CIBMTR®
CENTER FOR INTERNATIONAL BLOOD & MARROW TRANSPLANT RESEARCH

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contents

PERSPECTIVES: A NEW LOOK AT CIBMTR GROWTH

By Thomas Shea, CIBMTR Advisory Committee Chair

Since the CIBMTR affiliation in 2004, the Advisory Committee has met in person twice each year, during the BMT Tandem Meetings and again during the National Marrow Donor Program (NMDP) Council or American Society of Hematology (ASH) annual meeting. This allowed the committee to take advantage of the fact that many of its members were already in attendance at the parent meeting.

At the past few meetings, it has become evident that more time is needed for important, in-depth discussions. We need to take advantage of the experience of the advisory board membership by using its time wisely. With a complex organization like CIBMTR, many concerns require lengthy discussion and analyses by the Advisory Committee, including:

- Policy issues;
- Scientific directions;
- How to best achieve our goals while providing the best possible service to centers reporting outcomes;
- Issues related to collecting transplant data for non-malignant diseases.

Many of these matters touch on CIBMTR's requirements in its contract with the Health Resources and Services Administration (HRSA) for the Stem Cell Therapeutic Outcomes Database (SCTOD), so the Advisory Committee proposed to its HRSA Project Officer that the committee hold a single, four-hour, meeting during the BMT Tandem Meetings. HRSA approved this change.

Administrative reports, accomplishments and questions will be sent to Advisory Committee members ahead of the annual meeting. The in-person meeting time will be reserved for discussing policies and procedures that need further analysis. For issues that are expected to take more than an hour to present and discuss at the meeting, a task force or ad hoc committee will be formed two to three months before the meeting to analyze the issue and make recommendations to the full committee.

We feel this approach will be a more efficient and productive approach to CIBMTR Advisory Committee time and we will keep our CIBMTR Newsletter readers advised of important decisions that come out of the meetings.

Looking ahead

Another crucial event in the life of CIBMTR will be the upcoming competitive renewal applications for U24-CA76518 (the major grant supporting CIBMTR database operations) and the SCTOD contract with HRSA, both of which are due in summer 2012. Planning has already begun for these huge endeavors, and you will likely hear more about them over the course of the next few months.

ABBREVIATIONS USED IN THIS NEWSLETTER:

ADWC	Autoimmune Diseases Working Committee
AGNIS®	A Growable Network Information System®
ASBMT	American Society for Blood and Marrow Transplantation
ASH	American Society of Hematology
ATG	anti-thymocyte globulin
BMT	blood and marrow transplantation
BMT CTN	Blood and Marrow Transplant Clinical Trials Network
CIBMTR	Center for International Blood and Marrow Transplant Research
CKWC	Chronic Leukemia Working Committee
CLL	chronic lymphocytic leukemia
CML	chronic myeloid leukemia
DCC	Data and Coordinating Center
EBMT	European Group for Blood and Marrow Transplantation
GVHD	graft-versus-host disease
HCT	hematopoietic (stem) cell transplant
HIV	human immunodeficiency virus
HLA	human leukocyte antigen
HRSA	Health Resources and Services Administration
HSR	Health Services Research
ISCT	International Society for Cellular Therapy
MDS	myelodysplastic syndrome
MS	multiple sclerosis
NCI	National Cancer Institute
NHLBI	National Heart, Lung & Blood Institute
NIAID	National Institute of Allergy & Infectious Diseases
NIH	National Institutes of Health
NMDP	National Marrow Donor Program
PI	Principal Investigator
QOL	Quality of life
SRG	Survey Research Group
SCTOD	Stem Cell Therapeutic Outcomes Database
TED	Transplant Essential Data (forms)
WBMT	Worldwide Network for Blood & Marrow Transplantation

CHRONIC LEUKEMIA WORKING COMMITTEE

By Xiaochun Zhu, Wael Saber, Matt Kalaycio, Richard Maziarz, and Jorge Cortes

One of the first Working Committees established by the IBMTR (a CIBMTR predecessor organization), the Chronic Leukemia Working Committee (CKWC) is among the most productive in generating proposals that address a wide range of issues in the field of HCT.

All Working Committee co-chairs are responsible for promoting and developing their committee's scientific agenda, establishing priorities after obtaining input from committee members, and ensuring the progress of the research studies and publications. The CIBMTR Statistical Center and the CKWC would like to acknowledge the past leadership and scientific contributions of Jeffrey Szer, MD, and Ann Woolfrey, MD, who served as this committee's co-chairs.

The CKWC is currently led by co-chairs Matt Kalaycio, MD, Richard Maziarz, MD, and Jorge Cortes, MD, scientific director Wael Saber, MD, MS, and statisticians Kwang Woo Ahn, PhD, and Xiaochun Zhu, MS. It meets monthly by teleconference to ensure studies move forward in a timely fashion and to consider proposals. The co-chairs also reviewed the CIBMTR Comprehensive Report Forms for CML and CLL in 2010, and completely updated them. These forms will be part of the future launch of FormsNet™3 (CIBMTR's online data entry program).

