

Efficacy of disease management profiles. The mammographic screening program of Lazio

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ABSTRACT

Background. Screening programs are considered *disease management* profiles. The aim of the present study was to evaluate the efficacy of screening programs compared to regularly offered health care services, using early outcomes and process indicators.

Method. In the study period (1/7/99-30/6/01), six breast cancer screening programs were active in 12 health districts in the Lazio region of Italy. Screening histories of all the incident cases of women surgically treated for a breast neoplasm were reconstructed (not contacted, contacted, non-participants, participants). The subpopulations were then compared for the appropriateness of treatments received.

Results. We identified 3251 women who were treated for malignant neoplasms of the breast and 1562 treated for benign neoplasms. The incidence of malignant neoplasms was higher in the women contacted for screening (incidence rate ratio, 1.45; 95% CI, 1.32-1.60), and the incidence of treatment for non-malignancies was similar in the two populations (incidence rate ratio, 1.00: 95% CI, 0.86-1.16). The percentage of surgery for non-malignancies detected by screening was 16.7%, whereas among the cases diagnosed outside a screening program it was 33.8%. Of malignancies detected outside of screening, 16.6% had a surgical treatment that was too invasive, among the screen-detected malignancies the percentage fell to 11% (prevalence rate ratio, 0.66; 95% CI, 0.48-0.91). Women contacted for screening showed a higher incidence of localized and *in situ* tumors, whereas the incidence of non-localized and metastatic tumors was basically the same in the two groups.

Conclusions. The first round of screening programs led to more surgical interventions, a similar incidence of mastectomy and of interventions for benign neoplasm, but a lower incidence of unnecessary treatment.

Key words: breast cancer, mammography, opportunistic screening, overtreatment, screening.

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