

2. Cervical cancer screening in Australia 1996–1997

Cervical cancer

Cervical cancer affects the cells lining 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. If not caught early enough, the tumour can invade local tissue and spread or metastasise to other parts of the body. The main symptoms of cervical cancer are unusual bleeding from the vagina, and sometimes an unusual vaginal discharge. However, these symptoms 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 there is an excellent chance of a full recovery. There are two levels of severity of these pre-cancerous lesions, low-grade abnormalities and high-grade abnormalities, with the higher grade lesions more likely to progress to a cancer. These are usually graded from warty atypia (HPV effect), atypia, equivocal CIN, possible CIN, endocervical dysplasia NOS, CIN1 to CIN3, and carcinoma *in situ*.

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, hospital outpatient clinics and in some circumstances nurse practitioners.

If a pre-cancerous change is suggested by the Pap smear a doctor is able to look directly at the cervix by inserting an instrument called a colposcope into the vagina. Using a special stain the doctor can highlight any suspicious area, 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 are relatively easily treated and are cured in nearly all cases. 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 cryosurgery (freezing), cauterisation (burning, also called diathermy), laser surgery, or loop or cone biopsies. In a small number of instances a hysterectomy may be necessary, especially if changed cells are found inside the opening of the uterus and the woman does not want to have children in the future.

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

Cervical cancer screening

The Pap smear used today in cervical cancer screening was first developed by Dr George Papanicolaou, who was born in Greece in 1883. He emigrated to America and it was through his research into the measurement of ovarian and uterine cycles in guinea pigs that he first observed that vaginal smears from women with uterine cancer showed abnormal cells. In 1943 Papanicolaou and Traut published 'Diagnosis of uterine cancer by the vaginal smear', which described how the precursors to invasive cervical cancer could be detected. Soon after, the Pap smear became widely accepted as a screening test for cervical cancer.

In 1949 cervical cancer screening was first trialed in British Columbia. Program evaluation between 1955 and 1985 (Anderson et al. 1988) showed that morbidity and mortality from invasive squamous cell cancer of the cervix had been considerably reduced, and was directly attributable to the screening program. Later studies have shown similar results in countries that have introduced cervical cancer screening, although it is important to note that none of these studies were randomised controlled trials (the use of a control group as a comparison within the trial). This has come about historically because no provisions were made for randomised controlled trials when the Pap smear was first introduced. With such widespread use of the Pap smear today, it is no longer seen as ethical to carry out randomised controlled trials (Marcus & Crane 1998).

In 1986 the World Health Organization and the International Agency for Research on Cancer published guidelines outlining essential features of cervical cancer screening programs. These guidelines were subsequently used as a basis for a review of existing cervical cancer screening in Australia. Between 1988 and 1990 a program evaluation was undertaken by the Screening Evaluation Steering Committee on behalf of Australian Health Ministers' Advisory Council (AHMAC) at the then Australian Institute of Health.

The evaluation found that because of the fragmented approach to the provision of cervical screening services over a 25-year period, there were deficiencies in the delivery and outcomes of the services. For instance, there was no agreement on the age group of women to be screened, or the interval between screens, no fail-safe system for women with abnormal Pap smears, and no formal system to monitor the status of treated women (AHMAC 1991). In its report to AHMAC, the committee recommended the introduction of an organised approach to cervical cancer screening including the establishment of State and Territory registries to provide the infrastructure for this process. The major recommendations were that registries should:

- remind women to attend for screening;
- provide a fail-safe system to ensure follow-up of women with significantly abnormal Pap smears;
- provide individual women's cervical screening histories to laboratories and clinicians to aid reporting and management; and
- monitor the effects of initiatives to improve participation by women in screening. (AHMAC 1991).

The current national screening program has adopted these recommendations and has been operating since 1991.

National Cervical Screening Program

The Pap smear has the potential to reduce squamous cervical cancer by up to 90% through population screening. This potential led to the introduction of the National Cervical Screening Program in Australia in 1991. It is a joint initiative of the Commonwealth and State and Territory governments (Bell & Ward 1998). The screening recommendation under this program is for all women who have been sexually active at any stage in their lives to have a Pap smear every 2 years until age 70 years at which time screening can cease. This regime may be modified for some women who have had previous Pap smear abnormalities.

The program seeks to reduce morbidity and mortality from cervical cancer by:

- maximising participation by eligible women in routine 2-yearly screening;
- ensuring that cervical smears contain adequate samples of cervical cells;
- instituting a uniform and reliable reporting system;
- developing appropriate evaluation and management protocols for women with screen-detected abnormalities; and
- ensuring effective treatment and follow-up of women with screen-detected abnormalities of significant malignant potential (DHS 1994d).

Recruitment

National Health and Medical Research Council guidelines state that to facilitate effective prevention of cervical cancer all women at risk aged between 18 and 70 years should be routinely screened every two years (NHMRC 1990). In a number of States and Territories the programs actively recruit women in this target age group by a range of strategies including health promotion activities and direct mailouts based on local electoral rolls. Women over 70 years of age are screened on request but are not actively targeted. Other mechanisms include providing reminder services for women who do not otherwise attend for re-screening, and providing a back-up service encouraging women with significantly abnormal smears to be followed up.

Pap test registers

Registration on cervical screening registers is voluntary, and in all States and Territories there is an opt-off option for women. Doctors or health workers are required to advise women about information going on the Pap test register. If the woman consents, her demographic details together with a summary of the smear report are forwarded by the pathology laboratory to the cervical cytology register located in each State and Territory for inclusion on the register. If a woman has chosen to opt-off, her data are still included on the register in some States for statistical purposes but are unidentified, and by definition no follow-up is possible. It is estimated that 1-3% of women choose not to be included on the register.

Cervical cancer registers are covered by legislation in all States and Territories except Queensland to date. The Queensland register is due to begin operations in late 1998.

State and Territory registry start dates

New South Wales	July 1996
Victoria	November 1989
Queensland	No register at present
Western Australia	July 1994
South Australia	June 1993
Tasmania	May 1994
Australia Capital Territory	March 1995
Northern Territory	March 1996

Follow-up

If no abnormal cells are detected the national screening policy recommends a repeat smear in two years. If the Pap smear is abnormal the registries observe set protocols regarding follow-up. However, time periods vary between States and Territories for sending reminder or follow-up letters (e.g. From 27 months to 3 years for women with a normal smear report). As an example, in Western Australia an unsatisfactory cytology report prompts a reminder letter to the health care provider at six months, and a letter to the woman at 12 months; for a normal report a reminder letter is sent to the women at three years; for a low-grade abnormality a reminder letter is sent to the provider at 15 months, and to the woman at 21 months; and finally a high grade abnormality warrants a questionnaire letter to the health care provider at nine months, reminder letter to the woman at 12 months, and again at 15 months if necessary. In 1996, 18% of letters sent to women were returned to the Western Australian registry because the person was unknown at the address given (Barrett & Straton 1996).

National cervical cancer screening monitoring indicators

Screening indicators to monitor the National Cervical Screening Program cover the areas of participation, early rescreening, low- and high-grade abnormality detection, incidence and mortality. These indicators have been endorsed by the National Screening Information Advisory Group, and by State and Territory cervical cancer screening programs. The indicators and their definitions are provided below. On the following pages is an overview of each indicator's intention, application and definition. This is supported where possible with data indicating the current status and trend of the indicator. In some circumstances in this section of the report, additional information has been provided about the indicators. This has been done to provide further background material to interpret the indicators, and to assist those not familiar with this area of public health.

Indicator 1: Participation rate for cervical cancer screening

Per cent 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).

Indicator 2: Early rescreening

Proportion of women rescreened by number of rescreens during a 24-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 cervical cancer

Incidence rate of micro-invasive 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 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 of 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).

Participation

Increasing participation in cervical cancer screening is seen as the major challenge in reducing the number of women who present with this disease, and ultimately the number of women who die from cervical cancer. Women in the 20–69 years age group are actively targeted by a variety of recruitment initiatives determined mainly at a State or Territory level. To achieve higher population coverage it may be necessary to target particular sub-groups within our communities, such as older women, Indigenous women and women from non-English-speaking backgrounds.

There are a number of women within the target population who are ineligible for screening, such as those who have had a total hysterectomy with their cervix removed, who have never had sexual intercourse, and women with a previously diagnosed gynaecological cancer (Snider & Beauvais 1998).

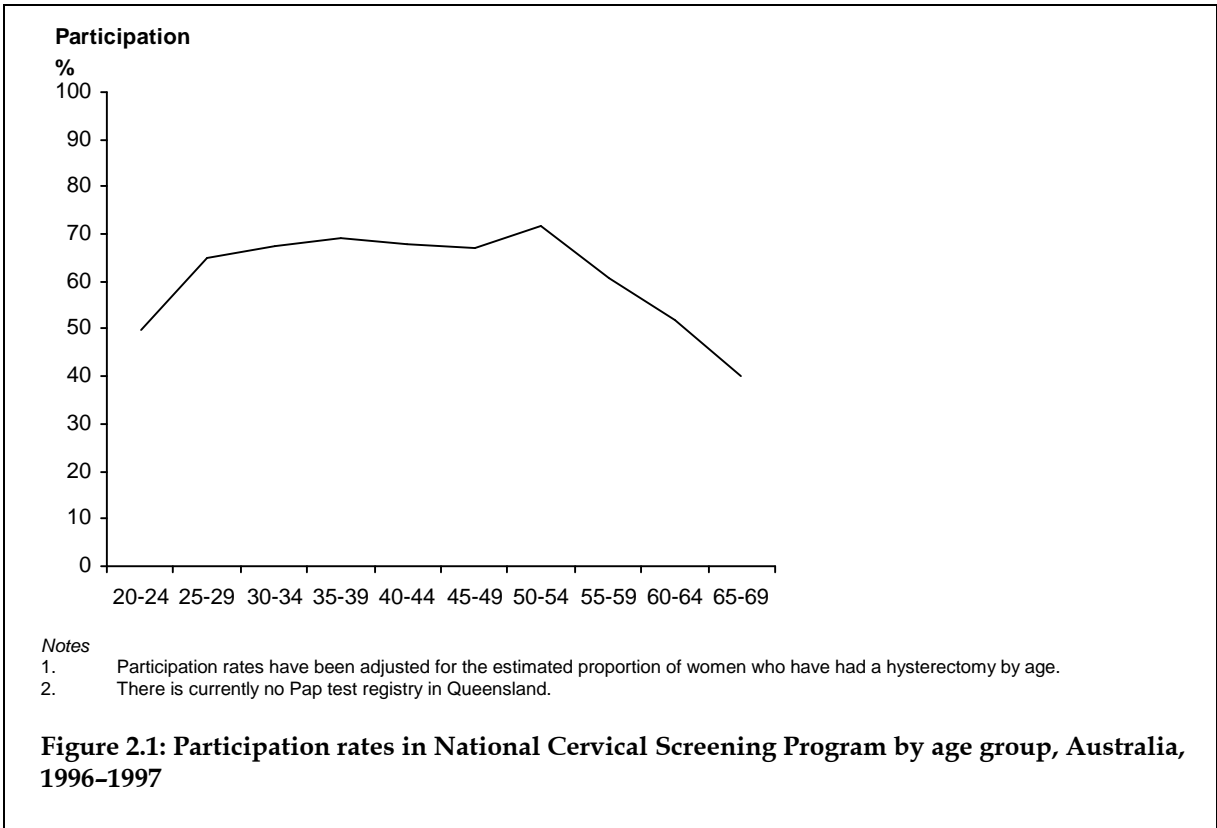
The objective, measurement and usefulness of participation as an indicator is outlined below:

- The participation indicator measures the proportion of the population covered by the screening programs.
- This indicator is important in assessing the contribution of the screening program to changes in incidence and mortality. The indicator can also 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 debate relating to target groups and screening intervals.

