

## 2.2 Prostate biopsies 40 years and over

### Context

This data item examines prostate biopsies performed on men aged 40 years and over. The data are for services funded by the MBS for prostate biopsies. They exclude publicly funded hospital services. Each repeat prostate biopsy for one person is counted as one service.

The prostate is an organ that forms part of the male reproductive system. Located immediately below the bladder and just in front of the bowel, its main function is to produce fluid that protects and enriches sperm.

A prostate biopsy is a procedure to remove samples of suspicious tissue from the prostate. It involves taking multiple small amounts of prostate tissue using a biopsy needle. The tissue is then examined under a microscope for cell abnormalities that indicate the presence of prostate cancer.

Prostate biopsies are commonly carried out if the results of early detection tests suggest a person may have prostate cancer. The three primary early detection tests are digital rectal examinations, prostate-specific antigen (PSA) blood tests and trans-rectal ultrasounds.

Early detection of prostate cancer by screening asymptomatic men with the PSA test is a complex issue. It is difficult to differentiate between potentially fatal cancers and benign tumours that would have caused no symptoms or harm. In cases where prostate cancer is not life threatening, early detection (known as over-diagnosis) may cause harm by exposing affected men to unnecessary treatments that carry substantial risk of adverse effects, such as urinary incontinence and impotence.<sup>1</sup>

A prostate biopsy may be performed in several different ways:

- the trans-rectal method, which is done through the rectum and is the most common
- the perineal method, which is done through the skin between the scrotum and the rectum.

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## Magnitude of variation

In 2013–14, there were 25,869 MBS-funded services for prostate biopsies, representing 460 services per 100,000 men aged 40 years and over (the Australian rate).

The number of MBS-funded services for prostate biopsies across 87\* local areas (SA4s) ranged from 150 to 1,357 per 100,000 men aged 40 years and over. The number of services was **9.0 times higher** in the area with the highest rate compared to the area with the lowest rate. The average number of services varied across states and territories, from 289 per 100,000 men aged 40 years and over in the Northern Territory, to 692 in South Australia.

After excluding the highest and lowest results, the prostate biopsies rate across the 71 remaining local areas was **2.7 times higher** in one local area compared to another.

## Interpretation

Potential reasons for the variation include differences in:

- clinical decision-making and clinicians' adherence to clinical guidelines
- the number of procedures undertaken on public patients. These data contain only information on prostate biopsies funded through the MBS and exclude men who have procedures as public patients in public hospitals
- rates of PSA testing. High PSA levels are a key indicator for performing prostate biopsies. Studies have shown that rates of PSA testing are lower in rural and regional areas of Australia, which is consistent with the rates shown here for prostate biopsy<sup>2,3</sup>
- beliefs about the value of PSA testing, leading to different uses of the test
- levels of private health insurance and access to specialist urologists and private hospitals
- geographical access to urologists as the need to travel long distances is likely to be a barrier in rural and regional areas.

