

Indicator 7: Incidence

7a. Incidence of breast cancer

The incidence of breast cancer is calculated per 100,000 women in a 12-month period by five-year age groups for females aged 0–4 years and over and for the target age group 50–69 years.

7b. Incidence of ductal carcinoma in situ

The incidence of DCIS is calculated per 100,000 women in a five-year period by ten-year age groups for females aged 0–19 years and over and for the target age group 50–69 years.

The incidence indicator

Registration of cancer cases is required by law in each of the states and territories. The data are collected by state and territory cancer registries and compiled in a national database, the National Cancer Statistics Clearing House, which is held by the Australian Institute of Health and Welfare (AIHW). The data include clinical and demographic information about people with newly diagnosed cancer. The incidence indicator measures the number of new cases of breast cancer in the community each year. It does not distinguish between screen-detected cancers and cancers detected by other methods.

Incidence data provide information about the underlying level of breast cancer in the Australian community. This knowledge can be used to assist in developing policies on breast cancer screening. For example, examining the trends in breast cancer incidence in different age groups helps to identify the ages at which women are most at risk of developing breast cancer. Incidence data can also be used to set performance standards for breast cancer detection.

This chapter reports the rates of breast cancer to 2003, the latest national data available. This chapter also reports on breast cancer incidence by state and territory, and by geographical region.

Similarly, data on the incidence of DCIS provide information about the underlying level of the condition among Australian women. Data are required to build more knowledge about DCIS, which was rarely detected before screening was introduced. Since the introduction of screening mammography, the detection of DCIS has increased (NBCC et al. 2000). More information is given on DCIS in the chapter headed 'Indicator 4'.

The incidence of breast cancer for women in the target age group 50–69 increased from 288.4 new cases in 1998 to 303.7 new cases per 100,000 women in 2002 and fell to 285.1 new cases per 100,000 women in 2003. These changes were not statistically significant.

The incidence of breast cancer in the total female population decreased from 114.5 new cases per 100,000 women in 1998 to 111.8 new cases per 100,000 women in 2003. These changes were not statistically significant.

Incidence of breast cancer in women aged 50-69 years and all women, 1998, 2002 and 2003

	1998	2002	2003
Rate for women aged 50–69 years	288.4	303.7	285.1
<i>95% CI</i>	280.4–296.5	296.0–311.5	277.8–292.6
Rate for all women	114.5	116.8	111.8
<i>95% CI</i>	112.3–116.7	114.7–118.9	109.8–113.8

Incidence of breast cancer by regions is shown in the table below. In 1994–1998 and 1999–2003 the age-standardised breast cancer incidence rate was significantly lower in outer regional, remote and very remote areas than the national rate.

Incidence of breast cancer in women aged 50-69 years, 1994–1998 and 1999–2003 by region

