Prostate Cancer Canada: PSA Recommendation
- Know Your Number -

Prostate Cancer Canada's (PCC) recommendation regarding the use of the PSA test for the early detection of prostate cancer in asymptomatic men has been reviewed given the release of recent national and international guidelines, as well as recent publications on the PSA test and prostate cancer mortality. The purpose of this revised recommendation is to provide men and their primary care providers with information and guidance in making an informed decision regarding having a PSA test. The decision to undergo testing for prostate cancer is one that should be discussed with a man and his primary care provider as part of a shared decision making process and we hope that with this revised recommendation, men who have concerns regarding their future risk of developing prostate cancer will be encouraged to discuss the benefits and limitations of PSA testing.

PCC's current recommendation regarding the use of the PSA test is to 'encourage men over the age of 40, as part of their annual check-up, to initiate a conversation with their doctor about early detection (which may include PSA testing and a Digital Rectal Exam)'. The development of our latest recommendations evolved from a comprehensive review of available scientific literature as well as listening to the views of our survivor stakeholders. Additionally, we have taken into account the views of national and international researchers and clinicians on the use of the PSA test for testing asymptomatic men.

Summary of Recommendation

Recommendation 1: Men should get a PSA test in their 40s to establish their baseline.

Recommendation 2: Men at high risk for prostate cancer should talk to their primary care provider before age 40 about prostate cancer.

Recommendation 3: At or over age 70, the decision to end PSA testing should be based on individual factors.

With national and international organizations releasing conflicting recommendations regarding the use of the PSA test, it's no wonder groups such as the Prostate Cancer Roundtable, a US based group of non-profit prostate cancer organizations, have expressed confusion among men and primary care providers in the use of the PSA test (Prostate Cancer Roundtable, 2013). No test for the early detection of cancer will detect all cases of cancer all the time. The PSA test, like any early detection tool, has its limitations but the test can be credited with saving the lives of men by detecting prostate cancer in its earliest stages. Guidelines from the United States Preventative Services Task Force (USPSTF) recommend against screening using the PSA test for all men (Moyer, 2012) based on conflicting evidence that can only be described as inconclusive. The recommendation against PSA testing for any age group greatly reduces the likelihood of detecting prostate cancer in its earliest stages, when it is curable. More

than 90% of prostate cancers are found locally for which the 5-year survival rate is close to 100% (American Cancer Society, 2012). This suggests that early detection saves lives. A recent study was conducted to determine the number of men, in the modern US population, who would have been diagnosed with advanced (metastatic) prostate cancer if the PSA test was not introduced. Reviewing available data from 2008, results of this study concluded that approximately 25,000 men would have presented with metastatic disease had the PSA test not been introduced; 3 times the number of men presenting with metastatic prostate cancer in 2008 (Scosyrev, 2012).

Two ongoing landmark trials conducted in Europe and the US are examining the effect of PSA testing on prostate cancer mortality. Initial results published from both studies yielded diverging results regarding the benefit of the PSA test and its effect on prostate cancer mortality. The European Randomized Study for Prostate Cancer (ERSPC), initiated in the early 1990s, involved 7 cancer centres in a number of European countries. Results from the 9-year follow-up of this study showed a 20% reduction in prostate cancer mortality among men between 55-69 years of age (Schroder, 2009). Results from the extended 11-year follow-up of this study further supported the 'significant' reduction in death from prostate cancer, showing an approximate 30% reduction in prostate cancer mortality (Schroder, 2012). Following this trend, as results of the study are published, it is expected that the number of men needed to be treated to prevent one death will continue to decrease. By contrast, the US Prostate, Lung, Ovarian and Colorectal (PLCO) study found no benefit to mortality with prostate cancer screening (which included both the PSA test and a DRE) after 7 and 10 years' follow-up (Andriole, 2009; Andriole, 2012).

Although both studies used slightly different methodology, the PSA test, particularly in the ERSPC study, shows promise in reducing prostate cancer mortality among men over age 50. In 2013, a study conducted by the Malmo Preventive Project examined the possibility of using the PSA test in men in their 40s to establish future risk of developing prostate cancer. Results from this study suggest that PSA testing can begin in the mid-late 40s to serve as an indicator of future risk of prostate cancer (Vickers, 2013).

Some studies and recommendations from other organizations often over-report the harms associated with PSA testing (Moyer, 2012; Quaseem, 2013) such as over-diagnosis and over-treatment. The PSA test is a blood test that poses little to no harm. The potential risks associated with PSA testing are the result of treatment choices made based on the results obtained. These potential risks include undergoing further testing or procedures that carry their own risks, for example, having biopsies that may result in pain and infection or proceeding with unnecessary treatment. Additionally, knowing the results of a PSA test may lead to worry and anxiety, even if cancer is not detected. As discussed in the recently released Melbourne Consensus Statement, it is important to separate treatment from testing (Melbourne, 2013). Establishing a baseline PSA value will allow men to make informed decisions regarding further testing once they know their number and have determined, with their primary care provider, a schedule

for future PSA testing. While a single test may not indicate the presence of cancer, a baseline test provides a benchmark for knowing how future PSA values change over time. From the trials conducted to date, there is no consensus on frequency of PSA testing. PSA testing programs should be tailored for each man and account for individual preferences and risk factors.

Prostate Cancer Canada does not recommend the use of the PSA test as a population-based screening tool, as current evidence does not support widespread use of the PSA test for this purpose. While we work to fund research that will uncover a more accurate test for detecting early stage prostate cancer, the PSA test is the best we have to detect abnormalities in the prostate gland. PSA tests do not distinguish between slow-growing and aggressive forms of cancer but indicate that something may be wrong. The decision to test or not to test using the PSA test cannot be a 'one-size-fits-all' approach. PCC's revised recommendations on PSA testing account for individual differences and preferences by acknowledging risk factors and the adoption of shared decision making in assisting men and their primary care providers to make informed decisions regarding testing. Men, regardless of their age, should discuss the potential benefits and limitations of the test to determine if PSA testing is right for them.

Recommendation One: Men should get a PSA test in their 40s to establish their baseline.

The Canadian Urologic Association (CUA) endorses PSA testing among men over 50 (Izawa, 2011); however, recent evidence has shown that there may be some value to establishing a baseline PSA value for men in their 40s as an indicator of future risk of prostate cancer (Vickers, 2013).

Recommendation Two: Men at high risk for prostate cancer should talk to their primary care provider before age 40 about prostate cancer.

While there is no known single cause for developing prostate cancer, there are some factors that increase the likelihood of certain men developing the disease. Men of black African or black Caribbean descent as well as men with a first degree relative with prostate cancer (father, brother, son) have an increased chance of developing a more aggressive form of the disease (American Cancer Society, 2013). Men in the high risk category should have a discussion with their primary care provider about their risk for prostate cancer and when to begin PSA testing.

Recommendation Three: At or over age 70, the decision to end PSA testing should be based on individual factors.

The decision to be tested for prostate cancer should be based on individual decisions/preferences. While many organizations recommend PSA testing for men with a life expectancy of at least 10 years, because of the possibility of over treatment which may result in complications later on in life (Izawa, 2011;

Quaseem, 2013), PCC recommends that both the decision to begin and end testing for prostate cancer, using the PSA test, be a shared decision determined with a man and his primary care provider.

Prostate Cancer Canada recommends that men get a PSA test in their 40s to establish their baseline and 'know their number' to establish future risk of developing prostate cancer. As new evidence emerges, we will endeavour to review our recommendations on an ongoing basis to ensure men concerned about prostate cancer, as well as their primary care providers, receive the most up-to-date information in a timely manner.

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