

WBMT



PROGRESS REPORT 2023

*Nongovernmental Organisation in
official relations with the World
Health Organization (WHO)*



Worldwide Network for Blood and Marrow Transplantation

(WBMT)

Progress Report

Calendar Year 2023

wbmt.org

Headquarters: Waldeggstrasse 51, CH-3097 Liebefeld, Switzerland

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1.0 INTRODUCTION

The Worldwide Network for Blood and Marrow Transplantation (WBMT) was formally created in 2007 by leaders from major hematopoietic cell transplantation (HCT) societies and donor registries across the world, culminating in consensus on Bylaws and an organizational structure in 2009. With the interest and strong support of the World Health Organization (WHO), these leaders shared a mutual vision of combining efforts towards improving standardization in the global application of HCT, cellular therapy, and related fields as well as broadening the scope of data sharing. This “Federation of Societies” began with 17 international organizations now numbering 21, all with substantial interest in HCT (**Appendix A**). The WBMT was incorporated as a non-profit organization for educational, scientific, and philanthropic purposes under the laws of Switzerland with headquarters in Liebefeld. Funding support has been solicited from relevant industry plus income from educational activities. Description of the earliest years of WBMT activity is available in previous Progress Reports available on the WBMT website (wbmt.org). They contain information on how WBMT developed, its structure and charter, its notable achievements, and its future aims and goals.

This report focuses on the accomplishments of WBMT during the calendar year 2023. After the successful 8th Workshop & Symposium in Rawalpindi, Pakistan, including a parallel nursing program, the newly established WBMT Nurses Standing Committee organized a two-day hybrid workshop for bone marrow transplant nurses in Nigeria with partners Vanderbilt University, the University of Lagos and the Sickle Cell Foundation of Nigeria. Following their great efforts this program can be seen as a very strong template for future WBMT nurses workshops. Furthermore, multiple papers were published and well received and important webinars on Allogeneic HSCT in patients with chronic viral diseases and HSCT in Sickle Cell Disease took place.

Looking forward to 2024, many new ideas are being worked on, new abstracts have been submitted to major conferences and the organization of the 9th WBMT Workshop & Symposium is well underway. All is made possible by the first-class support of the WBMT member societies and partners.

1.1 Early Development

The four founding Member Societies of the WBMT are the Asia-Pacific Blood and Marrow Transplantation Group (APBMT), Center for International Blood and Marrow Transplant Research (CIBMTR), European Society for Blood and Marrow Transplantation (EBMT), and World Marrow Donor Association (WMDA). Representatives organized themselves in 2007 to help identify goals and to communicate them to all other interested societies in HCT or related fields. They recognized:

- HCT is a global endeavor.
- More could be accomplished if the different societies active in this field collaborated.
- An international organization could support and even influence thoughtful, local policy and legislation from a global perspective.

It was concluded that the WBMT required a unique organizational structure to fulfill its goal of coordinating HCT, stem cell donor, and cellular therapy activities worldwide. It was also important not to duplicate decades of successful efforts by other established organizations in the field; the result was the current and continuing Federation of Societies structure.

1.2 Current Status with the WHO

The WHO played a critical role in the WBMT from its inception by providing substantial interest in and support of this new initiative. The collaborative relationship with the WHO led to the current status as non-government organization (NGO) in official relations, approved in January 2013. The WHO Executive Board reviewed the report of the relations and collaboration at its 144th session in January 2019 and confirmed that WBMT will remain in official relations with the WHO. In January 2022 the WHO Executive Board at its 150th session decided to maintain WBMT in official relations with WHO based on our achievements during the last years and the working plan for the period of 2022 to 2024. The WHO strongly supported the WBMT's early collaborative and unifying efforts. WHO representatives continue to attend meetings as observers, assist in planning activities, and participate as forum presenters on a variety of relevant topics. Since acquiring *NGO in official relations* status, the WBMT provides a set of collaborative projects to the WHO in pursuit of its educational, scientific, and philanthropic mission (**Section 4**).

2.0 COMMITTEE STRUCTURE

2.1 Board

The WBMT Board leads decision-making for all WBMT activities. The Board includes elected Executive Committee officials (**Section 2.2** and **Appendix B**) as well as Co-Chairs of the Standing Committees (**Sections 2.3 and 3.0**). Each committee is permitted a single vote. The WBMT Board includes a primary and alternate representative from each Member Society. Each Member Society is permitted a single vote, either by the primary or the alternate representative. Find below an overview of the Member Society representatives.

WBMT Board: Primary and Alternate Representatives					
Primary Representative	AABB	David	McKenna	July 1, 2025	End of second term
Alternate Representative	AABB	Christina	Celuzzi	July 1, 2024	End of first term
Primary Representative	ANZTCT	Nada	Hamad	July 1, 2024	End of first term
Alternate Representative	ANZTCT	Duncan	Purtill	July 1, 2025	End of second term
Primary Representative	AfBMT	Alaa	Elhaddad	July 1, 2025	End of second term
Alternate Representative	AfBMT	Bazuaye	Nosa	July 1, 2025	End of second term
Primary Representative	APBMT	Shinichiro	Okamoto	July 1, 2025	End of second term
Alternate Representative	APBMT	Alok	Srivastava	July 1, 2025	End of second term
Primary Representative	ASTCT	Damiano	Rondelli	July 1, 2024	End of first term
Alternate Representative	ASTCT	Corey	Cutler	July 1, 2025	End of second term
Primary Representative	ASFA	Laura	Connelly-Smith	July 1, 2024	End of first term
Alternate Representative	ASFA	Joseph (Yossi)	Schwartz	July 1, 2024	End of first term
Primary Representative	ASHI	Medhat	Askar	July 1, 2024	End of first term
Alternate Representative	ASHI				
Primary Representative	CIBMTR	Wael	Saber	July 1, 2024	End of first term
Alternate Representative	CIBMTR	Marcelo	Pasquini	July 1, 2024	End of first term
Primary Representative	EBMT	Anna	Sureda	July 1, 2024	End of first term
Alternate Representative	EBMT	John	Snowden	July 1, 2025	End of second term
Primary Representative	EFI	Steven	Marsh	July 1, 2025	End of second term
Alternate Representative	EFI	Mats	Bengtsson	July 1, 2025	End of second term
Primary Representative	ELN	Rüdiger	Hehlmann	July 1, 2025	End of second term
Alternate Representative	ELN	Dietger	Niederwieser	July 1, 2025	End of second term

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Primary Representative	EMBMT	Amir Ali	Hamidieh	July 1, 2025	End of second term
Alternate Representative	EMBMT	Riad	El Fakih	July 1, 2026	End of first term
Primary Representative	ESH	Ghyslaine	le Bougault	July 1, 2024	End of first term
Alternate Representative	ESH	Clotilde	Magistry	July 1, 2025	End of first term
Primary Representative	Eurocord	Annalisa	Ruggeri	July 1, 2024	End of first term
Alternate Representative	Eurocord	Vanderson	Rocha	July 1, 2025	End of second term
Primary Representative	FACT	Paul	Eldridge	July 1, 2025	End of second term
Alternate Representative	FACT	Phyllis	Warkentin	July 1, 2025	End of second term
Primary Representative	ICCBBA	Eoin	McGrath	July 1, 2024	End of first term
Alternate Representative	ICCBBA	Karen	Moniz	July 1, 2024	End of first term
Primary Representative	ISBT	Mickey	Koh	July 1, 2025	End of second term
Alternate Representative	ISBT	Peter	Horn	July 1, 2025	End of second term
Primary Representative	ISCT	Fermin	Sanchez-Guijo	July 1, 2024	End of first term
Alternate Representative	ISCT	Dominique	Farge	July 1, 2024	End of first term
Primary Representative	JACIE	John	Snowden	July 1, 2025	End of second term
Alternate Representative	JACIE	Nina	Worel	July 1, 2024	End of first term
Primary Representative	LABMT	Gregorio	Jaimovich	July 1, 2025	End of second term
Alternate Representative	LABMT	Carmem	Bonfim	July 1, 2024	End of first term
Primary Representative	WMDA	Jeff	Szer	July 1, 2025	End of second term
Alternate Representative	WMDA	Lydia	Foeken	July 1, 2025	End of second term

At the end of 2023, WBMT had 21 Member Societies. Each Member Society reviewed and confirmed the individuals serving as their representatives on the Board on an annual basis. The WBMT Board meets annually in person, alternating between the February Transplantation and Cellular Therapy Meetings (Tandem Meetings) in the US and the March - April European Society of Blood and Marrow Transplantation Meeting (EBMT) in Europe. The WBMT Board generally holds additional teleconferences, (**Appendix E**), to remain informed and to handle issues arising between the in-person sessions. Email communication is utilized as necessary between these meetings. Meeting minutes are posted on a password-protected section of the WBMT collaboration website and are available on request. In April 2023, the WBMT Board and several Standing Committees met in-person in Paris, France, in conjunction with the annual EBMT conference.

2.2 Executive Committee

The Executive Committee informs the WBMT Board while managing business matters between Board meetings. Membership includes the elected President, Vice President, Treasurer, Secretary, Past President and WBMT Representative to the WHO. The final role, WBMT Representative to the WHO,

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was added to the Executive Committee in 2016 and is filled by the Past President. As noted above, appointed Co-Chairs of the now nine Standing Committees (**Sections 2.3 and 3.0**) serve on the Executive Committee. The Executive Committee conducts monthly hour-long teleconferences, and minutes of these meetings are also posted on a password-protected section of the WBMT collaboration website.

Following existing Nomination and Election House Rules (which were reviewed and revised through 2016-2023), and with input from Board members, an ad hoc Nominating Committee, including one representative from each WHO region, convenes as necessary. In 2023, no changes took place in the Elected Officers.

WBMT Elected Officers – Serve on Executive Committee and Board 2023				
President	Mahmoud	Aljurf	April 1, 2024	End of term
Past President and WHO representative	Hildegard	Greinix	April 1, 2025	End of term
Vice President	Mickey	Koh	April 1, 2024	End of first term
Secretary	Sebastian	Galeano	April 1, 2024	End of first term
Treasurer	Annalisa	Ruggeri	April 1, 2024	End of first term

Appendix B displays photos and contact information for all current, elected officers of WBMT.

2.3 Standing Committees

Nine Standing Committees (**Section 3.0**) focus on areas of prime importance to the mission of the WBMT, as identified by the Executive Committee. Most of these committees were created in 2008, however, in 2022 the WBMT WHO Liaison Standing Committee was established followed by the approval of the establishment of the WBMT Nurses Standing Committee in 2023, focussing on educational programs for bone marrow transplantation nurses worldwide. Eventhough the WBMT Bylaws and House Rules remain to be updated, the mission and vision of this newest committee have already been added to this Progress Report. Committee leadership positions are reviewed annually at the beginning of the respective year. The majority of WBMT project work is accomplished by these Standing Committees:

- Accreditation [the international Alliance for Harmonization of Cellular Therapy Accreditation (AHCTA) serves in this capacity] (**Section 3.1**)
- Donor Issues (**Section 3.2**)
- Education and Dissemination (**Section 3.3**)
- Graft Processing and Cellular Therapy (**Section 3.4**)
- Global Emergencies / Nuclear Accident Management (**Section 3.5**)
- Patient Advocacy / Advisory (**Section 3.6**)
- Transplant Center / Recipient Issues (**Section 3.7**)
- WHO Liaison (**Section 3.8**)

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- Nurses (**Section 3.9**)

Two or rarely three Co-Chairs lead each committee. These Co-Chairs also participate in the ongoing work and decisions of the Executive Committee as noted above. By July 2023, some of the terms of operational Co-Chairs expired;

- Patient Advocacy / Advisory Committee: Cristóbal Frutos (agreed to serve a second term)
- Global Emergencies / Nuclear Accident Management Committee: Shahrukh Hashmi (agreed to serve a second term)
- Transplant Centre / Recipient Committee: Yoshiko Atsuta (term ended)
- Transplant Centre / Recipient Committee: Dietger Niederwieser (term ended)
- Education & Dissemination Committee: Yoshihisa Kodera (term ended)

Consequently, approval was granted by the WBMT Board for appointment of new Co-Chairs, whose names can be found in the below table.

In 2016, the WBMT Board revised the WBMT Bylaws related to the Standing Committee Co-Chairs. There is now greater emphasis on committee leader expectations and reporting committee activities. Any interested individual belonging to any (one or more) of the Member Societies is eligible to join these committees; membership is solicited and refreshed periodically. Because all WBMT committees are project driven, they meet with varying frequency, usually by teleconference due to international participation. WBMT committees also take advantage of relevant, international HCT meetings for in-person dialogue as they are attended by many of their members; these international meetings are conducted in both the US (February) and the EU (March - April) annually.

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Standing Committee Chairs – Serve on Executive Committee and Board				
Accreditation (AHCTA)	Amal	Alseraihy Alharbi	July 1, 2026	End of first term
Accreditation (AHCTA)	Yoshiko	Atsuta	July 1, 2026	End of first term
Donor Issues Committee	Nina	Worel	July 1, 2024	End of second term
Donor Issues Committee	Thilo	Mengling	July 1, 2025	End of first term
Donor Issues Committee	Jörg	Halter	July 1, 2025	End of first term
Education and Dissemination Committee	Adriana	Seber	July 1, 2025	End of first term
Education and Dissemination Committee	Damiano	Rondelli	July 1, 2025	End of first term
Education and Dissemination Committee	Dietger	Niederwieser	July 1, 2026	End of first term
Graft Processing and Cellular Therapy Committee	Christian	Chabannon	July 1, 2025	End of first term
Graft Processing and Cellular Therapy Committee	Ibrahim	Yakoub-Agha	July 1, 2026	End of first term
Patient Advocacy / Advisory Committee	Cristóbal	Frutos	July 1, 2026	End of second term
Patient Advocacy / Advisory Committee	Carmem	Bonfim	July 1, 2025	End of first term
Transplant Center / Recipient Issues Committee	Laurent	Garderet	July 1, 2025	End of first term
Transplant Center / Recipient Issues Committee	Yoshihisa	Kodera	July 1, 2026	End of first term
Global Emergencies / Nuclear Accident Management Committee	Ray	Powles	July 1, 2024	End of second term
Global Emergencies / Nuclear Accident Management Committee	Shahrukh	Hashmi	July 1, 2026	End of second term
Global Emergencies / Nuclear Accident Management Committee	Nada	Hamad	July 1, 2025	End of first term
WHO Liaison Committee	Hildegard	Greinix	July 1, 2025	End of term
Nurses Standing Committee	Reguia	Belkhedim	July 1, 2026	End of first term

3.0 STANDING COMMITTEE ANNUAL REPORTS AND ACCOMPLISHMENTS IN 2023

3.1 Accreditation Committee formerly known as AHCTA

Committee Mission

The mission of the Accreditation Committee is to recommend to the Executive Committee policies, programs, and actions pertaining to regulatory matters, practices, and codes with both national and international implications. This involves procedures related to all activities of the other Standing Committees. In its vigilance to avoid duplication of efforts, WBMT members agreed in 2009 that AHCTA would fulfil the role of the WBMT Accreditation Committee.

Leadership

The Co-Chairs of this committee are:

- Joseph Schwartz (Member Society, ASFA) - *Second term ended on July 1, 2023*
- Amal Alseraihy (Member Society, EMBMT)
- Yoshiko Atsuta (Member Society, APBMT) - *Started on July 1, 2023*

Meetings / Teleconferences

The committee met by videoconference on:

- 1st September / 1300-1400 pm CET.
- 1st November / 1300-1400 pm CET.

Completed Projects

- Contribution to 4th Workshop on Quality as a Development Tool for Hematopoietic Cell Transplantation Programs, 2023 ASTCT Tandem meeting.
- Developing quality program in North Africa, Amal Alseraihy.
- The Japanese Transplant Registry Unified Management Program (TRUMP®): quality management in registry science, Yoshiko Atsuta.

Ongoing Projects

- Quality and accreditation challenges for novel cellular immunotherapies
 - Quality management is performed by manufacturing companies, and quality standards vary from one company to another.
 - Regulatory requirement variation and standardization of quality management in need and being discussed in multiple organizations.
- Quality and accreditation discussion in the setting of resource limited countries (careful not to duplicate effort of other or member societies, but collection and connecting/linking information may be useful and fit WBMT's mission)
 - Possible survey

- Materials for limited resource countries

Future Plans

In 2024 the Accreditation Committee plans and education effort in areas which seem to be an obstacle to achieve accreditation e.g. quality programs and different quality programs in different areas of the world; Webinar in conjunction with the Education and Dissemination Committee is in planning stages.

Publications

- American Society for Transplantation and Cellular Therapy International Affairs Committee: Report of 4th Workshop on Quality as a Development Tool for Hematopoietic Cell Transplantation Programs at the 2023 Tandem BMT Meetings. Pablo Ramirez, Yoshiko Atsuta, Amal Alseraihy, Shinichiro Okamoto, Takanori Teshima, Mahmoud Aljurf , Navneet S. Majhail, Damiano Rondelli, Nelson Chao, and Mary E. Flowers. Accepted by JTCT, 2nd Jan 2024

3.2 Donor Issues Committee

Committee Mission

The mission of the Donor Issues Committee is to recommend to the Executive Committee policies, programs, and actions pertaining to the identification of stem cell donors (bone marrow, peripheral blood, and cord blood), harvesting procedures, product transportation, donor safety practices, and outcomes / long term follow-up within a member collection center; this includes the conduct of individuals and processes related to these procedures and practices.

Leadership

The Co-Chairs of this committee are:

- Nina Worel (Member Society, EBMT)
- Jörg Halter (Member Society)
- Thilo Mengling (Member Society, WMDA)

Thilo Mengling (WMDA) replaced Chloe Anthias in 2022 and Jörg Halter (EBMT) was elected as a co-chair in 2023.

Meetings / Teleconferences

The Donor Issues Committee met in person in 2023 in Paris. Three videoconferences took place for this committee including the co-chairs and Carmem Bonfim.

Completed Projects

During 2022/2023, the Donor Issues Committee completed the following projects:

- A short survey to evaluate the need of webinars/e-learning session was initiated and sent for dissemination.
- Presentation on “Protecting Donors with a Focus on Donor Safety” at the Asian Pacific Blood and Marrow Transplantation Group (APBMT) congress in Indonesia (Semarang).

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- Donor Issues Committee has sponsored four successful Donor Issue Workshops in 2009, 2011, 2013, and 2016. The workshops focused on the suitability of related donors (consensus statement of the WBMT published 2015) and donors with infectious diseases or living in areas of endemic infectious diseases. This topic was included in two recent publications of the WBMT.

