

**BreastScreen Australia
monitoring report 2002–2003**

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Cancer Series

Number 32

BreastScreen Australia monitoring report 2002–2003

**The Australian Institute of Health and Welfare
and the
Australian Government Department of Health and Ageing
for the
BreastScreen Australia Program**

May 2006

Australian Institute of Health and Welfare
Canberra

AIHW cat. no. CAN 27

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ISSN 1039-3307

ISBN 1 74024 558 X

Suggested citation

Australian Institute of Health and Welfare (AIHW) 2006. BreastScreen Australia monitoring report 2002–2003. AIHW cat. no. CAN 27. Canberra: Australian Institute of Health and Welfare (Cancer Series no. 32).

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Published by Australian Institute of Health and Welfare

Printed by National Capital Printing

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Acknowledgments

The BreastScreen Australia Program is funded by the Australian Government Department of Health and Ageing. This report was produced in collaboration with the BreastScreen Australia National Advisory Committee (since replaced by the Australian Screening Advisory Committee) and its Monitoring and Evaluation Working Group and the Screening Section of the Department of Health and Ageing.

This report was prepared by Edith Christensen, Chris Stevenson, John Harding, Janet Markey and Jane Zhou. Thanks are extended to the following state and territory program and data managers for providing the data and overall assistance in the production of this report. Thanks are also extended to all state and territory cancer registries, which are the source of data on breast cancer incidence (through the National Cancer Statistics Clearing House) and data on ductal carcinoma in situ.

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Abbreviations

AACR: Australasian Association of Cancer Registries

ABS: Australian Bureau of Statistics

ACT: Australian Capital Territory

AIHW: Australian Institute of Health and Welfare

ARIA: Accessibility/Remoteness Index for Australia

ASGC: Australian Standard Geographical Classification

ASR: age-standardised rate

ASR (A): age-standardised rate, standardised to the Australian standard population

BSANAC: BreastScreen Australia National Advisory Committee

CD: Census Collection District

CI: confidence interval (see glossary)

DoHA: Australian Government Department of Health and Ageing

DCIS: ductal carcinoma in situ (see glossary)

ERP: estimated resident population

ICD: International Classification of Diseases

IRSD: Index of Relative Socio-economic Disadvantage

NBCC: National Breast Cancer Centre

NQMC: National Quality Management Committee

NSW: New South Wales

NT: Northern Territory

Qld: Queensland

RRMA: Rural, Remote and Metropolitan Areas classification

SA: South Australia

SES: socioeconomic status

SLA: statistical local area

Tas: Tasmania

Vic: Victoria

WA: Western Australia

WHO: World Health Organization

Summary

This is the seventh national monitoring report for the BreastScreen Australia Program. The report presents statistics on BreastScreen Australia screening activity and outcomes for 2002–2003 and trend data from 1996 onwards. A reporting interval of two years is used because it corresponds with the recommended interval between screens for asymptomatic women in the target group of 50–69 years.

Indicator 1 Participation

- In 2002–2003 just over 1.6 million Australian women were screened through the BreastScreen Australia Program – these women were screened across Australia, including the most remote areas of the country.
- Participation among women in Australia in the target age group (50–69 years) increased from 54.6% (age-standardised) in 1997–1998 to 56.1% in 2002–2003. This increase in participation was statistically significant.
- In 2002–2003 the participation rate for the most advantaged group was 56.2% compared with 54.8% for the least advantaged group. This difference is statistically significant.
- In 2002–2003 the participation rates for Indigenous women and women whose language spoken at home was not English, 35.9% and 43.7% respectively, were significantly lower than the national rate of 56.1%, but have been rising steadily since 1997–1998. However, these rates should be interpreted with caution as it is not known how many women did not report their Indigenous status or the main language spoken at home. This is because in some states and territories, not-stated values are not separately quantified.

Indicator 2 Detection of small invasive cancers

- In order to reduce morbidity and mortality resulting from breast cancer, BreastScreen Australia aims to maximise the early detection of small-diameter (15 mm or less) invasive breast cancers. In 2003, 54.1% of invasive cancers detected in women aged 40 and over attending for their first screening round were small-diameter cancers. For women attending in 2003 who had previously been screened, 65.0% of cancers detected were small-diameter.
- For women in the target age group (50–69 years) attending for their first screening round, the age-standardised rate of small-diameter (≤ 15 mm) invasive cancer detection was 38.8 per 10,000 women screened in 2003. This was not significantly different from the 1998 and 2002 rates of 36.5 and 37.9 per 10,000 women screened, respectively.
- The national detection rate of 38.8 per 10,000 women screened for small-diameter invasive breast cancers for women attending the program for the first time in 2003 (their first screening round) was significantly higher than the rate of 26.5 per 10,000 women screened for women who attended in subsequent screening rounds.
- In 2003, 3,663 invasive cancers (any size, all screening rounds) were detected through BreastScreen Australia in women aged 40 and over.
- The age-standardised national invasive all-size cancer detection rate for women attending the program for the first time in 2003 was 73 cancers detected per 10,000 women screened (all ages). For women screened in 2003 who had previously attended the program, this rate was 39 cancers detected per 10,000 women screened.

Indicator 3a Interval cancer rate

- In the index years 1999–2001 the age-standardised interval (that is, an invasive cancer detected between two screening rounds) cancer rate for women in the target age group for the 24 months following a negative screening episode was 10.5 interval cancers per 10,000 women-years for women attending for their first screening round in the index years and 10.4 interval cancers per 10,000 women-years attending for their subsequent screening rounds.
- The age-standardised rate for interval cancers for women attending for their first screening round in the 24 months following a negative screening episode ranged from 8.7 to 13.5 interval cancers per 10,000 women-years across the states and territories.
- The age-standardised rate for interval cancers for women attending for their second or subsequent screening rounds in the 24 months following a negative screening episode ranged from 6.9 to 12.8 interval cancers per 10,000 women-years across the jurisdictions.
- The changes in the age-standardised interval cancer detection rates between the screening rounds were not statistically significant. Nor were there significant changes in the rates between 1996–1998 and 1999–2001.

Indicator 3b Program sensitivity (screen detected cancers)

- ‘Program sensitivity’ 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. The program sensitivity rate for women in the target age group 24 months after their first screen was 75.8% and 76.5% during index years 1996–1998 and 1999–2001, respectively.
- For the index years 1999–2001 the age-standardised program sensitivity rate for the 24 months following a negative screening episode for women attending for their first screening round ranged from 71% to 83% across states and territories. For women attending for subsequent screening rounds for the 24 months of follow-up, this rate ranged from 65% to 83%.

Indicator 4 Detection of ductal carcinoma in situ (DCIS)

- In 2003, 883 cases of ductal carcinoma in situ were detected in women participating in the BreastScreen Australia Program. The age-standardised detection rate for this condition for women in the target age group attending for their first screening round was 16.3 per 10,000 women screened. For women attending for their second or subsequent screening rounds in 2003 the rate decreased significantly to 10.0 per 10,000 women screened.
- The age-standardised rate of DCIS detection for women in the target age group has remained relatively constant since 1998, at between 10 and 11 cases detected per 10,000 women screened, over all screening rounds.

Indicator 5 Recall to assessment

- In 2003, the proportion of women recalled for assessment because of an abnormal mammogram result was significantly higher for women being screened for the first time compared with women who had previously been screened. While 9.3% of women attending their first round of screening were recalled for further testing, only 4.0% of women attending for a subsequent round of screening were recalled.

- Women attending the program for the first time have a significantly 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.
- In 2003, the age-standardised rates of recall to assessment for women in the target age group attending for their first screening session ranged from 5.7% to 12.4% across the states and territories. For women in the target age group attending for their second or subsequent screening rounds in 2003, the figures ranged from 2.4% to 5.5% between the jurisdictions.
- The proportion of women attending their first screening round who were recalled for assessment increased slightly from 7.2% in 1998 to 9.3% in 2003.

Indicator 6 Rescreening

- The proportion of women attending a BreastScreen Australia service in 2001 and returning for rescreening within the recommended 27-months interval increased with the number of previous screens. The age-standardised national rescreen rate for women attending a BreastScreen Australia service in 2001 for the first time was 62.9%. The rescreen rate increased to 71.9% for women attending for their second screen and 81.8% for women attending for a third or subsequent screen.
- Compared with the 2000 data there was a significant decrease in rescreen rates in 2001 for women in all screening categories (see table on page 55).

Indicator 7a Incidence of breast cancer

- The national breast cancer incidence rate for women in the target age group increased slightly between 1993–1997 and 1998–2002 from 273.0 to 296.5 per 100,000 women respectively.
- In 1993–1997 the breast cancer incidence rate for the target age group ranged from 196.1 to 281.6 per 100,000 women across the states and territories.
- Examining the trends in breast cancer incidence in different age groups helps to identify the ages at which women are at most risk of developing breast cancer. In 1997 the highest breast cancer incidence rates were in the 75–79 age group (337.7 new cases per 100,000 women). In 2001 the incidence peak shifted towards the younger age group 60–64 years (352.4 per 100,000 women). In 2002 the age group with the highest breast cancer incidence rate of 361.9 new cases per 100,000 women was 65–69 years old.
- Of the 12,027 new cases of breast cancer in 2002, 5,979 (49.7%) occurred in women in the target age group. Only 5.8% of cases were in women aged under 40 years. Age-specific incidence rates in 2002 ranged from 117.3 new cancers per 100,000 women in the 40–44 age group to 361.9 new cases per 100,000 women in the 65–69 age group.
- In 1993–1997 and 1998–2002 the age-standardised breast cancer incidence rate was significantly lower in outer regional, remote and very remote areas than the national rate.

Indicator 7b Incidence of ductal carcinoma in situ (DCIS)

- The age-standardised incidence rates for DCIS for women in the target age group (50–69 years) increased between the time periods 1993–1998 and 1997–2002 (31.5 and 40.3 per 100,000 women, respectively). The rate for women of all ages also shows a statistically significant upward trend for the same time periods.

- In 1997–2002 the age-standardised DCIS rate for women in the target age group ranged from 20.1 to 53.9 per 100,000 women across the states and territories.

Indicator 8 Mortality

- Breast cancer is the most common cause of cancer-related deaths in women, with 2,713 deaths in 2003 in Australia.
- The age-standardised mortality rate for the target age group (50–69 years) declined from 66.7 in 1989 to 54.1 per 100,000 women in 2003. A similar pattern of decline in mortality rates can be observed in women in all age groups, from 30.8 in 1989 to 24.6 per 100,000 women in 2003.
- Between 1989 and 2003, the age-standardised mortality rate for breast cancer in women in the target group (50–69 years) declined by an average of 1.9% per annum and for women in all age groups (0–85 years and over) the average decline was 1.8% per annum.
- For women in the target age group, mortality rates in 1999–2003 were similar for women in major cities (55.1 deaths per 100,000 women), inner regional areas (50.8) and outer regional areas (55.3). The rates in remote areas (49.3) and very remote areas (47.4) were lower, but this was not significant because of the small number of deaths in these areas.

Summary table

The following table provides a comparison of national data for all indicators for the target age group (50–69 years). The latest reporting period is compared with the previous reporting period and with the reporting period from five years ago and with the program performance objectives.

One-year to 5-year comparison table for national data for all indicators for the target age group 50–69 years

Indicator	Latest reporting period			Previous reporting period			Five years ago		
	Objective ^(e)	Year	Rate	Year	Rate	Year	Rate	Year	Rate
Participation in 24-month period (%)	70.0 ^(b)	2002–2003	56.1	2000–2001	56.9	1997–1998	54.6		
Detection rate of small invasive cancers (≤15 mm)^(e)	≥25								
First screening round		2003	38.8	2002	37.9	1998	36.5		
Subsequent screening rounds		2003	26.5	2002	26.7	1998	24.8		
Interval cancer rate^(e)									
First screening round 0–12 months following a negative screening episode	<7.5	Index years 1999, 2000 and 2001*	7.8	Index years 1996, 1997 and 1998*	6.6	..	..
Subsequent screening rounds 0–12 months following a negative screening episode	<7.5	Index years 1999, 2000 and 2001*	7.9	Index years 1996, 1997 and 1998*	7.8	..	..
Program sensitivity (screen detected cancers)^(e)									
First screening round 0–12 months following a negative screening episode	..	Index years 1999, 2000 and 2001*	88.9	Index years 1996, 1997 and 1998*	89.1	..	..
Subsequent screening rounds 0–12 months following a negative screening episode	..	Index years 1999, 2000 and 2001*	83.8	Index years 1996, 1997 and 1998*	81.7	..	..
Detection of ductal carcinoma in situ (DCIS)^(e)									
First screening round	≥12	2003	16.3	2002	20.6	1998	12.8		
Subsequent screening rounds	≥7	2003	10.0	2002	8.9	1998	9.2		
Recall to assessment^(d)									
First screening round	<10	2003	9.3	2002	8.7	1998	7.2		
Subsequent screening rounds	<5	2003	4.0	2002	4.0	1998	3.9		

(continued)

One-year to 5-year comparison table for national data for all indicators for the target age group 50–69 years (continued)

Indicator	Objective ^(a)	Latest reporting period		Previous reporting period		Five years ago	
		Year	Rate	Year	Rate	Year	Rate
Rescreening for age group 50–67 years^{(d),(e)}							
First screening round	≥75	Index year 2001	62.9	Index year 2000	66.3	..	..
Second screening round	≥90	Index year 2001	71.9	Index year 2000	75.7	..	..
Third and subsequent screening rounds	≥90	Index year 2001	81.8	Index year 2000	84.2	..	..
Incidence of breast cancer^(f)	..	2002	304.3	2001	305.0	1997	276.7
Incidence of ductal carcinoma in situ (DCIS)^(g)	..	1997–2002	40.3	..	..	1993–1998	31.5
Mortality from breast cancer^(h)	..	2003	54.1	2002	56.7	1998	57.3

.. Not applicable.

(a) Performance objective of the BreastScreen Australia Program as set out in the National Accreditation Standards (NQMC unpublished). Although these objectives were developed for individual screening services rather than for the national program as a whole, they do provide an indication of the national program's performance.

(b) Target formally agreed by the BreastScreen National Advisory Committee.

(c) 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.

(d) 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.

(e) Prior to index year 2000, data for 50–69 age group were reported. Although the BreastScreen Australia target age group is 50–69 years, only women aged 50–67 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 and, therefore, were not expected to return for screening.

(f) Rates are the number of new cases of breast cancer per 100,000 women and age-standardised to the Australian population at 30 June 2001.

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

(h) 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 Australian figure includes data from Vic, Qld, WA, SA, Tas and ACT. NT data were unavailable at the time of publication of the *BreastScreen Australia monitoring report 1998–1999 and 1999–2000* from which the data for index years 1996, 1997 and 1998 were copied. Updated NSW data were supplied separately.

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 (40–44, 45–49, 50–54, 55–59, 60–64, 65–69, 70–74, 75–79, 80–84, 85+ years) 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. It is important that a high proportion of women in the target age group attend for screening if BreastScreen Australia is to realise the anticipated reductions in overall mortality from breast cancer (DHS 1994). The participation rate is a direct measure of this attendance. 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 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 symptoms) is conducted outside the program. To some extent, therefore, the results presented in this report are an underestimation of screening on a national basis. This chapter reports on the participation rates for the BreastScreen Australia Program for 2002 and 2003 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 2002–2003 was 56.1%. This rate has been steadily increasing since 1996–1997, when it was 52.3%, to 57.1% in 2001–2002 but decreased to 56.1% in 2002–2003. The decrease in participation between 2001–2002 and 2002–2003 is statistically significant.

Age-standardised participation rates for women in the target age group (50–69 years), Australia, 1996–1997 to 2002–2003

	Objective ^(a)	1996–1997	1997–1998	1998–1999	1999–2000	2000–2001	2001–2002	2002–2003
Rate (%)	70.0	52.3	54.6	55.7	55.9	56.9	57.1	56.1
95% CI	..	52.2–52.4	54.5–54.7	55.6–55.8	55.8–56.0	56.8–57.0	57.0–57.2	56.0–56.2

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

.. Not applicable.

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

Source: AIHW analysis of BreastScreen Australia data.

Another BreastScreen Australia objective relating to participation 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. Below are some key points on each of these variables.

Region

Participation rates in 'Major cities' and 'Very remote' areas were lower than those in other regions.

The lower participation rates in 'Major cities' may reflect greater access to, and use of, private radiology services. Or there may be a group of women in the target age group who are working women and cannot easily access BreastScreen Australia services, or may be less likely to screen regularly within the recommended 2-year screening interval.

Participation is highest in rural and remote areas, but is below the rates for all other regions in 'Very remote' areas.

Participation in rural areas is encouraged through fixed mammography units in larger towns and the use of mobile mammography units in other areas.

It is not known why rates are relatively low in 'Very remote' areas. However, lower participation may be due to unavailability of BreastScreen Australia services in some remote areas of the Northern Territory and to lower participation by Indigenous women in very remote areas.

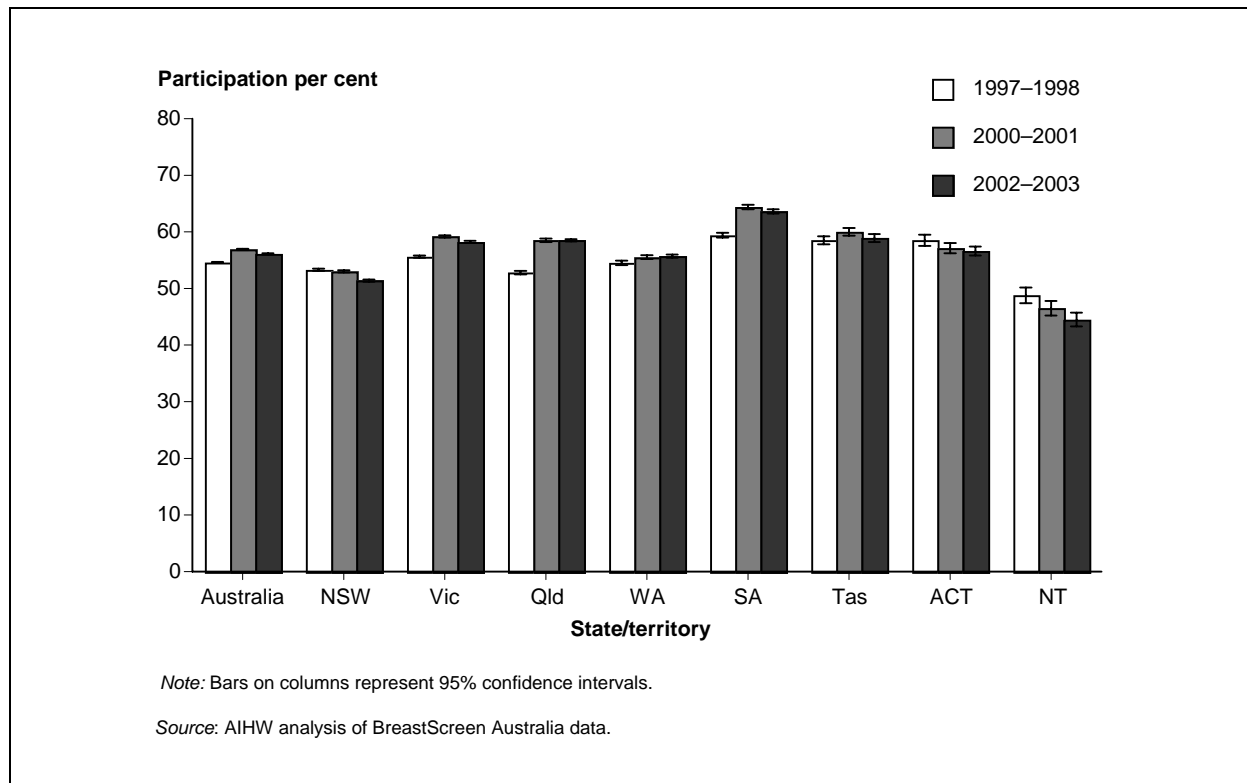
Socioeconomic status

Breast cancer mortality rates were highest among women with the highest socioeconomic status although the difference between the groups was not statistically significant (Dunn et al. 2002). There was only minor variation in the participation rates among different socioeconomic groups.

Indigenous status and main language spoken at home

Participation among Indigenous women was significantly lower than that of non-Indigenous women. Similarly, participation among women whose language spoken at home was not English was significantly lower than for women whose main language spoken at home was English. These results should, however, be treated with caution because of the data issues discussed in the report.

Participation of women aged 50–69 years in BreastScreen Australia, 1997–1998, 2000–2001 and 2002–2003



	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
2002–2003	56.1* [#]	51.4* [#]	58.2* [#]	58.5 [#]	55.7 [#]	63.6 [#]	58.9	56.6 [#]	44.5 [#]
95% CI	56.0–56.2	51.2–51.6	57.9–58.4	58.3–58.8	55.3–56.0	63.3–64.0	58.3–59.6	55.7–57.4	43.3–45.7
2000–2001	56.9	53.0	59.2	58.5	55.5	64.4	60.0	57.1	46.5
95% CI	56.8–57.0	52.8–53.2	58.9–59.4	58.2–58.7	55.2–55.9	64.0–64.8	59.3–60.7	56.2–58.0	45.2–47.7
1997–1998	54.6	53.3	55.6	52.8	54.5	59.4	58.5	58.5	48.8
95% CI	54.5–54.7	53.2–53.5	55.4–55.8	52.5–53.1	54.1–54.9	59.0–59.8	57.8–59.2	57.5–59.5	47.4–50.3

* Significantly different from the 2000–2001 rate.

[#] Significantly different from the 1997–1998 rate.

Notes

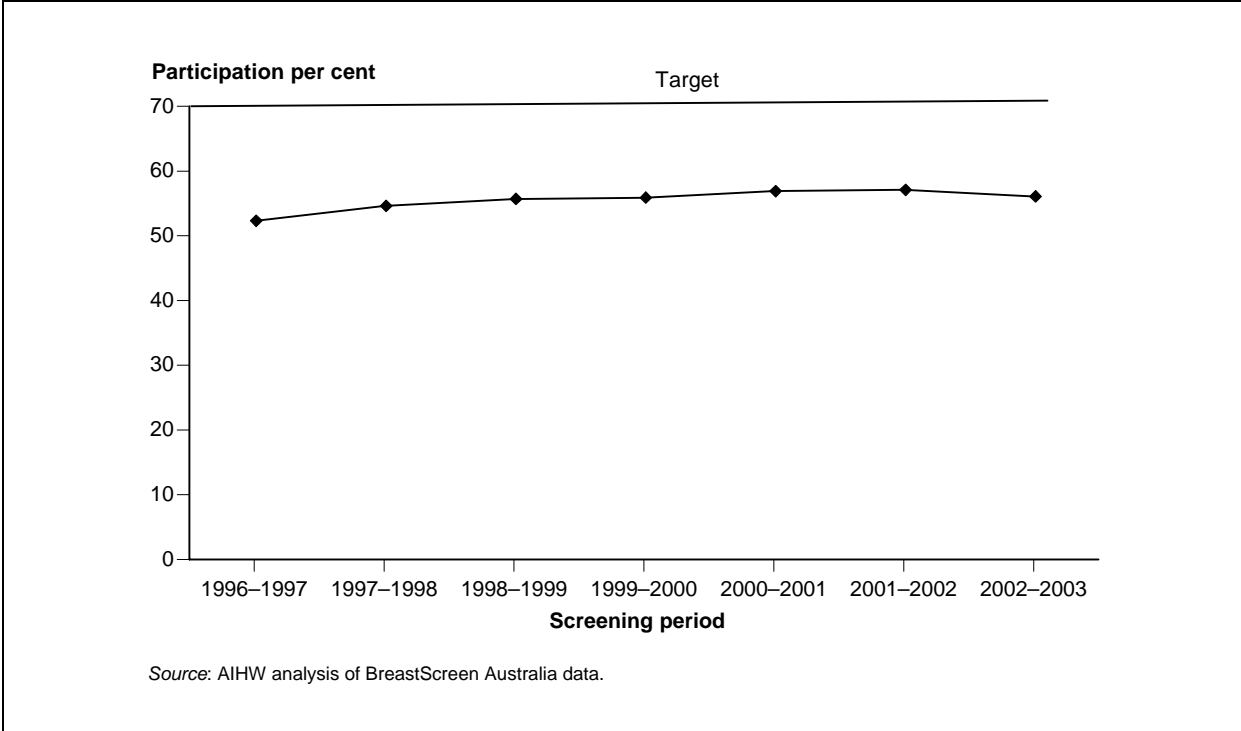
- Rates are the number of women screened as a percentage of the eligible female population and age-standardised to the Australian population at 30 June 2001.
- Periods cover 1 January 1997 to 31 December 1998, 1 January 2000 to 31 December 2001 and 1 January 2002 to 31 December 2003.

- Of the 1,618,306 women screened during 2002 and 2003 as part of the BreastScreen Australia Program, 1,118,429 (69%) were in the target age group (50–69 years).
- In 2002–2003, 56.1% (age-standardised) of women in the target age group attended a BreastScreen Australia service.
- Across states and territories, the age-standardised participation rate for women in the target age group ranged from 44.5% in the Northern Territory to 63.6% 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.

- Participation in BreastScreen Australia among women in Australia in the target age group increased from 54.6% (age-standardised) in 1997–1998 to 56.1% in 2002–2003. This increase in participation was statistically significant.
- Victoria, Queensland, Western Australia and South Australia were jurisdictions with a statistically significant increase in participation for women in the target age group between 1997–1998 and 2002–2003. In New South Wales, Australian Capital Territory and the Northern Territory, the participation rate declined between 1997–1998 and 2002–2003 and the decrease was statistically significant.

For more information, see: Tables 1 and 2 beginning on page 80. Tables with data other than for the latest reporting period can be found on the AIHW's web site at <www.aihw.gov.au>.

Participation of women aged 50–69 years in BreastScreen Australia, 1996–1997 to 2002–2003



	1996–1997	1997–1998	1998–1999	1999–2000	2000–2001	2001–2002	2002–2003
Rate (%)	52.3	54.6	55.7	55.9	56.9	57.1	56.1*
<i>95% CI</i>	52.2–52.4	54.5–54.7	55.6–55.8	55.8–56.0	56.8–57.0	57.0–57.2	56.0–56.2

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

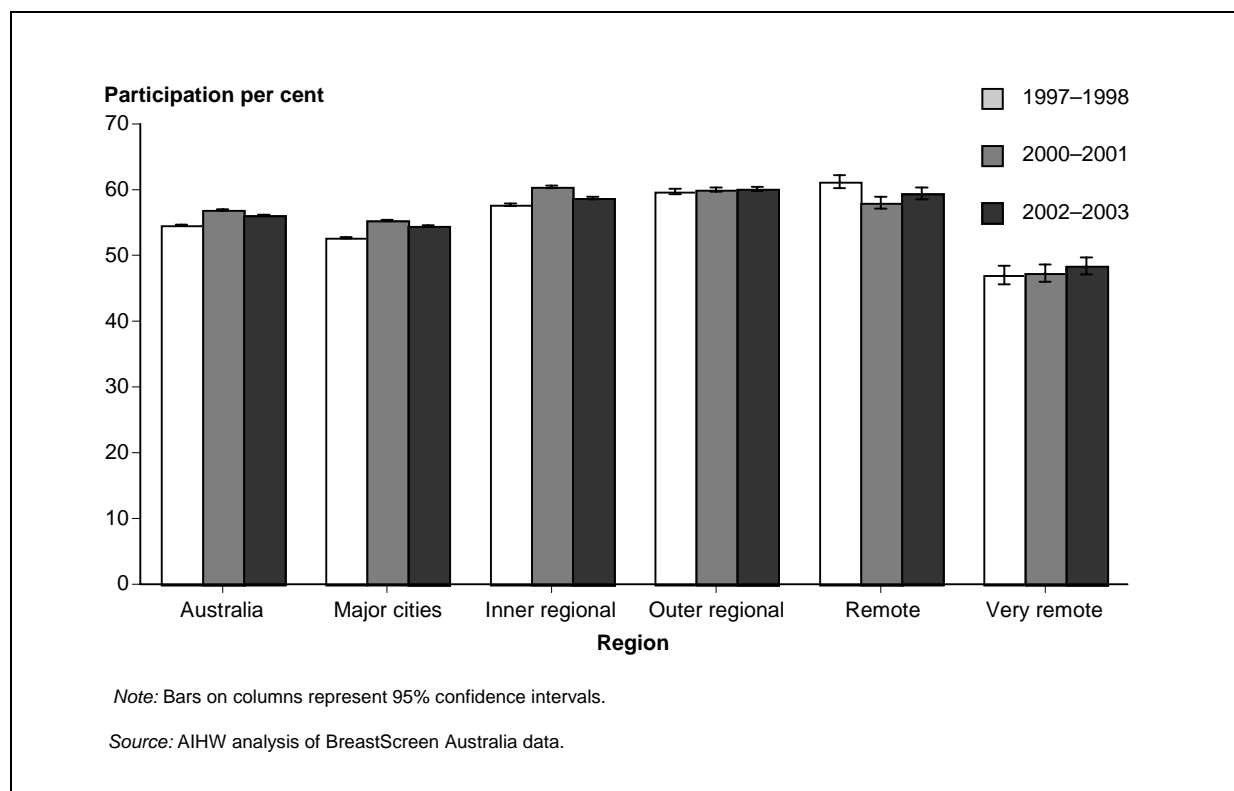
Notes

1. Rates are the number of women screened as a percentage of the eligible female 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 and 1 January 2002 to 31 December 2003.

- Participation in BreastScreen Australia among women in the target age group increased from 52.3% (age-standardised) in 1996–1997 to 57.1% in 2001–2002, falling to 56.1% in 2002–2003. The fall in 2002–2003 was statistically significant.

For more information, see: Tables 1 and 2 beginning on page 80 . Tables with data other than for the latest reporting period can be found on the AIHW's web site at <www.aihw.gov.au>.

Participation of women aged 50–69 years in BreastScreen Australia by region, 1997–1998, 2000–2001 and 2002–2003



	Australia	Major cities	Inner regional	Outer regional	Remote	Very remote
2002–2003 rate (%)	56.1#	54.5*#	58.7*	60.1	59.4#	48.4
95% CI	56.0–56.2	54.4–54.6	58.5–58.9	59.8–60.4	58.5–60.4	47.2–49.7
2000–2001 rate (%)	56.9	55.3	60.4	60.0	58.0	47.3
95% CI	56.8–57.0	55.2–55.5	60.1–60.6	59.6–60.3	57.0–58.9	46.0–48.7
1997–1998 rate (%)	54.6	52.7	57.7	59.7	61.2	47.0
95% CI	54.5–54.7	52.6–52.8	57.5–58.0	59.4–60.1	60.2–62.2	45.6–48.3

* Significantly different from the 2000–2001 rate.

Significantly different from the 1997–1998 rate.

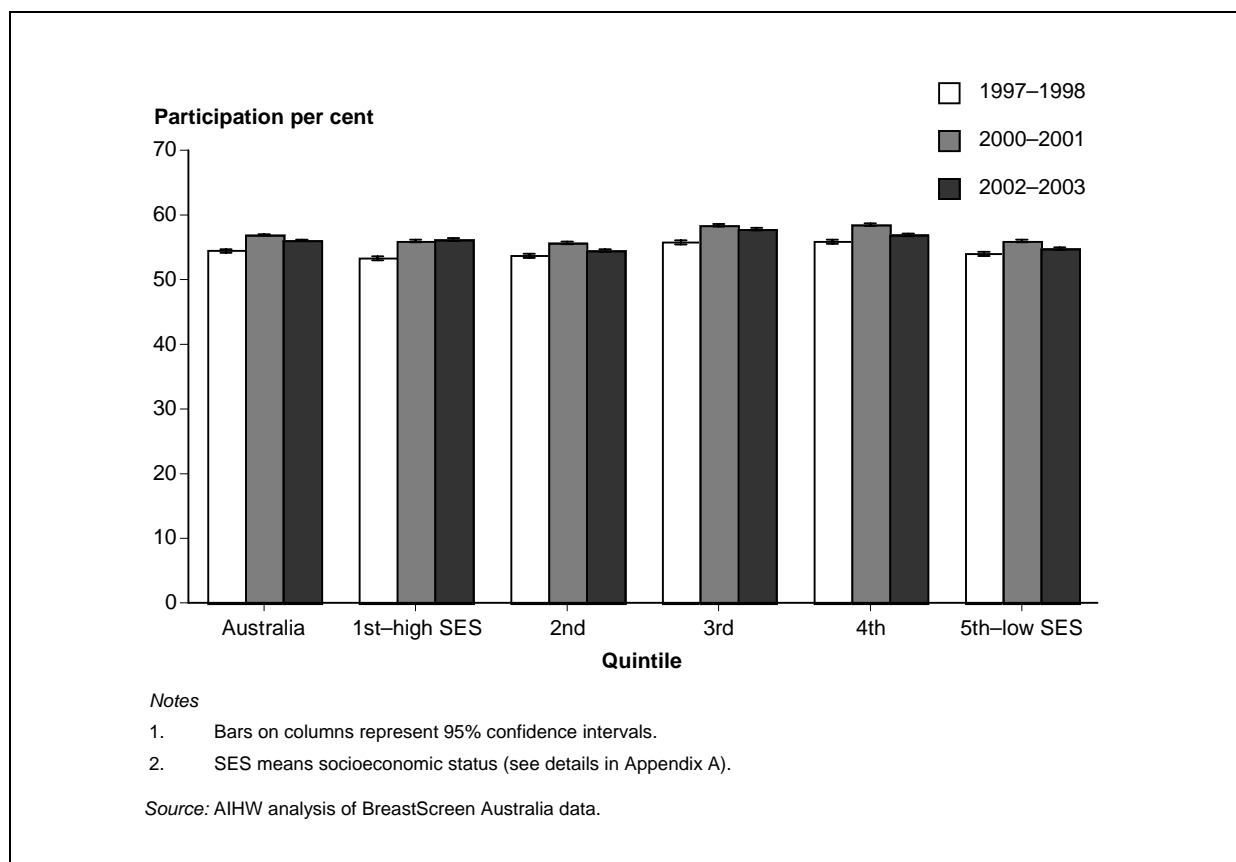
Notes

1. Rates are the number of women screened as a percentage of the eligible female population and age-standardised to the Australian population at 30 June 2001.
2. Periods cover 1 January 1997 to 31 December 1998, 1 January 2000 to 31 December 2001 and 1 January 2002 to 31 December 2003.
3. The Australian Standard Geographical Classification (ASGC) was used to create the above categories (ABS 2001).

- Participation in BreastScreen Australia varied significantly between regions in 1997–1998, 2000–2001 and 2002–2003.
- In 2002–2003 the age-standardised participation rates were lower than the national rate (56.1%) for women in the target age group in major cities (54.5%) and very remote areas (48.4%). Higher rates than the national rate were in the inner regional, outer regional areas and remote (58.7%, 60.1% and 59.4%, respectively).

For more information, see: Table 3 on page 82. Tables with data other than for the latest reporting period can be found on the AIHW's web site at <www.aihw.gov.au>.

Participation of women aged 50–69 years in BreastScreen Australia by socioeconomic status, 1997–1998, 2000–2001 and 2002–2003



	Australia	1st quintile	2nd quintile	3rd quintile	4th quintile	5th quintile
2002–2003						
rate (%)	56.1*#	56.2#	54.5*#	57.8*#	56.9*#	54.8*#
<i>95% CI</i>	56.0–56.2	56.0–56.5	54.2–54.7	57.5–58.0	56.6–57.1	54.6–55.1
2000–2001						
rate (%)	56.9	56.0	55.7	58.4	58.5	56.0
<i>95% CI</i>	56.8–57.0	55.7–56.2	55.5–56.0	58.2–58.7	58.3–58.8	55.8–56.2
1997–1998						
rate (%)	54.6	53.4	53.8	55.9	56.0	54.1
<i>95% CI</i>	54.5–54.7	53.1–53.6	53.6–54.1	55.7–56.2	55.7–56.3	53.9–54.3

* Significantly different from the 2000–2001 rate.

Significantly different from the 1997–1998 rate.

Notes

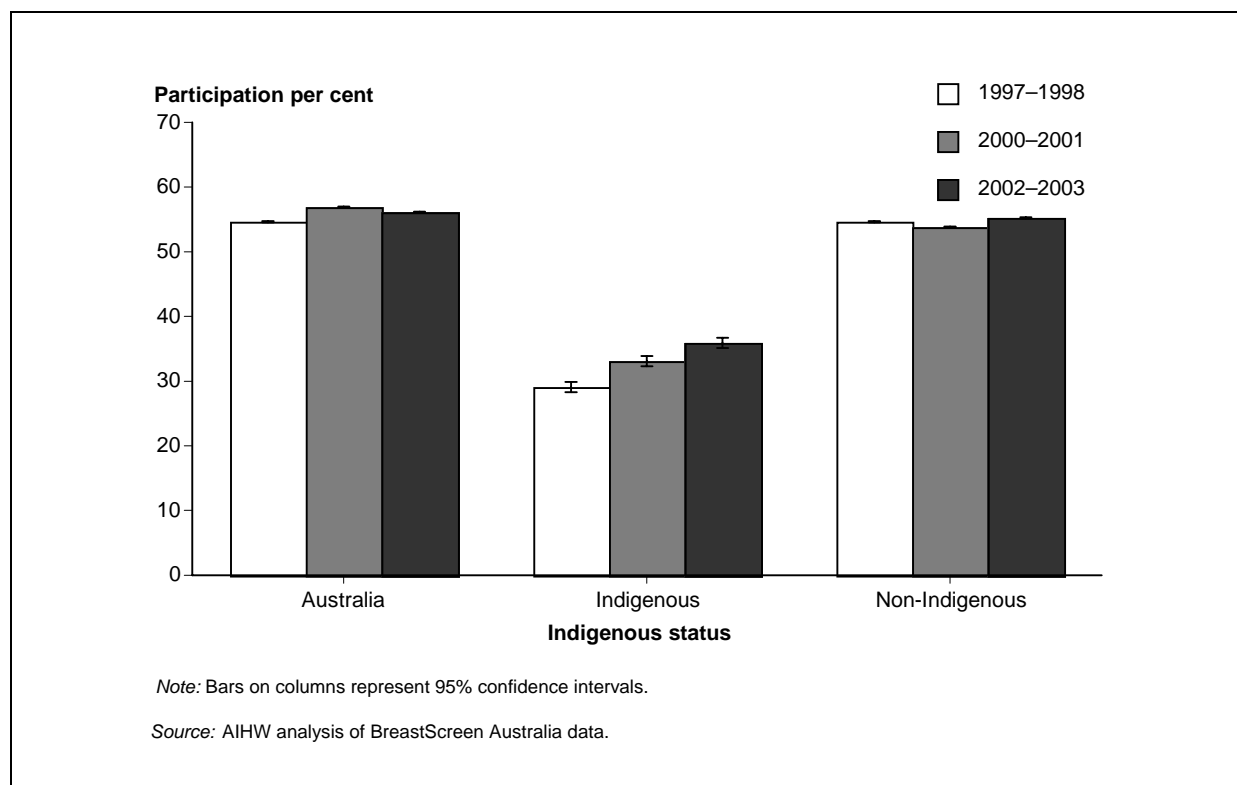
1. Rates are the number of women screened as a percentage of the eligible female population and age-standardised to the Australian population at 30 June 2001.
2. Periods cover 1 January 1997 to 31 December 1998, 1 January 2000 to 31 December 2001 and 1 January 2002 to 31 December 2003.
3. The first quintile corresponds to the highest socioeconomic status and the fifth to the lowest socioeconomic status.

- In 2002–2003 women in the target age group living in socioeconomic status postcodes with the highest participation rates were the first, third and fourth quintiles, 56.2%, 57.8% and 56.9%, respectively.
- Between the years 1997–1998 and 2002–2003 there were statistically

significant increases in participation in all socioeconomic categories.

For more information, see: Table 4 on page 83. Tables with data other than for the latest reporting period can be found on the AIHW's web site at <www.aihw.gov.au>.

Participation of women aged 50–69 years in BreastScreen Australia by Indigenous status, 1997–1998, 2000–2001 and 2002–2003



	Australia	Indigenous	Non-Indigenous
2002–2003 rate (%)	56.1 [#]	35.9 ^{*#}	55.2 [#]
95% CI	56.0–56.2	35.1–36.7	55.1–55.3
2000–2001 rate (%)	56.9	33.1	53.8
95% CI	56.8–57.0	32.3–33.9	53.7–53.9
1997–1998 rate (%)	54.6	29.1	54.6
95% CI	54.5–54.7	28.3–29.9	54.5–54.8

* Significantly different from the 2000–2001 rate.

[#] Significantly different from the 1997–1998 rate.

Notes

- Rates are the number of women screened as a percentage of the eligible female population and age-standardised to the Australian population at 30 June 2001.
- Periods cover 1 January 1997 to 31 December 1998, 1 January 2000 to 31 December 2001 and 1 January 2002 to 31 December 2003.
- Women whose Indigenous status was recorded as 'not-stated' were included in the analysis for all women but excluded from the analysis by Indigenous status.

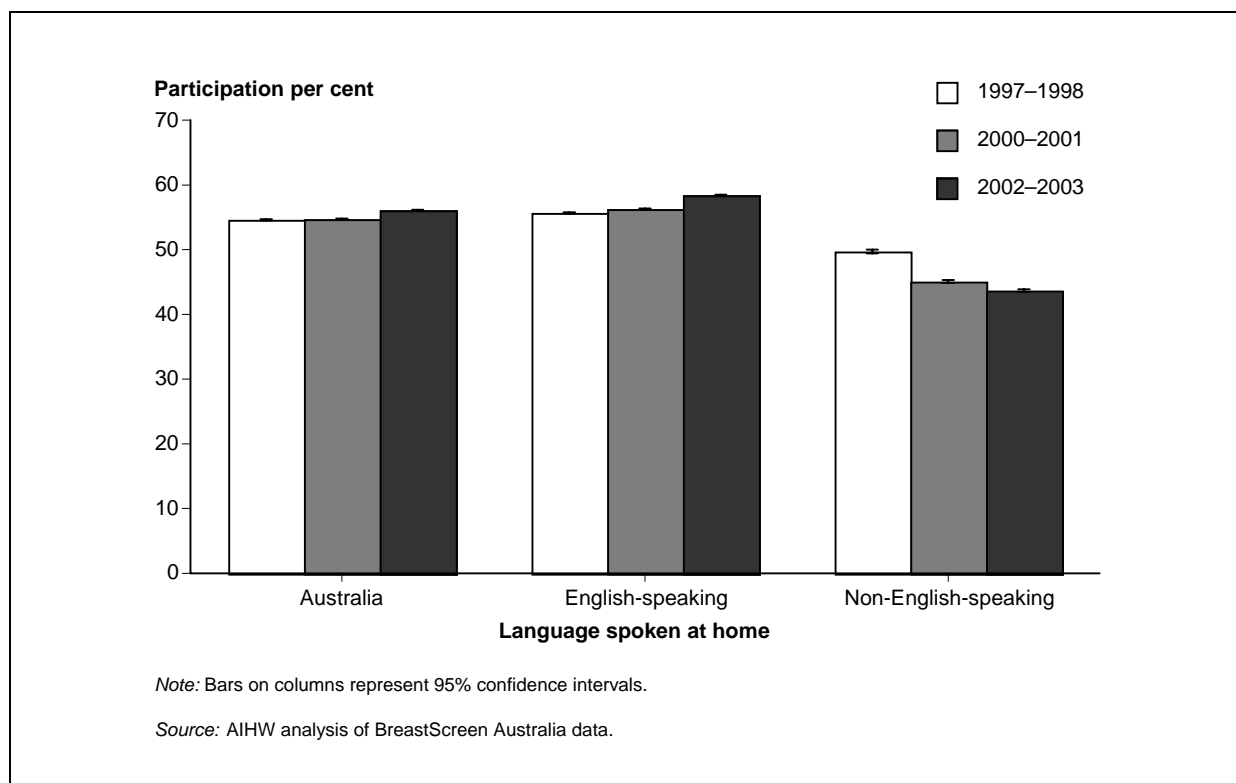
- In 2003, 1.1% of the Australian female population aged 50–69 years were Aboriginal and Torres Strait Islander women. This estimate is based on the experimental Indigenous population projections 2001–2009 (ABS 2004).
- Of the 1,618,306 women aged 40 and over participating in screening through the BreastScreen Australia Program in 2002–2003, there were 12,354 (0.8%) who identified themselves as Aboriginal or Torres Strait Islander (0.6% in 1997–1998 and 0.7% in 2000–2001). While 29,380 women in 2002–2003 were classified as not stating their Indigenous status, the true figure is higher because some jurisdictions classified these women as 'non-Indigenous' (see Appendix A for coding of Indigenous status). The

comparison of participation rates between Indigenous and non-Indigenous women should therefore be treated with caution.

- In 2002–2003 the age-standardised participation rate for Indigenous women (35.9%) was much lower than the non-Indigenous rate (55.2%) but the rate for Indigenous women increased significantly from 29.1% in 1997–1998 to 35.9% in 2002–2003.

For more information, see: Table 5 on page 84. Tables with data other than for the latest reporting period can be found on the AIHW's web site at <www.aihw.gov.au>.

Participation of women aged 50–69 years in BreastScreen Australia by language spoken at home, 1997–1998, 2000–2001 and 2002–2003



	Australia	English-speaking	Non-English-speaking
2002–2003 rate (%)	56.1 [#]	58.4 ^{*#}	43.7 ^{*#}
95% CI	56.0–56.2	58.3–58.5	43.4–43.9
2000–2001 rate (%)	54.7	56.3	45.1
95% CI	54.5–54.8	56.2–56.4	44.9–45.3
1997–1998 rate (%)	54.6	55.7	49.7
95% CI	54.5–54.7	55.5–55.8	49.5–50.0

* Significantly different from the 2000–2001 rate.

[#] Significantly different from the 1997–1998 rate.