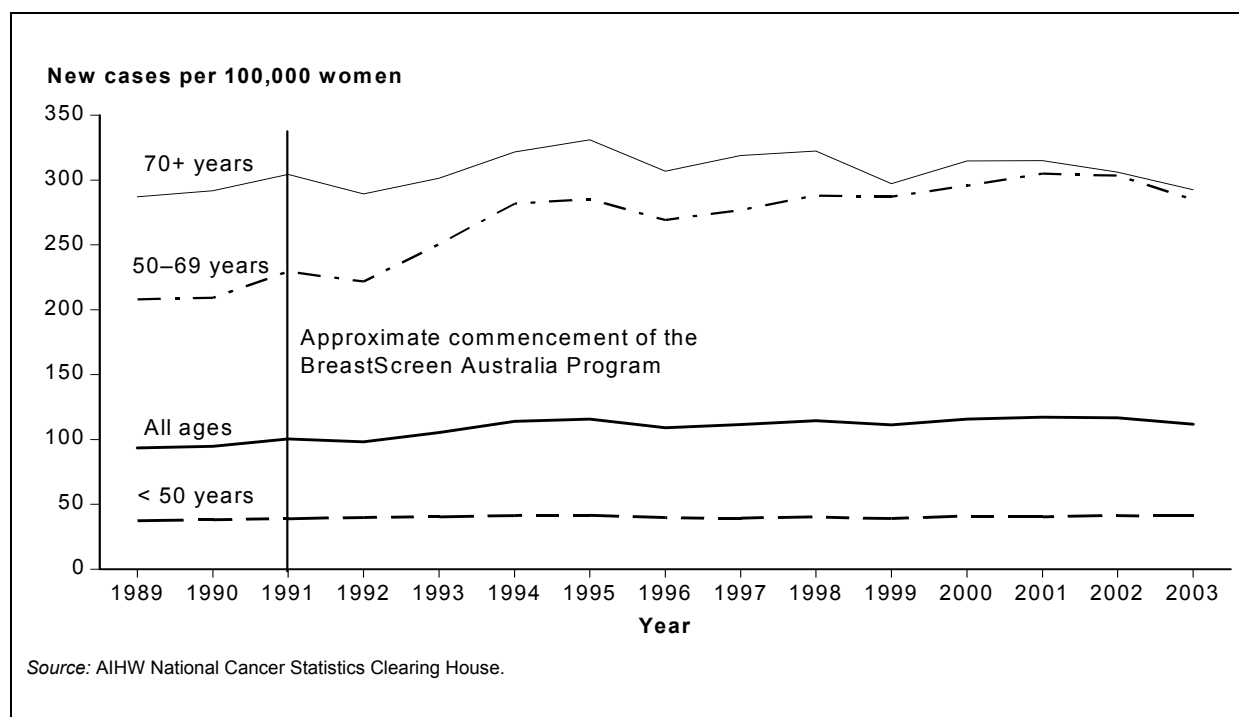
	Australia	Major cities	Inner regional	Outer regional	Remote	Very remote
Rate 1999–2003	295.4	300.7	293.8	274.6	255.8	228.6
<i>95% CI</i>	291.9–298.9	296.4–305.1	286.6–301.2	264.4–285.0	229.1–284.7	189.6–271.5
Rate 1994–1998	280.5	286.4	279.9	256.3	233.0	176.4
<i>95% CI</i>	276.9–284.2	281.9–291.0	272.1–287.9	245.8–267.1	205.7–262.6	139.9–219.2

The following table shows the incidence of DCIS. Incidence of DCIS increased from 31.2 cases per 100,000 women in the target age group in 1994–1998 to 42.6 cases per 100,000 women in 1999–2003. Similarly, the DCIS incidence rate for all women increased from 10.5 cases per 100,000 women in 1994–1998 to 13.5 cases per 100,000 women in 1999–2003.

Incidence of ductal carcinoma in situ in women aged 50-69 years and all women, 1994–1998 and 1999–2003

	1994–1998	1999–2003
Rate for women aged 50–69 years	31.2	42.6
<i>95% CI</i>	30.0–32.4	41.3–44.0
Rate for all women	10.5	13.5
<i>95% CI</i>	10.2–10.8	13.2–13.9

Incidence of breast cancer in women, Australia, 1989–2003



	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
All ages	93.5	94.7	100.4	98.2	105.3	113.9	115.6	109.1	111.4	114.5	111.2	115.6	117.2	116.8	111.8
<50	37.4	38.1	39.0	39.9	40.4	41.3	41.6	40.0	39.5	40.3	39.1	40.8	40.4	41.4	41.2
50-69	208.0	209.3	229.5	222.0	250.8	282.0	285.3	269.2	276.9	288.4	287.2	295.6	305.1	303.7	285.1
70+	287.1	291.7	304.4	289.4	301.4	321.6	331.0	306.8	318.9	322.4	297.3	314.7	315.1	306.2	292.4