The major research focus of the CKWC is to define the optimal role of transplantation for CLL, myeloproliferative neoplasms, CML in the post imatinib era, and MDS, which this committee added to its portfolio in 2010. Many of these conditions present in older patients and had not been traditionally treated with HCT. However, with the advent of reduced-intensity conditioning and non-myeloablative HCT, clinicians can now offer transplantation as a potential curative therapy for older patients with these hematologic malignancies.

The committee encourages and takes advantage of important collaborations with other groups to enable comparative studies to be completed, drawing, for example, on databases from the Mayo Clinic and Fred Hutchinson Research Cancer Center.

Publications and presentations

- **CK00-02:** Ballen KK, Shrestha S, Sobocinski KA, Zhang M-J, Bashey A, Bolwell BJ, Cervantes F, Devine SM, Gale RP, Gupta V, Hahn TE, Hogan WJ, Kröger N, Litzow MR, Marks DI, Maziarz RT, McCarthy PL, Schiller G, Schouten HC, Vivek Roy V, Wiernik PH, Horowitz MM, Giralt SA, Arora M. **Outcome of transplantation for myelofibrosis.** Biol Blood Marrow Transplant. 2010 Mar;16(3):358-67. Epub 2009 Oct 30. PMC2908949
- **CK03-02:** Goldman JM, Majhail NS, Klein JP, Wang Z, Sobocinski KA, Arora M, Horowitz MM, Rizzo JD. **Relapse and late mortality in 5-year survivors of myeloablative allogeneic hematopoietic cell transplantation for chronic myeloid leukemia in first chronic phase.** J Clin Oncol. 2010 Apr 10;28(11):1888-95. Epub 2010 Mar 8. PMC2860369
- **CK07-02:** Kalaycio ME, Kukreja M, Woolfrey AE, Szer J, Cortes J, Maziarz RT, Bolwell BJ, Buser A, Copelan E, Gale RP, Gupta V, Maharaj D, Marks DI, Pavletic SZ, Horowitz MM, Arora M. **Allogeneic hematopoietic cell transplant for prolymphocytic leukemia.** Biol Blood Marrow Transplant. 2010 Apr;16(4):543-7. Epub 2009 Dec 2. PMC2839005
- **CK 06-01:** Ballen KK, Arora M, Zhu X, Agovi M, Kalaycio M, Maziarz RT, Cortes JE, Woolfrey A, Horowitz MM, Saber W. **Results of allogeneic transplantation for polycythemia vera and essential thrombocythemia.** Presented at American Society of Hematology meeting 2010, Orlando, FL [Poster Presentation]
- **CK03-01b:** Khoury HJ, Kukreja M, Goldman JM, Wang T, Halter J, Arora M, Gupta V, Rizzieri DA, George B, Keating A, Gale RP, Marks DI, McCarthy PL, Woolfrey A, Szer, J, Giralt SA, Maziarz RT, Cortes J, Horowitz MM, Lee SJ. **Prognostic factors for outcomes in allogeneic transplantation for chronic myeloid leukemia in the imatinib era: a CIBMTR analysis.** [manuscript submitted]

Current research activities

- **CK02-01: Comparison of results using busulfan/cyclophosphamide compared to total body irradiation/ cyclophosphamide as preparation for allogeneic transplantation in CML and AML** (E.A. Copelan, PI). This project compares transplant-related mortality, relapse, overall survival and leukemia-free survival in patients receiving preparation with Oral Bu/Cy, IV Bu/Cy, and Cy/TBI. Status: data file preparation
- **CK06-03: Comparison of conventional myeloablative versus nonmyeloablative or reduced-intensity conditioning allogeneic HCT for CLL/small lymphocytic lymphoma** (J. Leis, PI). This study compares outcomes between patients undergoing HCT using conventional versus reduced-intensity/ nonmyeloablative conditioning regimens for CLL/small lymphocytic lymphoma. A secondary objective is to compare outcomes of patients who had a myeloablative allogeneic HCT using either a TBI-based or chemotherapy-based conditioning regimen. Status: data analysis
- **CK06-04: Decision analysis of allogeneic HCT for myelofibrosis: comparison of allogeneic HCT and non-transplantation therapies for myelofibrosis** (K. Ballen, PI). The study objective is to compare overall survival after HCT and non-transplantation therapies for myelofibrosis. Status: protocol development
- **CK08-02: Results of allogeneic HCT in patients with hairy cell leukemia** (R.J. Kreitman, PI). This is an analysis of CIBMTR registry data for all patients with hairy cell lymphoma who have undergone allogeneic (or syngeneic) HCT, to describe their characteristics prior to transplant and their outcomes. Status: protocol development
- **CK09-01: A comparison of outcomes of minimal intensity and reduced intensity conditioning regimens for patients with myelofibrosis** (V. Gupta, PI). The primary objectives are to evaluate and compare the clinical outcomes of non-myeloablative and reduced-intensity conditioning regimens in patients with myelofibrosis. Status: protocol development

