

Indicator 1 Participation

Participation rate

The participation rate is the percentage of women in the population screened through the BreastScreen Australia Program in a 24-month period, by 5-year age groups for women aged 40 years or over, and for the target age group (50–69 years).

The participation indicator

The participation rate is a population-based indicator that measures the proportion of the eligible population attending the screening program within the recommended screening interval. All women who are Australian citizens and those with permanent residency status are eligible for breast screening. A high proportion of attendance for screening by women in the target age group (50–69 years) is needed to maximise reductions in mortality from breast cancer (DHS 1994). The indicator also provides information to assist in assessing the effectiveness of the program's communication and education strategies, and can be used to assess whether the target age group (50–69 years) is well represented in the screening population.

The focus of this report is on women who have had a mammogram in the BreastScreen Australia Program. However, other mammography for screening and diagnosis (that is, investigating breast cancer symptoms) is conducted outside the program. Therefore, the results presented in this report are an underestimation of all screening on a national basis. This chapter reports on the participation rates for the BreastScreen Australia Program for 2004–2005 and presents trends from 1996 onwards.

One of the objectives of the BreastScreen Australia Program is 'To achieve, after five years, a 70 per cent participation in the National Program by women in the target group (50–69)...' (BSANAC & DHAC 2000). The age-standardised national participation rate for women in the target group in 2004–2005 was 56.2%.

Table 1.1: Age-standardised participation rates for women in the target age group (50–69 years), 1996–1997 to 2004–2005

Year of screening	Objective ^(a)	Rate (per cent)	95% CI
1996–1997	70.0	51.4	51.3–51.6
1997–1998		54.6	54.5–54.7
1998–1999		55.7	55.5–55.8
1999–2000		55.9	55.8–56.0
2000–2001		56.9	56.8–57.0
2001–2002		57.1	57.0–57.2
2002–2003		56.2	56.1–56.3
2003–2004		55.7	55.6–55.8
2004–2005		56.2	56.1–56.3

(a) Performance objective of the BreastScreen Australia Program as set out in the National Accreditation Standards (NQMC 2004).

Note: Rates are the number of women screened as a percentage of the eligible female population calculated as the average of the Australian Bureau of Statistics estimated resident population and age-standardised to the Australian population at 30 June 2001.

Source: AIHW analysis of BreastScreen Australia data.

Another BreastScreen Australia participation objective is ‘To achieve patterns of participation in the Program which are representative of the socioeconomic, ethnic and cultural profiles of the target population’ (BSANAC & DHAC 2000). This chapter reports national participation rates by region, socioeconomic status, Indigenous status and main language spoken at home. The following are key points on each of these variables.

Regional areas

- In 2004–2005, participation of women aged 50–69 years was significantly higher in outer regional (59.5%), inner regional (58.0%), and remote (57.8%) areas than in major cities (54.7%) and in very remote areas (45.9%).
- The lower participation rates in major cities may reflect greater access to, and use of, private radiology services. Participation in rural areas is encouraged through fixed mammography units in larger towns and the use of mobile mammography units in other areas. Lower participation in very remote areas may be due to unavailability of BreastScreen Australia services in some remote areas of the Northern Territory and to lower participation by Aboriginal and Torres Strait Islander women in very remote areas.

Socioeconomic status

- In 2004–2005, women aged 50–69 years living in the fifth quintile, which corresponds to the lowest level of socioeconomic status, participation rate in BreastScreen Australia (54.6%) was significantly below the national average of 56.2% and significantly lower than the rate (55.2%) achieved in 1999–2000. This contrasted with increasing participation since 1999–2000 of women living in the first and second quintiles, which corresponds to the highest socioeconomic status.
- Women aged 50–69 years in 2004–2005 living in the second most socioeconomically disadvantaged quintile also had participation significantly below that achieved by women living in the three most socioeconomically advantaged quintiles.

Aboriginal and Torres Strait Islander women

- In 2004–2005, the age-standardised participation rate for Aboriginal and Torres Strait Islander women aged 50–69 years (35.8%) was much lower than the non-Indigenous rate (55.9%). However, the rate for Aboriginal and Torres Strait Islander women increased significantly from 31.8% in 1999–2000 to 35.8% in 2004–2005.

Main language spoken at home

- Similarly, the age-standardised participation rate in 2004–2005 among women aged 50–69 years whose main language spoken at home was not English was significantly lower (43.1%) than the rate for women whose main language spoken at home was English (58.6%).

These results should, however, be treated with caution because of data issues. These include that women who did not state whether they were Indigenous or did not state the main language spoken at home may have been included in non-Indigenous and English-speaking totals in some states and territories.

Participation by states and territories

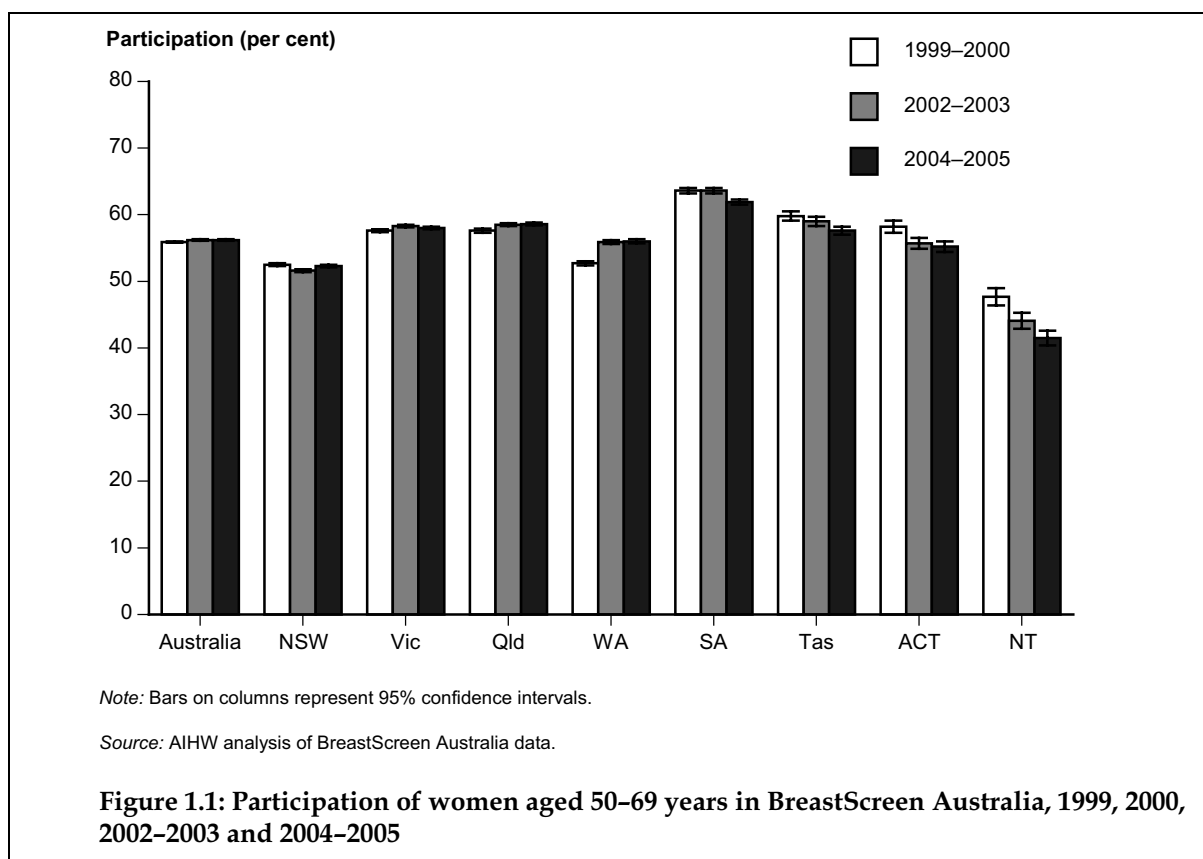


Table 1.2: Participation of women aged 50–69 years in BreastScreen Australia, 1999–2000, 2002–2003 and 2004–2005

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
	(per cent)								
2004–2005	56.2	52.3*	58.0	58.6#	56.0#	61.9*#	57.6*#	55.2#	41.5*#
95% CI	56.1–56.3	52.2–52.5	57.8–58.2	58.4–58.9	55.7–56.3	61.5–62.3	56.9–58.2	54.4–56.0	40.4–42.5
2002–2003	56.2	51.6	58.3	58.5	55.9	63.6	59.0	55.7	44.1
95% CI	56.1–56.3	51.4–51.8	58.1–58.5	58.2–58.7	55.5–56.2	63.2–64.0	58.3–59.6	54.9–56.5	42.9–45.2
1999–2000	55.9	52.5	57.6	57.6	52.7	63.6	59.8	58.2	47.7
95% CI	55.8–56.0	52.3–52.7	57.4–57.9	57.4–57.9	52.4–53.1	63.2–64.0	59.1–60.5	57.3–59.1	46.3–49.0

* Significantly different from the 2002–2003 rate.

Significantly different from the 1999–2000 rate.

Notes

1. Rates are the number of women screened as a percentage of the eligible female population calculated as the average of the Australian Bureau of Statistics estimated resident population and age-standardised to the Australian population at 30 June 2001.
2. Periods cover 1 January 1999 to 31 December 2000, 1 January 2002 to 31 December 2003 and 1 January 2004 to 31 December 2005.

- Of the 1,614,871 women screened during 2004–2005 as part of the BreastScreen Australia Program, 1,188,720 (74%) were in the target age group (50–69 years).
- In 2004–2005, 56.2% of women in the target age group (50–69 years) attended a BreastScreen Australia service.

- In 2004–2005, across states and territories, the age-standardised participation rate for women in the target age group (50–69 years) ranged from 41.5% in the Northern Territory to 61.9% in South Australia. It should be noted that BreastScreen Australia services are not provided in some remote areas of the Northern Territory and this may lower the participation rate for this jurisdiction.
- Queensland and Western Australia were jurisdictions with a statistically significant increase in participation for women in the target age group (50–69 years) between 1999–2000 and 2004–2005. In New South Wales, South Australia, Tasmania, Australian Capital Territory and the Northern Territory, the participation rate declined between 1999–2000 and 2004–2005 and except for New South Wales the decrease was statistically significant.

For more information, see tables 1 and 2 in Appendix A. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.

Participation over the years

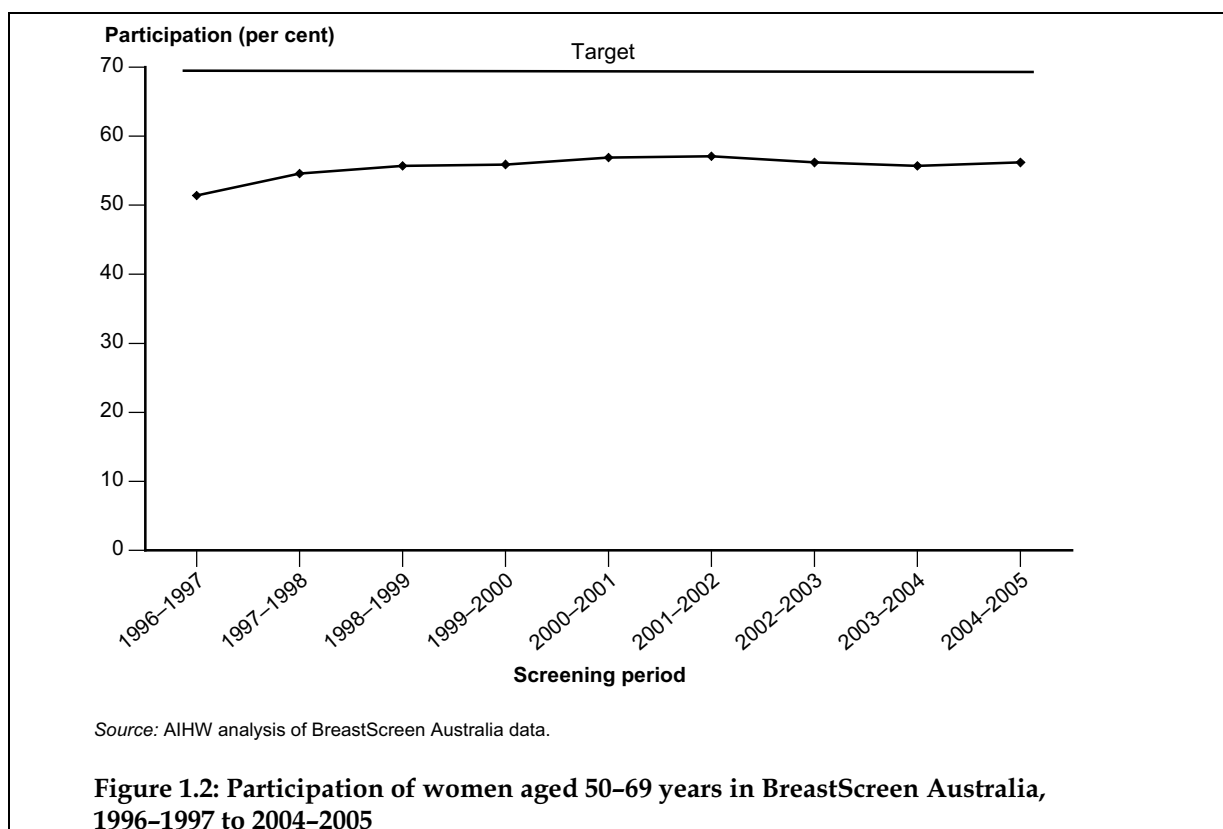


Table 1.3: Participation of women aged 50–69 years in BreastScreen Australia, 1996–1997 to 2004–2005

	1996–1997	1997–1998	1998–1999	1999–2000	2000–2001	2001–2002	2002–2003	2003–2004	2004–2005
	(per cent)								
Rate	51.4	54.6	55.7	55.9	56.9	57.1	56.2	55.7	56.2*
95% CI	51.3–51.6	54.5–54.7	55.5–55.8	55.8–56.0	56.8–57.0	57.0–57.2	56.1–56.3	55.6–55.8	56.1–56.3

* Significantly different from the 1996–1997, 1997–1998, 1998–1999, 2000–2001, 2001–2002 and 2003–2004 rates.

Notes

1. Rates are the number of women screened as a percentage of the eligible female population calculated as the average of the Australian Bureau of Statistics estimated resident population and age-standardised to the Australian population at 30 June 2001.
2. Periods cover 1 January 1996 to 31 December 1997, 1 January 1997 to 31 December 1998, 1 January 1998 to 31 December 1999, 1 January 1999 to 31 December 2000, 1 January 2000 to 31 December 2001, 1 January 2001 to 31 December 2002, 1 January 2002 to 31 December 2003, 1 January 2003 to 31 December 2004 and 1 January 2004 to 31 December 2005.

- Participation in BreastScreen Australia among women in the target age group (50–69 years) increased from 51.4% in 1996–1997 to 57.1% in 2001–2002, falling to 56.2% in 2004–2005. The fall in 2004–2005 was statistically significant.

For more information, see tables 1 and 2 in Appendix A. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.

Participation by region

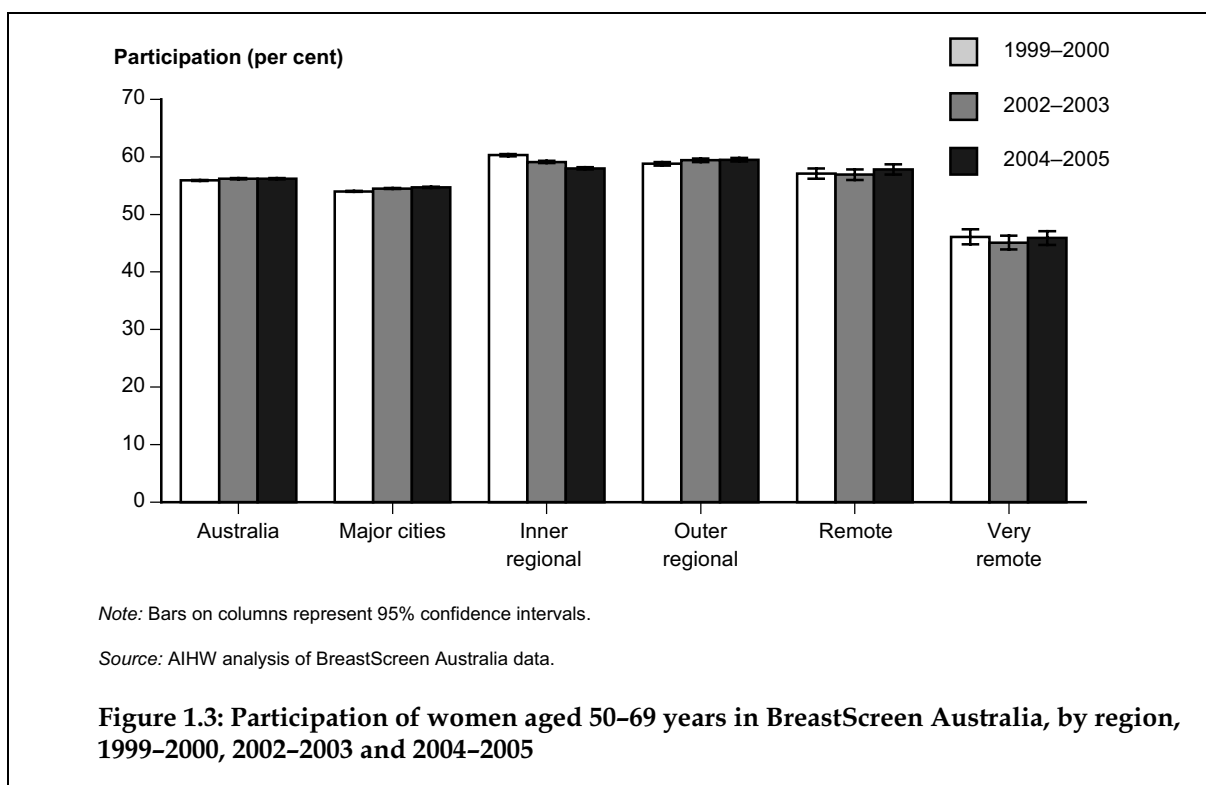


Table 1.4: Participation of women aged 50–69 years in BreastScreen Australia, by region, 1999–2000, 2002–2003 and 2004–2005

	Australia	Major cities	Inner regional	Outer regional	Remote	Very remote
	(per cent)					
2004–2005	56.2 [#]	54.7 [#]	58.0 ^{*#}	59.5 [#]	57.8	45.9
95% CI	56.1–56.3	54.6–54.9	57.8–58.2	59.2–59.8	56.9–58.7	44.7–47.1
2002–2003	56.2	54.5	59.1	59.4	56.9	45.1
95% CI	56.1–56.3	54.4–54.7	58.8–59.3	59.1–59.8	56.1–57.8	43.9–46.3
1999–2000	55.9	54.0	60.3	58.8	57.1	46.1
95% CI	55.8–56.0	53.9–54.2	60.1–60.5	58.5–59.1	56.1–58.0	44.8–47.5

* Significantly different from the 2002–2003 rate.

[#] Significantly different from the 1999–2000 rate.

Notes

1. Rates are the number of women screened as a percentage of the eligible female population calculated as the average of the Australian Bureau of Statistics estimated resident population and age-standardised to the Australian population at 30 June 2001.
2. Periods cover 1 January 1999 to 31 December 2000, 1 January 2002 to 31 December 2003 and 1 January 2004 to 31 December 2005.
3. The Australian Standard Geographical Classification was used to create the above categories (ABS 2001).

- Participation in BreastScreen Australia varied significantly among regions in 1999–2000, 2002–2003 and 2004–2005.
- In 2004–2005, the age-standardised participation rates were lower than the national rate (56.2%) for women in the target age group (50–69 years) in major cities (54.7%) and very

remote areas (45.9%). Higher rates than the national rate were in the inner regional, outer regional and remote areas (58.0%, 59.5% and 57.8%, respectively).

For more information, see Table 3 in Appendix A. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.

Participation by socioeconomic status

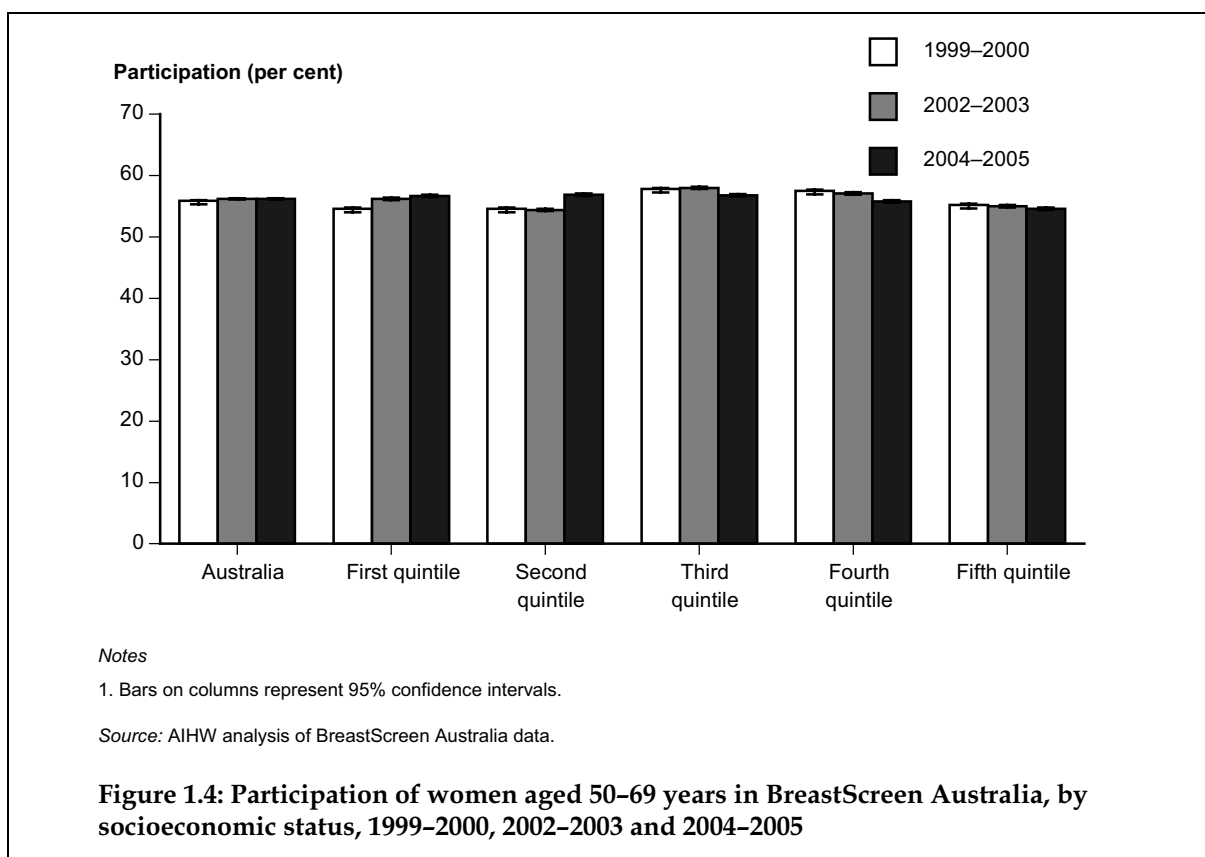


Table 1.5: Participation of women aged 50–69 years in BreastScreen Australia, by socioeconomic status, 1999–2000, 2002–2003 and 2004–2005

	Australia	First quintile	Second quintile	Third quintile	Fourth quintile	Fifth quintile
	(per cent)					
2004–2005	56.2 [#]	56.7 [#]	56.9 ^{*#}	56.8 ^{*#}	55.8 ^{*#}	54.6 [#]
95% CI	56.1–56.3	56.5–56.9	56.6–57.1	56.5–57.0	55.6–56.1	54.4–54.8
2002–2003	56.2	56.2	54.4	58.0	57.1	55.0
95% CI	56.1–56.3	56.0–56.5	54.2–54.6	57.7–58.2	56.8–57.3	54.8–55.2
1999–2000	55.9	54.6	54.6	57.8	57.5	55.2
95% CI	55.8–56.0	54.3–54.8	54.3–54.8	57.5–58.0	57.2–57.7	55.0–55.4

* Significantly different from the 2002–2003 rate.

Significantly different from the 1999–2000 rate.

Notes

1. Rates are the number of women screened as a percentage of the eligible female population calculated as the average of the Australian Bureau of Statistics estimated resident population and age-standardised to the Australian population at 30 June 2001.
2. Periods cover 1 January 1999 to 31 December 2000, 1 January 2002 to 31 December 2003 and 1 January 2004 to 31 December 2005.
3. The first quintile corresponds to the highest socioeconomic status and the fifth to the lowest socioeconomic status.

- In 2004–2005, women aged 50–69 years living in the most socioeconomically disadvantaged areas of Australia had a 54.6% participation in BreastScreen Australia, significantly below the national average of 56.2%.

- Between the years 1999–2000 and 2004–2005, there were significant increases in participation for women living in areas in the two most advantaged quintiles.

For more information, see Table 4 in Appendix A. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.

Participation by Indigenous status

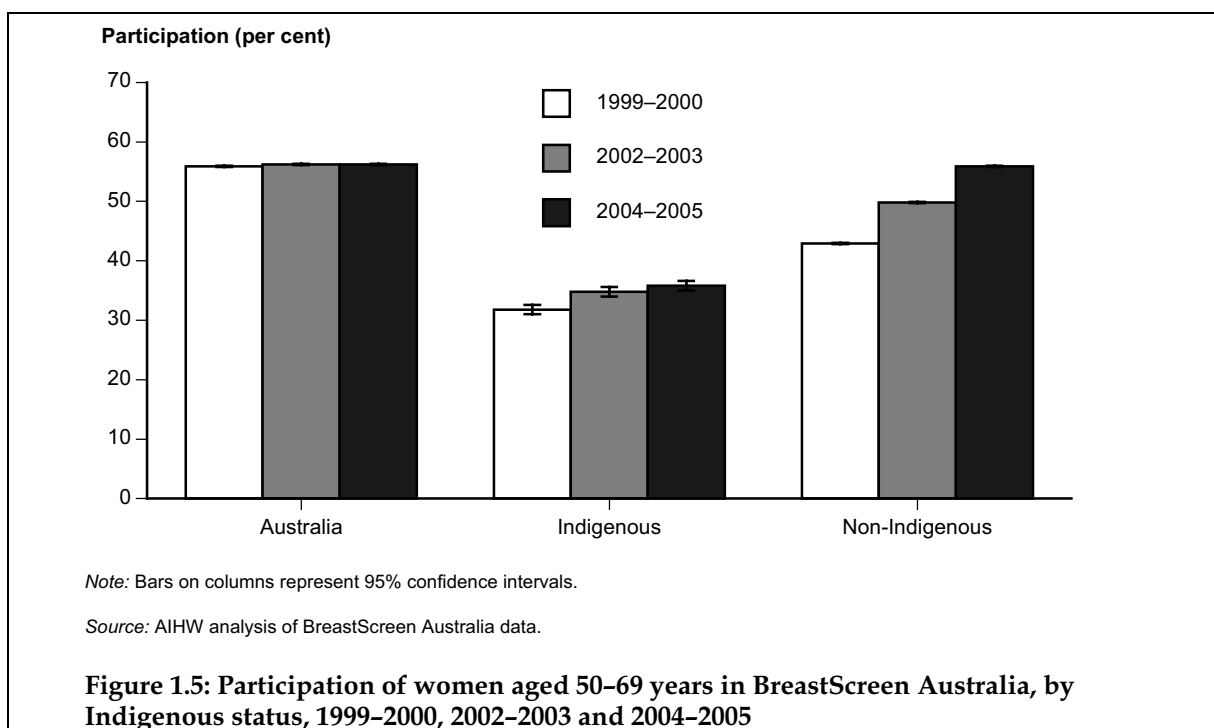


Table 1.6: Participation of women aged 50-69 years in BreastScreen Australia, by Indigenous status, 1999-2000, 2002-2003 and 2004-2005

	Australia	Indigenous	Non-Indigenous
	(per cent)		
2004-2005	56.2 [#]	35.8 [#]	55.9 [#]
95% CI	56.1-56.3	35.0-36.6	55.8-56.0
2002-2003	56.2	34.8	49.8
95% CI	56.1-56.3	34.1-35.7	49.7-49.9
1999-2000	55.9	31.8	42.9
95% CI	55.8-56.0	31.0-32.6	42.9-43.0

* Significantly different from the 2002-2003 rate.

Significantly different from the 1999-2000 rate.

Notes

1. Rates are the number of women screened as a percentage of the eligible female population calculated as the average of the Australian Bureau of Statistics estimated resident population and age-standardised to the Australian population at 30 June 2001.
2. Periods cover 1 January 1999 to 31 December 2000, 1 January 2002 to 31 December 2003 and 1 January 2004 to 31 December 2005.
3. 'Australia' includes all states and territories of Australia. 'Indigenous' and 'Non-Indigenous' includes Queensland, Western Australia, South Australia, and the Northern Territory.

- In 2004-2005, the age-standardised participation rate for Aboriginal and Torres Strait Islander women (35.8%) was much lower than the rate for non-Indigenous women (55.9%) but the rate for Aboriginal and Torres Strait Islander women increased significantly from 31.8% in 1999-2000 to 35.8% in 2004-2005.

Note:

In 2005, 1.1% of the Australian female population aged 50–69 years were Aboriginal and Torres Strait Islander women. This estimate is based on the Indigenous population projections 2001–2009 (ABS 2004).

Of the 1,614,871 women aged 40 years or over participating in screening through the BreastScreen Australia Program in 2004–2005, 12,580 (0.8%) who identified themselves as Aboriginal or Torres Strait Islander (0.7% in 1999–2000 and 0.7% in 2002–2003). In 2004–2005, 8,271 Aboriginal and Torres Strait Islander women aged 50–69 years were screened. While 11,898 women aged 40 years or over in 2004–2005 were classified as not stating their Indigenous status, the true figure is likely to be higher because BreastScreen New South Wales classified these women as non-Indigenous (see Appendix B for coding of Indigenous status). The comparison of participation rates between Aboriginal and Torres Strait Islander and non-Indigenous women should therefore be treated with caution.

For more information, see Table 5 in Appendix A. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.

