

# Pan-Canadian Standards for Gynecologic Oncology

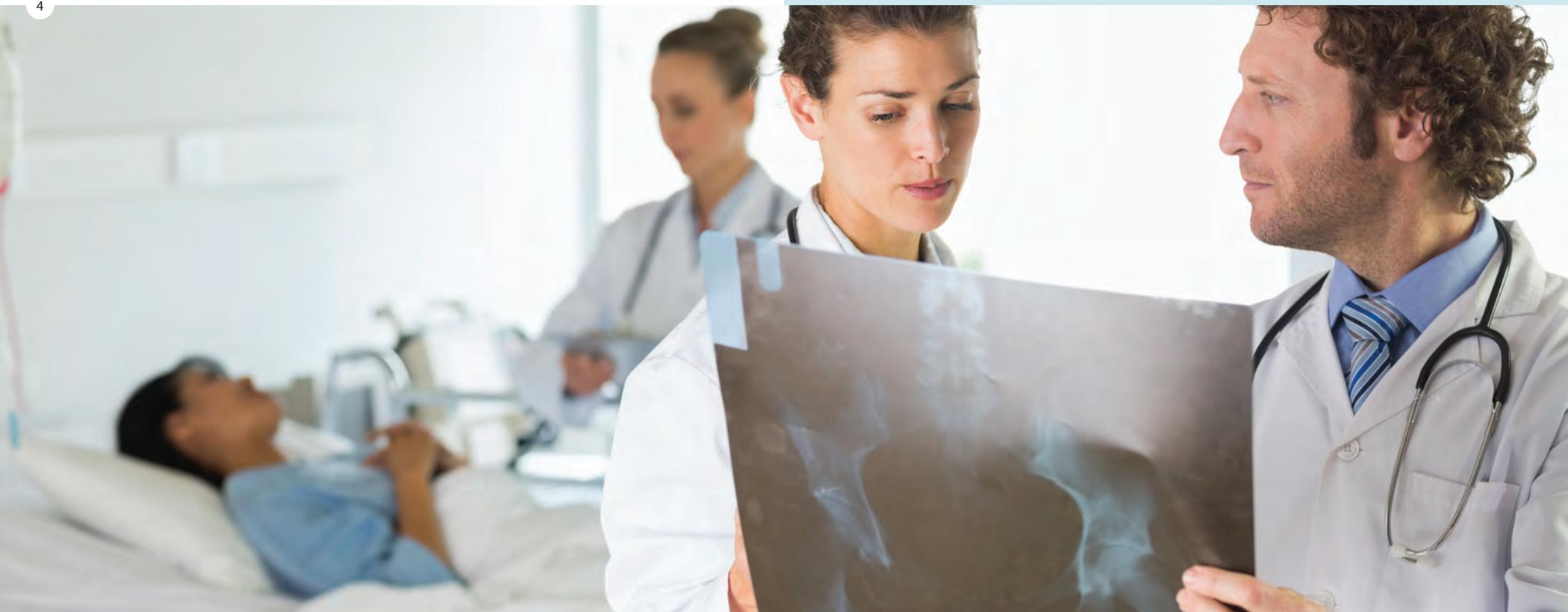




# Table of Contents

Introduction	8
Scope of Standards	10
Intended Users/Target Audience	10
Methodology	11
Literature Review and Environmental Scan	11
Expert Discussions	11
Standards and Evidence	12
—— Surgeon Criteria	12
1.1 Training and Maintenance of Competencies	13
1.2 Surgery and Management	14
—— Practice Settings	15
2.1 Organizational Criteria	15
2.2 Physical Resources and Collaborating Services	18
2.3 Human Resources	21
2.4 Treatment at Oncology Centre and Relationship with Affiliated Centres	22
—— Quality Processes	23
3.1 Multidisciplinary Discussion and Evaluation [of Cases]	23
3.2 Data Collection and Continuous Quality Improvement	24
Future Directions	26
References	26

Message from Dr. Christian Finley  
Expert Lead, Clinical Measures, Canadian Partnership Against Cancer



I am pleased to introduce the **Pan-Canadian Standards for Gynecologic Oncology**. This is Canada's first evidence-based, comprehensive national standards for gynecologic oncology that can be tailored according to local health systems. In efforts to build on the great work done to date, existing standards and published journals in gynecologic oncology have served as a foundation for the development of the national standards.

With increasing trends in the cases of reproductive system cancers, there are significant disparities in patterns of practice and patient outcomes for surgical cancer care across Canada. Findings from the November 2015 report, *Approaches to High-Risk, Resource Intensive Cancer Surgical Care in Canada*, culminated in the development of pan-Canadian standards. Report findings highlighted the tremendous variability in how each province in Canada delivers cancer care services, resulting in disparities in patient outcomes. Thus, deliberate approaches are needed to improve the organization of complex surgeries in a way that optimizes patient outcomes and reduces the burden on health care resources.

Ovarian cancer resections, in particular, have constituted the second highest case volume across Canada; and, while there has been a significant reduction in the annual incidence rate, the annual mortality rates have significantly increased over the years along with the number of gynecologic procedures performed for primary ovarian and fallopian tube cancers.

It is our hope that this document will serve as a decision-making resource to support the delivery of consistent, high-quality care to all Canadians requiring gynecologic oncology care. The document provides high-level guidance and discussion on the foundational resources and requirements that need to be in place to improve cancer surgical care and outcomes. It is our goal that the actionable recommendations included herein will help address current gaps, be forward thinking and elevate the delivery of care for patients with gynecologic malignancies.

Development of these standards has been informed by environmental scans, a literature review and evidence-informed expert consensus. The document emphasizes a number of key areas such as Royal College of Physicians and Surgeons of Canada's (RCPSC) system for evaluating and formally certifying

training in gynecologic oncology. Gynecologic oncology surgery requires an integrated team approach where the health care team should be well-trained and adequately resourced to provide the best possible care to women with gynecologic malignancies. The delivery of care is a shared responsibility between collaborating specialties where they collectively evaluate treatment options.

In Canada, both gynecologic oncologists and medical oncologists can deliver chemotherapy to patients post-surgery in either gynecologic oncology centres or centres where care is delivered closer to home. Medical oncology is an important facet of multidisciplinary care where the medical oncologist delivers a fundamental component of care.

