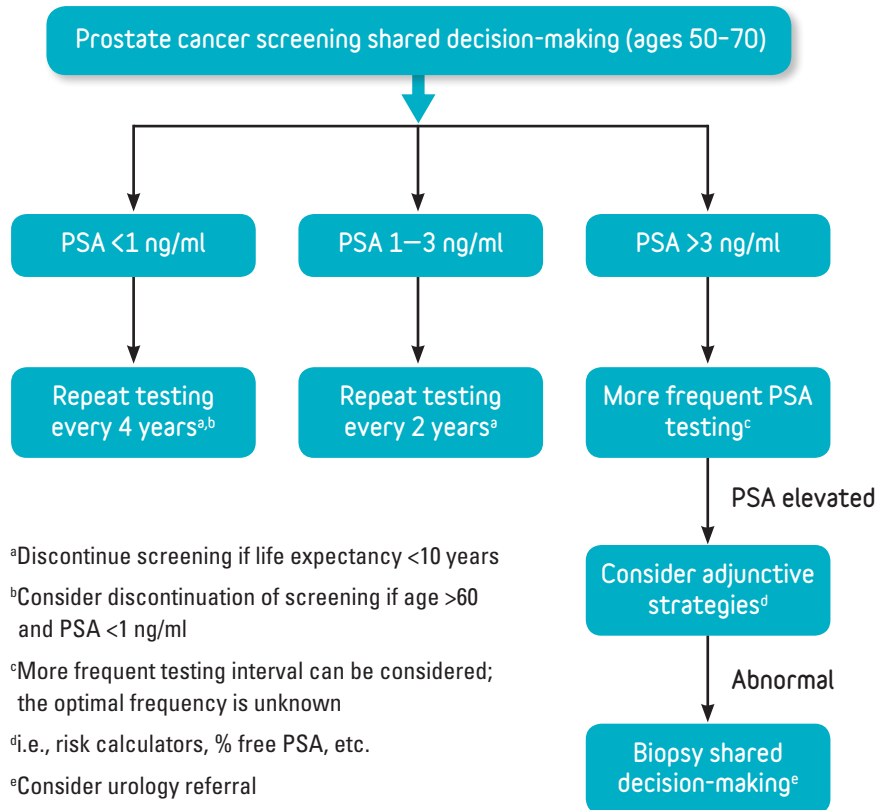


# A Practical Approach to the Canadian Urological Association Recommendations on Prostate Cancer Screening and Early Diagnosis<sup>1</sup>



## The CUA Prostate Cancer Screening Pathway



## Best Screening Practices

**For men electing to undergo PSA screening, initiate PSA testing at age 50 in most men and at age 45 in men at increased risk of prostate cancer (LoE, 3; GoR, C).**

Men aged 45–49 with a PSA >4 ng/ml with a family history of prostate cancer may benefit from PSA screening at an earlier age. For men with known germ-line mutations associated with prostate cancer development, an individualized testing strategy after consultation with a clinical geneticist is most appropriate.

### For men electing to undergo PSA screening

**Intervals between testing should be individualized based on previous PSA levels.**

- For men with PSA <1 ng/ml, repeat PSA testing every 4 years (LoE, 3; GoR, C)
- For men with PSA 1–3 ng/ml, repeat PSA testing every 2 years (LoE, 3; GoR, C)
- For men with PSA >3 ng/ml, consider more frequent PSA testing intervals or adjunctive testing strategies (LoE, 4; GoR, C)

**The age at which to discontinue PSA screening should be based on current PSA level and life expectancy.**

- For men aged 60 with a PSA <1 ng/ml, consider discontinuing PSA screening (LoE, 2; GoR, C).
- For all other men, discontinue PSA screening at age 70 (LoE, 2; GoR, C).
- For men with a life expectancy <10 years, discontinue PSA screening (LoE, 4; GoR, C).

As baseline PSA levels rise above 1 ng/ml, the intermediate-term risk of developing prostate cancer increases substantially.<sup>2-4</sup> It is recommended that physicians take into account a patient's general health status and competing risks of mortality when considering whether or not to offer PSA testing.

**Abbreviations:** GoR: grade of recommendation; LoE: level of evidence; PSA: prostate-specific antigen.

References: 1. Rendon RA, et al. *Can Urol Assoc J* 2017;11:289-309. 2. Preston MA, et al. *J Clin Oncol* 2016;34:2705-11. 3. Gelfond J, et al. *J Urol* 2015;194:46-51. 4. Vickers AJ, et al. *BMJ* 2013;346:f2023.

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## PSA Screening

**Offer PSA screening to men with a life expectancy >10 years. The decision of whether or not to pursue PSA screening should be based on shared decision-making after the potential benefits and harms associated with screening have been discussed (LoE, 1; GoR, B).**

Based on current evidence, organized PSA screening appears to result in a reduction in prostate cancer mortality; however, the CUA recognizes that PSA screening may not be the best option for all men, and healthcare providers should discuss the potential risks and benefits of PSA screening with their patients.

## Prostate Biopsy Decision-making

**Men undergoing screening should be involved in the decision-making regarding prostate biopsy. The decision to pursue biopsy should be based upon a discussion of the best evidence for estimating the risk for aggressive prostate cancer (Expert opinion).**

The PSA should be repeated and confirmed before proceeding to prostate biopsy. The decision to proceed with prostate biopsy should take into account several factors, including PSA level, results from adjunct tests or risk calculators, competing comorbidities, and patient preferences.

**Abbreviations:** 4Kscore®: four-kallikrein panel; GoR: grade of recommendation; LoE: level of evidence; mpMRI: multiparametric magnetic resonance imaging; PCA3: prostate cancer antigen 3; PHI®: Prostate Health Index; PSA: prostate-specific antigen; PSAD: PSA density; PSAV: PSA velocity.

## Adjunctive Strategies for Improving Prostate Cancer Early Diagnosis

<b>mpMRI followed by targeted biopsy*</b>	<ul style="list-style-type: none"><li>• Not considered standard of care in biopsy-naive patients.</li></ul>
<b>PSAV</b>	<ul style="list-style-type: none"><li>• Not recommended in isolation for clinical decision-making.</li><li>• Routine PSAV can provide additional information about a patient's risk of prostate cancer.</li></ul>
<b>PSAD</b>	<ul style="list-style-type: none"><li>• Discouraged as sole test for clinical decision-making.</li><li>• Can be considered adjunctively in men with known prostate volumes.</li></ul>
<b>Percent free PSA</b>	<ul style="list-style-type: none"><li>• Not recommended in isolation for clinical decision-making.</li><li>• Can be useful in estimating the risk of underlying disease in men with elevations in PSA (LoE, 2; GoR, C).</li></ul>
<b>Biomarkers (e.g., 4Kscore®, PHI®, PCA3)</b>	<ul style="list-style-type: none"><li>• May improve the prediction of clinically significant prostate cancer in men with moderately elevated PSA.</li><li>• Expensive; not publicly funded in Canada.</li><li>• Widespread use not encouraged by the CUA.</li></ul>
<b>Prostate risk calculators</b>	<ul style="list-style-type: none"><li>• Can be used to estimate the risk of clinically significant prostate cancer in men presenting with an elevated PSA.</li></ul>

\*The mpMRI statements were published by Cancer Care Ontario and endorsed by the CUA.