

## 3.4 Radical prostatectomy hospital admissions 40 years and over

### Context

This data item examines hospital admission for radical prostatectomy in men aged 40 years and over. Hospital admission data are sourced from the Admitted Patient Care National Minimum Data Set. This includes both public and private hospitals. Rates are described as the number of admissions per 100,000 people. Repeat admissions for one person and transfers to other hospitals are both counted as separate admissions.

Radical prostatectomy is a treatment option for prostate cancer. The prostate is an organ that is part of the male reproductive system. It is located immediately below the bladder and just in front of the bowel. Its main function is to produce fluid that protects and enriches sperm.

Prostate cancer is the most commonly diagnosed cancer in Australia. It is the fourth leading cause of death among Australian males<sup>1</sup> and the second leading cause of male cancer death.<sup>1</sup> The strongest risk factors for prostate cancer are age and genetic or family history. Prostate cancer in men is rare under the age of 50.<sup>2</sup>

Radical prostatectomy involves removing the prostate gland and the seminal vesicles, which are small glands located immediately above the prostate that produce seminal fluid. Three other evidence-based approaches to management of prostate cancer are active surveillance, radiotherapy and androgen deprivation therapy. These are both clinically valid management options for prostate cancer, reporting similar 10-year survival rates to radical prostatectomy.<sup>3,4</sup>

Radical prostatectomy is indicated for men who:

- have localised prostate cancer
- are fit for surgery
- have a life expectancy of greater than seven years.

# Radical prostatectomy hospital admissions 40 years and over

## Magnitude of variation

In 2012–13, there were 8,496 radical prostatectomy admissions to hospital, representing 150 admissions per 100,000 men aged 40 years and over (the Australian rate).

The number of radical prostatectomy admissions to hospital across 82\* local areas (SA4s) ranged from 69 to 282 per 100,000 men aged 40 years and over. The number of admissions was **4.1 times higher** in the area with the highest rate compared to the area with the lowest rate. The average number of admissions varied across states and territories, from 64 per 100,000 men aged 40 years and over in the Northern Territory, to 211 in the Australian Capital Territory.

After excluding the highest and lowest results, the radical prostatectomy hospital admission rate across the 67 remaining local areas was **2.2 times higher** in one local area compared to another.

## Interpretation

The number of radical prostatectomies was relatively small, even at the SA4 level, increasing the likelihood that chance fluctuations might influence the observed variation.

Potential reasons for the variation include differences in:

- rates of surgical versus non-surgical management options
- ability to access specialist surgical urological services in some locations, particularly in regional and rural areas, where rates of radical prostatectomy are estimated to be 29 per cent lower than in the capital cities<sup>5</sup>

