

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

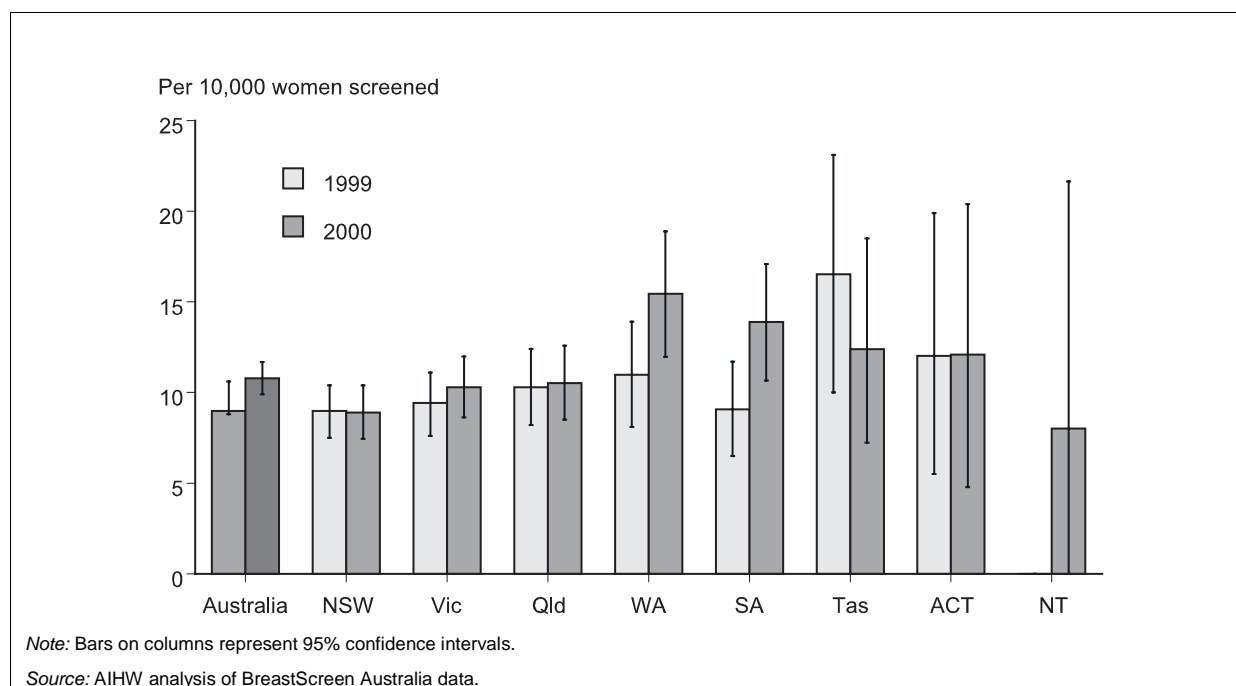
The ductal carcinoma in situ (DCIS) indicator measures the rate of DCIS diagnosed in women attending a BreastScreen Australia service. This is expressed as the number of cases of DCIS detected for every 10,000 women screened. DCIS is a disease that involves changes in the cells in the lining of the ducts 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although women with the condition are at increased risk of subsequent development of invasive breast cancer (NQMC unpublished).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is usually detected as a change on a mammogram or as a chance finding on a breast biopsy for another condition (NQMC unpublished). 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high grade DCIS through screening, and its subsequent treatment, is likely to prevent deaths from breast cancer (NQMC unpublished).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 2000, the national age-standardised rate of DCIS detection was 10.5 cases per 10,000 women aged 40 and over. This is slightly higher than the detection rate for 1999, at 9.3 per 10,000 women screened, but the difference is not statistically significant.

