The Breast Journal

LETTER TO THE EDITOR

Reducing Disparities in Breast Cancer Survival – The Effect of Large-Scale Screening of the Uninsured

To the Editor:

Mammography screening is prescribed by the U.S. Preventive Services Task Force for women at age 50–75 (1), as evidence shows that mammography screening is associated with a reduction in breast cancer mortality (2) and with limited risks and increased costs (3), while the latter might be considered high in some groups (4). Pro-active large coverage mammography screening is reported to be the best screening method for breast cancer (5). Unfortunately not all American women have access to breast cancer screening; utilization rates differ substantially within the U.S. female population (6). Lack of health insurance is reported to be the strongest predictor of screening underutilization (7).

Uninsured breast cancer patients have a lower quality-adjusted life expectancy than privately insured patients, because they are in worse overall health (8) and face higher mortality rates (9). This disparity maybe partly explained by lower access to mammography screening. This letter reports the effects of higher coverage of breast cancer screening among uninsured women and shows how improving access to health care reduces health disparities between privately insured and uninsured breast cancer patients.

We used a multi-dimensional life table for American women with breast cancer, reported earlier (10), using the POPMOD templates of the WHO (11) that include four disease stages, as defined by the American Joint Committee on Cancer (12). We applied U.S. specific demographics, epidemiology and stage distribution at presentation.

The life table calculated the quality-adjusted life expectancy for women in different age groups for insured and uninsured women, separately. Subsequently, we estimated the effect of bi-annual screening program for the uninsured. The effect of early detection was reflected in an improved initial distribution across the four disease stages. We calculated the disparity in quality-adjusted life expectancy between insured and uninsured women before and after the introduction of the screening program in absolute life years as well as the relative reduction of the difference as both are intuitively appealing to the medical profession and general public.

Figure 1 presents the results by age group. The bars show the difference in the average number of quality-adjusted life years between privately insured and uninsured women without and with bi-annual mammography screening, respectively. The curve indicates the percentage change in the difference in prognosis between the two societal groups.

The life tables estimated the health disparities between uninsured and privately insured women resulting only from differences in stage distribution at diagnosis, not from the differences in treatment. Providing breast cancer screening to uninsured women reduces the extra burden of breast cancer substantially, to the level comparable to those in the better-off group of privately insured women. The largest reduction of disparities in breast cancer survival would occur in younger women and can be over 50%. The costs of introducing more targeted breast cancer screening itself per woman would be about the same in all groups and do not relate to stage distribution. Leading to higher health gains, this would mean that screening is potentially most cost-effective among the most deprived and younger women.

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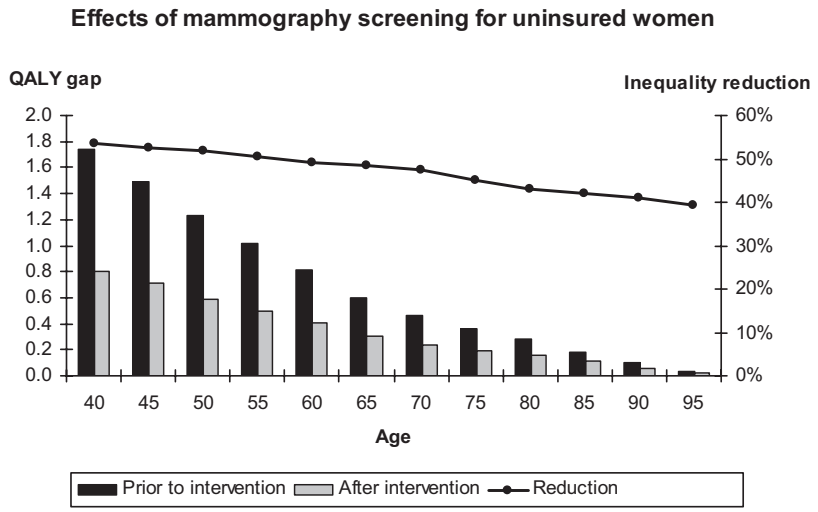

Figure 1. Difference in quality-adjusted life expectancy between privately insured women and uninsured women without and with large-scale screening. Effects of mammography screening for uninsured women.

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