<table>
<thead>
<tr>
<th>Table of Contents</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Goals and Vision Statement</td>
<td>3</td>
</tr>
<tr>
<td>Surgeon-Scientists</td>
<td>4</td>
</tr>
<tr>
<td>Research Team Members</td>
<td>5</td>
</tr>
<tr>
<td>Highlights</td>
<td>6</td>
</tr>
<tr>
<td>Funding Awards</td>
<td>7</td>
</tr>
<tr>
<td>Studies and Recruitment</td>
<td>8-10</td>
</tr>
<tr>
<td>Presentations and Publications</td>
<td>11-22</td>
</tr>
</tbody>
</table>
VISION AND GOALS

- To expand and promote **clinical, translational and educational research** by integration in the clinical care setting.
- To become Canada’s **leader** in Gynecologic Oncology, **improving outcomes** for all women with gynecologic cancer through excellence in patient care, research and education.

Our integrated approach includes:

**ACTIVE SCREENING**
Pre-screening gynecologic oncology clinics to identify patients eligible for our studies.

**BIOBANKING**
Collecting and banking blood samples from ovarian cancer patients and coordinating tissue collection for research.

**COLLABORATION**
Building relationships across disciplines for novel and innovative translational research.
Meet the
Surgeon-Scientists

**Dr. Marcus Bernardini**

Dr. Bernardini is the Division Head of Gynecologic Oncology at the University Health Network. His research interests include: understanding the role of precursor lesions in high grade serous ovarian cancer, as well as cytoreductive surgery for later stage disease. He co-leads the ovarian cytoreductive program as well as CANSTIC, a Pan-Canadian study looking at treatment and outcomes of ovarian pre-cursor lesions. He is also lead investigator of the Early Stage Cohort of CANSTAMP.

**Dr. Sarah Ferguson**

Dr. Ferguson is Director of Research for the Division of Gynecologic Oncology. Her research interests are improving surgical techniques and patient outcomes, survivorship and supportive care as well as hereditary cancer syndromes in Gynecology, in particular Lynch Syndrome. She is the lead investigator for the SENTOR trial and for the Advanced Stage Cohort of CANSTAMP.

**Dr. Stephane Laframboise**

Dr. Laframboise is co-director of the Gynecology Oncology Fellowship Program at Princess Margaret. Her research interests are in vulvar cancer and Quality Improvement. She currently co-leads projects investigating vulvar cancer patient outcomes as well as the MIGOS initiative, a minimally invasive surgery/same day discharge quality improvement pathway.

**Dr. Taymaa May**

Dr. Taymaa May is the Surgical Oncology Lead for Toronto Central South. Dr. May is the medical director of the UHN ovarian cancer serum biobank and a member of the international Ovarian Cancer Association Consortium. Dr. May's translational research interests are in the field of serous ovarian malignancies. Dr. May is the principal investigator for the international NRG-GY019 study at Princess Margaret.

**Dr. Liat Hogen**

Dr. Hogen joined the division in 2017. Her research interests include predictive models for successful debulking in advanced ovarian cancer, and clinical aspects of rare subtypes of ovarian cancer. She is working on developing an integrated model for improved surgical outcome in ovarian cancer, as well as clinical and genomic studies in clear cell and endometrioid ovarian cancer.

**Dr. Genevieve Bouchard-Fortier**

Dr. Bouchard-Fortier joined the division in 2016. Her research is focused on improving the quality of care of gynecologic oncology patients as well as developing quality metrics to measure outcomes. Currently she leads a perioperative care program for minimally invasive gynecologic oncology surgical patients (MIGOS) to shorten length of stay, reduce opioid use, improve patient experience and reduce costs.

**Dr. Paulina Cybulska**

Dr. Cybulska joined the division in 2019. Her research interests are investigation of the tumour immune micro-environment in high grade serous ovarian cancer, geriatric oncology and granulosa cell tumors. She is currently collaborating with Dr. Laurie Ailles on a translational project examining the role of cancer-associated fibroblasts in mediation of chemo-resistance.
Meet the Research Coordinators

Emily Van de Laar
Emily has been with the Gynecology Oncology team for 6 years. She has an MSc in Reproductive Biology from the University of Guelph and worked in basic research before joining the Gynecology Oncology team in 2014. She was genetic navigator for the Lynch Syndrome (LS2) study which successfully recruited and screened more than 900 participants at three cancer centres for Lynch Syndrome and connected more than 200 eligible patients with genetic counselling and testing. She works on study planning, logistics, budgets and data management. Her specific areas of research interest include: knowledge translation from the basic research lab into clinical practice, the role of genomics in modern cancer care, and data management from database development to best practices for data security in a technologically advancing healthcare system.

