Cervical screening in Australia

2005–2006

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Abbreviations

ABS	Australian Bureau of Statistics
ACT	Australian Capital Territory
AIHW	Australian Institute of Health and Welfare
AMBS 2004	Australian Modified Bethesda System 2004
ARIA	Accessibility/Remoteness Index for Australia
ASGC	Australian Standard Geographical Classification
AS rate	age-standardised rate
AS rate (A)	age-standardised rate using the Australian Standard Population
AS rate (W)	age-standardised rate using the (WHO) World Standard Population
CD	(Census) Collection District
CI	confidence interval
CIN	cervical intraepithelial neoplasia
HGA	high-grade abnormality
HPV	human papillomavirus
ICD	International Classification of Diseases
IRSD	Index of Relative Socio-economic Disadvantage
LGA	low-grade abnormality
NHMRC	National Health and Medical Research Council
NSW	New South Wales
NT	Northern Territory
Pap	Papanicolaou
Qld	Queensland
SA	South Australia
Tas	Tasmania
Vic	Victoria
WA	Western Australia
WHO	World Health Organization

Summary

The National Cervical Screening Program commenced in 1991. The main objective of the Program is to reduce the incidence, morbidity and mortality of cervical cancer through organised cervical screening of women using the Papanicolaou (Pap) test (the terms Pap test and Pap smear are often used interchangeably). The Program targets women aged 20–69 years.

Cervical screening in Australia 2005–2006 is the 10th annual report on the performance of the National Cervical Screening Program. This report combines data provided by state and territory cervical screening programs, as well as data sourced from the National Cancer Statistics Clearing House and the AIHW Mortality Database, to present the most recent information on the six Program performance indicators that cover participation in cervical screening, rate of early re-screening, low- and high-grade abnormalities detected, and incidence and mortality of cervical cancer.

For the first time, additional participation data have been compiled. These include 3-year and 5-year participation to enable comparisons with overseas cervical screening programs, and participation by geographic region and socioeconomic status to monitor the extent to which the program is achieving universal access.

The outcome data indicate that prevention, detection and treatment programs continue to be successful in reducing cervical cancer incidence and mortality. In 1991, when the Program commenced, the incidence of cervical cancer in women aged 20–69 years was 17.1 new cases per 100,000 women and mortality in women aged 20–69 years was 4.0 deaths per 100,000 women. Incidence of cervical cancer declined to 8.9 new cases per 100,000 women in 2004, and mortality to 2.0 deaths per 100,000 women in 2005. The decline in mortality began prior to introduction of the organised screening program and has continued.

Key points

Participation

Two-year participation

- In the 2-year period 2005–2006, there were 3,505,978 women who participated in the National Cervical Screening program. Women aged 20–69 years accounted for 98.5% of the women screened. The proportion of women aged 20–69 years participating in cervical screening was 60.6%.
- From 1996–1997, when reporting for the National Cervical Screening Program first commenced, to 2005–2006, there was a decline in participation among women aged less than 40 years, and an improvement in participation among women aged 55 years and over. For instance, participation of women aged 25–29 years fell from 64.5% in 1996–1997 to 56.3% in 2005–2006, and participation of women aged 55–59 years rose from 62.7% in 1996–1997 to 67.8% in 2005–2006.

Three-year participation

- In the 3-year period 2004–2006, there were 4,119,929 women who participated in the National Cervical Screening Program, 98.4% aged 20–69 years.
- The 3-year participation rate for 2004–2006 was 73.1% for women aged 20–69 years. This is comparable to the 3-year participation rates of 73% reported for New Zealand for 2003 (National Cervical Screening Programme 2005), 69.4% for England for 2007 (National Health Service 2007), 63.6% for Wales for 2007 (Cervical Screening Wales 2007), and to the previously reported average for the European Union countries of 75% (van Ballegooijen et al. 2000).

Five-year participation

- In the 5-year period 2002–2006, there were 4,824,166 women who participated in the National Cervical Screening Program, 98.1% aged 20–69 years.
- The 5-year participation rate for 2002–2006 was 85.9% for women aged 20–69 years. This is higher than the 5-year participation rates of 79.2% reported for England for 2007 (National Health Service 2007), 74.6% for Wales for 2007 (Cervical Screening Wales 2007), and 77% for the Netherlands for 2003 (Rebolj et al. 2007), but lower than a previously estimated 5-year participation rate of 90% for Finland (Antilla & Nieminen 2000).

Participation by region and socioeconomic status

- In 2005–2006, participation rates by geographic region were 62.1% for major cities, 59.3% for inner regional, 57.8% for outer regional, 56.9% for remote locations, and 53.0% for very remote locations. These differences are statistically significant.
- In 2005–2006, participation rates by socioeconomic status of area of residence were 71.5% for the first quintile, which corresponds to the highest level of socioeconomic status, 68.3% for the second quintile, 61.8% for the third quintile, 60.2% for the fourth quintile, and 57.3% for the fifth quintile, which corresponds to the lowest level of socioeconomic status. These differences are statistically significant.

Early re-screening

The recommended screening interval is 2 years following a normal (negative) Pap test. Early re-screening is defined as a repeat Pap test within 21 months of a negative test.

- Of a cohort of women screened in February 2005 who had a normal Pap test result, 24.4% had a repeat Pap test within 21 months. It is not known what proportion of this early re-screening was justified on clinical grounds.
- There was a decline in the proportion of women being re-screened early from 32.0% in 1999 to 24.4% in 2005, indicating greater compliance with the recommended screening interval over time.

Detection of abnormalities

Low-grade abnormalities include atypia, warty atypia, possible cervical intraepithelial neoplasia (CIN), equivocal CIN, CIN 1, and endocervical dysplasia not otherwise specified. High-grade abnormalities include CIN 1/2, CIN 2, CIN 3 and adenocarcinoma in situ.

- In 2006, the screening program detected 29,532 histologically verified abnormalities of which 15,118 were low-grade and 14,414 were high-grade.

- The number of high-grade abnormalities detected per 1,000 women screened aged 20–69 years increased significantly from 6.4 in 1997 (at the start of reporting) to 7.3 in 2006.
- Detection of high-grade abnormalities was highest in the younger age groups. In 2006, for women aged 20–24 years, detection of high-grade abnormalities was 18.4 per 1,000 women screened; in contrast, for women aged 65–69 years the rate was 1.1 per 1,000 women screened.

Incidence and mortality

- The numbers and rates of new cases of cervical cancer have continued to decline. There were 718 new cases in Australia in 2004 (6.9 per 100,000 women of all ages) compared with 1,090 in 1991 (13.2 per 100,000 women of all ages) when the organised screening program commenced. The number of new cases of micro-invasive cervical cancers also fell from 166 (1.9 per 100,000 women of all ages) to 107 (1.1 per 100,000 women of all ages) over the same period. These differences are statistically significant.
- Cervical cancer was the 18th most common cause of cancer mortality in Australian women in 2005, accounting for 216 deaths in 2005 compared with 329 in 1991. The age-standardised mortality rate from cervical cancer halved between 1991 and 2005 from 4.0 deaths per 100,000 women to 1.9. During the same period, for women aged 20–69 years the rate fell from 4.0 to 2.0 per 100,000 women.
- Mortality rates for cervical cancer increase with age. The highest mortality rate in the 2002–2005 period was in women aged 85 years and over, with 14.3 deaths per 100,000 women.

Aboriginal and Torres Strait Islander women

Identification of Aboriginal and Torres Strait Islander peoples in cancer registry records of new cases is not complete as Indigenous status is not yet included in pathology forms, and reporting of Indigenous status is primarily sourced from hospital records.

- In 2000–2004, despite under-reporting, cervical cancer incidence in Aboriginal and Torres Strait Islander women was 16.9 new cases per 100,000 women for New South Wales, Victoria, Queensland, Western Australia and the Northern Territory combined, more than double the non-Indigenous rate of 7.1 new cases per 100,000 women (AIHW unpublished data).

Only Queensland, Western Australia, South Australia and the Northern Territory have Indigenous mortality registration data of sufficient quality to be published.

- For these jurisdictions in the period 2002–2005, for women aged 20–69 years the age-standardised mortality rate for Indigenous women was 8.3 per 100,000 women, more than four times as high as the rate of 2.0 per 100,000 women for non-Indigenous women.

Summary trend comparison table for national data for all indicators for women in the target age group 20–69 years

	Current reporting period		Previous reporting period		Reporting commencement	
Indicator	**Year(s)**		**Year(s)**		**Year(s)**	
Participation in 2-year period (per cent)	2005–2006	60.6	2004–2005	61.0	1996–1997	61.0
Participation in 3-year period (per cent)	2004–2006	73.1	. .	. .	2004–2006	73.1
Participation in 5-year period (per cent)	2002–2006	85.9	. .	. .	2002–2006	85.9
Early re-screening within 21 months of normal Pap test[(a)] (per cent)	2005	24.4	2004	25.3	1999[(a)]	32.0
Ratio of low-grade to high-grade abnormalities	2006	1.05	2005	1.10	1997	1.47
High-grade abnormalities per 1,000 women screened (age-standardised rate)	2006	7.3	2005	7.5	1997	6.4
Incidence of cervical cancer per 100,000 women (age-standardised rate)	2004	8.9	2003	9.1	1997	11.4
Mortality from cervical cancer per 100,000 women (age-standardised rate)	2005	2.0	2004	1.8	1997	2.7

(a) From 1996–1998 the indicator reported on a 2-year period following a normal Pap test; in 1999, the indicator was changed to a 21-month interval, hence 1999 is the earliest year for which data are available for comparison.

National cervical screening monitoring indicators

The National Cervical Screening Program commenced in 1991. The main objective of the Program is to reduce the incidence, morbidity and mortality of cervical cancer through organised cervical screening of women using the Papanicolaou (Pap) test (the terms Pap test and Pap smear are often used interchangeably). The Program targets women aged 20–69 years.

This report monitors the performance of the National Cervical Screening Program using indicators which measure program activity, performance and outcome. These indicators help measure changes in disease patterns and examine the contribution of cervical screening to preventing or reducing deaths from cervical cancer.

Performance indicators for the National Cervical Screening Program cover the areas of participation, early re-screening, low- and high-grade abnormality detection, incidence and mortality. These were developed and endorsed by the former National Advisory Committee and by state and territory cervical screening programs.

State and territory cervical screening programs agreed upon the addition of four new performance indicators for the 2005–2006 report at a meeting in December 2006. Therefore, this report examines for the first time, participation over 3 years, participation over 5 years, participation by geographic location and participation by socioeconomic status.

A listing of the indicators and their definitions follows.

Indicators

Indicator 1 Participation

Indicator 1.1.1 Two-year participation rate for cervical screening

The percentage of women screened in a 2-year period for women aged 20 years and over and for the target age group 20–69 years.

Indicator 1.1.2 Three-year participation rate for cervical screening

The percentage of women screened in a 3-year period for women aged 20 years and over and for the target age group 20–69 years.

This indicator is reported for the first time in this report.

Indicator 1.1.3 Five-year participation rate for cervical screening

The percentage of women screened in a 5-year period for women aged 20 years and over and for the target age group 20–69 years.

This indicator is reported for the first time in this report.

Indicator 1.2 Participation by region

The percentage of women screened during a 2-year period by geographic region of residence for women aged 20 years and over and for the target age group 20–69 years.

This indicator is reported for the first time in this report.

Indicator 1.3 Participation by socioeconomic status

The percentage of women screened during a 2-year period by socioeconomic status of area of residence for women aged 20 years and over and for the target age group 20–69 years.

This indicator is reported for the first time in this report.

Indicator 2 Early re-screening

The proportion of women re-screened, by number of re-screens, during a 21-month period following a normal Pap test for women in the target age group 20–69 years.

Indicator 3 Low-grade abnormality detection

The ratio of the number of women with a histologically verified low-grade intraepithelial abnormality detected in a 12-month period to the number of women with a histologically verified high-grade intraepithelial abnormality detected in the same period, for women in the target age group 20–69 years.

Indicator 4 High-grade abnormality detection

Detection rate of histologically verified high-grade intraepithelial abnormalities per 1,000 women screened in a 12-month period for women aged 20 years and over and for the target age group 20–69 years.

Indicator 5.1 Incidence of micro-invasive squamous cervical cancer

Incidence rate of micro-invasive squamous cell carcinoma per 100,000 estimated resident female population in a 12-month period for women of all ages and for the target age group 20–69 years.

Indicator 5.2 Incidence of squamous, adenocarcinoma, adenosquamous and other cervical cancer

Incidence rate of squamous, adenocarcinoma, adenosquamous and other cervical cancer (micro-invasive and invasive) per 100,000 estimated resident female population in a 12-month period for women of all ages and for the target age group 20–69 years.

Indicator 5.3 Incidence by region

Incidence rate of cervical cancer per 100,000 estimated resident female population in a 4-year period by geographic region for women of all ages and for the target age group 20–69 years.

Indicator 6.1 Mortality by age group

Mortality rate for cervical cancer per 100,000 estimated resident female population in a 12-month period for women of all ages and for the target age group 20–69 years.

Indicator 6.2 Mortality by region

Mortality rate for cervical cancer per 100,000 estimated resident female population in a 4-year period by geographic region for women of all ages and for the target age group 20–69 years.

Indicator 6.3 Indigenous mortality

Mortality rate for cervical cancer per 100,000 estimated resident female population in a 4-year period by Indigenous status for women of all ages and for the target age group 20–69 years.

Important changes in cervical cancer

This *Cervical screening in Australia* report is the 10th since reporting for the National Cervical Screening Program began in 1996–1997. Recent changes to the understanding and management of cervical cancer are likely to have an impact on the Program, and will require that modifications are made to future *Cervical screening in Australia* reports to ensure that these documents continue to reflect current practices in cervical cancer.

During the last decade a greater understanding of the natural history of cervical cancer has developed, in particular the recognition of cervical cellular changes as an infective rather than a neoplastic process. It is now recognised that cervical cancer is a rare outcome of persistent infection with human papillomavirus (HPV), in particular HPV types 16 and 18, and that infection with a high-risk HPV type is necessary, though not sufficient, for the development of cancer (Walboomers et al. 1999; Bosch et al. 2002). It has also been recognised that low-grade abnormalities represent acute infection with HPV, and as such most will regress without treatment within a short period of time. High-grade abnormalities can occur after persistent infection with HPV. The probability of a high-grade abnormality progressing to cancer increases with age and extent of abnormality (NHMRC 2005), but this is still a very rare outcome, with regression rates for high-grade abnormalities estimated to be at least 80% (Raffle et al. 2003).

New NHMRC *Guidelines for the management of asymptomatic women with screen detected abnormalities* (2005), introduced in July 2006, acknowledge that the majority of cervical cell changes are a consequence of HPV infection and will resolve without medical intervention. This is reflected in the guidelines, with changes to the recommendation for the clinical management of women with low-grade squamous intraepithelial lesions favouring less intervention than the previous guidelines. The new NHMRC guidelines also recommend new management for women who have been treated for high-grade intraepithelial disease, where they return to the normal screening interval once they have fulfilled a 'test of cure' criteria.

In addition, in 2007, a vaccine against HPV types 16, 18, 6 and 11 was introduced under the National Immunisation Program, free to all women aged 12–26 years. This is likely to influence the incidence of low- and high-grade abnormalities in the future, as women who have been vaccinated move into the 20–69 year target age group. However, it is important to note that the use of HPV vaccines does not reduce the importance of regular Pap tests for all women in the target age group.

The recently introduced NHMRC management guidelines and HPV vaccine reflect a paradigm shift in the management of cervical cancer. The combined effects of these two changes on the National Cervical Screening Program are likely to be substantial, and future *Cervical screening in Australia* reports will reflect changes in cervical screening results.

Indicator 1 Participation

The participation indicator

The major objective of the National Cervical Screening Program is to reduce morbidity and mortality from cervical cancer by detecting treatable pre-cancerous lesions before their progression to cancer. Through increased participation, more women with pre-cancerous abnormalities can be detected and managed before progression to cervical cancer, thus reducing morbidity and mortality. In addition, increased participation will lead to the detection of early stage cancer, where treatment can reduce mortality, in more women.

The Program, through a variety of recruitment initiatives, targets women in the age group 20–69 years. The recommended screening interval for women in this age group who have been sexually active at any stage in their lives is 2 years. Pap tests may cease at the age of 70 years for women who have had two normal Pap tests within the previous 5 years. Women over 70 years who have never had a Pap test, or who request a Pap test, are screened.

Some women in the target population are unlikely to require screening. They include those who have had a total hysterectomy with their cervix removed and those who have never been sexually active. Women who have previously been diagnosed with gynaecological cancer may also not be eligible for screening.

Participation rate calculations should, in principle, exclude all three groups from the data. In practice, the data are adjusted to remove women who have had a hysterectomy but the latter two groups cannot be excluded due to the lack of reliable data. Hysterectomy rates are derived from self-reported information on hysterectomies in the 2001 National Health Survey conducted by the Australian Bureau of Statistics (ABS).

The objectives and usefulness of participation as an indicator are outlined below:

- The participation indicator measures the proportion of the target population participating in the cervical screening program in the recommended 2-year screening interval, and for the first time in this report for 3-year and 5-year intervals. The addition of participation data for 3- and 5-year intervals allows international comparisons of cervical screening performance to be made, since many other countries use a 3- or 5-year screening interval (Dickinson 2002).
- New indicators measuring the variation in participation by geographic region and by socioeconomic status aim to monitor the effectiveness of the Program in providing universal access to screening.
- Participation data are important in assessing the contribution of the cervical screening program to reducing incidence and mortality.
- The indicator can be used as a means of evaluating the effect of communication and recruitment strategies, particularly if participation rates are analysed by demographic characteristics.
- When this indicator is used in conjunction with others, it can be used to support analysis relating to target groups and screening intervals.

State- and territory-specific issues

Except for Victoria and the Australian Capital Territory, where only women with a state- or territory-specific address are registered, the participation rates are based on all women who were screened in the particular state or territory. This may lead to an overestimation of numbers of women screened because of double counting of some women between states. This may be the result of difficulty in identifying state of residence for women in border areas, and inclusion of women living overseas.

Data issues

The denominators for participation rates presented in this report have been calculated using the ABS estimated resident population, correct as of November 2007, and adjusted for the proportion of women who have had a hysterectomy using the 2001 ABS National Health Survey hysterectomy fractions.

At the time of preparation of this report, the latest estimated resident population figures according to Australian Standard Geographical Classification (ASGC) and Index of Relative Socio-economic Disadvantage (IRSD) classifications available were for the year 2005. Therefore, the denominators for participation rates by geographic location and by socioeconomic status presented in this report have been calculated using the estimated resident female population for 2005 only (adjusted for hysterectomy), rather than the average of the estimated resident populations for 2005 and 2006.

Key points

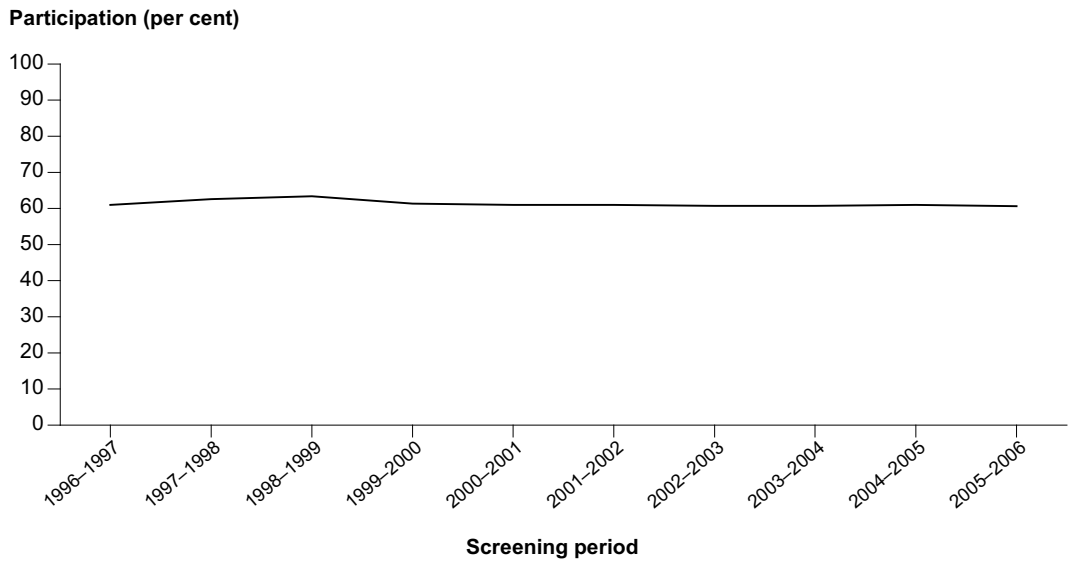
- Participation in the National Cervical Screening Program by women in the target age group 20–69 years for the 2005–2006 2-year reporting period was 60.6%. This is not a significant change from the previous non-overlapping 2-year rate for 2003–2004 of 60.7%.
- Reported here for the first time are 3- and 5-year participation rates. Nationally, the participation rates for women aged 20–69 years were 60.6% over 2 years, 73.1% over 3 years, and 85.9% over 5 years.
- The cervical screening programs in a number of other countries use a screening interval of 3 or 5 years (Dickinson 2002). The 3-year participation rate in Australia for 2004–2006 was 73.1% for women aged 20–69 years. This is comparable to the 3-year participation rates of 73% reported for New Zealand for 2003 (National Cervical Screening Programme 2005), 69.4% for England for 2007 (National Health Service 2007), 63.6% for Wales for 2007 (Cervical Screening Wales 2007), and to the previously reported average for the European Union countries of 75% (van Ballegooijen et al. 2000).
- The 5-year participation rate in Australia for 2002–2006 was 85.9% for women aged 20–69 years. This is higher than the 5-year participation rate of 79.2% reported for England for 2007 (National Health Service 2007), 74.6% for Wales for 2007 (Cervical Screening Wales 2007), and 77% for the Netherlands for 2003 (Rebolj et al. 2007), but lower than a previously estimated 5-year participation rate of 90% for Finland (Antilla & Nieminen 2000).

- In 2005–2006, participation rates by geographic region were 62.1% for major cities, 59.3% for inner regional, 57.8% for outer regional, 56.9% for remote locations, and 53.0% for very remote locations. These differences are significant.
- In 2005–2006, participation rates by socioeconomic status of area of residence were 71.5% for the first quintile, which corresponds to the highest level of socioeconomic status, 68.3% for the second quintile, 61.8% for the third quintile, 60.2% for the fourth quintile, and 57.3% for the fifth quintile, which corresponds to the lowest level of socioeconomic status. These differences are significant.

Indicator 1.1.1 Two-year participation rate

The percentage of women screened in a 2-year period for women aged 20 years and over and for the target age group 20–69 years.

Participation in the National Cervical Screening Program



Source: AIHW analysis of state and territory Cervical Cytology Registry data.

Figure 1.1: Participation of women aged 20–69 years in the National Cervical Screening Program, 1996–1997 to 2005–2006

Table 1.1: Participation of women aged 20–69 years in the National Cervical Screening Program, 1996–1997 to 2005–2006

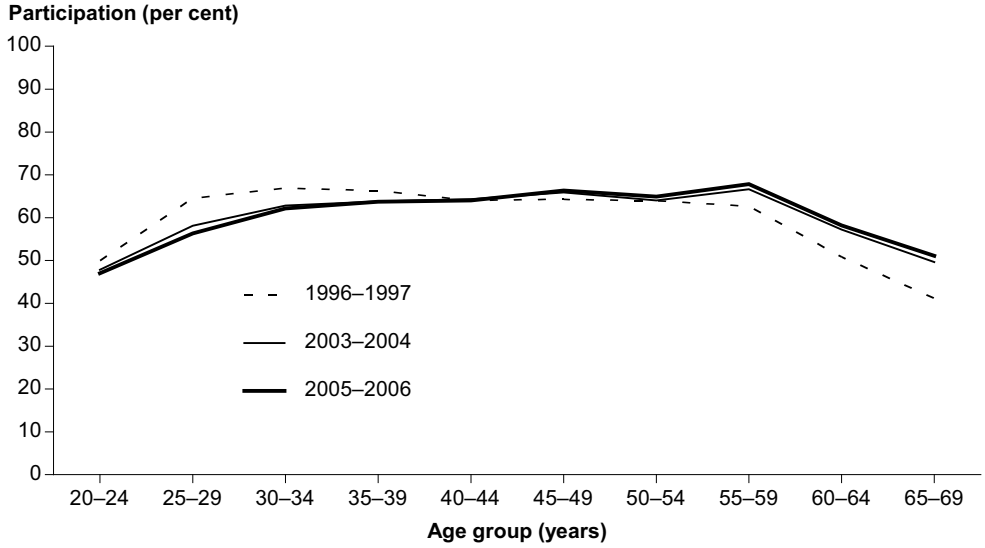
2-year period	1996–1997	1997–1998	1998–1999	1999–2000	2000–2001	2001–2002	2002–2003	2003–2004	2004–2005	2005–2006
AS rate (per cent)	61.0	62.6	63.4	61.3	61.0	61.0	60.7	60.7	61.0	60.6
95% CI	60.9–61.1	62.5–62.6	63.4–63.5	61.2–61.3	60.9–61.1	60.9–61.0	60.6–60.8	60.6–60.7	60.9–61.0	60.6–60.7

Notes

1. Rates are the number of women screened as a percentage of the eligible female population calculated as the average of the Australian Bureau of Statistics estimated resident population and age-standardised to the Australian population at 30 June 2001.
2. Participation rates have been adjusted for the estimated proportion of women who have had a hysterectomy.
3. These data exclude women who have opted not to be on the cervical cytology register.

- Participation in the National Cervical Screening Program among women in the target age group 20–69 years was 61.0% in 1996–1997 when reporting commenced. The 2-year participation rate increased to a peak of 63.4% in 1998–1999, when there was a national media campaign. Participation rates have remained at around 61.0% since 1999–2000. The 2-year participation rate for 2005–2006 was 60.6%.

Participation by age



Source: AIHW analysis of state and territory Cervical Cytology Registry data.

Figure 1.2: Participation of women aged 20–69 years in the National Cervical Screening Program, by 5-year age group, 1996–1997, 2003–2004 and 2005–2006

Table 1.2: Participation of women aged 20–69 years in the National Cervical Screening Program, by 5-year age group, 1996–1997, 2003–2004 and 2005–2006

	Age group (years)										
2-year period	**20–24**	**25–29**	**30–34**	**35–39**	**40–44**	**45–49**	**50–54**	**55–59**	**60–64**	**65–69**	**20–69[(a)]**
1996–1997 (per cent)	50.0	64.5	66.9	66.4	64.0	64.3	64.0	62.7	50.9	41.2	61.0 (60.9–61.1)
2003–2004 (per cent)	47.8	58.1	62.8	63.8	64.3	65.9	64.0	66.6	57.2	49.6	60.7 (60.6–60.7)
2005–2006 (per cent)	47.0	56.3	62.1	63.7	64.0	66.3	64.9	67.8	58.2	51.1	60.6 (60.6–60.7)

(a) Rates for the target age group 20–69 years are the number of women screened as a percentage of the eligible female population calculated as the average of the Australian Bureau of Statistics estimated resident population and age-standardised to the Australian population at 30 June 2001.

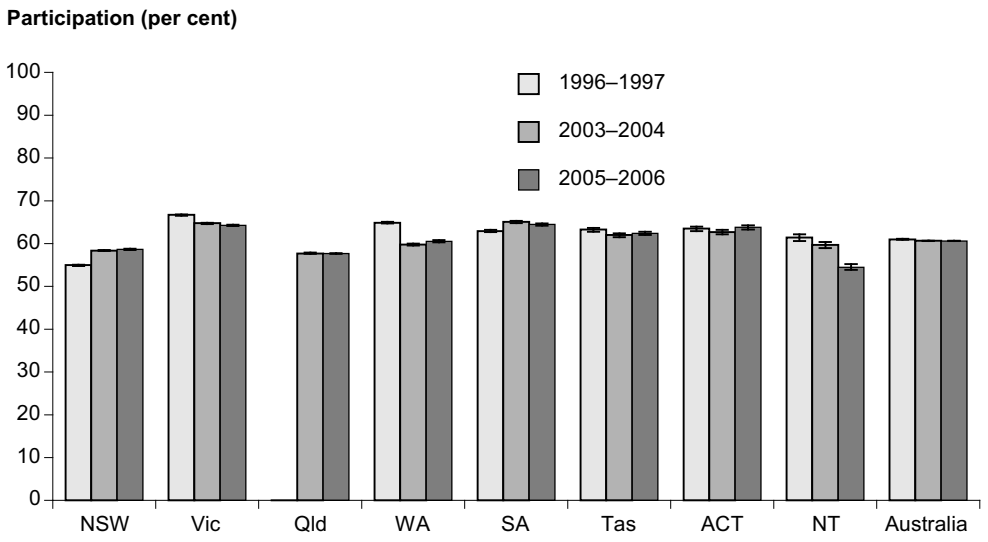
Notes

1. Rates for 5-year age groups are the number of women screened as a percentage of the eligible female population calculated as the average of the Australian Bureau of Statistics estimated resident population.
2. Participation rates have been adjusted for the estimated proportion of women who have had a hysterectomy.
3. These data exclude women who have opted not to be on the cervical cytology register.
4. Periods cover 1 January 1996 to 31 December 1997, 1 January 2003 to 31 December 2004, and 1 January 2005 to 31 December 2006.

- Over the 2-year period 2005–2006, 3,505,978 women participated in the National Cervical Screening Program. Of these women, 3,452,092 (98.5%) were aged 20–69 years.
- The participation rate for the 2-year period 2005–2006 was 60.6% for women in the target age group 20–69 years.
- From 1996–1997 to 2005–2006, there was a decline in participation among women aged less than 40 years, most prominent in the 25–29 year age group, and an increase in participation among women aged 55 years and over.
- In 2005–2006, participation was highest in women aged 55–59 years (67.8%) and lowest in women aged 20–24 years (47.0%).

For more information, see tables 1–12 beginning on page 51.

Participation by state and territory



Note: Bars on columns represent 95% confidence intervals.

Source: AIHW analysis of state and territory Cervical Cytology Registry data.

Figure 1.3: Participation of women aged 20–69 years in the National Cervical Screening Program, by state and territory, 1996–1997, 2003–2004 and 2005–2006

Table 1.3: Participation of women aged 20–69 years in the National Cervical Screening Program, by state and territory, 1996–1997, 2003–2004 and 2005–2006

2-year period	NSW[(a)]	Vic[(b)]	Qld[(c)]	WA	SA	Tas	ACT[(d)]	NT[(e)]	Australia
1996–1997 (per cent)	55.0	66.7	. .	64.9	62.9	63.3	63.5	61.4	61.0
95% CI	54.8–55.1	66.5–66.8	. .	64.7–65.1	62.7–63.2	62.8–63.7	62.9–64.0	60.6–62.2	60.9–61.1
2003–2004 (per cent)	58.4	64.8	57.7	59.8	65.1	62.0	62.7	59.7	60.7
95% CI	58.3–58.5	64.6–64.9	57.6–57.9	59.6–60.0	64.8–65.3	61.5–62.4	62.2–63.2	59.0–60.4	60.6–60.7
2005–2006 (per cent)	58.7	64.3	57.7	60.5	64.5	62.4	63.8	54.5	60.6
95% CI	58.5–58.8	64.1–64.4	57.6–57.8	60.3–60.8	64.2–64.7	62.0–62.8	63.3–64.3	53.9–55.2	60.6–60.7

. . Not applicable.

(a) The New South Wales Pap test register commenced in July 1996; therefore data have been estimated for the period January to July 1996.

(b) In the 2003–2004 and 2005–2006, reporting periods the Victorian registries only registered women with a Victorian address.

(c) The Queensland Health Pap smear register began operations in February 1999; therefore no data are available for 1996–1997.

(d) Since the National Cervical Screening Program commenced, the Australian Capital Territory has only registered women with an Australian Capital Territory address.

(e) The Northern Territory Pap test register commenced in March 1996; therefore data have been estimated for the period January to March 1996.

Notes

1. Rates are the number of women screened as a percentage of the eligible female population calculated as the average of the Australian Bureau of Statistics estimated resident population and age-standardised to the Australian population at 30 June 2001.
2. Participation rates have been adjusted for the estimated proportion of women who have had a hysterectomy.
3. These data exclude women who have opted not to be on the cervical cytology register.
4. Periods cover 1 January 1996 to 31 December 1997, 1 January 2003 to 31 December 2004, and 1 January 2005 to 31 December 2006.

