



PRINCESS MARGARET GLOBAL CANCER PROGRAM

ANNUAL REPORT

2022

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MESSAGE FROM THE DIRECTOR

The Princess Margaret Global Cancer Program (GCP) ended its third year of the program with new partnerships and new initiatives. Together with our partners from A.C. Camargo Cancer Centre in Brazil, King Hussein Cancer Centre in Jordan, Tata Memorial Hospital in India, DKFZ in Germany, and Moi Teaching and Referral Hospital in Eldoret, Kenya, our virtual speaker series and multidisciplinary case conferences provided an opportunity for exchange of expertise in quality and best practice, exploration of new research initiatives, and discussion of challenging clinical cases. We also expanded our network with several new partners over the last year, including Aga Khan University (Kenya), CRM – Ministry of Health (Malaysia), and Peter MacCallum Cancer Centre (Australia).

Dr. Kira Kornienko has completed the DKFZ fellowship and assumed a faculty position at Charité Hospital in Berlin. Dr. Robert Vanner and Dr. Eric Zhao will complete their fellowships this year in 2023. We were very pleased to award 4 seed grants in funding to investigators from across the cancer program, supporting diverse proposals focused on implementation science.

Again this year with PM Cancer Education, we launched the fourth year of the Global Oncology Leadership Development (GOLD) Program and enrolled 28 new fellows. We are planning to repeat the Union for International Cancer Control (UICC) Master Course on Comprehensive Cancer Centres in 2023. The prevalence of cancer poses a substantial and increasing challenge for healthcare systems, emphasizing the urgency for establishing comprehensive cancer units globally and promoting a sense of solidarity through guidance. The course will address the organization of a Comprehensive Cancer Centre by focusing on the integration of high-quality patient-centred care with education and research.

The Canadian Global Cancer Network, chaired by the GCP, has grown in 2022 and we collaborated with cancer centres across the country to run the third Canadian Global Oncology Workshop. The Workshop was held as a hybrid event, hosted this year by the McGill University Global Oncology Program, with 284 attendees from over 30 countries.

We are grateful for the ongoing support of The Princess Margaret Cancer Foundation and the generosity of our donors and supporters for allowing us to continue to develop this very important program. We are also deeply grateful to our program staff, trainees from across the globe, and faculty volunteers for investing their time, energy, and enthusiasm into building our program, particularly during the ongoing pandemic. We look forward to continuing to grow the GCP over the next year and to engaging and collaborating with new individuals, programs, and institutions in our work.



Danielle Rodin, MD, MPH, FRCPC
Director, Global Cancer Program

THE GLOBAL CANCER PROGRAM

The Princess Margaret Global Cancer Program (GCP) was launched in 2020 and aims to be an international center of excellence in global health and global oncology. Our program is structured around four key pillars of partnership development, research, education, and knowledge mobilization.

VISION

Our **vision** is to address the growing disparities in cancer treatment within our communities and internationally to improve health and to achieve equity in cancer for all people worldwide.

Mission

Our **mission** is to develop a program in global health and oncology that builds global capacity to deliver cancer services, conduct research with global impact, trains the next generation of international cancer leaders, and mobilize our community to engage in collective action to advance global cancer control.

STRATEGY

The GCP strategy guides its projects and initiatives. To view the 2020-2025 strategy [click here](#).

ACCOMPLISHMENTS AT A GLANCE



**13 Research
Publications**



**12 Partners in 9
Countries**

OUR ADVISORY COMMITTEES

The Princess Margaret GCP is governed by an Advisory Committee comprised of staff from PM and an International Advisory Committee comprised of international experts.

PM ADVISORY

The PM Advisory is comprised of the PM Directors for cancer strategy, external partnerships, research, education, nursing, and allied health, as well as representatives from each of the clinical departments across PM. This committee provides guidance on GCP's priorities, alignment of programming with strategic goals, allocation of resources, and communication across PM. The departmental representatives are responsible for facilitating GCP activities within their own departments. We welcome Dr. Vikaash Kumar from Medical Oncology and Hematology to our advisory this year.



Danielle Rodin
Director, Global Cancer Program



Mary Gospodarowicz
Senior Advisor, Global Cancer Program



Ahmed Al-Awamer
Supportive Care



Lesley Chalklin
Program Manager



Andrea Covelli
Surgical Oncology



Arun Ghoshal
Palliative Care Physician



Meredith Giuliani
Director of Education



Anet Julius
Director, Clinical Practice



Laurice Karkaby
Clinical Research Coordinator



Vikaash Kumar
Medical Oncology and Hematology



Monika Kryznowska
Director, Quality



Natasha Leigh
Medical Oncology Hematology



Mathieu Lupien
Chair, External Partnerships



Meena Merali
Cancer Strategy



Michael Milosevic
Radiation Oncology



Abhenil Mittal
Clinical Research Fellow



Rebecca Wong
Radiation Oncology

INTERNATIONAL ADVISORY

The International Advisory provides guidance to the Director and General Advisory on priority-setting, operational efficiency, maximization of impact and potential future directions. The advisory is comprised of international faculty with expertise in global health.



Michael Baumann
Chairman and Scientific Director, German Cancer Research Center (DKFZ)



Patrick Loehrer
Director, Indiana University Melvin and Bren Simon Cancer Center



Felicia Knaul
Director, Institute for Advanced Study of the Americas, University of Miami



Richard Sullivan
Director, Institute of Cancer Policy, King's College London



C.S. Pramesh
Director, Tata Memorial Hospital, Mumbai, India

OUR PARTNERS

Our program aims to build internationally collaborative relationships to advance mutual learning through clinical care and evidence generation to advance future care now for all patients globally. This includes establishing partnerships to improve cancer outcomes, heightening awareness and connection among staff engaged in global cancer across PM and UHN, and tracking our global health reach, impact, and key learnings from our global engagement.