Ductal carcinoma in situ detection in women aged 50–69 years, 1999 and 2000



	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
1999	9.7	9.0	9.4	10.3	11.0	9.1	16.5	12.0	..
95% CI	8.8–10.6	7.5–10.4	7.6–11.1	8.2–12.4	8.1–13.9	6.5–11.7	10.0–23.1	5.5–19.9	..
2000	10.8	8.9	10.3	10.5	15.4*	13.9	12.3	12.1	9.3
95% CI	9.9–11.7	7.4–10.4	8.5–12.0	8.4–12.5	12.0–18.8	10.7–17.1	6.5–18.2	5.3–19.9	0.0–26.2

.. Not applicable—no cases of DCIS were found in the Northern Territory in 1999.

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

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.

- In 2000, BreastScreen Australia detected 830 cases of DCIS, 573 of these being cases of DCIS in women in the target age group. In 1999, 703 cases of DCIS were detected in women screened, 498 of which were in the target age group (Table 29a).
- Nationally, in 2000 the national age-standardised rate of DCIS detection was 10.5 cases per 10,000 women aged 40 and over, and 10.8 cases per 10,000 women in the target age group. The corresponding rates for 1999 were not significantly different from those for 2000.

For more information, see:

Tables 29a, 29b, 30a and 30b.

Indicator 5: Recall to assessment

Recall to assessment rate

This indicator measures the proportion of all women screened in a calendar year who were recalled for assessment by five-year age groups (40–44, 45–49, 50–54, 55–59, 60–64, 65–69, 70–74, 75–79, 80–84, and 85+) 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).

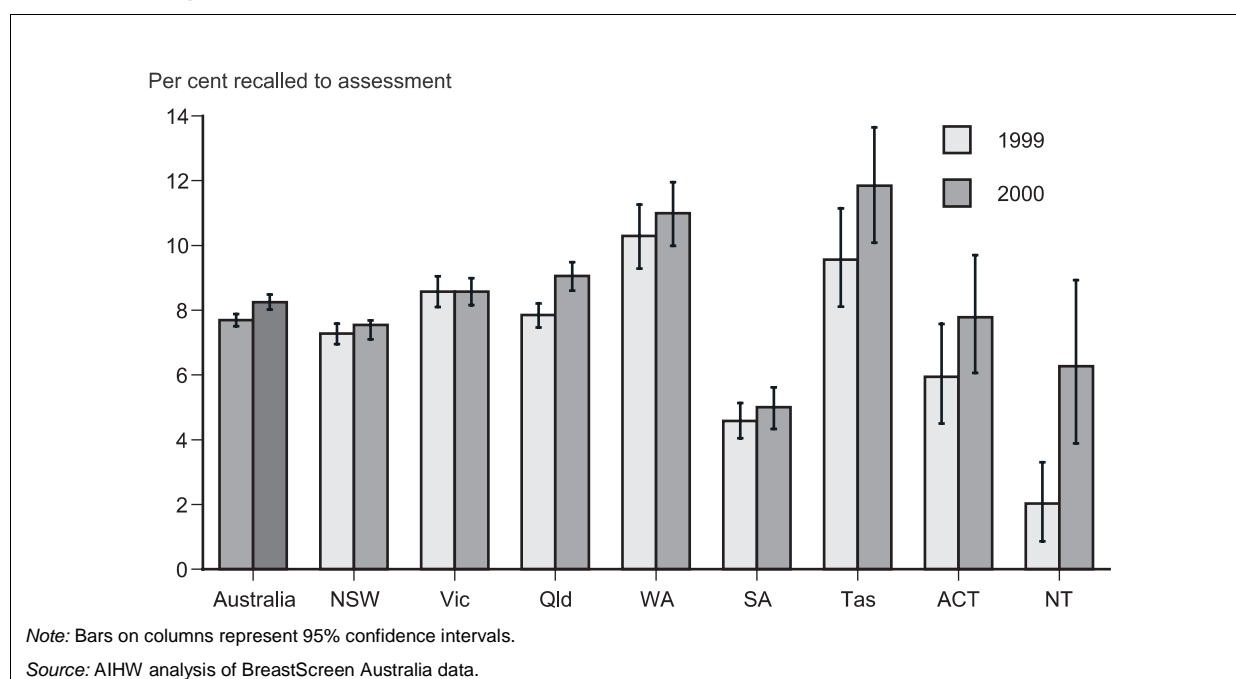
Women attending the program for the first time have a higher all-size cancer detection rate than those who have previously been screened. This is reflected in a higher recall to assessment rate for women who attend for their first screening round compared with those who attend for a subsequent round. The table below shows recall to assessment rates by screening round for 1999 and 2000.

