

January 3, 2024



New Study Reports IceCure's ProSense® Boosts Immune Response Against Cancer: Enhances CD8+ T Cell Response

- ***Independent mouse study conducted at Case Western Reserve University School of Medicine, published in [OncoImmunology](#), builds on body of evidence demonstrating cryoablation can activate the body's natural immune response by enhancing CD8+ T cells, which are an important arm of immune response***
- ***Data support previous studies and suggest ProSense® may produce anti-cancer benefits in humans beyond tumor destruction during cryoablation procedure***

CAESAREA, Israel, Jan. 3, 2024 /PRNewswire/ -- [IceCure Medical Ltd.](#) (Nasdaq: ICCM), developer of the ProSense® System, a minimally-invasive cryoablation technology that destroys tumors by freezing as an alternative to surgical tumor removal, today announced the publication of a study titled "Piezo1 facilitates optimal T cell activation during tumor challenge" in the highly influential peer-reviewed journal [OncoImmunology](#). The study, conducted at Case Western Reserve University School of Medicine in Cleveland, Ohio, by Muta Abiff et al, utilized ProSense® for cryoablation procedures in a mouse model to explore the role of the Piezo1 protein in regulating T-cell tumor immune-mediated rejection of soft tissue tumors.



The Piezo1 study involved performing cryoablation with ProSense® on tumor volumes of approximately 100 mm³ (diameter ~6 mm) using a mouse model. The cryoprobe was placed

percutaneously directly on the tumor mass. The data demonstrates that cryoablation induces immune rejection by enhancing CD8+ T cell activation, a process dependent on T cell expression of Piezo1. Increased activation and responsiveness, potentially leading to a more robust immune response against abnormal cells, was detected up to 2 weeks after cryoablation, displayed as an increase in CD25 and interferon gamma (IFN γ) expression on CD8+ T cells.

In the field of cryoimmunology, cryoablation is known to induce potent T cell-dependent tumor rejection. Prior independent research using ProSense® to explore cryoablation's antitumor activity includes a study titled "Functional tumor cell-intrinsic STING, not host STING, drives local and systemic antitumor immunity and therapy efficacy following cryoablation" by Alshebemi et al published in August 2023 in the [*Journal of Immunotherapy of Cancer*](#). The study demonstrated the unequivocal role of an ongoing and functional STING pathway as a major driver of local control and the systemic abscopal effects on advanced tumors following cryoablation.

"Preclinical data from both of these independent studies demonstrate the unique mechanism of action through which ProSense® induces the activation of immune cells which are critical to increasing the potential therapeutic benefits of cryoablation against solid tumors. These benefits extend beyond the destruction of the tumor through our minimally invasive procedure, by activating the immune system for weeks following the procedure," stated IceCure's Chief Executive Officer, Eyal Shamir. "These studies pave the way for analysis of immune response in the growing number of ProSense® cryoablation investigator-initiated trials in humans. As always, we are very grateful to the doctors conducting these independent studies that explore and confirm ProSense®'s mechanism of action and its benefits for patients."

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 procedure for breast tumors.

About IceCure Medical

IceCure Medical (Nasdaq: ICCM) develops and markets ProSense®, an advanced liquid-nitrogen-based cryoablation therapy for the treatment 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 alternative to hospital surgical tumor removal that is easily performed in a relatively short procedure. The system is marketed and sold worldwide for the indications cleared and approved to date including in the U.S., Europe, and China.

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 and Israeli 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 statement in this press release when it discusses: the expected plan and progress towards completion of the follow-up on the ICE3 clinical study in February 2024; evaluating all strategies to efficiently and effectively address the FDA's comments; and the expected 5-year results passed on the interim analysis of the ICE3 trial. Historic 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. Because such statements deal with future events and are based on IceCure's current expectations, they are subject to various risks and uncertainties and actual results, performance, or achievements of IceCure could differ materially from those described in or implied by the statements in this press release. The forward-looking statements contained or implied in this press release are subject to other risks and uncertainties, many of which are beyond the control of the Company, including those set forth in the Risk Factors section of the Company's Annual Report on Form 20-F for the year ended December 31, 2022 filed with the SEC on March 29, 2023, 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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