Health care planners and providers can utilize the information presented in this document to organize care in a way that maximizes patient outcomes while maintaining reasonable access to care. This report is one component of a family of reports to be developed for disease-site specific national standards of surgical cancer care.

I look forward to working with you to improve the quality of complex surgical cancer care in Canada.



*Dr. Christian Finley*  
Expert Lead, Clinical Measures  
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6

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## Acknowledgments

The production of this report was made possible through the dedicated efforts of many individuals. We express our gratitude to them for their contributions and assistance in the development of these recommendations.

We like to acknowledge the invaluable contributions of the Gynecologic Oncology Expert Panel Members and the Society of Gynecologic Oncology of Canada (SGOC) for their input and guidance in the production of this document. The Expert Panel was instrumental in the development of the recommendations through a comprehensive review of academic literature, objective analysis, in-person discussions and document review.

In addition, Laura Banfield, Librarian at McMaster University, conducted a comprehensive literature search at the onset of this project contributing to the evidence-informed development of the national standards.

To leverage the great work done to date, development of the national standards has been informed by published work: “Organization Guidelines for Gynecologic Oncology Services in Ontario”.<sup>1</sup>

Strategic oversight around the development of this document was provided by the Canadian Partnership Against Cancer (CPAC) by: Dr. Heather Bryant, Vice-President, Cancer Control. Process development, report production and dissemination were led by the Quality Initiatives, Diagnosis & Clinical Care team at CPAC: Corinne Daly, Dr. Mary Argent-Katwala, Director; Anubha Prashad, Program Manager; Michele Mitchell, Natasha Camuso, Analyst; and Mridula Suri, Delivery Manager.



## Introduction

- > In 2010, there were 82,885 incident cancer cases in Canadian women. Of these incident cases, 12.0% were reproductive system cancers.<sup>2</sup>
- > 9 out of 10 reproductive system cancer cases were uterine, ovarian and cervical cancers.<sup>2</sup>
- > Ovarian cancer caused the most fatalities with 9.5 deaths per 100,000 women in 2010.<sup>2</sup>
- > Canadian statistics from 2010 indicate that uterine cancer was the most commonly diagnosed reproductive system cancer with a rate of 30.3 new cases per 100,000 women.<sup>2</sup>
- > The median age of death from cervical cancer has decreased as older women have a better survival rate.<sup>2</sup>

## With increasing trends in the cases of reproductive system cancers, there are significant disparities in patterns of practice and patient outcomes for surgical cancer care across Canada.<sup>3</sup>

A recently published report, entitled *Approaches to High-Risk, Resource Intensive Cancer Surgical Care in Canada*, highlights major disparities in care patterns that exist across the country for several types of cancer that are considered high-risk and resource-intensive.<sup>3</sup> Considering that ovarian cancer resections constituted the second highest case volume, a number of key findings emerged:

- > Total of 16,949 surgeries were performed in 232 institutions across Canada (excluding Quebec).<sup>3</sup>
- > An increase of 10 ovarian cancer resections per institution in a given year was associated with 7% reduction in the risk of in-hospital mortality (after adjusting for patient-specific factors, procedure type, and hospital random effects).<sup>3</sup>
- > There was significant variability in resection rates and outcomes between provinces.<sup>3</sup>
- > There is considerable variation in regards to survival rates, with one province having 15-20% difference compared to international averages.<sup>4</sup>

There is strong evidence supporting the positive impact of volume on surgical cancer care. The report, *Approaches to High-Risk, Resource Intensive Cancer Surgical Care in Canada*, highlighted that patients and caregivers prefer better surgical care quality at the expense of longer travel distances. These factors are important to take into consideration when considering reorientation of cancer surgical procedures in any jurisdiction.<sup>3</sup> Additional factors to regionalization of care should also be considered including human resource requirements to ensure timely access to care, the necessary training and maintenance of competency for gynecologic oncologists, the availability of required equipment and services and quality assurance processes and measurement capabilities. Thus, the demonstrated variation in resection rates and outcomes among the provinces has provided the case to develop national clinical guidelines and standards for each cancer surgery. In fact, certain provinces have already taken steps to regionalize care gynecologic cancer surgery.<sup>3</sup>

Due to the nature of high-risk, complex cancers, the patient relative comorbidities and age, these surgeries are particularly challenging and are associated with a higher risk of adverse outcomes for patients. But, they also offer the best chance patients have for cure and as such, the optimal delivery of this care, both in indication but also in execution, is paramount.

Based on the aforementioned evidence supporting improved outcomes and patient safety in higher volume centres, as well as the disparities in care across the country, there is a need for a comprehensive set of pan-Canadian standards to ensure consistent, high-quality care for all Canadians requiring gynecologic oncology surgery.

## SCOPE OF STANDARDS

The objective of this document is to define national best practices and elevate the delivery of care for patients with gynecologic malignancies.

The scope of this document includes:

- > Gynecologic malignancies in general
- > Timely access to care from pre-, peri-, and post-operative care and treatment
- > Training and maintenance of competencies for gynecologic oncologists
- > Access to services and equipment
  - Such as access to oncology, consultants, allied health
- > Resources for patients and families (e.g. hereditary cancer programs)
- > Quality processes (including multidisciplinary around etc.)

The scope of this document does not include:

- > Management of care pathways by cancer type or tumor site
- > Assessment of drugs and treatment options
- > Assessment of technology and equipment used to deliver care

For the purposes of this document, a gynecologic oncology centre is defined as a centre that complies with all the recommendations included in the document.

This document is intended to provide high-level guidance to the Ministries of Health, gynecologic oncologists, local health authorities, and hospital administrators on the foundational resources and requirements that need to be in place to support high quality care delivery. It is recognized that these standards will need to be tailored according to local health system characteristics.

Expert panel members acknowledged that the readers of this document may want thresholds and/or concrete numbers to demonstrate that volume-outcome has a relationship. However, the expert panel members were not comfortable with providing numbers and have thus, highlighted important factors that would support the achievement optimal outcomes.

## INTENDED USERS/ TARGET AUDIENCE

The primary intended users/target audience of this document are: gynecologic oncologists in Canada. Secondary users include Ministries of Health, as well as other physicians and collaborating specialties (e.g. anesthesiologists, radiologists, pathologists). Other users that might benefit from this document include surgeons from other countries.

