

Cancer Series
Number 24

Cervical Screening in Australia 2000–2001 and 1999–2000

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

Australian Institute of Health and Welfare
Canberra

AIHW cat. no. CAN 19

© Australian Institute of Health and Welfare 2003

This work is copyright. Apart from any use as permitted under the *Copyright Act 1968*, no part may be reproduced without prior written permission from the Australian Institute of Health and Welfare. Requests and enquiries concerning reproduction and rights should be directed to the Head, Media and Publishing Unit, Australian Institute of Health and Welfare, GPO Box 570, Canberra ACT 2601.

This publication is part of the Australian Institute of Health and Welfare's Cancer Series. A complete list of the Institute's publications is available from the Media and Publishing Unit, Australian Institute of Health and Welfare, GPO Box 570, Canberra ACT 2601, or via the Institute's web site (<http://www.aihw.gov.au>).

ISSN 1039-3307

ISBN 1 74024 332 3

Suggested citation

Australian Institute of Health and Welfare (AIHW) 2003. Cervical screening in Australia 2000–2001 and 1999–2000. AIHW Cat. No.19. Canberra: AIHW (Cancer Series number 24).

Australian Institute of Health and Welfare

Board Chair
Dr Sandra Hacker

Director
Dr Richard Madden

Any enquiries about or comments on this publication should be directed to:

Dr Chris Stevenson
Australian Institute of Health and Welfare
GPO Box 570
Canberra ACT 2601

Phone: (02) 6244 1041

Published by Australian Institute of Health and Welfare.

Printed by Union Offset Printers

Contents

Part 1 – Cervical Screening in Australia 2000-2001 1

Part 2 – Cervical Screening in Australia 1999-2000 83

Part 3 – Appendixes, glossary and references 169

Part 1—Cervical Screening in Australia 2000–2001

Part 1: Contents

- List of tables 4
- List of figures 6
- Acknowledgments..... 7
- Summary 8
- National cervical screening monitoring indicators..... 11
- Participation 15
 - Indicator 1: Participation rate for cervical screening..... 17
- Early re-screening 20
 - Indicator 2: Early re-screening..... 21
- Low-grade abnormalities 23
 - Indicator 3: Low-grade abnormality detection..... 24
- High-grade abnormalities 25
 - Indicator 4: High-grade abnormality detection 26
- Incidence 29
 - Indicator 5: Incidence of micro-invasive cervical cancer 30
 - Indicator 6: Incidence of squamous, adenocarcinoma, adeno-squamous and other
cervical cancers 32
 - Indicator 8: Incidence by location 36
- Mortality 39
 - Indicator 7: Mortality 40
 - Indicator 9: Mortality by location..... 43
 - Indicator 10: Indigenous mortality..... 45
- Tables 47

List of tables

Table 1:	Structure of the Rural, Remote and Metropolitan Areas classification.....	13
Table 1a:	Number of women participating in the National Cervical Screening Program by age, states and territories, 1999–2000.....	47
Table 1b:	Proportion of women participating in the National Cervical Screening Program by age, states and territories, 1999–2000.....	48
Table 2a:	Number of women participating in the National Cervical Screening Program by age, states and territories, 2000–2001.....	49
Table 2b:	Proportion of women participating in the National Cervical Screening Program by age, states and territories, 2000–2001.....	50
Table 3:	Number of women with repeat screenings in the 21 months following a negative Pap smear in February 2000, states and territories, 1999–2000 and 2000–2001.....	51
Table 4:	Percentage of women with repeat screenings in the 21 months following a negative Pap smear in February 2000, states and territories, 1999–2000 and 2000–2001.....	51
Table 5a:	Number of low- and high-grade abnormalities on histology for women aged 20–69 years, states and territories, 2000.....	52
Table 5b:	Number of low- and high-grade abnormalities on histology for women aged 20–69 years, states and territories, 2001.....	52
Table 6a:	Rate of histologically confirmed high-grade abnormalities per 1,000 women screened, states and territories, 2000.....	53
Table 6b:	Rate of histologically confirmed high-grade abnormalities per 1,000 women screened by age, states and territories, 2001.....	54
Table 7a:	Number of histologically confirmed high-grade abnormalities by age, states and territories, 2000.....	55
Table 7b:	Number of histologically confirmed high-grade abnormalities by age, states and territories, 2001.....	56
Table 8a:	Number of women screened by age, states and territories, 2000.....	57
Table 8b:	Number of women screened by age, states and territories, 2001.....	58
Table 9a:	Age-standardised high-grade abnormality rate on histology per 1,000 women screened aged 20–69 years, states and territories, 2000.....	59
Table 9b:	Age-standardised high-grade abnormality rate on histology per 1,000 women screened aged 20–69 years, states and territories, 2001.....	59
Table 10:	New cases of micro-invasive cervical cancer by age, Australia, 1989–2000.....	60
Table 11:	Age-specific and age-standardised rates of micro-invasive cervical cancer by age, Australia, 1989–2000.....	61
Table 12:	New cases of cervical cancer by age, Australia, 1989–2000.....	62
Table 13:	Age-specific and age-standardised incidence rates of cervical cancer by age, Australia, 1989–2000.....	63

Table 14a:	New cases of cervical cancer by age, states and territories, 1996–1999	64
Table 14b:	Age-specific rates of cervical cancer, states and territories, 1996–1999	65
Table 15a:	Number of new cases of cervical cancer by age, states and territories, 1997–2000	66
Table 15b:	Age-specific rates of cervical cancer, states and territories, 1997–2000	67
Table 16a:	New cases of cervical cancer by histological type for women aged 20–69 years, Australia, 1989–2000.....	68
Table 16b:	Age-standardised incidence rates for cervical cancer by histological type for women aged 20–69 years, Australia, 1989–2000.....	68
Table 17a:	New cases of cervical cancer by histological type for women, all ages, Australia, 1989–2000	69
Table 17b:	Age-standardised incidence rates for cervical cancer by histological type for women, all ages, Australia, 1989–2000.....	69
Table 18:	New cases of cervical cancer by age and location, 1993–1996 and 1997–2000	70
Table 19:	Age-specific and age-standardised incidence rates for cervical cancer by age and location, 1993–1996 and 1997–2000.....	71
Table 20:	Deaths from cervical cancer by age, Australia, 1982–2001.....	72
Table 21:	Age-specific and age-standardised death rates for cervical cancer by age, Australia, 1982–2001	73
Table 22:	Deaths from cervical cancer by age, states and territories, 1994–1997	74
Table 23:	Age-specific and age-standardised death rates for cervical cancer by age, states and territories, 1994–1997.....	75
Table 24:	Deaths from cervical cancer by age, states and territories, 1998–2001	76
Table 25:	Age-specific and age-standardised death rates for cervical cancer by age, states and territories, 1998–2001.....	77
Table 26:	Deaths from cervical cancer by age and location, 1994–1997 and 1998–2001.....	78
Table 27:	Age-specific and age-standardised death rates for cervical cancer by age and location, 1994–1997 and 1998–2001	79
Table 28:	Deaths from cervical cancer by age and Indigenous status, Queensland, South Australia, Western Australia and Northern Territory, 1996–1999, 1997–2000 and 1998–2001.....	80
Table 29:	Age-specific and age-standardised death rates for cervical cancer by age and Indigenous status, Queensland, South Australia, Western Australia and Northern Territory, 1996–1999, 1997–2000 and 1998–2001.....	81

List of figures

- Figure 1: Participation rates in the National Cervical Screening Program by age group, Australia, 1999–2000 and 2000–2001..... 17
- Figure 2: Participation (age-standardised) in the National Cervical Screening Program by women aged 20–69 years, states and territories, 1999–2000 and 2000–2001..... 19
- Figure 3: Proportion of women re-screened by number of screens during the 21-month period following a negative Pap smear in February 2000, Australia 21
- Figure 4: Proportion of women re-screened by number of screens during the 21-month period following a negative smear in February 2000, states and territories..... 22
- Figure 5: Ratio of low- to high-grade abnormalities by women aged 20–69 years, states and territories, 2000 and 2001..... 24
- Figure 6: High-grade abnormalities per 1,000 women by age group, Australia, 2000 and 2001..... 26
- Figure 7: Age-standardised rate of high-grade abnormalities per 1,000 women screened aged 20–69 years, states and territories, 2000 and 2001 28
- Figure 8: Age-standardised incidence rates for micro-invasive squamous cell cancer, women aged 20–69 years, Australia, 1989–2000..... 30
- Figure 9: Age-specific incidence rates of micro-invasive squamous cell cancer, women aged 20–69 years, Australia, 1999 and 2000 31
- Figure 10: Age-standardised incidence rates of cervical cancer, Australia, 1989–2000..... 32
- Figure 11: Age-specific incidence rates of cervical cancer, Australia, 1999 and 2000 33
- Figure 12: Age-standardised cervical cancer incidence rates by women aged 20–69 years, states and territories, 1996–1999 and 1997–2000 34
- Figure 13: Age-standardised incidence rates of cervical cancer by histological type, women aged 20–69 years, Australia, 1989–2000 35
- Figure 14: Age-standardised incidence rates of cervical cancer by location by women aged 20–69 years, Australia, 1993–1996 and 1997–2000..... 36
- Figure 15: Age-standardised death rates from cervical cancer, Australia, 1982–2001..... 40
- Figure 16: Age-specific cervical cancer death rates by age group, Australia, 1988–1991 and 1998–2001..... 41
- Figure 17: Age-standardised cervical cancer death rates by women aged 20–69 years, states and territories, 1994–1997 and 1998–2001..... 42
- Figure 18: Age-standardised cervical cancer death rates by location, women aged 20–69 years, 1994–1997 and 1998–2001 43
- Figure 19: Age-standardised cervical cancer mortality rates by Indigenous status, women aged 20–69 years (Qld, SA, SA and NT), 1996–1999, 1997–2000 and 1998–2001..... 45

Acknowledgments

Financial support by the Australian Government Department of Health and Ageing and assistance of the Cancer Screening Section in the department are gratefully acknowledged. The authors of this report are Ms Janet Markey, Dr Chris Stevenson and Mr John Harding from the Australian Institute of Health and Welfare. The authors wish to extend their gratitude to those people working in the National Cervical Screening Program who provided data and comments for this report. The authors also acknowledge the input of the members of the National Advisory Committee to the National Cervical Screening Program, and the Australasian Association of Cancer Registries. The support received during the production of this report from the staff at the AIHW Health Registers and Cancer Monitoring Unit is gratefully acknowledged.

National Cervical Screening Program

New South Wales

Ms Jayne Ross
Mr Hassan Mamoon
Ms Liz Martin

Victoria

Dr Heather Mitchell
Ms Cathy Burrows
Mr Rory Wilby

Queensland

Ms Jennifer Muller
Mr Stephen Heim
Mr Nathan Dunn

Western Australia

Ms Nerida Steel

South Australia

Ms Sue Gilchrist
Ms Penny Iosifidis

Tasmania

Ms Valerie Gardner
Mr Paul Chandler

Australian Capital Territory

Ms Helen Sutherland
Mr Peter Couvee
Ms Coral Swan

Northern Territory

Ms Karen Finch
Ms Sarah Steele

Australian Government Department of Health and Ageing, Cancer Screening Section

Ms Andriana Koukari
Ms Liz Pugh

Summary

This report is the fifth national report on the performance of the National Cervical Screening Program in Australia. Cervical screening services are provided as part of mainstream health services with general practitioners performing approximately 80% of Pap smears. The program is funded by Medicare, the Australian Government, and the state and territory governments.

There is a set of performance monitoring indicators agreed to by the National Advisory Committee to the program. This report presents statistics on the monitoring undertaken. The main features of the report are summarised below.

Participation

- The total number of women who participated in cervical screening in 2000–2001 was 3,314,787 of whom 3,244,329 (98%) were in the screening program target age group of 20–69 years. This represented an increase of 16,621 in the number of women screened in 1999–2000.
- Between the periods 1999–2000 and 2000–2001 the proportion of women in the target population (women aged 20–69 years) participating in cervical screening declined from 62.6% to 61.8%.
- Participation in screening declined in all 5-year age groups within the target population between 1999–2000 and 2000–2001 except for the youngest (20–24) and oldest (65–69) age groups which each showed a slight increase. The largest decline was in women in their thirties – decreasing from 67.0% to 64.9% for women aged 30–34 years and from 68.7% to 67.1% for women aged 35–39 years.

Early re-screening

- The recommended screening interval is 2 years following a negative smear. Of a cohort of women screened in February 2000 who had a negative Pap smear result, 32% screened again within 21 months. It is not known what proportion of this early re-screening is justified on clinical grounds.

Detection of abnormalities

- A low-grade abnormality includes atypia, warty atypia, possible cervical intraepithelial neoplasia (CIN), equivocal CIN, and CIN 1, and a high-grade abnormality is defined to include CIN 1/2, CIN 2 and CIN 3 or adenocarcinoma in situ. The ratio of histologically confirmed low-grade abnormalities to high-grade abnormalities was 1.3 for Australia in 2001, the same as in 2000. The 2001 ratio did not include data for the Northern Territory.
- In 2001, the National Cervical Screening Program detected 13,555 women in the target age group 20–69 years with high-grade abnormalities. The number of high-grade abnormalities was highest in the younger age groups. For women under 35 years of age, the rate of high-grade abnormalities was over 10 per 1,000 women screened whereas it was less than 2 per 1,000 women aged 50 years and over.

Incidence and mortality

- The number of new cases of cervical cancer in Australia has continued to decline. There were 745 new cases in Australia in 2000 compared with 1,072 detected in 1989.
- Cervical cancer is the 15th most common cause of cancer mortality in women, accounting for 262 deaths in 2001. Although there was some fluctuation from year to year, the age-standardised mortality rate from cervical cancer declined. For all women aged 20 years and over there was a decline of 5.9 per 100,000 women in 1982 to 2.8 per 100,000 in 2001. During the same period, for women in the target age group of 20–69 years the rate declined from 5.1 per 100,000 to 2.4 per 100,000. The mortality rate also declined for women aged 70 years and over from 2.7 per 100,000 in 1982 to 1.1 per 100,000 in 2001.
- Women in the target age group from remote locations experienced a relatively high mortality rate from cervical cancer – 3.0 deaths per 100,000 compared with 2.3 deaths per 100,000 women in metropolitan areas. However, between the periods 1994–1997 and 1998–2001, the age-standardised cervical cancer mortality rate declined in all regions (metropolitan, rural and remote).
- Prior to 1998, only Western Australia, South Australia and the Northern Territory had Indigenous mortality registration data of sufficient quality to be publishable. In 1998, Queensland's coverage of Indigenous deaths reached an acceptable level to be included in the analysis of Indigenous mortality data. For these jurisdictions, in the period 1998–2001 there were 20 deaths from cervical cancer among Indigenous women in the target age group (an age-standardised mortality rate of 11.4 per 100,000 women). This is more than four times the corresponding rate in non-Indigenous women (2.5 per 100,000). Compared with the 1996–1999 mortality rate for Indigenous women in the target age group, which was 9.8 per 100,000, there was an increase in mortality in the 1998–2001 period. However, these rates are based on relatively small numbers of cases and may be subject to large variability. Despite the relatively large size of the apparent increase in the rate, it is still within the range of variation that would be expected due to chance.

National cervical screening monitoring indicators

This report monitors the performance of the National Cervical Screening Program using 10 indicators which measure program activity, performance and outcome. They help measure changes in disease patterns and examine the contribution health interventions may have in preventing or reducing deaths. They can also be used to help evaluate screening or other health interventions.

Screening 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 have been endorsed by the National Advisory Committee and state and territory cervical screening programs. Indicators are reviewed annually and, in this report, definitions of Indicators 2 and 5 have been changed compared with the definitions used in previous reports.

A listing of the 10 indicators and their definitions follows. The target age group for the National Cervical Screening Program is 20 to 69 years.

Indicator 1: Participation rate for cervical screening

Percentage of women screened in a 24-month period by 5-year age groups (20–24, 25–29, 30–34, 35–39, 40–44, 45–49, 50–54, 55–59, 60–64, 65–69), for all ages (20–80+) and the target age group (20–69 years).

Indicator 2: Early re-screening

Proportion of women re-screened by number of re-screens during a 21-month period following a negative 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 by 5-year age groups (20–24, 25–29, 30–34, 35–39, 40–44, 45–49, 50–54, 55–59, 60–64, 65–69, 70–74, 75–79, 80–84, 85+) and for the target age group (20–69 years, age-standardised).

Indicator 5: 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 by 5-year age groups (20–24, 25–29, 30–34, 35–39, 40–44, 45–49, 50–54, 55–59, 60–64, 65–69, 70–74, 75–79, 80–84, 85+) and for the target age group (20–69 years, age-standardised).

Indicator 6: Incidence of squamous, adenocarcinoma, adeno-squamous and other cervical cancer

Incidence rate of squamous, adenocarcinoma, adeno-squamous and other cervical cancers per 100,000 estimated resident female population in a 12-month period by 5-year age groups (20–24, 25–29, 30–34, 35–39, 40–44, 45–49, 50–54, 55–59, 60–64, 65–69, 70–74, 75–79, 80–84, 85+) and for the target age group (20–69 years, age-standardised).

Indicator 7: Mortality

Death rate from cervical cancer per 100,000 estimated resident female population in a 12-month period by 5-year age groups (20–24, 25–29, 30–34, 35–39, 40–44, 45–49, 50–54, 55–59, 60–64, 65–69, 70–74, 75–79, 80–84, 85+) and for the target age group (20–69 years, age-standardised).

Periodic indicators

Periodic indicators have been developed to report on issues that are of importance in monitoring the outcomes of the cervical screening program over a longer period of time than 1 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 4 years.

Periodic incidence and mortality indicators by location

Indicator 8: Incidence by location

Incidence rate of cervical cancer per 100,000 estimated resident female population in a 4-year period by location and 5-year age groups (20–24, 25–29, 30–34, 35–39, 40–44, 45–49, 50–54, 55–59, 60–64, 65–69, 70–74, 75–79, 80–84, 85+) and for the target age group (20–69 years, age-standardised).

Indicator 9: Mortality by location

Death rate from cervical cancer per 100,000 estimated resident female population in a 4-year period by location and 5-year age groups (20–24, 25–29, 30–34, 35–39, 40–44, 45–49, 50–54, 55–59, 60–64, 65–69, 70–74, 75–79, 80–84, 85+) and for the target age group (20–69 years, age-standardised).

Postcode and statistical local area information for incidence and mortality are routinely collected at the point of diagnosis or death. These data have been classified using the Rural, Remote and Metropolitan Areas classification (RRMA). This classification was developed in 1994 by the then Department of Primary Industries and Energy and the then Department of Human Services and Health as a framework by which various data sources could be analysed for metropolitan, rural and remote zones. The RRMA groups are classified according to Statistical Local Area based on the Australian Standard Geographical Classification (ASGC) version 2.1 (DPIE & DSHS 1994). Concordance algorithms have been developed to convert statistical local area information coded according to earlier and later ASGC versions into rural, remote and metropolitan area groupings.

Table 1: Structure of the Rural, Remote and Metropolitan Areas classification

Zone	Category
Metropolitan zone	Capital cities
	Other metropolitan areas (urban centre population > 100,000)
Rural zone	Large rural centres (urban centre population 25,000–99,999)
	Small rural centres (urban centre population 10,000–24,999)
	Other rural areas (urban centre population < 10,000)
Remote zone	Remote centres (urban centre population > 5,000)
	Other remote area (urban centre population < 5,000)

Source: DPIE & DSHS 1994.

Indicator 10: Indigenous mortality

Death rate from cervical cancer per 100,000 estimated resident female population in a 4-year period by Indigenous status and 5-year age groups (20–24, 25–29, 30–34, 35–39, 40–44, 45–49, 50–54, 55–59, 60–64, 65–69, 70–74, 75–79, 80–84, 85+) and for the target age group (20–69 years, age-standardised).

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 collections, and cervical screening data are no exception. Of the seven cervical screening indicators, only one indicator can be stratified by Indigenous status: mortality.

Even for this, coverage is not complete. Only Western Australia, South Australia, the Northern Territory and Queensland 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 non-Indigenous women, a 95% confidence interval is presented with the rates. This is because the observed value of a rate may vary due to chance even where there is no variation in the underlying value of the rate. The 95% confidence interval represents a range over which variation in the observed rate is consistent with this chance variation. These confidence intervals can be used as an approximate test of whether changes in a particular rate are consistent with chance variation. Where the confidence intervals do not overlap, the change in a rate is greater than that which could be explained by chance. Where the intervals do overlap, then changes in the rate may be taken as approximately consistent with variability due to chance.

For example, the participation rate for Victoria in 1999–2000 was 66.2% with a confidence interval of 66.1% to 66.3%. The corresponding rate for 2000–2001 was 65.3% with a confidence interval of 65.2% to 65.4%. These two intervals do not overlap, so the difference between the 1999–2000 and 2000–2001 rates is larger than we would expect due to chance alone.

Another example is the comparison between cervical cancer mortality rates for women living in rural and remote areas. In the period 1997–2000 there were 2.4 cervical cancer deaths per 100,000 women living in rural areas. This rate had a confidence interval of 2.1 to 2.8. The corresponding rate for women in remote areas was 3.7 per 100,000, with a confidence interval of 2.2 to 5.4. 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, which leads to small numbers of deaths from any specific cause, and these death rates may fluctuate 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 this result 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 differentiate between a real difference and one which is due to chance variation.

Participation

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. In addition, increased participation will lead to the detection of more women with early stages of cancer where treatment can reduce mortality.

The program, through a variety of recruitment initiatives, actively targets 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 2 years. Pap smears may cease at the age of 70 years for women who have had two normal Pap smears within the previous 5 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;
- those who have never been sexually active;
- women with a previously diagnosed gynaecological cancer.

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.

State and territory programs have strategic plans in place to increase participation of women in cervical screening. Such strategies include targeting priority population groups including Indigenous women, rural and remote women, and women from culturally and linguistically diverse backgrounds.

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 2-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 recruitment practices, 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.

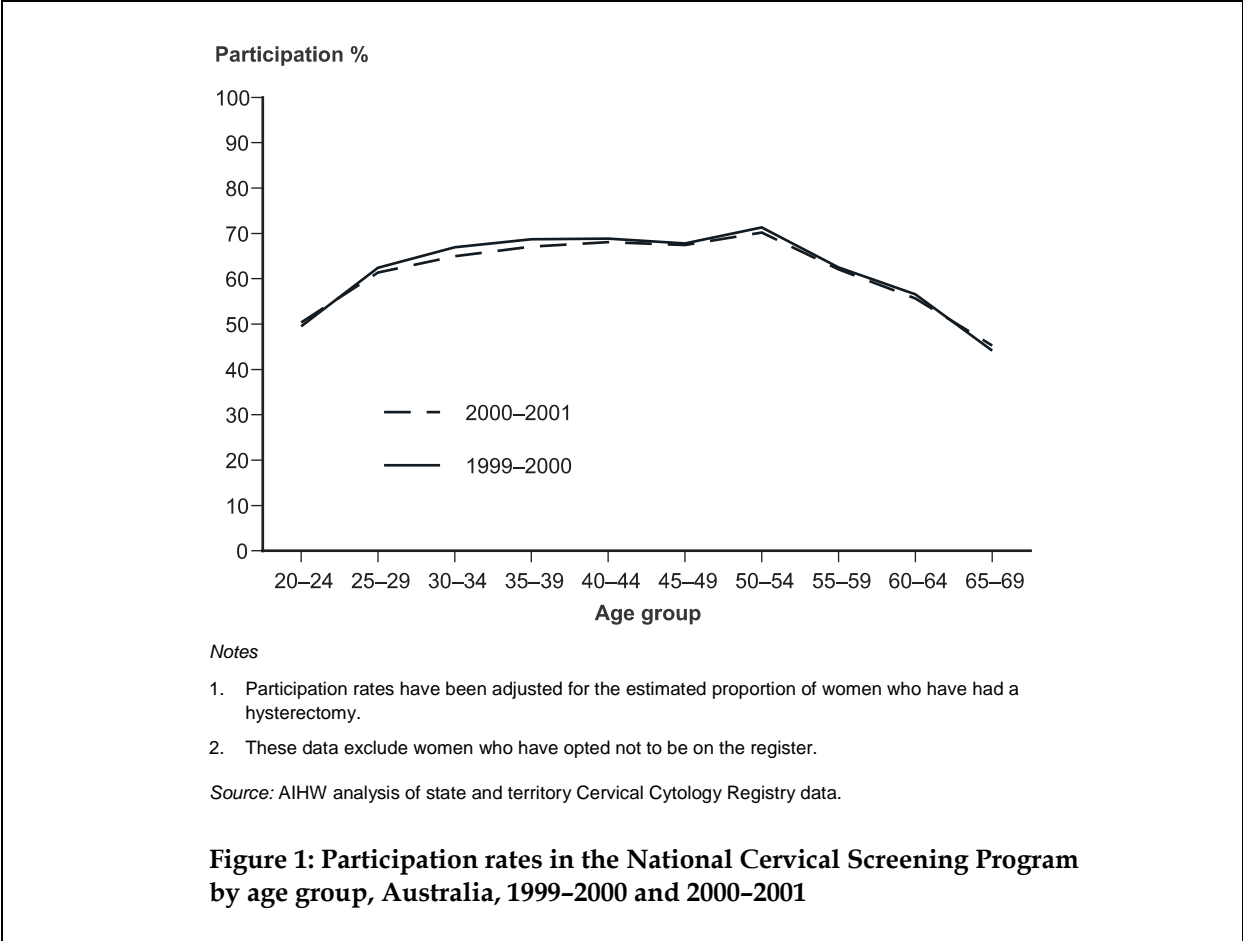
State and territory-specific issues

- Except for Victoria, Western Australia and the Australian Capital Territory, the participation rates are based on all women who were screened in a state or territory. This may lead to a small error in the estimation of numbers of women screened because of double counting of some women between states, difficulty in identifying state of residence for women in border areas, and inclusion of women resident overseas.
- Victorian rates for the two periods are not comparable because data provided for the 1999–2000 period include non-resident women; in the 2000–2001 period women were excluded if they were not Victorian residents.

Indicator 1: Participation rate for cervical screening

Percentage of women screened in a 24-month period by 5-year age groups (20–24, 25–29, 30–34, 35–39, 40–44, 45–49, 50–54, 55–59, 60–64, 65–69, 70–74, 75–79, 80–84, 85+) and for the target age group (20–69 years).

The graphs and tables below refer to the data for the target age group only. For detailed data refer to Tables 1b and 2b (pages 48 and 50).

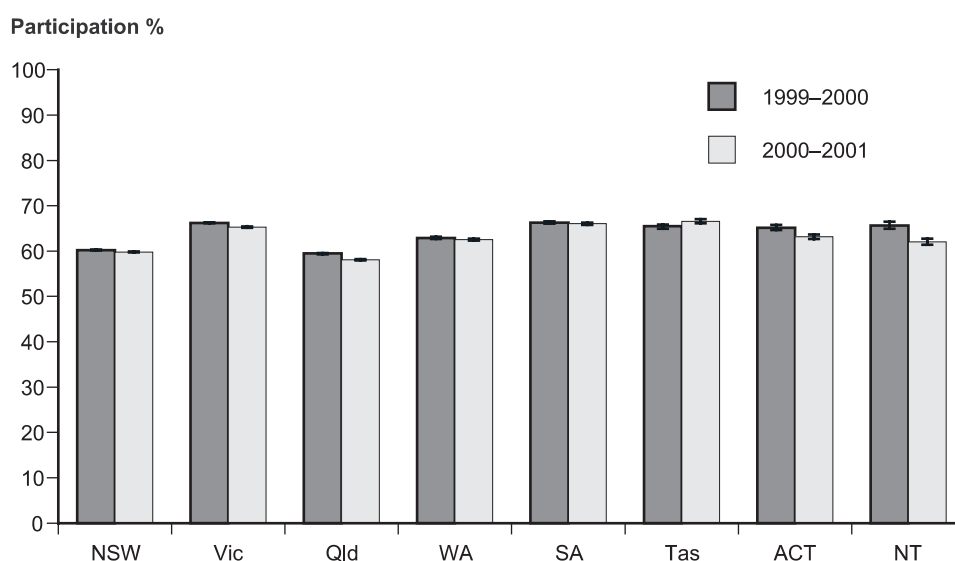


2-year period	Age group										20–69
	20–24	25–29	30–34	35–39	40–44	45–49	50–54	55–59	60–64	65–69	
	(Per cent)										
1999–2000	49.5	62.4	67.0	68.7	68.8	67.8	71.3	62.5	56.5	44.2	62.6
2000–2001	50.3	61.4	64.9	67.1	68.1	67.4	70.2	62.1	55.7	45.3	61.8

Note: Queensland data for the 1999–2000 period refer to the 2-year period from March 1999 to February 2001.

- The proportion of women in the target age group (20–69 years) participating in cervical screening fell from 62.6% in 1999–2000 to 61.8% in 2000–2001, a decline that is statistically significant (Table 2b, page 50).

- The total number of women screened by the National Cervical Screening Program in 2000–2001 was 3,331,408, an increase of 16,621 (0.5%) over the 1999–2000 reporting period for all ages. Of the total number screened in 2000–2001, 98% were from the target age group of 20–69 years (Table 2a, page 49).
- The age-specific participation rate was lower in 2000–2001 than in 1999–2000 in all age groups with the exception of the youngest and oldest age groups, 20–24 and 65–69 respectively (Tables 1b and 2b, pages 48 and 50).
- The age-specific participation rate was highest in the 50–54 age group with 70.2% of women screened compared with 45.3% in the 65–69 age group. As in the 1999–2000 reporting period, participation is highest in the age groups 35–39 to 50–54 but declines sharply thereafter as age increases (Tables 1b and 2b, pages 48 and 50).
- The age group with the largest difference in participation rates between the two periods was the 30–34 age group where the participation rate was 2.1 percentage points lower in 2000–2001 than in 1999–2000. Conversely, the age groups that experienced the least change in participation rates were the 45–49 and 55–59 age groups where there was only a difference of 0.4 percentage points in both groups (Tables 1a and 2a, pages 47 and 49).



Notes

1. Rates are expressed as the percentage of the eligible female population and age-standardised to the Australian 1991 population.
2. Queensland data for the 1999–2000 period refer to the 2-year period from March 1999 to February 2001.
3. Bars on graphs represent 95% confidence intervals.

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

Figure 2: Participation (age-standardised) in the National Cervical Screening Program by women aged 20–69 years, states and territories, 1999–2000 and 2000–2001

2-year period/ rate	NSW	Vic ^(b)	Qld ^(a)	WA ^(b)	SA	Tas	ACT ^(b)	NT	Australia
1999–2000									
AS rate	60.2	66.2	59.5	62.8	66.2	65.5	65.1	65.6	62.6
95% CI	60.1–60.3	66.1–66.3	59.3–59.6	62.6–63.1	66.0–66.5	65.0–65.9	64.6–65.7	64.9–66.4	62.5–62.6
2000–2001									
AS rate	59.8	65.3	58.1	62.5	66.0	66.6	63.2	62.1	61.8
95% CI	59.7–59.9	65.2–65.4	57.9–58.2	62.3–62.7	65.8–66.3	66.1–67.0	62.6–63.7	61.4–62.7	61.8–61.9

(a) Queensland data for the 1999–2000 period refer to the 2-year period from March 1999 to February 2001.

(b) The Vic, WA and ACT registries register women with only a Vic, WA or ACT address respectively.

- The age-standardised participation rate for women screened in the target age group of 20–69 years in 2000–2001 ranged from 58.1% in Queensland to a high of 66.6% in Tasmania (Table 2b, page 50).
- When compared with the 1999–2000 rates, the rates are lower in all jurisdictions except Tasmania where there was a statistically significant increase from 65.5% to 66.6% in 2000–2001 (Tables 1b and 2b, pages 48 and 50). The rise in Tasmania was due, at least partially, to a television advertising campaign.

Early re-screening

The National Cervical Screening Program seeks to maximise reductions in incidence and mortality for cervical cancer. The design of 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 in order 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 2 years.

This indicator is defined as the repeating of a Pap smear within 21 months of a negative smear report. Reasons for the choice of 21 months as the time line 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 2000 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;
- measures the compliance with the recommended screening interval following a negative smear; and
- is important in assessing screening coverage around the recommended interval, as significant differences may reduce program effectiveness.

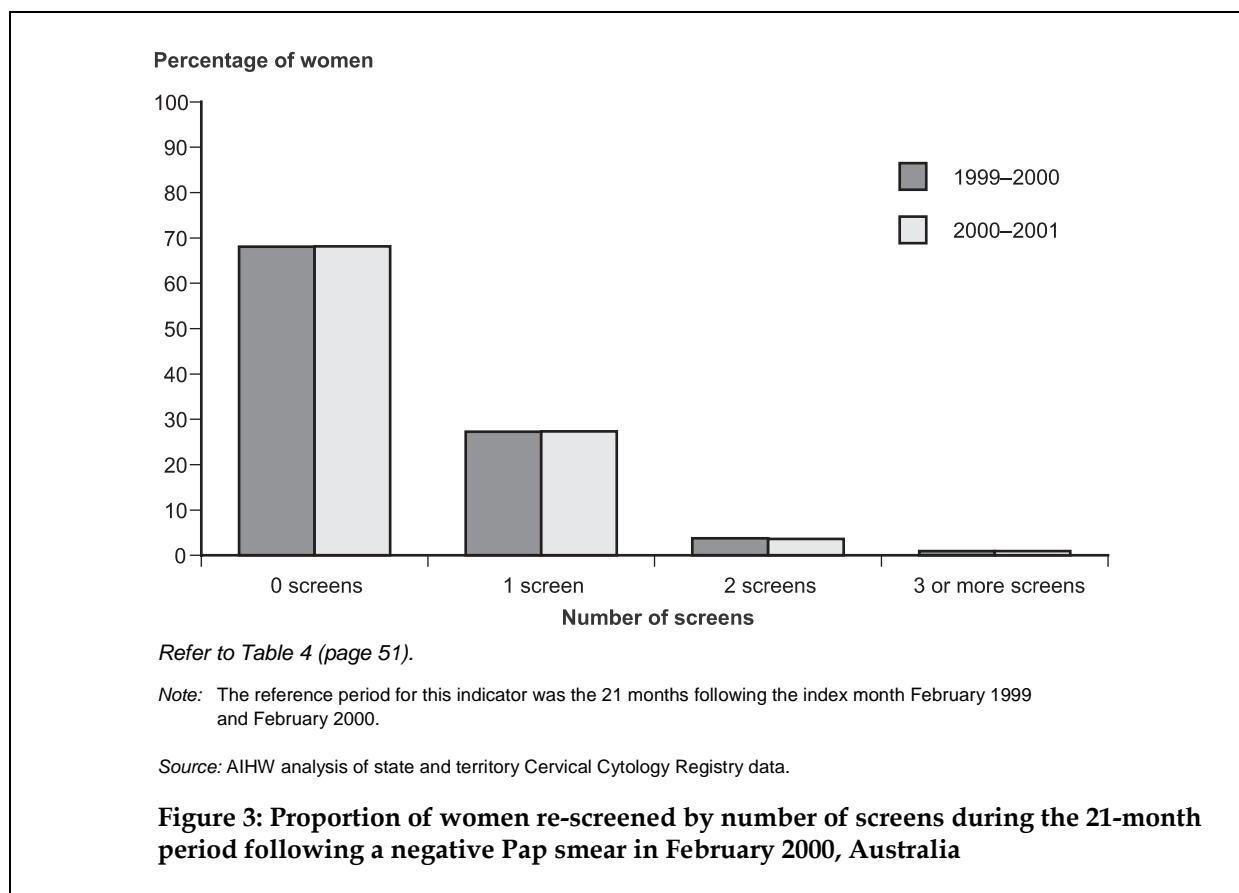
This indicator should be interpreted with caution as some early re-screening after a negative Pap smear report is appropriate and in accordance with the National Health and Medical Research Council (NHMRC) guidelines. Specifically, if a woman has a history of histologically proven high-grade abnormality, 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 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 has been made because women often have their Pap smear taken at a time convenient to them and are likely to have their biennial screening immediately before the 24-month anniversary. Also for some women, prescriptions for oral contraceptives lapse at 22 months and these women are then likely to combine their Pap smears with their visit to the GP for renewing their scripts for contraceptives.

Indicator 2: Early re-screening

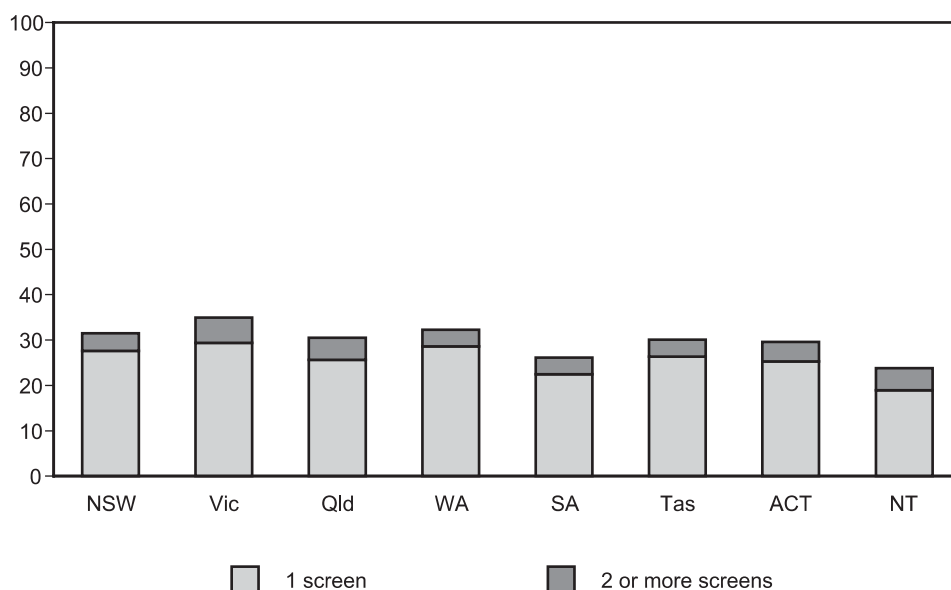
Proportion of women re-screened by number of re-screens during a 21-month period following a negative Pap smear.



21-month period	0 screens	1 screen	2 screens	3+ screens
	(Per cent)			
Feb 1999–Nov 2000	68.0	27.3	3.8	0.9
Feb 2000–Nov 2001	68.1	27.3	3.6	0.9

- A cohort of 168,640 women screened in February 2000 whose smear results were negative were tracked over a 21-month period to measure the extent of early re-screening. When compared with the February 1999 cohort, very little difference was observed in the rate of re-screening women with a negative smear (Tables 3 and 4, page 51).
- Of this cohort, 32% were re-screened (4.5% of these were re-screened more than once) and 68% did not have any further screens in the 21-month period tracked (Table 4, page 51).

Percentage of women



Refer to Table 4 (page 51).

Note: The reference period for this indicator was the 21 months following the index month February 2000.

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

Figure 4: Proportion of women re-screened by number of screens during the 21-month period following a negative smear in February 2000, states and territories

No. of screens	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
	(Per cent)								
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

- Of the cohort of women screened in February 2000, over 70% of women whose smear results were negative in the Northern Territory, South Australia and the Australian Capital Territory did not have any further screens during the follow-up 21-month period (Table 4, page 51).
- The proportion of women having additional screens varied among the states and territories. For example, the Northern Territory experienced the lowest proportion of re-screens (23.8%) and the highest proportion was in Victoria (35.0%).

Low-grade abnormalities

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 (the so-called high-grade abnormalities), and are therefore treated aggressively. The chance of low-grade abnormalities progressing to malignant change is very much less.

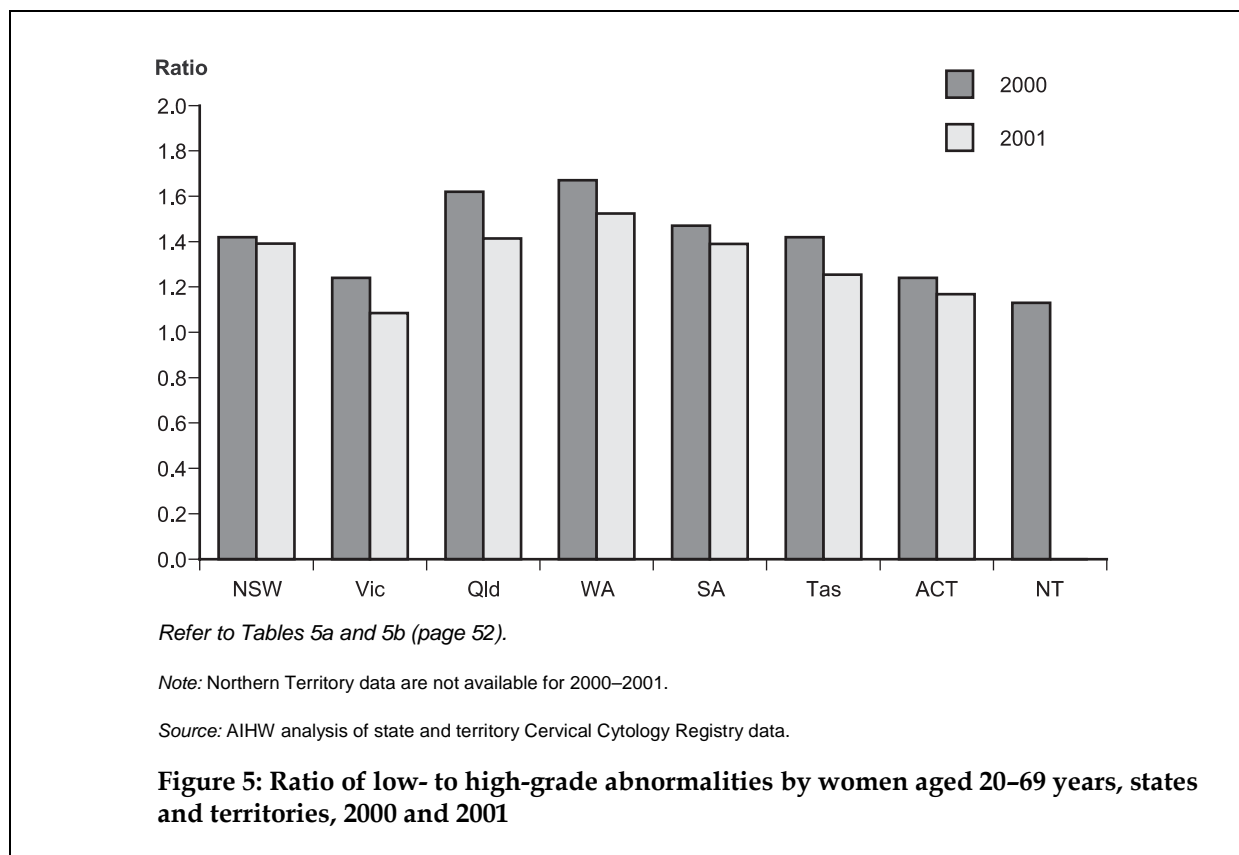
In this report a low-grade intraepithelial abnormality includes:

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

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

Indicator 3: Low-grade abnormality detection

Ratio of 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.



Year	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
	(Ratio)								
2000	1.4	1.2	1.6	1.7	1.5	1.4	1.2	1.1	1.4
2001	1.4	1.1	1.4	1.5	1.4	1.3	1.2	..	1.3

.. not available.

- In 2001, the ratio of histologically confirmed low-grade intraepithelial abnormalities to high-grade intraepithelial abnormalities was lower in all states and territories than in 2000. A comparison cannot be made for the Northern Territory because data for 2001 are unavailable. (When the Northern Territory data were excluded from the all-Australia 2000 data for comparison purposes, the 2000 national ratio increased from 1.4 to 1.5) (Tables 5a and 5b, page 52).
- The ratio of low-grade to high-grade abnormalities in 2001 ranged from 1.1 in Victoria to 1.5 in Western Australia.

High-grade abnormalities

High-grade lesions 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 community. 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 has produced guidelines to assist in the management of women who have low- and high-grade intraepithelial abnormalities (DHSH 1994b). These are summarised in Appendix F.

