Cancer Series
Number 25

BreastScreen Australia Monitoring Report 2000–2001

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

Australian Institute of Health and Welfare
Canberra
AIHW cat. no. CAN 20

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This publication is part of the Australian Institute of Health and Welfare's Cancer Series. A complete list of the Institute's publications is available from the Media and Publishing Unit, Australian Institute of Health and Welfare, GPO Box 570, Canberra ACT 2601, or via the Institute's web site (http://www.aihw.gov.au).

ISSN 1039-3307

ISBN 1 74024 348 X

Suggested citation

Australian Institute of Health and Welfare (AIHW) 2003. BreastScreen Australia monitoring report 2000–2001. AIHW cat. no. CAN 20. Canberra: Australian Institute of Health and Welfare (Cancer Series no. 25).

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Published by Australian Institute of Health and Welfare.

Printed by Union Offset Printers

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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 and its Monitoring and Evaluation Working Group and the Population Screening Section of the Department of Health and Ageing.

The authors of this report were Cathy Hotstone, Chris Stevenson and John Harding. 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 Clearing House) and data on ductal carcinoma in situ.

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Summary

This is the fifth national monitoring report for the BreastScreen Australia Program. The third and fourth reports have been combined in the *BreastScreen Australia Monitoring Report 1998–1999 and 1999–2000,* which is available as an internet-only publication on the Australian Institute of Health and Welfare's web site (http://www.aihw.gov.au). This fifth report presents statistics on BreastScreen Australia screening activity and outcomes for 2000–2001. A reporting interval of two years is used because it corresponds with the recommended interval between screens for asymptomatic women in the target age group of 50–69 years.

Participation

- In 2000–2001, 1,567,544 women participated in BreastScreen Australia screening. Of these women, 1,063,479 (68%) were in the screening program target age group of 50–69 years.
- Between the periods 1999–2000 and 2000–2001 the proportion of women in the target population (women aged 50 to 69 years) participating in the BreastScreen Australia Program rose from 55.9% to 56.9%.
- Although there was some variation in participation rates among different socioeconomic groups, the difference between the most and the least disadvantaged groups was only marginally significant, and all groups had participation rates above 55%. Greater variation in participation rates was observed for different cultural and linguistic groups. At 36.2%, the age-standardised participation rate for Indigenous women in the target age group was significantly lower than both the national participation rate and the participation rate for non-Indigenous women.

Detection of cancer

- 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 2001, 65% of all invasive breast cancers detected by BreastScreen Australia were small-diameter cancers. This proportion was reduced to 56.4% for women who were attending for their first screen and increased to 66.6% for women who had previously been screened.
- For women in the target age group, the age-standardised rate of small-diameter invasive cancer detection was 29 per 10,000 women screened in 2001. This was not significantly different from the 2000 rate of 29.6 per 10,000 women screened.
- Across the states and territories the age-standardised rates of interval cancer (that is, an invasive cancer detected between two screening rounds, see glossary) for women in the target age group in the 24 months after their first screen ranged from 5.6 per 10,000 women-years in the Australian Capital Territory to 14.5 per 10,000 women-years in Tasmania.
- '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 ranged from 68.2% in Tasmania to 81.3% in Western Australia.

- In 2001, 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 was 11.2 per 10,000 women screened for women in the target age group and 10.4 per 10,000 women screened for all women aged 40 and over.

Recall for assessment

- The proportion of women recalled for assessment because of an abnormal mammogram result was significantly higher for women being screened for the first time in 2001 compared with women who had previously been screened. The age-standardised recall rate was 8.3% for women attending their first round of screening. For women attending for their second or subsequent screen, only 4.0% (age-standardised) were recalled for assessment because of an abnormal result.

Rescreening

- The proportion of women attending a BreastScreen Australia service in 1999 and returning for rescreening within the recommended 27-month interval increased with the number of previous screens. The age-standardised national rescreen rate for women attending a BreastScreen Australia service in 1999 for the first time was 64.7%. The rescreen rate increased to 75% for women attending for their second screen and 82.5% for women attending for a third or subsequent screen within 27 months.

Breast cancer incidence

- With some fluctuation, there was a notable increase between 1987 and 2000 in the age-standardised breast cancer incidence rates for women in the target age group. Incidence increased in the target age group from 197.1 new cancers per 100,000 women in 1987 to 296.9 per 100,000 women in 2000.
- Of the 11,316 new cases of breast cancer in 2000, 5,452 (48%) occurred in women in the target age group. Only 6% of cases were women aged under 40 years. Age-specific incidence rates in 2000 ranged from 115.2 new cancers per 100,000 women in the 40–44 age group to 337.4 new cases per 100,000 women in the 60–64 age group.

Breast cancer mortality

- From 1993 onwards, a steady decline is evident in the age-standardised mortality rates for women in the target age group. The mortality rate for these women was 66.8 deaths per 100,000 women in 1988; in 2001, the corresponding figure was 51.8. A similar pattern of decline in mortality rates can be observed in women aged 70 and over. Mortality rates for women aged under 50 years remained the lowest and most consistent, staying below 8 deaths per 100,000 women for the period 1987 to 2001.

Introduction

This report on the performance of the BreastScreen Australia Program during 2000 and 2001 marks an important anniversary. Australia's national mammographic screening program was established in 1991, so it has now been operating for over 10 years, delivering quality breast cancer screening services to Australian women.

By the mid-1980s there was a growing body of international evidence that an organised approach to mammography screening would result in a significant decrease in breast cancer mortality. Towards the end of the 1980s a number of small private and public sector breast screening services had been established in Australia.

In November 1987, the Australian Health Ministers Advisory Council endorsed a recommendation to establish a National Breast Cancer Screening Evaluation study to assess the feasibility and cost-effectiveness of establishing a national breast cancer screening program. Specifically, the evaluation was to assess the possibility of providing high-quality services that were acceptable and accessible to women and that represented value for money. The Commonwealth committed $3.1 million over three years to this joint initiative with the state and territory health departments; additional funding of $2.8 million was provided for mobile screening units in 1989–90.

The National Breast Cancer Screening Evaluation was overseen by the Breast Cancer Screening Steering Committee, which provided advice on a range of pilot projects and their evaluation. The Steering Committee was supported by the Screening Evaluation Co-ordination Unit, established at the then Australian Institute of Health.

The National Breast Cancer Screening Evaluation included 11 breast cancer screening units, some of which were pre-existing and others being established as part of the evaluation. Both public and private screening units were included in the evaluation, from all states and territories except Tasmania. The aim of the evaluation was to establish whether breast cancer screening could be effectively implemented in Australia and achieve the screening participation rates and results obtained in other countries.

In 1990 the Screening Evaluation Co-ordination Unit provided its report, *Breast cancer screening in Australia: future directions*, to the Australian Health Ministers Advisory Council. The report covered the epidemiological basis for and cost-effectiveness of introducing an organised breast cancer screening program in Australia. It also examined the acceptability of screening to Australian women and whether the Australian health system had the capacity to deliver screening. Finally, it discussed and made detailed recommendations about the policy aspects of developing a national screening program. These included the parameters for eligibility for screening—in particular, identifying the target age group—and the screening interval. Other important components were providing a foundation for quality assurance across the breast cancer screening pathway, ensuring equal access, and maintaining the involvement of general practitioners. The report also stressed the importance of continued monitoring and evaluation of the screening program over time. It noted that there was sufficient evidence to support the development of a national screening program, and it provided the basis for the development of the National Program for the Early Detection of Breast Cancer.

Promoting breast cancer screening

In 1994–95, the Commonwealth committed funding over five years towards the development of a social marketing campaign, including the mass media, to inform women about the breast cancer screening program and to promote the benefits of early detection to reduce deaths and illness from breast cancer.

In 1995 Sara Henderson, the well-known Northern Territory cattle-station owner, author and motivational speaker became the figurehead of the BreastScreen Australia campaign. The Sara Henderson campaign concept and advertising materials included television and radio commercials, magazine and press advertisement, and supporting promotional material.

Campaign media activity has included a mix of metropolitan and regional television advertising and magazine and community radio advertising. Some campaign activity has specifically sought to target women from non-English speaking backgrounds via SBS Television and community radio. General practitioners have also been targeted with specific information dissemination strategies. BreastScreen Australia advertising material was included in the 1998–99 Essentials GP Patient Counselling Kit and tear-out leaflets on breast cancer screening were sponsored by BreastScreen Australia to provide patients with information about the benefits of screening.

Since the campaign began in 1995 various public relations activities have been implemented to support it. These have played an important role in building on and reinforcing messages to the target audience.

Some of the main activities have been:

- *placing editorials in newspapers and magazines;*
- *community service announcements on SBS Television and community radio;*
- *distributing posters and brochures in general practitioners' surgeries and health centres;*
- *distributing program information and bookmarks to libraries;*
- *promoting the campaign through Sara Henderson's book tour in 1995;*
- *promoting the program in the media; and*
- *developing the 13 20 50 information phone line and internet site.*

In 1990, the Commonwealth announced funding of $64 million over three years to implement a national program for the early detection of breast cancer, based on the recommendations in the Screening Evaluation Co-ordination Unit report. The program was jointly funded by the Commonwealth and the states and territories and was to be phased in over five years.

The National Advisory Committee for the Early Detection of Breast Cancer was established in 1991. Its role was to provide advice relating to implementation of the National Program. The early 1990s focused on a range of activities related to implementing a national breast cancer screening program. The Commonwealth established a National Coordination Unit collaborating with the states and territories to develop and implement policies, funding formulae, quality management infrastructure, processes and organisational systems. The states and territories established State Coordination Units and developed five-year plans for the systematic implementation of breast cancer screening and assessment services tailored to the state or territory's health system and environment. The State Coordination Units also provided critical input at the national level to the policies and protocols that would guide the breast cancer screening program and provide for a consistent, truly national program. The following are among the achievements of that early period:

- the development of national minimum accreditation guidelines and an accreditation system to ensure that breast cancer Screening and Assessment Services were providing

high-quality, effective services to women. The guidelines were replaced by the National Accreditation Requirements in 1994;

- establishment of a national minimum data set;
- establishment and operation of state and territory data systems to ensure that women received appropriate follow-up and to enable monitoring and evaluation of the Program;
- a summary of the major age-related issues in breast cancer screening and an information statement about the efficacy of screening mammography for women of various age groups;
- multi-disciplinary and uni-disciplinary training packages were developed by the Commonwealth in collaboration with the state and territory Programs. Training programs were offered at the national and state and territory levels for all clinical and non-clinical staff working in the Program;
- examination of issues related to the inclusion of open biopsy in the Program;
- exploration of medico-legal considerations; and
- establishment of a national freecall number for the Program—13 20 50—to support appointment and information processes for women.

In 1996, the name of the Program was changed to BreastScreen Australia and the National Advisory Committee was reconstituted. To celebrate the achievements of the Program, a National Breast Cancer Conference was held in 1997. Since that time, the National Advisory Committee has been working on refining BreastScreen Australia policies and national activities. The following have been important achievements:

- collection and publication of data against agreed national performance measures;
- review of the National Accreditation Requirements and endorsement of the new BreastScreen Australia National Accreditation Standards;
- development of a transparent and consistent tool to support accreditation decision making;
- the BreastScreen Australia Evaluation Plan agreed and the first project under that plan, the, BreastScreen Australia Data Dictionary, completed;
- development of a BreastScreen Australia Monitoring Plan;
- research on the BreastScreen Australia Radiographer and Radiologist workforces;
- issuing of BreastScreen Australia National Information Statements;
- agreement on a strategy for increasing the participation of Aboriginal and Torres Strait Islander women in breast cancer screening, based on broad consultation with Indigenous women and organisations;
- agreement on a BreastScreen Australia National Data Policy; and
- adoption of the BreastScreen Australia National Policy Framework on Symptomatic Women.

However, the greatest achievement in the period from 1996 to 2001 is that the BreastScreen Australia Program has provided over 4.5 million screening mammograms. During that period, the program has also consistently maintained cancer detection rates and detection rates for small cancers at or above those set as minimum standards for services to achieve.

Providing services in rural and remote areas

The BreastScreen Australia Program has developed some innovative approaches to ensuring that women in rural and remote areas have access to screening and assessment services. A network of 46 mobile screening units currently operates in over 500 locations throughout the country.

To provide access to women living in some of the most remote regions of Australia it has been necessary to purpose-build four-wheel-drive trucks that enable the transport of mammography equipment by road and barge. To ensure that services are available to women in the Torres Strait Islands, for example, a four-wheel-drive truck requires three separate barge trips – the first from the mainland coast by landing barge to the coastal freighter (where the transfer of the truck from one vessel to the other happens at sea), the second to Thursday Island, and the third from Thursday Island to the outer islands.

The staff of BreastScreen Australia take special care to ensure that visits to rural communities are successful. Before the mobile unit arrives, the recruitment and promotional staff visit to conduct publicity drives, provide training for local health workers and general practitioners, and check the proposed screening site, power and other technical requirements as well as access for equipment, clients and staff.

For most women who attend for breast cancer screening, their result will be normal, with no cancer detected. For some women, however, abnormalities that require further assessment will be detected.

To enable rural women to attend BreastScreen Australia assessment services, the states and territories operate a travel subsidy scheme, which assists with the cost of travel and accommodation for women and, in some cases, their carers.

Many rural communities have become strong partners in providing support for visits of the BreastScreen Australia mobile units. In Queensland, for example, a team of trained volunteers from the Queensland Country Women's Association and The Older Women's Network help women fill out their forms when they arrive for their screening appointments. BreastScreen Australia recognises the value of community partnership, and activities such as these help ensure a high participation rate. In 2001–2002, 61% of eligible Queensland women living in rural, remote and regional areas participated in the Program; this compares with only 55% of urban women in the south-east corner of the state.

Since the introduction of the national breast cancer screening program, there has been a 23.7% reduction in female deaths from breast cancer[1] in the target age range of 50–69 years. The survival rate five years after diagnosis of breast cancer increased from 72.3% during 1982 to 1986 to 84.0% between 1992 and 1997. These encouraging results can be attributed to early detection through screening combined with improvements in treatment and drug therapies. Nevertheless, breast cancer remains a major health concern for Australian women. More women die from it than from any other form of cancer: in 2001 it caused the death of 2,585 Australian women. The lifetime risk of an Australian woman developing breast cancer is one in eleven.

1 Based on data for the years 1993 to 2001.

There are still challenges for BreastScreen Australia to redevelop and target recruitment strategies to better meet the needs of women and encourage them to participate in the Program. In addition, to achieve the desired level of participation, the Program needs to provide more flexible access to services, in particular to meet the needs of the cohort of baby boomers, who are aging into the target age group and are more likely to be in the paid workforce and might therefore have difficultly accessing BreastScreen Australia services. Maintenance of high standards and development of the workforce and service capacity to achieve the target participation rate of 70% with the increase in the eligible population will also be important challenges for the Program in the next five years. The Program does, however, have a strong base to build on and a structure and ethos that supports continuous quality improvement. The results of the Program to date and the input and efforts of all those working in the Program attest to that.

Key features of BreastScreen Australia

- A doctor's referral is not required.
- Services are free to eligible women.
- Services are located throughout each Australian state and territory, using fixed or mobile services to ensure that the Program is accessible to all women.
- Recruitment and reminder systems aim to ensure that women in the target group are screened and rescreened in accordance with Program policy. The target group for screening is women aged 50–69 years, but women aged 40–49 years and over 70 years are also eligible to attend.
- Comprehensive, multi-disciplinary follow-up assessment services ensure that all women with a screen-detected breast abnormality have appropriate specialist clinical assessment to the point of diagnosis and referral to treatment services.
- A comprehensive system of accreditation ensures that all BreastScreen Australia services operate under a common set of standards. Each service is regularly assessed by an independent multi-disciplinary team to ensure that the service provided complies with national standards.

Aims and Objectives of the BreastScreen Australia Program

Aims

- To ensure that the Program is implemented in such a way that significant reductions can be achieved in morbidity and mortality attributable to breast cancer.
- To maximise the early detection of breast cancer in the target population.
- To ensure that screening for breast cancer in Australia is provided in dedicated accredited screening and assessment services as part of the BreastScreen Australia Program.
- To ensure equitable access to the Program for women aged 50-69 years.

- To ensure that services are acceptable and appropriate to the needs of the eligible population.
- To achieve high standards of program management, service delivery, monitoring and evaluation, and accountability.

Objectives

- To achieve a 70% participation rate in the BreastScreen Australia Program by women in the target age group and access to the Program for women aged 40–49 years and 70 years and over.
- To rescreen all women in the Program at two-yearly intervals.
- To achieve agreed performance outcomes that minimise recall rates, retake films, invasive procedures, 'false negatives', and 'false positives', and to maximise the number of cancers detected, particularly the number of small cancers.
- To refer to appropriate treatment services and collect information about the outcome of treatment.
- To fund through State Coordination Units Screening and Assessment Services that are accredited according to agreed National Accreditation Standards and to ensure that those Standards are monitored and reviewed by appropriate State and Territory Accreditation Committees.
- To recognise the real costs to women of participation in the Program and to minimise those costs. This includes the provision of services at minimal or no charge and free to eligible women who would not attend if there was a charge.
- To make information about mammographic screening and the BreastScreen Australia Program available in easily comprehensible and appropriate forms in a variety of forums and to women and health-care providers in particular.
- To achieve patterns of participation in the Program that are representative of the socioeconomic, ethnic and cultural profiles of the target population.
- To provide services in accessible, non-threatening and comfortable environments, using staff with appropriate expertise, experience and training.
- To provide appropriate service, in that the provision of counselling, education and information is an integral part of the Program; sensitive procedures for notification of recall are in place; and the time between the initial screen and assessment is minimised.
- To achieve high levels of participation in the development and management of the Program by members of significant professional and client groups.
- To collect and analyse data sufficient to monitor the implementation of the Program, to evaluate its effectiveness and efficiency, and to provide the basis for future policy and program development decisions.

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 to attend for screening if BreastScreen Australia is to realise the anticipated reductions in overall mortality from breast cancer (DHSH 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 2000 and 2001.

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 2000–2001 was 56.9%. This rate has been steadily increasing since 1996–1997, when it was 52.3%.

Age-standardised participation rates for women in the target age group (50–69 years), Australia, 1996–1997 to 2000–2001

	Objective[(a)]	1996–1997	1997–1998	1998–1999	1999–2000	2000–2001
Rate (%)	70.0	52.3	54.3	55.6	55.9	56.9
95% CI	. .	52.1–52.3	54.1–54.4	55.5–55.8	55.8–56.0	56.8–57.0

(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.

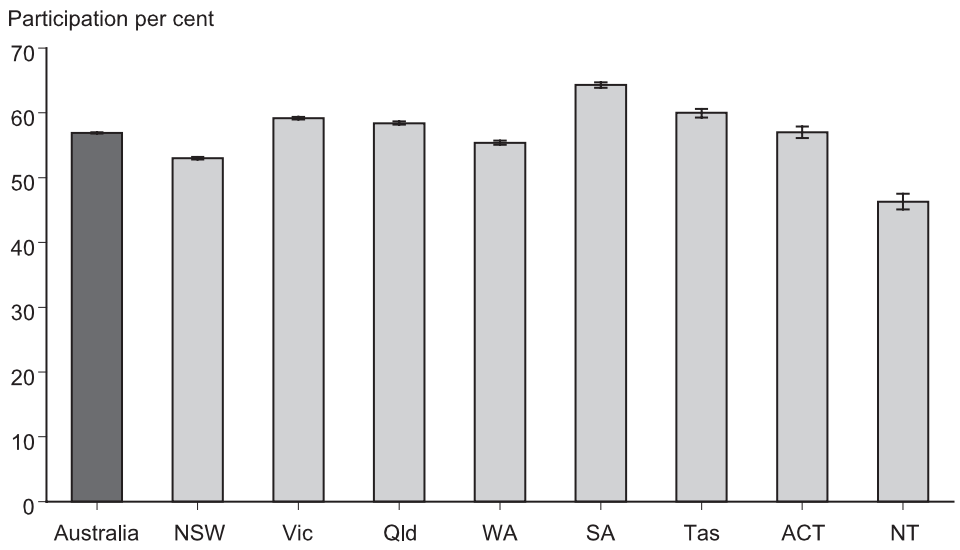
Another BreastScreen Australia objective relating to participation is 'To achieve patterns of participation in the Program which are representative of the socioeconomic, ethnic and cultural profiles of the target population' (BSANAC & DHAC 2000). This chapter reports national participation rates by region, socioeconomic status, Indigenous status, and main language spoken at home.

Participation rates in capital cities and 'Other remote areas' were significantly lower than those in other regions. The lower participation rates in capital cities may reflect greater access to 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. For some women, proximity to services could create over-familiarity and lead to postponement of screening in order to accommodate other priorities. Lower rates in remote areas may reflect a larger proportion of Indigenous women in the target age group who may not find services culturally accessible. However, there are no data to test these hypotheses. Although the participation rate for 'Other remote areas' is lower than that for all other regions except capital cities, it is similar to the all-Australia rate. Participation in country areas is encouraged through the use of mobile mammography units.

There was some variation in the participation rates among different socioeconomic groups, but there was only a marginally significant difference between the most and the least disadvantaged groups. This demonstrates the success of the program in reaching women at all socioeconomic levels, since there is no decline in participation with decreasing socioeconomic status.

Participation among Indigenous women was significantly lower than that of non-Indigenous women. Similarly, participation among women who speak a language other than English at home was significantly lower than that of women who speak English at home. 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, 2000–2001



Note: Bars on columns represent 95% confidence intervals.

Source: AIHW analysis of BreastScreen Australia data.

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Rate (%)	56.9	53.0*	59.2*	58.4*	55.4*	64.3*	60.0*	57.0	46.3*
95% CI	56.8–57.0	52.9–53.2	59.0–59.4	58.1–58.6	55.1–55.7	63.9–64.7	59.3–60.6	56.0–57.8	45.1–47.5

* Significantly different from the all-Australia rate.

Notes

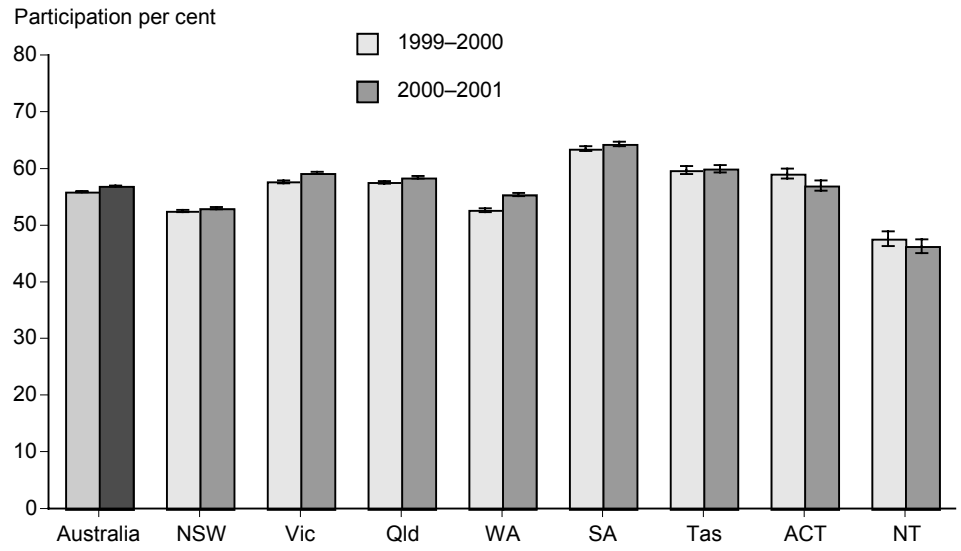
1. Rates are the number of women screened as a percentage of the eligible female population and age-standardised to the Australian population at 30 June 2001.
2. Period covers 1 January 2000 to 31 December 2001.

- In 2000–2001, 1,567,544 women were screened as part of the BreastScreen Australia Program. Of these women, 1,063,479 (68%) were in the target age group (50–69 years).
- In 2000–2001, 56.9% (age-standardised) of women in the target age group attended a BreastScreen Australia service. The corresponding participation rate for all women aged 40 and over was 37.5% (Table 2).
- Across states and territories, the age-standardised participation rate for women in the target age group ranged from 46.3% in the Northern Territory to 64.3% in South Australia.

For more information, see:

Tables 1 and 2

Participation of women aged 50–69 years in BreastScreen Australia, 1999–2000 and 2000–2001



Note: Bars on columns represent 95% confidence intervals.

Source: AIHW analysis of BreastScreen Australia data.

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
1999–2000	55.9	52.5	57.7	57.6	52.7	63.5	59.7	59.1	47.6
95% CI	55.8–56.0	52.3–52.7	57.4–57.9	57.3–57.8	52.3–53.0	63.1–63.9	59.0–60.4	58.2–60.0	46.3–48.9
2000–2001	56.9*	53.0*	59.2*	58.4	55.4*	64.3	60.0	57.0*	46.3
95% CI	56.8–57.0	52.9–53.2	59.0–59.4	58.1–58.6	55.1–55.7	63.9–64.7	59.3–60.6	56.0–57.8	45.1–47.5

* Significantly different from the 1999–2000 rate.

Notes

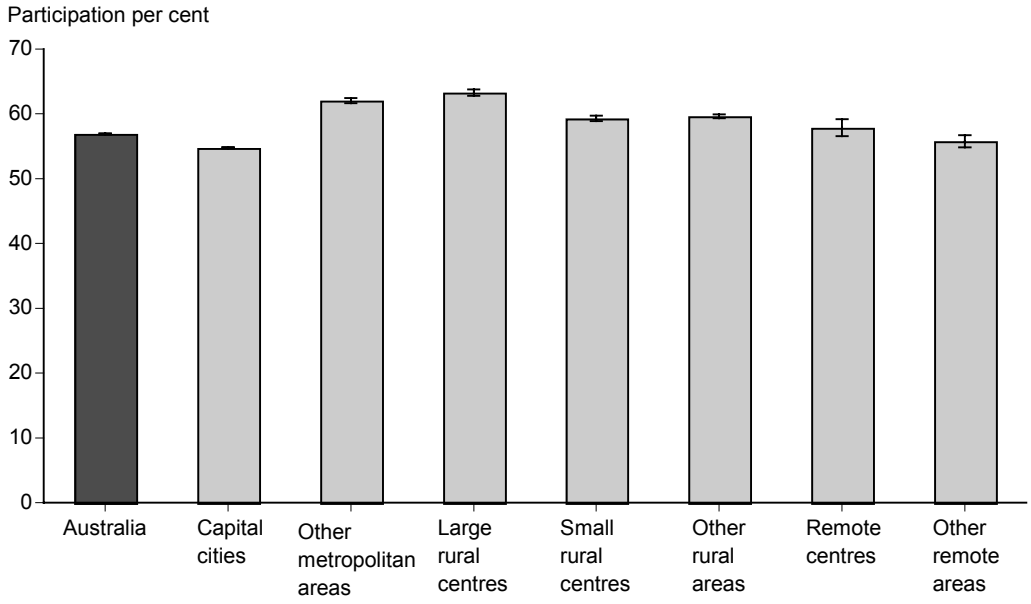
1. Rates are the number of women screened as a percentage of the eligible female population and age-standardised to the Australian population at 30 June 2001.
2. Periods cover 1 January 1999 to 31 December 2000 and 1 January 2000 to 31 December 2001.

- Nationally, participation in BreastScreen Australia among women in the target age group rose significantly from 1999–2000 to 2000–2001. The national age-standardised participation rate for women in the target age group rose from 55.9% in 1999–2000 to 56.9% in 2000–2001.
- New South Wales, Victoria, Western Australia and the Australian Capital Territory were the only jurisdictions to show a significant change in their age-standardised participation rates for women in the target age group in 2000–2001. In Victoria, the rate rose from 57.7% in 1999–2000 to 59.2% in 2000–2001 and in Western Australia it rose from 52.7% to 55.4%. In the Australian Capital Territory the participation rate fell from 59.1% to 57.0%.

For more information, see:

Tables 1 and 2

Participation of women aged 50–69 years in BreastScreen Australia by region, 2000–2001



Note: Bars on columns represent 95% confidence intervals.

Source: AIHW analysis of BreastScreen Australia data.

	Australia	Capital cities	Other metro	Large rural centres	Small rural centres	Other rural areas	Remote centres	Other remote
Rate (%)	56.9	54.8*	62.1*	63.3*	59.3*	59.6*	57.9	55.8*
95% CI	56.8–57.0	54.6–54.9	61.7–62.5	62.8–63.7	58.9–59.7	59.3–59.9	56.6–59.2	54.8–56.7

* Significantly different from the all-Australia rate.

