

## Routine Breast Cancer Screening Brings Better Outcomes for Patients

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OAK BROOK, Ill. — Researchers have discovered that, compared to breast cancer that is symptom-detected, patients with breast cancer detected via routine screening mammography are more likely to have improved clinical outcomes, according to a study published today in *Radiology: Imaging Cancer*, a journal of the Radiological Society of North America (RSNA).

While it is commonly understood that early detection of breast cancer results in better patient outcomes, national cancer registries in the U.S. and Canada don't track the method of cancer detection.

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Jean M. Seely, M.D., F.R.C.P.C.

Since improvements in patient outcomes may be incorrectly attributed solely to treatment advances, identifying the association between the method of breast cancer detection and clinical outcomes may have a direct impact on health care policy.

"I observed a marked difference in the way breast cancers were being detected in my clinical practice," said lead study author Jean M. Seely, M.D., F.R.C.P.C., a professor in the Department of Radiology at the University of Ottawa and head of the breast imaging section at Ottawa Hospital in Ontario, Canada. "I noted that many women under the age of 50 and older than 75 were diagnosed because of symptomatic presentation."

In a retrospective observational analysis, Dr. Seely and colleagues collected data of patients aged 40 years or older who were diagnosed with breast cancer in 2016.

Of the 821 patients included in the study, 50.1% had breast cancer diagnosed as the result of a symptom, rather than as the result of a screening mammogram.

Compared to patients with symptom-detected breast cancer, patients with screening-detected breast cancer had significantly lower odds of an advanced stage of breast cancer, lower odds of undergoing a mastectomy and a lower hazard ratio of death.

Breast cancers detected from symptoms were more frequent in women aged 40 to 49 years and over 75 years of age, 72.9% and 70.4%, respectively. All-cause deaths were also higher among patients who were not undergoing regular screening. Most surprising was how many patients died shortly after their breast cancer was detected, Dr. Seely noted.

"Within only 6.7 years of follow-up, almost 20% of the 821 breast cancer patients had died, half of them from breast cancer," Dr. Seely said. "The patients whose breast cancers were detected because of symptoms had a 63% higher likelihood of dying."

The researchers concluded that reducing the barriers to breast cancer screening in women aged 40 to 74 will improve patient outcomes and reduce the number of patient deaths from cancer. Women over age 75 might also benefit from screening, as these patients were more likely to be diagnosed due to symptoms and required more intensive treatment.

In 2024, the United States Preventive Services Task Force (USPSTF) updated their breast cancer screening guidelines, recommending that women aged 40 to 75 years at average risk undergo breast cancer screening every two years. The Canadian Task Force on Preventive Health Care recommends that women aged 50 to 74 years at average risk undergo breast cancer screening every two to three years.

"The results of this study will likely support the move to reduce the breast cancer screening age to 40 in the U.S. and Canada," Dr. Seely said. "We have lowered the screening age in many provincial and territorial screening programs in Canada and are aiming to establish a single national policy for screening."

"Impact of Method of Detection of Breast Cancer on Clinical Outcomes in Individuals Aged 40 Years or Older." Collaborating with Dr. Seely were Javeria Munir, M.D., Yashmin Nisha, M.B.B.S., Nayaar Islam, M.Sc., Mary Beth Bissell, M.D., F.R.C.P.C., Betty Anne Schwarz, D.Prof., M.Sc., and Erin Cordeiro, M.D., F.R.C.P.C.

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For patient-friendly information on breast cancer screening, visit [RadiologyInfo.org](https://www.rsna.org/radiologyinfo).

Images (JPG, TIF):