Notes

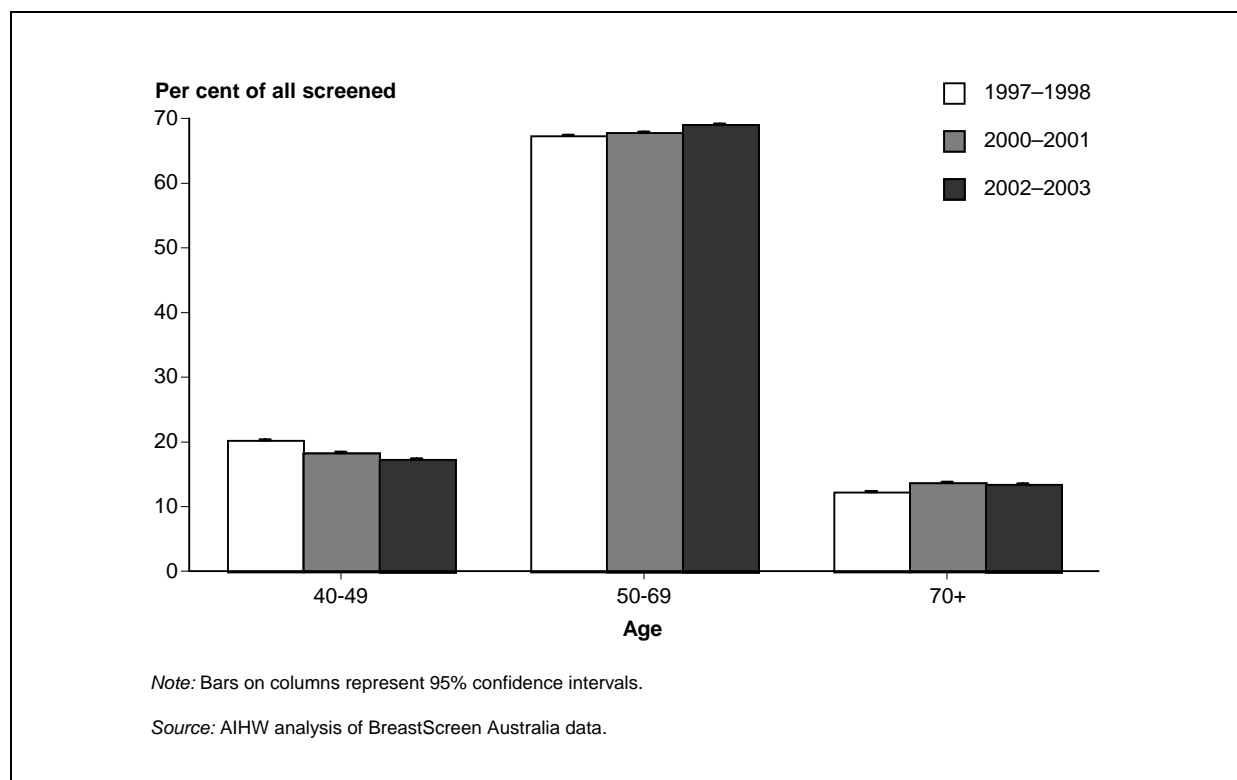
- Rates are the number of women screened as a percentage of the eligible female population and age-standardised to the Australian population at 30 June 2001.
- Periods cover 1 January 1997 to 31 December 1998, 1 January 2000 to 31 December 2001 and 1 January 2002 to 31 December 2003.
- Women who were recorded as not stating their language spoken at home are included in the analysis for all women but excluded from the analysis by language.

- Of the 1,618,306 women aged 40 years and over participating in screening through the BreastScreen Australia Program in 2002–2003, there were 205,683 (12.7%) who identified as non-English-speaking (14.2% in 1997–1998 and 13.1% in 2000–2001). While 4,514 women in 2002–2003 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 A). Participation rates between English-speaking and non-English-speaking women should therefore be treated with caution.

- In 2002–2003 there was a much lower age-standardised participation rate for women in the target age group from a non-English-speaking background (43.7%) than for English-speaking women (58.4%). The same applied for the periods 1997–1998 and 2000–2001.
- The age-standardised participation rate for women in the target age group from a non-English-speaking background decreased from 49.7% in 1997–1998 to 43.7% in 2002–2003. The reverse was true for women from an English-speaking background where the age-standardised rate increased from 55.7% in 1997–1998 to 58.4% in 2002–2003.

For more information, see: Table 6 on page 85. Tables with data other than for the latest reporting period can be found on the AIHW's web site at <www.aihw.gov.au>.

Age distribution of women aged 40 years and over screened by BreastScreen Australia, 1997–1998, 2000–2001 and 2002–2003



Age	40–49	50–69	70+
2002–2003 (%)	17.4 ^{*#}	69.1 ^{*#}	13.5 [#]
95%CI	17.3–17.4	69.0–69.2	13.5–13.6
2000–2001 (%)	18.4	67.9	13.8
95%CI	18.3–18.4	67.7–68.0	13.7–13.8
1997–1998 (%)	20.3	67.4	12.3
95%CI	20.2–20.4	67.3–67.5	12.2–12.4

* Significantly different from the 2000–2001 rate.

Significantly different from the 1997–1998 rate.

Notes

- Rates are the number of women screened as a percentage of all women aged 40 or over screened by BreastScreen Australia.
- Periods cover 1 January 1997 to 31 December 1998, 1 January 2000 to 31 December 2001 and 1 January 2002 to 31 December 2003.

- More than two-thirds (69.1%) of women participating in the BreastScreen Australia Program in 2002–2003 were in the target age group (50–69 years). Of all women screened, 17.4% were aged 40–49 years, and 13.5% were aged 70 years and over.
- The proportion of women in the target age group increased from 67.4% in 1997–1998 to 69.1% in 2002–2003. In the 70+ age group there was also an increase from 12.3% to 13.5% between 1997–1998 and 2002–2003.
- The only age group with a downward trend was the 40–49 age group. The proportion of women in this age group decreased from 20.3% in 1997–1998 to 17.4% in 2002–2003.

Indicator 2: Detection of small invasive cancers

Small invasive cancer detection rate

The detection rate for small invasive cancers is the rate of women with small diameter (≤ 15 mm) invasive breast cancers per 10,000 women screened by five-year age groups (40–44, 45–49, 50–54, 55–59, 60–64, 65–69, 70–74, 75–79, 80–84, 85+ years) 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), five-year age groups and for the target age group.

The 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 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 small (≤ 15 mm) invasive breast cancers require:

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

The following table shows the detection rate of small-diameter invasive breast cancers achieved by the BreastScreen Australia Program in 1998, 2002 and 2003. The objective of detecting at least 25 small-diameter (≤ 15 mm) cancers per 10,000 women screened was achieved at the national level in 2002 and 2003 for all screening rounds and age groups and in 1998 for women attending for their first screening round.

In 2003, the age-standardised detection rate for small invasive cancers in women in the target age group attending for their first screening round ranged from 23.3 to 92.7 per 10,000 women screened across the states and territories, but because of small numbers involved this apparently large variation in the detection rate was not statistically significant.

Small (≤ 15 mm) invasive breast cancer detection rate per 10,000 women, first and subsequent rounds, 1998, 2002 and 2003

	Objective ^(a)	1998	2002	2003
First screening round				
Rate for women aged 50–69 years	≥ 25	36.5	37.9	38.8
95% CI		32.7–40.5	32.7–43.6	33.2–45.1
Rate for women aged 40 years and over	..	36.3	36.4	40.8
95% CI		33.3–39.6	32.1–41.0	35.7–46.2
Subsequent screening rounds				
Rate for women aged 50–69 years	..	24.8	26.7	26.5
95% CI		23.3–26.5	25.3–28.2	25.1–27.9
Rate for women aged 40 years and over	..	24.0	25.0	25.0
95% CI		22.7–25.3	23.8–26.1	23.8–26.1

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

.. Not applicable.

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 table below shows the percentage of all invasive cancers detected that were small-diameter (≤ 15 mm) invasive breast cancers, by screening round, for women screened in 1998, 2002 and 2003.

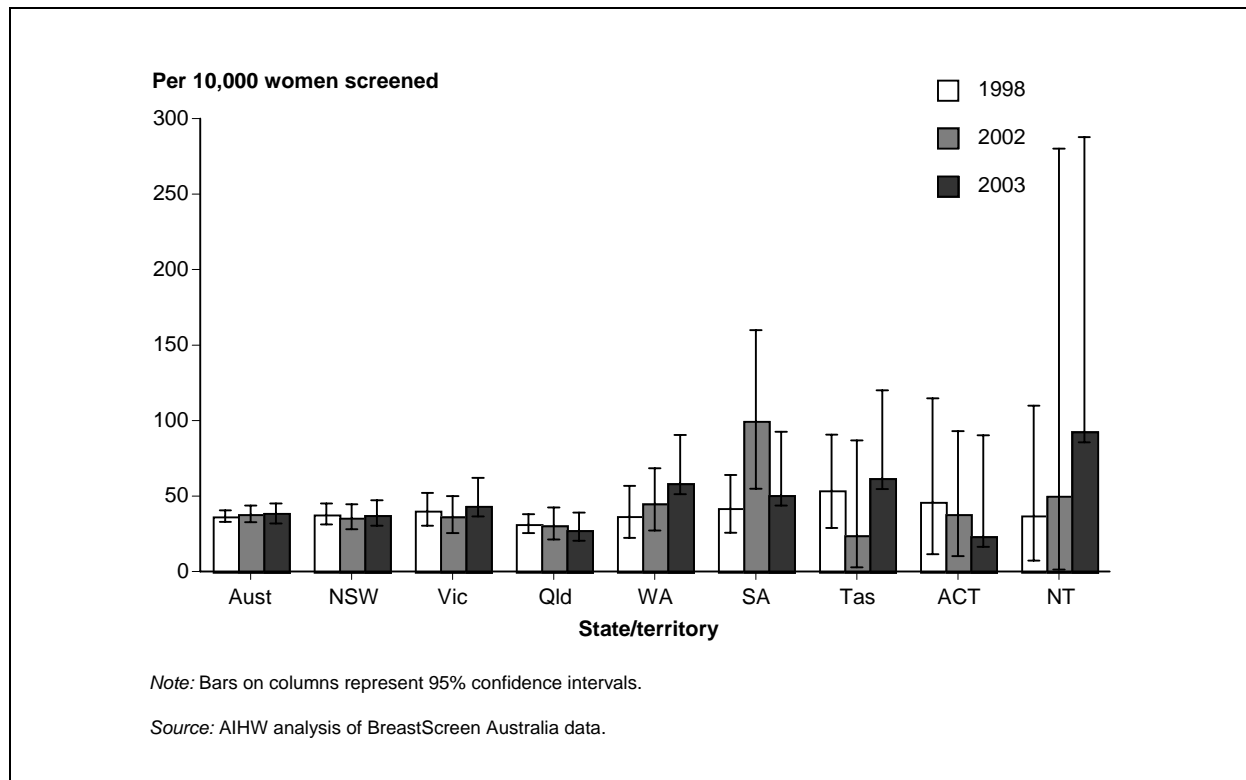
Percentage of invasive cancers detected that were small (≤ 15 mm) in diameter, 1998, 2002 and 2003

	1998	2002	2003
First screening round			
Women aged 50–69 years	58.3	56.1	55.4
Women aged 40 years and over	55.8	54.3	54.1
Subsequent screening rounds			
Women aged 50–69 years	68.5	65.7	64.0
Women aged 40 years and over	69.0	66.1	65.0

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 two years before the second round.

Small (≤ 15 mm) invasive breast cancer detection in women aged 50–69 years, first screening round, 1998, 2002 and 2003



	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
2003 rate	38.8	37.3	43.5	27.4	58.4	50.6	61.8	23.3	92.7
95% CI	33.2–45.1	28.9–47.1	28.6–62.0	18.3–39.1	33.9–90.5	21.2–92.7	26.5–120.1	0.8–90.2	12.2–287.6
2002 rate	37.9	35.6	36.5	30.6	45.2	99.7*	24.0	38.0	50.3
95% CI	32.7–43.6	27.9–44.5	25.5–50.0	21.2–42.4	27.2–68.6	54.9–159.9	2.9–86.8	10.2–93.0	1.3–280.0
1998 rate	36.5	37.7	40.3	31.3	36.7	41.9	53.8	46.2	37.2
95% CI	32.7–40.5	31.2–45.0	30.2–52.1	25.5–38.0	22.3–56.7	25.7–63.9	28.8–90.7	11.5–114.8	7.2–110.0

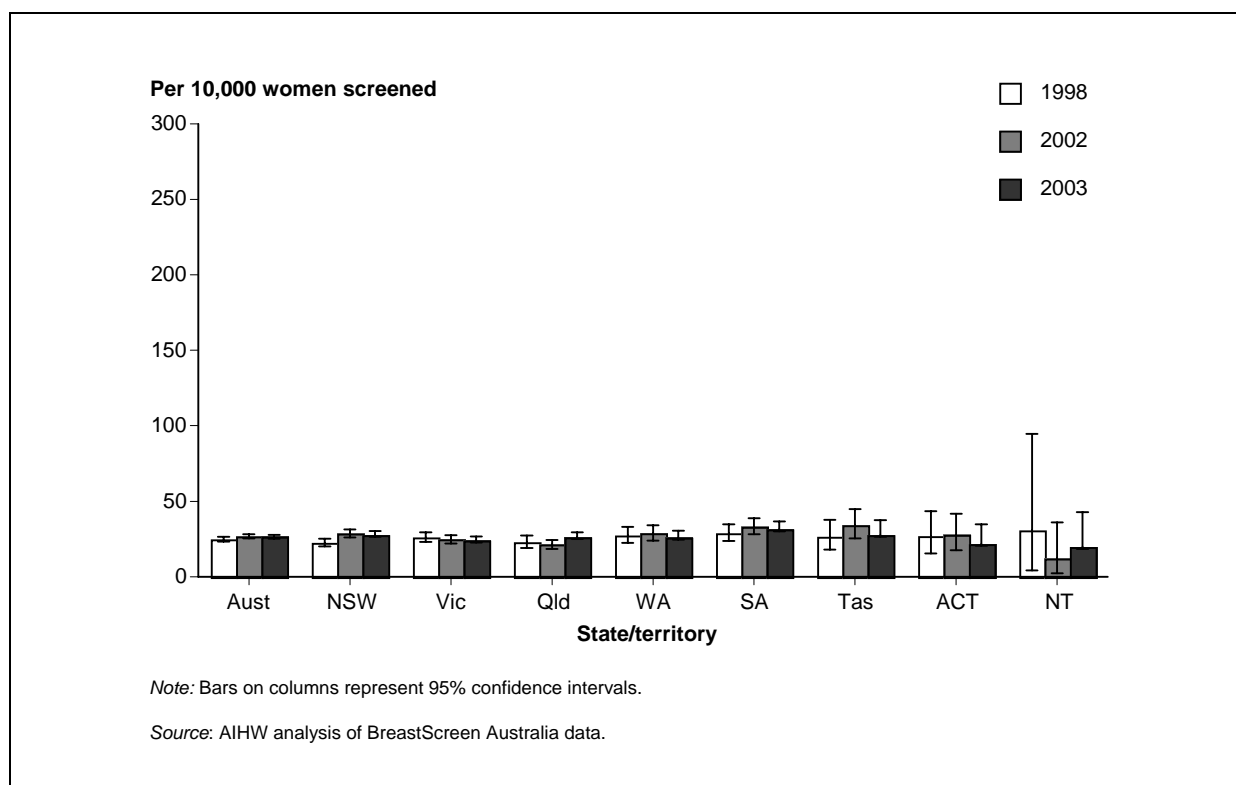
* Statistically different from the 2002 Australian rate.

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 2003, small-diameter invasive cancers were found in 361 women aged 40 and over attending a BreastScreen Australia service for their first screen. Of these women, 225 were in the target age group (50–69 years). The age-standardised detection rate was 38.8 per 10,000 women screened for women in the target age group and 40.8 per 10,000 women screened for all women aged 40 and over. The detection rate for small-diameter invasive cancers for women in the target age group increased from 36.5 per 10,000 women screened in 1998 to 38.8 in 2003. The increase was not statistically significant.
- In 2003, across the states and territories, there are no statistically significant differences in the age-standardised detection rate for small invasive cancers in women in the target age group due to the large confidence intervals arising from small numbers of cases.

For more information, see: Tables 7 to 10 beginning on page 86. Tables with data other than for the latest reporting period can be found on the AIHW's web site at <www.aihw.gov.au>.

Small (≤ 15 mm) invasive breast cancer detection in women aged 50–69 years, subsequent screening rounds, 1998, 2002 and 2003



	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
2003 rate	26.5	27.6	23.8	26.1	25.8	31.7	27.6	21.6	19.6
95% CI	25.1–27.9	25.1–30.3	21.2–26.6	23.1–29.5	21.6–30.5	26.9–37.1	19.8–37.3	12.5–34.7	7.1–42.8
2002 rate	26.7	28.6	24.7	21.3*	28.7	33.1	34.0	27.8	12.1
95% CI	25.3–28.2	26.0–31.4	22.0–27.6	18.5–24.4	24.1–34.1	28.2–38.7	25.3–44.8	17.7–41.6	2.3–35.9
1998 rate	24.8	22.5	26.1	22.8	27.3	28.8	26.5	26.9	30.6
95% CI	23.3–26.5	20.0–25.2	23.0–29.4	18.9–27.2	22.4–33.0	23.5–34.8	18.0–37.6	15.6–43.3	4.2–94.7

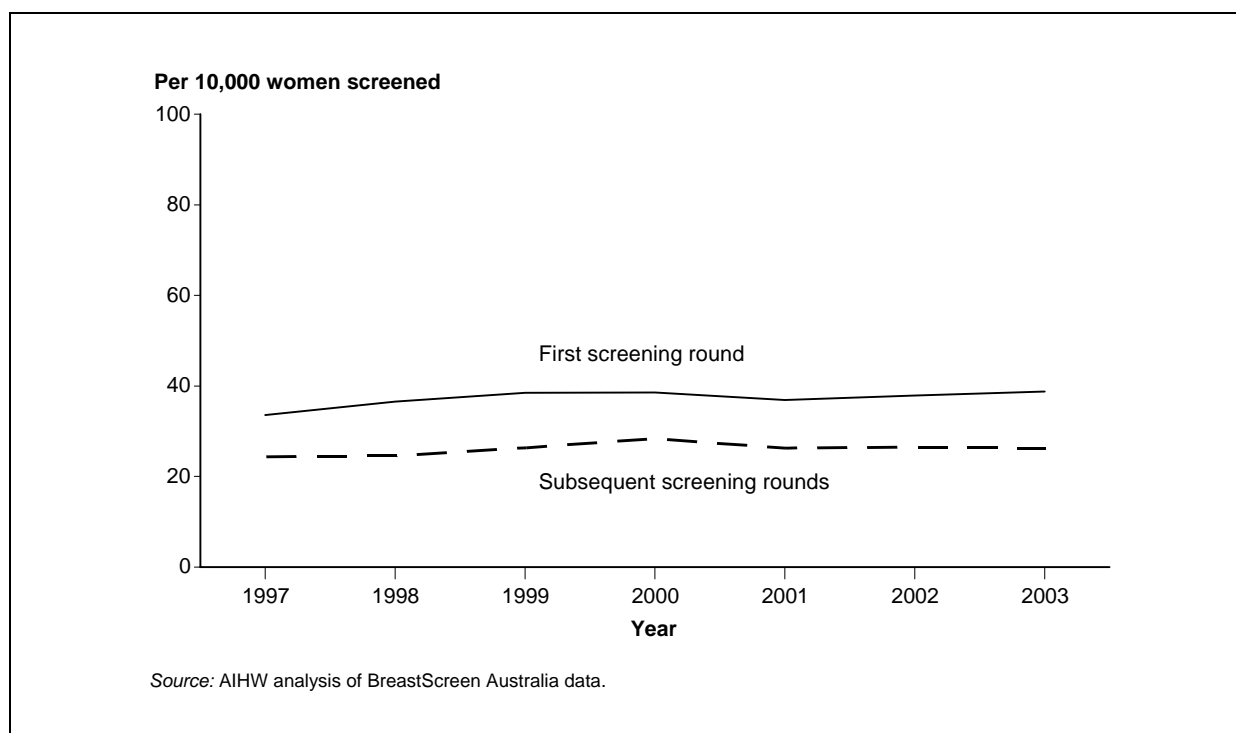
* Statistically different from the 2002 Australian rate.

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 2003, small-diameter invasive cancers were found in 1,948 women aged 40 years and over attending a BreastScreen Australia service for their second or subsequent screen. Of these women, 1,409 were in the target age group (50–69 years). The age-standardised detection rate was 26.5 per 10,000 women screened for women in the target age group and 25.0 for all women aged 40 years and over. In both age categories, the small-diameter cancer detection rates for Australia for women attending their second or subsequent screen were lower than the rates for women attending their first screen.

For more information, see: Tables 7 to 10 beginning on page 86. Tables with data other than for the latest reporting period can be found on the AIHW's web site at <www.aihw.gov.au>.

Small (≤ 15 mm) invasive breast cancer detection in women aged 50–69 years, first and subsequent screening rounds, trend data, 1997–2003



	1997	1998	1999	2000	2001	2002	2003
First screening round							
Rate	33.6*	36.5*	38.5*	38.6*	36.9*	37.9*	38.8*
95% CI	30.2–37.2	32.7–40.5	33.9–43.5	33.7–43.9	32.3–41.9	32.7–43.6	33.2–45.1
Subsequent screening rounds							
Rate	24.6	24.8	26.6	28.6	26.5	26.7	26.5
95% CI	22.9–26.3	23.3–26.5	25.1–28.2	27.1–30.2	25.1–28.0	25.3–28.2	25.1–27.9

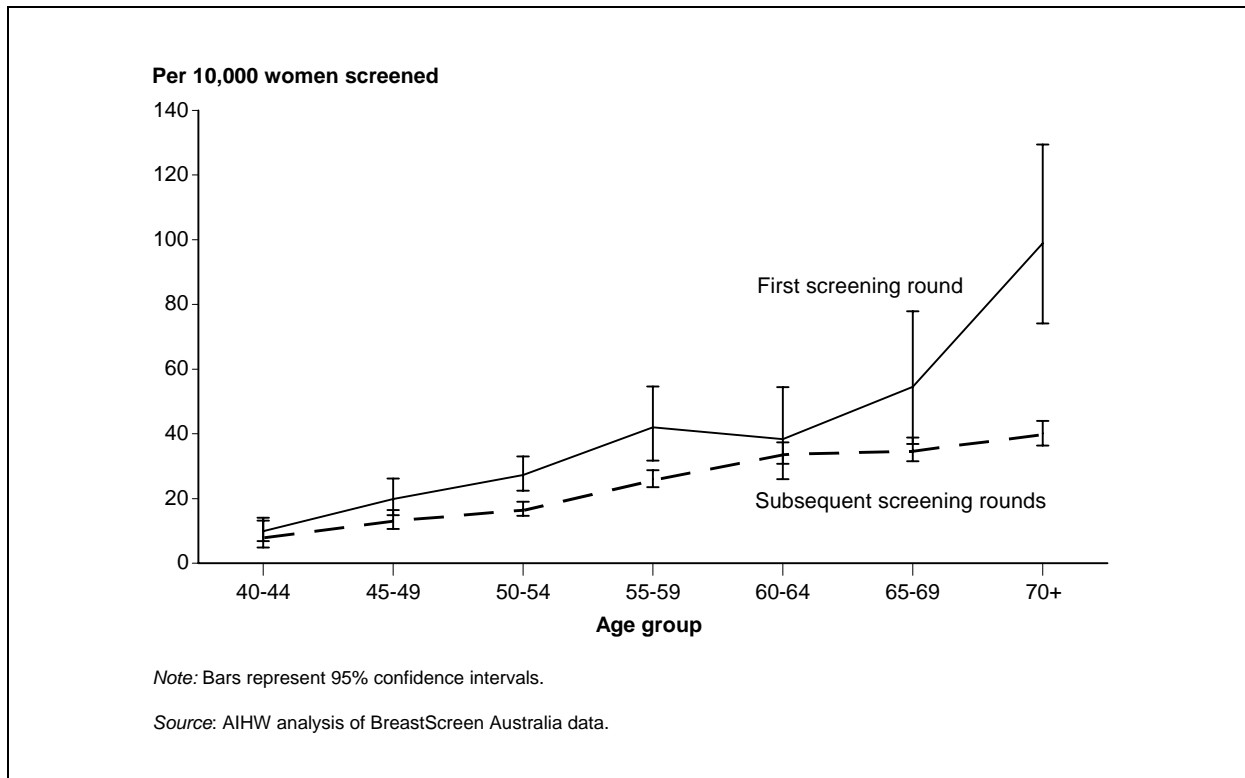
* Significantly different from subsequent screening rounds.

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.

- The detection rate of small (≤ 15 mm) invasive breast cancers differs between the first and subsequent screening rounds. The detection rate is higher for the first screening round across all years from 1997 to 2003.

For more information, see: Tables 7 to 10 beginning on page 86. Tables with data other than for the latest reporting period can be found on the AIHW's web site at <www.aihw.gov.au>.

Small (≤ 15 mm) invasive breast cancer detection by age, 2003



Age-specific rate	40-44	45-49	50-54	55-59	60-64	65-69	70+
First screening round							
Rate	9.9	19.9*	27.3*	42.0*	38.3	54.5*	98.9*
95% CI	6.8-13.9	14.8-26.1	22.4-32.9	31.8-54.6	26.0-54.4	36.8-77.8	74.1-129.3
Subsequent screening rounds							
Rate	8.2	13.3	16.7	26.0	33.9	35.0	40.1
95% CI	4.8-13.1	10.7-16.5	14.6-19.0	23.5-28.6	30.7-37.3	31.4-38.8	36.4-44.0

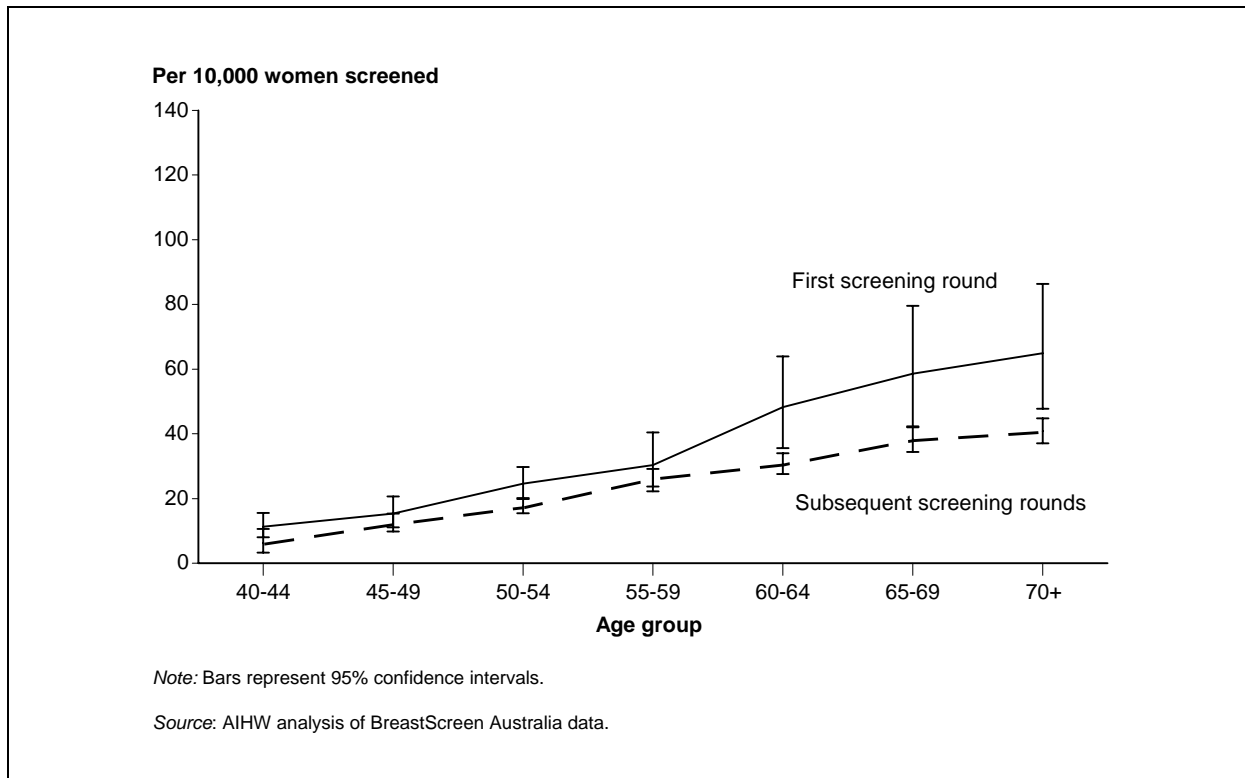
* Significantly different from subsequent screening rounds.

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

- The steady increase in the detection of small (≤ 15 mm diameter) invasive cancers with age reflects the greater incidence of breast cancer with age (Table 44 on page 119). The detection rate for women aged 40-44 years making a first round attendance at a BreastScreen Australia service in 2003 was 9.9 per 10,000 women screened. This rate increased to 98.9 per 10,000 women screened for women aged 70 and over. A similar pattern occurred for women making a second or subsequent round attendance, although the rate of increase with age was not as great.

For more information, see: Tables 7 to 10 beginning on page 86. Tables with data other than for the latest reporting period can be found on the AIHW's web site at <www.aihw.gov.au>.

Small (≤ 15 mm) invasive breast cancer detection by age, 2002



Age-specific rate	40-44	45-49	50-54	55-59	60-64	65-69	70+
First screening round							
Rate	11.3	15.3	24.6*	30.3	48.2*	58.6	64.9*
95% CI	8.0-15.5	11.0-20.6	20.2-29.7	22.2-40.5	35.5-63.8	42.1-79.5	47.7-86.3
Subsequent screening rounds							
Rate	6.2	12.3	17.5	26.3	30.7	38.2	40.8
95% CI	3.3-10.5	9.7-15.2	15.3-19.8	23.7-29.1	27.7-34.1	34.4-42.2	37.0-44.8

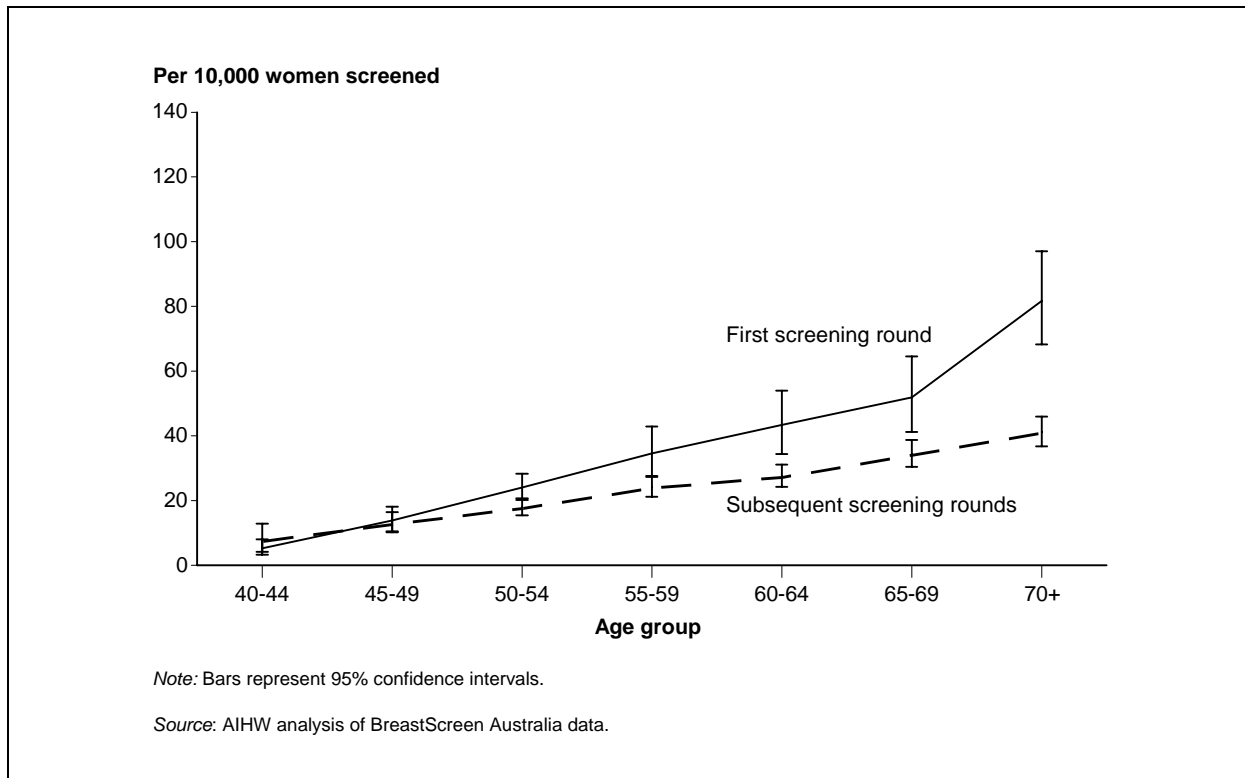
* Significantly different from subsequent screening rounds.

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

- The detection rate for women aged 40-44 years making a first round attendance at a BreastScreen Australia service in 2002 was 11.3 per 10,000 women screened. This rate increased to 64.9 per 10,000 women screened for women aged 70 and over. A similar pattern occurred for women making a second or subsequent round attendance, although the rate of increase with age was not as great.

For more information, see: Tables 7 to 10 beginning on page 86. Tables with data other than for the latest reporting period can be found on the AIHW's web site at <www.aihw.gov.au>.

Small (≤ 15 mm) invasive breast cancer detection by age, 1998



Age-specific rate	40-44	45-49	50-54	55-59	60-64	65-69	70+
First screening round							
Rate	5.3	13.9	24.0	34.6*	43.4*	51.9*	81.7*
95% CI	3.3-8.1	10.5-18.1	20.2-28.3	27.6-42.9	34.4-54.0	41.3-64.6	68.3-97.0
Subsequent screening rounds							
Rate	7.7	13.0	17.9	24.1	27.5	34.4	41.2
95% CI	4.2-13.0	10.1-16.3	15.4-20.7	21.3-27.3	24.2-31.1	30.4-38.6	36.8-46.0

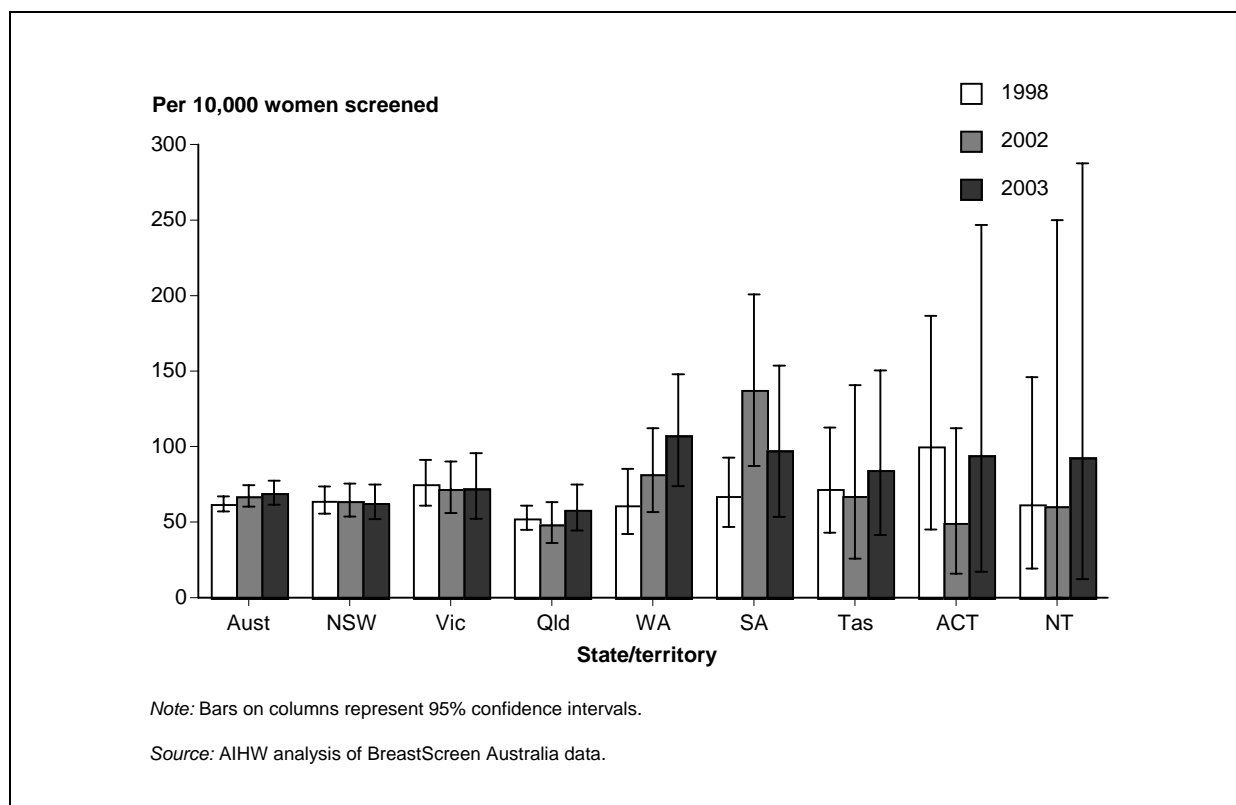
* Significantly different from subsequent screening rounds.

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

- The detection rate for women aged 40-44 years making a first round attendance at a BreastScreen Australia service in 1998 was 5.3 per 10,000 women screened. This rate increased to 81.7 per 10,000 women screened for women aged 70 and over. A similar pattern occurred for women making a second or subsequent round attendance, although the rate of increase with age was not as great.

For more information, see: Tables 7 to 10 beginning on page 86. Tables with data other than for the latest reporting period can be found on the AIHW's web site at <www.aihw.gov.au>.

All-size invasive breast cancer detection in women aged 50–69 years, first screening round, 1998, 2002 and 2003



	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
2003 rate	69.2	62.6	72.1	58.2	107.3	97.3	84.3	94.2	92.7
95% CI	61.6–77.4	51.8–74.8	52.2–95.5	44.4–74.8	73.8–147.9	53.4–153.6	41.4–150.5	17.0–246.7	12.2–287.6
2002 rate	67.1	63.9	71.8	48.4	81.6	137.6*	67.2	49.5	60.5
95% CI	60.2–74.6	53.7–75.4	56.1–90.0	36.2–63.2	56.7–112.2	87.1–200.6	25.8–140.7	15.8–112.2	0.0–249.9
1998 rate	61.9	64.1	75.1	52.4	61.0	67.2	72.0	100.0	61.8
95% CI	57.1–67.1	55.6–73.6	60.9–91.1	44.9–60.8	42.1–85.2	46.8–92.7	42.8–112.5	45.1–186.7	19.2–146.0

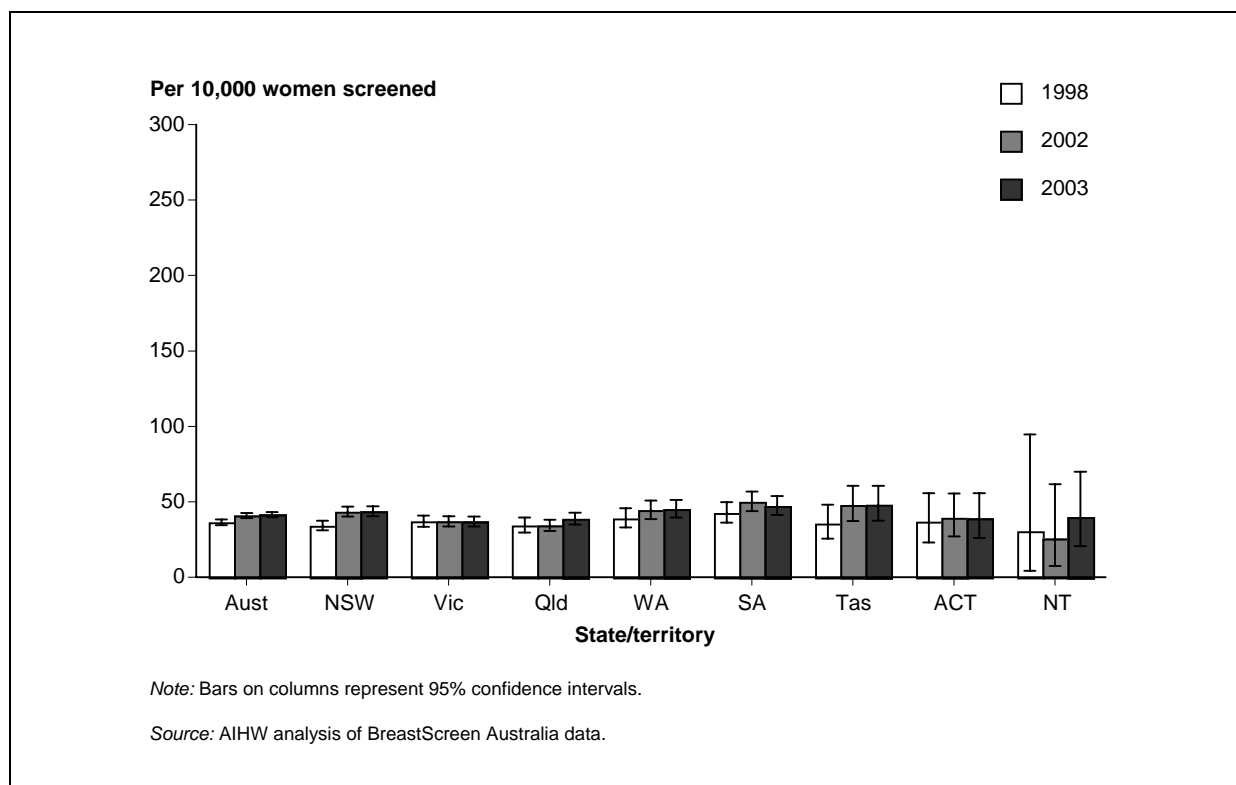
* Statistically different from the 2002 Australian rate.

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 2003, the age-standardised invasive cancer detection rate for women attending a BreastScreen Australia Service for the first time was 69.2 per 10,000 women screened.
- Across the states and territories, Queensland had the lowest age-standardised detection rate, at 58.2 per 10,000 women screened, and Western Australia had the highest rate, at 107.3 per 10,000 women screened, but this difference was not statistically significant.

For more information, see: Tables 11 to 14 beginning on page 90. Tables with data other than for the latest reporting period can be found on the AIHW's web site at <www.aihw.gov.au>.

All-size invasive breast cancer detection in women aged 50–69 years, subsequent screening rounds, 1998, 2002 and 2003



	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
2003 rate	41.5 [#]	43.7	36.8	38.7	45.2	47.3	48.0	38.9	39.9
<i>95% CI</i>	39.8–43.3	40.5–47.0	33.6–40.2	35.0–42.7	39.6–51.3	41.5–53.8	37.5–60.6	26.1–55.7	20.5–69.9
2002 rate	40.8	43.5	37.0	34.3*	44.4	50.0*	47.9	39.5	25.6
<i>95% CI</i>	39.0–42.6	40.3–46.9	33.8–40.5	30.8–38.2	38.5–50.9	43.9–56.7	37.4–60.5	27.2–55.5	7.3–61.5
1998 rate	36.4	34.2	37.0	34.4	39.0	42.6	35.6	36.9	30.6
<i>95% CI</i>	34.5–38.4	31.1–37.6	33.3–40.9	29.7–39.8	33.1–45.7	36.2–49.8	25.6–48.1	23.3–55.6	4.2–94.7

* Statistically different from the 2002 Australian rate.

[#] Statistically different from the 1998 Australian rate.

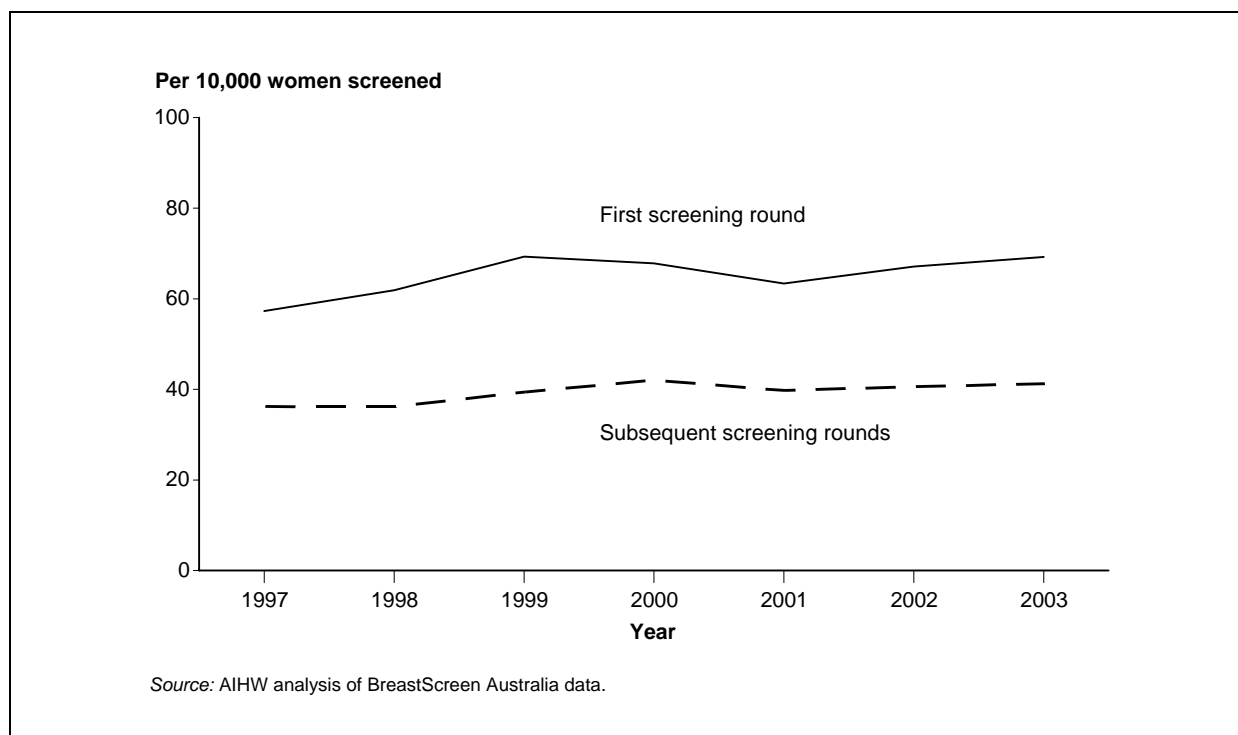
Notes: Rates are the number of women with invasive cancers detected per 10,000 women screened and age-standardised to the population of women attending a BreastScreen Australia service in 1998.

- In 2003, the age-standardised invasive cancer detection rate for women in the target age group attending a BreastScreen Australia service for their second or subsequent screen was 41.5 per 10,000 women screened. This is significantly lower than the detection rate for first round attendances (69.2 per 10,000 women screened).
- In 2003 the age-standardised invasive cancer detection rate for all women aged 40 and over, attending for their second or subsequent screen, was 38.5 per 10,000 women screened. This is lower than the rate for women in the target age group (41.5 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 in 2003 ranged from 36.8 per 10,000 women screened in Victoria to 48.0 per 10,000 women screened in Tasmania.