Participation by main language spoken at home

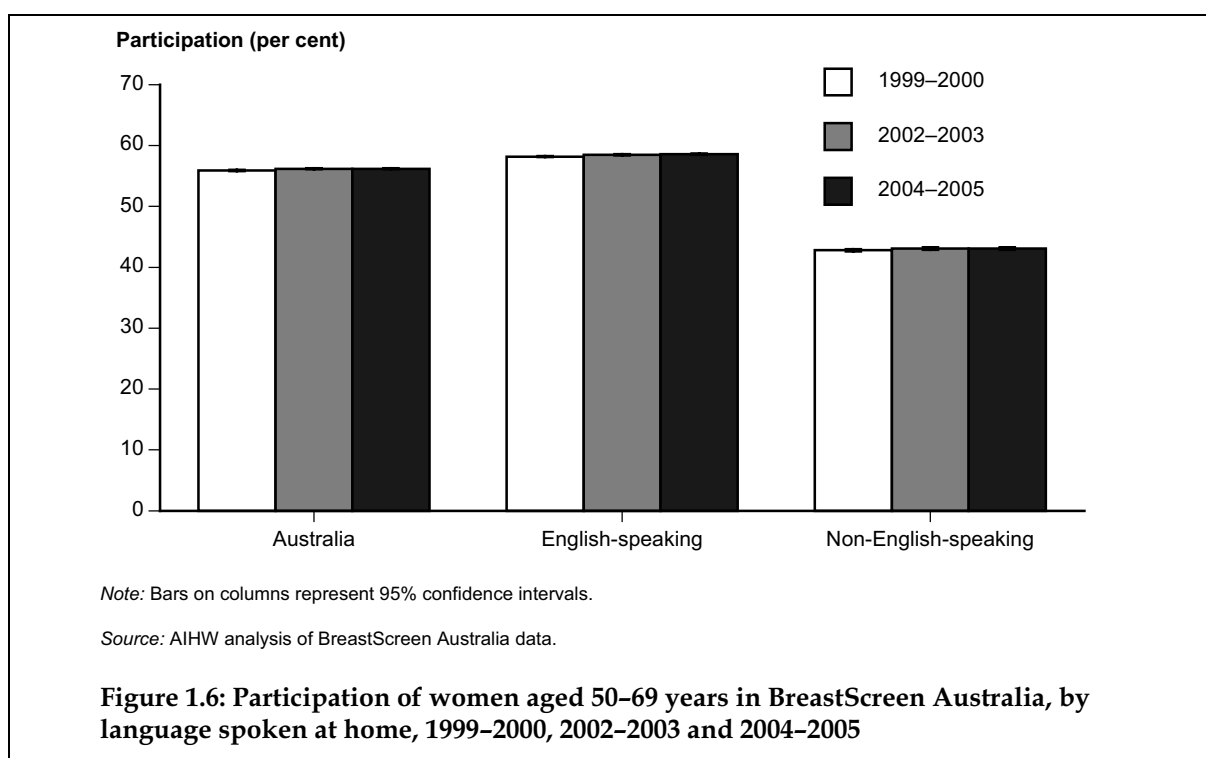


Table 1.7: Participation of women aged 50–69 years in BreastScreen Australia, by main language spoken at home, 1999–2000, 2002–2003 and 2004–2005

	Australia	English-speaking	Non-English-speaking
	(per cent)		
2004–2005	56.2*	58.6*	43.1
95% CI	56.1–56.3	58.5–58.7	42.9–43.4
2002–2003	56.2	58.5	43.1
95% CI	56.1–56.3	58.4–58.6	42.8–43.3
1999–2000	55.9	58.2	42.8
95% CI	55.8–56.0	58.1–58.3	42.6–43.0

* Significantly different from the 1999–2000 rate.

Notes

1. Rates are the number of women screened as a percentage of the eligible female population calculated as the average of the Australian Bureau of Statistics estimated resident population and age-standardised to the Australian population at 30 June 2001.
2. Periods cover 1 January 1999 to 31 December 2000, 1 January 2002 to 31 December 2003 and 1 January 2004 to 31 December 2005.
3. Women who were recorded as not stating their language spoken at home are included in the analysis for all women but excluded from the analysis by language.

- In 2004–2005, there was a much lower age-standardised participation rate for women in the target age group (50–69 years) who identified as not having English as their main language at home (43.1%) than for English-speaking women (58.6%). The same applied for the periods 1999–2000 and 2002–2003.

Note:

Of the 1,614,871 women aged 40 years or over participating in screening through the BreastScreen Australia Program in 2004–2005, 204,538 (12.7%) identified as not having English as their main language spoken at home (12.2% in 1999–2000 and 12.5% in 2002–2003). In 2004–2005, there were 153,447 women screened aged 50–69 years whose main language spoken at home was not English. While 5,801 women aged 40 years or over in 2004–2005 were classified as not stating the language they spoke at home, the true figure may be higher as some jurisdictions did not use the 'not-stated' category. Women in these jurisdictions who did not state the language they spoke at home were allocated to one of the other two categories (Appendix B). Participation rates between English-speaking and non-English-speaking women should therefore be treated with caution.

For more information, see Table 6 in Appendix A. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.

Age distribution of women screened

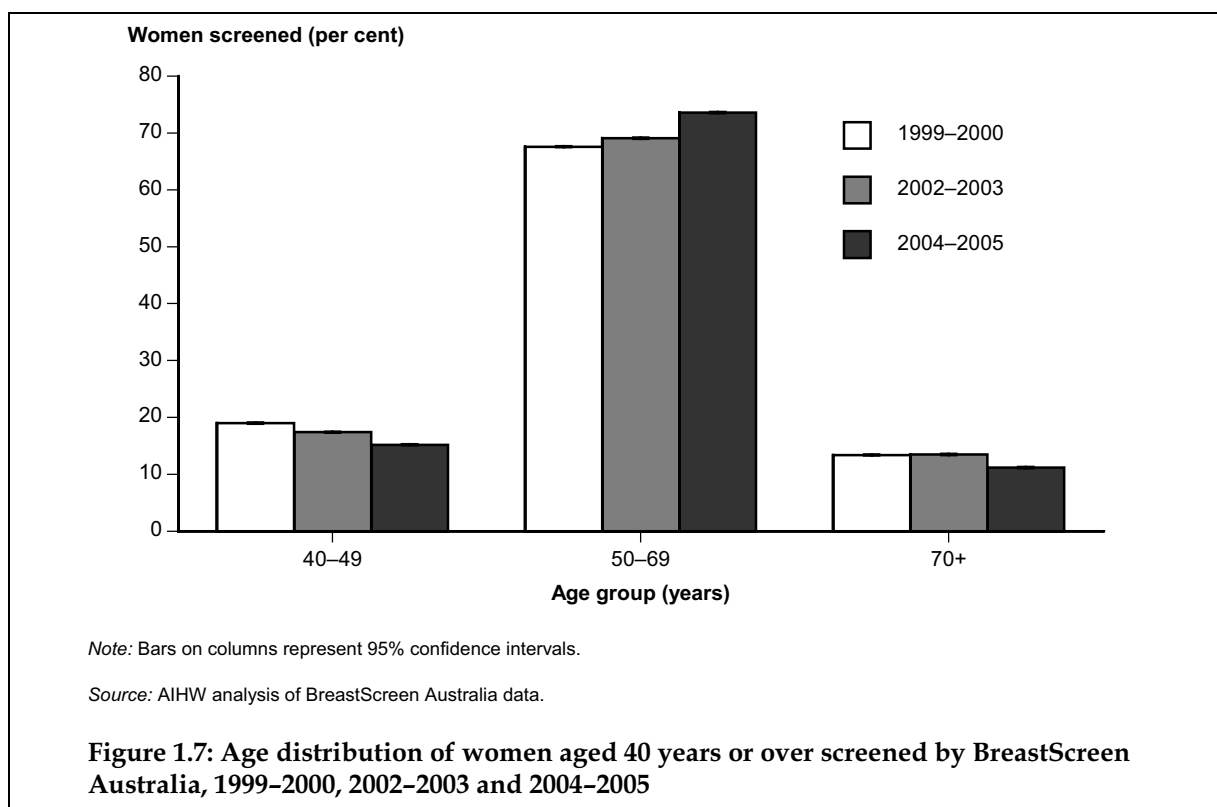


Table 1.8: Age distribution of women aged 40 years or over screened by BreastScreen Australia, 1999–2000, 2002–2003 and 2004–2005

	Age group (years)		
	40–49	50–69	70+
	(per cent)		
2004–2005	15.2*#	73.6*#	11.2*#
95% CI	15.1–15.3	73.5–73.7	11.1–11.2
2002–2003	17.4	69.1	13.5
95% CI	17.3–17.4	69.0–69.2	13.5–13.6
1999–2000	19.0	67.6	13.4
95% CI	18.9–19.1	67.5–67.7	13.3–13.4

* Significantly different from the 2002–2003 rate.

Significantly different from the 1999–2000 rate.

Notes

1. Rates are the number of women screened as a percentage of all women aged 40 years or over screened by BreastScreen Australia.
2. Periods cover 1 January 1999 to 31 December 2000, 1 January 2002 to 31 December 2003 and 1 January 2004 to 31 December 2005.
3. Some states and territories have a policy of not screening outside the target age range.

- Of women participating in the BreastScreen Australia Program in 2004–2005, 73.6% were in the target age group (50–69 years). Of all women screened, 15.2% were aged 40–49 years, and 11.2% were aged 70 years or over.

- The proportion of women screened in the target age group (50–69 years) increased significantly from 67.6% in 1999–2000 to 73.6% in 2004–2005. In the 70 years or over age group there was a significant decrease from 13.4% to 11.2% between 1999–2000 and 2004–2005.
- In the 40–49 years age group, the proportion of women screened decreased significantly from 19.0% in 1999–2000 to 15.2% in 2004–2005.

Indicator 2 Detection of all-size and small invasive cancers

A screen-detected breast cancer is a cancer that is histopathologically confirmed as a breast cancer before the completion of an episode of screening at BreastScreen Australia.

All-size and small invasive cancer detection rate

The detection rate for small invasive cancers is the number of women with small diameter (≤ 15 mm) invasive breast cancers per 10,000 women screened, by 5-year age groups for women aged 40 years or over, and for the target age group (50–69 years). Detection rates for all invasive cancers are also provided by screening round (that is, first round and subsequent rounds), 5-year age groups and for the target age group (50–69 years).

The all-size and small invasive cancer detection indicator

The small invasive cancer detection indicator measures the rate of women with invasive breast cancers that are 15 mm or less in size detected at a BreastScreen Australia service. This is expressed as the number of women with small invasive cancers detected for every 10,000 women screened.

A greater rate of detection of small cancers within the BreastScreen Australia Program increases the likelihood that the desired reductions in morbidity and mortality from breast cancer will be achieved. One of BreastScreen Australia's aims is to maximise the early detection of breast cancers (BSANAC & DHAC 2000). Finding breast cancer early often means that the cancer is small, can be more effectively treated and is less likely to have spread to other parts of the body. As a result, women who have cancers detected early may suffer less morbidity from breast cancer (Day 1991).

The National Accreditation Standards for the detection of all-size and small (≤ 15 mm) invasive breast cancers require that:

- ≥ 50 per 10,000 women aged 50–69 years who attend for their first screen are diagnosed with invasive breast cancer.
- ≥ 35 per 10,000 women aged 50–69 years who attend for their second or subsequent screen are diagnosed with invasive breast cancer.
- ≥ 25 per 10,000 women aged 50–69 years who attend for screening are diagnosed with small (≤ 15 mm) invasive breast cancer.

All-size invasive breast cancer detection by states and territories first screening round

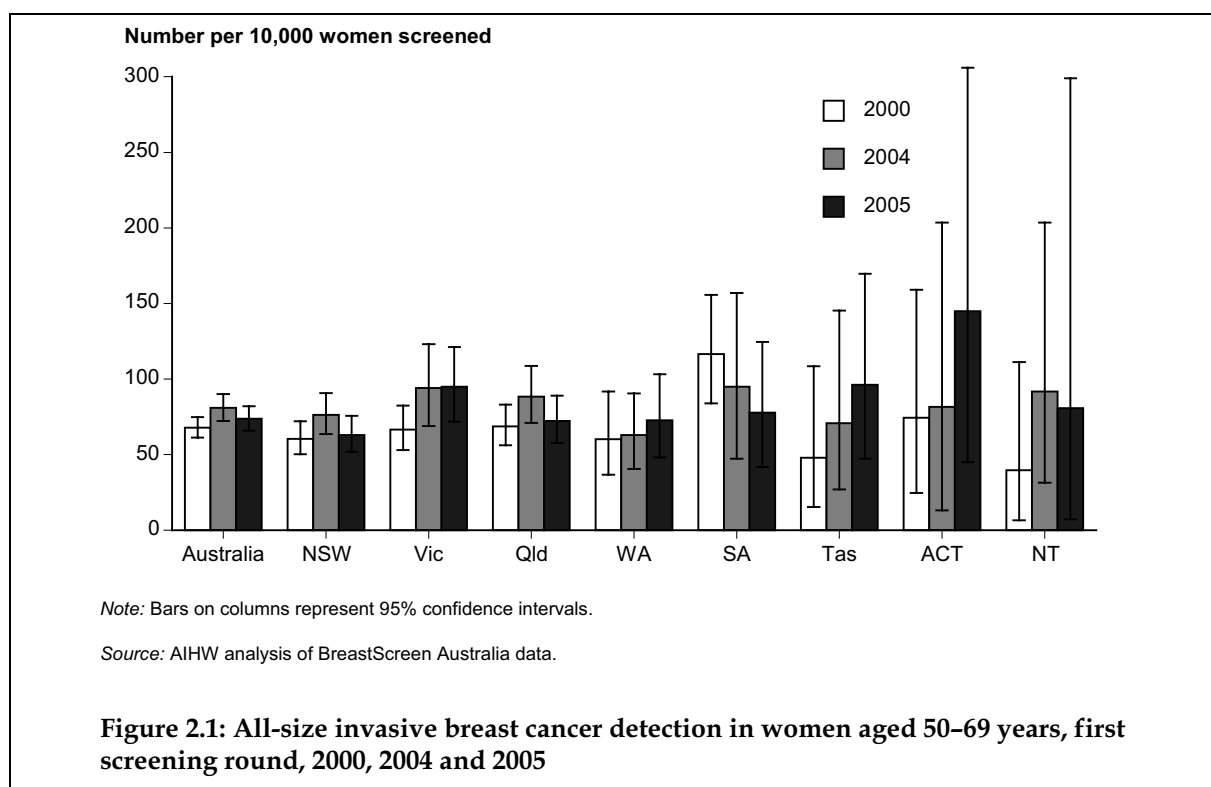


Table 2.1: All-size invasive breast cancer detection in women aged 50–69 years, first screening round, 2000, 2004 and 2005

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
2005 rate	73.8	63.1	94.9	72.3	72.8	77.8	96.3	145.0	80.7
95% CI	66.0–82.1	52.1–75.6	72.0–121.3	57.8–89.0	48.1–103.3	41.7–124.5	47.2–169.6	45.1–306.0	7.2–299.0
2004 rate	81.0	76.4	94.2	88.5	62.9	95.0	70.8	81.7	91.7
95% CI	72.3–90.2	63.6–90.8	69.0–123.1	71.0–108.7	40.6–90.5	47.3–157.0	27.1–145.5	13.1–203.5	31.5–203.6
2000 rate	67.8	60.5	66.7	68.8	60.3	116.5	48.0	74.4	39.8
95% CI	61.2–74.8	50.3–72.1	53.1–82.5	56.2–83.1	36.6–91.6	83.9–155.8	15.4–108.5	24.7–159.2	6.5–111.3

Note: Rates are the number of women with invasive cancers detected per 10,000 women screened and age-standardised to the population of women attending a BreastScreen Australia service in 1998.

- In 2005, the age-standardised invasive breast cancer detection rate for women attending a BreastScreen Australia service for the first time was 73.8 per 10,000 women screened.
- Across the states and territories, New South Wales had the lowest age-standardised detection rate, at 63.1 per 10,000 women screened, and the Australian Capital Territory had the highest rate, at 145.0 per 10,000 women screened, but this difference was not statistically significant.

For more information, see tables 11–14 in Appendix A. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.

All-size invasive breast cancer detection by states and territories, subsequent screening rounds

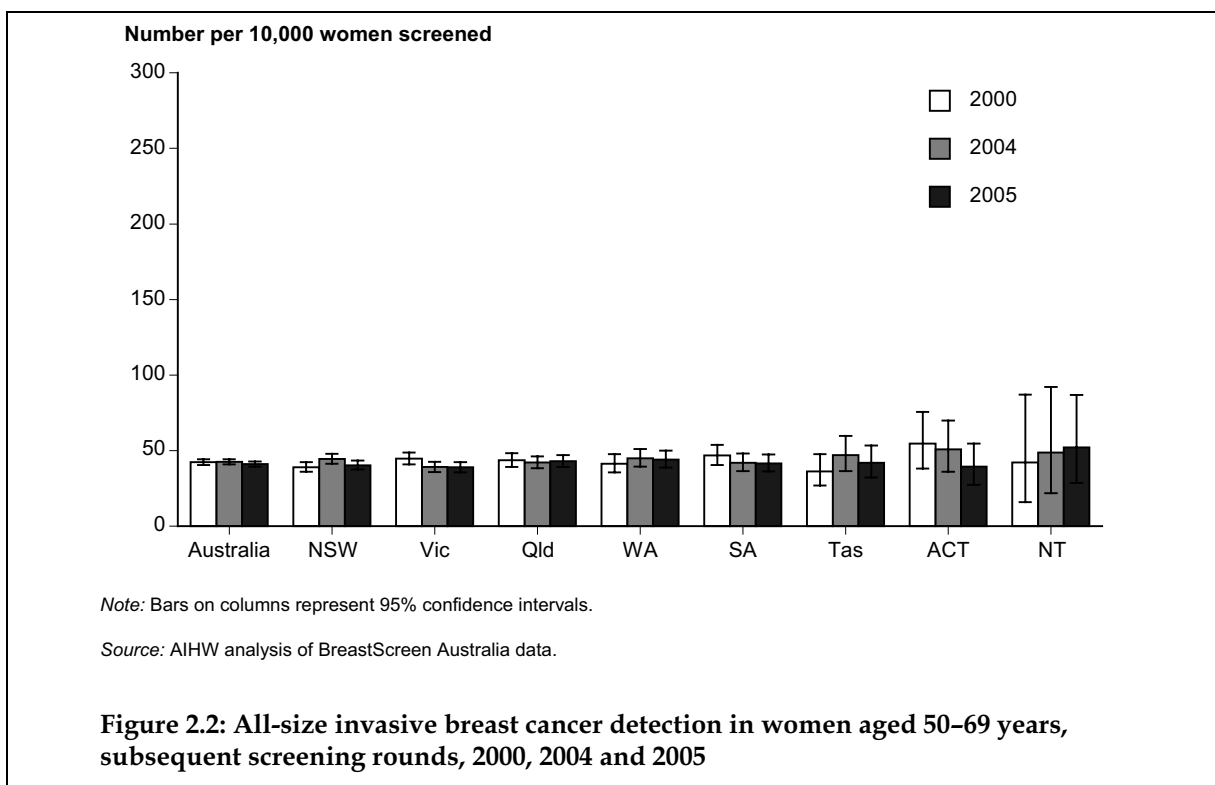


Table 2.2: All-size invasive breast cancer detection in women aged 50-69 years, subsequent screening rounds, 2000, 2004 and 2005

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
2005 rate	41.2	40.4	39.0	43.0	44.2	41.6	41.9	39.5	52.1
95% CI	39.5-42.9	37.5-43.4	35.7-42.5	39.3-47.1	38.8-50.1	36.1-47.6	32.2-53.5	27.5-54.8	28.5-86.7
2004 rate	42.6	44.6	39.2	42.2	44.9	42.1	47.1	50.9	48.8
95% CI	40.9-44.4	41.4-48.0	35.9-42.7	38.5-46.3	39.4-51.0	36.6-48.2	36.5-59.8	35.9-69.9	21.9-92.1
2000 rate	42.5	39.1	44.8	43.7	41.4	46.8	36.3	54.6	42.2
95% CI	40.6-44.4	36.0-42.4	41.0-48.8	39.3-48.4	35.6-47.8	40.5-53.7	27.0-47.7	38.1-75.6	15.9-87.1

Note: Rates are the number of women with invasive cancers detected per 10,000 women screened and age-standardised to the population of women attending a BreastScreen Australia service in 1998.

- In 2005, the age-standardised invasive cancer detection rate for women in the target age group (50-69 years) attending a BreastScreen Australia service for their second or subsequent screen was 41.2 per 10,000 women screened. This is significantly lower than the detection rate for first round attendances (73.8 per 10,000 women screened).
- In 2005, the detection rate for all women aged 40 years or over attending for their second or subsequent screen was 40.1 per 10,000 women screened. This is lower than the rate for women in the target age group (50-69 years) (41.2 per 10,000 women screened), although the difference is not statistically significant.

- Across the states and territories, the age-standardised invasive cancer detection rate for women in the target age group (50–69 years) in 2005 ranged from 39.0 per 10,000 women screened in Victoria to 52.1 per 10,000 women screened in Northern Territory.
- The decrease in the detection rate of all invasive cancers for Australia from 42.5 in 2000 to 41.2 in 2005 was not statistically significant.

For more information, see tables 11–14 in Appendix A. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.

All-size invasive breast cancer detection, first and subsequent screening rounds

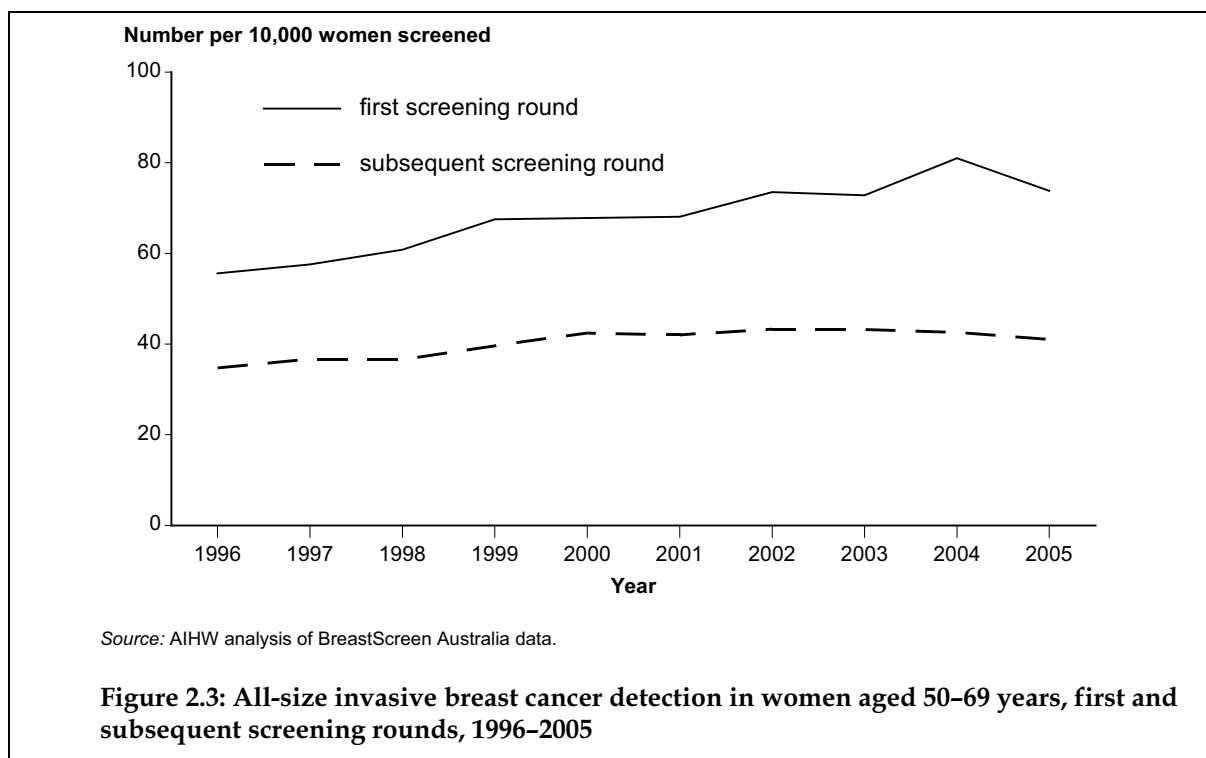


Table 2.3: All-size invasive breast cancer detection in women aged 50–69 years, first and subsequent screening rounds, 1996–2005

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
First screening round										
Rate	55.6*	57.6*	60.8*	67.5*	67.8*	68.1*	73.5*	72.8*	81.0*	73.8*
95% CI	52.0–59.5	53.2–62.3	56.0–66.0	61.3–74.0	61.2–74.8	61.7–74.9	66.3–81.3	65.0–81.2	72.3–90.2	66.0–82.1
Subsequent screening rounds										
Rate	34.8	36.7	36.6	39.6	42.5	42.1	43.3	43.3	42.6	41.2
95% CI	32.6–37.2	34.6–38.8	34.7–38.6	37.8–41.6	40.6–44.4	40.3–43.9	41.5–45.2	41.6–45.2	40.9–44.4	39.5–42.9

* Statistically different from subsequent rounds.

Note: Rates are the number of women with small invasive cancers detected per 10,000 women screened and age-standardised to the population of women attending a BreastScreen Australia service in 1998.

- The detection rate of all invasive breast cancers in the first screening round was significantly higher than it was for subsequent screening rounds for all years 1996–2005.
- The rate of detection of all invasive breast cancers in the first screening round increased significantly from 55.6 in 1996 to 73.8 per 10,000 women screened in 2005. The detection rate also rose significantly in subsequent screening rounds, from 34.8 per 10,000 women screened in 1996 to 41.2 per 10,000 women screened in 2005.

For more information, see tables 11–14 in Appendix A. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.

Table 2.4 shows the detection rate of small-diameter invasive breast cancers achieved by the BreastScreen Australia Program in 2000, 2004 and 2005. In 2000, 2004 and 2005, more than 25 small-diameter (≤ 15 mm) cancers per 10,000 women screened were found for all screening rounds and age groups.

Table 2.4: Small (≤ 15 mm) invasive breast cancer detection per 10,000 women, first and subsequent rounds, 2000, 2004 and 2005

	Objective ^(a)	2000	2004	2005
First screening round				
Rate for women aged 50–69 years	≥ 25	38.5	45.2	37.8
95% CI		33.6–43.8	38.9–52.2	32.4–43.8
Rate for women aged 40 years or over	..	37.9	40.4	39.0
95% CI		33.9–42.3	35.3–46.0	33.6–44.8
Subsequent screening rounds				
Rate for women aged 50–69 years	..	28.6	27.6	26.7
95% CI		27.1–30.2	26.2–29.0	25.4–28.1
Rate for women aged 40 years or over	..	27.0	27.0	25.8
95% CI		25.7–28.2	25.8–28.3	24.6–27.0

(a) Performance objective for BreastScreen services as set out in the National Accreditation Standards (NQMC 2004).

Note: Rates are the number of women with small invasive cancers detected per 10,000 women screened and age-standardised to the population of women attending a BreastScreen Australia service in 1998.

Table 2.5 below shows the percentage of all invasive cancers detected that were small-diameter (≤ 15 mm), by screening round, for women screened in 2000, 2004 and 2005.

Table 2.5: Percentage of small (≤ 15 mm) invasive cancers detected, first and subsequent rounds, 2000, 2004 and 2005

	2000	2004	2005
	(per cent)		
First screening round			
Women aged 50–69 years	56.9	56.3	52.1
Women aged 40 years or over	55.0	52.6	52.5
Subsequent screening rounds			
Women aged 50–69 years	67.5	64.9	65.2
Women aged 40 years or over	67.6	65.6	65.1

Source: AIHW analysis of BreastScreen Australia data.

- A higher proportion of women attending the program for the first time have tumours larger than 15 mm compared with those who have been screened previously. This shows that mammography was successful at detecting the majority of large cancers in the first round and most of the remaining cases have not had time to develop into large cancers in the 2 years before the second round.

Small invasive breast cancer detection by states and territories, first screening round

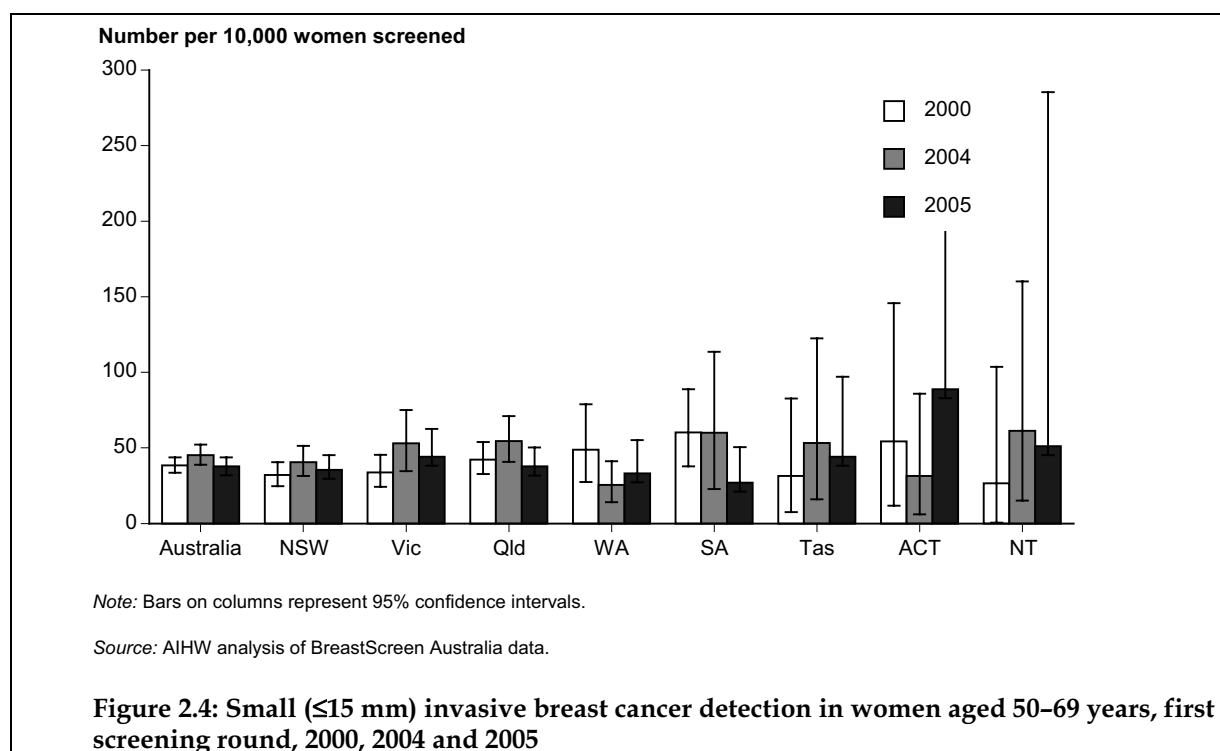


Table 2.6: Small (≤ 15 mm) invasive breast cancer detection in women aged 50–69 years, first screening round, 2000, 2004 and 2005

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
2005 rate	37.8	35.5	44.2	37.7	33.2	27.0	44.2	88.9	51.2
95% CI	32.4–43.8	27.4–45.0	29.2–62.6	27.5–50.3	17.2–55.2	11.1–50.4	14.4–97.0	15.3–225.7	1.3–285.4
2004 rate	45.2	40.6	53.0	54.5	25.6	60.0	53.2	31.4	61.2
95% CI	38.9–52.2	31.5–51.3	34.6–75.1	40.8–71.0	14.0–41.2	22.8–113.5	16.0–122.6	6.1–85.9	15.0–160.1
2000 rate	38.5	32.0	33.8	42.3	48.9	60.3	31.4	54.4	26.5
95% CI	33.6–43.8	24.7–40.6	24.3–45.4	32.7–53.9	27.5–78.9	37.9–88.9	7.5–82.6	11.9–145.8	0.5–103.6

Note: Rates are the number of women with small invasive cancers detected per 10,000 women screened and age-standardised to the population of women attending a BreastScreen Australia service in 1998.

- In 2005, the age-standardised detection rate for small invasive cancers in women in the target age group (50–69 years) attending for their first screening round ranged from 27.0 to 88.9 per 10,000 women screened across the states and territories. The small numbers of cases contributed to the wide variations in the rates.
- In 2005, small-diameter invasive cancers were found in 362 women aged 40 years or over attending a BreastScreen Australia service for their first screen. Of these women, 244 were in the target age group (50–69 years). The age-standardised detection rate was 37.8 per 10,000 women screened for women in the target age group (50–69 years) and 39.0 per 10,000 women screened for all women aged 40 years or over. The detection rate for small-diameter invasive cancers for women in the target age group (50–69 years) decreased from 38.5 per 10,000 women screened in 2000 to 37.8 in 2005. The decrease was not statistically significant.

