14 Cancer of the prostate

Summary

Compared with other cancers, relative survival after diagnosis of cancer of the prostate was high. In 1992–1997, relative survival one year after diagnosis of prostate cancer was 95.0% and five years after diagnosis was 82.7% (Table 14.1). Relative survival ten years after diagnosis was 49.5% in 1987–1991, the most recent period for which ten-year relative survival data are available (Figure 14.2; Table 14.2).

Between 1982–1986 and 1992–1997, relative survival after diagnosis of prostate cancer increased significantly. One-year relative survival increased from 87.6% to 95.0% and five-year relative survival increased from 59.3% to 82.7% (Figure 14.2; Table 14.2).

There was no clear relationship between prostate cancer five-year relative survival and age. Relative survival was highest for males aged 50–59 and 60–69 years, at 88.1% and 87.9% respectively (Figure 14.3; Table 14.1).

Five-year relative survival increased significantly between the diagnosis periods 1982–1986 and 1992–1997 for all age groups from 40–49 to 80–89 years (Figure 14.3; Table 14.3). A major factor influencing this increase in relative survival was the introduction and widespread use of PSA testing for prostate cancer in the 1990s. This resulted in a sharp rise in the numbers of new cases of prostate cancer detected.

Table 14.1: Cancer of the prostate: number of new cases and deaths, and five-year relative survival proportions, by age at diagnosis, Australia, 1992–1997

Age	New cases	Deaths	5-year relative survival (%)
0–19 years	2	1	*
20–29 years	1	1	*
30–39 years	8	2	*
40–49 years	422	91	78.0
50–59 years	5,162	776	88.1
60–69 years	20,559	4,565	87.9
70–79 years	25,560	10,053	81.6
80–89 years	10,394	6,874	67.0
90–99 years	947	833	39.4
All ages	**63,055**	**23,196**	**82.7**

* Interpretation difficult due to statistical instability. The instability in this age/sex/site group may be due to the survival model's handling a combination of small number of cases/deaths and or unstable background survival patterns resulting in invalid estimates. These results are therefore not presented here.

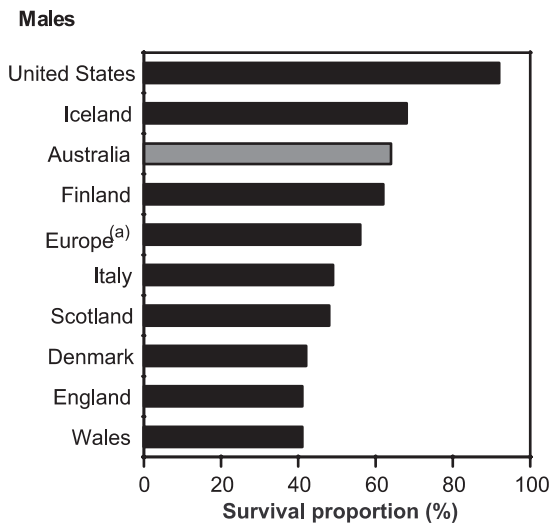
Incidence and mortality

During 1997, there were 9,736 new cases of prostate cancer diagnosed and prostate cancer was the cause of 2,449 deaths in 1997. It is estimated that during 1997 there were 6,000 years of life lost in males due to prostate cancer.

For the six-year period 1992–1997, age-standardised rates of males for incidence and mortality for prostate cancer decreased, with incidence falling by 1.1% per annum and mortality falling by 2.3% per annum.

International comparisons

The introduction of prostate-specific antigen testing (PSA) brings difficulties to the comparison of prostate cancer five-year relative survival between different populations. PSA artificially increases prostate cancer five-year relative survival (lead time bias) by extending the length of time between diagnosis (which is made earlier due to PSA) and the end of life which remains at the same point in time. PSA was introduced in the United States much earlier than in Australia, thus increasing United States relative survival estimates in comparison. Therefore, the following comparisons should be considered with caution. Five-year relative survival after diagnosis of prostate cancer in Australia is relatively high compared with other countries for which relative survival data are available. Australia is ranked third in this comparison behind the United States and Iceland (Figure 14.1; Table 14.4). Examination of relative survival time and proportions of those surviving in England and Wales and the United States showed similar improvements over time to those found in Australia, with five-year relative survival highest for males aged between 50 and 79 years (Ries et al. 1999; Coleman et al. 1999).



(a) Weighted average.

Note: The survival period varies among countries, but is broadly within the 1987–1991 period.

Sources: Ries et al. 1999; Coleman et al. 1999; Berrino et al. 1999.