Notes

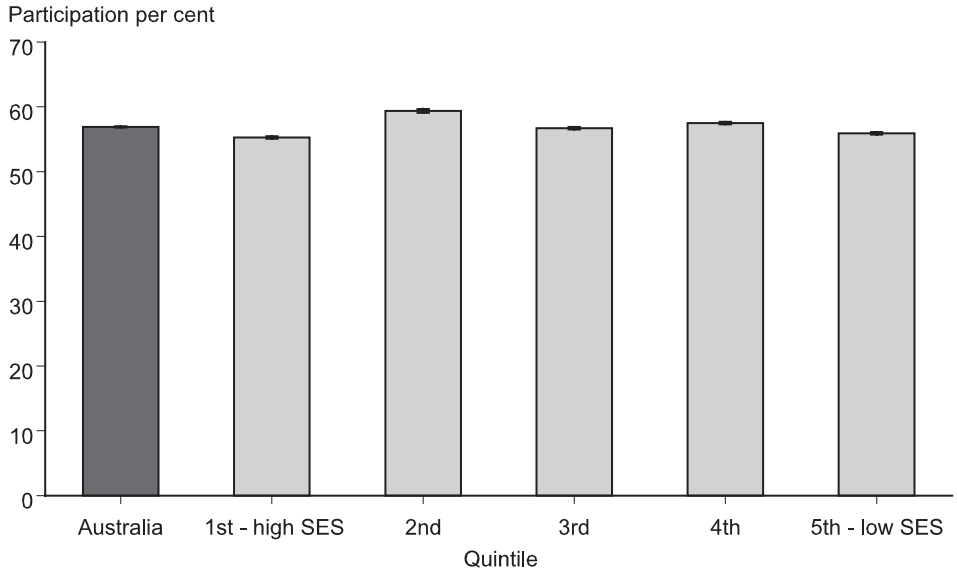
1. Rates are the number of women screened as a percentage of the eligible female population and age-standardised to the Australian population at 30 June 2001.
2. Period covers 1 January 2000 to 31 December 2001.

- The age-standardised participation rate for women in the target age group (50–69 years) ranged from 54.8% in 'Capital cities' to 63.3% in 'Large rural centres'.
- In all regional categories except 'Capital cities', 'Remote centres' and 'Other remote', the age-standardised participation rates for women in the target age group were significantly higher than the national rate. The rate of 54.8% recorded for 'Capital cities' was significantly lower than the national rate of 56.9%.

For more information, see:

Table 3

Participation of women aged 50–69 years in BreastScreen Australia by socioeconomic status, 2000–2001



Notes:

1. Bars on columns represent 95% confidence intervals.
2. SES means socioeconomic status.

Source: AIHW analysis of BreastScreen Australia data.

	Australia	1st quintile	2nd quintile	3rd quintile	4th quintile	5th quintile
Rate (%)	56.9	55.3*	59.4*	56.7	57.5*	55.9*
95% CI	56.8–57.0	55.1–55.6	59.2–59.7	56.4–56.9	57.3–57.8	55.7–56.1

* Significantly different from the all-Australia rate.

Notes

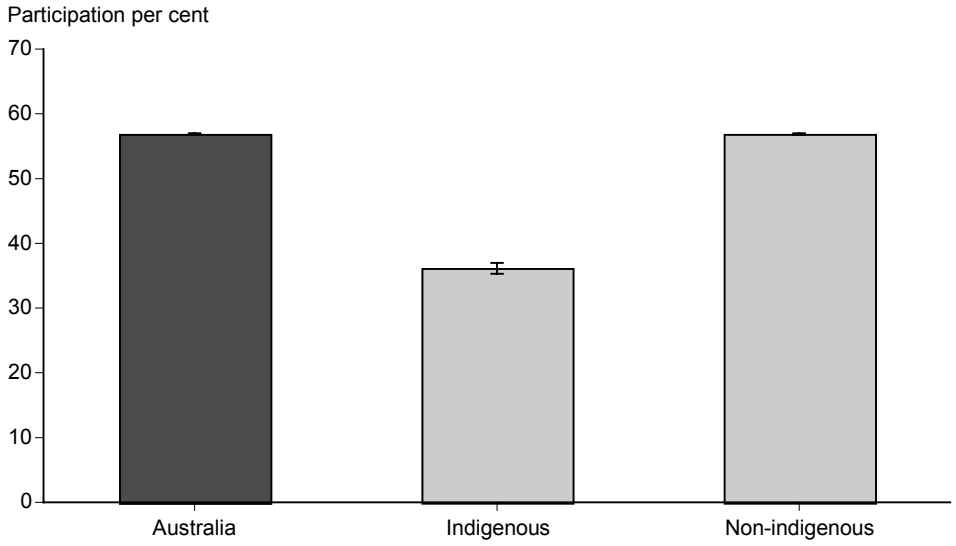
1. Rates are the number of women screened as a percentage of the eligible female population and age-standardised to the Australian population at 30 June 2001.
2. Period covers 1 January 2000 to 31 December 2001.
3. The first quintile corresponds to the highest socioeconomic status and the fifth to the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

- Women in the target age group with the highest socioeconomic status had the lowest age-standardised participation rate (55.3%) in 2000–2001. The socioeconomic group with the highest age-standardised participation rate for women in the target age group was the second quintile (59.4%).
- For women in the target age group, the most disadvantaged group (fifth quintile) had a significantly higher participation rate (55.9%) than the least disadvantaged group (first quintile), at 55.3%. Both groups' participation rates were significantly lower than the national rate (56.9%).

For more information, see:

Table 4

Participation of women aged 50–69 years in BreastScreen Australia by Indigenous status, 2000–2001



Note: Bars on columns represent 95% confidence intervals.

Source: AIHW analysis of BreastScreen Australia data.

	Australia	Indigenous	Non-Indigenous
Rate (%)	56.9	36.2*	56.9
95% CI	56.8–57.0	35.3–37.0	56.8–57.0

* Significantly different from the all-Australia rate.

Notes

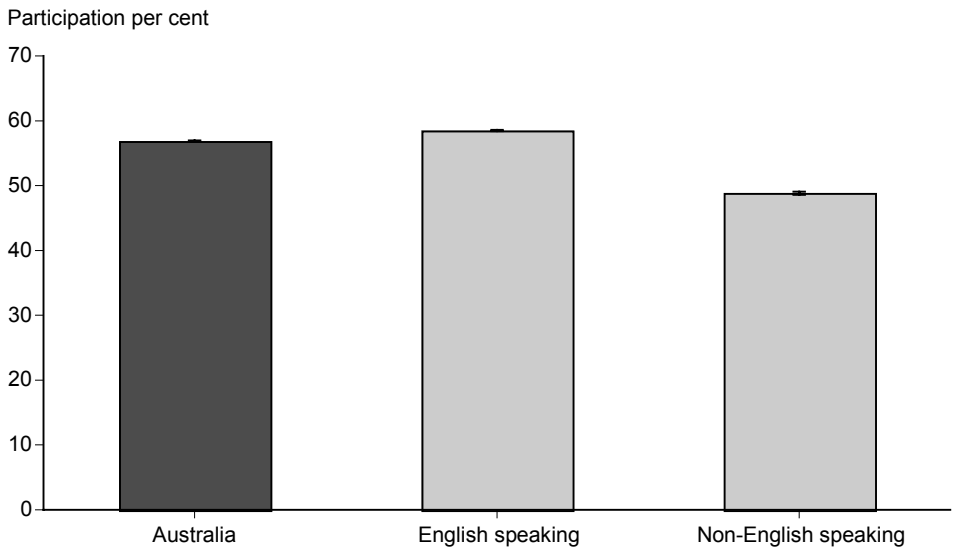
1. Rates are the number of women screened as a percentage of the eligible female population and age-standardised to the Australian population at 30 June 2001.
2. Period covers 1 January 2000 to 31 December 2001.
3. Women whose Indigenous status was recorded as 'not stated' were included in the analysis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

- Of the 1,567,544 women participating in screening through the BreastScreen Australia Program in 2000–2001, there were 10,960 (0.7%) who identified themselves as Indigenous. While 4,844 women were classified as not stating their Indigenous status, the true figure is higher because some jurisdictions classified these women as 'non-Indigenous' (Appendix A). The comparison of participation rates between Indigenous and non-Indigenous women should therefore be treated with caution.
- At 36.2%, the age-standardised participation rate for Indigenous women in the target age group was significantly lower than both the national participation rate and the non-Indigenous participation rate. The age-standardised participation rate for non-Indigenous women was the same as the national participation rate (56.9%).

For more information, see:

Table 5

Participation of women aged 50–69 years in BreastScreen Australia by language spoken at home, 2000–2001



Note: Bars on columns represent 95% confidence intervals.

Source: AIHW analysis of BreastScreen Australia data.

	Australia	English speaking	Non-English speaking
Rate (%)	56.9	58.5*	48.9*
95% CI	56.8–57.0	58.4–58.6	48.6–49.1

* Significantly different from the all-Australia rate.

Notes

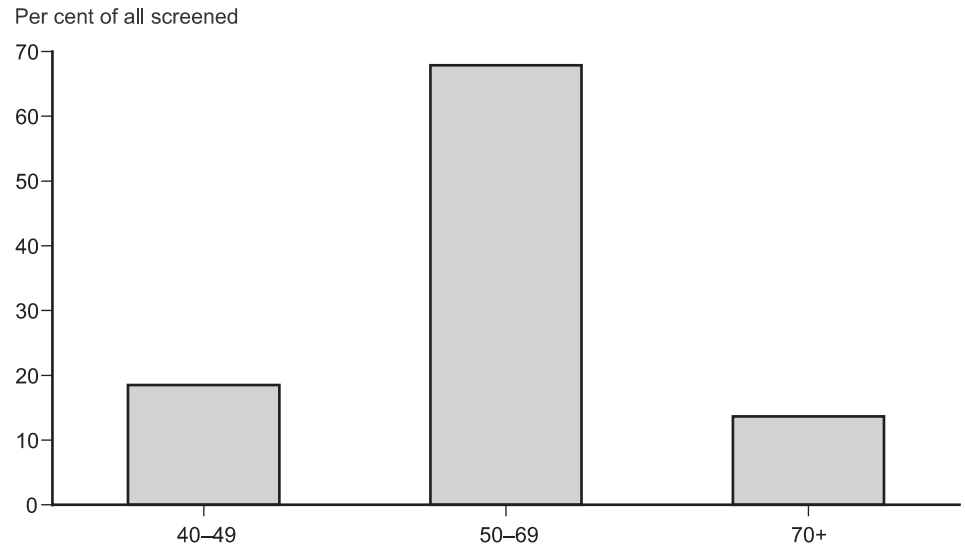
1. Rates are the number of women screened as a percentage of the eligible female population and age-standardised to the Australian population at 30 June 2001.
2. Period covers 1 January 2000 to 31 December 2001.
3. Women who were recorded as not stating their language spoken at home are included in the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

- Of the 1,567,544 women participating in screening through the BreastScreen Australia Program in 2000–2001, there were 212,844 (14%) who identified as non-English speaking. While 1,417 women 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.
- There was a significantly lower age-standardised rate of participation for women in the target age group from a non-English speaking background (48.9%) than for English speaking women (58.5%). English speaking women had a significantly higher participation rate, at 58.6%, than the national rate of 56.9% (age-standardised).

For more information, see:

Table 6

Age-distribution of women aged 40 years and over in BreastScreen Australia, 2000–2001



Source: AIHW analysis of BreastScreen Australia data.

Age	40–49	50–69	70+
%	18.5	67.8	13.7

Notes

1. Rates are the number of women screened as a percentage of all women aged 40 or over screened by BreastScreen Australia.
2. Period covers 1 January 2000 to 31 December 2001.

- The majority of women participating in the BreastScreen Australia Program in 2000–2001 were in the target age group (50–69 years). Of all women screened, 67.8% were aged 50–69 years, 18.5% were aged 40–49 years, and 13.7% were aged 70 years and over.

For more information, see:

Tables 1 and 2

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 (≤ 15mm) 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 invasive breast cancers that are 15 mm of less in size diagnosed in women attending BreastScreen Australia for screening. This is expressed as the number of 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 anticipated 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).

In 2001, 65% of all invasive breast cancers detected by BreastScreen Australia in women aged 40 and over were small diameter cancers.

The table below shows the percentage of all invasive cancers detected that were small diameter invasive breast cancers, by screening round, for women screened in 2001.

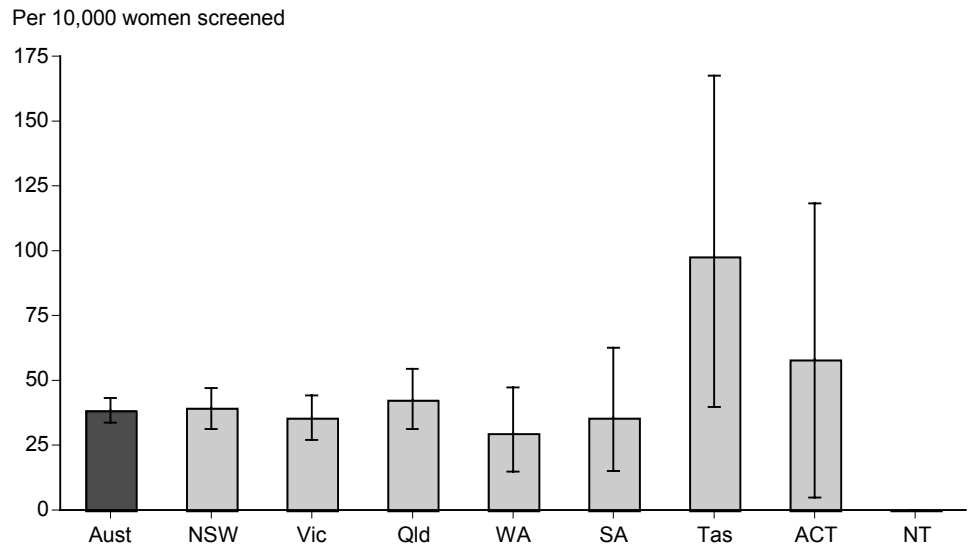
Percentage of invasive cancers detected that were small (≤ 15 mm) in diameter, 2001

	First screening round	Subsequent screening rounds
50–69 years	58.2	66.3
Ages 40 and over	56.4	66.6

Source: AIHW analysis of BreastScreen Australia data.

It is evident that 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 is because regular, biennial mammography provides the best chance for the detection of early-stage small cancers (AHMAC 1990).

Small (≤ 15mm) invasive breast cancer detection in women aged 50–69, first screening round, 2001



Note: Bars on columns represent 95% confidence intervals.

Source: AIHW analysis of BreastScreen Australia data.

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Rate	38.4	39.3	35.5	42.5	29.6	35.5	97.8	57.9	. .
95% CI	33.7–43.2	31.2–47.0	27.0–44.2	31.1–54.4	14.8–47.2	15.1–62.5	39.7–167.5	4.8–118.2	. .

. . Not applicable—no small invasive breast cancers were found in the Northern Territory at first-round screening in 2001.

Notes

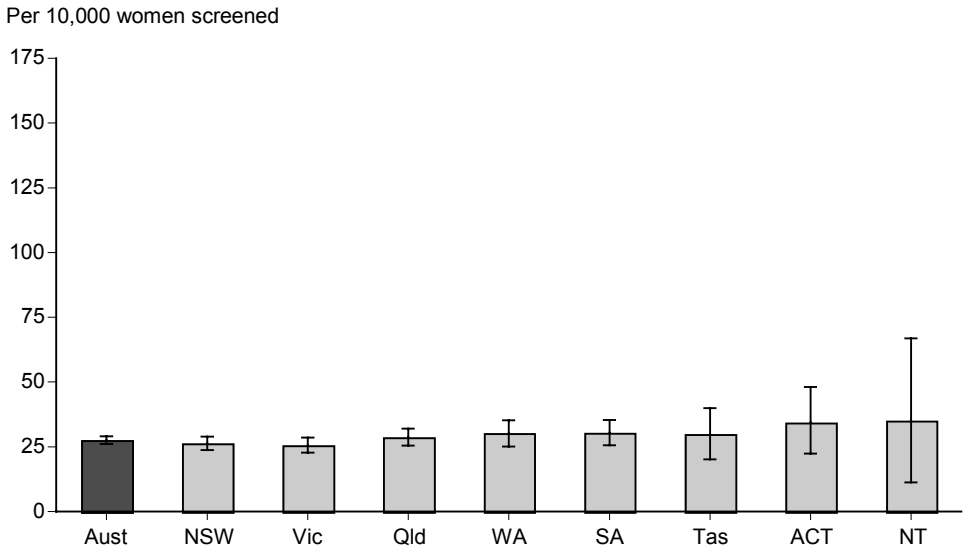
1. Rates are the number of small invasive cancers detected per 10,000 women screened and age-standardised to the population of women attending a BreastScreen Australia service in 1998.
2. None of the rates were significantly different from the all-Australia rate.

- Nationally, small diameter invasive cancers were found in 455 women aged 40 and over in the first round of screening. Of these women, 285 were in the target age group (50–69 years). The age-standardised detection rates were 38.4 per 10,000 women screened for women in the target age group and 39.3 per 10,000 women screened for all women aged 40 and over (see Tables 7 and 8).
- Across the states and territories, the age-standardised detection rate for small invasive cancers in women in the target age group ranged from none detected in the Northern Territory to 97.8 per 10,000 women screened in Tasmania. Large confidence intervals can be observed in the smaller states and territories due to the small number of cases detected in these states and territories (see Table 7).

For more information, see:

Tables 7 and 8

Small (≤ 15mm) invasive breast cancer detection in women aged 50–69, subsequent screening rounds, 2001



Note: Bars on columns represent 95% confidence intervals.

Source: AIHW analysis of BreastScreen Australia data.

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Rate	27.6	26.4	25.6	28.7	30.2	30.4	29.9	34.4	35.1
95% CI	26.1–29.0	23.7–28.9	22.8–28.6	25.5–32.0	25.1–35.2	25.6–35.3	20.1–39.9	22.3–48.1	11.3–66.9

Notes

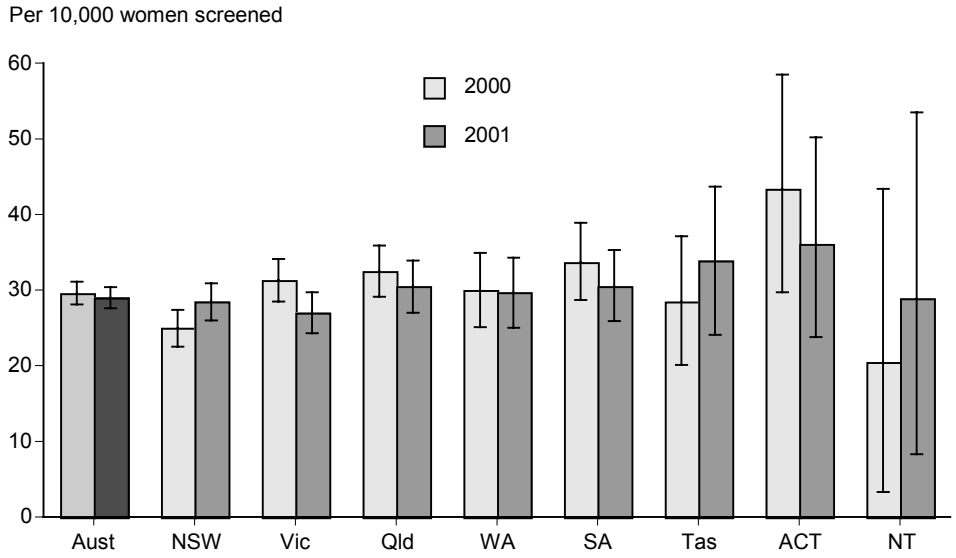
1. Rates are the number of small invasive cancers detected per 10,000 women screened and age-standardised to the population of women attending a BreastScreen Australia service in 1998.
2. None of the rates were significantly different from the all-Australia rate.

- For women in the target age group attending a BreastScreen Australia service for their second or subsequent screen in 2001, small (≤ 15 mm diameter) invasive cancers were detected at a rate of 27.6 per 10,000 women screened (age-standardised). The rate for all women aged 40 and over was not significantly different at 25.8 per 10,000 women screened. In both age categories, the small cancer detection rates for women attending their second or subsequent screen were significantly lower than the rates for women attending their first screen (Tables 8 and 10).
- The age-standardised detection rate of small invasive cancers by state and territory ranged from 25.6 per 10,000 women screened in Victoria to 35.1 in the Northern Territory. This difference was not statistically significant. Large confidence intervals can be observed in the smaller states and territories due to the small number of cases detected in these states and territories (see Table 9).

For more information, see:

Tables 9 and 10

Small (≤ 15mm) invasive breast cancer detection in women aged 50–69, all screening rounds, 2000 and 2001



Note: Bars on columns represent 95% confidence intervals.

Source: AIHW analysis of BreastScreen Australia data.

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
2000 rate	29.6	25.0*	31.3	32.5	30.0	33.7	28.5	43.4	20.5
95% CI	28.1–31.1	22.6–27.5	28.5–34.1	29.1–36.0	25.1–34.8	28.6–38.8	20.1–37.1	29.6–58.5	3.3–43.4
2001 rate	29.0	28.5	27.0	30.5	29.7	30.5	33.9	36.1	28.9
95% CI	27.7–30.4	26.0–30.9	24.3–29.7	27.1–33.9	25.0–34.3	26.0–35.3	24.1–43.7	23.8–50.2	8.3–53.5

* Significantly different from the all-Australia rate for the same period.

Notes:

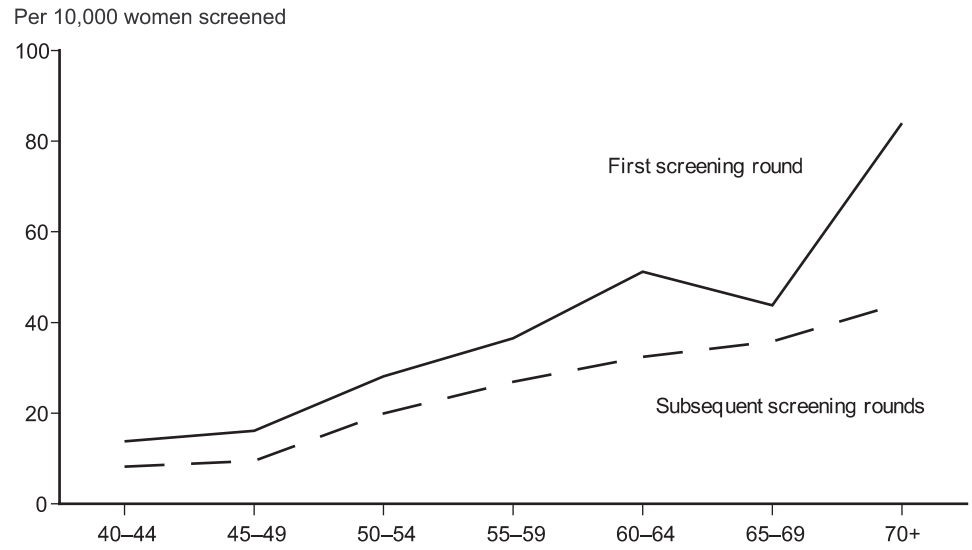
1. Rates are the number of small invasive cancers detected per 10,000 women screened and age-standardised to the population of women attending a BreastScreen Australia service in 1998.
2. None of the 2001 rates were significantly different from the 2000 rates.

- Nationally, the age-standardised rate of small (≤ 15 mm diameter) invasive cancer detection was 29 per 10,000 women screened in 2001. This was not significantly different from the 2000 rate of 29.6 per 10,000 women screened. Large confidence intervals can be observed in some states and territories due to the small number of cases detected.
- In 2001, small invasive cancers were detected in 2,379 women. Of these women, 1,652 (69%) were in the target age group (Table 11). Of women in the target age group with a screen detected cancer, 65% were women with small invasive cancers. The proportion of women with small invasive cancers of all women aged 40 and over with a screen detected cancer was also 65%.

For more information, see:

Tables 7, 8, 9, 10 and 11

Small (≤ 15mm) invasive breast cancer detection by age, 2001



Source: AIHW analysis of BreastScreen Australia data.

Age-specific rate	40–44	45–49	50–54	55–59	60–64	65–69	70+
First screening round	13.7	16.1	28.1	36.5	51.2	43.7	84.0
Subsequent screening rounds	8.2	9.5	19.9	26.9	32.4	35.8	44.3

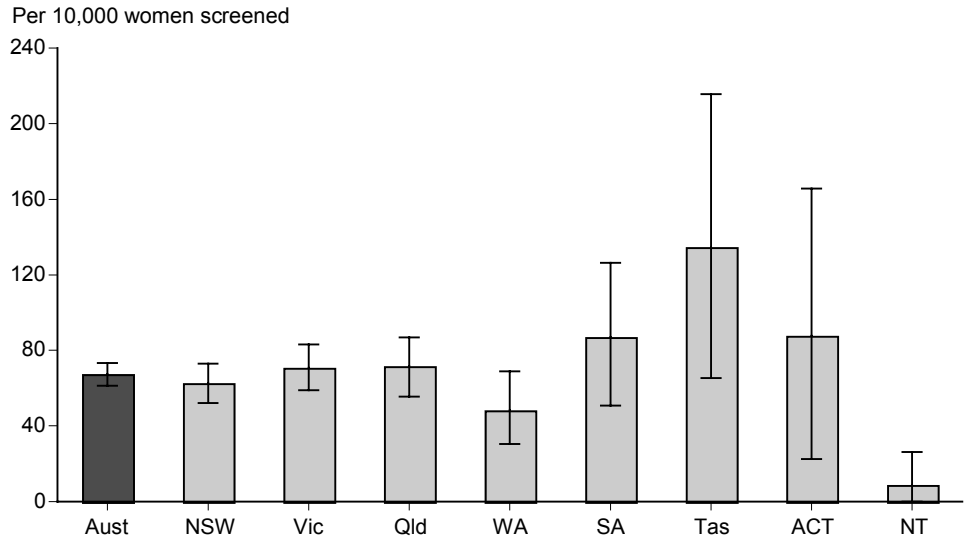
Note: Rates are the number of small invasive cancers detected per 10,000 women screened.

- The steady increase in the detection of small (≤ 15 mm diameter) invasive cancers with age in 2001 reflects the greater incidence of breast cancer with age (Table 42). The detection rate for women aged 40–44 making a first round attendance at a BreastScreen Australia service in 2000–2001 was 13.7 per 10,000 women screened. This rate increases to 84 per 10,000 women screened for women aged 70 and over, apart from a small fluctuation for women aged between 65 and 69. 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 8, 10 and 42

All-size invasive breast cancer detection in women aged 50–69 years, first screening round, 2001



Note: Bars on columns represent 95% confidence intervals.

Source: AIHW analysis of BreastScreen Australia data.

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Rate	67.3	62.5	70.7	71.6	48.2	86.9	134.8	87.6	8.8*
95% CI	61.2–73.2	52.0–73.0	58.9–83.0	55.5–86.7	30.3–68.8	50.7–126.4	65.3–215.6	22.5–165.7	0.0–26.3

* Significantly different from the all-Australia rate.

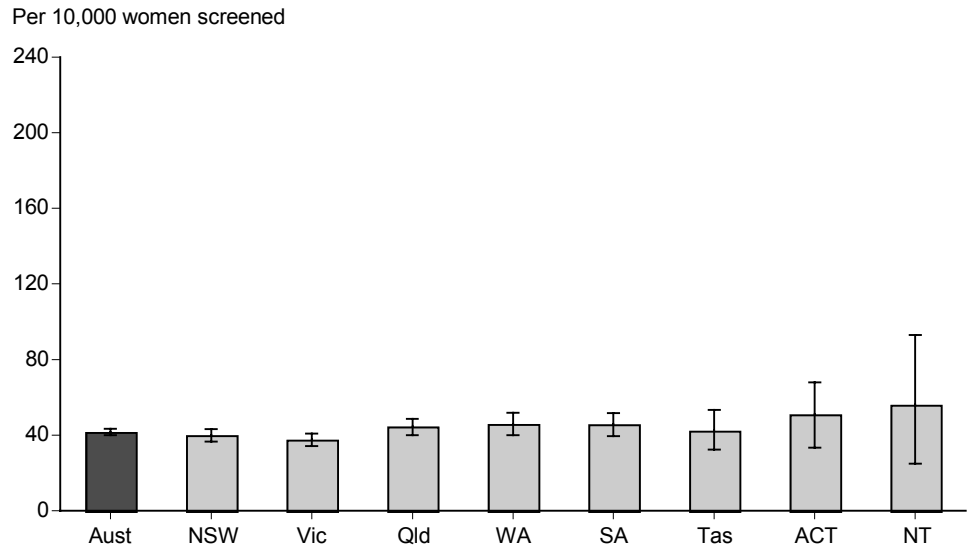
Note: Rates are the number of invasive cancers detected per 10,000 women screened and age-standardised to the population of women attending a BreastScreen Australia service in 1998.

- The age-standardised rate of detection of invasive cancers of all sizes for women attending a BreastScreen Australia Service for the first time in 2001 was 67.3 per 10,000 women screened. Across the states and territories, the Northern Territory had the lowest age-standardised detection rate, at 8.8 per 10,000 women screened, and Tasmania had the highest rate, at 134.8 per 10,000 women screened.
- The detection rate for invasive cancers among all women aged 40 and over (69.9 per 10,000 women screened) was not significantly different from the rate for women in the target age group (67.3 per 10,000 women screened).

For more information, see:

Tables 13 and 14

All-size invasive breast cancer detection in women aged 50–69 years, subsequent screening rounds, 2001



Note: Bars on columns represent 95% confidence intervals.

