

A Cancer Surgery Framework for Manitoba

Supplement to the Roadmap to Cancer Control for Manitoba 2020



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A Cancer Surgery Framework for Manitoba

CancerCare Manitoba (CCMB) is responsible for planning and leading a provincial cancer control program in Manitoba. CCMB is honoured to present the *Roadmap to Cancer Control for Manitoba 2020* as a guiding document to inform the Provincial Clinical and Preventive Services Planning process as well as all health regions in Manitoba related to cancer services. Six priorities for cancer control have been identified through wide stakeholder engagement. These priorities are patient- and community-centred, driven by research and innovation and call for equitable care for all Manitobans, including high-quality cancer surgery.

Surgery is the curative treatment option for a majority of cancers. Globally, the Lancet Oncology Commission reports that over 80% of people diagnosed with cancer will need a surgical procedure.¹ In Canada, 70% of cancers rely on surgery for cure.² These statistics show the key role surgery plays in achieving cancer control. CancerCare Manitoba has prioritized a provincial approach for the development, implementation and compliance with cancer surgical standards throughout Manitoba, as identified in both the *Manitoba Cancer Plan 2016-2021* and the *Roadmap to Cancer Control for Manitoba 2020*. This is in alignment with the national efforts of CPAC to develop and implement cancer surgical standards across Canada.

The initial step of achieving province-wide leadership in cancer surgery as an objective of the *Manitoba Cancer Plan 2016-2021*, was advanced under the leadership of Dr. Helmut Unruh, Surgical Oncology Lead at CancerCare Manitoba, together with surgeon disease site leads and in collaboration with Dr. Jack MacPherson, past Head of the Department of Surgery, University of Manitoba and Surgery Program, WRHA. One of the achievements during this time was the creation of the first report on *Cancer Surgery Quality in Manitoba* completed in 2019. My gratitude goes to Dr. Unruh and the surgeon disease site leads and the Department of Surgery, University of Manitoba, for the work involved in creating this report, as well as their commitment to moving this objective forward.

As the next step to bring high-quality cancer surgery to all Manitobans, a *Cancer Surgery Framework for Manitoba* was developed through wide stakeholder engagement. Through the commitment of the surgeon leads, and under the current leadership of Dr. Edward Buchel, Head of the Department of Surgery, University of Manitoba, and Dr. Pamela Hebbard, Surgical Oncology Lead, CancerCare Manitoba, we are very pleased to present this document that will assist all care providers engaged in cancer surgery in the province.

The *Cancer Surgery Framework for Manitoba* serves as a supplement to the *Roadmap to Cancer Control for Manitoba 2020* and introduces the four pillars of the framework: governance, service delivery, quality assurance and accountability, and research and innovation.

I would like to extend my gratitude to the current leadership and surgeon disease site leads for their commitment. CancerCare Manitoba, in partnership with Shared Health, will continue its leadership in achieving cancer control in Manitoba, with cancer surgery as a key component. We will build upon the work already accomplished and work with provincial stakeholders including surgeons, health partners and regions to ensure equal access to standardized, high-quality cancer surgery for the people of Manitoba.



Dr. Sri Navaratnam,
President and CEO, CancerCare Manitoba
Professor, Department of Internal Medicine,
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Introduction

Surgery plays a critical role in the diagnosis, treatment, and palliation of most solid-tumour cancers. Approximately 55% of cancer patients undergo surgery within one year of diagnosis³ and in 2018, 4,323 cancer surgeries were conducted in Manitoba for invasive cancers. The distributed nature of providers and facilities offering surgery poses a unique set of challenges and the provision of treatment can be fragmented at times. As a result, variation in surgical practice patterns and outcomes of care, along with inequity in access to care have been identified.^{4,5} In addition to this, demand for cancer surgery is increasing due to a growing and aging population, improved detection of earlier stage cancers, and the increasing role of surgery for more advanced disease in the context of multidisciplinary care.⁶

To meet growing demand and address practice variation and inequities in access, a central and cohesive approach to surgical oncology is needed. Surgery remains a core

treatment modality for cancer treatment and will significantly benefit from increased stewardship, service delivery planning, and an effective quality assurance infrastructure.