For more information, see tables 7-10 in Appendix A. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.

Small invasive breast cancer detection by states and territories, subsequent screening rounds

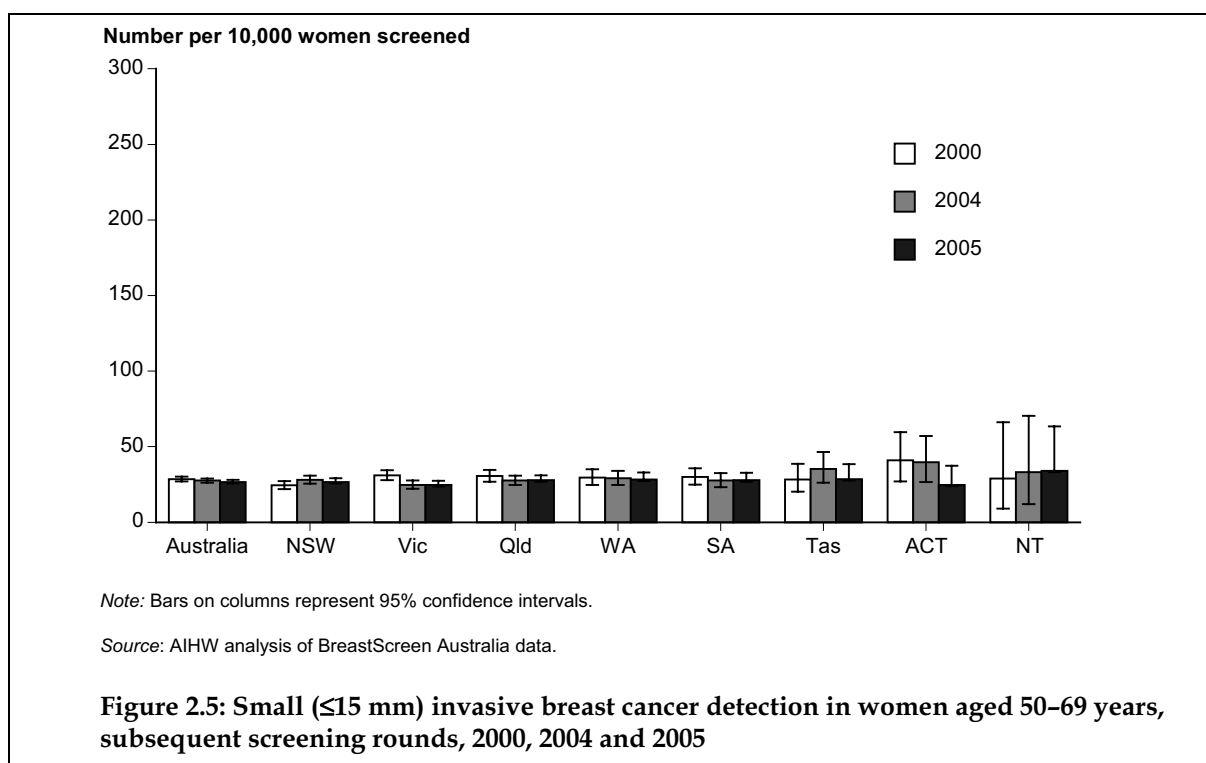


Table 2.7: Small (≤ 15 mm) invasive breast cancer detection in women aged 50–69 years, subsequent screening rounds, 2000, 2004 and 2005

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
2005 rate	26.7	26.6	24.6	27.8	28.2	27.8	28.6	24.7	34.1
95% CI	25.4–28.1	24.3–29.1	22.0–27.3	24.8–31.1	23.9–33.1	23.4–32.8	20.7–38.5	15.5–37.4	15.9–63.3
2004 rate	27.6	28.1	24.8	27.6	29.2	27.6	35.2	39.8	33.1
95% CI	26.2–29.0	25.6–30.8	22.2–27.7	24.5–30.9	24.8–34.1	23.2–32.6	26.1–46.4	26.6–57.2	12.0–70.5
2000 rate	28.6	24.5	31.0	30.6	29.5	29.9	28.4	41.0	29.0
95% CI	27.1–30.2	22.0–27.1	27.9–34.4	27.0–34.7	24.7–35.0	25.0–35.6	20.3–38.7	27.0–59.6	9.1–66.1

Note: Rates are the number of women with small invasive cancers detected per 10,000 women screened and age-standardised to the population of women attending a BreastScreen Australia service in 1998.

- In 2005, small-diameter invasive cancers were found in 1,946 women aged 40 years or over attending a BreastScreen Australia service for their second or subsequent screen. Of these women, 1,536 were in the target age group (50–69 years). The age-standardised detection rate was 26.7 per 10,000 women screened for women in the target age group (50–69 years) and 25.8 per 10,000 women for all women aged 40 years or over. In both age categories, the small-diameter cancer detection rates for Australia for women attending their second or subsequent screen were significantly lower than the rates for women attending their first screen.

For more information, see tables 7–10 in Appendix A. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.

Small invasive breast cancer detection, first and subsequent screening rounds

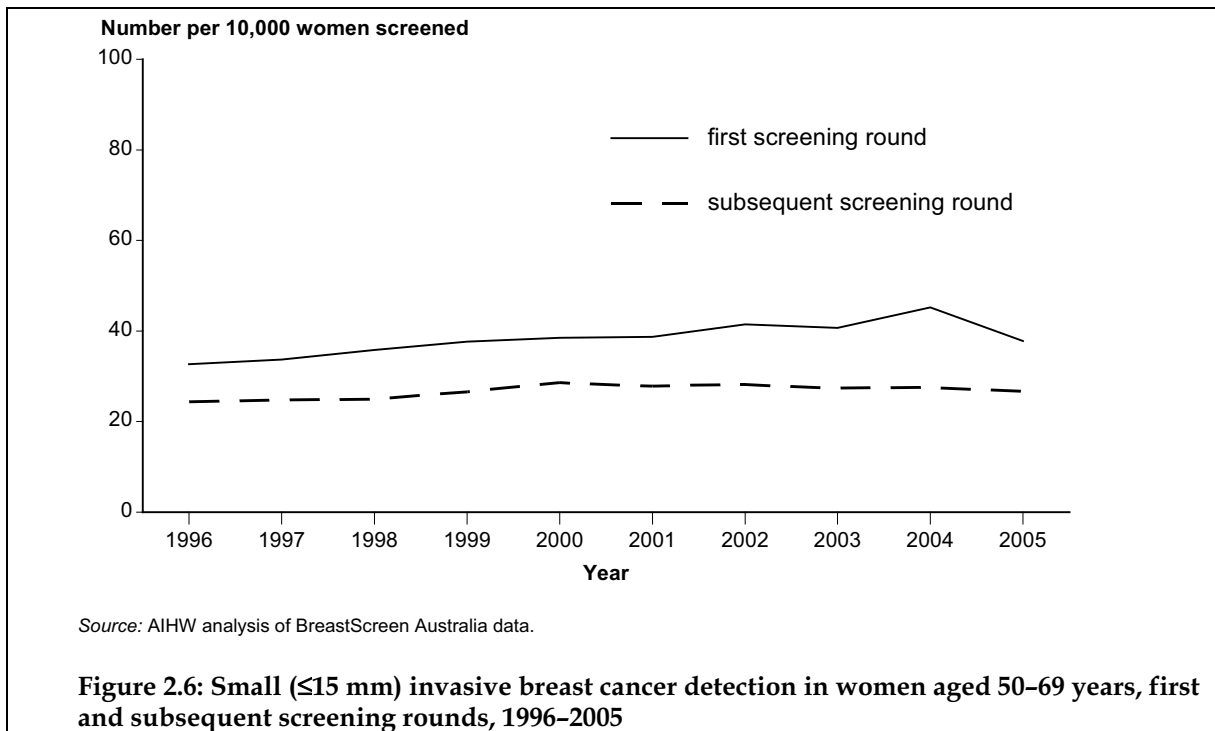


Table 2.8: Small (≤ 15 mm) invasive breast cancer detection in women aged 50–69 years, first and subsequent screening rounds, 1996–2005

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
First screening round										
Rate	32.6*	33.7*	35.8*	37.7*	38.5*	38.7*	41.5*	40.7*	45.2*	37.8*
95% CI	29.8–35.6	30.4–37.3	32.1–39.8	33.1–42.6	33.6–43.8	34.0–43.9	36.0–47.5	34.8–47.1	38.9–52.2	32.4–43.8
Subsequent screening rounds										
Rate	24.4	24.8	24.9	26.6	28.6	27.8	28.2	27.4	27.6	26.7
95% CI	22.5–26.3	23.1–26.5	23.4–26.5	25.1–28.2	27.1–30.2	26.4–29.4	26.8–29.7	26.0–28.8	26.2–29.0	25.4–28.1

* Significantly different from subsequent screening rounds.

Note: Rates are the number of women with small invasive cancers detected per 10,000 women screened and age-standardised to the population of women attending a BreastScreen Australia service in 1998.

- Detection of small invasive breast cancers in women aged 50–69 years increased significantly from 1996 to 2004 in the first screening round, from 32.6 to 45.2 per 10,000 women screened. In 2005, the rate decreased to 37.8 per 10,000. In subsequent screening rounds, the increase from 24.4 in 1996 to 26.7 in 2005 per 10,000 was not significant.

For more information, see tables 7–10 in Appendix A. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.

Small invasive breast cancer detection by age, 2005

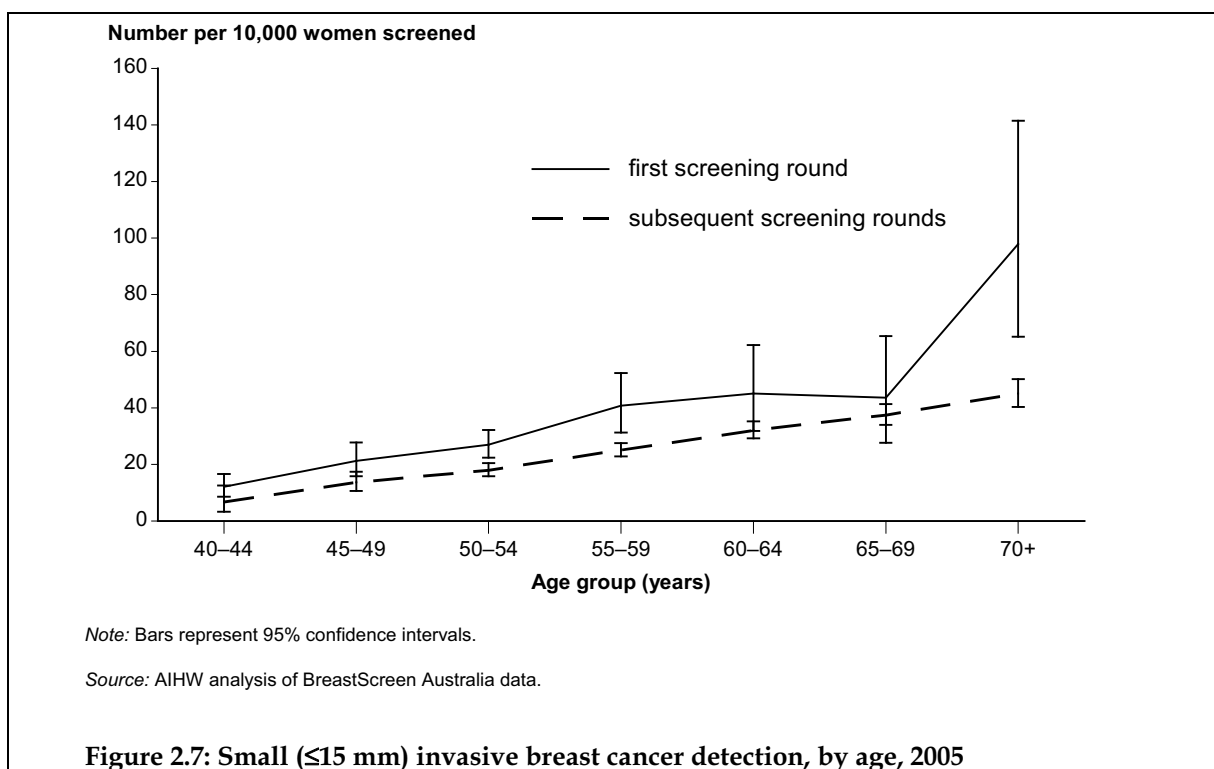


Table 2.9: Small (≤ 15 mm) invasive breast cancer detection, by age, 2005

	Age group (years)						
	40-44	45-49	50-54	55-59	60-64	65-69	70+
First screening round							
Rate	12.1	21.2	27.0*	40.8*	45.1	43.6	97.9*
95% CI	8.5-16.6	15.9-27.8	22.4-32.3	31.3-52.4	31.7-62.1	27.6-65.4	65.1-141.5
Subsequent screening rounds							
Rate	6.8	13.7	18.0	25.1	32.1	37.5	45.0
95% CI	3.3-12.5	10.6-17.5	15.8-20.3	22.8-27.6	29.2-35.2	34.0-41.2	40.3-50.1

* Significantly different from subsequent screening rounds.

Note: Rates are the number of women with small invasive cancers detected per 10,000 women screened.

- The rate of detection of small-diameter (≤ 15 mm) invasive cancers increased with age. This reflects rising incidence of breast cancer with age (Table 44). The detection rate for women aged 40-44 years making a first round attendance at a BreastScreen Australia service in 2005 was 12.1 per 10,000 women screened. This rate increased to 97.9 per 10,000 women screened for women aged 70 years or over. A similar pattern occurred for women making a second or subsequent round attendance from 6.8 to 45.0 per 10,000 women screened.

For more information, see tables 7-10 in Appendix A. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.

Small invasive breast cancer detection by age, 2004

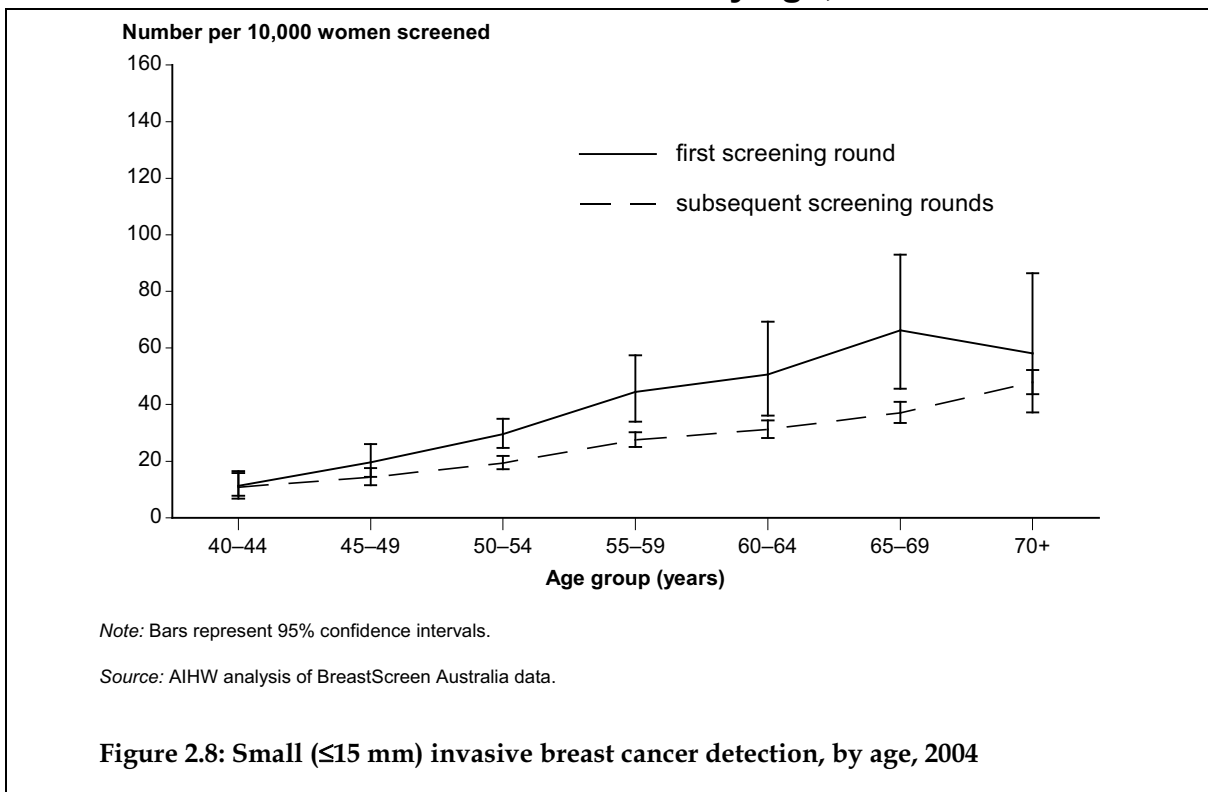


Table 2.10: Small (≤ 15 mm) invasive breast cancer detection, by age, 2004

	Age group (years)						
	40-44	45-49	50-54	55-59	60-64	65-69	70+
First screening round							
Rate	11.3	19.6	29.5*	44.5*	50.7*	66.2*	58.1
95% CI	7.8-15.8	14.5-26.0	24.6-35.0	33.9-57.5	36.0-69.3	45.6-93.0	37.2-86.5
Subsequent screening rounds							
Rate	10.8	14.3	19.4	27.5	31.2	37.1	47.8
95% CI	6.7-16.5	11.5-17.6	17.2-21.9	25.0-30.2	28.2-34.4	33.5-41.0	43.7-52.2

* Significantly different from subsequent screening rounds.

Note: Rates are the number of women with small invasive cancers detected per 10,000 women screened.

- In 2004, the rate of detection of small (≤ 15 mm) invasive cancers was not significantly different to the rate in 2005 (Table 2.9) for each age group and each screening round.

Small invasive breast cancer detection by age, 2000

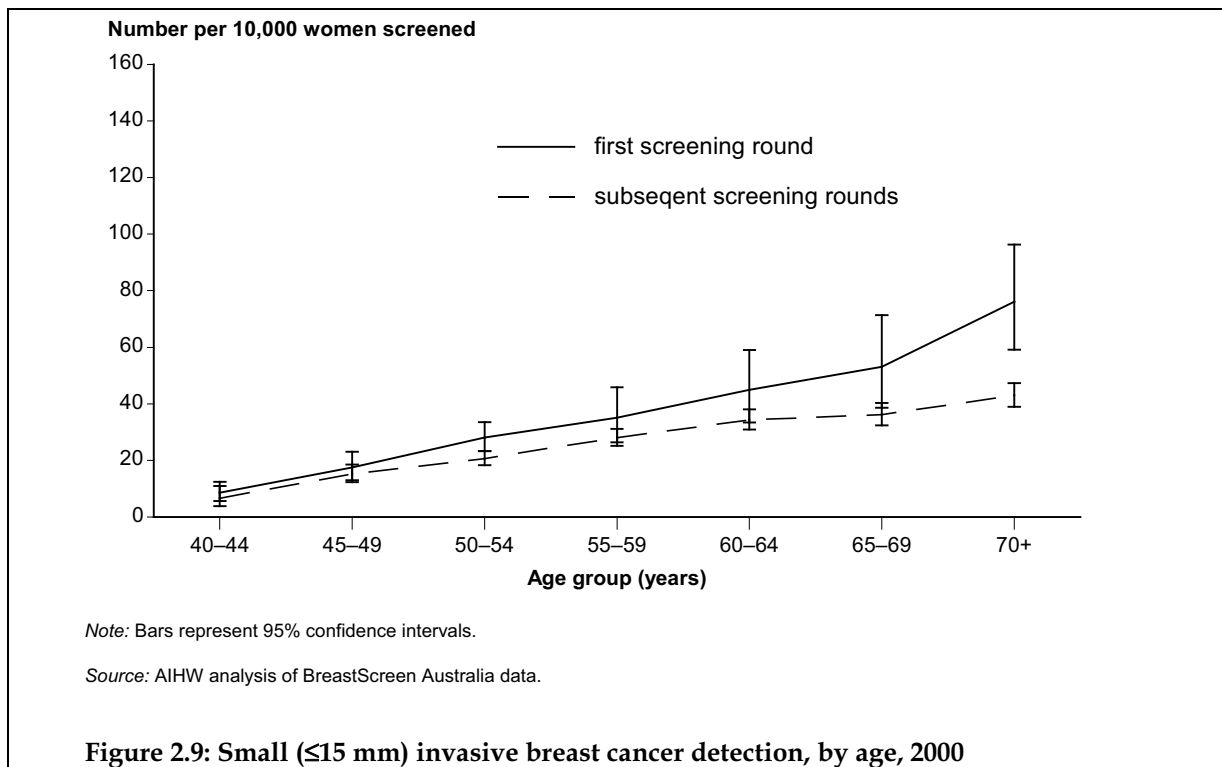


Table 2.11: Small (≤ 15 mm) invasive breast cancer detection, by age, 2000

	Age group (years)						
	40-44	45-49	50-54	55-59	60-64	65-69	70+
First screening round							
Rate	8.6	17.5	28.1	35.1	44.9	53.1	76.1*
95% CI	5.7-12.5	13.0-22.9	23.3-33.5	26.4-45.8	33.4-59.0	38.6-71.3	59.2-96.3
Subsequent screening rounds							
Rate	6.7	15.2	20.7	28.1	34.3	36.2	43.0
95% CI	3.7-11.0	12.3-18.5	18.3-23.3	25.3-31.2	30.9-38.0	32.4-40.3	39.0-47.3

* Significantly different from subsequent screening rounds.

Note: Rates are the number of women with small invasive cancers detected per 10,000 women screened.

- In 2000, the detection rates of small (≤ 15 mm) invasive cancers by age were mostly lower than the rates in 2005 (Table 2.9) and 2004 (Table 2.10) but not statistically significant.

Indicator 3 Sensitivity

Introduction

The ability of mammographic screening in the target age group (50–69 years) to successfully detect invasive breast cancer in the women screened can be assessed by considering the relative numbers of:

1. invasive breast cancers detected at screening episodes
2. invasive breast cancers diagnosed 0–12 months after a screening episode detected no cancer
3. invasive breast cancers diagnosed 13–24 months after a screening episode detected no cancer.

The goal of the Program is to have a high proportion of these cancers in category 1 and a low proportion in categories 2 and 3. This is especially important for category 2, as a breast cancer detected 0–12 months after a negative screen is much more likely to represent a failure of the screening process to detect a cancer than if detected after 13–24 months. However, aggressive breast cancers in some women can emerge in the period between scheduled screening episodes and grow very rapidly, and therefore not represent any failure in detection.

Indicator 3 measures the numbers and rates of the category 2 and 3 cancers (known as interval cancers) and measures cancers in category 1 as a percentage of total cancers found in screened women (sensitivity).

3a Interval cancer rate

The interval cancer rate is the rate of invasive breast cancers detected during an interval between two screening rounds per 10,000 women-years. It is stratified by 10-year age groups for women aged 40 years or over, and, for the target age group (50–69 years), time since screen (0–12 months, 13–24 months and 0–24 months) and screening round (first or subsequent).

Interval cancer rate indicator

An interval cancer is an invasive breast cancer that is diagnosed after a screening episode that detected no cancer and before the next scheduled screening episode. The interval cancer rate is expressed per 10,000 women-years at risk. It measures how effective the BreastScreen Australia Program is at detecting the presence of breast cancer in well women. A low-interval cancer rate is one measure of the effectiveness of the screening process.

The National Accreditation Standards for the detection of interval breast cancers require:

- < 7.5 interval cancers per 10,000 women aged 50–69 years who attend for screening less than 12 months following a negative screening episode

- the number per 10,000 women aged 50–69 years who attend for screening and who are diagnosed with an invasive interval breast cancer in the period 12–24 months following a negative screening episode.

Table 3.1: Interval cancer rate for women aged 40 years or over and 50–69 years, screened during index years 1998, 1999, 2000 and 2001, 2002, 2003, first and subsequent rounds, 0–12 months follow-up

	Objective ^(a)	Index years 1998, 1999 and 2000*	Index years 2001, 2002 and 2003
First screening round 0–12 months			
Rate for women aged 50–69 years	<7.5	7.2	6.9
95% CI		6.2–8.3	5.7–8.2
Rate for women aged 40 years or over	..	7.2	6.9
95% CI		6.4–8.0	5.9–7.9
Subsequent screening rounds 0–12 months			
Rate for women aged 50–69 years	<7.5	8.0	7.0
95% CI		7.5–8.5	6.6–7.4
Rate for women aged 40 years or over	..	7.8	7.2
95% CI		7.4–8.3	6.8–7.6
First screening round 13–24 months			
Rate for women aged 50–69 years	..	14.3	11.7
95% CI		12.9–15.9	10.1–13.4
Rate for women aged 40 years or over	..	13.4	11.5
95% CI		12.2–14.5	10.3–12.8
Subsequent screening rounds 13–24 months			
Rate for women aged 50–69 years	..	13.7	12.5
95% CI		13.0–14.4	11.9–13.1
Rate for women aged 40 years or over	..	13.1	12.2
95% CI		12.5–13.7	11.7–12.8

(a) National Accreditation Standards Performance Objective 2.4 is to minimise the number of invasive interval cancers and ensure that all invasive interval cancers are reviewed and investigated. For interval cancers diagnosed between 0 and 12 months, the objective is <7.5 per 10,000 women for women aged 50–69 years.

Note: Data for the index years 1998, 1999 and 2000 (0–12 months and 13–24 months) which were originally supplied for the *BreastScreen Australia monitoring reports 2001–2002, 2002–2003 and 2003–2004*, respectively, were re-used in this report.

- Table 3.1 shows the detection rate for interval cancers during index years 1998–2000 and 2001–2003. The objective of detecting less than 7.5 interval cancers per 10,000 women in the target age group (50–69 years) over the 12 months following a negative screening episode was achieved in 2001–2003 for women attending for all screening rounds and in 1998–2000 for women attending for their first screening round.

3b. Program sensitivity

The program sensitivity rate is the percentage of women with invasive breast cancer among all program-screened women diagnosed with invasive breast cancer during the screening interval (screen-detected and interval cancers). It is stratified by 10-year age groups for women aged 40 years or over, and, for the target age group (50–69 years), time since screen (0–12 months and 0–24 months) and screening round (first or subsequent).

The sensitivity indicator

Program sensitivity measures the ability of the program to detect invasive breast cancers in women attending for screening. It is the proportion of invasive breast cancers that are detected within the BreastScreen Australia Program out of all invasive breast cancers (interval cancers plus screen-detected cancers) diagnosed in program-screened women in the screening interval.

A high sensitivity indicates that few cancers in women screened are missed by the screening program. For example, in Table 3.2, in 2001–2003 there was program sensitivity of 79% in 24 months follow-up of women aged 50–69 years in the first screening round, indicating that 21% of cancers diagnosed during the screening interval were not detected by screening. For subsequent screening rounds, the program sensitivity for women aged 50–69 years in this time period was 71%, indicating that 29% of cancers were not detected by screening.

There are no National Accreditation Standards for the sensitivity indicator.

The following table shows the program sensitivity for invasive breast cancers during index years 1998–2000 and 2001–2003 (see Glossary for the definition of ‘index years’).

Table 3.2: Program sensitivity for women aged 40 years or over and 50–69 years, screened during index years 1998, 1999, 2000 and 2001, 2002, 2003, first and subsequent rounds, 0–24 months follow-up

	Index years 1998, 1999 and 2000	Index years 2001, 2002 and 2003
	(per cent)	
First screening round 0–24 months		
Rate for women aged 50–69 years	74.8	79.2
95% CI	71.2–78.5	75.0–83.6
Rate for women aged 40 years or over	73.2	77.7
95% CI	70.4–76.1	74.4–81.1
Subsequent screening rounds 0–24 months		
Rate for women aged 50–69 years	66.6	71.0
95% CI	64.7–68.4	69.3–72.8
Rate for women aged 40 years or over	64.9	68.2
95% CI	63.2–66.5	66.7–69.8

Note: Data for the index years 1998, 1999 and 2000 (0–12 months and 13–24 months) which were originally supplied for the *BreastScreen Australia monitoring reports 2001–2002, 2002–2003 and 2003–2004*, respectively, were re-used in this report.

In this chapter, data for the index years are combined. This aggregation improves the stability of rates.

In principle, screening should be done only with women who have no breast cancer symptoms. Those with symptoms should be referred for diagnostic follow-up. However, in practice this is not always practical, so the data presented here include both symptomatic and asymptomatic women. Both interval cancers and sensitivity rates in each state and territory are affected by the policy of management of symptomatic clients in that jurisdiction. For example, in New South Wales, women are not recalled to assessment on the basis of symptom status. Those women with a negative screen but who have symptoms are referred for diagnostic follow-up outside the BreastScreen Australia Program. However, those who have a cancer diagnosis will be counted as interval cancers—leading to a higher apparent interval cancer rate. Other states that do recall on the basis of symptoms may have lower apparent interval cancer rates. This affects the comparability of this indicator between jurisdictions.

Indicator 3a Interval cancer rate

Interval cancer rate by states and territories, first screening round, 0–12 months follow-up

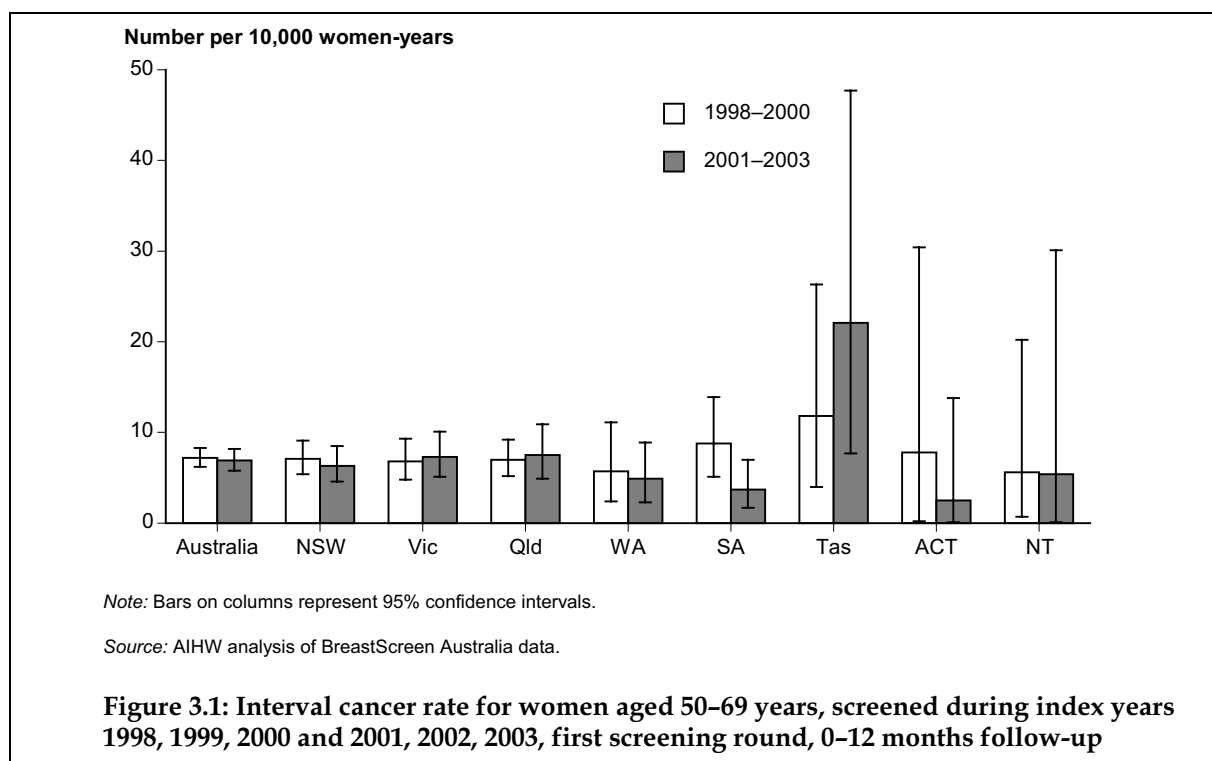


Table 3.3: Interval cancer rate for women aged 50–69 years, screened during index years 1998, 1999, 2000 and 2001, 2002, 2003, first screening round, 0–12 months follow-up

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Index years 2001–2003									
Rate	6.9	6.3	7.3	7.5	4.9	3.7	22.1	2.5	5.4
95% CI	5.7–8.2	4.6–8.5	5.0–10.0	4.9–10.9	2.3–8.9	1.7–6.9	7.7–47.7	0.1–13.8	0.1–30.1
Index years 1998–2000									
Rate	7.2	7.1	6.8	7.0	5.7	8.8	11.8	7.8	5.6
95% CI	6.2–8.3	5.4–9.1	4.8–9.3	5.2–9.2	2.4–11.0	5.1–14.0	4.0–26.3	0.2–30.4	0.7–20.1

Notes

1. Rates are the number of interval cancers detected per 10,000 women-years and age-standardised to the population of women attending a BreastScreen Australia service in 1998.
2. The data include both symptomatic and asymptomatic women.
3. None of the rates were significantly different from the all-Australia rate.
4. Data for the index years 1998, 1999 and 2000 (0–12 months and 13–24 months) which were originally supplied for the *BreastScreen Australia monitoring reports 2001–2002, 2002–2003 and 2003–2004*, respectively, were re-used in this report.