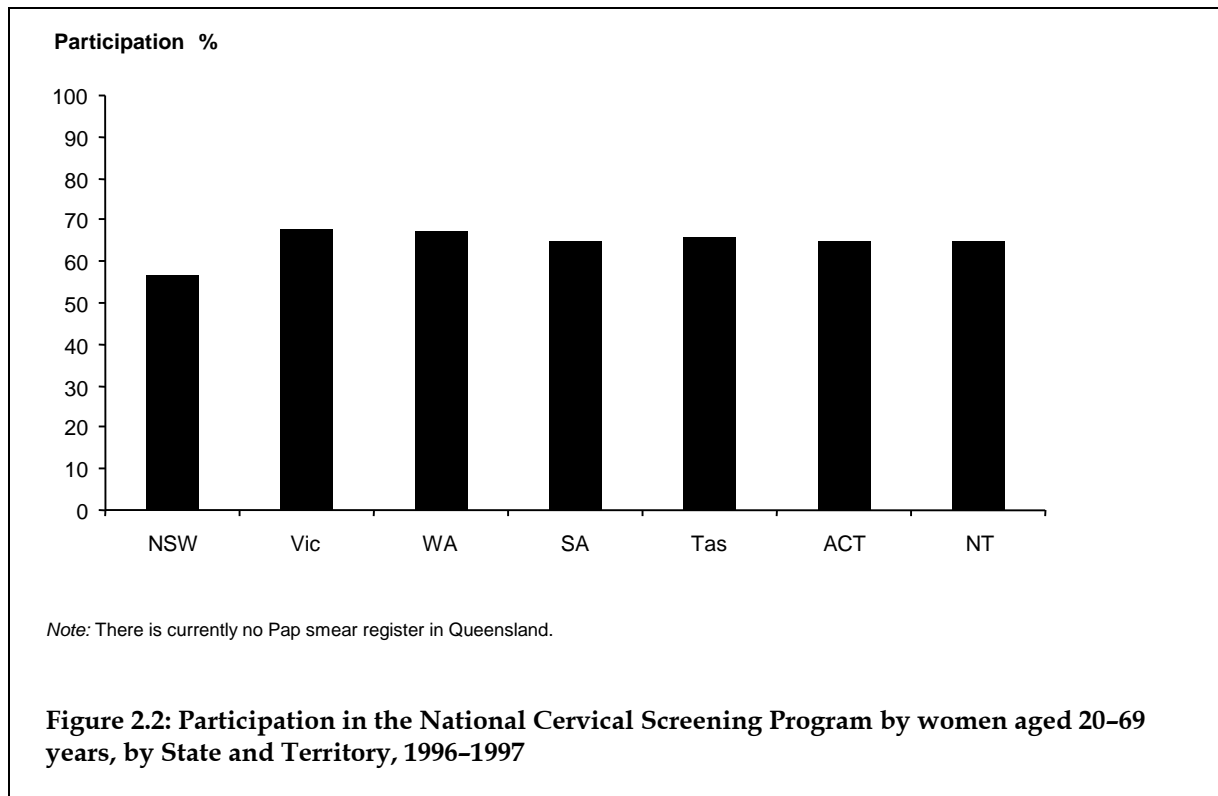
Indicator 1: Participation rate for cervical cancer screening

Per cent 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 participation rate for cervical cancer screening (excluding Queensland) for the period January 1996 to December 1997 was 62.4% for the target population of women aged 20-69 years (Table 2.2).
- During this period 2,619,273 women were screened in Australia for cervical cancer. Of these 2,563,108 (98%) were in the target age group 20-69 years of age.



- There was considerable variation in the participation rate within the target age group; the rate peaked in women aged 50-54 years at 71%. However, this was followed by a sharp decrease in the participation rate for older women, with women in the 65-69 age group having the lowest rate (40%). Within the younger age groups, 25-49 years, the rate was relatively constant.



- Participation rates display some small interstate variations (Figure 2.2, Table 2.2).
- The New South Wales participation rate was estimated (see Appendix A) for the period from January to June 1996 because the Pap test register did not begin operations until 29 July 1996. This may have contributed to its lower participation of 57%. In addition, there were a number of other factors that contributed to the lower participation including: a proportion of cases were not counted because of cross-border issues; laboratory data transfer difficulties; and where age was not stated in 1% of cases.
- The Northern Territory Pap smear register also began operations during the reporting period (11 March 1996) and, as for New South Wales, the Northern Territory participation rates for the period prior to this have been estimated.
- The participation rates are based on all women who were screened in that State or Territory. New South Wales, Victoria, Western Australia, South Australia and Tasmania record screens of a small number of women who live outside the State or Territory. Of these South Australia screens had the highest proportion of interstate residents in 1996–1997 (1.7% of all screens). The Australian Capital Territory Pap smear registry only registers women who live in that State.
- The Northern Territory Pap smear participation rates in this report may differ from those published by the Northern Territory Pap smear register. The female Aboriginal population comprises 23% of the total female population 20–69 years in the Northern Territory in 1996. The Northern Territory cervical screening program indicates that there is anecdotal evidence to suggest that Aboriginal women have lower rates of hysterectomy. Therefore the Northern Territory Pap smear register excludes Aboriginal women from the denominator when adjusting for the percentage of women who have had a hysterectomy.

Early rescreening

The National Cervical Screening Program seeks to maximise reductions in incidence and mortality given available resources. 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 important in controlling costs (where over-screening occurs) in order that resources may be transferred to under-screened populations. Where women have a positive result (e.g. CIN) from their Pap smear repeat testing is usually recommended within the 2-year interval.

The measurement and usefulness of this indicator can be summarised as:

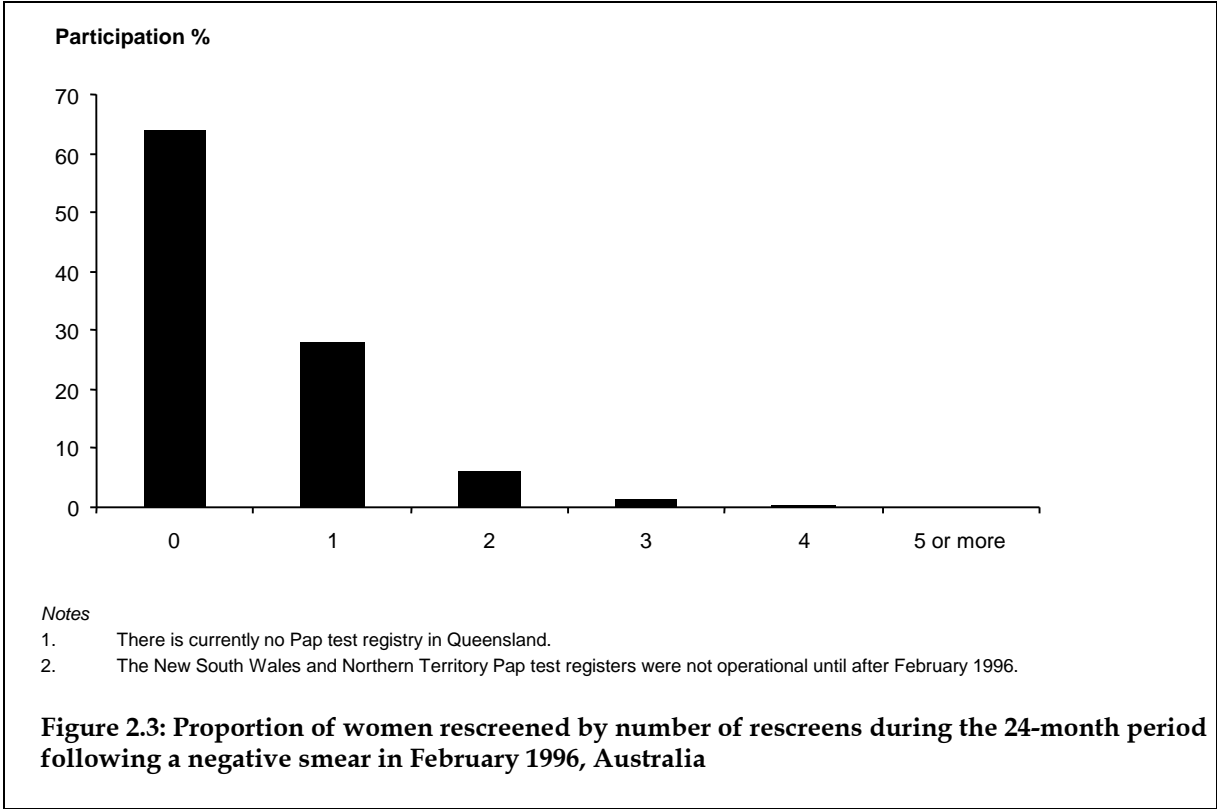
- This indicator measures the compliance with the recommended screening interval following a negative smear, and the range of screening practices around it.
- This indicator is important in assessing the spread of screening around the recommended interval, as significant differences may reduce program effectiveness.

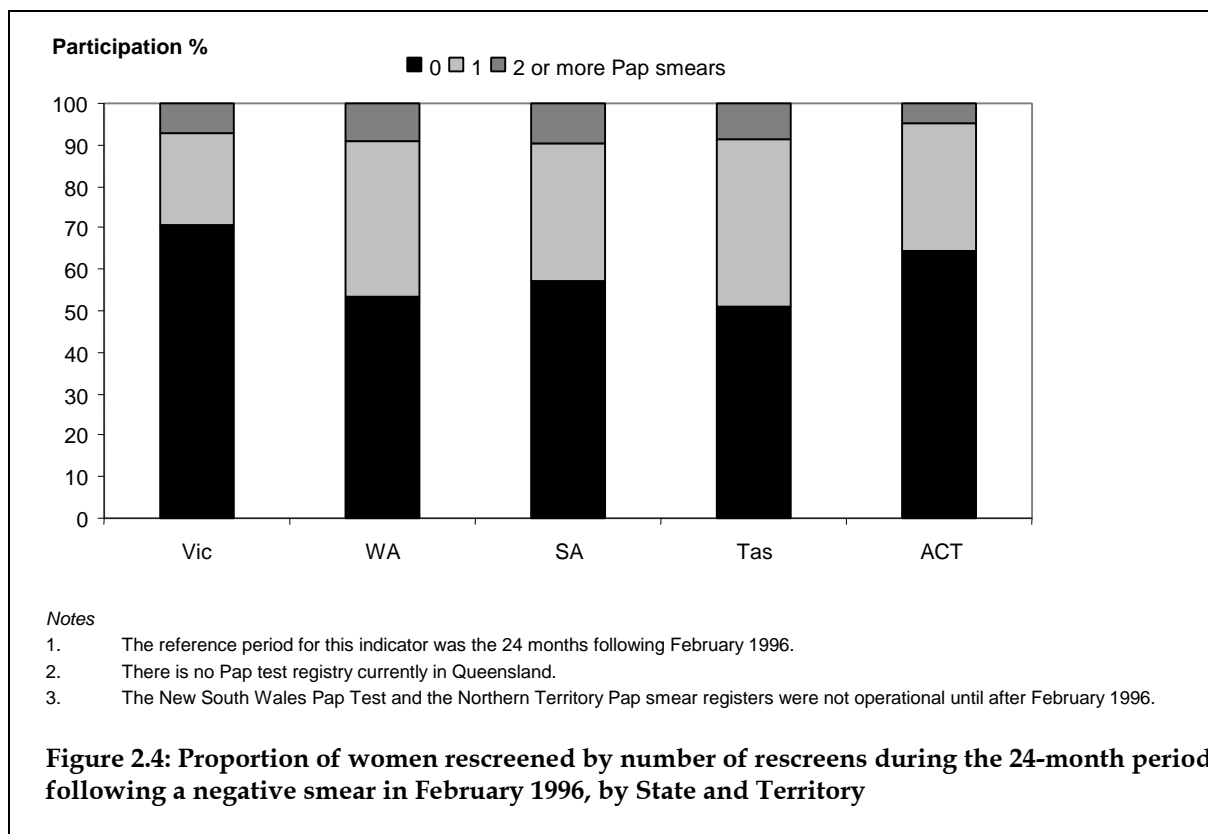
Based on a large number of studies the International Agency for Research on Cancer estimates the percentage reduction in the cumulative incidence of cervical cancer between the ages of 35 years and 65 years at 93.5% if the screening interval is 1 year, 92.5% and 90.8% respectively if the screening intervals are between 2 and 3 years. After this, the protective effect declines by approximately 4% per year. The recommended interval for rescreening varies from one year to 5 years in different countries of the developed world. Australia has adopted a policy of 2-yearly rescreening if the Pap smear result is normal.

Indicator 2: Early rescreening

Proportion of women rescreened by number of rescreens during a 24-month period following a negative smear.

- A cohort of 82,176 women was selected for follow-up for subsequent smears over the next 24 months. February was selected as the index month because it is a relatively stable month in terms of the number of women who are screened. This pattern has been consistent over a number of years possibly because less women take holidays at this time (Table 2.3).
- Approximately 64% of women who had a Pap smear in February 1996 were not rescreened in the following 2 years. Of the remaining women, 28% had one additional smear, 6% had two additional smears, and the remaining 2% had three or more additional smears. Only five States and the Australian Capital Territory were able to provide data for this indicator.





- More than 70% of Victorian women who had a negative screen in February 1996 had no more screens in the 24 months following. The percentage of women who had one repeat smear ranged from 22% (Victoria) to 41% (Tasmania). Less than 10% of women had two or more repeat screens in each of the States and the Australian Capital Territory (Table 2.4).

