Appendix A Cervical Cancer

Symptoms, detection and treatment

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

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

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

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

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

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

Cervical cancer and human papillomavirus

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

Appendix B Data sources and limitations

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

Table B1: Cervical cancer screening indicators data sources

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

Population data

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

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

Indigenous mortality data

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

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

Other data limitations

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

Trend data

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

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

Interpretation of trends

Geographic region

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

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

The remoteness areas for the ASGC

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

Source: ABS 2001.

Socioeconomic status

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

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

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

Reporting periods for incidence and mortality indicators

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

Confidence intervals

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

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

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

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

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

Appendix C Methods

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

Crude rates

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

Age-specific rates

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

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

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

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

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

Age-standardised rates (AS rates)

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

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

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

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

Confidence intervals

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

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

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

Appendix D Population data

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

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

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

Sources

(a) ABS 2002.

(b) Ahmad et al. 2002.

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

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

Source: ABS 2002.

Appendix E National Cervical Screening Programs contact list

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

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

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

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

Management of women with low-grade epithelial abnormalities

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

Observational management

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

Active management

Treatment by an accepted method, either ablative or excisional.

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

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

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

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

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

The major changes in the revised guidelines include:

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

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

Glossary

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

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

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

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

Atypia: the condition of being irregular.

Benign: not malignant.

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

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

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

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

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

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

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

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

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

Cryosurgery: the destruction of tissue using extreme cold.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Malignant: abnormal changes consistent with cancer.

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

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

Mortality: see 'Cancer death'.

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

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

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

Post-partum: following childbirth.

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

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

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

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

Stroma: the supporting framework of an organ.

The Institute: the Australian Institute of Health and Welfare.

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

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

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