The purpose of this document is to propose a framework to promote and advance high-quality cancer surgery in Manitoba. The framework outlined in this document was developed by surgical leads and is based on stakeholder engagement at various levels of the health care system.

The first engagement was held in January 2020 through the Manitoba Cancer Control Visioning Session which included a presentation and discussion on *Cancer Surgery in Manitoba: Plans for Moving Forward*. Following this broad engagement, focused discussions were held with clinical leads for breast, colon, rectal, thoracic, and prostate cancers to understand the current surgical landscape and to determine goals for cancer surgery in Manitoba.



Dr. Pamela Hebbard

Interim Lead, Surgical Oncology, CancerCare Manitoba
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Message from the Department of Surgery, The University of Manitoba and, Shared Health Manitoba

The Department of Surgery has been and continues to be proud of its collaboration with CancerCare Manitoba. Our surgeons currently deliver cancer care throughout our province. With the recent creation of Shared Health Manitoba, coordination of surgical care will happen not only within Winnipeg but in all regions throughout our province. In the document, *A Cancer Surgery Framework for Manitoba* the guiding concepts of surgical care delivery are outlined.

The mission of CancerCare Manitoba to reduce or eliminate the burden of cancer is something we all can believe in. Through the coordination of surgeons throughout our province, we can develop programs to deliver prevention, diagnosis and treatment. This document provides a framework that our cancer surgeons can embrace and constructively move forward. The opportunity to enhance the collaboration with CancerCare

Manitoba will enable the development of programs that deliver equitable surgical care for all patients, closer to their homes.

The Department of Surgery looks forward to the future where enhanced surgical care leads to enhanced quality of life for all cancer patients.



Dr. Edward Buchel

Provincial Surgery Specialty Lead, Shared Health Manitoba
Professor and Head, Department of Surgery, University of Manitoba
Surgery Site Director, Winnipeg Health Sciences Centre

Message from the Surgeon Disease Site Leads

Surgeons, like all healthcare professionals, come to work every day, wanting to do the best job possible for their patients. Modern surgery, however, is not just the surgeon's acumen and a scalpel; delivery of high-quality surgery requires a complex and interwoven medical system with many moving parts. Surgeons in large medical systems can rarely make system-wide changes in isolation and this document serves as a significant surgical contribution to the cancer care delivery in the province.

The surgeons championing this initiative are all passionate about working with colleagues and stakeholders to create the highest level of care possible for all patients. In alignment with CancerCare Manitoba's visioning process, we were enthused to look at the most common cancer surgeries under this lens as well as cancer delivery in general.

The four pillars outlined in this report serve as an excellent framework for cancer system assessment and continuous quality

improvement. Clinical governance will be a framework for an enhanced surgical "voice at the table." While complex cancer care cannot always be delivered in rural sites, improving infrastructure and care access where possible will keep care closer to home for more people. Patients should expect that quality assurance is happening in all aspects of the healthcare system and this adds another crucial element to patient safety and satisfaction. We think that patients want to have access to new proven technologies and up-to-date training in healthcare staff, while also knowing they are contributing to high-quality research and innovation. Of course, all of this must occur in a system that improves efficiency and accountability.

We look forward to working with our continued partners and stakeholders to achieving the lofty but attainable goals set out in this document.



Dr. Gordon Buduhan,
Thoracic DSG Lead



Dr. Jason Park,
Colorectal DSG Lead



Dr. Jeff Saranchuk,
Prostate DSG Lead



Dr. Elizabeth
Thompson, Cancer
Surgery Lead,
Southern Health -
Santé Sud

Cancer Surgery Highlighted at the Roadmap to Cancer Control for Manitoba Visioning Session



Dr. Christian Finley provided the Keynote Address *Quality Cancer Surgery: A High Value Pillar of Care* at the Roadmap to Cancer Control for Manitoba Visioning Session held in January 2020. Dr. Finley is a Thoracic Surgeon and Associate Professor, McMaster University, and Expert Lead, Clinical Measures, Canadian Partnership Against Cancer.



Dr. Brock Wright and the cancer surgeon panel presented *Cancer Surgery in Manitoba: Plans for Moving Forward*.