- The age-standardised detection rate of interval cancers for Australia for women aged 50–69 years 0–12 months after their first screen decreased between the index years

1998–2000 and 2001–2003 from 7.2 per 10,000 women to 6.9 per 10,000. However, the decrease was not statistically significant.

For more information, see tables 15–20 in Appendix A. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.

Interval cancer rate by states and territories, first screening round, 13–24 months follow-up

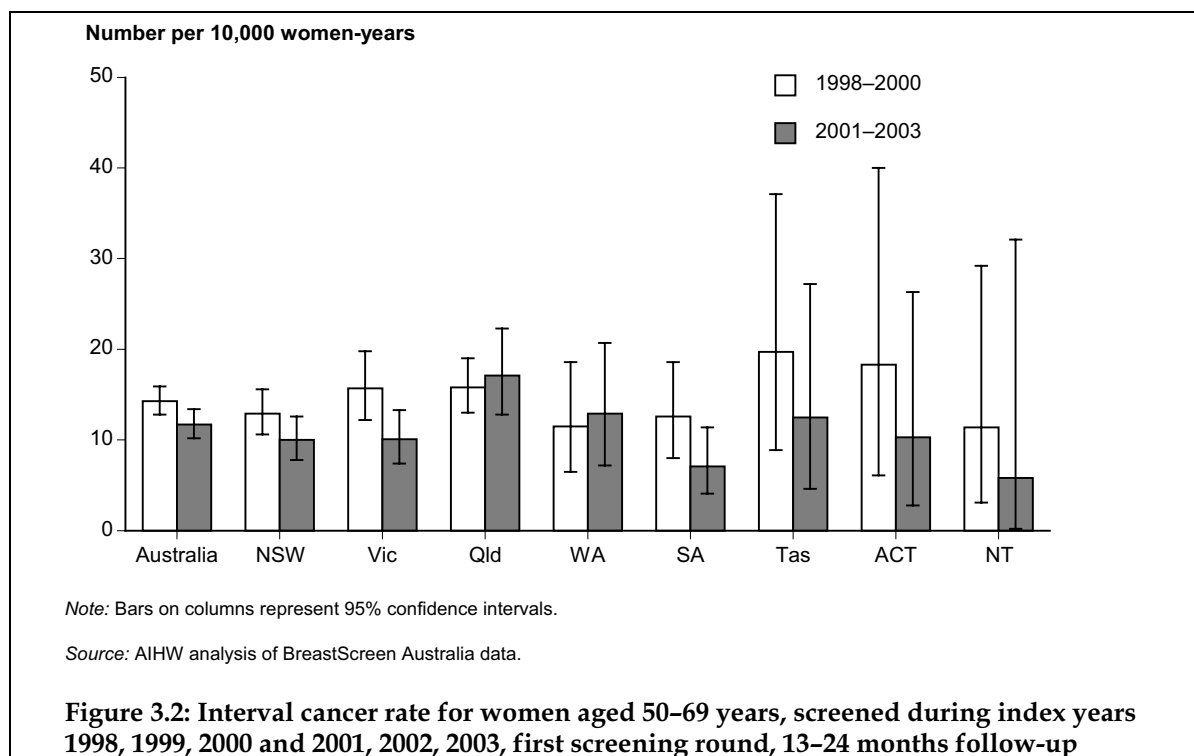


Table 3.4: Interval cancer rate for women aged 50–69 years, screened during index years 1998, 1999, 2000 and 2001, 2002, 2003, first screening round, 13–24 months follow-up

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Index years 2001–2003									
Rate	11.7	10.0	10.1	17.1	12.9	7.1	12.5	10.3	5.8
95% CI	10.1–13.4	7.8–12.6	7.4–13.3	12.9–22.3	7.2–20.6	4.1–11.4	4.6–27.1	2.8–26.3	0.1–32.0
Index years 1998–2000									
Rate	14.3	12.9	15.7	15.8	11.5	12.6	19.7	18.3	11.4
95% CI	12.9–15.9	10.6–15.6	12.2–19.8	12.9–19.0	6.5–18.7	8.0–18.5	8.9–37.2	6.0–40.0	3.1–29.1

Notes

1. Rates are the number of interval cancers detected per 10,000 women-years and age-standardised to the population of women attending a BreastScreen Australia service in 1998.
 2. The data include both symptomatic and asymptomatic women.
 3. None of the rates was significantly different from the all-Australia rate.
 4. Data for the index years 1998, 1999 and 2000 (0–12 months and 13–24 months) which were originally supplied for the *BreastScreen Australia monitoring reports 2001–2002, 2002–2003 and 2003–2004*, respectively, were re-used in this report.
- The age-standardised detection rate of interval cancers for Australia for women aged 50–69 years 13–24 months after their first screen decreased between the index years 1998–2000 and 2001–2003 from 14.3 per 10,000 women to 11.7 per 10,000. However, the decrease was not statistically significant.

For more information, see tables 15–20 in Appendix A. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.

Interval cancer rate by states and territories, first screening round, 0–24 months follow-up

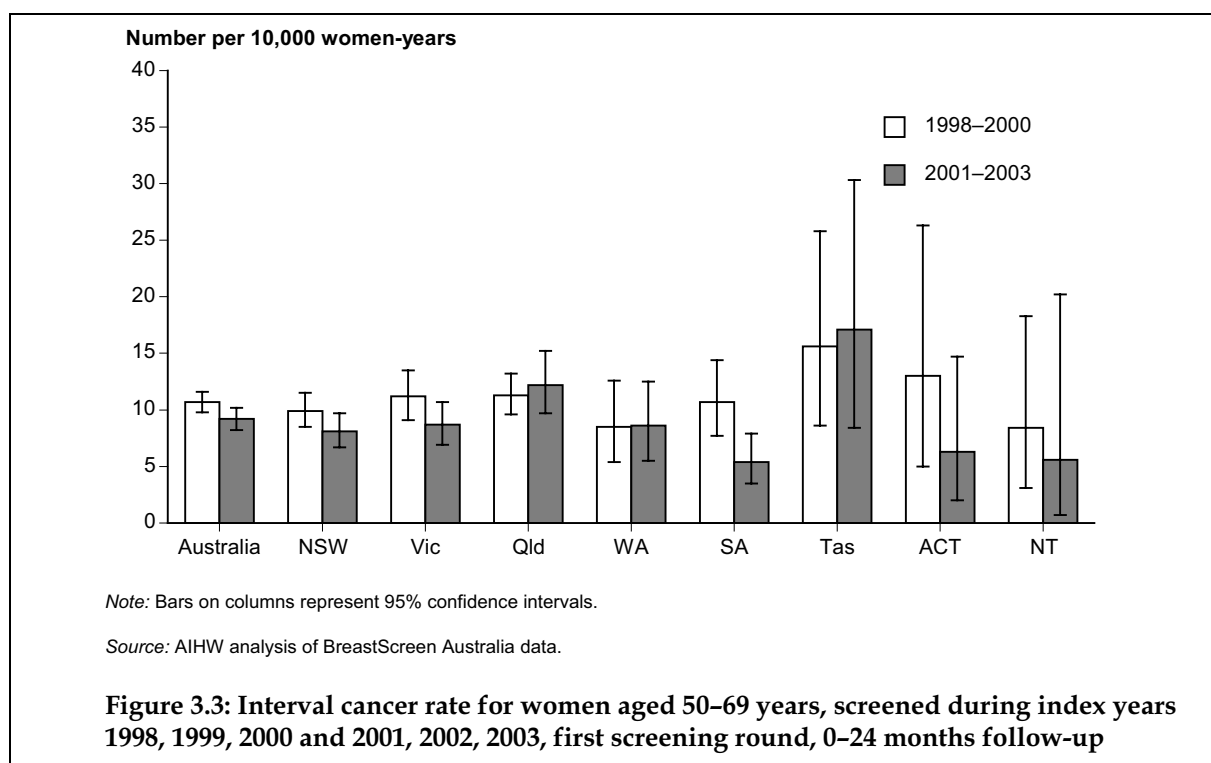


Table 3.5: Interval cancer rate for women aged 50–69 years, screened during index years 1998, 1999, 2000 and 2001, 2002, 2003, first screening round, 0–24 months follow-up

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Index years 2001–2003									
Rate	9.2	8.1	8.7	12.2	8.6	5.4	17.1	6.3	5.6
95% CI	8.3–10.3	6.7–9.7	6.9–10.7	9.7–15.2	5.5–12.5	3.5–7.8	8.4–30.3	2.0–14.7	0.7–20.1
Index years 1998–2000									
Rate	10.7	9.9	11.2	11.3	8.5	10.7	15.6	13.0	8.4
95% CI	9.8–11.6	8.5–11.5	9.2–13.5	9.6–13.2	5.4–12.6	7.6–14.4	8.6–25.9	5.0–26.3	3.1–18.4

Notes

1. Rates are the number of interval cancers detected per 10,000 women-years and age-standardised to the population of women attending a BreastScreen Australia service in 1998.
 2. The data include both symptomatic and asymptomatic women.
 3. None of the rates was significantly different from the all-Australia rate.
 4. Data for the index years 1998, 1999 and 2000 (0–12 months and 13–24 months) which were originally supplied for the *BreastScreen Australia monitoring reports 2001–2002, 2002–2003 and 2003–2004*, respectively, were re-used in this report.
- The age-standardised detection rate of interval cancers for Australia decreased from 10.7 per 10,000 women-years for women aged 50–69 years 0–24 months after their first screen during index years 1998–2000 to 9.2 per 10,000 women-years for women screened in index years 2001–2003. The decrease was not statistically significant.

For more information, see tables 15–20 in Appendix A. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.

Interval cancer rate by states and territories, subsequent screening rounds, 0–12 months follow-up

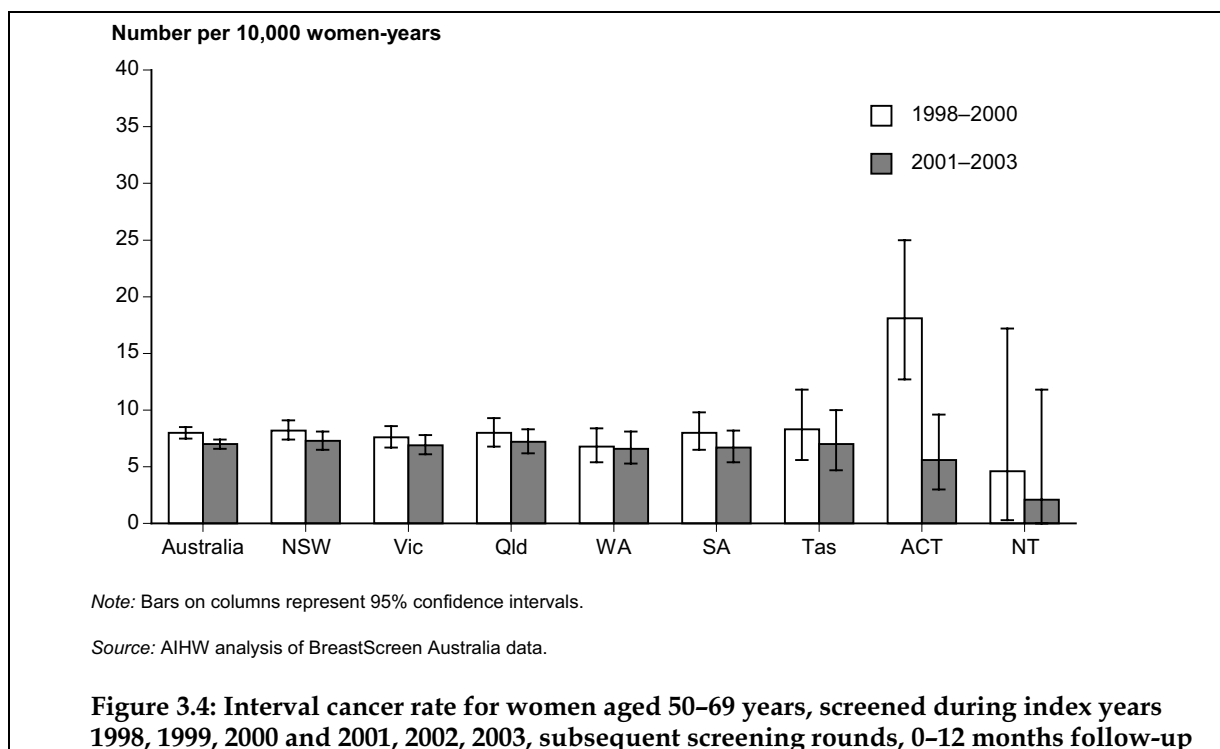


Table 3.6: Interval cancer rate for women aged 50–69 years, screened during index years 1998, 1999, 2000 and 2001, 2002, 2003, subsequent screening rounds, 0–12 months follow-up

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Index years 2001–2003									
Rate	7.0 [#]	7.3	6.9	7.2	6.6	6.7	7.0	5.6 [#]	2.1
95% CI	6.6–7.4	6.5–8.1	6.1–7.8	6.2–8.2	5.3–8.1	5.4–8.2	4.7–10.0	3.0–9.6	0.1–11.8
Index years 1998–2000									
Rate	8.0	8.2	7.6	8.0	6.8	8.0	8.3	18.1	4.6
95% CI	7.5–8.5	7.3–9.1	6.7–8.6	6.8–9.4	5.4–8.4	6.5–9.8	5.6–11.7	12.7–25.0	0.4–17.3

[#] Significantly different from the 1998–2000 rate.

Notes

1. Rates are the number of interval cancers detected per 10,000 women-years and age-standardised to the population of women attending a BreastScreen Australia service in 1998.
2. The data include both symptomatic and asymptomatic women.
3. None of the rates was significantly different from the all-Australia rate.
4. Data for the index years 1998, 1999 and 2000 (0–12 months and 13–24 months) which were originally supplied for the *BreastScreen Australia monitoring reports 2001–2002, 2002–2003 and 2003–2004*, respectively, were re-used in this report.

- Between index years 1998–2000 and 2001–2003, there was a significant decrease in the age-standardised rate of interval cancers from 8.0 per 10,000 women-years to 7.0 per 10,000 women-years for women aged 50–69 years during 0–12 months follow-up.
- For index years 2001–2003, the age-standardised rate of interval cancers for women aged 50–69 years for 0–12 months follow-up increased slightly between the first and the

subsequent rounds from 6.9 to 7.0 per 10,000 women-years. This increase was not significant.

For more information, see tables 15–20 in Appendix A. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.

Interval cancer rate by states and territories, subsequent screening rounds, 13–24 months follow-up

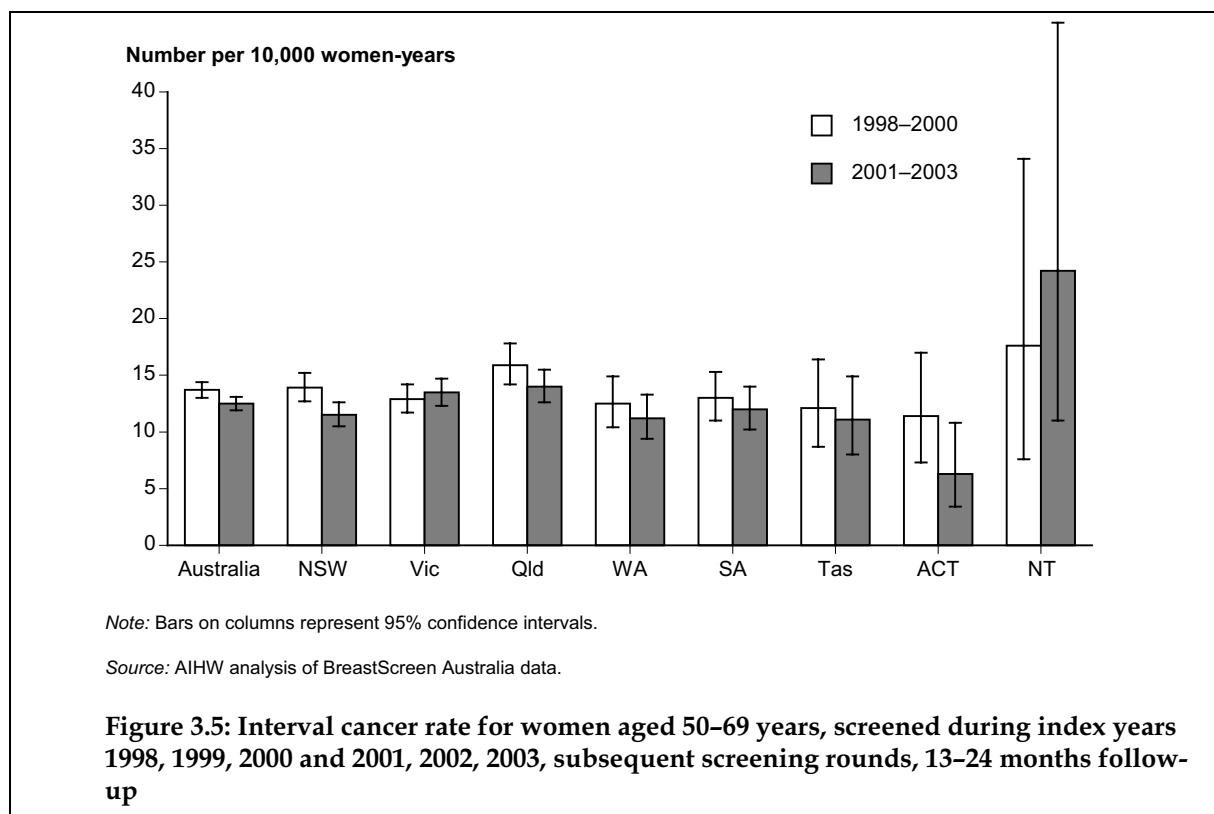


Table 3.7: Interval cancer rate for women aged 50–69 years, screened during index years 1998, 1999, 2000 and 2001, 2002, 2003, subsequent screening rounds, 13–24 months follow-up

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Index years 2001–2003									
Rate	12.5	11.5 [#]	13.5	14.0	11.2	12.0	11.1	6.3	24.2
95% CI	11.9–13.1	10.5–12.6	12.3–14.7	12.6–15.4	9.3–13.3	10.2–14.0	8.0–14.9	3.3–10.8	10.9–46.1
Index years 1998–2000									
Rate	13.7	13.9	12.9	15.9	12.5	13.0	12.1	11.4	17.6
95% CI	13.0–14.4	12.7–15.1	11.7–14.2	14.2–17.8	10.5–14.9	11.0–15.3	8.7–16.4	7.3–17.1	7.6–34.1

[#] Significantly different from the 1998–2000 rate.

Notes

1. Rates are the number of interval cancers detected per 10,000 women-years and age-standardised to the population of women attending a BreastScreen Australia service in 1998.
2. The data include both symptomatic and asymptomatic women.
3. None of the rates was significantly different from the all-Australia rate.
4. Data for the index years 1998, 1999 and 2000 (0–12 months and 13–24 months) which were originally supplied for the *BreastScreen Australia monitoring reports 2001–2002, 2002–2003 and 2003–2004*, respectively, were re-used in this report.

- Between index years 1998–2000 and 2001–2003, there was a significant decrease in the age-standardised rate of interval cancers from 13.7 per 10,000 women-years to 12.5 per 10,000 women-years for women aged 50–69 years during 13–24 months follow-up.

For more information, see tables 15–20 in Appendix A. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.

Interval cancer rate by states and territories, subsequent screening rounds, 0–24 months follow-up

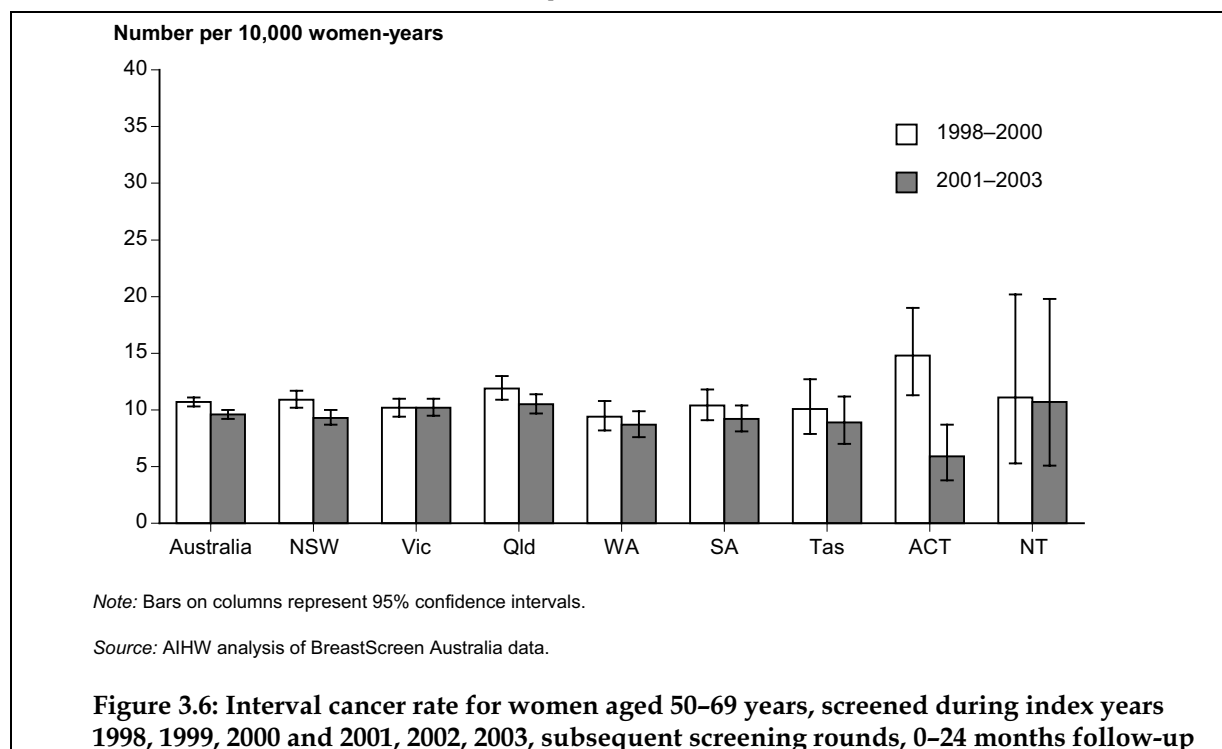


Table 3.8: Interval cancer rate for women aged 50–69 years, screened during index years 1998, 1999, 2000 and 2001, 2002, 2003, subsequent screening rounds, 0–24 months follow-up

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Index years 2001–2003									
Rate	9.6 [#]	9.3 [#]	10.2	10.5	8.7	9.2	8.9	5.9 [#]	10.7
95% CI	9.3–10.0	8.6–9.9	9.5–10.9	9.6–11.4	7.6–9.9	8.1–10.5	7.0–11.2	3.9–8.7	5.1–19.8
Index years 1998–2000									
Rate	10.7	10.9	10.2	11.9	9.4	10.4	10.1	14.8	11.1
95% CI	10.3–11.2	10.2–11.6	9.5–11.1	10.9–13.0	8.2–10.8	9.2–11.8	7.9–12.8	11.3–19.0	5.3–20.2

[#] Significantly different from the 1998–2000 rate.

Notes

1. Rates are the number of interval cancers detected per 10,000 women-years and age-standardised to the population of women attending a BreastScreen Australia service in 1998.
2. The data include both symptomatic and asymptomatic women.
3. None of the rates was significantly different from the all-Australia rate.
4. Data for the index years 1998, 1999 and 2000 (0–12 months and 13–24 months) which were originally supplied for the *BreastScreen Australia monitoring reports 2001–2002, 2002–2003 and 2003–2004*, respectively, were re-used in this report.

- The age-standardised rate of interval cancers for women aged 50–69 years with 0–24 months of follow-up after their subsequent screening rounds decreased significantly from 10.7 per 10,000 women-years in index years 1998–2000 to 9.6 per 10,000 women-years in index years 2001–2003.

For more information, see tables 15–20 in Appendix A. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.

Indicator 3b Program sensitivity

Program sensitivity by states and territories, first screening round, 0–12 months follow-up

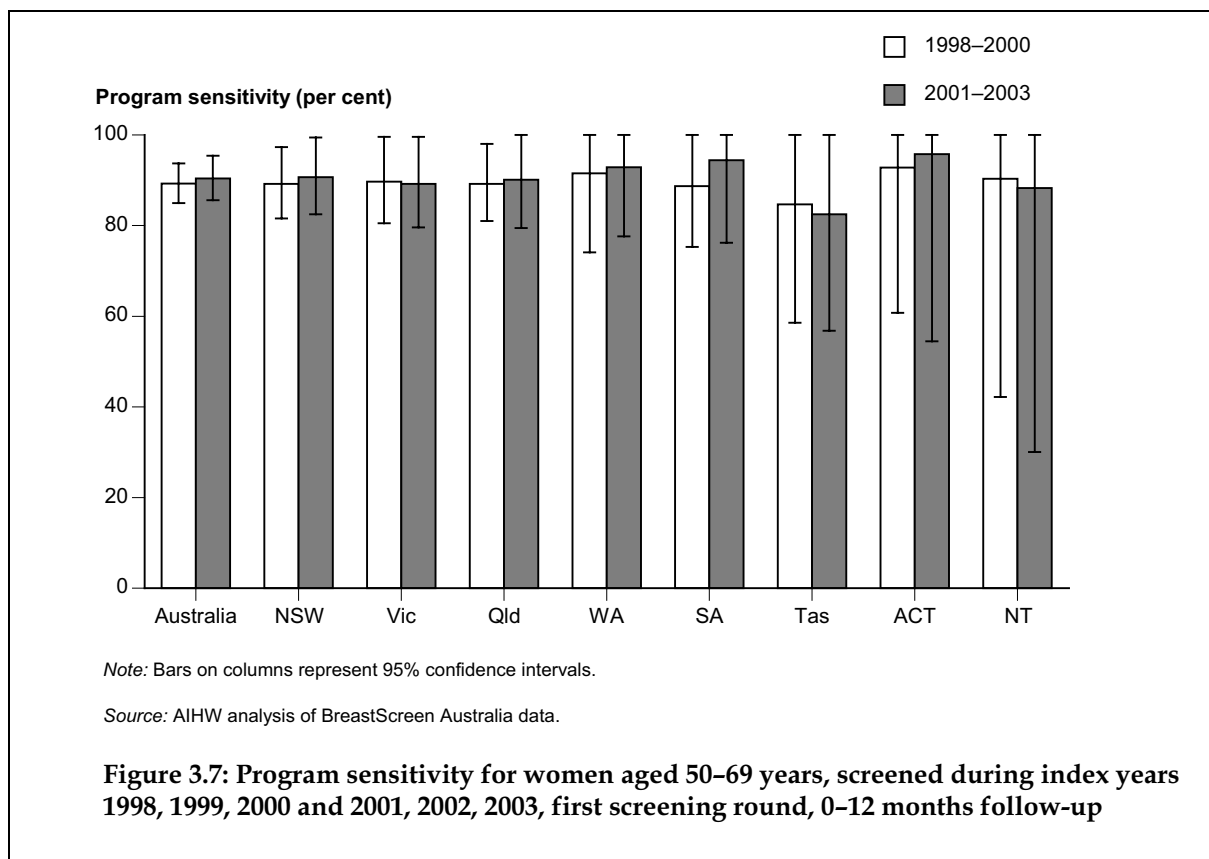


Table 3.9: Program sensitivity for women aged 50–69 years, screened during index years 1998, 1999, 2000 and 2001, 2002, 2003, first screening round, 0–12 months follow-up

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
(percent)									
Index years 2001–2003									
Rate	90.4	90.7	89.2	90.1	92.9	94.4	82.5	95.8	88.3
95% CI	85.6–95.4	82.6–99.4	79.6–99.5	79.5–100.0	77.6–100.0	76.2–100.0	56.8–100.0	54.5–100.0	30.1–100.0
Index years 1998–2000									
Rate	89.3	89.2	89.7	89.2	91.5	88.7	84.7	92.8	90.3
95% CI	85.0–93.7	81.6–97.3	80.5–99.6	81.1–98.0	74.1–100.0	75.4–100.0	58.5–100.0	60.8–100.0	42.2–100.0

Notes

1. Rates are the number of screen-detected cancers as a percentage of all cancers (screen-detected and interval cancers) and age-standardised to the population of women attending a BreastScreen Australia service in 1998.
2. The data include both symptomatic and asymptomatic women.
3. None of the rates was significantly different from the all-Australia rate.
4. Data for the index years 1998, 1999 and 2000 (0–12 months and 0–24 months) which were originally supplied for the *BreastScreen Australia monitoring reports 2001–2002, 2002–2003 and 2003–2004*, respectively, were re-used in this report.

- The age-standardised program sensitivity rate for women in the target age group (50–69 years) 0–12 months after their first screen was 90.4% for index years 2001–2003 compared with 89.3% for index years 1998–2000. The increase was not statistically significant.

For more information, see tables 21–24 in Appendix A. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.