Aysha Zia
Aysha has been with the Gynecology Oncology group for 5 years. She is on the forefront of clinical recruitment and interaction with patients. Her academic interests are Endometrial and Cervical cancer and Lynch Syndrome Studies, for which she’s been the lead coordinator of SENTOR, SHAPE, LACC, Lynch Clinical and Cervical Sexual Health to name a few. She is currently involved in Qualitative projects like MIGOS and VIVIFY Health App to help improve the surgical quality and patient care experience at the UHN! Along with coordinating, she is also involved in REB documentations and data analysis/extraction for various studies.

Gabrielle Ene,
Gabby has been with the Gynecologic Oncology team for 5 years, focusing a majority of her work on hereditary ovarian cancer, and early endometrial cancer in young women desiring fertility preservation. She provides support with project logistics and development, ethics considerations, and grant development and submissions. As of January 2020, she took on the role as GYN Biobank Manager. She has been invited to represent the Division of Surgical Oncology-Gynecology on the CCRU QCC (Quarterly CAPCR Connect) aimed at streamlining study start-up procedures. Furthermore, she has been involved in the successful development of a new clinical trial, B-FiERCE, awarded the CCSRI Innovation Grant 2020, and Can-STIC, a national-based collaboration with the Society of Gynecologic Oncology of Canada.
With the emergence of COVID-19 in 2020, on site research activity was reduced to prioritize the health and safety of patients and staff. Despite a challenging year, our research team, fellows and clinician investigators in Gynecology Oncology at Princess Margaret remained productive. When we were in clinic, we recruited patients to our 5 active studies and to our Gynecology Oncology biospecimen banking program. We had many posters to present and invitations to speak at international Gynecology Oncology conferences, including three plenary sessions. While COVID meant most conferences were moved to a digital format, we were extremely proud of the opportunity to showcase our hard work to the academic community.
Funding Awards

**Ferguson SE.** Innovation Grant, Canadian Cancer Society Research Institute. **$190,116 CAD** (2020-2023) Bariatric Surgery for Fertility-Sparing Treatment of Atypical Hyperplasia and Grade 1 Cancer of the Endometrium (B-FiERCE): A Feasibility Study.


**Bernardini MQ.** GTx Innovation competition, University Health Network Department of Surgical Oncology. **$30,000 CAD** (2020-2021) Nanoparticle Intra-Operative Lymph Node Evaluation using Porphysomes in Endometrial Cancer Surgery – A Pilot Study.

**Cybulsk P.** Violet River Research Award in Gynaecology, Mount Sinai Hospital Department of Obstetrics and Gynaecology. **$30,000 CAD** (2020-2021). Defining the Role of Cancer Associated Fibroblasts in Sculpting the Tumor Immune Microenvironment in High-Grade Serous Ovarian Carcinoma.

**Ferguson SE.** Violet River Research Award in Gynaecology, Mount Sinai Hospital Department of Obstetrics and Gynaecology. **$30,000 CAD** (2020-2021). Personalized medicine in endometrial cancer: using a one-stop molecular panel to inform treatment decisions and improve outcomes.

**Ferguson SE.** Knox Ritchie Award, Mount Sinai Hospital Department of Obstetrics and Gynaecology. **$10,000 CAD** (2020-2021) Identifying Women with Morbid Obesity from Health Administrative Data: A Validation Study of Surgical Billing Codes.

**May T.** Intuitive Foundation Research Grant, Intuitive Foundation. **$20,000 USD** (2020-2021). Long-term surgical and oncologic outcomes after robotic and vaginal radical trachelectomy in women with early stage cervical cancer: A Canadian multicenter experience.

**Hogen L.** Chair's Summer Research Student Award, University of Toronto Department of Obstetrics and Gynecology. **$3,500 CAD** (2020). Endometrioid ovarian cancer: clinical features and prognosis of early stage.

