Does prolonging the time to prostate cancer surgery impact long-term cancer control: a systematic review of the literature

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SAAD F, FINELLI A, DRANITSARIS G, GOLDENBERG L, BAGNELL S, GLEAVE M, FLESHNER N. Does prolonging the time to prostate cancer surgery impact long-term cancer control: a systematic review of the literature. The Canadian Journal of Urology. 2006;13(Supplement 3):16-24.

Background: *The wait times for prostate cancer surgery in Canada has increased over the past 2 decades. Prolonged wait times have a negative impact on patient quality of life but the effect on long-term cancer control is undefined. We conducted a systematic literature review to examine the best available evidence addressing the following key questions:*

- *What is the reported time interval for prostate cancer patients from the decision to operate until the day of cancer surgery?*
- *Are there recommendations/guidelines in the urological cancer literature and, if so, how do the Canadian times compare?*
- *Is there a known association between duration of wait time beyond the recommended standard and clinical outcome (i.e. recurrence free survival, overall survival)?*

Methods: *A structured literature search of Medline, Pubmed, CINAHL, EMBASE, the Cochrane Database of Systematic Reviews, the Cochrane Database of Abstracts of Reviews of Effects, Healthstar and Google Scholar was performed from January 1980 to January 2006 for published epidemiological studies and international guidelines/consensus documents that evaluated surgical wait times for prostate cancer. Data extracted from eligible studies included median time to prostate cancer surgery from the point of patient contact and adjusted hazard ratios (HR) for wait times. All HR from the included studies were examined for the possibility of statistical pooling via meta analytic techniques.*

Results: *Thirteen studies evaluating wait times for prostate cancers were identified, six of which measured the HR for prostate specific antigen (PSA) recurrence in patients with prolonged wait times. Differences in study data availability, method of analysis and wait time definitions precluded statistical pooling of the findings. Median wait times from various points of patient contact ranged from 42 days to 244 days. In the six Canadian studies identified, wait times ranged from 42 days (consultation to operation) to 83 days (consultation to hospital admission). This was in contrast to national and international guidelines, which recommended a maximum wait time for prostatectomy between 2 to 4 weeks. The association between surgical delay and disease recurrence remained controversial where only two of six epidemiological studies reported at least a statistical trend for an increased risk of PSA recurrence free survival in patients with surgical delays of 3 months or more.*

Conclusions: *Unlike comparable countries, surgical wait times in Canada appear to be increasing and are well beyond the threshold recommended by national and international expert bodies. Even though the association between surgical delay and disease recurrence remains unclear, there is an ongoing concern that the psychological impact of prolonged waiting could negatively impact patient outcomes. To address these important issues, the surgical wait times (SWAT) initiative is mandated to provide the necessary guidance and recommendations to the federal and provincial governments. Through a partnership of the key stakeholders, it is the vision of SWAT to ultimately improve the care and quality of life of prostate cancer patients and their families.*

Key Words: prostate cancer, surgery, wait time, delay

Acknowledgement: This study was conducted by the prostate cancer working group from the Canadian surgical wait times (SWAT) initiative

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Introduction

Prostate cancer is the most common neoplasm affecting men in Western Europe and North America.[1] In Canada alone, there were 20,500 new cases and 4,300 deaths from the disease in 2005.[2] Approximately 80% of patients have localized disease when first diagnosed, with surgery being an effective and potentially curative intervention for many patients.[3] Once a patient makes a decision for surgery, certain reasonable expectations arise, an important one being the wait time. There is recent evidence in the literature that wait times for prostatectomy has been steadily increasing in Canada.[4] In one study from the province of Ontario, Siemens et al demonstrated an almost doubling of wait times for prostatectomy from 1996-2000 compared to 1980-1995 (median = 91 days versus 55 days; $P < 0.001$).[5] What is particularly interesting is that wait times for prostate cancer surgery has been steadily decreasing in the United States and the United Kingdom over the same time period.[6,7] It has been well documented that a prolonged wait and long waiting lists can have a negative impact on almost all the dimensions of patient quality of life.[8-10]

The Canadian Society of Surgical Oncology (CSSO) recommends that the time from treatment decision to surgery should not exceed 14 days.[11] Therefore, another important issue related to prolonged wait times for prostate cancer surgery is the potential impact on relapse free and overall survival. In a recent Canadian study, Nam and colleagues identified a trend for an increased risk of recurrence free survival at 10 years in patients who had surgery beyond 3 months of diagnosis, compared to a group who had surgery within 3 months (hazard ratio = 1.46; $P = 0.09$).[12] In contrast, other investigators failed to find an association between surgical delay of up to 5 months and disease recurrence.[13,14] Therefore, the true impact of surgical delays remains controversial and what the appropriate wait time should be is currently unknown.