The Princess Margaret Global Cancer Program Partnerships

Partnerships

1. A.C. Camargo Cancer Center (São Paulo, Brazil)
2. Aga Khan University (Nairobi, Kenya)
3. City y Cancer Challenge (international organization, based in Switzerland)
4. Clinical Research Malaysia (Kuala Lumpur, Malaysia)
5. Davidoff Cancer Center (Petah Tivka, Israel)
6. DKFZ /Deutsches Krebsforschungszentrum (Heidelberg, Germany)
7. Insitut Curie (Paris, France)
8. King Hussein Cancer Center (Amman, Jordan)
9. Moi Teaching and Referral Hospital (Eldoret, Kenya)
10. Peter Mac Cancer Centre (Melbourne, Australia)
11. Tata Memorial Centre (Mumbai, India)
12. Toronto Addis Ababa Academic Collaboration (Ethiopia)



OUR PARTNERSHIPS: IMPROVING CANCER CARE THROUGH COLLABORATION

We are pleased to announce three new partnerships in 2022 for the Global Cancer Program, with Aga Khan University, Kenya, Peter MacCallum Cancer Centre, Australia, and Clinical Research Malaysia, Ministry of Health Malaysia. Collaboration with these leading institutions enables us to expand our reach and represents significant steps toward our common mission in the fight against cancer.

A New Partnership with the Aga Khan University in Nairobi, Kenya

- In April 2022 the Aga Khan University and Princess Margaret Cancer Centre signed a new MOU for partnership aimed to enhance and support initiatives to advance cancer care control in Kenya, Canada, and throughout the rest of the world
- Dr. Mansoor Saleh, Founding Director of Aga Khan Cancer Centre, and Dr. Zul Merali, Founding Director of the Mind and Brain Institute visited Toronto in July 2022 to discuss collaborative opportunities
- Dr. Madeline Li hosted Zarafsheen Veerjee, a social worker from Aga Khan University, to share our expertise on distress screening between October and November 2022.



A New Partnership with the Peter MacCallum Cancer Centre in Melbourne, Australia

- In December 2022 we were pleased to finalize our partnership with the Peter MacCallum Cancer Centre in Melbourne, an institution with whom we had a long-standing fellowship exchange. Dr. Gary Rodin visited Peter MacCallum to formally sign the MOU. We are looking forward to hosting leaders from Peter MacCallum in Toronto in Spring 2023.



A New Partnership with Clinical Research Malaysia, Ministry of Health Malaysia

- Representatives from Clinical Research Malaysia, Ministry of Health visited Toronto to learn about our clinical trials program and other PM initiatives. A formal MOU was signed to explore opportunities for collaboration in research, education, and clinical care.
- We hosted Drs. Noor Hisham Abdullah, Akhmal Yusof, and Joanne Yeoh and Audrey Ooi in December 2022



A New Partnership with ECO-ASCO Special Network: The Impact of the War in Ukraine on Cancer

The conflict in Ukraine erupted in February 2022 and affected millions of people including a large number of cancer patients disrupting cancer services in Ukraine. Access became difficult as hospitals and health centres were damaged or destroyed and healthcare workers were displaced. Ukraine's neighbouring countries have stepped up to provide cancer care for displaced patients. Despite these challenges, the National Cancer Institute of Ukraine has been resilient, continuing to provide care.

The PM Global Cancer Program has joined the European Cancer Organization and American Society of Clinical Oncology (ECO-ASCO) Special Network on the Impact of the War on Ukraine, which includes 300 organizations from around the world. The Network creates a community to share intelligence, provide information to Ukrainian patients, and coordinate people and organizations.



BUILDING THE GLOBAL COMMUNITY

The GCP is building a community of professionals with an interest in global cancer control in research, education, and knowledge mobilization. Publications, upcoming events, webinars, and opportunities to collaborate with like-minded professionals are communicated through bi-monthly newsletters, twitter, and program affiliates.

RESEARCH

The goal of our research program is to drive research and innovation that addresses disparities in cancer control, the biology, epidemiology, and clinical outcomes of cancer in different settings, and the evaluation of cost-effective programs to improve the delivery of care. Our research prioritizes international collaborative research that brings together investigators from different settings to share knowledge and expertise, and improve capacity to accelerate discovery in cancer control.

FUNDING RESEARCH IN GLOBAL CANCER

2022 Seed Grants

The third annual call for global oncology seed funding was initiated in August 2022 with a focus on implementation science.

Implementation science (IS) is the study of methods to promote the systematic update of research findings and evidence-based practices into routine practice to improve the impact on population health. IS bridges the gap between what we know (research) and what we do (practice) and is critical to reducing the burden of cancer by identifying and addressing the barriers to promote the uptake of evidence-based cancer control.

Awards of up to \$20,000 were offered for a 2-year funding period. Multi-disciplinary proposals that strengthen existing collaborations between Princess Margaret and partnering institutions were encouraged. The focus is on supporting early-stage projects to get off the ground to establish a scope of work.

1.Examining the economic burden and equity impacts of breast cancer in India: a pilot study

The project is led by Dr. Beverley Essue from the Institute of Health Policy, Management, and Evaluation (IMPHE) at the Dalla Lana School of Public Health. She is supported by team members Dr. Anna Dare and Dr. Danielle Rodin from Princess Margaret, Dr. Sujata Mishra from the University of Toronto, Dr. Revathy Krishnamurthy from Tata Memorial Hospital, and Dr. Bidhu Mohanti from KIMS Cancer Centre India.



