PROJECT INFORMATION

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Is Breast MRI Better at Finding Second Breast Cancers than Mammograms Alone for Breast Cancer Survivors?

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What was the research about?

More than 3 million women in the United States have had breast cancer. After their treatment is complete, these women usually receive yearly mammograms, an x-ray of the breast, to check for second breast cancers. When the first cancer comes back or a new breast cancer develops, it is a second breast cancer.

Sometimes doctors recommend that women get a breast MRI along with their mammogram. An MRI uses magnetic fields, or radio waves, and a computer to take pictures of the inside of the breast. But doctors don't know whether adding a breast MRI is better than mammograms alone at finding second breast cancers.

In this study, the research team looked at how often mammograms and breast MRIs found second breast cancers. To do this, the team looked at health records of breast cancer survivors from a cancer registry. The registry combines data from sites across the country and includes information about women with previous breast cancers who had mammograms and breast MRIs.

What were the results?

When doctors used a breast MRI with or without a mammogram, they were more likely to find cancer than when they used a mammogram alone. Breast MRIs also led to more biopsies. Biopsies confirm whether a tissue sample is cancer or not. But they may cause scarring, pain, or infection. Women may worry that the cancer has come back, even if it hasn't.

Who was in the study?

The study looked at health information for 13,266 women with a personal history of breast cancer. All had mammograms and/or breast MRIs to check for second breast cancers. Of these women, 77 percent were white, 9 percent were black, 9 percent were Asian or Pacific Islander, 3 percent were Hispanic, and 2 percent were mixed or other races. The registry included information from women with breast imaging tests done in California, New Hampshire, North Carolina, Vermont, and Washington State.

What did the research team do?

To identify which women had second breast cancers and how doctors found the cancer, the research team looked at

- Details about patients' first breast cancers
- Imaging test results from mammograms and breast MRIs

A group of women with a personal history of breast cancer and cancer specialists helped guide the study.

What were the limits of the study?

The study included information for most patients, but information for some patients was missing. The results may have been different if the study included information for all patients. Having a second breast cancer is rare. As a result, the study didn't include

enough women to allow the team to look at results for specific groups of women.

Future research could see whether having breast MRIs with mammograms helps to find breast cancer for specific groups of women, such as by age at diagnosis or by how aggressive the first cancer was.

How can people use the results?

Patients and their doctors can use these results to help decide whether to use a breast MRI with the yearly mammogram to check for second breast cancers.

To learn more about this project, visit www.pcori.org/Wernli121.