Source: AIHW analysis of BreastScreen Australia data.

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Rate	41.6	39.9	37.6	44.6	45.9	45.7	42.3	50.9	56.1
95% CI	39.9–43.3	36.6–43.1	34.2–40.8	40.0–48.7	40.0–51.8	39.4–51.7	32.3–53.4	33.4–67.9	24.8–93.0

Notes

1. Rates are the number of invasive cancers detected per 10,000 women screened and age-standardised to the population of women attending a BreastScreen Australia service in 1998.
2. None of the rates were significantly different from the all-Australia rate.

- The age-standardised rate of detection of invasive cancers of all sizes in women in the target age group attending a BreastScreen Australia service in 2001 for their second or subsequent visit was 41.6 per 10,000 women screened. This is significantly lower than the detection rate for first round attendances (67.3 per 10,000 women screened).
- The age-standardised rate of detection of invasive cancers for all women aged 40 and over, attending for their second or subsequent screen was 39.0 per 10,000 women screened. This is not significantly different from the rate for women in the target group (41.6 per 10,000 women screened).
- Across the states and territories, age-standardised rate of detection of all invasive cancers for women in the target age group ranged from 37.6 per 10,000 women screened in Victoria to 56.1 per 10,000 women screened in the Northern Territory.

For more information, see:

Tables 15 and 16

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).

3b. Program sensitivity

The program sensitivity rate is the percentage of women with screen-detected invasive breast cancer among all 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

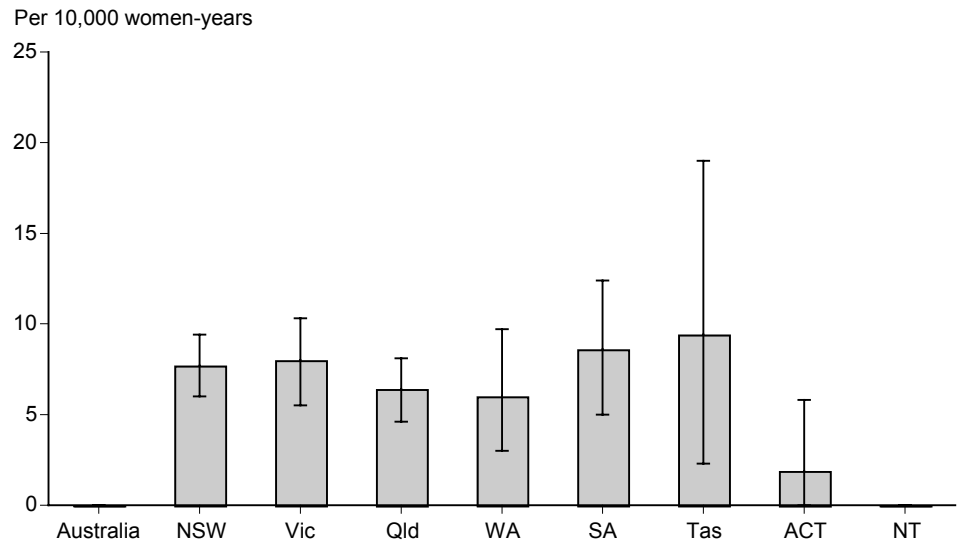
An interval cancer is an invasive breast cancer that is diagnosed after a screening episode that detected no cancer and before the next scheduled screening episode. The interval cancer rate is expressed per 10,000 women-years (see the glossary for a definitions of 'women-years' and 'interval cancer'). 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.

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.

In this chapter data for the years 1997, 1998 and 1999 are combined. This aggregation improves the stability of rates, especially those of the small states and territories.

Data for the Northern Territory were unavailable at the time this report was compiled. Data for New South Wales were incomplete for 1999, and so could not be included for 13–24 months or 0–24 months follow-up.

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



Note: Bars on columns represent 95% confidence intervals.

Source: AIHW analysis of BreastScreen Australia data.

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Rate	n.a.	7.7	8.0	6.4	6.0	8.6	9.4	1.9	n.a.
95% CI	n.a.	6.0–9.4	5.5–10.3	4.6–8.1	3.0–9.7	5.0–12.4	2.3–19.0	0.0–5.8	n.a.

n.a. Not available.

Notes

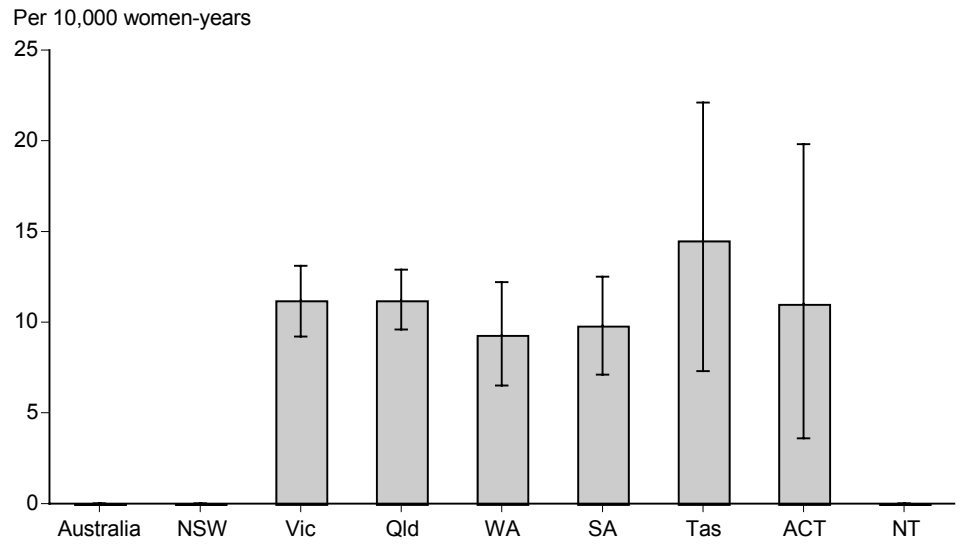
1. Rates are the number of interval cancers detected per 10,000 women-years and age-standardised to the population of women attending a BreastScreen Australia service in 1998.
2. The data include both symptomatic and asymptomatic women.
3. Northern Territory data were unavailable at the time of publication.

- Across the states and territories, the age-standardised rates of interval cancer for women in the target age group (50–69 years) 0–12 months after their first screen ranged from 1.9 per 10,000 women-years in the Australian Capital Territory to 9.4 per 10,000 women-years in Tasmania.

For more information, see:

Table 17

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



Note: Bars on columns represent 95% confidence intervals.

Source: AIHW analysis of BreastScreen Australia data.

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Rate	n.a.	n.a.	11.2	11.2	9.3	9.8	14.5	11.0	n.a.
95% CI	n.a.	n.a.	9.2–13.1	9.6–12.9	6.5–12.2	7.1–12.5	7.3–22.1	3.6–19.8	n.a.

n.a. Not available

Notes

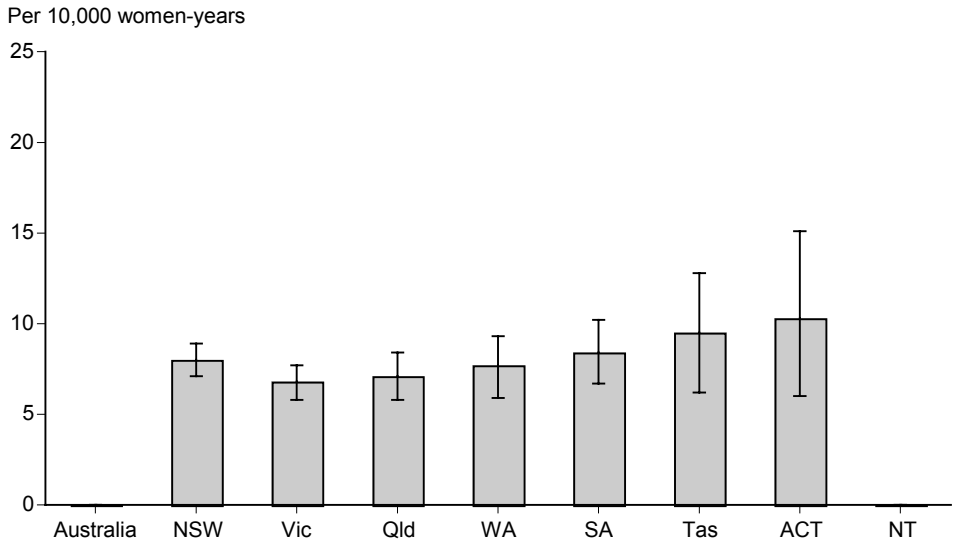
1. Rates are the number of interval cancers detected per 10,000 women-years and age-standardised to the population of women attending a BreastScreen Australia service in 1998.
2. The data include both symptomatic and asymptomatic women.
3. New South Wales and Northern Territory data were unavailable at the time of publication.

- Across the states and territories, the age-standardised rates of interval cancer for women in the target age group 0–24 months after their first screen ranged from 9.3 per 10,000 women-years in Western Australia to 14.5 per 10,000 women-years in Tasmania.

For more information, see:

Table 19

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



Note: Bars on columns represent 95% confidence intervals.

Source: AIHW analysis of BreastScreen Australia data.

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Rate	n.a.	8.0	6.8	7.1	7.7	8.4	9.5	10.3	n.a.
95% CI	n.a.	7.1–8.9	5.8–7.7	5.8–8.4	5.9–9.3	6.7–10.2	6.2–12.8	6.0–15.1	n.a.

n.a. Not available.

Notes

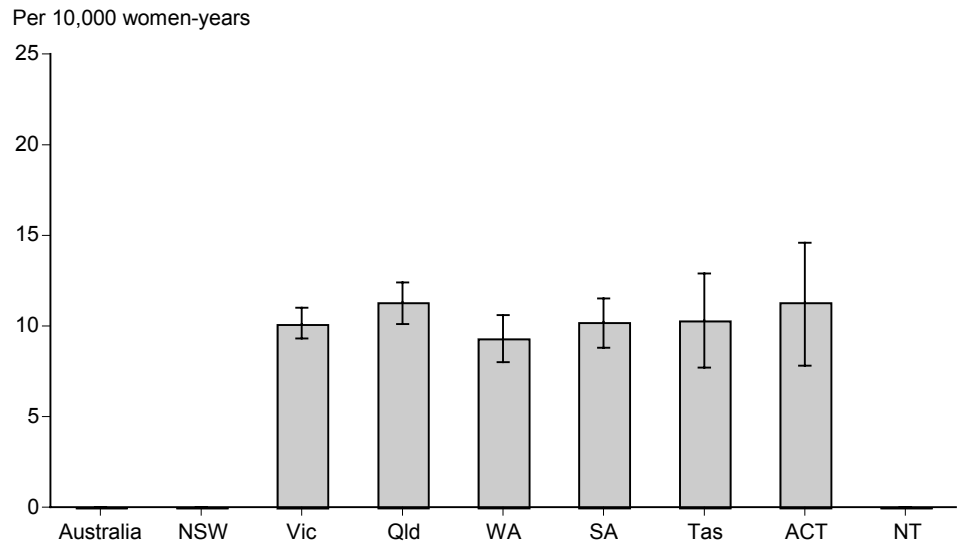
1. Rates are the number of interval cancers detected per 10,000 women-years and age-standardised to the population of women attending a BreastScreen Australia service in 1998.
2. The data include both symptomatic and asymptomatic women.
3. Northern Territory data were unavailable at the time of publication.

- Across the states and territories, the age-standardised rates of interval cancer for women in the target age group 0–12 months after their subsequent screen ranged from 6.8 per 10,000 women-years in Victoria to 10.3 per 10,000 women-years in the Australia Capital Territory.

For more information, see:

Table 20

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



Note: Bars on columns represent 95% confidence intervals.

Source: AIHW analysis of BreastScreen Australia data.

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Rate	n.a.	n.a.	10.1	11.3	9.3	10.2	10.3	11.3	n.a.
95% CI	n.a.	n.a.	9.3–11.0	10.1–12.4	8.0–10.6	8.8–11.5	7.7–12.9	7.8–14.6	n.a.

n.a. Not available.

Notes

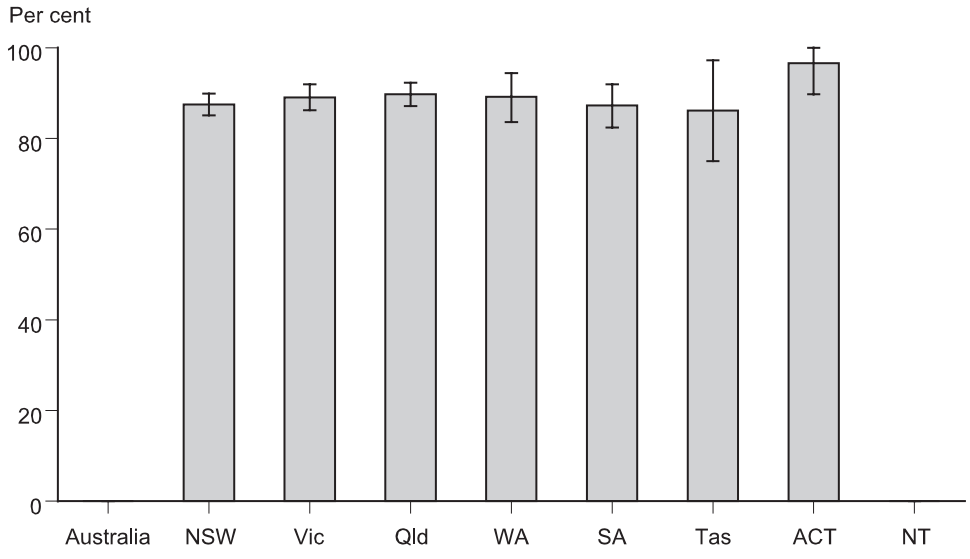
1. Rates are the number of interval cancers detected per 10,000 women-years and age-standardised to the population of women attending a BreastScreen Australia service in 1998.
2. The data include both symptomatic and asymptomatic women.
3. New South Wales and Northern Territory data were unavailable at the time of publication.

- Across the states and territories, the age-standardised rates of interval cancer for women in the target age group 0–24 months after their subsequent screen ranged from 9.3 per 10,000 women-years in Western Australia to 11.3 per 10,000 women-years in Queensland and the Australian Capital Territory.

For more information, see:

Table 22

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



Note: Bars on columns represent 95% confidence intervals.

Source: AIHW analysis of BreastScreen Australia data.

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Rate (%)	n.a.	87.5	89.0	89.7	89.2	87.3	86.1	96.6	n.a.
95% CI	n.a.	85.1–89.9	86.2–91.9	87.1–92.3	83.6–94.4	82.4–91.9	75.0–97.2	89.7–100.0	n.a.

n.a. Not available.

Notes

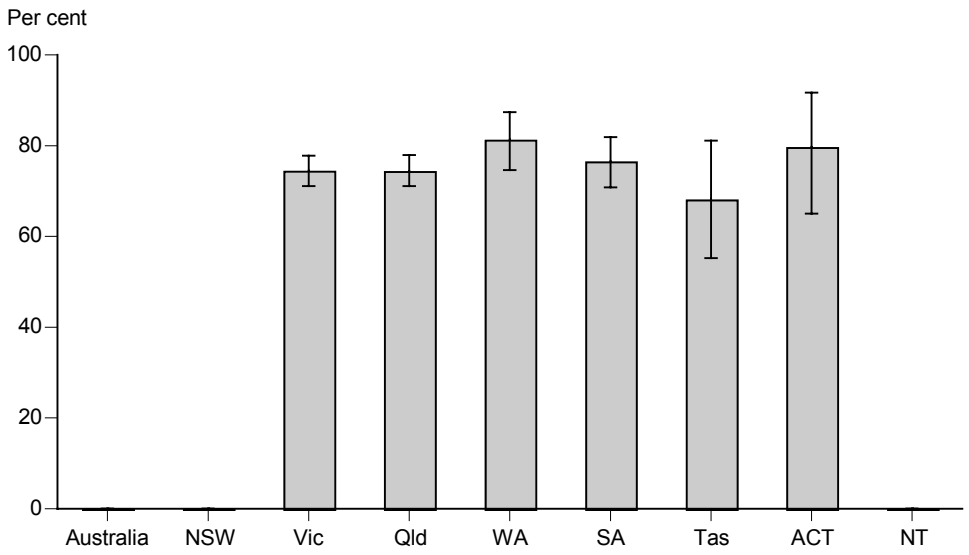
1. Rates are the number of screen-detected cancers as a percentage of all cancers (screen-detected and interval cancers) and age-standardised to the population of women attending a BreastScreen Australia service in 1998.
2. The data include both symptomatic and asymptomatic women.
3. Northern Territory data were unavailable at the time of publication.

- Across the states and territories, the Program sensitivity rate for women in the target age group 0–12 months after their first screen ranged from 86.1% in Tasmania to 96.6% in the Australian Capital Territory.

For more information, see:

Table 23

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



Note: Bars on columns represent 95% confidence intervals.

Source: AIHW analysis of BreastScreen Australia data.

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Rate (%)	n.a.	n.a.	74.5	74.4	81.3	76.5	68.2	79.7	n.a.
95% CI	n.a.	n.a.	71.1–77.8	71.1–77.9	74.6–87.4	70.8–81.9	55.2–81.1	65.0–91.7	n.a.

n.a. Not available.

Notes

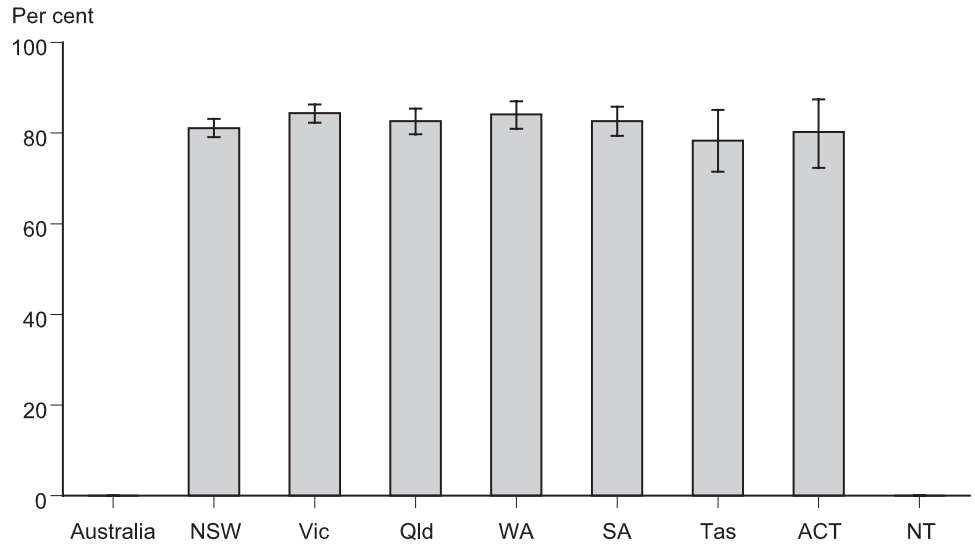
1. Rates are the number of screen-detected cancers as a percentage of all cancers (screen-detected and interval cancers) and age-standardised to the population of women attending a BreastScreen Australia service in 1998.
2. The data include both symptomatic and asymptomatic women.
3. New South Wales and Northern Territory data were unavailable at the time of publication.

- Across the states and territories, the Program sensitivity rate for women in the target age group 0–24 months after their first screen ranged from 68.2% in Tasmania to 81.3% in Western Australia.

For more information, see:

Table 24

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



Note: Bars on columns represent 95% confidence intervals.

Source: AIHW analysis of BreastScreen Australia data.

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Rate (%)	n.a.	81.1	84.4	82.6	84.1	82.6	78.3	80.2	n.a.
95% CI	n.a.	79.1–83.1	82.3–86.3	79.7–85.4	80.9–87.0	79.4–85.8	71.5–85.1	68.8–84.7	n.a.

n.a. Not available.

Notes

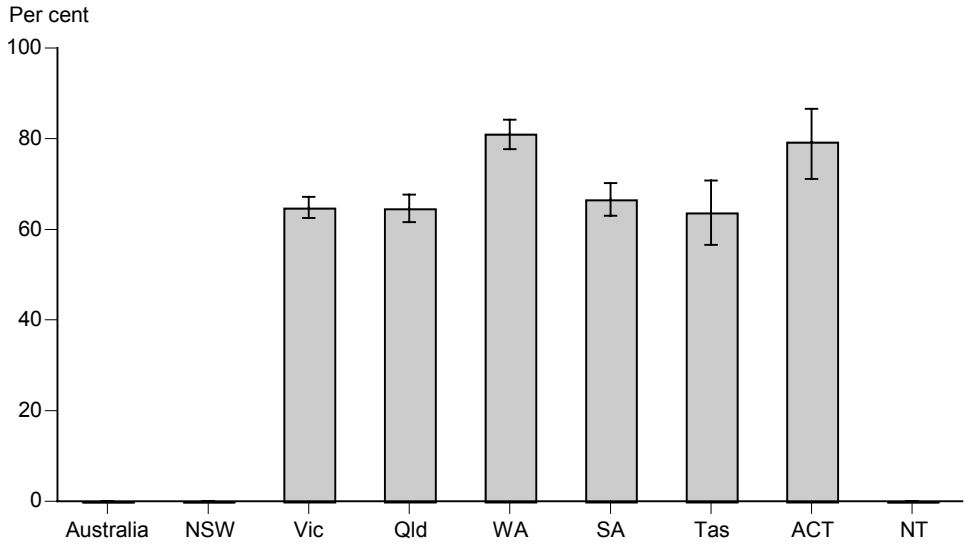
1. Rates are the number of screen-detected cancers as a percentage of all cancers (screen-detected and interval cancers) and age-standardised to the population of women attending a BreastScreen Australia service in 1998.
2. The data include both symptomatic and asymptomatic women.
3. Northern Territory data were unavailable at the time of publication.

- Across the states and territories, the Program sensitivity rate for women in the target age group 0–12 months after their subsequent screen ranged from 78.3% in Tasmania to 84.4% in Victoria.

For more information, see:

Table 25

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



Note: Bars on columns represent 95% confidence intervals.

Source: AIHW analysis of BreastScreen Australia data.

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Rate (%)	n.a.	n.a.	64.8	64.6	81.1	66.6	63.7	79.3	n.a.
95% CI	n.a.	n.a.	62.5–67.2	61.6–67.7	77.7–84.2	63.0–70.2	56.6–70.8	71.1–86.6	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. New South Wales and Northern Territory data were unavailable at the time of publication.

- Across the states and territories, the Program sensitivity rate for women in the target age group (50–69 years) 0–24 months after their subsequent screen ranged from 63.7% in Tasmania to 81.1% in Queensland.

For more information, see:

Table 26

Indicator 4: Ductal carcinoma in situ

Ductal carcinoma in situ detection rate

The ductal carcinoma in situ detection rate is the rate of women with ductal carcinoma in situ 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

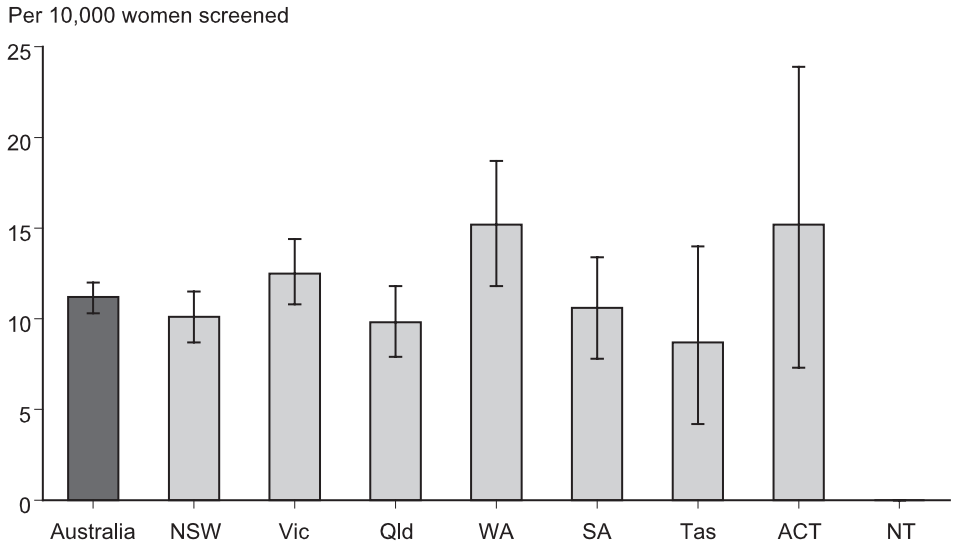
The ductal carcinoma in situ (DCIS) indicator measures the rate of DCIS diagnosed in women attending a BreastScreen Australia service. This is expressed as the number of cases of DCIS detected for every 10,000 women screened. DCIS is a disease that involves changes in the cells in the lining of the ducts 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 (NQMC unpublished).

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 (NQMC unpublished). 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.

In 2001, the national age-standardised rate of DCIS detection was 10.4 cases per 10,000 women aged 40 and over. This is slightly lower than the detection rate for 2000, at 10.5 per 10,000 women screened, but the difference is not statistically significant.

Ductal carcinoma in situ detection in women aged 50–69 years, 2001



Note: Bars on columns represent 95% confidence intervals.

Source: AIHW analysis of BreastScreen Australia data.

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Rate	11.2	10.1	12.5	9.8	15.2	10.8	8.7	15.2	. .
95% CI	10.3–12.1	8.7–11.5	10.8–14.4	7.9–11.8	11.8–18.6	8.0–13.6	4.2–13.9	7.3–23.9	. .

. . Not applicable—no cases of DCIS were found in the Northern Territory in 2001.

Notes

1. 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.
2. None of the rates was significantly different from the all-Australia rate.

- In 2001, 883 cases of DCIS were detected in women participating in the BreastScreen Australia Program, including 635 cases in women in the target age group. The age-standardised DCIS detection rate was 11.2 per 10,000 women screened for women in the target age group, and 10.4 per 10,000 women screened for all women aged 40 and over.
- The age-standardised rate of DCIS detection for women in the target age group ranged from none detected in the Northern Territory to 15.2 per 10,000 women screened in Western Australia and the Australian Capital Territory.

For more information, see:

Tables 27 and 28

Indicator 5: Recall to assessment

Recall to assessment rate

The recall to assessment rate is the proportion of all women screened in the calendar year 2001 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 that are recalled for assessment following attendance for a routine screening at a BreastScreen Australia service. The recall is made because a woman's screening mammogram shows signs that there may be breast cancer. During assessment, a woman might undergo further tests, such as additional mammography, physical examination, ultrasound and, if required, a fine needle aspiration or a 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 SA 1999; BreastScreen Queensland 2000).

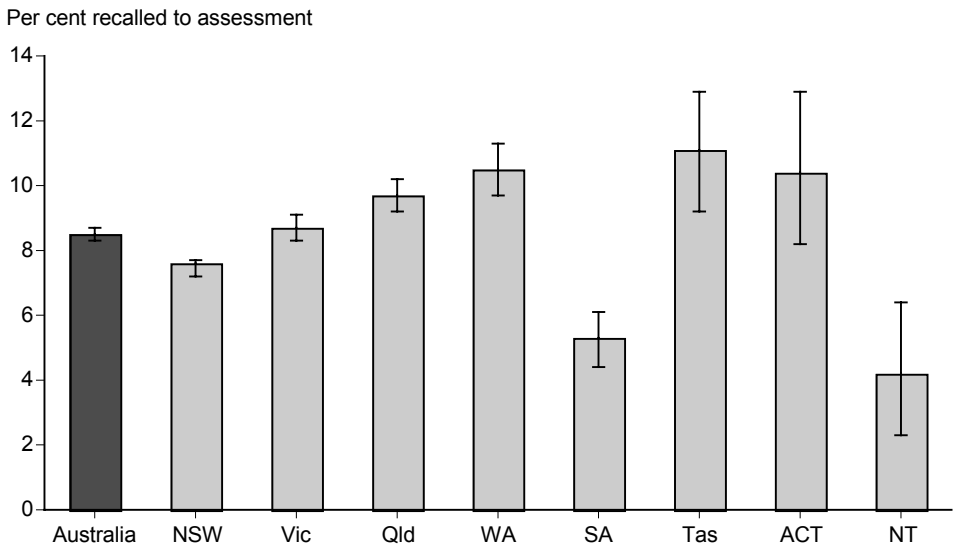
Women attending the program for the first time have a higher all-size cancer detection rate than those who have previously been screened. This is reflected in a higher recall to assessment rate for women who attend for their first screening round compared with those who attend for a subsequent round. The table below shows recall to assessment rates by screening round for 2000 and 2001.

Age-standardised recall to assessment rates for women aged 40 and over, 2000 and 2001

	First screening round	Subsequent screening rounds
2000 rate (%)	8.1	4.1
95% CI	8.0–8.3	4.0–4.2
2001 rate (%)	8.3	4.0
95% CI	8.1–8.5	4.0–4.1

Source: AIHW analysis of BreastScreen Australia data.

Recall to assessment rate for women aged 50–69 years, first screening round, 2001



Note: Bars on columns represent 95% confidence intervals.