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CHRONIC LEUKEMIA WORKING COMMITTEE
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- **CK11-01: Outcomes of allogeneic hematopoietic stem cell transplantation for adult chronic myelomonocytic leukemia** (H.K. Duong and M. Akhtari, PIs). The primary objective is to determine the rates of treatment-related mortality, relapse/progression, disease-free survival and overall survival for adults with chronic myelomonocytic leukemia who underwent allogeneic HCT from 1995-2008. Status: protocol pending

- **CK11-02: Development of a prognostic scoring system to predict relapse of MDS after allogeneic hematopoietic stem cell transplantation** (B.C. Shaffer, PI). The primary aim is to develop a prognostic scoring system based on patient, disease, and transplant-specific factors, which is predictive of relapse after allogeneic HCT in patients with MDS. Status: protocol pending

Two new study proposals were submitted to the CKWC prior to the 2010 BMT Tandem Meetings, both of which were accepted. In 2011, eight proposals were submitted; two were combined into one study. Of the seven new proposals, two were accepted for analysis and the remaining five were deferred for future consideration.

The CKWC encourages the HCT community to actively participate in the design and conduct of its studies, and to generate new proposals. It is particularly enthusiastic about encouraging participation from young investigators. The next in-person CKWC meeting will be held in February 2012 at the BMT Tandem Meetings in San Diego.

AUTOIMMUNE DISEASES WORKING COMMITTEE

By Steven Pavletic, Paolo Muraro and Marcelo Pasquini

The Autoimmune Diseases Working Committee (ADWC) provides scientific oversight for CIBMTR studies related to HCT for autoimmune disorders including autoimmune cytopenias. It is led by co-chairs Steven Pavletic, MD, FACP, and Paolo Muraro, MD, PhD. The scientific director is Marcelo Pasquini, MD, MS, and the biostatisticians are Kwang Woo Ahn, PhD and Xiaobo (Tony) Zhong, MS.

Autoimmune diseases have a high level of prevalence and morbidity. Lack of curative therapies and progressive disease courses result in poor quality of life and reduced life expectancy. However, experimental concepts in pre-clinical models of HCT for autoimmune disease have been successfully translated and applied in clinical research, with promising results. Observational studies are an essential complement to clinical trials, and CIBMTR's database activities have the potential to catalyze the field by disseminating scientific ideas, promoting activity and critically assessing outcomes in larger groups of patients.

This committee has faced many challenges since its inception, including the low numbers of research data being reported to CIBMTR and the difficulties in collecting retrospective data on disease-specific characteristics and outcomes. An emphasis on ADWC activities is timely, given promising long-term outcomes reported to date from single center and other registry studies, and CIBMTR's mission to expand its portfolio to include application of HCT to new indications.

Data collection for these indications began in 1995, and about 400 patients from 127 centers have been registered to date with CIBMTR. This does not represent the actual transplantation activity for these indications, since not all centers performing HCT for autoimmune disease register patients with CIBMTR. In Europe, outcomes from more than 1,000 patients have been reported to registries, and numerous publications in peer-reviewed journals have resulted.

Several studies of HCT transplant biology have been published over the last five years. These strongly support the concept of "resetting" the immune system after autologous HCT, and provide compelling evidence to support the underlying hypotheses and explain the encouraging clinical results observed.

Activities

CIBMTR assisted with preparing and publishing a workshop report by North American and European experts involved in the care of multiple sclerosis patients (the most common autoimmune indication for use of HCT), including neurologists and HCT physicians, and representatives of CIBMTR and EBMT:

- Pasquini MC, Griffith LM, Arnold DL, Atkins HL, Bowen JD, Chen JT, Freedman MS, Kraft GH, Mancardi GL, Martin R, Muraro PA, Nash RA, Racke MK, Storek J, Saccardi R. **Hematopoietic stem cell transplantation for multiple sclerosis: collaboration of the CIBMTR and EBMT to facilitate international clinical studies.** Biol Blood Marrow Transplant. 2010 Aug; 16(8):1076-83. Epub 2010 Mar 18. PMCID: PMC2897916

The ADWC co-sponsored an international meeting on transplantation for autoimmune disease with EBMT and the European League of Associations for Rheumatology in Florence in November 2009. Proceedings and recommendations for the research to proceed were published as a supplement to *Bone Marrow Transplantation* in 2010. An additional position paper emerging from this initiative is currently in review:

- Illei G, Cervera R, Burt R, Doria A, Heipe F, Jayne D, Pavletic S, Martin T, Marmont A, Saccardi R, Voskuyl A, Farge D. **Current state and future directions of autologous hematopoietic stem cell transplantation in systemic lupus erythematosis.**

Several of these participants also met in conjunction with the Autoimmune Diseases Working Party of EBMT in Paris in April 2011 to discuss future collaborative projects.

