

Women's Breast Health Centre Annual Review April 2015 - March 2016

Dr. Jean Seely, Head of Breast Imaging
Susan Domina, Corporate Manager Breast Imaging

Dr. Jim Watters, Medical Director
Jennifer Smylie, Clinical Manager

The Women's Breast Health Centre (WBHC) is dedicated to providing the highest quality care for breast patients across the Champlain Local Health Integration Network (LHIN). It is a comprehensive breast centre that offers expertise in breast imaging, diagnosis, risk assessment, surgical planning and psychosocial support in a caring and efficient environment for individuals with breast cancer and other breast concerns.

Program Highlights:

- ◆ **35,661** diagnostic breast examinations and procedures
- ◆ **2263** breast biopsies
- ◆ **5182** breast clinic patient visits
- ◆ **1944** referrals to the Breast Clinic: **925** diagnosed breast cancer patients
- ◆ **Innovations in Patient Care:**
 - * **Radioactive Seed Localization (RSL)**
 - * **Reducing the Burden of Breast Cancer in Young Women (RUBY)**



Diag. 1 Working together towards an internationally renowned Breast Centre of Excellence

People:

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The complement of active medical staff in the WBHC has been stable over the past year with ten breast surgeons, eight breast radiologists, and two family physicians with a special interest in breast problems. We are very pleased that Dr. Erin Cordeiro, a breast surgical oncologist trained in Halifax and Toronto, joined our program - and the Division of General Surgery - in June 2015, having worked as a locum for several months. Dr. Mukta Mahajan is the Breast Imaging Fellow for the 2015-16 academic year.

There were a number of changes in WBHC nursing staff in 2015-16. After a decade at the WBHC, Lee-Ann Wolfesberger left in June 2015 for the Irving Greenberg Family Cancer Centre (IGFCC). Fiona MacDonald arrived from the TOH Antenatal Program in June 2015 and also moved to the IGFCC in November. Chantal Gagne joined us in November 2015 from the Women's Health Centre at the Riverside Campus. There are five specialist breast nurses (3.6 FTEs) at the WBHC.

Dr. Moein Momtazi is the newest member of the Division of Plastic Surgery. He joined Drs. Kirsty Boyd, Gloria Rockwell and Jing Zhang in September 2015 in providing breast reconstructive services, with a focus on complex reconstruction.



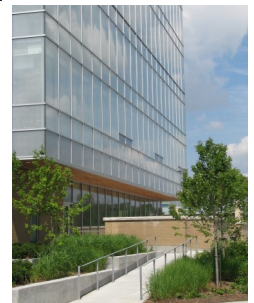
Dr. Moein Momtazi
Plastic Surgeon



Dr. Mukta Mahajan
Breast Imaging Fellow



Chantal Gagne
RN



Diag 2. Location of the new Breast Centre

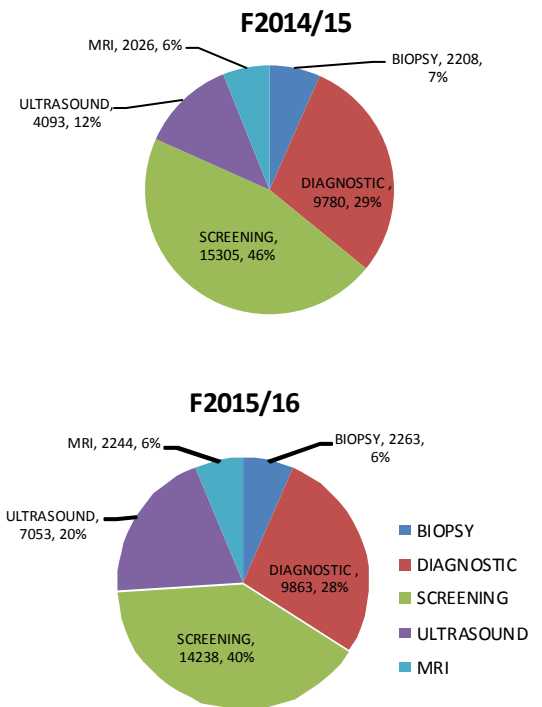


The Ottawa Hospital
L'Hôpital d'Ottawa

Breast Imaging

In the past year, breast imaging underwent major changes in organization. The first change was designed to improve access to patients with specific breast abnormalities at the WBHC. This meant focusing WBHC activity on diagnostic assessments. Breast screening was moved to the three other screening sites of the Ottawa Hospital, at the General campus, the Riverside Campus, and the Ontario Breast screening site of the Ottawa Hospital at Hampton Park Plaza. The only exception to this is screening for research, where access to the research staff at the WBHC is required.