Source: AIHW analysis of BreastScreen Australia data.

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Rate (%)	8.5	7.6*	8.7	9.7*	10.5*	5.3*	11.1*	10.4	4.2*
95% CI	8.2–8.7	7.2–7.9	8.4–9.1	9.2–10.2	9.7–11.3	4.4–6.1	9.2–12.9	8.2–12.9	2.2–6.3

* Significantly different from the all-Australia rate.

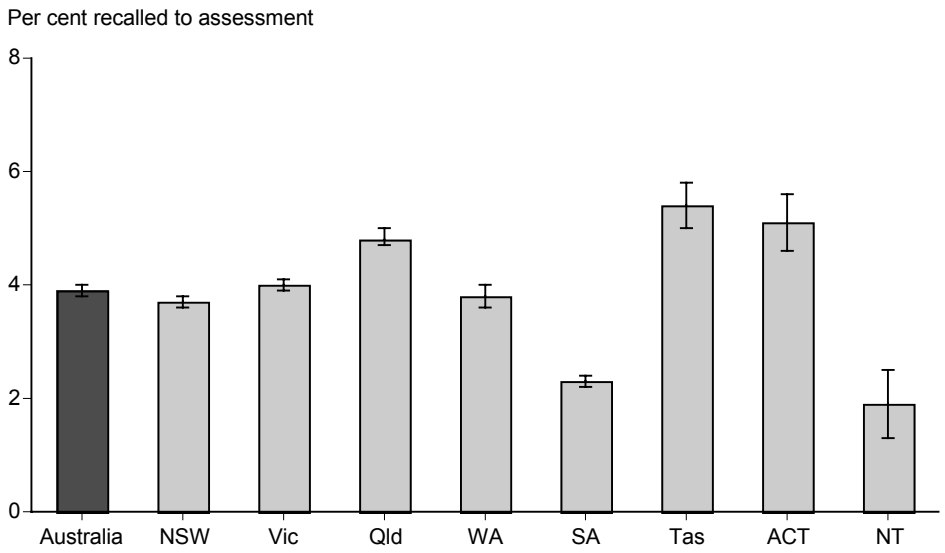
Note: Rates are the number of women recalled for assessment as a percentage of women screened and age-standardised to the population of women attending a BreastScreen Australia service in 1998.

- Of women in the target age group screened for the first time in 2001, 8.5% (age-standardised) were recalled for assessment due to an abnormal mammogram result. The age-standardised rate for all women aged 40 and over was 8.3%.
- Age-standardised rates of recall for assessment for women in the target age group ranged from 4.2% in the Northern Territory to 11.1% in Tasmania. New South Wales, at 7.6%, South Australia, at 5.3%, and the Northern Territory, at 4.2%, all had recall rates significantly lower than the national rate. Significantly higher than the national rate were the Western Australian and Tasmanian rates, at 10.5% and 11.1% respectively.

For more information, see:

Tables 29 and 30

Recall to assessment rate for women aged 50–69 years, subsequent screening round, 2001



Note: Bars on columns represent 95% confidence intervals.

Source: AIHW analysis of BreastScreen Australia data.

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Rate (%)	3.9	3.7*	4.0	4.8*	3.8	2.3*	5.4*	5.1*	1.9*
95% CI	3.9–4.0	3.6–3.8	3.9–4.1	4.7–5.0	3.6–4.0	2.2–2.5	5.0–5.8	4.6–5.6	1.4–2.5

* Significantly different from the all-Australia 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 2001, 3.9% (age-standardised) were recalled for assessment due to an abnormal mammogram result. The age-standardised recall rate for all women aged 40 and over was 4.0%.
- Age-standardised rates of recall for assessment for women in the target age group screened for a second or subsequent time ranged from 1.9% in the Northern Territory to 5.4% in Tasmania.

For more information, see:

Tables 31 and 32.

Indicator 6: Rescreening

Rescreen rate

The rescreen rate is the proportion of all women screened in 1999 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 (50–69 years).

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 only 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).

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.

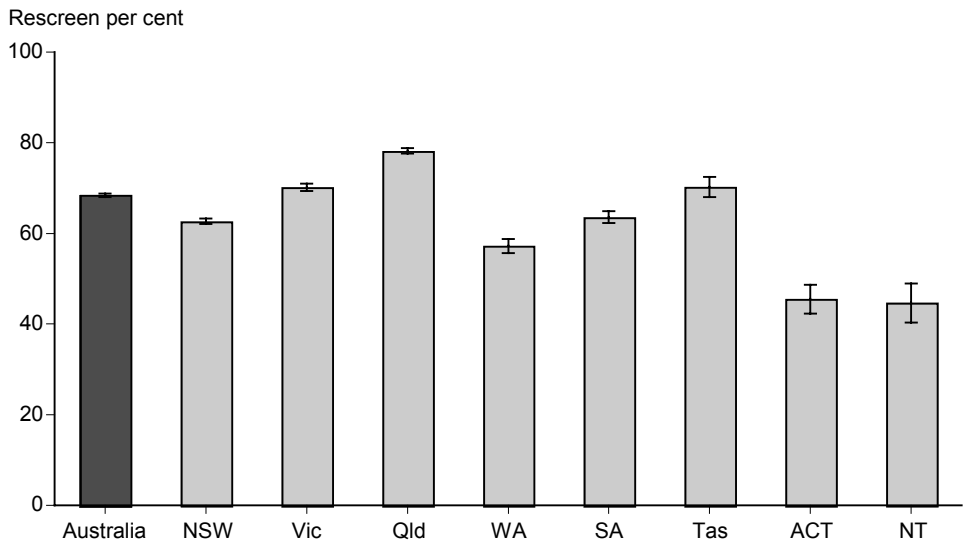
One of the objectives of the BreastScreen Australia Program is 'To rescreen all women in the Program at two-yearly intervals' (BSANAC & DHAC 2000).

Age-standardised rescreen rates for women aged 40 years and over, screened during 1999, Australia

	First screening round	Second screening round	Subsequent screening rounds
Rate (%)	64.7	75.0	82.5
95% CI	64.4–65.0	74.7–75.3	82.2–82.7

Source: AIHW analysis of BreastScreen Australia data.

Rescreen rate for women aged 50–69 years, screened during 1999, first screening round



Note: Bars on columns represent 95% confidence intervals.

Source: AIHW analysis of BreastScreen Australia data.

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Rate (%)	68.5	62.3*	70.2*	78.2*	57.3*	63.6*	70.3	45.5*	44.7*
95% CI	68.0–68.8	61.8–62.7	69.4–71.0	77.6–78.8	55.7–58.8	62.4–64.9	68.0–72.5	42.3–48.7	40.3–49.0

* Significantly different from the all-Australia rate.

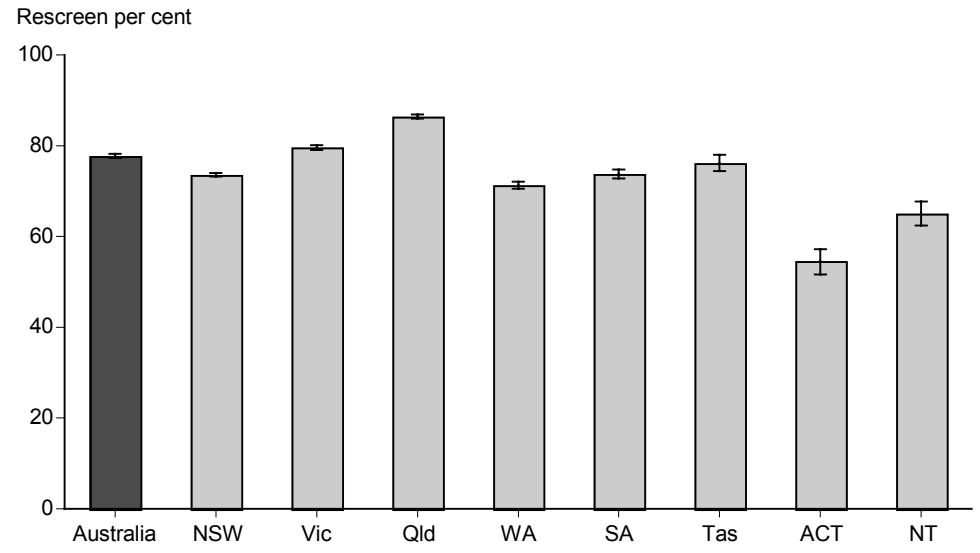
Note: Rates are the number of women attending for rescreening as a percentage of women screened and age-standardised to the population of women attending a BreastScreen Australia service in 1998.

- The age-standardised national rescreen rate for women in the target age group returning for screening within 27 months of attending a BreastScreen Australia service in 1999 for the first time was 68.5%. Of all women aged 40 and over, 64.7% returned for screening.
- Across the states and territories, the age-standardised rescreen rates for women in the target age group ranged from 44.7% in the Northern Territory to 78.2% in Queensland. Victoria and Queensland had rates significantly higher than the national rate.

For more information, see:

Tables 33 and 34

Rescreen rate for women aged 50–69 years, screened during 1999, second screening round



Note: Bars on columns represent 95% confidence intervals.

Source: AIHW analysis of BreastScreen Australia data.

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Rate (%)	77.7	72.7*	79.6*	86.4*	71.3*	73.8*	76.2	54.6*	65.0*
95% CI	77.3–78.2	72.4–73.1	79.1–80.1	86.0–86.9	70.5–72.1	72.8–74.8	74.4–78.0	51.6–57.2	62.4–67.7

* Significantly different from the all-Australia rate.

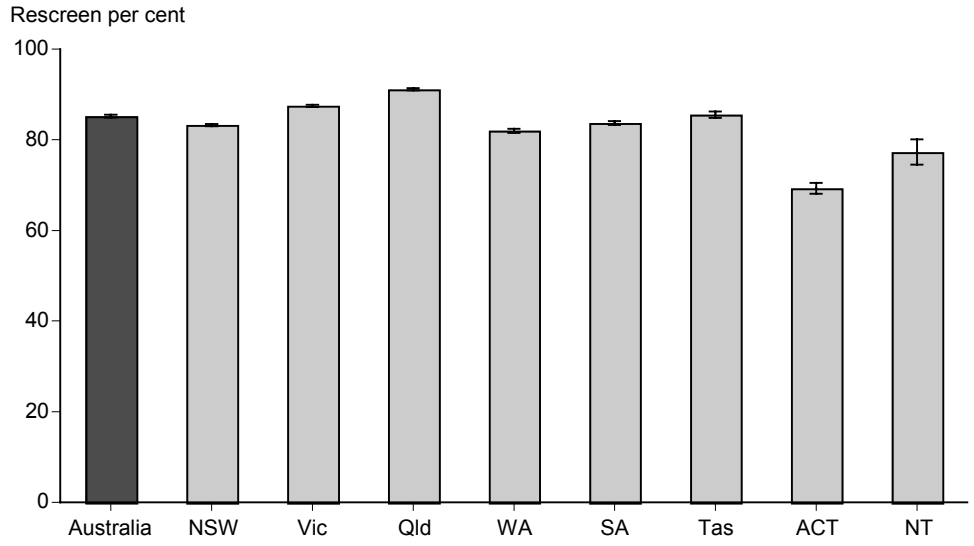
Note: Rates are the number of women attending for rescreening as a percentage of women screened and age-standardised to the population of women attending a BreastScreen Australia service in 1998.

- The age-standardised national rescreen rate for women in the target age group returning for screening within 27 months of attending a BreastScreen Australia service in 1999 for the second time was 77.7%. For all women aged 40 and over, the rescreen rate was 75.0%.
- Across the states and territories, the age-standardised rescreen rates for the target age group ranged from 54.6% in the Australian Capital Territory to 86.4% in Queensland. Victoria and Queensland had rates significantly higher than the national rate.

For more information, see:

Tables 35 and 36

Rescreen rate for women aged 50–69 years, screened during 1999, third and subsequent screening rounds



Note: Bars on columns represent 95% confidence intervals.

Source: AIHW analysis of BreastScreen Australia data.

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Rate (%)	85.2	82.4*	87.5*	91.1*	82.0*	83.7*	85.5	69.3*	77.3*
95% CI	84.9–85.5	82.2–82.7	87.2–87.7	90.9–91.4	81.5–82.4	83.3–84.1	84.8–86.2	68.1–70.5	74.5–80.1

* Significantly different from the all-Australia 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 in the target age group returning for screening within 27 months of attending a BreastScreen Australia service in 1999 for their third or subsequent visit was 85.2%. Of all women aged 40 and over, 82.5% returned for screening within 27 months.
- Across the states and territories, the age-standardised rescreen rates for the target age group ranged from 69.3% in the Australian Capital Territory to 91.1% in Queensland.

For more information, see:

Tables 37 and 38

Indicator 7: Incidence

7a. Incidence of breast cancer

The incidence rate 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 rate of ductal carcinoma in situ (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

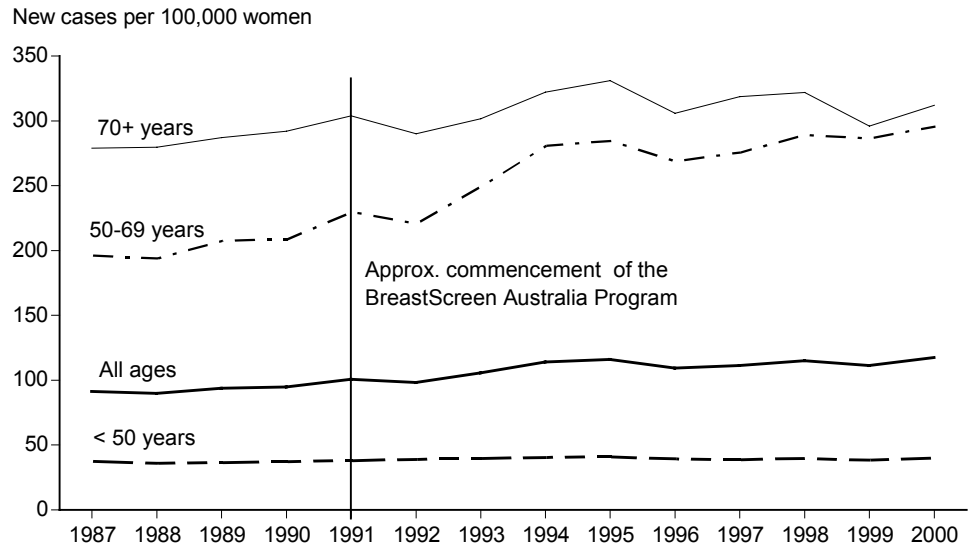
Registration of cancer cases is required by law in each of the states and territories. The data are collected by state and territory cancer registries and compiled in a national database, the National Cancer Statistics Clearing House, which is held by the Australian Institute of Health and Welfare. The 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 other detection methods.

Incidence data provide information about the underlying risk 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 data performance standards for breast cancer detection.

This chapter reports the rates of breast cancer from 1987 to 2000, 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 ductal carcinoma in situ (DCIS) provide information about the underlying risk to Australian women of developing the condition. 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'.

Incidence of breast cancer in women, Australia, 1987–2000



Source: AIHW National Cancer Statistics Clearing House.

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
All ages	91.2	89.7	93.5	94.6	100.4	98.0	105.3	113.9	115.7	109.2	111.2	114.9	111.2	115.4
<50	38.3	36.7	37.3	38.0	38.8	39.7	40.4	41.3	41.7	40.1	39.4	40.4	39.2	40.6
50–69	197.1	194.8	208.5	209.6	230.5	221.6	250.6	281.6	285.3	269.7	276.5	290.1	287.5	296.2
70+	279.1	279.7	287.1	292.0	304.0	290.1	301.8	322.3	331.1	305.8	318.7	321.9	296.1	312.1

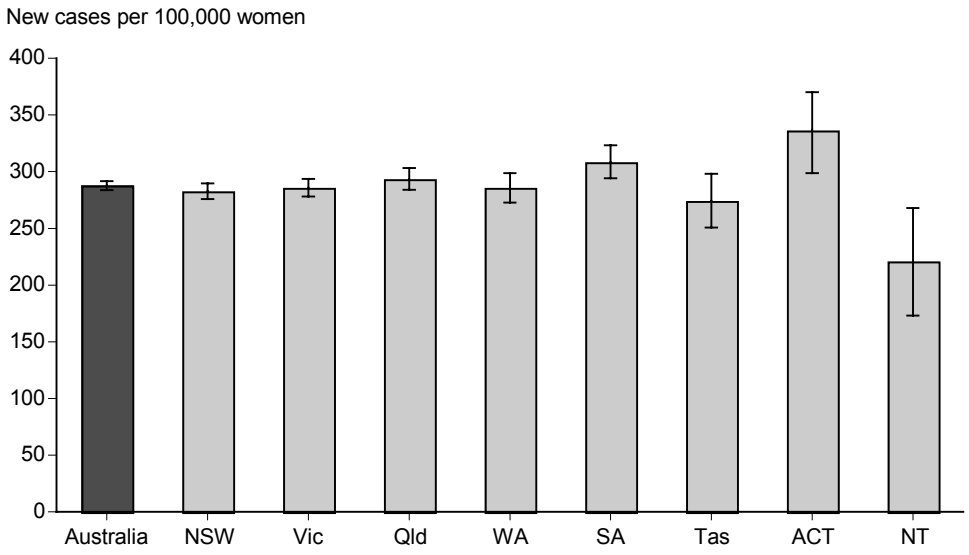
Note: Rates are the number of breast cancers detected per 100,000 women and age-standardised to the Australian population at 30 June 2001.

- With some fluctuation, a notable increase over the period 1987 to 2000 can be seen in the age-standardised breast cancer incidence rates for women in the target age group. Incidence has increased in this group from 197.1 new cancers per 100,000 women in 1987 to 296.2 per 100,000 women in 2000. A similar pattern of increase in incidence rates is apparent in the 70 and over age group. Incidence rates have remained more consistent over time in the 'all ages' category and in women under 50 years of age.
- The increase in the rate of new cancers, especially in the target age group, corresponds with the introduction in 1991 of BreastScreen Australia (then known as the National Program for the Early Detection of Breast Cancer). Although the underlying rate for breast cancer is increasing, the sharp increase between 1992 and 1994 is likely to be, at least partly, the result of the early detection of cancers in women who may otherwise have gone undiagnosed for some years.

For more information, see:

Tables 39 and 40

Incidence of breast cancer in women, aged 50–69 years, 1997–2000



Note: Bars on columns represent 95% confidence intervals.

Source: AIHW National Cancer Statistics Clearing House.

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Rate	287.8	282.5	285.7	293.2	285.8	308.3*	274.2	336.3*	220.9*
95% CI	283.7–291.7	275.7–289.6	278.0–293.5	284.0–303.3	272.7–298.6	294.1–323.1	250.6–298.1	298.6–370.2	173.0–267.9

* Significantly different from the all-Australia 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 1997 to 2000 was 287.8 new cancers per 100,000 women. Across the states and territories, incidence rates ranged from 220.9 new cancers per 100,000 women in the Northern Territory to 336.3 new cases per 100,000 women in the Australian Capital Territory.

For more information, see:

Tables 41 and 42

Age–specific incidence rates for breast cancer in women, Australia 2000

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+
Rate	115.2	188.2	250.7	302.7	337.4	324.0	329.7	309.7	298.4	291.7

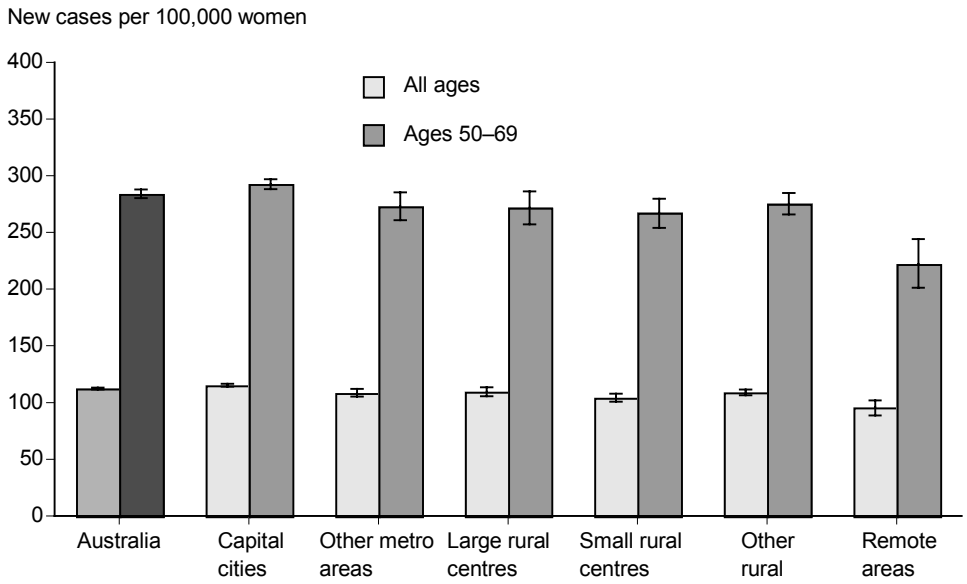
Note: Rates are the number of breast cancers detected per 100,000 women.

- All women aged 40 and over are able to attend for screening with BreastScreen Australia, although the Program is specifically aimed at women aged 50–69 years of age who are without symptoms. Of the 11,316 new cases of breast cancer in 2000, 5,452 (48%) occurred in women in the target age group. Only 6% of cases were women aged under 40 years.
- Age-specific incidence rates in 2000, ranged from 115.2 new cancers per 100,000 women in the 40–44 age group to 337.4 new cases per 100,000 women in the 60–64 age group.

For more information, see:

Tables 39 and 40

Incidence of breast cancer in women by region, 1996–2000



Note: Bars on columns represent 95% confidence intervals.

Source: AIHW National Cancer Statistics Clearing House.

	Australia	Capital cities	Other metropolitan areas	Large rural centres	Small rural centres	Other rural areas	Remote areas
All ages	112.3	115.2*	108.4	109.4	104.2*	108.9	95.5*
95% CI	111.3–113.2	114.0–116.4	105.2–112.0	105.5–113.3	100.8–107.7	106.4–111.5	88.7–101.9
Ages 50–69	284.0	292.5*	273.0	271.8	267.2*	275.1	222.0*
95% CI	280.2–287.7	288.0–296.9	260.8–285.4	257.0–286.0	253.9–279.6	265.7–284.6	201.3–244.2

* Significantly different from the all-Australian rate.

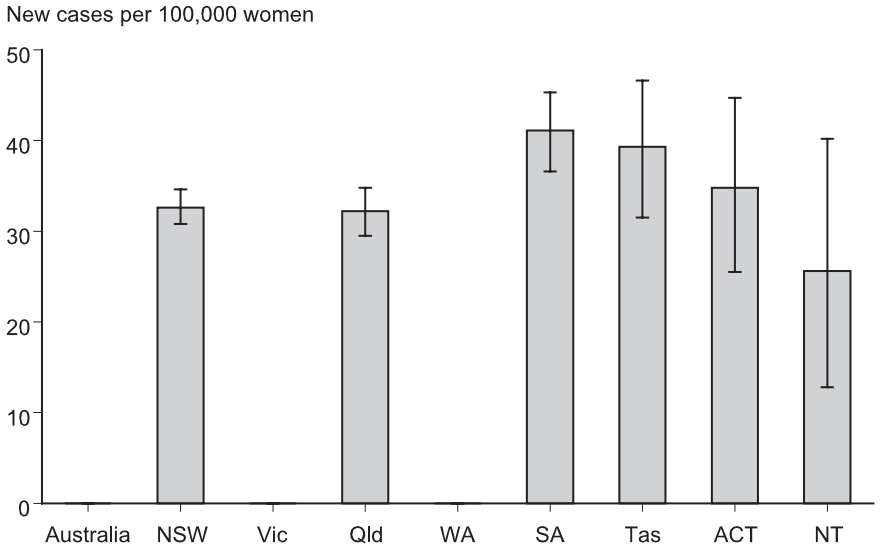
Note: Rates are the number of breast cancers detected per 100,000 women and age-standardised to the Australian population at 30 June 2001.

- For the period 1996 to 2000, the age-standardised incidence rate was 284.0 cases of breast cancer per 100,000 women for women in the target age group, and 112.3 cases per 100,000 women for all women aged 40 and over. Breast cancer incidence rates for women in the target age group ranged from 222.0 cases per 100,000 women in remote areas to 292.5 cases per 100,000 women in capital cities.

For more information, see:

Tables 43 and 44

Incidence of ductal carcinoma in situ in women, aged 50–69 years, 1995–2000



Note: Bars on columns represent 95% confidence intervals.

Source: National Cancer Statistics Clearing House.

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Rate	n.a.	32.6	n.a.	32.2	n.a.	41.1	39.3	34.8	25.6
95% CI	n.a.	30.8–34.6	n.a.	29.5–34.8	n.a.	36.6–45.3	31.5–46.6	25.5–44.7	12.8–40.2

n.a. Not available.

Notes

1. Rates are the number of breast cancers detected per 100,000 women and age-standardised to the Australian population at 30 June 2001.
2. Data for Victoria and Western Australia were unavailable at the time of publication.

- Between 1995 and 2000, the age-standardised incidence of ductal carcinoma in situ for women aged 50–69 years ranged from 25.6 cases per 100,000 in the Northern Territory to 41.1 per 100,000 in South Australia.

For more information, see:

Tables 45 and 46

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 for coding the cause of death and compilation into national statistics. The Australian Institute of Health and Welfare also holds these data in a national mortality database. The data presented here are from the AIHW National Mortality Database and are based on 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 over the last five years has remained fairly stable, with 2,569 women dying from the disease in 1996 and 2,585 women in 2001. However, over this period the rates of deaths caused by breast cancer have steadily fallen.

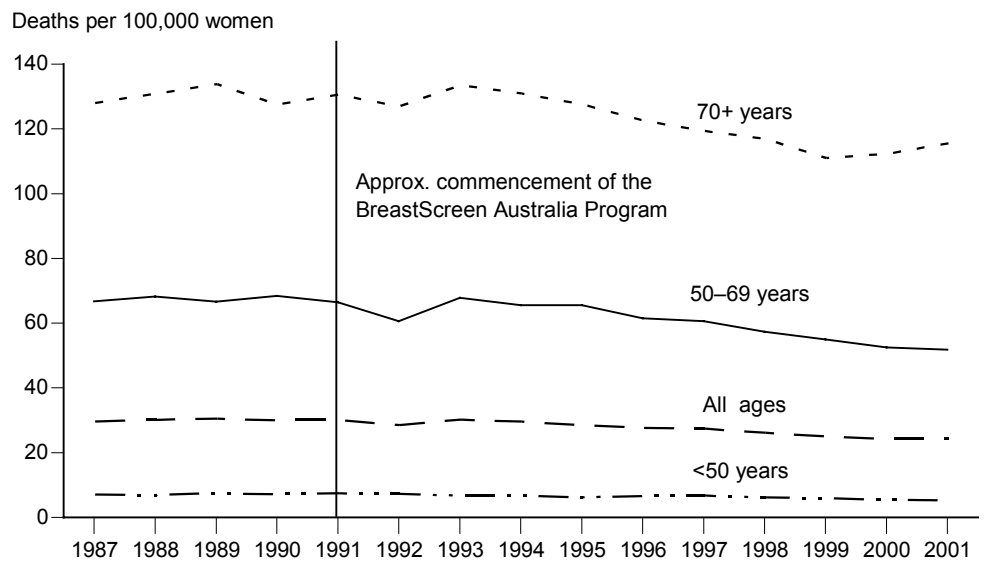
In the longer term, mortality rates from breast cancer are an important indicator of the effectiveness of the screening program. A particularly important indication of the effectiveness of a screening program is the change in mortality rates over time in the target age group for screening. There are, 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 just for those women who participated in the BreastScreen Australia Program.

This chapter shows the trend in breast cancer mortality from 1988 to 2001, 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.

Mortality from breast cancer, females, Australia, 1987–2001



Source: AIHW National Mortality Database.

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
All ages	30.0	30.5	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
<50	7.4	7.3	7.9	7.5	7.8	7.6	7.1	7.1	6.5	6.9	7.2	6.6	6.4	5.9	5.7
50–69	66.8	68.3	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
70+	128.3	131.2	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

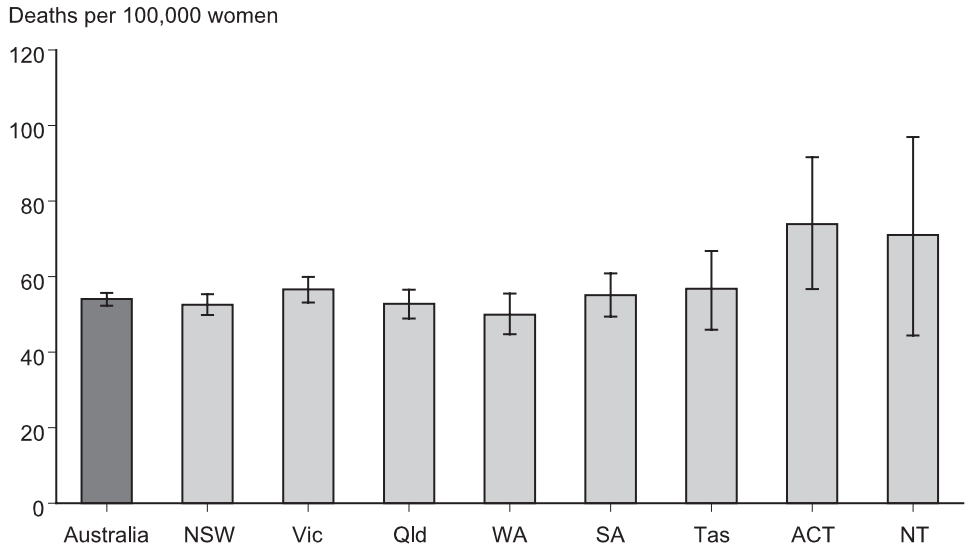
Note: Rates are the number of deaths from breast cancer per 100,000 women and age-standardised to the Australian population at 30 June 2001.