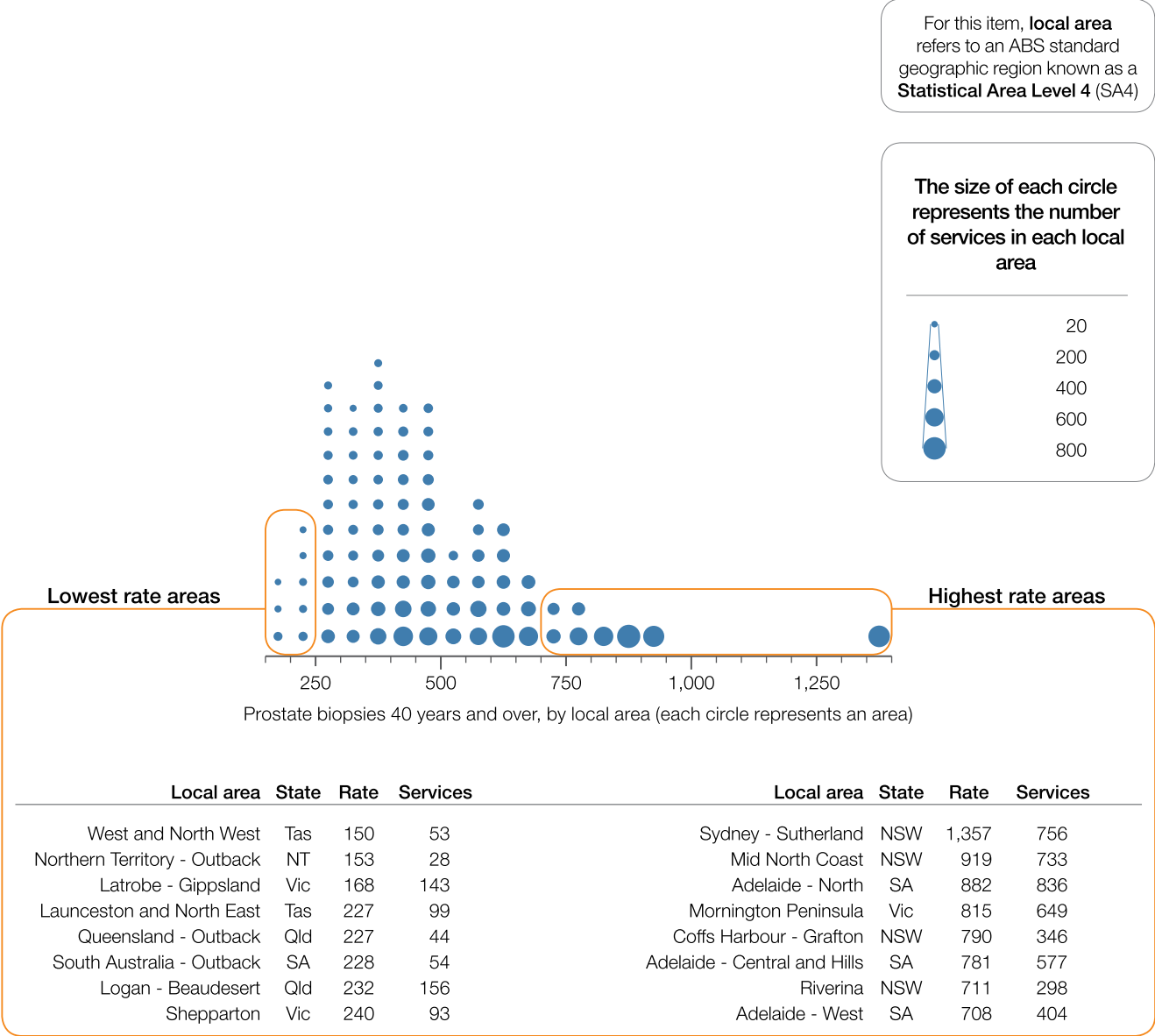
To explore this variation, further analysis could focus on:

- gathering data on prostate biopsy rates for public patients to develop a comprehensive picture of variation
- mapping PSA testing rates against prostate biopsy rates
- reviewing the data against the density of urologists by region.

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\*There are 88 SA4s. For this item, data were suppressed for 1 SA4. This is because of confidentiality requirements given the small numbers of services in this area.

Figure 22: Number of MBS-funded services for prostate biopsies per 100,000 men aged 40 years and over, age standardised, by local area, 2013–14



**Notes:**  
Rates are standardised based on the age structure of the Australian population in 2001.  
State/territory and national rates are based on the total number of services and men in the geographic area.  
The term local area refers to an ABS standard geographic region known as a Statistical Area Level 4 (SA4).

