

# Indicator 5

## Mortality

### Mortality from breast cancer

The mortality rate from breast cancer is calculated per 100,000 estimated resident female population in a 12-month period by 5-year age groups (40–44, 45–49, 50–54, 55–59, 60–64, 65–69, 70–74, 75–79, 80–84, 85+) and for the target age group (50–69 years). Supplementary information presented in this chapter includes mortality rates by State and Territory and by region (metropolitan, rural and remote), and age-specific mortality rates.

### Where do mortality data come from?

Mortality statistics are one of the most comprehensively collected national data sets. Registration of death is a legal requirement in Australia and, as such, compliance is virtually complete. Registration of deaths is the responsibility of the Registrars of Births, Deaths and Marriages in each State and Territory of Australia. The Registrars provide the mortality data to the Australian Bureau of Statistics for coding the cause of death and compilation into national statistics. The AIHW also holds these data in a national mortality database. The data presented here are from the AIHW National Mortality Database and are based on year of registration of the death.

### Why report on mortality from breast cancer?

Breast cancer is the most common cause of cancer death in Australian women. In 1998, 2,542 women died

from this disease. The aim of BreastScreen Australia is to detect invasive breast cancer at an early stage so that it may be treated effectively and reduce mortality. Mortality rates from breast cancer are an important indicator of the effectiveness of the screening program. A particularly important indication of the effectiveness of a screening program is the change in mortality rates over time in the target age group for screening. However, changes in the mortality rates may not be apparent for a number of years following the commencement of a screening program. Accordingly, this measure needs to be viewed over the long term.

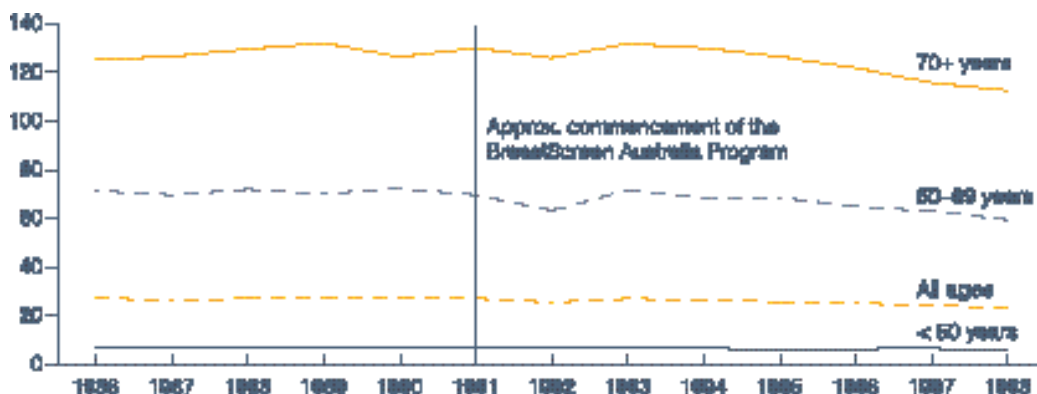
The mortality rates presented here are for the total female population of Australia and not just for those women who participated in the BreastScreen Australia Program.

This chapter shows the trend in breast cancer mortality from 1986 to 1998, the latest national data available. Three pages of supplementary information are also included:

- breast cancer mortality for the target age group (women aged 50–69 years) by State and Territory. These rates are presented for an aggregate of 4 years, 1995 to 1998. Data are aggregated over a 4-year period to improve the stability of rates, especially in the small States and Territories.
- national age-specific breast cancer mortality rates for 1998 by 5-year age groups.
- breast cancer mortality rates by Rural, Remote and Metropolitan Area classification. This classification (Appendix 1) is used to examine mortality rates in rural and remote areas.

## Mortality from breast cancer, Australia, 1986–1998

Deaths per 100,000 women



Source: AIHW National Mortality Database.

