

# Highlights the Importance of Breast Cancer Screening

UCSF Dept of Radiology and biomedical Engineering

<https://radiology.ucsf.edu/blog/landmark-mammography-study-highlights-importance-breast-cancer-screening>



December 26, 2018 - 6:15am

A landmark mammography study has found that women who receive annual breast cancer screenings will have a lower mortality rate and will benefit more from therapy upon diagnosis of breast cancer. The lead investigator on this study was László Tabár, MD. He and his team analyzed data from the Swedish Cancer Registry from over 52,000 women who either did or did not participate in mammography screening between 1977 to 2015; nearly 40 years. (They also used comparison data from pre-screening years of 1958 to 1976.) Researchers calculated overall annual incidences of breast cancer, breast cancer incidences resulting in mortality after 10 years and incidences resulting in mortality within 11-20 years. Overall, they concluded that “women who chose to participate in an organized breast cancer screening program” had a 60 percent lower mortality risk within 10 years of diagnosis and a 47 percent lower mortality risk within 20 years of diagnosis. The findings of this study were published in November 2018 in [Cancer](#), the official journal of the American Cancer Society.

“Such findings give more reasons why the UC San Francisco Department of Radiology and Biomedical Imaging supports annual mammography screening starting at age 40 to save more lives,” says [Bonnie Joe, MD, PhD](#), chief of Breast Imaging. “A combination of both screening *and* therapy are essential. Earlier screening leads to more effective therapy.”

To add to this discussion, a [second study](#), presented at the 2018 Radiological Society of North America (RSNA) annual meeting found that women over age 75 should continue to get annual screening mammograms, as there is a high incidence rate of breast cancer amongst this age group. This study, done by Stamatia Destounis, MD, FACR, a radiologist at Elizabeth Wende Breast Care Clinic in Rochester, New York, analyzed data from 763,256 mammography exams over ten years from 2007 to 2017. Back in 2009, the [United States Preventive Services Task Force \(USPSTF\)](#) said that there was not enough data to “assess the benefits and harms of screening mammography in women 75 years and older. Now, the debate continues.

“There is definitely a debate about what age we should stop screening,” says Dr. Joe. “This research from Dr. Destounis considers the overall health of the individual, too. If a woman 75 and older is in good health, then data show

## Research confirms mammography's role in reducing breast cancer deaths



Women who are screened regularly for breast cancer have a much lower risk of dying from the disease within 20 years of diagnosis than women who do not undergo regular screening, according to new findings published in [Cancer](#).

“Although all patients with breast cancer stand to benefit from advances in breast cancer therapy, the current results demonstrate that women who have participated in mammography screening obtain a significantly greater benefit from the therapy available at the time of diagnosis than do those who have not participated,” wrote first author Laszlo Tabar, MD, of Falun Central Hospital in Falun, Sweden, and colleagues.

Using health registries from a defined Swedish population, the team calculated both the overall annual incidences of breast cancer as well as

breast cancer incidences resulting in mortality within 10 years and within 11-20 years of diagnosis among more than 52,000 women who did or did not participate in mammography screening from 1977 to 2015. The women's ages ranged from 40 to 69 years old.

Women who chose to engage in an organized breast cancer screening program, the researchers found, had a 60 percent lower risk of mortality from breast cancer within 10 years after diagnosis than women who did not engage in regular screening. Additionally, they had a 47 percent lower risk of mortality from breast cancer within 20 years of diagnosis.

A [prepared statement](#) issued by the American College of Radiology (ACR) noted that this research confirms findings from past studies and "debunks claims that mammography screening is not a primary factor in plummeting breast cancer deaths."

"The Tabar study shows beyond doubt that therapy is far more effective when breast cancers are found earlier via mammography. Screening and therapy work hand in hand," said Dana Smetherman, MD, chair of the ACR's Breast Imaging Commission. "Annual screening starting at age 40 and therapy are vital to saving the most lives."

