

Has mammographic screening delivered the expected mortality benefits for Queensland women?

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Aims

To assess the impact of mammographic screening during the period 2000 to 2005 on invasive breast cancer mortality among Queensland women.

Methods

This population based, retrospective study included females aged 50-65 without a prior history of breast cancer who were registered on the Queensland electoral roll in the year 2000 (n=263,259).

Data obtained from the Electoral Commission of Queensland (ECQ) was matched with screening data from BreastScreen Queensland (BSQ), and the Wesley Breast Screening Clinic (WBC). Death data for this study population was sourced from the Queensland Oncology Repository (QOR).

The screening behaviour of study participants during the years 2000 through 2005 was observed and participants were separated into screened and non-screened cohorts based on their attendance for mammography during this period. Women still alive at 1 January 2006 were included in the analysis and follow-up continued until 31 December 2013.

Survival analysis was conducted with breast cancer death as the outcome of interest and results were adjusted for age, socio-economic status, remoteness of residence and indigenous status.

Results

Matching ECQ data with screening data identified 189,712 women who had at least one mammographic screen during the observation period 2000 to 2005 (Cohort 1) and 73,547 women who had no contact registered with either screening service during the same period (Cohort 2).

Study participants who died from any cause (n=5,418) prior to commencement of follow-up in 2006 were removed from the study.

Cumulative breast cancer mortality after eight years follow-up was 0.51% among unscreened women and 0.26% in screened women. After adjusting for demographic factors, breast cancer mortality was 61% lower in the screening group.

Conclusions

The estimated breast cancer mortality reduction in Queensland women aged 50-65 attributable to screening in this study is higher than results reported previously within Australia and elsewhere.