3 Relative survival analysis results

Survival time

Length of survival is an important measure in assessing the broad impacts of screening and treatment on women diagnosed with breast cancer. The convention is to focus on survival proportions at 1 ,2 or 3 years and at 5 and 10 years after diagnosis (Supramaniam et al. 1998, NCI 1998, Bonnett et al. 1992), however single-year proportions are also routinely reported. These periods reflect different stages of management during the life of women diagnosed with breast cancer. Relative survival proportions one year after diagnosis reflect the success or otherwise of interventions on the immediately detectable cancer, encompassing issues such as stage of disease, surgical success and post-operative issues (e.g. breast reconstruction, infection), and comorbid conditions. The relative survival proportions at the second and third year reflect situations where (a) the disease has not reappeared and no further management of the disease is required; or (b) the disease has not progressed rapidly, treatment is ongoing but some metastases may have been found and require treatment. The relative survival proportions at 5 and 10 years are strong indicators of successful breast cancer management, through either periods of remission or cure, however metastases are sometimes detected after long periods.

The single-year relative survival proportions (Table 2, Figure 1) showed a steady decline each year following diagnosis. The greatest falls in relative survival proportions occurred in the first 5 years after diagnosis, with the decline in proportions slowing over the next 5 years. This general pattern was consistent across the two periods 1982–1987 and 1988–1992. The differences between the relative survival curves for each period increased with increasing survival time.

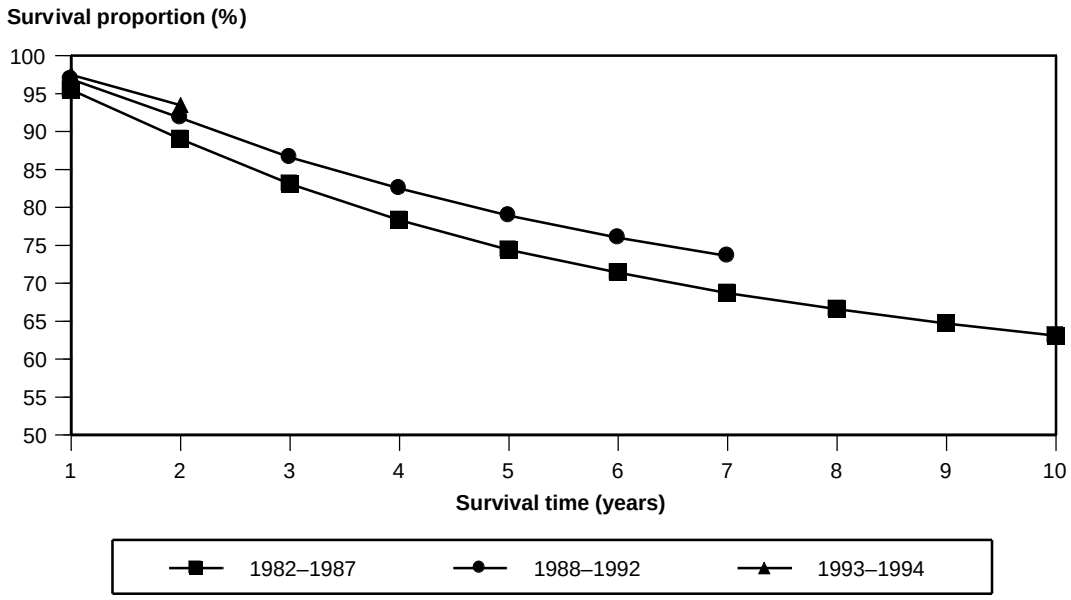
Table 2: Breast cancer relative survival proportions (%) by survival time and period of diagnosis, Australia[a][b]

	1982–1994[c]		1982–1987		1988–1992		1993–1994	
Survival time (years)	%	95% CI	%	95% CI	%	95% CI	%	95% CI
1	96.5	96.4–96.7	95.5	95.2–95.8	96.9	96.7–97.1	97.5	97.2–97.8
2	90.9	90.6–91.1	89.0	88.6–89.4	91.8	91.5–92.1	93.5	92.7–94.2
3	85.2	84.8–85.5	83.1	82.6–83.6	86.6	86.1–87.0		
4	80.7	80.3–81.1	78.3	77.7–78.8	82.5	82.0–83.0		
5	76.8	76.4–77.3	74.4	73.8–75.0	78.9	78.3–79.5		
6	73.6	73.1–74.1	71.4	70.8–72.0	76.0	75.4–76.7		
7	70.9	70.4–71.4	68.7	68.1–69.4	73.6	72.8–74.4		
8	68.7	68.2–69.3	66.6	66.0–67.3				
9	66.7	66.1–67.3	64.7	64.0–65.3				
10	65.0	64.3–65.7	63.1	62.4–63.8				

(a) Excludes Queensland.

(b) Ages 0–99 years.

(c) Results for period of diagnosis 1982–1994 based on a sample of 65,500 records (88.7% of all records).



(a) Excludes Queensland.

Figure 1: Breast cancer relative survival proportions by survival time and period of diagnosis, Australia[(a)]

Year of diagnosis

The year of diagnosis is an important indicator for the availability of screening or breast cancer management options and therefore has an indirect relationship to survival. The trends over time can indicate the successes of the public health system in dealing with breast cancer. Since 1984, the 1-, 3-, 5- and 10-year breast cancer relative survival proportions have increased with each successive year of diagnosis (Table 3, Figure 2). It is noticeable that the rate of increase in relative survival was somewhat greater in the period 1984–1987.

