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Stable incidence of advanced breast cancer argues against screening effectiveness

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Swedish trials on mammography screening of women aged 40-74 years indicated that two to four rounds of screening could significantly reduce the risk of being diagnosed with and dying from advanced breast cancer.1 Because stage at diagnosis is independent of treatment efficacy, the trials concluded that the introduction of screening in general populations would be reflected by a reduced incidence of advanced breast cancer and mortality from breast cancer.1

However, De Glas and colleagues show that mammography screening of Dutch women aged 70-74 years has only a modest influence on the incidence of advanced breast cancer.2 US, Australian, and European studies in communities with a long history of screening and a high participation rate, where women have attended more screening rounds than in the Swedish trials, report similar findings for advanced breast cancer, including very large or metastatic cancer.1-3 The quasi stable incidence of advanced breast cancer over time is not compatible with screening having a major role in the reductions in breast cancer mortality seen in most high income countries.

This situation contrasts sharply with that seen for colorectal and cervical cancer screening. Marked declines in the incidence of advanced forms of both these cancers, as well as mortality, are seen where screening is widespread, which agrees with results of randomised trials.4-7 For breast cancer, the discrepancies between trial results and epidemiological data can probably be explained by the Swedish trials overestimating reductions in the risk of advanced cancer and of cancer death associated with mammography screening.

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