Trial record **1 of 79** for: Acute Lymphoblastic Leukemia and umbilical cord

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Donor Umbilical Cord Blood Transplant With or Without Ex-Vivo Expanded Cord Blood Progenitor Cells in Treating Patients With Acute Myeloid Leukemia, Acute Lymphoblastic Leukemia, Chronic Myelogenous Leukemia, or Myelodysplastic Syndromes

This study is currently recruiting participants.

Verified July 2013 by Fred Hutchinson Cancer Research Center

Sponsor:
Fred Hutchinson Cancer Research Center/University of Washington Cancer Consortium

Collaborators:
National Heart, Lung, and Blood Institute (NHLBI)
National Cancer Institute (NCI)

Information provided by:
Fred Hutchinson Cancer Research Center

ClinicalTrials.gov Identifier:
NCT01690520

First received: September 19, 2012
Last updated: July 8, 2013
Last verified: July 2013
History of Changes

Full Text View | Tabular View | No Study Results Posted | Disclaimer | How to Read a Study Record

Tracking Information	
First Received Date ICMJE	September 19, 2012
Last Updated Date	July 8, 2013
Start Date ICMJE	December 2012
Estimated Primary Completion Date	October 2017 (final data collection date for primary outcome measure)
Current Primary Outcome Measures ICMJE **(submitted: July 8, 2013)**	Time to engraftment (ANC greater than or equal to 500) in both arms (standard myeloablative CBT with and without off-the-shelf expanded cord blood progenitors) [Time Frame: Up to 2 years] [Designated as safety issue: No] The log-rank test will be used. Groups will be compared using Gray's test.
Original Primary Outcome Measures ICMJE **(submitted: September 19, 2012)**	Time to engraftment (ANC greater than or equal to 500) in both arms (standard myeloablative CBT with and without off-the-shelf expanded cord blood progenitors) [Time Frame: Up to 2 years] [Designated as safety issue: No] The log-rank test will be used.
Change History	Complete list of historical versions of study NCT01690520 on ClinicalTrials.gov Archive Site
Current Secondary Outcome Measures ICMJE **(submitted: July 8, 2013)**	• Time to engraftment, defined as the first of 2 consecutive days in which ANC is at least 500 [Time Frame: Up to 2 years] [Designated as safety issue: No] Groups will be compared using Gray's test. • Relative contribution to engraftment of the expanded cord blood product and the unmanipulated cord blood unit(s) in early and long-term engraftment, determined by frequent determination of donor chimerism in the peripheral blood [Time Frame: Up to 2 years] [Designated as safety issue: No] Groups will be compared using Gray's test. • Time to ANC greater than or equal to 100 [Time Frame: Up to 2 years]