- The increase in the detection rate of all invasive cancers for Australia from 36.4 in 1998 to 41.5 in 2003 was statistically significant.

For more information, see: Tables 11 to 14 beginning on page 90. Tables with data other than for the latest reporting period can be found on the AIHW's web site at <www.aihw.gov.au>.

All-size invasive breast cancer detection in women aged 50–69, first and subsequent screening rounds, trend data, 1997–2003



	1997	1998	1999	2000	2001	2002	2003
First screening round							
Rate	57.3*	61.9*	69.3*	67.8*	63.4*	67.1*	69.2*
95% CI	52.9–62.0	57.1–67.1	63.1–75.9	61.3–74.8	57.3–70.0	60.2–74.6	61.6–77.4
Subsequent screening rounds							
Rate	36.5	36.4	39.7	42.3	40.0	40.8	41.5
95% CI	34.5–38.7	34.5–38.4	37.9–41.7	40.4–44.2	38.3–41.8	39.0–42.6	39.8–43.3

* 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 was significantly higher in the first screening round across all years from 1997 to 2003. The rate of detection in the first screening round increased from 57.3 in 1997 to 69.2 in 2003. This increase was not statistically significant.
- The detection rate of all invasive breast cancers also rose in subsequent screening rounds from 36.5 in 1997 to 41.5 in 2003. The increase was not statistically significant.

For more information, see: Tables 11 to 14 beginning on page 90. Tables with data other than for the latest reporting period can be found on the AIHW's web site at <www.aihw.gov.au>.

Indicator 3: 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 (40–49, 50–59, 60–69, 70+ 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 (see the glossary for definitions of ‘women-years at risk’ and ‘interval cancer’). 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 per 10,000 women aged 50–69 years who attend for screening are diagnosed with an invasive interval breast cancer between 0 and less than 12 months following a negative screening episode.

The table below shows the detection rate for interval cancers during index years 1996–1998 and 1999–2001. The objective of detecting less than 7.5 interval cancers per 10,000 women in the target age group 50–69 was achieved in 1996–1998 for women attending for their first screening round.

Interval cancer rate for women aged 40 and over and 50–69 years, screened during index years 1996, 1997, 1998 and 1999, 2000, 2001, first and subsequent rounds, 0–12 months follow-up

	Objective ^(a)	Index years 1996, 1997 and 1998*	Index years 1999, 2000 and 2001
First screening round 0–12 months			
Rate for women aged 50–69 years	<7.5	6.6	7.8
95% CI		5.8–7.5	6.7–9.1
Rate for women aged 40 years and over	..	6.5	7.7
95% CI		5.9–7.2	6.8–8.7
Subsequent screening rounds 0–12 months			
Rate for women aged 50–69 years	<7.5	7.8	7.9
95% CI		7.2–8.3	7.4–8.4
Rate for women aged 40 years and over	..	7.4	7.8
95% CI		7.0–7.9	7.4–8.2

.. Not applicable.

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

* The Australian figure includes data from Vic, Qld, WA, SA, Tas and ACT. NT data were unavailable at the time of publication of the *BreastScreen Australia monitoring report 1998–1999 and 1999–2000* from which the data for index years 1996, 1997 and 1998 were copied. Updated NSW data were supplied separately.

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 (40–49, 50–59, 60–69, 70+ years), time since screen (0–12 months, 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. The program needs to achieve a high sensitivity in order to be effective. Program sensitivity 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.

There are no National Accreditation Standards for the sensitivity indicator.

The table below shows the detection rate for invasive cancers during index years 1996–1998 and 1999–2001.

Program sensitivity for women aged 40 and over and 50–69 years, screened during index years 1996, 1997, 1998 and 1999, 2000, 2001, first and subsequent rounds, 0–12 months follow-up

	Index years 1996, 1997 and 1998*	Index years 1999, 2000 and 2001
First screening round 0–12 months		
Rate (%) for women aged 50–69 years	89.1	88.9
95% CI	85.3–92.9	84.4–93.6
Rate (%) for women aged 40 years and over	87.5	87.5
95% CI	84.6–90.6	84.0–91.1
Subsequent screening rounds 0–12 months		
Rate (%) for women aged 50–69 years	81.7	83.8
95% CI	79.0–84.5	81.6–86.0
Rate (%) for women aged 40 years and over	79.9	81.7
95% CI	77.4–82.5	79.7–83.7

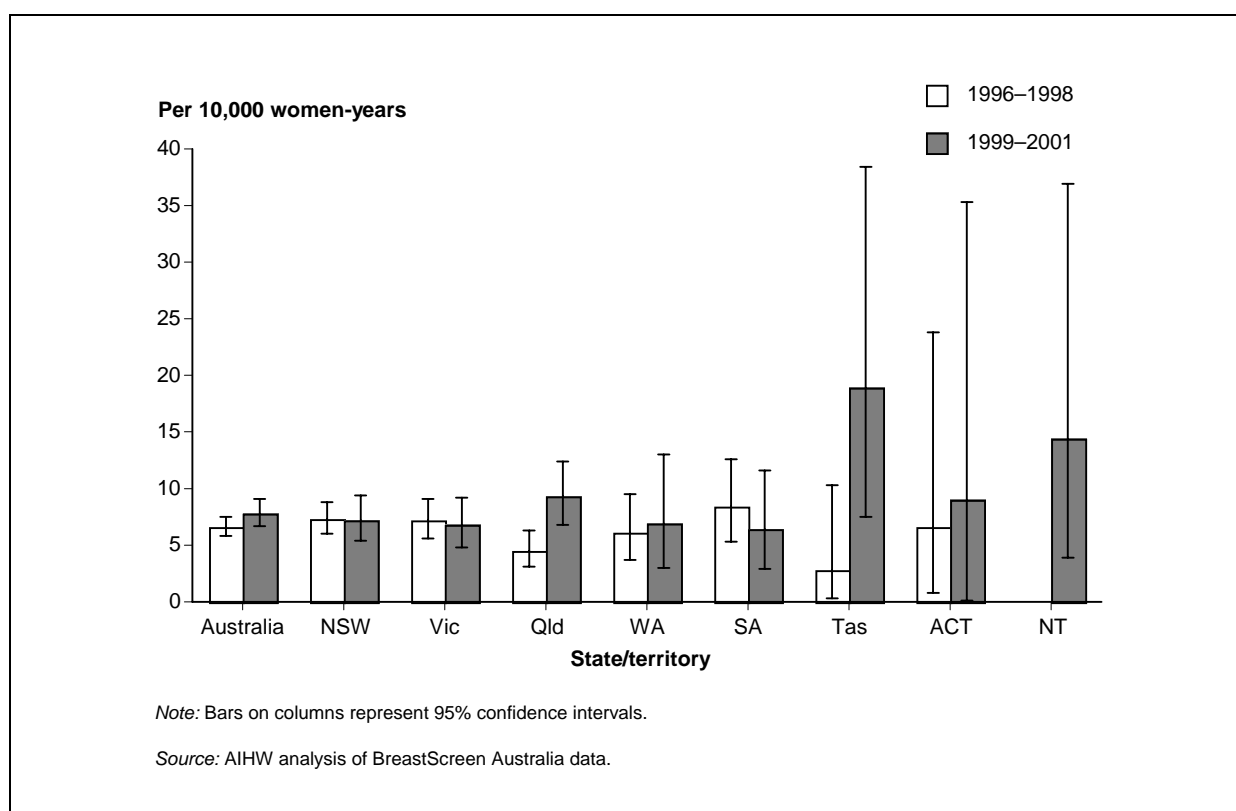
* The Australian figure includes data from Vic, Qld, WA, SA, Tas and ACT. NT data were unavailable at the time of publication of the *BreastScreen Australia monitoring report 1998–1999 and 1999–2000* from which the data for index years 1996, 1997 and 1998 were copied. Updated NSW data were supplied separately.

In this chapter, data for the index years are combined. This aggregation improves the stability of rates, especially those of the small states and territories.

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 are affected by the policy on management of symptomatic clients in that state. For example, in NSW, 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 may affect the comparability of this indicator between jurisdictions.

Interval cancer rate for women aged 50–69 years, screened during index years 1996, 1997, 1998 and 1999, 2000, 2001, first screening round, 0–12 months follow-up



	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Index years 1999–2001									
Rate	7.8	7.2	6.8	9.3	6.9	6.4	18.9	9.0	14.4
95% CI	6.7–9.1	5.4–9.4	4.8–9.3	6.9–12.4	3.1–13.0	2.9–11.7	7.5–38.4	0.1–35.3	3.9–36.9
Index years 1996–1998									
Rate	6.6	7.3	7.2	4.5	6.1	8.4	2.8	6.6	n.a.
95% CI	5.8–7.5	6.0–8.9	5.5–9.1	3.2–6.3	3.7–9.5	5.3–12.5	0.3–10.4	0.8–23.8	n.a.

n.a. Not available.

Notes

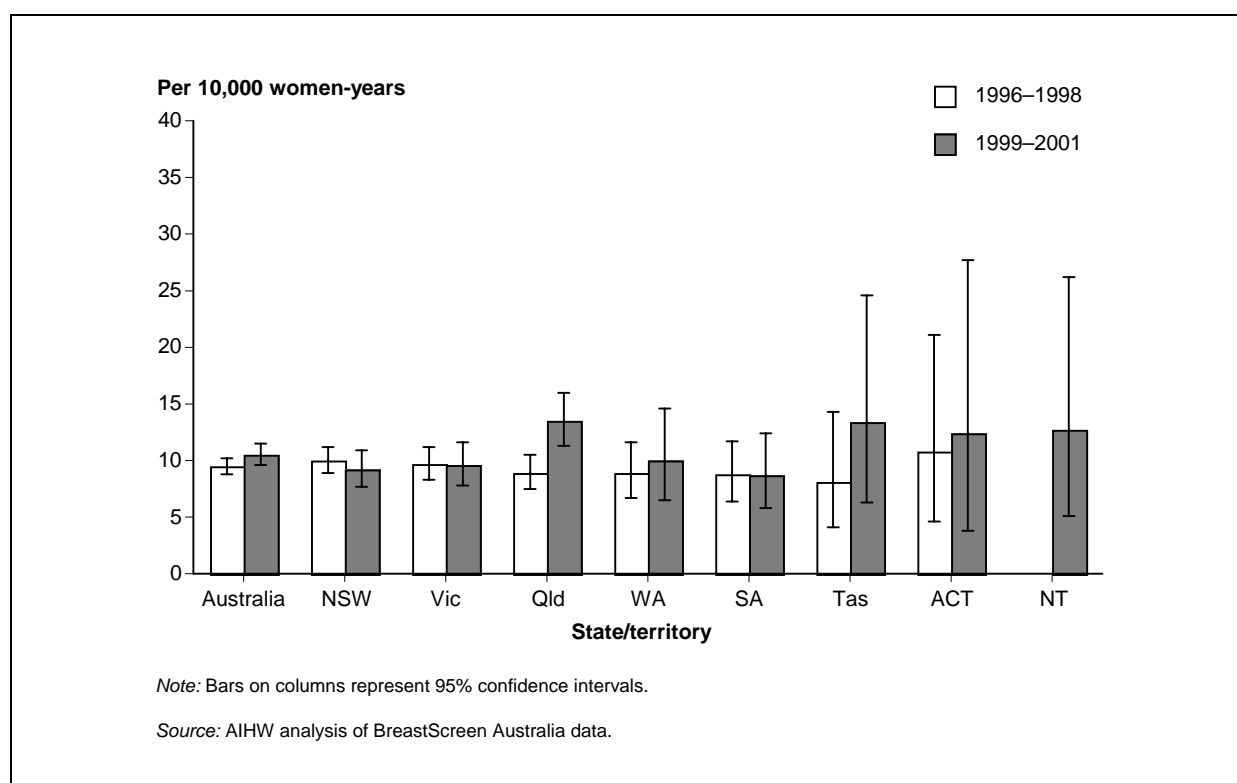
1. Rates are the number of interval cancers detected per 10,000 women-years and age-standardised to the population of women attending a BreastScreen Australia service in 1998.
2. The data include both symptomatic and asymptomatic women.
3. None of the rates was significantly different from the all-Australia rate.
4. The Australian figure includes data from Vic, Qld, WA, SA, Tas and ACT. NT data were unavailable at the time of publication of the *BreastScreen Australia monitoring report 1998–1999 and 1999–2000* from which the data for index years 1996, 1997 and 1998 were copied. Updated NSW data were supplied separately.

- The age-standardised rate of interval cancer detection for Australia increased between the index years 1996–1998 and 1999–2001 from 6.6 to 7.8. However, the increase was not statistically significant.
- Across the states and territories, the age-standardised rates of interval cancer ranged from 6.4 per 10,000 women-years in South Australia to 18.9 per 10,000 women-years in Tasmania; this difference was not statistically significant. For example, there were only

8 cases in Tasmania, a relatively small number that might be expected to fluctuate considerably over time.

For more information, see: Tables 15 to 20 beginning on page 94. Tables with data other than for the latest reporting period can be found on the AIHW's web site at <www.aihw.gov.au>.

Interval cancer rate for women aged 50–69 years, screened during index years 1996, 1997, 1998 and 1999, 2000, 2001, first screening round, 0–24 months follow-up



	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Index years 1999–2001									
Rate	10.5	9.2	9.6	13.5	10.0	8.7	13.4	12.4	12.7
95% CI	9.6–11.5	7.8–10.9	7.8–11.6	11.3–16.0	6.5–14.6	5.8–12.4	6.2–24.6	3.7–27.7	5.1–26.2
Index years 1996–1998									
Rate	9.5	10.0	9.7	8.9	8.9	8.8	8.1	10.8	n.a.
95% CI	8.8–10.2	8.9–11.2	8.3–11.2	7.5–10.5	6.7–11.6	6.4–11.7	4.1–14.3	4.6–21.0	n.a.

n.a. Not available.

Notes

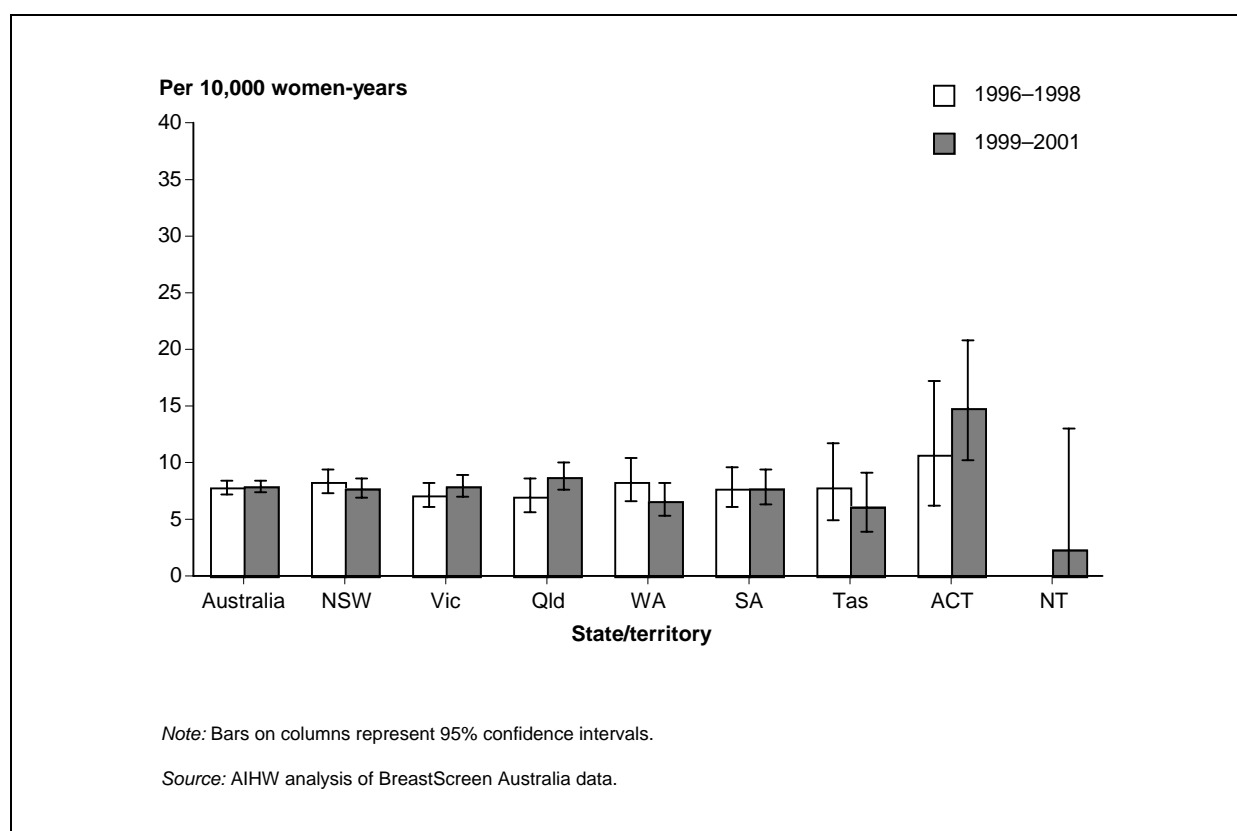
1. Rates are the number of interval cancers detected per 10,000 women-years and age-standardised to the population of women attending a BreastScreen Australia service in 1998.
2. The data include both symptomatic and asymptomatic women.
3. The Australian figure includes data from Vic, Qld, WA, SA, Tas and ACT. NT data were unavailable at the time of publication of the *BreastScreen Australia monitoring report 1998–1999 and 1999–2000* from which the data for index years 1996, 1997 and 1998 were copied. Updated NSW data were supplied separately.

- The age-standardised rate of interval cancer rate for Australia increased from 9.5 per 10,000 women-years for women in the target age group 0–24 months after their first screen during index years 1996–1998 to 10.5 per 10,000 women-years for women screened in index years 1999–2001. The increase was not statistically significant.
- Across the states and territories differences in the age-standardised rates of interval cancer for women in the target age group (50–69 years) 0–24 months after their first

screen were not statistically significant. They ranged from 8.7 per 10,000 women-years in South Australia to 13.5 per 10,000 women-years in Queensland.

For more information, see: Tables 15 to 20 beginning on page 94. Tables with data other than for the latest reporting period can be found on the AIHW's web site at <www.aihw.gov.au>.

Interval cancer rate for women aged 50–69 years, screened during index years 1996, 1997, 1998 and 1999, 2000, 2001, subsequent screening rounds, 0–12 months follow-up



	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Index years 1999–2001									
Rate	7.9	7.7	7.9	8.7	6.6	7.7	6.1	14.8*	2.3
95% CI	7.4–8.4	6.9–8.6	7.0–8.9	7.6–10.0	5.3–8.2	6.3–9.4	3.9–9.0	10.2–20.9	0.1–13.0
Index years 1996–1998									
Rate	7.8	8.3	7.1	7.0	8.3	7.7	7.8	10.7	n.a.
95% CI	7.2–8.3	7.3–9.4	6.1–8.3	5.7–8.6	6.5–10.3	6.0–9.6	4.9–11.7	6.2–17.2	n.a.

* Significantly different from the Australian rate.

n.a. Not available.

Notes

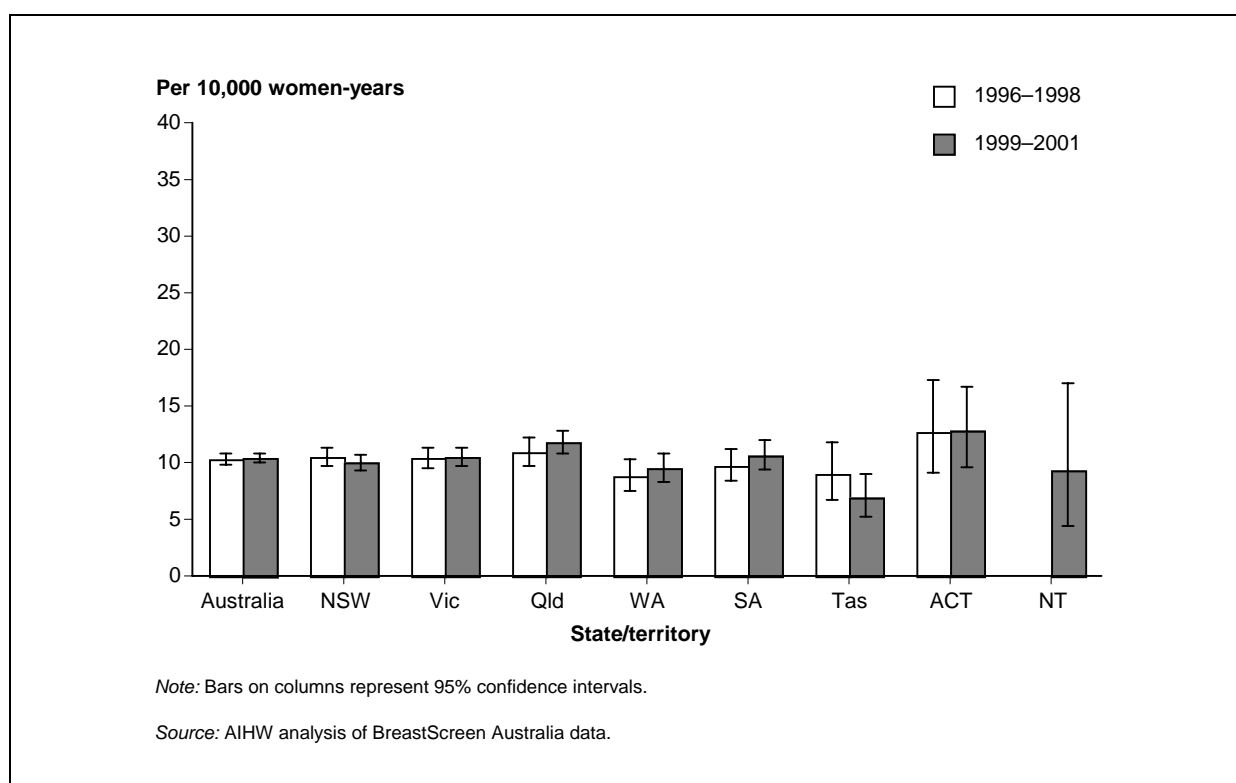
- Rates are the number of interval cancers detected per 10,000 women-years and age-standardised to the population of women attending a BreastScreen Australia service in 1998.
- The data include both symptomatic and asymptomatic women.
- The Australian figure includes data from Vic, Qld, WA, SA, Tas and ACT. NT data were unavailable at the time of publication of the *BreastScreen Australia monitoring report 1998–1999 and 1999–2000* from which the data for index years 1996, 1997 and 1998 were copied. Updated NSW data were supplied separately.

- For index years 1999–2001, the age-standardised rate of interval cancer for Australia for women in the target age group (50–69 years), 0–12 months follow-up, increased slightly between the first and the subsequent rounds (7.8 to 7.9 per 10,000 women-years respectively).

- The age-standardised rate of interval cancers for subsequent screening rounds for women in the target age group (50–69 years), 0–12 months follow-up in the Australian Capital Territory (14.8 per 10,000 women-years) was significantly higher than the national rate (7.9 per 10,000 women-years).
- For index years 1996–1998, the age-standardised rate of interval cancer for Australia between women in the target age group (50–69 years) 0–12 months after their first and 0–12 months after their subsequent screen increased from 6.6 to 7.8 per 10,000 women-years. This change was not statistically significant.

For more information, see: Tables 15 to 20 beginning on page 94. Tables with data other than for the latest reporting period can be found on the AIHW's web site at <www.aihw.gov.au>.

Interval cancer rate for women aged 50–69 years, screened during index years 1996, 1997, 1998 and 1999, 2000, 2001, subsequent screening rounds, 0–24 months follow-up



	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Index years 1999–2001									
Rate	10.4	10.0	10.5	11.8	9.5	10.6	6.9*	12.8	9.3
95% CI	10.0–10.8	9.4–10.7	9.7–11.3	10.8–12.8	8.3–10.9	9.4–12.0	5.2–9.1	9.7–16.7	4.5–17.0
Index years 1996–1998									
Rate	10.3	10.5	10.4	10.9	8.8	9.7	9.0	12.7	n.a.
95% CI	9.8–10.8	9.8–11.4	9.5–11.3	9.7–12.3	7.5–10.3	8.4–11.2	6.7–11.8	9.1–17.3	n.a.

* Significantly different from the Australian rate.

n.a. Not available.

Notes

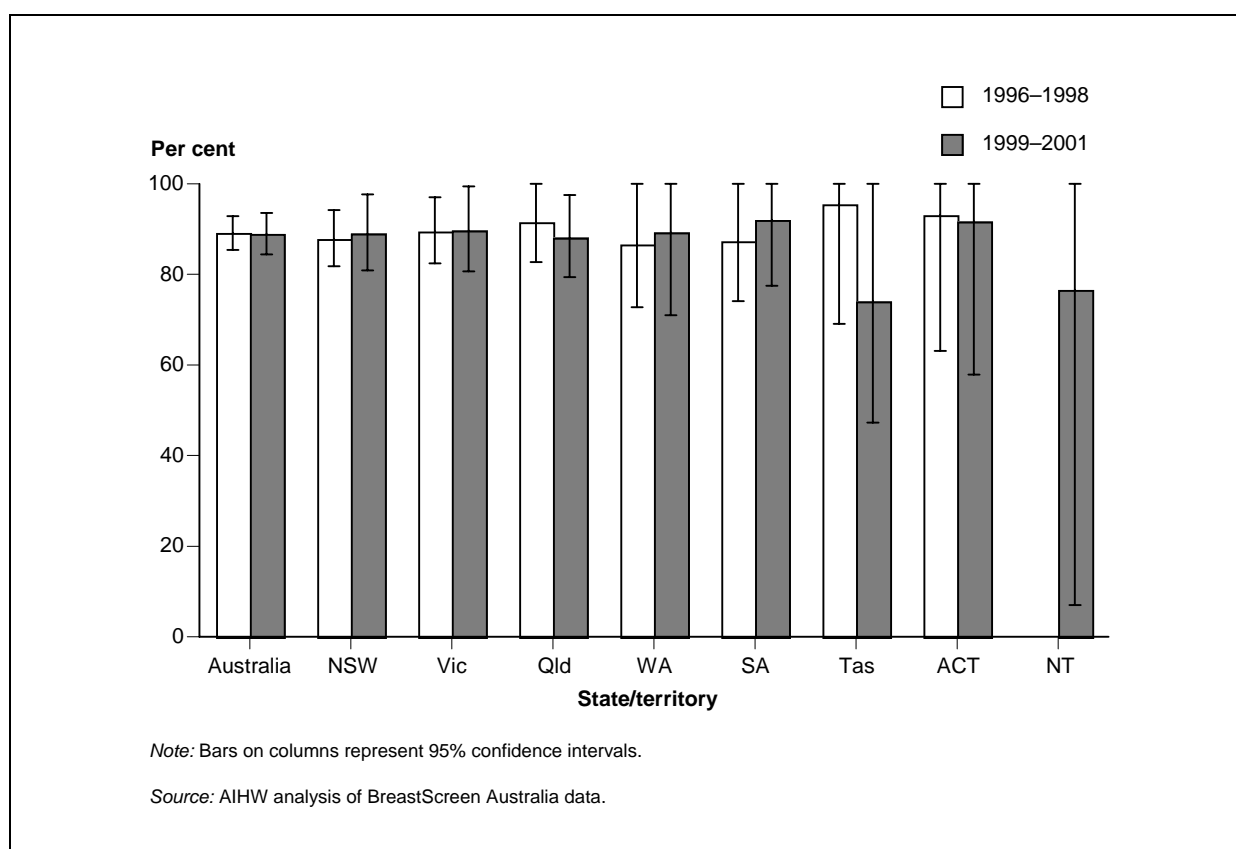
1. Rates are the number of interval cancers detected per 10,000 women-years and age-standardised to the population of women attending a BreastScreen Australia service in 1998.
2. The data include both symptomatic and asymptomatic women.
3. The Australian figure includes data from Vic, Qld, WA, SA, Tas and ACT. NT data were unavailable at the time of publication of the *BreastScreen Australia monitoring report 1998–1999 and 1999–2000* from which the data for index years 1996, 1997 and 1998 were copied. Updated NSW data were supplied separately.

- The interval cancer rate for women aged 50–69 years with 0–24 months of follow-up after their subsequent screening rounds was 10.4 per 10,000 women-years for index years 1999–2001 compared with the rate of 10.3 per 10,000 women-years for index years 1996–1998. This difference is small and is not statistically significant.
- The age-standardised rate of interval cancers for subsequent screening rounds for women in the target age group (50–69 years), 0–24 months follow-up in Tasmania

(6.9 per 10,000 women-years) was significantly lower than the national rate (10.4 per 10,000 women-years).

For more information, see: Tables 15 to 20 beginning on page 94. Tables with data other than for the latest reporting period can be found on the AIHW's web site at <www.aihw.gov.au>.

Program sensitivity for women aged 50–69 years, screened during index years 1996, 1997, 1998 and 1999, 2000, 2001, first screening round, 0–12 months follow-up



	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Index years 1999–2001									
Rate	88.9	89.0	89.7	88.1	89.3	92.0	74.0	91.7	76.6
95% CI	84.4–93.6	80.9–97.7	80.7–99.5	79.4–97.6	71.0–100.0	77.4–100.0	47.2–100.0	57.9–100.0	7.1–100.0
Index years 1996–1998									
Rate	89.1	87.8	89.5	91.5	86.6	87.3	95.5	93.1	n.a.
95% CI	85.3–92.9	81.7–94.1	82.5–97.0	82.7–100.0	72.8–100.0	74.1–100.0	69.1–100.0	63.1–100.0	n.a.

n.a. Not available.

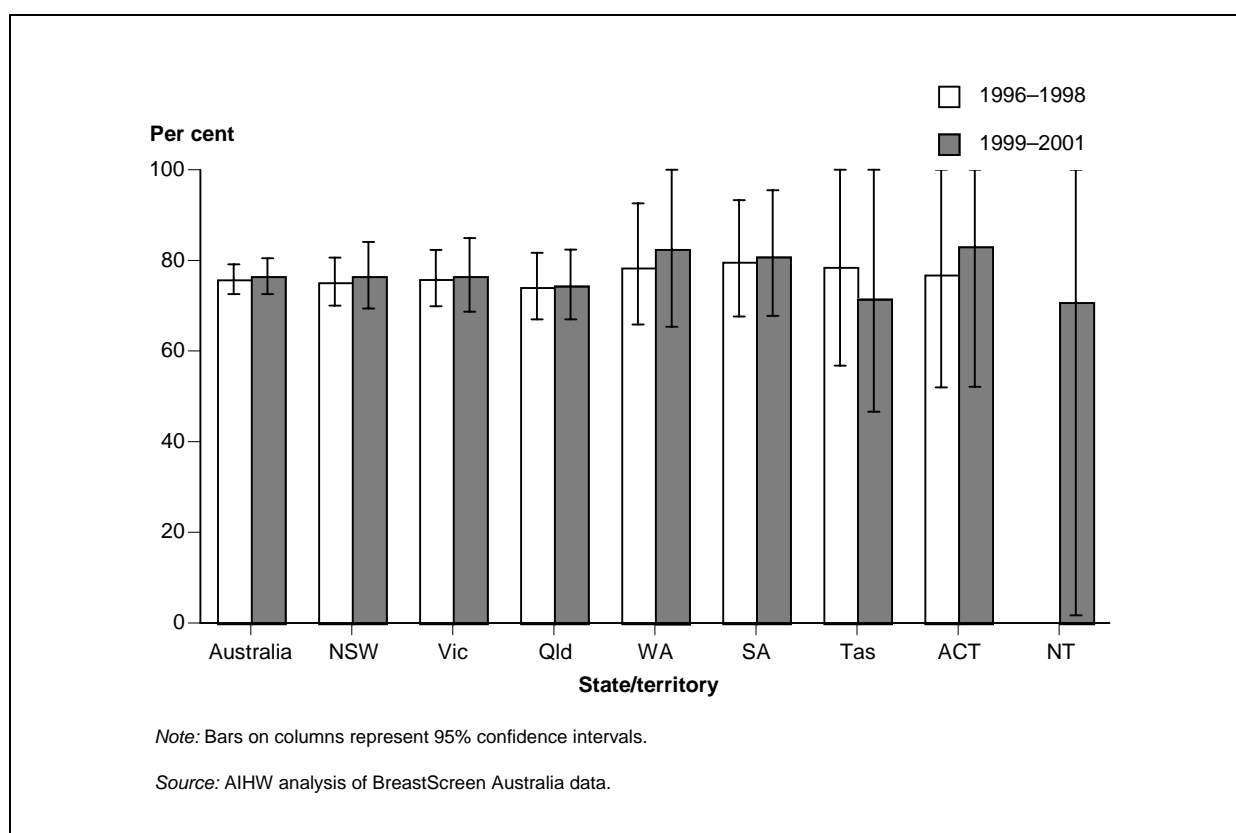
Notes

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. The Australian figure includes data from Vic, Qld, WA, SA, Tas and ACT. NT data were unavailable at the time of publication of the *BreastScreen Australia monitoring report 1998–1999 and 1999–2000* from which the data for index years 1996, 1997 and 1998 were copied. Updated NSW data were supplied separately.

- For index years 1999–2001, the age-standardised program sensitivity rate for women in the target age group (50–69) 0–12 months after their first screen was 88.9%, and 89.1% for index years 1996–1998. The decrease between the age-standardised program sensitivity rates for Australia between the index years was not statistically significant.

For more information, see: Tables 21 to 24 beginning on page 100. Tables with data other than for the latest reporting period can be found on the AIHW's web site at <www.aihw.gov.au>.

Program sensitivity for women aged 50–69 years, screened during index years 1996, 1997, 1998 and 1999, 2000, 2001, first screening round, 0–24 months follow-up



	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Index years 1999–2001									
Rate	76.5	76.5	76.5	74.4	82.5	80.8	71.5	83.1	70.8
95% CI	72.6–80.5	69.4–84.1	68.8–84.9	67.0–82.4	65.4–100.0	67.7–95.5	46.6–100.0	52.0–100.0	1.6–100.0
Index years 1996–1998									
Rate	75.8	75.2	75.9	74.1	78.4	79.7	78.6	76.9	n.a.
95% CI	72.6–79.1	70.1–80.7	69.9–82.3	67.0–81.8	65.9–92.6	67.6–93.2	56.8–100.0	52.0–100.0	n.a.

n.a. Not available.

Notes

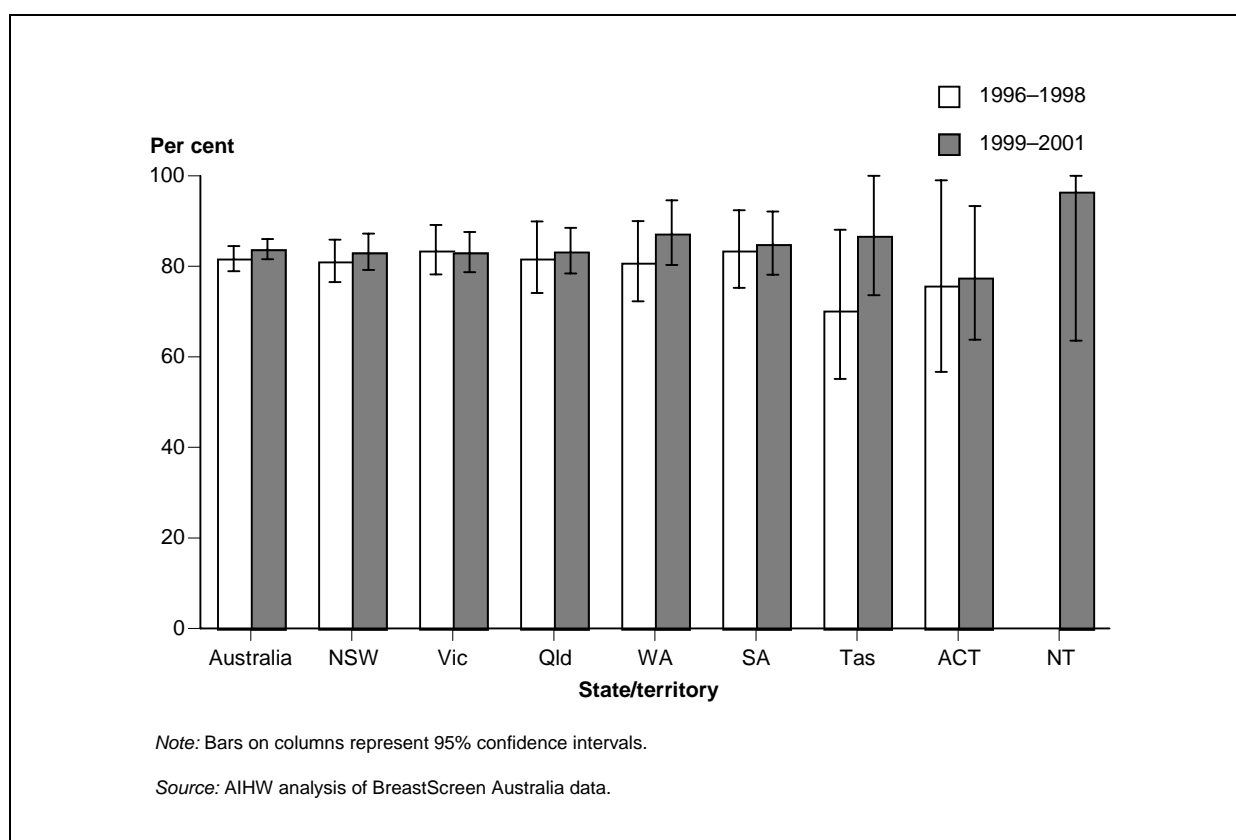
1. Rates are the number of screen-detected cancers as a percentage of all cancers (screen-detected and interval cancers) and age-standardised to the population of women attending a BreastScreen Australia service in 1998.
2. The data include both symptomatic and asymptomatic women.
3. The Australian figure includes data from Vic, Qld, WA, SA, Tas and ACT. NT data were unavailable at the time of publication of the *BreastScreen Australia monitoring report 1998–1999 and 1999–2000* from which the data for index years 1996, 1997 and 1998 were copied. Updated NSW data were supplied separately.

- The program sensitivity rate for Australia between the follow-up periods of 0–12 and 0–24 months for women after their first screening round for index years 1999–2001 decreased by 12 percentage points from 88.9% to 76.5%.

- For index years 1996–1998, the age-standardised program sensitivity rate for women in the target age group (50–69) 0–24 months after their first screen was 75.8%.

For more information, see: Tables 21 to 24 beginning on page 100. Tables with data other than for the latest reporting period can be found on the AIHW's web site at <www.aihw.gov.au>.

Program sensitivity for women aged 50–69 years, screened during index years 1996, 1997, 1998 and 1999, 2000, 2001, subsequent screening rounds, 0–12 months follow-up



	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Index years 1999–2001									
Rate	83.8	83.1	83.1	83.3	87.2	84.9	86.7	77.5	96.5
95% CI	81.6–86.0	79.2–87.2	78.7–87.7	78.4–88.5	80.3–94.6	78.2–92.1	73.6–100.0	63.8–93.3	63.6–100.0
Index years 1996–1998									
Rate	81.7	81.1	83.5	81.7	80.8	83.5	70.2	75.7	n.a.
95% CI	79.0–84.5	76.5–85.9	78.2–89.1	74.1–89.9	72.3–90.0	75.2–92.4	55.1–88.1	56.7–99.0	n.a.

n.a. Not available.

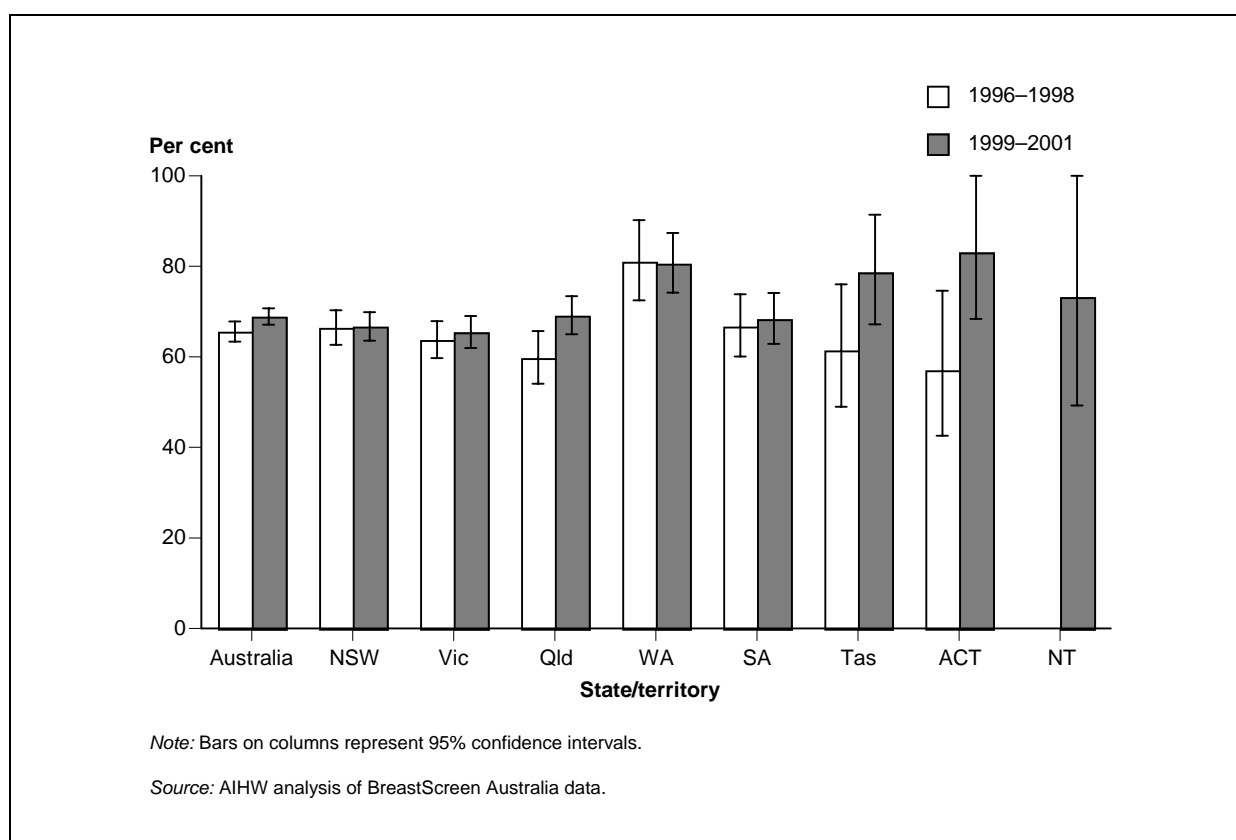
Notes

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. The Australian figure includes data from Vic, Qld, WA, SA, Tas and ACT. NT data were unavailable at the time of publication of the *BreastScreen Australia monitoring report 1998–1999 and 1999–2000* from which the data for index years 1996, 1997 and 1998 were copied. Updated NSW data were supplied separately.

- The program sensitivity rate between the index years 1996–1998 and 1999–2001 for women in the target age group (50–69) 0–12 months after their second or subsequent screens increased from 81.7% to 83.8% but the increase was not statistically significant.
- Across the states and territories, there were no statistically significant differences in the program sensitivity rate for women in the target age group (50–69) 0–12 months after their second or subsequent screens.

For more information, see: Tables 21 to 24 beginning on page 100. Tables with data other than for the latest reporting period can be found on the AIHW's web site at <www.aihw.gov.au>.

Program sensitivity for women aged 50–69 years, screened during index years 1996, 1997, 1998 and 1999, 2000, 2001, subsequent screening rounds, 0–24 months follow-up



	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Index years 1999–2001									
Rate	68.9	66.7	65.4	69.1	80.6	68.3	78.6	83.1	73.2
95% CI	67.1–70.7	63.6–69.9	62.0–69.0	65.1–73.4	74.2–87.4	62.9–74.1	67.3–91.4	68.4–100.0	49.4–100.0
Index years 1996–1998									
Rate	65.6	66.4	63.7	59.7	81.0	66.7	61.4	57.0	n.a.
95% CI	63.4–67.8	62.7–70.3	59.6–67.9	54.1–65.7	72.5–90.2	60.1–73.8	49.0–76.0	42.6–74.6	n.a.

n.a. Not available.

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. The Australian figure includes data from Vic, Qld, WA, SA, Tas and ACT. NT data were unavailable at the time of publication of the *BreastScreen Australia monitoring report 1998–1999 and 1999–2000* from which the data for index years 1996, 1997 and 1998 were copied. Updated NSW data were supplied separately.

- The program sensitivity rate for Australia between the 0–12 and 0–24 months follow-up periods for women after their second or subsequent screening rounds for index years 1999–2001 decreased from 83.8% to 68.9%.
- The program sensitivity rate for Australia between the index years 1996–1998 and 1999–2001 for women in the target age group (50–69) 0–24 months after their second or

subsequent screen increased from 65.6% to 68.9%. This increase was not statistically significant.

For more information, see: Tables 21 to 24 beginning on page 100. Tables with data other than for the latest reporting period can be found on the AIHW's web site 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 (40–49, 50–59, 60–69, 70+ years) and for the target age group (50–69 years).

The DCIS detection indicator

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. 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 (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).

DCIS is asymptomatic in the majority of cases and is usually detected as a change on a mammogram or as a chance finding on a breast biopsy for another condition. Before the introduction of nationwide mammographic screening in Australia in 1991, DCIS was rarely found. Since then, screening mammography has increased the detection rate for DCIS (NBCC et al. 2000).

Early detection of high-grade DCIS through screening, and its subsequent treatment, is likely to prevent deaths from breast cancer. The ability to detect DCIS can also be seen as an indicator of the quality of the screening process, since it reflects good-quality imaging and screen-film reading.

The National Accreditation Standards for the detection of DCIS require:

- ≥ 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 1998, 2002 and 2003. 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.

