaluation

5. At the conclusion of each rotation faculty members will summarize and accurately describe the resident's performance on the provided form, discuss this evaluation with the resident and return the form to the residency director.
6. The resident will summarize and accurately describe faculty performance and return it to the program office for inclusion in a computer-generated report to insure resident anonymity.
7. Twice per year the resident will be evaluated by the program director in a formal, written evaluation session. These evaluations will be transcribed and signed by both the residency program director and the resident.

9. Schedule

	Monday	Tuesday	Wednesday	Thursday	Friday
AM	7:30 am Journal Club Office (DA)	Office (DA)	7:00 Sparrow Tumor Board	7:00 IRMC Tumor Board Office (DA)	7:30 am Hem/Onc Core Conference Office (DA) Breast IDC
PM	Office (DA)	Office (DA)	Office (DA)	Office (DA)	Office (DA)

All activities in bold are required activities for all sub-specialty residents.

Didactic lectures and teaching conferences listed are given to all the Sub-specialty residents together during the Friday morning MSU Hematology/Oncology seminar.

Note: During the week the sub-specialty resident attends two outpatient clinics at Ingham Regional Medical Center. The times for this clinic vary from resident to resident and as such have not been including in this table.

10. Rotation Competency Objectives

1. Patient Care

- a) By the conclusion of the rotation, the Hematology/Oncology resident will have participated, observed and helped in interpreting various diagnostic studies. The resident will gain adequate understanding regarding indications for appropriate imaging based on the case in question. By the conclusion of the rotation, the Hematology/Oncology Resident will be able to follow a comprehensive and accurate method of evaluating and interpreting different types of radiographs.
- b) Demonstrate the ability to respond appropriately to abnormal study results.
- c) Participate in outpatient diagnostic center activities under the supervision of an attending physician.
- d) Demonstrate the ability to render initial result of a given radiology study including a well-thought and organized differential diagnosis for the study findings.
- e) Discuss with the supervising physician a suggested follow up recommendation, which may include observation, further studies, or specific intervention.

2. Medical Knowledge

- a) The subspecialty resident will gain experience and expertise in the techniques and appropriate uses of diagnostic radiology studies. The resident will gain medical knowledge in the basic principles of diagnostic radiology and breast imaging.

- b) Demonstrate a sound knowledge base pertinent to the use of diagnostic radiology and the different modalities used in this field.
3. Interpersonal and Communication Skills
- a) Communicate effectively with patients and their families, including conducting a family conference.
 - b) Demonstrate the ability to effectively work with other members of the health care team, including other residents, attending physicians and other health care providers.
 - c) Work effectively with referring physicians to coordinate further patient care as dictated by the result of performed studies.
4. Professionalism
- a) Throughout the rotation, residents are expected to exhibit reliability in their clinical duties, as well as integrity and respect in their interactions with patients and colleagues.
 - b) Residents will be able to demonstrate appropriate consultative principles of communication and responsiveness to professional consultative requests.
5. Practice Based Learning and Improvement
- a) Rotating residents will demonstrate self-initiative in the use of information technology available via the MSU electronic library to access and retrieve materials for self-education regarding diagnostic radiology literature.
 - b) Rotating residents will be expected to show progressive learning throughout the rotation, with emphasis on learning from any cognitive or procedural errors. They are also expected to facilitate any quality improvement initiatives in place at the Diagnostic radiology office practice.
 - c) Read ACR/BI-RADS Breast Imaging Reporting and Data System published by the American College of Radiology.
6. Systems Based Practice
- a) All residents will demonstrate conscientious awareness of the impact of their professional activities at the Breast Care Center practice site, and will avoid inappropriate use of the practice resources.
 - b) Residents must demonstrate understanding of cost-effectiveness of care incorporating cost-effectiveness into their development of diagnosis and treatment plans.