	[Designated as safety issue: No] • Time to ANC greater than or equal to 500 [Time Frame: Up to 2 years] [Designated as safety issue: No] • Time to platelet engraftment (20k and 50k) [Time Frame: Up to 2 years] [Designated as safety issue: No] • Duration of initial hospitalization [Time Frame: Up to 2 years] [Designated as safety issue: No] • Incidence of infectious complications [Time Frame: Up to 100 days post transplant] [Designated as safety issue: No] • Non-relapse mortality (NRM) [Time Frame: Up to 1 year] [Designated as safety issue: No] • Incidence and severity of acute and chronic GVHD [Time Frame: Up to 2 years] [Designated as safety issue: Yes] • Infusional toxicity greater than or equal to grade 3 [Time Frame: Day 0 (day of transplant)] [Designated as safety issue: Yes] Toxicities will be graded using the NCI Common Terminology Criteria for Adverse Events (CTCAE) Version 4.0. • Graft failure (primary and secondary) [Time Frame: Up to 2 years] [Designated as safety issue: Yes] • Kinetics of immune system recovery as measured by T and B cell subsets, T cell receptor excision circles (TREC), spectratyping and T cell receptor (TCR) sequencing [Time Frame: Up to 2 years] [Designated as safety issue: No] • Death without engraftment [Time Frame: Up to 2 years] [Designated as safety issue: No] Groups will be compared using Gray's test and log-rank test.
Original Secondary Outcome Measures ICMJE **(submitted: September 19, 2012)**	• Time to engraftment, defined as the first of 2 consecutive days in which ANC is at least 500 [Time Frame: Up to 2 years] [Designated as safety issue: No] • Relative contribution to engraftment of the expanded cord blood product and the unmanipulated cord blood unit(s) in early and long-term engraftment, determined by frequent determination of donor chimerism in the peripheral blood [Time Frame: Up to 2 years] [Designated as safety issue: No] • Time to ANC greater than or equal to 100 [Time Frame: Up to 2 years] [Designated as safety issue: No] • Time to ANC greater than or equal to 500 [Time Frame: Up to 2 years] [Designated as safety issue: No] • Time to platelet engraftment (20k) [Time Frame: Up to 2 years] [Designated as safety issue: No] • Time to platelet engraftment (50k) [Time Frame: Up to 2 years] [Designated as safety issue: No] • Duration of initial hospitalization [Time Frame: Up to 2 years] [Designated as safety issue: No] • Incidence of infectious complications [Time Frame: Up to 100 days post transplant] [Designated as safety issue: No] • Non-relapse mortality (NRM) [Time Frame: Day 200] [Designated as safety issue: No] • NRM [Time Frame: 1 year] [Designated as safety issue: No] • Incidence and severity of acute and chronic GVHD [Time Frame: Up to 2 years] [Designated as safety issue: Yes] • Infusional toxicity greater than or equal to grade 3 [Time Frame: Up to 2 years] [Designated as safety issue: Yes] • Graft failure (primary and secondary) [Time Frame: Up to 2 years] [Designated as safety issue: Yes] • Kinetics of immune system recovery as measured by T and B cell subsets, T cell receptor excision circles (TREC), spectratyping and T cell receptor (TCR) sequencing [Time Frame: Up to 2 years] [Designated as safety issue: No]
Current Other Outcome Measures ICMJE	*Not Provided*
Original Other Outcome Measures ICMJE	*Not Provided*

Descriptive Information

Brief Title ICMJE	Donor **Umbilical Cord** Blood Transplant With or Without Ex-Vivo Expanded **Cord** Blood Progenitor Cells in Treating Patients With **Acute** Myeloid **Leukemia**, **Acute Lymphoblastic Leukemia**, Chronic Myelogenous **Leukemia**, or Myelodysplastic Syndromes
Official Title ICMJE	Multi-center, Open-label Randomized Study of Single or Double Myeloablative **Cord** Blood Transplantation With or Without Infusion of Off-The-shelf ex Vivo Expanded Cryopreserved **Cord** Blood Progenitor Cells in Patients With Hematologic Malignancies
Brief Summary	This randomized phase II trial studies how well giving donor **umbilical cord** blood transplant with or without ex-vivo expanded **cord** blood progenitor cells works in treating patients with **acute** myeloid **leukemia**, **acute lymphoblastic leukemia**, chronic myelogenous **leukemia**, or myelodysplastic syndromes. Giving chemotherapy and total-body irradiation before a donor **umbilical cord** blood transplant helps stop the growth of cancer cells. It may also stop the patient's immune system from rejecting the donor's cells. When the healthy stem cells and ex-vivo expanded **cord** blood progenitor cells are infused into the patient they may help the patient's bone marrow make stem cells, red blood cells, white blood cells, and platelets. It is not yet known whether giving donor **umbilical cord** blood transplant plus ex-vivo expanded **cord** blood progenitor cells is more effective than giving a donor **umbilical cord** blood transplant alone.
Detailed Description	PRIMARY OBJECTIVES: I. Compare the time to neutrophil engraftment (absolute neutrophil count [ANC] >= 500) in patients receiving a standard of care myeloablative cord blood transplant (CBT) augmented with an off-the-shelf pre-expanded and cryopreserved cord blood product to those who do not receive the product. SECONDARY OBJECTIVES: I. Provide initial data on clinical and economic benefit, such as time to platelet engraftment, duration of initial hospitalization, day 200 transplant related mortality (TRM), death without engraftment, and incidence of severe infections in the first 100 days post transplant. II. The kinetics of immune system recovery will also be evaluated in both arms. OUTLINE: Patients are randomized to 1 of 2 treatment arms. Standard of Care Arm: CONDITIONING REGIMEN: Patients receive fludarabine phosphate intravenously (IV) over 30 minutes on days -8 to -6 and cyclophosphamide IV on days -7 to -6. Patients also undergo total-body irradiation (TBI) twice daily (BID) on days -4 to -1. TRANSPLANT: Patients undergo single-unit or double-unit unmanipulated umbilical cord blood (UCB) transplant on day 0. GRAFT-VERSUS-HOST DISEASE (GVHD) PROPHYLAXIS: Patients receive cyclosporine IV over 1 hour twice daily (adults) or three times a day (children) on days -3 to 100 with taper beginning on day 101. Patients also receive mycophenolate mofetil (MMF) IV three times a day on days 0-7 then may receive MMF orally (PO) three times a day. Patients remain on MMF three times a day for a minimum of 30 days, and then may begin taper if there is no evidence of graft-versus-host disease (GVHD) and are well-engrafted from one donor unit. Experimental Arm: CONDITIONING REGIMEN: Patients receive fludarabine phosphate IV and cyclophosphamide IV, and undergo TBI as in Standard of Care Arm. TRANSPLANT: Patients undergo single-unit or double-unit unmanipulated UCB transplant on day 0. Patients also receive an infusion of ex vivo-expanded cord blood progenitors at least 4 hours after completion of UCB transplant. GVHD PROPHYLAXIS: Patients receive cyclosporine IV and mycophenolate mofetil IV or PO as in Standard of Care Arm. After completion of study treatment, patients are followed up periodically for 2 years.
Study Type ICMJE	Interventional
Study Phase	Phase 2
Study Design ICMJE	Allocation: Randomized

