

ANNUAL REPORT

2014





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We are pleased to present the 2014 Annual Report for the Princess Margaret Cancer Centre at the University Health Network (UHN). The report profiles the recent activities of our departments, disease groups, and research and education programs. In 2014, we made significant progress on our strategic plan – World Class Personalized Cancer Medicine – while maintaining excellence in our core business, including excellence in clinical practice and quality of care, and appropriate and advanced hospital infrastructure to enable the delivery of state-of-the-art cancer care.

LEADERSHIP MESSAGE

Our strategy emphasizes five core themes: transforming patient care, augmenting correlative cancer biology, accelerating guided therapeutics, expanding novel therapeutics, and driving outreach and education. We have structured this report along these themes, highlighting exciting developments in each area. Our focus this past year has been, and will continue to be, on fostering a culture of innovation, integration and collaboration within our programs, while fully engaging our staff.

There have been a number of changes in leadership at UHN and the Princess Margaret. After nine years as UHN President and CEO, Dr. Bob Bell has moved on to a new assignment as Ontario's Deputy Minister of Health and Long-Term Care. We wish Dr. Bell all the best and thank him for his outstanding leadership over the years. Dr. Peter Pisters joined UHN in January 2015 as President and CEO. We would like to extend a warm welcome to him and we look forward to working with him. Dr. Benjamin Neel has moved to a new leadership role. After eight years as Director of Research for the Princess Margaret Cancer Centre, Dr. Neel has assumed the position of Director of the Perlmutter Cancer Institute at NYU Langone Medical Centre in New York City. Dr. Bradley Wouters has been appointed as the interim Director of Research for the Princess Margaret Cancer Centre.

We would also like to acknowledge the unfortunate passing of Dr. Pam Catton. The impact she had as the Medical Director of the Breast Cancer Survivorship Program and Radiation Oncologist will live on through her work and we will miss her dearly.

We are delighted to announce the recent integration of the Psychosocial Oncology, Palliative Care and Cancer Rehabilitation and Survivorship programs to form the new Supportive Care Department at the Princess Margaret. This new department will bring together dedicated people working toward providing and promoting the provision of supportive care for all patients and their families.

Another exciting development in 2014 was the advancement of the Princess Margaret Space Transformation project. This initiative will enable us to free up additional space for the purpose of improving staff amenities, and most importantly, improving the patient experience. This initiative would not have been possible without The Princess Margaret Cancer Foundation. We would like to thank them for their unwavering commitment to fundraising such that we can continue to work towards achieving our vision.

In particular, we want to thank all our staff and volunteers for their remarkable dedication and determination to provide the very highest standard of care and support for our patients, and for continually pushing the boundaries of innovation and collaboration in our quest towards living our vision as a Top 5 Cancer Centre in the world. For further details, please visit our website: www.theprincessmargaret.ca.

Marnie Escaf MHA, HBBA
Senior Vice President
Executive Lead
Princess Margaret Cancer Program



Mary Gospodarowicz MD, FRCPC, FRCR (Hon)
Medical Director
Princess Margaret Cancer Program



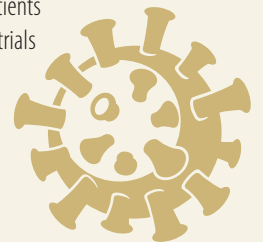
SIZE

- ✓ 750,000 sq ft of clinical and research space
- ✓ >3,000 people
 - ◆ 2,900 employees
 - ◆ 170 oncologists
 - ◆ 400 volunteers
- ✓ 202 beds
- ✓ 350 ambulatory clinics
- ✓ 18 radiation treatment machines



RESEARCH

- ✓ 397,824 sq ft research space
- ✓ 1,156 researchers and research staff
- ✓ \$150M in research funding
- ✓ 1,224 publications
- ✓ 167 clinical research studies opened in 2014
- ✓ 7,129 patients participated in clinical research studies in 2014
- ✓ 20% of patients on clinical trials



EDUCATION

- Student body in cancer:
- ✓ 102 clinical fellows
 - ✓ 169 nursing students
 - ✓ 173 residents



CLINICAL CARE

- ✓ 17,460 new patients
- ✓ 6,201 surgeries
- ✓ 34,851 outpatient chemo visits
- ✓ 92,526 radiation visits
- ✓ 368 stem cell transplants



OUR PROGRAM

WHO WE ARE

Our Vision: "To achieve global impact as one of the top 5 comprehensive cancer programs in the world"

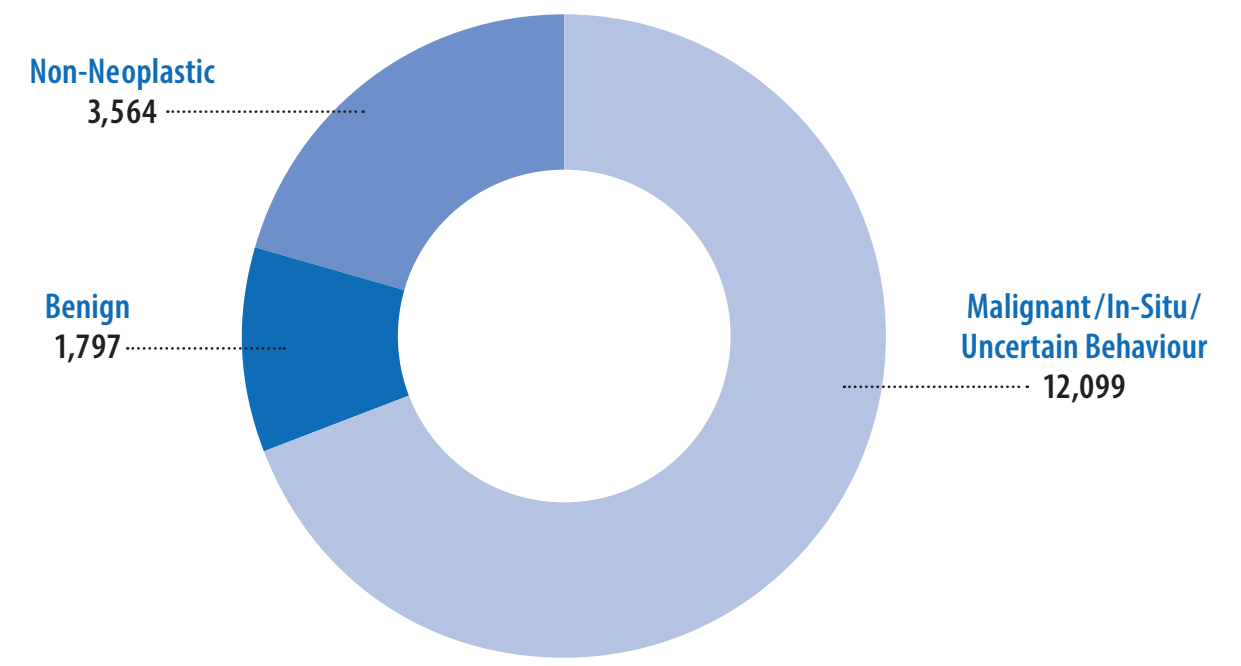
The Princess Margaret Cancer Centre at UHN in Toronto is Canada's largest comprehensive cancer centre. Offering a full suite of cancer services at the community, regional, provincial and international levels, we are a key resource for complex cancer care spanning the continuum; from diagnosis to palliation and survivorship, across all disease sites.

Under the auspices of Cancer Care Ontario (CCO), the Princess Margaret is responsible for the Toronto Central South Regional Cancer Program, which includes the Princess Margaret and UHN, Mount Sinai Hospital, St. Joseph's Health Centre, St. Michael's Hospital and Women's College Hospital, in collaboration with Toronto Central Community Care Access Centre and Toronto Central Palliative Care Network.

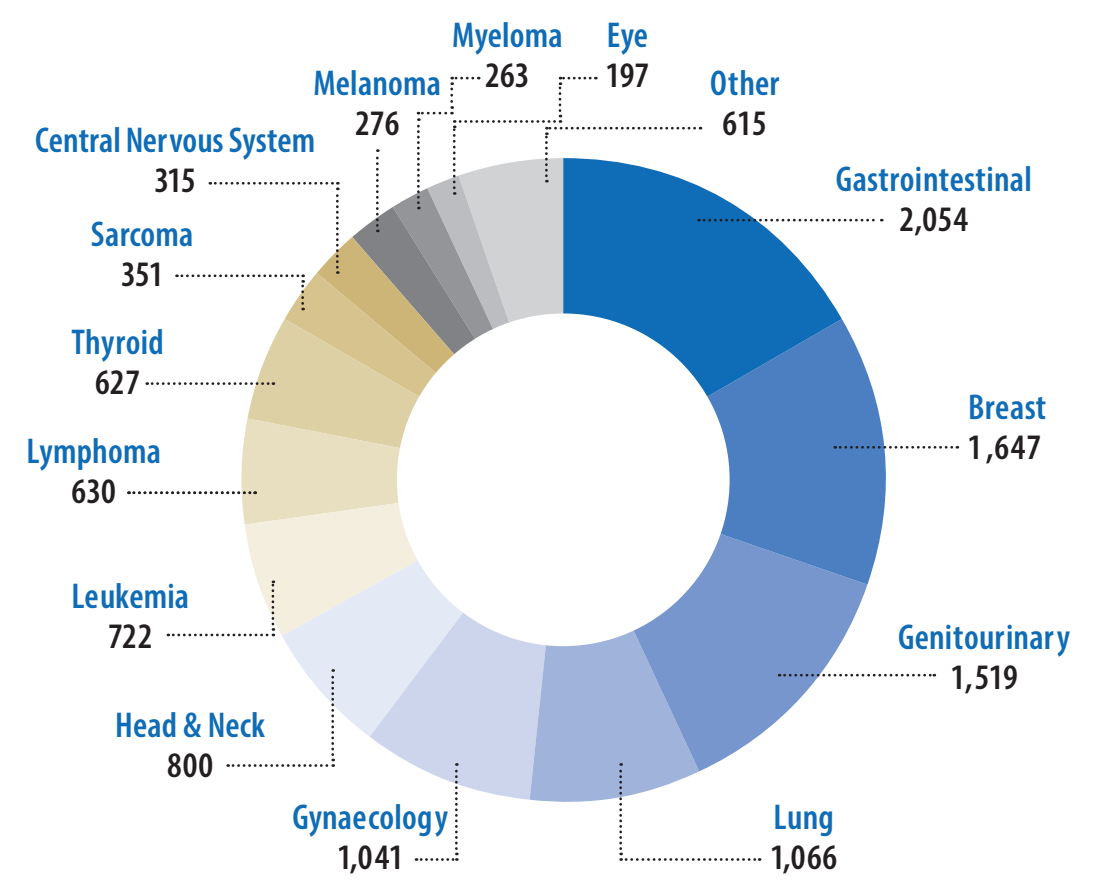
Patients receive care at four sites across UHN; Toronto General Hospital, Toronto Western Hospital, Toronto Rehabilitation Institute and the Princess Margaret Cancer Centre, however most cancer services are delivered at the Princess Margaret site. The following numbers describe the size and scope of cancer clinical care, research and education activity across our sites.