- From 1993 a steady decline is evident in the age-standardised mortality rates for women in the target age group. The mortality rate for these women was 66.8 deaths per 100,000 women in 1988; in 2001 the corresponding figure was 51.8 deaths per 100,000 women. A similar pattern of decline in mortality rates can be observed in women aged 70 and over. Mortality rates for women aged under 50 years remained the lowest and most consistent, staying below 8 deaths per 100,000 women for the period 1987 to 2001.

For more information, see:

Tables 47 and 48

Mortality from breast cancer in women aged 50–69, 1998–2001



Note: Bars on columns represent 95% confidence intervals.

Source: AIHW National Mortality Database.

	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Rate	54.1	52.5	56.6	52.8	49.9	55.1	56.8	73.9	71.0
95% CI	52.3–55.7	49.8–55.3	53.1–59.9	48.9–56.5	44.7–55.5	49.4–60.8	45.9–66.8	56.7–91.6	44.4–96.9

Notes

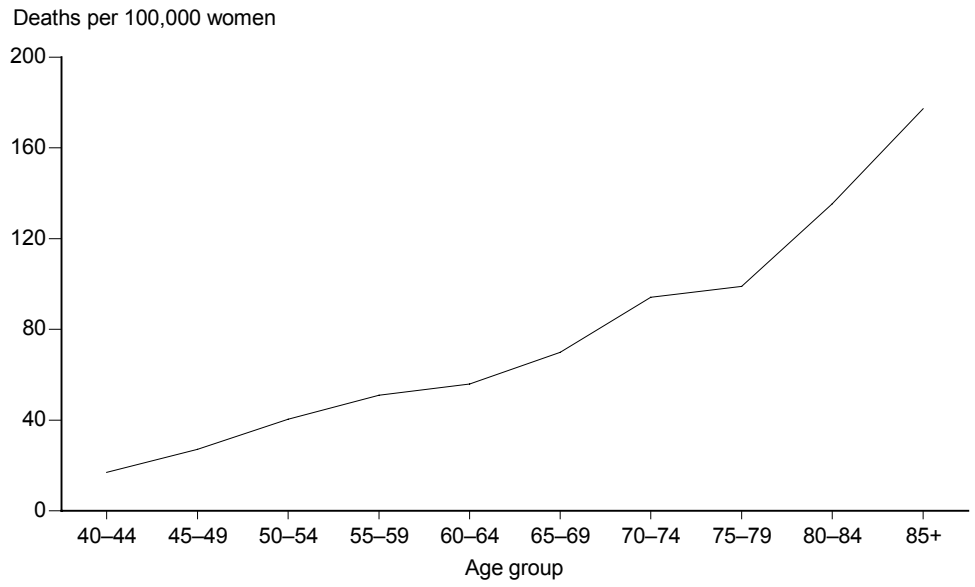
1. Rates are the number of deaths from breast cancer per 100,000 women and age-standardised to the Australian population at 30 June 2001.
2. None of the rates was significantly different from the all-Australia rate.

- For the period 1998–2001, the national age-standardised mortality rate was 54.1 deaths per 100,000 women. Across the states and territories, the mortality rate ranged from 49.9 deaths per 100,000 women in Western Australia to 73.9 deaths per 100,000 women in the Australian Capital Territory.

For more information, see:

Tables 49 and 50

Age–specific mortality rates for breast cancer, females, Australia, 2001



Source: AIHW National Mortality Database.

Age	40–44	45–49	50–54	55–59	60–64	65–69	70–74	75–79	80–84	85+
Rate	16.9	27.1	40.4	51.0	55.9	69.8	94.1	99.0	135.3	177.3

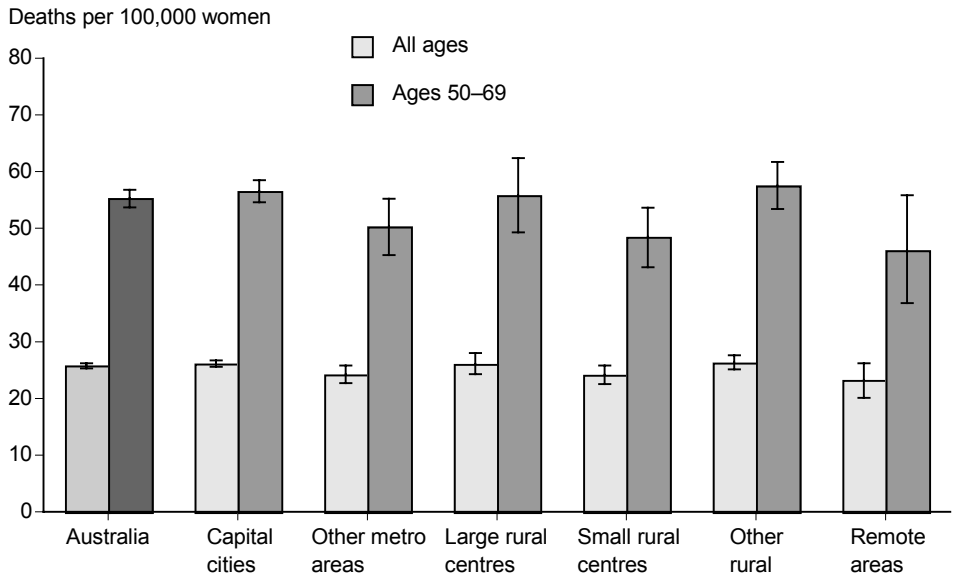
Note: Rates are the number of deaths from breast cancer per 100,000 women.

- In 2001, age-specific mortality rates increased consistently with age. For women aged 40–44 , the rate was 16.9 deaths per 100,000 women. The rate increased to 177.3 deaths per 100,000 women for women aged 85 and over.
- The pattern of breast cancer mortality by age group has remained the same over the period 1988–2001.

For more information, see:

Tables 47 and 48

Mortality from breast cancer by region, females, 1997–2001



Source: AIHW National Mortality Database.

	Australia	Capital cities	Other metropolitan areas	Large rural centres	Small rural centres	Other rural areas	Remote areas
All ages	25.8	26.1	24.2	26.1	24.1	26.3	23.2
95% CI	25.3–26.2	25.6–26.7	22.7–25.8	24.3–28.0	22.5–25.8	25.1–27.6	20.1–26.2
Ages 50–69	55.3	56.6	50.3	55.8	48.5	57.5	46.1
95% CI	53.7–56.8	54.6–58.5	45.3–55.2	49.3–62.4	43.1–53.7	53.4–61.7	36.8–55.8

Notes

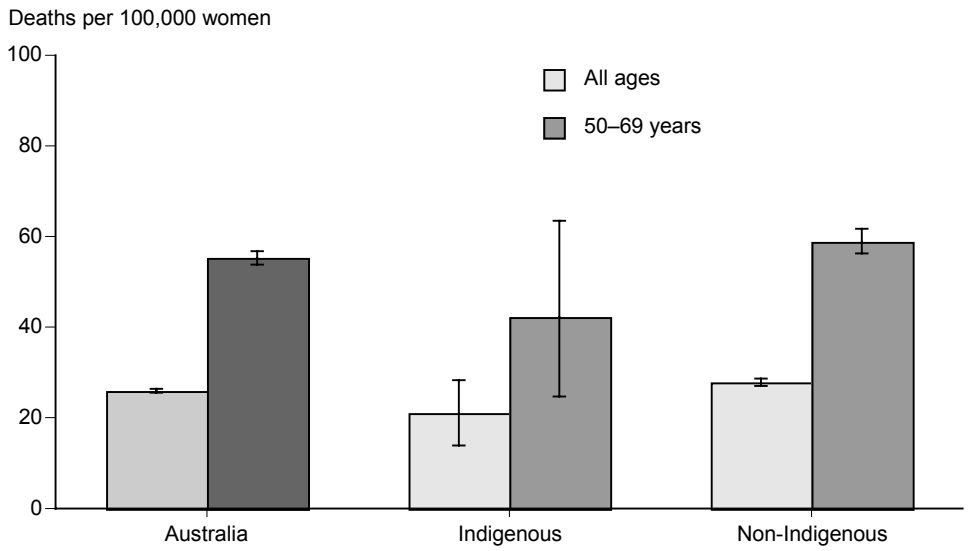
1. Rates are the number of deaths from breast cancer per 100,000 women and age-standardised to the Australian population at 30 June 2001.
2. The Rural, Remote and Metropolitan Areas classification (DPIE & DHSH 1994) was used to create the above categories.
3. None of the rates was significantly different from the all-Australia rate.

- Across all regions, mortality rates were significantly higher for women in the target age group than for the 'all ages' group. For women in the target age group, mortality rates ranged from 46.1 deaths per 100,000 women in 'Remote areas' to 57.5 deaths per 100,000 women in 'Other rural areas'. However, this difference was not significant.

For more information, see:

Tables 51 and 52

Mortality from breast cancer by Indigenous status, females, 1997–2001



Source: AIHW National Mortality Database.

	Australia	Indigenous	Non-Indigenous
All ages	25.9	21.0	27.8*
95% CI	25.5–26.4	13.9–28.3	27.0–28.6
Ages 50–69	55.3	42.2	58.8
95% CI	53.8–56.8	24.7–63.5	56.3–61.7

* Significantly different from the all-Australian 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 of preparation of this report. Therefore data from these jurisdictions only are included in the analysis by Indigenous status. Data for Queensland 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 the target age group, the age-standardised mortality rate for Indigenous women (42.2 deaths per 100,000 women) was lower than that for non-Indigenous women (58.8 deaths per 100,000 women). However, this difference was not significant. In the 'all ages' category non-Indigenous women had a mortality rate significantly higher than the national rate.

For more information, see:

Tables 53 and 54

Tables

Indicator 1: Participation

Table 1: Number of women participating in breast screening in BreastScreen Australia by age, states and territories, 2000–2001

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
40–44	44,585	11,013	32,966	7,485	6,833	2,880	1,667	837	108,266
45–49	72,749	20,745	47,806	15,863	13,328	5,929	3,724	1,395	181,539
50–54	104,217	90,071	66,818	32,432	33,310	9,257	6,223	2,486	344,814
55–59	91,058	73,594	54,038	25,484	26,159	7,782	4,612	1,637	284,364
60–64	77,753	62,082	43,544	21,775	22,567	6,694	3,289	932	238,636
65–69	64,799	51,433	35,437	17,289	18,430	5,480	2,280	517	195,665
70–74	52,490	41,524	26,734	4,891	6,936	1,747	576	315	135,213
75–79	29,898	11,050	12,297	1,955	2,798	627	244	121	58,990
80–84	9,411	1,702	3,868	449	668	134	66	54	16,352
85+	2,121	374	938	104	112	34	17	5	3,705
Ages 40+	**549,081**	**363,588**	**324,446**	**127,727**	**131,141**	**40,564**	**22,698**	**8,299**	**1,567,544**
Ages 50–69	**337,827**	**277,180**	**199,837**	**96,980**	**100,466**	**29,213**	**16,404**	**5,572**	**1,063,479**

Note: Period covers 1 January 2000 to 31 December 2001.

Source: AIHW analysis of BreastScreen Australia data.

Table 2: Percentage of women participating in BreastScreen Australia, states and territories, 2000–2001

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
				(Per cent)					
40–44	18.0	6.0	24.1	10.1	11.8	15.7	13.1	11.4	14.7
45–49	32.2	12.4	37.9	23.0	24.6	34.9	30.2	21.5	26.7
50–54	49.3	57.1	56.1	52.3	63.6	57.7	53.8	46.9	54.2
55–59	55.2	61.4	59.4	56.5	65.3	61.8	60.1	49.1	58.7
60–64	56.0	61.0	60.2	58.5	66.6	61.9	60.2	46.5	59.3
65–69	53.4	57.7	59.2	55.9	61.6	59.2	54.5	41.0	56.6
70–74	44.3	47.8	47.1	17.3	22.7	19.9	15.4	35.6	40.5
75–79	29.0	14.7	25.4	8.3	10.1	8.1	7.5	21.1	20.4
80–84	13.4	3.4	11.7	2.8	3.6	2.5	3.2	13.8	8.3
85+	3.4	0.8	3.2	0.7	0.6	0.7	1.0	1.7	2.1
Ages 40+									
Crude rate	37.5	33.7	42.0	31.8	36.2	36.6	35.1	29.8	36.6
ASR(A)	38.2	34.6	42.6	32.6	37.8	37.8	34.8	31.1	37.5
95% CI	38.1–38.3	34.5–34.7	42.4–42.7	32.4–32.8	37.6–38.0	37.3–38.1	34.3–35.3	30.4–31.8	37.4–37.5
Ages 50–69									
Crude rate	53.1	59.1	58.4	55.3	64.3	60.0	56.8	46.8	56.9
ASR(A)	53.0	59.2	58.4	55.4	64.3	60.0	57.0	46.3	56.9
95% CI	52.9–53.2	59.0–59.4	58.1–58.6	55.1–55.7	63.9–64.7	59.3–60.6	56.0–57.8	45.1–47.5	56.8–57.0

Notes

1. Period covers 1 January 2000 to 31 December 2001.
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.

Source: AIHW analysis of BreastScreen Australia data.

Table 3: Participation in BreastScreen Australia by age and region, 2000–2001

Age group	Number/ Rate	Capital cities	Other metro-politan areas	Large rural centres	Small rural centres	Other rural areas	Remote centres	Other remote areas	Australia
40–44	Number	59,781	12,760	8,432	7,066	15,841	1,880	2,505	108,266
	Rate	12.7	22.9	19.4	14.9	15.9	22.6	21.8	14.7
45–49	Number	104,352	19,317	13,539	12,093	26,080	2,715	3,444	181,539
	Rate	23.9	37.6	34.1	28.1	28.7	38.8	34.5	26.7
50–54	Number	214,396	28,939	21,710	23,148	48,655	3,221	4,745	344,814
	Rate	52.4	59.4	60.8	57.0	56.2	55.4	53.0	54.2
55–59	Number	169,590	25,039	18,339	20,711	44,329	2,394	3,962	284,364
	Rate	56.4	64.3	65.6	60.9	61.4	59.6	57.7	58.7
60–64	Number	138,814	21,511	15,910	19,040	38,627	1,629	3,106	238,636
	Rate	57.1	64.2	64.9	61.2	62.2	60.5	57.5	59.3
65–69	Number	112,586	18,357	13,619	16,757	30,904	1,158	2,284	195,665
	Rate	54.0	61.3	62.7	58.9	60.2	56.9	56.1	56.6
70–74	Number	76,131	15,405	10,122	11,377	20,048	648	1,483	135,213
	Rate	37.4	51.0	47.2	41.2	43.3	40.0	46.0	40.5
75–79	Number	32,857	7,531	4,214	4,767	8,670	269	682	58,990
	Rate	18.2	29.2	22.4	20.6	23.0	22.8	28.7	20.4
80–84	Number	8,792	2,349	1,199	1,350	2,366	87	209	16,352
	Rate	7.2	14.0	9.1	8.8	9.3	10.7	13.5	8.3
85+	Number	1,962	517	293	258	601	21	54	3,705
	Rate	1.7	3.6	2.4	2.0	2.6	2.8	3.9	2.1
Ages 40+	**Number**	**919,261**	**151,726**	**107,377**	**116,566**	**236,120**	**14,021**	**22,474**	**1,567,544**
	Crude rate	34.2	44.0	41.5	38.4	39.7	41.0	40.7	36.6
	ASR(A)	35.2	44.6	43.1	38.9	39.6	41.5	40.6	37.5
	95% CI	35.2-35.3	44.4-44.8	42.8-43.3	38.6-39.1	39.5-39.8	40.7-42.2	40.1-41.2	37.4-37.5
Ages 50–69	**Number**	**635,386**	**93,847**	**69,577**	**79,655**	**162,515**	**8,402**	**14,097**	**1,063,479**
	Crude rate	54.7	62.1	63.3	59.4	59.7	57.7	55.7	56.9
	ASR(A)	54.8	62.1	63.3	59.3	59.6	57.9	55.8	56.9
	95% CI	54.6–54.9	61.7–62.5	62.8–63.7	58.9–59.7	59.3–59.9	56.6–59.2	54.8–56.7	56.8–57.0

Notes

1. Period covers 1 January 2000 to 31 December 2001.
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.

Source: AIHW analysis of BreastScreen Australia data.

Table 4: Participation in BreastScreen Australia by age and socioeconomic status, 2000–2001

Age group	Number/ Rate	1st quintile	2nd quintile	3rd quintile	4th quintile	5th quintile	Australia
40–44	Number	21,400	20,822	20,771	23,256	22,016	108,266
	Rate	13.4	13.8	14.2	16.3	16.1	14.7
45–49	Number	37,926	33,648	35,396	38,452	36,117	181,539
	Rate	24.1	24.3	27.4	30.0	28.8	26.7
50–54	Number	74,387	71,601	65,587	66,957	66,282	344,814
	Rate	51.5	57.0	54.2	54.9	54.0	54.2
55–59	Number	58,160	56,277	54,875	57,430	57,622	284,364
	Rate	58.5	61.9	58.2	58.7	56.4	58.7
60–64	Number	44,738	44,638	46,760	50,906	51,594	238,636
	Rate	58.6	61.6	58.9	59.9	57.9	59.3
65–69	Number	35,546	35,844	38,644	42,481	43,150	195,665
	Rate	53.9	57.8	56.7	58.1	56.3	56.6
70–74	Number	25,940	25,793	27,110	28,620	27,751	135,213
	Rate	38.5	42.5	40.8	42.2	38.6	40.5
75–79	Number	11,903	10,334	12,274	12,455	12,024	58,990
	Rate	19.3	19.4	21.1	21.9	20.1	20.4
80–84	Number	3,271	2,735	3,472	3,418	3,457	16,352
	Rate	7.3	7.4	9.0	9.4	9.0	8.3
85+	Number	722	670	792	744	777	3,705
	Rate	1.6	1.9	2.2	2.4	2.3	2.1
Ages 40+	**Number**	**313,993**	**302,362**	**305,681**	**324,719**	**320,789**	**1,567,544**
	Crude rate	34.0	36.6	36.5	38.6	37.4	36.6
	ASR(A)	35.8	38.1	37.5	38.8	37.4	37.5
	95% CI	35.7–35.9	38.0–38.2	37.3–37.6	38.7–39.0	37.3–37.6	37.4–37.5
Ages 50–69	**Number**	**212,831**	**208,360**	**205,865**	**217,774**	**218,648**	**1,063,479**
	Crude rate	55.1	59.4	56.7	57.6	56.0	56.9
	ASR(A)	55.3	59.4	56.7	57.5	55.9	56.9
	95% CI	55.1–55.6	59.2–59.7	56.4–56.9	57.3–57.8	55.7–56.1	56.8–57.0

Notes

1. Period covers 1 January 2000 to 31 December 2001.
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.

Source: AIHW analysis of BreastScreen Australia data.

Table 5: Participation in BreastScreen Australia by age and Indigenous status, 2000–2001

Age group	Number/Rate	Indigenous	Non-Indigenous	Australia
40–44	Number	1,473	106,677	108,266
	Rate	11.8	14.7	14.7
45–49	Number	1,960	179,189	181,539
	Rate	19.9	26.8	26.7
50–54	Number	2,487	341,017	344,814
	Rate	33.4	54.3	54.2
55–59	Number	1,875	281,618	284,364
	Rate	37.7	58.7	58.7
60–64	Number	1,419	236,468	238,636
	Rate	37.3	59.3	59.3
65–69	Number	1,014	193,971	195,665
	Rate	37.8	56.5	56.6
70–74	Number	520	134,258	135,213
	Rate	28.3	40.4	40.5
75+	Number	212	78,542	79,047
	Rate	9.4	11.9	11.9
Ages 40+	**Number**	**10,960**	**1,551,740**	**1,567,544**
	Crude rate	24.2	36.6	36.6
	ASR(A)	25.1	37.4	37.4
	95% CI	24.6–25.6	37.3–37.5	37.3–37.4
Ages 50–69	**Number**	**6,795**	**1,053,074**	**1,063,479**
	Crude rate	35.9	56.9	56.9
	ASR(A)	36.2	56.9	56.9
	95% CI	35.3–37.0	56.8–57.0	56.8–57.0

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 2000 to 31 December 2001.
3. Women in the 'unknown' category are included in the column for all women, 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, 2000–2001

Age group	Number/Rate	English speaking	Non-English speaking	Australia
40–44	Number	94,996	13,182	108,266
	Rate	15.6	10.4	14.7
45–49	Number	158,318	23,061	181,539
	Rate	28.0	20.3	26.7
50–54	Number	298,209	46,305	344,814
	Rate	55.8	45.7	54.2
55–59	Number	245,294	38,807	284,364
	Rate	59.8	52.0	58.7
60–64	Number	199,959	38,452	238,636
	Rate	60.7	52.5	59.3
65–69	Number	165,455	30,029	195,665
	Rate	58.9	46.1	56.6
70–74	Number	118,948	16,155	135,213
	Rate	42.4	30.1	40.5
75–79	Number	53,306	5,615	58,990
	Rate	21.7	12.8	20.4
80–84	Number	15,300	1,035	16,352
	Rate	8.8	4.7	8.3
85+	Number	3,498	203	3,705
	Rate	2.2	1.1	2.1
Ages 40+	**Number**	**1,353,283**	**212,844**	**1,567,544**
	Crude rate	37.7	30.7	36.6
	ASR(A)	38.8	30.6	37.5
	95% CI	38.7–38.8	30.5–30.7	37.4–37.5
Ages 50–69	**Number**	**908,917**	**153,593**	**1,063,479**
	Crude rate	58.5	48.9	56.9
	ASR(A)	58.5	48.9	56.9
	95% CI	58.4–58.6	48.6–49.1	56.8–57.0

Notes

1. Period covers 1 January 2000 to 31 December 2001.
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.

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 women screened, first screening round, by age, states and territories, 2001

Age group	Number	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
40–44	Screened	13,638	4,386	9,823	2,508	2,152	809	568	312	34,196
	Cases	20	5	14	4	4	0	0	0	47
45–49	Screened	10,801	5,218	6,328	2,957	2,272	659	612	290	29,137
	Cases	16	10	10	6	5	0	0	0	47
50–54	Screened	13,357	13,059	7,125	4,560	4,284	725	679	371	44,160
	Cases	46	35	22	9	9	2	1	0	124
55–59	Screened	5,851	4,533	3,360	1,227	848	280	200	135	16,434
	Cases	22	16	14	3	2	2	1	0	60
60–64	Screened	4,406	3,660	2,354	884	418	209	110	68	12,109
	Cases	23	14	13	4	2	4	2	0	62
65–69	Screened	3,136	2,976	1,653	573	325	139	72	40	8,914
	Cases	11	14	8	2	2	2	0	0	39
70–74	Screened	1,916	1,216	954	244	172	60	33	19	4,614
	Cases	10	12	7	9	1	0	0	0	39
75–79	Screened	1,335	553	598	180	167	72	24	12	2,941
	Cases	10	6	8	0	1	1	0	0	26
80–84	Screened	561	226	207	65	60	15	8	7	1,149
	Cases	3	3	1	0	0	0	0	0	7
85+	Screened	146	79	62	26	23	7	3	0	346
	Cases	0	2	2	0	0	0	0	0	4
Ages 40+	**Screened**	**55,147**	**35,906**	**32,464**	**13,224**	**10,721**	**2,975**	**2,309**	**1,254**	**154,000**
	Cases	**161**	**117**	**99**	**37**	**26**	**11**	**4**	**0**	**455**
Ages 50–69	**Screened**	**26,750**	**24,228**	**14,492**	**7,244**	**5,875**	**1,353**	**1,061**	**614**	**81,617**
	Cases	**102**	**79**	**57**	**18**	**15**	**10**	**4**	**0**	**285**

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, 2001

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
40–44	14.7	11.4	14.3	15.9	18.6	0.0	0.0	0.0	13.7
45–49	14.8	19.2	15.8	20.3	22.0	0.0	0.0	0.0	16.1
50–54	34.4	26.8	30.9	19.7	21.0	27.6	14.7	0.0	28.1
55–59	37.6	35.3	41.7	24.4	23.6	71.4	50.0	0.0	36.5
60–64	52.2	38.3	55.2	45.2	47.8	191.4	181.8	0.0	51.2
65–69	35.1	47.0	48.4	34.9	61.5	143.9	0.0	0.0	43.8
70–74	52.2	98.7	73.4	368.9	58.1	0.0	0.0	0.0	84.5
75–79	74.9	108.5	133.8	0.0	59.9	138.9	0.0	0.0	88.4
80–84	53.5	132.7	48.3	0.0	0.0	0.0	0.0	0.0	60.9
85+	0.0	253.2	322.6	0.0	0.0	0.0	0.0	0.0	115.6
Ages 40+									
Crude rate	29.2	32.6	30.5	28.0	24.3	37.0	17.3	0.0	29.5
ASR(A)	36.4	40.2	42.8	54.4	34.7	69.6	38.7	0.0	39.3
95% CI	30.0–42.7	32.3–49.0	32.9–52.4	32.9–78.5	18.1–57.2	32.5–119.7	3.2–79.0	. .	35.0–43.5
Ages 50–69									
Crude rate	38.1	32.6	39.3	24.8	25.5	73.9	37.7	0.0	34.9
ASR(A)	39.3	35.5	42.5	29.6	35.5	97.8	57.9	0.0	38.4
95% CI	31.2–47.0	27.0–44.2	31.1–54.4	14.8–47.2	15.1–62.5	39.7–167.5	4.8–118.2	. .	33.7–43.2

. . Not applicable—no small invasive breast cancers were found in the Northern Territory at first-round screening in 2001.