Cancer Surgery in Manitoba

Current State

The landscape of cancer surgery is immense. In 2018, 4,323 cancer surgeries were performed in Manitoba in 27 facilities (Appendix 1), but most of these facilities performed a significantly low volume each year. Therefore, in this analysis, facilities needed to conduct at least 10 cancer surgeries per year to be considered a cancer surgery facility. The 13 facilities that met this requirement performed 4,280 of the surgeries in 2018. Figure 1 shows the number and percentage of cancer surgeries in Manitoba by disease site. Figure 2 shows the percentage of cancer surgeries by disease site for the 10 main hospital facilities in Manitoba. The breadth of this work is large when one considers the supportive care provided by surgeons across the province with regards to diagnostic workup and biopsies, line insertion and removal for chemotherapy, and other supportive care close to home. This work is largely unmeasured but is key to providing efficient, high-quality care, close to home.

Breast and colorectal cancers are the most common cancers to be operated on, with surgery being the cornerstone of the treatment for these cancers. Surgeries for these two diseases are performed by surgeons in rural and urban settings. While the Health Sciences Centre in Winnipeg is the province's cancer hub and does the largest portion of cancer surgeries, hospitals and surgeons across the province contribute a crucial number to the overall volume of cancer surgeries.

Who is included in Figures 1 & 2? Individuals who received surgical treatment for invasive cancers in 2018.

Which surgeries are included in Figures 1 & 2? All surgeries performed with curative intent are included. If two procedures were performed during one operating room time, only one procedure counted towards the overall number of surgeries.

Which facilities are included in Figures 1 & 2? Figure 1 includes surgeries conducted in all 27 facilities. Figure 2 includes surgeries conducted at the 10 main cancer facilities. Please refer to Appendix 1 for a full list of facilities.