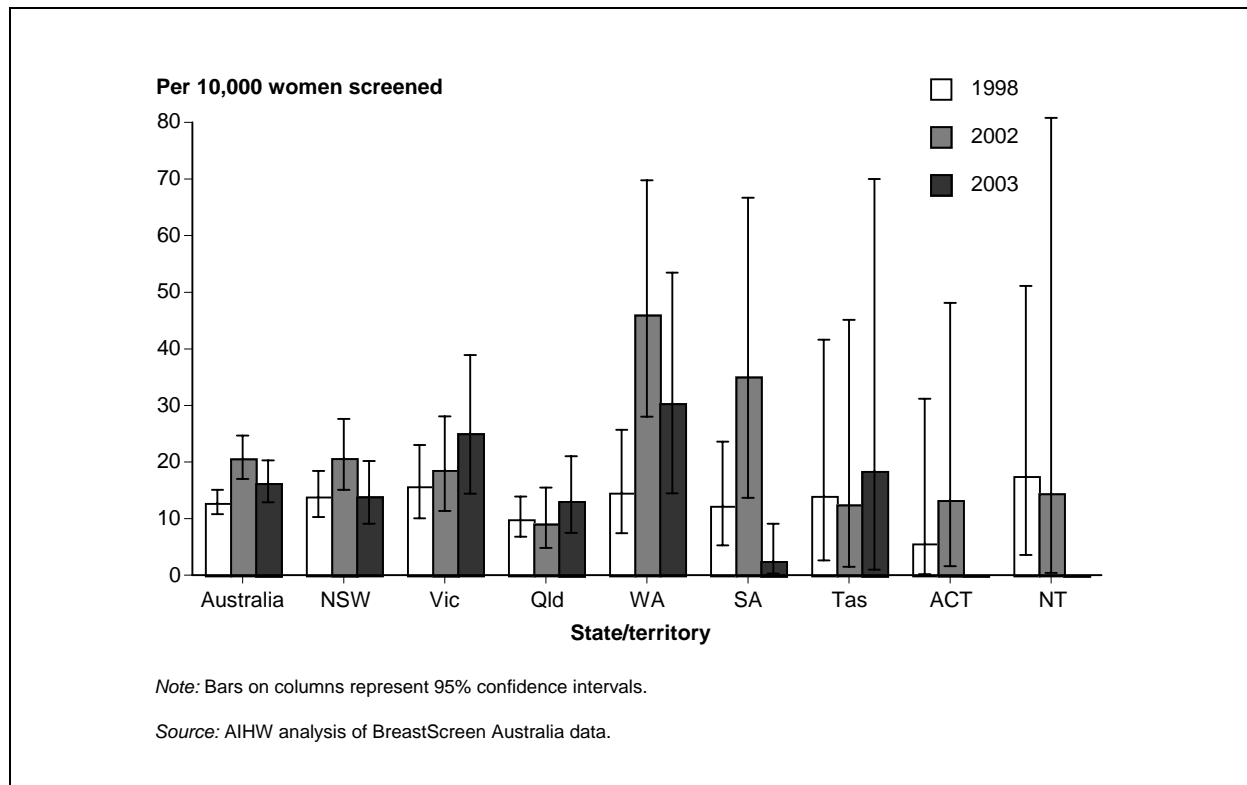
Ductal carcinoma in situ detection rate in women aged 40 and over and 50–69 years, Australia, 1998, 2002 and 2003

	Objective ^(a)	1998	2002	2003
First screening round				
Rate for women aged 50–69 years	≥12	12.8	20.6	16.3
<i>95% CI</i>		10.7–15.1	17.0–24.7	12.9–20.3
Rate for women aged 40 years and over	..	12.8	18.3	15.5
<i>95% CI</i>		11.1–14.6	15.5–21.4	12.7–18.6
Subsequent screening rounds				
Rate for women aged 50–69 years	≥7	9.2	8.9	10.0
<i>95% CI</i>		8.3–10.2	8.1–9.8	9.1–10.9
Rate for women aged 40 years and over	..	8.8	8.5	9.6
<i>95% CI</i>		8.0–9.7	7.8–9.2	8.9–10.3

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

.. Not applicable.

Ductal carcinoma in situ detection in women aged 50–69 years, first screening round, 1998, 2002 and 2003



	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
2003 rate	16.3	13.9	25.1	13.1	30.4	2.5*	18.4	..	..
<i>95% CI</i>	12.9–20.3	9.1–20.2	14.4–38.9	7.5–21.0	14.5–53.5	0.3–9.2	1.0–70.0	..	..
2002 rate	20.6	20.7	18.6	9.1 [#]	46.0 [#]	35.1	12.5	13.3	14.5
<i>95% CI</i>	17.0–24.7	15.1–27.6	11.5–28.2	4.8–15.5	28.0–69.8	13.7–66.6	1.5–45.1	1.6–48.2	0.4–80.8
1998 rate	12.8	13.9	15.7	9.9	14.6	12.3	14.0	5.6	17.5
<i>95% CI</i>	10.7–15.1	10.3–18.4	10.1–23.0	6.8–13.8	7.4–25.6	5.3–23.5	2.6–41.6	0.1–31.2	3.6–51.1

* Statistically different from the 2002 Australian rate.

[#] Statistically different from the 2002 Australian rate.

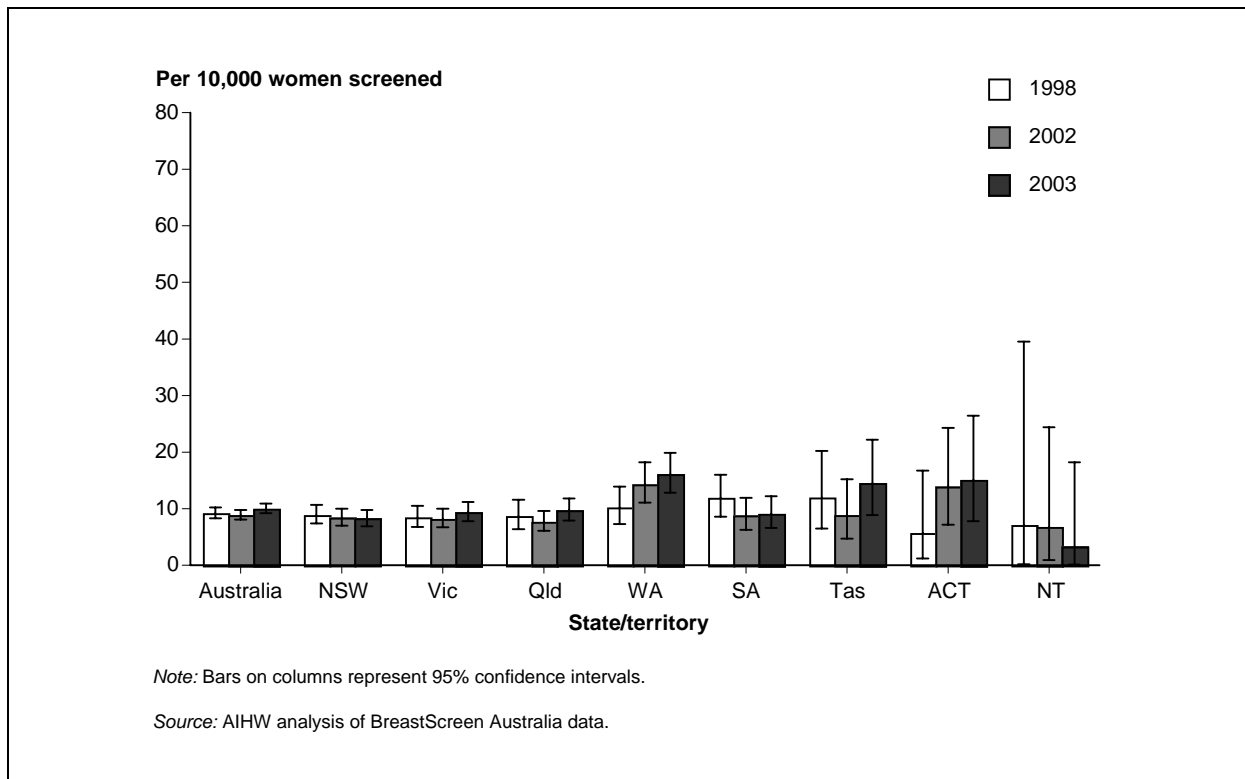
.. Not applicable—no DCIS cases detected.

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 163 women attending for their first screening round in 2003, including 102 cases in women in the target age group. The age-standardised DCIS detection rate was 16.3 per 10,000 women screened for women in the target age group, and 15.5 per 10,000 women screened for women aged 40 and over.
- The national age-standardised detection rate of DCIS increased from 12.8 in 1998 to 16.3 in 2003 but the increase was not statistically significant.

For more information, see: Tables 25 to 28 beginning on page 102. Tables with data other than for the latest reporting period can be found on the AIHW's web site at <www.aihw.gov.au>.

Ductal carcinoma in situ detection in women aged 50–69 years, second or subsequent screening rounds, 1998, 2002 and 2003



	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
2003 rate	10.0	8.3	9.4	9.7	16.1*	9.1	14.5	15.1	3.3
<i>95% CI</i>	9.1–10.9	7.0–9.9	7.8–11.2	7.9–11.8	12.8–19.9	6.6–12.1	9.0–22.2	7.8–26.5	0.1–18.2
2002 rate	8.9	8.4	8.2	7.7	14.3 [#]	8.8	8.9	13.9	6.8
<i>95% CI</i>	8.1–9.8	7.0–10.0	6.7–10.0	6.1–9.6	11.0–18.2	6.4–12.0	4.7–15.3	7.1–24.3	0.8–24.4
1998 rate	9.2	8.9	8.5	8.7	10.2	11.9	12.0	5.7	7.1
<i>95% CI</i>	8.3–10.2	7.4–10.7	6.8–10.5	6.4–11.6	7.3–13.9	8.6–15.9	6.6–20.2	1.2–16.7	0.2–39.5

* Statistically different from the 2003 Australian rate.

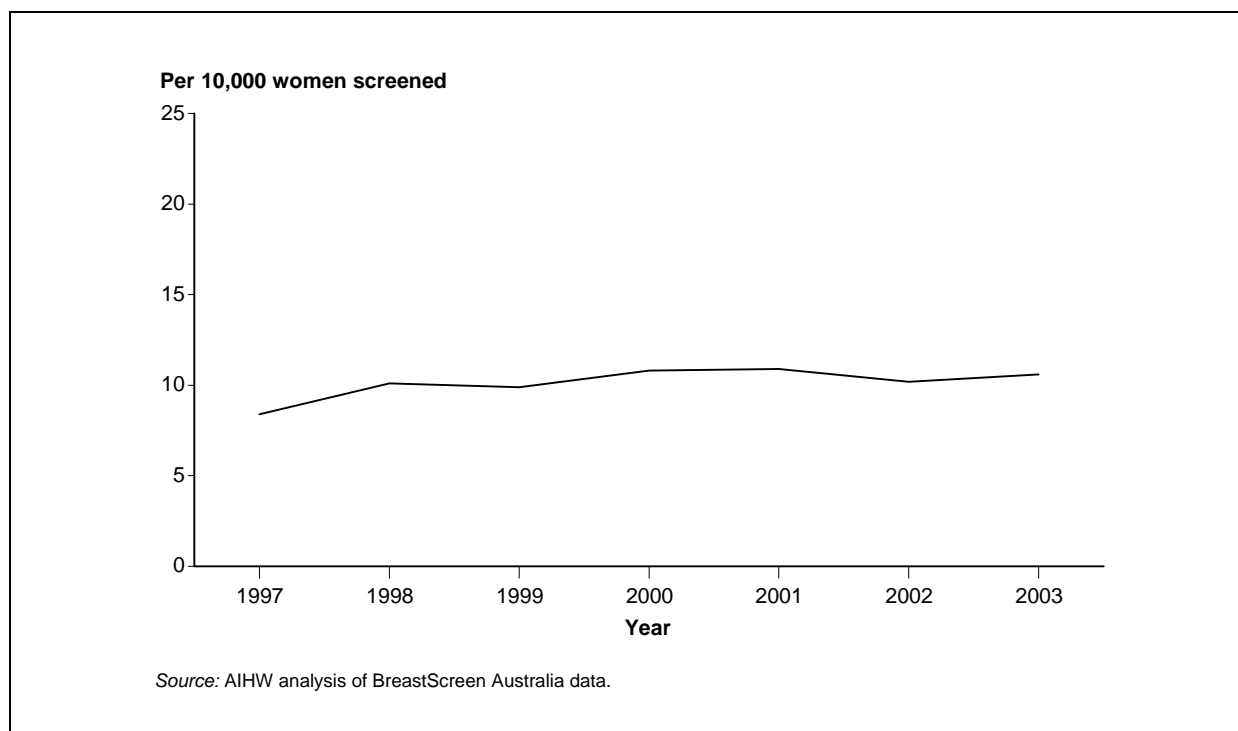
[#] Statistically different from the 2002 Australian rate.

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.

- DCIS was detected in 720 women aged 40 years and over attending for their second or subsequent screening rounds in 2003, including 518 cases in women in the target age group. The age-standardised DCIS detection rate was 10.0 per 10,000 women screened for women in the target age group, and 9.6 per 10,000 women screened for women aged 40 and over.
- The national age-standardised detection rate of DCIS increased from 9.2 in 1998 to 10.0 in 2003; however, the increase was not statistically significant.

For more information, see: Tables 25 to 28 beginning on page 102. Tables with data other than for the latest reporting period can be found on the AIHW's web site at <www.aihw.gov.au>.

Ductal carcinoma in situ detection in women aged 50–69 years, trend data, all screening rounds, 1997–2003



	1997	1998	1999	2000	2001	2002	2003
Rate	8.4*	10.1	9.9 [#]	10.8	10.9	10.2	10.6
95% CI	7.6–9.3	9.3–11.1	9.0–10.8	9.9–11.7	10.1–11.8	9.4–11.1	9.8–11.5

* Statistically different from the 2000, 2001, 2002 and 2003 rate.

[#] Does not include data from NT.

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 age-standardised rate of DCIS detection for women in the target age group has remained relatively constant since 1998, at between 10 and 11 cases detected per 10,000 women screened, over all screening rounds.

For more information, see: Tables 25 to 28 beginning on page 102. Tables with data other than for the latest reporting period can be found on the AIHW's web site 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 five-year age groups (40–44, 45–49, 50–54, 55–59, 60–64, 65–69, 70–74, 75–79, 80–84, and 85+ years) 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. Women may also be recalled for other non-mammographic reasons. During assessment, a woman might undergo further tests, such as additional mammography, physical examination, ultrasound and, if required, a fine needle aspiration or a core 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:

- <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 1998, 2002 and 2003. The objectives of recalling less than 10% of women in the target age group 50–69 attending for their first screening round and less than 5% of women attending for their second or subsequent screening rounds were achieved in the three years.

Age-standardised recall to assessment rates for women aged 40 and over and 50–69 years, mammographic reasons, 1998, 2002 and 2003

	Objective ^(a)	1998	2002	2003
First screening round				
Rate (%) for women aged 50–69 years	<10	7.2	8.7	9.3
95% CI		7.1–7.4	8.5–9.0	9.1–9.6
Rate (%) for women aged 40 years and over	..	7.2	8.6	9.3
95% CI		7.0–7.3	8.4–8.7	9.1–9.6
Subsequent screening rounds				
Rate (%) for women aged 50–69 years	<5	3.9	4.0	4.0
95% CI		3.9–4.0	4.0–4.1	4.0–4.1
Rate (%) for women aged 40 years and over	..	3.9	4.1	4.2
95% CI		3.9–4.0	4.1–4.2	4.1–4.2

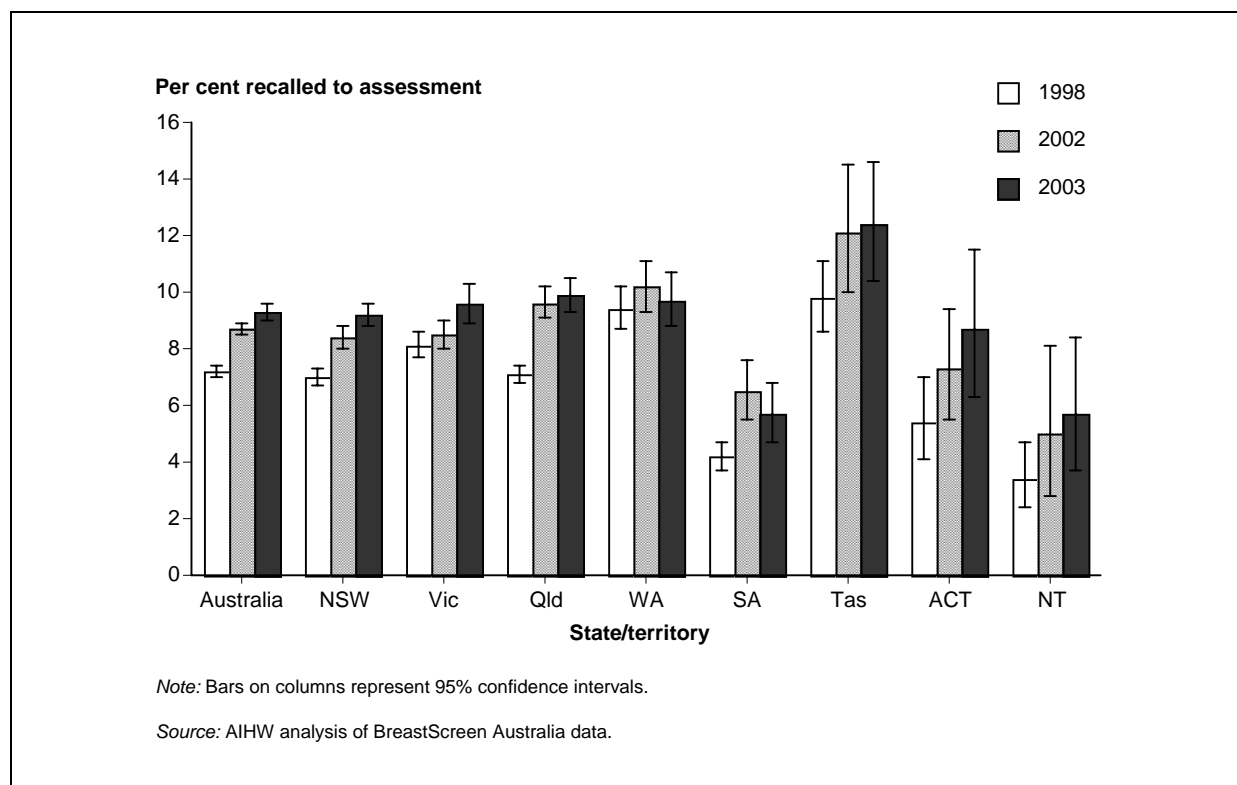
(a) Performance objective for BreastScreen services as set out in the National Accreditation Standards (NQMC unpublished).

.. Not applicable.

Source: AIHW analysis of BreastScreen Australia data.

The age-standardised recall to assessment rate for women attending for their first screening round rose from 7.2% in 1998 to 9.3% in 2003. This increase was statistically significant. The age-standardised recall rate for women aged 40 and over attending for their first screening round also rose considerably from 7.2% in 1998 to 9.3% in 2003.

Recall to assessment rate for women aged 50–69 years, mammographic reasons, first screening round, 1998, 2002 and 2003



	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
2003 rate (%)	9.3*#	9.2*#	9.6#	9.9#	9.7	5.7	12.4	8.7	5.7
95% CI	9.1–9.6	8.8–9.6	9.0–10.4	9.3–10.5	8.8–10.6	4.6–6.8	10.4–14.6	6.3–11.5	3.7–8.4
2002 rate (%)	8.7	8.4	8.5	9.6	10.2	6.5	12.1	7.3	5.0
95% CI	8.5–9.0	8.0–8.7	7.9–9.0	9.0–10.1	9.4–11.1	5.5–7.6	10.0–14.5	5.5–9.4	2.7–8.0
1998 rate (%)	7.2	7.0	8.1	7.1	9.4	4.2	9.8	5.4	3.4
95% CI	7.1–7.4	6.7–7.3	7.7–8.6	6.8–7.4	8.7–10.2	3.7–4.7	8.6–11.1	4.1–7.0	2.3–4.7

* Statistically different from the 2002 rate.

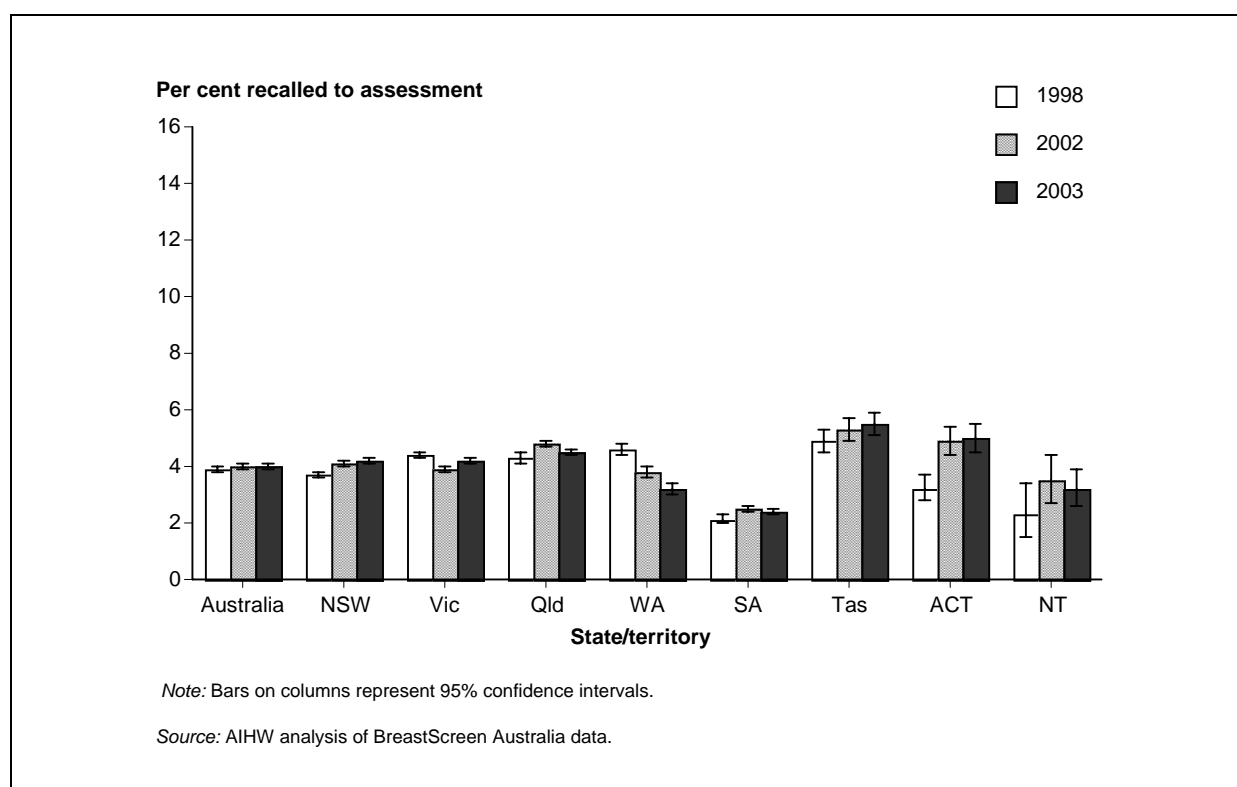
Statistically different from the 1998 rate.

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 2003, 9.3% (age-standardised) of women in the target age group attending for their first screen were recalled for assessment due to an abnormal mammogram result. Between 1998 and 2003 there was a statistically significant increase in recalls due to mammographic reasons for women attending their first screen. Similar increases also occurred in New South Wales, Victoria and Queensland. In other states and territories the changes between 1999 and 2003 were not statistically significant, mainly due to the number of cases being too small to measure significant change.
- In 2003 the age-standardised rates of recall for assessment for women in the target age group for the Northern Territory and South Australia (5.7%) were much lower than the national rate (9.3%).

For more information, see: Tables 29 to 36 beginning on page 104. Tables with data other than for the latest reporting period can be found on the AIHW's web site at <www.aihw.gov.au>.

Recall to assessment rate for women aged 50–69 years, mammographic reasons, subsequent screening rounds, 1998, 2002 and 2003



	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
2003 rate (%)	4.0	4.2 [#]	4.2 [*]	4.5 [*]	3.2 ^{*#}	2.4 [#]	5.5	5.0 [#]	3.2
<i>95% CI</i>	4.0–4.1	4.1–4.3	4.1–4.3	4.3–4.6	3.1–3.4	2.3–2.6	5.1–5.9	4.5–5.5	2.5–3.9
2002 rate (%)	4.0	4.1	3.9	4.8	3.8	2.5	5.3	4.9	3.5
<i>95% CI</i>	4.0–4.1	4.0–4.2	3.8–4.0	4.7–4.9	3.6–4.0	2.4–2.7	4.9–5.7	4.4–5.4	2.7–4.4
1998 rate (%)	3.9	3.7	4.4	4.3	4.6	2.1	4.9	3.2	2.3
<i>95% CI</i>	3.9–4.0	3.6–3.8	4.3–4.5	4.1–4.4	4.4–4.9	2.0–2.3	4.5–5.3	2.8–3.7	1.5–3.4

* Statistically different from the 2002 rate.

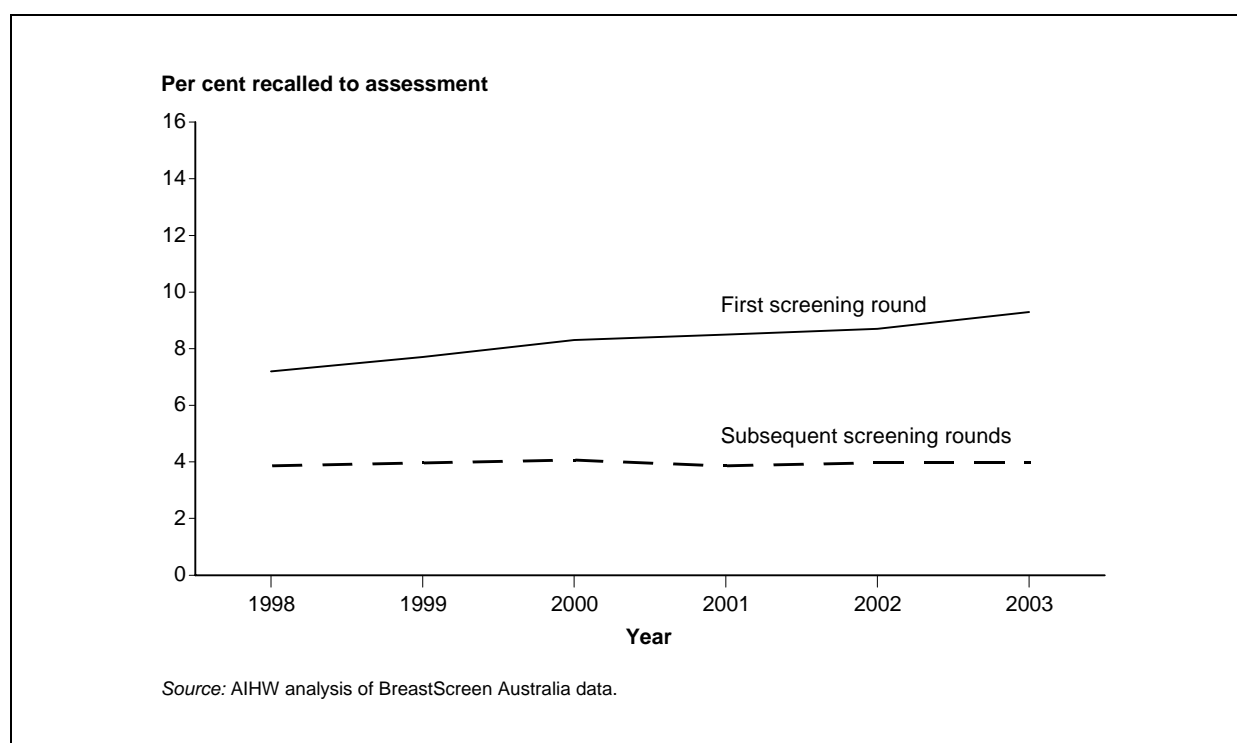
Statistically different from the 1998 rate.

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 in the target age group who were screened for a second or subsequent time in 2003, 4.0% (age-standardised) were recalled for assessment due to an abnormal mammogram result. This is less than half the rate for women attending for their first screen (9.3%).
- In 2003 the age-standardised rates of recall for mammographic assessment for women in the target age group screened for a second or subsequent time for South Australia, Northern Territory and Western Australia (2.4%, 3.2% and 3.2%, respectively) were much lower than the Australian rate (4.0%). Higher rates than the national rate were reported in Queensland, Tasmania and the Australian Capital Territory (4.5%, 5.5% and 5.0%, respectively).

For more information, see: Tables 29 to 36 beginning on page 104. Tables with data other than for the latest reporting period can be found on the AIHW's web site at <www.aihw.gov.au>.

Recall to assessment trends for women aged 50–69 years, mammographic reasons, first and subsequent screening rounds, 1998 to 2003



	1998	1999	2000	2001	2002	2003
First screening round						
Rate	7.2*	7.7*	8.3*	8.5*	8.7*	9.3*
95% CI	7.1–7.4	7.5–7.9	8.1–8.5	8.3–8.8	8.5–9.0	9.1–9.6
Subsequent screening rounds						
Rate	3.9	4.0	4.1	3.9	4.0	4.0
95% CI	3.9–4.0	3.9–4.1	4.0–4.1	3.9–4.0	4.0–4.1	4.0–4.1

* 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 1998 and 2003. The age-standardised recall rate increased from 7.2% to 9.3%.
- The age-standardised recall rate for women attending for their second or subsequent screen was relatively stable between 1998 and 2003 and oscillated between 3.9% and 4.1%. However, recall rates reported for women attending for their second or subsequent rounds were much lower than the recall rates reported for women attending for their first screen--in recent years less than half.

For more information, see: Tables 29 to 36 beginning on page 104. Tables with data other than for the latest reporting period can be found on the AIHW's web site 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 two years who returned for a screen within 27 months. This rate is reported by five-year age groups (40–44, 45–49, 50–54, 55–59, 60–64, 65–69, 70–74, 75–79, 80–84, and 85+ years) 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 and, therefore, were not expected to return for screening.

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 two years. By having a mammogram every two 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 an additional 3 months to allow for potential delays in screening availability.

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. As can be seen in the table below, 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.

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

The National Accreditation Standards for rescreen require:

- ≥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 2000 and 2001 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 and, therefore, were not expected to return for screening.

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 2000 and 2001. The age-standardised rescreen rate for women aged 50–67 years attending for their first screening round declined from 66.3% in 2000 to 62.9% in 2001. The age-standardised rescreen rate for women aged 40 and over attending for their first screening round also declined from 61.8% in 2000 to 58.5% in 2001. 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%.

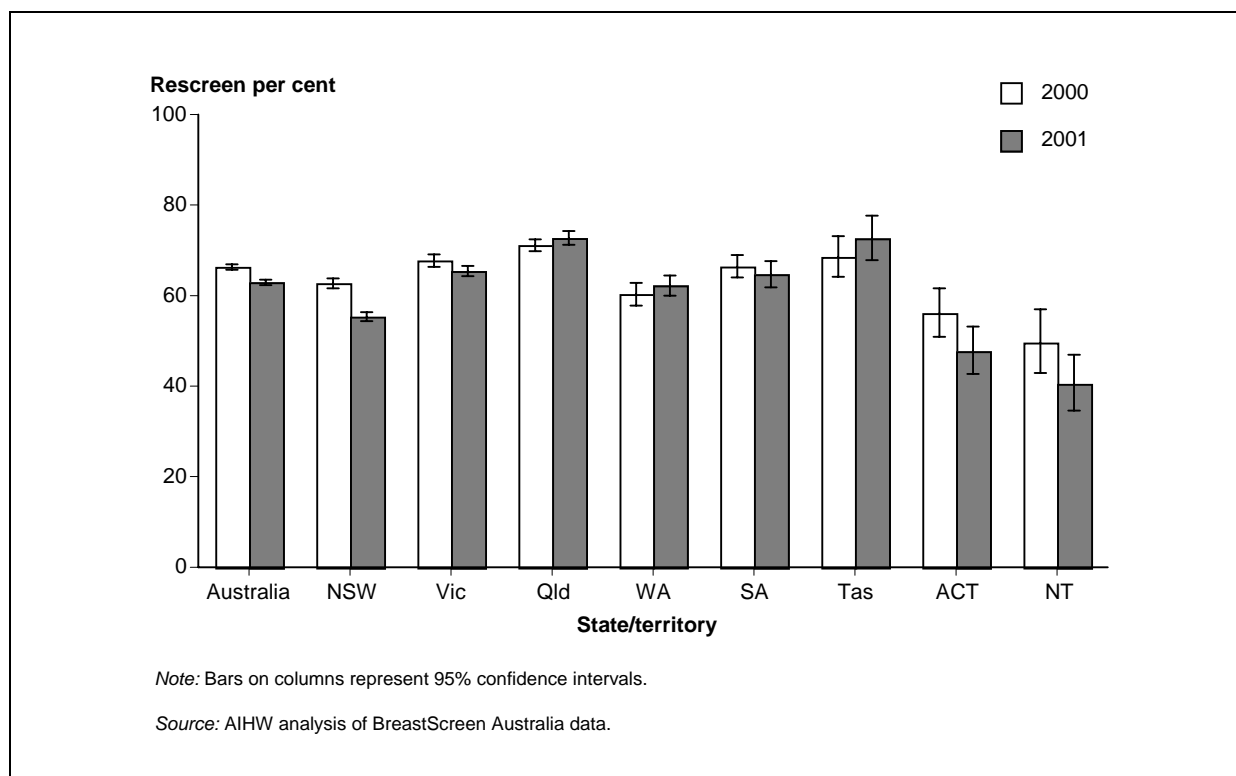
Age-standardised rescreen rates for women aged 40 and over and 50–67 years, screened during 2000 or 2001

	Objective ^(a)	2000	2001
First screening round			
Rate (%) for women aged 50–67 years	≥75	66.3	62.9
95% CI		65.6–66.9	62.2–63.5
Rate (%) for women aged 40 years and over	..	61.8	58.5
95% CI		61.3–62.3	58.1–59.0
Second screening round			
Rate (%) for women aged 50–67 years	≥90	75.7	71.9
95% CI		75.2–76.3	71.3–72.5
Rate (%) for women aged 40 years and over	..	72.0	67.9
95% CI		71.6–72.4	67.4–68.3
Subsequent screening rounds			
Rate (%) for women aged 50–67 years	≥90	84.2	81.8
95% CI		83.8–84.5	81.5–82.1
Rate (%) for women aged 40 years and over	..	80.6	78.0
95% CI		80.3–81.0	77.7–78.3

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

.. Not applicable.

Rescreen rate for women aged 50–67 years, screened during 2000 and 2001, first screening round



	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
2001 rate (%)	62.9*	55.3*	65.4	72.7	62.2	64.7	72.6	47.7	40.5
<i>95% CI</i>	62.2–63.5	54.4–56.3	64.3–66.6	71.2–74.2	60.0–64.4	61.8–67.6	67.8–77.7	42.7–53.1	34.6–46.9
2000 rate (%)	66.3	62.7	67.7	71.1	60.3	66.4	68.5	56.1	49.6
<i>95% CI</i>	65.6–66.9	61.6–63.8	66.3–69.1	69.8–72.5	57.9–62.9	64.0–68.9	64.1–73.1	50.9–61.6	42.9–56.8

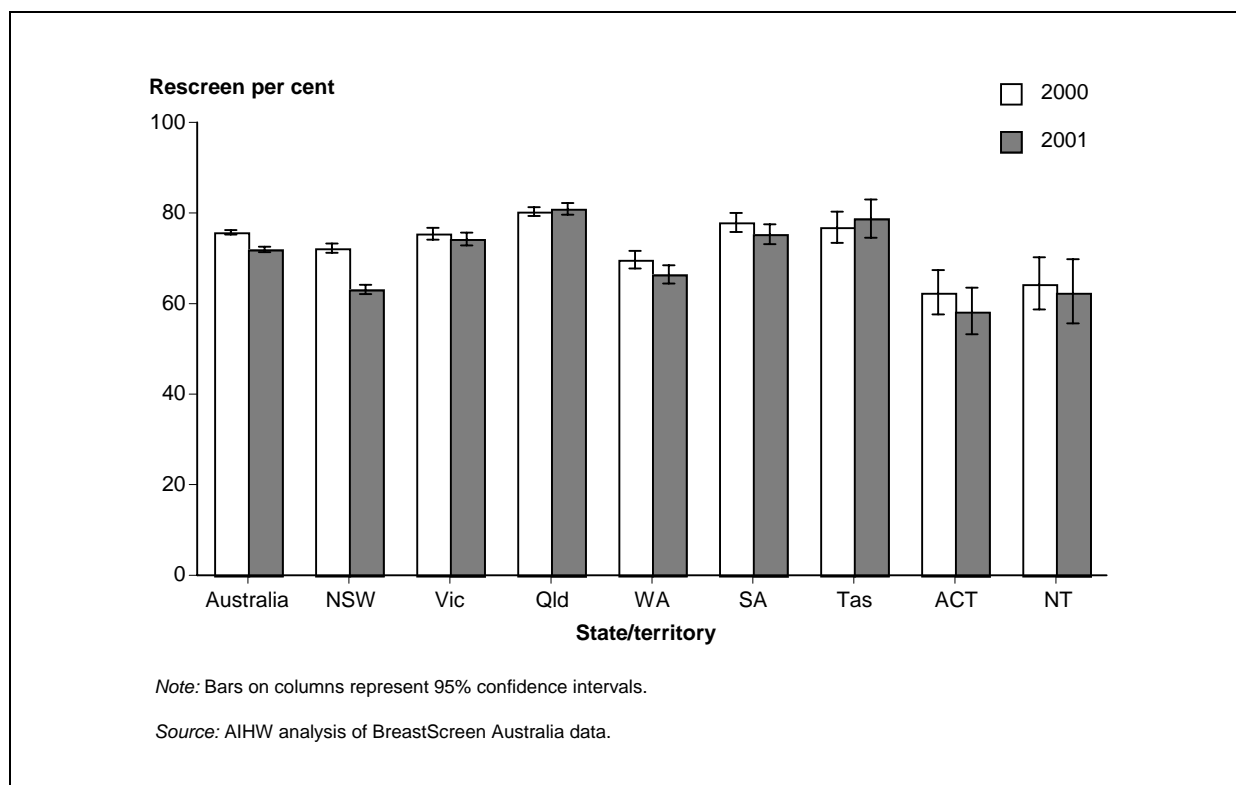
* Statistically different from the 2000 rate.

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 2001 for the first time was 62.9%. Of all women aged 40 and over, 58.5% returned for screening.
- Across the states and territories, the age-standardised rescreen rates in 2001 for women aged 50–67 years were below the national average for New South Wales (55.3%), Australian Capital Territory (47.7%) and Northern Territory (40.5%), and above the average for Queensland (72.7%) and Tasmania (72.6%).
- The age-standardised national rescreen rate for women attending the service in 2000 decreased from 66.3% to 62.9% for women attending the service in 2001. New South Wales followed a similar trend with a decrease in rescreen rates between 2000 (62.7%) and 2001 (55.3%). The changes in rescreen rates in all other states and territories were not statistically significant.

For more information, see: Tables 37 to 42 beginning on page 112. Tables with data other than for the latest reporting period can be found on the AIHW's web site at <www.aihw.gov.au>.

Rescreen rate for women aged 50–67 years, screened during 2000 and 2001, second screening round



	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
2001 rate (%)	71.9*	63.1*	74.2*	80.9*	66.4	75.3*	78.7	58.2*	62.4*
95% CI	71.3–72.5	62.1–64.1	72.8–75.6	79.7–82.2	64.4–68.5	73.2–77.5	74.6–83.1	53.3–63.5	55.6–69.7
2000 rate (%)	75.7	72.2	75.4	80.3	69.6	77.9	76.8	62.4	64.3
95% CI	75.2–76.3	71.3–73.2	74.1–76.7	79.2–81.3	67.7–71.6	75.8–80.1	73.3–80.3	57.6–67.5	58.7–70.2

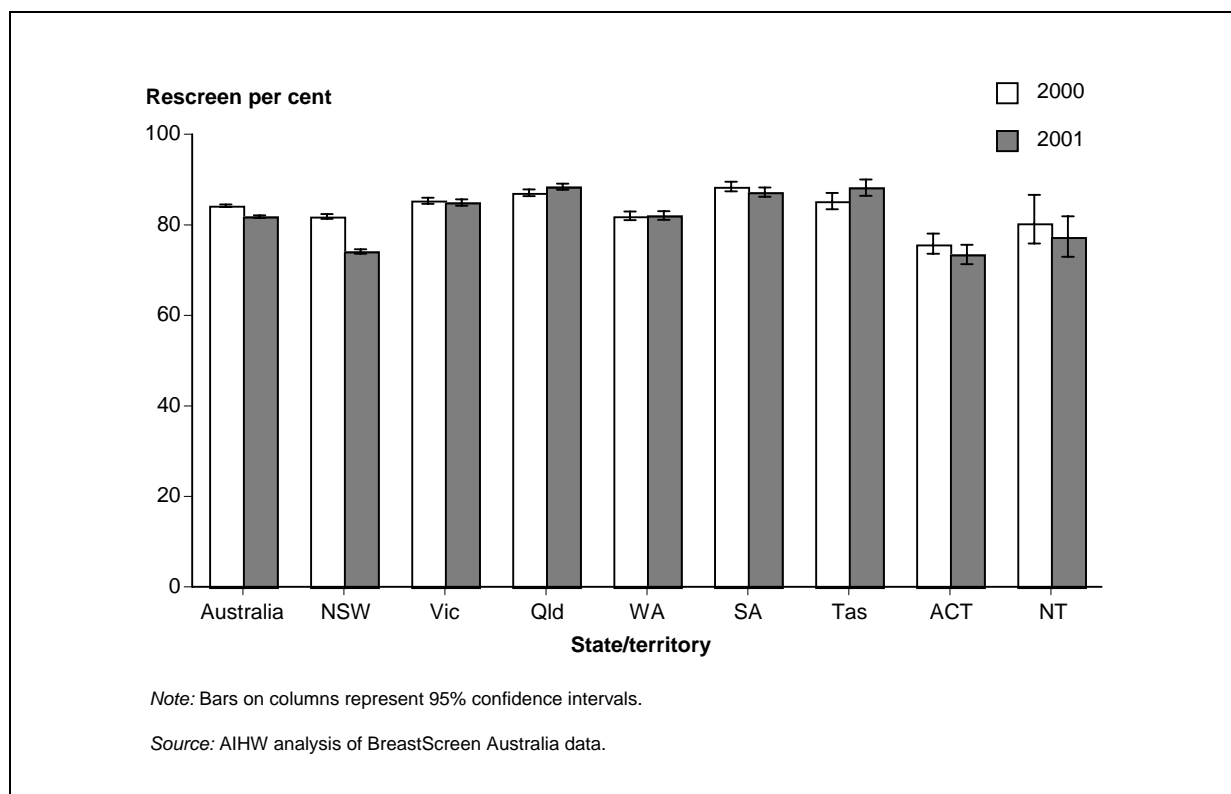
* Statistically significant increase between first and second screening round (first round is on previous page).

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 within 27 months of attending a BreastScreen Australia service in 2001 for the second time was 71.9%. This is higher than the rate for women attending for their first visit (62.9%). New South Wales, Victoria, Queensland, South Australia, the Australian Capital Territory and the Northern Territory followed a similar trend with increases between the first and subsequent screening rounds.
- There was a statistically significant decrease in the age-standardised rescreen rates for women attending a screening service for their second round from 75.7% in 2000 to 71.9% in 2001. For New South Wales, the decrease in the rescreen rates was from 72.2% (2000) to 63.1% (2001). The changes for other states and territories were not statistically significant.

For more information, see: Tables 37 to 42 beginning on page 112. Tables with data other than for the latest reporting period can be found on the AIHW's web site at <www.aihw.gov.au>.

Rescreen rate for women aged 50–67 years, screened during 2000 and 2001, third and subsequent screening rounds



	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
2001 rate (%)	81.8*	74.1*	84.9	88.4	82.0	87.2	88.2	73.4	77.3
<i>95% CI</i>	81.5–82.1	73.6–74.6	84.3–85.6	87.7–89.2	81.1–83.0	86.2–88.2	86.4–90.0	71.3–75.6	72.8–81.9
2000 rate (%)	84.2	81.8	85.3	87.0	81.9	88.4	85.2	75.7	80.3
<i>95% CI</i>	83.8–84.5	81.3–82.4	84.6–86.0	86.2–87.9	80.9–82.9	87.3–89.5	83.4–86.9	73.4–78.1	74.3–86.5

* Statistically different from the 2000 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 2001 for their third or subsequent visit was 81.8%. This is much higher than the rates for women attending for their first or second visits (62.9% and 71.9% respectively).
- The age-standardised national rescreen rate for the third and subsequent screening rounds declined from 84.2% in 2000 to 81.8% in 2001.

For more information, see: Tables 37 to 42 beginning on page 112. Tables with data other than for the latest reporting period can be found on the AIHW's web site at <www.aihw.gov.au>.

Indicator 7: Incidence

7a. Incidence of breast cancer

The incidence of breast cancer is calculated per 100,000 estimated resident female population in a 12-month period by five-year age groups (0–4, 5–9, 10–14, 15–19, 20–24, 25–29, 30–34, 35–39, 40–44, 45–49, 50–54, 55–59, 60–64, 65–69, 70–74, 75–79, 80–84, 85+ years) 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 estimated resident female population in a six-year period by ten-year age groups (0–19, 20–29, 30–39, 40–49, 50–59, 60–69, 70+ years) and for the target age group (50–69 years).

The incidence indicator

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

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

This chapter reports the rates of breast cancer from 1988 to 2002, the latest national data available. This chapter also reports on breast cancer incidence by state and territory, and by geographical region.

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

The following table shows the incidence of breast cancer in 1997, 2001 and 2002. The incidence of breast cancer for women in the target age group 50–69 increased significantly from 276.7 cases per 100,000 women in 1997 to 304.3 cases per 100,000 women in 2002.

Incidence of breast cancer in women aged 50-69 years and 0-85 and over, 1997, 2001 and 2002

	1997	2001	2002
Rate for women aged 50-69 years	276.7	305.0	304.3
<i>95% CI</i>	268.8-284.8	297.2-312.9	296.6-312.1
Rate for women aged 0-85 years and over	111.3	117.1	116.8
<i>95% CI</i>	109.1-113.5	115.0-119.2	114.7-118.9

Incidence of breast cancer by regions is shown in the table below. In 1993-1997 and 1998-2002 the age-standardised breast cancer incidence rate was significantly lower in outer regional, remote and very remote areas than the national rate.

