

Breast Cancer and BreastScreen Queensland

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Summary

Breast cancer is a significant public health issue. Presently, it is the most common cause of cancer-related death among women in Queensland and Australia. Experts agree that based on current knowledge, breast cancer screening programs are the most effective means of reducing the amount of illness and death caused by breast cancer.

The Queensland Health BreastScreen Queensland Program is the state component of the National BreastScreen Australia Program. Since its establishment in 1991, the BreastScreen Queensland program has evolved into a network of 11 fixed site screening and assessment services, 4 mobile, 4 relocatable and 4 satellite services. This network of BreastScreen Queensland Services provides free access to high quality breast cancer screening for eligible women throughout Queensland.

All women are at risk of developing breast cancer, however the greatest risk factor is age. Over 70 percent of all breast cancers occur in women aged 50 years and over. Importantly, nine out of ten

women who develop breast cancer do not have a significant family history of the disease. As yet, the cause of breast cancer is unknown. The best protection against the disease remains early detection through biennial breast cancer screening and treatment.

BreastScreen Queensland screened over 149 000 women during the 1998/99 financial year. The number of women diagnosed with breast cancer has increased dramatically since the introduction of BreastScreen Queensland, with a corresponding downward trend in mortality from breast cancer. This pattern is encouraging and follows the pattern expected for an effective screening program.

High Risk Groups

A small proportion, less than 10 percent, of women who develop breast cancer, have a higher than average risk of breast cancer. Included in this higher risk group are:

- women who have a personal history of breast cancer
- women who have a first degree relative (mother, sister or daughter) who developed breast cancer pre-menopausally.
- women with specific genetic mutations such as BRCA1 and BRCA2
- women who started menstruation early or menopause late
- women who have never had children or have their first baby after the age of 30 years
- women who have other types of breast disease

It is important to remember that, based on current knowledge, most breast cancer does not occur in women in these high-risk groups [Redman & Krickler, 1998]. Further, these risk factors are not easily modifiable, so they have limited implications for population-based prevention.

Preventing Breast Cancer

As previously stated the causes of breast cancer, or how to prevent it, are not known. Potentially modifiable factors that have been linked to breast cancer include hazardous alcohol consumption, obesity, physical inactivity and inadequate consumption of fruit and vegetables [Mezzetti et al, 1998]. As knowledge in this area of primary prevention develops, there will be a need to develop public information programs [Redman & Krickler, 1998].

However, at present, the increased risk from these potentially modifiable factors is thought to be small [Kelsey et al, 1993]. Consequently, our best chance of reducing mortality from breast cancer is through early detection by mammographic screening. Evidence from randomised controlled trials (RCTs) has shown that early detection of breast cancer by mammography can reduce mortality by 30 percent [Fletcher et al, 1993].

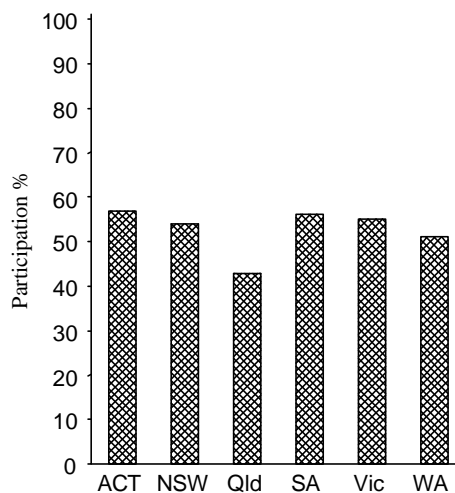
Participation rates for breast cancer screening

To achieve the mortality reductions reported from the RCTs, BreastScreen Queensland must achieve a participation rate of 70 percent for women aged 50 to 69 years. Women aged 40 years and over are eligible to use the BreastScreen Queensland Program, however the primary target group remains women aged 50-69 years.