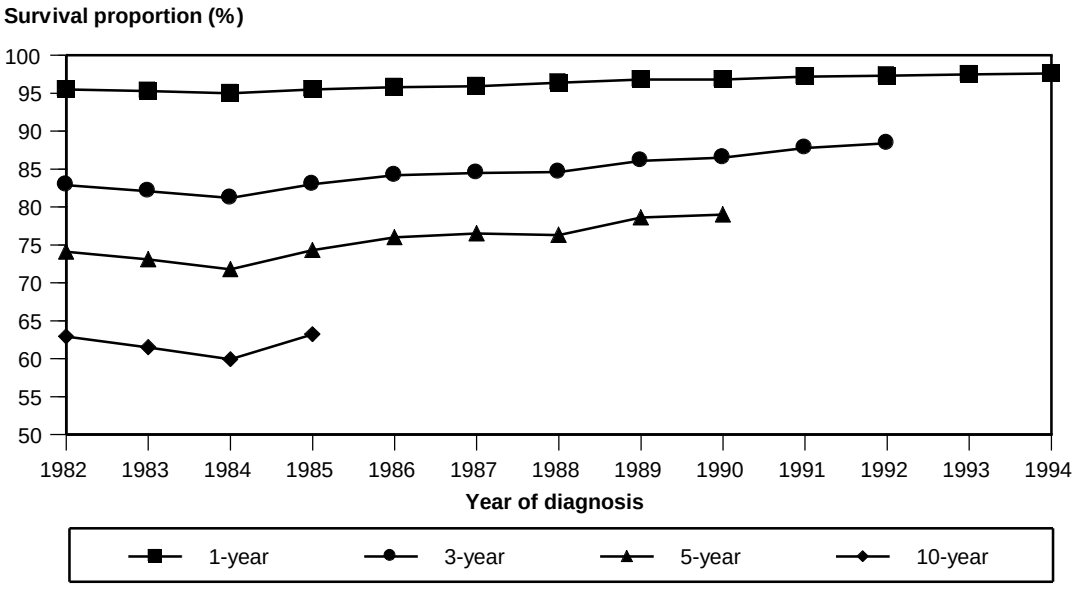
Proportions for all survival intervals from 1- to 10-years are given in Table 4.

Table 3: Breast cancer 1-, 3-, 5- and 10-year relative survival proportions (%) in Australia[(a)(b)] by year of diagnosis

			1-year		3-year		5-year		10-year	
Year of diagnosis	New cases	Deaths	%	95% CI	%	95% CI	%	95% CI	%	95% CI
1982	4,310	2,407	95.5	95.1–95.8	82.9	81.9–83.8	74.1	72.8–75.5	62.9	61.2–64.6
1983	4,370	2,420	95.3	94.9–95.6	82.1	81.1–83.1	73.1	71.7–74.4	61.5	59.8–63.2
1984	4,748	2,573	95.0	94.6–95.4	81.2	80.3–82.2	71.8	70.5–73.1	59.9	58.2–61.5
1985	4,900	2,422	95.5	95.2–95.9	83.0	82.1–83.9	74.3	73.1–75.6	63.2	61.5–64.8
1986	4,992	2,236	95.8	95.5–96.2	84.2	83.3–85.1	76.0	74.8–77.3		
1987	5,493	2,241	95.9	95.6–96.3	84.5	83.7–85.4	76.5	75.3–77.7		
1988	5,568	2,112	96.4	96.1–96.7	84.6	83.8–85.5	76.3	75.1–77.6		
1989	5,931	1,871	96.8	96.5–97.0	86.1	85.3–87.0	78.6	77.4–79.7		
1990	6,028	1,612	96.8	96.6–97.1	86.5	85.6–87.3	79.0	77.8–80.3		
1991	6,535	1,332	97.2	96.9–97.4	87.8	86.9–88.7				
1992	6,557	907	97.3	97.1–97.6	88.4	87.4–89.5				
1993	7,109	549	97.5	97.2–97.9						
1994	7,286	170	97.6	96.9–98.2						

(a) Excludes Queensland.

(b) Ages 0–99 years.



(a) Excludes Queensland.

Figure 2: Breast cancer survival proportions by year of diagnosis and survival time, Australia[(a)], 1982–1994

Table 4: Breast cancer relative survival proportions (%) in Australia[(a)(b)] by time since diagnosis and year of diagnosis

Time since diagnosis	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
1 year	95.5	95.3	95.0	95.5	95.8	95.9	96.4	96.8	96.8	97.2	97.3	97.5	97.6
2 years	88.9	88.4	87.8	89.0	89.8	90.0	90.5	91.5	91.7	92.5	92.9	93.4	
3 years	82.9	82.1	81.2	83.0	84.2	84.5	84.6	86.1	86.5	87.8	88.4		
4 years	78.0	77.1	76.0	78.2	79.7	80.1	80.1	82.0	82.4	84.1			
5 years	74.1	73.1	71.8	74.3	76.0	76.5	76.3	78.6	79.0				
6 years	71.1	69.9	68.6	71.3	73.2	73.7	73.3	75.7					
7 years	68.4	67.1	65.7	68.6	70.6	71.2	70.7						
8 years	66.3	65.0	63.5	66.6	68.7	69.3							
9 years	64.4	63.0	61.4	64.6	66.8								
10 years	62.9	61.5	59.9	63.2									

(a) Excludes Queensland.