Publications

- Real-World issues and potential solutions in hematopoietic cell transplantation during the COVID-19 pandemic: perspectives from the Worldwide Network for Blood and Marrow Transplantation and Center for International Blood and Marrow Transplant Research Health Services and International Studies Committee
(<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7380217/>)
- Suitability of haematopoietic cell donors: updated consensus recommendations from the WBMT standing committee on donor issues.
Worel N, Aljurf M, Anthias C, Buser AS, Cody M, Fechter M, Galeano S, Greinix HT, Kisch AM, Koh MBC, Mengling T, Nicoloso G, Niederwieser D, Pulsipher MA, Seber A, Shaw BE, Stefanski HE, Switzer GE, Szer J, van Walraven SM, Yang H, Halter JP. *Lancet Haematol.* 2022 Aug;9(8):e605-e614. doi: 10.1016/S2352-3026(22)00184-3.
(<https://pubmed.ncbi.nlm.nih.gov/35901845/>)
- Endemic or regionally limited parasitic and fungal infections in haematopoietic stem-cell transplantation recipients: a Worldwide Network for Blood and Marrow Transplantation (WBMT) Review.
Muhsen IN, Galeano S, Niederwieser D, Koh MBC, Ljungman P, Machado CM, Kharfan-Dabaja MA, de la Camara R, Kodera Y, Szer J, Rasheed W, Cesaro S, Hashmi SK, Seber A, Atsuta Y, Saleh MFM, Srivastava A, Styczynski J, Alrajhi A, Almaghrabi R, Abid MB, Chemaly RF, Gergis U, Brissot E, El Fakih R, Riches M, Mikulska M, Worel N, Weisdorf D, Greinix H, Cordonnier C, Aljurf M. *Lancet Haematol.* 2023 Apr;10(4):e295-e305. doi: 10.1016/S2352-3026(23)00031-5. PMID: 36990624 Review.
(<https://pubmed.ncbi.nlm.nih.gov/36990624/>)
- Endemic or regionally limited bacterial and viral infections in haematopoietic stem-cell transplantation recipients: a Worldwide Network for Blood and Marrow Transplantation (WBMT) Review.
Muhsen IN, Galeano S, Niederwieser D, Koh MBC, Ljungman P, Machado CM, Kharfan-Dabaja MA, de la Camara R, Kodera Y, Szer J, Rasheed W, Cesaro S, Hashmi SK, Seber A, Atsuta Y, Saleh MFM, Srivastava A, Styczynski J, Alrajhi A, Almaghrabi R, Abid MB, Chemaly RF, Gergis U, Brissot E, El Fakih R, Riches M, Mikulska M, Worel N, Weisdorf D, Greinix H, Cordonnier C, Aljurf M. *Lancet Haematol.* 2023 Apr;10(4):e284-e294. doi: 10.1016/S2352-3026(23)00032-7.
(<https://pubmed.ncbi.nlm.nih.gov/36990623/>)

Ongoing Projects

This committee continues to work on the following projects:

- WBMT book on “The Hematopoietic Stem Cell Transplantation Donor”
- Work on the evaluation of the short survey covering the need of webinars/e-learning session and set up a webinar series
- Organizing webinars/e-learning sessions

Future Plans

The Donor Issues Committee identified the following projects for initiation during 2024:

- preparing educational activities 2024/2025 based on the results of the survey on educational needs
- Finalizing the WBMT book on “The Hematopoietic Stem Cell Transplantation Donor”

3.3 Education and Dissemination Committee

Committee Mission

The mission of the Education and Dissemination Committee is to recommend to the Executive Committee policies, programs, actions and materials pertaining to the development or design of resources prepared for the express purpose of educating the populace about HCT. This committee collaborates with all partners within the WBMT and assists in preparation of opinion or advisory materials for the WBMT and/or WHO. It plays an important role in Workshop program design.

Leadership

The Co-Chairs of this committee are:

- Damiano Rondelli (Member Society, ASTCT)
- Adriana Seber (Member Society, LABMT)
- Dietger Niederwieser (Member Society, ELN)

Meetings / Teleconferences

The Education and Dissemination Committee conducts monthly meetings of Co-Chairs, quarterly Committee meetings, weekly meetings with centers in Ukraine until a few months ago, then every two weeks.

Completed Projects

In 2023, the Education and Dissemination Committee developed two educational webinars:

- May 2023: HSCT in Sickle Cell Disease
- September 2023: Allogeneic HSCT in patients with chronic viral diseases

The slides, flyers and recordings of the webinars are available at the WBMT webpage:

<https://www.wbmt.org/past-events/>

Additionally, the committee looked into selection of an international site for the next WBMT Workshop & Symposium.

Future Plans

The Education and Dissemination Committee identified the following projects for 2023:

- Organization of regular educational webinars.
- Continue to organize Workshop & Scientific Symposia annually or as appropriate.
- Prepare workshops for cellular therapies.

Publications

- Radiation hazards of the Ukraine nuclear power plants: how can international blood and marrow stem cell transplant societies help? Hashmi SK, Powles RC, Ma D, Muhsen IN, Aljurf M, Niederwieser D, Weisdorf DJ, Koh MBC, Greinix H. *Ann Hematol*. 2023 Jun 6. doi: 10.1007/s00277-023-05191-9 . Online ahead of print. PMID: 37280449 Review.
- Endemic or regionally limited parasitic and fungal infections in haematopoietic stem-cell transplantation recipients: a Worldwide Network for Blood and Marrow Transplantation (WBMT) Review. Muhsen IN, Galeano S, Niederwieser D, Koh MBC, Ljungman P, Machado CM, Kharfan-Dabaja MA, de la Camara R, Kodera Y, Szer J, Rasheed W, Cesaro S, Hashmi SK, Seber A, Atsuta Y, Saleh MFM, Srivastava A, Styczynski J, Alrajhi A, Almaghrabi R, Abid MB, Chemaly RF, Gergis U, Brissot E, El Fakih R, Riches M, Mikulska M, Worel N, Weisdorf D, Greinix H, Cordonnier C, Aljurf M. *Lancet Haematol*. 2023 Apr;10(4):e295-e305. doi: 10.1016/S2352-3026(23)00031-5. PMID: 36990624 Review.
- Endemic or regionally limited bacterial and viral infections in haematopoietic stem-cell transplantation recipients: a Worldwide Network for Blood and Marrow Transplantation (WBMT) Review. Muhsen IN, Galeano S, Niederwieser D, Koh MBC, Ljungman P, Machado CM, Kharfan-Dabaja MA, de la Camara R, Kodera Y, Szer J, Rasheed W, Cesaro S, Hashmi SK, Seber A, Atsuta Y, Saleh MFM, Srivastava A, Styczynski J, Alrajhi A, Almaghrabi R, Abid MB, Chemaly RF, Gergis U, Brissot E, El Fakih R, Riches M, Mikulska M, Worel N, Weisdorf D, Greinix H, Cordonnier C, Aljurf M. *Lancet Haematol*. 2023 Apr;10(4):e284-e294. doi: 10.1016/S2352-3026(23)00032-7. PMID: 36990623 Review.
- An Analysis of the Worldwide Utilization of Hematopoietic Stem Cell Transplantation for Acute Myeloid Leukemia. Tokaz MC, Baldomero H, Cowan AJ, Saber W, Greinix H, Koh MBC, Kröger N, Mohty M, Galeano S, Okamoto S, Chaudhri N, Karduss AJ, Ciceri F, Colturato VAR, Corbacioglu S, Elhaddad A, Force LM, Frutos C, León AG, Hamad N, Hamerschlak N, He N, Ho A, Huang XJ, Jacobs B, Kim HJ, Iida M, Lehmann L, de Latour RP, Percival MM, Perdomo M, Rasheed W, Schultz KR, Seber A, Ko BS, Simone AJ, Srivastava A, Szer J, Wood WA, Kodera Y, Nagler A, Snowden JA, Weisdorf D, Passweg J, Pasquini MC, Sureda A, Atsuta Y, Aljurf M, Niederwieser D. *Transplant Cell Ther*. 2023 Apr;29(4):279.e1-279.e10. doi: 10.1016/j.jtct.2022.12.013. Epub 2022 Dec 23. PMID: 36572384

3.4 Graft Processing and Cellular Therapy Committee

Committee Mission

The mission of the Graft Processing and Cellular Therapies Committee is to recommend policies, programs, and actions pertaining to the handling of a harvested product, including: storage, preparation and manipulation, equipment, product transportation, and documentation within a cell processing center. This includes the conduct of individuals and processes related to these practices. The committee also focuses on cellular therapy, which is increasingly important in haemato-oncology, transplantation, and regenerative medicine, in relation to cellular product source, processing, and in the coming years, in relation to advanced therapeutic medicinal products.

Leadership

The Co-Chairs of this committee are:

- Christian Chabannon
- Ibrahim Yakoub-Agha (Member Society, EMBMT)

Meetings / Teleconferences

During 2023, the Graft Processing and Cellular Therapy Committee did not meet in person. The committee had 3 videoconferences in 2023, mainly discussing tasks related to the ongoing project on the use of non-cryopreserved autologous HCT products.

Ongoing Projects

This committee continues to work on the following projects:

- Partner with the International Society of Cellular Therapy (ISCT) on the *ISCT Presidential Task Force on the Use of Unproven Cellular Therapies*.
- Survey of laboratory practices related to the use of non-cryopreserved autologous HCT products.

Future Plans

The Graft Processing and Cellular Therapy Committee identified the following projects for action in 2024:

- Create a list and map of cell processing laboratory facilities worldwide.
- Collaborate with the EBMT Cellular Therapies Working Party and other organizations on a parallel project of clinical outcome of non-cryopreserved autologous HCT transplants.
- Coordinate with FACT and the Joint Accreditation Committee of ISCT and EBMT (JACIE) and AHCTA Committee to introduce stepwise accreditation for laboratories (and transplant programs) in emerging regions under a joint International Accreditation Program.

3.5 Global Emergencies / Nuclear Accident Management Committee

The creation of this committee was first suggested in 2014 under the name Nuclear Accident Management Committee. Initial meetings and sessions took place in 2015. In the fourth quarter of 2015, the committee leaders gave presentations during the WBMT session at the APBMT annual scientific meeting. Highlights of this session focused on the number and types of radiologic response exercises being conducted worldwide; all emphasized the need to engage and educate the HCT community of their potential involvement in a nuclear disaster and to continue these practice exercises. In 2020 the mission and name of the committee were reviewed and updated, resulting in the current name which has continued until now.

Committee Mission

The mission of the Global Emergencies / Nuclear Accident Management Committee is to promote worldwide awareness of public health emergencies, (including pandemics), radiation or other disasters that may impact global HCT practice or there could be a role of HCT and cell therapy in the management of these emergencies. Committee objectives include the following:

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1. Increase preparedness in WBMT members, teams, organizations, and member countries to provide assistance in the event of a massive radiation incident, pandemic, or a public health emergency.
2. Develop international consensus guidelines for triage and treatment of casualties that require hematopoietic support.
3. Establish coalitions within member countries to share information following radiation or other types of incidents or relevant global emergencies.

Leadership

The Co-Chairs of this committee are:

- Ray Powles (Member Society, EBMT)
- Shahrukh Hashmi (Member Society, ASTCT)
- Nada Hamad (Member Society, ANZTCT)

Meetings / Teleconferences

In 2023, the WBMT Global Emergencies / Nuclear Accident Management Committee dedicated a meeting during EBMT Annual Conference in Paris, France. Additionally, the Committee collaborated with the EBMT Nuclear Accident Committee on the Ukraine Resilience Response to Radiation Programme 2023-4. They met during the same conference in Paris in which 2 Co-Chairs of WBMT's committee actively participated.

Completed Projects

In 2023:

- Consensus statement by WBMT on Ukraine Radiation hazards in case of accidental Ukraine nuclear power plant leak.

Future Plans

- Gain recognition as a formal/affiliated member of the WHO's global emergencies team. A WHO-WBMT meeting is scheduled for this.
- Write a consensus paper on the role of WBMT in public health aspects.

Publications

- Radiation hazards of the Ukraine nuclear power plants: how can international blood and marrow stem cell transplant societies help? Hashmi SK, Powles RC, Ma D, Muhsen IN, Aljurf M, Niederwieser D, Weisdorf DJ, Koh MBC, Greinix H. Ann Hematol. 2023 Jun 6. doi: 10.1007/s00277-023-05191-9. Online ahead of print. PMID: 37280449 Review.

3.6 Patient Advocacy / Advisory Committee

Committee Mission

The mission of the Patient Advocacy / Advisory Committee is to recommend to the Executive Committee policies, programs, and actions pertaining to the establishment and / or support of international patient advocacy groups and activities. This includes projects in collaboration with international disease or treatment specific organizations that are related to HCT (pre-and post-transplantation issues) particularly those with emphasis on patient, donor, family, and / or caregiver related topics. There will be mentorship and harmonization in the development and distribution of patient / public educational materials.

Leadership

The Co-Chairs of this committee are:

- Cristóbal Frutos (Member Society, LABMT)
- Carmem Bonfim (Member Society, LABMT)

Meetings / Teleconferences

During 2023, this committee had 3 meetings.

Completed Projects

During 2023, the Patient Advocacy / Advisory Committee completed the following projects:

- Participate in the cGVHD NIH group.
- Present at the ASTCT Living with GVHD Session at the Tandem Meetings.
- Present at the cGVHD Symposium in Croatia.

3.7 Transplant Center / Recipient Issues Committee

Committee Mission

The mission of the Transplant Center / Recipient Issues Committee is to recommend to the Executive Committee policies, programs, or actions pertaining to the performance of hematologic transplantation and other cellular therapies / procedures within a member transplant center; this includes recording recipient outcomes, maintenance of records, and the conduct of individuals and processes carrying out these procedures and practices. As of 2006, this committee also administers biennial activities related to the global transplant activity (GTA) reports and GTA data use proposal reviews / deliberations (**Section 4.1**).

Leadership

The Co-Chairs of this Standing Committee are:

- Laurent Garderet
- Yoshihisa Kodera (Member Society, APBMT)

Meetings / Teleconferences

During 2023, this Standing Committee maintained regular video conferences every 2 months, on the last Wednesday of the month.

Completed Projects

During 2023, this Standing Committee completed the following project:

- Optimize global transplant registry (GTR) and update activities up to 2022.

Ongoing Projects

This Standing Committee continues to work on the following project:

- Include cellular therapy activities in the GTR and finalize the world autologous stem cell transplantation in myeloma (“Waustim”) study and substudies: cryopreserved vs non cryo, auto transplant according to age and autotransplant vs no transplant between the age of 70 and 75.

Future Plans

This Standing Committee has identified the following projects for the future:

- Outcome studies on different diseases (AML; CML worldwide).
- Participate to Mongolia Workshop & Symposium.
- Analyse GvHD and infections worldwide.
- Use the Waustim database to test an early relapse prognostic score and study the interaction between response prior to auto transplant and lenalidomide maintenance post-transplant.

Publications

- Radiation hazards of the Ukraine nuclear power plants: how can international blood and marrow stem cell transplant societies help? Hashmi SK, Powles RC, Ma D, Muhsen IN, Aljurf M, Niederwieser D, Weisdorf DJ, Koh MBC, Greinix H. *Ann Hematol.* 2023 Jun 6. doi: 10.1007/s00277-023-05191-9. Online ahead of print. PMID: 37280449 Review.
- Endemic or regionally limited parasitic and fungal infections in haematopoietic stem-cell transplantation recipients: a Worldwide Network for Blood and Marrow Transplantation (WBMT) Review. Muhsen IN, Galeano S, Niederwieser D, Koh MBC, Ljungman P, Machado CM, Kharfan-Dabaja MA, de la Camara R, Kodera Y, Szer J, Rasheed W, Cesaro S, Hashmi SK, Seber A, Atsuta Y, Saleh MFM, Srivastava A, Styczynski J, Alrajhi A, Almaghrabi R, Abid MB, Chemaly RF, Gergis U, Brissot E, El Fakih R, Riches M, Mikulska M, Worel N, Weisdorf D, Greinix H, Cordonnier C, Aljurf M. *Lancet Haematol.* 2023 Apr;10(4):e295-e305. doi: 10.1016/S2352-3026(23)00031-5. PMID: 36990624 Review.
- Endemic or regionally limited bacterial and viral infections in haematopoietic stem-cell transplantation recipients: a Worldwide Network for Blood and Marrow Transplantation (WBMT) Review. Muhsen IN, Galeano S, Niederwieser D, Koh MBC, Ljungman P, Machado CM, Kharfan-Dabaja MA, de la Camara R, Kodera Y, Szer J, Rasheed W, Cesaro S, Hashmi SK, Seber A, Atsuta Y, Saleh MFM, Srivastava A, Styczynski J, Alrajhi A, Almaghrabi R, Abid MB, Chemaly RF, Gergis U, Brissot E, El Fakih R, Riches M,

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Mikulska M, Worel N, Weisdorf D, Greinix H, Cordonnier C, Aljurf M. *Lancet Haematol.* 2023 Apr;10(4):e284-e294. doi: 10.1016/S2352-3026(23)00032-7. PMID: 36990623 Review.

- Prognostic value of blood biomarkers in steroid-refractory or steroid-dependent acute graft-versus-host disease: a REACH2 analysis. Socié G, Niederwieser D, von Bubnoff N, Mohty M, Szer J, Or R, Garrett J, Prahallad A, Wilke C, Zeiser R. *Blood.* 2023 Jun 1;141(22):2771-2779. doi: 10.1182/blood.2022018579. PMID: 36827620 Free PMC article. *Clinical Trial.*
- Different treatment strategies versus a common standard arm (CSA) in patients with newly diagnosed AML over the age of 60 years: a randomized German inter-group study. Niederwieser D, Lang T, Krahl R, Heinicke T, Maschmeyer G, Al-Ali HK, Schwind S, Jentzsch M, Cross M, Kahl C, Wolf HH, Sayer H, Schulze A, Dreger P, Hegenbart U, Krämer A, Junghanss C, Mügge LO, Hähling D, Hirt C, Späth C, Peter N, Opitz B, Florschütz A, Reifenrath K, Zojer N, Scholl S, Pönisch W, Heyn S, Vucinic V, Hochhaus A, Aul C, Giagounidis A, Balleisen L, Oldenkott B, Staib P, Kiehl M, Schütte W, Naumann R, Eimermacher H, Dörken B, Sauerland C, Lengfelder E, Hiddemann W, Wörmann B, Müller-Tidow C, Serve H, Schliemann C, Hehlmann R, Berdel WE, Pffirmann M, Krug U, Hoffmann VS. *Ann Hematol.* 2023 Mar;102(3):547-561. doi: 10.1007/s00277-023-05087-8. Epub 2023 Jan 25. PMID: 36695874 Free PMC article.
- An Analysis of the Worldwide Utilization of Hematopoietic Stem Cell Transplantation for Acute Myeloid Leukemia. Tokaz MC, Baldomero H, Cowan AJ, Saber W, Greinix H, Koh MBC, Kröger N, Mohty M, Galeano S, Okamoto S, Chaudhri N, Karduss AJ, Ciceri F, Colturato VAR, Corbacioglu S, Elhaddad A, Force LM, Frutos C, León AG, Hamad N, Hamerschlak N, He N, Ho A, Huang XJ, Jacobs B, Kim HJ, Iida M, Lehmann L, de Latour RP, Percival MM, Perdomo M, Rasheed W, Schultz KR, Seber A, Ko BS, Simione AJ, Srivastava A, Szer J, Wood WA, Kodera Y, Nagler A, Snowden JA, Weisdorf D, Passweg J, Pasquini MC, Sureda A, Atsuta Y, Aljurf M, Niederwieser D. *Transplant Cell Ther.* 2023 Apr;29(4):279.e1-279.e10. doi: 10.1016/j.jtct.2022.12.013. Epub 2022 Dec 23. PMID: 36572384
- Prognostic Impact of Organomegaly in Mastocytosis: An Analysis of the European Competence Network on Mastocytosis. Lübke J, Schwaab J, Christen D, Elberink HO, Span B, Nidoszytko M, Gorska A, Lange M, Gleixner KV, Hadzijusufovic E, Solomiany O, Angelova-Fischer I, Zanotti R, Bonifacio M, Bonadonna P, Shoumariyeh K, von Bubnoff N, Müller S, Perkins C, Elena C, Malcovati L, Hagglund H, Mattsson M, Parente R, Varkonyi J, Fortina AB, Caroppo F, Zink A, Brockow K, Breynaert C, Bullens D, Yavuz AS, Doubek M, Sabato V, Schug T, Niederwieser D, Hartmann K, Triggiani M, Gotlib J, Hermine O, Arock M, Kluin-Nelemans HC, Panse J, Sperr WR, Valent P, Reiter A, Jawhar M.J *Allergy Clin Immunol Pract.* 2023 Feb;11(2):581-590.e5. doi: 10.1016/j.jaip.2022.10.051. Epub 2022 Nov 17. PMID: 36403897
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- Impact of the changing landscape of induction therapy prior to autologous stem cell transplantation in 540 newly diagnosed myeloma patients: a retrospective real-world study. Wang SY, Holzhey T, Heyn S, Zehrfeld T, Fricke S, Hoffmann FA, Becker C, Braunert L, Edelmann T, Paulenz I, Hitzschke M, Flade F, Schwarzer A, Fenchel K, Franke GN, Vucinic V, Jentzsch M, Schwind S, Hell S, Backhaus D, Lange T,

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Niederwieser D, Scholz M, Platzbecker U, Pönisch W.J Cancer Res Clin Oncol. 2023 Jul;149(7):3739-3752. doi: 10.1007/s00432-022-04184-x. Epub 2022 Aug 20. PMID: 35987926 Free PMC article.

