

Women's Breast Health Centre Annual Review April 2014 - March 2015

*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:

- ◆ 33,416 diagnostic breast examinations and procedures
- ◆ 2208 breast biopsies
- ◆ 5036 breast clinic patient visits
- ◆ 1840 referrals to the Breast Clinic: more than 860 diagnosed breast cancer patients
- ◆ Implementation of **Radioactive Seed Localization**



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

Inside:

Breast Imaging	2
Education and CME	2
Psychosocial Support	2
Breast Clinic Highlights	3
Innovations and Changes	3
Awards	4
Research Highlights	4
Partnerships	4
Looking Ahead	4

People:



Dr. Erin Cordeiro
Surgeon

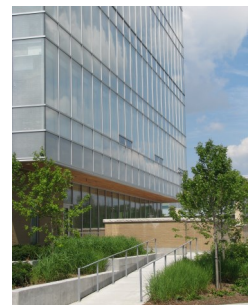


Dr. Renata Faermann
Breast Imaging Fellow



Dr. Jing Zhang
Plastic Surgeon

There has been a remarkable evolution in the WBHC medical staff in recent years as overall activity has expanded and programs tailored to specific needs have been developed. In the last four years, six breast surgeons have been recruited - for a total now of ten, three breast radiologists - for a total of eight, two plastic/reconstructive surgeons, and two family physicians with a special interest in breast problems. Dr. Erin Cordeiro is a breast surgical oncologist who joined our program as a locum in October 2014. Dr. Renata Faermann is the Breast Imaging Fellow for the 2014-15 academic year. Dr. Jing Zhang, a plastic surgeon, arrived in the July 2014 having completed a reconstructive microsurgical fellowship at the University of Manitoba. Sandra Kim Lowry returned to the WBHC nursing staff in March 2015 with specific responsibility for the High Risk program. Kelly Legallais moved to a systemic therapy position in the Cancer Program last summer and then to the Cancer Assessment Clinic.



Diag 2. Location of the new Breast Centre



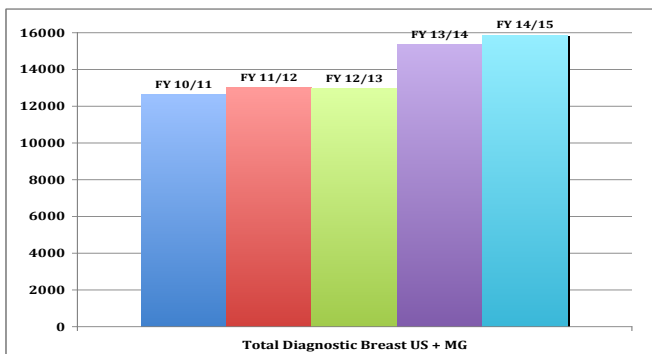
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Breast Imaging

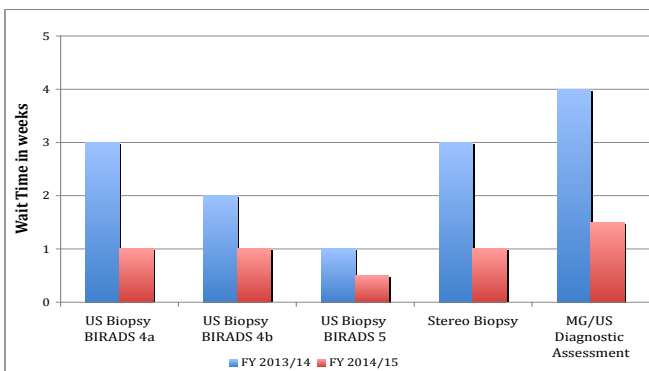
The workflow of technologists was changed for diagnostic mammography and ultrasound. Instead of two different technologists taking a patient sequentially, a single technologist now performs both exams on the same patient. This allows for better correlation of the two studies, and results in better care for the patient. This has led to improved patient experience and turn around time within the department.

Canadian Association of Radiology Mammography Accreditation Program (CARMAP) approval was received for all units at the Ottawa Hospital in February 2015.

