Sensei Biotherapeutics Reports New Clinical Results Highlighting Durable Progression Free Survival Data for Solnerstotug in PD-(L)1 Resistant Tumors at the ESMO Congress 2025

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- *6-month progression-free survival (PFS) of 50% in the higher 15 mg/kg dose cohort compares favorably to historical PD-(L)1 refractory settings –*
- *All clinical responses, including a complete response, observed in the higher 15 mg/kg dose cohort –*
- *Favorable safety profile with six cases of mild, manageable grade 1 cytokine release syndrome (CRS) across all patients treated to date, all of which occurred in the 15 mg/kg dose cohort –*
- *Data support advancement to Phase 2 studies, currently being planned in Non-Small Cell Lung Cancer and Merkel Cell Carcinoma –*
- *Sensei to host investor webcast Monday, October 20th at 8:00 AM ET –*

BOSTON, Oct. 17, 2025 (GLOBE NEWSWIRE) -- Sensei Biotherapeutics, Inc. (Nasdaq: SNSE), a clinical-stage biotechnology company focused on the discovery and development of next-generation therapeutics for cancer patients, today announced results from the dose expansion portion of its Phase 1/2 trial evaluating solnerstotug (formerly SNS-101), a conditionally active monoclonal antibody targeting VISTA (V-domain Ig suppressor of T cell activation). The data will be shared today during a mini oral session at the ESMO Congress 2025.

The Phase 1 dose expansion is a multi-center, open-label study evaluating solnerstotug as monotherapy and in combination with Libtayo® (cemiplimab), Regeneron's PD-1 inhibitor. The study enrolled patients with a basket of "hot" tumor types (that typically respond to immunotherapy) (n=44), of whom 41 had previously received and progressed on PD-(L)1 therapy, as well as patients with "cold" tumor types (that typically exhibit primary resistance to immunotherapy) (n=20).

Patients who progress following treatment with PD-(L)1 inhibitors ("secondary resistance") face a particularly poor prognosis, as resistance to immune checkpoint blockade is a significant challenge in oncology. For patients who develop secondary resistance, the likelihood of benefiting from a rechallenge with the same therapy is estimated to be 5% or less.[1]

Currently, treatment options for PD-(L)1 resistant tumors are limited, with many patients receiving chemotherapy, experimental therapies in clinical trials, or palliative care in the absence of effective alternatives. While historical benchmarks in this setting are limited, docetaxel, which is widely used in the 2nd line post-PD-(L)1 setting for Non-Small Cell Lung Cancer (NSCLC), typically has a 6-month PFS of 10-20% in similar patient populations.[2] To date, immune checkpoint inhibitor (ICI) combination therapies have not been approved in this setting.

Emerging Clinical Signal and Favorable Tolerability Profile

As of the September 8, 2025, data cutoff, 35 efficacy-evaluable "hot tumor" patients had received cemiplimab with either 15 mg/kg (n=19) or 3 mg/kg dose (n=16) of solnerstotug. Six clinical responses, including five in patients with PD-(L)1 resistant tumors, occurred at the higher 15 mg/kg solnerstotug dose, and no objective responses were observed at the 3 mg/kg dose.

Among 41 "hot tumor" patients that received and progressed on a prior PD-(L)1 therapy, the overall 6-month PFS rate was 37%, which compares favorably with historical benchmarks in this setting. At 15 mg/kg, 6-month PFS reached 50% among PD-(L)1 resistant patients, surpassing rates historically seen in this treatment-refractory population. At 3 mg/kg, 6-month PFS was 24% among PD-(L)1 resistant patients.

Solnerstotug was well tolerated at both 3 mg/kg and 15 mg/kg doses in combination with cemiplimab:

- Only six mild (Grade 1) CRS events were observed across all patients in Phase 1 (n=98), all manageable.
- No new safety signals were identified across dose expansion (n=64).
- The safety profile remains consistent with prior data and compares favorably to other checkpoint inhibitor combinations in this population.

“We believe solnerstotug’s emerging dose-dependent activity in refractory ‘hot’ tumors, combined with a favorable tolerability profile, support its advancement into Phase 2 studies,” said Ron Weitzman, M.D., Chief Medical Officer of Sensei Biotherapeutics. “The data suggest that selective blockade of VISTA within the tumor microenvironment may help re-engage exhausted T cells, even after PD-1 failure, a goal long considered out of reach.”

In addition to the “hot” tumor cohorts, 20 patients with Microsatellite Stable Colorectal (MSS CRC) “cold” tumors were treated with either solnerstotug as monotherapy or in combination with cemiplimab (350 mg). No responses were observed and the safety profile was consistent with previously reported data.

Durable Disease Control in “Hot” Tumors Followed by Late Onset Responses

Four out of six responders demonstrated prolonged disease control, followed by a late onset response (occurring between 18 and 54 weeks). PD-(L)1 therapies typically have a time to response of 2–3 months, indicating that the combination of solnerstotug plus cemiplimab has a unique and differentiated pattern of activity.