- Impact of IDH1 and IDH2 mutation detection at diagnosis and in remission in patients with AML receiving allogeneic transplantation. Bill M, Jentsch M, Bischof L, Kohlschmidt J, Grimm J, Schmalbrock LK, Backhaus D, Brauer D, Goldmann K, Franke GN, Vucinic V, Niederwieser D, Mims AS, Platzbecker U, Eisfeld AK, Schwind S. Blood Adv. 2023 Feb 14;7(3):436-444. doi: 10.1182/bloodadvances.2021005789. PMID: 35381077 Free PMC article.

3.8 WHO Liaison Standing Committee

Committee Mission

The mission of the WHO Liaison Committee is to recommend to the Executive Committee policies, programs, and actions pertaining to the continuation of collaborative projects with the WHO in pursuit of WBMT's educational, scientific and philanthropic mission. This includes projects to promote global access to hematopoietic cell donation and transplantation as well as administration of other cellular therapies, technical and scientific input on safety and quality of HCT and cellular therapies and consultation services with emphasis on HCT and cellular therapies.

Leadership

The Co-Chairs of this Standing Committee are:

- Hildegard Greinix (Immediate Past President and WHO representative WBMT)
- Daniel Weisdorf (Past President WBMT)

Meetings / Teleconferences

The group meets annually in person and by telephone conferences throughout the year. Furthermore, telephone conferences with Mr. Efstratios Chatzixiros, Adviser on Transplantation of Human Organs, Tissues and Cells of the Blood and Other Products of Human Origin Team in the Health Product Policy and Standards Department of the WHO Headquarters in Geneva, Switzerland take place on a regular basis.

Completed Projects

- Annual Report to WHO about WHO WBMT collaborative projects.
- Report on the WBMT Pakistan Workshop together with the WBMT Education & Dissemination Committee and local organizers. This report has been submitted for publication.

Ongoing Projects

- Support for Ukrainian HCT teams.
- Collaboration with other WBMT Standing Committees in organizing the next WBMT Workshop in Mongolia in collaboration with WHO.
- Dissemination of worldwide survey on current use of cell and gene therapies and future needs, including mapping of how practices are regulated together with the WBMT Graft Processing and Cellular Therapy

Committee.

Last fall the WBMT sent out a questionnaire to capture a snapshot picture of the worldwide situation with regards to the availability of both commercially approved and investigational CAR-T-cell therapy as well as other forms of advanced cell based therapy. This survey consists of 55 questions asking for center/hospital characteristics; all cell therapy products available at the center/hospital; barriers for access to cellular therapies; existence of HCT programs which include cell therapy programs; regulatory frameworks/approval of cell therapies; clinical indications for cell therapy; cost of products and treatment as well as reimbursement; in-house production with description of facilities, GMP requirements and oversight of cell product release; availability of other advanced cell therapy products such as gene therapy for sickle cell disease and thalassemia; patient safety issues including monitoring during and after cell therapy and outcome data registries.

A wide range of countries responded to this survey including Brazil, Yemen, Vietnam and the USA and in total 552 responses were received. This will allow a detailed statistical analysis to obtain important and unique data on the current use of cell therapy products worldwide. This analysis is currently ongoing and will be completed within the next several months.

- Collaboration with WHO on Global Action Framework in Stem Cell Donation and Transplantation.
- Work on constituency statement on “Availability, ethical access and oversight of transplantation of human cells, tissues and organs” of the WHO to be presented at the World Health Assembly in Geneva in May 2024.

At the World Health Assembly meeting in Geneva in May 2024, the WHO draft on “Availability, ethical access and oversight of transplantation of human cells, tissues and organs” proposed by Argentina, Brazil, China, and the European Union and its Member States, Peru and Qatar will be discussed. Together with other NGOs working in the field of organ and stem cell transplantation we will provide a statement in support of this document focusing on strategies to improve access to stem cell transplantation and cellular therapies, promoting donor and product safety as well as quality control and strategies to improve transplant outcome.

- Establishment of a Steering Committee on minimum requirements for establishing an advanced cellular therapy and gene therapy facility together with the WBMT Education & Dissemination Committee, and Graft Processing and Cellular Therapy Committee.

After establishing a steering committee, a questionnaire will be developed that will then be send within a Delphi process to experts in manufacturing and clinical use of cellular products of human origin of different world regions. This consensus process will eventually provide guidance on minimum and standards requirements for establishing an ATMP and gene therapy facility.

Future Plans

- Safety standards, quality management systems and accreditation processes currently available for the development of gene and cell therapies together with the WBMT Accreditation Committee (AHCTA).
- Proposal for a tool on how to monitor cell therapy practices worldwide in collaboration with the WHO.

- Develop a toolkit, including: assessment tools for benchmarking of care, training modules for webinars, online resources (slides, videos) and adaptation tools for setting up HCT in low-resource settings in collaboration with WHO.

3.9 Nurses Standing Committee

Committee Mission

WBMT Nurses Standing Committee is formed to answer the group's particular concerns with focus in countries that have no organized nursing group or are overlooked and whose progress in SCT & CT nursing knowledge and patient care is hampered by lack of support, relevant training, and up-to-date information. The WBMT Nurses Standing Committee will provide leadership, education, and support to nursing professionals involved in SCT & CT worldwide, particularly nurses in emerging countries. The committee is responsible for addressing issues related to nursing practice, evidence-based nursing care and advocating for nursing excellence in SCT & CT through collaboration and consultation with existing international societies.

Leadership

The Co-Chair of this Standing Committee is:

- Reggie Belkhedim (Member Society, EMBMT)

Supported by:

- Mahmoud Aljurf (WBMT President)
- Eugenia Trigos (Member Society, JACIE)
- Sebastian Galeano (Member Society, LABMT)

Meetings / Teleconferences

The WBMT Nurses Standing Committee has conducted a two-day webinar entitled "Nigeria BMT Nurses Online Workshop" held on 16 & 17 November 2023 in collaboration with the Lagos Universting Teaching Hospital and the Sickle Cell Foundation Nigeria which comprised of the following:

- 35 topics, 27 speakers from 13 countries.
- Around 900 registrants, 433+ actual attendees (online & onsite) from 37 countries of 7 regions.

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ORGANIZED BY: WBMT
 IN COLLABORATION WITH: LAKE UNIVERSITY TEACHING HOSPITAL AND SICKLE CELL FOUNDATION NIGERIA

The Nigeria BMT NURSES' ONLINE WORKSHOP
 16-17 November 2023 | Lagos, Nigeria
 (9:00 AM - 4:00 PM, Nigeria Time)

A WEBINAR WORKSHOP INTENDED FOR ALL NURSES AND HEALTHCARE WORKERS IN THE FIELD OF BLOOD AND MARROW TRANSPLANTATION, HEMATOPOIETIC STEM CELL TRANSPLANTATION AND CELL THERAPY

ABOUT THE WORKSHOP:
 The 2-day Online Workshop is a comprehensive program on the basics and advance approaches to BMT patient care at the pre-transplant, transplant and post-transplant stages. Scientific presentations will be participated and delivered by 27 expert transponders from the different regions of the world.

PROGRAM HIGHLIGHTS:

- Introduction to HSCT, HLA and Pre-transplant preparations
- Donor issues, Cell sources, Apheresis and Cryopreservation
- Infection, Transfusion, Complications and Management
- Role of Nurses, Pharmacy care, Follow-ups
- Role of Carers, Quality Management of patients
- The Sickle Cell context

REGISTRATION IS FREE
 Click link below to register ahead for this webinar:
https://us02web.zoom.us/join/register?wml_ZJz1Bw7T06TKVQK0E9MA
 Webinar ID: 841 3044 4691
 Passcode: 462356

Worldwide Network for Blood and Marrow Transplantation
 An NGO in collaboration with World Health Organization

THE NIGERIA BMT NURSES' ONLINE WORKSHOP PROGRAM 16-17 November 2023, Lagos University Teaching Hospital, Lagos, Nigeria

DAY ONE			DAY TWO		
TIME	TOPIC TITLE / ACTIVITY	SPEAKER	TIME	TOPIC TITLE / ACTIVITY	SPEAKER
09:00 - 09:10	WELCOME NOTE Medical Director, Vanderbilt Stem Cell Transplant and Cellular Therapy Program Prof. Kassem Adetola		09:00 - 09:10	WELCOME NOTE National Director/CEO, Sickle Cell Foundation Nigeria Dr. Annette Akkisele	
09:10 - 09:15	OPENING REMARKS Dr. Mahmoud Aljurf WBMT President & WBMT NG Committee Chairperson		09:10 - 09:15	RECAP OF DAY ONE Reggie Belkhedim WBMT NG Committee Co-chairperson	
09:15 - 09:30	Introduction HSCT: Basics of HSCT, Concepts and Indications	Michelle Kenyon, United Kingdom	09:15 - 09:30	BMT Settings, Infection and Infection Control	Kishwar Sultana, Pakistan
09:30 - 09:45	Haematopoiesis & Hematopoietic Stem Cell Transplantation: An Introduction	Reggie Belkhedim, France	09:30 - 09:45	Engraftment/ Graft Failure or Relapse after transplant	Suman Kubal, India
09:45 - 10:00	The HLA System, Tissue Typing and Finding a Donor	Rita Nehme, Lebanon	09:45 - 10:00	Role of Nurse in care of post BMT patients with rejection of transplant	Lu Yin, China
10:00 - 10:15	Pre-transplant: Preparation for transplant, patient evaluation, donor evaluation, transplant scheduling	Francisca Negrete, Chile	10:00 - 10:15	Discharge planning	Azra Shaheen Ainy, Pakistan
10:15 - 10:30	Q&A	Moderator: Eugenia Trigo	10:15 - 10:30	Early Follow-up: Homecare of Post-transplant patient in limited resource country	Kishwar Sultana, Pakistan
10:30 - 10:45	HSCT Types, Sources, and Indications	Rita Nehme, Lebanon	10:30 - 10:45	Q&A	Moderator: Amala Lucas
10:45 - 11:00	Donor Issues	Rita Nehme, Lebanon	10:45 - 11:15	Acute and Chronic GVHD: Nursing challenges in Acute versus Chronic GVHD	John Murray, United Kingdom
11:00 - 11:15	Haematopoietic Progenitor Cell Sources and Collection	Sandesh, India	11:15 - 11:30	Supportive care: Nutrition	Latha Gracelin P., India
11:15 - 11:30	Apheresis - Nurses' role	Josephine Suganya A.M.C., India	11:30 - 11:45	Late effect & Long-term Follow up	Megan Hogg, Australia
11:30 - 11:45	Cryopreservation and infusion of cryopreserved stem cells - Processing & Storage	Abijah Princy B, India	11:45 - 12:00	Psychosocial impacts of transplant	Megan Hogg, Australia
11:45 - 12:00	Q&A	Moderator: Amala Lucas	12:00 - 12:15	Q&A	Moderator: Megan Hogg
12:00 - 12:15	LUNCH BREAK		12:15 - 13:15	Vaccinations	Trish Joyce, Australia
12:15 - 12:30	Q&A	Moderator: Amala Lucas	13:00 - 13:45	Family	Komal Mundhra, India
12:30 - 13:00	LUNCH BREAK		13:45 - 14:00	Role of Carers: Carer stress	Yvonne Patek-Hudson, Australia
13:00 - 13:15	Infusion of Hematopoietic fresh Stem Cells	Diana Villalobos, Chile	14:00 - 14:15	End of life care: Psychological/Spiritual and Patient support in Palliative care	Felicia Michael, Australia
13:15 - 13:30	Transfusion Support	Gloria Ceballo, Panama	14:15 - 14:30	Quality Management in HSCT: Implications for Nursing	Cristina Vogel, Brazil
13:30 - 13:50	Part I: Early and acute complications and principle of BMT nursing care: Neutropenic fever, Mucositis, TMA, Pain, infections (bacterial, viral & fungal)	Eugenia Trigo, Spain	14:30 - 14:45	Q&A	Moderator: Reggie Belkhedim
13:50 - 14:05	VOD and its management	Amala Lucas, India	SICKLE CELL SESSIONS		
14:05 - 14:20	CVC Management	Paola Viveros Lamás, Chile	14:45 - 15:00	Aims of BMT for sickle cell patients	Noof Shwikan, Saudi Arabia
14:20 - 14:35	Q&A	Moderator: Kishwar Sultana	15:00 - 15:15	Preparation of sickle cell patient for BMT	Noof Shwikan, Saudi Arabia
14:35 - 14:55	Part II: Early and acute complications and principle of BMT nursing care: Anemia, Thrombocytopenia, Hemorrhagic Cytitis	Eugenia Trigo, Spain	15:15 - 15:30	Transplant rejection with sickle cell patient	Noof Shwikan, Saudi Arabia
14:55 - 15:10	Pharmaceutical Care: Drug to drug interactions, reactions, etc.	Jorge Morales, Chile	15:30 - 15:45	Survivorship life after SCT	Michelle Kenyon, United Kingdom
15:10 - 15:25	Immunosuppressive drugs: Mechanism of action, Administration care, adverse effects, Nursing care	Niti Lotey, Canada	15:45 - 16:00	Q&A	Moderator: Dr. Annette Akkisele
15:25 - 15:40	Q&A	Moderator: Paola Viveros	16:00 - 16:10	Closing Remarks Dr. Sebastian Galeano WBMT Secretary	

Completed Projects

- Establishing the Formation of the WBMT Nurses Standing Committee.
- WBMT Nurses Standing Committee Bylaws for approval.
- Nigeria BMT Nurses Online Workshop (16-17 November 2023).

Ongoing Projects

- Proposal of a WBMT Nurses satellite Workshop for the 9th WBMT Workshop & Symposium 2024 in Mongolia.
- Team formation and laying out an agenda for the follow-up programs for Nigerian nurses.
- Team formation and planning of development of BMT educational materials for Low-Middle Income Countries.
- Drafting of WBMT Nurses Standing Committee Newsletter.

Future Plans

- To make a proposal for a Nurses satellite Workshop for the 9th WBMT Workshop & Symposium 2024 in Mongolia.
- Follow-up program for Nigerian nurses.
- Development of BMT educational materials for Low-Middle Income Countries.
- Task force "Ukraine" (a special project in collaboration with Dr. Aleksander Istomin and Ukrainian BMT nurses on the challenges in their current situation).

Publications

Two abstracts have been submitted to EBMT:

- High Participation Rate with World-Wide Representation in First Webinar BMT Nurses Workshop of the Worldwide Network for Blood and Marrow Transplantation (WBMT): A collaboration between the WBMT, Lagos University Teaching Hospital, and Sickle Cell Foundation of Nigeria. Reggie Belkhedim, Sebastian Galeano, Dietger Niederwieser, Damiano Rondelli, Abijah Princy B, Amala Lucas, Azra Shaheen Ainy, Cristina Vogel, Diana Villalobos, Eugenia Arjona, Felicia Michael, Francisca Negrete, Gloria Ceballo,

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John Murray, Jorge Morales, Josephine Suganya A.M.C., Kishwar Sultana, Komal Mundhe, Latha Gracelin P., Lu Yin15, Megan Hogg, Michelle Kenyon, Niti Lotey, Nouf Shwikan, Paola Viveros Llamas, Rita Nehme, Sandeep, Suman Kubal, Trish Joyce, Yvonne Panek-Hudson, Adriana Seber, Annette Akinsete, Edamisan Temiye, Oluseye Akinsete, Adetola Kassim, Mahmoud Aljurf.

- Establishing a WBMT Nursing Group. Reggie Belkhedim, Eugenia Trigoso, Paola Viveros, Megan Hogg, Amalorpavamari Lucas, Kishwar Sultana, Nouf Shwikan, Rita Nehme, Stephanie Deren, Mina Roy, Sulman Siddique, Sandeep, Haitham Abu Huq, Linda Hariss, Blessing Aziken-John, Titilayo Bamigboye, Zainab Olayiwola, Amina Asimegbe, Sebastian Galeano, MD, Mahmoud Aljurf, Mickey Koh. Hildegard Greinix, Dietger Niederwieser, Damiano Rondelli, Adriana Seber, Romel Batallones.

4.0 WBMT ACTIVITIES AND ACCOMPLISHMENTS IN 2023

The WBMT engages in a variety of activities including:

- An annual global survey of HCT activity (**Section 4.1**);
- Establishing an internet-based program for data collection on a global level;
- Conducting scientific and educational conferences (**Section 4.2**);
- Developing consensus guidelines for optimum delivery of HCT services and accreditation of HCT facilities (**Section 4.3**);
- Collaborating and consulting with the WHO to promote excellence in HCT, stem cell donation, and cellular therapy (**Section 4.4**);
- Supporting other global HCT activities (**Section 4.5**);
- Maintaining a Website for broad communication (**Section 4.6**);
- Establishing research guidelines within this global HCT community, particularly as related to use of the Global transplant activity data (**Section 4.7**).

4.1 Annual Global Survey

WBMT leaders agreed in early formative years that a first initiative should be to conduct annual global surveys of HCT activity performed by transplant centers (**Appendices C1 and C2**); a minimal yet essential level of activity information is requested of participating centers. The annual survey displays volume of, and main indications for, allogeneic (related, unrelated, and graft source information) and autologous HCT activity. Disease indications for HCT include main- and sub-class categories.

The WBMT survey reporting sheet is available on the WBMT website; it is accompanied by the disease indications classification codes to assist in completing the survey. This will continue during transition from the hard copy manual entry to the internet based reporting system. In countries lacking internet connection, the data will still be reported by hard copy/fax to the regional office and entered there directly.

The WBMT continues to promote the annual survey by publishing findings biannually in scientific journals and presenting results at least once annually at international meetings (**Appendix F**). The WBMT encourages other, growing and developing groups (e.g., LABMT and AfBMT) to form their own registries to participate in the survey, and a WBMT representative presents at each Workshop and Symposium (**Section 4.2.2**), describing the activity data, including the collection process, and encouraging all teams to report their activity data.

Data for the Global Transplant Activity (GTA) survey are currently being collected from our member societies APBMT, EBMT and CIBMTR for their regions and, for all other regions of the world from each center on hard copies. The activity of these centers is reported directly to the WBMT office and the information entered there by hand. Worldwide we have around 1700 transplant centers

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reporting now more than 90.000 HCT/year. Global activity data are then returned to the regional societies to allow analysis on developments of regional or national registries. These data do not represent an outcome registry, but the GTA survey is a mechanism by which each country's annual data can be registered with the WBMT and can also be used by the reporting organization. In addition, GTA survey is allowing comparisons between countries and detect gaps between developed or raising countries. The procedure is time consuming and the data are available with a considerable time delay (in 2022 data were published until 2016).

