



Value of Screening Mammography

For years, mammography has been widely accepted as the gold standard for breast cancer screening. In 2000, a Cochrane review challenged the value of screening mammography stating there was no reliable evidence that breast cancer screening reduced mortality. Other imaging modalities, such as ultrasonography and MRI, are being considered for screening; however, currently they are utilized only in specific patient populations or clinical trials. In addition to screening controversies, there are numerous questions about the most effective way to biopsy a suspicious lesion. Once a breast abnormality is discovered, numerous diagnostic modalities exist. Image-guided interventional procedures offer high accuracy for the diagnosis of nonpalpable suspicious lesions, generally without any lasting postprocedure changes on follow-up mammography.

MAMMOGRAPHY IN WOMEN UNDER AGE 50

"Women and their physicians continue to be misled into believing that the age of 50 has some biological significance. There are no data to support this contention. Analyses perpetuate the myth by combining data for all women aged 40-49 as if they are a uniform group, and then comparing them to the combined data for all women aged 50 and older, as if they are a uniform group. Results that actually change steadily with older age are made to appear to change abruptly at the age of 50. Two reports by F Alexander and colleagues and the UK Trial of Early Detection of Breast Cancer Group suggest that screening of women aged 40-49 years is at least as effective as is that for women over 50 years."

—Kopans DB. *Lancet* 1999;354:946.

I believe it is close to criminal to offer mammographic screening to women under 50 in the United States. The latest Canadian trial results published in *Annals of Internal Medicine* in September do not demonstrate an advantage in breast cancer mortality. In fact, there is an excess mortality from breast cancer in women under 50 for the first 10 years of the study. This excess mortality in the early years has been also noticed in the overviews of the screening trials as well.

—Michael Baum, ChM, FRCS

MAMMOGRAPHY IN WOMEN OVER 50

"There is no evidence that clinical examination, breast ultra sonograph, or teaching self-examination of the breast are effective tools for early detection. However, randomised controlled trials have shown that screening by mammography can significantly reduce mortality from breast cancer by up to 40% in those who attend. The benefit is greatest in women aged 50-70 years. Published data from the combined Swedish trials showed an overall reduction in breast cancer mortality of 29% during 12 years of follow up in women aged over 50 who were invited for screening."

—Blamey RW et al. *BMJ* 2000;321(7262):689-93.

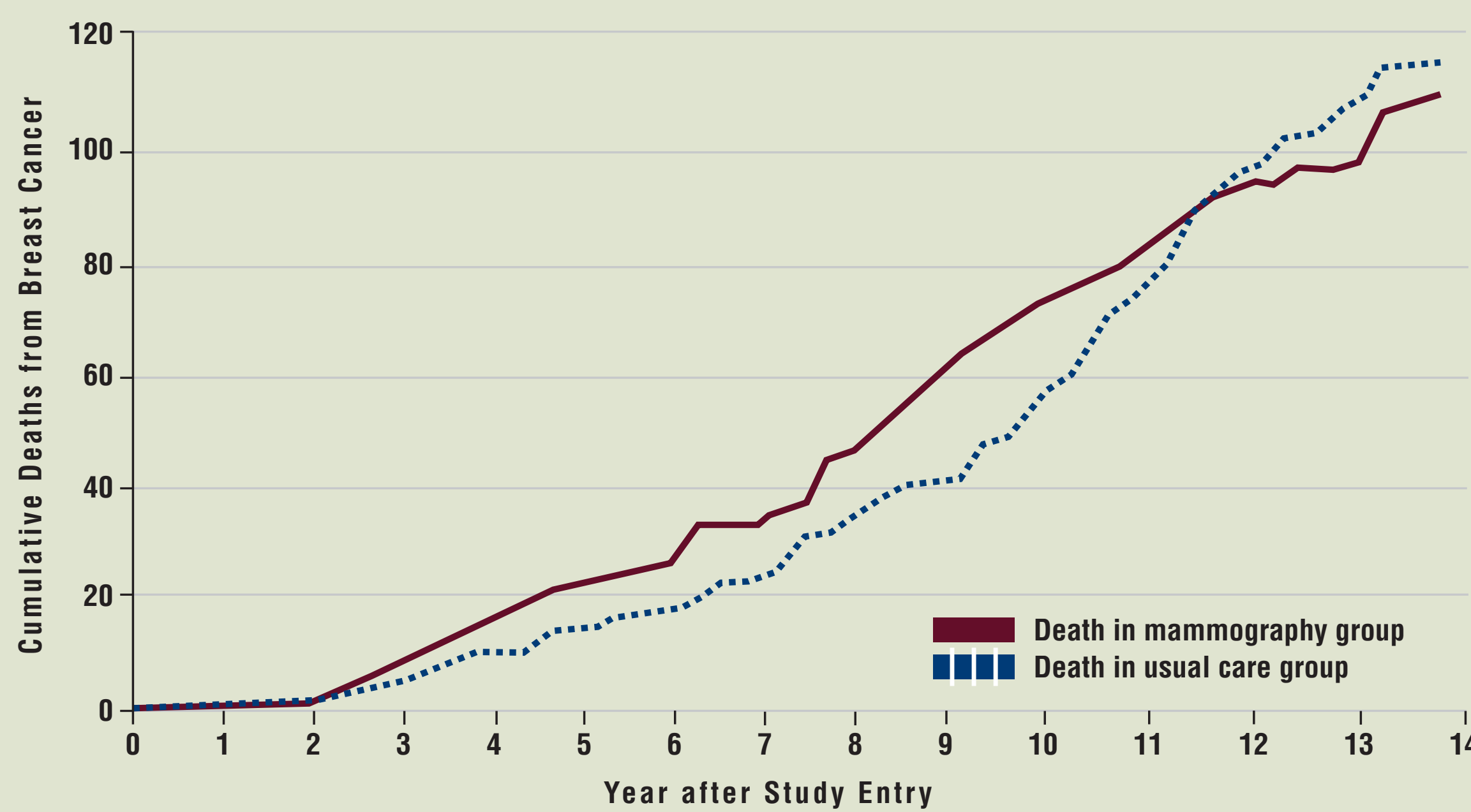
My argument against screening women over 50 is not that it has no effect, but that we are disingenuous in the way we invite women to be screened. I passionately believe that women should make an informed choice. We tell women that screening will save their lives and reduce their risk of dying by 20%. In absolute terms, we have to screen 1,000 women for 10 years to save one life — one in a thousand. If we told women truthfully, "If I screen you for 10 years, you will have one in a thousand less chance of breast cancer death, but a significant risk of over-diagnosis, false alarms, health insurance issues, unnecessary biopsies and detection of duct carcinoma *in situ*, which never would have troubled you," many women would refuse it.