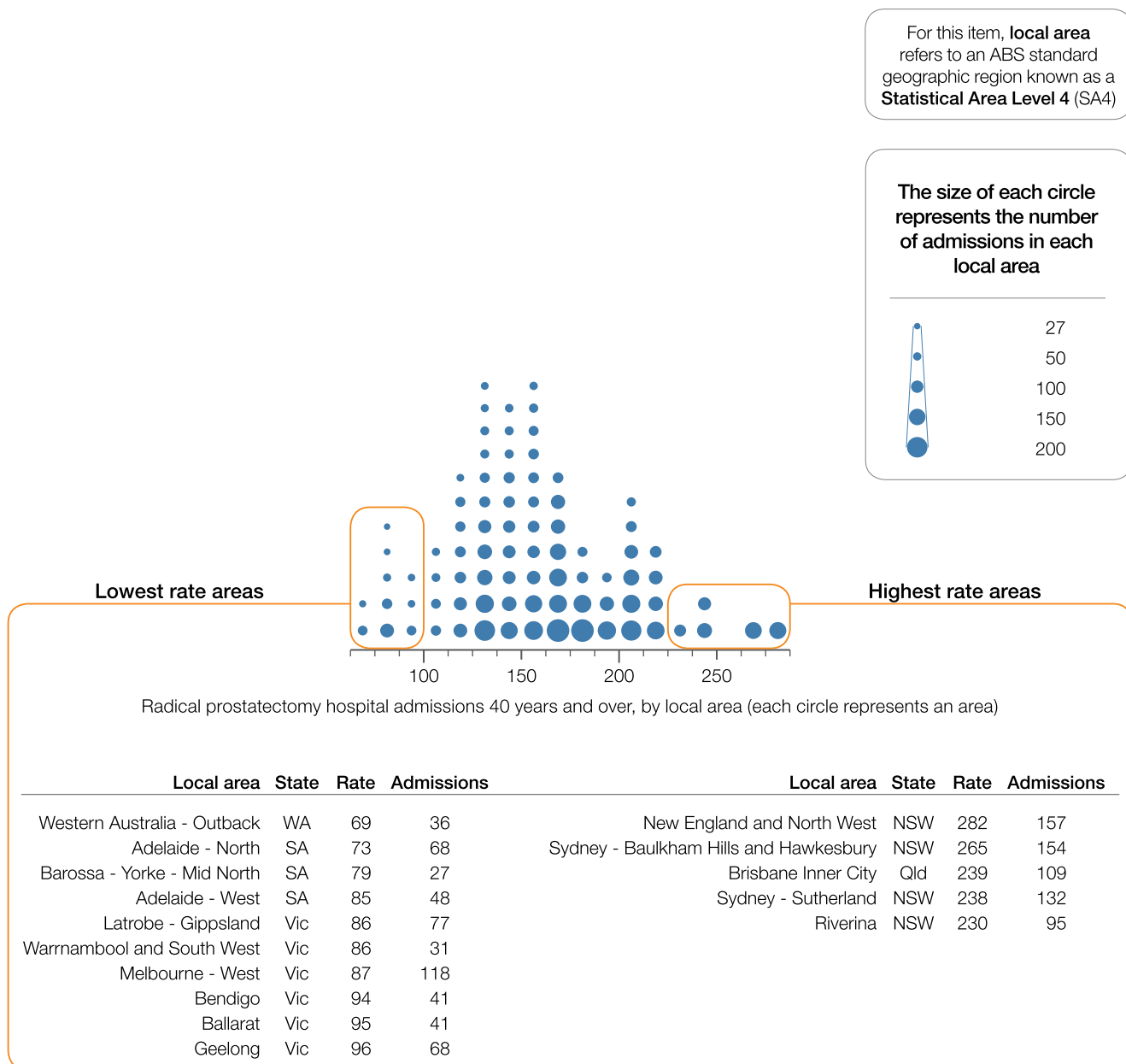
- the availability of radiation therapy services, leading to referrals for this treatment modality rather than surgery
- the uptake of routine prostate examination and prostate-specific antigen testing. Reduced rates of radical prostatectomy are observed among men from socioeconomically disadvantaged backgrounds; those whose access to services may be compromised by geography; and those without private health insurance<sup>6</sup>.

To explore this variation, further analysis could focus on:

- exploring opportunities for linkage of cancer registration data with data for hospital admissions and outpatient treatment to enable analysis of variations for radical prostatectomy surgery and radiation therapy for prostate cancer<sup>7</sup>
- more detailed data mapping within smaller geographical areas (such as inner and outer regions of major cities or regional areas within each state) and analysis of the split between public and private admissions to develop a more comprehensive understanding of local variation.

\*There are 88 SA4s. For this item, data were suppressed for 6 SA4s. This is because of confidentiality requirements given the small numbers of admissions in these areas.