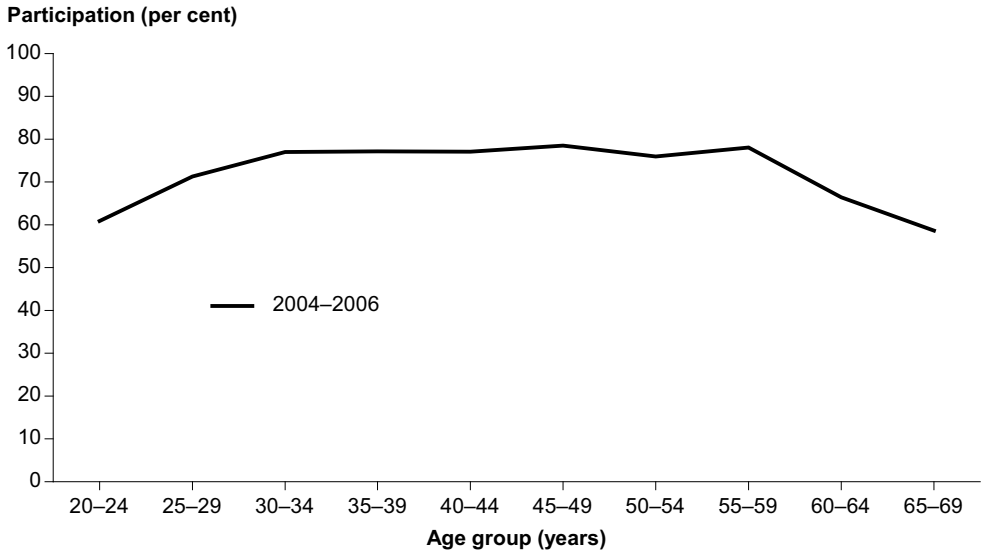
- In 2005–2006, there were significant declines in participation compared with 2003–2004 rates in Victoria, South Australia and the Northern Territory, and significant increases in Western Australia and the Australian Capital Territory.
- The highest 2-year participation rates for 2005–2006 were in Victoria (64.3%) and South Australia (64.5%) and the lowest in Queensland (57.7%) and the Northern Territory (54.5%).

For more information, see tables 1–12 beginning on page 51.

Indicator 1.1.2 Three-year participation rate

The percentage of women screened in a 3-year period for women aged 20 years and over and for the target age group 20–69 years.

Three-year participation by age



Source: AIHW analysis of state and territory Cervical Cytology Registry data.

Figure 1.4: Participation of women aged 20–69 years in the National Cervical Screening Program over 3 years, by 5-year age group, 2004–2006

Table 1.4: Participation of women aged 20–69 years in the National Cervical Screening Program over 3 years, by 5-year age group, 2004–2006

	Age group (years)										
3-year period	**20–24**	**25–29**	**30–34**	**35–39**	**40–44**	**45–49**	**50–54**	**55–59**	**60–64**	**65–69**	**20–69[(a)]**
2004–2006 (per cent)	60.9	71.3	77.0	77.2	77.1	78.5	76.0	78.1	66.4	58.7	73.1 (73.0–73.2)

(a) Rates for the target age group 20–69 years are the number of women screened as a percentage of the eligible female population calculated as the average of the Australian Bureau of Statistics estimated resident population and age-standardised to the Australian population at 30 June 2001.

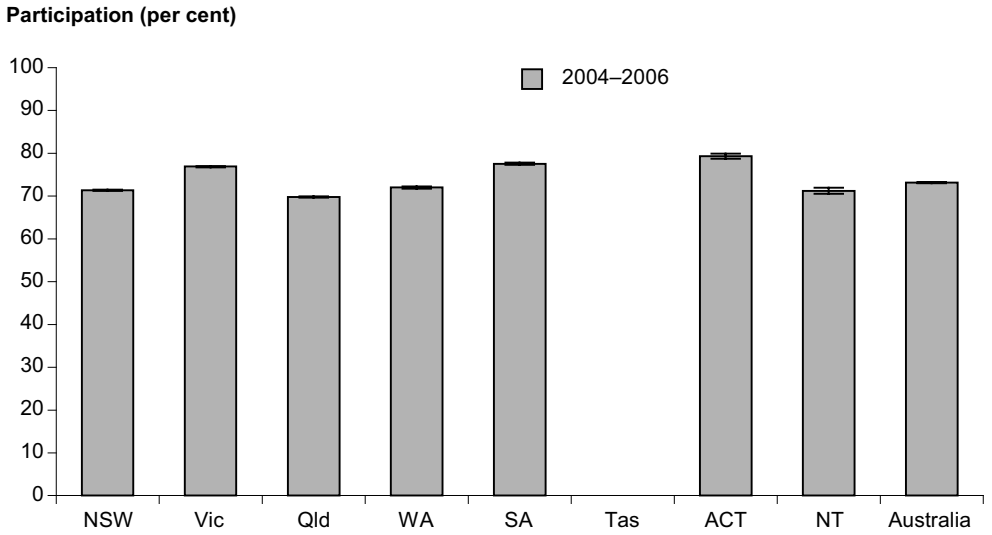
Notes

1. Rates for 5-year age groups are the number of women screened as a percentage of the eligible female population calculated as the average of the Australian Bureau of Statistics estimated resident population.
2. Participation rates have been adjusted for the estimated proportion of women who have had a hysterectomy.
3. These data exclude women who have opted not to be on the cervical cytology register.
4. Period covers 1 January 2004 to 31 December 2006.
5. Tasmania data were not available at the time of preparation of this report.

- Over the 3-year period 2004–2006, 4,119,929 women participated in the National Cervical Screening Program. Of these, 4,052,821 (98.4%) were aged 20–69 years.
- The participation rate for the 3-year period 2004–2006 was 73.1% for women in the target age group 20–69 years.

For more information, see tables 1–12 beginning on page 51.

Three-year participation by state and territory



Note: Bars on columns represent 95% confidence intervals.

Source: AIHW analysis of state and territory Cervical Cytology Registry data.

Figure 1.5: Participation of women aged 20–69 years in the National Cervical Screening Program over 3 years, by state and territory, 2004–2006

Table 1.5: Participation of women aged 20–69 years in the National Cervical Screening Program over 3 years, by state and territory, 2004–2006

3-year period	NSW	Vic	Qld	WA	SA	Tas[(a)]	ACT	NT	Australia
2004–2006 (per cent)	71.3	76.9	69.8	72.0	77.5	. .	79.3	71.2	73.1
95% CI	71.2–71.5	76.7–77.0	69.6–69.9	71.7–72.2	77.3–77.8	. .	78.7–79.9	70.5–71.9	73.0–73.2

. . Not applicable.

(a) Tasmania data were not available at the time of preparation of this report.

Notes

1. Rates are the number of women screened as a percentage of the eligible female population calculated as the average of the Australian Bureau of Statistics estimated resident population and age-standardised to the Australian population at 30 June 2001.
2. Participation rates have been adjusted for the estimated proportion of women who have had a hysterectomy.
3. These data exclude women who have opted not to be on the cervical cytology register.
4. Period covers 1 January 2004 to 31 December 2006.

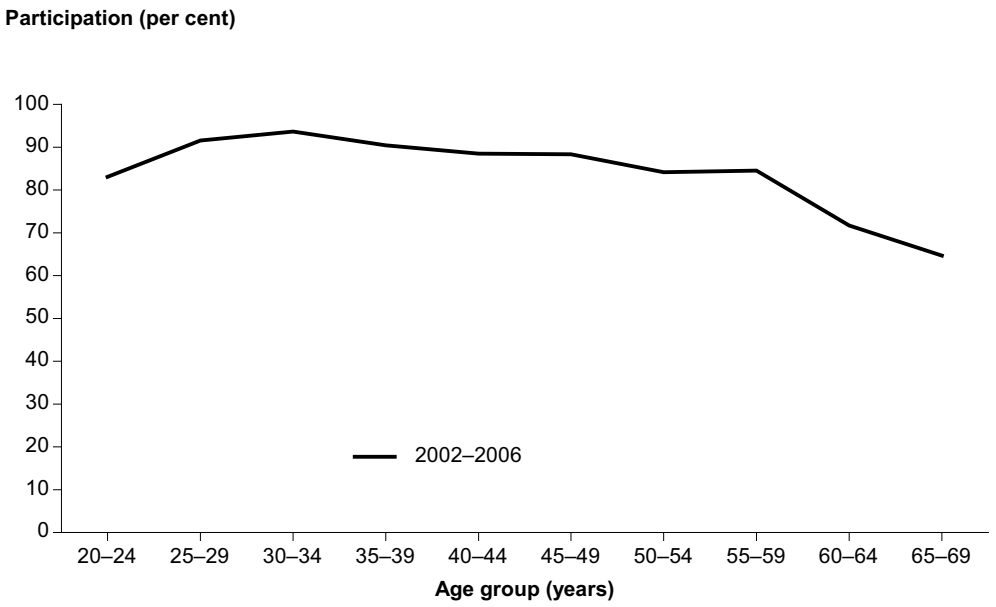
- The highest 3-year participation rates for 2004–2006 were in South Australia (77.5%) and the Australian Capital Territory (79.3%) and the lowest in Queensland (69.8%).

For more information, see tables 1–12 beginning on page 51.

Indicator 1.1.3 Five-year participation rate

The percentage of women screened in a 5-year period for women aged 20 years and over and for the target age group 20–69 years.

Five-year participation by age



Source: AIHW analysis of state and territory Cervical Cytology Registry data.

Figure 1.6: Participation of women aged 20–69 years in the National Cervical Screening Program over 5 years, by 5-year age group, 2002–2006

Table 1.6: Participation of women aged 20–69 years in the National Cervical Screening Program over 5 years, by 5-year age group, 2002–2006

	Age group (years)										
5-year period	**20–24**	**25–29**	**30–34**	**35–39**	**40–44**	**45–49**	**50–54**	**55–59**	**60–64**	**65–69**	**20–69[(a)]**
2002–2006 (per cent)	83.1	91.6	93.7	90.5	88.5	88.4	84.2	84.6	71.7	64.7	85.9 (85.8–86.0)

(a) Rates for the target age group 20–69 years are the number of women screened as a percentage of the eligible female population calculated as the average of the Australian Bureau of Statistics estimated resident population and age-standardised to the Australian population at 30 June 2001.

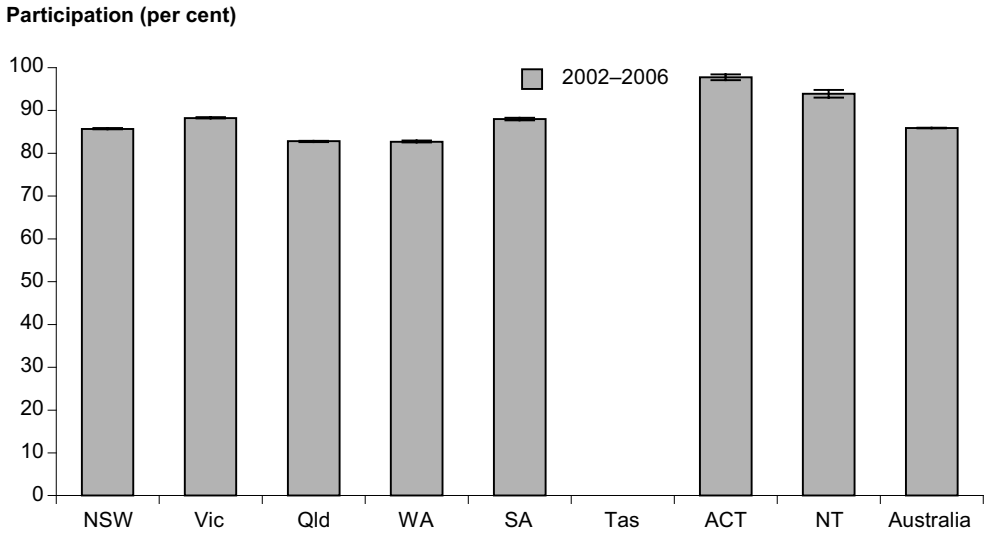
Notes

1. Rates for 5-year age groups are the number of women screened as a percentage of the eligible female population calculated as the average of the Australian Bureau of Statistics estimated resident population.
2. Participation rates have been adjusted for the estimated proportion of women who have had a hysterectomy.
3. These data exclude women who have opted not to be on the cervical cytology register.
4. Period covers 1 January 2002 to 31 December 2006.
5. Tasmania data were not available at the time of preparation of this report.

- Over the 5-year period 2002–2006 4,824,166 women participated in the National Cervical Screening Program. Of these women, 4,732,320 (98.1%) were aged 20–69 years.
- The participation rate for the 5-year period 2002–2006 was 85.9% for women in the target age group 20–69 years.

For more information, see tables 1–12 beginning on page 51.

Five-year participation by state and territory



Note: Bars on columns represent 95% confidence intervals.

Source: AIHW analysis of state and territory Cervical Cytology Registry data.

Figure 1.7: Participation of women aged 20–69 years in the National Cervical Screening Program over 5 years, by state and territory, 2002–2006

Table 1.7: Participation of women aged 20–69 years in the National Cervical Screening Program over 5 years, by state and territory, 2002–2006

5-year period	NSW	Vic	Qld	WA	SA	Tas[(a)]	ACT[(b)]	NT[(b)]	Australia
2002–2006 (per cent)	85.7	88.2	82.8	82.7	88.0	. .	97.8	93.9	85.9
95% CI	85.6–85.9	88.1–88.4	82.6–82.9	82.5–83.0	87.7–88.3	. .	97.1–98.4	93.0–94.8	85.8–86.0

. . Not applicable.

(a) Tasmania data were not available at the time of preparation of this report.

(b) Australian Capital Territory and Northern Territory have populations that are both highly transient and relatively small, which may lead to erroneously high participation rates in some age groups over a 5-year period.

Notes

1. Rates are the number of women screened as a percentage of the eligible female population calculated as the average of the Australian Bureau of Statistics estimated resident population and age-standardised to the Australian population at 30 June 2001.
2. Participation rates have been adjusted for the estimated proportion of women who have had a hysterectomy.
3. These data exclude women who have opted not to be on the cervical cytology register.
4. Period covers 1 January 2002 to 31 December 2006.

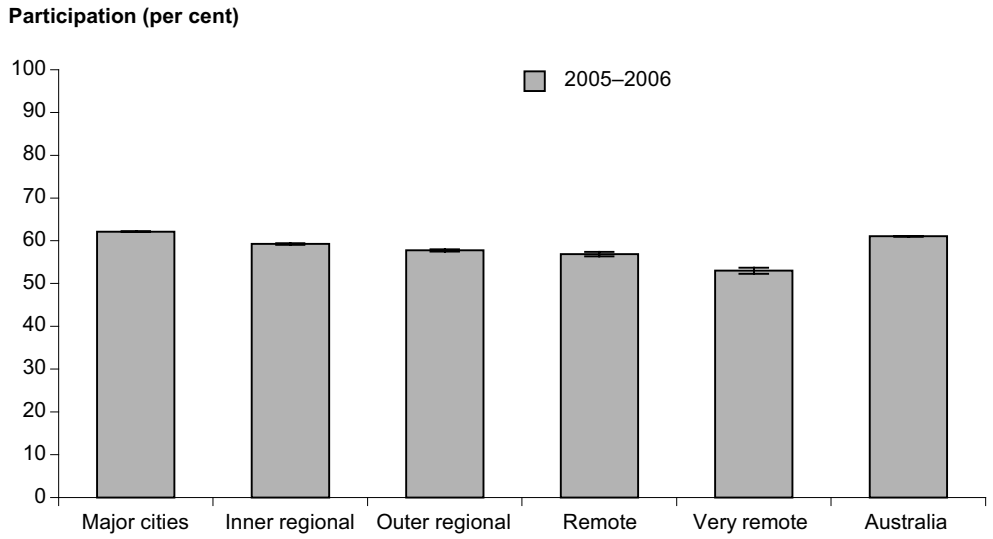
- The highest 5-year participation rates for 2002–2006 were in the Australian Capital Territory (97.8%) and the Northern Territory (93.9%) and the lowest in Queensland (82.8%) and Western Australia (82.7%)

For more information, see tables 1–12 beginning on page 51.

Indicator 1.2 Participation by region

The percentage of women screened in a 2-year period by geographic region of residence for women in the target age group 20–69 years.

Participation by region



Note: Bars on columns represent 95% confidence intervals.

Source: AIHW analysis of state and territory Cervical Cytology Registry data.

Figure 1.8: Participation of women aged 20–69 years in the National Cervical Screening Program, by geographic region, 2005–2006

Table 1.8: Participation of women aged 20–69 years in the National Cervical Screening Program, by geographic region, 2005–2006

2-year period	Major cities	Inner regional	Outer regional	Remote	Very remote	Australia
2005–2006 (per cent)	62.1	59.3	57.8	56.9	53.0	61.1
95% CI	62.1–62.2	59.1–59.4	57.5–58.0	56.4–57.4	52.3–53.7	61.0–61.1

Notes

1. Rates are the number of women screened as a percentage of the eligible female population calculated as the average of the Australian Bureau of Statistics estimated resident population and age-standardised to the Australian population at 30 June 2001.
2. Participation rates have been adjusted for the estimated proportion of women who have had a hysterectomy.
3. These data exclude women who have opted not to be on the cervical cytology register.
4. Period covers 1 January 2005 to 31 December 2006.
5. The Australian Standard Geographical Classification was used to create the above categories (ABS 2001).
6. Tasmania data were not available at the time of preparation of this report.

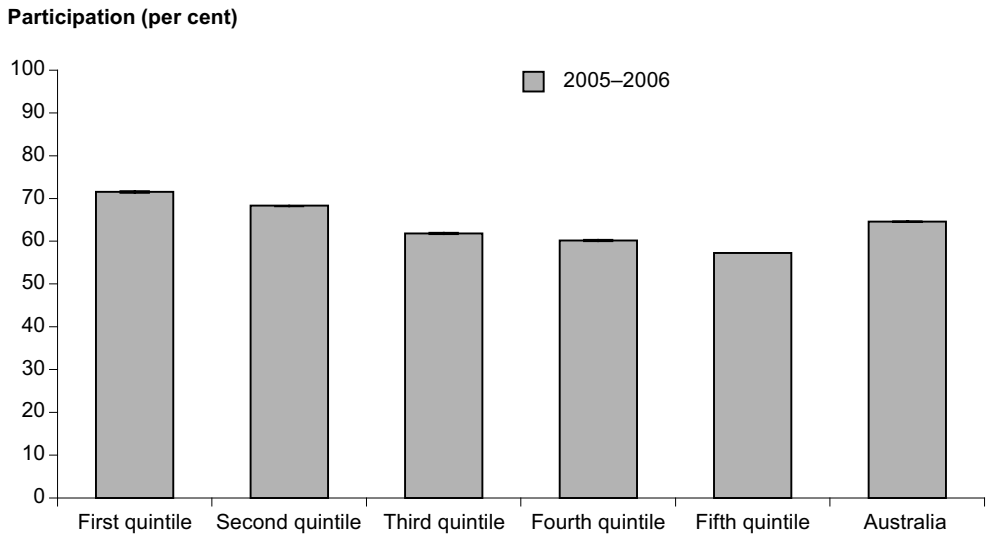
- In 2005–2006, participation rates were highest in major cities (62.1%), followed by inner regional (59.3%), outer regional (57.8%), and remote locations (56.9%), with participation lowest in very remote locations (53.0%).

For more information, see tables 1–12 beginning on page 51.

Indicator 1.3 Participation by socioeconomic status

The percentage of women screened in a 2-year period by socioeconomic status of area of residence for women in the target age group 20–69 years.

Participation by socioeconomic status



Note: Bars on columns represent 95% confidence intervals.

Source: AIHW analysis of state and territory Cervical Cytology Registry data.

Figure 1.9: Participation of women aged 20–69 years in the National Cervical Screening Program, by socioeconomic status, 2005–2006

Table 1.9: Participation of women aged 20–69 years in the National Cervical Screening Program, by socioeconomic status, 2005–2006

2-year period	First quintile	Second quintile	Third quintile	Fourth quintile	Fifth quintile	Australia
2005–2006 (per cent)	71.5	68.3	61.8	60.2	57.3	64.6
95% CI	71.3–71.7	68.2–68.5	61.7–62.0	60.0–60.3	57.1–57.4	64.5–64.6

Notes

1. Rates are the number of women screened as a percentage of the eligible female population calculated as the average of the Australian Bureau of Statistics estimated resident population and age-standardised to the Australian population at 30 June 2001.
2. Participation rates have been adjusted for the estimated proportion of women who have had a hysterectomy.
3. These data exclude women who have opted not to be on the cervical cytology register.
4. Period covers 1 January 2005 to 31 December 2006.
5. The first quintile corresponds to the highest level of socioeconomic status and the fifth to the lowest.
6. Tasmania data were not available at the time of preparation of this report.

- In 2005–2006, participation rates were highest in the first quintile (71.5%), which corresponds to the highest level of socioeconomic status, followed by the second quintile (68.3%), third quintile (61.8%), and fourth quintile (60.2%), with participation lowest in the fifth quintile (57.3%), which corresponds to the lowest level of socioeconomic status.

For more information, see tables 1–12 beginning on page 51.

Indicator 2 Early re-screening

Proportion of women re-screened, by number of re-screens, during a 21-month period following a normal Pap test for women in the target age group 20–69 years.

The National Cervical Screening Program seeks to maximise reductions in incidence and mortality of cervical cancer within a cost-effective framework. The screening program defines two key parameters for achieving these objectives—target populations and screening intervals. Compliance with these parameters is crucial to maintaining the effectiveness of the program and cost efficiency so that resources may be used to increase population coverage. For most women who have a negative test, the recommended interval before their next screen is 2 years. An early re-screen is defined as having a repeat Pap test within 21 months of a negative test result. Reasons for the choice of 21 months as the timeline for reporting are discussed under 'Data issues' below.

This indicator tracks over a period of 21 months a cohort of women from all states and territories who had a negative test result in February 2005 to determine the extent of early re-screening within the National Cervical Screening Program. February was selected as the index month nationally because it has been shown to be a relatively stable month in terms of the number of women who are screened. This pattern has been consistent over a number of years, partly because fewer women take holidays at this time. It is also helped by the fact that February is not a month during which public holidays are nationally gazetted. The early re-screening indicator measures the compliance with the recommended screening interval following a negative test, and is important in assessing screening coverage around the recommended interval, as significant differences may reduce program effectiveness.

This indicator should be interpreted with caution as some early re-screening after a negative Pap test report is appropriate and in accordance with the National Health and Medical Research Council (NHMRC) guidelines.

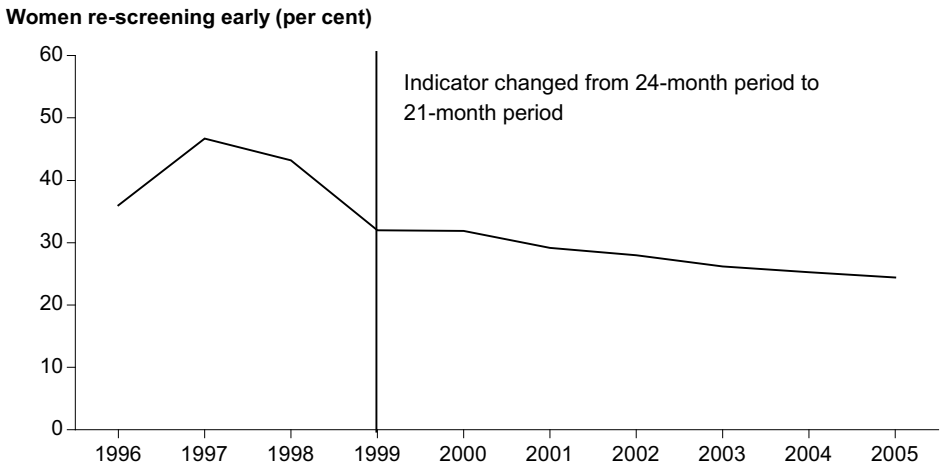
Data issues

The data for Indicator 2 published in reports before the *Cervical screening in Australia 1999–2000* report are not directly comparable with the data in this report as this indicator has been modified to change the follow-up period from 24 months to 21 months. This change was made because women often have their Pap test performed at a time convenient to them, with some choosing to have their biennial screening immediately before the 2-year anniversary. Also, prescriptions for oral contraceptives lapse at 22 months and some women are then likely to combine their Pap test with their visit to the general practitioner for renewing their prescription.

Key points

- The proportion of women who are re-screened early following a normal Pap test has continued to decline since 1999, at which time it was 32.0%. The national figure for the 2005 cohort was 24.4%, which is slightly lower than the 2004 cohort figure of 25.3%. This trend indicates greater compliance with the recommended screening interval of 2-years, which is important for maintaining the cost-effectiveness of the Program.

Trend in early re-screening



Source: AIHW analysis of state and territory Cervical Cytology Registry data.

Figure 2.1: Proportion of women aged 20–69 years re-screening early following a normal Pap test, 1996–2005 cohorts

Table 2.1: Proportion of women aged 20–69 years re-screening early following a normal Pap test, by number of screens, 1996–2005 cohorts

No. of screens	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
					Per cent					
1 screen	28.0	37.2	34.7	27.3	27.3	25.3	24.1	22.7	22.1	21.5
2 screens	6.2	7.6	6.9	3.8	3.6	3.1	3.1	2.8	2.6	2.4
3+ screens	1.8	1.9	1.5	0.9	0.9	0.8	0.8	0.7	0.6	0.5
Total	**36.0**	**46.7**	**43.1**	**32.0**	**31.8**	**29.2**	**28.0**	**26.2**	**25.3**	**24.4**

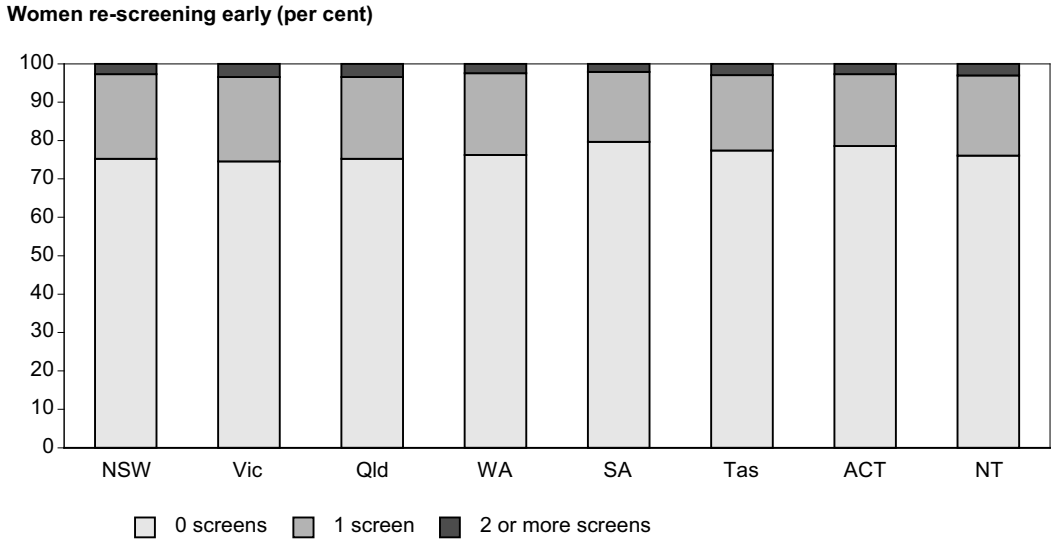
Notes

1. The indicator reported on a 2-year period following a normal Pap test up to and including 1998; in 1999 the indicator was changed to a 21-month interval; therefore, data up to and including 1998 are not directly comparable with data in subsequent years.
2. The reference period for the 1996, 1997 and 1998 cohorts was the 2-year period 1 January to 31 December the following year.
3. From 1999 the reference period for this indicator was the 21 months following the index month of February (except for Queensland where the index month for 1999 was March).

- A cohort of 203,565 women screened in February 2005 whose Pap test results were normal was tracked over a 21-month period to measure the extent of early re-screening in Australia. The proportion of women being re-screened early fell from 32.0% in the 1999 cohort to 24.4% in the 2005 cohort.

For more information, see tables 13–16 beginning on page 63.

Early re-screening by state and territory



Source: AIHW analysis of state and territory Cervical Cytology Registry data.

Note: The reference period for this indicator was the 21 months following the index month February.

Figure 2.2: Proportion of women aged 20–69 years rescreening within 21 months of a normal Pap test, by state and territory, 2005 cohort

- In the 2005 cohort, South Australia (79.7%), Tasmania (77.4%) and the Australian Capital Territory (78.6%) had the highest proportion of women who did not screen again within 21 months of a normal Pap test, compared with 75.6% nationally.

For more information, see tables 13–16 beginning on page 63.

Table 2.2: Proportion of women aged 20–69 years re-screening within 21 months of a normal Pap test, by number of screens, and state and territory, 1999–2005 cohorts

Year	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
					Per cent				
1999 cohort									
0 screens	67.5	66.1	70.8	66.8	70.2	68.9	71.3	70.8	68.0
1 screen	28.3	28.3	24.7	29.1	25.4	26.6	24.0	25.0	27.3
2 or more	4.2	5.6	4.5	4.2	4.5	4.5	4.7	4.2	4.7
2000 cohort									
0 screens	68.5	65.0	69.5	67.7	73.9	69.9	70.4	76.2	68.1
1 screen	27.6	29.4	25.6	28.6	22.4	26.4	25.3	18.9	27.3
2 or more	3.9	5.6	4.9	3.7	3.7	3.7	4.4	4.9	4.5
2001 cohort									
0 screens	70.4	67.8	72.3	71.8	76.7	73.1	72.9	76.0	70.8
1 screen	26.1	27.4	23.6	25.1	20.6	23.9	23.1	20.9	25.3
2 or more	3.5	4.8	4.1	3.1	2.7	3.1	4.0	3.1	3.9
2002 cohort									
0 screens	72.0	69.5	73.3	71.9	77.3	74.9	74.1	75.1	72.0
1 screen	24.6	25.8	22.5	24.6	20.1	21.9	22.2	20.5	24.1
2 or more	3.4	4.7	4.2	3.5	2.6	3.2	3.7	4.4	3.9
2003 cohort									
0 screens	73.6	72.7	73.9	72.9	78.5	77.1	74.0	72.8	73.8
1 screen	23.2	23.1	22.1	24.0	19.4	20.3	22.4	23.3	22.7
2 or more	3.1	4.3	4.0	3.0	2.1	2.6	3.6	3.9	3.5
2004 cohort									
0 screens	74.1	74.0	74.0	74.2	80.2	76.4	75.3	77.2	74.7
1 screen	23.0	22.1	22.1	23.4	17.6	20.8	21.4	20.2	22.1
2 or more	2.9	3.9	3.9	2.5	2.1	2.8	3.3	2.6	3.2
2005 cohort									
0 screens	75.3	74.6	75.3	76.3	79.7	77.4	78.6	76.1	75.6
1 screen	22.0	22.0	21.3	21.3	18.2	19.7	18.7	20.9	21.5
2 or more	2.7	3.5	3.4	2.4	2.1	2.9	2.7	3.0	2.9

Note: From 1999, the reference period for this indicator was the 21 months following the index month of February (except for Queensland where the index month for 1999 was March).

Indicator 3 Low-grade abnormality detection

The ratio of the number of women with a histologically verified low-grade intraepithelial abnormality detected in a 12-month period to the number of women with a histologically verified high-grade intraepithelial abnormality detected in the same period, for women in the target age group 20–69 years.

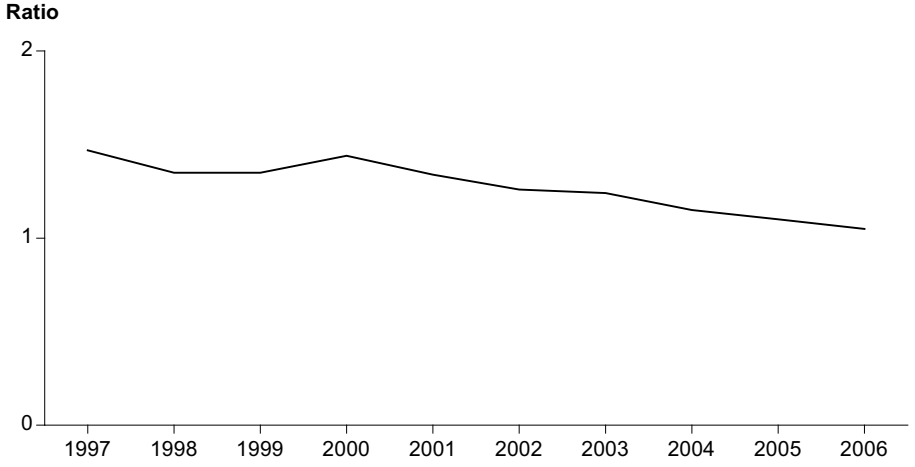
This ratio is only based on the results for women who are referred for histological follow-up. The numerator represents those that were found to be low-grade abnormalities by the follow-up. The denominator represents those that were identified as high-grade abnormalities by the follow-up. The majority of low-grade abnormalities identified at follow-up represent cases where the initial Pap test result was incorrectly identified as high grade. Therefore, in this indicator, a lower ratio of low-grade abnormalities to high-grade abnormalities is the desired outcome.

In this report low-grade abnormalities include atypia, warty atypia, possible cervical intraepithelial neoplasia (CIN), equivocal CIN, CIN 1, and endocervical dysplasia not otherwise specified. High-grade abnormalities include CIN 1/2, CIN 2, CIN 3 and adenocarcinoma in situ.

Key points

- The ratio of low-grade to high-grade histologically verified abnormalities decreased from 1.47 in 1997 to 1.05 in 2006. There was a concurrent decline in the number of low-grade abnormalities detected as a percentage of all screens from 1.04% in 1997 to 0.78% in 2006.

Trend in ratio of low- to high-grade abnormalities



Source: AIHW analysis of state and territory Cervical Cytology Registry data.