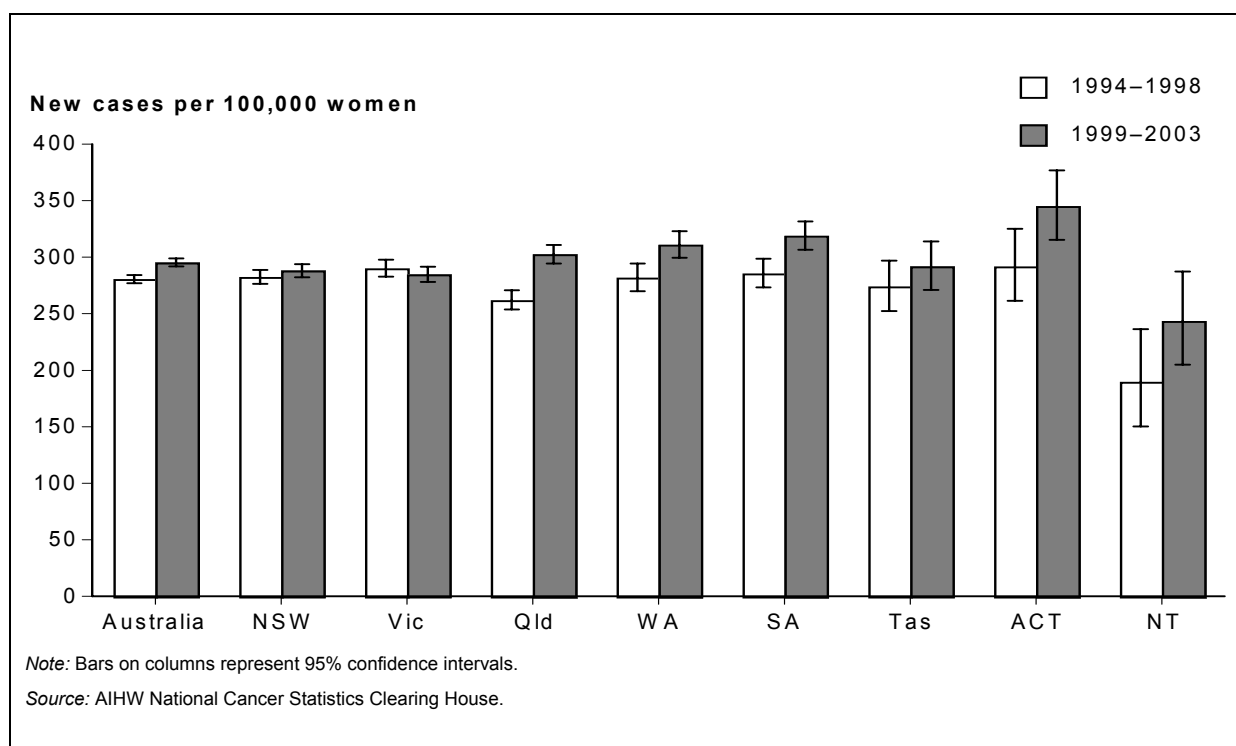
Note: Rates are the number of breast cancers detected per 100,000 women and age-standardised to the Australian population at 30 June 2001.

- With some fluctuations, there was a significant increase over the period 1989 to 2003 in the age-standardised breast cancer incidence rates for women in the target age group (50–69 years). Incidence increased in this group from 208.0 new cancers per 100,000 women in 1989 to 285.1 per 100,000 women in 2003, although there was a peak of 305.1 new breast cancers per 100,000 women in 2001.
- From 1994 onwards, incidence has been relatively constant among women aged less than 50 years, and aged 70 years and over.

For more information, see: Tables 43 to 48 beginning on page 114. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.

States and territories

Incidence of breast cancer in women aged 50–69 years, 1994–1998 and 1999–2003



	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Rate									
1999–2003	295.4#	288.1	284.8*	302.6#	311.1**	318.9**	291.9	345.1*	243.7*
95% CI	291.9–298.9	282.2–294.0	278.1–291.7	294.5–310.9	299.6–322.9	306.6–331.6	271.0–313.9	315.4–376.9	205.0–287.5
Rate									
1994–1998	280.5	282.6	290.3	262.1*	281.9	274.1	273.3	292.0	189.8*
95% CI	276.8–284.1	276.4–288.8	283.0–297.7	253.8–270.7	269.9–294.3	252.5–297.1	251.7–296.2	261.5–325.2	150.2–236.5

* Significantly different from the Australian rate.

Significantly different from the 1994–1998 rate.

