The purpose of the study is to evaluate the percent of cases in which treatment recommendations are changed after the DCISionRT test results become available. The aim of PREDICT is to activate up to 100 sites and consent 2,500 patients diagnosed with DCIS.

There are 49 sites registered and an additional 20 sites are pending activation.

Inclusion criteria:
- Patient has histologically confirmed ductal carcinoma in situ (DCIS) in a single breast (presence of lobular carcinoma in situ (LCIS) or other benign breast disease in addition to DCIS is acceptable)
- Patient tissue is sufficient to generate DNA for analysis
- Patient must be able to provide informed consent

Exclusion criteria:
- Patient is insufficient to generate DCISionRT test results or required DCISionRT testing (age, tumor size, margin status, palpability) are missing
- Patient has evidence of invasive breast cancer including micrometastasis, lymph node involvement, or Paget's disease of the nipple or suspicious mammographic findings on the contralateral breast
- Patient has surgically been treated with a mastectomy for primary DCIS
- Patient has prior in situ or invasive breast cancer
- Patient is pregnant

Study Groups/Cohorts
Female patients with DCIS: 25 years and older. Patients must have histologically confirmed ductal carcinoma in situ (DCIS) in a single breast without evidence of invasive cancer (presence of lobular carcinoma in situ (LCIS) or other benign breast disease in addition to DCIS is acceptable). The primary objective of the study is to create a de-novo DCIS risk model.

Primary Outcome Measures
- Percent of Cases: Change in Treatment Recommendation (Time: 5 years)
- The study will collect details on physician treatment recommendations before and after availability of the generic test (DCISionRT) results. The main elements include type of surgery (lumpectomy, mastectomy, contralateral prophylactic mastectomy), type of radiation therapy (none, CRT, APR, whole breast RT) and endocrine therapy (yes, no). The main measure will be percent of cases in which treatment recommendations are changed after the test results become available.

Secondary Outcome Measures
- Function of Demographic Factors (Time: Frame 5 years)
- Percent of patients for which the recommended treatment changes after DCISionRT results are known as a function of demographic factors (age groups <40, 40-50, ≥50, weight, family history)
- Function of Tumor Factors (Time: Frame 5 years)
- Percent of patients for which the recommended treatment changes after DCISionRT results are known as a function of tumor factors (tumor size, grade, nucleic, palpability, surgical margins, hormone receptor status)

Distribution of DCISionRT scores across the cohort (Time: Frame 5 years)
- Each patient will receive the following risk test (DCISionRT test risk score: 0-100, Risk Category Low (0-15) or Elevated (≥50), Risk Score with Breast Conserving Therapy Alone (40-50) and Risk Score with Breast Conserving Therapy and Radiation (40-60))
- Function of Geographic Region (Time: Frame 5 years)
- Percent of patients for which the recommended treatment changes after DCISionRT results are known as a function of the geographic region of the investigators.

Cohorts
- Recruiters
- Electric Coordinators
- Sites
- Sites - Academic Centers
- Sites - Regional Hospitals
- Sites - Specialty Private Practices

Physician Participation
- Surgeons
- Radiation Oncologists
- Medical Oncologists

- The study population will be selected from the clinical practices of the participating investigators and institutions. Patients who have been recently diagnosed with DCIS and are being evaluated for the need for further therapy before and after availability of the test results are known as a function of the geographic region of the investigators.

Consorted Patients on PREDICT Study
- 425
- 200
- 652

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The PREDICT Registry: A prospective registry study to evaluate the effect of the DCISionRT test on treatment decisions in patients with DCIS following breast conserving therapy

All Current Sites Registered
- Academic Centers
- Regional Hospitals
- Specialty Private Practices

- The purpose of the study is to evaluate the percent of cases in which treatment recommendations are changed after the DCISionRT test results become available.
- The PREDICT Study will have 5 and 10 year follow up.