Program sensitivity by states and territories, first screening round, 0–24 months follow-up

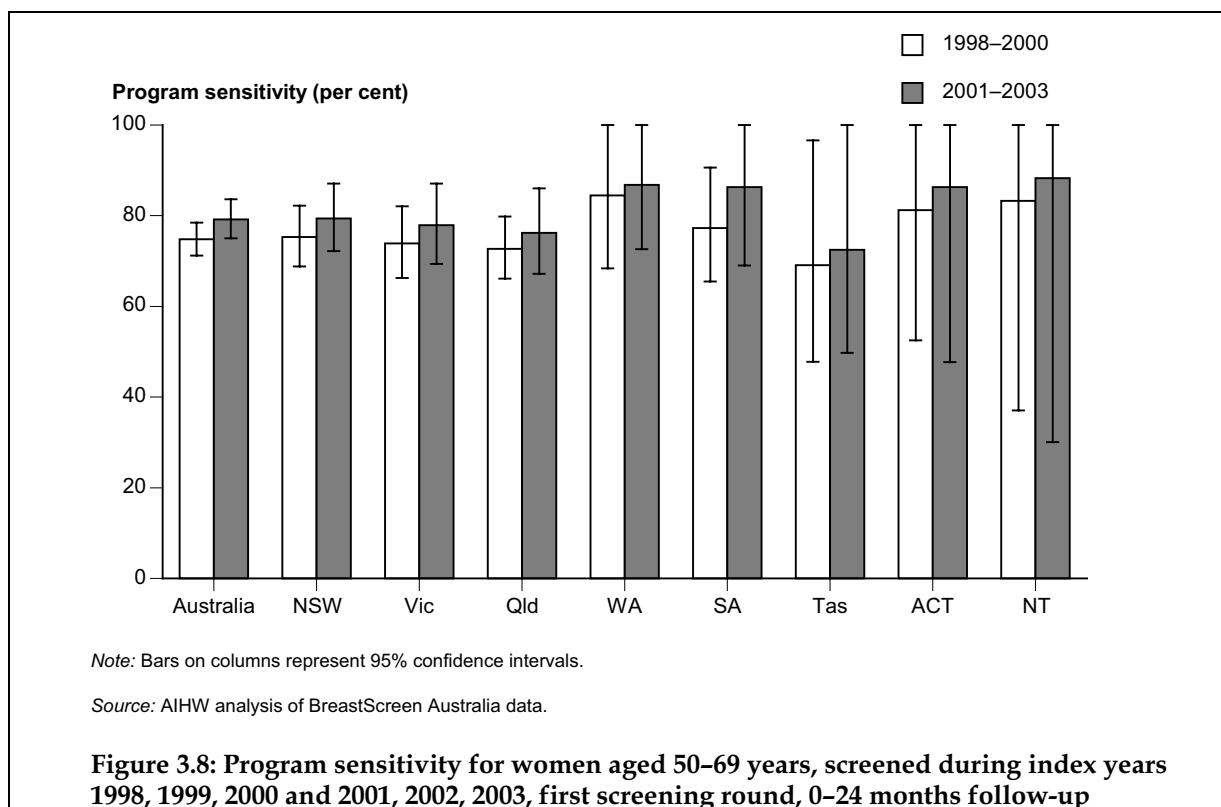


Table 3.10: Program sensitivity for women aged 50–69 years, screened during index years 1998, 1999, 2000 and 2001, 2002, 2003, first screening round, 0–24 months follow-up

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
	(per cent)								
Index years 2001–2003									
Rate	79.2	79.4	77.9	76.2	86.8	86.3	72.5	86.3	88.3
95% CI	75.0–83.6	72.2–87.1	69.4–87.0	67.3–86.0	72.6–100.0	69.1–100.0	49.8–100.0	47.6–100.0	30.1–100.0
Index years 1998–2000									
Rate	74.8	75.3	73.9	72.7	84.5	77.3	69.1	81.2	83.3
95% CI	71.2–78.5	68.8–82.2	66.3–82.1	66.0–79.8	68.4–100.0	65.5–90.6	47.8–96.6	52.5–100.0	37.1–100.0

Notes

1. Rates are the number of screen-detected cancers as a percentage of all cancers (screen-detected and interval cancers) and age-standardised to the population of women attending a BreastScreen Australia service in 1998.
 2. The data include both symptomatic and asymptomatic women.
 3. Data for the index years 1998, 1999 and 2000 (0–12 months and 0–24 months) which were originally supplied for the *BreastScreen Australia monitoring reports 2001–2002, 2002–2003 and 2003–2004*, respectively, were re-used in this report.
- The age-standardised program sensitivity rate for women aged 50–69 years 0–24 months after their first screen increased from 74.8% in 1998–2000 to 79.2% in 2001–2003. The increase was not significant.

For more information, see tables 21–24 in Appendix A. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.

Program sensitivity by states and territories, subsequent screening rounds, 0–12 months follow-up

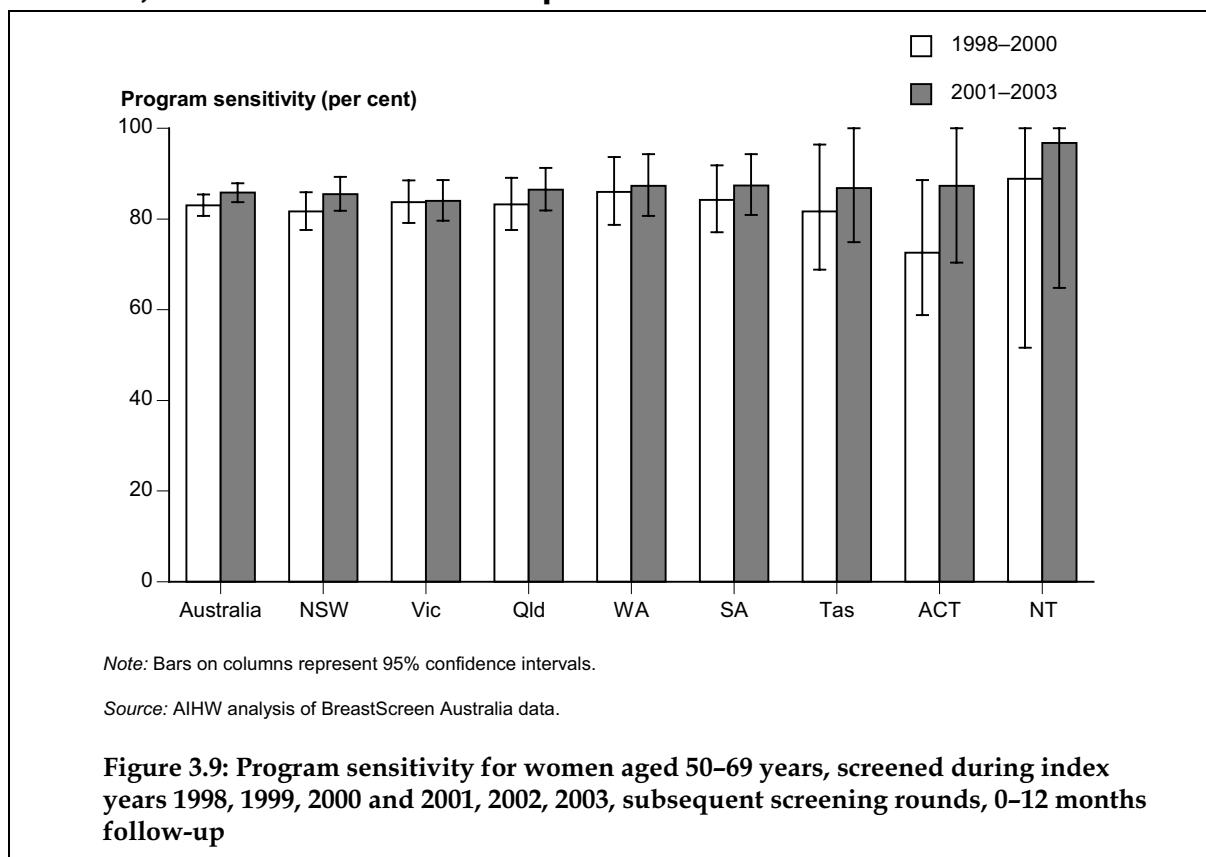


Table 3.11: Program sensitivity for women aged 50–69 years, screened during index years 1998, 1999, 2000 and 2001, 2002, 2003, subsequent screening rounds, 0–12 months follow-up

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
(per cent)									
Index years 2001–2003									
Rate	85.8	85.5	84.0	86.5	87.3	87.4	86.8	87.3	96.8
95% CI	83.7–88.0	81.7–89.3	79.6–88.5	81.9–91.2	80.7–94.3	80.9–94.2	74.9–100.0	70.5–100.0	64.8–100.0
Index years 1998–2000									
Rate	83.0	81.7	83.7	83.2	86.0	84.2	81.7	72.6	88.9
95% CI	80.7–85.3	77.6–85.9	79.1–88.4	77.6–89.1	78.8–93.8	77.0–91.8	68.8–96.4	58.8–88.6	51.6–100.0

Notes

1. Rates are the number of screen-detected cancers as a percentage of all cancers (screen-detected and interval cancers) and age-standardised to the population of women attending a BreastScreen Australia service in 1998.
2. The data include both symptomatic and asymptomatic women.
3. None of the rates was significantly different from the all-Australia rate.
4. Data for the index years 1998, 1999 and 2000 (0–12 months and 0–24 months) which were originally supplied for the *BreastScreen Australia monitoring reports 2001–2002, 2002–2003 and 2003–2004*, respectively, were re-used in this report.

- The program sensitivity rate between the index years 1998–2000 and 2001–2003 for women aged 50–69 years 0–12 months after their second or subsequent screens increased from 83.0% to 85.8%. The increase was not statistically significant.

For more information, see tables 21–24 in Appendix A. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.

Program sensitivity by states and territories, subsequent screening rounds, 0–24 months follow-up

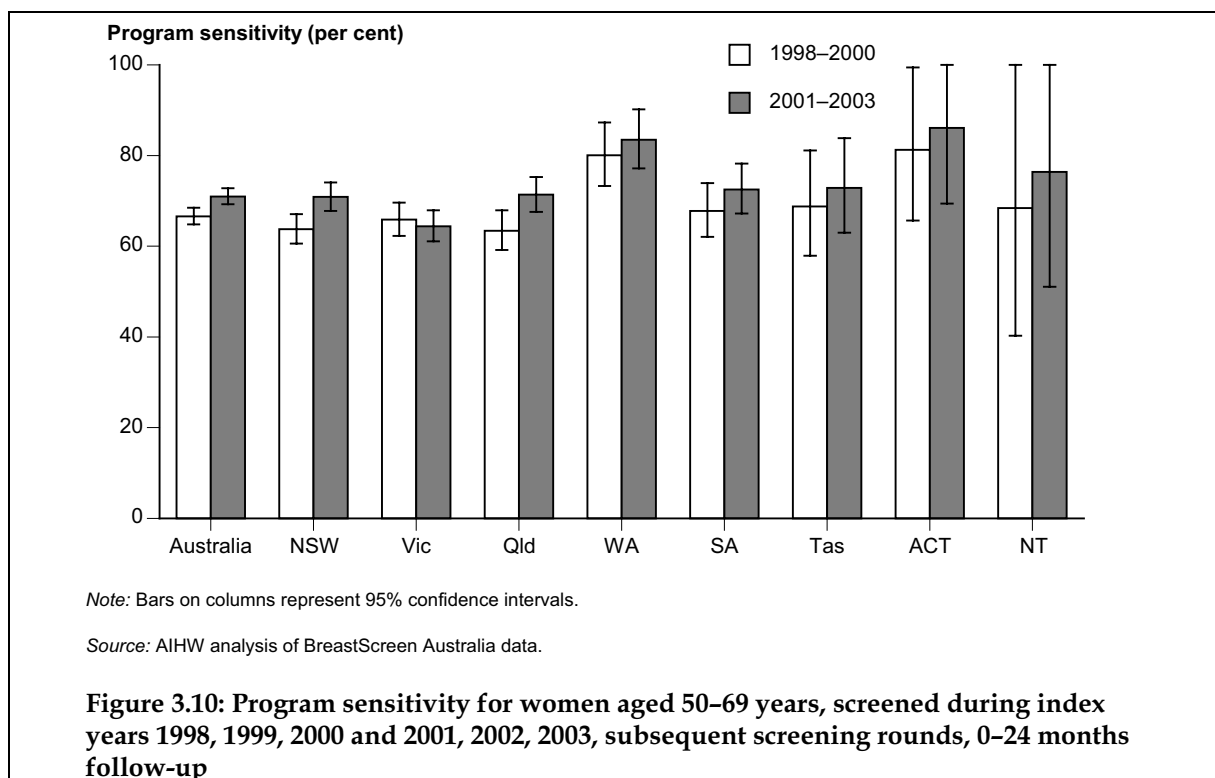


Table 3.12: Program sensitivity for women aged 50–69 years, screened during index years 1998, 1999, 2000 and 2001, 2002, 2003, subsequent screening rounds, 0–24 months follow-up

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
(per cent)									
Index years 2001–2003									
Rate	71.0 [#]	70.9 [#]	64.4	71.4	83.5	72.5	72.9	86.1	76.4
95% CI	69.3–72.8	67.8–74.0	61.1–67.9	67.7–75.4	77.2–90.2	67.1–78.1	62.9–83.9	69.4–100.0	51.2–100.0
Index years 1998–2000									
Rate	66.6	63.8	65.9	63.4	80.1	67.8	68.8	81.3	68.4
95% CI	64.7–68.4	60.7–67.1	62.3–69.6	59.1–67.8	73.3–87.3	62.1–74.0	58.0–81.1	65.7–99.5	40.3–100.0

[#] Significantly different from the 1998–2000 rate.

Notes

1. Rates are the number of screen-detected cancers as a percentage of all cancers (screen-detected and interval cancers) and age-standardised to the population of women attending a BreastScreen Australia service in 1998.
 2. The data include both symptomatic and asymptomatic women.
 3. Data for the index years 1998, 1999 and 2000 (0–12 months and 0–24 months) which were originally supplied for the *BreastScreen Australia monitoring reports 2001–2002, 2002–2003 and 2003–2004*, respectively, were re-used in this report.
- The program sensitivity rate for Australia between the index years 1998–2000 and 2001–2003 for women in the target age group (50–69 years) 0–24 months after their second or subsequent screen increased from 66.6% to 71.0%. This increase was statistically significant.

For more information, see tables 21–24 in Appendix A. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.

Indicator 4 Detection of ductal carcinoma in situ

Ductal carcinoma in situ detection rate

The ductal carcinoma in situ (DCIS) detection rate is the rate of women with DCIS per 10,000 women screened, by 10-year age groups for women aged 40 years or over, and for the target age group (50–69 years).

The DCIS detection indicator

DCIS is a disease that involves changes in the cells in the lining of the ducts of the breast. Although the changes are like those seen in breast cancer, DCIS has not spread beyond the ducts and therefore is not an invasive cancer (NBCC et al. 2000). The natural history of DCIS is still not well understood, although women with the condition are at increased risk of subsequent development of invasive breast cancer (O’Shaughnessy 2000).

The DCIS indicator measures the rate of DCIS diagnosed in women attending a BreastScreen Australia service. This is expressed as the number of women with DCIS detected for every 10,000 women screened.

The National Accreditation Standards for the detection of DCIS require that:

- ≥ 12 per 10,000 women aged 50–69 years who attend for their first screen are diagnosed with DCIS
- ≥ 7 per 10,000 women aged 50–69 years who attend for their second or subsequent screen are diagnosed with DCIS.

The following table illustrates the detection of DCIS in 2000, 2004 and 2005. The objectives of detecting at least 12 DCIS lesions per 10,000 women attending for their first screening round and at least 7 DCIS lesions per 10,000 women attending for their second and subsequent rounds were achieved for women in all age categories.

Table 4.1: Ductal carcinoma in situ detection rate in women aged 40 years or over and 50–69 years, 2000, 2004 and 2005

	Objective ^(a)	2000	2004	2005
First screening round				
Rate for women aged 50–69 years	≥12	13.7	20.3 [#]	14.5
95% CI		11.0–16.8	16.2–24.9	11.4–18.1
Rate for women aged 40 years or over	..	14.0	18.1	15.9
95% CI		11.8–16.5	14.9–21.8	12.6–19.7
Subsequent screening rounds				
Rate for women aged 50–69 years	≥7	10.4	10.5	11.0
95% CI		9.5–11.4	9.7–11.4	10.2–11.9
Rate for women aged 40 years or over	..	9.9	10.3	10.3
95% CI		9.1–10.7	9.5–11.0	9.6–11.1

[#] Significantly different from subsequent screening rounds.

(a) Performance objective for BreastScreen services as set out in the National Accreditation Standards (NQMC 2004).

- In 2005, BreastScreen Australia detected 925 cases of DCIS in women aged 40 years or over, 165 cases in the first screening round, and 760 cases in subsequent screening rounds.
- In women aged 50–69 years, there were 725 cases of DCIS detected in 2005, 104 cases in the first screening round, and 621 cases in subsequent screening rounds.
- For women aged 50–69 years, the detection rate in the first screening round was 14.5 per 10,000 women screened, and in subsequent screening rounds 11.0 per 10,000 women screened in 2005. Although the detection rates rose slightly between 2000 and 2005, the increases were not significant.

Ductal carcinoma in situ detection, all screening rounds

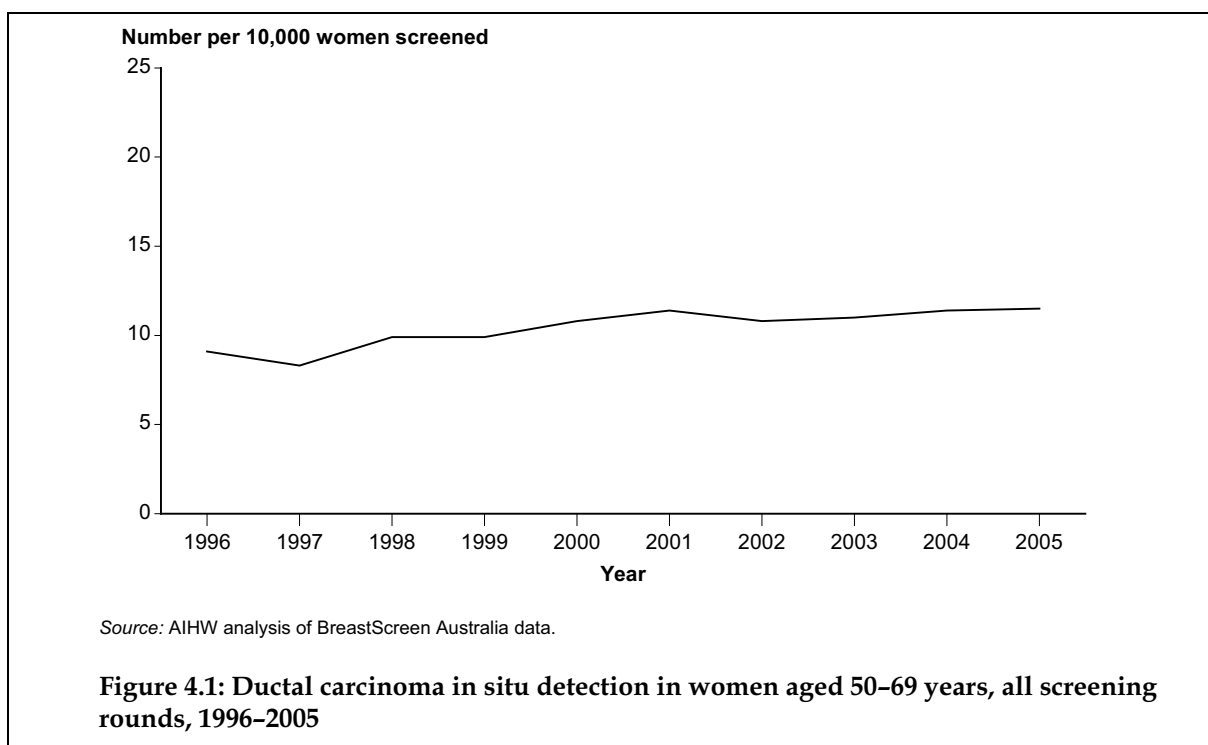


Table 4.2: Ductal carcinoma in situ detection in women aged 50–69 years, all screening rounds, 1996–2005

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Rate	9.1	8.3	9.9	9.9	10.8	11.4	10.8	11.0	11.4	11.5*
95% CI	8.2–10.1	7.5–9.1	9.0–10.8	9.1–10.8	9.9–11.7	10.5–12.3	9.9–11.6	10.2–11.9	10.5–12.3	10.7–12.3

* Statistically different from the 1996 and 1997 rate.

Note: Rates are the number of cases of DCIS per 10,000 women screened and age-standardised to the population of women attending a BreastScreen Australia service in 1998.

- The number of DCIS cases detected in women aged 50–69 years increased from 376 in 1996 to 725 DCIS cases in 2005 for all screening rounds.
- The age-standardised rate of DCIS detection for women in the target age group (50–69 years) has remained relatively constant since 1996, at between 9 and 11 cases detected per 10,000 women screened, over all screening rounds.

For more information, see tables 25–28 in Appendix A. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.

Ductal carcinoma in situ detection by states and territories, first screening round

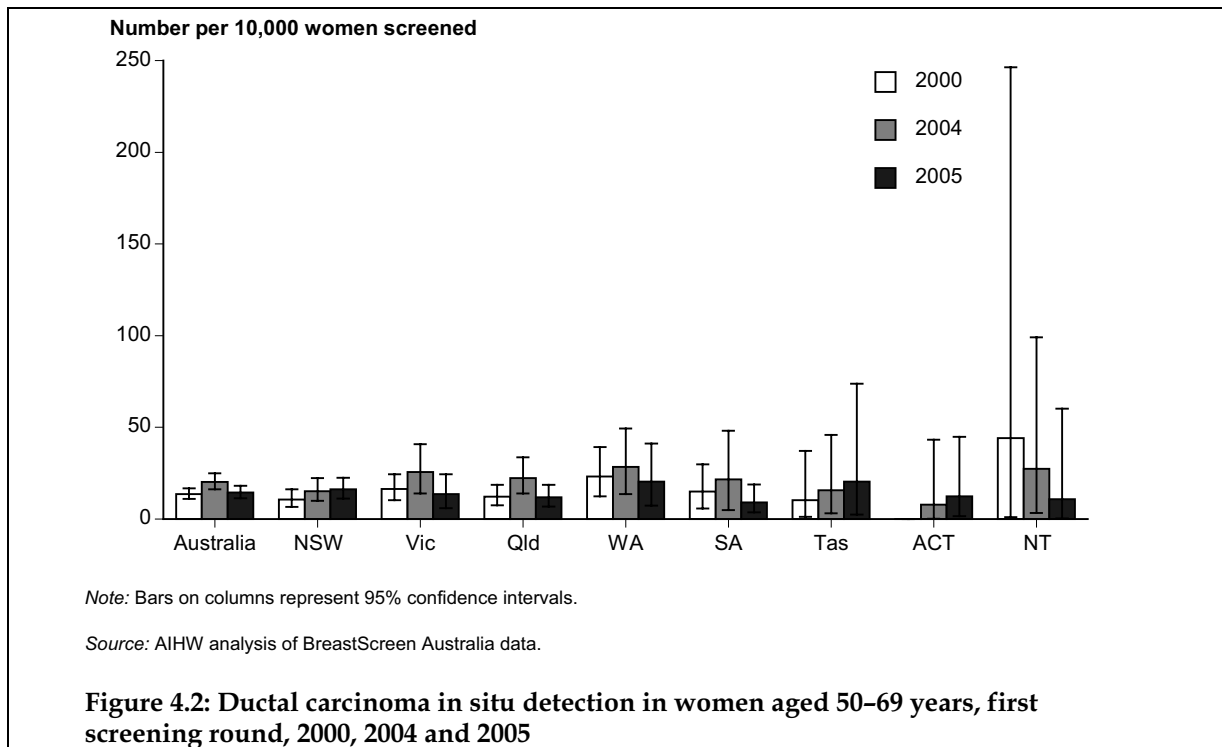


Table 4.3: Ductal carcinoma in situ detection in women aged 50–69 years, first screening round, 2000, 2004 and 2005

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
2005 rate	14.5	16.2	13.7	11.8	20.5	9.1	20.4	12.4	10.8
95% CI	11.4–18.1	11.2–22.4	6.0–24.5	6.8–18.6	7.4–41.2	3.7–18.8	2.5–73.8	1.5–44.8	0.3–60.2
2004 rate	20.3	15.2	25.7	22.3	28.4	21.7	15.7	7.8	27.4
95% CI	16.2–24.9	9.9–22.3	13.9–40.9	14.0–33.6	13.7–49.4	4.9–48.2	3.2–45.9	0.2–43.3	3.3–99.1
2000 rate	13.7	10.7	16.4	12.2	23.3	15.1	10.3	..	44.2
95% CI	11.0–16.8	6.7–16.2	10.3–24.4	7.5–18.6	12.4–39.3	5.8–29.8	1.2–37.1	..	1.1–246.4

Note: Rates are the number of cases of DCIS per 10,000 women screened and age-standardised to the population of women attending a BreastScreen Australia service in 1998.

- DCIS was detected in 165 women attending for their first screening round in 2005, including 104 cases in women aged 50–69 years. The age-standardised DCIS detection rate was 14.5 per 10,000 women screened for women aged 50–69 years, and 15.9 per 10,000 for women aged 40 years or over.
- The national age-standardised detection rate of DCIS increased from 13.7 in 2000 to 14.5 in 2005 but the increase was not statistically significant.

For more information, see tables 25–28 in Appendix A. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.

Ductal carcinoma in situ detection by states and territories, second or subsequent screening rounds

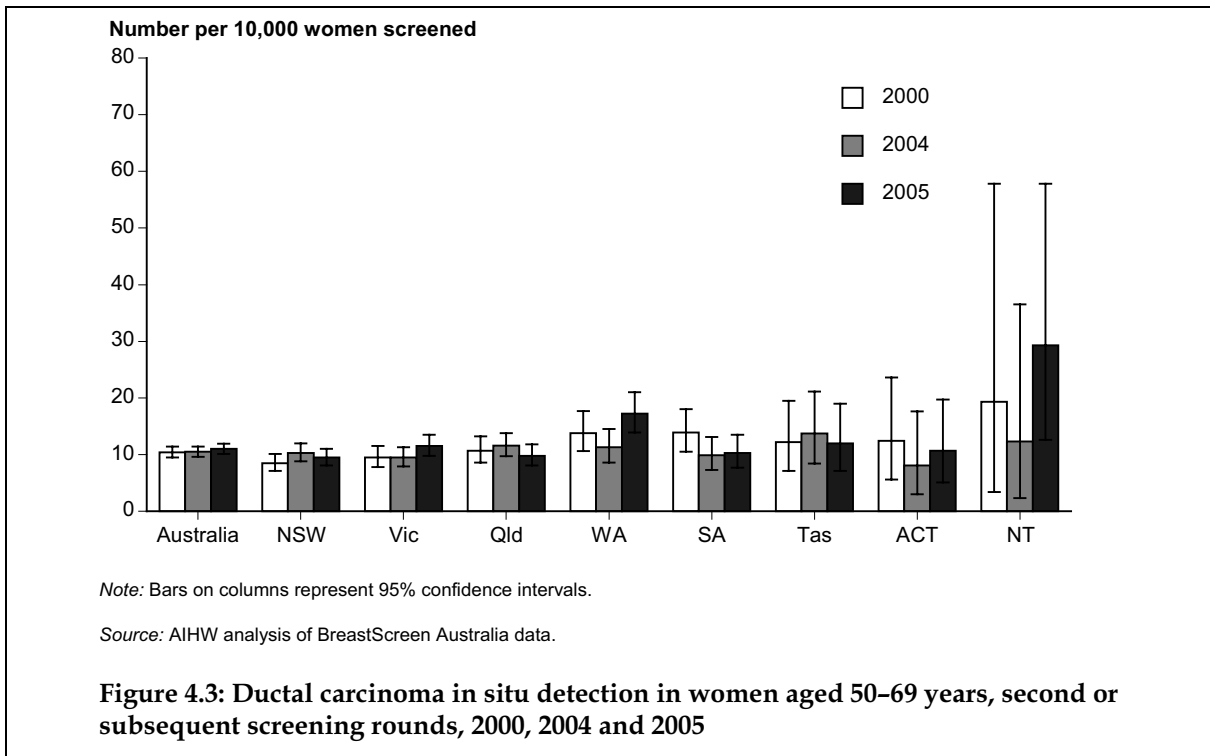


Table 4.4: Ductal carcinoma in situ detection in women aged 50–69 years, second or subsequent screening rounds, 2000, 2004 and 2005

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
2005 rate	11.0	9.5	11.5	9.8	17.2	10.3	12.0	10.7	29.3
95% CI	10.2–11.9	8.1–11.0	9.8–13.5	8.1–11.8	13.9–21.1	7.7–13.5	7.1–19.0	5.1–19.6	12.6–57.8
2004 rate	10.5	10.3	9.5	11.6	11.3	9.9	13.7	8.1	12.3
95% CI	9.7–11.4	8.8–12.0	7.9–11.3	9.7–13.8	8.7–14.6	7.4–13.1	8.3–21.1	3.0–17.6	2.3–36.5
2000 rate	10.4	8.5	9.5	10.7	13.8	13.9	12.2	12.4	19.3
95% CI	9.5–11.4	7.1–10.1	7.8–11.4	8.6–13.2	10.6–17.7	10.6–18.0	7.1–19.6	5.6–23.6	3.4–57.8

Note: Rates are the number of cases of DCIS per 10,000 women screened and age-standardised to the population of women attending a BreastScreen Australia service in 1998.

- DCIS was detected in 760 women aged 40 years or over attending for their second or subsequent screening rounds in 2005, including 621 cases in women aged 50–69 years. The age-standardised DCIS detection rate was 11.0 per 10,000 women screened for women aged 50–69 years, and 10.3 per 10,000 for women aged 40 years or over.
- The national age-standardised detection rate of DCIS in 2005 (11.0 cases per 10,000 women) was not significantly different to the rate in 2000 at 10.4 cases per 10,000 women.

For more information, see tables 25–28 in Appendix A. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.

Indicator 5 Recall to assessment

Recall to assessment rate

The recall to assessment rate is the proportion of all women screened in a given calendar year who were recalled for assessment, by 5-year age groups for women aged 40 years or over, and for the target age group (50–69 years).

The recall to assessment indicator

The recall to assessment indicator measures the rate of women who are recalled for assessment following attendance for a routine screening at a BreastScreen Australia service. In most cases, the recall is made because a woman's screening mammogram shows signs that there may be breast cancer. During assessment, a woman might undergo further tests, such as additional mammography, physical examination, ultrasound and, if required, a fine needle aspiration or a biopsy.

BreastScreen Australia aims to maximise the number of cancers detected – in particular, the number of small cancers – while minimising the number of unnecessary investigations. Most women recalled to assessment are found not to have breast cancer (BreastScreen South Australia 2005; BreastScreen Queensland 2005).

Women attending the program for the first time have a higher all-size cancer detection rate than those who have previously been screened. This is reflected in a higher recall to assessment rate for women who attend for their first screening round compared with those who attend for a subsequent round.

The National Accreditation Standards for recall to assessment require that:

- <10% of women aged 50–69 years who attend for their first screen are recalled for assessment.
- <5% of women aged 50–69 years who attend for their second or subsequent screen are recalled for assessment.

The following table shows the recall rates for 2000, 2004 and 2005. The objectives of recalling less than 10% of women aged 50–69 years attending for their first screening round and less than 5% of women attending for their second or subsequent screening rounds were achieved in each of the 3 years.

Table 5.1: Age-standardised recall to assessment rates for women aged 40 years or over and 50–69 years, mammographic reasons, 2000, 2004 and 2005

	Objective ^(a)	2000	2004	2005
(per cent)				
First screening round				
Rate for women aged 50–69 years	<10	8.2	9.9	9.8 [#]
95% CI		8.0–8.5	9.6–10.1	9.6–10.1
Rate for women aged 40 years or over	..	8.1	9.7	9.8
95% CI		7.9–8.3	9.5–9.9	9.5–10.0
Subsequent screening rounds				
Rate for women aged 50–69 years	<5	4.1	4.0	4.0
95% CI		4.0–4.1	4.0–4.1	3.9–4.0
Rate for women aged 40 years or over	..	4.1	4.3	4.2
95% CI		4.0–4.1	4.2–4.3	4.1–4.2

[#] Significantly different from subsequent screening rounds.

