

14. PSA testing should not replace a DRE, as PSA levels may be elevated due to factors such as prostatitis, prostate enlargement, UTIs, or normal variation.<sup>7</sup>
- According to the Canadian Task Force on Preventive Health Care, current evidence would suggest no higher risk of prostate cancer in men presenting with chronic LUTS than in men without LUTS.<sup>27,28</sup>
  - PSA testing should only be discussed with men who have at least a 10-year life expectancy and for whom knowledge of the presence of prostate cancer would change management.<sup>7</sup>

#### Box 4. Talking Tips: PSA

- “You’re having trouble with new urinary tract symptoms, which appear to be increasing. Most of the time, these symptoms are due to an enlarged prostate, but it’s also possible they are caused by prostate cancer. The PSA test can give us information to help us figure it out.”
- “But it’s important to know that the PSA test may result in harm:
  - Although a raised PSA level can help to find cancer in its early stages, it will often lead to more tests (e.g., biopsy—where a needle removes tissue from the prostate) that may not have been necessary if in fact there is no cancer. This is called a false positive result.
  - Many of the cancers we pick up by doing the PSA are low-risk cancers that don’t need treatment, so there is a chance you might be offered treatments that can cause long-lasting problems like incontinence or erectile dysfunction.”

15. For men who elect to undergo PSA screening, it is recommended that intervals between testing should be dictated by previous results [Weak Recommendation, Very Low–Low Evidence]:<sup>7,29</sup>
- If PSA < 1 ng/ml, repeat testing in 4 years.
  - If PSA 1 to 3 ng/ml, repeat testing in 2 years.
  - If PSA > 3 ng/ml, consider more frequent testing intervals or adjunct test strategies.
  - If PSA levels > 4 ng/ml, testing should be repeated prior to consideration of biopsy—25% of men may have a resolution to levels that do not require investigation. “Determining the threshold for performing a prostate biopsy should be an individualized process” [Expert Opinion].<sup>7,29</sup>
16. A 2018 meta-analysis of the free-to-total PSA ratio for men with PSA levels of 4 to 10 ng/ml found the positive likelihood ratio was only 1.85 (95% CI 1.56–2.2) and negative likelihood ratio 0.42 (95% CI 0.34–0.53), suggesting that it is not adequate to make the diagnosis of prostate cancer significantly more or less unlikely. The level of evidence was very low, as all studies were case-control and had a significant heterogeneity between them. Although cut-offs for a positive result varied between 0.14 to 0.25, this did not affect the diagnostic accuracy of the test.<sup>30</sup>
17. Investigations that are *not* recommended as part of the initial assessment include cytology, cystoscopy, urodynamics, upper urinary tract imaging, prostate ultrasound, MRI, and biopsy.<sup>7</sup>

#### Additional Assessments

18. If the diagnosis remains uncertain after an initial assessment, it may be reasonable to do the following:<sup>7</sup>
- Serum creatinine.
  - Urine tests: cytology, uroflowmetry, post-void residual (PVR).
  - A PVR can help to determine the baseline ability of the bladder to empty, detect severe urinary retention that may not be amenable to medical therapy, evaluate the impact of certain medications ([Info point 39](#)), and/or indicate detrusor dysfunction.<sup>12</sup>
  - Voiding diary (recorded over 24–72 hours): tracks urinary frequency and volume of voiding.
  - Obstructive sleep apnea screen for patients > age 50 with primarily nocturia.
  - Sexual function questionnaire.

**Note:** Uroflowmetry may be performed by a urologist.

#### MANAGEMENT

**Note:** Refer to [Appendix 2](#) for an algorithmic approach to the management of BPH.

19. The management of a patient with BPH will depend on symptom severity, impact on a patient’s quality of life/degree of bother, and patient preferences.<sup>7</sup> Some patients may request or require immediate referral to a urologist ([Info point 48](#); [Appendix 2](#)).