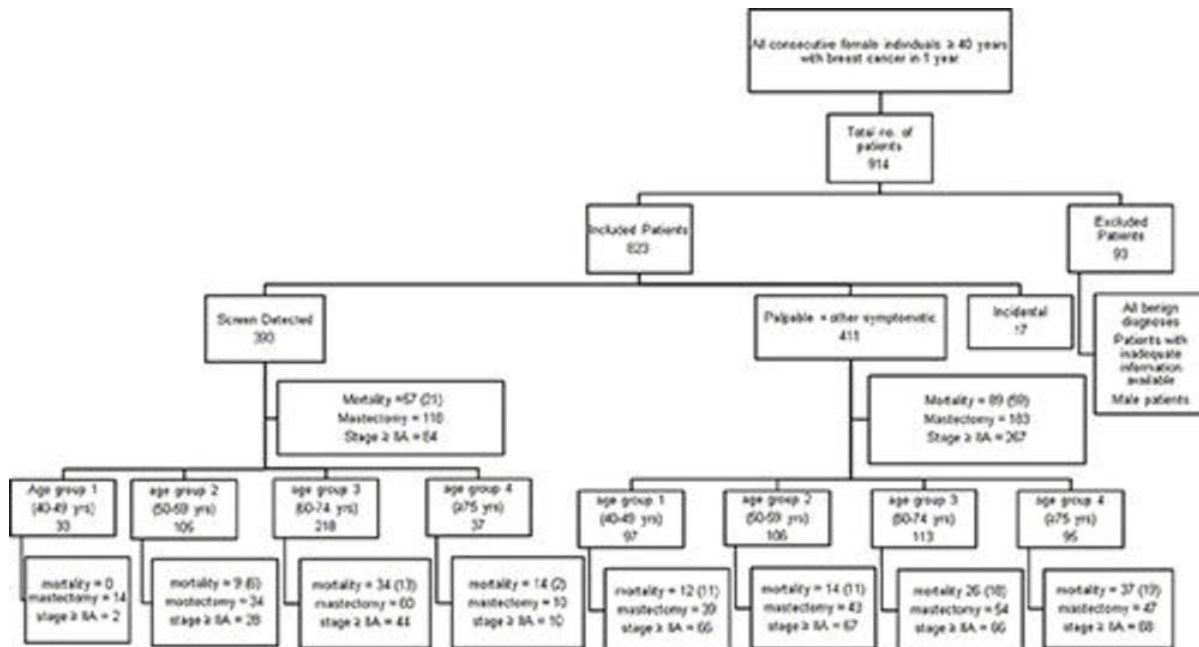


Figure 1. Study flowchart of patients. In the final row, the number of breast cancer-related deaths is in parentheses.  
[High-res \(TIF\) version](#)

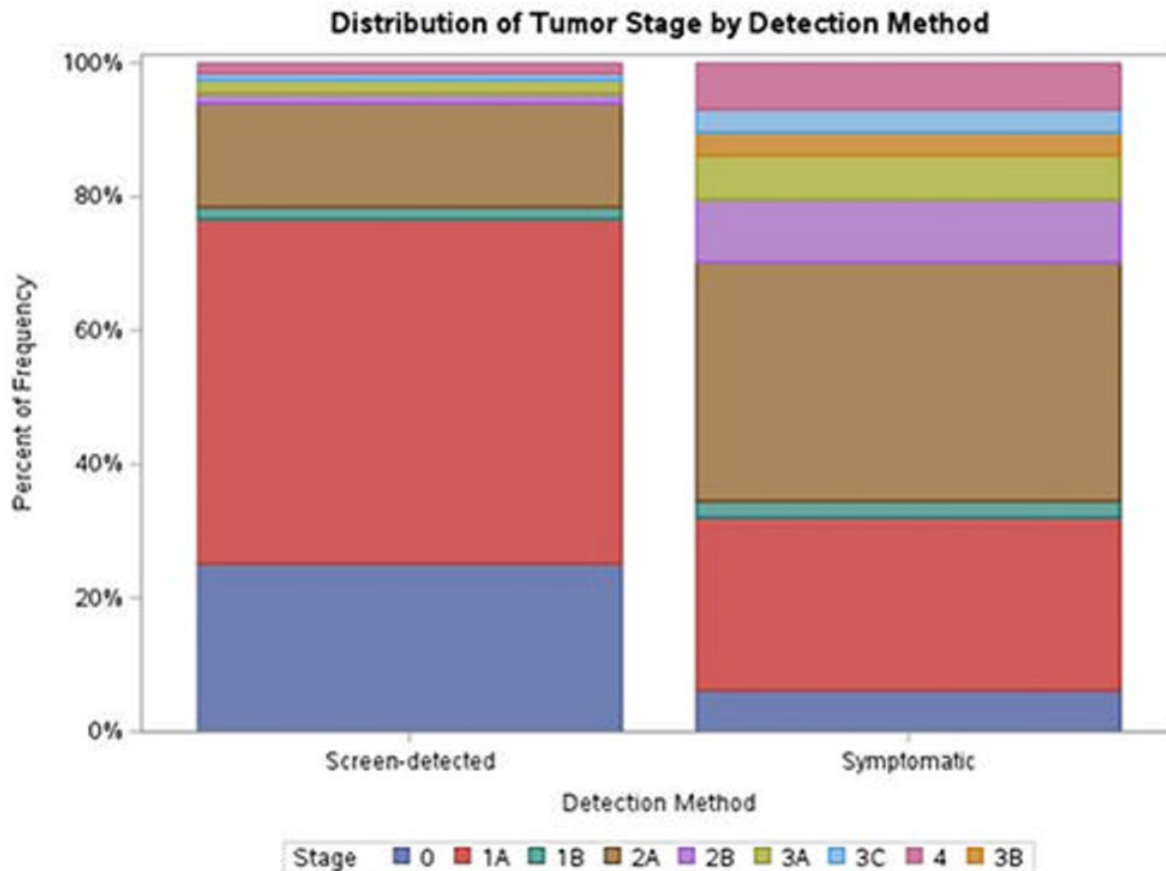
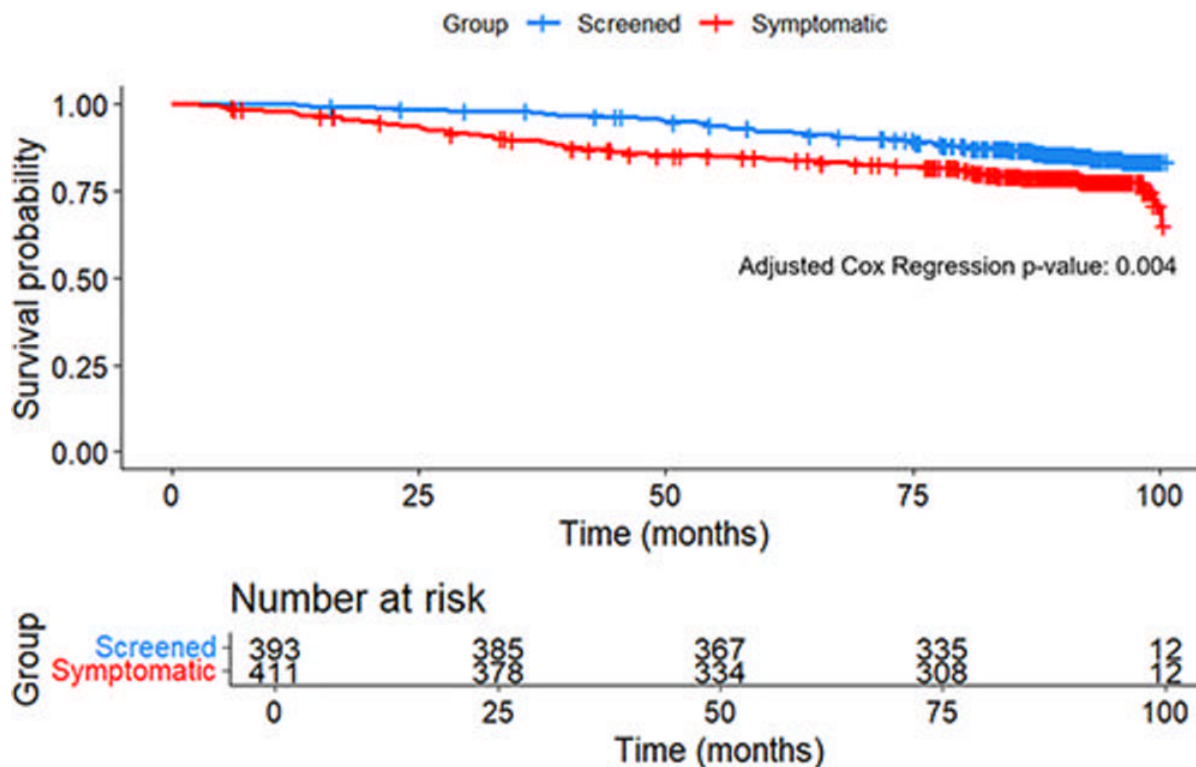