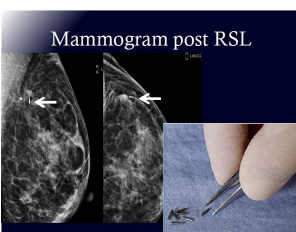
The other change in the organization of the WBHC was to combine patients' assessments by using one mammography technologist to perform both the mammogram and the breast ultrasound. Previously one technologist would perform the mammogram, and a second technologist would do the breast ultrasound. By having the same technologist perform the mammogram followed by the breast ultrasound, the patients were provided with a shorter appointment time, more dedicated care by their technologist, a reduced chance of booking errors, and a shorter wait time for the appointment. This was achieved by ensuring that all the mammography technologists were fully trained in breast ultrasound. The changes have allowed for a major improvement in efficiency of work, with higher volumes of diagnostic assessments performed. Last year, a 72% increase in total number of breast ultrasounds was noted. By increasing the **efficiency of work**, patients have much shorter wait times for their appointments.



Diag. 3 Volume of Breast Diagnostic Imaging

Innovations in Care

Radioactive Seed Localization (RSL)



The first procedure in the Ottawa Hospital Radioactive Seed Localization Program was done on April 21, 2015. In this new technique for localizing non-palpable breast cancers for surgery, the radiologist inserts a tiny seed the size of a grain of rice into the breast cancer instead of a wire which has been the traditional procedure. The seed is embedded with a minuscule dose of radioactivity, I125. Not harmful to the patient or environment, the seed allows the surgeon to precisely identify the tumor at surgery. The benefit for the patient is that the seed – which rests entirely within the breast – can be placed in her tumor several days prior to surgery. This decreases her anxiety and improves scheduling of surgery.

RSL has very quickly replaced the use of wires almost entirely. Since the program began, 390 seeds have been inserted in 348 patients. The program has been very successful, with reduced delays in the operating room, and patients reporting high levels of satisfaction. A study comparing outcomes between the seeds and wires showed a lower rate of complications with the seeds, and no issues with surgical outcomes. The successful implementation of this program is due to the efforts of a very committed group of individuals in a broad range of disciplines, led by Drs. Jean Seely and Carolyn Nessim.

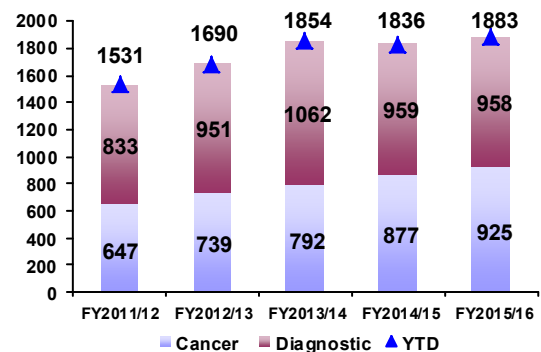
Reducing the Burden of Breast Cancer in Young Women (RUBY)

Researchers and clinicians at 29 sites across Canada are beginning to recruit a prospective cohort of 1200 women with breast cancer aged 18-40 over the next 4 years. The group will look at the contribution of genetic mutations in young onset breast cancer, the influence of diet and exercise on cancer outcomes and the impact of your treatments on fertility. RUBY participants will have access to expanded genetic testing, a personalized diet and nutrition report, and the RUBY website with resources tailored specifically for young women with breast cancer. With Dr. Angel Arnaout's leadership, REB approval has been obtained and the necessary processes put in place to begin recruitment in May 2016.

Clinic Highlights

Activity

The total number of clinical consults (for proven breast cancer, diagnostic/benign questions, and high lifetime risk, including gene mutation carriers) has increased modestly over the past year to 1944, an increase of 11% since the 2012-13 fiscal year. 925 patients with proven breast cancer were referred last year, 29% more than three years ago. Median wait times from referral to consult were 10 days for patients with breast cancer and 14 days for others. Median wait time was 40 days from referral to surgery for patients undergoing primary surgery for breast cancer at TOH. The limited clinic capacity has continued to be challenging but collaboration and flexibility on the part of all of the staff have meant that we have been able to continue to provide a high level of service to our patients.