Age-standardised recall to assessment rates for women aged 40 and over, 1999 and 2000

	First screening round	Subsequent screening rounds
1999 rate (%)	7.5	4.0
95% CI	7.4–7.6	4.0–4.1
2000 rate (%)	8.1	4.1
95% CI	8.0–8.3	4.0–4.2

Source: AIHW analysis of BreastScreen Australia data.

Recall to assessment rate for women aged 50–69 years, first screening round, 1999 and 2000



	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
1999	7.7	7.3	8.6*	7.9	10.3*	4.6*	9.6*	5.9	2.0*
95% CI	7.5–7.9	7.0–7.6	8.1–9.0	7.5–8.2	9.3–11.3	4.0–5.1	8.1–11.1	4.5–7.6	0.9–3.3
2000	8.3	7.5*	8.6	9.1*	11.0*	5.0*	11.8*	7.8	6.3
95% CI	8.0–8.5	7.2–7.9	8.2–9.0	8.6–9.5	10.0–12.0	4.3–5.6	10.1–13.6	6.1–9.7	3.9–8.9

* Significantly different from the all-Australia rate for the corresponding year.

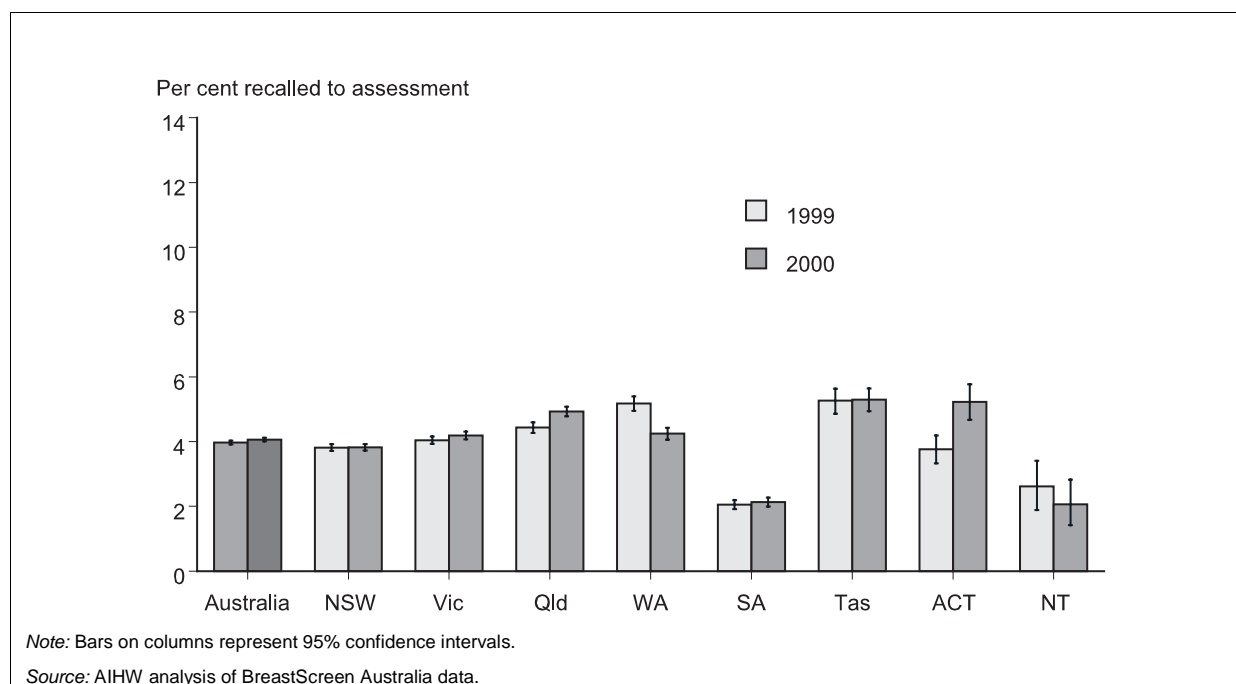
Note: Rates are the number of women recalled for assessment as a percentage of women screened and age-standardised to the population of women attending a BreastScreen Australia service in 1998.

