



## Inquiry into gynaecological health, 2006

### Key statistics on gynaecological cancers

Gynaecological cancers comprise all cancers of the female genital organs, including cancer of the vulva, vagina and placenta (ICD-10 C58, C51-C52), cervical cancer (ICD-10 C53), cancer of the uterus (ICD-10 C54-C55) and ovarian cancer and other unspecified cancers of the female genital organs (ICD-10 C56-C57).

### New cases of gynaecological cancers

There was an 8% increase overall in new cases over the 10 years from 1991 to 2001 compared with a 12% increase in population. However, during that period the total number of new cases of cervical cancer decreased by 33%. In contrast, new cases of cancer of the uterus increased by 31%, of ovarian cancer and other unspecified cancers of the female genital organs by 23% and cases of cancer of the vulva, vagina and placenta by 18%.

**Table 1: Incidence of gynaecological cancers**

	1991	2001	2006 <sup>(a)</sup>	2011 <sup>(a)</sup>
<b>Gynaecological cancer</b>	<b>Number</b>			
Cervical cancer	1,089	735	582	461
Cancer of uterus	1,170	1,537	1,738	1,967
Ovarian cancer and other unspecified cancers of the female genital organs	1,056	1,295	1,465	1,645
Cancer of vulva, vagina and placenta	271	319	367	414
<b>Total cancers of female genital organs</b>	<b>3,586</b>	<b>3,886</b>	<b>4,152</b>	<b>4,487</b>
	<b>Per cent</b>			
Cervical cancer	30.4	18.9	14.0	10.3
Cancer of uterus	32.6	39.6	41.9	43.8
Ovarian cancer and other unspecified cancers of the female genital organs	29.4	33.3	35.3	36.7
Cancer of vulva, vagina and placenta	7.6	8.2	8.8	9.2
<b>Total cancers of female genital organs</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) AIHW projection.

Source: National Cancer Statistics Clearing House, AIHW.

## Mortality

**Table 2: Deaths from gynaecological cancers**

	1991	2001	2004
<b>Gynaecological cancer</b>	<b>Number</b>		
Cervical cancer	336	262	212
Cancer of uterus	257	293	327
Ovarian cancer	728	846	851
Cancer of vulva, vagina and placenta	72	117	89
<b>Total cancers of female genital organs</b>	<b>1,393</b>	<b>1,518</b>	<b>1,530</b>
	<b>Per cent</b>		
Cervical cancer	24.1	17.3	14.3
Cancer of uterus	18.4	19.3	22.1
Ovarian cancer	52.3	55.7	57.5
Cancer of vulva, vagina and placenta	5.2	7.7	6.0
<b>Total cancers of female genital organs</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

Source: AIHW National Mortality Database.

### Risk of developing a malignant gynaecological cancer

- 1 in 34 by 75 years of age and 1 in 23 by 85 years of age.
- Cancer of the vulva, vagina and placenta: 1 in 569 by 75 years of age and 1 in 320 by 85 years of age.
- Cervical cancer: 1 in 201 by 75 years of age and 1 in 158 by 85 years of age.
- Cancer of the uterus: 1 in 75 by 75 years of age and 1 in 52 by 85 years of age.
- Ovarian cancer and other unspecified cancers of the female genital organs: 1 in 101 by 75 years of age and 1 in 64 by 85 years of age.

### Risk of dying from a malignant gynaecological cancer

- 1 in 103 by 75 years of age and 1 in 55 by 85 years of age.
- Cancer of the vulva, vagina and placenta: 1 in 3,352 by 75 years of age and 1 in 1,274 by 85 years of age.
- Cervical cancer: 1 in 731 by 75 years of age and 1 in 417 by 85 years of age.
- Cancer of the uterus: 1 in 466 by 75 years of age and 1 in 239 by 85 years of age.
- Ovarian cancer and other unspecified cancers of the female genital organs: 1 in 169 by 75 years of age and 1 in 92 by 85 years of age.

### Onset

- In 2002, the average age of first diagnosis of a gynaecological cancer was 62 years and the median age was 62 years.
- The average age of first diagnosis of a cancer of the vulva, vagina and placenta was 67 years and the median age was 71 years.