Figure 14.1: Cancer of the prostate five-year relative survival proportions: selected countries

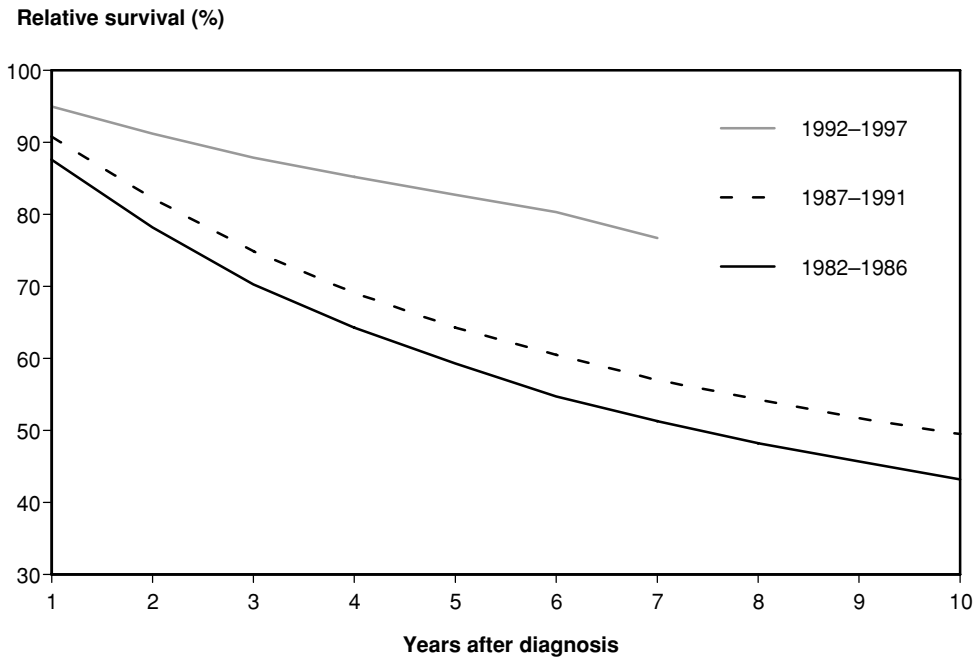
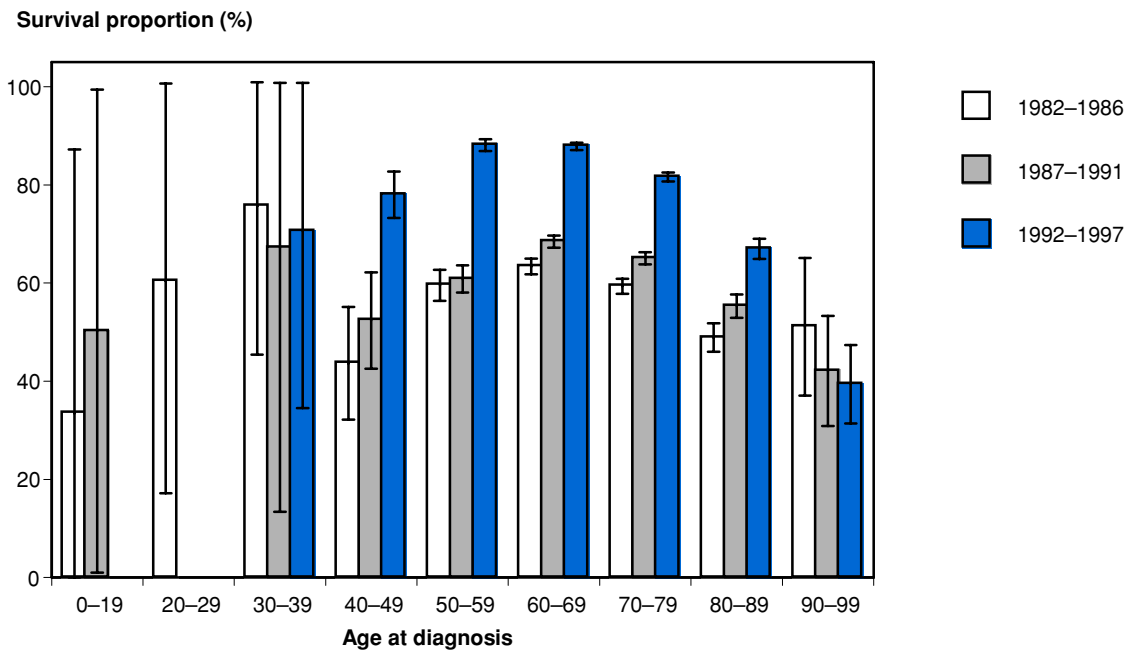


Figure 14.2: Cancer of the prostate relative survival proportions: period of diagnosis, Australia



Note: 95% confidence intervals are shown for each age group.

Figure 14.3: Cancer of the prostate five-year relative survival proportions: age at diagnosis by period of diagnosis, Australia