Low-grade abnormalities

In this report a low-grade intraepithelial abnormality is defined as a lesion that is: warty atypia (HPV effect); atypia, equivocal CIN; possible CIN, CIN 1; or endocervical dysplasia NOS.

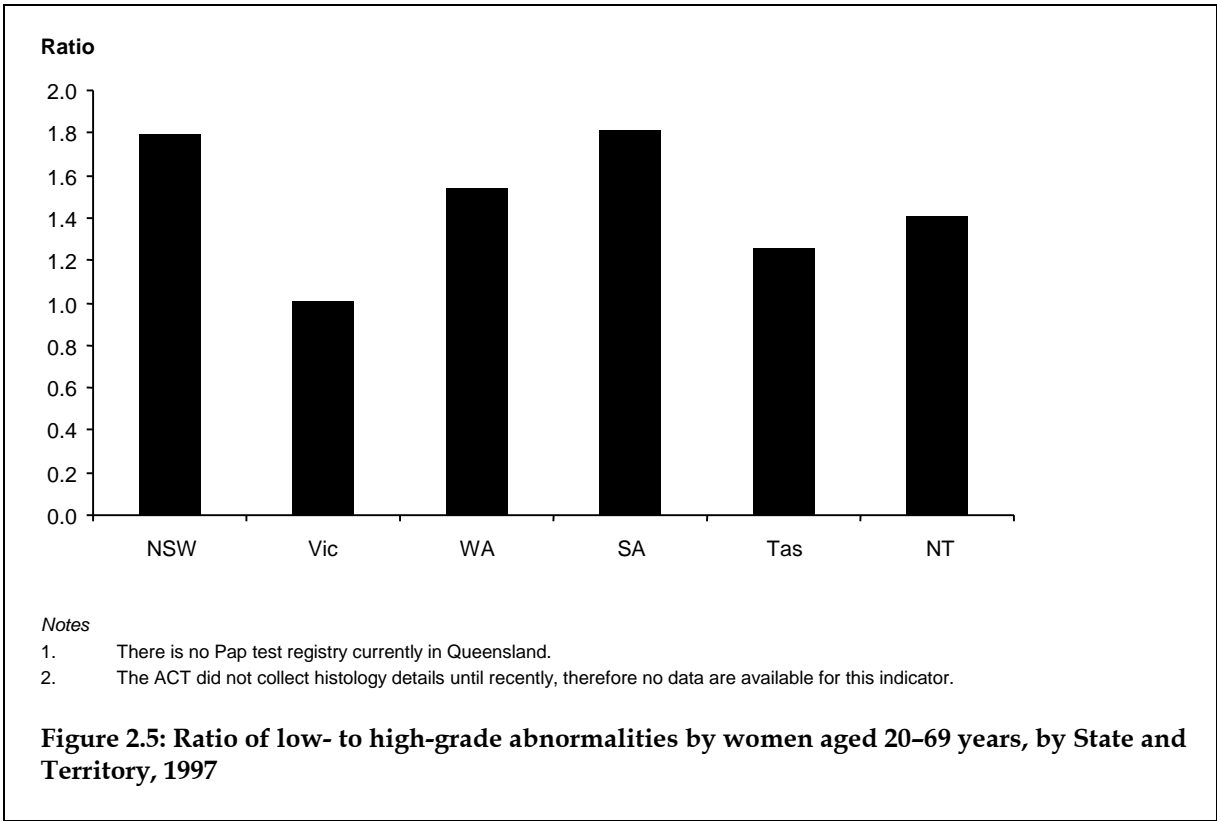
The rationale behind this indicator is to provide a broad indication about the extent of morbidity caused to women taking part in the screening program, and in particular those women who have a biopsy. A biopsy is an invasive procedure in which a piece of tissue is taken from the cervix. It represents a fairly major event for a woman compared with having a Pap smear.

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

- The ratio of histologically confirmed low-grade abnormalities to high-grade abnormalities was 1.5 for Australia in 1997 (excluding Queensland and the Australian Capital Territory) (Table 2.5).



- There was some variation between States with New South Wales and South Australia (1.8) followed by Western Australia (1.5) having the highest, while Victoria (1) had the lowest ratio.

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 cervical cancer screening programs is to set a screening interval which detects these lesions before they progress and become invasive. This indicator measures the frequency of this type of abnormality in the community. A high-grade intraepithelial abnormality is defined in this report as CIN 1/2, CIN 2, CIN 3, or adenocarcinoma in situ.

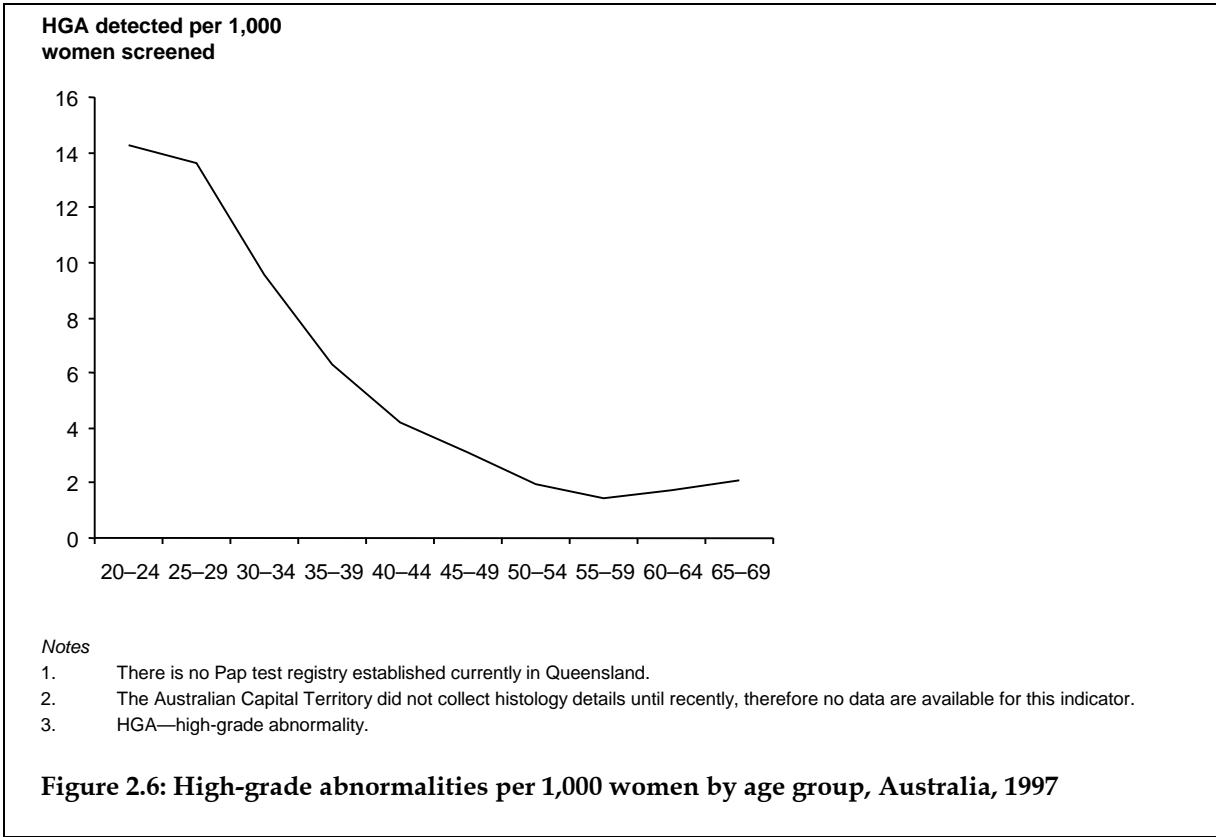
It is estimated that approximately 1% of women screened will receive a histological diagnosis of CIN 1 or higher. The National Health and Medical Research Council has produced guidelines distributed by the 'National Cervical Screening Program' to assist in the management of women who have low- and high-grade intraepithelial abnormalities. The National Health and Medical Research Council guidelines also highlight the need for follow-up after confirmation of a CIN lesion primarily because of the greater risk of developing invasive cancer (DHS 1994e).

The recommended management of CIN 2 and CIN 3 is treatment by a gynaecologist with appropriate expertise, which may include excisional treatment. Management varies if an abnormality is found during pregnancy; the recommended management is to refer for colposcopy during the first trimester to initially exclude invasive disease. If a high-grade abnormality is confirmed it is recommended that a colposcopy be repeated during mid-trimester to exclude progression, and the lesion should be reassessed 8 weeks post-partum (DHS 1994e). It is also recommended that women who have had a hysterectomy and who have a past history of CIN should continue to have smears taken at least yearly. If a lesion is completely excised at hysterectomy the women should continue to have smears taken from the vaginal vault annually for 5 years, and 2-yearly thereafter (DHS 1994e).

Indicator 4: High-grade abnormality detection

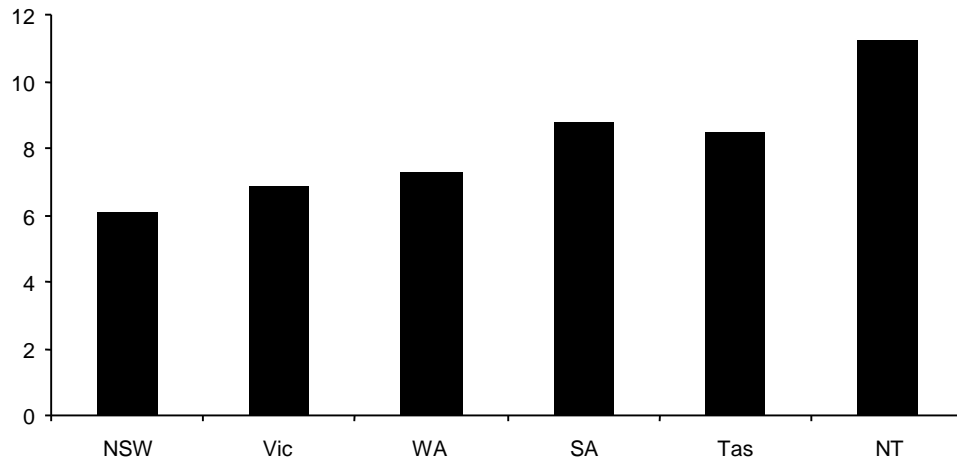
Detection rate for histologically verified high-grade intraepithelial abnormalities per 1,000 women screened in a 12-month period by 5-year age groups (20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70-74, 75-79, 80-84, 85+) and for the target age group (20-69 years – age-standardised).

- The detection rate for histologically verified high-grade intraepithelial abnormalities was 7.1 per 1,000 women in the target age group 20-69 years screened in Australia (excluding Queensland and the Australian Capital Territory) (Table 2.8). The age-standardised rate for women aged 20-69 years was 6.9 per 1,000 women screened (Table 2.9).



- Figure 2.6 shows the rate of histologically verified high-grade intraepithelial abnormalities was much higher in the younger age groups. In the 20-29 year age group the rate was more than 13.9 per 1,000 women screened compared with less than 2 per 1,000 in women aged 50-69 years. This age specific distribution contrasts with patterns of cervical cancer incidence and mortality that are the inverse of this age distribution, suggesting that the malignant potential of an intraepithelial high grade abnormality is greater with increasing age. It is unethical to research this issue, but data from the National Women’s Hospital, New Zealand found evidence of this (McInroe 1984).

HGA detected per 1,000 women screened



Notes

1. There is no Pap test registry currently in Queensland.
2. The Australian Capital Territory did not collect histology details until recently, therefore no data are available for this indicator.
3. HGA —high-grade abnormality.

Figure 2.7: Age-standardised rate of high-grade abnormalities per 1,000 women screened aged 20–69 years, by State and Territory, 1997

- There was considerable variation in the State and Territory age-standardised rate of high-grade abnormalities per 1,000 women screened. The Northern Territory had the highest rate at 11.2 per 1,000 women screened, and New South Wales the lowest at 6.1 (Figure 2.7).

Incidence

A major objective of the cervical cancer screening program is to minimise the incidence of cervical cancer by detecting treatable pre-cancerous lesions prior to their progression to cancer. However, where these pre-cancerous lesions cannot be detected then diagnosis of cancer at its earliest stage, the micro-invasive stage, is the best alternative. The next two indicators measure the incidence rates of micro-invasive and all cervical cancers in the community. These indicators provide information for the formulation of policy and the allocation of resources to deal with the disease. The indicators also provide information on the impact of screening on the disease.

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.