To address these issues for the key urological disease sites; prostate, bladder, kidney and testes, a Canadian surgical wait times (SWAT) initiative was recently undertaken. The SWAT initiative is composed of a steering committee and a scientific advisory committee. The SWAT initiative, whose members consist of urological oncologists, surgeons and methodologists is mandated to review the current literature on the surgical wait times for urological cancers and then develop a consensus document that can serve as a guide for patients, physicians and other key stakeholders in the Canadian health care system. To begin this process, the SWAT steering committee undertook a review of the prostate cancer literature to determine the recommendations on appropriate wait times for prostatectomy and to quantify the overall risk of disease recurrence and overall survival in patients who have wait times beyond the recommended threshold. In this study, the results of the systematic review of the literature addressing the key questions in prostate cancer are described.

Methods

Objectives

We conducted a systematic literature review to examine the best available evidence addressing the following key questions:

- What is the reported time interval for prostate cancer patients from the decision to operate until the day of cancer surgery?
- Are there recommendations/guidelines in the urological cancer literature and, if so, how do the Canadian times compare?
- Is there a known association between duration of wait time beyond the recommended standard and clinical outcome (i.e. recurrence free survival, overall survival)?

Data sources, study selection and data extraction and synthesis

We performed a structured literature search of Medline, Pubmed, CINAHL, EMBASE, the Cochrane Database of Systematic Reviews, the Cochrane Database of Abstracts of Reviews of Effects, Healthstar and Google Scholar from January 1980 to January 2006 for published epidemiological studies and international guidelines/consensus documents that evaluated surgical wait times for prostate cancer. The following inclusion criteria were used: 1) The document was available as a full report. 2) The document was developed in North or South America, Western Europe, Australia or New Zealand. 3) Patients undergoing prostate cancer surgery must have been considered. 4) The primary outcome of interest for epidemiological studies must have been the association between surgical wait times from the initial surgical consultation until the day of surgery and clinical outcomes. Care was undertaken to avoid the inclusion of duplicate publications.

We conducted searches of the listed databases in June, July and January 2006. One member of the working group conducted the searches. Eligible studies were selected by the first member and compared with results from a search by another member. Data were abstracted by one member and

confirmed by a second person. We obtained full copies of all primary study reports, as well as working tables that summarized the key study characteristics and data.

Since the definitions of wait time varied widely among the studies, those that characterized it differently from "surgical consult until day of surgery" were also evaluated. We then compiled the key characteristics of each study in summary tables. Studies evaluating the natural history of prostate cancer were also considered and we made particular note of those that placed the patients into risk groups. All risk ratios from the accepted epidemiological studies were examined for the possibility of statistical pooling via meta analytic techniques.

Results

Surgical wait time

Thirteen studies reporting wait times for prostate cancer were identified. Differences in available study,

TABLE 1. **Reported wait times for prostate cancer surgery in various countries**

Reference	Country	No. patients (n) and year	Wait time definition used	Median duration and date
Simunovic[4]	Canada	n = 798; 1993 n = 1565; 2000	Surgeon consult date to hospital admission	80 d in 1993 83 d in 2000
Simunovic[15]	Canada	n = 58; Jan-May, 2000	Referral to surgery	64 d[a]
Graefen[13]	Germany	n = 795; 1992-2000	Diagnosis to surgery	54 d
Subramonian[7]	United Kingdom	n = 40; prior to 2000	GP referral to surgery Diagnosis to surgery	244 d 76 d
Nam[12]	Canada	n = 645; 1987-1997	Diagnosis to surgery	68 d
Siemens[5]	Canada	n = 9524; 1980-2000	Diagnosis to hospital admission	55 d in 1980-1985 91 d in 1996-2000
Spurgeon[16]	England	n = 677; Oct 1997	GP referral to urgent surgery GP referral to non-urgent surgery	53 d 111 d
Cancer Care Ontario[17c]	Canada	n = 51[a] n = 66;[b] Feb-Apr 2004	Referral to operation[a] Consult to operation[b]	65 d[a] 59 d[b]
Moul[6]	United States	n = 3324; 1988-2002	Diagnosis to surgery	119 d in 1990 63 d in 2002
Hurst[18]	Spain	1992-2000	Diagnosis to surgery	Mean in 1992 = 119.43 d Mean in 2000 = 42.7 d
Esmail[19]	Canada	2005[b]	Diagnosis to surgery	42 d; range = 24.5 d to 56 d[c]
Boorjian[20]	United States	n = 3149; 1987-2002	Biopsy to surgery	Mean = 69 d
Lee[21]	United States	n = 169; 2001-2004	Biopsy to surgery	Median = 56 d; range = 14 d to 378 d

