

**Cervical screening in Australia  
2004–2005**

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# **Cervical screening in Australia 2004–2005**

**The Australian Institute of Health and Welfare and  
the Australian Government Department of Health and Ageing  
for the National Cervical Screening Program**

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# Abbreviations

ABS	Australian Bureau of Statistics
ACT	Australian Capital Territory
AHMAC	Australian Health Ministers' Advisory Council
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 (the classification designed by the ABS to define the geography of Australia)
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
ERP	Estimated resident population
HGA	High-grade abnormality
HPV	Human papillomavirus
ICD	International Classification of Diseases
LGA	Low-grade abnormality
NHMRC	National Health and Medical Research Council
NSW	New South Wales
NT	Northern Territory
Qld	Queensland
RRMA	Rural, Remote and Metropolitan Areas (classification)
SA	South Australia
Tas	Tasmania
Vic	Victoria
WA	Western Australia
WHO	World Health Organization

# Summary

The National Cervical Screening Program commenced in 1991. The major goals of the Program in Australia are to reduce the incidence and mortality of cervical cancer in women. Cervical screening through Pap smears detects abnormalities of the cervix at an early stage and medical intervention can avert the possible progression to cervical cancer.

This is the ninth annual report on the performance of the Program. Data were provided by state and territory cervical cytology registries and are presented on six indicators which measure program activity, performance and outcome. The key outcome data indicate that the Program has been very successful in meeting the goals of reducing incidence and mortality through early detection and treatment. In the period from 1982–1991 prior to commencement of the National Program, age-standardised incidence of cervical cancer was declining at an average of 0.7% per annum, and mortality was declining at 2.7% per annum. From 1991 to 2003 the average decline in incidence was 5.2% per annum and for mortality was 5.0% per annum (AIHW National Cancer Statistics Clearing House). Furthermore the incidence of cervical cancer among women in the target age range of 20–69 years declined from 17.2 per 100,000 women in 1991 to 9.1 in 2003, and mortality fell from 4.0 per 100,000 women in 1991 to 1.8 per 100,000 in 2004.

The main features in this report are as follows.

## Participation

- In the two-year period 2004–2005 there were 3,462,907 women who participated in the National Cervical Screening Program. Women aged 20–69 years accounted for 98.4% of the women screened.
- Between the periods 2002–2003 and 2004–2005 the proportion of women aged 20–69 years participating in cervical screening increased from 60.7% to 61.0%.
- There was a steady decline in participation among women aged less than 40 years from 1998–1999 to 2004–2005 but continued improvement in participation for older women in the 55–69 year age group. For example, participation fell from 68.7% in 1998–1999 to 62.9% in 2004–2005 for women aged 30–34 years but increased from 46.5% to 49.7% during the same period for women aged 65–69 years.

## Early re-screening

The recommended screening interval is two years following a normal (negative) smear.

- Of a cohort of women screened in February and March 2004 who had a normal Pap smear result, 25.3% had a repeat Pap smear 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 25.3% in 2004.

## Detection of abnormalities

A low-grade abnormality includes atypia, warty atypia, possible cervical intraepithelial neoplasia (CIN), equivocal CIN, and CIN 1. A high-grade abnormality is defined to include CIN 1/2, CIN 2 and CIN 3 and adenocarcinoma in situ.

- In 2005 the screening program detected 31,111 histologically verified abnormalities of which 16,274 were low-grade and 14,837 were high-grade.
- The number of high-grade abnormalities detected per 1,000 women screened aged 20–69 years increased significantly between 1997 and 2005, from 6.4 to 7.5.
- With the exception of a rise in 2000, there has been a decline in the ratio of low-grade to high-grade abnormalities in women aged 20–69 years from 1.35 in 1999 to 1.10 in 2005.
- The number of high-grade abnormalities detected per 1,000 women screened was highest in the younger age groups. For women aged 20–24, the rate of high-grade abnormalities was 19.2 per 1,000 women screened; in contrast the rate was 1.0 per 1,000 women screened aged 65–69 years.

### **Incidence and mortality**

- The number of new cases of cervical cancer has continued to decline. There were 725 new cases in Australia in 2003 compared with 1,091 in 1991 before the start of the organised screening program. The number of new cases of micro-invasive cervical cancers also fell from 166 to 85 over the same period.
- All histological types of cervical cancer have shown a statistically significant decrease in the age-standardised rates per 100,000 women aged 20–69 years with the exception of adenocarcinoma. The incidence of adenocarcinoma declined from 2.7 per 100,000 women in 1992 to 2.2 in 2003. It is possible that this is because these cells may be too deep in the endocervical canal to be easily detected with a Pap smear (Heley 2007).
- Cervical cancer was the 18th most common cause of cancer mortality in Australian women in 2004, accounting for 212 deaths in 2004 compared with 329 in 1991. Although there was some fluctuation from year to year, the age-standardised mortality rate from cervical cancer declined between 1991 and 2004. For all women there was a decline from 4.0 deaths per 100,000 women in 1991 to 1.9 in 2004; this represents a decline of almost 55%. During the same period, for women aged 20–69 years the rate fell from 4.0 to 1.9 per 100,000 women, a decline of 52.5%.
- Women aged 20–69 years from regional and remote locations experienced higher incidence and mortality rates for cervical cancer compared with women in major cities. In 2000–2003, age-standardised incidence was 8.9 per 100,000 females in major cities, 9.8 per 100,000 in regional areas and 12.3 per 100,000 in remote areas. Only the higher rate in remote areas was statistically significant. However, the age-standardised death rate in regional areas of 2.5 deaths per 100,000 females in 2001–2004 was significantly higher than the rate of 1.9 deaths per 100,000 in major cities. Because of small numbers, the death rate of 2.4 per 100,000 in remote areas was not significantly higher than the major cities rate.

### **Indigenous incidence and mortality**

Data on Indigenous incidence rates are not available and 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 2001–2004, the age-standardised mortality rate for Indigenous women was 9.9 per 100,000 women, more than four times higher than the rate of 2.1 per 100,000 for non-Indigenous women in these states and the Northern Territory.

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

Indicator	Current reporting period		Previous reporting period		Reporting commencement	
	Year(s)		Year(s)		Year(s)	
Participation in 24-month period	2004–2005	<u>%</u> 61.0	2002–2003	<u>%</u> 60.7	1996–1997	<u>%</u> 61.0
Early re-screening within 21 months of normal Pap smear <sup>(a)</sup>	2004	<u>%</u> 25.3	2003	<u>%</u> 26.2	1999 <sup>(a)</sup>	<u>%</u> 32.0
Ratio of low- and high-grade abnormalities	2005	<u>Ratio</u> 1.10	2004	<u>Ratio</u> 1.15	1997	<u>Ratio</u> 1.47
High-grade abnormalities per 1,000 women screened (age-standardised rate)	2005	<u>ASR</u> 7.5	2004	<u>ASR</u> 7.4	1997	<u>ASR</u> 6.4
Incidence of cervical cancer per 100,000 women (age-standardised rate)	2003	<u>ASR</u> 9.1	2002	<u>ASR</u> 8.9	1997	<u>ASR</u> 11.4
Mortality from cervical cancer per 100,000 women (age-standardised rate)	2004	<u>ASR</u> 1.8	2003	<u>ASR</u> 2.2	1997	<u>ASR</u> 2.7

(a) From 1996 to 1998 the indicator reported on a 24-month period following a normal Pap smear; 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

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 cancer of the cervix.

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. A listing of the indicators and their definitions follows. The target age group for the National Cervical Screening Program is 20–69 years.

## **Indicator 1: Participation rate for cervical screening**

The participation rate is the percentage of women screened in a 24-month period for women aged 20 years and over and for the target age group 20–69 years.

## **Indicator 2: Early re-screening**

The proportion of women re-screened, by number of re-screens, during a 21-month period following a normal smear.

## **Indicator 3: Low-grade abnormality detection**

Number of women with a histologically verified low-grade intraepithelial abnormality detected in a 12-month period as a ratio of the number of women with a histologically verified high-grade intraepithelial abnormality detected in the same period.

## **Indicator 4: High-grade abnormality detection**

Detection rate for 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 cell carcinoma**

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

## Indicator 6.1: Mortality by age

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

## Periodic indicators

Periodic indicators have been developed to report on issues of importance in monitoring the outcomes of the cervical screening program over a longer period of time than one year. 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. The periodic indicators presented in this report are based on a reporting period of four years.

## Periodic incidence and mortality indicators by location

### Geographic region

In reports before 2000–2001, analysis of incidence and mortality data by geographic region used the Rural, Remote and Metropolitan Areas (RRMA) classification. This classification was developed in 1994 by the then Department of Primary Industries and Energy and the then Department of Human Services and Health (DPIE & DSHS 1994). It allows geographic regions to be classified into seven zones – two metropolitan, three rural and two remote zones.

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 off-shore, shipping and migratory CDs

Source: ABS 2001.

The ASGC is not directly comparable to the RRMA classification. Accessibility is judged purely on distance to one of the metropolitan centres. For example, the ASGC allocates Hobart to its second group (Inner regional Australia) and Darwin to its third group (Outer regional Australia), whereas the RRMA classification grouped them together with the other capital cities.

### **Indicator 5.3: Incidence by location**

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

### **Indicator 6.2: Mortality by location**

Death rate from cervical cancer per 100,000 estimated resident female population in a four-year period by location for females of all ages and for the target age group 20–69 years.

### **Indicator 6.3: Indigenous mortality**

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

This indicator examines the patterns of mortality among Indigenous women.

Identification of Indigenous status 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.

## **Confidence intervals**

Where indicators include a comparison between states and territories, between time periods, between geographic locations 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 owing 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 participation rate for women aged 20–69 years in Victoria in 2004–2005 was 65.4% with a confidence interval of 65.3% to 65.5%. The corresponding rate for 2002–2003 was 64.2% with a confidence interval of 64.1% to 64.4%. These two intervals do not overlap, so the difference between the 2002–2003 and 2004–2005 rates is larger than we would expect due to chance alone.

Another example is the comparison between cervical mortality rates for women in the target group in remote areas. In the period 1997–2000 there were 4.6 cervical cancer deaths per 100,000 women living in remote areas. This rate had a confidence interval of 2.9 to 6.9. The 2001–2004 rate for women living in remote areas was 2.4 deaths per 100,000, with a confidence interval of 1.2 to 4.0. 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 over time. This in turn leads to relatively wide confidence intervals for an observed death 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.



# Indicator 1: Participation

*The percentage of women screened in a 24-month period for women aged 20 years and over and for the target age group 20–69 years.*

The major objective of the National Cervical Screening Program is to reduce morbidity and deaths 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 treated before progression to cervical cancer, thus reducing morbidity and deaths. 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, focuses on women in the age group 20–69 years. The recommended screening interval for women in this target age group who have been sexually active at any stage in their lives is two years. Pap smears may cease at the age of 70 years for women who have had two normal Pap smears within the previous five years. Women over 70 years who have never had a Pap smear, or who request a Pap smear, 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.

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

- The participation indicator measures the proportion of the target population covered by the cervical screening program and the current screening policy of a two-year interval.
- The indicator is important in assessing the contribution of the cervical screening program to changes in 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.

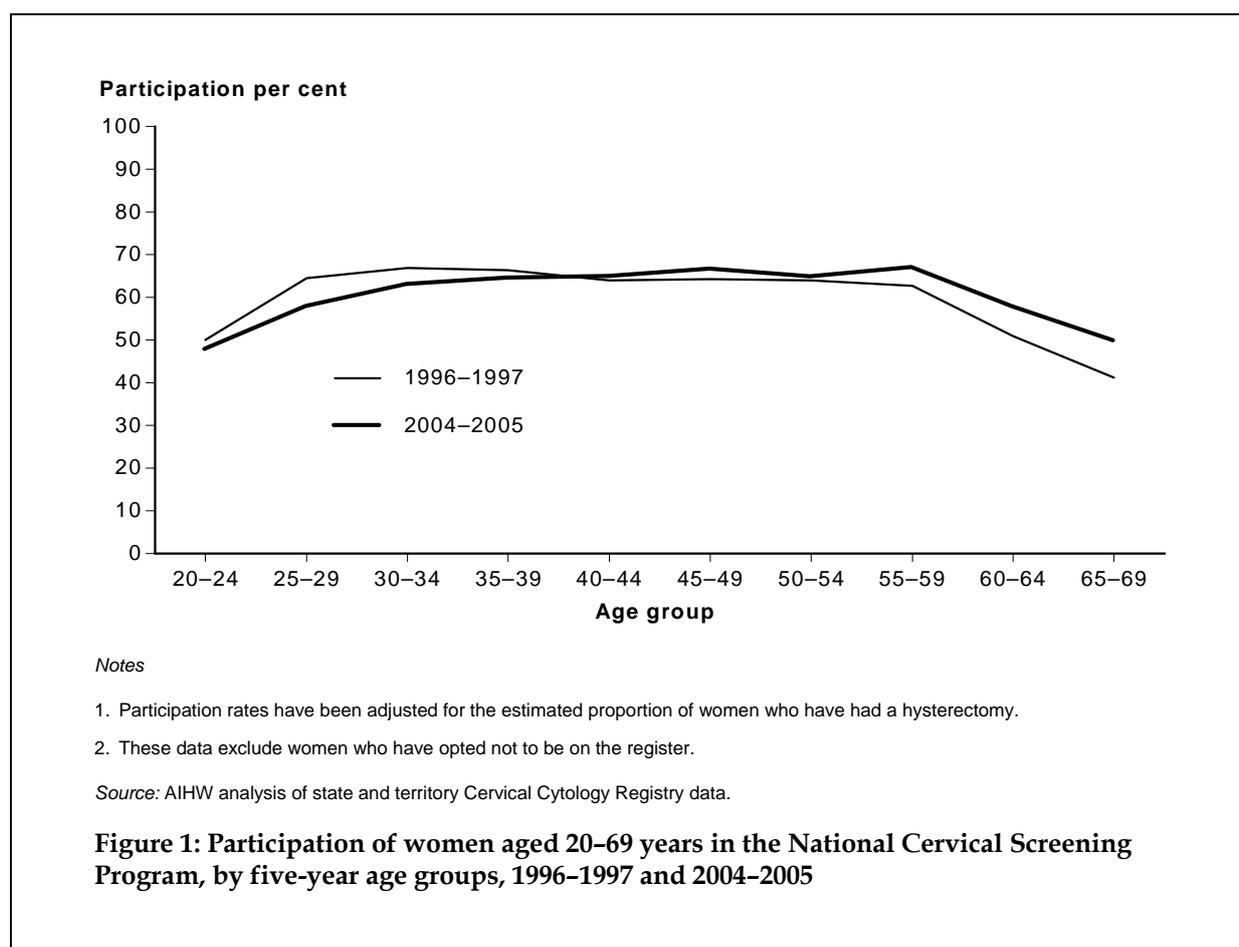
## State- and territory-specific issues

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 over-estimation 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 resident overseas.

## **Data issues**

In 2001 the Australian Bureau of Statistics (ABS) carried out a full population census and a national health survey. The denominators for participation rates presented in this report have been calculated using the 2001 ABS National Health Survey hysterectomy fractions and ABS estimated resident population data, and age-adjusted using the 2001 Australian Standard Population.

## Participation by age



	Age group										20-69*
	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	
1996-1997	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)
1998-1999	53.5	65.5	68.7	68.2	66.5	66.7	64.7	65.9	56.0	46.5	63.4 (63.4-63.5)
2000-2001	50.3	61.0	64.9	64.8	64.4	65.0	63.0	64.9	55.3	46.7	61.0 (60.9-61.1)
2002-2003	49.0	59.0	63.4	63.9	64.1	65.6	63.1	66.2	56.4	48.8	60.7 (60.6-60.8)
2004-2005	47.7	57.8	62.9	64.4	64.8	66.5	64.7	66.9	57.7	49.7	61.0 (60.9-61.0)

\* Age-standardised rates (standardised to the Australian 2001 population) with 95% confidence intervals.

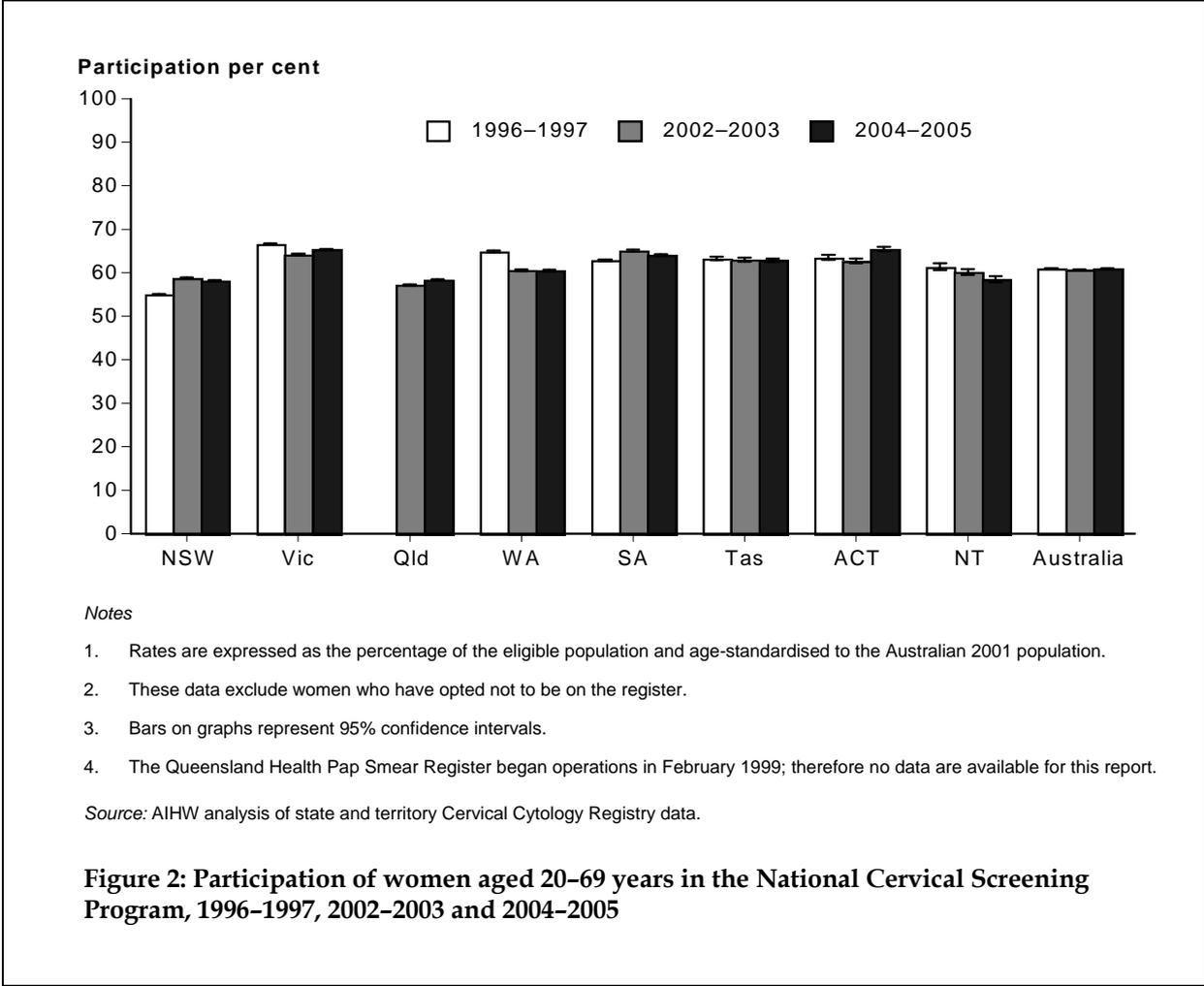
**Notes**

1. Periods cover 1 January 1996 to 31 December 1997 and 1 January 2004 to 31 December 2005.
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 register.

For more information, see Tables 1-4 beginning on page 35. Tables with data other than for the latest reporting period can be found on the AIHW's website at <[www.aihw.gov.au](http://www.aihw.gov.au)>.

- In 2004–2005 there were 3,462,907 women who participated in the National Cervical Screening Program. Of these women, 3,407,219 (98.4%) were aged 20–69 years.
- From 1996–1997 to 2004–2005 there was a steady decline in participation among women aged less than 35 years and continued improvement in participation for women aged 40 years and over.
- Participation rates have peaked at 63.4% in 1998–1999. There was a significant decline to 60.7% in 2002–2003, followed by a statistically significant increase to 61.0% in 2004–2005.

**Participation by state and territory**



For more information, see Tables 1–4 beginning on page 35. Tables with data other than for the latest reporting period can be found on the AIHW’s website at <www.aihw.gov.au>.

## Participation of women aged 20–69 years in the National Cervical Screening Program, 1996–1997 to 2004–2005

24-month period	NSW <sup>(b)</sup>	Vic <sup>(c)</sup>	Qld	WA <sup>(d)</sup>	SA	Tas	ACT <sup>(c)(e)</sup>	NT <sup>(f)</sup>	Aust
1996–1997									
AS rate	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
1998–1999									
AS rate	59.4	67.7	..	63.9	66.0	64.5	65.7	62.6	63.4
95% CI	59.3–59.5	67.6–67.9	..	63.7–64.1	65.7–66.2	64.0–64.9	65.1–66.2	61.8–63.3	63.4–63.5
2000–2001									
AS rate	59.1	64.6	57.0	61.4	64.9	65.2	62.8	61.7	61.0
95% CI	59.0–59.3	64.5–64.8	56.8–57.1	61.2–61.6	64.6–65.1	64.7–65.6	62.3–63.4	61.0–62.4	60.9–61.1
2002–2003									
AS rate	58.8	64.2	57.2	60.6	65.1	63.1	62.7	60.2	60.7
95% CI	58.7–58.9	64.1–64.4	57.0–57.3	60.3–60.8	64.8–65.3	62.6–63.5	62.2–63.3	59.5–60.9	60.6–60.8
2004–2005									
AS rate	58.2	65.4	58.4	60.5	64.1	62.9	65.5	58.5	61.0
95% CI	58.1–58.3	65.3–65.5	58.3–58.6	60.3–60.7	63.9–64.4	62.5–63.3	65.0–66.0	57.9–59.2	60.9–61.0

.. Not applicable.

- (a) Age-standardised rates (standardised to the Australian 2001 population) with 95% confidence intervals.
- (b) The New South Wales Pap Test Register commenced in July 1996, therefore data have been estimated for the period January to July 1996.
- (c) In the 2002–2003 and 2004–2005 reporting periods the Victorian and Australian Capital Territory registries only registered women with a Victorian or Australian Capital Territory address respectively.
- (d) From 1998–1999 to 2000–2001 the Western Australia registry only registered women with a Western Australian address.
- (e) Since the National Cervical Screening Program commenced, the Australian Capital Territory has only registered women with an Australian Capital Territory address.
- (f) The Northern Territory Pap Smear Register commenced in March 1996, therefore data have been estimated for the period January to March 1996.

### Notes

1. Rates are expressed as the percentage of the eligible female population and age-standardised to the Australian 2001 population.
2. The Queensland Health Pap Smear Register began operations in February 1999; therefore no data are available for this report.

- In 2004–2005 there were significant declines in participation in New South Wales, South Australia and the Northern Territory, and significant increases in Victoria, Queensland and the Australian Capital Territory.
- The highest rates of participation were in Victoria (65.4%) and the Australian Capital Territory (65.5%) in 2004–2005 and the lowest in New South Wales (58.2%) and Queensland (58.4%).

For more information, see Tables 1–4 beginning on page 35. Tables with data other than for the latest reporting period can be found on the AIHW's website at <[www.aihw.gov.au](http://www.aihw.gov.au)>.

# Indicator 2: Early re-screening

*Proportion of women re-screened by number of re-screens during a 21-month period following a normal smear.*

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 smear, the recommended interval before their next screen is two years.

An early re-screen is defined as having a repeat Pap smear within 21 months of a negative smear result. Reasons for the choice of 21 months as the timeline for reporting are discussed under 'Data issues' below.