Furthermore, the EBMT, that reported the data for whole Europe using the Promise system, will stop using this program and has been working on alternatives. In order to maintain and improve reporting, WBMT decided to develop an internet-based reporting system using the actual sheet. This is not trivial considering the different levels of the GTA survey, security and the need of highest data quality and safety. Information can be entered at transplant center, country and region level (at the moment a considerable proportion is entered at a global level) and should avoid duplicates, inappropriate use and is restricted to a limited number of persons of each center (data manager and Head of Department). The connection with the server has to be encrypted. Using this security tools, we are now planning to go online in 2022 with the GTR starting in Latin America. Every transplant center will enter its activities and have an overview of its own data only. Selected persons have access to country level data and the central WBMT office to the regional data. All the calculations will be performed by the program including additions, percentages and correlations. This will allow to have yearly real time data at the latest in March of the following year. A manual is in development to explain data entering. These activity data can be used at the team level for those countries / societies that do not have an existing data collection system (e.g. LABMT, AfBMT). If a new regional or national registry were to be developed, it could potentially use the GTA data to identify the activity in those countries that are outside other data collection systems, providing a mechanism for follow-up reporting.

In the near future reports of second HCT and cellular therapy worldwide is planned. The GTA survey will be essential for obtaining actual data for the WHO, for publications and for understanding the development and trends in the field.

The WBMT has guidelines for research using these data, which have been renewed during 2021 (**Appendix D1**). Member Societies can request use of these data for research purposes with signed Data Transmission Agreements (**Appendix D2**). Proposals for the use of these data are reviewed and approved by the Transplant Center / Recipient Issues Committee (**Section 3.7**).

During a previous annual meeting of the American Society of Hematology Vanderson Rocha gave an exciting oral presentation on the topic of increasing access to allogeneic HCT on an international level. He showed data from WBMT's global transplant survey focusing on donor sources, different world regions and main indications. He discussed factors associated with access to allogeneic HCT including donor type and stem cell source availability, patient demographics, economical and social issues, provider and health care system impact. Finally, V. Rocha discussed strategies for expanding allogeneic HCT activity in resource-constrained areas, such as use of telehealth systems, wearable devices, use of artificial intelligence, and collaboration among international organizations.

4.2 Scientific and Educational Conferences

4.2.1 Joint Scientific / International Symposia

Scientific conferences are an important activity of the WBMT for communicating with other clinicians and researchers. WBMT conducts an annual 90-minute Scientific / International Symposium at one or two major HCT conferences. The Symposium is most often presented during the US-based Transplantation and Cellular Therapy Meetings [sponsored by the CIBMTR and the American Society for Transplantation and Cellular Therapy (ASTCT)] each February. Additionally, the WBMT presents a similar or modified program at the annual EBMT meeting in March – April. The focus during the WBMT presentations is on topics of global interest. **Appendix F** lists annual Symposia programs since WBMT began coordinating them in 2009.

4.2.2 WBMT Workshops and Scientific Symposia

The WBMT sponsors Workshops and Scientific Symposia in various world regions; often those with constrained resources to encourage expansion of existing transplant programs or establishing new programs. The WBMT leverages the skills and expertise of its Member Societies along with the Education and Dissemination Committee and all other Standing Committees in planning these programs. Since 2011, the WBMT conducted eight Workshops and Symposia: in Hanoi, Vietnam, in 2011 (**Section 4.2.2.1**); Salvador, Brazil, in 2013 (**Section 4.2.2.2**); Cape Town, South Africa, in 2014 (**Section 4.2.2.3**), Riyadh, Saudi Arabia, in 2017 (**Section 4.2.2.4**); Casablanca, Morocco, in 2018 (**Section 4.2.2.5**); Beijing, China, in 2018 (**Section 4.2.2.6**); Asuncion, Paraguay in 2019 (**Section 4.2.2.7**) and Rawalpindi, Pakistan in 2022 (**Section 4.2.2.8**).

4.2.2.1 2011 Hanoi, Vietnam

In late 2011, the WBMT conducted its first two-day Workshop and associated one-day Scientific Symposium in Hanoi, Vietnam, in cooperation with the WHO and in partnership with the APBMT and a local Vietnamese Organizing Committee.

The Hanoi Workshop concluded that WBMT should conduct training programs for physicians who lead transplant programs abroad. Since then, several teaching fellowships materialized during 2013 and increased in number through 2015. Trainees included practitioners from Vietnam (Hanoi and Ho-Chi-Minh City), Mongolia, Qatar, the Philippines, and Cambodia cross-training in Japan, Korea, Belgium, and Germany. This Workshop also enhanced networking across the globe. For instance, representatives from Myanmar, Indonesia, and Bangladesh established an HCT program under the guidance of WBMT 2011 Workshop participants.

4.2.2.2 2013 Salvador, Brazil

With a commitment by the WBMT Board to support the LABMT, a new WBMT Member Society in 2013, and strong interest from a local organizing committee, the WBMT hosted a two-day Workshop and one-day Scientific Symposium in late 2013 in Salvador da Bahia, Brazil. Participants indicated this was a successful and valuable collaborative venture, but the most visible measurement of success has been the high level of regional organization and productivity since the Workshop.

The LABMT now holds regular monthly and annual meetings and continues to actively develop standing committees modelled after WBMT committees. Within two years of the Workshop, LABMT investigators

published in peer-reviewed journals and presented oral abstracts at the prestigious American Society of Hematology (ASH) meetings.

4.2.2.3 2014 Cape Town, South Africa

The WBMT held its third Workshop and Scientific Symposium in November, 2014, in Cape Town, South Africa, in collaboration with the WHO, the African Society of Blood Transfusion and a local, South African planning committee. With the largest audience yet, attendees represented 34 countries, 20 of which were African. More than 200 individuals registered for the Workshop, and providing primarily positive responses and sound suggestions for improvements to future Workshop programs.

The WBMT customized the scientific program to address blood transfusion safety, a special problem on the continent, and included more open dialog time than in previous Workshops.

As was true for both previous Workshops, a broad spectrum of expert planners and presenters were from Europe, the Far East, Mediterranean region, and the US, augmenting a cadre of regional speakers.

Similar to the LABMT and the Workshop in Salvador, Brazil, the WBMT encouraged and strongly supported a more formal structure and activity level of the AFBMT. The WBMT received and approved a formal application for status as a WBMT Member Society in February 2015, and the AFBMT hosted a business meeting with newly elected officers in Istanbul in March 2015.

4.2.2.4 2017 Riyadh, Saudi Arabia

The fourth Workshop and Symposium, this one co-organized with the EMBMT, took place in Riyadh, Saudi Arabia, in January 2017. WBMT Officers and Standing Committee Co-Chairs participated along with the Riyadh-based Planning Organization. An extended program included longer, open discussion periods, as suggested on prior program evaluation forms. More than 1,000 individuals from 34 countries participated in the Workshop. Representatives from 12 different countries provided regional presentations. A summary of the presentations was published (**Appendix G**).

4.2.2.5 2018 Casablanca, Morocco

In April 2018, the WBMT and AFBMT hosted a Workshop in Casablanca, Morocco, in association with the Moroccan Society of Hematology. The scientific program focused on setting up and enhancing HCT programs in Africa, including adapted conditioning regimens and focusing on diseases affecting regional populations. JACIE offered a workshop regarding establishing an accreditation program in low-middle income countries. A summary of this meeting was published.

4.2.2.6 2018 Beijing, China

The 5th Annual WBMT / WHO Workshop and Scientific Symposium in collaboration with the Chinese Hematopoietic Stem Cell Transplantation Committee and the Chinese Medical Association was held at Beijing Kuntai Hotel, Beijing, China from September 19-21, 2018, focusing on the development of a HCT global outcome registry and advanced technology for HCT in emerging countries. The attendees were approximately 500 and most of the domestic attendees were relatively young physicians and other medical professionals. They concluded that it was a successful workshop and that they learned that different regions and differing times require different approaches to the challenges of HCT internationally. The scientific, social and

organizational parts were outstanding. Following the pattern of the other meetings of the WBMT; we developed some new scientific aspects of importance.

Congratulations were offered for the extremely well-arranged 5th WBMT workshop. Most important was the very high-quality program and lectures and the large number of local and international speakers. This is in addition to the exceptional arrangements of logistics including venue, lecture room, audiovisuals, exhibit, registration, meals and many others. It was encouraging to note that the Central Administrative Office, WBMT and the Local Administrative Office communicated well each other. This was a model for the preparation of future workshop/scientific symposia sponsored with the WBMT.

4.2.2.7 2019 Asuncion, Paraguay

The 6th WBMT Workshop and Symposium was held September 2-4, 2019 in Asuncion, Paraguay.

With the participation of 13 countries from Latin America sharing the current situation of HCT from the key players to an audience of 20 different countries as well as the Paraguayan Minister of Health, representatives from PAHO and WHO. Debate and discussion was vigorous. Everyone wanted to share what they were doing, express their weaknesses, ask how other countries had gotten through common barriers including access to medication and funding for HCT.

With over 300 colleagues, a list of essential medication was brought forth by the WBMT, discussed by all those present, and a commitment was secured by WHO representatives to make every effort possible to ensure easy access to these drugs.

The first day of the Workshop closed on a high note with the official launch of the Paraguayan Donor Registry and the presence of the Orchestra Band of Cateura, a local band composed of children from Asuncion that make their instruments out of the salvaged garbage -- a true testament of their resilience.

Day 2 began with meet the experts session followed by a Pediatrics HCT round table that finished with the commitment of all Heads of Services of Pediatric Centers to work together towards harmonizing treatments and sharing facilities. Common HCT debates included discussion of cryopreserved vs refrigerated grafts for autologous HCT; matched unrelated donor vs Haploidentical donor; and bone marrow vs cord blood with detailed presentations.

Patients emphasized the challenges of living after HCT. They formed a patient association and came to give their thanks to the WBMT for their assistance in the development of the HCT Program in Paraguay.

During the Gala Dinner that was held the second day of the meeting the President of the National Social Security Insurance assured those present he would expedite processes to have a HCT Center built with international standards by seeking the help of the WBMT.

Parallel to these events, the first JACIE-FACT Workshop was held on the 1st of September, a Nurses Satellite meeting took place coordinated by the Nurses Group of the LABMT and EBMT and the LABMT held an assembly where officers were elected, charges were distributed and work was outlined for the next two years. Follow-up to the success of the workshop led to expressions of thanks to the WBMT. It was stated that the meeting "truly shattered all our expectations".

4.2.2.8 2022 Rawalpindi, Pakistan

From September 22 to 24, 2022 the 8th WBMT Workshop, organized together with Armed Forces Bone Marrow Transplant Centre/National Institute of Blood and Marrow Transplant (AFBMT/NIBMT) in collaboration with WHO, took place as a hybrid meeting in Rawalpindi, Pakistan. This workshop was attended by 2845 individuals from 52 countries including delegates from the Eastern Mediterranean region, North America, South America, Asia Pacific, Europe and Africa. The program consisted of sessions

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on minimum essential requirements for establishing or expanding a transplant program in emerging countries, transplant indications for starting programs, training and dissemination of knowledge, donor selection and donor safety, transfusion services for transplant centers, cell collection and processing, quality assurance in transplant centers, and patient/donor registration and outcome database. Short presentations were followed by moderated panel discussions with local and regional representatives discussing all important topics in detail.

In the inaugural session attended also by Lt. Gen. Nigar Johar, the Surgeon General/DGMS of the Pakistan Army and Minister of Health, Dr. Efstratios Chatzixiros presented the WHO global perspective of HCT followed by reports about regional transplant activities.

Dr. Qamar Un Nisa Chaudhry mentioned the fragmented and under-developed health care system, the under-developed diagnostic and transfusion services, the low number of transplant centers, the lack of trained human resource, the non-availability and costs of chemotherapeutic agents and monoclonal antibodies, the lack of national disease and transplant data and the lack of awareness and prevention programs for genetic diseases like beta thalassemia as challenges for HCT in Pakistan. In Pakistan, the first allogeneic HCT was performed by the Armed Forces Bone Marrow Transplant Centre on 19 July 2001. Meantime, the country has 12 transplant centers and a total number of 3,380 HCT including 2,704 allogeneic and 676 autologous HCT have been performed. The first cellular culture facility was established at the AFBMTC in 2015. This facility performed clinical trials on the use of mesenchymal stromal cells in spinal cord injuries, graft-versus-host disease, COVID-19 pneumonia and studies in autoimmune disorders and diabetic nephropathy are currently ongoing. The AFBMTC plans to establish an in-house CAR-T-cell program that has been approved. Currently, infrastructure including procurement of equipment and training of staff is ongoing. Future plans include in-house production of cytotoxic T-cells and gene therapy. Additionally, reports on transplant activities in Saudi Arabia, Oman, Iran, Qatar, United Arab Emirates, Nepal and Bangladesh were presented. A parallel Nursing Session took place on 23 September 2022.

4.2.2.9 2023, Lagos, Nigeria

In 2023, the WBMT Nurses Standing Committee was established which immediately set out to organizing a workshop for nurses. Initially, the proposed workshop was intended for a small group of nurses in the Lagos University Teaching Hospital (LUTH) and the Sickle Cell Foundation Nigeria (SCFN). The initiation of the proposed workshop started with a survey-questionnaire posed to the Nigerian group to determine the actual needs and concerns of the participating parties. A series of communications was performed, followed by meetings and plannings on the topics. The 35 topics of the program were lectured by 27 expert volunteers from 13 different countries ranging from North America, Latin America, Europe, Africa, Middle East, Central Asia and Asia Pacific. As agreed, speakers were allotted 15 minutes to discuss their topic either by virtual presentation or via a pre-recorded mode. A thorough coordination with the Nigerian IT support team from LUTH was established to ensure the seamless flow of the lectures. The workshop took the interest of many nurses and health professionals from across the world. The registration portal has recorded at least 900+ registrants. Actual attendance tallied at 433+ from 37 countries of 7 regions. It has certainly fulfilled part of the mission and visions of the WBMT Nurses Standing Committee as it also manifested the real need to reach out to nurses in developing countries who are so motivated and eager to optimize their knowledge in the field of BMT.

4.2.2.10 Future Workshops and Symposia

In Q3 2024, the 9th WBMT Workshop & Symposium will be held in Mongolia, of which details will be shared in due time.

4.3 Consensus and Guideline Initiatives

The primary purpose of the WBMT is to serve as a collective venue and voice – at a global level – for HCT and related issues. With the support of its Board, the WBMT publishes its findings on critical matters or burning issues on its website and collaborates with other scientific organizations. Previously, WBMT positions were published on standardized product labelling, and rejection of financial reimbursement for donation of cellular products in peer review journals as can be seen on the WBMT website.

More recently, current and previous Standing Committees authored substantial work, either independently or collaboratively, on standardization of practice topics (minimal requirements for a HCT program, training best practices and other topics) (**Section 3.0** and **Appendix G**). In 2017 and 2018 the Transplant Center / Recipient Committee created a table of minimal requirements for establishing a new HCT program. All elements were rated, then reviewed by committee volunteers and later published. This fundamental information was used, in part, by a WBMT group who visited Ethiopia in December 2015 to assess their existing situation and to document what might be required for their five-year HCT plan. A final report was provided in the second quarter of 2016. Unfortunately, there is current considerable political instability in Ethiopia which has meant that the current project has been put on hold as the local team and government are unable to focus on this project currently. We will pick this up when the political situation improves.

In 2021 a statement on changes in HCT practices in response to COVID-19 based on an international survey was published under the leadership of the WBMT Donor Issues Standing Committee.

4.4 Collaboration with the WHO

As noted previously, a WHO representative has been involved with WBMT activities since the earliest development meetings. The WBMT maintained a working relationship with the WHO for almost four years before being officially invited to apply for *NGO in official relations* status with the WHO. The WHO approved the WBMT's initial application as of January 2013 and approved this continued status in January 2019. This status provides the WBMT with the opportunity to continue its work in partnership with the WHO in promoting global excellence in HCT, stem cell donation, and cellular therapy. This partnership brings with it additional responsibilities, including participation in other WHO initiatives, in pursuit of mutual educational, scientific, and philanthropic missions. Because of the importance of this collaboration, the WBMT created in 2016 an Executive Committee position, generally the Past President, specifically designated to represent the WBMT within the WHO.

In 2022 the WBMT Board approved a new standing committee, called the WHO Liaison Standing Committee chaired by the Past President to acknowledge the increasing activities important for fulfilling the collaboration plan with WHO.

4.4.1 Platform for WBMT Collaborative Projects

The NGO status of the WBMT is in relation to activities that form the foundation of WBMT's continued work consisting of:

- Technical input and relevant data that may inform WHO's work on raising awareness and addressing the burden of diseases/conditions that are amenable to HCT:
 - Assess access to HCT over time on a global level (WBMT Global Activity Survey).
 - Assess access to HCT over time in different regions of the world (WBMT Global Activity Survey).
 - Organization and conduct of 8th WBMT workshop in Pakistan assessing regional HCT activities, HCT infrastructure and teams as well as challenges for HCT access.
 - WBMT member activities to support HCT programs in different world regions.
 - Impact of COVID-19 on global HCT activities.
 - Support of Ukraine during ongoing war.
- Technical input that may inform WHO's work towards developing guidance materials for establishing hematopoietic stem cell transplantation programs at country-level.
- Under WHO's guidance, support WHO's work towards the development of knowledge resources to build capacity in low and low-middle income countries selected by WHO and in agreement with national authorities for starting or strengthening HCT programs, in line with WHO's guiding principles (WBMT/WHO Workshop in Pakistan).
- Technical input that may inform WHO in assessing access to cell and gene therapies worldwide in line with current WHO frameworks and guidelines.
- Technical input that may inform WHO's work in the development of resources and tools for strengthening the oversight capacity at global and national level, in line with WHO's principles.
- Technical input that may inform WHO's work on development of quality and safety guidance for gene and cell therapies, in line with relevant WHO regulatory frameworks and guidelines.

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4.5 Supporting Other HCT Global Activities

4.5.1 Ethiopia – A New HCT Center

The WBMT assists in establishing new HCT programs of high quality. In November 2014 representatives from Ethiopia (a Minister of Health office representative, individuals representing blood banks, hematologists, and others) met with WBMT leaders and requested support and technical assistance in establishing an HCT program in their country. These preliminary discussions led the WBMT to create a task force of interested parties to assess and assist in this venture. As at that time Co-Chair of the WBMT Graft Processing and Cellular Therapies Committee, Mickey Koh, was identified as the WBMT Project Leader and he maintained frequent communication with the Ethiopian team throughout 2015. Planning became more focused in the second half of 2015, and a comprehensive onsite visit by four WBMT HCT clinicians (some with substantial blood transfusion expertise) followed in December 2015. In the first part of 2016, the team prepared a full report, which was approved by the WBMT Executive Committee and distributed to the Ethiopian clinician team as well as the Dean of the adjacent medical school and the Minister of Health. Throughout the year, Mickey Koh conducted regular discussions via email with the Ethiopian team, and this project continued in 2018. Though challenges exist (recent political instability), the WBMT is impressed with the eagerness and engagement of local planners who are strongly supported by their current government.

Since then, Mickey Koh has continued with regular teleconference calls to assess the progress of this initiative all through 2016 and 2017. There were encouraging signs of continuing governmental support and concrete plans were being drawn up for building works. There was also planning done for training of Ethiopian staff in HCT. Unfortunately, the domestic and political situation changed in Ethiopia about 2018 and there has been little progress since. The political situation has worsened with fighting in the country and Covid-19 has put further strain on the country and its resources.

