

Breast cancer survival by size and nodal status in Australia

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The National Breast Cancer Centre (NBCC) is Australia's peak body for breast and ovarian cancer control. It was established in 1995 by the Australian Government in response to community concerns about the human cost of breast cancer. In 2001 the Government provided additional funding to expand the NBCC's work into ovarian cancer.

The NBCC works with consumers, health professionals, cancer organisations, researchers and governments to improve the management of breast and ovarian cancer and the wellbeing of people with these diseases. It aims to improve health outcomes for people with breast and ovarian cancer by ensuring that wherever they live, they receive the best possible care.

Please note that as with all statistical reports there is the potential for minor revisions of data in this report over its life. Please refer to the online version at <www.aihw.gov.au>.

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Breast cancer survival by size and nodal status in Australia

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Board Chair

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Director

Penny Allbon

National Breast Cancer Centre

Board Chair

Dr Megan Keaney

Director

Dr Helen Zorbas

Any enquiries about or comments on this publication should be directed to:

John Harding

Australian Institute of Health and Welfare

GPO Box 570

Canberra ACT 2601

Phone: (02) 6244 1000

Email: cancer@aihw.gov.au

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The report was prepared by Kun Zhao, John Harding, Dr Mark Short and Chris Sturrock of the AIHW Health Registers and Cancer Monitoring Unit.

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Abbreviations

ABS	Australian Bureau of Statistics
ACT	Australian Capital Territory
AIHW	Australian Institute of Health and Welfare
ARIA	Accessibility/Remoteness Index for Australia
ASGC	Australian Standard Geographical Classification
CD	census collection district
CI	confidence interval
IRSD	Index of Relative Socioeconomic Disadvantage
NBCC	National Breast Cancer Centre
NSW	New South Wales
NT	Northern Territory
Qld	Queensland
SA	South Australia
SEIFA	Socioeconomic Indexes for Areas
SLA	statistical local area
Tas	Tasmania
Vic	Victoria
WA	Western Australia

Summary

Background

This report by the Australian Institute of Health and Welfare (AIHW) and the National Breast Cancer Centre (NBCC) provides descriptive statistics of relative survival to 2006 in Australian women diagnosed with invasive breast cancer in 1997. In addition, the data quantify the associations of size and nodal status with survival in Australia, both in general and by age at diagnosis, place of residence and socioeconomic status.

This report is a follow-up of *Breast cancer size and nodal status* (AIHW & NBCC 2001). Data consisted of 10,017 cases of women diagnosed with breast cancer in 1997; of these cases, there were 3,323 deaths up to 31 December 2006.

Key findings

- Survival was considerably higher for women with smaller tumours compared with women diagnosed with larger tumours. Specifically, 5-year relative survival was 98% for women with cancers 10 mm in size or less and declined to 73% for women with cancers 30 mm or more and to 49% for women with unknown tumour size.
- Similarly, survival was significantly higher in women whose lymph nodes were cancer-free (negative nodal status) compared with women whose cancer had spread to their lymph nodes (positive nodal status). Specifically, 5-year relative survival was 97% when nodes were negative, 80% when nodes were positive and 71% when nodal status was unknown.
- Women with unknown tumour size and nodal status had the lowest relative survival throughout the analyses. Survival in these women may be poor because of advanced co-morbidity, frailty for reasons of age or other factors where a comprehensive investigation and treatment of their cancers was not deemed to be warranted.
- Age effects were analysed, with poorer survival in women aged less than 40 years and aged 70 years and over.
- Survival was also highest among women living in major city areas and in areas with highest socioeconomic status.
- Some groups of women showed a relative survival greater than 100%. Although these figures are based on small numbers, they may validly occur in women with successful early diagnosis and treatment to reduce the risk of dying below the risk of women in the general community.

1 Introduction

Data sources

The primary data source was a special collection of all female invasive breast cancer cases in 1997 which was provided by state and territory cancer registries for the report *Breast cancer size and nodal status* (AIHW & NBCC 2001). A summary of these records is presented in Table 1.1. These records were then linked with the AIHW National Death Index for death records from 1 January 1997 to 31 December 2006.

Table 1.1: Breast cancer cases diagnosed in 1997: size of cancer by state and territory

State/ territory	Size												Total No.	% of total
	0–10 mm		11–15 mm		16–19 mm		20–29 mm		30+ mm		Unknown			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		
NSW	718	20.6	739	21.2	383	11.0	754	21.7	559	16.1	327	9.4	3,480	34.7
Vic	465	18.2	543	21.2	261	10.2	560	21.9	387	15.1	345	13.5	2,561	25.6
Qld	413	23.6	385	22.0	184	10.5	335	19.1	299	17.1	135	7.7	1,751	17.5
WA	193	21.1	201	22.0	97	10.6	177	19.4	132	14.4	114	12.5	914	9.1
SA	121	13.6	174	19.5	91	10.2	183	20.5	204	22.8	120	13.4	893	8.9
Tas	38	16.5	57	24.8	26	11.3	43	18.7	48	20.9	18	7.8	230	2.3
ACT	23	16.6	37	26.6	14	10.1	32	23.0	24	17.3	9	6.5	139	1.4
NT	7	14.3	12	24.5	6	12.2	8	16.3	9	18.4	7	14.3	49	0.5
Australia	1,978	19.8	2,148	21.4	1,062	10.6	2,092	20.9	1,662	16.6	1,075	10.7	10,017	100.0

Source: National Cancer Statistics Clearing House, AIHW.

Relative survival

Relative survival analysis compares the survival rate of persons diagnosed with cancer (observed survival) with the survival rate of the entire Australian population of the same sex and age in the same calendar year as the cancer cohort (expected survival). The relative survival is defined as the observed survival divided by the expected survival and is usually given as a percentage. For example, a 5-year relative survival of 89% for women diagnosed with breast cancer in 1997 and who were aged 60–64 years at diagnosis means that a person from that category has an 89% chance of surviving 5 or more years relative to all Australian females aged 60–64 years in 1997.

The software used to compute the relative survival figures was written by Dickman (2004). It uses the Ederer II method of computing the interval-specific expected survivals. All of the cancers in this study were diagnosed in a single year and therefore the period and cohort methods of analysis yield identical results.

Caveats

- Tumour size is the largest diameter of the excised tumour. However, in the case of multifocal tumours (where a number of tumours have arisen at the same time), there was a difference in measurement methodology between jurisdictions. In South Australia and the Northern Territory tumour size was recorded as the sum of the diameters of all the tumours whereas in the other jurisdictions tumour size was recorded as the diameter of the largest tumour. Therefore the tumour sizes in records from South Australia and Northern Territory are a little inflated compared with the rest of Australia. However, this would have little if any bearing on the results herein because the number of records of multifocal tumours in those two jurisdictions are very small compared with the total number of records used in this study.
- During data preparation it was discovered that a tumour size record of 0 mm was ambiguous. Some coders in some jurisdictions meant a tumour of microscopic size whereas others meant that the size was unknown. A separate survival analysis was performed on this set of records. The results indicated very poor survival for such women. As this scenario does not accord with the rest of the study, where there is a clear trend of decreasing survival for increasing tumour size, it was felt that most of the 0 mm records must in fact be of unknown tumour size. As there was no way to separate the two kinds of 0 mm records it was decided to reclassify all of them as being of unknown tumour size.
- Information about socioeconomic status and remoteness was determined using postcodes of women at the time of diagnosis, i.e. in 1997. It should be noted that women may move to different geographic areas after diagnosis. Although not analysed here, a patient's place of residence and socioeconomic status following diagnosis may also affect breast cancer survival.
- Various tables in the next chapter show some categories of women with a relative survival of over 100%. At face value this indicates that a woman in such a category has a smaller risk of dying than women of the same age in the general population, that is, her cancer has had some health benefit. Whilst it is true that diagnosis of a serious disease can result in behavioural changes that in turn give health benefits, there is no consistency in the 'over 100%' figures in the tables. Therefore these numbers should be interpreted as normal statistical variation due to small sample sizes and treated with caution.