This indicator:

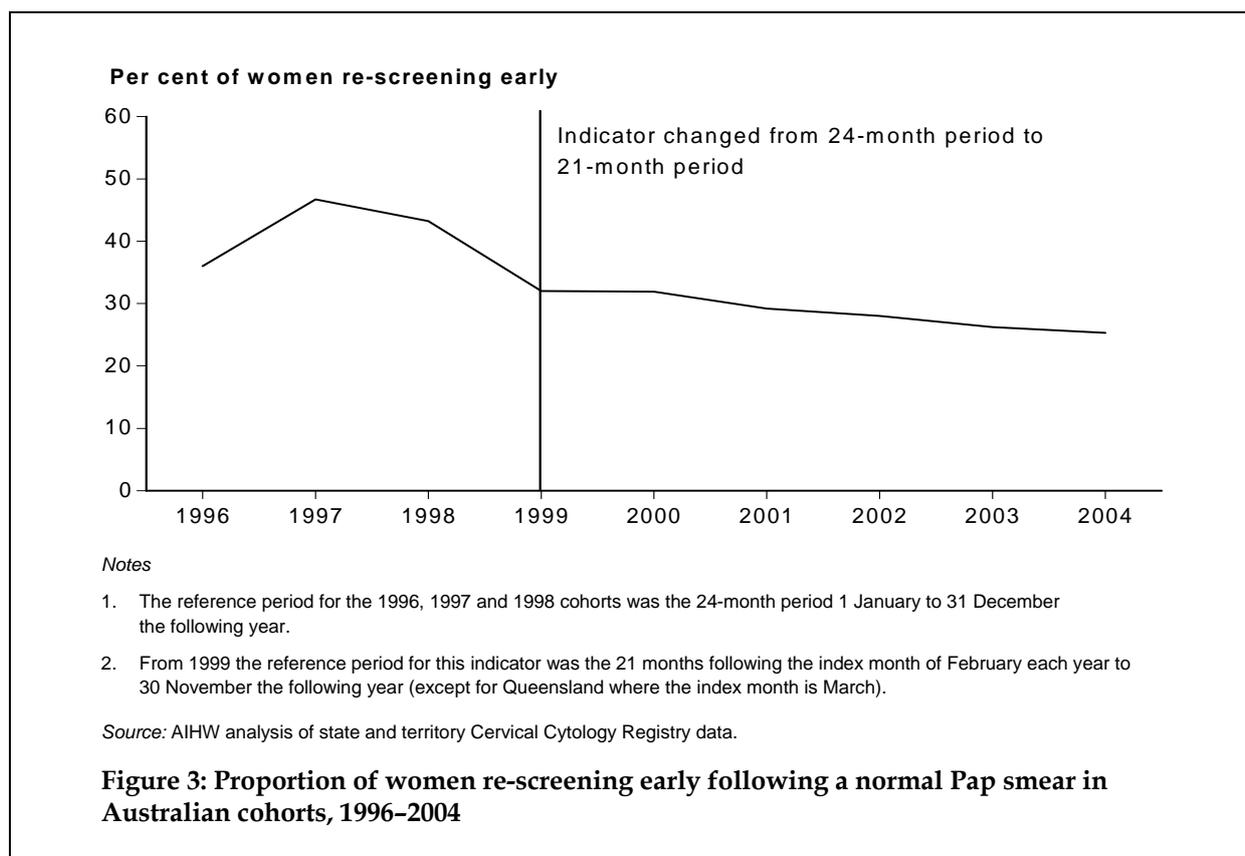
- tracks over a period of 21 months a cohort of women from all states and territories who had a negative smear result in February 2002 to determine the extent of early re-screening within the National Cervical Screening Program. The exception to this is Queensland where the index month is March. February 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.
- measures the compliance with the recommended screening interval following a negative smear.
- 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 smear report is appropriate and in accordance with the National Health and Medical Research Council guidelines. Specifically, if a woman has a history of histologically proven high-grade abnormality, then annual screening is recommended. If a woman is being monitored after treatment or during the resolution phase of a low-grade abnormality, it is appropriate for her to be screened earlier than the 24 months recommended screening interval.

## 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 smear taken at a time convenient to them, with some choosing to have their biennial screening immediately before the 24-month anniversary. Also prescriptions for oral contraceptives lapse at 22 months and some women are then likely to combine their Pap smears with their visit to the GP for renewing their scripts.

## Trend in early re-screening



### Proportion of women re-screening early following a normal Pap smear in Australian cohorts, by number of screens, 1996–2004

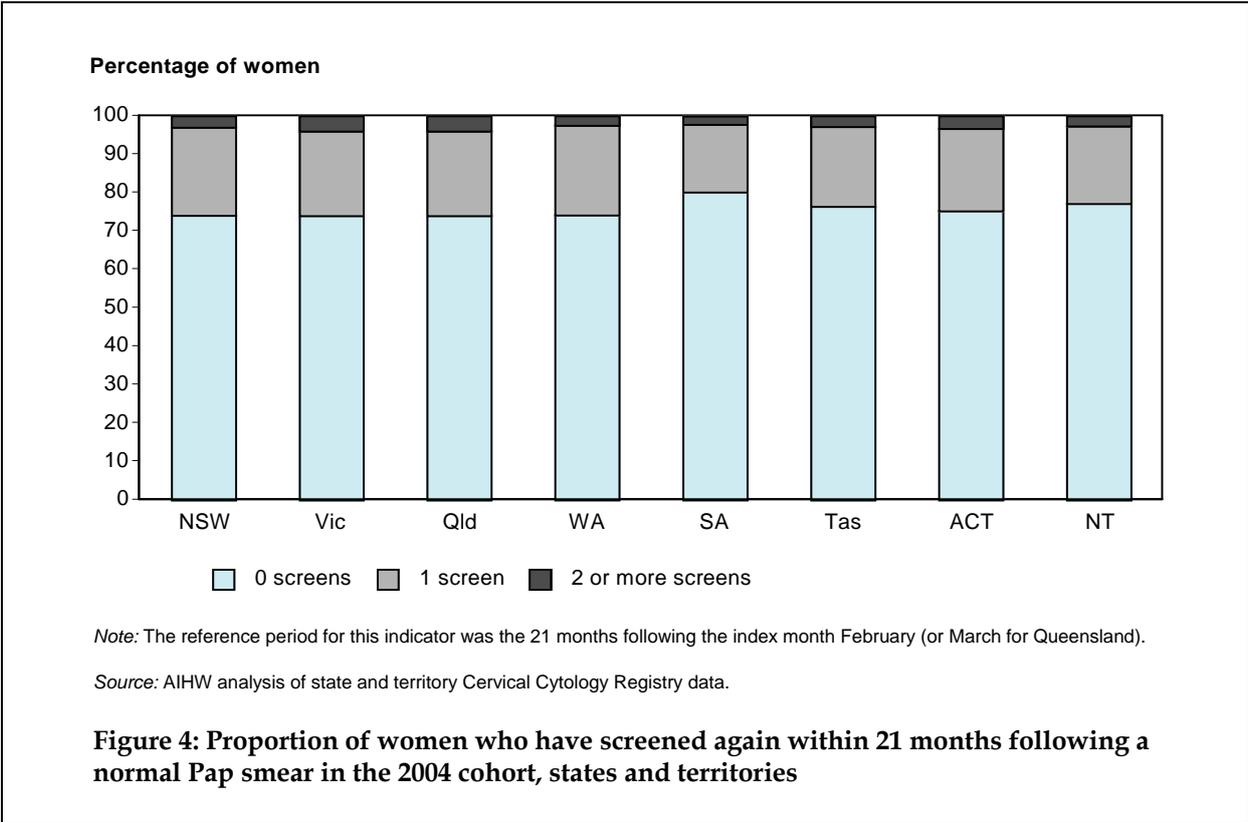
No. of screens	1996	1997	1998	1999	2000	2001	2002	2003	2004
1 screen	28.0	37.2	34.7	27.3	27.3	25.3	24.1	22.7	22.1
2 screens	6.2	7.6	6.9	3.8	3.6	3.1	3.1	2.8	2.6
3+ screens	1.8	1.9	1.5	0.9	0.9	0.8	0.8	0.7	0.6
<b>Total</b>	<b>36.0</b>	<b>46.7</b>	<b>43.1</b>	<b>32.0</b>	<b>31.8</b>	<b>29.2</b>	<b>28.0</b>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

*Note:* The indicator reported on a 24-month period following a normal Pap smear 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.

- A cohort of 166,586 women screened in February or March 2004 whose Pap smear 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 has fallen from 32.0% in 1999 to 25.3% in 2004.

For more information, see Tables 5–8 beginning on page 39. Tables with data other than for the latest reporting period can be found on the AIHW's website at <[www.aihw.gov.au](http://www.aihw.gov.au)>.

# Early re-screening by state and territory



- In the 2004 cohort the level of early re-screening did not vary significantly among the states and territories except for South Australia where 80.2% of women did not screen again within 21 months of a normal Pap smear, compared with 74.7% nationally.
- Since the 2000 cohort, all states and territories experienced a decline in the proportion of women having additional Pap smears within the 21 months following a normal smear.

For more information, see Tables 5–8 beginning on page 39. Tables with data other than for the latest reporting period can be found on the AIHW’s website at <[www.aihw.gov.au](http://www.aihw.gov.au)>.

**Proportion of women who have or have not re-screened within 21 months following a normal Pap smear, by number of screens, states and territories, 1999–2004**

Year	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Per cent									
<b>1999 cohort</b>									
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
<b>2000 cohort</b>									
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
<b>2001 cohort</b>									
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
<b>2002 cohort</b>									
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
<b>2003 cohort</b>									
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
<b>2004 cohort</b>									
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

For more information, see Tables 5–8 beginning on page 39. Tables with data other than for the latest reporting period can be found on the AIHW's website at <[www.aihw.gov.au](http://www.aihw.gov.au)>.

## 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.*

This ratio is an indicator of the success of cytology laboratories in accurately identifying those Pap smears which are appropriate for histological follow-up. Women with low-grade abnormalities identified in the Pap smear are not usually referred for further investigative tests; they are advised to return for early re-screening to test whether the low-grade abnormality has resolved, remains a low-grade abnormality or has progressed to a high-grade abnormality. Therefore, the majority of women referred for follow-up will have had a high-grade abnormality identified in the Pap smear. Some of these apparent high-grade abnormalities will be identified by histological follow-up to have actually been low-grade abnormalities.

This ratio is only based on the results for women who are referred for histological follow-up. The numerator represents those that were confirmed as 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 smear 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.

The Pap smear test is able to identify a range of abnormalities in cervical cells. Some of these abnormalities have a greater chance of becoming malignant, and high-grade abnormalities are therefore treated aggressively. The chance of low-grade abnormalities progressing to malignant change is lower.

In this report a low-grade intraepithelial abnormality includes:

- atypia
- warty atypia (human papillomavirus (HPV) effect)
- possible cervical intraepithelial neoplasia (CIN) (see glossary)
- equivocal CIN
- CIN 1
- endocervical dysplasia not otherwise specified (NOS).

The indicator is the ratio of low-grade to high-grade intraepithelial abnormalities, all histologically verified.

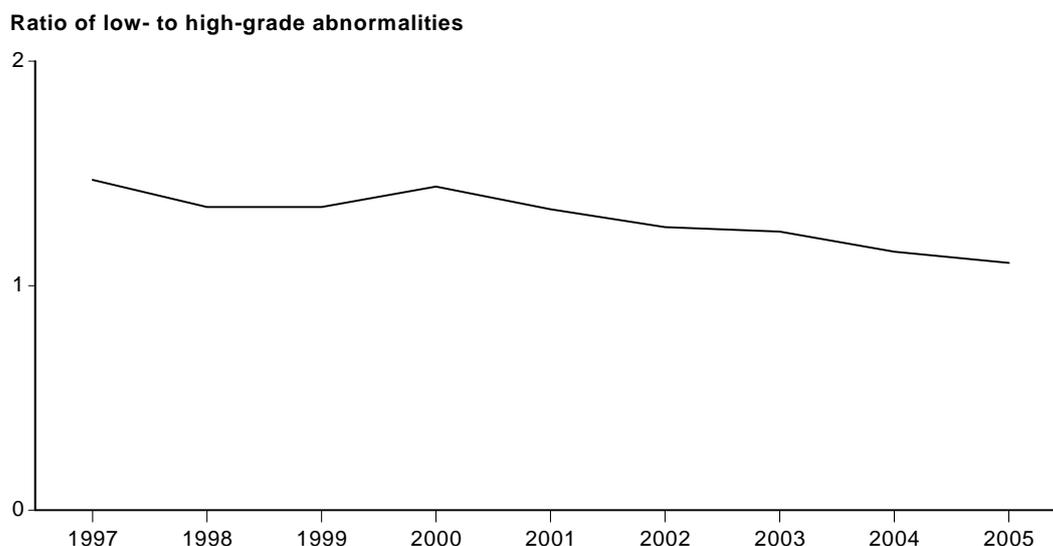
**Number of low- to high-grade abnormalities histologically verified for women aged 20–69 years, 1997–2005**

<b>Abnormalities</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
Low-grade	15,314	14,411	15,753	19,985	18,126	18,781	18,443	16,627	16,274
High-grade	10,392	10,704	11,686	13,851	13,555	14,903	14,840	14,507	14,837
<b>Total</b>	<b>25,706</b>	<b>25,115</b>	<b>27,439</b>	<b>33,836</b>	<b>31,681</b>	<b>33,684</b>	<b>33,283</b>	<b>31,134</b>	<b>31,111</b>
<b>Ratio</b>	<b>1.47</b>	<b>1.35</b>	<b>1.35</b>	<b>1.44</b>	<b>1.34</b>	<b>1.26</b>	<b>1.24</b>	<b>1.15</b>	<b>1.10</b>
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
<b>As a percentage of all screens</b>									
Low-grade	1.04	0.93	1.02	1.07	0.98	1.01	1.01	0.88	0.84
High-grade	0.71	0.69	0.75	0.74	0.73	0.80	0.79	0.77	0.77
<b>Total</b>	<b>1.75</b>	<b>1.61</b>	<b>1.77</b>	<b>1.81</b>	<b>1.71</b>	<b>1.80</b>	<b>1.77</b>	<b>1.64</b>	<b>1.61</b>

*Notes*

1. The Queensland Health Pap Smear Register began operations in February 1999; therefore no data are available for this report.
2. Australian Capital Territory data were unavailable for 1997 and 1998.

## Trend in ratio of low- to high-grade abnormalities



### Notes

1. The Queensland Health Pap Smear Register began operations in February 1999; therefore no data are available for this report.
2. Australian Capital Territory data were unavailable for 1997 and 1998.
3. Northern Territory data were unavailable for 2001.

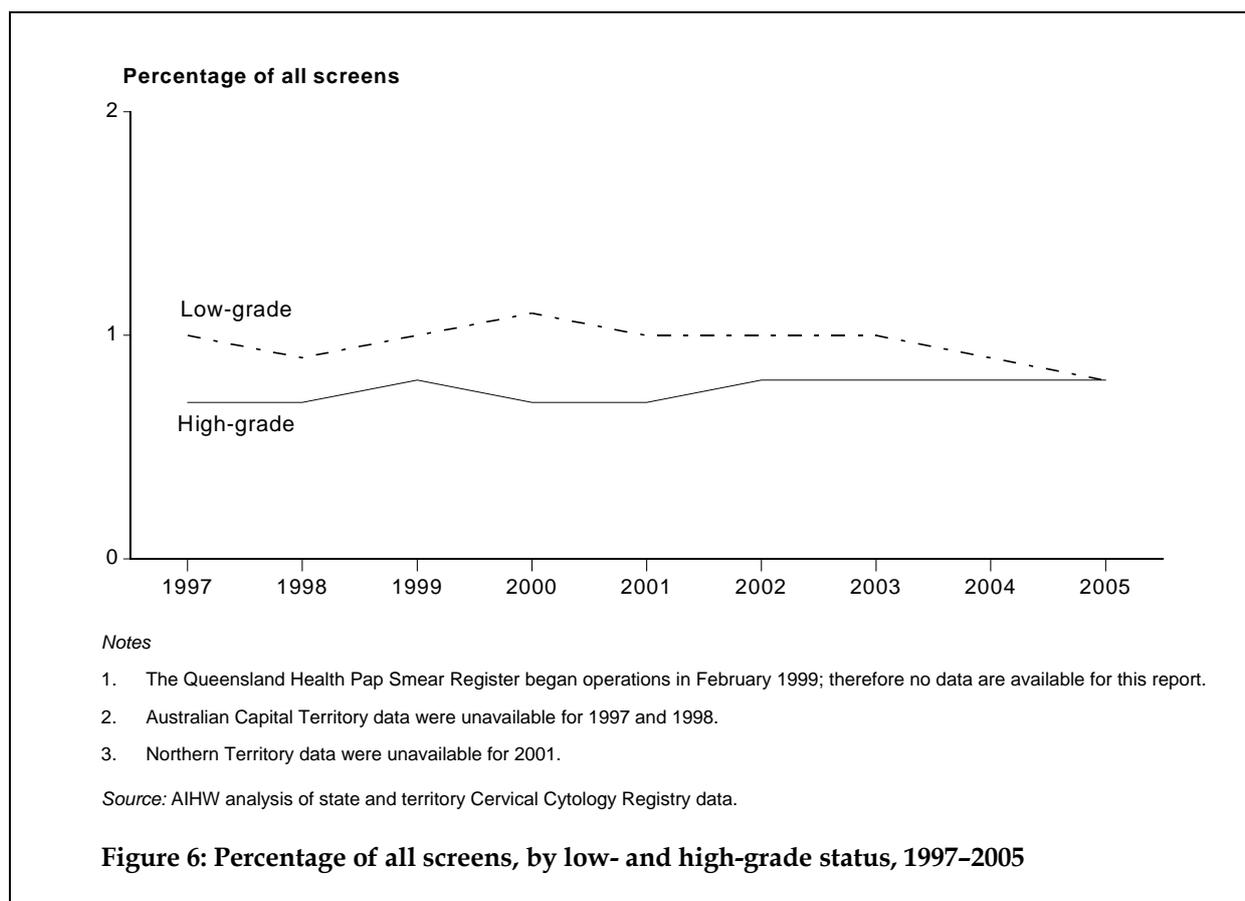
Source: AIHW analysis of state and territory Cervical Cytology Registry data.

**Figure 5: Ratio of histologically verified low-grade to high-grade abnormalities in women aged 20–69 years, 1997–2005**

- The screening program in 2005 detected 31,111 histologically verified abnormalities of which 16,274 were low grade and 14,837 were high grade.
- Between 1997 and 2005 the ratio of low-grade to high-grade abnormalities diagnosed in women aged 20–69 years declined from 1.47 to 1.10.
- The percentage of abnormalities detected in 2005 was 1.6% of women being screened, slightly lower than in 1997 (1.8%); however, in 1997 there was a much higher proportion of low-grade abnormalities being detected.

For more information, see Tables 9 and 10 on page 41. Tables with data other than for the latest reporting period can be found on the AIHW's website at <[www.aihw.gov.au](http://www.aihw.gov.au)>.

## Trend in proportion of screens by low- and high-grade status

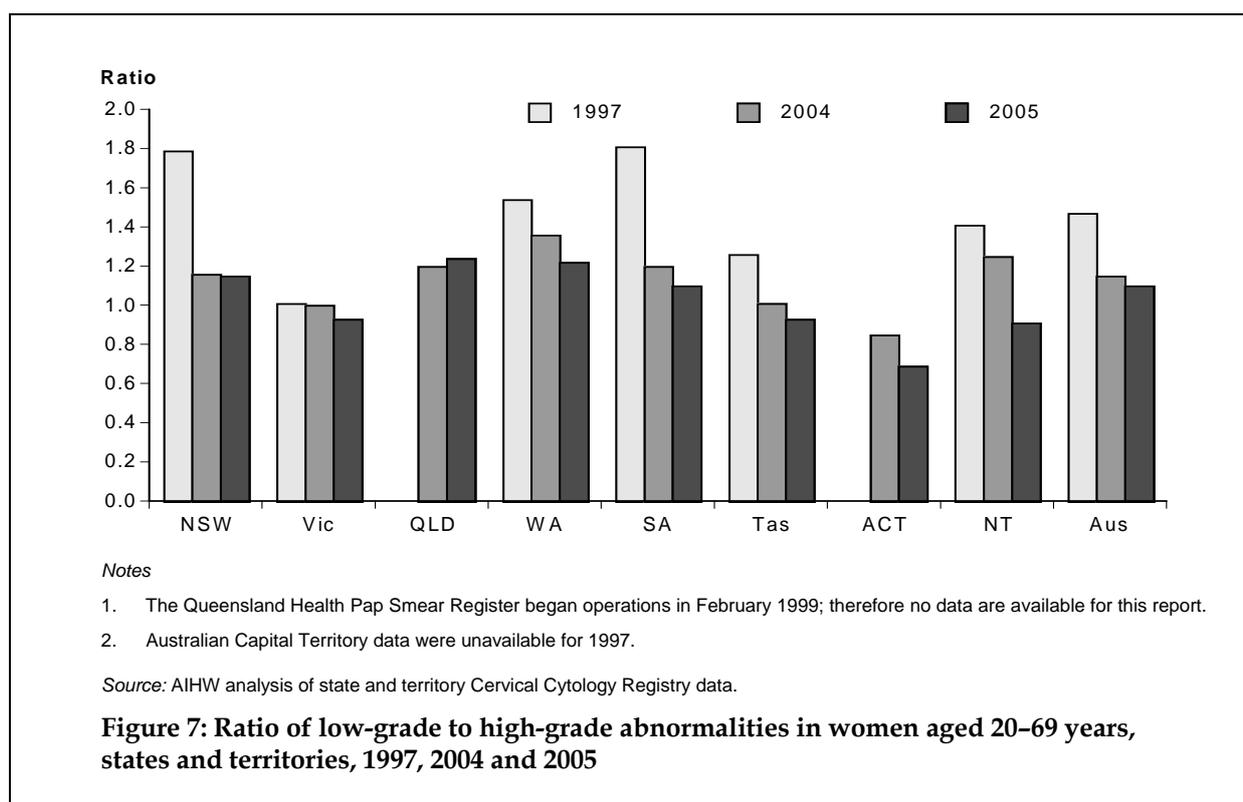


Year	1997	1998	1999	2000	2001	2002	2003	2004	2005
<b>Percentage of all screens</b>									
Low-grade	1.0	0.9	1.0	1.1	1.0	1.0	1.0	0.9	0.8
High-grade	0.7	0.7	0.8	0.7	0.7	0.8	0.8	0.8	0.8

- The gap in the percentage of all screens that were histologically verified as low- or high-grade abnormalities narrowed over the period 1997 to 2005.

For more information, see Tables 9 and 10 on page 41. Tables with data other than for the latest reporting period can be found on the AIHW's website at <[www.aihw.gov.au](http://www.aihw.gov.au)>.

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



Year	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
	<b>Ratio</b>								
1997	1.79	1.01	..	1.54	1.81	1.26	n.a.	1.41	1.47
1998	1.46	1.11	..	1.48	1.45	1.42	n.a.	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	n.a.	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

.. Not applicable.

n.a. Not available.

**Notes**

1. The Queensland Health Pap Smear Register began operations in February 1999; therefore no data are available for this report.
2. Australian Capital Territory data were unavailable for 1997 and 1998.
3. Northern Territory data were unavailable for 2001.

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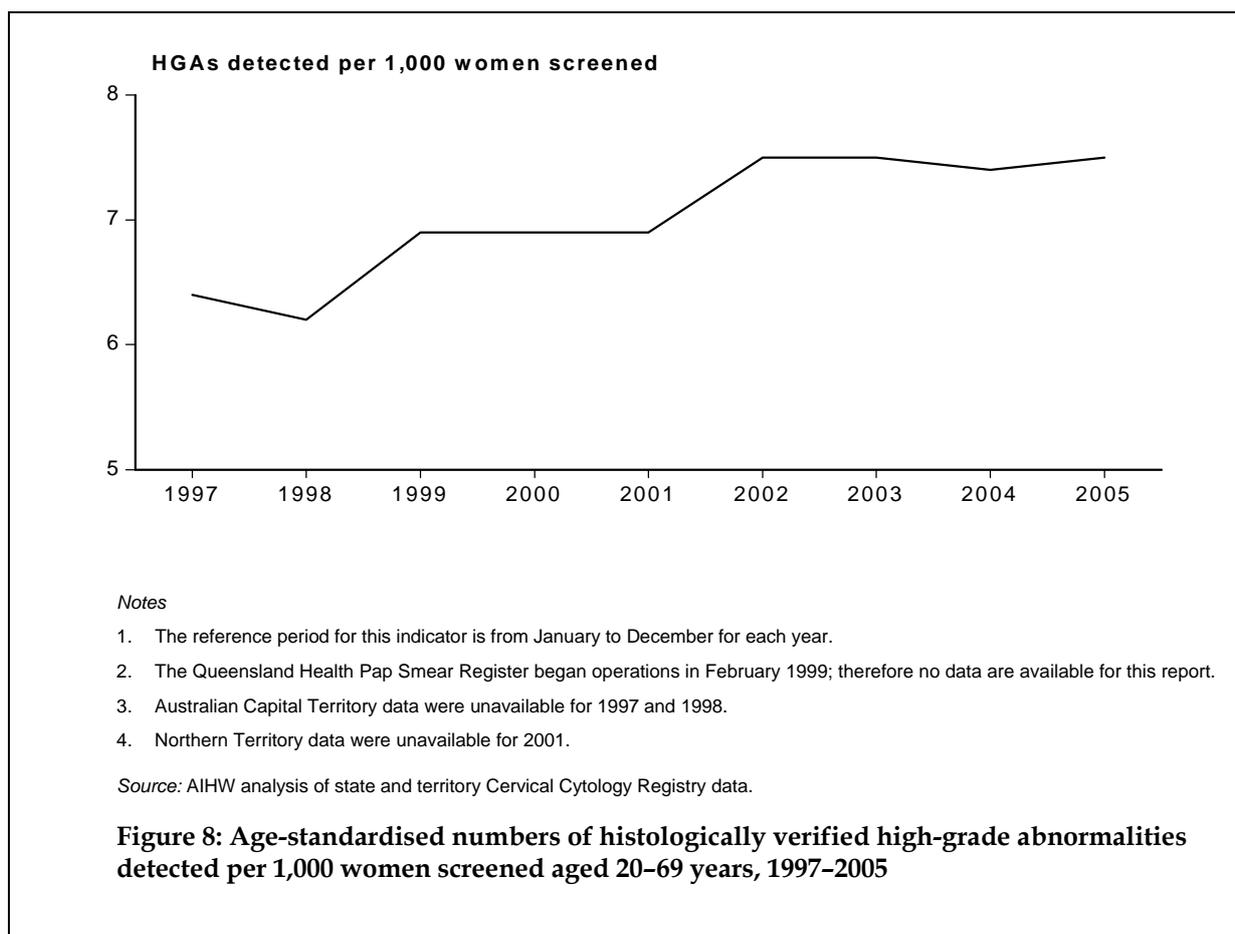
## Indicator 4: High-grade abnormality detection

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

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. This indicator measures the frequency of this type of abnormality 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.

