

Health Letter

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What's New In Screening Mammography

For years, debate has raged over screening mammography—whether it works and, if so, for whom. Major medical groups have widely divergent recommendations for patients. The American Cancer Society recommends annual x-ray breast examinations for all women beginning at age 40, while the government's Preventive Services Task Force suggests 50 as the starting age, continuing only through 69. Public Citizen's Health Research Group has long held that there is insufficient evidence to recommend annual mammography for average risk women under the age of 50 but has previously supported screening mammography in women 50 or older. We have also endorsed annual manual examinations by a health professional for women 40 or older.

Most experts would not hesitate to recommend mammography for high risk women. Factors conferring increased risk for breast cancer include a first-degree relative with a history of breast cancer, a positive test for the genes BRCA-1 or BRCA-2, a history of estrogen replacement or more than 10 years of oral contraceptive use, and first pregnancy after the age of 30. The earliest debate, then, has focused on low-risk women, particularly those under 50.

There have been several attempts by the National Institutes of Health to establish guidelines for screening by convening so-called Consensus Conferences. The most recent was in 1997, when a 13-member panel heard testimony from 32 experts and concluded that no data supported routine screen-

ing for women under 50. This conclusion aroused such an outcry from radiologists, other physicians, and lay persons that the U.S. Senate voted 98-0 that the National Cancer Institute's National Cancer Advisory Board, which helps set U.S. cancer policy, should ignore the panel's conclusions. The Advisory Board duly knuckled under.

The debate just got wider and hotter. On October 20, 2001, *The Lancet*, a well-respected British medical journal, published the results of a rigorous analysis of the seven randomized, controlled clinical trials of mammography that have been done world-wide. Randomized, controlled trials are the best way of determining whether an intervention is effective, because each patient is equally likely to be assigned to the screened or unscreened group. In the *Lancet* analysis, the authors com-

bined the results of all seven randomized, controlled trials using a statistical technique called meta-analysis. The *Lancet* paper carries so much weight because the authors are part of the Cochrane Collaboration, which provides the most comprehensive and authoritative meta-analyses in a number of fields of medical importance. The authors' main conclusion: "there is no reliable evidence that screening for breast cancer reduces [overall] mortality." Once again, the gloves are off.

The data from the Cochrane group's meta-analysis are summarized in the table on page 2.

The data show that, after 13 years, there is some evidence of a benefit in terms of reducing mortality due to breast cancer, but this is true only for women over 50 years of age and is

continued on page 2

C O N T E N T S

Product Recalls

November 8—December 5, 2001
Hand lotion, beds and shoes are on our list this month. 3

Clearing the Smoke from Low-Tar and Nicotine Cigarettes

A new study by the National Cancer Institute shows what we probably already knew—that these cigarettes don't help anyone but the tobacco companies. 7

Health Letter Volume Index 2001 and Cumulative Index..... 8

Outrage of the Month

Oops—Did It Again (or, Escondido in Escondido)

Somebody needs to teach surgeons in this California hospital to count how many retractors and surgical sponges they start with and how many they finish with! 16

MAMMOGRAPHY SCREENING,

from page 1

driven by the results of poor quality studies. There is no evidence of benefit for women of any age in terms of reducing total mortality.

Unfortunately, even within the Cochrane Collaboration, there has been controversy. While the Cochrane Breast Cancer Group editors agreed with the reviewers of the mammography study that 1) there was no evidence that mass screening mammography conferred an overall survival benefit and 2) that the evidence was inconclusive for breast cancer mortality, they disagreed on whether “mass screening leads to increased use of aggressive treatment.” Potentially, such aggressive treatment, if more dangerous but no more effective than less aggressive treatment, could result in higher mortality due to causes other than breast cancer, and thus the overall finding of no benefit on total mortality. While *The Lancet* has published the full version, the Cochrane Library omitted the statement about more aggressive therapy. An accompanying commentary by *The Lancet's* editor concluded that, “At present, there is no reliable evidence from large randomized trials to support screening mammography programs.”

