



CIBMTR[®]

CENTER FOR INTERNATIONAL BLOOD
& MARROW TRANSPLANT RESEARCH



CLINICAL
OUTCOMES



HEALTH SERVICES



IMMUNOBIOLOGY



BIOINFORMATICS



STATISTICAL
METHODOLOGY

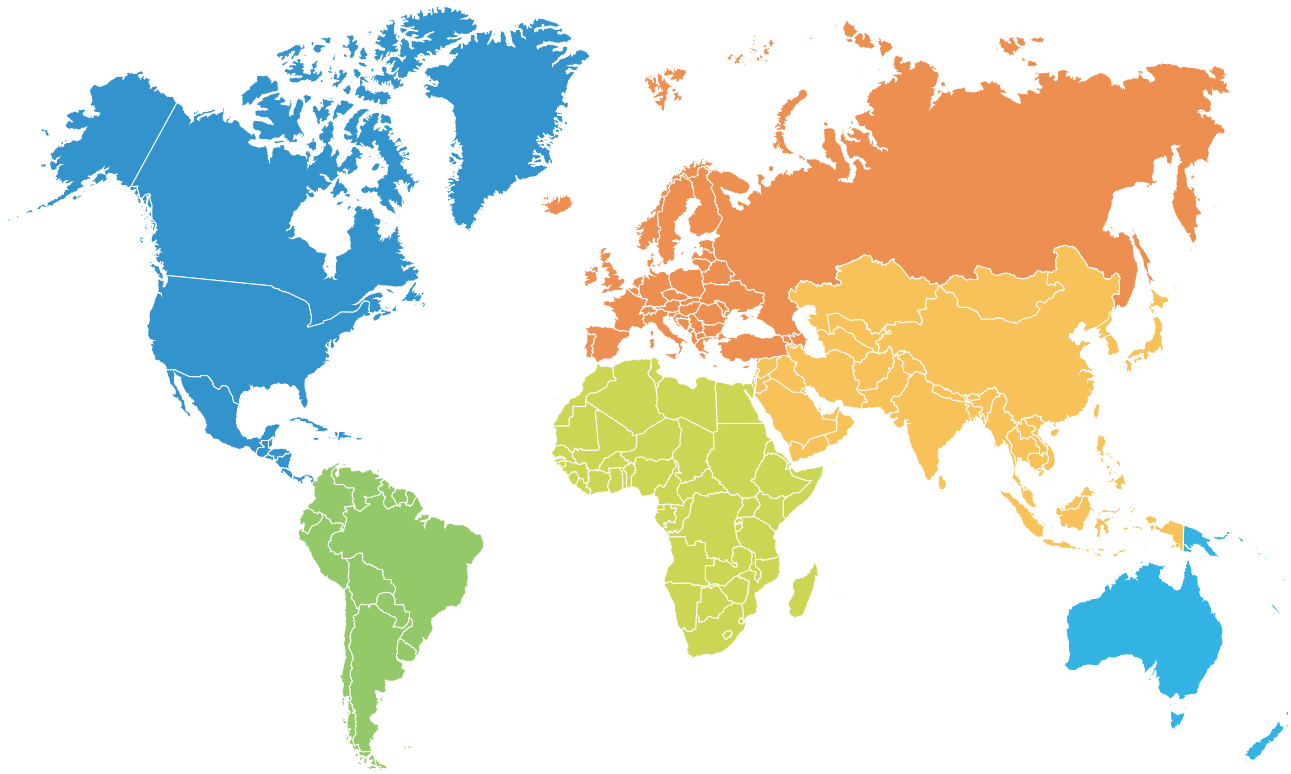


CLINICAL TRIALS

FACTS AND FIGURES

July 2018 - June 2019

SHARING KNOWLEDGE. SHARING HOPE.



A WORLD OF RESEARCHERS

>7,500 researchers, clinicians, and support personnel

~500 centers

>55 countries

WORKING TOGETHER

>220 studies in progress

>1,400 publications

>170,000 biorepository samples

FOR LIFE

>535,000 patients registered

~24,000 new patients registered annually

WHO WE ARE

The CIBMTR® (Center for International Blood & Marrow Transplant Research®) is a research collaboration between the National Marrow Donor Program® (NMDP)/Be The Match® and the Medical College of Wisconsin. The CIBMTR facilitates critical research through medical, scientific, and statistical expertise; a large network of participating centers; a unique and extensive clinical database; and a robust and comprehensive biospecimen repository.

