
UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 6-K

REPORT OF FOREIGN PRIVATE ISSUER
PURSUANT TO RULE 13a-16 OR 15d-16
UNDER THE SECURITIES EXCHANGE ACT OF 1934

For the Month of: September 2025 (Report No. 6)

Commission File Number: 001-40753

ICECURE MEDICAL LTD.
(Translation of registrant's name into English)

7 Ha'Eshel St., PO Box 3163
Caesarea, 3079504 Israel
(Address of principal executive office)

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F:

☒ Form 20-F ☐ Form 40-F

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On September 30, 2025, IceCure Medical Ltd. (the "Company") issued a press release titled "IceCure's ProSense® at the European Society of Breast Imaging Congress 2025: Unlocking De-Escalation of Care in Breast Cancer, Positive Results from 5 Independent Studies Presented," a copy of which is furnished as Exhibit 99.1 with this Report of Foreign Private Issuer on Form 6-K.

The press release attached herewith as Exhibit 99.1 (excluding the second paragraph thereof) is incorporated by reference into the Company's Registration Statements on Form F-3 (Registration Nos. [333-258660](#), [333-267272](#) and [333-290046](#)) and Form S-8 (Registration Nos. [333-270982](#), [333-264578](#), [333-262620](#) and [333-281587](#)), filed with the Securities and Exchange Commission, to be a part thereof from the date on which this Report of Foreign Private Issuer on Form 6-K is submitted, to the extent not superseded by documents or reports subsequently filed or furnished.

EXHIBIT INDEX

Exhibit No.

99.1	Press release dated September 30, 2025 titled "IceCure's ProSense® at the European Society of Breast Imaging Congress 2025: Unlocking De-Escalation of Care in Breast Cancer, Positive Results from 5 Independent Studies Presented"
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SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

ICECURE MEDICAL LTD.

Date: September 30, 2025

By: /s/ Eyal Shamir
Name: Eyal Shamir
Title: Chief Executive Officer

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**IceCure's ProSense® at the European Society of Breast Imaging
Congress 2025: Unlocking De-Escalation of Care in Breast Cancer,
Positive Results from 5 Independent Studies Presented**

*IceCure's exclusive workshop was filled to capacity – Unlocking De-Escalation of Care:
Cryoablation for Breast Cancer led by Key Opinion Leaders Dr. Federica Di Naro
and Dr. Lucía Graña-Lopez*

*5 abstracts presented from doctors using ProSense® for breast cancer cryoablation in Europe
Dr. Francesca Pugliese awarded Young Physician-Scientist Grant for her study on
post-procedure lesion conspicuity imaging as potential noninvasive biomarker for
treatment evaluation; selected as one of the top 5 abstracts*

CAESAREA, Israel, September 30, 2025 – IceCure Medical Ltd. (Nasdaq: ICCM) (“IceCure”, “IceCure Medical” or the “Company”), developer of minimally-invasive cryoablation technology that destroys tumors by freezing as an option to surgical tumor removal, today announced its participation at the European Society of Breast Imaging (“EUSOBI”) Congress 2025 in Aberdeen, United Kingdom, on September 25-27, 2025.

“ProSense® represents the next step in the de-escalation of care for early-stage breast cancer,” said Eyal Shamir, IceCure’s Chief Executive Officer. “Prior advances in screening, early detection, and adjuvant therapies have shifted treatment from radical surgery to breast-conserving, personalized approaches. With the breast cancer indication already approved in the European Union, ProSense® offers a minimally invasive, outpatient procedure with superior cosmetic outcomes and effectiveness comparable to surgery. Interest in this shift is clear—our workshop at EUSOBI was filled to capacity, and there was strong reception to the five independent investigator studies, highlighting the growing momentum for ProSense® adoption in the treatment of early-stage breast cancer in Europe

ProSense® was featured in the following:

- **Unlocking De-Escalation of Care: Cryoablation for Breast Cancer**, an exclusive workshop sponsored by IceCure
 - o Renowned speakers Dr. Federica Di Naro and Dr. Lucía Graña-Lopez provided an in-depth examination of cryoablation for the destruction of breast cancer tumors. The workshop was filled to capacity.
 - **Investigator Initiated Study in the Main Scientific Program “Next Generation: Spotlight on Emerging Physician Scientists / Best ePoster Award”**
 - o **Abstract Title: Lesion Conspicuity on Contrast-Enhanced Mammography as a Predictor of Response to Cryoablation in Breast Cancer** (LINK) Winner of the Young Physician-Scientist Grant
 - **Presenter:** Dr. Francesca Pugliese, Radiology, Breast Imaging Careggi University Hospital, Florence, Italy
 - **Study’s Focus:** To investigate whether early changes in lesion conspicuity on contrast-enhanced mammography (“CEM”) after cryoablation can predict the tumor’s response to treatment in breast cancer patients; 69 patients; mean age 86 years with range of 60-94
 - **Key Findings:** A reduction in lesion conspicuity on early post-ablation CEM strongly correlates with favorable tumor response in breast cancer patients treated with cryoablation. This imaging feature may serve as an early, noninvasive biomarker for treatment evaluation and could help guide clinical decision-making. The agreement between CEM and biopsy results was strong, with 100% sensitivity and positive predictive value for CEM
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- **2 Investigator Initiated Studies at the Focus Session Presentations: “Update in HRL and imaged guided therapy”**
 - o **Abstract Title: Efficacy of percutaneous Cryoablation for local control of Invasive Breast Cancer: assessment of tumor response using RECIST 1.1 Criteria in comparison with hormone therapy** (LINK)
 - **Presenter:** Dr. Federica Di Naro, Medical Director of Breast Diagnostics, Lead Author, Dr. Sofia Baldi Giorgi, Radiology Resident, Careggi University Hospital, Florence, Italy
 - **Study’s Focus:** To evaluate the efficacy of percutaneous cryoablation as a local treatment for invasive breast cancer in comparison to hormone therapy, with tumor response assessed through RECIST 1.1 criteria to provide a standardized measure of treatment effectiveness; 101 patients; mean age of 86 years with a range of 60-94
 - **Key Findings:** At 12 months, the cumulative complete response rate in the cryoablation group was 75.8%, with an overall disease control rate of 96.8%. Percutaneous cryoablation was found to be a safe, well-tolerated local treatment showing higher complete response rates than hormone therapy alone by RECIST 1.1 criteria, especially in small, Luminal A tumors. It offers a valuable option for elderly or frail patients unsuited for surgery.
 - o **Abstract Title: Comparing Non-Surgical Approaches in Hormone Receptor Positive Breast Cancer: Cryoablation Alone, Cryoablation Plus Hormone Therapy, and Hormone Therapy Alone** (LINK)
 - **Presenter** Dr. Federica Di Naro, Medical Director of Breast Diagnostics, Careggi University Hospital, Florence, Italy
 - **Study’s Focus:** To evaluate the efficacy of cryoablation in combination with hormone therapy compared to cryoablation alone and hormone therapy alone in patients with hormone receptor-positive (HR+) breast cancer; 101 patients with 113 lesions; mean age 86 years with a range of 60-94
 - **Key Findings:** Cryoablation, particularly when combined with hormone therapy, emerged as a promising non-surgical approach for HR+ breast cancer patients, offering enhanced local control and disease-free survival. At 12 months, the tumor-free rate based on biopsy was highest in the combination group (91.2%), followed by cryoablation alone (85.7%) and hormone therapy alone (65%).
 - **2 Investigator Initiated Poster Presentations:**
 - o **Abstract Title: Percutaneous Cryoablation for Early-Stage Breast Cancer: Initial Experience and Short-Term Outcomes** (LINK)
 - **Presenter:** Dr. Inci Kizildag Yirgin, Department of Radiology, Oncology Institute, Istanbul University, Turkey