2. Referral to palliative care services by Indian oncologists- a cross-sectional mixed methods survey

Dr. Arun Ghoshal, a palliative care fellow at the Princess Margaret Cancer Centre, is the lead applicant on this project. The project is supported by Dr. Camilla Zimmerman from Princess Margaret, and Dr. CS Pramesh and Dr. Jayita Deodhar from the Tata Memorial Hospital.

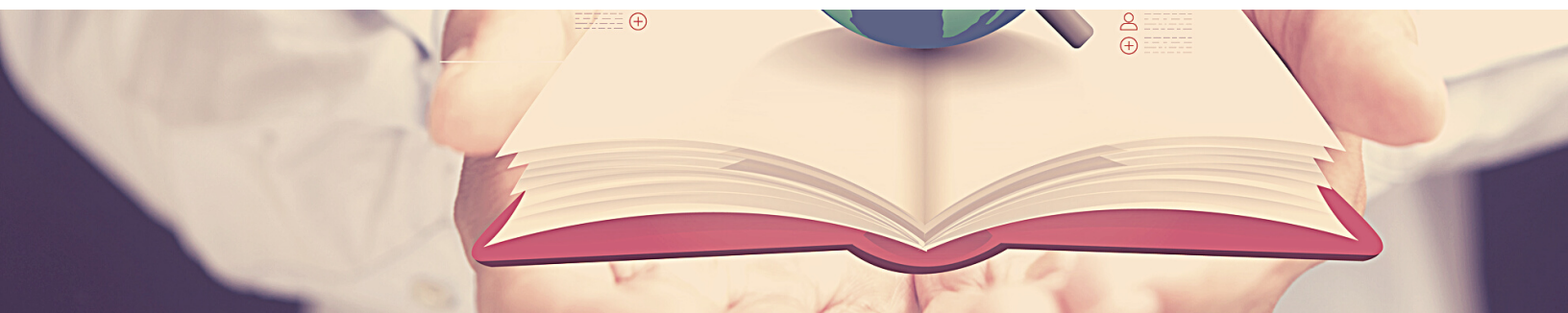
3. Implementation of screening for emotional distress at Aga Khan University Hospital

The research project is led by Dr. Madeline Li, the Co-Lead of Psychosocial Oncology at the Princess Margaret Department of Supportive Care. Project team members include Dr. Gary Rodin from Princess Margaret, Dr. Mansoor Saleh, Dr. Zul Merali, and Dr. Zarafsheen Verjee from the Aga Khan University in Kenya.



4. De-escalating mastectomy to facilitate breast conservation in Nigerian women with a complete response to neo-adjuvant chemotherapy using wire localization

Dr. Funmi Wuraola, a surgical oncology physician, is the lead applicant on this project. Team members include Dr. Anna Dare and Dr. Danielle Rodin from Princess Margaret, Dr. Olusegun Alatise, and Dr. Adeleye Omisore from Obafemi Awolowo University Teaching Hospital, Nigeria.



2021 Seed Grants Progress

The five proposals funded in 2021 are still underway and will conclude in December 2023. Their progress will be presented to the GCP Advisory at the mid-way point and cancer-program wide rounds are scheduled for the end of the funding term.

1. Expanding access to three-dimensional radiotherapy for cervical cancer in Ghana

Dr. Aba Scott recently completed a year-long Fellowship in the Radiation Medicine Program at The Princess Margaret, and won her seed grant alongside teams at The Princess Margaret and her home country of Ghana. Her project is supporting the training of medical physicists and radiotherapists at Ghana's National Centre for Radiotherapy and Nuclear Medicine. Medical physicists and radiotherapists play crucial roles in designing radiotherapy treatment plans. The training is helping them gain critical competencies in modern techniques in order to adapt the knowledge Dr. Scott gained at The Princess Margaret into practice in Ghana.

2. Building radiation therapy capacity through a case-based, distant simulation learning program (CB-DSLP) – a demonstration project

Nicole Harnett is the Director of the Accelerated Education Program and of the Radiation Medicine Skills Lab at The Princess Margaret. Together with colleagues from The Princess Margaret, the Michener Institute of Education at UHN, and Black Lion Hospital in Ethiopia, Nicole's project is supporting radiation training programs to build a high-quality radiation therapist workforce appropriate to the needs of Ethiopia. Building off previous training, the team will implement a 10-session education series including lectures, discussions and simulation sessions. This will be supplemented by asynchronous, self-directed learning designed to provide the knowledge to prepare practicing radiation therapists for advanced radiation therapy topics.

3. Availability of palliative care and referral practices of oncologists in Mexico before and during the COVID-19 pandemic

Dr. Jacqueline Alcalde Castro, a Palliative Care Fellow at The Princess Margaret who originally comes from Mexico, and her supervisor Dr. Camilla Zimmermann, the Head of Supportive Care at The Princess Margaret, are leading this project. Their study is working to identify factors associated with earlier specialized palliative care referrals before and during COVID-19 at The Princess Margaret, and compare those with practices in Mexico before and during COVID-19. They hope to identify factors associated with the availability of specialized palliative care before and during COVID-19 that could inform best-practice health policies.





4. Surgeon perspectives on the approach to breast surgical oncology in Northern Province, Sri Lanka: A qualitative analysis

Dr. Gayathri Naganathan is a General Surgery Resident Physician at the University of Toronto and an alumna of McMaster University Medical School. She is working with teams at the University of Jaffna in Sri Lanka and the University of Toronto. The study looks at surgeon perspectives on the approach to breast surgical oncology in a northern province in Sri Lanka. This qualitative research aims to understand the experiences of surgeons in the Jaffna district who provide surgical care for breast cancer patients. The goal is to identify challenges, barriers, inequities and variations in care. The team hopes to understand factors relevant to surgeon decision-making that may contribute to a preponderance of mastectomy over breast conserving surgery in this area of Sri Lanka.

