Annual mammographic screening to reduce breast cancer mortality in women from age 40 years: long-term follow-up of the UK Age RCT

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Declared competing interests of authors: Peter Sasieni is a member of the National Institute for Health Research (NIHR) Clinical Trials Unit and Policy Research Unit and reports grants from the NIHR. Sue Moss reports grants from the Department of Health and Social Care, Cancer Research UK, the Medical Research Council, the Health Technology Assessment programme, the National Cancer Institute and the American Cancer Society during the conduct of the study.

Published October 2020
DOI: 10.3310/hta24550

Plain English summary

Long-term follow-up of the UK Age RCT
Health Technology Assessment 2020; Vol. 24: No. 55
DOI: 10.3310/hta24550

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Plain English summary

It is known that breast cancer screening with mammography (i.e. X-ray of the breasts) in women aged ≥ 50 years leads to a reduction in the number of deaths from breast cancer. In the UK, the NHS Breast Screening Programme offers regular screening to women aged 50–70 years. There is still some disagreement about the effect of such screening on the risk of death from breast cancer for those aged 40–49 years. There is also concern about overdiagnosis, that is, the finding of breast cancer that would not have been diagnosed in a woman’s lifetime if she had not been screened.

This study recruited 160,921 women aged 39–41 years and randomly assigned one in three of the women to be offered annual mammographic screening from age 40 to 48 years. The women were followed up for occurrence of breast cancer, death from breast cancer and death from all other causes.

We found that the women who were offered the screening were 25% less likely to die of breast cancer in the first 10 years in the trial. This mortality reduction was reduced with later follow-up, with a 12% reduction after an average of 23 years. There was no effect of offering screening on death from other causes.

During the early years of the trial, the women offered screening had larger numbers of breast cancers diagnosed, but this excess disappeared after the first National Programme screen. This suggests that there is no overdiagnosis from screening those aged 40–49 years over and above that which already results from screening those aged ≥ 50 years.
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This report

The research reported in this issue of the journal was funded by the HTA programme as project number 10/57/55. The contractual start date was in July 2012. The draft report began editorial review in August 2019 and was accepted for publication in May 2020. The authors have been wholly responsible for all data collection, analysis and interpretation, and for writing up their work. The HTA editors and publisher have tried to ensure the accuracy of the authors’ report and would like to thank the reviewers for their constructive comments on the draft document. However, they do not accept liability for damages or losses arising from material published in this report.

This report presents independent research funded by the National Institute for Health Research (NIHR). The views and opinions expressed by authors in this publication are those of the authors and do not necessarily reflect those of the NHS, the NIHR, NETSCC, the HTA programme or the Department of Health and Social Care. If there are verbatim quotations included in this publication the views and opinions expressed by the interviewees are those of the interviewees and do not necessarily reflect those of the authors, those of the NHS, the NIHR, NETSCC, the HTA programme or the Department of Health and Social Care.

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