**Kislinger T.** Project Grant, Canadian Institutes of Health Research. **$504,901 CAD** (2020-2024). The Ovarian Cancer Glycoproteome: Biomarker Discovery and Therapeutic Targets. (Co-investigator: **Bernardini MQ**)

**Jacobson M.** Violet River Research Award in Gynaecology, Mount Sinai Hospital Department of Obstetrics and Gynaecology. **$30,000 CAD** (2020-2021). Persistence of Fimbrial Tissue on the Ovarian Surface Following a Two-Step Risk-Reducing Bilateral Salpingo-Oophorectomy in BRCA 1/2 Mutation Carriers. (Co-investigator: **Bernardini MQ**)

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**WORDS OF FOUNDER**

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Molecular Profiling of Tumour Heterogeneity in High Grade Serous Ovarian Cancer

• Recruitment began in 2020

OCHP is a prospective study to collect and assess fresh ovarian tumour tissue by single cell RNA-Seq to characterize the tumour microenvironment in primary ovarian tumours and their metastatic deposits. Recruitment began in 2020 with 8 consented patients. Only a handful of these cases produced sufficient, high quality tissue for the study, but we hope to complete 10 successful case analyses by the end of 2021.

Acceptability of bariatric surgery in young women with endometrial cancer and atypical hyperplasia: a qualitative study

• Recruitment began in 2020

The B-Fierce feasibility pilot study is an exciting precursor to a planned prospective study to investigate the use of bariatric surgery for weight management in gynecologic cancer patients with low grade (grade 1) endometrioid endometrial cancer who wish to retain fertility. The pilot study is an interview with this patient population asking them questions about weight, fertility, endometrial cancer and bariatric surgery. Based on the acceptability of this approach to patients, the B-Fierce study will roll out to actually offer bariatric surgery to eligible patients. In 2020, 12 patients were interviewed, analysis will be completed in 2021.
18F-DCFPyL PET/CT in High-grade Epithelial Ovarian Cancer: A Pilot Study

PI: Dr. Liat Hogen  
- Recruitment began July 2019

PET-HOC is a prospective study to assess the performance of a PET/CT scan with the radioactive tracer 18F-DCFPyL to determine its accuracy in detecting small deposits of disease in patients with suspected high grade serous ovarian cancer. Sites of disease seen on PET/CT will be compared to standard CT scan, and to what is found at time of surgery as reported by the surgeon. Recruitment in 2020 was excellent and to date 13 patients have been evaluated with PET/CT, we have updated our timeline for recruitment to reflect delays due to COVID-19. We hope to achieve full recruitment by end of 2021.

A Randomized Phase II Double-Blind Placebo-Controlled Trial of Acetylsalicylic Acid (ASA) in Prevention of Ovarian Cancer in Women with BRCA 1/2 Mutations

PI: Dr. Marcus Bernardini  
- Recruitment began June 2019

A randomized, control trial to determine whether there is a reduction in ovarian cancer precursor lesions identified in women with BRCA1/2 mutations who undergo risk reduction surgery after taking ASA (Aspirin) daily for a minimum of 6 months prior to surgery. Recruitment continued successfully in 2020 with 6 new patients on study (for a total of 14). The total recruitment goal is 414 patients enrolled at all study sites by end of 2022.

Gynecological Cancer Surveillance in Women with Lynch Syndrome: A Prospective Cohort Study

PI: Dr. Sarah Ferguson  
- Recruitment open February 2015 to present

A prospective study to provide a better understanding of the clinical benefits of gynecologic cancer screening and the psychosocial concerns in women with Lynch Syndrome. Recruitment began in 2015 and to date 86 women from across the province have been recruited for active surveillance for gynecologic cancer or risk-reducing surgery. Recruitment in 2020 added 16 patients. As we near our accrual goal of 100 patients we are beginning to analyse study data. We hope to complete recruitment and begin preparing manuscripts for publication in 2021.
Comprehensive Perioperative Care Program in *Minimally Invasive Gynecologic Oncology Surgery* (MIGOS project)

**PIs:** Dr. Genevieve Bouchard-Fortier and Dr. Stephane Laframboise

• Recruitment completed in 2020

MIGOS is a prospective, quality improvement initiative to develop and test a perioperative care program for patients undergoing minimally invasive surgery. The aim is to improve the rate of same-day discharge for surgical patients as well as the overall patient experience (as reported through questionnaires administered before and after surgery). Patients will be followed for 30 days after discharge to assess their recovery. The program screened all potential surgical patients (>500) and successfully assessed more than 100 patients in 2020 and is currently moving into a second phase, assessing a digital application to support peri-operative care in patients undergoing minimally invasive surgery at Princess Margaret.