## Mammograms Do Save Lives, Study Shows

By Steven Reinberg

*HealthDay Reporter*

FRIDAY, Nov. 9, 2018 (HealthDay News) -- Women confused by the conflicting advice surrounding the benefits and timing of mammograms will be interested in a new study out of Sweden.

The research, involving more than 50,000 [breast cancer](#) patients, found that those who took part in a [breast cancer](#) screening program had a 60 percent lower risk of dying from the disease in the 10 years after diagnosis, and a 47 percent lower risk 20 years after diagnosis.

"This is really what we've been waiting for because there has been so much hoopla about [mammography](#) not reducing the death rate from breast cancer," said Dr. Lauren Cassell, chief of [breast](#)surgery at Lenox Hill Hospital in New York City. She was not involved with the study.

Many people have said it's better treatment, and not screening, that has improved survival, Cassell explained.

"But when you do pick up cancers earlier, patients do better," she said. "We've had a gut feeling that early detection makes a difference, and now we can prove it."

Study co-author Robert Smith, vice president for [cancer](#) screening at the American Cancer Society, said, "The advantage of screening is that it offers a woman, if she develops breast cancer, the opportunity to treat that cancer early when the treatment can be less aggressive and when she has more treatment choices."

Finding cancer in an early stage may also avoid aggressive treatments that can diminish quality of life, he added.

"[Mammography](#) today, in the setting of modern therapy, confers a substantial benefit to women who attend regular screening," Smith said. "The mortality reductions we observe are principally due to mammography detecting the most aggressive cancers early."

While the findings may seem obvious, the effect of mammograms on survival is something that's been debated in recent years.

The American Cancer Society recommends annual breast cancer screening for women aged 45 to 54, while the U.S. Preventive Services Task Force recommends mammograms every other year for women aged 50 to 74.

The task force says the evidence for earlier screening isn't convincing, but women should make that decision on an individual basis.

Part of the discrepancy is caused by how the evidence is gathered, Smith explained.

Much of the data that has gone into making recommendations came from older studies that weren't able to clearly break out the benefit of early screening on survival, he said.

Early screening finds cancers that wouldn't show symptoms for years, Smith said. Also, survival from breast cancer can get confused with improvements in treatment, making it hard to tease out the benefit of screening, he added.

For the new study, researchers were able to take advantage of highly detailed Swedish data that spanned 52 years. This enabled the researchers to look at data from the late 1950s to the early 1970s, when widespread screening didn't exist, and 39 years later, when widespread screening was available.

What's more, the data for the new study were "individualized" -- so researchers could look at the outcome of every woman in the registry who had breast cancer and whether she was screened or not. This enabled Smith's team to pinpoint the effect of screening on survival.

The researchers also were able to quantify the benefit of screening by looking at deaths after diagnosis.

"The latest study adds to the large body of literature that demonstrates early detection of breast cancer through screening programs saves the most lives," said Dr. Nicole Saphier, director of breast imaging at Memorial Sloan Kettering Cancer Center, Monmouth Regional, in Middletown, N.J.

Breast cancers in women aged 40 to 49 tend to grow faster than breast cancers in older women, she said. "This means mammography and early detection are essential in these women, when the chances of survival are highest," she added.

For the study, Smith and his colleagues collected data on more than 52,400 women aged 40 to 69 in Dalarna, Sweden. All were diagnosed with breast cancer between 1977 and 2015. All the patients received the latest treatment for their stage of cancer, regardless of how it was found.

Dr. Jay Baker is president of the Society of Breast Imaging. In a society news release, he said that, "The conclusion of this study could not be more clear -- modern treatments are important but not solely sufficient. Women who get regular screening mammograms cut their risk of dying of breast cancer by about half." The findings were published online Nov. 8 in the journal *Cancer*.

## New Study Cements Fact That Mammography is a Primary Factor in Reduced Breast Cancer Deaths

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By Staff Editor  
Nov 9, 2018 - 11:59:21 AM



(HealthNewsDigest.com) - Tabar et al — published online November 8 in *Cancer* — debunks claims that [mammography screening](#) is not a primary factor in plummeting breast cancer deaths and reinforces the long-proven fact that [Mammography Saves Lives](#)™.