In the second half of 2023, Mickey Koh was contacted by the Ethiopian haematologist and blood bank specialist expressing an interest in restarting this project. It does have official endorsement at the Ethiopian government and Mickey Koh has since been in contact with the Ministry of Health officials who have confirmed that starting a transplant programme is a priority for the Ethiopian government. Since then, there have been regular online meetings set up again to discuss and to move ahead with this project. The timeline is for a transplant programme is to be established in the next 12-18 months.

4.5.2 Ukraine

In November 2021 the ELN and WBMT were asked to help to develop allogeneic stem cell transplantation (HCT) in Ukraine. While allogeneic HCT was performed in children, no activity was reported for a population of 44 million inhabitants. Since WBMT has already a considerable experience in supervisory telemedicine in Paraguay and Lithuania, an inspection of two autologous programs on site took place in November 2021. With the beginning of the war in February 2022, HUP was founded by the WBMT and the European Leukemia Net (ELN) as a network of worldwide leading scientific non-profit societies for Ukrainian patients with hematological diseases. Members of this unique network are the American Society of Hematology (ASH), the American Society for Transplantation and Cellular Therapy (ASTCT), the European Society for Blood and Marrow Transplantation (EBMT), the German Society of Hematology and Oncology (DGHO), the Lymphoma Coalition, the European Cancer Coalition, the ELN and the WBMT, with its working relation with the World Health Organization (WHO). The HUP,

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in cooperation with the City of Leipzig, was extremely successful in delivering substantial amounts of drugs, diagnostic reagents and medical devices not available in the country. Intellectual support was provided by weekly (daily for the Kyiv BMT center) videoconferences and by establishing the first European Tumor Board for Ukrainian patients (EBMT). Recently, the most modern hematology diagnostics provided by the laboratory MLL in Munich, Germany, became available free of charge for all patients admitted to Ukrainian Hospitals. The care and outcome of patients with hematological diseases in the Ukraine are now comparable with the majority of European countries representing an essential step forward in comparison to the pre-war situation, where patients were sent abroad (e.g. Turkey) at the expense of the Ukrainian government. In 2022, 223 Hematopoietic Stem Cell Transplantation (HCT) procedures, the only curative approach for many hematological and non-hematological diseases, were performed in the Ukraine (Table attached). Most importantly and for the first time, 45 allogeneic HCT from related and unrelated donors were performed in adult patients. The 2022 activities in HCT/population, although being lower than the median activity in other European countries, represent today a sustainable and important step forward in difficult periods and beyond for a European country like Ukraine. In 2023, more than 300 HCT were performed in the whole country showing a further increase (>35% of the previous year) of activities.

The majority of these autologous and allogeneic HSCT (n=58) and the specialized care of patients returning from the treatment abroad to Ukraine were performed at the Kyiv BMT Center. Using daily supervisory telemedicine, all modern type of HSCT including those from related identical, related non-identical and unrelated donors were performed in the center on a routine basis. This was possible only through the modern infrastructure of the center (lamina air flow rooms, laboratories, stem cell harvest facilities) and the experienced team of physicians and nurses based on more than 1000 HCT from patient's own stem cells (autologous HSCT). More importantly, the Kyiv BMT center has excellent and expensive up-to date sterile rooms with HEPA filtration, which are essential to decrease or avoid life threatening infections during the period of aplasia (no defense against infection). The infection rates of the patients transplanted in the center are similar to the one in the bigger European and non-European centers and the 100-days treatment related mortality is below 5% for autologous and below 10% for allogeneic HCT. It is not surprising that the head of the unit was honored 2 weeks ago for life achievement from the ASTCT, and the oral presentation in Orlando, USA, was scored best abstract. The HUP continues his work by videoconferencing every week (more than 43 meetings were held up to now) and is open to all interested people.

	2021								2022									
	adults				pediatric				Total	adults				pediatric				Total
	Auto	MRD	M(M)UD	Haplo	Auto	MRD	M(M)UD	Haplo		Auto	MRD	M(M)UD	Haplo	Auto	MRD	M(M)UD	Haplo	
Kyiv BMT Center	80	2	0	0					82	41	6	6	5					58
Blood pathology and transfusion Lviv	15	0	0	0					15	21	0	0	0					21
National Cancer Institute	48	0	0	0					48	31	0	0	0	6				37
Children Hospital "Ohmatdyt"	0	0	0	0	11	12	14	16	53	0	2	9	6	2	4	12	1	36
Cherkasy regional Hospital	30	2	2	0					34	34	3	5	3					45
Kyiv Regional Hospital	16	0	0	0					16	12	0	0	0					12
Feofania Hospital										11	0	0	0					11
Ukrainian Children's, Lviv										0				3				3
Children's Hospital, Dnipro	0	0	0	0				0	0					0	0	0	0	0
Total	189	4	2	0	11	12	14	16	248	150	11	20	14	11	4	12	1	223
Total	189	6			11		42		248	150		45		11		17		223

Table: Hematopoietic Stem Cell Transplantation in the Ukraine during 2021 and 2022

4.5.3 Regional HCT Societies

As previously mentioned, (**Section 4.2.2.2**) the WBMT has been instrumental in supporting the development of the now highly successful LABMT. The LABMT first met as an integrated group in 2013; now it has a Board and bylaws, and it holds regular monthly and annual meetings. The WBMT continues to support this organization, and the LABMT continues to actively develop, including creating standing committees modelled after WBMT committees.

Similarly, the WBMT was very supportive of establishing the AfBMT (**Section 4.2.2.3**). A small, interim Executive Committee existed early in the building process; elected officers are now in place. The WBMT approved the AfBMT's formal application for Member Society status in February 2015 and continues to place high focus and expectations on this organization; it represents the single remaining continent that has not uniformly reported transplant activity or outcome data. In April 2018, the WBMT and AfBMT hosted a Workshop in Casablanca, Morocco, in association with the Moroccan Society of Hematology (**Section 4.2.2.5**). The AfBMT under the current leadership of Dr. Alaa Elhaddad has regular meetings discussing important topics of HCT and stem cell donation.

Both of these groups are encouraged to commit to participation in the WBMT annual global survey of HCT activity (**Section 4.1**). After the Workshop in Latin America, several new transplant centers started providing activity data to this survey. This is an important step forward in addressing the current gap in acquisition of data from these regions.

4.6 Website

The first WBMT website was launched in 2010. Identifying itself via the internet was an important first step in the evolution of WBMT branding. In 2020 a new version of the website was launched: wbmt.org. Substantial effort is continually placed on posting current documents, information regarding Workshops and Symposia programs, and important newsworthy items (e.g., joint statement on crisis in Ukraine, latest versions of the Bylaws and House Rules, etc.).

4.7 Research Data Task Force

The WBMT Board mandated development of a Task Force in 2013 for the purpose of developing guidelines for management and use of the WBMT GTA data as well as guidelines for how research should be managed with collaboration amongst WBMT Member Societies. These documents (**Appendices D1 and D2**) were approved in 2015, and all Member Societies signed data transmission agreements in early 2016. Since 2015, the Transplant Center / Recipient Issues Committee (**Section 3.7**) administers all activities related to the GTA survey, including providing reports and reviewing proposals for use of these data. During 2021, this Task Force completed the revision of the WBMT Research Guidelines, the guiding principles of collection, presentation, dissemination and sharing of the Global Activity Survey data.

4.8 Administrative support

Administrative support is outsourced to the World Marrow Donor Association (WMDA) that took on this responsibility per July 2019. As it became more clear that WBMT faces a growing volume of administrative work, in 2023, a Task Force committed to investigate a new way forward for WBMT's administrative support. They concluded that, with the global presence and interaction with international sponsors, stakeholders and other organizations, WBMT needs an executive who could lead this work from a planning and financial perspective. With more administrative support, WBMT can achieve its goals better and reach sustainable financial streams. After WBMT Board approval was obtained for this initiative, a vacancy was published and the Task Force sees to follow up on the aim of hiring an executive, for nearly a fulltime job. From April 2024 onwards, WBMT should function with a newly assigned executive, and will have terminated their contract with the WMDA.

4.9 Updated Bylaws and House Rules

In 2023 the WBMT [Bylaws](#) and [House Rules](#) were updated. The most recent versions are available on the WBMT website (by clicking the links).

5.0 FUTURE AIMS

The WBMT continues to evolve and available resources and time from the Society leaders and committee members constrain the selection of projects for its portfolio. In addition to the plans identified by each Standing Committee, the Executive Committee regularly assesses priority activities.

They are to:

- Establish a more durable mechanism for soliciting and sustaining high level financial support. Over the past few years, WBMT member societies have been asked to contribute via a voluntary fee. The personalized letter stating this request has been added (**Appendix J**). In 2024, a newly assigned executive will be tasked with planning financial sustainability.
- Continue the close collaboration with the WHO on global projects relevant to HCT and stem cell donation and fulfilling WBMT responsibilities as an NGO in official relations with the WHO (**Section 4**). The WHO Liaison Standing Committee has been created (**Section 3.8**) to follow up on projects with the WHO.
- Continue to offer Workshops and Scientific Symposia in regions with constrained resources and willing to establish new or expand existing HCT programs.
- Integrate regional registries to the WBMT registry.
- Continue working on improvement of collection and analyses of global activity data by the new and user friendly database and its publication.
- Integrate subcommittee functions with regional registries.
- Additional focus on advanced cell therapy and access to these advanced therapies by LMIC.

APPENDIX A: MEMBER SOCIETIES

Member Society	Description
<p>Association for the Advancement of Blood & Biotherapies (AABB) aabb.org</p>	<p>AABB (Association for the Advancement of Blood & Biotherapies) is an international, not-for-profit organization representing individuals and institutions involved in the fields of transfusion medicine and biotherapies. The Association works collaboratively to advance the field through the development and delivery of standards, accreditation and education programs. AABB is dedicated to its mission of improving lives by making transfusion medicine and biotherapies safe, available and effective worldwide.</p>
<p>African Blood and Marrow Transplantation Group (AfBMT) https://www.wbmt.org/member-societies-of-wbmt/AfBMT/</p>	<p>In order to encourage activity in the medical and scientific field of blood and marrow transplantation in Africa, AfBMT has been established with the support of the WBMT. The main objectives are to improve awareness among health workers, to improve the skills of healthcare teams through sharing experiences and adapt the knowledge and potential of HCT therapy to local resources and needs.</p>
<p>American Society for Apheresis (ASFA) apheresis.org</p>	<p>ASFA is the premier organization of physicians, scientists, and allied health professionals whose mission is to advance apheresis medicine for patients, donors, and practitioners through education, evidence-based practice, research, and advocacy. ASFA creates guidelines for the appropriate use of apheresis techniques, provides education for apheresis practitioners, and promotes research in apheresis medicine, as well as information for patients regarding apheresis procedures.</p>
<p>American Society of Transplantation and Cellular Therapy (ASTCT) https://www.astct.org/home</p>	<p>ASTCT is an international professional membership association of more than 2,200 physicians, investigators and other health care professionals from more than 45 countries. It is dedicated to improving the application and success of stem cell transplantation and related cellular therapies. It strives to be the leading organization promoting research, education and clinical practice in the field.</p>
<p>American Society for Histocompatibility and Immunogenetics (ASHI) ashi-hla.org</p>	<p>ASHI is a not-for-profit association of clinical and research professionals including immunologists, geneticists, molecular biologists, transplant physicians and surgeons, pathologists and technologists. As a professional society involved in histocompatibility, immunogenetics and transplantation, ASHI is dedicated to advancing the science and application of histocompatibility and immunogenetics; providing a forum for the exchange of information; and advocating the highest</p>

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	standards of laboratory testing in the interest of optimal patient care.
Asia Pacific Blood and Marrow Transplantation (APBMT) apbmt.org	APBMT is an international organization which is involved in hematological stem cell transplantation, sharing their information and cooperating with basic and clinical research in Asia-Pacific countries. APBMT is comprised of 22 countries/regions (Australia, Bangladesh, Cambodia, China, Hong Kong, India, Indonesia, Iran, Japan, Korea, Malaysia, Mongolia, Myanmar, Nepal, New Zealand, Pakistan, Philippines, Singapore, Sri Lanka, Taiwan, Thailand and Vietnam) and is expanding its activities through the annual congresses, registration systems and working groups under the collaboration with the member societies of WBMT.
Australia and New Zealand Transplant and Cellular Therapies Ltd (ANZTCT) anztct.org.au	The Australia and New Zealand Transplant and Cellular Therapies Ltd (ANZTCT) is a society consisting of medical graduates and scientists involved in the clinical or laboratory management of patients undergoing blood or marrow stem cell transplantation or with an interest in the field of blood or marrow stem cell transplantation research.
Center for International Blood and Marrow Transplant Research (CIBMTR) cibmtr.org	CIBMTR® is a research collaboration between the National Marrow Donor Program® (NMDP)/Be The Match® and the Medical College of Wisconsin (MCW). CIBMTR collaborates with the global scientific community to advance hematopoietic cell transplantation and cellular therapy worldwide to increase survival and enrich quality of life for patients. CIBMTR facilitates critical observational and interventional research through scientific and statistical expertise, a large network of transplant centers, and a unique and extensive clinical outcomes database.
Eastern Mediterranean Blood and Marrow Transplantation (EMBMT) embmt.org	EMBMT was established in 2008 as a cooperative platform for physicians, scientists and healthcare workers from institutions in the WHO designated Eastern Mediterranean area with the goal of sharing experience, initiation of cooperative trials and establish common strategy to achieve optimization in the field of HCT. The group's aim is to promote all aspects of patient care, academic and research activities associated with HCT in the region which includes knowledge of the trends, patterns and status of HCT in Eastern Mediterranean countries.
Eurocord eurocord.org	EUROCORD is a non-profit organization affiliated to the University Paris Diderot and to the Assistance Publique des Hopitaux de Paris (APHP). It has strong links with the University Institute of Hematology (IUH) at the Saint-Louis hospital, and the French Agence de la biomédecine. Located within the campus of Saint Louis hospital in Paris, EUROCORD is a clinical

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	research group dedicated to study cord blood transplantation and innovative therapy in both malignant and non-malignant diseases, and to develop new indications for stem cell therapy.
European Federation for Immunogenetics (EFI) efi-web.org	EFI is a European society of workers in the field of immunogenetics, histocompatibility testing and transplantation. EFI supports the development in Europe as a discipline in medicine and promotes research and training in this field.
European Society for Blood and Marrow Transplantation (EBMT) ebmt.org	EBMT is a collaborative peer network of professionals working in centres and as individuals in the field of clinical stem cell transplantation and cellular therapy. Members contribute to and benefit from the collective knowledge that the EBMT has accrued, with the ultimate goal of saving the lives of patients with blood cancers and other life-threatening diseases.
European Leukemia Network (ELN) www.leukemia-net.org	The objective of the ELN is to integrate the leading leukemia trial groups (CML, AML, ALL, CLL, MDS, CMPD), their interdisciplinary partners (diagnostics, treatment research, registry, guidelines), industry and SMEs across Europe to form a cooperative network for advancements in leukemia-related research and health care and cure.
European School of Hematology (ESH) esh.org	ESH is a non-profit institution for continuing education that promotes and facilitates access to research in hematology and related disciplines in Europe, North America, North Africa, and the Middle East. ESH also develops tools for continuing education produced in collaboration with international experts in the field.
Foundation for the Accreditation of Cellular Therapy (FACT) factwebsite.org	FACT is a non-profit organization that establishes standards for high-quality medical and laboratory practices in cellular therapies for the purposes of voluntary inspection.

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<p>International Council for Commonality in Blood Banking Automation (ICCBBA)</p> <p>iccbba.org</p>	<p>ICCBBA is a not-for-profit, tax exempt, NGO responsible for management of the ISBT 128 Information Standard for Blood and Transplantation, a global standard for the terminology, identification, labeling, and information transfer of human blood, cell, tissue, and organ products across international borders and disparate health care systems. It ensures the highest levels of accuracy, safety, and efficiency for the benefit of donors, patients, and ISBT 128 licensed facilities worldwide. The system features a unique, highly flexible, and comprehensive coding method for every collected product and provides international consistency to support the transfer, transfusion, or transplantation of blood, cells, tissues and organs.</p>
<p>International Society of Blood Transfusion (ISBT)</p> <p>isbtweb.org</p>	<p>ISBT is an international professional society that facilitates knowledge about transfusion and transplantation science and medicine.</p>
<p>International Society of Cellular Therapy (ISCT)</p> <p>isctglobal.org</p>	<p>ISCT is a global association that promotes cellular therapies research by fostering international translational research, driving commercialization strategies, and providing education.</p>
<p>Joint Accreditation Committee – ISCT (Europe) & EBMT (JACIE)</p> <p>jacie.org</p>	<p>JACIE is a non-profit organization that assesses and provides accreditation in the field of HCT. Its primary aim is to promote high-quality patient care and laboratory performance in hematopoietic stem cell collection, processing and transplantation through an internationally recognized system of accreditation. It partners with EBMT, ISCT, and FACT.</p>
<p>Latin American Bone Marrow Transplantation group (LABMT)</p> <p>https://www.wbmt.org/member-societies-of-wbmt/labmt/</p>	<p>The purpose of this group is to provide a mechanism through which Latin American Blood and Marrow Transplant and Hematology groups can collaborate and engage in scientific and educational activities and endeavours to promote excellence in stem cell transplantation, stem cell donation, cellular therapy and hematologic practices. Activities include data collection and sharing outcome information.</p>

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<p>World Marrow Donor Association (WMDA) wmda.info</p>	<p>WMDA is a global association whose mission to work with its members to ensure reliable provision of life-saving cells while promoting care and safety for both patient and donor. WMDA now incorporates all functions previously undertaken by Bone Marrow Donors Worldwide and Netcord.</p>
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APPENDIX B: EXECUTIVE COMMITTEE ELECTED OFFICERS

**President**

Mahmoud Aljurf, MD, MPH
King Faisal Specialist Hospital & Research Center
P.O. Box 3354
Riyadh 11211 Saudi Arabia
maljurf@kfshrc.edu.sa

**Immediate Past-President and WHO Representative**

Hildegard Greinix, MD
Medizinische Universitaet Graz
Division of Hematology
Auenbruggerplatz 38, 8036, Graz Austria
hildegard.greinix@medunigraz.at

**Vice President**

Mickey Koh, MD, FRCP, FRCPath, PhD
St George's Hospital and Medical School
Jenner Wing Corridor 6
Blackshaw Road
London W 17 0QT, UK
Mickey.koh@stgeorges.nhs.uk

**Treasurer**

Annalisa Ruggeri
IRCCS Ospedale San Raffaele, Ematologia e Trapianto di midollo
via Olgettina 60
20135, Mialno, Italy
annalisaruggeri80@hotmail.com

**Secretary**

Sebastian Galeano
Department of Hematology
Hospital Británico
Av. Italia 2420
Montevideo, Uruguay
sgaleano.uy@gmail.com



Past President

Daniel Weisdorf, MD
Blood & Marrow Transplant Program, University of Minnesota,
MMC 480, Minneapolis, MN 55455, USA
weisd001@umn.edu



Past President

Jeff Szer
Department of Clinical Haematology & BMT Service,
The Royal Melbourne Hospital, Melbourne, Australia
jeff.szer@mh.org.au



Past President

Yoshihisa Koderu, MD, PhD
Department of Promotion for Blood and Marrow
Transplantation
Aichi Medical University, School of Medicine
21 Karimata Yazako Nagakute-cho, Aichi 480-1195, Japan
ykoderu@river.ocn.ne.jp