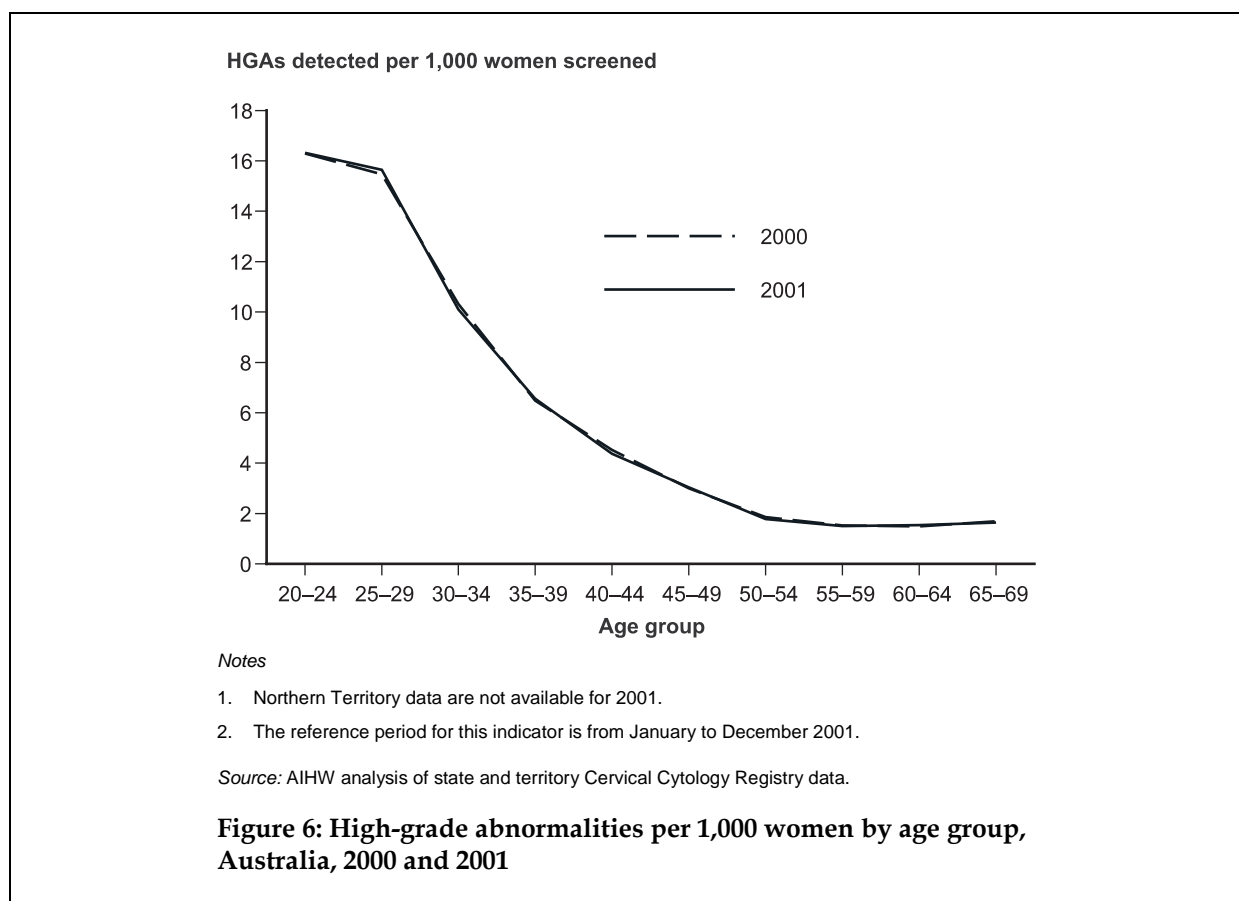
State- and territory-specific issues

- The reference period for Indicator 4 was 12 months from January to December 2001 for all states and territories.

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 5-year age groups (20–24, 25–29, 30–34, 35–39, 40–44, 45–49, 50–54, 55–59, 60–64, 65–69, 70–74, 75–79, 80–84, 85+) and for the target age group (20–69 years, age-standardised).

The graph and table below refer to the data for the target age group only. For detailed data refer to Tables 6a and 6b (pages 53 and 54).

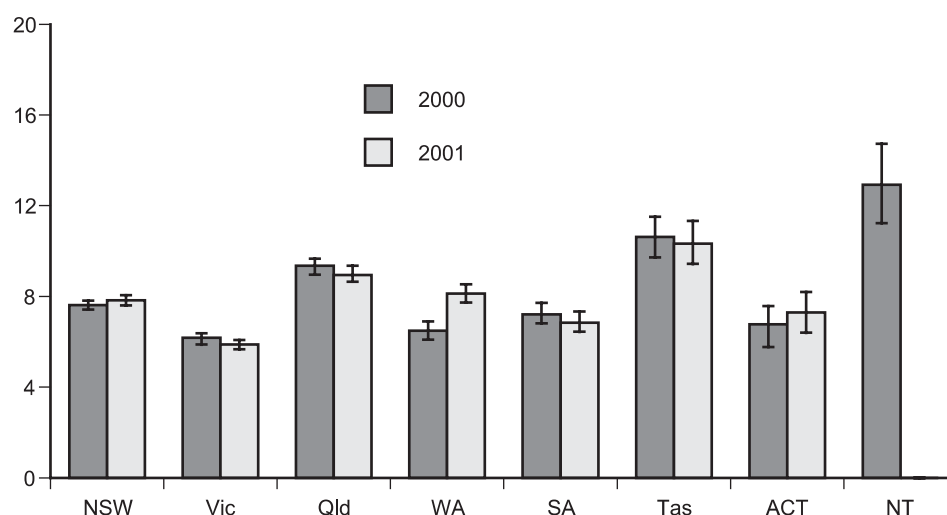


Year	Age group										
	20–24	25–29	30–34	35–39	40–44	45–49	50–54	55–59	60–64	65–69	20–69
	(Number per 1,000 women)										
2000	16.3	15.5	10.3	6.5	4.5	3.0	1.9	1.5	1.5	1.7	7.4
2001	16.3	15.6	10.1	6.6	4.4	3.0	1.8	1.5	1.5	1.6	7.3

Note: Northern Territory data are not available for 2001.

- The age-standardised rate of high-grade abnormalities per 1,000 women screened in the target age group (20–69 years) declined from 7.4 in 2000 to 7.3 in 2001 (Tables 6a and 6b, pages 53 and 54). Northern Territory data are not available for 2001. However, when the Northern Territory data are excluded from the 2000 national data there is no change to the all-Australia rate from 2000 to 2001.
- In 2001, approximately 0.7% of the 1,875,006 women screened in the target age group (20–69 years) were found to have high-grade abnormalities (Tables 7b and 8b, pages 56 and 58).

HGAs detected per 1,000 women screened



Refer to Tables 9a and 9b (page 59).

Notes

1. The reference period for this indicator is from January to December 2001.
2. Rates are standardised to the 1991 Australian total population.
3. Northern Territory data are not available for 2001.
4. Bars on graphs represent 95% confidence intervals.

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

Figure 7: Age-standardised rate of high-grade abnormalities per 1,000 women screened aged 20–69 years, states and territories, 2000 and 2001

AS rate	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
2000	7.6	6.2	9.4	6.5	7.2	10.6	6.8	12.9	7.5
95% CI	7.4–7.8	6.0–6.4	9.0–9.7	6.1–6.9	6.8–7.6	9.7–11.6	5.9–7.7	11.4–14.4	7.4–7.6
2001	7.8	5.9	8.9	8.1	6.8	10.3	7.3	..	7.5
95% CI	7.6–8.1	5.7–6.1	8.6–9.3	7.7–8.5	6.4–7.3	9.4–11.3	6.4–8.2	..	7.4–7.6

.. not available.

- In 2001 the age-standardised rate of high-grade abnormalities increased in New South Wales, Western Australia and the Australian Capital Territory and declined in all other jurisdictions – the all-Australia rate did not change between 2000 and 2001 (Tables 9a and 9b, page 59).
- In Western Australia the increase between the two reporting periods from 6.5 to 8.1 per 1,000 women screened is statistically significant (Tables 9a and 9b, page 59).
- There are considerable variations in the age-standardised rates of high-grade abnormalities between the states and territories. They ranged from 5.9 per 1,000 women in Victoria to 10.3 per 1,000 women in Tasmania.

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 alternative. 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).

Micro-invasive squamous cell carcinoma makes up the largest share of the micro-invasive cancers reported in Indicator 5. There are also other forms of micro-invasive cancers such as adenocarcinoma and adeno-squamous cell carcinoma for which data are not available for inclusion in this indicator.

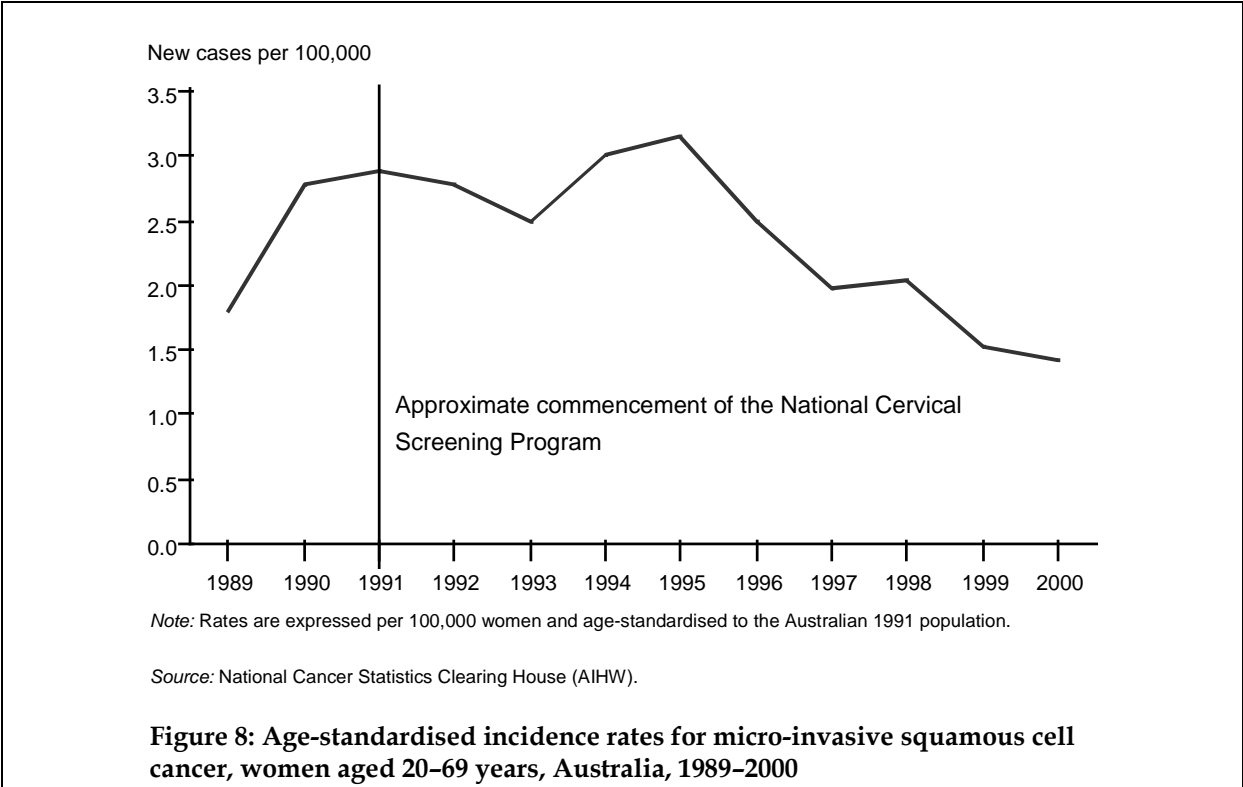
In interpreting cervical cancer incidence statistics, note that cervical screening has been available on an ad hoc basis since the 1960s, but it is only since the late 1980s and early 1990s that there has been an organised national approach to screening at a population level. The introduction of cervical 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, with the rate of more advanced cancers decreasing in the longer term.

For this report the most recent national data available on incidence are for 2000, in contrast to screening data which are available for 2001. This time lag in availability of incidence data is expected to reduce over the next 2 years.

Indicator 5: Incidence of micro-invasive cervical cancer

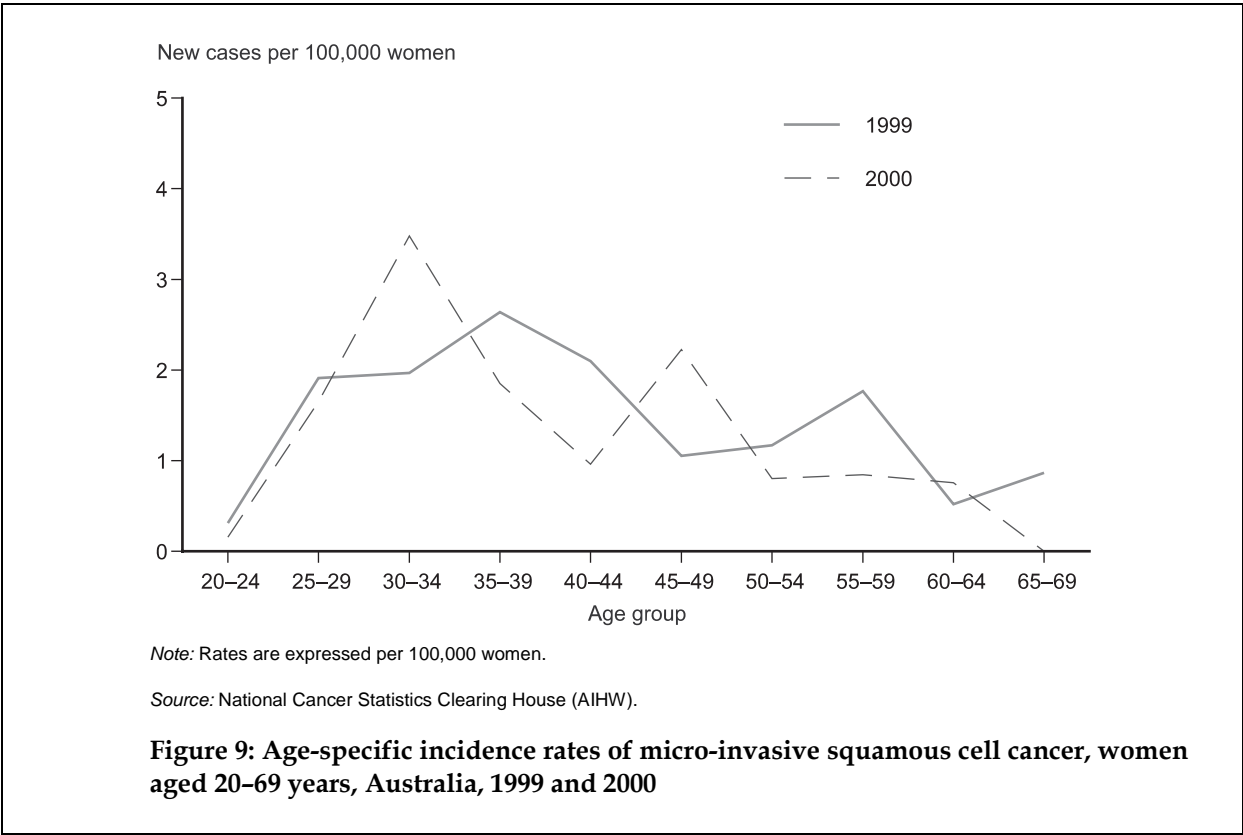
Incidence rates of micro-invasive squamous cell carcinoma per 100,000 estimated resident female population in a 12-month period by 5-year age groups (20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70-74, 75-79, 80-84, 85+) and for the target age group (20-69 years, age-standardised).

The graphs and tables below refer to the data for the target age group only. For detailed data refer to Table 11 (page 61).



	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
	(Number per 100,000 women)											
AS rate	1.8	2.8	2.9	2.8	2.5	3.0	3.1	2.5	2.0	2.0	1.5	1.4

- The age-standardised incidence rate of micro-invasive cervical cancer was 1.4 per 100,000 women in 2000 for women in the target age group of 20-69 years and 0.9 per 100,000 for women of all ages (Table 11, page 61). The rates have been declining rapidly since 1995.
- In 2000 there were 89 new cases of micro-invasive cervical cancers for all women and 86 new cases in women aged 20-69 years (Table 10, page 60).



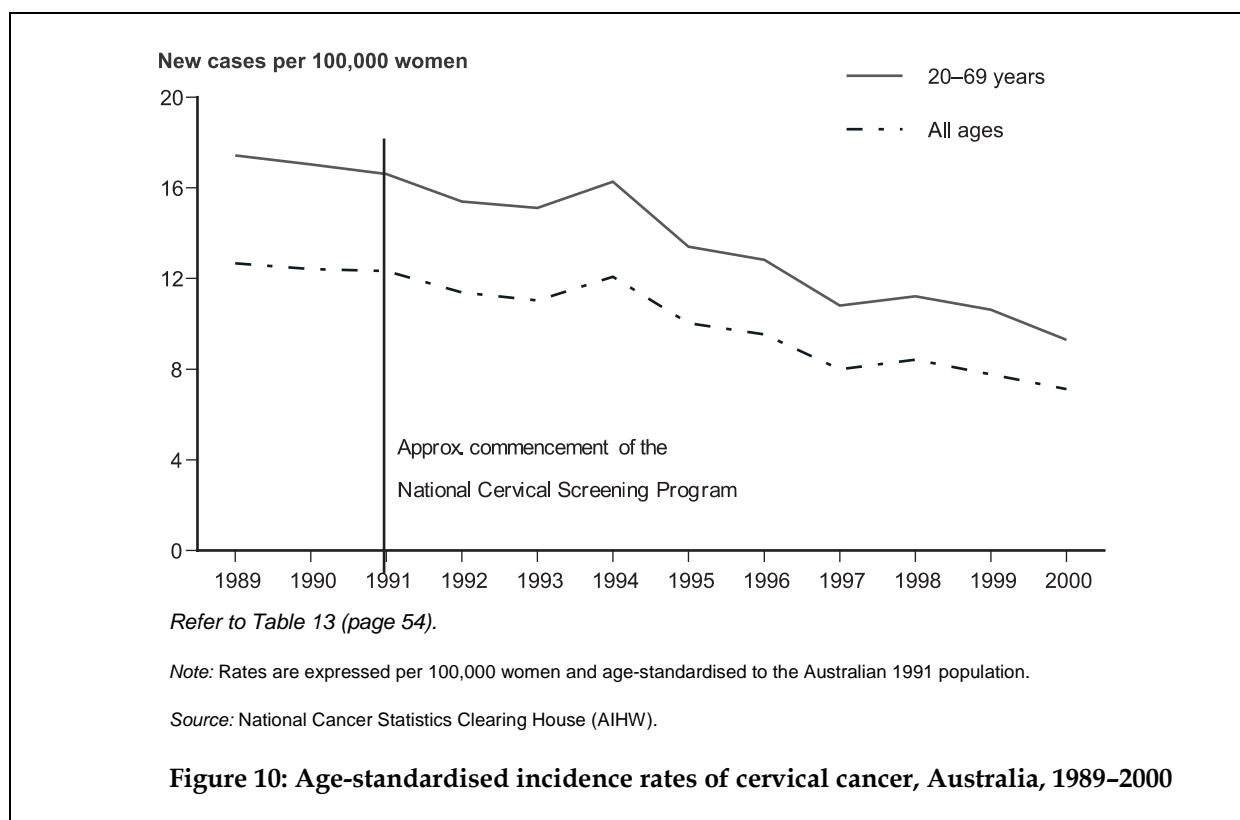
Year	Age group											20-69*
	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69		
1999	0.3	1.9	2.0	2.6	2.1	1.1	1.2	1.8	0.5	0.9	1.5 (1.2-1.8)	
2000	0.2	1.7	3.5	1.9	1.0	2.2	0.8	0.8	0.8	0.0	1.4 (1.1-1.7)	

*Age-standardised rates (standardised to the Australian 1991 population) with 95% confidence intervals.

- The age-standardised incidence rate of micro-invasive squamous cell cancer was 1.4 per 100,000 women aged 20-69 years in 2000; this was statistically no different from the 1.5 per 100,000 in 1999. Hence none of the differences between 1999 and 2000 for any 5-year age group can be regarded as significant (Tables 10 and 11, pages 60 and 61).
- The highest detection rates for micro-invasive squamous cell cancer were for women in the 25-29 to 45-49 age groups.

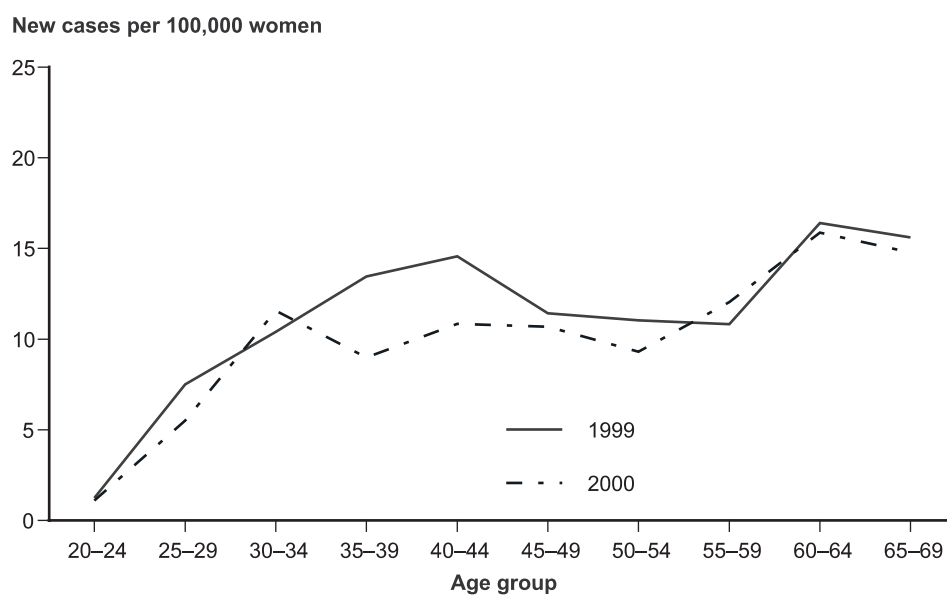
Indicator 6: Incidence of squamous, adenocarcinoma, adeno-squamous and other cervical cancers

Incidence rates of squamous, adenocarcinoma, adeno-squamous and other cervical cancer per 100,000 estimated resident female population in a 12-month period by 5-year age groups (20–24, 25–29, 30–34, 35–39, 40–44, 45–49, 50–54, 55–59, 60–64, 65–69, 70–74, 75–79, 80–84, 85+) and for the target age group (20–69 years, age-standardised).



Age	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
	(Number per 100,000 women)											
All ages	12.7	12.4	12.3	11.4	11.0	12.1	10.0	9.5	8.0	8.4	7.8	7.1
20–69 years	17.4	17.0	16.6	15.4	15.1	16.3	13.4	12.8	10.8	11.2	10.6	9.3

- In 2000, there were 745 new cases of cervical cancer diagnosed in Australia, of these 578 were women in the target age group 20–69 years (Table 12, page 62). All but two cases of the remaining 167 were in women aged 70 years and over.
- The incidence rate of all cervical cancers declined to 7.1 per 100,000 women for all women in Australia, and to 9.3 per 100,000 women in the target group.
- Between 1989 and 2000 the age-standardised incidence rate for cervical cancer for women of all ages declined by 43.9%, and in the target age group by 56.9% (Table 13, page 63).



Refer to Table 13 (page 63).

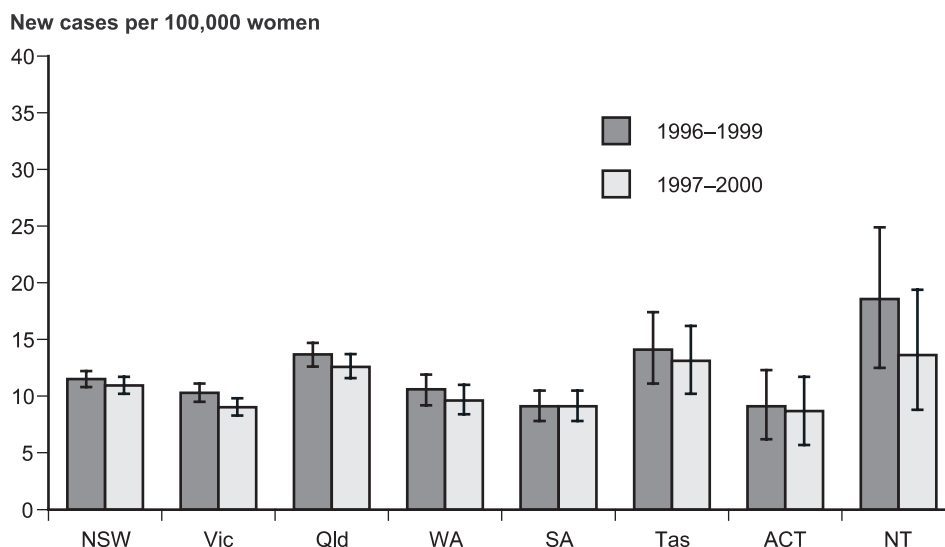
Note: Rates are expressed per 100,000 women.

Source: National Cancer Statistics Clearing House (AIHW).

Figure 11: Age-specific incidence rates of cervical cancer, Australia, 1999 and 2000

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)											
1999	1.2	7.5	10.4	13.5	14.6	11.4	11.0	10.8	16.4	15.6	10.6
2000	1.1	5.5	11.6	9.0	10.8	10.7	9.3	12.0	15.9	14.8	9.3

- The age-specific rate of cervical cancer incidence rose rapidly in women from age 20-24 through to age 30-34 years in 2000, and stabilised through to the 50-54 age group before rising again.
- In 2000, the age-specific rates of cervical cancer incidence were lower than in 1999 in all 5-year age groups ranging from 20-69, except in the 30-34 and 55-59 age groups.



Refer to Tables 14b and 15b (pages 65 and 67).

Notes

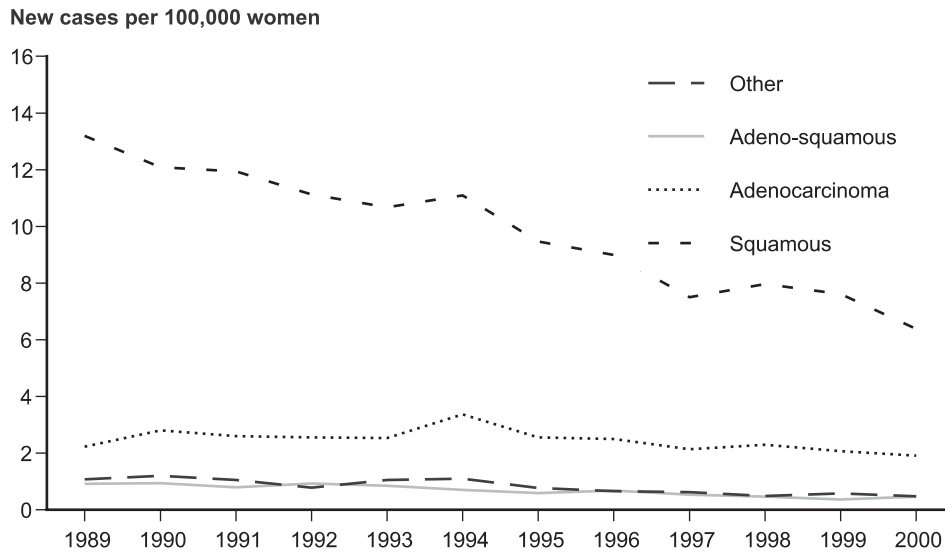
1. Rates are expressed per 100,000 women and age-standardised to the Australian 1991 population.
2. Bars on graphs represent 95% confidence intervals.

Source: National Cancer Statistics Clearing House (AIHW).

Figure 12: Age-standardised cervical cancer incidence rates by women aged 20-69 years, states and territories, 1996-1999 and 1997-2000

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
1996-1999	11.5	10.3	13.7	10.6	9.1	14.1	9.1	18.6	11.4
95% CI	10.8-12.2	9.5-11.1	12.6-14.7	9.2-11.9	7.8-10.5	11.1-17.4	6.2-12.3	12.5-24.9	10.9-11.8
1997-2000	11.0	9.0	12.6	9.6	9.1	13.1	8.7	13.6	10.5
95% CI	10.2-11.7	8.3-9.8	11.6-13.7	8.4-11.0	7.8-10.5	10.2-16.2	5.7-11.7	8.8-19.4	10.1-10.9

- In the period 1997-2000, the Australian Capital Territory had the lowest incidence at 8.0 per 100,000 women and the Northern Territory had the highest rate of cervical cancer incidence of 13.6 per 100,000 women. Queensland (12.6) was significantly above the national average (10.5) and Victoria (9.0) was significantly below.
- The incidence rate declined in all states and territories between the two periods 1996-1999 and 1997-2000 (Tables 14b and 15b, pages 65 and 67.)



Refer to Table 16b (page 68).

Note: Rates are expressed per 100,000 women and age-standardised to the Australian 1991 population.

Source: National Cancer Statistics Clearing House (AIHW).

Figure 13: Age-standardised incidence rates of cervical cancer by histological type, women aged 20–69 years, Australia, 1989–2000

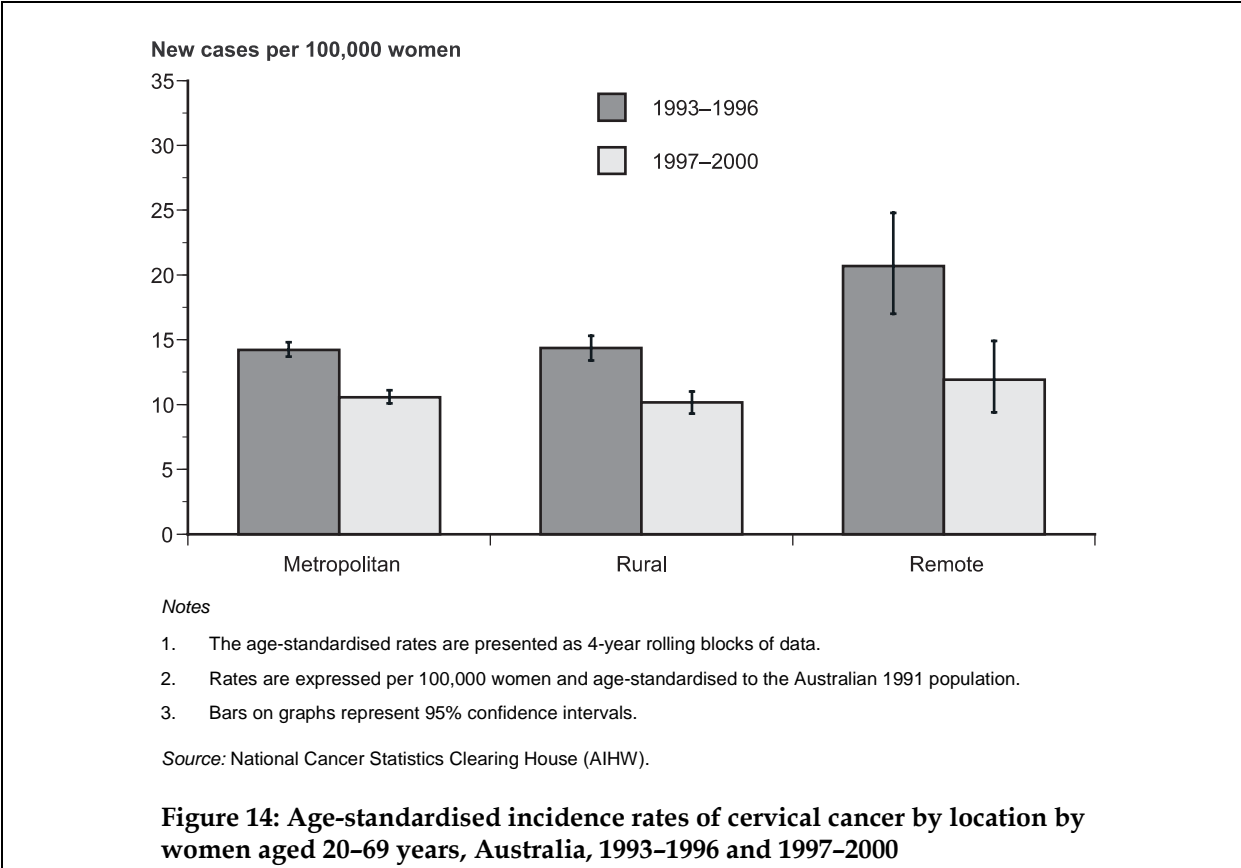
Histological type	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Squamous	13.2	12.1	11.9	11.1	10.7	11.1	9.5	9.0	7.5	8.0	7.6	6.4
Adenocarcinoma	2.2	2.8	2.6	2.6	2.5	3.4	2.6	2.5	2.1	2.3	2.1	1.9
Adeno-squamous	0.9	0.9	0.8	0.9	0.8	0.7	0.6	0.7	0.5	0.5	0.4	0.5
Other	1.1	1.2	1.1	0.8	1.1	1.1	0.8	0.7	0.6	0.5	0.6	0.5

- In 2001, squamous cell carcinomas of the cervix accounted for 69.2% of all new cases of cervical cancer in women aged 20–69 years, adenocarcinomas 20.3%, adeno-squamous 5.3%, and the remaining 5.2% comprised a range of other mixed and unknown histologies (Table 16a, page 68).
- The trend from 1989 to 2000 for all histological types has been a decrease in the age-standardised rates of cervical cancer per 100,000 in women aged 20–69 years. However, this trend is not statistically significant for adenocarcinoma.

Indicator 8: Incidence by location

Incidence rates of cervical cancer per 100,000 estimated resident female population in a 3-year period by location by 5-year age groups (20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70-74, 75-79, 80-84, 85+) and for the target age group (20-69 years, age-standardised).

The graph and table below refer to the data for the target age group only. For detailed data refer to Table 19 (page 71).



	Metropolitan		Rural		Remote	
	1993-1996	1997-2000	1993-1996	1997-2000	1993-1996	1997-2000
AS rate	14.2	10.6	14.4	10.2	20.7	11.9
95% CI	13.7-14.8	10.1-11.1	13.4-15.3	9.3-11.0	17.0-24.8	9.4-14.9

- There were 2,327 new cases (72.9% of all new cases) of cervical cancer in metropolitan locations in the 4-year period 1997-2000, 778 new cases (24.4% of all new cases) in rural locations and 88 new cases (2.4% of all new cases) in remote locations (Table 18, page 70).

- Age-standardised cervical cancer incidence rates in the period 1997–2000, for women in the target age group 20–69 years, were higher in remote locations (11.9 per 100,000 women) than in rural (10.2) and metropolitan (10.6) locations. This difference was not statistically significant (Table 19, page 71).

Age-specific features

(Table 19, page 71)

- Very few cervical cancers occur in women under the age of 20. The incidence rate of cervical cancer increases with age.

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.

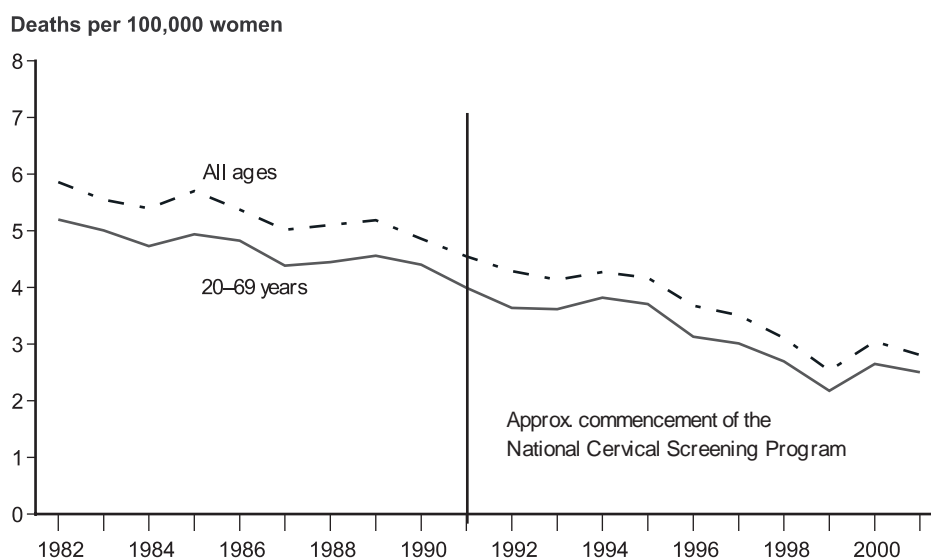
The three mortality indicators are mortality (by age and state), mortality by location (metropolitan, rural and remote), and Indigenous mortality (Indigenous and Non-Indigenous). These indicators measure the level of mortality from cervical cancer in the total female population by age and other demographic characteristics. The mortality indicators are important because from them an assessment can be made of changes in mortality in different age groups and particular target groups over time. However, note that changes in the mortality rates may not be evident for a number of years following an improvement in the participation rate. Therefore, the effectiveness of this measure needs to be viewed in the longer rather than the shorter term.

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 1999; and
 2. the introduction by the Australian Bureau of Statistics (ABS) of the Automated Coding System (ACS) for processing deaths registered from 1 January 1997.
- As a result of this there is now a break in the mortality data series. In order to make mortality data coded using ICD-9 and ICD-10 comparable, the ABS has 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 different from figures in previous *Cervical Screening in Australia* reports.
- Prior to 1998, only South Australia, Western Australia and the Northern Territory had a relatively high coverage of Indigenous status identification in the deaths data. In 1998 Queensland's coverage of Indigenous deaths reached an acceptable level following the introduction of a new *Death Information Form* in 1996-97 which included a question on Indigenous status (ABS 1999). Therefore, in this report, cervical cancer deaths for Indigenous Australians include data from Queensland (for 1998 to 2000), South Australia, Western Australia and the Northern Territory.

Indicator 7: Mortality

Death rate from cervical cancer per 100,000 estimated resident female population in a 12-month period by 5-year age groups (20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70-74, 75-79, 80-84, 85+) and for the target age group (20-69 years, age-standardised).



Refer to Table 21 (page 73).

Notes

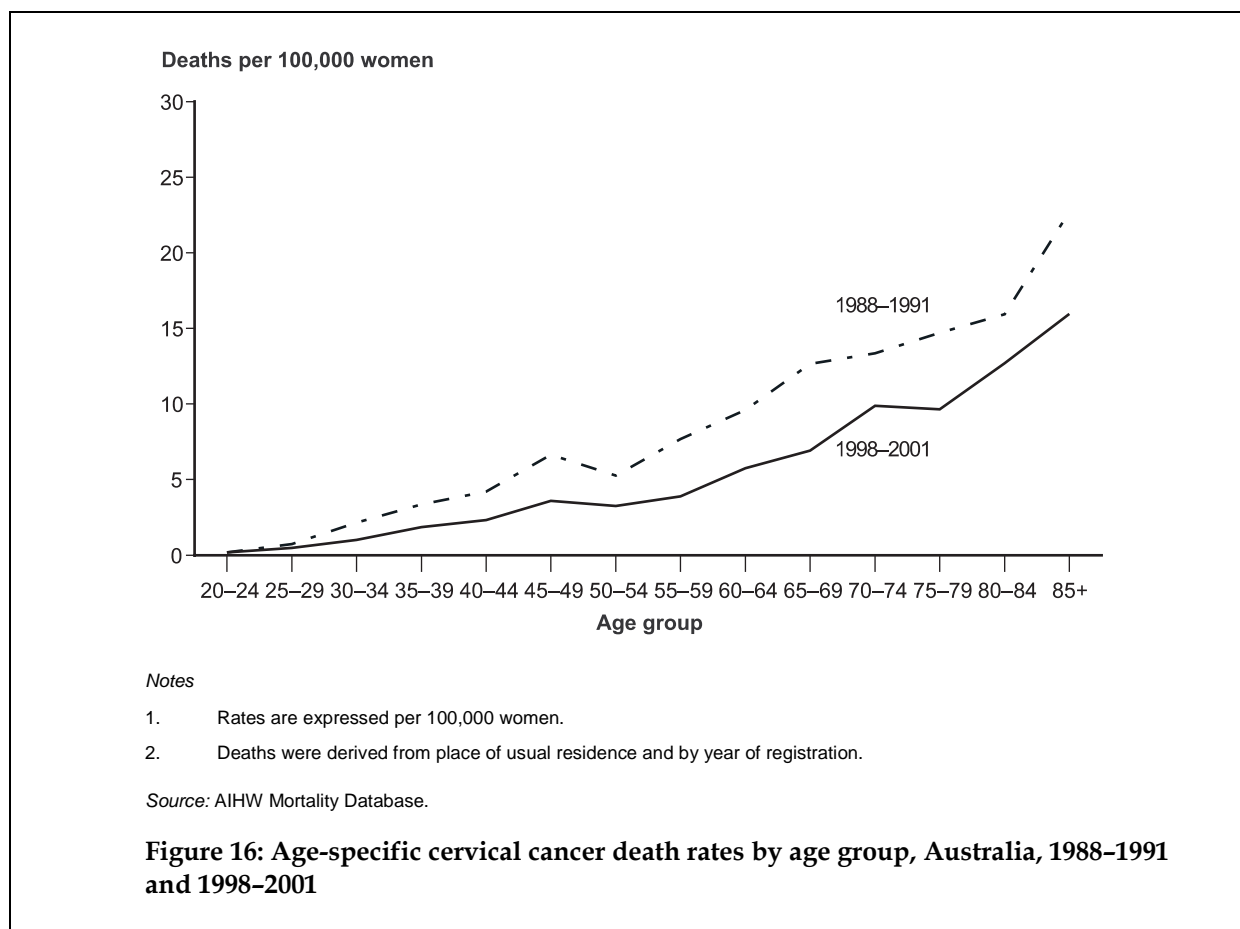
1. Rates are expressed per 100,000 women and age-standardised to the Australian 1991 population.
2. Deaths were derived from place of usual residence and by year of registration
3. Rates for all ages are based on data for women aged 15 years and over.

Source: AIHW Mortality Database.

Figure 15: Age-standardised death rates from cervical cancer, Australia, 1982-2001

	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01
All ages	5.9	5.5	5.4	5.7	5.4	5.0	5.1	5.2	4.9	4.5	4.3	4.1	4.3	4.2	3.7	3.5	3.1	2.5	3.0	2.8
20-69 years	5.2	5.0	4.7	4.9	4.8	4.4	4.4	4.6	4.4	4.0	3.6	3.6	3.8	3.7	3.1	3.0	2.7	2.2	2.7	2.5

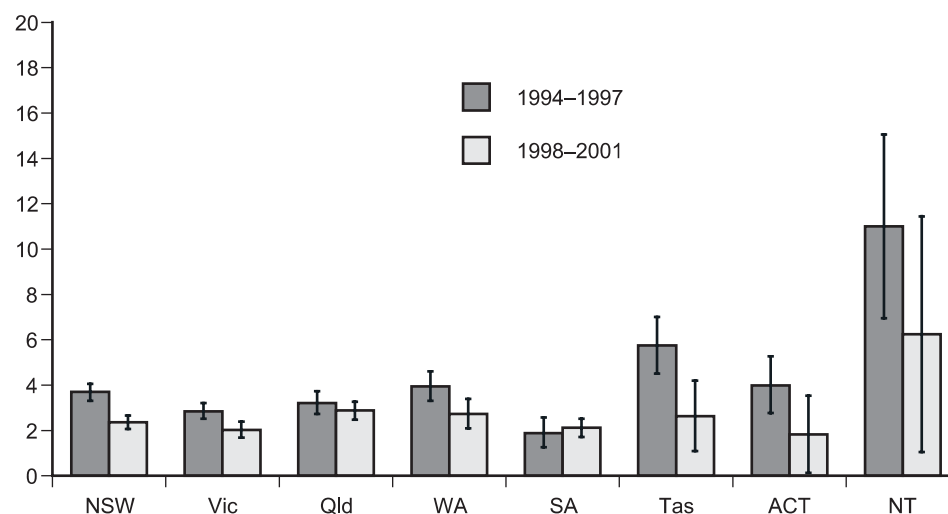
- Cervical cancer was the 15th most common cause of cancer deaths in Australian women in 2001, accounting for 262 deaths.
- The age-standardised death rate for women of all ages fell to 2.8 per 100,000 in 2001.



