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IS BREAST CANCER SCREENING A USEFUL TOOL TO TACKLE HEALTH INEQUALITIES? A STUDY IN EMILIA-ROMAGNA REGION

Introduction

Differences in survival for breast cancer related to socioeconomic status (SES) are well documented in the literature.

Breast cancer screening, even in Northern-European countries with good adherence, has not resulted in a significant reduction in these SES-related differences in survival. In Emilia-Romagna region since 2001 (with total coverage) all women aged 50-69 have been offered a proactive screening program, which includes rapid diagnostic and treatment pathways for positive cases. Average adherence is about 70%.

Objectives

To evaluate whether this screening modality reduces SES related differences in breast cancer survival.

Methods

Regional Breast Cancer Registry (BCR) was linked with Mortality Registry to determine vital status and cause of death.

BCR was also linked with Census' individual database to obtain individual SES data: 14,689 (63.3%) of eligible cases were linked and comparison between linked and not linked women was performed.

Kaplan-Meier specific 5-year survival and Cox hazard ratio (HR) were calculated separately for 3 age groups (30-49, 50-69, 70-89) and 2 incidence periods (1997-2000, 2001-2003) adjusting for age and stage.

Results

No significant difference was detected between linked and not linked women by stage and survival. Differences in survival by educational level were found in the first period in all age groups with lower values for women with low education; in the second period these differences disappeared only for women aged 50-69. Cox models confirmed these results (age group 50-69; HR [95%CI] high education vs low, first period: 0.66 [0.44-0.98]; second period 1.02 [0.55-1.89]) and highlighted a different pattern in each age group, with the youngest ones showing a persistent difference in survival even after the adjustment for stage.

Conclusions

In the current ongoing debate about the effectiveness of screening in reducing mortality, it should be noted that a screening program entailing a rapid, free pathway of diagnosis and treatment is able to level out the difference in survival for more deprived women.