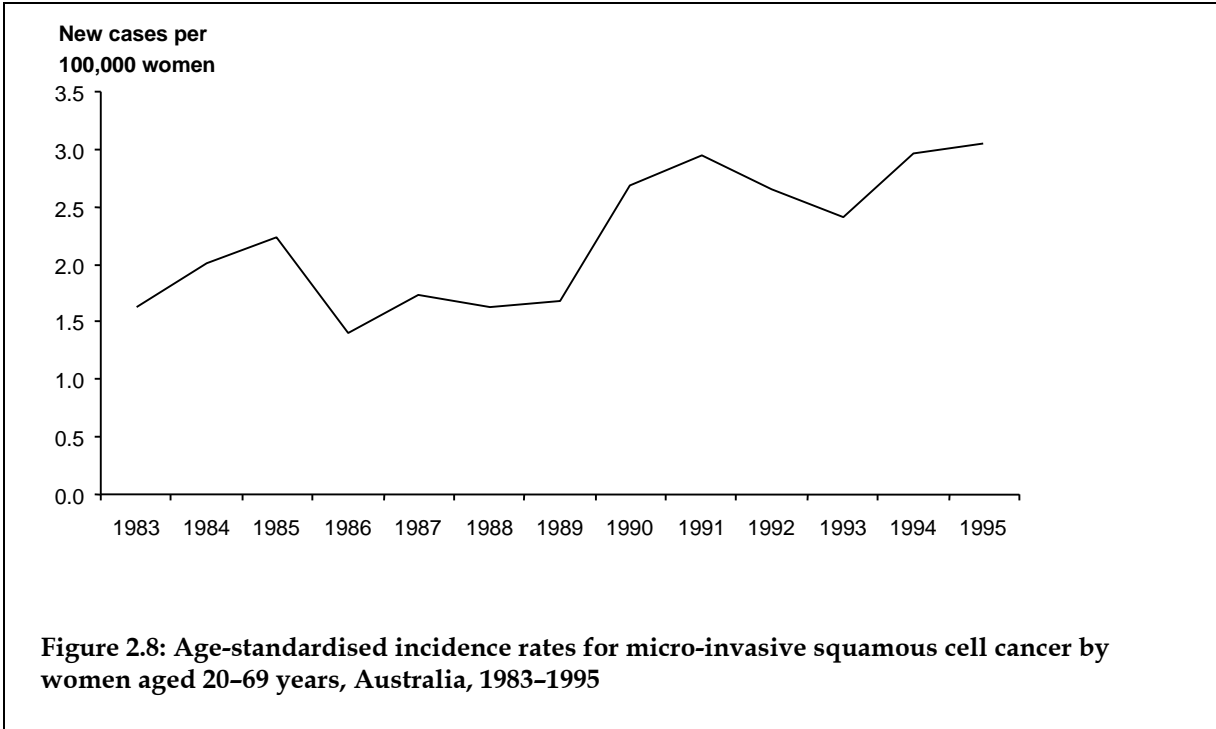
Vascular space involvement, either venous or lymphatic, should not alter the staging.' (Ostor & Mulvany 1996)

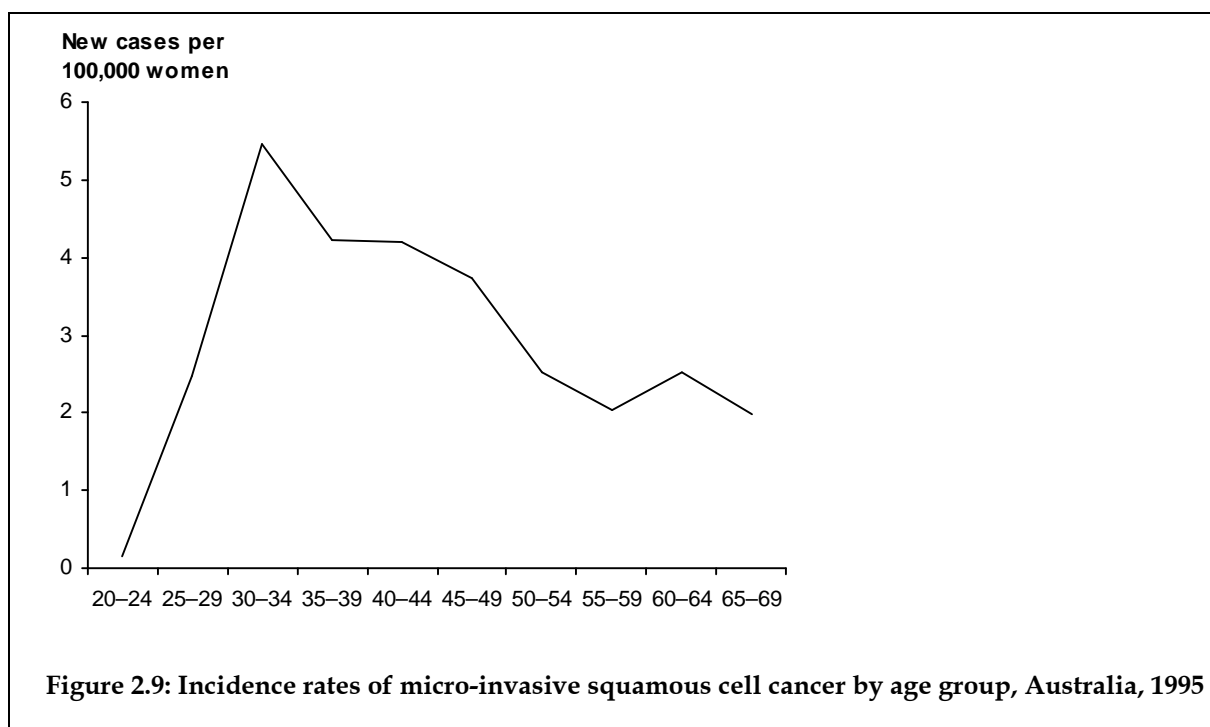
Cervical cancer screening has been available on an ad hoc basis since the 1960s, but it is only since the late 1980s and early 1990s that there has been an organised national approach to screening at a population level. The introduction of cervical cancer screening programs may result in the paradox whereby in the short term, the number of new cases of cancer increases because cancers are found earlier than they would have been without screening, with the rate decreasing in the longer term. Other factors can also temporarily influence the incidence rate, for example, in 1994 there was a sudden upturn in the incidence rate of cervical cancer. This upturn is generally credited to a substantial increase in the numbers of women being screened and consequently being diagnosed with cancer because of a well-publicised litigation case involving cancer of the cervix at the time.

Indicator 5: Incidence of micro-invasive cervical cancer

Incidence rate of micro-invasive 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).

- The age-standardised incidence rate of micro-invasive cervical cancer was 2 per 100,000 for all women in 1995, and 3.1 per 100,000 for the target age group 20–69 years (Table 2.11).
- In 1995 there were 187 new cases of micro-invasive cervical cancer among women of all ages, and for the target age group 20–69 years there were 175 new cases (Table 2.10).
- The age-standardised incidence rate for micro-invasive squamous cell carcinoma of the cervix varied quite markedly between 1982 and 1995. As explained on the previous page the increase in the incidence rate in the 1989–1990 period is a positive one as long as it is offset by a decline in later stage cancers. It should be noted that the definition and coding of micro-invasive cancer has changed over time among pathologists and cancer registries, and this will have impacted on the stability of this trend.



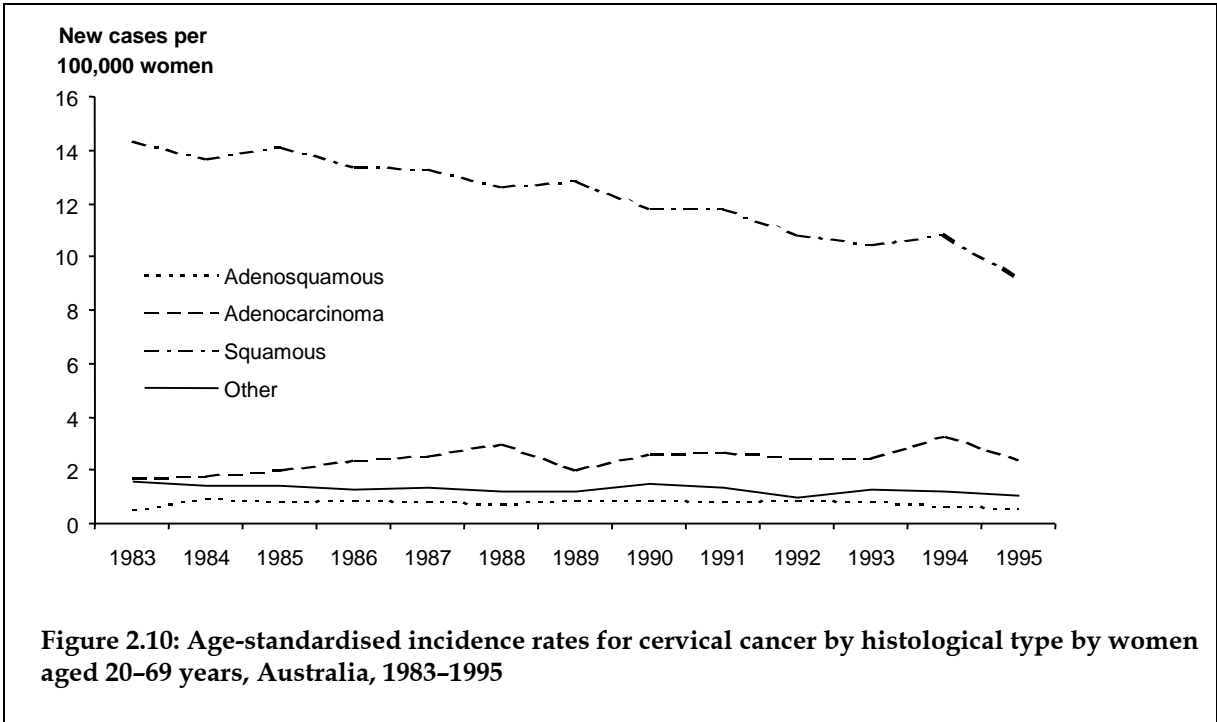


- In 1995, women in the 30–34 years age group had the highest rate of micro-invasive squamous cell cervical cancer (5.5 per 100,000) (Figure 2.9). The rate declined with age to rates of 2.5 per 100,000 and below for women aged 50 years or more. This pattern was evident throughout the 1990s (Table 2.11).
- In 1995, there were 40 cases of micro-invasive squamous cell cervical cancer in women aged 30–34 years. The numbers of cancers declined with age to less than 10 for women aged 55–69 years (Table 2.10).

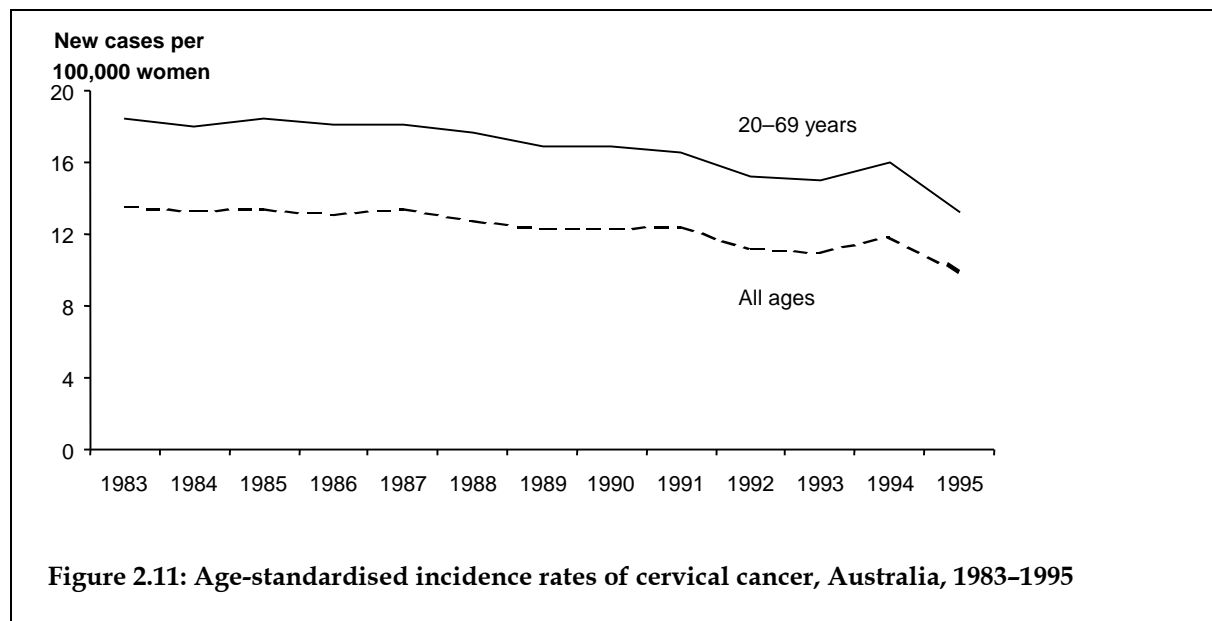
Indicator 6: Incidence of squamous, adenocarcinoma, adeno-squamous and other cervical cancer

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).

