

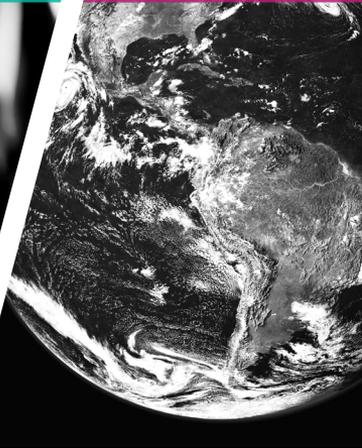
Precision Radiation Medicine.



Personalized Care.

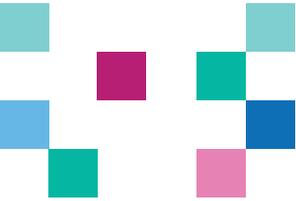
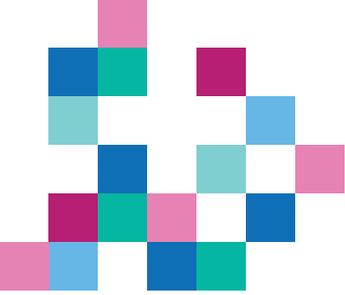


Global Impact.



# STRATEGIC ROADMAP FOR 2020

Radiation Medicine Program



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# CHIEF'S MESSAGE

I am pleased to present the Radiation Medicine Program (RMP)'s *Strategic Roadmap for 2020*, which will guide us towards our vision: “**Precision Radiation Medicine. Personalized Care. Global Impact.**”

The *Moral Obligation to Innovate*, which was launched in 2011, laid the path in our pursuit to improve patient care and outcomes through innovation in research, education, clinical practice and system operations. As we approach the final stages of this plan, we have refreshed our strategy looking forward to reflect the rapid pace of innovation within radiation medicine, as well as the changing healthcare environment. Furthermore, we wish to ensure that our goals and directions are aligned with the strategic plans of the University Health Network (UHN), Princess Margaret Cancer Centre (PM Cancer Centre), University of Toronto, Department of Radiation Oncology (UT-DRO), and Cancer Care Ontario (CCO)'s Ontario Cancer Plan IV.

The *Strategic Roadmap for 2020* is the culmination of a nine month “Taking Stock” process, during which we undertook extensive consultations with various stakeholders within the RMP community and beyond to evaluate the program's current context. Based on the feedback we received, we have identified key challenges and successes in the realms of research, education, clinical practice and system operations. The *Strategic Roadmap for 2020* outlines our aspirations to become a transformational leader in the future global state of precision radiation medicine, and how we intend to achieve them over the ensuing five years.

I am grateful to the RMP Steering Committee and our consultant, Dr. Jane Cooke-Lauder for all their hard work in developing the *Strategic Roadmap for 2020*. I would also like to thank everyone within RMP for their invaluable contributions to this plan, and for helping us to shape the future of our program collectively. I look forward to achieving our goals together and attaining global impact in our pursuit to deliver world-class precision radiation medicine and personalized care for our cancer patients.



A handwritten signature in black ink that reads "F. Liu". The signature is elegant and cursive.

**Fei-Fei Liu, MD, FRCPC**  
Chief, Radiation Medicine Program,  
Princess Margaret Cancer Centre  
Chair and Professor, Department of Radiation  
Oncology, University of Toronto

# RADIATION MEDICINE PROGRAM

The Radiation Medicine Program (RMP) in the Princess Margaret Cancer Centre is the largest radiation treatment centre in Canada, and one of the largest single-site treatment facilities in the world ([www.radiationatpm.com](http://www.radiationatpm.com)). The program is comprised of over 350 staff, organized by three core disciplines of radiation oncology, radiation physics and radiation therapy, which are supported by various clinical, research, administrative and technical support staff. It is well equipped with state-of-the-art technologies that facilitate high precision and quality care for over 8,000 new cancer patients annually. Our interprofessional team of world-renowned radiation oncologists, physicists, therapists, nurses and researchers is dedicated to advancing best practices in radiation medicine through innovative research, education and the uptake of cutting-edge, novel radiation practices and technologies.

