RSNA®
Radiological Society of North America

820 Jorie Blvd
Oak Brook, IL 60523
TEL 1-630-571-2670
FAX 1-630-571-7837
RSNA.org

NEWS

RSNA Press Release

Mammography-Detected Breast Cancer in 40-49 Year-olds Has Better Prognosis

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Media Contacts:

RSNA Media Relations: 1-630-590-7762

Linda Brooks
1-630-590-7738
lbrooks@rsna.org

Maureen Morley
1-630-590-7754
mmorley@rsna.org

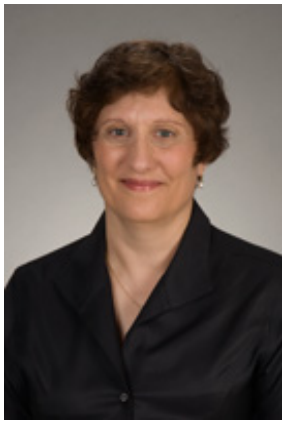
At A Glance

- From 1990 to 2008, mammography-detected breast cancer increased from 28 percent to 58 percent.
- Compared with women whose cancer was self-detected or discovered by a physician, patients whose cancer was detected using mammography were more likely to have breast-conserving treatment and less likely to have chemotherapy.

OAK BROOK, Ill. — Based on a study of nearly 2,000 breast cancer patients, researchers at the Swedish Cancer Institute in Seattle say that, in women between the ages of 40 and 49, breast cancers detected by mammography have a better prognosis. The study appears in the March issue of *Radiology*.

"In our study, women aged 40 to 49 whose breast cancer was detected by mammography were easier to treat and had less recurring disease and mortality, because their cancer was found at an earlier stage," said Judith A. Malmgren, Ph.D., president of HealthStat Consulting, Inc.

Dr. Malmgren and a team of researchers reviewed breast cancer patient data from a dedicated registry at the Swedish Cancer Institute's community cancer center. The researchers analyzed data on 1,977 breast cancer patients between the ages of 40 and 49 who were treated between 1990 and 2008. The researchers looked at method of diagnosis (detected by mammography, patient or physician), stage at diagnosis (0-IV, confirmed by biopsy), treatment, and annual follow-up information, including recurrence of disease.


Judith A. Malmgren, Ph.D.

"Our goal was to assess the differences between mammography and non-mammography detected breast cancer, to determine whether earlier detection confers a treatment and morbidity advantage because the disease is found at an earlier stage," Dr. Malmgren said.

The data analysis revealed a significant increase in the percentage of mammography-detected breast cancer over the 18-year period: from 28 percent in 1990 to

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58 percent in 2008. Over the same period, patient- and physician-detected breast cancer declined from 73 percent of all cases in 1990 to 42 percent in 2008.

"The shift toward more mammography-detected breast cancer cases was accompanied by a shift toward diagnosis at an earlier stage of disease that required less treatment," Dr. Malmgren said.

Over the 18-year period, the number of breast cancers diagnosed at Stage 0 increased by 66 percent, while the number of Stage III breast cancers decreased by 66 percent. The majority of Stage 0 cancer cases were ductal carcinoma in situ (DCIS), a non-invasive cancer that is confined to a milk duct. The treatment of DCIS remains controversial, because not all experts agree that it is potentially life threatening.

Dr. Malmgren said another key finding of the study was the extent of treatment patients received. Compared with women whose cancer was self-detected or discovered by a physician, patients whose cancer was detected using mammography were more likely to have breast-conserving treatment and less likely to have chemotherapy. Specifically, they were more likely to undergo lumpectomy (67 percent versus 48 percent), less likely to undergo modified radical mastectomy (25 percent versus 47 percent), and less likely to die of breast cancer (4 percent versus 11 percent).

"The benefits of breast cancer treatment are accompanied by significant harms," Dr. Malmgren said. "Chemotherapy may have long-lasting toxic effects on a woman's body, and mastectomy and reconstructive surgery are difficult and expensive operations that can have a significant effect on body image."

The American Cancer Society and other medical organizations recommend that women should begin receiving annual mammograms to screen for breast cancer beginning at age 40. In 2009, the U.S. Preventive Services Task Force issued controversial new guidelines that eliminated the longstanding recommendation for routine mammography screening for women between the ages of 40 and 49, stating that the benefits of screening were potentially outweighed by the harms of screening, such as false-positive results.

"The objective of screening is to detect disease at an earlier, more treatable stage, which—based on our review—mammography accomplishes," Dr. Malmgren said.

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"Impact of Mammography Detection on the Course of Breast Cancer in Women Aged 40–49 Years." Collaborating with Dr. Malmgren were Jay Parikh, M.D., Mary K. Atwood, C.T.R., and Henry G. Kaplan, M.D.

The study was funded by the Kaplan Cancer Research Fund and the Cancer Surveillance System of the Fred Hutchinson Cancer Research Center.

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