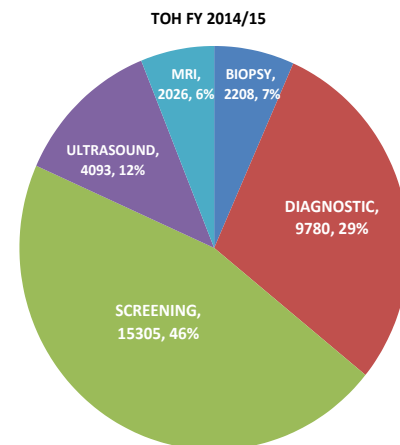
In the breast biopsy room, the ultrasound unit was updated to GE Logiq E9 machine.



Diag. 3 Volume of Diagnostic Ultrasound and Mammogram



Diag. 4. Biopsy Wait Time from Request to Completion



Diag. 5 Breast Diagnostic Imaging

Volumes of diagnostic work ups at the WBHC increased by 3.5% since 2014. At the same time, wait times for breast biopsies, and diagnostic assessment with mammography and breast ultrasound decreased by an average of 57%. The net effect of increased volumes and reduced wait times was due to improved efficiency and workflows at the WBHC.

Education and CME

The third bi-annual University of Ottawa Breast Imaging update was held October 17 to 19, 2014 at the Westin Hotel in Ottawa. Course co-directors were Drs. Jean Seely and Geoff Doherty, and guest speakers were Paula Gordon, MD from the University of British Columbia and David Dershaw, MD from Memorial Sloan Kettering. Ottawa Hospital faculty included Drs. Peddle, Scott-Moncrieff and Verma (Medical Imaging), Carolyn Nessim (Surgery), Carlos Parra-Harran (Pathology), Jean-Michel Caudrelier (Radiation Oncology) and Sharlene Bilmer (MRT).

The second update for Family Physicians for the Champlain Region was held on January 22, 2015 at the Hampton Inn. The topic was *High Risk Screening for Breast cancer*. Speakers were Dr Jean Seely, Emily Creede and Kelly Anderson from CHEO Genetics and Jennifer Smylie (WBHC Manager). Drs. Shail Verma and Jean Seely provided a lecture titled *Genetics and Breast Cancer* at the University of Ottawa Women's Health Update, October 3rd, 2014. Dr Jackie Lau provided a lecture on *Imaging of Metastases* at the Breast Cancer retreat, November 2014.

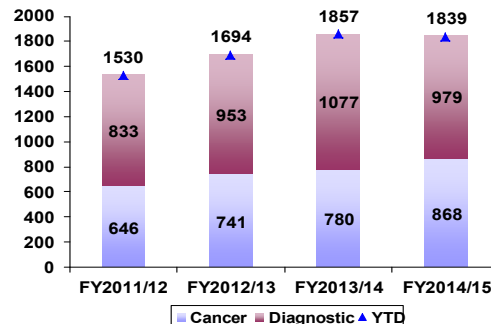
Dr. Jay Parikh, Medical Director of the Houston Breast Screening Network at MD Anderson Cancer Center, visited TOH and spoke on *Staging of Breast Cancer* and *Breast Radioactive Seed Localization* as a visiting professor in the fall of 2014. It was of great interest to the radiologist and surgeons.

Dr. Angel Arnaout presented on Oncoplastic Surgery in Breast Cancer and on Neoadjuvant and Window of Opportunity Trials in Breast Cancer at the Canadian Locally Advanced Cancer Meeting in Cambridge, Ontario in May 2014.

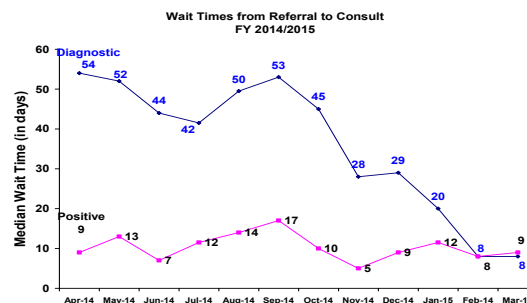
Dr. Arnaout also presented an update at the Canadian Comprehensive General Surgery Review Course in Toronto, Ontario in February 2015. Among her local presentations was Management of the Axilla in Breast Cancer Patients at the Annual Retreat, TOHCP Breast Disease Site Group, November 2014.