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AUTOIMMUNE DISEASES WORKING COMMITTEE

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Current studies with preliminary results

- **AI06-03: Overview of HCT for autoimmune diseases performed in North and South America and reported to the CIBMTR** (Peter McSweeney and Marcelo Pasquini, PIs). The study found that the activity of transplantation for autoimmune disease is increasing in these regions. Autologous HCT is a treatment option; however selecting patients in the peak inflammatory phase of the disease prior to end organ failure will maximize the effectiveness of transplantation for these diseases.

- **AI05-02: The effect of allogeneic HCT on the activity and progression of MS** (Richard Nash, PI). The objective of this study is to identify patients who received an allogeneic HCT for treatment of various diseases who also have coexistent and active MS at time of transplantation. It found that allogeneic transplantation may be highly effective for inducing long-term remission of MS. Suppression of inflammatory activity can be achieved with transplantation, and further studies will identify candidates who would most benefit from this procedure.

- **AI07-01: Development of expert clinical guidelines for evaluation of MS in HCT recipients with a history of MS as a comorbidity condition.** (Harold Atkins, PI). This is a guideline paper, and its objective is to overview requirements for evaluation of patients with coexistent MS who need a transplant for treatment of other illness. These guidelines will serve both transplant physicians and consulting neurologists.

- **AI06-01: Hematopoietic stem cell transplantation for autoimmune cytopenias** (Harold Atkins and Marcelo Pasquini, PIs). Status: supplemental form/data collection

- **AI06-02: Effect of allogeneic HCT on systemic lupus erythematous** (Richard Nash and Steven Pavletic, PIs). Status: supplemental form/data collection

- **AI09-01: Long-term outcomes after autologous HCT for severe MS** (Paolo Muraro, Marcelo Pasquini and Ricardo Saccardi, PIs). Status: protocol development. The objective of this study will be to evaluate long-term outcomes of autologous HCT for MS from time of transplant, and will be limited to a subset of patients who survived three and five years after transplantation.

To improve the status of autoimmune transplant data collection and reporting in the Americas, at the most recent BMT Tandem Meetings, ADWC leadership also recommended:

- Seeking opportunities for partnerships among autoimmune diseases specialists and HCT physicians to leverage the registry for collaborative research endeavors;
- Exploring mechanisms for additive funding for data collection;
- Supporting ADWC staff, including protected time for the scientific director and a dedicated statistician;
- Reviewing and revising where necessary the policies governing data access, usage and publication to ensure maximum transparency and fair allocation of credits (especially publication credits) in order to encourage investigators to report the data to the registry.

The committee's plans for the future also include sponsoring a conference and workshop in 2012 that focuses on the role of registries in studying HCT in autoimmune disease, and hosting scientific sessions at the BMT Tandem Meetings in 2012 and 2013.

SOLID TUMORS WORKING COMMITTEE

by Mukta Arora and Michael Bishop

The Solid Tumors Working Committee provides scientific oversight for studies related to HCT for solid tumors. The committee is led by co-chairs Michael Bishop, MD, Naoto Ueno, MD, PhD, FACP, and Edward Stadtmauer, MD; scientific director Mukta Arora, MD, MS; and biostatisticians Kwang Woo Ahn, PhD, and Xiaochun Zhu, MS.

The graft-versus-tumor effects seen in patients given allogeneic HCT for hematological malignancies have stimulated interest in allogeneic immunotherapy in patients with otherwise refractory metastatic solid tumors. Studies conducted by the Solid Tumors Working Committee over the past several years have included analyses of results for HCT in metastatic breast cancer, advanced testes/germ cell cancer, Ewing sarcoma, rhabdomyosarcoma, renal cell cancer, colorectal cancer, desmoplastic tumors and neuroblastoma.

Publications

- **ST99-03**: Stiff PJ, Agovi M-A, Antman K, Blaise D, Camitta BM, Cairo MS, Childs RW, Edwards JR, Gale RP, Hale GA, Horowitz MM, Arora M. **High dose chemotherapy with blood or marrow transplant for rhabdomyosarcoma: a CIBMTR analysis.** Biol Blood Marrow Transplant 16:525-532, 2010. PMC2838953. This study described the clinical outcomes in patients with rhabdomyosarcoma after autologous HCT. It concluded that when HCT is performed after relapse, long-term survival is seen in approximately one-third of patients, which is seemingly better than previous reports of standard dose salvage for those with poor-risk histologies.

Studies with preliminary results

- **ST06-01: Clinical outcomes of patients with desmoplastic small round cell tumor of the peritoneum undergoing autologous HCT: a CIBMTR retrospective analysis** (Edward Stadtmauer, PI). This report of a relatively large group of patients from multiple centers shows outcomes after autologous HCT are encouraging when compared to historical reports in the literature. Advanced desmoplastic small round cell tumor remains a challenging disease and further multi-modality approaches performed prospectively should be pursued.