- Of women aged 40 and over screened by BreastScreen Australia for the first time in 2000, 8.1% (age-standardised) were recalled for assessment due to an abnormal mammogram result. This was a significant increase from 1999, when the recall to assessment rate was 7.5%. In the target age group, 8.3% of women were recalled in 2000 and 7.7% were recalled in 1999. The rate for 2000 was significantly higher than that for 1999.
- Across the states and territories in 2000, the recall to assessment rate in the target age group ranged from 5.0% in South Australia to 11.8% in Tasmania. Recall rates in Queensland, Western Australia and Tasmania were significantly higher than the all-Australia rate, whereas those in New South Wales and South Australia were significantly lower.

For more information, see:

Tables 31a, 31b, 32a and 32b.

Recall to assessment rate for women aged 50–69 years, subsequent screening rounds, 1999 and 2000



	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
1999	4.0	3.8	4.0	4.4*	5.2*	2.1*	5.3*	3.8	2.6*
95% CI	3.9–4.0	3.7–3.9	3.9–4.2	4.3–4.6	4.9–5.4	1.9–2.2	4.9–5.7	3.3–4.2	1.9–3.4
2000	4.1	3.8*	4.2	4.9*	4.2	2.1*	5.3*	5.2*	2.1*
95% CI	4.0–4.1	3.7–3.9	4.1–4.3	4.8–5.1	4.1–4.4	2.0–2.3	4.9–5.6	4.7–5.8	1.4–2.8

* Significantly different from the all-Australia rate for the corresponding year.

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

- Of women aged 40 and over and of women in the target group, 4.1% who were screened by BreastScreen Australia for a second or subsequent time were recalled for assessment due to a screening mammogram with an abnormal result in 2000. The corresponding rates for 1999 were not significantly different.
- Across the states and territories in 2000, the recall to assessment rate in the target age group ranged from 2.1% in South Australia and the Northern Territory to 5.3% in Tasmania.

For more information, see:

Tables 33a, 33b, 34a and 34b.

Indicator 6: Rescreening

Rescreen rate

The rescreen rate is the proportion of all women screened in 1998 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 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 in addition to those who screen 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.