The National Health and Medical Research Council (NHMRC) produced guidelines in 1994 to assist in the management of women who have low-grade and high-grade intraepithelial abnormalities (DHS 1994a). These guidelines were used for the management of women with screen-detected cervical abnormalities until July 2005 and are summarised in Appendix G. The next report, *Cervical screening in Australia 2005–2006*, will report on data based on changes approved by the NHMRC in 2005 for the management of asymptomatic women with screen-detected abnormalities. These changes are summarised in Appendix G.

## Trend in high-grade abnormalities detected



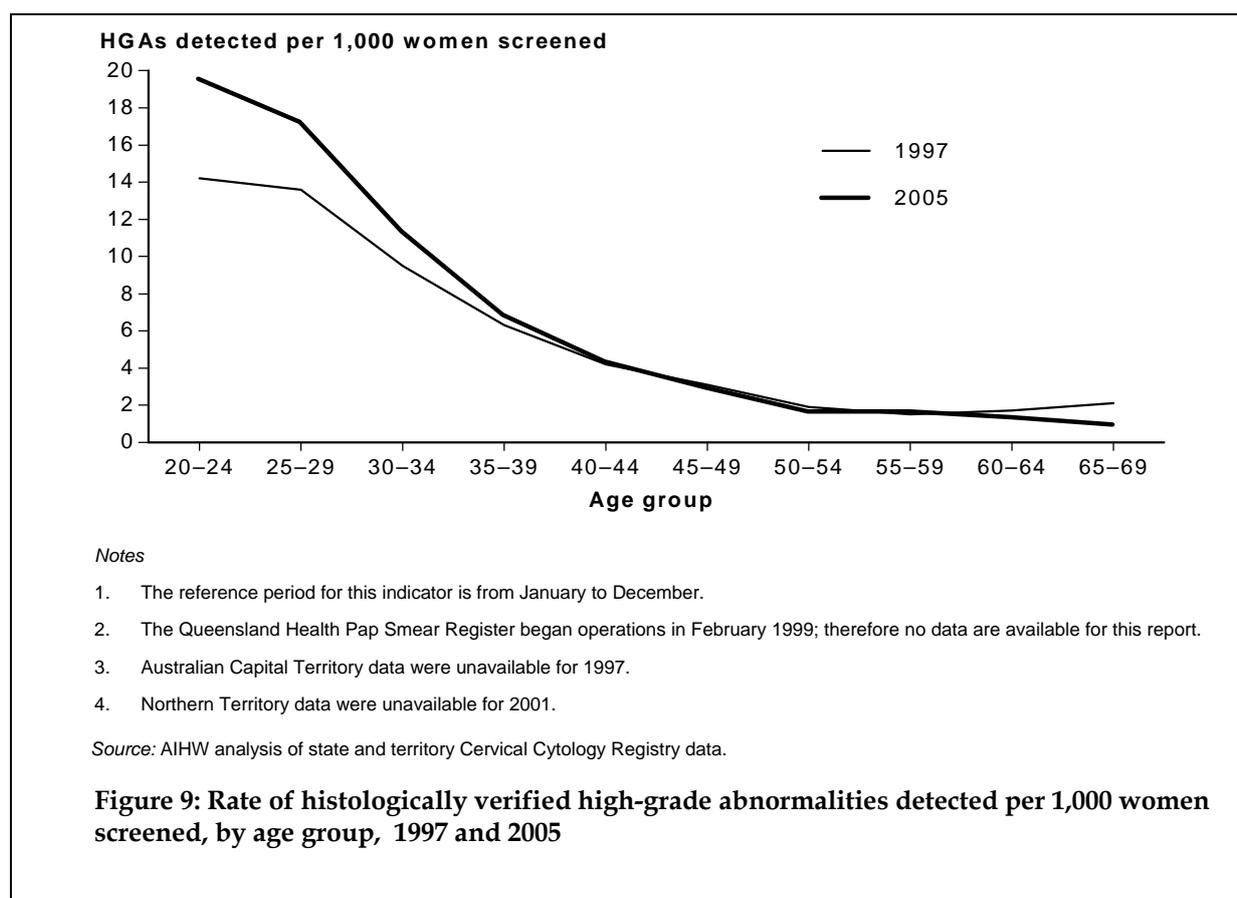
	1997	1998	1999	2000	2001	2002	2003	2004	2005
Rates	6.4	6.2	6.9	6.9	6.9	7.5	7.5	7.4	7.5
95% CI	6.2–6.5	6.1–6.3	6.8–7.1	6.8–7.0	6.8–7.0	7.4–7.6	7.4–7.6	7.3–7.5	7.3–7.6

*Note:* Rates are the number of histologically verified high-grade abnormalities detected per 1,000 women screened and age-standardised to the Australian 2001 population.

- For women aged 20–69 years the age-standardised number of high-grade abnormalities detected per 1,000 women screened increased significantly over the period 1997 to 2005, from 6.4 to 7.5.

For more information, see Tables 11–16 beginning on page 42. Tables with data other than for the latest reporting period can be found on the AIHW's website at <[www.aihw.gov.au](http://www.aihw.gov.au)>.

## High-grade abnormalities detected by age



Year	Age group										Rate 20-69*
	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	
	<b>Number per 1,000 women</b>										
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)

\* Age-standardised rates for women aged 20-69 years (standardised to the Australian 2001 population) with 95% confidence intervals.

**Notes**

1. The Queensland Health Pap Smear Register began operations in February 1999; therefore no data are available for this report.
2. Australian Capital Territory data were unavailable for 1997 and 1998.
3. Northern Territory data were unavailable for 2001.

For more information, see Tables 11-16 beginning on page 42. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.

- In 2005, there were 14,756 histologically verified high-grade abnormalities detected in 1,930,435 women screened aged 20–69 years, a detection rate of 0.8%.
- The age-standardised detection rate for histologically verified high-grade intraepithelial abnormalities increased significantly for women aged 20–69 years, from 6.4 per 1,000 women screened in 1997 to 7.5 in 2005.
- The detection rate for high-grade abnormalities was much higher in the younger age groups. In 2005, the rate for women aged 20–24 years was 19.2 per 1,000 women screened compared with less than 2 per 1,000 women in women aged 50–69 years.

For more information, see Tables 11–16 beginning on page 42. Tables with data other than for the latest reporting period can be found on the AIHW's website at <[www.aihw.gov.au](http://www.aihw.gov.au)>.

## High-grade abnormalities detected, states and territories

Year	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
1997 rate	5.5	6.3	..	6.7	8.3	7.7	n.a.	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	n.a.	9.4–12.7	6.2–6.5
1998 rate	5.8	5.3	..	6.2	8.9	9.6	n.a.	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	n.a.	11.0–14.1	6.1–6.3
1999 rate	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 rate	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 rate	7.1	5.4	8.2	7.4	6.3	9.5	7.0	n.a.	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	n.a.	6.8–7.0
2002 rate	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 rate	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 rate	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 rate	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

.. Not applicable

n.a. Not available.

### Notes

1. The Queensland Health Pap Smear Register began operations in February 1999; therefore no data are available for this report.
2. Australian Capital Territory data were unavailable for 1997 and 1998.
3. Northern Territory data were unavailable for 2001.

- Among the states and territories, the Northern Territory had the highest rate of high-grade abnormalities detected in most years from 1997 to 2005.
- In New South Wales there was an increase in high-grade abnormalities detected, from 5.5 per 1,000 women screened in 1997 to 8.3 in 2004 and 2005. There was also an overall increase over time for Tasmania, from 7.7 per 1,000 women screened in 1997 to 10.5 in 2005.
- In South Australia there was a decrease in high-grade abnormalities detected, from 8.9 per 1,000 women screened in 1998 to 5.8 in 2004 and 7.1 in 2005. There was also a decrease in high-grade abnormalities detected in Queensland, from 8.6 per 1,000 women screened in 2000 (the earliest year Queensland provided data for this indicator) to 7.6 in 2005.

For more information, see Tables 11–16 beginning on page 42. Tables with data other than for the latest reporting period can be found on the AIHW's website at <[www.aihw.gov.au](http://www.aihw.gov.au)>.

## 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. However, 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 next two indicators measure the incidence rates of micro-invasive and all cervical cancers in the community.

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 mm in depth and no wider than 7 mm.

Stage 1a2. Measured invasion of stroma between 3 mm and 5 mm in depth and no wider than 7 mm. 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).

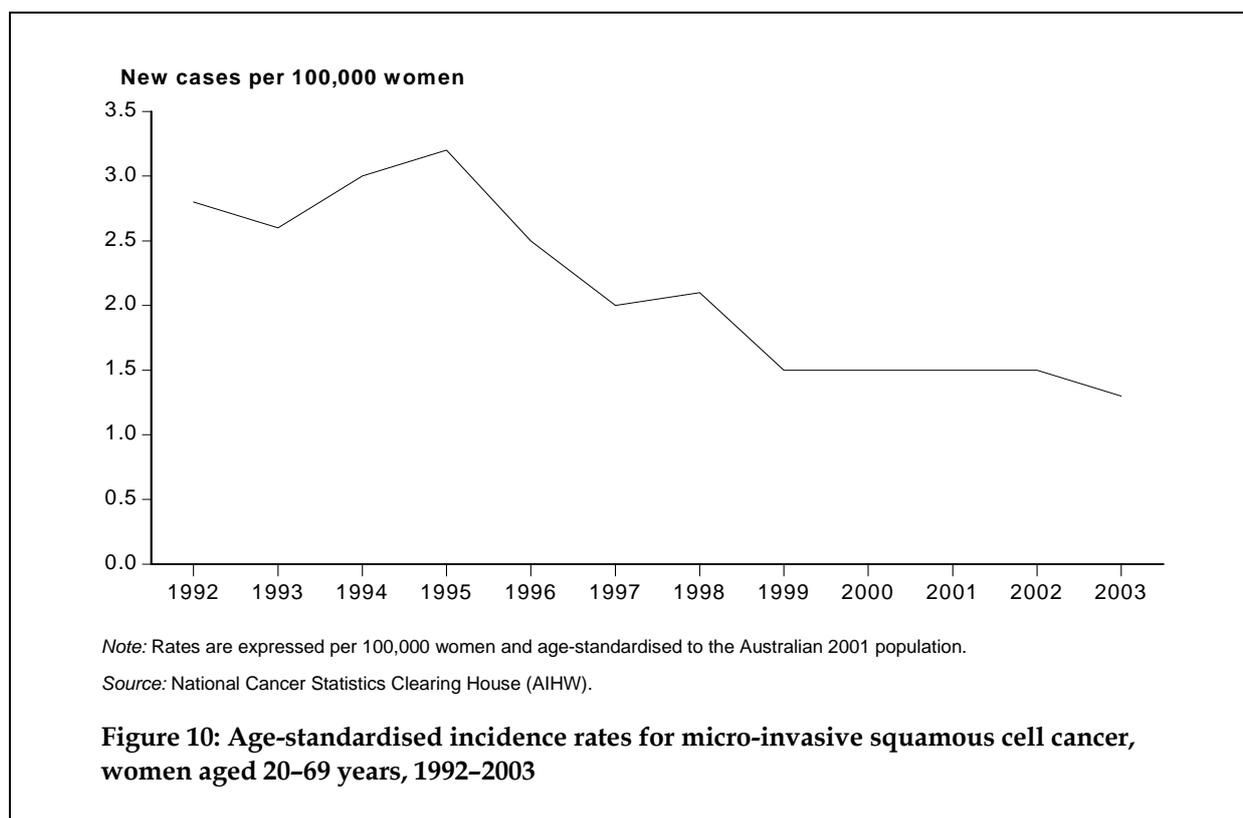
In interpreting cervical cancer incidence statistics, note that cervical screening has been available on an ad hoc basis since the 1960s, but it is only since the late 1980s and early 1990s that there has been an organised national approach to screening at a population level. The introduction of cervical 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 2003, in contrast to screening data and mortality data which are available for 2004–2005. This time lag in availability of incidence data is expected to reduce over the next few years.

## Indicator 5.1: Incidence of micro-invasive cervical cancer

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

### Trend in incidence of micro-invasive cervical cancer

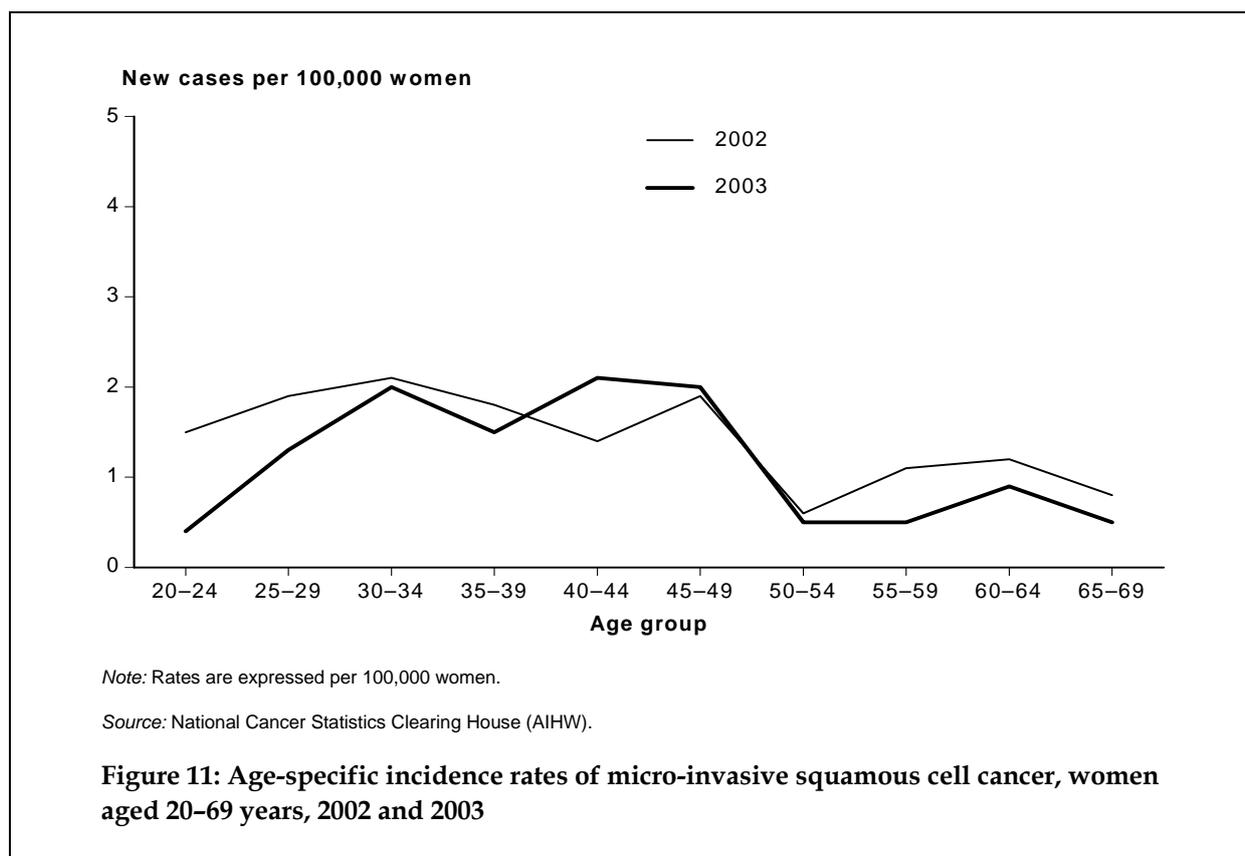


AS rate	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
<b>Number per 100,000 women</b>												
All ages	1.9	1.7	2.1	2.1	1.7	1.4	1.4	1.0	1.0	1.0	1.0	0.8
Ages 20–69 years	2.8	2.6	3.0	3.2	2.5	2.0	2.1	1.5	1.5	1.5	1.5	1.3

- The age-standardised incidence rate of micro-invasive cervical cancer was 1.3 per 100,000 women in 2003 for women in the target age group of 20–69 years and 0.8 per 100,000 for women of all ages. The rate for women aged 20–69 years declined from a peak of 3.2 per 100,000 women in 1995 to 1.3 per 100,000 in 2003.
- In 1995 there were 192 new cases of micro-invasive cervical cancer diagnosed. By 2003 this number had declined to 85, with 80 of these cases in the 20–69 years age group.

For more information, see Tables 17 and 18 beginning on page 48.

## Incidence of micro-invasive cervical cancer by age



Year	Age group										20-69*
	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	
Number per 100,000 women											
2002	1.5	1.9	2.1	1.8	1.4	1.9	0.6	1.1	1.2	0.8	1.5 (1.2-1.8)
2003	0.4	1.3	2.0	1.5	2.1	2.0	0.5	0.5	0.9	0.5	1.3 (1.0-1.6)

\*Age-standardised rates (standardised to the Australian 2001 population) with 95% confidence intervals.

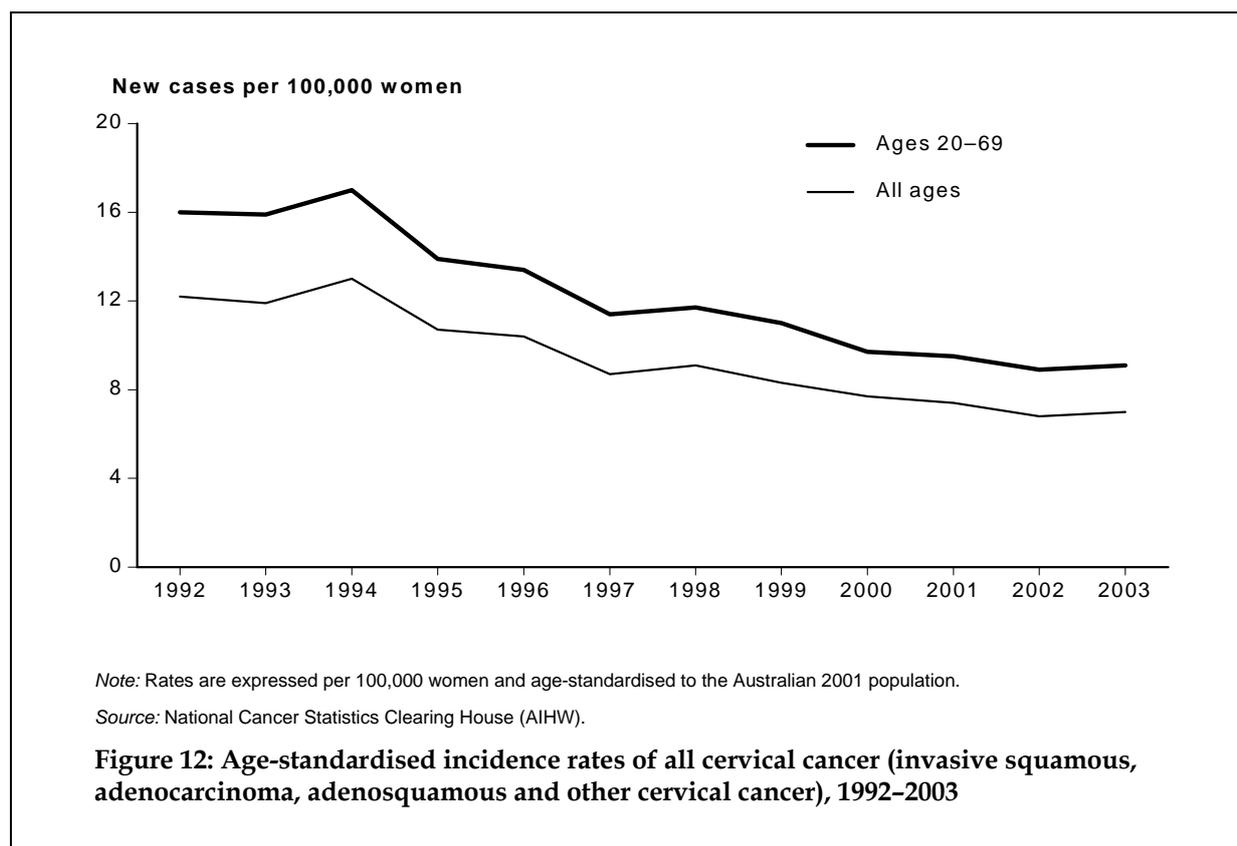
- In 2003, the highest detection rates for micro-invasive squamous cell cancer were for women aged 30-34 years, 40-44 years and 45-49 years respectively, at around two cases per 100,000 women. The rate declined with age to below one per 100,000 and below for women aged 50 years or more.

For more information, see Tables 17 and 18 beginning on page 48.

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

*Incidence rates 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 females of all ages and for the target age group 20–69 years.*

### Trend in incidence of all cervical cancer

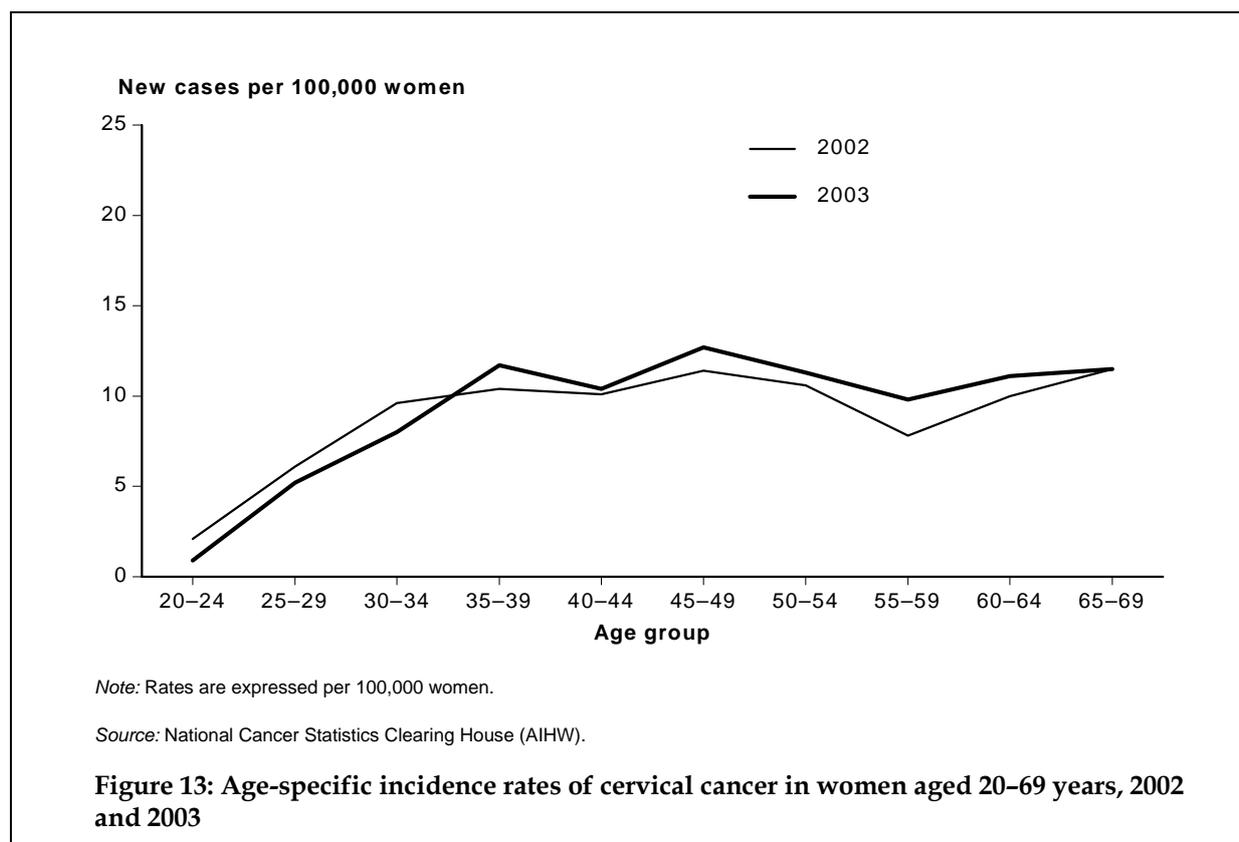


	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
<b>AS rate</b>	<b>Number per 100,000 women</b>											
All ages	12.2	11.9	13.0	10.7	10.4	8.7	9.1	8.3	7.7	7.4	6.8	7.0
Ages 20–69	16.0	15.9	17.0	13.9	13.4	11.4	11.7	11.0	9.7	9.5	8.9	9.1

- In 2003, there were 725 new cases of cervical cancer diagnosed in Australia compared with the peak of 1,139 new cases in 1994. Of the 725 new cases, 578 were for women aged 20–69 years. All but one of the remaining 147 cases were in women aged 70 years and over.
- The age-standardised incidence rate of all cervical cancers was 7.0 per 100,000 women for women of all ages in Australia in 2003, and 9.1 per 100,000 for women aged 20–69 years.

For more information, see Tables 19 and 20 beginning on page 50.