New Patients in 2014

Total 17,460



New Patients by Disease Group 2014



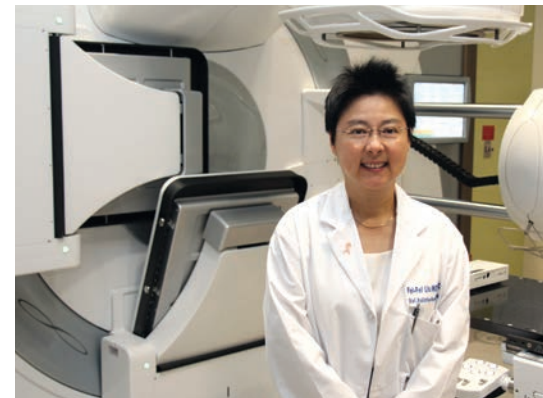
CLINICAL CARE

OUR CLINICAL PROGRAMS



Surgical Oncology

The Department of Surgical Oncology offers the most comprehensive surgical cancer care in Canada. Our multidisciplinary surgical teams offer services to over 6,200 patients a year for central nervous system, breast, skin and melanoma, sarcoma, urology, head and neck, thoracic, hepatobiliary, colorectal, gynecologic, ocular neoplasms and oncological reconstruction. 80% of patients require surgical services during their cancer care and our team of 64 surgical oncologists continues to meet the increasing demand for surgical services while contributing to growing and improving the program in areas where we provide care to the most complex patients.



Radiation Oncology

The Radiation Medicine Program provides services to over 6,000 patients per year, 12% of which are enrolled in clinical trials. Our team of over 350 radiation specialists provides these services in one of the largest treatment facilities in the world. We have a large number of radiation treatment suites, simulators and equipment that allow us to offer specialized treatments to our patients such as palliative and pediatric radiation therapy; treatment of oligometastases; stereotactic radiation therapy; brachytherapy; and gamma knife radiosurgery.



Medical Oncology

The Medical Oncology and Hematology Department is a multidisciplinary, inter-professional team that constitutes this country's largest centre treating leukemia, lymphoma and myeloma. In solid tumours, we focus on treatment of complex cancer cases requiring multidisciplinary input that is provided by our team of 50 medical and hematological oncologists and more than 150 practitioners, nurses, trainees and allied health professionals. More than 50 international fellows from five continents are currently undergoing clinical research training at the Princess Margaret. The team also includes 16 hematologists and a Blood and Marrow Transplant Centre. Our facilities have over 100 inpatient beds, an 80-chair chemotherapy unit, an acute care centre and over 100 ambulatory clinics each week.



Supportive Care – Psychosocial Oncology, Palliative Care and Cancer Rehabilitation and Survivorship

Supportive Care is comprised of Psychosocial Oncology, Palliative Care and the Cancer Rehabilitation and Survivorship Program. In total, over 70 social workers, psychiatrists, psychologist, therapists, palliative care physicians and nurses engage in clinical care, research and education with the ultimate vision to ensure that every patient receives the supportive and palliative care that they need. Care is provided to patients through clinics, consultation services, emergency on-call services and in the 12-bed palliative care inpatient unit. The Supportive Care Department aims to maximize the quality of the patient experience across the continuum of care and enhance research and education opportunities through increased integration and collaboration.

Collaborative Academic Practice

The Collaborative Academic Practice (CAP) portfolio contains 14 health professions involved in the care of cancer patients. These health professionals play a central role in leading the synthesis of practice, education and research, and each person plays a part in modeling a dynamic culture of collaboration. Each profession is aligned to the cancer program areas, working to optimize unique contributions in collaboration with other members of interdisciplinary and multidisciplinary teams, to enable best practice, best care, and best service. There are 40 health professionals and almost 500 nurses dedicated to the care of cancer patients through CAP.





PERSONALIZED CANCER MEDICINE

OUR STRATEGY

The Princess Margaret Cancer Centre Strategy 2013-2018: World Class Personalized Cancer Medicine summarizes our goals across five key strategic themes with a vision of *Global Impact as a Top 5 Comprehensive Cancer Centre in the World*.

Transform patient care We will transform patient care by empowering patients to become partners in their care, developing new models of inter-professional care, offering support through all the aspects of cancer care, and customizing support for unique and vulnerable populations.

Augment correlative cancer biology We will understand cancer biology at the molecular, cellular and tumour levels, knowing that this is critical to diagnosis, monitoring treatment response, and developing new therapeutic strategies that are safer and more effective.

Accelerate guided therapeutics We will foster continuous innovation and evaluation of technologies, supported by a robust foundation of informatics and quantification; enabling individualized cancer detection, diagnosis, treatment and support.

Expand novel therapeutics We will provide patients with access to leading-edge treatments through research and implementation of novel systemic therapeutics, incorporating molecular imaging and genomic signatures and improving outcomes for cancer patients globally.

Drive outreach and education We will strengthen our impact and reputation by contributing to our communities, improving care and research, and exchanging knowledge through education and outreach as well as through global and local collaborations and partnerships.

WE ARE TRANSFORMING PATIENT CARE



“Shaping the future takes leadership, courage and commitment to a strong vision. Looking forward, I see many opportunities for our teams to continue to provide innovative care and transform the patient experience at the Princess Margaret.”

Judy Costello

Spotlight on Judy Costello

Judy's leadership has stretched beyond her portfolio of palliative care, malignant hematology, hematology and stem cell transplant. In 2014 she was co-chair of the Toronto Central Local Health Integration Network (TCLHIN) Palliative Care Council, responsible for the implementation of the TCLHIN Palliative Care Strategy; co-led the operationalization of the CCO Acute Leukemia strategy for GTA and co-chaired the Princess Margaret Quality Committee. Judy is a surveyor with Accreditation Canada and has presented locally, nationally and internationally on topics such as quality, systems improvement, patient centered care, pain management and professional practice structures and strategies that lead to improved outcomes.

Judy's impact on Transforming Patient Care at the Princess Margaret includes shaping the development of a plan for Cancer Rehabilitation and planning for a new palliative care clinic. In addition, she has partnered with colleague Terri Stuart-McEwan (Executive Director) to provide oversight for the development of programs targeting specialized populations such as the Adolescent and Young Adult Program and the Geriatric Demonstration Project. She also led the transformative planning that took place in Malignant Hematology and is now also shaping the future for acute care.

Launch of the Global Institute for Psychosocial, Palliative and End-of-Life Care

The Global Institute of Psychosocial, Palliative and End-of-Life Care (GIPPEC) at the University of Toronto was officially launched October 6th at the Princess Margaret Cancer Centre. The aim is to generate knowledge and debate to inform public policy, healthcare delivery and clinical practice, and to diminish stigma and barriers to access of psychosocial and palliative care for those with life-threatening and advanced disease.

GIPPEC is devoted to promoting and developing interdisciplinary research that addresses the medical, psychological, social, legal, ethical, cultural and religious issues related to psychosocial and palliative care of individuals with advanced and terminal disease. Personalized Cancer Medicine will be furthered by the meaningful evidence generated to inform local, national and global health policy, advance clinical practice and improve public awareness.



Creating a Canadian Survivorship Research Community

Co-led by Jennifer Jones, Acting Director of Cancer Rehabilitation and Survivorship at the Princess Margaret, The Canadian Cancer Survivorship Research Consortium was launched in 2014 and now has over 70 associates. The goal of the consortium is to develop a strong body of cancer survivorship knowledge in Canada by creating an effective Canadian research community, building research teams and projects, effectively translating research findings into practice, and mentoring the next generation of researchers. The consortium shares updates on the latest in cancer survivorship research, monthly, during research rounds hosted in the ELLICSR boardroom and broadcasts to remote participants across the country.



The Max Tanenbaum Healing Garden

The 14th floor courtyard is now home to the new Max Tanenbaum Healing Garden – a natural and beautiful space designed to ensure a pleasing, tranquil, year-round garden in an area that is visible from patient rooms. The garden design uses strong, cultivated patterns of formal French gardens and incorporates the artistry of hand blown glass flowers, enclosed by an artificial boxwood hedge.

This garden is being funded with proceeds from our international partnership with Kuwait and we want to thank everyone who has invested in this partnership, both at home and abroad.

“It's a reminder that life is beautiful.”

Patient, Princess Margaret Cancer Centre

WE ARE AUGMENTING CORRELATIVE CANCER BIOLOGY

Spotlight on Dr. Rob Bristow

Dr. Bristow is a Clinician-Scientist at Princess Margaret Cancer Centre where he treats genitourinary cancers and is a Professor in the Departments of Radiation Oncology and Medical Biophysics at the University of Toronto. His primary research interests are in tumour hypoxia, genome instability and prostate cancer genomics in the context of Personalized Cancer Medicine.