Note: Rates are the number of 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, 2001

Age group	Number	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
40–44	Screened	9,575	1,043	7,415	1,576	1,306	579	320	140	21,954
	Cases	6	1	10	0	0	0	1	0	18
45–49	Screened	27,561	4,864	18,968	5,752	4,500	2,202	1,265	450	65,562
	Cases	20	3	26	4	1	5	3	0	62
50–54	Screened	42,464	33,227	27,508	13,286	12,810	3,753	2,582	850	136,480
	Cases	70	69	56	37	26	9	3	2	272
55–59	Screened	43,823	35,834	25,495	13,299	13,715	3,714	2,293	781	138,954
	Cases	133	79	62	35	45	11	7	2	374
60–64	Screened	38,082	28,664	20,734	11,420	12,002	3,279	1,728	478	116,387
	Cases	110	86	75	35	49	13	8	1	377
65–69	Screened	32,494	23,454	16,956	9,245	9,636	2,754	1,250	241	96,030
	Cases	113	78	68	36	31	8	8	2	344
70–74	Screened	26,913	19,791	13,529	2,470	3,436	1,095	266	137	67,637
	Cases	106	69	58	9	18	12	2	0	274
75–79	Screened	16,146	5,104	5,882	914	1,308	283	109	50	29,796
	Cases	68	17	19	12	14	4	1	0	135
80–84	Screened	5,261	648	1,915	198	301	61	34	26	8,444
	Cases	30	6	11	4	2	0	0	0	53
85+	Screened	1,147	142	429	42	38	8	4	2	1,812
	Cases	5	0	6	0	2	1	1	0	15
Ages 40+	**Screened**	**243,466**	**152,771**	**138,831**	**58,202**	**59,052**	**17,728**	**9,851**	**3,155**	**683,056**
	Cases	**661**	**408**	**391**	**172**	**188**	**63**	**34**	**7**	**1,924**
Ages 50–69	**Screened**	**156,863**	**121,179**	**90,693**	**47,250**	**48,163**	**13,500**	**7,853**	**2,350**	**487,851**
	Cases	**426**	**312**	**261**	**143**	**151**	**41**	**26**	**7**	**1,367**

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, 2001

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
40–44	6.3	9.6	13.5	0.0	0.0	0.0	31.3	0.0	8.2
45–49	7.3	6.2	13.7	7.0	2.2	22.7	23.7	0.0	9.5
50–54	16.5	20.8	20.4	27.8	20.3	24.0	11.6	23.5	19.9
55–59	30.3	22.0	24.3	26.3	32.8	29.6	30.5	25.6	26.9
60–64	28.9	30.0	36.2	30.6	40.8	39.6	46.3	20.9	32.4
65–69	34.8	33.3	40.1	38.9	32.2	29.0	64.0	83.0	35.8
70–74	39.4	34.9	42.9	36.4	52.4	109.6	75.2	0.0	40.5
75–79	42.1	33.3	32.3	131.3	107.0	141.3	91.7	0.0	45.3
80–84	57.0	92.6	57.4	202.0	66.4	0.0	0.0	0.0	62.8
85+	43.6	0.0	139.9	0.0	526.3	1250.0	2500.0	0.0	82.8
Ages 40+									
Crude rate	27.1	26.7	28.2	29.6	31.8	35.5	34.5	22.2	28.2
ASR(A)	24.2	23.4	27.3	29.9	29.8	38.7	42.3	23.4	25.8
95% CI	22.2–26.0	20.7–26.3	24.6–29.9	25.0–34.8	25.3–34.1	28.5–49.1	26.2–59.9	7.5–44.7	24.6–27.0
Ages 50–69									
Crude rate	27.2	25.7	28.8	30.3	31.4	30.4	33.1	29.8	28.0
ASR(A)	26.4	25.6	28.7	30.2	30.4	29.9	34.4	35.1	27.6
95% CI	23.7–28.9	22.8–28.6	25.5–32.0	25.1–35.2	25.6–35.3	20.1–39.9	22.3–48.1	11.3–66.9	26.1–29.0

Note: Rates are the number of 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 small diameter (≤ 15 mm) invasive cancers detected in these women, all screening rounds, by age, states and territories, 2001

Age group	Number	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
40–44	Screened	23,213	5,429	17,238	4,084	3,458	1,388	888	452	56,150
	Cases	26	6	24	4	4	0	1	0	65
45–49	Screened	38,362	10,082	25,296	8,709	6,772	2,861	1,877	740	94,699
	Cases	36	13	36	10	6	5	3	0	109
50–54	Screened	55,821	46,286	34,633	17,846	17,094	4,478	3,261	1,221	180,640
	Cases	116	104	78	46	35	11	4	2	396
55–59	Screened	49,674	40,367	28,855	14,526	14,563	3,994	2,493	916	155,388
	Cases	155	95	76	38	47	13	8	2	434
60–64	Screened	42,488	32,324	23,088	12,304	12,420	3,488	1,838	546	128,496
	Cases	133	100	88	39	51	17	10	1	439
65–69	Screened	35,630	26,430	18,609	9,818	9,961	2,893	1,322	281	104,944
	Cases	124	92	76	38	33	10	8	2	383
70–74	Screened	28,829	21,007	14,483	2,714	3,608	1,155	299	156	72,251
	Cases	116	81	65	18	19	12	2	0	313
75–79	Screened	17,481	5,657	6,480	1,094	1,475	355	133	62	32,737
	Cases	78	23	27	12	15	5	1	0	161
80–84	Screened	5,822	874	2,122	263	361	76	42	33	9,593
	Cases	33	9	12	4	2	0	0	0	60
85+	Screened	1,293	221	491	68	61	15	7	2	2,158
	Cases	5	2	8	0	2	1	1	0	19
Ages 40+	**Screened**	**298,613**	**188,677**	**171,295**	**71,426**	**69,773**	**20,703**	**12,160**	**4,409**	**837,056**
	Cases	**822**	**525**	**490**	**209**	**214**	**74**	**38**	**7**	**2,379**
Ages 50–69	**Screened**	**183,613**	**145,407**	**105,185**	**54,494**	**54,038**	**14,853**	**8,914**	**2,964**	**569,468**
	Cases	**528**	**391**	**318**	**161**	**166**	**51**	**30**	**7**	**1,652**

Source: AIHW analysis of BreastScreen Australia data.

Table 12: Age-specific rates of small diameter (≤ 15 mm) invasive cancers detected in women screened, all screening rounds, states and territories, 2001

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
40–44	11.2	11.1	13.9	9.8	11.6	0.0	11.3	0.0	11.6
45–49	9.4	12.9	14.2	11.5	8.9	17.5	16.0	0.0	11.5
50–54	20.8	22.5	22.5	25.8	20.5	24.6	12.3	16.4	21.9
55–59	31.2	23.5	26.3	26.2	32.3	32.5	32.1	21.8	27.9
60–64	31.3	30.9	38.1	31.7	41.1	48.7	54.4	18.3	34.2
65–69	34.8	34.8	40.8	38.7	33.1	34.6	60.5	71.2	36.5
70–74	40.2	38.6	44.9	66.3	52.7	103.9	66.9	0.0	43.3
75–79	44.6	40.7	41.7	109.7	101.7	140.8	75.2	0.0	49.2
80–84	56.7	103.0	56.6	152.1	55.4	0.0	0.0	0.0	62.5
85+	38.7	90.5	162.9	0.0	327.9	666.7	1,428.6	0.0	88.0
Ages 40+									
Crude rate	27.5	27.8	28.6	29.3	30.7	35.7	31.3	15.9	28.4
ASR(A)	26.4	26.1	29.1	32.3	31.1	39.1	37.6	19.3	27.6
95% CI	24.4–28.4	23.7–28.5	26.3–31.8	27.6–37.2	26.6–35.6	29.8–47.8	24.8–52.5	5.6–35.7	26.4–28.7
Ages 50–69									
Crude rate	28.8	26.9	30.2	29.5	30.7	34.3	33.7	23.6	29.0
ASR(A)	28.5	27.0	30.5	29.7	30.5	33.9	36.1	28.9	29.0
95% CI	26.0–30.9	24.3–29.7	27.1–33.9	25.0–34.3	26.0–35.3	24.1–43.7	23.8–50.2	8.3–53.5	27.7–30.4

Note: Rates are the number of 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 13: Numbers of women screened and cases of invasive cancer detected in these women, first screening round, by age, states and territories, 2001

Age group	Number	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
40–44	Screened	13,638	4,386	9,823	2,508	2,152	809	568	312	34,196
	Cases	29	14	20	6	5	0	1	0	75
45–49	Screened	10,801	5,218	6,328	2,957	2,272	659	612	290	29,137
	Cases	36	22	24	8	8	1	2	0	101
50–54	Screened	13,357	13,059	7,125	4,560	4,284	725	679	371	44,160
	Cases	70	56	36	18	15	4	3	1	203
55–59	Screened	5,851	4,533	3,360	1,227	848	280	200	135	16,434
	Cases	30	37	23	6	8	2	1	0	107
60–64	Screened	4,406	3,660	2,354	884	418	209	110	68	12,109
	Cases	37	33	21	5	4	4	3	0	107
65–69	Screened	3,136	2,976	1,653	573	325	139	72	40	8,914
	Cases	22	24	15	3	5	4	0	0	73
70–74	Screened	1,916	1,216	954	244	172	60	33	19	4,614
	Cases	19	22	11	10	1	0	0	0	63
75–79	Screened	1,335	553	598	180	167	72	24	12	2,941
	Cases	24	15	14	2	2	1	0	0	58
80–84	Screened	561	226	207	65	60	15	8	7	1,149
	Cases	5	5	2	0	1	0	1	0	14
85+	Screened	146	79	62	26	23	7	3	0	346
	Cases	2	2	2	0	0	0	0	0	6
Ages 40+	**Screened**	**55,147**	**35,906**	**32,464**	**13,224**	**10,721**	**2,975**	**2,309**	**1,254**	**154,000**
	Cases	**274**	**230**	**168**	**58**	**49**	**16**	**11**	**1**	**807**
Ages 50–69	**Screened**	**26,750**	**24,228**	**14,492**	**7,244**	**5,875**	**1,353**	**1,061**	**614**	**81,617**
	Cases	**159**	**150**	**95**	**32**	**32**	**14**	**7**	**1**	**490**

Source: AIHW analysis of BreastScreen Australia data.

Table 14: Age-specific rates of invasive breast cancers per 10,000 women screened, first screening round, states and territories, 2001

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
40–44	21.3	31.9	20.4	23.9	23.2	0.0	17.6	0.0	21.9
45–49	33.3	42.2	37.9	27.1	35.2	15.2	32.7	0.0	34.7
50–54	52.4	42.9	50.5	39.5	35.0	55.2	44.2	27.0	46.0
55–59	51.3	81.6	68.5	48.9	94.3	71.4	50.0	0.0	65.1
60–64	84.0	90.2	89.2	56.6	95.7	191.4	272.7	0.0	88.4
65–69	70.2	80.6	90.7	52.4	153.8	287.8	0.0	0.0	81.9
70–74	99.2	180.9	115.3	409.8	58.1	0.0	0.0	0.0	136.5
75–79	179.8	271.2	234.1	111.1	119.8	138.9	0.0	0.0	197.2
80–84	89.1	221.2	96.6	0.0	166.7	0.0	1,250.0	0.0	121.8
85+	137.0	253.2	322.6	0.0	0.0	0.0	0.0	0.0	173.4
Ages 40+									
Crude rate	49.7	64.1	51.7	43.9	45.7	53.9	47.6	8.0	52.4
ASR(A)	62.5	80.9	72.5	75.2	74.4	96.2	74.8	5.9	69.9
95% CI	53.9–71.3	70.1–92.6	59.7–85.5	51.6–103.0	47.0–104.3	48.2–150.4	26.7–131.8	0.0–17.6	64.8–75.3
Ages 50–69									
Crude rate	59.4	61.9	65.6	44.2	54.5	103.5	66.0	16.3	60.0
ASR(A)	62.5	70.7	71.6	48.2	86.9	134.8	87.6	8.8	67.3
95% CI	52.0–73.0	58.9–83.0	55.5–86.7	30.3–68.8	50.7–126.4	65.3–215.6	22.5–165.7	0.0–26.3	61.2–73.2

Note: Rates are the number of 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 15: Numbers of women screened and cases of invasive cancer detected in these women, subsequent screening rounds, by age, states and territories, 2001

Age group	Number	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
40–44	Screened	9,575	1,043	7,415	1,576	1,306	579	320	140	21,954
	Cases	11	1	17	1	2	0	1	0	33
45–49	Screened	27,561	4,864	18,968	5,752	4,500	2,202	1,265	450	65,562
	Cases	41	8	41	8	11	7	3	1	120
50–54	Screened	42,464	33,227	27,508	13,286	12,810	3,753	2,582	850	136,480
	Cases	101	104	91	50	45	9	9	3	412
55–59	Screened	43,823	35,834	25,495	13,299	13,715	3,714	2,293	781	138,954
	Cases	201	113	104	60	61	18	8	3	568
60–64	Screened	38,082	28,664	20,734	11,420	12,002	3,279	1,728	478	116,387
	Cases	178	129	115	60	70	20	8	4	584
65–69	Screened	32,494	23,454	16,956	9,245	9,636	2,754	1,250	241	96,030
	Cases	166	112	96	49	49	12	13	2	499
70–74	Screened	26,913	19,791	13,529	2,470	3,436	1,095	266	137	67,637
	Cases	150	101	83	14	25	13	4	0	390
75–79	Screened	16,146	5,104	5,882	914	1,308	283	109	50	29,796
	Cases	86	37	27	15	21	5	2	0	193
80–84	Screened	5,261	648	1,915	198	301	61	34	26	8,444
	Cases	41	8	15	4	2	1	0	0	71
85+	Screened	1,147	142	429	42	38	8	4	2	1,812
	Cases	6	1	6	0	2	1	1	0	17
Ages 40+	**Screened**	**243,466**	**152,771**	**138,831**	**58,202**	**59,052**	**17,728**	**9,851**	**3,155**	**683,056**
	Cases	**981**	**614**	**595**	**261**	**288**	**86**	**49**	**13**	**2,887**
Ages 50–69	**Screened**	**156,863**	**121,179**	**90,693**	**47,250**	**48,163**	**13,500**	**7,853**	**2,350**	**487,851**
	Cases	**646**	**458**	**406**	**219**	**225**	**59**	**38**	**12**	**2,063**

Source: AIHW analysis of BreastScreen Australia data.

Table 16: Age-specific rates of invasive breast cancers per 10,000 women screened, subsequent screening rounds, by age, states and territories, 2001

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
40–44	11.5	9.6	22.9	6.3	15.3	0.0	31.3	0.0	15.0
45–49	14.9	16.4	21.6	13.9	24.4	31.8	23.7	22.2	18.3
50–54	23.8	31.3	33.1	37.6	35.1	24.0	34.9	35.3	30.2
55–59	45.9	31.5	40.8	45.1	44.5	48.5	34.9	38.4	40.9
60–64	46.7	45.0	55.5	52.5	58.3	61.0	46.3	83.7	50.2
65–69	51.1	47.8	56.6	53.0	50.9	43.6	104.0	83.0	52.0
70–74	55.7	51.0	61.3	56.7	72.8	118.7	150.4	0.0	57.7
75–79	53.3	72.5	45.9	164.1	160.6	176.7	183.5	0.0	64.8
80–84	77.9	123.5	78.3	202.0	66.4	163.9	0.0	0.0	84.1
85+	52.3	70.4	139.9	0.0	526.3	1250.0	2500.0	0.0	93.8
Ages 40+									
Crude rate	40.3	40.2	42.9	44.8	48.8	48.5	49.7	41.2	42.3
ASR(A)	36.5	35.6	41.9	44.4	47.4	51.4	62.4	40.3	39.0
95% CI	34.1–38.8	32.4–38.9	38.3–45.2	38.9–50.2	41.5–53.1	40.0–63.7	42.8–84.7	18.3–65.6	37.6–40.5
Ages 50–69									
Crude rate	41.2	37.8	44.8	46.3	46.7	43.7	48.4	51.1	42.3
ASR(A)	39.9	37.6	44.6	45.9	45.7	42.3	50.9	56.1	41.6
95% CI	36.6–43.1	34.2–40.8	40.0–48.7	40.0–51.8	39.4–51.7	32.3–53.4	33.4–67.9	24.8–93.0	39.9–43.3

Note: Rates are the number of 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 17: Numbers and age-specific rates of interval cancers in women screened during 1997, 1998 and 1999, 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	65	23	27	13	9	3	2	n.a.	n.a.
	Rate	7.5	6.8	5.1	7.0	6.3	5.5	5.5	n.a.	n.a.
50–59	Number	62	44	36	10	22	2	1	n.a.	n.a.
	Rate	8.3	7.6	6.8	6.2	12.2	4.4	3.3	n.a.	n.a.
60–69	Number	26	12	17	4	2	3	0	n.a.	n.a.
	Rate	7.0	8.5	5.9	5.8	3.6	35.1	0.0	n.a.	n.a.
70+	Number	20	9	4	1	0	0	0	n.a.	n.a.
	Rate	10.3	10.7	3.5	3.4	0.0	0.0	0.0	n.a.	n.a.
Ages 40+	**Number**	**173**	**88**	**84**	**28**	**33**	**8**	**3**	n.a.	n.a.
	Crude rate	7.9	7.7	5.8	6.3	8.2	6.3	3.8	n.a.	n.a.
	ASR(A)	8.0	8.0	5.8	5.9	7.1	7.4	2.4	n.a.	n.a.
	95%CI	6.7–9.3	6.1–9.9	4.5–7.1	3.7–8.4	4.5–9.9	2.4–14.0	0.0–5.7	n.a.	n.a.
Ages 50–69	**Number**	**88**	**56**	**53**	**14**	**24**	**5**	**1**	n.a.	n.a.
	Crude rate	7.8	7.8	6.5	6.1	10.2	7.8	2.6	n.a.	n.a.
	ASR(A)	7.7	8.0	6.4	6.0	8.6	9.4	1.9	n.a.	n.a.
	95%CI	6.0–9.4	5.5–10.3	4.6–8.1	3.0–9.7	5.0–12.4	2.3–19.0	0.0–5.8	n.a.	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. Northern Territory data were unavailable at the time of publication

Source: AIHW analysis of BreastScreen Australia data.

Table 18: Numbers and age-specific rates of interval cancers in women screened during 1997, 1998 and 1999, 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	n.a.	45	57	12	22	5	1	n.a.	n.a.
	Rate	n.a.	13.2	11.3	6.5	16.5	9.8	2.9	n.a.	n.a.
50–59	Number	n.a.	76	86	16	24	4	5	n.a.	n.a.
	Rate	n.a.	13.1	16.8	10.1	13.5	9.2	17.0	n.a.	n.a.
60–69	Number	n.a.	23	43	11	4	6	2	n.a.	n.a.
	Rate	n.a.	16.2	15.2	16.2	7.2	35.1	25.3	n.a.	n.a.
70+	Number	n.a.	9	16	6	1	0	1	n.a.	n.a.
	Rate	n.a.	10.7	14.2	21.1	3.8	0.0	24.6	n.a.	n.a.
Ages 40+	**Number**	n.a.	**153**	**202**	**45**	**51**	**15**	**9**	n.a.	n.a.
	Crude rate	n.a.	13.4	14.3	10.3	13.0	12.4	11.8	n.a.	n.a.
	ASR(A)	n.a.	13.7	14.9	12.4	11.2	15.4	17.3	n.a.	n.a.
	95%CI	n.a.	11.4–16.1	12.8–17.0	8.8–16.4	8.0–14.8	7.1–24.6	5.3–30.5	n.a.	n.a.
Ages 50–69	**Number**	n.a.	**99**	**129**	**27**	**28**	**10**	**7**	n.a.	n.a.
	Crude rate	n.a.	13.7	16.3	11.9	12.0	16.5	18.8	n.a.	n.a.
	ASR(A)	n.a.	14.4	16.2	12.6	10.9	20.0	20.5	n.a.	n.a.
	95%CI	n.a.	11.3–17.9	13.3–18.9	7.4–17.4	6.8–15.4	8.6–34.0	6.0–38.2	n.a.	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. Northern Territory and New South Wales data were unavailable at the time of publication.

Source: AIHW analysis of BreastScreen Australia data.

Table 19: Numbers and age-specific rates of interval cancers in women screened during 1997, 1998 and 1999, 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	n.a.	68	84	25	31	8	3	n.a.	n.a.
	Rate	n.a.	10.0	8.2	6.7	11.3	7.6	4.2	n.a.	n.a.
50–59	Number	n.a.	120	122	26	46	6	6	n.a.	n.a.
	Rate	n.a.	10.4	11.7	8.2	12.9	6.7	10.0	n.a.	n.a.
60–69	Number	n.a.	35	60	15	6	9	2	n.a.	n.a.
	Rate	n.a.	12.3	10.6	11.0	5.4	25.5	12.4	n.a.	n.a.
70+	Number	n.a.	18	20	7	1	0	1	n.a.	n.a.
	Rate	n.a.	10.7	8.8	12.2	1.9	0.0	12.2	n.a.	n.a.
Ages 40+	**Number**	n.a.	**241**	**286**	**73**	**84**	**23**	**12**	n.a.	n.a.
	Crude rate	n.a.	10.5	10.0	8.3	10.5	9.3	7.8	n.a.	n.a.
	ASR(A)	n.a.	10.9	10.3	9.1	9.1	11.3	9.8	n.a.	n.a.
	95%CI	n.a.	9.3–12.4	9.1–11.6	6.8–11.4	7.1–11.1	6.4–16.6	4.2–17.0	n.a.	n.a.
Ages 50–69	**Number**	n.a.	**155**	**182**	**41**	**52**	**15**	**8**	n.a.	n.a.
	Crude rate	n.a.	10.8	11.3	9.0	11.1	12.0	10.5	n.a.	n.a.
	ASR(A)	n.a.	11.2	11.2	9.3	9.8	14.5	11.0	n.a.	n.a.
	95%CI	n.a.	9.2–13.1	9.6–12.9	6.5–12.2	7.1–12.5	7.3–22.1	3.6–19.8	n.a.	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. Northern Territory and New South Wales data were unavailable at the time of publication.

Source: AIHW analysis of BreastScreen Australia data.

Table 20: Numbers and age-specific rates of interval cancers in women screened during 1997, 1998 and 1999, 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	83	16	32	19	24	6	6	n.a.	n.a.
	Rate	9.2	8.8	5.6	10.0	16.5	6.6	11.0	n.a.	n.a.
50–59	Number	172	111	75	53	60	21	10	n.a.	n.a.
	Rate	8.3	6.9	7.8	8.6	10.0	11.1	8.1	n.a.	n.a.
60–69	Number	136	90	44	30	32	11	10	n.a.	n.a.
	Rate	7.7	6.6	6.2	6.4	6.1	7.3	13.5	n.a.	n.a.
70+	Number	55	30	26	7	3	5	1	n.a.	n.a.
	Rate	5.4	5.0	6.4	9.9	3.0	22.4	8.5	n.a.	n.a.
Ages 40+	**Number**	**446**	**247**	**177**	**109**	**119**	**43**	**27**	n.a.	n.a.
	Crude rate	7.7	6.6	6.7	8.1	8.7	9.5	10.2	n.a.	n.a.
	ASR(A)	7.9	7.0	6.7	8.4	9.4	10.5	10.2	n.a.	n.a.
	95%CI	7.2–8.7	5.9–8.1	5.7–7.7	6.7–10.2	7.6–11.2	7.2–14.0	6.2–14.3	n.a.	n.a.
Ages 50–69	**Number**	**308**	**201**	**119**	**83**	**92**	**32**	**20**	n.a.	n.a.
	Crude rate	8.0	6.8	7.1	7.6	8.2	9.4	10.1	n.a.	n.a.
	ASR(A)	8.0	6.8	7.1	7.7	8.4	9.5	10.3	n.a.	n.a.
	95%CI	7.1–8.9	5.8–7.7	5.8–8.4	5.9–9.3	6.7–10.2	6.2–12.8	6.0–15.1	n.a.	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. Northern Territory data were unavailable at the time of publication.

Source: AIHW analysis of BreastScreen Australia data.

Table 21: Numbers and age-specific rates of interval cancers in women screened during 1997, 1998 and 1999, 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	n.a.	20	67	9	19	9	3	n.a.	n.a.
	Rate	n.a.	11.1	12.7	5.9	14.9	10.9	6.2	n.a.	n.a.
50–59	Number	n.a.	208	138	61	73	26	18	n.a.	n.a.
	Rate	n.a.	13.0	15.1	11.5	12.4	14.5	15.9	n.a.	n.a.
60–69	Number	n.a.	192	115	43	59	9	5	n.a.	n.a.
	Rate	n.a.	14.2	16.5	10.9	11.5	6.3	7.3	n.a.	n.a.
70+	Number	n.a.	69	49	5	12	3	2	n.a.	n.a.
	Rate	n.a.	11.6	12.1	8.7	12.4	14.4	17.4	n.a.	n.a.
Ages 40+	**Number**	n.a.	**489**	**369**	**118**	**163**	**47**	**28**	n.a.	n.a.
	Crude rate	n.a.	13.1	14.5	10.4	12.3	11.1	11.6	n.a.	n.a.
	ASR(A)	n.a.	12.8	14.6	9.8	12.7	11.5	11.7	n.a.	n.a.
	95%CI	n.a.	11.3–14.1	13.1–16.1	8.0–11.8	10.3–14.8	8.1–15.1	6.9–16.9	n.a.	n.a.
Ages 50–69	**Number**	n.a.	**400**	**253**	**104**	**132**	**35**	**23**	n.a.	n.a.
	Crude rate	n.a.	13.5	15.7	11.3	12.0	10.9	12.7	n.a.	n.a.
	ASR(A)	n.a.	13.5	15.7	11.3	12.1	11.1	12.3	n.a.	n.a.
	95%CI	n.a.	12.2–14.8	13.8–17.7	9.2–13.5	9.9–14.2	7.6–14.9	7.1–17.6	n.a.	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. Northern Territory and New South Wales data were unavailable at the time of publication.

Source: AIHW analysis of BreastScreen Australia data.

Table 22: Numbers and age-specific rates of interval cancers in women screened during 1997, 1998 and 1999, 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	n.a.	36	99	28	43	15	9	n.a.	n.a.
	Rate	n.a.	10.0	9.0	8.2	15.8	8.7	8.7	n.a.	n.a.
50–59	Number	n.a.	319	213	114	133	47	28	n.a.	n.a.
	Rate	n.a.	10.0	11.3	9.9	11.2	12.8	11.8	n.a.	n.a.
60–69	Number	n.a.	282	159	73	91	20	15	n.a.	n.a.
	Rate	n.a.	10.4	11.4	8.4	8.8	6.8	10.5	n.a.	n.a.
70+	Number	n.a.	99	75	12	15	8	3	n.a.	n.a.
	Rate	n.a.	8.3	9.2	9.4	7.6	18.5	12.9	n.a.	n.a.
Ages 40+	**Number**	n.a.	**736**	**546**	**227**	**282**	**90**	**55**	n.a.	n.a.
	Crude rate	n.a.	9.9	10.5	9.1	10.5	10.3	10.9	n.a.	n.a.
	ASR(A)	n.a.	9.9	10.6	9.1	11.0	11.0	11.0	n.a.	n.a.
	95%CI	n.a.	8.9–10.7	9.7–11.5	7.9–10.3	9.6–12.4	8.5–13.5	7.9–14.0	n.a.	n.a.
Ages 50–69	**Number**	n.a.	**601**	**372**	**187**	**224**	**67**	**43**	n.a.	n.a.
	Crude rate	n.a.	10.2	11.3	9.3	10.1	10.1	11.3	n.a.	n.a.
	ASR(A)	n.a.	10.1	11.3	9.3	10.2	10.3	11.3	n.a.	n.a.
	95%CI	n.a.	9.3–11.0	10.1–12.4	8.0–10.6	8.8–11.5	7.7–12.9	7.8–14.6	n.a.	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. Northern Territory and New South Wales data were unavailable at the time of publication.

Source: AIHW analysis of BreastScreen Australia data.

Indicator 3b: Program sensitivity

Table 23: Program sensitivity rates for women screened during 1997, 1998 and 1999, first screening round, 0–12 months, states and territories

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
				(Per cent)					
40–49	72.9	76.5	84.4	76.4	79.1	76.9	77.8	n.a.	n.a.
50–59	85.3	86.7	87.5	86.1	80.5	90.5	94.1	n.a.	n.a.
60–69	90.5	92.1	92.9	93.4	96.7	80.0	100.0	n.a.	n.a.
70+	92.3	93.6	97.8	97.4	100.0	100.0	100.0	n.a.	n.a.
Ages 40+									
Crude rate	85.5	87.8	90.5	87.6	87.2	86.9	92.7	n.a.	n.a.
ASR(A)	85.1	87.0	89.6	87.5	87.1	85.9	93.1	n.a.	n.a.
95% CI	83.0–87.1	84.3–89.6	87.5–91.9	83.0–91.7	83.0–91.1	76.9–94.4	86.2–100.0	n.a.	n.a.
Ages 50–69									
Crude rate	87.4	88.4	89.9	89.5	86.2	86.1	96.4	n.a.	n.a.
ASR(A)	87.5	89.0	89.7	89.2	87.3	86.1	96.6	n.a.	n.a.
95% CI	85.1–89.9	86.2–91.9	87.1–92.3	83.6–94.4	82.4–91.9	75.0–97.2	89.7–100.0	n.a.	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. Northern Territory and New South Wales data were unavailable at the time of publication.

Source: AIHW analysis of BreastScreen Australia data.

Table 24: Program sensitivity rates for women screened during years 1997, 1998 and 1999, first screening round, 0–24 months, states and territories

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
				(Per cent)					
40–49	n.a.	52.4	67.0	77.8	52.3	55.6	87.5	n.a.	n.a.
50–59	n.a.	70.5	69.8	79.5	66.4	76.0	76.2	n.a.	n.a.
60–69	n.a.	80.0	81.0	83.8	90.8	57.1	84.6	n.a.	n.a.
70+	n.a.	88.0	90.8	86.0	97.6	100.0	80.0	n.a.	n.a.
Ages 40+									
Crude rate	n.a.	72.5	76.0	81.5	72.8	69.7	80.9	n.a.	n.a.
ASR(A)	n.a.	71.6	74.9	81.2	74.1	69.5	81.4	n.a.	n.a.
95% CI	n.a.	68.6–74.5	72.3–77.6	75.9–86.1	69.7–78.4	60.2–79.3	70.4–92.3	n.a.	n.a.
Ages 50–69									
Crude rate	n.a.	73.4	74.6	81.5	74.3	67.4	79.4	n.a.	n.a.
ASR(A)	n.a.	74.5	74.4	81.3	76.5	68.2	79.7	n.a.	n.a.
95% CI	n.a.	71.1–77.8	71.1–77.9	74.6–87.4	70.8–81.9	55.2–81.1	65.0–91.7	n.a.	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. Northern Territory and New South Wales data were unavailable at the time of publication.

Source: AIHW analysis of BreastScreen Australia data.

Table 25: Program sensitivity rates for women screened during 1997, 1998 and 1999, subsequent screening rounds, 0–12 months, states and territories

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
				(Per cent)					
40–49	61.9	72.9	74.6	66.7	60.0	69.6	57.1	n.a.	n.a.
50–59	78.5	82.0	78.9	80.3	78.3	75.3	84.4	n.a.	n.a.
60–69	84.9	87.8	87.8	89.3	88.7	82.5	74.4	n.a.	n.a.
70+	90.5	92.3	90.7	89.4	95.6	75.0	90.0	n.a.	n.a.
Ages 40+									
Crude rate	82.1	86.3	84.2	83.8	82.7	77.0	78.7	n.a.	n.a.
ASR(A)	78.3	83.0	82.0	81.1	79.5	76.1	76.6	n.a.	n.a.
95% CI	76.4–80.2	80.2–85.7	79.6–84.4	77.7–84.5	76.0–83.0	69.6–82.5	59.4–87.7	n.a.	n.a.
Ages 50–69									
Crude rate	81.9	85.1	83.4	84.9	83.5	78.4	80.6	n.a.	n.a.
ASR(A)	81.1	84.4	82.6	84.1	82.6	78.3	80.2	n.a.	n.a.
95% CI	79.1–83.1	82.3–86.3	79.7–85.4	80.9–87.0	79.4–85.8	71.5–85.1	68.8–84.7	n.a.	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. Northern Territory and New South Wales data were unavailable at the time of publication.