Incidence of breast cancer in women aged 50-69 years, 1993-1997 and 1998-2002 by region

	Australia	Major cities	Inner regional	Outer regional	Remote	Very remote
Rate 1998-2002	296.5	302.1	295.5	273.0	253.5	216.4
<i>95% CI</i>	292.9-300.0	297.7-306.5	288.1-303.1	262.8-283.6	226.6-282.8	177.6-259.1
Rate 1993-1997	273.0	278.8	270.4	251.5	230.8	204.4
<i>95% CI</i>	269.3-276.6	274.2-283.3	262.6-278.3	241.0-262.4	203.5-260.7	163.7-249.7

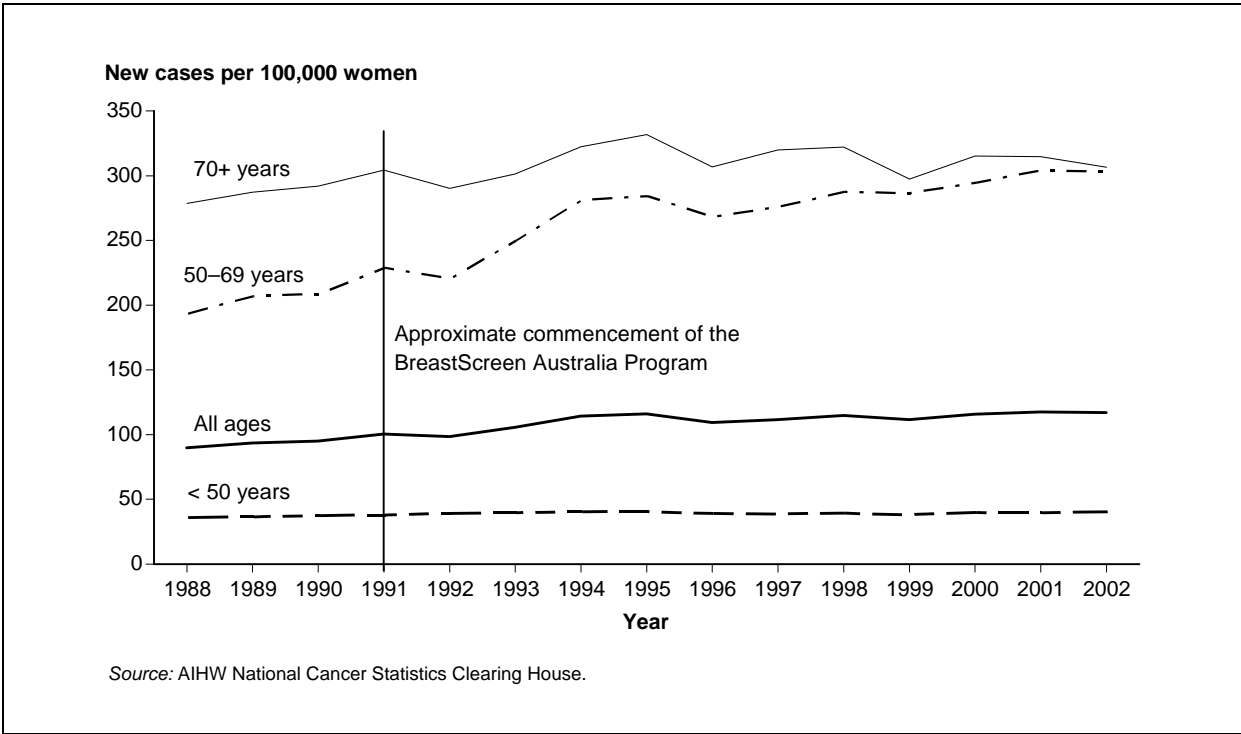
The following table shows the incidence of DCIS. Incidence of DCIS increased from 31.5 cases per 100,000 women in the target age group in 1993-1998 to 40.3 cases per 100,000 women in 1997-2002. Similarly, the DCIS incidence rate for women aged 0-70 and over increased from 10.6 cases per 100,000 women in 1993-1998 to 13.0 cases per 100,000 women in 1997-2002.

Incidence of ductal carcinoma in situ in women aged 0-70 and over and 50-69 years, 1993-1998 and 1997-2000

	1993-1998	1997-2002
Rate for women aged 50-69 years	31.5	40.3
<i>95% CI</i>	30.3-32.6	39.1-41.5
Rate for women aged 0-70 years and over	10.6	13.0
<i>95% CI</i>	10.3-10.9	12.7-13.3

Note: Comparisons between time periods should be treated with caution because of overlapping periods.

Incidence of breast cancer in women, Australia, 1988–2002



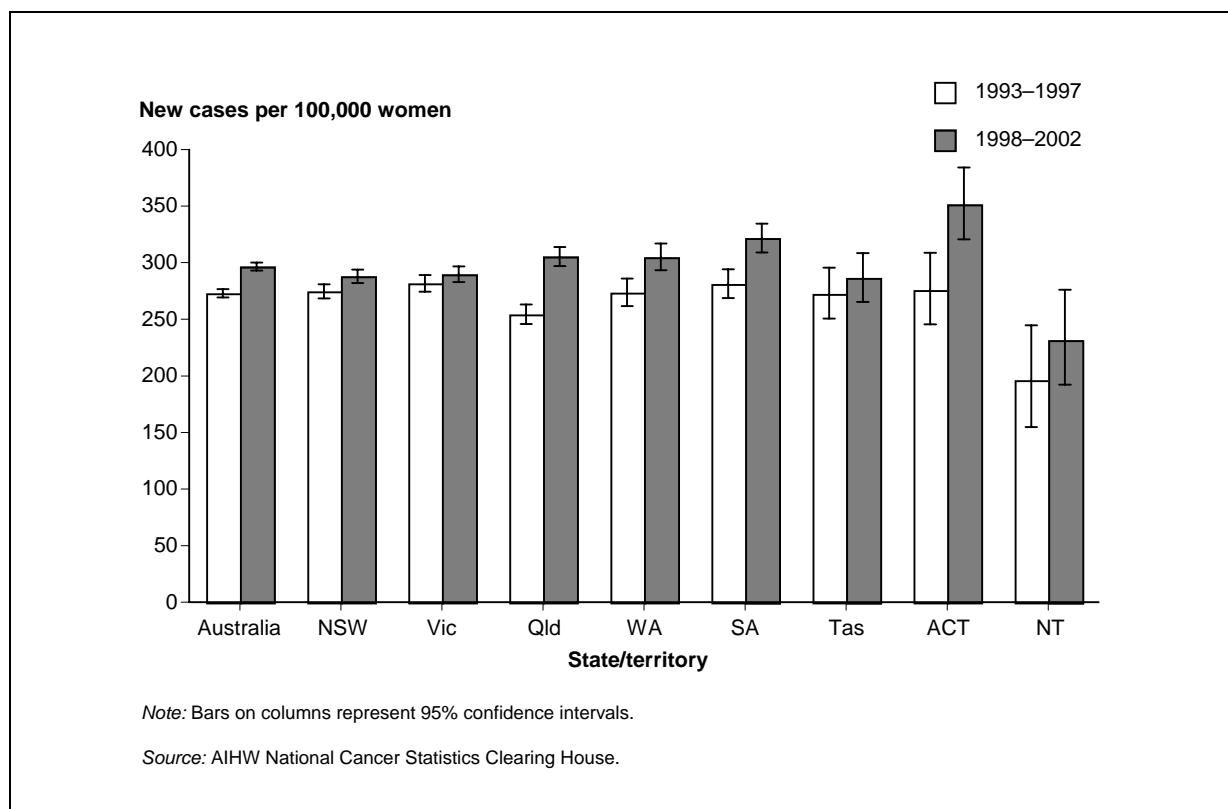
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
All ages	89.5	93.3	94.7	100.2	98.1	105.3	113.9	115.6	109.0	111.3	114.5	111.2	115.5	117.1	116.8
<50	36.6	37.2	38.1	38.7	39.8	40.4	41.1	41.5	39.9	39.3	40.2	39.0	40.6	40.3	41.1
50-69	194.3	207.9	209.6	229.9	221.7	250.7	282.1	285.1	269.0	276.7	288.6	287.5	295.5	305.0	304.3
70+	278.8	287.3	292.1	304.3	290.4	301.5	322.5	331.7	306.9	319.8	322.2	297.5	315.2	314.7	306.6

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, a notable increase over the period 1988 to 2002 can be seen in the age-standardised breast cancer incidence rates for women in the target age group (aged 50-69). Incidence has increased in this group from 194.3 new cancers per 100,000 women in 1988 to 304.3 per 100,000 women in 2002.
- Although the underlying rate for breast cancer has been increasing since 1988, the sharp increase between 1992 and 1995 is likely to be, at least partly, the result of the early detection of cancers in women who may otherwise have gone undiagnosed for some years.
- From 1994 onwards, incidence has been relatively constant among women aged less than 50 years, and aged 70 years and over.

For more information, see: Tables 43 to 48 beginning on page 118. Tables with data other than for the latest reporting period can be found on the AIHW's web site at <www.aihw.gov.au>.

Incidence of breast cancer in women aged 50–69 years, 1993–1997 and 1998–2002



	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Rate									
1998–2002	296.5 [#]	287.8 [#]	289.7	305.3 [#]	305.0 [#]	321.7 ^{*#}	286.4	351.4 ^{*#}	231.5 [*]
95% CI	292.9–300.0	281.9–293.8	282.9–296.8	297.0–313.8	293.5–316.9	309.1–334.6	265.4–308.7	320.7–384.2	192.2–276.1
Rate									
1993–1997	273.0	274.6	281.6	254.4 [*]	273.6	281.2	272.4	275.9	196.1 [*]
95% CI	269.3–276.6	268.4–280.9	274.4–289.0	246.1–263.0	261.6–286.0	268.8–294.2	250.6–295.7	245.6–308.9	154.8–244.8

* Significantly different from the Australian rate.

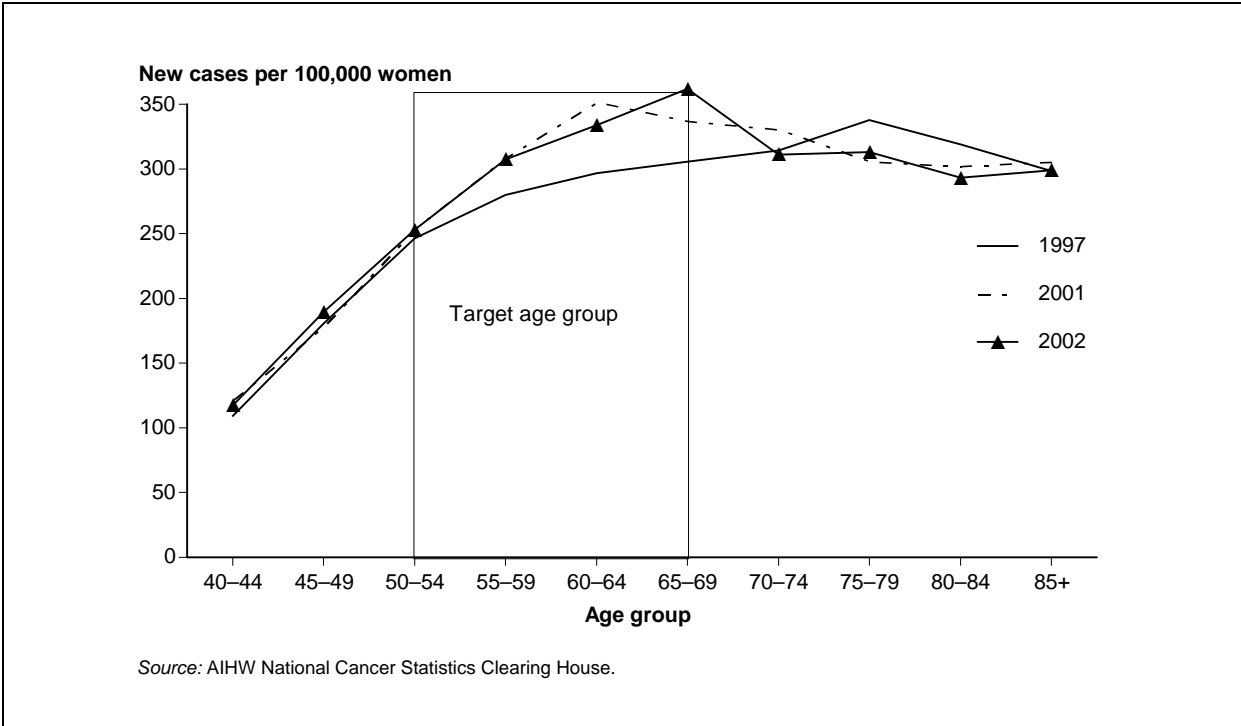
[#] Significantly different from the 1993–1997 rate.

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 1998–2002 was 296.5 new cancers per 100,000 women. Across the states and territories, incidence rates ranged from 231.5 new cancers per 100,000 women in the Northern Territory to 351.4 new cases per 100,000 women in the Australian Capital Territory. The rates for South Australia and Australian Capital Territory (321.7 and 351.4 per 100,000 women respectively) were much higher than the national rate.
- In 1993–1997 the age-standardised breast cancer incidence rates in the Northern Territory and Queensland (196.1 and 254.4 new cases per 100,000 women respectively) were lower than the national rate (273.0 per 100,000 women).
- Between 1993–1997 and 1998–2002 there was an increase in age-standardised incidence rates in all states and territories except Victoria, Tasmania and the Northern Territory.

For more information, see: Tables 43 to 48 beginning on page 118. Tables with data other than for the latest reporting period can be found on the AIHW's web site at <www.aihw.gov.au>.

Age-specific incidence rates for breast cancer in women, Australia, 1997, 2001 and 2002



Source: AIHW National Cancer Statistics Clearing House.

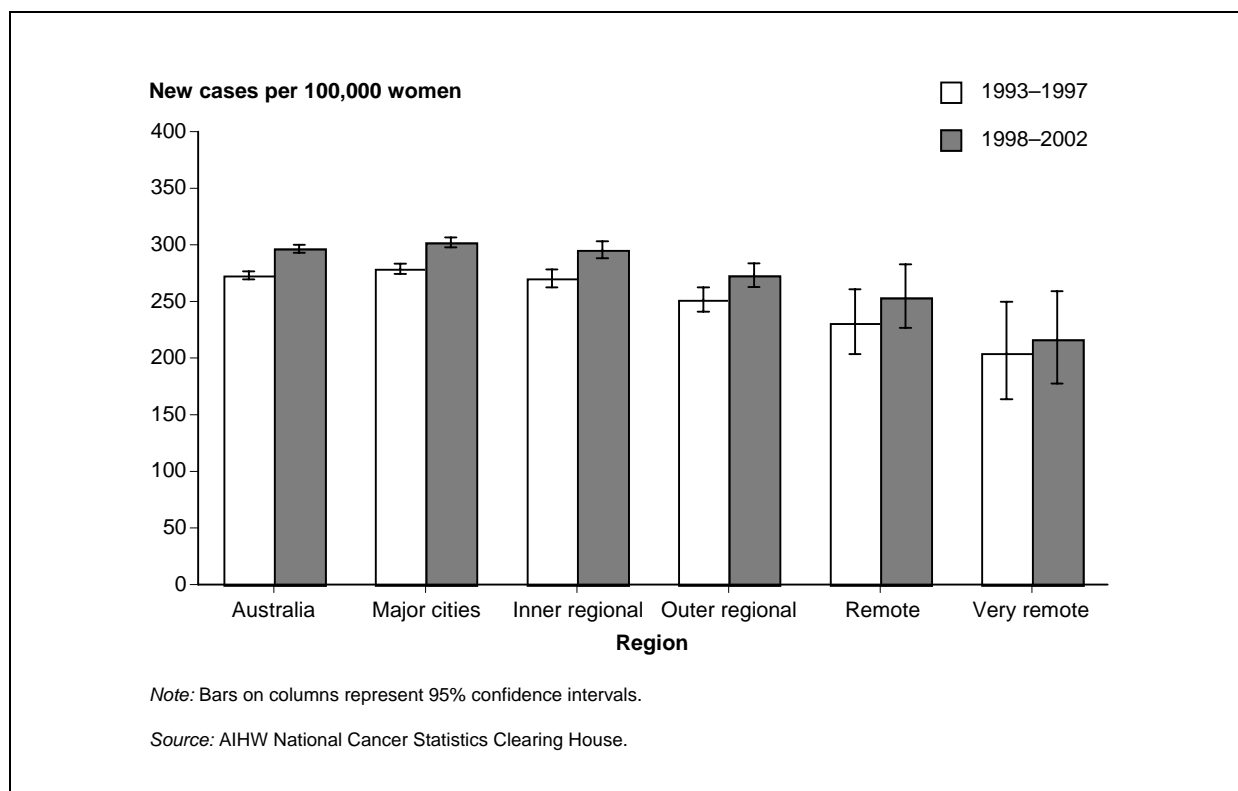
Age	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+
2002 rate	117.3	189.4	253.0	307.4	333.9	361.9	311.2	313.2	293.2	299.1
2001 rate	122.2	179.1	254.5	309.3	352.4	337.5	331.2	306.5	302.8	306.0
1997 rate	109.2	180.5	246.5	279.9	296.7	305.7	314.3	337.7	319.1	298.6

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

- The expectation of breast cancer screening is that breast cancers are being detected earlier. The graph above illustrates this. In 1997 the highest breast cancer incidence rate was in the 75-79 age group (337.7 new cases per 100,000 women). In 2001 the incidence peak shifted towards the younger age group 60-64 years with 352.4 cases per 100,000 women. Similarly, in 2002 the age group with the highest breast cancer incidence rate of 361.9 new cases per 100,000 women was 65-69 years old.

For more information, see: Tables 43 to 48 beginning on page 118. Tables with data other than for the latest reporting period can be found on the AIHW's web site at <www.aihw.gov.au>.

Incidence of breast cancer in women aged 50–69 years, by region, 1993–1997 and 1998–2002



	Australia	Major cities	Inner regional	Outer regional	Remote	Very remote
1998–2002 rate	296.5 [#]	302.1 [#]	295.5 [#]	273.0* [#]	253.5*	216.4*
95% CI	292.9–300.0	297.7–306.5	288.1–303.1	262.8–283.6	226.6–282.8	177.6–259.1
1993–1997 rate	273.0	278.8	270.4	251.5*	230.8*	204.4*
95% CI	269.3–276.6	274.2–283.3	262.6–278.3	241.0–262.4	203.5–260.7	163.7–249.7

* Significantly different from the Australian rate.

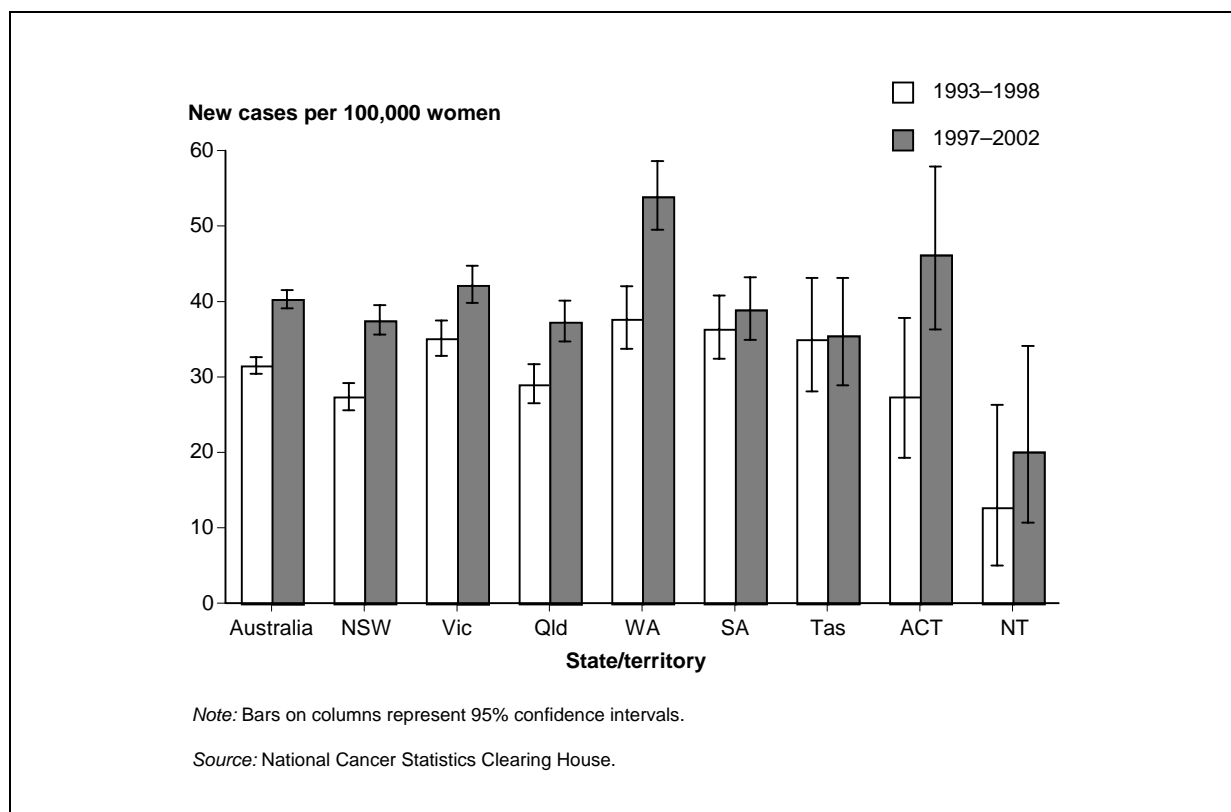
[#] Significantly different from the 1993–1997 rate.

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 1993–1997 and 1998–2002 the age-standardised breast cancer incidence rate was significantly lower in outer regional, remote and very remote areas than the national rate.
- Between 1993–1997 and 1998–2002 there were significant increases in the age-standardised breast cancer incidence rate in major cities, inner regional and outer regional areas.

For more information, see: Tables 43 to 48 beginning on page 118. Tables with data other than for the latest reporting period can be found on the AIHW's web site at <www.aihw.gov.au>.

Incidence of ductal carcinoma in situ in women aged 50–69 years, 1993–1998 and 1997–2002



	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Rate									
1997–2002	40.3	37.5	42.2	37.3	53.9*	38.9	35.5	46.2	20.1*
<i>95% CI</i>	39.1–41.5	35.6–39.5	39.8–44.7	34.6–40.1	49.5–58.7	35.0–43.2	28.9–43.1	36.4–58.0	10.7–34.1
Rate									
1993–1998	31.5	27.4*	35.1*	29.0	37.7*	36.4	35.0	27.4	12.7*
<i>95% CI</i>	30.3–32.6	25.7–29.3	32.8–37.5	26.5–31.7	33.7–42.0	32.3–40.7	28.1–43.1	19.3–37.7	5.0–26.3

* Significantly different from the Australian rate.

Notes

1. Comparisons between time periods should be treated with caution because of overlapping periods.
2. 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 1997 to 2002, the national age-standardised incidence rate of DCIS for women aged 50–69 years was 40.3 per 100,000 women.
- In 1997–2002 the age-standardised DCIS rate in Western Australia (53.9 cases per 100,000 women) was significantly higher, and in the Northern Territory (20.1 cases per 100,000 women) the rate was significantly lower, than the national rate (40.3 per 100,000 women).
- In 1993–1998 the age-standardised DCIS rate in Victoria and Western Australia (35.1 and 37.7 cases per 100,000 women, respectively) was significantly higher and in the Northern Territory (12.7 cases per 100,000 women) and New South Wales (27.4 cases per 100,000 women) significantly lower, than the national rate (31.5 per 100,000 women).

For more information, see: Tables 49 to 50 beginning on page 124. Tables with data other than for the latest reporting period can be found on the AIHW's web site at <www.aihw.gov.au>.

Indicator 8: Mortality

Mortality rate

The mortality rate from breast cancer is calculated per 100,000 estimated resident female population in a 12-month period by 5-year age groups (0–4, 5–9, 10–14, 15–19, 20–24, 25–29, 30–34, 35–39, 40–44, 45–49, 50–54, 55–59, 60–64, 65–69, 70–74, 75–79, 80–84, 85+ years) 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 2,557 women dying from the disease in 1998 and 2,713 women in 2003. However, over this period the rates of death caused by breast cancer have steadily fallen.

In the longer term, mortality rates from breast cancer are an important indicator of the effectiveness of the screening program. A particularly important indication of the effectiveness of a screening program is the change in mortality rates over time in the target age group for screening. There are, however, two difficulties with using these mortality rates as an indicator of screening effectiveness. The first is that changes in mortality over time may reflect factors additional to screening, such as new and more effective treatments. The second is that changes in the mortality rates may not be apparent for a number of years following the commencement of a screening program. Accordingly, this is a measure that needs to be viewed over the long term and interpreted with caution.

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 1989 to 2003, the latest national data available. It also reports 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 A.

The following table shows the breast cancer mortality rate trends between 1994–1998 and 1999–2003. Mortality from breast cancer for women in the target age group 50–69 decreased significantly from 61.8 deaths per 100,000 women in 1994–1998 to 54.0 deaths per 100,000 women in 1999–2003. Similarly, mortality rates also decreased significantly for women in all

age groups from 28.2 deaths per 100,000 women in 1994–1998 to 24.9 deaths per 100,000 women in 1999–2003.

Mortality from breast cancer in women aged 0–85 and over and 50–69 years, 1994–1998 and 1999–2003

	1994–1998	1999–2003
Rate for women aged 50–69 years	61.8	54.0
<i>95% CI</i>	60.1–63.6	52.5–55.5
Rate for women aged 0–85 years and over	28.2	24.9
<i>95% CI</i>	27.8–28.7	24.5–25.3

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.

Source: AIHW National Mortality Database.

The following table shows the breast cancer mortality rates by regions. For women in the target age group, mortality rates in 1999–2003 were highest in outer regional areas with 55.3 deaths per 100,000 women, and lowest in very remote areas, with 47.4 deaths per 100,000 women. The difference was not statistically significant because the relatively small number of deaths in very remote areas have wide confidence intervals.

Mortality from breast cancer in women aged 50–69 years, 1999–2003 by region

	Australia	Major cities	Inner regional	Outer regional	Remote	Very remote
Rate 1999–2003	54.0	55.1	50.8	55.3	49.3	47.4
<i>95% CI</i>	52.5–55.5	53.3–57.0	47.8–53.9	50.8–60.1	37.9–62.7	30.3–70.2

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 ASGC remoteness categories are available from 1997 only; therefore, there is no comparable non-overlapping 5-year period prior to 1999–2003.

Source: AIHW National Mortality Database.

The following table shows the mortality rates by Indigenous status for Queensland, Western Australia, South Australia and Northern Territory combined. In 1999–2003 in the target age group, the age-standardised mortality rate for Indigenous women (39.4 deaths per 100,000 women) was lower than that for non-Indigenous women (52.9 deaths per 100,000 women); however, this difference was not statistically significant. In 1994–1998 there was a statistically significant difference in mortality rates between the Indigenous and non-Indigenous populations (44.8 and 97.1 deaths per 100,000 women, respectively). Across the time periods 1994–1998 and 1999–2003, the national mortality rates decreased significantly from 61.8 to 54.0 deaths per 100,000 women, respectively. Similarly, mortality rates for non-Indigenous women decreased significantly from 97.1 in 1994–1998 to 52.9 deaths per 100,000 women in 1999–2003. For Indigenous women, the mortality rates decreased from 44.8 to 39.4 deaths per 100,000 women over the same time periods; however, these changes were not statistically significant.

Mortality from breast cancer in women aged 50-69 years, 1994-1998 and 1999-2003 by Indigenous status

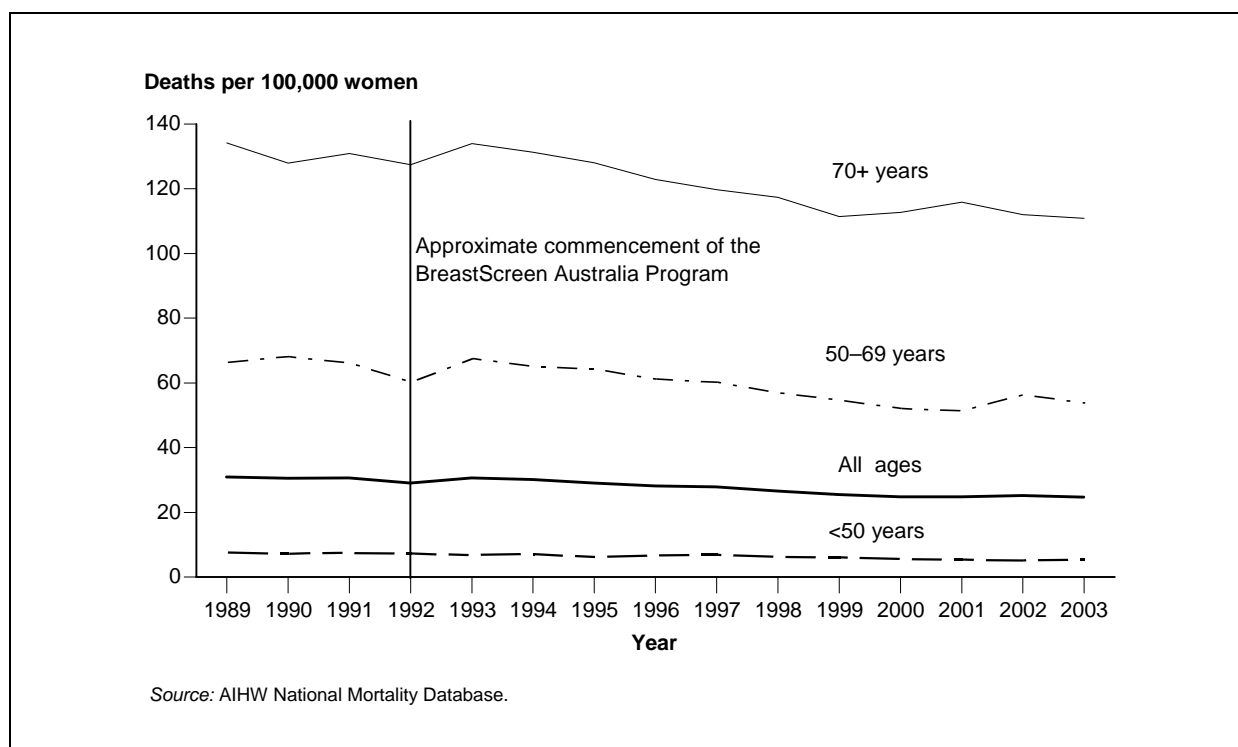
	Australia	Indigenous	Non-Indigenous
Rate 1999-2003	54.0	39.4	52.9
<i>95% CI</i>	52.5-55.5	24.5-59.8	50.5-55.4
Rate 1994-1998	61.8	44.8	97.1
<i>95% CI</i>	60.1-63.6	24.4-75.3	92.5-101.8

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.

Mortality from breast cancer, females, Australia, 1989–2003



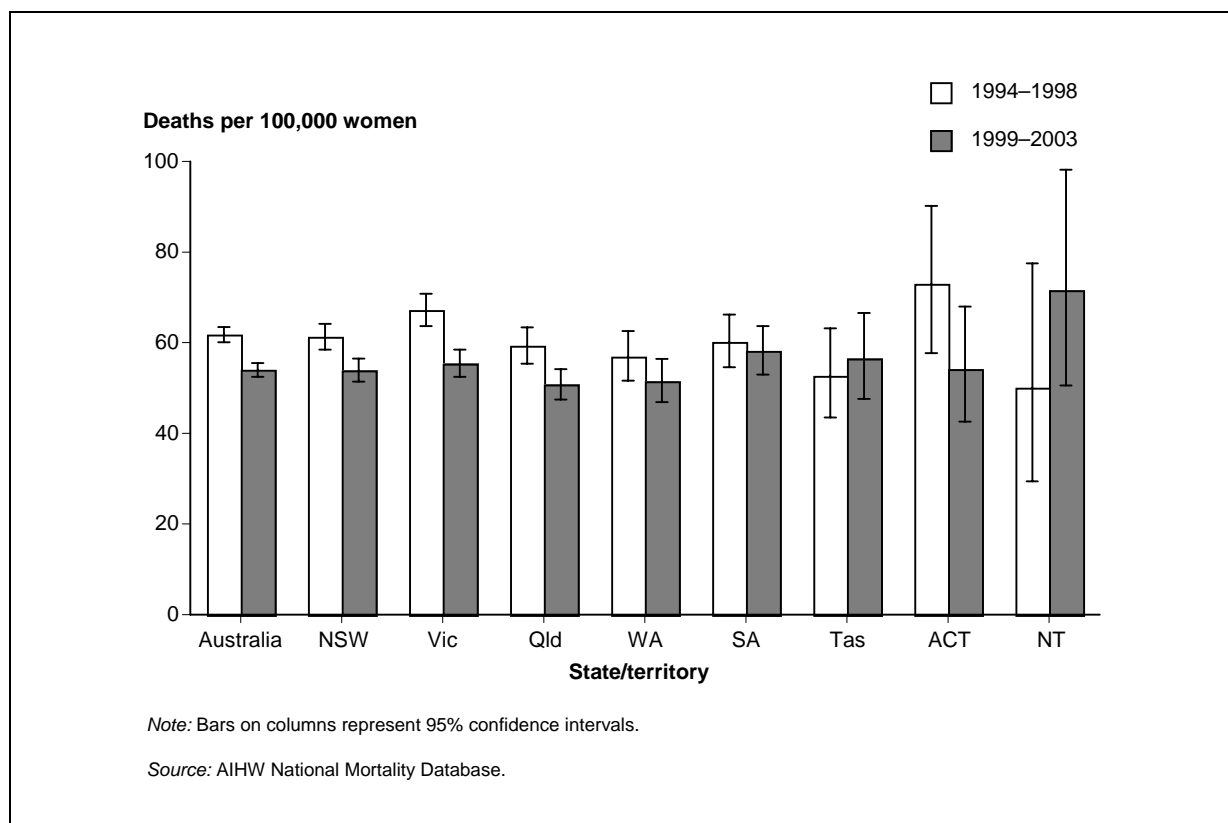
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
All ages	30.8	30.4	30.5	28.9	30.5	30.0	28.9	28.1	27.8	26.5	25.4	24.7	24.7	25.1	24.6
<50	7.9	7.5	7.8	7.6	7.1	7.4	6.5	6.9	7.2	6.6	6.4	5.9	5.7	5.4	5.6
50–69	66.7	68.5	66.5	60.6	67.9	65.5	64.6	61.5	60.6	57.3	55.0	52.5	51.8	56.7	54.1
70+	134.1	127.9	130.9	127.4	133.9	131.3	128.0	122.9	119.7	117.3	111.4	112.7	115.9	112.0	110.8

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 in the target age group has been declining steadily. The mortality rate for these women was 66.7 deaths per 100,000 women in 1989; in 2003 the corresponding figure was 54.1 deaths per 100,000 women. There was a small increase in the mortality rate in 2002, rising to 56.7 deaths per 100,000 women. However, this increase was not statistically significant. A similar pattern of decline in mortality rates can be observed in women aged 70 and over. Mortality rates for women aged less than 50 years remained the lowest and most consistent, staying below 8 deaths per 100,000 women for the period 1989 to 2003.

For more information, see: Tables 51 to 58 beginning on page 125. Tables with data other than for the latest reporting period can be found on the AIHW's web site at <www.aihw.gov.au>.

Mortality from breast cancer in women aged 50–69 years, 1994–1998 and 1999–2003



	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Rate									
1999–2003	54.0*	53.9*	55.4*	50.8*	51.5	58.2	56.5	54.2	71.6
<i>95% CI</i>	52.5–55.5	51.4–56.5	52.4–58.4	47.5–54.2	46.9–56.4	53.0–63.7	47.5–66.6	42.6–68.0	50.6–98.2
Rate									
1994–1998	61.8	61.3	67.2	59.3	56.9	60.2	52.7	73.0	50.1
<i>95% CI</i>	60.1–63.6	58.5–64.3	63.7–70.8	55.4–63.4	51.6–62.6	54.7–66.2	43.5–63.1	57.6–90.2	29.4–77.5

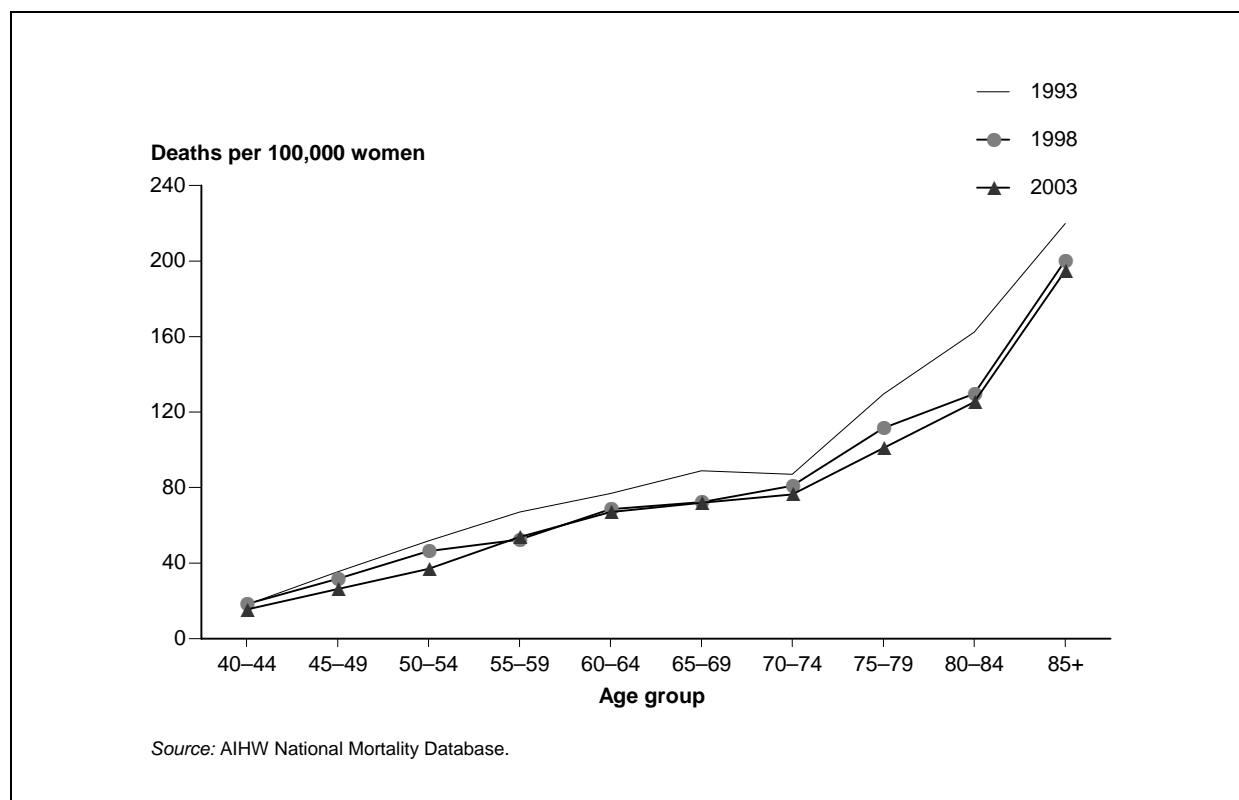
* Statistically different from the 1994–1998 rate.

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 1994–1998 and 1999–2003 from 61.8 to 54.0 deaths per 100,000 women. New South Wales, Victoria and Queensland followed a similar trend of decreases in mortality between the two time periods.

For more information, see: Tables 51 to 58 beginning on page 125. Tables with data other than for the latest reporting period can be found on the AIHW's web site at <www.aihw.gov.au>.

Age-specific mortality rates for breast cancer, females, Australia, 1993, 1998 and 2003



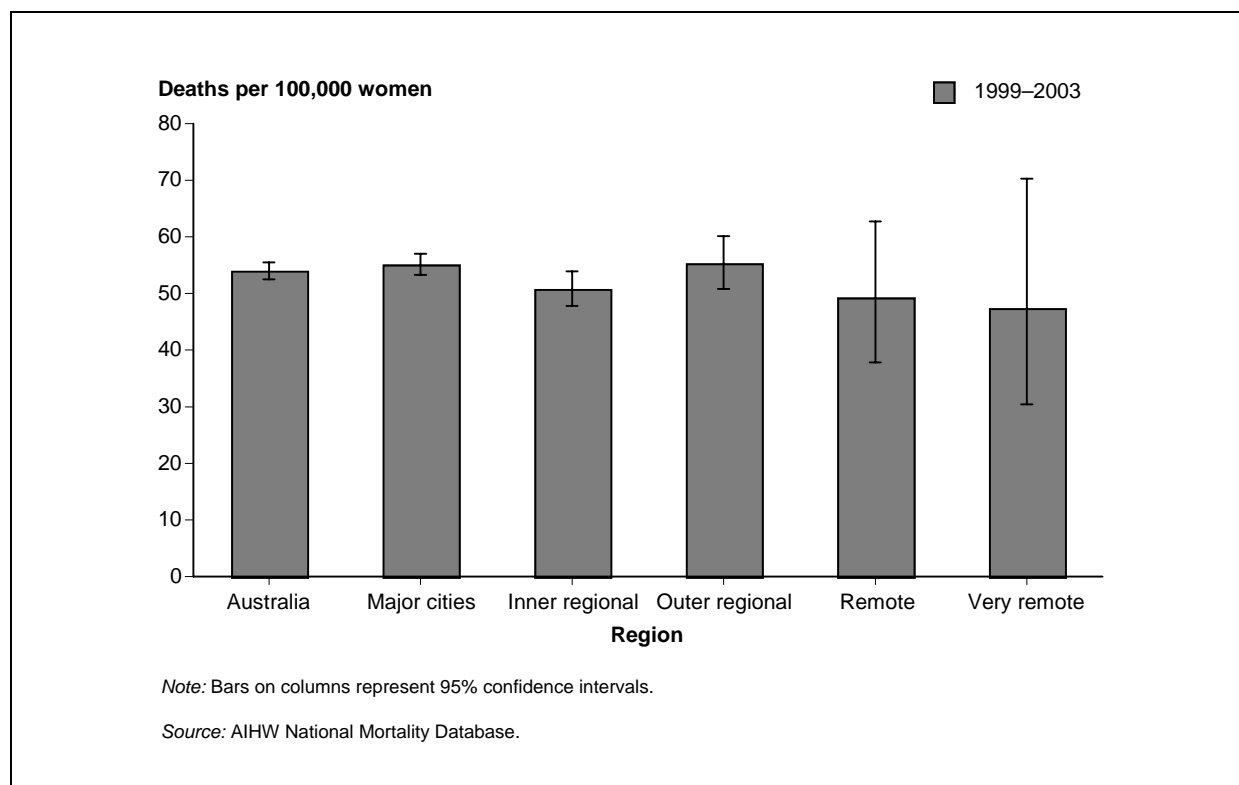
Age	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+
2003	15.3	26.2	36.8	53.8	67.1	71.9	76.4	100.9	125.2	194.9
1998	18.2	31.7	46.3	52.4	68.5	72.2	80.9	111.6	129.6	200.3
1993	17.9	35.3	51.8	67.1	76.8	88.9	87.0	129.5	162.4	219.9

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

- In 1993, 1998 and 2003, age-specific mortality rates increased consistently with age. For women aged 40-44 years, the rate was 17.9, 18.2 and 15.3 deaths per 100,000 women, respectively. The rate increased to 219.9, 200.3 and 194.9 deaths per 100,000 women in 1993, 1998 and 2003, respectively, for women aged 85 and over.
- The mean age at death for women dying from breast cancer increased from 65.6 years in 1993 to 67 years in 2003. The median age at death increased from 66 years in 1993 to 67 years in 2003.

For more information, see: Tables 51 to 58 beginning on page 125. Tables with data other than for the latest reporting period can be found on the AIHW's web site at <www.aihw.gov.au>.

Mortality from breast cancer by region, females aged 50–69 years, 1999–2003



	Australia	Major cities	Inner regional	Outer regional	Remote	Very remote
Rate 1999–2003	54.0	55.1	50.8	55.3	49.3	47.4
95% CI	52.5–55.5	53.3–57.0	47.8–53.9	50.8–60.1	37.9–62.7	30.3–70.2

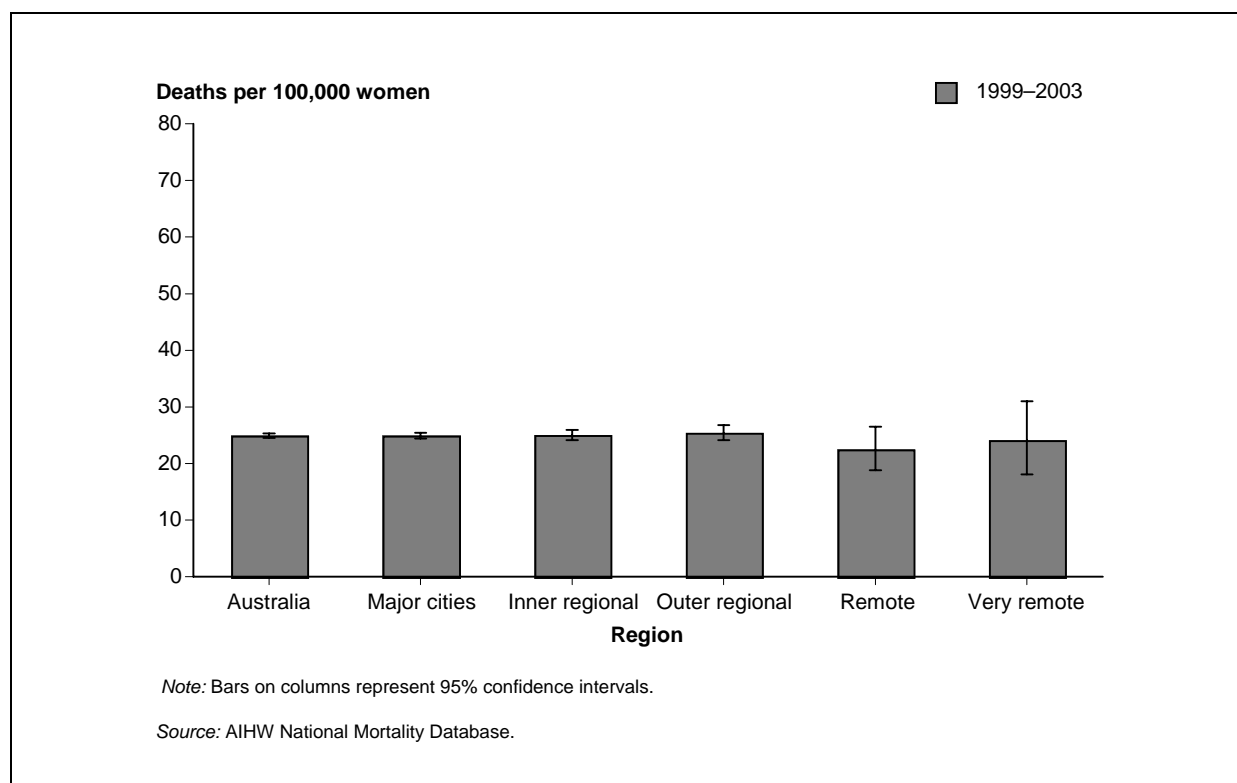
Notes

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 (ASGC) was used to create the above categories (ABS 2001).
3. AIHW Mortality data by ASGC remoteness categories are available from 1997 only; therefore, there is no comparable non-overlapping 5-year period prior to 1999–2003.