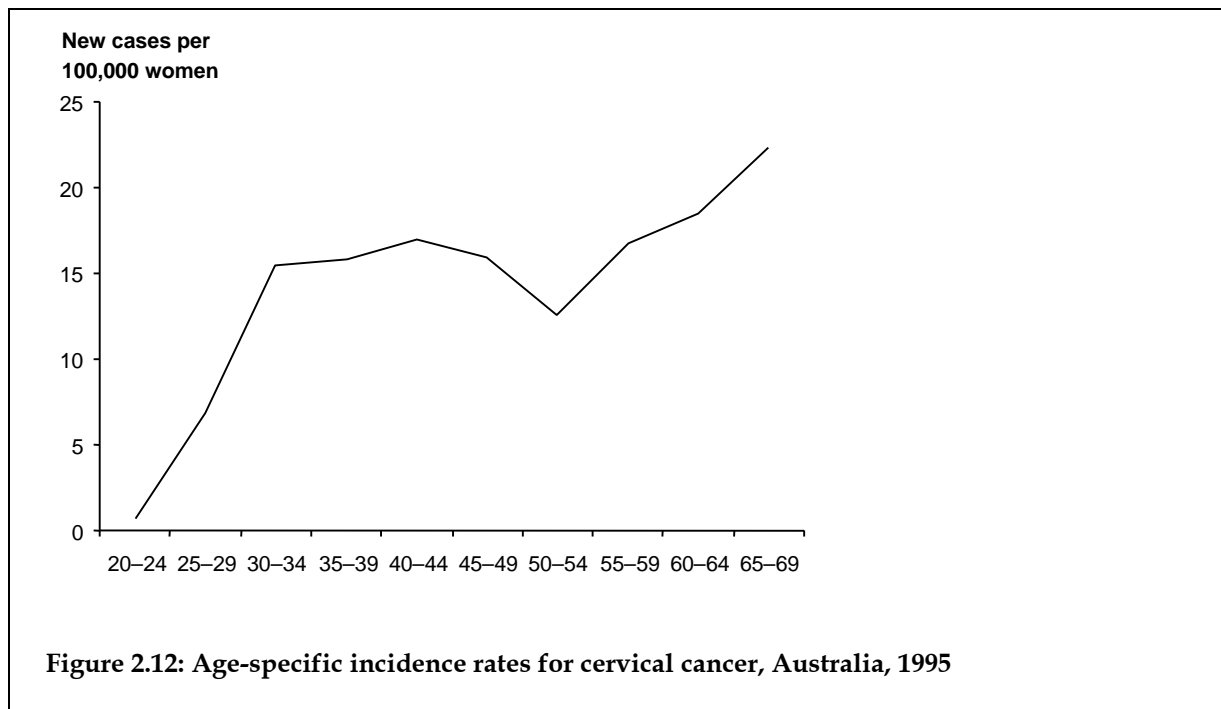
- In 1995, squamous cell carcinomas of the cervix accounted for approximately 69.5% of all cervical cancers, adenocarcinomas 17.9%, adeno-squamous 4.6% while a range of other mixed and unknown histologies comprised the remainder (8%).
- Between 1983 and 1995 the age-standardised incidence rate for squamous cell carcinomas of the cervix fell by 36% for all age groups, and the target age group 20-69 years (Figure 2.10, Table 2.12).



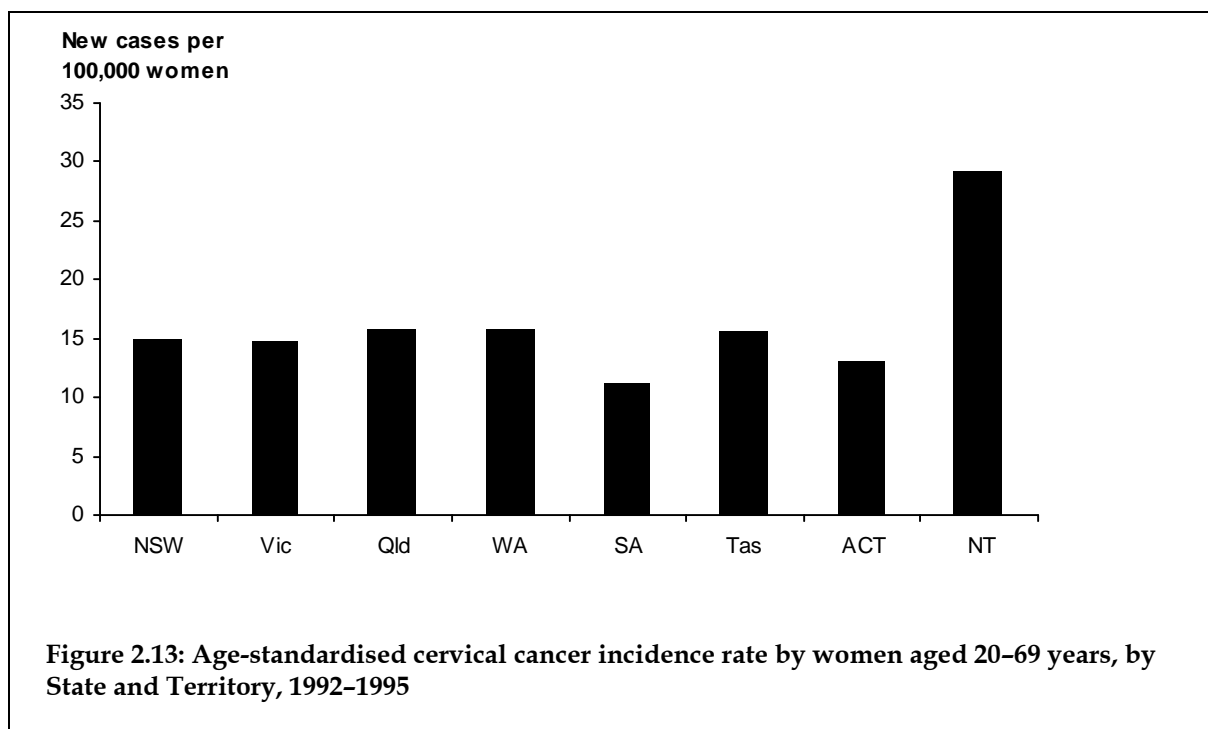
- In 1995, the incidence rate of cervical cancer was 9.9 per 100,000 for all women in Australia, and 13.2 per 100,000 for the target age group (Table 2.15).
- Cervical cancer was the eighth most frequently diagnosed new cancer, accounting for 947 new cases in Australia. There were 760 new cases of cervical cancer diagnosed in women in the target age group of 20–69 years.



- Between 1983 and 1995 the age-standardised incidence rate for cervical cancer (all ages) declined by 27%. The rate of decline increased marginally from approximately 1990, however, between 1993 and 1994 a rise in incidence occurred (Table 2.15). This increase is possibly related to the wide media coverage of a New South Wales woman who undertook legal action related to her cervical cancer. This media coverage prompted many women to undergo screening, and consequently a number of previously undiagnosed cancers may not have been detected.
- The incidence rate patterns for cervical cancer screening target population (aged 20–69) reflected most of the patterns described above. However, the decline in rates from 1990 and the upswing in 1994 were more pronounced in the target age group.



- The age-specific pattern of new cases of cervical cancer differs from most other cancers in that it rises rapidly in the relatively young age group; in 1995, the rate was 15.5 per 100,000 women at ages 30–34 years. The rates were relatively constant to the 50–54 year age group, but increased through ages 60–69 years (Table 2.15).



- There was a considerable range in cervical cancer incidence between States and Territories for women aged 20-69 years. South Australia had the lowest incidence at 11.2 per 100,000 women compared with the Northern Territory which had the highest rate of 29.2 per 100,000 women. The remaining States and Territory had similar rates of 14 to 16 new cases per 100,000 women (Table 2.16).

Mortality

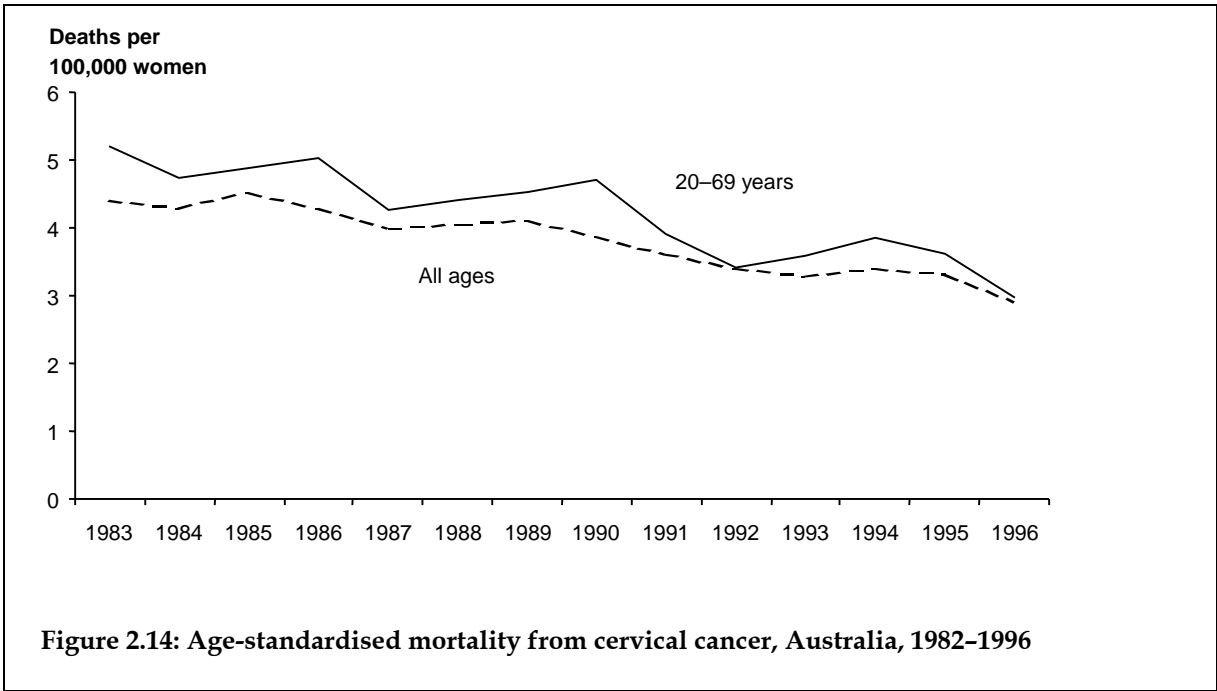
Cancer of the cervix is one of the few cancers for which there is an efficacious screening test for detection of the disease at an early stage, and in theory most deaths due to cervical cancer are potentially avoidable (Marcus & Crane 1998). However, some deaths do occur and the objective of the National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

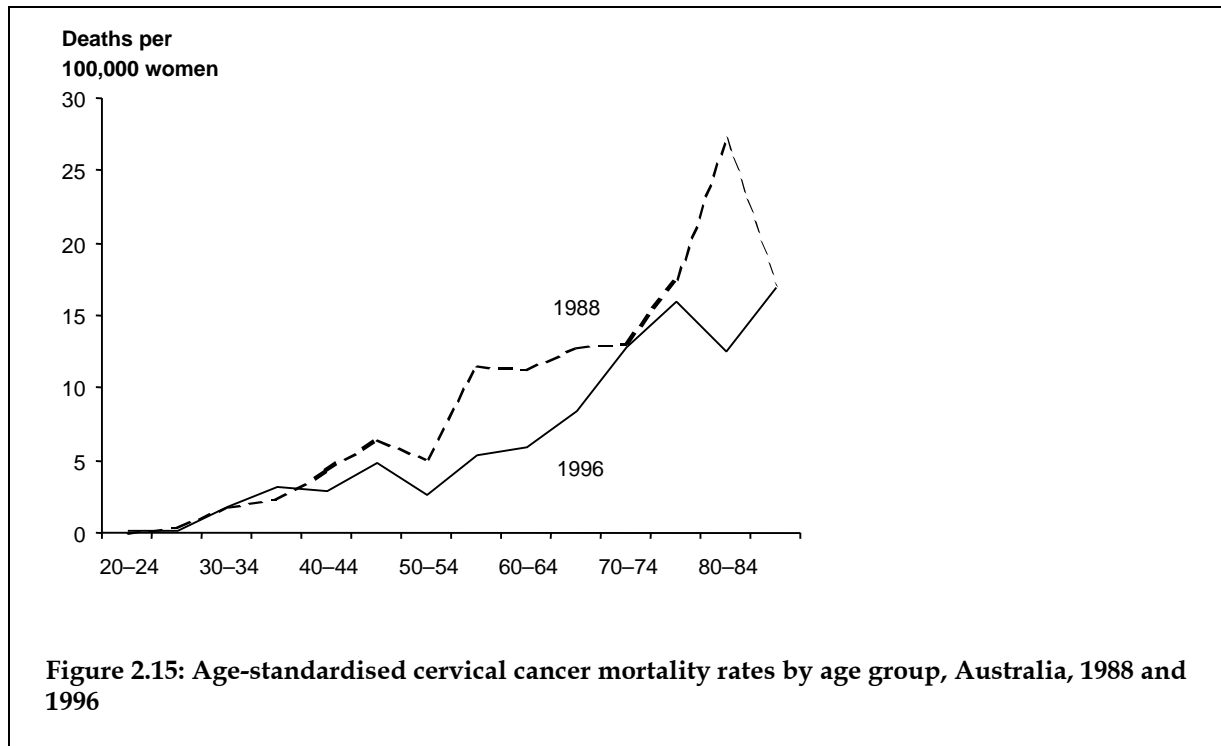
The mortality indicator measures the level of mortality from cervical cancer in the total female population by age and other demographic characteristics. This indicator is important because from it, an assessment can be made of changes in mortality in different age groups, and in particular the target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

