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The *CMAJ* articles on the NBSS have stimulated marked controversy and yielded no new information. The earlier detection of breast cancer by mammography than by physical examination had been documented previously.¹ Unexpected was the lack of a reduction in death rates for women over the age of 50 years, when such a reduction had been well demonstrated before.^{1,2}

There are one or more possible explanations. The follow-up period of only 2 years after completion of the study is too short. For example, the reduction in death rates in the group aged 40 to 49 years in the HIP study was not shown until after 7 years of follow-up.¹ The stated follow-up of 7 years since initiation of the NBSS is probably an overestimate, since four of the centres did not open until 1984 and the cutoff for linkage with the Canadian Mortality Database was given as Dec. 31, 1988. The second reason is the documented poor mammography technique.^{3,4}

Also, the statistical power is limited, in that only 44 925 women underwent mammography, whereas the Breast Cancer Detection Demonstration Project (BCDDP)⁵ and the Swedish Five-County Study⁶ each included more than 280 000 women. The latter demonstrated a reduction after mammography in the rate of death due to breast cancer that was similar to that found in the HIP study.⁷

A further contributing fact may be that a large number of symptomatic women, even those with breast lumps, were permitted to participate in the NBSS; in nearly all the classic studies of mammography screening, women with symptoms underwent diagnostic mammography, and screening implied mammography of asymptomatic volunteers. Inclusion of symptomatic women in the NBSS, however, did not afford many of them (particularly those under the age of 50) the advantage of early detection of small cancers with no involvement of axillary lymph nodes. The incidence of and the rate of death from cancer were lower for the women who entered the BCDDP for routine screening than for the women who entered because of their concern about breast disease or at a physician's recommendation.⁵

The cancer detection rates in the NBSS were similar to those obtained in the screening of asymptomatic women. The inclusion of symptomatic patients should have resulted in a much higher rate. Our experience with mammography in a mix of 55% symptomatic and 45% asymptomatic patients showed an overall detection rate for cancer of 33 per 1000.⁸ The relatively low detection rate in the NBSS again raises the question of poor mammography technique.

There is no evidence from the NBSS at this time to alter the recommendation for screening with mammography and clinical

examination all women aged 40 years and over.

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With reference to cancer of the breast and the NBSS, the premise is that early diagnosis will lead to better outcomes and fewer deaths.

The results confirm previous findings that mass screening for women under 50 years does not contribute to better outcomes and for those over 50 contributes marginal benefit.

The reaction has been predictable: outrage and protestation by special interest groups and accusations that the study is flawed — an accusation frequent-