2 Results

Survival by age

Age differentials from less than 40 years to 70 years and over

(Table 2.2, page 9)

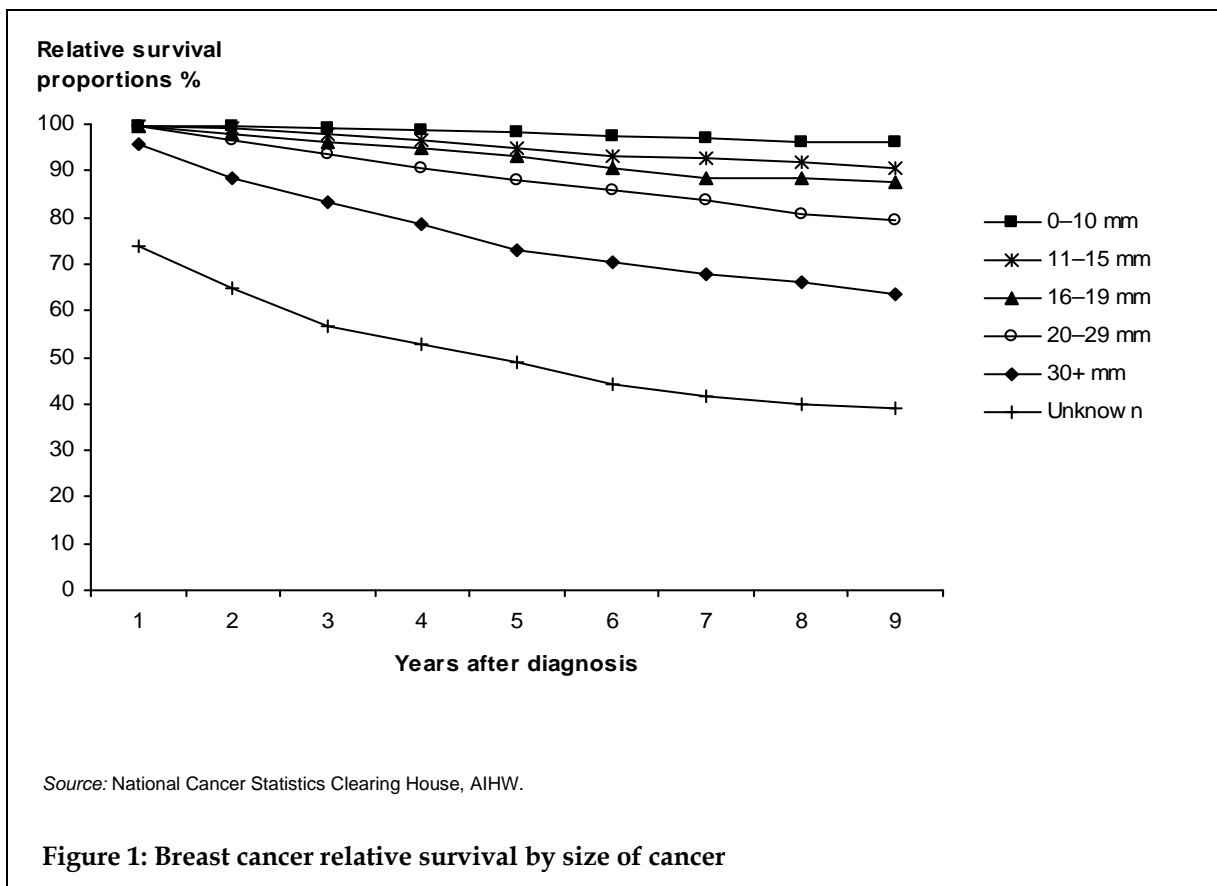
- In general, relative survival was highest in women aged 50–59 years and lowest in women aged 70 years and older.
- From the fifth to the ninth year after diagnosis, relative survival was significantly lower in women aged younger than 40 years and women aged 70 years and over compared with women from every other age group.
- Five-year relative survival was 81% in women aged 0–39 years, 86% in women aged 40–49 years, 90% in women aged 50–59 years, 89% in women aged 60–69 years and 80% in women aged 70 years and over.

Survival by size

Survival by size and years after diagnosis

(Table 2.3, page 10)

- In general, relative survival was highest for women with 0–10 mm tumours and decreased steadily as tumour size increased. However, women with unknown tumour size had the lowest survival every year after diagnosis.
- From 5 to 9 years after diagnosis, relative survival was significantly higher for women with 0–10 mm tumours compared with women with every other tumour size.
- For every year after diagnosis, relative survival was significantly lower for women with 30 mm or greater tumours compared with women with every other known tumour size.
- Five-year relative survival was 98% for women with 0–10 mm tumours, 95% for women with 11–15 mm tumours, 93% for women with 16–19 mm tumours, 88% for women with 20–29 mm tumours, 73% for women with 30mm or greater tumours and 49% for women with tumours of unknown size.



Survival by age and size

(Table 2.4, page 11)

- At 1 year after diagnosis, there were no significant differences in relative survival among age groups for smaller cancers (sizes 0-10, 11-15 and 16-19 mm).
- At 5 and 9 years after diagnosis, relative survival was generally lowest in women aged younger than 40 years for all known tumour sizes.
- Five-year relative survival for women with very small tumours (0-10 mm) was 95% for those aged younger than 40 years, 97% for ages 40-49 years, 98% for ages 50-59 years, 97% for ages 60-69 years and 103% for ages 70 years and over.

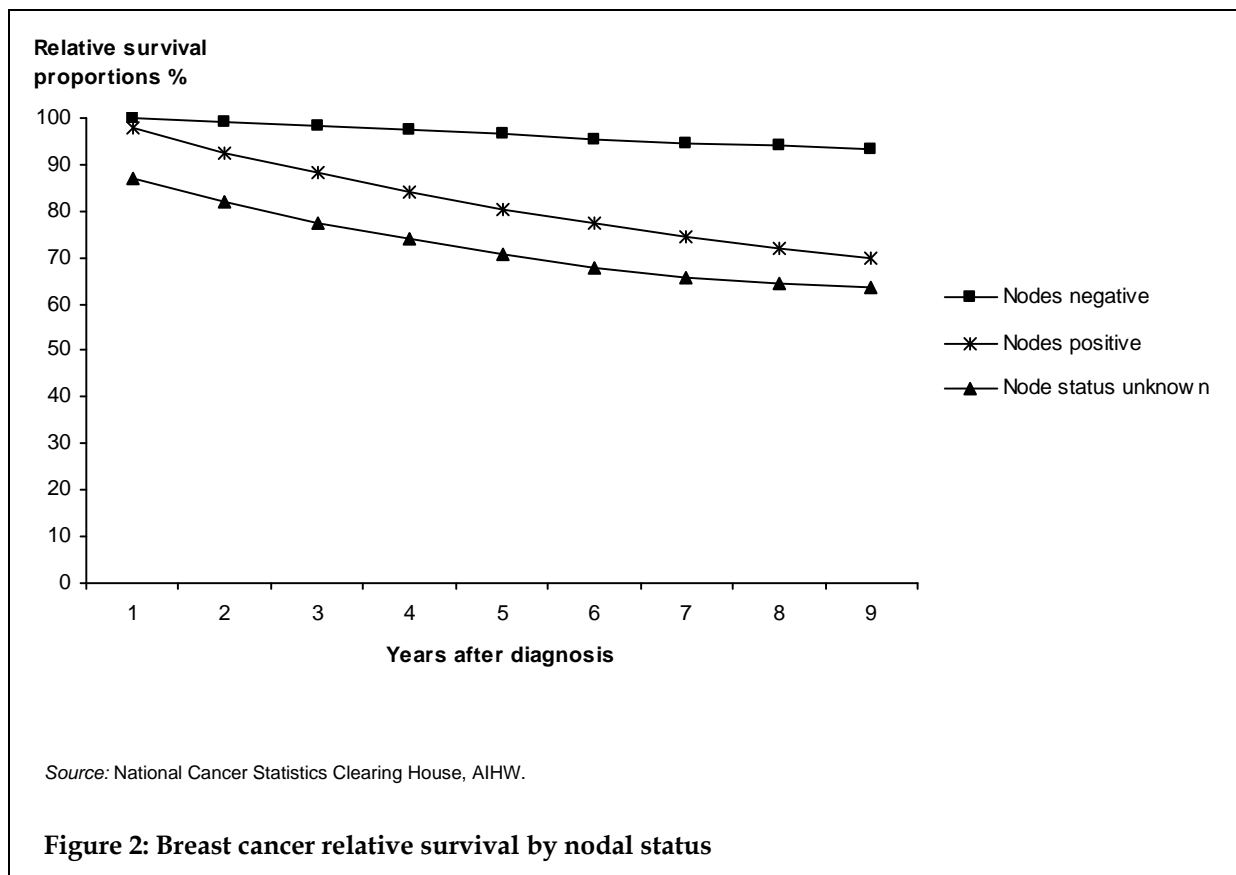
Survival by nodal status

Survival by nodal status and years after diagnosis

(Table 2.6, page 12)

- In every year after diagnosis, relative survival was significantly higher for women with negative nodal status compared with women with positive nodal status. Women with unknown nodal status had the lowest relative survival every year after diagnosis.

- Five-year relative survival was 97% for women with negative nodal status, 80% for women with positive nodal status and 71% for women with unknown nodal status.
- The difference in relative survival between women with negative and positive nodal status increased steadily with years elapsed following diagnosis. For example, the difference in 1-year relative survival between women with positive (98%) and negative (100%) nodal status was 2 percentage points, whereas the difference in 9-year relative survival between women with positive (70%) and negative (94%) nodal status was 24 percentage points.



