Drug for Multiple Myeloma Demonstrated to Significantly Extend Disease-Free Survival

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(PhysOrg.com) -- Initial results from a large, randomized clinical trial for patients with multiple myeloma, a cancer of the blood and bone marrow, showed that patients who received the oral drug lenalidomide (Revlimid, also known as CC-5013) following a blood stem cell transplant had their cancer kept in check longer than patients who received a placebo.

The clinical trial, for patients ages 18 to 70, was sponsored by the National Cancer Institute (NCI), and conducted by a network of researchers led by the Cancer and Leukemia Group B (CALGB) in collaboration with the Eastern Cooperative Oncology Group (ECOG) and the Blood and Marrow Transplant Clinical Trials Network (BMT CTN). The BMT CTN is co-sponsored by NCI and the National Heart, Lung, and Blood Institute, both parts of the National Institutes of Health.

The independent data and safety monitoring committee overseeing the trial (known as CALGB-100104) found that the study demonstrated a longer time before the cancer progressed following autologous blood stem cell transplantation for those patients on the study drug than those on placebo and so the trial was stopped early. Autologous blood stem cell transplantation is a procedure in which a patient's own blood stem cells are removed, the patient is then treated with high doses of chemotherapy and/or radiation therapy to kill the cancer, after which the blood stem cells are returned to the patient. It is a common procedure for patients with multiple myeloma.

A total of 568 patients with multiple myeloma, who had received no more than 12 months of prior therapy and no prior transplant, were enrolled between December 2004 and July 2009. All patients received autologous transplantation following a high dose of a drug called melphalan, which is commonly used to treat multiple myeloma. Ultimately, 460 patients who had adequate organ function and no evidence of progressive disease, were randomized between 90 and 100 days after transplant to receive lenalidomide or placebo. Patients began lenalidomide or placebo between day 100 to 110 and continued until they had evidence of progressive disease.

Among the patients who received placebo, half had their myeloma progress (worsen) estimated within 778 days. In contrast, for those patients taking lenalidomide, a median time to progression cannot be defined because fewer than half the patients had worsening of their myeloma. This represents a 58 percent reduction in the risk of disease progression for the group taking lenalidomide. This difference in time to progression was highly statistically significant.

This is the first randomized phase 3 trial (the final and most comprehensive aspect of a three-phase clinical trials process) to demonstrate a clinical benefit of lenalidomide following transplant for multiple myeloma. However, the trial has not yet shown evidence of an overall survival benefit.

The types of side effects observed in this trial were similar to those observed in other clinical trials with lenalidomide. Detailed results from this trial will be presented at a future scientific meeting.

“This study answers the important question for multiple myeloma patients regarding maintenance lenalidomide therapy starting at 100 days following transplant,” said Philip L. McCarthy, Jr., M.D., associate professor of medicine at Roswell Park Cancer Institute and principal

investigator of this study. “We now know that prolonged maintenance therapy with lenalidomide when compared to placebo will delay disease progression. This is an exciting advance in the field of multiple myeloma therapy and occurred due to the willingness of multiple myeloma patients to participate in this study and to the cooperation of the many physicians and study groups involved.”

Lenalidomide, a derivative of thalidomide, was approved by the U.S. Food and Drug Administration in 2006 to be used in combination with dexamethasone, a steroid, for the treatment of multiple myeloma in patients who received at least one prior therapy for their disease. Celgene Corporation, Summit, N.J., provided lenalidomide for this trial under a clinical trials agreement with NCI.

"This trial is a prime example of an important study question that was effectively carried out by collaboration between NCI-sponsored oncology cooperative groups, NCI, and NHLBI co-sponsored Blood and Marrow Clinical Trials Network with support from Celgene Corp., the discoverer, developer, and manufacturer of lenalidomide. This collaboration made it possible to rapidly complete accrual to the trial and to provide information in a timely manner that informs an important change in medical practice," said Richard F. Little, M.D., head, Blood and AIDS Cancers Therapeutics Section of NCI's Cancer Therapy Evaluation Program, part of the Division of Cancer Treatment and Diagnosis.

Multiple myeloma occurs when a type of immune cell, called a plasma cell, becomes too numerous and crowds out healthy blood cells in the bone marrow (the spongy tissue inside the bones), causing pain, and gradually damaging the bones and other body organs. An estimated 20,580 people will be diagnosed with multiple myeloma in the United States in 2009. Approximately 46,000 people are living with the disease in the United States.

Provided by Roswell Park Cancer Institute