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LACOG - GBECAM 2023

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REALIZAÇÃO



GERENCIAMENTO  
E PRODUÇÃO





ESCOLA DE  
MEDICINA



Câncer de  
mama Brasil

# CARCINOMA DUCTAL *IN SITU* Atualizações em cirurgia e marcadores prognósticos

Felipe Zerwes  
Mastologista

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MEDICAL EDUCATION



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REALIZAÇÃO



GERENCIAMENTO  
E PRODUÇÃO



# Conflito de Interesses

- De acordo com a Resolução 1931/2009 do Conselho Federal de Medicina e com a RDC 96/2008 da ANVISA, declaro que:
- Palestras patrocinadas / Advisory boards: Gencell; Roche; Libbs; MSD; Novartis; Astra Zeneca.

## Forum 1: Molecular Aspects of DCIS Progression

 Wednesday, December 7, 2022  4:00 PM – 5:00 PM ART  Location: Stars at Night Ballroom 3&4  CE: 1

4:00 PM – 4:20 PM ART

**Tumor stroma in DCIS progression**



4:20 PM – 4:40 PM ART

**Clonal evolution of DCIS to invasion**




4:40 PM – 5:00 PM ART

**Defining recurrence risk for DCIS: How do we tailor therapy**

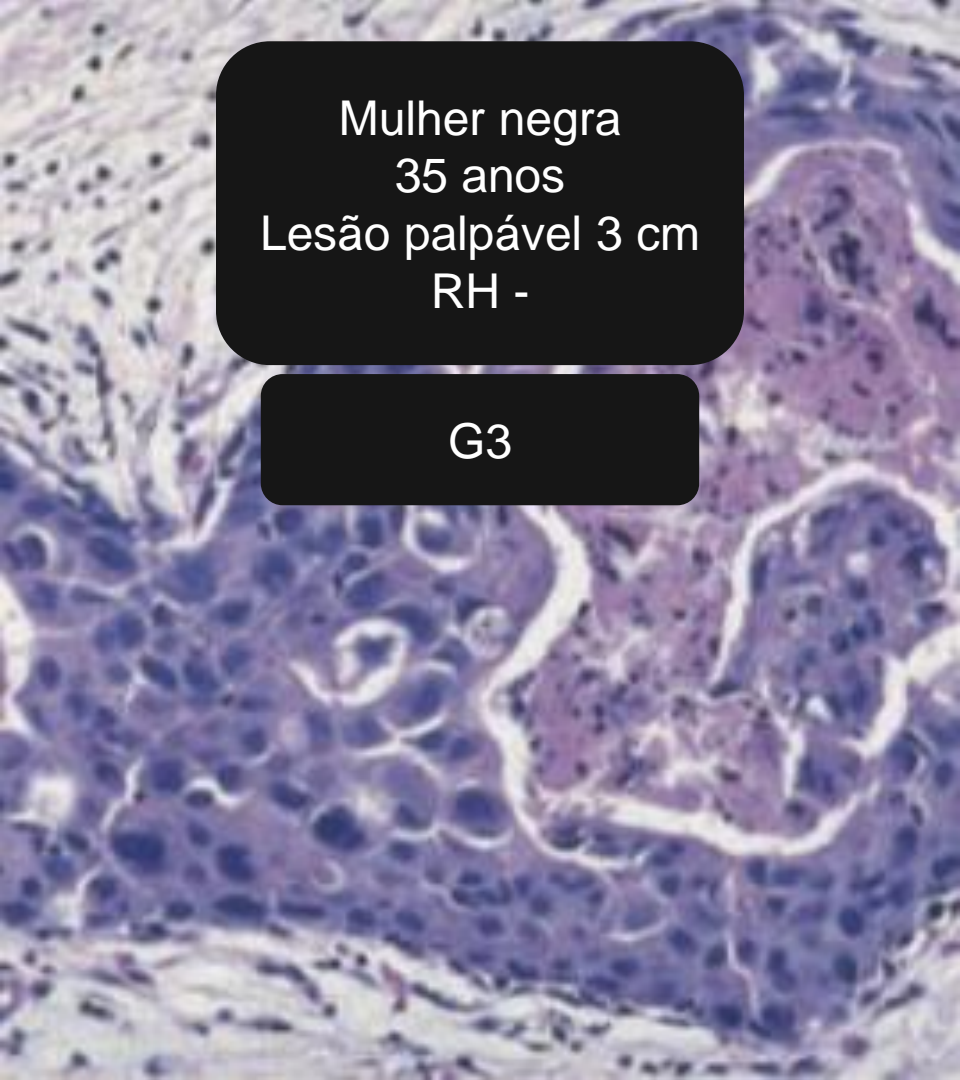






Mulher caucasiana  
75 anos  
MMG rastreamento  
Foco de 1.0 cm  
RH +

G1  
CRIBRIFORME



Mulher negra  
35 anos  
Lesão palpável 3 cm  
RH -

G3

Mulher caucasiana  
75 anos  
MMG rastreamento  
Foco de 1.0 cm  
RH +

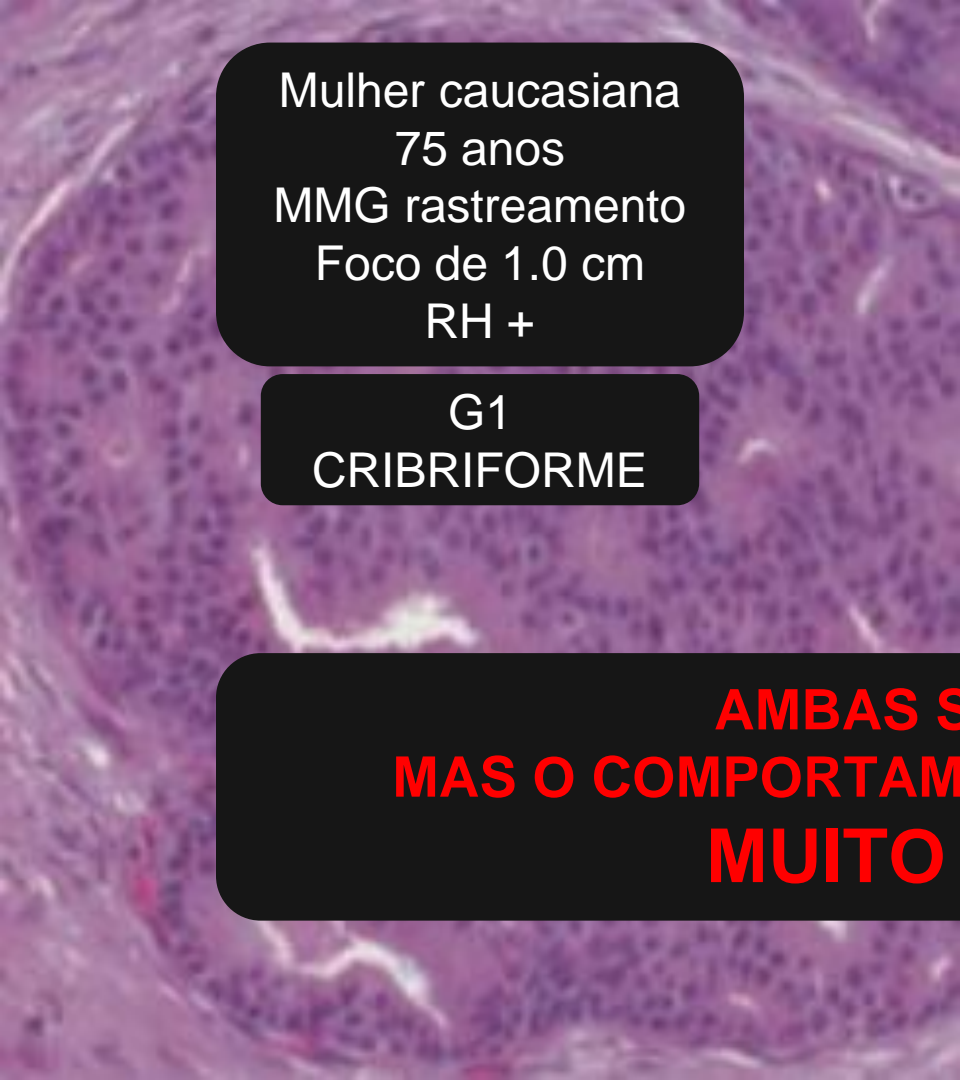
G1  
CRIBRIFORME

Mulher negra  
35 anos  
Lesão palpável 3 cm  
RH -

G3

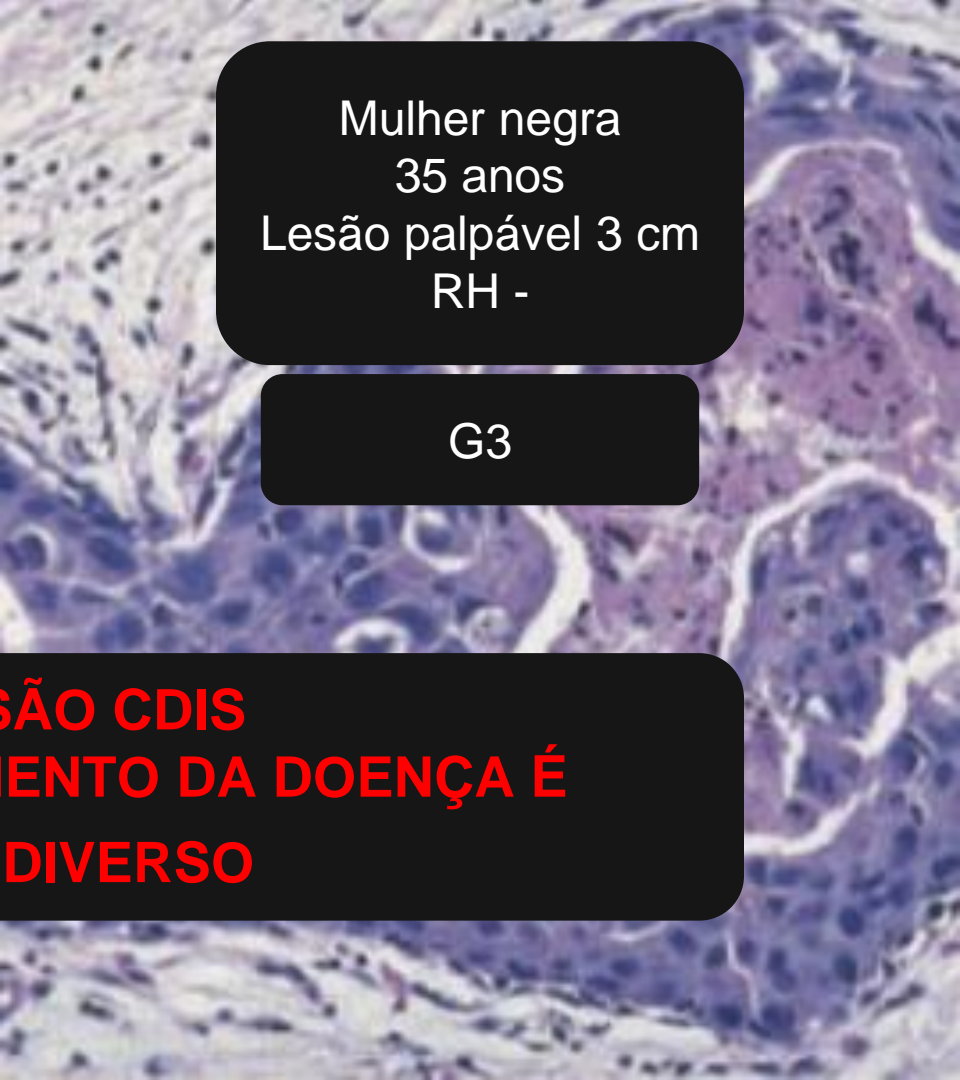
### ESTIMATIVA DE PROGRESSÃO DE CDIS PARA INVASOR EM 10 ANOS SEM TTO

IDADE	GRAU	TAMANHO	PROGRESSÃO
< 45 anos	3	> 1.0 CM	60 %
> 45 anos	1-2	< 2.5 CM	10 %



Mulher caucasiana  
75 anos  
MMG rastreamento  
Foco de 1.0 cm  
RH +

G1  
CRIBRIFORME



Mulher negra  
35 anos  