The study showed that women screened regularly for breast cancer have a 47 percent lower risk of dying from the disease within 20 years of diagnosis than those not regularly screened. Ninety-five percent of all breast cancer deaths occur within 20 years of diagnosis. [\[1\]](#) [\[2\]](#) [\[3\]](#)

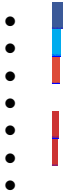
"The Tabar study shows beyond doubt that therapy is far more effective when breast cancers are found earlier via mammography. Screening and therapy work hand in hand. Annual screening starting at age 40 and therapy are vital to saving the most lives," said Dana Smetherman, MD, chair of the American College of Radiology Breast Imaging Commission.

National Cancer Institute SEER Data show that — since regular mammography use started in the 1980s, breast cancer deaths in women have fallen 43 percent. Breast cancers deaths in men — who are not screened, but get the same treatment as women — have remained virtually unchanged.

Tabar et al. results are also in keeping with large studies — such as [Otto et al.](#) and [Coldman et al.](#) — that regular mammography use cuts the risk of dying from breast cancer nearly in half. Early detection via mammography also enables women to be treated with less extensive surgery, fewer mastectomies and less chemotherapy.

"The conclusion of this study could not be more clear— modern treatments are important but not solely sufficient. Women who get regular screening mammograms cut their risk of dying of breast cancer by about half," said Jay Baker, MD, president of the Society of Breast Imaging.

The American College of Radiology (ACR) and the Society of Breast imaging [continue to recommend](#) that women start getting annual mammograms at age 40 and continue as long as they are in good health. The ACR also advises women to have [a risk assessment by the age of 30](#) to see if earlier screening is right for them.