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
<b>All ages</b>	27.0	26.5	26.9	27.2	26.9	27.0	25.4	26.9	26.5	25.6	25.0	24.2	23.0
<b>&lt; 50</b>	7.1	6.8	6.5	7.1	6.8	7.1	6.9	6.4	6.6	5.8	6.3	6.4	5.8
<b>50-69</b>	71.3	69.6	71.9	70.1	72.2	69.6	63.3	71.5	68.6	68.5	65.0	62.8	59.4
<b>70+</b>	125.2	126.6	129.6	132.1	126.5	130	126	131.8	130	126.5	121.9	115.8	112.6

Note:

Rates are expressed per 100,000 women and age-standardised to the Australian population at 30 June 1991.

- The above figure shows the mortality rates from breast cancer for the years 1986 to 1998. Monitoring mortality rates over time assists in assessing the Program's impact on mortality.
- Age-standardised mortality rates for the BreastScreen Australia target age group (50 to 69 years) have remained stable over the period 1986 to 1993 except for the fluctuation in the rate in 1992. Since 1993 the rates have declined steadily to 59.4 deaths per 100,000 women in 1998 (Table 29). The age-standardised mortality rates for women aged 70+ years show a similar pattern of decline since 1993.
- A small decline in mortality rates since 1993 is apparent for women of all ages. The rates for women under 50 years have remained fairly stable throughout this period. More detailed information is provided by the age-specific mortality rates in Table 29.
- Improvement in treatment practices and disease management and early detection of cancer through screening are all likely to have impacted on mortality. The feasibility of an observational study to determine the impact of the BreastScreen Australia Program on breast cancer mortality is currently under consideration by the National Advisory Committee.

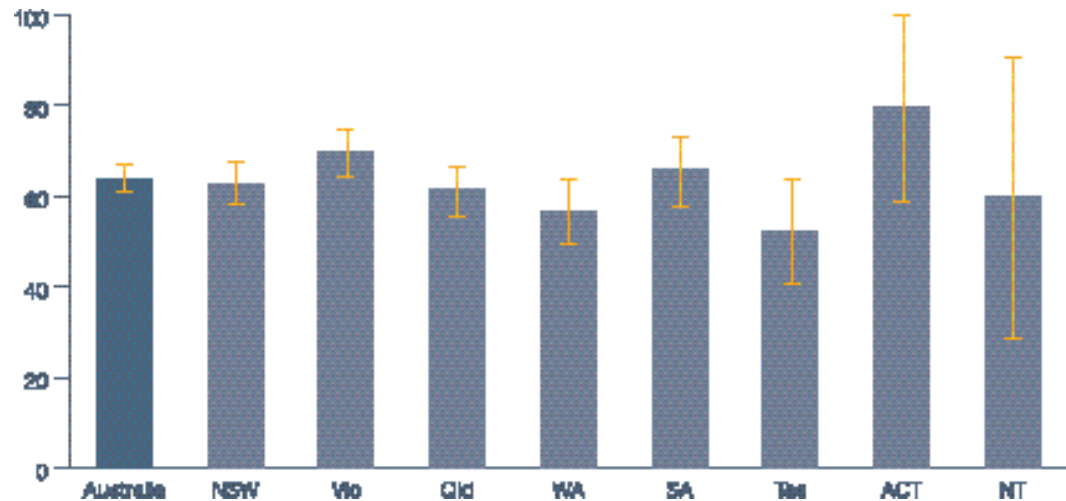
### For more information, see:

Tables 28 to 31.

Kricker A, Farac K, Smith D, Sweeny A, McCredie M & Armstrong BK 1999. Breast cancer in New South Wales in 1972–1995: tumor size and the impact of mammographic screening. *Int J Cancer* 81:877–888.

## Mortality from breast cancer, ages 50–69, 1995–1998

Deaths per 100,000 women



Bars on graphs represent 95% confidence intervals.

Source: AIHW National Mortality Database.

