



## To Screen or Not To Screen?

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Last November, a Canadian task force of medical professionals concluded women in their 40s at average risk of developing breast cancer should not be routinely screened with mammography. The potential harms of so-called false positives and unnecessary biopsies outweighed the potential benefits of screening in average-risk women, the Canadian Task Force on Preventive Health Care guidelines said, stoking an ongoing and contentious debate.

The task force made five additional breast cancer screening recommendations for average-risk women, including on the use of magnetic resonance imaging and breast self-exams. Three Sunnybrook staff with expertise in breast cancer care and imaging recently sat down to discuss all the recommendations.

“Women should really seek out information to find out if they really are average risk, because many women aren’t aware of the full impact, for example, of family history on both sides of the family and other risk factors that may increase their risk of breast cancer.”

Dr. Andrea Eisen, co-chair of Cancer Care Ontario’s Breast Site Group, is head of Sunnybrook’s Familial Cancer Program, which provides risk assessment of hereditary cancer syndromes to patients and their families with a focus on breast, ovarian and colorectal cancers.

“From personal experience, having had callbacks for mammograms and biopsies that turned out to be benign, it’s incredibly stressful... There are more women who have the stress that turns out to be for nothing, than there are women who actually have their cancer diagnosed.”

**Dr. Ellen Warner** is a medical oncologist at Sunnybrook's Odette Cancer Centre who led a study proving the benefits of adding MRI to mammography for screening very high-risk women. She is also the author of a recent review article in the New England Journal of Medicine on breast screening for average-risk women.

"The reason the Canadian Task Force on Preventive Health Care have taken this position is they believe the benefits of the lives saved through screening are not much greater than those harms. I disagree strongly with the recommendations."

Dr. Martin Yaffe, PhD and senior imaging scientist at Sunnybrook Research Institute, led the invention of digital mammography and is co-leader of the Smarter Imaging Program, an initiative of the Ontario Institute for Cancer Research.

## ROUND-TABLE DISCUSSION

### Breast Cancer

**What are your thoughts on the task force's recommendation on screening mammography for women who are in their 40s?**



**DR. YAFFE:** I disagree with the task force recommendations. Most women don't have breast cancer. The whole idea behind screening is that you're trying to find breast cancer in the few women who do, so there is the opportunity to save their lives through earlier treatment.

The task force looked at eight trials of screening with mammography and they pooled the data from those eight trials. Across the board they found about a 15 per cent mortality reduction from screening women in their 40s. They compared that to what they considered to be the harms of screening, including what we refer to as false positives, over-diagnosis and over-treatment.

The reason they have taken this position is they believe the benefits of the lives saved through screening are not much greater than those harms. I disagree strongly with the recommendations. First of all, the 15 per cent mortality reduction they identified is a gross underestimate because it's based on old mammography done in a time when imaging was primitive compared to what it is today. Seven of those trials were done in the 1960s, '70s and '80s. The eighth and most recent one finished just after 2000, and there, when you look at the women who actually did receive the mammography, the result was a 24 per cent mortality reduction from screening women in their 40s.



**DR. WARNER:** Treatment of breast cancer has tremendously improved. Back in the 1960s, we weren't giving adjuvant therapy to anybody. We were doing surgery and then saying good luck. Now, most women will get some kind of additional treatment, with huge benefits. And it's possible that 15 per cent mortality reduction due to screening mammography today is even less. So, we don't really know, and that's why I think that for women in their 40s it should be between the woman and her doctor to discuss the pros and the cons, and let each individual woman decide if she wants a screening mammogram.

**What does the task force mean when it refers to terms like false positives and over-diagnosis?**

**DR. YAFFE:** When screening is done two pictures are taken of each breast. Using those images, about 93 per cent of women can be told they do not have cancer. In the other seven per cent, the radiologist would like the woman to come back for additional images to make absolutely sure there is no cancer. In only about one per cent of those women screened is a needle biopsy performed, and depending on their age, one-quarter to one-third of that one per cent is found to have cancer.

So when women are called back for imaging and don't have cancer, that's called a false positive. Certainly, being recalled induces stress. But typically it's a relatively short-lived stress, and once you have the answer that stress disappears. It would probably be helpful if when women are called back they are informed that there is only about a one in 20 chance they have cancer.

**DR. WARNER:** From personal experience, having had callbacks for mammograms and biopsies that turned out to be benign, it's incredibly stressful. There are women who have an abnormal mammogram and then come back months later for an ultrasound or something else. There are more women who have the stress that turns out to be for nothing, than there are women who actually have their cancer diagnosed.