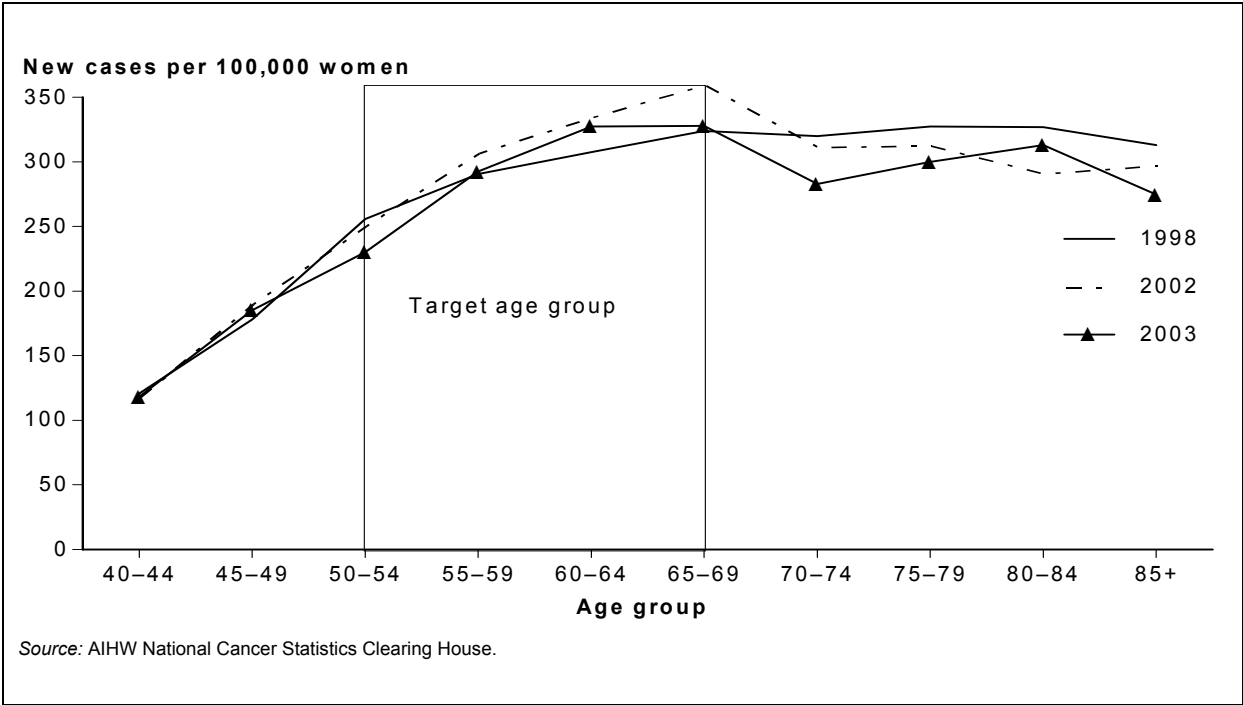
Note: Rates are the number of breast cancers detected per 100,000 women and age-standardised to the Australian population at 30 June 2001.

- The national age-standardised incidence rate for 1999–2003 was 295.4 new cancers per 100,000 women. Across the states and territories, incidence rates ranged from 243.7 new cancers per 100,000 women in the Northern Territory to 345.1 new cases per 100,000 women in the Australian Capital Territory. The rates for Western Australia, South Australia and the Australian Capital Territory (311.1, 318.9 and 345.1 per 100,000 women respectively) were much higher than the national rate of 295.2 cases per 100,000 women.
- In 1994–1998 the age-standardised breast cancer incidence rates in the Northern Territory and Queensland (189.8 and 262.1 new cases per 100,000 women respectively) were lower than the national rate (280.5 per 100,000 women).

- Between 1994–1998 and 1999–2003 there was a significant increase in age-standardised incidence rates in Queensland, Western Australia and South Australia.

For more information, see: Tables 43 to 48 beginning on page 114. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.

Age-specific incidence rates for breast cancer in women, Australia, 1998, 2002 and 2003