Survival by age and nodal status

(Table 2.7, page 13)

- At 5 and 9 years after diagnosis, women with negative nodal status had significantly higher relative survival compared with women with positive or unknown nodal status for all age groups.
- For example, 5-year relative survival for women aged 50–59 years was 97% for those with negative nodal status, 83% for those with positive nodal status and 76% for those with unknown nodal status.

Survival by place of residence

Survival by place of residence and years after diagnosis

(Table 2.9, page 14)

- In general, relative survival was highest for women who lived in Major Cities and lowest for women who lived in Remote and Very Remote areas. However, there were no statistically significant differences between areas.
- Nine-year relative survival was 80% in Major Cities, 79% in Inner Regional areas, 77% in Outer Regional areas and 75% in Remote and Very Remote areas, with these differences not statistically significant.

Survival by place of residence and size

(Table 2.10, page 15)

- There were generally no significant differences in 1-, 5- and 9-year relative survival between women living in different areas for all tumour sizes.
- However, 1- and 5-year relative survival was significantly higher in women with 11-15 mm tumours for those living in Major Cities (100% and 95%, respectively) compared with those in Outer Regional areas (97% and 88%, respectively).

Survival by place of residence and nodal status

(Table 2.12, page 16)

- One-, five- and nine-year relative survival generally was not significantly different between women living in different areas for positive, negative or unknown nodal status.

Survival by socioeconomic status

Survival by socioeconomic status and years after diagnosis

(Tables 2.14 and 2.19, pages 17 and 21)

Relative survival was analysed by socioeconomic status quintiles and deciles using the ABS SEIFA Index of Socioeconomic Disadvantage (see Glossary).

- From the third year after diagnosis, relative survival was significantly higher for women in the most socioeconomically advantaged areas (1st quintile) compared with women in the least socioeconomically advantaged areas (4th and 5th quintiles).
- Five-year relative survival was 89% in the first socioeconomic status quintile, 86% in the second quintile, 86% in the third quintile, 84% in the fourth quintile and 84% in the fifth quintile.
- Extending the analysis further using socioeconomic status deciles, a similar pattern was found. There was a significant difference between the first and ninth socioeconomic status deciles from the fourth year following diagnosis. For example, 5-year relative

survival was 90% for women in the first decile and 83% for women in the ninth decile. The tenth decile usually presented lower survival than the first decile, but these differences were not statistically significant, partly due to the small number of cases in the tenth decile.

Survival by socioeconomic status and size

(Tables 2.15 and 2.20, pages 18 and 22)

- In the ninth year after diagnosis, relative survival was highest in women living in the most socioeconomically advantaged areas of Australia (1st quintile) for women with all known tumour sizes greater than 10 mm.
- Five-year relative survival was significantly higher in women with 11–15 mm tumours for those in the first socioeconomic status quintile (97%) compared with those in the fourth quintile (91%).
- There were inconsistent findings when the analysis was conducted using socioeconomic status deciles because of higher standard errors and wider confidence intervals. For women with 11–15 mm tumours, 5-year relative survival was significantly higher for those in the first socioeconomic status decile (98%) compared with those in the eighth decile (89%), but very similar to those in the ninth decile (96%).

Survival by socioeconomic status and nodal status

(Tables 2.17 and 2.22, pages 19 and 24)

- Differences in relative survival between women living in different areas of socioeconomic advantage were greater for positive compared with negative nodal status and in later years after diagnosis.
- At 5 and 9 years after diagnosis, relative survival was significantly higher in women with positive nodal status for those in the first socioeconomic status quintile compared with those in the fifth quintile.
- For example, 5-year relative survival for women with positive nodal status was 85% in the first quintile, 82% in the second quintile, 78% in the third quintile, 78% in the fourth quintile and 77% in the fifth quintile.
- Five-year relative survival for women with negative nodal status was 98% in the first quintile, 97% in the second quintile, 97% in the third quintile, 96% in the fourth quintile and 95% in the fifth quintile.
- When the analysis was conducted using socioeconomic deciles, there was more volatility in the rates because of smaller numbers and wider confidence intervals. Five-year relative survival for women with positive nodal status ranged from 79% for the third decile to 85% for the first decile in the first five deciles and from 75% for the sixth decile to 81% for the seventh decile in the second five deciles.

Table 2.1: Number of cases diagnosed by age and size of cancer, 1997 and deaths from 1997 to 2006

Size	Age at diagnosis					Total
	0–39	40–49	50–59	60–69	70+	
Number of cases diagnosed						
0–10 mm	123	344	587	511	413	1,978
11–15 mm	132	405	585	510	516	2,148
16–19 mm	86	199	270	218	289	1,062
20–29 mm	145	454	469	433	591	2,092
30+ mm	134	353	391	294	490	1,662
Unknown	59	153	172	163	528	1,075
Total	679	1,908	2,474	2,129	2,827	10,017
Deaths from 1997 to 2006						
0–10 mm	14	26	52	88	144	324
11–15 mm	21	46	73	104	224	468
16–19 mm	19	38	36	40	148	281
20–29 mm	51	107	107	132	314	711
30+ mm	60	130	149	116	338	793
Unknown	30	72	85	103	456	746
Total	195	419	502	583	1,624	3,323

Source: National Cancer Statistics Clearing House, AIHW.

Table 2.2: Breast cancer survival by age

Years after diagnosis	Age at diagnosis													
	0-39		40-49		50-59		60-69		70+		Total			
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI		
1	97.7	96.3-98.6	98.7	98.0-99.1	98.0	97.4-98.6	97.0	96.0-97.7	92.1	90.7-93.3	96.3	95.8-96.7		
2	93.4	91.2-95.0	94.7	93.6-95.6	95.7	94.8-96.5	95.0	93.8-96.0	88.1	86.5-89.7	93.2	92.5-93.7		
3	89.2	86.6-91.3	91.7	90.4-92.9	93.6	92.5-94.6	92.8	91.4-94.0	84.7	82.8-86.5	90.4	89.6-91.1		
4	85.4	82.5-87.9	89.4	87.9-90.7	91.5	90.2-92.6	90.6	89.0-92.0	82.7	80.6-84.8	88.1	87.3-88.9		
5	81.3	78.2-84.1	86.4	84.7-87.9	89.5	88.1-90.7	89.0	87.3-90.5	79.6	77.2-81.8	85.6	84.7-86.4		
6	79.2	75.9-82.1	84.3	82.5-85.9	87.7	86.2-89.1	87.3	85.5-89.0	76.5	74.0-79.0	83.4	82.5-84.3		
7	77.2	73.8-80.2	82.8	81.0-84.5	86.3	84.7-87.7	85.5	83.5-87.3	74.9	72.2-77.6	81.8	80.9-82.8		
8	74.6	71.1-77.7	81.3	79.4-83.0	85.0	83.4-86.5	84.0	81.9-85.9	74.4	71.5-77.2	80.5	79.5-81.5		
9	72.1	68.6-75.4	80.0	78.1-81.8	83.9	82.2-85.5	82.6	80.5-84.6	73.7	70.7-76.8	79.3	78.2-80.4		

Source: National Cancer Statistics Clearing House, AIHW.

Table 2.3: Breast cancer survival by size of cancer

Years after diagnosis	Size													
	0-10 mm		11-15 mm		16-19 mm		20-29 mm		30+ mm		Unknown		Total	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
1	99.6	99.0-100.0	99.7	99.0-100.1	99.6	98.6-100.3	99.4	98.6-99.9	95.6	94.3-96.6	74.0	71.1-76.6	96.3	95.8-96.7
2	99.4	98.5-100.0	99.0	98.1-99.7	97.9	96.3-99.1	96.6	95.4-97.6	88.3	86.4-89.9	64.7	61.5-67.6	93.2	92.5-93.7
3	99.1	98.1-99.9	97.9	96.8-98.9	96.1	94.2-97.7	93.4	91.9-94.8	83.3	81.2-85.3	56.5	53.2-59.7	90.4	89.6-91.1
4	98.7	97.5-99.7	96.6	95.2-97.7	94.8	92.6-96.7	90.6	88.9-92.2	78.6	76.2-80.8	52.8	49.5-56.1	88.1	87.3-88.9
5	98.2	96.9-99.4	94.7	93.2-96.1	93.0	90.6-95.1	87.9	86.0-89.6	73.1	70.6-75.5	49.1	45.7-52.5	85.6	84.7-86.4
6	97.5	96.0-98.8	93.3	91.6-94.8	90.5	87.8-93.0	85.7	83.6-87.6	70.4	67.8-72.9	44.1	40.7-47.5	83.4	82.5-84.3
7	96.9	95.3-98.4	92.7	90.9-94.4	88.3	85.4-91.0	83.6	81.4-85.7	67.7	65.0-70.3	41.7	38.3-45.1	81.8	80.9-82.8
8	96.3	94.6-97.9	91.9	90.0-93.6	88.4	85.4-91.2	80.8	78.4-83.0	66.1	63.3-68.8	39.8	36.4-43.3	80.5	79.5-81.5
9	96.0	94.2-97.7	90.7	88.7-92.6	87.7	84.6-90.7	79.2	76.8-81.6	63.6	60.7-66.4	39.0	35.5-42.5	79.3	78.2-80.4

Source: National Cancer Statistics Clearing House, AIHW.