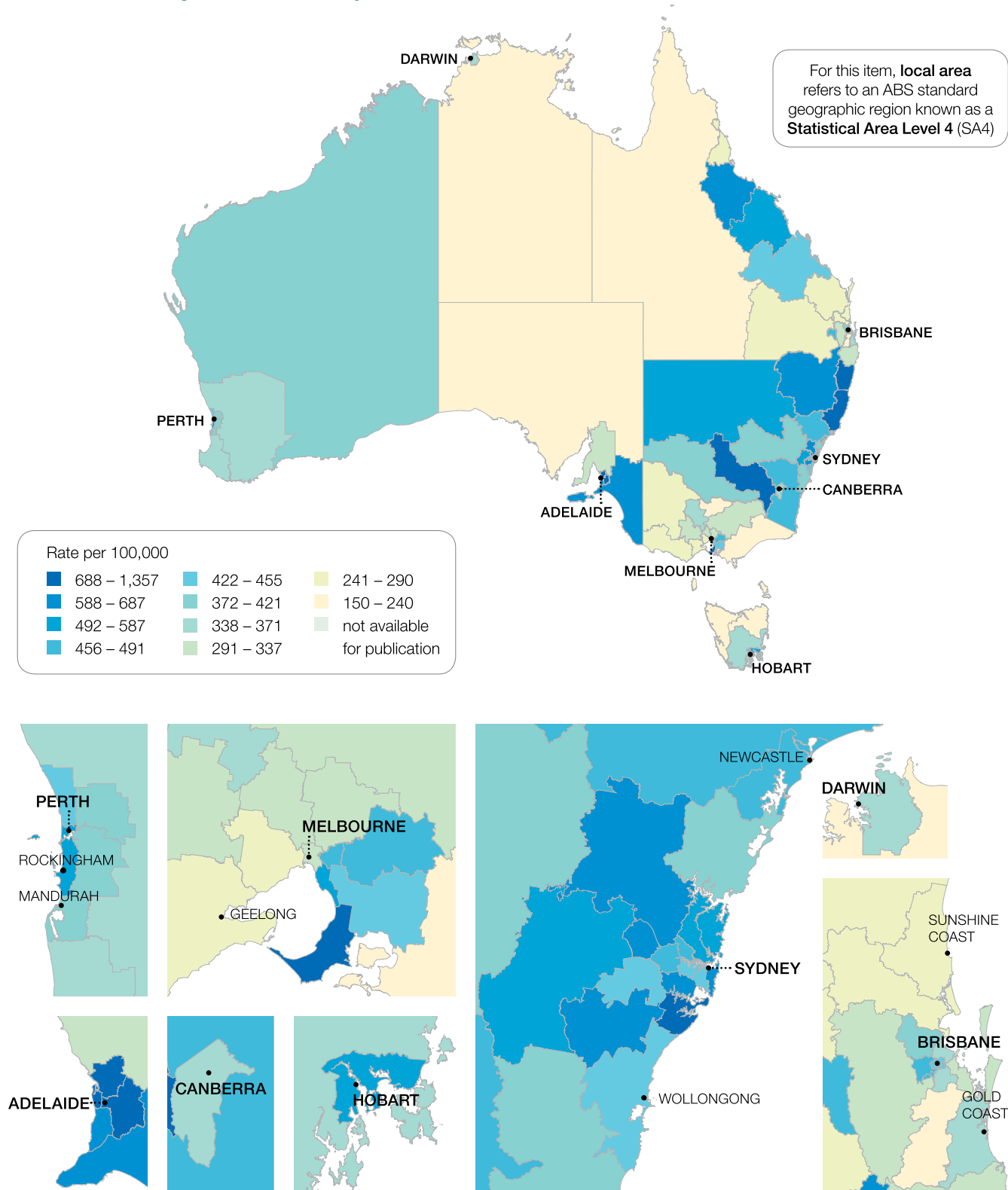
MBS statistics exclude services provided free of charge to public patients in hospitals, to Department of Veterans' Affairs beneficiaries, some patients under compensation arrangements and through other publicly funded programs. SA4 analysis excludes approximately 15 services from GPO postcodes 2001, 2124, 3001, 4001, 5001, 6843 but these data are included in state/territory and national level analysis.

For more technical information please refer to the Technical Supplement.

**Sources:** National Health Performance Authority analysis of Department of Human services Medicare Benefits statistics 2013–14 (data supplied 12/08/2014) and Australian Bureau of Statistics Estimated Resident Population 30 June 2013.

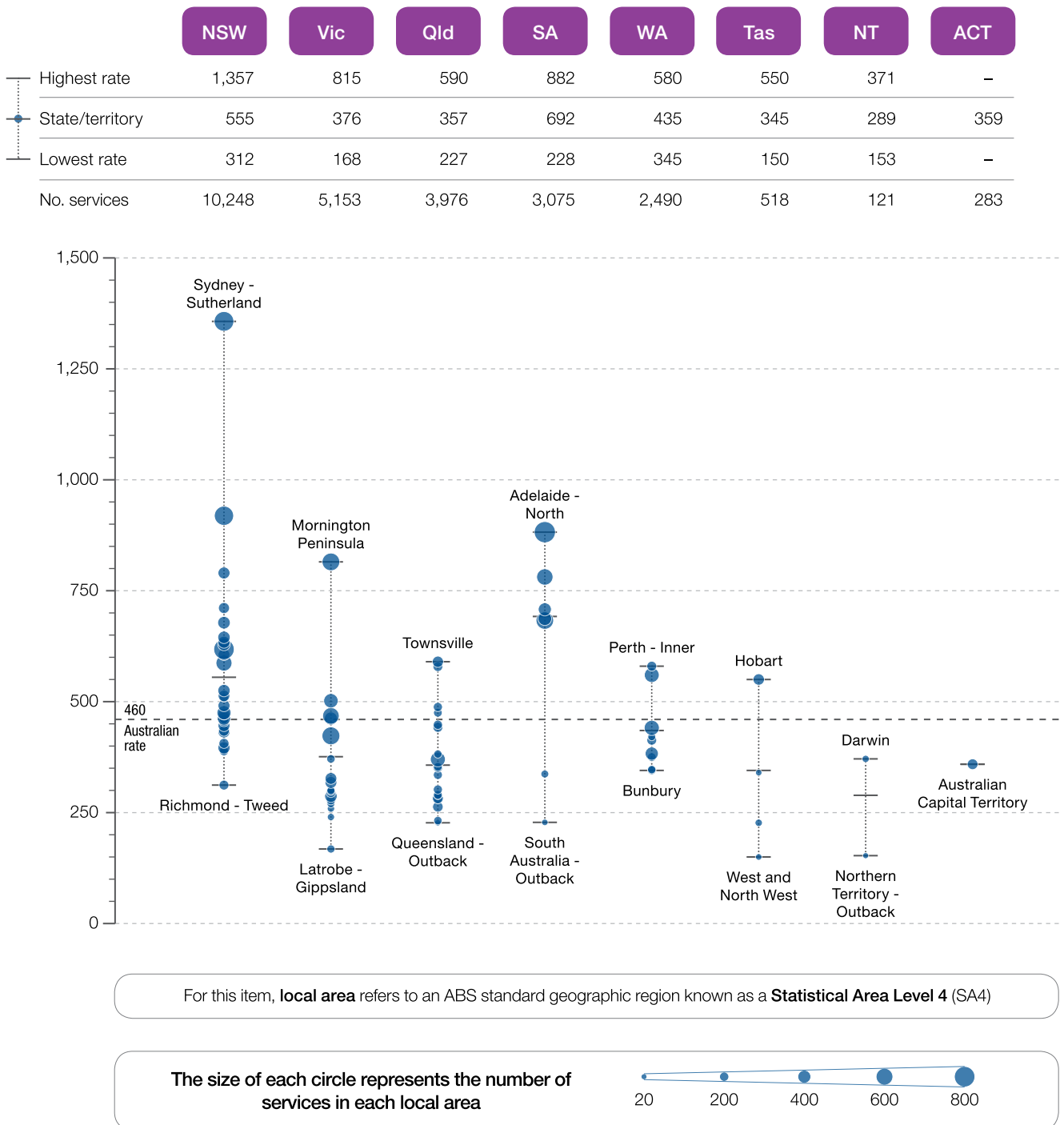
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**Figure 23:** Number of MBS-funded services for prostate biopsies per 100,000 men aged 40 years and over, age standardised, by local area, 2013–14



