

Breast cancer charity under fire for overstating the benefits of screening

August 2 2012

Professors Lisa Schwartz and Steven Woloshin of the Center for Medicine and the Media at The Dartmouth Institute for Health Policy and Clinical Practice argue that last year's breast cancer awareness month campaign by Susan G Komen for the Cure "overstates the benefit of mammography and ignores harms altogether."

Their views are published on bmj.com today as part of an occasional series highlighting the exaggerations, distortions, and selective reporting that make some news stories, advertising, and medical journal articles "not so."

A growing and increasingly accepted body of evidence shows that although screening may reduce a woman's chance of dying from breast cancer by a small amount, it also causes major harms, say the authors. Yet Komen's public advertising campaign gives women no sense that screening is a close call.

Instead it states that the key to surviving breast cancer is for women to get screened because "early detection saves lives. The 5-year survival rate for breast cancer when caught early is 98%. When it's not? 23%."

This benefit of mammography looks so big that it is hard to imagine why any woman would forgo screening. But the authors explain that comparing survival between screened and unscreened women is "hopelessly biased."



For example, imagine a group of 100 women who received diagnoses of breast cancer because they felt a breast lump at age 67, all of whom die at age 70. Five year survival for this group is 0%. Now imagine the women were screened, given their diagnosis three years earlier, at age 64, but still die at age 70. Five year survival is now 100%, even though no one lived a second longer.

Overdiagnosis (the detection of cancers that will not kill or even cause symptoms during a patient's lifetime) also distorts survival statistics because the numbers now include people who have a diagnosis of cancer but who, by definition, survive the cancer, the authors add.

"If there were an Oscar for misleading statistics, using survival statistics to judge the benefit of screening would win a lifetime achievement award hands down," they write.

But that doesn't stop people from misinterpreting survival statistics. Disturbingly, in a recent survey, the authors found that most US primary care doctors also mistakenly interpret improved survival as evidence that screening saves lives.

Mammography certainly sounds better when stated in terms of improving five year survival - from 23% to 98%, a difference of 75 percentage points, they say. But in terms of its actual benefit, mammography can reduce the chance that a woman in her 50s will die from breast cancer over the next 10 years from 0.53% to 0.46%, a difference of 0.07 percentage points.

The Komen advertisement also ignores the harms of screening, they add. For every life saved by mammography, around two to 10 women are overdiagnosed. These women cannot benefit from unnecessary chemotherapy, radiation, or surgery. All they do experience is harm.



"Women need much more than marketing slogans about screening: they need - and deserve - the facts," conclude the authors. "The Komen advertisement campaign failed to provide the facts. Worse, it undermined decision making by misusing statistics to generate false hope about the benefit of mammography screening. That kind of behaviour is not very charitable."

More information: www.bmj.com/cgi/doi/10.1136/bmj.e5132

Provided by British Medical Journal

Citation: Breast cancer charity under fire for overstating the benefits of screening (2012, August 2) retrieved 23 May 2024 from https://medicalxpress.com/news/2012-08-breast-cancer-charity-overstating-benefits.html

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