# Methodology

## LITERATURE REVIEW AND ENVIRONMENTAL SCAN

A literature search was performed using Embase and Medline and the search was restricted to publications between 1996 to June 2016 and 1946 to June 2016, respectively. A comprehensive search strategy was developed to assess the literature to examine evidence. The search strategy incorporated medical subject headings (MeSH), Boolean operators, and wild cards. Results were excluded if they were duplicate findings or were not deemed relevant after review (Fig. 1).

## EXPERT DISCUSSIONS

The standards herein were developed through consultation with an expert panel of gynecologic oncology from across Canada. The expert panel members reviewed literature search findings for relevance and identified key evidence to be evaluated and incorporated to support the standards, where appropriate. An in-person meeting was held to develop standard statements (30 standards developed) and achieve consensus on standard statements to be included, followed by an electronic survey to validate and vote on the results from the in-person meeting. Based on the electronic survey and follow-up meeting discussions, one standard statement was added, resulting in 31 standards being included in this document. A targeted review period was held to seek additional feedback and endorsement from the Society of Gynecologic Oncology of Canada (SOGC).

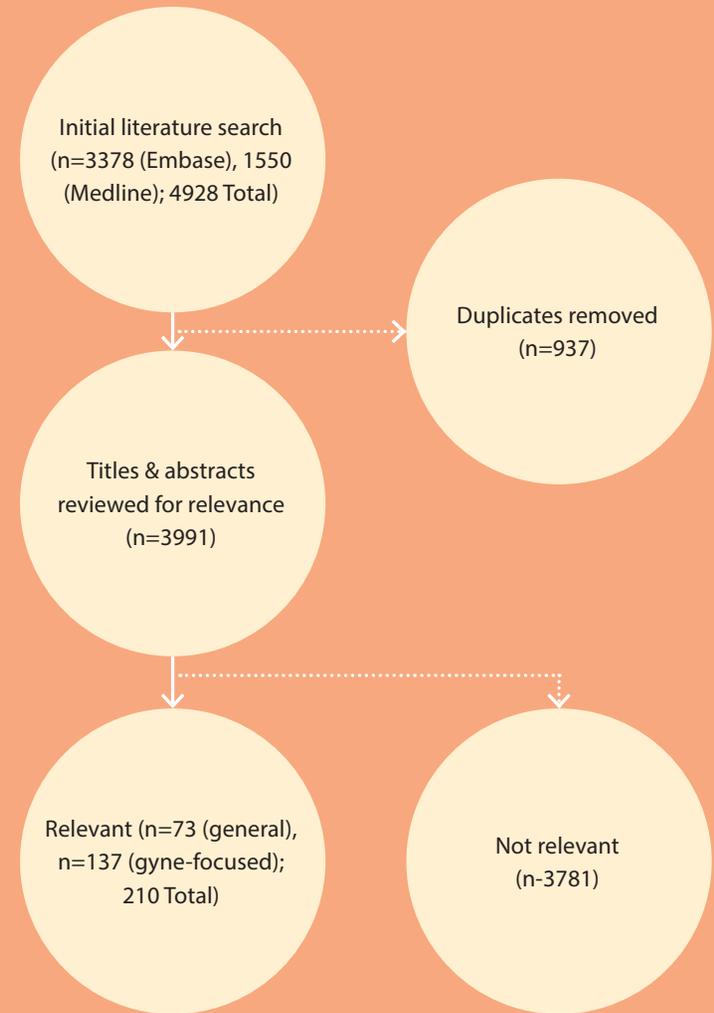
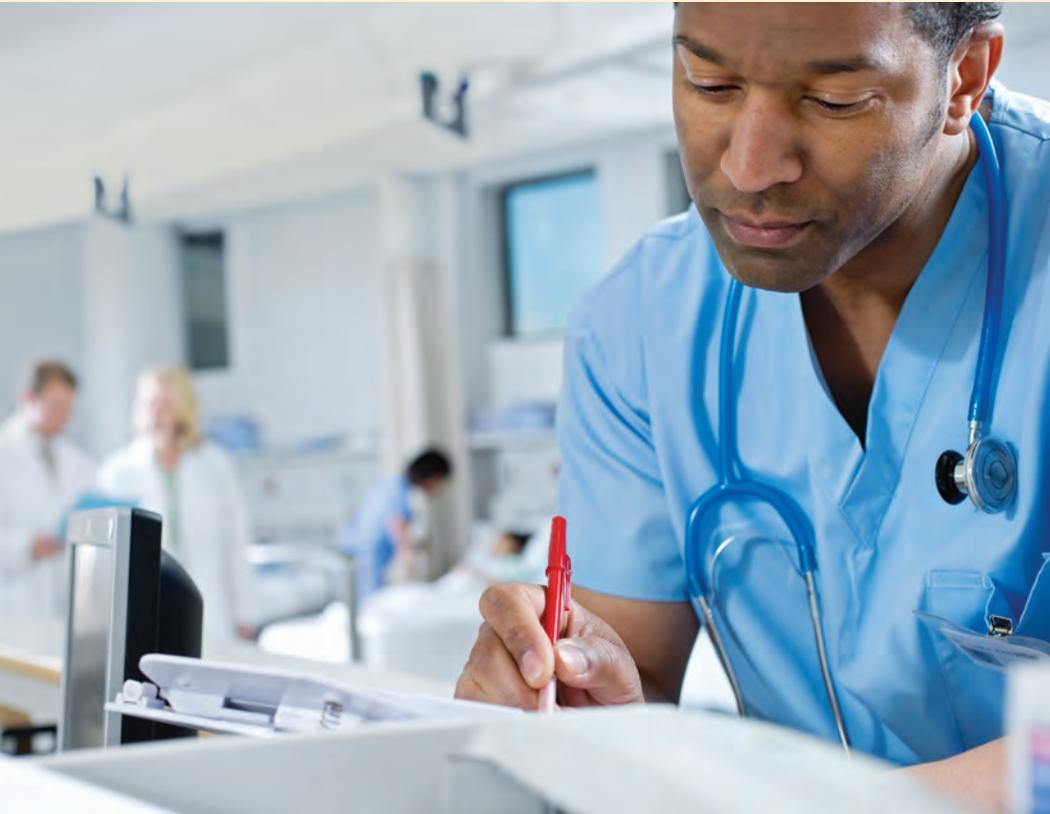