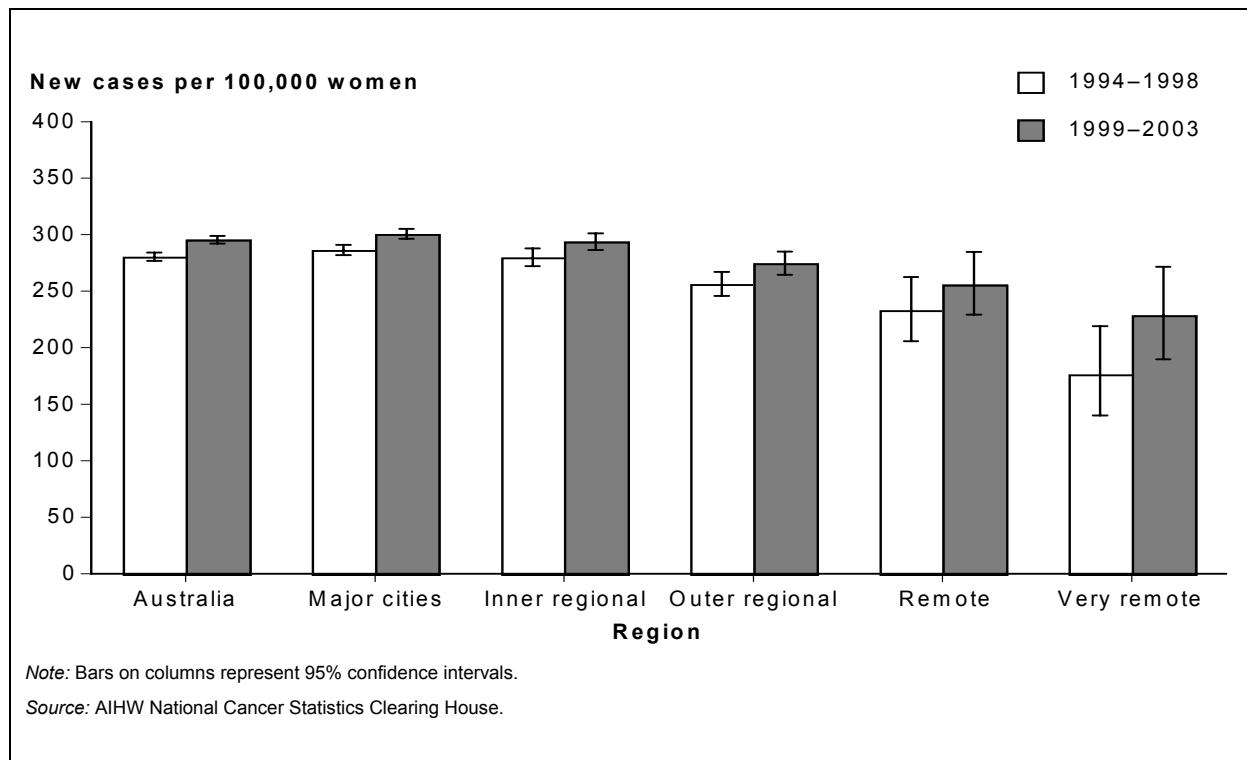
Age	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+
2003 rate	118.3	185.1	230.1	292.6	327.5	327.8	283.0	299.9	313.2	274.8
2002 rate	118.8	190.5	251.1	307.5	335.1	360.2	311.8	313.2	291.3	297.5
1998 rate	120.7	177.9	255.7	290.7	307.7	324.0	319.9	327.4	326.8	313.2

Note: Rates are the number of breast cancers detected per 100,000 women.

- In 1998 the highest breast cancer incidence rate was in the 75-79 age group (327.4 new cases per 100,000 women). In 2002 the incidence peak shifted to the 65-69 age group with 360.2 cases per 100,000 women. Similarly, in 2003 the age group with the highest breast cancer incidence rate of 327.0 new cases per 100,000 women was 65-69 years old.

For more information, see: Tables 43 to 48 beginning on page 114. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.

Incidence of breast cancer in women aged 50–69 years, by region, 1994–1998 and 1999–2003



	Australia	Major cities	Inner regional	Outer regional	Remote	Very remote
1999–2003 rate	295.4 [#]	300.7 [#]	293.8	274.6*	255.8*	228.6*
95% CI	291.9–298.9	296.4–305.1	286.6–301.2	264.4–285.0	229.1–284.7	189.6–271.5
1994–1998 rate	280.5	286.4	279.9	256.3*	233.0*	176.4*
95% CI	276.9–284.2	281.9–291.0	272.1–287.9	245.8–267.1	205.7–262.6	139.9–219.2

* Significantly different from the Australian rate.

[#] Significantly different from the 1994–1998 rate.