Medical &
Scientific
Expertise



Worldwide
Network



Clinical
Database



Biospecimen
Repository

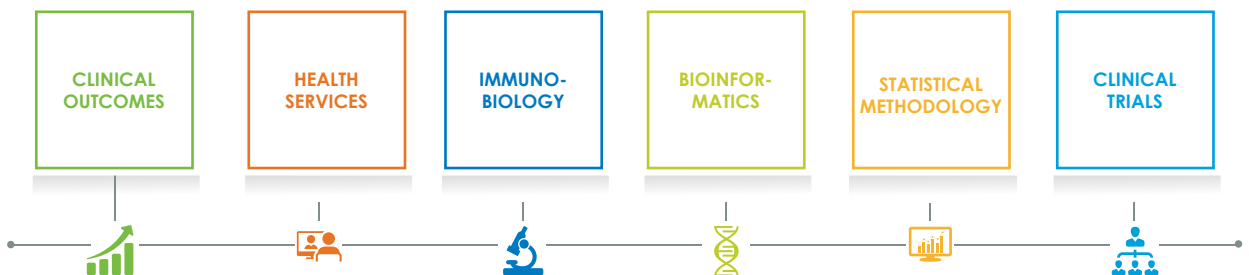


MISSION

The CIBMTR promotes collaborative research to understand and improve access to and outcomes of cellular therapies for the people we serve.

VALUE TO THE COMMUNITY

The CIBMTR has collected clinical outcomes data worldwide for >45 years, resulting in a Research Database with information on >535,000 patients. At any given time, the CIBMTR has >200 retrospective research studies and >20 prospective research studies ongoing in 6 major areas of research activity.



GLOBAL COLLABORATION

The CIBMTR comprises an international network of ~500 centers in >55 countries that submit cellular therapy-related data for patients. Data for almost 100% of US allogeneic transplants and >80% of US autologous transplants are reported to the CIBMTR, and data for ~12,000 non-US patients are collected annually. The CIBMTR continues to strengthen its collaborations with centers around the world as well as national and international registries. A major focus is enhancing data alignment and exchange, particularly through harmonization of data collection. CIBMTR investigators also partner on research studies, and CIBMTR staff members mentor and train colleagues across the globe.

IMPROVING PATIENTS' LIVES

The CIBMTR is dedicated to improving survival, treatment, and quality of life for patients. With >1,400 publications, the CIBMTR conducts practice-changing research that helps patients and physicians:



SELECT DONORS AND GRAFTS

CIBMTR studies help establish the paradigm for selecting the best donor and graft:

- Optimal human leukocyte antigen (HLA) matching
- Impact of donor characteristics
- Cord blood vs bone marrow vs peripheral blood



EVALUATE PATIENT RISK

CIBMTR studies show which patients:

- Have the highest risk of graft-vs-host disease (GVHD) and other complications
- Are most likely to benefit from cellular therapy



IDENTIFY LONG-TERM EFFECTS OF CELLULAR THERAPY

CIBMTR studies provide insight into:

- Long-term impact of cellular therapy on patients and their families, including risk of second cancers and other late complications
- Survivors' quality of life



PROVIDE MEDICAL CARE GUIDANCE FOR SURVIVORS

The CIBMTR works with the medical community to develop guidelines for optimal long-term care of cellular therapy survivors to:

- Decrease the rate of late complications
- Preserve patients' fertility
- Identify post-cellular therapy best practice preventive health behaviors



ADDRESS ACCESS TO CARE

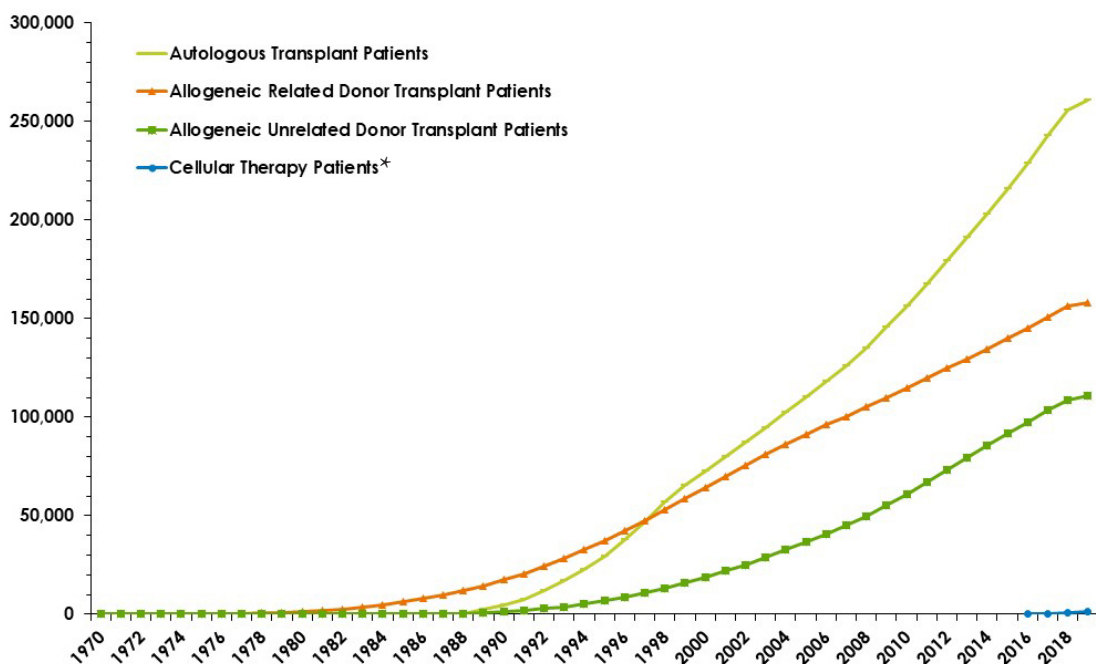
CIBMTR studies address the broad range of issues that influence access to cellular therapy and long-term care after treatment, including:

- Disparities in access and outcomes for specific populations
- Costs of care

Publications establishing the CIBMTR's research in each of these areas are listed at cibmtr.org/About/AdminReports/Pages/SummaryPubs.aspx

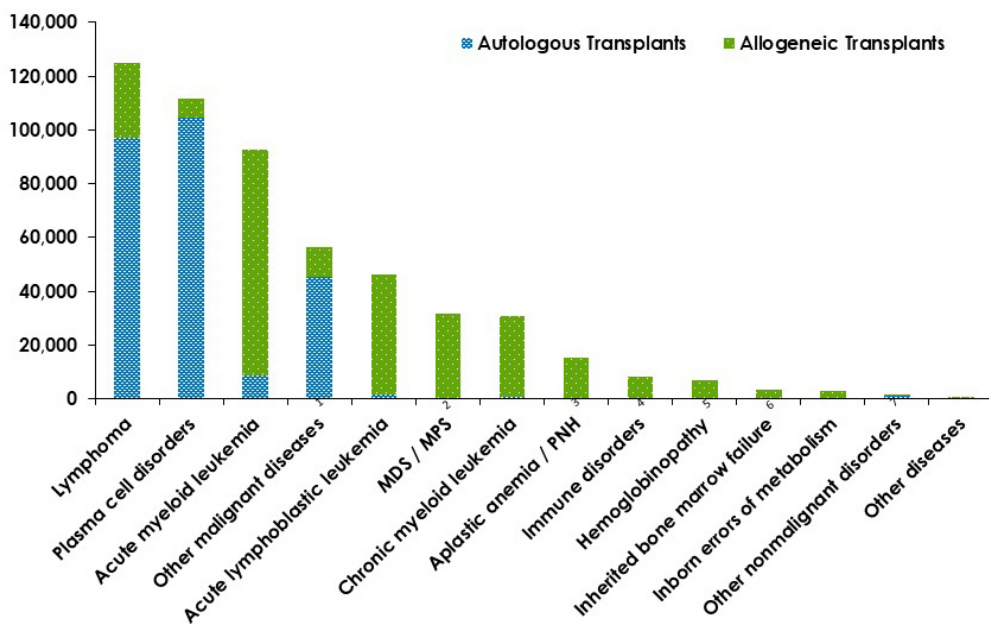
NUMBER OF PATIENTS REGISTERED

CUMULATIVE PATIENTS REGISTERED WITH THE CIBMTR



* Includes CAR-T and genetically modified products

TRANSPLANT PATIENTS REGISTERED WITH THE CIBMTR BY DISEASE



¹Includes other leukemia and solid tumors

²Includes myelodysplastic (MDS) and myeloproliferative syndromes (MPS)

³Includes severe aplastic anemia and paroxysmal nocturnal hemoglobinuria (PNH)

⁴Includes immune deficiencies and histiocytic disorders

⁵Includes sickle cell anemia, sickle cell thalassemia, and thalassemia major

⁶Includes Schwachmann-Diamond syndrome, Fanconi anemia, Diamond-Blackfan anemia, and other inherited abnormalities of erythrocytes

⁷Includes platelet disorders and autoimmune deficiencies

CLINICAL OUTCOMES RESEARCH

Answering clinically important questions using the CIBMTR's unique and extensive Research Database

Clinical outcomes research studies address a wide range of issues, focusing on questions that are difficult or impossible to address in single-center studies or randomized trials because diseases treated with cellular therapy are uncommon, single centers treat few patients with a given disorder, and not all important questions are amenable to a randomized study design.

SCIENTIFIC WORKING COMMITTEES

Fifteen Scientific Working Committees oversee most of the CIBMTR's clinical outcomes research. Each committee focuses on a specific disease, use of cellular therapy, or complication of therapy. More than 2,800 worldwide researchers participate on the committees, which are chaired by 45 global experts in the field. There are currently >195 studies in progress; 40 new study proposals were approved at the 2019 TCT | Transplantation & Cellular Therapy Meetings (TCT Meetings). The CIBMTR encourages new investigators to participate in and lead studies. In each of the past 3 years, almost half of the proposals were submitted by principal investigators who had not previously submitted a proposal to use CIBMTR data.

Over the past 12 months, Working Committee researchers presented 34 abstracts (18 oral and 16 poster) at national and international conferences. More than 560 scientific authors at approximately 300 institutions worldwide published 62 Working Committee manuscripts in peer-reviewed journals this year, including in *Blood*, the *Journal of Allergy and Clinical Immunology*, *JAMA Oncology*, *Leukemia*, and *Haematologica*.