Table 2.4: Breast cancer survival by age and size of cancer

Size	Age at diagnosis																	
	0-39			40-49			50-59			60-69			70+			Total		
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI		
	1-year survival																	
0-10 mm	100.1	—	99.9	98.1-100.1	100.0	99.0-100.3	99.3	97.8-100.1	99.0	96.4-100.6	99.6	99.0-100.0						
11-15 mm	99.3	94.8-100.0	99.7	98.2-100.0	99.5	98.3-100.0	100.3	99.1-100.7	99.3	97.1-100.8	99.7	99.0-100.1						
16-19 mm	98.9	92.1-99.9	99.6	96.6-100.1	98.9	96.4-99.8	99.0	96.0-100.2	101.0	98.0-102.7	99.6	98.6-100.3						
20-29 mm	96.0	91.1-98.2	99.9	98.6-100.1	99.9	98.6-100.2	98.8	96.9-99.8	99.8	97.7-101.3	99.4	98.6-99.9						
30+ mm	98.6	94.2-99.7	97.9	95.7-99.0	95.8	93.1-97.4	95.8	92.5-97.8	92.6	89.3-95.3	95.6	94.3-96.6						
Unknown	89.8	78.8-95.3	90.2	84.3-94.0	85.2	78.9-89.8	72.7	65.3-78.8	63.1	58.6-67.2	74.0	71.1-76.6						
	5-year survival																	
0-10 mm	94.7	88.8-97.6	96.8	94.0-98.4	97.6	95.6-99.0	97.4	94.6-99.5	103.0	98.3-106.8	98.2	96.9-99.4						
11-15 mm	92.0	85.8-95.7	92.6	89.5-94.9	96.2	93.9-97.8	96.1	93.2-98.4	93.9	89.0-98.2	94.7	93.2-96.1						
16-19 mm	85.2	75.7-91.3	88.7	83.2-92.5	95.5	91.8-97.9	94.5	89.4-98.0	95.2	88.2-101.2	93.0	90.6-95.1						
20-29 mm	79.7	72.1-85.4	86.6	83.1-89.5	90.2	86.9-92.8	86.8	82.6-90.2	90.1	85.1-94.7	87.9	86.0-89.6						
30+ mm	66.7	57.9-74.0	75.7	70.8-79.9	76.1	71.4-80.2	79.8	74.2-84.6	66.0	60.1-71.7	73.1	70.6-75.5						
Unknown	61.2	47.5-72.3	67.7	59.6-74.6	58.0	50.1-65.1	54.9	46.6-62.5	36.1	31.1-41.3	49.1	45.7-52.5						
	9-year survival																	
0-10 mm	90.1	83.2-94.5	94.4	91.0-96.7	95.6	93.0-97.7	94.0	90.2-97.2	103.5	96.3-110.0	96.0	94.2-97.7						
11-15 mm	84.8	77.3-90.1	90.7	87.2-93.4	92.2	89.2-94.6	90.7	86.6-94.1	90.4	83.5-97.0	90.7	88.7-92.6						
16-19 mm	78.5	68.1-86.0	82.8	76.6-87.7	90.5	85.7-94.1	92.7	86.5-97.5	87.5	77.6-96.9	87.7	84.6-90.7						
20-29 mm	65.4	57.0-72.7	78.5	74.2-82.1	81.0	76.8-84.6	78.8	73.7-83.3	83.4	76.5-90.2	79.2	76.8-81.6						
30+ mm	56.4	47.5-64.4	65.2	59.8-70.0	66.5	61.3-71.2	70.0	63.6-75.9	57.8	50.5-65.1	63.6	60.7-66.4						
Unknown	49.3	36.0-61.3	54.3	46.0-61.9	53.2	45.2-60.6	40.7	32.6-48.8	26.0	20.8-31.8	39.0	35.5-42.5						

Note: Confidence intervals for 1-year survival in women aged younger than 40 years with 0-10 mm tumours could not be obtained because no deaths occurred in the first year after diagnosis for this group.

Source: National Cancer Statistics Clearing House, AIHW.

Table 2.5: Number of cases diagnosed, nodal status by age, 1997 and deaths from 1997 to 2006

Age at diagnosis	Nodal status			Total
	Nodes positive	Nodes negative	Unknown	
Number of cases diagnosed				
0–39	275	295	109	679
40–49	736	869	303	1,908
50–59	799	1,295	380	2,474
60–69	591	1,099	439	2,129
70+	600	1,054	1,173	2,827
Total	3,001	4,612	2,404	10,017
Deaths from 1997 to 2006				
0–39	112	38	45	195
40–49	229	97	93	419
50–59	245	141	116	502
60–69	222	191	170	583
70+	371	409	844	1,624
Total	1,179	876	1,268	3,323

Source: National Cancer Statistics Clearing House, AIHW.

Table 2.6: Breast cancer survival by nodal status

Years after diagnosis	Nodal status							
	Nodes positive		Nodes negative		Unknown		Total	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
1	97.7	96.9–98.3	100.0	99.6–100.2	87.2	85.6–88.6	96.3	95.8–96.7
2	92.4	91.3–93.4	99.3	98.7–99.7	81.9	80.1–83.6	93.2	92.5–93.7
3	88.1	86.8–89.4	98.4	97.7–99.0	77.2	75.1–79.1	90.4	89.6–91.1
4	84.2	82.7–85.7	97.6	96.8–98.4	74.0	71.8–76.1	88.1	87.3–88.9
5	80.2	78.5–81.7	96.5	95.5–97.4	70.7	68.4–72.9	85.6	84.7–86.4
6	77.3	75.6–79.0	95.2	94.2–96.2	67.6	65.2–70.0	83.4	82.5–84.3
7	74.4	72.6–76.2	94.7	93.5–95.7	65.7	63.2–68.1	81.8	80.9–82.8
8	72.0	70.1–73.9	94.0	92.8–95.2	64.4	61.8–66.9	80.5	79.5–81.5
9	69.7	67.7–71.6	93.5	92.2–94.7	63.4	60.8–66.0	79.3	78.2–80.4

Source: National Cancer Statistics Clearing House, AIHW.

Table 2.7: Breast cancer survival by nodal status and age

Age at diagnosis	Nodal status							
	Nodes positive		Nodes negative		Unknown		Total	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
1-year survival								
0–39	98.3	95.8–99.3	99.7	97.7–100.0	90.9	83.7–95.1	97.7	96.3–98.6
40–49	98.7	97.5–99.3	100.0	99.3–100.1	94.8	91.6–96.9	98.7	98.0–99.1
50–59	97.8	96.5–98.7	99.8	99.2–100.1	92.4	89.2–94.7	98.0	97.4–98.6
60–69	97.5	95.7–98.7	100.3	99.6–100.6	87.8	84.3–90.6	97.0	96.0–97.7
70+	96.0	93.5–98.0	99.8	98.4–100.8	82.6	79.9–85.0	92.1	90.7–93.3
5-year survival								
0–39	73.7	68.1–78.6	92.9	89.2–95.4	69.1	59.4–76.9	81.3	78.2–84.1
40–49	80.4	77.3–83.2	94.0	92.1–95.5	79.1	74.0–83.4	86.4	84.7–87.9
50–59	83.4	80.5–85.9	97.1	95.7–98.1	76.4	71.6–80.5	89.5	88.1–90.7
60–69	82.5	78.8–85.8	97.5	95.7–99.0	76.3	71.7–80.4	89.0	87.3–90.5
70+	76.0	71.0–80.7	98.1	94.9–100.9	63.7	59.7–67.5	79.6	77.2–81.8
9-year survival								
0–39	60.1	54.0–65.7	88.2	83.8–91.5	59.2	49.3–67.8	72.1	68.6–75.4
40–49	70.9	67.4–74.2	90.8	88.5–92.7	71.1	65.5–76.0	80.0	78.1–81.8
50–59	73.8	70.4–76.9	93.4	91.6–95.0	72.8	67.7–77.3	83.9	82.2–85.5
60–69	72.1	67.7–76.2	93.5	90.9–95.7	69.5	64.3–74.3	82.6	80.5–84.6
70+	63.8	57.6–70.1	98.4	93.8–102.8	55.0	50.2–59.9	73.7	70.7–76.8

Source: National Cancer Statistics Clearing House, AIHW.

