

Prostate cancer screening practices and attitudes among primary care physicians in Victoria, British Columbia

The majority of physicians responding to a recent survey believe that PSA testing for screening purposes should be covered by MSP.

ABSTRACT

Background: Though prostate cancer is the most common noncutaneous cancer in males, screening practices of primary care physicians in British Columbia remain inconsistent, in part because of contradictory clinical guidelines. Our objectives were to examine prostate cancer screening attitudes and practices among physicians, and to determine the influence of current guidelines.

Methods: Questionnaires were delivered to a randomly selected sample of 121 primary care physicians in Victoria, British Columbia, in August 2007. When the completed surveys were returned, descriptive statistics were completed using SPSS version 16.0.

Results: The majority of physicians surveyed report using both digital rectal examination and prostate-specific antigen testing for prostate cancer screening in asymptomatic men. Most respondents believe that the BC Medical Services Plan should pay for PSA as a screening test.

Conclusions: Clinical guidelines appear to influence screening practices, with many physicians preferring those published by the BC Cancer Agency. However, there is no consensus among physicians on the most appropriate standard of care for prostate cancer screening, and there exists a need for further examination of current guidelines.

Background

Prostate cancer is the most common form of cancer in Canadian men (excluding non-melanoma skin cancer), with an estimated 22 300 cases and 4300 deaths in 2007. Approximately one in eight men will eventually develop prostate cancer, yet much controversy surrounds prostate cancer screening.¹

For a screening program to be effective, the following must apply:

- The condition in question is serious.
- Screening tests can accurately detect early stage disease.
- Early detection can lead to improved outcomes.
- The benefits of screening outweigh the harms.²

In evaluating a population screening program, the associated financial and psychosocial costs must also be examined to determine whether the program is appropriate, and whether it should be covered under government-funded health care.³

Currently, prostate-specific antigen (PSA) testing and digital rectal examination (DRE) are the most widely used tools for prostate cancer screening, with sensitivities of 72.1% for PSA and 53.2% for DRE.⁴ Used in combination, PSA and DRE remain the best available tools, with an estimated sensitivity of 87.2%. In com-

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Table 1. Prostate cancer screening guidelines.

Organization	Recommendation on DRE	Recommendation on PSA testing
Canadian Task Force on Preventive Health Care ⁴	Insufficient evidence to include or exclude on periodic health exam.	PSA should be excluded from periodic health exam.
US Preventive Services Task Force ¹³	Insufficient evidence to recommend for or against DRE for prostate cancer screening.	Insufficient evidence to recommend for or against PSA testing for prostate cancer screening.
Canadian Urological Association ¹⁴ (1996)	Men should be aware of potential benefits and risks to make an informed decision.	Men should be aware of potential benefits and risks to make an informed decision.
American Urological Association ¹⁵	DRE screening should be offered to men over 50 with a life expectancy of more than 10 years.	PSA testing should be offered to men over 50 with a life expectancy of more than 10 years.
BC Cancer Agency ^{16,17}	Should be done annually in fit men 50–70 years or when obstructive or other urinary tract symptoms are present.	Fit men age 50–70 with at least 10 years' life expectancy should be made aware of the potential benefits and risks. If desired, PSA testing should be performed annually for 2–3 years, and if normal and stable, then every 2–3 years.
European Association of Urology ¹⁸	Lack of evidence to support or disregard population-based screening programs for prostate cancer.	Lack of evidence to support or disregard population-based screening programs for prostate cancer.

parison, breast cancer screening with mammography and physical examination has a sensitivity of 90.4%.⁵ Prostate cancer screening has resulted in earlier detection of prostate cancer, though conclusive evidence that population screening reduces mortality has yet to be presented.^{6,7} Previous studies investigating prostate cancer screening practices and attitudes in Canada have shown that the majority of physicians screen asymptomatic men using both PSA testing and DRE.⁸

Meta-analysis of studies examining prostate cancer screening have concluded that there is insufficient evidence to support or refute population screening.⁹ Two large, prospective, randomized screening trials to evaluate the outcomes of PSA testing and DRE in prostate cancer screening are currently under way: the Prostate, Lung, Colorectal and Ovarian Cancer Screening Trial (PLCO)¹⁰ in the US and the European Randomized Study of Screening for Prostate Cancer (ERSPC).¹¹ Data from these studies will be useful in determining future

Table 2. PSA testing coverage in Canada.