# RMP BY THE NUMBERS



## STAFF

- 36** radiation oncologists
- 33** radiation physicists
- 160** radiation therapists
- 6** radiation therapists in advanced practice roles
- 115** support staff



## CLINICAL PRACTICE

- 8219** patient consultations
- 10,383** radiation treatment courses
- 400** patients treated daily



## RESEARCH

- \$45.7 million** peer-reviewed funding
- 206** peer-reviewed publications
- 190** prospective research protocols



## EDUCATION

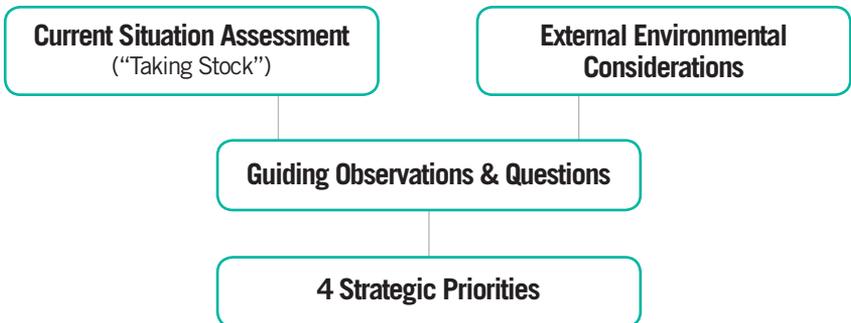
- 29** radiation oncology residents
- 24** radiation oncology fellows
- 4** radiation physics residents
- 49** medical radiation sciences students

*\*2014-15 statistics*

# OUR STRATEGIC SETTING

The 2011-2015 RMP strategic plan, the *Moral Obligation to Innovate*, defines the backdrop and the tone for this strategic refresh process. Developed over a two-year time period with extensive consultation and engagement, the *Moral Obligation to Innovate* laid out a focus on improving patient care and outcomes; the integration of academia and clinical practice; the centrality of engaging, developing and rewarding high performance, and professional advancement in a mutually supportive and collaborative environment; and the need to be nimble, responsive and adaptable to the environment.

The strategic refresh process consisted of an extensive internal (“Taking Stock”) assessment, as well as external environmental considerations conducted over a nine-month period, engaging various stakeholders within and beyond the RMP community.



# STRATEGIC PRIORITIES

1

Accelerate discovery to deliver precision medicine for best patient & population outcomes

2

Integrate research & education with clinical practice

3

Strengthen internal & external community linkages

4

Extend high reliability with systems thinking

**Precision Radiation Medicine.  
Personalized Care.  
Global Impact.**

**VISION**

Advance exemplary radiation medicine through patient care, research & education in partnership with our patients & community

**MISSION**

Precision medicine

Integrate research & education  
with clinical practice

Strengthen community  
linkages

High reliability with  
systems thinking

**STRATEGIC  
PRIORITIES**

Innovation

Excellence

Collaboration

Accountability

Integrity

**VALUES**

# OUR STRATEGY

We are committed to the delivery of excellent care, more efficiently both within RMP and across the system. Our intent is that by 2020, RMP will be sought out by an increasing number of patients, learners and leaders from around the world as the “program of choice” for excellence in precision medicine. Our values, statements of vision, mission, goals, as well as the success metrics of our four-point strategy will define our overall approach.

Our core values are the non-technical competencies that support attainment of our vision and guide our decision-making.

## Innovation

We are creative, bold and passionate in the pursuit and implementation of new ideas that improve cancer patient outcomes.

## Excellence

We demonstrate dedication and focused commitment, while leading with respect and civility at the individual, team and program levels.

## Collaboration

We engage meaningfully and inclusively with each other beyond traditional practice domains and program boundaries to achieve more together than apart.

## Accountability

We step forward with a sense of empowerment, personal drive, focus and commitment. We are highly accountable to ourselves, colleagues, team members, partners and funders.

## Integrity

We conduct ourselves in a fair, transparent and ethical manner at all times. We are highly reliable and are consistently sincere and trustworthy.

# STRATEGIC PRIORITY 1

## **Accelerate discovery to deliver precision medicine for best patient & population outcomes**

In pursuit of improved patient outcomes, we will leverage our clinical, research and technological capabilities to tailor the delivery of radiation therapy to each patient informed by patient genetics, tumour characteristics and real-time adaptive response to radiation therapy. We will exploit informatics and “big data” to track, monitor and assess improvements in patient outcomes, as well as generate evidence to improve future care and treatment. As such, RMP will lead the development of comprehensive anthologies of outcomes at the Princess Margaret and nationally to improve clinical care, research and knowledge generation.

As part of our social responsibility and commitment to the local community, we will establish a high energy particle therapy facility in collaboration with other stakeholders and develop evidence-informed treatments. Most importantly, RMP will focus on treating the whole patient – not just the disease – ensuring patients have the necessary information to make meaningful contributions and informed choices about their care and treatment.