Dr. Bristow is an international leader in his field. He is currently the lead principal investigator for the Canadian component of the International Cancer Genome Consortium whole genome prostate cancer sequencing project (CPC-GENE) and serves on the Scientific Advisory Board/Committee for Prostate Cancer Canada (co-Chair), the Prostate Cancer Foundation (USA), the Advisory Council for Research (ACOR) of Canadian Cancer Society Research Institute, the Movember Global Strategic Committee and Action Plan (GAP) and the Cancer Research Society. He also is Chair of the NCIC Clinical Trials Group (NCIC CTG) GU Correlative Sciences Working Group.

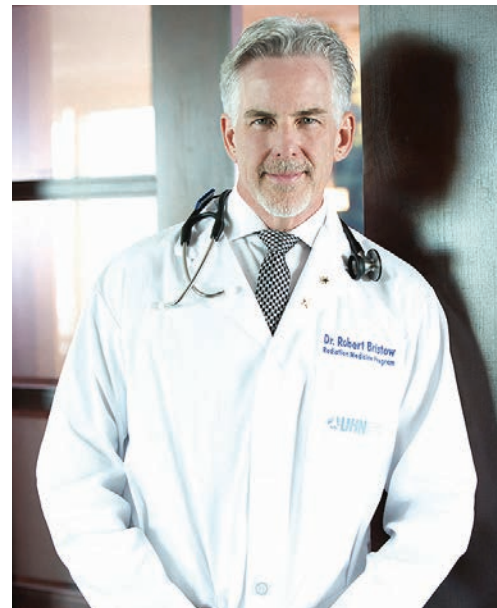
Recent research conducted by Dr. Bristow and his team identified a genetic test that acts as a quick and highly accurate tool to determine which men with prostate cancer would do well with only surgery or radiation, and those who would need additional treatment (chemotherapy, hormone therapy or molecular-targeted drugs) – to improve cure rates. This research, published in *Lancet Oncology*, was selected as one of the Canadian Cancer Society's top 10 research stories of 2014.

Currently, prostate cancer recurs in 30-50% of patients following image-guided radiotherapy or radical prostatectomy interventions. Dr. Bristow's research aims to personalize each patient's treatment to decrease the chance of recurrence.

Landmark Study Identifies Improved Methods to Classify and Treat Patients with Human Papilloma Virus (HPV) – Associated Oropharynx Cancer

Over the past 20 years, the incidence of human papilloma virus (HPV)-associated oropharynx cancer (OPC) has been increasing, now comprising the majority of all OPC cases seen in North America. Through generous donations by multiple donors including Joe's Team Fund for Translational Research, a multidisciplinary team of head and neck cancer experts led by Dr. Brian O'Sullivan has been conducting multiple translational research studies for head and neck cancer patients.

Dr. O'Sullivan and his team have been global leaders in studying HPV-related OPC, enabled by a large prospective head and neck cancer database of over 10,000 patients. Their two landmark studies published in the *Journal of Clinical Oncology* in 2013 and 2015, also chosen in 2014 as a "Best of ASTRO" by the American Society for Radiation Oncology (ASTRO), outlines methods to categorize risk groups for HPV-positive OPC patients using clinical features alone. This enables oncologists to identify lower risk patients and remove or modify therapies that have significant acute and long-term toxicities to the patient. The study also includes proposals for significant modification of the existing Union for International Cancer Control stage classification and prognostic grouping for OPC, to further facilitate personalized treatment and has already influenced the design of clinical trials currently conducted by multi-centered international head and neck cancer clinical trials groups.



“ This is Personalized Cancer Medicine to the hilt – the ability to provide more targeted treatment to patients based on their unique cancer genetic fingerprint plus what's going on in the cancer cell's surrounding environment. We hope to improve cure rates by reducing the chances of the cancer recurring and preventing the cells from spreading. ”

Dr. Rob Bristow



“ Advances in nanotechnology and image guidance enable real-time visualization of cancer tissue during surgeries and interventions and show great promise in treatment of cancer while sparing healthy tissue. ”

Dr. Kazuhiro Yasufuku

AQUA Team Awarded the Cancer Quality Council of Ontario's Innovation Honorable Mention

The AQUA (Automated Quality Assurance) system was developed by a multidisciplinary team led by Drs. Daniel Létourneau and David Jaffray. AQUA provides radiotherapy (RT) clinics with a comprehensive software platform that coordinates and centralizes all quality assurance tests that need to be performed across different RT equipment, thus ensuring high-quality RT delivery and patient safety. In 2014, the AQUA team was awarded Honourable Mention for Innovation by the Cancer Quality Council of Ontario. The award, sponsored by CCO and the Ontario Division of the Canadian Cancer Society, recognizes initiatives that make significant contributions to quality or innovation in the delivery of cancer care across the province.

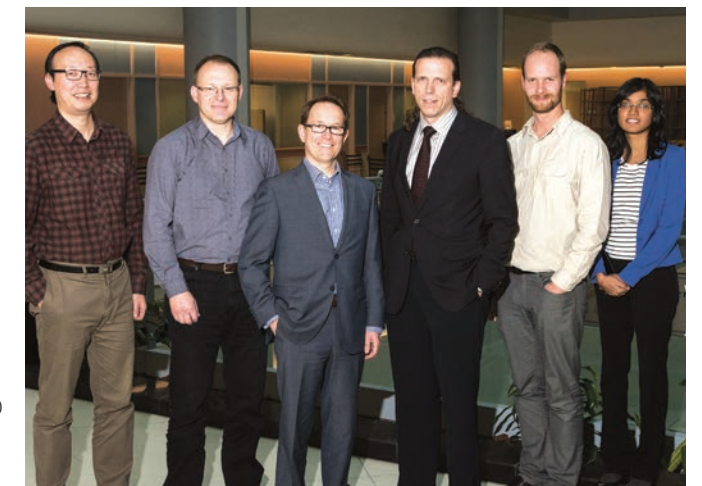
In order to expand AQUA's reach to patients beyond those treated at the Princess Margaret, Princess Margaret and its spin-off Acumyn Inc secured an exclusive development and global distribution agreement with one of the world's biggest radiation therapy companies, Elekta Ltd. The agreement will see UHN's award-winning AQUA platform developed into a marketable product by Acumyn Inc. and then offered to cancer clinics around the world by Elekta.

WE ARE ACCELERATING GUIDED THERAPEUTICS

Spotlight on Dr. Kazuhiro Yasufuku

An Associate Professor of Surgery at the University of Toronto, Dr. Yasufuku holds multiple leadership roles at the Princess Margaret and UHN as staff thoracic surgeon, Director of the Interventional Thoracic Surgery Program, and Clinical Lead of Thoracic Surgery within the Guided Therapeutics (GTx) and Robotic Surgery Programs. Dr. Yasufuku is leading multiple translational clinical trials through the GTx Program. In May 2014, he performed the world's first clinical case utilizing novel near-infrared fluorescence imaging technology in combination with Dual energy CT and Cone-beam CT in the GTx OR for localization and minimally invasive resection of small-sized lung cancer. The use of this approach has allowed the surgical team to employ a lung cancer "lumpectomy" rather than removal of a whole section of lung. This allows earlier return to normal life with less short-term and long-term side effects. These technologies are showing promise in early detection and treatment of early stage lung cancer, which will be key to improved survival.

The Princess Margaret GTx Program is dedicated to the research and development of new technologies that allow surgeons to maximize the accuracy of surgical treatment and minimize damage to surrounding normal structure. This will allow improved survival and improved quality of life for our patients. The program develops and implements real time imaging modalities and novel contrast agents to better "see" the cancer target and employs novel therapies (robotics, laser) to destroy the target volume. The GTx group is active in lung, head and neck and sarcoma cancers with a plan to increase the breadth of involvement to gynaecological and liver and pancreas surgery over time. This program is dedicated to creating and innovating new solutions for cancer treatment, translating those solutions to patient care in the operating room, radiation suite, chemo day care unit, pathology bench and radiology suite. It is our responsibility as a large cancer teaching centre to evaluate whether or not a new intervention is better and to educate those to take it forward.



WE ARE EXPANDING NOVEL THERAPEUTICS

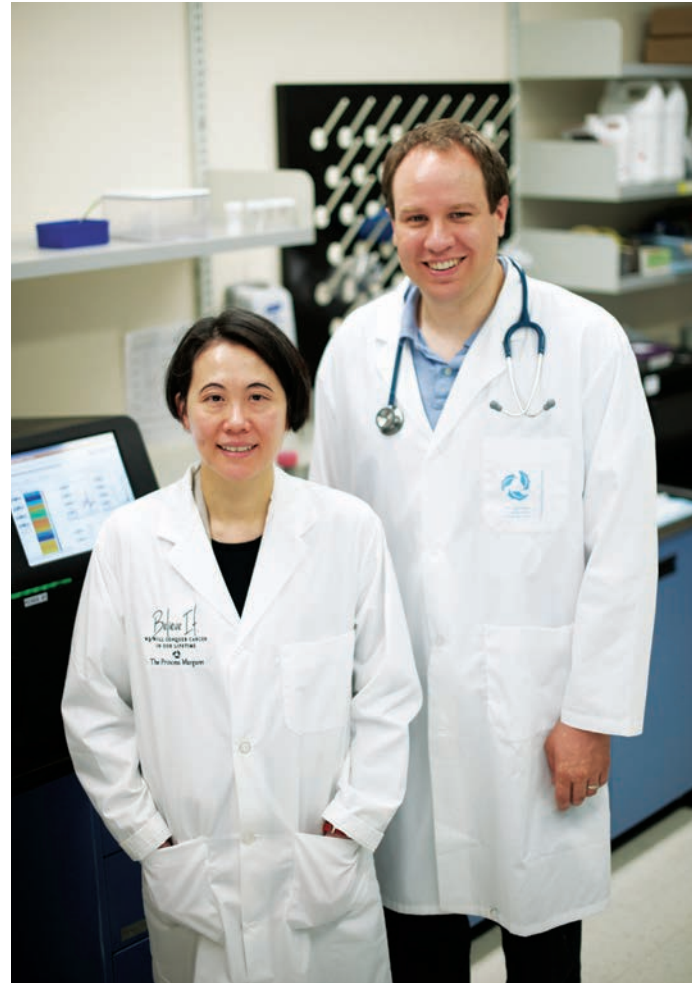
Spotlight on Dr. Lillian Siu and Dr. Philippe Bedard

Medical oncologists, Drs. Lillian Siu and Philippe Bedard have demonstrated exceptional leadership in the development of novel therapeutics. The impact of their work expands far beyond the walls of Princess Margaret; Dr. Siu is currently serving a four-year term (2012-2016) on the Board of Directors for the American Society of Clinical Oncology (ASCO). She also serves as a member of the Nomination Committee for the American Association for Cancer Research (2014-2016). Dr. Bedard is a member of the Steering Committee for the Breast International Group AURORA Molecular Screening Initiative and recently delivered plenary talks at the European Organization for Research and Treatment of Cancer, the National Cancer Institute and the American Association for Cancer Research meeting and the European Breast Cancer Conference on molecular profiling.