Studies in progress

- **ST00-02: Allogeneic HCT for renal cell cancer** (A. John Barrett, PI) Status: supplemental form/data collection

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SOLID TUMORS WORKING COMMITTEE

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- **ST02-02: Allogeneic HCT in colorectal cancer** (Olle Ringden, PI) Status: supplemental form/data collection
- **ST07-01: Clinical outcomes of allogeneic hematopoietic cell transplant for neuroblastoma.** (Stephan A. Grupp and Gregory A. Hale, PIs).The purpose of this study is to evaluate overall and disease-free survival in patients undergoing an allogeneic transplant for neuroblastoma. Status: protocol development
- **ST09-01: Transplant trends for metastatic solid tumors in North America and Europe** (Didier Blaise and Richard Childs, PIs) Status: protocol development
- **ST10-01: The value of high-dose chemotherapy and autologous HCT as adjuvant treatment in patients with high risk inflammatory breast cancer after neoadjuvant chemotherapy** (Naoto Ueno and Yee C. Cheng, PIs) Status: protocol development

The Solid Tumors Working Committee encourages anyone with an interest in these topics to join the committee or present a study proposal.

As with all CIBMTR observational research, the status of these studies is updated biannually on the www.cibmtr.org website.

STEM CELL THERAPEUTIC OUTCOMES DATABASE

by J. Douglas Rizzo and Carol Doleysh

The SCTOD is a HRSA-funded program that collects data on all allogeneic transplants performed in the United States, and on transplants done elsewhere using cell products that originated in the U.S. Recent activity within the SCTOD has focused on a quality of life pilot project and center-specific outcome analyses. Following are highlights from the past few months.

Quality of Life pilot project

This project is being conducted to determine the feasibility and acceptability of collecting QOL data directly from patients, with the goal of minimizing the burden on transplant centers to collect this type of information.

QOL data will be collected from adult and pediatric recipients at baseline (pre transplant), 100 days, 6 months, and 12 months post transplant. Transplant centers will obtain consent from the patient and administer the baseline QOL surveys. The baseline data and patient contact information will then be submitted to CIBMTR. CIBMTR will mail paper surveys to patients for each of the remaining time points and monitor return of the completed surveys. Centers will continue to follow the patients clinically and provide outcomes data electronically; patient reporting track assignment will not be modified for this study.

The protocol was formally released to seven pilot sites December 2, 2010. Study activation began in late June 2011 and two pilot sites are accruing patients. Sites are activated after they have local IRB approval, a contract in place, and study training is completed. The planned accrual period is six months. Each transplant center will recruit as many patients as it can within the six-month period; estimated total enrollment is 250-300 transplant recipients.

Center-Specific Outcomes

The SCTOD contract requires that CIBMTR conduct an analysis of one-year survival rates at each transplant center in the United States and make these data available to the public. The 2010 Center-Specific Outcomes Report was the first to include data on HCTs performed at U.S. transplant centers using both related and unrelated donors. CIBMTR sent centers a de-identified version of the report, along with the key to their center's data, and national normative data to provide a context for their center's results. The report was posted on the NMDP website at www.BeTheMatch.org.

In order to fairly address the complex issues and maintain a transparent scientific approach to center outcomes reporting, a Center-Specific Outcomes Analysis Forum was held in September 2010. Participants (including transplant physicians, payors, statisticians, patients and center outcomes reporting experts) reviewed the process and made recommendations for the best approaches to producing and publishing the center-specific analysis, from statistical and clinical (physician and patient) perspectives. These were summarized and distributed to U.S. Medical Directors in spring, and can be found at www.cibmtr.org/Meetings/Materials/CSOAForum/pages/index.aspx.

EBMT/AGNIS® project

The AGNIS team (A Growable Network Information System) continues to work with the EBMT registry and Eurocord to map data elements from EBMT forms to CIBMTR forms, and to program an interface that will exchange TED-level data with EBMT.

Mapping data elements from the Pre-TED, Post-TED, and EBMT's MED-A forms is complete, and additional data elements relevant to cord blood HCT are in process. Program testing of data exchange using AGNIS is in progress. Mapping from FormsNet to EBMT will also be completed. This connection will ensure exchange of outcomes data for cord blood units that banks in the United States and Europe need to meet regulatory requirements and monitor the quality of the products they distribute. Launch of continuous data exchange is anticipated in 2011.

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STEM CELL THERAPEUTIC OUTCOMES DATABASE

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Other SCTOD news

- Re-approval for SCTOD data collection forms was received from the U.S. Office of Management and Budget on December 20, 2010. The new expiration date is December 31, 2013.
- Cellular Therapies: Hematopoietic cells are increasingly used for indications beyond hematologic malignancies, including regenerative medicine. To better characterize this activity, the Cellular Therapies for Regenerative Medicine (CTRM) Form was released January 18, 2011. The form will collect registration data at one time point. This approach is similar to the EBMT, and will facilitate collaboration.
- An increasing amount of information useful to patients is being made available on the website of the C.W. Bill Young Cell Transplantation Program, http://bloodcell.transplant.hrsa.gov/, including updated survival data for transplants performed between 2004 and 2008, and transplant center volumes data for 2009.

