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: May 2026 (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 May 19, 2026, IceCure Medical Ltd. (the "Company") issued a press release titled "IceCure's ProSense® Reports Nearly 90% Recurrence-Free Rate for Cryoablation of Kidney Cancer: Data Presented at ECIO 2026 and First-Ever Breast Cryoablation Master Class Overbooked", a copy of which is furnished as Exhibit 99.1 with this Report of Foreign Private Issuer on Form 6-K.

This Report on Foreign Private Issuer on Form 6-K (excluding the second and fourth paragraphs of the press release included as Exhibit 99.1 hereto) is incorporated by reference into the Company's Registration Statements on Form F-3 (File Nos. 333-290046 and 333-258660) and Form S-8 (File 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a part thereof from the date on which this Report of Foreign Private Issuer on Form 6-K is submitted, to the extent not superseded by documents or reports subsequently filed or furnished.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 No.	
99.1	Press release dated May 19, 2026, titled "IceCure's ProSense® Reports Nearly 90% Recurrence-Free Rate for Cryoablation of Kidney Cancer: Data Presented at ECIO 2026 and First-Ever Breast Cryoablation Master Class Overbooked"

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: May 19, 2026

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

IceCure's ProSense® Reports Nearly 90% Recurrence-Free Rate for Cryoablation of Kidney Cancer: Data Presented at ECIO 2026 and First-Ever Breast Cryoablation Master Class Overbooked

At the annual European Conference on Interventional Oncology, ICESECRET data presented demonstrated 89.4% recurrence-free rate in patients with tumors ≤3 cm and 83.9% of patients remained recurrence-free at a median follow-up of 4.0 years

Independent breast cancer study reported no residual cancer at 6 and 12 months post-procedure, with 100% of patients reporting excellent cosmetic outcomes

Independent study showed 92.9% reduction in fibroadenoma volume at 12 months post-treatment with ProSense®

FDA clearance of ProSense® in early-stage breast cancer drives expanding global adoption and clinical interest in breast cryoablation

CAESAREA, Israel, May 19, 2026 – 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 that cryoablation and ProSense® were featured at the annual European Conference on Interventional Oncology ("ECIO") 2026, held in Basel, Switzerland on April 26 to 30, 2026.

"We believe ECIO 2026 marked a significant milestone for IceCure, ProSense® and cryoablation in interventional oncology," said Eyal Shamir, Chief Executive Officer of IceCure. "We are experiencing growing global momentum and commercial interest in ProSense® and cryoablation, with particular interest shown at ECIO 2026 in the treatment of breast cancer, fibroadenomas, and kidney cancer. The eager participation of doctors who are regular users of ProSene® leading hands-on trainings and presentations and more independent third-party data, combined with the compelling kidney cancer results from the ICESECRET trial, reinforce the expanding clinical validation and versatility of our technology."

For the first time in ECIO's history, a dedicated breast cryoablation course was held, including hands-on training with ProSense® conducted by leading ProSense® users: Dr. Franco Orsi of the European Institute of Oncology, Milan and Principal Investigator of the PRECICE trial, Dr. Toulsie Ramothul of Institute Curie and Principal Investigator of the CRYODESC trial, and Dr. Linda Riks of the Franciscus Gasthuis & Vlietland Hospital, Rotterdam, Investigator of the THERMAC trial. In addition, ProSense® was featured in three general cryoablation device hands-on training sessions.

"Our leadership role at ECIO 2026 included the first dedicated breast cryoablation course, which was overbooked due to the very high level of interest. Most of the faculty mentioned ICE3, ProSense®'s U.S. Food and Drug Administration authorization, the recent American Society of Breast Surgeons' updated guidelines, and data from other trials, underscoring the increasing recognition of cryoablation as a minimally invasive alternative to surgery and its potential to become a standard-of-care treatment option," Shamir concluded.

Clinical Data Highlights

ICESECRET Trial – Kidney Cancer, 5-Year Results

Abstract title: *ICESECRET Trial Final analysis: 5-year Safety and Efficacy of Cryoablation for Small Renal Masses* Final analysis of the ICESECRET prospective multicenter trial evaluated cryoablation using ProSense® for small renal masses:

- 114 patients (mean age 69.1 years) underwent 138 procedures with mean tumor size of 2.4 cm
- Technical success rate of 92.5% in procedures without anatomical limitations
- 83.9% of patients remained recurrence-free at a median follow-up of 4.0 years
- Recurrence-free rate increased to 89.4% in patients with unifocal tumors ≤3 cm without prior ipsilateral kidney cancer, and successful procedures
- Minimal impact on renal function and hemoglobin levels, with short hospitalization of an average of 1.3 days

The study concluded that cryoablation was highly effective for tumors ≤3 cm and safe for lesions up to 5 cm.

Breast Cryoablation Study in Turkey – Early-Stage Breast Cancer
Oral presentation title: *Percutaneous Cryoablation for Early-Stage Breast Cancer: Initial Experience and Short-Term Outcomes*

The study evaluated feasibility and outcomes in a prospective cohort:

- 26 patients (28 tumors) with mean tumor size of 11.73 mm were successfully treated
- No major complications reported; low mean pain score of 1.8 on a scale of 1-5
- No residual disease detected in evaluable tumors at 6- and 12-month follow-up imaging
- All procedures were performed on an outpatient basis with short recovery times
- 100% of patients reported excellent cosmetic outcomes (5/5 satisfaction)

The study demonstrated that cryoablation was a safe and effective minimally invasive option for early-stage breast cancer with excellent short-term outcomes.

Breast Fibroadenoma Study in Hungary – Volume Reduction at 6 and 12 months
Poster presentation titled: *Liquid Nitrogen–Based Cryoablation for Fibroadenoma: Retrospective Analysis of Prospectively Collected Data*

This study evaluated the safety and efficacy of ProSense® liquid nitrogen–based cryoablation for the treatment of multiple large fibroadenomas:

- 78 women with 1 to 4 fibroadenomas ranging 7-80 mm in diameter underwent cryoablation

- Mean procedure time was 13 ± 10.4 minutes with one to five cryoprobe relocations
- A single freeze–thaw–freeze cycle was sufficient in 76% of cases
- Median volume reduction was 80.6% at 6 months and 92.9% at 12 months, both of which were statistically significant

The study concluded that ProSense® is a safe and effective treatment for fibroadenomas, including large and multifocal lesions, achieving substantial volume reduction at one year and supporting its role as a minimally invasive alternative to surgery.

About ProSense®

The ProSense® Cryoablation System is the first and only medical device to receive FDA marketing authorization for the local treatment of low-risk breast cancer with adjuvant endocrine therapy for women aged 70 and above, including patients who are not suitable for surgical alternatives for breast cancer treatment. A full list of benefits and risks can be found on the Company's website.

ProSense® is a minimally invasive cryosurgical tool that provides the 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 in the 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 the 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 Statement

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 Company's belief that ECIO 2026 marked a significant milestone for IceCure, ProSense® and cryoablation in interventional oncology; the Company's belief that ICESECRET trial results, independent study data, and clinical presentations at ECIO 2026 reinforce the expanding clinical validation and versatility of ProSense®; the Company's belief that growing global momentum and commercial interest in ProSense® will continue, particularly in the treatment of breast cancer, fibroadenomas, and kidney cancer; and the Company's expectations regarding the role of ProSense® and cryoablation in addressing unmet needs across oncology indications. 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, 2025 filed with the SEC on March 17, 2026, 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.

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