**DR. EISEN:** The other thing about over-diagnosis is the concept that maybe we're picking up latent breast cancer that would never clinically cause a problem – much along the lines of the prostate cancer screening issue, where we know there's a very high prevalence of indolent [slow-growing] prostate cancer.

**DR. YAFFE:** Part of the challenge of dealing with breast cancer once it's detected is figuring out which breast cancers are going to be the aggressive ones that really need to be treated aggressively and which ones aren't. If we could do that – and that's really the subject of ongoing research – I think it would be possible to do something

closer to “watchful waiting.”

### **What strategy should a woman in her mid-40s, with little knowledge about her breast cancer risk, take?**

**DR. WARNER:** She needs to be what we call “breast aware.” We used to recommend that women do monthly breast self-examination in a very diligent manner. Randomized trials have shown that doesn’t reduce mortality, but that doesn’t mean a woman shouldn’t be able to find lumps as early as possible. She needs to know what her breasts normally feel like, so that if something changes she can say, ‘Hey, that wasn’t there a month ago; I better go see my doctor right away.’

Plus, there are various lifestyle things women can do that are helpful: avoiding hormone replacement therapy if they go into menopause and don’t need it, minimizing alcohol consumption, exercising and keeping their weight down, especially after menopause.

**DR. EISEN:** Women should really seek out information to find out if they really are average risk, because many women aren’t aware of the full impact, for example, of family history on both sides of the family and other risk factors that may increase their risk of breast cancer. There is a program in Ontario now to start screening with mammography and MRI at age 30 for women who are at very high risk, mostly for hereditary reasons.

### **What are some benefits of early breast cancer detection?**

**DR. EISEN:** The prognosis is better and the treatment required may not be as intensive as for someone diagnosed at a later stage. At the most basic level, if you have a very large tumour you may require a mastectomy instead of a lumpectomy or breast conserving therapy. You may require chemotherapy versus no chemotherapy, or if you do need chemo you may need a more aggressive chemo regimen.

### **What impact could the mixed messaging around mammography have on breast care in Canada?**

**DR. YAFFE:** In the United States, the volume of mammography in women in their 40s has gone down, despite the fact the U.S. federal government almost instantly rejected the American task force recommendations in 2009 [that suggested screening every other year for women aged 50 to 74] Nevertheless, just because of the publicity, fewer women – not just in their 40s but for all ages – are actually getting mammograms in the U.S.

**DR. EISEN:** I think that is really a concern in general because the uptake of screening mammography, even for women eligible for the organized screening program in the over-50 category, is far from ideal. In Ontario, it’s about 70 per cent of women who are eligible that obtain routine screening mammography.

### **What about using mammography to diagnose a breast concern, such as a lump? Is there any debate?**

**DR. YAFFE:** There is no controversy whatsoever about the value of diagnostic imaging if a woman has symptoms or any kinds of signs of breast cancer. Even those who most strongly oppose screening don’t dispute that. The issue is really screening. But frequently, when the media conveys that message to the public, they will simply say something like, “Mammography not useful, experts say.”

## Early Screening: One woman's story



Susan Silverman, 62, watched with concern late last year as the debate over screening mammography was making headlines. More than a decade earlier, when the Thornhill, Ontario, resident was 48, a mammogram detected a tumour in her breast. "It showed right away," says Susan, a mother of three who has been married to her husband, Albert, for 42 years. She opted to have a mammogram after two family members were diagnosed with breast cancer in their 30s and 40s.

Further imaging and surgery followed, plus post-surgical chemotherapy and radiation at Sunnybrook, leaving Susan cancer-free to this day. At the time of her diagnosis, she was in the category the task force now says should not be routinely screened with mammography. "That's a very bad idea," she says of the recommendation average-risk women should wait until their 50s to get mammography screening. "Just like any other part of your body, you have to be on top of everything."

Susan worries about the impact the recommendation will have. She wonders if it will discourage women in their 40s from being proactive about their breast health. She also thinks the health-care system will be worse off if breast cancers are discovered later. "To save a few pennies at the front and then pay for it at the end, what are they achieving? I don't get that."

She is thankful the mammogram 14 years ago detected the cancer that might have robbed her of the chance to see her grandchildren. Susan was finishing up her breast cancer treatments in 1998 when she learned she would become a grandmother for the first time. "I said, 'I want to see this little boy grow up, and be at his bar mitzvah.'" She is getting her wish this spring.

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