Figure 3.1: Ratio of histologically verified low-grade to high-grade abnormalities in women aged 20–69 years, 1997–2006

Table 3.1: Number of histologically verified low-grade and high-grade abnormalities in women aged 20–69 years, 1997–2006

Abnormalities	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Low-grade	15,314	14,411	15,753	19,985	18,126	18,781	18,443	16,627	16,274	15,118
High-grade	10,392	10,704	11,686	13,851	13,555	14,903	14,840	14,507	14,837	14,414
Total	**25,706**	**25,115**	**27,439**	**33,836**	**31,681**	**33,684**	**33,283**	**31,134**	**31,111**	**29,532**
Ratio	1.47	1.35	1.35	1.44	1.34	1.26	1.24	1.15	1.10	1.05
95% CI	1.44–1.51	1.31–1.38	1.32–1.38	1.41–1.47	1.31–1.37	1.23–1.29	1.22–1.27	1.12–1.17	1.07–1.12	1.03–1.07
				Per cent						
Low-grade	1.04	0.93	1.02	1.07	0.98	1.01	1.01	0.88	0.84	0.78
High-grade	0.71	0.69	0.75	0.74	0.73	0.80	0.79	0.77	0.77	0.74
Total	**1.75**	**1.61**	**1.77**	**1.81**	**1.71**	**1.80**	**1.77**	**1.64**	**1.61**	**1.52**

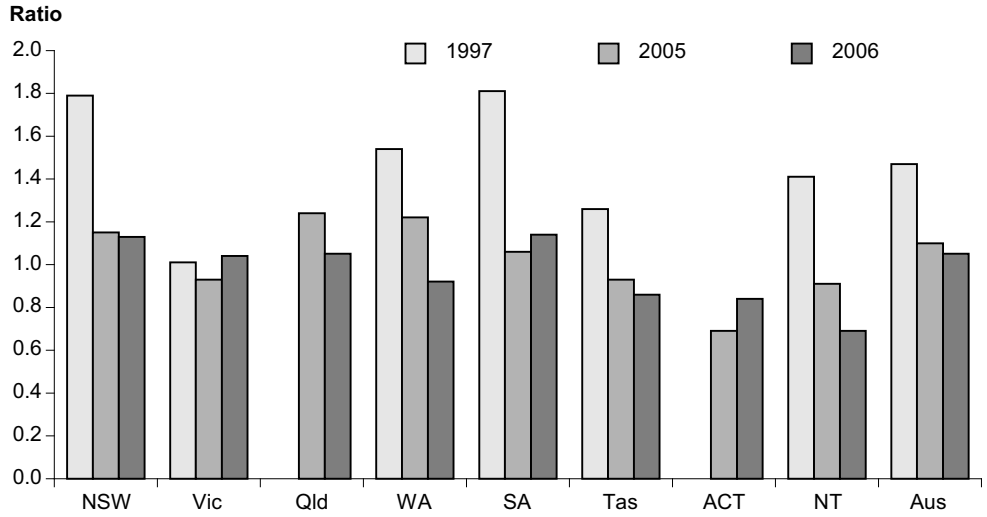
Notes

1. Ratio is the number of women with histologically verified low-grade abnormalities divided by the number of women with histologically verified high-grade abnormalities.
2. The Queensland Health Pap smear register began operations in February 1999; therefore no data are available for 1997 and 1998.
3. Australian Capital Territory data were not available for 1997 and 1998.
4. Northern Territory data were not available for 2001.

- The screening program in 2006 detected 29,532 histologically verified abnormalities of which 15,118 were low grade and 14,414 were high grade.
- Between 1997 and 2006, the ratio of low-grade to high-grade abnormalities diagnosed in women aged 20–69 years declined from 1.47 to 1.05.
- The percentage of abnormalities detected fell from 1.75% in 1997 to 1.52% in 2006.
- The number of low-grade abnormalities fell from 1.04% of screens in 1997 to 0.78% of screens in 2006.

For more information, see tables 17 and 18 on page 65.

Ratio of low- to high-grade abnormalities by state and territory



Source: AIHW analysis of state and territory Cervical Cytology Registry data.

Figure 3.2: Ratio of histologically verified low-grade to high-grade abnormalities in women aged 20–69 years, by state and territory, 1997, 2005 and 2006

Table 3.2: Ratio of histologically verified low-grade to high-grade abnormalities in women aged 20–69 years, by state and territory, 1997–2006

Year	NSW	Vic	Qld[(a)]	WA	SA	Tas	ACT[(b)]	NT[(c)]	Australia
					Ratio				
1997	1.79	1.01	. .	1.54	1.81	1.26	. .	1.41	1.47
1998	1.46	1.11	. .	1.48	1.45	1.42	. .	0.87	1.35
1999	1.37	1.18	. .	1.70	1.43	1.36	1.24	0.88	1.35
2000	1.42	1.24	1.62	1.67	1.47	1.42	1.24	1.13	1.44
2001	1.39	1.09	1.41	1.52	1.39	1.25	1.17	. .	1.34
2002	1.29	0.91	1.40	1.62	1.27	1.13	1.31	1.42	1.26
2003	1.41	0.95	1.11	1.71	1.32	0.96	1.06	1.31	1.24
2004	1.16	1.00	1.20	1.36	1.20	1.01	0.85	1.25	1.15
2005	1.15	0.93	1.24	1.22	1.06	0.93	0.69	0.91	1.10
2006	1.13	1.04	1.05	0.92	1.14	0.86	0.84	0.69	1.05

. . Not applicable.

(a) The Queensland Health Pap smear register began operations in February 1999; therefore no data are available for 1997–1999.

(b) Australian Capital Territory data were not available for 1997 and 1998.

(c) Northern Territory data were not available for 2001.

- In 2006, New South Wales and South Australia had the highest ratio of low- to high-grade abnormalities at 1.13 and 1.14, respectively, and the Northern Territory had the lowest at 0.69.

For more information, see tables 17 and 18 on page 65.

Indicator 4 High-grade abnormality detection

Detection rate of histologically verified high-grade intraepithelial abnormalities per 1,000 women screened in a 12-month period for women aged 20 years and over and for the target age group 20–69 years.

The detection of high-grade abnormalities is an indicator of Program performance. High-grade abnormalities (HGAs) have a greater probability of progressing to invasive cancer than do low-grade lesions. Therefore, one of the aims of the National Cervical Screening Program is to set a screening interval that detects most of these lesions before they progress and become invasive. It should be emphasised, however, that high-grade abnormalities do not always progress to invasive cervical cancer, with a recent study suggesting that at least 80% of high-grade abnormalities regress (Raffle et al. 2003). Factors that influence the progression of high-grade abnormalities to invasive cervical cancer include age—with regression more likely in younger women—and extent of high-grade abnormality—with extensive and persistent high-grade abnormalities more likely to progress to invasive cervical cancer (NHMRC 2005).

The rate of detection of high-grade abnormalities is an indicator of how well the Program detects these abnormalities. The best way to interpret this rate is to look at these rates in combination with cervical cancer incidence and mortality rates, since the aim of detecting high-grade abnormalities is to reduce the incidence and mortality from cervical cancer.

This indicator measures the frequency of histologically verified high-grade abnormalities in the screened population. A high-grade intraepithelial abnormality is defined in this report as CIN 1/2, CIN 2, CIN 3 or adenocarcinoma in situ.

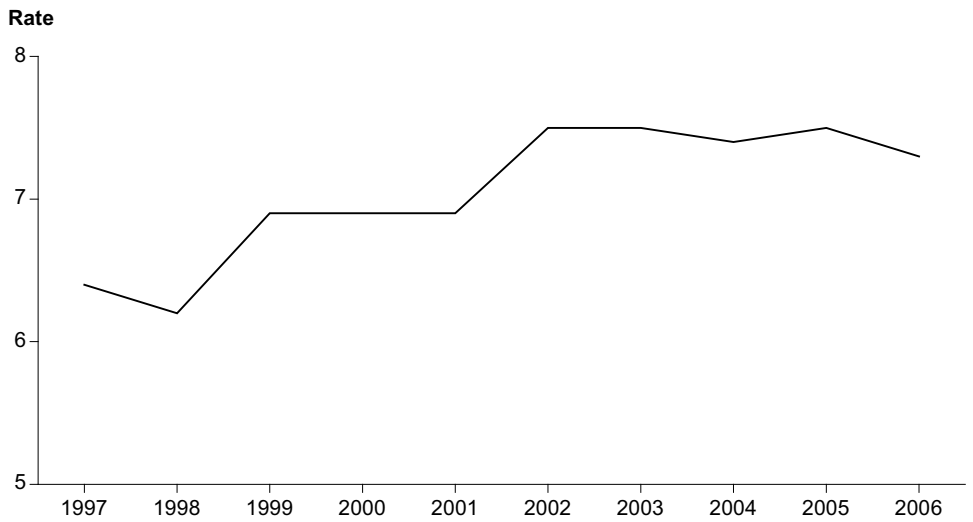
Data issues

The NHMRC produced guidelines in 1994 to assist in the management of women who have low-grade and high-grade intraepithelial abnormalities (DHSH 1994a). These guidelines were used for the management of women with screen-detected cervical abnormalities until the end of June 2006 and are summarised in Appendix F. Changes approved by the NHMRC in 2005 for the management of asymptomatic women with screen-detected abnormalities (NHMRC 2005) were officially adopted in July 2006, but assuming a 6-month lag-time in the uptake of the guidelines is reasonable. Therefore, while the management of women over the 2-year period, on which the data for this report are based, should primarily follow the 1994 guidelines, there may be some influence of the recent introduction of the 2005 guidelines. Comparisons between these data and those from previous years should therefore be made with caution.

Key points

- The detection rate of high-grade abnormalities increased from 6.4 in 1997 to 7.3 in 2006. The rate of high-grade abnormalities was highest in women aged 20–34 years and lowest in women aged 50–69 years. This is consistent with current understanding of the natural history of high-grade abnormalities, with significant regression of high-grade abnormalities occurring in younger women (NHMRC 2005).

Trend in high-grade abnormalities detected



Source: AIHW analysis of state and territory Cervical Cytology Registry data.

Figure 4.1: Histologically verified high-grade abnormalities detected per 1,000 women screened aged 20–69 years, 1997–2006

Table 4.1: Histologically-verified high-grade abnormalities detected per 1,000 women screened aged 20–69 years, 1997–2006

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
					Number detected per 1,000 women screened					
AS rate	6.4	6.2	6.9	6.9	6.9	7.5	7.5	7.4	7.5	7.3
95% CI	6.2–6.5	6.1–6.3	6.8–7.1	6.8–7.0	6.8–7.0	7.4–7.6	7.4–7.6	7.3–7.5	7.3–7.6	7.2–7.4

Notes

1. Rates are the number of histologically verified high-grade abnormalities detected per 1,000 women screened and age-standardised to the Australian population at 30 June 2001.
2. The reference period for this indicator is from 1 January to 31 December for each year.
3. The Queensland Health Pap smear register began operations in February 1999; therefore no data are available for 1997–1999.
4. Australian Capital Territory data were not available for 1997 and 1998.
5. Northern Territory data were not available for 2001.

- In 2006, there were 14,396 histologically verified high-grade intraepithelial abnormalities detected in 1,940,566 women screened aged 20–69 years.
- The age-standardised detection rate for histologically verified high-grade intraepithelial abnormalities increased significantly over the period 1997–2006, from 6.4 per 1,000 women screened in 1997 to 7.3 in 2006, for women aged 20–69 years.

For more information, see tables 19–24 beginning on page 66.

High-grade abnormalities detected by age

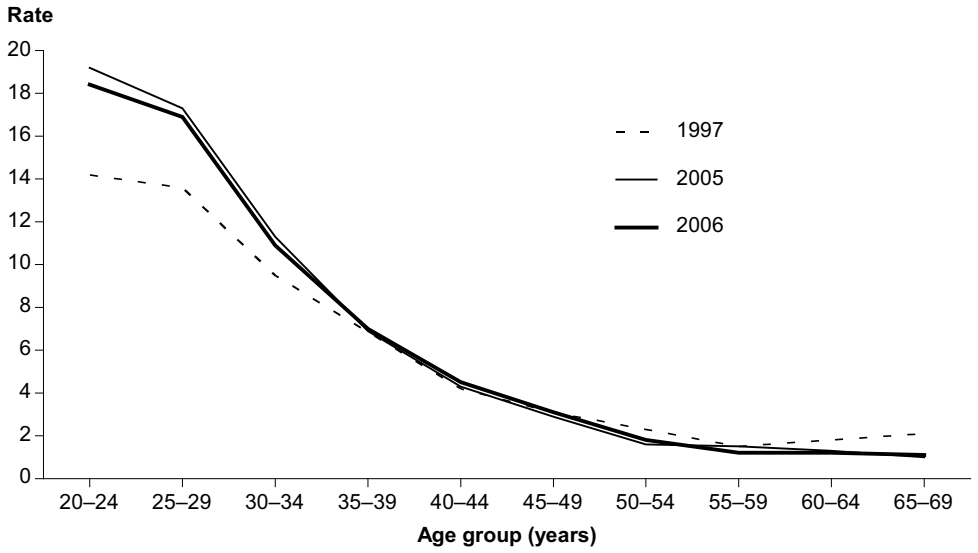


Figure 4.2: Histologically verified high-grade abnormalities detected per 1,000 women screened aged 20–69 years, by 5-year age group, 1997, 2005 and 2006

Table 4.2: Histologically verified high-grade abnormalities detected per 1,000 women screened aged 20–69 years, by 5-year age group, 1997–2006

	Age group (years)										
Year	20–24	25–29	30–34	35–39	40–44	45–49	50–54	55–59	60–64	65–69	20–69[(a)]
	Number detected per 1,000 women screened										
1997	14.2	13.6	9.5	6.3	4.2	3.1	1.9	1.5	1.7	2.1	6.4 (6.2–6.5)
1998	14.3	13.9	8.8	6.3	4.1	2.6	1.9	1.6	1.7	1.0	6.2 (6.1–6.3)
1999	16.8	15.0	10.0	6.7	4.4	3.2	2.0	1.7	1.6	2.0	6.9 (6.8–7.1)
2000	16.3	15.5	10.3	6.5	4.5	3.0	1.9	1.5	1.5	1.7	6.9 (6.8–7.0)
2001	16.3	15.6	10.1	6.6	4.4	3.0	1.8	1.5	1.5	1.6	6.9 (6.8–7.0)
2002	18.9	16.7	11.3	6.9	4.8	3.0	2.0	1.7	1.3	1.4	7.5 (7.4–7.6)
2003	18.5	16.9	11.0	6.9	5.0	3.2	1.8	1.5	1.6	1.4	7.5 (7.4–7.6)
2004	19.4	16.8	11.3	6.8	4.4	2.9	1.7	1.4	1.2	1.0	7.4 (7.3–7.5)
2005	19.2	17.3	11.3	6.9	4.3	2.9	1.6	1.5	1.3	1.0	7.5 (7.3–7.6)
2006	18.4	16.9	10.9	7.0	4.5	3.1	1.8	1.2	1.2	1.1	7.3 (7.2–7.4)

(a) Rates are the number of histologically verified high-grade abnormalities detected per 1,000 women screened and age-standardised to the Australian population at 30 June 2001.

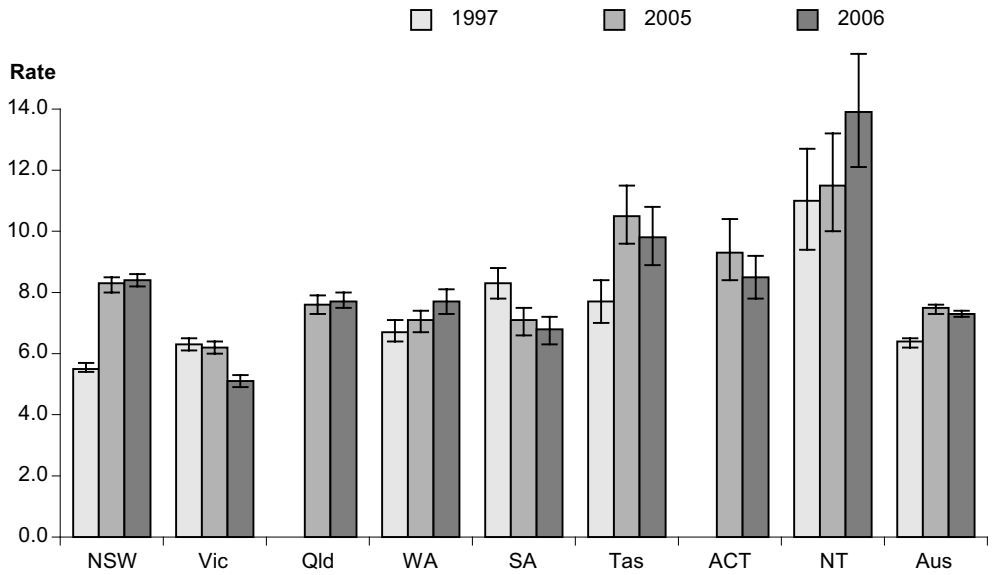
Notes

1. Rates are the number of histologically verified high-grade abnormalities detected per 1,000 women screened.
2. The reference period for this indicator is from 1 January to 31 December for each year.
3. The Queensland Health Pap smear register began operations in February 1999; therefore no data are available for 1997–1999.
4. Australian Capital Territory data were not available for 1997 and 1998.
5. Northern Territory data were not available for 2001.

- The detection rate for high-grade abnormalities was much higher in the younger age groups. In 2006, the rate for women aged 20–24 years was 18.4 per 1,000 women screened compared with less than 2.0 per 1,000 women screened in women aged 50–69 years.

For more information, see tables 19–24 beginning on page 66.

High-grade abnormalities detected by state and territory



Source: AIHW analysis of state and territory Cervical Cytology Registry data.

Figure 4.3: Rate of histologically verified high-grade abnormalities detected per 1,000 women screened aged 20–69 years, by state and territory, 1996, 2005 and 2006

- The only state to have a significantly different rate of detection of high-grade abnormalities in 2006 compared with 2005 was Victoria, with a decrease from 6.2 per 1,000 women screened in 2005 to 5.1 per 1,000 women screened in 2006.

- In New South Wales, there was an overall increase in the rate of high-grade abnormalities detected from 5.5 per 1,000 women screened in 1997 to 8.4 in 2006. Western Australia had a smaller increase in the rate of high-grade abnormality detection from 6.7 per 1,000 women screened in 1997 to 7.7 in 2006. Tasmania also had an increase in the detection rate, from 7.7 in 1997 to 9.8 in 2006, as did the Australian Capital Territory, from 6.4 in 1999 (the first year for which these data are available) to 8.5 in 2006.

- In Victoria, there was an overall decrease in the rate of high-grade abnormalities detected from 6.3 per 1,000 women screened in 1997 to 5.1 per 1,000 women screened in 2006. Queensland had a decrease in the rate of high-grade abnormalities detected from 8.6 in 2000 (the first year for which these data are available) to 7.7 per 1,000 women screened in 2006. Similarly in South Australia there was a decrease in the detection rate from 8.3 in 1997 to 6.8 in 2006.

- The Northern Territory had the highest rates of high-grade abnormalities detected of all the jurisdictions for most years that these data were available between 1997 and 2006.

For more information, see tables 19–24 beginning on page 66.

Table 4.3: Rate of histologically verified high-grade abnormalities detected per 1,000 women screened aged 20–69 years, by state and territory, 1997–2006

Year	NSW	Vic	Qld[(a)]	WA	SA	Tas	ACT[(b)]	NT[(c)]	Australia
				Number detected per 1,000 women screened					
1997	5.5	6.3	. .	6.7	8.3	7.7	. .	11.0	6.4
95% CI	5.4–5.7	6.1–6.5	. .	6.4–7.1	7.8–8.8	7.0–8.5	. .	9.4–12.7	6.2–6.5
1998	5.8	5.3	. .	6.2	8.9	9.6	. .	12.5	6.2
95% CI	5.6–6.0	5.1–5.5	. .	5.9–6.5	8.4–9.4	8.8–10.5	. .	11.0–14.1	6.1–6.3
1999	7.0	6.3	. .	7.1	7.9	9.1	6.4	8.3	6.9
95% CI	6.8–7.2	6.1–6.6	. .	6.7–7.5	7.5–8.3	8.3–10.0	5.6–7.4	6.9–9.8	6.8–7.1
2000	7.0	5.6	8.6	5.9	6.7	9.7	6.4	12.0	6.9
95% CI	6.8–7.2	5.4–5.8	8.3–8.9	5.6–6.3	6.3–7.1	8.9–10.7	5.5–7.3	10.4–13.6	6.8–7.0
2001	7.1	5.4	8.2	7.4	6.3	9.5	7.0	. .	6.9
95% CI	6.9–7.3	5.2–5.6	7.9–8.6	7.0–7.8	5.9–6.8	8.6–10.4	6.2–8.0	. .	6.8–7.0
2002	7.9	6.3	8.7	7.9	6.2	8.9	7.1	10.6	7.5
95% CI	7.7–8.1	6.1–6.5	8.4–9.0	7.5–8.3	5.8–6.6	8.1–9.8	6.3–8.1	9.1–12.1	7.4–7.6
2003	7.2	7.1	8.5	7.8	6.3	7.5	9.3	10.7	7.5
95% CI	7.0–7.4	6.8–7.3	8.2–8.8	7.4–8.2	5.9–6.7	6.7–8.3	8.3–10.5	9.3–12.3	7.4–7.6
2004	8.3	6.2	7.8	7.7	5.8	9.4	8.5	9.0	7.4
95% CI	8.0–8.5	6.0–6.4	7.5–8.1	7.3–8.1	5.4–6.2	8.5–10.3	7.5–9.5	7.7–10.4	7.3–7.5
2005	8.3	6.2	7.6	7.1	7.1	10.5	9.3	11.5	7.5
95% CI	8.0–8.5	6.0–6.4	7.3–7.9	6.7–7.4	6.6–7.5	9.6–11.5	8.4–10.4	10.0–13.2	7.3–7.6
2006	8.4	5.1	7.7	7.7	6.8	9.8	8.5	13.9	7.3
95% CI	8.2–8.6	4.9–5.3	7.5–8.0	7.3–8.1	6.3–7.2	8.9–10.8	7.8–9.2	12.1–15.8	7.2–7.4

. . Not applicable.

(a) The Queensland Health Pap smear register began operations in February 1999; therefore no data are available for 1997–1999.

(b) Australian Capital Territory data were not available for 1997 and 1998.

(c) Northern Territory data were not available for 2001.

Notes

1. Rates are the number of histologically verified high-grade abnormalities detected per 1,000 women screened and age-standardised to the Australian population at 30 June 2001.
2. The reference period for this indicator is from 1 January to 31 December for each year.

Indicator 5 Incidence

A major objective of the National Cervical Screening Program is to minimise the incidence of cervical cancer by detecting treatable pre-cancerous lesions before their progression to cancer. But where these pre-cancerous lesions cannot be detected, diagnosis of cancer at its earliest stage, the micro-invasive stage, is the most desirable outcome. The incidence indicators measure the incidence rates of micro-invasive and all cervical cancers, as well as incidence by geographic region.

Data issues

In 1994, the International Federation of Gynaecology and Obstetrics endorsed the following definition of micro-invasive carcinoma of the cervix:

Stage 1a1. Measured invasion of stroma no greater than 3 millimetres in depth and no wider than 7 millimetres.

Stage 1a2. Measured invasion of stroma between 3 millimetres and 5 millimetres in depth and no wider than 7 millimetres. The depth of invasion should be measured from the base of the epithelium, either surface or glandular, from which it originates. Vascular space involvement, either venous or lymphatic, should not alter the staging (Ostor & Mulvany 1996).

In interpreting cervical cancer incidence statistics, note that cervical screening has been available on an ad hoc basis since the 1960s, but it is only since the late 1980s and early 1990s that there has been an organised national approach to screening at a population level. The introduction of cervical screening programs which achieve higher participation rates may result in the paradox whereby, in the short term, the number of new cases of micro-invasive cancer increases because cancers are found earlier than they would have been without screening, but the rate of more advanced cancers decreases in the longer term.

For this report the most recent national data available on incidence are for 2004, in contrast to screening data which are available for 2005–2006 and mortality data which are available for 2005. This time lag in availability of incidence data is expected to reduce over the next few years.

Key points

- In 2004, incidence of micro-invasive squamous cervical cancer in 2004 was 1.6 per 100,000 women in the target age group 20–69 years, down from the peak incidence in 1995 of 3.2 per 100,000 women, and significantly lower than the rate of 2.9 new cases per 100,000 women in 1991 at the commencement of the cervical screening program.
- Incidence of all cervical cancer in 2004 was 8.9 per 100,000 women in the target age group 20–69 years, significantly lower than the rate of 17.1 new cases per 100,000 women in 1991 at the commencement of the cervical screening program.
- For women within the target age group 20–69 years, incidence of micro-invasive squamous cervical cancer was highest in the 30–34 year age group (2.9 per 100,000 women), and the incidence of all cervical cancer was highest in the 45–49 year age group

(13.3 per 100,000 women). For women of all ages, incidence of micro-invasive squamous cervical cancer remained highest in the 30–34 year age group (2.9 per 100,000 women), but incidence of all cervical cancer was highest in the 80–84 year age group (16.2 per 100,000 women).

- There were notable increases in the incidence of both micro-invasive and invasive cervical cancer in women aged 20–34 years in 2004 compared with 2003. However, there was no significant change in the overall rate of micro-invasive or invasive cervical cancer from 2003 to 2004.
- Between 1993 and 2004, the incidence of cervical cancer in women aged 20–69 years fell from 15.8 per 100,000 women in 1993 to 8.9 per 100,000 women in 2004. Over this time, the incidence of adenocarcinomas only decreased from 2.7 per 100,000 women in 1993 to 2.0 per 100,000 women in 2004. The inability of cervical screening to have a greater effect on the incidence rate of adenocarcinoma has been attributed to difficulties in cytological sampling of endocervical cells, diverse appearance and less well defined characteristics of adenocarcinoma, and a poorer understanding of the natural history of how glandular abnormalities give rise to adenocarcinoma (NHMRC 2005; Wang 2006).

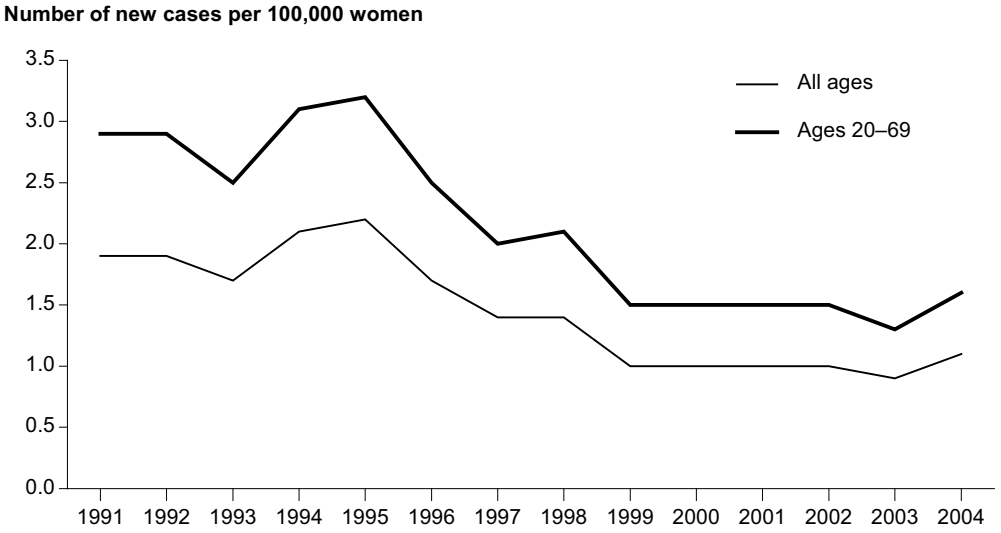
Identification of Aboriginal and Torres Strait Islander people in cancer registry records of new cases is not complete as Indigenous status is not yet included in pathology forms and reporting of Indigenous status is primarily sourced from hospital records.

- In 2000–2004, despite under-reporting, cervical cancer incidence in Aboriginal and Torres Strait Islander women was 16.9 new cases per 100,000 women for New South Wales, Victoria, Queensland, Western Australia and the Northern Territory combined, more than double the non-Indigenous rate of 7.1 new cases per 100,000 women (AIHW unpublished data).

Indicator 5.1 Incidence of micro-invasive squamous cervical cancer

Incidence rate of micro-invasive squamous cell carcinoma per 100,000 estimated resident female population in a 12-month period for women of all ages and for the target age group 20–69 years.

Trend in incidence of micro-invasive squamous cervical cancer



Source: National Cancer Statistics Clearing House (AIHW).

Figure 5.1: Age-standardised incidence rates of micro-invasive squamous cell carcinoma, 1991–2004

Table 5.1: Age-standardised incidence rates of micro-invasive squamous cell carcinoma, 1991–2004

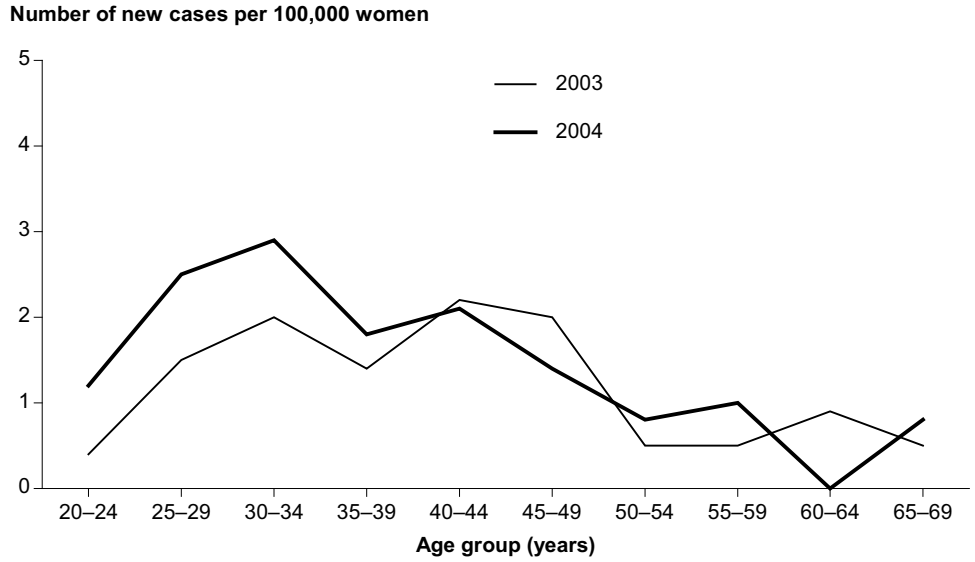
Age	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
	Number of new cases per 100,000 women													
All ages	1.9	1.9	1.7	2.1	2.2	1.7	1.4	1.4	1.0	1.0	1.0	1.0	0.9	1.1
Ages 20–69 years	2.9	2.9	2.5	3.1	3.2	2.5	2.0	2.1	1.5	1.5	1.5	1.5	1.3	1.6

Note: Rates are the number of micro-invasive squamous cell carcinomas detected per 100,000 women and age-standardised to the Australian population at 30 June 2001.

- In 1991, when the Program commenced, 166 new cases of micro-invasive squamous cell carcinoma were diagnosed, 156 of which were in the 20–69 years age group. By 2004, this number had declined to 107, with 100 of these in the 20–69 years age group.
- In 1991, the age-standardised incidence rate of micro-invasive squamous cell carcinoma was 1.9 per 100,000 women for women of all ages and 2.9 per 100,000 women for women aged 20–69 years. By 2004, these had decreased to 1.1 per 100,000 for women of all ages and 1.6 per 100,000 women for women in the target age group 20–69 years.

For more information, see tables 25 and 26 beginning on page 72.

Incidence of micro-invasive squamous cervical cancer by age



Source: National Cancer Statistics Clearing House (AIHW).

Figure 5.2: Incidence rates of micro-invasive squamous cell carcinoma in women aged 20–69 years, by 5-year age group, 2003 and 2004

Table 5.2: Incidence rates of micro-invasive squamous cell carcinoma for women aged 20–69 years, by 5-year age group, 2003 and 2004

	Age group (years)										
Year	**20–24**	**25–29**	**30–34**	**35–39**	**40–44**	**45–49**	**50–54**	**55–59**	**60–64**	**65–69**	**20–69[(a)]**
	Number of new cases per 100,000 women										
2003	0.4	1.5	2.0	1.4	2.2	2.0	0.5	0.5	0.9	0.5	1.3 (1.0–1.6)
2004	1.2	2.5	2.9	1.8	2.1	1.4	0.8	1.0	0.0	0.8	1.6 (1.3–1.9)

(a) Rates are the number of micro-invasive squamous cell carcinomas detected per 100,000 women and age-standardised to the Australian population at 30 June 2001.

Note: Rates are the number of micro-invasive squamous cell carcinomas detected per 100,000 women.