Led by this dynamic team, the Phase I Program is instrumental in advancing Personalized Cancer Medicine. In 2014, the program once again successfully competed for the US National Cancer Institute Phase I grant and is now one of 13 sites comprising the Experimental Therapeutics Clinical Trials Network, an important venue for the identification and development of new treatments. In 2014, the Phase I Program enrolled a total of 204 solid tumour patients, testing highly sought after anticancer drugs including immune checkpoint inhibitors, immune-stimulatory molecules and antibody drug conjugates, amongst others. The program holds preferred partnership status with many large pharmaceutical companies and is considered one of the top Phase I Programs in the world.

IMPACT and COMPACT are two genomic-based clinical trials, led by Drs. Siu and Bedard since March 2012, that are directly advancing Personalized Cancer Medicine by helping to inform treatment decisions based on the molecular profile of an individual's tumour. IMPACT (Integrated Molecular Profiling in Advanced Cancer Trial) is the first comprehensive Canadian molecular profiling program and COMPACT (Community Oncology Molecular Profiling in Advanced Cancer Trial) includes community partners, extending our reach beyond patients being treated at Princess Margaret. Patients with actionable mutations identified by IMPACT/COMPACT are frequently referred to the Phase I Program to enable enrollment into clinical trials of novel drugs that best match their tumours' molecular profiles.

Through the IMPACT and COMPACT studies, over 2,500 patients have been enrolled to date and due to the success of the studies, Dr. Bedard and two fellows from Princess Margaret, Anna Spreafico and Donna Graham, were invited to provide oral presentations at the prestigious ASCO American Society of Clinical Oncology (ASCO) Conference last year.



“**‘Precision medicine’ are no longer just buzz words. Oncologists are now armed with an improved knowledge of the key genetic changes that drive tumour growth. This information, along with rapid advances in molecular profiling technologies such as next generation sequencing, as well as an emerging arsenal of new anticancer drugs, have enabled the delivery of personalized treatment to many patients at the Princess Margaret.**”

Drs. Lillian Siu and Philippe Bedard

Clinical Research in the Leukemia Program

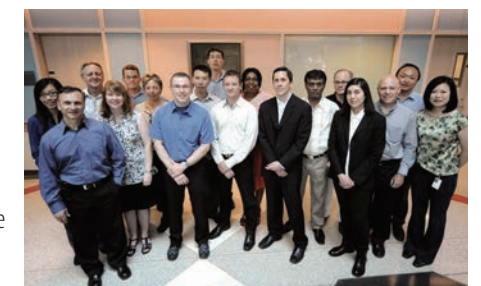
The Leukemia Program provides our patients the opportunity to participate in cutting edge clinical and translational research. Currently there are over thirty active phase I, II, and III clinical trials available for our patients. Clinical trial activity is focused on personalized medicine as the program evaluates targeted therapies in early phase clinical trials. For example, the program is a co-leader of a multi-centre phase I trial of the MDM2 inhibitor that defines the safety and pharmacokinetics of the drug in patients with relapsed and refractory Acute Myeloid Leukemia (AML). Rapid and durable clinical responses have been observed in a subset of patients and a genetic signature predictive of response has been identified. Interim results were presented by Dr. Karen Yee at the 2014 Annual meeting of the American Society of Hematology.

The Leukemia Program also prioritizes translating discoveries from Princess Margaret labs into clinical trials. Dr. Aaron Schimmer and colleagues were able to rapidly translate their laboratory findings into the clinic and in 2014 completed a multi-centre phase I clinical trial evaluating an inhibitor of mitochondrial protein synthesis in patients with AML. Moreover, in a landmark study published in 2014, Drs. Shlush, Minden, Dick, and colleagues defined “pre-leukemia” stem cells and how they evolve into acute leukemia (Shlush et al, Nature 2014). This important discovery clarified the origins of leukemia and suggested why some patients relapse.

Campbell Family Institute for Breast Cancer Research Group Develops a First-in-Class Drug Now in Clinical Testing

In an extremely rare discovery, researchers at the Campbell Family Institute for Breast Cancer Research have developed a first-in-class drug that has advanced to clinical trials. The drug known as CFI-400945 is a polo-like kinase 4 (PLK4) inhibitor that targets aneuploidy (abnormal number of chromosomes), a hallmark of many different types of cancer. The new drug has demonstrated effectiveness in pre-clinical trials against many types of cancer, including breast, ovarian and pancreatic and results have been published in leading scientific journals.

A first-in-human dose-finding phase I clinical trial started in April 2014 at Princess Margaret and University of California Los Angeles. The study is progressing well and recruitment is ongoing to evaluate safety and optimal dose for future clinical trials.



The Robert and Maggie Bras & Family New Drug Development Program (DDP) Phase II Program

Under the direction of Drs. Amit Oza and Malcolm Moore, the Robert & Maggie Bras and Family New Drug Development (DDP) Phase II program has over 40 trials open and is actively enrolling patients into studies. In 2014, more than 280 patients were accrued to early phase clinical trials. These trials are advancing the next generation of cancer therapeutics.

DDP is also the administrative hub of the Princess Margaret Phase II Consortium (PMHC), a pan-Canadian cancer research enterprise that draws upon and strategically leverages resident expertise at 10 academic cancer centres across Canada and one site in the US. In 2014, PMHC was successfully awarded a third consecutive peer-reviewed award from the US Department of Defense (PI: A. Oza) to support translational research that will improve our understanding of the mechanics behind cancer. This is in addition to support awarded by several funding agencies including: Cancer Care Ontario and Ontario Institute for Cancer Research. A member of the highly prestigious Gynecologic Cancer InterGroup (GCGI), the Consortium has been responsible for the advancement of four early phase gynecologic cancer clinical trials that will involve participation by collaborators around the world.

WE ARE DRIVING OUTREACH AND EDUCATION

Spotlight on Pamela Savage

Recently appointed as the Director of Professional Practice for Oncology, Surgery (Toronto General) and International Programs, and a member of the CAP portfolio, Pam Savage oversees Nursing and Health Professions practice across the Oncology and Surgical Services programs. Ensuring the highest standards of practice, all nurses at the Princess Margaret are certified in Chemotherapy and Biotherapy through the de Souza Institute. In 2014, Pam was proud and delighted to report that 51% of nurses at the Princess Margaret have achieved the Canadian Nurses Association (CNA) Certification in Oncology Nursing. This represents the highest number of nurses that are CNA certified in the specialty of oncology nursing in any one hospital across the country. Pam is an active member of an International Advisory Panel Management of Central Vascular Access Device Sites with Skin Impairment and has co-authored a number of medication safety related research papers. Most recently, she was the co-author of "Safe Handling of Cytotoxics: Guideline Recommendations", written in partnership with CCO. Pam also holds an external leadership position as the Co-chair of the CNA Oncology Examination Committee.



Pam's impact is felt by cancer patients well beyond the walls of the Princess Margaret. In addition to leading our nursing and health professions work in Kuwait and Qatar, Pam has also played a key role in efforts to introduce specialized oncology nursing to Eldoret, Kenya. Over a four week period in September and October 2014, the Princess Margaret hosted three Kenyan nurses, which resulted in the development of a nursing orientation program for Moi Teaching and Referral Hospital (MTRH), updated chemotherapy procedures for improved nurse and patient safety, and a curriculum for a higher diploma in oncology. Working with Dr. Doris Howell, RBC Chair in Oncology Nursing Research, the engagement is expected to expand in 2015 to include collaboration with Moi University School of Nursing and Aga Khan University School of Nursing with a focus on the development of the first masters level Nursing Oncology curriculum in Kenya. There will be opportunity for the Princess Margaret nurses to provide hands on oncology nursing education at MTRH and for others to visit faculty giving lectures at Moi University.

“As a member of the Collaborative Academic Practice team, the new role of Director of Professional Practice role in Oncology, Surgery and International is an exciting development for the cancer program. It strives to enhance the integration of practice, education and research within the inter-professional team, and across programs leading to the best possible care for cancer patients.”

Pam Savage

Cancer Care Ontario Communities of Practice

Communities of Practice (CoP) is a forum used to bring variety of professionals from the Ontario regional cancer programs together to share ideas, discuss best practice guidelines, and evaluate existing practice. It is a platform that allows inter-professional staff from the regional hospitals to collaborate on areas within their discipline.

In 2014, Princess Margaret led/supported two CoP events. The first was in the endocrine disease site, which provided interactive multidisciplinary case reviews to facilitate discussions on pre-operative and post-operative methods of thyroid patient care. The second was on Psychosocial, Patient Education, Palliative Care and Symptom Management, focused on information sharing on outcomes associated with screening and symptom management, the influence of low health literacy in screening initiatives, and the current state and future plans from CCO regarding symptom screening. It also generated ideas to enhance regional collaboration on smoking cessation.