- *Study's Focus:* To evaluate the feasibility, safety, and short-term outcomes of percutaneous cryoablation for early-stage breast cancer; 12 patients with 13 tumors; mean age 69 years with a range of 57-97
- *Key Findings:* Cryoablation is a safe, effective option for early-stage breast cancer, with excellent short-term outcomes. There was no residual suspicion in 4 evaluable tumors at 6-month follow up. All patients rated their cosmetic outcomes as a 5 out of 5. There were no major complications and the mean pain score was 1.6 out of 10.

o Abstract Title: **Breaking the Ice: Percutaneous Cryoablation as a Minimally Invasive Alternative for Early-Stage Breast Cancer**(LINK)

- *Presenter:* Dr. Elisabet Vila Trias, Breast Radiology, Barcelona, Spain
- *Study's Focus:* To describe the feasibility, safety, and preliminary clinical outcomes of ultrasound-guided percutaneous cryoablation as a treatment for low-risk early-stage breast cancer; 16 patients; mean age 82 years
- *Key Findings:* Percutaneous cryoablation appears to be a feasible, safe, and favorable minimally invasive alternative to surgery in selected patients with low-risk early-stage breast cancer. Longer follow-up and larger studies are needed to confirm its oncologic effectiveness.

About ProSense®

The ProSense® Cryoablation System provides a minimally invasive treatment option to destroy tumors by freezing them. The system uniquely harnesses the power of liquid nitrogen to create large lethal zones for maximum efficacy in tumor destruction in benign and cancerous lesions, including breast, kidney, lung, and liver.

ProSense® enhances patient and provider value by accelerating recovery, reducing pain, surgical risks, and complications. With its easy, transportable design and liquid nitrogen utilization, ProSense® opens that door to fast and convenient office-based procedures for breast tumors.

About IceCure Medical

IceCure Medical (Nasdaq: ICCM) develops and markets advanced liquid-nitrogen-based cryoablation therapy systems for the destruction of tumors (benign and cancerous) by freezing, with the primary focus areas being breast, kidney, bone and lung cancer. Its minimally invasive technology is a safe and effective option to surgical tumor removal that is easily performed in a relatively short procedure. The Company's flagship ProSense® system is marketed and sold worldwide for the indications cleared and approved to date including in the U.S., Europe and Asia.

Forward Looking Statements

This press release contains forward-looking statements within the meaning of the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995 and other Federal securities laws. Words such as "expects," "anticipates," "intends," "plans," "believes," "seeks," "estimates" and similar expressions or variations of such words are intended to identify forward-looking statements. For example, IceCure is using forward looking statements in this press release when it discusses the belief that ProSense® represents the next step in the de-escalation of care for early-stage breast cancer and that ProSense® offers superior cosmetic outcomes and effectiveness comparable to surgery. Historical results of scientific research and clinical and preclinical trials do not guarantee that the conclusions of future research or trials will suggest identical or even similar conclusions. Important factors that could cause actual results, developments and business decisions to differ materially from those anticipated in these forward-looking statements include, among others: the Company's planned level of revenues and capital expenditures; the Company's available cash and its ability to obtain additional funding; the Company's ability to market and sell its products; legal and regulatory developments in the United States and other countries; the Company's ability to maintain its relationships with suppliers, distributors and other partners; the Company's ability to maintain or protect the validity of its patents and other intellectual property; the Company's ability to expose and educate medical professionals about its products; political, economic and military instability in the Middle East, specifically in Israel; as well as those factors set forth in the Risk Factors section of the Company's Annual Report on Form 20-F for the year ended December 31, 2024 filed with the SEC on March 27, 2025, and other documents filed with or furnished to the SEC which are available on the SEC's website, www.sec.gov. The Company undertakes no obligation to update these statements for revisions or changes after the date of this release, except as required by law. Information available on or through the websites mentioned in this press release does not form part of this press release.

IR Contact:

Email: investors@icecure-medical.com
Michael Polyviou
Phone: 732-232-6914