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
<b>Rate</b>	63.9	62.8	69.7 <sup>(a)</sup>	61.3	56.5	65.7	52.2	79.7 <sup>(a)</sup>	60.0
<b>95% CI</b>	62.0–65.9	59.6–66.1	65.7–73.7	56.7–65.9	50.4–62.7	58.9–72.4	41.4–62.9	60.3–99.2	30.0–90.0

(a) Significantly different from the rest of Australia at the 5% level.

Note:

Rates are expressed per 100,000 women and age-standardised to the Australian population at 30 June 1991.

- Mortality data by State and Territory provide an indication as to whether a Program needs to be specially tailored to local conditions, e.g. high mortality in a State, or whether a relatively generic program can be used nationally. Although some differences in mortality exist between the States and Territories, these differences are relatively small and therefore BreastScreen Australia aims to provide a similar level of service in each State and Territory.
- Across all States and Territories, age-standardised mortality rates for the target age group ranged from 52.2 per 100,000 women for Tasmania to 79.7 per 100,000 women for the ACT for the period 1995 to 1998 (Table 31). This range is similar to that reported for the period 1993 to 1996 where the rates ranged from 56.9 per 100,000 women in Tasmania to 82.7 per 100,000 women for the ACT (AIHW 1998b).

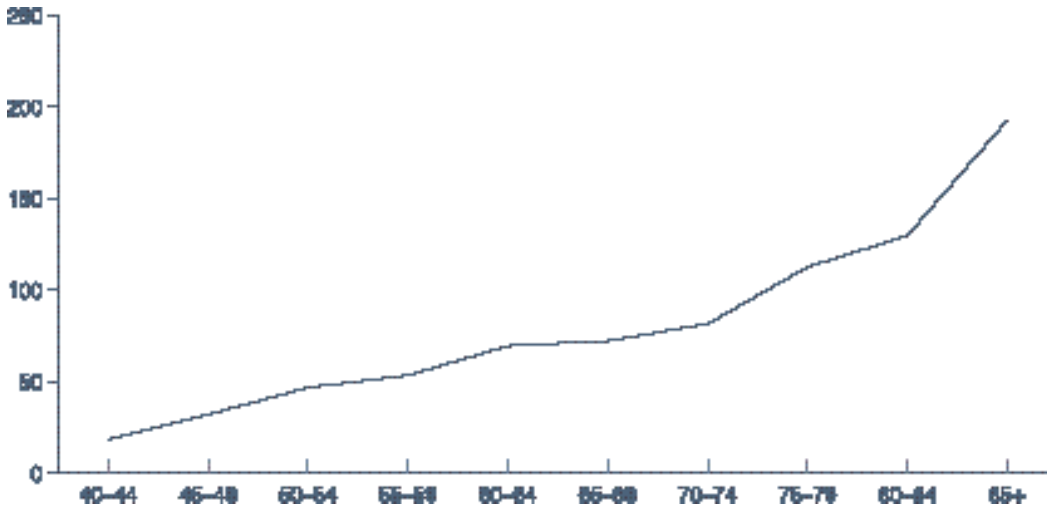
### For more information, see:

Tables 28 to 31.

Australian Institute of Health and Welfare (AIHW) 1998b. Breast and cervical cancer screening in Australia 1996–97. AIHW Cat. No. CAN 3. Canberra: AIHW (Cancer Series No. 8).

## Age-specific mortality rates for breast cancer, Australia, 1998

Deaths per 100,000 women



Source: AIHW National Mortality Database.

Age	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+
Rate	18.2	31.7	46.5	53.1	69.2	72.0	81.2	112.3	129.4	192.3

Note:

Rates are expressed per 100,000 women.

