

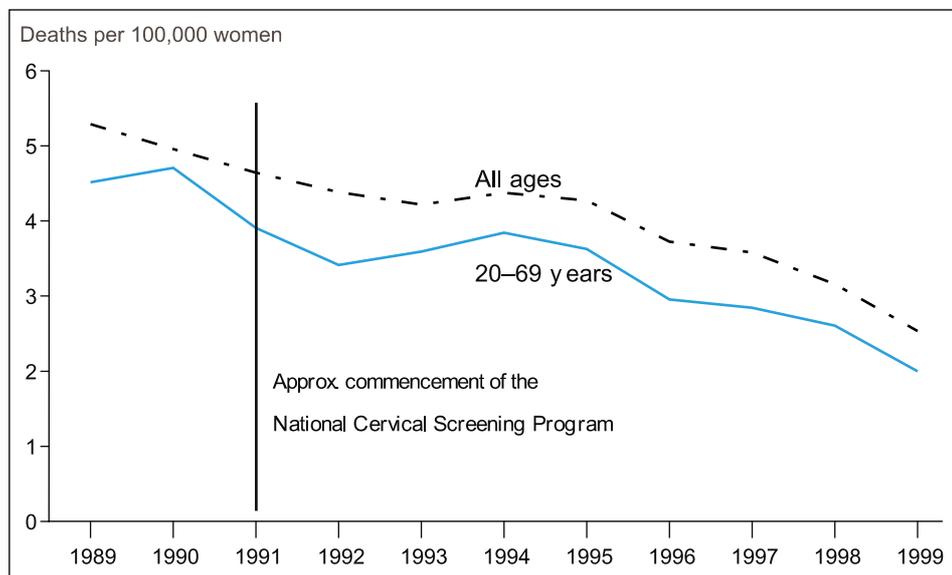
# Mortality

Cancer of the cervix is one of the few cancers for which there is an efficacious screening test for detection of precursors of the disease at a pre-cancerous stage, and most deaths due to cervical cancer are potentially avoidable (Marcus & Crane 1998). However, some deaths do occur and the objective of the National Cervical Screening Program is to reduce this mortality rate.

These indicators measure the level of mortality from cervical cancer in the total female population by age and other demographic characteristics. These indicators are important because from them an assessment can be made of changes in mortality rates in different age groups and particular target groups over time. However, it should be noted that changes in the mortality rates may not be evident for a number of years following an improvement in the participation rate. Therefore the effectiveness of this measure needs to be viewed in the longer rather than the shorter term.

## Indicator 7: Mortality

Mortality rates from cervical cancer per 100,000 estimated resident female population in a 12-month period by 5-year age groups (20-24, 25-29, 30-34, 35-39, 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 (20-69 years, age-standardised).



Refer to Table 21 (page 67).

### Notes

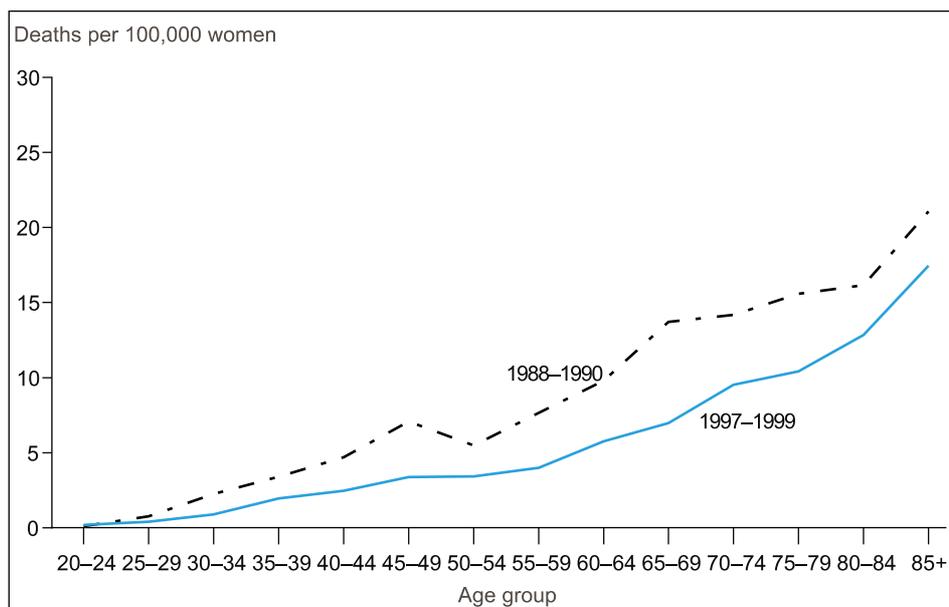
1. Rates for all ages are based on data for women aged 20 years and over.
2. Rates are expressed per 100,000 women and age standardised to the Australian 1991 population.