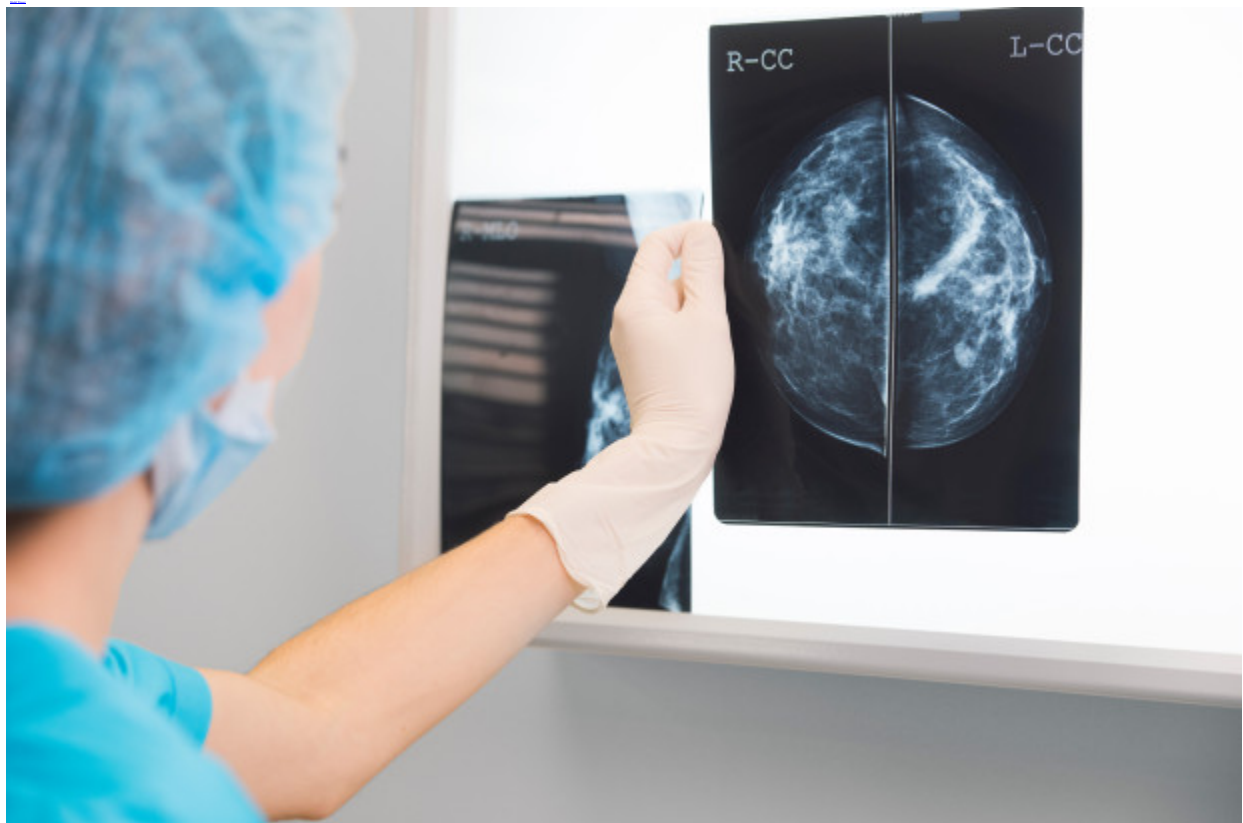


LIVING

## Breast cancer death rate drops thanks to screening, study says

By [Hannah Sparks](#)

November 9, 2018 | 2:24pm



iStockphoto

Don't skimp on breast cancer screening.

The efficacy of mammography has been called into question before, but a new study might put that debate to rest.

The findings reveal that regular mammograms contributed to a 60 percent decrease in breast cancer death during first 10 years of diagnosis, and a 47 percent reduced risk within 20 years.

The report, led by Queen Mary University of London and co-authored by the American Cancer Society, tracked 52,438 Swedish women aged 40-69 from 1977 to 2015.

The study concludes that women who are screened and treated for cancer at an earlier stage have significantly increased odds of survival.

Sure, that might sound like a no-brainer — but researchers insist the data marks a major breakthrough.

“These new results demonstrate the vital role that screening also has to play, giving women a much greater benefit from modern treatments,” says senior author Stephen Duffy in a statement, whose report appears in the American Cancer Society's journal, Cancer.

“We need to ensure that participation in breast screening programs improves, especially in socio-economically deprived areas.”

**FILED UNDER** BREAST CANCER , HEALTH

## **Women who take part in breast screening face a '60% lower risk of dying from the disease within a decade'**

- Screening detects and treats cancers at an earlier stage, researchers say
- Women also have a 47% lower risk of death within 20 years after diagnosis
- Participation needs to improve, authors of the 'groundbreaking' study said

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By [VANESSA CHALMERS HEALTH REPORTER FOR MAILONLINE](#)

**PUBLISHED:** 03:00 GMT, 9 November 2018 | **UPDATED:** 09:57 GMT, 9 November 2018

Women who take part in breast screening have a significantly greater benefit from treatments than those who are not screened, a study has found.

Those who chose to participate in an organised breast cancer screening programme had a 60 per cent lower risk of dying from the disease within 10 years after diagnosis, research led by Queen Mary University of London revealed.

The study, on more than 50,000 women, also found that 47 per cent lower risk of dying from breast cancer within 20 years after diagnosis.

Researchers said this benefit occurs because screening detects cancers at an earlier stage, meaning that they respond much better to treatment.

The research, published in the American Cancer Society's peer-reviewed journal *Cancer*, was described as 'groundbreaking' by a leading charity.





**Women who take part in breast screening have a 60% lower risk of breast cancer death in first 10 years, than those who are not screened, a study by Queen Mary University, London, has found**

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Women in England between the ages of 50 and 70 are currently automatically invited for breast cancer screening every three years, with their final invitation between their 68th and 71st birthday.

The screening programme is run by Public Health England and tests are carried out by NHS hospitals.