Lesão palpável 3 cm  
RH -

G3

**AMBAS SÃO CDIS  
MAS O COMPORTAMENTO DA DOENÇA É  
MUITO DIVERSO**



# CDIS

## Dados Estatísticos

**AUMENTOU DIAGNÓSTICO  
(RASTREAMENTO)  
MAIORIA RH +**

**MAIORIA CC + RT**

**MORTALIDADE BAIXA**

**RECIDIVA INVASORA MAU  
PROG.**

**EXTENSÃO TTO LOCAL NÃO  
AFETA SOBREVIDA**

DeSantis C. et al. CA CANCER J Clin 2019  
Narod S. et al. JAMA Oncol 2015  
Worni M. et al. JNCI 2015

# CDIS

## Dados Estatísticos

AUMENTOU DIAGN  
(RASTREAMEN  
MAIORIA RH

MAIORIA CC +

**PIOR PROGNÓSTICO  
MORTALIDADE**

JOVENS  
NEGRAS

LESÕES EXTENSAS  
G3  
RH -

TALIDADE BAIXA

VA INVASORA MAU  
PROG.

ÃO TTO LOCAL NÃO  
TA SOBREVIDA

DeSantis C. et al. CA CANCER J Clin 2019  
Narod S. et al. JAMA Oncol 2015  
Worni M. et al. JNCI 2015

# FATORES DE RISCO PARA RECIDIVA E PROGRESSÃO ( marcadores prognósticos)

**< 50 anos**

**Lesão  
Palpável**

**Grau 3**

**Hist.  
Familiar**

**Tamanho  
Multifoc.**

**Comedo**

**HER-2 +**

# Carcinoma ductal *in situ*

## OPÇÕES DE TRATAMENTO

- MASTECTOMIA
- CIR. CONSERVADORA
  - SEM RT
  - COM RT
- AUSÊNCIA CIRURGIA
- MANEJO DA AXILA

- HORMONIOTERAPIA

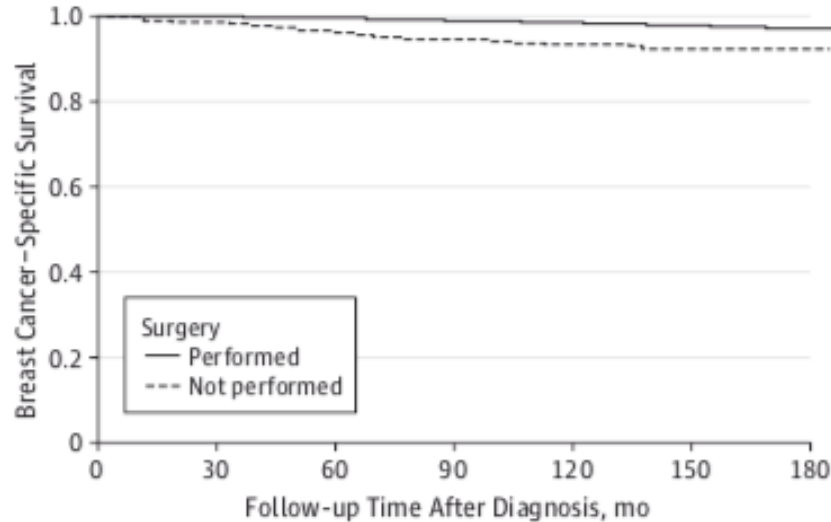
# Carcinoma ductal *in situ*

**CIRURGIA IMPACTA DESFECHO CLÍNICO ?**

# SEER 1998 – 2011

## 57.222 mulheres CDIS

**A** Total patient cohort



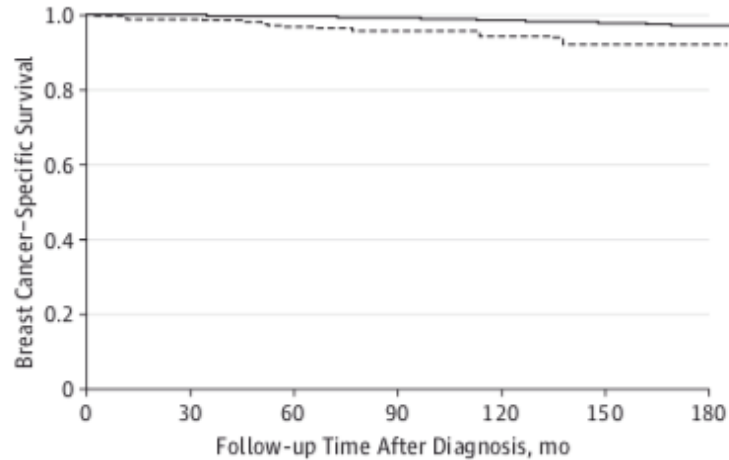
No. at risk		Follow-up Time After Diagnosis, mo						
		0	30	60	90	120	150	180
Performed	56053	44013	32328	22550	14037	7042	2443	
Not performed	1169	856	614	436	273	137	54	

Sagara Y. et al JAMA Surg 2015

# SEER 1998 – 2011

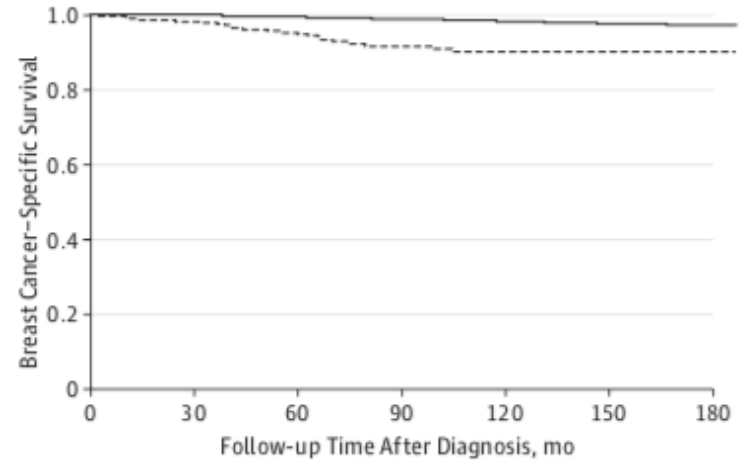
## 57.222 mulheres CDIS

**C** Intermediate-grade ductal carcinoma in situ



No. at risk	0	30	60	90	120	150	180
Performed	21605	16649	12031	8572	5408	2865	1032
Not performed	441	322	225	154	103	51	20