Figure 1. Flow chart of search results and article inclusion

# Standards and Evidence

## SURGEON CRITERIA



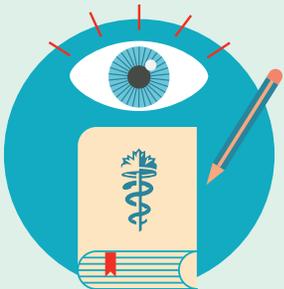
## 1.1 TRAINING AND MAINTENANCE OF COMPETENCIES



1.1.1 A gynecologic oncologist should have contemporary knowledge of the diseases of female genital tract cancers as defined by the Objectives of Training in the Subspecialty of Gynecologic Oncology in the Royal College of Physicians and Surgeons of Canada.<sup>5</sup>



1.1.2 Gynecologic oncologists' participation in the maintenance of competency is mandatory and must be in accordance with provincial and national standards preferably specific to gynecologic oncology.



1.1.3 Gynecologic oncologists should have formal, complete and certified training in gynecologic oncology equivalent with Royal College of Physicians and Surgeons of Canada (RCPSC). For those not trained in Canada, a similar regimented and accredited training program must be completed and certified by RCPSC.<sup>5,6</sup>

The technical skills and knowledge base to safely and competently treat gynecologic malignancies require that the practitioners have completed comprehensive training in the full scope of gynecologic oncology, thereafter, systematically and diligently ensuring that their training is contemporary. Where possible, training completed in Canada is preferred but the expert panel acknowledges that, in the United States and internationally, there are many excellent training programs, though their scope, training and evaluation are sufficiently different to make them not completely transferable at face value.

## 1.2 SURGERY AND MANAGEMENT

1.2.1 Gynecologic oncologist should be intimately involved in the diagnostic assessment and management of gynecologic malignancies where the decision of operability and resectability is made only by the gynecologic oncologist.

- > Surgical management of ovarian cancers, fallopian and peritoneal, including surgery should only be performed by gynecologic oncologists.<sup>7</sup>
  - Patients with pelvic masses should be referred according to the published guidelines.<sup>8</sup>
- > All women with gynecologic malignancies should have access to multidisciplinary teams and should be operated on and/or have the treatment directed by a gynecologic oncologist.

14



Many international case studies as well as expert experience have shown that models of care that include the gynecologic oncologists' decisions of operability and resectability have superior rates of resection and suggest superior survivals for gynecologic malignancies.<sup>9-11</sup> Patients with advanced disease experienced significant survival when a gynecologic oncologist was involved in their care. Evidence also suggests that all women undergoing surgery for ovarian cancer should have access to a gynecological opinion.<sup>12</sup> There is a positive influence of gynecologic oncologists on the treatment, outcome and survival of patients with high-risk cancers.<sup>10,11</sup>

Where care is informally given or where high-risk cancer evaluation and treatment is not standardized, the patients often have less chance of being offered curative modalities. As such, it is the recommendation of the expert panel that all patients with gynecologic malignancies in Canada be evaluated in a systematic way such that care can be standardized. Within this model, gynecologic oncologists need to be intimately involved in the treatment decisions. In addition, community physicians should have ready access to gynecologic opinion with access to a gynecologic oncologist on call. Calls from the community regarding referrals should be answered within 24 hours.

While there are instances where general surgeons in Canada have excellent training and experience in providing surgical treatment of some gynecologic malignancies, in order to optimize outcomes, the expert panel advises that the practice of those resections should be conducted by gynecologic oncologists or in collaboration with a gynecologic oncologist in a centre of care that complies with the practice setting (as mentioned in the following section). The expert panel feels that the evidentiary weight is overwhelming in its determination that care in this model is superior and in the patients best interest.

## PRACTICES SETTINGS



### 2.1 ORGANIZATIONAL CRITERIA

2.1.1 Three gynecologic oncologists, at a minimum, are needed at each gynecology designated centre.

> Intra-operative collaboration is encouraged in gynecologic oncology and should be supported for complex cases.

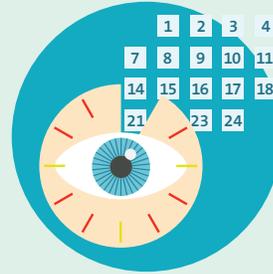
In a balance of Canadian geography, patient, surgeon and hospital factors, it is felt that there should be a minimum of three gynecologic oncologists on staff to provide diagnostic assessment and management of gynecologic malignancies. A minimum of a three-person gynecologic oncologist team can reduce surgeon fatigue, contribute to shorter operative time thereby producing optimal outcomes.<sup>13</sup> Evidence suggests that fatigue engendered on a single gynecologic oncologist may lead to suboptimal outcomes.<sup>13</sup>

2.1.2 Recruitment of additional gynecologic oncologists and/or adequate human resource supports may be warranted based on certain factors/thresholds:

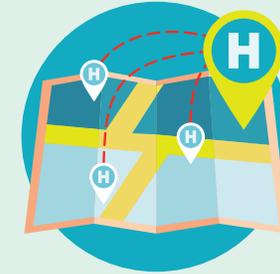
- > Increase in non-clinical responsibilities of education, research or leadership.
- > Significant increase in surgeon gynecologic oncologist's workload may compromise their ability to provide timely and effective patient care. This is based on the assumption of <60 work hours for gynecologic oncologists.
- > Significant and sustained increase in the number of referrals compromising the delivery of care.
- > Increased wait times for cancer patients.

Manpower planning is dependent on the level of involvement in delivering systemic treatment and conducting genetic evaluation.

2.1.3 Gynecologic oncology centre should set targets to monitor and evaluate wait times and timely access to care.



2.1.4 Within the geographic limitations of each province, gynecologic oncology services should be concentrated and regionalized.



