



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?

Although most women with DCIS will never get invasive breast cancer, currently almost all women undergo surgery. There are ongoing studies to look at whether active monitoring is a good option for women with low-risk DCIS. Active monitoring means regular checks with mammograms and office visits for any unusual changes.

This article is about the decision aids and prediction models that are available for women with DCIS and their doctors as they discuss decisions about treatment together.

This study reviewed these decision aids and prediction models to measure their quality and usefulness.

Decision Aids are
A tool to help patients and their doctors decide about treatment together. Decision aids provide balanced information and may help patients consider their personal values.
Prediction Models are
Math models (also known as statistical models) that are used to predict the risk of getting an outcome for a person, like a side effect or a future DCIS.

Why was this study done?

Several different treatment options may be acceptable for women with low-risk DCIS from a medical point of view. The choice of treatment or active monitoring may depend more on each woman's goals and preferences. This means there is a need to improve the way informed decisions are made.

Prediction models help doctors provide risk information to patients. Decision aids help patients review their options along with each person's specific goals and preferences.

It is important to review all the published science articles (literature) to see what prediction models and decision aids already exist for women with DCIS. After our review, we also measured their quality and usefulness for women and their doctors.

How was this study done?

We did an organized review (also called a systematic review) of all available science literature. We used well-accepted guidelines called PRISMA. PRISMA stands for "Preferred Reporting Items for Systematic Reviews and Meta-Analyses."

- All decision aids were measured with accepted standards called the “International Patient Decision Aids Standards (IPDAS). We reviewed how each decision aid was developed, what content was included, and how effective each decision aid was.
- The prediction models were measured with accepted standards called “Critical Appraisal and Data Extraction for Systematic Reviews” (CHARMS). We reviewed the patient population used to develop the tool, the process used, and the results for each model.

Systematic Reviews are
Thorough and detailed reviews of existing science literature on a certain topic, designed to answer a specific question.

What are the results of this study?

We reviewed 33 studies that met our requirements. Four decision aids and 6 prediction models were found in these 33 studies.

Three decision aids included active monitoring. We also found one additional communication aid that did not include the active monitoring option. Three were only available in English and one was in German. Most of these decision aids lacked tools to help women discuss their options with their doctors. There was room for improvement in all the decision aids, but they might be used to develop new aids.

We found 6 prediction models but none included the option of active monitoring. This means that all existing models should be revised to include this option or that new prediction models should be developed.

We also found that measurements and reporting on the performance of the models were unsatisfactory. Their performance should be checked using quality clinical data from larger groups of patients that is tested by independent researchers. The clinical usefulness of available models will remain unclear until these additional checks have been made.

What does it mean for women with DCIS?

This is important because patients who have used decision aids often report feeling better informed about DCIS. This may help women with low-risk DCIS better understand the level of risk they actually have instead of what their initial view may be. Good quality decision aids also help doctors provide balanced and understandable information to women with low-risk DCIS in better ways. Only one decision aid included information for both patients and doctors.

Accurate and up-to-date prediction models can also help identify different levels of risk for each person to better understand the risks and benefits of each treatment option.

Unfortunately, there are still no well-tested, good-quality DCIS risk prediction models or decision aids that include active monitoring as a management option for low-risk DCIS. The PRECISION consortium hopes to develop both decision aids and a risk prediction model in the future.

More information about the article

The official name is “Prediction Models and Decision Aids for Women with Ductal Carcinoma In Situ: A Systematic Literature Review.” The study was published in July 2022.

The article can be found at: <https://doi.org/10.3390/cancers14133259> and at <https://www.dcisprecision.org/publications/>.