Queensland is the most decentralised of all the states, making the establishment of a coordinated statewide breast cancer screening network a major public health achievement. The establishment of the statewide Program was implemented in stages between 1991 and 1997. This staged introduction means that Queensland has yet to achieve the participation rates of the southern states. In 1996 – 1997 the BreastScreen Australia participation rate for women aged 50-69 years was 52 percent compared to 43 percent for Queensland (Figure 1). However, BreastScreen Queensland achieved a participation rate during 1997 - 1998 of 53 percent, for women in the target age group. Those BreastScreen Queensland Services that have been established for more than five years, in 1997-98, had achieved participation rates ranging from 47 percent to 67 percent. In general terms, the average participation rates are higher in rural and remote areas (61.7 percent) than in urban areas (48.5 percent).

The 1996 National Breast Health Survey [Barratt et al, 1997] found that 8.1percent of screening was through private services, that is, outside the BreastScreen Program. The corresponding percentage in the target age group, 50-69 years, was 10.0 percent. In Queensland, the Wesley Breast Clinic offers a private sector breast cancer screening service which would account for a significant proportion of screening outside the Breastscreen program.

Figure 1: Participation in BreastScreen by State and Territory, Women aged 50 to 69 years, 1996-1997

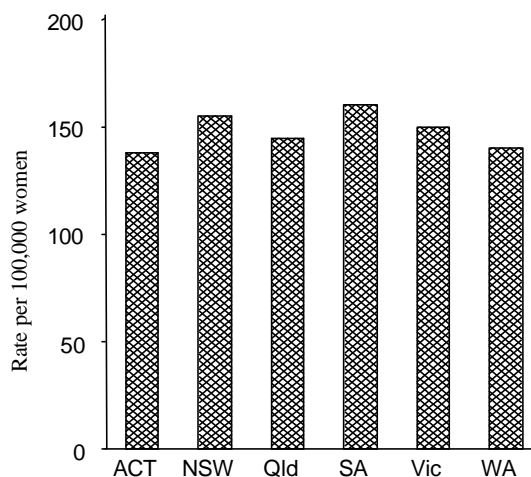


(Source: AIHW, 1998)

Detection of small cancers

BreastScreen Queensland aims to maximise the detection of cancers while they are still small. Early detection results in increased survival and better treatment options for women. The rate of detection of small invasive cancers (£10mm) by BreastScreen Queensland in 1996/97 was 134 per 100,000 women screened and this compares favourably with the rates reported by the other states (Figure 2).

Figure 2: Rate of small invasive breast cancers detected per 100,000 women screened, women age 50-69 years, 1997



(Source: AIHW, 1998)

Number of new cases and number of deaths in Queensland

In Queensland, as in the rest of Australia, breast cancer is the most commonly diagnosed cancer in women, accounting for 30 percent of all new cases of cancer. In 1997, 1,848 Queensland women were diagnosed with invasive breast cancer, giving an age standardised rate of 102.3 per 100,000. In the same year, 412 Queensland women died from breast cancer, making it the most common cause of cancer death in women (17 percent of all cancer deaths). The age standardised mortality rate was 21.9 per 100,000 women.

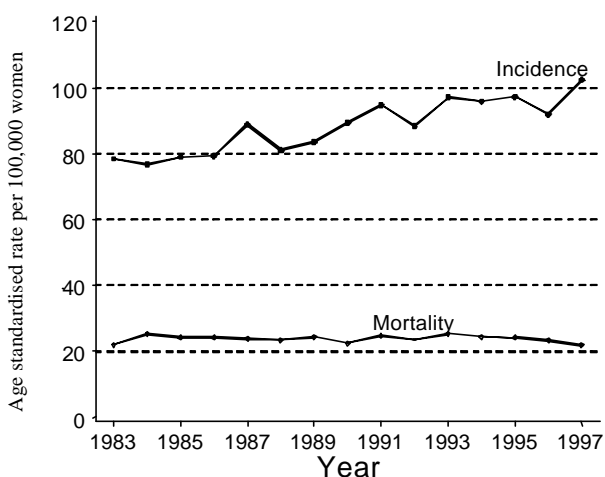
Trends in overall incidence and mortality

The incidence, that is, the rate of diagnosis of new cases of breast cancer, has been increasing in recent years. For example, between 1988 and 1997, the incidence increased by 27 percent (Figure 3).

