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Mammography may increase breast cancer risk in some high-risk women

CHICAGO – Low-dose radiation from annual mammography screening may increase breast cancer risk in women with genetic or familial predisposition to breast cancer, according to a study presented today at the annual meeting of the Radiological Society of North America (RSNA).

"For women at high risk for breast cancer, screening is very important, but a careful approach should be taken when considering mammography for screening young women, particularly under age 30," said Marijke C. Jansen-van der Weide, Ph.D., epidemiologist in the Department of Epidemiology and Radiology at University Medical Center Groningen in the Netherlands. "Further, repeated exposure to low-dose radiation should be avoided."

Women who are at high risk for breast cancer need to begin screening at a younger age, because they often develop cancer earlier than women at average risk. However, according to Dr. Jansen-van der Weide and colleagues, young women with familial or genetic predisposition to the disease may want to consider alternative screening methods to mammography, because the benefit of early tumor detection in this group of women may be offset by the potential risk of radiation-induced cancer.

According to the American Cancer Society, there is strong evidence supporting the benefits of mammography for women after age 40. However, there are conflicting reports regarding the benefits of mammography for women under 40. Alternative screening methods such as ultrasound and MRI may be made available to younger women, but are generally used as an adjunct to mammography.

The American Cancer Society recommends that some women at high risk (greater than 20 percent lifetime risk) should have MR imaging and mammography every year, typically beginning at age 30.

The researchers conducted an analysis of peer-reviewed, published medical research to determine if low-dose radiation exposure affects breast cancer risk among high-risk women. Out of 47 articles found on the topic, six were selected by the reviewers for inclusion in their analysis. Four studies looked at the effect of exposure to low-dose radiation among breast cancer gene mutation carriers, and two studies researched the effect of radiation on women with a family history of breast cancer. Using data from these studies, the researchers were able to calculate pooled odds ratios to estimate radiation-induced breast cancer risk.

The results showed that among all high-risk women in the study, average increased risk of breast cancer due to low-dose radiation exposure was 1.5 times greater than that of high-risk women not exposed to low-dose radiation. High-risk women exposed before age 20 or with five or more exposures were 2.5 times more likely to develop breast cancer than high-risk women not exposed to low-dose radiation.

"Our findings suggest that low-dose radiation increases breast cancer risk among these young high-risk women, and a careful approach is warranted," Dr. Jansen-van der Weide said.

She noted that this analysis is based on a small study sample and should be interpreted with caution. Dr. Jansen-van der Weide also pointed out that these results apply only to specific high-risk groups of women. Women at average risk were not assessed in this study.

In general, early detection with mammography and prompt treatment can significantly improve a woman's chances of survival. More than 90 percent of women whose breast cancer is found in an early stage will survive. For young, high-risk women and their doctors, it is important to weigh the benefits against any potential risk when making a decision about annual breast cancer screening with mammography.

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Note: Copies of RSNA 2009 news releases and electronic images will be available online at RSNA.org/press09 beginning Monday, Nov. 30.

RSNA is an association of more than 44,000 radiologists, radiation oncologists, medical physicists and related scientists committed to excellence in patient care through education and research. The Society is based in Oak Brook, Ill. (RSNA.org)

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Risiko durch Mammographie- Srenning in jungen Jahren

Frauen, die ein erhöhtes familiäres oder genetisch bedingtes Risiko haben an Brustkrebs zu erkranken, wird häufig dazu geraten schon in jungen Jahren zur einer jährlichen Mammographie-Untersuchung zu gehen.

Ganz unbedenklich ist diese Vorgehensweise aber nicht.

Gerade Frauen, die ein Risiko tragen, sind im Punkte Vorsorge hoch sensibel. So wird dann aus den jährlich empfohlenen Vorsorge-untersuchungen ab dem 30. Lebensjahr häufig eine jährliche Untersuchung ab dem 20. Lebensjahr.

Gerade in jungen Jahren, wenn der Körper auf Hochtouren läuft, ist auch die weibliche Brust besonders sensibel auf die Strahlenbelastung. Dann kommt zu dem genetisch bedingten Risiko noch ein „hausgemachtes“ dazu.

Eine Meta-Analyse von der Universität Groningen zeigt dieses Risiko in Zahlen auf. Die errechneten Werte zeigten für die Gesamtgruppe, dass die Mammographie das Brustkrebsrisiko um 63% erhöhen würde.

Doch Vorsicht bei Statistiken! Da das Signifikanzniveau verfehlt wurde, könnten dies auch ein Zufallsergebnisse sein.

Für Frauen, die vor dem 20. Lebensjahr Mammographien durchführen ließen und für Frauen mit mehr als 5 Mammographien in jungen Jahren, war das Risiko auf jeden Fall signifikant erhöht !

So auch Aussage der Studie

Bei Frauen mit einem genetisch oder familiär bedingten hohen Risiko sollte das Mammographie-Screening mit Augenmaß erfolgen und röntgenologische Untersuchungen der Brust bei Frauen in jungen Jahren sollten vermieden werden.

Die American Cancer Society bezweifelt die Ergebnisse, wegen der nicht aussagefähigen oben erwähnten Statistik und empfiehlt weiterhin ein Mammographie-Screening für Frauen mit hohem Risiko ab dem 30. und bei Frauen ohne Risiko ab dem 40. Lebensjahr.

Die US Preventive Services Task Force (USPSTF) empfiehlt in ihren neuesten Leitlinien die Untersuchung bei Frauen ohne Risiko erst ab dem 50. Lebensjahr.

Quelle: [Pressemitteilung der Radiological Society of North America](#)