>2,800

Worldwide
Researchers



>195

Ongoing
Studies



62

Publications



34

Presentations



MEDICARE CLINICAL TRIALS AND STUDIES

Many patients with specific diseases and/or at certain ages are denied access to cellular therapy in the US due to lack of insurance coverage by the Centers for Medicare and Medicaid Services (Medicare). Medicare Coverage with Evidence Development (CED) studies allow Medicare to provide coverage to patients enrolled on clinical studies that inform policy decisions.

Disease	Patient Population	Enrollment	Dates
Myelodysplastic Syndrome (10-CMS-MDS) NCT# 01166009	Elderly patients with myelodysplastic syndrome	134 centers 4,404 patients 2,843 patients ≥65 years old 1,324 patients 55-64 years old 237 patients <54 years old	Launched in 2010
Myelofibrosis (16-CMS-MF) NCT# 02934477	Patients aged ≥55 years with primary myelofibrosis	112 centers 155 patients (650 planned) 31 related (matched 6/6) 106 unrelated (matched 8/8) 18 haploidentical	Launched in December 2016
Multiple Myeloma (17-CMS-MM) NCT# 03127761	Elderly patients with Stage II or III multiple myeloma or primary plasma cell leukemia	85 centers 7 patients (550 planned)	Launched in July 2017
Sickle Cell Disease (BMT CTN 1503) NCT# 02766465	Adolescents and young adults with severe sickle cell disease	37 centers 94 patients (200 planned)	Launched in October 2016
Sickle Cell Disease (17-CMS-SCD) NCT# 01166009	Patients aged 15-50 years with severe sickle cell disease	72 centers 5 patients (200 planned)	Launched in November 2017



Expanded Coverage

Conducting national clinical studies that allow providers to offer coverage and patients to receive treatment

CLINICAL OUTCOMES RESEARCH

CELLULAR THERAPY

In addition to receiving data on transplant patients, the CIBMTR received data from >115 centers for >1,400 patients who received cellular therapy. Indications for treatment included malignant hematologic disorders, neurologic diseases, infection and GVHD treatment and prophylaxis, immune reconstitution, cardiovascular disease, and many others.

>1,400

Patients



>115

Centers



The CIBMTR receives cellular therapy data via a suite of Cellular Therapy Essential Data (CTED) forms. These forms undergo real time review and revision, in keeping with the rapidly developing field. In October 2018, the CIBMTR held a fourth Cellular Therapy Registry Forum focused on long-term follow-up, risk evaluation and mitigation strategy reporting requirements, and the new American Society for Transplantation and Cellular Therapy (ASTCT) Consensus Criteria on cytokine release syndrome and neurotoxicity.

The CIBMTR continues to expand its cellular therapy registry capabilities through fulfillment of the Food and Drug Administration (FDA) long-term follow-up requirements. The FDA requires pharmaceutical companies that commercialize genetically engineered cellular therapies to follow recipients of these therapies for 15 years in order to evaluate their safety and efficacy. The CIBMTR can support this requirement and is currently partnered with several pharmaceutical companies to track these long-term outcome data.

The CIBMTR also serves as the Cellular Immunotherapy Data Resource (CIDR) for the Immuno-Oncology Translational Network (IOTN), funded by the National Cancer Institute and National Institute on Minority Health and Health Disparities. For the CIDR, the CIBMTR's data registry collects outcomes of patients receiving cellular immunotherapies to support observational studies and inform subsequent studies and clinical trials. The IOTN supports the Cancer MoonshotSM initiative to accelerate cancer research to make more therapies available to more patients.

The CIBMTR is strategizing to develop a regenerative medicine outcomes registry for stem cell and cord blood therapies used to repair the functions of non-malignant damaged organs and tissues. In association with Cord Blood Connect, an international conference hosted by the Cord Blood Association, the CIBMTR hosted a multi-institutional collaborative regenerative medicine strategy meeting in September 2018. This meeting focused on sharing the CIBMTR's registry capabilities, including form development and collection of patient-reported outcomes, and it determined disease priority related to a regenerative medicine outcomes registry.

STEM CELL THERAPEUTIC OUTCOMES DATABASE

The CIBMTR operates the Stem Cell Therapeutic Outcomes Database (SCTOD) for the C.W. Bill Young Cell Transplantation Program (CWBYCTP) through a contract with the Health Resources and Services Administration. For the SCTOD, the CIBMTR tracks and analyzes data for all allogeneic transplants performed in the US and transplants performed globally with products from the US. The contract was renewed in 2017.

Each year the CIBMTR publishes transplant center volumes data and center-specific survival rates. This year's center volumes data includes transplants performed in 2013-2017. On the CWBYCTP website, the CIBMTR supported new functionality this year to allow download of the full center volumes dataset. The latest center-specific survival analysis includes first allogeneic transplants performed in 2014-2016 and contains enhanced risk adjustment variables.