5. Partial breast reirradiation using ultra-hypofractionation: A phase 2 multi-institutional study

Dr. Abdel-Rahman is a Clinical Research Fellow in the Breast and Lymphoma programs in Radiation Medicine at The Princess Margaret. She completed her residency at the department of Radiation Oncology at the King Hussein Cancer Center in Amman, Jordan. She is working with an international, multi-institutional team at The Princess Margaret, King Hussein Cancer Center, A.C. Camargo and elsewhere. The study will evaluate the safety and efficacy of a shorter, one-week, ultra-hypofractionation regimen for reirradiation with partial breast irradiation (rPBI). With this research, Dr. Abdel-Rahman is working to advance global knowledge of how to optimally treat women with breast cancer recurrence by identifying treatments that include breast preservation as opposed to mastectomy.



2020 SEED GRANTS

Recently, our first two funded projects reached completion. We are pleased to update on the completion of these projects and impact they will have going forward.

Monika Krzyzanowska, Impact of Coronavirus Disease 2019 (COVID-19) On Cancer Care Delivery



Dr. Monika Krzyzanowska co-led with Dr. Rachel Riechelmann (A.C. Camargo, Brazil) to characterize the patterns of cancer care delivery during COVID-19. While there were significant disruptions to cancer care delivery at Princess Margaret there were relatively few COVID-19 positive cases in the cancer patient population due to stringent health measures. Conversely, in Brazil, care delivery was complicated by a high prevalence of COVID-19 affecting the cancer population. As of October 1, 2020, 555 cancer patients were diagnosed with COVID-19, with a mortality rate of 10%. Furthermore, there was a greater decrease in the number of new cancer patients accessing care during the pandemic at A.C. Camargo. Understanding these disparities could help inform recommendations for health care policies and priorities going forward to minimize such discrepancies.

Meredith Giuliani and Janet Papadakos, Closing the Global Cancer Research Gap: Advanced Training in Science Communication



Drs. Janet Papadakos and Meredith Giuliani co-led this project with colleagues at A.C. Camargo, Brazil, Tata Memorial Hospital, India and DKFZ in Germany. The primary aim of the project was to develop and pilot a globally focused course on advanced cancer science communication to better translate research to practice. The course, now ready to implement, was developed with a diverse, international focus group that included journalists, educators and academics. The subject matter of the course covers science communication in a wide variety of contexts, including scholarship, public relations and philanthropy. The first course will roll out in 2023 with three, self-paced, online modules offered to healthcare professionals. Going forward, the team will continue to study the implementation and uptake to further refine how the course helps close the gap between what researchers know and what clinicians and other health professionals implement in practice.



EDUCATION

The goal of our education program is to inform the broader cancer community on global cancer control and develop infrastructure to support knowledge exchange. This includes the development of curricula for trainees and faculty in health systems and global cancer control, leveraging of new platforms to enable teaching and learning across international borders, and the establishment of fellowship opportunities to develop shared learning opportunities between different institutions.

GOLD – GLOBAL ONCOLOGY LEADERSHIP DEVELOPMENT



The Global Oncology Leadership Development Program (GOLD) is an interdisciplinary opportunity for clinical Fellows at The Princess Margaret to enhance their leadership skills. In 2022, GOLD welcomed 28 Fellows to the Program. Almost all came from abroad, including Argentina, Chile, Pakistan, Jamaica and India. The program included interpersonal,

organizational and systems leadership skills training and was delivered through a mix of lectures, workshops, networking events, online learning, a self-reflective personality inventory and a formal mentorship. Presenters were healthcare providers with expertise in leadership, health policy and social networking, and service researchers, economists, philanthropists, and specialists in health communication and organizational change. GOLD was designed to remove both financial and time barriers to trainees by offering this program free of charge and ensuring participants were granted protected time from their clinical duties.

Running for its fourth year, GOLD is designed to equip clinical fellows with the skills to develop as leaders in cancer care. In collaboration with the PM Cancer Education Program, 119 fellows, from 28 countries have to date graduated from GOLD. Since GOLD targets fellows who will be responsible for future cancer care systems and have an interest in health systems leadership to advance the cancer care agenda, participants are well positioned to have significant impact through their combined medical and leadership training.

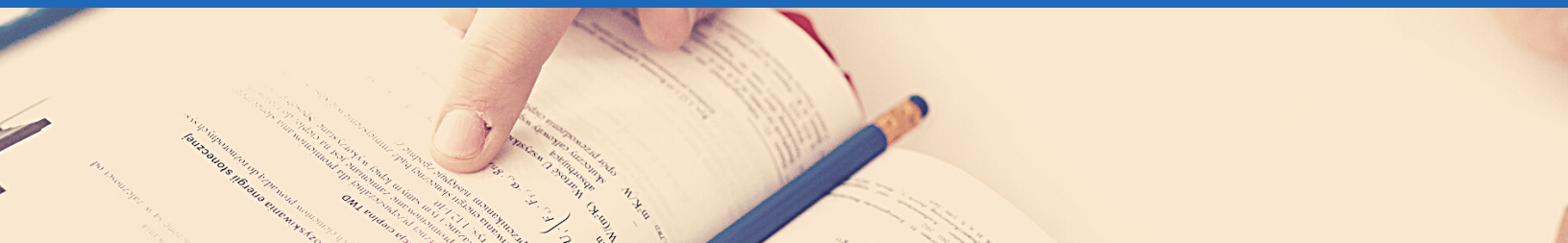




Dr. Aba Scott, a Radiation Oncologist from Ghana, participated in the GOLD program in 2020. She came to Princess Margaret to deepen her clinical skills in 3D-radiotherapy techniques to bring up-to-date radiotherapy for patients with gynecological cancers in Ghana. She was motivated by the high death rates from cervical cancer in Ghana and limited access to 3D treatment. Since her return to Ghana, her organization has scaled up access to 3D treatments. With support from Dr. Milosevic and the team at Princess Margaret, Aba has trained a large multi-professional team to use 3D techniques to treat patients. Her leadership has an impact beyond Ghana. She said, "This impact is far-reaching beyond Ghana because my cancer center also treats