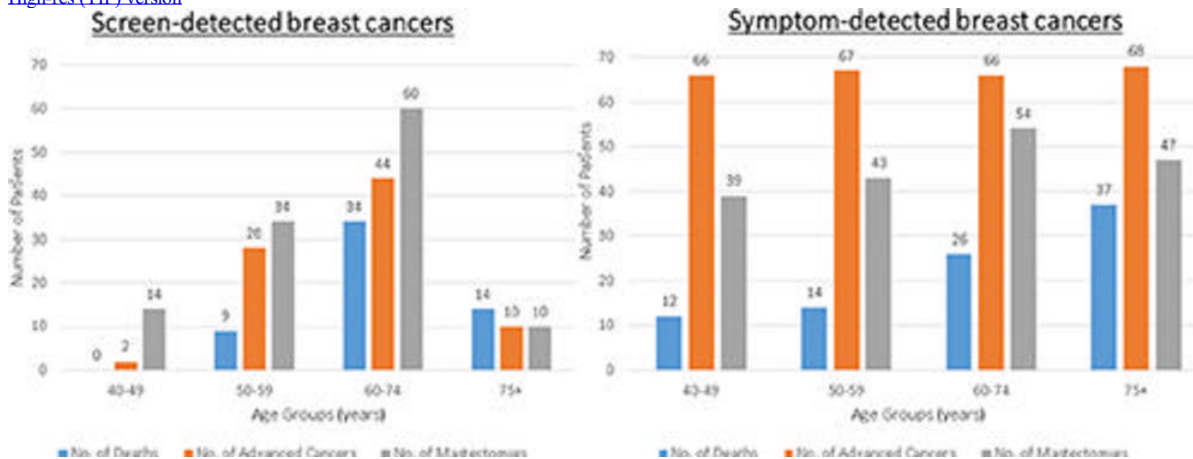
Figure 2. Distribution of breast cancer stage according to method of detection.  
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## Kaplan-Meier curve



**Figure 3.** Kaplan–Meier curves of probability of survival in months according to screen detection or symptom detection of breast cancer.

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**Figure 4.** Graph illustrates the method of detection (symptom-detected vs screen-detected) and number of breast cancer–related deaths, advanced cancers, and mastectomies across age groups.

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Resources:

[Study abstract](#)