Source: AIHW Mortality Database.

**Figure 15: Age-standardised mortality rates from cervical cancer, Australia, 1989-1999**

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
All ages	5.3	5.0	4.6	4.4	4.2	4.4	4.3	3.7	3.6	3.2	2.5
20-69 years	4.5	4.7	3.9	3.4	3.6	3.8	3.6	3.0	2.8	2.6	2.0

- Cervical cancer is the 18th most common cause of cancer death in women, accounting for 220 deaths in 1999 (Table 20, page 66). The age-standardised mortality rate for all ages was 2.5 per 100,000 women in 1999. The mortality rate from cervical cancer has been declining over time, and between 1989 and 1999 the age-standardised cervical cancer mortality rate declined by 53% (Table 21, page 67).
- In the target age group (women aged 20-69), mortality rates have declined at approximately the same rate as those for all ages from 4.5 per 100,000 women in 1989 to 2.0 per 100,000 women in 1999 (Table 21, page 67).
- The mortality rate from cervical cancer declined in most age groups between the years 1989 and 1999, in particular in the 30-34 age group (74%), and in the 65-69 age group (62%) (Table 21, page 67).



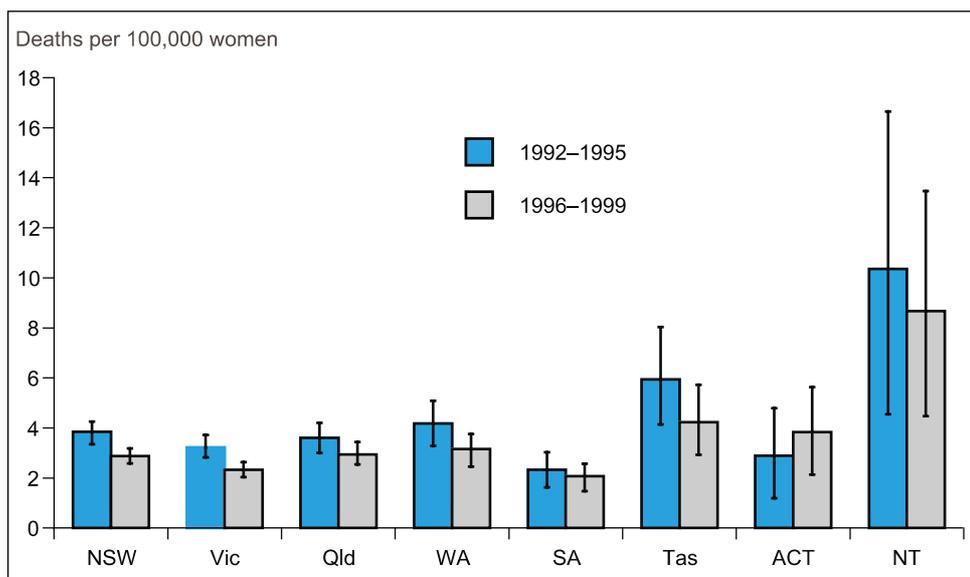
Note: Rates are expressed per 100,000 women.

Source: AIHW Mortality Database.