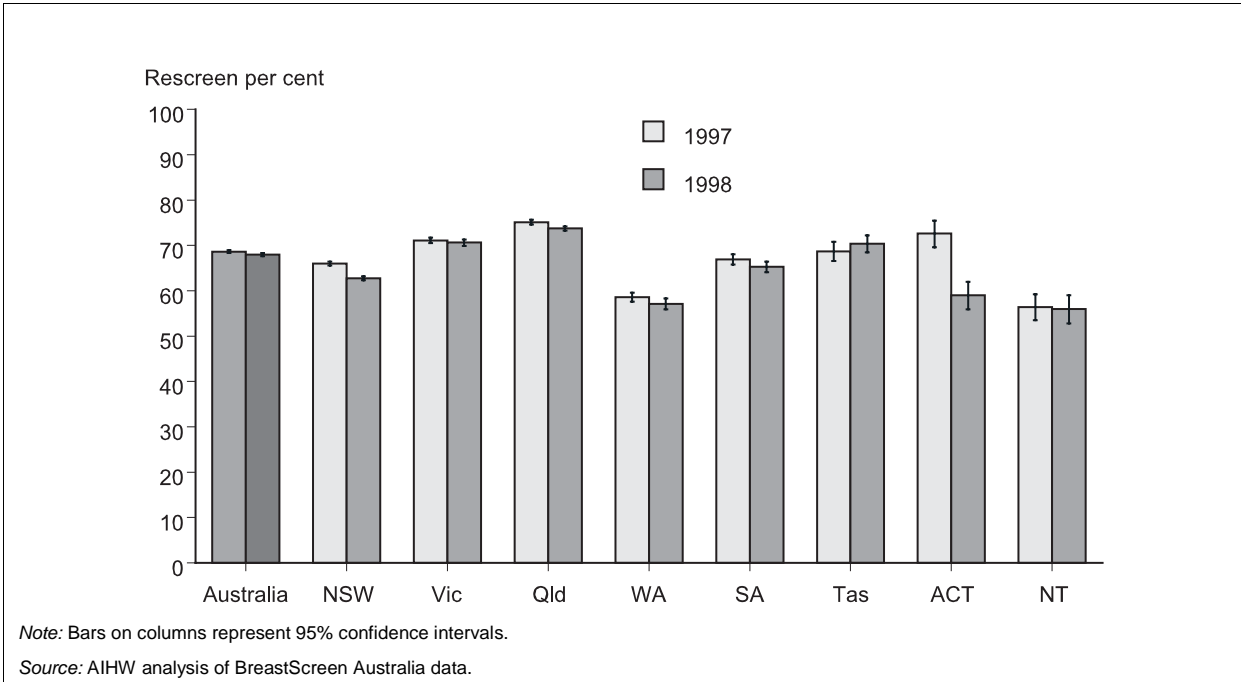
One of the objectives of the BreastScreen Australia Program is ‘To rescreen all women in the Program at two-yearly intervals’ (BSANAC & DHAC 2000).

Age-standardised rescreen rates for women aged 40 years and over, screened during 1998, Australia

	First screening round	Second screening round	Subsequent screening rounds
Rate (%)	64.1	74.5	82.6
95% CI	63.9–64.4	74.3–74.8	82.3–82.9

Source: AIHW analysis of BreastScreen Australia data.

Rescreen rate for women aged 50–69 years, screened during 1997 and 1998, first screening round



	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
1997	68.6	66.0*	71.1*	75.1*	58.6*	66.9*	68.7	72.6*	56.4*
95% CI	68.3–69.0	65.6–66.4	70.5–71.7	74.6–75.6	57.6–59.5	65.8–68.0	66.6–70.8	69.6–75.4	53.5–59.2
1998	68.0	62.8*	70.6*	73.7*	57.1*	65.3*	70.4*	59.0*	56.0*
95% CI	67.6–68.3	62.3–63.2	69.9–71.3	73.3–74.2	55.9–58.3	64.1–66.4	68.5–72.2	55.9–62.0	52.8–59.0