**D** High-grade ductal carcinoma in situ



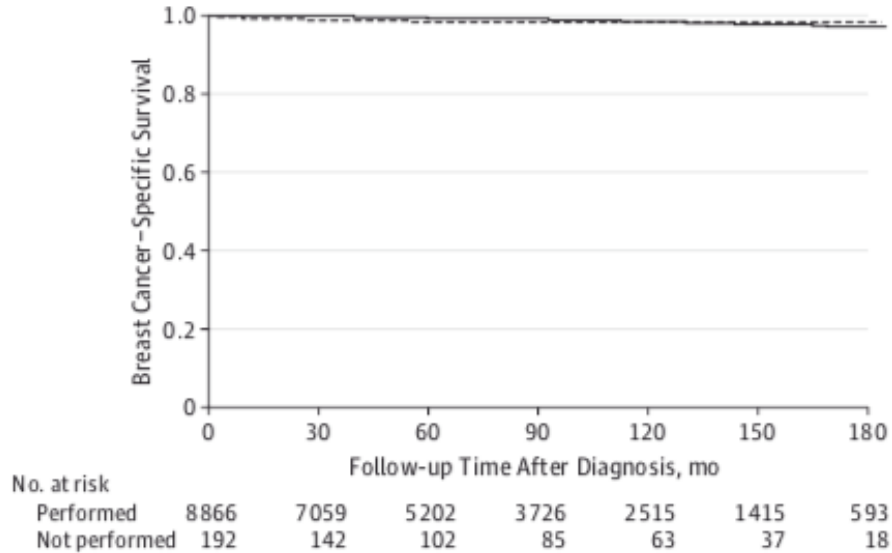
No. at risk	0	30	60	90	120	150	180
Performed	25583	20305	15095	10252	6113	2762	818
Not performed	536	393	287	196	107	49	16

Sagara Y. et al JAMA Surg 2015

# SEER 1998 – 2011

## 57.222 mulheres CDIS

**B** Low-grade ductal carcinoma in situ



Sagara Y. et al JAMA Surg 2015





**REVIEW ARTICLE**

# Ductal carcinoma in situ: to treat or not to treat, that is the question

Maartje van Seijen<sup>1</sup>, Esther H. Lips<sup>1</sup>, Alastair M. Thompson<sup>2</sup>, Serena Nik-Zainal<sup>3</sup>, Andrew Futreal<sup>4</sup>, E. Shelley Hwang<sup>5</sup>, Ellen Verschuur<sup>6</sup>, Joanna Lane<sup>7</sup>, Jos Jonkers<sup>1,8</sup>, Daniel W. Rea<sup>9</sup> and Jelle Wesseling<sup>1,10,11</sup> on behalf of the PRECISION team

Ductal carcinoma in situ (DCIS) now represents 20–25% of all 'breast cancers' consequent upon detection by population-based breast cancer screening programmes. Currently, all DCIS lesions are treated, and treatment comprises either mastectomy or breast-conserving surgery supplemented with radiotherapy. However, most DCIS lesions remain indolent. Difficulty in discerning harmless lesions from potentially invasive ones can lead to overtreatment of this condition in many patients. To counter overtreatment and to transform clinical practice, a global, comprehensive and multidisciplinary collaboration is required. Here we review the incidence of DCIS, the perception of risk for developing invasive breast cancer, the current treatment options and the known molecular aspects of progression. Further research is needed to gain new insights for improved diagnosis and management of DCIS, and this is integrated in the PRECISION (PREvent ductal Carcinoma In Situ Invasive Overtreatment Now) initiative. This international effort will seek to determine which DCISs require treatment and prevent the consequences of overtreatment on the lives of many women affected by DCIS.

*British Journal of Cancer* (2019) 121:285–292; <https://doi.org/10.1038/s41416-019-0478-6>

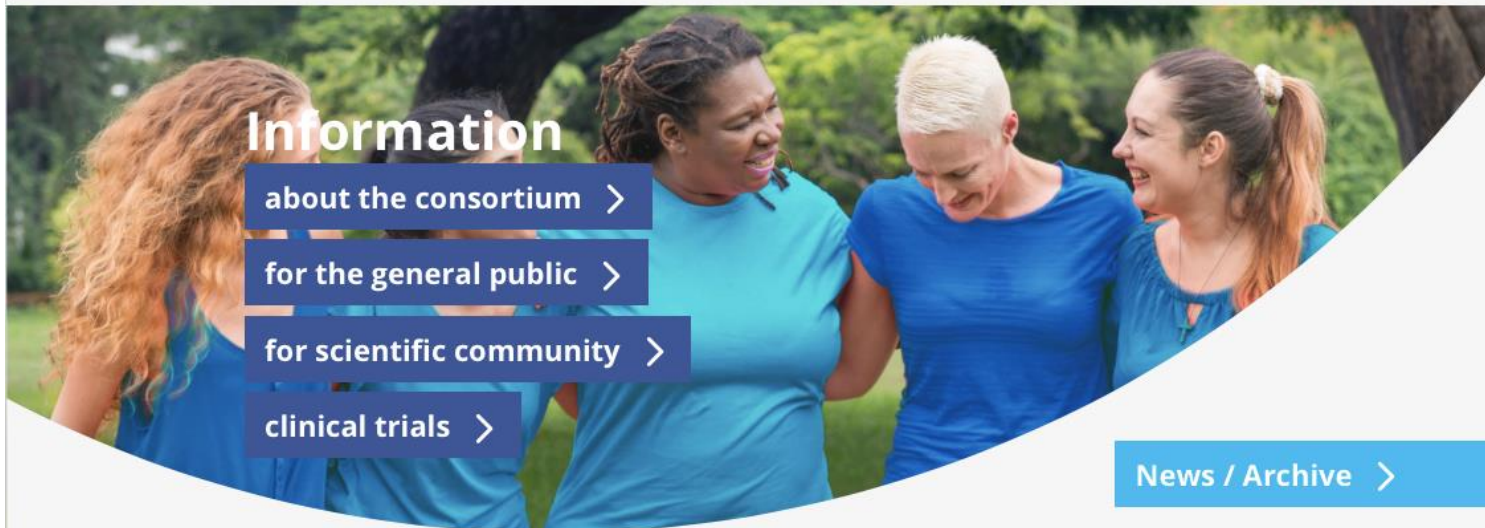
# Grand Challenge 2017



PRECISION: PREvent ductal Carcinoma  
In Situ Invasive Overtreatment Now



When is cancer not really cancer?



## Information

[about the consortium >](#)

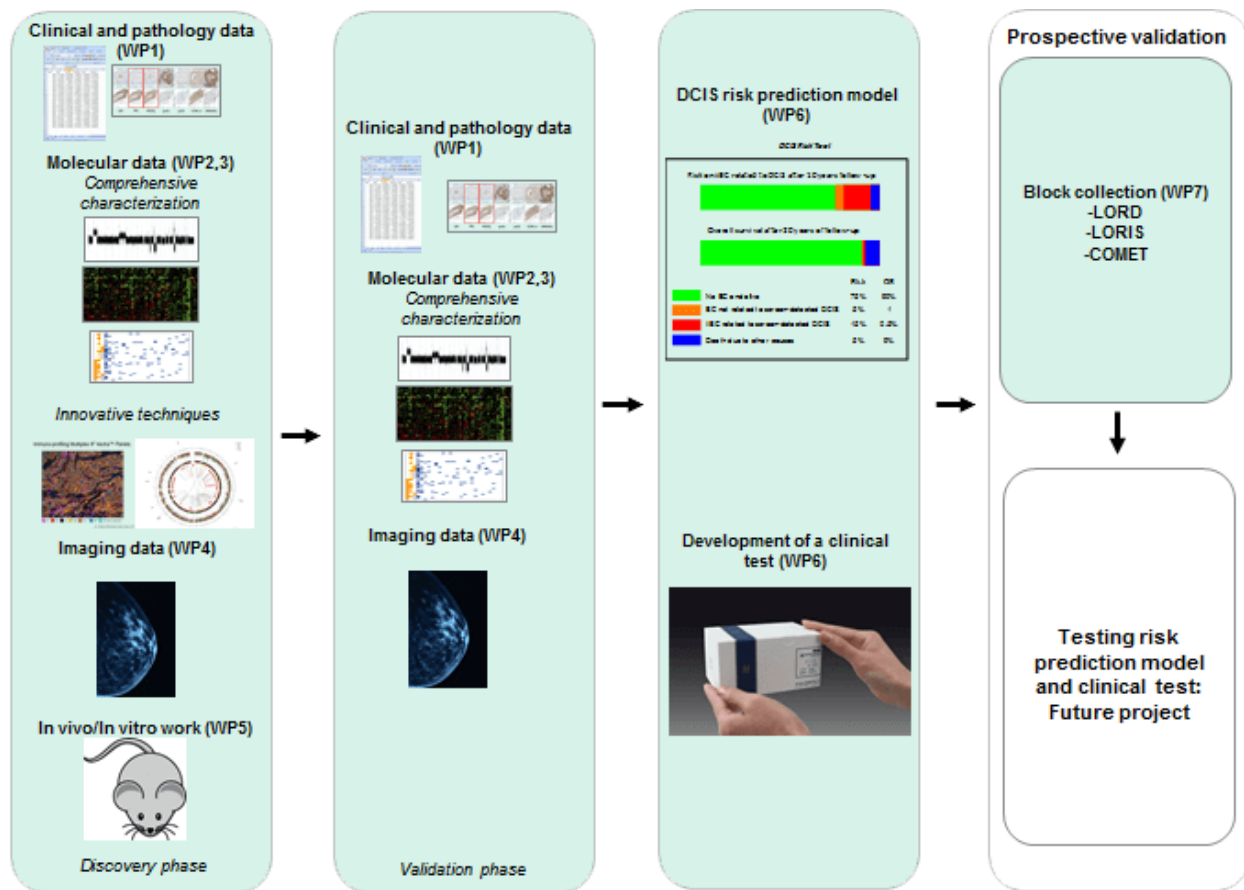
[for the general public >](#)

