IMUNON Reports Positive Phase 2 MRD Clinical Data for IMNN-001, Demonstrating the Successful Overcoming of Historical IL-12 Safety Barriers in Frontline Ovarian Cancer

July 21, 2026

Preliminary data reinforces IMNN-001 immunotherapy's potential for success in the rapidly recruiting Phase 3 OVATION 3 clinical trial

- Lower rate of minimal residual disease (MRD)
- Higher ctDNA clearance with IMNN-001 vs. control
- Highly favorable safety and tolerability profile

Study, conducted in partnership with Break Through Cancer, provides new translational data and further support for IMNN-001's unique mechanism of remodeling the tumor immune microenvironment

LAWRENCEVILLE, N.J., July 21, 2026 (GLOBE NEWSWIRE) -- IMUNON, Inc. (Nasdaq: IMNN), a clinical-stage company in Phase 3 development with its DNA-mediated immunotherapy, today announced new positive preliminary data from its ongoing Phase 2 minimal residual disease (MRD) translational clinical trial of IMNN-001, conducted in combination with standard of care neoadjuvant and adjuvant chemotherapy (N/ACT) plus bevacizumab, in women with newly diagnosed advanced ovarian cancer.

This cutting-edge translational study is being conducted through the Break *Through* Cancer Targeting Minimal Residual Disease in Ovarian Cancer TeamLab, a multi-institutional collaboration accelerating research in ovarian cancer. The multi-site study is led by investigators at The University of Texas (UT) MD Anderson Cancer Center, which serves as the lead clinical site. Its objectives include understanding how chemo-immunotherapy with IMNN-001 impacts ovarian cancer's "cold" tumor microenvironment and MRD after frontline treatment.

Nine patients in each of the control and experimental arms (total target accrual of 30 patients, 15 in each arm) have reached second-look laparoscopy (SLL), the study's primary assessment point for surgical MRD. Compared to control, preliminary results show a deeper antitumor response, as demonstrated by a lower MRD-positive rate, in patients treated with IMNN-001 (44% vs. 67%), a higher rate of circulating tumor DNA (ctDNA) clearance (87.5% vs. 62.5%), and a numerically higher rate of patients achieving no evidence of disease (NED) following frontline therapy (100% vs. 56%).

"We are encouraged by these new data points from our MRD study, which continue to build the case for IMNN-001's potential to make a meaningful difference for women with newly diagnosed advanced ovarian cancer," said Stacy Lindborg, Ph.D., President and Chief Executive Officer of IMUNON. "These findings, together with the consistent safety profile we've now observed across multiple studies, reinforce that we have overcome the historical safety and efficacy barriers associated with the development of a novel IL-12 immunotherapy and further bolster our confidence in IMNN-001 as we continue to advance our pivotal Phase 3 OVATION 3 trial."

"These new findings from the MRD study add an important layer of evidence to what we've observed with IMNN-001 to date," said study principal investigator, Amir Jazaeri, M.D., professor of Gynecologic Oncology and Reproductive Medicine at UT MD Anderson. "The reduction in residual disease and the encouraging ctDNA clearance we're seeing, together with a consistent safety and tolerability profile, strongly support the continued investigation of IMNN-001's role in the frontline treatment of ovarian cancer."

These new MRD findings build on results from the Company's completed Phase 2 OVATION 2 study, in which IMNN-001 was associated with a 14.7-month increase in median overall survival compared to chemotherapy alone (45.1 vs. 30.4 months), and a 24.2-month increase among patients who also received PARP inhibitor maintenance therapy (65.6 vs. 41.4 months). The positive tolerability profile of IMNN-001 observed in prior studies has continued in the MRD study, including in combination with standard-of-care chemotherapy plus bevacizumab and in the maintenance setting, with no cytokine release syndrome, systemic toxicities, or serious immune-related adverse events observed to date. IMNN-001 is now being evaluated in the Company's pivotal Phase 3 OVATION 3 trial, enrolling patients with newly diagnosed advanced ovarian cancer at clinical sites across the U.S.

Reinforcing previously published phase 2 data, new translational data from the MRD study also continue to support IMNN-001's proposed mechanism of action. IMNN-001 induces robust expression of IL-12 in macrophages within the peritoneal fluid and tumor tissue, stimulating a cascade of anti-tumor cytokines, including interferon-gamma, and resulting in potent macrophage and T cell activation. These findings are consistent with a shift in the tumor immune microenvironment from "cold" to "hot," activating both innate and adaptive immune responses.

"We remain focused on generating a comprehensive body of evidence for IMNN-001 across our clinical program," added Dr. Lindborg. "The MRD study, together with our Phase 2 OVATION 2 results and the ongoing pivotal Phase 3 OVATION 3 trial, continues to build a consistent picture of IMNN-001's benefit-risk profile in frontline ovarian cancer treatment."

About the Translational Phase 2 MRD Study

The Phase 2 MRD study (NCT05739981) is evaluating IMNN-001 in combination with standard-of-care neoadjuvant and adjuvant chemotherapy plus bevacizumab in women with newly diagnosed advanced ovarian cancer, conducted through the Break *Through* Cancer Targeting Minimal Residual Disease in Ovarian Cancer TeamLab. Patients in the experimental arm receive IMNN-001, administered intraperitoneally, in combination with N/ACT plus bevacizumab, followed by interval cytoreductive surgery and additional cycles of adjuvant chemotherapy plus IMNN-001. Patients then undergo second-look laparoscopy (SLL) to assess for minimal residual disease, followed by maintenance therapy assigned according to homologous recombination deficiency (HRD) status. The primary endpoint of the study is MRD-positive rate at SLL; the secondary endpoint is progression-free survival (PFS). The study also includes serial translational analyses of tumor tissue, circulating tumor DNA (ctDNA), microbiome, and intraperitoneal

fluid, to further characterize IMNN-001's impact on the tumor immune microenvironment.

