FOCUS ON
BREAST CANCER

ACT Government Health

AN OVERVIEW OF BREAST CANCER IN THE ACT

This Focus On report gives an overview of breast cancer in the ACT, including a description of trends in incidence and mortality from 1994 to 2014, and survival from 1983 to 2012.

It is important to note that men also get breast cancer. However this report focusses on breast cancer in women.

KEY MESSAGES

- **Breast cancer is the most common cancer among women** in the ACT (2010–2014).
- **There are several lifestyle risk factors which contribute to the incidence of breast cancer** including alcohol consumption, being overweight or obese, insufficient physical activity and menopausal hormone therapy. Use of oral contraceptives and breastfeeding offer some protection against breast cancer. [1]
- **As the greatest risk factor is older age,** the number of women in the ACT with breast cancer is likely to increase as the proportion of older women in our population grows.
- **5-year survival from breast cancer is high and improving** (91.4% during the period 2003–2012 compared with 77.8% for 1983–1992).

BREAST CANCER INCIDENCE

What do we know about breast cancer incidence in the ACT?

In 2014

243

new cases of breast cancer were diagnosed in ACT women (Figure 1).

The age-standardised incidence rate for the ACT in 2014 was

122.1

cases per 100,000 women compared to

122.5

cases per 100,000 women for Australia in 2013 (latest available national data). [2]

Breast cancer is the most common cancer in ACT women with an average of 253 cases diagnosed annually for the period 2010–2014. Breast cancer outnumbers the next two most common cancers in women, colorectal cancer and melanoma, combined. The estimated risk of female breast cancer diagnosis before the age of 85 in the ACT over this period was 1 in 7.

How has breast cancer incidence changed over time?

The number of new cases of breast cancer diagnosed in ACT women increased from

138

in 1994, when cancer reporting became mandatory, to

243

in 2014 (Figure 1).

Over the same period, the age-standardised incidence rate for the ACT was

120.7

cases per 100,000 women (1994) compared with

122.1

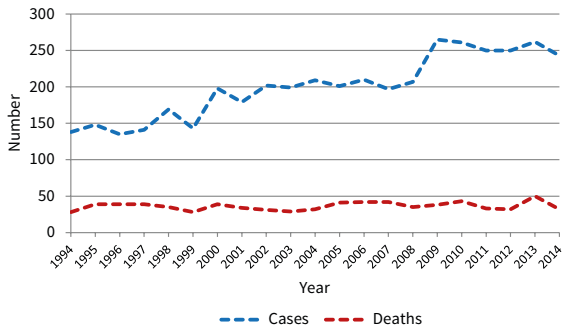
cases per 100,000 women in 2014 (Figure 2).

There is not a clear trend for breast cancer incidence because it has varied over time.

While the age-standardised incidence rates for breast cancer were similar in 1994 and 2014, the number of new cases of breast cancer in the ACT increased over that time (Figure 1) due to population increases and the ageing of the population.

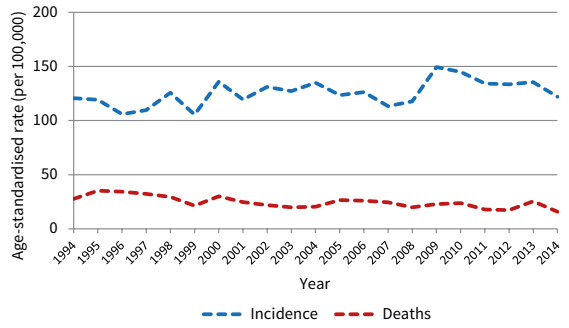
When compared with Australia, the ACT has had relatively high incidence rates for breast cancer (Figure 3). The reasons for this are complex, but it is well established that there is an association between socio-economic status and risk of breast cancer, with women in higher socio-economic groups being at higher risk. [3,4,5,6] The ACT has a high socio-economic status relative to other Australian states and territories. [7] It is thought that the reasons for these increased breast cancer rates are related to lifestyle factors (eg high alcohol consumption) and hormonal factors such as having fewer children, a higher proportion of women who have never given birth, and older age at first birth and lower rates of breastfeeding. [8]

Figure 1: Number of breast cancer cases diagnosed and number of deaths due to breast cancer, ACT, 1994–2014, females