**Figure 16: Age-specific cervical cancer mortality rates by age group, Australia, 1988-1990 and 1997-1999**

Period	Age group													
	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+
1988-1990	0.1	0.8	2.3	3.4	4.7	7.1	5.5	7.7	9.8	13.7	14.2	15.6	16.2	21.1
1997-1999	0.2	0.4	0.9	2.0	2.5	3.4	3.4	4.0	5.8	7.0	9.5	10.4	12.8	17.4

- Cervical cancer mortality rates increase with age. Very few deaths occur in women aged less than 20 years of age (on average <1 per year). Mortality rates tend to increase gradually from age 20-24 years through to those women in the age groups 60-plus where the rate increases sharply.
- In the period 1997-1999, in the target age group, the age-specific mortality rate increased gradually from a rate of 0.2 per 100,000 women in those aged 20-24 years to 7.0 deaths per 100,000 women in the 65-69 age group.
- Between 1988-1990 and 1997-1999, age-specific mortality rates have declined in all age groups.



Refer to Tables 23 and 25 (pages 69 and 71).

#### Notes

1. The age-standardised rates were averaged over 4 years to smooth annual variations that may occur in the smaller States and Territories.
2. Deaths derived from place of usual residence and not place of death.
3. Rates are expressed per 100,000 women and age standardised to the Australian 1991 population.
4. Bars on graphs represent 95% confidence intervals.

Source: AIHW Mortality Database.

**Figure 17: Age-standardised cervical cancer mortality rates by women aged 20-69 years, by States and Territories, 1992-1995 and 1996-1999**

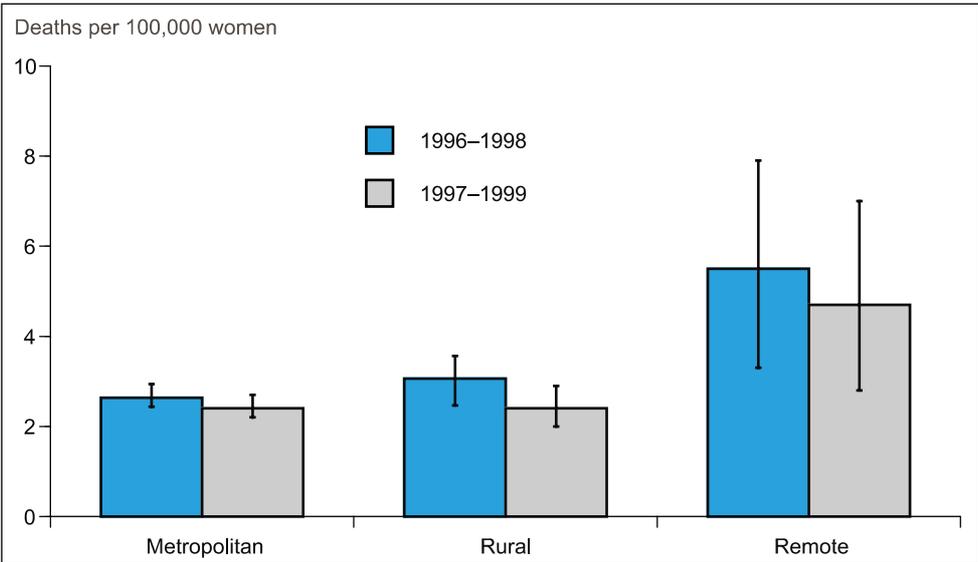
	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Rate 1992-1995	3.9	3.2	3.6	4.2	2.3	5.9	2.9	10.4	3.6
95% CI	3.4-4.3	2.8-3.7	3.0-4.2	3.3-5.1	1.6-3.0	4.1-8.0	1.2-4.8	4.6-16.7	3.4-3.9
Rate 1996-1999	2.9	2.3	2.9	3.2	2.1	4.2	3.8	8.7	2.8
95% CI	2.6-3.2	2.0-2.6	2.5-3.4	2.5-3.8	1.5-2.6	2.9-5.7	2.1-5.6	4.5-13.5	2.6-3.0