About IMNN-001 Immunotherapy

Designed using IMUNON's proprietary TheraPlas® platform technology, IMNN-001 is an IL-12 DNA plasmid vector encased in a nanoparticle delivery system that enables cell transfection followed by persistent, local secretion of the IL-12 protein. IL-12 is one of the most active cytokines for the induction of potent anticancer immunity, acting through the induction of T-lymphocyte and natural killer cell proliferation. IMUNON previously reported positive safety and encouraging Phase 1 results with IMNN-001 administered as monotherapy or as combination therapy in patients with advanced peritoneally metastasized primary or recurrent ovarian cancer, and completed a Phase 1b dose-escalation trial (the OVATION 1 Study) of IMNN-001 in combination with carboplatin and paclitaxel neoadjuvantly in patients with newly diagnosed ovarian cancer. IMUNON previously reported positive results from the completed Phase 2 OVATION 2 Study, which assessed IMNN-001 (100 mg/m2 administered intraperitoneally weekly) plus neoadjuvant and adjuvant chemotherapy (N/ACT) of paclitaxel and carboplatin compared to standard-of-care N/ACT alone in 112 patients with newly diagnosed advanced ovarian cancer.

About Epithelial Ovarian Cancer

Epithelial ovarian cancer is the sixth deadliest malignancy among women in the U.S. There are approximately 20,000 new cases of ovarian cancer every year and approximately 70% are diagnosed in advanced stage III/IV. Epithelial ovarian cancer is characterized by dissemination of tumors in the peritoneal cavity with a high risk of recurrence (75%, stage III/IV) after surgery and chemotherapy. Since the five-year survival rates of patients with stage III/IV disease at diagnosis are poor (41% and 20%, respectively), there remains a need for a therapy that not only reduces the recurrence rate but also improves overall survival. The peritoneal cavity of advanced ovarian cancer patients contains the primary tumor environment and is an attractive target for a regional approach to immune modulation.

About IMUNON

IMUNON is a clinical-stage biotechnology company focused on advancing a portfolio of innovative treatments that harness the body's natural mechanisms to generate safe, effective and durable responses across a broad array of human diseases, constituting a differentiating approach from conventional therapies. IMUNON is developing its non-viral DNA technology across its modalities. The first modality, TheraPlas®, is developed for the gene-based delivery of cytokines and other therapeutic proteins in the treatment of solid tumors where an immunological approach is deemed promising. The second modality, PlaCCine®, is developed for the gene delivery of viral antigens that can elicit a strong immunological response.

The Company's lead clinical program, IMNN-001, is a DNA-based immunotherapy for the localized treatment of advanced ovarian cancer that has completed multiple clinical trials including one Phase 2 clinical trial (OVATION 2) and is currently conducting a Phase 3 clinical trial (OVATION 3). IMNN-001 works by instructing the body to produce safe and durable levels of powerful cancer-fighting molecules, such as interleukin-12 and interferon gamma, at the tumor site. Additionally, the Company has completed dosing in a first-in-human study of its COVID-19 booster vaccine (IMNN-101). The Company will continue to leverage these modalities and to advance, either directly or through partnership, the technological frontier of plasmid DNA to better serve patients with difficult-to-treat conditions. For more information, please visit www.imunon.com.

About Break *Through* Cancer

Founded in 2021, Break *Through* Cancer empowers outstanding researchers and physicians to both intercept and find cures for several of the deadliest cancers by stimulating radical collaboration among outstanding cancer research institutions, including its founding partners: Dana-Farber Cancer Institute, Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins, Memorial Sloan Kettering Cancer Center, MIT's Koch Institute for Integrative Cancer Research, and The University of Texas MD Anderson Cancer Center.

The Foundation is supported by a Board of Directors from the five partner institutions and a Scientific Advisory Board of U.S. cancer experts. The Foundation was launched with an extraordinary challenge pledge of $250 million from Mr. and Mrs. William H. Goodwin, Jr. and their family, and the estate of William Hunter Goodwin III.

For further information, please visit the Foundation's website at www.breakthroughcancer.org.

Forward-Looking Statements

IMUNON wishes to inform readers that forward-looking statements in this release are made pursuant to the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995. All statements, other than statements of historical fact, including, but not limited to, statements regarding the timing and enrollment of the Company's clinical trials, the potential of any therapies developed by the Company to fulfill unmet medical needs, the market potential for the Company's products, if approved, the potential efficacy and safety profile of our product candidates, and the Company's plans and expectations with respect to its development programs more generally, are forward-looking statements. We generally identify forward-looking statements by using words such as "may," "will," "expect," "plan," "anticipate," "estimate," "intend" and similar expressions (as well as other words or expressions referencing future events, conditions or circumstances). Readers are cautioned that such forward-looking statements involve risks and uncertainties including, without limitation, uncertainties relating to unforeseen changes in the course of research and development activities and in clinical trials, including the fact that interim results are not necessarily indicative of final results; the uncertainties of and difficulties in analyzing interim clinical data; the significant expense, time and risk of failure in conducting clinical trials; the need for IMUNON to evaluate its future development plans; possible actions by customers, suppliers, competitors or regulatory authorities; and other risks detailed from time to time in IMUNON's filings with the Securities and Exchange Commission. IMUNON assumes no obligation, except to the extent required by law, to update or supplement forward-looking statements that become untrue because of subsequent events, new information or otherwise.

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