- For women in the target age group, mortality rates in 1999–2003 were highest in outer regional areas with 55.3 deaths per 100,000 women, and lowest in very remote areas, with 47.4 deaths per 100,000 women. The difference was not statistically significant because the relatively small number of deaths in very remote areas have wide confidence intervals.

For more information, see: Tables 51 to 58 beginning on page 125. Tables with data other than for the latest reporting period can be found on the AIHW's web site at <www.aihw.gov.au>.

Mortality from breast cancer by region, females all ages, 1999–2003



	Australia	Major cities	Inner regional	Outer regional	Remote	Very remote
Rate 1999–2003	24.9	24.9	25.0	25.4	22.5	24.1
95% CI	24.5–25.3	24.3–25.4	24.1–25.9	24.0–26.8	18.9–26.5	18.1–31.0

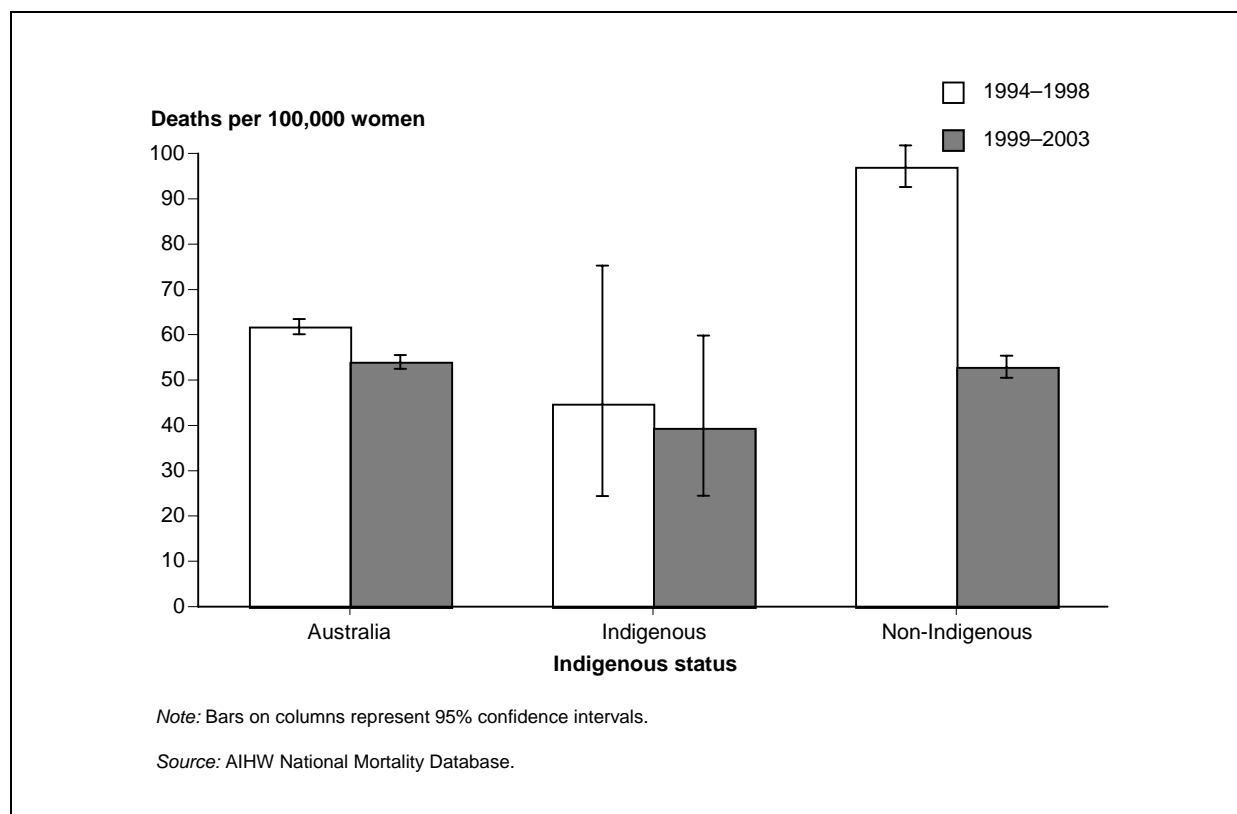
Notes

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 (ASGC) was used to create the above categories (ABS 2001).
3. AIHW Mortality data by ASGC remoteness categories are available from 1997 only; therefore, there is no comparable non-overlapping 5-year period prior to 1999–2003.

- For women of all ages, mortality rates in 1999–2003 were highest in outer regional areas with 25.4 deaths per 100,000 women, and lowest in remote areas, with 22.5 deaths per 100,000 women. The difference between the rates was not statistically significant because the relatively small number of deaths in remote areas have wide confidence intervals.

For more information, see: Tables 51 to 58 beginning on page 125. Tables with data other than for the latest reporting period can be found on the AIHW's web site at <www.aihw.gov.au>.

Mortality from breast cancer by Indigenous status, females aged 50–69 years, 1994–1998 and 1999–2003



	Australia	Indigenous	Non-Indigenous
Rate 1999–2003	54.0*	39.4	52.9*
95% CI	52.5–55.5	24.5–59.8	50.5–55.4
Rate 1994–1998	61.8	44.8	97.1
95% CI	60.1–63.6	24.4–75.3	92.5–101.8

* Statistically different from the 1994–1998 rate.

Notes

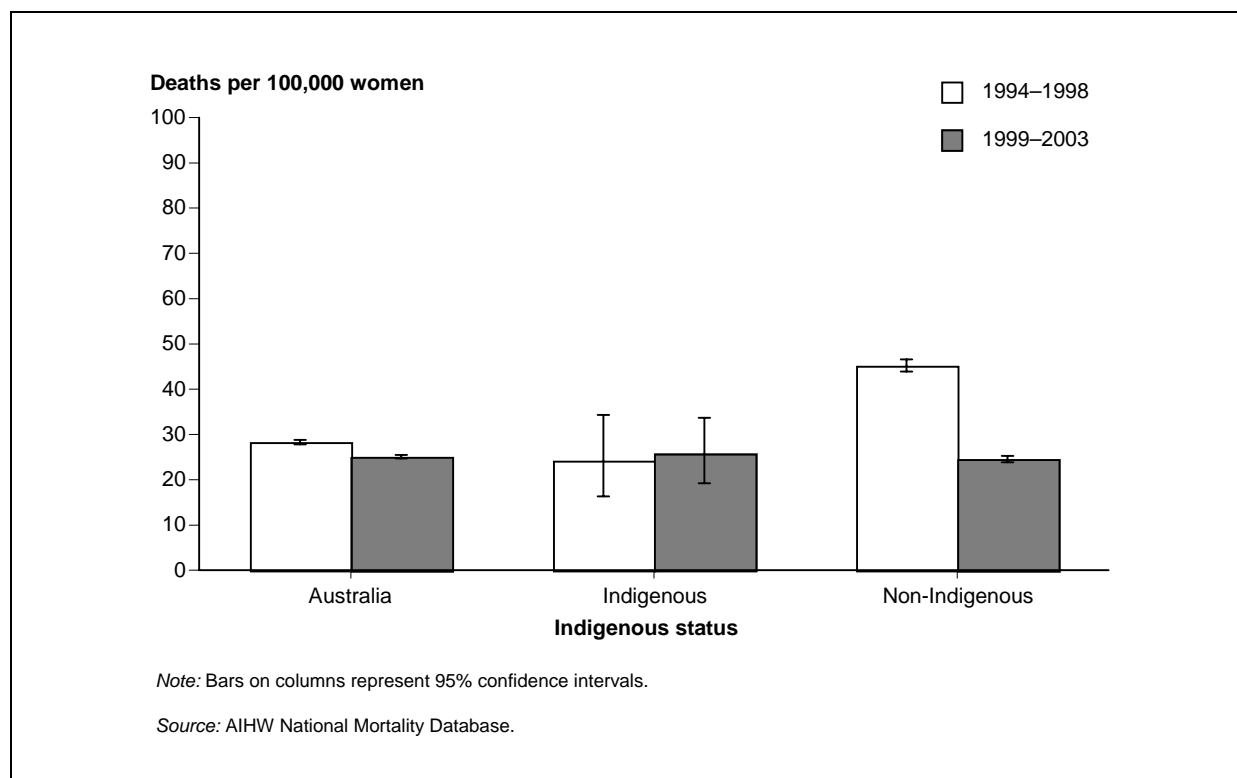
1. Only Queensland, Western Australia, South Australia and the Northern Territory had Indigenous death registration data considered to be of a publishable standard at the time this report was prepared. Therefore, data from these jurisdictions only are included in the analysis by Indigenous status. Queensland data are included from 1998 onwards.
2. 'Australia' includes all states and territories.
3. Women whose Indigenous status was recorded as 'not-stated' are included in the analysis for all women but excluded from the analysis by Indigenous status.
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.

- In 1999–2003 in the target age group, the age-standardised mortality rate for Indigenous women in Queensland, Western Australia, South Australia and Northern Territory combined (39.4 deaths per 100,000 women) was lower than that for non-Indigenous women (52.9 deaths per 100,000 women); however, this difference was not statistically significant. In 1994–1998 there was a statistically significant difference in mortality rates between the Indigenous and non-Indigenous populations (44.8 and 97.1 deaths per 100,000 women, respectively).
- Across the time periods from 1994–1998 to 1999–2003 the national mortality rates decreased from 61.8 to 54.0 deaths per 100,000 women, respectively. Similarly, mortality

rates for non-Indigenous women decreased from 97.1 in 1994–1998 to 52.9 deaths per 100,000 women in 1999–2003. For Indigenous women, the mortality rates decreased from 44.8 to 39.4 deaths per 100,000 women over the same time periods; however, these changes were not statistically significant.

For more information, see: Tables 51 to 58 beginning on page 125. Tables with data other than for the latest reporting period can be found on the AIHW's web site at <www.aihw.gov.au>.

Mortality from breast cancer by Indigenous status, females all ages, 1994–1998 and 1999–2003



	Australia	Indigenous	Non-Indigenous
Rate 1999–2003	25.1*	25.8	24.6*
95% CI	24.6–25.5	19.2–33.6	23.9–25.3
Rate 1994–1998	28.3	24.2	45.2
95% CI	27.8–28.8	16.3–34.3	43.8–46.5

* Statistically different from the 1994–1998 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.
3. Women whose Indigenous status was recorded as 'not-stated' are included in the analysis for all women but excluded from the analysis by Indigenous status.
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.

- In 1999–2003 the age-standardised mortality rate for Indigenous women of all ages in Queensland, Western Australia, South Australia and Northern Territory combined (25.8 deaths per 100,000 women) was not very different from the rate for non-Indigenous women (24.6 deaths per 100,000 women) and from the national rate (25.1 deaths per 100,000 women).
- Across the years from 1994–1998 to 1999–2003, the national mortality rate decreased from 28.3 to 25.1 deaths per 100,000 women respectively. Similarly, for non-Indigenous women, the mortality rate decreased from 45.2 to 24.6 deaths per 100,000 women over the same time periods. The mortality rates for Indigenous women increased from 24.2 in

1994-1998 to 25.8 deaths per 100,000 women in 1999-2003, although this change was not statistically significant.

For more information, see: Tables 51 to 58 beginning on page 125. Tables with data other than for the latest reporting period can be found on the AIHW's web site at <www.aihw.gov.au>.

Tables

- Appendix B includes the list of tables published on the Internet. The tables can be found on the AIHW's web site at <www.aihw.gov.au>.

Indicator 1: Participation

Table 1: Number of women participating in BreastScreen Australia by age, states and territories, 2002–2003

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
40–44	41,138	10,692	34,725	7,176	6,159	2,820	561	622	103,893
45–49	70,029	19,491	50,525	15,816	12,219	5,439	2,330	1,347	177,196
50–54	102,019	89,304	68,792	34,153	33,255	8,923	6,011	2,318	344,775
55–59	98,818	81,438	63,429	29,675	29,309	8,918	5,337	1,843	318,767
60–64	79,286	64,213	48,494	23,309	22,873	6,947	3,646	1,109	249,877
65–69	65,730	53,611	38,670	18,800	19,184	5,790	2,619	606	205,010
70–74	51,050	42,483	29,597	5,177	6,719	3,254	570	331	139,181
75–79	33,242	11,075	8,415	2,069	3,268	692	243	136	59,140
80–84	11,789	1,614	1,813	551	763	180	76	65	16,851
85+	2,655	280	443	94	101	26	9	8	3,616
Ages 40+	555,756	374,201	344,903	136,820	133,850	42,989	21,402	8,385	1,618,306
Ages 50–69	345,853	288,566	219,385	105,937	104,621	30,578	17,613	5,876	1,118,429

Note: Period covers 1 January 2002 to 31 December 2003.

Source: AIHW analysis of BreastScreen Australia data.

Table 2: Percentage of women participating in BreastScreen Australia, states and territories, 2002–2003

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
(Per cent)									
40–44	16.1	5.7	23.9	9.4	10.4	15.1	4.3	8.3	13.6
45–49	30.1	11.3	38.2	22.2	22.2	31.2	19.0	20.5	25.3
50–54	47.2	55.4	55.3	52.4	62.9	54.3	51.3	40.8	52.7
55–59	53.2	59.8	59.7	57.0	64.0	62.2	59.0	48.7	57.6
60–64	54.9	60.6	60.7	58.2	65.3	60.8	61.1	46.1	58.7
65–69	52.6	58.2	60.3	56.9	62.6	60.5	57.5	43.4	56.9
70–74	43.7	49.8	51.5	18.0	22.9	37.0	15.3	33.8	42.0
75–79	31.7	14.3	16.8	8.4	11.7	8.9	7.1	20.7	19.9
80–84	15.3	2.9	4.9	3.1	3.7	3.1	3.2	15.0	7.8
85+	3.9	0.6	1.4	0.6	0.5	0.5	0.5	2.4	1.9
Ages 40+									
Crude rate	36.4	33.2	41.6	32.1	35.7	37.2	31.5	28.2	36.0
ASR(A)	37.0	34.0	42.1	32.5	36.9	37.9	31.3	29.5	36.7
95% CI	36.9–37.1	33.9–34.1	42.0–42.3	32.4–32.7	36.7–37.1	37.6–38.3	30.8–31.7	28.8–30.2	36.7–36.8
Ages 50–69									
Crude rate	51.5	58.2	58.6	55.6	63.7	59.1	56.3	44.3	56.1
ASR(A)	51.4	58.2	58.5	55.7	63.6	58.9	56.6	44.5	56.1
95% CI	51.2–51.6	57.9–58.4	58.3–58.8	55.3–56.0	63.3–64.0	58.3–59.6	55.7–57.4	43.3–45.7	56.0–56.2

Notes

1. Period covers 1 January 2002 to 31 December 2003.
2. Rates are the number of women screened as a percentage of the eligible female population and age-standardised to the Australian population at 30 June 2001.
3. BreastScreen Australia services are not provided in some remote areas of the Northern Territory. This may affect the Northern Territory's participation rate.

Source: AIHW analysis of BreastScreen Australia data.

Table 3: Participation in BreastScreen Australia by age and region, 2002–2003

Age group	Number/ rate	Major cities	Inner regional	Outer regional	Remote	Very remote	Australia
40–44	Number	63,725	22,531	14,094	2,413	1,130	103,893
	Rate	12.6	13.9	18.0	19.7	19.0	13.6
45–49	Number	109,441	39,634	22,897	3,644	1,580	177,196
	Rate	23.6	26.6	32.3	34.3	31.6	25.3
50–54	Number	224,913	75,307	37,237	5,300	2,018	344,775
	Rate	51.6	54.4	56.4	55.7	45.4	52.7
55–59	Number	202,530	74,126	35,631	4,767	1,712	318,767
	Rate	56.1	60.3	61.5	61.4	51.8	57.6
60–64	Number	153,805	61,811	29,483	3,582	1,195	249,877
	Rate	56.8	62.3	62.7	62.0	50.1	58.7
65–69	Number	126,337	51,250	23,932	2,691	800	205,010
	Rate	54.8	60.0	61.9	60.7	47.3	56.9
70–74	Number	85,550	36,256	15,291	1,600	484	139,181
	Rate	39.8	46.7	45.3	44.5	37.3	42.0
75–79	Number	37,801	14,336	6,210	616	177	59,140
	Rate	19.2	21.3	21.9	22.5	18.8	19.9
80–84	Number	10,858	4,001	1,758	187	48	16,851
	Rate	7.5	8.3	8.7	9.6	7.6	7.8
85+	Number	2,292	838	425	42	18	3,616
	Rate	1.8	2.0	2.3	2.5	3.3	1.9
Ages 40+	Number	1,017,255	380,090	186,959	24,841	9,161	1,618,306
	Crude rate	34.4	38.3	40.7	41.2	35.0	36.0
	ASR(A)	35.3	38.6	40.9	41.2	34.8	36.7
	95% CI	35.2–35.4	38.5–38.8	40.7–41.1	40.7–41.7	34.1–35.6	36.7–36.8
Ages 50–69	Number	707,586	262,495	126,284	16,340	5,725	1,118,429
	Crude rate	54.5	58.9	60.2	59.4	48.4	56.1
	ASR(A)	54.5	58.7	60.1	59.4	48.4	56.1
	95% CI	54.4–54.6	58.5–58.9	59.8–60.4	58.5–60.4	47.2–49.7	56.0–56.2

Notes

1. Period covers 1 January 2002 to 31 December 2003.
2. Rates are the number of women screened as a percentage of the eligible female population and age-standardised to the Australian population at 30 June 2001.
3. The Australian Standard Geographical Classification (ASGC) was used to create the above categories (ABS 2001).
4. Totals may not add up due to rounding.

Source: AIHW analysis of BreastScreen Australia data.

Table 4: Participation in BreastScreen Australia by age and socioeconomic status, 2002–2003

Age group	Number/ rate	1st quintile	2nd quintile	3rd quintile	4th quintile	5th quintile	Australia
40–44	Number	20,182	19,234	22,926	21,947	19,604	103,893
	Rate	12.8	12.2	14.9	14.8	13.3	13.6
45–49	Number	36,047	32,195	38,225	37,150	33,579	177,196
	Rate	24.0	22.3	27.7	27.5	25.4	25.3
50–54	Number	76,533	69,107	69,777	67,207	62,151	344,775
	Rate	53.3	51.7	55.0	53.4	50.1	52.7
55–59	Number	68,777	60,943	65,469	64,322	59,256	318,767
	Rate	57.9	55.1	60.3	58.4	56.4	57.6
60–64	Number	49,035	46,283	51,379	53,366	49,814	249,877
	Rate	58.7	56.9	59.5	59.6	58.9	58.7
65–69	Number	38,068	37,271	42,342	45,597	41,733	205,010
	Rate	56.5	55.7	57.3	57.9	56.7	56.9
70–74	Number	26,535	25,741	29,593	30,116	27,195	139,181
	Rate	42.2	41.9	43.2	42.0	40.6	42.0
75–79	Number	12,898	9,672	12,289	13,093	11,189	59,140
	Rate	21.4	17.4	19.9	21.2	19.5	19.9
80–84	Number	3,926	2,573	3,535	3,742	3,074	16,851
	Rate	8.3	6.2	7.8	8.7	7.7	7.8
85+	Number	834	482	765	852	682	3,616
	Rate	1.8	1.3	1.9	2.4	2.1	1.9
Ages 40+	Number	332,835	303,501	336,300	337,393	308,277	1,618,306
	Crude rate	35.5	34.1	37.3	37.5	35.6	36.0
	ASR(A)	36.6	35.0	38.2	37.8	36.0	36.7
	95% CI	36.4–36.7	34.9–35.1	38.1–38.3	37.7–37.9	35.8–36.1	36.7–36.8
Ages 50–69	Number	232,412	213,604	228,967	230,493	212,953	1,118,429
	Crude rate	56.2	54.4	57.9	57.0	55.0	56.1
	ASR(A)	56.2	54.5	57.8	56.9	54.8	56.1
	95% CI	56.0–56.5	54.2–54.7	57.5–58.0	56.6–57.1	54.6–55.1	56.0–56.2

Notes

1. Period covers 1 January 2002 to 31 December 2003.
2. Rates are the number of women screened as a percentage of the eligible female population and age-standardised to the Australian population at 30 June 2001.
3. The first quintile corresponds to the highest level of socioeconomic status and the fifth to the lowest.
4. Totals may not add up due to rounding.

Source: AIHW analysis of BreastScreen Australia data.

Table 5: Participation in BreastScreen Australia by age and Indigenous status, 2002–2003

Age group	Number/rate	Indigenous	Non-Indigenous	Australia
40–44	Number	1,576	100,934	103,893
	Rate	11.1	13.4	13.6
45–49	Number	2,196	172,753	177,196
	Rate	20.3	25.1	25.3
50–54	Number	2,763	335,347	344,775
	Rate	32.1	52.0	52.7
55–59	Number	2,185	311,077	318,767
	Rate	37.6	56.8	57.6
60–64	Number	1,634	243,744	249,877
	Rate	37.8	57.9	58.7
65–69	Number	1,133	199,814	205,010
	Rate	38.4	55.9	56.9
70–74	Number	637	135,169	139,181
	Rate	31.0	41.1	42.0
75+	Number	230	77,734	79,607
	Rate	9.3	11.0	11.3
Ages 40+	Number	12,354	1,576,572	1,618,306
	Crude rate	24.1	35.5	36.0
	ASR(A)	25.1	36.1	36.6
	95% CI	24.7–25.6	36.0–36.1	36.6–36.7
Ages 50–69	Number	7,715	1,089,982	1,118,429
	Crude rate	35.6	55.3	56.1
	ASR(A)	35.9	55.2	56.1
	95% CI	35.1–36.7	55.1–55.3	56.0–56.2

Notes

1. Rates are the number of women screened as a percentage of the eligible female population and age-standardised to the Australian population at 30 June 2001.
2. Period covers 1 January 2002 to 31 December 2003.
3. Women in the 'unknown' category are included in the column for 'Australia', but are not included in the other columns.

Source: AIHW analysis of BreastScreen Australia data.

Table 6: Participation in BreastScreen Australia by age and main language spoken at home, 2002–2003

Age group	Number/rate	English-speaking	Non-English-speaking	Australia
40–44	Number	90,881	12,610	103,893
	Rate	14.3	9.6	13.6
45–49	Number	153,822	22,705	177,196
	Rate	26.4	19.4	25.3
50–54	Number	301,377	42,212	344,775
	Rate	54.8	40.5	52.7
55–59	Number	279,215	38,676	318,767
	Rate	59.7	45.4	57.6
60–64	Number	214,283	35,001	249,877
	Rate	61.6	45.2	58.7
65–69	Number	173,834	30,761	205,010
	Rate	59.4	45.4	56.9
70–74	Number	122,445	16,495	139,181
	Rate	44.0	31.0	42.0
75–79	Number	53,224	5,824	59,140
	Rate	21.2	12.9	19.9
80–84	Number	15,599	1,218	16,851
	Rate	8.1	5.0	7.8
85+	Number	3,431	181	3,616
	Rate	2.0	0.9	1.9
Ages 40+	Number	1,408,111	205,683	1,618,306
	Crude rate	37.4	28.3	36.0
	ASR(A)	38.3	28.0	36.7
	95% CI	38.3–38.4	27.9–28.1	36.7–36.8
	Ages 50–69	Number	968,709	146,650	1,118,429
Crude rate	58.4	43.8	56.1	
ASR(A)	58.4	43.7	56.1	
95% CI	58.3–58.5	43.4–43.9	56.0–56.2	

Notes

1. Period covers 1 January 2002 to 31 December 2003.
2. Rates are the number of women screened as a percentage of the eligible female population and age-standardised to the Australian population at 30 June 2001.
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.

Source: AIHW analysis of BreastScreen Australia data.

Indicator 2: Detection rate for small invasive cancers

Table 7: Numbers of women screened and cases of small-diameter (≤ 15 mm) invasive cancers detected in these women, first screening round, by age, states and territories, 2003

Age group	Number	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
40–44	Screened	12,126	4,123	10,426	2,613	2,010	898	9	194	32,399
	Cases	15	2	10	1	2	1	0	1	32
45–49	Screened	9,140	4,714	5,996	2,862	1,930	788	34	198	25,662
	Cases	15	10	14	7	4	0	1	0	51
50–54	Screened	11,028	12,195	6,220	4,704	3,979	671	507	284	39,588
	Cases	29	29	16	18	11	4	1	0	108
55–59	Screened	5,904	1,988	3,049	1,111	629	368	153	122	13,324
	Cases	21	11	9	5	4	3	1	2	56
60–64	Screened	3,640	1,087	2,040	680	294	208	96	44	8,089
	Cases	11	8	4	3	2	2	0	1	31
65–69	Screened	2,580	753	1,384	396	192	117	47	34	5,503
	Cases	17	2	5	5	1	0	0	0	30
70–74	Screened	1,304	406	655	154	69	41	22	6	2,657
	Cases	9	3	6	0	2	0	1	0	21
75–79	Screened	817	261	437	112	69	28	14	9	1,747
	Cases	7	7	3	3	1	0	0	0	21
80–84	Screened	355	123	149	57	46	12	6	0	748
	Cases	5	1	0	3	0	1	0	0	10
85+	Screened	99	41	40	13	9	4	2	0	208
	Cases	1	0	0	0	0	0	0	0	1
Ages 40+	Screened	46,993	25,691	30,396	12,702	9,227	3,135	890	891	129,925
	Cases	130	73	67	45	27	11	4	4	361
Ages 50–69	Screened	23,152	16,023	12,693	6,891	5,094	1,364	803	484	66,504
	Cases	78	50	34	31	18	9	2	3	225

Source: AIHW analysis of BreastScreen Australia data.

Table 8: Age-specific rates of small-diameter (≤ 15 mm) invasive cancers detected in women screened, first screening round, states and territories, 2003

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
40–44	12.4	4.9	9.6	3.8	10.0	11.1	0.0	51.5	9.9
45–49	16.4	21.2	23.3	24.5	20.7	0.0	294.1	0.0	19.9
50–54	26.3	23.8	25.7	38.3	27.6	59.6	19.7	0.0	27.3
55–59	35.6	55.3	29.5	45.0	63.6	81.5	65.4	163.9	42.0
60–64	30.2	73.6	19.6	44.1	68.0	96.2	0.0	227.3	38.3
65–69	65.9	26.6	36.1	126.3	52.1	0.0	0.0	0.0	54.5
70–74	69.0	73.9	91.6	0.0	289.9	0.0	454.5	0.0	79.0
75–79	85.7	268.2	68.6	267.9	144.9	0.0	0.0	0.0	120.2
80–84	140.8	81.3	0.0	526.3	0.0	833.3	0.0	..	133.7
85+	101.0	0.0	0.0	0.0	0.0	0.0	0.0	..	48.1
Ages 40+									
Crude rate	27.7	28.4	22.0	35.4	29.3	35.1	44.9	44.9	27.8
ASR(A)	37.8	47.2	31.8	55.2	65.9	49.3	91.1	66.1	40.8
95% CI	30.6–45.9	33.7–63.3	22.9–42.4	35.7–79.4	28.5–115.8	22.5–91.6	11.4–261.9	8.8–188.8	35.7–46.2
Ages 50–69									
Crude rate	33.7	31.2	26.8	45.0	35.3	66.0	24.9	62.0	33.8
ASR(A)	37.3	43.5	27.4	58.4	50.6	61.8	23.3	92.7	38.8
95% CI	28.9–47.1	28.6–62.0	18.3–39.1	33.9–90.5	21.2–92.7	26.5–120.1	0.8–90.2	12.2–287.6	33.2–45.1

.. Not applicable—no women in this age group were screened in 2003.

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.

Source: AIHW analysis of BreastScreen Australia data.

Table 9: Numbers of women screened and cases of small-diameter (≤ 15 mm) invasive cancers detected in these women, subsequent screening rounds, by age, states and territories, 2003

Age group	Number	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
40–44	Screened	8,387	855	7,730	1,514	1,267	600	273	146	20,772
	Cases	4	1	8	0	2	0	2	0	17
45–49	Screened	25,935	4,396	20,421	6,043	4,190	1,909	1,095	520	64,509
	Cases	37	4	26	9	7	2	0	1	86
50–54	Screened	40,877	32,664	28,992	13,766	12,734	3,896	2,311	899	136,139
	Cases	60	56	48	25	27	5	4	2	227
55–59	Screened	46,601	40,883	30,347	15,673	14,843	4,177	2,521	892	155,937
	Cases	121	92	84	42	41	16	6	3	405
60–64	Screened	38,545	31,374	23,235	12,397	11,903	3,439	1,848	608	123,349
	Cases	159	87	69	40	48	12	2	1	418
65–69	Screened	32,591	26,370	19,135	10,091	9,791	3,033	1,316	323	102,650
	Cases	117	85	69	30	44	9	5	0	359
70–74	Screened	25,346	20,678	14,837	2,623	3,301	1,795	267	169	69,016
	Cases	97	69	44	9	16	12	0	0	247
75–79	Screened	16,992	5,118	4,303	975	1,532	341	91	64	29,416
	Cases	84	26	19	2	8	2	1	0	142
80–84	Screened	6,242	660	920	241	345	85	36	32	8,561
	Cases	24	3	6	0	4	0	0	0	37
85+	Screened	1,404	93	222	33	48	13	3	3	1,819
	Cases	8	1	0	0	1	0	0	0	10
Ages 40+	Screened	242,920	163,091	150,142	63,356	59,954	19,288	9,761	3,656	712,168
	Cases	711	424	373	157	198	58	20	7	1,948
Ages 50–69	Screened	158,614	131,291	101,709	51,927	49,271	14,545	7,996	2,722	518,075
	Cases	457	320	270	137	160	42	17	6	1,409

Source: AIHW analysis of BreastScreen Australia data.

Table 10: Age-specific rates of small-diameter (≤ 15 mm) invasive cancers detected in women screened, subsequent screening rounds, states and territories, 2003

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
40–44	4.8	11.7	10.3	0.0	15.8	0.0	73.3	0.0	8.2
45–49	14.3	9.1	12.7	14.9	16.7	10.5	0.0	19.2	13.3
50–54	14.7	17.1	16.6	18.2	21.2	12.8	17.3	22.2	16.7
55–59	26.0	22.5	27.7	26.8	27.6	38.3	23.8	33.6	26.0
60–64	41.3	27.7	29.7	32.3	40.3	34.9	10.8	16.4	33.9
65–69	35.9	32.2	36.1	29.7	44.9	29.7	38.0	0.0	35.0
70–74	38.3	33.4	29.7	34.3	48.5	66.9	0.0	0.0	35.8
75–79	49.4	50.8	44.2	20.5	52.2	58.7	109.9	0.0	48.3
80–84	38.4	45.5	65.2	0.0	115.9	0.0	0.0	0.0	43.2
85+	57.0	107.5	0.0	0.0	208.3	0.0	0.0	0.0	55.0
Ages 40+									
Crude rate	29.3	26.0	24.8	24.8	33.0	30.1	20.5	19.1	27.4
ASR(A)	25.8	22.9	24.3	22.6	31.6	27.1	23.6	15.5	25.0
95% CI	23.8–27.8	20.0–26.1	21.9–26.9	19.0–26.7	27.0–36.8	20.5–35.3	12.5–39.2	6.2–32.1	23.8–26.1
Ages 50–69									
Crude rate	28.8	24.4	26.5	26.4	32.5	28.9	21.3	22.0	27.2
ASR(A)	27.6	23.8	26.1	25.8	31.7	27.6	21.6	19.6	26.5
95% CI	25.1–30.3	21.2–26.6	23.1–29.5	21.6–30.5	26.9–37.1	19.8–37.3	12.5–34.7	7.1–42.8	25.1–27.9

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.

Source: AIHW analysis of BreastScreen Australia data.

Table 11: Numbers of women screened and cases of invasive cancer detected in these women, first screening round, by age, states and territories, 2003

Age group	Number	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
40–44	Screened	12,126	4,123	10,426	2,613	2,010	898	9	194	32,399
	Cases	29	7	24	1	3	1	0	1	66
45–49	Screened	9,140	4,714	5,996	2,862	1,930	788	34	198	25,662
	Cases	29	21	24	14	9	2	1	0	100
50–54	Screened	11,028	12,195	6,220	4,704	3,979	671	507	284	39,588
	Cases	55	55	25	35	24	5	2	0	201
55–59	Screened	5,904	1,988	3,049	1,111	629	368	153	122	13,324
	Cases	37	15	20	9	6	4	1	2	94
60–64	Screened	3,640	1,087	2,040	680	294	208	96	44	8,089
	Cases	21	11	13	7	3	3	1	1	60
65–69	Screened	2,580	753	1,384	396	192	117	47	34	5,503
	Cases	23	6	10	8	3	0	1	0	51
70–74	Screened	1,304	406	655	154	69	41	22	6	2,657
	Cases	18	6	10	0	2	0	1	0	37
75–79	Screened	817	261	437	112	69	28	14	9	1,747
	Cases	9	10	8	5	1	1	0	0	34
80–84	Screened	355	123	149	57	46	12	6	0	748
	Cases	12	3	0	5	0	1	0	0	21
85+	Screened	99	41	40	13	9	4	2	0	208
	Cases	2	1	0	0	0	0	0	0	3
Ages 40+	Screened	46,993	25,691	30,396	12,702	9,227	3,135	890	891	129,925
	Cases	235	135	134	84	51	17	7	4	667
Ages 50–69	Screened	23,152	16,023	12,693	6,891	5,094	1,364	803	484	66,504
	Cases	136	87	68	59	36	12	5	3	406

Source: AIHW analysis of BreastScreen Australia data.

Table 12: Age-specific rates of invasive breast cancers per 10,000 women screened, first screening round, states and territories, 2003

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
40–44	23.9	17.0	23.0	3.8	14.9	11.1	0.0	51.5	20.4
45–49	31.7	44.5	40.0	48.9	46.6	25.4	294.1	0.0	39.0
50–54	49.9	45.1	40.2	74.4	60.3	74.5	39.4	0.0	50.8
55–59	62.7	75.5	65.6	81.0	95.4	108.7	65.4	163.9	70.5
60–64	57.7	101.2	63.7	102.9	102.0	144.2	104.2	227.3	74.2
65–69	89.1	79.7	72.3	202.0	156.3	0.0	212.8	0.0	92.7
70–74	138.0	147.8	152.7	0.0	289.9	0.0	454.5	0.0	139.3
75–79	110.2	383.1	183.1	446.4	144.9	357.1	0.0	0.0	194.6
80–84	338.0	243.9	0.0	877.2	0.0	833.3	0.0	..	280.7
85+	202.0	243.9	0.0	0.0	0.0	0.0	0.0	..	144.2
Ages 40+									
Crude rate	50.0	52.5	44.1	66.1	55.3	54.2	78.7	44.9	51.3
ASR(A)	65.9	81.8	64.2	99.4	100.8	78.5	138.4	66.1	73.1
95% CI	56.5–76.3	63.6–102.5	51.4–78.7	73.1–130.2	56.7–155.1	41.2–132.1	38.2–316.2	8.8–188.8	66.3–80.2
Ages 50–69									
Crude rate	58.7	54.3	53.6	85.6	70.7	88.0	62.3	62.0	61.0
ASR(A)	62.6	72.1	58.2	107.3	97.3	84.3	94.2	92.7	69.2
95% CI	51.8–74.8	52.2–95.5	44.4–74.8	73.8–147.9	53.4–153.6	41.4–150.5	17.0–246.7	12.2–287.6	61.6–77.4

.. Not applicable—no women in this age group were screened in 2003.

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.

Source: AIHW analysis of BreastScreen Australia data.

Table 13: Numbers of women screened and cases of invasive cancer detected in these women, subsequent screening rounds, by age, states and territories, 2003

Age group	Number	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
40–44	Screened	8,387	855	7,730	1,514	1,267	600	273	146	20,772
	Cases	5	2	13	0	3	0	3	0	26
45–49	Screened	25,935	4,396	20,421	6,043	4,190	1,909	1,095	520	64,509
	Cases	56	5	41	13	12	2	1	1	131
50–54	Screened	40,877	32,664	28,992	13,766	12,734	3,896	2,311	899	136,139
	Cases	117	86	72	44	43	12	6	4	384
55–59	Screened	46,601	40,883	30,347	15,673	14,843	4,177	2,521	892	155,937
	Cases	197	144	117	75	66	23	8	5	635
60–64	Screened	38,545	31,374	23,235	12,397	11,903	3,439	1,848	608	123,349
	Cases	220	136	109	67	62	19	5	3	621
65–69	Screened	32,591	26,370	19,135	10,091	9,791	3,033	1,316	323	102,650
	Cases	181	129	101	54	67	18	11	0	561
70–74	Screened	25,346	20,678	14,837	2,623	3,301	1,795	267	169	69,016
	Cases	134	91	70	20	23	14	0	0	352
75–79	Screened	16,992	5,118	4,303	975	1,532	341	91	64	29,416
	Cases	114	36	26	6	9	2	1	0	194
80–84	Screened	6,242	660	920	241	345	85	36	32	8,561
	Cases	47	11	14	1	6	0	0	0	79
85+	Screened	1,404	93	222	33	48	13	3	3	1,819
	Cases	10	1	0	0	1	0	1	0	13
Ages 40+	Screened	242,920	163,091	150,142	63,356	59,954	19,288	9,761	3,656	712,168
	Cases	1,081	641	563	280	292	90	36	13	2,996
Ages 50–69	Screened	158,614	131,291	101,709	51,927	49,271	14,545	7,996	2,722	518,075
	Cases	715	495	399	240	238	72	30	12	2,201

Source: AIHW analysis of BreastScreen Australia data.

Table 14: Age-specific rates of invasive breast cancers per 10,000 women screened, subsequent screening rounds, by age, states and territories, 2003

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
40–44	6.0	23.4	16.8	0.0	23.7	0.0	109.9	0.0	12.5
45–49	21.6	11.4	20.1	21.5	28.6	10.5	9.1	19.2	20.3
50–54	28.6	26.3	24.8	32.0	33.8	30.8	26.0	44.5	28.2
55–59	42.3	35.2	38.6	47.9	44.5	55.1	31.7	56.1	40.7
60–64	57.1	43.3	46.9	54.0	52.1	55.2	27.1	49.3	50.3
65–69	55.5	48.9	52.8	53.5	68.4	59.3	83.6	0.0	54.7
70–74	52.9	44.0	47.2	76.2	69.7	78.0	0.0	0.0	51.0
75–79	67.1	70.3	60.4	61.5	58.7	58.7	109.9	0.0	66.0
80–84	75.3	166.7	152.2	41.5	173.9	0.0	0.0	0.0	92.3
85+	71.2	107.5	0.0	0.0	208.3	0.0	3,333.3	0.0	71.5
Ages 40+									
Crude rate	44.5	39.3	37.5	44.2	48.7	46.7	36.9	35.6	42.1
ASR(A)	39.7	35.4	36.9	41.5	46.7	41.7	45.6	29.1	38.5
95% CI	37.2–42.2	31.5–39.4	33.8–40.1	36.4–47.1	41.0–52.9	33.4–51.5	27.5–68.7	15.4–49.9	37.1–40.0
Ages 50–69									
Crude rate	45.1	37.7	39.2	46.2	48.3	49.5	37.5	44.1	42.5
ASR(A)	43.7	36.8	38.7	45.2	47.3	48.0	38.9	39.9	41.5
95% CI	40.5–47.0	33.6–40.2	35.0–42.7	39.6–51.3	41.5–53.8	37.5–60.6	26.1–55.7	20.5–69.9	39.8–43.3

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.

Source: AIHW analysis of BreastScreen Australia data.

Indicator 3a: Interval cancer rate

Table 15: Numbers and age-specific rates of interval cancers in women screened during 1999, 2000 and 2001, first screening round, 0–12 months, states and territories

Age group	Number/ rate	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
40–49	Number	57	26	26	7	15	3	3	2	139
	Rate	7.7	8.5	5.4	4.4	10.6	6.9	8.6	12.5	7.2
50–59	Number	43	40	35	8	12	5	1	4	148
	Rate	7.7	8.2	9.4	6.1	6.8	14.7	3.7	24.7	8.2
60–69	Number	15	7	15	3	2	3	1	0	46
	Rate	6.6	4.9	9.2	8.1	5.8	24.8	16.3	0.0	7.4
70+	Number	13	4	6	0	0	0	0	0	23
	Rate	10.8	7.2	8.4	0.0	0.0	0.0	0.0	0.0	8.0
Ages 40+	Number	128	77	82	18	29	11	5	6	356
	Crude rate	7.8	7.7	7.5	5.2	7.9	11.6	7.1	16.5	7.7
	ASR(A)	7.8	7.2	8.4	5.5	6.5	14.1	7.8	12.2	7.7
	95% CI	6.3–9.4	5.5–9.2	6.5–10.6	2.8–9.4	3.8–10.0	6.1–26.7	0.4–22.3	4.2–27.1	6.8–8.7
Ages 50–69	Number	58	47	50	11	14	8	2	4	194
	Crude rate	7.3	7.4	9.3	6.5	6.7	17.4	6.1	20.7	8.0
	ASR(A)	7.2	6.8	9.3	6.9	6.4	18.9	9.0	14.4	7.8
	95% CI	5.4–9.4	4.8–9.3	6.9–12.4	3.1–13.0	2.9–11.7	7.5–38.4	0.1–35.3	3.9–36.9	6.7–9.1

Note: 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.

Source: AIHW analysis of BreastScreen Australia data.

Table 16: Numbers and age-specific rates of interval cancers in women screened during 1999, 2000 and 2001, first screening round, 13–24 months, states and territories

Age group	Number/ rate	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
40–49	Number	65	31	56	11	21	1	2	1	188
	Rate	9.3	10.1	11.9	7.7	15.8	2.4	5.9	6.8	10.2
50–59	Number	74	59	59	17	25	2	4	3	243
	Rate	13.9	12.0	16.3	14.2	14.7	6.2	15.1	18.8	13.9
60–69	Number	17	18	32	4	2	1	1	0	75
	Rate	7.9	12.7	19.9	12.2	6.1	9.1	16.9	0.0	12.5
70+	Number	13	6	6	2	0	1	1	0	29
	Rate	11.7	10.8	8.5	16.1	0.0	20.9	42.0	0.0	10.6
Ages 40+	Number	169	114	153	34	48	5	8	4	535
	Crude rate	10.8	11.5	14.4	11.0	13.6	5.5	11.7	11.5	12.0
	ASR(A)	11.0	11.7	15.4	12.5	10.7	8.0	17.1	8.8	12.3
	95% CI	9.2–13.0	9.4–14.3	12.8–18.4	7.8–18.6	7.4–14.8	1.9–20.1	4.7–38.1	2.3–22.7	11.2–13.5
Ages 50–69	Number	91	77	91	21	27	3	5	3	318
	Crude rate	12.2	12.2	17.4	13.8	13.3	6.9	15.5	15.8	13.5
	ASR(A)	11.4	12.3	17.8	13.4	11.1	7.4	15.9	11.0	13.3
	95% CI	9.1–14.1	9.5–15.7	14.2–22.0	7.7–21.2	6.7–17.0	1.1–22.6	3.3–40.6	2.3–32.2	11.8–14.9

Note: 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.

Source: AIHW analysis of BreastScreen Australia data.

Table 17: Numbers and age-specific rates of interval cancers in women screened during 1999, 2000 and 2001, first screening round, 0–24 months, states and territories

Age group	Number/ Rate	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
40–49	Number	122	57	82	18	36	4	5	3	327
	Rate	8.5	9.3	8.6	5.9	13.1	4.7	7.3	9.7	8.7
50–59	Number	117	99	94	25	37	7	5	7	391
	Rate	10.7	10.1	12.8	10.0	10.7	10.5	9.4	21.8	11.0
60–69	Number	32	25	47	7	4	4	2	0	121
	Rate	7.2	8.8	14.5	10.0	6.0	17.3	16.6	0.0	9.9
70+	Number	26	10	12	2	0	1	1	0	52
	Rate	11.3	9.0	8.4	7.3	0.0	9.6	21.0	0.0	9.3
Ages 40+	Number	297	191	235	52	77	16	13	10	891
	Crude rate	9.3	9.6	10.9	8.0	10.7	8.6	9.4	14.1	9.8
	ASR(A)	9.3	9.4	11.9	8.8	8.6	11.1	12.4	10.5	10.0
	95% CI	8.2–10.6	8.0–11.0	10.2–13.7	6.1–12.2	6.4–11.1	5.7–18.9	4.7–24.0	4.9–19.6	9.2–10.8
Ages 50–69	Number	149	124	141	32	41	11	7	7	512
	Crude rate	9.7	9.8	13.3	10.0	9.9	12.3	10.7	18.3	10.7
	ASR(A)	9.2	9.6	13.5	10.0	8.7	13.4	12.4	12.7	10.5
	95% CI	7.8–10.9	7.8–11.6	11.3–16.0	6.5–14.6	5.8–12.4	6.2–24.6	3.7–27.7	5.1–26.2	9.6–11.5

Note: 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.

Source: AIHW analysis of BreastScreen Australia data.

Table 18: Numbers and age-specific rates of interval cancers in women screened during 1999, 2000 and 2001, subsequent screening rounds, 0–12 months, states and territories

Age group	Number/ rate	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
40–49	Number	82	11	68	19	13	3	5	2	203
	Rate	7.7	6.0	9.3	9.2	7.8	3.3	10.0	11.4	8.1
50–59	Number	188	163	130	47	66	14	23	0	631
	Rate	7.7	8.5	9.3	6.4	9.2	6.3	16.6	0.0	8.3
60–69	Number	155	107	78	39	34	10	10	1	434
	Rate	7.7	7.1	7.9	6.9	5.7	5.7	12.4	5.6	7.3
70+	Number	85	42	54	9	9	2	2	0	203
	Rate	6.4	5.8	9.6	9.8	6.6	6.5	17.9	0.0	7.0
Ages 40+	Number	510	323	330	114	122	29	40	3	1,471
	Crude rate	7.4	7.4	9.0	7.1	7.5	5.6	14.3	3.5	7.8
	ASR(A)	7.5	7.2	9.0	7.6	7.6	5.5	14.2	3.9	7.8
	95% CI	6.9–8.2	6.3–8.3	8.0–10.0	6.1–9.2	6.2–9.2	3.6–8.1	9.7–20.0	0.8–11.5	7.4–8.2
Ages 50–69	Number	343	270	208	86	100	24	33	1	1,065
	Crude rate	7.7	7.9	8.7	6.6	7.6	6.0	15.0	1.6	7.8
	ASR(A)	7.7	7.9	8.7	6.6	7.7	6.1	14.8	2.3	7.9
	95% CI	6.9–8.6	7.0–8.9	7.6–10.0	5.3–8.2	6.3–9.4	3.9–9.0	10.2–20.9	0.1–13.0	7.4–8.4

Note: 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.