- There were 1,091 deaths from cervical cancer in the States and Territories during the period from 1996-1999. As expected, the largest number of deaths from cervical cancer were in the most populous States of New South Wales (391) and Victoria (244) (Table 24, page 70).
- There was considerable variation in the age-standardised mortality rates for all women among States and Territories. The Northern Territory rate (10.6 per 100,000 women) was over twice as high as that of the next highest State, Tasmania (4.7 per 100,000 women) (Table 25, page 71). The age-standardised mortality rate for the Northern Territory reflects its high proportion of Indigenous women. In the period 1987-1993 Indigenous women were almost 12 times more likely to die from cervical cancer than other Northern Territory women (d'Espaignet et al 1996).
- There was a similar pattern among States and Territories for women in the target age group, 20-69 years. The Northern Territory mortality rate (8.7 per 100,000 women) was again more than double that of the next highest State, Tasmania (4.2 per 100,000 women), and South Australia (2.1 per 100,000 women) and Victoria (2.3 per 100,000 women) had the lowest rates of mortality from cervical cancer (Table 25, page 71).

# Indicator 9: Mortality by location

Mortality rates from cervical cancer per 100,000 estimated resident female population in a 3-year period by location and 5-year age groups (20-24, 25-29, 30-34, 35-39, 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 (20-69 years, age-standardised).

The graph and table below refer to the data for the target age group only. For detailed data refer to Table 27 (page 73).



**Notes**

1. The age-standardised rates are presented as 3-year rolling blocks of data.
2. Deaths derived from place of usual residence and not place of death.
3. Rates are expressed per 100,000 women and age standardised to the Australian 1991 population.
4. Bars on graphs represent 95% confidence intervals.

Source: AIHW Mortality Database.

**Figure 18: Age-standardised cervical cancer mortality rates by women aged 20-69 years, by location, 1996-1998 and 1997-1999**

	Metropolitan		Rural		Remote	
	1996-1998	1997-1999	1996-1998	1997-1999	1996-1998	1997-1999
Rate	2.6	2.4	3.1	2.4	5.5	4.7
95% CI	2.4-2.9	2.2-2.7	2.5-3.6	2.0-2.9	3.3-7.9	2.8-7.0

- In the 3-year period 1997-1999 there were 551 deaths from cervical cancer in metropolitan locations (70% of all cervical cancer deaths), 208 deaths (26% of all cervical cancer deaths) in rural locations and 30 deaths (4% of all cervical cancer deaths) in remote locations (Table 26, page 72).
- The age-standardised cervical cancer mortality rate for women in the target age group 20-69 years was highest in remote locations (4.7 per 100,000 women) in the period 1997-1999. During the same period the rate for cervical cancer mortality in both metropolitan and rural locations were 2.4 per 100,000 women (Table 27, page 73).

- The age-standardised cervical cancer mortality rate declined for all locations between the periods 1996-1998 and 1997-1999, for women in the target age group 20-69 years. The overall decline in the target age group was 8% in metropolitan locations, 23% in rural locations, and 15% in remote locations (Table 27, page 73).
- The higher mortality rate in remote location reflects to a large extent the relatively high proportion of Indigenous people in remote areas, and the higher mortality rates among Indigenous women (see Indicator 10).

## **Age-specific features**

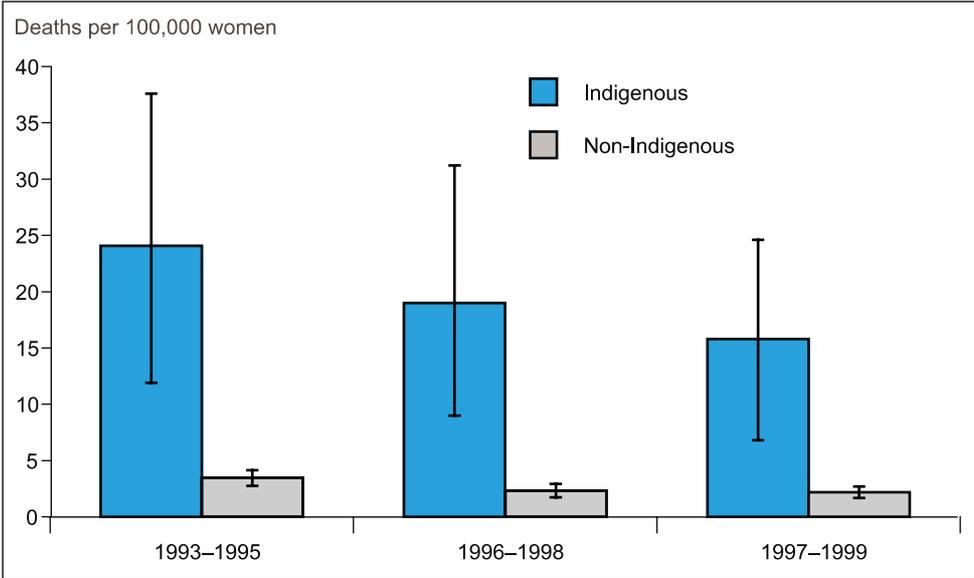
(Tables 26 and 27, pages 72 and 73)