In contrast, mortality rates for breast cancer have been stable over the last 15 years, fluctuating between 22 and 25 deaths per 100,000 women (Figure 3). An encouraging sign is that there has been a decrease in the mortality rate, albeit a small one, every year for the last four years (Figure 3). However, this could be a chance occurrence and will need to be shown for two or three more years to be confirmed as a real trend.

This pattern of increasing incidence and (probably) decreasing mortality is exactly what would be expected from a successful breast cancer screening program. Similar patterns have been observed in the other states [AIHW, 1998].

Figure 3: Breast cancer incidence and mortality, Queensland, 1983 to 1997

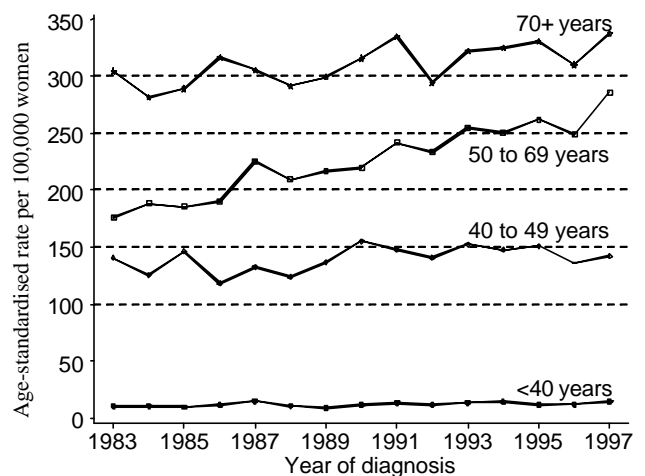


(Source: Queensland Cancer Registry)

Trends in age-specific incidence and mortality rates

Another encouraging sign is that the largest increase in incidence was in women in the target age group for the breast cancer screening program (50 to 69 years) (Figure 4).

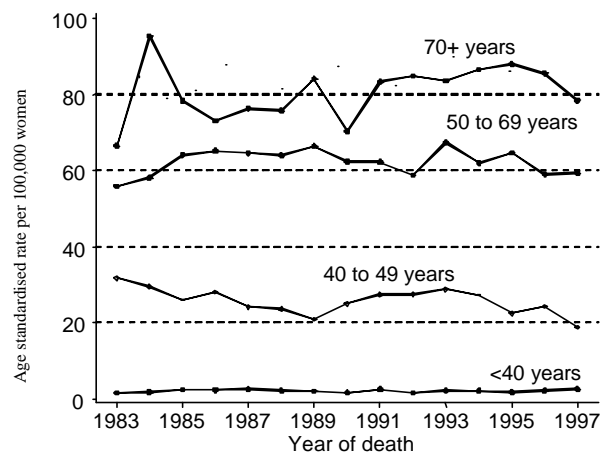
Figure 4: Breast cancer incidence by age group, Queensland, 1983 to 1997



(Source: Queensland Cancer Registry)

The age-specific rates for mortality (Figure 5) are difficult to interpret because of random variation due to small numbers. At least another two or three years of data are needed for any age-specific trend to be clearly evident.

Figure 5: Breast cancer mortality by age group, Queensland, 1983 to 1997



(Source: Queensland Cancer Registry)

Breast cancer in Indigenous Australians

There is little information on breast cancer among Indigenous women. The sparse data that are available suggest that Indigenous women are less likely than non-Indigenous women to be hospitalised for breast cancer, but are just as likely to die from breast cancer. A recent report from the Australian Institute of Health and Welfare and National Breast Cancer Centre suggested that '*this might imply that Aboriginal and Torres Strait Islander women are less likely to receive or complete treatment for their disease*' [AIHW, 1998]. The report also suggested that, for Indigenous women, breast cancer was '*less likely to be detected early because of their lower participation in the mammographic screening program*'.

BreastScreen Queensland Program

BreastScreen Queensland Services are located throughout the State and provide free high quality breast cancer screening to women aged 40 years and over. For further information or to make an appointment for a breastscreen call 13 20 50.

(The 1991 Australian Standard Population was used to age standardise the incidence and mortality rates in this circular)

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