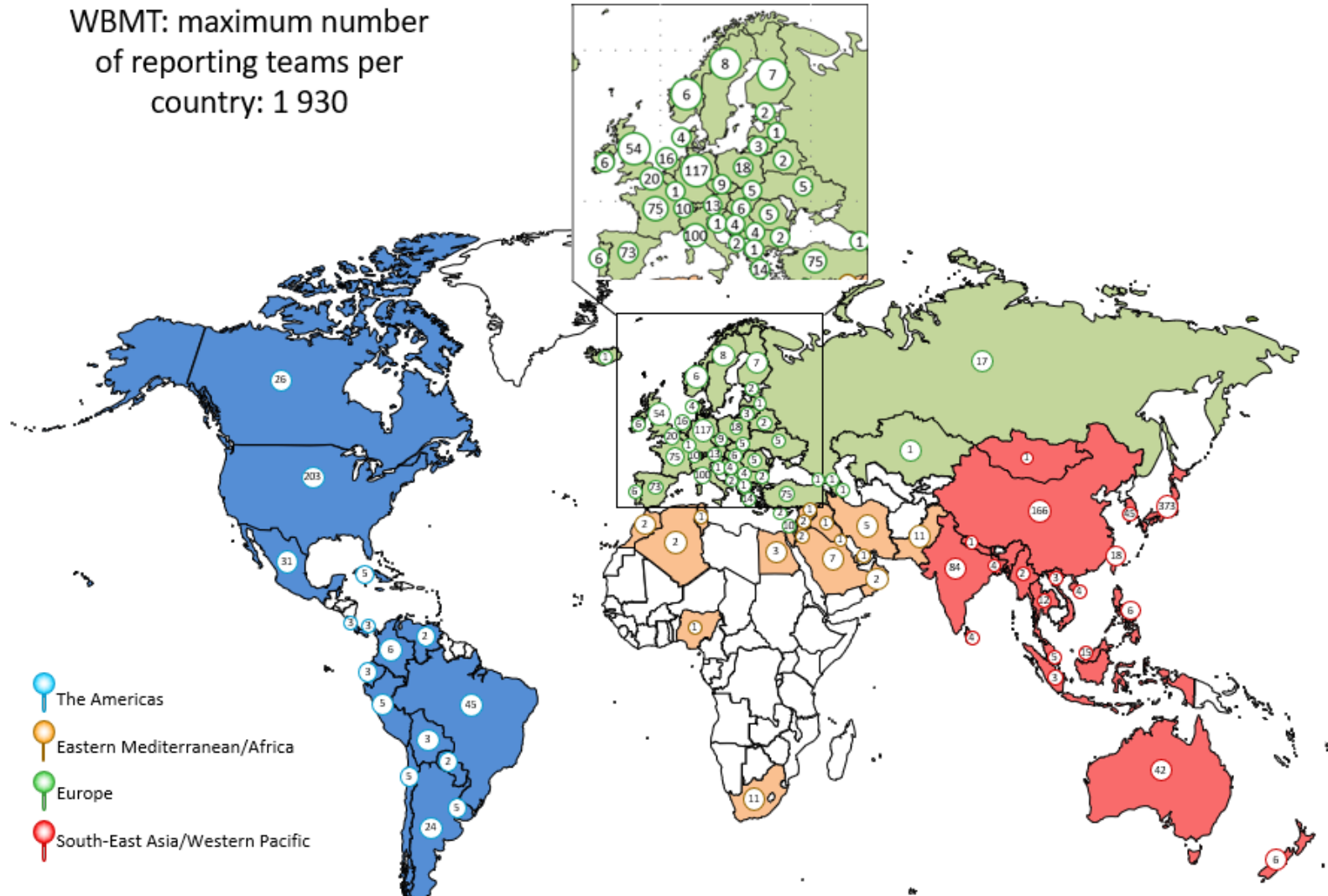


Founding President

Dietger Niederwieser, MD
Division of Hematology and Medical Oncology, Univ. of Leipzig
Johannisallee 32A, 04103 Leipzig, Germany
dietger@medizin.uni-leipzig.de

APPENDIX C1: CENTER SITES THAT CONTRIBUTE DATA TO THE ACTIVITY SURVEY

WBMT: maximum number of reporting teams per country: 1 930



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APPENDIX C2: COUNTRIES THAT HAVE CONTRIBUTED DATA

Region	WHO Region	Country	Max. N Teams in any survey year
3	EMR/AFR (AFBMT)	Algeria	2
1	AMR/PAH	Argentina	24
2	EUR	Armenia	1
4	SEAR/WPR	Australia	42
2	EUR	Austria	13
2	EUR	Azerbaijan	1
4	SEAR/WPR	Bangladesh	4
2	EUR	Belarus	2
2	EUR	Belgium	20
1	AMR/PAH	Bolivia	3
2	EUR	Bosnia and Herzegovina	2
1	AMR/PAH	Brazil	45
2	EUR	Bulgaria	2
1	AMR/PAH	Canada	26
1	AMR/PAH	Chile	5
4	SEAR/WPR	China	166
1	AMR/PAH	Colombia	6
1	AMR/PAH	Costa Rica	3
2	EUR	Croatia	4
1	AMR/PAH	Cuba	5
2	EUR	Cyprus	2
2	EUR	Czech Republic	9
2	EUR	Denmark	4
1	AMR/PAH	Ecuador	3
3	EMR/AFR (AFBMT)	Egypt	3
2	EUR	Estonia	2
2	EUR	Finland	7
2	EUR	France	75
2	EUR	Georgia	1
2	EUR	Germany	117
2	EUR	Greece	14
4	SEAR/WPR	Hong Kong	4
2	EUR	Hungary	6
2	EUR	Iceland	1
4	SEAR/WPR	India	84
	SEAR/WPR	Indonesia	3
3	EMR/AFR (EMRO)	Iran	5
3	EMR/AFR (EMRO)	Iraq	1
2	EUR	Ireland	6

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2	EUR	Israel	10
2	EUR	Italy	100
4	SEAR/WPR	Japan	373
3	EMR/AFR (EMRO)	Jordan	2
2	EUR	Kazakhstan	1
3	EMR/AFR (EMRO)	Kuwait	1
2	EUR	Latvia	1
3	EMR/AFR (EMRO)	Lebanon	2
2	EUR	Lithuania	3
2	EUR	Luxembourg	1
2	EUR	Macedonia, FYR	1
4	SEAR/WPR	Malaysia	15
1	AMR/PAH	Mexico	31
4	SEAR/WPR	Mongolia	1
3	EMR/AFR (AFBMT)	Morocco	2
4	SEAR/WPR	Myanmar	2
4	SEAR/WPR	Nepal	1
2	EUR	Netherlands	16
4	SEAR/WPR	New Zealand	6
3	EMR/AFR (AFBMT)	Nigeria	1
2	EUR	Norway	6
3	EMR/AFR (EMRO)	Oman	2
3	EMR/AFR (EMRO)	Pakistan	11
1	AMR/PAH	Panama	3
1	AMR/PAH	Paraguay	2
1	AMR/PAH	Peru	5
4	SEAR/WPR	Philippines	6
2	EUR	Poland	18
2	EUR	Portugal	6
3	EMR/AFR (EMRO)	Qatar	1
2	EUR	Romania	5
2	EUR	Russian Federation	17
3	EMR/AFR (EMRO)	Saudi Arabia	7
2	EUR	Serbia	4
4	SEAR/WPR	Singapore	5
2	EUR	Slovak Republic	5
2	EUR	Slovenia	1
3	EMR/AFR (AFBMT)	South Africa	11
4	SEAR/WPR	South Korea	45
2	EUR	Spain	73
4	SEAR/WPR	Sri Lanka	4
2	EUR	Sweden	8
2	EUR	Switzerland	10

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3	EMR/AFR (EMRO)	Syria	1
4	SEAR/WPR	Taiwan	18
4	SEAR/WPR	Thailand	12
3	EMR/AFR (AFBMT)	Tunisia	1
2	EUR	Turkey	73
2	EUR	Ukraine	4
2	EUR	United Kingdom	54
1	AMR/PAH	USA	203
1	AMR/PAH	Uruguay	5
1	AMR/PAH	Venezuela	2
4	SEAR/WPR	Vietnam	3
		93	1930

APPENDIX D1: WBMT RESEARCH GUIDELINES

WBMT RESEARCH GUIDELINES

(Original proposal for submission to WBMT Board – November 2014)

(Renewed version September 2021)

This document* is developed by the Worldwide Network for Blood and Marrow Transplantation (WBMT) and outlines the guiding principles of research performed directly by this entity through the global survey data or indirectly by fostering collaboration among member societies with the intent of dissemination of information for advancement of the hematopoietic cell transplantation field.

BACKGROUND:

The idea of creating guidelines for research endeavors generated by WBMT Member Societies laterally, or on behalf of the parent organization (WBMT), was first presented during the 2013 annual, in-person Board meeting in Salt Lake City, USA. The Board agreed that guiding principles for the conduct of research by or within the WBMT was an important topic to be explored and formed a Research Activity Task Force to 1) develop a guidelines document on developing, conducting and disseminating results of studies involving data and/or investigators from multiple Member Societies and, 2) to promote collaboration among the WBMT Member Societies/registries through the establishment of a framework for the conduct of research.

During the deliberations of the Research Activity Task Force it was decided to cover this topic of research in two different fronts, first to develop the guiding principles of collection, presentation, dissemination and sharing of the Global Activity Survey data, herein defined as Global Transplant Activity data. Second, the Research Activity Task force would develop guiding principles to provide general guidelines for the conduct of international collaborative research (Appendix D), with the intent to serve as reference for research procedures and for fostering collaboration among member societies.

OVERARCHING WBMT GUIDING PRINCIPLES OF RESEARCH

Overarching Guiding Principle #1

The Worldwide Network for Blood and Marrow Transplantation (WBMT) has the responsibility to collect, store, disseminate information related to global hematopoietic cell transplantation activity. This is done through the annual global activity survey. WBMT will be responsible for safe keeping of this data and oversight of its utilization.

Overarching Guiding Principle #2

The WBMT shall not duplicate or compete with research actively being conducted by its Member Societies and/or registries. Each WBMT Member Society conducts research in its unique manner, independent from the WBMT.

Overarching Guiding Principle #3

The WBMT will foster collaboration through its member societies for the development of collaborative research to address global questions in transplantation, encourage the analysis of regional differences and offer a global perspective on transplantation. Furthermore, this collaborative research shall fulfill the WBMT mission including increase global awareness of the importance of transplantation, improve access to transplant, optimize safety for patients and donors, and improve the quality of all activities associated with hematopoietic cell transplantation

GLOBAL TRANSPLANT ACTIVITY (GTA)

Global Transplant Activity Guiding Principle #1

The WBMT is required to survey transplant activity globally in an annual basis to maintain its Non-Government Organization (NGO) status with the World Health Organization (WHO).

Commentary on GTA Guiding Principle #1

Since the January 2013 award of NGO status by the WHO, there are important and continuing obligations for the WBMT. One such criterion is referred to as “Global Database on Donation and Transplantation”. WHO, along with the Spanish National Transplant Organization established the Global Observatory on Donation and Transplantation and one of several goals is the development of a global database on donation and transplantation. WBMT has facilitated access to its global survey data for input into this Observatory database since 2006 and remains an ongoing project.

The current process for collecting these Global Activity data is performed by the WBMT Global Transplant Activity Survey Officer. All GTA related communication (e.g., requests to centers and registries) is managed by this individual. The data is collected through a survey and represents the number of first transplants performed by a center during a calendar year. Data for a particular year activity is collected from November of the subsequent year through February. For example, submission related to the activity for 2013 will be due starting November 2014 through February 2015. This data will be compiled and released to the WHO and to the public by fall of 2015.

Any transplant center is eligible to provide data to the WBMT through its Member Society. The only requirement for participation is that each member society has a standing agreement with the WBMT to share transplant activity data. (Appendix A) WBMT will have the autonomy in using this data according to its mission and share with third parties for specific projects (Guiding Principles #2 and #3).

One important exception in the relationship between the WBMT and a member society involves transplant activity data from regions where the regional member society is still in development. In these instances, direct communication from a transplant center and the WBMT is allowed, condition upon having a standing agreement in place. The transplant center is required to include in the survey whether it has an active affiliation (i.e. data reporting) with an outcomes registry (APBMT, CIBMTR or EBMT) or not. Additionally, the regional member society in question needs to be aware of this direct relationship between its transplant center and the WBMT. In case of data being shared from a transplant center directly with the WBMT, the WBMT will share this activity information with the regional member society.

WBMT Global Transplant Activity data reports (Appendix B) capture disease indications (malignant and non-malignant) for allogeneic (related and unrelated) and autologous stem cell transplantation, donor type and stem cell sources. They do not include outcome data. Data are provided to the WBMT by transplant program sites, national societies and/or outcome registries.

The data from a WBMT member society with registry (APBMT, CIBMTR, EBMT, EMBMT, ABMTRR, and in future, LABMT and AFBMT) that is shared with the WBMT can be utilized by the same member society for other uses without restrictions.

Collection forms are available on the www.wbmt.org website and may be submitted in paper format or electronic mail.

Global Transplant Activity Guiding Principle #2

The WBMT will be responsible for the dissemination of the Global Transplant Activity report.

Commentary on GTA Guiding Principle #2

The responsibilities with the GTA include report annually to the WHO and share the activity with member societies. A summary slide set, updated annually outlying annual and cumulative activity will be uploaded in the WBMT website for public use. Activity reports in form of manuscript for publication are included among the dissemination of global transplant activity and will be done in a minimum schedule of one every other year.

Global Transplant Activity Guiding Principle #3

The WBMT has ownership of the GTA data and any use needs to be approved by the WBMT. This includes data requests and proposal for scientific studies that seek to utilize this data for analysis.

Commentary on GTA Guiding Principle #3

The GTA comprises of center level data on the number of transplant recipients including indications, donor and stem cell sources. These data, in aggregate, demonstrate important information of trends in activities and practices globally. Additional uses of this data are possible by any WBMT member societies. In addition to annual reports of global activities, any individual on behalf of the member societies can request specific information by contacting the WBMT Global Transplant Activity Survey Officer. If the use is for research purposes, the proponent is required to complete a proposal form (Appendix C) which needs to be approved by his or her Member Society Representative before it can be submitted to the WBMT. This proposal will then be reviewed by the Transplant Center and Recipient Standing Committee before it can be released. When a proposed study is approved, any Member Society that provided data to be used for that study will be notified by the approval committee. For data requests outside the member societies, GTA data can only be released with approval from the WBMT board or the Executive Committee according defined operation. In these situations, charges may apply, if these are requests from for-profit entities, according to the WBMT corporate program guidelines.

The data from a member society that is shared with the WBMT can be utilized by the same member society (which also has ownership of its data) without restrictions.

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Uses of GTA data to fulfill the non-governmental organization (NGO) with WHO will also be overseen by the Transplant Center and Recipient Issues Standing Committee. These analyses include periodic reports (annual or biennial) on practices and trends related to transplantation. The Transplant and Recipient Standing Committee will develop and maintain a tracking document with the status of all projects that utilized the GTA. This tracking document will be available to the Board and Executive Committee and the status of these studies or projects will be presented to these committees periodically.

Authorship of publication of studies using the GTA data will follow the authorship recommendations of the International Committee of Medical Journal Editors (ICMJE), which include the following criteria:

Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work; AND

Drafting the work or revising it critically for important intellectual content; AND

Final approval of the version to be published; AND

Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.


Authorship is carefully decided considering contributions of the study as well as the collection and the analyses of the GTA data of the WBMT. Authors lists consist of primary investigators who proposed the study, representatives from the WBMT member societies with registry, which submit GTA data, and the members and co-chairs of the Transplant Center and Recipients Issues Standing Committee, the WBMT Global Transplant Activity Survey Officer as well as representatives of the Executive Committee of the WBMT. The number of authors from each member society with registry will be agreed in advance among the co-chairs of the Transplant Center and Recipient Standing Committee (see Appendix E). The member societies that submitted data are then requested to select authors. The final authors list is overseen by the Transplant Center and Recipient Issues Standing Committee.

The specific procedures of the use of GTA data for research purposes are defined in the Appendix E (the WBMT Operation Manual for Global Transplant Activity Data Use) along with the Appendix F (the Letter of Commitment).

Insertion site for APPENDIX A (Data Transmission Agreement; DTA)

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Appendix B: Sample from the Transplant Activity Survey document (www.wbmt.org)

Country/Hospital:		WBMT SURVEY ON TRANSPLANT ACTIVITY 20.....																			
Contact E mail:		PLEASE REPORT THE NUMBER OF PATIENTS RECEIVING THEIR FIRST TRANSPLANT ONLY FOR THE YEAR 2009/2010/2011/2012																			
No. Teams reporting:		SEPARATELY ON EACH SURVEY SHEET																			
No. Teams known to transplant but do not report:																					
		NUMBER OF PATIENTS RECEIVING FIRST TRANSPLANTS ONLY																			
		Allogeneic											Autologous			Total					
		HLA - id sibling			Family non - id*			twin		Family total	Unrelated			Unrelated total							
BM	PBSC	Cord	BM	PBSC	Cord	BM	PBSC		BM	PBSC	Cord		BM	PBSC							Cord
Indication																					
Leukemias	Total Leukemia																				
	Total AML																				
	AML 1st CR																				
	non 1st CR																				
	Total ALL																				
	ALL 1st CR																				
	non 1st CR																				
	Total CML																				
	CML 1st cP																				
	not 1st cP																				
Other Leukemia																					
Total MDS/MPS (incl. combined MDS/MPS)																					
MDS incl. Sec AL																					
MPS																					
CLL incl. PLL																					
LPD	Total LPD																				
	Total Plasma Cell Disorder																				
	PCD - Myeloma																				
	PCD - other																				
	Total Lymphoma																				
	HD																				
NHL																					
Other LPD																					
Solid tumors	Total Solid tumors																				
	Neuroblastoma																				
	Germ cell tumor																				
	Breast Cancer																				
	Ewing																				
Other solid tumor																					
Non - Malignant disorders	Total Non-malignant dis.																				
	Total Bone Marrow Failure																				
	BMF - SAA																				
	BMF - other																				
	Hemoglobinopathy																				
	Primary Immune Deficiency																				
	Inherited Dis of Metabolism																				
	Auto Immune Disease																				
	Other Non Malignant Disease																				
	Other																				
TOTAL PATIENTS (1st. HSCT)																					
TOTAL NUMBER OF TRANSPLANTS PERFORMED THIS YEAR: includes 1st, 2nd, 3rd. etc.										ALLO:			AUTO:			TOTAL:					
EBMT CIC No. / CIBMTR Code / APBMT (if member):.....																					

Appendix C

GTA Study Form

Global Transplant Activity (GTA) Study Proposal Form

Prepare a brief description of the proposed study as you envision it. This should be no more than three pages, using standard 8½" X 11" paper with 1" margins. Use the outline below and send your description to (H. Baldomero or WBMT site)

Study Title

Include the name(s) and institution(s) and WBMT Member Society of the individual(s) proposing the study.

Specific Aims

State the primary purpose(s) of the study as concisely and clearly as possible. A reader should have a clear idea of the purpose for which the data will be analyzed.

Scientific Justification

Summarize the rationale of the study, citing relevant previous work. This should convey the importance of the intended study.

IV. Study Design (Scientific Plan)

Describe how the specific aims would be addressed using information from the WBMT. It should include the specific statistical methodology planned, with discussion of limitations, if relevant.