This year the CIBMTR coordinated the sixth Center Outcomes Forum, which generated recommendations regarding new variables for pediatric non-malignant disease risk adjustment, statistical modeling, and improving quality through collaboration. Working with NMDP/Be The Match Patient and Health Professional Services, the CIBMTR published 22 lay summaries of research publications for patients and their loved ones.

Transplant Center
Volumes



Center-Specific
Survival Analysis



Center
Outcomes Forum



22 Research
Summaries for
Patients



PATIENT-REPORTED OUTCOMES

The CIBMTR collects patient-reported outcomes (PRO) and other survey data to meet clinical trial aims using the CIBMTR ePRO system. The ePRO system incorporates a user-friendly interface in Qualtrics, automated tracking and alerting functionality, and PROMIS measures via computer logic to focus on questions relevant to each individual patient.

This year the CIBMTR built PROs for 3 BMT CTN studies and developed a new protocol to routinely collect core PRO data on a subset of US patients. With these data, the CIBMTR will study long-term survivorship and characterize the patient experience overall and in specific patient cohorts defined by disease, ethnicity, race, region, age, and other demographics.

IMPROVING SURVIVAL, TREATMENT,

>535,000 patients

~500 participating centers

Every allogeneic and most autologous HCT in US

~12,000 international patients annually

>1,400 cellular therapy patients

Patient-reported outcomes

COLLECT AND MAINTAIN OUTCOMES DATA



PROVIDE ACCESS TO OUTCOMES DATA



Enhanced Data Back to Centers

Data by Request for Information

Center Volumes Portal

Cord Blood Report Portal

Standard Reports

Risk Calculators

Custom Information Requests

8 PhD-level Statistical Directors

>20 Master's-level statisticians

Educational sessions

1:1 statistical consultation

>20 online lectures

PROVIDE STATISTICAL EXPERTISE TO RESEARCHERS



AND QUALITY OF LIFE FOR PATIENTS

LEAD AND CONDUCT RESEARCH STUDIES



>7,500 researchers and support personnel worldwide

>220 studies in progress

- Working Committees
- Medicare CED
- Health Services
- Immunobiology
- Bioinformatics
- Statistical Methodology
- BMT CTN
- RCI BMT

>1,400 publications

>160,000 unique individuals represented

Related and unrelated donors and recipients

Unrelated cord blood units

HLA, KIR, and other genetic typing

Whole blood, plasma/serum, viable cells, and cell lines

Linked to clinical outcomes data

PROVIDE ACCESS TO RESEARCH REPOSITORY SAMPLES



PROVIDE EDUCATION, GUIDELINES, AND TRAINING



TCT Meetings

Data Management Guide

Forms Instruction Manuals

>30 online trainings

Center Support

HEALTH SERVICES RESEARCH

Exploring how socioeconomic factors, health behaviors, financial systems, and health care process affect access to and outcomes of cellular therapies

Investigators with the Health Services Research Program use both quantitative and qualitative research methods to identify and address barriers to treatment, improve practice, and demonstrate the value of cellular therapies and survivorship care. This year investigators presented 7 abstracts (4 oral and 3 poster) at national and international conferences and published 7 manuscripts in peer-reviewed journals.



Access to Treatment

Value and Health Economics

Health Disparities

Health services research investigators study value, quality, and access to care, particularly for patients from disadvantaged backgrounds and racial and ethnic minority populations. One current study, conducted in partnership with NMDP/Be The Match Health and Public Policy, explores differences among states' Medicaid coverage of transplantation for patients with sickle cell disease. Other current studies examine cost dynamics of allogeneic HCT vs chemotherapy for acute myeloid leukemia (AML), autologous HCT in inpatient and outpatient settings for multiple myeloma, and non-HLA barriers to transplant in the state of Virginia.



Survivorship

Late Effects

Patient-Reported Outcomes

Quality of life is a key outcome, and patient-reported outcomes provide an essential perspective, particularly for late effects of treatment. This year health services research investigators published 2 manuscripts evaluating the impact of individualized survivorship care plans on patient-reported outcomes among transplant survivors. With funding from the National Institutes of Health, investigators continue to work with partners across the US to determine the impact of stepped self-care in improving quality of life for transplant survivors.



Treatment Decision Making

Health services research is vital to treatment decision-making. This year investigators published study results identifying and addressing knowledge gaps that affect timely referral of patients with AML and identifying physicians' perceived barriers to palliative care utilization. An upcoming study focuses on patients' perspectives and use of palliative care.

