



PUBLICATION SUMMARY: BREAST CRYOABLATION

Cryoablation as a De-Escalation Strategy for Early-Stage Breast Cancer

Medium-Term Outcomes of Cryoablation for Nonoperative Management of Clinical T1-2N0 ER-Positive/HER2-Negative Breast Cancer in Elderly or Comorbid Women.

Oliver Goldaracena JM, et al. J Vasc Interv Radiol. 2026.

OVERVIEW

This real-world, retrospective study evaluated ultrasound-guided minimally invasive cryoablation without breast surgery or sentinel node biopsy in 113 elderly or comorbid women with clinical T1-2N0, ER-positive/HER2-negative breast cancer.

DESIGN

PRIMARY ENDPOINT: Breast cancer recurrence

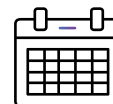
SECONDARY ENDPOINTS: Axillary nodal recurrence, primary and secondary local control, recurrence-free survival



Real-world
retrospective, single-center observational cohort



Non-surgical strategy
no breast conserving surgery or sentinel node biopsy



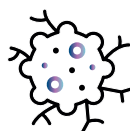
25.3 months
median imaging follow-up

PATIENT & TUMOUR CHARACTERISTICS

A clinically diverse elderly and comorbid population, including selected T2 tumours and invasive lobular carcinoma.



113 women
Median age: 84 years
83.2% ≥ 2 comorbidities



Tumour size: 17mm median (range 5-48), 34% T2 tumours (>20-50mm)
Histology: 75% invasive ductal carcinoma, 13% invasive lobular carcinoma, 7% mucinous, 5% papillary
Tumour grade: 21% G1, 73.5% G2, 5.5% G3

TREATMENT & FOLLOW-UP APPROACH

Intake

Patient Selection

Biopsy-confirmed clinical T1-2N0, ER+/HER2- breast cancer

Multidisciplinary Evaluation

Multidisciplinary discussion + shared decision-making

Neoadjuvant Endocrine Therapy

25.6% received ET therapy before cryoablation (recommended for tumours >20mm)

Cryoablation treatment

Curative Intent, Ultrasound-Guided Cryoablation Procedure
Outpatient • Local Anaesthesia • No Sedation • Same-Day Discharge

50 minutes mean procedure time

1.2 cryoablation needles used (mean)

5-10mm intended ice ball margin beyond visible tumor (technical success)

Two 10-min freeze cycles separated by a 10-min passive thaw (shorter freeze for tumour <10mm)

Boston Scientific argon-only ICEfx Cryoablation System with 14- and 17-gauge electric thaw cryoablation needles

Key Study Findings

Ultrasound-guided cryoablation demonstrated encouraging medium-term oncologic outcomes as part of a nonoperative management strategy in elderly or comorbid women with oestrogen receptor-positive/HER2-negative breast cancer.



1.7%
Breast Cancer Recurrence



98.2%
Primary Local Control

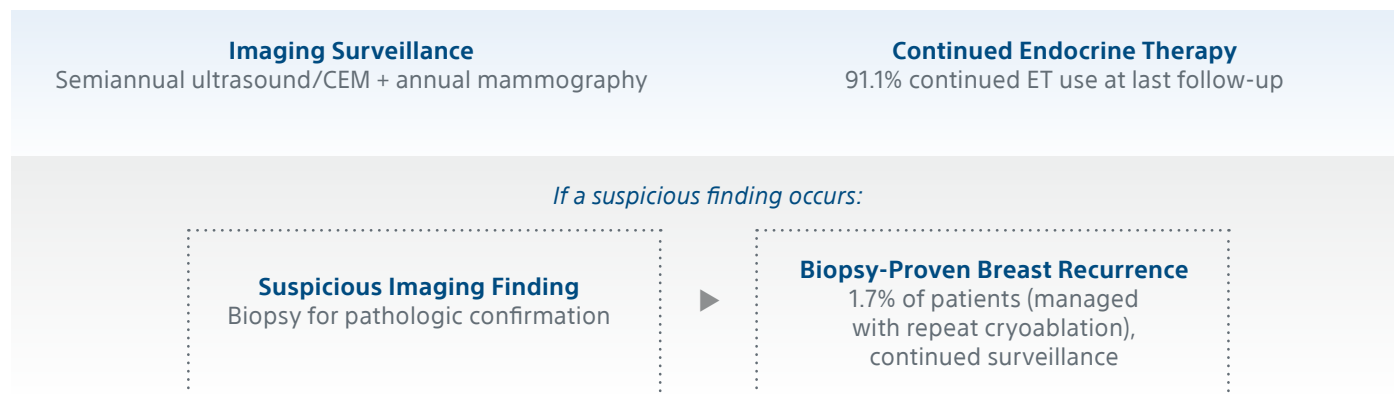


97.0%
3-Year Recurrence-Free Survival



0
Major Adverse Events (Grade 2-3)

Follow-up



► KEY RESULTS

Primary Endpoint	1.7% Breast Cancer Recurrence 2/113 patients			
Secondary Endpoints	98.2% Primary Local Control 111/113 patients	99.1% Secondary Local Control 112/113 patients	0.8% Axillary Recurrence 1/113 patients	97.0% 3-Year Recurrence-Free Survival
Safety	0 Major Adverse Events (Grade 2-3) Grade 1 events in 8.7% of patients.			

► CONCLUSIONS

- Cryoablation demonstrated high local control with very low recurrence
- Low axillary recurrence supports the potential omission of sentinel node biopsy
- Repeat cryoablation allowed continued non-surgical management
- Endocrine therapy adherence may contribute to favourable oncologic outcomes
- Findings support the role of cryoablation in de-escalation strategies for eligible patients with early-stage breast cancer

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REFERENCES: Oliver Goldaracena JM, Córdoba Chicote V, Roca Navarro MJ, et al. Medium-term outcomes of cryoablation for nonoperative management of clinical T1–2N0 ER-positive/HER2-negative breast cancer in elderly or comorbid women. J Vasc Interv Radiol. 2026;109061. doi:10.1016/j.jvir.2026.109061.

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