2.1.5 Gynecologic oncology surgery should be delivered within designated gynecologic oncology centres.<sup>14</sup>

16 Manpower planning is inexact and very dependent on local circumstances, scope of work and other non-clinical activities. As such, providing any exact number is difficult but in evaluation of historic Canadian experience, the expert panel feels that recruitment of additional gynecologic oncologists/human resources may be warranted based on the previously mentioned factors. Manpower planning is dependent on a number of factors including involvement in pre-invasive disease treatment, counseling, involvement in leadership roles etc.

In addition, because of the multitude of responsibilities undertaken by gynecologic oncologists, such as involvement in prevention programs, treatment guideline development, quality assurance for oncologic care, clinical, educational, research and administrative work, adequate payment schedules should exist and be maintained. Clinical work should be remunerated based on case complexity.

Expert panel members recommended the following targets for triage and screening to facilitate timely ordering of diagnostic and appropriate referral to consultants:

- > A complete referral to a gynecologic oncology centre should be triaged within a week upon receipt. In addition, there should not be any delays in triage in instances where referral may not be complete but sufficient documentation is received to warrant the referral.
- > According to regional guidelines, 90% of patients with high risk and symptomatic malignancies should be seen, assessed and dispositioned within two to three weeks, followed by operation within three weeks. All other cases should have a treatment disposition within four-six weeks.<sup>8</sup>

Ideally, specific information on the quality of surgery and care would guide the regionalization process within the geographic limitations of a health authority. Currently available information would suggest that the most robust, modifiable variable in the model of patient care is regionalizing patients to high-volume hospitals for select high-risk procedures so that they are more likely to experience better outcomes.<sup>15</sup> High-volume centres tend to have more highly trained gynecologic oncologists, better infrastructure, better-staffed patient units, more resources, and increased collaborations with multidisciplinary teams. These factors have reportedly reduced mortality rates and improved long-term survival rates.<sup>16-26</sup> That said, it is felt that it is not the volume itself but the associated factors outlined in this document that make the difference in patient care, such that just centralizing cases without addressing the rest of these recommendations is a mistake and unlikely to improve care.

2.1.6 Gynecologic oncology centres should be affiliated or involved in the assessment of hereditary gynecologic oncology syndromes and pre-invasive disease.

2.1.7 The treatment and prognosis of patients with gynecologic malignancies is largely dependent on pathology and the majority of cases referred often requires review of pathological specimens by specialized gynecologic pathologists or pathologists with an interest in gynecologic malignancies.

It is the shared opinion of the expert panel members that Stage 1/Grade 1 endometrioid adenocarcinoma of uterus cases should be reviewed by two pathologists with access to a specialized gynecologic pathologist. All other gynecologic malignancy cases should be reviewed by a specialized gynecologic pathologist.

2.1.8 Gynecologic oncology centres should participate in regional and provincial integrated, established networks of care where appropriate to ensure care is provided closer to home.



Geographic isolation, within the Canadian context, can prohibit the delivery of high quality care to vulnerable populations. Availability of a healthy and functional network of care including ready access to telehealth and other technological solutions can help mitigate the risks and provide care closer to home. Thus, regionalization of services should take into consideration patient choice and the distance that patients are willing to travel as these patients often need health care services on a frequent and regular basis for years.<sup>27, 28</sup> Innovative regional programs that leverage existing networks are important to ensure that patients get optimal care. Whether through diagnostic assessment pathways, integrated home care models or active involvement of the patient's primary care team, there are many existing programs that can bridge these potential care gaps.

2.1.9 All patients should have the opportunity to participate in clinical trials.



Infrastructure, such as the availability of disease-specific clinical trial networks, should be in place to support and increase the participation of patients in clinical research. For the treatment of gynecologic malignancies, particular focus should be given to availability and funding of clinical trials as this disease is underserved proportionally to its mortality and incidence.

## 2.2 PHYSICAL RESOURCES AND COLLABORATING SERVICES

2.2.1 All gynecologic oncology centres need timely access to diagnostics so that all testing (e.g. CT scan, interventional radiology, biopsy etc.) can be completed within defined wait times for advanced cancers. It is the joint responsibility of the region, institution and gynecologic oncologists to provide appropriate supports and timely access to services (from suspicion to diagnosis to treatment). A region with gynecologic oncology centre(s) needs to be committed to supporting adequate manpower to provide high quality care.

A gynecologic oncology centre should be well-resourced so that timely diagnosis and earlier intervention can occur. Full spectrum of surgery, radiation therapy and systemic therapy services should be available.<sup>14</sup>





2.2.2 The following resources and collaborating services are considered to be reasonable criteria for gynecologic oncology services to provide comprehensive and timely care:

- > Dedicated, geographically defined gynecologic oncology surgical unit with consolidated unit of beds to ensure an appropriate level of nursing, gynecologic oncology, surgical oncology, gynecologic pathology, medical oncology, palliative expertise with the expectation that all cases should be placed with dedicated beds so that their care is standardized.
- > Step-down beds when necessary to support the volume of patients treated.
- > 24 hours a day, 7 days a week access to the operating room, intensive care unit, interventional radiology and critical care.
- > Access to rapid response laboratory (i.e. biochemistry, hematology, transfusion and microbiology) services.
- > Onsite pathology and frozen sections to support operative room.
- > Timely access to appropriate immunohistochemistry and genomics.
- > Timely access to colposcopy services.
- > Timely access for inpatient gynecologic oncology services in particular chemotherapy such that the care is not compromised; timely access for gynecologic oncology for inpatient and outpatient chemotherapy oncology services.

The issue of where patients are most safely cared for in gynecology is multifaceted and influenced by case volume, hospital resources and historic relationships. Within that construct, it is the collective opinion that patients undergoing gynecologic oncology surgery are best served where they are geographically concentrated together to consolidate expertise in all the aforementioned services. The specialized nature of their care and complications make that expertise the difference in “failure to rescue.” It is the expectation that the majority of elective patients could be cared for in this area. Clearly, there will be issues of surgical capacity and hospital flow that will impact this but the hospital must design their work flow around this concept. The issue of higher level care needs to be equally defined. Many cancer patients need “step down” or equivalent critical care beds to ensure optimal care and minimize mortality. As such, those beds need to be resourced adequately to ensure timely and optimal care.

2.2.3 All gynecologic oncology services should have well-maintained and adequately resourced open and minimally invasive equipment.