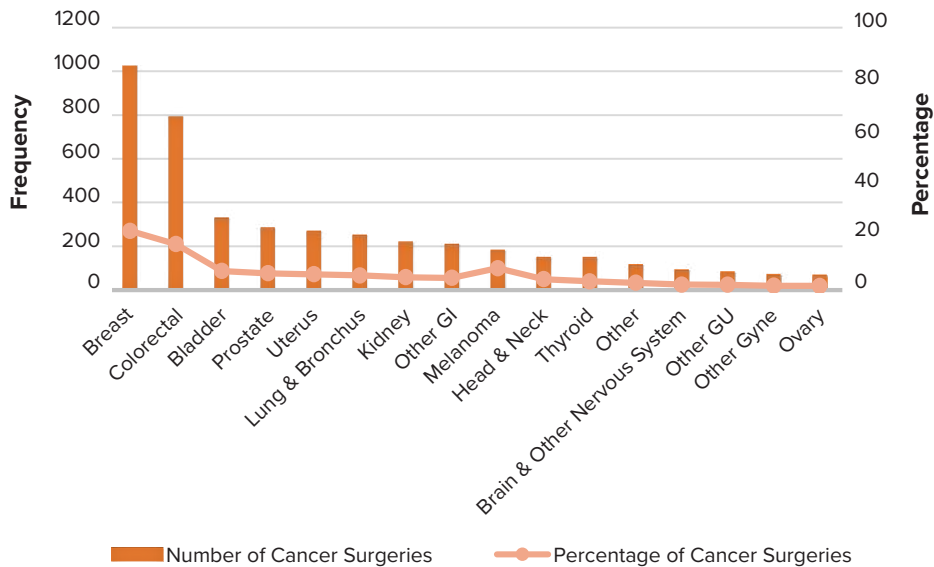


4,280
Surgeries in
2018



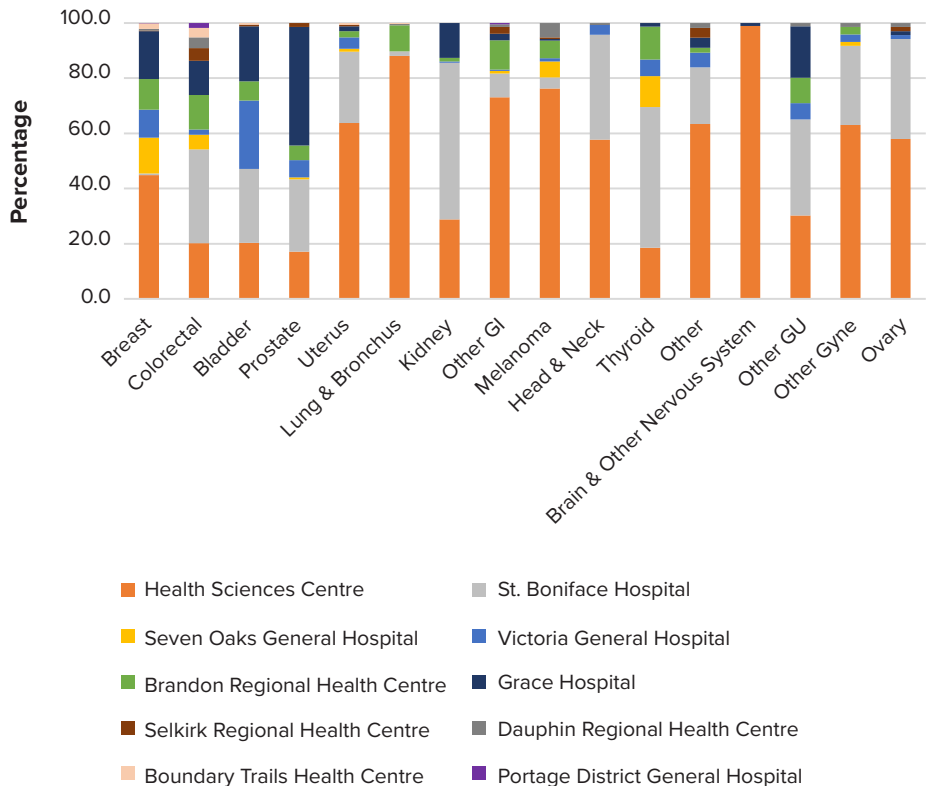
13
Facilities

FIGURE 1. CANCER SURGERIES IN MANITOBA, 2018, BY DISEASE SITE



Note: Please see Appendix 2 to see how cancers were grouped.

FIGURE 2. CANCER SURGERIES IN MANITOBA, 2018, BY DISEASE SITE AND MAIN FACILITIES



Cancer Surgery Framework at a Glance

Pillar 1

Governance

Establish provincial governance to deliver high-quality cancer surgery throughout the province

Pillar 2

Service Delivery

Ensure all Manitobans have timely access to high-quality cancer surgery that is closer to home and sustainable.

Pillar 3

Quality Assurance & Accountability

Establish a quality assurance and accountability structure for cancer surgery in Manitoba

Pillar 4

Research & Innovation

Establish a cancer surgery research program

Pillar 1: Governance

Establish provincial governance to deliver high-quality cancer surgery throughout the province

Governance is essential to providing coordinated, efficient, and high-quality cancer surgery throughout the province. The current cancer surgical services model in Manitoba can be enhanced by improved governance that will enable partnerships and collaboration between providers and various levels of provincial and regional health care systems.

A solution for addressing fragmentation in service delivery, improving clinical outcomes and patient experience is organizing as a network to coordinate efforts.⁷ With cancer surgery distributed throughout the province, a provincial lens is needed when considering cancer surgery governance. While the implementation of a governance structure is relatively new to the Canadian surgical oncology landscape, it is a concept that is gaining momentum with provinces such as Ontario, British Columbia, and Quebec leading the way.

Integrated networks such as these are practical solutions to fragmented service delivery models that are not optimal in providing effective and high-quality care.⁷ The benefits of such networks are emerging in recent years but are not without their own set of challenges. Factors such as physician autonomy, expertise, identity, and relationships with various stakeholders play an essential role in the trajectory of patients and are important considerations when implementing a network. Therefore, for such a network to be successful and achieve its goals and objectives, strong clinical leadership is a requirement and will provide the opportunity for collaborative governance. The implementation of such a network will allow for improved coordination of efforts and enhanced partnerships in Manitoba.

Goal 1:

Establish clinical leadership for cancer surgery in Manitoba.

Goal 2:

Develop a coordinated and integrated Provincial Cancer Surgery Network for Manitoba.