Toronto Regional Cancer Program

The Princess Margaret is highly engaged in CCO's population-based cancer control efforts; we have over 20 staff in regional or provincial leadership positions.

The Princess Margaret in the Toronto Central Region (south) leads and supports collaborative quality improvement efforts, resource sharing and knowledge exchange with partner hospitals and organizations to optimize the quality of cancer services across the region. Some of our joint achievements for 2014 include the initiation of a number of pilot projects at the Princess Margaret, such as a nursing and pharmacy-led call back program to support toxicity management, and the INTEGRATE pilot project which aims to help identify and manage patients who may benefit from early palliative care.

1st Annual Personalized Cancer Medicine Conference

On February 10 & 11th, 2014, the Princess Margaret Cancer Centre hosted its inaugural conference, "Beyond the Genetic Prescription Pad: Personalizing Cancer Medicine in 2014." The two-day scientific forum and continuing education event was designed to spark discussion and debate in order to promote knowledge exchange, innovation and collaboration with the goal of furthering Personalized Cancer Medicine. With six international keynote speakers and 26 national faculty, four highly focused sessions and lively debates and receptions, the sold-out event attracted over 200 participants ranging from clinical oncologists and scientists, to allied health professionals, nurses, students and trainees.



Building Capacity in Kuwait – Health Professions

The Princess Margaret has completed four years of its five year partnership with the Kuwait Cancer Control Centre (KCCC). The partnership is based on the tenet of local capacity building at KCCC and within Kuwait for population-based cancer control, with education as a primary vehicle for achieving this. Educational collaborations have included formal medical training at the Princess Margaret through the University of Toronto, provision of continuing education programs, ongoing professional development, and patient and family education programs.



This focus on education resulted in over a dozen personalized learning plans (PLPs) at the Princess Margaret in 2014 for Kuwaiti health professionals spanning clinical nutrition, physiotherapy, pharmacy, medical imaging and laboratory medicine. These four to 12 week experiences provide specific and dedicated training to support the enhancement of existing services at KCCC or the creation of new programs in support of patient care. For example, a physiotherapist by the name of Amal Mohammad Al Shaiji visited the Princess Margaret to understand how a lymphedema clinic is developed and operationalized. She will bring back the knowledge and lessons learned to KCCC to help them begin the process of establishing their own lymphedema program.

The opportunity enabled clinicians at KCCC to develop therapeutic diets for inpatients using the approach that was ultimately presented to and endorsed by the Kuwait Ministry of Health, inspiring dietitians across Kuwait to adopt the approach to improve nutritional care for inpatients across the country. This initiative will create lasting impact in the care of patients requiring lymphedema treatment at KCCC and across Kuwait.

The Princess Margaret expects to host another dozen PLPs in 2015, further contributing to ongoing capacity building efforts at the KCCC.

Collaboration with Tata Memorial Centre in Mumbai, India

On May 27, 2014 the Princess Margaret initiated an academic partnership with the Tata Memorial Centre (TMC) in Mumbai, India. The signing of a Memorandum of Understanding established the broad principles to pool cancer knowledge and expertise. It was signed by Dr. Rajendra Badwe, Cancer Centre Director, on behalf of TMC, and Dr. Mary Gospodarowicz on behalf of the Princess Margaret. The collaboration is centered on a shared vision of advancing innovation and delivery of best practices in all aspects of cancer care, research and education. Other areas of mutual interest include advancing delivery of Personalized Cancer Medicine and e-health initiatives. Planned engagements include the training of TMC medical physicists at the Princess Margaret and collaborations to help TMC develop a tumour tissue culture lab by adopting a method pioneered at the Princess Margaret.



“The meeting point of our two cultures, India and Canada, will be a melting pot for novelty in oncology.”

Dr. Rajendra Badwe, Cancer Centre Director, TMC

“The experience not only provided benefits for the KCCC but it also provided me with an opportunity to grow both personally and professionally. I have a deeper understanding and appreciation of global health care and a broader perspective on culture and its role in cancer care. Both have improved who I am as a clinician at UHN and I have shared this with my colleagues, team members as well as my family. It has forced me to reflect on our practices at UHN and whether we are using best practices and the latest evidence and how we can approach care provision for our patients differently.”

Daniela Fierini

OUR PEOPLE

OUR LEADERS

Clinical Program Leaders

Medical Oncology	Malcolm Moore
Surgical Oncology	Jonathan Irish
Radiation Oncology	Fei-Fei Liu
Supportive Care	Gary Rodin
Oncology Nursing and Allied Health	Pamela Savage

Disease Site Group Leaders

Breast	David McCready
Central Nervous System	Normand Laperriere
Endocrine	Shereen Ezzat
Gastrointestinal	Jennifer Knox
Genitourinary	Tony Finelli
Gynecology	Stephane Laframboise
Head and Neck	Brian O'Sullivan
Leukemia	Aaron Schimmer
Lung	Andrea Bezjak
Lymphoma	Michael Crump
Melanoma	Danny Ghazarian
Sarcoma	Peter Ferguson

Senior Management Team

Marnie Escaf, *Senior Vice President, UHN and Executive Lead, Princess Margaret Cancer Centre*
 Judy Costello, *Senior Clinical Director, Hematology, Hematologic Oncology & Palliative Care UHN*
 Rudy Dahdal, *Director, Facilities, Redevelopment & Support Services*
 Jane Finlayson, *Senior Public Affairs Advisor*
 Zsolt Hering, *Finance Manager*
 Jin-Hyen Huh, *Director, Pharmacy Operations*
 Terri Stuart-McEwan, *Executive Director, Solid Tumour Oncology and Gattuso Rapid Diagnostic Centre*
 Pam Savage, *Director of Professional Practice, Oncology, Surgical Services TG & International*
 Sophie Foxcroft, *Director of Operations, Radiation Medicine Program*
 Mary Ann Neary, *Senior Clinical Director, Surgical Services*
 Terra Ierasts, *Shared Information Management Services Site Manager*
 Lorinda Lee, *Director of Human Resources*
 Martha Wyatt, *Director, Regional Cancer Program and Toronto Medical Affairs*
 Hayley Panet, *Manager, Strategic Projects*

AWARDS AND OTHER HIGHLIGHTS

Kirsh Humanitarian Awards

Dr. Andre Schuh, and Harjot Singh Vohra, Clinical Research Coordinator, were the proud recipients of this year's Kirsh Humanitarian Awards.



Photo: UHN Photographics

External Awards

Dr. Shaf Keshavjee was appointed an Officer of the Order of Canada and received a Doctor of Science honoris causa from Ryerson University and a Doctorate of Science, Honorary from Queen's University.

Dr. Mary Gospodarowicz was honored with the ASTRO Gold Medal.

Dr. Barry Rosen was the recipient of this year's Gynecologic Oncology Society of Canada's Presidential Medal.

Dr. Rama Khokha received the Robert L. Noble Prize from the Canadian Cancer Society Research Institute.

Dr. Pam Ohashi was presented with the Canadian Society for Immunology Cinader Award.

Dr. John Dick was elected to the Fellowship of the Royal Society.

Dr. Frances Shepherd received the Claude Jacquillat Award from the International Congress on Anti-Cancer Treatment.

Dr. David Hedley was the recipient of the Fulwyler Award for Innovative Excellence from the International Society for Advancement of Cytometry.

Dr. John Trachtenberg was presented with a Doctor of Science, honoris causa, University of Guelph.

Dr. Malcolm Moore was presented with a Doctor of Science, honoris causa, University of Waterloo.

Dr. Tak Mak was the recipient of the Dr. Chew Wei Memorial Prize in Cancer Research from the University of British Columbia.

Dr. Doris Howell received the Diamond Jubilee International Visiting Fellowship Award at the University of Southampton in the United Kingdom and the Lawrence S. Bloomberg Faculty of Nursing Distinguished Alumnus Award.

Diana Incekol, Giselle Chow, Karelin Martina, Pamela Savage and Michael George received the Baxter Vascular Access Research Award.

Kelly McGuigan was the recipient of the Pfizer Award for Excellence in Nursing Education, presented at the Canadian Association of Nurses in Oncology Annual Conference.

Laura Legere was presented with the Award for Excellence in Kidney Cancer Nursing at the Canadian Association of Nurses in Oncology Annual Conference.

Diana Incekol, Michael George, Giselle Chow, Karlin Martina and Pamela Savage were awarded the People's choice Award for the poster "A Tool to Take To the Right IV Access" at the 18th International Cancer Conference on Cancer, Panama City.

Dr. Pamela Catton and Dr. Terry Cheng received the Canadian Association of Radiation Oncologists Survivorship Abstract Award.

Dr. Lynn Gauthier received the post-doctoral Fellowship from the Canadian Breast Cancer Foundation (Ontario Region).

Nadine Richard received the Brain Canada-CIBC Brain Cancer Research Training Award Fellowship.

Dr. Brian Wilson was elected a Fellow of the Optical Society and was awarded the 2014 Britton Chance Biomedical Optics Award by the International Society for Optics and Photonics.

Dr. Eitan Amir received an award for Outstanding contribution in Reviewing from the European Journal of Cancer and the European Organization for Research and Treatment of Cancer.

Samantha Mayo received the Award for Best Oral presentation at the Annual Canadian Blood and Marrow Transplant Group (CBMTG) Meeting for her work on neurocognitive dysfunction after allogeneic Bone Marrow Transplant.

Nazir Jamal and the team at the Cell Processing Laboratory received the Patty Bakkestad-Legare Award at the Annual CBMTG Meeting.

Drs. Daniel Letourneau and David Jaffray, Mr. Paul Hommer, Kevin Wang, Gavin Disney, Igor Svistoun, Bern Norrlinger, Mohammad Islam, Robert Heaton, Jason Smale, Jim Pearce, Stephen Breen, Matthew Bergshoeff, and Ms Phyliss Lee were the recipients of the 2014 Innovation Award (Honorable Mention) from the Cancer Quality Council of Ontario.