Diag. 4 Volume of Referrals and their Clinical Diagnosis

Programs

Dr. Justine Davies continues to lead the **High Risk Clinic**, working with the specialist breast nurses in the WBHC to provide assessment, education and counseling for women who may have an elevated risk of developing breast cancer. The clinic complements the OBSP High Risk program which offers genetic testing and MRI surveillance to women whose lifetime risk of developing breast cancer is 25% or greater.

The **TEAM (The Advanced Multidisciplinary)** program has enrolled two hundred and twenty-five patients since its inception in May 2014. The program's goal is to identify patients with locally advanced or inflammatory breast cancer at the time of referral and provide them with expedited, individualized care and nursing support. The program has been very successful in reliably identifying the appropriate patients and having their biopsy and test results available at the time of consultation. Median wait time from referral to surgical consult in the WBHC is about six days.

The **Rapid Access for Prophylactic Mastectomy and Immediate Reconstruction (RAPMIR)** has now been in place since November 2013. Our experience with this innovative side-by-side OR model was presented at the Canadian Society of Plastic Surgeons Annual Meeting in June 2015. The program has been associated with a marked decrease in wait times (from an average of almost 300 days to approximately 100 days) and a doubling of the number of cases/day by each surgeon relative to the traditional model. Drs. Kirsty Boyd and Carolyn Nessim were featured for their work on the CBC television program 'Keeping Canada Alive', aired in mid-2015.

Jennifer Smylie has led a major update of our **Patient Information Pathway** over the past year. With input from patients, nursing, social work, diagnostic imaging, surgery and others, the material for the Preoperative Education presentation has been revised, the *Breast Cancer Information Guide and Personal Record* updated, a Postoperative Physiotherapy video completed, and feedback provided for the Cancer Program *Patient Information Portal*. Filming for a *Navigating the Breast Diagnostic Pathway* video has been completed. Attention is now being turned to the informational and psychosocial needs of patients with locally advanced breast cancer and to developing additional videos for women diagnosed with breast cancer.

Education and CME

University of Ottawa Breast Cancer Retreat, October 2015: **Update on Surgical Management of Breast Cancer**. Dr. Erin Cordeiro.

University of Ottawa Breast Cancer Retreat, October 2015: **Breast Imaging – Choosing the Right Imaging Modality**. Dr. Jean Seely.

MRI Update 2015, University de Quebec, November 2015: **Update on Breast MRI Indications**. Dr. Geoff Doherty.

MRI Update 2015, University de Quebec, November 2015: **MRI guided breast biopsies – a review**. Dr. Geoff Doherty.

Radiological Society of North America, Chicago, Ill, December 2015: **MR Imaging-guided Breast Biopsy (Hands-on)**. Dr. Jean Seely.

Radiological Society of North America, Chicago, Ill, December 2015: **US-guided Interventional Breast Procedures (Hands-on)**. Dr. Jean Seely.

Champlain Regional Primary Care Cancer Program, January 2016: **Breast Imaging Screening: Evidence and Controversies**. Dr. Jean Seely.

11th Annual Canadian General Surgery Review Course, Toronto, February 2016: **Breast Cancer**. Dr. Angel Arnaout.

University of Ottawa General Surgery Update Course, February 2016: **The Utility of Contralateral Prophylactic Mastectomy in Patients with Unilateral Breast Cancer**. Dr. Erin Cordeiro.

Selected Awards and Grants:

(ACRIN) Tomosynthesis Mammographic Imaging Screening Trial (TMIST) (Dr. Jean Seely, Principal Investigator, Ottawa) REB protocol 20150693-01H. Ottawa Integrative Cancer Center, 2016: \$70,000

The CUBIC Trial: A Window of Opportunity Trial Evaluating the Role of Chloroquine and Autophagy in Breast Cancer (Dr. Angel Arnaout, Principal Investigator). Canadian Breast Cancer Foundation, 2014 - 2017: \$450,000.