Source: AIHW analysis of BreastScreen Australia data.

Table 19: Numbers and age-specific rates of interval cancers in women screened during 1999, 2000 and 2001, subsequent screening rounds, 13–24 months, states and territories

Age group	Number/ rate	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
40–49	Number	101	24	87	18	15	14	3	2	264
	Rate	10.5	13.1	12.5	11.2	10.5	16.6	6.4	12.5	11.5
50–59	Number	289	239	204	78	91	22	16	7	946
	Rate	13.1	12.4	15.1	12.5	13.6	10.0	12.1	16.1	13.2
60–69	Number	213	211	143	64	77	8	7	3	726
	Rate	11.9	14.0	14.6	13.8	13.8	4.8	8.9	17.0	13.1
70+	Number	141	66	79	7	11	2	1	3	310
	Rate	12.0	9.1	14.2	9.8	8.1	5.7	9.0	54.3	11.4
Ages 40+	Number	744	540	513	167	194	46	27	15	2,246
	Crude rate	12.1	12.4	14.3	12.7	12.9	9.1	10.0	18.1	12.7
	ASR(A)	12.1	12.6	14.3	12.3	12.3	9.4	9.6	20.3	12.6
	95% CI	11.2–13.0	11.2–14.0	13.1–15.6	10.3–14.4	10.5–14.3	6.8–12.6	6.0–14.4	10.7–34.5	12.1–13.1
Ages 50–69	Number	502	450	347	142	168	30	23	10	1,672
	Crude rate	12.6	13.1	14.9	13.1	13.7	7.7	10.9	16.3	13.1
	ASR(A)	12.6	13.1	14.9	13.1	13.7	7.8	10.8	16.5	13.1
	95% CI	11.5–13.8	11.9–14.4	13.4–16.5	11.0–15.4	11.7–15.9	5.3–11.2	6.8–16.2	7.6–30.8	12.5–13.8

Note: 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.

Source: AIHW analysis of BreastScreen Australia data.

Table 20: Numbers and age-specific rates of interval cancers in women screened during 1999, 2000 and 2001, subsequent screening rounds, 0–24 months, states and territories

Age group	Number/ Rate	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
40–49	Number	183	35	155	37	28	17	8	4	467
	Rate	9.0	9.6	10.9	10.1	9.0	9.7	8.2	11.9	9.7
50–59	Number	477	402	334	125	157	36	39	7	1,577
	Rate	10.2	10.4	12.1	9.2	11.3	8.2	14.4	8.0	10.6
60–69	Number	368	318	221	103	111	18	17	4	1,160
	Rate	9.7	10.6	11.3	10.0	9.6	5.3	10.7	11.3	10.1
70+	Number	226	108	133	16	20	4	3	3	513
	Rate	9.0	7.4	11.9	9.8	7.4	6.1	13.4	26.6	9.1
Ages 40+	Number	1,254	863	843	281	316	75	67	18	3,717
	Crude rate	9.7	9.9	11.6	9.6	10.1	7.3	12.2	10.7	10.1
	ASR(A)	9.7	9.9	11.6	9.7	9.9	7.4	12.0	12.0	10.1
	95% CI	9.1–10.3	9.1–10.8	10.8–12.4	8.5–11.0	8.7–11.1	5.8–9.3	9.0–15.5	6.8–19.4	9.8–10.5
Ages 50–69	Number	845	720	555	228	268	54	56	11	2,737
	Crude rate	10.0	10.5	11.8	9.5	10.5	6.9	13.0	8.9	10.4
	ASR(A)	10.0	10.5	11.8	9.5	10.6	6.9	12.8	9.3	10.4
	95% CI	9.4–10.7	9.7–11.3	10.8–12.8	8.3–10.9	9.4–12.0	5.2–9.1	9.7–16.7	4.5–17.0	10.0–10.8

Note: 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.

Source: AIHW analysis of BreastScreen Australia data.

Indicator 3b: Program sensitivity

Table 21: Program sensitivity rates for women screened during 1999, 2000 and 2001, first screening round, 0–12 months, states and territories

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
(Per cent)									
40–49	74.1	79.5	84.3	86.8	70.0	70.0	70.0	66.7	78.3
50–59	87.5	86.1	85.8	89.6	89.0	66.7	93.8	60.0	86.6
60–69	91.2	94.8	91.5	88.9	96.2	84.2	88.9	100.0	92.2
70+	91.0	96.4	95.1	100.0	100.0	100.0	100.0	100.0	94.8
Ages 40+									
Crude rate	85.4	88.3	88.5	90.4	87.4	78.8	87.2	66.7	87.2
ASR(A)	86.2	88.4	88.2	90.1	88.4	76.4	88.3	77.5	87.5
95% CI	79.9–92.7	81.2–96.1	81.4–95.5	76.1–100.0	76.4–100.0	54.1–100.0	60.8–100.0	22.8–100.0	84.0–91.1
Ages 50–69									
Crude rate	88.7	88.9	88.2	89.4	91.3	76.5	92.0	63.6	88.5
ASR(A)	89.0	89.7	88.1	89.3	92.0	74.0	91.7	76.6	88.9
95% CI	80.9–97.7	80.7–99.5	79.4–97.6	71.0–100.0	77.4–100.0	47.2–100.0	57.9–100.0	7.1–100.0	84.4–93.6

Note: 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.

Source: AIHW analysis of BreastScreen Australia data.

Table 22: Program sensitivity rates for women screened during 1999, 2000 and 2001, first screening round, 0–24 months, states and territories

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
(Per cent)									
40–49	57.2	63.9	65.9	80.7	49.3	66.7	77.8	57.1	62.1
50–59	71.9	71.5	71.2	80.2	72.4	64.7	78.9	50.0	72.0
60–69	82.9	83.7	78.8	85.7	92.6	81.0	88.9	100.0	82.8
70+	83.5	91.4	92.1	93.9	100.0	88.9	80.0	100.0	89.3
Ages 40+									
Crude rate	71.6	75.3	74.9	83.3	72.4	74.6	81.0	56.5	74.2
ASR(A)	73.4	75.8	74.8	83.6	76.6	72.6	81.6	71.6	75.1
95% CI	68.0–79.0	69.6–82.3	69.0–81.0	70.4–98.3	65.9–88.6	52.2–98.2	56.1–100.0	17.9–100.0	72.1–78.2
Ages 50–69									
Crude rate	75.3	75.2	74.3	81.6	78.2	73.7	82.1	53.3	75.6
ASR(A)	76.5	76.5	74.4	82.5	80.8	71.5	83.1	70.8	76.5
95% CI	69.4–84.1	68.8–84.9	67.0–82.4	65.4–100.0	67.7–95.5	46.6–100.0	52.0–100.0	1.6–100.0	72.6–80.5

Note: 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.

Source: AIHW analysis of BreastScreen Australia data.

Table 23: Program sensitivity rates for women screened during 1999, 2000 and 2001, subsequent screening rounds, 0–12 months, states and territories

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
(Per cent)									
40–49	65.7	78.8	70.6	62.7	77.2	86.4	70.6	66.7	69.9
50–59	81.2	79.6	80.1	86.0	81.3	85.3	74.2	100.0	81.1
60–69	85.8	88.1	87.9	89.0	90.1	88.6	82.1	91.7	87.6
70+	89.8	91.5	87.6	89.3	91.9	94.3	86.7	100.0	89.9
Ages 40+									
Crude rate	83.9	85.6	83.2	86.2	85.9	87.9	77.4	92.1	84.5
ASR(A)	80.3	83.3	81.2	82.4	84.2	87.6	77.2	90.8	81.7
95% CI	76.9–83.9	77.4–89.3	77.1–85.5	75.5–89.7	77.3–91.4	75.2–100.0	63.8–92.4	62.9–100.0	79.7–83.7
Ages 50–69									
Crude rate	83.6	84.1	84.0	87.5	85.6	86.9	77.2	96.4	84.4
ASR(A)	83.1	83.1	83.3	87.2	84.9	86.7	77.5	96.5	83.8
95% CI	79.2–87.2	78.7–87.7	78.4–88.5	80.3–94.6	78.2–92.1	73.6–100.0	63.8–93.3	63.6–100.0	81.6–86.0

Note: 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.

Source: AIHW analysis of BreastScreen Australia data.

Table 24: Program sensitivity rates for women screened during 1999, 2000 and 2001, subsequent screening rounds, 0–24 months, states and territories

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
(Per cent)									
40–49	46.2	53.9	55.8	64.0	61.1	56.8	80.0	50.0	53.3
50–59	63.0	61.2	65.0	78.7	64.6	73.5	80.5	72.0	65.2
60–69	71.8	71.4	74.9	83.1	73.6	85.9	86.8	75.0	74.0
70+	76.8	80.8	76.5	91.5	83.6	89.7	92.9	57.1	78.8
Ages 40+									
Crude rate	67.9	69.0	69.4	81.0	70.1	77.7	83.5	67.9	70.2
ASR(A)	63.7	65.0	67.3	78.5	68.7	75.5	83.7	66.4	66.9
95% CI	61.0–66.4	60.8–69.3	63.9–70.8	71.8–85.6	63.2–74.6	65.7–86.2	69.0–100.0	46.7–91.5	65.3–68.5
Ages 50–69									
Crude rate	67.5	66.5	69.8	81.0	68.9	79.2	83.0	73.2	69.6
ASR(A)	66.7	65.4	69.1	80.6	68.3	78.6	83.1	73.2	68.9
95% CI	63.6–69.9	62.0–69.0	65.1–73.4	74.2–87.4	62.9–74.1	67.3–91.4	68.4–100.0	49.4–100.0	67.1–70.7

Note: 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.

Source: AIHW analysis of BreastScreen Australia data.

Indicator 4: Ductal carcinoma in situ

Table 25: Number of women screened and cases of DCIS detected in these women by age, first screening round, states and territories, 2003

Age group	Number	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
40–49	Screened	21,266	8,837	16,422	5,475	3,940	1,686	43	392	58,061
	Cases	14	12	12	7	3	1	0	0	49
50–59	Screened	16,931	14,183	9,269	5,815	4,608	1,039	660	406	52,911
	Cases	19	28	15	11	2	1	0	0	76
60–69	Screened	6,220	1,840	3,424	1,076	486	325	143	78	13,592
	Cases	11	6	3	5	0	1	0	0	26
70+	Screened	2,575	831	1,281	336	193	85	44	15	5,360
	Cases	8	1	2	1	0	0	0	0	12
Ages 40+	Screened	46,992	25,691	30,396	12,702	9,227	3,135	890	891	129,924
	Cases	52	47	32	24	5	3	0	0	163
Ages 50–69	Screened	23,151	16,023	12,693	6,891	5,094	1,364	803	484	66,503
	Cases	30	34	18	16	2	2	0	0	102

Source: AIHW analysis of BreastScreen Australia data.

Table 26: Age-specific rate of DCIS detected in women screened, first screening round, states and territories, 2003

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
40–49	6.6	13.6	7.3	12.8	7.6	5.9	0.0	0.0	8.4
50–59	11.2	19.7	16.2	18.9	4.3	9.6	0.0	0.0	14.4
60–69	17.7	32.6	8.8	46.5	0.0	30.8	0.0	0.0	19.1
70+	31.1	12.0	15.6	29.8	0.0	0.0	0.0	0.0	22.4
Ages 40+									
Crude rate	11.1	18.3	10.5	18.9	5.4	9.6	0.0	0.0	12.5
ASR(A)	14.5	21.1	12.2	26.6	3.3	13.5	0.0	0.0	15.5
95% CI	10.4–19.6	13.2–30.9	7.6–18.2	13.8–44.1	1.0–7.8	0.6–44.9	0.0	0.0	12.7–18.6
Ages 50–69									
Crude rate	13.0	21.2	14.2	23.2	3.9	14.7	0.0	0.0	15.3
ASR(A)	13.9	25.1	13.1	30.4	2.5	18.4	0.0	0.0	16.3
95% CI	9.1–20.2	14.4–38.9	7.5–21.0	14.5–53.5	0.3–9.2	1.0–70.0	0.0	0.0	12.9–20.3

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.

Source: AIHW analysis of BreastScreen Australia data.

Table 27: Number of women screened and cases of DCIS detected in these women by age, subsequent screening rounds, states and territories, 2003

Age group	Number	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
40–49	Screened	34,322	5,251	28,151	7,557	5,457	2,509	1,368	666	85,281
	Cases	21	2	10	5	2	3	1	1	45
50–59	Screened	87,479	73,547	59,339	29,439	27,577	8,073	4,832	1,791	292,077
	Cases	65	70	56	42	22	13	6	1	275
60–69	Screened	71,136	57,744	42,370	22,488	21,694	6,472	3,164	931	225,999
	Cases	68	53	43	42	23	8	6	0	243
70+	Screened	49,984	26,549	20,282	3,872	5,226	2,234	397	268	108,812
	Cases	69	38	25	12	8	4	1	0	157
Ages 40+	Screened	242,921	163,091	150,142	63,356	59,954	19,288	9,761	3,656	712,169
	Cases	223	163	134	101	55	28	14	2	720
Ages 50–69	Screened	158,615	131,291	101,709	51,927	49,271	14,545	7,996	2,722	518,076
	Cases	133	123	99	84	45	21	12	1	518

Source: AIHW analysis of BreastScreen Australia data.

Table 28: Age-specific rate of DCIS detected in women screened, subsequent screening rounds, states and territories, 2003

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
40–49	6.1	3.8	3.6	6.6	3.7	12.0	7.3	15.0	5.3
50–59	7.4	9.5	9.4	14.3	8.0	16.1	12.4	5.6	9.4
60–69	9.6	9.2	10.1	18.7	10.6	12.4	19.0	0.0	10.8
70+	13.8	14.3	12.3	31.0	15.3	17.9	25.2	0.0	14.4
Ages 40+									
Crude rate	9.2	10.0	8.9	15.9	9.2	14.5	14.3	5.5	10.1
ASR(A)	8.5	8.8	8.8	16.0	8.7	14.4	14.8	5.3	9.6
95% CI	7.4–9.8	7.2–10.6	7.4–10.4	12.8–19.7	6.4–11.5	9.5–21.0	7.1–26.3	0.6–19.3	8.9–10.3
Ages 50–69									
Crude rate	8.4	9.4	9.7	16.2	9.1	14.4	15.0	3.7	10.0
ASR(A)	8.3	9.4	9.7	16.1	9.1	14.5	15.1	3.3	10.0
95% CI	7.0–9.9	7.8–11.2	7.9–11.8	12.8–19.9	6.6–12.1	9.0–22.2	7.8–26.5	0.1–18.2	9.1–10.9

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.

Source: AIHW analysis of BreastScreen Australia data.

Indicator 5: Recall to assessment rate

Table 29: Numbers of women screened and women recalled for assessment by age, mammographic reasons, first screening round, states and territories, 2003

Age group	Number	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
40–44	Screened	12,126	4,123	10,426	2,613	2,010	898	9	194	32,399
	Recalled	1,006	369	940	266	100	74	1	9	2,765
45–49	Screened	9,141	4,714	5,996	2,862	1,930	788	34	198	25,663
	Recalled	853	489	636	357	103	103	5	9	2,555
50–54	Screened	11,028	12,195	6,220	4,704	3,979	671	507	284	39,588
	Recalled	1,017	1,232	675	515	229	90	50	17	3,825
55–59	Screened	5,904	1,988	3,049	1,111	629	368	153	122	13,324
	Recalled	570	219	289	121	29	40	13	13	1,294
60–64	Screened	3,640	1,087	2,040	680	294	208	96	44	8,089
	Recalled	340	100	189	50	21	27	7	2	736
65–69	Screened	2,580	753	1,384	396	192	117	47	34	5,503
	Recalled	219	57	133	34	10	14	4	0	471
70–74	Screened	1,304	406	655	154	69	41	22	6	2,657
	Recalled	116	48	60	13	5	5	1	0	248
75–79	Screened	817	261	437	112	69	28	14	9	1,747
	Recalled	60	40	39	13	6	3	2	0	163
80–84	Screened	355	123	149	57	46	12	6	0	748
	Recalled	35	16	8	8	0	2	0	0	69
85+	Screened	99	41	40	13	9	4	2	0	208
	Recalled	6	4	5	0	1	1	0	0	17
Ages 40+	Screened	46,994	25,691	30,396	12,702	9,227	3,135	890	891	129,926
	Recalled	4,222	2,574	2,974	1,377	504	359	83	50	12,143
Ages 50–69	Screened	23,152	16,023	12,693	6,891	5,094	1,364	803	484	66,504
	Recalled	2,146	1,608	1,286	720	289	171	74	32	6,326

Source: BreastScreen Australia.

Table 30: Age-specific and age-standardised recall to assessment rates, mammographic reasons, first screening round, states and territories, 2003

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
(Per cent)									
40–44	8.3	8.9	9.0	10.2	5.0	8.2	11.1	4.6	8.5
45–49	9.3	10.4	10.6	12.5	5.3	13.1	14.7	4.5	10.0
50–54	9.2	10.1	10.9	10.9	5.8	13.4	9.9	6.0	9.7
55–59	9.7	11.0	9.5	10.9	4.6	10.9	8.5	10.7	9.7
60–64	9.3	9.2	9.3	7.4	7.1	13.0	7.3	4.5	9.1
65–69	8.5	7.6	9.6	8.6	5.2	12.0	8.5	0.0	8.6
70–74	8.9	11.8	9.2	8.4	7.2	12.2	4.5	0.0	9.3
75–79	7.3	15.3	8.9	11.6	8.7	10.7	14.3	0.0	9.3
80–84	9.9	13.0	5.4	14.0	0.0	16.7	0.0	..	9.2
85+	6.1	9.8	12.5	0.0	11.1	25.0	0.0	..	8.2
Ages 40+									
Crude rate	9.0	10.0	9.8	10.8	5.5	11.5	9.3	5.6	9.3
ASR(A)	9.1	10.1	9.8	10.0	5.8	12.1	9.4	4.8	9.3
95% CI	8.7–9.4	9.5–10.7	9.3–10.3	9.3–10.9	4.9–6.7	10.4–14.0	6.5–12.8	3.3–6.6	9.1–9.6
Ages 50–69									
Crude rate	9.3	10.0	10.1	10.4	5.7	12.5	9.2	6.6	9.5
ASR(A)	9.2	9.6	9.9	9.7	5.7	12.4	8.7	5.7	9.3
95% CI	8.8–9.6	9.0–10.4	9.3–10.5	8.8–10.6	4.6–6.8	10.4–14.6	6.3–11.5	3.7–8.4	9.1–9.6

.. Not applicable—no women in this age group were screened in 2003.

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

Source: AIHW analysis of BreastScreen Australia data.

Table 31: Numbers of women screened and women recalled for assessment by age, mammographic reasons, subsequent screening rounds, states and territories, 2003

Age group	Number	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
40–44	Screened	8,387	855	7,730	1,514	1,267	600	273	146	20,772
	Recalled	368	49	386	80	31	38	14	4	970
45–49	Screened	25,934	4,396	20,421	6,043	4,190	1,909	1,095	520	64,508
	Recalled	1,318	254	1,044	277	128	131	51	25	3,228
50–54	Screened	40,877	32,664	28,992	13,766	12,734	3,896	2,311	899	136,139
	Recalled	1,743	1,483	1,326	477	287	245	113	35	5,709
55–59	Screened	46,601	40,883	30,347	15,673	14,843	4,177	2,521	892	155,937
	Recalled	1,951	1,634	1,331	504	341	235	124	34	6,154
60–64	Screened	38,545	31,374	23,235	12,397	11,903	3,439	1,848	608	123,349
	Recalled	1,683	1,286	1,035	357	294	158	88	14	4,915
65–69	Screened	32,591	26,370	19,135	10,091	9,791	3,033	1,316	323	102,650
	Recalled	1,328	1,008	854	322	281	148	71	7	4,019
70–74	Screened	25,346	20,678	14,837	2,623	3,301	1,795	267	169	69,016
	Recalled	991	771	635	92	88	81	10	7	2,675
75–79	Screened	16,992	5,118	4,303	975	1,532	341	91	64	29,416
	Recalled	645	214	226	38	33	7	3	3	1,169
80–84	Screened	6,242	660	920	241	345	85	36	32	8,561
	Recalled	223	30	58	4	16	6	2	1	340
85+	Screened	1,404	93	222	33	48	13	3	3	1,819
	Recalled	45	6	8	0	3	1	1	0	64
Ages 40+	Screened	242,919	163,091	150,142	63,356	59,954	19,288	9,761	3,656	712,167
	Recalled	10,295	6,735	6,903	2,151	1,502	1,050	477	130	29,243
Ages 50–69	Screened	158,614	131,291	101,709	51,927	49,271	14,545	7,996	2,722	518,075
	Recalled	6,705	5,411	4,546	1,660	1,203	786	396	90	20,797

Source: BreastScreen Australia.

Table 32: Age-specific and age-standardised recall to assessment rates, mammographic reasons, subsequent screening rounds, states and territories, 2003

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
(Per cent)									
40–44	4.4	5.7	5.0	5.3	2.4	6.3	5.1	2.7	4.7
45–49	5.1	5.8	5.1	4.6	3.1	6.9	4.7	4.8	5.0
50–54	4.3	4.5	4.6	3.5	2.3	6.3	4.9	3.9	4.2
55–59	4.2	4.0	4.4	3.2	2.3	5.6	4.9	3.8	3.9
60–64	4.4	4.1	4.5	2.9	2.5	4.6	4.8	2.3	4.0
65–69	4.1	3.8	4.5	3.2	2.9	4.9	5.4	2.2	3.9
70–74	3.9	3.7	4.3	3.5	2.7	4.5	3.7	4.1	3.9
75–79	3.8	4.2	5.3	3.9	2.2	2.1	3.3	4.7	4.0
80–84	3.6	4.5	6.3	1.7	4.6	7.1	5.6	3.1	4.0
85+	3.2	6.5	3.6	0.0	6.3	7.7	33.3	0.0	3.5
Ages 40+									
Crude rate	4.2	4.1	4.6	3.4	2.5	5.4	4.9	3.6	4.1
ASR(A)	4.3	4.5	4.6	3.6	2.6	5.5	4.8	3.5	4.2
95% CI	4.2–4.4	4.3–4.6	4.5–4.7	3.4–3.8	2.4–2.7	5.2–5.9	4.4–5.4	2.9–4.2	4.1–4.2
Ages 50–69									
Crude rate	4.2	4.1	4.5	3.2	2.4	5.4	5.0	3.3	4.0
ASR(A)	4.2	4.2	4.5	3.2	2.4	5.5	5.0	3.2	4.0
95% CI	4.1–4.3	4.1–4.3	4.3–4.6	3.1–3.4	2.3–2.6	5.1–5.9	4.5–5.5	2.5–3.9	4.0–4.1

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

Source: AIHW analysis of BreastScreen Australia data.

Table 33: Numbers of women screened and women recalled for assessment by age, other reasons only, first screening round, states and territories, 2003

Age group	Number	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
40–44	Screened	12,126	4,123	10,426	2,613	2,010	898	9	194	32,399
	Recalled	18	102	264	21	0	0	0	0	405
45–49	Screened	9,141	4,714	5,996	2,862	1,930	788	34	198	25,663
	Recalled	13	73	134	16	0	0	0	0	236
50–54	Screened	11,028	12,195	6,220	4,704	3,979	671	507	284	39,588
	Recalled	8	172	86	17	0	0	0	0	283
55–59	Screened	5,904	1,988	3,049	1,111	629	368	153	122	13,324
	Recalled	5	32	38	5	0	0	0	0	80
60–64	Screened	3,640	1,087	2,040	680	294	208	96	44	8,089
	Recalled	4	19	23	0	0	0	0	0	46
65–69	Screened	2,580	753	1,384	396	192	117	47	34	5,503
	Recalled	2	11	12	1	0	0	0	0	26
70–74	Screened	1,304	406	655	154	69	41	22	6	2,657
	Recalled	1	9	6	0	0	0	0	0	16
75–79	Screened	817	261	437	112	69	28	14	9	1,747
	Recalled	0	5	6	0	0	0	0	0	11
80–84	Screened	355	123	149	57	46	12	6	0	748
	Recalled	0	1	1	0	0	0	0	0	2
85+	Screened	99	41	40	13	9	4	2	0	208
	Recalled	0	0	1	1	0	0	0	0	2
Ages 40+	Screened	46,994	25,691	30,396	12,702	9,227	3,135	890	891	129,926
	Recalled	51	424	571	61	0	0	0	0	1,107
Ages 50–69	Screened	23,152	16,023	12,693	6,891	5,094	1,364	803	484	66,504
	Recalled	19	234	159	23	0	0	0	0	435

Source: BreastScreen Australia.

Table 34: Age-specific and age-standardised recall to assessment rates, first screening round, other reasons only, states and territories, 2003

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
(Per cent)									
40–44	0.1	2.5	2.5	0.8	0.0	0.0	0.0	0.0	1.3
45–49	0.1	1.5	2.2	0.6	0.0	0.0	0.0	0.0	0.9
50–54	0.1	1.4	1.4	0.4	0.0	0.0	0.0	0.0	0.7
55–59	0.1	1.6	1.2	0.5	0.0	0.0	0.0	0.0	0.6
60–64	0.1	1.7	1.1	0.0	0.0	0.0	0.0	0.0	0.6
65–69	0.1	1.5	0.9	0.3	0.0	0.0	0.0	0.0	0.5
70–74	0.1	2.2	0.9	0.0	0.0	0.0	0.0	0.0	0.6
75–79	0.0	1.9	1.4	0.0	0.0	0.0	0.0	0.0	0.6
80–84	0.0	0.8	0.7	0.0	0.0	0.0	0.0	..	0.3
85+	0.0	0.0	2.5	7.7	0.0	0.0	0.0	..	1.0
Ages 40+									
Crude rate	0.1	1.7	1.9	0.5	0.0	0.0	0.0	0.0	0.9
ASR(A)	0.1	1.7	1.4	0.3	0.0	0.0	0.0	0.0	0.7
95% CI	0.1–0.1	1.4–1.9	1.3–1.6	0.2–0.5	0.0	0.0	0.0	0.0	0.6–0.8
Ages 50–69									
Crude rate	0.1	1.5	1.3	0.3	0.0	0.0	0.0	0.0	0.7
ASR(A)	0.1	1.5	1.2	0.3	0.0	0.0	0.0	0.0	0.6
95% CI	0.0–0.1	1.3–1.9	1.0–1.4	0.1–0.5	0.0	0.0	0.0	0.0	0.5–0.7

.. Not applicable—no women in this age group were screened in 2003.

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

Source: AIHW analysis of BreastScreen Australia data.

Table 35: Numbers of women screened and women recalled for assessment by age, other reasons only, subsequent screening rounds, states and territories, 2003

Age group	Number	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
40–44	Screened	8,387	855	7,730	1,514	1,267	600	273	146	20,772
	Recalled	9	18	140	8	0	0	0	0	175
45–49	Screened	25,934	4,396	20,421	6,043	4,190	1,909	1,095	520	64,508
	Recalled	21	74	353	23	0	0	0	0	471
50–54	Screened	40,877	32,664	28,992	13,766	12,734	3,896	2,311	899	136,139
	Recalled	27	277	349	49	0	0	0	0	702
55–59	Screened	46,601	40,883	30,347	15,673	14,843	4,177	2,521	892	155,937
	Recalled	20	258	271	36	0	0	0	0	585
60–64	Screened	38,545	31,374	23,235	12,397	11,903	3,439	1,848	608	123,349
	Recalled	14	177	201	27	0	0	0	0	419
65–69	Screened	32,591	26,370	19,135	10,091	9,791	3,033	1,316	323	102,650
	Recalled	10	109	138	10	0	0	0	0	267
70–74	Screened	25,346	20,678	14,837	2,623	3,301	1,795	267	169	69,016
	Recalled	8	59	106	2	0	0	0	0	175
75–79	Screened	16,992	5,118	4,303	975	1,532	341	91	64	29,416
	Recalled	8	24	47	1	0	0	0	0	80
80–84	Screened	6,242	660	920	241	345	85	36	32	8,561
	Recalled	2	4	22	0	0	0	0	0	28
85+	Screened	1,404	93	222	33	48	13	3	3	1,819
	Recalled	0	1	4	0	0	0	0	0	5
Ages 40+	Screened	242,919	163,091	150,142	63,356	59,954	19,288	9,761	3,656	712,167
	Recalled	119	1,001	1,631	156	0	0	0	0	2,907
Ages 50–69	Screened	158,614	131,291	101,709	51,927	49,271	14,545	7,996	2,722	518,075
	Recalled	71	821	959	122	0	0	0	0	1,973

Source: BreastScreen Australia.

Table 36: Age-specific and age-standardised recall to assessment rates, other reasons only, subsequent screening rounds, states and territories, 2003

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
	(Per cent)								
40–44	0.1	2.1	1.8	0.5	0.0	0.0	0.0	0.0	0.8
45–49	0.1	1.7	1.7	0.4	0.0	0.0	0.0	0.0	0.7
50–54	0.1	0.8	1.2	0.4	0.0	0.0	0.0	0.0	0.5
55–59	0.0	0.6	0.9	0.2	0.0	0.0	0.0	0.0	0.4
60–64	0.0	0.6	0.9	0.2	0.0	0.0	0.0	0.0	0.3
65–69	0.0	0.4	0.7	0.1	0.0	0.0	0.0	0.0	0.3
70–74	0.0	0.3	0.7	0.1	0.0	0.0	0.0	0.0	0.3
75–79	0.0	0.5	1.1	0.1	0.0	0.0	0.0	0.0	0.3
80–84	0.0	0.6	2.4	0.0	0.0	0.0	0.0	0.0	0.3
85+	0.0	1.1	1.8	0.0	0.0	0.0	0.0	0.0	0.3
Ages 40+									
Crude rate	0.0	0.6	1.1	0.2	0.0	0.0	0.0	0.0	0.4
ASR(A)	0.1	0.9	1.1	0.3	0.0	0.0	0.0	0.0	0.5
95% CI	0.0–0.1	0.8–1.0	1.1–1.2	0.2–0.3	0.0	0.0	0.0	0.0	0.4–0.5
Ages 50–69									
Crude rate	0.0	0.6	0.9	0.2	0.0	0.0	0.0	0.0	0.4
ASR(A)	0.0	0.6	1.0	0.2	0.0	0.0	0.0	0.0	0.4
95% CI	0.0–0.1	0.6–0.7	0.9–1.0	0.2–0.3	0.0	0.0	0.0	0.0	0.4–0.4

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

Source: AIHW analysis of BreastScreen Australia data.

Indicator 6: Rescreen rate

Table 37: Number of women screened during 2001 and number of those women who returned for screening within 27 months by age, first screening round, states and territories

Age group	Number	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
40–44	Screened	13,614	4,369	9,697	2,505	2,141	810	567	308	34,011
	Returned	7,092	650	6,928	1,439	1,220	605	267	157	18,358
45–49	Screened	10,752	5,192	6,225	2,943	2,251	656	604	281	28,904
	Returned	5,549	2,025	4,368	1,783	1,373	473	299	135	16,005
50–54	Screened	13,275	12,946	6,971	4,529	4,261	720	672	353	43,727
	Returned	7,240	8,962	4,947	2,864	2,935	533	322	168	27,971
55–59	Screened	5,814	4,477	3,291	1,211	835	276	196	132	16,232
	Returned	3,185	2,759	2,356	714	512	189	94	42	9,851
60–64	Screened	4,364	3,602	2,279	873	411	205	107	63	11,904
	Returned	2,463	2,334	1,700	542	261	154	53	25	7,532
65–69	Screened	3,117	2,931	1,606	569	317	135	72	40	8,787
	Returned	1,696	1,863	1,199	274	141	99	24	15	5,311
70–74	Screened	1,895	1,187	921	232	171	60	33	19	4,518
	Returned	1,037	658	570	34	22	27	3	5	2,356
75–79	Screened	1,308	540	577	178	164	70	24	12	2,873
	Returned	647	46	89	29	30	10	4	1	856
80–84	Screened	556	220	200	65	59	15	7	7	1,129
	Returned	257	14	23	5	8	1	1	4	313
85+	Screened	143	75	60	26	23	7	3	0	337
	Returned	41	2	6	2	3	0	0	0	54
Ages 40+	Screened	54,838	35,539	31,827	13,131	10,633	2,954	2,285	1,215	152,422
	Returned	29,207	19,313	22,186	7,686	6,505	2,091	1,067	552	88,607
Ages 50–67	Screened	25,476	22,917	13,567	6,972	5,706	1,336	1,026	577	77,577
	Returned	14,033	15,277	9,784	4,358	3,833	975	491	247	48,998

Source: BreastScreen Australia.

Table 38: Age-specific and age-standardised rescreen rates for women screened during 2001, first screening round, states and territories

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
(Per cent)									
40–44	52.1	14.9	71.4	57.4	57.0	74.7	47.1	51.0	54.0
45–49	51.6	39.0	70.2	60.6	61.0	72.1	49.5	48.0	55.4
50–54	54.5	69.2	71.0	63.2	68.9	74.0	47.9	47.6	64.0
55–59	54.8	61.6	71.6	59.0	61.3	68.5	48.0	31.8	60.7
60–64	56.4	64.8	74.6	62.1	63.5	75.1	49.5	39.7	63.3
65–69	54.4	63.6	74.7	48.2	44.5	73.3	33.3	37.5	60.4
70–74	54.7	55.4	61.9	14.7	12.9	45.0	9.1	26.3	52.1
75–79	49.5	8.5	15.4	16.3	18.3	14.3	16.7	8.3	29.8
80–84	46.2	6.4	11.5	7.7	13.6	6.7	14.3	57.1	27.7
85+	28.7	2.7	10.0	7.7	13.0	0.0	0.0	..	16.0
Ages 40+									
Crude rate	53.3	54.3	69.7	58.5	61.2	70.8	46.7	45.4	58.1
ASR(A)	54.0	54.7	68.9	53.5	54.8	68.0	41.8	39.7	58.5
95% CI	53.3–54.8	53.8–55.5	67.8–70.1	52.0–55.0	52.9–56.8	64.2–71.8	38.3–45.5	35.1–44.6	58.1–59.0
Ages 50–67									
Crude rate	55.1	66.7	72.1	62.5	67.2	73.0	47.9	42.8	63.2
ASR(A)	55.3	65.4	72.7	62.2	64.7	72.6	47.7	40.5	62.9
95% CI	54.4–56.3	64.3–66.6	71.2–74.2	60.0–64.4	61.8–67.6	67.8–77.7	42.7–53.1	34.6–46.9	62.2–63.5

.. Not applicable—no women in this age group were screened in 2001.

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.

Source: AIHW analysis of BreastScreen Australia data.

Table 39: Number of women screened during 2001 and number of those women who returned for screening within 27 months by age, second screening round, states and territories

Age group	Number	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
40–44	Screened	7,215	915	5,409	1,174	1,013	426	241	101	16,494
	Returned	4,520	330	4,356	808	735	345	149	65	11,308
45–49	Screened	10,152	2,803	6,700	2,394	1,906	647	471	183	25,256
	Returned	6,230	1,499	5,267	1,646	1,405	513	283	100	16,943
50–54	Screened	12,848	15,915	8,660	3,581	4,706	849	713	372	47,644
	Returned	8,178	12,320	6,843	2,438	3,674	668	412	242	34,775
55–59	Screened	6,772	3,662	5,694	1,755	1,919	455	271	137	20,665
	Returned	4,130	2,566	4,602	1,141	1,437	360	159	77	14,472
60–64	Screened	4,927	2,539	4,065	1,159	963	296	161	82	14,192
	Returned	3,189	1,879	3,370	779	712	230	95	54	10,308
65–69	Screened	3,754	1,729	3,238	851	688	214	85	48	10,607
	Returned	2,309	1,278	2,641	410	359	171	33	25	7,226
70–74	Screened	2,404	1,093	2,070	259	196	102	33	25	6,182
	Returned	1,415	638	1,444	63	46	51	5	14	3,676
75–79	Screened	1,604	410	921	189	224	71	25	7	3,451
	Returned	871	44	138	38	53	20	0	2	1,166
80–84	Screened	627	218	279	52	72	22	8	6	1,284
	Returned	280	19	35	12	15	7	0	2	370
85+	Screened	156	59	89	13	15	4	2	1	339
	Returned	45	6	11	0	0	1	0	0	63
Ages 40+	Screened	50,459	29,343	37,125	11,427	11,702	3,086	2,010	962	146,114
	Returned	31,167	20,579	28,707	7,335	8,436	2,366	1,136	581	100,307
Ages 50–67	Screened	26,915	23,225	20,394	7,030	8,028	1,814	1,194	628	89,228
	Returned	16,995	17,595	16,452	4,697	6,137	1,429	694	396	64,395

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.

Source: AIHW analysis of BreastScreen Australia data.

Table 40: Age-specific and age-standardised rescreen rates in women screened during 2001, second screening round, states and territories

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
(Per cent)									
40–44	62.6	36.1	80.5	68.8	72.6	81.0	61.8	64.4	68.6
45–49	61.4	53.5	78.6	68.8	73.7	79.3	60.1	54.6	67.1
50–54	63.7	77.4	79.0	68.1	78.1	78.7	57.8	65.1	73.0
55–59	61.0	70.1	80.8	65.0	74.9	79.1	58.7	56.2	70.0
60–64	64.7	74.0	82.9	67.2	73.9	77.7	59.0	65.9	72.6
65–69	61.5	73.9	81.6	48.2	52.2	79.9	38.8	52.1	68.1
70–74	58.9	58.4	69.8	24.3	23.5	50.0	15.2	56.0	59.5
75–79	54.3	10.7	15.0	20.1	23.7	28.2	0.0	28.6	33.8
80–84	44.7	8.7	12.5	23.1	20.8	31.8	0.0	33.3	28.8
85+	28.8	10.2	12.4	0.0	0.0	25.0	0.0	0.0	18.6
Ages 40+									
Crude rate	61.8	70.1	77.3	64.2	72.1	76.7	56.5	60.4	68.6
ASR(A)	61.8	64.5	76.9	59.3	65.7	74.6	50.3	58.3	67.9
95% CI	61.0–62.5	63.4–65.6	75.9–77.8	57.9–60.9	64.1–67.3	71.3–78.0	46.8–54.0	52.7–64.3	67.4–68.3
Ages 50–67									
Crude rate	63.1	75.8	80.7	66.8	76.4	78.8	58.1	63.1	72.2
ASR(A)	63.1	74.2	80.9	66.4	75.3	78.7	58.2	62.4	71.9
95% CI	62.1–64.1	72.8–75.6	79.7–82.2	64.4–68.5	73.2–77.5	74.6–83.1	53.3–63.5	55.6–69.7	71.3–72.5

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.

Source: AIHW analysis of BreastScreen Australia data.

Table 41: Number of women screened during 2001 and number of those women who returned for screening within 27 months by age, third and subsequent screening rounds, states and territories

Age group	Number	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
40–44	Screened	2,340	125	1,958	401	290	152	75	34	5,375
	Returned	1,760	77	1,716	346	242	126	62	25	4,354
45–49	Screened	17,339	2,052	12,142	3,352	2,582	1,545	782	260	40,054
	Returned	12,274	1,390	10,407	2,712	2,165	1,313	563	198	31,022
50–54	Screened	29,479	17,165	18,636	9,653	8,039	2,890	1,848	453	88,163
	Returned	21,607	14,454	16,277	7,789	6,937	2,522	1,328	355	71,269
55–59	Screened	36,798	32,005	19,591	11,473	11,711	3,239	1,989	621	117,427
	Returned	27,191	27,109	17,381	9,388	10,238	2,849	1,460	473	96,089
60–64	Screened	32,933	25,973	16,440	10,190	10,954	2,955	1,544	380	101,369
	Returned	24,712	22,309	14,674	8,540	9,650	2,653	1,166	303	84,007
65–69	Screened	28,526	21,577	13,560	8,319	8,882	2,526	1,140	185	84,715
	Returned	20,960	18,311	12,052	5,283	5,979	2,229	639	135	65,588
70–74	Screened	24,322	18,575	11,323	2,197	3,210	978	229	111	60,945
	Returned	16,874	12,776	8,569	1,004	1,620	742	61	91	41,737
75–79	Screened	14,446	4,650	4,908	706	1,062	209	81	38	26,100
	Returned	9,444	748	1,136	323	491	92	31	23	12,288
80–84	Screened	4,586	421	1,615	142	227	38	26	18	7,073
	Returned	2,648	115	334	60	86	18	4	5	3,270
85+	Screened	982	82	331	29	21	3	1	1	1,450
	Returned	430	19	68	8	7	2	1	0	535
Ages 40+	Screened	191,751	122,625	100,504	46,462	46,978	14,535	7,715	2,101	532,671
	Returned	137,900	97,308	82,614	35,453	37,415	12,546	5,315	1,608	410,159
Ages 50–67	Screened	116,782	88,466	63,202	36,453	36,201	11,610	6,103	1,579	360,396
	Returned	86,739	75,281	55,947	29,976	31,625	10,253	4,487	1,221	295,529

Source: BreastScreen Australia.

Table 42: Age-specific and age-standardised rescreen rates in women screened during 2001, third and subsequent screening rounds, states and territories

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
(Per cent)									
40–44	75.2	61.6	87.6	86.3	83.4	82.9	82.7	73.5	81.0
45–49	70.8	67.7	85.7	80.9	83.8	85.0	72.0	76.2	77.5
50–54	73.3	84.2	87.3	80.7	86.3	87.3	71.9	78.4	80.8
55–59	73.9	84.7	88.7	81.8	87.4	88.0	73.4	76.2	81.8
60–64	75.0	85.9	89.3	83.8	88.1	89.8	75.5	79.7	82.9
65–69	73.5	84.9	88.9	63.5	67.3	88.2	56.1	73.0	77.4
70–74	69.4	68.8	75.7	45.7	50.5	75.9	26.6	82.0	68.5
75–79	65.4	16.1	23.1	45.8	46.2	44.0	38.3	60.5	47.1
80–84	57.7	27.3	20.7	42.3	37.9	47.4	15.4	27.8	46.2
85+	43.8	23.2	20.5	27.6	33.3	66.7	100.0	0.0	36.9
Ages 40+									
Crude rate	71.9	79.4	82.2	76.3	79.6	86.3	68.9	76.5	77.0
ASR(A)	72.8	76.8	84.2	75.2	79.0	84.6	66.3	76.0	78.0
95% CI	72.3–73.2	75.5–78.0	83.6–84.9	74.1–76.2	77.9–80.2	82.8–86.4	63.9–68.7	71.7–80.4	77.7–78.3
Ages 50–67									
Crude rate	74.3	85.1	88.5	82.2	87.4	88.3	73.5	77.3	82.0
ASR(A)	74.1	84.9	88.4	82.0	87.2	88.2	73.4	77.3	81.8
95% CI	73.6–74.6	84.3–85.6	87.7–89.2	81.1–83.0	86.2–88.2	86.4–90.0	71.3–75.6	72.8–81.9	81.5–82.1

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.

Source: AIHW analysis of BreastScreen Australia data.

Indicator 7a: Incidence of breast cancer

Table 43: Number of new cases of breast cancer in women by age, Australia, 1988–2002

Age group	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
0–4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5–9	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
10–14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15–19	0	0	0	0	0	0	0	1	0	2	3	0	2	0	1
20–24	7	8	4	10	6	13	7	8	6	13	14	11	5	9	7
25–29	47	44	53	51	46	58	57	56	42	50	50	50	54	44	54
30–34	161	157	204	182	180	169	197	199	194	173	198	185	186	172	199
35–39	344	369	340	398	378	412	394	398	424	444	418	435	437	448	433
40–44	653	652	669	719	715	778	770	750	759	755	847	821	840	910	892
45–49	672	751	829	851	1,013	1,030	1,136	1,235	1,182	1,160	1,160	1,149	1,269	1,224	1,313
50–54	633	723	788	853	858	978	1,106	1,241	1,182	1,324	1,466	1,500	1,562	1,650	1,645
55–59	632	681	688	806	819	927	1,035	1,144	1,123	1,179	1,264	1,294	1,424	1,534	1,646
60–64	849	885	823	886	787	972	1,101	1,066	1,017	1,079	1,140	1,244	1,334	1,438	1,402
65–69	767	828	858	951	931	1,000	1,216	1,095	1,063	1,077	1,136	1,093	1,119	1,171	1,286
70–74	697	711	753	790	778	899	1,017	1,009	984	1,033	1,056	988	1,098	1,109	1,036
75–79	575	625	635	672	654	693	782	849	741	866	884	832	899	895	923
80–84	383	397	425	487	491	466	527	579	571	574	590	555	583	611	620
85+	299	326	336	371	366	394	377	417	434	446	493	491	521	561	570
All ages	6,719	7,157	7,405	8,027	8,022	8,789	9,722	10,048	9,722	10,175	10,719	10,648	11,333	11,776	12,027
Ages 50–69	2,881	3,117	3,157	3,496	3,395	3,877	4,458	4,546	4,385	4,659	5,006	5,131	5,439	5,793	5,979

Source: AIHW National Cancer Statistics Clearing House.