BLOOD AND MARROW TRANSPLANT CLINICAL TRIALS NETWORK

by Sarah Mull

In October 2010, the BMT CTN submitted a competitive renewal to NHLBI for continued administration of the Data and Coordinating Center (DCC). That award, along with awards from NHLBI and NCI to 20 Core Centers (some of which are consortia of two or more centers), was made in August 2011. The DCC is made up of three organizations (CIBMTR, NMDP and The EMMES Corporation) that work together to provide administrative, logistic, scientific, and informatics support for all BMT CTN activities.

The BMT CTN gives investigators the critical infrastructure to collaborate on studies that explore innovative therapies and provide definitive answers to important HCT-related questions. Collaboration with other multicenter trial groups leverages this infrastructure to address more issues, involve more patients and centers, and maximize the NIH's investment in the Network. To date, the BMT CTN has:

- Launched 25 trials (including four led by other groups: **BMT CTN 0502, 0703, 0704 and 0804**);
- Successfully completed accrual to 11 trials;
- Accrued more than 3,800 patients to trials since accrual began in November 2003;
- Presented or published results from seven completed trials.

Once a clinical trial is open for enrollment, the single most critical metric affecting its success is rapid patient accrual. Of the five trials opened by the Network in the past 15 months, four are substantially ahead of enrollment projections (ranging from 158% to 568% of projections) at last tally. Accrual is facilitated by participation of a large percentage of U.S. transplant centers in the Network. More than 100 centers have enrolled patients on at least one BMT CTN study as either a Core or Affiliate Center.

Other noteworthy network accomplishments include:

- Six manuscripts were published by the BMT CTN in the past year and three abstracts presented at national meetings so far this year.
- The 3rd annual BMT CTN Coordinators Meeting was held in February during the BMT Tandem Meetings in Honolulu, Hawaii. In all, 167 Coordinators from more than 100 centers attended this highly successful event.
- Three BMT CTN protocols opened to accrual this year:
  - **BMT CTN 0804/CALGB 100701:** Phase II study of reduced-intensity allogeneic stem cell transplant for high-risk chronic lymphocytic leukemia. This protocol is a collaborative effort between the BMT CTN and CALGB.
  - **BMT CTN 0901:** A randomized, multicenter, phase III study of allogeneic stem cell transplantation comparing regimen intensity in patients with myelodysplastic syndrome or acute myeloid leukemia.
  - **BMT CTN 0902:** A phase III randomized, multi-center trial testing whether exercise or stress management improves functional status and symptoms of autologous and allogeneic HCT recipients). **This is the Network's first trial examining quality of life as its primary endpoint.**
- One additional protocol was released to centers in April 2011 and is expected to begin accruing soon:
  - **BMT CTN 0903:** Allogeneic hematopoietic cell transplant for hematological cancers and myelodysplastic syndromes in HIV-infected individuals.
- Another collaborative protocol (**BMT CTN 0805/SWOG 0805**) is anticipated for release to BMT CTN centers in fall 2011.

HEALTH SERVICES RESEARCH PROGRAM

By Tammy Payton, Shaveta Nayyar, Ellen Denzen, Elizabeth Murphy, Navneet Majhail

The HSR program is a collaborative research undertaking between CIBMTR and NMDP Patient Services that focuses on health services and health policy research in HCT. CIBMTR's Health Policy Working Committee conducts such research through the CIBMTR observational database; the HSR program is designed to complement the committee's work by focusing on issues that require additional resources and expertise for their study.

Current HSR activities mainly focus on quality of care and center factors in HCT, on financial aspects of HCT, and on survey methodology.

Current projects

- **Transplant provider and center factors and outcomes of allogeneic HCT:** This project will conduct a national survey of transplant centers to explore how center and provider factors and models of delivery of care may impact allogeneic HCT outcomes. Funding from the Agency for Healthcare Research and Quality is pending and the survey will be implemented in October 2011.

- **Increasing response rates to the Office of Patient Advocacy Survey:** The survey assesses patient satisfaction with patient services coordination through NMDP, and with materials and resources provided to patients, families and caregivers. The study is investigating whether mode of contact (phone versus mail) and provision of various incentives impact response rates.

- **Financial impact of allogeneic HCT on patients:** In collaboration with the CIBMTR Health Policy Working Committee, this pilot study is examining the feasibility of collecting patient-reported out-of-pocket cost information over the first three months after allogeneic HCT. Accrual at three centers has been completed and data analysis is underway.

- **Costs of HCT:** Conducted in collaboration with the Chronic Disease Research Group at Hennepin County Medical Center, Minneapolis, MN, this pilot study will assemble a cohort of HCT recipients from commercial payor databases (Thomson Healthcare MarketScan Data and Ingenix i3 Data), to evaluate health care-related costs of HCT. The project received funding through the University of Minnesota Masonic Cancer Center Internal Grants Program.