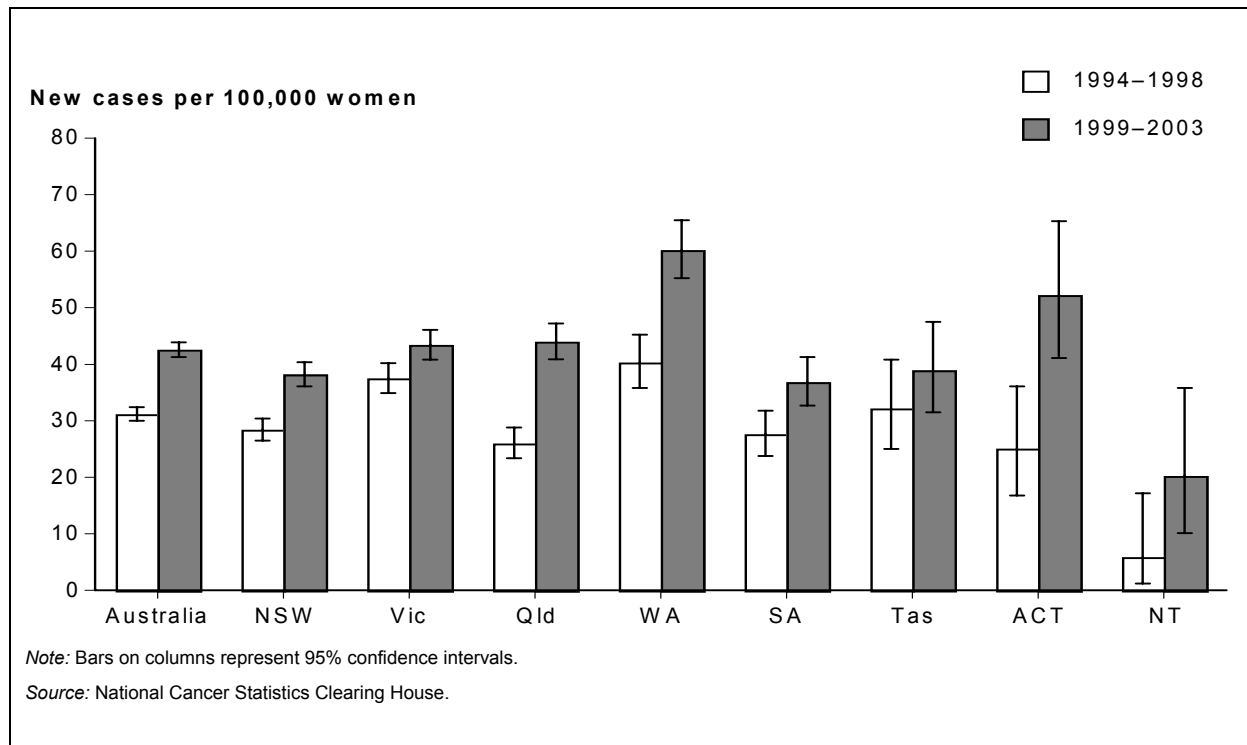
Note: Rates are the number of breast cancers detected per 100,000 women and age-standardised to the Australian population at 30 June 2001.

- In 1994–1998 and 1999–2003 the age-standardised breast cancer incidence rate was significantly lower in outer regional, remote and very remote areas than the national rate.
- Between 1994–1998 and 1999–2003 there was a significant increase in the age-standardised breast cancer incidence rate in major cities.

For more information, see: Tables 43 to 48 beginning on page 114. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.

States and territories

Incidence of ductal carcinoma in situ in women aged 50–69 years, 1994–1998 and 1999–2003



	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Rate 1999–2003	42.6	38.2*	43.4	44.0	60.2*	36.8	38.9	52.2	20.2*
<i>95% CI</i>	41.3–44.0	36.1–40.4	40.8–46.1	41.0–47.2	55.2–65.5	32.7–41.3	31.5–47.5	41.1–65.3	10.1–35.9
Rate 1994–1998	31.2	28.4	37.5*	26.0*	40.3*	27.6	32.2	25.1	5.9*
<i>95% CI</i>	30.0–32.4	26.4–30.4	34.9–40.2	23.5–28.8	35.8–45.1	23.8–31.8	25.0–40.8	16.8–36.1	1.2–17.1