## Incidence by age

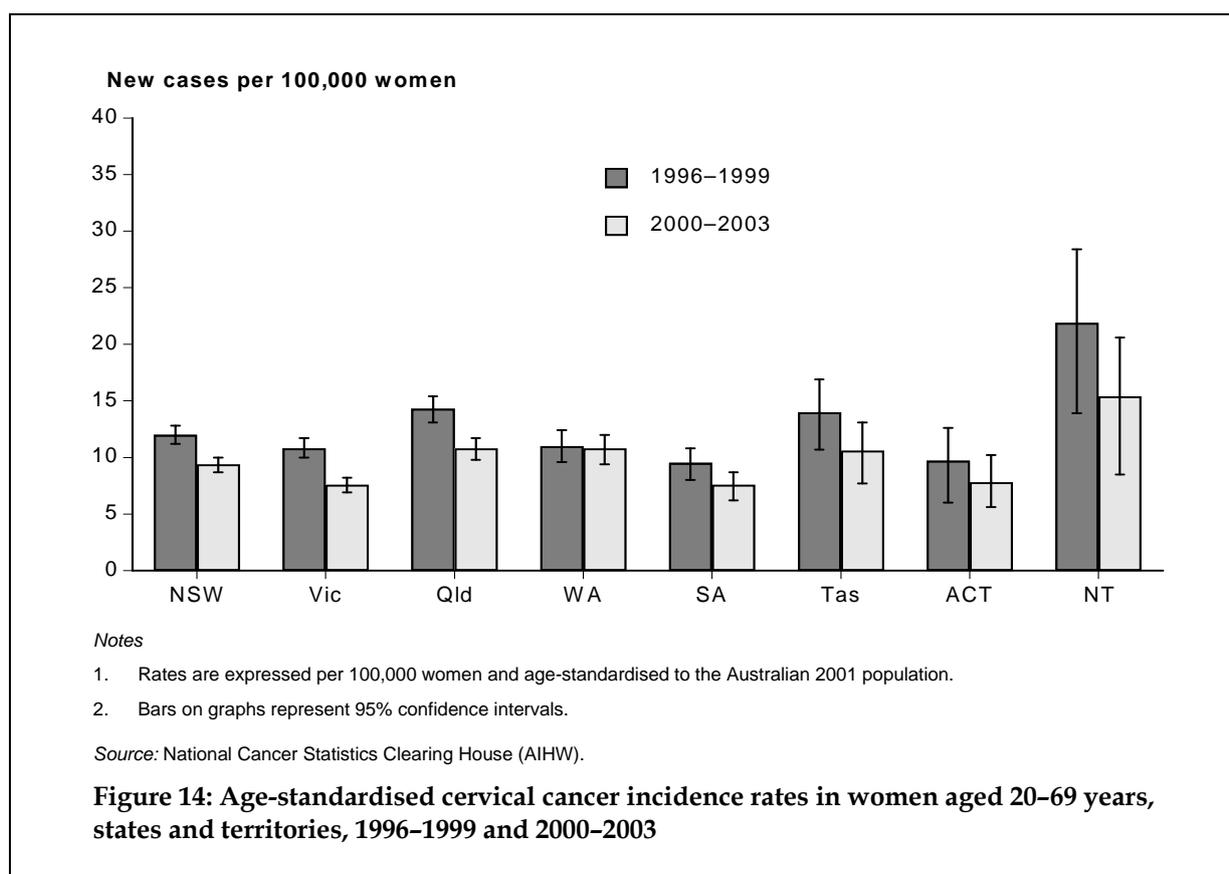


	Age group										20–69
	20–24	25–29	30–34	35–39	40–44	45–49	50–54	55–59	60–64	65–69	
Age-specific rate 2002	2.1	6.1	9.6	10.4	10.1	11.4	10.6	7.8	10.0	11.5	8.9
Age-specific rate 2003	0.9	5.2	8.0	11.7	10.4	12.7	11.3	9.8	11.1	11.5	9.1

- The age-specific rate of cervical cancer was highest in 2003 for women aged 45–49 years with 12.7 new cases per 100,000 women, and lowest for women aged 20–24 years, with 0.9 per 100,000.

For more information, see Tables 19 and 20 beginning on page 50.

## Incidence by states and territories

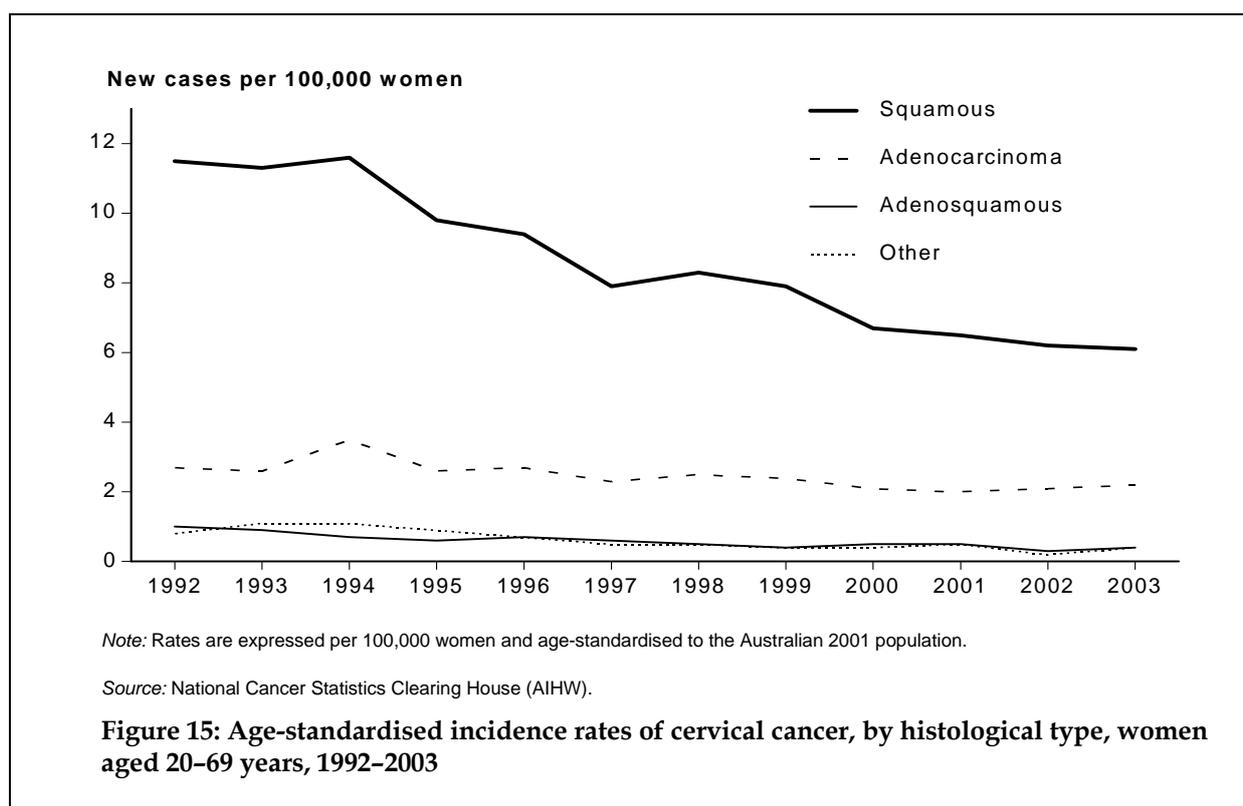


	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
<b>AS rate</b>									
<b>1996–1999</b>	12.0	10.8	14.3	11.0	9.5	14.0	9.7	21.9	11.9
95% CI	11.2–12.8	9.9–11.6	13.2–15.5	9.6–12.4	8.2–11.0	11.1–17.3	6.8–13.4	15.4–29.9	11.4–12.3
<b>AS rate</b>									
<b>2000–2003</b>	9.4	7.6	10.8	10.8	7.6	10.6	7.8	15.4	9.3
95% CI	8.8–10.1	7.0–8.3	9.9–11.8	9.6–12.2	6.5–9.0	8.1–13.5	5.4–11.0	10.2–22.3	8.9–9.7

- In the period 2000–2003, Victoria and South Australia had the lowest incidence of cervical cancer at 7.6 new cases per 100,000 women aged 20–69 years and the Northern Territory had the highest rate of 15.4 per 100,000 women.
- The age-standardised incidence rate declined in all states and territories between the two periods 1996–1999 and 2000–2003. The declines were significant in New South Wales, Victoria, Queensland and Australia as a whole.

For more information, see Tables 21–24 beginning on page 52.

## Incidence by histological type



Histological type	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
	Number per 100,000 women											
Squamous	11.5	11.3	11.6	9.8	9.4	7.9	8.3	7.9	6.7	6.5	6.2	6.1
Adenocarcinoma	2.7	2.6	3.5	2.6	2.7	2.3	2.5	2.4	2.1	2.0	2.1	2.2
Adenosquamous	1.0	0.9	0.7	0.6	0.7	0.6	0.5	0.4	0.5	0.5	0.3	0.4
Other	0.8	1.1	1.1	0.9	0.7	0.5	0.5	0.4	0.4	0.5	0.2	0.4

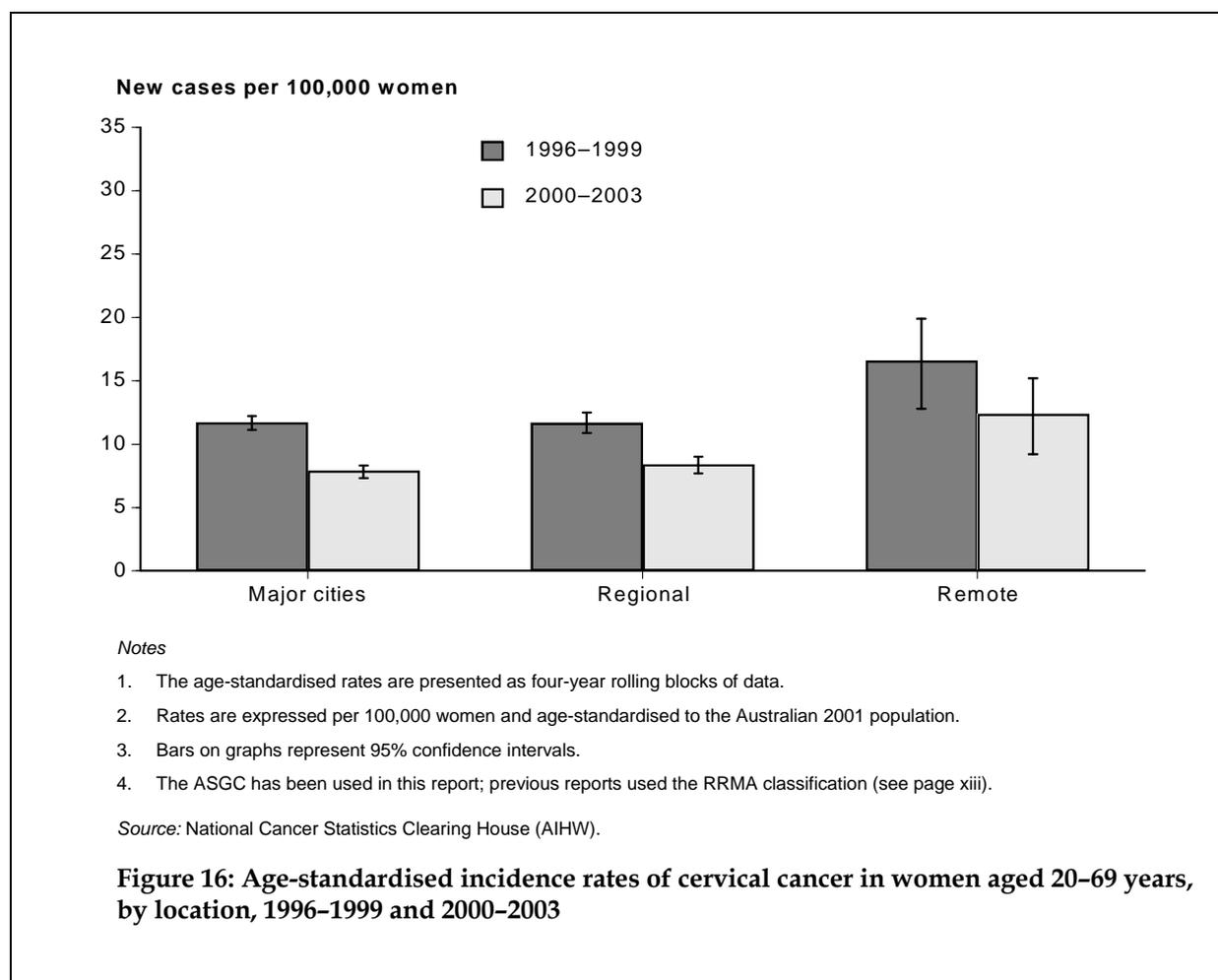
- In 2003, squamous cell carcinomas of the cervix accounted for 67.6% of all new cases of cervical cancer in women aged 20–69 years, adenocarcinomas 23.7%, adenosquamous 4.3%, and the remaining 4.3% a range of other mixed and unknown histologies.
- With the exception of adenocarcinoma, the trend from 1992 to 2003 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 smear (Heley 2007).

For more information, see Tables 21–24 beginning on page 52.

## Indicator 5.3: Incidence by location

*Incidence rates of cervical cancer per 100,000 estimated resident female population in a four-year period by location for females of all ages and for the target age group 20–69 years.*

### Incidence by location



	Metropolitan		Regional		Remote	
	1996–1999	2000–2003	1996–1999	2000–2003	1996–1999	2000–2003
AS rate	11.7	7.9	11.7	8.4	16.6	12.4
95% CI	11.2–12.3	7.5–8.4	10.9–12.5	7.8–9.1	13.3–20.4	9.6–15.6

- In 2000–2003 there were 1,907 new cases of cervical cancer in major cities (65.7% of all new cases), 918 new cases in regional locations (31.6% of all new cases) and 79 new cases (2.7% of all new cases) in remote locations.
- In 2000–2003 age-standardised cervical cancer incidence rates for women aged 20–69 years were higher in remote locations (12.3 per 100,000 women) than in regional areas (9.8) and major cities (8.9). The rate for remote locations was significantly higher than for women in major cities.

For more information, see Tables 29 and 30 beginning on page 58.

# Indicator 6: Mortality

Cancer of the cervix is one of the few cancers for which there is an efficacious screening test for detection of precursors of the disease. 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 (metropolitan, rural 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 tenth revision of the International Classification of Diseases (ICD-10) for classifying deaths registered from 1 January 1997; and
2. the introduction by the Australian Bureau of Statistics (ABS) of the Automated Coding System for processing deaths registered from 1 January 1997.

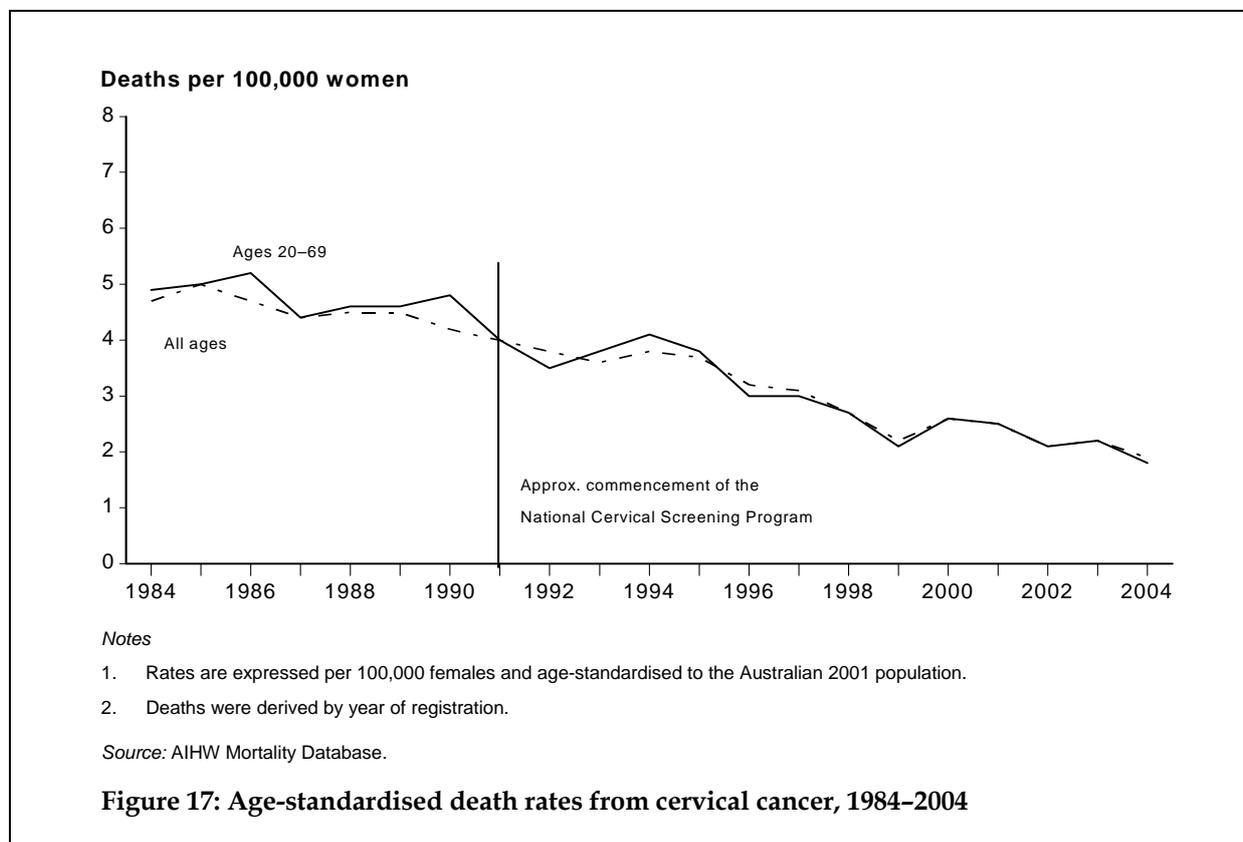
As a result, a break occurred in the mortality data series. In order to make mortality data coded using ICD-9 and ICD-10 comparable, the ABS derived comparability factors to adjust data based on ICD-9. These comparability factors are derived from the movements in the underlying causes of death coded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

## Indicator 6.1: Mortality by age group

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

### Trend in mortality from cervical cancer

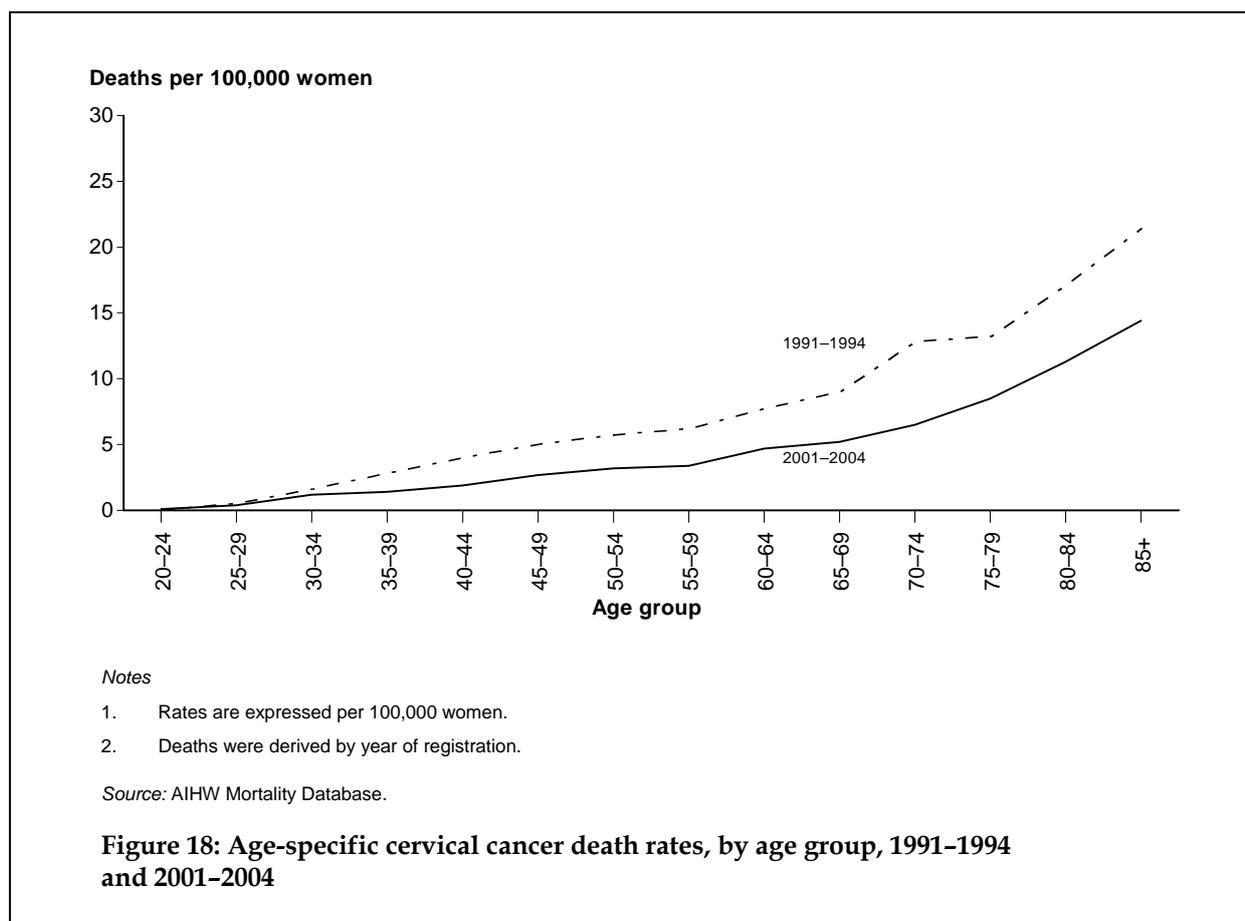


	Year																			
	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04
All ages	5.0	4.7	4.4	4.5	4.5	4.2	4.0	3.8	3.6	3.8	3.7	3.2	3.1	2.7	2.2	2.6	2.5	2.1	2.2	1.9
Ages 20–69	5.0	5.2	4.4	4.6	4.6	4.8	4.0	3.5	3.8	4.1	3.8	3.0	3.0	2.7	2.1	2.6	2.5	2.1	2.2	1.8

- Cervical cancer was the 18th most common cause of cancer deaths in Australian women in 2004, accounting for 212 deaths.
- The age-standardised death rate from cervical cancer for females of all ages has fallen from 4.0 per 100,000 females in 1991 at the start of the screening program to 1.9 per 100,000 women in 2004.

For more information, see Tables 31 and 32 beginning on page 60.

## Mortality by age

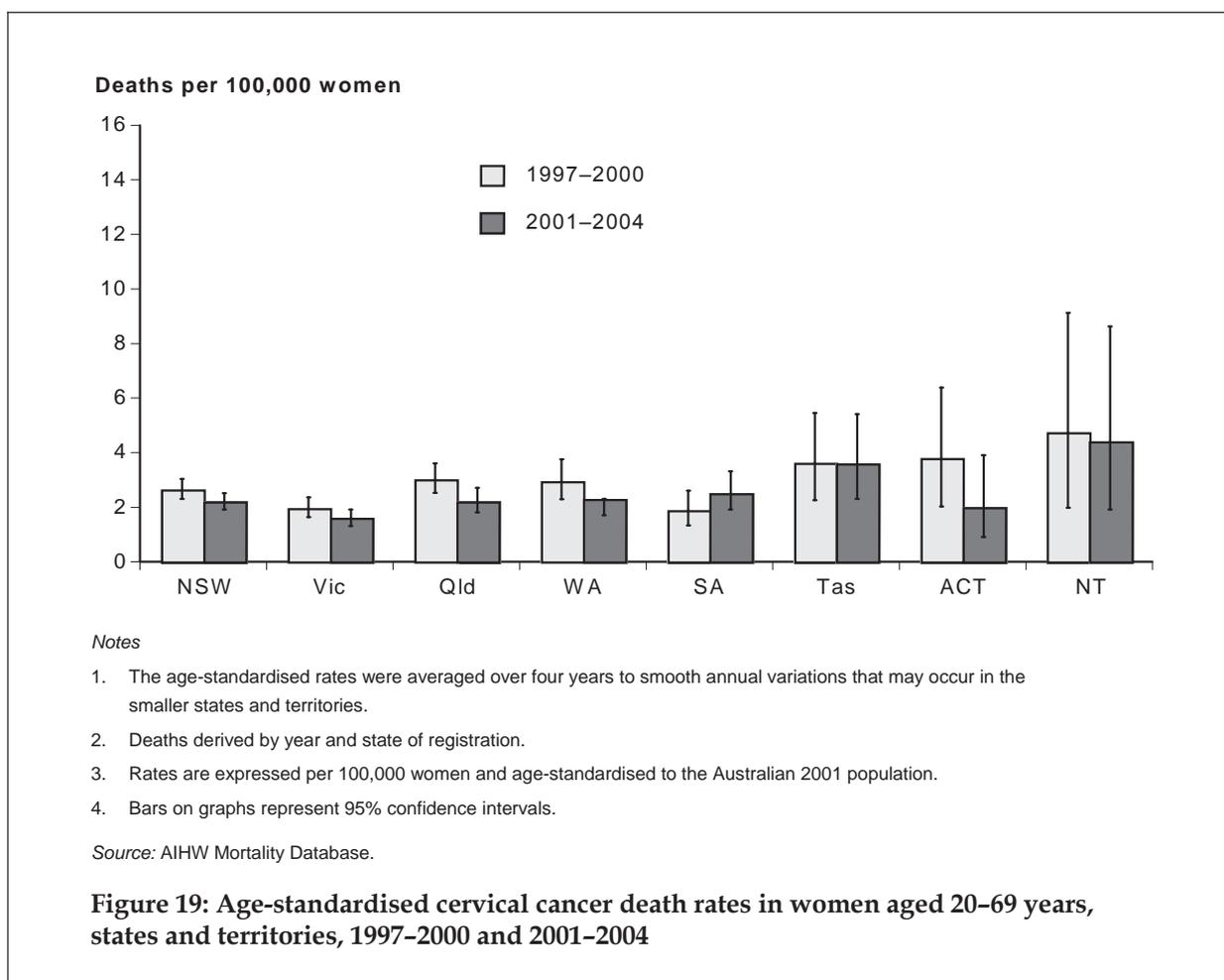


Period	Age group													
	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+
1991-1994	0.1	0.6	1.7	2.9	4.1	5.1	5.8	6.3	7.8	9.1	12.9	13.3	17.2	21.5
2001-2004	0.1	0.4	1.2	1.4	1.9	2.7	3.2	3.4	4.7	5.2	6.5	8.5	11.3	14.4

- Mortality from cervical cancer between the periods 1991-1994 and 2001-2004 declined in all age groups for women aged 25 years and over.
- Age-specific rates of cervical cancer mortality increase with age. The highest mortality rate in 2001-2004 was in women aged 85 years and over with 14.4 deaths per 100,000 women.

