

Study involving large number of women shows early mammography screening lowers risk of developing fatal breast cancer

A recently published analysis of more than half a million women in Sweden reveals that mammography screening reduces the rates of advanced and fatal breast cancers [1].

Although randomized trials and incidence-based mortality studies of service screening programs have demonstrated a substantial reduction in breast cancer mortality associated with invitation to and participation in mammographic screening, measuring the effect of mammography screening on breast cancer mortality in observational studies suffers from a methodological challenge. This is because in such studies, mortality data apply to cancers diagnosed and treated during many previous years, during which participation in screening and exposure to various therapies may be different from those prevailing in the year of death.

A recently described analytic strategy [2] addressed this methodological problem by adopting a new endpoint: the incidence of breast cancer becoming fatal within 10 and 20 years after diagnosis. In this analysis, the determinants of death from breast cancer, exposure to mammography screening and breast cancer treatment, belong to the same time period. The new approach was first applied to the data from a single county in Sweden and enabled the estimation of changes during discrete time periods in women participating or not participating in screening [2]. A 60% lower incidence of breast cancer that was fatal within 10 years was observed in women participating in screening compared with women not participating in screening.

The group of researchers decided to extend this study to a much larger population, namely in women who reside in nine Swedish counties and who were eligible for screening and. The aim of the newly published study was to determine whether a similar decrease in the incidence rate of breast cancers that were fatal within 10 years after diagnosis would be observed, as well as to determine whether the incidence rate of advanced breast

cancer in women participating in mammography screening would also be reduced.

The enlarged study was performed using data from a population of greater than one-half million women aged 40 to 69 years. This population accounts for approximately 30% of all screening-eligible women in Sweden.

The team found a 41 percent reduction in cancers that were fatal within 10 years after diagnosis and a 25 percent reduction in the incidence of advanced breast cancer in women who participated in screening.

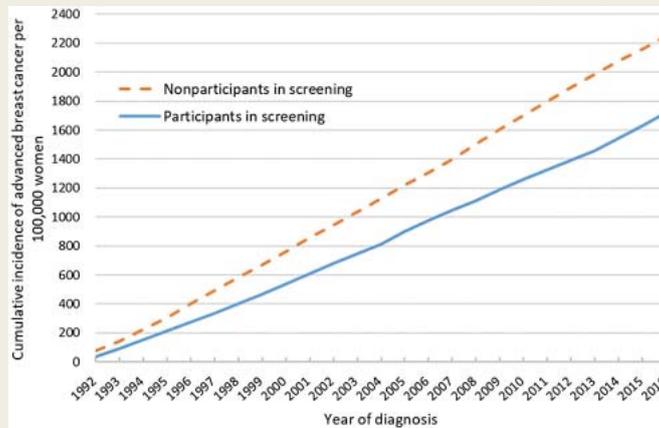
“This study shows that participation in breast cancer screening substantially reduces the risk of having a fatal breast cancer. Because the comparison of participating with non-participating persons was contemporaneous — with mammogra-

phy screening and breast cancer treatment belonging to the same time period — t is not affected by potential changes in treatment of breast cancer over time,” said joint co-author Stephen W Duffy.

Dr. László Tabár, the other joint lead author, stressed that participating in breast cancer screening confers a reduced risk of dying from breast cancer above and beyond what is obtainable with current therapies in the

absence of screening. *“Some may believe that recent improvements in breast cancer treatment makes early detection less important,”* he said. *“Our study shows that nothing can replace finding breast cancer early.”*

The researchers concluded that the benefits of participating in mammography screening are truly substantial and save lives through early detection, lives that otherwise would have been lost under the prevailing therapy at the time of diagnosis.



Cumulative incidence of advanced breast cancer for all nine Swedish counties combined.. Graph reproduced from Duffy et al. [1].

“...Some may believe that recent improvements in breast cancer treatment makes early detection less important....our study shows that nothing can replace finding breast cancer early....”

Dr. László Tabár,
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