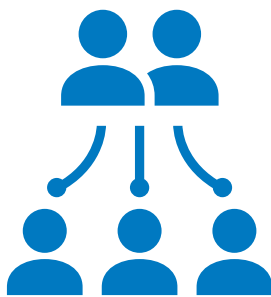
IMMUNOBIOLOGY RESEARCH

Managing a repository of paired tissue samples from donors and recipients, both unrelated and related, to study the genetic, cellular, and immunologic factors that influence cellular therapy outcomes

The CIBMTR's Immunobiology Research group manages the Research Repository inventory and immunogenetic testing programs that add critical HLA and killer-cell immunoglobulin-like receptor (KIR) data for use in CIBMTR clinical outcomes studies. This year the CIBMTR received >11,500 samples, including >3,750 from unrelated donors and >1,300 from related donors, >4,000 from unrelated recipients and >1,400 from related recipients, and >550 from unrelated cord blood units. Over the last 12 months, the CIBMTR completed HLA and KIR typing on >2,500 donor and recipient research sample pairs.

Linking outcomes data to immunologic data available in the Research Repository supports studies that include genetic and immunobiologic data and clinical phenotype data. The Immunobiology Research group distributed >13,200 samples to investigators this year. The combination of the Unrelated and Related Donor Research Repositories facilitates an organized approach to studying transplant biology across the spectrum of cellular therapy.

171,269 Samples



72,811 from unrelated donors and
9,891 from related donors

65,861 from unrelated recipients and
10,283 from related recipients



12,423 from unrelated cord blood units

BIOINFORMATICS RESEARCH

Conducting bioinformatics for high impact research and translation of research into practice

The bioinformatics research team specializes in developing and utilizing software tools and analytical methods to facilitate data exchange, interpret information, understand patterns, and predict factors to save and improve lives. At the intersection of science and technology, this team pursues high-impact and innovative research and produces strategic applications for the business to bridge the transition from research to operations. Bioinformatics research moves in the direction of computational biomedicine with activities in three main areas: Genomics / Omics and high-throughput bioanalytics, machine learning and clinical predictions, and cellular therapy matching and donor registry modeling. This year investigators with the Bioinformatics Research Program presented 21 abstracts (15 oral and 6 poster) at national and international conferences and published 16 manuscripts in peer-reviewed journals.

Bioinformatics Resources



HaploStats

Frequency information for haplotypes and haplotype pairs relative to specific HLA types found in the US population.

Genomic Data Repository

Platform for genomic and omics data storage and analysis with tools for integration with other data and data science applications.

Haplotype Frequencies

Haplotype associations and allele frequency data for various race and ethnic populations, including those in the US and Jerusalem.

Histoimmunogenetics Markup Language (HML)

Software reporting format, developed by the Bioinformatics Research group, to facilitate exchange of genetic typing data to reduce donor search times.

STATISTICAL METHODOLOGY RESEARCH

Developing statistical models to use in cellular therapy research and comparing new models to existing solutions using the CIBMTR Research Database

Treatment with cellular therapy is a complex process with multiple competing risks and dramatic changes in the risks of specific events over time. The CIBMTR has developed and evaluated many of the statistical models used in cellular therapy research and works to provide guidance for appropriate application and interpretation of these sophisticated models.

Statistical directors with the Statistical Methodology Research Program ensure the statistical integrity of CIBMTR scientific activities, contribute to results in articles on statistical issues for clinical audiences, and support Working Committee study investigators in developing scientific study protocols using CIBMTR data. This year statistical directors presented 9 oral abstracts at national and international conferences and published 9 methodology manuscripts in peer-reviewed journals.