Whatever the technology's merits, there can be little question that a powerful lobby is pushing screening mammography: radiologists, anti-cancer organizations, and companies that manufacture the equipment and film used in mammography. In the public realm, the fear of breast cancer is out of proportion to the reality: lung cancer kills 65,000 American women annually as opposed to 41,000 from breast cancer. Furthermore, cardiovascular disease is the leading killer of American women with 510,000 deaths each year. Yet, in a survey of 200 women younger than 50 years of age, 77 percent of respondents overestimated their probability of dying of breast cancer within 10 years by a factor of 10 or more.

In 1992, Joann Schellenback of the American Cancer Society told the *New York Times* that the Society's much touted 1 in 9 women getting breast cancer in their lifetime was “meant to be a jolt.” The 1 in 9 figure was

Results of Meta-analysis of Screening Mammography Effectiveness after 13 Years of Follow-up

	Breast Cancer Mortality		Total Mortality	
	Effect of Mammography	Statistically Significant?	Effect of Mammography	Statistically Significant?
Less than 50 years of age				
Medium quality studies	3% increase	No	2% increase	No
Poor quality studies	23% decrease	No	No change	No
Both	11% decrease	No	1% increase	No
Greater than 50 years of age				
Medium quality studies	6% decrease	No	No change	No
Poor quality studies	36% decrease	Yes	1% decrease	No
Both	24% decrease	Yes	1% decrease	No

developed by calculating a U.S. woman's cumulative lifetime risk of breast cancer between birth and age 85 (even though a woman's life expectancy, were she to be born today, is 80). Of course the risk in any one year is much lower (never greater than 0.4 percent) and only starts to rise significantly after the age of 55. Thankfully, for less advanced tumors, the 10-year recurrence-free rate after treatment is as high as 90 percent.

Many patients and physicians fail to appreciate the very real problem of false positives. One out of every 15 normal mammograms is wrongly read as a possible cancer. Also, the positive predictive value of screening mammography, or the likelihood of having breast cancer if a mammogram is abnormal, is only 5.6 percent and is rarely greater than 12 percent (this figure changes with the age of the woman and her risk profile). Women who receive false-positive mammograms are subject to adverse psychological effects, including anxiety and depression—all for naught. Long-term psychological distress after receiving a false positive result lasts up to 12 months and results in the use of more health care resources than would be used had the initial mammogram been correctly read as normal. Furthermore, recipients of false-positive results tend

to seek mental health care at significantly higher rates than those who receive normal results.

Even some of the detected abnormalities are not clinically relevant. Hence, aggressive treatment of these mammographic findings does not automatically translate into a longer life, another potential explanation for the lack of demonstrable benefit in reducing total mortality. Others may be detected later by manual examination by the physician or patient—but still not so late as to endanger the woman's life.

The efficacy of screening mammography remains controversial. The new Cochrane analysis makes the case for screening mammography in all ages still weaker. The possible benefits of screening must be weighed against the risks, such as the psychological trauma of receiving a false positive result. We maintain that screening mammography for average risk women under the age of 50 is not recommended. For older women, we now recommend that you discuss the risks and benefits of screening with your health care provider.

What You Can Do

If you are a woman at high risk, i.e.:

- Have a 1st degree relative with breast cancer.

continued on page 15

MAMMOGRAPHY SCREENING, *from page 2*

- If you are a carrier of a cancer causing genetic mutation like BRCA1, or 2.
- Have never been pregnant, or had your first pregnancy after age 30.
- Have used estrogen replacement therapy or an oral contraceptive for more than 10 years.

- Have a prior history of breast cancer.

You Should:

- Examine your breasts monthly;
- Make sure your physician examines your breasts as part of your regular gynecological examination;
- Undergo mammography annually, beginning at age 40 or sooner.

If you are a woman at average risk, you should:

- Make sure your physician examines your breasts as part of your regular gynecological examination;
- If you are under 50, do not have a mammogram;
- If you are over 50, discuss the risks and benefits of mammography with your physician.