**Sources:** National Health Performance Authority analysis of Department of Human services Medicare Benefits statistics 2013–14 (data supplied 12/08/2014) and Australian Bureau of Statistics Estimated Resident Population 30 June 2013.

**Figure 24: Number of MBS-funded services for prostate biopsies per 100,000 men aged 40 years and over, age standardised, by local area, state and territory, 2013–14**



**Notes:**

Rates are standardised based on the age structure of the Australian population in 2001.  
State/territory and national rates are based on the total number of services and men in the geographic area.

**Sources:** National Health Performance Authority analysis of Department of Human services Medicare Benefits statistics 2013–14 (data supplied 12/08/2014) and Australian Bureau of Statistics Estimated Resident Population 30 June 2013.

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## Resources

- Prostate Cancer Foundation of Australia and Cancer Council Australia. *Clinical practice guidelines for PSA testing and early management of test-detected prostate cancer*. 2014. Forthcoming in 2015: [www.prostate.org.au](http://www.prostate.org.au).
- National Institute for Health and Care Excellence. *Prostate cancer: diagnosis and management clinical guideline*. 2014. Available at: [www.nice.org.uk/guidance/cg175](http://www.nice.org.uk/guidance/cg175).
- Australian Institute of Health and Welfare. *Prostate cancer in Australia*. Cancer Series No. 79. 2013. Available at: [www.aihw.gov.au/WorkArea/DownloadAsset.aspx?id=60129545133](http://www.aihw.gov.au/WorkArea/DownloadAsset.aspx?id=60129545133).
- Evans SM, Millar JL, Wood JM, Davis ID, Bolton D, Giles GG, et al. *The Prostate Cancer Registry: monitoring patterns and quality of care for men diagnosed with prostate cancer*. BJU Int, 2013;111;159–66.
- Victorian Prostate Cancer Clinical Registry. *Five Year Report*. 2015. Available at: <http://pcr.registry.org.au/Files/Annual%20Reports/Vic%20PCR%20Five%20Year%20Report.pdf>.
- Choosing Wisely, Royal College of Pathologists of Australasia. *Tests, treatments and procedures clinicians and consumers should question*. 2015. Available at: [www.choosingwisely.org.au/recommendations/rcpa](http://www.choosingwisely.org.au/recommendations/rcpa).

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1 Cancer Council Australia. Prostate cancer screening. 2015. (Accessed 24 September 2015, at [http://wiki.cancer.org.au/policy/Prostate\\_cancer/Screening#Prostate-specific\\_antigen\\_test](http://wiki.cancer.org.au/policy/Prostate_cancer/Screening#Prostate-specific_antigen_test)).

2 Coory MD, Baade PD. Urban-rural differences in prostate cancer mortality, radical prostatectomy and prostate-specific antigen testing in Australia. Med J Aust 2005;182(3):112–115.

3 Baade PD, Youlden DR, Coory MD, Gardiner RA, Chambers SK. Urban-rural differences in prostate cancer outcomes in Australia: what has changed. Med J Aust, 2011;194(6):293–296.