Dr. Rodger Tiedemann received the Till & McCulloch Paper of the Year Award (Translational).

Dr. Meredith Giuliani received the award for Best Abstract in Survivorship at the Canadian Association of Radiation Oncology Annual Meeting.

Tina Papadakos received the Excellence in Patient Education Award from the Cancer Patient Education Network.

Jolie Ringash received the Best of ASTRO Award from the American Society for Therapeutic Radiology and Oncology and the Survivorship Award from the Canadian Association of Radiation Oncology.

Cathy Sabiston received the Health Psychology New Investigator Award from the Canadian Psychological Association.

Dr. Pam Catton received the 2014 Margaret Hay Edwards Achievement Medal from the American Association for Cancer Education.

University of Toronto and UHN Awards

Dr. Pamela Catton received the Excellence in Radiation Medicine Educational Teaching Award, Princess Margaret Cancer Centre, Radiation Medicine Program, and Individual Teaching Excellence Award from the Wightman-Berris Academy and the Colin R. Woolf Award from the University of Toronto.

Dr. Philippe Bedard was the recipient of the Individual Teaching Excellence Award for Post-Graduates from the Wightman-Berris Academy.

Dr. Amit Oza won the University of Toronto Division of Medical Oncology Research Award.

Dr. Andrea Bezjak received the University of Toronto Department of Radiation Oncology Residents Award for Excellence in Clinical Teaching.

Sarah Wood was the recipient of the Michael Kamin Hart Award for Excellence in Adolescent and Young Adult Oncology Care.

Catherine Dirks received the Occupational Therapy Innovation Award for innovation in patient care.

Dhara Moddel UHN Department of Psychiatry Team Work Award.

Stephanie Phan was the Family Fund Scholarship Recipient, The Princess Margaret Cancer Foundation for Mastering Mindfulness Personally and Professionally training course.

Dr. Mary Elliott received the Golda Fine Memorial Academic Award.

Raymond Jang received the UHN/Mount Sinai Excellence in Teaching Award (New Faculty) 2013-2014.

Dr. Ralph DaCosta and Dr. Tak Mak received Inventor of the Year Awards.

Leila Amin was awarded the 2014 CAP Fellowship.

Joyce Nyhof-Young received the Dr. Elizabeth Anne Beattie Teaching Award from the University of Toronto and an Individual Teaching Excellence Award from the Wightman-Berris Academy.

Phan Stephanie received the Corrigan Family Fund Scholarship from The Princess Margaret Cancer Foundation.

Andrew Schuh received the Gerald Kirsh Humanitarian Award.

Dr. Steven Gallinger won The Joseph and Wolf Lebovic Chair in HPB Surgery.

Dr. David Warr Head, Medical Oncology Breast Group President of the Multinational Association of Supportive Care in Cancer (MASCC)



On June 25, Dr. David Warr became President of MASCC from 2014 to 2016. MASCC is a multidisciplinary organization dedicated to research and education in all aspects of supportive care for people with cancer and has almost 1000 members in 60 countries.

Dr. Warr is world-renowned for his research in symptom management and his expertise in managing cancer patients' pain and nausea. He created and managed a specialized pain clinic at The Princess Margaret that provided advice and guidance to colleagues when regular pain management strategies were unsuccessful. His dedication to reducing suffering has earned him a global reputation as a leader in pain management.

“To be president of an organization that speaks to multi-professional care is one of the most fulfilling aspects of my life. As our former president said, ‘MASCC is the most important organization to which I belong’. Like MASCC, the Princess Margaret Cancer Centre has patient centered care as its focus.”

Dr. David Warr

Dr. Brian O’Sullivan

Dr. Brian O’Sullivan was appointed Commissioner for the International Commission on Radiation Units & Measurements (ICRU) for a four-year term (2014-2018). The Mission of the ICRU is to develop and to disseminate internationally accepted recommendations on radiation related quantities and units, terminology, measurement procedures, and reference data for safe and efficient application of ionizing radiation to medical diagnosis and therapy, radiation science and technology, and radiation protection of individuals and populations.



In January, 2014 Dr. O’Sullivan commenced a three year term as Radiation Oncology Co-Chair of the US National Cancer Institute Head and Neck Scientific Steering Committee. As a co-chair, Dr. O’Sullivan’s role is to provide guidance on the design and prioritization of clinical trials and new investigational drugs, afford oversight for the activities of task forces, provide recommendations, guidance on scientific directions and facilitate decision making on the scientific merit of clinical trials.

A Canadian First – New Research for the Radiation Therapist Publication

Caitlin Gillan and Nicole Harnett, two Radiation Therapists at the Princess Margaret have co-edited a new publication – the first of its kind in Canada, titled ‘Research for the Radiation Therapist: From Question to Culture’.



Twenty radiation therapists, students and colleagues from the Princess Margaret’s Radiation Medicine Program contributed to the text, which provides a context for radiation therapy research, and offers practical examples from the clinical and academic experiences of its contributors. The editors invited research and health professionals to write chapters on various topics, some of which include ethics, evidence-based practice, research culture and survey methodologies.

Radiation Therapy Research Output at Princess Margaret Exceeds Total Output for the UK

A recently published audit of research capacity of 45 radiation therapy clinics (1,580 FTE) in the UK showed that a total of 27 peer-reviewed articles were published by radiation therapists in 2014, the largest number of publications by any one centre was five. During the same time frame, the Princess Margaret Radiation Therapy Department (150 FTE) published 28 peer-reviewed articles, five in journals with an impact factor over 4.5.

OUR NEW RECRUITS



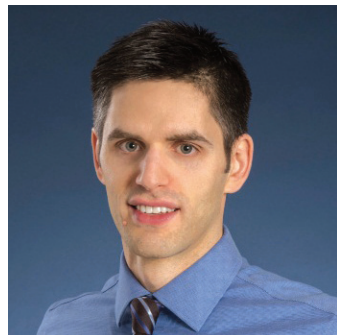
Dr. Scott Bratman

Dr. Scott Bratman is a Scientist and Assistant Professor of Radiation Oncology at the University of Toronto. Dr. Bratman received his MD and PhD from Columbia University in 2009 and was trained in radiation oncology at the Stanford Cancer Institute. His current research focus is on improving outcomes for patients with head and neck cancer as well as other cancers through optimized detection and personalized treatments using blood-based biomarkers.



Dr. Raymond Kim

Dr. Raymond Kim is a Clinician Investigator in the Division of Medical Oncology and Hematology. Dr. Kim is a graduate of the MD/PhD program at the University of Toronto. He did a residency in internal medicine at the University of Toronto followed by a three-year clinical fellowship in medical genetics through the Canadian College of Medical Genetics. His clinical and academic focus will be on integrating genomics into the practice of personalized medicine for patients with cancer, as well as those with an elevated risk of cancer due to germline genetic defects.



Dr. David Cescon

Dr. David Cescon is a Clinician Scientist in the Division of Medical Oncology and Hematology. Dr. Cescon did his medical training, internal medicine and medical oncology residency at the University of Toronto. He then entered the PhD program in the Department of Medical Biophysics at University of Toronto, during which he worked in Dr. Tak Mak's laboratory. His clinical and research focus is in breast cancer and novel therapeutics development.



Dr. Penelope Bradbury

Dr. Penelope Bradbury is a Clinician Investigator and Associate Professor in the Division of Medical Oncology and Hematology, Department of Medicine of the Faculty of Medicine at the University of Toronto. Dr. Bradbury completed her medical and medical oncology training in New Zealand and in the U.K. She completed a fellowship in thoracic oncology at the Princess Margaret, and then moved on to the National Cancer Institute of Canada Clinical Trials Group in Kingston and also had a clinical practice at the Kingston Cancer Centre. Her area of clinical focus will be in the thoracic site group and in sarcoma.



Dr. Anca Prica

Dr. Anca Prica is an Assistant Professor in the Division of Medical Oncology and Hematology, Department of Medicine of the Faculty of Medicine at the University of Toronto. Dr. Prica did her medical training, internal medicine and hematology training at the University of Toronto, followed by a two year fellowship in malignant hematology at the Sunnybrook Health Sciences Centre and a completed a master's degree in health research methodology at McMaster University. Her area of clinical focus will be in lymphoma and myeloma.



Dr. Ken Aldape

Dr. Ken Aldape is a Neuropathologist who came to the Princess Margaret from the MD Anderson Cancer Centre. Dr. Aldape received his MD and completed his residency and a fellowship in Surgical Pathology from the University of California, School of Medicine, San Francisco. Dr. Aldape's research interest is in primary brain tumours. He has experience with identification of biomarkers in gliomas, including microarray studies. He has identified a mesenchymal subgroup of glioma, which may be related to micro-environmental factors. His work characterizes glioma subtypes as well as identifies clinically relevant molecular alterations in these tumours.



Dr. Douglas Chepeha

Dr. Douglas Chepeha is a Surgeon on the Head and Neck Surgical Oncology team and Professor in the Department of Otolaryngology, Head and Neck Surgery at the University of Toronto, recruited from the University of Michigan. Dr. Chepeha did his medical training at the University of Alberta and the University of British Columbia and has done fellowships in head and neck surgical oncology at the University of Toronto and at the University of Michigan. His research interests are in individualized care based on tumor marker expression. His reconstructive interests include template based reconstruction, addressing complex three-dimensional defects, development and validation of reconstructive goals, principles and tissue engineering.

TRANSITIONS



Benjamin Neel to Bradly Wouters

After eight years as Director of Research at the Princess Margaret Cancer Centre, Dr. Benjamin Neel has taken a new leadership role as Director of the Cancer Centre at New York University Langone Medical Centre.