Province	Policy
British Columbia	PSA test not covered for screening. Covered once patient is diagnosed with prostate cancer.
Alberta	PSA covered for screening if physician determines there are clinical signs of prostate cancer or patient is high-risk. Covered once patient is diagnosed with prostate cancer.
Ontario	PSA test not covered for screening. Covered once patient is diagnosed with prostate cancer.
Quebec	PSA test not covered for screening.
Manitoba, New Brunswick, Newfoundland, Nova Scotia, Prince Edward Island, Saskatchewan	PSA test covered for screening.

prostate cancer screening directions, though it may be several years before results are published and recommendations endorsed. Preliminary data from these studies suggest that screening is associated with reduced risk of metastatic prostate cancer.¹²

The controversy surrounding the use of DRE and PSA testing is evident

in the wide-ranging recommendations adopted by various professional associations (**Table 1**).^{13–18}

These conflicting recommendations may lead to confusion among primary care physicians and ultimately result in inappropriate screening practices. Previous studies have concluded that inappropriate prostate cancer

screening is common, and that such screening is more prevalent when the physician is an older male.^{19,20}

Though the cost of PSA testing is not covered by British Columbia's Medical Services Plan (MSP) when it is used for screening, some provinces do cover the PSA test for screening (Table 2).²¹

The issue of PSA testing coverage by MSP has been a topic of debate in recent years. The cost of such a screening program would be significant. However, while costs are projected to increase with the province's aging population, they are likely to be less than previously estimated.²²

In order to explore the issue of prostate cancer screening, we designed a study to examine the attitudes, beliefs, and practices of primary care physicians and to determine how clinical guidelines affect screening practices.

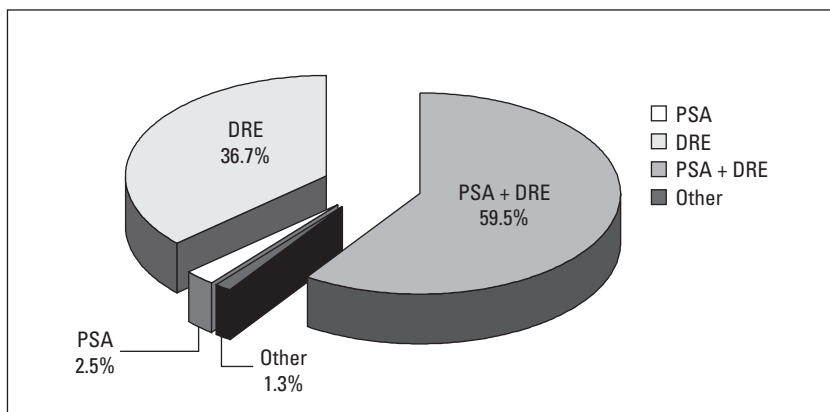
Methods

A questionnaire was designed in accordance with recommendations on survey administration and based on previously described studies.^{8,23,24} The questionnaire was finalized upon review by a urologist, primary care physicians, and statisticians. Questions were grouped according to respondent demographics, attitudes on prostate cancer screening, and prostate cancer screening practices. The survey included questions using the Likert scale, questions that asked respondents to "choose one of the following," and yes/no questions.

A pilot questionnaire was sent to 70 primary care physicians on Vancouver Island. Feedback from the completed questionnaires that were returned (51.4%) was used to finalize the questions and ensure they were appropriate and well understood.

Potential subjects were randomly selected from the BC College of Physicians and Surgeons database of 471

Figure 1. Initial prostate cancer screening tool preferred by physicians surveyed.



general practitioners in Victoria. A list of 150 random integers between 1 and 471 was generated and matched to physicians in the database; 29 physicians were excluded because of their scope of practice. Questionnaires were delivered in August 2007, with instructions to return the completed surveys by fax or mail.

When the completed questionnaires were returned, SPSS version 16.0 was used to compute descriptive statistics. The Pearson chi-square test was used to assess relationships between physician demographics and response patterns.

Results

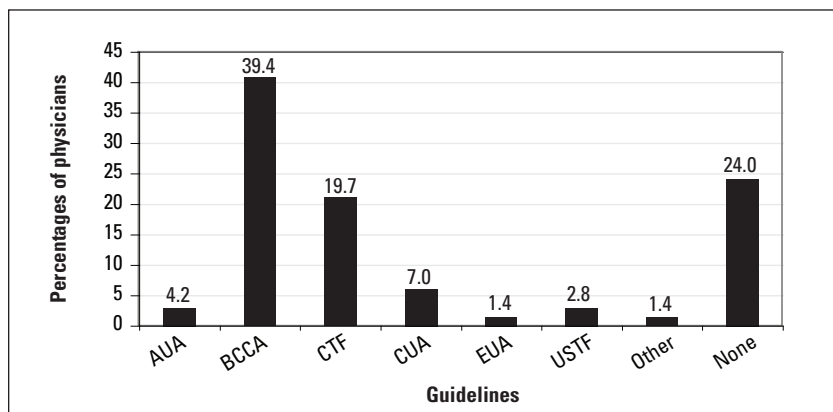
The survey response rate was 65.3% (79/121). The respondents included both male (68.4%) and female (31.6%) physicians. The mean age of physicians surveyed was 51.1 years (SD 9.85 years). The mean years in practice was 22.7 years (SD 9.8 years).

Of the total respondents, 81.0% reported regularly screening asymptomatic men for prostate cancer using PSA testing, with 65.6% beginning screening at age 50 and 25.0% at age 40. DRE was also used regularly by 92.4% of physicians, with 46.6% beginning screening at age 50, and 47.9% at age 40. No statistically

significant relationships were found between physician gender, age, or years of experience and prostate screening practices.

