Frank words about breast screening that no-one wants to hear

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By Cornelia J. Baines MD, MSc, FACE
Professor Emerita,
Dalla Lana School of Public Health
University of Toronto

Phone: 416-978-1458
Email: cornelia.baines@utoronto.ca

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In 2010 the Canadian Breast Cancer Foundation Ontario (CBCFO) released a report on its recent consensus conference "It's About Time" focussing on earlier detection and diagnosis of breast cancer. The breast cancer screening recommendations that emerged from the conference for women at average risk are that screening should be done within an organized program and should begin at "approximately" age 40. ("Approximately" may leave wiggle room for women in their 30s to participate.) The "preferred" modality is annual digital mammography and if it is not available, film mammography is an alternative. CBCFO is campaigning for women in their 40s to be included in the Ontario Breast Screening Program. Given currently available evidence, such an initiative is less than compelling but it certainly is not surprising.

Some may remember the firestorm unleashed in November 2009 with the publication of the United States Preventive Services Task Force (USPSTF) Guidelines for Breast Screening (1). "The recommendations were loudly denounced by radiologists, breast cancer survivors, media doctors, gynecologists and politicians. Medical experts called the task force 'idiots'; conservatives lined up to denounce the report as an Obama administration plot." (2).

The American College of Radiology (ACR) declared "two decades of decline in breast cancer mortality could be reversed and countless American women may die needlessly from breast cancer each year…the guidelines are flawed, shocking and unconscionable.." (3). These protestations conveniently ignored evidence from Denmark, Norway, WHO data and the USA that breast cancer mortality has declined in the absence of screening and in women too young to be screened, due to increased awareness and improved therapy (2). The ACR received donations of at least $1 million each from GE Healthcare and Siemens AG. Both companies make mammography equipment and MRI scanners. The lobbyists leading the charge against the USPSTF 2009 guidelines in Washington included GE, Siemens and the ACR (3).

Dr. Dan Kopans, a US radiologist and screening advocate, not only assailed the 2009 USPSTF Guidelines but also wrote that those disagreeing with him are wrong: "They distort data, rely on weak science, but refuse to defend when challenged." He also claimed that "Many European countries as well as Canada do not support or at any rate do not encourage screening before the age of 50 and have lied to their populations." (4).

In fact the USPSTF produced an evidence-based document revealing that 1904 women aged 39 to 49 had to attend annual screening for 10 years to prevent one breast cancer death leaving 1903 women at substantial risk of over-diagnosis. Corresponding figures for women aged 50-59 were 1339 and 60-69, 377 (1). Twenty-five percent of screen-detected breast cancers are over-diagnosed. In contrast to the transitory disadvantages of false-positive screens, the downside of over-diagnosis is that it is life-long because of treatment and the sequelae (5). Over-diagnosis is revealed by the unchanged incidence of advanced breast cancer while the incidence of carcinoma-in-situ has been escalating (2).

Five of eight major screening trials at 13-year follow-up reveal no statistically significant breast cancer mortality reduction; two studies showing major reductions are seriously flawed. Combining trial data yields a significant 15-16 percent reduction in overall breast cancer mortality. Looking specifically at screening benefit for women age 40-49, the Swedish Overview revealed a 9 percent, the UK Age trial a 17 percent and the USPSTF a 15 percent reduction, none statistically significant. When that benefit is balanced against the 25 percent of screen-detected cancers that are over-diagnosed entailing inevitable and unnecessary treatment, mammography screening benefits are diminished (2).

A 2010 Danish study compared breast cancer death rates over the period 1971 to 2005 in 20 percent of the Danish population living in counties where breast screening was offered for about 17 years, to death rates in the 80 percent of the population in counties where no screening occurred (6).

- Surprisingly, breast cancer deaths decreased as much in screened as unscreened populations up to the age of 74. No decline was observed in women over 74.

- More surprising was that breast cancer deaths declined even in younger women who were ineligible for screening and not screened (6).

A recent overview of 30 European countries using WHO data has shown that breast cancer mortality dropped 37 percent in women under 50 years who are generally ineligible for screening, while the drop was only 21 percent in women 50-69 years who were most commonly screened. Therapy undoubtedly contributed to the reduction observed in both screened and unscreened women (2).

It's time to recognize that screening benefits are small in relation to the risks of over-diagnosis. Screening advocates have used ad hominem attacks that, although inappropriate have been very successful in dominating the screening controversy. "Survivors" testimony in support of screening has been powerful even though it is incompatible with the reality that most women with breast cancer do not die of breast cancer and with the certainty that the ones who have been over-diagnosed never will. And what the two-year-post-diagnosis "breast cancer survivors" are unaware of is the sad fact that breast cancer can kill 20 years after diagnosis. As recently observed in the New England Journal of Medicine, we should "work to prevent vested interests from being granted the loudest voices in health care…" (7). It is worth noting that three of the five member CBCFO scientific advisory committee organizing the consensus conference are active in breast imaging and a fourth, from the American Cancer Society, was a loud critic of the USPSTF guidelines (3).

It is reasonable for women to choose to be screened, but only if they are completely informed about the probability of benefit versus the probability of harm. Such information is not widely available to the general public. One concludes it is information no-one wants to hear.

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