[for scientific community >](#)

[clinical trials >](#)

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PRECISION (PREvent ductal Carcinoma In Situ Invasive Overtreatment Now)



## The 3 clinical trials embedded in PRECISION – LORIS, LORD and COMET

	LORIS	COMET	LORD (new design)
Country	UK	US	Netherlands/Europe
Age	≥46	≥40	≥45
Standards of care	Standard local care	Surgery	Standard local care
Endocrine therapy	No	Possible	No
Time to Primary Endpoint	5 years	2, 5, 7, 10	10
Opened	2014	2017	2020
Sites open	60	84/100	48
Patients	181	700	307, 234 since new design
Blood Samples collected	151	650	30
Accrual Target	188	1200 (900)	2500
Comments	Closed for recruitment 31st March 2020		*LORD changed design to Patient Preference Trial from randomized one in Q2 2020

Summary of RCT for Low Risk DCIS (last updated 31st May 2021)

	COMET	LORD	LORIS
<b>País</b>	USA	UK	NL/EUROPE
<b>Início</b>	2017	2020 <sup>*(PPT)</sup>	2014
<b>Idade</b>	≥ 40	≥ 45	≥ 46
<b>HT</b>	permitida	não	não
<b>Desf. Prim.</b>	2,5,7,10 a	10 a	5 a
<b>Sítios</b>	84	48	60
<b>n projetado</b>	1200 (900)	2500	188
<b>n atual</b>	700	307	181
<b>Resultados</b>	07/2023	12/2029	?

Dados obtidos no Clinicaltrials.gov em 26/03/2023

# Active surveillance versus conventional treatment in low-risk DCIS; women's preferences in the LORD trial

R.S.J.M Schmitz<sup>1</sup>, E.G. Engelhardt<sup>1,2</sup>, M.A. Gerritsma<sup>2</sup>, C.M.T. Sondermeijer<sup>3</sup>, S. Alaekhaneshir<sup>1</sup>, E. Verschuur<sup>4</sup>, M. van Oirsouw<sup>4</sup>, J.H.E. Houtzager<sup>2</sup>, R. Griffioen<sup>2</sup>, N. Bijker<sup>5</sup>, R.M. Mann<sup>6,7</sup>, F. van Duijnhoven<sup>8</sup>, J. Wesseling<sup>\*1,9,10</sup>, E.M.A. Bleiker<sup>\*2,11,12</sup>, Grand Challenge PRECISION Consortium<sup>1</sup>

<sup>1</sup>Netherlands Cancer Institute, Amsterdam, the Netherlands, <sup>2</sup>Division of Molecular Pathology <sup>3</sup>Netherlands Cancer Institute, Amsterdam, the Netherlands, <sup>4</sup>Department of Biometrics <sup>5</sup>Dorckbanker Vereniging Nederland, Utrecht, the Netherlands <sup>6</sup>Amsterdam University Medical Center, Amsterdam, the Netherlands, <sup>7</sup>Department of Radiation Oncology <sup>8</sup>Netherlands Cancer Institute, Amsterdam, the Netherlands, <sup>9</sup>Department of Radiology <sup>10</sup>Radboud University Medical Center, Nijmegen, the Netherlands, <sup>11</sup>Department of Radiology <sup>12</sup>Netherlands Cancer Institute, Amsterdam, the Netherlands, <sup>13</sup>Department of Pathology <sup>14</sup>Netherlands Cancer Institute, Amsterdam, the Netherlands, <sup>15</sup>Department of Pathology <sup>16</sup>Leiden University Medical Center, Leiden, the Netherlands, <sup>17</sup>Department of Pathology <sup>18</sup>Netherlands Cancer Institute, Amsterdam, the Netherlands, <sup>19</sup>Family Cancer Clinic <sup>20</sup>Leiden University Medical Center, Leiden, the Netherlands, <sup>21</sup>Department of Clinical Genetics

## BACKGROUND

- DCIS is a potential precursor to breast cancer. However, the majority remain indolent. Consequently, there is a growing concern regarding overtreatment in DCIS.
- The LORD trial is a non-randomized, patient preference trial comparing active surveillance to conventional treatment
- In LORD, Women are free to opt for either management strategy.

## OBJECTIVES

- Describe the distribution of participants within the treatment arm
- Identify women's motives to opt for their preferred treatment arm
- Assess association between patient and disease characteristics and treatment preference

## CONCLUSION

- The LORD trial is the first to offer women with low-risk DCIS a choice between conventional treatment and active surveillance
- In the LORD trial, most women opt for active surveillance and not conventional treatment, which is still recommended in clinical guidelines for women with DCIS
- Women report high levels of trust in their oncologist and the safety of active surveillance
- Women's strong preference for active surveillance underscores the urgent need for robust evidence that de-escalating treatment for low-risk DCIS is safe

## METHODS

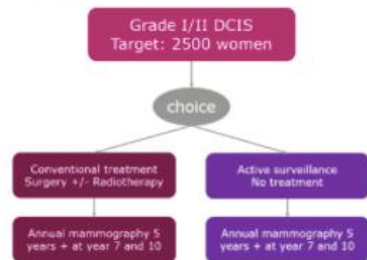


Figure 1: LORD trial design

Data from validated patient questionnaires at baseline  
Thematic analyses open-ended questions  
Multivariable logistic regression

## RESULTS

Figure 2: Distribution by treatment arm n=376

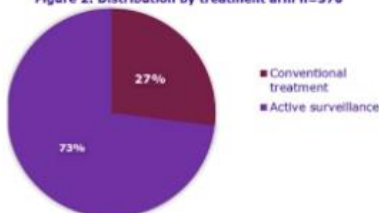
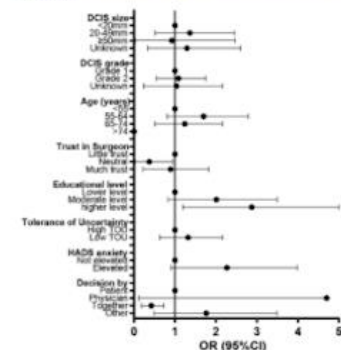


Figure 3: Reported motives for preference either treatment arm



Figure 4: Factors associated with conventional treatment preference



High educational level and higher HADS score of anxiety were associated with preference for conventional treatment. As was the final decision making by the patient as opposed to together with their clinician.

Funded by



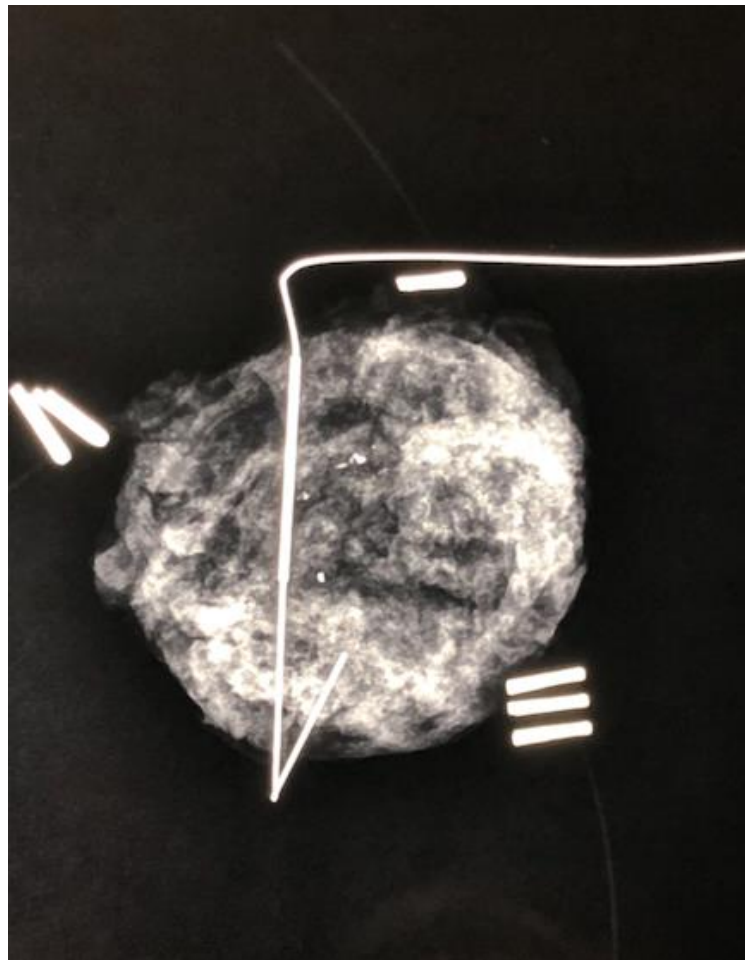
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# Carcinoma ductal *in situ*