Study Design	Allocation: Randomized Endpoint Classification: Efficacy Study Intervention Model: Parallel Assignment Masking: Open Label Primary Purpose: Treatment
Condition ICMJE	• Accelerated Phase Chronic Myelogenous **Leukemia** • **Acute** Myeloid **Leukemia** With Multilineage Dysplasia Following Myelodysplastic Syndrome • Adult **Acute Lymphoblastic Leukemia** in Remission • Adult **Acute** Myeloid **Leukemia** in Remission • Adult **Acute** Myeloid **Leukemia** With 11q23 (MLL) Abnormalities • Adult **Acute** Myeloid **Leukemia** With Del(5q) • Adult **Acute** Myeloid **Leukemia** With Inv(16)(p13;q22) • Adult **Acute** Myeloid **Leukemia** With t(15;17)(q22;q12) • Adult **Acute** Myeloid **Leukemia** With t(16;16)(p13;q22) • Adult **Acute** Myeloid **Leukemia** With t(8;21)(q22;q22) • Childhood **Acute Lymphoblastic Leukemia** in Remission • Childhood **Acute** Myeloid **Leukemia** in Remission • Childhood Chronic Myelogenous **Leukemia** • Chronic Phase Chronic Myelogenous **Leukemia** • de Novo Myelodysplastic Syndromes • Previously Treated Myelodysplastic Syndromes • Refractory Anemia • Refractory Anemia With Excess Blasts • Refractory Anemia With Excess Blasts in Transformation • Relapsing Chronic Myelogenous **Leukemia** • Secondary **Acute** Myeloid **Leukemia**
Intervention ICMJE	• Procedure: ex vivo-expanded **cord** blood progenitor cell infusion Given IV • Procedure: **umbilical cord** blood transplantation Undergo single-unit unmanipulated **umbilical cord** blood transplant Other Names: ◦ **cord** blood transplantation ◦ transplantation, **umbilical cord** blood ◦ UCB transplantation • Procedure: double-unit **umbilical cord** blood transplantation Undergo double-unit unmanipulated **umbilical cord** blood transplant • Drug: fludarabine phosphate Given IV Other Names: ◦ 2-F-ara-AMP ◦ Beneflur ◦ Fludara • Drug: cyclophosphamide Given IV Other Names: ◦ CPM ◦ CTX ◦ Cytoxan ◦ Endoxan ◦ Endoxana

