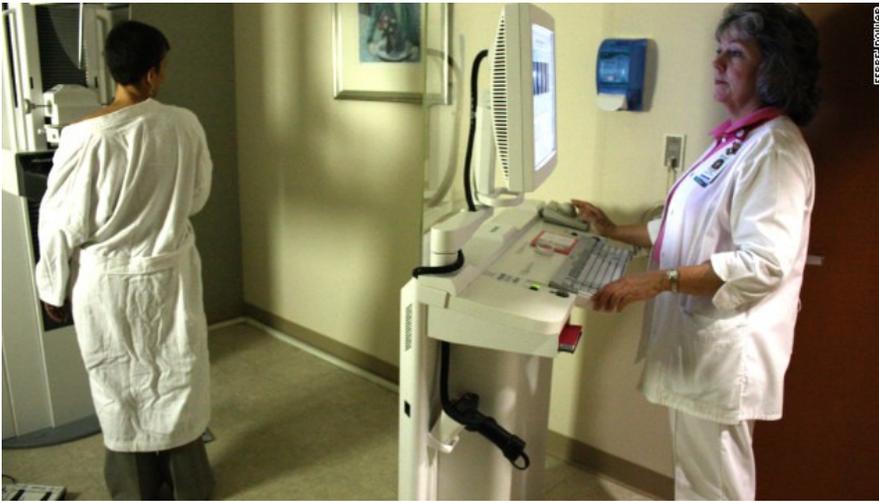


Time to debunk the mammography myth

By Gayle Sulik and Bonnie Spanier

updated 8:45 AM EDT, Tue March 18, 2014

CNN.com



Gayle Sulik and Bonnie Spanier say the benefits of mammograms are far smaller than early evidence suggested, and the hazards have been largely ignored.

Editor's note: [Gayle Sulik](#) is a medical sociologist, founder of the [Breast Cancer Consortium](#) and author of "Pink Ribbon Blues: How Breast Cancer Culture Undermines Women's Health." Follow her on Twitter: [@pinkribbonblues](#). [Bonnie Spanier](#) is a molecular microbiologist, emerita professor at the University at Albany (SUNY) and co-founder of Capital Region Action Against Cancer.

(CNN) -- Recently some friends were discussing whether early detection via

screening mammography may not be the key to surviving breast cancer. Several women argued that despite the studies, they believe in mammograms, echoing many women who were treated for a screen-detected breast cancer and are alive to tell the story. Some even support it when screening clearly failed to detect their cancers or prevent the onset of advanced disease.

For decades, belief in some version of "early detection cures breast cancer and saves lives" has shaped our view. In the 1970s, when women like Betty Ford and the late Shirley Temple Black were lifting the veil of secrecy and shame surrounding breast cancer, finding the disease "early" meant being alert to symptoms to find a tumor before it got so large it poisoned the body. In this context, it was logical to try to find tumors before they got to this point.

Today "early detection" means something very different. Now, "early" has shifted from feeling a lump to relying on a mammogram to detect a microscopic abnormality. Supporting the narrative that "every breast cancer is curable as long as you catch it in time," the focus shifted to the detection of smaller and smaller suspicious conditions by way of radiographic imaging.

A [large Canadian study with 25 years of follow-up](#) reported that annual screening mammograms did not reduce the number of cancer deaths any more than clinical exams and health care among the nearly 90,000 women ages 40 to 59 who took part. In fact, they contributed to harm.

When the study was released, the circling question was not: Was the study relevant, the design rational, the findings contextualized? Some radiologists even said the results were [because of outdated equipment or even cheating](#). But staying within the realm of opinion rather than analysis, the question for many was simply: Do you believe this finding?

Consider DCIS (ductal carcinoma in situ). They can't be found by manual breast exams. They are highly localized and among the tinier suspicious cell clusters and were rarely found before mammogram screening. [New cases of DCIS went from 5,000 in 1983 to more than 54,000 today](#), and most are treated

like full-blown cancer, with surgeries, lymph node removal and other therapies.

But the assumption that DCIS was an early expression of life-threatening cancer was inaccurate, so much so that there are [efforts to reclassify DCIS as a precancer](#). What's more, finding smaller abnormalities did not translate to a decline in more advanced disease as would be expected. With a more cautious approach, thousands of women who were told they had breast cancer might have avoided invasive overtreatment. Yet the general belief that finding the smallest abnormalities will prevent breast cancer deaths remains.

Focusing on beliefs -- mammograms always save lives -- primes us to rely on opinions that may not be based on reliable evidence. Presenting those beliefs as facts manipulates our emotions. This persuasive strategy is prevalent in health and medical advertising, celebrity spots, and health news.

Consider these trusted, but misleading, persuaders:

Susan G. Komen for the Cure often treats screening mammography as a sure thing for saving lives. [Komen's "Get Screened Now" campaign](#) compared a 98% five-year survival rate for breast cancers "caught early" to a 23% five-year survival rate for those caught late. Being alive today, or for a few years, is not the same as "not dying" from a disease. Among other errors, these misleading statistics mix apples and oranges, in this case stage zero DCIS with the most advanced cancers.

The American Cancer Society argues that [despite the limitations of screening, including documented overdiagnosis and overtreatment](#), women 40 and older should have a mammogram every year and continue to do so for as long as they are in good health.

Ignoring the mounting evidence of the limited value of screening for women of average risk, particularly for women in their 40s, the society (and radiology associations) continue to promote early detection via screening.

Health care delivery systems send false messages too. [Advertising the story of a 32-year-old woman](#) -- eight years younger than the earliest recommended age to start screening -- to spread a message that regular mammograms greatly increase survival is misleading. It sells a product, but does not necessarily deliver on the promise.

Indeed, no matter how state-of-the-art the mammography machine, technician, and radiologists are, screening mammograms miss at least 10% of invasive breast cancers -- and the worst ones. After 25 years of follow-up, the Canadian study confirmed its earlier findings that the women who received annual screening mammograms died at similar rates as the women who did not -- and far too many got unnecessary overtreatment. Truth in advertising would fully explain these caveats.

[A celebrity on prime time](#) who is being treated for a screen-detected breast cancer publicly announces that a mammogram saved her life. But regardless of when or how a "breast cancer" is identified, it is the inherent qualities of the cancer that matter most with regard to a course of treatment and the probability of a successful outcome. Yet the "I got lucky by catching it early" so "every woman should get a mammogram" message continues to spread like wildfire.

It doesn't stop there -- it is spread in campaigns by the [National Football League](#), Kohl's department store, [propane gas trucks](#) with messages on the side, pink lemonade, early detection goody bags. The false

narrative propagates in a pink ribbon marketplace.

Belief in untested assumptions is much too common. Think back to the extreme and [disfiguring Halsted "radical" mastectomy](#), which removed the breast, lymph nodes and two major chest muscles. It was standard breast cancer treatment by 1915 and remained so for nearly 100 years.

The surgery was not protocol because it saved lives, as many assumed, but because of Halsted's prestige and certainty. Scrutiny of his studies eventually revealed that Halsted's beliefs about breast cancer lacked evidence to support his claims about treatment, but randomized, controlled trials did not confirm the benefit of alternatives until the 1970s.

Eight randomized, controlled trials of mammography screening have found that the benefits are far smaller than early evidence suggested, and the hazards have been largely ignored.

Let's not wait 100 years to move beyond belief in the unequivocal power of this screening tool. We need to understand its strengths, risks and limitations and allow that understanding to inform our beliefs and our practices.

The opinions expressed in this commentary are solely those of the writers.

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