patients from many other West African countries such as Sierra Leone, Liberia, and Benin. Oncology residents from Rwanda, Uganda, and Ethiopia receive part of their training at my center in Ghana, and they will translate the knowledge and skills gained from this program into their practices in their home countries, resulting in improved treatment outcomes in the sub-Saharan African region." Dr. Scott said that her experience in the GOLD program played a role in her success. Through the program, she learned how to lead. She learned more about herself, constructive ways to work with others and to transform a goal into a reality. Her experience in the GOLD program played a role in her success. More details on her story can be found [here](#).

We are conducting a longitudinal, qualitative study to learn how the experience in GOLD impacted the participants. If even a fraction of alumni are as successful as Dr. Scott, the GOLD program is meeting its aim to be a catalyst for global cancer control.



EXPANDING EDUCATIONAL REACH THROUGH THE CARO-ARRO ENRICHMENT PROGRAM

In 2022, the Global Cancer Program and Cancer Education partnered again with the Canadian Association of Radiation Oncology (CARO) and the American Association of Residents in Oncology (ARRO) on a collaborative, multi-institutional program to network, to receive mentorship and explore the field of global oncology, which is currently not included as part of core training. The program is free and is run online through Princess Margaret's

online educational platform called "Cancer Campus". Running for the third year, the course includes ten recorded sessions that introduce participants to key concepts in global oncology and cancer control including cancer policy, the economics of cancer care, research, and innovation in cancer care. There are currently 282 registered course participants from 14 different countries spanning the disciplines of clinical oncology, medical oncology, radiation oncology, medical physics, radiation therapy, and physician assistant.



JOINT INTERNATIONAL MULTIDISCIPLINARY CASE CONFERENCES (“TUMOUR BOARDS”)



Since 2020 we conducted lymphoma tumour boards in collaboration with King Hussein Cancer Centre (KHCC). Dr. Anca Prica and Dr. Michael Crump, PM hematologic oncologists at the Princess Margaret, have led monthly tumour board discussions with the lymphoma group from KHCC to discuss challenging lymphoma cases and to draw on the perspectives and experiences of both organizations. In 2022, participants from Tata Memorial Hospital joined these rounds.

TRAINING MEDICAL PHYSICISTS IN KENYA

Monique Van Prooijen, medical physicist in the Radiation Medicine Program, had led educational sessions with physicists in Kenya through the Kenyan Physicists Forum (KPF). The KPF has been in operation since November 2018 and strives to assist medical physicists in Kenya through online peer support. For the first 3+ years, the focus was a series of monthly seminars on topics selected by KPF members. Approximately 2 years ago, the Kenyan government started building new cancer centres to provide modern radiation therapy, including IMRT. With this change, the focus of the KPF has shifted to quality assurance. They are currently engaged in a ‘treatment planning system – treatment delivery’ dose verification project that will also help physicists develop their research skills. This work was summarized in an abstract submitted to the American Association of Physicists in Medicine (AAPM) general meeting in 2023. In other work, the physics department has started consultations for an international Physics IMRT Fellowship in the form of a needs assessment survey.



PM GLOBAL CANCER PROGRAM TRAINEES



DR. ARUN GHOSHAL

Dr. Arun Ghoshal completed his medical training in Mumbai, India and specialized in palliative medicine at Tata Memorial Cancer Center. He holds a master's degree in translational research in cancer medicine from King's College London.

At present, along with his clinical work, Dr. Ghoshal is working on developing his research skills conducting a systemic review of the various anticancer therapies used in palliative care for out-patients with advanced cancer, and a literature review on the application of machine learning and natural language processing in cancer palliative care. He was recently awarded a GCP seed grant in 2022 on a study on the referral practices of Indian oncologists for palliative care. Post Fellowship, Dr. Ghoshal hopes to continue offering earlier palliative care in his practice in India.



DR. ABHENIL MITTAL

Dr. Abhenil Mittal completed his medical training in New Delhi, India and specialized in Medical Oncology from All India Institute of Medical Sciences, New Delhi. He has also done additional training in clinical research (Principles and Practise of Clinical Research) from Harvard T.H Chan School of Public Health and global health from University of Toronto.

Dr. Mittal is interested in health services research and global oncology. During his fellowship, along with his clinical work, Dr. Mittal has completed several projects in breast, genitourinary, thoracic, and global oncology looking at treatment optimization, biomarker validation, drug toxicity and quality of life. He is also actively involved in a collaborative project with Tata Memorial Hospital, Mumbai looking at financial toxicity in breast cancer patients in India.



DR. MELINDA MUSHONGA

Breast cancer is one of the most common cancers in Zimbabwe. Access to care is difficult with only 34 percent of eligible patients receiving post-mastectomy radiation. Among other factors, treatment-related side effects such as radiation dermatitis have not been studied adequately. Prior studies were conducted mostly in countries where the majority of patients are white, and studies have noted that Black patients have worse severe radiation dermatitis.