	• Radiation: total-body irradiation Undergo TBI Other Name: TBI • Drug: cyclosporine Given IV Other Names: ◦ ciclosporin ◦ cyclosporin ◦ cyclosporin A ◦ CYSP ◦ Sandimmune • Drug: mycophenolate mofetil Given IV or PO Other Names: ◦ Cellcept ◦ MMF
Study Arm (s)	• Active Comparator: Arm I (standard of care) CONDITIONING REGIMEN: Patients receive fludarabine phosphate IV over 30 minutes on days -8 to -6 and cyclophosphamide IV on days -7 to -6. Patients also undergo TBI BID on days -4 to -1. TRANSPLANT: Patients undergo single-unit or double-unit unmanipulated UCB transplant on day 0. GVHD PROPHYLAXIS: Patients receive cyclosporine IV over 1 hour twice daily (adults) or three times a day (children) on days -3 to 100 with taper beginning on day 101. Patients also receive MMF IV three times a day on days 0-7 then may receive MMF orally three times a day. Patients remain on MMF three times a day for a minimum of 30 days, and then may begin a taper if there is no evidence of GVHD and are well-engrafted from one donor unit. Interventions: ◦ Procedure: **umbilical cord** blood transplantation ◦ Procedure: double-unit **umbilical cord** blood transplantation ◦ Drug: fludarabine phosphate ◦ Drug: cyclophosphamide ◦ Radiation: total-body irradiation ◦ Drug: cyclosporine ◦ Drug: mycophenolate mofetil • Experimental: Arm II (experimental) CONDITIONING REGIMEN: Patients receive fludarabine phosphate IV and cyclophosphamide IV, and undergo TBI as in Standard of Care Arm. TRANSPLANT: Patients undergo single-unit or double-unit unmanipulated UCB transplant on day 0. Patients also undergo infusion of ex vivo-expanded **cord** blood progenitor cell infusion at least 4 hours after completion of UCB transplant. GVHD PROPHYLAXIS: Patients receive cyclosporine IV and mycophenolate mofetil IV or PO as in Standard of Care Arm. Interventions: ◦ Procedure: ex vivo-expanded **cord** blood progenitor cell infusion ◦ Procedure: **umbilical cord** blood transplantation ◦ Procedure: double-unit **umbilical cord** blood transplantation ◦ Drug: fludarabine phosphate ◦ Drug: cyclophosphamide ◦ Radiation: total-body irradiation ◦ Drug: cyclosporine ◦ Drug: mycophenolate mofetil
Publications *	*Not Provided*

*** Includes publications given by the data provider as well as publications identified by ClinicalTrials.gov Identifier (NCT Number) in Medline.**