At the 15 mg/kg dose of solnerstotug, notable responses included:

- A Merkel Cell Carcinoma (MCC) patient with a durable complete response at week 18 and a duration of response of 54+ weeks
- A Microsatellite Instability-High Colorectal Cancer (MSI-H CRC) patient with a partial response (PR) at week 36 and a 33+ week duration
- An NSCLC patient with a tumor proportion score less than 5% that was PD-1 naïve had a PR at week 54 and duration of response of 15+ weeks
- An Esophageal Cancer patient with a PR at Week 24 and a duration of response of 6 weeks

“This pattern of delayed, durable responses is unusual among immunotherapies,” said Kyriakos Papadopoulos, M.D., Co-Director of Clinical Research at START, San Antonio. “It may indicate that solnerstotug acts through a mechanism that is complementary to PD-(L)1 in resistant tumors.”

Next Steps: Planned Phase 2 Studies to Evaluate Efficacy in a Commercially Attractive Indication and Potentially Pursue Accelerated Approval in a PD-1 Resistant Population

Sensei is planning two Phase 2 studies to begin in 2026, subject to FDA feedback and the Company’s ability to raise sufficient capital. The first is expected to be a randomized trial in 2nd line NSCLC where patients have received and failed anti-PD-(L)1 treatment. Patients would be randomized to receive either the combination of solnerstotug + a PD-(L)1 inhibitor or chemotherapy.

The second trial is expected to be a single arm study in PD-(L)1 resistant MCC patients where there is limited therapeutic optionality and potential for accelerated approval, subject to FDA feedback.

“We’re pleased by the emerging signs of dose-related activity, durability, and a favorable safety profile—key characteristics of a potentially differentiated immunotherapy,” said John Celebi, President and Chief Executive Officer of Sensei Biotherapeutics. “These results provide a foundation for our planned Phase 2 development program as we work to better define solnerstotug’s role in treating challenging patient populations.”

Investor Webcast Information

Sensei will host an investor webcast on October 20th at 8:00 AM ET, featuring company leadership and Kyriakos Papadopoulos, MD, Co-Director of Clinical Research at START, San Antonio.

Register for the event here. A replay will be available after the webcast on the Investor Relations page of Sensei’s website: https://investors.senseibio.com

About Sensei Biotherapeutics
Sensei Biotherapeutics (Nasdaq: SNSE) is a clinical stage biotechnology company focused on the discovery and development of next-generation therapeutics for cancer patients. Through its TMAb™ (Tumor Microenvironment Activated biologics) platform, Sensei develops conditionally active therapeutics designed to disable immunosuppressive signals or activate immunostimulatory signals selectively in the tumor microenvironment to unleash T cells against tumors. Sensei’s lead product candidate is solnerstotug, a conditionally active antibody designed to block the V-domain Ig suppressor of T cell activation (VISTA) checkpoint selectively within the low pH tumor microenvironment, where VISTA acts as a suppressor of T cells by binding the receptor PSGL-1. For more information, please visit www.senseibio.com, and follow the company on X @SenseiBio and LinkedIn.

Cautionary Note Regarding Forward-Looking Statements

Any statements contained in this press release that do not describe historical facts may constitute forward-looking statements as that term is defined in the Private Securities Litigation Reform Act of 1995. These statements may be identified by words and phrases such as “believe”, “designed to,” “expect”, “may”, “plan”, “potential”, “will”, and similar expressions, and are based on Sensei’s current beliefs and expectations. These forward-looking statements include expectations regarding the development and potential therapeutic benefits of Sensei’s product candidates, including the results of the dose expansion portion of its Phase 1/2 clinical trial of solnerstotug, and its planning of two Phase 2 studies to begin in 2026, subject to FDA feedback and raising sufficient capital. These statements involve risks and uncertainties that could cause actual results to differ materially from those reflected in such statements. Risks and uncertainties that may cause actual results to differ materially include uncertainties inherent in the development of therapeutic product candidates, such as the risk that any one or more of Sensei’s product candidates will not be successfully

developed or commercialized; the risk of delay or cessation of any planned clinical trials of Sensei's product candidates; the risk that prior results, such as signals of safety, activity or durability of effect, observed from preclinical studies and clinical trials, will not be replicated or will not continue in ongoing or future studies or clinical trials involving Sensei's product candidates; the risk that Sensei's product candidates or procedures in connection with the administration thereof will not have the safety or efficacy profile that Sensei anticipates; risks associated with Sensei's dependence on third-party suppliers and manufacturers, including sole source suppliers, over which Sensei may not always have full control; risks regarding the accuracy of Sensei's estimates of expenses, capital requirements and needs for additional financing; and other risks and uncertainties that are described in Sensei's Quarterly Report on Form 10-Q filed with the U.S. Securities and Exchange Commission (SEC) on August 5, 2025 and Sensei's other Periodic Reports filed with the SEC. Any forward-looking statements speak only as of the date of this press release and are based on information available to Sensei as of the date of this release, and Sensei assumes no obligation to, and does not intend to, update any forward-looking statements, whether as a result of new information, future events or otherwise.

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[1] **Kluger HM, et al.** *J Immunother Cancer* 2023
[2] **Brahmer et al.** *N Engl J Med.* 2015; **Borghaei et al.** *N Engl J Med.* 2015.