The preferred initial method of prostate cancer screening among physicians surveyed was PSA and DRE used in combination (Figure 1).

The majority of physicians surveyed agreed that both DRE (90.8%) and PSA (72.6%) testing are valuable for prostate cancer screening. Regarding the evidence supporting prostate cancer screening, only 8.2% agreed that there was insufficient evidence to support using DRE, while 33.8% agreed that there was insufficient evidence to support using PSA testing. Most respondents (64.4%) agreed that MSP should pay for PSA testing for prostate cancer screening, while 30.8% agreed that they check the "MSP billable" box when ordering PSA tests for screening asymptomatic men. Physicians with more than 20 years of experience were significantly more likely to disagree with the statement "PSA testing leads to excess subsequent investigations such as prostate biopsy" (48.8%) than physicians with fewer than 20 years of experience (13.3%) ($P = .003$). No other statistically significant relationships were found between prostate cancer screening

Figure 2. Prostate cancer screening guidelines preferred by physicians surveyed.

AJA=American Urological Association, BCCA=BC Cancer Agency, CTF=Canadian Task Force on Preventive Health Care, CUA=Canadian Urological Association, EUA=European Association of Urology, USTF=US Preventive Services Task Force

attitudes and physician age, gender, or years of practice.

The majority of respondents (74.0%) reported that clinical guidelines and recommendations influence their prostate cancer screening practices (Figure 2). There was a significant correlation between the physician's age and the influence of guidelines on screening practices. Of physicians aged 56 and older, 38.5% reported that guidelines do not influence their screening practices, while 7.7% of physicians 45 and younger and 4.8% of physicians 46 to 55 held the same opinion ($P = .017$). Physicians preferred the guidelines published by the BC Cancer Agency (39.4%) and the Canadian Task Force on Preventive Health Care (19.7%). No significant correlations between physician demographics and preferred guidelines were identified.

Conclusions

There were some limitations to this study. The sample surveyed represented a proportion of one geographic area in BC, and it is not known if these results can be generalized to represent the practices and opinions of physicians in Victoria or BC. The survey also

relied on self-reported data, which introduces the risk of disclosure bias.

Despite these limitations, the survey results indicate that most primary care physicians are regularly screening asymptomatic men for prostate cancer using both PSA testing and DRE. These screening practices are comparable to the practices of physicians previously surveyed in Newfoundland and Ontario.^{8,25} BC physicians are, however, significantly more reliant on DRE and less reliant on PSA testing for screening when compared with physicians in Newfoundland, who favor DRE and PSA testing in combination (74.3%), with 18.8% preferring DRE alone. By contrast, 36.7% of physicians surveyed in BC prefer DRE alone ($P = .007$). This difference in practice is also reflected in the fact that while 82.7% of respondents believe that PSA testing and DRE should be used in combination, only 59.5% are using them together as their initial screening tool. These findings are likely explained by the fact that PSA tests for screening are funded by health insurance in Newfoundland but not in BC.

Though the majority of physicians screen regularly using both DRE and

PSA testing, and also believe that these are important tools in prostate cancer screening, confusion still exists about the evidence supporting PSA testing. One-third of respondents agreed that there is insufficient evidence to support PSA testing for prostate cancer screening, yet only 6.8% felt PSA testing was not a valuable screening tool. Though it is clear that these screening tools are not ideal, they are currently the only feasible methods of detecting prostate cancer in the population.

Published guidelines appear to influence the prostate cancer screening practices of most physicians surveyed, but there was no consensus regarding the guidelines endorsed by different agencies. The guidelines issued by the BC Cancer Agency were named most often, followed by guidelines from the Canadian Task Force on Preventive Health Care. In addition, one-quarter of physicians polled choose to ignore current guidelines or use their own screening practices.

While the vast majority of physicians (97.4%) agreed that the digital rectal examination is an important component of medical training, formal clinical teaching of this can be inconsistent. It might help to have organized training sessions with standardized patients, similar to the sessions used for female breast and pelvic examination, to ensure that newly trained physicians have the technical skills to perform these exams effectively. There might also be value in continuing medical education directed at practising physicians to ensure that they remain current on prostate cancer screening practices and controversies.

Most physicians surveyed (90.8%) feel comfortable with their knowledge regarding when MSP should be billed for PSA testing, yet nearly one-third of respondents report inappropriately

billing MSP for PSA testing for prostate cancer screening purposes. As data from the ERSPC and PLCO trials now underway become available, it may be time for politicians and medical experts to reopen the debate on funding PSA testing for screening purposes.

It is clear that the majority of primary care physicians are in favor of screening asymptomatic men for prostate cancer and feel that the cost should not be borne by the patient. The medical, psychological, and financial risks and benefits of screening should all be considered along with the effect the results of screening may have on individual patient management. Regardless of the current controversy, physicians and their patients should discuss these issues so that patients can make an informed decision on the most appropriate care.

Competing interests

None declared.

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