## TIPO DE CIRURGIA

**MASTECTOMIA  
X  
CIRURGIA  
CONSERVADORA**





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# Carcinoma ductal *in situ*

## MARGENS CIRÚRGICAS “MÍNIMAS” NA CC

# Carcinoma ductal *in situ*

## MARGENS CIRÚRGICAS “MÍNIMAS” NA CC

VOLUME 34 · NUMBER 33 · NOVEMBER 20, 2016

JOURNAL OF CLINICAL ONCOLOGY

ASCO SPECIAL ARTICLE

### Society of Surgical Oncology–American Society for Radiation Oncology–American Society of Clinical Oncology Consensus Guideline on Margins for Breast-Conserving Surgery With Whole-Breast Irradiation in Ductal Carcinoma In Situ

*Monica Morrow, Kimberly J. Van Zee, Lawrence J. Solin, Nehmat Houssami, Mariana Chavez-MacGregor, Jay R. Harris, Janet Horton, Shelley Hwang, Peggy L. Johnson, M. Luke Marinovich, Stuart J. Schnitt, Irene Wapnir, and Meena S. Moran*

# RECOMENDAÇÕES CONSENSO MARGENS

- Margem mínima de **2mm** em pacientes com CDIS ou CDIS com microinvasão, tratadas com cirurgia conservadora + RT;

# RECOMENDAÇÕES CONSENSO MARGENS

- Margem mínima de **2mm** em pacientes com CDIS ou CDIS com microinvasão, tratadas com cirurgia conservadora + RT;
- Não há evidência de necessidade de margens mais amplas, mesmo para piores prognósticos;

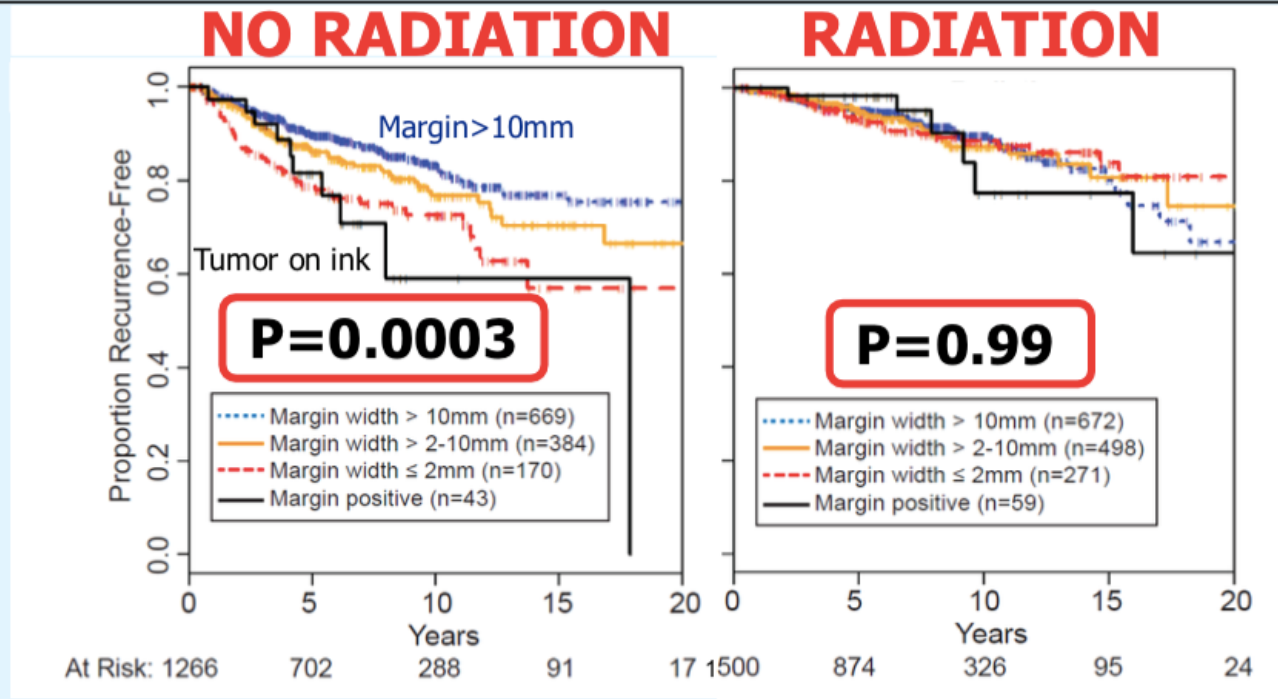
JOVENS  
LESÕES GRANDES  
COMEDOCARCINOMA  
ALTO GRAU

# RECOMENDAÇÕES CONSENSO MARGENS

- Margem mínima de **2mm** em pacientes com CDIS ou CDIS com microinvasão, tratadas com cirurgia conservadora **+ RT**;
- Não há evidência de necessidade de margens mais amplas, mesmo para piores prognósticos;

JOVENS  
LESÕES GRANDES  
COMEDOCARCINOMA  
ALTO GRAU

# AFTER BCS FOR DCIS **WITHOUT RADIATION**, RECURRENCE RISK VARIES WIDELY BY MARGIN WIDTH



Van Zee *et al.*,  
2015 *Ann Surg*

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# FATORES DE RISCO PARA RECIDIVA LOCAL APÓS CIRURGIA CONSERVADORA

**< 50 anos**

**Lesão  
Palpável**

**Grau 3**

**Margem  
Positiva**

**Hist.  
Familiar**

**Tamanho  
Multifoc.**

**Comedo**

**Ausência  
RT**

**HER-2 +**

**Ausência  
TH**



# Carcinoma ductal *in situ*

## MANEJO DA AXILA

# Carcinoma ductal *in situ*

## MANEJO DA AXILA

### PROBABILIDADE DE SUBESTIMAÇÃO

***Core-biopsy***  
**Lesão palpável**  
**Área > 5 cm**

# Carcinoma ductal *in situ*

## MANEJO DA AXILA

### PROBABILIDADE DE SUBESTIMAÇÃO

***Core-biopsy***  
**Lesão palpável**  
**Área > 5 cm**

**Mastectomia**

# Carcinoma ductal *in situ*

## MANEJO DA AXILA

### PROBABILIDADE DE SUBESTIMAÇÃO

25% Cir. conservadora para CDIS realizam BLS

**Mastectomia**

## INTRODUCTION

Breast Ductal Carcinoma in Situ (DCIS) is a malignant proliferation of the epithelium inside the breast duct, which does not invade the myoepithelial layer and, therefore, does not have the capacity to generate metastases. [1]. However, an upstaging after surgery is possible, since there may be a concomitant invasive lesion that was not diagnosed in the pathological examination from biopsy, being discovered only after the surgical procedure [1]. In the pre-screening mammography era, DCIS was diagnosed, more commonly in symptomatic women presenting with a palpable nodule, papillary flow, or through an incidental finding on a breast biopsy [2], accounting for 1-2% of cancer cases. [3]. After the advent of mammographic screening, the incidence has considerably increased among asymptomatic women with mammographic changes such as calcifications. [4]. Nowadays the diagnosis of DCIS corresponds to 20-25% of biopsies secondary to screening mammographic changes. [1]. As we do know that the chance of axillary metastasis is potentially null, old series where axillary dissection (AD) was performed ipsilateral to the index tumor, axillary involvement was observed in less than 1% of cases [9].

Today with the well-established sentinel lymph node biopsy (SNB), in which only some lymph nodes are analyzed with serial sections, and sometimes associated with immunohistochemistry (IHC) evaluation, there was an increase in the diagnosis of axillary involvement, reaching a rate of 1-22% [10-22], where the majority is composed of isolated tumor cell or small volume of disease. [23].

Thus, due to the possibility of upstaging after surgery, some authors advocate the performance of SNB in patients at high risk for the presence of an invasive lesion or for patients undergoing mastectomy [26-27].

Historically, the associated factors involved of a higher risk of present invasive lesion are young age, presence of comedocarcinosis, nuclear grade 3, extensive lesion, palpable lesion or nodular lesion seen on imaging studies. [28-34].

## OBJECTIVES

Our objective in this study was to describe in a single breast cancer reference center the surgical treatment of patients diagnosed with DCIS (mastectomy or breast conservative surgery - BCS). In addition, we aimed to find the reasons that led our surgeons to choose one or the other treatment, as well as the factors related to axillary approach.