Table 44: Age-specific and age-standardised incidence rates for breast cancer in women, Australia, 1988–2002

Age group	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
0–4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5–9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10–14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15–19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.3	0.5	0.0	0.3	0.0	0.2
20–24	1.1	1.2	0.6	1.5	0.9	1.8	1.0	1.1	0.9	1.9	2.1	1.7	0.8	1.4	1.1
25–29	6.8	6.2	7.5	7.3	6.7	8.5	8.4	8.1	5.9	6.9	6.8	6.8	7.4	6.2	7.9
30–34	24.4	23.2	29.4	25.6	24.8	23.1	26.8	27.2	26.8	24.2	27.9	26.0	25.9	23.3	26.3
35–39	54.2	57.1	51.8	59.9	55.8	59.9	56.5	55.9	58.1	59.8	55.6	57.4	57.8	59.7	58.4
40–44	114.6	109.4	108.1	112.5	111.4	120.2	117.2	112.3	111.8	109.2	120.6	114.9	115.2	122.2	117.3
45–49	154.4	164.7	173.2	169.3	188.1	179.8	190.6	200.3	184.8	180.5	177.5	172.7	188.2	179.1	189.4
50–54	167.7	185.8	196.6	206.5	202.2	225.4	244.1	260.7	237.6	246.5	256.0	250.9	250.7	254.5	253.0
55–59	173.9	188.6	191.6	224.7	223.5	246.7	268.4	289.2	275.6	279.9	291.6	285.9	300.7	309.3	307.4
60–64	229.4	238.8	222.0	239.4	215.5	270.3	308.5	298.8	285.1	296.7	306.1	323.8	336.1	352.4	333.9
65–69	232.9	241.5	246.2	270.7	263.8	281.4	343.0	309.2	299.7	305.7	325.5	315.8	324.3	337.5	361.9
70–74	260.5	267.5	278.2	279.9	265.9	296.2	320.5	312.4	300.9	314.3	319.0	296.4	329.1	331.2	311.2
75–79	279.3	291.0	287.7	298.0	285.5	301.3	343.3	363.8	303.9	337.7	328.9	296.2	312.4	306.5	313.2
80–84	296.8	296.7	305.0	334.9	324.2	294.4	315.2	335.8	323.3	319.1	324.1	303.2	306.8	302.8	293.2
85+	299.6	315.9	318.2	337.2	316.5	323.4	295.7	310.4	306.5	298.6	314.5	295.6	297.5	306.0	299.1
All ages															
Crude rate	81.1	84.9	86.6	92.6	91.4	99.1	108.4	110.7	105.6	109.2	113.8	111.7	117.5	120.4	121.6
ASR(A)	89.5	93.3	94.7	100.2	98.1	105.3	113.9	115.6	109.0	111.3	114.5	111.2	115.5	117.1	116.8
Ages 50–69															
Crude rate	200.0	213.0	213.4	234.1	225.0	254.3	287.6	287.3	271.3	278.3	289.8	288.1	295.8	305.0	304.9
ASR(A)	194.3	207.9	209.6	229.9	221.7	250.7	282.1	285.1	269.0	276.7	288.6	287.5	295.5	305.0	304.3

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

Source: AIHW National Cancer Statistics Clearing House.

Table 45: Number of new cases of breast cancer in women by age, states and territories, 1998–2002

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
0–4	0	0	0	0	0	0	0	0	0
5–9	0	0	0	0	0	0	0	0	0
10–14	0	0	0	0	0	0	0	0	0
15–19	1	1	2	2	0	0	0	0	6
20–24	20	10	6	5	5	0	0	0	46
25–29	73	89	44	20	15	4	3	4	252
30–34	311	244	151	106	76	29	17	6	940
35–39	743	542	399	219	172	44	36	16	2,171
40–44	1,493	1,084	785	386	343	102	80	37	4,310
45–49	1,978	1,521	1,188	608	505	152	118	45	6,115
50–54	2,544	1,922	1,410	779	731	202	181	54	7,823
55–59	2,443	1,699	1,369	672	627	180	134	38	7,162
60–64	2,160	1,616	1,280	617	588	175	95	27	6,558
65–69	1,931	1,489	1,061	553	544	133	81	13	5,805
70–74	1,916	1,435	955	369	394	147	56	15	5,287
75–79	1,566	1,178	735	371	413	109	51	10	4,433
80–84	1,016	770	537	253	276	68	34	5	2,959
85+	893	711	452	226	263	64	21	6	2,636
All ages	19,088	14,311	10,374	5,186	4,952	1,409	907	276	56,503
Ages 50–69	9,078	6,726	5,120	2,621	2,490	690	491	132	27,348

Source: AIHW National Cancer Statistics Clearing House.

Table 46: Age-specific and age-standardised incidence rates for breast cancer in women, states and territories, 1998–2002

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
0–4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5–9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10–14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15–19	0.1	0.1	0.3	0.6	0.0	0.0	0.0	0.0	0.2
20–24	1.9	1.2	1.0	1.6	2.1	0.0	0.0	0.0	1.4
25–29	6.0	9.8	6.6	5.8	5.9	5.2	4.5	8.7	7.0
30–34	25.5	26.1	22.6	29.8	28.3	35.5	26.8	13.6	25.9
35–39	58.5	57.8	57.2	58.9	59.7	48.6	56.1	39.3	57.7
40–44	121.7	120.0	116.1	105.3	119.6	112.0	126.0	101.8	118.1
45–49	176.2	182.6	190.1	178.6	186.6	179.8	191.7	142.2	181.5
50–54	246.4	250.5	243.7	260.2	286.9	258.5	324.0	211.9	253.0
55–59	300.2	286.2	306.9	301.2	316.6	288.3	356.5	236.7	299.5
60–64	315.4	321.4	361.5	337.4	351.8	329.7	356.0	274.2	331.0
65–69	315.3	331.5	352.6	357.2	359.1	284.8	390.4	209.5	333.1
70–74	323.7	332.0	338.4	263.8	258.2	334.5	301.6	342.8	317.4
75–79	308.9	318.3	308.5	319.9	304.4	283.9	320.3	347.9	311.3
80–84	292.9	310.6	327.7	322.3	299.1	251.4	337.8	270.6	305.6
85+	291.5	308.9	315.3	301.6	311.3	275.7	262.3	422.8	302.3
All ages									
Crude rate	116.8	118.9	116.0	110.9	130.2	117.8	113.7	59.6	117.1
ASR(A)	113.0	115.0	118.1	114.6	118.6	110.8	126.5	98.8	115.0
95% CI	111.4–114.6	113.1–116.9	115.8–120.4	111.5–117.8	115.3–122.0	105.1–116.8	118.3–135.2	85.6–113.3	114.1–116.0
Ages 50–69									
Crude rate	288.8	290.8	304.8	304.7	322.8	287.1	348.5	229.2	297.0
ASR(A)	287.8	289.7	305.3	305.0	321.7	286.4	351.4	231.5	296.5
95% CI	281.9–293.8	282.9–296.8	297.0–313.8	293.5–316.9	309.1–334.6	265.4–308.7	320.7–384.2	192.2–276.1	292.9–300.0

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

Source: AIHW National Cancer Statistics Clearing House.

Table 47: Number of new cases of breast cancer in women, by age and region, 1998–2002

Age group	Major cities	Inner regional	Outer regional	Remote	Very remote	Australia
0–4	0	0	0	0	0	0
5–9	0	0	0	0	0	0
10–14	0	0	0	0	0	0
15–19	4	1	1	0	0	6
20–24	37	8	1	0	0	46
25–29	176	43	24	4	5	252
30–34	673	163	84	13	7	940
35–39	1,543	405	182	32	8	2,171
40–44	2,954	849	400	79	28	4,310
45–49	4,191	1,220	582	84	38	6,115
50–54	5,362	1,601	722	94	44	7,823
55–59	4,734	1,559	759	82	29	7,162
60–64	4,265	1,525	649	95	24	6,558
65–69	3,828	1,363	543	53	18	5,805
70–74	3,491	1,269	465	39	23	5,287
75–79	2,977	1,019	388	38	11	4,433
80–84	2,020	660	250	22	7	2,959
85+	1,787	573	248	20	8	2,636
All ages	38,043	12,258	5,298	655	249	56,503
Ages 50–69	18,189	6,048	2,673	323	115	27,348

Source: AIHW National Cancer Statistics Clearing House.

Table 48: Age-specific and age-standardised incidence rates for breast cancer in women by region, 1998–2002

Age group	Major cities	Inner regional	Outer regional	Remote	Very remote	Australia
0–4	0.0	0.0	0.0	0.0	0.0	0.0
5–9	0.0	0.0	0.0	0.0	0.0	0.0
10–14	0.0	0.0	0.0	0.0	0.0	0.0
15–19	0.2	0.2	0.3	0.0	0.0	0.2
20–24	1.6	1.4	0.5	0.0	0.0	1.4
25–29	6.9	7.2	7.4	6.7	13.0	7.0
30–34	26.7	24.5	23.9	20.0	19.1	25.9
35–39	61.4	53.3	47.2	48.7	24.8	57.7
40–44	122.3	110.4	105.9	133.0	98.0	118.1
45–49	186.3	173.3	170.9	164.3	159.4	181.5
50–54	259.2	248.9	229.7	207.3	215.2	253.0
55–59	303.9	296.3	294.4	233.5	201.4	299.5
60–64	335.7	335.2	297.1	354.9	224.8	331.0
65–69	340.8	335.6	295.0	249.3	230.6	333.1
70–74	318.7	332.7	279.5	235.3	377.5	317.4
75–79	311.3	321.9	288.7	295.0	267.7	311.3
80–84	310.7	307.2	271.7	251.6	273.7	305.6
85+	302.3	303.3	303.9	261.8	304.2	302.3
All ages						
Crude rate	118.2	122.6	107.9	85.9	60.7	117.1
ASR(A)	117.3	114.1	105.4	100.7	93.8	115.0
95% CI	116.1–118.5	112.1–116.1	102.6–108.3	93.0–108.8	81.8–106.6	114.1–116.0
Ages 50–69						
Crude rate	302.1	297.8	274.3	252.1	215.6	297.0
ASR(A)	302.1	295.5	273.0	253.5	216.4	296.5
95% CI	297.7–306.5	288.1–303.1	262.8–283.6	226.6–282.8	177.6–259.1	292.9–300.0

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

Source: AIHW National Cancer Statistics Clearing House.

Indicator 7b: Incidence of ductal carcinoma in situ

Table 49: Number of new cases of ductal carcinoma in situ by age, states and territories, 1997–2002

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
0–19	0	0	0	0	0	0	0	0	0
20–29	9	12	3	4	3	0	1	0	32
30–39	103	81	51	24	14	6	4	1	284
40–49	533	354	239	170	93	23	37	3	1452
50–59	797	649	409	307	218	59	49	11	2499
60–69	602	510	327	239	137	42	27	3	1887
70+ years	501	306	223	132	80	24	14	0	1280
All ages	2,545	1,912	1,252	876	545	154	132	18	7,434
Ages 50–69	1,399	1,159	736	546	355	101	76	14	4,386

Source: AIHW National Cancer Statistics Clearing House.

Table 50: Age-specific and age-standardised rates of ductal carcinoma in situ, states and territories, 1997–2002

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
0–19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20–29	0.3	0.6	0.2	0.5	0.5	0.0	0.6	0.0	0.4
30–39	3.5	3.6	3.1	2.8	2.1	2.9	2.6	1.0	3.2
40–49	19.1	17.1	15.5	20.2	14.0	11.0	24.7	3.7	17.4
50–59	36.7	40.5	34.1	50.2	40.9	35.6	44.9	22.8	38.8
60–69	38.8	44.9	42.1	59.7	35.9	35.3	48.2	16.0	42.5
70+ years	24.1	20.1	22.8	27.3	14.5	15.2	22.7	0.0	21.9
All ages									
Crude rate	13.0	13.3	11.8	15.7	12.0	10.7	13.8	3.3	12.9
ASR(A)	12.9	13.3	12.1	16.5	11.4	10.4	15.2	4.6	13.0
95% CI	12.4–13.4	12.7–13.9	11.5–12.8	15.4–17.6	10.4–12.4	8.8–12.2	12.7–18.1	2.7–7.5	12.7–13.3
Ages 50–69									
Crude rate	37.6	42.3	37.3	54.0	38.8	35.5	46.1	20.9	40.3
ASR(A)	37.5	42.2	37.3	53.9	38.9	35.5	46.2	20.1	40.3
95% CI	35.6–39.5	39.8–44.7	34.6–40.1	49.5–58.7	35.0–43.2	28.9–43.1	36.4–58.0	10.7–34.1	39.1–41.5

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

Source: AIHW National Cancer Statistics Clearing House.

Indicator 8: Mortality

Table 51: Number of deaths from breast cancer in women, Australia, 1989–2003

Age group	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
0–4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5–9	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
10–14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15–19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20–24	1	0	2	1	0	1	1	0	1	2	2	1	1	0	0
25–29	7	6	12	4	2	2	5	9	6	7	6	5	2	4	5
30–34	34	26	25	33	39	19	25	28	37	28	20	23	21	24	26
35–39	67	63	79	79	73	87	57	90	84	68	59	66	63	71	65
40–44	137	149	150	136	116	139	120	136	135	128	141	122	126	112	118
45–49	170	168	177	196	202	211	207	189	211	207	203	187	185	173	185
50–54	212	228	232	212	225	239	221	230	271	265	247	255	262	295	242
55–59	217	215	227	219	252	249	248	240	236	227	260	257	253	289	307
60–64	287	282	258	236	276	262	268	258	239	255	263	239	228	273	289
65–69	297	328	306	272	316	290	317	289	284	252	212	216	242	256	263
70–74	251	258	305	287	264	308	288	296	297	268	288	287	315	245	252
75–79	261	254	249	254	298	274	281	279	291	300	274	281	289	312	301
80–84	205	205	211	213	257	250	259	252	244	236	232	237	273	277	277
85+	238	219	229	247	268	271	280	273	273	314	298	335	325	367	383
All ages	2,384	2,401	2,462	2,389	2,589	2,602	2,577	2,569	2,609	2,557	2,505	2,511	2,585	2,698	2,713
Ages 50–69	1,013	1,053	1,023	939	1,069	1,040	1,054	1,017	1,030	999	982	967	985	1,113	1,101

Source: AIHW National Mortality Database.

Table 52: Age-specific and age-standardised mortality rates for breast cancer in women, Australia, 1989–2003

Age group	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
0–4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5–9	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10–14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15–19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20–24	0.2	0.0	0.3	0.1	0.0	0.1	0.1	0.0	0.1	0.3	0.3	0.2	0.2	0.0	0.0
25–29	1.0	0.8	1.7	0.6	0.3	0.3	0.7	1.3	0.8	1.0	0.8	0.7	0.3	0.6	0.7
30–34	5.0	3.7	3.5	4.6	5.3	2.6	3.4	3.9	5.2	3.9	2.8	3.2	2.8	3.2	3.4
35–39	10.4	9.6	11.9	11.7	10.6	12.5	8.0	12.3	11.3	9.0	7.8	8.7	8.4	9.6	8.8
40–44	23.0	24.1	23.5	21.2	17.9	21.2	18.0	20.0	19.5	18.2	19.7	16.7	16.9	14.7	15.3
45–49	37.3	35.1	35.2	36.4	35.3	35.4	33.6	29.5	32.8	31.7	30.5	27.7	27.1	25.0	26.2
50–54	54.5	56.9	56.2	50.0	51.8	52.8	46.4	46.2	50.4	46.3	41.3	40.9	40.4	45.4	36.8
55–59	60.1	59.9	63.3	59.8	67.1	64.6	62.7	58.9	56.0	52.4	57.4	54.3	51.0	54.0	53.8
60–64	77.4	76.1	69.7	64.6	76.8	73.4	75.1	72.3	65.7	68.5	68.4	60.2	55.9	65.0	67.1
65–69	86.6	94.1	87.1	77.1	88.9	81.8	89.5	81.5	80.6	72.2	61.3	62.6	69.8	72.0	71.9
70–74	94.4	95.3	108.1	98.1	87.0	97.1	89.2	90.5	90.4	80.9	86.4	86.0	94.1	73.6	76.4
75–79	121.5	115.1	110.4	110.9	129.5	120.3	120.4	114.4	113.5	111.6	97.6	97.7	99.0	105.9	100.9
80–84	153.2	147.1	145.1	140.6	162.4	149.5	150.2	142.7	135.7	129.6	126.7	124.7	135.3	131.0	125.2
85+	230.6	207.4	208.1	213.6	219.9	212.5	208.4	192.8	182.8	200.3	179.4	191.3	177.3	192.6	194.9
All ages															
Crude rate	28.3	28.1	28.4	27.2	29.2	29.0	28.4	27.9	28.0	27.2	26.3	26.0	26.4	27.3	27.1
ASR(A)	30.8	30.4	30.5	28.9	30.5	30.0	28.9	28.1	27.8	26.5	25.4	24.7	24.7	25.1	24.6
95% CI	29.6– 32.1	29.2– 31.6	29.3– 31.7	27.7– 30.0	29.3– 31.7	28.9– 31.2	27.8– 30.1	27.0– 29.2	26.8– 28.9	25.5– 27.6	24.4– 26.4	23.7– 25.7	23.8– 25.7	24.2– 26.1	23.7– 25.6
Ages 50–69															
Crude rate	69.2	71.2	68.5	62.2	70.1	67.1	66.6	62.9	61.5	57.8	55.1	52.6	51.9	56.8	54.4
ASR(A)	66.7	68.5	66.5	60.6	67.9	65.5	64.6	61.5	60.6	57.3	55.0	52.5	51.8	56.7	54.1
95% CI	62.5– 71.0	64.3– 72.8	62.4– 70.8	56.7– 64.6	63.8– 72.1	61.6– 69.7	60.7– 68.7	57.8– 65.4	57.0– 64.4	53.8– 61.0	51.6– 58.5	49.2– 55.9	48.6– 55.1	53.4– 60.1	51.0– 57.4

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.

Source: AIHW National Mortality Database.

Table 53: Number of deaths from breast cancer in women by age, states and territories, 1999–2003

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
0–4	0	0	0	0	0	0	0	0	0
5–9	0	0	0	0	0	0	0	0	0
10–14	0	0	0	0	0	0	0	0	0
15–19	0	0	0	0	0	0	0	0	0
20–24	1	1	1	1	0	0	0	0	4
25–29	4	9	2	4	2	0	0	1	22
30–34	41	27	22	13	5	2	1	3	114
35–39	93	100	55	24	36	9	5	2	324
40–44	182	163	118	62	67	15	6	6	619
45–49	284	249	173	90	86	26	14	11	933
50–54	390	354	255	118	116	36	20	12	1,301
55–59	480	344	238	119	119	34	18	14	1,366
60–64	454	339	215	114	109	34	18	9	1,292
65–69	431	284	182	109	120	37	20	6	1,189
70–74	453	386	248	124	117	33	22	4	1,387
75–79	503	420	233	118	125	42	14	2	1,457
80–84	446	359	209	104	119	40	15	4	1,296
85+	553	485	266	160	172	54	17	1	1,708
All ages	4,315	3,520	2,217	1,160	1,193	362	170	75	13,012
Ages 50–69	1,755	1,321	890	460	464	141	76	41	5,148

Note: State refers to the state of usual residence.

Source: AIHW National Mortality Database.

Table 54: Age-specific and age-standardised mortality rates for breast cancer in women, states and territories, 1999–2003

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
0–4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5–9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10–14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15–19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20–24	0.1	0.1	0.2	0.3	0.0	0.0	0.0	0.0	0.1
25–29	0.3	1.0	0.3	1.2	0.8	0.0	0.0	2.2	0.6
30–34	3.3	2.8	3.2	3.6	1.9	2.5	1.6	6.7	3.1
35–39	7.4	10.7	7.9	6.5	12.7	10.2	7.9	4.9	8.7
40–44	14.6	17.7	17.0	16.6	23.1	16.3	9.4	16.3	16.6
45–49	24.9	29.5	27.1	25.9	31.6	30.4	22.8	34.0	27.3
50–54	36.9	45.0	42.6	37.9	44.6	44.9	34.9	44.9	41.0
55–59	56.1	55.0	49.8	50.3	56.9	51.7	44.6	81.2	54.0
60–64	64.8	66.0	57.8	60.1	63.9	62.2	64.4	84.9	63.3
65–69	70.1	62.8	59.3	68.8	79.2	78.8	93.2	92.4	67.6
70–74	76.8	89.6	87.2	87.6	77.6	75.2	118.0	88.0	83.3
75–79	97.4	111.0	95.5	99.1	90.7	108.4	85.0	66.2	100.2
80–84	123.9	139.1	122.1	126.9	124.1	143.8	140.2	202.1	128.6
85+	172.5	202.5	176.6	204.4	195.3	222.1	195.9	65.7	187.4
All ages									
Crude rate	26.1	28.9	24.3	24.5	31.2	30.2	21.1	16.1	26.6
ASR(A)	23.9	26.5	24.0	24.6	26.3	26.3	24.9	27.7	24.9
95% CI	23.2–24.6	25.6–27.3	23.0–25.0	23.2–26.0	24.8–27.9	23.6–29.2	21.3–29.0	20.9–35.8	24.5–25.3
Ages 50–69									
Crude rate	54.4	55.6	50.7	51.3	58.6	57.0	51.6	67.1	54.2
ASR(A)	53.9	55.4	50.8	51.5	58.2	56.5	54.2	71.6	54.0
95% CI	51.4–56.5	52.4–58.4	47.5–54.2	46.9–56.4	53.0–63.7	47.5–66.6	42.6–68.0	50.6–98.2	52.5–55.5

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. State refers to the state of usual residence.

Source: AIHW National Mortality Database.

Table 55: Number of deaths from breast cancer in women by age and region, 1999–2003

Age group	Major cities	Inner regional	Outer regional	Remote	Very remote	Australia
0–4	0	0	0	0	0	0
5–9	0	0	0	0	0	0
10–14	0	0	0	0	0	0
15–19	0	0	0	0	0	0
20–24	2	2	0	0	0	4
25–29	16	3	1	1	1	22
30–34	67	28	14	2	4	114
35–39	211	69	37	5	3	324
40–44	384	144	75	10	6	619
45–49	609	214	91	11	8	933
50–54	845	285	149	17	4	1,301
55–59	927	263	150	20	6	1,366
60–64	844	284	143	15	6	1,292
65–69	803	249	115	13	9	1,189
70–74	905	318	140	16	8	1,387
75–79	965	345	134	12	0	1,457
80–84	882	293	108	9	4	1,296
85+	1,122	394	174	12	5	1,708
All ages	8,584	2,890	1,333	142	63	13,012
Ages 50–69	3,420	1,081	558	65	25	5,148

Notes

1. Regions have been defined according to the ASGC Remoteness Areas classification.
2. Totals may not add up due to rounding.

Source: AIHW National Mortality Database.

Table 56: Age-specific and age-standardised mortality rates for breast cancer in women by region, 1999–2003

Age group	Major cities	Inner regional	Outer regional	Remote	Very remote	Australia
0–4	0.0	0.0	0.0	0.0	0.0	0.0
5–9	0.0	0.0	0.0	0.0	0.0	0.0
10–14	0.0	0.0	0.0	0.0	0.0	0.0
15–19	0.0	0.0	0.0	0.0	0.0	0.0
20–24	0.1	0.3	0.2	0.0	0.0	0.1
25–29	0.6	0.6	0.3	1.7	2.6	0.6
30–34	2.6	4.1	4.1	2.8	10.2	3.1
35–39	8.4	9.1	9.7	8.2	8.0	8.7
40–44	15.6	18.3	19.5	17.3	20.4	16.6
45–49	26.7	29.7	26.3	20.4	33.9	27.3
50–54	39.8	42.8	46.5	37.3	20.4	41.0
55–59	56.3	47.0	55.7	53.9	39.0	54.0
60–64	64.7	60.3	63.5	54.2	50.8	63.3
65–69	71.1	60.3	61.7	59.7	107.0	67.6
70–74	83.1	82.8	83.5	92.5	126.1	83.3
75–79	99.2	106.0	97.2	91.9	10.0	100.2
80–84	130.4	130.5	113.9	97.4	133.9	128.6
85+	181.9	198.5	204.5	145.1	193.6	187.4
All ages						
Crude rate	26.3	28.5	27.0	18.7	15.2	26.6
ASR(A)	24.9	25.0	25.4	22.5	24.1	24.9
95% CI	24.3–25.4	24.1–25.9	24.0–26.8	18.9–26.5	18.1–31.0	24.5–25.3
Ages 50–69						
Crude rate	55.1	51.3	55.6	49.1	44.1	54.2
ASR(A)	55.1	50.8	55.3	49.3	47.4	54.0
95% CI	53.3–57.0	47.8–53.9	50.8–60.1	37.9–62.7	30.3–70.2	52.5–55.5

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 (ASGC) was used to create the above categories (ABS 2001).

Source: AIHW National Mortality Database.

Table 57: Number of deaths from breast cancer in women by age and Indigenous status, Queensland, Western Australia, South Australia, Northern Territory, 1999–2003

Age group	Indigenous	Non-Indigenous	Australia
0–4	0	0	0
5–9	0	0	0
10–14	0	0	0
15–19	0	0	0
20–24	0	2	4
25–29	2	7	22
30–34	3	40	114
35–39	5	114	324
40–44	7	241	619
45–49	10	338	933
50–54	5	494	1,301
55–59	4	484	1,366
60–64	5	442	1,292
65–69	8	400	1,189
70–74	7	472	1,387
75+	12	1,484	4,461
All ages	68	4,518	13,012
Ages 50–69	22	1,820	5,148

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 for all women, but they are not included in the other columns.

Source: AIHW National Mortality Database.

Table 58: Age-standardised and age-specific mortality rates for breast cancer in women by Indigenous status, Queensland, Western Australia, South Australia, Northern Territory, 1999–2003

Age group	Indigenous	Non-Indigenous	Australia
0–4	0.0	0.0	0.0
5–9	0.0	0.0	0.0
10–14	0.0	0.0	0.0
15–19	0.0	0.0	0.0
20–24	0.0	0.2	0.1
25–29	3.3	0.6	0.6
30–34	5.4	3.1	3.1
35–39	10.4	8.5	8.7
40–44	17.9	17.8	16.6
45–49	32.6	26.8	27.3
50–54	21.4	42.1	41.0
55–59	24.7	52.3	54.0
60–64	40.5	60.5	63.3
65–69	94.0	65.1	67.6
70–74	123.5	82.0	83.3
75+	154.4	127.3	132.3
All ages			
Crude rate	9.8	25.9	26.6
ASR(A)	25.8	24.6	25.1
95% CI	19.2–33.6	23.9–25.3	24.6–25.5
Ages 50–69			
Crude rate	36.4	52.9	54.2
ASR(A)	39.4	52.9	54.0
95% CI	24.5–59.8	50.5–55.4	52.5–55.5

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. Rates are the number of deaths from breast cancer per 100,000 women and age-standardised to the Australian population at 30 June 2001.
4. Deaths in the 'not-stated' category are included in the column for all women, but they are not included in the other columns.

Source: AIHW National Mortality Database.

Appendix A: Data and statistical issues

Data sources

Multiple data sources were analysed to produce this report. These are summarised in Table A1. All data used in this report are based on calendar years.

Table A1: Sources for data presented in this report

Indicator	Description	Data source
1	Participation	BreastScreen Australia state and territory services
2	Cancer detection	BreastScreen Australia state and territory services
3	Sensitivity	BreastScreen Australia state and territory services
4	DCIS detection	BreastScreen Australia state and territory services, state and territory Cancer Registries
5	Recall to assessment	BreastScreen Australia state and territory services
6	Rescreening	BreastScreen Australia state and territory services
7	Incidence (ICD-10 C50)	National Cancer Statistics Clearing House, AIHW
8	Mortality (ICD-9 174, ICD-10 C50)	National Mortality Database, AIHW

Population data

The ABS estimated resident population (ERP) data were used to calculate screening participation, and cancer incidence and mortality rates.

Participation rates were calculated using the average of the 2002 and 2003 estimated resident female populations. The only exceptions to this were participation rates by socioeconomic status, by language spoken at home and by Indigenous status.

As the ABS does not calculate ERP by socioeconomic status or language spoken at home, alternative methods were used to calculate the denominators for these rates. In the case of language spoken at home, the denominator was calculated by applying the age-specific distribution from the language question in the 2001 national population census to the relevant age-specific ERP counts. The denominator for rates based on socioeconomic status was calculated by applying an ABS concordance between statistical local area (SLA) and socioeconomic status to the relevant ERP by SLA counts.

The most recent direct count of the Aboriginal and Torres Strait Islander population was carried out in the 2001 census. However, the ABS has released estimates of Aboriginal and Torres Strait Islander population for more recent years (ABS 2004). The average of the projected populations for 2002 and 2003 was used as the denominator for Indigenous participation rates.

Mortality data

Mortality data in this report are given for 1989 to 2003. During this time, changes have been made to the coding and processing of mortality data that affect the comparability of the data. Data holdings for 1987–1996 were manually coded using the ninth revision of the International Classification of Diseases (ICD-9). Data holdings for 1997 onwards have been coded using ICD-10. These data were coded using an automated system with slightly different coding rules.

The change to the coding and processing of mortality data has introduced a break in the data time series. The ABS has developed comparability factors, which are applied to the pre-1997 data, so that a single time series may still be derived (ABS 2002). For breast cancer, the comparability factor is close to one (0.98).

The application of a comparability factor causes the number of deaths before 1997 to be non-integer. Rounding has been used to put the number of deaths into whole numbers.

Statistical analysis of BreastScreen monitoring indicators

Crude rates

A crude rate is defined as the number of events over a specified period (for example, a year) divided by the total population at risk of the event. For example, a crude cancer incidence rate is defined as the number of new cases of cancer in a specified period divided by the population at risk.

Age-specific rates

An age-specific rate is defined as the number of events for a specified age group over a specified period (for example, a year) divided by the total population at risk of the event in that age group. Age-specific rates in this report were calculated by dividing the number of deaths, cancer cases or women participating in the screening programs in each specified age group by the corresponding population in the same age group.

Age-standardised rates

Age-standardised rates (ASRs) enable comparisons to be made between populations that have different age structures. This publication uses direct standardisation, in which the age-specific rates are multiplied by a constant population. This effectively removes the influence of the age structure on the summary rate.

As the *National health data dictionary* recommends the use of the 2001 Australian total estimated resident population as the standard population for health statistics, this population has been used for age-standardising mortality, incidence and participation rates. For statistics based on the population of women screened – that is, cancer detection rates, interval cancer rates and program sensitivity – rates are standardised to the 1998 population of women screened by BreastScreen Australia.

The method used for all these calculations consists of three steps:

Step 1: Calculate the age-specific rate for each age group.

Step 2: Calculate the expected number of cases in each five-year age group by multiplying the age-specific rates by the corresponding standard population and dividing by the appropriate factor (that is, 100,000 for mortality and incidence rates, 10,000 for cancer detection and sensitivity rates, and 100 for the participation rate).

Step 3: Sum the expected number of cases in each age group, divide by the total of the standard population and multiply by the appropriate factor (that is, 100,000 for mortality and incidence rates, 10,000 for cancer detection and sensitivity rates, and 100 for the participation rate). This gives the age-standardised rate.

Rate denominators

Death rates and cancer incidence rates are expressed in this report as annual rates per 100,000 population. Rates for cancer detection are calculated per 10,000 women screened. Screening participation rates are expressed as a percentage of the eligible population. Rescreen and recall-to-assessment rates are expressed as a percentage of women screened.

Confidence intervals

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

The confidence intervals are used to provide an approximate indication of the differences between rates. Where the confidence intervals of two rates do not overlap, the corresponding rates are statistically significantly different from each other. This is used to compare individual stratified rates with the all-Australia rate. To be truly rigorous, such a comparison should be between a given rate and the rate calculated from the all-Australia data excluding the data underlying the specific rate in the comparison. Presentation of such a comparison in this report would, however, be unnecessarily complex. The approximate comparisons presented might understate the statistical significance of some differences, but they are sufficiently accurate for the purposes of this report.

As with all statistical comparisons, care should be exercised in interpreting the results of the comparison. If two rates are statistically significantly different from each other, this means that the difference is unlikely to have arisen by chance. Judgement should, however, be exercised in deciding whether or not the difference is of any practical significance.

Stratification variables

The data in this report are presented either stratified by the age of the women at the time of screening (for the screening data), at the time of diagnosis (for the cancer incidence data) or at the time of death (for the cancer mortality data). A number of stratification variables apply to some or all of the data presented:

- state or territory
- geographic location
- socioeconomic status
- Indigenous status
- main language spoken at home

- tumour size
- screening round.

State or territory

The state or territory reported is the one where screening took place (for the screening data) or where the diagnosis was made (for the cancer incidence data) or the place of usual residence (for the cancer mortality data).

This means that it is possible for a woman to be double-counted in the screening data. If she was screened in one jurisdiction and then screened again less than two years later in another jurisdiction, both screens may be included in the participation rate. This should, however, have a negligible effect on the reported participation rates.

Geographic location

In all previous reports including 2000–2001, analysis of participation, incidence and mortality data by geographic region used the Rural, Remote and Metropolitan Areas (RRMA) classification. This classification was developed in 1994 by the then Department of Primary Industries and Energy and the then Department of Human Services and Health. It allows geographic regions to be classified into seven zones: two metropolitan, three rural and two remote (DPIE & DSHS 1994).

This report uses a more recent geographic classification in place of RRMA. The new system, known as the Australian Standard Geographical Classification (ASGC), groups geographic areas into five classes. These classes are based on Census Collection Districts (CDs) and defined using the Accessibility/Remoteness Index for Australia (ARIA). ARIA is a measure of the remoteness of a location from the services provided by large towns or cities. A higher ARIA score denotes a more remote location. The five classes of the ASGC Remoteness classification, along with a sixth ‘Migratory’ class, are listed in Table A2.

Table A2: The remoteness areas for the ASGC Remoteness Classification

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

Source: ABS 2001.

The ASGC Remoteness classification is not directly comparable to the RRMA classification. Accessibility is judged purely on distance to one of the major urban centres. For example, the ASGC Remoteness classification allocates Hobart to its second group (Inner regional Australia) and Darwin to its third group (Outer regional Australia), whereas the RRMA classification grouped them together with the other capital cities.

Socioeconomic status

Socioeconomic status was coded according to the Index of Relative Socio-economic Disadvantage (IRSD). The IRSD is one of the socioeconomic indexes for areas (SEIFA

indexes) developed by the ABS to categorise geographic areas according to their social and economic characteristics.

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

Indigenous status

The BreastScreen Australia Data Dictionary (AIHW & DoHA forthcoming) specifies that Indigenous status should be coded as

- Aboriginal
- Torres Strait Islander
- both Aboriginal and Torres Strait Islander
- not Indigenous or
- not-stated.

For the purposes of this report these categories were amalgamated and the data stratified into three categories:

- Indigenous
- not Indigenous or
- not-stated.

Main language spoken at home

The BreastScreen Australia Data Dictionary (AIHW & DoHA forthcoming) recommends that main language spoken at home be coded according to the four-digit ABS Australian Standard Classification of Languages, 1998 (ABS cat. no. 1267.0). This report has collapsed the classification into the simple dichotomy of 'English' and 'Other language'.

Although this stratification is reported as 'main language spoken at home', practice varies between the jurisdictions as to how this information is collected. In some jurisdictions there may thus be some lack of comparability with the BreastScreen Data Dictionary definition of 'main language'.

In addition, some jurisdictions do not use the 'Not-stated' classification. If main language spoken at home is not given, it is set to a default value. The default used is not the same for all jurisdictions. This means that the analysis based upon main language spoken at home should be interpreted with caution.

Tumour size

Tumour size is the size in millimetres of the malignant lesion, and applies to invasive cancers only. For more details about this stratification, see the definition given in the BreastScreen Australia Data Dictionary (AIHW & DoHA forthcoming).

Screening round

The BreastScreen Australia Data Dictionary distinguishes between a woman's screening round in the national program and her round in the state or territory program. Round in the national program is used for this stratification in this report. However, it is not always

possible to determine round in the national program, so for some women this stratification has been collected as round number in the state or territory program.

BreastScreen Australia Data Dictionary

A data dictionary has been developed for the BreastScreen Australia Program (AIHW & DoHA forthcoming). Summary definitions of key concepts and terminology used in this report are given in the glossary. More detailed definitions and explanations may be found in the data dictionary.

Appendix B: Tables published on the Internet

Indicator 1: Participation

Table 1:	Number of women participating in BreastScreen Australia by age, states and territories, 2002–2003
Table 2:	Percentage of women participating in BreastScreen Australia, states and territories, 2002–2003
Table 3:	Number of women participating in BreastScreen Australia by age, states and territories, 2001–2002
Table 4:	Percentage of women participating in BreastScreen Australia, states and territories, 2001–2002
Table 5:	Number of women participating in BreastScreen Australia by age, states and territories, 2000–2001
Table 6:	Percentage of women participating in BreastScreen Australia, states and territories, 2000–2001
Table 7:	Number of women participating in BreastScreen Australia by age, states and territories, 1999–2000
Table 8:	Percentage of women participating in BreastScreen Australia, states and territories, 1999–2000
Table 9:	Number of women participating in BreastScreen Australia by age, states and territories, 1998–1999
Table 10:	Percentage of women participating in BreastScreen Australia, states and territories, 1998–1999
Table 11:	Number of women participating in BreastScreen Australia by age, states and territories, 1997–1998
Table 12:	Percentage of women participating in BreastScreen Australia, states and territories, 1997–1998
Table 13:	Number of women participating in BreastScreen Australia by age, states and territories, 1996–1997
Table 14:	Percentage of women participating in BreastScreen Australia, states and territories, 1996–1997
Table 15:	Participation in BreastScreen Australia by age and region, 2002–2003
Table 16:	Participation in BreastScreen Australia by age and region, 2000–2001
Table 17:	Participation in BreastScreen Australia by age and region, 1997–1998
Table 18:	Participation in BreastScreen Australia by age and socioeconomic status, 2002–2003
Table 19:	Participation in BreastScreen Australia by age and socioeconomic status, 2000–2001

Table 20:	Participation in BreastScreen Australia by age and socioeconomic status, 1997–1998
Table 21:	Participation in BreastScreen Australia by age and Indigenous status, 2002–2003
Table 22:	Participation in BreastScreen Australia by age and Indigenous status, 2000–2001
Table 23:	Participation in BreastScreen Australia by age and Indigenous status, 1997–1998
Table 24:	Participation in BreastScreen Australia by age and main language spoken at home, 2002–2003
Table 25:	Participation in BreastScreen Australia by age and main language spoken at home, 2000–2001
Table 26:	Participation in BreastScreen Australia by age and main language spoken at home, 1997–1998

Indicator 2: Detection rate for small invasive cancers

Table 27:	Numbers of women screened and cases of small-diameter (≤ 15 mm) invasive cancers detected in these women, first screening round, by age, states and territories, 2003
Table 28:	Age-specific rates of small-diameter (≤ 15 mm) invasive cancers detected in women screened, first screening round, states and territories, 2003
Table 29:	Numbers of women screened and cases of small-diameter (≤ 15 mm) invasive cancers detected in these women, first screening round, by age, states and territories, 2002
Table 30:	Age-specific rates of small-diameter (≤ 15 mm) invasive cancers detected in women screened, first screening round, states and territories, 2002
Table 31:	Numbers of women screened and cases of small-diameter (≤ 15 mm) invasive cancers detected in these women, first screening round, by age, states and territories, 2001
Table 32:	Age-specific rates of small-diameter (≤ 15 mm) invasive cancers detected in women screened, first screening round, states and territories, 2001
Table 33:	Numbers of women screened and cases of small-diameter (≤ 15 mm) invasive cancers detected in these women, first screening round, by age, states and territories, 2000
Table 34:	Age-specific rates of small-diameter (≤ 15 mm) invasive cancers detected in women screened, first screening round, states and territories, 2000
Table 35:	Numbers of women screened and cases of small-diameter (≤ 15 mm) invasive cancers detected in these women, first screening round, by age, states and territories, 1999
Table 36:	Age-specific rates of small-diameter (≤ 15 mm) invasive cancers detected in women screened, first screening round, states and territories, 1999
Table 37:	Numbers of women screened and cases of small-diameter (≤ 15 mm) invasive cancers detected in these women, first screening round, by age, states and territories, 1998

- Table 38: Age-specific rates of small-diameter (≤ 15 mm) invasive cancers detected in women screened, first screening round, states and territories, 1998
- Table 39: Numbers of women screened and cases of small-diameter (≤ 15 mm) invasive cancers detected in these women, first screening round, by age, states and territories, 1997
- Table 40: Age-specific rates of small-diameter (≤ 15 mm) invasive cancers detected in women screened, first screening round, states and territories, 1997
- Table 41: Numbers of women screened and cases of small-diameter (≤ 15 mm) invasive cancers detected in these women, subsequent screening rounds, by age, states and territories, 2003
- Table 42: Age-specific rates of small-diameter (≤ 15 mm) invasive cancers detected in women screened, subsequent screening rounds, states and territories, 2003
- Table 43: Numbers of women screened and cases of small-diameter (≤ 15 mm) invasive cancers detected in these women, subsequent screening rounds, by age, states and territories, 2002
- Table 44: Age-specific rates of small-diameter (≤ 15 mm) invasive cancers detected in women screened, subsequent screening rounds, states and territories, 2002
- Table 45: Numbers of women screened and cases of small-diameter (≤ 15 mm) invasive cancers detected in these women, subsequent screening rounds, by age, states and territories, 2001
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- Table 47: Numbers of women screened and cases of small-diameter (≤ 15 mm) invasive cancers detected in these women, subsequent screening rounds, by age, states and territories, 2000
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Glossary

Administrative databases: observations about events that are routinely recorded or required by law to be recorded. Such events include births, deaths, hospital separations and cancer incidence. Administrative databases include the National Mortality Database, the National Hospital Morbidity Database and the National Cancer Statistics Clearing House Database.

Age-specific rate: a rate for a specific age group. The numerator and denominator relate to the same age group.

Age-standardised rate: weighted average of age-specific rates according to a standard distribution of the population by age to eliminate the effect of different age distributions and thus facilitate valid comparison of groups with differing age compositions.

Assessment: further investigation of a mammographic abnormality or symptom reported at screening. This includes women who choose assessment outside the program.

Benign: not cancerous.

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

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

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

Core biopsy: removal of a cylindrical sample of breast tissue under a local or general anaesthetic through a needle for microscopic examination.

Data: refers to the building blocks of health information, including observations from administrative databases and health survey data sets.

Ductal carcinoma in situ: a non-invasive tumour of the mammary gland (breast) arising from cells lining the ducts.

Early review: the recall of a woman to a second assessment within 12 months of the screening date and following an equivocal assessment visit. Early review within 6 months of the screening date is considered part of the screening episode, but early review at 6 months or more occurs after the screening episode is complete.

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

False negative: means that the test has incorrectly observed that the disease is not present.

False positive: means that the test has incorrectly observed that the disease is present.

Film reading: viewing of a radiographic depiction of the breast (a mammogram) to determine the presence or absence of an abnormality indicative of a tumour.

Fine needle aspiration biopsy: the sampling of cells from breast tissue for examination by a pathologist.

First screening round: see *Screening round*.

Incidence: see *New cancer case*.

Index screening year: the year for which the interval cancer rate and the program sensitivity rate are determined.

Index screens: all screening examinations performed within the index screening year.

Indicators: observations about data that have been analysed to provide a means of comparing measures of health within and between population groups.

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

Information: observations about data that have been analysed to provide a means of comparing measures of health within and between population groups.

International Classification of Diseases: World Health Organization's internationally accepted classification of death and disease. The tenth revision (ICD-10) is currently in use.

Interval cancer – invasive (as defined for national reporting purposes by Kavanagh et al. (1999), with minor changes pending endorsement by the National Advisory Committee):

- an invasive breast cancer diagnosed after completion of a negative screening episode and before the next screening examination (within 24 months from the date of the previous screen)
- a case of invasive breast cancer that is diagnosed at early review or in the interval between assessment and early review, where the recommendation for early review is six months or more from the screening date
- breast cancer diagnosed in a woman by BreastScreen Australia within 24 months of a negative screen (early rescreen) if the woman presents with a breast lump and/or clear or blood-stained nipple discharge in the breast in which the breast cancer was diagnosed, or
- an invasive breast cancer diagnosed between six and 24 months after a recommendation for assessment is made and a woman fails to attend assessment.

Invasive cancer: a tumour whose cells have invaded healthy or normal tissue.

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

Mammogram: a radiographic depiction of the breast.

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

Mortality: see *Cancer death*.

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

Next scheduled screening examination: 24 months after previous screen unless the woman is recommended for annual rescreening, when the next scheduled screening examination is 12 months.

Population estimates: official population numbers compiled by the Australian Bureau of Statistics at both state and territory and statistical local area levels by age and sex, as at 30

June each year. These estimates allow comparisons to be made between geographic areas of differing population sizes and age structures.

Prevalence: the number of instances of a specific disease or other condition in a given population at a designated time.

Recruitment: strategies that aim to promote participation of women in the BreastScreen Australia Program through direct contact with women in the target age group and education of health practitioners and the general public. Women are encouraged to attend every 2 years.

Rescreening: the next screening examination after the screening episode in the index screening year.

Risk factor: an attribute or exposure that is associated with an increased probability of a specified outcome, such as the occurrence of a disease. Risk factors are not necessarily the causes of disease.

Screening: the performance of tests on apparently well people in order to detect a medical condition at an earlier stage than would otherwise be the case. As a screening test is not intended to be diagnostic, a person with a positive or suspicious result must be referred for diagnosis and treatment.

Screening episode: a screening episode includes all attendances for screening and assessment within 6 months relating to a particular round of screening. It commences at the date of attendance for screening. It is completed when:

- (i) a recommendation is made to return the woman to routine rescreening
- (ii) a recommendation is made for early review at 6 months or more from the screening date
- (iii) a diagnosis of cancer is made
- (iv) the woman fails to attend for technical recall or assessment within 6 months
- (v) the woman dies.

Screening round: the first screening round is a woman's first visit to a mammography screening service; a subsequent screening round means that she has been screened before. If she attends for the fourth screening round, she has been screened three times before.

Screening round (first): a woman's first visit to a BreastScreen Australia mammography screening service.

Screening round (subsequent): a woman's visit to a BreastScreen Australia mammography screening service when she has attended such a service before.

Sensitivity: the proportion of people with a disease who have a positive test result for the disease.

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

Symptom: any evidence of disease apparent to the patient. For the purposes of this report, symptoms refer to a self-reported breast lump and/or blood-stained or watery nipple discharge.

Ultrasound: diagnostic method based on the reflection of ultrasonic sound waves generated through scanning of, in this case, the breast. The reflections are viewed on a computer screen or photograph and checked for variations in images.

Unit record file: observations containing person-specific records from health surveys and administrative databases that are unanalysed and not tabulated. This is the most basic form

of data and cannot be accessed for general use without appropriate confidentiality measures being in place.

Women 'at risk' of interval or screen-detected breast cancer are:

- all women screened aged 50-69 years who are resident in the service catchment area in which they are screened at the time of screening who have not reported a personal history of invasive cancer or DCIS
- women who are recommended for annual rescreening are only at risk of interval cancer up until 12 months after the screening examination
- women who are recommended for routine rescreening are only at risk of an interval cancer up until 24 months after the screening examination.

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