

Casting Doubt on Mammograms

If there's such a thing as a first commandment in medicine, getting a yearly mammogram starting at age 50 is it. For decades, we've heard that by finding cancers while they're small enough to treat, the annual exam lowers the death rate from breast cancer by 30 percent. Now an analysis in the

journal *Lancet* makes a heretical claim: While mammography unquestionably detects cancer earlier, there's *no* evidence that the exam saves lives. As one might expect, reaction from believers has not been forgiving.

The faith in mammography rests on eight major studies that looked at a total of a half million women. Six of the trials

concluded that the test provides major benefits to women over age 50. Unfortunately, say Danish epidemiologists Peter Gøtzsche and Ole Olsen, an analysis of the studies shows that each of the six was seriously flawed—unlike the other two studies, which found the exam had no payoff.

Some of the errors were small but sent

up red flags nevertheless. Subjects were supposed to be randomly assigned to get either mammograms or routine care, for instance, but in one study, the women who got mammograms were, on average, five months older—suggesting that the division hadn't been truly random. Other problems were harder to overlook, such as when the mammography group had more women of a higher socioeconomic class, who are known to be at increased risk of breast cancer.

Another disturbing inconsistency was found in an earlier update on some of the studies, which concluded that mammography produced a 29 percent decrease in deaths from breast cancer. The credibility of that analysis was "greatly weakened," Gøtzsche and Olsen say, because the researchers didn't acknowledge that the death rate from all causes actually *increased* in women who got the exam.

What are we to make of all this? Not

Let's Get Personal

much, says radiologist Stephen Feig, who is president of the Society of Breast Imaging. "Gøtzsche and Olsen pretend to demonstrate that the evidence for the reduction in mortality is not real. That's not true," Feig says. "It's incredible that this could have gotten into the *Lancet*." Indeed, the recent analysis drew detailed rebuttals from scientists involved in many of the critiqued studies. For instance, the age difference of five months was a reasonable one, they said, and shouldn't cast doubt on the researchers' methods. And although the screened group in another study did have more women of higher socioeconomic class, that ought to stack the deck against mammography, not in its favor.

But many take Gøtzsche and Olsen quite seriously, only in part because they're affiliated with the so-called Cochrane Collaboration, a prestigious group dedicated to reviewing studies. "I think the concerns they raise are real ones," says epidemiologist Gordon Guyatt, who has coauthored a series of articles for physicians on how to evaluate studies. "They cast serious doubt on prior conclusions about whether the exam saves lives. But given that we've invested so much time and resources in mammography," Guyatt adds, "people don't want to hear that it might not be effective."

Biostatistician Donald Berry, who served on a 1997 panel that looked at mammography at the request of the National Institutes of Health, also believes the analysis deserves attention. "In my estimation," he says, "the problems throw the entire question of screening up in the air."

While the question hovers there, awaiting further attention from (let us hope) calm, cool, and unbiased researchers, women should keep a few things in mind.

First, the breast cancer death rate in this country has fallen—about 13 percent since 1990—though it's not clear if the decrease is due to mammography or to more effective treatments. To Phyllis Wingo, director of surveillance research at the American Cancer Society, the conclusion is inescapable: We should keep doing what we're doing.

Second, women need firmer answers about the exam. "Women and clinicians think mammography is the answer, and if you question it, you're immediately accused of terrible things—even of murdering women," says Berry. "Certainly, it makes all kinds of sense that screening would help. But is there evidence that it decreases mortality? The answer is simply not clear.

"This analysis underlines the need for something I've been asking for since the NIH panel: that researchers on these studies share their raw data. That's the biggest single step we could take toward removing some of this uncertainty."

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