Biostatistics Resources



At the TCT Meetings

Educational Sessions

related to statistical design and analysis

1:1 Statistical Consultation

for researchers writing proposals or developing protocols for CIBMTR studies



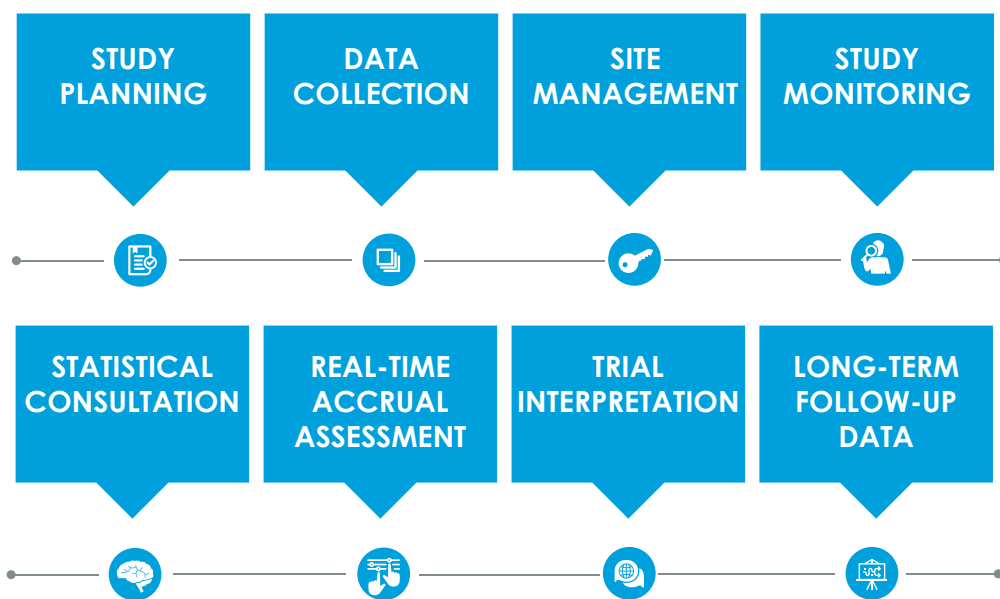
>20 Online Lectures

- ANOVA: Comparing >2 Treatments
- Basic Concepts of Bayesian Statistics
- Common Errors in Linear Regression
- Designing Clinical Trials
- Introduction to Survival Analysis
- Matched Studies in Medical Research
- Uses and Abuses of Non-Parametric Statistics
- Web-Based Sample Size Calculation
- Writing a Protocol

CLINICAL TRIALS SUPPORT

Conducting multicenter Phase I-III national trials through the BMT CTN and RCI BMT

The CIBMTR provides skilled administrative leadership, a vast network of participating centers, and substantial infrastructure support for prospective research. Cellular therapy is a rapidly evolving field, and clinical trials face unique challenges, including the relatively small number of treatments performed at any single center, the diverse indications for cellular therapy, the complexities of the intervention, and multiple post-treatment complications. The BMT CTN addresses these challenges and executes multicenter Phase II and III trials with broad national participation. The RCI BMT supports both small bridge trials and larger multi-center trials.



RESOURCE FOR CLINICAL INVESTIGATION IN BLOOD AND MARROW TRANSPLANTATION (RCI BMT)

Supported primarily by NMDP/Be The Match and corporate and private sponsors, the RCI BMT operates without NIH funding. This year the RCI BMT managed 7 active ongoing protocols and opened 5 new protocols, which have cumulatively accrued almost 3,000 patients. The RCI BMT also continued development of 4 new protocols. Over the last 12 months, the RCI BMT completed accrual on one trial and presented 2 abstracts. Investigators published 4 manuscripts in peer-reviewed journals this year.

The Survey Research Group of the RCI BMT assists clinical researchers in developing and conducting research involving questionnaires and patient interviews. The group also manages the CIBMTR's new ePRO system. This year the Survey Research Group supported 8 RCI BMT / BMT CTN studies, contacted >7,000 donors and patients, and participated in the development of one upcoming study.

BLOOD AND MARROW TRANSPLANT CLINICAL TRIALS NETWORK (BMT CTN)

The CIBMTR, along with NMDP/Be The Match and The Emmes Company, serves as the BMT CTN Data and Coordinating Center, which is supported by an NIH grant from the National Heart, Lung, and Blood Institute and the National Cancer Institute. Established in 2001, the BMT CTN provides scientific expertise, an extensive network, an efficient protocol process, demonstrated accrual success, and a biorepository as well as clinical trial data resources to implement and complete multi-institutional trials available to patients in all regions of the US.

The BMT CTN has launched 50 trials and completed accrual for 40 of these trials, including 3 this year. With its network of >100 centers, the BMT CTN has accrued >10,600 patients to its trials, including >300 this year. The Network established a Research Sample Repository that currently includes >410,000 biospecimens. Additionally, the BMT CTN has launched 105 ancillary and correlative studies, 12 of which were published this year; 58 used cryopreserved specimens from the Research Sample Repository or samples shipped directly to a project laboratory. This year Network investigators presented 6 abstracts (4 oral and 2 poster) of study results at national and international meetings, and they published 12 manuscripts in peer-reviewed journals, bringing the total number of BMT CTN publications to >100.

RCI BMT

>37,000 Patients



22 Studies



9 Publications



BMT CTN

>10,600 Patients



50 Clinical Trials



>410,000
Biospecimens



105 Ancillary and
Correlative Studies



102 Publications



CORPORATE SUPPORT

Collaborating with corporate partners to provide access to high quality data and conduct scientifically sound studies

The CIBMTR provides opportunities for industry collaborators to access CIBMTR data and statistical support to address questions specific to their business needs through Corporate Membership as well as Corporate Studies and Projects. The CIBMTR also offers access to scientific and statistical expertise through consultation services, such as protocol design and development and long-term outcomes registry development.

Corporate Membership - The CIBMTR Corporate Membership program provides a variety of resource materials to corporations seeking access to the most current and comprehensive cellular therapy data. These materials are useful for marketing managers, medical directors, research directors, product managers, case managers, and data coordinators.

Corporate Studies and Projects - Corporate partners may contract with the CIBMTR to conduct a study, support a project involving more complex analyses, or license a specified data set. Organizations interested in funding a study, such as one comparing HCT with one or more other therapies, or using historical controls, can negotiate with the CIBMTR for data and/or expert statistical analyses.

SUPPORT THE TCT MEETINGS

In collaboration with the ASTCT, the CIBMTR hosts the annual TCT Meetings, formerly the BMT Tandem Meetings, which are North America's largest international gathering of cellular therapy professionals. In 2019, 4,055 attendees from 45 countries participated in 5 days of plenary and concurrent sessions, breakfast and lunch symposia, oral abstract and poster sessions, and product theaters.