## METHODS

A retrospective analysis was made using the Pérola Byington Hospital's database, from January 2011 to December 2019. During this period, 11,373 cases of breast cancer were treated in the institution and 812 [7.4%] were DCIS. Data was available and we could analyze 494 patients who underwent vacuum-guided biopsy guided by mammography or ultrasound and were diagnosed with DCIS and underwent surgical treatment at the Hospital. We grouped the patients into 3 age groups: under 40, 40-49, and 50 and over. In all groups, we had patients who underwent SNB using the patent blue technique or AD and were evaluated using the H&E method. It is not part of the Institutional protocol to perform IHC in axillary lymph nodes. We had also evaluated the type of surgery [BCS or mastectomy] in each age group.

## RESULTS

DCIS was diagnosed through mammographic alterations in 62% of all cases and nuclear grade 2 was the most common, with 47%, followed by grade 3 and 1, 46% and 4%, respectively. In 2% of cases the data was missing. Comedo-carcinosis was present in 78% of our specimens.

BCS was the most frequently surgery performed (73% of cases), with the axillary approach being performed in 35% of these patients (32% for SNB and 3% for AD). While 27% of patients underwent radical surgery and in this group 92% were submitted to axillary approach (70% SNB and 22% AD). In the group of patients younger than 40 years, 74% of patients (17 out of 23 in total) underwent an axillary approach regardless of the type of surgery.

When evaluating the predetermined age groups, we saw that most of our patients were 50 years or more (69%), followed by patients between 40-49 years (26%) and 5% in patients under 40 years.

In 3% of cases (16 in 494) we reclassified the lesion as invasive carcinoma.

None of them had a lymph node involved by malignant cells after surgery and that's include the cases reclassified as invasive carcinoma.

## RESULTS

Figure 1: Type of Surgery and axilla approach

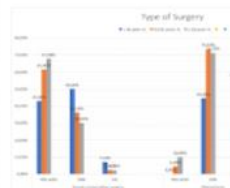


Figure 2: Type of Surgery

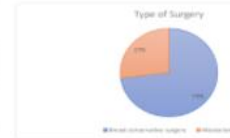
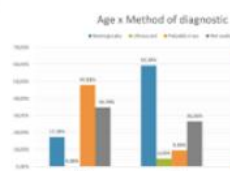


Figure 3: Age x Method of diagnostic



## CONCLUSIONS

The results obtained in this analysis showing no axillary involvement will make us rethink the indications for the concomitant surgical approach of the breast and the axilla in cases with a diagnosis of DCIS as a way to reduce the axillary surgical overtreatment.

It was not our goal to compare the costs and complications of each method of diagnosis and the prognostic factors after the treatment of DCIS.

## REFERENCES

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## CONTACTS

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## PÉROLA BYINGTON 2011 – 2019

### 812 casos DCIS (7.4%)

Breast proliferation not invade the capsule, upstaging concomitant pathological after the mammography symptomatic papillary fixation biopsy [2]. The advent of mammography considerably increased among asymptomatic women with mammographic changes such as calcifications. [4]. Nowadays the diagnosis of DCIS corresponds to 20-25% of biopsies secondary to screening mammographic changes. [1]. As we do know that the chance of axillary metastasis is potentially null, old series where axillary dissection (AD) was performed ipsilateral to the index tumor, axillary involvement was observed in less than 1% of cases [9].

Today with the well-established sentinel lymph node biopsy (SNB), in which only some lymph nodes are analyzed with serial sections, and sometimes associated with immunohistochemistry (IHC) evaluation, there was an increase in the diagnosis of axillary involvement, reaching a rate of 1-22% [10-22], where the majority is composed of isolated tumor cell or small volume of disease. [23].

Thus, due to the possibility of upstaging after surgery, some authors advocate the performance of SNB in patients at high risk for the presence of an invasive lesion or for patients undergoing mastectomy [26-27].

Historically, the associated factors involved of a higher risk of present invasive lesion are young age, presence of comedonecrosis, nuclear grade 3, extensive lesion, palpable lesion or nodular lesion seen on imaging studies. [28-34].

Pérola Byington Hospital's database, from January 2011 to December 2019. During this period, 11,373 cases of breast cancer were treated in the institution and 812 (7.4%) were DCIS. Data was available and we could analyze 494 patients who underwent vacuum-guided biopsy guided by mammography or ultrasound and were diagnosed with DCIS and underwent surgical treatment at the Hospital. We grouped the patients into 3 age groups: under 40, 40-49, and 50 and over. In all groups, we had patients who underwent SNB using the patent blue technique or AD and were evaluated using the H&E method. It is not part of the institutional protocol to perform IHC in axillary lymph nodes. We had also evaluated the type of surgery [BCS or mastectomy] in each age group.

### RESULTS

DCIS was diagnosed through mammographic alterations in 62% of all cases and nuclear grade 2 was the most common, with 47%, followed by grade 3 and 1, 46% and 4%, respectively. In 2% of cases the data was missing. Comedo necrosis was present in 78% of our specimens.

BCS was the most frequently surgery performed (73% of cases), with the axillary approach being performed in 35% of these patients (32% for SNB and 3% for AD). While 27% of patients underwent radical surgery and in this group 92% were submitted to axillary approach (70% SNB and 22% AD). In the group of patients younger than 40 years, 74% of patients (17 out of 23 in total) underwent an axillary approach regardless of the type of surgery.

When evaluating the predetermined age groups, we saw that most of our patients were 50 years or more (69%), followed by patients between 40-49 years (26%) and 5% in patients under 40 years.

In 3% of cases (16 in 494) we reclassified the lesion as invasive carcinoma.

None of them had a lymph node involved by malignant cells after surgery and that's include the cases reclassified as invasive carcinoma.

### RESULTS

Figure 1: Type of Surgery and axilla approach



Figure 2: Type of Surgery

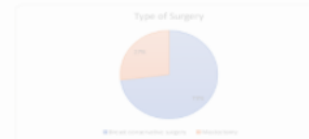
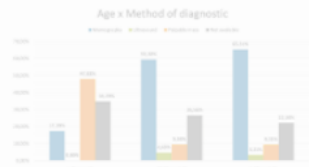


Figure 3: Age x Method of diagnostic



### CONCLUSIONS

The results obtained in this analysis showing no axillary involvement will make us rethink the indications for the concomitant surgical approach of the breast and the axilla in cases with a diagnosis of DCIS as a way to reduce the axillary surgical overtreatment.

It was not our goal to compare the costs and complications of each method of diagnosis and the prognostic factors after the treatment of DCIS.

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10. Intra M, Veronesi F, Mazzard G, et al. Axillary sentinel lymph node biopsy in patients with pure ductal carcinoma in situ of the breast. *Arch Surg*. 2005;138:309-13.

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**PÉROLA BYINGTON  
2011 – 2019**

**812 casos CDIS (7.4%)**

## RESULTS

DCIS was diagnosed in 7.4% of mammograms. The majority of cases were diagnosed by gross pathology (73%), followed by biopsy (26%). The most common histological types were lobular DCIS (73%), followed by ductal DCIS (26%). The majority of cases were diagnosed by gross pathology (73%), followed by biopsy (26%). The most common histological types were lobular DCIS (73%), followed by ductal DCIS (26%).

BCS was the most frequently surgery performed (73% of cases), with the axillary approach being performed in 35% of these patients (32% for SNB and 3% for AD). While 27% of patients underwent radical surgery and in this group 92% were submitted to axillary approach (70% SNB and 22% AD). In the group of patients younger than 40 years, 74% of patients (17 out of 23 in total) underwent an axillary approach regardless of the type of surgery.

When evaluating the predetermined age groups, we saw that most of our patients were 50 years or more (69%), followed by patients between 40-49 years (26%) and 5% in patients under 40 years.

In 3% of cases (16 in 494) we reclassified the lesion as invasive carcinoma.

None of them had a lymph node involved by malignant cells after surgery and that's include the cases reclassified as invasive carcinoma.

**494 casos  
(CDIS BAV)**

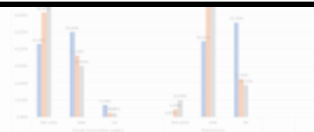


Figure 2: Type of Surgery

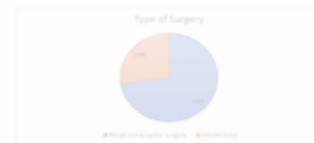
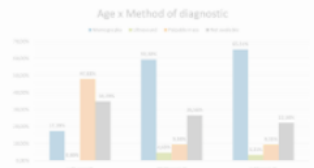


Figure 3: Age x Method of diagnostic



Analysis showing no...  
link the indications...  
of the breast and...  
DCIS as a way to...  
treat.

It was not our goal to compare the costs and complications of each method of diagnosis and the prognostic factors after the treatment of DCIS.

