



Low-Risk DCIS Research Update and Resources

by PRECISION Patient Advocates

WHAT IS PRECISION?

PRECISION (**PRE**vent ductal **C**arcinoma **I**n **S**itu **I**nvasive **O**vertreatment **N**ow) is an international research project bringing together experts from the Netherlands, UK and US who are investigating biological clues – known as biomarkers – to learn how **low-risk DCIS** differs from higher-risk DCIS. The aim is to help women (in consultation with their physicians) make more informed treatment decisions and potentially avoid overtreatment of **low-risk DCIS**.^(1,6)

“Even though approximately 5 out of 6 low-risk ductal carcinoma in situ (DCIS) breast lesions are expected to never progress to invasive breast cancer, almost all women diagnosed with DCIS undergo aggressive treatment, which may have little benefit. These people still endure the financial, physical and emotional burdens of surgery, radiation and drug therapies. Distinguishing between people with low-risk DCIS who will require treatment immediately from those who could safely consider an active-monitoring approach is the central premise of our Cancer Grand Challenges team, PRECISION, in taking on the Lethal Versus Non-Lethal challenge.”^(6,7)

CURRENT KNOWLEDGE ABOUT DCIS

- DCIS is frequently detected by screening mammography (seen as microcalcifications), accounting for one quarter of all breast cancers diagnosed today.^(1,2)
- A biopsy (tissue sample) is the only way to diagnose DCIS.⁽²⁾
- Given that most DCIS is surgically removed, the natural course of DCIS, including factors influencing its progression, is difficult to evaluate.⁽⁴⁾

DCIS GRADES / RISK LEVELS / BIO-MARKERS

- A *pathologist* looks at the cells under a microscope and gives the DCIS a grade:
- A level of "risk" is often added to describe DCIS as "low" or "high" risk to indicate the probability (likelihood) that it will develop into invasive cancer.⁽²⁾
- Women with low-risk DCIS are less likely to have invasive cancer in the future than women with high-risk DCIS.⁽²⁾
- The definition of low-risk DCIS differs slightly among countries.⁽⁸⁾
- There are two DCIS-specific genomic profiling assays that attempt to distinguish low and high-risk patients, but imperfections in risk stratification coupled with a high price tag warrant the continued search for more robust and accessible prognostic biomarkers.⁽⁴⁾

CURRENT TREATMENT / POTENTIAL OVERTREATMENT OF DCIS

- Treatment guidelines for all DCIS (even low-risk) are similar to invasive breast cancer: Immediate surgery: lumpectomy often followed by radiation therapy or mastectomy.
- Hormone blocking drugs are often recommended by physicians in the US.
- Recent studies show up to 88% of untreated DCIS (grade I/II) will remain in situ and potentially not progress, and there is considerable overtreatment of DCIS patients.^(4,5)

CLINICAL TRIALS FOR LOW-RISK DCIS

- To investigate potential strategies to de-escalate treatment of low-risk DCIS, several prospective studies are currently comparing standard DCIS treatment with active surveillance (LORIS, LORD, COMET, LORETTA, and LARRIKIN): [Table/Summary](#)⁽⁴⁾



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IMPROVING DCIS COMMUNICATION/ RISK PERCEPTIONS

- Women diagnosed with DCIS often have inaccurate perceptions of the risk of developing and dying from breast cancer, and experience similar levels of anxiety to women with invasive breast cancer.⁽¹⁰⁾
- The way DCIS is described upon diagnosis can be confusing. It may be called: *abnormal cells, pre-cancer, non-invasive, pre-invasive, non-obligate precursor of invasive breast cancer, and stage zero breast cancer.*
- For many years, there has been an effort among physicians and patient advocates to remove the anxiety-producing term "carcinoma" from the description of DCIS.⁽⁹⁾

NEW DCIS RESOURCES!

- [Plain Language Summaries](#): Explain PRECISION scientific publications in lay terms.
- [Is Ductal Carcinoma In Situ \(DCIS\) really cancer?](#) (Patient-oriented video)
- [DCIS Decision Support Tool](#): Estimates health outcomes at 10 years for women who have surgery and other treatments for DCIS.

RECENT PRECISION PUBLICATIONS

- [Genomic analysis defines clonal relationships of ductal carcinoma in situ and recurrent invasive breast cancer](#)
- [Treating \(low-risk\) DCIS patients: What can we learn from real-world cancer registry evidence?](#)
- [PREvent ductal Carcinoma in Situ Invasive Overtreatment Now \(PRECISION\) "When is Cancer Not Really Cancer"?](#)
- [Variability in grading of ductal carcinoma in situ among an international group of pathologists](#)
- [More PRECISION Publications](#)

REFERENCES

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