

## Frequently Asked Questions

### What is the purpose of a population based breast screening programme?

The aim of a population based breast screening programme is to reduce deaths from breast cancer.

### How common is breast cancer in New Zealand?

Breast cancer is the commonest cancer in women in developed countries and is the leading cause of non-tobacco related cancer deaths for New Zealand women. In 2012, 3025 women were diagnosed with breast cancer (almost 30% of all new female cancer cases) and 617 women died of the disease<sup>1</sup>. Breast screening does not prevent the development of cancer, but rather can detect the disease at an earlier stage. Early detection can reduce deaths from cancer and can reduce the amount of treatment needed.

### When did the organised population-based breast screening programme start in New Zealand?

BreastScreen Aotearoa (BSA) started screening eligible New Zealand women aged 50 to 64 years in December 1998 after two successful pilots. In 2004, the eligible age range was extended to 45 to 69 years. Free breast screening is provided every two years to eligible women.

### Why have you done this study?

There is strong evidence from international randomised controlled trials that organised breast screening can reduce the rate of breast cancer deaths, if the target coverage (percentage of eligible women who actually take part in screening) of 70% is achieved. It is important to assess whether BSA, New Zealand's established screening programme, is achieving the main benefit of breast screening, which is the reductions in mortality from breast cancer reported in international trials. This study was carried out to evaluate breast cancer outcomes occurring among women screened in the BSA programme, compared to those who were not.

### What use are these findings?

The findings of this study enable us to show evidence of the effectiveness of the BSA programme in New Zealand. It is important to know that the programme is effective in reducing the rate of death from breast cancer. Also, detecting breast cancer earlier, when tumours are smaller and less likely to have spread, will reduce the burden of treatment for most women.

### How did you track the outcomes for women?

The overall study is made up of two separate studies. One study (a cohort study) looked at all women in New Zealand who were eligible for breast screening from 1999 to 2011. The other study (a case control study) provided a means of comparing

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<sup>1</sup> Ministry of Health. 2015. Cancer: New registrations and deaths 2012. Wellington: Ministry of Health.

and validating the results from the cohort study. An analysis was also undertaken using only those women in the cohort known to be diagnosed with breast cancer to compare the differences at diagnosis between screened and unscreened women.

Both studies were deliberately included to make sure that all of the evaluation questions could be answered. A separate benefit was that findings could often be checked between the studies. Both study types have weaknesses and finding similar results through different methods can provide reassurance and confidence in the results.

#### How do these results compare with overseas findings?

The results of the New Zealand breast cancer mortality study are consistent with the results of similar studies that have been carried out overseas.

#### Does this study show that screening and finding cancer earlier actually results in a better outcome?

Yes, this study shows that organised population based breast screening in New Zealand reduces the rate of breast cancer deaths by approximately a third among women screened, compared with those who have never been screened. For women who take part in regular screening, there is an even greater reduction in rate of death from breast cancer.

#### Does it tell an individual woman their chance of surviving breast cancer if they are screened?

No, this study does not report on the chance of survival for individual women. This is a population based study, which means that the results relate to the New Zealand population of women screened, not to the outcome for any individual woman. An individual woman's breast cancer survival is predicted by factors such as the size, grade and spread of her breast cancer, as well as other factors. New Zealand women can have confidence that taking part in organised breast screening improves their chances of early detection of breast cancer.