## REFERENCES

1. Does sentinel lymph node biopsy for screening high-grade ductal carcinoma in situ of the breast cause more harm than good? *Semin Oncol*. 2019;46(5):505-510. doi:10.1053/j.seminoncol.2019.05.005
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**PÉROLA BYINGTON  
2011 – 2019**

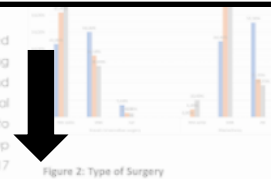
**812 casos CDIS (7.4%)**

**RESULTS**

DCIS was diagnosed in 73% of the patients. The most common type of DCIS was lobular DCIS (73%), followed by tubular DCIS (26%) and atypical lobular DCIS (1%). The most common type of DCIS was lobular DCIS (73%), followed by tubular DCIS (26%) and atypical lobular DCIS (1%).

**494 casos (CDIS BAV)**

BCS was the most frequently surgery performed (73% of cases), with the axillary approach being performed in 35% of these patients (32% for SNB and 3% for AD). While 27% of patients underwent radical surgery and in this group 92% were submitted to axillary approach (70% SNB and 22% AD). In the group of patients younger than 40 years, 74% of patients (17 out of 23 in total) underwent an axillary approach, regardless of the type of surgery.



**C.C. (73%)**

**MAST. (27%)**

When evaluating the predictors we saw that most of our patients were more (69%), followed by patients between 40 and 49 years (26%) and 5% in patients under 40 years.

**35% AXILA**

**92% AXILA**

In 3% of cases (16 in 494) we observed a lymph node lesion as invasive carcinoma. None of them had a lymph node with malignant cells after surgery and all cases reclassified as invasive carcinoma.

None of them had a lymph node with malignant cells after surgery and all cases reclassified as invasive carcinoma.

Breast proliferation... not invade... have the c... upstaging... concomitant... pathological... after the... mammogram... asymptomatic... papillary... biopsy [2].... advent of... considerably increased among asymptomatic women with mammographic changes such as calcifications. [4]. Nowadays the diagnosis of DCIS corresponds to 20-25% of biopsies secondary to screening mammographic changes. [1]. As we do know that the chance of axillary metastasis is potentially null, old series where axillary dissection (AD) was performed ipsilateral to the index tumor, axillary involvement was observed in less than 1% of cases [9].

Today with the well-established sentinel lymph node biopsy (SNB), in which only some lymph nodes are analyzed with serial sections, and sometimes associated with immunohistochemistry (IHC) evaluation, there was an increase in the diagnosis of axillary involvement, reaching a rate of 1-22% [10-22], where the majority is composed of isolated tumor cell or small volume of disease. [23].

Thus, due to the possibility of upstaging after surgery, some authors advocate the performance of SNB in patients at high risk for the presence of an invasive lesion or for patients undergoing mastectomy [26-27].

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Pérola Byington Hospital's database, from January 2011 to December 2019. During this period, 11,373 cases of breast cancer were treated in the institution and 812 (7.4%) were DCIS. Data was available and we could analyze 494 patients who underwent vacuum-guided biopsy guided by mammography or ultrasound and were diagnosed with DCIS and underwent surgical treatment at the Hospital. We grouped the patients into 3 age groups: under 40, 40-49, and 50 and over. In all groups, we had patients who underwent SNB using the patent blue technique or AD and were evaluated using the H&E method. It is not part of the institutional protocol to perform IHC in axillary lymph nodes. We had also evaluated the type of surgery [BCS or mastectomy] in each age group.



analysis showing no... the indications... of the breast and... DCIS as a way to... ent.

It was not our goal to compare the costs and complications of each method of diagnosis and the prognostic factors of each treatment of DCIS.

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  6. ...

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**PÉROLA BYINGTON  
2011 – 2019**

**812 casos CDIS (7.4%)**

## RESULTS

DCIS was diagnosed in 812 (7.4%) of 10,923 women. The most frequent histological type was lobular DCIS (73%), followed by ductal DCIS (27%). The majority of cases (69%) were diagnosed by mammography, followed by ultrasound (16%) and biopsy (15%). The majority of cases (69%) were diagnosed by mammography, followed by ultrasound (16%) and biopsy (15%).

BCS was the most frequently performed (73% of cases), with the axillary approach being performed in 35% of these patients (32% for SNB and 3% for AD). While 27% of patients underwent radical surgery and in this group 92% were submitted to axillary approach (28% for SNB and 22% AD). In the group of patients younger than 40 years, 74% of patients (17 out of 23) underwent an axillary approach.

When evaluating the predictive factors, we saw that most of our patients were older (69%), followed by patients with a higher histological grade (26%) and 5% in patients under 40 years of age. In our study, 16 (1.9%) patients had a lymph node metastasis (16 in 494) and 35% of patients had a lymph node metastasis (16 in 494) and 35% of patients had a lymph node metastasis (16 in 494).

**494 casos  
(CDIS BAV)**

**C.C.  
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**16 casos CI (3%)**

Pérola Byington Hospital's database, from January 2011 to December 2019. During this period, 11,373 cases of breast cancer were treated in the institution and 812 (7.4%) were DCIS. Data was available and we could analyze 494 patients who underwent vacuum-guided biopsy guided by mammography or ultrasound and were diagnosed with DCIS and underwent surgical treatment at the Hospital. We grouped patients into three age groups: under 40, 40-59, and ≥60 years. In all groups, we had positive results. In the youngest group, the patient blue was positive for DCIS and was evaluated using the H&E method. It is not part of the institutional protocol to perform IHC in axillary lymph nodes. We had also evaluated the type of surgery [BCS or mastectomy] in each age group.

**PÉROLA BYINGTON  
2011 – 2019**

**812 casos CDIS (7.4%)**

## RESULTS

DCIS was diagnosed in 812 women (7.4%) during the period from 2011 to 2019. The majority of cases (73%) were diagnosed by axillary biopsy, followed by mastectomy (27%). The majority of cases (35%) were diagnosed by axillary biopsy, followed by mastectomy (27%).

**494 casos  
(CDIS BAV)**

BCS was the most frequently surgery performed (73% of cases), with the axillary approach being performed in 35% of these patients (32% for SNB and 3% for AD). While 27% of patients underwent radical surgery and in this group 92% were submitted to axillary approach (28% SNB and 22% AD). In the group of patients younger than 40 years, 74% of patients (17 out of 23) underwent an axillary approach.

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(27%)**

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**NENHUM LINFONODO POSITIVO**

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## SentiNot 2.0: Avoid unnecessary Sentinel Lymph Node Biopsies in women with DCIS

Eirini Pantoria<sup>1,2</sup>, Staffan Eriksson<sup>3,4</sup>, Lida Pistiolis<sup>5,6,7</sup>, Roger Olofsson Bagge<sup>8,9,7</sup>, Gyula Nagy<sup>9</sup>, Alastair Thompson<sup>9</sup>, Vivian Man<sup>10</sup>, Ava Kwong<sup>10,11,12</sup>, Andreas Karakatsani<sup>1,2</sup>, Fredrik Wärnberg<sup>5</sup>  
on behalf of the SentiNot Trialists Group

<sup>1</sup>Department of Biostatistics, Uppsala University, Uppsala, Sweden; <sup>2</sup>Department of Surgery, Uppsala University Hospital, Uppsala, Sweden; <sup>3</sup>Center for Clinical Research, Uppsala University, Västerås, Sweden; <sup>4</sup>Department of Surgery, Västermanland County Hospital, Västerås, Sweden; <sup>5</sup>Hälsinglands Centre for Cancer Research, Department of Surgery, Institute of Clinical Sciences, Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden; <sup>6</sup>Department of Surgery, Sahlgrenska University Hospital, Gothenburg, Sweden; <sup>7</sup>Wärnberg Centre for Molecular and Translational Medicine, University of Gothenburg, Gothenburg, Sweden; <sup>8</sup>Stress Link, Department of Surgery, Linköping University Hospital, Linköping, Sweden; <sup>9</sup>Swedish Cancer Research Center, Karolinska Institutet, Stockholm, Sweden; <sup>10</sup>Department of Surgery, The University of Hong Kong, Hong Kong SAR; <sup>11</sup>Department of Surgery, The University of Hong Kong-Shen Zhen Hospital, China; <sup>12</sup>Department of Surgery Hong Kong Sanatorium and Hospital, Hong Kong SAR

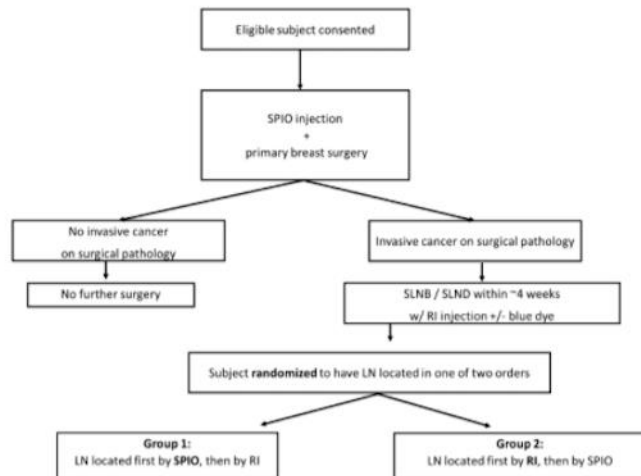
### Background

- 15-30% of women with a preoperative diagnosis of ductal carcinoma in situ (DCIS) will be diagnosed with invasive cancer (IBC) on specimen pathology.
- Risk of upgrade, and impairment of lymphatic outflow after breast surgery, mainly mastectomy, are drivers for upfront sentinel lymph node dissection (SLND).
- In the SentiNot feasibility study, marking the SLN by superparamagnetic iron oxide nanoparticles (SPIO) injection during primary surgery minimized unnecessary SLNDs, allowing for delayed SLND (d-SLND) only in those with IBC up to 50 days after primary surgery.
- This policy resulted in that 78.3% study participants avoided upfront SLND. In the d-SLND setting, SPIO detection outperformed the isotope (98.5 vs 60.6%), regardless of type of breast procedure. Incremental healthcare costs were reduced by 8.5% (485 USD per patient) for the entire trial population (ref 1).