(b) Ages 0–99 years.

Age at diagnosis

The 5-year relative survival proportions varied by age group across all periods of analysis (Table 5, Figure 3). The highest relative survival proportion (79%) was observed in women diagnosed in the age range 40–49 years, an age group that comprises 19% of all breast cancers. The lowest relative survival proportion (72%) was observed for women in the oldest age group 90–99 years, comprising 1.2% of all breast cancers. With the exception of women aged 80–89 years, 5-year relative survival proportions improved from 1982–1987 to 1988–1992 for all age groups. The most striking of these improvements (8%) was in women diagnosed in the 50–59 year age range.

The overall 5-year relative survival proportion increased from 74% in 1982–1987 to 79% in 1988–1992.

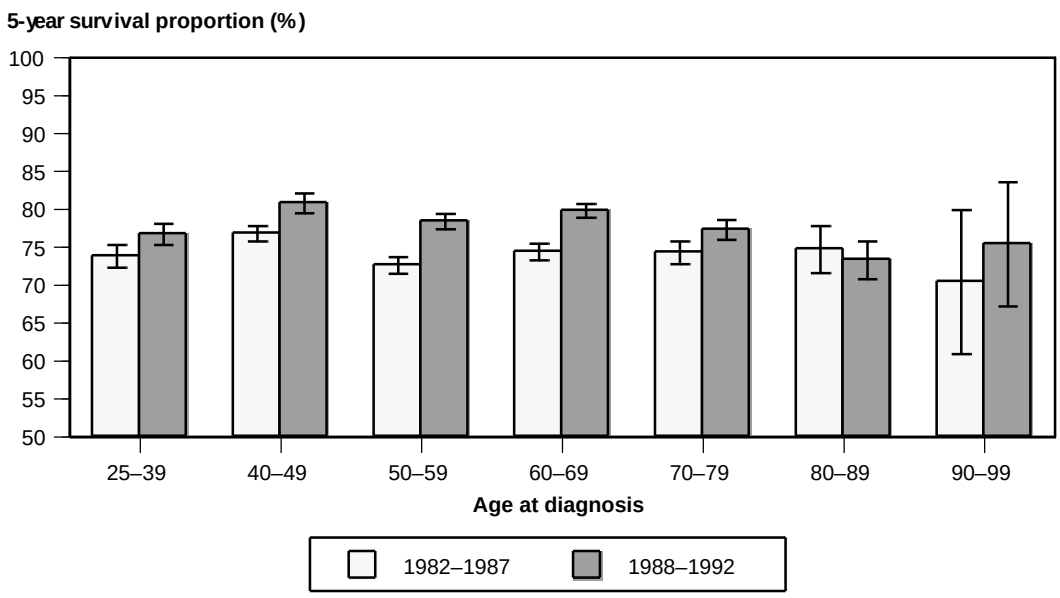
Table 5: Breast cancer 5-year relative survival proportions (%) by age at diagnosis and period of diagnosis, Australia[a]

	1982–1994			1982–1987		1988–1992	
Age at diagnosis	New cases	%	95% CI	%	95% CI	%	95% CI
25–39 years	5,860	74.8	73.7–76.0	73.8	72.3–75.3	76.7	75.3–78.1
40–49 years	14,211	78.8	78.0–79.5	76.8	75.8–77.9	80.8	79.5–81.7
50–59 years	15,403	75.6	74.8–76.4	72.6	71.5–73.7	78.4	77.4–79.3
60–69 years	17,358	77.9	77.1–78.7	74.4	73.3–75.4	79.8	78.9–80.8
70–79 years	13,749	75.9	74.9–77.0	74.3	72.8–75.7	77.3	76.0–78.6
80–89 years	6,253	72.6	70.4–74.8	74.7	71.6–77.9	73.3	70.8–75.8
90–99 years	922	71.9	63.2–80.6	70.4	60.9–79.8	75.4	67.2–83.5
All ages[b][c]	65,500	76.8	76.4–77.3	74.4	73.8–75.0	78.9	78.3–79.5

(a) Excludes Queensland.

(b) All ages for period of diagnosis 1982–1994 results based on a sample of 65,500 records (88.7% of all records).

(c) Ages 0–99 years.



(a) With 95% confidence intervals.
(b) Excludes Queensland.

Figure 3: Breast cancer 5-year relative survival proportions[(a)] by age at diagnosis and period of diagnosis, Australia[(b)]

The 2-year relative survival estimates showed increases in all age groups across the three diagnosis periods, although, as for the 5-year estimates, the trend varied between age groups (Table 6, Figure 4). In 1993–1994, the highest relative survival proportion (94.0%) was observed in women diagnosed in the age range 40–49 years while the lowest relative survival proportion (91.4%) was observed for women in the 80–89 year age group.