Recruitment Information

Recruitment Status ICMJE	Recruiting
Estimated Enrollment ICMJE	160
Completion Date	*Not Provided*
Estimated Primary Completion Date	October 2017 (final data collection date for primary outcome measure)
Eligibility Criteria ICMJE	Inclusion Criteria: • Acute myeloid leukemia: ◦ High risk first complete remission (CR1) as evidenced by preceding myelodysplastic syndromes (MDS), high risk cytogenetics (for example, monosomy 5 or 7, or as defined by referring institution treatment protocol), >= 2 cycles to obtain complete remission (CR), erythroblastic or megakaryocytic leukemia; >= second complete remission (CR2) ◦ All patients must be in CR as defined by hematologic recovery and < 5% blasts by morphology within the bone marrow and a cellularity of >= 15% for age ◦ Patients in which adequate marrow/biopsy specimens cannot be obtained to determine remission status by morphologic assessment, but have fulfilled criteria of remission by flow cytometry, recovery of peripheral blood counts with no circulating blasts, and/or normal cytogenetics (if applicable) may still be eligible; reasonable attempts must be made to obtain an adequate specimen for morphologic assessment, including possible repeat procedures; these patients must be discussed with the principal investigator prior to enrollment • Acute Lymphoblastic Leukemia ◦ High risk CR1 [for example, but not limited to: t(9;22), t(1;19), t(4;11) or other mixed-lineage leukemia (MLL) rearrangements, hypodiploid]; greater than 1 cycle to obtain CR; CR2 or greater ◦ All patients must be in CR as defined by hematologic recovery and < 5% blasts by morphology within the bone marrow and a cellularity of >= 15% for age ◦ Patients in which adequate marrow/biopsy specimens cannot be obtained to determine remission status by morphologic assessment, but have fulfilled criteria of remission by flow cytometry, recovery of peripheral blood counts with no circulating blasts, and/or normal cytogenetics (if applicable) may still be eligible; reasonable attempts must be made to obtain an adequate specimen for morphologic assessment, including possible repeat procedures; these patients must be discussed with the principal investigator prior to enrollment • Chronic myelogenous leukemia excluding refractory blast crisis; to be eligible in first chronic phase (CP1) patient must have failed or be intolerant to tyrosine kinase inhibitor therapy • Myelodysplasia (MDS) International Prognostic Scoring System (IPSS) intermediate (Int)-2 or High risk (i.e., refractory anemia with excess blasts [RAEB], refractory anemia with excess blasts in transformation [RAEBt]) or refractory anemia with severe pancytopenia or high risk cytogenetics; blasts must be < 10% by a representative bone marrow aspirate morphology • Karnofsky (>= 16 years old) >= 70 or Eastern Cooperative Oncology Group (ECOG) 0-1 • Lansky (< 16 years old) >= 60 • Adults: calculated creatinine clearance must be > 60 mL and serum creatinine =< 2 mg/dL • Children (< 18 years old): calculated creatinine clearance must be > 60 mL/min • Total serum bilirubin must be < 3mg/dL unless the elevation is thought to be due to Gilbert's disease or hemolysis • Transaminases must be < 3 x the upper limit of normal • Diffusing capacity of the lung for carbon monoxide (DLCO) corrected > 60% normal • For pediatric patients unable to perform pulmonary function tests, oxygen (O2) saturation > 92% on room air • May not be on supplemental oxygen • Left ventricular ejection fraction > 45% • OR shortening fraction > 26% • Ability to understand and the willingness to sign a written informed consent document Exclusion Criteria: • Uncontrolled viral or bacterial infection at the time of study enrollment • Active or recent (prior 3 month) invasive fungal infection without infectious disease (ID) consult and

	• Active or recent (prior 6 month) invasive fungal infection without infectious disease (ID) consult and approval • History of human immunodeficiency virus (HIV) infection • Pregnant or breastfeeding • Prior myeloablative transplant containing full dose TBI (greater than 8 Gy) • Any prior myeloablative transplant within the last 6 months • Extensive prior therapy including > 12 months alkylator therapy or > 6 months alkylator therapy with extensive radiation • CNS leukemic involvement not clearing with intrathecal chemotherapy and/or cranial radiation prior to initiation of conditioning
Gender	Both
Ages	6 Months to 45 Years
Accepts Healthy Volunteers	No
Contacts ICMJE	*Not Provided*
Location Countries ICMJE	United States

Administrative Information

NCT Number ICMJE	NCT01690520
Other Study ID Numbers ICMJE	2603.00, NCI-2012-01572, P30CA015704, P50HL110787
Has Data Monitoring Committee	Yes
Responsible Party	*Not Provided*
Study Sponsor ICMJE	Fred Hutchinson Cancer Research Center/University of Washington Cancer Consortium
Collaborators ICMJE	• National Heart, Lung, and Blood Institute (NHLBI) • National Cancer Institute (NCI)
Investigators ICMJE	Principal Investigator: Colleen Delaney — Fred Hutchinson Cancer Research Center/University of Washington Cancer Consortium
Information Provided By	Fred Hutchinson Cancer Research Center
Verification Date	July 2013

ICMJE **Data element required by the International Committee of Medical Journal Editors and the World Health Organization ICTRP**