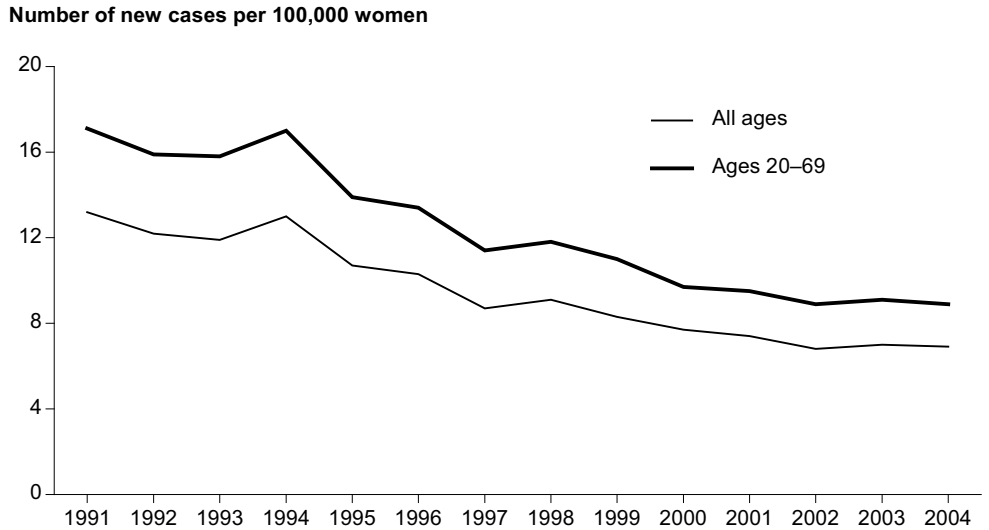
- In 2004, the highest detection rates for micro-invasive squamous cell carcinoma were for women aged 30–34 years, 25–29 years and 40–44 years, at 2.9, 2.5, and 2.1 cases per 100,000 women, respectively. The rate declined with age to 1.0 or below per 100,000 women for women aged 50 years or more.
- There were increases in the rate of detection of micro-invasive cervical carcinoma in the age groups 20–34 years between 2003 and 2004. This was from 0.4 per 100,000 women to 1.2 per 100,000 women in the 20–24 year age group, from 1.5 per 100,000 women to 2.5 per 100,000 women in the 25–29 year age group, and from 2.0 to 2.9 in women aged 30–34 years.

For more information, see tables 25 and 26 beginning on page 72.

Indicator 5.2 Incidence of squamous, adenocarcinoma, adenosquamous and other cervical cancer

Incidence rate of squamous, adenocarcinoma, adenosquamous and other cervical cancer (micro-invasive and invasive) per 100,000 estimated resident female population in a 12-month period for women of all ages and for the target age group 20–69 years.

Trend in incidence of all cervical cancer



Source: National Cancer Statistics Clearing House (AIHW).

Figure 5.3: Age-standardised incidence rates of all cervical cancer (squamous, adenocarcinoma, adenosquamous and other cervical cancer), 1991–2004

Table 5.3: Age-standardised incidence rates of all cervical cancer (squamous, adenocarcinoma, adenosquamous and other cervical cancer), 1991–2004

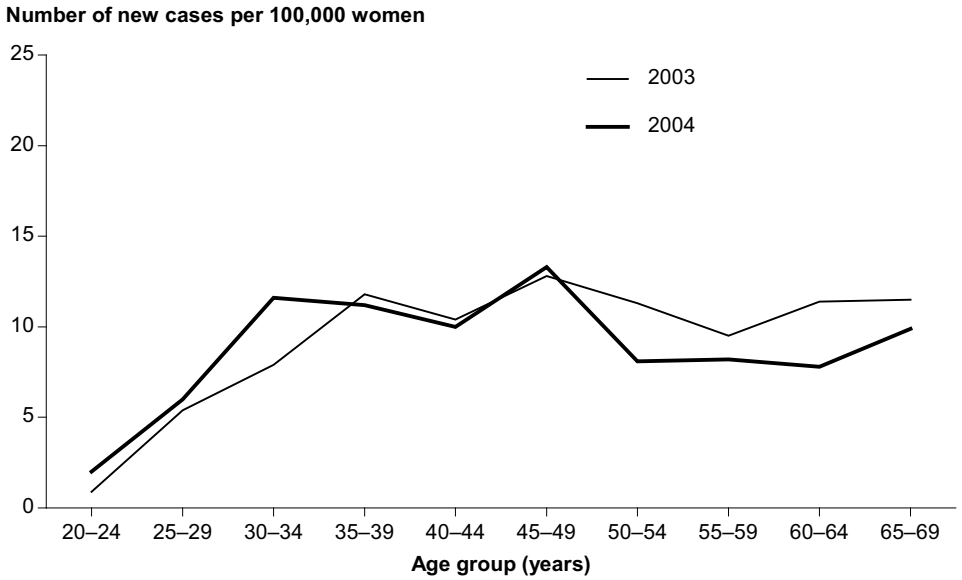
Age	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
	Number of new cases per 100,000 women													
All ages	13.2	12.2	11.9	13.0	10.7	10.3	8.7	9.1	8.3	7.7	7.4	6.8	7.0	6.9
Ages 20–69 years	17.1	15.9	15.8	17.0	13.9	13.4	11.4	11.8	11.0	9.7	9.5	8.9	9.1	8.9

Note: Rates are the number of cervical cancers detected per 100,000 women and age-standardised to the Australian population at 30 June 2001.

- In 1991, when the Program commenced, there were 1,090 new cases of cervical cancer diagnosed in Australia, 892 of these in women aged 20–69 years. In 2004, there were 718 new cases diagnosed, with 576 in the 20–69 years age group.
- In 1991, the age-standardised incidence rate of all cervical cancer was 13.2 per 100,000 women for women of all ages and 17.1 per 100,000 women for women aged 20–69 years. In 2004, these decreased to 6.9 per 100,000 women for women of all ages and 8.9 per 100,000 women for women aged 20–69 years.

For more information, see tables 27 and 28 beginning on page 74.

Incidence by age



Source: National Cancer Statistics Clearing House (AIHW).

Figure 5.4: Incidence rates of cervical cancer in women aged 20–69 years, by 5-year age group, 2003 and 2004

Table 5.4: Incidence rates of cervical cancer in women aged 20–69 years, by 5-year age group, 2003 and 2004

	Age group (years)										
Year	**20–24**	**25–29**	**30–34**	**35–39**	**40–44**	**45–49**	**50–54**	**55–59**	**60–64**	**65–69**	**20–69[(a)]**
	Number of new cases per 100,000 women										
2003	0.9	5.4	7.9	11.8	10.4	12.8	11.3	9.5	11.4	11.5	9.1 (8.4–9.9)
2004	2.0	6.0	11.6	11.2	10.0	13.3	8.1	8.2	7.8	9.9	8.9 (8.2–9.7)

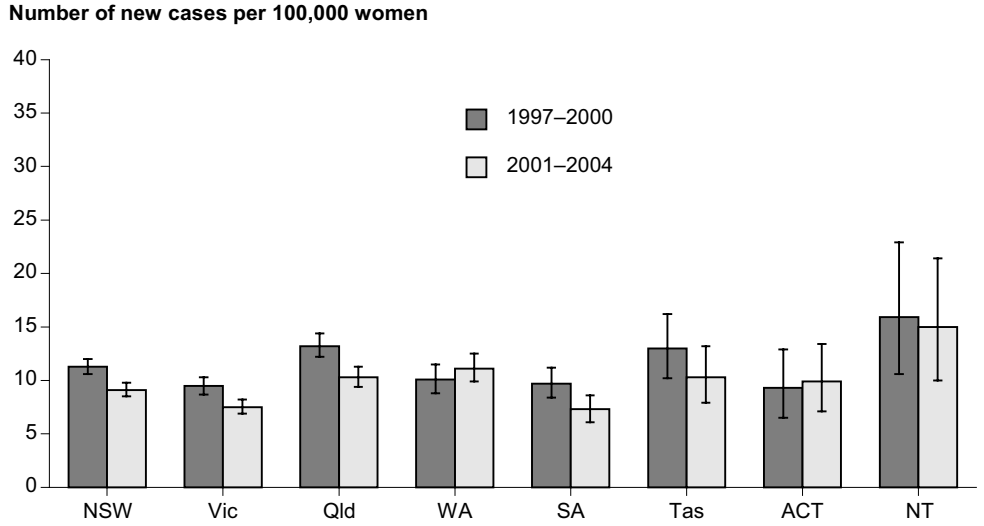
(a) Rates are the number of cervical cancers detected per 100,000 women and age-standardised to the Australian population at 30 June 2001.

Note: Rates are the number of cervical cancers detected per 100,000 women.

- For women in the target age group 20–69 years, the incidence of cervical cancer was highest in 2004 for women aged 45–49 years with 13.3 new cases per 100,000 women, and lowest for women aged 20–24 years, with 2.0 new cases per 100,000 women.
- For women of all ages, the incidence of cervical cancer was highest in 2004 for women aged 80–84 years with 16.2 new cases per 100,000 women, but still lowest for women aged 20–24 years, with 2.0 new cases per 100,000 women.

For more information, see tables 27 and 28 beginning on page 74.

Incidence by state and territory



Note: Bars on graphs represent 95% confidence intervals.

Source: National Cancer Statistics Clearing House (AIHW).

Figure 5.5: Age-standardised incidence rates of cervical cancer in women aged 20–69 years, by state and territory, 1997–2000 and 2001–2004

Table 5.5: Age-standardised incidence rates of cervical cancer in women aged 20–69 years, by state and territory, 1997–2000 and 2001–2004

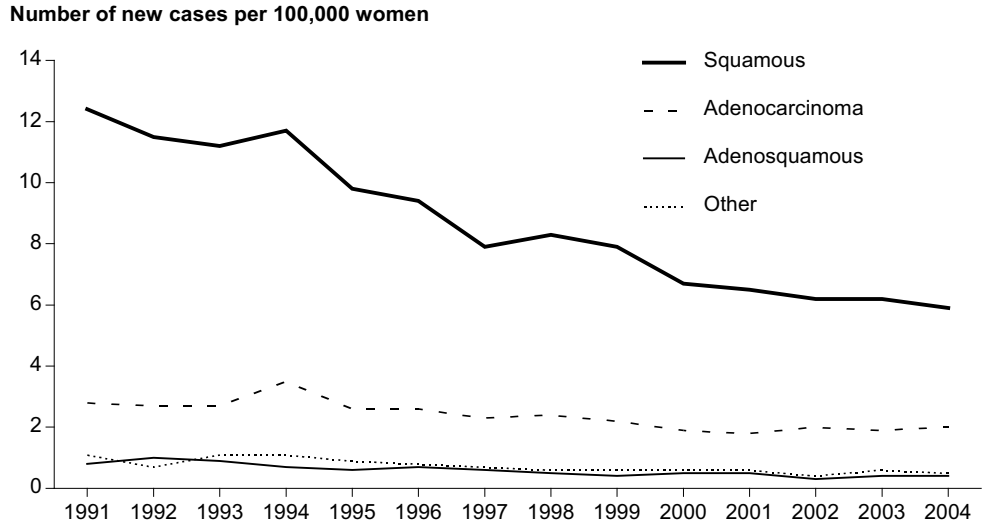
	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
				Number of new cases per 100,000 women					
1997–2000	11.3	9.5	13.2	10.1	9.7	13.0	9.3	15.9	11.0
95% CI	10.6–12.0	8.7–10.3	12.2–14.4	8.8–11.5	8.4–11.2	10.2–16.2	6.5–12.9	10.6–22.9	10.6–11.4
2001–2004	9.1	7.5	10.3	11.1	7.3	10.3	9.9	15.0	9.1
95% CI	8.5–9.8	6.9–8.2	9.4–11.3	9.9–12.5	6.1–8.6	7.9–13.2	7.1–13.4	10.0–21.4	8.7–9.5

Note: Rates are the number of cervical cancers detected per 100,000 women and age-standardised to the Australian population at 30 June 2001.

- In the period 2001–2004, Victoria and South Australia had the lowest incidence of cervical cancer, at 7.5 and 7.3 new cases per 100,000 women, respectively, for women aged 20–69 years. The Northern Territory had the highest rate, at 15.0 per 100,000 women.
- The age-standardised incidence rate declined in all states and territories except for Western Australia and the Australian Capital Territory between the periods 1997–2000 and 2001–2004. The declines were significant in New South Wales, Victoria, Queensland and Australia as a whole.

For more information, see tables 29–32 beginning on page 76.

Incidence by histological type



Source: National Cancer Statistics Clearing House (AIHW).

Figure 5.6: Age-standardised incidence rates of cervical cancer in women aged 20–69 years, by histological type, 1991–2004

Table 5.6: Age-standardised incidence rates of cervical cancer in women aged 20–69 years, by histological type, 1991–2004

Histological type	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
	Number of new cases per 100,000 women													
Squamous	12.4	11.5	11.2	11.7	9.8	9.4	7.9	8.3	7.9	6.7	6.5	6.2	6.2	5.9
Adenocarcinoma	2.8	2.7	2.7	3.5	2.6	2.6	2.3	2.4	2.2	1.9	1.8	2.0	1.9	2.0
Adenosquamous	0.8	1.0	0.9	0.7	0.6	0.7	0.6	0.5	0.4	0.5	0.5	0.3	0.4	0.4
Other	1.1	0.7	1.1	1.1	0.9	0.8	0.7	0.6	0.6	0.6	0.6	0.4	0.6	0.5

Note: Rates are the number of cervical cancers detected per 100,000 women and age-standardised to the Australian population at 30 June 2001.

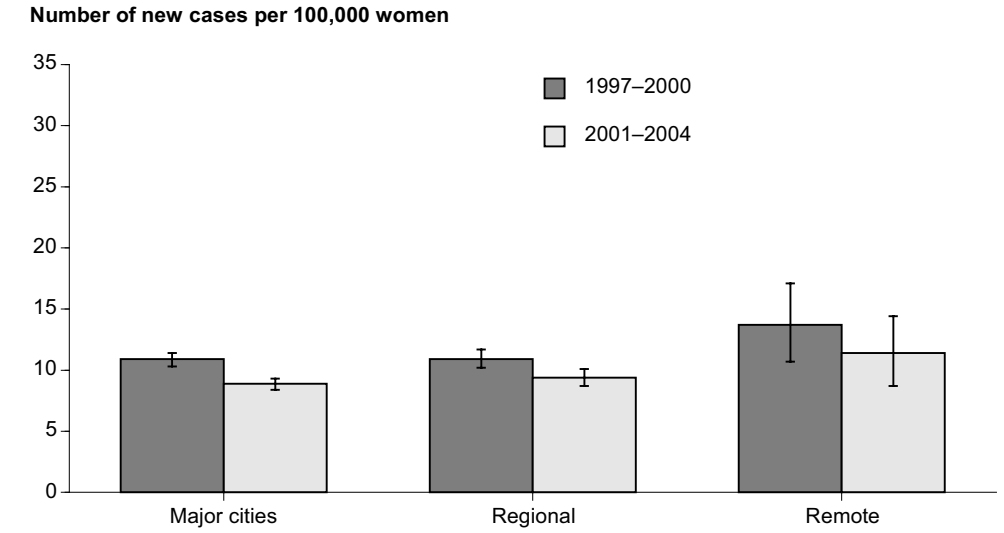
- In 2004, squamous cell carcinomas of the cervix accounted for 66.7% of all new cases of cervical cancer in women aged 20–69 years, adenocarcinomas 22.4%, adenosquamous 4.9%, and the remaining 6.1% a range of other mixed and unknown histologies.
- With the exception of adenocarcinoma, the trend from 1991 to 2004 for all histological types has been a statistically significant decrease in the age-standardised rates of cervical cancer per 100,000 women aged 20–69 years.
- Cervical screening has been less effective in reducing adenocarcinoma incidence rates than other types of cervical cancers because these cells may be too deep in the endocervical canal to be easily detected with a Pap test (Heley 2007).

For more information, see tables 33–36 beginning on page 80.

Indicator 5.3 Incidence by region

Incidence rate of cervical cancer per 100,000 estimated resident female population in a 4-year period by geographic region for women of all ages and for the target age group 20–69 years.

Incidence by region



Note: Bars on graphs represent 95% confidence intervals.

Source: National Cancer Statistics Clearing House (AIHW).

Figure 5.7: Age-standardised incidence rates of cervical cancer in women aged 20–69 years, by geographic region, 1997–2000 and 2001–2004

Table 5.7: Age-standardised incidence rates of cervical cancer in women aged 20–69 years, by geographic region, 1997–2000 and 2001–2004

	Major cities		Regional		Remote	
	1997–2000	2001–2004	1997–2000	2001–2004	1997–2000	2001–2004
	Number of new cases per 100,000 women					
AS rate	10.9	8.9	10.9	9.4	13.7	11.4
95% CI	10.3–11.4	8.4–9.3	10.2–11.7	8.7–10.1	10.7–17.1	8.7–14.4

Note: Rates are the number of cervical cancers detected per 100,000 women and age-standardised to the Australian population at 30 June 2001.

- In 2001–2004, there were 1,899 new cases of cervical cancer in major cities (66.1% of all new cases), 892 new cases in regional locations (31.0% of all new cases) and 78 new cases (2.7% of all new cases) in remote locations.
- In 2001–2004, age-standardised cervical cancer incidence rates for women aged 20–69 years were significantly lower in major cities (8.9 per 100,000 women) and regional locations (9.4 per 100,000 women) than in 1997–2000 (10.9 per 100,000 women). The incidence rate in remote locations did not change significantly between 1997–2000 (13.7 per 100,000 women) and 2001–2004 (11.4 per 100,000 women).

For more information, see tables 37 and 38 beginning on page 82.

Indicator 6 Mortality

Cervical cancer is one of the few cancers for which there is an efficacious screening test for detection of precursors of the disease. Most deaths due to cervical cancer are potentially avoidable (Marcus & Crane 1998). The objective of the National Cervical Screening Program is to reduce this mortality rate.

The three mortality indicators for the Program are mortality by age and state; mortality by location (major cities, regional and remote); and Indigenous mortality (Indigenous and other Australian women). However, it should be noted that changes in 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.

Data issues

Two major changes that have occurred in the classification and processing of Australian mortality data require some caution when interpreting mortality data over time. They are:

1. the introduction of the 10th revision of the International Classification of Diseases (ICD-10) for classifying deaths registered from 1 January 1997
2. the introduction by the ABS of the Automated Coding System for processing deaths registered from 1 January 1997.

As a result, a break occurred in the mortality data series. In order to make mortality data coded using ICD-9 and ICD-10 comparable, the ABS derived comparability factors to adjust data based on ICD–9. These comparability factors are derived from the movements in the underlying causes of death coded in ICD–9 compared with ICD–10 (ABS 2000).

For cervical cancer deaths, the comparability factor is 0.98, and the pre-1997 mortality data presented in this report have been adjusted accordingly. The effect of this is that the pre-1997 number of deaths appearing in this report are slightly different from figures in some earlier *Cervical screening in Australia* reports.

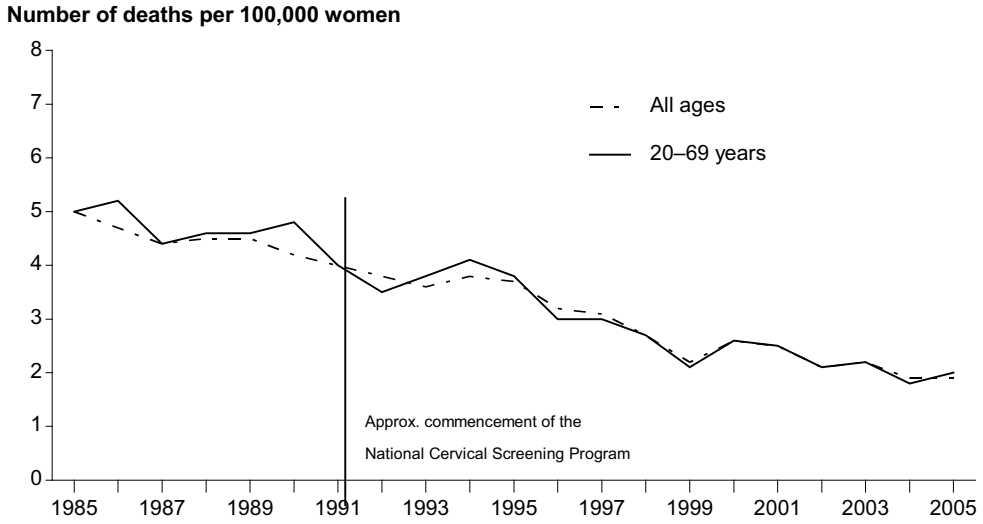
Key points

- In 2005, the mortality rate for cervical cancer was 2.0 per 100,000 women for women in the target age group 20–69 years and 1.9 per 100,000 women for women of all ages. In 1991, at the start of the screening program, the mortality rate was 4.0 per 100,000 women (both for women in the target age group 20–69 years and for women of all ages).
- The highest mortality rates from cervical cancer were in women aged 85 years and over (14.3 per 100,000 women in 2002–2005).
- Mortality from cervical cancer in women aged 20–69 years for the period 2002–2005 was 8.3 per 100,000 women for Aboriginal and Torres Strait Islander women, 4.15 times as high as the mortality rate of 2.0 per 100,000 women for other Australian women.

Indicator 6.1 Mortality by age group

Mortality rate for cervical cancer per 100,000 estimated resident female population in a 12-month period for women of all ages and for the target age group 20–69 years.

Trend in mortality from cervical cancer



Source: AIHW Mortality Database.

Figure 6.1: Age-standardised mortality rates for cervical cancer, 1985–2005

Table 6.1: Age-standardised mortality rates for cervical cancer, 1985–2005

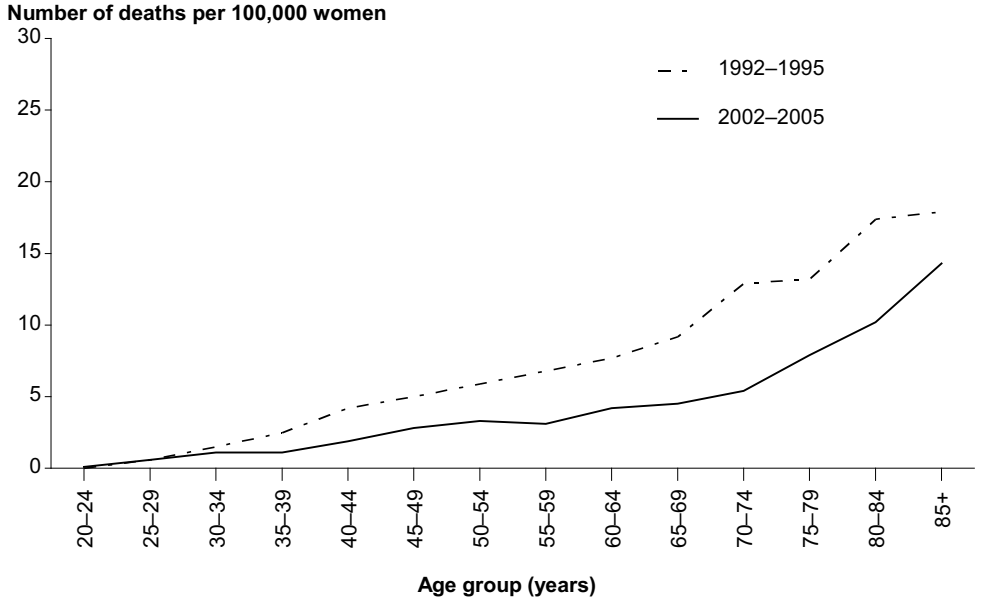
Age	Year																				
	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05
	Number of deaths per 100,000 women																				
All ages	5.0	4.7	4.4	4.5	4.5	4.2	4.0	3.8	3.6	3.8	3.7	3.2	3.1	2.7	2.2	2.6	2.5	2.1	2.2	1.9	1.9
Ages 20–69 years	5.0	5.2	4.4	4.6	4.6	4.8	4.0	3.5	3.8	4.1	3.8	3.0	3.0	2.7	2.1	2.6	2.5	2.1	2.2	1.8	2.0

Note: Rates are the number of deaths from cervical cancer per 100,000 women and age-standardised to the Australian population at 30 June 2001.

- Cervical cancer was the 18th most common cause of cancer deaths in Australian women in 2005, accounting for 216 deaths.
- The age-standardised mortality rate from cervical cancer for women of all ages has fallen from 4.0 per 100,000 women in 1991 at the start of the screening program to 1.9 per 100,000 women in 2005.

For more information, see tables 39 and 40 beginning on page 84.

Mortality by age



Source: AIHW Mortality Database.

Figure 6.2: Mortality rates for cervical cancer by 5-year age group, 1992–1995 and 2002–2005

Table 6.2: Mortality rates for cervical cancer by 5-year age-group, 1992–1995 and 2002–2005

	Age group (years)													
Period	**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+**
	Number of deaths per 100,000 women													
1992–1995	0.0	0.6	1.5	2.5	4.2	5.0	5.9	6.8	7.7	9.2	12.9	13.2	17.4	17.9
2002–2005	0.1	0.6	1.1	1.1	1.9	2.8	3.3	3.1	4.2	4.5	5.4	7.9	10.2	14.3

Note: Rates are the number of deaths from cervical cancer per 100,000 women and age-standardised to the Australian population at 30 June 2001.

- Mortality from cervical cancer declined between the periods 1992–1995 and 2002–2005 in all age groups for women aged 30 years and over.
- Mortality rates of cervical cancer increase with age. The highest mortality rate in 2002–2005 was in women aged 85 years and over with 14.3 deaths per 100,000 women.

For more information, see tables 39 and 40 beginning on page 84.

Mortality by states and territories

Note: Bars on graphs represent 95% confidence intervals.

Source: AIHW Mortality Database.

Figure 6.3: Age-standardised mortality rates for cervical cancer in women aged 20–69 years, by state and territory, 1998–2001 and 2002–2005

Table 6.3: Age-standardised mortality rates for cervical cancer in women aged 20–69 years, by state and territory, 1998–2001 and 2002–2005

Period	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
				Number of deaths per 100,000 women					
1998–2001	2.5	1.8	3.1	2.8	2.3	2.3	3.2	4.6	2.4
95% CI	2.1–2.8	1.5–2.2	2.6–3.7	2.2–3.6	1.7–3.1	1.2–3.8	1.6–5.6	2.0–9.0	2.3–2.7
2002–2005	2.1	1.5	2.0	2.2	2.3	4.6	1.2	3.0	2.0
95% CI	1.8–2.4	1.2–1.8	1.7–2.5	1.7–2.9	1.7–3.1	3.1–6.6	0.4–2.9	0.9–6.7	1.8–2.2

Note: Rates are the number of deaths from cervical cancer per 100,000 women and age-standardised to the Australian population at 30 June 2001.

- In the 4-year period 2002–2005, there were 893 deaths from cervical cancer in Australia compared with 1,014 in 1998–2001.
- In 2002–2005, age-standardised mortality for women in the age group 20–69 years ranged between 1.2 deaths per 100,000 women in the Australian Capital Territory to 4.6 deaths per 100,000 women in Tasmania.
- In women aged 20–69 years, the age-standardised mortality rates decreased in all jurisdictions between the periods 1998–2001 and 2002–2005 except in South Australia where the rate did not change and in Tasmania where the rate increased from 2.3 to 4.6 per 100,000 women. Although the decline at the national level from 2.4 deaths per 100,000 women in 1998–2001 to 2.0 per 100,000 women in 2002–2005 was significant, the numbers in each jurisdiction, except for Queensland, were too small for any changes to be

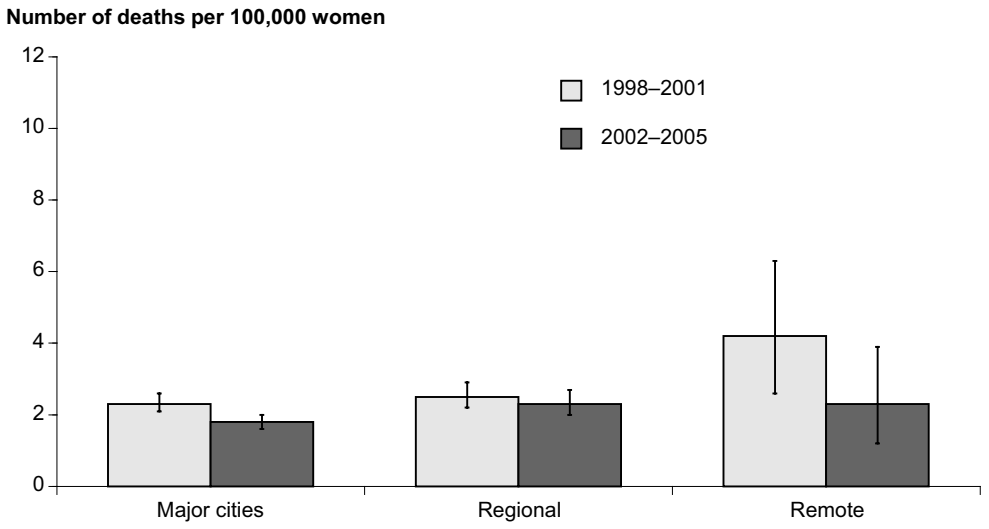
statistically significant. Queensland had a significant decline in mortality rate from 3.1 per 100,000 women in 1998–2001 to 2.0 per 100,000 women in 2002–2005.

For more information, see tables 41–44 beginning on page 86.

Indicator 6.2 Mortality by region

Mortality rate for cervical cancer per 100,000 estimated resident female population in a 4-year period by geographic region for women of all ages and for the target age group 20–69 years.

Mortality by region



Note: Bars on graphs represent 95% confidence intervals.

Source: AIHW Mortality Database.

Figure 6.4: Age-standardised mortality rates for cervical cancer in women aged 20–69 years, by geographic region, 1998–2001 and 2002–2005

Table 6.4: Age-standardised mortality rates for cervical cancer in women aged 20–69 years, by geographic region, 1998–2001 and 2002–2005

	Major cities		Regional		Remote	
	1998–2001	2002–2005	1998–2001	2002–2005	1998–2001	2002–2005
	Number of deaths per 100,000 women					
AS rate	2.3	1.8	2.5	2.3	4.2	2.3
95% CI	2.1–2.6	1.6–2.0	2.2–2.9	2.0–2.7	2.6–6.3	1.2–3.9

Note: Rates are the number of deaths from cervical cancer per 100,000 women and age-standardised to the Australian population at 30 June 2001.

- During the 4-year period 2002–2005, there were 560 deaths in major cities (62.7% of all cervical cancer deaths in that period), 308 deaths in regional areas (34.5% of all cervical cancer deaths) and 19 deaths in remote areas (2.1% of all cervical cancer deaths).
- In women aged 20–69 years, age-standardised mortality rates from cervical cancer were 1.8 deaths per 100,000 women in major cities, 2.3 deaths per 100,000 women in regional

locations, and 2.3 deaths per 100,000 women in remote locations. These were not significantly different.

- In major cities, the age-standardised mortality rate for women aged 20–69 years declined significantly between the periods 1998–2001 and 2002–2005 whereas in regional areas there was no change between the two periods. The largest overall decline in mortality from 4.2 to 2.3 deaths per 100,000 women was in remote areas, but the small numbers of women involved precluded significance, and this apparent decline in mortality should therefore be treated with caution.

For more information, see tables 45 and 46 beginning on page 90.

Indicator 6.3 Indigenous mortality

Mortality rate for cervical cancer per 100,000 estimated resident female population in a 4-year period by Indigenous status for women of all ages and for the target age group 20–69 years.

Mortality by Indigenous status

Note: Bars on graphs represent 95% confidence intervals.

Source: AIHW Mortality Database.

Figure 6.5: Age-standardised mortality rates for cervical cancer in women aged 20–69 years (Queensland, Western Australia, South Australia and Northern Territory), by Indigenous status, 2002–2005

Table 6.5: Age-standardised mortality rates for cervical cancer in women aged 20–69 years (Queensland, Western Australia, South Australia and Northern Territory), by Indigenous status, 2002–2005

	Aboriginal and Torres Strait Islander women	Other Australian women
	Number of deaths per 100,000 women	
AS rate	8.3	2.0
95% CI	4.7–13.4	1.7–2.3

Notes

1. Rates are the number of deaths from cervical cancer per 100,000 women and age-standardised to the Australian population at 30 June 2001.
2. Only Indigenous mortality data from Queensland, Western Australia, South Australia and the Northern Territory are considered to be statistically reliable; therefore, cervical cancer mortality data used in this analysis are confined to these jurisdictions.

- The age-standardised mortality rate attributable to cervical cancer among Aboriginal and Torres Strait Islander women aged 20–69 years in the 2002–2005 period was 8.3 deaths per 100,000 women compared with 2.0 deaths per 100,000 women for other Australian women in the same age range.

For more information, see Table 47 on page 92.

Additional data tables

As well as the additional data tables that follow, trends data tables are published on the AIHW's website at <www.aihw.gov.au>.