- The average age of first diagnosis of cervical cancer was 56 years and the median age was 49 years.
- The average age of first diagnosis of a cancer of the uterus was 64 years and the median age was 64 years.
- The average age of first diagnosis of ovarian cancer and other unspecified cancers of the female genital organs was 62 years and the median age was 62 years.

## **International comparison**

### **Cervical cancer**

- Australian incidence of cervical cancer per 100,000 population age-standardised to the world population was 6.9 in 2002 (7.7 for Canada, 10.0 for New Zealand, 8.3 for the UK, 7.7 for USA, 16.2 world-wide).
- Australia's mortality from cervical cancer per 100,000 population age-standardised to the world population was 1.7 in 2002 (2.5 for Canada, 3.5 for New Zealand, 3.1 for the UK, 2.3 for USA, 9.0 world-wide).

### **Cancer of the uterus**

- Australian incidence of cancer of the uterus per 100,000 population age-standardised to the world population was 10.3 in 2003 (15.0 for Canada, 12.0 for New Zealand, 11.0 for the UK, 22.8 for USA, 6.5 world-wide).
- Australia's mortality from cancer of the uterus per 100,000 population age-standardised to the world population was 1.6 in 2002 (1.9 for Canada, 2.5 for New Zealand, 1.8 for the UK, 2.6 for USA, 1.6 world-wide).

### **Ovarian cancer**

- Australian incidence of ovarian cancer per 100,000 population age-standardised to the world population was 8.9 in 2002 (11.6 for Canada, 12.4 for New Zealand, 13.4 for the UK, 10.6 for USA, 6.6 world-wide).
- Australia's mortality from ovarian cancer per 100,000 population age-standardised to the world population was 4.9 in 2002 (5.9 for Canada, 6.4 for New Zealand, 8.0 for the UK, 6.1 for USA, 4.0 world-wide).

**Table 3: Cervical cancer global ranking of incidence and mortality, selected countries, 2002**

<b>Country/region</b>	<b>Age-standardised number per 100,000 population</b>		
	<b>Incidence</b>	<b>Mortality</b>	<b>Mortality to incidence ratio</b>
World	16.2	9.0	0.56
More developed regions	10.3	4.0	0.39
Less developed regions	19.1	11.2	0.59
Australia	6.9	1.7	0.25
Canada	7.7	2.5	0.32
New Zealand	10.0	3.2	0.32
United Kingdom	8.3	3.1	0.37
USA	7.7	2.3	0.30
Central & Eastern Europe	14.5	7.1	0.49
Northern Europe	9.0	3.6	0.40
Southern Europe	10.7	3.3	0.31
Western Europe	10.0	3.4	0.34
South East Asia	26.2	15.0	0.57

Source: GLOBOCAN 2002, IARC, 2005.

**Table 4: Cancer of the uterus global ranking of incidence and mortality, selected countries, 2002**

<b>Country/region</b>	<b>Age-standardised number per 100,000 population</b>		
	<b>Incidence</b>	<b>Mortality</b>	<b>Mortality to incidence ratio</b>
World	6.5	1.6	0.25
More developed regions	13.6	2.5	0.18
Less developed regions	3.0	1.0	0.33
Australia	10.3	1.6	0.16
Canada	15.0	1.9	0.13
New Zealand	12.0	2.5	0.21
United Kingdom	11.0	1.8	0.16
USA	22.8	2.6	0.11
Central & Eastern Europe	11.8	3.6	0.31
Northern Europe	12.2	2.1	0.17
Southern Europe	11.8	2.2	0.19
Western Europe	12.5	2.1	0.17
South East Asia	4.2	1.6	0.38

Source: GLOBOCAN 2002, IARC, 2005.

**Table 5: Ovarian cancer global ranking of incidence and mortality, selected countries, 2002**

Country/region	Age-standardised number per 100,000 population		Mortality to incidence ratio
	Incidence	Mortality	
World	6.6	4.0	0.61
More developed regions	10.2	5.7	0.56
Less developed regions	5.0	2.9	0.58
Australia	8.9	4.9	0.55
Canada	11.6	5.9	0.51
New Zealand	12.4	6.4	0.52
United Kingdom	13.4	8.0	0.60
USA	10.6	6.1	0.58
Central & Eastern Europe	10.2	6.0	0.59
Northern Europe	13.3	7.9	0.59
Southern Europe	9.7	4.5	0.46
Western Europe	11.3	6.3	0.56
South East Asia	7.2	4.1	0.57

Source: GLOBOCAN 2002, IARC, 2005.