Source: AIHW analysis of BreastScreen Australia data.

Table 26: Program sensitivity rates for women screened during 1997, 1998 and 1999, subsequent screening rounds, 0–24 months, states and territories

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
				(Per cent)					
40–49	n.a.	54.4	52.8	66.7	45.6	51.6	72.7	n.a.	n.a.
50–59	n.a.	61.3	61.3	80.3	61.9	57.7	75.0	n.a.	n.a.
60–69	n.a.	69.6	69.2	89.3	73.3	72.2	85.3	n.a.	n.a.
70+	n.a.	78.4	80.7	89.4	81.3	65.2	81.8	n.a.	n.a.
Ages 40+									
Crude rate	n.a.	67.9	67.2	82.7	66.8	62.0	78.1	n.a.	n.a.
ASR(A)	n.a.	64.3	64.2	82.4	64.1	61.4	78.2	n.a.	n.a.
95% CI	n.a.	61.5–67.1	61.6–66.8	79.1–85.5	60.5–67.7	55.2–67.5	69.7–85.8	n.a.	n.a.
Ages 50–69									
Crude rate	n.a.	65.7	65.3	81.8	67.5	63.4	78.3	n.a.	n.a.
ASR(A)	n.a.	64.8	64.6	81.1	66.6	63.7	79.3	n.a.	n.a.
95% CI	n.a.	62.5–67.2	61.6–67.7	77.7–84.2	63.0–70.2	56.6–70.8	71.1–86.6	n.a.	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. Northern Territory and New South Wales data were unavailable at the time of publication.

Source: AIHW analysis of BreastScreen Australia data.

Indicator 4: Ductal carcinoma in-situ

Table 27: Number of women screened and cases of DCIS detected in these women by age, states and territories, 2001

Age group	Number	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
40–49	Screened	61,579	15,511	42,535	12,794	10,230	4,249	2,765	1,192	150,855
	Cases	41	12	16	13	14	3	4	0	103
50–59	Screened	105,493	86,653	63,489	32,371	31,658	8,472	5,754	2,137	336,027
	Cases	107	94	56	37	33	5	7	0	339
60–69	Screened	78,119	58,754	41,696	22,124	22,380	6,381	3,160	827	233,441
	Cases	78	87	47	45	25	8	6	0	296
70+	Screened	53,422	27,759	23,575	4,137	5,505	1,601	481	253	116,733
	Cases	66	27	32	10	8	2	0	0	145
Ages 40+	**Screened**	**298,613**	**188,677**	**171,295**	**71,426**	**69,773**	**20,703**	**12,160**	**4,409**	**837,056**
	Cases	**292**	**220**	**151**	**105**	**80**	**18**	**17**	**0**	**883**
Ages 50–69	**Screened**	**183,612**	**145,407**	**105,185**	**54,495**	**54,038**	**14,853**	**8,914**	**2,964**	**569,468**
	Cases	**185**	**181**	**103**	**82**	**58**	**13**	**13**	**0**	**635**

Source: AIHW analysis of BreastScreen Australia data.

Table 28: Age-specific rate of DCIS detected in women screened, states and territories, 2001

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
40–49	6.7	7.7	3.8	10.2	13.7	7.1	14.5	0.0	6.8
50–59	10.1	10.8	8.8	11.4	10.4	5.9	12.2	0.0	10.1
60–69	10.0	14.8	11.3	20.3	11.2	12.5	19.0	0.0	12.7
70+	12.4	9.7	13.6	24.2	14.5	12.5	0.0	0.0	12.4
Ages 40+									
Crude rate	9.8	11.7	8.8	14.7	11.5	8.7	14.0	0.0	10.5
ASR(A)	9.7	11.1	9.0	15.1	11.9	8.6	13.1	0.0	10.4
95% CI	8.6–10.8	9.7–12.8	7.5–10.5	12.1–18.4	9.1–14.5	5.0–12.7	7.1–19.2	. .	9.7–11.1
Ages 50–69									
Crude rate	10.1	12.4	9.8	15.0	10.7	8.8	14.6	0.0	11.2
ASR(A)	10.1	12.5	9.8	15.2	10.8	8.7	15.2	0.0	11.2
95% CI	8.7–11.5	10.8–14.4	7.9–11.8	11.8–18.6	8.0–13.6	4.2–13.9	7.3–23.9	. .	10.3–12.1

. . Not applicable—no cases of DCIS were found in the Northern Territory in 2001.

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, first screening round, states and territories, 2001

Age group	Number	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
40–44	Screened	13,646	4,386	9,824	2,508	2,152	809	568	312	34,205
	Recalled	833	326	814	254	84	93	24	17	2,445
45–49	Screened	10,807	5,218	6,329	2,959	2,272	659	612	290	29,146
	Recalled	799	453	623	381	121	85	57	13	2,532
50–54	Screened	13,360	13,059	7,126	4,560	4,285	725	679	371	44,165
	Recalled	1,092	1,184	767	528	200	91	64	11	3,937
55–59	Screened	5,855	4,533	3,362	1,227	848	280	200	135	16,440
	Recalled	450	413	305	123	43	27	24	4	1,389
60–64	Screened	4,407	3,660	2,355	884	418	209	110	68	12,111
	Recalled	330	317	224	84	27	27	13	3	1,025
65–69	Screened	3,144	2,977	1,654	573	325	139	72	40	8,924
	Recalled	206	232	150	60	17	12	6	3	686
70–74	Screened	1,917	1,216	955	244	172	60	33	19	4,616
	Recalled	135	110	75	31	9	4	4	2	370
75–79	Screened	1,335	553	598	180	167	72	24	12	2,941
	Recalled	114	39	49	13	8	6	2	1	232
80–84	Screened	561	226	207	65	60	15	8	7	1,149
	Recalled	32	17	22	3	1	2	1	0	78
85+	Screened	146	79	62	26	23	7	3	0	346
	Recalled	8	7	8	1	0	1	0	0	25
Ages 40+	**Screened**	**55,178**	**35,907**	**32,472**	**13,226**	**10,722**	**2,975**	**2,309**	**1,254**	**154,043**
	Recalled	**3,999**	**3,098**	**3,037**	**1,478**	**510**	**348**	**195**	**54**	**12,719**
Ages 50–69	**Screened**	**26,766**	**24,229**	**14,497**	**7,244**	**5,876**	**1,353**	**1,061**	**614**	**81,640**
	Recalled	**2,078**	**2,146**	**1,446**	**795**	**287**	**157**	**107**	**21**	**7,037**

Source: BreastScreen Australia.

Table 30: Age-specific and age-standardised recall to assessment rate, first screening round, states and territories, 2001

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
				(Per cent)					
40–44	6.1	7.4	8.3	10.1	3.9	11.5	4.2	5.4	7.1
45–49	7.4	8.7	9.8	12.9	5.3	12.9	9.3	4.5	8.7
50–54	8.2	9.1	10.8	11.6	4.7	12.6	9.4	3.0	8.9
55–59	7.7	9.1	9.1	10.0	5.1	9.6	12.0	3.0	8.4
60–64	7.5	8.7	9.5	9.5	6.5	12.9	11.8	4.4	8.5
65–69	6.6	7.8	9.1	10.5	5.2	8.6	8.3	7.5	7.7
70–74	7.0	9.0	7.9	12.7	5.2	6.7	12.1	10.5	8.0
75–79	8.5	7.1	8.2	7.2	4.8	8.3	8.3	8.3	7.9
80–84	5.7	7.5	10.6	4.6	1.7	13.3	12.5	0.0	6.8
85+	5.5	8.9	12.9	3.8	0.0	14.3	0.0	. .	7.2
Ages 40+									
Crude rate	7.2	8.6	9.4	11.2	4.8	11.7	8.4	4.3	8.3
ASR(A)	7.4	8.6	9.4	10.8	5.1	10.9	9.9	4.9	8.3
95% CI	7.1–7.7	8.3–8.9	9.0–9.8	10.1–11.5	4.5–5.8	9.5–12.3	8.0–12.0	3.2–6.9	8.1–8.5
Ages 50–69									
Crude rate	7.8	8.9	10.0	11.0	4.9	11.6	10.1	3.4	8.6
ASR(A)	7.6	8.7	9.7	10.5	5.3	11.1	10.4	4.2	8.5
95% CI	7.2–7.9	8.4–9.1	9.2–10.2	9.7–11.3	4.4–6.1	9.2–12.9	8.2–12.9	2.2–6.3	8.2–8.7

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

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, subsequent screening rounds, states and territories, 2001

Age group	Number	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
40–44	Screened	9,566	1,043	7,416	1,576	1,306	579	320	140	21,946
	Recalled	344	37	367	82	31	48	16	2	927
45–49	Screened	27,560	4,864	18,966	5,751	4,500	2,202	1,265	450	65,558
	Recalled	1,143	244	1,080	259	118	140	57	17	3,058
50–54	Screened	42,463	33,227	27,509	13,287	12,811	3,753	2,582	850	136,482
	Recalled	1,590	1,428	1,395	533	306	235	115	16	5,618
55–59	Screened	43,815	35,834	25,492	13,297	13,714	3,714	2,293	781	138,940
	Recalled	1,663	1,394	1,245	473	275	190	130	13	5,383
60–64	Screened	38,086	28,665	20,732	11,420	12,002	3,279	1,728	478	116,390
	Recalled	1,393	1,126	969	434	302	189	78	10	4,501
65–69	Screened	32,482	23,452	16,955	9,247	9,635	2,754	1,250	241	96,016
	Recalled	1,147	903	776	341	237	108	77	5	3,594
70–74	Screened	26,911	19,791	13,530	2,468	3,436	1,095	266	137	67,634
	Recalled	893	670	641	84	98	62	14	1	2,463
75–79	Screened	16,146	5,104	5,879	914	1,308	283	109	50	29,793
	Recalled	503	185	264	47	47	15	3	2	1,066
80–84	Screened	5,259	648	1,915	198	301	61	34	26	8,442
	Recalled	160	20	82	7	11	3	4	0	287
85+	Screened	1,147	142	429	42	38	8	4	2	1,812
	Recalled	39	5	21	2	2	1	1	0	71
Ages 40+	**Screened**	**243,435**	**152,770**	**138,823**	**58,200**	**59,051**	**17,728**	**9,851**	**3,155**	**683,013**
	Recalled	**8,875**	**6,012**	**6,840**	**2,262**	**1,427**	**991**	**495**	**66**	**26,968**
Ages 50–69	**Screened**	**156,846**	**121,178**	**90,688**	**47,251**	**48,162**	**13,500**	**7,853**	**2,350**	**487,828**
	Recalled	**5,793**	**4,851**	**4,385**	**1,781**	**1,120**	**722**	**400**	**44**	**19,096**

Source: BreastScreen Australia.

Table 32: Age-specific and age-standardised recall to assessment rates, subsequent screening rounds, states and territories, 2001

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
				(Per cent)					
40–44	3.6	3.5	4.9	5.2	2.4	8.3	5.0	1.4	4.2
45–49	4.1	5.0	5.7	4.5	2.6	6.4	4.5	3.8	4.7
50–54	3.7	4.3	5.1	4.0	2.4	6.3	4.5	1.9	4.1
55–59	3.8	3.9	4.9	3.6	2.0	5.1	5.7	1.7	3.9
60–64	3.7	3.9	4.7	3.8	2.5	5.8	4.5	2.1	3.9
65–69	3.5	3.9	4.6	3.7	2.5	3.9	6.2	2.1	3.7
70–74	3.3	3.4	4.7	3.4	2.9	5.7	5.3	0.7	3.6
75–79	3.1	3.6	4.5	5.1	3.6	5.3	2.8	4.0	3.6
80–84	3.0	3.1	4.3	3.5	3.7	4.9	11.8	0.0	3.4
85+	3.4	3.5	4.9	4.8	5.3	12.5	25.0	0.0	3.9
Ages 40+									
Crude rate	3.6	3.9	4.9	3.9	2.4	5.6	5.0	2.1	3.9
ASR(A)	3.7	4.0	4.9	4.0	2.5	5.8	5.1	2.1	4.0
95% CI	3.6–3.8	3.9–4.2	4.8–5.0	3.8–4.2	2.3–2.6	5.4–6.1	4.5–5.6	1.5–2.6	4.0–4.1
Ages 50–69									
Crude rate	3.7	4.0	4.8	3.8	2.3	5.3	5.1	1.9	3.9
ASR(A)	3.7	4.0	4.8	3.8	2.3	5.4	5.1	1.9	3.9
95% CI	3.6–3.8	3.9–4.1	4.7–5.0	3.6–4.0	2.2–2.5	5.0–5.8	4.6–5.6	1.4–2.5	3.9–4.0

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 33: Number of women screened during 1999 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	14,299	4,948	9,523	2,530	2,339	840	591	243	35,313
	Returned	8,882	775	7,099	1,546	1,329	613	275	135	20,654
45–49	Screened	11,839	6,064	7,267	2,880	2,503	683	621	284	32,141
	Returned	7,263	2,604	5,465	1,817	1,553	486	295	152	19,635
50–54	Screened	13,168	13,434	9,323	2,334	4,737	886	743	444	45,069
	Returned	8,238	9,809	7,131	1,381	3,322	641	389	217	31,128
55–59	Screened	6,154	2,594	5,221	1,012	1,319	360	228	139	17,027
	Returned	3,822	1,767	4,085	615	871	255	115	60	11,590
60–64	Screened	4,743	2,038	3,905	677	855	284	135	91	12,728
	Returned	3,048	1,398	3,141	410	591	214	61	41	8,904
65–69	Screened	3,594	1,451	3,300	479	666	191	94	48	9,823
	Returned	2,231	1,016	2,593	219	288	115	26	19	6,507
70–74	Screened	2,199	858	1,822	302	259	115	61	27	5,643
	Returned	1,366	487	1,312	57	47	29	5	10	3,313
75–79	Screened	1,539	678	1,073	204	241	94	30	12	3,871
	Returned	942	47	484	29	50	14	3	4	1,573
80–84	Screened	497	221	355	49	83	22	12	5	1,244
	Returned	255	12	129	4	8	4	1	3	416
85+	Screened	122	66	106	12	22	5	2	0	335
	Returned	48	3	26	2	2	1	0	0	82
Ages 40+	**Screened**	**58,154**	**32,352**	**41,895**	**10,479**	**13,024**	**3,480**	**2,517**	**1,293**	**163,194**
	Returned	**36,095**	**17,918**	**31,465**	**6,080**	**8,061**	**2,372**	**1,170**	**641**	**103,802**
Ages 50–69	**Screened**	**27,659**	**19,517**	**21,749**	**4,502**	**7,577**	**1,721**	**1,200**	**722**	**84,647**
	Returned	**17,339**	**13,990**	**16,950**	**2,625**	**5,072**	**1,225**	**591**	**337**	**58,129**

Source: BreastScreen Australia.

Table 34: Age-specific and age-standardised rescreen rates for women screened during 1999, first screening round, states and territories

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
				(Per cent)					
40–44	62.1	15.7	74.5	61.1	56.8	73.0	46.5	55.6	58.5
45–49	61.3	42.9	75.2	63.1	62.0	71.2	47.5	53.5	61.1
50–54	62.6	73.0	76.5	59.2	70.1	72.3	52.4	48.9	69.1
55–59	62.1	68.1	78.2	60.8	66.0	70.8	50.4	43.2	68.1
60–64	64.3	68.6	80.4	60.6	69.1	75.4	45.2	45.1	70.0
65–69	62.1	70.0	78.6	45.7	43.2	60.2	27.7	39.6	66.2
70–74	62.1	56.8	72.0	18.9	18.1	25.2	8.2	37.0	58.7
75–79	61.2	6.9	45.1	14.2	20.7	14.9	10.0	33.3	40.6
80–84	51.3	5.4	36.3	8.2	9.6	18.2	8.3	60.0	33.4
85+	39.3	4.5	24.5	16.7	9.1	20.0	0.0	. .	24.5
Ages 40+									
Crude rate	62.1	55.4	75.1	58.0	61.9	68.2	46.5	49.6	63.6
ASR(A)	62.3	58.6	75.6	53.3	57.2	64.6	41.2	45.8	64.7
95% CI	61.8–62.7	58.0–59.3	75.1–76.0	52.2–54.4	56.2–58.2	62.7–66.4	38.9–43.5	42.4–49.2	64.4–65.0
Ages 50–69									
Crude rate	62.7	71.7	77.9	58.3	66.9	71.2	49.3	46.7	68.7
ASR(A)	62.7	70.2	78.2	57.3	63.6	70.3	45.5	44.7	68.5
95% CI	62.1–63.3	69.4–71.0	77.6–78.8	55.7–58.8	62.4–64.9	68.0–72.5	42.3–48.7	40.3–49.0	68.0–68.8

. . Not applicable—no women in this age group screened in 1999.

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 35: Number of women screened during 1999 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	6,490	1,052	4,610	1,050	760	404	229	135	14,730
	Returned	4,751	381	3,847	790	572	323	146	83	10,893
45–49	Screened	10,440	3,291	6,629	2,794	1,738	691	444	270	26,297
	Returned	7,497	1,834	5,541	2,111	1,278	549	251	185	19,246
50–54	Screened	16,973	17,802	9,070	5,167	4,276	1,030	752	515	55,585
	Returned	12,621	14,579	7,792	3,840	3,385	828	466	323	43,834
55–59	Screened	10,279	6,190	6,705	2,740	2,134	572	397	358	29,375
	Returned	7,501	4,874	5,809	2,049	1,651	446	219	235	22,784
60–64	Screened	8,515	4,269	5,163	2,129	1,363	415	209	183	22,246
	Returned	6,307	3,406	4,519	1,618	1,066	329	126	129	17,500
65–69	Screened	7,118	3,479	4,225	1,650	1,054	307	146	108	18,087
	Returned	5,175	2,669	3,627	927	581	195	51	70	13,295
70–74	Screened	5,064	2,509	2,757	447	424	125	55	66	11,447
	Returned	3,541	1,599	2,177	140	127	31	6	41	7,662
75–79	Screened	2,692	845	1,442	227	299	86	55	21	5,667
	Returned	1,856	141	726	73	98	20	6	12	2,932
80–84	Screened	926	208	418	51	66	21	4	11	1,705
	Returned	540	29	173	20	14	4	1	7	788
85+	Screened	160	54	89	6	7	1	3	0	320
	Returned	76	8	27	0	1	0	0	0	112
Ages 40+	**Screened**	**68,657**	**39,699**	**41,108**	**16,261**	**12,121**	**3,652**	**2,294**	**1,667**	**185,459**
	Returned	**49,865**	**29,520**	**34,238**	**11,568**	**8,773**	**2,725**	**1,272**	**1,085**	**139,046**
Ages 50–69	**Screened**	**42,885**	**31,740**	**25,163**	**11,686**	**8,827**	**2,324**	**1,504**	**1,164**	**125,293**
	Returned	**31,604**	**25,528**	**21,747**	**8,434**	**6,683**	**1,798**	**862**	**757**	**97,413**

Source: BreastScreen Australia.

Table 36: Age-specific and age-standardised rescreen rates in women screened during 1999, second screening round, states and territories

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
				(Per cent)					
40–44	73.2	36.2	83.4	75.2	75.3	80.0	63.8	61.5	74.0
45–49	71.8	55.7	83.6	75.6	73.5	79.5	56.5	68.5	73.2
50–54	74.4	81.9	85.9	74.3	79.2	80.4	62.0	62.7	78.9
55–59	73.0	78.7	86.6	74.8	77.4	78.0	55.2	65.6	77.6
60–64	74.1	79.8	87.5	76.0	78.2	79.3	60.3	70.5	78.7
65–69	72.7	76.7	85.8	56.2	55.1	63.5	34.9	64.8	73.5
70–74	69.9	63.7	79.0	31.3	30.0	24.8	10.9	62.1	66.9
75–79	68.9	16.7	50.3	32.2	32.8	23.3	10.9	57.1	51.7
80–84	58.3	13.9	41.4	39.2	21.2	19.0	25.0	63.6	46.2
85+	47.5	14.8	30.3	0.0	14.3	0.0	0.0	. .	35.0
Ages 40+									
Crude rate	72.6	74.4	83.3	71.1	72.4	74.6	55.4	65.1	75.0
ASR(A)	72.7	69.2	83.6	67.2	68.4	70.4	50.2	65.1	75.0
95% CI	72.4–73.1	68.6–69.7	83.3–84.0	66.4–67.9	67.6–69.2	68.9–71.8	48.1–52.3	62.7–67.3	74.7–75.3
Ages 50–69									
Crude rate	73.7	80.4	86.4	72.2	75.7	77.4	57.3	65.0	77.7
ASR(A)	73.6	79.6	86.4	71.3	73.8	76.2	54.6	65.0	77.7
95% CI	73.2–74.0	79.1–80.1	86.0–86.9	70.5–72.1	72.8–74.8	74.4–78.0	51.6–57.2	62.4–67.7	77.3–78.2

. . Not applicable—no women in this age group screened in 1999.

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 37: Number of women screened during 1999 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	2,132	169	1,751	396	228	187	99	26	4,988
	Returned	1,783	96	1,569	324	200	158	73	23	4,226
45–49	Screened	13,994	1,801	9,161	2,442	2,430	1,548	990	153	32,519
	Returned	11,203	1,245	8,181	2,032	2,047	1,329	703	115	26,855
50–54	Screened	21,948	13,831	12,396	6,562	6,456	2,349	1,690	230	65,462
	Returned	18,066	11,968	11,224	5,589	5,599	2,063	1,225	186	55,920
55–59	Screened	28,051	23,947	12,605	8,195	9,561	2,792	1,746	340	87,237
	Returned	23,208	20,907	11,521	7,003	8,379	2,469	1,269	259	75,015
60–64	Screened	25,545	21,235	11,184	7,406	9,089	2,544	1,405	185	78,593
	Returned	21,665	18,844	10,316	6,402	8,060	2,289	1,073	144	68,793
65–69	Screened	22,697	18,778	9,488	6,313	7,782	2,221	1,075	96	68,450
	Returned	19,037	16,317	8,594	4,230	5,267	1,615	555	69	55,684
70–74	Screened	19,042	15,548	7,813	1,433	2,498	383	198	42	46,957
	Returned	15,523	11,253	6,412	717	1,312	211	66	30	35,524
75–79	Screened	8,986	2,771	4,119	442	559	100	71	10	17,058
	Returned	6,941	560	2,283	212	301	50	27	8	10,382
80–84	Screened	2,700	209	1,243	71	104	16	7	7	4,357
	Returned	1,798	68	623	34	54	6	0	3	2,586
85+	Screened	339	38	269	10	11	1	3	0	917
	Returned	290	9	103	5	4	1	0	0	414
Ages 40+	**Screened**	**145,434**	**98,327**	**70,029**	**33,270**	**38,718**	**12,141**	**7,284**	**1,089**	**406,538**
	Returned	**119,514**	**81,267**	**60,826**	**26,548**	**31,223**	**10,191**	**4,991**	**837**	**335,399**
Ages 50–69	**Screened**	**98,241**	**77,791**	**45,673**	**28,476**	**32,888**	**9,906**	**5,916**	**851**	**299,742**
	Returned	**81,976**	**68,036**	**41,655**	**23,224**	**27,305**	**8,436**	**4,122**	**658**	**255,412**

Source: BreastScreen Australia.

Table 38: Age-specific and age-standardised rescreen rates in women screened during 1999, third and subsequent screening rounds, states and territories

Age Group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
				(Per cent)					
40–44	83.6	56.8	89.6	81.8	87.7	84.5	73.7	88.5	84.7
45–49	80.1	69.1	89.3	83.2	84.2	85.9	71.0	75.2	82.6
50–54	82.3	86.5	90.5	85.2	86.7	87.8	72.5	80.9	85.4
55–59	82.7	87.3	91.4	85.5	87.6	88.4	72.7	76.2	86.0
60–64	84.8	88.7	92.2	86.4	88.7	90.0	76.4	77.8	87.5
65–69	83.9	86.9	90.6	67.0	67.7	72.7	51.6	71.9	81.3
70–74	81.5	72.4	82.1	50.0	52.5	55.1	33.3	71.4	75.7
75–79	77.2	20.2	55.4	48.0	53.8	50.0	38.0	80.0	60.9
80–84	66.6	32.5	50.1	47.9	51.9	37.5	0.0	42.9	59.4
85+	85.5	23.7	38.3	50.0	36.4	100.0	0.0	. .	45.1
Ages 40+									
Crude rate	82.2	82.6	86.9	79.8	80.6	83.9	68.5	76.9	82.5
ASR(A)	82.4	82.6	88.5	78.1	80.2	83.9	65.2	76.9	82.5
95% CI	82.2–82.7	82.4–82.9	88.2–88.7	77.5–78.6	79.7–80.7	83.3–84.6	63.9–66.5	74.4–79.3	82.2–82.7
Ages 50–69									
Crude rate	83.4	87.5	91.2	81.6	83.0	85.2	69.7	77.3	85.2
ASR(A)	83.3	87.5	91.1	82.0	83.7	85.5	69.3	77.3	85.2
95% CI	83.0–83.5	87.2–87.7	90.9–91.4	81.5–82.4	83.3–84.1	84.8–86.2	68.1–70.5	74.5–80.1	84.9–85.5

. . Not applicable—no women screened in this age group in 1999.

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 39: Number of new cases of breast cancer in women by age, Australia, 1987–2000

Age group	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
0–4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5–9	0	0	0	0	0	0	0	0	1	0	0	0	0	0
10–14	0	0	0	0	0	0	1	0	1	0	0	0	0	0
15–19	1	0	0	0	0	0	0	0	1	1	3	4	0	2
20–24	5	7	8	4	11	6	13	7	8	6	13	13	11	4
25–29	59	46	44	52	53	46	58	57	58	42	52	53	49	54
30–34	192	165	158	204	184	179	169	200	203	197	175	197	186	190
35–39	363	345	367	341	402	380	414	395	399	426	446	419	441	436
40–44	592	654	656	669	717	712	779	773	757	765	757	850	824	840
45–49	691	671	754	826	854	1,010	1,027	1,140	1,233	1,187	1,156	1,167	1,150	1,269
50–54	600	633	728	786	856	856	977	1,108	1,240	1,188	1,330	1,471	1,497	1,562
55–59	692	635	681	690	809	819	926	1,030	1,147	1,123	1,174	1,272	1,300	1,433
60–64	823	851	885	826	889	789	975	1,101	1,063	1,020	1,075	1,144	1,243	1,339
65–69	768	769	830	854	951	929	998	1,209	1,100	1,066	1,075	1,144	1,091	1,118
70–74	626	699	713	754	792	775	900	1,019	1,004	983	1,029	1,055	986	1,100
75–79	583	576	623	634	670	657	692	781	852	739	864	886	836	891
80–84	390	385	395	424	485	490	469	525	580	562	572	588	546	567
85+	306	300	327	336	371	365	394	376	412	436	444	491	484	511
All ages	**6,691**	**6,736**	**7,169**	**7,400**	**8,044**	**8,013**	**8,792**	**9,721**	**10,059**	**9,741**	**10,165**	**10,754**	**10,644**	**11,316**
Ages 50–69	**2,883**	**2,888**	**3,124**	**3,156**	**3,505**	**3,393**	**3,876**	**4,448**	**4,550**	**4,397**	**4,654**	**5,031**	**5,131**	**5,452**

Source: AIHW National Cancer Statistics Clearing House.