Indicator 1.1.1 Two-year participation

Table 1: Proportion of women participating in the National Cervical Screening Program, by 5-year age group, 1997–1998 to 2005–2006

Age group (years)	1997–1998	1999–2000	2001–2002	2003–2004	2005–2006
			Per cent		
20–24	51.4	51.4	50.0	47.8	47.0
25–29	65.0	62.2	60.3	58.1	56.3
30–34	68.2	65.8	64.1	62.8	62.1
35–39	67.8	65.5	64.4	63.8	63.7
40–44	65.7	64.3	64.2	64.3	64.0
45–49	66.2	64.7	65.4	65.9	66.3
50–54	64.7	63.1	63.0	64.0	64.9
55–59	64.8	64.4	65.7	66.6	67.8
60–64	53.8	54.7	56.1	57.2	58.2
65–69	44.6	45.5	48.0	49.6	51.1
70–74	21.9	19.9	18.9	17.3	16.8
75–79	8.3	7.6	7.7	6.3	5.6
80+	2.7	2.5	2.5	1.9	1.6
Ages 20 years and over					
Crude rate	57.2	55.8	55.1	54.5	54.3
AS rate	56.2	54.9	54.6	54.2	54.1
95% CI	56.1–56.3	54.9–55.0	54.6–54.7	54.1–54.3	54.1–54.2
Ages 20–69 years					
Crude rate	62.8	61.5	61.0	60.5	60.4
AS rate	62.6	61.3	61.0	60.7	60.6
95% CI	62.5–62.6	61.2–61.3	60.9–61.0	60.6–60.7	60.6–60.7

Notes

1. Rates are the number of women screened as a percentage of the eligible female population calculated as the average of the Australian Bureau of Statistics estimated resident population and age-standardised to the Australian population at 30 June 2001.
2. Participation rates have been adjusted for the estimated proportion of women who have had a hysterectomy.
3. These data exclude women who have opted not to be on the cervical cytology register.
4. For a more comprehensive understanding of the data presented above please refer Table 2 for each of the periods reported above because not all jurisdictions were able to supply data for some years and there were differences in how they reported their data for some reporting periods.

Source: AIHW analysis of state and territory Cervical Cytology Registry data.

Table 2: Proportion of women participating in the National Cervical Screening Program, by state and territory, 1997–1998 to 2005–2006

Period	NSW	Vic[(a)]	Qld[(b)]	WA[(c)]	SA	Tas	ACT[(d)]	NT	Australia
					Per cent				
Ages 20 years and over									
1997–1998	52.0	60.3	. .	57.5	58.7	57.9	58.8	54.4	56.2
1999–2000	52.8	58.4	52.3	55.2	58.0	56.8	56.4	57.8	54.9
2001–2002	53.2	58.0	50.7	54.3	58.4	57.8	56.6	55.7	54.6
2003–2004	52.1	57.7	51.9	53.4	58.2	55.1	56.0	53.8	54.2
2005–2006	52.3	57.2	51.7	54.0	57.7	55.4	57.0	48.8	54.1
Ages 20–69 years									
1997–1998	58.1	66.9	. .	64.2	65.2	65.1	65.4	60.2	62.6
1999–2000	58.9	65.2	58.1	61.7	64.7	63.9	63.0	63.6	61.3
2001–2002	59.4	64.9	56.3	60.7	65.2	65.0	63.3	61.4	61.0
2003–2004	58.4	64.8	57.7	59.8	65.1	62.0	62.7	59.7	60.7
2005–2006	58.7	64.3	57.7	60.5	64.5	62.4	63.8	54.5	60.6

. . Not applicable.

(a) In the 1999–2000, 2001–2002, 2003–2004 and 2005–2006 reporting periods the Victorian registries only registered women with a Victorian address.

(b) Queensland Health Pap smear register began operations in February 1999; therefore no data are available for 1997–1998.

(c) In the 1999–2000 reporting period the Western Australia registry only registered women with a Western Australia address.

(d) Since the National Cervical Screening Program commenced, the Australian Capital Territory has only registered women with an Australian Capital Territory address.

Notes

1. Rates are the number of women screened as a percentage of the eligible female population calculated as the average of the Australian Bureau of Statistics estimated resident population and age-standardised to the Australian population at 30 June 2001.
2. Participation rates have been adjusted for the estimated proportion of women who have had a hysterectomy.
3. These data exclude women who have opted not to be on the cervical cytology register.

Source: AIHW analysis of state and territory Cervical Cytology Registry data.

Table 3: Number of women participating in the National Cervical Screening Program, by 5-year age group, and state and territory, 2005–2006

Age group (years)	NSW	Vic[(a)]	Qld	WA	SA	Tas	ACT[(a)]	NT	Australia
					Number				
20–24	99,038	83,967	68,843	36,162	26,523	8,681	6,970	4,113	334,297
25–29	124,765	101,371	74,792	38,777	28,546	8,503	7,817	4,723	389,294
30–34	153,676	122,540	87,126	45,204	33,557	10,014	8,416	4,952	465,485
35–39	147,685	123,703	85,538	46,275	35,244	10,426	8,020	4,585	461,476
40–44	144,655	117,843	84,094	45,159	35,630	10,785	7,706	3,997	449,869
45–49	130,656	107,382	75,591	40,628	33,359	10,055	7,015	3,467	408,153
50–54	107,326	89,537	61,496	33,060	28,338	8,617	6,089	2,746	337,209
55–59	88,458	75,923	51,246	26,431	24,454	7,229	5,035	1,863	280,639
60–64	61,609	52,693	35,391	16,876	17,031	5,005	3,136	1,000	192,741
65–69	41,858	37,806	22,973	11,991	12,391	3,415	1,986	510	132,930
70–74	11,932	9,182	7,725	3,242	3,864	759	496	101	37,301
75–79	3,790	2,426	2,373	924	1,415	205	136	42	11,311
80+	1,566	1,183	1,080	495	617	87	49	14	5,091
Not stated	160	0	0	0	23	0	0	0	183
Ages 20 years and over	**1,117,174**	**925,555**	**658,268**	**345,224**	**280,992**	**83,781**	**62,871**	**32,113**	**3,505,978**
Ages 20–69 years	**1,099,726**	**912,764**	**647,090**	**340,563**	**275,073**	**82,730**	**62,190**	**31,956**	**3,452,092**

(a) The Victorian and Australian Capital Territory registries only register women with a Victorian or Australian Capital Territory address, respectively.

Note: These numbers may be overestimated because of double counting of some women between some states. This may be the result of difficulty in identifying state of residence for women in border areas, tests inadvertently transferred to interstate registers and inclusion of women resident overseas; however, the impact of double counting is probably very small.

Source: AIHW analysis of state and territory Cervical Cytology Registry data.

Table 4: Proportion of women participating in the National Cervical Screening Program, by 5-year age group, and state and territory, 2005–2006

Age group (years)	NSW	Vic[(a)]	Qld	WA	SA	Tas	ACT[(a)]	NT	Australia
					Per cent				
20–24	43.1	47.1	48.1	51.3	50.8	56.7	48.7	50.3	47.0
25–29	53.9	57.8	55.5	57.9	60.4	61.5	58.0	53.9	56.3
30–34	61.1	64.3	59.3	62.8	65.8	64.2	64.0	55.8	62.1
35–39	62.7	66.6	60.2	64.2	67.1	64.8	66.5	56.7	63.7
40–44	62.6	67.6	60.5	64.1	67.5	65.3	66.9	56.7	64.0
45–49	64.6	70.8	62.8	65.4	69.6	65.8	67.6	57.9	66.3
50–54	63.3	70.3	60.6	62.7	68.6	65.3	68.5	56.6	64.9
55–59	65.6	74.4	62.6	65.4	72.2	66.7	73.9	58.3	67.8
60–64	55.9	64.8	54.1	54.4	62.5	56.5	65.4	48.1	58.2
65–69	47.6	57.8	46.9	49.5	56.5	48.7	58.8	43.2	51.1
70–74	15.6	16.1	19.4	16.2	20.1	12.8	18.6	13.7	16.8
75–79	5.4	4.6	6.7	5.3	7.6	3.9	6.0	8.1	5.6
80+	1.4	1.5	2.0	1.9	2.1	1.0	1.4	2.5	1.6
Ages 20 years and over									
Crude rate	52.2	57.1	52.6	55.2	56.7	55.1	58.7	53.5	54.3
AS rate	52.3	57.2	51.7	54.0	57.7	55.4	57.0	48.8	54.1
95% CI	52.2–52.4	57.1–57.4	51.6–51.9	53.8–54.2	57.5–57.9	55.0–55.8	56.6–57.5	48.2–49.3	54.1–54.2
Ages 20–69 years									
Crude rate	58.4	63.8	57.6	60.6	64.3	62.4	63.0	54.9	60.4
AS rate	58.7	64.3	57.7	60.5	64.5	62.4	63.8	54.5	60.6
95% CI	58.5–58.8	64.1–64.4	57.6–57.8	60.3–60.8	64.2–64.7	62.0–62.8	63.3–64.3	53.9–55.2	60.6–60.7

(a) The Victorian and Australian Capital Territory registries only register women with a Victorian or Australian Capital Territory address, respectively.

Notes

1. Rates are the number of women screened as a percentage of the eligible female population calculated as the average of the Australian Bureau of Statistics estimated resident population and age-standardised to the Australian population at 30 June 2001.
2. Participation rates have been adjusted for the estimated proportion of women who have had a hysterectomy.
3. These data exclude women who have opted not to be on the cervical cytology register.

Source: AIHW analysis of state and territory Cervical Cytology Registry data.

Indicator 1.1.2 Three-year participation

Table 5: Number of women participating in the National Cervical Screening Program over 3 years, by 5-year age group, and state and territory, 2004–2006

Age group (years)	NSW	Vic[(a)]	Qld	WA	SA	Tas[(b)]	ACT[(a)]	NT	Australia
					Number				
20–24	129,186	108,407	87,408	45,170	33,815	. .	9,085	5,412	418,483
25–29	158,839	127,797	93,941	48,141	35,833	. .	10,019	6,220	480,790
30–34	191,105	153,305	108,589	55,898	42,080	. .	10,636	6,548	568,161
35–39	178,994	147,265	102,437	55,078	42,569	. .	9,913	5,912	542,168
40–44	175,479	141,050	101,582	53,495	43,236	. .	9,457	5,107	529,406
45–49	155,053	124,378	88,251	47,090	39,210	. .	8,566	4,384	466,932
50–54	125,789	103,008	71,598	37,540	32,931	. .	7,305	3,486	381,657
55–59	101,855	84,701	58,139	29,034	27,538	. .	6,057	2,305	309,629
60–64	69,954	57,842	39,099	18,418	18,721	. .	3,678	1,258	208,970
65–69	49,586	41,583	25,406	13,139	13,841	. .	2,419	651	146,625
70–74	15,565	10,910	9,329	3,744	4,469	. .	664	148	44,829
75–79	5,123	3,290	3,232	1,191	1,797	. .	183	57	14,873
80+	2,297	1,629	1,520	693	802	. .	70	18	7,029
Not stated	350	0	0	0	26	. .	0	0	376
Ages 20 years and over	**1,359,175**	**1,105,166**	**790,531**	**408,631**	**336,868**	**. .**	**78,052**	**41,506**	**4,119,929**
Ages 20–69 years	**1,335,840**	**1,089,336**	**776,450**	**403,003**	**329,774**	**. .**	**77,135**	**41,283**	**4,052,821**

. . Not applicable.

(a) The Victorian and Australian Capital Territory registries only register women with a Victorian or Australian Capital Territory address, respectively.

(b) Tasmania data were not available at the time of preparation of this report.

Note: These numbers may be overestimated because of double counting of some women between some states. This may be the result of difficulty in identifying state of residence for women in border areas, tests inadvertently transferred to interstate registers and inclusion of women resident overseas; however, the impact of double counting is probably very small.

Source: AIHW analysis of state and territory Cervical Cytology Registry data.

Table 6: Proportion of women participating in the National Cervical Screening Program over 3 years, by 5-year age group, and state and territory, 2004–2006

Age group (years)	NSW	Vic[(a)]	Qld	WA	SA	Tas[(b)]	ACT[(a)]	NT	Australia
					Per cent				
20–24	56.7	61.6	62.2	64.9	65.7	. .	63.9	67.1	60.9
25–29	68.9	73.3	70.4	72.4	76.2	. .	75.3	72.1	71.3
30–34	75.6	79.8	73.9	77.4	81.6	. .	80.6	73.3	77.0
35–39	76.4	80.1	73.2	77.1	81.4	. .	82.8	74.2	77.2
40–44	75.6	81.0	73.4	76.0	81.5	. .	81.6	72.5	77.1
45–49	77.3	82.9	74.4	76.5	82.6	. .	82.8	74.4	78.5
50–54	74.7	81.5	71.3	72.0	80.0	. .	82.1	73.3	76.0
55–59	76.5	84.5	72.4	73.5	82.4	. .	90.4	74.9	78.1
60–64	64.8	72.7	61.5	60.7	70.3	. .	78.9	62.7	66.4
65–69	56.9	64.3	53.0	55.1	63.8	. .	73.1	57.5	58.7
70–74	20.3	19.1	23.6	18.8	23.1	. .	25.2	20.5	20.8
75–79	7.2	6.2	9.1	6.9	9.6	. .	8.0	11.2	7.5
80+	2.2	2.1	2.9	2.7	2.8	. .	2.1	3.3	2.4
Ages 20 years and over									
Crude rate	63.8	68.6	63.9	65.9	68.3	. .	73.3	70.0	65.8
AS rate	63.7	68.5	62.6	64.2	69.4	. .	70.9	63.8	65.3
95% CI	63.6–63.8	68.4–68.6	62.5–62.8	64.0–64.4	69.2–69.6	. .	70.4–71.4	63.1–64.5	65.3–65.4
Ages 20–69 years									
Crude rate	71.2	76.6	69.9	72.3	77.5	. .	78.5	71.8	73.1
AS rate	71.3	76.9	69.8	72.0	77.5	. .	79.3	71.2	73.1
95% CI	71.2–71.5	76.7–77.0	69.6–69.9	71.7–72.2	77.3–77.8	. .	78.7–79.9	70.5–71.9	73.0–73.2

. . Not applicable.

(a) The Victorian and Australian Capital Territory registries only register women with a Victorian or Australian Capital Territory address, respectively.

(b) Tasmania data were not available at the time of preparation of this report.

Notes

1. Rates are the number of women screened as a percentage of the eligible female population calculated as the average of the Australian Bureau of Statistics estimated resident population and age-standardised to the Australian population at 30 June 2001.
2. Participation rates have been adjusted for the estimated proportion of women who have had a hysterectomy.
3. These data exclude women who have opted not to be on the cervical cytology register.

Source: AIHW analysis of state and territory Cervical Cytology Registry data.

Indicator 1.1.3 Five-year participation

Table 7: Number of women participating in the National Cervical Screening Program over 5 years, by 5-year age group, and state and territory, 2002–2006

Age group (years)	NSW	Vic[(a)]	Qld	WA	SA	Tas[(b)]	ACT[(a)]	NT	Australia
					Number				
20–24	178,705	144,568	114,725	57,978	43,317	. .	11,915	7,378	558,586
25–29	207,020	162,636	120,568	60,501	44,524	. .	12,893	8,480	616,622
30–34	235,865	183,961	131,778	67,592	50,575	. .	13,351	8,787	691,909
35–39	212,964	166,415	120,343	63,513	48,996	. .	12,034	7,615	631,880
40–44	204,992	156,662	116,269	60,558	48,439	. .	11,340	6,478	604,738
45–49	176,104	133,404	96,958	50,780	41,954	. .	10,136	5,463	514,799
50–54	141,483	110,448	78,381	39,448	34,896	. .	8,607	4,277	417,540
55–59	110,948	85,478	60,246	28,089	27,228	. .	6,954	2,847	321,790
60–64	75,880	58,399	39,450	18,642	18,859	. .	4,214	1,517	216,961
65–69	58,018	42,504	26,307	13,038	13,692	. .	3,098	838	157,495
70–74	21,194	13,275	11,394	4,517	5,241	. .	964	280	56,865
75–79	7,808	4,880	4,608	1,790	2,408	. .	267	97	21,858
80+	3,650	2,454	2,444	1,033	1,153	. .	117	36	10,887
Not stated	2,199	0	0	0	37	. .	0	0	2,236
Ages 20 years and over	**1,636,830**	**1,265,084**	**923,471**	**467,479**	**381,319**	**. .**	**95,890**	**54,093**	**4,824,166**
Ages 20–69 years	**1,601,979**	**1,244,475**	**905,025**	**460,139**	**372,480**	**. .**	**94,542**	**53,680**	**4,732,320**

. . Not applicable.

(a) The Victorian and Australian Capital Territory registries only register women with a Victorian or Australian Capital Territory address, respectively.

(b) Tasmania data were not available at the time of preparation of this report.

Note: These numbers may be overestimated because of double counting of some women between some states. This may be the result of difficulty in identifying state of residence for women in border areas, tests inadvertently transferred to interstate registers and inclusion of women resident overseas; however, the impact of double counting is probably very small.

Source: AIHW analysis of state and territory Cervical Cytology Registry data.

Table 8: Proportion of women participating in the National Cervical Screening Program over 5 years, by 5-year age group, and state and territory, 2002–2006

Age group (years)	NSW	Vic[(b)]	Qld	WA	SA	Tas[(c)]	ACT[(a)(b)]	NT[(a)]	Australia
					Per cent				
20–24	79.7	83.9	84.5	85.3	86.6	. .	85.1	93.6	83.1
25–29	89.3	93.4	91.3	91.4	94.4	. .	98.0	98.7	91.6
30–34	93.1	95.3	90.9	93.3	96.6	. .	101.3	97.8	93.7
35–39	90.6	91.5	87.5	89.5	93.3	. .	100.4	96.9	90.5
40–44	88.3	90.5	85.5	86.6	90.9	. .	97.3	92.7	88.5
45–49	89.3	90.7	84.3	84.0	89.8	. .	98.8	95.0	88.4
50–54	84.8	88.3	79.7	77.1	85.4	. .	96.6	92.8	84.2
55–59	86.1	88.9	78.9	75.0	84.6	. .	108.5	99.4	84.6
60–64	72.6	75.9	65.6	63.8	73.5	. .	94.9	81.4	71.7
65–69	67.8	67.1	57.4	56.5	64.6	. .	97.0	79.3	64.7
70–74	27.3	23.1	28.9	22.9	26.7	. .	37.2	40.0	26.2
75–79	11.0	9.3	13.2	10.5	12.8	. .	11.6	20.1	11.1
80+	3.5	3.2	4.8	4.2	4.1	. .	3.7	6.9	3.8
Ages 20 years and over									
Crude rate	77.5	79.6	76.5	76.6	78.0	. .	91.1	93.0	78.2
AS rate	76.8	78.8	74.4	74.0	78.9	. .	87.9	85.0	77.0
95% CI	76.7–77.0	78.6–78.9	74.3–74.6	73.8–74.2	78.6–79.1	. .	87.3–88.4	84.3–85.8	76.9–77.0
Ages 20–69 years									
Crude rate	86.1	88.7	83.6	83.8	88.3	. .	97.3	95.1	86.5
AS rate	85.7	88.2	82.8	82.7	88.0	. .	97.8	93.9	85.9
95% CI	85.6–85.9	88.1–88.4	82.6–82.9	82.5–83.0	87.7–88.3	. .	97.1–98.4	93.0–94.8	85.8–86.0

. . Not applicable.

(a) Australian Capital Territory and Northern Territory have populations that are both highly transient and relatively small, which may lead to erroneously high participation rates in some age groups over a 5-year period.

(b) The Victorian and Australian Capital Territory registries only register women with a Victorian or Australian Capital Territory address. respectively.

(c) Tasmania data were not available at the time of preparation of this report.

Notes

1. Rates are the number of women screened as a percentage of the eligible female population calculated as the average of the Australian Bureau of Statistics estimated resident population and age-standardised to the Australian population at 30 June 2001.
2. Participation rates have been adjusted for the estimated proportion of women who have had a hysterectomy.
3. These data exclude women who have opted not to be on the cervical cytology register.

Source: AIHW analysis of state and territory Cervical Cytology Registry data.

Indicator 1.2 Participation by region

Table 9: Number of women participating in the National Cervical Screening Program, by geographic region, 2005–2006

Age group (years)	Major cities	Inner regional	Outer regional	Remote	Very remote	Unknown	Australia
				Number			
20–24	230,589	55,931	26,506	4,819	3,386	744	321,975
25–29	279,691	58,641	30,027	5,767	3,564	762	378,452
30–34	331,999	74,100	35,871	6,624	3,772	735	453,101
35–39	321,373	80,030	37,452	6,467	3,381	727	449,430
40–44	304,543	84,411	38,334	6,147	2,975	774	437,185
45–49	274,302	78,371	35,356	5,363	2,551	674	396,617
50–54	226,813	65,263	28,658	4,189	1,796	567	327,284
55–59	187,498	55,646	24,193	3,258	1,307	497	272,398
60–64	123,865	41,816	17,699	2,315	790	316	186,800
65–69	84,766	29,316	12,696	1,477	495	186	128,937
70–74	24,985	7,413	3,489	452	128	40	36,508
75–79	7,929	1,947	964	135	46	11	11,032
80+	3,663	825	366	65	8	5	4,931
Not stated	150	21	10	0	0	0	181
Ages 20 years and over	**2,402,167**	**633,730**	**291,621**	**47,079**	**24,198**	**6,038**	**3,404,832**
Ages 20–69 years	**2,365,439**	**623,524**	**286,792**	**46,427**	**24,016**	**5,982**	**3,352,180**

Notes

1. Tasmania data were not available at the time of preparation of this report.
2. The Australian Standard Geographical Classification was used to create the above categories (ABS 2001).
3. These numbers may be overestimated because of double counting of some women between some states. This may be the result of difficulty in identifying state of residence for women in border areas, tests inadvertently transferred to interstate registers and inclusion of women resident overseas; however, the impact of double counting is probably very small.

Source: AIHW analysis of state and territory Cervical Cytology Registry data.

Table 10: Proportion of women participating in the National Cervical Screening Program, by geographic region, 2005–2006

Age group (years)	Major cities	Inner regional	Outer regional	Remote	Very remote	Australia
			Per cent			
20–24	45.8	51.9	53.0	56.6	52.8	47.6
25–29	57.4	56.6	56.3	56.4	50.7	57.2
30–34	63.1	58.1	56.7	54.6	51.7	61.5
35–39	66.8	60.9	59.6	56.9	56.0	64.9
40–44	65.7	60.9	58.9	58.8	55.2	64.0
45–49	68.6	64.2	62.6	59.1	60.6	67.1
50–54	66.9	62.8	59.7	58.5	52.8	65.2
55–59	70.1	64.8	62.2	60.8	54.0	68.1
60–64	60.6	58.5	55.1	54.6	45.5	59.5
65–69	51.5	50.0	49.1	48.4	41.9	50.9
70–74	17.5	14.9	16.5	18.6	13.7	16.8
75–79	5.9	4.4	5.2	7.0	6.7	5.5
80+	1.8	1.3	1.4	2.4	0.8	1.6
Ages 20 years and over						
Crude rate	55.6	52.5	51.8	53.1	50.8	54.7
AS rate	55.5	52.8	51.6	51.0	47.3	54.5
95% CI	55.4–55.6	52.6–52.9	51.4–51.7	50.5–51.5	46.6–47.9	54.4–54.6
Ages 20–69 years						
Crude rate	61.6	59.3	57.8	56.9	53.2	60.8
AS rate	62.1	59.3	57.8	56.9	53.0	61.1
95% CI	62.1–62.2	59.1–59.4	57.5–58.0	56.4–57.4	52.3–53.7	61.0–61.1

Notes

1. Tasmania data were not available at the time of preparation of this report.
2. Rates are the number of women screened as a percentage of the eligible female population calculated as the average of the Australian Bureau of Statistics estimated resident population and age-standardised to the Australian population at 30 June 2001.
3. Estimated resident population from 2005 only has been used, as 2006 population figures for geographic location were not available at the time of preparation of this report.
4. Participation rates have been adjusted for the estimated proportion of women who have had a hysterectomy.
5. These data exclude women who have opted not to be on the cervical cytology register.
6. The Australian Standard Geographical Classification was used to create the above categories (ABS 2001).

Source: AIHW analysis of state and territory Cervical Cytology Registry data.

Indicator 1.3 Participation by socioeconomic status

Table 11: Number of women participating in the National Cervical Screening Program, by socioeconomic status, 2005–2006

Age group (years)	First quintile	Second quintile	Third quintile	Fourth quintile	Fifth quintile	Unknown	Australia
				Number			
20–24	72,050	67,820	63,419	60,842	54,597	3,117	321,845
25–29	86,923	80,656	73,411	69,665	64,318	3,294	378,267
30–34	106,763	98,713	88,435	81,410	73,805	3,799	452,925
35–39	107,267	98,373	87,592	81,063	71,291	3,695	449,281
40–44	104,186	94,519	85,693	80,326	68,791	3,529	437,044
45–49	96,596	84,258	76,963	72,136	63,375	3,161	396,489
50–54	82,052	67,957	62,923	59,945	51,606	2,690	327,173
55–59	68,827	55,592	51,946	50,401	43,231	2,295	272,292
60–64	44,711	36,923	36,218	36,679	30,854	1,339	186,724
65–69	28,451	24,931	25,326	26,568	22,874	748	128,898
70–74	8,344	7,018	7,151	7,484	6,326	176	36,499
75–79	2,755	2,141	2,054	2,124	1,910	44	11,028
80+	1,272	951	971	900	821	19	4,934
Not stated	55	24	29	20	51	2	181
Ages 20 years and over	**810,252**	**719,876**	**662,131**	**629,563**	**553,850**	**27,908**	**3,403,580**
Ages 20–69 years	**797,826**	**709,742**	**651,926**	**619,035**	**544,742**	**27,667**	**3,350,938**

Notes

1. Tasmania data were not available at the time of preparation of this report.
2. The first quintile corresponds to the highest level of socioeconomic status and the fifth to the lowest.
3. These numbers may be overestimated because of double counting of some women between some states. This may be the result of difficulty in identifying state of residence for women in border areas, tests inadvertently transferred to interstate registers and inclusion of women resident overseas; however, the impact of double counting is probably very small.

Source: AIHW analysis of state and territory Cervical Cytology Registry data.

Table 12: Proportion of women participating in the National Cervical Screening Program, by socioeconomic status, 2005–2006

Age group (years)	First quintile	Second quintile	Third quintile	Fourth quintile	Fifth quintile	Australia
			Per cent			
20–24	50.2	51.1	50.7	51.8	45.5	50.4
25–29	64.5	63.2	57.9	59.3	55.0	60.6
30–34	72.3	69.4	62.3	60.9	57.0	65.2
35–39	77.3	73.4	65.0	62.8	59.7	68.5
40–44	75.7	72.8	64.7	62.1	58.4	67.5
45–49	79.1	75.3	67.6	64.4	63.2	70.8
50–54	77.5	72.9	65.8	63.1	60.9	68.9
55–59	81.9	75.7	68.7	65.1	63.5	71.9
60–64	72.1	66.2	59.4	57.2	56.7	62.8
65–69	60.5	57.7	50.5	49.3	50.0	53.7
70–74	20.8	18.9	16.5	16.2	16.0	17.7
75–79	7.1	6.2	5.1	5.1	5.5	5.8
80+	1.9	1.8	1.6	1.6	1.7	1.7
Ages 20 years and over						
Crude rate	63.8	61.5	55.1	53.6	51.3	57.7
AS rate	63.9	61.0	55.1	53.7	51.1	57.6
95% CI	63.7–64.0	60.8–61.1	55.0–55.3	53.6–53.8	51.0–51.3	57.5–57.7
Ages 20–69 years						
Crude rate	71.0	68.0	61.7	60.1	56.9	64.3
AS rate	71.5	68.3	61.8	60.2	57.3	64.6
95% CI	71.3–71.7	68.2–68.5	61.7–62.0	60.0–60.3	57.1–57.4	64.5–64.6

Notes

1. Tasmania data were unavailable at the time of preparation of this report.
2. Rates are the number of women screened as a percentage of the eligible female population calculated as the average of the Australian Bureau of Statistics estimated resident population and age-standardised to the Australian population at 30 June 2001.
3. Estimated resident population from 2005 only has been used, as 2006 population figures for socioeconomic status were not available at the time of preparation of this report
4. Participation rates have been adjusted for the estimated proportion of women who have had a hysterectomy.
5. These data exclude women who have opted not to be on the cervical cytology register.
6. The first quintile corresponds to the highest level of socioeconomic status and the fifth to the lowest.

Source: AIHW analysis of state and territory Cervical Cytology Registry data.

Indicator 2 Early re-screening

Table 13: Number of women with repeat screenings following a normal Pap test in Australian cohorts, 1996–2005

No. of tests	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
					Number					
0	52,617	76,560	78,693	119,556	114,902	121,736	120,609	125,979	124,416	153,857
1	22,998	53,456	48,088	47,916	46,105	43,594	40,334	38,772	36,761	43,798
2	5,088	10,922	9,572	6,591	6,075	5,296	5,162	4,795	4,367	4,932
3	1,078	2,080	1,568	1,310	1,199	1,092	1,051	982	800	817
4	296	508	412	269	251	206	195	169	184	134
5 or more	99	196	157	81	108	61	70	65	58	27

Notes

1. The indicator reported on a 2-year period following a normal Pap test up to and including 1998; in 1999 the indicator was changed to a 21-month interval; therefore data up to and including 1998 are not directly comparable with data in subsequent years.
2. The reference period for the 1996, 1997 and 1998 cohorts was the 2-year period 1 January to 31 December the following year.
3. From 1999, the reference period for this indicator was the 21 months following the index month of February (except for Queensland where the index month for 1999 was March).

Source: AIHW analysis of state and territory Cervical Cytology Registry data.

Table 14: Percentage of women with repeat screenings following a normal Pap test in Australian cohorts, 1996–2005

No. of tests	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
					Per cent					
0	64.0	53.3	56.8	68.0	68.1	70.8	72.0	73.8	74.7	75.6
1	28.0	37.2	34.7	27.3	27.3	25.3	24.1	22.7	22.1	21.5
2	6.2	7.6	6.9	3.8	3.6	3.1	3.1	2.8	2.6	2.4
3	1.3	1.4	1.1	0.7	0.7	0.6	0.6	0.6	0.5	0.4
4	0.4	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1
5 or more	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0

Notes

1. The indicator reported on a 2-year period following a normal Pap test up to and including 1998; in 1999 the indicator was changed to a 21-month interval; therefore data up to and including 1998 are not directly comparable with data in subsequent years.
2. The reference period for the 1996, 1997 and 1998 cohorts was the 2-year period 1 January to 31 December the following year.
3. From 1999 the reference period for this indicator was the 21 months following the index month of February (except for Queensland where the index month for 1999 was March).

Source: AIHW analysis of state and territory Cervical Cytology Registry data.

Table 15: Number of women with repeat screenings in the 21 months following a normal Pap test in the 2005 cohort, by state and territory and Australia

No. of tests	NSW	Vic[(a)]	Qld	WA	SA	Tas	ACT[(a)]	NT	Australia 2005 cohort
					Number				
0	70,182	31,315	23,774	12,011	9,938	2,695	2,683	1,259	153,857
1	20,550	9,229	6,717	3,354	2,277	687	639	345	43,798
2	2,134	1,173	863	333	223	86	82	38	4,932
3	307	235	170	39	36	11	9	10	817
4	40	39	41	6	2	4	2	0	134
5 or more	6	12	5	0	1	1	0	2	27

(a) The Victorian and Australian Capital Territory only register women with a Victorian or Australian Capital Territory address, respectively.

Notes

1. The reference period for this indicator was the 21 months following the index month of February.
2. These numbers may be overestimated because of double counting of some women between some states. This may be the result of difficulty in identifying state of residence for women in border areas, tests inadvertently transferred to interstate registers and inclusion of women resident overseas; however, the impact of double counting is probably very small.

Source: AIHW analysis of state and territory Cervical Cytology Registry data.

Table 16: Proportion of women with repeat screenings in the 21 months following a normal Pap test in the 2005 cohort, by state and territory and Australia

No. of tests	NSW	Vic[(a)]	Qld	WA	SA	Tas	ACT[(a)]	NT	Australia 2005 cohort
					Per cent				
0	75.3	74.6	75.3	76.3	79.7	77.4	78.6	76.1	75.6
1	22.0	22.0	21.3	21.3	18.2	19.7	18.7	20.9	21.5
2	2.3	2.8	2.7	2.1	1.8	2.5	2.4	2.3	2.4
3	0.3	0.6	0.5	0.2	0.3	0.3	0.3	0.6	0.4
4	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.1
5 or more	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0

(a) The Victorian and Australian Capital Territory only register women with a Victorian or Australian Capital Territory address, respectively.

Notes

1. The reference period for this indicator was the 21 months following the index month of February.
2. These numbers may be overestimated because of double counting of some women between some states. This may be the result of difficulty in identifying state of residence for women in border areas, tests inadvertently transferred to interstate registers and inclusion of women resident overseas; however, the impact of double counting is probably very small.

Source: AIHW analysis of state and territory Cervical Cytology Registry data.