Period	Age group													
	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+
1988-1991	0.2	0.7	2.1	3.4	4.2	6.6	5.3	7.7	9.6	12.6	13.4	14.7	15.9	22.7
1998-2001	0.2	0.5	1.0	1.9	2.3	3.6	3.3	3.9	5.7	6.9	9.9	9.7	12.7	16.0

- In both 1988-1991 and 1998-2001 the rates of cervical cancer mortality increased with increasing age.
- The mortality between the two reference periods declined in all age groups except for the age group 20-24 years where there was no difference.
- In the period 1998-2001 the mortality in the target age group was 0.2 deaths per 100,000 women in the 20-24 years age group and rose with each successive age group to 6.9 in the 65-69 age group.

Deaths per 100,000 women



Refer to Tables 23 and 25 (pages 75 and 77).

Notes

1. The age-standardised rates were averaged over 4 years to smooth annual variations that may occur in the smaller states and territories.
2. Deaths derived from place of usual residence and by year of registration.
3. Rates are expressed per 100,000 women and age-standardised to the Australian 1991 population.
4. Bars on graphs represent 95% confidence intervals.

Source: AIHW Mortality Database.

Figure 17: Age-standardised cervical cancer death rates by women aged 20-69 years, states and territories, 1994-1997 and 1998-2001

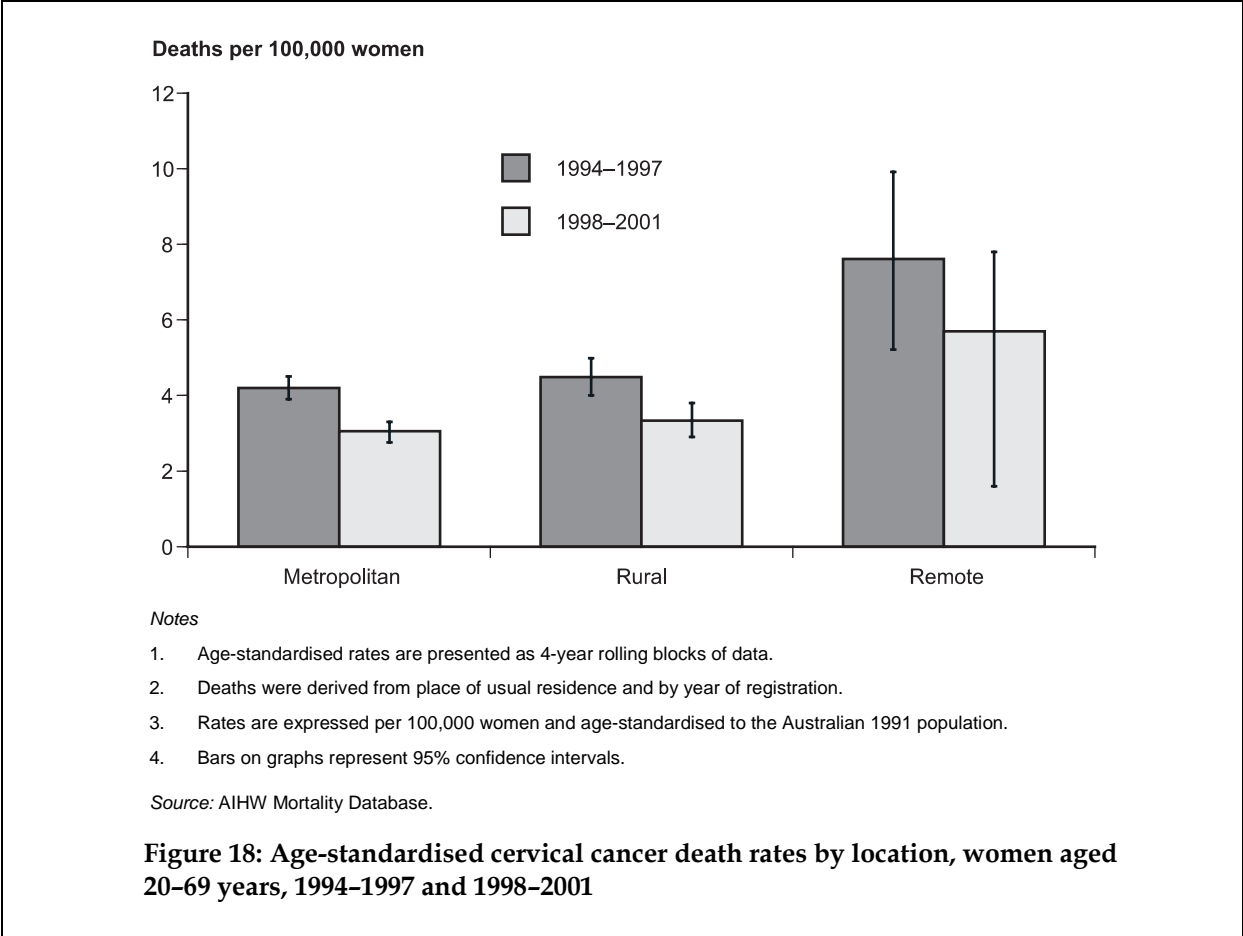
	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Rate 1994-1997	3.7	2.8	3.2	3.9	1.9	5.7	4.0	11.0	3.4
95% CI	3.4-4.0	2.5-3.2	2.8-3.6	3.3-4.6	1.5-2.3	4.2-7.3	2.3-5.7	5.8-16.2	3.2-3.6
Rate 1998-2001	2.4	2.0	2.9	2.7	2.1	2.6	1.8	6.2	2.4
95% CI	2.0-2.7	1.7-2.4	2.4-3.4	2.1-3.4	1.5-2.8	1.4-3.9	0.6-3.1	2.2-10.3	2.2-2.6

- In 1998-2001 there were 1,046 deaths from cervical cancer in all states and territories compared with 1,273 in 1994-1997.
- The age-standardised mortality rate varied from 1.8 per 100,000 women in the Australian Capital Territory to 6.2 in the Northern Territory.
- The age-standardised death rates decreased in all jurisdictions between the two periods except in South Australia. The declines were significantly different in New South Wales, Victoria and Tasmania. Although the Northern Territory rate decreased sharply between the two periods, the rates are based on very small numbers and are subject to considerable variation.

Indicator 9: Mortality by location

Death rate from cervical cancer per 100,000 estimated resident female population in a 4-year period by location and 5-year age groups (20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70-74, 75-79, 80-84, 85+) and for the target age group (20-69 years, age-standardised).

The graph and table below refer to the data for the target age group only. For additional data refer to Table 27 (page 79).



	Metropolitan		Rural		Remote	
	1994-1997	1998-2001	1994-1997	1998-2001	1994-1997	1998-2001
Rate	3.1	2.3	3.4	2.7	6.6	3.0
95% CI	2.8-3.4	2.1-2.5	2.9-3.8	2.3-3.1	4.3-8.8	1.7-4.6

- During the 4-year period 1998-2001, there were 709 deaths (70% of all cervical cancer deaths in that period) in metropolitan areas, 270 deaths (27% of all cervical cancer deaths) in rural areas and 35 deaths (3% of all cervical cancer deaths) in remote areas (Table 26, page 78).

- The age-standardised death rate for women in the target age group 20–69 years increased from metropolitan to rural areas and from rural to remote areas, though none of these differences were statistically significant.
- In all three regions the age-standardised mortality rates declined between the periods 1994–1997 and 1998–2001; however, only the decline in the metropolitan area was statistically significant. The largest overall mortality reduction was in remote areas (a mortality reduction of 55% between 1994–1997 and 1998–2001), but these rates are based on small numbers and therefore the decline is not statistically significant. Between the same two periods, in metropolitan areas there was a 26% decline in cervical cancer mortality, and in rural areas it was 21%.

Age-specific features

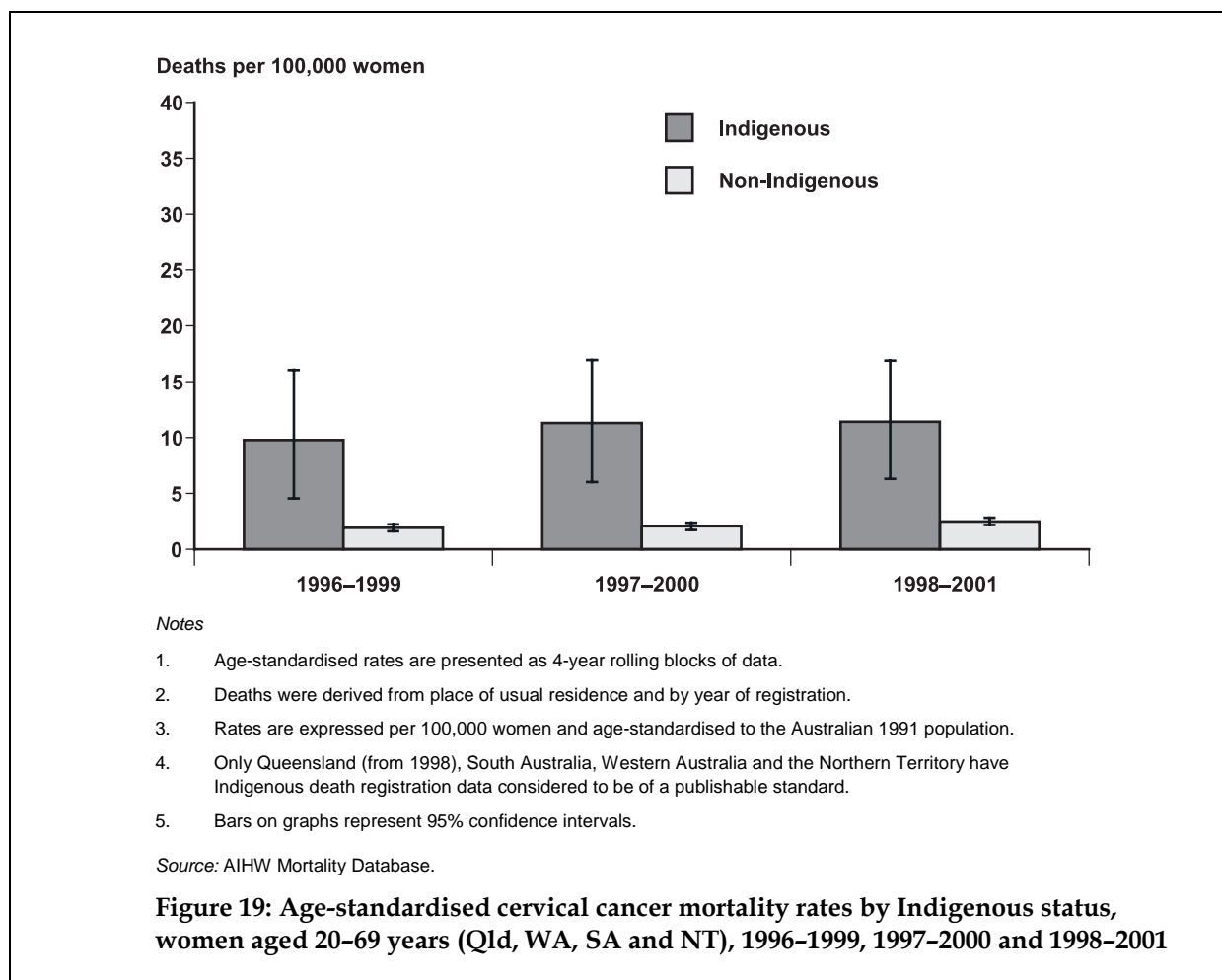
(Tables 26 and 27, pages 78 and 79)

- In metropolitan and rural locations, the death rates from cervical cancer increased with age. In remote locations, although there is a general trend of rising death rates with age, the specific pattern is less clear because of the small numbers involved in calculating the rates.
- In metropolitan locations, age-specific cervical cancer mortality increased slightly for younger ages. In rural locations, age-specific mortality declined in almost all age groups.

Indicator 10: Indigenous mortality

Death rate from cervical cancer per 100,000 estimated resident female population in a 4-year period by Indigenous status and 5-year age groups (20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70-74, 75-79, 80-84, 85+) and for the target age group (20-69 years, age-standardised).

The graph and table below refer to the data for the target age group only. For detailed data refer to Table 29 (page 81).



	Indigenous			Non-Indigenous		
	1996-1999	1997-2000	1998-2001	1996-1999	1997-2000	1998-2001
AS Rate (A)	9.8	11.3	11.4	1.9	2.1	2.5
95% CI	4.6-16.1	6.2-17.1	6.3-17.6	1.6-2.3	1.7-2.4	2.2-2.8
<i>Note: Indigenous and non-Indigenous deaths from Queensland for 1998, 1999, 2000 and 2001 are included in the above table.</i>						
Excluding Queensland						
AS Rate (A)	7.9	7.2	5.5	1.8	1.9	2.0
95% CI	2.3-14.1	2.6-12.9	1.4-11.0	1.4-2.2	1.2-2.2	1.6-2.4

- Due to the difficulties of Indigenous identification in health data collections, only Indigenous mortality data from Queensland (from 1998), Western Australia, South Australia and the Northern Territory are considered to be of publishable standard. Therefore, all cervical cancer mortality data for both Indigenous women and non-Indigenous women used in this analysis are confined to these jurisdictions.
- The age-standardised mortality rate attributable to cervical cancer among Indigenous women in the target age group in the 1998–2001 period was 11.4 per 100,000 women and was considerably higher than the mortality rate for non-Indigenous women in the same age range (2.5 per 100,000 women) (Tables 28 and 29, pages 80 and 81).
- The Indigenous cervical cancer mortality rate among women in the target age group was higher in 1998–2001 than in 1996–1999. However, these figures are not directly comparable because data from Queensland was available only from 1998. Queensland accounts for almost half of the Indigenous population when the four jurisdictions are combined. If we exclude Queensland, then death rates among Indigenous people fell between 1996–1999 and 1998–2001. Death rates for Indigenous women are based on relatively small numbers of cases and may be subject to large variability. This is reflected in the wide confidence intervals associated with the mortality rates. (Table 29, page 81).

Age-specific features

(Tables 28 and 29, pages 80 and 81)

- The numbers of deaths among Indigenous women in Queensland, Western Australia, South Australia and the Northern Territory are either very small or none in many age groups and care is needed in interpreting the rates.
- Mortality rates generally increased with increasing age in both Indigenous and non-Indigenous women.
- Compared with non-Indigenous women, Indigenous women experienced high rates of mortality in every age group.

Tables

Indicator 1: Participation

Table 1a: Number of women participating in the National Cervical Screening Program by age, states and territories, 1999–2000

Age group	NSW	Vic	Qld	WA ^(a)	SA ^(b)	Tas	ACT ^(a)	NT	Australia
20–24	99,812	83,943	64,583	34,401	25,727	8,939	6,354	4,587	328,346
25–29	147,289	120,835	82,879	44,631	33,896	10,398	8,083	6,067	454,078
30–34	151,934	125,001	81,147	46,230	36,101	11,047	8,072	5,782	465,314
35–39	156,192	124,293	83,093	47,573	38,032	11,999	7,964	4,941	474,087
40–44	137,205	110,095	73,124	42,825	35,019	10,864	7,369	4,170	420,671
45–49	115,982	94,509	61,746	35,698	30,326	9,101	6,706	3,490	357,558
50–54	95,632	78,785	50,876	27,795	25,564	7,582	5,848	2,491	294,573
55–59	64,864	53,943	33,397	17,857	17,313	5,123	3,485	1,444	197,426
60–64	48,312	41,339	23,470	13,451	13,827	3,822	2,243	719	147,183
65–69	34,003	30,654	16,317	9,346	10,135	2,849	1,388	401	105,093
70–74	14,487	11,283	7,955	3,583	6,517	788	491	147	45,251
75–79	5,487	4,233	3,228	1,230	n.a.	321	168	79	14,746
80+	2,113	1,946	1,423	542	n.a.	140	58	20	6,242
Not stated	3,720	27	408	0	24	4	15	21	4,219
All ages	1,077,032	880,886	583,646	325,162	272,481	82,977	58,244	34,359	3,314,787
Ages 20–69 years	1,051,225	863,397	570,632	319,807	265,940	81,724	57,512	34,092	3,244,329

(a) The WA and ACT registers only register women with a WA or ACT address respectively.

(b) South Australia has grouped women aged 70 years or more, and for the purpose of this table they appear in the 70–74 age group.

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 likely impact of double counting is probably very small.
2. Queensland data for the 1999–2000 period refer to the 2-year period from March 1999 to February 2001.

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

Table 1b: Proportion of women participating in the National Cervical Screening Program by age, states and territories, 1999–2000

Age group	NSW	Vic	Qld	WA ^(a)	SA ^(b)	Tas	ACT ^(a)	NT	Australia
(Per cent)									
20–24	45.6	50.0	51.7	50.6	53.5	61.3	48.8	58.8	49.5
25–29	59.6	65.5	61.2	62.9	65.8	66.3	62.1	64.9	62.4
30–34	65.3	69.9	64.0	67.9	69.9	70.1	67.7	67.6	67.0
35–39	67.2	72.3	64.8	69.5	71.5	71.2	69.2	66.6	68.7
40–44	67.0	72.5	64.8	69.5	72.6	70.7	69.7	69.7	68.8
45–49	66.1	72.1	63.2	67.3	71.3	68.4	70.2	72.4	67.8
50–54	69.3	76.4	65.9	70.3	75.1	72.2	79.9	75.2	71.3
55–59	60.2	68.3	57.1	60.7	66.3	62.0	71.7	70.0	62.5
60–64	53.7	62.2	51.0	56.4	62.3	54.6	65.3	58.6	56.5
65–69	40.8	49.7	39.9	44.5	48.6	43.9	49.9	48.3	44.2
All ages									
Crude rate	55.2	60.4	55.4	58.5	59.5	58.9	61.4	65.3	57.5
AS rate	55.0	60.4	54.5	57.4	60.4	59.4	59.5	60.7	57.2
95% CI	54.9–55.1	60.3–60.6	54.4–54.7	57.2–57.6	60.2–60.6	59.0–59.8	58.9–60.0	60.0–61.4	57.1–57.2
Ages 20–69 years									
Crude rate	60.7	66.6	60.2	63.5	66.7	66.0	65.3	66.4	63.1
AS rate	60.2	66.2	59.5	62.8	66.2	65.5	65.1	65.6	62.6
95% CI	60.1–60.3	66.1–66.3	59.3–59.6	62.6–63.1	66.0–66.5	65.0–65.9	64.6–65.7	64.9–66.4	62.5–62.6

(a) The WA and ACT registers only register women with a WA or ACT address respectively.

(b) South Australia has grouped women aged 70 years or more, and for the purpose of this table they appear in the 70–74 age group.

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 likely impact of double counting is probably very small.
2. Queensland data for the 1999–2000 period refer to the 2-year period from March 1999 to February 2001.
3. Rates are standardised to the 1991 Australian total population.

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

Table 2a: Number of women participating in the National Cervical Screening Program by age, states and territories, 2000–2001

Age group	NSW	Vic ^(a)	Qld	WA ^(a)	SA ^(b)	Tas	ACT ^(a)	NT	Australia
20–24	98,410	81,673	62,480	33,698	25,410	8,804	6,193	4,595	321,263
25–29	143,840	114,693	79,515	43,183	32,306	10,127	7,845	5,898	437,407
30–34	153,836	125,139	81,104	46,448	36,257	10,994	8,158	5,827	467,763
35–39	154,920	121,537	80,964	47,090	37,436	11,924	7,976	5,043	466,890
40–44	140,924	112,399	74,268	43,390	35,941	11,193	7,474	4,188	429,777
45–49	118,907	95,793	62,383	36,619	30,829	9,475	6,708	3,464	364,178
50–54	99,838	82,150	52,047	29,221	26,386	8,081	6,059	2,509	306,291
55–59	68,905	56,506	35,118	18,729	18,311	5,505	3,665	1,375	208,114
60–64	50,567	42,868	24,336	14,060	14,155	4,106	2,378	766	153,236
65–69	35,430	31,124	16,749	9,621	10,236	2,974	1,519	359	108,012
70–74	14,641	10,486	8,042	3,641	6,495	798	483	149	44,735
75–79	5,341	3,617	3,098	1,173	n.a.	327	168	53	13,777
80+	2,190	1,584	1,354	542	n.a.	133	46	26	5,875
Not stated	3,720	0	320	0	20	3	9	18	4,090
All ages	1,091,469	879,569	581,778	327,415	273,782	84,444	58,681	34,270	3,331,408
Ages 20–69 years	1,065,577	863,882	568,964	322,059	267,267	83,183	57,975	34,024	3,262,931

(a) The Vic, WA and ACT registers only register women with a Vic, WA or ACT address respectively.

(b) South Australia has grouped women aged 70 years or more, and for the purpose of this table they appear in the 70–74 age group.

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 likely impact of double counting is probably very small.

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

Table 2b: Proportion of women participating in the National Cervical Screening Program by age, states and territories, 2000–2001

Age group	NSW	Vic ^(a)	Qld	WA ^(a)	SA ^(b)	Tas	ACT ^(a)	NT	Australia
(Per cent)									
20–24	46.5	51.1	51.1	53.1	54.9	62.9	47.7	59.1	50.3
25–29	59.2	63.7	59.7	62.8	64.7	67.6	59.3	63.5	61.4
30–34	63.7	67.3	61.5	66.0	68.8	68.8	64.7	65.5	64.9
35–39	65.9	69.9	62.6	68.6	70.7	72.2	67.0	65.9	67.1
40–44	66.3	71.8	63.5	68.8	72.7	71.5	68.2	66.1	68.1
45–49	65.9	71.7	62.4	67.0	71.7	70.3	68.2	66.6	67.4
50–54	68.6	75.8	63.8	69.1	73.8	73.7	76.3	68.2	70.2
55–59	60.2	68.0	55.9	60.1	66.5	63.7	68.8	58.6	62.1
60–64	53.1	61.6	49.2	55.4	61.6	55.9	63.1	54.4	55.7
65–69	42.2	50.6	40.6	45.1	49.9	46.7	52.4	40.0	45.3
All ages									
Crude rate	54.7	59.4	54.0	58.2	59.3	60.4	59.3	62.4	57.8
AS rate	54.6	59.5	53.2	57.1	60.2	60.4	57.6	57.2	56.5
95% CI	54.5–54.7	59.4–59.6	53.1–53.4	56.9–57.3	60.0–60.4	60.0–60.8	57.1–58.1	56.6–57.8	56.5–56.6
Target age 20–69 years									
Crude rate	60.4	65.8	58.7	63.3	66.6	67.1	63.4	63.6	62.5
AS rate	59.8	65.3	58.1	62.5	66.0	66.6	63.2	62.1	61.8
95% CI	59.7–59.9	65.2–65.4	57.9–58.2	62.3–62.7	65.8–66.3	66.1–67.0	62.6–63.7	61.4–62.7	61.8–61.9

(a) The Vic, WA and ACT registers only register women with a Vic, WA or ACT address respectively.

(b) South Australia has grouped women aged 70 years or more, and for the purpose of this table, they appear in the 70–74 age group.

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 likely impact of double counting is probably very small.
2. Rates are standardised to the 1991 Australian total population.

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

Indicator 2: Early re-screening

Table 3: Number of women with repeat screenings in the 21 months following a negative Pap smear in February 2000, states and territories, 1999–2000 and 2000–2001

No. of tests	NSW	Vic ^(a)	Qld	WA ^(a)	SA	Tas	ACT ^(a)	NT	Australia 2000–2001	Australia 1999–2000
Number of women										
0	36,316	31,627	20,356	11,376	9,311	2,699	2,021	1,196	114,902	119,556
1	14,626	14,300	7,507	4,803	2,829	1,018	725	297	46,105	47,916
2	1,709	2,045	1,117	536	387	113	114	54	6,075	6,591
3	296	469	254	67	58	27	10	18	1,199	1,310
4	37	134	52	6	14	3	1	4	251	269
5 or more	17	66	16	4	4	0	0	1	108	81

(a) The Vic, WA and ACT registries only register women with a Vic, WA and ACT 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 likely impact of double counting is probably very small.

Source: State and territory Cervical Cytology Registry data.

Table 4: Percentage of women with repeat screenings in the 21 months following a negative Pap smear in February 2000, states and territories, 1999–2000 and 2000–2001

No. of tests	NSW	Vic ^(a)	Qld	WA ^(a)	SA	Tas	ACT ^(a)	NT	Australia 2000–2001	Australia 1999–2000
Per cent of women										
0	68.5	65.0	69.5	67.7	73.9	69.9	70.4	76.2	68.1	68.0
1	27.6	29.4	25.6	28.6	22.4	26.4	25.3	18.9	27.3	27.3
2	3.2	4.2	3.8	3.2	3.1	2.9	4.0	3.4	3.6	3.8
3	0.6	1.0	0.9	0.4	0.5	0.7	0.4	1.1	0.7	0.7
4	0.1	0.3	0.2	0.0	0.1	0.1	0.0	0.3	0.1	0.2
5 or more	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0

(a) The Vic, WA and ACT registries only register women with a Vic, WA and ACT 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 likely impact of double counting is probably very small.

Source: State and territory Cervical Cytology Registry data.

Indicator 3: Low-grade abnormality detection

Table 5a: Number of low- and high-grade abnormalities on histology for women aged 20–69 years, states and territories, 2000

Abnormalities	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Low-grade	6,381	3,701	5,016	2,075	1,541	678	273	320	19,985
High-grade	4,493	2,986	3,105	1,240	1,045	478	220	284	13,851
Ratio	1.42	1.24	1.62	1.67	1.47	1.42	1.24	1.13	1.44
As a percentage of all screens in 2000									
Low-grade	1.1	0.7	1.6	1.1	1.0	1.5	0.5	1.6	1.1
High-grade	0.7	0.6	1.0	0.6	0.7	1.0	0.4	1.4	0.7

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 likely impact of double counting is probably very small.

Source: State and territory Cervical Cytology Registry data.

Table 5b: Number of low- and high-grade abnormalities on histology for women aged 20–69 years, states and territories, 2001

Abnormalities	NSW	Vic	Qld	WA	SA ^(a)	Tas	ACT	Australia
Low-grade	6,416	3,099	4,086	2,308	1,335	591	291	18,126
High-grade	4,614	2,855	2,890	1,515	961	471	249	13,555
Ratio	1.39	1.09	1.41	1.52	1.39	1.25	1.17	1.34
As a percentage of all screens in 2001								
Low-grade	1.1	0.6	1.3	1.2	0.9	1.3	0.5	1.0
High-grade	0.8	0.6	0.9	0.8	0.6	1.0	0.4	0.7

Notes

1. Northern Territory data are unavailable for 2001.
2. These numbers may be overestimated because of double counting of some women between some states. This may be the result of difficulty in identifying state of residence for women in border areas, tests inadvertently transferred to interstate registers and inclusion of women resident overseas; however, the likely impact of double counting is probably very small.

Source: State and territory Cervical Cytology Registry data.

Indicator 4: High-grade abnormality detection

Table 6a: Rate of histologically confirmed high-grade abnormalities per 1,000 women screened, states and territories, 2000

Age group	NSW	Vic	Qld	WA	SA ^(a)	Tas	ACT	NT	Australia
20–24	17.0	13.8	19.0	13.8	13.8	27.0	13.8	24.0	16.3
25–29	15.4	13.1	19.7	14.8	13.8	18.1	9.4	23.7	15.5
30–34	10.3	8.6	12.8	9.1	10.9	12.1	12.1	15.6	10.3
35–39	6.2	5.3	8.6	5.6	6.1	10.9	5.4	12.3	6.5
40–44	5.0	3.4	5.5	3.2	4.9	7.0	3.1	11.5	4.5
45–49	2.8	2.3	4.1	2.2	3.4	4.4	4.8	6.3	3.0
50–54	1.9	1.2	2.6	1.3	2.3	3.4	3.6	1.4	1.9
55–59	1.3	1.0	3.0	1.0	1.8	1.7	2.5	3.6	1.5
60–64	1.4	1.1	1.5	1.7	2.4	1.4	1.6	4.7	1.5
65–69	2.2	1.1	1.6	1.0	2.0	2.6	2.6	9.5	1.7
70–74	3.0	2.0	2.4	n.a.	8.6	2.3	0.0	12.7	3.2
75–79	3.7	2.1	6.0	n.a.	n.a.	0.0	50.0	0.0	3.8
80–84	4.8	2.5	9.5	n.a.	n.a.	0.0	0.0	0.0	4.3
85+	6.5	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	3.1
All ages	7.3	5.9	9.5	6.3	7.0	10.2	6.9	14.3	7.3
Ages 20–69 years	7.4	6.0	9.6	6.4	7.0	10.4	6.8	14.3	7.4

(a) South Australia has grouped all women aged 70 years or more, and for the purpose of this table they appear in the 70–74 age group.

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 likely impact of double counting is probably very small.

Source: State and territory Cervical Cytology Registry data.

Table 6b: Rate of histologically confirmed high-grade abnormalities per 1,000 women screened by age, states and territories, 2001

Age group	NSW	Vic	Qld	WA	SA ^(a)	Tas	ACT	Australia
20–24	18.2	12.6	18.9	17.8	13.7	23.7	2.2	16.3
25–29	16.5	12.7	18.0	17.6	13.3	20.4	13.0	15.6
30–34	10.4	8.1	12.1	11.0	9.4	11.8	11.1	10.1
35–39	6.2	5.2	8.1	7.2	6.4	10.0	11.3	6.6
40–44	4.2	3.5	5.1	4.8	3.9	7.0	9.9	4.4
45–49	3.1	2.0	3.7	3.2	3.6	4.9	5.3	3.0
50–54	1.7	1.3	2.7	1.5	2.2	1.3	1.7	1.8
55–59	1.4	0.9	2.4	1.4	1.5	2.1	2.8	1.5
60–64	1.6	0.9	2.1	1.0	2.2	2.9	3.0	1.5
65–69	1.6	1.2	2.2	1.6	1.8	2.3	4.7	1.6
70–74	1.2	1.4	1.7	3.0	4.8	4.4	11.7	2.1
75–79	3.7	3.9	6.0	1.2	n.a.	0.0	0.0	3.9
80–84	3.4	1.6	10.6	3.6	n.a.	17.9	0.0	4.9
85+	6.1	0.0	0.0	7.9	n.a.	0.0	0.0	3.2
All ages	7.4	5.6	8.9	7.9	6.5	9.8	7.6	7.2
Ages 20–69 years	7.5	5.7	9.0	8.0	6.5	9.8	7.6	7.3

(a) South Australia has grouped all women aged 70 years or more, and for the purpose of this table they appear in the 70–74 age group.

Notes

1. Northern Territory data are unavailable for 2001.
2. These numbers may be overestimated because of double counting of some women between some states. This may be the result of difficulty in identifying state of residence for women in border areas, tests inadvertently transferred to interstate registers and inclusion of women resident overseas, however the likely impact of double counting is probably very small.

Source: State and territory Cervical Cytology Registry data.

Table 7a: Number of histologically confirmed high-grade abnormalities by age, states and territories, 2000

Age group	NSW	Vic	Qld	WA	SA ^(a)	Tas	ACT	NT	Australia
20–24	924	632	665	266	196	131	46	62	2,922
25–29	1,284	880	904	379	260	105	42	83	3,937
30–34	898	619	593	249	224	75	56	53	2,767
35–39	559	373	400	158	131	73	24	36	1,754
40–44	399	217	231	84	97	44	13	28	1,113
45–49	192	128	146	50	58	23	18	13	628
50–54	107	58	75	23	33	15	12	2	325
55–59	49	31	57	11	17	5	5	3	178
60–64	40	28	20	14	18	3	2	2	127
65–69	41	20	14	6	11	4	2	2	100
70–74	24	13	10	3	31	1	0	1	83
75–79	11	5	10	1	0	0	4	0	31
80–84	4	2	5	0	0	0	0	0	11
85+	2	0	0	1	0	0	0	0	3
Not stated	2	0	1	0	0	0	0	0	3
All ages	4,536	3,006	3,131	1,245	1,076	479	224	285	13,982
Ages 20–69 years	4,493	2,986	3,105	1,240	1,045	478	220	284	13,851

(a) South Australia has grouped all women aged 70 years or more, and for the purpose of this table they appear in the 70–74 age group.

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 likely impact of double counting is probably very small.

Source: State and territory Cervical Cytology Registry data.

Table 7b: Number of histologically confirmed high-grade abnormalities by age, states and territories, 2001

Age group	NSW	Vic	Qld	WA	SA ^(a)	Tas	ACT	Australia
20–24	1,008	588	652	343	194	116	8	2,909
25–29	1,334	821	786	429	232	116	57	3,775
30–34	929	600	558	297	189	75	51	2,699
35–39	544	366	365	193	130	68	51	1,717
40–44	343	232	218	122	78	45	42	1,080
45–49	216	110	130	70	62	27	20	635
50–54	102	63	82	27	33	6	6	319
55–59	58	32	49	16	16	7	6	184
60–64	48	22	29	9	17	7	4	136
65–69	32	21	21	9	10	4	4	101
70–74	10	8	8	7	16	2	3	54
75–79	11	8	10	1	0	0	0	30
80–84	3	1	6	1	0	1	0	12
85+	2	0	0	1	0	0	0	3
Age not stated	0	0	1	0	0	0	0	1
All ages	4,640	2,872	2,915	1,525	977	474	252	13,655
Ages 20–69 years	4,614	2,855	2,890	1,515	961	471	249	13,555

(a) South Australia has grouped all women aged 70 years or more, and for the purpose of this table they appear in the 70–74 age group.

Notes

1. Northern Territory data are unavailable for 2001.
2. These numbers may be overestimated because of double counting of some women between some states. This may be the result of difficulty in identifying state of residence for women in border areas, tests inadvertently transferred to interstate registers and inclusion of women resident overseas; however, the likely impact of double counting is probably very small.

Source: State and territory Cervical Cytology Registry data.

Table 8a: Number of women screened by age, states and territories, 2000

Age group	NSW	Vic	Qld	WA	SA ^(a)	Tas	ACT	NT	Australia
20–24	54,311	45,637	35,011	19,340	14,251	4,849	3,332	2,581	179,312
25–29	83,176	67,289	45,787	25,623	18,861	5,813	4,489	3,496	254,534
30–34	87,608	71,913	46,487	27,275	20,521	6,217	4,611	3,399	268,031
35–39	89,792	70,492	46,677	28,213	21,478	6,679	4,474	2,935	270,740
40–44	79,978	64,332	42,141	26,282	19,986	6,288	4,180	2,440	245,627
45–49	67,717	55,487	35,455	22,617	17,160	5,216	3,779	2,056	209,487
50–54	56,503	47,826	29,398	17,830	14,521	4,348	3,316	1,445	175,187
55–59	38,304	32,441	19,203	11,521	9,678	2,972	2,001	823	116,943
60–64	27,659	24,586	13,156	8,448	7,654	2,165	1,290	425	85,383
65–69	19,011	17,734	8,744	5,856	5,372	1,546	774	211	59,248
70–74	8,019	6,600	4,195	2,358	3,594	435	268	79	25,548
75–79	2,964	2,391	1,659	905	0	168	80	37	8,204
80–84	842	798	529	300	0	39	19	8	2,535
85+	306	321	187	119	0	29	5	3	970
Not stated	1,734	0	207	0	11	0	7	16	1,975
All ages	617,924	507,847	328,836	196,687	153,087	46,764	32,625	19,954	1,903,724
Ages 20–69 years	604,059	497,737	322,059	193,005	149,482	46,093	32,246	19,811	1,864,492

(a) South Australia has grouped all women aged 70 years or more, and for the purpose of this table they appear in the 70–74 age group.

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 likely impact of double counting is probably very small.

Source: State and territory Cervical Cytology Registry data.

Table 8b: Number of women screened by age, states and territories, 2001

Age group	NSW	Vic	Qld	WA	SA ^(a)	Tas	ACT	Australia
20–24	55,327	46,511	34,551	19,292	14,136	4,892	3,558	178,267
25–29	81,027	64,645	43,714	24,378	17,509	5,700	4,380	241,353
30–34	89,191	73,696	46,004	27,016	20,161	6,369	4,601	267,038
35–39	88,177	69,967	45,033	26,936	20,314	6,779	4,522	261,728
40–44	81,892	66,241	42,340	25,501	20,004	6,412	4,250	246,640
45–49	69,104	56,362	35,401	21,883	17,098	5,521	3,794	209,163
50–54	58,595	48,786	29,858	18,232	14,698	4,783	3,473	178,425
55–59	40,658	33,830	20,348	11,590	10,340	3,283	2,119	122,168
60–64	29,437	24,988	13,923	8,580	7,669	2,418	1,336	88,351
65–69	20,375	17,710	9,555	5,758	5,585	1,713	860	61,556
70–74	8,283	5,923	4,572	2,321	3,344	452	257	25,152
75–79	2,945	2,071	1,665	809	0	178	106	7,774
80–84	890	626	566	278	0	56	19	2,435
85+	327	255	196	126	0	21	4	929
Age not stated	1,895	0	147	0	8	3	5	2,058
All ages	628,123	511,611	327,873	192,700	150,866	48,580	33,284	1,893,037
Ages 20–69 years	613,783	502,736	320,727	189,166	147,514	47,870	32,893	1,854,689

(a) South Australia has grouped all women aged 70 years or more, and for the purpose of this table they appear in the 70–74 age group.

Notes

1. Northern Territory data are unavailable for 2001.
2. These numbers may be overestimated because of double counting of some women between some states. This may be the result of difficulty in identifying state of residence for women in border areas, tests inadvertently transferred to interstate registers and inclusion of women resident overseas; however, the likely impact of double counting is probably very small.

Source: State and territory Cervical Cytology Registry data.

Table 9a: Age-standardised high-grade abnormality rate on histology per 1,000 women screened aged 20–69 years, states and territories, 2000

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
All ages									
AS rate	7.1	5.7	8.8	5.9	6.8	9.6	7.6	12.1	7.1
95% CI	6.9–7.4	5.5–5.9	8.5–9.2	5.6–6.2	6.4–7.2	8.7–10.5	6.6–8.6	10.7–13.5	7.0–7.2
Target age 20–69									
AS rate	7.6	6.2	9.4	6.5	7.2	10.6	6.8	12.9	7.5
95% CI	7.4–7.8	6.0–6.4	9.0–9.7	6.1–6.9	6.8–7.6	9.7–11.6	5.9–7.7	11.4–14.4	7.4–7.6

Notes

1. Rates are standardised to the 1991 Australian total population.
2. These numbers may be overestimated because of double counting of some women between some states. This may be the result of difficulty in identifying state of residence for women in border areas, tests inadvertently transferred to interstate registers and inclusion of women resident overseas; however, the likely impact of double counting is probably very small.

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

Table 9b: Age-standardised high-grade abnormality rate on histology per 1,000 women screened aged 20–69 years, states and territories, 2001

	NSW	Vic	Qld	WA	SA	Tas	ACT	Australia
All ages								
AS rate	7.2	5.5	8.5	7.5	6.3	9.4	6.5	7.1
95% CI	7.0–7.4	5.3–5.7	8.2–8.8	7.2–7.9	5.9–6.7	8.6–10.3	5.7–7.3	6.9–7.2
Target age 20–69								
AS rate	7.8	5.9	8.9	8.1	6.8	10.3	7.3	7.5
95% CI	7.6–8.1	5.7–6.1	8.6–9.3	7.7–8.5	6.4–7.3	9.4–11.3	6.4–8.2	7.4–7.6

Notes

1. Northern Territory data are unavailable for 2001.
2. Rates are standardised to the 1991 Australian total population.
3. These numbers may be overestimated because of double counting of some women between some states. This may be the result of difficulty in identifying state of residence for women in border areas, tests inadvertently transferred to interstate registers and inclusion of women resident overseas; however, the likely impact of double counting is probably very small.

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

Indicator 5: Incidence of micro-invasive cervical cancer

Table 10: New cases of micro-invasive cervical cancer by age, Australia, 1989–2000

Age group	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
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	1	0	0	0	0	1	0	0	0	0
20–24	1	4	0	5	1	7	1	6	3	2	2	1
25–29	13	14	14	14	9	17	16	17	10	18	14	12
30–34	28	32	31	32	32	36	42	18	27	18	14	25
35–39	10	25	40	25	26	30	29	35	21	26	20	14
40–44	17	26	30	24	17	24	30	23	21	22	15	7
45–49	6	18	9	13	15	26	23	12	11	15	7	15
50–54	4	6	11	12	17	9	12	11	8	13	7	5
55–59	5	8	7	11	5	5	9	7	8	3	8	4
60–64	7	8	7	8	7	10	11	6	5	5	2	3
65–69	2	6	7	9	10	6	7	10	2	2	3	0
70–74	0	2	4	2	3	6	5	3	4	3	2	0
75–79	1	3	3	2	1	3	5	2	2	2	1	1
80–84	1	0	2	0	0	0	1	1	0	2	0	2
85+	0	0	0	0	1	2	1	1	0	0	0	0
All ages	95	152	166	157	144	181	192	153	122	131	95	89
Ages 20–69 years	93	147	156	153	139	170	180	145	116	124	92	86

Source: National Cancer Statistics Clearing House (AIHW).

Table 11: Age-specific and age-standardised rates of micro-invasive cervical cancer by age, Australia, 1989–2000

Age group	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
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	0.2	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
20–24	0.2	0.6	0.0	0.7	0.1	1.0	0.1	0.9	0.4	0.3	0.3	0.2
25–29	1.8	2.0	2.0	2.0	1.3	2.5	2.3	2.4	1.4	2.4	1.9	1.7
30–34	4.1	4.6	4.4	4.4	4.4	4.9	5.7	2.5	3.8	2.5	2.0	3.5
35–39	1.5	3.8	6.0	3.7	3.8	4.3	4.1	4.8	2.8	3.4	2.6	1.9
40–44	2.9	4.2	4.7	3.7	2.6	3.7	4.5	3.4	3.0	3.1	2.1	1.0
45–49	1.3	3.8	1.8	2.4	2.6	4.4	3.7	1.9	1.7	2.3	1.1	2.2
50–54	1.0	1.5	2.7	2.8	3.9	2.0	2.5	2.2	1.5	2.3	1.2	0.8
55–59	1.4	2.2	2.0	3.0	1.3	1.3	2.3	1.7	1.9	0.7	1.8	0.8
60–64	1.9	2.2	1.9	2.2	1.9	2.8	3.1	1.7	1.4	1.3	0.5	0.8
65–69	0.6	1.7	2.0	2.5	2.8	1.7	2.0	2.8	0.6	0.6	0.9	0.0
70–74	0.0	0.7	1.4	0.7	1.0	1.9	1.5	0.9	1.2	0.9	0.6	0.0
75–79	0.5	1.4	1.3	0.9	0.4	1.3	2.1	0.8	0.8	0.7	0.4	0.3
80–84	0.7	0.0	1.4	0.0	0.0	0.0	0.6	0.6	0.0	1.1	0.0	1.1
85+	0.0	0.0	0.0	0.0	0.8	1.6	0.7	0.7	0.0	0.0	0.0	0.0
All ages												
Crude rate	1.1	1.8	1.9	1.8	1.6	2.0	2.1	1.7	1.3	1.4	1.0	0.9
AS rate (A)	1.1	1.8	1.9	1.8	1.6	2.0	2.1	1.6	1.3	1.3	1.0	0.9
95% CI	0.9–1.4	1.5–2.1	1.6–2.2	1.5–2.1	1.4–1.9	1.7–2.3	1.8–2.4	1.4–1.9	1.1–1.5	1.1–1.6	0.8–1.2	0.7–1.1
AS rate (W)	1.0	1.5	1.6	1.5	1.4	1.7	1.7	1.4	1.1	1.1	0.8	0.8
95% CI	0.8–1.2	1.3–1.8	1.3–1.8	1.3–1.8	1.1–1.6	1.4–1.9	1.5–2.0	1.2–1.6	0.9–1.3	0.9–1.3	0.7–1.0	0.6–0.9
Ages 20–69 years												
Crude rate	1.8	2.8	2.9	2.8	2.5	3.0	3.2	2.5	2.0	2.1	1.5	1.4
AS rate (A)	1.8	2.8	2.9	2.8	2.5	3.0	3.1	2.5	2.0	2.0	1.5	1.4
95% CI	1.4–2.1	2.3–3.2	2.5–3.4	2.4–3.2	2.1–2.9	2.5–3.5	2.7–3.6	2.1–2.9	1.6–2.3	1.7–2.4	1.2–1.8	1.1–1.7
AS rate (W)	1.7	2.7	2.7	2.7	2.4	2.9	3.0	2.4	1.9	2.0	1.5	1.4
95% CI	1.4–2.0	2.2–3.1	2.3–3.1	2.3–3.1	2.0–2.8	2.5–3.3	2.6–3.5	2.0–2.8	1.5–2.2	1.7–2.3	1.2–1.8	1.1–1.7

Note: Rates are expressed per 100,000 women and age-standardised to the Australian 1991 population (A) and the World Standard Population (W).