Table 2.8: Number of cases diagnosed, place of residence by size of cancer, 1997

Size	Place of residence					Total
	Major Cities	Inner Regional	Outer Regional	Remote & Very Remote		
0-10 mm	1,405	413	140	20		1,978
11-15 mm	1,503	421	194	30		2,148
16-19 mm	751	219	75	17		1,062
20-29 mm	1,444	447	176	25		2,092
30+ mm	1,144	309	181	28		1,662
Unknown	784	199	74	18		1,075
Total	7,031	2,008	840	138		10,017

Source: National Cancer Statistics Clearing House, AIHW.

Table 2.9: Breast cancer survival by place of residence

Years after diagnosis	Place of residence														
	Major Cities			Inner Regional			Outer Regional			Remote & Very Remote			Total		
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI			
1	96.3	95.7-96.8	96.7	95.6-97.5	95.9	94.1-97.3	95.3	89.8-98.2	96.3	95.8-96.7					
2	93.4	92.6-94.0	92.8	91.4-94.1	92.4	90.1-94.3	92.0	85.5-96.1	93.2	92.5-93.7					
3	90.6	89.7-91.4	90.5	88.8-92.0	88.3	85.6-90.7	90.3	83.2-95.1	90.4	89.6-91.1					
4	88.3	87.3-89.2	88.5	86.7-90.2	86.3	83.4-88.9	83.2	75.0-89.4	88.1	87.3-88.9					
5	85.9	84.9-86.9	85.7	83.7-87.6	83.0	79.8-85.9	80.6	72.0-87.4	85.6	84.7-86.4					
6	84.0	82.8-85.0	83.2	81.0-85.2	80.6	77.2-83.7	78.1	69.0-85.4	83.4	82.5-84.3					
7	82.4	81.2-83.5	81.3	79.0-83.4	79.6	76.1-82.9	76.2	66.8-83.9	81.8	80.9-82.8					
8	81.0	79.8-82.2	79.9	77.5-82.2	78.6	74.9-82.0	74.2	64.5-82.3	80.5	79.5-81.5					
9	79.9	78.6-81.1	78.5	76.0-80.8	77.2	73.4-80.7	74.5	64.7-82.9	79.3	78.2-80.4					

Source: National Cancer Statistics Clearing House, AIHW.

Table 2.10: Breast cancer survival by place of residence and size

Size	Place of residence														
	Major Cities			Inner Regional			Outer Regional			Remote & Very Remote			Total		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI	
	1-year survival														
0–10 mm	99.8	99.1–100.3	99.5	97.6–100.4	98.4	93.7–100.2	95.8	70.2–100.1	99.6	99.0–100.0					
11–15 mm	100.0	99.3–100.5	99.5	97.7–100.4	97.1	93.1–99.2	101.0	—	99.7	99.0–100.1					
16–19 mm	99.2	97.9–100.1	100.8	98.1–101.5	99.7	91.8–100.9	100.7	—	99.6	98.6–100.3					
20–29 mm	99.3	98.4–99.9	99.4	97.5–100.5	100.3	96.9–101.2	97.6	75.7–101.0	99.4	98.6–99.9					
30+ mm	95.8	94.3–97.1	95.3	91.8–97.5	94.6	89.8–97.5	93.9	75.1–99.2	95.6	94.3–96.6					
Unknown	73.5	70.1–76.6	75.0	68.1–80.7	75.3	63.7–84.0	79.1	52.1–92.6	74.0	71.1–76.6					
	5-year survival														
0–10 mm	98.8	97.3–100.0	97.3	93.8–99.8	96.2	89.5–100.5	94.9	69.1–102.7	98.2	96.9–99.4					
11–15 mm	95.2	93.4–96.8	96.9	93.5–99.4	88.2	81.7–93.2	81.4	60.7–93.5	94.7	93.2–96.1					
16–19 mm	92.4	89.4–95.0	93.5	87.5–97.9	96.5	86.6–101.5	98.3	67.4–103.5	93.0	90.6–95.1					
20–29 mm	89.0	86.8–91.1	84.9	80.4–88.8	86.5	79.2–92.0	84.1	59.7–97.7	87.9	86.0–89.6					
30+ mm	74.2	71.2–77.1	71.0	64.8–76.5	70.2	62.3–77.0	71.8	50.0–86.5	73.1	70.6–75.5					
Unknown	47.9	43.9–51.8	52.0	44.0–59.7	52.6	39.6–64.6	56.2	29.1–78.7	49.1	45.7–52.5					
	9-year survival														
0–10 mm	96.7	94.5–98.6	93.9	89.2–97.7	94.7	86.5–100.6	101.2	73.7–109.5	96.0	94.2–97.7					
11–15 mm	91.2	88.8–93.5	91.2	86.5–95.2	87.3	79.7–93.5	79.5	57.1–94.4	90.7	88.7–92.6					
16–19 mm	88.2	84.4–91.6	82.8	75.0–89.5	96.4	84.4–104.0	90.8	60.1–103.5	87.7	84.6–90.7					
20–29 mm	80.3	77.4–83.1	77.5	72.0–82.5	75.0	66.1–82.6	76.9	50.6–95.3	79.2	76.8–81.6					
30+ mm	64.5	61.0–67.8	61.4	54.6–67.9	62.7	54.1–70.5	56.0	34.3–74.6	63.6	60.7–66.4					
Unknown	38.6	34.5–42.7	40.4	32.6–48.4	36.9	24.9–49.6	46.9	21.0–72.3	39.0	35.5–42.5					

Note: Confidence intervals for 1-year survival could not be obtained for some groups because no deaths occurred in the first year after diagnosis.
Source: National Cancer Statistics Clearing House, AIHW.

Table 2.11: Number of cases diagnosed, place of residence by nodal status, 1997

Nodal status	Place of residence				Total
	Major Cities	Inner Regional	Outer Regional	Remote & Very Remote	
Nodes positive	2,128	573	263	37	3,001
Nodes negative	3,244	926	378	64	4,612
Unknown	1,659	509	199	37	2,404
Total	7,031	2,008	840	138	10,017

Source: National Cancer Statistics Clearing House, AIHW.

Table 2.12: Breast cancer survival by place of residence and nodal status

Nodal status	Place of residence																						
	Major Cities			Inner Regional			Outer Regional			Remote & Very Remote			Total										
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI											
Nodes positive	97.7	96.8-98.4	97.5	95.6-98.8	97.4	94.3-99.0	98.1	83.1-100.5	97.7	96.9-98.3	1-year survival												
											81.4	79.5-83.3	78.7	74.7-82.3	74.3	68.2-79.7	71.3	52.8-84.6	80.2	78.5-81.7			
											96.5	95.3-97.5	97.6	95.5-99.3	95.4	91.7-98.3	88.6	76.6-95.8	96.5	95.5-97.4	5-year survival		
Nodes negative	100.1	99.6-100.4	100.4	99.6-100.8	98.8	96.6-99.9	96.2	86.9-99.4	100.0	99.6-100.2	9-year survival												
											86.6	84.6-88.3	88.6	85.2-91.5	88.2	82.4-92.4	90.8	75.1-97.6	87.2	85.6-88.6	5-year survival		
											70.4	67.6-73.0	71.3	66.2-76.1	70.4	62.3-77.7	76.0	56.2-90.1	70.7	68.4-72.9	9-year survival		
Unknown	70.4	67.6-73.0	71.3	66.2-76.1	70.4	62.3-77.7	76.0	56.2-90.1	70.7	68.4-72.9	9-year survival												
											71.1	68.8-73.4	67.6	63.0-72.0	63.0	56.2-69.3	64.0	44.5-79.9	69.7	67.7-71.6	5-year survival		
											93.6	92.0-95.0	93.4	90.4-96.1	94.4	89.7-98.4	82.9	69.1-92.7	93.5	92.2-94.7	9-year survival		
Total	63.5	60.3-66.7	62.7	56.9-68.3	62.8	53.9-71.2	70.4	48.9-87.8	63.4	60.8-66.0	9-year survival												
											63.5	60.3-66.7	62.7	56.9-68.3	62.8	53.9-71.2	70.4	48.9-87.8	63.4	60.8-66.0	5-year survival		
											63.5	60.3-66.7	62.7	56.9-68.3	62.8	53.9-71.2	70.4	48.9-87.8	63.4	60.8-66.0	9-year survival		

Source: National Cancer Statistics Clearing House, AIHW.

Table 2.13: Number of cases diagnosed, socioeconomic status quintile^(a) by size of cancer, 1997

Size	1st quintile	2nd quintile	3rd quintile	4th quintile	5th quintile	Total
0–10 mm	533	358	397	371	319	1,978
11–15 mm	537	409	399	413	390	2,148
16–19 mm	272	197	232	201	160	1,062
20–29 mm	516	413	366	417	380	2,092
30+ mm	378	325	347	311	301	1,662
Unknown	247	215	195	195	223	1,075
Total	2,483	1,917	1,936	1,908	1,773	10,017

(a) The first quintile corresponds to the highest socioeconomic status and the fifth to the lowest socioeconomic status, using the ABS SEIFA Index of Socioeconomic Disadvantage.