But the number of women taking up the invitation has fallen to the lowest level in a decade, with participation rates averaging at more than 70 per cent.

The numbers of participation varies dramatically across the country, with lower rates in poorer, inner-city areas.

Senior author Professor Stephen Duffy, of Queen Mary University of London, said: 'Recent improvements in treatments have led to reduced deaths from breast cancer.

'However, these new results demonstrate the vital role that screening also has to play, giving women a much greater benefit from modern treatments.

'We need to ensure that participation in breast screening programmes improves, especially in socio-economically deprived areas.'

The study involved 52,438 women aged 40 to 69 years in the county of Dalarna, Sweden, during 39 years of the screening era (1977-2015).

The screening process is overseen by Public Health England, which uses an IT system to send out invitations.

All patients received stage-specific treatment according to the latest national guidelines, irrespective of the mode of detection.

Previous studies have linked screenings to a 10-20 per cent less likely risk of death from breast cancer.

The investigators, led by Dr Laszlo Tabar, of Falun Central Hospital in Sweden, used a new method to improve the evaluation of the impact of organised mammography screening on death from breast cancer, by calculating the annual incidence of breast cancers causing death within 10 years and within 20 years after breast cancer diagnosis.

Experts agree that regular breast screening is beneficial in identifying breast cancer early, according to the NHS, and women are less likely to need a mastectomy or chemotherapy.

However, this year it was revealed 450,000 women were denied life-saving scans and up to 270 died early after a 'colossal' IT failure in the NHS lasting almost a decade.

The victims aged between 68 and 71 were never sent letters offering them a final routine breast screening because of an IT error lasting from 2009 until this year.

Around 150,000 of these women died and former Health Secretary Jeremy Hunt admitted between 135 and 270 of them developed breast cancer that shortened their lives.

Women were reassured that they would receive their final invitations by the end of May 2018.

Rachel Rawson, clinical nurse specialist at Breast Cancer Care, said: 'The shocking failings uncovered earlier this year in issuing invitations must not be allowed to happen again.'

'This groundbreaking study firmly underscores that being diagnosed by screening means longer lives for many, many women, as treatment is more effective the sooner breast cancer is detected.'

The NHS estimates that its screening programme saves about one life for every 200 women who are scanned for breast cancer, adding up to about 1,300 lives saved each year in the UK.

However, screening can be seen as causing unnecessary distress.

About three in every 200 women screened are diagnosed with a cancer that would never have become life-threatening, equating to about 4,000 women each year being offered unnecessary treatment.