**Post-operative Opioid Stewardship in Gynecologic Oncology: Prescription Patterns of Physicians, and Use by Patients**

• Recruitment completed in 2020

The Opioid Stewardship program aims to quantify the use of postoperative opioids by surgical patients by surveying both patients and medical practitioners. The goal is to develop an opioid reduction strategy including an educational intervention for prescribers. The study opened in 2019 beginning with physician surveys to assess and characterize their opioid prescribing behaviour. Patient recruitment took place during 2020 and 55 patients were included in the final assessment. Manuscripts are currently being prepared to report study results.
Publications and Presentations

International Gynecologic Cancer Society (IGCS) Annual Global Meeting September 10-13, 2020

ORAL PLENARY PRESENTATIONS


ORAL FEATURED POSTERS


POSTERS


**Society of Gynecologic Oncology (SGO) Annual Meeting on Women’s Cancer**

**Mar 28-31, 2020**

**SCIENTIFIC PLENARY**


**FEATURED POSTERS**


POSTERS


Oncology (SGO) Annual Meeting on Women’s Cancer. 2020 Mar 28-31. (moved to virtual format due to COVID-19)


The Farr Nezhat Surgical Innovation Session- Invited Speaker


American Society of Clinical Oncology (ASCO) Annual Meeting May 29-31, 2020


American College of Surgeons Clinical Congress

American College of Medical Genetics and Genomics (ACMG) Annual Clinical Genetics Meeting-Digital Edition


24th Annual Meeting of the Collaborative Group of the Americas on Inherited Colorectal Cancer


American Society for Radiation Oncology (ASTRO) 62nd Annual Meeting


The European Society for Radiotherapy and Oncology (ESTRO) World Congress of Brachytherapy


Digestive Disease Week

Tinmouth J, Zwaal C, Gryfe JC, Carroll B, McCurdy B, Baxter N, Ferguson SE. What is the evidence for cancer screening and cancer risk reduction strategies in persons at risk for or affected with Lynch Syndrome? Planned presentation at: Digestive Disease Week. Chicago, IL; 2020 May 2-5. (Conference cancelled due to COVID-19)
The Society of Gynecologic Oncology Canada (GOC) Annual General Meeting
October 14-17, 2020


Nguyen J, Vicus D, Bernardini MQ, Hogen L. Patients with ovarian clear cell carcinoma are at high risk of secondary malignancy. ePoster presented at: Virtual 40th Annual General Meeting of the Society of Gynecologic Oncology of Canada. 2020 Oct 14-17. (moved to virtual format due to COVID-19)
Invited Speaker


INVITED SPEAKER PRESENTATIONS

23rd Annual E. Earle Dilworth M.D. Resident Research Forum


GOC Community of Practice Annual Digital Meeting


Ovarian Cancer Canada’s National Virtual Symposium


University of Toronto Department of Obstetrics and Gynecology Annual Research Day
May 8, 2020


Publications by Year

First or Last Author Publications


Co-author Publications


McCuaig J, Care M, Ferguson SE, Kim RH, Stockley TL, Metcalfe KA. Year 1: Experiences of a tertiary cancer centre following implementation of reflex BRCA1 and BRCA2 tumor testing for all high-grade serous ovarian cancers in a universal healthcare system. Gynecol Oncol [Internet]. 2020 Sep;158(3):747–53. Available from: http://dx.doi.org/10.1016/j.ygyno.2020.06.507


20


Nguyen JMV, Bouchard-Fortier G, Covens A. Same-day discharge of Gynecologic Oncology patients following ileostomy closure is feasible and safe. Gynecol Oncol [Internet]. 2020 Feb;156(2):446–50. Available from: http://dx.doi.org/10.1016/j.ygyno.2019.11.014

CLINICAL CARE GUIDELINES