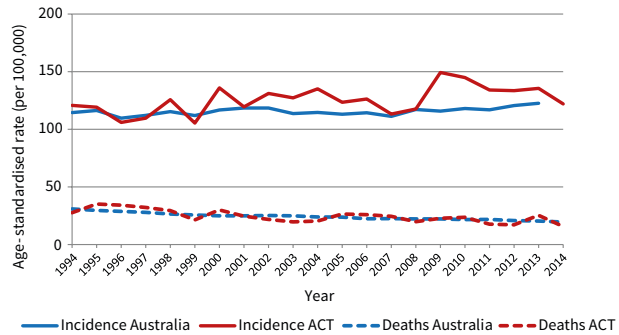
Source: ACT Cancer Registry, Epidemiology Section, ACT Health

Figure 2: Age-standardised incidence and death rates (per 100,000) for breast cancer, ACT, 1994–2014, females



Source: ACT Cancer Registry, Epidemiology Section, ACT Health

Figure 3: Age-standardised incidence and death rates (per 100,000) for breast cancer, ACT & Australia, 1994–2014, females



Source: ACT Cancer Registry, Epidemiology Section, ACT Health; Australian Cancer Database, Australian Institute of Health & Welfare

BREAST CANCER DEATHS

What do we know about breast cancer incidence in the ACT?

In 2014

32

women who lived in the ACT at the time of their breast cancer diagnosis, died from breast cancer (Figure 1).

The age-standardised death rate for the ACT has decreased from

27.7

deaths per 100,000 women in 1994 to

15.8

deaths per 100,000 women in 2014. (Figure 2)

The decrease in death rate for breast cancer in the ACT is statistically significant. The death rates for the ACT over time, have been very similar to Australia (Figure 3).

While the number of cases of breast cancer has increased over the last few decades in the ACT, the number of deaths has remained fairly stable despite an increase in the population of the ACT and the growth in the proportion of older people in the population. It is believed that this is due to early detection of breast cancer through screening (which improves a woman's chance of survival), as well as improved treatment. [3]

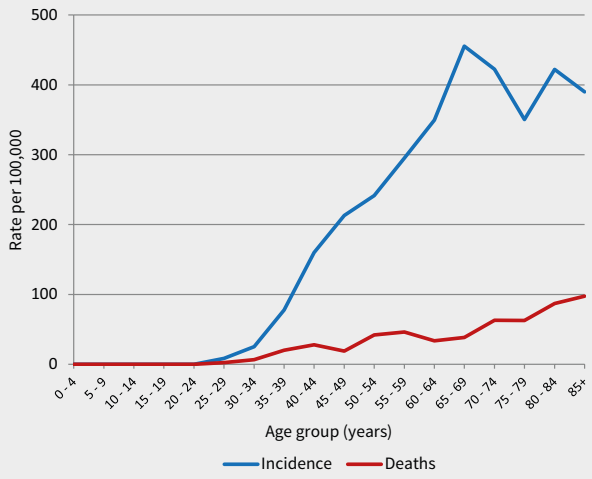
TRENDS BY AGE

The median age at breast cancer diagnosis in ACT women over the period 2010–2014 was 51 and median age at death was 65 years. Breast cancer becomes more common as women age. The number of breast cancer deaths also increases with age.

Age-specific trends for 2010–2014 (Figure 4) show that incidence of breast cancer rises steadily with increasing age until age 65 to 69 years before decreasing among women aged over 70. This pattern is also seen in data for Australia. The age-standardised incidence rate in the ACT for the 30 to 34 age group for 2010–2014 was 25.2 per 100,000 women rising to 455.5 per 100,000 women in the 60 to 69 year age group.

The increase in deaths by age is more gradual, with a steady rise from age 30 years and above. The age-standardised death rate for the 30 to 34 age group for 2010–2014 was 6.6 per 100,000 women rising to 97.5 per 100,000 women in the 85+ age group.

Figure 4: Age-specific incidence and death rates for breast cancer, ACT, 2010–2014, females



Source: ACT Cancer Registry, Epidemiology Section, ACT Health

SURVIVAL

Relative survival

Relative survival is a measure used by cancer registries to compare the survival of people with a specific disease to those who do not have the disease over a period of time (usually five years from the date of diagnosis for those with the disease).

Relative survival is calculated by dividing the percentage of people with the disease who are still alive at the end of the period by the percentage of people in the general population, of the same age and sex, who are alive at the end of the same time period.

Relative survival shows whether the disease shortens life.

One-, two-, three-, four- and five-year survival from breast cancer

During the period 2003–2012, compared to their counterparts in the general population, women diagnosed with breast cancer in the ACT had a 98% chance of surviving for 1 year, falling to 92% surviving for five years (Table 1).