Source: National Cancer Statistics Clearing House (AIHW).

Indicator 6: Incidence of invasive squamous, adenocarcinoma, adeno-squamous and other cervical cancer

Table 12: New cases of cervical cancer by age, Australia, 1989–2000

Age group	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
0–4	1	0	0	0	0	0	0	0	0	0	0	0
5–9	0	0	0	0	0	1	0	0	0	0	0	0
10–14	0	0	0	0	0	0	0	0	0	0	0	0
15–19	1	1	1	0	1	1	2	1	1	2	0	2
20–24	16	12	12	9	10	16	4	15	10	10	8	7
25–29	67	59	49	53	37	49	52	43	44	48	55	40
30–34	130	113	120	107	105	124	112	68	78	84	74	83
35–39	122	156	140	126	129	131	110	141	99	102	102	68
40–44	128	139	150	132	128	131	118	117	102	101	104	79
45–49	94	120	104	101	101	131	99	102	79	110	76	72
50–54	82	70	90	77	89	87	58	80	74	65	66	58
55–59	83	80	63	78	79	73	69	64	51	52	49	57
60–64	85	78	81	76	76	88	71	61	52	56	63	63
65–69	100	76	89	88	91	94	78	65	57	55	54	51
70–74	67	66	79	72	63	78	71	59	45	61	46	57
75–79	51	51	48	53	46	65	50	51	45	44	42	50
80–84	28	29	35	34	37	40	30	41	32	39	33	37
85+	18	23	33	22	21	22	33	25	28	29	21	21
All ages	1,072	1,073	1,094	1,028	1,013	1,131	957	933	797	858	793	745
Ages 20–69 years	907	903	898	847	845	924	771	756	646	683	651	578

Note: The above table includes the incidence of micro-invasive and invasive cervical cancers.

Source: National Cancer Statistics Clearing House (AIHW).

Table 13: Age-specific and age-standardised incidence rates of cervical cancer by age, Australia, 1989–2000

Age group	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
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	0.2	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	0.1	0.1	0.2	0.0	0.2	0.2	0.3	0.2	0.2	0.3	0.0	0.3
20–24	2.4	1.8	1.7	1.3	1.4	2.3	0.6	2.2	1.5	1.5	1.2	1.1
25–29	9.5	8.3	7.0	7.7	5.4	7.2	7.6	6.1	6.0	6.5	7.5	5.5
30–34	19.2	16.3	16.9	14.8	14.4	16.9	15.3	9.4	10.9	11.8	10.4	11.6
35–39	18.9	23.8	21.1	18.6	18.7	18.8	15.4	19.3	13.3	13.5	13.5	9.0
40–44	21.5	22.5	23.5	20.6	19.8	19.9	17.7	17.2	14.7	14.3	14.6	10.8
45–49	20.6	25.1	20.7	18.8	17.6	22.0	16.1	15.9	12.3	16.8	11.4	10.7
50–54	21.1	17.5	21.8	18.2	20.5	19.2	12.2	16.1	13.8	11.3	11.0	9.3
55–59	23.0	22.3	17.6	21.3	21.0	18.9	17.4	15.7	12.1	11.9	10.8	12.0
60–64	22.9	21.0	21.9	20.8	21.1	24.7	19.9	17.1	14.3	15.0	16.4	15.9
65–69	29.2	21.8	25.3	24.9	25.6	26.5	22.0	18.3	16.2	15.7	15.6	14.8
70–74	25.2	24.4	28.0	24.6	20.8	24.6	22.0	18.0	13.7	18.4	13.8	17.1
75–79	23.7	23.1	21.3	23.1	20.0	28.5	21.4	20.9	17.5	16.3	15.0	17.4
80–84	20.9	20.8	24.1	22.5	23.4	23.9	17.4	23.2	17.8	21.4	18.0	19.5
85+	17.4	21.8	30.0	19.0	17.2	17.3	24.6	17.7	18.8	18.6	12.6	12.0
All ages												
Crude rate	12.7	12.5	12.6	11.7	11.4	12.6	10.5	10.1	8.5	9.1	8.3	7.7
AS rate (A)	12.7	12.4	12.3	11.4	11.0	12.1	10.0	9.5	8.0	8.4	7.8	7.1
AS rate (W)	10.5	10.3	10.1	9.3	9.1	9.9	8.2	7.8	6.5	6.9	6.4	5.8
Ages 20–69 years												
Crude rate	17.4	17.0	16.6	15.4	15.2	16.4	13.5	13.1	11.0	11.5	10.8	9.5
AS rate (A)	17.4	17.0	16.6	15.4	15.1	16.3	13.4	12.8	10.8	11.2	10.6	9.3
AS rate (W)	17.0	16.7	16.2	15.0	14.7	15.9	13.0	12.6	10.5	11.0	10.4	9.1

Note: Rates are expressed per 100,000 women and age-standardised to the Australian 1991 population (A) and the World Standard Population (W).

Source: National Cancer Statistics Clearing House (AIHW).

Table 14a: New cases of cervical cancer by age, states and territories, 1996–1999

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	2	1	1	0	0	0	0	0	4
20–24	11	8	16	3	0	5	0	0	43
25–29	61	37	48	13	16	7	5	3	190
30–34	105	57	72	30	26	12	0	2	304
35–39	147	94	103	33	24	24	9	10	444
40–44	130	108	91	52	24	8	5	6	424
45–49	134	91	65	34	25	6	5	7	367
50–54	122	60	54	21	14	5	3	6	285
55–59	65	62	41	19	16	5	4	4	216
60–64	80	60	47	17	18	7	1	2	232
65–69	89	49	51	22	12	4	4	0	231
70–74	83	57	28	22	12	4	3	2	211
75–79	65	45	37	14	14	5	1	1	182
80–84	53	46	19	15	8	2	2	0	145
85+	35	29	20	13	5	0	1	0	103
All ages	1,182	804	693	308	214	94	43	43	3,381
Ages 20–69 years	944	626	588	244	175	83	36	40	2,736

Source: National Cancer Statistics Clearing House (AIHW).

Table 14b: Age-specific rates of cervical cancer, states and territories, 1996–1999

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	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.2
20–24	1.2	1.2	3.1	1.1	0.0	8.1	0.0	0.0	1.6
25–29	6.3	5.0	9.0	4.6	7.5	10.7	9.5	8.0	6.6
30–34	10.9	7.9	14.0	10.8	11.9	17.7	0.0	5.9	10.6
35–39	14.6	12.7	19.0	11.3	10.2	31.7	17.5	31.9	14.9
40–44	13.9	15.6	18.0	18.5	10.8	11.2	10.0	21.9	15.2
45–49	15.5	14.1	13.7	13.3	11.8	9.1	10.2	30.4	14.1
50–54	16.4	10.9	13.3	10.2	7.7	8.9	7.8	35.2	12.9
55–59	11.1	14.4	13.3	12.0	11.2	11.0	15.7	38.6	12.6
60–64	15.6	15.8	18.6	12.9	14.2	17.7	5.3	29.9	15.7
65–69	17.9	13.5	21.4	18.2	9.6	10.5	25.3	0.0	16.5
70–74	17.7	16.6	12.8	20.6	9.7	11.3	20.8	63.3	16.0
75–79	17.3	16.6	21.0	16.7	13.9	17.1	9.1	49.3	17.3
80–84	20.8	24.9	15.9	25.6	11.7	9.8	29.2	0.0	20.1
85+	16.3	17.8	20.0	24.9	8.4	0.0	19.5	0.0	16.8
All ages									
Crude rate	9.3	8.6	10.1	8.6	7.1	9.8	6.9	12.1	9.0
AS rate (A)	8.6	7.8	9.8	8.2	6.5	9.7	6.7	14.6	8.4
95% CI	8.1–9.1	7.3–8.4	9.2–10.5	7.3–9.1	5.7–7.5	7.9–11.7	4.7–9.0	9.8–19.8	8.1–8.7
AS rate (W)	7.1	6.4	8.1	6.6	5.4	8.0	5.6	12.3	6.9
95% CI	6.7–7.5	5.9–6.9	7.5–8.7	5.8–7.3	4.7–6.2	6.4–9.8	3.9–7.4	8.4–16.4	6.7–7.2
Ages 20–69 years									
Crude rate	11.8	10.5	13.7	10.7	9.3	14.1	8.9	17.9	11.6
AS rate (A)	11.5	10.3	13.7	10.6	9.1	14.1	9.1	18.6	11.4
95% CI	10.8–12.2	9.5–11.1	12.6–14.7	9.2–11.9	7.8–10.5	11.1–17.4	6.2–12.3	12.5–24.9	10.9–11.8
AS rate (W)	11.3	10.1	13.3	10.3	8.9	13.5	9.0	18.8	11.1
95% CI	10.6–12.1	9.4–10.9	12.2–14.3	8.9–11.6	7.7–10.2	10.6–16.5	5.8–11.9	12.6–25.1	10.7–11.6

Note: Rates are expressed per 100,000 women and age-standardised to the Australian 1991 population (A) and the World Standard Population (W).

Source: National Cancer Statistics Clearing House (AIHW).

Table 15a: Number of new cases of 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
5–9	0	0	0	0	0	0	0	0	0
10–14	0	0	0	0	0	0	0	0	0
15–19	3	1	1	0	0	0	0	0	5
20–24	12	5	12	2	0	4	0	0	35
25–29	63	32	46	13	16	9	6	2	187
30–34	118	55	76	28	28	10	2	2	319
35–39	122	69	91	31	22	20	8	8	371
40–44	123	95	85	44	21	8	5	5	386
45–49	119	85	56	39	24	5	5	4	337
50–54	113	54	46	20	18	6	2	4	263
55–59	73	56	40	15	14	5	3	3	209
60–64	78	58	54	16	21	4	1	2	234
65–69	86	47	44	19	12	6	3	0	217
70–74	78	55	34	21	14	3	3	1	209
75–79	64	45	32	14	17	4	2	3	181
80–84	51	40	19	18	10	1	2	0	141
85+	35	25	20	11	6	1	1	0	99
All ages	1,138	722	656	291	223	86	43	34	3,193
Ages 20–69 years	907	556	550	227	176	77	35	30	2,558

Source: National Cancer Statistics Clearing House (AIHW).

Table 15b: Age-specific rates of cervical cancer, 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	0.4	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.2
20–24	1.4	0.8	2.4	0.8	0.0	6.7	0.0	0.0	1.3
25–29	6.4	4.3	8.5	4.6	7.6	13.9	11.3	5.3	6.4
30–34	12.3	7.6	14.7	10.0	13.0	15.1	4.0	5.8	11.2
35–39	12.0	9.3	16.5	10.5	9.4	26.7	15.6	25.0	12.3
40–44	12.9	13.5	16.4	15.4	9.3	11.1	10.0	17.8	13.6
45–49	13.6	13.0	11.6	14.9	11.2	7.5	10.2	16.7	12.8
50–54	14.5	9.3	10.7	9.1	9.4	10.1	4.9	21.8	11.3
55–59	12.0	12.6	12.3	9.1	9.5	10.7	11.1	26.5	11.7
60–64	14.9	15.0	20.5	11.7	16.2	9.9	5.1	28.4	15.4
65–69	17.5	13.1	18.5	15.7	9.8	15.9	18.7	0.0	15.6
70–74	16.6	16.0	15.3	19.3	11.4	8.5	20.5	30.7	15.8
75–79	16.4	15.9	17.5	15.9	16.2	13.3	16.9	142.5	16.5
80–84	19.6	21.4	15.5	30.4	14.4	4.8	27.8	0.0	19.2
85+	15.5	14.6	18.9	19.9	9.5	5.8	17.9	0.0	15.3
All ages									
Crude rate	8.9	7.6	9.4	8.0	7.4	9.0	6.9	9.4	8.4
AS rate (A)	8.2	6.9	9.1	7.5	6.7	8.8	6.6	12.6	7.8
95% CI	7.6–8.6	6.4–7.4	8.4–9.8	6.7–8.5	5.8–7.7	7.1–10.8	4.6–8.6	7.6–17.8	7.5–8.1
AS rate (W)	6.7	5.6	7.5	6.0	5.5	7.4	5.4	9.7	6.4
95% CI	6.3–7.1	5.2–6.1	6.9–8.1	5.3–6.7	4.7–6.3	5.8–9.1	3.9–7.0	6.2–13.0	6.1–6.6
Ages 20–69 years									
Crude rate	11.3	9.3	12.6	9.8	9.3	13.1	8.6	13.1	10.7
AS rate (A)	11.0	9.0	12.6	9.6	9.1	13.1	8.7	13.6	10.5
95% CI	10.2–11.7	8.3–9.8	11.6–13.7	8.4–11.0	7.8–10.5	10.2–16.2	5.7–11.7	8.8–19.4	10.1–10.9
AS rate (W)	10.7	8.9	12.2	9.3	8.9	12.7	8.5	13.6	10.2
95% CI	10.0–11.4	8.1–9.6	11.1–13.2	8.2–10.6	7.6–10.3	9.8–15.7	5.8–11.5	8.7–19.0	9.8–10.6

Note: Rates are expressed per 100,000 women and age-standardised to the Australian 1991 population (A) and the World Standard Population (W).

Source: National Cancer Statistics Clearing House (AIHW).

Table 16a: New cases of cervical cancer by histological type for women aged 20–69 years, Australia, 1989–2000

Histological type	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Squamous	687	641	650	612	597	630	545	529	449	484	466	398
Adenocarcinoma	116	148	144	141	142	192	147	148	129	140	127	117
Adeno-squamous	48	50	43	51	47	40	34	40	32	30	23	30
Other	56	64	61	43	59	62	45	39	36	29	35	30
Total	907	903	898	847	845	924	771	756	646	683	651	575
<i>Micro-invasive</i>	93	147	156	153	139	170	180	145	116	124	92	86

Source: National Cancer Statistics Clearing House (AIHW).

Table 16b: Age-standardised incidence rates for cervical cancer by histological type for women aged 20–69 years, Australia, 1989–2000

Histological type	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Squamous	13.2	12.1	11.9	11.1	10.7	11.1	9.5	9.0	7.5	8.0	7.6	6.4
Adenocarcinoma	2.2	2.8	2.6	2.6	2.5	3.4	2.6	2.5	2.1	2.3	2.1	1.9
Adeno-squamous	0.9	0.9	0.8	0.9	0.8	0.7	0.6	0.7	0.5	0.5	0.4	0.5
Other	1.1	1.2	1.1	0.8	1.1	1.1	0.8	0.7	0.6	0.5	0.6	0.5
<i>Micro-invasive</i>	1.8	2.8	2.9	2.8	2.5	3.0	3.1	2.5	2.0	2.0	1.5	1.4

Note: Rates are expressed per 100,000 women and age-standardised to the Australian 1991 population.

Source: National Cancer Statistics Clearing House (AIHW).

Table 17a: New cases of cervical cancer by histological type for women, all ages, Australia, 1989–2000

Histological type	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Squamous	808	769	792	753	706	780	675	667	546	609	574	520
Adenocarcinoma	136	171	172	157	164	222	173	168	159	166	147	137
Adeno-squamous	53	56	50	56	56	50	39	47	38	35	25	31
Other	75	77	80	62	87	78	70	51	54	48	47	54
Total	1,072	1,073	1,094	1,028	1,013	1,130	957	933	797	858	793	742
<i>Micro-invasive</i>	95	152	166	157	144	181	192	153	122	131	95	89

Source: National Cancer Statistics Clearing House (AIHW).

Table 17b: Age-standardised incidence rates for cervical cancer by histological type for women, all ages, Australia, 1989–2000

Histological type	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Squamous	8.9	8.6	8.7	8.0	7.5	8.1	7.1	6.8	5.2	5.7	5.3	4.9
Adenocarcinoma	1.5	1.9	1.8	1.7	1.7	2.4	1.8	1.7	1.5	1.6	1.5	1.4
Adeno-squamous	0.6	0.6	0.6	0.6	0.6	0.5	0.4	0.5	0.4	0.3	0.2	0.3
Other	0.8	0.8	0.8	0.6	0.8	0.8	0.7	0.5	0.5	0.4	0.5	0.5
<i>Micro-invasive</i>	1.1	1.8	1.9	1.8	1.6	2.0	2.1	1.6	1.3	1.3	1.0	0.9

Note: Rates are expressed per 100,000 women and age-standardised to the Australian 1991 population.

Source: National Cancer Statistics Clearing House (AIHW).

Indicator 8: Incidence by location

Table 18: New cases of cervical cancer by age and location, 1993–1996 and 1997–2000

Age group	Metropolitan		Rural		Remote	
	1993–1996	1997–2000	1993–1996	1997–2000	1993–1996	1997–2000
0–4	0	0	0	0	0	0
5–9	0	0	0	0	0	0
10–14	1	0	0	0	0	0
15–19	3	4	2	1	0	0
20–24	33	27	10	8	2	0
25–29	130	139	42	42	9	6
30–34	277	229	117	80	15	10
35–39	367	255	128	100	16	16
40–44	349	276	132	91	13	19
45–49	322	254	92	74	18	9
50–54	221	202	83	55	9	6
55–59	196	149	77	57	12	3
60–64	211	163	78	66	8	5
65–69	229	161	84	53	15	3
70–74	200	161	64	43	8	5
75–79	147	131	61	48	4	2
80–84	103	103	41	36	4	2
85+	75	74	23	24	3	1
All ages	2,863	2,327	1,034	778	137	88
Ages 20–69 years	2,335	1,854	842	626	118	78

Note: The numbers are presented as 4-year rolling blocks of data.

Source: National Cancer Statistics Clearing House (AIHW).

Table 19: Age-specific and age-standardised incidence rates for cervical cancer by age and location, 1993–1996 and 1997–2000

Age group	Metropolitan		Rural		Remote	
	1993–1996	1997–2000	1993–1996	1997–2000	1993–1996	1997–2000
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	0.1	0.0	0.0	0.0	0.0	0.0
15–19	0.2	0.2	0.3	0.1	0.0	0.1
20–24	1.5	1.3	1.7	1.6	2.3	0.0
25–29	6.3	6.3	6.9	6.9	9.5	6.5
30–34	13.1	10.9	16.4	12.2	15.5	10.8
35–39	18.2	11.8	17.7	13.1	18.3	18.2
40–44	18.3	13.6	19.7	12.5	18.7	24.4
45–49	18.3	13.3	15.4	11.1	30.2	14.1
50–54	16.6	12.0	17.2	9.2	20.2	11.1
55–59	17.9	11.9	17.6	11.6	35.2	7.6
60–64	21.2	15.5	19.0	15.0	28.1	17.3
65–69	22.9	16.7	21.1	13.1	67.5	13.4
70–74	22.0	17.2	18.3	11.7	44.3	25.5
75–79	22.0	16.8	23.9	16.1	33.8	15.0
80–84	21.2	19.7	22.7	17.8	47.6	21.9
85+	19.7	15.9	16.8	13.9	41.1	12.6
All ages						
AS rate (A)	15.0	11.3	15.1	10.6	22.9	12.8
95% CI	14.5–15.6	10.9–11.8	14.2–16.0	9.8–11.4	19.0–27.0	10.0–15.9
AS rate (W)	14.4	10.8	14.4	10.2	21.8	12.1
95% CI	13.9–15.6	10.4–11.8	13.5–16.0	9.4–11.4	18.3–27.0	9.7–15.9
Ages 20–69 years						
AS rate (A)	14.2	10.6	14.4	10.2	20.7	11.9
95% CI	13.7–14.8	10.1–11.1	13.4–15.3	9.3–11.0	17.0–24.8	9.4–14.9
AS rate (W)	13.9	10.3	13.9	9.9	20.3	11.4
95% CI	13.4–14.4	9.9–10.8	13.0–14.9	9.1–10.6	16.6–24.3	9.0–14.5

Notes

1. The numbers are presented as 4-year rolling blocks of data.
2. Rates are expressed per 100,000 women and age-standardised to the Australian 1991 population (A) and the World Standard Population (W).

Source: National Cancer Statistics Clearing House (AIHW).

Indicator 7: Mortality

Table 20: Deaths from cervical cancer by age, Australia, 1982–2001

Age group	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01
0–4	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
10–14	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	1	1	0	0	0	0	1	0	0	0	0	0	0
20–24	1	1	0	0	2	2	0	1	1	3	0	0	0	0	1	0	3	1	1	2
25–29	7	8	10	6	6	5	3	3	10	5	5	2	6	3	1	2	6	2	4	2
30–34	13	12	13	20	12	15	12	21	14	13	15	11	11	7	13	8	5	6	10	12
35–39	12	18	19	17	16	20	15	18	30	25	19	25	11	16	23	18	19	7	12	15
40–44	22	20	20	18	26	20	24	24	36	19	27	32	28	21	20	16	19	18	14	23
45–49	24	28	26	21	24	19	27	31	36	29	26	23	35	32	30	28	16	25	27	35
50–54	29	26	25	25	25	24	19	27	17	21	13	29	37	26	13	21	24	15	19	27
55–59	41	40	21	31	41	32	41	20	25	25	23	20	26	34	22	24	15	14	19	23
60–64	47	36	41	41	41	28	41	33	34	33	31	25	24	30	21	22	28	15	24	6
65–69	39	49	43	52	50	46	41	54	43	35	25	30	37	37	29	30	19	21	26	18
70–74	35	30	33	43	32	55	34	48	25	37	45	38	33	43	41	36	28	30	37	27
75–79	34	20	29	29	23	29	35	29	32	30	32	28	30	30	38	32	26	26	25	14
80–84	21	22	26	26	23	20	34	24	8	22	35	24	26	27	22	27	26	19	23	19
85+	18	21	21	29	24	16	17	22	25	32	23	24	24	20	24	30	31	21	26	39
All ages	342	330	327	359	343	329	343	355	337	329	319	311	329	328	296	294	265	220	267	262
Ages 20–69 years	234	238	218	230	242	210	222	231	246	208	184	197	216	207	172	169	154	124	156	163

Note: Deaths were derived from place of usual residence and by year of registration.

Source: AIHW Mortality Database.

Table 21: Age-specific and age-standardised death rates for cervical cancer by age, Australia, 1982–2001

Age group	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01
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
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
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
15–19	0.0	0.0	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
20–24	0.1	0.1	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	0.3
25–29	1.1	1.2	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	0.5	0.3
30–34	2.1	1.9	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	1.6
35–39	2.2	3.2	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	2.0
40–44	5.1	4.5	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	3.1
45–49	6.4	7.6	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	2.5	3.8	4.0	5.1
50–54	7.9	7.2	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	3.1	4.2
55–59	11.1	10.7	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	4.6
60–64	14.2	10.6	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	6.1	7.6	4.0	6.2	1.5
65–69	13.5	16.8	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	5.2
70–74	15.0	12.5	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	9.1	11.2	8.1
75–79	21.3	11.6	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	9.2	8.7	4.8
80–84	19.6	19.9	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	15.1	14.4	10.6	12.3	9.4
85+	22.7	25.6	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	19.9	12.7	15.2	21.3
All ages																				
AS rate (A)	5.9	5.5	5.4	5.7	5.4	5.0	5.1	5.2	4.9	4.5	4.3	4.1	4.3	4.2	3.7	3.5	3.1	2.5	3.0	2.8
As rate (W)	5.2	5.0	4.7	4.9	4.8	4.4	4.4	4.6	4.4	4.0	3.6	3.6	3.8	3.7	3.1	3.0	2.7	2.2	2.7	2.5
Ages 20–69 years																				
AS rate (A)	5.1	5.1	4.7	4.8	4.9	4.2	4.3	4.4	4.6	3.8	3.3	3.5	3.8	3.5	2.9	2.8	2.5	2.0	2.5	2.4
As rate (W)	5.1	5.1	4.6	4.7	4.9	4.1	4.3	4.4	4.6	3.8	3.3	3.5	3.8	3.6	2.9	2.8	2.5	2.0	2.5	2.4

Notes

1. Rates for all ages are based on data for women aged 15 years and over.
2. Rates are expressed per 100,000 women and age-standardised to the Australian 1991 population (A) and the World Standard Population (W).

Source: AIHW Mortality Database.

Table 22: Deaths from cervical cancer by age, states and territories, 1994–1997

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	1	0	0	0	0	0	0	0	1
20–24	0	0	1	0	0	0	0	0	1
25–29	1	4	5	0	0	0	2	0	12
30–34	13	11	8	5	1	1	0	0	39
35–39	24	16	10	9	5	2	0	2	68
40–44	37	15	13	9	3	5	3	1	86
45–49	54	23	17	14	6	5	3	6	128
50–54	39	19	23	10	3	3	3	0	100
55–59	37	20	20	15	7	6	2	2	109
60–64	39	19	13	8	7	9	1	2	98
65–69	52	40	19	14	5	4	1	2	137
70–74	60	42	25	10	10	7	2	1	157
75–75	46	32	34	7	11	3	2	1	136
80–84	34	29	14	10	14	1	1	0	103
85+	36	23	10	15	9	4	1	0	98
All ages	473	293	212	126	81	50	21	17	1,273
Ages 20–69 years	296	167	129	84	37	35	15	15	778

Notes

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

Source: AIHW Mortality Database.

Table 23: Age-specific and age-standardised death rates for cervical cancer by age, states and territories, 1994–1997

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	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20–24	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
25–29	0.1	0.5	0.9	0.0	0.0	0.0	3.8	0.0	0.4
30–34	1.4	1.5	1.6	1.8	0.5	1.5	0.0	0.0	1.4
35–39	2.4	2.2	1.8	3.1	2.1	2.6	0.0	6.4	2.3
40–44	4.0	2.2	2.6	3.2	1.4	7.0	6.0	3.6	3.1
45–49	6.2	3.6	3.6	5.5	2.8	7.6	6.1	26.1	4.9
50–54	5.3	3.5	5.7	4.9	1.6	5.3	7.8	0.0	4.6
55–59	6.3	4.6	6.5	9.5	4.9	13.1	7.8	19.3	6.4
60–64	7.6	5.0	5.1	6.0	5.5	22.7	5.3	29.9	6.7
65–69	10.5	11.0	8.0	11.6	4.0	10.5	6.3	44.1	9.8
70–74	12.8	12.2	11.4	9.4	8.1	19.8	13.8	31.7	11.9
75–75	12.3	11.8	19.3	8.3	10.9	10.3	18.1	49.3	13.0
80–84	13.3	15.7	11.7	17.1	20.5	4.9	14.6	0.0	14.4
85+	16.8	14.1	10.0	28.7	15.1	24.4	19.5	0.0	16.0
All ages									
AS rate (A)	4.8	4.0	4.5	5.0	3.1	6.8	5.5	13.1	4.5
95% CI	4.4–5.3	3.6–4.4	4.1–4.9	4.6–5.5	2.8–3.3	6.2–7.4	5.0–6.0	12.0–14.3	4.1–4.9
AS rate (W)	4.2	3.3	3.6	4.2	2.5	6.3	4.6	11.0	3.8
95% CI	3.8–4.6	3.0–3.7	3.3–4.0	3.8–4.6	2.2–2.7	5.7–6.9	4.2–5.0	10.0–12.0	3.5–4.2
Ages 20–69 years									
AS rate (A)	3.7	2.8	3.2	3.9	1.9	5.7	4.0	11.0	3.4
95% CI	3.4–4.0	2.5–3.2	2.8–3.6	3.3–4.6	1.5–2.3	4.2–7.3	2.3–5.7	5.8–16.2	3.2–3.6
AS rate (W)	3.5	2.7	2.9	3.6	1.8	5.6	3.8	9.7	3.2
95% CI	3.2–3.9	2.4–3.0	2.6–3.3	3.0–4.2	1.4–2.2	4.1–7.2	2.2–5.5	5.1–14.4	3.0–3.4

Notes

1. The age-standardised rates were averaged over 4 years to smooth annual variations that may occur in the smaller states and territories.
2. Deaths were derived from place of usual residence and by year of registration.
3. Rates for all ages are based on data for women aged 20 years and over.
4. Rates are expressed per 100,000 women and age-standardised to the Australian 1991 population (A) and the World Standard Population (W).

Source: AIHW Mortality Database.

Table 24: Deaths from cervical cancer by age, states and territories, 1998–2001

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	0	0	0	0	0	0
20–24	2	2	2	1	0	0	0	0	5
25–29	0	4	6	5	1	3	0	0	14
30–34	23	11	9	5	8	0	0	0	29
35–39	25	15	5	6	2	1	0	1	56
40–44	33	14	25	8	7	2	2	1	67
45–49	32	27	30	11	6	2	1	0	96
50–54	30	20	19	8	5	5	3	1	79
55–59	26	14	18	10	5	2	1	2	72
60–64	20	10	9	3	3	0	0	3	89
65–69	12	13	12	9	5	2	1	1	96
70–74	31	23	10	11	13	2	0	1	131
75–79	27	10	8	3	4	0	1	0	109
80–84	35	18	11	15	5	2	2	1	95
85+	51	40	38	20	10	6	4	2	108
All ages	261	158	151	86	50	24	12	10	1,046
Ages 20–69 years	203	130	135	66	42	17	8	9	603

Notes

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

Source: AIHW Mortality Database.

Table 25: Age-specific and age-standardised death rates for cervical cancer by age, states and territories, 1998–2001

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	0.4	0.4	0.0	0.0	0.0	0.0	0.2
25–29	0.0	0.5	1.1	1.8	0.5	4.8	0.0	0.0	0.5
30–34	2.4	1.5	1.7	1.8	3.8	0.0	0.0	0.0	1.0
35–39	2.5	2.0	0.9	2.0	0.9	1.4	0.0	3.1	1.9
40–44	3.4	2.0	4.7	2.8	3.1	2.8	4.0	3.5	2.3
45–49	3.6	4.1	6.1	4.1	2.8	3.0	2.1	0.0	3.6
50–54	3.7	3.3	4.2	3.4	2.5	8.1	6.9	5.1	3.3
55–59	4.1	3.0	5.2	5.8	3.3	4.1	3.5	16.4	3.9
60–64	3.7	2.5	3.3	2.1	2.3	0.0	0.0	39.6	5.7
65–69	2.5	3.6	5.0	7.3	4.1	5.3	6.1	20.4	6.9
70–74	6.6	6.7	4.5	10.0	10.7	5.7	0.0	29.2	9.9
75–75	6.7	3.4	4.2	3.3	3.7	0.0	8.0	0.0	9.7
80–84	13.1	9.4	8.7	24.9	7.0	9.5	26.3	72.6	12.7
85+	21.5	22.4	34.1	34.3	15.2	33.0	65.9	177.8	16.0
All ages									
AS rate (A)	3.1	2.7	3.5	3.9	2.8	3.2	3.2	10.4	3.3
95% CI	2.7–3.5	2.3–3.0	3.1–3.9	3.4–4.3	2.4–3.1	2.8–3.6	2.8–3.6	9.2–11.7	2.9–3.7
AS rate (W)	2.8	2.4	3.3	3.4	2.5	3.1	2.6	8.9	3.0
95% CI	2.5–3.1	2.1–2.7	2.9–3.7	3.0–3.8	2.2–2.8	2.7–3.5	2.3–2.9	7.8–10.0	2.6–3.3
Ages 20–69 years									
AS rate (A)	2.4	2.0	2.9	2.7	2.1	2.6	1.8	6.2	2.4
95% CI	2.0–2.7	1.7–2.4	2.4–3.4	2.1–3.4	1.5–2.8	1.4–3.9	0.6–3.1	2.2–10.3	2.2–2.6
AS rate (W)	2.3	2.0	2.9	2.7	2.0	2.7	1.8	6.3	2.4
95% CI	2.0–2.6	1.7–2.4	2.4–3.4	2.1–3.4	1.4–2.6	1.4–4.1	0.6–3.1	2.2–10.3	2.2–2.6

Notes

1. The age-standardised rates were averaged over 4 years to smooth annual variations that may occur in the smaller states and territories.
2. Deaths were derived from place of usual residence and by year of registration.
3. Rates for all ages are based on data for women aged 20 years and over.
4. Rates are expressed per 100,000 women and age-standardised to the Australian 1991 population (A) and the World Standard Population (W).

Source: AIHW Mortality Database.

Table 26: Deaths from cervical cancer by age and location, 1994–1997 and 1998–2001

Age group	Metropolitan		Rural		Remote	
	1994–1997	1998–2001	1994–1997	1998–2001	1994–1997	1998–2001
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	1	0	0	0	0	0
20–24	1	4	0	3	0	0
25–29	9	9	3	9	0	1
30–34	25	38	12	17	1	1
35–39	51	36	14	16	2	3
40–44	52	64	30	26	2	2
45–49	88	79	28	27	9	3
50–54	71	61	24	27	4	3
55–59	74	58	29	19	4	1
60–64	63	37	28	10	5	1
65–69	87	37	40	15	7	3
70–74	107	67	44	22	3	2
75–75	94	39	37	10	2	4
80–84	70	65	29	21	2	3
85+	73	115	24	48	0	8
All ages	864	709	343	270	40	35
Ages 20–69 years	520	423	209	169	33	18

Notes

1. Deaths were derived from place of usual residence and by year of registration.
2. The number of deaths is presented as 4-year rolling blocks of data.

Source: AIHW Mortality Database.

Table 27: Age-specific and age-standardised death rates for cervical cancer by age and location, 1994–1997 and 1998–2001

Age group	Metropolitan		Rural		Remote	
	1994–1997	1998–2001	1994–1997	1998–2001	1994–1997	1998–2001
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	0.1	0.0	0.0	0.0	0.0	0.0
20–24	0.0	0.0	0.0	0.2	0.6	0.0
25–29	0.4	0.5	0.0	0.4	1.5	1.1
30–34	1.2	1.7	1.0	1.8	2.6	1.1
35–39	2.5	1.9	2.3	1.7	2.1	3.4
40–44	2.7	4.4	2.7	3.1	3.6	2.6
45–49	4.9	4.6	14.3	4.1	4.1	4.5
50–54	5.0	4.6	8.2	3.5	4.6	5.3
55–59	6.5	6.6	10.8	4.4	3.9	2.4
60–64	6.3	6.9	17.7	3.5	2.3	3.3
65–69	8.8	10.0	30.0	3.8	3.7	12.6
70–74	11.6	12.4	16.8	7.2	6.0	10.5
75–75	13.7	14.2	16.2	4.8	3.4	28.8
80–84	14.0	15.6	22.5	12.2	10.7	30.0
85+	18.2	17.0	0.0	23.6	27.8	85.5
All ages						
AS rate (A)	4.2	3.1	4.5	3.3	7.6	5.7
95% CI	3.9–4.5	2.8–3.3	4.0–5.0	2.9–3.8	5.2–9.9	3.9–7.8
AS rate (W)	3.8	2.8	4.0	3.1	7.3	4.5
95% CI	3.5–4.1	2.5–3.0	3.6–4.5	2.7–3.5	5.0–9.5	3.0–6.2
Ages 20–69 years						
AS rate (A)	3.1	2.3	3.4	2.7	6.6	3.0
95% CI	2.8–3.4	2.1–2.5	2.9–3.8	2.3–3.1	4.3–8.8	1.7–4.6
AS rate (W)	3.1	2.3	3.3	2.7	6.7	2.9
95% CI	2.8–3.4	2.1–2.5	2.9–3.8	2.3–3.1	4.3–9.1	1.6–4.4

Notes

1. The age-standardised rates are presented as 4-year rolling blocks of data.
2. Deaths were derived from place of usual residence and by year of registration.
3. Rates for all ages are based on data for women aged 20 years and over.
4. Rates are expressed per 100,000 women and age-standardised to the Australian 1991 population (A) and the World Standard Population (W).

Source: AIHW Mortality Database.

Table 28: Deaths from cervical cancer by age and Indigenous status, Queensland, South Australia, Western Australia and Northern Territory, 1996–1999, 1997–2000 and 1998–2001

Age group	Indigenous			Non-Indigenous		
	1996–1999	1997–2000	1998–2001	1996–1999	1997–2000	1998–2001
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	0	0	0
20–24	0	0	0	0	0	3
25–29	1	1	1	5	6	11
30–34	1	2	1	8	13	21
35–39	2	2	3	11	15	11
40–44	5	5	3	19	17	38
45–49	2	5	1	21	30	46
50–54	1	0	1	19	21	32
55–59	1	2	3	17	24	32
60–64	2	2	3	27	34	15
65–69	2	3	4	20	31	23
70–74	3	4	2	34	35	33
75+	3	3	11	76	91	106
All ages	23	29	33	256	317	371
Ages 20–69 years	17	22	20	147	191	232

Notes

1. Deaths were derived from place of usual residence and by year of registration.
2. The number of deaths is presented as 4-year rolling blocks of data.
3. Only Queensland (from 1998), South Australia, Western Australia and the Northern Territory have Indigenous death registration data considered to be of a publishable standard.

Source: AIHW Mortality Database.

Table 29: Age-specific and age-standardised death rates for cervical cancer by age and Indigenous status, Queensland, South Australia, Western Australia and Northern Territory, 1996–1999, 1997–2000 and 1998–2001

Age group	Indigenous			Non-Indigenous		
	1996–1999	1997–2000	1998–2001	1996–1999	1997–2000	1998–2001
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	0.0	0.0	0.0	0.0
20–24	0.0	0.0	0.0	0.0	0.0	0.0
25–29	2.8	2.5	2.2	0.7	0.7	1.1
30–34	3.3	5.6	2.4	1.1	1.5	2.1
35–39	7.8	6.7	8.5	1.4	1.6	1.0
40–44	24.5	20.7	10.6	2.5	1.9	3.6
45–49	13.0	27.1	4.5	2.9	3.5	4.7
50–54	8.5	0.0	4.9	3.1	2.8	3.6
55–59	12.5	21.4	27.0	3.7	4.3	4.8
60–64	31.0	27.0	34.1	6.9	7.3	2.7
65–69	42.1	55.3	58.2	5.5	7.3	4.8
70–74	101.8	115.6	48.4	9.9	8.8	7.2
75+	79.7	70.6	214.3	12.1	12.1	12.0
All ages						
AS rate (A)	16.7	19.7	25.8	2.3	2.5	3.3
95% CI	8.5–26.3	11.0–30.0	16.9–36.1	2.0–2.7	2.1–2.8	3.0–3.6
AS rate (W)	16.0	18.2	19.0	2.8	3.0	3.0
95% CI	9.1–23.5	11.7–25.6	12.6–25.8	2.5–3.2	2.7–3.3	2.7–3.3
Ages 20–69 years						
AS rate (A)	9.8	11.3	11.4	1.9	2.1	2.5
95% CI	4.6–16.1	6.2–17.1	6.3–17.6	1.6–2.3	1.7–2.4	2.2–2.8
AS rate (W)	10.6	12.9	11.0	2.3	2.5	2.5
95% CI	5.3–16.8	7.6–18.8	6.4–16.4	1.9–2.6	2.1–2.8	2.2–2.8

Notes

1. The age-standardised rates are presented as 4-year rolling blocks of data.
2. Deaths derived from place of usual residence and by year of registration.
3. Rates for all ages are based on data for women aged 20 years and over.
4. Rates are expressed per 100,000 women and age-standardised to the Australian 1991 population (A) and the World Standard Population (W).
5. Only Queensland (from 1998), South Australia, Western Australia and the Northern Territory have Indigenous death registration data considered to be of a publishable standard.
6. The increases in indigenous age-standardised rates for all ages are related to the inclusion of Queensland data for 1998–2001. Queensland accounts for almost half of the Indigenous population when the four jurisdictions are combined. When Queensland data is excluded, the 1998–2001 mortality rate falls to 17.2 for all ages and 9.7 for ages 20–69.

Source: AIHW Mortality Database.