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

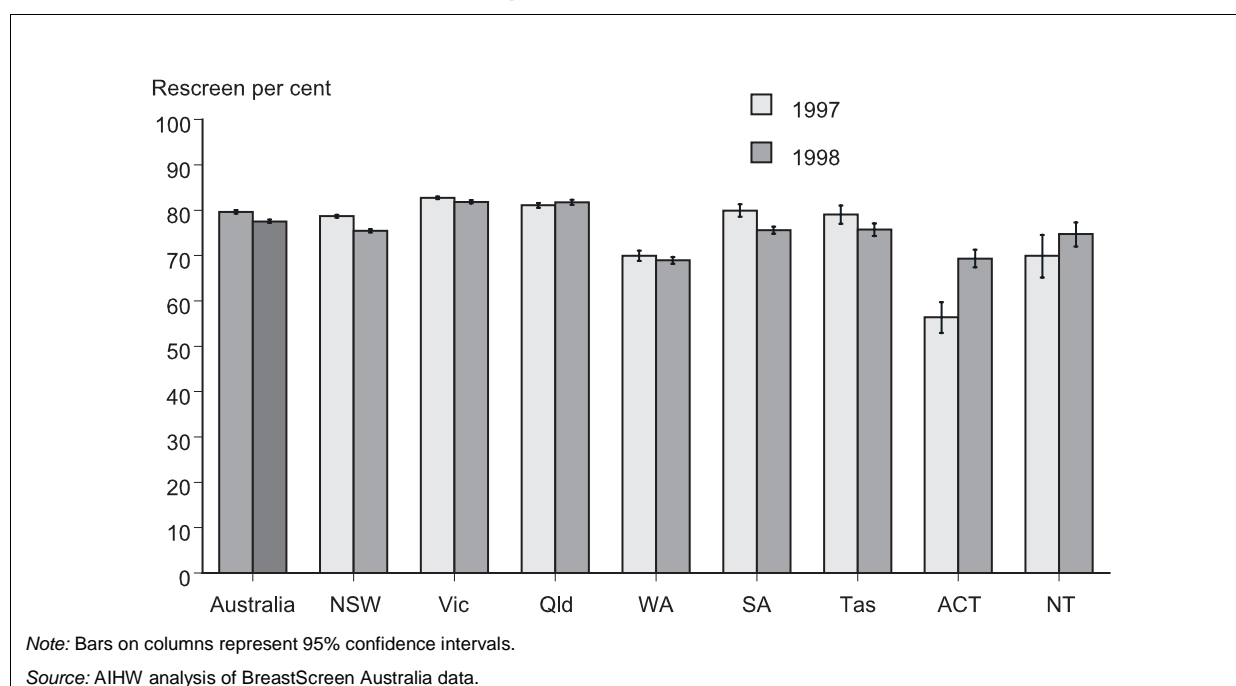
Note: Rates are the number of women attending for rescreening as a percentage of women screened and age-standardised to the population of women attending a BreastScreen Australia service in 1998.

- The age-standardised national rescreen rate for women screened in 1998 was 64.1% of women screened for women aged 40 and over, and 68.0% for the target age group.
- Across the states and territories, the age-standardised rescreen rates for the first screening round among women in the target age group screened in 1998 ranged from 56.0% in the Northern Territory to 73.7% in Queensland.

For more information, see:

Tables 35a, 35b, 36a and 36b.

Rescreen rate for women aged 50–69 years, screened during 1997 and 1998, second screening round



	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
1997	79.6	78.7*	82.7*	81.1*	70.0*	79.9	79.1	56.4*	70.0*
95% CI	79.3–80.1	78.4–79.0	82.5–83.0	80.6–81.6	68.8–71.1	78.6–81.3	77.0–81.0	52.9–59.7	65.2–74.6
1998	77.5	75.4*	81.8*	81.7*	68.9*	75.6*	75.7*	69.3*	74.8
95% CI	77.2–77.9	75.1–75.8	81.5–82.2	81.2–82.3	68.2–69.7	74.8–76.4	74.3–77.1	67.4–71.3	72.0–77.3