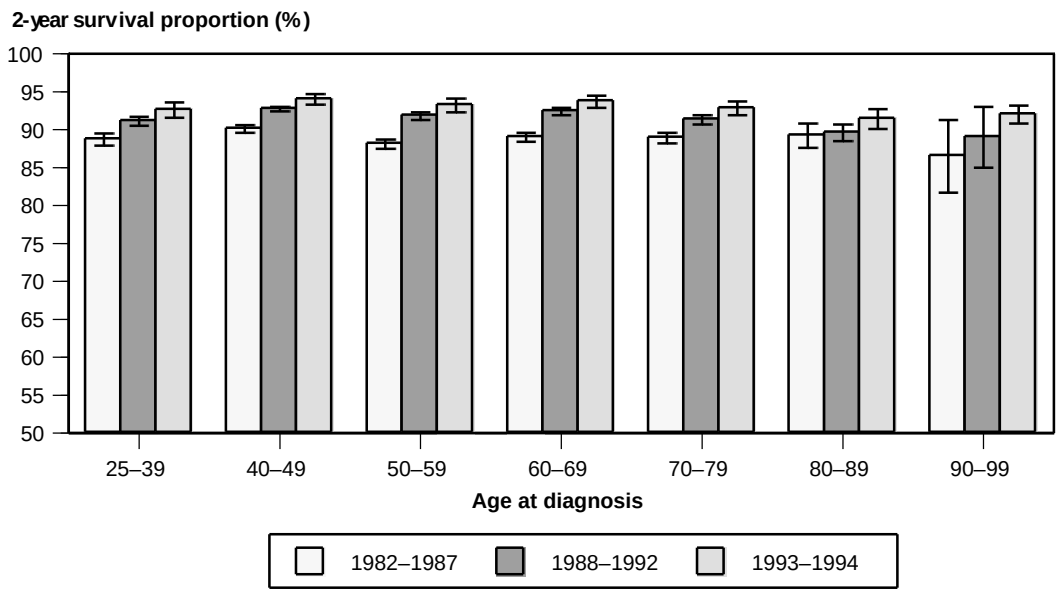
Table 6: Breast cancer 2-year relative survival proportions (%) by age at diagnosis and period of diagnosis, Australia[(a)]

	1982–1994		1982–1987		1988–1992		1993–1994	
Age at diagnosis	%	95% CI	%	95% CI	%	95% CI	%	95% CI
25–39 years	90.7	90.2–91.3	88.7	87.9–89.5	91.1	90.5–91.7	92.6	91.6–93.6
40–49 years	92.3	91.9–92.7	90.1	89.6–90.7	92.7	92.4–93.1	94.0	93.3–94.7
50–59 years	91.1	90.7–91.5	88.1	87.5–88.7	91.8	91.3–92.2	93.2	92.3–94.0
60–69 years	90.4	90.0–90.9	89.0	88.4–89.6	92.4	91.9–92.8	93.7	92.9–94.5
70–79 years	89.5	88.9–90.1	88.9	88.2–89.7	91.3	90.7–91.9	92.8	91.9–93.7
80–89 years	87.9	86.8–89.0	89.2	87.6–90.7	89.6	88.5–90.7	91.4	90.1–92.8
90–99 years	87.5	83.3–91.8	86.5	81.7–91.3	89.0	85.0–93.0	92.0	90.8–93.1
All ages[(b)(c)]	90.9	90.6–91.1	89.0	88.6–89.4	91.8	91.5–92.1	93.5	92.7–94.2

(a) Excludes Queensland.

(b) All ages for period of diagnosis 1982–1994 results based on a sample of 65,500 records (88.7% of all records).

(c) Ages 0–99 years.



(a) With 95% confidence intervals.

(b) Excludes Queensland.

Figure 4: Breast cancer 2-year relative survival proportions[(a)] by age at diagnosis and period of diagnosis, Australia[(b)]

State and Territory of usual residence

The 5-year relative survival proportion for all States and Territories combined (excluding Queensland) was 76.8% (Table 7) for the period 1982–1994. The proportions by State and Territory varied by 11.5%, from 83.2% in the Australian Capital Territory to 71.7% in the Northern Territory. These variations may reflect real differences between the populations or health services (and their quality) in the States and Territories and are probably contributed to by the greater statistical variability of the estimates for the less populous Territories. These issues could be further explored in the future. If the Territories are excluded, the difference in 5-year relative survival proportions between the States narrows to 4.2%.

The Australian Capital Territory followed by Western Australia, showed consistently higher 2- and 5-year relative survival proportions than the other States and the Northern Territory. It is noteworthy that all States and Territories showed improvements in their 5-year relative survival proportions across the two analysis periods (Figure 5). The largest improvements in relative survival proportions were in the Northern Territory (10.1%) and Tasmania (8.8%).

Table 7: Breast cancer 5-year relative survival proportions (%) by State or Territory[(a)] of usual residence and period of diagnosis

	1982–1994		1982–1987		1988–1992	
State/Territory	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
NSW	76.6	76.0–77.2	74.5	73.7–75.3	78.5	77.7–79.3
Vic	76.0	75.3–76.7	74.0	73.1–74.8	78.1	77.2–78.9
WA	78.7	77.6–79.9	76.0	74.5–77.4	81.4	80.1–82.7
SA	77.9	76.7–79.1	75.2	73.7–76.6	80.8	79.4–82.1
Tas	74.5	72.2–76.9	71.5	68.9–74.1	77.8	75.5–80.1
ACT	83.2	80.6–85.7	80.9	78.0–83.8	85.3	83.0–87.7
NT	71.7	65.2–78.3	68.2	61.0–75.4	75.1	69.1–81.1
Australia[(b)(c)]	76.8	76.4–77.3	74.4	73.8–75.0	78.9	78.3–79.5

(a) Ages 0–99 years.