## GOAL FOR 2020

**Implement a precision medicine approach in 3 tumour site groups**

**Establish required informatics and data infrastructure**

**Engage patients more fully in their treatment and in evidence generation**

**Develop a particle facility in collaboration with other stakeholders**

## HOW WE WILL ACHIEVE IT

- Adapt radiation therapy informed by patient genetics, as well as tumour morphology, pan-omics and microenvironmental characteristics
- Create a comprehensive 'pipeline' of patient, tumour and treatment information, including patient-reported outcomes, to inform a health learning system
- Re-design service delivery models and care maps in alignment with changing treatment modalities while facilitating data capture
- Explore a 'case expert' model to support precision medicine implementation
  
- Develop a comprehensive outcomes database and governance structure to house multi-dimensional, multi-parametric data (e.g. patient-reported outcomes, biological, anatomic, pan-omics, radiomics, dosimetric, treatment data)
  
- Expand our patient engagement strategy to encompass clinical practice and research domains
- Establish routine patient self-reporting on various parameters (e.g. advocacy, satisfaction with experience, knowledge level, engagement, outcomes)
  
- Establish a partnership agreement with SickKids and Cancer Care Ontario
- Secure financial resources and real estate

# STRATEGIC PRIORITY 2

## Integrate research & education with clinical practice

Excellence in our academic mandate will enable a proactive and integrated approach to patient care such that each patient interaction results in knowledge gathering and sharing, to allow for an optimal individual patient experience and outcome, while providing evidence for future improvements at the population level.

The application of research to inform practice change and quality improvement will be strengthened by increasing enrollment and becoming more effective in our delivery of clinical trials; developing aligned site-specific research plans; rapidly scaling up discoveries from the disease site to the Program level; and encouraging the dissemination of research findings at internal fora.

From a learning and education standpoint, we will deliver programs and courses in alignment with our academic affiliations, while being committed to integrating learning into all of our program activities and clinics. We will embrace clinical simulation to enhance learning and continue to foster interprofessional education. We will seek to transform current knowledge and education products, building from the many successes to date, into a dynamic self-sustaining education enterprise. By 2020, our Program will be an exemplar learning health system.

## GOAL FOR 2020

**Capture, store and share integrated patient data for every patient**

**Intensify research impact**

**Translate clinical experience and research findings into sustainable educational offerings**

**Align staff performance goals with research and education strategies**

## HOW WE WILL ACHIEVE IT

- Standardize the point-of-care data capture process (e.g. # of site groups capturing data, # of patients enrolled in clinical trials, # of research publications and impact factor)
- Evolve our clinical care pathways to facilitate data capture, thereby learning from each patient
- Improve the process of notifying staff of available research funding opportunities
- Require all site groups to have a research plan and conduct regular research meetings
- Integrate requirements for clinical implementation and demonstration of efficacy into new technology development contracts
- Increase academic output per REB approved study
- Implement a growth plan and new business model for education, as well as methods to evaluate impact
- Support delivery of UT-DRO priorities and increase # of partnerships with aligned institutions
- Incorporate education and/or research expectations in staff annual goals

# STRATEGIC PRIORITY 3

## Strengthen internal & external community linkages

Our success is dependent on the full engagement of all staff members, their belief in the Program and their desire to add value to the patient experience by applying their skills and expertise to maximum effect. As such, we will emphasize the provision of additional opportunities for career growth, and will recognize and reward staff contributions while adhering to principles of transparency and equity.

As we strive to create a patient journey as seamless and integrated as possible, we will build strong relationships with our partners within the Cancer Program and UHN to coordinate care delivery, share data, tissue samples and new knowledge/expertise. We will partner with UHN's research institutes for increased clinical relevance, complementing their expertise with our deep clinical and technical insights.

We will contribute to improvements in individual and population outcomes by sharing our knowledge and best practices widely and engaging with referring partners, regional cancer centres and global organizations. We will conduct outreach activities for radiation therapy consultations to ensure ready access to our expertise and to enhance existing working relationships. We will continue to break down silos in our quest for collaboration and integration across, as well as outside, the Program driven by the patient being the focus for all of our activities.

## GOAL FOR 2020

**Establish RMP as the “employer of choice”**

**Enhance integration and collaboration within UHN**

**Improve continuity of care**

**Optimize access to radiation therapy for cancer patients**

## HOW WE WILL ACHIEVE IT

- Improve current staff training and development opportunities
- Promote a Wellness and Development Program in alignment with existing UHN/UT resources
- Align reward and recognition practices to reflect the value of research, education and clinical care
  
- Increase # of new service models that integrate with other specialty services; # of clinical translational studies with co-PIs from other departments; # of RMP staff as co-PI or investigators in trials initiated by other departments
- Strengthen relationships with UHN research institutes
  
- Simplify the referral process
- Require all clinics to ensure referring physicians’ contact information are current
- Implement an integrated booking system
  
- Review brand and develop a strategic communication and engagement plan
- Continue work with CCO on implementing a new funding model
- Develop scanning processes to monitor catchment areas for access, gaps and opportunities

# STRATEGIC PRIORITY 4

## Extend high reliability with systems thinking

Being successful will require a shift in how we practice and manage the Program. Moving forward, our work environment will be characterized by sound data management, a steady flow of reliable information, strong communication practices, process discipline, continuous improvement, and adherence to standard procedures.

