DCIS

PRECISION News about Ductal Carcinoma In Situ (DCIS)

Ductal Carcinoma In Situ (DCIS) is a breast condition that is often found on mammograms. DCIS refers to abnormal cells found inside a milk duct. Research shows that at least 3 out of 4 women (75%) with DCIS will not get a future invasive breast cancer, but almost all still receive breast cancer treatment. There are types of DCIS that are considered low-risk or higher risk. This is why DCIS is sometimes called different names. PRECISION* is learning about low-risk DCIS risk to find women who may not need treatment. One of their published articles is explained here.

What is the science article about?

For many years the US National Cancer Institute has collected information about DCIS patients in a database called SEER (Surveillence, Epidemiology, and End Results). SEER is an example of a cancer registry that tracks people with a history of cancer to learn what happens to them over time. This is called “health outcomes”. This study reviewed the SEER database to see what happened to women with low-risk DCIS over their lifetimes.

Why was this study done?

Many studies show that most women with low-risk DCIS may not get invasive breast cancer, even if DCIS is not treated. In fact, more than 7 out of 10 women (75%) with DCIS will not have a future breast event. The problem is that doctors do not yet have enough information to fully understand what happens to individual women with DCIS who do not receive local treatment immediately.

Three clinical trials are currently studying whether active monitoring or surgery should be recommended for women with low-risk DCIS. These are very important, but the results from these clinical trials will only be available in the next 10 years. Until then, information from registries like the SEER database can tell us what has already happened to many women with low-risk DCIS. This may help us learn more about what might happen to similar women with DCIS in the future as long as the information is fair and complete.

How was this study done?

The study found information about 85,982 women who were originally diagnosed with DCIS in the US SEER database. This included women over 40 years old who were diagnosed with all grades (1, 2 and 3) of DCIS between 1992 to 2016. The study looked at women who were treated with surgery, treated with surgery and radiotherapy, and women who did not get local treatment.

The study also looked at features which can make DCIS “low-risk” for future invasive breast cancer. These features include lower grade DCIS (1 and 2), small-sized lesions of 2 cm or less, and a positive marker called Estrogen Receptor (ER+). These features help researchers understand how the impact of possible treatment approaches can differ between women over their lifetime.

Active monitoring means that women do not have surgery right away and are watched regularly by getting mammograms. Active monitoring was not available for most women in this database, so the researchers used the results for women who did not have surgery right away as a substitute for active monitoring. This allowed them to compare active monitoring as a treatment choice to immediate surgery for low-risk DCIS.

This work was supported by Cancer Research UK and by KWF Kankerbestrijding (ref. C38317/A24043)

* PRECISION is an international research program seeking to better identify low-risk DCIS which may help some women avoid surgery and other treatments. Thanks to the women who donated information to researchers!

What are the results of this study?

For women with low-risk DCIS who did not receive surgery or surgery plus radiation:

- This is the group that was used to consider active monitoring.
- Over 9 out of 10 women (96%) were alive without future invasive breast cancer at 5 years.
- Almost 9 out of 10 of these women (89%) were alive without future invasive breast cancer at 10 years.
- This study showed that 3 out of 100 women (3%) had a future invasive breast cancer in the same breast within 10 years. This fits with estimates from other studies in the US that range from 2-4 out of 100 women (2.3-3.9%).

For women who had a future invasive breast cancer in the same breast:

- Risk factors at the first DCIS diagnosis correctly predicted who would get a breast cancer within five years.
- Women aged 40-49 had a higher risk of future invasive breast cancer in the same breast within 5 years than women aged 50-69.
- Grade 3 DCIS lesions had a higher risk than grade 1 or 2 within five years. Information about grades is here.

For women who had a future breast cancer in the other breast:

- Risk factors found at the first DCIS diagnosis did not predict a future invasive breast cancer in the other breast for women under 70 years old.
- 70-74 year old women had a higher risk of invasive breast cancer in the other breast.

What does it mean for women with DCIS?

The breast cancer-free survival found at 5 and 10 years for women who were diagnosed with low-risk DCIS is important evidence that active monitoring could be safe and practical for women with low-risk DCIS.

This kind of information is called real-world evidence and may be used to help women and their doctors make decisions about active monitoring or surgery for low-risk DCIS.

More information about the article

The official name is “Treating (low-risk) DCIS patients: What can we learn from real-world cancer registry evidence?”
Author: Byng D et al. On behalf of PRECISION.* Published in Breast Cancer Research and Treatment.

The article can be found at: 10.1007/s10549-020-06042-1 and at https://www.dcisprecision.org/publications/.
The study was published in January 2021.

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