## Survival

### Cervical cancer

- Relative survival five years after diagnosis of cancer of the cervix was 74.6% across all ages for women diagnosed in 1992–1997. This decreased as age increased. Five-year relative survival was highest for females aged 20–29 years, at 90.2%. This decreased steadily to 36.0% for females aged 80–89 years.

### Cancer of the uterus

- Relative survival five years after diagnosis of cancer of the uterus was 81.4% across all ages for women diagnosed in 1992–1997. This was quite high in most age groups. For those cancers diagnosed during 1992–1997, relative survival was above 80.0% for females aged under 60–69 years, declining to 63.0% in the 80–89 age group and 39.9% in the 90–99 age group.

### Ovarian cancer

- Relative survival five years after diagnosis of cancer of the ovary was 42.0% across all ages for women diagnosed in 1992–1997. This was highest in the younger age groups and decreased as age increased. Five-year relative survival was highest for females aged 20–29 years, at 88.9%. Five-year relative survival decreased to 18.1% for females aged 80–89 years.

**Table 6: Cancer of the cervix: number of new cases and deaths, and five-year relative survival proportions, by age at diagnosis, Australia, 1992-1997**

Age	New cases	Deaths	5-year relative survival (%)
0-19 years	7	1	*
20-29 years	335	33	90.2
30-39 years	1,325	166	88.1
40-49 years	1,332	249	82.2
50-59 years	876	264	71.1
60-69 years	889	349	65.4
70-79 years	691	405	48.8
80-89 years	305	229	36.0
90-99 years	43	36	39.9
<b>All ages</b>	<b>5,803</b>	<b>1,732</b>	<b>74.6</b>

\* Interpretation difficult due to statistical instability. The instability in this age/sex/site group may be due to the survival model's handling a combination of small number of cases/deaths and or unstable background survival patterns resulting in invalid estimates. These results are therefore not presented here.

Source: National Cancer Statistics Clearing House and National Death Index, AIHW.

**Table 7: Cancer of the uterus: number of new cases and deaths, and five-year relative survival proportions, by age at diagnosis, Australia, 1992-1997**

Age	New cases	Deaths	5-year relative survival (%)
0-19 years	4	1	*
20-29 years	35	2	97.3
30-39 years	181	18	92.2
40-49 years	760	87	89.7
50-59 years	1,747	245	88.3
60-69 years	2,285	486	83.0
70-79 years	1,916	737	72.9
80-89 years	822	500	63.0
90-99 years	94	78	39.9
<b>All ages</b>	<b>7,844</b>	<b>2,154</b>	<b>81.4</b>

\* Interpretation difficult due to statistical instability. The instability in this age/sex/site group may be due to the survival model's handling a combination of small number of cases/deaths and or unstable background survival patterns resulting in invalid estimates. These results are therefore not presented here.

Source: National Cancer Statistics Clearing House and National Death Index, AIHW.

**Table 8: Cancer of the ovary: number of new cases and deaths, and five-year relative survival proportions, by age at diagnosis, Australia, 1992–1997**

<b>Age</b>	<b>New cases</b>	<b>Deaths</b>	<b>5-year relative survival (%)</b>
0–19 years	77	11	85.8
20–29 years	189	21	88.9
30–39 years	345	89	73.9
40–49 years	883	351	59.0
50–59 years	1,344	708	46.8
60–69 years	1,514	999	33.2
70–79 years	1,516	1,154	26.0
80–89 years	665	586	18.1
90–99 years	88	87	0.0
<b>All ages</b>	<b>6,621</b>	<b>4,006</b>	<b>42.0</b>

Source: National Cancer Statistics Clearing House and National Death Index, AIHW.

### **Cervical cancer screening**

- The national cervical cancer screening program targeting women aged 20–69 years identifies pre-cancerous abnormalities which can usually be successfully treated, preventing the onset of cancer. The program has been very successful in reducing cervical cancer incidence and mortality.
- The age-standardised participation rate for women aged 20–69 years was 60.7% in 2002–2003.
- There was a decline in participation among women under 55 years of age and an improvement in participation for women aged 55–69 years in 2002–2003 when compared with 1996–1997. For example, participation in screening by women aged 25–29 fell from 65.0% to 58.8%, but increased from 60.7% to 66.1% in women aged 55–59.