Part 2—Cervical Screening in Australia 1999–2000

Part 2: Contents

- List of tables 86
- List of figures 89
- Acknowledgments..... 90
- Summary 91
- National cervical screening monitoring indicators 93
- Participation 97
 - Indicator 1: Participation rate for cervical screening..... 99
- Early re-screening 103
 - Indicator 2: Early re-screening..... 104
- Low-grade abnormalities 106
 - Indicator 3: Low-grade abnormality detection..... 107
- High-grade abnormalities 109
 - Indicator 4: High-grade abnormality detection 110
- Incidence 113
 - Indicator 5: Incidence of micro-invasive cervical cancer 114
 - Indicator 6: Incidence of invasive squamous, adenocarcinoma, adeno-squamous and other cervical cancer..... 116
 - Indicator 8: Incidence by location 120
- Mortality..... 122
 - Indicator 7: Mortality 123
 - Indicator 9: Mortality by location..... 127
 - Indicator 10: Indigenous mortality..... 129
- Tables..... 131

List of tables

Table A:	Structure of the Rural, Remote and Metropolitan Areas classification	95
Table 1a:	Number of women participating in the National Cervical Screening Program, by age, states and territories, 1998–1999	131
Table 1b:	Proportion of women participating in the National Cervical Screening Program, by age, states and territories, 1998–1999	132
Table 2a:	Number of women participating in the National Cervical Screening Program, by age, states and territories, 1999–2000	133
Table 2b:	Proportion of women participating in the National Cervical Screening Program, by age, states and territories, 1999–2000	134
Table 3:	Number of women with repeat screenings in the 21 months following a negative Pap smear in February 1999, states and territories, and Australia, 1999–2000	135
Table 4:	Percentage of women with repeat screenings in the 21 months following a negative smear in February 1999, states and territories, and Australia, 1999–2000	135
Table 5a:	Number of low- and high-grade abnormalities on histology for women aged 20–69 years, states and territories, 1999	136
Table 5b:	Number of low- and high-grade abnormalities on histology for women aged 20–69 years, states and territories, 2000	136
Table 6a:	Rate of histologically confirmed high-grade abnormalities per 1,000 women screened, by age, states and territories, 1999	137
Table 6b:	Rate of histologically confirmed high-grade abnormalities per 1,000 women screened, by age, states and territories, 2000	138
Table 7a:	Number of histologically confirmed high-grade abnormalities, by age, states and territories, 1999	139
Table 7b:	Number of histologically confirmed high-grade abnormalities, by age, states and territories, 2000	140
Table 8a:	Number of women screened, by age, states and territories, 1999	141
Table 8b:	Number of women screened, by age, states and territories, 2000	142
Table 9a:	Age-standardised high-grade abnormality rate on histology per 1,000 women screened aged 20–69 years, states and territories, 1999	143
Table 9b:	Age-standardised high-grade abnormality rate on histology per 1,000 women screened aged 20–69 years, states and territories, 2000	143
Table 10:	New cases of micro-invasive cervical cancer, by age, Australia, 1988–1999	144
Table 11:	Age-specific and age-standardised rates of micro-invasive cervical cancer, by age, Australia, 1988–1999	145

Table 12:	New cases of cervical cancer, by age, Australia, 1988–1999	146
Table 13:	Age-specific and age-standardised incidence rates of cervical cancer, by age, Australia, 1988–1999	147
Table 14a:	Number of new cases of cervical cancer by age, states and territories, 1995–1998.....	148
Table 14b:	Age-specific rates of cervical cancer, by age, states and territories, 1995–1998.....	149
Table 15a:	Number of new cases of cervical cancer, by age, states and territories, 1996–1999.....	150
Table 15b:	Age-specific rates of cervical cancer, by age, states and territories, 1996–1999.....	151
Table 16a:	Number of new cases of cervical cancer, by histological type for women aged 20–69 years, Australia, 1988–1999.....	152
Table 16b:	Age-standardised incidence rates for cervical cancer, by histological type for women aged 20–69 years, Australia, 1988–1999	152
Table 17a:	Number of new cases of cervical cancer, by histological type for women, all ages, Australia, 1988–1999	153
Table 17b:	Age-standardised incidence rates for cervical cancer, by histological type for women, all ages, Australia, 1988–1999	153
Table 18:	Number of new cases of cervical cancer, by age and location, 1995–1998 and 1996–1999	154
Table 19:	Age-specific and age-standardised incidence rates for cervical cancer, by age and location, 1995–1998 and 1996–1999.....	155
Table 20:	Number of deaths from cervical cancer, by age, Australia, 1981–2000	156
Table 21:	Age-specific and age-standardised death rates for cervical cancer, by age, Australia, 1981–2000.....	157
Table 22:	Number of deaths from cervical cancer, by age, states and territories, 1993–1996.....	158
Table 23:	Age-specific and age-standardised death rates for cervical cancer, by age, states and territories, 1993–1996.....	159
Table 24:	Number of deaths from cervical cancer, by age, states and territories, 1997–2000.....	160
Table 25:	Age-specific and age-standardised death rates for cervical cancer, by age, states and territories, 1997–2000.....	161
Table 26:	Number of deaths from cervical cancer, by age and location, 1993–1996 and 1997–2000	162
Table 27:	Age-specific and age-standardised death rates for cervical cancer, by age and location, 1993–1996 and 1997–2000	163

Table 28:	Number of deaths from cervical cancer, by age and Indigenous status, 1995–1998, 1996–1999 and 1997–2000	164
Table 29:	Age-specific and age-standardised death rates for cervical cancer, by age and Indigenous status, 1995–1998, 1996–1999 and 1997–2000	165

List of figures

Figure 1:	Participation rates in the National Cervical Screening Program, by age group, Australia, 1998–1999 and 1999–2000	99
Figure 2:	Participation (age-standardised) in the National Cervical Screening Program by women aged 20–69 years, states and territories, 1998–1999 and 1999–2000 ..	101
Figure 3:	Proportion of women re-screened, by number of screens during the 21-month period following a negative smear in February 1999, Australia	104
Figure 4:	Proportion of women re-screened, by number of screens during the 21-month period following a negative smear in February 1999, states and territories.....	105
Figure 5:	Ratio of low- to high-grade abnormalities, by women aged 20–69 years, states and territories, 1999 and 2000.....	107
Figure 6:	High-grade abnormalities per 1,000 women, by age group, Australia, 1999 and 2000.....	110
Figure 7:	Age-standardised rate of high-grade abnormalities per 1,000 women screened aged 20–69 years, states and territories, 1999 and 2000.....	112
Figure 8:	Age-standardised incidence rates for micro-invasive squamous cell cancer, women aged 20–69 years, Australia, 1988–1999	114
Figure 9:	Age-specific incidence rates of micro-invasive squamous cell cancer, women aged 20–69 years, Australia, 1998 and 1999	115
Figure 10:	Age-standardised incidence rates of cervical cancer, Australia, 1988–1999	116
Figure 11:	Age-specific incidence rates of cervical cancer, Australia, 1998 and 1999	117
Figure 12:	Age-standardised cervical cancer incidence rates, women aged 20–69 years, states and territories, 1995–1998 and 1996–1999	118
Figure 13:	Age-standardised incidence rates of cervical cancer by histological type, women aged 20–69 years, Australia, 1988–1999	119
Figure 14:	Age-standardised incidence rates of cervical cancer, by location, women aged 20–69 years, Australia, 1995–1998 and 1996–1999.....	120
Figure 15:	Age-standardised death rates from cervical cancer, Australia, 1981–2000.....	123
Figure 16:	Age-specific cervical cancer death rates, by age group, Australia, 1987–1990 and 1997–2000.....	124
Figure 17:	Age-standardised cervical cancer death rates, women aged 20–69 years, states and territories, 1993–1996 and 1997–2000.....	125
Figure 18:	Age-standardised cervical cancer death rates, by location, women aged 20–69 years, 1993–1996 and 1997–2000	127
Figure 19:	Age-standardised cervical cancer mortality rates, by Indigenous status, women aged 20–69 years, 1995–1998, 1996–1999 and 1997–2000.....	129

Acknowledgments

This report is funded by the Australian Government Department of Health and Ageing. The assistance of the Cancer Screening Section in the Department is gratefully acknowledged.

The authors of this report are Dr Indrani Pieris-Caldwell, Dr Chris Stevenson Ms Janet Markey and Ms Cathy Hotstone from the Australian Institute of Health and Welfare. The authors wish to extend their gratitude to those persons working in the National Cervical Screening Programs and members of the National Screening Information Advisory Group who provided data and comments for this report. The authors also acknowledge the input to this report of the members of the National Advisory Committee to the National Cervical Screening Program, and the Australasian Association of Cancer Registries. Thanks are also extended to the New South Wales Cancer Council, and state and territory health departments for their assistance in the production of this report. The support received from the staff of the Health Registers and Cancer Monitoring Unit, Australian Institute of Health and Welfare, during the production of this report is gratefully acknowledged.

National Cervical Screening Program

New South Wales

Ms Jayne Ross
Mr Hassan Mamoon
Ms Jennifer Mitchell

Victoria

Dr Heather Mitchell
Ms Vicky Higgins
Ms Cathy Burrows
Mr Rory Wilby
Ms Helen Farrugia

Queensland

Ms Jennifer Muller
Mr Stephen Heim

Western Australia

Ms Gloria Sutherland
Ms Nerida Steel

South Australia

Ms Sue Gilchrist
Ms Penny Iosifidis

Tasmania

Ms Valerie Gardner
Mr Paul Chandler

Australian Capital Territory

Ms Alice Jones
Mr Peter Couvee
Ms Coral Swan

Northern Territory

Ms Karen Finch
Ms Sarah Steele

Commonwealth

Ms Sarah Major
Ms Andriana Koukari
Ms Vicki Shaw

Summary

- The total number of women who participated in cervical screening in 1999–2000 was 3,314,787 of whom 3,244,329 (98%) were in the screening program target age group of 20–69 years.
- Between the periods 1998–1999 and 1999–2000 the proportion of women in the target population (women aged 20 to 69 years) participating in cervical screening declined from 64.8% to 62.6%.
- Participation in screening declined in all 5-year age groups within the target population between 1998–1999 and 1999–2000. The largest decline was in younger age groups – decreasing from 66.0% to 62.4% for women aged 25–29 years and from 52.0% to 49.5% for women aged 20–24 years.
- The recommended screening interval is 2 years following a negative smear. Of a cohort of women screened in February 1999 who had a negative Pap smear result, 32% screened again within 21 months. It is not known what proportion of this early re-screening is justified on clinical grounds.
- A low-grade abnormality includes atypia, warty atypia, possible CIN, equivocal CIN, and CIN 1, while a high-grade abnormality is defined to include CIN 1/2, CIN 2 and CIN 3 or adenocarcinoma in situ. The ratio of histologically confirmed low-grade abnormalities to high-grade abnormalities was 1.4 for Australia in 2000, the same as for 1999. The 1999 ratio does not include data for Queensland.
- In 2000, the National Cervical Screening Program detected 13,851 women in the target age group 20–69 years with high-grade abnormalities. The number of high-grade abnormalities was highest in the younger age groups. In the age groups 35–39 years or less the rate of high-grade abnormalities was over 10 per 1,000 women screened whereas it was less than 2 per 1,000 in women in the age groups 50–54 years and over.
- The number of new cases of cervical cancer declined in Australia in recent years. There were 787 new cases in Australia in 1999 compared with 1,066 new cases detected in 1988.
- Cervical cancer is the 15th most common cause of cancer mortality in women, accounting for 267 deaths in 2000. The age-standardised mortality rate from cervical cancer in the target age group, although fluctuating, declined over time from 5.0 per 100,000 women to 2.5 per 100,000 women between the years 1981 and 2000. During the same period the age-standardised cervical cancer mortality rate for all ages also declined from 6.2 per 100,000 women to 3.5 per 100,000 women.
- Women in the target age group from remote locations experienced a relatively high mortality rate from cervical cancer – 3.7 deaths per 100,000 women compared with 2.4 deaths per 100,000 women in metropolitan and rural locations. However, between the periods 1993–1996 and 1997–2000, the age-standardised cervical cancer mortality rate declined in all regions (metropolitan, rural and remote).
- Prior to 1998, only Western Australia, South Australia and the Northern Territory had Indigenous mortality registration data of sufficient quality to be publishable. In 1998, Queensland's coverage of Indigenous deaths reached an acceptable level to be included in the analysis of Indigenous mortality data. For these jurisdictions, in the period 1997–2000 there were 22 deaths (an age-standardised mortality rate of 11.3 per 100,000

women) from cervical cancer among Indigenous women in the target age group. This is over five times the corresponding rate in non-Indigenous women (2.1 per 100,000 women). Compared with the 1995–1998 mortality rate for Indigenous women in the target age group, which was 17.5 per 100,000 women, there was a decline in mortality in the 1997–2000 period. However, these rates are based on relatively small numbers of cases and may be subject to large variability. Despite the relatively large size of the apparent decline in the rate, it is still within the range of variation that would be expected due to chance.

National cervical screening monitoring indicators

This report monitors the performance of the National Cervical Screening Program using 10 indicators. Indicators are used as summary measures of program activity, performance and outcome. They help measure changes in disease patterns and examine the contribution health interventions may have in preventing or reducing deaths. They can also be used to assist in the evaluation of screening or other health interventions.

Screening indicators for the National Cervical Screening Program cover the areas of participation, early re-screening, low- and high-grade abnormality detection, incidence and mortality. The National Advisory Committee and state and territory cervical screening programs have endorsed these indicators. Indicators are reviewed annually and, in this report, definitions of Indicators 2 and 5 have been changed compared with the definitions used in previous reports.

A listing of the 10 indicators and their definitions follows. The target age group for the National Cervical Screening Program is 20 to 69 years.

Indicator 1: Participation rate for cervical screening

Percentage of women screened, in a 24-month period by 5-year age groups (20–24, 25–29, 30–34, 35–39, 40–44, 45–49, 50–54, 55–59, 60–64, 65–69), for all ages (20+) and the target age group (20–69 years).

Indicator 2: Early re-screening

Proportion of women re-screened by number of re-screens during a 21-month period following a negative 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, by 5-year age groups (20–24, 25–29, 30–34, 35–39, 40–44, 45–49, 50–54, 55–59, 60–64, 65–69, 70–74, 75–79, 80–84, 85+) and for the target age group (20–69 years, age-standardised).

Indicator 5: 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, by 5-year age groups (20–24, 25–29, 30–34, 35–39, 40–44, 45–49, 50–54, 55–59, 60–64, 65–69, 70–74, 75–79, 80–84, 85+) and for the target age group (20–69 years, age-standardised).

Indicator 6: Incidence of squamous, adenocarcinoma, adeno-squamous and other cervical cancer

Incidence rate of squamous, adenocarcinoma, adeno-squamous and other cervical cancer per 100,000 estimated resident female population in a 12-month period, by 5-year age groups (20–24, 25–29, 30–34, 35–39, 40–44, 45–49, 50–54, 55–59, 60–64, 65–69, 70–74, 75–79, 80–84, 85+) and for the target age group (20–69 years, age-standardised).

Indicator 7: Mortality

Death rate from cervical cancer per 100,000 estimated resident female population in a 12-month period, by 5-year age groups (20–24, 25–29, 30–34, 35–39, 40–44, 45–49, 50–54, 55–59, 60–64, 65–69, 70–74, 75–79, 80–84, 85+) and for the target age group (20–69 years – age-standardised).

Periodic indicators

Periodic indicators have been developed to report on issues that are of importance in monitoring the outcomes of the cervical screening program over a longer period of time than 1 year. This longer period allows for a greater aggregation of information on issues that are subject to wide annual fluctuations and allows for a more confident and meaningful estimate of the outcomes. The periodic indicators presented in this report are based on a reporting period of 4 years.

Periodic incidence and mortality indicators by location

Indicator 8: Incidence by location

Incidence rate of cervical cancer per 100,000 estimated resident female population in a 4-year period, by geographic location¹ and 5-year age groups (20–24, 25–29, 30–34, 35–39, 40–44, 45–49, 50–54, 55–59, 60–64, 65–69, 70–74, 75–79, 80–84, 85+) and for the target age group (20–69 years, age-standardised).

Indicator 9: Mortality by location

Death rate from cervical cancer per 100,000 estimated resident female population in a 4-year period, by geographic location¹ and 5-year age groups (20–24, 25–29, 30–34, 35–39, 40–44, 45–49, 50–54, 55–59, 60–64, 65–69, 70–74, 75–79, 80–84, 85+) and for the target age group (20–69 years, age-standardised).

Postcode and statistical local area information for incidence and mortality is routinely collected at the point of diagnosis or death. These data have been classified using the Rural, Remote and Metropolitan Areas classification (RRMA). This classification was developed in 1994 by the then Department of Primary Industries and Energy and the then Department of Human Services and Health as a framework by which various data sources could be analysed for metropolitan, rural and remote zones. The RRMA groups are classified according to Statistical

¹ See Table A for location classified by RRMA.

Local Area based on the Australian Standard Geographical Classification (ASGC) version 2.1 (DPIE & DSHS 1994). Concordance algorithms have been developed to convert statistical local area information coded according to earlier and later ASGC versions into rural, remote and metropolitan area groupings.

Table A: Structure of the Rural, Remote and Metropolitan Areas classification

Zone	Category
Metropolitan zone	Capital cities
	Other metropolitan centres (urban centre population >100,000)
Rural zone	Large rural centres (urban centre population 25,000–99,999)
	Small rural centres (urban centre population 10,000–24,999)
	Other rural areas (urban centre population <10,000)
Remote zone	Remote centres (urban centre population >5,000)
	Other remote area (urban centre population <5,000)

Source: DPIE & DSHS 1994.

Indicator 10: Indigenous mortality

Death rate from cervical cancer per 100,000 estimated resident female population in a 4-year period by Indigenous status and 5-year age groups (20–24, 25–29, 30–34, 35–39, 40–44, 45–49, 50–54, 55–59, 60–64, 65–69, 70–74, 75–79, 80–84, 85+) and for the target age group (20–69 years, age-standardised).

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 collections, and cervical screening data are no exception. Of the seven cervical screening indicators, only one indicator can be stratified by Indigenous status: mortality. Even for this, coverage is not complete. Only Western Australia, South Australia, the Northern Territory and Queensland are currently considered to have adequate coverage of Indigenous deaths in the registration of deaths. Therefore, mortality data from these jurisdictions only 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 non-Indigenous women, a 95% confidence interval (CI) is presented along with the rates. This is because the observed value of a rate may vary due to chance even where there is no variation in the underlying value of the rate. The 95% confidence interval provides a probability that the difference is not due to chance. Where the confidence intervals do not overlap, there is at least 95% confidence that the change in a rate is greater than that which could be explained by chance. Where the intervals do overlap, then there is not a 95% confidence that changes in the rate are due to chance.

For example, the participation rate for New South Wales in 1998–1999 was 60.8% with a confidence interval of 60.7% to 60.9%. The corresponding rate for 1999–2000 was 60.2% with a confidence interval of 60.1% to 60.3%. These two intervals do not overlap, so there is at least 95% confidence that the difference between the 1998–1999 and 1999–2000 rates is larger than we would expect due to chance alone.

Another example is the comparison between cervical cancer mortality rates for women living in rural and remote areas. In the period 1997 to 2000 there were 2.4 cervical cancer deaths per 100,000 women living in rural areas. This rate had a confidence interval of 2.2 to 2.6. The corresponding rate for women in remote areas was 3.7 per 100,000 women, with a confidence interval of 2.2 to 5.4. These confidence intervals overlap, so despite the relatively large difference between the two observed rates there is less than 95% probability that these differences are not caused by chance. This arises from the fact that remote areas of Australia have small populations, which leads to small numbers of deaths from any specific cause, and these small numbers may fluctuate 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 this result 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 differentiate between a real difference and one which is due to chance variation.

Participation

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 to women. In addition, increased participation will lead to the detection of more women with early stages of cancer where treatment can reduce mortality.

The program, through a variety of recruitment initiatives, actively targets women in the age group 20–69 years. The recommended screening interval for women in the target age group 20–69 years who have ever been sexually active at any stage in their lives is 2 years. Pap smears may cease at the age of 70 years for women who have had two normal Pap smears within the last 5 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;
- those who have never been sexually active; and
- women with a previously diagnosed gynaecological cancer (this last group is monitored under a clinical arrangement) (Snider & Beauvais 1998).

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 methodological difficulties.

State and territory Programs have strategic plans in place to increase participation of women in cervical screening. Such strategies include targeting priority population-groups including Indigenous women, rural and remote women, and women from culturally and linguistically diverse backgrounds.

The objective, measurement and usefulness of participation as an indicator is 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 2-yearly interval.
- This 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 recruitment practices, 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.
- The data presented for this indicator refer to the 2-year period 1999–2000. Data for the period 1998–1999 are also included for comparison.

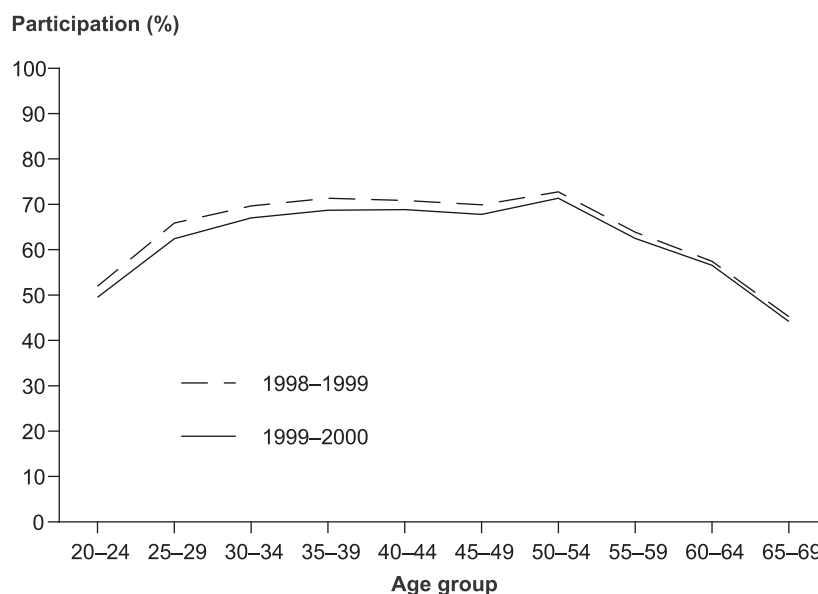
State- and territory-specific issues

- Except for Western Australia and the Australian Capital Territory, the participation rates are based on all women who were screened in that 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.
- The reference period for this indicator is from 1 January 1999 to 31 December 2000. Queensland data, however, refer to the 2-year period from March 1999 to February 2001. This is because the Queensland Pap Smear Register began in February 1999 and therefore no data are available for the earlier period.

Indicator 1: Participation rate for cervical screening

Percentage of women screened in a 24-month period, by 5-year age groups (20–24, 25–29, 30–34, 35–39, 40–44, 45–49, 50–54, 55–59, 60–64, 65–69, 70–74, 75–79, 80–84, 85+) and for the target age group (20–69 years).

The graphs and tables below refer to the data for the target age group only. For detailed data refer to Tables 1b and 2b (pages 132 and 134).



Notes

1. Participation rates have been adjusted for the estimated proportion of women who have had a hysterectomy.
2. These data exclude women who have opted not to be on the register.

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

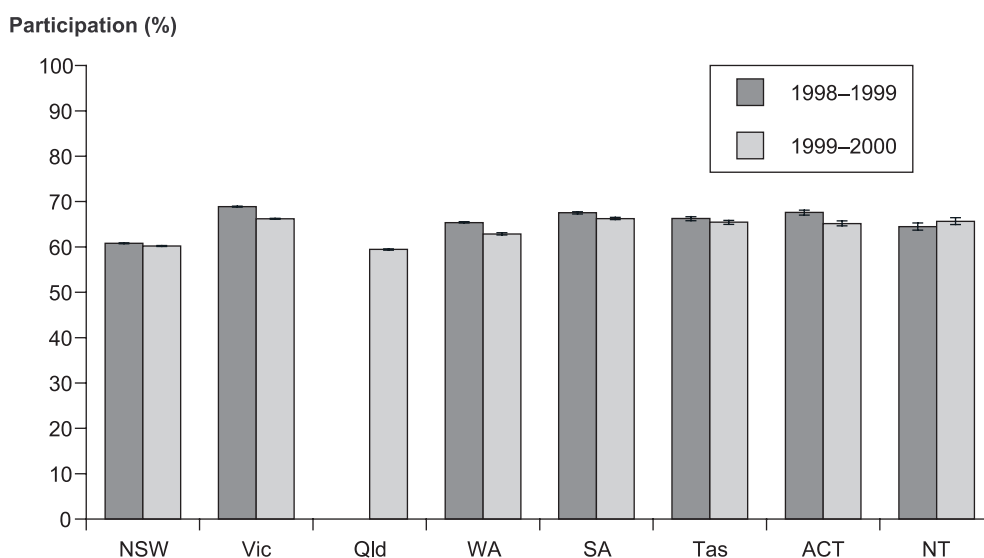
Figure 1: Participation rates in the National Cervical Screening Program, by age group, Australia, 1998-1999 and 1999-2000

2-year period	Age group										
	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	20-69
	(Per cent)										
1998-1999	52.0	66.0	69.7	71.4	70.9	69.9	72.8	63.9	57.4	45.2	64.8
1999-2000	49.5	62.4	67.0	68.7	68.8	67.8	71.3	62.5	56.5	44.2	62.6

Notes

1. The Queensland register began in February 1999; therefore no data were available for the 1998-1999 period.
2. Queensland data for the 1999-2000 period refer to the 2-year period from March 1999 to February 2001.

- In 1999–2000, 62.6% of women in the target age group 20–69 years participated in cervical screening. The proportion of women participating in screening has declined significantly between the two periods 1998–1999 and 1999–2000. Excluding Queensland data which were not included in 1998–1999 the proportion of women who participated in screening was 63.3% in 1999–2000, a statistically significant decline from 64.8% in 1998–1999.
- The total number of women screened in Australia in 1999–2000 was 3,314,787, of whom 3,244,329 (98%) were in the target age range of 20–69 years (Table 2a, page 133).
- Participation in screening is highest at the age groups 35–39 to 50–54 but declines sharply from the age group 55–59.
- Between the two reporting periods, the age-specific participation rates declined in all age groups. This decline was greatest at younger ages. Screening rates for women aged 25–29 years decreased from 66.0% to 62.4% and for women aged 20–24 years from 52.0% to 49.5%.



Notes

1. Rates are expressed as the percentage of the eligible female population and age-standardised to the Australian 1991 population.
2. No data were available for Queensland for the period 1998-1999 as the Queensland register began in February 1999.
3. Queensland data for the 1999-2000 period refer to the 2-year period from March 1999 to February 2001.
4. Bars on graphs represent 95% confidence intervals.

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

Figure 2: Participation (age-standardised) in the National Cervical Screening Program by women aged 20-69 years, states and territories, 1998-1999 and 1999-2000

2-year period/ rate	NSW	Vic	Qld ^(a)	WA ^(b)	SA	Tas	ACT ^(b)	NT	Australia
1998-1999									
AS rate	60.8	68.9	n.a.	65.4	67.6	66.3	67.6	64.5	64.8
95% CI	60.7-60.9	68.8-69.0	n.a.	65.1-65.6	67.3-67.8	65.8-66.7	67.0-68.1	63.7-65.3	64.8-64.9
1999-2000									
AS rate	60.2	66.2	59.5	62.8	66.2	65.5	65.1	65.6	62.6
95% CI	60.1-60.3	66.1-66.3	59.3-59.6	62.6-63.1	66.0-66.5	65.0-65.9	64.6-65.7	64.9-66.4	62.5-62.6

(a) Queensland data for the 1999-2000 period refer to the 2-year period from March 1999 to February 2001.

(b) The WA and ACT Registries only register women with a valid WA or ACT address respectively.

- In 1999–2000, the proportion of women screened in the target age group of 20–69 years in states and territories varied from a high of 66.2% in Victoria and South Australia to a low of 59.5% in Queensland.
- Compared to 1998–1999, all jurisdictions except the Northern Territory experienced a decreased rate of participation in 1999–2000. The rate of decline was statistically significant in New South Wales, Victoria, Western Australia, South Australia and the Australian Capital Territory. Queensland had no data for the period 1998–1999.
- The Northern Territory registered an increased participation rate in the target age group, but the increase is not statistically significant.
- All registers except those in Western Australia and the Australian Capital Territory keep records of Pap smears for women screened in their jurisdiction but who live outside that jurisdiction. The largest proportion of interstate women recorded for 1999–2000 was in New South Wales (0.9% of all women screened in the state).

Early re-screening

The National Cervical Screening Program seeks to maximise reductions in incidence of and mortality from cervical cancer. The design of the screening program defines two key parameters to achieve these objectives – target populations and screening intervals. Compliance with these parameters is crucial in maintaining the effectiveness of the program and in maintaining cost efficiency in order 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 2 years.

This indicator is defined as the repeating of a Pap smear within 21 months of a negative smear report.

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 1999, 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;
- measures the compliance with the recommended screening interval following a negative smear; and
- is important in assessing screening coverage around the recommended interval, as significant differences may reduce program effectiveness.

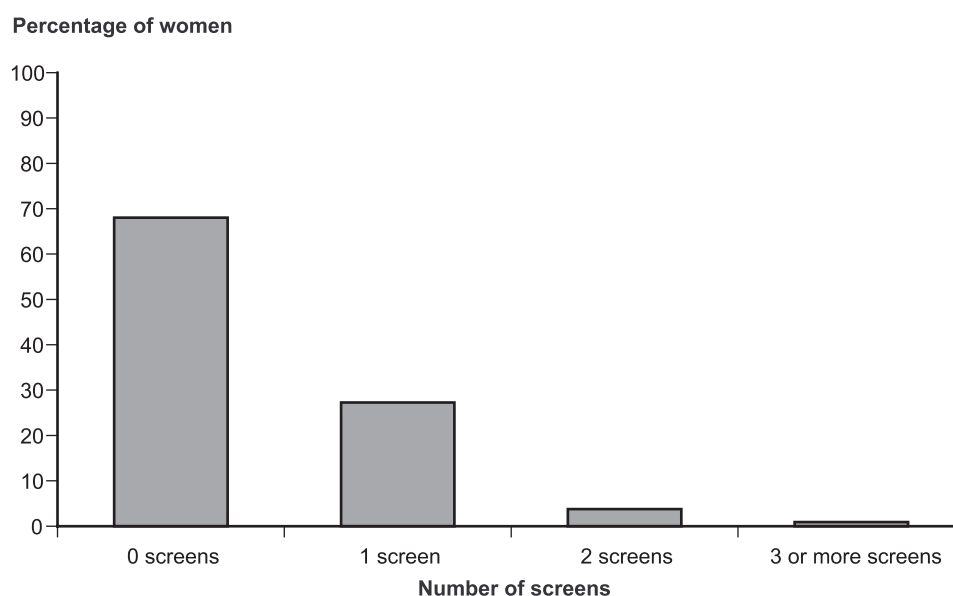
This indicator should be interpreted with caution as some early re-screening after a negative Pap smear report is appropriate and in accordance with the National Health and Medical Research Council (NHMRC) guidelines. Specifically, if a woman has a history of histologically proven high-grade abnormality, 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 interval.

Data issues

The data published in previous reports for Indicator 2, early re-screening, 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 has been made because women often have their Pap smear taken at a time convenient to them and are likely to have their biennial screening immediately before the 24-month anniversary. Also for some women, prescriptions for oral contraceptives lapse at 22 months and the women are then likely to combine their Pap smears at their visit to the GP for renewing their scripts for contraceptives.

Indicator 2: Early re-screening

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



Refer to Table 4 (p. 135).

Note: The reference period for this indicator was the 21 months following the index month February 1999. For Queensland the index month was March 1999.

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

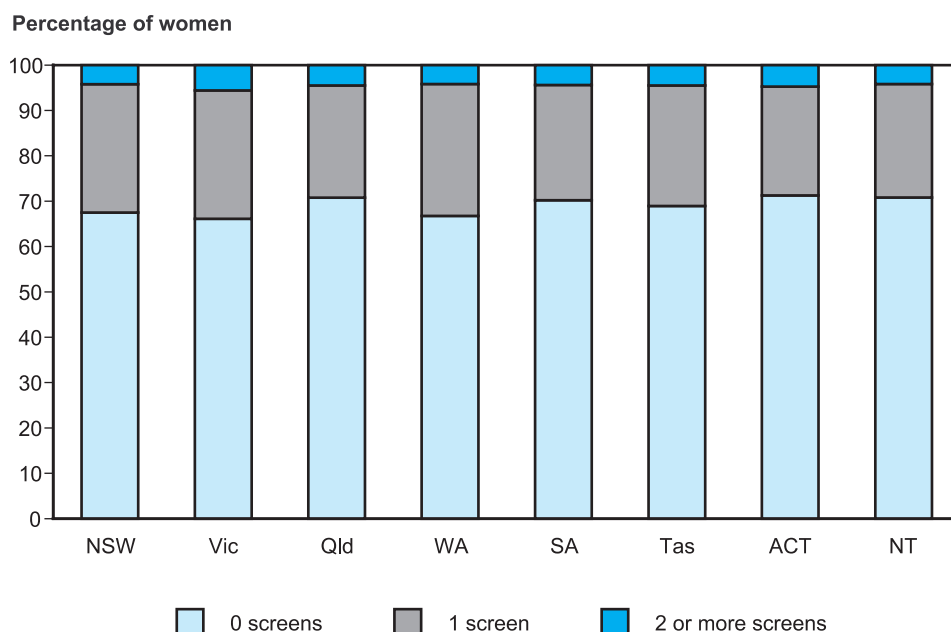
Figure 3: Proportion of women re-screened, by number of screens during the 21-month period following a negative smear in February 1999, Australia

21-month period	0 screens	1 screen	2 screens	3+ screens
	(Per cent)			
Feb 1999–Nov 2000	68.0	27.3	3.8	0.9

Note: Previously published data for this indicator refer to a cohort of women followed up for a period of 24 months. Therefore, the data published in previous reports are not directly comparable to the data published here.

This indicator, early re-screening, tracked over a period of 21 months a cohort of 175,723 Australian women who had a negative smear result in the index month to ascertain how many of them had early repeat screens.

- Of these women 68% were not re-screened in the follow-up period, 27% had one additional screening, 3.9% two additional screenings and less than 1% had 3 or more additional screenings.



Refer to Table 4 (p. 135).

Note: The reference period for this indicator was the 21 months following the index month February 1999. For Queensland the index month was March 1999.

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

Figure 4: Proportion of women re-screened, by number of screens during the 21-month period following a negative smear in February 1999, states and territories

No. of screens	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
	(Per cent)								
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	4.4	4.7	4.2	4.7

- Over 70% of the women in Queensland, South Australia, the Australian Capital Territory and the Northern Territory who had a negative Pap smear result in the index month had no additional screenings during the follow-up period of 21 months.
- The lowest proportion of women who had additional smears was in the Australian Capital Territory (28.7%) and the highest was in Victoria (33.9%).

Low-grade abnormalities

The Pap smear test is able to identify a range of abnormalities in cervical cells. Some of these abnormalities (the so-called high-grade abnormalities) have a greater chance of becoming malignant, and are therefore treated aggressively. The chance of low-grade abnormalities progressing to malignant change is very much less.

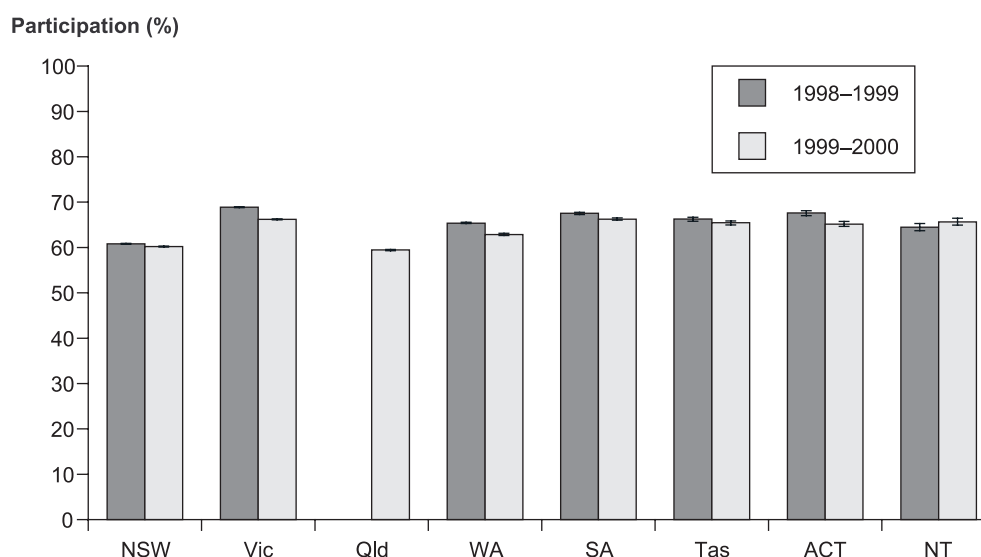
In this report a low-grade intraepithelial abnormality includes:

- atypia;
- warty atypia (human papilloma virus (HPV) effect);
- possible cervical intraepithelial neoplasia (CIN) (see Glossary);
- equivocal CIN;
- CIN 1; and
- endocervical dysplasia not otherwise specified (NOS).

The indicator is measured as the ratio of histologically verified low-grade intraepithelial abnormalities detected to histologically verified high-grade intraepithelial abnormalities.

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.



Refer to Tables 5a and 5b (p. 136).

Note: Data for Queensland were incomplete for 1999 as the Queensland register began in February 1999.

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

Figure 5: Ratio of low- to high-grade abnormalities, by women aged 20-69 years, states and territories, 1999 and 2000

Year	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
	(Ratio)								
1999	1.4	1.2	n.a.	1.7	1.4	1.4	1.2	0.9	1.4
2000	1.4	1.2	1.6	1.7	1.5	1.4	1.2	1.1	1.4

- The ratio of histologically confirmed low-grade intraepithelial abnormalities to high-grade intraepithelial abnormalities in Australia in 2000 was 1.4, which was the same as for 1999 (1.4). Excluding Queensland from the 2000 data for a valid comparison, the ratio still remains at 1.4.
- The ratio of low-grade to high-grade abnormalities in 2000 varied from 1.1 in the Northern Territory to 1.7 in Western Australia. The younger age structure of the female population in the Northern Territory is partly responsible for this result as the rate of high-grade abnormalities found is much higher in women less than 35 years of age (see Indicator 4).

- Between the two periods 1999 and 2000, the ratios of low-grade to high-grade abnormalities increased in South Australia, and in the Northern Territory. In the Northern Territory, in 1999, there were more cases of high-grade than low-grade abnormalities detected but the reverse was true in 2000.

High-grade abnormalities

High-grade lesions have a greater probability of progressing to invasive cancer than low-grade lesions. Therefore, one of the aims of the National Cervical Screening Program is to set a screening interval which detects most of these lesions before they progress and become invasive. This indicator measures the frequency of this type of abnormality in the screened community. 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 has produced guidelines to assist in the management of women who have low- and high-grade intraepithelial abnormalities (DHS 1994b).

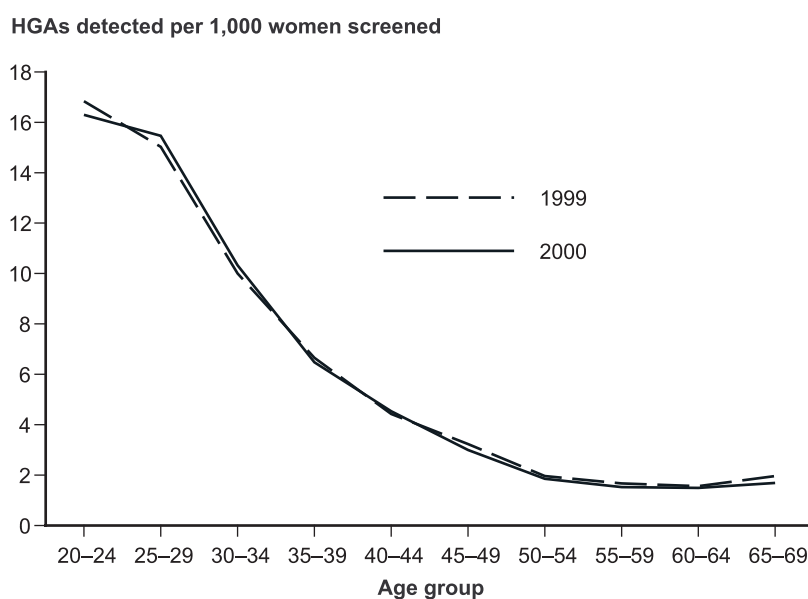
State- and territory- specific issues

- The reference period for Indicator 4 was 12 months from January to December 2000 for all states and territories, except for Queensland where data refer to a 12-month period from March 2000 to February 2001.
- The Queensland register commenced in February 1999; therefore data for Queensland were not available for 1998–1999.

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 5-year age groups (20–24, 25–29, 30–34, 35–39, 40–44, 45–49, 50–54, 55–59, 60–64, 65–69, 70–74, 75–79, 80–84, 85+) and for the target age group (20–69 years, age-standardised).

The graph and table below refer to the data for the target age group only. For detailed data refer to Tables 6a and 6b (pages 137 and 138).



Notes

1. Queensland data were not available in 1999.
2. The reference period for this indicator is from January to December 2000; for Queensland it is from March 2000 to February 2001.

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

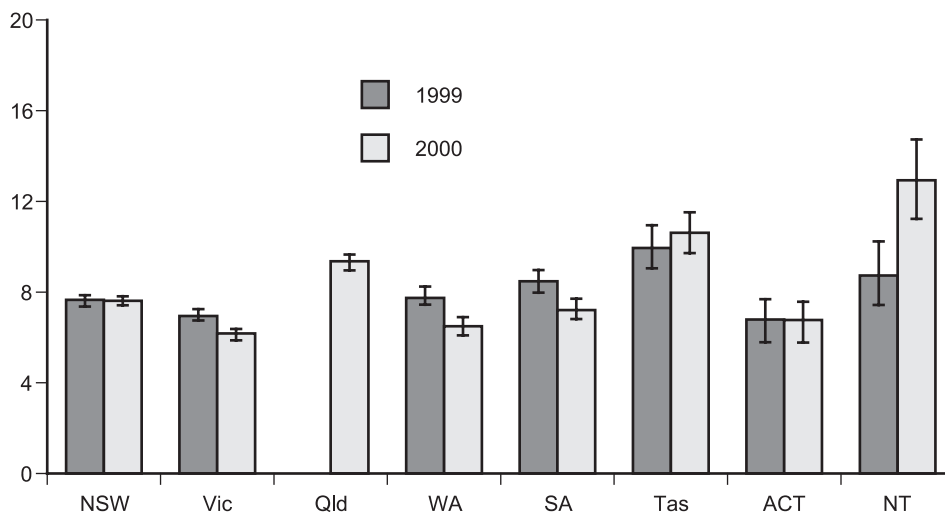
Figure 6: High-grade abnormalities per 1,000 women, by age group, Australia, 1999 and 2000

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 1,000 women)										
1999	16.8	15.0	10.0	6.7	4.4	3.2	2.0	1.7	1.6	2.0	7.6
2000	16.3	15.5	10.3	6.5	4.5	3.0	1.9	1.5	1.5	1.7	7.5

Note: Queensland was included in 2000 data but not in 1999 data.

- Of the 1,864,492 women screened in the target age group 20–69 years in 2000, high-grade intra-epithelial abnormalities were detected in 7.4 per 1,000 women (13,851).
- The age-standardised rate of histologically verified high-grade abnormalities declined from 7.6 per 1,000 women screened in the target age group 20–69 years in 1999 to 7.5 per 1,000 women screened in 2000. Queensland data were not included in 1999, and, when Queensland was excluded from 2000 data for comparison, the age-standardised rate of histologically verified high-grade abnormalities for Australia in 2000 was 7.1 per 1,000 women screened, a statistically significant fall from 7.6 per 1,000 in 1999.
- High-grade abnormalities per 1,000 women are highest in the younger ages. For example, women in the age groups under 35–39 had a rate of high-grade abnormalities of 10 per 1,000 or over. In contrast, the rate of high-grade abnormalities among women in age groups above 50–54 was less than 2 per 1,000.
- Between the two periods 1999 and 2000 the age-specific rates of high-grade abnormalities detected decreased in most age groups, in particular, in the older age groups. When Queensland was excluded, the age-specific rates of high-grade abnormalities detected in 2000 declined further in every age group except in the age groups 60–64 and 65–69 where the rates remained the same as before.

HGAs detected per 1,000 women screened



Refer to Tables 9a and 9b (p. 143).

Notes

1. The Queensland Health Pap Smear Register began operations in February 1999; therefore, no data were available for 1999.
2. The reference period for this indicator is from January to December 2000; for Queensland, it is from March 2000 to February 2001.
3. Rates are standardised to the 1991 Australian total population.
4. Bars on graphs represent 95% confidence intervals.

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

Figure 7: Age-standardised rate of high-grade abnormalities per 1,000 women screened aged 20-69 years, states and territories, 1999 and 2000

AS rate	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
1999	7.7	6.9	n.a.	7.7	8.5	9.9	6.8	8.7	7.6
95% CI	7.4-7.9	6.7-7.2	n.a.	7.4-8.2	8.0-9.0	9.0-10.9	5.8-7.7	7.4-10.2	7.4-7.7
2000	7.6	6.2	9.4	6.5	7.2	10.6	6.8	12.9	7.5
95% CI	7.4-7.8	5.9-6.4	9.0-9.7	6.1-6.9	6.8-7.7	9.7-11.5	5.8-7.6	11.2-14.7	7.4-7.6

- In 2000, the age-standardised rate of high-grade abnormalities varied considerably among states and territories. The lowest rate was observed in Victoria (6.2 per 1,000 women) and the highest rate was in the Northern Territory (12.9 per 1,000 women).
- Except in Tasmania, the Australian Capital Territory and the Northern Territory, in all jurisdictions the age-standardised rate of high-grade abnormalities declined between 1999 and 2000. In Victoria, Western Australia, and South Australia the decreases in the rates of high-grade abnormalities were statistically significant.
- In the Northern Territory and Tasmania, the rates increased between 1999 and 2000; of these, only the increase in the Northern Territory is statistically significant.

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 alternative. 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 greater than 3 mm and no greater than 5 mm in depth and no wider than 7 mm. The depth of invasion should not be more than 5 mm taken 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).

Micro-invasive squamous cell carcinoma makes up the largest share of the micro-invasive cancer which is reported in Indicator 5. There are also other forms of micro-invasive cancers such as adenocarcinoma and adeno-squamous cell carcinoma for which data are not available to include in this indicator.