For more information, see Tables 33 and 36 beginning on page 62.

## Mortality by states and territories



	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Rate 1997–2000	2.7	2.0	3.0	3.0	1.9	3.6	3.8	4.7	2.6
95% CI	2.3–3.0	1.6–2.4	2.5–3.6	2.3–3.8	1.3–2.6	2.3–5.4	2.0–6.4	2.0–9.1	2.4–2.8
Rate 2001–2004	2.2	1.6	2.2	2.3	2.5	3.6	2.0	4.4	2.1
95% CI	1.9–2.5	1.3–2.0	1.8–2.6	1.8–3.0	1.9–3.3	2.2–5.4	0.8–3.9	1.8–8.6	1.9–2.3

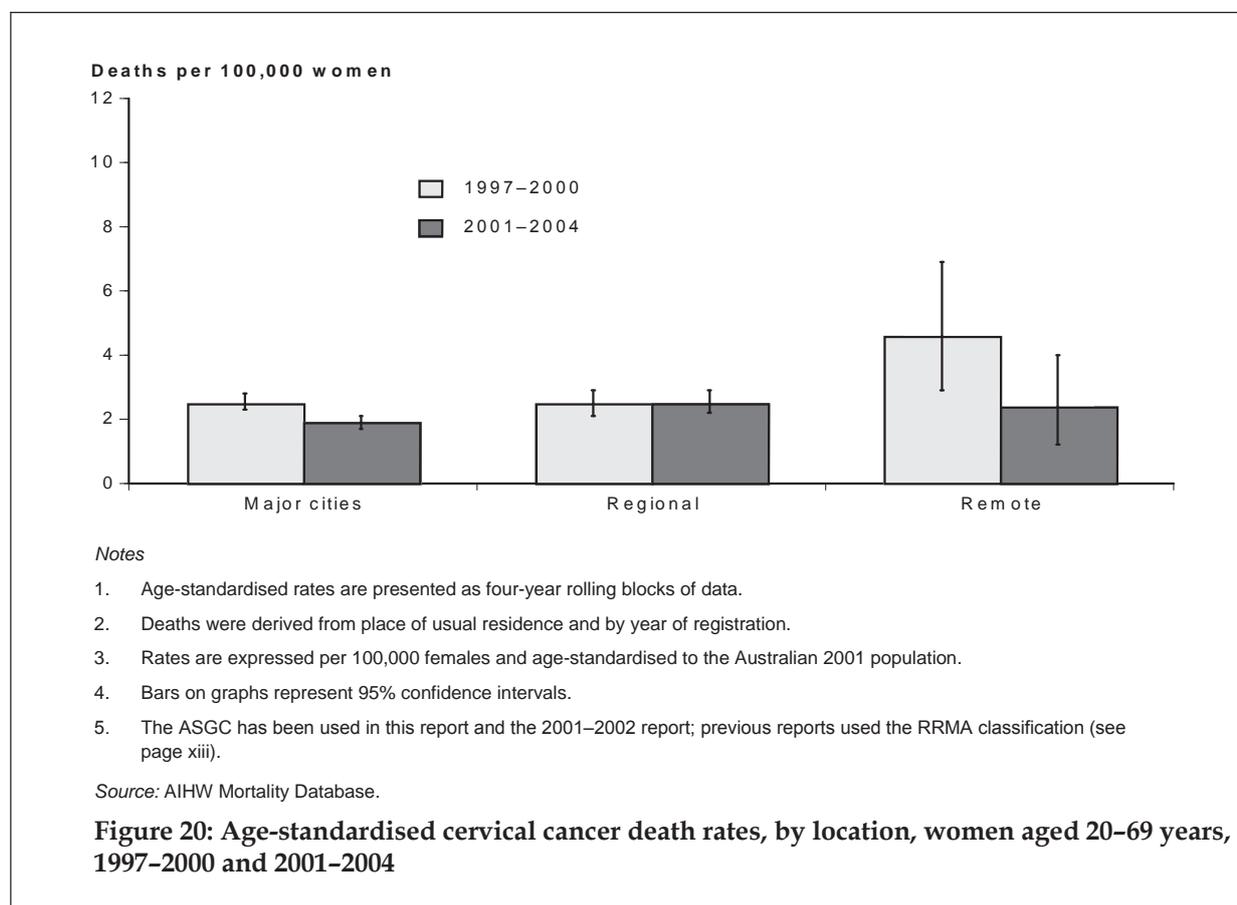
- In the four-year period 2001–2004 there were 939 deaths from cervical cancer in all states and territories compared with 1,046 in 1997–2000.
- Age-standardised mortality varied from 1.6 deaths per 100,000 females in Victoria to 4.4 per 100,000 in the Northern Territory in the 2001–2004 period.
- The age-standardised death rates decreased in all jurisdictions between the two periods except in South Australia where the rate increased from 1.9 to 2.5 and in Tasmania where the rate did not change. Although the decline at the national level from 2.6 deaths per 100,000 women in 1997–2000 to 2.1 per 100,000 in 2001–2004 was significant, the numbers in each jurisdiction were too small for any changes to be statistically significant.

For more information, see Tables 33 and 36 beginning on page 62.

## Indicator 6.2: Mortality by location

*Death rate from cervical cancer per 100,000 estimated resident female population in a 4-year period by location for females of all ages and for the target age group 20–69 years.*

### Mortality by location



	Major cities		Regional		Remote	
	1997–2000	2001–2004	1997–2000	2001–2004	1997–2000	2001–2004
Rate	2.5	1.9	2.5	2.5	4.6	2.4
95% CI	2.2–2.8	1.7–2.1	2.2–2.9	2.2–2.9	2.9–6.9	1.2–4.0

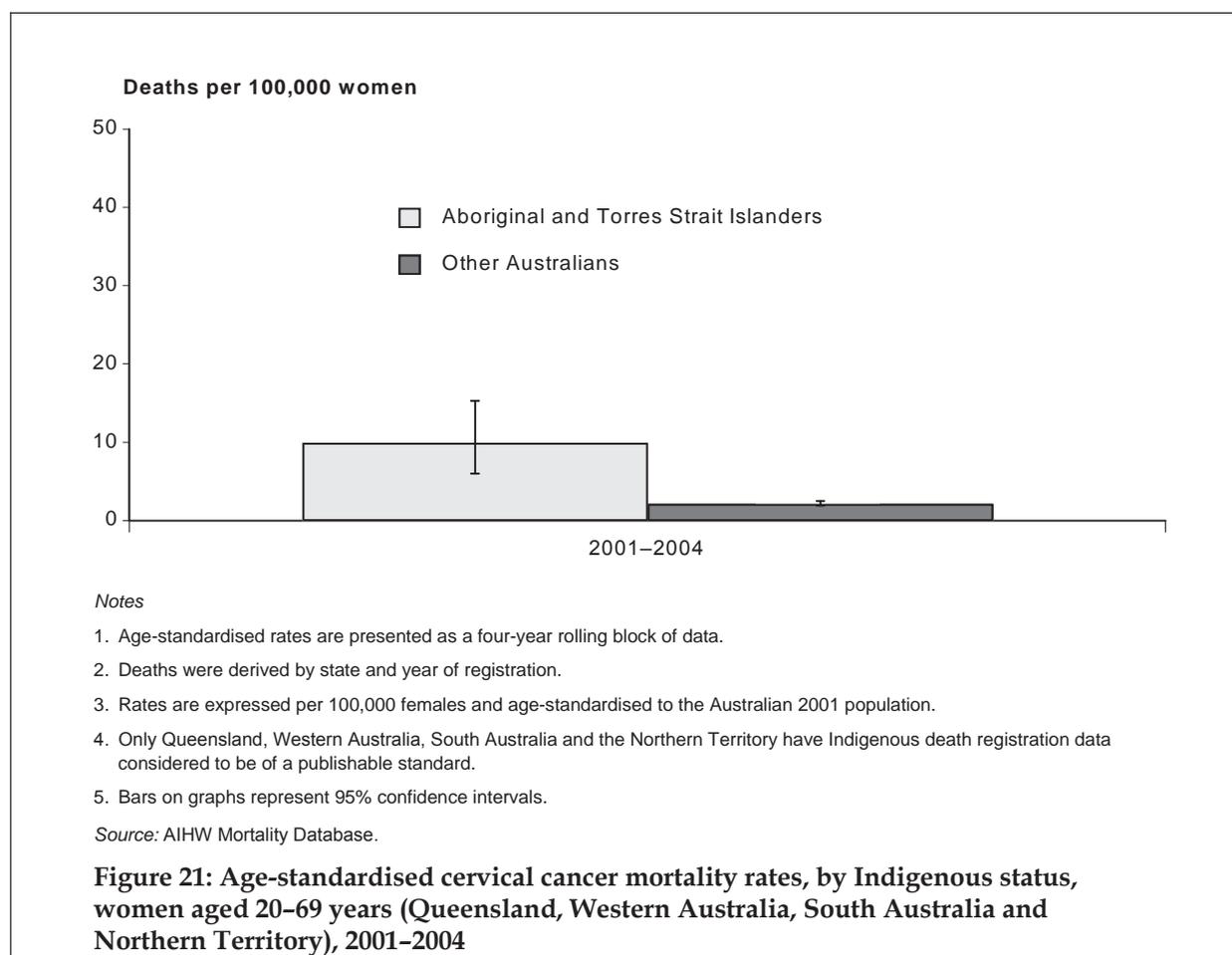
- During the four-year period 2001–2004 in major cities, there were 589 deaths (62.7% of all cervical cancer deaths in that period) in major cities, 324 deaths in regional areas (34.5% of all cervical cancer deaths) and 23 deaths in remote areas (2.5% of all cervical cancer deaths).
- In major cities and remote areas the age-standardised mortality rates declined between the periods 1997–2000 and 2001–2004 whereas in regional areas there was no change between the two periods. The decline in major cities was statistically significant. The largest overall mortality reduction, of 48%, was in remote areas, but these rates are based on small numbers and have a high standard error, and therefore should be treated with caution.

For more information, see Tables 37 and 38 beginning on page 66.

## Indicator 6.3: Indigenous mortality

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

### Mortality by Indigenous status



	Aboriginal and Torres Strait Islander women	Other Australian women
AS rate (A)	9.9	2.1
95% CI	6.0–15.3	1.9–2.5

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 2001–2004 period was 9.9 per 100,000 women and was 4.7 times higher than the mortality rate for other Australian women in the same age range.

For more information, see Table 39 on page 68.

# Tables

Appendix E includes the list of tables published on the Internet. The tables can be found on the AIHW's website at <[www.aihw.gov.au](http://www.aihw.gov.au)>.

## Indicator 1: Participation

**Table 1: Proportion of women participating in the National Cervical Screening Program, by age, 1996–1997 to 2004–2005**

Age group	1996–1997	1998–1999	2000–2001	2002–2003	2004–2005
	Per cent				
20–24	50.0	53.5	50.3	49.0	47.7
25–29	64.5	65.5	61.0	59.0	57.8
30–34	66.9	68.7	64.9	63.4	62.9
35–39	66.4	68.2	64.8	63.9	64.4
40–44	64.0	66.5	64.4	64.1	64.8
45–49	64.3	66.7	65.0	65.6	66.5
50–54	64.0	64.7	63.0	63.1	64.7
55–59	62.7	65.9	64.9	66.2	66.9
60–64	50.9	56.0	55.3	56.4	57.7
65–69	41.2	46.5	46.7	48.8	49.7
70–74	24.5	20.6	19.7	18.3	17.0
75–79	4.9	7.7	7.0	7.1	5.9
80+	1.9	2.4	2.3	2.2	1.8
<b>Ages 20 and over</b>					
Crude	55.9	57.8	55.3	54.7	54.6
AS rate (A)	54.8	56.9	54.7	54.3	54.4
95% CI	54.7–54.8	56.8–56.9	54.6–54.7	54.3–54.4	54.4–54.5
<b>Ages 20–69</b>					
Crude	61.2	63.7	61.1	60.6	60.8
AS rate (A)	61.0	63.4	61.0	60.7	61.0
95% CI	60.9–61.1	63.4–63.5	60.9–61.1	60.6–60.8	60.9–61.0

### Notes

1. For a more comprehensive understanding of the data presented above please refer to the relevant tables on the following pages 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.
2. Rates are age-standardised to the 2001 Australian total population.
3. In 2001 the ABS carried out a full population Census and a national health survey. These led to the revision of the ABS estimated resident population (ERP) data, the introduction of a new Australian standard population for use in age standardisation and the production of new estimates of hysterectomy status among Australian women. The denominators for participation rates presented in this report have been calculated using the 2001 ABS National Health Survey hysterectomy fractions and the revised ERP values, and age adjusted using the 2001 Australian Standard Population.
4. Separate rates cannot be calculated for women in the 80–84 and 85 years and over age groups because hysterectomy fractions are not available for these age groups; however, a hysterectomy fraction is available for women aged 80 years and over.

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

**Table 2: Proportion of women participating in the National Cervical Screening Program, by age, states and territories, 1996–1997 to 2004–2005**

Period	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
<b>Per cent</b>									
<b>Ages 20 and over</b>									
1996–1997	49.2	60.2	..	58.1	56.6	56.5	56.9	55.6	54.8
1998–1999	53.2	60.7	..	57.3	59.3	57.4	59.1	56.9	56.9
2000–2001	53.0	57.7	51.3	55.0	58.2	58.0	56.2	55.9	54.7
2002–2003	52.6	57.4	51.5	54.2	58.3	56.1	55.9	54.5	54.3
2004–2005	52.0	58.2	52.9	54.0	57.4	55.8	58.4	52.4	54.4
<b>Ages 20–69</b>									
1996–1997	55.0	66.7	0.0	64.9	62.9	63.3	63.5	61.4	61.0
1998–1999	59.4	67.7	0.0	63.9	66.0	64.5	65.7	62.6	63.4
2000–2001	59.1	64.6	57.0	61.4	64.9	65.2	62.8	61.7	61.0
2002–2003	58.8	64.2	57.2	60.6	65.1	63.1	62.7	60.2	60.7
2004–2005	58.2	65.4	58.4	60.5	64.1	62.9	65.5	58.5	61.0

.. Not applicable.

*Notes*

1. For a more comprehensive understanding of the data presented above please refer to the relevant tables on the following pages for each of the periods reported above because not all jurisdictions were able to supply data for some years and there were differences in the way they reported their data for some reporting periods.
2. Rates are age-standardised to the 2001 Australian total population.
3. In 2001 the ABS carried out a full population Census and a national health survey. These led to the revision of the ABS estimated resident population (ERP) data, the introduction of a new Australian standard population for use in age standardisation and the production of new estimates of hysterectomy status among Australian women. The denominators for participation rates presented in this report have been calculated using the 2001 ABS National Health Survey hysterectomy fractions and the revised ERP values, and age adjusted using the 2001 Australian Standard Population.
4. Separate rates cannot be calculated for women in the 80–84 and 85 years and over age groups because hysterectomy fractions are not available for these age groups; however, a hysterectomy fraction is available for women aged 80 years and over.
5. The Queensland Health Pap Smear Register began operations in February 1999; therefore no data are available for this report.

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

**Table 3: Number of women participating in the National Cervical Screening Program, by age, states and territories, 2004–2005**

Age group	NSW	Vic <sup>(a)</sup>	Qld	WA	SA	Tas	ACT <sup>(a)</sup>	NT	Australia
20–24	97,382	84,046	66,962	35,306	25,095	8,520	7,020	4,225	328,556
25–29	124,675	102,844	73,734	38,353	27,592	8,647	7,836	4,918	388,599
30–34	154,889	127,704	87,924	45,738	33,756	10,228	8,644	5,256	474,139
35–39	144,319	123,513	83,276	45,442	34,444	10,426	8,049	4,650	454,119
40–44	145,507	120,159	84,175	44,914	35,634	11,055	7,760	4,037	453,241
45–49	126,813	106,305	73,230	39,959	32,423	9,882	7,061	3,409	399,082
50–54	104,533	88,642	60,450	32,226	27,678	8,422	6,057	2,737	330,745
55–59	84,916	73,154	49,389	25,071	23,154	7,000	4,966	1,785	269,435
60–64	57,706	50,290	33,225	16,135	15,929	4,776	2,955	961	181,977
65–69	39,997	36,387	21,823	11,557	12,011	3,235	1,846	470	127,326
70–74	12,111	9,387	7,974	3,226	3,831	765	453	105	37,852
75–79	3,934	2,680	2,655	918	1,465	231	135	46	12,064
80+	1,734	1,228	1,158	508	565	99	57	18	5,367
Not stated	356	0	0	0	7	0	1	41	405
<b>Ages 20 and over</b>	<b>1,098,872</b>	<b>926,339</b>	<b>645,975</b>	<b>339,353</b>	<b>273,584</b>	<b>83,286</b>	<b>62,840</b>	<b>32,658</b>	<b>3,462,907</b>
<b>Ages 20–69</b>	<b>1,080,737</b>	<b>913,044</b>	<b>634,188</b>	<b>334,701</b>	<b>267,716</b>	<b>82,191</b>	<b>62,194</b>	<b>32,448</b>	<b>3,407,219</b>

(a) The Victorian and Australian Capital Territory registers 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:* State and territory Cervical Cytology Registry data.

**Table 4: Proportion of women participating in the National Cervical Screening Program, by age, states and territories, 2004–2005**

Age group	NSW	Vic <sup>(a)</sup>	Qld	WA	SA	Tas	ACT <sup>(a)</sup>	NT	Australia
	<b>Per cent</b>								
20–24	43.4	48.5	49.1	51.3	50.3	57.5	51.6	57.6	47.7
25–29	55.0	60.2	56.8	58.4	60.8	64.6	61.9	60.6	57.8
30–34	60.9	66.4	60.4	63.2	65.8	64.6	68.0	58.9	62.9
35–39	62.5	68.4	61.0	64.5	67.1	65.8	68.9	60.8	64.4
40–44	62.8	69.4	61.6	64.0	67.4	65.3	67.7	59.0	64.8
45–49	64.0	71.8	63.4	65.4	69.4	66.1	69.1	61.1	66.5
50–54	62.3	70.4	61.4	62.3	68.0	64.5	68.2	60.7	64.7
55–59	63.9	73.8	62.8	64.6	70.1	66.5	74.8	62.1	66.9
60–64	54.3	64.9	54.3	54.1	62.0	56.4	65.3	50.8	57.7
65–69	45.6	56.2	46.3	48.4	55.8	47.1	56.1	44.2	49.7
70–74	15.6	16.4	27.3	16.1	19.9	13.0	17.3	14.8	17.0
75–79	5.5	5.0	10.5	5.3	7.7	4.4	5.8	9.5	5.9
80+	1.6	1.6	3.2	2.0	1.9	1.2	1.7	3.0	1.8
<b>Ages 20 and over</b>									
Crude rate	51.9	58.1	54.9	55.1	56.3	55.6	60.4	57.7	54.6
AS rate	52.0	58.2	52.9	54.0	57.4	55.8	58.4	52.4	54.4
95% CI	51.9–52.1	58.1–58.4	52.8–53.1	53.8–54.2	57.2–57.6	55.5–56.2	57.9–58.9	51.8–53.0	54.4–54.5
<b>Ages 20–69</b>									
Crude rate	58.1	65.0	58.4	60.6	64.0	62.9	65.0	59.2	60.8
AS rate	58.2	65.4	58.4	60.5	64.1	62.9	65.5	58.5	61.0
95% CI	58.1–58.3	65.3–65.5	58.3–58.6	60.3–60.7	63.9–64.4	62.5–63.3	65.0–66.0	57.9–59.2	60.9–61.0

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

*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. Rates are standardised to the 2001 Australian total population.
3. In 2001 the ABS carried out a full population Census and a national health survey. These led to the revision of the ABS estimated resident population (ERP) data, the introduction of a new Australian standard population for use in age standardisation and the production of new estimates of hysterectomy status among Australian women. The denominators for participation rates presented in this report have been calculated using the 2001 ABS National Health Survey hysterectomy fractions and the revised ERP values, and age adjusted using the 2001 Australian Standard Population.
4. Separate rates cannot be calculated for women in the 80–84 and 85 years and over age groups because hysterectomy fractions are not available for these age groups; however, a hysterectomy fraction is available for women aged 80 years and over.

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

## Indicator 2: Early re-screening

**Table 5: Number of women with repeat screenings following a normal Pap smear in Australian cohorts from 1996 to 2004**

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

*Notes*

1. The indicator reported on a 24-month period following a normal Pap smear 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 to data in subsequent years.
2. The reference period for this indicator from 1999 onwards is February to November the following year (21 months); however, Queensland uses March to December the following year as its reporting period.
3. New South Wales, Queensland and Northern Territory data were unavailable for 1996. In addition, Queensland data were unavailable for 1997 and 1998.

Source: State and territory Cervical Cytology Registry data.

**Table 6: Percentage of women with repeat screenings following a normal Pap smear in Australian cohorts from 1996 to 2004**

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

*Notes*

1. The indicator reported on a 24-month period following a normal Pap smear 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 to data in subsequent years.
2. The reference period for this indicator from 1999 onwards is February to November the following year (21 months); however, Queensland uses March to December the following year as its reporting period.
3. New South Wales, Queensland and Northern Territory data were unavailable for 1996. In addition, Queensland data were unavailable for 1997 and 1998.

Source: State and territory Cervical Cytology Registry data.

**Table 7: Number of women with repeat screenings in the 21 months following a normal Pap smear in the 2004 cohort, by states and territories and Australia**

No. of tests	NSW	Vic <sup>(a)</sup>	Qld	WA	SA	Tas	ACT <sup>(a)</sup>	NT	Australia 2004 cohort
<b>Number of women</b>									
0	39,344	35,829	20,034	11,737	11,196	2,648	2,249	1,379	124,416
1	12,191	10,707	5,980	3,701	2,459	722	640	361	36,761
2	1,315	1,430	843	332	248	81	81	37	4,367
3	184	333	159	49	39	13	14	9	800
4	52	75	36	9	8	1	3	0	184
5 or more	7	41	6	0	2	1	0	1	58

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

*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. The follow-up period for Queensland data is from March 2004 to December 2005.

Source: State and territory Cervical Cytology Registry data.

**Table 8: Percentage of women with repeat screenings in the 21 months following a normal Pap smear in the 2004 cohort, by states and territories and Australia**

No. of tests	NSW	Vic <sup>(a)</sup>	Qld	WA	SA	Tas	ACT <sup>(a)</sup>	NT	Australia 2004 cohort
<b>Per cent</b>									
0	74.1	74.0	74.0	74.2	80.2	76.4	75.3	77.2	74.7
1	23.0	22.1	22.1	23.4	17.6	20.8	21.4	20.2	22.1
2	2.5	3.0	3.1	2.1	1.8	2.3	2.7	2.1	2.6
3	0.3	0.7	0.6	0.3	0.3	0.4	0.5	0.5	0.5
4	0.1	0.2	0.1	0.1	0.1	0.0	0.1	0.0	0.1
5 or more	0.0	0.1	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. 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. The follow-up period for Queensland data is from March 2004 to December 2005.

Source: State and territory Cervical Cytology Registry data.

## Indicator 3: Low-grade abnormality detection

**Table 9: Number of low- and high-grade abnormalities on histology for women aged 20–69 years, 1997–2005**

Abnormalities	1997	1998	1999	2000	2001	2002	2003	2004	2005
Low-grade	15,314	14,411	15,753	19,985	18,126	18,781	18,443	16,627	16,274
High-grade	10,392	10,704	11,686	13,851	13,555	14,903	14,840	14,507	14,837
Total	25,706	25,115	27,439	33,836	31,681	33,684	33,283	31,134	31,111
<b>Ratio</b>	<b>1.47</b>	<b>1.35</b>	<b>1.35</b>	<b>1.44</b>	<b>1.34</b>	<b>1.26</b>	<b>1.24</b>	<b>1.15</b>	<b>1.10</b>
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
<b>As a percentage of all screens</b>									
Low-grade	1.0	0.9	1.0	1.1	1.0	1.0	1.0	0.9	0.8
High-grade	0.7	0.7	0.8	0.7	0.7	0.8	0.8	0.8	0.8
<b>Total</b>	<b>1.8</b>	<b>1.6</b>	<b>1.8</b>	<b>1.8</b>	<b>1.7</b>	<b>1.8</b>	<b>1.8</b>	<b>1.6</b>	<b>1.6</b>

### 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. The Queensland Health Pap Smear Register began operations in February 1999; therefore no data are available for this report.
3. Australian Capital Territory data were unavailable for 1997 and 1998.
4. Northern Territory data were unavailable for 2001.
5. In 2002, 2003 and 2004 the Western Australian registry collated data for Indicator 3 according to the woman's age at the time of biopsy result and selected the most abnormal result in the time period. This may result in discrepancies when comparing totals with Indicator 4 where the age is the woman's age at the time of the Pap smear.

Source: State and territory Cervical Cytology Registry data.