Appendix D

COLLABORATIVE INTERNATIONAL RESEARCH IN HEMATOPOIETIC CELL TRANSPLANTATION

WBMT Reference Document -

General Research Guiding Principle #1

Any collaborative research is required to follow all basic principles for ethical conduct of research in addition of being inclusive to all participating parties, being fair, minimize bias, avoid conflicts of interest and strictly adheres to the WHO guiding principles on cell, tissue and organ transplantation.

Commentary on General Research Guiding Principle #1

International collaborative research is herein defined as biomedical research that includes sharing of data or biologic specimens (“biospecimens”) among different organizations or groups that are located in separate countries.

The rules and guiding principles for collaborative research are no different from any biomedical research, as the majority of biomedical research requires some level of collaboration. This guiding principle mostly apply to complex collaborative, involving different organizations situated in different countries that abide to similar but not equal rules and regulations towards the practice of research. This first guiding principle is broad and applies to biomedical research involving human subjects. The ethical principles of conduct of research are derived from the Belmont Report (<http://www.hhs.gov/ohrp/humansubjects/guidance/belmont.html>) and include respect for persons, beneficence and justice. The inclusiveness to all participating parties is an essential component for the conduct of international collaborative research in order to acknowledge all who are involved. This statement would apply when the collaborative parties are large complex organizations or when the number of collaborative parties is large. Fairness applies to all levels of research, development, conduct, interpretation and dissemination. Additionally, this guiding principle is referring to fairness among the collaborative parties. Bias is inherent in research, and minimize bias strengthens research. Finally, conflict of interest at any level, from commercial to self-promotion is deleterious for research as it clouds the conduct and manipulates the message or conclusion of a project.

International collaborative research in hematopoietic cell transplantation is the main responsible for the success of this field. The guiding principles are meant to be a general reference document for the conduct of research and assist investigators to promote the betterment of the practice of transplantation, advance the field by improving access and outcomes of patients and safeguard the health of volunteer donors.

General Research Guiding Principle #2

The process of international collaborative biomedical research requires several steps to ensure its efficiency and fairness at the same time safeguarding the patients' data.

Commentary on General Research Guiding Principle #2

Biomedical research process applied to specific collaborative projects can be stratified into several phases: concept development, project development, data sharing, analysis, results interpretation, dissemination and conclusion. In general these phases can be distinct or combined depending on the project, however consideration of each of these steps are relevant in order to organize the procedures and requirements.

This guiding principle proposes general procedure in each phase of a collaborative project that could be considered.

Concept Development

The inception of a project starts with the concept or idea. The concept often focuses on the hypotheses of interest to be tested in the project. This step can be part of the project development. However, often in the collaborative international research, the concept or proposal is often a necessary step for recruiting collaborators, obtain approval or to better describe a project that is intended. Understanding the availability of data already in existence or procurement of such data can also be considered in the step of the research process.

Project Development

The development of the project requires detail information on the objectives, background, population and requirement of informed consent, data sources and analyses being done. This a priori exercise sediment the proposed activities and anticipates all potential pitfalls. The most common procedure in this phase is the development of a protocol that includes all the components of the project. The development of the protocol should be a collaborative effort that ensures that all participating parties are aware of the project details.

Additionally, this phase of the project development needs to address the safeguard of the data, the protection human subjects, funding information, shared responsibilities plan and authorship guidelines, results review process and dissemination plan. Each of these components might not apply to all projects, but if presented upfront might help avoid delays during the life cycle of the project.

The section below outlines each component with proposed format and content.

1. Protocol Document: Describes in detail all the proposed scientific activities to be done with in the project. The protocol document should include the objectives of the project in a succinct and direct language; background that justifies the study and or hypotheses; description of the population of interest and the sources of data; description of the outcomes being tested; detailed of the proposed statistical analysis; relevant references and any additional information that is relevant for the understanding of the project (i.e. demographic table, surveys, etc). If the study involves additional informed consent of recipients, this document would be to be referenced or added to the protocol document.
2. Safeguard of the data: This description could be incorporated in the protocol or in a separate document. However a safeguard plan would requirement agreements between parties if data are being exchanged. The important components for the safeguard plan include description of the data needed in the study, the expected transferring plan, who will be the responsible parties to oversee this exchange or transfer and how the transferred data will be stored, including security details, for how long and the procedures that will take place once the project is completed. In case of data, a description on whether personal health information (PHI, i.e. date of birth, gender, social security or other unique identification number among others) is required for the study and the type of PHI needs to be included. Also, if the project requires data from different databases to be merged, a description of this data merger should include the variables used for the merger, identification of an honest broker in case of datasets with PHI, storage or plans for data destruction once the project is completed.
3. Protection of Human Subjects: any biomedical research that utilizes data requires appropriate informed consent, which authorizes the utilization of data for a particular use or research in general. Ethical committee oversight is a vital component of biomedical research to assure that human subjects are not being harmed. The rules of ethical committee engagement vary in different countries which makes a protection of human subjects document important in collaboration international research. The components of this document should include, the type of data being utilized in the project, whether the patients or individuals who consented for the specific project in question. In case of sharing dataset that include PHI, additional oversight might be required to overview that the process is appropriately set to avoid data breeches or losses. For studies that required additional informed consent, the document should include how the consent procedure will take place.
4. Funding Sources: studies that are done as part of funded projects may require a document that outlines any restriction that the funding agent might impose on the project. Additionally, the funding plan might require multiple sources which should be outlined accordingly.
5. Shared Responsibilities: It is important to develop a leadership plan that outlines the responsibility of each member of the project and that all members are in agreement with this plan. This document should also include authorship guidelines for any publication that results from this project. The authorship guidelines might be a detailed list of each member of the project and their position in a manuscript or general rules that will be considered to choose authors and their respective position on any manuscript from this project.
6. Results review and Dissemination Plan: some of the components of this section can be included in the protocol document. A detailed plan for how the results will be reviewed and disseminated might be necessary in studies that involve different outcomes databases or research groups. This includes timeline for completion of the analysis, presentation in conferences or meetings and other public dissemination.

Project Analysis

Once the project is developed with documentation and agreements approved, data can be transferred. If the project requires separate informed consent, enrollment of participants may be initiated.

Prior to analyses, verification of the data for errors, outliers and follow up is important to avoid misinterpretation of results. Analyses results when completed should follow the results review and dissemination plan outline above.

Completion of the Project

Once the study is completed, which in some instances might be upon the publication of results or otherwise determined procedures for returning, destroying shared data or left over samples, or indefinitely storage should take place. Additional studies that include any data used in the original project need to be discussed among the original owners of the data before proceeding. This will initiate another project cycle and some of the steps described above may apply.

*This document will be prominently posted at www.wbmt.org.

Appendix E

WBMT Operation Manual for Global Transplant Activity Data Use

This manual provides specific procedures of the use of Global Transplant Activity (GTA) data for research purposes. The GTA data is collected and managed in accordance to the WBMT Research Guidelines.

1. Research proposals

Activity reports in form of manuscript for publication are included among the dissemination of global transplant activity and will be done in a minimum schedule of one every other year. These reports are planned under the responsibility of the co-Chairs of the Transplant Center / Recipient Issues Standing Committee.

Additional uses of this data are possible by any WBMT member societies. If the use is for research purposes, the proponent is required to complete a proposal form (Appendix C of the WBMT Research Guidelines) which needs to be approved by his or her Member Society Representative before it can be submitted to the Transplant Center / Recipient Issues Standing Committee of the WBMT.

2. Review and approval of research proposals

A new study proposal by using the proposal form will be reviewed by the Transplant Center / Recipient Issues (TCRI) Standing Committee during the committee meeting. Study proposal and its approval will be recorded in the minutes of the TCRI Standing Committee meeting. When a proposed study is approved, any Member Society that provided data to be used for that study will be notified by the approval committee.

3. Dataset provision

If the study proposal is approved, a study protocol will be created by the principal investigators (PI) of the proposal. After the study protocol has been approved by the TCRI Standing Committee, the dataset for conducting the study will be provided by the WBMT Global Transplant Activity Survey Officer. The PI must submit a Letter of Commitment ([Appendix F](#) of the WBMT Research Guidelines) to the co-Chairs of the TCRI Standing Committee. Whether or not it can be provided by the WBMT Global Transplant Activity Survey Officer will be determined by the TCRI Standing Committee co-chairs.

4. Responsibilities of Principal Investigators

The PI must:

- Properly carry out research based on the content certified in the Letter of Commitment
- Report on research progress at the TCRI Standing Committee web meeting
- When the analysis results are finalized, prepare a manuscript in a timely manner.
- Manuscripts must be confirmed by all co-authors prior to submission

5. Authorship

The final authors list is overseen by the co-Chairs of the TCRI Standing Committee. Generally, the authors may include the following individuals.

- PIs that proposed and carried out the study
- Representatives from the registries contributing activities. At least one author from the registries needs to be included. The number of subsequent authors from each registry is determined by the volume of data submission (one author every 5000 patients included in the manuscript). Member societies contributing are requested to select authors.
- WBMT Global Transplant Activity Survey Officer
- Members of the TCRI Standing Committee who participated in the discussion of the proposal, analyses, and interpretation of the results of the study
- Co-chairs of the TCRI Standing Committee
- WBMT officers

6. Publication

All publications or presentations of these data shall acknowledge the WBMT and the member societies that contributed data as the data source.

Publications that do not use GTA data are not included in the scope of this manual.

Appendix F

The Letter of Commitment

To the Co-chairs of the Transplant Center and Recipient Issues Standing Committee of the WBMT

I promise to uphold the following commitments.

1. Global Transplant Activity data are not to be used for any purpose other than the study whose protocol approved by Transplant Center and Recipient Issues Standing Committee of the WBMT
2. Data are to be managed under the responsibility of the applicant, and are not to be made available for viewing by, or transferred to, a third party. Viewing by co-researchers or co-authors is to be restricted to an absolute minimum, and such persons are to observe these provisions.
4. The content of data provided by the WBMT Data Center are not to be altered without permission.
5. The final authors list is overseen by the Transplant Center and Recipient Issues Standing Committee. The Transplant Center and Recipient Issues Standing Committee notifies and invites member societies which submit data to the WBMT to recommend study participants, i.e. co-authors for the study.
7. When publishing the results of the research, it is to be made clear that WBMT GTA data were used.
8. The applicant is to inform the Transplant Center and Recipient Issues Standing Committee without delay in the event of any of the following,
 - (1) discontinuation of use of the data,
 - (2) changes to the details given in the application to use data.
9. Any infringement of these provisions will result in the cancellation of the data use application approval. In that event, the applicant shall promptly return any data to the WBMT Data Center, and destroy all copied or processed data.

I certify that I have read this document and commit to fulfilling the responsibilities described herein.

Study Title

Date

Institute

Name

APPENDIX D2: WBMT MEMBER SOCIETY REGISTRY DATA

WBMT MEMBER SOCIETY REGISTRY DATA TRANSMISSION AGREEMENT

This Data Transmission Agreement (“**Agreement**”), effective[Date], is entered into by and between the Worldwide Blood and Marrow Transplant Network (“**WBMT**”), a non-government organization with the World Health Organization and _____ (“**WBMT Member Society**”), each a “**Party**” and collectively, the “**Parties**”.

The purpose of this Agreement is to set forth terms by which the WBMT will facilitate its member societies in data submission related to the Global Transplant Activity (“**GTA**”) for public dissemination and research purposes.

First and foremost, and following WBMT Guiding Principle #3, *“The WBMT has ownership of the GTA data and any use needs to be approved by the WBMT. This includes data requests and proposal for scientific studies that seek to utilize these data for analysis”* and *“The data from a Member Society that is shared with the WBMT can be utilized by the same Member Society (which also has ownership of its own data) without restrictions.”*

Section 1. Data Collection and Records

- **Global Transplant Activity Data:** The WBMT member society shall submit information related to transplant activity from the transplant centers that are within the region of the member society or has an established relationship with the member society to provide this data. Transplant activity data collected in the Global Activity Survey Form (“**GAS**”) includes the volume of first transplants per patients performed at a transplant center in one year with accompanied information related to the indication, graftsource and donor type.
- **Data Collection.** The WBMT Member Society shall compile all annual transplant activity data from their participating transplant centers and provide to WBMT with GAS compiled for the specific region as requested by the WBMT within the time frames and in the manner specified by the WBMT. The timeline for submission of the compiled regional GAS is from November to February in reference to the activity of the prior year. The GAS should be submitted directly to the WBMT offices during this specified period.

Section 2. Informed Consent

- The GAS does not include any patient specific identifiers. It represents the number of transplants performed at a given transplant center. The volume per center is not provided to the WBMT, the GAT includes the number of active centers in a particular region and the number of transplants performed annually. Informed consent is not required for collection or submission to WBMT.

Section 3. Term

- This Agreement shall commence on its effective date referenced in the first paragraph above and shall continue in force until terminated by either Party at any time, with or without cause, upon thirty (30) days written notice to the other Party. During the thirty (30) day period after such notice is sent, the Parties shall continue to act toward each other in good faith.

Section 4. Miscellaneous

- Compliance with Laws and Regulations. The WBMT Member Society shall comply with all applicable statutes and regulations specific to that country, including, but not limited to, those regarding the safeguarding of donor and patient records, privacy regulations and human subjects protection.
- Assignment and Subcontracting. The WBMT Member Society may not assign this Agreement or any of their respective rights and responsibilities under this Agreement, without the WBMT's prior written consent. No responsibilities under this Agreement may be subcontracted without the prior written approval of the Parties.
- Amendment. Except as otherwise provided for in this Agreement, this Agreement may not be amended except by written instrument duly signed and delivered by the WBMT and the WBMT Member Society.
- Non-Assumption of Liabilities. Neither the WBMT nor the WBMT Member Society shall be liable for any of the prior existing or future obligations, liabilities or debts of the other Party.
- Governing Law. This Agreement and all transactions contemplated by this Agreement shall be governed, construed and enforced in accordance with the laws of Switzerland.
- Independent Contractors. Nothing in this Agreement is intended to create an employment or agency relationship between the Parties. Neither Party shall be deemed or construed to be an employee or agent of the other.
- Notice. Any notice required to be given by this Agreement shall be in writing and sent by:
1) mail, registered or certified, as evidenced by a delivery receipt; 2) with a private delivery

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service as evidenced by a shipping receipt; or 3) by electronic mail return receipt requested.

- Prior Agreement. This Agreement constitutes and contains the entire Agreement between the Parties with respect to the subject matter hereof, including but not limited to the terms and conditions relating to the maintenance and transmission of data, and supersedes any prior oral or written agreements.
- Force Majeure. Neither Party shall be considered to have failed in the performance of this Agreement if such failure arises out of causes beyond the control and without the fault or negligence of the Party failing to perform, except that the WBMT Member Society shall not be excused from strict compliance with this Agreement under this clause due to errors, omissions or failures by its independent contractors or lowertier subcontractors.
- Successors. This Agreement shall be binding on and will inure to the benefit of the Parties and their respective successors and assigns.

This Agreement is executed by individuals who are duly authorized to enter into the Agreement and legally binds their respective parties to be effective on the date stated in the first paragraph above. "Duly authorized" includes the WBMT President, a registry leadership representative or a center representative as is designated by that center.

By: WBMT

By: [Registry WBMT Member Society]

By: _____

By: _____

Authorized Signature

(Typed/Printed Name)

Title: Current WBMT President

Title: _____

Date: _____

Date: _____

APPENDIX E: HISTORY OF MAJOR MEETINGS AND INTERNATIONAL WORKSHOPS

WBMT <i>Board</i> Business Meetings	WBMT <i>Participant</i> Meetings
2023	
	WBMT The Nigeria BMT Nurses' Online Workshop (November)
Video conference (September)	
Paris, France (March)	
2022	
Video conference (October)	
	WBMT Workshop & Symposium Rawalpindi, Pakistan (September)
Video conference (March)	
2021	
Video conference (September)	
Video conference (April)	
2020	
Video conference (June)	
Video conference (March)	
2019	
Houston, US (February)	
	Asuncion, Paraguay (September)
	Busan, Korea (September)
2018	
Teleconference (December)	
Teleconference (July)	
	Casablanca, Morocco (April)

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	Beijing, China (September)
Lisbon, France (March)	
	Taipei, Province of China (November)
2017	
Teleconference (December)	
Teleconference (July)	
	Regensburg, Germany – Sickle Cell Disease Cure and Prevention Consortium (June)
	Geneva, Switzerland – WHO (May)
Orlando, FL, US (February)	
2016	
Teleconference (December)	
Teleconference (July)	
	Geneva, Switzerland – WHO (May)
Valencia, Spain (April)	
2015	
Teleconference (December)	Addis Ababa, Ethiopia – On-site visit by select WBMT representatives (December)
	Okinawa, Japan – Nuclear Accident Management Committee (October)
Teleconference (July)	
	Regensburg, Germany – Sickle Cell Disease Cure and Prevention Consortium (June)
San Diego, CA, US (February)	
2014	
Teleconference (December)	

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	Geneva, Switzerland – MPRO NGO meeting (September)
Teleconference (July)	
Milan, Italy (March)	
2013	
	Brasilia, Brazil – WBMT / NOFIT (December)
Teleconference (November)	
Teleconference (July)	
	Geneva, Switzerland – WHO (May)
	London, UK – Standing Committees (April)
Salt Lake City, UT, US (February)	
2012	
	Atlanta, GA, USA – WBMT / LABMT (December)
	Rome, Italy – WBMT / NOTIFY (November)
Teleconference (October)	Hyderabad, India – APBMT (October)
	St. Petersburg, Russia – WBMT / Russia (September)
	Lagos, Nigeria – WBMT / AFBMT (September)
	Manila, Philippines – WBMT / Philippine Society of Hematology (August)
Teleconference (June)	
Geneva, Switzerland (April)	
	San Diego, CA, US – WBMT / LABMT (February)
2011	
Teleconference (December)	
Teleconference (September)	

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	Rio de Janeiro, Brazil – SBTMO / LABMT (August)
Teleconference (June)	
Teleconference (April)	
	Paris, France – Standing Committees (March)
Honolulu, HI, US* (February)	
2010	
	Phuket, Thailand – APBMT (November)
Vienna, Austria (March)	
	Brussels, Belgium – WHO (February)
2009	
Minneapolis, MN, US (November)	
	New York, NY, US – UN (October)
Nagoya, Japan (April)	
Goteborg, Sweden (March)	
2008	
Minneapolis, MN, US (October)	Geneva, Switzerland – WHO (October)
Firenze / Florence, Italy (March)	
	Tampa, FL (February)
2007	
Minneapolis, MN, US (October)	
Lyon, France (March)	

***1st elected Board meeting**

APPENDIX F: HISTORY OF INTERNATIONAL SCIENTIFIC SYMPOSIA

2023

October, APBMT

Protecting Donors (Focus on Donor Safety) Donor Issues WBMT Standing Committee

Speaker: Nina Worel

April, EBMT

Joint Session EBMT - WBMT | Update on The Global Data for Hematopoietic Stem Cell Transplantation

- JS06-2 Global Stem Cell Transplantation Activities Including Cellular Therapies
Speaker: Helen Baldomero (Switzerland)
- JS06-3 Global Data on HSCT for Multiple Myeloma
Speaker: Dietger Niederwieser (Germany)
- JS06-4 Global Data on HSCT for Acute Myeloid Leukemia
Speaker: Molly Tokaz (United States)

February, TCT

Update on The Global Data for Hematopoietic Stem Cell Transplantation

- Global Stem Cell Transplantation Activities Including Cellular Therapies
Speaker: Dietger Niederwieser
- Global Data on HSCT for Multiple Myeloma
Speaker: Laurent Garderet
- Global Data on HSCT for Acute Myeloid Leukemia
Speaker: Molly Tokaz

2022

December, ASH (poster)

- International Differences in Baseline Characteristics and Practice Patterns in Patients with Newly Diagnosed Multiple Myeloma Undergoing Upfront Autologous Stem Cell Transplantation
Laurent Garderet et al.
- Worldwide Network for Blood and Marrow Transplantation (WBMT) Global Study on Baseline Characteristics and Clinical Outcomes in NEWLY Diagnosed Multiple Myeloma Patients Undergoing Upfront Autologous STEM Cell Transplantation, a Study Off 61,725 Patients from 629 Centers
Laurent Garderet et al.