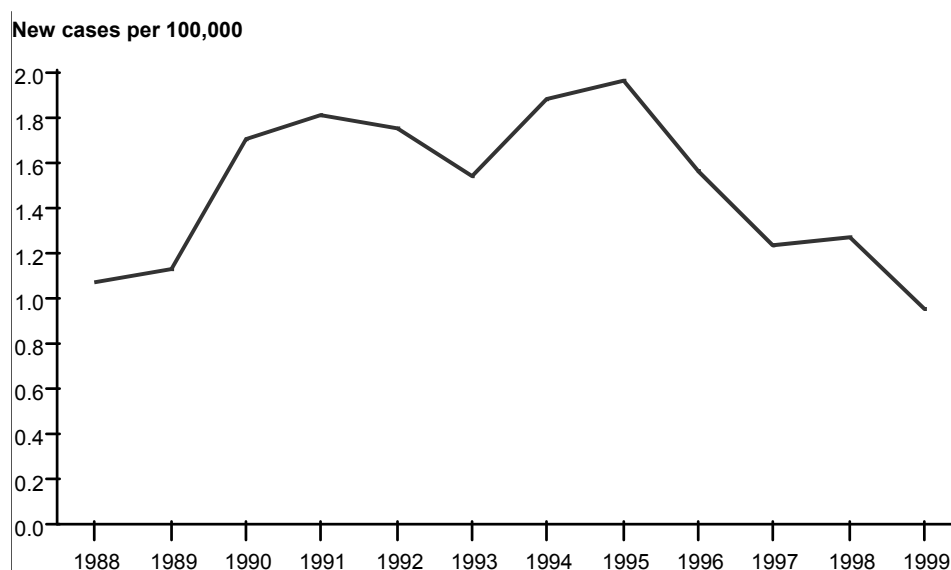
In interpreting cervical cancer incidence statistics, it should be noted that cervical screening has been available on an ad hoc basis since the 1960s, but it is only since the late 1980s and early 1990s that there has been an organised national approach to screening at a population level. The introduction of cervical screening programs 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, with the rate of more advanced cancers decreasing in the longer term.

For this report the most recent national data available on incidence data are for 1999, in contrast to screening data which are available for 2000. This time lag in availability of incidence data is expected to reduce over the next 2 years.

Indicator 5: 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 by 5-year age groups (20–24, 25–29, 30–34, 35–39, 40–44, 45–49, 50–54, 55–59, 60–64, 65–69, 70–74, 75–79, 80–84, 85+) and for the target age group (20–69 years, age-standardised).

The graphs and tables below refer to the data for the target age group only. For detailed data refer to Table 11 (page 145).



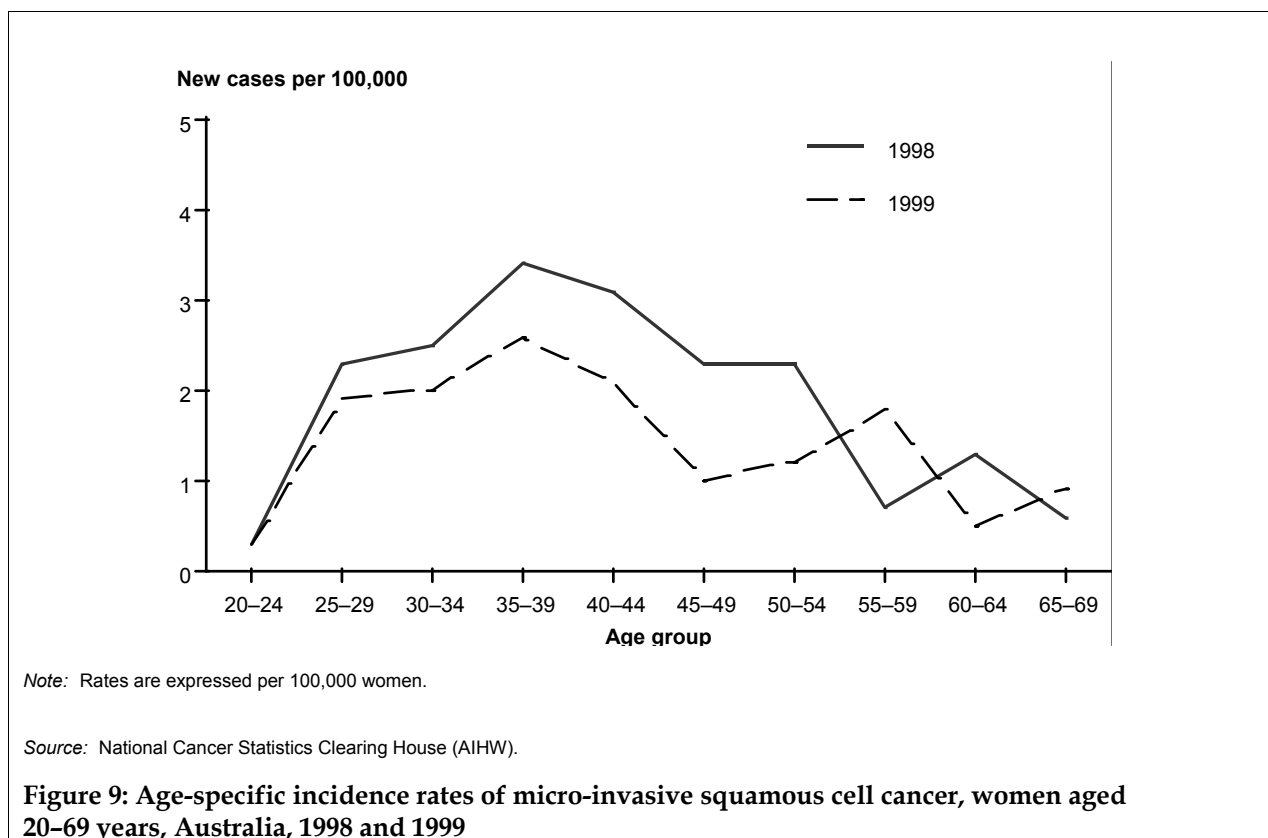
Note: Rates are expressed per 100,000 women and age-standardised to the Australian 1991 population.

Source: National Cancer Statistics Clearing House (AIHW).

Figure 8: Age-standardised incidence rates for micro-invasive squamous cell cancer, women aged 20–69 years, Australia, 1988–1999

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	(Rate per 100,000 women)											
AS rate	1.7	1.8	2.7	2.9	2.8	2.5	3.0	3.1	2.5	2.0	2.0	1.5

- The age-standardised incidence rate of micro-invasive cervical cancer was 1.4 per 100,000 women for all women in 1999, and 1.5 per 100,000 for the target age group 20–69 years (Table 11, page 145).
- In 1999 there were 95 new cases of micro-invasive cervical cancer among women of all ages, and for the target age group 20–69 years there were 92 new cases (Table 10, page 144).
- The age-standardised incidence rates for micro-invasive squamous cell carcinoma of the cervix have fluctuated during the period 1988–1999. Note that the number of cases of micro-invasive cancer is very low and the rates are therefore unstable (Tables 10 and 11, pages 144 and 145).



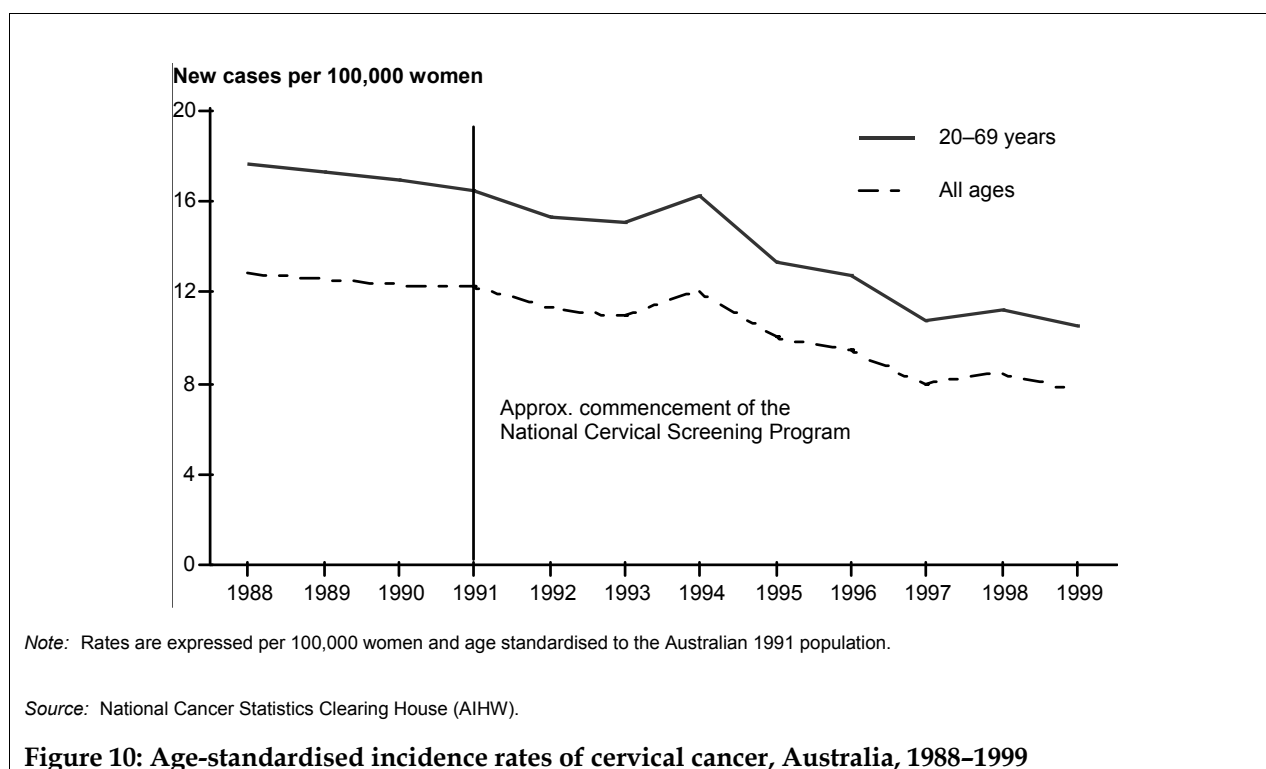
Year	Age group									
	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69
1998	0.3	2.3	2.5	3.4	3.1	2.3	2.3	0.7	1.3	0.6
1999	0.3	1.9	2.0	2.6	2.1	1.0	1.2	1.8	0.5	0.9

- In both 1998 and 1999, women in the age group 35-39 years had the highest incidence rate of micro-invasive squamous cell cancer. In 1999, there were 20 cases of micro-invasive squamous cell cervical cancer in women aged 35-39 years. It should be noted that the rates for age groups 45-49 and over in 1999 are based on small numbers of cases (less than 10 cases in each 5-year age group) (Tables 10 and 11, pages 144 and 145).

Indicator 6: Incidence of invasive squamous, adenocarcinoma, adeno-squamous and other cervical cancer

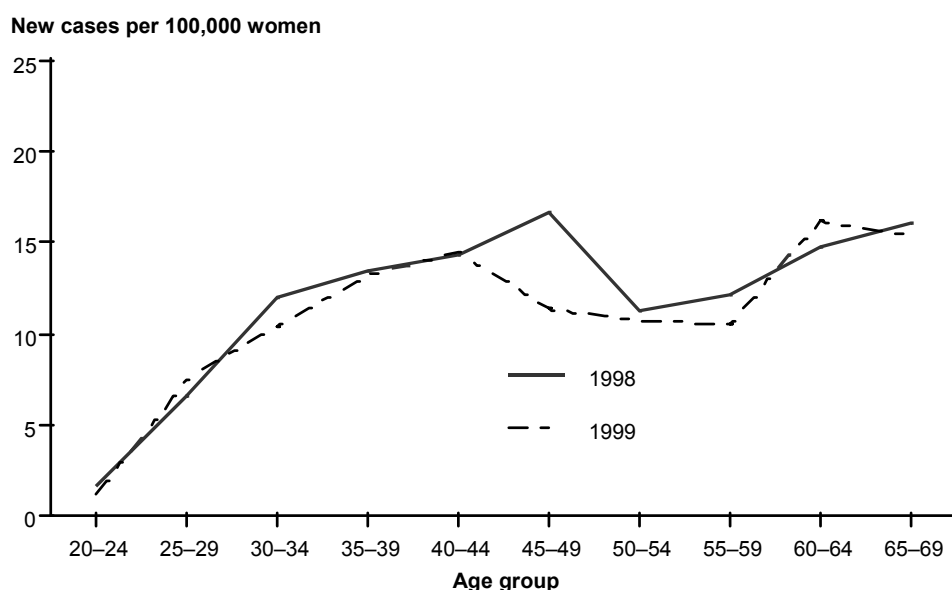
Incidence rates of squamous, adenocarcinoma, adeno-squamous and other cervical cancer per 100,000 estimated resident female population in a 12-month period, by 5-year age groups (20–24, 25–29, 30–34, 35–39, 40–44, 45–49, 50–54, 55–59, 60–64, 65–69, 70–74, 75–79, 80–84, 85+) and for the target age group (20–69 years, age-standardised).

For detailed data refer to Table 13 (page 147).



Age	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	(Rate per 100,000 women)											
All ages	12.9	12.6	12.4	12.3	11.3	11.0	12.1	10.0	9.5	8.0	8.4	7.7
20–69 years	17.7	17.4	17.0	16.6	15.3	15.1	16.3	13.4	12.8	10.8	11.2	10.5

- In 1999, the incidence rate of all cervical cancers declined to 7.7 per 100,000 women for all women in Australia, and 10.5 per 100,000 women in the target group (Table 13, page 147).
- In 1999, cervical cancer was the 10th most frequently diagnosed new cancer in women. There were 787 new cases of cervical cancer diagnosed in Australia in 1999, and of these 646 were women in the target age group 20–69 years (Table 12, page 146).
- Between 1988 and 1999 the age-standardised incidence rate for cervical cancer for women of all ages declined by 40.3%, and in the target age group by 40.7% (Table 13, page 147).



Refer to Table 13 (page 147).

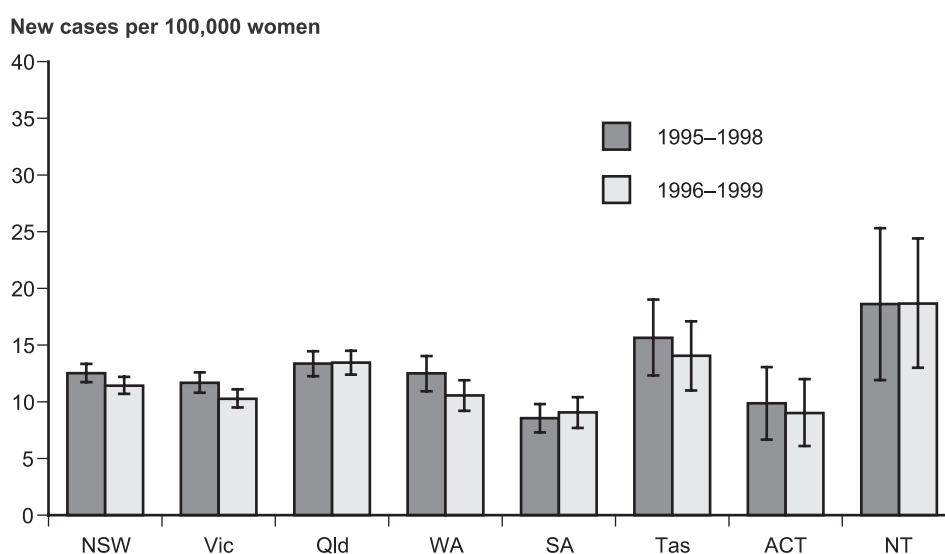
Note: Rates are expressed per 100,000 women.

Source: National Cancer Statistics Clearing House (AIHW).

Figure 11: Age-specific incidence rates of cervical cancer, Australia, 1998 and 1999

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	
(Rate per 100,000 women)											
1998	1.5	6.5	11.9	13.5	14.3	16.6	11.3	12.2	14.7	16.0	9.1
1999	1.1	7.5	10.3	13.1	14.5	11.4	10.8	10.5	16.3	15.6	8.2

- The age-specific rate of cervical cancer incidence rises rapidly in women from age 20-24 through to age 40-44 years; in 1999 the age-specific rate for women aged 40-44 years was 14.5 per 100,000 women. From that age, the rate declines to 10.5 at age group 55-59, and then rises again.



Refer to Tables 14b and 15b (pp. 149 and 151).

Notes

1. Rates are expressed per 100,000 women and age standardised to the Australian 1991 population.
2. Bars on graphs represent 95% confidence intervals.

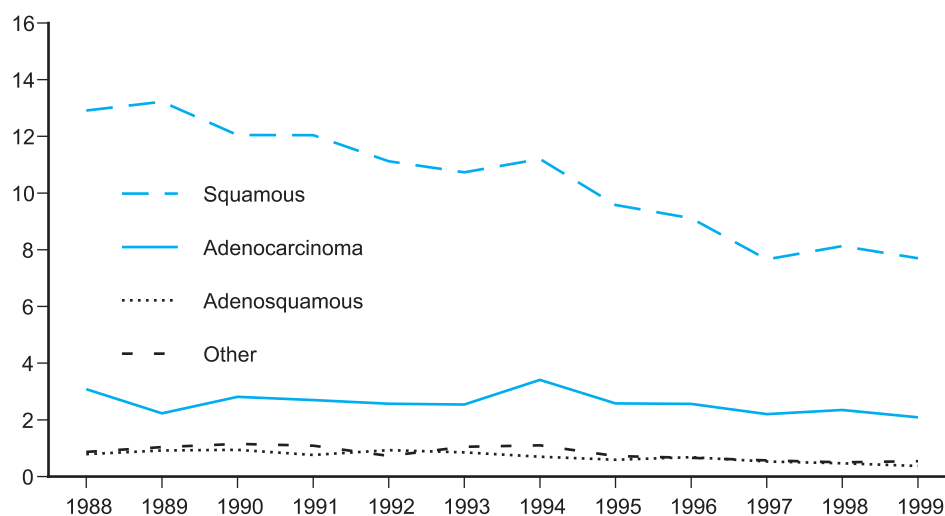
Source: National Cancer Statistics Clearing House (AIHW).

Figure 12: Age-standardised cervical cancer incidence rates, women aged 20-69 years, states and territories, 1995-1998 and 1996-1999

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
1995-1998	12.2	11.5	13.3	12.4	8.4	15.5	9.8	21.9	12.0
95% CI	11.4-13.0	10.6-12.4	12.2-14.4	10.8-13.9	7.1-9.6	12.2-18.9	6.6-13.0	15.2-28.6	11.6-12.5
1996-1999	11.4	10.3	13.5	10.6	9.1	14.1	9.0	18.7	11.3
95% CI	10.7-12.2	9.5-11.1	12.4-14.5	9.2-11.9	7.7-10.4	11.0-17.1	6.1-12.0	13.0-24.4	10.9-11.7

- There were considerable differences in the incidence of cervical cancer among states and territories for women aged 20-69 years. In the period 1996-1999, the Australian Capital Territory had the lowest incidence at 9.0 per 100,000 women while the Northern Territory had the highest rate of cervical cancer incidence of 18.7 per 100,000 women. Both Queensland (13.5) and the Northern Territory (18.7) were significantly above the national average (11.3) while South Australia (9.1) was significantly below.
- Between the two periods 1995-1998 and 1996-1999 the incidence rate declined in all states and territories except in Queensland and South Australia. However, the decline is not statistically significant (Tables 14b and 15b, pages 149 and 151).

New cases per 100,000 women



Refer to Table 16b (page 152).

Note: Rates are expressed per 100,000 women and age-standardised to the Australian 1991 population.

Source: National Cancer Statistics Clearing House (AIHW).

Figure 13: Age-standardised incidence rates of cervical cancer by histological type, women aged 20–69 years, Australia, 1988–1999

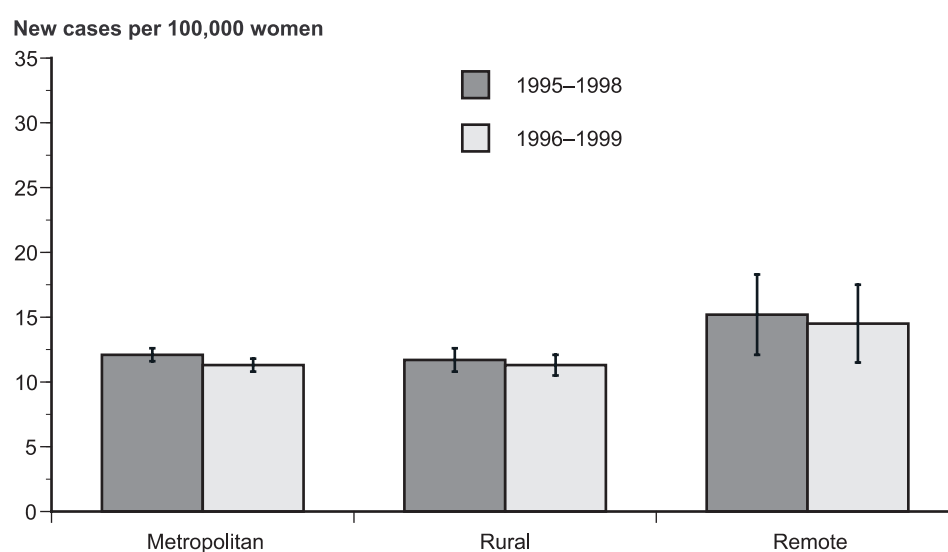
Histological type	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Squamous	12.9	13.2	12.1	12.0	11.1	10.7	11.2	9.6	9.1	7.7	8.1	7.7
Adenocarcinoma	3.1	2.2	2.8	2.7	2.6	2.5	3.4	2.6	2.6	2.2	2.4	2.1
Adeno-squamous	0.8	0.9	0.9	0.8	0.9	0.9	0.7	0.6	0.7	0.5	0.5	0.4
Other	0.9	1.0	1.2	1.1	0.7	1.1	1.1	0.7	0.7	0.6	0.5	0.5

- In 1999, squamous cell carcinomas of the cervix accounted for approximately 71.8% of all new cases of cervical cancer in women aged 20–69 years, adenocarcinomas 19.5%, adeno-squamous 3.6% and a range of other mixed and unknown histologies comprised the remaining 5.1% (Table 16a, page 152).

Indicator 8: Incidence by location

Incidence rates of cervical cancer per 100,000 estimated resident female population in a 4-year period, by location and 5-year age groups (20–24, 25–29, 30–34, 35–39, 40–44, 45–49, 50–54, 55–59, 60–64, 65–69, 70–74, 75–79, 80–84, 85+) and for the target age (20–69 years – age-standardised).

The graph and table below refer to the data for the target age group only. For detailed data refer to Table 19 (page 155).



Notes

1. The age-standardised rates are presented as 4-year rolling blocks of data. These years were selected to be comparable with the mortality by location indicator presented later in this report.
2. Rates are expressed per 100,000 women and age standardised to the Australian 1991 population.
3. Bars on graphs represent 95% confidence intervals.

Source: National Cancer Statistics Clearing House (AIHW).

Figure 14: Age-standardised incidence rates of cervical cancer, by location, women aged 20–69 years, Australia, 1995–1998 and 1996–1999

	Metropolitan		Rural		Remote	
	1995–1998	1996–1999	1995–1998	1996–1999	1995–1998	1996–1999
AS rate	12.1	11.3	11.7	11.3	15.2	14.5
95% CI	11.6–12.6	10.8–11.8	10.8–12.6	10.5–12.1	12.1–18.3	11.5–17.5

- In the 4-year period 1996–1999 there were 2,432 new cases (72% of all new cases) of cervical cancer in metropolitan locations, 840 new cases (25% of all new cases) in rural locations and 102 new cases (3% of all new cases) in remote locations (Table 18, page 154).
- In the period 1996–1999, the age-standardised cervical cancer incidence rate for women in the target age group 20–69 years was higher in remote locations (14.5 per 100,000 women) than in metropolitan and rural locations. This difference was not statistically significant. During the same period, the corresponding rates of cervical cancer incidence in both metropolitan and rural locations were 11.3 per 100,000 women (Table 19, page 155).
- The age-standardised incidence rate of cervical cancer in all locations for women aged 20–69 years declined between the periods 1995–1998 and 1996–1999. However, the decline is not statistically significant.

Age-specific features

- Very few cervical cancers occur in women under the age of 20. The incidence rate of cervical cancer increases with age.
- Between the periods 1995–1998 and 1996–1999 age-specific rates for the incidence of cervical cancer declined in almost all ages in metropolitan and rural areas. However, the age pattern of cervical cancer incidence in remote areas shows fluctuations between the same periods. This may be due to the small numbers of cervical cancer occurring in these areas.

Mortality

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

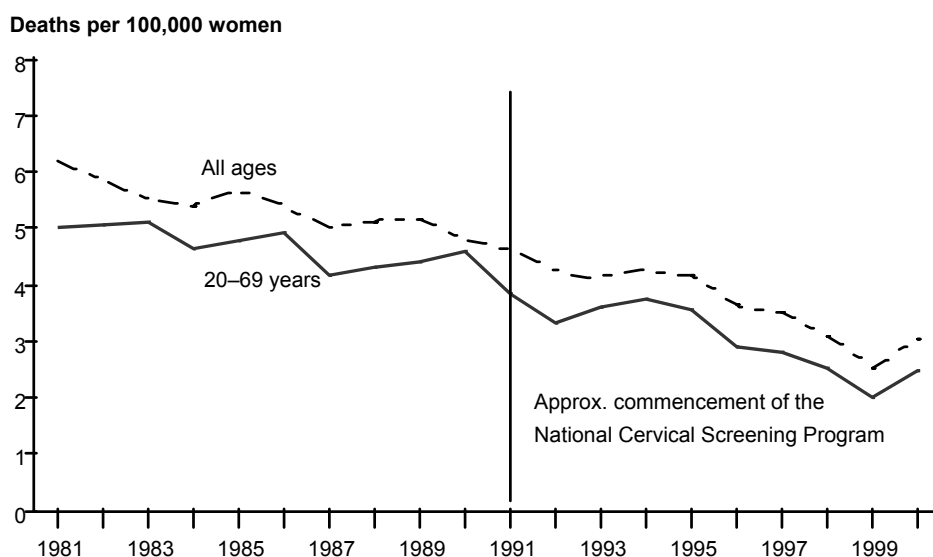
These indicators measure the level of mortality from cervical cancer in the total female population by age and other demographic characteristics. This indicator is important because from it an assessment can be made of changes in mortality in different age groups and particular target groups over time.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

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 1999; and
 2. the introduction of the Automated Coding System (ACS) for processing deaths registered from 1 January 1997.
- As a result of this there is now a break in the mortality data series. In order to make mortality data coded using ICD-9 and ICD-10 comparable, the Australian Bureau of Statistics (ABS) has 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 to 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 different from figures in previous *Cervical Screening in Australia* reports.
- Prior to 1998, only South Australia, Western Australia and the Northern Territory had a relatively high coverage of Indigenous status identification in the deaths data. In 1998 Queensland's coverage of Indigenous deaths reached an acceptable level following the introduction of a new *Death Information Form* in 1996-97 which included a question on Indigenous status (ABS 1999). Therefore, in this report, cervical cancer deaths for Indigenous Australians include data from Queensland (for 1998 to 2000), South Australia, Western Australia and the Northern Territory.

Indicator 7: Mortality

Death rates from cervical cancer per 100,000 estimated resident female population in a 12-month period by 5-year age groups (20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70-74, 75-79, 80-84, 85+) and for the target age group (20-69 years – age-standardised).



Refer to Table 21 (p. 157).

Notes

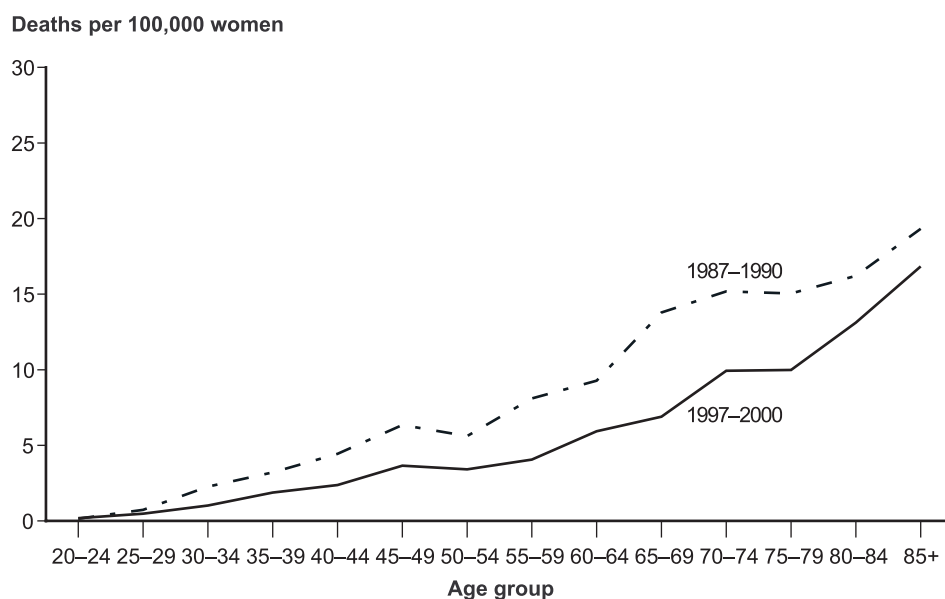
1. Rates are expressed per 100,000 women.
2. Deaths were derived from place of usual residence and by year of registration
3. Rates for all ages are based on data for women aged 15 years and over.
4. Rates are expressed per 100,000 women and age-standardised to the Australian 1991 population.

Source: AIHW Mortality Database.

Figure 15: Age-standardised death rates from cervical cancer, Australia, 1981-2000

	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00
All ages	6.2	5.9	5.5	5.4	5.7	5.4	5.0	5.1	5.2	4.9	4.6	4.3	4.1	4.3	4.2	3.7	3.5	3.1	2.5	3.0
20-69 years	5.0	5.1	5.1	4.7	4.8	4.9	4.2	4.3	4.4	4.6	3.8	3.3	3.5	3.8	3.6	2.9	2.8	2.5	2.0	2.5

- Cervical cancer was the 15th most common cause of cancer deaths in Australian women in 2000, accounting for 267 deaths.
- The age-standardised death rate for women of all ages was 3.0 per 100,000 in 2000. Mortality from cervical cancer, although fluctuating, has declined over time.



Notes

1. Rates are expressed per 100,000 women.
2. Deaths were derived from place of usual residence and by year of registration.

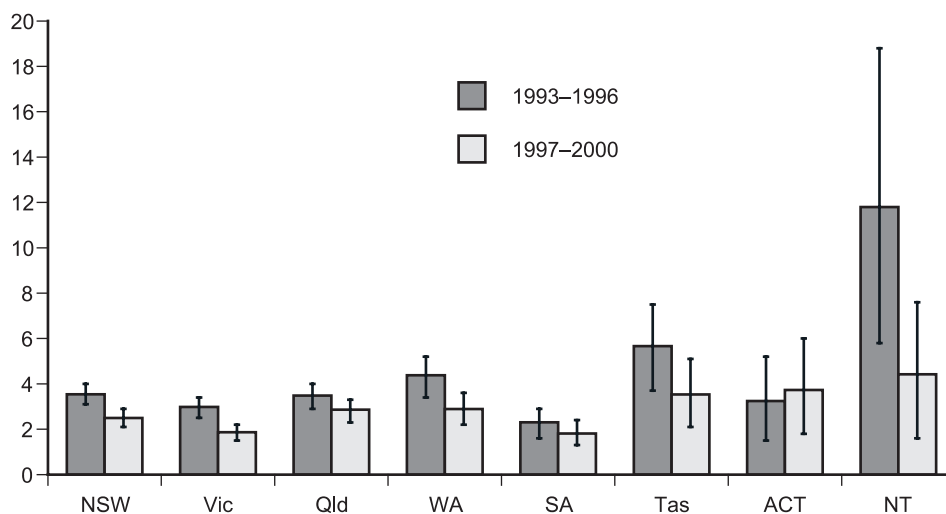
Source: AIHW Mortality Database.

Figure 16: Age-specific cervical cancer death rates, by age group, Australia, 1987-1990 and 1997-2000

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+
1987-1990	0.1	0.7	2.3	3.2	4.4	6.3	5.6	8.1	9.3	13.8	15.2	15.0	16.2	19.3
1997-2000	0.2	0.5	1.0	1.9	2.4	3.7	3.4	4.1	5.9	6.9	9.9	10.0	13.1	16.8

- The age-specific rates of cervical cancer mortality increased with rising age – very few deaths occurred at younger ages while most deaths concentrated at older ages. In the period 1997-2000, within the target age group, the age-specific mortality ranged from 0.2 deaths per 100,000 women in the age group 20-24 to 6.9 deaths per 100,000 women in the age group 65-69.
- The age-specific mortality between the two reference periods declined in all age groups except for the age group 20-24 years.

Deaths per 100,000 women



Refer to Tables 23 and 25 (pp. 159 and 161).

Notes

1. The age-standardised rates were averaged over 4 years to smooth annual variations that may occur in the smaller states and territories.
2. Deaths derived from place of usual residence and by year of registration.
3. Rates are expressed per 100,000 women and age-standardised to the Australian 1991 population.
4. Bars on graphs represent 95% confidence intervals.

Source: AIHW Mortality Database.

Figure 17: Age-standardised cervical cancer death rates, women aged 20-69 years, states and territories, 1993-1996 and 1997-2000

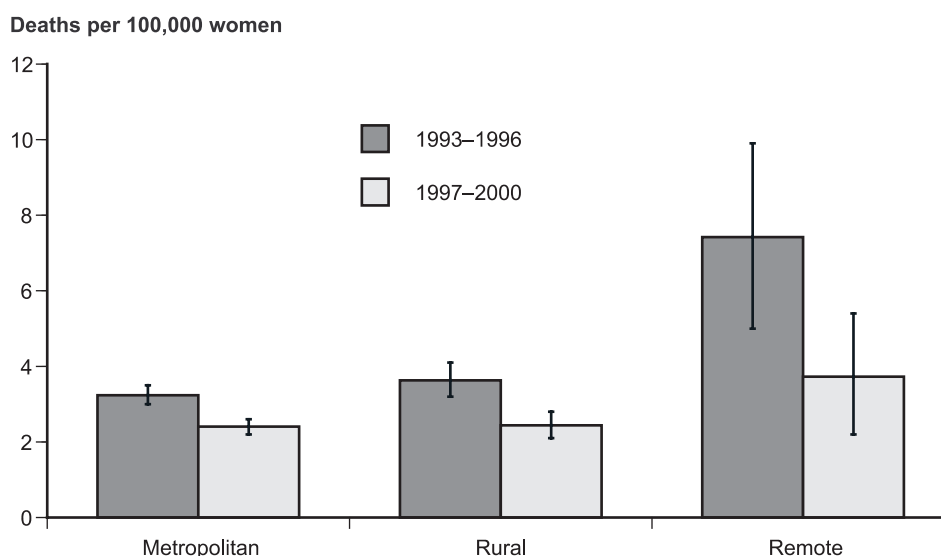
	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Rate 1993-1996	3.5	3.0	3.5	4.4	2.3	5.7	3.2	11.8	3.4
95% CI	3.1-4.0	2.5-3.4	2.9-4.0	3.4-5.2	1.6-2.9	3.7-7.5	1.5-5.2	5.8-18.8	3.2-3.7
Rate 1997-2000	2.5	1.9	2.9	2.9	1.8	3.5	3.7	4.4	2.4
95% CI	2.1-2.9	1.5-2.2	2.3-3.3	2.2-3.6	1.3-2.4	2.1-5.1	1.8-6.0	1.6-7.6	2.2-2.6

- There were 1,046 deaths from cervical cancer in all states and territories in 1997–2000.
- The age-standardised mortality rates varied from 4.4 per 100,000 women in the Northern Territory to 1.8 per 100,000 women in South Australia. Although the Northern Territory mortality rate declined considerably between the two periods, the rates are based on a very small number of deaths and are therefore subject to great variability.
- In all jurisdictions except the Australian Capital Territory the death rate declined between the two periods. Only the declines in New South Wales and Victorian rates, however, are statistically significant.
- The mortality rate in the Australian Capital Territory increased between the two periods; this increase is not statistically significant.

Indicator 9: Mortality by location

Death rates from cervical cancer per 100,000 estimated resident female population in a 4-year period, by location and 5-year age groups (20–24, 25–29, 30–34, 35–39, 40–44, 45–49, 50–54, 55–59, 60–64, 65–69, 70–74, 75–79, 80–84, 85+) and for the target age group (20–69 years, age-standardised).

The graph and table below refer to the data for the target age group only. For additional data refer to Tables 26 and 27, pages 162 and 163)



Notes:

1. The age-standardised rates are presented as 4-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 1991 population.
4. Bars on graphs represent 95% confidence intervals.

Source: AIHW Mortality Database.

Figure 18: Age-standardised cervical cancer death rates, by location, women aged 20–69 years, 1993–1996 and 1997–2000

	Metropolitan		Rural		Remote	
	1993–1996	1997–2000	1993–1996	1997–2000	1993–1996	1997–2000
Rate	3.2	2.4	3.6	2.4	7.4	3.7
95% CI	3.0–3.5	2.2–2.6	3.2–4.1	2.1–2.8	5.0–9.9	2.2–5.4

- During the 4-year period 1997–2000 there were 735 deaths (70% of all cervical deaths in that period) in metropolitan areas, 276 deaths (26% of all cervical deaths) in rural areas and 35 deaths (4% of all cervical deaths) in remote areas (Table 26, page 162).
- The age-standardised death rate for women in the target age group 20–69 years was highest in remote locations. The difference was statistically significant from other locations in the period 1993–1996, but during the period 1997–2000, the difference was not statistically significant. The high rate of mortality in remote locations may reflect the relatively high proportion of Indigenous people in remote areas, and the high death rates among Indigenous women. Both metropolitan and rural locations had similar rates of mortality from cervical cancer.
- In all three regions the age-standardised mortality rates declined between the periods 1993–1996 and 1997–2000; however, only the declines in metropolitan and rural areas were statistically significant. The largest overall mortality reduction was in remote areas (a mortality reduction of 50% between 1993–1996 and 1997–2000), but these rates are based on small numbers and therefore the decline is not statistically significant. Between the same two periods, in metropolitan areas, there was a 25% decline in cervical cancer mortality and in rural areas, it was 33%.

Age-specific features

- In the target age group of 20–69 years, age-specific mortality from cervical cancer increases with age. However, it is higher still among women in their 70s and 80s.

Indicator 10: Indigenous mortality

Death rates from cervical cancer per 100,000 estimated resident female population in a 4-year period, by Indigenous status and 5-year age groups (20–24, 25–29, 30–34, 35–39, 40–44, 45–49, 50–54, 55–59, 60–64, 65–69, 70–74, 75–79, 80–84, 85+) and for the target age group (20–69 years, age-standardised).

The graph and table below refer to the data for the target age group only. For detailed data refer to Tables 28 and 29 (pages 164 and 165).



Notes

1. The age-standardised rates are presented as 4-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 1991 population.
4. Only Queensland (from 1998), South Australia, Western Australia and the Northern Territory have Indigenous death registration data considered to be of a publishable standard.
5. Bars on graphs represent 95% confidence intervals.

Source: AIHW Mortality Database.

Figure 19: Age-standardised cervical cancer mortality rates, by Indigenous status, women aged 20–69 years, 1995–1998, 1996–1999 and 1997–2000

	Indigenous			Non-Indigenous		
	1995–1998	1996–1999	1997–2000	1995–1998	1996–1999	1997–2000
AS rate	17.5	10.6	11.3	2.3	1.9	2.1
95% CI	8.8–26.5	5.2–17.1	6.2–17.1	1.9–2.7	1.6–2.3	1.7–2.4

Note: Indigenous and non-Indigenous deaths from Queensland for 1998, 1999 and 2000 are included in the above table.

- Due to the difficulties of Indigenous identification in health data collections, only Indigenous mortality data from Queensland (from 1998), Western Australia, South Australia and the Northern Territory are considered to be of publishable standard. Therefore, all cervical cancer mortality data for both Indigenous women and non-Indigenous women used in this analysis are confined to these jurisdictions.
- There were 22 deaths, an age-standardised rate of 11.3 per 100,000 women, attributable to cervical cancer among Indigenous women in the target age group in 1997–2000 period. This is over 5 times the mortality rate for non-Indigenous women in the same age range (2.1 per 100,000 women) (Tables 28 and 29, pages 164 and 165).
- The Indigenous cervical cancer mortality rate among women in the target age group declined over time from 17.5 in 1995–1998 to 11.3 deaths per 100,000 women in 1997–2000. The Queensland data only cover part of this period, so their inclusion may effect the comparison. When Queensland data were excluded from the analysis, the Indigenous mortality rate from cervical cancer still declined from 22 in 1995–1998 to 15.1 per 100,000 women in 1997–2001. However, the death rates for Indigenous women are based on relatively small numbers of cases and may be subject to large variability. This is reflected in the wide confidence intervals associated with the mortality rates. Despite the relatively large size of the apparent decline in the rate, it is still within the range of variation that would be expected due to chance, that is, it is not statistically significant (Table 29, page 165).
- Mortality from cervical cancer among non-Indigenous women fluctuated over time.

Age-specific features

- The numbers of deaths among Indigenous women in Queensland, Western Australia, South Australia and the Northern Territory are either very small or none in many age groups and care is needed in interpreting the rates.
- Mortality rates generally increased with increasing age in both Indigenous and non-Indigenous women.
- Compared with non-Indigenous women, Indigenous women experienced high rates of mortality in every age group.

Tables

Indicator 1: Participation rate for cervical screening

Table 1a: Number of women participating in the National Cervical Screening Program, by age, states and territories, 1998–1999

Age group	NSW	Vic	WA ^(a)	SA ^(b)	Tas	ACT ^(a)	NT	Total
20–24	105,105	89,660	36,858	27,282	9,466	6,803	4,700	279,874
25–29	152,831	128,002	47,821	36,257	11,298	8,589	6,208	391,006
30–34	154,747	129,131	48,370	37,393	11,482	8,293	5,586	395,002
35–39	158,287	129,303	49,374	39,258	12,479	8,350	4,963	402,014
40–44	135,791	112,158	43,327	35,207	10,685	7,563	4,050	348,781
45–49	114,246	96,199	35,585	30,489	9,030	7,019	3,321	295,889
50–54	91,705	77,518	26,608	24,842	7,222	5,785	2,217	235,897
55–59	61,286	52,870	17,411	16,762	4,845	3,404	1,273	157,851
60–64	45,955	41,426	13,272	13,327	3,689	2,177	641	120,487
65–69	32,950	32,337	9,512	10,243	2,753	1,413	355	89,563
70–74	14,341	12,107	3,656	7,043	842	583	147	38,719
75–79	5,440	4,559	1,311	n.a.	334	198	72	11,914
80+	2,051	2,055	431	n.a.	134	67	23	4,761
Not stated	5,485	n.a.	n.a.	31	7	15	28	5,566
All ages	1,080,220	907,325	333,536	278,134	84,266	60,259	33,584	2,777,324
Ages 20–69 years	1,052,903	888,604	328,138	271,060	82,949	59,396	33,314	2,716,364

(a) The WA and ACT registers only register women with a valid WA or ACT address respectively.

(b) South Australia has grouped women aged 70 years or more, and for the purpose of this table, they appear in the 70–74 age group.

Notes

1. These numbers may be over-estimated 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.
2. The Queensland Health Pap Smear Register began operations in February 1999. Hence no data are available for 1998–1999.

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

Table 1b: Proportion of women participating in the National Cervical Screening Program, by age, states and territories, 1998–1999

Age group	NSW	Vic	WA ^(a)	SA ^(b)	Tas	ACT ^(a)	NT	Total
(Per cent)								
20–24	48.1	53.6	54.7	55.9	63.7	51.9	59.7	52.0
25–29	62.3	69.2	67.6	68.9	70.1	65.4	65.8	66.0
30–34	66.6	72.9	71.2	71.5	71.6	69.3	66.9	69.7
35–39	67.9	75.5	72.3	72.9	72.4	71.5	67.7	71.4
40–44	67.2	74.9	71.2	74.0	70.0	71.8	68.0	70.9
45–49	66.1	74.7	68.8	72.2	68.8	73.1	71.1	69.9
50–54	68.5	78.0	70.7	75.4	71.1	82.4	70.6	72.8
55–59	59.2	69.6	61.9	66.9	60.7	74.3	67.0	63.9
60–64	52.0	63.6	57.5	61.2	54.1	66.1	53.8	57.4
65–69	39.1	52.2	45.7	48.5	42.3	51.7	44.9	45.2
All ages								
Crude rate	56.9	64.1	61.9	62.2	60.9	64.2	64.9	60.6
AS rate	56.2	63.8	60.4	62.8	60.9	62.6	60.4	60.0
95% CI	56.1–56.3	63.6–63.9	60.2–60.6	62.5–63.0	60.5–61.4	62.1–63.1	59.7–61.2	59.9–60.0
Ages 20–69 years								
Crude rate	61.4	69.3	66.1	68.1	66.8	67.8	65.8	65.4
AS rate	60.8	68.9	65.4	67.6	66.3	67.6	64.5	64.8
95% CI	60.7–60.9	68.8–69.0	65.1–65.6	67.3–67.8	65.8–66.7	67.0–68.1	63.7–65.3	64.8–64.9

(a) The WA and ACT registers only register women with a valid WA and ACT address respectively.