**Figure 41: Number of radical prostatectomy admissions to hospital per 100,000 men aged 40 years and over, age standardised, by local area, 2012–13**



**Notes:**

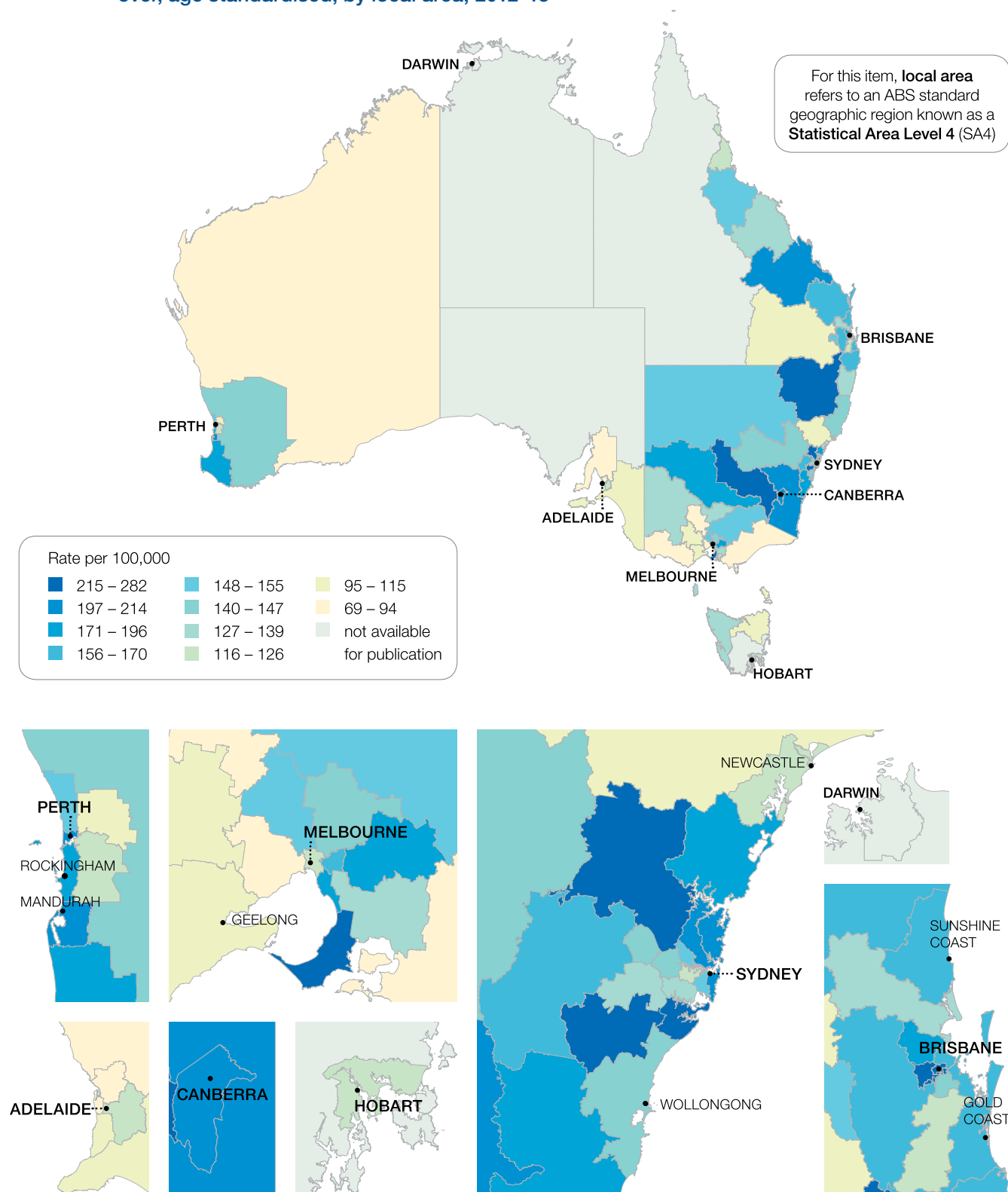
Rates are standardised based on the age structure of the Australian population in 2001.  
 State/territory and national rates are based on the total number of admissions and men in the geographic area.  
 The term local area refers to an ABS standard geographic region known as a Statistical Area Level 4 (SA4).  
 Includes all public hospitals, private hospitals and day hospital facilities.