(b) Excludes Queensland.

(c) Australian results based on a sample of 65,500 records (88.7% of all records).

(a) With 95% confidence intervals.

(b) Excludes Queensland.

Figure 5: Breast cancer 5-year relative survival proportions[(a)] by period of diagnosis, States and Territories compared with Australia[(b)]

In a comparison of the 2-year relative survival proportions (Table 8, Figure 6), for the three diagnosis periods, the proportions also showed a consistent upward trend in all States and Territories. They reached a peak in the 1993–1994 diagnosis period where all jurisdictions have relative survival proportions above 91%. The greatest increases occurred in the Northern Territory, New South Wales and Victoria, although these increases were only marginally greater than in the other States and Territories.

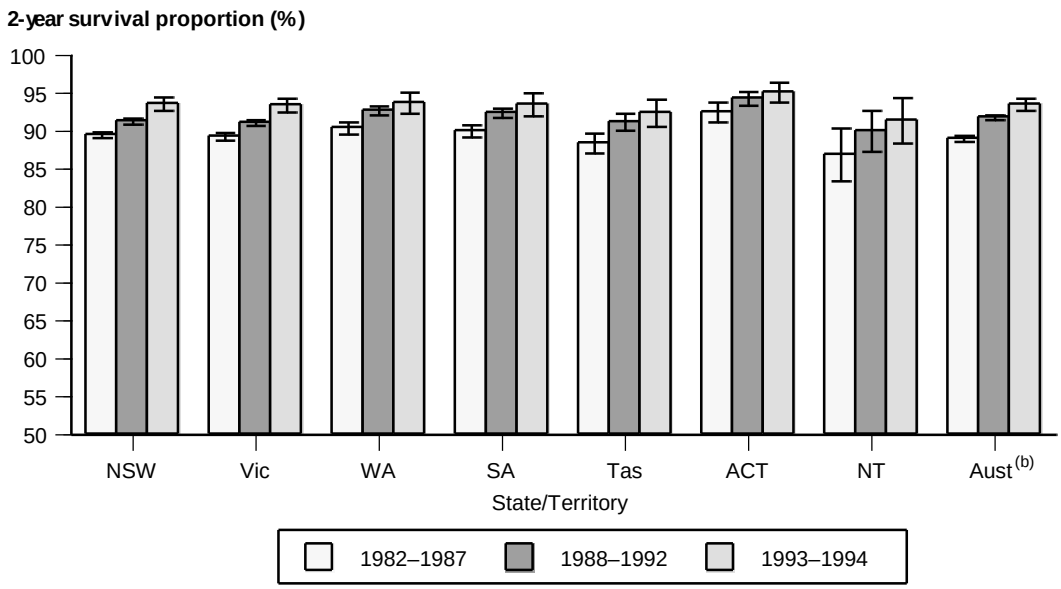
Table 8: Breast cancer 2-year relative survival proportions (%) by State and Territory[(a)] of usual residence and period of diagnosis

	1982–1994		1982–1987		1988–1992		1993–1994	
State/Territory	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
NSW	90.7	90.4–91.1	89.5	89.1–90.0	91.3	90.9–91.7	93.6	92.7–94.5
Vic	90.5	90.1–90.9	89.3	88.8–89.8	91.1	90.7–91.5	93.4	92.5–94.4
WA	91.9	91.3–92.5	90.4	89.6–91.2	92.7	92.1–93.3	93.7	92.3–95.2
SA	91.5	90.9–92.1	90.0	89.2–90.8	92.4	91.8–93.1	93.5	92.0–95.0
Tas	90.1	89.0–91.2	88.4	87.1–89.7	91.2	90.1–92.2	92.4	90.6–94.2
ACT	93.7	92.6–94.7	92.5	91.2–93.8	94.3	93.4–95.3	95.1	93.8–96.5
NT	88.9	86.0–91.8	86.9	83.4–90.3	90.0	87.3–92.7	91.4	88.4–94.3
Australia[(b)(c)]	90.9	90.6–91.1	89.0	88.6–89.4	91.8	91.5–92.1	93.5	92.7–94.2

(a) Ages 0–99 years.

(b) Excludes Queensland.

(c) Australian results based on a sample of 65,500 records (88.7% of all records).