(b) South Australia has grouped all women aged 70 years or more, and for the purposes of this table they appear in the 70–74 age group.

Notes

1. These numbers may be over-estimated 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.
2. The Queensland Health Pap Smear Register began operations in February 1999. Hence no data are available for 1998–1999.
3. Rates are standardised to the 1991 Australian total population.

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

Table 2a: Number of women participating in the National Cervical Screening Program, by age, states and territories, 1999–2000

Age group	NSW	Vic	Qld	WA ^(a)	SA ^(b)	Tas	ACT ^(a)	NT	Australia
20–24	99,812	83,943	64,583	34,401	25,727	8,939	6,354	4,587	328,346
25–29	147,289	120,835	82,879	44,631	33,896	10,398	8,083	6,067	454,078
30–34	151,934	125,001	81,147	46,230	36,101	11,047	8,072	5,782	465,314
35–39	156,192	124,293	83,093	47,573	38,032	11,999	7,964	4,941	474,087
40–44	137,205	110,095	73,124	42,825	35,019	10,864	7,369	4,170	420,671
45–49	115,982	94,509	61,746	35,698	30,326	9,101	6,706	3,490	357,558
50–54	95,632	78,785	50,876	27,795	25,564	7,582	5,848	2,491	294,573
55–59	64,864	53,943	33,397	17,857	17,313	5,123	3,485	1,444	197,426
60–64	48,312	41,339	23,470	13,451	13,827	3,822	2,243	719	147,183
65–69	34,003	30,654	16,317	9,346	10,135	2,849	1,388	401	105,093
70–74	14,487	11,283	7,955	3,583	6,517	788	491	147	45,251
75–79	5,487	4,233	3,228	1,230	n.a.	321	168	79	14,746
80+	2,113	1,946	1,423	542	n.a.	140	58	20	6,242
Not stated	3,720	27	408	0	24	4	15	21	4,219
All ages	1,077,032	880,886	583,646	325,162	272,481	82,977	58,244	34,359	3,314,787
Ages 20–69 years	1,051,225	863,397	570,632	319,807	265,940	81,724	57,512	34,092	3,244,329

(a) The WA and ACT registers only register women with a valid WA or ACT address respectively.

(b) South Australia has grouped women aged 70 years or more, and for the purpose of this table they appear in the 70–74 age group.

Notes

1. These numbers may be over-estimated 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.
2. Queensland data for the 1999–2000 period refer to the 2-year period from March 1999 to February 2001.

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

Table 2b: Proportion of women participating in the National Cervical Screening Program, by age, states and territories, 1999–2000

Age group	NSW	Vic	Qld	WA ^(a)	SA ^(b)	Tas	ACT ^(c)	NT	Australia
(Per cent)									
20–24	45.6	50.0	51.7	50.6	53.5	61.3	48.8	58.8	49.5
25–29	59.6	65.5	61.2	62.9	65.8	66.3	62.1	64.9	62.4
30–34	65.3	69.9	64.0	67.9	69.9	70.1	67.7	67.6	67.0
35–39	67.2	72.3	64.8	69.5	71.5	71.2	69.2	66.6	68.7
40–44	67.0	72.5	64.8	69.5	72.6	70.7	69.7	69.7	68.8
45–49	66.1	72.1	63.2	67.3	71.3	68.4	70.2	72.4	67.8
50–54	69.3	76.4	65.9	70.3	75.1	72.2	79.9	75.2	71.3
55–59	60.2	68.3	57.1	60.7	66.3	62.0	71.7	70.0	62.5
60–64	53.7	62.2	51.0	56.4	62.3	54.6	65.3	58.6	56.5
65–69	40.8	49.7	39.9	44.5	48.6	43.9	49.9	48.3	44.2
All ages									
Crude rate	55.2	60.4	55.4	58.5	59.5	58.9	61.4	65.3	57.5
AS rate	55.0	60.4	54.5	57.4	60.4	59.4	59.5	60.7	57.2
95% CI	54.9–55.1	60.3–60.6	54.4–54.7	57.2–57.6	60.2–60.6	59.0–59.8	58.9–60.0	60.0–61.4	57.1–57.2
Ages 20–69 years									
Crude rate	60.7	66.6	60.2	63.5	66.7	66.0	65.3	66.4	63.1
AS rate	60.2	66.2	59.5	62.8	66.2	65.5	65.1	65.6	62.6
95% CI	60.1–60.3	66.1–66.3	59.3–59.6	62.6–63.1	66.0–66.5	65.0–65.9	64.6–65.7	64.9–66.4	62.5–62.6

(a) The WA and ACT registers only register women with a valid WA and ACT address respectively.

(b) South Australia has grouped all women aged 70 years or more, and for the purposes of this table they appear in the 70–74 age group.

Notes

1. These numbers may be over-estimated 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.
2. Queensland data for the 1999–2000 period refer to the 2-year period from March 1999 to February 2001.
3. Rates are standardised to the 1991 Australian total population.

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

Indicator 2: Early re-screening

Table 3: Number of women with repeat screenings in the 21 months following a negative Pap smear in February 1999, states and territories, and Australia, 1999–2000

No. of tests	NSW	Vic	Qld	WA ^(a)	SA	Tas	ACT ^(a)	NT	Australia
0	36,482	33,041	23,870	10,568	9,438	2,624	2,147	1,386	119,556
1	15,212	14,126	8,341	4,601	3,411	1,012	723	490	47,916
2	1,902	2,126	1,202	547	478	138	125	73	6,591
3	317	504	244	96	97	28	16	8	1,310
4	45	117	62	16	23	4	2	0	269
5 or more	6	55	10	3	5	1	0	1	81

(a) The WA and ACT registries only register women with a valid WA and ACT address respectively.

Notes

1. These numbers may be over-estimated 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.
2. The follow-up period for Queensland data is from March 1999 to December 2000.

Source: State and territory Cervical Cytology Registry data.

Table 4: Percentage of women with repeat screenings in the 21 months following a negative smear in February 1999, states and territories, and Australia, 1999–2000

No. of tests	NSW	Vic	Qld	WA ^(a)	SA	Tas	ACT ^(a)	NT	Australia
0	67.5	66.1	70.8	66.8	70.2	68.9	71.3	70.8	68.0
1	28.3	28.3	24.7	29.1	25.4	26.6	24.0	25.0	27.3
2	3.5	4.3	3.6	3.5	3.6	3.6	4.1	3.7	3.8
3	0.6	1.0	0.7	0.6	0.7	0.7	0.5	0.4	0.7
4	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.0	0.2
5 or more	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0

(a) The WA and ACT registries only register women with a valid WA and ACT address respectively.

Note: These numbers may be over-estimated 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.

Source: State and territory Cervical Cytology Registry data.

Indicator 3: Low-grade abnormality detection

Table 5a: Number of low- and high-grade abnormalities on histology for women aged 20–69 years, states and territories, 1999

Abnormalities	NSW	Vic	WA	SA	Tas	ACT	NT	Total
Low-grade	6,207	4197	2563	1767	640	221	158	15,753
High-grade	4,523	3546	1509	1237	470	178	179	11,642
Ratio	1.37	1.18	1.70	1.43	1.36	1.24	0.88	1.35
As a percentage of all screens in 1999								
Low-grade	1.0	0.8	1.3	1.2	1.4	1.8	0.9	1.0
High-grade	0.8	0.7	0.8	0.8	1.0	1.4	1.0	0.8

Notes

1. The Queensland Health Pap Smear Register began operations in February 1999; therefore no data are available for 1999.
2. These numbers may be over-estimated 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.

Source: State and territory Cervical Cytology Registry data.

Table 5b: Number of low- and high-grade abnormalities on histology for women aged 20–69 years, states and territories, 2000

Abnormalities	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Low-grade	6,381	3,701	5,016	2,075	1,541	678	273	320	19,985
High-grade	4,493	2,986	3,105	1,240	1,045	478	220	284	13,851
Ratio	1.42	1.24	1.62	1.67	1.47	1.42	1.24	1.13	1.44
As a percentage of all screens in 2000									
Low-grade	1.1	0.7	1.6	1.1	1.0	1.5	0.5	1.6	1.1
High-grade	0.7	0.6	1.0	0.6	0.7	1.0	0.4	1.4	0.7

Note: These numbers may be over-estimated 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.

Source: State and territory Cervical Cytology Registry data.

Indicator 4: High-grade abnormality detection

Table 6a: Rate of histologically confirmed high-grade abnormalities per 1,000 women screened, by age, states and territories, 1999

Age group	NSW	Vic	WA	SA ^(a)	Tas	ACT	NT	Total
20–24	18.3	15.9	15.5	16.8	23.1	8.5	13.4	16.8
25–29	14.8	14.1	17.4	15.4	21.0	10.1	15.8	15.0
30–34	9.9	9.2	10.6	11.8	12.1	10.1	11.1	10.0
35–39	6.7	6.2	6.7	7.0	8.4	8.3	9.6	6.7
40–44	4.3	3.8	4.4	6.5	5.8	5.5	4.0	4.4
45–49	3.0	2.7	3.1	5.0	4.6	4.4	4.8	3.2
50–54	2.2	1.4	1.5	2.9	3.0	1.5	3.9	2.0
55–59	1.4	1.5	1.6	2.6	1.4	3.1	7.9	1.7
60–64	1.3	1.7	1.6	1.8	1.9	3.4	0.0	1.6
65–69	2.2	1.3	2.3	2.4	1.3	6.8	9.3	2.0
70–74	1.7	2.4	0.9	6.8	4.4	10.9	12.8	2.9
75–79	4.5	1.5	5.7	n.a.	0.0	48.1	0.0	4.1
80–84	2.4	2.5	3.8	n.a.	20.4	0.0	0.0	3.0
85+	0.0	2.9	44.4	n.a.	0.0	0.0	0.0	4.4
All ages	7.4	6.8	7.8	8.3	9.9	7.0	9.7	7.5
Ages 20–69 years	7.6	6.9	7.9	8.4	10.0	6.8	9.7	7.5

(a) South Australia has grouped all women aged 70 years or more, and for the purpose of this table they appear in the 70–74 age group.

Notes

1. These numbers may be over-estimated 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.
2. No data were available for Queensland for this period.

Source: State and territory Cervical Cytology Registry data.

Table 6b: Rate of histologically confirmed high-grade abnormalities per 1,000 women screened, by age, states and territories, 2000

Age group	NSW	Vic	Qld	WA	SA ^(a)	Tas	ACT	NT	Australia
20–24	17.0	13.8	19.0	13.8	13.8	27.0	13.8	24.0	16.3
25–29	15.4	13.1	19.7	14.8	13.8	18.1	9.4	23.7	15.5
30–34	10.3	8.6	12.8	9.1	10.9	12.1	12.1	15.6	10.3
35–39	6.2	5.3	8.6	5.6	6.1	10.9	5.4	12.3	6.5
40–44	5.0	3.4	5.5	3.2	4.9	7.0	3.1	11.5	4.5
45–49	2.8	2.3	4.1	2.2	3.4	4.4	4.8	6.3	3.0
50–54	1.9	1.2	2.6	1.3	2.3	3.4	3.6	1.4	1.9
55–59	1.3	1.0	3.0	1.0	1.8	1.7	2.5	3.6	1.5
60–64	1.4	1.1	1.5	1.7	2.4	1.4	1.6	4.7	1.5
65–69	2.2	1.1	1.6	1.0	2.0	2.6	2.6	9.5	1.7
70–74	3.0	2.0	2.4	1.3	8.6	2.3	0.0	12.7	3.2
75–79	3.7	2.1	6.0	1.1	n.a.	0.0	50.0	0.0	3.8
80–84	4.8	2.5	9.5	0.0	n.a.	0.0	0.0	0.0	4.3
85+	6.5	0.0	0.0	8.4	n.a.	0.0	0.0	0.0	3.1
All ages	7.3	5.9	9.5	6.3	7.0	10.2	6.9	14.3	7.3
Ages 20–69 years	7.4	6.0	9.6	6.4	7.0	10.4	6.8	14.3	7.4

(a) South Australia has grouped all women aged 70 years or more, and for the purpose of this table they appear in the 70–74 age group.

Note: These numbers may be over-estimated 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.

Source: State and territory Cervical Cytology Registry data.

Table 7a: Number of histologically confirmed high-grade abnormalities, by age, states and territories, 1999

Age group	NSW	Vic	WA	SA ^(a)	Tas	ACT	NT	Total
20–24	1,031	787	316	247	118	31	35	2,565
25–29	1,252	1,031	466	300	131	49	54	3,283
30–34	859	690	290	240	79	46	34	2,238
35–39	599	461	188	150	59	38	25	1,520
40–44	332	249	114	125	36	23	9	888
45–49	201	152	67	84	24	17	9	554
50–54	122	64	25	41	13	5	5	275
55–59	51	48	17	24	4	6	6	156
60–64	35	40	13	13	4	4	0	109
65–69	41	22	13	13	2	5	2	98
70–74	14	16	2	23	2	3	1	61
75–79	14	4	5	0	0	5	0	28
80–84	2	2	1	0	1	0	0	6
85+	0	1	2	0	0	0	0	3
Age not stated	5	0	0	0	0	0	0	5
All ages	4,558	3,569	1,519	1,260	473	232	180	11,789
Ages 20–69 years	4,523	3,546	1,509	1,237	470	224	179	11,686

(a) South Australia has grouped all women aged 70 years or more, and for the purpose of this table they appear in the 70–74 age group.

Notes

1. These numbers may be over-estimated 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.
2. No data were available for Queensland for this period.

Source: State and territory Cervical Cytology Registry data.

Table 7b: Number of histologically confirmed high-grade abnormalities, by age, states and territories, 2000

Age group	NSW	Vic	Qld	WA	SA ^(a)	Tas	ACT	NT	Australia
20–24	924	632	665	266	196	131	46	62	2,922
25–29	1,284	880	904	379	260	105	42	83	3,937
30–34	898	619	593	249	224	75	56	53	2,767
35–39	559	373	400	158	131	73	24	36	1,754
40–44	399	217	231	84	97	44	13	28	1,113
45–49	192	128	146	50	58	23	18	13	628
50–54	107	58	75	23	33	15	12	2	325
55–59	49	31	57	11	17	5	5	3	178
60–64	40	28	20	14	18	3	2	2	127
65–69	41	20	14	6	11	4	2	2	100
70–74	24	13	10	3	31	1	0	1	83
75–79	11	5	10	1	0	0	4	0	31
80–84	4	2	5	0	0	0	0	0	11
85+	2	0	0	1	0	0	0	0	3
Age not stated	2	0	1	0	0	0	0	0	3
All ages	4,536	3,006	3,131	1,245	1,076	479	224	285	13,982
Ages 20–69 years	4,493	2,986	3,105	1,240	1,045	478	220	284	13,851

(a) South Australia has grouped all women aged 70 years or more, and for the purpose of this table they appear in the 70–74 age group

Note: These numbers may be over-estimated 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.

Source: State and territory Cervical Cytology Registry data.

Table 8a: Number of women screened, by age, states and territories, 1999

Age group	NSW	Vic	WA	SA ^(a)	Tas	ACT	NT	Total
20–24	56,207	49,642	20,430	14,682	5,112	3,647	2,617	152,337
25–29	84,768	72,923	26,751	19,534	6,247	4,856	3,420	218,499
30–34	87,185	74,662	27,357	20,319	6,536	4,573	3,068	223,700
35–39	89,864	74,680	28,256	21,299	7,065	4,557	2,616	228,337
40–44	77,916	65,350	25,624	19,272	6,199	4,184	2,225	200,770
45–49	66,105	56,250	21,453	16,760	5,225	3,875	1,860	171,528
50–54	54,472	46,336	16,802	13,938	4,302	3,299	1,289	140,438
55–59	36,266	31,374	10,801	9,400	2,854	1,922	757	93,374
60–64	27,057	23,708	8,133	7,351	2,113	1,164	361	69,887
65–69	18,896	17,423	5,611	5,476	1,582	738	215	49,941
70–74	8,061	6,696	2,276	3,361	451	276	78	21,199
75–79	3,103	2,600	872	n.a.	173	104	46	6,898
80–84	832	811	260	n.a.	49	19	7	1,978
85+	263	344	45	n.a.	21	10	2	685
Age not stated	2,406	0	0	11	5	8	11	2,441
All ages	613,401	522,799	194,671	151,403	47,934	33,232	18,572	1,582,012
Ages 20–69 years	598,736	512,348	191,218	148,031	47,235	32,815	18,428	1,548,811

(a) South Australia has grouped all women aged 70 years or more, and for the purpose of this table they appear in the 70–74 age group.

Notes

1. These numbers may be over-estimated 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.
2. No data were available for Queensland for this period.

Source: State and territory Cervical Cytology Registry data.

Table 8b: Number of women screened, by age, states and territories, 2000

Age group	NSW	Vic	Qld	WA	SA^(a)	Tas	ACT	NT	Australia
20–24	54,311	45,637	35,011	19,340	14,251	4,849	3,332	2,581	179,312
25–29	83,176	67,289	45,787	25,623	18,861	5,813	4,489	3,496	254,534
30–34	87,608	71,913	46,487	27,275	20,521	6,217	4,611	3,399	268,031
35–39	89,792	70,492	46,677	28,213	21,478	6,679	4,474	2,935	270,740
40–44	79,978	64,332	42,141	26,282	19,986	6,288	4,180	2,440	245,627
45–49	67,717	55,487	35,455	22,617	17,160	5,216	3,779	2,056	209,487
50–54	56,503	47,826	29,398	17,830	14,521	4,348	3,316	1,445	175,187
55–59	38,304	32,441	19,203	11,521	9,678	2,972	2,001	823	116,943
60–64	27,659	24,586	13,156	8,448	7,654	2,165	1,290	425	85,383
65–69	19,011	17,734	8,744	5,856	5,372	1,546	774	211	59,248
70–74	8,019	6,600	4,195	2,358	3,594	435	268	79	25,548
75–79	2,964	2,391	1,659	905	0	168	80	37	8,204
80–84	842	798	529	300	0	39	19	8	2,535
85+	306	321	187	119	0	29	5	3	970
Age not stated	1,734	0	207	0	11	0	7	16	1,975
All ages	617,924	507,847	328,836	196,687	153,087	46,764	32,625	19,954	1,903,724
Ages 20–69 years	604,059	497,737	322,059	193,005	149,482	46,093	32,246	19,811	1,864,492

(a) South Australia has grouped all women aged 70 years or more, and for the purpose of this table they appear in the 70–74 age group.

Note: These numbers may be over-estimated 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.

Source: State and territory Cervical Cytology Registry data.

Table 9a: Age-standardised high-grade abnormality rate on histology per 1,000 women screened aged 20–69 years, states and territories, 1999

	NSW	Vic	WA	SA	Tas	ACT	NT	Total
All ages								
AS rate	7.1	6.4	7.8	7.9	9.5	6.5	8.4	7.1
95% CI	6.9–7.3	6.2–6.7	7.0–8.8	7.4–8.3	8.4–10.7	5.5–7.5	6.8–10.2	7.0–7.3
Target age 20–69								
AS rate	7.7	6.9	7.7	8.5	9.9	6.8	8.7	7.6
95% CI	7.4–7.9	6.7–7.2	7.4–8.2	8.0–9.0	9.0–10.9	5.8–7.7	7.4–10.2	7.4–7.7

Notes

1. No data were available for Queensland for this period.
2. Standardised to the 1991 Australian total population.
3. These numbers may be over-estimated 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.

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

Table 9b: Age-standardised high-grade abnormality rate on histology per 1,000 women screened aged 20–69 years, states and territories, 2000

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
All ages									
AS rate	7.1	5.7	8.8	5.8	6.8	9.6	7.6	12.1	7.1
95% CI	6.9–7.4	5.5–6.0	8.5–9.2	5.5–6.1	6.4–7.2	8.7–10.5	6.0–9.7	10.4–14.0	7.0–7.2
Target age 20–69									
AS rate	7.6	6.2	9.4	6.5	7.2	10.6	6.8	12.9	7.5
95% CI	7.4–7.8	5.9–6.4	9.0–9.7	6.1–6.9	6.8–7.7	9.7–11.5	5.8–7.6	11.2–14.7	7.4–7.6

Notes

1. Rates are standardised to the 1991 Australian total population.
2. These numbers may be over-estimated 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.

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

Indicator 5: Incidence of micro-invasive cervical cancer

Table 10: New cases of micro-invasive cervical cancer, by age, Australia, 1988–1999

Age group	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
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	1	0	0	0	0	1	0	0	0
20–24	4	1	4	0	5	1	7	1	6	3	2	2
25–29	13	13	14	14	14	9	17	16	17	10	17	14
30–34	20	28	32	31	32	32	36	42	18	27	18	14
35–39	13	10	24	40	25	26	29	29	35	21	26	20
40–44	12	17	25	30	24	17	24	30	23	21	22	15
45–49	9	6	18	9	13	14	26	23	12	11	15	7
50–54	6	4	5	11	12	17	9	12	11	8	13	7
55–59	5	5	8	7	11	4	5	9	7	8	3	8
60–64	2	7	8	7	8	7	10	11	6	5	5	2
65–69	2	2	6	7	9	10	6	7	10	2	2	3
70–74	0	0	2	4	2	3	6	5	3	4	3	2
75–79	1	1	3	3	2	1	3	5	2	2	2	1
80–84	0	1	0	2	0	0	0	1	1	0	2	0
85+	0	0	0	0	0	1	2	1	1	0	0	0
All ages	87	95	149	166	157	142	180	192	153	122	130	95
Ages 20–69 years	86	93	144	156	153	137	169	180	145	116	123	92

Source: National Cancer Statistics Clearing House (AIHW).

Table 11: Age-specific and age-standardised rates of micro-invasive cervical cancer, by age, Australia, 1988–1999

Age group	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
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	0.2	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
20–24	0.6	0.2	0.6	0.0	0.7	0.1	1.0	0.1	0.9	0.4	0.3	0.3
25–29	1.9	1.8	2.0	2.0	2.0	1.3	2.5	2.3	2.4	1.4	2.3	1.9
30–34	3.0	4.1	4.6	4.4	4.4	4.4	4.9	5.7	2.5	3.8	2.5	2.0
35–39	2.0	1.5	3.7	6.0	3.7	3.8	4.2	4.1	4.8	2.8	3.4	2.6
40–44	2.1	2.9	4.0	4.7	3.7	2.6	3.7	4.5	3.4	3.0	3.1	2.1
45–49	2.1	1.3	3.8	1.8	2.4	2.4	4.4	3.7	1.9	1.7	2.3	1.0
50–54	1.6	1.0	1.2	2.7	2.8	3.9	2.0	2.5	2.2	1.5	2.3	1.2
55–59	1.4	1.4	2.2	2.0	3.0	1.1	1.3	2.3	1.7	1.9	0.7	1.8
60–64	0.5	1.9	2.2	1.9	2.2	1.9	2.8	3.1	1.7	1.4	1.3	0.5
65–69	0.6	0.6	1.7	2.0	2.5	2.8	1.7	2.0	2.8	0.6	0.6	0.9
70–74	0.0	0.0	0.7	1.4	0.7	1.0	1.9	1.5	0.9	1.2	0.9	0.6
75–79	0.5	0.5	1.4	1.3	0.9	0.4	1.3	2.1	0.8	0.8	0.7	0.4
80–84	0.0	0.7	0.0	1.4	0.0	0.0	0.0	0.6	0.6	0.0	1.1	0.0
85+	0.0	0.0	0.0	0.0	0.0	0.8	1.6	0.7	0.7	0.0	0.0	0.0
All ages												
Crude rate	1.5	1.6	2.5	2.7	2.5	2.2	2.8	2.9	2.3	1.8	1.9	1.4
AS rate (A)	1.5	1.6	2.5	2.7	2.5	2.3	2.8	3.0	2.3	1.8	1.9	1.4
95% CI	1.2–1.9	1.2–1.9	2.1–2.9	2.3–3.1	2.1–2.9	1.9–2.6	2.4–3.2	2.5–3.3	1.9–2.7	1.5–2.1	1.5–2.1	1.1–1.7
AS rate (W)	1.6	1.6	2.5	2.6	2.5	2.2	2.8	2.9	2.3	1.8	1.9	1.4
95% CI	1.2–1.9	1.2–1.8	2–2.9	2.2–3	2.1–2.9	1.8–2.5	2.4–3.2	2.4–3.2	1.9–2.6	1.4–2.1	1.5–2.1	1.1–1.7
Age 20–69 years												
Crude rate	1.7	1.8	2.7	2.9	2.8	2.5	3.0	3.2	2.5	2.0	2.1	1.5
AS rate (A)	1.7	1.8	2.7	2.9	2.8	2.5	3.0	3.1	2.5	2.0	2.0	1.5
95% CI	1.3–2.1	1.4–2.2	2.3–3.2	2.4–3.3	2.3–3.2	2.0–2.9	2.5–3.4	2.7–3.6	2.1–2.9	1.6–2.3	1.7–2.4	1.2–1.8
AS rate (W)	1.7	1.7	2.6	2.7	2.7	2.3	2.9	3.0	2.4	1.9	2.0	1.5
95% CI	1.3–2.0	1.4–2.0	2.2–3.0	2.3–3.1	2.3–3.1	1.9–2.7	2.5–3.3	2.6–3.4	2.0–2.8	1.5–2.2	1.6–2.3	1.2–1.8

Note: Rates are expressed per 100,000 women and age standardised to the Australian 1991 population (A) and the World Standard Population (W).

Source: National Cancer Statistics Clearing House (AIHW).

Indicator 6: Incidence of invasive squamous, adenocarcinoma, adeno-squamous and other cervical cancer

Table 12: New cases of cervical cancer, by age, Australia, 1988–1999

Age group	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
0–4	1	0	0	0	0	0	0	0	0	0	0	0
5–9	0	0	0	0	0	0	1	0	0	0	0	0
10–14	0	0	0	0	0	0	0	0	0	0	0	0
15–19	4	1	1	1	0	1	1	2	1	1	2	0
20–24	19	16	12	12	9	9	16	3	15	10	10	7
25–29	77	67	59	47	53	37	50	51	43	43	48	55
30–34	128	131	112	119	106	105	123	112	68	78	85	74
35–39	137	122	155	140	126	129	130	110	141	99	102	100
40–44	124	127	139	150	130	128	131	118	116	102	101	104
45–49	92	93	121	105	100	101	131	99	102	79	109	76
50–54	63	82	68	90	77	89	88	58	80	75	65	65
55–59	67	83	80	63	78	78	73	69	63	51	53	48
60–64	90	86	78	81	76	76	88	71	61	51	55	63
65–69	102	99	75	89	87	91	94	77	65	56	56	54
70–74	54	66	66	78	72	64	77	73	59	45	61	44
75–79	50	51	51	48	53	46	65	50	51	46	45	41
80–84	35	28	29	36	35	37	40	30	41	32	39	35
85+	23	19	23	33	22	21	24	34	25	28	29	21
All ages	1,066	1,071	1,069	1,092	1,024	1,012	1,132	957	931	796	860	787
Ages 20–69 years	899	906	899	896	842	843	924	768	754	644	684	646

Note: The above table includes the incidence of micro-invasive and invasive cervical cancers.

Source: National Cancer Statistics Clearing House (AIHW).

Table 13: Age-specific and age-standardised incidence rates of cervical cancer, by age, Australia, 1988–1999

Age group	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
0–4	0.2	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	0.2	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	0.6	0.1	0.1	0.2	0.0	0.2	0.2	0.3	0.2	0.2	0.3	0.0
20–24	2.9	2.4	1.8	1.7	1.3	1.3	2.3	0.4	2.2	1.5	1.5	1.1
25–29	11.1	9.5	8.3	6.7	7.7	5.4	7.4	7.4	6.1	5.9	6.5	7.5
30–34	19.4	19.3	16.1	16.7	14.6	14.4	16.7	15.3	9.4	10.9	11.9	10.3
35–39	21.6	18.9	23.6	21.1	18.6	18.7	18.6	15.4	19.3	13.3	13.5	13.1
40–44	21.8	21.3	22.5	23.5	20.3	19.8	19.9	17.7	17.1	14.7	14.3	14.5
45–49	21.1	20.4	25.3	20.9	18.6	17.6	22.0	16.1	15.9	12.3	16.6	11.4
50–54	16.7	21.1	17.0	21.8	18.2	20.5	19.4	12.2	16.1	13.9	11.3	10.8
55–59	18.4	23.0	22.3	17.6	21.3	20.8	18.9	17.4	15.5	12.1	12.2	10.5
60–64	24.3	23.2	21.0	21.9	20.8	21.1	24.7	19.9	17.1	14.0	14.7	16.3
65–69	31.0	28.9	21.5	25.3	24.6	25.6	26.5	21.7	18.3	15.9	16.0	15.6
70–74	20.2	24.8	24.4	27.6	24.6	21.1	24.3	22.6	18.0	13.7	18.4	13.2
75–79	24.3	23.7	23.1	21.3	23.1	20.0	28.5	21.4	20.9	17.9	16.7	14.6
80–84	27.1	20.9	20.8	24.8	23.1	23.4	23.9	17.4	23.2	17.8	21.4	19.0
85+	23.0	18.4	21.8	30.0	19.0	17.2	18.8	25.3	17.7	18.8	18.6	12.7
All ages												
Crude rate	12.9	12.7	12.5	12.6	11.7	11.4	12.6	10.5	10.1	8.5	9.1	8.2
AS Rate (A)	12.9	12.6	12.4	12.3	11.3	11.0	12.1	10.0	9.5	8.0	8.4	7.7
AS Rate (W)	10.6	10.5	10.2	10.1	9.3	9.1	9.9	8.2	7.8	6.5	6.9	6.3
Ages 20–69 years												
Crude rate	17.7	17.4	16.9	16.6	15.3	15.2	16.4	13.5	13.0	11.0	11.5	10.7
AS Rate (A)	17.7	17.4	17.0	16.6	15.3	15.1	16.3	13.4	12.8	10.8	11.2	10.5
AS Rate (W)	17.2	17.0	16.6	16.1	14.9	14.7	15.9	13.0	12.5	10.5	11.0	10.2

Note: Rates are expressed per 100,000 women and age standardised to the Australian 1991 population (A) and the World Standard Population (W).

Source: National Cancer Statistics Clearing House (AIHW).

Table 14a: Number of new cases of cervical cancer by age, states and territories, 1995–1998

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	3	1	2	0	0	0	0	0	6
20–24	11	6	14	3	0	4	0	0	38
25–29	56	41	42	15	16	8	4	3	185
30–34	120	78	75	30	23	15	1	1	343
35–39	155	99	100	38	20	20	9	11	452
40–44	137	117	77	58	24	8	10	6	437
45–49	145	95	65	41	22	9	4	8	389
50–54	117	61	54	20	11	5	5	5	278
55–59	81	61	45	24	13	6	4	2	236
60–64	82	65	38	24	15	10	2	2	238
65–69	85	63	53	26	16	7	1	3	254
70–74	91	54	38	23	21	5	4	2	238
75–79	66	54	39	12	13	6	0	2	192
80–84	47	49	17	14	11	1	3	0	142
85+	34	36	24	15	6	0	1	0	116
All ages	1,230	880	683	343	211	104	48	45	3,544
Ages 20–69 years	989	686	563	279	160	92	40	41	2,850

Source: National Cancer Statistics Clearing House (AIHW).

Table 14b: Age-specific rates of cervical cancer, by age, states and territories, 1995–1998

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	0.4	0.2	0.4	0.0	0.0	0.0	0.0	0.0	0.2
20–24	1.2	0.9	2.7	1.1	0.0	6.3	0.0	0.0	1.4
25–29	5.8	5.6	8.0	5.4	7.5	12.1	7.6	8.1	6.5
30–34	12.3	10.7	14.4	10.7	10.3	21.3	2.0	3.0	11.9
35–39	15.6	13.5	18.8	13.1	8.5	26.3	17.3	35.5	15.4
40–44	14.9	17.1	15.5	21.0	10.9	11.3	19.8	22.2	15.9
45–49	17.0	14.9	13.9	16.4	10.5	13.8	8.2	35.4	15.2
50–54	16.5	11.7	14.1	10.3	6.4	9.3	13.9	31.3	13.3
55–59	14.1	14.5	15.3	15.6	9.3	13.5	16.4	20.3	14.2
60–64	16.1	17.3	15.4	18.5	11.9	25.4	11.0	31.3	16.4
65–69	16.9	17.3	22.3	21.7	12.6	18.5	6.4	67.8	18.0
70–74	19.4	15.8	17.5	21.8	17.0	14.1	27.8	65.9	18.2
75–79	18.3	20.9	23.2	15.0	13.5	21.3	0.0	101.0	19.1
80–84	18.5	26.4	14.5	23.8	16.1	4.9	45.4	0.0	20.0
85+	16.7	23.1	25.5	30.3	10.6	0.0	20.9	0.0	20.0
All ages									
Crude rate	9.8	9.5	10.2	9.7	7.1	10.8	7.7	12.9	9.6
AS rate (A)	9.1	8.7	9.8	9.3	6.4	10.7	7.8	17.9	9.0
95% CI	8.6–9.6	8.1–9.3	9.1–10.6	8.3–10.3	5.5–7.2	8.6–12.8	5.6–10.0	12.7–23.2	8.7–9.3
AS rate (W)	7.5	7.1	8.0	7.6	5.2	8.9	6.3	14.4	7.3
95% CI	7.1–7.9	6.6–7.5	7.4–8.6	6.8–8.4	4.5–5.9	7.2–10.6	4.5–8.1	10.2–18.6	7.1–7.6
Ages 20–69 years									
Crude rate	12.5	11.7	13.4	12.5	8.5	15.6	9.9	18.6	12.2
AS rate (A)	12.2	11.5	13.3	12.4	8.4	15.5	9.8	21.9	12.0
95% CI	11.4–13.0	10.6–12.4	12.2–14.4	10.8–13.9	7.1–9.6	12.2–18.9	6.6–13.0	15.2–28.6	11.6–12.5
AS rate (W)	12.0	11.2	12.9	12.0	8.1	15.0	9.7	21.6	11.7
95% CI	11.2–12.7	10.3–12.1	11.9–14.0	10.5–13.5	6.9–9.3	11.8–18.2	6.5–12.8	15.0–28.2	11.3–12.2

Note: Rates are expressed per 100,000 women and age standardised to the Australian 1991 population (A) and the World Standard Population (W).

Source: National Cancer Statistics Clearing House (AIHW).

Table 15a: Number of new cases of cervical cancer, by age, states and territories, 1996–1999

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	2	1	1	0	0	0	0	0	4
20–24	11	8	15	3	0	5	0	0	42
25–29	61	37	47	13	16	7	5	3	189
30–34	105	58	72	30	26	12	0	2	305
35–39	147	93	102	33	24	24	9	10	442
40–44	130	107	91	52	24	8	5	6	423
45–49	134	90	64	34	25	6	5	8	366
50–54	122	60	54	21	14	5	3	6	285
55–59	64	62	41	19	16	5	4	4	215
60–64	80	60	45	17	18	7	1	2	230
65–69	89	50	50	22	12	4	4	0	231
70–74	83	55	27	22	13	4	3	2	209
75–79	65	45	37	14	14	5	1	2	183
80–84	53	46	21	15	8	2	2	0	147
85+	35	29	20	13	5	0	1	0	103
All ages	1,181	801	687	308	215	94	43	45	3,374
Ages 20–69 years	943	625	581	244	175	83	36	41	2,728

Source: National Cancer Statistics Clearing House (AIHW).

Table 15b: Age-specific rates of cervical cancer, by age, states and territories, 1996–1999

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	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.2
20–24	1.3	1.2	3.0	1.1	0.0	8.2	0.0	0.0	1.6
25–29	6.2	5.0	8.8	4.6	7.5	10.6	9.3	7.9	6.5
30–34	10.8	8.0	13.9	10.7	11.8	17.6	0.0	5.9	10.6
35–39	14.5	12.5	18.7	11.2	10.2	31.5	17.2	31.5	14.8
40–44	13.9	15.4	17.9	18.5	10.8	11.2	9.9	21.6	15.1
45–49	15.4	13.9	13.4	13.2	11.7	9.1	10.1	34.0	14.0
50–54	16.3	10.9	13.3	10.2	7.6	8.8	7.7	34.8	12.9
55–59	10.8	14.3	13.2	11.9	11.2	10.9	15.5	37.4	12.5
60–64	15.4	15.7	17.7	12.7	14.2	17.6	5.3	29.6	15.5
65–69	17.9	13.8	21.0	18.2	9.6	10.6	25.3	0.0	16.5
70–74	17.6	16.0	12.3	20.5	10.5	11.3	20.5	62.7	15.8
75–79	17.3	16.6	21.0	16.6	13.9	17.1	9.1	95.1	17.4
80–84	20.5	24.6	17.5	25.3	11.6	9.7	28.7	0.0	20.3
85+	16.3	17.8	20.1	24.9	8.4	0.0	19.4	0.0	16.8
All ages									
Crude rate	9.3	8.5	10.0	8.5	7.2	9.8	6.9	12.6	9.0
AS rate (A)	8.5	7.8	9.7	8.2	6.5	9.7	7.0	15.7	8.4
95% CI	8.0–9.0	7.2–8.3	9.0–10.4	7.3–9.1	5.7–7.4	7.7–11.6	4.9–9.1	11.1–20.3	8.1–8.7
AS rate (W)	7.0	6.4	8.0	6.5	5.4	8.0	5.7	12.8	6.9
95% CI	6.6–7.4	5.9–6.8	7.4–8.6	5.8–7.3	4.7–6.1	6.4–9.6	4.0–7.4	9.1–16.6	6.6–7.1
Ages 20–69 years									
Crude rate	11.8	8.5	10.9	8.7	7.5	11.3	7.1	14.7	977.9
AS rate (A)	11.4	10.3	13.5	10.6	9.1	14.1	9.0	18.7	11.3
95% CI	10.7–12.2	9.5–11.1	12.4–14.5	9.2–11.9	7.7–10.4	11.0–17.1	6.1–12.0	13.0–24.4	10.9–11.7
AS rate (W)	11.2	10.1	13.0	10.2	8.9	13.5	8.8	19.0	11.0
95% CI	10.5–11.9	9.3–10.9	12.0–14.1	8.9–11.5	7.5–10.2	10.6–16.4	6.0–11.7	13.2–24.8	10.6–11.5

Note: Rates are expressed per 100,000 women and age standardised to the Australian 1991 population (A) and the World Standard Population (W).

Source: National Cancer Statistics Clearing House (AIHW).

Table 16a: Number of new cases of cervical cancer, by histological type for women aged 20–69 years, Australia, 1988–1999

Histological type	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Squamous	657	688	639	650	610	596	630	546	527	450	484	464
Adenocarcinoma	157	116	149	146	141	141	192	147	148	129	140	126
Adeno-squamous	40	48	50	41	51	47	40	34	40	32	30	23
Other	45	54	61	59	40	59	62	41	39	33	30	33
Total	899	906	899	896	842	843	924	768	754	644	684	646
<i>Micro-invasive</i>	<i>86</i>	<i>87</i>	<i>140</i>	<i>154</i>	<i>151</i>	<i>134</i>	<i>169</i>	<i>176</i>	<i>145</i>	<i>115</i>	<i>116</i>	<i>92</i>

Source: National Cancer Statistics Clearing House (AIHW).

Table 16b: Age-standardised incidence rates for cervical cancer, by histological type for women aged 20–69 years, Australia, 1988–1999

Histological type	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Squamous	12.9	13.2	12.1	12.0	11.1	10.7	11.1	9.5	9.0	7.5	8.0	7.5
Adenocarcinoma	3.1	0.0	2.8	2.7	2.6	2.5	3.4	2.6	2.5	2.1	2.3	2.0
Adeno-squamous	0.8	0.9	0.9	0.8	0.9	0.8	0.7	0.6	0.7	0.5	0.5	0.4
Other	0.9	1.0	1.1	1.1	0.7	1.1	1.1	0.7	0.7	0.6	0.5	0.5
<i>Micro-invasive</i>	<i>1.1</i>	<i>1.1</i>	<i>1.7</i>	<i>1.8</i>	<i>1.8</i>	<i>1.5</i>	<i>1.9</i>	<i>2.0</i>	<i>1.6</i>	<i>1.2</i>	<i>1.3</i>	<i>1.0</i>

Note: Rates are expressed per 100,000 women and age-standardised to the Australian 1991 population (A).

Source: National Cancer Statistics Clearing House (AIHW).

Table 17a: Number of new cases of cervical cancer, by histological type for women, all ages, Australia, 1988–1999

Histological type	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Squamous	777	808	767	793	751	705	780	677	665	548	610	571
Adenocarcinoma	179	136	172	174	157	163	222	173	168	159	165	147
Adeno-squamous	45	53	56	48	56	56	50	39	47	38	35	25
Other	65	74	74	77	60	88	80	68	51	51	50	44
Total	1,066	1,071	1,069	1,092	1,024	1,012	1,132	957	931	796	860	787
<i>Micro-invasive</i>	<i>87</i>	<i>89</i>	<i>145</i>	<i>164</i>	<i>155</i>	<i>139</i>	<i>180</i>	<i>188</i>	<i>153</i>	<i>121</i>	<i>123</i>	<i>95</i>

Source: National Cancer Statistics Clearing House (AIHW).

Table 17b: Age-standardised incidence rates for cervical cancer, by histological type for women, all ages, Australia, 1988–1999

Histological type	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Squamous	9.4	9.6	8.9	8.9	8.3	7.7	8.3	7.1	6.8	5.5	6.0	5.6
Adenocarcinoma	2.2	0.0	2.0	2.0	1.8	1.8	2.4	1.8	1.7	1.6	1.7	1.4
Adeno-squamous	0.6	0.6	0.7	0.5	0.6	0.6	0.5	0.4	0.5	0.4	0.3	0.2
Other	0.8	0.9	0.8	0.8	0.6	0.9	0.9	0.7	0.5	0.5	0.5	0.4
<i>Micro-invasive</i>	<i>1.1</i>	<i>1.2</i>	<i>1.8</i>	<i>1.9</i>	<i>1.8</i>	<i>1.6</i>	<i>2.0</i>	<i>2.1</i>	<i>1.6</i>	<i>1.3</i>	<i>1.3</i>	<i>1.0</i>

Note: Rates are expressed per 100,000 women and age-standardised to the Australian 1991 population (A).

Source: National Cancer Statistics Clearing House (AIHW).

Indicator 8: Incidence by location

Table 18: Number of new cases of cervical cancer, by age and location, 1995–1998 and 1996–1999

Age group	Metropolitan		Rural		Remote	
	1995–1998	1996–1999	1995–1998	1996–1999	1995–1998	1996–1999
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	4	2	2	2	0	0
20–24	24	29	14	13	0	0
25–29	136	142	43	40	6	7
30–34	234	209	98	89	11	8
35–39	321	303	110	116	21	23
40–44	329	305	96	101	12	17
45–49	300	277	80	78	8	11
50–54	205	213	67	64	7	8
55–59	167	151	62	59	7	5
60–64	165	158	68	67	5	5
65–69	183	173	59	51	12	7
70–74	182	156	51	48	5	5
75–79	138	133	51	48	3	2
80–84	101	105	38	39	3	3
85+	89	78	24	23	3	2
All ages	2,577	2,432	863	840	104	102
Ages 20–69 years	2,063	1,959	697	679	90	90

Note: The numbers are presented as 4-year rolling blocks of data.

Source: National Cancer Statistics Clearing House (AIHW).