FAST MRI Study in Breast Cancer Survivors, Clinical Trials.gov: NCT02244593 (Dr. Jean Seely, Principal Investigator). Cancer Care Ontario/ Ottawa Regional Cancer Program, 2014: \$20,000

Increasing use of contralateral prophylactic mastectomy: A concern for over-aggressive treatment of breast cancer patients in Canada (Dr. Angel Arnaout, Co-Principal Investigator). Canadian Cancer Society Research Institute (CCSRI) Knowledge to Action Grant, 2015 - 2017: \$99,999; and Ontario Institute of Cancer Research (OICR)/ Cancer Care Ontario (CCO) KT-NET Grant, 2015-2017: \$98,995.

The specimen margin assessment technique (SMART) Trial: A novel 3D method of identifying the most accurate method of specimen orientation in breast cancer surgery (Dr. Angel Arnaout, Principal Investigator). Canadian Cancer Society Innovation Grant: Research Institute, 2014 - 2016: \$140,050

Towards better outcomes for young women with breast cancer: A pan Canadian Collaborative (Dr. Angel Arnaout, Collaborator). Canadian Breast Cancer Foundation and Canadian Institutes of Health Research - Institute of Cancer Research (CIHR-ICR), 2014 - 2019: \$5,695,303.00.

Use of innovative knowledge translation strategies to reduce overuse of diagnostic imaging in early stage breast cancer (Dr. Angel Arnaout, Co-Principal Investigator). Canadian Cancer Society Knowledge to Action Grant 2014 - 2016: \$100,000

Selected Publications:

Al-Baimani K, Bazzarelli A, Clemons, M, Robertson SJ, Addison C, Arnaout A. **Invasive Pleomorphic Lobular Carcinoma of the Breast: Pathological, Clinical and Therapeutic Considerations.** *Clinical Breast Cancer* 2015; 15 (6), 421-425

Arnaout A, Catley, C, Booth CM, McInnes M, Graham I, Kumar V, Simos, D, Van Walraven, C, Clemons, M. **Utilization of Preoperative MRI for Breast Cancer: A Canadian Population-based Study.** *JAMA Oncol.* 2015;1(9):1238-1250.

Cordeiro E, Arnaout A and Cil T. **The Effect of Neoadjuvant Chemotherapy on Short-Term Outcomes in Breast Surgery: A Propensity Score Adjusted Analysis of NSQIP data.** Oral Presentation, ASCO Breast, September 2015, San Francisco, CA.

Cordeiro E, Dixon M, Coburn N and Holloway C. **A Patient-Centered Approach Towards Wait Times in the Surgical Management of Breast Cancer in the Province of Ontario.** *Ann Surg Onc.* 2015; 22(8):2509-16

Cordeiro E, Jackson T and Cil T. **Same Day Major Breast Cancer Surgery is Safe: An analysis of short-term outcomes using the NSQIP database.** *Ann Surg Onc.* 2016. Feb 26th [ePub ahead of print]. Poster Presentation, American Society of Breast Surgeons Society, April 2015, Orlando, FL.

Saheb-Al-Zamani M, Bagher S, Cordeiro E, O'Neill A, Hofer S and Zhong T. **Complications in immediate versus delayed breast reconstruction: An outcomes analysis of the American College of Surgeons National Surgical Quality Improvement Program.** Oral Presentation, Canadian Society of Plastic Surgeons Meeting, June 2015, Victoria, BC.

Seely JM, Lamb L, Malik N, Lau J. **The Yield of Pre-operative Breast MRI in Patients According to Breast Tissue Density,** *European Radiology* November 2015 (Epub ahead of print); DOI:10.1007/s00330-015-4118-0

Seely JM, Verma R, Kielar A, Smyth KR, Hack K, Taljaard M, Gravel DH, Ellison E. **Benign Papillomas of the Breast Diagnosed on Large-Gauge Vacuum Biopsy compared with 14 Gauge Core Needle Biopsy - Do they require surgical excision?** Accepted for publication, *The Breast Journal*, October 21, 2015.

Simos D, Catley C, Arnaout A, Booth C, McInnes M, vanWalraven C, Fergusson D, Dent S, Stewart D, Clemons M. **Imaging for distant metastases in women with early stage breast cancer: A population-based, cohort study.** *CMAJ* cmaj.150003; published ahead of print June 22, 2015, doi:10.1503/cmaj.150003