Table 1: Relative survival from breast cancer, by years after diagnosis, ACT, 2003–2012, females

Years after diagnosis	Survival (%)	95% confidence interval
1	98.2	97.4–98.8
2	96.5	95.4–97.4
3	94.6	93.3–95.7
4	92.8	91.3–94.1
5	91.5	89.8–92.9

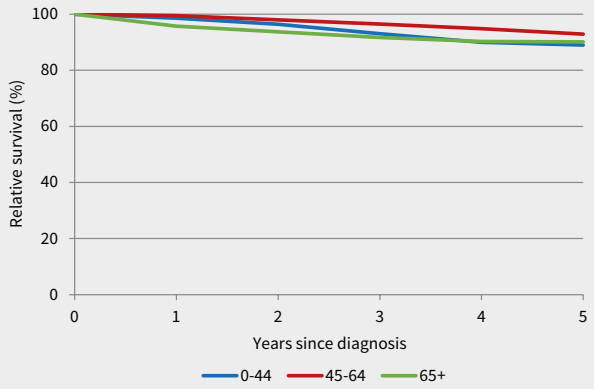
Source: ACT Cancer Registry, Epidemiology Section, ACT Health

Breast cancer survival by age

Most cancers show decreasing survival with age.

Of women in the ACT diagnosed with breast cancer aged 0–44 years, 89% survived for five years or more, compared with 93% of women diagnosed in the 45 to 64 age group and 90% in the 65 and over age group (2003–2012) (Figure 5). Differences in survival by age group are not statistically significant.

Figure 5: 5-year relative survival from breast cancer, by age group, ACT, 2003–2012, females



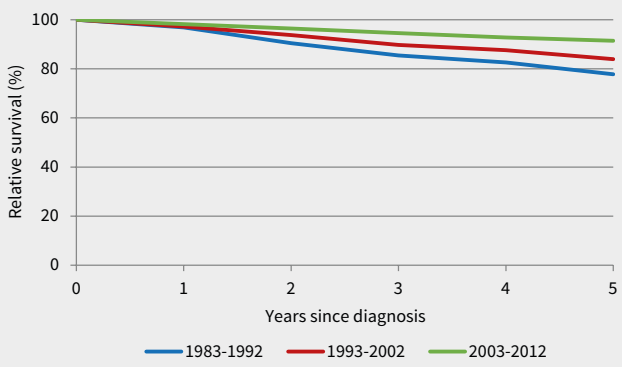
Source: ACT Cancer Registry, Epidemiology Section, ACT Health

Breast cancer survival trends over time

Breast cancer survival is increasing over time.

In 2003–2012, 91% of ACT women with breast cancer survived five years after diagnosis, an increase from 78% in 1983–1992 and 84% in 1993–2002 (Figure 6). Part of this increase is due to improvements in treatment and early detection through breast screening. It may also be due in part to lead time bias which is introduced because the detection of a cancer by screening increases the time between diagnosis and death. However it is thought that this bias is modest. [9]

Figure 6: 5-year relative survival from breast cancer, ACT, 1983-1992 to 2003-2012, females



Source: ACT Cancer Registry, Epidemiology Section, ACT Health

AUSTRALIAN BURDEN OF DISEASE FOR BREAST CANCER

Despite improvements in survival since the early 1980s, breast cancer accounts for 8.1% of the burden of dying early from cancer in Australia (responsible for an average of 2,700 deaths a year in Australia between 1994 and 2014). [2, 10]

In contrast, due to the high survival rate for breast cancer, it is the leading cause of non-fatal cancer burden (i.e. the burden of living with cancer) in women (31.5%). [10]

SCREENING FOR BREAST CANCER

Early detection of a breast cancer improves a woman's chance of survival and quality of life. Breast screening can detect breast cancers before they can be felt.

BreastScreen ACT is part of a national breast screening program that is aimed at reducing deaths from breast cancer through early detection.

The program provides free screening and follow up services to ACT resident women from the age of 40 years.

Research shows that the most benefit, in terms of reducing deaths from breast cancer, can be achieved by regular 2-yearly screening of women over the age of 50. There is less evidence to support the population benefits of screening women under the age of 50.

For more information see: http://www.health.act.gov.au/our-services/women-youth-and-children/breastscreen

ACT & SOUTH EAST NSW BREAST CANCER TREATMENT QUALITY ASSURANCE PROJECT

The ACT and South East NSW Breast Cancer Treatment Quality Assurance Project began in 1997. The aim of the project is to collect and examine data on treatment and outcomes for women with breast cancer. The data collected helps to guide best clinical practice for breast cancer treatment and in turn improve the quality of life of cancer patients and reduce deaths from breast cancer.

For more information see: http://www.health.act.gov.au/research-publications/research/breast-cancer-research

NOTE

All rates in this report were age-standardised to the 2001 Australian population.

References

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