Source: National Cancer Statistics Clearing House, AIHW.

Table 2.14: Breast cancer survival by socioeconomic status quintile^(a)

Years after diagnosis	1st quintile		2nd quintile		3rd quintile		4th quintile		5th quintile		Total	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
1	96.8	95.9–97.6	96.2	95.0–97.1	96.7	95.7–97.6	95.5	94.3–96.5	96.1	94.9–97.1	96.3	95.8–96.7
2	94.4	93.2–95.5	92.9	91.4–94.2	93.8	92.4–95.0	92.1	90.6–93.4	92.2	90.6–93.6	93.2	92.5–93.7
3	92.4	91.0–93.7	90.7	89.0–92.2	90.7	89.0–92.2	88.3	86.5–89.9	89.1	87.3–90.8	90.4	89.6–91.1
4	90.6	89.0–92.0	88.0	86.1–89.7	88.3	86.5–90.1	86.3	84.4–88.1	86.4	84.4–88.2	88.1	87.3–88.9
5	88.7	87.0–90.3	85.5	83.5–87.4	85.5	83.4–87.4	83.6	81.5–85.6	83.5	81.3–85.5	85.6	84.7–86.4
6	86.6	84.7–88.3	83.9	81.7–85.9	82.5	80.3–84.6	82.0	79.8–84.1	81.1	78.8–83.3	83.4	82.5–84.3
7	85.2	83.3–87.1	81.7	79.5–83.9	81.0	78.7–83.2	80.7	78.3–82.9	79.4	77.0–81.7	81.8	80.9–82.8
8	84.0	82.0–86.0	80.3	77.9–82.5	80.0	77.6–82.3	79.6	77.2–81.9	77.4	74.8–79.8	80.5	79.5–81.5
9	83.0	80.9–85.0	78.8	76.3–81.1	79.1	76.6–81.5	78.4	75.9–80.8	75.9	73.3–78.4	79.3	78.2–80.4

(a) The first quintile corresponds to the highest socioeconomic status and the fifth to the lowest socioeconomic status, using the ABS SEIFA Index of Socioeconomic Disadvantage.

Source: National Cancer Statistics Clearing House, AIHW.

Table 2.15: Breast cancer survival by socioeconomic status quintile^(a) and size of cancer

Size	1st quintile		2nd quintile		3rd quintile		4th quintile		5th quintile		Total	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
0–10 mm	100.1	98.7–100.6	99.8	98.0–100.5	99.6	97.8–100.5	98.7	96.5–99.9	99.6	97.4–100.5	99.6	99.0–100.0
11–15 mm	100.3	99.0–100.8	100.2	98.5–100.9	99.7	97.9–100.5	98.3	96.1–99.6	99.6	97.8–100.5	99.7	99.0–100.1
16–19 mm	99.8	97.4–100.7	98.9	95.4–100.4	100.0	97.2–101.1	99.6	96.3–100.9	99.6	95.8–100.9	99.6	98.6–100.3
20–29 mm	99.2	97.4–100.3	99.6	97.7–100.5	99.3	97.0–100.5	99.8	97.9–100.8	99.0	96.9–100.2	99.4	98.6–99.9
30+ mm	95.8	92.8–97.8	95.4	92.1–97.6	94.7	91.4–97.0	94.3	90.8–96.7	97.6	94.6–99.3	95.6	94.3–96.6
Unknown	73.8	67.7–79.1	73.0	66.3–78.7	78.7	72.0–84.1	70.7	63.5–76.8	73.9	67.5–79.4	74.0	71.1–76.6
	1-year survival											
0–10 mm	99.0	96.4–100.9	97.9	94.5–100.3	99.1	95.9–101.3	99.2	95.9–101.5	95.3	91.1–98.3	98.2	96.9–99.4
11–15 mm	97.3	94.3–99.6	95.9	92.2–98.8	94.7	91.0–97.6	90.5	86.3–93.9	94.5	90.6–97.4	94.7	93.2–96.1
16–19 mm	93.3	88.4–97.0	89.9	83.4–94.8	94.9	89.3–99.1	94.5	88.5–98.7	91.7	84.5–96.9	93.0	90.6–95.1
20–29 mm	91.4	87.6–94.6	90.1	85.8–93.5	85.1	80.0–89.5	86.7	82.1–90.6	84.6	79.8–88.7	87.9	86.0–89.6
30+ mm	76.7	71.4–81.5	74.4	68.6–79.5	69.6	63.8–74.9	70.9	64.9–76.2	73.6	67.6–79.0	73.1	70.6–75.5
Unknown	52.9	45.5–59.9	46.8	39.3–54.1	54.4	46.3–62.2	39.7	32.2–47.3	51.0	43.6–58.2	49.1	45.7–52.5
	5-year survival											
0–10 mm	96.5	92.8–99.5	94.6	89.9–98.4	96.9	92.5–100.5	97.3	92.8–101.0	94.2	89.1–98.3	96.0	94.2–97.7
11–15 mm	92.8	88.8–96.3	91.0	86.0–95.2	90.4	85.5–94.5	89.1	84.1–93.4	89.5	84.4–93.8	90.7	88.7–92.6
16–19 mm	90.9	84.7–95.9	87.1	79.4–93.4	87.8	80.3–94.1	89.0	81.5–95.1	81.4	72.3–89.1	87.7	84.6–90.7
20–29 mm	82.5	77.5–87.0	81.6	76.2–86.5	80.0	73.9–85.6	78.5	72.9–83.6	72.3	66.5–77.7	79.2	76.8–81.6
30+ mm	68.8	62.7–74.5	62.6	56.1–68.8	57.1	50.7–63.2	64.4	57.8–70.6	64.6	57.8–71.1	63.6	60.7–66.4
Unknown	43.0	35.5–50.8	37.9	30.4–45.6	43.8	35.5–52.2	28.1	21.3–35.6	40.8	33.2–48.5	39.0	35.5–42.5
	9-year survival											

(a) The first quintile corresponds to the highest socioeconomic status and the fifth to the lowest socioeconomic status, using the ABS SEIFA Index of Socioeconomic Disadvantage.
Source: National Cancer Statistics Clearing House, AIHW.

Table 2.16: Number of cases diagnosed, socioeconomic status quintile^(a) by nodal status, 1997

Nodal status	1st quintile	2nd quintile	3rd quintile	4th quintile	5th quintile	Total
Nodes positive	733	597	591	557	523	3,001
Nodes negative	1,182	840	869	912	809	4,612
Unknown	568	480	476	439	441	2,404
Total	2,483	1,917	1,936	1,908	1,773	10,017

(a) The first quintile corresponds to the highest socioeconomic status and the fifth to the lowest socioeconomic status, using the ABS SEIFA Index of Socioeconomic Disadvantage.
Source: National Cancer Statistics Clearing House, AIHW.

Table 2.17: Breast cancer survival by socioeconomic status quintile^(a) and nodal status

Nodal status	1st quintile		2nd quintile		3rd quintile		4th quintile		5th quintile		Total	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
Nodes positive	97.5	95.9–98.7	97.5	95.7–98.7	98.0	96.3–99.1	97.1	95.1–98.5	98.2	96.3–99.3	97.7	96.9–98.3
Nodes negative	100.2	99.5–100.6	100.1	99.1–100.6	99.7	98.6–100.3	99.9	98.9–100.4	99.8	98.8–100.4	100.0	99.6–100.2
Unknown	88.3	85.1–91.1	87.3	83.6–90.3	89.5	86.0–92.4	84.0	79.9–87.4	86.3	82.5–89.5	87.2	85.6–88.6
	1-year survival											
Nodes positive	84.6	81.3–87.5	81.6	77.9–85.0	77.8	73.8–81.4	78.1	74.0–81.7	77.2	72.9–81.0	80.2	78.5–81.7
Nodes negative	97.6	95.7–99.1	96.8	94.5–98.7	97.0	94.7–98.8	96.0	93.7–97.9	94.7	92.2–96.7	96.5	95.5–97.4
Unknown	74.8	70.0–79.3	69.9	64.7–74.7	73.4	68.1–78.3	64.0	58.5–69.2	69.8	64.3–74.9	70.7	68.4–72.9
	5-year survival											
	9-year survival											
Nodes positive	76.1	72.1–79.7	71.2	66.8–75.4	66.7	62.1–71.1	69.8	65.2–74.2	62.0	57.1–66.6	69.7	67.7–71.6
Nodes negative	94.0	91.4–96.3	93.0	89.8–95.8	95.0	92.0–97.7	93.5	90.4–96.2	91.5	88.2–94.4	93.5	92.2–94.7
Unknown	68.3	62.7–73.6	62.7	56.9–68.4	64.5	58.4–70.3	56.9	50.9–62.8	63.3	57.1–69.2	63.4	60.8–66.0

(a) The first quintile corresponds to the highest socioeconomic status and the fifth to the lowest socioeconomic status, using the ABS SEIFA Index of Socioeconomic Disadvantage.
Source: National Cancer Statistics Clearing House, AIHW.