Pillar 2: Service Delivery

Ensure all Manitobans have timely access to high-quality cancer surgery that is closer to home and sustainable

Optimal service delivery means providing the right care, in the right place, at the right time, and ensuring the health system is resourced appropriately and efficiently. In some scenarios allowing patients to access surgical treatment close to home may be appropriate; however, in other cases, it may be more appropriate to centralize surgery to centres of excellence. Colorectal and breast cancer surgery have a wide footprint in Manitoba. Colorectal surgery is being conducted in 10 different facilities and breast cancer surgery is conducted in 6 facilities. While the goal of this pillar is not to increase the number of facilities conducting these surgeries, the intent is to improve compliance with national standards at facilities currently offering cancer surgery. By doing so, we standardize care across all regional health authorities and ensure that Manitobans undergoing surgery, regardless of location, are receiving the same high-quality care. Investing in facilities currently offering these surgeries and supporting improved compliance with standards are essential to providing high-quality care closer to home.

The cancer control landscape has changed over time and continues to evolve based on new evidence and best practices. An aging Canadian population has led to an increase in the number of new cases diagnosed each year and health systems must be equipped to serve the growing needs in cancer care.⁹ An increase in new cases without an increase in human resources, infrastructure, and improved technology capabilities will lead to treatment delays, physician burnout, and suboptimal clinical care. Workforce requirements must be carefully planned to ensure appropriate recruitment for future needs. An increase in human resources is insufficient without increases in infrastructure, such as clinic space and operating room time. Equipment

considerations are also needed to ensure all regional health authorities have access to appropriate equipment to conduct safe and high-quality surgery. Technology can also be leveraged to build capacity within the surgical community by supporting training and educational opportunities. Understanding and addressing technology gaps is foundational to continuous improvements in cancer control and investing in technology can be a catalyst for better patient care.

Healthcare costs continue to escalate with little to no increase in healthcare budgets. Therefore, identifying efficiencies within systems and cost-effectively providing high-quality care is of utmost importance. By carefully examining current patient pathways, inefficiencies can be identified and addressed. Streamlining patient care pathways will have a significant impact on the patient experience. Due to a lack of care coordination, patients often experience fragmented care, especially during the diagnosis period. This is of significant concern for patients living outside of the Winnipeg Regional Health Authority and needing to travel multiple times for multiple tests on multiple days. By investing effort into coordinating diagnostic testing, ancillary care, follow-up care, etc., efficiencies can be gained for patients as well as the system. Effective and efficient care will lead to cost savings which can be reinvested back into the health care system. Investing in human resources, training, technology, and infrastructure is critical to meeting the emerging needs in cancer control.



Goal 1:

Enhance access to high-quality cancer surgery closer to home for all Manitobans.

Goal 2:

Build capacity of appropriate workforce, infrastructure and technology resources to ensure delivery of sustainable and high quality cancer surgery in Manitoba.

Goal 3:

Optimize surgical care pathways to ensure coordinated and timely care for all Manitobans.

Pillar 3: Quality Assurance & Accountability

Establish a quality assurance and accountability structure for cancer surgery in Manitoba

Quality assurance is critical to providing high-quality cancer treatment. The ongoing measurement and reporting of quality of care are essential to understanding quality gaps and promoting a culture of patient safety. The foundation for quality assurance for cancer surgery in Manitoba has been laid by the *Cancer Surgery Quality in Manitoba* report, which was released in 2019. This comprehensive report focused on treatment patterns, quality of care, and post-operative outcome measurement for the major disease sites. The groundwork laid by this initiative will allow us to continue reporting on surgical quality. A disadvantage that accompanies population level administrative data used in the report mentioned above is the timeliness of data access. With data access being delayed 1 to 2 years, the reporting of quality metrics is not real-time and, therefore at times not meaningful.