We will focus on reducing waste and streamlining care delivery, supporting safe activities that improve the patient experience and outcome. Individuals and teams will be expected to challenge the status quo, questioning daily activities on the basis of the “value add” to the patient experience and outcome. This will be increasingly important as we implement more complex patient offerings as part of precision medicine.

We will encourage ownership, engagement and contribution at all levels through changes in structure, processes and incentives. We will review our committee structure to ensure clear accountability and streamlined decision making. We will be guided by a systems thinking approach, applying the appropriate models, evidence and frameworks to the complexities of RMP.

We will achieve the above while maintaining our focus on innovation and creating the conditions where innovation can flourish. The requirement for high reliability and precision medicine will serve as a powerful spur for innovation.

## GOAL FOR 2020

**Establish a fully functioning dashboard that supports integrated decision making**

**Integrate systems thinking and quality concepts into operations**

**Streamline decision making and clarify accountability**

## HOW WE WILL ACHIEVE IT

- Communicate key performance indicators and related metrics across the program to promote awareness and shared ownership
- Align individual and team performance management processes with RMP strategic goals
- Apply quality and project management standards uniformly to all key initiatives
- Train primary project leads in continuous quality improvement
- Continue to lead in quality and safety at the national and international levels
- Streamline patient treatment flow
- Review our processes with the goal of eliminating work-arounds and reducing re-work
- Review structure and mandate of RMP committees to facilitate accountability and alignment with program goals and priorities
- Improve committee decision making and action-tracking to increase committee efficiency and effectiveness
- Facilitate access to committee work to improve communication and transparency

# STRATEGIC IMPLEMENTATION

Critical to the successful implementation of the *Strategic Roadmap for 2020* is the assignment of accountability, clearly defined milestones and measures, as well as a structured process for monitoring and evaluating the progress towards meeting our strategic aims and objectives.

## ROLES & RESPONSIBILITIES

**Chief**, leads implementation of the plan; informally and formally provides support and monitors progress; implements performance reviews of leadership group based upon objectives identified in the plan.

**RMP Steering Committee**, plays a leadership role in determining and implementing strategic priorities, and evaluating progress against milestones and goals; identifies leads for each strategic priority.

**Priority Leads**, develop and implement a work plan with milestones designed to achieve the priority as identified by Steering; work collaboratively with others to achieve the priorities; provide regular updates to Steering.

**All RMP Staff**, utilize concepts and directions defined in this plan to prioritize work.

## MONITORING & COURSE CORRECTION

Progress against identified goals, objectives and deliverables will be monitored in four ways. With the understanding that change is the only constant, course corrections will be made over the life of this plan with consultation from staff and committees.

### STEERING COMMITTEE MEETINGS

Regular & annual  
review of progress,  
challenges &  
successes

### PRIORITY LEADS MEETINGS

Regular review  
of progress on  
applicable strategic  
milestones

### LEADERSHIP & STAFF REVIEWS

Regular performance  
reviews based on  
objectives defined  
by strategic  
priorities

### REGULAR UPDATES & COMMUNICATION

Communication &  
updates on progress  
achieved & emerging  
priorities

# ACKNOWLEDGEMENTS

## **STRATEGIC PLANNING STEERING COMMITTEE**

Andrea Bezjak  
Sophie Foxcroft  
David Jaffray  
Catarina Lam  
Daniel Létourneau  
Fei-Fei Liu  
Michael Milosevic  
Elen Moyo  
Richard Tsang  
Rebecca Wong

## **STRATEGIC PLANNING CONSULTANT**

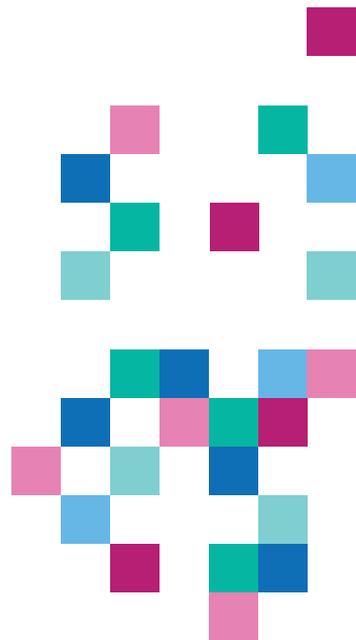
Jane Cooke-Lauder, Bataleur Enterprises, Inc.

## **DESIGN AND LAYOUT**

Emma Ito

## **FOR AN ELECTRONIC VERSION OF THE REPORT**

<http://www.radiationatpm.com>



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