Table 2.18: Number of cases diagnosed, socioeconomic status decile^(a) by size of cancer, 1997

Size	1st decile	2nd decile	3rd decile	4th decile	5th decile	6th decile	7th decile	8th decile	9th decile	10th decile	Total
0-10 mm	292	241	184	174	206	191	184	187	172	147	1,978
11-15 mm	292	245	208	201	193	206	190	223	223	167	2,148
16-19 mm	144	128	95	102	117	115	104	97	85	75	1,062
20-29 mm	270	246	213	200	178	188	208	209	193	187	2,092
30+ mm	194	184	166	159	171	176	164	147	169	132	1,662
Unknown	140	107	112	103	110	85	97	98	107	116	1,075
Total	1,332	1,151	978	939	975	961	947	961	949	824	10,017

(a) The first decile corresponds to the highest socioeconomic status and the tenth to the lowest socioeconomic status, using the ABS SEIFA Index of Socioeconomic Disadvantage.
Source: National Cancer Statistics Clearing House, AIHW.

Table 2.20: Breast cancer survival by socioeconomic status decile^(a) and size of cancer

Size	1st decile		2nd decile		3rd decile		4th decile		5th decile	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
	1-year survival									
0–10 mm	100.0	97.9–100.7	100.1	97.6–100.7	100.0	96.8–100.8	99.7	96.3–100.6	99.2	96.1–100.5
11–15 mm	100.7	98.6–101.0	99.8	97.1–100.9	99.4	96.3–100.6	101.0	98.0–101.4	99.1	95.7–100.4
16–19 mm	99.8	95.7–100.9	99.8	95.2–101.0	97.4	90.6–100.1	100.3	94.4–101.1	98.5	92.9–100.7
20–29 mm	100.9	98.5–101.6	97.4	94.0–99.3	99.5	96.4–100.7	99.7	96.6–100.7	101.1	97.7–101.6
30+ mm	96.6	92.3–99.0	94.8	89.9–97.8	96.1	91.3–98.7	94.7	89.4–97.8	94.2	89.0–97.4
Unknown	74.1	65.7–80.9	73.5	63.9–81.3	74.6	65.1–82.2	71.2	61.2–79.2	80.0	70.9–86.8
	5-year survival									
0–10 mm	99.1	95.4–101.5	98.8	94.7–101.4	98.9	93.8–101.9	96.9	91.6–100.1	98.6	93.6–101.7
11–15 mm	97.8	93.9–100.5	96.6	91.6–100.2	95.2	89.7–99.0	96.7	91.0–100.6	96.0	90.5–99.7
16–19 mm	94.9	88.1–99.4	91.4	83.5–96.9	96.6	87.5–102.1	83.7	73.8–90.9	93.9	85.1–99.8
20–29 mm	94.4	89.0–98.6	88.2	82.4–92.8	91.3	85.2–95.9	88.7	82.3–93.6	84.3	76.7–90.3
30+ mm	77.4	69.7–83.9	76.0	68.2–82.7	74.7	66.5–81.6	74.0	65.4–81.2	72.0	63.5–79.3
Unknown	51.2	41.6–60.5	55.0	43.7–65.7	51.4	40.7–61.7	41.8	31.5–52.0	53.5	42.7–63.6
	9-year survival									
0–10 mm	96.6	91.4–100.6	96.4	90.7–100.5	94.4	87.2–99.8	94.9	88.2–99.6	95.7	89.2–100.7
11–15 mm	92.9	87.4–97.2	92.8	86.2–98.2	90.0	83.0–95.6	92.0	84.5–98.0	93.6	86.6–98.9
16–19 mm	91.2	82.4–97.8	90.6	81.2–97.6	95.0	83.7–103.0	79.8	68.7–88.7	90.2	79.4–98.7
20–29 mm	82.4	75.1–88.8	82.5	75.5–88.5	81.4	73.5–88.2	81.7	73.9–88.4	80.8	72.0–88.3
30+ mm	68.1	59.5–76.0	69.5	60.7–77.5	61.3	52.2–69.6	64.1	54.5–72.8	60.3	51.0–69.1
Unknown	42.0	32.1–52.1	44.4	32.9–56.3	45.6	34.4–56.9	29.8	20.5–40.0	42.5	31.8–53.4

(continued)

Table 2.20 (continued): Breast cancer survival by socioeconomic status decile^(a) and size of cancer

Size	6th decile		7th decile		8th decile		9th decile		10th decile		Total	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
1-year survival												
0–10 mm	100.0	96.9–100.8	97.4	93.3–99.4	100.0	96.9–100.9	99.5	95.9–100.7	99.6	95.6–100.7	99.6	99.0–100.0
11–15 mm	100.3	97.4–101.0	99.7	96.4–100.7	97.2	93.6–99.1	100.3	97.7–101.0	98.7	94.8–100.2	99.7	99.0–100.1
16–19 mm	101.5	—	99.7	94.0–101.1	99.6	93.5–101.1	102.0	—	97.1	89.1–99.8	99.6	98.6–100.3
20–29 mm	97.6	93.4–99.7	100.0	96.8–101.2	99.6	96.5–100.8	100.0	96.7–101.0	98.1	94.2–99.9	99.4	98.6–99.9
30+ mm	95.2	90.4–98.0	94.3	88.9–97.4	94.4	88.9–97.6	97.6	93.2–99.8	97.6	92.4–99.8	95.6	94.3–96.6
Unknown	76.9	66.2–85.0	68.0	57.6–76.6	73.2	62.9–81.3	75.5	65.9–83.0	72.6	63.3–80.0	74.0	71.1–76.6
5-year survival												
0–10 mm	99.6	94.8–102.4	95.8	90.1–99.7	102.5	98.3–104.6	95.2	89.0–99.3	95.4	89.0–99.3	98.2	96.9–99.4
11–15 mm	93.5	87.9–97.6	92.7	86.5–97.1	88.6	82.6–93.2	95.5	90.3–99.2	93.0	86.6–97.5	94.7	93.2–96.1
16–19 mm	96.0	87.8–101.2	92.7	83.6–98.6	96.4	87.5–101.7	93.9	83.2–100.6	89.3	78.2–96.3	93.0	90.6–95.1
20–29 mm	85.8	78.5–91.7	87.3	80.6–92.6	86.1	79.4–91.5	79.3	71.8–85.4	90.1	83.6–95.0	87.9	86.0–89.6
30+ mm	67.4	59.1–74.7	74.2	65.9–81.2	67.2	58.2–75.0	73.3	64.9–80.4	74.1	64.8–81.8	73.1	70.6–75.5
Unknown	55.7	43.1–67.4	37.7	27.3–48.5	41.7	31.0–52.4	47.3	36.7–57.5	54.3	43.8–64.1	49.1	45.7–52.5
9-year survival												
0–10 mm	98.1	91.6–102.8	93.2	86.0–98.7	101.4	95.1–105.7	95.5	88.2–100.9	92.7	84.8–98.5	96.0	94.2–97.7
11–15 mm	87.3	80.1–93.1	91.1	83.5–97.1	87.4	80.3–93.2	92.3	85.5–97.6	85.8	77.7–92.3	90.7	88.7–92.6
16–19 mm	85.4	74.4–94.2	85.3	74.3–93.8	93.1	81.9–101.0	80.3	66.8–91.3	82.6	69.6–92.2	87.7	84.6–90.7
20–29 mm	79.3	70.4–87.0	76.4	68.2–83.6	80.7	72.7–87.6	70.2	61.7–77.8	74.5	66.2–81.7	79.2	76.8–81.6
30+ mm	54.0	45.3–62.3	69.2	60.0–77.4	59.1	49.4–68.0	60.5	51.2–69.3	69.8	59.4–78.8	63.6	60.7–66.4
Unknown	45.5	32.7–58.5	25.9	16.6–36.6	30.4	20.7–41.1	31.3	21.9–41.6	49.5	38.2–60.7	39.0	35.5–42.5

(a) The first decile corresponds to the highest socioeconomic status and the tenth to the lowest socioeconomic status, using the ABS SEIFA Index of Socioeconomic Disadvantage.

Note: Confidence intervals for 1-year survival could not be obtained for some groups because no deaths occurred in the first year after diagnosis.

Source: National Cancer Statistics Clearing House, AIHW.

Table 2.21: Number of cases diagnosed, socioeconomic status decile^(a) by nodal status, 1997

Nodal status	1st decile	2nd decile	3rd decile	4th decile	5th decile	6th decile	7th decile	8th decile	9th decile	10th decile	Total
Nodes positive	372	361	303	294	306	285	272	285	269	254	3,001
Nodes negative	625	557	439	401	422	447	463	449	449	360	4,612
Unknown	335	233	236	244	247	229	212	227	231	210	2,404
Total	1,332	1,151	978	939	975	961	947	961	949	824	10,017

(a) The first decile corresponds to the highest socioeconomic status and the tenth to the lowest socioeconomic status, using the ABS SEIFA Index of Socioeconomic Disadvantage.