Dr. Bradly Wouters has been appointed Interim Director of Research for Princess Margaret Cancer Centre. Dr. Wouters joined the Princess Margaret in 2008 and has been a member of the Princess Margaret Executive Committee (research) for five years. He has been a faculty member on the European Society for Radiotherapy and Oncology (ESTRO) teaching course on basic clinical radiobiology in Europe for the past 10 years and was also the Director of the ESTRO Molecular Oncology for the Radiation Oncologist course for more than 5 years. Dr. Wouters is the recipient of several prestigious awards and honors. As well, Dr. Wouters was named the recipient of the ESTRO Klaas Breur Award – Annual Gold Medal Award Lecture for 2011.



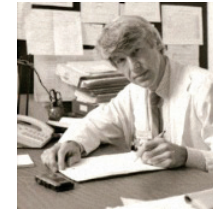
Bob Bell to Peter Pisters

After nine years as UHN's President and CEO, Dr. Bob Bell was bid a fond farewell. On June 2, 2014 he began his new role as Ontario's Deputy Minister of Health and Long Term Care. We wish to acknowledge and thank him for his outstanding leadership over the years.

Dr. Peter Pisters is UHN's new President and CEO. Dr. Pisters shares the same passion for conquering cancer that we do. He is committed to superb clinical care, world-class research and a teaching environment that supports and encourages all members of UHN's community. He is an internationally recognized surgical oncologist with clinical experience and academic interest in gastrointestinal cancers and soft tissue sarcomas. He is a member of the editorial board of multiple surgery and oncology journals and has authored more than 200 peer-reviewed publications and 70 book chapters.



TRIBUTES



Dr. Ian Tannock

Dr. Ian Tannock became a medical oncology resident at the 'old' Princess Margaret Hospital in 1976. Two years later he became a full-time staff physician and began creating his legacy of world firsts, research excellence and renowned mentorship. During his remarkable career, Dr. Tannock developed treatments for prostate cancer leading to the approval of drugs used across the globe. In the 1990s, he led an international study to determine whether chemotherapy could improve symptom control and quality of life in patients with incurable prostate cancer. His recommendation of docetaxel every three weeks with daily prednisone remains the gold standard of treatment today.

Dr. Tannock retired in June, 2014 after 40 years of service.



Dr. Bernard Cummings

Dr. Bernard Cummings, the inaugural Chair of the University of Toronto, Department of Radiation Oncology and former Chief of Radiation Oncology at the Princess Margaret Cancer Centre has retired after an exemplary career of over 40 years at the Princess Margaret Cancer Centre. Dr. Cummings made extraordinary contributions to the role of multidisciplinary management and fractionation, and left a strong legacy in GI tumours. He provided a profound mentorship role and helped shape the development of radiation medicine in Ontario and across Canada.

Dr. Brenda Gallie

Dr. Brenda Gallie has retired from her role as Senior Scientist at the Princess Margaret Cancer Centre from 1999 to the end of August 2014. Dr. Gallie's research was focused on elucidating the biological mechanisms underpinning a rare form of eye cancer that afflicts children, known as retinoblastoma, for which she received the Canadian Ophthalmology Society's Lifetime Achievement Award in March 2013.



EDUCATION

WE ARE EDUCATING THE LEADERS OF TOMORROW



Spotlight on Danielle Rodin

Dr. Danielle Rodin is a Radiation Oncology Resident at the Princess Margaret. She has played a leading role in the growth of the Global Task on Radiotherapy for Cancer Control (GTRCC), which strives to bring cancer leaders together with radiotherapy professionals, industry partners, cancer control organizations, patient groups, economists, and enablers of healthcare change to identify opportunities, and quantify the investment needed to provide equity in global access to radiation therapy.

Dr. Rodin has been involved with GTRCC since its inception and, as part of her Masters of Public Health at Harvard University, is undertaking mathematical modeling for the task force to estimate the global health and economic benefit of improving access to radiotherapy.

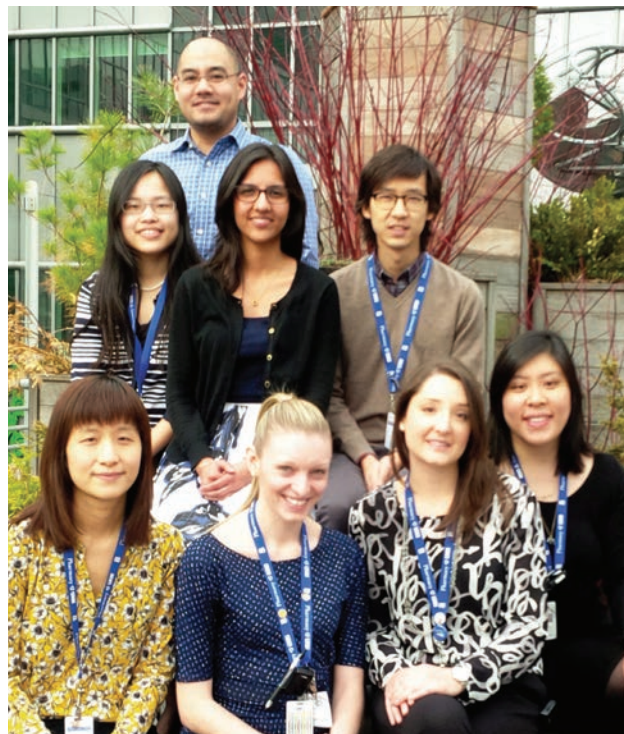
"I have been impressed by the potential impact of grassroots mobilization, having seen its success in addressing HIV and other diseases. With that in mind, I initiated an online community called Global RT and benefited from the support of other young leaders in its development and implementation. This online community connects patients, providers, and policy-makers who want to improve cancer care and to advocate for global access to radiotherapy. It is a virtual platform for education, exchange, and action regarding radiotherapy for cancer."

Global RT has utilized a number of multimedia tools, including infographics, film, Facebook and Twitter. Presentations and publications include ASTRO 2014 and the 2014 Union for International Cancer Control World Cancer Congress, and the website has been published in *Lancet Oncology*.

Pharmacy Residency Oncology Program at the Princess Margaret

In September 2014, the Pharmacy Department at the Princess Margaret welcomed UHN's first oncology-focused hospital pharmacy resident. UHN has had a hospital pharmacy residency program since 1966, and a primary care residency program since 2008. However, due to the specialized nature of oncology practice, the need for training specifically in this area was identified. It consists of 12 consecutive months of training in all areas of hospital practice, with a mandatory clinical pharmacy research project. The goal is to refine professional competence and practice skills to support provision of patient care. This is the first oncology-focused residency program in Ontario.

Top row: Jeff Doi, Second Row (L to R): Anjie Yang, Patwant Dhillon (incoming resident for 2015-2016), Ian Pang (current resident for 2014-2015), Bottom Row (L to R): Lina Ho, Rachel Whitty, Amanda Jacques, Denise Kwan



Young Investigators the Future of Personalized Cancer Medicine

Our young investigators are having great impact on Personalized Cancer Medicine and have made tremendous achievements in 2014 including two oral presentations at ASCO 2014 at European Breast Cancer Conference 2014. Individual award winners are listed below.

Aaron Hanson, *American Society of Clinical Oncology, Merit Award*

Anna Spreafico, *American Society of Clinical Oncology, Merit Award, ASCO and Conquer Cancer Foundation Young Investigator Award and Novartis Oncology Young Canadian Investigator Award*

Stephanie Lheureux, *American Society of Clinical Oncology Merit Award and a PhD Award from EXON association*

David Cescon, *American Society of Clinical Oncology, Young Investigator Award*

Leila Khoja, *Immune Therapy Trainee Award*

Toshiki Ochi, *Immune Therapy Trainee Award*

Kenji Chamoto, *Knudson Postdoctoral Fellowship*

Ahmed Al-Awamer, *Canadian Bioethics Society 2014 Student Award Winner*

Rebecca Prince, *ASCO Merit Awards at the ASCO Annual Meeting and Quality Symposium*

Liran Shlush, *Canadian Hematology Society's paper of the year award, the American society of hematology Scholar award and the Keating award from the University of Toronto Division of Hematology and Hematopathology*

Leila Khoja, *Guglietti Immune Therapy Fellowship, AACR / ASCO workshop – Methods in Clinical Cancer Research*

RESEARCH



Spotlight on Rama Khokha

Dr. Rama Khokha is a Senior Scientist at the Princess Margaret and an international leader in cancer research. She received the 2014 Robert L. Noble Prize from the Canadian Cancer Society Research Institute, in recognition of her many contributions to our understanding of cancer. Her discoveries include the impact of the progesterone hormone on breast stem cells, published in *Nature* 2010. Her lab has further identified new mechanisms by which systemic hormones such as progesterone (*Stem Cell Reports* 2014), and other local factors such as TIMPs (*Nature Cell Biology* 2015), build a tissue niche to exert their dynamic effects on adult breast stem and progenitor cell pools.

The Khokha lab has also contributed innovative methods and screening tools for discovery of cancer-causing genes in human cells (*Nature Genetics* 2014) as well as new genetically engineered mouse models that are used by scientists around the world.