Indicator 3 Low-grade abnormality detection

Table 17: Number of low- and high-grade abnormalities on histology for women aged 20–69 years, 1998–2006

Abnormalities	1998	1999	2000	2001	2002	2003	2004	2005	2006
					Number				
Low-grade	14,411	15,753	19,985	18,126	18,781	18,443	16,627	16,274	15,118
High-grade	10,704	11,686	13,851	13,555	14,903	14,840	14,507	14,837	14,414
Total	**25,115**	**27,439**	**33,836**	**31,681**	**33,684**	**33,283**	**31,134**	**31,111**	**29,532**
Ratio	1.35	1.35	1.44	1.34	1.26	1.24	1.15	1.10	1.05
95% CI	1.31–1.38	1.32–1.38	1.41–1.47	1.31–1.37	1.23–1.29	1.22–1.27	1.12–1.17	1.07–1.12	1.03–1.07
					Per cent of screens				
Low-grade	0.9	1.0	1.1	1.0	1.0	1.0	0.9	0.8	0.78
High-grade	0.7	0.8	0.7	0.7	0.8	0.8	0.8	0.8	0.74
Total	**1.6**	**1.8**	**1.8**	**1.7**	**1.8**	**1.8**	**1.6**	**1.6**	**1.52**

Notes

1. The Queensland Health Pap smear register began operations in February 1999; therefore no data are available for 1997 and 1998.
2. Australian Capital Territory data were not available for 1997 and 1998.
3. Northern Territory data were not available for 2001.
4. These numbers may be overestimated because of double counting of some women between some states. This may be the result of difficulty in identifying state of residence for women in border areas, tests inadvertently transferred to interstate registers and inclusion of women resident overseas; however, the impact of double counting is probably very small.
5. There are small differences between the way this indicator was calculated between the states and territories, which may result in discrepancies when comparing totals with Indicator 4.

Source: AIHW analysis of state and territory Cervical Cytology Registry data.

Table 18: Number of low- and high-grade abnormalities on histology for women aged 20–69 years, by state and territory, 2006

Abnormalities	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
					Number				
Low-grade	5,787	2,725	3,053	1,419	1,104	371	475	184	15,118
High-grade	5,133	2,608	2,902	1,537	967	432	567	268	14,414
Total	**10,920**	**5,333**	**5,955**	**2,956**	**2,071**	**803**	**1,042**	**452**	**29,532**
Ratio	1.13	1.04	1.05	0.92	1.14	0.86	0.84	0.69	1.05
95% CI	1.09–1.17	0.99–1.10	1.00–1.11	0.86–0.99	1.05–1.24	0.75–0.99	0.74–0.95	0.57–0.83	1.03–1.07
					Per cent of screens				
Low-grade	0.9	0.5	0.8	0.8	0.8	0.8	0.8	1.1	0.78
High-grade	0.8	0.5	0.8	0.8	0.7	1.0	1.0	1.6	0.74
Total	**1.8**	**1.1**	**1.7**	**1.6**	**1.4**	**1.8**	**1.8**	**2.6**	**1.52**

Notes

1. These numbers may be overestimated because of double counting of some women between some states. This may be the result of difficulty in identifying state of residence for women in border areas, tests inadvertently transferred to interstate registers and inclusion of women resident overseas; however, the impact of double counting is probably very small.
2. There are small differences between the way this indicator was calculated between the states and territories, which may result in discrepancies when comparing totals with Indicator 4.

Source: AIHW analysis of state and territory Cervical Cytology Registry data.

Indicator 4 High-grade abnormality detection

Table 19: Number of histologically confirmed high-grade abnormalities, by 5-year age group, 1998–2006

Age group (years)	1998	1999	2000	2001	2002	2003	2004	2005	2006
					Number				
20–24	2,220	2,565	2,922	2,909	3,425	3,379	3,509	3,620	3,463
25–29	3,126	3,283	3,937	3,775	3,920	3,913	3,671	3,809	3,720
30–34	2,041	2,238	2,767	2,699	3,078	2,976	3,020	3,040	2,805
35–39	1,468	1,520	1,754	1,717	1,804	1,774	1,725	1,792	1,819
40–44	833	888	1,113	1,080	1,195	1,250	1,135	1,096	1,123
45–49	447	554	628	635	642	680	653	661	723
50–54	257	275	325	319	352	332	308	307	333
55–59	145	156	178	184	218	202	202	229	198
60–64	115	109	127	136	113	147	117	132	128
65–69	52	98	100	101	86	92	69	70	84
70–74	62	61	83	54	64	38	43	35	40
75–79	21	28	31	30	21	28	31	21	19
80–84	11	6	11	12	11	13	15	19	7
85+	4	3	3	3	13	9	4	11	7
Age not stated	4	5	3	1	1	0	1	1	0
Ages 20 years and over	**10,806**	**11,789**	**13,982**	**13,655**	**14,943**	**14,833**	**14,503**	**14,843**	**14,469**
Ages 20–69 years	**10,704**	**11,686**	**13,851**	**13,555**	**14,833**	**14,745**	**14,409**	**14,756**	**14,396**

Notes

1. The Queensland Health Pap smear register began operations in February 1999; therefore no data are available for 1997 and 1998.
2. Australian Capital Territory data were not available for 1997 and 1998.
3. Northern Territory data were not available for 2001.
4. These numbers may be overestimated because of double counting of some women between some states. This may be the result of difficulty in identifying state of residence for women in border areas, tests inadvertently transferred to interstate registers and inclusion of women resident overseas; however, the impact of double counting is probably very small.
5. There are small differences between the way this indicator was calculated between the states and territories, which may result in discrepancies when comparing totals with Indicator 3.

Source: AIHW analysis of state and territory Cervical Cytology Registry data.

Table 20: Rate of histologically confirmed high-grade abnormalities per 1,000 women screened, by 5-year age group, 1998–2006

Age group (years)	1998	1999	2000	2001	2002	2003	2004	2005	2006
				Number detected per 1,000 women screened					
20–24	14.3	16.8	16.3	16.3	18.9	18.5	19.4	19.2	18.4
25–29	13.9	15.0	15.5	15.6	16.7	16.9	16.8	17.3	16.9
30–34	8.8	10.0	10.3	10.1	11.3	11.0	11.3	11.3	10.9
35–39	6.3	6.7	6.5	6.6	6.9	6.9	6.8	6.9	7.0
40–44	4.1	4.4	4.5	4.4	4.8	5.0	4.4	4.3	4.5
45–49	2.6	3.2	3.0	3.0	3.0	3.2	2.9	2.9	3.1
50–54	1.9	2.0	1.9	1.8	2.0	1.8	1.7	1.6	1.8
55–59	1.6	1.7	1.5	1.5	1.7	1.5	1.4	1.5	1.2
60–64	1.7	1.6	1.5	1.5	1.3	1.6	1.2	1.3	1.2
65–69	1.0	2.0	1.7	1.6	1.4	1.4	1.0	1.0	1.1
70–74	2.9	2.9	3.2	2.1	2.7	1.7	2.0	1.7	2.0
75–79	3.4	4.1	3.8	3.9	2.5	3.5	4.5	3.2	3.1
80–84	6.0	3.0	4.3	4.9	4.2	5.2	6.7	8.8	3.5
85+	4.8	4.4	3.1	3.2	13.5	9.2	5.1	16.0	9.4
Ages 20 years and over									
Crude rate	6.8	7.5	7.3	7.2	7.8	7.7	7.5	7.6	7.3
AS rate	5.9	6.5	6.5	6.4	7.1	7.0	7.0	7.2	6.9
95% CI	5.7–6.1	6.3–6.7	6.3–6.6	6.3–6.6	7.0–7.3	6.9–7.2	6.8–7.2	7.0–7.5	6.7–7.1
Ages 20–69 years									
Crude rate	6.9	7.5	7.4	7.3	7.9	7.8	7.6	7.6	7.4
AS rate	6.2	6.9	6.9	6.9	7.5	7.5	7.4	7.5	7.3
95% CI	6.1–6.3	6.8–7.1	6.8–7.0	6.8–7.0	7.4–7.6	7.4–7.6	7.3–7.5	7.3–7.6	7.2–7.4

Notes

1. From 1997 through to 2001 inclusive South Australia grouped all women aged 70 years or more, and for the purposes of this table they appear in the 70–74 years age group.
2. The Queensland Health Pap smear register began operations in February 1999; therefore no data are available for 1997 and 1998.
3. Australian Capital Territory data were not available for 1997 and 1998.
4. Northern Territory data were not available for 2001.
5. These numbers may be overestimated because of double counting of some women between some states. This may be the result of difficulty in identifying state of residence for women in border areas, tests inadvertently transferred to interstate registers and inclusion of women resident overseas; however, the impact of double counting is probably very small.
6. There are small differences between the way this indicator was calculated between the states and territories, which may result in discrepancies when comparing totals with Indicator 3.

Source: AIHW analysis of state and territory Cervical Cytology Registry data.

Table 21: Number of histologically confirmed high-grade abnormalities, by 5-year age group, and state and territory, 2006

Age group (years)	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
					Number				
20–24	1,267	481	780	375	203	137	158	62	3,463
25–29	1,312	743	699	398	228	110	157	73	3,720
30–34	1,014	520	571	285	188	66	108	53	2,805
35–39	626	392	327	192	135	51	61	35	1,819
40–44	417	214	184	133	98	25	37	15	1,123
45–49	264	134	150	74	47	15	24	15	723
50–54	108	59	69	33	37	10	10	7	333
55–59	64	31	48	20	18	11	4	2	198
60–64	36	22	38	9	10	6	6	1	128
65–69	25	12	26	10	3	1	2	5	84
70–74	7	9	11	6	5	2	0	0	40
75–79	9	0	4	2	4	0	0	0	19
80–84	1	2	3	0	1	0	0	0	7
85+	1	0	3	2	1	0	0	0	7
Age not stated	0	0	0	0	0	0	0	0	0
Ages 20 years and over	**5,151**	**2,619**	**2,913**	**1,539**	**978**	**434**	**567**	**268**	**14,469**
Ages 20–69 years	**5,133**	**2,608**	**2,892**	**1,529**	**967**	**432**	**567**	**268**	**14,396**

Notes

1. These numbers may be overestimated because of double counting of some women between some states. This may be the result of difficulty in identifying state of residence for women in border areas, tests inadvertently transferred to interstate registers and inclusion of women resident overseas; however, the impact of double counting is probably very small.
2. There are small differences between the way this indicator was calculated between the states and territories, which may result in discrepancies when comparing totals with Indicator 3.

Source: AIHW analysis of state and territory Cervical Cytology Registry data.

Table 22: Rate of histologically confirmed high-grade abnormalities per 1,000 women screened, by 5-year age group, and state and territory, 2006

Age group (years)	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
				Number detected per 1,000 women screened					
20–24	23.3	10.3	20.3	18.2	14.4	28.7	22.3	27.7	18.3
25–29	18.9	13.2	16.6	18.0	14.9	23.7	20.1	28.8	16.7
30–34	12.0	7.8	12.0	11.5	10.8	12.6	12.8	20.3	10.8
35–39	7.5	5.7	6.8	7.4	7.1	9.2	7.6	14.4	6.9
40–44	5.2	3.3	4.0	5.4	5.2	4.5	4.8	7.0	4.5
45–49	3.6	2.2	3.5	3.3	2.6	2.8	3.4	7.9	3.1
50–54	1.8	1.2	2.0	1.8	2.4	2.1	1.6	4.9	1.7
55–59	1.3	0.7	1.7	1.4	1.4	2.9	0.8	2.0	1.2
60–64	1.0	0.7	1.9	1.0	1.1	2.2	1.9	1.8	1.2
65–69	1.1	0.6	2.0	1.6	0.5	0.5	1.0	18.0	1.1
70–74	1.1	1.8	2.7	3.4	2.4	4.8	0.0	0.0	2.0
75–79	4.4	0.0	3.2	3.9	5.4	0.0	0.0	0.0	3.1
80–84	1.7	4.2	7.0	0.0	4.0	0.0	0.0	0.0	3.5
85+	4.7	0.0	20.0	23.3	10.2	0.0	0.0	0.0	9.5
Ages 20 years and over									
Crude rate	8.3	5.1	7.9	7.7	6.5	9.7	9.0	15.6	7.2
AS rate	7.7	4.7	7.6	7.5	6.5	8.8	7.4	12.2	6.8
95% CI	7.4–8.0	4.4–4.9	7.0–8.1	6.8–8.2	5.9–7.1	8.0–9.7	6.8–8.0	10.6–13.8	6.6–7.0
Ages 20–69 years									
Crude rate	8.4	5.2	8.0	8.1	6.6	9.7	9.1	15.7	7.3
AS rate	8.4	5.1	7.7	7.7	6.8	9.8	8.5	13.9	7.3
95% CI	8.2–8.6	4.9–5.3	7.5–8.0	7.3–8.1	6.3–7.2	8.9–10.8	7.8–9.2	12.1–15.8	7.2–7.4

Notes

1. These numbers may be overestimated because of double counting of some women between some states. This may be the result of difficulty in identifying state of residence for women in border areas, tests inadvertently transferred to interstate registers and inclusion of women resident overseas; however, the impact of double counting is probably very small.
2. There are small differences between the way this indicator was calculated between the states and territories, which may result in discrepancies when comparing totals with Indicator 3.

Source: AIHW analysis of state and territory Cervical Cytology Registry data.

Table 23: Number of women screened, by 5-year age group, 1998–2006

Age group (years)	1998	1999	2000	2001	2002	2003	2004	2005	2006
					Number				
20–24	154,804	152,337	179,312	178,267	180,961	182,264	180,911	188,375	188,386
25–29	225,693	218,499	254,534	241,353	234,688	231,713	219,045	220,542	220,451
30–34	231,024	223,700	268,031	267,038	271,399	270,492	267,553	268,793	257,055
35–39	234,358	228,337	270,740	261,728	260,097	258,040	253,730	258,908	261,604
40–44	201,812	200,770	245,627	246,640	249,958	251,113	255,197	255,267	250,219
45–49	171,088	171,528	209,487	209,163	212,372	214,324	221,712	227,281	231,495
50–54	133,964	140,438	175,187	178,425	176,949	180,162	183,853	186,689	190,004
55–59	88,706	93,374	116,943	122,168	130,107	135,062	146,837	152,411	158,529
60–64	66,272	69,887	85,383	88,351	89,625	92,047	97,916	101,992	109,111
65–69	49,835	49,941	59,248	61,556	62,438	65,023	68,036	70,176	73,711
70–74	21,657	21,199	25,548	25,152	23,731	22,781	21,055	20,508	20,461
75–79	6,226	6,898	8,204	7,774	8,349	7,971	6,920	6,505	6,085
80–84	1,843	1,978	2,535	2,435	2,642	2,514	2,249	2,148	2,006
85+	833	685	970	929	965	974	789	686	742
Not stated	4,492	2,441	1,975	2,058	1,857	1,841	286	164	69
Ages 20 years and over	**1,592,607**	**1,582,012**	**1,903,724**	**1,893,037**	**1,906,138**	**1,916,321**	**1,926,089**	**1,960,446**	**1,969,929**
Ages 20–69 years	**1,557,556**	**1,548,811**	**1,864,492**	**1,854,689**	**1,868,594**	**1,880,240**	**1,894,790**	**1,930,435**	**1,940,566**

Notes

1. From 1997 through to 2001 inclusive South Australia grouped all women aged 70 years or more, and for the purposes of this table they appear in the 70–74 years age group.
2. The Queensland Health Pap smear register began operations in February 1999; therefore no data are available for 1997 and 1998.
3. Australian Capital Territory data were not available for 1997 and 1998.
4. Northern Territory data were not available for 2001.
5. These numbers may be overestimated because of double counting of some women between some states. This may be the result of difficulty in identifying state of residence for women in border areas, tests inadvertently transferred to interstate registers and inclusion of women resident overseas; however, the impact of double counting is probably very small.

Source: AIHW analysis of state and territory Cervical Cytology Registry data.

Table 24: Number of women screened, by 5-year age group, and state and territory, 2006

Age group (years)	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
					Number				
20–24	54,490	46,590	38,496	20,627	14,077	4,778	7,092	2,236	188,386
25–29	69,557	56,444	42,075	22,101	15,288	4,636	7,815	2,535	220,451
30–34	84,320	66,495	47,708	24,830	17,383	5,254	8,454	2,611	257,055
35–39	83,311	69,208	48,262	25,864	18,921	5,560	8,052	2,426	261,604
40–44	80,067	64,540	46,449	24,793	18,902	5,567	7,749	2,152	250,219
45–49	74,196	60,188	42,460	22,417	17,818	5,454	7,067	1,895	231,495
50–54	60,154	49,974	34,177	18,149	15,286	4,687	6,134	1,443	190,004
55–59	49,765	42,435	28,647	14,558	13,182	3,856	5,091	995	158,529
60–64	34,792	29,641	19,759	9,125	9,371	2,692	3,190	541	109,111
65–69	23,215	20,688	12,767	6,325	6,585	1,876	1,977	278	73,711
70–74	6,612	4,958	4,082	1,750	2,088	417	491	63	20,461
75–79	2,026	1,311	1,231	510	734	109	145	19	6,085
80–84	581	479	426	182	253	32	49	4	2,006
85+	214	173	150	86	98	11	8	2	742
Age not stated	57	0	0.00	0	12	0	0	0	69
Ages 20 years and over	**623,357**	**513,125**	**366,689**	**191,317**	**149,998**	**44,929**	**63,314**	**17,200**	**1,969,929**
Ages 20–69 years	**613,867**	**506,204**	**360,800**	**188,789**	**146,813**	**44,360**	**62,621**	**17,112**	**1,940,566**

Note: These numbers may be overestimated because of double counting of some women between some states. This may be the result of difficulty in identifying state of residence for women in border areas, tests inadvertently transferred to interstate registers and inclusion of women resident overseas; however, the impact of double counting is probably very small.

Source: AIHW analysis of state and territory Cervical Cytology Registry data.

Indicator 5.1 Incidence of micro-invasive squamous cervical cancer

Table 25: Number of new cases of micro-invasive squamous cervical cancer, by 5-year age group, 1991–2004

Age group (years)	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
							Number							
0–4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5–9	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10–14	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15–19	1	0	0	0	0	1	0	0	0	0	0	0	0	0
20–24	0	5	1	7	1	6	3	3	2	1	2	10	3	8
25–29	14	14	9	17	18	18	10	17	14	12	12	13	10	17
30–34	32	33	32	36	41	18	28	18	13	27	22	16	15	22
35–39	39	24	26	31	29	36	22	27	22	13	14	13	10	13
40–44	30	24	17	25	30	23	21	23	14	9	6	11	17	16
45–49	9	14	15	26	23	11	11	18	7	15	15	13	14	10
50–54	12	11	17	9	12	11	8	12	7	6	9	4	3	5
55–59	6	12	5	5	10	7	8	2	8	4	4	6	3	6
60–64	7	9	7	10	11	6	6	5	2	3	4	5	4	0
65–69	7	9	9	8	6	10	2	2	3	0	2	3	2	3
70–74	4	2	4	6	5	4	5	3	2	0	2	1	3	2
75–79	3	3	1	3	5	2	2	2	1	1	3	2	0	2
80–84	2	0	0	1	1	1	0	2	0	2	0	1	2	2
85+	0	0	1	1	1	1	0	0	0	0	2	0	0	1
All ages	**166**	**160**	**144**	**185**	**193**	**155**	**126**	**134**	**95**	**93**	**97**	**98**	**86**	**107**
Ages 20–69 years	**156**	**155**	**138**	**174**	**181**	**146**	**119**	**127**	**92**	**90**	**90**	**94**	**81**	**100**

Note: Cancer incidence estimates provided in this publication were made in November 2007. These estimates may be updated at any time as case details are added, modified or deleted in the national database. These modifications may occur several years after the initial diagnosis, as additional case details are received by the state and territory cancer registries from data suppliers and then passed to the National Cancer Statistics Clearing House. This may have the impact of making incidence estimates for the same year incompatible between publications, but for the most part these changes are very small.

Source: National Cancer Statistics Clearing House (AIHW).

Table 26: Age-specific and age-standardised incidence rates of micro-invasive squamous cervical cancer, by 5-year age group, 1991–2004

Age group (years)	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
						Number of new cases per 100,000 women								
0–4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5–9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10–14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15–19	0.2	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20–24	0.0	0.7	0.1	1.0	0.1	0.9	0.4	0.5	0.3	0.2	0.3	1.5	0.4	1.2
25–29	2.0	2.0	1.3	2.5	2.6	2.5	1.4	2.3	1.9	1.7	1.7	1.9	1.5	2.5
30–34	4.5	4.6	4.4	4.9	5.6	2.5	3.9	2.5	1.8	3.8	3.0	2.1	2.0	2.9
35–39	5.9	3.5	3.8	4.4	4.1	4.9	3.0	3.6	2.9	1.7	1.9	1.7	1.4	1.8
40–44	4.7	3.7	2.6	3.8	4.5	3.4	3.0	3.3	2.0	1.2	0.8	1.4	2.2	2.1
45–49	1.8	2.6	2.6	4.4	3.7	1.7	1.7	2.8	1.1	2.2	2.2	1.9	2.0	1.4
50–54	2.9	2.6	3.9	2.0	2.5	2.2	1.5	2.1	1.2	1.0	1.4	0.6	0.5	0.8
55–59	1.7	3.3	1.3	1.3	2.5	1.7	1.9	0.5	1.8	0.8	0.8	1.1	0.5	1.0
60–64	1.9	2.5	1.9	2.8	3.1	1.7	1.6	1.3	0.5	0.8	1.0	1.2	0.9	0.0
65–69	2.0	2.5	2.5	2.3	1.7	2.8	0.6	0.6	0.9	0.0	0.6	0.8	0.5	0.8
70–74	1.1	0.7	1.3	1.9	1.5	1.2	1.5	0.9	0.6	0.0	0.6	0.3	0.9	0.6
75–79	0.9	1.3	0.4	1.3	2.1	0.8	0.8	0.7	0.4	0.3	1.0	0.7	0.0	0.7
80–84	1.4	0.0	0.0	0.6	0.6	0.6	0.0	1.1	0.0	1.1	0.0	0.5	0.9	0.9
85+	0.0	0.0	0.8	0.8	0.7	0.7	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.5
All ages														
Crude rate	1.9	1.8	1.6	2.1	2.1	1.7	1.4	1.4	1.0	1.0	1.0	1.0	0.9	1.1
AS rate (A)	1.9	1.9	1.7	2.1	2.2	1.7	1.4	1.4	1.0	1.0	1.0	1.0	0.9	1.1
95% CI	1.7–2.3	1.6–2.2	1.4–2.0	1.8–2.4	1.9–2.5	1.4–2.0	1.1–1.6	1.2–1.7	0.8–1.2	0.8–1.2	0.8–1.2	0.8–1.2	0.7–1.1	0.9–1.3
AS rate (W)	1.8	1.7	1.5	1.9	2.0	1.5	1.2	1.3	0.9	0.9	0.9	0.9	0.8	1.0
95% CI	1.5–2.1	1.5–2.0	1.3–1.8	1.6–2.2	1.7–2.2	1.3–1.8	1.0–1.5	1.1–1.5	0.7–1.1	0.7–1.1	0.7–1.1	0.8–1.2	0.6–1.0	0.8–1.2
Ages 20–69 years														
Crude rate	2.9	2.8	2.5	3.1	3.2	2.5	2.0	2.1	1.5	1.5	1.5	1.5	1.3	1.5
AS rate (A)	2.9	2.9	2.5	3.1	3.2	2.5	2.0	2.1	1.5	1.5	1.5	1.5	1.3	1.6
95% CI	2.5–3.4	2.4–3.4	2.1–3.0	2.6–3.6	2.7–3.7	2.1–3.0	1.7–2.4	1.8–2.5	1.2–1.9	1.2–1.8	1.2–1.8	1.2–1.8	1.0–1.6	1.3–1.9
AS rate (W)	2.8	2.8	2.4	3.0	3.1	2.5	2.0	2.1	1.5	1.5	1.4	1.5	1.3	1.6
95% CI	2.4–3.3	2.4–3.3	2.1–2.9	2.6–3.5	2.7–3.6	2.1–2.9	1.7–2.4	1.7–2.5	1.2–1.8	1.2–1.8	1.2–1.8	1.2–1.9	1.0–1.6	1.3–2.0

Note: Rates are the number of micro-invasive squamous cell carcinomas detected per 100,000 women and age-standardised to the Australian population at 30 June 2001(A) and the WHO World Standard Population (W).

Source: National Cancer Statistics Clearing House (AIHW).

Indicator 5.2 Incidence of squamous, adenocarcinoma, adenosquamous and other cervical cancer

Table 27: Number of new cases of cervical cancer, by 5-year age group, 1991–2004

Age group (years)	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
							Number							
0–4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5–9	0	0	0	1	0	0	0	0	0	0	0	0	0	0
10–14	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15–19	1	0	1	1	1	1	1	2	0	2	2	0	1	3
20–24	12	9	9	16	4	15	11	12	9	7	7	14	6	14
25–29	50	54	39	50	54	46	44	48	57	40	41	42	37	41
30–34	122	109	103	124	111	68	80	82	75	87	58	72	61	89
35–39	138	127	128	135	114	142	104	106	103	68	88	77	87	83
40–44	150	126	130	133	119	118	101	101	102	80	67	76	80	78
45–49	102	102	101	132	99	101	78	114	79	75	104	79	91	96
50–54	88	78	89	86	59	81	79	64	67	59	77	70	74	54
55–59	61	77	81	74	68	63	51	53	52	56	55	42	54	49
60–64	80	76	74	86	71	61	53	57	62	65	46	42	49	35
65–69	89	85	91	98	77	64	57	57	55	52	43	42	42	37
70–74	80	71	64	78	71	62	45	56	47	56	41	34	41	29
75–79	48	53	46	65	51	51	46	44	41	50	40	36	35	47
80–84	36	34	36	41	30	41	33	42	33	36	41	33	40	37
85+	33	22	21	22	33	25	28	28	19	24	29	31	30	26
All ages	**1,090**	**1,023**	**1,013**	**1,142**	**962**	**939**	**811**	**866**	**801**	**757**	**739**	**690**	**728**	**718**
Ages 20–69 years	**892**	**843**	**845**	**934**	**776**	**759**	**658**	**694**	**661**	**589**	**586**	**556**	**581**	**576**

Notes

1. Includes the incidence of micro-invasive and invasive cervical cancers.
2. Cancer incidence estimates provided in this publication were made in November 2007. These estimates may be updated at any time as case details are added, modified or deleted in the national database. These modifications may occur several years after the initial diagnosis as additional case details are received by the state and territory cancer registries from data suppliers and then passed to the National Cancer Statistics Clearing House. This may have the impact of making incidence estimates for the same year incompatible between publications, but for the most part these changes are very small.

Source: National Cancer Statistics Clearing House (AIHW).

Table 28: Age-specific and age-standardised incidence rates of cervical cancer, by 5-year age group, 1991–2004

Age group (years)	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
						Number of new cases per 100,000 women								
0–4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5–9	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10–14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15–19	0.2	0.0	0.2	0.2	0.2	0.2	0.2	0.3	0.0	0.3	0.3	0.0	0.1	0.4
20–24	1.7	1.3	1.3	2.3	0.6	2.2	1.6	1.8	1.4	1.1	1.1	2.1	0.9	2.0
25–29	7.2	7.8	5.7	7.4	7.9	6.5	6.1	6.5	7.8	5.5	5.8	6.1	5.4	6.0
30–34	17.1	15.0	14.1	16.9	15.2	9.4	11.2	11.6	10.5	12.1	7.8	9.5	7.9	11.6
35–39	20.8	18.7	18.6	19.3	16.0	19.5	14.0	14.1	13.6	9.0	11.7	10.4	11.8	11.2
40–44	23.5	19.6	20.1	20.2	17.8	17.4	14.6	14.4	14.3	11.0	9.0	10.0	10.4	10.0
45–49	20.3	18.9	17.6	22.2	16.1	15.8	12.1	17.4	11.9	11.1	15.2	11.4	12.8	13.3
50–54	21.3	18.4	20.5	19.0	12.4	16.3	14.7	11.2	11.2	9.5	11.9	10.8	11.3	8.1
55–59	17.0	21.0	21.6	19.2	17.2	15.5	12.1	12.2	11.5	11.8	11.1	7.8	9.5	8.2
60–64	21.6	20.8	20.6	24.1	19.9	17.1	14.6	15.3	16.1	16.4	11.3	10.0	11.4	7.8
65–69	25.3	24.1	25.6	27.6	21.7	18.0	16.2	16.3	15.9	15.1	12.4	11.8	11.5	9.9
70–74	28.3	24.3	21.1	24.6	22.0	19.0	13.7	16.9	14.1	16.8	12.2	10.2	12.5	8.9
75–79	21.3	23.1	20.0	28.5	21.9	20.9	17.9	16.4	14.6	17.4	13.7	12.2	11.8	15.7
80–84	24.8	22.5	22.7	24.5	17.4	23.2	18.3	23.1	18.0	18.9	20.3	15.7	18.2	16.2
85+	30.0	19.0	17.2	17.3	24.6	17.7	18.7	17.9	11.4	13.7	15.8	16.4	15.5	13.2
All ages														
Crude rate	12.6	11.7	11.4	12.7	10.6	10.2	8.7	9.2	8.4	7.8	7.6	7.0	7.3	7.1
AS rate (A)	13.2	12.2	11.9	13.0	10.7	10.3	8.7	9.1	8.3	7.7	7.4	6.8	7.0	6.9
95% CI	12.4–14.0	11.4–12.9	11.2–12.6	12.3–13.8	10.1–11.5	9.7–11.0	8.1–9.4	8.5–9.8	7.8–8.9	7.2–8.3	6.9–7.9	6.3–7.3	6.5–7.6	6.6–7.1
AS rate (W)	11.1	10.3	10.1	11.1	9.1	8.7	7.4	7.7	7.1	6.5	6.2	5.8	5.9	5.9
95% CI	10.5–11.8	9.7–10.9	9.4–10.7	10.4–11.7	8.5–9.7	8.2–9.3	6.9–7.9	7.2–8.3	6.6–7.6	6.0–7.0	5.8–6.7	5.3–6.2	5.5–6.4	5.7–6.1
Ages 20–69 years														
Crude rate	16.5	15.4	15.2	16.6	13.6	13.1	11.2	11.7	11.0	9.7	9.5	8.9	9.1	8.9
AS rate (A)	17.1	15.9	15.8	17.0	13.9	13.4	11.4	11.8	11.0	9.7	9.5	8.9	9.1	8.9
95% CI	16.0–18.3	14.9–17.0	14.7–16.9	15.9–18.2	12.9–14.9	12.5–14.4	10.5–12.3	10.9–12.7	10.2–11.9	8.9–10.5	8.7–10.3	8.1–9.6	8.4–9.9	8.2–9.7
AS rate (W)	16.2	15.1	14.9	16.2	13.2	12.7	10.8	11.3	10.6	9.3	9.0	8.5	8.7	8.6
95% CI	15.2–17.3	14.1–16.2	13.9–15.9	15.1–17.2	12.3–14.2	11.8–13.7	10.0–11.7	10.4–12.1	9.8–11.4	8.6–10.1	8.3–9.8	7.8–9.3	8.0–9.4	7.9–9.4

Note: Rates are the number of cervical cancers detected per 100,000 women and age-standardised to the Australian population at 30 June 2001(A) and the WHO World Standard Population (W).

Source: National Cancer Statistics Clearing House (AIHW).

Table 29: Number of new cases of cervical cancer, by 5-year age group, and state and territory, 1997–2000

Age group (years)	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
					Number				
0–4	0	0	0	0	0	0	0	0	0
5–9	0	0	0	0	0	0	0	0	0
10–14	0	0	0	0	0	0	0	0	0
15–19	3	1	1	0	0	0	0	0	5
20–24	13	6	13	2	0	5	0	0	39
25–29	60	33	49	14	17	8	6	2	189
30–34	118	56	78	29	29	10	2	2	324
35–39	123	72	97	29	24	20	8	8	381
40–44	122	91	84	44	24	8	5	6	384
45–49	119	86	61	40	25	5	6	4	346
50–54	112	57	51	20	17	6	2	4	269
55–59	75	54	41	17	14	5	3	3	212
60–64	78	57	55	17	21	5	1	3	237
65–69	86	49	44	19	14	5	4	0	221
70–74	77	53	35	20	13	3	2	1	204
75–79	64	45	32	14	17	4	2	3	181
80–84	51	39	23	18	10	1	2	0	144
85+	35	26	20	10	6	1	1	0	99
All ages	**1,136**	**725**	**684**	**293**	**231**	**86**	**44**	**36**	**3,235**
Ages 20–69 years	**906**	**561**	**573**	**231**	**185**	**77**	**37**	**32**	**2,602**

Source: National Cancer Statistics Clearing House (AIHW).