Indicator 7: Mortality

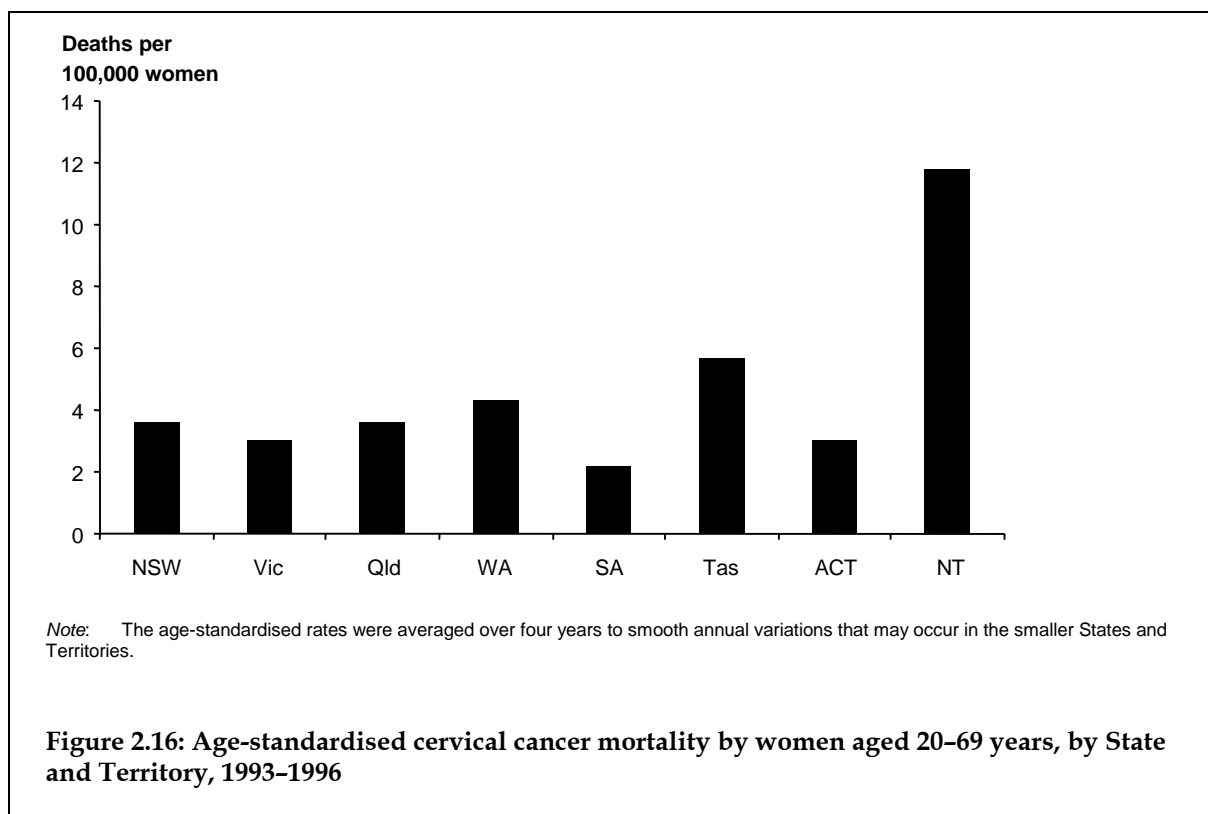
Death rate of cervical cancer per 100,000 estimated resident female population in a 12-month period by 5-year age groups (20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70-74, 75-79, 80-84, 85+) and for the target age group (20-69 years – age-standardised).

- Cervical cancer is the eighth most common cause of cancer death in women, accounting for 302 deaths in 1996. The age-standardised mortality rates for all ages was 2.9 per 100,000 women in 1996. This rate fell by 34% between 1983 and 1996 with almost all of this decline attributable to the National Cervical Cancer Screening Program (Tables 2.18 and 2.19).
- In the cervical cancer screening target group (women aged 20-69), mortality rates have declined at approximately the same rate as those for all ages. Mortality rates for this group were at their lowest in 1996 at 3 deaths per 100,000 women. Some declines have also been apparent in the older age groups, although these have been less consistent.





- Death from cancer of the cervix, like many cancers, is very much an age-related event— in both 1988 and 1996 there were no deaths reported in women under the age of 20 years. There was a gradual increase in the number of deaths in the middle age groups and higher numbers in age groups over 65 years.
- The median age at death was approximately 64 years for the years 1995 and 1996.



- There was considerable variation in the age-standardised rates of cervical cancer mortality between States and Territories. The Northern Territory rate (11.8 per 100,000 women) was more than double that of the next highest State, Tasmania (5.7 per 100,000 women). There was slightly more variation in mortality rates between States and Territories than in the incidence of cervical cancer (Table 2.21).

Tables

Indicator 1: Participation rate for cervical cancer screening

Table 2.1: Number of women participating in Pap smear programs by age, by all women screened in the State or Territory, 1996–1997.

Age group	NSW ^(a)	Vic	WA	SA	Tas	ACT ^(c)	NT ^(d)	Australia
20–24	100,579	84,743	38,551	28,157	10,458	7,354	4,958	274,800
25–29	142,392	123,651	48,584	36,478	11,786	8,716	6,184	377,791
30–34	148,690	127,168	50,173	37,889	12,293	8,571	5,511	390,296
35–39	144,884	125,992	48,770	37,991	12,242	8,217	4,722	382,818
40–44	121,267	107,973	42,240	32,341	10,358	7,409	3,802	325,390
45–49	102,807	93,757	34,555	28,267	8,757	6,841	3,094	278,078
50–54	77,168	72,536	23,546	20,925	6,201	4,621	1,827	206,824
55–59	52,031	50,217	16,292	14,740	4,441	2,744	1,028	141,493
60–64	37,832	37,706	11,973	11,506	3,336	1,830	518	104,701
65–69	28,365	30,597	8,693	9,298	2,498	1,182	284	80,917
70–74	19,105 ^(b)	14,576	3,416	7,022 ^(b)	929	477	116	45,640
75–79	n.a.	5,292	1,153	n.a.	332	155	49	6,981
80–84	n.a.	1,869	414	n.a.	122	51	22	2,478
85+	n.a.	997	15	n.a.	39	9	6	1,066
Not stated	9750	n.a.	n.a.	1,029	10	77	96	10,962
Total	984870	877,074	328,375	265,643	83,802	58,254	32,217	2,619,273
20–69 years	956015	854,340	323,377	257,592	82,370	57,485	31,929	2,563,108

(a) The New South Wales Pap Test register commenced in July 1996, therefore data has been estimated for the period January to July 1996.

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

(c) The ACT register only registers women with an ACT address.

(d) The Northern Territory Pap Smear register commenced in March 1996, therefore data has been estimated for the period January to March 1996.

Notes

1. There is currently no Pap smear register in Queensland.
2. Data on participation for women aged over 69 years is not routinely collected by the programs. Therefore participation data are not available for some States or Territories for the older age groups.

Table 2.2: Participation rates in the Pap smear program by age, by all women screened in the State or Territory, 1996–1997.

Age group	NSW ^(a)	Vic	WA	SA	Tas	ACT ^(c)	NT ^(d)	Australia
20–24	44.6	49.8	58.1	55.5	66.3	52.1	60.1	49.9
25–29	59.8	67.8	70.9	68.7	71.7	66.0	67.1	65.0
30–34	62.4	71.5	73.1	69.5	71.4	68.3	67.1	67.6
35–39	63.4	75.0	73.4	70.7	69.6	68.6	67.0	69.2
40–44	62.0	74.1	71.8	68.8	68.6	69.2	66.6	68.0
45–49	60.9	74.2	70.0	67.8	67.5	70.3	69.8	67.3
50–54	64.1	82.0	71.8	71.1	67.6	75.7	67.2	71.5
55–59	53.2	69.8	62.1	62.0	58.0	66.1	62.5	60.7
60–64	44.2	59.7	55.0	54.5	50.3	60.1	48.4	51.7
65–69	32.8	48.8	42.1	42.5	38.3	43.9	37.4	40.1
70–74	24.4 ^(b)	25.5	19.5	33.9 ^(b)	15.6	19.9	22.7	25.0
75–79	n.a.	12.3	8.7	n.a.	7.1	9.2	14.9	5.0
80–84	n.a.	6.6	4.6	n.a.	3.9	5.0	12.3	2.7
85+	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total	50.9	61.1	61.7	56.9	57.8	62.5	67.1	56.3
20–69 years	56.7	68.0	67.4	64.9	65.9	65.1	65.1	62.4

(a) The New South Wales Pap Test register commenced in July 1996, therefore data has been estimated for the period January to July 1996.

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

(c) The ACT register only registers women with an ACT address.

(d) The Northern Territory Pap Smear register commenced in March 1996, therefore data has been estimated for the period January to March 1996.

Notes

1. There is currently no Pap smear register in Queensland.

2. Data on participation for women aged over 69 years is not routinely collected by the programs. Therefore participation data are not available for some States or Territories for the older age groups.

Indicator 2: Early rescreening

Table 2.3: Number of women with repeat screenings in the 24 months following a negative Pap smear in February 1996, Australia

No. of tests	Vic	WA	SA	Tas	ACT ^(a)	Australia
Number of women						
0	32,866	8,396	7,927	2,008	1,420	52,617
1	10,307	5,843	4,558	1,608	682	22,998
2	2,556	1,164	1,010	272	86	5,088
3	576	212	228	47	15	1,078
4	165	55	60	13	3	296
5 or more	71	5	20	3	0	99

(a) The ACT register only registers women with an ACT address.

Notes

1. There is currently no Pap smear register in Queensland.
2. The NSW Pap Test Register began operations on 29 August 1996, and The NT Pap Smear Register began operations on 10 March 1996, therefore data was not available for this indicator from either jurisdiction.
3. Data on participation for women aged over 69 years is not routinely collected by the programs, therefore participation data are not available for some States or Territories for the older age groups.

Table 2.4: Percentage of women with repeat screenings in the 24 months following a negative Pap smear in February 1996, Australia

No. of tests	Vic	WA	SA	Tas	ACT ^(a)	Australia
Per cent of women						
0	70.6	53.6	57.4	50.8	64.4	64.0
1	22.1	37.3	33.0	40.7	30.9	28.0
2	5.5	7.4	7.3	6.9	3.9	6.2
3	1.2	1.4	1.6	1.2	0.7	1.3
4	0.4	0.4	0.4	0.3	0.1	0.4
5 or more	0.2	0.1	0.1	0.1	0.0	0.1

(a) The ACT register only registers women with an ACT address.

Notes

4. There is currently no Pap smear register in Queensland.
5. The NSW Pap Test Register began operations on 29 August 1996, and The NT Pap Smear Register began operations on 10 March 1996, therefore data was not available for this indicator from either jurisdiction.
1. Data on participation for women aged over 69 years is not routinely collected by the programs, therefore participation data are not available for some States or Territories for the older age groups.

