



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 DCIS risk to find women who may not need treatment. One of their published articles is explained here.

What is the science article about?

There are different kinds of DCIS. A doctor called a pathologist diagnoses DCIS. This study looked at how different pathologists graded the same DCIS samples.

Why was this study done?

DCIS is graded to describe how cells look compared to normal cells. Treatment can be based on the DCIS grade.

Grades may predict the level of risk to develop a future DCIS or breast cancer for that person:

- Grade 1 is also called low grade DCIS.
- Grade 2 is also called intermediate grade DCIS.
- Grade 3 is also called high grade DCIS.

Grades 1 and 2 are thought to be low risk for a future DCIS or breast cancer.

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 and researchers are still not sure about all of the factors that can help them decide which patients have low-risk DCIS.

How was this study done?

In this study, 9 pathologists looked at the same DCIS samples and graded them. They came from 4 hospitals in 3 different countries, including the US, the UK and the Netherlands.

This was done to see if they agreed or disagreed on the DCIS grade for each patient. The study also looked at how they agreed on other DCIS features.

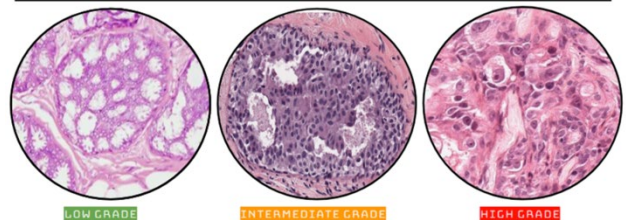
Nine pathologists (3 from each country) separately offered opinions on the grade and other features of DCIS from 425 patients. They also answered a short survey about their experience and the kind of guidelines they had used for grading.

How is DCIS diagnosed?

Abnormal cells are taken from the body during a breast biopsy. A doctor called a pathologist looks at breast cells that are placed on glass slides under a microscope. That doctor decides what "grade" of risk exists for each DCIS.



DUCTAL CARCINOMA IN-SITU





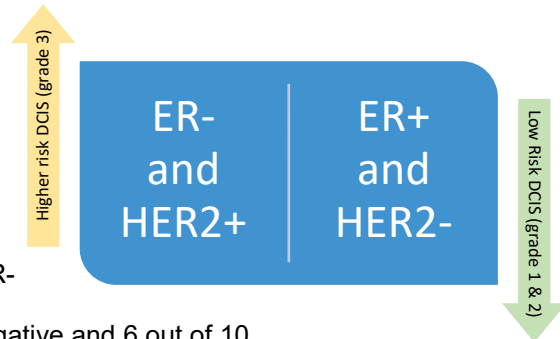
DCIS

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What are the results in the article?

This study showed that:

- There were differences in how pathologists graded some DCIS samples. This was true even when taking each countries' guidelines into account.
- We measured the level of Estrogen Receptor (ER) and HER2 Receptor (HER2) for some DCIS samples.
 - Almost all low and intermediate grade DCIS were ER-positive (100%) and HER2-negative (89%).
 - Over 5 out of 10 (55%) high grade DCIS was ER-negative and 6 out of 10 (62%) were HER2-positive.
- In 2 out of 10 samples (20%), different pathologists graded the exact same lesion as either low, intermediate or high grade DCIS.
- Some pathologists scored many more DCIS cases as low or high grade than others.



What does it mean for women with DCIS?

This study shows that there is an urgent need to improve agreement between pathologists when grading DCIS. This can help make DCIS diagnoses more consistent and help guide treatment decisions that are based on more standard guidelines throughout the world.

There are important limits about this study.

- We did not know the long term outcome of every patient in the study.
- We did not insist that the pathologists follow standard guidelines. This is often not done in normal practice, so we wanted to make this study as close to normal practice as possible.
- At the moment, most pathologists are not using digital slides. This is changing and it is hoped that this will help create more constant DCIS diagnoses.
- There was only one slide for each DCIS patient. Usually many slides are viewed for each patient.

When was the study done?

The science article was published in February 2021. The public summary was completed in March 2021.

Official name and details of the article

Variability in grading of ductal carcinoma in situ among an international group of pathologists.

Maartje van Seijen et al on behalf of PRECISION.* Journal of Pathology Clinical Research. 23 Feb 2021. DOI: <https://doi.org/10.1002/cjp2.201>.

The article can be found at: <https://www.dcisprecision.org/publications/> and <https://onlinelibrary.wiley.com/doi/full/10.1002/cjp2.201>.