**Table 10: Number of low- and high-grade abnormalities on histology for women aged 20–69 years, states and territories, 2005**

Abnormalities	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Low-grade	5,862	2,987	3,559	1,840	1,118	456	234	218	16,274
High-grade	5,104	3,214	2,881	1,511	1,055	492	340	240	14,837
<b>Ratio</b>	<b>1.15</b>	<b>0.93</b>	<b>1.24</b>	<b>1.22</b>	<b>1.06</b>	<b>0.93</b>	<b>0.69</b>	<b>0.91</b>	<b>1.10</b>
<b>As a percentage of all screens in 2005</b>									
Low-grade	1.0	0.6	1.0	1.0	0.7	1.0	0.7	1.2	0.8
High-grade	0.8	0.6	0.8	0.8	0.7	1.1	1.0	1.3	0.8

### 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. The Western Australian registry has collated data for Indicator 3 according to the woman's age at the time of biopsy result and selected the most abnormal result in the time period. This may result in discrepancies when comparing totals with Indicator 4 where the age is the woman's age at the time of the Pap smear.

Source: State and territory Cervical Cytology Registry data.

## Indicator 4: High-grade abnormality detection

Table 11: Rate of histologically confirmed high-grade abnormalities per 1,000 women screened, by age, 1997–2005

Age group	1997	1998	1999	2000	2001	2002	2003	2004	2005
20–24	14.2	14.3	16.8	16.3	16.3	18.9	18.5	19.4	19.2
25–29	13.6	13.9	15.0	15.5	15.6	16.7	16.9	16.8	17.3
30–34	9.5	8.8	10.0	10.3	10.1	11.3	11.0	11.3	11.3
35–39	6.3	6.3	6.7	6.5	6.6	6.9	6.9	6.8	6.9
40–44	4.2	4.1	4.4	4.5	4.4	4.8	5.0	4.4	4.3
45–49	3.1	2.6	3.2	3.0	3.0	3.0	3.2	2.9	2.9
50–54	1.9	1.9	2.0	1.9	1.8	2.0	1.8	1.7	1.6
55–59	1.5	1.6	1.7	1.5	1.5	1.7	1.5	1.4	1.5
60–64	1.7	1.7	1.6	1.5	1.5	1.3	1.6	1.2	1.3
65–69	2.1	1.0	2.0	1.7	1.6	1.4	1.4	1.0	1.0
70–74	3.0	2.9	2.9	3.2	2.1	2.7	1.7	2.0	1.7
75–79	..	3.4	4.1	3.8	3.9	2.5	3.5	4.5	3.2
80–84	..	6.0	3.0	4.3	4.9	4.2	5.2	6.7	8.8
85+	..	4.8	4.4	3.1	3.2	13.5	9.2	5.1	16.0
<b>Ages 20 and over</b>									
Crude rate	..	6.8	7.5	7.3	7.2	7.8	7.7	7.5	7.6
AS rate (A)	..	5.9	6.5	6.5	6.4	7.1	7.0	7.0	7.2
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
<b>Ages 20–69</b>									
Crude rate	7.1	6.9	7.5	7.4	7.3	7.9	7.8	7.6	7.6
AS rate (A)	6.4	6.2	6.9	6.9	6.9	7.5	7.5	7.4	7.5
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

.. Not applicable.

### Notes

1. In 1997 New South Wales and 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. 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.
3. The Queensland Health Pap Smear Register began operations in February 1999; therefore no data are available for this report.
4. Australian Capital Territory data were unavailable for 1997 and 1998.
5. Northern Territory data were unavailable for 2001.
6. 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.
7. Rates cannot be calculated for 1997 for ages 70 years and over because some jurisdictions didn't collect data for the number of women screened in these age groups while other jurisdictions didn't collect the number of high-grade abnormalities detected in women aged 70 years and over; therefore, it is not appropriate to include rates for these age groups.
8. South Australian data for 2005 may change before the final report is published.

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

**Table 12: Rate of histologically confirmed high-grade abnormalities per 1,000 women screened, by age, states and territories, 2005**

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
20–24	23.1	14.8	19.9	17.9	12.5	31.1	20.8	31.3	19.2
25–29	19.1	14.5	16.4	17.4	16.3	28.7	20.4	22.5	17.3
30–34	12.5	9.5	11.3	10.5	12.2	13.6	13.0	13.8	11.3
35–39	7.3	6.0	6.3	6.7	8.9	9.1	8.2	11.1	6.9
40–44	4.4	3.7	4.2	4.4	4.9	4.9	5.5	7.7	4.3
45–49	3.0	2.7	3.2	2.1	3.5	1.9	4.3	2.6	2.9
50–54	1.6	1.2	2.0	1.6	1.8	1.7	3.0	3.9	1.6
55–59	1.4	1.2	2.3	1.2	1.1	1.5	3.0	3.0	1.5
60–64	1.3	1.1	1.5	0.9	0.9	2.2	4.9	1.8	1.3
65–69	0.8	0.7	1.6	0.8	1.1	0.0	3.9	12.0	1.0
70–74	1.6	0.2	3.0	2.8	1.0	2.4	12.2	0.0	1.7
75–79	2.8	2.7	1.5	7.9	5.0	8.8	0.0	0.0	3.2
80–84	11.9	3.7	6.6	16.7	8.6	0.0	33.3	0.0	8.8
85+	14.3	6.1	7.0	12.0	46.2	71.4	(a)	0.0	16.0
<b>Ages 20 and over</b>									
Crude rate	8.3	6.2	7.8	7.4	7.0	10.4	9.9	13.2	7.6
AS rate (A)	8.0	5.7	7.1	7.2	7.5	11.0	14.2	10.1	7.2
95% CI	7.5–8.4	5.4–6.0	6.7–7.5	6.5–8.0	6.4–8.6	8.2–14.0	5.0–24.1	8.7–11.6	7.0–7.5
<b>Ages 20–69</b>									
Crude rate	8.4	6.3	7.9	7.4	7.1	10.5	9.9	13.3	7.6
AS rate (A)	8.3	6.2	7.5	7.1	7.1	10.5	9.3	11.5	7.5
95% CI	8.0–8.5	6.0–6.4	7.3–7.8	6.7–7.4	6.6–7.5	9.6–11.5	8.4–10.4	10.0–13.2	7.3–7.6

(a) Not reported because of very high standard error.

*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 13: Number of histologically confirmed high-grade abnormalities, by age, 1997–2005**

<b>Age group</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
20–24	2,123	2,220	2,565	2,922	2,909	3,425	3,379	3,509	3,620
25–29	2,913	3,126	3,283	3,937	3,775	3,920	3,913	3,671	3,809
30–34	2,115	2,041	2,238	2,767	2,699	3,078	2,976	3,020	3,040
35–39	1,384	1,468	1,520	1,754	1,717	1,804	1,774	1,725	1,792
40–44	795	833	888	1,113	1,080	1,195	1,250	1,135	1,096
45–49	496	447	554	628	635	642	680	653	661
50–54	240	257	275	325	319	352	332	308	307
55–59	122	145	156	178	184	218	202	202	229
60–64	106	115	109	127	136	113	147	117	132
65–69	98	52	98	100	101	86	92	69	70
70–74	72	62	61	83	54	64	38	43	35
75–79	17	21	28	31	30	21	28	31	21
80–84	9	11	6	11	12	11	13	15	19
85+	3	4	3	3	3	13	9	4	11
Age not stated	6	4	5	3	1	1	0	1	1
<b>Ages 20 and over</b>	<b>10,499</b>	<b>10,806</b>	<b>11,789</b>	<b>13,982</b>	<b>13,655</b>	<b>14,943</b>	<b>14,833</b>	<b>14,503</b>	<b>14,843</b>
<b>Ages 20–69</b>	<b>10,392</b>	<b>10,704</b>	<b>11,686</b>	<b>13,851</b>	<b>13,555</b>	<b>14,833</b>	<b>14,745</b>	<b>14,409</b>	<b>14,756</b>

*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. The Queensland Health Pap Smear Register began operations in February 1999; therefore no data are available for this report.
3. Australian Capital Territory data were unavailable for 1997 and 1998.
4. Northern Territory data were unavailable for 2001.
5. In 2002, 2003 and 2004 the Western Australian registry collated data for Indicator 4 according to the woman's age at the time of first smear result in the time period. In the event there is no smear in the time period, the age is calculated according to the age at the time of first result categorised as most abnormal biopsy in the time period. This may result in discrepancies when comparing totals with Indicator 3.

*Source:* State and territory Cervical Cytology Registry data.

**Table 14: Number of histologically confirmed high-grade abnormalities by age, states and territories, 2005**

<b>Age group</b>	<b>NSW</b>	<b>Vic</b>	<b>Qld</b>	<b>WA</b>	<b>SA</b>	<b>Tas</b>	<b>ACT</b>	<b>NT</b>	<b>Australia</b>
20–24	1,272	704	782	372	183	152	81	74	3,620
25–29	1,333	843	698	384	256	144	89	62	3,809
30–34	1,100	678	574	275	231	80	62	40	3,040
35–39	600	419	306	176	171	54	37	29	1,792
40–44	362	251	202	114	95	31	24	17	1,096
45–49	216	165	135	49	63	11	17	5	661
50–54	96	61	70	29	27	8	10	6	307
55–59	65	49	66	18	14	6	8	3	229
60–64	43	30	28	8	8	6	8	1	132
65–69	17	14	20	5	7	0	4	3	70
70–74	10	1	13	5	2	1	3	0	35
75–79	6	4	2	4	4	1	0	0	21
80–84	8	2	3	3	2	0	1	0	19
85+	3	1	1	1	3	1	1	0	11
Age not stated	1	0	0	0	0	0	0	0	1
<b>Ages 20 and over</b>	<b>5,132</b>	<b>3,222</b>	<b>2,900</b>	<b>1,443</b>	<b>1,066</b>	<b>495</b>	<b>345</b>	<b>240</b>	<b>14,843</b>
<b>Ages 20–69</b>	<b>5,104</b>	<b>3,214</b>	<b>2,881</b>	<b>1,430</b>	<b>1,055</b>	<b>492</b>	<b>340</b>	<b>240</b>	<b>14,756</b>

*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. The Western Australian registry collated data for Indicator 4 according to the woman's age at the time of first smear result in the time period. In the event there is no smear in the time period, the age is calculated according to the age at the time of first result categorised as most abnormal biopsy in the time period. This may result in discrepancies when comparing totals with Indicator 3.

Source: State and territory Cervical Cytology Registry data.

**Table 15: Number of women screened, by age, 1997–2005**

<b>Age group</b>	<b>1997<sup>(a)</sup></b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
20–24	149,203	154,804	152,337	179,312	178,267	180,961	182,264	180,911	188,375
25–29	214,958	225,693	218,499	254,534	241,353	234,688	231,713	219,045	220,542
30–34	221,661	231,024	223,700	268,031	267,038	271,399	270,492	267,553	268,793
35–39	219,961	234,358	228,337	270,740	261,728	260,097	258,040	253,730	258,908
40–44	187,533	201,812	200,770	245,627	246,640	249,958	251,113	255,197	255,267
45–49	160,788	171,088	171,528	209,487	209,163	212,372	214,324	221,712	227,281
50–54	123,427	133,964	140,438	175,187	178,425	176,949	180,162	183,853	186,689
55–59	82,996	88,706	93,374	116,943	122,168	130,107	135,062	146,837	152,411
60–64	60,841	66,272	69,887	85,383	88,351	89,625	92,047	97,916	101,992
65–69	45,781	49,835	49,941	59,248	61,556	62,438	65,023	68,036	70,176
70–74	23,862	21,657	21,199	25,548	25,152	23,731	22,781	21,055	20,508
75–79	3,147	6,226	6,898	8,204	7,774	8,349	7,971	6,920	6,505
80–84	1,069	1,843	1,978	2,535	2,435	2,642	2,514	2,249	2,148
85+	22	833	685	970	929	965	974	789	686
Not stated	359	4,492	2,441	1,975	2,058	1,857	1,841	286	164
<b>Ages 20 and over</b>	<b>1,495,608</b>	<b>1,592,607</b>	<b>1,582,012</b>	<b>1,903,724</b>	<b>1,893,037</b>	<b>1,906,138</b>	<b>1,916,321</b>	<b>1,926,089</b>	<b>1,960,446</b>
<b>Ages 20–69</b>	<b>1,467,149</b>	<b>1,557,556</b>	<b>1,548,811</b>	<b>1,864,492</b>	<b>1,854,689</b>	<b>1,868,594</b>	<b>1,880,240</b>	<b>1,894,790</b>	<b>1,930,435</b>

(a) Some jurisdictions did not supply data on the number of women screened who were aged 70 years and over; in some cases these women were included in the 70–74 years age group. For a more comprehensive understanding of the data, refer to <[www.aihw.gov.au](http://www.aihw.gov.au)>.

*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. The Queensland Health Pap Smear Register began operations in February 1999; therefore no data are available for this report.
3. Australian Capital Territory data were unavailable for 1997 and 1998.
4. Northern Territory data were unavailable for 2001.
5. South Australian data for 2005 may change before the final report is published.

Source: State and territory Cervical Cytology Registry data.

**Table 16: Number of women screened, by age, states and territories, 2005**

<b>Age group</b>	<b>NSW</b>	<b>Vic</b>	<b>Qld</b>	<b>WA</b>	<b>SA</b>	<b>Tas</b>	<b>ACT</b>	<b>NT</b>	<b>Australia</b>
20–24	55,039	47,533	39,210	20,799	14,647	4,894	3,885	2,368	188,375
25–29	69,960	58,126	42,528	22,061	15,730	5,017	4,364	2,756	220,542
30–34	87,987	71,406	50,691	26,182	18,986	5,871	4,772	2,898	268,793
35–39	81,786	70,181	48,413	26,292	19,198	5,949	4,487	2,602	258,908
40–44	81,790	67,258	47,953	25,881	19,569	6,273	4,336	2,207	255,267
45–49	71,829	60,176	42,512	23,101	18,189	5,647	3,920	1,907	227,281
50–54	59,008	49,678	34,702	18,449	15,177	4,799	3,328	1,548	186,689
55–59	47,814	41,395	28,134	14,471	12,880	4,013	2,705	999	152,411
60–64	32,351	27,926	18,927	9,175	8,688	2,765	1,618	542	101,992
65–69	21,844	20,114	12,159	6,493	6,486	1,800	1,031	249	70,176
70–74	6,395	5,229	4,350	1,769	2,046	419	246	54	20,508
75–79	2,107	1,500	1,377	505	795	114	83	24	6,505
80–84	673	536	457	180	232	34	30	6	2,148
85+	210	164	142	83	65	14	4	4	686
Age not stated	118	0	0	7	6	0	0	33	164
<b>Ages 20 and over</b>	<b>618,911</b>	<b>521,223</b>	<b>371,555</b>	<b>195,448</b>	<b>152,694</b>	<b>47,609</b>	<b>34,809</b>	<b>18,197</b>	<b>1,960,446</b>
<b>Ages 20–69</b>	<b>609,408</b>	<b>513,794</b>	<b>365,229</b>	<b>192,904</b>	<b>149,550</b>	<b>47,028</b>	<b>34,446</b>	<b>18,076</b>	<b>1,930,435</b>

*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:* State and territory Cervical Cytology Registry data.

## Indicator 5.1: Incidence of micro-invasive cervical cancer

Table 17: New cases of micro-invasive cervical cancer, by age, 1992–2003

Age group	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
0–4	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
10–14	0	0	0	0	0	0	0	0	0	0	0	0
15–19	0	0	0	0	1	0	0	0	0	0	0	0
20–24	5	1	7	1	6	3	3	2	1	2	10	3
25–29	14	9	17	17	18	10	17	14	12	12	13	9
30–34	32	32	36	42	18	28	18	14	27	22	16	15
35–39	25	26	31	28	36	22	27	21	13	14	13	11
40–44	24	17	25	30	23	21	22	14	9	6	11	16
45–49	13	15	26	23	11	11	18	7	15	15	13	14
50–54	12	17	9	12	11	8	12	7	6	9	4	3
55–59	12	5	5	9	7	8	2	8	4	4	6	3
60–64	8	7	10	11	6	6	5	2	3	4	5	4
65–69	9	10	6	7	10	2	2	3	0	2	3	2
70–74	2	4	6	5	4	5	3	2	0	2	1	3
75–79	2	1	3	5	2	2	2	1	1	3	2	0
80–84	0	0	0	1	1	0	2	0	2	0	1	2
85+	0	1	2	1	1	0	0	0	0	2	0	0
<b>All ages</b>	<b>158</b>	<b>145</b>	<b>183</b>	<b>192</b>	<b>155</b>	<b>126</b>	<b>133</b>	<b>95</b>	<b>93</b>	<b>97</b>	<b>98</b>	<b>85</b>
<b>Ages 20–69</b>	<b>154</b>	<b>139</b>	<b>172</b>	<b>180</b>	<b>146</b>	<b>119</b>	<b>126</b>	<b>92</b>	<b>90</b>	<b>90</b>	<b>94</b>	<b>80</b>

Note: Cancer incidence estimates provided in this publication were made in March 2006. 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 18: Age-specific and age-standardised incidence rates of micro-invasive cervical cancer, by age, 1992–2003**

Age group	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
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
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
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
15–19	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20–24	0.7	0.1	1.0	0.1	0.9	0.4	0.5	0.3	0.2	0.3	1.5	0.4
25–29	2.0	1.3	2.5	2.5	2.5	1.4	2.3	1.9	1.7	1.7	1.9	1.3
30–34	4.4	4.4	4.9	5.7	2.5	3.9	2.5	2.0	3.8	3.0	2.1	2.0
35–39	3.7	3.8	4.4	3.9	4.9	3.0	3.6	2.8	1.7	1.9	1.8	1.5
40–44	3.7	2.6	3.8	4.5	3.4	3.0	3.1	2.0	1.2	0.8	1.4	2.1
45–49	2.4	2.6	4.4	3.7	1.7	1.7	2.8	1.1	2.2	2.2	1.9	2.0
50–54	2.8	3.9	2.0	2.5	2.2	1.5	2.1	1.2	1.0	1.4	0.6	0.5
55–59	3.3	1.3	1.3	2.3	1.7	1.9	0.5	1.8	0.8	0.8	1.1	0.5
60–64	2.2	1.9	2.8	3.1	1.7	1.6	1.3	0.5	0.8	1.0	1.2	0.9
65–69	2.5	2.8	1.7	2.0	2.8	0.6	0.6	0.9	0.0	0.6	0.8	0.5
70–74	0.7	1.3	1.9	1.5	1.2	1.5	0.9	0.6	0.0	0.6	0.3	0.9
75–79	0.9	0.4	1.3	2.1	0.8	0.8	0.7	0.4	0.3	1.0	0.7	0.0
80–84	0.0	0.0	0.0	0.6	0.6	0.0	1.1	0.0	1.1	0.0	0.5	0.9
85+	0.0	0.8	1.6	0.7	0.7	0.0	0.0	0.0	0.0	1.1	0.0	0.0
<b>All ages</b>												
Crude rate	1.8	1.6	2.0	2.1	1.7	1.4	1.4	1.0	1.0	1.0	1.0	0.9
AS rate (A)	1.9	1.7	2.1	2.1	1.7	1.4	1.4	1.0	1.0	1.0	1.0	0.8
95% CI	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	0.7–1.0
AS rate (W)	1.7	1.5	1.9	1.9	1.5	1.2	1.3	0.9	0.9	0.9	0.9	0.8
95% CI	1.4–2.0	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
<b>Ages 20–69</b>												
Crude rate	2.8	2.5	3.1	3.2	2.5	2.0	2.1	1.5	1.5	1.5	1.5	1.3
AS rate (A)	2.8	2.6	3.0	3.2	2.5	2.0	2.1	1.5	1.5	1.5	1.5	1.3
95% CI	2.4–3.3	2.1–3.0	2.6–3.5	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
AS rate (W)	2.8	2.5	3.0	3.1	2.5	2.0	2.1	1.5	1.5	1.4	1.5	1.3
95% CI	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

Note: Rates are expressed per 100,000 women and age-standardised to the Australian 2001 population (A) and the WHO World Standard Population (W).

Source: National Cancer Statistics Clearing House (AIHW).

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

Table 19: New cases of cervical cancer, by age, 1992–2003

Age group	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
0–4	0	0	0	0	0	0	0	0	0	0	0	0
5–9	0	0	1	0	0	0	0	0	0	0	0	0
10–14	0	0	0	0	0	0	0	0	0	0	0	0
15–19	0	1	1	1	1	1	2	0	2	2	0	1
20–24	9	10	16	4	15	11	12	9	7	7	14	6
25–29	55	38	49	54	46	44	48	56	40	41	42	35
30–34	110	104	123	111	68	80	82	75	87	58	73	61
35–39	125	129	134	114	142	104	106	103	68	87	77	86
40–44	129	128	134	119	118	101	100	102	81	67	77	80
45–49	101	102	132	98	102	78	114	78	75	104	79	90
50–54	78	91	86	59	81	78	63	67	59	76	69	74
55–59	79	78	73	68	63	51	53	51	56	55	42	56
60–64	75	77	88	71	62	53	57	63	65	47	42	48
65–69	89	92	95	79	64	57	57	55	51	43	41	42
70–74	71	64	79	70	63	45	56	47	56	41	34	41
75–79	53	46	66	51	51	46	44	41	50	40	35	34
80–84	34	36	40	30	41	33	41	33	36	40	34	41
85+	22	21	22	33	25	28	28	19	24	29	31	30
<b>All ages</b>	<b>1,030</b>	<b>1,017</b>	<b>1,139</b>	<b>962</b>	<b>942</b>	<b>810</b>	<b>863</b>	<b>799</b>	<b>757</b>	<b>737</b>	<b>690</b>	<b>725</b>
<b>Ages 20–69</b>	<b>850</b>	<b>849</b>	<b>930</b>	<b>777</b>	<b>761</b>	<b>657</b>	<b>692</b>	<b>659</b>	<b>589</b>	<b>585</b>	<b>556</b>	<b>578</b>

### Notes

1. The table includes the incidence of micro-invasive and invasive cervical cancers.
2. Cancer incidence estimates provided in this publication were made in March 2006. 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 20: Age-specific and age-standardised incidence rates of cervical cancer, by age, 1992–2003**

<b>Age group</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
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
5–9	0.0	0.0	0.2	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
15–19	0.0	0.2	0.2	0.2	0.2	0.2	0.3	0.0	0.3	0.3	0.0	0.2
20–24	1.3	1.4	2.3	0.6	2.2	1.6	1.8	1.4	1.1	1.1	2.1	0.9
25–29	8.0	5.6	7.2	7.9	6.5	6.1	6.5	7.6	5.5	5.8	6.1	5.2
30–34	15.2	14.2	16.7	15.2	9.4	11.2	11.6	10.5	12.1	7.8	9.6	8.0
35–39	18.5	18.7	19.2	16.0	19.5	14.0	14.1	13.6	9.0	11.6	10.4	11.7
40–44	20.1	19.8	20.4	17.8	17.4	14.6	14.2	14.3	11.1	9.0	10.1	10.4
45–49	18.8	17.8	22.2	15.9	15.9	12.1	17.4	11.7	11.1	15.2	11.4	12.7
50–54	18.4	21.0	19.0	12.4	16.3	14.5	11.0	11.2	9.5	11.7	10.6	11.3
55–59	21.6	20.8	18.9	17.2	15.5	12.1	12.2	11.3	11.8	11.1	7.8	9.8
60–64	20.5	21.4	24.7	19.9	17.4	14.6	15.3	16.4	16.4	11.5	10.0	11.1
65–69	25.2	25.9	26.8	22.3	18.0	16.2	16.3	15.9	14.8	12.4	11.5	11.5
70–74	24.3	21.1	24.9	21.7	19.3	13.7	16.9	14.1	16.8	12.2	10.2	12.4
75–79	23.1	20.0	29.0	21.9	20.9	17.9	16.4	14.6	17.4	13.7	11.9	11.4
80–84	22.5	22.7	23.9	17.4	23.2	18.3	22.5	18.0	18.9	19.8	16.1	18.5
85+	19.0	17.2	17.3	24.6	17.7	18.7	17.9	11.4	13.7	15.8	16.3	15.3
<b>All ages</b>												
Crude rate	11.7	11.5	12.7	10.6	10.2	8.7	9.2	8.4	7.8	7.5	7.0	7.3
AS rate (A)	12.2	11.9	13.0	10.7	10.4	8.7	9.1	8.3	7.7	7.4	6.8	7.0
AS rate (W)	10.4	10.1	11.0	9.1	8.7	7.4	7.7	7.1	6.5	6.2	5.8	5.9
<b>Ages 20–69</b>												
Crude rate	15.5	15.3	16.5	13.6	13.2	11.2	11.7	11.0	9.7	9.5	8.9	9.1
AS rate (A)	16.0	15.9	17.0	13.9	13.4	11.4	11.7	11.0	9.7	9.5	8.9	9.1
AS rate (W)	15.2	15.0	16.1	13.2	12.8	10.8	11.2	10.5	9.3	9.0	8.5	8.6

Notes: Rates are expressed per 100,000 women and age-standardised to the Australian 2001 population (A) and the WHO World Standard Population (W).

Source: National Cancer Statistics Clearing House (AIHW).

