Part 3—Appendixes, glossary and references

Part 3: Contents

Appendix A: Cervical cancer—symptoms, detection and treatment

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

A cervical cancer may take 10 or more years to develop, but before this the cells may show pre-cancerous changes. These early changes can be detected by a Pap smear (which is described in more detail below), and with early treatment of these abnormalities, cervical cancer can be prevented. The most recent classification of these pre-cancerous lesions has two levels of severity, low-grade epithelial abnormalities (LGEA) and high-grade epithelial abnormalities (HGEA). An earlier classification described various grades of cervical intra-epithelial neoplasia (CIN). Low-grade abnormalities include minor changes in squamous cells and CIN 1, and high-grade abnormalities include CIN 2, CIN 3, squamous carcinoma-in-situ, adenocarcinoma-in-situ and invasive carcinoma (squamous or adenocarcinoma).

The Pap smear is the most common way to detect pre-cancerous changes, which rarely cause any symptoms. The test involves a doctor inserting a speculum into the vagina and gently scraping the surface of the cervix. This process collects cells that are transferred onto a slide or into a special liquid, which is then sent to a pathology laboratory for assessment. Pap smears are offered by general practitioners, gynaecologists, family planning clinics, women's health centres, hospital outpatient clinics and, in some circumstances, specially trained nurses.

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

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

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

For invasive cancer, a cone biopsy or hysterectomy is generally performed. If the cancer cells are detected on the surface of the cervix only, it may be treated by a cone biopsy. If it has

invaded deeper into the cervix, a hysterectomy is generally performed. In advanced cases, a radical hysterectomy is needed to remove the cervix and uterus along with a margin of tissue around the cervix and lymph nodes from the pelvis. Radiotherapy is sometimes used as well as surgery, and for more advanced cases it may be used on its own.

Appendix B: Data sources and limitations

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

Table B1: Cervical cancer screening indicators data sources

Indicator	Description	Data source
1	Participation rate for cervical cancer screening	National Cervical Screening Program
2	Early rescreening	National Cervical Screening Program
3	Low-grade abnormality detection	National Cervical Screening Program
4	High-grade abnormality detection	National Cervical Screening Program
5	Incidence of micro-invasive cervical cancer National Cancer Statistics Clearing House (ICD9 180)	National Cancer Statistics Clearing House
6,8	Incidence of squamous, adenocarcinoma, adeno-squamous and other cervical cancer (ICD9 180)	National Cancer Statistics Clearing House
7,9,10	Mortality from cervical cancer (ICD9 180) For 1999 data (ICD10 C539)	AIHW Mortality Database

Population data

The Australian Bureau of Statistics estimated resident female population has been used to calculate incidence and mortality rates. Participation rates were calculated using the average of the 1998 and 1999 estimated resident female population (see Appendix D for tables). There may be some variation in published participation rates because national rates use estimated resident population data in the denominator whereas local data analysis may use census counts. The denominator population used to calculate cervical screening participation rates has been adjusted by the estimated proportion of women who have had a hysterectomy by age. These data were derived from the 1995 National Health Survey, and are tabled in Appendix D.

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

Indigenous mortality data

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

Other data limitations

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

- Participation rates will be 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 Western Australia and Australian Capital Territory, and the Australian totals, may be overestimated because of double counting of some women in registers. This may be the result of difficulty in identifying state or territory of residence for women in border areas and the inclusion in registers of women resident overseas.
- Participation rates published by state and territory programs may differ from those in this publication because of variation in denominators used.

Appendix C: Methods

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

Crude rates

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

Age-specific rates

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

Age-specific cervical cancer incidence rate in females aged 50–54 in the year 2000

$$= \frac{\text{New cases aged } 50-54 \text{ years (year 2000)}}{2000 \text{ female population aged } 50-54 \text{ years}} \times 100{,}000$$

$$= \frac{58}{623{,}134} \times 100{,}000$$

$$= 9.3 \text{ per } 100{,}000$$

Age-standardised rates (AS rate)

Rates are adjusted for age to facilitate comparisons between populations that have different age structures, e.g. between youthful and ageing communities. There are two different methods commonly used to adjust for age. In this publication we use direct standardisation in which age-specific rates are multiplied against a constant population (the Australian 1991 Population Standard unless otherwise specified). This effectively removes the influence of age structure on the summary rate that is described as the age-standardised rate. The method may be used for the calculation of participation, incidence and mortality rates. The method used for this calculation comprises three steps.

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

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

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

Confidence intervals

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

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

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

Appendix D: Population data

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

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

Sources

(a) ABS (1993).

(b) Doll & Smith (1982).

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

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

Source: ABS 1995 National Health Survey.

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

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

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

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

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

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

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

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

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

Appendix E: National Cervical Screening Programs contact list

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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 NHMRC guidelines for the management of women with screen-detected abnormalities. It is intended to assist medical practitioners to take appropriate action on receipt of Pap smear reports.

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

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

Management of women with low-grade epithelial abnormalities

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

Observational management

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

Active management

Treatment by an accepted method, either ablative or excisional.

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

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

Glossary

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

ABS: Australian Bureau of Statistics.

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

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

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

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

AHMAC: Australian Health Ministers' Advisory Council.

AIHW: Australian Institute of Health and Welfare.

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

AS rate: age-standardised rate

Atypia: the condition of being irregular.

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

Benign: not malignant.

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

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

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

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

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

Cryosurgery: the destruction of tissue using extreme cold.

Dysplasia: abnormal cell growth.

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

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

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

Exfoliate: to break away or remove.

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

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

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

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

HPV: Human papilloma virus.

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

Incidence: see *new cancer case*

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

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

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

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

Malignant: abnormal changes consistent with cancer.

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

Mortality: see *cancer death.*

Neoplasia: the process by which tumours are formed.

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

NOS: not otherwise specified.

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

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

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

Post-partum: following childbirth.

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

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

RRMA: Rural, Remote and Metropolitan Areas Classification.

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

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

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

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

Stroma: the supporting framework of an organ.

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

The Institute: The Australian Institute of Health and Welfare.

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

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

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