PROTOCOL SYNOPSIS – BMT CTN PROTOCOL 0201

A Phase III Randomized, Multicenter Trial Comparing G-CSF Mobilized Peripheral Blood Stem Cell with Marrow Transplantation from HLA Compatible Unrelated Donors

Principal Investigator: Claudio Anasetti, M.D.

Study Design: The study is designed as a Phase III, randomized, open label, multicenter, prospective, comparative trial of granulocyte colony stimulating factor (G-CSF)-mobilized peripheral blood stem cells (PBSC) versus marrow from unrelated donors for transplantation in patients with hematologic malignancies. Recipients will be stratified by transplant center and disease risk and will be randomized to either the PBSC or marrow arm in a 1:1 ratio.

Primary Objective: The primary objective is to compare two-year survival probabilities between patients in the two study arms using an intent-to-treat analysis.

Secondary Objectives: Patients randomized to the two study arms and actually transplanted will be compared for the following endpoints (patients who do not receive a transplant will be excluded from the following analyses): survival, incidences of neutrophil and platelet engraftment, graft failure, acute graft-versus-host disease (GVHD), chronic GVHD, time off all immunosuppressive therapy, relapse, infections, adverse events, immune reconstitution, and quality of life. Donors in each arm of the study will be compared for time to return to baseline toxicity score, CBC and WBC differential values after donation and quality of life.

Eligibility Criteria: Eligible patients are up to 66.00 years of age, have acute leukemia, myelodysplasia, chronic myeloid leukemia, or other myeloproliferative disorders, adequate organ function, a 6/6 or 5/6 HLA-A, B and DRB1 matched unrelated donor, and are able to give signed informed consent prior to enrollment. Donors must be 18 years of age, meet National Marrow Donor Program (NMDP) criteria for donor eligibility and give informed consent prior to enrollment.

Treatment Description: Patients will receive one of four conditioning regimens as described in the protocol, at the discretion of the transplant physician. The GVHD prophylaxis regimen will be per institutional standard, but may not contain Phase I agents. The transplant physician must declare the conditioning and GVHD prophylaxis regimens prior to randomization to the PBSC versus marrow arm. Marrow cells will be collected from the donors using standard procedures. PBSC

donors will receive G-CSF ~10mcg/kg/d x 5 days and cells will be collected by a single large volume apheresis on Day 5, or two smaller volume apheresis procedures on Days 5 and 6. Marrow or blood cells will not be T-depleted or frozen prior to transplantation.

Accrual Objective: Patients who are candidates for transplantation of G-CSF–mobilized PBSC or marrow from HLA-compatible unrelated donors will be targeted for accrual. Approximately 275 patients will be accrued per study arm (total of 550 patients).

Accrual Period: The estimated accrual period is three years.

Study Duration: Patients and donors will be followed for two years for evaluation of the primary endpoint, with additional follow-up to three years after transplantation or donation for evaluation of certain secondary endpoints.