**Table 21: New cases of cervical cancer, by age, states and territories, 1996–1999**

<b>Age group</b>	<b>NSW</b>	<b>Vic</b>	<b>Qld</b>	<b>WA</b>	<b>SA</b>	<b>Tas</b>	<b>ACT</b>	<b>NT</b>	<b>Australia</b>
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	1	0	0	0	0	0	4
20–24	12	9	17	3	0	6	0	0	47
25–29	60	37	51	14	17	6	5	4	194
30–34	105	57	73	30	26	12	0	2	305
35–39	150	97	109	32	24	24	9	10	455
40–44	129	104	90	52	26	8	5	7	421
45–49	135	92	68	34	25	6	5	7	372
50–54	120	62	58	21	14	5	3	6	289
55–59	66	60	42	20	16	6	4	4	218
60–64	82	60	47	18	18	6	1	3	235
65–69	89	50	50	22	13	4	5	0	233
70–74	83	55	33	21	11	4	2	2	211
75–79	64	45	37	15	14	5	1	1	182
80–84	53	46	22	15	8	2	2	0	148
85+	34	29	19	12	5	0	1	0	100
<b>All ages</b>	<b>1,184</b>	<b>804</b>	<b>717</b>	<b>309</b>	<b>217</b>	<b>94</b>	<b>43</b>	<b>46</b>	<b>3,414</b>
<b>Ages 20–69</b>	<b>948</b>	<b>628</b>	<b>605</b>	<b>246</b>	<b>179</b>	<b>83</b>	<b>37</b>	<b>43</b>	<b>2,769</b>

Source: National Cancer Statistics Clearing House (AIHW).

**Table 22: Age-specific and age-standardised incidence rates of cervical cancer, states and territories, 1996–1999**

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
0–4	0.2	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	0.2	0.0	0.0	0.0	0.0	0.0	0.2
20–24	1.4	1.4	3.4	1.2	0.0	9.8	0.0	0.0	1.8
25–29	6.2	5.0	9.5	5.0	7.9	9.1	9.4	10.6	6.7
30–34	10.9	7.8	14.1	10.7	11.9	17.6	0.0	5.9	10.7
35–39	14.9	13.1	20.0	10.9	10.2	31.6	17.3	31.6	15.3
40–44	13.8	15.0	17.8	18.5	11.7	11.2	10.0	25.3	15.1
45–49	15.6	14.2	14.2	13.2	11.7	9.1	10.1	29.8	14.3
50–54	16.1	11.3	14.2	10.2	7.6	8.8	7.7	35.0	13.1
55–59	11.2	13.9	13.6	12.6	11.2	13.1	15.6	37.8	12.7
60–64	15.9	15.8	18.5	13.5	14.2	15.1	5.3	45.0	15.9
65–69	17.9	13.8	21.0	18.2	10.4	10.6	31.7	0.0	16.6
70–74	17.6	16.0	15.0	19.6	8.9	11.3	13.7	63.4	16.0
75–79	17.0	16.6	21.0	17.8	13.9	17.1	9.1	48.0	17.3
80–84	20.6	24.7	18.3	25.3	11.6	9.7	28.7	0.0	20.5
85+	15.8	17.7	19.0	22.9	8.3	0.0	19.5	0.0	16.3
<b>All ages</b>									
Crude rate	9.3	8.6	10.5	8.6	7.2	9.8	6.9	12.9	9.1
AS rate (A)	9.2	8.5	10.7	8.8	7.0	9.9	7.6	17.2	9.1
95% CI	8.7–9.8	7.9–9.1	9.9–11.5	7.9–9.9	6.1–8.0	8.0–12.1	5.4–10.3	11.8–24.0	8.8–9.4
AS rate (W)	7.8	7.1	9.2	7.3	6.1	9.0	6.3	14.4	7.7
95% CI	7.3–8.4	6.6–7.6	8.5–9.9	6.5–8.2	5.3–6.9	7.2–11.0	4.6–8.6	10.2–19.7	7.5–8.0
<b>Ages 20–69</b>									
Crude rate	11.9	10.6	14.1	10.8	9.5	14.1	9.1	19.1	11.7
AS rate (A)	12.0	10.8	14.3	11.0	9.5	14.0	9.7	21.9	11.9
95% CI	11.2–12.8	9.9–11.6	13.2–15.5	9.6–12.4	8.2–11.0	11.1–17.3	6.8–13.4	15.4–29.9	11.4–12.3
AS rate (W)	11.4	10.2	13.7	10.4	9.1	13.9	9.2	20.4	11.3
95% CI	10.6–12.1	9.4–11.0	12.7–14.9	9.1–11.8	7.8–10.6	11.1–17.3	6.4–12.7	14.5–27.9	10.9–11.7

*Note:* Rates are expressed per 100,000 women and age-standardised to the Australian 2001 population (A) and the WHO World Standard Population (W).

*Source:* National Cancer Statistics Clearing House (AIHW).

**Table 23: Number of new cases of cervical cancer, by age, states and territories, 2000–2003**

<b>Age group</b>	<b>NSW</b>	<b>Vic</b>	<b>Qld</b>	<b>WA</b>	<b>SA</b>	<b>Tas</b>	<b>ACT</b>	<b>NT</b>	<b>Australia</b>
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	0	1	2	0	0	0	0	5
20–24	14	3	10	6	1	0	0	0	34
25–29	41	35	38	21	10	6	4	3	158
30–34	95	61	64	29	19	5	4	2	279
35–39	105	56	74	40	23	8	7	5	318
40–44	95	58	74	38	24	9	2	5	305
45–49	128	67	71	41	18	12	4	7	348
50–54	94	60	60	29	17	8	6	4	278
55–59	80	45	40	19	11	9	3	2	209
60–64	72	48	42	20	13	4	2	1	202
65–69	65	43	30	20	12	3	1	3	177
70–74	65	33	31	24	12	4	2	1	172
75–79	61	42	29	13	9	1	2	2	159
80–84	46	45	29	16	11	3	1	0	151
85+	40	28	18	16	8	4	0	0	114
<b>All ages</b>	<b>1,003</b>	<b>624</b>	<b>611</b>	<b>334</b>	<b>188</b>	<b>76</b>	<b>38</b>	<b>35</b>	<b>2,909</b>
<b>Ages 20–69</b>	<b>789</b>	<b>476</b>	<b>503</b>	<b>263</b>	<b>148</b>	<b>64</b>	<b>33</b>	<b>32</b>	<b>2,308</b>

Source: National Cancer Statistics Clearing House (AIHW).

**Table 24: Age-specific and age-standardised incidence rates of cervical cancer, states and territories, 1999–2002**

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
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	0.0	0.2	0.7	0.0	0.0	0.0	0.0	0.2
20–24	1.6	0.5	2.0	2.3	0.5	0.0	0.0	0.0	1.3
25–29	4.3	4.9	7.2	7.8	5.1	10.4	7.7	8.5	5.6
30–34	9.5	7.9	11.6	10.0	8.9	7.7	7.7	5.5	9.4
35–39	10.5	7.5	13.2	13.5	10.2	11.5	13.8	15.5	10.7
40–44	9.4	7.8	13.1	12.6	10.3	12.2	3.9	16.8	10.2
45–49	14.0	9.9	13.8	14.6	8.2	17.4	8.1	26.8	12.6
50–54	11.0	9.4	12.3	11.4	8.1	12.3	12.9	18.2	10.8
55–59	11.4	8.8	10.1	9.8	6.4	16.7	9.0	14.0	10.1
60–64	12.7	11.5	13.8	12.9	9.4	9.0	8.7	11.3	12.2
65–69	13.2	11.9	12.1	15.6	9.9	8.0	5.7	56.4	12.5
70–74	13.8	9.6	13.6	21.0	10.0	11.4	13.4	26.8	12.9
75–79	14.7	13.8	14.7	13.5	8.1	3.2	15.0	81.3	13.6
80–84	15.6	21.3	20.7	23.8	14.0	13.3	11.3	0.0	18.3
85+	15.2	14.3	14.6	25.0	11.1	20.1	0.0	0.0	15.3
<b>All ages</b>									
Crude rate	7.6	6.4	8.3	8.7	6.1	7.9	5.9	9.3	7.4
AS rate (A)	7.3	6.1	8.3	8.7	5.8	7.7	6.0	12.9	7.2
95% CI	6.9–7.8	5.6–6.6	7.6–9.0	7.8–9.7	5.0–6.7	6.0–9.6	4.2–8.3	8.2–18.8	6.9–7.5
AS rate (W)	6.2	5.1	7.1	7.4	4.9	6.6	5.2	10.5	6.1
95% CI	5.8–6.6	4.7–5.5	6.5–7.7	6.6–8.2	4.2–5.7	5.2–8.4	3.6–7.1	7.0–15.0	5.9–6.3
<b>Ages 20–69</b>									
Crude rate	9.4	7.6	10.8	10.8	7.7	10.8	7.7	13.3	9.3
AS rate (A)	9.4	7.6	10.8	10.8	7.6	10.6	7.8	15.4	9.3
95% CI	8.8–10.1	7.0–8.3	9.9–11.8	9.6–12.2	6.5–9.0	8.1–13.5	5.4–11.0	10.2–22.3	8.9–9.7
AS rate (W)	9.0	7.3	10.4	10.4	7.3	10.1	7.5	14.4	8.9
95% CI	8.3–9.6	6.6–7.9	9.5–11.3	9.2–11.7	6.2–8.6	7.7–13.0	5.2–10.6	9.5–20.7	8.5–9.2

Note: Rates are expressed per 100,000 women and age-standardised to the Australian 2001 population (A) and the WHO World Standard Population (W).

Source: National Cancer Statistics Clearing House (AIHW).

**Table 25: New cases of cervical cancer, by histological type, for women aged 20–69 years, 1992–2003**

<b>Histological type</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
Squamous	612	599	635	545	531	456	488	471	405	400	389	391
Adenocarcinoma	142	142	194	148	153	136	146	142	127	121	134	137
Adenosquamous	52	47	40	34	40	34	30	23	30	31	18	25
Other	44	61	61	47	37	31	28	23	27	33	15	25
<b>Total</b>	<b>850</b>	<b>849</b>	<b>930</b>	<b>774</b>	<b>761</b>	<b>657</b>	<b>692</b>	<b>659</b>	<b>589</b>	<b>585</b>	<b>556</b>	<b>578</b>
<i>Micro-invasive</i>	<i>154</i>	<i>139</i>	<i>172</i>	<i>180</i>	<i>146</i>	<i>119</i>	<i>126</i>	<i>92</i>	<i>90</i>	<i>90</i>	<i>94</i>	<i>80</i>

Source: National Cancer Statistics Clearing House (AIHW).

**Table 26: Age-standardised incidence rates for cervical cancer, by histological type, for women aged 20–69 years, 1992–2003**

<b>Histological type</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
Squamous	11.5	11.3	11.6	9.8	9.4	7.9	8.3	7.9	6.7	6.5	6.2	6.1
Adenocarcinoma	2.7	2.6	3.5	2.6	2.7	2.3	2.5	2.4	2.1	2.0	2.1	2.2
Adenosquamous	1.0	0.9	0.7	0.6	0.7	0.6	0.5	0.4	0.5	0.5	0.3	0.4
Other	0.8	1.1	1.1	0.9	0.7	0.5	0.5	0.4	0.4	0.5	0.2	0.4
<i>Micro-invasive</i>	<i>2.8</i>	<i>2.6</i>	<i>3.0</i>	<i>3.2</i>	<i>2.5</i>	<i>2.0</i>	<i>2.1</i>	<i>1.5</i>	<i>1.5</i>	<i>1.5</i>	<i>1.5</i>	<i>1.3</i>

Note: Rates are expressed per 100,000 women and age-standardised to the Australian 2001 population.

Source: National Cancer Statistics Clearing House (AIHW).

**Table 27: New cases of cervical cancer, by histological type, all ages, 1992–2003**

<b>Histological type</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
Squamous	752	709	786	677	674	556	611	578	527	508	487	492
Adenocarcinoma	158	163	224	174	173	167	172	161	150	144	146	161
Adenosquamous	57	56	50	39	47	40	35	25	31	35	20	30
Other	63	89	80	70	48	47	45	35	49	50	37	42
<b>Total</b>	<b>1,030</b>	<b>1,017</b>	<b>1,140</b>	<b>960</b>	<b>942</b>	<b>810</b>	<b>863</b>	<b>799</b>	<b>757</b>	<b>737</b>	<b>690</b>	<b>725</b>
<i>Micro-invasive</i>	<i>158</i>	<i>145</i>	<i>183</i>	<i>192</i>	<i>155</i>	<i>126</i>	<i>133</i>	<i>95</i>	<i>93</i>	<i>97</i>	<i>98</i>	<i>85</i>

Source: National Cancer Statistics Clearing House (AIHW).

**Table 28: Age-standardised incidence rates for cervical cancer, by histological type, all ages, 1992–2003**

<b>Histological type</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
Squamous	8.9	8.4	9.0	7.6	7.4	6.0	6.4	6.0	5.4	5.1	4.8	4.8
Adenocarcinoma	1.9	1.9	2.6	1.9	1.9	1.8	1.8	1.7	1.5	1.5	1.5	1.6
Adenosquamous	0.7	0.6	0.6	0.4	0.5	0.4	0.4	0.3	0.3	0.4	0.2	0.3
Other	0.7	1.0	0.9	0.8	0.5	0.5	0.5	0.4	0.5	0.5	0.3	0.4
<i>Micro-invasive</i>	<i>1.9</i>	<i>1.7</i>	<i>2.1</i>	<i>2.1</i>	<i>1.7</i>	<i>1.4</i>	<i>1.4</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>	<i>0.8</i>

Note: Rates are expressed per 100,000 women and age-standardised to the Australian 2001 population.

Source: National Cancer Statistics Clearing House (AIHW).

## Indicator 5.3: Incidence by location

Table 29: New cases of cervical cancer, by age and location, 1996–1999 and 2000–2003

Age group	Major cities		Regional		Remote		Australia	
	1996–1999	2000–2003	1996–1999	2000–2003	1996–1999	2000–2003	1996–1999	2000–2003
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	2	4	2	1	0	0	4	5
20–24	28	21	17	8	2	2	47	34
25–29	132	89	53	45	8	3	194	158
30–34	191	170	105	66	7	12	305	279
35–39	279	176	152	96	23	6	455	318
40–44	278	174	129	83	13	8	421	305
45–49	259	189	102	97	11	14	372	348
50–54	199	173	78	69	10	3	289	278
55–59	144	107	65	71	8	10	218	209
60–64	149	121	76	52	7	7	235	202
65–69	169	98	61	57	2	5	233	177
70–74	143	109	61	44	4	3	211	172
75–79	125	100	54	40	3	2	182	159
80–84	97	94	48	39	2	2	148	151
85+	73	68	25	29	2	2	100	114
<b>All ages</b>	<b>2,268</b>	<b>1,692</b>	<b>1,029</b>	<b>796</b>	<b>102</b>	<b>79</b>	<b>3,414</b>	<b>2,909</b>
<b>Ages 20–69</b>	<b>1,828</b>	<b>1,317</b>	<b>839</b>	<b>643</b>	<b>91</b>	<b>69</b>	<b>2,769</b>	<b>2,308</b>

### Notes

1. The numbers are presented as four-year rolling blocks of data.
2. In the periods 1996–1999 and 2000–2003 there were 15 and 242 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. Regions have been defined according to the ASGC Remoteness Areas classification.

Source: National Cancer Statistics Clearing House (AIHW).

**Table 30: Age-specific and age-standardised incidence rates for cervical cancer, by age and location, 1995–1998 and 1999–2002**

Age group	Major cities		Regional		Remote		Australia	
	1995–1998	1999–2002	1995–1998	1999–2002	1995–1998	1999–2002	1995–1998	1999–2002
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	0.1	0.2	0.3	0.1	0.0	0.0	0.2	0.2
20–24	1.4	1.1	2.6	1.3	3.0	3.2	1.8	1.3
25–29	6.4	4.4	7.0	6.3	9.2	3.9	6.7	5.6
30–34	9.8	8.2	12.8	8.1	8.5	14.6	10.7	9.4
35–39	14.1	8.8	16.4	10.7	29.2	7.7	15.3	10.7
40–44	15.0	8.8	14.9	8.8	18.8	10.6	15.1	10.2
45–49	14.8	10.3	12.9	11.2	19.8	23.0	14.3	12.6
50–54	13.5	10.0	11.4	8.5	20.7	4.8	13.1	10.8
55–59	12.9	7.9	11.6	10.5	21.7	24.2	12.7	10.1
60–64	15.6	11.4	15.4	9.1	27.0	21.5	15.9	12.2
65–69	18.5	10.9	13.1	11.7	9.2	21.2	16.6	12.5
70–74	16.2	12.5	14.5	10.0	23.7	16.1	16.0	12.9
75–79	17.7	12.8	16.3	10.6	23.5	14.3	17.3	13.6
80–84	20.0	16.9	21.1	14.9	25.8	25.0	20.5	18.3
85+	17.6	13.4	13.4	12.6	18.8	23.5	16.3	15.3
<b>All ages</b>								
AS rate (A)	9.0	6.3	8.9	6.4	12.7	9.5	9.1	7.2
95% CI	8.7–9.4	6.0–6.6	8.4–9.5	6.0–6.9	10.2–15.4	7.4–11.9	8.8–9.4	6.9–7.5
AS rate (W)	7.6	5.3	7.6	5.5	10.8	8.1	7.7	6.1
95% CI	7.3–8.0	5.0–5.5	7.2–8.1	5.1–5.9	8.7–13.1	6.3–10.0	7.5–8.0	5.9–6.3
<b>Ages 20–69</b>								
AS rate (A)	11.7	7.9	11.7	8.4	16.6	12.4	11.9	9.3
95% CI	11.2–12.3	7.5–8.4	10.9–12.5	7.8–9.1	13.3–20.4	9.6–15.6	11.4–12.3	8.9–9.7
AS rate (W)	11.1	7.5	11.3	8.1	15.8	11.8	11.3	8.9
95% CI	10.6–11.7	7.1–8.0	10.5–12.1	7.5–8.7	12.7–19.4	9.1–14.9	10.9–11.7	8.5–9.2

*Notes*

1. The numbers are presented as four-year rolling blocks of data.
2. Rates are expressed per 100,000 women and age-standardised to the Australian 2001 population (A) and the WHO World Standard Population (W).

Source: National Cancer Statistics Clearing House (AIHW).

## Indicator 6.1: Mortality by age

Table 31: Deaths from cervical cancer, by age, 1984–2004

Age group	Year																				
	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04
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	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1
20–24	0	0	2	2	0	1	1	3	0	0	0	0	1	0	3	1	1	0	2	0	0
25–29	10	6	6	5	3	3	10	5	5	2	6	3	1	2	6	2	4	1	2	5	4
30–34	13	20	12	15	12	21	14	13	15	11	11	7	13	8	5	6	10	11	6	13	7
35–39	19	17	16	20	15	18	30	25	19	25	11	16	23	18	19	7	12	12	9	12	9
40–44	20	18	26	20	24	24	36	19	27	32	28	21	20	16	19	18	14	19	13	12	13
45–49	26	21	24	19	27	31	36	29	26	23	35	32	30	28	16	25	27	23	15	22	17
50–54	25	25	25	24	19	27	17	21	13	29	37	26	13	21	24	15	19	21	32	17	15
55–59	21	31	41	32	41	20	25	25	23	20	26	34	22	24	15	14	19	20	15	19	21
60–64	41	41	41	28	41	33	34	33	31	25	24	30	21	22	28	15	24	25	19	21	15
65–69	43	52	50	46	41	54	43	35	25	30	37	37	29	30	19	21	26	20	18	20	17
70–74	33	43	32	55	34	48	25	37	45	38	33	43	41	36	28	30	37	28	18	23	17
75–79	29	29	23	29	35	29	32	30	32	28	30	30	38	32	26	26	25	30	26	29	16
80–84	26	26	23	20	34	24	8	22	35	24	26	27	22	27	26	19	23	28	26	21	23
85+	21	29	24	16	17	22	25	32	23	24	24	20	24	30	31	21	26	24	26	24	37
<b>All ages</b>	<b>327</b>	<b>359</b>	<b>343</b>	<b>329</b>	<b>343</b>	<b>355</b>	<b>337</b>	<b>329</b>	<b>319</b>	<b>311</b>	<b>329</b>	<b>328</b>	<b>296</b>	<b>294</b>	<b>265</b>	<b>220</b>	<b>267</b>	<b>262</b>	<b>227</b>	<b>238</b>	<b>212</b>
<b>Ages 20–69</b>	<b>218</b>	<b>230</b>	<b>242</b>	<b>210</b>	<b>222</b>	<b>231</b>	<b>246</b>	<b>208</b>	<b>184</b>	<b>197</b>	<b>216</b>	<b>207</b>	<b>172</b>	<b>169</b>	<b>154</b>	<b>124</b>	<b>156</b>	<b>152</b>	<b>131</b>	<b>141</b>	<b>118</b>

*Notes*

1. Deaths were derived by year of registration.
2. A comparability factor of 0.98 was applied to mortality data for years prior to 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 (i.e. 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 32: Age-specific and age-standardised death rates for cervical cancer, by age, 1984–2004**

Age group	Year																				
	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04
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	0.0	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
20–24	0.0	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
25–29	1.5	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
30–34	2.1	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
35–39	3.2	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
40–44	4.3	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
45–49	6.9	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	2.4
50–54	7.0	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
55–59	5.5	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
60–64	11.5	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
65–69	14.9	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
70–74	13.2	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
75–79	16.7	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	9.7	5.3
80–84	23.4	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	10.0
85+	24.7	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	13.6	12.2	18.3
<b>All ages</b>																					
AS rate (A)	4.7	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
AS rate (W)	3.6	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
<b>Ages 20–69</b>																					
AS rate (A)	4.9	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
AS rate (W)	4.5	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

Notes: Rates are expressed per 100,000 women and age-standardised to the Australian 2001 population (A) and the WHO World Standard Population (W).

Source: AIHW Mortality Database.

**Table 33: Deaths from cervical cancer, by age, states and territories, 1997–2000**

<b>Age group</b>	<b>NSW</b>	<b>Vic</b>	<b>Qld</b>	<b>WA</b>	<b>SA</b>	<b>Tas</b>	<b>ACT</b>	<b>NT</b>	<b>Australia</b>
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	5	2	1	0	1	0	14
30–34	7	5	5	8	3	1	0	0	29
35–39	21	12	10	6	2	3	0	2	56
40–44	26	14	14	7	0	1	3	2	67
45–49	33	22	17	9	10	0	3	2	96
50–54	34	12	18	5	4	3	2	1	79
55–59	26	12	18	9	3	2	1	1	72
60–64	25	19	23	8	5	8	0	1	89
65–69	37	14	16	12	9	4	4	0	96
70–74	45	36	21	14	8	4	1	2	131
75–75	39	28	18	7	9	4	2	2	109
80–84	34	27	12	12	7	2	0	1	95
85+	42	24	16	17	5	3	1	0	108
<b>All ages</b>	<b>372</b>	<b>231</b>	<b>194</b>	<b>116</b>	<b>66</b>	<b>35</b>	<b>18</b>	<b>14</b>	<b>1,046</b>
<b>Ages 20–69</b>	<b>224</b>	<b>124</b>	<b>118</b>	<b>68</b>	<b>35</b>	<b>26</b>	<b>16</b>	<b>11</b>	<b>603</b>

*Notes*

1. Numbers were averaged over four 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 34: Age-specific and age-standardised death rates for cervical cancer, by age, states and territories, 1997–2000**

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
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	0.9	0.7	0.5	0.0	1.9	0.0	0.5
30–34	0.7	0.7	1.0	2.9	1.4	1.5	0.0	0.0	1.0
35–39	2.1	1.6	1.8	2.0	0.9	4.0	0.0	6.2	1.9
40–44	2.7	2.0	2.7	2.4	0.0	1.4	6.0	7.1	2.4
45–49	3.8	3.4	3.5	3.4	4.7	0.0	6.1	8.2	3.6
50–54	4.3	2.1	4.2	2.3	2.1	5.1	4.8	5.4	3.4
55–59	4.3	2.7	5.5	5.4	2.0	4.3	3.7	8.7	4.0
60–64	4.7	4.9	8.7	5.8	3.9	19.7	0.0	14.2	5.9
65–69	7.5	3.9	6.7	9.9	7.3	10.7	25.0	0.0	6.9
70–74	9.5	10.4	9.5	12.8	6.5	11.4	6.8	61.4	9.9
75–75	10.0	9.9	9.8	7.9	8.6	13.3	16.9	92.6	10.0
80–84	12.9	14.3	9.7	20.1	10.0	9.6	0.0	75.6	12.9
85+	18.5	14.0	15.1	30.8	7.9	17.5	17.9	0.0	16.7
<b>All ages</b>									
AS rate (A)	2.7	2.3	2.9	3.3	1.9	3.4	3.3	8.8	2.7
95% CI	2.5–3.0	2.0–2.6	2.5–3.3	2.7–3.9	1.5–2.4	2.4–4.8	1.9–5.3	4.0–15.9	2.5–2.8
AS rate (W)	2.1	1.7	2.2	2.4	1.5	2.7	2.6	6.1	2.0
95% CI	1.8–2.3	1.5–1.9	1.9–2.6	2.0–2.9	1.1–1.9	1.8–3.7	1.5–4.1	3.0–10.6	1.9–2.2
<b>Ages 20–69</b>									
AS rate (A)	2.7	2.0	3.0	3.0	1.9	3.6	3.8	4.7	2.6
95% CI	2.3–3.0	1.6–2.4	2.5–3.6	2.3–3.8	1.3–2.6	2.3–5.4	2.0–6.4	2.0–9.1	2.4–2.8
AS rate (W)	2.4	1.8	2.8	2.8	1.7	3.3	3.4	4.4	2.4
95% CI	2.1–2.8	1.5–2.2	2.3–3.3	2.1–3.5	1.2–2.4	2.1–5.0	1.8–5.8	1.8–8.4	2.2–2.6

*Notes*

1. The age-standardised rates were averaged over four 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 expressed per 100,000 women and age-standardised to the Australian 2001 population (A) and the WHO World Standard Population (W).