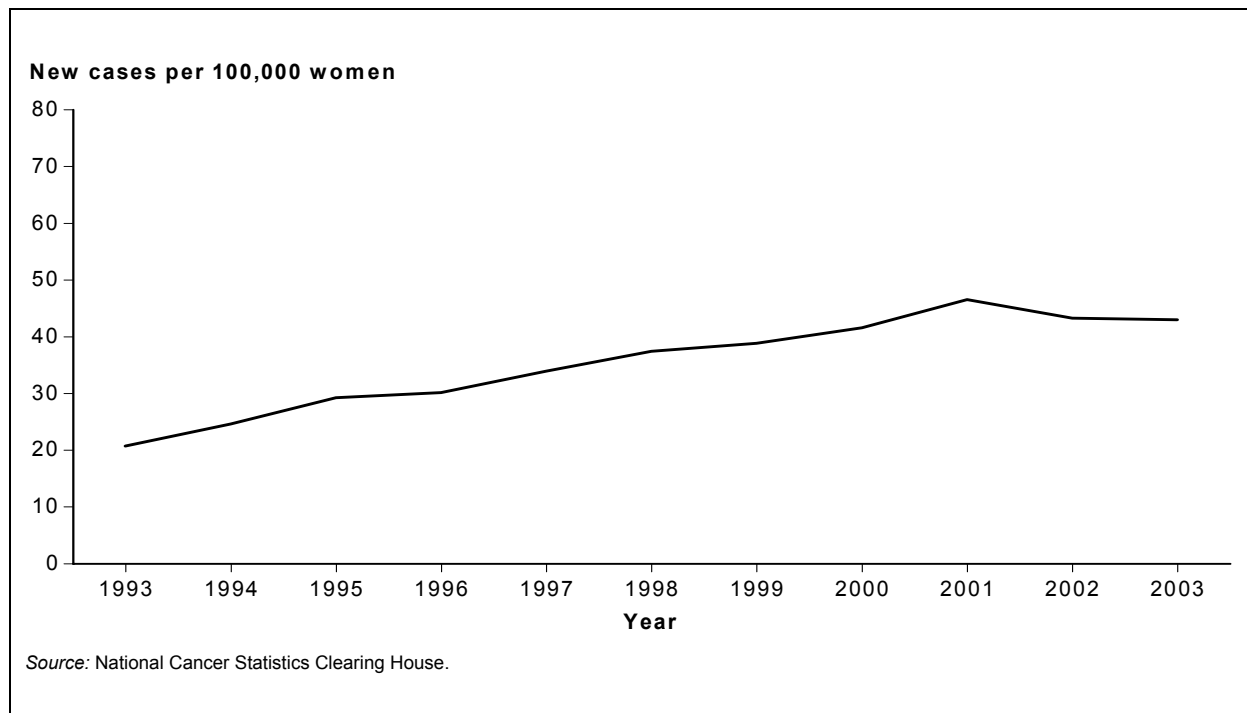
* Significantly different from the Australian rate.

Note: Rates are the number of DCIS detected per 100,000 women and age-standardised to the Australian population at 30 June 2001.

- For the period 1999 to 2003, the national age-standardised incidence rate of DCIS for women aged 50–69 years was 42.6 per 100,000 women, a large increase on the rate for 1994–1998 of 31.2 per 100,000 women.

For more information, see: Tables 49 to 52 beginning on page 120. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.

Incidence of ductal carcinoma in situ in women aged 50–69 years, 1993–2003



	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Rate	20.7*	24.6*	29.2*	30.1*	33.9*	37.4	38.8	41.5	46.5	43.2	42.9
95% CI	18.4– 23.1	22.2– 27.3	26.6– 32.0	27.5– 32.9	31.2– 36.8	34.6– 40.4	35.9– 41.8	38.6– 44.6	43.5– 49.7	40.3– 46.2	40.1– 45.8

* Significantly different from the 2003 rate.

Note: Rates are the number of DCIS detected per 100,000 women and age-standardised to the Australian population at 30 June 2001.

- Age-standardised DCIS incidence increased steadily from 20.7 in 1993 to 46.5 per 100,000 women in 2001, before falling to 42.9 per 100,000 women in 2003.
- The increase in DCIS incidence rate is likely to be, at least partly, the result of the early detection of cancers in women who may otherwise have gone undiagnosed for some years.

For more information, see: Tables 49 to 52 beginning on page 120. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.