- Between the periods 1996-1998 and 1997-1999, mortality from cervical cancer has declined in nearly all age groups in metropolitan and rural areas. Numbers in remote areas are small and trends are difficult to assess.
- In all geographical locations, the age-specific mortality rates increased with increasing age.

# Indicator 10: Indigenous mortality

Mortality rates from cervical cancer per 100,000 estimated resident female population in a 3-year period by Indigenous status and 5-year age groups (20-24, 25-29, 30-34, 35-39, 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 (20-69 years, age-standardised).

The graph and table below refer to the data for the target age group only. For detailed data refer to Table 29 (page 75).



**Notes**

1. The age-standardised rates are presented as 3-year rolling blocks of data.
2. Deaths derived from place of usual residence and not place of death.
3. Rates are expressed per 100,000 women and age standardised to the Australian 1991 population.
4. Only Western Australia, South Australia and the Northern Territory have Indigenous death registration data considered to be of a publishable standard.
5. Bars on graphs represent 95% confidence intervals.

Source: AIHW Mortality Database.

**Figure 19: Age-standardised cervical cancer mortality rates by women aged 20-69 years, by Indigenous status, 1993-1995, 1996-1998 and 1997-1999**

	Indigenous			Non-Indigenous		
	1993-1995	1996-1998	1997-1999	1993-1995	1996-1998	1997-1999
AS rate (A)	24.1	19.0	15.8	3.4	2.3	2.2
95% CI	11.9-37.6	9.0-31.2	6.8-24.6	2.8-4.1	1.8-2.9	1.7-2.7

- Due to the difficulties of Indigenous identification in health data collections, only mortality data from Western Australia, South Australia and the Northern Territory are of sufficient quality to be publishable. Therefore all cervical cancer mortality data for both Indigenous women and non-Indigenous women used in this analysis are confined to these States and Territory.

- In the 1997-1999 period there were 18 deaths attributable to cervical cancer among Indigenous women, an age-standardised rate of 29.0 per 100,000 women. This is over nine times the mortality rate for non-Indigenous women (3.2 per 100,000 women) (Tables 28 and 29, pages 74 and 75).
- The age-standardised mortality rate for Indigenous women in the target age group 20-69 years was 15.8 per 100,000 women for the period 1997-1999. The comparative figure for non-Indigenous women was 2.2 per 100,000 women (Table 29, page 75).
- Between the two periods 1996-1998 and 1997-1999, the Indigenous cervical cancer mortality rate among women in the target age group 20-69 years declined from 19 to 15.8 deaths per 100,000 women. When the mortality rate for the period 1993-1995 was included for comparison, the Indigenous mortality rate for the target age group still shows a decline. However, these rates are based on relatively small numbers of cases and may be subject to large variability. This is reflected in the wide confidence intervals associated with the mortality rates. Despite the relatively large size of the apparent decline in the rate, it is still within the range of variation that would be expected due to chance, that is, it is not statistically significant (Table 29, page 75).

## **Age-specific features**

(Tables 28 and 29, pages 74 and 75)

- The numbers of deaths among Indigenous women in Western Australia, South Australia and the Northern Territory are very small in most age groups and care is needed in interpreting the rates.
- Mortality rates generally increased with increasing age in both Indigenous and non-Indigenous women.
- Compared with non-Indigenous women, Indigenous women experienced high rates of mortality at almost every age group.