2.2.4 Capital expenditures must be available to provide contemporary equipment and be re-evaluated regularly as there are changes in manpower to ensure adequate resourcing.

2.2.5 All gynecologic-related pathology reports should be reported in a synoptic format and should be completed within 2 weeks of operation.



2.2.6 Robotic surgery, if available, requires appropriate training and mentorship, and should be well-maintained and adequately resourced.

2.2.7 Where systemic therapy is offered (chemotherapy and biologic agents), medical oncology, oncology pharmacy and nursing support for inpatient and outpatient services should be available.<sup>14</sup>

All gynecologic oncology pathology reports should be reported in a synoptic format within 2 weeks of operation. Electronic synoptic pathology reports are standardized checklists that capture information at the point of care and once completed, are promptly transmitted to other health care professionals.<sup>29</sup> Captured information can be used by gynecologic oncologists to assess adherence to evidence and safety procedures and assess the delivery of quality of care and patient outcomes.<sup>29</sup>

Robotic technology for gynecologic surgery has enabled gynecologic oncologists to perform complex surgical procedures through minimally invasive surgery. That said, the adoption of any new technique may result in adverse events and as such needs to be brought onboard in a thoughtful and systematic way. As technology evolves over time, adverse events and outcomes need to be tracked to support quality improvement.

Systemic therapy services should be appropriately equipped and resourced to provide chemotherapy and biologic agents, and oncology pharmacy support for inpatient and outpatient services.

## 2.3 HUMAN RESOURCES

2.3.1 The multidisciplinary team at a gynecologic oncology centre should include:<sup>14</sup>

- > Access to medical and surgical oncology services
- > A radiation oncologist with training in gynecology
- > Access to intra-cavitary brachytherapy
- > General practitioners with training in oncology
- > An adequate number of pathologists preferably with a specialty or alternately a special interest in gynecologic oncology pathology
- > Access to geneticists and pathologist with gynecologic expertise
- > Specialists in radiology, including those with expertise in gynecologic diagnostic imaging and interventional radiology
- > Access to specialized oncology nursing and continued advanced practice nursing in the outpatient setting
- > The following medical specialists should be available:
  - Psycho-social-sexual counseling and support
  - Palliative care physician or specialist, which may include assessment at the gynecologic oncology centre, with seamless linkage to and coordination with providers in the patient's home community
  - Access to dietitians
  - Access to medical specialists should be available as required
  - Geneticist/genetic oncology clinic where patients with hereditary predisposition to cancer can receive counseling and appropriate testing when indicated
  - Access to an expert in reproductive medicine
  - Access to an expert in obstetrics and pre-conception counseling etc.
  - Access to stoma nurse, occupational therapy, rehabilitation, spiritual care, culturally appropriate aboriginal people support
  - Access to translators, community liaisons, and screening experts
  - Access to sexual medicine

Critical to successful patient care is the team involved in the care. Gynecologic oncologists recognize that while their role of a gynecologic oncologist is one of leadership, knowledge and technical expertise, that prevention of mortality and morbidity is equally executed by the entire care team; and that “failure to rescue” is an institutional failing as much as a physician one. It is the opinion of the expert panel that, although, gynecologic oncologists have an integral role to play, collaboration with other specialties, consultants and clinical nurse specialists is key to providing high quality gynecologic oncology care. Due to the inherent vulnerability of the patient population, they are at increased risk of gaps in care that are bridged by these professionals.

Advanced practice nurses help in the education and evaluation of patients, inpatient standardization of perioperative management, identification and prevention of adverse events, and management and timely discharge to ensure patient flow. Diagnostic assessment pathways have shown to reduce wait times and it is recommended that gynecologic oncology centres should support resources including advanced practice team which may include nurse navigators. Role of oncology nurse navigators have shown to enhance patient experience. Recruitment of nurse navigators is viewed as an effective strategy to improve the standard of cancer care delivered and can improve patient outcomes.<sup>30</sup>

Women with gynecologic cancers find it helpful to be given individualized information and care to satisfy their individual needs and reinforce their self-image. Nurses have an important role in strengthening women's feelings of hope and supporting them in maintaining as positive a self-image as possible.<sup>31</sup>

The primary oncology team should routinely assess for pain and other symptoms, and regularly inquire about a patient's understanding of her disease and her goals of care. Specialty palliative care can provide an extra layer of support for patients with gynecological malignancies and their families by helping with more challenging symptom management, psychosocial support, complex decision-making, advance care planning, and transitions in care.<sup>32</sup> Recognized outcomes are not only related to physician and center but also house staff, specialized nursing teams.<sup>33</sup> Evidence suggests that hospitals with good staffing volumes had better outcomes for cancer surgical patients.<sup>34</sup>

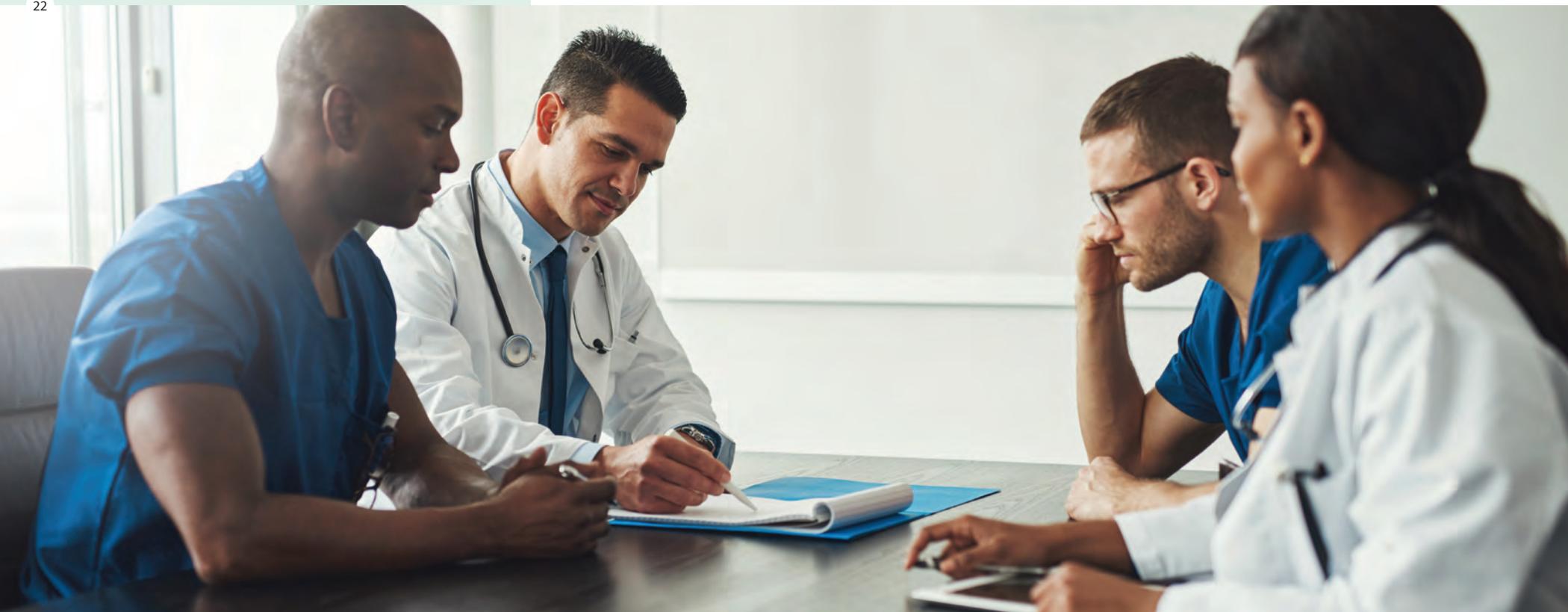
For services not immediately available in the institution, knowledge and/or formal relationships with centres that can provide these services in the region is important.