Dr. Melinda Mushonga is an early career clinical oncologist who trained in radiation oncology at the University of Zimbabwe. She enrolled in a Radiation Oncology Clinical Fellowship at University of Toronto, and conducted research with Dr Danielle Rodin. She was awarded an ASCO Conquer Cancer Young Investigator Award for a study radiation induces skin toxicity in Zimbabwe. Dr. Mushonga will identify the skin toxicity rates reported by physicians and perform a questionnaire with patients reporting their own symptoms—the latter potentially revealing a higher prevalence compared to physician-reported levels as patients may identify changes in their skin that would be missed by clinical grading techniques.



BAHAR RAFINEJAD-FARAHANI

Bahar Rafinejad-Farahani completed her bachelor's degree in London, Ontario, specializing in biology at Western University. At present, she is completing her Master of Public Health degree at George Washington University.

Bahar is interested in global oncology and improving access to care in low- and middle-income countries. During her time with the GCP, Bahar supported the coordination of the 2022 Canadian Global Oncology Workshop and assisted with a scoping review assessing the impact of antimicrobial resistance on cancer care. In addition, she is actively involved in collaborative projects with Tata Memorial Hospital, Mumbai, and Harvard T.H Chan School of Public Health examining financial toxicity in breast cancer patients in India and disparities in cancer clinical trials in the United States, respectively



DR. GILLA SHAPIRO

Under Dr. Danielle Rodin's supervision, Dr. Gilla Shapiro is leading the project to measure disparities in clinical trial participation for patients at PM in collaboration with the Cancer Experience Program and the Cancer Clinical Research Unit. Clinical trials are an essential component of high-quality cancer care however barriers to participation limit the extent to which all patients can benefit and knowledge about the effectiveness and toxicity of novel treatments

in diverse populations. This work will provide a foundation to prioritize health equity in research and from which to develop interventions, policies and approaches to ensure equal opportunity for patients with cancer to be considered for clinical trials.



DR. ERIC ZHAO

Dr. Eric Zhao is co-supervised by Dr. Trevor Pugh at the Princess Margaret Cancer Centre and Dr. Stefan Pfister at the German Cancer Research Center (DFKZ), the largest biomedical cancer research institute in Germany. The program focuses on investigating the mechanism of cancer, including

identifying cancer risk factors and strategies to prevent people from getting cancer such as developing novel tumour diagnosis approaches that are more precise. Dr. Zhao is the 2021 recipient of our PM-DKFZ Clinician and Medical Scientist Award and is in Heidelberg, Germany continuing his research on the development of biomarkers of immune system activation against cancers, using DNA methylation data from tumour samples and liquid biopsies. He developed methodological advances in cell-type specific methylation analysis in CNS tumours and liquid biopsy methylomes from cerebrospinal fluid. Together with Drs. Trevor Pugh, Federico Gaiti, Gelareh Zadeh, and Stefan Pfister he was awarded the Yamana Gold Discovery to Impact Grant to study CNS immune biomarkers using single-cell methylation data and translate those biomarkers into liquid biopsies.



KNOWLEDGE MOBILIZATION

One of the biggest opportunities with having an international network such as the Global Cancer Program is that it helps us close what is known as the “know-do gap” – the gap between what researchers know and what health care professionals do. With the following events and initiatives, Global Cancer Program aims to synthesize knowledge generated internationally to allow for the exchange and application of knowledge to improve cancer care globally.

Global Cancer Program Grand Rounds. In March 2022, the Global Cancer Program launched its Grand Rounds, a web-based series of presentations featuring international experts.

The first presentation, called Women and Cancer in Africa: Changing Narratives in Practice and Policy, was given by Dr. Miriam Mutebi, a Consultant Breast Surgical Oncologist and Assistant Professor in the Department of Surgery at the Aga Khan University Hospital in Nairobi, Kenya.

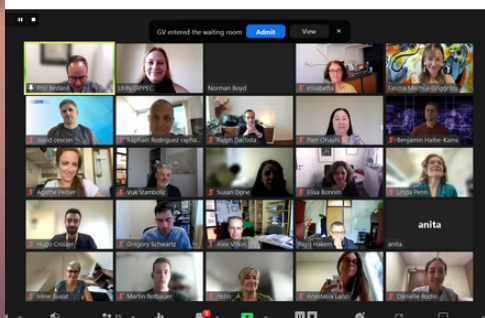
Dr. Noor Hisham Abdullah, Director General of Health Malaysia, spoke about global challenges in breast and endocrine cancers.



Virtual Speakers Series.

Throughout the COVID-19 pandemic, the Global Cancer Program has found ways to continue building relationships with partnering institutions online, including its Virtual Speaker Series. The Virtual Speaker Series develops relationships in research, clinical expertise, and education within departments and across disciplines with global partners. The aim of the series is to engage experts from different institutions and to learn from different perspectives. Recent topics have included drug development strategy and improving the patient and family experiences in cancer care.

Institut Curie – Princess Margaret Cancer Centre Jamboree



In May 2022 the Princess Margaret and Institut Curie jointly hosted a virtual research jamboree to explore opportunities for collaborative research in the field of translational breast cancer research. It was attended by over 60 participants from both institutions.

