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Does breast cancer screening level health inequalities out? A population-based study in an Italian region.

Pacelli B, Carretta E, Spadea T, Caranci N, Di Felice E, Stivanello E, Cavuto S, Cisbani L, Candela S, De Palma R, Fantini MP.

Abstract

BACKGROUND

Although population-based screening has the potential to reduce inequalities in breast cancer survival, evidence on this topic is controversial. The objective of this study was to evaluate whether the full implementation of a mammography screening programme in Emilia-Romagna in Italy had an impact on variations in breast cancer survival by educational level.

METHODS

A cohort study was performed, including all women <70 years and residing in Emilia-Romagna who had infiltrating breast cancer registered in 1997-2000 (transitional screening period) or 2001-03 (consolidation screening period). Cancer cases were retrieved from the regional Breast Cancer Registry and followed up for 5 years. Educational level was determined from census data and allocated to cancer cases by individual record linkage. Age at diagnosis was classified into two groups (30-49, 50-69: screening target population).

RESULTS

A total of 9639 cases were analyzed. In the 1997-2000 period, low-educated women had significantly lower survival compared with high-educated women, both in the younger and in the older age-groups. After the full implementation of the screening programme, these differences decreased in both age-groups, until disappearing completely among women in the age-group invited to screening.

CONCLUSIONS

Our findings suggest that a fee-free population-based organized mammography screening programme with active invitation of the whole target population could be effective in reducing differences in survival in the population targeted by the screening.