Indicator 3: Low-grade abnormality detection

Table 2.5: Number of low- and high-grade abnormalities by women aged 20–69 years, by State and Territory, 1997

Abnormalities	NSW	Vic	WA	SA	Tas	NT	Australia
Low-grade	6,447	3,419	2,209	2,370	543	326	15,314
High-grade	3,601	3,388	1,432	1,310	430	231	10,392
Ratio	1.79	1.01	1.54	1.81	1.26	1.41	1.47

Notes

1. There is currently no Pap test registry established in Queensland.
2. The ACT did not collect histology details until recently, therefore no data are available for this indicator.

Indicator 4: High-grade abnormality detection

Table 2.6: Number of high-grade abnormalities by age, by State and Territory, 1997

Age group	NSW	Vic	WA	SA ^(a)	Tas	NT	Australia
20–24	788	670	320	184	115	46	2,123
25–29	1,022	1,015	370	335	109	62	2,913
30–34	753	696	286	265	74	41	2,115
35–39	453	429	193	216	61	32	1,384
40–44	267	277	110	90	32	19	795
45–49	154	139	82	89	17	15	496
50–54	64	80	28	50	9	9	240
55–59	34	35	16	27	5	5	122
60–64	31	23	15	33	2	2	106
65–69	35	24	12	21	6	0	98
70–74	20	16	1	35	n.a.	n.a.	72
75–79	7	8	2	n.a.	n.a.	n.a.	17
80–84	2	3	4	n.a.	n.a.	n.a.	9
85+	3	n.a.	n.a.	n.a.	n.a.	n.a.	3
Age not stated	5	n.a.	n.a.	1	n.a.	n.a.	6
Total	3,638	3,415	1,439	1,346	430	231	10,499
20–69 years	3,601	3,388	1,432	1,310	430	231	10,392

(a) 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. There is currently no Pap test registry in Queensland.
2. The ACT did not collect histology details until recently, therefore no data are available for this indicator.

Table 2.7: Number of women screened by age, by State and Territory, 1997

Age group	NSW	Vic	WA	SA ^(a)	Tas	NT	Australia
20–24	58,842	45,403	21,222	15,231	5,705	2,738	149,141
25–29	85,421	70,504	27,798	20,617	7,121	3,452	214,199
30–34	89,016	72,728	28,423	21,266	7,173	3,035	222,058
35–39	87,766	72,287	28,506	21,413	7,377	2,652	220,384
40–44	73,682	62,536	24,720	18,245	6,277	2,124	188,112
45–49	62,596	54,917	20,078	16,097	5,352	1,816	161,164
50–54	48,045	43,848	14,270	12,215	3,997	1,093	124,191
55–59	32,031	29,632	9,554	8,494	2,706	606	83,510
60–64	23,277	21,639	6,902	6,681	2,057	297	61,162
65–69	17,239	16,715	4,897	5,211	1,551	179	45,910
70–74	11,439	7,989	n.a.	3,887	488	70	23,982
75–79	n.a.	2,957	n.a.	n.a.	161	31	3,188
80–84	n.a.	996	n.a.	n.a.	64	13	1,091
85+	n.a.	n.a.	n.a.	n.a.	19	3	32
Age not stated	0	0	0	333	4	59	396
Total	589,354	502,151	186,370	149,690	50,052	18,168	1,498,520
20–69 years	577,915	490,209	186,370	145,470	49,316	17,992	1,469,831

(a) 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.

Table 2.8: Rate of high-grade abnormalities per 1,000 screens, by State and Territory, 1997

Age group	NSW	Vic	WA	SA ^(a)	Tas	NT	Australia
20–24	13.4	14.8	15.1	12.1	20.2	16.8	14.2
25–29	12.0	14.4	13.3	16.3	15.3	18.0	13.6
30–34	8.5	9.6	10.1	12.5	10.3	13.5	9.5
35–39	5.2	5.9	6.8	10.1	8.3	12.1	6.3
40–44	3.6	4.4	4.5	4.9	5.1	9.0	4.2
45–49	2.5	2.5	4.1	5.5	3.2	8.3	3.1
50–54	1.3	1.8	1.9	4.1	2.3	8.2	1.9
55–59	1.1	1.2	1.7	3.2	1.8	8.3	1.5
60–64	1.3	1.1	2.2	4.9	1.0	6.7	1.7
65–69	2.0	1.4	2.5	4.0	3.9	n.a.	2.1
70–74	1.8	2.0	n.a.	9.0	n.a.	n.a.	3.0
75–79	n.a.	2.7	n.a.	n.a.	n.a.	n.a.	5.3
80–84	n.a.	3.0	n.a.	n.a.	n.a.	n.a.	8.2
85+	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	93.8
Total	6.2	6.8	7.7	9.0	8.6	12.7	7.0
20–69 years	6.2	6.9	7.7	9.0	8.7	12.8	7.1

(a) 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. There is currently no Pap test registry in Queensland.
2. The ACT did not collect histology details until recently, therefore no data are available for this indicator.

Table 2.9: Age-standardised high-grade abnormality rate, by State and Territory, 1997

	NSW	Vic	WA	SA	Tas	NT	Australia
Standardised rate	6.1	6.9	7.3	8.8	8.5	11.2	6.9

(a) 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. There is currently no Pap test registry in Queensland.
2. The ACT did not collect histology details until recently, therefore no data are available for this indicator.
3. Standardised to the 1991 Australian total population.

Indicator 5: Incidence of micro-invasive cervical cancer

Table 2.10: New cases of micro-invasive cervical cancer by age, Australia, 1983–1995

Age groups	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
0–4	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
10–14	0	0		0	0	0	0	0	0	0	0	0	0
15–19	1	0	1	0	0	0	0	0	1	0	0	0	0
20–24	2	1	9	1	3	4	1	4	0	5	0	6	1
25–29	10	12	12	10	8	13	12	15	14	12	7	18	17
30–34	10	26	22	15	18	19	26	30	31	32	32	31	40
35–39	24	24	19	16	23	12	11	24	37	22	25	31	30
40–44	9	11	13	7	13	12	16	22	35	24	17	26	28
45–49	7	6	12	8	9	9	4	18	10	12	15	27	23
50–54	3	5	5	4	3	6	4	4	11	12	17	8	12
55–59	2	3	2	3	4	5	6	9	6	12	5	5	8
60–64	4	3	8	1	3	1	6	7	7	5	7	10	9
65–69	1	3	3	2	1	2	2	6	7	9	10	6	7
70–74	2	3	2	3	0	0	0	2	4	2	4	6	5
75–79	0	0	0	1	0	1	1	3	3	2	1	3	5
80–84	0	0	0	0	0	0	0	0	2	0	0	0	1
85+	0	0	0	0	0	0	0	0	0	0	1	2	1
Total	75	97	108	71	86	84	89	144	168	149	141	179	187

Source: National Cancer Statistics Clearing House.

Table 2.11: Age-specific and age-standardised rates of micro-invasive cervical cancer by age, Australia, 1983–1995

Age groups	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
0–4	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
10–14	0	0	0	0	0	0	0	0	0	0	0	0	0
15–19	0.2	0	0.2	0	0	0	0	0	0.2	0	0	0	0
20–24	0.3	0.2	1.4	0.2	0.5	0.6	0.2	0.6	0	0.7	0	0.8	0.1
25–29	1.6	1.9	1.8	1.5	1.2	1.9	1.7	2.1	2.0	1.7	1.0	2.6	2.5
30–34	1.6	4.2	3.5	2.4	2.8	2.9	3.8	4.3	4.4	4.4	4.4	4.2	5.5
35–39	4.3	4.1	3.2	2.6	3.7	1.9	1.7	3.7	5.6	3.2	3.6	4.4	4.2
40–44	2.1	2.4	2.8	1.4	2.4	2.1	2.7	3.6	5.5	3.7	2.6	4.0	4.2
45–49	1.9	1.6	3.0	2.0	2.1	2.1	0.9	3.8	2.0	2.2	2.6	4.5	3.7
50–54	0.8	1.4	1.4	1.1	0.8	1.6	1.0	1.0	2.7	2.8	3.9	1.8	2.5
55–59	0.5	0.8	0.5	0.8	1.1	1.4	1.7	2.5	1.7	3.3	1.3	1.3	2.0
60–64	1.2	0.8	2.2	0.3	0.8	0.3	1.6	1.9	1.9	1.4	1.9	2.8	2.5
65–69	0.3	1.0	1.0	0.7	0.3	0.6	0.6	1.7	2.0	2.5	2.8	1.7	2.0
70–74	0.8	1.2	0.8	1.1	0	0	0	0.7	1.4	0.7	1.3	1.9	1.5
75–79	0	0	0	0.5	0.5	0.5	0.5	1.4	1.3	0.9	0.4	1.3	2.1
80–84	0	0	0	0	0	0	0	0	1.4	0	0	0	0.6
85+	0	0	0	0	0	0	0	0	0	0	0.8	1.6	0.7
All ages													
AS Rate (A)	1.0	1.3	1.4	0.9	1.1	1.0	1.1	1.7	1.9	1.7	1.6	2.0	2.0
AS Rate (W)	0.9	1.1	1.2	0.8	0.9	0.9	0.9	1.4	1.6	1.4	1.3	1.7	1.7
Ages 20–69													
AS Rate (A)	1.6	2.0	2.2	1.4	1.7	1.6	1.7	2.6	2.9	2.6	2.4	3.0	3.1
AS Rate (W)	1.5	1.9	2.2	1.3	1.6	1.6	1.6	2.5	2.7	2.5	2.3	2.9	2.9

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.

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

Table 2.12: Number of new cases of cervical cancer by histology for women aged 20–69 years, Australia, 1983–1995

Histological type	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Squamous	653	636	671	644	662	643	670	625	639	597	586	615	528
Adenocarcinoma	80	83	96	116	125	151	104	140	144	137	136	185	136
Adeno-squamous	23	44	37	43	39	39	45	49	44	50	47	39	35
Other	72	67	67	62	68	63	61	80	71	55	72	68	61
Total	828	830	871	865	894	896	880	894	898	839	841	907	760

Source: National Cancer Statistics Clearing House.

Table 2.13: Age-standardised incidence rates for cervical cancer by histology for women aged 20–69 years, Australia, 1983–1995

Histological type	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Squamous	14.4	13.7	14.1	13.4	13.3	12.6	12.9	11.8	11.8	10.9	10.5	10.8	9.2
Adenocarcinoma	1.8	1.8	2.0	2.4	2.5	3.0	2.0	2.7	2.7	2.5	2.4	3.3	2.4
Adeno-squamous	0.5	0.9	0.8	0.9	0.8	0.8	0.9	0.9	0.8	0.9	0.8	0.7	0.6
Other	1.5	1.4	1.4	1.3	1.4	1.2	1.2	1.5	1.3	1.0	1.3	1.2	1.1

Source: National Cancer Statistics Clearing House.

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

Table 2.14: New cases of cervical cancer by age, Australia, 1983–1995

Age groups	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
0–4	0	0	0	0	0	1	0	0	0	0	0	0	0
5–9	0	0	0	0	0	0	0	0	0	0	0	1	0
10–14	0	0	1	0	0	0	0	0	0	0	0	0	0
15–19	1	1	1	3	1	4	1	1	1	0	1	1	2
20–24	14	10	22	12	17	17	16	13	11	10	9	15	5
25–29	56	61	73	59	68	74	64	60	49	51	35	46	47
30–34	101	108	106	121	134	127	126	108	115	103	104	118	113
35–39	122	135	128	127	151	136	121	155	144	128	126	131	113
40–44	101	104	102	115	113	127	124	136	156	128	129	128	113
45–49	85	79	86	113	93	92	86	122	103	97	100	131	98
50–54	75	65	92	80	65	64	82	66	90	80	90	85	60
55–59	82	76	82	79	62	67	84	81	56	76	81	72	66
60–64	110	107	102	82	106	91	81	80	84	78	74	87	66
65–69	95	93	85	82	89	103	97	73	90	88	93	94	79
70–74	72	68	71	64	78	56	69	67	78	70	65	78	72
75–79	42	60	42	42	55	51	48	50	48	51	48	65	51
80–84	31	25	28	26	29	31	25	29	40	34	36	39	29
85+	14	18	20	23	24	20	17	24	36	22	22	25	33
Total	1,001	1,010	1,041	1,028	1,085	1,061	1,041	1,065	1,101	1,016	1,013	1,116	947

Source: National Cancer Statistics Clearing House.