Clinic Highlights

The numbers of new consultations for breast cancer and other conditions seen in the WBHC clinics (surgical, benign/diagnostic, and high risk clinics) continue to increase year over year. At the same time, with additional surgeons, wait times from referral to consultation have improved markedly. There are now as many as three clinic teams working at any one time and the very limited space available has meant that postoperative follow-up often occurs in other settings. The TEAM (ThE Advanced Multidisciplinary) program became well established over the past year, effectively identifying patients with locally advanced or inflammatory breast cancer and providing expedited, individualized care. Preliminary data suggest that the program is working as intended and has considerably shortened the time needed for evaluation and to begin treatment, typically chemotherapy. The TEAM program joins the RADS program (2011) and Riverside prophylactic mastectomy-immediate reconstruction program (2013) in providing efficient and effective care for patient groups with particular needs. The radioactive seed localization program for surgery of non-palpable breast lesions – for which much of the developmental work was completed in the past year - is highlighted below.

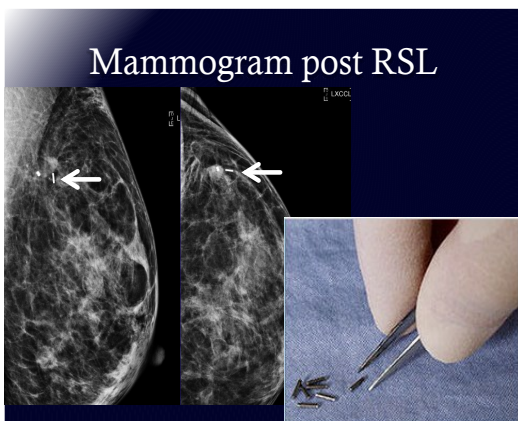


Diag. 6 Volume of Referrals and their Clinical Diagnosis



Diag. 7 Wait Times—Referral to Consult Visit

Innovations and Changes in Practice



Radioactive seed localization (RSL)

With improved breast imaging and earlier detection of cancer, more than a third of breast cancers are not palpable. Before surgery, a breast specialty radiologist must use image guidance (ultrasound or mammography) to place a small wire in the breast. This wire allows the surgeon to localize the tumor in the breast. The wire must be inserted on the same day as the surgery and at the same hospital, which requires the patient to travel within the hospital with a small wire hanging out of her breast.

A new technique to localize breast cancers for surgery called radioactive seed localization (RSL) has been developed. Instead of using a wire, the radiologist inserts a tiny seed the size of a grain of rice into the breast cancer. The seed is embedded with a minuscule dose of radioactivity, I¹²⁵. Not harmful to the patient or environment, the seed allows the surgeon to identify the tumor at surgery at least as well as a wire. The benefit for the patient is that she may have the seed placed in her tumor several days before the day of

surgery. It decreases her anxiety, and improves scheduling of surgery.

Dr. Jean Seely and Dr. Carolyn Nessim have led a committed team of radiologists, breast surgeons, pathologists, nuclear medicine physicians, radiation safety officers, and administrators in developing the protocols and training: Dr. Jon Aro, Dr. Denis Gravel, Dr. Hung Tan, Dr. Lionel Zuckier, Jennifer Smylie, and Paula Doering. Two site visits were undertaken, one to the Mayo Clinic in Rochester in July 2014, and the other to St Joseph's Hospital in Hamilton, Ontario in October 2013. Approval by the Canadian Nuclear Safety Commission to start the program was obtained in March 2015. The Ottawa Hospital RSL program will start in April 2015.

Psychosocial Support

Distress has been deemed the “Sixth Vital Sign” in cancer care (Bultz & Carlson, 2006). A breast cancer diagnosis can cause high levels of distress, given possible impacts on family, work, body image, and worries about the future. With increasing volumes of patients, WBHC continues to focus on efficient and effective ways to meet the psychosocial needs of patients. As part of the Psychosocial Oncology Program (PSOP), the WBHC social worker provides individual counselling to patients with complex situations, interacting with upwards of 560 patients per year. In addition, the social worker runs the “Stepping Stones” support group, attended by approximately 80 patients per year. Along with a WBHC nurse, the social worker and a PSOP physiotherapist provide education to all patients attending the Pre-Operative Education Session, where patients learn what to expect from a medical, mobility, and emotional standpoint. Through these initiatives, WBHC continues to address the complex psychosocial needs of patients by providing timely information and emotional support.