King Hussein Cancer Research Conference 2022. The King Hussein Cancer Centre (KHCC) held its first cancer research conference, in Amman, Jordan which was inaugurated by the Director-General, and president of the conference Dr. Asem Mansour. Drs. Keith Stewart, Girish Kulkarni, and Mary Gospodarowicz were among keynote speakers. Among discussion was the significance of cancer research in enhancing tools and knowledge to diagnose and treat the disease, as well as to develop effective treatments. Participants presented 268 research papers on a range of topics, including breast cancer, gastrointestinal cancer, pediatric cancer, nursing, pharmacology, and palliative medicine. The event aimed to contribute to a deeper understanding of cancer and to alleviate its significant burden on developed and developing countries. Dr. Mansour also shared the latest statistics on cancer in Jordan, with 9,248 new cases recorded, 7,094 of which were among Jordanians, and an incidence rate of 99.4 per 100,000 people.

Barretos Cancer Hospital Visit. In November 2022, we hosted a visit at The Princess Margaret from Brazil's Barretos Cancer Hospital. The Brazilian contingent included Dr. Edmundo Carvalho Mauad, Director of the Barretos Cancer Hospital, Dr. Celine Marques Pinheiro, a Professor of Cellular and Molecular Biology in the MD Program at the Barretos School of Health Sciences and Dr. Luis Gustavo C. Romagnolo, Head of Innovation of Barretos Cancer Hospital. Presenters included Dr. Kevin Smith, President and CEO, University Health Network, and topics included innovations in detection, care and patient assessment.



Canadian Global Cancer Network 2022. The Global Cancer Program was thrilled to announce the launch of the Canadian Global Cancer Network in 2022. Health equity is a key pillar of Canada's health care system and is a cornerstone of the Canadian Strategy for Cancer Control, which identifies the importance of international partnerships in advancing cancer control. Organizations and institutions across Canada, including the Canadian Partnership Against Cancer (CPAC), Queen's University, McGill University, Hospital for Sick Children, Princess Margaret Cancer Centre, and others, are committed to addressing global cancer control in access and disparities. However, awareness and understanding of the scope and breadth of these activities across the country has, to-date, been limited. The development of Canadian Global Cancer Network is the first step to create a collaborative national approach to global cancer control, to learn from each other, and to maximize the impact of our collective efforts.

<https://www.partnershipagainstcancer.ca/canadianglobalcancernetwork/>

In the past couple of years, virtual workshops were organized by Queen's University and the Princess Margaret Global Cancer Program. In December 2022, a hybrid conference, the Canadian Global Oncology Workshop, was organized by McGill University to create an opportunity for leaders in oncology and global health to share ideas, experiences, and lessons learned in the field. 284 participants from over 30 countries attended the workshop which helped foster collaboration and dialogue on initiatives in research, education, advocacy, and policy across the cancer care continuum. Link for viewing:

<https://www.youtube.com/playlist?list=PL5QXqNfeRrQemO4ehh6KGdvge-zns36v>

APPENDIX A: PUBLICATIONS

JOURNAL PUBLICATIONS

1. Wilson, B. E., & Rodin, D. (2022). Global Inequity and its Consequences in Radiation Oncology Research. *International journal of radiation oncology, biology, physics*, 113(3), 509–510. <https://doi.org/10.1016/j.ijrobp.2022.04.028>
2. Scott, A. A., Polo, A., Zubizarreta, E., Akoto-Aidoo, C., Edusa, C., Osei-Bonsu, E., Yarney, J., Dwobeng, B., Milosevic, M., & Rodin, D. (2022). Geographic Accessibility and Availability of Radiotherapy in Ghana. *JAMA network open*, 5(8), e2226319. <https://doi.org/10.1001/jamanetworkopen.2022.26319>
3. Khader, J., Glicksman, R. M., Mheid, S., Mansour, A., Giuliani, M. E., Gospodarowicz, M., Almousa, A., Abdel-Razeq, H., & Rodin, D. (2022). Enhancing International Cancer Organization Collaborations: King Hussein Cancer Center and Princess Margaret Cancer Centre Model for Collaboration. *Journal of cancer education : the official journal of the American Association for Cancer Education*, 37(3), 763–769. <https://doi.org/10.1007/s13187-020-01878-z>
4. Pramesh, C. S., Badwe, R. A., Bhoo-Pathy, N., Booth, C. M., Chinnaswamy, G., Dare, A. J., de Andrade, V. P., Hunter, D. J., Gopal, S., Gospodarowicz, M., Gunasekera, S., Ilbawi, A., Kapambwe, S., Kingham, P., Kutluk, T., Lamichhane, N., Mutebi, M., Orem, J., Parham, G., Ranganathan, P., ... Weiderpass, E. (2022). Priorities for cancer research in low- and middle-income countries: a global perspective. *Nature medicine*, 28(4), 649–657. <https://doi.org/10.1038/s41591-022-01738-x>
5. Mafrá, A., Laversanne, M., Gospodarowicz, M., Klinger, P., De Paula Silva, N., Piñeros, M., Steliarova-Foucher, E., Bray, F., & Znaor, A. (2022). Global patterns of non-Hodgkin lymphoma in 2020. *International journal of cancer*, 151(9), 1474–1481. <https://doi.org/10.1002/ijc.34163>
6. Li, B. T., Daly, B., Gospodarowicz, M., Bertagnolli, M. M., Brawley, O. W., Chabner, B. A., Fashoyin-Aje, L., de Claro, R. A., Franklin, E., Mills, J., Legos, J., Kaucic, K., Li, M., The, L., Hou, T., Wu, T. H., Albrecht, B., Shao, Y., Finnegan, J., Qian, J., ... Wu, Y. L. (2022). Reimagining patient-centric cancer clinical trials: a multi-stakeholder international coalition. *Nature medicine*, 28(4), 620–626. <https://doi.org/10.1038/s41591-022-01775-6>
7. Papadakos, T., Gospodarowicz, M., & Giuliani, M. (2022). Why Leadership? The Intersectionality of Leadership and Health Equity. *International journal of radiation oncology, biology, physics*, 113(1), 37–39. <https://doi.org/10.1016/j.ijrobp.2022.01.051>
8. Wilson, B. E., Oar, A., Rodin, D., Bray, F., Ferlay, J., Polo, A., Borrás, J. M., Bourque, J. M., Malik, M., Ynoe de Moraes, F., Lievens, Y., Stevens, L. M., Zubizarreta, E., & Yap, M. L. (2022). Radiotherapy prioritization in 143 national cancer control plans: Correlation with radiotherapy machine availability, geography and income level. *Radiotherapy and oncology : journal of the European Society for Therapeutic Radiology and Oncology*, 176, 83–91. <https://doi.org/10.1016/j.radonc.2022.09.001>
9. Udayakumar, S., Solomon, E., Isaranuwatthai, W., Rodin, D. L., Ko, Y. J., Chan, K. K. W., & Parmar, A. (2022). Cancer treatment-related financial toxicity experienced by patients in low- and middle-income countries: a scoping review. *Supportive care in cancer : official journal of the Multinational Association of Supportive Care in Cancer*, 30(8), 6463–6471. <https://doi.org/10.1007/s00520-022-06952-4>
10. Suleman, A., Vijenthira, A., Berlin, A., Prica, A., & Rodin, D. (2022). The Use of Virtual Care in Patients with Hematologic Malignancies: A Scoping Review. *Current oncology (Toronto, Ont.)*, 29(2), 892–900. <https://doi.org/10.3390/curroncol29020076>
11. Safavi, A. H., Lovas, M., Liu, Z. A., Melwani, S., Truong, T., Devonish, S., Abdelmutti, N., Sayani, A., Rodin, D., & Berlin, A. (2022). Virtual Care and Electronic Patient Communication During COVID-19: Cross-sectional Study of Inequities Across a Canadian Tertiary Cancer Center. *Journal of medical Internet research*, 24(11), e39728. <https://doi.org/10.2196/39728>
12. Rodin, D., Sutradhar, R., Nofech-Mozes, S., Gu, S., Faught, N., Hahn, E., Fong, C., Trebinjac, S., Paszat, L., & Rakovitch, E. (2022). Long-term outcomes of women with large DCIS lesions treated with breast-conserving therapy. *Breast cancer research and treatment*, 192(1), 223–233. <https://doi.org/10.1007/s10549-021-06488-x>
13. Rodin, D., Shapiro, Y., Pinhasov, A., Kreinin, A., & Kirby, M. (2022). An accurate wearable hydration sensor: Real-world evaluation of practical use. *PloS one*, 17(8), e0272646. <https://doi.org/10.1371/journal.pone.0272646>