The CIBMTR and ASTCT provide numerous opportunities to support the TCT Meetings. Corporations may choose to provide meeting support, such as the TCT Reception or a poster session; education support, such as a CME symposia meal or concurrent scientific session; or marketing support, such as conference WiFi or the mobile app. Organizations may also choose to exhibit, gaining 4 days of access to the world's leaders in the field.



**TRANSPLANTATION &
CELLULAR THERAPY MEETINGS™**
of ASTCT AND CIBMTR®

UPCOMING MEETINGS

Feb. 19-23, 2020, Orlando, FL

Feb. 11-15, 2021, Honolulu, HI

Feb. 2-6, 2022, Salt Lake City, UT

RECENT PUBLICATIONS

The CIBMTR published **110 peer-reviewed manuscripts** in scientific journals this year. Some of the CIBMTR's key findings were published in the following articles.

Allen CE, Marsh R, Dawson P, et al. **Reduced intensity conditioning for HCT for HLH and primary immune deficiencies.** *Blood*. 2018 Sep 27; 132(13):1438-1451. Epub 2018 Jul 11. PMC6161764.

Sivasankaran A, Williams E, Switzer GE, et al. **Machine learning approach to predicting stem-cell donor availability.** *Biology of Blood and Marrow Transplantation*. 2018 Dec 1; 24(12):2425-2432. Epub 2018 Jul 31.

Bhatt NS, Brazauskas R, Tecca HR, et al. **Post-transplantation employment status of adult survivors of childhood allogeneic HCT: A report from the CIBMTR.** *Cancer*. 2019 Jan 1; 125(1):144-152. Epub 2018 Oct 12. PMC6310211.

Pulsipher MA, Logan BR, Kiefer DM, et al. **Related PBSC donors experience more severe symptoms and less complete recovery at one year compared to unrelated donors.** *Haematologica*. 2019 Apr 1; 104(4):844-854. Epub 2018 Oct 31. PMC6442962.

Majhail NS, Murphy E, Laud P, et al. **Randomized controlled trial of individualized treatment summary and survivorship care plans for HCT survivors.** *Haematologica*. 2019 May 1; 104(5):1084-1092. Epub 2018 Dec 4. PMC6518896.

Papanicolau GA, Ustun C, Young JH, et al. **Bloodstream infection due to vancomycin-resistant enterococcus is associated with increased mortality after HCT for acute leukemia and MDS: A multicenter, retrospective cohort study.** *Clinical Infectious Diseases*. 2019 Jan 14. [Epub ahead of print].

Stadtmauer E, Pasquini M, Blackwell E, et al. **Autologous transplantation, consolidation and maintenance therapy in multiple myeloma: Results of the BMT CTN 0702 trial.** *Journal of Clinical Oncology*. 2019 Mar 1; 37(7):589-597. Epub 2019 Jan 17. PMC6553842.

Maiers M, Halagan M, Gragert L, et al. **GRIMM: GRaph IMputation and Matching for HLA genotypes.** *Bioinformatics*. 2019 Jan 28. [Epub ahead of print].

Kanate AS, Kumar A, Dreger P, et al. **Maintenance therapies for Hodgkin and non-Hodgkin lymphomas after autologous transplantation: A consensus project of ASBMT, CIBMTR, and the Lymphoma Working Party of EBMT.** *JAMA Oncology*. 2019 May 1; 5(5):715-722. Epub 2019 Feb 28.

Parikh SH, Satwani P, Ahn KW, et al. **Survival trends in infants undergoing allogeneic HCT.** *JAMA Pediatrics*. 2019 May 1; 173(5):e190081. Epub 2019 May 6. PMC6503511.

Ustun C, Le-Rademacher J, Wang H-L, et al. **Allogeneic HCT compared to chemotherapy consolidation in older AML patients 60-75 years in first complete remission: An alliance (A151509), SWOG, ECOG-ACRIN, and CIBMTR study.** *Leukemia*. 2019 May 9. [Epub ahead of print].

Hu Z-H, Gale RP, Zhang M-J. **Direct adjusted survival and cumulative incidence curves for observational studies.** *Bone Marrow Transplantation*. 2019 May 17. [Epub ahead of print].

Kim HT, Ahn KW, Hu Z-H, et al. **Prognostic score and cytogenetic risk classification for chronic lymphocytic leukemia patients: CIBMTR report.** *Clinical Cancer Research*. 2019 Aug 15; 25(16):5143-5155. Epub 2019 Jun 28. PMC6697588.

Milwaukee Campus

Medical College of Wisconsin
9200 W. Wisconsin Ave, Suite C5500
Milwaukee, WI 53226 USA
(414) 805-0700

Minneapolis Campus

National Marrow Donor Program/
Be The Match
500 N. 5th Street
Minneapolis, MN 55401-1206 USA
(763) 406-5800

CIBMTR.ORG

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