Table 40: Age-specific and age-standardised incidence rates for breast cancer in women, Australia, 1987–2000

Age group	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
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
5–9	0.0	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
10–14	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.0
15–19	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.5	0.6	0.0	0.3
20–24	0.8	1.1	1.2	0.6	1.6	0.9	1.8	1.0	1.1	0.9	1.9	2.0	1.7	0.6
25–29	8.6	6.6	6.2	7.4	7.6	6.7	8.5	8.4	8.4	5.9	7.2	7.2	6.7	7.4
30–34	29.7	25.0	23.3	29.4	25.8	24.7	23.1	27.2	27.8	27.2	24.4	27.8	26.2	26.5
35–39	58.1	54.4	56.8	51.9	60.5	56.1	60.2	56.6	56.0	58.4	60.0	55.7	58.2	57.6
40–44	110.5	114.7	110.1	108.1	112.2	111.0	120.4	117.6	113.4	112.7	109.4	121.0	115.3	115.2
45–49	163.9	154.2	165.4	172.6	169.9	187.5	179.2	191.3	200.0	185.6	179.9	178.5	172.9	188.2
50–54	163.0	167.7	187.1	196.1	207.2	201.8	225.1	244.6	260.5	238.8	247.6	256.9	250.4	250.7
55–59	188.4	174.7	188.6	192.1	225.6	223.5	246.4	267.1	290.0	275.6	278.7	293.4	287.2	302.7
60–64	223.4	230.0	238.8	222.8	240.2	216.0	271.1	308.5	297.9	286.0	295.6	307.1	323.5	337.4
65–69	242.9	233.5	242.1	245.0	270.7	263.2	280.8	341.1	310.6	300.5	305.2	327.8	315.2	324.0
70–74	234.3	261.3	268.2	278.6	280.6	264.9	296.5	321.1	310.9	300.6	313.1	318.7	295.8	329.7
75–79	293.2	279.8	290.1	287.3	297.1	286.8	300.8	342.8	365.0	303.1	336.9	329.6	297.6	309.7
80–84	315.1	298.3	295.2	304.3	333.5	323.5	296.3	314.1	336.4	318.2	318.0	323.0	298.3	298.4
85+	314.8	300.6	316.8	318.2	337.2	315.6	323.4	294.9	306.7	307.9	297.3	313.2	291.4	291.7
All Ages														
Crude rate	82.1	81.3	85.1	86.5	92.8	91.3	99.1	108.4	110.8	105.8	109.1	114.2	111.7	117.3
ASR(A)	91.2	89.7	93.5	94.6	100.4	98.0	105.3	113.9	115.7	109.2	111.2	114.9	111.2	115.4
Ages 50–69														
Crude rate	203.1	200.5	213.4	213.4	234.7	224.9	254.2	286.9	287.5	272.0	278.0	291.2	288.1	296.5
ASR(A)	197.1	194.8	208.5	209.6	230.5	221.6	250.6	281.6	285.3	269.7	276.5	290.1	287.5	296.2

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 41: Number of new cases of breast cancer in women by age, states and territories, 1997–2000

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	2	4	3	0	0	0	0	9
20–24	17	10	5	3	5	1	0	0	41
25–29	60	60	41	25	10	5	4	3	208
30–34	245	198	131	81	62	15	14	2	748
35–39	584	421	331	186	148	31	26	15	1,742
40–44	1,112	838	589	301	268	75	57	31	3,271
45–49	1,575	1,178	873	475	426	101	80	34	4,742
50–54	1,967	1,460	1,034	533	546	157	128	35	5,860
55–59	1,775	1,241	963	474	475	128	93	30	5,179
60–64	1,619	1,227	891	436	419	126	67	16	4,801
65–69	1,486	1,169	806	407	394	95	61	10	4,428
70–74	1,482	1,143	767	297	323	98	48	12	4,170
75–79	1,210	926	592	298	323	87	34	7	3,477
80–84	754	612	415	183	235	48	24	2	2,273
85+	638	545	326	163	190	46	17	5	1,930
All ages	**14,524**	**11,030**	**7,768**	**3,865**	**3,824**	**1,013**	**653**	**202**	**42,879**
Ages 50–69	**6,847**	**5,097**	**3,694**	**1,850**	**1,834**	**506**	**349**	**91**	**20,268**

Source: AIHW National Cancer Statistics Clearing House.

Table 42: Age-specific and age-standardised incidence rates for breast cancer in women, states and territories, 1997–2000

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	0.3	0.8	1.2	0.0	0.0	0.0	0.0	0.4
20–24	2.0	1.5	1.0	1.2	2.6	1.7	0.0	0.0	1.6
25–29	6.1	8.1	7.6	8.9	4.7	7.7	7.5	7.9	7.1
30–34	25.5	27.1	25.2	28.9	28.7	22.6	27.9	5.8	26.2
35–39	57.3	56.4	59.9	62.6	63.1	41.3	50.1	46.5	57.9
40–44	116.7	119.1	113.5	105.2	119.1	104.4	113.4	109.7	115.3
45–49	179.2	180.3	179.9	180.6	198.8	151.7	162.1	139.6	179.9
50–54	250.8	251.8	239.1	241.2	282.1	264.3	307.0	189.8	251.4
55–59	290.9	278.4	296.0	285.4	321.7	272.1	342.5	259.9	290.8
60–64	306.3	315.4	337.2	315.6	323.0	309.9	337.7	227.8	316.4
65–69	301.6	325.0	339.1	335.5	320.6	253.4	381.7	213.9	318.0
70–74	313.4	330.6	345.6	271.9	261.3	278.3	325.6	368.6	314.3
75–79	309.6	327.1	323.8	336.8	308.5	289.9	287.3	324.1	317.9
80–84	286.3	324.2	336.7	305.8	335.0	229.8	327.4	151.3	309.3
85+	280.5	317.1	308.0	294.9	301.0	267.7	303.8	489.2	298.1
All ages									
Crude rate	113.0	116.6	111.6	105.7	126.6	105.9	103.8	55.6	113.1
ASR(A)	111.1	114.4	116.0	111.8	117.7	102.5	120.7	96.2	113.2
95% CI	109.3–113.0	112.1–116.4	113.4–118.6	108.3–115.2	113.8–121.7	96.3–108.8	110.5–129.8	81.6–111.9	112.0–114.2
Ages 50–69									
Crude rate	283.4	287.3	293.2	286.1	308.9	274.1	333.4	218.3	288.7
ASR(A)	282.5	285.7	293.2	285.8	308.3	274.2	336.3	220.9	287.8
95% CI	275.7–289.6	278.0–293.5	284.0–303.3	272.7–298.6	294.1–323.1	250.6–298.1	298.6–370.2	173.0–267.9	283.7–291.7

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 43: Number of new cases of breast cancer in women, by age and region, 1996–2000

Age group	Capital cities	Other metropolitan centres	Large rural centres	Small rural centres	Other rural areas	Remote areas	Australia
0–4	0	0	0	0	0	0	0
5–9	0	0	0	0	0	0	0
10–14	0	0	0	0	0	0	0
15–19	7	0	0	1	2	0	10
20–24	34	6	2	2	4	0	47
25–29	178	19	13	10	24	5	250
30–34	668	57	41	47	110	21	943
35–39	1,440	160	114	128	269	53	2,163
40–44	2,672	303	261	228	473	96	4,033
45–49	3,959	391	341	335	764	131	5,921
50–54	4,717	493	361	409	922	137	7,039
55–59	4,016	514	325	417	910	110	6,293
60–64	3,616	454	367	417	872	87	5,812
65–69	3,410	450	341	438	776	72	5,486
70–74	3,213	466	319	380	694	74	5,146
75–79	2,661	347	272	333	551	50	4,214
80–84	1,833	234	177	170	379	38	2,831
85+	1,522	179	163	163	310	25	2,362
All ages	**33,946**	**4,073**	**3,097**	**3,478**	**7,060**	**899**	**52,550**
Ages 50–69	**15,759**	**1,911**	**1,394**	**1,681**	**3,480**	**406**	**24,630**

Source: AIHW National Cancer Statistics Clearing House.

Table 44: Age-specific and age-standardised incidence rates for breast cancer in women by region, 1996–2000

Age group	Capital cities	Other metropolitan centres	Large rural centres	Small rural centres	Other rural areas	Remote areas	Australia
0–4	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
10–14	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15–19	0.3	0.0	0.0	0.5	0.5	0.0	0.3
20–24	1.5	2.4	1.0	1.2	1.4	0.0	1.4
25–29	7.2	7.2	6.3	5.2	6.7	4.2	6.9
30–34	28.1	22.2	20.4	22.9	26.0	18.2	26.4
35–39	59.9	58.5	52.5	54.5	54.1	47.3	57.9
40–44	118.4	117.0	126.2	101.5	100.1	100.5	114.7
45–49	186.1	160.7	182.2	163.9	177.0	161.4	180.8
50–54	259.2	228.8	228.0	227.1	237.9	204.8	248.9
55–59	295.7	296.9	257.2	271.4	278.0	221.0	287.6
60–64	317.3	294.2	323.8	289.9	305.7	233.6	310.2
65–69	321.3	296.2	314.0	310.3	305.0	242.4	314.0
70–74	314.3	317.6	304.9	285.7	309.8	321.7	311.2
75–79	316.5	300.0	315.5	318.9	316.4	302.7	315.0
80–84	318.8	309.9	287.7	247.4	317.2	335.8	310.6
85+	300.9	298.1	309.1	293.2	297.3	238.1	299.4
All ages							
Crude rate	112.6	113.2	108.6	112.7	115.4	69.0	111.6
ASR(A)	115.2	108.4	109.4	104.2	108.9	95.5	112.3
95% CI	114.0–116.4	105.2–112.0	105.5–113.3	100.8–107.7	106.4–111.5	88.7–101.9	111.3–113.2
Ages 50–69							
Crude rate	293.0	274.9	275.0	271.9	277.4	221.2	285.2
ASR(A)	292.5	273.0	271.8	267.2	275.1	222.0	284.0
95% CI	288.0–296.9	260.8–285.4	257.0–286.0	253.9–279.6	265.7–284.6	201.3–244.2	280.2–287.7

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 45: Number of new cases of ductal carcinoma in situ by age, states and territories, 1995–2000

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
0–19	0	n.a.	1	n.a.	0	0	0	0	n.a.
20–29	11	n.a.	2	n.a.	2	0	1	0	n.a.
30–39	86	n.a.	45	n.a.	16	5	2	2	n.a.
40–49	461	n.a.	203	n.a.	100	24	28	9	n.a.
50–59	644	n.a.	320	n.a.	208	68	34	8	n.a.
60–69	510	n.a.	266	n.a.	148	37	18	6	n.a.
70+ years	442	n.a.	184	n.a.	99	20	24	1	n.a.
All ages	**2,154**	n.a.	**1,021**	n.a.	**573**	**154**	**107**	**26**	n.a.
Ages 50–69	**1,154**	n.a.	**586**	n.a.	**356**	**105**	**52**	**14**	n.a.

n.a. Not available.

Source: AIHW National Cancer Statistics Clearing House.

Table 46: Age-specific and age-standardised rates of ductal carcinoma in situ, states and territories, 1995–2000

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
0–19	0.0	n.a.	0.0	n.a.	0.0	0.0	0.0	0.0	n.a.
20–29	0.4	n.a.	0.1	n.a.	0.3	0.0	0.6	0.0	n.a.
30–39	2.9	n.a.	2.8	n.a.	2.3	2.3	1.3	2.0	n.a.
40–49	17.1	n.a.	13.8	n.a.	15.3	11.7	18.8	11.8	n.a.
50–59	32.1	n.a.	29.8	n.a.	42.4	44.2	35.1	19.1	n.a.
60–69	33.4	n.a.	35.9	n.a.	39.0	31.7	34.4	35.6	n.a.
70+ years	22.3	n.a.	19.9	n.a.	18.7	13.1	42.4	9.0	n.a.
All ages									
Crude rate	11.3	n.a.	10.0	n.a.	12.7	10.7	11.4	4.9	n.a.
AS Rate (A)	11.4	n.a.	10.6	n.a.	12.4	11.0	13.7	7.9	n.a.
95% CI	10.9–11.9	n.a.	9.9–11.2	n.a.	11.4–13.4	9.1–12.7	11.2–16.4	4.7–11.3	n.a.
Ages 50–69									
Crude rate	32.7	n.a.	32.3	n.a.	40.9	38.8	34.9	23.9	n.a.
AS Rate (A)	32.6	n.a.	32.2	n.a.	41.1	39.3	34.8	25.6	n.a.
95% CI	30.8–34.6	n.a.	29.5–34.8	n.a.	36.6–45.3	31.5–46.6	25.5–44.7	12.8–40.2	n.a.

n.a. Not available.

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 47: Number of deaths from breast cancer in women, Australia, 1987–2001

Age group	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
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	1	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	2	0	1	0	2	1	0	1	1	0	1	2	2	1	1
25–29	10	5	7	6	12	4	2	2	5	9	6	7	6	5	2
30–34	30	26	34	26	25	33	39	19	25	28	37	28	20	23	21
35–39	75	66	67	63	79	79	74	87	57	90	84	68	59	66	63
40–44	123	120	137	149	150	136	116	139	120	136	135	128	141	122	126
45–49	129	152	170	168	177	196	202	211	207	189	211	207	203	187	185
50–54	206	202	212	228	232	212	225	239	221	230	271	265	247	255	262
55–59	244	238	217	215	227	219	252	249	248	240	236	227	260	257	253
60–64	270	291	287	282	258	236	276	262	268	258	239	255	263	239	228
65–69	254	290	297	328	306	272	316	290	317	289	284	252	212	216	242
70–74	257	251	251	258	305	287	264	308	288	296	297	268	288	287	315
75–79	230	254	261	254	249	254	298	274	281	279	291	300	274	281	289
80–84	166	184	205	205	211	213	257	250	259	252	244	236	232	237	273
85+	217	222	238	219	229	247	268	271	280	273	273	314	298	335	325
All ages	**2,213**	**2,301**	**2,384**	**2,401**	**2,462**	**2,389**	**2,590**	**2,602**	**2,577**	**2,569**	**2,609**	**2,557**	**2,505**	**2,511**	**2,585**
Ages 50–69	**974**	**1,021**	**1,013**	**1,053**	**1,023**	**939**	**1,069**	**1,040**	**1,054**	**1,017**	**1,030**	**999**	**982**	**967**	**985**

Source: AIHW National Mortality Database.

Table 48: Age-specific and age-standardised mortality rates for breast cancer in women, Australia, 1987–2001

Age group	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
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	0.2	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	0.3	0.0	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
25–29	1.5	0.7	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
30–34	4.6	3.9	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
35–39	12.0	10.4	10.4	9.6	11.9	11.7	10.8	12.5	8.0	12.3	11.3	9.0	7.8	8.7	8.4
40–44	23.0	21.1	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
45–49	30.6	34.9	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
50–54	56.0	53.5	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
55–59	66.4	65.5	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
60–64	73.3	78.6	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
65–69	80.3	88.1	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
70–74	96.2	93.8	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
75–79	115.7	123.4	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
80–84	134.1	142.6	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
85+	223.3	222.4	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
All ages															
Crude rate	27.2	27.8	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
ASR(A)	30.0	30.5	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
Ages 50–69															
Crude rate	68.6	70.9	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
ASR(A)	66.8	68.3	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

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 49: Number of deaths from breast cancer in women by age, states and territories, 1998–2001

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	2	2	1	1	0	0	0	0	6
25–29	5	7	4	3	1	0	0	0	20
30–34	37	19	19	6	8	0	3	0	92
35–39	75	77	42	23	24	10	4	1	256
40–44	150	136	99	51	56	14	6	5	517
45–49	255	208	131	73	67	22	16	10	782
50–54	307	280	211	97	80	28	17	9	1,029
55–59	331	269	182	83	79	25	21	7	997
60–64	326	258	173	79	94	26	20	9	985
65–69	351	229	126	77	86	30	19	4	922
70–74	373	330	207	91	97	32	24	4	1,158
75–79	378	312	195	104	97	40	16	2	1,144
80–84	350	267	157	70	89	31	10	4	978
85+	405	349	210	135	119	36	17	1	1,272
All ages	**3,345**	**2,743**	**1,757**	**893**	**897**	**294**	**173**	**56**	**10,158**
Ages 50–69	**1,315**	**1,036**	**692**	**336**	**339**	**109**	**77**	**29**	**3,933**

Source: AIHW National Mortality Database.

Table 50: Age-specific and age-standardised mortality rates for breast cancer in women, states and territories, 1998–2001

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	0.2	0.3	0.2	0.4	0.0	0.0	0.0	0.0	0.2
25–29	0.5	1.0	0.7	1.1	0.5	0.0	0.0	0.0	0.7
30–34	3.8	2.6	3.6	2.1	3.7	0.0	6.0	0.0	3.2
35–39	7.4	10.3	7.5	7.7	10.3	13.6	7.8	3.1	8.5
40–44	15.4	19.0	18.6	17.5	24.6	19.3	11.9	17.4	17.9
45–49	28.6	31.4	26.5	27.1	31.0	32.7	32.4	39.8	29.2
50–54	37.6	46.2	46.3	41.3	39.6	45.2	38.5	45.4	42.1
55–59	52.3	58.3	52.9	48.0	51.4	51.5	72.8	56.4	53.7
60–64	60.2	64.9	62.6	55.1	71.0	62.1	96.0	119.6	63.1
65–69	71.8	63.9	52.9	62.9	71.0	80.5	116.6	82.7	66.5
70–74	78.7	95.2	92.1	81.8	78.9	91.1	161.7	117.7	86.9
75–79	93.9	106.5	103.4	113.3	89.9	130.4	127.8	89.2	101.3
80–84	128.9	137.8	122.9	114.3	123.3	145.5	128.2	280.5	129.2
85+	169.4	193.5	187.8	230.6	179.7	198.9	278.0	91.3	186.7
All ages									
Crude rate	25.7	28.7	24.8	24.0	29.5	30.7	27.2	15.2	26.5
ASR(A)	24.0	26.8	25.0	24.7	25.5	27.6	33.5	30.6	25.3
95% CI	23.2–24.8	25.8–27.8	23.9–26.1	23.1–26.4	23.8–27.3	24.3–30.7	28.3–38.5	21.6–41.0	24.8–25.8
Ages 50–69									
Crude rate	53.0	56.8	52.7	49.9	55.6	57.5	69.9	65.0	54.3
ASR(A)	52.5	56.6	52.8	49.9	55.1	56.8	73.9	71.0	54.1
95% CI	49.8–55.3	53.1–59.9	48.9–56.5	44.7–55.5	49.4–60.8	45.9–66.8	56.7–91.6	44.4–96.9	52.3–55.7

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 51: Number of deaths from breast cancer in women by age and region, 1997–2001

Age group	Capital cities	Other metropolitan centres	Large rural centres	Small rural centres	Other rural areas	Remote areas	Australia
0–4	0	0	0	0	0	0	0
5–9	0	0	0	0	0	0	0
10–14	0	0	0	0	0	0	0
15–19	0	0	0	0	0	0	0
20–24	4	1	1	0	1	0	7
25–29	15	5	0	3	3	0	26
30–34	78	10	8	12	17	4	129
35–39	221	19	25	24	40	11	340
40–44	404	34	41	42	107	23	651
45–49	672	74	56	57	113	20	992
50–54	819	79	101	85	193	23	1,300
55–59	810	85	65	67	183	22	1,232
60–64	758	97	58	80	209	22	1,224
65–69	757	109	69	83	169	19	1,206
70–74	920	112	80	117	202	24	1,455
75–79	885	132	105	101	199	13	1,435
80–84	798	105	79	83	143	14	1,222
85+	967	124	107	116	214	17	1,545
All ages	**8,108**	**986**	**795**	**870**	**1,793**	**212**	**12,764**
Ages 50–69	**3,144**	**370**	**293**	**315**	**754**	**86**	**4,962**

Source: AIHW National Mortality Database.

Table 52: Age-specific and age-standardised mortality rates for breast cancer in women by region, 1997–2001

Age group	Capital Cities	Other metropolitan	Large rural centres	Small rural centres	Other rural areas	Remote areas	Australia
0–4	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
10–14	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
20–24	0.2	0.4	0.5	0.0	0.4	0.0	0.2
25–29	0.6	1.9	0.0	1.6	0.9	0.0	0.7
30–34	3.2	3.9	4.0	5.9	4.1	3.5	3.6
35–39	9.1	6.8	11.5	10.2	8.1	9.8	9.0
40–44	17.6	12.8	19.4	18.3	22.2	23.7	18.2
45–49	31.3	29.8	29.3	27.3	25.6	24.2	29.9
50–54	42.7	34.7	60.5	44.7	47.4	32.9	43.6
55–59	57.3	46.9	49.5	41.9	53.8	42.7	54.1
60–64	64.9	60.9	49.7	54.0	71.0	57.1	63.6
65–69	71.9	72.2	63.6	58.7	66.2	63.2	69.3
70–74	90.1	75.4	75.7	86.5	88.9	101.9	87.6
75–79	101.9	109.0	117.5	92.6	110.3	76.3	103.5
80–84	135.5	133.4	124.6	115.8	116.7	121.3	130.5
85+	182.0	192.7	191.5	195.9	195.4	162.0	186.0
All ages							
Crude rate	26.6	26.9	27.6	27.8	29.0	16.2	26.8
ASR(A)	26.1	24.2	26.1	24.1	26.3	23.2	25.8
95% CI	25.6–26.7	22.7–25.8	24.3–28.0	22.5–25.8	25.1–27.6	20.1–26.2	25.3–26.2
Ages 50–69							
Crude rate	56.6	51.5	56.0	49.3	58.1	45.2	55.6
ASR(A)	56.6	50.3	55.8	48.5	57.5	46.1	55.3
95% CI	54.6–58.5	45.3–55.2	49.3–62.4	43.1–53.6	53.4–61.7	36.8–55.8	53.7–56.8

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.

Source: AIHW National Mortality Database.

Table 53: Number of deaths from breast cancer in women by age and Indigenous status, Queensland, Western Australia, South Australia, Northern Territory, 1997–2001

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	7
25–29	1	9	26
30–34	1	43	129
35–39	4	120	340
40–44	9	238	652
45–49	3	347	993
50–54	7	492	1,300
55–59	3	429	1,233
60–64	6	413	1,224
65–69	4	371	1,206
70–74	1	493	1,455
75+	8	1,425	4,202
All ages	**47**	**4,382**	**12,767**
Ages 50–69	**20**	**1,705**	**4,963**

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.
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 54: Age-standardised and age-specific mortality rates for breast cancer in women by Indigenous status, Queensland, Western Australia, South Australia, Northern Territory, 1997–2001

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	0.2
25–29	1.9	0.8	0.7
30–34	2.1	3.8	3.6
35–39	10.1	9.8	9.0
40–44	28.2	20.2	18.2
45–49	12.1	31.5	29.9
50–54	37.8	49.6	43.6
55–59	24.0	57.4	54.2
60–64	60.2	67.1	63.6
65–69	56.1	68.4	69.3
70–74	21.6	95.6	87.6
75+	137.4	143.9	133.3
All ages			
Crude rate	8.0	28.5	26.8
ASR(A)	21.0	27.8	25.9
95% CI	13.9–28.3	27.0–28.6	25.5–26.4
Ages 50–69			
Crude rate	41.6	58.9	55.6
ASR(A)	42.2	58.8	55.3
95% CI	24.7–63.5	56.3–61.7	53.8–56.8

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.
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.

TableA1: 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
5	Recall to assessment	BreastScreen Australia state and territory services
6	Rescreening	BreastScreen Australia state and territory services
7	Incidence (ICD 174)	National Cancer Statistics Clearing House, AIHW
8	Mortality (ICD 174)	National Mortality Database, AIHW

Population data

The Australian Bureau of Statistics' 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 2000 and 2001 estimated resident female populations. The only exceptions to this were participation rates by socioeconomic status, by language spoken at home, and by Indigenous status. The population data on which the participation rates are based are found on the web site of the Australian Institute of Health and Welfare at (http://www.aihw.gov.au). The ABS does not calculate ERP by socioeconomic status or language spoken at home. In these cases the denominator was calculated by applying the age-specific distribution of socioeconomic status and language spoken at home from the most recent ABS Census data available to the relevant age-specific ERP counts. For language spoken at home, the most recent available data were from the 2001 ABS Census and for socioeconomic status, the most recent available data were from the 1996 ABS Census.

The most recent direct count of the Aboriginal and Torres Strait Islander population was carried out in the 2001 Census. However, adjustments to the Aboriginal and Torres Strait Islander population based on the 2001 Census for years prior to 2001 were not available at the time of publication. Consequently, projected estimates based on the 1996 ABS Census have been used for these years.

Mortality Data

Mortality data in this report are given for 1987 to 2001. 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 Australian Bureau of Statistics 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.

The application of a comparability factor causes the number of deaths prior to 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 (ASR)

Age-standardised rates enable comparisons to be made between populations which 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.

The National Health Data Committee has advocated the use of the 1991 Australian total estimated resident population as the standard population until the year 2001. As the 2001 Australian total estimated resident population is now available, mortality, incidence and participation rates are age-standardised to this population for the first time in this report. A comparison of participation rates age-standardised to both the 1991 and 2001 populations revealed only slight differences. 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 standard populations used in this report are found on the AIHW web site (http://www.aihw.gov.au).

The method used for all these calculations consists 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 in this report were calculated using the software package Palisade @Risk (http://www.palisade.com). The calculations were based on 1000 simulations using a binomial or Poisson distribution with parameters calculated from the observed data. The confidence intervals represent a range of values within which the true value of the rate is likely to fall in 95% of iterations.

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 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; and
- 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 where the death was registered (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

Analysis of mortality data by geographic area uses the Rural, Remote and Metropolitan Areas (RRMA) classification. This classification, developed in 1994 by the then Department of Primary Industries and Energy and the then Department of Human Services and Health, is used as a framework for examining breast cancer mortality data at the national level. Seven categories are included—two metropolitan, three rural and two remote (see Table A2).

Table A2: Structure of the Rural, Remote and Metropolitan Areas classification

Zone	Category
Metropolitan	Capital cities
	Other metropolitan centres (urban centre population > 100,000)
Rural	Large rural centres (urban centre population 25,000–99,999)
	Small rural centres (urban centre population 10,000–24,999)
	Other rural areas (urban centre population <10,000)
Remote	Remote centres (urban centre population > 5,000)
	Other remote areas (urban centre population <5,000)

A more recent geographic classification system has been developed using 1996 Population Census data. This system, known as the Accessibility/Remoteness Index of Australia (ARIA) , categorises areas according to their distance from 'service centres'. Service centres are urban centres with a population of 5,000 or more as at the 1996 Census. The ARIA system classifies areas as highly accessible, accessible, moderately accessible, remote and very remote.

The ARIA system was not designed as a replacement for the RRMA classification. In particular, it does not allow a comparable categorisation. Accessibility is judged purely on distance to an urban centre. For example, Albury, Tamworth and Inner Sydney all have the same classification (highly accessible) using the ARIA system. An updated rural/remote/metropolitan categorisation is being developed using ARIA. Until that new categorisation becomes available, the existing RRMA system will continue to be used.

The RRMA classification is based on statistical local areas (SLA) and allocates each SLA in Australia to a category based primarily on population numbers and an index of remoteness (DPIE & DHSH 1994). Both the size of SLAs and the distribution of population within them vary considerable. This can mean that within a remote SLA there are pockets that are rural rather than remote and vice versa.

The use of SLAs for coding geographic regions is not straightforward. In particular, SLA boundaries change over time. Coding data to SLAs thus raises difficulties with tracking these changes over time and ensuring that all data are coded consistently. Instead, for this report the data were coded to postcode and a concordance was developed to map postcode to RRMA. This mapping is not exact, since SLA boundaries can cross postcode boundaries. As a result, the proportion of each postcode that could be mapped to each RRMA category was calculated and used to code the data.

A total of 507 of the BreastScreen screening data records had postcodes that could not be mapped to an RRMA classification. These were allocated proportionally between the classifications.

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 Australian Bureau of Statistics 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.

Like the RRMA classification, the IRSD was developed for SLAs. However, as with the RRMA coding, for this report the data were coded to postcode and a concordance was developed to map postcode to quintile of IRSD. Again, this mapping is not exact, since SLA boundaries can cross postcode boundaries. As a result, the proportion of each postcode that could be mapped to each IRSD quintile was calculated and used to code the data.

A total of 304 of the BreastScreen screening data records had postcodes that could not be mapped to an IRSD quintile. These were allocated proportionally between the quintiles.

Indigenous status

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

- Aboriginal;
- Torres Straits 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.

Abbreviations

AACR: Australasian Association of Cancer Registries
ABS: Australian Bureau of Statistics
ACT: Australian Capital Territory
AIHW: Australian Institute of Health and Welfare
AHMAC: Australian Health Ministers Advisory Council
ASR: age-standardised rate
ASR(A): age-standardised rate—standardised to the Australian standard population
BSA: BreastScreen Australia
BSANAC: BreastScreen Australia National Advisory Committee
CI: confidence interval (see glossary)
DoHA: Australian Government Department of Health and Ageing
DCIS: ductal carcinoma in situ
DHSH: Department of Human Services and Health (1994 to 1996)
ERP: estimated resident population
NBCC: National Breast Cancer Centre
NHS: National Health Survey
NQMC: National Quality Management Committee
NSW: New South Wales
NT: Northern Territory
Qld: Queensland
SA: South Australia
SES: socioeconomic status
SLA: statistical local area
Tas: Tasmania
Vic: Victoria
WA: Western Australia
WHO: World Health Organization

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 but dying 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: a woman is screened but not cleared for routine rescreening and instead is referred for further assessment within 6 to 12 months of the index screen.

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.

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 person 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: WHO'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 two 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, so a person with a positive or suspicious result must be referred for diagnosis and treatment.

Screening episode: includes screening examination and assessment. Early review within 6–12 months of an initial screen is not considered part of the screening episode.

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.

Torres Strait Islander: a person of Torres Strait Islander descent who identifies as a Torres Strait Islander and is accepted as such by the community in which he or she lives.

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 existence.

Women-years at risk: all women screened in the index screening year who are resident in the state or territory in which they are screened who have not reported a personal history of breast cancer.

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