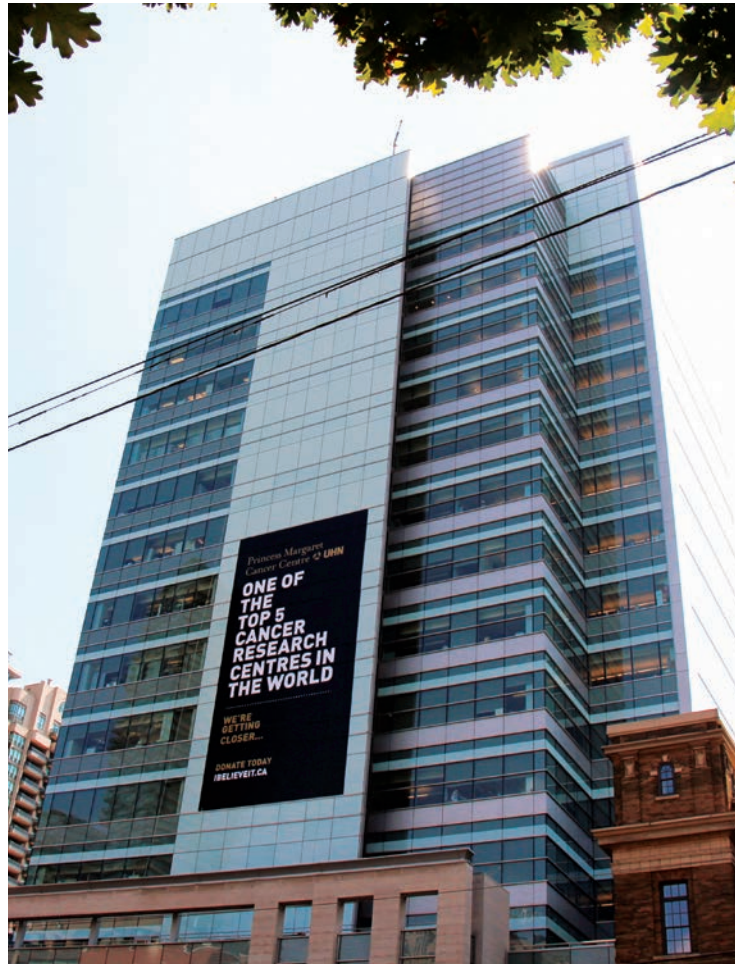
As Vice-Chair of the Department of Medical Biophysics at the University of Toronto, Dr. Khokha is also a dedicated educator and has impacted graduate student curriculum, making it more multidisciplinary to reflect the nature of cancer research. She is a dedicated mentor and has helped shape the future of cancer research through her work with trainees.

Cancer Clinical Research Unit (CCRU)

Treatment advances in Personalized Cancer Medicine are based on rigorous clinical research. At the Princess Margaret, the CCRU is charged with facilitating, supporting and providing the necessary infrastructure for innovation and quality in clinical research. CCRU provides foundational support and acts as a conduit for clinical research, providing direction, guidance and leadership for clinical researchers throughout the Princess Margaret. CCRU is made up of a number of departments, all dedicated to supporting the work conducted by our clinical research investigators. "Our ultimate goal, like that of the investigators and teams we support, is to improve outcomes for our patients and to help conquer cancer."

In 2014, the overall enrollment of patients into clinical studies was nearly 20% of all patients who are treated at the Princess Margaret. In North America, < 5% of oncology patients go on to clinical trials. Today, there are over 775 active clinical research studies at the Princess Margaret, and in 2014, we recruited more than 7,000 patients to clinical research studies. Over the next five years we aspire to double clinical research involvement. This ambitious goal will be achievable with the ongoing hard work of our dedicated staff and investigators, and the continued support from the hospital and the Foundation.





Expansion of the Toronto Medical Discovery Tower

The Princess Margaret campus has added 113,000 square feet to its downtown Toronto footprint. This includes 10 of the 14 floors of the Toronto Medical Discovery Tower (TMDT) at the corner of College and Elizabeth Streets, which will be renamed the Princess Margaret Cancer Research Tower.

With a donation from nine of Canada's largest gold mining companies (Agnico Eagle Mines Ltd., Barrick Gold Corporation, Goldcorp Inc., IAMGOLD, Kinross Gold Corporation, New Gold Inc., Primero Mining Corp., Silver Wheaton Corp. and Yamana Gold Inc.) the 11th floor was designated the Gold Floor.

With its new home base on the 14th floor, the centre aims to bring together top researchers in the field of brain cancer and help establish the Princess Margaret as a leader in this area. This centre is being led by Dr. Kenneth Aldape.

A new commercialization venture was also established on these new floors. Northern Biologics is an early-stage biologics company, headquartered in the MaRS Discovery District of Toronto. The company is developing a portfolio of antibody-based therapeutics for oncology and fibrosis.

Princess Margaret Space Transformation: Transforming Space – Transforming Cancer

With a 10-year horizon, the Space Transformation Project will transform space at Princess Margaret to enable our vision and strategy. The first phase of this project has been approved with major support from our Princess Margaret Cancer Foundation and UHN, and it focuses on redeveloping the entire main floor to enhance functionality and amenities for patients, a new Gynecology clinic and a new dedicated Palliative Care clinic, expanded collaborative spaces for our program management at 700 University Ave., with a bridge connection to 610 University Ave., and improved staff amenities including a new wellness centre.

Planning and design for each of these elements is well underway, and will be a major focus for staff and patient consultation over the next year.

Highlights from 2014

Identification of pre-leukaemic haematopoietic stem cells in acute leukaemia

Lead PI: John Dick

Published in Nature, February, 2014

Loss of the Timp gene family is sufficient for the acquisition of the CAF-like cell state.

Lead PI: Rama Khokha

Published in Nature Cell Biology, September, 2014

Functional characterization of CFI-400945, a Polo-like kinase 4 inhibitor, as a potential anticancer agent.

Lead PI: Tak Mak

Published in Cancer Cell, August, 2014

UHN secured \$6.6 million from The Terry Fox Foundation. These funds will support the research of the Princess Margaret Senior Scientists Drs. Bradley Wouters and Robert Bristow to develop new and more personalized treatments that target low oxygen levels in tumours.

REMEMBERING A VISIONARY LEADER

Pamela Anne Catton MD, MPHE, FRCPC November 28, 1953 – December 23, 2014



Dr. Pamela Catton was a Radiation Oncologist at the Princess Margaret Cancer Centre, and a Professor in the Department of Radiation Oncology, University of Toronto. She was an internationally renowned educator, and mentor to an entire generation of oncologists. Pam was a skilled and compassionate clinician, who consistently delivered exemplary care for her patients. She was a creative force in innovations in education, covering the spectrum from undergraduate, post-graduate, continuing education, faculty development, inter-professional, to patient and cancer survivor education.

Amongst many of Pam's legacies was the development of a joint BSc Program in Medical Radiation Sciences (MRS), between the University of Toronto Department of Radiation Oncology with the Michener Institute, which at the time was the first Radiation Therapy degree program in Canada. Since its initial establishment in 1999, the MRS program has trained more than 1,500 radiation therapists, imaging and nuclear medicine technologists; many of whom are now leaders across Canada. Pam's particular passion was the promotion of inter-professional education, and talent development in this domain. This passion translated into the creation of Clinical Specialist Radiation Therapists (CSRTs), which began as a pilot project at the Princess Margaret Cancer Centre in 2007, and now has expanded to 24 CSRTs flourishing in 10 cancer centres across Ontario.

Pam's contribution to the educational community extended well beyond our local environment; she was a key participant and leader in the Royal College of Physicians and Surgeons of Canada, ranging from numerous site visits across the country reviewing residency training programs, to co-chairing the Working Group on CanMEDS roles, to Chairing the Education Research and Development Committee. In all of these activities, Pam worked tirelessly, critiqued constructively, and facilitated the transformation of our medical training curricula.

Pam has always been a strong advocate for Radiation Oncology, and was an active contributor to our Canadian Association of Radiation Oncology (CARO). She was instrumental in the establishment of CROF (the Canadian Radiation Oncology Foundation), the philanthropic arm of CARO, and was its Board Chair from 2011–2013, during which time, she established the CARO–CROF Summer Studentship in Radiation Oncology, facilitating medical students' career development in Radiation Oncology.

Through her strong vision, boundless energy, and organizational skills, Pam also established the trailblazing ELLICSR: Health, Wellness, and Cancer Survivorship Centre at UHN, the first center of its kind in Canada, focused on empowering "patients, to improve their health, well-being, and the overall delivery of cancer care."

Pam was an inspiring mentor, who believed in everyone's capacity to thrive in our academic environment; she would pour her entire energy and soul into ensuring that all trainees and junior faculties achieve success. She has mentored and influenced an entire generation of radiation medicine professionals, who are now leading their own programs nationally, and internationally.

Accordingly, Pam has received numerous honours and awards for her achievements, starting with innumerable Teaching and Mentorship Awards within the Department of Radiation Oncology; the Mickles Fellowship Award for Postgraduate Medical Education from the Faculty of Medicine; and the Anderson Award for Excellence in Educational Administration from the Wightman-Berris Academy. She also held the Inaugural Princess Margaret – University of Toronto Butterfield/Drew Chair in Breast Cancer Survivorship; received the Excellence in Cancer Patient Education Award from the US National Cancer Institute – Cancer Patient Education Network; and just this year, the 2014 Margaret Hay Edwards Achievement Medal from the American Association for Cancer Education, awarded to those who have made sustained outstanding contributions to cancer education.

Pam will be dearly missed by everyone within our communities. Her legacy will continue through all the programs which she has launched and established; her impact will continue to reverberate through the generations of health professionals who will strive to advocate for the highest quality oncology care for our patients, as did Pam.

THE PRINCESS MARGARET CANCER FOUNDATION



We're Getting Closer

On October 15, 2014, The Princess Margaret Cancer Foundation celebrated the halfway point in its five-year Billion Dollar Challenge with an event called 'A Golden Day'. The purpose of the campaign is to help revolutionize cancer care by supporting the creation of a new gold standard in cancer care: Personalized Cancer Medicine. The funds raised are already facilitating Princess Margaret Cancer Centre's most ambitious recruitment drive in its history.

The celebration featured six gold bars which represented donations totaling \$3.28 million received from nine of Canada's leading gold mining companies.

The Billion Dollar Challenge is a partnership between the Foundation and the Princess Margaret. At the beginning of the campaign, each group was challenged to raise \$500 million over five years. At the halfway point, the groups have collectively raised \$576 million.

“ Bold visions with big impact require big funding. ”

Paul Alofs, President & CEO, The Princess Margaret Cancer Foundation



The Billion Dollar Challenge has already facilitated the recruitment of 26 international cancer experts and their teams, totaling 91 staff, which will increase to approximately 200 by the end of the Challenge.





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