Source: AIHW Mortality Database.

**Table 35: Deaths from cervical cancer, by age, states and territories, 2001–2004**

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
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	2	0	0	0	0	0	0	0	2
25–29	1	1	3	3	1	2	0	1	12
30–34	11	4	11	8	1	0	2	0	37
35–39	14	9	9	2	2	3	2	1	42
40–44	21	8	17	3	5	2	0	1	57
45–49	23	15	13	8	12	4	1	1	77
50–54	27	16	12	12	9	5	0	4	85
55–59	30	15	13	6	6	4	1	0	75
60–64	33	18	14	6	7	1	1	0	80
65–69	25	18	12	9	8	1	1	1	75
70–74	31	19	21	10	3	2	0	0	86
75–79	28	29	20	9	9	4	2	0	101
80–84	33	26	18	14	3	3	0	1	98
85+	35	28	14	15	15	4	0	0	111
<b>All ages</b>	<b>314</b>	<b>206</b>	<b>177</b>	<b>106</b>	<b>81</b>	<b>35</b>	<b>10</b>	<b>10</b>	<b>939</b>
<b>Ages 20–69</b>	<b>187</b>	<b>104</b>	<b>104</b>	<b>57</b>	<b>51</b>	<b>22</b>	<b>8</b>	<b>9</b>	<b>542</b>

*Notes*

1. Numbers were averaged over four 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 36: Age-specific and age-standardised death rates for cervical cancer, by age, states and territories, 2001–2004**

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
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	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
25–29	0.1	0.1	0.6	1.1	0.5	3.6	0.0	2.9	0.4
30–34	1.1	0.5	1.9	2.7	0.5	0.0	3.8	0.0	1.2
35–39	1.4	1.2	1.6	0.7	0.9	4.4	4.0	3.1	1.4
40–44	2.1	1.1	2.9	1.0	2.1	2.7	0.0	3.3	1.9
45–49	2.5	2.2	2.5	2.8	5.4	5.7	2.0	3.8	2.7
50–54	3.1	2.5	2.4	4.6	4.2	7.6	0.0	17.6	3.2
55–59	4.1	2.8	3.1	2.9	3.3	7.0	2.8	0.0	3.4
60–64	5.7	4.2	4.4	3.7	5.0	2.2	4.2	0.0	4.7
65–69	5.0	4.9	4.7	6.8	6.5	2.6	5.5	17.8	5.2
70–74	6.6	5.6	9.1	8.7	2.6	5.7	0.0	0.0	6.5
75–75	6.7	9.4	9.9	9.2	8.1	12.9	14.7	0.0	8.5
80–84	10.7	11.7	12.2	19.7	3.6	12.8	0.0	57.0	11.3
85+	12.9	13.9	10.9	22.7	20.2	19.4	0.0	0.0	14.4
<b>All ages</b>									
AS rate (A)	2.1	1.9	2.3	2.7	2.2	3.3	1.6	3.7	2.2
95% CI	1.9–2.4	1.6–2.1	2.0–2.7	2.2–3.2	1.8–2.8	2.3–4.6	0.8–3.0	1.5–7.4	2.0–2.3
AS rate (W)	1.6	1.4	1.8	2.0	1.7	2.6	1.4	2.9	1.7
95% CI	1.4–1.8	1.2–1.6	1.5–2.0	1.6–2.4	1.3–2.2	1.7–3.6	0.7–2.5	1.3–5.5	1.5–1.8
<b>Ages 20–69</b>									
AS rate (A)	2.2	1.6	2.2	2.3	2.5	3.6	2.0	4.4	2.1
95% CI	1.9–2.5	1.3–2.0	1.8–2.6	1.8–3.0	1.9–3.3	2.2–5.4	0.8–3.9	1.8–8.6	1.9–2.3
AS rate (W)	2.0	1.5	2.0	2.2	2.3	3.3	1.9	4.0	2.0
95% CI	1.7–2.3	1.2–1.8	1.7–2.5	1.6–2.8	1.7–3.0	2.1–5.1	0.8–3.8	1.7–7.7	1.8–2.1

*Notes*

1. The age-standardised rates were averaged over four 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 expressed per 100,000 women and age-standardised to the Australian 2001 population (A) and the WHO World Standard Population (W).

Source: AIHW Mortality Database.

## Indicator 6.2: Mortality by location

Table 37: Deaths from cervical cancer, by age and location, 1997–2000 and 2001–2004

Age group	Major cities		Regional		Remote		Australia	
	1997–2000	2001–2004	1997–2000	2001–2004	1997–2000	2001–2004	1997–2000	2001–2004
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	0	2	2	0	0	5	2
25–29	7	6	6	5	0	1	14	12
30–34	19	26	6	9	3	2	29	37
35–39	32	25	22	16	1	1	56	42
40–44	43	30	21	23	4	4	67	57
45–49	71	46	20	30	3	0	96	77
50–54	51	53	26	29	1	2	79	85
55–59	44	47	24	28	4	0	72	75
60–64	53	44	34	35	3	1	89	80
65–69	64	46	28	27	4	2	96	75
70–74	78	57	48	27	3	2	131	86
75–79	71	61	35	35	3	3	109	101
80–84	65	63	25	34	4	1	95	98
85+	71	83	36	25	1	3	108	111
<b>All ages</b>	<b>672</b>	<b>589</b>	<b>332</b>	<b>324</b>	<b>35</b>	<b>23</b>	<b>1,046</b>	<b>939</b>
<b>Ages 20–69</b>	<b>387</b>	<b>324</b>	<b>189</b>	<b>203</b>	<b>23</b>	<b>13</b>	<b>603</b>	<b>542</b>

### Notes

1. Deaths were derived from place of usual residence and by year of registration.
2. The number of deaths is presented as four-year rolling blocks of data.
3. In 1997–2000 and 2001–2004 there were 6 and 3 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 38: Age-specific and age-standardised death rates for cervical cancer, by age and location, 1997–2000 and 2001–2004**

Age group	Major cities		Regional		Remote		Australia	
	1997–2000	2001–2004	1997–2000	2001–2004	1997–2000	2001–2004	1997–2000	2001–2004
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	0.0	0.3	0.3	0.0	0.0	0.2	0.1
25–29	0.3	0.3	0.7	0.7	0.5	1.2	0.5	0.4
30–34	1.0	1.3	0.8	1.1	4.1	2.1	1.0	1.2
35–39	1.6	1.3	2.3	1.8	1.3	1.5	1.9	1.4
40–44	2.3	1.5	2.3	2.4	5.1	6.0	2.4	1.9
45–49	4.0	2.5	2.5	3.4	5.2	0.7	3.6	2.7
50–54	3.3	3.0	3.7	3.5	2.6	4.0	3.4	3.2
55–59	3.8	3.3	4.0	3.9	11.9	0.0	4.0	3.4
60–64	5.4	4.0	6.6	5.9	9.0	1.9	5.9	4.7
65–69	7.1	5.0	6.1	5.4	15.7	8.2	6.9	5.2
70–74	8.9	6.6	11.1	6.1	18.3	9.0	9.9	6.5
75–79	9.6	7.8	10.2	9.3	23.4	21.4	10.0	8.5
80–84	13.2	10.8	10.6	12.3	46.2	14.5	12.9	11.3
85+	16.0	15.9	18.0	10.4	18.5	32.2	16.7	14.4
<b>All ages</b>								
AS rate (A)	2.6	2.1	2.7	2.4	5.2	3.1	2.7	2.2
95% CI	2.4–2.8	1.9–2.2	2.4–3.0	2.1–2.7	3.5–7.2	1.9–4.6	2.5–2.8	2.0–2.3
AS rate (W)	1.9	1.5	2.0	1.9	3.9	2.2	2.0	1.7
95% CI	1.8–2.1	1.4–1.7	1.8–2.3	1.6–2.1	2.6–5.3	1.4–3.3	1.9–2.2	1.5–1.8
<b>Ages 20–69</b>								
AS rate (A)	2.5	1.9	2.5	2.5	4.6	2.4	2.6	2.1
95% CI	2.2–2.8	1.7–2.1	2.2–2.9	2.2–2.9	2.9–6.9	1.2–4.0	2.4–2.8	1.9–2.3
AS rate (W)	2.3	1.8	2.4	2.3	4.3	2.2	2.4	2.0
95% CI	2.1–2.5	1.6–2.0	2.0–2.7	2.0–2.7	2.7–6.4	1.1–3.7	2.2–2.6	1.8–2.1

*Notes*

1. The age-standardised rates are presented as four-year rolling blocks of data.
2. Deaths were derived from place of usual residence and by year of registration.
3. Rates are expressed per 100,000 women and age-standardised to the Australian 2001 population (A) and the WHO World Standard Population (W).

Source: AIHW Mortality Database.

## Indicator 6.3: Mortality by Indigenous status

Table 39: Number of deaths and age-specific and age-standardised death rates for cervical cancer, by age and Indigenous status (Queensland, Western Australia, South Australia and Northern Territory), 2001–2004

Age group	Indigenous Australians		Other Australians	
	Number	Rate	Number	Rate
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	0.0
20–24	0	0.0	0	0.1
25–29	0	0.0	8	0.0
30–34	3	6.4	17	0.8
35–39	1	2.5	13	1.6
40–44	7	21.0	19	1.2
45–49	3	11.6	31	1.7
50–54	3	14.8	34	3.0
55–59	1	7.3	24	3.5
60–64	2	19.3	25	3.0
65–69	2	28.4	28	4.0
70–74	2	41.7	32	5.5
75+	3	48.9	115	6.9
<b>All ages</b>	<b>27</b>	<b>..</b>	<b>347</b>	<b>..</b>
AS rate (A)	..	10.5	..	2.3
95% CI	..	6.3–16.0	..	2.0–2.5
AS rate (W)	..	7.9	..	1.7
95% CI	..	5.0–11.7	..	1.5–1.9
<b>Ages 20–69</b>	<b>22</b>	<b>..</b>	<b>199</b>	<b>..</b>
AS rate (A)	..	9.9	..	2.1
95% CI	..	6.0–15.3	..	1.9–2.5
AS rate (W)	..	9.1	..	2.0
95% CI	..	5.5–13.9	..	1.7–2.3

.. Not applicable.

### Notes

1. Deaths were derived by state and year of registration.
2. The number of deaths is presented as a four-year rolling 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.

Source: AIHW Mortality Database.

# Appendixes

## 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 cells in the cervical canal (adenocarcinoma). Over two-thirds of cervical cancers are squamous cell carcinomas, which are most easily detected on the Pap smear, 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. These early changes can be detected by a Pap smear (described in more detail below), and if they are promptly treated, cervical cancer can be prevented. The National Health and Medical Research Council recently approved a revised classification system of the Australian Modified Bethesda System (2004) which will be used to classify data collected from July 2006 onwards; however, the data in this report have been collated using the previous classification system in which these pre-cancerous lesions have two levels of severity – low-grade epithelial abnormalities and high-grade epithelial abnormalities. An earlier classification described various grades of cervical intraepithelial neoplasia (CIN). Low-grade abnormalities include minor changes in squamous cells and CIN 1, and high-grade abnormalities include CIN 2, CIN 3, squamous carcinoma in situ, adenocarcinoma in situ and invasive carcinoma (squamous or adenocarcinoma).

The Pap smear 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 scraping the surface of the cervix. This process collects cells that are transferred onto a slide or into a special liquid, which is then sent to a pathology laboratory for assessment. Pap smears 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 smear shows an abnormality, the woman may be advised to have a repeat smear if the abnormality is low grade or she may be advised to have a colposcopy. 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.

Pre-cancerous changes can be easily and effectively treated to prevent the progression to cervical cancer. The type of treatment depends on whether the change observed is low or

high grade, 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.

## 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 Australian Bureau of Statistics estimated resident female population has been used to calculate incidence and mortality rates. Participation rates were calculated using the average of the estimated resident female population for the two-year reporting period. 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 has been adjusted by the estimated proportion of women who have had a hysterectomy by age. These data were derived from the 2001 National Health Survey, and are tabled in Appendix D.

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

### Indigenous mortality data

Due to the difficulties of Indigenous identification, mortality data used in Indicator 6.3 are based on deaths in Queensland, Western Australia, South Australia and the Northern Territory only.

## 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, the Australian Capital Territory and 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 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.

<b>States and territories</b>	<b>Date registry commenced</b>
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

## 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 death 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:

$$\begin{aligned} \text{Age-specific} \\ \text{cervical cancer} \\ \text{incidence rate in} \\ \text{females aged 50-54} \\ \text{years in 2002} &= \frac{\text{New cases aged 50 – 54 years (year 2002)}}{\text{2002 female population aged 50 – 54 years}} \times 100,000 \\ &= \frac{78}{650,212} \times 100,000 \\ &= 12.0 \text{ per } 100,000 \end{aligned}$$

### 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 Australian 2001 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 five-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 one 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<sup>(a)</sup> and WHO World Standard Population<sup>(b)</sup>

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

*Sources*

(a) ABS 2002.

(b) Ahmad et al. 2002.

**Table D2: Hysterectomy fractions for women aged 15–80+ years, 2001**

<b>Age group</b>	<b>% of women who have not had a hysterectomy</b>
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
<b>Total</b>	<b>85.5</b>

Source: ABS 2002.

## Appendix E: Tables published on the Internet

### Indicator 1: Participation

- Table 1: Proportion of women participating in the National Cervical Screening Program, by age, 1996–1997 to 2004–2005
- Table 2: Proportion of women participating in the National Cervical Screening Program, by age, states and territories, 1996–1997 to 2004–2005
- Table 3: Number of women participating in the National Cervical Screening Program, by age, states and territories, 2004–2005
- Table 4: Proportion of women participating in the National Cervical Screening Program, by age, states and territories, 2004–2005
- Table 5: Number of women participating in the National Cervical Screening Program, by age, states and territories, 2003–2004
- Table 6: Proportion of women participating in the National Cervical Screening Program, by age, states and territories, 2003–2004
- Table 7: Number of women participating in the National Cervical Screening Program, by age, states and territories, 2002–2003
- Table 8: Proportion of women participating in the National Cervical Screening Program, by age, states and territories, 2002–2003
- Table 9: Number of women participating in the National Cervical Screening Program, by age, states and territories, 2001–2002
- Table 10: Proportion of women participating in the National Cervical Screening Program, by age, states and territories, 2001–2002
- Table 11: Number of women participating in the National Cervical Screening Program, by age, states and territories, 2000–2001
- Table 12: Proportion of women participating in the National Cervical Screening Program, by age, states and territories, 2000–2001
- Table 13: Number of women participating in the National Cervical Screening Program, by age, states and territories, 1999–2000
- Table 14: Proportion of women participating in the National Cervical Screening Program, by age, states and territories, 1999–2000
- Table 15: Number of women participating in the National Cervical Screening Program, by age, states and territories, 1998–1999
- Table 16: Proportion of women participating in the National Cervical Screening Program, by age, states and territories, 1998–1999
- Table 17: Number of women participating in the National Cervical Screening Program, by age, states and territories, 1997–1998
- Table 18: Proportion of women participating in the National Cervical Screening Program, by age, states and territories, 1997–1998
- Table 19: Number of women participating in the National Cervical Screening Program, by age, states and territories, 1996–1997

Table 20: Proportion of women participating in the National Cervical Screening Program, by age, states and territories, 1996-1997

## **Indicator 2: Early re-screening**

Table 21: Number of women with repeat screenings following a normal Pap smear in Australian cohorts from 1996 to 2004

Table 22: Percentage of women with repeat screenings following a normal Pap smear in Australian cohorts from 1996 to 2004

Table 23: Number of women with repeat screenings in the 21 months following a normal Pap smear in the 2004 cohort, by states and territories and Australia

Table 24: Percentage of women with repeat screenings in the 21 months following a normal Pap smear in the 2004 cohort, by states and territories and Australia

Table 25: Number of women with repeat screenings in the 21 months following a normal Pap smear in the 2003 cohort, by states and territories and Australia

Table 26: Percentage of women with repeat screenings in the 21 months following a normal Pap smear in the 2003 cohort, by states and territories and Australia

Table 27: Number of women with repeat screenings in the 21 months following a normal Pap smear in the 2002 cohort, by states and territories and Australia

Table 28: Percentage of women with repeat screenings in the 21 months following a normal Pap smear in the 2002 cohort, by states and territories and Australia

Table 29: Number of women with repeat screenings in the 21 months following a normal Pap smear in the 2001 cohort, by states and territories and Australia

Table 30: Percentage of women with repeat screenings in the 21 months following a normal Pap smear in the 2001 cohort, by states and territories and Australia

Table 31: Number of women with repeat screenings in the 21 months following a normal Pap smear in the 2000 cohort, by states and territories and Australia

Table 32: Percentage of women with repeat screenings in the 21 months following a normal Pap smear in the 2000 cohort, by states and territories and Australia

Table 33: Number of women with repeat screenings in the 21 months following a normal Pap smear in the 1999 cohort, by states and territories and Australia

Table 34: Percentage of women with repeat screenings in the 21 months following a normal Pap smear in the 1999 cohort, by states and territories and Australia

Table 35: Number of women with repeat screenings in the 24 months following a normal Pap smear in the 1998 cohort, by states and territories and Australia

Table 36: Percentage of women with repeat screenings in the 24 months following a normal Pap smear in the 1998 cohort, by states and territories and Australia

Table 37: Number of women with repeat screenings in the 24 months following a normal Pap smear in the 1997 cohort, by states and territories and Australia

Table 38: Percentage of women with repeat screenings in the 24 months following a normal Pap smear in the 1997 cohort, by states and territories and Australia

Table 39: Number of women with repeat screenings in the 24 months following a normal Pap smear in the 1996 cohort, by states and territories and Australia

Table 40: Percentage of women with repeat screenings in the 24 months following a normal Pap smear in the 1996 cohort, by states and territories and Australia

### **Indicator 3: Low-grade abnormality detection**

Table 41: Number of low- and high-grade abnormalities on histology for women aged 20–69 years, 1997–2005

Table 42: Number of low- and high-grade abnormalities on histology for women aged 20–69 years, states and territories, 2005

Table 43: Number of low- and high-grade abnormalities on histology for women aged 20–69 years, states and territories, 2004

Table 44: Number of low- and high-grade abnormalities on histology for women aged 20–69 years, states and territories, 2003

Table 45: Number of low- and high-grade abnormalities on histology for women aged 20–69 years, states and territories, 2002

Table 46: Number of low- and high-grade abnormalities on histology for women aged 20–69 years, states and territories, 2001

Table 47: Number of low- and high-grade abnormalities on histology for women aged 20–69 years, states and territories, 2000

Table 48: Number of low- and high-grade abnormalities on histology for women aged 20–69 years, states and territories, 1999

Table 49: Number of low- and high-grade abnormalities on histology for women aged 20–69 years, states and territories, 1998

Table 50: Number of low- and high-grade abnormalities on histology for women aged 20–69 years, states and territories, 1997

### **Indicator 4: High-grade abnormality detection**

Table 51: Rate of histologically confirmed high-grade abnormalities per 1,000 women screened, in Australia by age, 1997–2005

Table 52: Rate of histologically confirmed high-grade abnormalities per 1,000 women screened, by age, states and territories, 2005

Table 53: Rate of histologically confirmed high-grade abnormalities per 1,000 women screened, by age, states and territories, 2004

Table 54: Rate of histologically confirmed high-grade abnormalities per 1,000 women screened, by age, states and territories, 2003

Table 55: Rate of histologically confirmed high-grade abnormalities per 1,000 women screened, by age, states and territories, 2002

Table 56: Rate of histologically confirmed high-grade abnormalities per 1,000 women screened, by age, states and territories, 2001

Table 57: Rate of histologically confirmed high-grade abnormalities per 1,000 women screened, by age, states and territories, 2000

Table 58: Rate of histologically confirmed high-grade abnormalities per 1,000 women screened, by age, states and territories, 1999

- Table 59: Rate of histologically confirmed high-grade abnormalities per 1,000 women screened, by age, states and territories, 1998
- Table 60: Rate of histologically confirmed high-grade abnormalities per 1,000 women screened, by age, states and territories, 1997
- Table 61: Number of histologically confirmed high-grade abnormalities in Australia by age, 1997–2005
- Table 62: Number of histologically confirmed high-grade abnormalities by age, states and territories, 2005
- Table 63: Number of histologically confirmed high-grade abnormalities by age, states and territories, 2004
- Table 64: Number of histologically confirmed high-grade abnormalities by age, states and territories, 2003
- Table 65: Number of histologically confirmed high-grade abnormalities by age, states and territories, 2002
- Table 66: Number of histologically confirmed high-grade abnormalities by age, states and territories, 2001
- Table 67: Number of histologically confirmed high-grade abnormalities by age, states and territories, 2000
- Table 68: Number of histologically confirmed high-grade abnormalities by age, states and territories, 1999
- Table 69: Number of histologically confirmed high-grade abnormalities by age, states and territories, 1998
- Table 70: Number of histologically confirmed high-grade abnormalities by age, states and territories, 1997
- Table 71: Number of women screened, by age, 1997–2005
- Table 72: Number of women screened, by age, states and territories, 2005
- Table 73: Number of women screened, by age, states and territories, 2004
- Table 74: Number of women screened, by age, states and territories, 2003
- Table 75: Number of women screened, by age, states and territories, 2002
- Table 76: Number of women screened, by age, states and territories, 2001
- Table 77: Number of women screened, by age, states and territories, 2000
- Table 78: Number of women screened, by age, states and territories, 1999
- Table 79: Number of women screened, by age, states and territories, 1998
- Table 80: Number of women screened, by age, states and territories, 1997

## Appendix F: National Cervical Screening Programs contact list

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## Appendix G: Pre-2006 NHMRC guidelines for the management of women with screen-detected abnormalities

This reference sheet is a summary of the 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 smear reports. (Information on the new NHMRC guidelines can be found on page 85.)

Low-grade epithelial abnormalities		
Pap smear report	Investigation	Management
Non-specific minor squamous cell changes/atypia		Repeat smear at 12-monthly intervals until it reverts to normal.
Minor changes in endocervical cells/ low-grade glandular change	Repeat smear 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 smear at 6-monthly intervals. If HPV-associated cell changes persist after 12 months, refer for colposcopy.	If HPV confirmed, continue with 6-monthly smears until two negative reports are received. Repeat smear annually for 2 years then revert to 2-yearly screening.
Possible CIN 1 ± HPV/possible mild dysplasia	Repeat smear 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 smear 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 (SCC) 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, e.g. epithelial atrophy or infection. In this case, treat the problem and repeat the smear.	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 smears should be taken at 6-monthly intervals until the abnormality either regresses or progresses. After two negative smears at 6-monthly intervals, smears should be taken at yearly intervals. If two consecutive annual smears are normal the woman can revert to 2-yearly screening.

#### Active management

Treatment by an accepted method, either ablative or excisional.

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

<b>Post-treatment assessment</b>	After initial post-treatment colposcopic assessment by gynaecologist, repeat smear at 6-monthly intervals for 1 year. Following treatment of a high-grade epithelial abnormality, smears should be repeated yearly thereafter. Following treatment for a low-grade epithelial abnormality, revert to normal 2-yearly screening after two consecutive normal smears at yearly intervals.
<b>Special circumstances</b>	
Total hysterectomy for CIN	Annual smears from vaginal vault for 5 years; then revert to 2-yearly smears.
Total hysterectomy for benign causes	No further smears required if previous smears were negative. Baseline smear if reason for hysterectomy and/or previous Pap smear history unknown.
Subtotal hysterectomy for benign causes—cervix present	Continue normal 2-yearly screening.
Abnormality during pregnancy	Refer for colposcopy during 1st 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 2004–2005 are based on the NHMRC guidelines which were in place to 2005. 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 (NCSP 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 with one of the over 100 known types of HPV. These HPV viruses are classified according to their status as low or high risk of progression to cancer; only four types have been associated with cervical cancer in Australia. Recent work in molecular biology and epidemiology suggests most HPV infections acquired by women resolve without medical intervention (NCSP 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 smears 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; and
- the use of HPV testing as test of cure following treatment for high-grade abnormalities (CIN 2 and 3) (Professor Ian Hammond, 14 March 2005).

These guidelines are based on revised terminology which will be used for the classification of cervical cytology reporting, the AMBS 2004. The AMBS 2004 classification system will be used to classify data collected for *Cervical screening in Australia 2005–2006*.

Further information on the new guidelines can be found on the Australian Government Department of Health and Ageing website <[www.cervicalscreen.health.gov.au](http://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](http://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.

**Adjuvant:** enhancing or administered to enhance the effectiveness of a treatment or substance.

**AS rate:** age-standardised rate. A method of removing the influence of age when comparing populations with different 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.

**Basement membrane:** the delicate, non-cellular layer on which an epithelium is seated. The epithelium forms the surface portion of the skin and lines hollow organs and all passages of the respiratory, digestive and genito-urinary systems.

**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.

**CIN (cervical intraepithelial neoplasia):** 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 I (mild dysplasia), CIN II (moderate dysplasia) and CIN 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.

**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 (e.g. 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 smear test.

**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.

**HPV:** 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 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 (of an illness or event, and so forth) 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.

**LGA:** 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 smear:** 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.

**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. Eighty–eighty-five per cent of cancers of the cervix arise from squamous cells. Abnormalities associated with squamous cells are most likely abnormalities to be picked up by Pap smears (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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