[a]Considered all urological cancer surgeries including prostate cancer.
[b]This study did not use primary data but used survey based approach.
[c]Range in eleven Canadian provinces with Manitoba having the shortest time (24.5 days) and Nova Scotia having the longest wait time (56 days).

method of analysis and wait time definitions precluded statistical pooling of the data. Wait time definitions consisted of general practitioner (GP) referral to surgery, surgeon consultation date to hospital admission, referral to surgery, diagnosis to surgery, and diagnosis to hospital admission. As a result, median wait times ranged from 42 to 244 days, Table 1. There were six Canadian studies that evaluated wait times (five of six being Ontario based).[4,5,12,15,17] Definitions of wait times were slightly different, but their findings were internally consistent. Using the most recent data (years 2000 to 2004), wait times for prostate cancer surgery in Canada ranged from 42 days (consultation to operation) to 83 days (consultation to hospital admission).

It is important to recall the study by Siemens et al, who reported an almost doubling of wait times for prostatectomy from 1996-2000 compared to 1980-1995 (median = 91 days versus 55 days; $P < 0.001$).[5] This finding is in contrast to that of Simunovic et al,[4] who determined that despite the increases in the number of patients undergoing prostate surgery (up 96% from 1993 to 2000), median wait times are not increasing proportionally (only 4% increase over the same period), with prostate cancer being the only type of surgery for which the wait time increase was deemed not significant.[4]

Compared to the United States and the United Kingdom, the most current data suggest that wait times in Canada are comparable. In one recent United States study presented in abstract form, Moul et al reported a median wait time of 63 days from diagnosis to surgery for the year 2002.[6] However unlike the trend for prolongation in Canada, wait times in the United States has been reduced by approximately 47% compared to 1990.[6] This is despite the fact that United States and Canadian practice experiences and clinical volumes are not significantly different.[23] In Spain, wait times for prostatectomy were reduced by 64% between 1992 and 2000.[18]

Surgical wait times for urological malignancies in Ontario, which include prostate cancer, remain higher than other disease sites such as breast, gynecological, head and neck and thoracic cancers. This may reflect the difficult treatment choices that prostate cancer patient's face, which includes watchful waiting, androgen deprivation therapy, radiation therapy or surgery.[15] This also opens the door for introduction of unproven treatment modalities as alternatives to waiting for surgical treatment.

Wait time guidelines and recommendations from the literature

Two professional bodies and one group of investigators developed recommendations for maximum wait time for cancer surgery, Table 2. The Canadian Society of Surgical Oncology (CSSO) and the United Kingdom National Health Service both made similar recommendations where the maximum wait time for all cancer surgeries from diagnosis to treatment should be 2 weeks as stated by the former group and 4 weeks from the latter.[11,22] The position statement of the CSSO states that cancer patients should be seen in consultation within 2 weeks of referral and that surgery should be initiated within 2 weeks of any preoperative

TABLE 2. **Recommended maximum wait times from the literature**

Reference	Wait time definition	Recommended maximum wait time	Type of surgery
UK National Health Service[22]	GP referral to specialist assessment	2 weeks	All cancer surgeries
	Diagnosis to treatment	1 month	All cancer surgeries
	Urgent GP referral to trea tment	2 months	All cancer surgeries
CSSO[11]	Referral to consultation	2 weeks	All cancer surgeries
	Conclusion of preoperative tests to treatment	2 weeks	All cancer surgeries
Moul[6]	From diagnosis to treatment	3 months	Radical prostatectomy
Esmail[19]	From diagnosis to treatment	4 weeks (range: 3 to 6 weeks)[a]	Radical prostatectomy

[a]Range in eleven Canadian provinces with Manitoba urological surgeons stating that a reasonable wait time would be 3 weeks and Nova Scotia urological surgeons indicating that a wait of 6 weeks would be reasonable.

