



Geron Presents Clinical Data on its Telomerase Vaccine at the 2010 American Society of Hematology Meeting

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GRNVAC1 Vaccination Associated with Prolonged Disease-Free Survival in Selected Patients with High-Risk AML

MENLO PARK, Calif., December 6, 2010 - Geron Corporation (Nasdaq: GERN) today announced the presentation of final data from its Phase 2 clinical trial of GRNVAC1, an autologous dendritic cell vaccine targeting telomerase, in patients with acute myelogenous leukemia (AML) at the 52nd Annual Meeting of the American Society of Hematology (ASH) in Orlando, Florida.

The multi-center, open label trial was designed to evaluate the feasibility of GRNVAC1 manufacture and the safety and tolerability of the vaccination regimen in patients with AML who were in complete clinical remission. Additional objectives of the study were to evaluate the immune responses to GRNVAC1 and to explore the effects of vaccination on minimal residual disease and relapse rates in this patient population stratified by risk groups.

"Last year we presented that the primary end-points for this study, safety and feasibility, were met. The updated data shows that GRNVAC1 is safe with prolonged dosing in this study. In addition, data on disease-free survival in this high-risk patient population is encouraging with seven of eleven patients remaining in remission up to thirty months following vaccination with GRNVAC1," said Stephen M. Kelsey, M.D., Geron's executive vice president and chief medical officer, oncology. "The data suggests that targeting telomerase through a dendritic cell-based vaccine approach may prolong remission duration in some patients with high-risk AML."

"These GRNVAC1 results in AML provide the first evidence that targeting telomerase is associated with a clinically significant outcome in this Phase 2 clinical study," said Thomas B. Okarma, Ph.D., M.D. Geron's president and chief executive officer. "Combined with earlier published results in prostate cancer, we now have sufficient clinical rationale to move our cancer immunotherapy efforts to GRNVAC2, our embryonic stem cell-based dendritic cell platform."

Data Presented

Twenty-one patients received GRNVAC1 in the study, including 19 in clinical remission (CR; 16 in CR1 and three in CR2) and two in early relapse. Of the 19 patients in CR, eight were considered intermediate risk for relapse and eleven were at high risk for relapse as predicted by their cytogenetics, FAB type, or because they were in second CR.

Thirteen out of 21 patients in the trial remain in CR. Median duration of follow-up from first vaccination is 13.2 months. At 12 months after vaccination with GRNVAC1, estimated disease-free survival is 81% for patients at high-risk of relapse (95% CI: 42-95%). Previously published data on this patient population suggests that approximately 45% of patients would normally remain free from relapse at this stage.

Expression of WT-1, a marker of minimal residual disease, was sequentially analyzed by qPCR in 21 patients. The 13 patients who remain in CR are negative for WT-1, while six of seven with clinical relapse were WT-1 positive. One patient was positive for WT-1 prior to vaccination with GRNVAC1 and became WT-1 negative during the course of vaccination. This patient relapsed after 30 months.

Patient immune response to telomerase after vaccination with GRNVAC1 was evaluated using the ELISPOT assay to measure the presence of activated T-cells specific to hTERT. Positive immune responses were detected in 55% of patients.

GRNVAC1 was found to be safe and well tolerated in this study over multiple vaccinations, with up to 32 serial vaccinations administered (median = 17). Idiopathic thrombocytopenic purpura (grade 3-4) was reported in one patient. Other toxicities (grade 1-2) included rash or headache.

GRNVAC1 Vaccination Protocol

Patients entered the trial in their first or second clinical remission. Prior to or shortly after completing consolidation chemotherapy, patients underwent leukapheresis to harvest normal mononuclear (white blood) cells from the bloodstream for vaccine manufacture.

Patients were vaccinated weekly for six weeks, with 1×10^7 GRNVAC1 cells administered intra-dermally, followed by a non-treatment period of four weeks, and subsequent boost injections every other week for 12 weeks. Monthly extended boost injections were then administered until their vaccine product supply was depleted or the patient relapsed.

GRNVAC1 Manufacture

GRNVAC1 is an autologous immunotherapeutic product candidate that comprises mature dendritic cells (DCs) transfected with messenger RNA encoding the catalytic subunit of human telomerase (hTERT) and a portion of the lysosomal targeting signal, lysosome-associated membrane protein (LAMP), to enhance immune stimulatory capacity. GRNVAC1 is designed to induce an immune cell mediated response targeted against tumor cells expressing telomerase antigen on their surface.

GRNVAC1 is produced at a centralized manufacturing facility from patient-specific leukapheresis harvests. Patient mononuclear cells are differentiated in culture to immature DCs, which are transfected with messenger RNA encoding hTERT and LAMP. Transfected DCs are matured, aliquoted and cryopreserved. GRNVAC1 is released for patient dosing contingent on several product specifications that include: identity of mature dendritic cells, confirmation of positive transfection with hTERT, number of viable cells per dose after thawing and product sterility.

GRNVAC1 was successfully manufactured and released in 21 out of the 31 patients enrolled in the study. These results are expected and reflect the variability of patient starting material that is often associated with an autologous, patient-specific product.

Geron is developing GRNVAC2, an immunotherapeutic DC-based product derived from human embryonic stem cells (hESCs), as an "off-the-shelf" vaccine delivery vehicle. HESC-derived DCs exhibit functional equivalence to DCs from peripheral blood and can be generated using scalable production methods.

About AML

AML is a cancer of the blood characterized by a rapid overproduction of an abnormal immature cell of the myeloid lineage. These leukemic cells accumulate in the bone marrow and interfere with normal blood cell production. AML is the most common form of acute leukemia in adults and remains an unmet clinical need, especially in patients over 60 or who have other biologic features which confer high risk of relapse, where fewer than 10% of patients survive for more than five years.

Chemotherapy is administered in AML to induce remission, however many patients in complete remission eventually relapse due to a substantial burden of remaining leukemic cells, referred to as "minimal residual disease". Additional therapies to address minimal residual disease that are well tolerated are needed for patients at high risk of relapse.

About Telomerase

Telomerase is a critical and potentially broadly applicable tumor target. The enzyme is expressed in the majority of malignant tumors, and its activity is essential for the indefinite replicative capacity of cancer cells that enables their malignant cell growth. Telomerase is absent or expressed only transiently at low levels in most normal adult tissues.

Telomerase expression in AML cells is high, particularly in patients with cytogenetic (chromosomal) abnormalities associated with a high risk of relapse.

About Geron

Geron is developing first-in-class biopharmaceuticals for the treatment of cancer and chronic degenerative diseases, including spinal cord injury, heart failure and diabetes. The company is advancing an anti-cancer drug and a cancer vaccine that target the enzyme telomerase through multiple Phase 2 clinical trials in different cancers. For more information about Geron, visit www.geron.com.

This news release may contain forward-looking statements made pursuant to the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995. Investors are cautioned that statements in this press release regarding potential applications of Geron's telomerase, oncology, and human embryonic stem cell technologies constitute forward-looking statements that involve risks and uncertainties, including, without limitation, risks inherent in the development and commercialization of potential products, uncertainty and preliminary nature of clinical trial results or regulatory approvals or clearances, need to raise additional capital, dependence upon collaborators and protection of our intellectual property rights. Actual results may differ materially from the results anticipated in these forward-looking statements. Additional information on potential factors that could affect our results and other risks and uncertainties are detailed from time to time in Geron's periodic reports, including our quarterly report on Form 10-Q for the quarter ended September 30, 2010 and our annual report on Form 10-K for the year ended December 31, 2009.

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