(a) Performance objective for BreastScreen services as set out in the National Accreditation Standards (NQMC 2004).

Source: AIHW analysis of BreastScreen Australia data.

- The age-standardised recall to assessment rate for women in the target age group (50–69 years) attending for their first screening round increased significantly from 8.2% in 2000 to 9.8% in 2005. The age-standardised recall rate for women aged 40 years or over attending for their first screening round also increased significantly from 8.1% in 2000 to 9.8% in 2005.
- The age-standardised recall to assessment rate for women aged 50–69 years attending for subsequent screening rounds remained stable at 4.1% in 2000, 4.3% in 2004 and 4.2% in 2005.

Recall to assessment rate by states and territories, mammographic reasons, first screening rounds

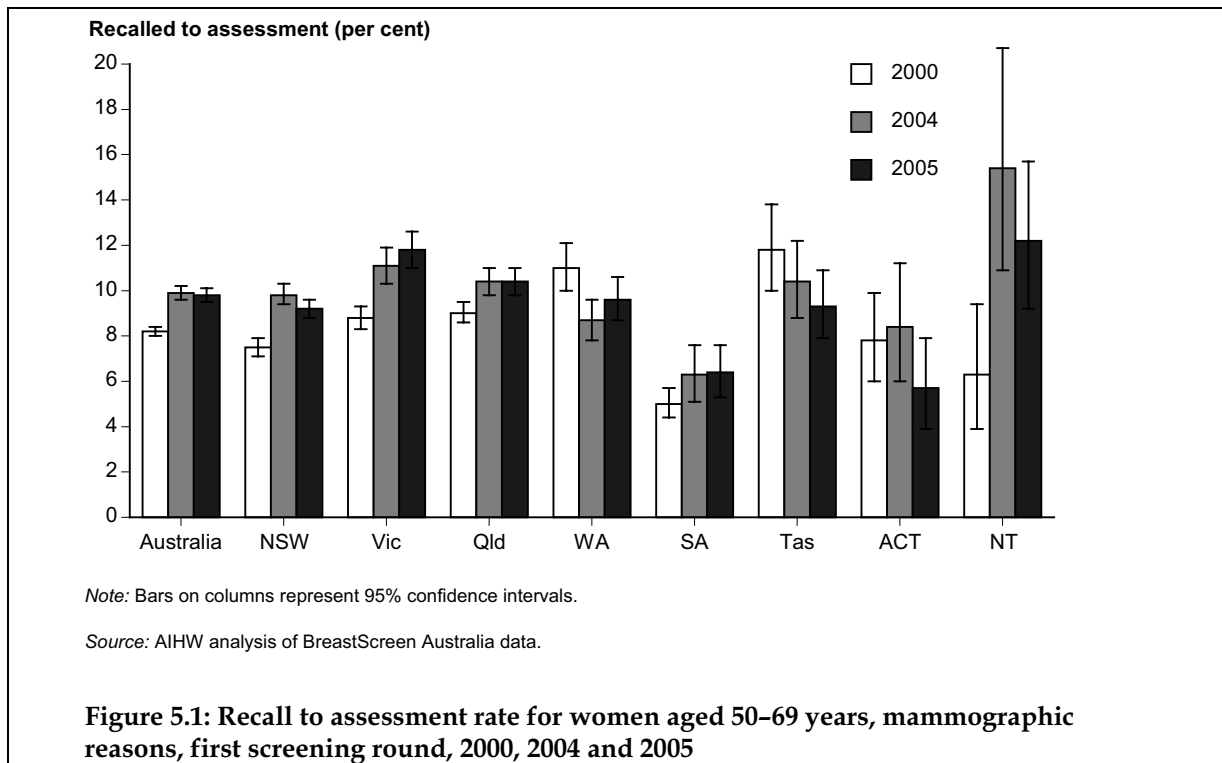


Table 5.2: Recall to assessment rate for women aged 50–69 years, mammographic reasons, first screening round, 2000, 2004 and 2005

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
	(per cent)								
2005 rate	9.8 [#]	9.2 [#]	11.8 [#]	10.4 [#]	9.6	6.4	9.3	5.7	12.2
95% CI	9.6–10.1	8.8–9.6	11.1–12.6	9.8–11.0	8.7–10.6	5.3–7.6	7.8–10.9	3.9–7.9	9.2–15.7
2004 rate	9.9	9.8	11.1	10.4	8.7	6.3	10.4	8.4	15.4
95% CI	9.6–10.1	9.3–10.2	10.4–11.9	9.8–11.0	7.9–9.6	5.2–7.6	8.7–12.2	6.0–11.2	10.9–20.8
2000 rate	8.2	7.5	8.8	9.0	11.0	5.0	11.8	7.8	6.3
95% CI	8.0–8.5	7.1–7.8	8.3–9.2	8.5–9.4	10.0–12.0	4.4–5.7	10.0–13.9	6.0–10.0	3.9–9.4

[#] Statistically different from the 2000 rate.

Note: Rates are the number of women recalled for assessment as a percentage of women screened and age-standardised to the population of women attending a BreastScreen Australia service in 1998.

- In 2005, 9.8% (age-standardised) of women aged 50–69 years attending for their first screen were recalled for assessment due to an abnormal mammogram result. This was a significant increase on the proportion recalled in 2000 of 8.2%. Similar increases also occurred in New South Wales, Victoria and Queensland. In other states and territories the changes between 2000 and 2005 were not significant, mainly due to the number of cases being too small to measure significant change.

For more information, see tables 29–36 in Appendix A. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.

Recall to assessment rate by states and territories, mammographic reasons, subsequent screening rounds

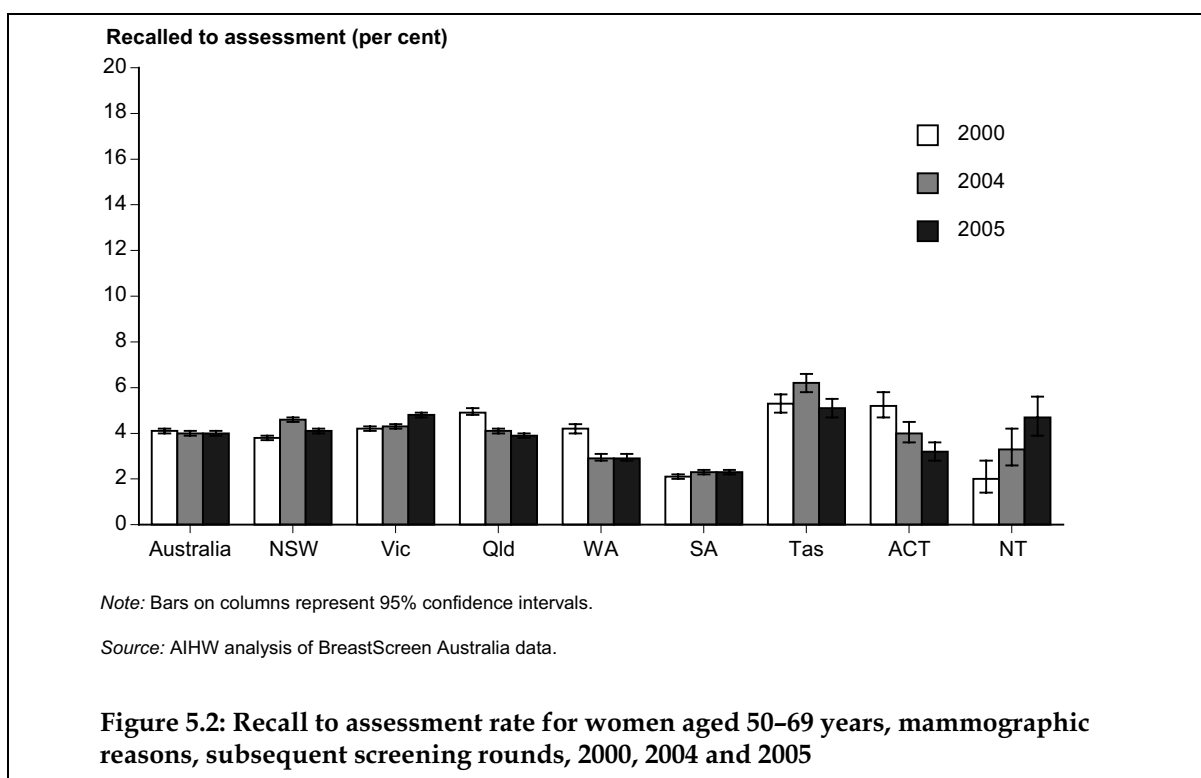


Table 5.3: Recall to assessment rate for women aged 50–69 years, mammographic reasons, subsequent screening rounds, 2000, 2004 and 2005

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
	(per cent)								
2005 rate	4.0	4.1* [#]	4.8* [#]	3.9 [#]	2.9 [#]	2.3	5.1*	3.2 [#]	4.7 [#]
95% CI	3.9–4.0	4.0–4.2	4.6–4.9	3.8–4.0	2.8–3.1	2.2–2.5	4.7–5.5	2.9–3.6	3.9–5.6
2004 rate	4.0	4.6	4.3	4.1	2.9	2.3	6.2	4.0	3.3
95% CI	4.0–4.1	4.4–4.7	4.2–4.4	4.0–4.2	2.7–3.0	2.2–2.4	5.8–6.6	3.5–4.5	2.5–4.2
2000 rate	4.1	3.8	4.2	4.9	4.2	2.1	5.3	5.2	2.0
95% CI	4.0–4.1	3.7–3.9	4.1–4.3	4.7–5.0	4.1–4.4	2.0–2.3	4.9–5.7	4.7–5.8	1.4–2.7

* Statistically different from the 2004 rate.

[#] Statistically different from the 2000 rate.

Note: Rates are the number of women recalled for assessment as a percentage of women screened and age-standardised to the population of women attending a BreastScreen Australia service in 1998.

- Of women aged 50–69 years who were screened for a second or subsequent time in 2005, 4.0% (age-standardised) were recalled for assessment due to an abnormal mammogram result. This was less than half the rate for women attending for their first screen (9.8%).

For more information, see tables 29–36 in Appendix A. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.

Recall to assessment trends, mammographic reasons, first and subsequent screening rounds

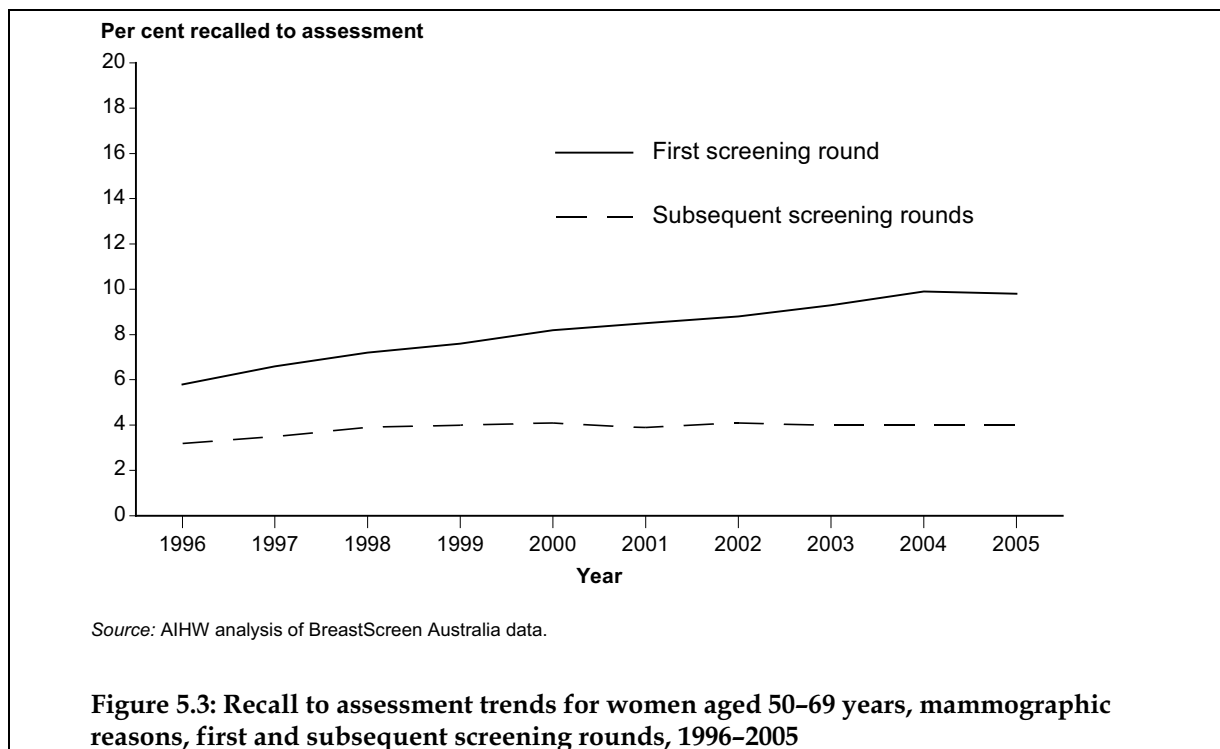


Table 5.4: Recall to assessment trends for women aged 50–69 years, mammographic reasons, first and subsequent screening rounds, 1996–2005

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
	(per cent)									
First screening round										
Rate	5.8*	6.6*	7.2*	7.6*	8.2*	8.5*	8.8*	9.3*	9.9*	9.8*
95% CI	5.7–5.9	6.4–6.7	7.1–7.4	7.4–7.8	8.0–8.5	8.3–8.7	8.6–9.0	9.1–9.6	9.6–10.1	9.6–10.1
Subsequent screening rounds										
Rate	3.2	3.5	3.9	4.0	4.1	3.9	4.1	4.0	4.0	4.0
95% CI	3.1–3.3	3.4–3.6	3.9–4.0	3.9–4.1	4.0–4.1	3.9–4.0	4.0–4.1	4.0–4.1	4.0–4.1	3.9–4.0

* Statistically significant from subsequent rounds.

Note: Rates are the number of women recalled for assessment as a percentage of women screened and age-standardised to the population of women attending a BreastScreen Australia service in 1998.

- There was an increase in the age-standardised rate for women recalled for assessment for mammographic reasons after their first screening round between 1996 and 2005, from 5.8% to 9.8%.
- The age-standardised recall rate for women attending for their second or subsequent screen was relatively stable between 1998 and 2005, oscillating between 3.9% and 4.1%.

For more information, see tables 29–36 in Appendix A. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.

Indicator 6 Rescreening

Rescreen rate

The rescreen rate is the proportion of all women screened in a given year whose screening outcome was a recommendation to return for screening in 2 years and who returned for a screen within 27 months. This rate is reported by 5-year age groups for women aged 40 years or over, and for the target age group (50–67 years). Although the BreastScreen Australia target age group is 50–69 years, only women aged 50–67 years are reported for the rescreen indicator. This is because women aged 68–69 years in the index year were outside the target age group 27 months after their index screen.

The rescreen indicator

The rescreen indicator measures the proportion of women who return for screening in the program within the recommended screening interval. The interval between screens is an important factor influencing the level of detection of cancers within the program. Intervals that are too long may allow tumours to grow to the point where symptoms become evident, thus eliminating the advantage of screening. A high rescreen rate is also important for maintaining the participation rate. The anticipated reductions in mortality can be achieved only if a high proportion of women in the target age group attend for screening every 2 years. By having a mammogram every 2 years, a woman can reduce her chance of dying from breast cancer by up to 40% (Duffy et al. 1991; Fletcher et al. 1993; Feig 1998). The recommended interval of 27 months includes another 3 months to allow for potential delays in screening availability and data transfer.

Women in the target age group are re-invited biennially. Some states and territories have a policy of re-inviting a proportion of women annually, for example, women with a strong family history of breast cancer. The data for this indicator include women who are recommended for annual screening as well as those screened biennially.

The proportion of women who returned for screening within the recommended screening interval increased with the number of screens a woman had previously attended. The rescreen rate is greater for women who have attended for two previous screens than for women who have been screened only once before, and greater still for women who have previously attended three or more screening episodes (Table 6.1).

One of the objectives of the BreastScreen Australia Program is 'To rescreen all women in the Program at 2-yearly intervals' (BSANAC & DHAC 2000).

The National Accreditation Standards for rescreen require that:

- ≥75% of women aged 50–67 years who attend for their first screening round within the program are rescreened within 27 months.
- ≥90% of women aged 50–67 years who attend for their second and subsequent screen are rescreened within 27 months of their previous screening episode.

The following table shows the rescreen rates for 2002 and 2003 for women aged 50–67 years. Although the BreastScreen Australia target age group is 50–69 years, only women aged

50–67 years are reported for the rescreen indicator. This is because women aged 68–69 years in the index year were outside the target age group 27 months after their index screen.

The objectives of rescreening at least 75% of women in the age group 50–67 attending for their first screening round and at least 90% of women attending for their second or subsequent screening rounds were not achieved in 2002 and 2003. The age-standardised rescreen rate for women aged 50–67 years attending for their first screening round declined from 61.6% in 2002 to 60.5% in 2003, but this decline was not significant. The age-standardised rescreen rate for women aged 40 years or over attending for their first screening round also declined from 56.6% in 2002 to 52.1% in 2003. The rescreen rates for women aged 50–67 years participating in their second or subsequent rounds were higher than the rescreen rates achieved by women participating in their first screening round but they did not reach the objective of at least 90%.

Table 6.1: Age-standardised rescreen rates for women aged 40 years or over and 50–67 years, screened during 2002 and 2003

	Objective ^(a)	2002	2003
(per cent)			
First screening round			
Rate for women aged 50–67 years	≥75	61.6	60.5
95% CI		60.9–62.2	59.8–61.2
Rate for women aged 40 years or over	..	56.6	52.1
95% CI		56.1–57.1	51.6–52.6
Second screening round			
Rate for women aged 50–67 years	≥90	70.3	69.5
95% CI		69.7–71.0	68.8–70.1
Rate for women aged 40 years or over	..	65.9	61.0
95% CI		65.4–66.4	60.5–61.4
Subsequent screening rounds			
Rate for women aged 50–67 years	≥90	80.7	80.1
95% CI		80.4–81.0	79.8–80.4
Rate for women aged 40 years or over	..	76.4	70.9
95% CI		76.1–76.7	70.7–71.2

(a) Performance objective for BreastScreen services as set out in the National Accreditation Standards (NQM 2004).

Rescreen rate by states and territories, first screening round

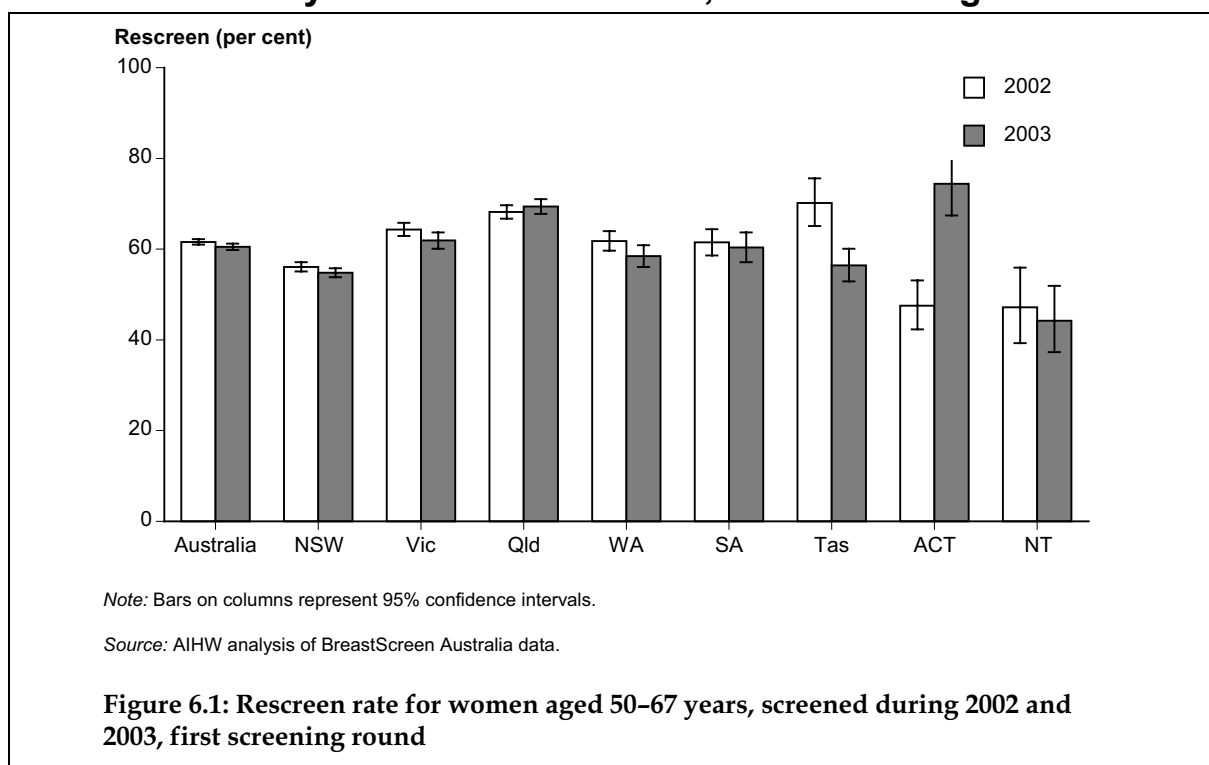


Table 6.2: Rescreen rate for women aged 50-67 years, screened during 2002 and 2003, first screening round

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
	(per cent)								
2003 rate	60.5	54.8	61.9	69.4	58.5	60.4	56.4*	74.4*	44.2
95% CI	59.8-61.2	53.7-55.8	60.1-63.7	67.8-71.0	56.1-61.0	57.2-63.8	52.9-60.1	67.5-81.9	37.2-51.8
2002 rate	61.6	56.1	64.3	68.2	61.8	61.5	70.2	47.5	47.2
95% CI	60.9-62.2	55.1-57.1	62.9-65.8	66.7-69.7	59.6-64.0	58.6-64.4	65.1-75.6	42.3-53.1	39.2-55.9

* Statistically different from the 2002 rate.

Note: Rates are the number of women attending for rescreening as a percentage of women screened and age-standardised to the population of women attending a BreastScreen Australia service in 1998.

- The age-standardised national rescreen rate for women aged 50-67 years returning for screening within 27 months of attending a BreastScreen Australia service in 2003 for the first time was 60.5%, a reduction from 61.6% in 2002, but this was not statistically significant. Of all women aged 40 years or over screened in 2003, 52.1% returned for screening, a fall from 56.6% in 2002. This decrease was statistically significant.

For more information, see tables 37-42 in Appendix A. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.

Rescreen rate by states and territories, second screening round

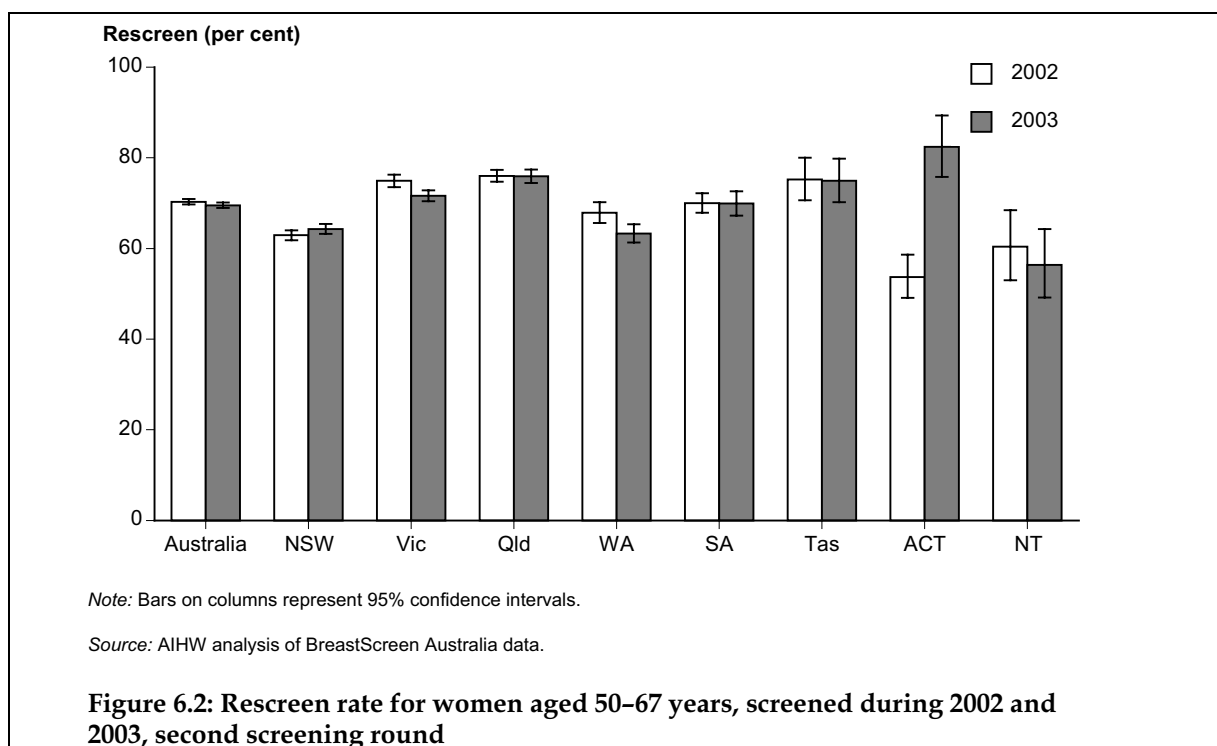


Table 6.3: Rescreen rate for women aged 50–67 years, screened during 2002 and 2003, second screening round

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
	(per cent)								
2003 rate	69.5*	64.3*	71.6*	75.9*	63.3*	69.9*	74.9*	82.4	56.4
95% CI	68.8–70.1	63.3–65.4	70.5–72.9	74.4–77.4	61.3–65.4	67.2–72.7	70.3–79.8	75.8–89.4	49.2–64.3
2002 rate	70.3	62.9	74.9	76.0	67.9	70.0	75.2	53.7	60.4
95% CI	69.7–71.0	61.8–63.9	73.6–76.3	74.7–77.3	65.6–70.2	67.8–72.2	70.6–80.0	49.1–58.6	53.0–68.4

* Statistically significant increase between first and second screening round (first round is on previous page).

Note: Rates are the number of women attending for rescreening as a percentage of women screened and age-standardised to the population of women attending a BreastScreen Australia service in 1998.

- The age-standardised national rescreen rate for women aged 50–67 years returning for screening a second time within 27 months of attending a BreastScreen Australia service in 2003 was 69.5%. This is higher than the rate for women attending for their first visit (60.5%).
- There was a decline in the age-standardised rescreen rates for women attending a screening service for their second round from 70.3% in 2002 to 69.5% in 2003. This was not statistically significant.

For more information, see tables 37–42 in Appendix A. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.

Rescreen rate by states and territories third and subsequent screening rounds

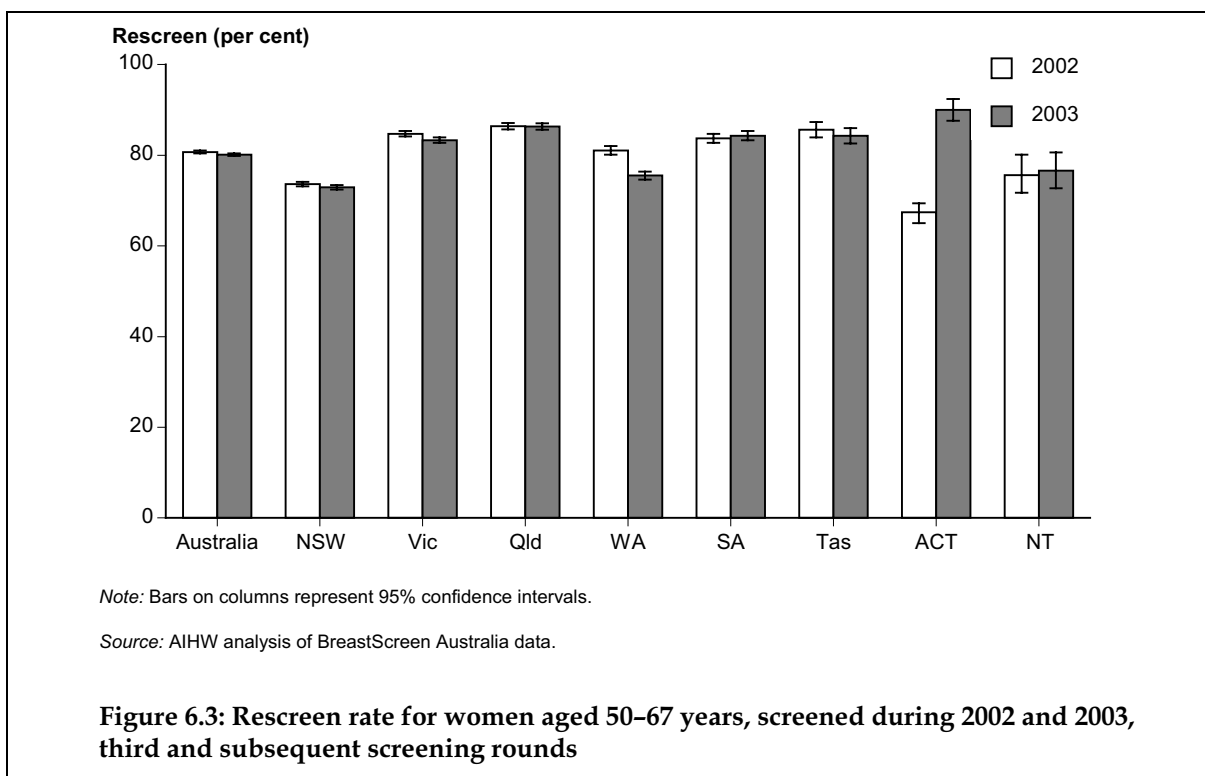


Table 6.4: Rescreen rate for women aged 50–67 years, screened during 2002 and 2003, third and subsequent screening rounds

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
	(per cent)								
2003 rate	80.1	72.9	83.3	86.3	75.5*	84.3	84.3	90.0*	76.6
95% CI	79.8–80.4	72.4–73.4	82.7–84.0	85.6–86.9	74.6–76.4	83.3–85.3	82.6–86.0	87.6–92.4	72.7–80.6
2002 rate	80.7	73.6	84.7	86.4	81.0	83.7	85.6	67.4	75.6
95% CI	80.4–81.0	73.1–74.1	84.1–85.4	85.7–87.1	80.1–82.0	82.8–84.7	83.9–87.3	65.4–69.4	71.4–80.1

* Statistically different from the 2002 rate.

Note: Rates are the number of women attending for rescreening as a percentage of women screened and age-standardised to the population of women attending a BreastScreen Australia service in 1998.

- The age-standardised national rescreen rate for women aged 50–67 years returning for screening for their third or subsequent visit within 27 months of attending a BreastScreen Australia service in 2003 was 80.1%. This is much higher than the rates for women attending for their first or second visits (60.5% and 69.5%, respectively).
- The age-standardised national rescreen rate for the third and subsequent screening rounds declined from 80.7% in 2002 to 80.1% in 2003. This was not statistically significant.

For more information, see tables 37–42 in Appendix A. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.

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 5-year age groups for women of all ages, 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 5-year period, by 10-year age groups for women of all ages, 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 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, looking at the trends in breast cancer incidence in different age groups helps to establish 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 2004, the latest national data available, and 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.