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

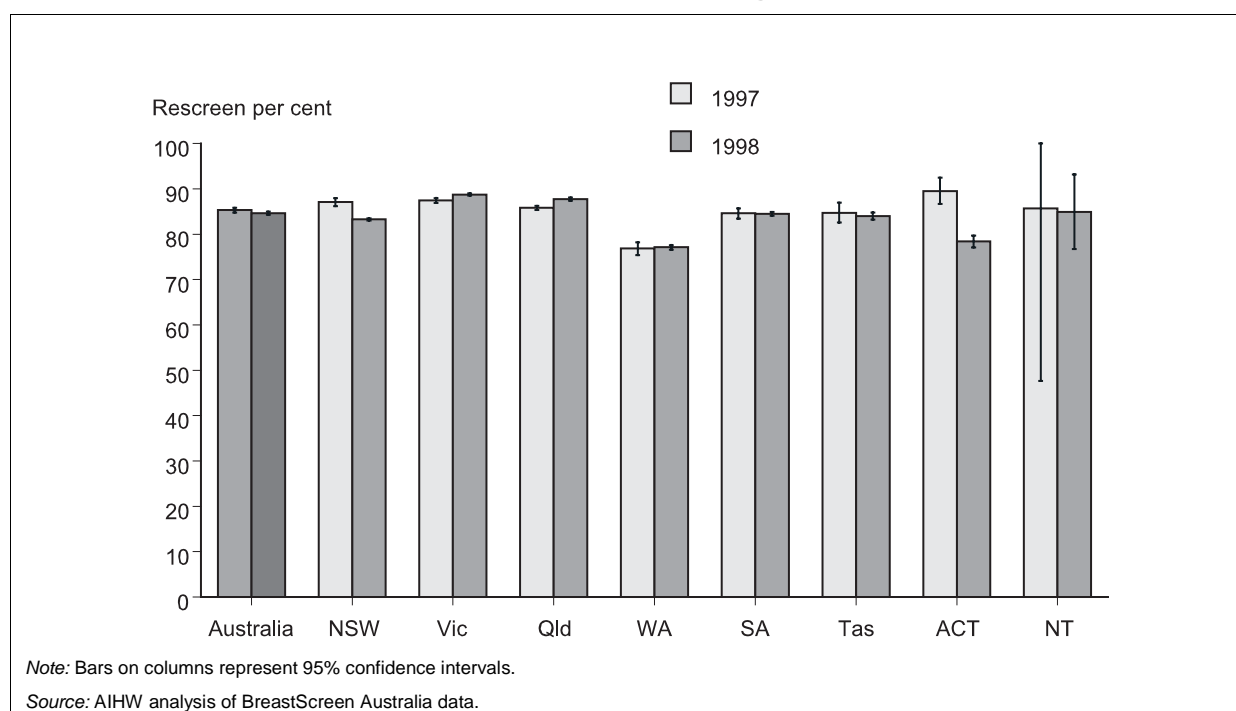
Note: Rates are the number of women attending for rescreening as a percentage of women screened and age-standardised to the population of women attending a BreastScreen Australia service in 1998.

- The age-standardised national rescreen rate for women screened in 1998 was 74.5% of women screened for women aged 40 and over and 77.5% for the target age group. These rates were significantly lower than the corresponding rates for 1997.
- Across the states and territories, the age-standardised rescreen rates for women in the target age group attending a second screening round in 1998 ranged from 68.9% in Western Australia to 81.8% in Victoria.

For more information, see:

Tables 37a, 37b, 38a and 38b.

Rescreen rate for women aged 50–69 years, screened during 1997 and 1998, third and subsequent screening rounds



	Australia	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
1997	85.3	87.1*	87.5*	85.8	76.9*	84.6	84.7	89.5*	85.7
95% CI	84.8–85.8	86.2–88.0	86.9–88.0	85.4–86.3	75.4–78.2	83.5–85.7	82.6–87.0	86.7–92.5	47.6–100.0
1998	84.6	83.3*	88.8*	87.7*	77.1*	84.5*	84.0	78.4*	84.9
95% CI	84.3–85.0	83.0–83.5	88.5–89.0	87.4–88.1	76.6–77.6	74.8–76.4	83.2–84.8	77.1–79.7	76.7–93.2

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

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 screened in 1998 was 82.6% of women screened for women aged 40 and over and 84.6% for the target age group. These rates were lower than those for women screened in 1997, with the difference in women aged 40 and over being significant.
- Across the states and territories, the age-standardised rescreen rates for women in the target age group attending a third or subsequent screening rounds in 1998 ranged from 77.1% in Western Australia to 88.8% in Victoria.

For more information, see:

Tables 39a, 39b, 40a and 40b.