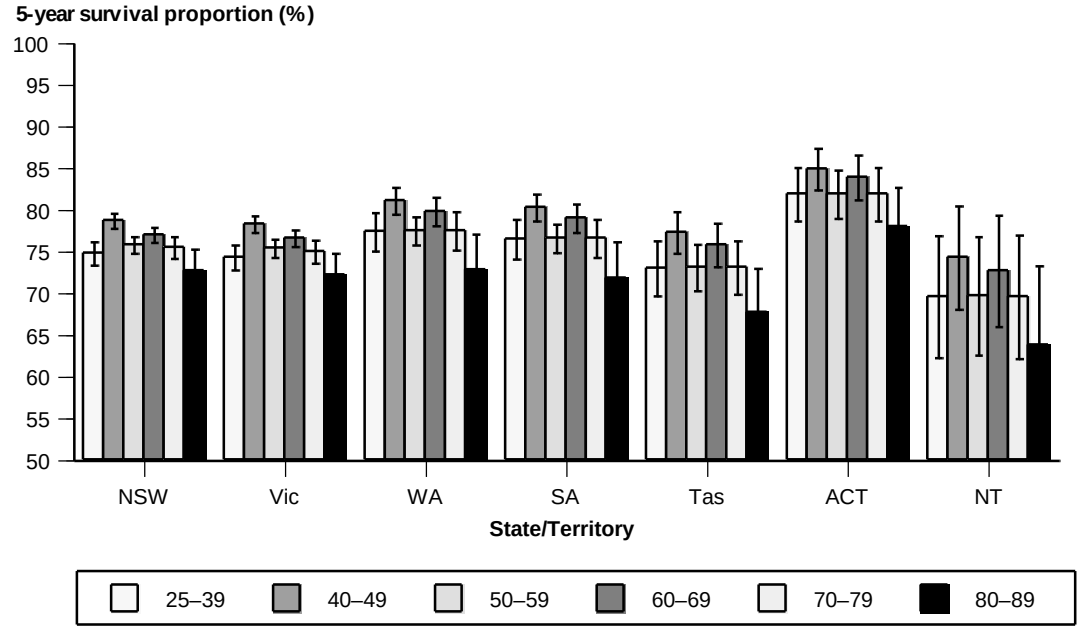
(a) With 95% confidence intervals.
(b) Excludes Queensland.

Figure 6: Breast cancer 2-year relative survival proportions[(a)] by period of diagnosis, States and Territories compared with Australia[(b)]

Table 9: Breast cancer 5-year relative survival proportions (%) by State and Territory and age at diagnosis, 1982–1994

	State/Territory						
Age at diagnosis	NSW	Vic	WA	SA	Tas	ACT	NT
25–39 years	74.8	74.3	77.4	76.5	73.0	81.9	69.6
40–49 years	78.7	78.3	81.1	80.3	77.3	84.9	74.3
50–59 years	75.8	75.4	77.5	76.6	73.1	81.9	69.7
60–69 years	77.0	76.6	79.8	79.0	75.8	83.9	72.7
70–79 years	75.5	75.0	77.5	76.6	73.1	81.9	69.6
80–89 years	72.7	72.2	72.8	71.8	67.7	78.0	63.8
All ages[(a)]	76.6	76.0	78.7	77.9	74.5	83.2	71.7

(a) Ages 0–99 years.



(a) With 95% confidence intervals.

Figure 7: Breast cancer 5-year relative survival proportions[(a)] by State and Territory and age at diagnosis, 1982–1994

An examination of the age-specific relative survival proportions in each State and Territory (Table 9, Figure 7) showed consistency in the age distribution (i.e. higher in the 40–49 and 60–69 year age groups and lower in the 80–89 year age group). There was also similarity in the magnitude of the relative survival proportions in New South Wales, Victoria and Tasmania. The Australian Capital Territory, Western Australia and South Australia showed slightly higher relative survival proportions for each age group, while in the Northern Territory the proportions were substantially lower. The age group 90–99 years was excluded from the analysis due to the small numbers of cases in each State and Territory.

Urban and rural areas of usual residence

The differential between the 5-year relative survival proportions in urban and rural locations (see Appendix A for classification of these locations) was small, at just under 2% (Table 10). In both diagnosis periods (1982–1987 and 1988–1992) relative survival proportions were higher in urban areas than in rural areas (Figure 8). The upward trend in relative survival proportions over time observed for the States and Territories, and across age groups, was also reflected in this geographic split.

Table 10: Breast cancer 5-year relative survival proportions (%) in Australia[(a)(b)] by geographic area of usual residence and period of diagnosis

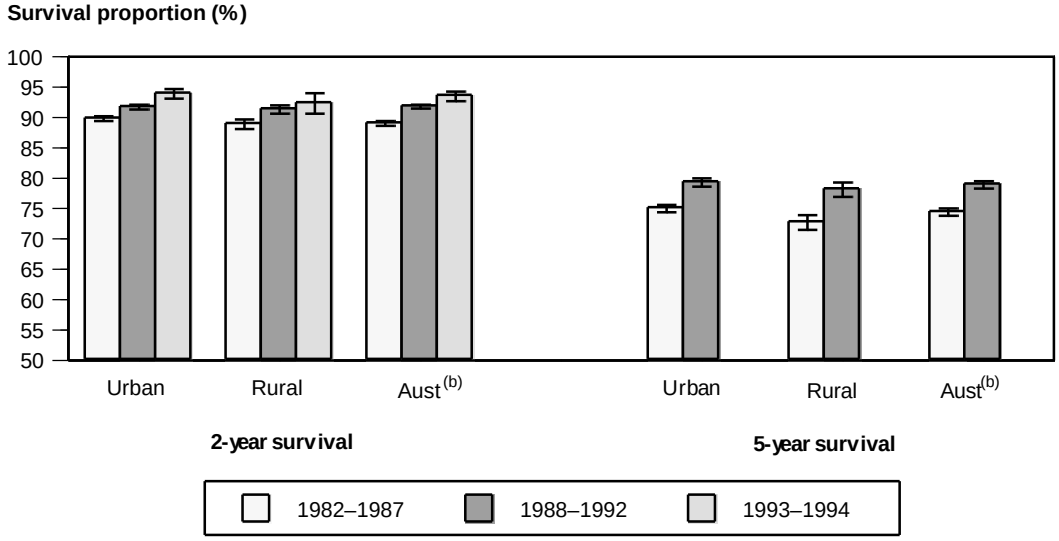
	1982–1994		1982–1987		1988–1992	
Area	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
Urban	77.2	76.8–77.7	75.0	74.4–75.7	79.3	78.6–80.0
Rural	75.3	74.5–76.2	72.7	71.5–73.9	78.1	76.9–79.3
Australia[(c)(d)]	76.8	76.4–77.3	74.4	73.8–75.0	78.9	78.3–79.5

