



Can mammograms help women?

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Mammograph is a diagnostic tool used to screen breast cancer in hopes that breast cancer can be detected at its earliest stage and patients can be treated early enough to increase their odds of survival.

For a long time, mammography is recommended for women aged 40 to 49 who are believed at high risk of breast cancer. However, the potential benefits and particularly the risks of the modern technology are seldom discussed with patients.

In today's issue of the *Annals of Internal Medicine*, the American College of Physicians (ACP) issued new clinical guidelines for screening mammography for women age 40 to 49, emphasizing that patients should be told of both benefits and risks of mammograms as the risk of the procedure has become evident.

But the guidelines are ambiguous, critics said, which only recommend that clinicians should help patients decide whether or not to take mammograms. The guidelines do not reveal much of real benefits and risks associated with use of mammograms in detail.

Mammograms are touted by many doctors as the best screening tool for detecting breast cancer while some urge caution. Is mammography effective enough in diagnosing breast cancer? The problems with this screening method include false positives and false negatives and the risk of radiation.

According to a Swedish study of 60,000 women, cited by newstarget.com, 70 percent of the mammographically detected tumors weren't tumors at all. 70 to 80 percent of all positive mammograms do not show any presence of breast cancer. These false positives may be responsible for the increased survival rate if any associated with mammogram screening, critics suggested.

The false positives are likely to result in unnecessary medical intervention and emotional stress. For instance, a positive resulting from mammograms is likely to lead to invasive biopsy, which could do more harm than good. In some cases, the false diagnosis could lead to loss of a healthy breast or even life.

On the other hand, mammograms have a high rate of missed diagnosis of breast cancer, resulting in false negatives, which can delay treatment and eventually lead to loss of a woman's life. Dr. Samuel S. Epstein, professor of Environmental Health Department in University of Illinois at Chicago, was cited as claiming in his book "The Politics of Cancer" that 25 percent of breast cancer cases are missed in women aged 40 to 49 when mammography is used for screening.

According to a report by newstarget.com, the rate of false negatives estimated by the National Cancer Institute (NCI) is even higher, 40 percent among women ages 40-49. Mammograms result in high rates of false negatives in younger women, whose breasts are denser, making it harder to detect breast cancer. In pre-menopausal women, the false negatives are twice as likely to occur.



In addition to the uncertainties of screening results, one thing is certain: Radiation damages breast tissue, which is very sensitive to ionizing radiations such as x-ray used in mammography. Ionizing radiations are the best studied cancer causing agent in the world and the human history and were recognized by the U.S. government as a carcinogen in 2005 although the risk has been known for decades to say the least.

The dose used in the current mammography is relatively smaller than that used in the early days such as in 1970s, about 1 rad versus 5 to 10 rads. But one exposure to the reduced dose would still increase the risk for breast cancer by one percent in women aged 35 to 50, according to Dr. Frank Rauscher, former director of the National Cancer Institute, cited by [newstarget.com](#). Some such as Russell L. Blaylock, MD, estimated that annual radiological breast exams increase the risk of breast cancer by two percent.

In the 1960s and 70s, women received 10 screenings a year without being informed of the potential cancer risk resulting from mammograms. Dr. John Gofman, a prominent nuclear scientist and physician who retired now from the University of California at Los Angeles estimated that 75 percent of breast cancer cases are related to exposure to x-ray exposure including that used in mammography and chest x-ray although he acknowledged that other factors such as diet and environment also have an effect of the overall risk.

The medical industry downplays repeatedly the risk of medical x-ray saying that compared to other cancer risks, the risk from x-ray is small, or the benefits outweigh risks. Some studies show that exposure to x-ray may be responsible only for a few percent of the total cancer risk, but sponsorship for such studies are not always clear and whether or not there is conflict of interest remains unknown.

The risk of mammograms may be greater for about 30 percent of women who carry faulty genes such as BRCA 1 and 2, according to an early study. The study of 1,600 women with BRCA 1 and 2 mutations published in the June 27 2006 issue of *Journal of Clinical Oncology* shows that these women were 54 percent more likely to develop breast cancer if they had ever had a chest x-ray. Exposure to radiation before age 20 doubled the risk of breast cancer before their 40th birthday.

Dawn Prate reported at [newstarget.com](#) that "Women Cancer research has also found a gene, called oncogene AC, that is extremely sensitive to even small doses of radiation. A significant percentage of women in the United States have this gene, which could increase their risk of mammography-induced cancer. They estimate that 10,000 A-T carriers will die of breast cancer this year due to mammography."

The incidence of ductal carcinoma in situ (DCIS), a form of breast cancer has increased by 328 percent since introduction of mammogram screening and 200 percent of the increase is allegedly caused by mammography, which raises breast cancer risk by the radiation used and pressure placed on the women's breast during the screening procedure, according to Dawn Prate. It's believed that pressure on breasts may cause existing breast cancer cells to spread to other locations.

The risk of radiation is more significant in younger women. Evidence released by the National Cancer Institute cited by [newstarget.com](#) shows that mammography would cause 75 cases of breast cancer for every 15 identified. The mortality of breast cancer in young women who received annual mammograms increased by 52 percent, according to a Canadian study, cited by Prate.

"A 1992 Canadian National Breast Cancer Study showed that mammography had no positive effect on mortality for women between the ages of 40 and 50. In fact, the study seemed to suggest that women in that age group are more likely to die of breast cancer when screened regularly." Dawn Prate reported at newstarget.com.

While there is still an ongoing debate on the medical value of mammography, evidence suggests that the screening method does not help save lives of women aged 40 to 49. For instance, a 1997 consensus panel appointed by the National Institute of Health concluded that no evidence suggests mammograms for this age group save lives and they may even do more harm than good. The panel advises that women weigh the risks when considering a mammogram.

Those who rely on screening to reduce their risk of death from breast cancer may consider alternative screening methods such as thermography and M.R.I. scan as these screening procedures are generally recognized as effective and safer tools when it comes to detection of breast cancer.

The bottom line is, a health observer with foodconsumer.org suggests, that no matter how accurate or harmless a diagnostic tool such as mammography is, these procedures are not meant to prevent breast cancer from occurring or being developed. These tools are used to find breast cancer in its earliest stage and treat the patients early, which some doctors believe help increase the odds of survival.

Those who really want to prevent breast cancer should know the real risk factors for breast cancer and eliminate the risks in their life to reduce their odds of developing breast cancer, the health observer said. He said when one was diagnosed with breast cancer, she is already in a defensive position.

Those who want to be free of breast cancer should think more about prevention than mammogram screening, he suggested.

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