Surgical Synoptic Reporting (SOR) is an alternative data source that allows for near real-time quality indicator measurement which can complement population level administrative data sources. Data from synoptic reporting is currently being used to provide individual surgeons with a

report which includes their quality indicator performance. These reports are timely, actionable, and include clinically relevant measurements. However, since participating in SOR is optional and limited to WRHA, the ability to understand surgical quality at a population level is limited. By implementing a provincial strategy for this initiative, we will create the necessary infrastructure for ongoing quality measurement at the population level. In addition to an overarching quality assurance framework, efforts are required at the local hospital level to ensure ongoing compliance with national standards. For example, as per recently released pan-Canadian thoracic surgery standards, a designated thoracic surgical centre should have a minimum of three Royal College of Physicians and Surgeons of Canada (RCPSC) or equivalent certified thoracic surgeons.⁹ Similarly, the national breast standards state that hospitals offering breast cancer surgery should have access to radiology, nuclear medicine, pathology, etc.¹⁰ An environmental scan is needed to understand the current state of standards compliance in Manitoba so resources can be allocated to address potential gaps in care.

Goal 1:

Develop the infrastructure to continuously monitor cancer surgery indicators for quality assurance.

Goal 2:

Implement accountability mechanisms for cancer surgery.

Goal 3:

Consolidate highly specialized, low volume, high risk surgeries as per national recommendations.

Pillar 4: Innovation & Research

Establish a cancer surgery research program

Research and innovation are key drivers of high-quality cancer care. Advances in cancer research support evidence-based care and improve clinical and patient-reported outcomes. The Research Institute at CancerCare Manitoba is dedicated to basic and translational research as well as epidemiology, health services research, palliative care, and psychosocial oncology research.

While research in surgical oncology is currently ongoing in Manitoba, there are areas to expand on existing research strengths such as breast cancer survivorship, surgical variation, and outcome measurement to better inform clinical and surgical practice. For example, the *Cancer Surgery Quality in Manitoba* report identified regional differences in the percentage of women who underwent mastectomy with immediate reconstruction. The data used for the report was not sufficient

to explain the differences between regions, and further research would be instrumental in identifying the root causes. The *Cancer Surgery Quality in Manitoba* report was also vital in identifying the current gaps in the data available for research purposes such as the lack of readily available data on nodal station sampling for lung cancer. Further to this, increased research and project management support are needed to expand the current research scope in surgical oncology.

Goal 1:

Develop a research program focused on quality of cancer surgery, clinical outcomes, and patient experience.

Appendix 1

List of Facilities Conducting Cancer Surgery in 2018

Facility	Number of Cancer Surgeries
Health Sciences Centre	1,856
St. Boniface Hospital	880
Grace Hospital	523
Brandon Regional Health Centre	342
Victoria General Hospital	261
Seven Oaks General Hospital	208
Selkirk Regional Health Centre	55
Dauphin Regional Health Centre	53
Boundary Trails Health Centre	51
Portage District General Hospital	16
Thompson General Hospital	11
Concordia Hospital	14
Hôpital Ste. Anne Hospital	10
Bethesda Regional Health Centre	7
Misericordia Health Centre	7
Beausejour Hospital	6
Carman Memorial Hospital	<5
Minnedosa Health Centre	<5
Swan Valley Health Centre	<5
The Pas Health Complex	<5
Boissevain Medical Clinic	<5
Flin Flon General Hospital	<5
Neepawa Health Centre (Memorial Hospital)	<5
Altona Community Memorial Health Centre	<5
Arborg and Districts Health Centre	<5
Melita Medical Clinic	<5
Russell Health Centre	<5

Appendix 2

Definition of Cancer Groupings Used in Figures 1 and 2

Other GI (Other Gastrointestinal) cancer includes stomach, pancreas, other digestive system, small intestine, liver, esophagus, and gallbladder.

Head & Neck cancer includes lip, larynx, tongue, gum and other mouth, major salivary gland, other buccal cavity & pharynx, floor of mouth, eye, oropharynx, hypopharynx, and nasopharynx.

Other cancer includes soft tissue, non-Hodgkin's lymphoma, anus, other ill-defined and unknown, bones and joints, other respiratory system, mesothelioma, other endocrine, chronic lymphocytic leukemia, acute myeloid leukemia, acute lymphocytic leukemia, and Hodgkin's lymphoma.

Other GU (Other Genitourinary) cancer includes testis, ureter, penis, other urinary system, and other male genital system.

Other Gyne (Other Gynecologic) cancer includes other female genital system, and cervix uteri.

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Acknowledgments

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CancerCare Manitoba Roadmap Planning and Project Team

Questions?

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