Table 7.1: Incidence of breast cancer per 100,000 women in women aged 50–69 years and all women, 1999, 2003 and 2004

	1999	2003	2004
Rate for women aged 50–69 years	286.9	285.6	288.8
95% CI	279.1–294.9	278.3–293.0	281.6–296.2
Rate for all women	111.2	112.2	112.8
95% CI	109.1–113.4	110.2–114.3	110.8–114.8

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 incidence of breast cancer for women aged 50–69 years decreased slightly from 286.9 new cases per 100,000 women in 1999 to 285.6 new cases per 100,000 in 2003 and rose to 288.8 new cases per 100,000 in 2004. These changes were not statistically significant.
- The incidence of breast cancer in the total female population increased from 111.2 new cases per 100,000 women in 1999 to 117.2 per 100,000 in 2001 and 2002 before decreasing to 112.2 per 100,000 in 2003 and rising slightly to 112.8 per 100,000 in 2004.

Table 7.2: Incidence of ductal carcinoma in situ per 100,000 in women aged 50–69 years and all women, 1995–1999 and 2000–2004

	1995–1999	2000–2004
Rate for women aged 50–69 years	34.0	43.9
95% CI	32.7–35.3	42.6–45.2
Rate for all women	11.3	14.0
95% CI	11.0–11.6	13.6–14.3

Notes

1. Rates are the number of breast cancers detected per 100,000 women and age-standardised to the Australian population at 30 June 2001.
 2. Comparisons between time periods should be treated with caution because of overlapping periods.
- Incidence of DCIS increased from 34.0 cases per 100,000 women in the target age group (50–69 years) in 1995–1999 to 43.9 cases per 100,000 women in 2000–2004. Similarly, the DCIS incidence rate for all women increased from 11.3 cases per 100,000 women in 1995–1999 to 14.0 cases per 100,000 women in 2000–2004.

Indicator 7a Incidence of breast cancer

Incidence of breast cancer

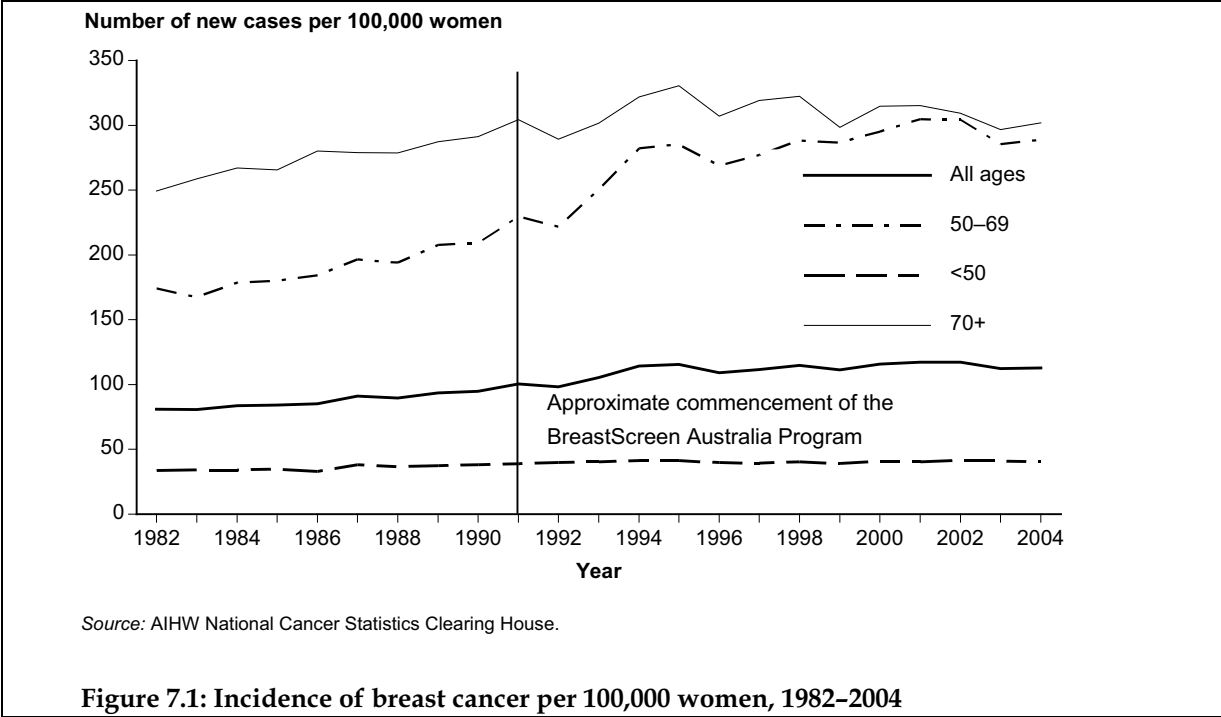


Table 7.3: Incidence of breast cancer per 100,000 women, 1982–2004

Year of diagnosis	Age group (years)			
	All ages	<50	50–69	70+
1982	80.8	33.8	174.2	249.3
1983	80.7	34.3	167.5	258.7
1984	83.5	34.0	178.6	267.0
1985	84.2	34.7	180.1	265.7
1986	85.2	33.1	184.4	280.2
1987	91.1	38.2	196.8	278.9
1988	89.5	36.6	194.3	278.7
1989	93.4	37.4	207.9	287.4
1990	94.6	38.1	209.3	291.3
1991	100.4	38.9	229.8	304.4
1992	98.2	39.9	221.9	289.4
1993	105.3	40.4	250.7	301.7
1994	114.1	41.3	282.4	322.0
1995	115.5	41.5	285.3	330.5
1996	109.1	40.0	269.0	307.0
1997	111.4	39.5	277.1	319.2
1998	114.6	40.4	288.5	322.3
1999	111.2	39.1	286.9	298.4
2000	115.6	40.9	295.1	314.8
2001	117.2	40.4	304.9	315.3
2002	117.2	41.3	304.4	309.2
2003	112.2	41.1	285.6	296.7
2004	112.8	40.4	288.8	301.9

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 1990–2004 in the age-standardised breast cancer incidence rates for women in the target age group (50–69 years). Incidence increased in this group from 209.3 new cancers per 100,000 women in 1990 to 288.8 per 100,000 women in 2004, although there was a peak of 304.9 new breast cancers per 100,000 women in 2001.
- From 1994 onwards, the incidence rate was relatively constant among women aged less than 50 years, and aged 70 years and over.

For more information, see tables 43–48 in Appendix A. 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 by states and territories

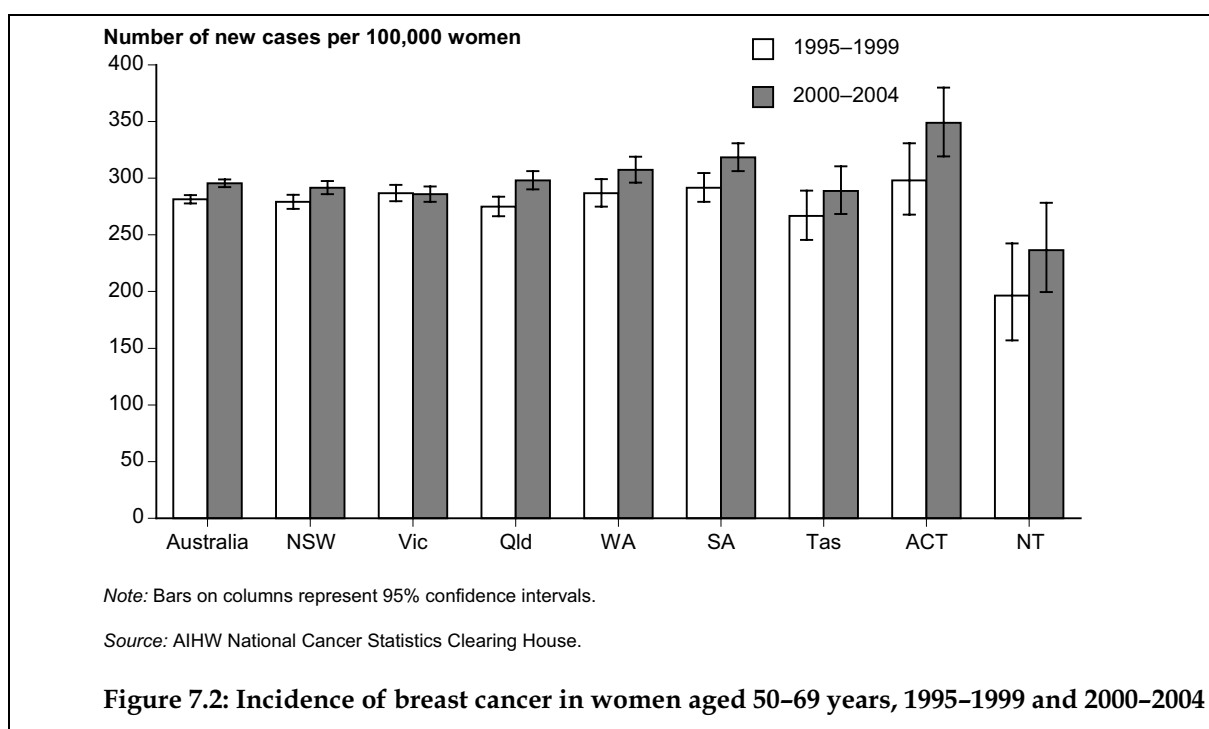


Table 7.4: Incidence of breast cancer in women aged 50–69 years, 1995–1999 and 2000–2004

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Rate									
2000–2004	295.5 [#]	291.6 [#]	285.9	298.1 [#]	307.3	318.3 ^{*#}	288.8	348.7 [*]	236.6 [*]
95% CI	292.2–299.0	285.8–297.5	279.2–292.6	290.3–306.1	296.2–318.8	306.2–330.8	268.4–310.4	319.3–380.0	199.5–278.4
Rate									
1995–1999	281.4	279.0	286.8	274.9	286.8	291.6	266.6	298.0	196.4 [*]
95% CI	277.9–285.1	273.0–285.2	279.7–294.1	266.5–283.5	274.9–299.0	279.2–304.4	245.5–289.1	267.8–330.7	157.0–242.4

* Significantly different from the Australian rate.

Significantly different from the 1995–1999 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 2000–2004 was 295.5 new cancers per 100,000 women. Across the states and territories, incidence rates ranged from 236.6 new cancers per 100,000 women in the Northern Territory to 348.7 new cases per 100,000 women in the Australian Capital Territory. The rates for South Australia and the Australian Capital Territory (318.3 and 348.7 per 100,000 women respectively) were statistically significantly higher than the national rate of 295.5 cases per 100,000 women.
- In 1995–1999, the age-standardised breast cancer incidence rate in the Northern Territory (196.4 new cases per 100,000 women) was lower than the national rate (281.4 per 100,000 women). While the rate increased in 2000–2004 (236.6 per 100,000 women), it remained significantly lower than the national rate (295.5 per 100,000).
- Between 1995–1999 and 2000–2004, there was a significant increase in age-standardised incidence rates in New South Wales, Queensland and South Australia.

For more information, see tables 43–48 in Appendix A. 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

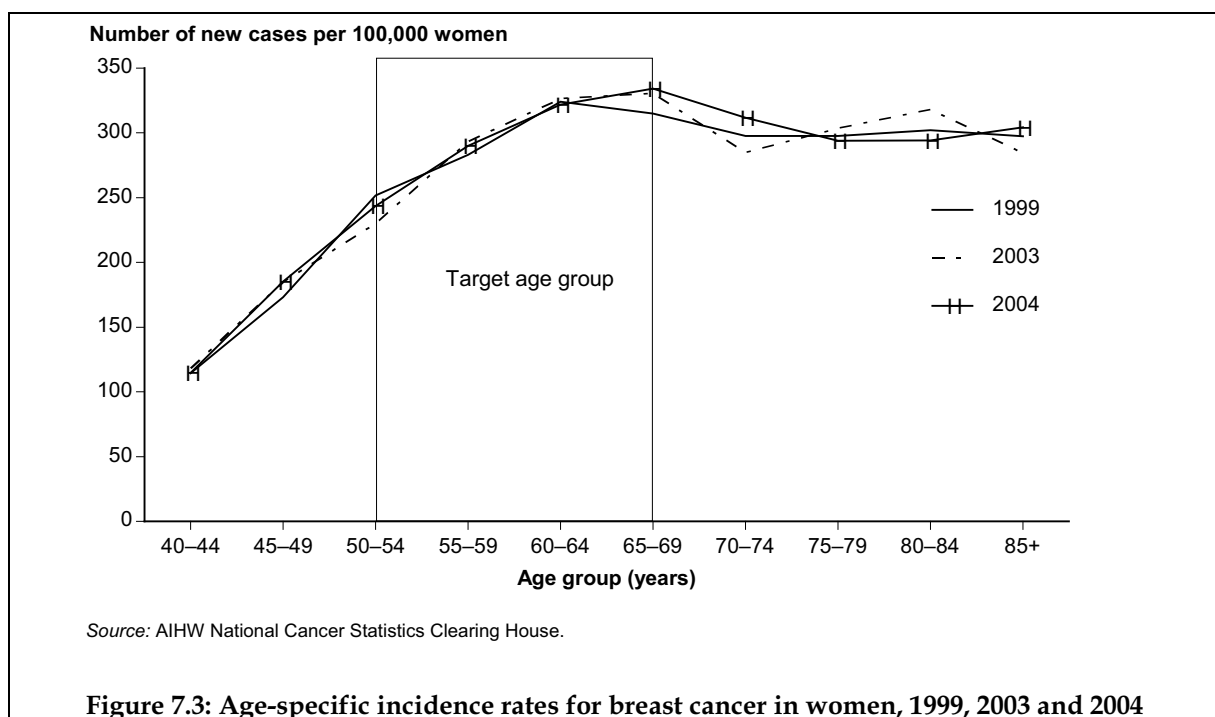


Table 7.5: Age-specific incidence rates for breast cancer in women, 1999, 2003 and 2004

	Age group (years)									
	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+
2004 rate	114.6	185.3	243.4	289.9	321.7	334.1	311.6	293.8	294.1	304.2
2003 rate	118.3	185.0	230.1	293.5	326.5	330.5	285.1	303.5	318.1	284.6
1999 rate	114.4	173.2	251.7	283.0	324.0	314.9	297.6	297.6	302.1	297.4

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

- In 1999, the highest breast cancer incidence rate was in the 60-64 age group (324.0 new cases per 100,000 women). In 2003 and 2004, the incidence peak shifted to the 65-69 age group with 330.5 and 334.1 cases per 100,000 women, respectively.

For more information, see tables 43-48 in Appendix A. 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 by region

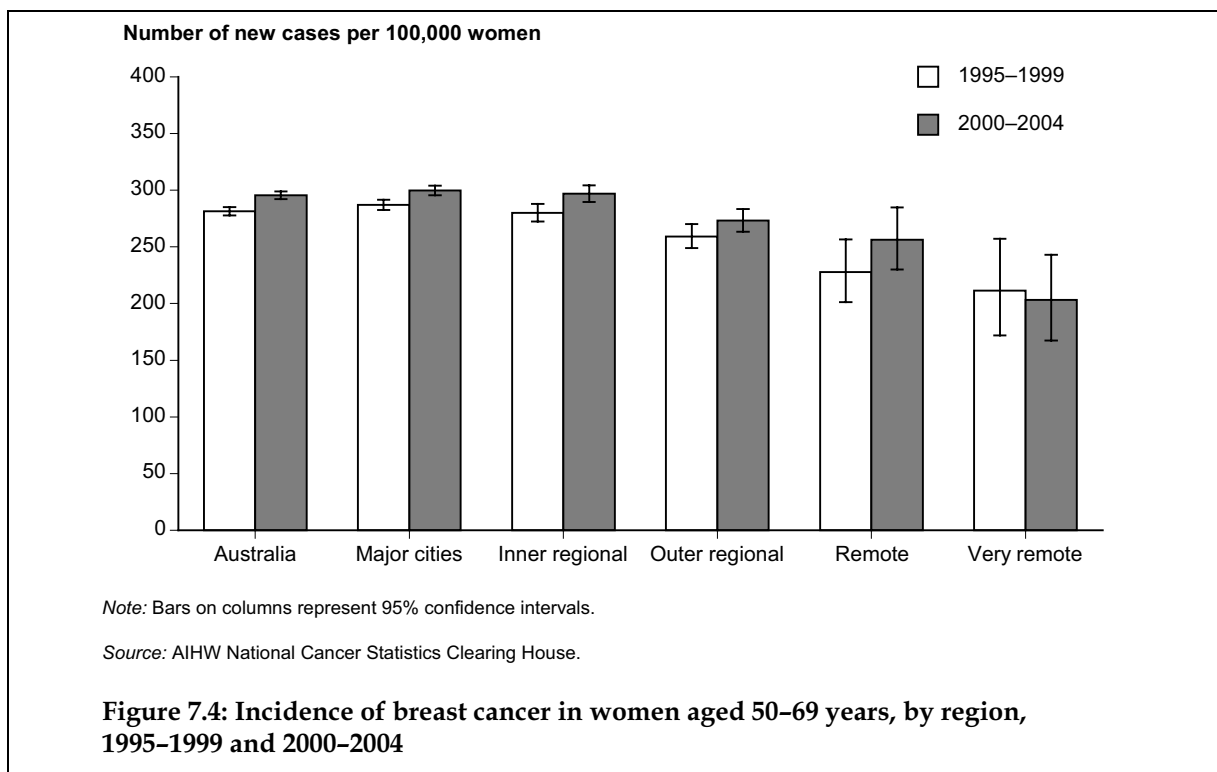


Table 7.6: Incidence of breast cancer in women aged 50-69 years, by region, 1995-1999 and 2000-2004

	Australia	Major cities	Inner regional	Outer regional	Remote	Very remote
2000-2004 rate	295.5 [#]	299.6 [#]	296.9 [#]	273.2*	256.2*	203.1*
95% CI	292.2-299.0	295.4-303.9	289.7-304.2	263.3-283.5	229.9-284.7	167.3-242.9
1995-1999 rate	281.4	287.1	280.1	259.2*	227.8*	211.5*
95% CI	277.9-285.1	282.6-291.6	272.4-287.9	248.8-270.0	201.1-256.6	172.0-257.2

* Significantly different from the Australian rate.

[#] Significantly different from the 1995-1999 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 1995-1999 and 2000-2004, the age-standardised breast cancer incidence rate was significantly lower in outer regional, remote and very remote areas than the national rate.
- Between 1995-1999 and 2000-2004, there was a significant increase in the age-standardised breast cancer incidence rate in major cities and inner regional areas.

For more information, see tables 43-48 in Appendix A. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.

Indicator 7b Incidence of ductal carcinoma in situ

Incidence of ductal carcinoma in situ by states and territories

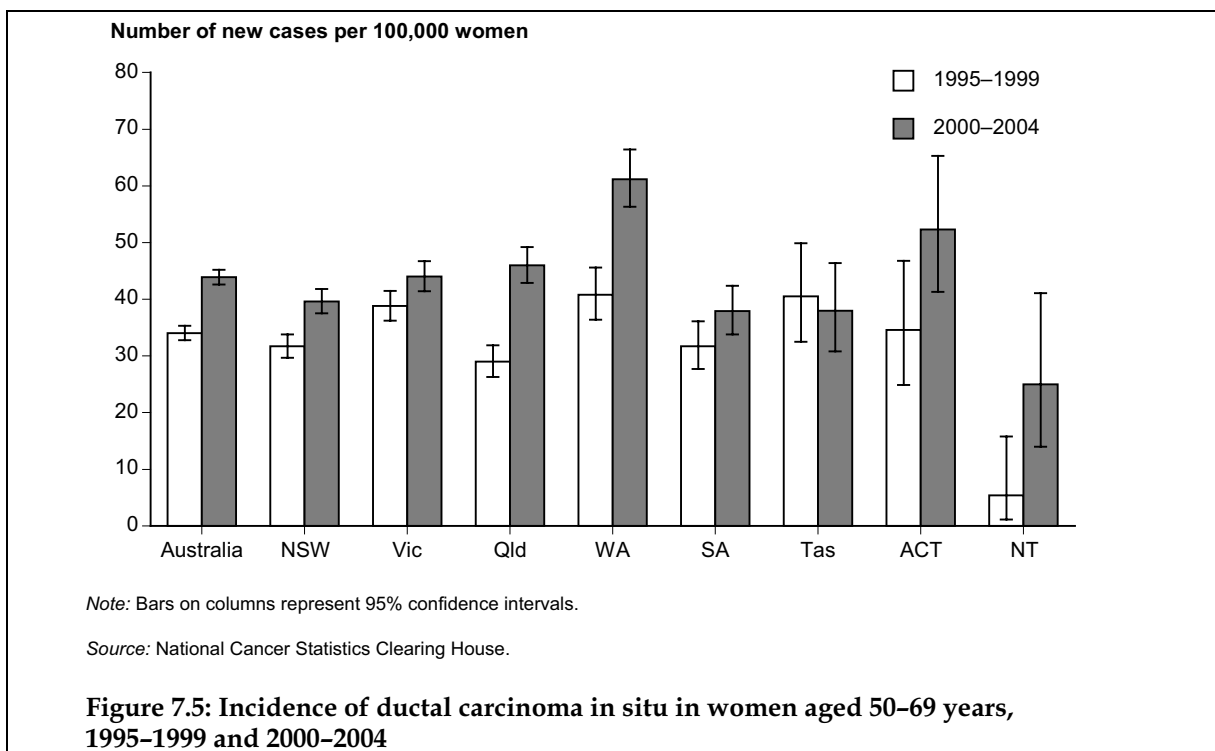


Table 7.7: Incidence of ductal carcinoma in situ in women aged 50-69 years, 1995-1999 and 2000-2004

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Rate 2000-2004	43.9 [#]	39.6 ^{*#}	44.0	46.0 [#]	61.2 ^{*#}	37.9 [*]	38.0	52.3	25.0 [*]
95% CI	42.6-45.2	37.5-41.8	41.4-46.8	43.0-49.2	56.3-66.4	33.8-42.4	30.8-46.4	41.3-65.3	13.9-41.0
Rate 1995-1999	34.0	31.7	38.8	29.0	40.8	31.7	40.5	34.6	5.4
95% CI	32.7-35.3	29.7-33.8	36.2-41.6	26.3-31.9	36.4-45.6	27.7-36.1	32.5-49.8	24.9-46.8	1.1-15.9

* Significantly different from the Australian rate.

Significantly different from the 1995-1999 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 2000-2004, the national age-standardised incidence rate of DCIS for women aged 50-69 years was 43.9 per 100,000 women, a statistically significant increase on the rate for 1995-1999 of 34.0 per 100,000 women.

For more information, see tables 49-52 in Appendix A. 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 over the years

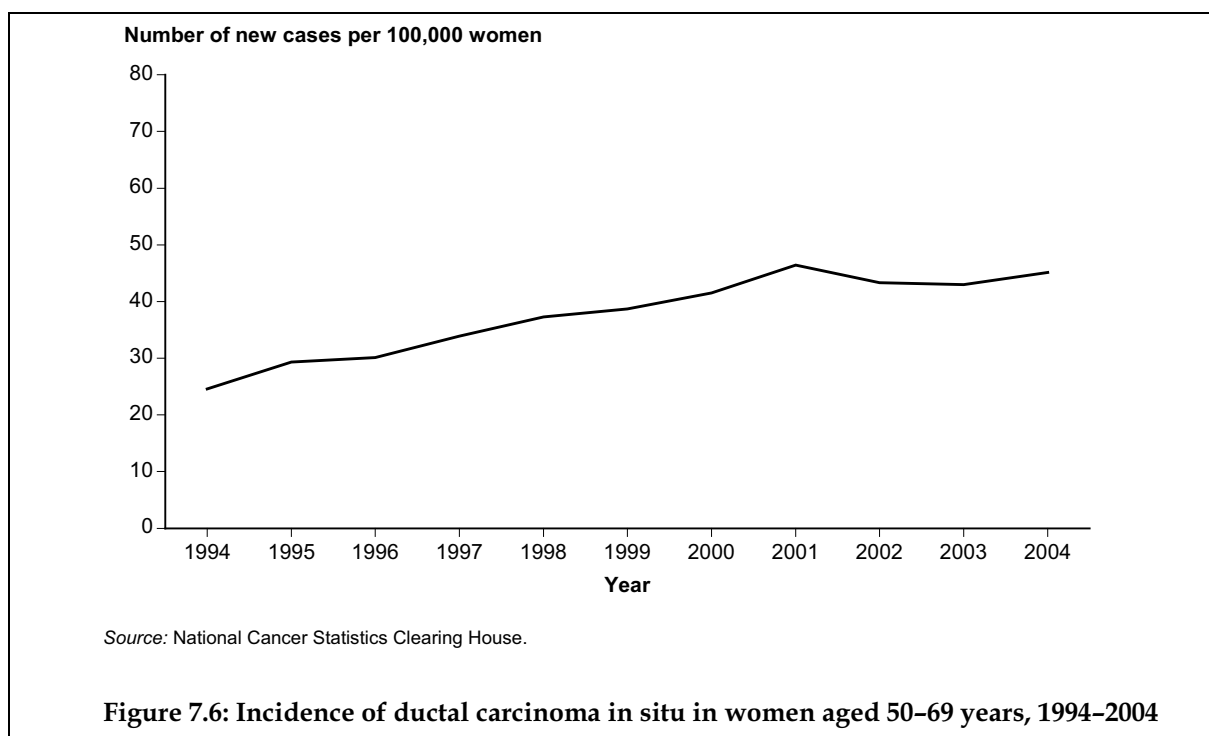


Table 7.8: Incidence of ductal carcinoma in situ in women aged 50–69 years, 1994–2004

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Rate	24.6*	29.3*	30.1*	33.9*	37.3*	38.7*	41.5	46.4	43.3	43.0	45.1
95% CI	22.2– 27.3	26.7– 32.1	27.4– 32.9	31.2– 36.9	34.4– 40.2	35.8– 41.7	38.6– 44.6	43.4– 49.5	40.4– 46.3	40.2– 45.9	42.3– 48.1

* Significantly different from the 2004 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 and significantly from 24.6 per 100,000 women in 1994 to 46.4 per 100,000 in 2001, before falling to 43.3 and 43.0 per 100,000 in 2002 and 2003, respectively, and increasing to 45.1 per 100,000 in 2004.

For more information, see tables 49–52 in Appendix A. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.

Indicator 8 Mortality

Mortality rate

The mortality rate from breast cancer is calculated per 100,000 women in a 12-month period, by 5-year age groups for women of all ages, and for the target age group (50–69 years).

The mortality indicator

Mortality statistics are one of the most comprehensively collected national data sets. Registration of death is a legal requirement in Australia and, as a result, compliance is virtually complete. Registration of deaths is the responsibility of the Registrar of Births, Deaths and Marriages in each state and territory. The registrars provide the mortality data to the Australian Bureau of Statistics (ABS) for coding the cause of death and compilation into national statistics. The AIHW also holds these data in a national mortality database. The data presented here are from the AIHW National Mortality Database and are based on the year of registration of the death. Note that about 5% of deaths are not registered until the year following the death (ABS 2002).

Breast cancer is the most common cause of cancer death in Australian women. The number of deaths from breast cancer in recent years has remained fairly stable, with 2,463 women dying from the disease in 1991 and 2,719 women in 2005. However, over this period, the rates of death caused by breast cancer have steadily fallen. The death rate from breast cancer for women aged 50–69 years decreased significantly from 61.5 deaths per 100,000 women in 1996 to 51.8 deaths per 100,000 in 2005. Similarly, mortality rates also decreased significantly for all women from 28.1 deaths per 100,000 in 1996 to 23.7 deaths per 100,000 women in 2005.

The mortality rates presented in this chapter are for the total female population of Australia, not only for those women who participated in the BreastScreen Australia Program.

This chapter shows the trend in breast cancer mortality from 1982–2005, the latest national data available, and on breast cancer mortality by state and territory, by age, by region and by Indigenous status.

Some changes have been made to the coding and processing of mortality data. These are described in Appendix B.

Table 8.1: Number of deaths from breast cancer per 100,000 women in women aged 50–69 years and all women, 1996 and 2005

	1996	2005
Rate for women aged 50–69 years	61.5	51.8
95% CI	57.8–65.5	48.8–54.9
Rate for all women	28.1	23.7
95% CI	27.0–29.2	22.8–24.6

Notes

1. Rates are the number of deaths from breast cancer per 100,000 women and age-standardised to the Australian population at 30 June 2001.
2. Comparisons between time periods should be treated with caution because of overlapping periods.

Source: AIHW National Mortality Database.

Table 8.2: Number of deaths from breast cancer per 100,000 women in women aged 50–69 years, 2001–2005, by region

	Australia	Major cities	Inner regional	Outer regional	Remote	Very remote
Rate 2001–2005	53.0	53.4	52.3	53.0	50.2	44.9
95% CI	51.6–54.4	51.6–55.2	49.4–55.4	48.8–57.6	38.9–63.3	28.6–66.5

Notes

1. Rates are the number of deaths from breast cancer per 100,000 women and age-standardised to the Australian population at 30 June 2001.
2. AIHW mortality data by the Australian Standard Geographical Classification remoteness categories are available from 1997 only; therefore, there is no comparable non-overlapping 5-year period before 2001–2005.

Source: AIHW National Mortality Database.

- For women aged 50–69 years, mortality rates in 2001–2005 were highest in major cities and in outer regional areas with 53.4 and 53.0 deaths per 100,000 women, respectively, and lowest in very remote areas, with 44.9 deaths per 100,000 women. The differences were not statistically significant because of the relatively small number of deaths in very remote areas.

Table 8.3: Number of deaths from breast cancer per 100,000 in women aged 50–69 years, Queensland, Western Australia, South Australia and Northern Territory, 1996–2000 and 2001–2005, by Indigenous status

	Australia	Indigenous	Non-Indigenous
Rate 2001–2005	53.1	45.4	51.8
95% CI	51.7–54.5	29.8–66.3	49.5–54.1
Rate 1996–2000	57.3	55.7	67.2
95% CI	55.7–58.9	35.6–82.9	64.0–70.5

Notes

1. Only Queensland, Western Australia, South Australia, and the Northern Territory have Indigenous death registration data considered to be of a publishable standard; therefore, data from these jurisdictions only are included in the analysis by Indigenous status. Queensland data are included from 1998 onwards.
2. 'Australia' includes all states and territories of Australia. 'Indigenous' and 'Non-Indigenous' includes Queensland, Western Australia, South Australia, and the Northern Territory.
3. Deaths in the 'not-stated' category are included in the column 'Australia', but they are not included in the other columns.

4. Rates are the number of deaths from breast cancer per 100,000 women and age-standardised to the Australian population at 30 June 2001.

Source: AIHW National Mortality Database.

- Table 8.3 presents mortality rates by Indigenous status for Queensland, Western Australia, South Australia and Northern Territory combined. In 2001–2005, in the target age group (50–69 years), the age-standardised mortality rate for Aboriginal and Torres Strait Islander women (45.4 deaths per 100,000 women) was lower than that for non-Indigenous women (51.8 deaths per 100,000 women), but this difference was not statistically significant.
- Similarly, in 1996–2000, there was no statistically significant difference in mortality rates between Aboriginal and Torres Strait Islander women and non-Indigenous women (55.7 and 67.2 deaths per 100,000 women, respectively). From 1996–2000 to 2001–2005 the national mortality rate decreased significantly from 57.3 to 53.1 deaths per 100,000 women. Similarly, the mortality rate for non-Indigenous women decreased significantly from 67.2 in 1996–2000 to 51.8 deaths per 100,000 women in 2001–2005. For Aboriginal and Torres Strait Islander women, the mortality rate decreased from 55.7 to 45.4 deaths per 100,000 women over the same time periods, but these changes were not statistically significant because of small numbers.

