

**BreastScreen Australia
monitoring report 2002–2003**

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

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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.