- **System capacity initiative – HSCT in 2020:** NMDP is conducting a multi-year series of symposia to evaluate and provide recommendations for addressing workforce and infrastructure challenges to the appropriate current and future utilization of HCT. The HSR team is providing expertise and support to various working groups in this project (e.g. conducting surveys).

- **Insurance impact on HCT:** HSR, NMDP's Payor Policy Program Staff, and Dr. Richard Maziarz from Oregon Health & Science University are collaborating on a study of the impact of insurance authorization process on time to transplantation and overall survival for patients with hematologic cancers at three transplant centers. Investigators will generate detailed process maps to track referred patients from payor authorization to HCT, and will determine reasons for delays and deferral. This proposal has been submitted for extramural funding.

Recent HSR publications

- Majhail NS, Murphy EA, Omondi NA, Robinett P, Gajewski JL, LeMaistre CF, Confer D, Rizzo JD. **Allogeneic transplant physician and center capacity in the United States.** Biol Blood Marrow Transplant. 2011 Jul 17:956-61. Epub 2011 Apr 12. PMCID: PMC3114271 [Available 2012/7/1]

- Omondi NA, Stickney Ferguson S, Majhail NS, Buchanan GR, Haight AE, Labotka RJ, Rizzo JD, and Murphy EA. **Barriers to clinical trial participation of African American and Black youth with sickle cell disease and their parents.** (submitted)

- The HSR program continues to increase its dissemination of research findings at state and national HSR conferences.
  - **MP3 song downloads as incentive to increase young adult response to online surveys** (oral presentation at 15th Annual Minnesota Health Services Research Conference).
  - **The effects of tailored design method in a chronically ill population: results of a controlled experiment** (oral presentation at the 15th Annual Minnesota Health Services Research Conference).
  - **Preparing for oncology patient needs: blood and marrow transplant nursing workforce system capacity initiative,** was presented in a poster at the 36th Annual Oncology Nursing Society Congress.

As this relatively new program grows, we envision it will be a resource for investigators to collaborate on health services-related research in HCT and hematologic malignancies. Queries about the program or potential avenues for collaboration can be addressed to Navneet Majhail, MD, MS, at majha001@umn.edu.

2011 BMT Tandem Meetings: Success in Hawaii!!

by D'Etta Waldoch

The combined annual meetings of CIBMTR and ASBMT have been North America's largest international gathering of blood and marrow transplant clinicians and investigators, laboratory technicians, transplant nurses, pharmacists and clinical research associates since 1999.

2011

Leading experts convened in February to present the latest developments in blood and marrow transplantation during the BMT Tandem Meetings on the beautiful island of Oahu, Hawaii. Scientific Program Chairs for the 2011 meetings were Thomas Shea, MD, for CIBMTR and Elizabeth Shpall, MD, for ASBMT. Records set at the 2006 meetings in Hawaii, of just over 2,000 attendees, were surpassed by 400. And, a record-breaking 650 abstracts were submitted by investigators from 33 countries.

New this year was a Clinical Practice Forum, attended by more than 400 allied health professionals. This forum was designed to cross roles and disciplines, addressing clinically relevant topics for data managers, administrators, pharmacists, nurses and others working in transplantation. Its success guaranteed it will be back in 2012.

2012

The 2012 BMT Tandem Meetings will return to the U.S. mainland in the spacious Manchester Grand Hyatt in sunny San Diego, CA, a bit earlier than usual: February 1-5. Scientific Program Chairs for 2012 are Stella Davies, MBBS, PhD, representing CIBMTR, and John Levine, MD, MS, for ASBMT. Topics slated for presentation at the San Diego meetings are listed in the box below.

Peripheral meetings will include the BMT CTN Steering Committee, BMT CTN Coordinator and Investigator Sessions, Foundation for Accreditation of Cellular Therapy Training Workshops, Clinical Research Professional Data Management Conference, BMT Center Administrative Director Conference, BMT Pharmacist Conference, Advanced Practice Professional Conference, Transplant Nursing Conference, Pediatric BMT Program, BMT Center Medical Director Conference, and the Clinical Practice Forum.

Detailed information about the 2012 meeting is continuously updated on the CIBMTR (www.cibmtr.org) and ASBMT (www.asbmt.org) websites. Online conference registration, hotel reservations and the abstract submission program (abstract deadline: **October 13, 2011**) are now available. Check in periodically for updates to the provisional agenda.

For general information, please e-mail D'Etta Waldoch, CMP, at the conference office at bmttandem@cs.com. Questions about support opportunities at the 2012 BMT Tandem Meetings may be directed to Sherry Fisher at slfisher@mcw.edu.