Table 30: Age-specific and age-standardised incidence rates of cervical cancer, by 5-year age group, and state and territory, 1997–2000

Age group (years)	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
				Number of new cases per 100,000 women					
0–4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5–9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10–14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15–19	0.4	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.2
20–24	1.5	0.9	2.6	0.8	0.0	8.5	0.0	0.0	1.5
25–29	6.1	4.4	9.0	5.0	8.0	12.4	11.2	5.3	6.5
30–34	12.3	7.7	15.0	10.4	13.4	15.1	4.0	5.8	11.4
35–39	12.1	9.6	17.5	9.8	10.2	26.6	15.4	24.8	12.7
40–44	12.8	12.9	16.2	15.4	10.7	11.1	9.9	21.2	13.5
45–49	13.5	13.2	12.6	15.2	11.7	7.5	12.2	16.4	13.1
50–54	14.3	9.8	11.8	9.0	8.8	10.1	4.8	21.7	11.5
55–59	12.3	12.1	12.6	10.2	9.5	10.6	11.0	26.0	11.9
60–64	14.8	14.7	20.8	12.3	16.2	12.3	5.0	42.7	15.6
65–69	17.5	13.6	18.5	15.7	11.4	13.3	25.0	0.0	15.9
70–74	16.3	15.3	15.8	18.3	10.5	8.5	13.6	30.7	15.4
75–79	16.4	15.9	17.5	15.8	16.2	13.3	16.9	138.9	16.5
80–84	19.4	20.7	18.7	30.1	14.3	4.8	27.3	0.0	19.6
85+	15.4	15.1	18.9	18.1	9.5	5.8	17.9	0.0	15.3
All ages									
Crude rate	8.8	7.7	9.8	8.0	7.6	9.0	7.0	9.9	8.5
AS rate (A)	8.7	7.5	10.0	8.2	7.3	9.0	7.5	14.8	8.5
95% CI	8.2–9.2	7.0–8.1	9.2–10.8	7.3–9.2	6.4–8.3	7.2–11.2	5.4–10.1	9.4–21.8	8.2–8.8
AS rate (W)	7.4	6.3	8.6	6.8	6.3	8.3	6.3	11.7	7.2
95% CI	6.9–7.9	5.8–6.7	8.0–9.3	6.0–7.6	5.5–7.2	6.6–10.3	4.6–8.5	7.8–16.8	6.9–7.4
Ages 20–69 years									
Crude rate	11.2	9.4	13.1	10.0	9.8	13.1	9.0	13.9	10.9
AS rate (A)	11.3	9.5	13.2	10.1	9.7	13.0	9.3	15.9	11.0
95% CI	10.6–12.0	8.7–10.3	12.2–14.4	8.8–11.5	8.4–11.2	10.2–16.2	6.5–12.9	10.6–22.9	10.6–11.4
AS rate (W)	10.7	8.9	12.8	9.6	9.4	13.0	8.9	14.9	10.5
95% CI	10.1–11.5	8.2–9.7	11.8–13.9	8.4–10.9	8.1–10.8	10.2–16.2	6.3–12.3	9.9–21.4	10.1–10.9

Note: Rates are the number of cervical cancers detected per 100,000 women and age-standardised to the Australian population at 30 June 2001(A) and the WHO World Standard Population (W).

Source: National Cancer Statistics Clearing House (AIHW).

Table 31: Number of new cases of cervical cancer, by 5-year age group, and state and territory, 2001–2004

Age group (years)	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
					Number				
0–4	0	0	0	0	0	0	0	0	0
5–9	0	0	0	0	0	0	0	0	0
10–14	0	0	0	0	0	0	0	0	0
15–19	2	1	0	3	0	0	0	0	6
20–24	14	6	12	6	1	1		1	41
25–29	44	40	42	20	6	3	2	4	161
30–34	80	64	67	31	22	7	4	5	280
35–39	110	60	75	44	26	9	7	4	335
40–44	95	49	74	40	24	11	3	5	301
45–49	141	74	68	39	19	14	8	7	370
50–54	92	63	58	33	14	6	6	3	275
55–59	76	42	39	21	11	6	3	2	200
60–64	62	40	31	22	8	4	5	0	172
65–69	59	39	28	19	11	2	3	3	164
70–74	52	28	25	23	8	6	2	1	145
75–79	55	43	30	17	8	2	2	1	158
80–84	52	40	30	12	11	5	1	0	151
85+	37	33	17	16	8	4	1	0	116
All ages	**971**	**622**	**596**	**346**	**177**	**80**	**47**	**36**	**2,875**
Ages 20–69 years	**773**	**477**	**494**	**275**	**142**	**63**	**41**	**34**	**2,299**

Source: National Cancer Statistics Clearing House (AIHW).

Table 32: Age-specific and age-standardised incidence rates of cervical cancer, by 5-year age group, and state and territory, 2001–2004

Age group (years)	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
				Number of new cases per 100,000 women					
0–4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5–9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10–14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15–19	0.2	0.2	0.0	1.1	0.0	0.0	0.0	0.0	0.2
20–24	1.6	0.9	2.3	2.3	0.5	1.7	0.0	3.3	1.5
25–29	4.7	5.7	8.0	7.5	3.2	5.3	3.9	11.6	5.8
30–34	7.8	8.2	11.7	10.6	10.2	10.7	7.6	13.7	9.2
35–39	11.1	8.0	13.3	14.9	11.7	13.3	13.9	12.3	11.3
40–44	9.3	6.5	12.7	13.1	10.2	14.7	5.8	16.4	9.8
45–49	15.1	10.7	12.8	13.6	8.6	20.0	16.2	26.0	13.2
50–54	10.7	9.8	11.6	12.7	6.6	9.1	12.8	13.1	10.5
55–59	10.3	7.8	9.2	10.1	6.0	10.5	8.4	13.0	9.1
60–64	10.7	9.4	9.7	13.8	5.7	8.7	20.9	0.0	10.1
65–69	11.8	10.6	10.9	14.5	9.0	5.2	16.6	52.9	11.4
70–74	11.2	8.2	10.9	20.0	6.8	17.1	13.4	25.6	11.0
75–79	13.2	14.0	14.9	17.4	7.2	6.4	14.8	38.2	13.4
80–84	17.0	18.0	20.4	17.0	13.4	21.4	10.6	0.0	17.5
85+	13.8	16.6	13.3	24.4	10.9	19.5	13.3	0.0	15.2
All ages									
Crude rate	7.3	6.3	7.9	8.9	5.7	8.3	7.2	9.4	7.2
AS rate (A)	7.0	6.0	7.8	8.9	5.4	7.9	7.5	11.4	7.0
95% CI	6.6–7.5	5.5–6.5	7.2–8.5	8.0–9.9	4.6–6.3	6.3–9.9	5.5–9.9	7.4–16.5	6.8–7.3
AS rate (W)	5.9	5.0	6.7	7.5	4.7	6.7	6.3	9.8	6.0
95% CI	5.5–6.3	4.6–5.4	6.2–7.3	6.7–8.4	4.0–5.4	5.3–8.5	4.6–8.4	6.6–13.8	5.7–6.2
Ages 20–69									
Crude rate	9.1	7.5	10.3	11.2	7.3	10.5	9.4	13.9	9.1
AS rate (A)	9.1	7.5	10.3	11.1	7.3	10.3	9.9	15.0	9.1
95% CI	8.5–9.8	6.9–8.2	9.4–11.3	9.9–12.5	6.1–8.6	7.9–13.2	7.1–13.4	10.0–21.4	8.7–9.5
AS rate (W)	8.7	7.2	10.0	10.7	7.0	9.9	9.3	14.3	8.7
95% CI	8.1–9.3	6.6–7.9	9.1–10.9	9.5–12.0	5.9–8.3	7.6–12.7	6.6–12.6	9.7–20.4	8.3–9.1

Note: Rates are the number of cervical cancers detected per 100,000 women and age-standardised to the Australian population at 30 June 2001(A) and the WHO World Standard Population (W).

Source: National Cancer Statistics Clearing House (AIHW).

Table 33: Number of new cases of cervical cancer, by histological type, for women aged 20–69 years, 1991–2004

Histological type	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
							Number							
Squamous	646	611	596	638	546	529	455	490	470	403	400	389	394	384
Adenocarcinoma	143	140	143	194	148	147	131	141	132	118	114	123	124	129
Adenosquamous	42	52	47	40	34	40	33	30	24	30	32	18	26	28
Other	61	40	59	62	48	43	39	33	35	38	40	26	37	35
Total	**892**	**843**	**845**	**934**	**776**	**759**	**658**	**694**	**661**	**589**	**586**	**556**	**581**	**576**
Micro-invasive	156	155	138	174	181	146	119	127	92	90	90	94	81	100

Source: National Cancer Statistics Clearing House (AIHW).

Table 34: Age-standardised incidence rates for cervical cancer, by histological type, for women aged 20–69 years, 1991–2004

Histological type	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
							Number of new cases per 100,000 women							
Squamous	12.4	11.5	11.2	11.7	9.8	9.4	7.9	8.3	7.9	6.7	6.5	6.2	6.2	5.9
Adenocarcinoma	2.8	2.7	2.7	3.5	2.6	2.6	2.3	2.4	2.2	1.9	1.8	2.0	1.9	2.0
Adenosquamous	0.8	1.0	0.9	0.7	0.6	0.7	0.6	0.5	0.4	0.5	0.5	0.3	0.4	0.4
Other	1.1	0.7	1.1	1.1	0.9	0.8	0.7	0.6	0.6	0.6	0.6	0.4	0.6	0.5
Micro-invasive	2.9	2.9	2.5	3.1	3.2	2.5	2.0	2.1	1.5	1.5	1.5	1.5	1.3	1.6

Note: Rates are the number of cervical cancers detected per 100,000 women and age-standardised to the Australian population at 30 June 2001.

Source: National Cancer Statistics Clearing House (AIHW).

Table 35: Number of new cases of cervical cancer, by histological type, all ages, 1991–2004

Histological type	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
							Number							
Squamous	788	751	706	787	677	670	553	613	577	525	508	487	495	490
Adenocarcinoma	171	156	164	224	174	167	162	166	151	136	136	135	145	149
Adenosquamous	50	57	56	50	39	47	39	35	26	31	36	20	31	28
Other	81	59	87	81	72	55	57	52	47	65	59	48	57	51
Total	**1,090**	**1,023**	**1,013**	**1,142**	**962**	**939**	**811**	**866**	**801**	**757**	**739**	**690**	**728**	**718**
Micro-invasive	166	160	144	185	193	155	126	134	95	93	97	98	86	107

Source: National Cancer Statistics Clearing House (AIHW).

Table 36: Age-standardised incidence rates for cervical cancer, by histological type, all ages, 1991–2004

Histological type	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
							Number of new cases per 100,000 women							
Squamous	9.6	8.9	8.3	9.0	7.6	7.4	6.0	6.5	6.0	5.3	5.1	4.8	4.8	4.7
Adenocarcinoma	2.1	1.9	1.9	2.6	1.9	1.8	1.7	1.8	1.6	1.4	1.4	1.3	1.4	1.4
Adenosquamous	0.6	0.7	0.7	0.6	0.4	0.5	0.4	0.4	0.3	0.3	0.4	0.2	0.3	0.3
Other	0.9	0.7	1.0	0.9	0.8	0.6	0.6	0.5	0.5	0.6	0.6	0.4	0.5	0.5
Micro-invasive	1.9	1.9	1.7	2.1	2.2	1.7	1.4	1.4	1.0	1.0	1.0	1.0	0.9	1.1

Note: Rates are the number of cervical cancers detected per 100,000 women and age-standardised to the Australian population at 30 June 2001.

Source: National Cancer Statistics Clearing House (AIHW).

Indicator 5.3 Incidence by region

Table 37: Number of new cases of cervical cancer, by 5-year age group and geographic region, 1997–2000 and 2001–2004

Age group (years)	Major cities		Regional		Remote		Australia	
	1997–2000	2001–2004	1997–2000	2001–2004	1997–2000	2001–2004	1997–2000	2001–2004
				Number				
0–4	0	0	0	0	0	0	0	0
5–9	0	0	0	0	0	0	0	0
10–14	0	0	0	0	0	0	0	0
15–19	3	5	2	1	0	0	5	6
20–24	24	27	13	13	2	1	39	41
25–29	129	108	53	46	5	6	189	161
30–34	213	187	99	81	9	11	324	280
35–39	231	224	134	105	15	5	381	335
40–44	253	190	115	102	16	9	384	301
45–49	234	238	101	118	10	13	346	370
50–54	188	183	74	88	6	4	269	275
55–59	140	122	67	68	5	9	212	200
60–64	149	115	78	51	8	4	237	172
65–69	156	105	63	55	2	4	221	164
70–74	146	98	54	41	3	5	204	145
75–79	123	113	54	42	4	3	181	158
80–84	101	98	41	51	1	2	144	151
85+	71	84	27	30	1	2	99	116
All ages	**2,163**	**1,899**	**976**	**892**	**86**	**78**	**3,235**	**2,875**
Ages 20–69 years	**1,718**	**1,500**	**798**	**727**	**76**	**66**	**2,602**	**2,299**

Notes

1. The numbers are presented as 4-year non-overlapping blocks of data.
2. In the periods 1997–2000 and 2001–2004, there were 11 and 7 cases, respectively, that were excluded from these data because the respective postcodes were not able to be matched to the coding used for this analysis.
3. Because some postcodes cross boundaries, totals may not add up due to rounding.
4. The Australian Standard Geographical Classification was used to create the above categories (ABS 2001).

Source: National Cancer Statistics Clearing House (AIHW).

Table 38: Age-specific and age-standardised incidence rates for cervical cancer, by 5-year age group and geographic region, 1997–2000 and 2001–2004

	Major cities		Regional		Remote		Australia	
Age group (years)	**1997–2000**	**2001–2004**	**1997–2000**	**2001–2004**	**1997–2000**	**2001–2004**	**1997–2000**	**2001–2004**
				Number of new cases per 100,000 women				
0–4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5–9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10–14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15–19	0.2	0.3	0.3	0.1	0.0	0.0	0.2	0.2
20–24	1.3	1.4	2.0	2.0	3.1	1.6	1.5	1.5
25–29	6.2	5.5	7.0	6.7	5.6	8.2	6.5	5.8
30–34	10.9	8.8	12.2	9.8	10.6	12.9	11.4	9.2
35–39	11.6	11.2	14.4	11.8	19.2	6.8	12.7	11.3
40–44	13.5	9.4	13.0	10.6	23.2	13.1	13.5	9.8
45–49	13.3	12.8	12.5	13.4	17.7	20.4	13.1	13.2
50–54	12.1	10.5	10.3	10.7	11.3	7.4	11.5	10.5
55–59	12.1	8.5	11.5	9.5	12.7	21.3	11.9	9.1
60–64	15.3	10.5	15.3	8.6	26.8	11.1	15.6	10.1
65–69	17.2	11.4	13.4	11.1	6.9	14.4	15.9	11.4
70–74	16.6	11.4	12.5	9.2	18.4	28.1	15.4	11.0
75–79	16.7	14.3	15.7	10.9	30.7	18.2	16.5	13.4
80–84	20.5	16.9	17.5	18.7	11.9	17.0	19.6	17.5
85+	16.2	16.2	13.4	12.2	13.0	23.0	15.3	15.2
All ages								
AS rate (A)	8.5	6.9	8.3	7.1	10.5	9.2	8.5	7.0
95% CI	8.1–8.8	6.6–7.2	7.8–8.8	6.6–7.6	8.3–13.0	7.2–11.5	8.2–8.8	6.8–7.3
AS rate (W)	7.1	5.8	7.1	6.1	8.9	7.7	7.2	6.0
95% CI	6.8–7.5	5.6–6.1	6.7–7.6	5.7–6.5	7.1–11.0	6.1–9.7	6.9-7.4	5.7-6.2
Ages 20–69 years								
AS rate (A)	10.9	8.9	10.9	9.4	13.7	11.4	11.0	9.1
95% CI	10.3–11.4	8.4–9.3	10.2–11.7	8.7–10.1	10.7–17.1	8.7–14.4	10.6–11.4	8.7–9.5
AS rate (W)	10.3	8.5	10.5	9.1	13.1	10.9	10.5	8.7
95% CI	9.9–10.8	8.1–8.9	9.8–11.3	8.4–9.8	10.2–16.3	8.4–13.8	10.1-10.9	8.3-9.1

Notes

1. The rates are presented as 4-year non-overlapping blocks of data.
2. Rates are the number of cervical cancers detected per 100,000 women and age-standardised to the Australian population at 30 June 2001.

Source: National Cancer Statistics Clearing House (AIHW).

Indicator 6.1 Mortality by age group

Table 39: Number of deaths from cervical cancer, by 5-year age group, 1985–2005

Age group (years)	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05
											Number										
0–4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5–9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10–14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15–19	0	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0
20–24	0	2	2	0	1	1	3	0	0	0	0	1	0	3	1	1	0	2	0	0	1
25–29	6	6	5	3	3	10	5	5	2	6	3	1	2	6	2	4	1	2	5	4	5
30–34	20	12	15	12	21	14	13	15	11	11	7	13	8	5	6	10	11	6	13	7	8
35–39	17	16	20	15	18	30	25	19	25	11	16	23	18	19	7	12	12	9	12	9	2
40–44	18	26	20	24	24	36	19	27	32	28	21	20	16	19	18	14	19	13	12	13	20
45–49	21	24	19	27	31	36	29	26	23	35	32	30	28	16	25	27	23	15	22	17	25
50–54	25	25	24	19	27	17	21	13	29	37	26	13	21	24	15	19	21	32	17	15	24
55–59	31	41	32	41	20	25	25	23	20	26	34	22	24	15	14	19	20	15	19	21	17
60–64	41	41	28	41	33	34	33	31	25	24	30	21	22	28	15	24	25	19	21	15	20
65–69	52	50	46	41	54	43	35	25	30	37	37	29	30	19	21	26	20	18	20	17	12
70–74	43	32	55	34	48	25	37	45	38	33	43	41	36	28	30	37	28	18	23	17	13
75–79	29	23	29	35	29	32	30	32	28	30	30	38	32	26	26	25	30	26	29	16	23
80–84	26	23	20	34	24	8	22	35	24	26	27	22	27	26	19	23	28	26	21	23	21
85+	29	24	16	17	22	25	32	23	24	24	20	24	30	31	21	26	24	26	24	37	25
All ages	**359**	**343**	**329**	**343**	**355**	**337**	**329**	**319**	**311**	**329**	**328**	**296**	**294**	**265**	**220**	**267**	**262**	**227**	**238**	**212**	**216**
Ages 20–69 years	**230**	**242**	**210**	**222**	**231**	**246**	**208**	**184**	**197**	**216**	**207**	**172**	**169**	**154**	**124**	**156**	**152**	**131**	**141**	**118**	**134**

Notes

1. Deaths were derived by year of registration.
2. A comparability factor of 0.98 was applied to mortality data for years before 1997 because, in processing deaths registered from 1 January 1997, Australia adopted the use of the Automated Coding System and introduced ICD-10 codes. The comparability factor provides a link between the two data series (that is, pre-1997 and 1997–2004). Comparability factors close to 1.0 indicate there were no significant coding differences between automated ICD-10 and manual ICD-9 coding.

Source: AIHW Mortality Database.

Table 40: Age-specific and age-standardised mortality rates for cervical cancer, by 5-year age group, 1985–2005

Age group (yeas)	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05
	Number of deaths per 100,000 women																				
0–4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5–9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10–14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15–19	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
20–24	0.0	0.3	0.3	0.0	0.1	0.1	0.4	0.0	0.0	0.0	0.0	0.1	0.0	0.5	0.2	0.2	0.0	0.3	0.0	0.0	0.1
25–29	0.9	0.9	0.7	0.4	0.4	1.4	0.7	0.7	0.3	0.9	0.4	0.1	0.3	0.8	0.3	0.6	0.1	0.3	0.7	0.6	0.7
30–34	3.1	1.9	2.3	1.8	3.0	2.0	1.8	2.0	1.5	1.5	0.9	1.8	1.1	0.7	0.8	1.4	1.5	0.8	1.7	0.9	1.0
35–39	2.8	2.5	3.1	2.3	2.7	4.6	3.7	2.7	3.6	1.5	2.2	3.1	2.4	2.5	0.9	1.6	1.6	1.2	1.6	1.2	0.3
40–44	3.7	5.4	3.7	4.1	3.9	5.9	2.9	4.3	5.0	4.3	3.1	2.9	2.3	2.7	2.5	1.9	2.6	1.7	1.6	1.7	2.6
45–49	5.2	5.7	4.4	6.3	6.9	7.6	5.8	4.9	3.9	5.9	5.2	4.7	4.4	2.4	3.8	4.0	3.4	2.2	3.1	2.3	3.4
50–54	7.1	6.8	6.4	4.9	7.1	4.2	5.0	3.0	6.8	8.2	5.6	2.6	3.9	4.2	2.5	3.0	3.2	4.9	2.6	2.3	3.6
55–59	8.4	11.1	8.8	11.3	5.4	6.8	7.1	6.2	5.2	6.9	8.7	5.3	5.7	3.5	3.1	4.0	4.0	2.8	3.3	3.5	2.8
60–64	11.3	11.2	7.7	11.1	9.0	9.3	9.0	8.6	7.1	6.6	8.5	5.8	6.0	7.5	3.9	6.0	6.1	4.5	4.9	3.3	4.3
65–69	17.8	16.4	14.6	12.5	15.7	12.4	10.0	7.2	8.5	10.5	10.5	8.3	8.5	5.4	6.1	7.5	5.8	5.1	5.5	4.5	3.1
70–74	16.6	12.3	20.5	12.8	18.1	9.4	13.2	15.4	12.6	10.5	13.4	12.6	11.0	8.5	9.0	11.1	8.4	5.4	7.0	5.2	4.0
75–79	16.0	11.8	14.8	17.1	13.7	14.7	13.5	14.1	12.4	13.3	13.0	15.7	12.5	9.7	9.3	8.7	10.3	8.8	9.8	5.3	7.7
80–84	22.9	19.0	15.8	26.6	17.6	5.6	14.8	23.3	14.9	15.8	15.9	12.2	15.0	14.3	10.4	12.1	13.9	12.3	9.5	10.1	8.9
85+	33.1	24.9	16.1	16.7	20.9	23.2	29.4	19.5	19.3	18.4	14.6	16.6	20.1	19.8	12.6	14.8	13.1	13.8	12.4	18.8	12.1
All ages																					
AS rate (A)	5.0	4.7	4.4	4.5	4.5	4.2	4.0	3.8	3.6	3.8	3.7	3.2	3.1	2.7	2.2	2.6	2.5	2.1	2.2	1.9	1.9
AS rate (W)	3.8	3.7	3.4	3.4	3.5	3.3	3.1	2.8	2.8	2.9	2.8	2.4	2.3	2.1	1.7	2.0	1.9	1.6	1.7	1.4	1.5
Ages 20–69 years																					
AS rate (A)	5.0	5.2	4.4	4.6	4.6	4.8	4.0	3.5	3.8	4.1	3.8	3.0	3.0	2.7	2.1	2.6	2.5	2.1	2.2	1.8	2.0
AS rate (W)	4.6	4.8	4.1	4.2	4.3	4.5	3.8	3.3	3.4	3.7	3.5	2.8	2.7	2.5	1.9	2.4	2.3	1.9	2.0	1.7	1.8

Note: Rates are the number of deaths from cervical cancer per 100,000 women and age-standardised to the Australian population at 30 June 2001(A) and the WHO World Standard Population (W).

Source: AIHW Mortality Database.

Table 41: Number of deaths from cervical cancer, by 5-year age group, and state and territory, 1998–2001

Age group (years)	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
					Number				
0–4	0	0	0	0	0	0	0	0	0
5–9	0	0	0	0	0	0	0	0	0
10–14	0	0	0	0	0	0	0	0	0
15–19	0	0	0	0	0	0	0	0	0
20–24	2	2	1	0	0	0	0	0	5
25–29	1	4	4	2	1	0	1	0	13
30–34	5	4	8	10	3	1	1	0	32
35–39	21	7	11	4	2	2	1	2	50
40–44	25	13	18	8	2	0	2	2	70
45–49	28	21	18	9	13	0	1	1	91
50–54	34	12	15	7	4	3	2	2	79
55–59	25	13	17	4	6	1	1	1	68
60–64	30	19	27	7	6	2	0	1	92
65–69	29	12	15	14	8	5	3	0	86
70–74	39	33	23	16	7	4	0	1	123
75–75	34	28	15	11	10	5	2	2	107
80–84	33	27	14	12	7	2	0	1	96
85+	41	26	16	11	5	2	1	0	102
All ages	**347**	**221**	**202**	**115**	**74**	**27**	**15**	**13**	**1,014**
Ages 20–69 years	**200**	**107**	**134**	**65**	**45**	**14**	**12**	**9**	**586**

Notes

1. Numbers were averaged over 4 years to smooth annual variations that may occur in the smaller states and territories.
2. Deaths were derived by year and state of registration.

Source: AIHW Mortality Database.

Table 42: Age-specific and age-standardised mortality rates for cervical cancer, by 5-year age group, and state and territory, 1998–2001

Age group (years)	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
				Number of deaths per 100,000 women					
0–4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5–9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10–14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15–19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20–24	0.2	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.2
25–29	0.1	0.5	0.7	0.7	0.5	0.0	1.9	0.0	0.4
30–34	0.5	0.5	1.5	3.5	1.4	1.5	2.0	0.0	1.1
35–39	2.1	0.9	2.0	1.3	0.9	2.7	1.9	6.1	1.7
40–44	2.6	1.8	3.4	2.8	0.9	0.0	4.0	6.9	2.4
45–49	3.1	3.2	3.6	3.3	6.0	0.0	2.0	4.0	3.4
50–54	4.2	2.0	3.3	3.0	2.0	4.8	4.5	10.1	3.2
55–59	3.9	2.8	4.9	2.3	3.9	2.1	3.5	8.1	3.7
60–64	5.5	4.8	9.8	4.9	4.5	4.8	0.0	13.3	5.9
65–69	5.9	3.4	6.3	11.4	6.6	13.4	18.4	0.0	6.2
70–74	8.2	9.5	10.2	14.4	5.7	11.4	0.0	29.4	9.2
75–75	8.4	9.6	8.0	12.0	9.3	16.3	16.0	89.2	9.5
80–84	12.2	13.9	11.0	19.6	9.7	9.4	0.0	70.1	12.7
85+	17.1	14.4	14.3	18.8	7.6	11.1	16.4	0.0	15.0
All ages									
AS rate (A)	2.5	2.1	2.9	3.2	2.2	2.6	2.7	7.5	2.5
95% CI	2.2–2.8	1.9–2.4	2.5–3.3	2.6–3.8	1.7–2.7	1.7–3.7	1.5–4.4	3.3–13.9	2.4–2.7
AS rate (W)	1.9	1.6	2.3	2.4	1.7	1.9	2.1	5.2	1.9
95% CI	1.7–2.1	1.4–1.8	2.0–2.6	2.0–2.9	1.3–2.1	1.2–2.8	1.2–3.5	2.5–9.3	1.8–2.0
Ages 20–69 years									
AS rate (A)	2.5	1.8	3.1	2.8	2.3	2.3	3.2	4.6	2.4
95% CI	2.1–2.8	1.5–2.2	2.6–3.7	2.2–3.6	1.7–3.1	1.2–3.8	1.6–5.6	2.0–9.0	2.3–2.7
AS rate (W)	2.3	1.7	2.9	2.6	2.1	2.1	2.9	4.2	2.3
95% CI	2.0–2.6	1.4–2.0	2.4–3.4	2.0–3.4	1.5–2.8	1.1–3.5	1.5–5.2	1.8–8.2	2.1–2.5

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 were derived by year and state of registration.
3. Rates are the number of deaths from cervical cancer per 100,000 women and age-standardised to the Australian population at 30 June 2001(A) and the WHO World Standard Population (W).

Source: AIHW Mortality Database.

Table 43: Number of deaths from cervical cancer, by 5-year age group, and state and territory, 2002–2005

Age group (years)	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
					Number				
0–4	0	0	0	0	0	0	0	0	0
5–9	0	0	0	0	0	0	0	0	0
10–14	0	0	0	0	0	0	0	0	0
15–19	0	0	0	1	0	0	0	0	1
20–24	3	0	0	0	0	0	0	0	3
25–29	2	1	5	3	2	2	0	1	16
30–34	12	4	9	7	1	0	1	0	34
35–39	10	9	5	1	2	3	1	1	32
40–44	22	7	17	4	5	3	0	0	58
45–49	24	15	12	9	11	7	1	0	79
50–54	27	16	15	11	9	7	0	3	88
55–59	28	15	14	7	3	5	0	0	72
60–64	32	14	13	7	6	2	1	0	75
65–69	22	15	12	7	9	0	1	1	67
70–74	28	17	14	7	3	2	0	0	71
75–79	31	25	20	5	7	4	2	0	94
80–84	37	18	15	13	4	3	0	1	91
85+	35	26	13	16	18	4	0	0	112
All ages	**313**	**182**	**164**	**98**	**80**	**42**	**7**	**7**	**893**
Ages 20–69 years	**182**	**96**	**102**	**56**	**48**	**29**	**5**	**6**	**524**

Notes

1. Numbers were averaged over 4 years to smooth annual variations that may occur in the smaller states and territories.
2. Deaths were derived by year and state of registration.

Source: AIHW Mortality Database.

Table 44: Age-specific and age-standardised mortality rates for cervical cancer, by 5-year age group, and state and territory, 2002–2005

Age group (years)	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
				Number of deaths per 100,000 women					
0–4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5–9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10–14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15–19	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0
20–24	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
25–29	0.2	0.1	1.0	1.1	1.1	3.6	0.0	2.9	0.6
30–34	1.2	0.5	1.5	2.4	0.5	0.0	1.9	0.0	1.1
35–39	1.0	1.2	0.9	0.3	0.9	4.5	2.0	3.1	1.1
40–44	2.1	0.9	2.8	1.3	2.1	4.0	0.0	0.0	1.9
45–49	2.5	2.1	2.2	3.1	4.9	9.8	2.0	0.0	2.8
50–54	3.1	2.5	2.9	4.2	4.2	10.5	0.0	12.7	3.3
55–59	3.6	2.6	3.1	3.2	1.6	8.3	0.0	0.0	3.1
60–64	5.4	3.2	3.8	4.2	4.1	4.2	4.0	0.0	4.2
65–69	4.3	4.0	4.5	5.1	7.2	0.0	5.3	16.5	4.5
70–74	6.1	5.0	6.1	6.1	2.6	5.7	0.0	0.0	5.4
75–75	7.4	8.1	9.8	5.0	6.3	12.8	14.7	0.0	7.9
80–84	11.7	7.8	9.8	17.6	4.7	12.4	0.0	57.6	10.2
85+	12.7	12.8	9.8	23.8	23.9	18.9	0.0	0.0	14.3
All ages									
AS rate (A)	2.1	1.6	2.1	2.4	2.1	3.9	1.2	2.9	2.0
95% CI	1.9–2.3	1.4–1.9	1.8–2.4	1.9–2.9	1.7–2.7	2.8–5.3	0.5–2.5	0.8–6.5	1.9–2.2
AS rate (W)	1.6	1.2	1.6	1.8	1.6	3.1	0.9	2.1	1.5
95% CI	1.4–1.8	1.0–1.4	1.3–1.9	1.4–2.2	1.3–2.1	2.2–4.3	0.4–1.9	0.8–4.6	1.4–1.7
Ages 20–69 years									
AS rate (A)	2.1	1.5	2.0	2.2	2.3	4.6	1.2	3.0	2.0
95% CI	1.8–2.4	1.2–1.8	1.7–2.5	1.7–2.9	1.7–3.1	3.1–6.6	0.4–2.9	0.9–6.7	1.8–2.2
AS rate (W)	1.9	1.4	1.9	2.1	2.1	4.3	1.2	2.7	1.9
95% CI	1.7–2.2	1.1–1.7	1.6–2.3	1.6–2.7	1.6–2.8	2.8–6.2	0.4–2.8	0.9–6.1	1.7–2.0

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 were derived by year and state of registration.
3. Rates are the number of deaths from cervical cancer per 100,000 women and age-standardised to the Australian population at 30 June 2001(A) and the WHO World Standard Population (W).

Source: AIHW Mortality Database.

Indicator 6.2 Mortality by region

Table 45: Number of deaths from cervical cancer, by 5-year age group and geographic region, 1998–2001 and 2002–2005

Age group (years)	Major cities		Regional		Remote		Australia	
	1998–2001	2002–2005	1998–2001	2002–2005	1998–2001	2002–2005	1998–2001	2002–2005
				Number				
0–4	0	0	0	0	0	0	0	0
5–9	0	0	0	0	0	0	0	0
10–14	0	0	0	0	0	0	0	0
15–19	0	1	0	0	0	0	0	1
20–24	3	1	2	2	0	0	5	3
25–29	7	8	5	7	0	1	13	16
30–34	21	25	6	8	5	1	32	34
35–39	27	21	21	10	1	1	50	32
40–44	41	33	23	21	6	3	70	58
45–49	64	52	25	26	0	1	91	79
50–54	52	50	26	36	1	1	79	88
55–59	41	47	24	24	3	0	68	72
60–64	62	36	28	36	2	1	92	75
65–69	52	42	32	22	2	3	86	67
70–74	76	47	42	24	4	0	123	71
75–79	66	61	38	29	2	3	107	94
80–84	71	56	22	32	2	1	96	91
85+	70	79	30	31	2	2	102	112
All ages	**650**	**560**	**323**	**308**	**33**	**19**	**1,014**	**893**
Ages 20–69 years	**367**	**315**	**192**	**193**	**23**	**13**	**586**	**524**

Notes

1. Deaths were derived from place of usual residence and by year of registration.
2. The number of deaths is presented as 4-year non-overlapping blocks of data.
3. In 1998–2001 and 2002–2005, there were 8 and 6 deaths, respectively, that were excluded from these data because the respective postcodes were not able to be matched to the coding used for this analysis or postcodes were not provided.
4. Because some postcodes cross boundaries, totals may not add up due to rounding.

Source: AIHW Mortality Database.