**Table 9: National Cervical Screening Program: age-standardised participation rates by age, 1996–1997 to 2002–2003**

Age group	1996–1997	1999–2000	2002–2003
20–24	49.9	51.4	48.7
25–29	65.0	62.2	58.8
30–34	67.6	65.8	63.3
35–39	69.2	65.5	63.8
40–44	68.0	64.3	64.0
45–49	67.3	64.7	65.5
50–54	71.5	63.1	63.0
55–59	60.7	64.4	66.1
60–64	51.7	54.7	56.3
65–69	40.1	45.5	48.8
70–74	25.0	19.9	18.2
75–79	5.0	7.6	7.1
80+	2.7	2.5	2.2
<b>All ages</b>			
Crude	55.8	55.8	54.6
ASR (A)	54.6	54.9	54.2
95% CI	54.6–54.7	54.9–55.0	54.1–54.3
<b>Ages 20–69</b>			
Crude	61.1	61.5	60.5
ASR (A)	60.8	61.3	60.6
95% CI	60.8–60.9	61.2–61.3	60.5–60.6

*Notes*

1. For a more comprehensive understanding of the data represented above please refer to AIHW cervical screening publications. As not all jurisdictions were able to supply data for some years and there were differences in the way they reported their data for a few reporting periods.
2. Rates are age-standardised to the 2001 Australian total population.
3. In 2001 the ABS carried out a full population Census and a national health survey. These led to the revision of the ABS estimated resident population (ERP) data, the introduction of a new Australian standard population for use in age standardisation and the production of new estimates of hysterectomy status among Australian women. The denominators for participation rates presented in this report have been calculated using the 2001 ABS National Health Survey hysterectomy fractions and the revised ERP values, and age-adjusted using the 2001 Australian standard population. The denominators for the equivalent rates in previous reports were calculated using the 1995 ABS National Health Survey hysterectomy fractions and unrevised ERP values, and age-adjusted using the 1991 Australian standard population. The combined effect of these changes is that participation rates presented in this report are on average between 1 and 2 percentage points lower than equivalent rates in previous reports.
4. Separate rates cannot be calculated for women in the 80–84 and 85 and over age groups because hysterectomy fractions are not available for these age groups; however a hysterectomy fraction is available for women aged 80 and over.

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

## Hospital inpatients

- There were 9,551 admissions to Australian hospitals in 2003–04 of women with a principal diagnosis of a gynaecological cancer. Of those admissions there were 864 for cancer of the vulva, vagina and placenta, 1,782 for cervical cancer, 3,435 for cancer of the uterus and 3,470 for ovarian cancer and other unspecified cancers of the female genital organs.
- Between 1999–00 and 2003–04 the number of hospital admissions for gynaecological cancer patients increased by 2.5%.



## Expenditure on cancer

- In 2000–01 expenditure on cervical cancer was \$13 million, expenditure on cancer of the uterus \$18 million and expenditure on ovarian cancer was \$25 million.
- In 2000–01 the estimated lifetime treatment costs of a person with cervical cancer is \$17,240, the estimated lifetime treatments costs of a person with cancer of the uterus is \$11,867 and the estimated lifetime treatment costs of a person with ovarian cancer is \$19,677.

**Table 10: Estimated lifetime treatment cost of each cancer, 2000–01**

	Lifetime cost of cancer (\$) <sup>(a)</sup>
Leukaemia	51,196
Brain	40,732
Multiple myeloma	37,068
Larynx	34,413
Oesophagus	30,808
Bone and connective tissue	29,593
Non-Hodgkin's lymphoma	27,620
Mouth and oropharynx cancer	22,996
Bladder	22,915
Stomach	21,573
Ovarian cancer	19,677
Hodgkin's disease	18,998
Colorectal	18,246
Pancreatic	18,204
Gall bladder	18,141
Liver	18,046
Prostate	17,942
Cervical cancer	17,240
Lung	16,476
Kidney	15,892
Breast cancer	11,897
Uterine cancer	11,867
Thyroid	8,792
Testicular	5,805
Melanoma	3,341

(a) Total average cost of treatment across an entire lifetime. Total treatment cost in 2000–01 divided by new cases in 2001 gives an approximate estimate of lifetime costs per incident case where treatment costs, incidence and mortality rates have been steady over time.

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