

McGill University
Department of Diagnostic Radiology
Combined Research and Clinical fellowship[in Breast Imaging

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General Overview

The Department of Radiology at McGill University offers a one year fellowship in Breast Imaging at the Cedars Breast Clinic of the Royal Victoria Hospital. The Breast imaging section annually performs over 12,000 mammograms, 6,000 breast ultrasounds, 500 stereotactic and 1 600 ultrasound guided core biopsies, and 150 localizations per year. In addition, the MR division performs approximately 20 breast MRIs per week. MR-guided biopsies are also performed

The Department of Radiology of the MUHC offers a 1-year Clinical & Research fellowship in Breast Imaging. The fellowship program offers exposure to clinical research in Breast imaging with a focus on oncological imaging, radiomics, machine learning and outcomes research. Protected research time (2 days per week) is provided for the candidate to be involved in research projects.

Projects are carried out under the supervision of experienced researchers. Publication of research projects, presentation of results at national and international meetings and published in leading peer-reviewed journals is mandatory

Fellows will be expected to prepare at least 3 manuscripts for publication. Given the short duration of the fellowship, it will be mandatory that the fellow has at least one research proposal written prior to joining the Department of Radiology at McGill to ensure that the research can begin in a timely fashion. The fellows are also expected to apply for grant funding prior to arriving in the Department. Support will be provided to the fellow for the grant application process.

Duration: 1 year

Objectives/Guidelines

At the end of the fellowship, the fellow should be able to:

- 1. Diagnose breast cancer at very early stage**
- 2. Use the BIRADS lexicon, recommend appropriate management.**
- 3. Perform imaging guided biopsies (US, stereotactic, and MRI guided) safely**
- 4. Perform pre-operative needle localizations**
- 5. Act as an expert consultant for all diseases of the breast.**

6. Prepare a minimum of three research-related manuscripts.

Structure

The breast imaging section is integrated into the Cedars Breast Clinic which offers to its patients a “one stop shop” whereby in the same visit, the patient consults her breast surgeon, has her mammogram performed as well as any additional work up including additional mammographic views, sonographic examination and imaging guided biopsies as required.

State-of-the-art equipment includes:

- 2 CAR accredited digital mammography units (tomosynthesis)
- 3 state of the art US machines with the highest resolution transducers and Doppler capabilities.
- 1 prone digital biopsy table with vacuum assisted core biopsy capabilities
- Two high field MRI systems with a dedicated Sentinelle breast coil and the integrated interventional CAD

Fellow's responsibilities & Schedule

- To read mammograms, perform sonographic examinations, interpret MRIs and perform imaging guided biopsies and needle localizations prior to surgery.
- Act as a consultant in the multidisciplinary team
- Attend Tumor Board and Working Rounds during which interesting and challenging cases are presented and discussed between, surgeons, radiologists and pathologists.
- Participate in the teaching process of the residents during their rotation in the breast center
- Be responsible for the post-biopsy reading of all the interventional procedures they performed during their rotation, so they will be able to assess the pathologic-radiologic concordance of all the lesions biopsied.
- Participate in at least three scholarly projects, with the goal of publishing in major peer-reviewed journals.
- **EXPECTED CASE LOAD (daily unless specified)**
 - Mammograms: 25
 - Ultrasounds: 10
 - Biopsies: 10, US guided and 4 stereotactic per week
 - MRI (weekly): 10
 - Needle localization: 4

On-Call Responsibilities

- The fellow will be assessed in his/her first few months to determine what type of call will be assigned, as formal Breast-Imaging call does not exist at the MUHC. The Residency Program

Director, in consultation with the Breast Imaging Fellowship Director, shall decide on an appropriate call duty for the fellow.

FELLOW EVALUATION:

- The fellow is evaluated on a daily basis by the attending staff both with respect to their clinical and research skills.
- A formal written evaluation is completed every 3 months, using the CanMEDS roles scheme. The fellow will meet the fellowship supervisor for direct feedback