



### Appendix 3: CTFPHC Recommendation for Screening for Prostate Cancer with PSA test

<b>Population</b>	All men not previously diagnosed with prostate cancer. This includes men with lower urinary tract symptoms (nocturia, urgency, frequency and poor stream) or with benign prostatic hyperplasia (BPH)
<b>Burden of illness</b>	Prostate cancer is the most commonly diagnosed non-skin cancer in men and the third leading cause of cancer-related death among men in Canada. The estimated lifetime risk of diagnosis is 14.3% under current rates of screening, and the estimated lifetime risk of death from prostate cancer is 3.6% under current methods of treatment.
<b>Intervention</b>	Prostate-specific antigen test (PSA)
<b>Recommendation</b>	<ul style="list-style-type: none"> <li>For men aged less than 55 years, we recommend not screening for prostate cancer with the prostate-specific antigen test. (<i>Strong recommendation; low quality evidence</i>)</li> <li>For men aged 55-69 years, we recommend not screening for prostate cancer with the prostate-specific antigen test. (<i>Weak recommendation; moderate quality evidence</i>)</li> <li>For men 70 years of age and older, we recommend not screening for prostate cancer with the prostate-specific antigen test. (<i>Strong recommendation; low quality evidence</i>).</li> </ul>
<b>Basis of recommendation</b>	<p>The CTFPHC based this recommendation on consideration of the overall balance between the possible benefits and harms of PSA screening (with or without digital rectal exam [DRE]): weighing the possible benefits against potential harms of early diagnosis and treatment of prostate cancer.</p> <p>For men under 55 years and 70 years and older, there is no evidence that screening with the PSA test reduces mortality whereas there is evidence of harms. For men aged 55 to 69 years, there is inconsistent evidence of a small potential benefit of screening, and evidence of harms.</p> <p>This recommendation places a relatively low value on a small potential absolute decrease in prostate cancer mortality, and reflects concerns with false positive results, unnecessary biopsies, overdiagnosis of prostate cancer, and harms associated with unnecessary treatment.</p>
<b>If 1,000 men aged 55–59 were screened for 13 years</b>	<p>178 men (or about 20%) would have a false positive PSA test, meaning an unnecessary prostate biopsy. Four of these 178 men would experience biopsy complications severe enough to require hospitalization.</p> <p>102 men would be diagnosed with prostate cancer, but 33 of these diagnoses would not have resulted in symptoms or death in the patient's lifetime (overdiagnosed cases). However, these men would likely choose treatment due to uncertainty about progression of disease. There are both harms and benefits of treatment: 11-21% of treated men suffer short-term complications; 13-44% experience long-term erectile dysfunction; up to 18% experience urinary incontinence; and 0.4-0.5% die due to complications from prostate surgery. However, treatment of early stage prostate cancers with prostatectomy or radiation therapy (with or without hormone therapy) does reduce both prostate cancer-specific and all-cause mortality.</p> <p>Ultimately, if 1,000 men were screened, 1 man would avoid death due to prostate cancer.</p>
<b>Details of recommended service</b>	<p>The implication of the strong recommendation for men under 55 years and 70 years and older is that clinicians should not routinely discuss screening for prostate cancer. The implication of the weak recommendation for men aged 55 to 69 years is that clinicians should discuss the risks and benefits of screening and its potential consequences with each man in the context of his preferences.</p> <p>DRE is not recommended.</p>
<b>Considerations for implementation</b>	<p>There are no trial data demonstrating that the benefits or harms of screening differ in high risk populations, as compared to men from the general population. However clinicians may wish to discuss the benefits and harms of screening in men at higher risk, with explicit consideration of their values and preferences.</p> <p>The recommendation does not apply to men with previously diagnosed prostate cancer or to the use of the PSA test for surveillance after treatment for prostate cancer</p>