tests.[11] The United Kingdom National Health Service specifies in its Cancer Plan that there should be a maximum wait of 2 weeks from the time of the GP referral to the time of a specialist's assessment; a maximum 1 month wait from diagnosis and treatment; and a maximum 2 month wait from an urgent GP referral to actual treatment.[22] These recommendations are for all cancer types, and there are no particular guidelines for prostatectomy. Subramonian et al from the United Kingdom however, noted that the 2 week waiting rule from GP referral to specialist assessment will do nothing to improve other steps in the pathway to surgery.[7] Their study demonstrated that the longest wait time for all urological surgeries, with the exception of orchidectomy, is from diagnosis to surgery and it is this key time interval that needs to be shortened.

Moul and colleagues evaluated the impact of delayed radical prostatectomy on PSA recurrence and concluded that the optimal waiting time between diagnosis and surgery should be no more than 3 months.[6] The authors note, however, that although a delay greater than 3 months may be an adverse factor for high-risk patients, the same adversity was not observed in all subgroups. This was the only epidemiological study to explicitly recommend a maximum wait time, although the association between surgical delay and progression free survival remains controversial (*vide infra*).

Recently, The Fraser Institute reported the results of their Canada wide survey (n = 179) on wait times for various procedures including radical prostatectomy.[19] One of the questions asked to urological surgeons was what they considered to be a reasonable wait for treatment after an appointment. The investigators reported a median of 4 weeks (weighted by population size) for radical prostatectomy for the entire country (range = 3 to 6 weeks).

Overall, evidence-based recommendations regarding wait times for urological cancers are lacking in the literature. Some reports even go no further than to suggest that it is up to society to decide on the length of acceptable wait times through a dialogue between the key stakeholders.[4] As an illustration, a question could be presented where stakeholders are asked if it is acceptable for low risk prostate cancer patients (i.e. T1 or T2, a Gleason score ≤ 6, a PSA value ≤ 10 ng/mL and a life expectancy > 10 years) to wait at least 4 months for radical prostatectomy? In their epidemiological study, Kahn et al determine that a wait of at least 5 months does not negatively impact PSA recurrence free survival.[14]

TABLE 3. **Epidemiological studies evaluating the association between wait time and risk of cancer recurrence**

Reference	No. patients	Years[b]	Key groups evaluated	Key outcome: PSA recurrence
Nam[12]	645	1987-1997	Delay ≥ 3 versus < 3 months	Adjusted HR = 1.46; P = 0.09
[a]Moul[6]	3324	1988-2002	Delay ≥ 3 versus < 3 months	Adjusted HR = 1.19; P = 0.044
Kahn[14]	926	1989-1994	Delay groups	RF at 5-year[c] / RF at 10-year[c]
			≤ 60 d	82% / 78%
			61 d to 90 d	86% / 78%
			91 d to 120 d	86% / 75%
			121 d to 150 d	90% / 82%
			> 150 d	89% / 87%
Graefen[13]	795	1992-2000	Time to treatment evaluated as a continuous variable	Adjusted HR = 1.0; P = 0.84
Boorjian[20]	3149	1987-2002	Delay ≥ 3 versus < 3 months	Adjusted HR = 1.01; P = 0.939[d]
Lee[21]	169	2001-2004	Time to treatment evaluated as a continuous variable	Adjusted HR = 0.994; P = 0.62

RF = relapse free, PSA = prostate specific antigen, HR = hazard ratio.
[a]Only reported in abstract form, but detailed outcomes data obtained from the author.
[b]All studies used retrospective cohort designs.
[c]None of the differences were statistically significant after adjustment for prognostic factors.
[d]A subgroup analysis conducted in high risk patients (i.e. PSA level ≥ 20 ng/mL, biopsy Gleason score ≥ 8 or clinical stage ≥ T2c) failed to detect a statistically significant association between delay ≥ 3 months and PSA recurrence (HR = 0.83; P = 0.253).

Is there an association between wait time and clinical outcomes?