For more technical information please refer to the Technical Supplement.

**Sources:** National Health Performance Authority analysis of Admitted Patient Care National Minimum Data Set 2012–13 (data supplied 09/04/2014) and Australian Bureau of Statistics Estimated Resident Population 30 June 2013.

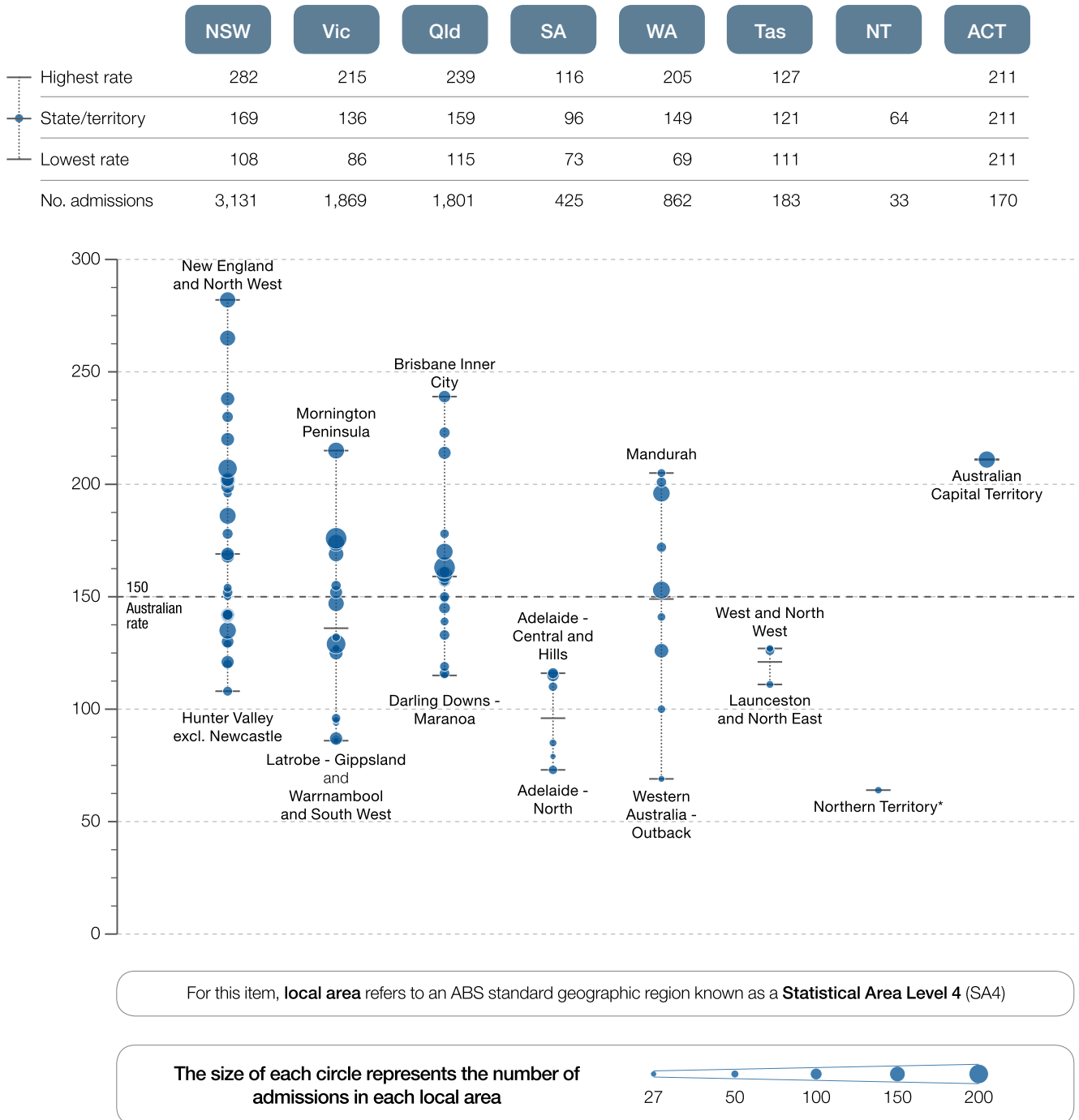
# Radical prostatectomy hospital admissions 40 years and over