## 2.4 TREATMENT AT ONCOLOGY CENTRE AND RELATIONSHIP WITH AFFILIATED CENTRES

2.4.1 In addition to surgical care, gynecologic oncologists and their teams should be equipped to provide radiation therapy and systemic therapy and have a formal relationship with a cancer centre.<sup>14</sup>

Barriers in geography of available beds in a unit should not impede the necessary consultation treatment. Although, a gynecologic oncology centre should be equipped with adequate resources to manage the full range of gynecologic oncology care, in the instance that this is not the case, a formal working relationship or association with a regional cancer centre should be in place.<sup>35,36</sup> This includes affiliation with a regional cancer center that has access to radiation therapy equipment and where consultations with consultants, such as medical and radiation oncologists, is also readily available.<sup>35</sup>

In addition, treatments such as chemotherapy, radiation, and palliative care should be delivered at affiliated centres to allow patients to receive ongoing treatments closer to home.<sup>14</sup> Collaboration with an affiliated centre can have an overall positive impact on wait times for treatment, better patient flow and an opportunity for multidisciplinary teams from specialized hospitals to closely collaborate with other hospitals.<sup>14</sup>



## QUALITY PROCESSES



### 3.1 MULTIDISCIPLINARY DISCUSSION AND EVALUATION [OF CASES]

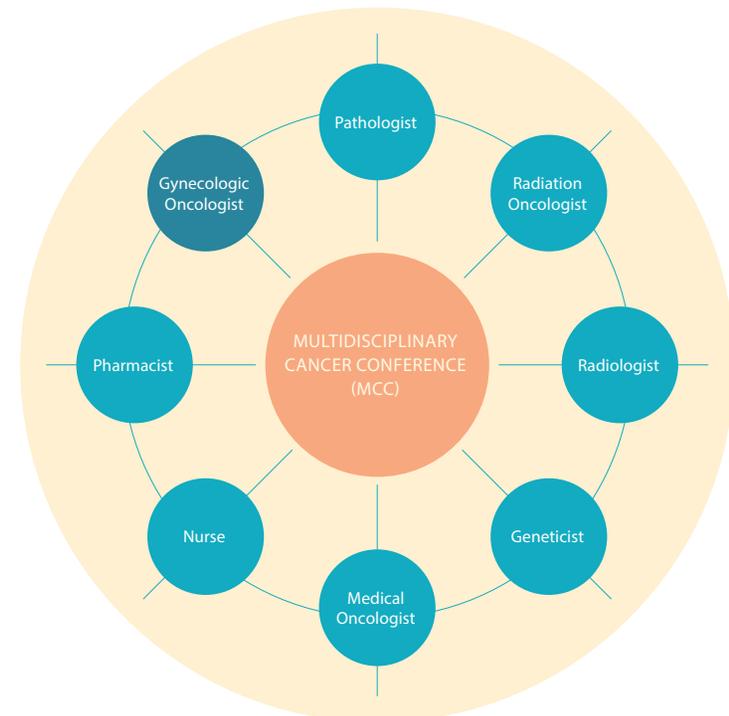
3.1.1 Multidisciplinary cancer conference should, at a minimum, include a gynecologic oncologist, a pathologist trained in gynecologic malignancy and radiation oncologist with an interest/training in gynecologic cancer to support achievement of optimal outcomes. Participation could also include a radiologist, geneticist, medical oncologist, nursing and pharmacy as well as community partners participating in care.

3.1.2 All complex gynecologic malignancies should be discussed in multidisciplinary format.

Collaboration and knowledge sharing are essential for those involved in patient care. Collaboration between specialties has shown to enhance patient outcomes as well as significantly reduce the time from diagnosis to treatment.<sup>36-49</sup> It is critical that nurses, radiologists, medical oncologists, radiation oncologists and gynecologic oncologists formulate a unified, evidenced-based management plan for patients.<sup>40</sup> For instance, depending on the region, chemotherapy can be administered by a gynecologic oncologist or a medical oncologist and as such these relationships need to be in place to deliver appropriate care. Communication between the members of the multidisciplinary teams needs to be timely to ensure compliance to agreed-upon patient pathways, including personalized case management and compliance with definitive treatment.<sup>50</sup> With current availability of telemedicine and videoconferencing, geography should not be a barrier.

Patients' psychological, social and sexual rehabilitation following treatment for gynecological cancer demands a holistic, pro-active approach by professionals who are skilled in the provision of this care. Within a multidisciplinary team, the clinical nurse specialist is in a key position to be able to address these often complex and sensitive issues. The successful development of medical/nursing partnerships enables women with gynecological cancer to gain proper access to

essential expert knowledge and information and thereby to make informed decisions.<sup>51</sup> In addition, evidence shows that participants receiving a palliative intervention addressing physical, psychosocial and care coordination provided concurrently with oncology care had higher quality of life and better mood.<sup>52</sup> Knowledge of a patient's perspective and preference for gynecological cancer follow-up care by the health care team can enhance the patient's experience ultimately improve their patient journey.