Table 19: Age-specific and age-standardised incidence rates for cervical cancer, by age and location, 1995–1998 and 1996–1999

Age group	Metropolitan		Rural		Remote	
	1995–1998	1996–1999	1995–1998	1996–1999	1995–1998	1996–1999
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	0.2	0.1	0.3	0.3	0.1	0.1
20–24	1.1	1.4	2.6	2.5	0.0	0.0
25–29	6.3	6.5	7.1	6.6	6.5	7.2
30–34	11.1	10.0	14.4	13.3	11.6	8.5
35–39	15.3	14.3	14.6	15.3	24.2	25.5
40–44	16.7	15.2	13.7	14.2	16.6	23.2
45–49	16.2	14.7	12.7	12.1	13.3	16.8
50–54	13.7	13.4	12.5	11.5	13.2	15.2
55–59	14.4	12.6	13.6	12.4	19.5	13.0
60–64	16.4	15.5	16.5	16.0	16.9	16.6
65–69	18.6	17.7	14.6	12.8	51.8	29.9
70–74	19.6	16.7	14.1	13.3	30.5	27.2
75–79	19.2	17.6	18.8	17.0	24.0	15.6
80–84	19.9	20.5	19.9	20.2	33.2	31.7
85+	21.3	17.7	15.5	14.1	35.9	23.1
All ages						
AS rate (A)	9.1	8.4	8.6	8.3	11.8	10.9
95% CI	8.7–9.5	8.1–8.7	8.0–9.2	7.7–8.9	9.5–14.1	8.8–13.0
AS rate (W)	7.4	6.9	7	6.8	9.3	8.8
95% CI	7.1–7.7	6.6–7.2	6.5–7.5	6.3–7.3	7.5–11.1	7.1–10.5
Ages 20–69 years						
AS rate (A)	12.1	11.3	11.7	11.3	15.2	14.5
95% CI	11.6–12.6	10.8–11.8	10.8–12.6	10.5–12.1	12.1–18.3	11.5–17.5
AS rate (W)	11.8	11.1	11.4	10.9	14.5	14.0
95% CI	11.3–12.3	10.6–11.6	10.6–12.2	10.1–11.7	11.5–17.5	11.1–16.9

Notes

1. The numbers are presented as 4-year rolling blocks of data.
2. Rates are expressed per 100,000 women and age-standardised to the Australian 1991 population (A) and the World Standard Population (W).

Source: National Cancer Statistics Clearing House (AIHW).

Indicator 7: Mortality

Table 20: Number of deaths from cervical cancer, by age, Australia, 1981–2000

Age group	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00
0–4	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
10–14	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	1	1	0	0	0	0	1	0	0	0	0	0
20–24	0	1	1	0	0	2	2	0	1	1	3	0	0	0	0	1	0	3	1	1
25–29	4	7	8	10	6	6	5	3	3	10	5	5	2	6	3	1	2	6	2	4
30–34	12	13	12	13	20	12	15	12	21	14	13	15	11	11	7	13	8	5	6	10
35–39	14	12	18	19	17	16	20	15	18	30	25	19	25	11	16	23	18	19	7	12
40–44	17	22	20	20	18	26	20	24	24	36	19	27	32	28	21	20	16	19	18	14
45–49	18	24	28	26	21	24	19	27	31	36	29	26	23	35	32	30	28	16	25	27
50–54	30	29	26	25	25	25	24	19	27	17	21	13	29	37	26	13	21	24	15	19
55–59	36	41	40	21	31	41	32	41	20	25	25	23	20	26	34	22	24	15	14	19
60–64	46	47	36	41	41	41	28	41	33	34	33	31	25	24	30	21	22	28	15	24
65–69	52	39	49	43	52	50	46	41	54	43	35	25	30	37	37	29	30	19	21	26
70–74	42	35	30	33	43	32	55	34	48	25	37	45	38	33	43	41	36	28	30	37
75–79	40	34	20	29	29	23	29	35	29	32	30	32	28	30	30	38	32	26	26	25
80–84	25	21	22	26	26	23	20	34	24	8	22	35	24	26	27	22	27	26	19	23
85+	19	18	21	21	29	24	16	17	22	25	32	23	24	24	20	24	30	31	21	26
All ages	354	342	330	327	359	343	329	343	355	337	329	319	311	329	328	296	294	265	220	267
Ages 20–69 years	228	234	238	218	230	242	210	222	231	246	208	184	197	216	207	172	169	154	124	156

Note: Deaths were derived from place of usual residence and by year of registration.

Source: AIHW Mortality Database.

Table 21: Age-specific and age-standardised death rates for cervical cancer, by age, Australia, 1981–2000

Age group	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00
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
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
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
15–19	0.0	0.0	0.0	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
20–24	0.0	0.1	0.1	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
25–29	0.6	1.1	1.2	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	0.5
30–34	1.9	2.1	1.9	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
35–39	2.8	2.2	3.2	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
40–44	4.1	5.1	4.5	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
45–49	4.9	6.4	7.6	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	2.5	3.8	4.0
50–54	8.0	7.9	7.2	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	3.1
55–59	9.8	11.1	10.7	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
60–64	14.3	14.2	10.6	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	6.1	7.6	4.0	6.2
65–69	18.2	13.5	16.8	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
70–74	18.7	15.0	12.5	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	9.1	11.2
75–79	26.0	21.3	11.6	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	9.2	8.7
80–84	24.0	19.6	19.9	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	15.1	14.4	10.6	12.3
85+	24.9	22.7	25.6	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	19.9	12.7	15.2
All ages																				
AS rate (A)	6.2	5.9	5.5	5.4	5.7	5.4	5.0	5.1	5.2	4.9	4.6	4.3	4.1	4.3	4.2	3.7	3.5	3.1	2.5	3.0
As rate (W)	5.3	5.2	5.0	4.7	4.9	4.8	4.4	4.4	4.6	4.4	4.0	3.6	3.6	3.8	3.7	3.1	3.0	2.7	2.2	2.7
Ages 20–69 years																				
AS rate (A)	5.0	5.1	5.1	4.7	4.8	4.9	4.2	4.3	4.4	4.6	3.8	3.3	3.5	3.8	3.6	2.9	2.8	2.5	2.0	2.5
As rate (W)	5.0	5.1	5.1	4.6	4.7	4.9	4.1	4.3	4.4	4.5	3.8	3.3	3.5	3.8	3.6	2.8	2.8	2.5	2.0	2.5

Notes

1. Rates for all ages are based on data for women aged 15 years and over.
2. Rates are expressed per 100,000 women and age-standardised to the Australian 1991 Population (A) and the World Standard Population (W).

Source: AIHW Mortality Database.

Table 22: Number of deaths from cervical cancer, by age, states and territories, 1993–1996

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	1	0	0	0	0	0	0	0	1
20–24	0	0	1	0	0	0	0	0	1
25–29	2	3	5	0	0	0	2	0	12
30–34	13	11	9	6	2	1	0	0	41
35–39	25	16	16	8	6	1	0	2	74
40–44	38	25	16	12	4	4	2	1	101
45–49	50	21	17	16	5	7	2	4	121
50–54	41	18	23	11	4	4	3	3	106
55–59	32	23	17	13	8	7	1	2	102
60–64	37	19	14	12	9	6	2	2	100
65–69	44	40	22	15	7	5	0	2	134
70–74	57	41	25	14	12	7	1	0	156
75–79	42	28	33	7	10	4	2	1	127
80–84	31	27	16	9	12	2	1	1	99
85+	30	26	9	10	9	4	2	0	90
All ages	445	297	220	130	86	51	18	18	1,264
Ages 20–69 years	283	173	137	91	44	34	12	16	791

Notes

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

Source: AIHW Mortality Database.

Table 23: Age-specific and age-standardised death rates for cervical cancer, by age, states and territories, 1993–1996

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	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20–24	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
25–29	0.2	0.4	1.0	0.0	0.0	0.0	3.9	0.0	0.4
30–34	1.3	1.5	1.7	2.1	0.8	1.3	0.0	0.0	1.4
35–39	2.7	2.2	3.1	2.8	2.6	1.3	0.0	6.7	2.6
40–44	4.3	3.7	3.3	4.5	1.8	5.7	3.9	3.8	3.8
45–49	6.1	3.4	3.8	6.8	2.4	10.9	4.2	19.0	5.0
50–54	6.5	3.8	6.8	6.3	2.5	8.0	9.5	21.6	5.7
55–59	5.9	5.6	6.2	8.9	5.9	16.2	4.4	23.1	6.5
60–64	7.4	5.0	5.7	9.4	7.0	15.0	11.5	33.7	7.0
65–69	8.7	10.9	9.2	12.5	5.2	12.8	0.0	48.0	9.5
70–74	12.4	12.4	11.7	13.5	9.7	19.3	7.2	0.0	12.3
75–79	12.5	11.8	21.4	9.2	10.9	14.5	22.0	55.1	13.6
80–84	13.0	15.5	14.4	15.7	18.0	10.2	16.6	108.6	14.7
85+	16.5	18.6	10.5	22.1	17.3	28.1	47.2	0.0	17.2
All ages									
AS rate (A)	4.6	4.1	4.7	5.4	3.4	6.9	4.9	14.4	4.5
95% CI	4.1–5.0	3.6–4.5	4.0–5.2	4.3–6.2	2.7–4.1	4.9–8.7	2.6–7.2	7.2–22.5	4.3–4.8
As rate (W)	4.2	3.6	4.2	5.0	3.0	6.6	4.4	13.0	4.1
95% CI	3.8–4.6	3.2–4.0	3.6–4.7	4.0–5.8	2.3–3.6	4.7–8.5	2.3–6.6	7.0–19.7	3.9–4.3
Ages 20–69 years									
AS rate (A)	3.5	3.0	3.5	4.4	2.3	5.7	3.2	11.8	3.4
95% CI	3.1–4.0	2.5–3.4	2.9–4.0	3.4–5.2	1.6–2.9	3.7–7.5	1.5–5.2	5.8–18.8	3.2–3.7
As rate (W)	3.5	2.9	3.5	4.4	2.3	5.8	3.5	12.0	3.4
95% CI	3.1–4.0	2.4–3.3	2.8–3.9	3.3–5.2	1.6–3.0	3.8–7.7	1.6–5.6	6.0–19.0	3.2–3.7

Notes

1. The age-standardised rates were averaged over 4 years to smooth annual variations that may occur in the smaller states and territories.
2. Deaths were derived from place of usual residence and by year of registration.
3. Rates for all ages are based on data for women aged 20 years and over.
4. Rates are expressed per 100,000 women and age-standardised to the Australian 1991 Population (A) and the World Standard Population (W).

Source: AIHW Mortality Database.

Table 24: Number of deaths from 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
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
75–79	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
All ages	372	231	194	116	66	35	18	14	1,046
Ages 20–69 years	212	116	127	66	37	22	14	9	603

Notes

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

Source: AIHW Mortality Database.

Table 25: 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	6.3	1.9
40–44	2.7	2.0	2.7	2.5	0.0	1.4	6.0	7.2	2.4
45–49	3.8	3.4	3.5	3.4	4.7	0.0	6.2	8.5	3.7
50–54	4.4	2.1	4.2	2.3	2.1	5.1	4.9	5.5	3.4
55–59	4.3	2.7	5.6	5.5	2.0	4.3	3.7	9.0	4.1
60–64	4.8	4.9	8.8	5.9	3.9	19.8	0.0	14.3	5.9
65–69	7.5	3.9	6.7	9.9	7.3	10.6	25.0	0.0	6.9
70–74	9.6	10.5	9.5	12.9	6.5	11.4	6.9	61.2	9.9
75–79	10.0	9.9	9.8	8.0	8.6	13.3	16.9	96.3	10.0
80–84	13.1	14.5	9.8	20.4	10.1	9.7	0.0	78.3	13.1
85+	18.7	14.1	15.2	30.9	8.0	17.3	18.0	0.0	16.8
All ages									
AS rate (A)	3.4	2.9	3.6	4.2	2.5	4.5	4.4	11.1	3.4
95% CI	3.1–3.8	2.5–3.3	3.1–4.1	3.4–4.9	1.9–3.1	3.0–6.1	2.5–6.5	4.6–18.1	3.2–3.6
As rate (W)	3.1	2.5	3.4	3.6	2.2	4.1	4.0	8.5	3.0
95% CI	2.7–3.4	2.2–2.9	2.9–3.9	2.9–4.3	1.7–2.8	2.7–5.7	2.3–6.1	4.1–13.5	2.8–3.2
Ages 20–69 years									
AS rate (A)	2.5	1.9	2.9	2.9	1.8	3.5	3.7	4.4	2.4
95% CI	2.1–2.9	1.5–2.2	2.3–3.3	2.2–3.6	1.3–2.4	2.1–5.1	1.8–6.0	1.6–7.6	2.2–2.6
As rate (W)	2.5	1.9	2.9	2.8	1.8	3.5	3.6	4.5	2.4
95% CI	2.1–2.8	1.5–2.2	2.4–3.4	2.1–3.5	1.3–2.4	2.0–5.0	1.9–5.8	1.7–7.8	2.2–2.6

Notes

1. The age-standardised rates were averaged over 4 years to smooth annual variations that may occur in the smaller states and territories.
2. Deaths were derived from place of usual residence and by year of registration.
3. Rates for all ages are based on data for women aged 20 years and over.
4. Rates are expressed per 100,000 women and age-standardised to the Australian 1991 Population (A) and the World Standard Population (W).

Source: AIHW Mortality Database.

Table 26: Number of deaths from cervical cancer, by age and location, 1993–1996 and 1997–2000

Age group	Metropolitan		Rural		Remote	
	1993–1996	1997–2000	1993–1996	1997–2000	1993–1996	1997–2000
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	1	0	0	0	0	0
20–24	1	4	0	1	0	0
25–29	9	8	2	5	1	1
30–34	25	20	15	7	1	2
35–39	53	39	17	16	4	1
40–44	67	48	31	15	3	4
45–49	83	75	29	18	8	3
50–54	73	59	29	19	4	1
55–59	71	49	27	19	4	4
60–64	66	58	28	30	6	1
65–69	84	65	43	27	7	4
70–74	115	87	38	39	3	5
75–75	90	78	36	29	1	2
80–84	70	71	28	19	1	5
85+	67	74	24	32	0	2
All ages	873	735	349	276	42	35
Ages 20–69 years	531	425	222	157	37	21

Notes

1. Deaths were derived from place of usual residence and by year of registration.
2. The number of deaths is presented as 4-year rolling blocks of data.

Source: AIHW Mortality Database.

Table 27: Age-specific and age-standardised death rates for cervical cancer, by age and location, 1993–1996 and 1997–2000

Age group	Metropolitan		Rural		Remote	
	1993–1996	1997–2000	1993–1996	1997–2000	1993–1996	1997–2000
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	0.1	0.0	0.0	0.0	0.0	0.0
20–24	0.0	0.0	0.0	0.2	0.2	0.0
25–29	0.4	0.3	1.0	0.4	0.8	1.0
30–34	1.2	2.1	1.0	1.0	1.1	2.2
35–39	2.6	2.3	4.6	1.8	2.1	1.1
40–44	3.5	4.7	4.1	2.4	2.1	5.3
45–49	4.7	4.9	12.9	3.9	2.7	4.7
50–54	5.4	6.1	8.5	3.5	3.3	1.8
55–59	6.4	6.3	11.1	3.9	3.9	10.0
60–64	6.6	7.0	21.3	5.6	6.9	3.4
65–69	8.5	10.8	30.4	6.7	6.7	17.0
70–74	12.7	11.0	17.1	9.3	10.6	27.1
75–75	13.5	14.2	8.2	10.0	9.8	14.9
80–84	14.4	15.6	11.8	13.7	9.7	50.5
85+	17.6	17.0	0.0	16.0	18.6	21.1
All ages						
AS rate (A)	4.4	3.3	4.7	3.4	7.9	6.2
95% CI	4.1–4.7	3.1–3.6	4.2–5.2	3.0–3.8	5.4–10.3	4.0–8.3
As rate (W)	3.9	3.0	4.2	3.0	7.8	5.1
95% CI	3.7–4.2	2.7–3.2	3.8–4.7	2.6–3.4	5.4–10.1	3.4–6.9
Ages 20–69 years						
AS rate (A)	3.2	2.4	3.6	2.4	7.4	3.7
95% CI	3.0–3.5	2.2–2.6	3.2–4.1	2.1–2.8	5.0–9.9	2.2–5.4
As rate (W)	3.2	2.4	3.6	2.4	7.4	3.6
95% CI	3.0–3.5	2.2–2.6	3.1–4.1	2.1–2.8	5.0–9.9	2.1–5.2

Notes

1. The age-standardised rates are presented as 4-year rolling blocks of data.
2. Deaths were derived from place of usual residence and by year of registration.
3. Rates for all ages are based on data for women aged 20 years and over.
4. Rates are expressed per 100,000 women and age-standardised to the Australian 1991 population (A) and the World Standard Population (W).

Source: AIHW Mortality Database.

Table 28: Number of deaths from cervical cancer, by age and Indigenous status, 1995–1998, 1996–1999 and 1997–2000

Age group	Indigenous			Non-Indigenous		
	1995–1998	1996–1999	1997–2000	1995–1998	1996–1999	1997–2000
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	0	0	0
20–24	0	0	0	0	0	0
25–29	0	1	1	5	5	6
30–34	1	1	2	8	8	13
35–39	3	2	2	19	11	15
40–44	4	5	5	9	19	17
45–49	5	2	5	19	21	30
50–54	0	1	0	14	19	21
55–59	1	1	2	26	17	24
60–64	4	2	2	22	27	34
65–69	4	2	3	18	20	31
70–74	2	3	4	23	34	35
75+	1	3	3	75	76	91
All ages	25	23	29	235	256	317
Ages 20–69 years	22	17	22	138	147	191

Notes

1. Deaths were derived from place of usual residence and by year of registration.
2. The number of deaths is presented as 4-year rolling blocks of data.
3. Only Queensland (from 1998), South Australia, Western Australia and the Northern Territory have Indigenous death registration data considered to be of a publishable standard.

Source: AIHW Mortality Database.

Table 29: Age-specific and age-standardised death rates for cervical cancer, by age and Indigenous status, 1995–1998, 1996–1999 and 1997–2000

Age group	Indigenous			Non-Indigenous		
	1995–1998	1996–1999	1997–2000	1995–1998	1996–1999	1997–2000
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	0.0	0.0	0.0	0.0
20–24	0.0	0.0	0.0	0.0	0.0	0.0
25–29	0.0	2.8	2.5	0.8	0.7	0.7
30–34	3.8	3.3	5.6	1.2	1.1	1.5
35–39	14.0	7.8	6.7	2.8	1.4	1.6
40–44	23.5	24.5	20.7	1.4	2.5	1.9
45–49	39.2	13.0	27.1	3.2	2.9	3.5
50–54	0.0	8.5	0.0	2.9	3.1	2.8
55–59	14.5	12.5	21.4	6.9	3.7	4.3
60–64	72.1	31.0	27.0	6.8	6.9	7.3
65–69	98.9	42.1	55.3	5.8	5.5	7.3
70–74	81.9	101.8	115.6	7.9	9.9	8.8
75+	30.6	79.7	70.6	14.7	12.1	12.1
All ages						
AS Rate (A)	26.5	17.4	19.7	2.6	2.3	2.5
95% CI	15.8–38.0	9.2–26.4	11.5–28.8	2.2–3.0	2.0–2.7	2.2–2.8
As Rate (W)	22.9	16.7	18.2	3.2	2.8	3.0
95% CI	13.8–32.8	9.3–24.5	11.7–25.6	2.7–3.6	2.5–3.2	2.7–3.3
Ages 20–69 years						
AS Rate (A)	17.5	10.6	11.3	2.3	1.9	2.1
95% CI	8.8–26.5	5.2–17.1	6.2–17.1	1.9–2.7	1.6–2.3	1.7–2.4
As Rate (W)	20.5	11.4	12.9	2.6	2.3	2.5
95% CI	11.5–29.4	6.0–17.8	7.6–18.8	2.1–3.0	1.9–2.6	2.1–2.8

Notes

1. The age-standardised rates are presented as 4-year rolling blocks of data.
2. Deaths derived from place of usual residence and by year of registration.
3. Rates for all ages are based on data for women aged 20 years and over.
4. Rates are expressed per 100,000 women and age-standardised to the Australian 1991 population (A) and the World Standard Population (W).
5. Only Queensland (from 1998), South Australia, Western Australia and the Northern Territory have Indigenous death registration data considered to be of a publishable standard.

Source: AIHW Mortality Database.

Part 3—Appendixes, glossary and references

Part 3: Contents

- Appendix A: Cervical cancer – symptoms, detection and treatment 170
- Appendix B: Data sources and limitations 172
 - Population data..... 172
 - Indigenous mortality data..... 172
 - Other data limitations 172
- Appendix C: Methods 174
- Appendix D: Population data..... 176
- Appendix E: National Cervical Screening Programs contact list 181
- Appendix F: NHMRC guidelines for the management of women with screen-detected abnormalities..... 175
- Glossary 185**
- References 188**
- Related publications 189**

Appendix A: Cervical cancer—symptoms, detection and treatment

Cervical cancer affects the cells of the cervix, which is the lower part of the womb or 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 may not be 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 (which is described in more detail below), and with early treatment of these abnormalities, cervical cancer can be prevented. The most recent classification of these pre-cancerous lesions has two levels of severity, low-grade epithelial abnormalities (LGEA) and high-grade epithelial abnormalities (HGEA). An earlier classification described various grades of cervical intra-epithelial 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 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 the pathologist.

Pre-cancerous changes can be easily and effectively be 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 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 rescreening	National Cervical Screening Program
3	Low-grade abnormality detection	National Cervical Screening Program
4	High-grade abnormality detection	National Cervical Screening Program
5	Incidence of micro-invasive cervical cancer National Cancer Statistics Clearing House (ICD9 180)	National Cancer Statistics Clearing House
6,8	Incidence of squamous, adenocarcinoma, adeno-squamous and other cervical cancer (ICD9 180)	National Cancer Statistics Clearing House
7,9,10	Mortality from cervical cancer (ICD9 180) For 1999 data (ICD10 C539)	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 1998 and 1999 estimated resident female population (see Appendix D for tables). 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 1995 National Health Survey, and are tabled in Appendix D.

The age-standardised rates in this publication are calculated using the total estimated 1991 mid-year Australian resident population. Where appropriate, rates are also standardised to the World Standard Population for international comparison. Both the Australian and World Standard Populations are in Appendix D.

Indigenous mortality data

Due to the difficulties of Indigenous identification, mortality data used in Indicator 10 are based on deaths in Queensland (for 1998, 1999, 2000 and 2001), Western Australia, South Australia and the Northern Territory only.

Other data limitations

- Hysterectomy fractions are calculated using national data derived from the National Health Survey using aggregate data that does not necessarily reflect variation at the state or territory level. In this report, data from the 1995 National Health Survey have been used to maintain consistency with earlier reporting. In future reports, data from the 2001 National Health Survey on self-reported hysterectomies will be used.

- Participation rates will be underestimated 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 Western Australia and 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.

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 (e.g. 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, e.g.

$$\begin{aligned} \text{Age-specific} \\ \text{cervical cancer} \\ \text{incidence rate in} \\ \text{females aged 50-54} \\ \text{in the year 2000} &= \frac{\text{New cases aged 50 – 54 years (year 2000)}}{2000 \text{ female population aged 50 – 54 years}} \times 100,000 \\ &= \frac{58}{623,134} \times 100,000 \\ &= 9.3 \text{ per } 100,000 \end{aligned}$$

Age-standardised rates (AS rate)

Rates are adjusted for age to facilitate comparisons between populations that have different age structures, e.g. 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 1991 Population Standard unless otherwise specified). This effectively removes the influence of age structure on the summary rate that is described as the age-standardised rate. The method may be used for the calculation of participation, incidence and mortality rates. The method used for this calculation comprises three steps.

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

Step 2: Calculate the expected number of cases in each 5-year age group by multiplying the age-specific rates by the corresponding standard population and dividing by 100,000, giving the expected number of cases.

Step 3: Sum the expected number of cases in each age group to give the age-standardised rate. Divide this sum by the total of the standard population and multiply by 100,000.

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 nineteen chances in twenty that the difference will be less than two standard errors.

The 95% confidence intervals in this report were calculated using the software package Palisade @risk (<http://www.palisade.com>). These calculations were based on 1,000 simulations using a binomial or Poisson distribution with the observed data to calculate the distribution parameters.

Appendix D: Population data

Table D1: Australian Standard Population^(a) and World Standard Population^(b)

Age group	World Standard Population (W)	Australian 1991 Population Standard (A)
0–4	12,000	1,271,703
5–9	10,000	1,272,208
10–14	9,000	1,241,619
15–19	9,000	1,364,074
20–24	8,000	1,396,764
25–29	8,000	1,399,663
30–34	6,000	1,425,735
35–39	6,000	1,328,387
40–44	6,000	1,294,271
45–49	6,000	1,029,145
50–54	5,000	846,934
55–59	4,000	725,950
60–64	4,000	736,868
65–69	3,000	671,390
70–74	2,000	510,755
75–79	1,000	384,495
80–84	500	229,828
85+	500	154,247
Total	100,000	17,284,036

Sources

(a) ABS (1993).

(b) Doll & Smith (1982).

Table D2: Hysterectomy fractions for women aged 15-80+ years, Australia, 1995

Age group	% of women who have not had a hysterectomy
18-19	98.4
20-24	99.8
25-29	99.3
30-34	98.0
35-39	91.9
40-44	85.2
45-49	79.1
50-54	68.5
55-59	68.5
60-64	67.8
65-69	68.8
70-74	66.8
75-79	66.8
80+	61.5
Total	84.3

Source: ABS 1995 National Health Survey.

Table D3: Estimated resident female populations, by age, states and territories, June 1999

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
0–4	210,825	149,345	117,830	61,742	46,022	15,373	10,369	8,481	620,101
5–9	217,147	157,607	124,506	64,778	48,311	16,591	10,727	8,378	648,219
10–14	213,517	155,122	122,073	66,783	48,963	17,091	10,794	7,465	641,992
15–19	214,180	157,811	125,527	65,940	49,288	16,951	11,568	7,015	648,380
20–24	218,587	167,569	125,120	67,885	48,428	14,750	13,024	7,837	663,257
25–29	248,403	186,122	136,228	71,363	52,440	16,005	13,157	9,524	733,363
30–34	236,656	181,447	128,549	69,303	53,023	16,123	12,164	8,579	706,004
35–39	254,383	187,302	139,312	74,660	58,441	18,625	12,635	8,055	753,568
40–44	238,135	176,533	130,717	71,804	56,080	17,940	12,380	6,971	710,706
45–49	220,757	164,621	122,514	66,279	53,683	16,750	12,104	6,019	662,831
50–54	198,358	147,675	110,532	56,265	48,969	15,085	10,507	4,711	592,163
55–59	154,145	113,036	82,604	41,983	37,196	11,878	6,866	2,900	450,656
60–64	131,505	96,830	66,557	34,641	32,448	10,136	4,947	1,767	378,852
65–69	121,817	90,079	59,234	30,379	30,570	9,450	4,002	1,178	346,720
70–74	117,014	85,765	55,803	27,180	30,571	8,771	3,655	818	329,585
75–79	100,326	73,381	46,982	22,832	26,932	7,774	3,118	538	281,885
80–84	121,721	89,214	57,646	28,481	33,150	9,534	3,227	592	343,574
Total	3,217,476	2,379,459	1,751,734	922,298	754,515	238,827	155,244	90,828	9,511,856

Source: AIHW Population Database based on estimated resident population data compiled by ABS.

Table D4: Estimated resident female populations, states and territories, June 2000

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
0-4	212,248	150,048	119,160	61,978	45,470	15,236	10,327	8,521	623,100
5-9	220,812	159,285	126,800	65,717	48,675	16,633	10,858	8,396	657,321
10-14	217,827	157,685	124,667	67,662	49,127	16,792	11,001	7,584	652,475
15-19	214,103	157,159	126,223	66,450	49,724	16,702	11,844	7,147	649,402
20-24	211,077	158,650	121,765	63,301	46,456	14,071	12,778	7,714	635,881
25-29	247,422	184,117	135,753	69,930	51,486	15,541	13,323	9,359	727,009
30-34	240,000	185,289	131,615	70,453	53,291	16,169	12,582	8,816	718,323
35-39	255,711	188,110	140,417	74,799	57,901	18,242	12,852	8,251	756,421
40-44	244,599	180,407	134,766	73,321	57,577	18,175	12,722	7,226	728,900
45-49	224,723	166,671	124,670	68,226	54,103	16,897	12,337	6,405	674,128
50-54	207,920	154,790	116,441	60,200	51,550	15,772	11,315	5,088	623,134
55-59	161,449	117,249	88,394	44,223	39,070	12,350	7,449	3,255	473,483
60-64	137,200	100,964	70,601	36,564	33,626	10,633	5,336	1,900	396,853
65-69	121,266	89,014	59,494	30,663	30,036	9,263	4,102	1,235	345,081
70-74	118,405	86,798	56,363	28,027	30,669	8,777	3,742	853	333,643
75-79	102,665	74,696	48,012	23,354	27,472	7,758	3,225	560	287,744
80-84	68,156	48,613	32,106	15,366	18,064	5,345	1,975	369	190,000
85+	61,529	46,288	28,770	15,009	16,988	4,673	1,607	286	175,151
Total	3,267,112	2,405,833	1,786,017	935,243	761,285	239,029	159,375	92,965	9,648,049

Source: AIHW Population Database based on estimated resident population data compiled by ABS.

Table D4: Estimated resident female populations, states and territories, June 2001

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
0-4	213,086	150,321	120,456	61,905	44,962	15,150	10,272	8,594	624,858
5-9	220,990	159,060	127,970	65,655	48,495	16,360	10,824	8,379	657,874
10-14	220,821	159,577	127,233	68,044	48,716	16,771	11,073	7,723	660,094
15-19	218,197	160,653	128,582	68,177	50,536	16,636	12,060	7,173	662,077
20-24	212,719	160,769	123,091	63,913	46,344	13,999	13,122	7,616	641,636
25-29	241,462	178,268	132,503	67,908	49,170	14,721	13,030	9,029	706,171
30-34	248,361	191,148	136,310	72,069	53,575	16,257	12,838	9,047	739,696
35-39	253,112	187,977	139,855	74,293	56,832	17,524	12,849	8,204	750,770
40-44	250,299	184,241	138,896	74,398	58,196	18,437	12,815	7,428	744,821
45-49	227,525	168,515	127,283	69,797	54,391	17,073	12,302	6,543	683,539
50-54	215,107	160,647	121,798	63,711	53,246	16,338	11,817	5,513	648,237
55-59	168,272	122,587	93,692	46,062	41,110	12,818	7,906	3,418	495,911
60-64	140,535	102,654	74,133	37,870	34,124	10,988	5,594	2,111	408,042
65-69	121,568	89,321	60,179	31,244	29,788	9,248	4,265	1,290	346,923
70-74	118,705	86,795	57,118	28,484	30,325	8,740	3,731	918	334,826
75-79	103,805	75,974	48,959	23,787	27,745	7,819	3,320	588	292,000
80-84	72,230	51,628	34,293	16,288	19,239	5,547	2,159	412	201,800
85+	64,220	48,296	30,155	15,998	17,672	4,899	1,765	307	183,313
Total	3,311,014	2,438,431	1,822,506	949,603	764,466	239,325	161,742	94,293	9,782,588

Source: AIHW Population Database based on estimated resident population data compiled by ABS.

Appendix E: National Cervical Screening Programs contact list

New South Wales

Ms Jayne Ross
NSW Cervical Screening Program
PO Box 533
WENTWORTHVILLE NSW 2145
Phone: +61 2 9845 8046
Email: jayne_ross@wsahs.nsw.gov.au
Home page: www.csp.nsw.gov.au

Ms Liz Martin
Phone: +61 2 9391 9532
Email: limar@doh.health.nsw.gov.au
Mr Hassan Mamoon
Data Manager
Phone: +61 2 9845 8046

Victoria

Dr Heather Mitchell
Medical Director
Victorian Cervical Cytology Registry
Email: hmitchel@vcs.org.au

Mr Rory Wilby
Program Manager
Prevention & Child Health
Dept of Human Services
Level 17, 120 Spender Street
MELBOURNE Vic 3000
Phone: +61 3 9250 0300
Home page: www.dhs.vic.org.au

Queensland

Ms Jennifer Muller
Program Manager
Women's Cancer Screening Services
Queensland Health
PO Box 48
BRISBANE Qld 4001

Margaret Porter-Doherty
Registry Manager
Phone: +61 7 3234 1596
Home page: www.health.qld.gov.au

Western Australia

Ms Nerida Steel
Acting Program Manager
Cervical Cancer Prevention Program
1st Floor, Eastpoint Plaza
233 Adelaide Terrace
PERTH WA 6000
Phone: +61 8 9237 6920
Fax: +61 8 9237 6991
Email: nerida.steel@health.wa.gov.au

South Australia

Ms Sue Gilchrist
Program Manager
SA Cervical Screening Program
2nd Floor, Norwich Centre
55 King William Road
NORTH ADELAIDE SA 5006
Phone: +61 8 8226 8182
Fax: +61 8 8226 8190
Email: sue.gilchrist@dhs.sa.gov.au

Ms Penny Iosifidis
Data Manager
Phone: +61 8 8226 8191
Email: penny.iosifidis@dhs.sa.gov.au

Tasmania

Ms Gail Raw
Program Manager
Dept of Health & Human Services
GPO Box 125B
HOBART Tas 7001

Mr Paul Chandler
Data Manager
Phone: +61 3 6230 7753
Email: paul.chandler@dchs.tas.gov.au
Home page: www.dchs.tas.gov.au

Australian Capital Territory

Ms Helen Sutherland
Program Manager
ACT Health
GPO Box 825
CANBERRA ACT 2601
Phone: +61 2 6205 1540
Fax: +61 2 6205 1394
Email: helen.sutherland@act.gov.au

Mr Peter Couvee
Registry Coordinator
Phone: +61 2 6205 1955
Fax: +61 2 6205 5035
Email: peter.couvee@act.gov.au

Australian Government Department of Health and Ageing

Population Screening Section
Department of Health and Ageing
GPO Box 9848
CANBERRA ACT 2601
Fax: 61 2 6289 4021
Home page: www.cervicalscreen.health.gov.au

Northern Territory

Ms Gae Allcock
Program Manager
Coordinator
Women's Cancer Prevention Program
Territory Health Services
PO Box 40596
CASUARINA NT 0810
Phone: +61 8 8922 6445
Fax: +61 8 8922 5511
Email: gae.allcock@nt.gov.au

Appendix F: 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.

Low-grade epithelial abnormalities		
Pap smear report	Investigation	Management
Non-specific minor squamous cell changes/atyphia		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 2 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 2 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 2 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.

Post-treatment assessment	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 2 consecutive normal smears at yearly intervals.
Special circumstances	
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.

Glossary

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

ABS: Australian Bureau of Statistics.

ACT: Australian Capital Territory – a land-locked territory of Australia situated within the state of New South Wales on the eastern seaboard with a population of 319,317 (2001). Its capital city is Canberra, which is also Australia's capital city.

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

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

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

AHMAC: Australian Health Ministers' Advisory Council.

AIHW: Australian Institute of Health and Welfare.

ASGC: Australian Standard Geographical Classification: the classification designed by the ABS to define the geography of Australia.

AS rate: age-standardised rate

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 (malignant neoplasm): a term used to describe one of several diseases which result when the process of cell division, by which tissues normally grow and renew themselves, becomes uncontrolled and leads to the development of malignant cells. These cancer cells multiply in an uncoordinated way, independently of normal growth control mechanisms, to form a tumour. This tumour may expand locally by invasion or systemically by metastasis via the lymphatic or vascular systems. If left untreated, most malignant tumours will eventually result in death.

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

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).

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

Colposcopy: an examination of the lower genital tract with a magnifying instrument called a 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 punch biopsy to attain diagnosis.

Cryosurgery: the destruction of tissue using extreme cold.

Dysplasia: abnormal cell growth.

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

Epidemiology: the quantitative study of the distribution and determinants of health-related states and events in populations, and the application of this study to the control of health problems.

Epithelium: the covering of internal and external surfaces of the body, including the lining of vessels and other small cavities. It consists of cells joined by small amounts of cementing substances. It is classified into types on the basis of the number of layers deep and the shape of the superficial cells.

Exfoliate: to break away or remove.

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.

Hysterectomy fractions: the proportion of women who have had their uterus removed by hysterectomy.

HPV: Human papilloma virus.

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

Incidence: see *new cancer case*

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.

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

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

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 a disease is transferred from one part of the body to another, for example via the lymphatic system or the bloodstream.

Mortality: see *cancer death*.

Neoplasia: the process by which tumours are formed.

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).

NOS: not otherwise specified.

NSW: New South Wales – a state of Australia on the eastern seaboard which has the largest state capital city in Australia, Sydney, and a population of 6,575,217 (2001).

NT: Northern Territory – a territory in the north of Australia with a population of 197,768 (2001) and Darwin as its capital city.

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

Post-partum: following childbirth.

Qld: Queensland – a state in the north-east of Australia with a population of 3,628,946 (2001) and Brisbane as its capital city.

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.

RRMA: Rural, Remote and Metropolitan Areas Classification.

SA: South Australia – a state in the southern part of Australia with a population of 1,511,728 (2001) and Adelaide as its capital city.

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.

Sensitivity: the proportion of individuals with the disease whom the screening test labels positive.

Squamous malignancy: Cervical cancer can be derived from several cells types. One of these cell types is the squamous cell and most cervical cancers are derived from this cell type.

Stroma: the supporting framework of an organ.

Tas: Tasmania – an island state in the south-east of Australia with a population of 471,795 (2001) and Hobart as its capital city.

The Institute: The Australian Institute of Health and Welfare.

Vic: Victoria – a state in the south-east of Australia with a population of 4,804,726 (2001) and Melbourne as its capital city.

WA: Western Australia – the largest state in Australia, located in the west with a population of 1,901,159 (2001) and Perth as its capital city.

References

- ABS (Australian Bureau of Statistics) 1993. Estimated resident population by age and sex: Australian States and Territories, June 1987 to June 1992. ABS Cat. No. 3201.0. Canberra:ABS.
- ABS (Australian Bureau of Statistics) 1995. National Health Survey: summary of result, Australia. ABS Cat. No. 4364.0. Canberra: ABS.
- ABS (Australian Bureau of Statistics) 1999. Deaths Australia 1998. Cat. No. 3302.0. Canberra: ABS.
- ABS (Australian Bureau of Statistics) 2000. Causes of death 1999. Cat. No. 3303.0. Canberra: ABS.
- DHSH (Commonwealth Department of Human Services and Health) 1994a. Summary of NHMRC guidelines for the management of women with screen-detected abnormalities. Canberra: AGPS.
- DHSH (Commonwealth Department of Human Services and Health) 1994b. Screening to prevent cervical cancer: guidelines for the management of women with screen detected abnormalities. Canberra: AGPS.
- DPIE (Department of Primary Industries and Energy) & DHSH (Department of Human Services and Health) 1994. Rural, remote and metropolitan areas classification. 1991 Census edition. Canberra: AGPS.
- Doll R & Smith PG 1982. Comparison between cancer registries: age-standardised rates. In: Waterhouse J, Shanmugaratnam K, Muir C & Powell J (eds). Cancer incidence in five continents, Volume IV. Lyons: International Agency for Research on Cancer.
- Jelfs PL 1995. Cervical cancer in Australia. Australian Institute of Health and Welfare: Cancer Series No. 3. Canberra: AIHW.
- Jensen OM, Parkin DM, Machennan R & Muir C (eds) 1991. Cancer registration: principles and methods. Lyons: International Agency for Research on Cancer.
- Marcus AC & Crane LA 1998. A review of cervical cancer screening intervention research: implications for public health programs and future research. *Preventive Medicine* 27:13-31.
- Ostor AG & Mulvany N 1996. The pathology of cervical neoplasia. *Current Opinion in Obstetrics and Gynecology* 8:69-73.
- Snider JA & Beauvais JE 1998. Pap smear utilization in Canada: estimates after adjusting the eligible population for hysterectomy status. *Chronic Diseases in Canada* 19(1):19-24.

Related publications

AHMAC (Australian Health Ministers' Advisory Council) 1991. Cervical Cancer Screening Evaluation Committee. Cervical cancer screening in Australia: options for change. Australian Institute of Health, Prevention Program Evaluation Series, No. 2. Canberra: AGPS.

AHMAC (Australian Health Ministers' Advisory Council) & AIHW (Australian Institute of Health and Welfare) 1997. The Aboriginal and Torres Strait Islander health information plan... This time, let's make it happen. AIHW Cat. No. HWI 12. Canberra: AIHW.

AIHW (Australian Institute of Health and Welfare) 1998. Breast and cervical screening in Australia 1996-1997. AIHW Cat. No. CAN 3. Canberra: AIHW (Cancer Series No. 8).

AIHW (Australian Institute of Health and Welfare) 2000. Breast and cervical screening in Australia 1997-1998. AIHW Cat. No. CAN 9. Canberra: AIHW (Cancer Series No. 14).

Anderson GH, Flynn KJ, Hickey LA, Le Riche JC, Maticic JP & Suen KC 1988. Organisation and results for the cervical cytology screening programme in British Columbia, 1955-85. *British Medical Journal* 296:975-8.

Barratt AL, Cockburn J, Redman S, Paul C & Perkins J 1997. Mammographic screening: results from the 1996 National Breast Health Survey. *Medical Journal of Australia* 167 521-4.

Barrett P & Straton JAY 1996. Cervical cytology registry of Western Australia: 1996 statistical report - WA Cervical Cancer Prevention Program. Perth: Health Department of Western Australia.

Bell J & Ward J 1998. Cervical screening: linking practice, policy and research in women's health. *Cancer Forum* 22(1):6-11.

Colditz GA, Hoaglin DC & Berkey CS 1997. Cancer incidence and mortality: the priority of screening frequency and population coverage. *The Milbank Quarterly* 75(2):147-73.

DHSH (Commonwealth Department of Health and Family Services) 1998. Screening for the prevention of cervical cancer. Canberra: AGPS.

DHUK (Department of Health) 1997. Statistical bulletin - cervical screening programme, England: 1996-97. UK: Government Statistical Service.

d'Espaignet ET, Measey ML, Condon JR, Jelfs P & Dempsey KE 1996. Cancer in the Northern Territory 1987-1993. Darwin: Territory Health Services.

Duncan AA & Wallis MG 1995. Classifying interval cancers. *Clinical Radiology* 50: 774-7.

Hennekens CH & Buring J 1987. *Epidemiology in medicine*. Boston: Little, Brown and Company.

Jelfs P 1998. Using cancer registries to evaluate cancer screening programs. *Cancer Forum* 22(1):3-6.

Kavanagh AM & Broom DH 1997. Women's understanding of abnormal cervical smear test results: a qualitative interview study. *British Medical Journal* 314:1388-91.

Mathers C, Penm R, Sanson-Fisher R, Carter R & Campbell E 1998. Health system costs of cancer in Australia 1993-94. Canberra: Australian Institute of Health and Welfare. Health and Welfare Expenditure Series No. 4.

McInroe WA, McLean MR, Jones RW & Mullins PR 1984. The invasive potential of carcinoma in situ of the cervix. *Obstetric Gynaecology* 64:451-8.

Mitchell H & Higgins V 1997. Statistical report 1996. Carlton South: Victorian Cervical Cytology Registry.

Queensland Health (Women's Cancer Screening Services – Public Health Services) 1998. Quality management plan. Queensland Cervical Screening Program 1998/1999-2001/2002.

Sigurdsson KS, Adalsteinsson S & Ragnarsson J 1991. Trends in cervical and breast cancer in Iceland: a statistical evaluation of trends in incidence and mortality for the period 1955-1989, their relation to screening and prediction to the year 2000. *International Journal of Cancer* 48:523-8.

Towler BP, Irwig LM & Shelley JM 1993. The adequacy of management of women with CIN 2 and CIN 3 Pap smear abnormalities. *Medical Journal of Australia* 159:523-8.

Wain G 1999. A brief on re-screening data in NSW by demography.

Wain G, Ward J & Towler BP 1995. Gynaecological care of women with abnormal Pap smears: how varied is current practice? *Medical Journal of Australia* 162:348-53.