(a) Excludes Queensland.

(b) Ages 0–98 years.

(c) Australian results for 0–98 year olds from the sample of 65,500 records (88.7% of all records).

(d) 616 cases missing geographical locators were excluded from the urban and rural estimates but included in the Australian estimate.



(a) With 95% confidence intervals.

(b) Excludes Queensland.

Figure 8: Breast cancer 2-year and 5-year survival proportions[(a)] by period of diagnosis, urban and rural areas of usual residence compared with Australia[(b)]

Two-year relative survival proportions in urban and rural locations showed a pattern similar to 5-year relative survival proportions (Table 11) in their upward trend over time. Further,

2-year relative survival proportions were higher in urban areas than in rural areas in all three diagnosis periods (1982–1987, 1988–1992 and 1993–1994).

Table 11: Breast cancer 2-year relative survival proportions (%) in Australia[(a)(b)] by geographical area and period of diagnosis

	1982–1994		1982–1987		1988–1992		1993–1994	
Area	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
Urban	91.0	90.8–91.3	89.8	89.4–90.2	91.7	91.3–92.0	93.9	93.1–94.8
Rural	90.3	89.8–90.9	88.9	88.1–89.6	91.3	90.6–91.9	92.3	90.6–94.1
Australia[(c)(d)]	90.9	90.6–91.1	89.0	88.6–89.4	91.8	91.5–92.1	93.5	92.7–94.2

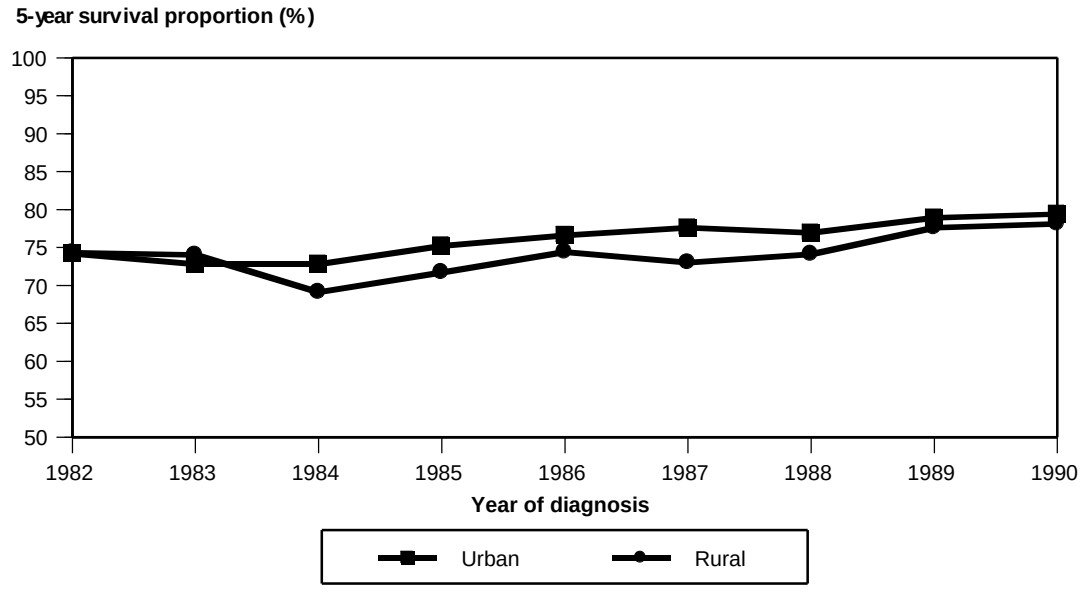
(a) Excludes Queensland.

(b) Ages 0–98 years.

(c) Australian results for 0–98 year olds from the sample of 65,500 records (88.7% of all records).

(d) 616 cases missing geographical locators were excluded from the urban and rural estimates but included in the Australian estimate.

From 1984, 5-year relative survival proportions by single year of diagnosis in urban and rural locations increased over time (Figure 9). In urban areas, the 5-year relative survival proportions rose quickly between 1984 and 1987 and then increased more slowly to 1990. In rural areas, there were sharp increases in proportions between 1984 and 1986 and between 1988 and 1989. The greatest difference in proportions between urban and rural locations occurred in 1987, when the relative survival proportion in urban areas was 3.6% higher than that in rural areas (Table 12). Two-year relative survival proportions showed a similar pattern to 5-year proportions (Table 13).