—Michael Baum, ChM, FRCS

"In 2000, we reported that there is no reliable evidence that screening for breast cancer reduces mortality. As we discuss here, a Cochrane review has now confirmed and strengthened our previous findings. The review also shows that breast cancer mortality is a misleading outcome measure. Finally, we use data supplemental to those in the Cochrane review to show that screening leads to more aggressive treatment...We have provided detailed evidence on the mammography screening trials, and hope that women, clinicians and policy-makers will consider these findings carefully when they decide whether or not to attend or support screening programmes. Any hope or claim that screening mammography with more modern technologies than applied in these trials will reduce mortality without causing too much harm will have to be tested in large, well-conducted randomised trials with all-cause mortality as the primary outcome."

—Olsen O, Gøtzsche PC. *Lancet* 2001;358(9290):1340-2.

MORTALITY IN WOMEN AGES 40-49 WITH AND WITHOUT MAMMOGRAPHY



REPRINTED WITH PERMISSION: Miller AB et al. The Canadian National Breast Screening Study-1: Breast Cancer Mortality after 11 to 16 Years of Follow-up. A randomized screening trial of mammography in women age 40 to 49 years. *Annals of Internal Medicine* 2002;137(5):305-315.

CLINICAL RESEARCH BACKGROUND

ALL-CAUSE MORTALITY IN MEDIUM-QUALITY SCREENING TRIALS AFTER 13 YEARS

STUDY	SCREENED		NOT SCREENED		RELATIVE RISK* (95% CI)
	# of Deaths	# of Women	# of Deaths	# of Women	
Malmö 1976	2537	21088	2593	21195	0.98 (0.93-1.04)
Canada 1980a	418	25214	414	25216	1.01 (0.88-1.16)
Canada 1980b	734	19711	690	19694	1.06 (0.96-1.18)
Subtotal	3689	66013	3697	66105	1.00 (0.96-1.05)

*Fixed effects model

ADAPTED FROM: Olsen O, Gøtzsche PC. *Lancet* 2001;358(9290):1284-5

ACRIN-6652: SCREENING AND DIAGNOSTIC STUDY OF DIGITAL MAMMOGRAPHY VERSUS SCREEN-FILM MAMMOGRAPHY IN THE DETECTION OF BREAST CANCER IN WOMEN OPEN PROTOCOL

PROJECTED ACCRUAL: 49,500 patients

Eligibility Asymptomatic women without breast implants presenting for screening.

Protocol: All patients undergo a two-view digital and a two-view screen-film mammography of each breast. Quality of life assessments are performed in the first 800 patients before mammography screening and 1200 (600 with positive screening results and 600 with negative screening results) after screening.

SELECT PUBLICATIONS

Baltic S. Analysis of mammography trials renews debate on mortality reduction. *J Natl Cancer Inst* 2001; 93:1678-9.

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Marcy PY et al. Medical complications and medical legal pitfalls concerning interventional radiological procedures on the breast. *Bulletin du Cancer* 2001;88(12):1159-1166.

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Olsen O et al. Quality of Cochrane reviews: Assessment of sample from 1998. *BMJ* 2001;323(7317):829-32.