### Inclusion Criteria

- Any DCIS/ pLCIS with
  - High-risk features (size, grade, comedo necrosis, mass effect)
  - Micro-invasion on preoperative biopsy
- Any DCIS/pLCIS planned
  - For surgery that precludes accurate axillary mapping (mastectomy, oncoplastic surgery)
  - For risk-reducing mastectomy
- Diagnostic excision of BIRADS 4 or 5 lesion

### Methods



### Endpoints

#### Primary Endpoints

- SLN detection on d-SLND
- Nodal Yield on d-SLND
- SPIO-RI concordance on d-SLND

#### Secondary Endpoints

- Shoulder arm morbidity (DASH score)
- HRQoL (EORTC-QLQ-C30, EORTC-QLQ-BR23, BREASTQ)
- Lymphedema rate at 1, 2 and 5 years postoperative

### Trial Status

Since the trial launched (March 2020), 280 patients have been recruited (74 underwent mastectomies, and 206 BCT).

Of those, 71 patients have been randomized (14 from the mastectomy group and 57 from the BCT group).

No safety issues have been reported.

### Collaborators

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Sahlgrenska University Hospital, Sweden  
University Hospital, Linköping  
Skåne University Hospital  
Blekinge County Council Hospital  
Växjö Hospital, Växjö, Sweden  
The University of Hong Kong-Shenzhen Hospital  
Norrlands University Hospital  
Dalarna County Hospital, Falun, Sweden  
Baylor College of Medicine






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ORIGINAL ARTICLE – BREAST ONCOLOGY

# Predicting Lymph Node Metastases in Patients with Biopsy-Proven Ductal Carcinoma In Situ of the Breast: Development and Validation of the DCIS-met Model

Claudia J. C. Meurs, MSc<sup>1,2</sup> , Joost van Rosmalen, PhD<sup>3,4</sup> , Marian B. E. Menke-Pluijmers, MD, PhD<sup>5</sup> , Sabine Siesling, PhD<sup>1,6</sup> , and Pieter J. Westenend, MD, PhD<sup>7</sup> 

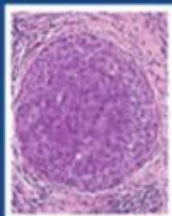
<sup>1</sup>Department of Health Technology and Services Research, Technical Medical Centre, University of Twente, Enschede, The Netherlands; <sup>2</sup>CMAnalyzing, Zevenaar, The Netherlands; <sup>3</sup>Department of Biostatistics, Erasmus MC, Rotterdam, The Netherlands; <sup>4</sup>Department of Epidemiology, Erasmus MC, Rotterdam, The Netherlands; <sup>5</sup>Department of Surgery, Albert Schweitzer Hospital, Dordrecht, The Netherlands; <sup>6</sup>Department of Research, Netherlands Comprehensive Cancer Organisation, Utrecht, The Netherlands; <sup>7</sup>Laboratory of Pathology Dordrecht, Dordrecht, The Netherlands

# DCIS-Met Model for Predicting Metastases

Axillary staging



For biopsy-proven DCIS



**Hypothesis:** a model based on factors available in daily clinical practice can predict lymph node metastasis

Study used registry based data of NCR and PALGA

**Development cohort:**

Population based development cohort

2,892 biopsy-proven DCIS resected, period 2011-2012

127 metastases: 4.4%



Performance: AUC 0.745

Web tool to predict metastases; model 1858 at [www.evidencio.com](http://www.evidencio.com)



Age: 24 years

Detection mode:  System-identified  Clinician

Palpable:  No  Yes

BI-RADS score:  1  2  3

DCIS grade at biopsy:  Low  Intermediate  High

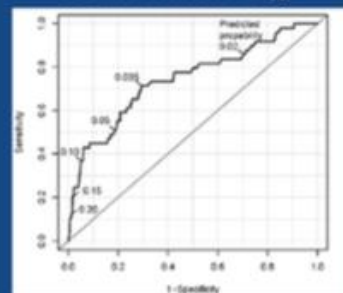
Suspicious invasive component at biopsy:  Yes  No

Predicted risk of metastases: 5.3%

**Validation cohort:**

2,396 biopsy-proven DCIS resected, period 2016-2019

53 metastases: 2.2%



Performance: AUC 0.741

Thus, the model can support clinical decisions for staging.

Meurs CJC, van Rosmalen J, Menke-Pluijmers MBE, Siesling S, Westenend PJ, et al. *Ann Surg Oncol*.

Visual Abstract by @UTwenteTSR for @AnnSurgOncol

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ONCOLOGY

# DCIS-Met Model for Predicting Metastases

Axillary staging

For biopsy-proven DCIS



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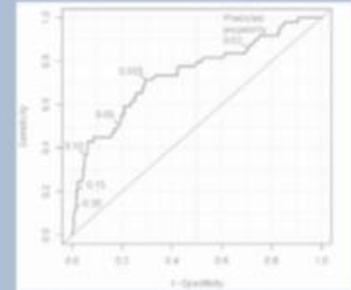
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JOVENS  
LESÃO PALPÁVEL  
SUSPEITA INVASÃO NA BIÓPSIA  
BIRADS 5  
GRAU 2 e GRAU 3

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LACOG - GBECAM 2023



REALIZAÇÃO



APOIO



# Carcinoma ductal *in situ*

## MARCADORES PROGNÓSTICOS

### ALGORITMOS E TESTES PARA AUXÍLIO NA DECISÃO DE TTO COMPLEMENTAR

Nomograma *DCIS MSKCC*  
*Oncotype DCIS score*  
*DCISision RT*



# Resumindo CDIS

**CIRURGIA RECOMENDADA**

**TIPO DE CIRURGIA NÃO ALTERA SOBREVIDA (ÓTIMA)**

**MARGEM LIVRE IMPORTANTE**

**EM CASO DE MASTECTOMIA - BLS**

# Resumindo CDIS

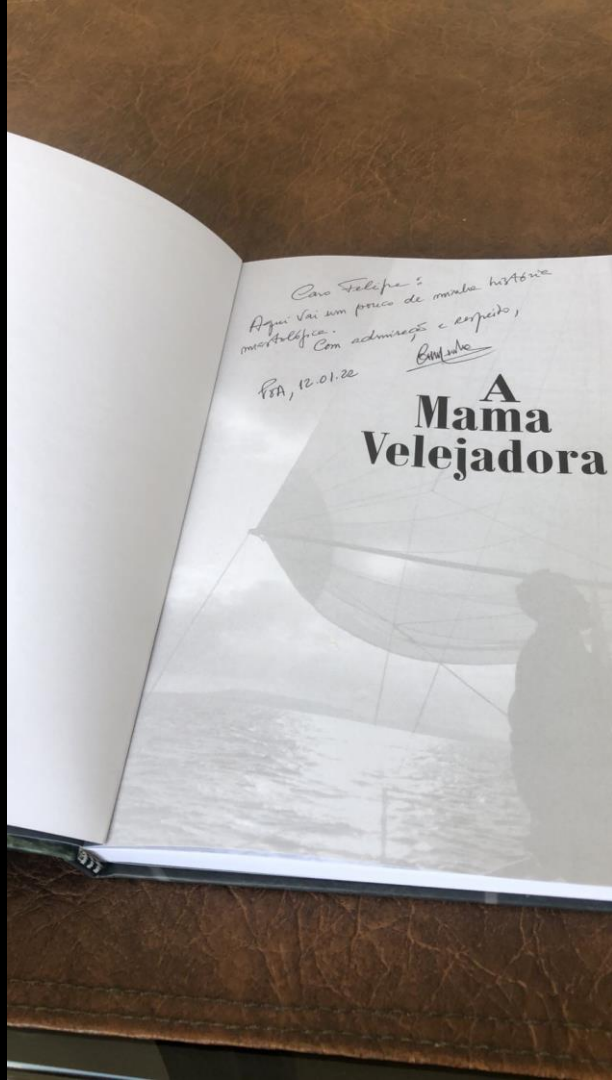
**RT E HT DIMINUEM REC. LOCAL APÓS CIR. CONS.**

**MARCADORES CONHECIDOS DE MAU PROGNÓSTICO**  
Jovens, negras, Grau 3, Lesão palpável/extensa,  
Multifocalidade, Comedocarcinoma, RH-, Her2+, HF+.

**NOMOGRAMAS E TESTES GENÉTICOS**

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