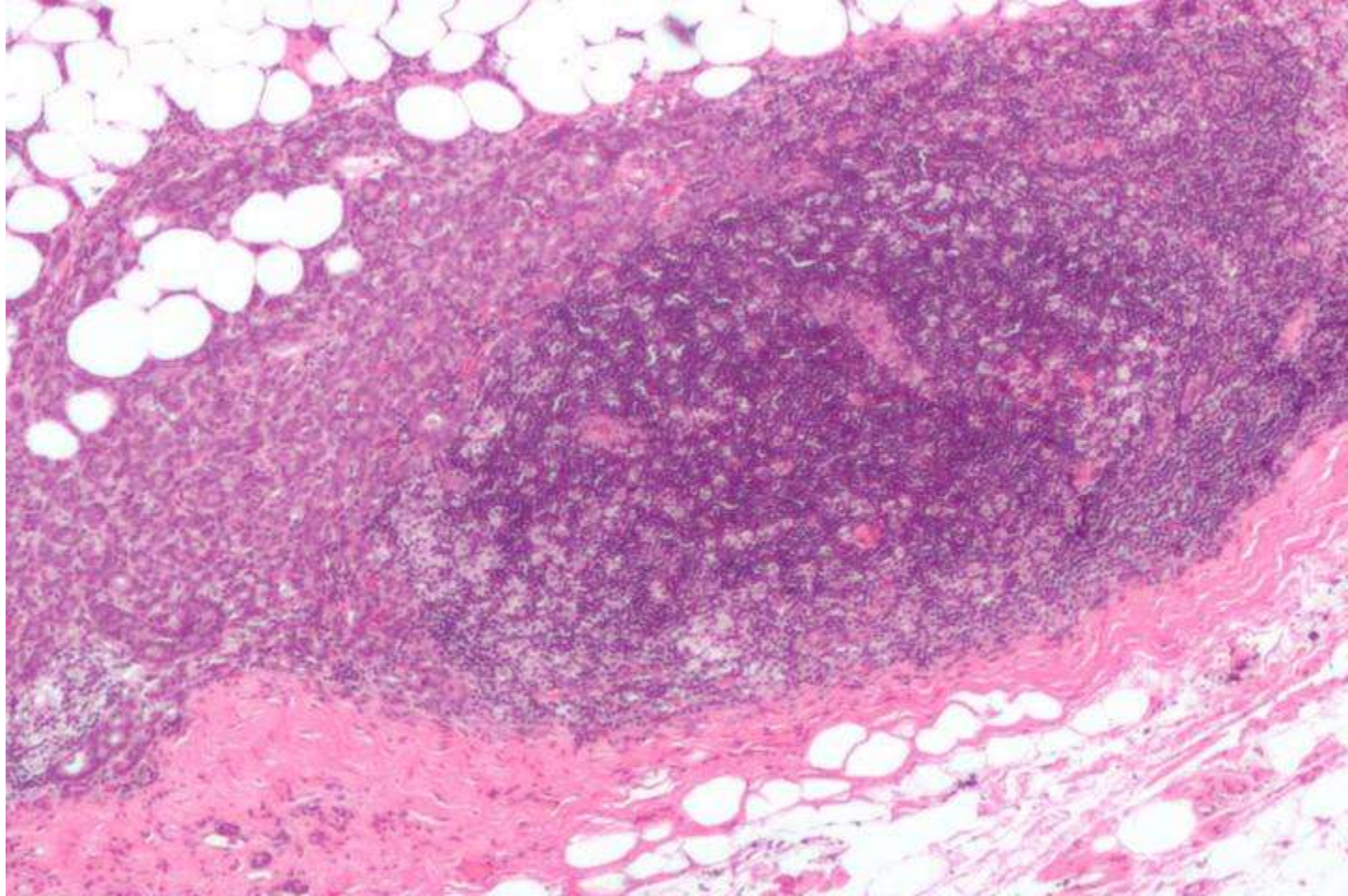
Ms Rawson said: 'It is crucial every eligible woman can count on the opportunity to attend screening, and those over 70 must be informed they can request mammograms if they choose.'

'Empowering women to make the right health choices for them with clear, balanced information should be an absolute priority.'

Screening linked to 60% lower risk of breast cancer

## Breast screening linked to 60 per cent lower risk of breast cancer death in first 10 years

November 9, 2018, [Queen Mary, University of London](#)



Micrograph showing a lymph node invaded by ductal breast carcinoma, with extension of the tumour beyond the lymph node.

Women who take part in breast screening have a significantly greater benefit from treatments than those who are not screened, according to a study of more than 50,000 women, led in the UK by Queen Mary University of London.

The research, using data from Sweden, finds that women who chose to participate in an organised [breast cancer](#) screening programme had a 60 per cent lower risk of dying from breast [cancer](#) within 10 years after diagnosis, and a 47 per cent lower risk of dying from breast cancer within 20 years after diagnosis.

The authors say that this benefit occurs because screening detects cancers at an earlier stage, meaning that they respond much better to treatment.

The study was co-authored and funded by the American Cancer Society and appears in the American Cancer Society's peer-review journal *Cancer*.

In the UK, mammography screening is offered to all women aged 50-70 through the NHS Breast Screening Programme, with participation rates averaging more than 70 per cent but varying dramatically across the country, with lower rates in poorer, inner-city areas.