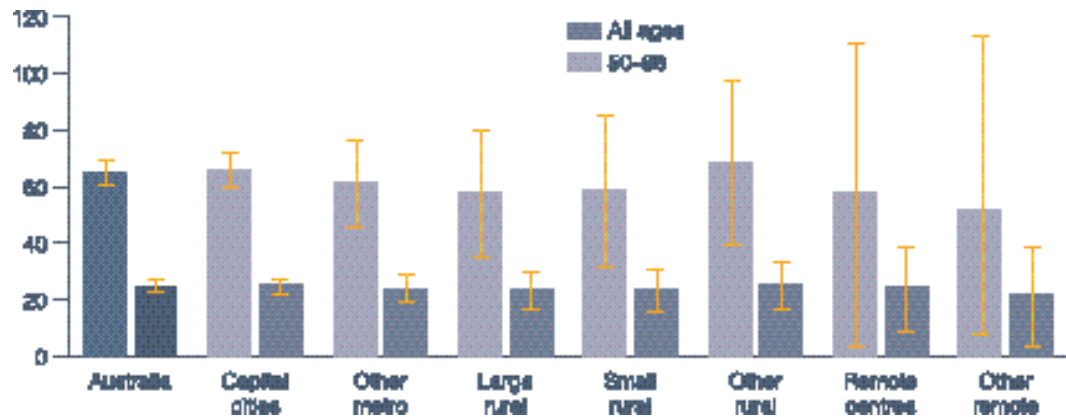
- The age distribution of breast cancer mortality is an important factor for BreastScreen Australia. From this distribution the Program is able to be targeted at those women where significant benefit can be achieved due to their risk profile.
- Age-specific mortality rates of breast cancer are low among women aged less than 35 (4.0 deaths per 100,000 women aged 30 to 34 and 1.0 deaths per 100,000 women aged 25 to 29). However, death rates increase rapidly with age after 35 years (Table 29).
- In 1998 death rates rose from 18.2 per 100,000 women aged 40 to 44 to 192.3 per 100,000 women over the age of 85 years.
- There has been little change in age-specific mortality rates over the years 1986 to 1998 (Table 29).

**For more information, see:**

Tables 28 to 31.

## Mortality from breast cancer by region, 1994–1998

Deaths per 100,000 women



Bars on graphs represent 95% confidence intervals.

Source: AIHW National Mortality Database.

	Australia	Capital cities	Other metro	Large rural	Small rural	Other rural	Remote centres	Other remote
<b>50-69</b>	64.9	66.2	61.4	57.9	58.9	68.8	57.6	51.5
<b>95% CI</b>	60.9–68.9	61.1–71.3	46.9–75.8	36.8–79.0	33.5–84.3	41.3–96.3	5–110.1	9.5–112.4
<b>All ages</b>	24.8	25.2	24.0	23.5	23.5	25.3	24.3	21.6
<b>95% CI</b>	23.9–25.8	24.0–26.4	20.5–27.6	18.3–28.8	17.2–29.8	18.5–32.2	10.2–38.3	5.2–37.9

Notes:

1. Rates are expressed per 100,000 women and age-standardised to the Australian population at 30 June 1991.
2. None of the rates were significantly different from 'capital cities' at the 5% level.
3. The Rural, Remote and Metropolitan Areas classification (RRMA, DPIE & DSHS 1994) was used to create the above categories.

- Geographic area of residence does not appear to be a factor in mortality from breast cancer for women of all ages combined. The death rates for this group are similar in all regions and are not statistically significantly different from 'capital cities' at the 5% level.
- For women in the target age group, death rates are highest in 'capital cities' and 'other rural centres'. Death rates are lowest in 'other remote areas'. Geographic area of residence does not seem to be a factor in mortality from breast cancer in the target age group as demonstrated by the lack of statistically significant differences between the rates for 'other remote areas' and 'capital cities'.

### For more information, see:

Australian Institute of Health and Welfare (AIHW) 1998c. Health in rural and remote Australia. AIHW Cat. No. PHE 6. Canberra: AIHW.

Commonwealth Department of Primary Industries and Energy & Department of Human Services and Health (DPIE & DSHS) 1994. Rural, remote and metropolitan areas classification. 1991 Census edition. Canberra: AGPS.