2012 Meeting Topics

- Aging and transplants in the elderly
- Late effects/survivorship
- Biomarkers in HCT
- HCT for low-grade lymphoma
- Chronic GVHD
- Hematopoietic stem cell biology
- Dendritic cells
- GVHD prevention
- ATG vs. non-ATG therapy
- Transplantation for autoimmune disease
- Controversies in myeloma treatment
- HCT in the HIV+ population
- Natural killer cells in HCT and cellular therapy
- Donor selection: where is it going?
- Preventing relapse after HCT – myeloid malignancies
- Clinical trials: cooperative groups and networks of the future
- HCT/cellular therapy for CLL/CML
- Donor selection – HLA and other typing
- Supportive care/complementary therapies
- New treatment strategies
- Tolerance
- Next generation sequencing
- Training the next generation
- HCT for non-malignant disorders
- Sessions presented by NMDP, ISCT, and WBMT

INSIDE PROSPECTIVE RESEARCH AT CIBMTR

by Rebecca Drexler and Dana Killmeyer

One important component of CIBMTR's Prospective Research team that is unfamiliar to many people – both inside and outside CIBMTR – is the RCI BMT Survey Research Group, which is located on the Minneapolis campus.

The SRG, led by Dana Killmeyer, includes specialists with experience in collecting and reporting survey data, who also have specialized expertise in HCT studies. The SRG is responsible for collecting quality, scientifically valid data about the health and experiences of donors, patients, and their families. Its staff members conduct surveys using self-administered questionnaires delivered online or by mail, or through standardized or semi-structured telephone interviews.

The SRG maintains a core staff of research interviewers trained and experienced in survey data collection, who join existing studies to add that extra element of QOL follow-up data. In the past year, this group has grown from one interviewer to a team of six, and is anticipated to continue to grow, due to the significant need for its services.

Its first study was undertaken by the then un-named team in collaboration with Galen Switzer, PhD, of the University of Pittsburgh Medical Center in 2007. Since then, the SRG has added the following studies to its repertoire:

- A study of the financial impact of HCT on patients and families;
- A five-year follow-up to the **BMT CTN 0201** study (A phase III randomized, multicenter trial comparing granulocyte colony-stimulating factor mobilized peripheral blood stem cell with marrow transplantation from HLA compatible unrelated donors);
- A study of related donor safety (**RDSafe**);
- Killer-cell immunoglobulin-like receptors-donor sample (**KIR-DS**). This is part of a study facilitated by the University of Minnesota under their Natural Killer Cell Biology Grant. It launched in summer 2011.
- SCTOD Quality of Life study (**SQOL**), doing QOL follow up on patients after transplantation. This study also launched in summer 2011.
- A long-term donor follow-up study of unrelated donors.

The group is working with another study that is anticipated to launch later in 2011: **BMT CTN 0903** (Allogeneic blood stem cell transplant for hematological cancers and bone marrow failure in HIV-infected individuals). The SRG will assist with initial contact to potential participants and with subsequent calls to follow up on unreturned materials.

The continuing growth of this important component of the Prospective Research program will expand CIBMTR's research capabilities into new and exciting arenas.

FORMSNET™3 MAKES ITS INTRODUCTORY APPEARANCE

By Shawn Freeman and Katherine Gee

During the 2011 BMT Tandem Meetings, current FormsNet™2 users had the opportunity to view a demonstration of the up-and-coming FormsNet™3 application for CIBMTR forms submission. Since application development had just started, the development team wanted to ensure that it incorporates functionality that is important to users and which makes the system as user friendly as possible. We had a great turnout of attendees; about 100 people came to the demonstration at Tandem and 79 filled out surveys.

The purpose was to demonstrate five key concepts and receive feedback on them. The team also wanted to verify that the general look and feel of FormsNet3 enhanced the user's experience. Concepts that were presented were:

1. Section bars replacing the left-hand navigation that can toggle open/closed.
2. Enabling and disabling of questions to automatically navigate through the form.
3. Field-level icons to show the status of each field.
4. Click vs. Tab navigation as a way for the system to move from question to question.
5. Visual presentation of how multiples (questions answered for more than one instance) would look and could function.

Our new functions were discussed with participants, including auto-population of key fields. The results were overwhelmingly in favor of the look and potential functionality of FormsNet3, as you can see by the survey results and comments below.

FormsNet Proof of Concept Demonstration		
QUESTION	YES	NO
Do you like the ability to expand and collapse sections of a form?	99%	1%
Do the field-level icons help you visually understand what is needed for each question?	84%	16%
Is it useful to know the status of each section within the form?	94%	6%
Do you like that the system clears the answers to the sub questions?	87%	13%
Do you feel that the click-level navigation will be a time saver?	92%	8%

Other supportive comments received:

- *I thought it was very informative and appreciate a chance to preview some of the concepts. I really like the ability to expand the sections, as needed. I also like having the error icon right on the field, so you can quickly see what is wrong. Help anywhere is good!*
- *Thank you for the populating feature–a welcome timesaver.*

Further information will be made available as this exciting new venture moves forward!

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