One of the main objectives of the current study was to evaluate the epidemiological literature that measured the association between prolonged wait times and patient clinical outcomes. Five published studies and one analysis reported in abstract form were identified, Table 3. All of the studies used retrospective cohort designs with the primary outcome being PSA recurrence free survival. Four of five applied Cox regression analysis which adjusted for known prognostic factors to measure the hazard ratio (HR) in patients with prolonged wait times compared to those with shorter delays.[6,12,13,20,21] In contrast, the study by Kahn et al used the Kaplain-Meier product limit method to estimate the actuarial 5 and 10 year biochemical recurrence free survival in various surgical delay groups, which included stratification based on clinical stage, serum PSA and Gleason score.[14] Notwithstanding, when reviewing these studies, one must be aware of the many possible biases such as lead time and patient selection bias which could confound the analysis.

Differences in the various wait time subgroups and the lack of statistical variance data in some of the studies precluded statistical pooling via meta analysis. Using a large patient series (n = 3324), Moul et al reported an increased risk of PSA recurrence (adjusted HR = 1.19; P = 0.044) in patients with surgical delays of 3 months or more.[6] Consistent with these findings was the Canadian analysis by Nam and colleagues, who reported a crude HR of 1.58 in patients who were delayed at least 3 months (P = 0.04).[12] However after statistical adjustment for tumor grade, stage and PSA, the HR was no longer statistically significant (HR = 1.46; P = 0.09).

The findings reported by Graefin et al, from Germany and three recent studies from the United States further refute the association between surgical delay of a few months and PSA recurrence.[13,14,20,21] Kahn et al was unable to find statistically significant differences in 5 and 10 year biochemical recurrence free survival between patients who received surgery within 2 months compared to patients who were delayed 2 to 3 months, 3 to 4 months and more than 5 months, Table 3. It was interesting to note that a non-significant trend was observed where patients in the beyond 5 month group had a higher 10 year recurrence free survival than the ≤ 2 month group (87% versus 78%). The investigators attributed this difference in part to a potential selection bias where men with lower Gleason scores and serum PSA often delayed surgery for a few months.[14] Graefin et al, also failed to find a statistically significant association between treatment delay (measured as days from diagnosis to surgery) and PSA recurrence free survival (HR = 1.0; P = 0.84).[13] As in the findings of Kahn et al, Graefin and colleagues reported that patients who waited more than 4 months had superior overall survival compared to those who underwent surgery within 30 days (HR = 0.50; P < 0.001).[13] The authors attributed this survival advantage in the delayed group to their institutional policy where men with more aggressive cancers are treated earlier than those with low risk disease.

The recent report by Boorjian et al from the United States went a step further than the previous two studies.[20] In addition to evaluating all patients from the original sample, the investigators identified a high-risk subgroup (i.e. PSA level ≥ 20 ng/mL, biopsy Gleason score ≥ 8 or clinical stage ≥ T2c) and evaluated the impact of a delay of ≥ 3 months. The subgroup analysis in high risk patients failed to detect a statistically significant association between delay ≥ 3 months and PSA recurrence (HR = 0.83; P = 0.253).[20] The investigators from three studies concluded that patients can be reassured that there is no immediate urgency to perform prostatectomy and they are free to evaluate other treatments because a delay of a few months will not compromise surgical efficacy.[13,14,20]

Qualitative insights from experts in the field

In situations such as the current one where there is limited and controversial data on both the recommended maximum wait time and the association between prolonged wait time and clinical outcome, expert opinion is often sought. Some qualitative insights from experts in the field of cancer epidemiology and urological oncology are highlighted in Table 4. Upon reviewing this literature, the overall consensus seems to be that surgical delays of a few months does not appear to negatively impact recurrence free survival in most patients, but we do not know which patients this statement can be safely applied to and we do not know what the wait time threshold should be. Therefore, initiatives such as SWAT needs to consider the available epidemiological data along with the known impact on patient quality of life, the various patient risk groups and the available health care resources in order to develop reasonable wait time benchmarks for prostate cancer surgery in Canada.

TABLE 4. **Qualitative insights on the impact of wait time on clinical outcomes as reported by experts in the field**