(a) Excludes Queensland.

Figure 9: Breast cancer 5-year relative survival proportions by urban and rural areas of usual residence and year of diagnosis[(a)], 1982–1990

Table 12: Breast cancer 5-year relative survival proportions (%) in Australia[a][b] by year of diagnosis and geographical area

	Urban			Rural			Unknown area
Year of diagnosis	New cases	5-year %	95% CI	New cases	5-year %	95% CI	New cases
1982	3,308	74.2	72.7–75.7	991	74.3	71.5–77.1	19
1983	3,279	72.8	71.2–74.3	1,070	74.0	71.3–76.7	31
1984	3,568	72.8	71.3–74.3	1,154	69.1	66.4–71.8	57
1985	3,704	75.2	73.7–76.6	1,159	71.7	69.0–74.3	75
1986	3,813	76.6	75.2–78.0	1,160	74.4	71.8–77.0	47
1987	4,063	77.6	76.3–79.0	1,376	73.0	70.5–75.5	84
1988	4,180	76.9	75.5–78.2	1,344	74.1	71.5–76.6	79
1989	4,495	78.9	77.5–80.2	1,401	77.6	75.1–80.1	38
1990	4,534	79.4	77.9–80.8	1,467	78.1	75.6–80.7	33

(a) Excludes Queensland.

(b) Ages 0–98 years.

Table 13: Breast cancer 2-year relative survival proportions (%) in Australia[a][b] by year of diagnosis and geographical area

	Urban			Rural			Unknown area
Year of diagnosis	New cases	2-year %	95% CI	New cases	2-year %	95% CI	New cases
1982	3,308	89.3	88.5–90.0	991	89.4	88.1–90.8	19
1983	3,279	88.6	87.9–89.4	1,070	89.3	88.0–90.6	31
1984	3,568	88.6	87.9–89.4	1,154	87.0	85.6–88.4	57
1985	3,704	89.7	89.0–90.4	1,159	88.2	86.9–89.6	75
1986	3,813	90.4	89.7–91.0	1,160	89.5	88.2–90.8	47
1987	4,063	90.8	90.2–91.5	1,376	88.8	87.6–90.1	84
1988	4,180	90.5	89.8–91.2	1,344	89.3	88.1–90.6	79
1989	4,495	91.4	90.8–92.0	1,401	90.9	89.7–92.1	38
1990	4,534	91.6	90.9–92.3	1,467	91.1	90.0–92.3	33
1991	4,881	92.4	91.7–93.0	1,630	92.5	91.4–93.7	57
1992	4,893	92.9	92.2–93.6	1,650	92.8	91.5–94.1	40
1993	5,350	93.8	92.8–94.7	1,751	92.6	90.8–94.5	25

(a) Excludes Queensland.

(b) Ages 0–98 years.

International comparisons

Table 14: Breast cancer 5-year relative survival proportions internationally[(a)] by period of diagnosis

Period	Location	Number of cancers	Relative survival (%)
1978–1984	Poland, Cracow	362	57
1978–1982	Scotland	11,261	62
1978–1984	Germany, Saarland	3,359	68
1978–1985	France	1,510	73
1980–1984	Canada	—	74
1982–1989	India, Bangalore	1,514	46
1982–1989	India, Madras	1,747	51
1982–1987	**Australia—1**	**29,193**	**74**
1983–1985	Estonia	742	63
1983–1985	Spain	691	63
1983–1985	England	19,840	64
1983–1987	Denmark	13,138	69
1983–1985	Italy	1,730	73
1983–1985	Finland	3,494	75
1983–1985	Switzerland	868	77
1985–1992	Thailand, Khon Kaen	423	48
1986–1993	United States (black)	7,891	70
1986–1993	United States (white)	89,336	86
1987–1992	Netherlands	—	76
1988–1992	Lithuania	1,649	57
1988–1992	*Northern Territory*	*118*	*75*
1988–1992	Norway	9,403	78
1988–1992	*Victoria*	*9,552*	*78*
1988–1992	*Tasmania*	*871*	*78*
1988–1992	**Australia—2**	**30,975**	**79**
1988–1992	*New South Wales*	*13,126*	*79*
1988–1992	*South Australia*	*3,344*	*81*
1988–1992	*Western Australia*	*3,462*	*81*
1988–1992	*Australian Capital Territory*	*502*	*85*

(a) Table is split into studies with follow-up before and after 1990 and ordered from lowest relative survival proportion to highest.

Note: Entries in italics denote results from this report.

Sources: Supramaniam et al. (1998) and results from this report.

Five-year breast cancer relative survival proportions in women diagnosed in Australia in the 1980s and early 1990s are lower than those in white women in the United States (Table 14). However, Australian proportions are similar to those in the Scandinavian countries and higher than those in other European countries such as England, Spain and Scotland.

In a comparison of 2- and 10-year Australian and United States relative survival proportions, the Australian proportions were consistently lower regardless of the period of diagnosis (NCI 1998). However, it should be noted that the United States relative survival proportions are based on data from 9 SEER (Surveillance, Epidemiology and End Results) Program geographic areas.