Source: National Cancer Statistics Clearing House, AIHW.

Table 2.22: Breast cancer survival by socioeconomic status decile^(a) and nodal status

Nodal status	1st decile		2nd decile		3rd decile		4th decile		5th decile	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
Nodes positive	98.4	96.1–99.6	96.6	93.9–98.4	96.7	93.7–98.5	98.3	95.7–99.7	98.4	95.8–99.7
Nodes negative	100.8	99.8–101.0	99.6	98.1–100.4	100.0	98.4–100.7	100.1	98.5–100.8	99.6	97.8–100.5
Unknown	88.9	84.7–92.3	87.5	82.0–91.7	87.5	82.1–91.7	87.0	81.8–91.1	88.6	83.5–92.5
	1-year survival									
Nodes positive	85.1	80.4–89.1	84.0	79.2–88.1	79.0	73.4–83.7	84.4	79.1–88.8	80.8	75.4–85.4
Nodes negative	98.6	96.2–100.5	96.4	93.4–98.7	100.0	97.0–102.0	93.3	89.5–96.3	97.1	93.6–99.7
Unknown	76.5	70.2–82.2	72.4	64.6–79.3	72.3	64.7–79.1	67.6	60.3–74.2	70.2	62.6–77.0
	5-year survival									
Nodes positive	73.5	67.8–78.7	78.7	73.1–83.6	68.9	62.6–74.7	73.5	67.1–79.3	70.6	64.3–76.4
Nodes negative	94.8	91.3–97.8	93.1	89.1–96.5	95.4	91.0–99.0	90.3	85.5–94.4	95.7	91.2–99.4
Unknown	70.0	62.7–76.9	65.7	57.0–74.0	63.7	55.2–71.8	61.7	53.7–69.4	64.1	55.7–72.2

(continued)

Table 2.22 (continued): Breast cancer survival by socioeconomic status decile^(a) and nodal status

Nodal status	6th decile		7th decile		8th decile		9th decile		10th decile		Total	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
Nodes positive	97.6	94.7–99.2	98.5	95.7–99.8	95.8	92.5–97.9	98.2	95.2–99.7	98.2	95.2–99.6	97.7	96.9–98.3
Nodes negative	99.8	98.1–100.5	99.7	98.1–100.5	100.0	98.5–100.7	100.3	98.8–100.9	99.3	97.2–100.2	100.0	99.6–100.2
Unknown	90.5	85.4–94.2	80.9	74.5–86.0	86.9	81.3–91.1	89.5	84.2–93.4	82.9	76.8–87.7	87.2	85.6–88.6
	1-year survival											
Nodes positive	74.6	68.5–79.9	80.8	75.1–85.6	75.5	69.5–80.7	76.6	70.5–81.9	77.7	71.6–82.9	80.2	78.5–81.7
Nodes negative	96.9	93.7–99.4	94.2	90.6–97.0	97.8	94.6–100.1	94.0	90.4–96.9	95.5	91.8–98.2	96.5	95.5–97.4
Unknown	76.9	69.3–83.6	62.6	54.5–70.2	65.3	57.6–72.3	67.6	59.9–74.7	72.1	64.2–79.2	70.7	68.4–72.9
	5-year survival											
Nodes positive	62.5	55.8–68.9	73.2	66.6–79.0	66.6	59.8–72.8	59.6	52.7–66.1	64.4	57.5–70.8	69.7	67.7–71.6
Nodes negative	94.4	90.1–97.9	90.7	86.1–94.6	96.4	92.1–99.8	91.7	87.1–95.7	91.2	86.3–95.3	93.5	92.2–94.7
Unknown	64.8	56.0–73.2	52.5	43.7–61.3	60.8	52.5–68.8	60.2	51.7–68.4	66.5	57.5–75.0	63.4	60.8–66.0
	9-year survival											

(a) The first decile corresponds to the highest socioeconomic status and the tenth to the lowest socioeconomic status, using the ABS SEIFA Index of Socioeconomic Disadvantage.
Source: National Cancer Statistics Clearing House, AIHW.

Glossary

Cancer (malignant neoplasm): 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 size: the largest reported diameter of an invasive tumour. For multicentric or multifocal cancer, size was taken as the diameter of the largest focus. This applied in all jurisdictions except South Australia and the Northern Territory cancer registries where the sizes of multicentric and/or multifocal cancers were summed. This latter practice complied with standards existing in some registries around 1980 and was still being maintained in 1997 to facilitate analyses of time trends. The effect has been to artificially increase the measure of sizes of South Australian and Northern Territory tumours relative to those for other jurisdictions.

Cancer size groupings: based on the NBCC *National protocol for recording 1. size, nodal status and grade of invasive breast cancer and 2. carcinoma in situ* (Marr et al. 1997), the breast cancer size categories used in this report are defined in Table G1.

Table G1: Definitions of cancer size groups

Cancer size group	Definition
0–10 mm	Cancers equal to or larger than 0.1 mm and equal to or smaller than 10.5 mm
11–15 mm	Cancers larger than 10.5 mm and smaller than 15.5 mm
16–19 mm	Cancers equal to or larger than 15.5 mm and smaller than 19.5 mm
20–29 mm	Cancers equal to or larger than 19.5 mm and smaller than 29.5 mm
30+ mm	Cancers equal to or larger than 29.5 mm
Unknown	Cancers recorded as 0 mm, -1 mm, or 999 mm in size

Cancer records were included in the size group ‘Unknown’ where cancer size was recorded as 0 mm. Approximately 11% of women in this report had unknown breast cancer size and survival in these women may be poor for a number of reasons. First, size information may be unavailable for women in the advanced stages of cancer. Second, women with unknown tumour size (mean age at diagnosis = 67 years) were generally older than women with known tumour size (mean age at diagnosis = 59 years).

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

Geographic classification: this report uses a geographic classification known as the Australian Standard Geographical Classification (ASGC) Remoteness Area, which groups geographic areas into five classes: Major Cities, Inner Regional, Outer Regional, Remote and Very Remote. These classes are based on census collection districts (CDs), which aggregate into statistical local areas (SLAs) and are defined using the Accessibility/Remoteness Index

for Australia (ARIA). ARIA is a measure of the remoteness of a location from the services provided by large towns or cities.

The smallest geographic unit available in this study was the postcode at diagnosis. A concordance between SLAs and postcodes was used to obtain the ASGC Remoteness Area for postcodes.

Lymph node: masses of lymphatic tissue, often bean-shaped, that produce lymphocytes and through which lymph filters.

Nodal status: in accordance with the NBCC *National protocol for recording 1. size, nodal status and grade of invasive breast cancer and 2. carcinoma in situ* (Marr et al. 1997), nodal status refers to whether excised lymph nodes were found to have cancer in them (positive) or not (negative). The 'Unknown' nodal status category included cases where no lymph nodes were examined and cases where nodal status could not be determined after examination.

Women with unknown nodal status accounted for approximately 24% of cases in this report. Survival in these women may be poor for similar reasons as women with unknown breast cancer size. First, nodal status information may be unavailable for women in the advanced stages of cancer. Second, women were generally older in the unknown (mean age at diagnosis = 67 years) compared with the known (mean age at diagnosis = 58 years) nodal status category.

Relative survival: the ratio of the observed survival rate for a given cohort of cancer patients to the expected survival rate in the age-, sex- and calendar year-matched population (see Introduction).

Socioeconomic status: socioeconomic status was coded according to the Index of Relative Socioeconomic Disadvantage (IRSD). The IRSD is one of the Socioeconomic Indexes For Areas (SEIFA) developed by the Australian Bureau of Statistics to categorise geographic areas according to their social and economic characteristics.

The smallest geographic unit available in this study was the postcode at diagnosis. A concordance between postcodes and SLAs was used to obtain the IRSD for postcodes. 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 be smaller than if the variability had been measured between individuals.

References

AIHW (Australian Institute of Health and Welfare) & NBCC (National Breast Cancer Centre) 2001. Breast cancer size and nodal status. Cancer Monitoring series no. 2. Canberra: AIHW.

AIHW & NBCC 2006. Breast cancer in Australia: an overview, 2006. Cancer series no. 34. Cat. no. CAN 29. Canberra: AIHW.

Dickman, P 2004. Estimating and modelling relative survival using SAS. Stockholm: Karolinska Institutet. Downloaded 8 May 2007, <www.pauldickman.com/rsmode1/sas_colon.zip>.

Marr G, Morris K & Kavanagh A 1997. The national protocol for recording 1. size, nodal status and grade of invasive breast cancer and 2. carcinoma in situ. Sydney: NBCC.

NBCC 2007. National review of cancer registry data collections for breast and ovarian cancer. Sydney: NBCC.

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