Reference	Key opinion
Simunovic et al[4]	There is little evidence that the 83-day delay found has a negative impact on operative mortality or long-term survival.
Siemens et al[5]	There is no evidence that patients waiting up to 12 months for surgery suffer a decrease in cancer-specific survival.
Subramonian et al[7]	A review of other studies indicates that there is no consensus that clinical outcome is worsened with delays.
Graefen et al[13]	A delay of a few months does not adversely affect recurrence free survival rates. However, it is not possible from the literature to estimate a maximum wait time before prognosis is affected.
Nam et al[12]	There may exist a possible relationship between delays for radical prostatectomy (RP) and prostate cancer cure rates.
Khan et al[14]	Delays of up to several months do not appear to impact long-term biochemical cancer control rates. Therefore, patients can be reassured that there is no immediate urgency to perform RP after a prostate cancer diagnosis.
Spurgeon et al[16]	There is no "across the board" implication on clinical outcome.
Moul et al[6]	The optimal wait time may be less than 3 months post diagnosis, especially for patients with high risk disease (PSA > 20ng/ml or Gleason > 7 or T2c).
Boorjian[20]	From the present data, we think that men who wait several months after biopsy before undergoing radical prostatectomy are not jeopardizing their probability of cure.

Discussion

We conducted a systematic review of the literature to identify current wait times for prostate cancer surgery, recommendations on what the maximum wait time should be and to assess the possible association between surgical delays and patient clinical outcomes. Our findings revealed that wait times in Canada are similar to those in other comparable countries. Unlike these countries, the overall trend is that wait times are rising, which, at least in Ontario, has been attributed to the increasing stress placed on the health care system.[4,5] Ongoing data collection is viewed as an important step in improving access to surgical care and is a priority for Cancer Care Ontario, the Ontario Ministry of Health and Long Term Care, the British Columbia Regional Surgical Executive Committee initiative as well as other provinces.[17]

Recommendations on maximal wait times or standards for acceptable surgical delay are also rare, which makes it difficult to conclude whether current documented wait times are appropriate. Objective benchmarks for appropriate waits do not exist,[15] and the problem of establishing such benchmarks is complicated by the lack of consensus on the true impact of wait times on patient health. Therefore, an immediate priority is to develop benchmarks based on expert consensus and a review of the literature.

The association between prolonged wait times and recurrence free survival is controversial. Although some of the work in this area indicates that a delay of a few months does not have a negative impact on outcome,[13,14,20] there is other evidence suggesting poorer outcomes with prolonged delays, particularly in patients considered to be high risk (i.e. PSA > 20 ng/ml or Gleason > 7 or T2).[6] Therefore based on the available evidence, it would be reasonable to make the following recommendations: PSA > 20 ng/ml or Gleason score > 7 or ≥ T2: ≤ 28 days from decision to operate, PSA between 10 ng/ml to 20 ng/ml: ≤ 60 days from decision to operate, and PSA < 10 ng/ml, Gleason < 7 and T1-T2a: ≤ 90 days from decision to operate.

Nevertheless, there is still no agreement on the optimal timing for prostatectomy in all types of patient groups,[5] and some studies even suggested that waiting 2 months from diagnosis may allow for more successful surgery and decreased morbidity.[13] Therefore, more well designed,

prospective epidemiological studies are needed to examine the association between wait time and clinical outcome with the ultimate objective being the identification of a threshold which would assist in the development of surgical guidelines for informed health policy decision making.

In addition to the potential clinical impact of prolonged surgical delay, there is concern about the impact on patient health associated with psychological stress resulting from prolonged waiting. Widespread agreement exists that delays to surgery have significant effects on psychological well being, and reduced waiting times may result in a decrease in psychological morbidity.[5,10,16] One of the first studies that identified a possible correlation between length of wait and survival suggested that these findings may be attributable to the psychological impact of waiting and that large cohort analyses are needed to confirm this important hypothesis.[12]

When the key stakeholders are discussing what the optimal wait time for prostate cancer surgery should be, quality of care during and following the surgical procedure also needs to be considered. There is a growing body of evidence suggesting that high volume centers and surgical skill are significantly associated with reduced post operative complication rates and overall hospital length of stay.[24-26] A failure to consider overall quality of care when establishing wait time benchmarks may compromise patient care because patients may be shifted from high to low volume centers, which may not be able to offer the same level of care, in order to reduce the wait time.

In conclusion, the findings of our systematic literature review revealed that the national and international guidelines recommend a maximum wait time for prostatectomy between 2 to 4 weeks. Unlike comparable countries, surgical wait times in Canada appear to be increasing. Even though the association between surgical delay and disease recurrence is controversial, there is a concern that the psychological impact of prolonged waiting could negatively impact patient outcomes. To address these important issues, the SWAT initiative is mandated to provide the necessary guidance and recommendations to the federal and provincial governments. Through a partnership between the key stakeholders, it is the vision of SWAT to ultimately improve the care and quality of life of cancer patients. □

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