Figure 42: Number of radical prostatectomy admissions to hospital per 100,000 men aged 40 years and over, age standardised, by local area, 2012–13



Sources: National Health Performance Authority analysis of Admitted Patient Care National Minimum Data Set 2012–13 (data supplied 09/04/2014) and Australian Bureau of Statistics Estimated Resident Population 30 June 2013.

**Figure 43: Number of radical prostatectomy admissions to hospital per 100,000 men aged 40 years and over, age standardised, by local area, state and territory, 2012–13**



\*The overall rate for the Northern Territory is lower than the minimum published SA4 rate as it includes the SA4 rates for Darwin and Outback Northern Territory that have been suppressed due to the small numbers of admissions in these areas.

**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 admissions and men in the geographic area.

**Sources:** National Health Performance Authority analysis of Admitted Patient Care National Minimum Data Set 2012–13 (data supplied 09/04/2014) and Australian Bureau of Statistics Estimated Resident Population 30 June 2013.

# Radical prostatectomy hospital admissions 40 years and over

## Resources

- Prostate Cancer Foundation of Australia and Cancer Council Australia. *Clinical Practice Guidelines: PSA Testing and Early Management of Test-Detected Prostate Cancer* (consultation draft 2015). Available at: [www.prostate.org.au/media/418708/PSA-Testing-Draft-Clinical-Practice-Guidelines.pdf](http://www.prostate.org.au/media/418708/PSA-Testing-Draft-Clinical-Practice-Guidelines.pdf).
- National Institute for Health and Care Excellence. Prostate Cancer: diagnosis and treatment. *Clinical Guideline*. 2014. Available at: [www.nice.org.uk/guidance/cg175/resources/guidance-prostate-cancer-diagnosis-and-treatment-pdf](http://www.nice.org.uk/guidance/cg175/resources/guidance-prostate-cancer-diagnosis-and-treatment-pdf)
- 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).
- 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>.

- 
- 1 Australian Institute of Health and Welfare. Prostate cancer in Australia. Cancer series no. 79. Cat. no. CAN 76. Canberra: AIHW, 2013.
  - 2 Alam N, You H, Banks C, Baker D, Bishop J. Prostate cancer in New South Wales. Sydney: Cancer Institute NSW, 2009.
  - 3 Boorjian SA, Karnes RJ, Viterbo R, Rangel LJ, et al. Long-term survival after radical prostatectomy versus external-beam radiotherapy for patients with high-risk prostate cancer. *Cancer*. 2011;117(13):2883–91.
  - 4 Klotz L, Zhang L, Lam A, Nam R, et al. Clinical results of long-term follow-up of a large, active surveillance cohort with localized prostate cancer. *JCO*. 2010;28(1):126–31.
  - 5 Coory MD, Baade PD. Urban-rural differences in prostate cancer mortality, radical prostatectomy and prostate-specific antigen testing in Australia. *MJA*. 2005;182(3):112–15.
  - 6 Hall SE, Holman CAJ, Wisniewski ZS, Semmens J. Prostate cancer: socio-economic, geographical and private-health insurance effects on care and survival. *BJU International*. 2005;95(1):51–8.
  - 7 Evans S, Millar J, Wood J, Davis I, Bolton D, Giles G, Frydenberg M, Frauman A, Costello A, McNeil J. The Prostate Cancer Registry: monitoring patterns and quality of care for men diagnosed with prostate cancer. *BJU International*, 2013;111,(4b)158–166.