## 3.2 DATA COLLECTION AND CONTINUOUS QUALITY IMPROVEMENT

**3.2.1** Institutions and regions that have gynecologic oncology centres need to support quality processes such that social and financial barriers are not a limitation to participation.

**3.2.2** It is the joint responsibility of the gynecologic oncology centres and gynecologic oncologists to actively monitor patient complications and have quality processes in place to support quality improvement. Every gynecologic oncology centre needs to have a system in place to identify adverse events and outcomes early in the patient's journey and rescue the patients to avoid further more serious events.

**3.2.3** There should be an implementation of a national, data-driven approach to deliver best practice care and for health authorities to provide appropriate supports to institutions to achieve the best practice. Routine data collection on process and outcomes should be systematically and prospectively captured and benchmarked against national and international standards. This includes systematic classification of adverse events, regular review of morbidity and mortality rounds, and periodic review of data to allow for self-evaluation and to promote continuous cyclical improvement (through audit and feedback). Best practice approaches should be utilized and shared to ensure high quality care.

**3.2.4** Institutions should support adequate collection and measurement of patient experience data.

**3.2.5** There is an expectation that techniques and processes of care will change over time. It is the expectation that when adopting new technologies and techniques, active tracking of adverse events and outcomes will be completed.

**3.2.6** Appropriate federal, provincial and regional bodies should identify patients at high-risk for negative outcomes, in particular those from vulnerable populations, and develop appropriate pathways and monitor compliance against the pathways.

**3.2.7** Systematic communication and documentation tools, in alignment with published best practice guidelines, should be in place and embedded into quality processes to minimize errors in care and enhance quality of care delivered to patients.



Although difficult to define, quality improvement is often measured by components of structure, outcomes, and process. One way for gynecologic oncologists to evaluate their practices is to compare themselves with evidence-based national guidelines and track quality data which is often generated from entries into large patient databases. This data, around quality care, process and outcome measures, can provide meaningful information regarding surgical outcomes and quality and upon regular monitoring, can help predict surgical morbidity and mortality.<sup>53</sup> Over time, routine collection of data will improve data quality and ultimately lead to better patient care. However, outcome not only depends upon surgeon and hospital volume but also involves patient factors (e.g. comorbidities, a “supporting cast” of health professionals, such as physical therapy and Intensive Care Unit). The complementary skill set of the gynecologic oncologist may also influence gynecological outcomes.<sup>54</sup> Thus, data collection at various points of the patient journey

and benchmarking against national and international standards/targets can support the delivery of high quality patient-centered care.

The goal of data collection, evaluation and monitoring is to help improve surgical and hospital performance in a non-punitive manner and to steer away from a ‘blame and shame’ approach. When adopting new techniques or technologies, risk to patient needs to be balanced against the amount and significance of that innovation. Routine data audits and monitoring of complications in a standardized way have shown to improve outcomes.<sup>55,56</sup> Institution-level data should be fed back into the system to improve quality and minimize inter-provincial barriers as well as to the local participants providing gynecologic oncology services to help improve quality. Monitoring outcomes data can help the clinicians identify which processes they have followed or not which have directly impacted patient outcome.<sup>57</sup> Tools such as synoptic operative reporting and National Surgical Quality Improvement Program (United States), a leading nationally validated, risk-adjusted, outcomes-based program, can help measure and improve the quality of surgical care.<sup>58</sup>

Wait times, for example, could be good indicators and could reveal inequalities in cancer care access. Measuring them would lead to characterize those inequalities and to propose actions to improve access to cancer care whose impact could be measured.<sup>59,60</sup> Recognizing that there is considerable variation in the evaluation of quality of care, the uniform use of well-defined quality of care indicators to measure and monitor performance holds the promise of improving outcome in patients who undergo gynecologic oncology surgeries.<sup>24</sup>

Careful analysis of outcomes, appropriate feedback to physicians and team-work discussions can help identify improvement opportunities and act as a powerful educational tool. Data around outcomes and processes used in the surgical management should be disseminated to involved surgeons and centers on a routinely basis which can result in meaningful quality improvements in practice.<sup>61</sup>

Careful management of toxicities and supportive services need to be in place to ensure optimal care is delivered.<sup>62</sup> For example, when working with new technologies, comparison to standard treatment options can prioritize resources, encourage the adoption of new technologies and help provide the most advanced care for patients.<sup>63</sup>

In conclusion, there needs to be collective accountability between the institution and health care providers where the latter needs to be continually developing new skills to improve team performance and demonstrate commitment to participate in institutional quality improvement/patient safety initiatives to evaluate errors and implement plans for preventing recurrences.<sup>64</sup> This also implies that institutions need to prioritize and invest in developing robust, non-punitive reporting systems, supporting clinicians after adverse events and medical errors and developing ways to support patients who may be adversely affected by errors.<sup>64,65</sup>





## FUTURE DIRECTIONS

26

This document is intended to act as an informational and decision-making resource to define national best practices and to elevate the delivery of care for patients with gynecologic malignancies. Following publication, future work will include wide dissemination and identification of strategies to catalyze systematic and comprehensive adoption to help narrow the gap and address current deficiencies and variability in care.

Efforts will be underway to develop an evaluation framework to measure uptake and to explore the role of accrediting bodies as a mechanism to promote and offer accreditation process to enforce the recommended standards. In addition, opportunities will be explored to seek meaningful input from the Society of Obstetricians and Gynaecologists of Canada (SOGC), Ovarian Cancer Canada, patient community, administrators, clinicians and health authorities as the standards get implemented.

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With increasing trends in the cases of reproductive system cancers, there are significant disparities in patterns of practice and patient outcomes for surgical cancer care across Canada.

This document provides high-level guidance on the foundational resources and requirements that need to be in place to improve cancer surgical care and outcomes. It will serve as a decision-making resource to support the delivery of consistent, high-quality care to all Canadians requiring gynecologic oncology care.

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