Table 2.15: Age-specific and age-standardised incidence rates for cervical cancer by age, Australia, 1983–1995

Rates	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
0–4	0	0	0	0	0	0.2	0	0	0	0	0	0	0
5–9	0	0	0	0	0	0	0	0	0	0	0	0.2	0
10–14	0	0	0.2	0	0	0	0	0	0	0	0	0	0
15–19	0	0.2	0.2	0.5	0.1	0.6	0.1	0.1	0.2	0	0.2	0.2	0.3
20–24	2.0	1.4	3.3	1.8	2.6	2.6	2.4	1.9	1.6	1.4	1.3	2.1	0.7
25–29	8.6	9.7	11.2	9.0	1	10.6	9.1	8.6	7.0	7.4	5.1	6.8	7.0
30–34	16.3	17.1	17.0	19.1	20.7	19.2	18.6	15.8	16.3	14.5	14.2	16.1	15.7
35–39	22.4	23.6	21.4	20.5	24.2	21.8	18.7	23.8	22.0	18.9	18.5	18.8	16.0
40–44	23.3	22.8	21.6	23.2	21.3	22.6	20.8	22.0	24.6	20.1	19.9	19.5	17.2
45–49	23.5	22.0	21.6	27.6	22.1	21.1	19.1	25.7	20.7	18.4	17.5	22.0	15.9
50–54	18.8	18.0	25.7	23.0	17.7	17.0	21.1	17.0	21.8	18.9	20.7	18.8	12.8
55–59	23.3	19.2	21.9	21.1	17.2	18.7	23.3	22.6	15.9	21.3	21.6	18.7	16.9
60–64	30.9	30.6	28.0	23.0	28.8	24.6	22.1	21.9	23.0	21.4	20.6	24.7	18.5
65–69	33.3	32.2	29.1	26.7	28.5	31.3	28.3	21.2	25.6	24.9	26.2	26.5	22.3
70–74	30.5	26.1	27.8	25.2	29.2	20.9	26.0	24.8	28.0	23.9	21.4	24.6	22.3
75–79	25.5	36.3	22.8	21.7	27.7	24.8	22.3	22.7	21.3	22.7	21.7	28.5	22.3
80–84	27.7	21.3	24.3	22.3	23.4	24.0	18.7	21.5	27.5	22.5	22.7	23.3	16.8
85+	19.9	24.0	22.5	25.4	24.7	20.0	16.5	22.7	33.6	19.0	18.1	20.4	24.6
All ages													
AS Rate (A)	13.6	13.4	13.5	13.1	13.4	12.8	12.3	12.3	12.4	11.2	11.0	11.9	9.9
AS Rate (W)	11.2	10.9	11.2	10.9	11.0	10.6	10.2	10.2	10.1	9.3	9.1	9.8	8.1
Ages 20–69													
AS Rate (A)	18.4	18.0	18.5	18.1	18.1	17.7	16.9	16.9	16.6	15.3	15.0	16.0	13.2
AS Rate (W)	18.0	17.5	18.2	17.8	17.6	17.2	16.5	16.5	16.2	14.9	14.7	15.6	12.8

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.

Table 2.16: Number of new cases of cervical cancer by age, by State and Territory, 1992–1995

Rates	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	1	0	0	0	1
10–14	0	0	0	0	0	0	0	0	0
15–19	3	0	1	0	0	0	0	0	4
20–24	9	17	11	2	0	0	0	0	39
25–29	56	37	40	18	16	6	4	2	179
30–34	150	119	77	41	32	13	4	2	438
35–39	180	116	105	42	33	7	6	9	498
40–44	148	133	88	62	34	15	10	8	498
45–49	152	108	79	37	27	11	6	6	426
50–54	110	71	59	37	21	4	6	7	315
55–59	122	64	48	31	10	12	5	3	295
60–64	107	87	52	26	16	11	4	2	305
65–69	124	93	58	35	22	14	3	5	354
70–74	110	62	55	19	25	10	3	1	285
75–79	75	65	38	16	14	7	0	0	215
80–84	46	35	27	11	11	4	3	1	138
85+	34	27	18	9	11	3	0	0	102
Total	1,426	1,034	756	386	273	117	54	46	4,092

Source: National Cancer Statistics Clearing House.

Table 2.17: Age-specific and age-standardised incidence rates for cervical cancer, by State and Territory, 1992–1995

Rates	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	0.5	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	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.2
20–24	1.0	2.3	2.1	0.7	0.0	0.0	0.0	0.0	1.4
25–29	6.1	5.2	8.4	6.9	7.4	8.9	7.9	5.8	6.5
30–34	15.1	16.1	15.1	14.6	13.5	17.0	7.7	6.1	15.0
35–39	19.3	16.5	21.7	15.3	14.5	9.5	11.8	31.1	17.9
40–44	16.9	20.2	19.1	24.0	15.7	21.9	19.8	32.0	19.1
45–49	19.3	18.5	19.0	16.9	13.9	18.1	13.7	30.8	18.3
50–54	17.9	15.7	18.7	22.4	14.1	8.4	20.6	55.3	17.6
55–59	22.9	16.3	18.6	22.5	7.6	29.0	23.8	37.5	19.4
60–64	20.9	23.3	21.7	21.0	12.5	27.9	23.8	35.5	21.2
65–69	24.4	25.1	25.0	30.2	16.6	36.2	19.3	127.7	25.0
70–74	24.7	19.3	27.2	19.3	21.1	28.7	23.3	37.6	23.1
75–79	22.6	27.4	25.1	21.8	15.9	26.2	0.0	0.0	23.4
80–84	19.8	20.4	25.9	20.3	17.5	21.8	54.6	121.4	21.3
85+	19.4	19.8	22.6	21.5	22.7	22.6	0.0	0.0	20.4
All ages									
AS Rate (A)	11.1	10.9	11.8	11.4	8.5	11.7	9.7	21.1	11.0
AS Rate (W)	9.1	8.9	9.7	9.4	6.9	9.5	8.1	17.3	9.0
Ages 20–69									
AS Rate (A)	15.0	14.7	15.8	15.8	11.2	15.6	13.2	29.2	14.8
AS Rate (W)	14.6	14.3	15.4	15.4	10.8	15.2	13.1	28.5	14.5

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.

Indicator 7: Mortality

Table 2.18: Number of deaths from cervical cancer by age, Australia, 1983–1996

New cases	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
0–4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5–9	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10–14	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15–19	0	0	0	0	0	0	1	1	0	0	0	0	1	0
20–24	1	0	0	2	2	0	1	1	3	0	0	0	0	1
25–29	8	10	6	6	5	3	3	10	5	5	2	6	3	1
30–34	12	13	20	12	15	12	21	14	13	15	11	11	7	13
35–39	18	19	17	16	20	15	18	31	25	19	25	11	16	23
40–44	20	20	18	27	20	24	24	37	19	28	33	29	21	20
45–49	29	27	21	24	19	28	32	37	30	27	23	36	33	31
50–54	27	26	26	25	24	19	28	17	21	13	30	38	27	13
55–59	41	21	32	42	33	42	20	25	26	23	20	27	35	22
60–64	37	42	42	42	29	42	34	35	34	32	26	24	31	21
65–69	50	44	53	51	47	42	55	44	36	26	31	38	38	30
70–74	31	34	44	33	56	35	49	26	38	46	39	34	44	42
75–79	20	30	30	23	30	36	30	33	31	33	29	31	31	39
80–84	22	27	27	23	20	35	24	8	22	36	24	27	28	22
85+	21	21	30	24	16	17	22	25	33	23	24	24	20	24
Total	337	334	366	350	336	350	362	344	336	326	317	336	335	302

Source: AIHW Mortality Database.

Table 2.19: Age-specific and age-standardised mortality rates for cervical cancer by age, Australia, 1983–1996

Rates	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
0–4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5–9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10–14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15–19	0.0	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
20–24	0.2	0.0	0.0	0.3	0.3	0.0	0.2	0.1	0.4	0.0	0.0	0.0	0.0	0.1
25–29	1.3	1.6	0.9	0.9	0.7	0.4	0.4	1.4	0.7	0.7	0.3	0.9	0.4	0.1
30–34	2.0	2.1	3.2	1.9	2.3	1.8	3.1	2.0	1.8	2.1	1.5	1.5	1.0	1.8
35–39	3.2	3.3	2.8	2.6	3.2	2.4	2.8	4.7	3.8	2.8	3.6	1.6	2.2	3.2
40–44	4.6	4.4	3.8	5.5	3.7	4.2	4.0	6.0	3.0	4.4	5.1	4.4	3.1	2.9
45–49	7.8	7.0	5.3	5.9	4.5	6.4	7.0	7.7	6.0	5.0	4.0	6.0	5.4	4.8
50–54	7.4	7.2	7.3	7.0	6.5	5.0	7.2	4.2	5.1	3.1	6.9	8.4	5.7	2.6
55–59	11.0	5.6	8.6	11.2	9.0	11.6	5.5	7.0	7.2	6.3	5.3	7.0	8.8	5.4
60–64	10.8	11.8	11.5	11.6	7.9	11.3	9.2	9.4	9.2	8.8	7.2	6.7	8.7	5.9
65–69	17.2	15.2	18.1	16.6	14.9	12.8	16.0	12.6	10.2	7.4	8.7	10.7	10.7	8.5
70–74	12.8	13.5	17.0	12.6	21.0	13.1	18.4	9.6	13.5	15.7	12.8	10.7	13.6	12.8
75–79	11.8	17.0	16.3	11.9	15.1	17.5	14.0	15.0	13.7	14.4	12.6	13.6	13.3	16.0
80–84	20.3	23.9	23.4	19.8	16.2	27.1	17.9	5.7	15.1	23.8	15.2	16.2	16.2	12.5
85+	26.2	25.2	33.8	26.5	16.5	17.0	21.3	23.7	30.0	19.9	19.7	18.8	14.9	16.9
All ages														
AS Rate (A)	4.4	4.3	4.5	4.3	4.0	4.1	4.1	3.9	3.6	3.4	3.3	3.4	3.3	2.9
AS Rate (W)	3.5	3.3	3.5	3.4	3.1	3.1	3.2	3.1	2.8	2.6	2.5	2.7	2.6	2.2
Ages 20–69														
AS Rate (A)	5.2	4.7	4.9	5.0	4.3	4.4	4.5	4.7	3.9	3.4	3.6	3.8	3.6	3.0
AS Rate (W)	5.2	4.7	4.8	5.0	4.2	4.4	4.4	4.6	3.9	3.4	3.6	3.9	3.6	2.9

Note: 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 2.20: Number of deaths from cervical cancer by age, State and Territory, 1993–1996

Rates	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	14	11	9	6	1	1	0	0	42
35–39	25	16	17	8	6	1	0	2	75
40–44	38	25	18	11	4	4	2	1	103
45–49	54	21	16	16	4	7	1	4	123
50–54	41	18	24	11	4	4	3	3	108
55–59	32	23	18	13	8	7	1	2	104
60–64	37	19	15	12	9	6	2	2	102
65–69	46	40	22	15	7	5	0	2	137
70–74	58	42	25	14	12	7	1	0	159
75–79	43	29	33	7	10	4	2	2	130
80–84	33	27	16	9	12	2	1	1	101
85+	32	27	9	10	9	4	1	0	92
Total	456	301	228	132	86	52	16	19	1,290

Note: 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 2.21: Age-specific and age-standardised mortality rates for cervical cancer by age, by State and Territory, 1996

Rates	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	1.4	1.5	1.7	2.1	0.4	1.3	0.0	0.0	1.4
35-39	2.6	2.3	3.4	2.9	2.6	1.3	0.0	6.8	2.7
40-44	4.3	3.8	3.8	4.2	1.8	5.8	4.0	3.9	3.9
45-49	6.6	3.4	3.7	6.9	2.0	11.1	2.2	19.4	5.1
50-54	6.4	3.8	7.2	6.4	2.6	8.1	9.7	22.1	5.8
55-59	5.9	5.7	6.7	9.1	6.0	16.5	4.5	23.6	6.6
60-64	7.3	5.1	6.3	9.6	7.1	15.3	11.7	34.4	7.1
65-69	9.1	10.8	9.4	12.8	5.3	13.0	0.0	48.9	9.7
70-74	12.7	12.7	12.0	13.8	9.9	19.7	7.4	0.0	12.5
75-79	12.7	12.1	21.2	9.4	11.2	14.8	22.5	112.4	13.9
80-84	13.7	15.2	14.7	16.0	18.4	10.4	17.0	110.9	15.0
85+	17.4	19.0	10.7	22.6	17.6	28.6	24.1	0.0	17.5
All ages									
AS Rate (A)	3.3	2.9	3.4	3.8	2.3	4.9	3.1	11.4	3.2
AS Rate (W)	2.6	2.2	2.6	3.0	1.7	4.0	2.4	8.4	2.5
Ages 20-69									
AS Rate (A)	3.6	3.0	3.6	4.3	2.2	5.7	3.0	11.8	3.5
AS Rate (W)	3.6	2.9	3.6	4.3	2.2	5.8	3.2	12.0	3.5

Notes

1. Deaths in this table are derived from 'place of usual residence', and not 'place of death'.
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.