Mortality from breast cancer over the years

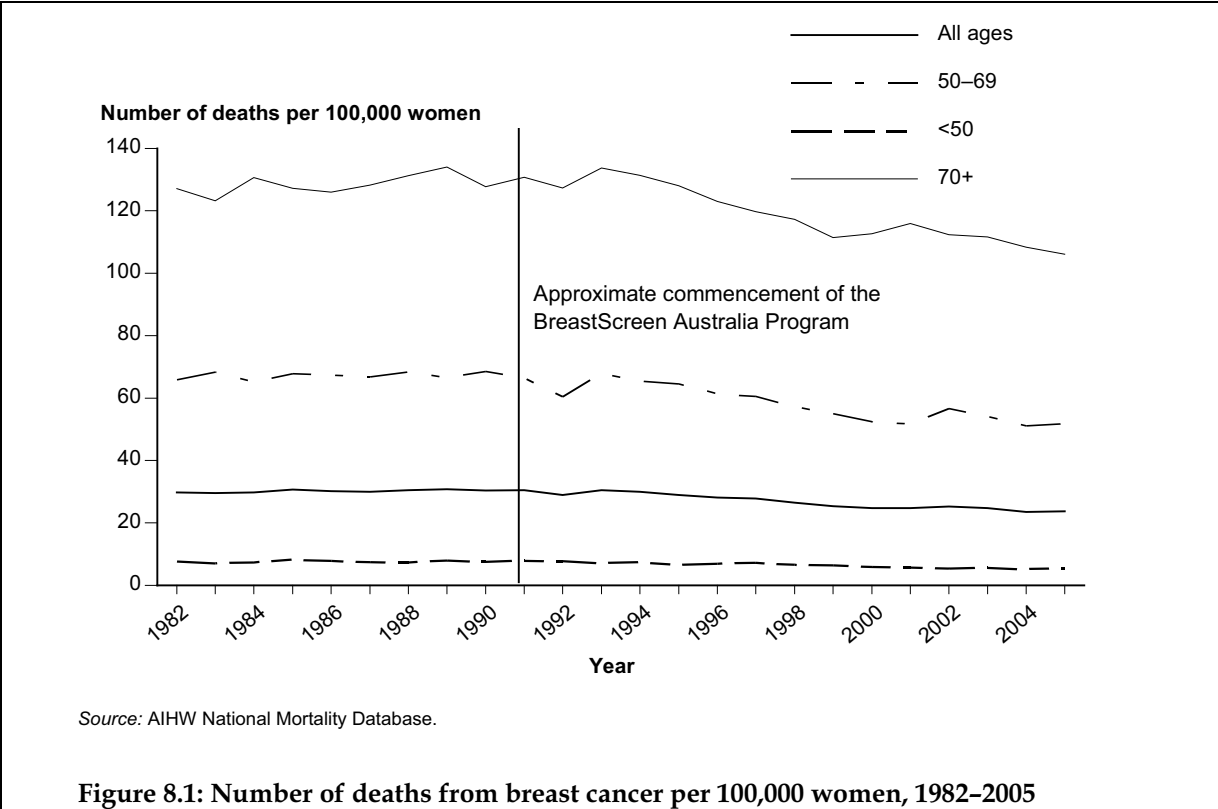


Table 8.4: Number of deaths from breast cancer per 100,000 women, 1982–2005

Year of death	Age group (years)			
	All ages	<50	50–69	70+
1982	29.8	7.6	65.9	127.1
1983	29.5	7.0	68.3	123.2
1984	29.8	7.3	65.2	130.7
1985	30.7	8.3	67.8	127.2
1986	30.2	7.8	67.4	126.0
1987	30.0	7.4	66.8	128.2
1988	30.5	7.3	68.3	131.3
1989	30.8	7.9	66.6	134.1
1990	30.4	7.5	68.5	127.7
1991	30.5	7.8	66.5	130.8
1992	28.9	7.7	60.5	127.3
1993	30.5	7.1	67.9	133.8
1994	30.0	7.4	65.5	131.4
1995	28.9	6.5	64.6	128.0
1996	28.1	6.9	61.5	123.0
1997	27.8	7.2	60.6	119.7
1998	26.5	6.6	57.3	117.3
1999	25.4	6.4	55.0	111.4
2000	24.7	5.9	52.5	112.7
2001	24.7	5.7	51.8	115.9
2002	25.2	5.4	56.7	112.4
2003	24.7	5.6	54.2	111.6
2004	23.5	5.2	51.1	108.4
2005	23.7	5.5	51.8	106.1

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

- The age-standardised mortality rate for women aged 50–69 years declined steadily from 65.9 deaths per 100,000 women in 1982 to 51.8 deaths per 100,000 women in 2005. Similar patterns of decline in mortality rates can be observed in women aged 70 years or over, women aged less than 50 years and in women of all ages.

For more information, see tables 53–60 in Appendix A. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.

Mortality from breast cancer by states and territories

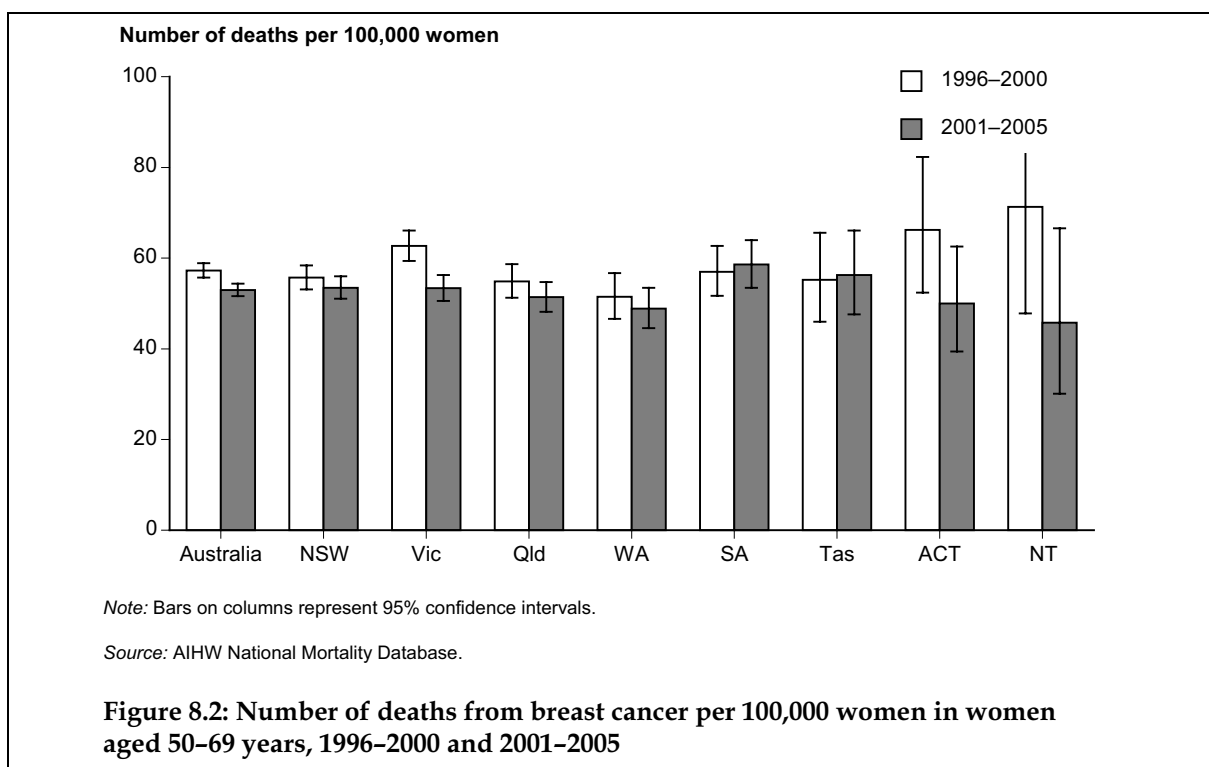


Table 8.5: Number of deaths from breast cancer per 100,000 women in women aged 50-69 years, 1996-2000 and 2001-2005

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Rate 2001-2005	53.1*	53.8	53.5*	51.2	49.2	58.5	56.4	50.2	45.2
95% CI	51.7-54.5	51.4-56.3	50.7-56.4	48.1-54.6	44.8-53.8	53.5-64.0	47.7-66.2	39.5-62.8	29.7-65.7
Rate 1996-2000	57.3	55.7	62.7	54.9	51.5	57.0	55.2	66.2	71.3
95% CI	55.7-58.9	53.0-58.4	59.4-66.1	51.2-58.7	46.6-56.8	51.7-62.8	45.9-65.6	52.4-82.4	47.8-99.6

* Statistically different from the 1996-2000 rate.

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

- There were statistically significant changes in the mortality rates between the states and territories and across the time periods. The national mortality rate declined between 1996-2000 and 2001-2005 from 57.3 to 53.1 deaths per 100,000 women. Victoria also had significant decreases in mortality between the two time periods.

For more information, see tables 53-60 in Appendix A. 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 mortality rates for breast cancer

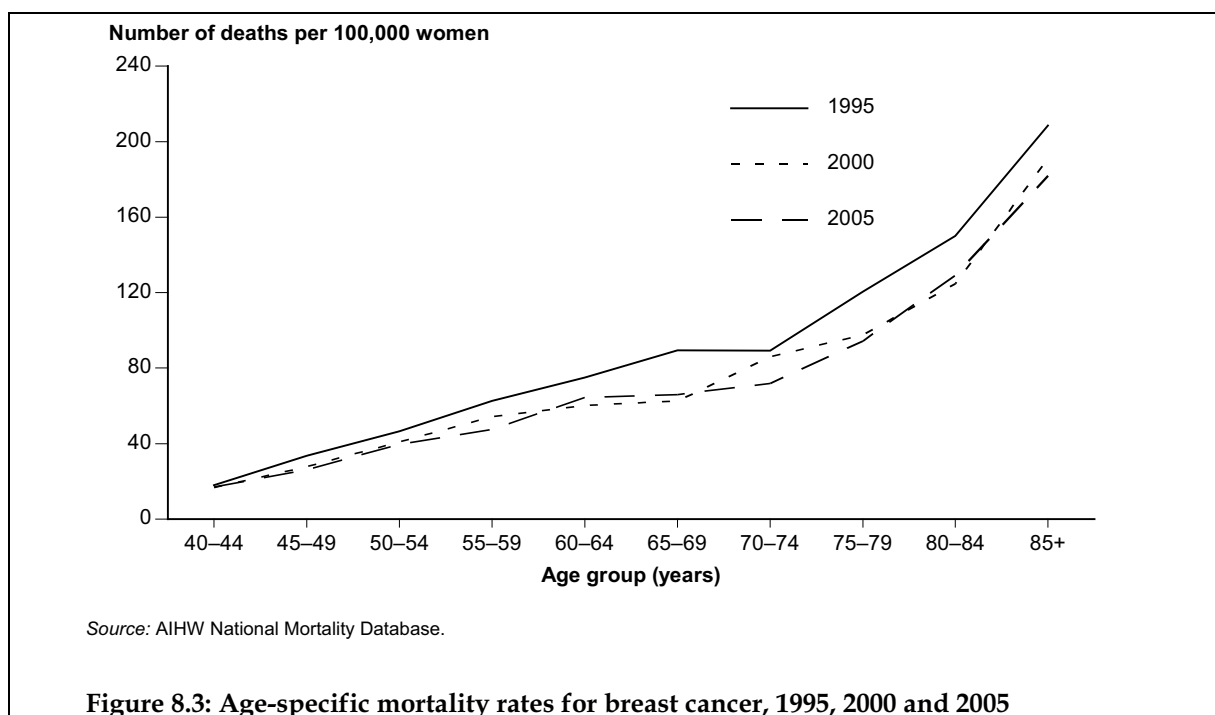


Table 8.6: Age-specific mortality rates for breast cancer, 1995, 2000 and 2005

	Age group (years)									
	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+
2005	17.0	26.0	39.6	47.5	64.5	66.0	72.0	94.4	129.3	182.0
2000	16.7	27.7	40.9	54.3	60.2	62.6	86.0	97.7	124.7	191.3
1995	17.9	33.5	46.5	62.7	75.0	89.4	89.2	120.5	150.0	208.6

Note: Rates are the number of deaths from breast cancer per 100,000 women.

- Age-specific mortality rates increased consistently with age. In 1995, the age-specific rate for women aged 40-44 years was 17.9 per 100,000 women increasing to 208.6 deaths per 100,000 for women aged 85 years or over. In 2005, the age-specific rate for women aged 40-44 years was 17.0 deaths per 100,000 women increasing to 182.0 deaths per 100,000 for women aged 85 years or over.
- The mean age at death for women dying from breast cancer increased from 66 years in 1995 to 67 years in 2005. The median age at death decreased from 67 years in 1995 to 66 years in 2005.

For more information, see tables 53-60 in Appendix A. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.

Mortality from breast cancer by region for women aged 50–69 years

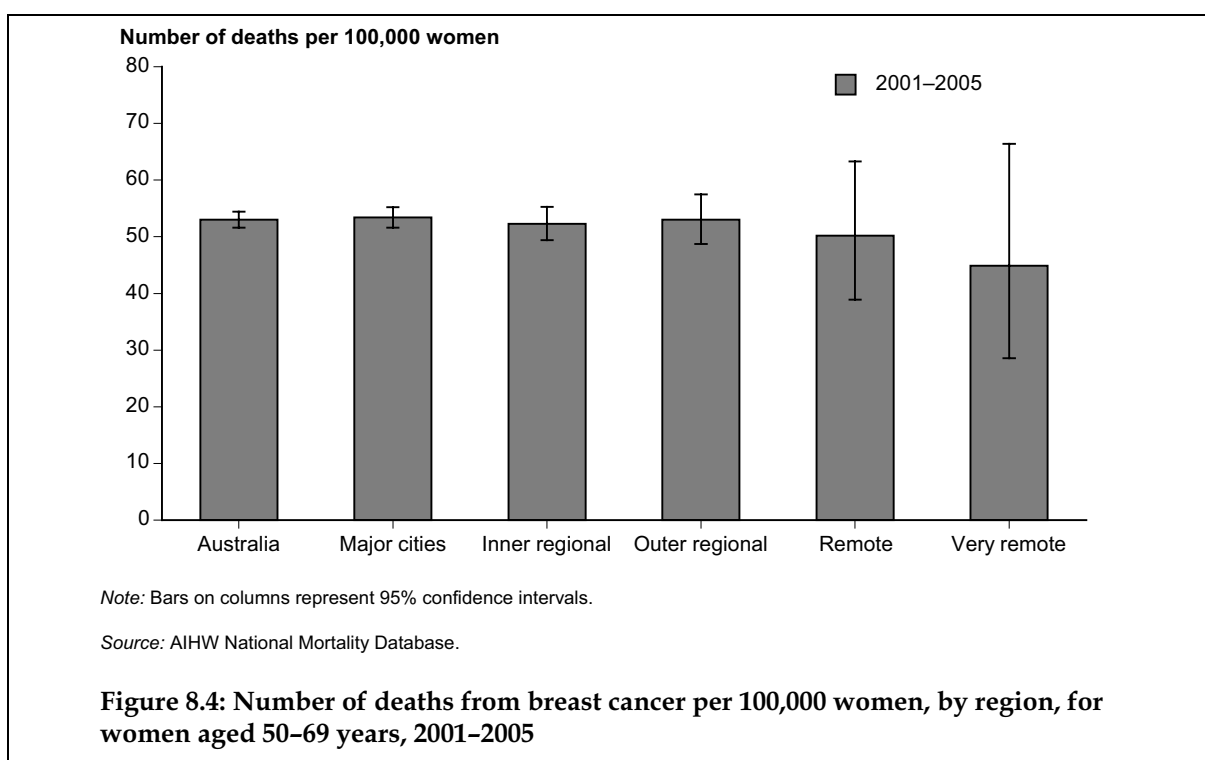


Table 8.7: Number of deaths from breast cancer per 100,000 women, by region, for women aged 50–69 years, 2001–2005

	Australia	Major cities	Inner regional	Outer regional	Remote	Very remote
Rate 2001–2005	53.0	53.4	52.3	53.0	50.2	44.9
95% CI	51.6–54.4	51.6–55.2	49.4–55.4	48.8–57.6	38.9–63.3	28.6–66.5

Notes

1. Rates are the number of deaths from breast cancer per 100,000 women and age-standardised to the Australian population at 30 June 2001.
2. The Australian Standard Geographical Classification was used to create the above categories (ABS 2001) and applied to the area of usual residence of the deceased persons.
3. AIHW Mortality data by Australian Standard Geographical Classification remoteness categories are available from 1997 only; therefore, there is no comparable non-overlapping 5-year period before 2001–2005.

- For women in the target age group (50–69 years), breast cancer mortality rates in 2001–2005 were highest in major cities with 53.4 deaths per 100,000 women, and lowest in very remote areas, with 44.9 deaths per 100,000 women. The difference was not statistically significant because of the relatively small number of deaths in very remote areas.

For more information, see tables 53–60 in Appendix A. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.

Mortality from breast cancer by region for women of all ages

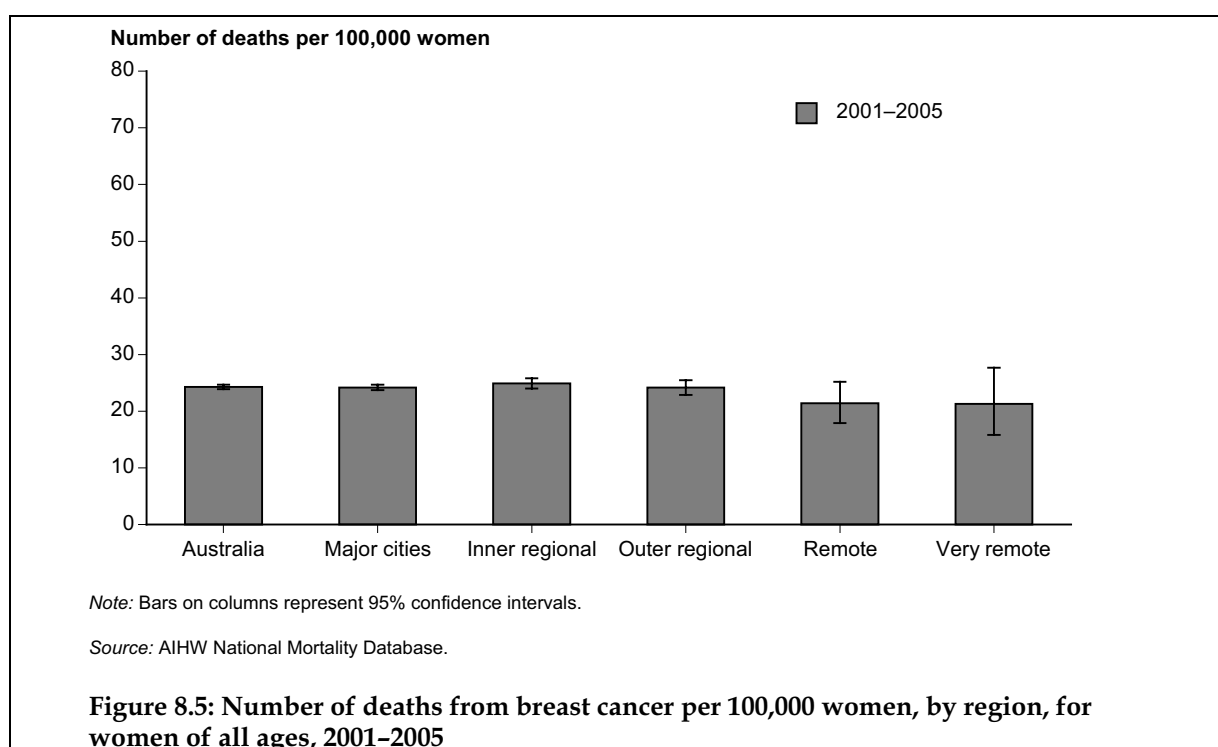


Table 8.8: Number of deaths from breast cancer per 100,000 women, by region, for women of all ages, 2001-2005

	Australia	Major cities	Inner regional	Outer regional	Remote	Very remote
Rate 2001-2005	24.3	24.2	24.9	24.2	21.4	21.3
95% CI	23.9-24.7	23.7-24.7	24.0-25.8	22.9-25.5	18.0-25.3	15.9-27.8

Notes

1. Rates are the number of deaths from breast cancer per 100,000 women and age-standardised to the Australian population at 30 June 2001.
2. The Australian Standard Geographical Classification was used to create the above categories (ABS 2001) and applied to the area of usual residence of the deceased persons.
3. AIHW Mortality data by Australian Standard Geographical Classification remoteness categories are available from 1997 only; therefore, there is no comparable non-overlapping 5-year period before 2001-2005.

- For women of all ages, mortality rates in 2001-2005 were highest in inner regional areas with 24.9 deaths per 100,000 women, and lowest in very remote areas, with 21.3 deaths per 100,000 women. The difference was not statistically significant because of the relatively small number of deaths in very remote areas.

For more information, see tables 53-60 in Appendix A. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.

Mortality from breast cancer by Indigenous status for women aged 50–69 years

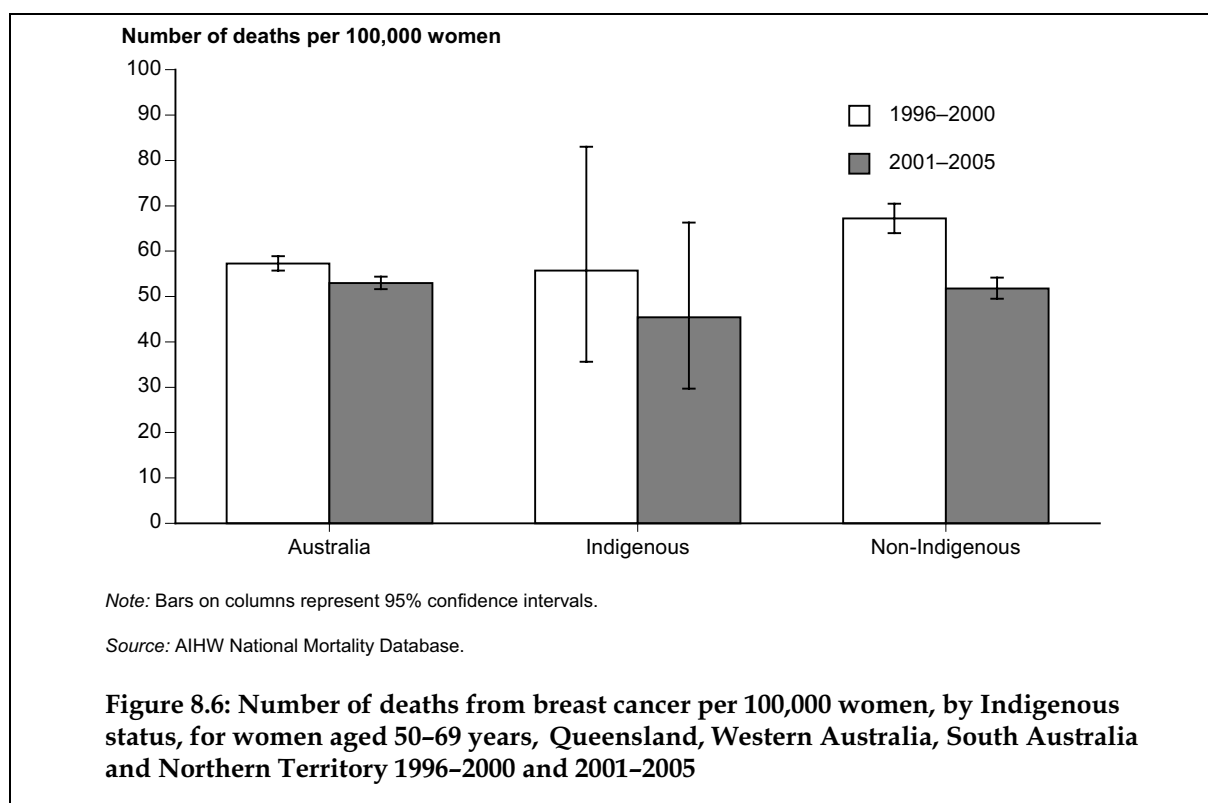


Table 8.9: Number of deaths from breast cancer per 100,000 women, by Indigenous status, for women aged 50–69 years, Queensland, Western Australia, South Australia and Northern Territory 1996–2000 and 2001–2005

	Australia	Indigenous	Non-Indigenous
Rate 2001–2005	53.1*	45.4	51.8*
95% CI	51.7–54.5	29.8–66.3	49.5–54.1
Rate 1996–2000	57.3	55.7	67.2
95% CI	55.7–58.9	35.6–82.9	64.0–70.5

* Statistically different from the 1996–2000 rate.

Notes

1. Only Queensland, Western Australia, South Australia and the Northern Territory had Indigenous death registration data considered to be of a publishable standard at the time this report was prepared. Therefore, data from these jurisdictions only are included in the analysis by Indigenous status. Queensland data are included from 1998 onwards.
2. 'Australia' includes all states and territories of Australia. 'Indigenous' and 'Non-Indigenous' includes Queensland, Western Australia, South Australia, and the Northern Territory.
3. Rates are the number of deaths from breast cancer per 100,000 women and age-standardised to the Australian population at 30 June 2001.

- In 2001–2005, in the target age group (50–69 years), the age-standardised mortality rate for Aboriginal and Torres Strait Islander women in Queensland, Western Australia, South Australia and Northern Territory combined (45.4 deaths per 100,000 women) was lower than that for non-Indigenous women (51.8 deaths per 100,000 women), but this difference was not statistically significant. Similarly, in 1996–2000, there was no statistically significant difference in mortality rates between the Aboriginal and Torres

Strait Islander and non-Indigenous populations (55.7 and 67.2 deaths per 100,000 women, respectively).

- From 1996–2000 to 2001–2005, national breast cancer mortality decreased from 57.3 to 53.1 deaths per 100,000 women. Mortality for non-Indigenous women decreased from 67.2 in 1996–2000 to 51.8 deaths per 100,000 women in 2001–2005. For Aboriginal and Torres Strait Islander women, the mortality rate decreased from 55.7 to 45.4 deaths per 100,000 women between these periods, but this change was not statistically significant.

For more information, see tables 53–60 in Appendix A. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.

Mortality from breast cancer by Indigenous status for women of all ages

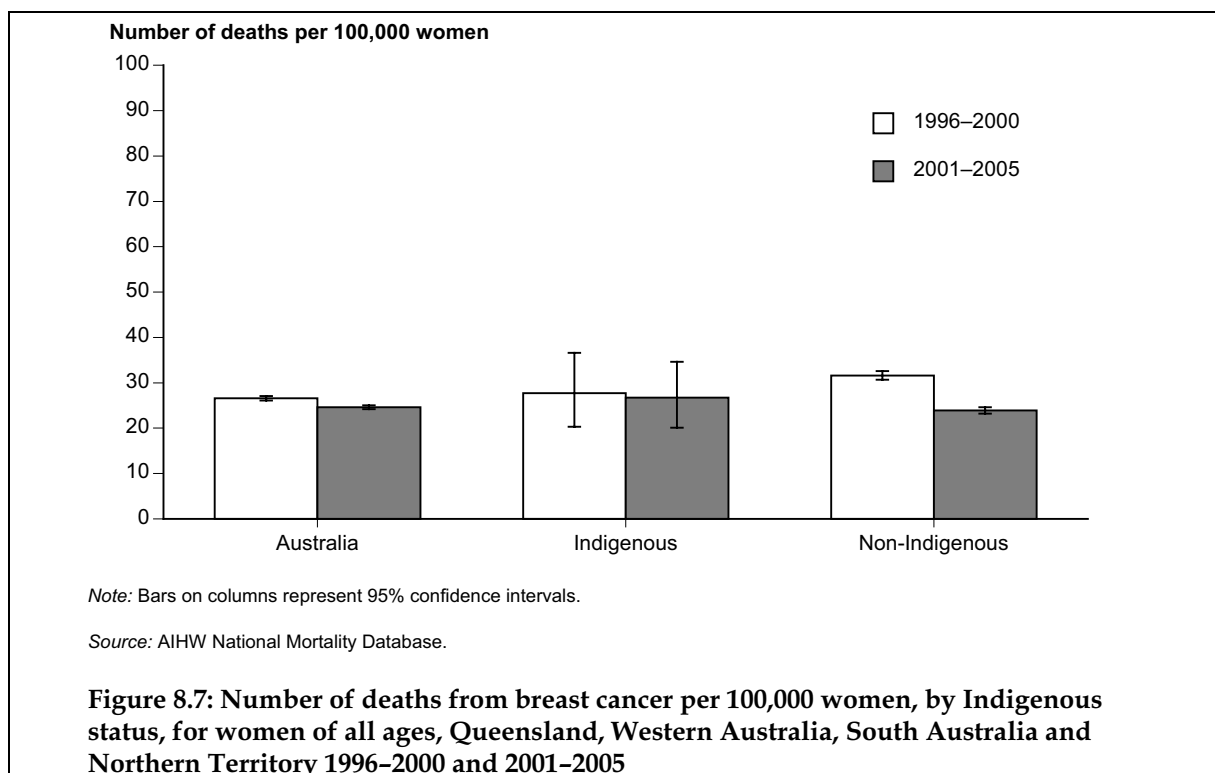


Table 8.10: Number of deaths from breast cancer per 100,000 women, by Indigenous status, for women of all ages, Queensland, Western Australia, South Australia and Northern Territory 1996–2000 and 2001–2005

	Australia	Indigenous	Non-Indigenous
Rate 2001–2005	24.6*	26.7	23.9*
95% CI	24.1–25.0	20.1–34.6	23.3–24.6
Rate 1996–2000	26.6	27.7	31.6
95% CI	26.1–27.1	20.4–36.7	30.6–32.5

* Statistically different from the 1996–2000 rate.

Notes

1. Only Queensland, Western Australia, South Australia and the Northern Territory had Indigenous death registration data considered to be of a publishable standard at the time this report was prepared. Therefore, data from these jurisdictions only are included in the analysis by Indigenous status. Queensland data are included from 1998 onwards.
2. 'Australia' includes all states and territories of Australia. 'Indigenous' and 'Non-Indigenous' includes Queensland, Western Australia, South Australia, and the Northern Territory.
3. Rates are the number of deaths from breast cancer per 100,000 women and age-standardised to the Australian population at 30 June 2001.

- In 2001–2005, the age-standardised breast cancer mortality rate for Aboriginal and Torres Strait Islander women of all ages in Queensland, Western Australia, South Australia and Northern Territory combined (26.7 deaths per 100,000 women) was not significantly different from the rate for non-Indigenous women (23.9 deaths per 100,000 women) and from the national rate (24.6 deaths per 100,000 women).

- From 1996–2000 to 2001–2005, the national mortality rate decreased from 26.6 deaths per 100,000 women to 24.6 per 100,000. There was no significant change in the mortality rate for Aboriginal and Torres Strait Islander women in Queensland, Western Australia, South Australia and Northern Territory from 27.7 per 100,000 women in 1996–2000 to 26.7 deaths per 100,000 in 2001–2005.

For more information, see tables 53–60 in Appendix A. Tables with data other than for the latest reporting period can be found on the AIHW's website at <www.aihw.gov.au>.