APPENDIX B: VIRTUAL SPEAKER SERIES

Many of the recorded virtual speaker series are hosted on PM CancerCampus. [Click here](#) to view recordings.

2022 Completed Series

INQUIRE-Onc (International Quality and Research Exchange in Oncology) Virtual Speaker Series

Mission: To advance quality care and research with development of a network of international collaborators to aid in peer mentorship, consultancy and quality innovation.

Structure: Virtual meetings/rounds will be held on the second Wednesday/month from 4-5pm EST with Quality team members from AC Camargo, Brazil and Princess Margaret Cancer Centre, Canada with a goal of expansion of membership to other International Cancer Centres over time. Each session is open to any interested individuals at the participating institutions based on topic.

Content: Each session will focus on care delivery, safety or quality. A presentation with a minimal didactic component and ample opportunity for interactive dialogue is encouraged.

Monday February 14: Dr. Lesley Moody entitled 'Improving the Patient & Family Experience: More than Checking a Box'.

March 30: Dr. Samuel Aguiar, Chief of Colorectal Cancer Division, and Bruna Kuper, Research Nurse, AC Camargo Cancer Center entitled 'Remote Monitoring in Colorectal Surgery Patients'

April 13: Sanaz Ghazi, PhD, CCMP, CRP, Process Improvement Specialist, Princess Margaret Cancer Center entitled 'Best Practice For Process Improvement in a Cancer Center'

May 11: Dr. Barbara Vizzachi, AC Camargo Cancer Center entitled 'Tumour Board Key Performance Indicators'

July 13: Dr. Jennifer Jones, on Cancer Rehabilitation and Survivorship at Princess Margaret Cancer Centre

February 10 PM Tata Virtual Speaker Series Clinical implementation of Automated Treatment

Planning Dr. Tom Purdie, Medical Physicist, Princess Margaret Cancer Centre **Automated Planning for Gynecological Cancers**, Dr. Supriya Chopra, Radiation Oncologist, & Ms Jeevanshu Jain, Medical Physicist, Tata Memorial Hospital

April 7 PM-Tata Virtual Speaker Series SMARTER Meso Study Dr John Cho, Radiation Oncologist, Princess Margaret Cancer Centre **Prophylactic vs Reactive Enteral Nutrition in patients undergoing curative radiation therapy for Head and Neck Cancers** Dr Sarbani Ghosh Laskar, Radiation Oncologist, Tata Memorial Hospital

Thursday July 14 Princess Margaret Cancer Program Summer Guest Speaker Establishing an Aga Khan University and Princess Margaret Cancer Centre Connection Dr. Mansoor Saleh, MD, Founding Director, Aga Khan University Cancer Centre, Nairobi, Kenya

September 8 PM-Tata Virtual Speaker Series Drug Repurposing as a Drug Development Strategy Dr. Aaron Schimmer, Director, Research, Princess Margaret Cancer Center **Novel drugs and drug delivery platforms in cancer therapy** Dr. Jayant S Goda, Radiation Oncologist, Tata Memorial