Table 46: Age-specific and age-standardised mortality rates for cervical cancer, by 5-year age group and geographic region, 1998–2001 and 2002–2005

	Major cities		Regional		Remote		Australia	
Age group (years)	**1998–2001**	**2002–2005**	**1998–2001**	**2002–2005**	**1998–2001**	**2002–2005**	**1998–2001**	**2002–2005**
				Number of deaths per 100,000 women				
0–4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5–9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10–14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15–19	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
20–24	0.2	0.1	0.3	0.3	0.0	0.0	0.2	0.1
25–29	0.3	0.4	0.6	1.1	0.5	1.2	0.4	0.6
30–34	1.1	1.2	0.7	1.0	6.3	1.2	1.1	1.1
35–39	1.3	1.1	2.3	1.1	1.5	1.3	1.7	1.1
40–44	2.1	1.6	2.5	2.2	9.3	4.5	2.4	1.9
45–49	3.6	2.8	3.0	2.9	0.4	1.9	3.4	2.8
50–54	3.2	2.9	3.5	4.3	2.4	2.1	3.2	3.3
55–59	3.4	3.1	3.9	3.1	8.6	0.0	3.7	3.1
60–64	6.1	3.2	5.3	5.9	8.5	3.0	5.9	4.2
65–69	5.8	4.4	6.9	4.3	9.1	11.9	6.2	4.5
70–74	8.6	5.6	9.5	5.3	21.4	0.1	9.2	5.4
75–79	8.7	7.8	10.7	7.3	15.1	20.5	9.5	7.9
80–84	14.0	9.3	9.1	11.3	23.0	13.7	12.7	10.2
85+	15.1	14.6	14.2	12.4	28.4	20.3	15.0	14.3
All ages								
AS rate (A)	2.4	1.9	2.6	2.2	4.5	2.5	2.5	2.0
95% CI	2.3–2.6	1.8–2.1	2.3–2.8	2.0–2.5	3.0–6.4	1.5–3.9	2.4–2.7	1.9–2.2
AS rate (W)	1.8	1.4	2.0	1.7	3.5	1.9	1.9	1.5
95% CI	1.7–2.0	1.3–1.6	1.7–2.2	1.5–1.9	2.3–4.8	1.1–2.9	1.8–2.0	1.4–1.7
Ages 20–69 years								
AS rate (A)	2.3	1.8	2.5	2.3	4.2	2.3	2.4	2.0
95% CI	2.1–2.6	1.6–2.0	2.2–2.9	2.0–2.7	2.6–6.3	1.2–3.9	2.3–2.7	1.8–2.2
AS rate (W)	2.1	1.7	2.3	2.2	3.9	2.1	2.3	1.9
95% CI	1.9–2.4	1.5–1.9	2.0–2.7	1.9–2.5	2.5–5.9	1.1–3.6	2.1–2.5	1.7–2.0

Notes

1. The age-standardised rates are presented as 4-year non-overlapping blocks of data.
2. Deaths were derived from place of usual residence and by year of registration.
3. Rates are the number of deaths from cervical cancer per 100,000 women and age-standardised to the Australian population at 30 June 2001(A) and the WHO World Standard Population (W).

Source: AIHW Mortality Database.

Indicator 6.3 Indigenous mortality

Table 47: Number of deaths and age-specific and age-standardised mortality rates for cervical cancer, by 5-year age group and Indigenous status (Queensland, Western Australia, South Australia and Northern Territory), 2002–2005

	Indigenous Australians		Other Australians	
Age group (years)	Number	Number of deaths per 100,000 women	Number	Number of deaths per 100,000 women
0–4	0	0.0	0	0.0
5–9	0	0.0	0	0.0
10–14	0	0.0	0	0.0
15–19	0	0.0	1	0.1
20–24	0	0.0	0	0.0
25–29	0	0.0	10	1.0
30–34	2	4.2	15	1.4
35–39	1	2.5	8	0.7
40–44	5	14.4	22	1.9
45–49	1	3.8	29	2.7
50–54	5	23.6	34	3.4
55–59	1	7.0	21	2.4
60–64	0	0.0	24	3.7
65–69	3	41.3	26	4.9
70–74	2	41.2	22	4.8
75+	3	49.4	107	10.7
All ages	**23**	. .	**319**	. .
AS rate (A)	. .	9.4	. .	2.0
95% CI	. .	5.4–15.0	. .	1.8–2.3
AS rate (W)	. .	6.9	. .	1.6
95% CI	. .	4.2–10.6	. .	1.4–1.7
Ages 20–69 years	**18**	. .	**189**	. .
AS rate (A)	. .	8.3	. .	2.0
95% CI	. .	4.7–13.4	. .	1.7–2.3
AS rate (W)	. .	7.4	. .	1.8
95% CI	. .	4.3–12.0	. .	1.6–2.1

. . Not applicable.

Notes

1. Deaths were derived by state and year of registration.
2. The number of deaths is presented as a 4-year block of data.
3. Only Queensland, Western Australia, South Australia and the Northern Territory have Indigenous death registration data considered to be of a publishable standard.
4. Rates are the number of deaths from cervical cancer per 100,000 women and age-standardised to the Australian population at 30 June 2001(A) and the WHO World Standard Population (W).

Source: AIHW Mortality Database.

Appendix A Cervical Cancer

Symptoms, detection and treatment

Cervical cancer affects the cells of the cervix, which is the lower part of the womb (uterus) as it joins the inner end of the vagina. Like other cancers, cervical cancer is a disease where normal cells change, begin to multiply out of control, and form a growth or tumour. The cancer may arise from the squamous cells at the transformation zone where the squamous cells on the outside of the cervix join the columnar cells in the lining of the cervical canal (squamous cell carcinoma) or from the glandular (columnar) cells in the cervical canal (adenocarcinoma). Over two-thirds of cervical cancers are squamous cell carcinomas, which are most easily detected on the Papanicolaou (Pap) test, and about 20% are adenocarcinomas. If not detected early, the tumour can invade local tissue and spread (metastasise) to other parts of the body. The main symptoms of cervical cancer are unusual bleeding from the vagina, and very rarely an unusual vaginal discharge. However, these symptoms are quite common and are usually not due to cancer.

A cervical cancer may take 10 or more years to develop, but before this the cells may show pre-cancerous changes. The Pap test is the most common way to detect pre-cancerous changes, which rarely cause any symptoms. The test involves a doctor or nurse practitioner inserting a speculum into the vagina and gently collecting cells from the surface of the cervix. Once collected, cells are transferred onto a slide or into a special liquid, which is then sent to a pathology laboratory for assessment. Pap tests are offered by general practitioners, gynaecologists, family planning clinics, women's health centres, hospital outpatient clinics and, in some circumstances, specially trained nurses.

If the Pap test shows an abnormality, the woman may be advised to have a repeat test if the abnormality is low-grade. She may be advised to have a colposcopy if the abnormality is high-grade. With colposcopy, a doctor is able to look directly at the cervix under magnification using an instrument called a colposcope. Using a special stain the doctor can highlight any suspicious area, which may be pre-cancerous or cancerous. The doctor will then take a tissue sample (a biopsy) of the suspicious area for further examination by a pathologist.

High-grade pre-cancerous changes can be easily and effectively treated to prevent the progression to cervical cancer. The type of treatment depends on the woman's age and general health, whether she wants to have children, and on her preferences.

There is a range of treatments for pre-cancerous changes, including laser treatment, loop excision (LLETZ), cryosurgery (cold coagulation), electrodiathermy, or cone biopsy (either by laser or by scalpel). In a small number of instances, a hysterectomy may be necessary.

For invasive cancer, a cone biopsy or hysterectomy is generally performed. If the cancer cells are detected on the surface of the cervix only, it may be treated by a cone biopsy. If it has invaded deeper into the cervix, a hysterectomy is generally performed. In advanced cases, a radical hysterectomy is needed to remove the cervix and uterus along with a margin of tissue around the cervix and lymph nodes from the pelvis. Radiotherapy is sometimes used as well as surgery, and for more advanced cases it may be used on its own.

Cervical cancer and human papillomavirus

Recent evidence has shown cervical cancer to be a rare outcome of persistent infection with human papillomavirus (HPV). At least 13 high-risk types are currently recognised, with HPV types 16, 18, 45, 39, and 73 most predominantly associated with cervical cancer in Australia (HPV types 16 and 18 account for around 70% of these) (Stevens et al. 2006). In 2007, a vaccine against HPV types 16, 18, 6 and 11 was introduced under the National Immunisation Program, free to all women aged 12–26 years. While the vaccine is expected to lower cervical cancer incidence and mortality rates, the slow progression of this disease means that these effects will not be evident for some time.

Appendix B Data sources and limitations

All data used in this report are based on calendar years. Data are derived from multiple sources and are summarised below.

Table B1: Cervical cancer screening indicators data sources

Indicator	Description	Data source
1	Participation rate for cervical cancer screening	National Cervical Screening Program
2	Early re-screening	National Cervical Screening Program
3	Low-grade abnormality detection	National Cervical Screening Program
4	High-grade abnormality detection	National Cervical Screening Program
5.1	Incidence of micro-invasive cervical cancer National Cancer Statistics Clearing House (ICD-10 C53)	National Cancer Statistics Clearing House
5.2	Incidence of squamous, adenocarcinoma, adeno-squamous and other cervical cancer (ICD-10 C53)	National Cancer Statistics Clearing House
5.3	Incidence by location (ICD-10 C53)	National Cancer Statistics Clearing House
6.1	Mortality from cervical cancer (ICD-9 180 for data up to and including 1996; ICD-10 C53 for data from 1997 onwards)	AIHW Mortality Database
6.2	Mortality by location	AIHW Mortality Database
6.3	Mortality by Indigenous status	AIHW Mortality Database

Population data

The ABS estimated resident female population was used to calculate incidence and mortality rates. Participation rates were calculated using the average of the estimated resident female population for the 2-year reporting period or for the 3- or 5-year reporting period for the new indicators examining 3-year and 5-year participation. There may be some variation in published participation rates because national rates use estimated resident population data in the denominator whereas local data analysis may use Census counts. The denominator population used to calculate cervical screening participation rates was adjusted by the estimated proportion of women who have had a hysterectomy. These data were derived from the 2001 National Health Survey, and are tabled in Appendix D.

The age-standardised rates in this publication were calculated using the total estimated 2001 mid-year Australian resident population. Where appropriate, rates are also standardised to the World Health Organization (WHO) World Standard Population for international comparison. Both the Australian and the WHO World Standard Populations are in Appendix D.

Indigenous mortality data

Identification of Indigenous status in Australia is still very fragmented and generally of poor quality in health data collection. Of the three collections used to report the cervical screening indicators, only the mortality database currently collects Indigenous status. Only Queensland, Western Australia, South Australia and the Northern Territory are currently considered to

have adequate coverage of Indigenous deaths in the registration of deaths. Therefore, only mortality data from these jurisdictions are analysed in this report for Indicator 6.3.

Other data limitations

- Hysterectomy fractions are calculated using national data derived from the ABS National Health Survey using aggregate data that do not necessarily reflect variation at the state or territory level. In this report, data from the 2001 National Health Survey have been used.
- Participation rates will be underestimates to the extent that a small percentage of women choose to opt off local registers and have been excluded from the statistics in this report.
- The participation numbers for states and territories other than Victoria and the Australian Capital Territory, as well as the Australian totals may be overestimated because of double counting of some women in registers. This may be the result of difficulty in identifying state or territory of residence for women in border areas and the inclusion in registers of women resident overseas.
- Participation rates published by state and territory programs may differ from those in this publication because of variation in denominators used.

Trend data

Where trend data have been provided for indicators relating to participation, early re-screening, low-grade abnormalities or high-grade abnormalities, it is important to note that, for some years, not all jurisdictions were able to supply data and there were differences in how data were reported for some reporting periods (footnotes advising the limitations of data that have been provided wherever this was applicable). For some states and territories the absence of data is due to a later commencement date for the registry, as shown below.

States and territories	Date registry commenced
New South Wales	July 1996
Victoria	November 1989
Queensland	February 1999
Western Australia	July 1994
South Australia	June 1993
Tasmania	May 1994
Australian Capital Territory	March 1995
Northern Territory	March 1996

Interpretation of trends

Geographic region

This report uses the Australian Standard Geographical Classification (ASGC) which groups geographic areas into five classes. These classes are based on Census Collection Districts (CDs) and defined using the Accessibility/Remoteness Index for Australia (ARIA). ARIA is a measure of the remoteness of a location from the services provided by large towns or cities. A

higher ARIA score denotes a more remote location. The five classes of the ASGC, along with a sixth 'Migratory' class, are listed in the following table.

The remoteness areas for the ASGC

Region	Collection districts within region
Major cities of Australia	CDs with an average ARIA index value of 0 to 0.2
Inner regional Australia	CDs with an average ARIA index value greater than 0.2 and less than or equal to 2.4
Outer regional Australia	CDs with an average ARIA index value greater than 2.4 and less than or equal to 5.92
Remote Australia	CDs with an average ARIA index value greater than 5.92 and less than or equal to 10.53
Very remote Australia	CDs with an average ARIA index value greater than 10.53
Migratory	Areas composed of offshore, shipping and migratory CDs

Source: ABS 2001.

Socioeconomic status

Socioeconomic status was coded according to the Index of Relative Socio-economic Disadvantage (IRSD). The IRSD is one of the socioeconomic indexes for areas (Socio-Economic Indexes for Areas indexes) developed by the ABS to categorise geographic areas according to their social and economic characteristics.

It is important to note that the IRSD relates to the average disadvantage of all people living in a geographic area. Hence any variability between groups based on the IRSD will probably be smaller than if the variability had been measured between individuals.

This index of socioeconomic status divides areas into one of five quintiles in which the first quintile corresponds to the highest level of socioeconomic status and the fifth to the lowest.

Reporting periods for incidence and mortality indicators

Some incidence and mortality figures are based on a reporting period of 4 years rather than 12 months. This longer period allows for a greater aggregation of information on issues that are subject to wide annual fluctuations and for a more confident and meaningful estimate of the outcomes.

Confidence intervals

Where indicators include a comparison between states and territories, between time periods, between geographic locations, between socioeconomic status, or between Indigenous and other Australian women, a 95% confidence interval (CI) is presented along with the rates. This is because the observed value of a rate may vary due to chance, even where there is no variation in the underlying value of the rate. The 95% confidence interval represents a range (interval) over which variation in the observed rate is consistent with this chance variation. In other words, there is 95% confidence that the true value of the rate is somewhere within this range.

These confidence intervals can be used as a guide to whether changes in a particular rate are consistent with chance variation. Where the confidence intervals do not overlap, the difference between the rates is greater than that which could be explained by chance and is regarded as statistically significant.

For example, the 2-year participation rate for women aged 20–69 years in Victoria in 2005–2006 was 64.3% with a confidence interval of 64.1% to 64.4%. The corresponding rate for 2003–2004 was 64.8% with a confidence interval of 64.6% to 64.9%. These two intervals do not overlap, so the difference between the 2003–2004 and 2005–2006 rates is larger than we would expect due to chance alone.

Another example is the comparison between cervical cancer mortality rates for women in the target age group in remote areas. In the period 1998–2001 there were 4.2 cervical cancer deaths per 100,000 women living in remote areas. This rate had a confidence interval of 2.6 to 6.3. The 2002–2005 rate for women living in remote areas was 2.3 deaths per 100,000 women, with a confidence interval of 1.2 to 3.9. These confidence intervals overlap, so despite the relatively large difference between the two observed rates they are still consistent with chance variation. This arises from the fact that remote areas of Australia have small populations, resulting in small numbers of deaths from any specific cause, and these rates may fluctuate a great deal from year to year. This in turn leads to relatively wide confidence intervals for an observed mortality rate.

It is important to note that a result such as in this second example does not imply that the difference between the two rates is definitely due to chance. Instead, an overlapping confidence interval represents a difference in rates which is too small to allow differentiation between a real difference and one which is due to chance variation.

Appendix C Methods

This section describes the methods employed to calculate the estimates presented in the tables in the body of this publication.

Crude rates

A crude rate is defined as the number of events over a specified period of time (for example, a year) divided by the total population. For example, a crude cancer incidence rate is similarly defined as the number of new cases of cancer in a specified period of time divided by the population at risk. Crude mortality rates and cancer incidence rates are expressed in this report as rates per 100,000 population. Crude participation rate is expressed as a percentage.

Age-specific rates

Age-specific rates are calculated by dividing the number of cases occurring in each specified age group by the corresponding population in the same age group expressed as a percentage or a rate per 1,000 or 100,000 population. This rate may be calculated for particular age and sex groupings, for example:

Age-specific cervical cancer incidence rate in females aged 50–54 years in 2002

$$= \frac{\text{New cases aged } 50-54 \text{ years (year 2002)}}{2002 \text{ female population aged } 50-54 \text{ years}} \times 100{,}000$$

$$= \frac{78}{650{,}212} \times 100{,}000$$

$$= 12.0 \text{ per } 100{,}000$$

Age-standardised rates (AS rates)

Rates are adjusted for age to facilitate comparisons between populations that have different age structures, for example, between youthful and ageing communities. There are two different methods commonly used to adjust for age. In this publication, we use direct standardisation in which age-specific rates are multiplied against a constant population (the 2001 Australian Standard Population unless otherwise specified). This effectively removes the influence of age structure on the summary rate that is described as the age-standardised rate. The method may be used for the calculation of participation, incidence and mortality rates. The method used for this calculation comprises three steps.

Step 1: Calculate the age-specific rate (as shown above) for each age group.

Step 2: Calculate the expected number of cases in each 5-year age group by multiplying the age-specific rates by the corresponding standard population and dividing by the appropriate factor (that is, 100,000 for mortality and incidence rates and 100 for the participation rate).

Step 3: Sum the expected number of cases in each group, divide by the total of the standard population and multiply by the appropriate factor (that is, 100,000 for mortality and incidence rates and 100 for the participation rate). This gives the age-standardised rate.

Confidence intervals

Population numbers for incidence, mortality and screening have a natural level of variability for a single year above and below what might be expected in the mean over many years. The percentage variability is small for large population numbers but high for small numbers such as mortality in a young age group. One measure of the likely difference is the standard error, which indicates the extent to which a population number might have varied by chance in only 1 year of data.

In the 95% confidence interval, there are about 19 chances in 20 that the difference will be less than two standard errors.

The 95% confidence intervals (CIs) in this report were calculated using a method developed by Dobson et al. (1991). This method calculates approximate confidence intervals for a weighted sum of Poisson parameters.

Appendix D Population data

Table D1: Australian Standard Population[(a)] and WHO World Standard Population[(b)]

Age group (years)	2001 Australian Standard Population (A)	World Standard Population (W)
0–4	1,282,357	8.86
5–9	1,351,664	8.69
10–14	1,353,177	8.60
15–19	1,352,745	8.47
20–24	1,302,412	8.22
25–29	1,407,081	7.93
30–34	1,466,615	7.61
35–39	1,492,204	7.15
40–44	1,479,257	6.59
45–49	1,358,594	6.04
50–54	1,300,777	5.37
55–59	1,008,799	4.55
60–64	822,024	3.72
65–69	682,513	2.96
70–74	638,380	2.21
75–79	519,356	1.52
80–84	330,050	0.91
85+	265,235	0.63
Total	**19,413,240**	**100.03**

Note: The World Standard Population is the WHO World Standard Population Distribution (%), based on the world average population 2000–2025.

Sources

(a) ABS 2002.

(b) Ahmad et al. 2002.

Table D2: Hysterectomy fractions for women aged 18–80+ years, 2001

Age group (years)	Percentage of women who have not had a hysterectomy
18–19	100.0
20–24	100.0
25–29	100.0
30–34	98.9
35–39	95.6
40–44	90.6
45–49	82.5
50–54	76.5
55–59	66.2
60–64	68.9
65–69	66.8
70–74	68.1
75–79	67.9
80+	69.0
Total	**85.5**

Source: ABS 2002.

Appendix E National Cervical Screening Programs contact list

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Appendix F NHMRC guidelines for the management of women with screen-detected abnormalities

This reference sheet is a summary of the 1994 NHMRC guidelines for the management of women with screen-detected abnormalities. It is intended to assist medical practitioners to take appropriate action on receipt of Pap test reports (Information on the new NHMRC guidelines can be found on page 107.).

Low-grade epithelial abnormalities		
Pap test report	**Investigation**	**Management**
Non-specific minor squamous cell changes/atypia		Repeat Pap test at 12-monthly intervals until it reverts to normal.
Minor changes in endocervical cells/ low-grade glandular change	Repeat Pap test in 6 months using cytobrush and spatula. If low-grade abnormality persists, refer for colposcopy and biopsy if indicated.	If endocervical cell abnormality confirmed, refer to gynaecologist for appropriate treatment.
HPV effect/HPV-associated cell changes	Repeat Pap test at 6-monthly intervals. If HPV-associated cell changes persist after 12 months, refer for colposcopy.	If HPV confirmed, continue with 6-monthly Pap tests until two negative reports are received. Repeat pap test annually for 2 years then revert to 2-yearly screening.
Possible CIN 1 ± HPV/possible mild dysplasia	Repeat Pap test at 6-monthly intervals until two successive negative reports are received. If lesion persists for 12 months, refer for colposcopy.	If CIN 1 confirmed, follow either observational or active management program as explained on reverse of sheet.
CIN 1 ± HPV/mild dysplasia	Refer for colposcopy and biopsy if indicated.	If CIN 1 confirmed, follow either observational or active management program as explained on reverse of sheet. If higher grade abnormality diagnosed, see below.

High-grade epithelial abnormalities		
Pap test report	**Investigation**	**Management**
CIN 2 ± HPV/moderate dysplasia	Refer for colposcopy and directed biopsy.	If CIN 2 confirmed, treatment by gynaecologist with appropriate expertise is required.
CIN 3 ± HPV/severe dysplasia	Refer for colposcopy and directed biopsy.	If CIN 3 confirmed, treatment by gynaecologist with appropriate expertise is required.
CIN 3 ± HPV with possible invasion; endocervical glandular dysplasia; or adenocarcinoma in situ	Refer to gynaecologist with expertise in colposcopic evaluation of malignancies.	Treatment by gynaecologist with appropriate expertise is required.
Invasive squamous cell carcinoma or Adenocarcinoma	Refer to gynaecologist skilled in the management of malignancies, or a specialist unit, for urgent evaluation and management.	Treatment by gynaecologist with appropriate expertise is required.
Inconclusive—abnormal cells highly suggestive but not diagnostic of a high-grade abnormality	Refer for colposcopy and possible biopsy, unless there is an obvious diagnostic difficulty, for example epithelial atrophy or infection. In this case, treat the problem and repeat the Pap test.	If high-grade lesion confirmed, treatment by gynaecologist with appropriate expertise is required.

Management of women with low-grade epithelial abnormalities

A cytological assessment of CIN 1 requires referral for colposcopy and, if indicated, biopsy. There is controversy over the management—observational and active. Both treatment options should be fully discussed with the woman.

Observational management

If the diagnosis of CIN 1 is confirmed and the woman elects not to be treated, cervical Pap tests should be taken at 6-monthly intervals until the abnormality either regresses or progresses. After two negative Pap tests at 6-monthly intervals, Pap tests should be taken at yearly intervals. If two consecutive annual Pap tests are normal the woman can revert to 2-yearly screening.

Active management

Treatment by an accepted method, either ablative or excisional.

Pap test report	Management
Negative/within normal limits	Repeat Pap test in 2 years.
Negative/within normal limits and no endocervical cells present	Repeat Pap test in 2 years.
Negative with inflammation	Repeat Pap test in 2 years.
Note: Investigate any symptoms that are not readily explained, such as post-coital or intermenstrual bleeding. A negative Pap test must not be taken as reassurance in these circumstances. Further investigation may involve referral to a gynaecologist.	
Unsatisfactory	Repeat Pap test in 6–12 weeks, with treatment and where possible correction of any problems beforehand if appropriate.

Post-treatment assessment	After initial post-treatment colposcopic assessment by gynaecologist, repeat Pap test at 6-monthly intervals for 1 year. Following treatment of a high-grade epithelial abnormality, Pap tests should be repeated yearly thereafter. Following treatment for a low-grade epithelial abnormality, revert to normal 2-yearly screening after two consecutive normal Pap tests at yearly intervals.
Special circumstances	
Total hysterectomy for CIN	Annual Pap tests from vaginal vault for 5 years, then revert to 2-yearly Pap tests.
Total hysterectomy for benign causes	No further Pap tests required if previous Pap tests were negative. Baseline Pap test if reason for hysterectomy and/or previous Pap test history unknown.
Subtotal hysterectomy for benign causes—cervix present	Continue normal 2-yearly screening.
Abnormality during pregnancy	Refer for colposcopy during first trimester to exclude invasive disease. If confirmed high-grade abnormality, repeat colposcopy during mid-trimester to exclude progression. Lesion should be reassessed 8 weeks post-partum.

Changes in 2005 to NHMRC guidelines for the management of asymptomatic women with screen-detected abnormalities

Data in this report on cervical screening in Australia to 2005–2006 are based primarily on the 1994 NHMRC guidelines. In 2005, the NHMRC approved revised guidelines as a result of an improved understanding of the natural history of the human papillomavirus (HPV) and its link to cervical cancer. Most particularly, this involves evidence of the pivotal role of persistent infection with high-risk HPV subtypes as a necessary, but not sufficient, cause for cervical malignancy to occur (NHMRC 2005).

The new management approach for women with possible or definite low-grade cervical cytology is based on the acceptance that low-grade squamous intraepithelial abnormalities represent acute HPV infection. Recent work in molecular biology and epidemiology suggests most HPV infections acquired by women resolve without medical intervention (NHMRC 2005).

The major changes in the revised guidelines include:

- the use of a new terminology for the classification of cervical cytology reporting—the Australian Modified Bethesda System 2004 (AMBS 2004)
- repeat Pap tests for most women with low-grade squamous change
- more conservative management of women with biopsy proven CIN 1
- colposcopy for all women with atypical glandular cell reports
- the use of HPV testing as test of cure following treatment for high-grade abnormalities (CIN 2 and 3) (NHMRC 2005).

Further information on the new guidelines can be found on the Australian Government Department of Health and Ageing website <www.cervicalscreen.health.gov.au> and in *Screening to prevent cervical cancer: guidelines for the management of asymptomatic women with screen-detected abnormalities* <www.nhmrc.gov.au/publications>.

Glossary

Ablative therapy: the destruction of cells on the surface of the cervix using laser therapy, chemicals or diathermy.

Adenocarcinoma: a cancer formed from the cells of a gland.

Adenosquamous: a mix of adenocarcinoma and squamous cells in the same sample.

Age-standardised rate: A method of removing the influence of age when comparing populations with difference age structures. This is usually necessary because the rates of many diseases vary strongly (usually increasing) with age. The age structures of the different populations are converted to the same 'standard' structure; then the disease rates that would have occurred with that structure are calculated and compared (AIHW 2006).

Atypia: the condition of being irregular.

Benign: not malignant.

Cancer death: a death where the underlying cause (see 'Underlying cause of death') is indicated as cancer. Persons with cancer who die of other causes are not counted in the death statistics in this publication.

Cancer (malignant neoplasm): a large range of diseases, in which some of the body's cells become defective, begin to multiply out of control, can invade and damage the area around them, and can also spread to other parts of the body to cause further damage (AIHW 2006).

Cervical cancer: this term covers all cancers specific to the uterine cervix, including micro-invasive cervical cancer. Types of cervical cancers include squamous cell carcinoma, adenocarcinoma (including mucoepidermoid and adenoid carcinomas), adenosquamous, and other and unspecified carcinomas. The term 'all cervical cancers' denotes all these types of cervical cancer, unless otherwise specified.

Cervical cytology register: a database that stores Pap test results and related test results for women in each state and territory of Australia. The term cervical cytology register is often used interchangeably with the terms Pap test register and Pap smear register.

Cervical cytology registry: the component of each state and territory cervical screening program which maintains the cervical cytology register. The term cervical cytology registry is often used interchangeably with the terms Pap test registry and Pap smear registry.

Cervical intraepithelial neoplasia (CIN): squamous cell carcinoma of the cervix is mostly preceded, over a period of years, by a spectrum of asymptomatic abnormalities known as cervical intraepithelial neoplasia (CIN) graded as CIN 1 (I) (mild dysplasia), CIN 2 (II) (moderate dysplasia) and CIN 3 (III) (severe dysplasia and carcinoma in situ). CIN usually occurs at least a decade before cervical cancer. If CIN remains untreated, some women will develop cervical cancer and others will progress to invasive cervical cancer, despite treatment (AIHW: Jelfs 1995).

Colposcopy: a microscopic examination of the lower genital tract with a magnifying instrument called colposcope. This method of conservative evaluation allows the clinician to more accurately assess the cytologic abnormality by focusing on the areas of greatest cellular abnormality and by sampling them with a biopsy to attain diagnosis (NCSP 2004).

Cone biopsy: biopsy in which an inverted cone of tissue is excised, as from the uterine cervix.

Confidence interval: a range determined by variability in data, within which there is a specified (usually 95%) chance that the true value of a calculated parameter (for example, relative risk) lies.

Cryosurgery: the destruction of tissue using extreme cold.

Dysplasia: abnormal development or growth patterns of cells (NCSP 2004).

Endocervical: the inside of the uterine cervix or the mucous membrane lining of the cervix.

Epidemiology: the study of the patterns and causes of health and disease in populations, and the application of this study to improve health (AIHW 2006).

Epithelium: tissue lining the outer layer of a body or lining a cavity (for example, vagina or mouth) (NCSP 2004).

Exfoliate: to break away or remove (shed) cells. In the context of this report it refers to the removal of cells from a person for the purpose of a Pap test.

High-grade abnormalities (HGA): high-grade abnormalities as defined for this report include CIN 1/2, CIN 2, CIN 3 or adenocarcinoma in situ.

Histology: the microscopic study of the minute structure and composition of tissues.

Hysterectomy: refers to the surgical procedure whereby all or part of the uterus is removed.

Human papillomavirus: The virus that causes genital warts and which is linked in some cases to the development of more serious cervical cell abnormalities (NCSP 2004).

Hysterectomy fractions: the proportion of women who have not had their uterus removed by hysterectomy.

ICD-10: International Classification of Diseases—a coding system used to identify the primary site of the malignancy. This classification is in its 10th revision.

Incidence: the number of new cases (for example, of an illness or event) occurring during a given period (AIHW 2006).

Indigenous Australian: A person of Aboriginal and/or Torres Strait Islander descent who identifies as an Aboriginal and/or Torres Strait Islander and is accepted as such by the community with which he or she is associated (AIHW 2006).

Intraepithelial: the area within the layer of cell tissues forming the epidermis of a body cavity. These cells comprise contiguous cells having minimum intercellular substance (NCSP 2004).

Invasive cancer: a tumour whose cells have a tendency to invade healthy or normal tissues.

Low-grade abnormalities: low-grade abnormalities include atypia, warty atypia (human papillomavirus (HPV) effect), possible CIN, equivocal CIN, CIN 1 or endocervical dysplasia not otherwise specified.

Lymph node: masses of lymphatic tissue, often bean-shaped, that produce lymphocytes and through which lymph filters. These are located throughout the body.

Malignant: abnormal changes consistent with cancer.

Metastasis: the process by which cancerous cells are transferred from one part of the body to another, for example, via the lymphatic system or the bloodstream.

Micro-invasive squamous cell carcinoma (micro-invasive cancer): a lesion in which the cancer cells have invaded just below the surface of the cervix, but have not developed any potential to spread to other tissues.

Mortality: see 'Cancer death'.

Neoplasia: the new and abnormal development of cells that may be harmless or cancerous (malignant) (NCSP 2004).

New cancer case: a person who has a new cancer diagnosed for the first time. One person may have more than one cancer and therefore may be counted twice in incidence statistics if it is decided that the two cancers are not of the same origin. This decision is based on a series of principles set out in more detail in a publication by Jensen et al. (1991).

Pap test: a test prepared for the study of exfoliated cells from the cervix (refer to Appendix A).

Post-partum: following childbirth.

Radiation therapy: the treatment of disease with any type of radiation, most commonly with ionising radiation, such as X-rays, beta rays and gamma rays.

Screening: the performance of tests on apparently well people in order to detect a medical condition at an earlier stage than would otherwise be the case.

Significant difference: where rates are referred to as significantly different, or one rate is deemed significantly higher or lower than another, these differences are statistically significant. Rates are deemed statistically significantly different when their confidence intervals do not overlap, since their difference is greater than what could be explained by chance. See 'confidence intervals' in Appendix B for more information.

Squamous malignancy: thin and flat cells, shaped like soft fish scales. They line the outer surface of the cervix (ectocervix). They meet with columnar cells in the squamo-columnar junction. Between 80 and 85% of cancers of the cervix arise from squamous cells. Abnormalities associated with squamous cells are most likely abnormalities to be picked up by Pap tests (NCSP 2004).

Stroma: the supporting framework of an organ.

The Institute: the Australian Institute of Health and Welfare.

Tumour: an abnormal growth of tissue. Can be benign (not a cancer) or malignant (a cancer) (AIHW 2006).

Underlying cause of death: the condition, disease or injury initiating the sequence of events leading directly to death; that is, the primary, chief, main or principal cause (AIHW 2006).

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