Senior author Professor Stephen Duffy from Queen Mary University of London said: "Recent improvements in treatments have led to reduced deaths from breast cancer. However, these new results demonstrate the vital role that screening also has to play, giving women a much greater benefit from modern treatments. We need to ensure that participation in [breast screening](#) programmes improves, especially in socio-economically deprived areas."

The study involved 52,438 women aged 40 to 69 years in the county of Dalarna, Sweden, during 39 years of the screening era (1977-2015). All patients received stage-specific treatment according to the latest national guidelines, irrespective of the mode of detection.

The investigators, led by Laszlo Tabar, M.D., of Falun Central Hospital in Sweden, used a new method to improve the evaluation of the impact of organised [mammography screening](#) on death from breast cancer, by calculating the annual incidence of breast cancers causing death within 10 years and within 20 years after [breast cancer diagnosis](#).

## **ACS Press release:**

Data from Sweden shows women receiving screening had a significantly greater benefit from therapy available at the time of diagnosis

A study co-authored and funded by the American Cancer Society finds that Swedish women who took part in mammography screening had a significantly greater benefit from the therapy available at the time of diagnosis than do those who have not been screened.

The study, appearing online Nov. 8 in the American Cancer Society's peer-review journal *Cancer*, finds that women who chose to get screened regularly had a 60% lower risk of dying from breast cancer within 10 years after diagnosis, and a 47% lower risk of dying from breast cancer within 20 years after diagnosis compared with the corresponding risks for women who did not get screened.

Robert A. Smith, PhD, ACS vice president of screening and study co-author, commented: "Although all patients with breast cancer stand to benefit from advances in breast cancer therapy, these results show that women who get mammography screening regularly see a significantly greater benefit from the latest therapy available at the time of diagnosis than do those who do not get regular screening."

For the new study, investigators led by Laszlo Tabar, M.D., of Falun Central Hospital, Falun, Sweden, say they used a new methodology to improve the evaluation of the impact of organized mammography screening on death from breast cancer, calculating the annual incidence of fatal breast cancers within 10 years and within 11 to 20 years after breast cancer diagnosis. Measuring the incidence of fatal breast cancer provides a direct measure of the impact of earlier diagnosis through mammography screening upon women who participate in screening (screen-detected and interval cancer cases combined) compared with women who did not.

The authors used comprehensive registries for population, screening history, breast cancer incidence, and disease-specific death data in a defined population in Dalarna County, Sweden. The population studied

includes all women ages 40 to 69 years (mean 52,438 women) in the county of Dalarna, Sweden, during 39 years of the screening era (1977-2015).

The annual incidence of breast cancer was calculated along with the annual incidence of breast cancers that were fatal within 10 and within 11 to 20 years of diagnosis among women aged 40 to 69 years who either did or did not participate in mammography screening during a 39-year period (1977-2015). All patients received stage-specific therapy according to the latest national guidelines, irrespective of the mode of detection.

They found women who chose to participate in an organized breast cancer screening program had a 60% lower risk of dying from breast cancer within 10 years after diagnosis and a 47% lower risk of dying from breast cancer within 20 years after diagnosis compared with the corresponding risks for nonparticipants.

The authors also looked at data from before mammography became available. While the incidence of cancer among women not participating in the mammography program during the screening era was 62% greater than in the prescreening era, the incidence of fatal cancers within 10 years was only 13% greater, indicating a benefit attributable to improved treatment and management of the disease.

The authors conclude that "the substantially lower incidence of cancers that were fatal at either 10 years (60%) or 20 years (47%) in the participating women compared with the nonparticipating women within the screening period indicates that a woman's decision to participate in screening resulted in a greater reduction in death from breast cancer compared with women who did not participate. This notable difference is attributable to earlier detection and treatment at an earlier phase in the natural history of the disease among women who participated in mammography screening."

**[Robert Smith, PHD](#)**

Vice President, Cancer Screening

Great, it is everywhere. Australia, India, UK, USA, Brazil, .....