Selected Awards and Grants:

A randomized control study led by **Dr. Jean Seely** on **abbreviated Breast MRI in the evaluation of women who have had a prior history of breast cancer** opened for accrual in January 2015. 300 women will be randomized to routine screening with mammography or mammography plus Fast MRI, and will be evaluated for anxiety and cancer detection rates.

Best Overall Research Presentation by resident Dr. JM Aubin and his supervisor **Dr. Angel Arnaout** at the University of Ottawa General Research Day 2014: The SMART Trial—Evaluation of Breast Specimen Margin Orientation.

Increasing Use of Contralateral Prophylactic Mastectomy: A Concern for Over-Aggressive Treatment of Early Stage Breast Cancer Patients. Co - PI: Drs. Janet Squires and **Angel Arnaout**, OICR/CCO KT-NET Grant: \$98,995 (2015-2017).

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

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

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

Selected Publications:

Arnaout A, Boileau JF, Brackstone M. **Surgical considerations in locally advanced breast cancer patients receiving neoadjuvant chemotherapy.** *Curr Opin Support Palliat Care* 2014 8(1):39-45.

Bouganim N, Arnaout A, M Clemons. **Neoadjuvant endocrine treatment for breast cancer: From bedside to bench and back again?** *Curr Oncol.* 2014 21(1):e122-e128. Review.

Hilton J, Arnaout A, Clemons M. **Primary endocrine therapy as an approach for patients with localized breast cancer deemed to not to be surgical candidates.** *Curr Opin Support Palliat Care* 2014 8(1):53-8

Lad S, Seely J, Elmaadawy M, Peddle S, Perkins G, Robertson S, Ibach K, Haggart F, Arnaout A. **Juvenile Papillomatosis: A Case Report and Literature Review.** *Clinical Breast Cancer*, 10/2014.

Malik N, Seely J, Lad S, Schweitzer M. **Underestimation of Malignancy in Biopsy-Proven Cases of Stromal Fibrosis.** *British Journal of Radiology.* 2014 87:20140182.

Qian Y, Seely J, Hakim S, Jamison B, Arnaout A. **Breast MALToma: Case Report.** *Breast Journal.* 2014 Sep-Oct;20(5):551-2.

Seely J, **Educating Physicians about Screening Mammography in Canada.** *Society of Breast Imaging newsletter.* June 2014.

Simos D, Hutton B, Graham ID, Arnaout A, Caudrelier JM, Clemons M. **Imaging for metastatic disease in patients with newly diagnosed breast cancer: are doctor's perceptions in keeping with guidelines?** *J Eval Clin Pract* 2014 Oct 14. Doi:10.1111/jep. 12240.

Simos D, Hutton B, Graham ID, Arnaout A, Caudrelier JM, Mazzarello S, Clemons M. **Patient perceptions and expectations regarding imaging for metastatic disease in early stage breast cancer.** [Springerplus.](#) 2014 Apr 5;3:176

Partnerships

Dr. Jim Watters, Regional Communities of Practice
Breast Site Lead

The WBHC remains the hub of an active regional breast program and of the Champlain Breast Cancer Community of Practice. The CoP has developed updated consensus guidance on the management of positive sentinel lymph nodes following primary surgery for early breast cancer and continues to collaborate with TOH Cancer Program Disease Site Group. Priorities for the next two years are developing common regional expectations for immediate and delayed breast reconstruction, guidance on indications for and access to neoadjuvant therapy, and an updated patient information pathway. A concise summary of how family physicians can access regional breast screening, diagnostic services, and consultations has been developed and will be disseminated shortly. The WBHC has close ties with the Ontario Breast Screening Program, of which Dr. Jean Seely is the regional lead. She is also on the provincial Quality Management Partnership expert panel for mammography developing a comprehensive quality framework and working to establish consistently high standards for breast imaging services.

Looking Ahead

Fundraising continues for the building of the new Breast Health Centre in space identified at the General Site. Certification of the WBHC as a 'Breast Center of Excellence' through the National Quality Measures for Breast Centers program is being actively explored.