Prostate-specific antigen testing

Evolving evidence and shared decision making

Jon Emery

PROSTATE CANCER causes over 3500 deaths in Australia per annum and approximately one in six Australian men living to 85 years will be diagnosed with the disease. Overall, survival rates are excellent, which means there are over 89,000 men in Australia diagnosed in the previous five years living with the consequences of their diagnosis and treatment. These statistics are important because they play into the arguments about prostate cancer screening in terms of how common prostate cancer is, how it causes more deaths than breast cancer, and also how many men live with the disease and die from another cause.

Prostate-specific antigen (PSA) testing of asymptomatic men has been controversial for many years because of mixed results from large trials, concerns about overdiagnosis of slow-growing cancers and their overtreatment, and associated long-term effects on quality of life. The controversies have led to conflicting guidelines and sometimes polarised opinions between professional organisations.

This edition of the *Australian Journal of General Practice* highlights the evolving evidence about PSA testing, including long-term follow-up data demonstrating reduced prostate cancer mortality, new diagnostic procedures and the growing use of active surveillance as a strategy to reduce the overtreatment of low-risk tumours.[1] Many prostate cancers are slow-growing, and it requires long-term follow up of PSA screening trials to identify benefit if it exists.

Sixteen-year follow-up data from the European Randomized study of Screening for Prostate Cancer (ERSPC) trial has confirmed the previously reported 20% relative risk reduction in prostate cancer mortality for PSA testing.[2] This equates to 570 men needing to be screened to prevent one death.

Multi-parametric magnetic resonance imaging has been shown to be more accurate at diagnosing clinically significant prostate cancers than transrectal ultrasound-guided biopsy, thereby reducing the proportion of men with a raised PSA who require biopsy, and the diagnosis of clinically insignificant disease. The alternative transperineal approach to prostate biopsy has reduced the rates of sepsis from this diagnostic procedure. Data from the Prostate Cancer Outcomes Registry show that 71% of men with low-risk prostate cancer will be managed initially with active surveillance or watchful waiting as a means to reduce the harms of overtreatment.[3]

This new evidence and changes in urological practice have led to a review of national PSA testing guidelines, which is currently under way. This should provide greater clarity for general practitioners (GPs) who currently face the dilemma of different recommendations between national guidelines. However, there is agreement about the need to support men to make informed decisions about PSA testing with information resources and decision aids.[4,5] GPs need up-to-date decision aids that reflect this new evidence; the magnitude of benefit is becoming clearer and new ways to reduce harms from diagnosis and treatment might alter how individuals weigh up whether or not to have a PSA test.

Author

Jon Emery MA, MBBCh, FRACGP, MRCGP, DPhil, Herman Professor of Primary Care Cancer Research, Department of General Practice and Centre for Cancer Research, University of Melbourne, Melbourne, Vic

References

1. Rashid P, Zargar-Shoshtari K, Ranasinghe W. Prostate specific antigen (PSA) testing for prostate cancer: Time to reconsider the approach to screening. Aust J Gen Practice 2023;52(3):91–95.
2. Hugosson J, Roobol MJ, Månsson M, et al; ERSPC investigators. A 16-yr follow-up of the European Randomized study of Screening for Prostate Cancer. Eur Urol. 2019;76(1):43–51. doi: 10.1016/j.eururo.2019.02.009.
3. Papa N, O'Callaghan M, James E, Millar J. Prostate cancer in Australian and New Zealand men: Patterns of care within PCOR-ANZ 2015-2018. Melbourne: Monash University & Movember, 2021. Available at https://prostatecancerregistry-org.s3.amazonaws.com/pcor_cms/media/filer_public/ce/9c/ce9cd8eb-2cb0-4be9-8473-4087b277fb1e/pcor-anz_2020_annual_report_final.pdf [Accessed 9 February 2023].
4. Tse T, Wu B, Vagholkar S, Willcock S. Shared decision making in prostate cancer screening: an update. Aust J Gen Practice 2023;52(3):99–101.
5. Chiam K, Crowe J, Grogan P, et al; STARGATE Working Group. Making informed decisions about prostate cancer testing: Locally tailored factsheets on the burden of prostate cancer in Australia. Aust J Gen Practice 2023;52(3):102–105.

correspondence **ajgp@racgp.org.au**