October, APBMT

- Global Trends in Cellular Therapy and its integration with HSCT- WBMT Perspective
Dietger Niederwieser et al.

April, TCT

Broad Access to HCT Worldwide: How has the WBMT Advanced Worldwide Equity in 15 years?

- Barriers to Reaching Equity in HCT and Cellular Therapy
Mickey Koh
- What Allows Us to Deliver Affordable and Available HCTs?
Cristóbal Frutos
- WBMT Achievements and Future Goals
Yoshiko Atsuta

March, EBMT, video conference

JS04 Joint session EBMT-WBMT: Maintaining safe access to stem cell transplantation during the pandemic

- JS04-01 Adapting inpatient and outpatient clinical care: comparing experiences from transplant centres worldwide
Adriana Seber (Brazil)
- JS04-02 Challenges in donor selection and stem cell collection
Nina Worel (Austria)
- JS04-03 Global perspective on achieving quality for cellular therapy
Yossi Schwartz (United States)

2021

October, APBMT, video conference

- *Design the future of HCT Societies, WBMT perspective*
Hildegard Greinix, President of WBMT, Medical University Graz, Austria

March, EBMT, video conference

JS05 Joint session WBMT: COVID-19 vaccination in HSCT

- JS5-1 Translating science into survival; mRNA vaccines for cancer and infectious disease
Christopher huber (Germany)
- JS5-2 COVID-19 vaccination in HSCT
Per Ljungman (Sweden)
- JS5-3 Global access to COVID-19 vaccines
Susan Brown (United States)

February, TCT, video conference

S-C2 - WBMT Concurrent: Transplantation During a Worldwide Crisis: Lessons Learned Across the World

- The Latin American Bone Marrow Transplantation Group (LABMT) Experience

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Adriana Seber, MD, Hospital Samaritano, Sao Paulo, Brazil

- HSCT Challenges and Solutions Under COVID-19: The Experience from China

Xiao-Jun Huang, MD, Institute of Hematology, Peking University People's Hospital, Beijing, China

- The Eastern Mediterranean Blood and Marrow Transplantation (EMBMT) Group Experience

Riad El Fakih, Oncology Center, King Faisal Specialist Hospital and Research Center, Riyadh, Saudi Arabia

2020

August, EBMT, video conference

International access to HCT drugs: Impact on transplant practice and patients

- Chair: D Weisdorf (United States)

Causes of drug shortages

- Chair: G Stemer (Austria)

How can pharmacists help the HCT team in drug shortages and cost of medications

- Chair: H Greinix

Successful models of cooperation to offer essential drugs in the care of HCT patients: Role of WBMT

February, ASTCT, video conference

- Chair: Emily Thakur

Identifying the Root Causes of Drug Shortages and Finding Enduring Solutions

- Chair: Zahra Mahmoudjafari

Drug Shortages: The Role of the Pharmacist on the HCT Team

- Chair: H Greinix

Successful Models of Cooperation to Offer Essential Drugs for the Care of HCT Patients: WBMT

2019

March, EBMT Frankfurt

Efficiency and Effectiveness of New Models for Transplant Care Delivery

Chair: D Weisdorf (United States)

- Remote health development, consultation from a distance in Nepal (D. Rondelli, Nepal)
- Choosing wisely for haematopoietic cell transplantation (D Weisdorf, United States)
- Telemedicine for Remote Consultations (D Niederwieser, Germany)

February, BMT Tandem Meetings (Houston)

Efficiency and Effectiveness of New Models for Transplant Care Delivery

Chair: D Weisdorf (United States)

- Home Delivery Model of Video Conferencing with Patients (J Nelson, United States)
- Remote Health Strategies in Development of Global BMT (D. Rondelli, Nepal)
- The Cure2Children-Sankalp India Foundation Experience in Affordable Bone Marrow Transplantation for Children with Severe Thalassemia in India (L Faulkner, Italy)
- Telemedicine for Remote Consultations (D Niederwieser, Germany)

2018

February, BMT Tandem Meetings (Utah)

How the best donor can improve transplant outcomes?

Chair: D Weisdorf (United States)

- Introduction and recent trends (J Szer, Australia)
- Assessing donor suitability beyond HLA (H Yang, Australia)
- How regional haplotype frequencies influence the success of finding the best unrelated UCB or volunteer donors (L Bouzas, Brazil)
- Cost and morbidity consequences of different donor choices (M Pasquini, United States)

2017

February, BMT Tandem Meetings (Orlando)

Do stem cell transplants need to be so expensive? What is really necessary?

Co-Chairs: Y Kodera (Japan) and J Szer (Australia)

- WBMT introduction (J Szer, Australia)
- Introduction to the topic of cost (D Weisdorf, US)
- The Mexican experience (D Gomez-Almaguer, Mexico)
- The Indian experience (A Srivastava, India)

2016

April, EBMT Meeting (Valencia)

Global Challenges in Transplantation

Co-Chairs: Y Kodera (Japan) and J Kuball (Netherlands)

- Economic stresses in transplantation: How are these challenging existing and new programs? (D Weisdorf, US)
- Quality measures: How to incorporate quality into existing and new sites? (H Greinix, Austria)
- EBMT-JACIE accreditation: 10 years of success (J Snowden, United Kingdom)

February, **BMT Tandem Meetings** (Honolulu)

Haploidentical HCT – A Global Overview: Comparing Asia, EU, and US

Co-Chairs: Y Kodera (Japan) and J Szer (Australia)

- Introduction
 - WBMT Global Activity Survey (D Niederwieser, Germany)
 - Trends in Haplo HCT (J Apperley, United Kingdom)
- The Asian Experience (X-J Huang, China)
- The EU Experience (A Nagler, Israel)
- The US Experience (E Fuchs, US)

2015

April, **EBMT Meeting** (Istanbul)*

*During these meetings, the WBMT participated in a plenary session in lieu of a traditional Joint Session.

PLENARY: Access to Stem Cell Transplantation in the 21st Century: An EBMT-WBMT Joint Session

Co-Chairs: Y Kodera (Japan) and T Damirer (Turkey)

- Lessons after one million transplants (A Gratwohl, Switzerland)
- Which AML patient should not be transplanted in 2015? (F Appelbaum, US)

February, **BMT Tandem Meetings** (San Diego)

Global Donor Selection Challenges: Clinical efficacy and cost performance

Co-Chairs: Y Kodera (Japan) and D Weisdorf (US)

- Introduction (Y Kodera, Japan, and D Weisdorf, US)
- Medical Products of Human Origin / World Health Organization (MPHO / WHO – WBMT / TTS / ISBT / ICCBBA) Project: Regulatory recommendations for MPHO (J Nunez, Switzerland)
- Haplo-HCT without T-cell depletion vs. unrelated vs. related (post-transplant cyclophosphamide) for developing countries (D Niederwieser, Germany)
- Regional cost differences of matched, haploidentical, and cord blood HCT (S Giebel, Poland)

- Report from regional group – LABMT (A Seber, Brazil)

2014

April, EBMT Meeting (Milan)

Hematopoietic Stem Cell Transplantation: Access and Affordability

Co-Chairs: D Niederwieser, Y Kodera, D Confer, D Weisdorf, H Greinix

- Non-Government Organization (NGO): Status significance and opportunities of an NGO (J Nunez)
- Cost of non-transplant therapy for hematologic malignancies (J Apperley)
- Alternative donor selection
 - Haploidentical donor (L Luznik)
 - Cord blood stem cell transplantation (M Eapen)

February, BMT Tandem Meetings (Dallas)

Hematopoietic Stem Cell Transplantation: Access and Affordability

Co-Chairs: D Niederwieser, Y Kodera, D Confer, D Weisdorf, H Greinix

- Non-Government Organization (NGO): Status significance and opportunities of NGO (J Nunez)
- Cost of non-transplant therapy for hematologic malignancies (J Apperley)
- Alternative donor selection
 - Haploidentical donor (X-J Huang)
 - Cord blood stem cell transplantation (D Weisdorf)

2013

April, EBMT Meeting

The Legacy of E. Donnall Thomas: One Million Hematopoietic Stem Cell Transplants

Co-Chairs: D Niederwieser, Y Kodera, D Confer, H Greinix

- E. Donnall Thomas: From Cooperstown to Global (R Storb)
- Challenges to Future Growth: The Transplant Center Perspective
 - Europe (M Mohty)
 - Eastern Mediterranean (M Aljurf)
 - Africa (N Novitzky)

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- Challenges to Future Growth: The Donor Registry Perspective (D Confer)
- Challenges to Future Growth: The WHO Perspective (L Noël)
- Improving Research Collaborations to Move Forward (M Horowitz)

February, BMT Tandem Meetings

The Legacy of E. Donnall Thomas: One Million Hematopoietic Stem Cell Transplants

Co-Chairs: D Niederwieser, Y Kodera, D Confer, H Greinix

- E. Donnall Thomas: From Cooperstown to Global (F Appelbaum)
- Challenges to Future Growth: The Transplant Center Perspective
 - North America (R Champlin)
 - Central / South America (C Bonfim)
 - Asia-Pacific (A Srivastava)
- Challenges to Future Growth: The Donor Registry Perspective (D Confer)
- Challenges to Future Growth: The WHO Perspective (L Noël)
- Improving Research Collaborations to Move Forward (J Apperley)

2012

WBMT Scientific Session

Chair: D Niederwieser

- WBMT Update (D Niederwieser)
- The Macroeconomics of Hematopoietic Stem Cell Transplantation (A Gratwohl)
- A Global View of Cord Blood Transplantation (V Rocha)
- The Fukushima Nuclear Accident – The Transplant Team Experience (S Taniguchi)

2011

WHO and WBMT: A Model for Optimal Collaboration Between Scientists and Health Institutions

Co-Chairs: D Confer, Y Kodera, D Niederwieser

- Update on WBMT Activity (D Niederwieser)
- Global HCT Activity Survey 2007-2008 (H Baldomero)
- Report from the APBMT Congress: HCT Activity and Plans for a Vietnam Meeting (Y Kodera)

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- Harmonizing Standards in BMT – Improving Outcomes on a Global Scale (K Loper)
- WHO and WBMT a Model for Optimal Collaboration Between Scientists and Health Institutions (L Noël)

2010

Worldwide Network for Blood and Marrow Transplantation (WBMT) Session Co-

Chairs: D Niederwieser, M Horowitz

- Update on Progress of WBMT (D Niederwieser)
- Challenges in Establishing HCT Outcomes Registries in Developing Countries Asia- Pacific BMT Group (Y Atsuta)
- Eastern Mediterranean BMT Group (M Aljurf)
- Ethical Issues in Donation of Hematopoietic Stem Cells (A Capron)

2009

WBMT International Session (Supported by THERAKOS, Inc.) Co-

Chairs: D Niederwieser, S Davies, Y Kodera, M Oudshoorn

- Overview of Unrelated Adult and Cord Blood Donation: the WMDA Annual Survey (M Oudshoorn)
- Unrelated Donor Outcomes and Plans for Assessing Related Donor Outcomes: A Report from the NMDP / CIBMTR (D Confer)
- Related Donor Outcomes from the Japanese Registry: The Importance of Pre-registration (Y Kodera)
- Proposal for an EBMT Donor Outcome Registry (J Halter)

APPENDIX G: PUBLICATIONS LIST

WBMT Publications		
#	Citation	Credited to
Published in 2023		
56	Socié G, Niederwieser D, von Bubnoff N, Mohty M, Szer J, Or R, Garrett J, Prahallad A, Wilke C, Zeiser R. Prognostic value of blood biomarkers in steroid-refractory or steroid-dependent acute graft-versus-host disease: a REACH2 analysis. Blood. 2023 Jun 1;141(22):2771-2779. doi: 10.1182/blood.2022018579 .PMID: 36827620 Free PMC article. Clinical Trial.	
55	Shahrukh K Hashmi, Ray C Powles, David Ma, Ibrahim N Muhsen, Mahmoud Aljurf, Dietger Niederwieser, Daniel J Weisdorf, Mickey B C Koh, Hildegard Greinix. Radiation hazards of the Ukraine nuclear power plants: how can international blood and marrow stem cell transplant societies help? Ann Hematol. 2023 Jun 6. doi: 10.1007/s00277-023-05191-9. https://pubmed.ncbi.nlm.nih.gov/37280449/	
54	Muhsen IN, Galeano S, Niederwieser D, Koh MBC, Ljungman P, Machado CM, Kharfan-Dabaja MA, de la Camara R, Kodera Y, Szer J, Rasheed W, Cesaro S, Hashmi SK, Seber A, Atsuta Y, Saleh MFM, Srivastava A, Styczynski J, Alrajhi A, Almaghrabi R, Abid MB, Chemaly RF, Gergis U, Brissot E, El Fakih R, Riches M, Mikulska M, Worel N, Weisdorf D, Greinix H, Cordonnier C, Aljurf M. Endemic or regionally limited bacterial and viral infections in haematopoietic stem-cell transplantation recipients: a Worldwide Network for Blood and Marrow Transplantation (WBMT) Review. Lancet Haematol. 2023 Apr;10(4):e284-e294. doi: 10.1016/S2352-3026(23)00032-7.	
53	Muhsen IN, Galeano S, Niederwieser D, Koh MBC, Ljungman P, Machado CM, Kharfan-Dabaja MA, de la Camara R, Kodera Y, Szer J, Rasheed W, Cesaro S, Hashmi SK, Seber A, Atsuta Y, Saleh MFM, Srivastava A, Styczynski J, Alrajhi A, Almaghrabi R, Abid MB, Chemaly RF, Gergis U, Brissot E, El Fakih R, Riches M, Mikulska M, Worel N, Weisdorf D, Greinix H, Cordonnier C, Aljurf M. Endemic or regionally limited parasitic and fungal infections in haematopoietic stem-cell transplantation recipients: a Worldwide Network for Blood and Marrow Transplantation (WBMT) Review. Lancet Haematol. 2023 Apr;10(4):e295-e305. doi: 10.1016/S2352-3026(23)00031-5.	
52	Niederwieser D, Lang T, Krahl R, Heinicke T, Maschmeyer G, Al-Ali HK, Schwind S, Jentzsch M, Cross M, Kahl C, Wolf HH, Sayer H, Schulze A, Dreger P, Hegenbart U, Krämer A, Junghanss C, Mügge LO, Hähling D, Hirt C, Späth C, Peter N, Opitz B, Florschütz A, Reifenrath K, Zojer N, Scholl S, Pönisch W, Heyn S, Vucinic V, Hochhaus A, Aul C, Giagounidis A, Balleisen L, Oldenkott B, Staib P, Kiehl M, Schütte W, Naumann R, Eimermacher H, Dörken B, Sauerland C, Lengfelder E, Hiddemann W, Wörmann B, Müller-Tidow C, Serve H,	

	Schliemann C, Hehlmann R, Berdel WE, Pfirrmann M, Krug U, Hoffmann VS. Different treatment strategies versus a common standard arm (CSA) in patients with newly diagnosed AML over the age of 60 years: a randomized German inter-group study. Ann Hematol. 2023 Mar;102(3):547-561. doi: 10.1007/s00277-023-05087-8 . Epub 2023 Jan 25.PMID: 36695874 Free PMC article.	
51	Lübke J, Schwaab J, Christen D, Elberink HO, Span B, Niedoszytko M, Gorska A, Lange M, Gleixner KV, Hadzijusufovic E, Solomiany O, Angelova-Fischer I, Zanotti R, Bonifacio M, Bonadonna P, Shoumariyeh K, von Bubnoff N, Müller S, Perkins C, Elena C, Malcovati L, Hagglund H, Mattsson M, Parente R, Varkonyi J, Fortina AB, Caroppo F, Zink A, Brockow K, Breynaert C, Bullens D, Yavuz AS, Doubek M, Sabato V, Schug T, Niederwieser D, Hartmann K, Triggiani M, Gotlib J, Hermine O, Arock M, Kluin-Nelemans HC, Panse J, Sperr WR, Valent P, Reiter A, Jawhar M.J Prognostic Impact of Organomegaly in Mastocytosis: An Analysis of the European Competence Network on Mastocytosis. Allergy Clin Immunol Pract. 2023 Feb;11(2):581-590.e5. doi: 10.1016/j.jaip.2022.10.051 . Epub 2022 Nov 17.PMID: 36403897	
50	Backhaus D, Brauer D, Pointner R, Bischof L, Vucinic V, Franke GN, Niederwieser D, Platzbecker U, Jentzsch M, Schwind S. A high hematopoietic cell transplantation comorbidity Index (HCT-CI) does not impair outcomes after non-myeloablative allogeneic stem cell transplantation in acute myeloid leukemia patients 60 years or older. Bone Marrow Transplant. 2023 Jan;58(1):30-38. doi: 10.1038/s41409-022-01833-0 . Epub 2022 Oct 4.PMID: 36195769 Free PMC article.	
Published in 2022		
49	Okamoto S, Perales MA, Sureda A, Niederwieser D. The activities and regulatory landscape of cellular therapies including hematopoietic cell transplantation in the world. Blood Cell Ther. 2022 Dec 23;5(Spec Edition):S15-S24. doi: 10.31547/bct-2022-013	
48	Molly C Tokaz, Helen Baldomero, Andrew J Cowan, Wael Saber, Hildegard Greinix, Mickey B C Koh, Nicolaus Kröger, Mohamad Mohty, Sebastian Galeano, Shinichiro Okamoto, Naeem Chaudhri, Amado J Karduss, Fabio Ciceri, Vergílio Antonio R Colturato, Selim Corbacioglu, Alaa Elhaddad, Lisa M Force, Cristóbal Frutos, Andrés Gómez-De León, Nada Hamad, Nelson Hamerschlak, Naya H, Aloysius Ho, Xiao-Jun Huang, Ben Jacobs, Hee-Je Kim, Minako Lida, Leslie Lehmann, Regis Peffault de Latour, Mary-Elizabeth M Percival, Martina Perdomo, Walid Rasheed, Kirk R Schultz, Adriana Seber, Bor-Sheng Ko, Anderson João Simone, Alok Srivastava, Jeff Szer, William A Wood, Yoshihisa Koderu, Arnon Nagler, John A Snowden, Daniel Weisdorf, Jakob Passweg, Marcelo C Pasquini, Anna Sureda, Yoshiko Atsuta, Mahmoud Aljurf, Dietger Niederwieser. An Analysis of the Worldwide Utilization of Hematopoietic Stem Cell Transplantation for Acute Myeloid Leukemia. Transplant Cell Ther.	

	<p>2022 Dec 23;S2666-6367(22)01840-1. doi: 10.1016/j.jtct.2022.12.013. https://pubmed.ncbi.nlm.nih.gov/36572384/</p>	
47	<p>Guglielmelli P, Kiladjan JJ, Vannucchi AM, Duan M, Meng H, Pan L, He G, Verstovsek S, Boyer F, Barraco F, Niederwieser D, Pungolino E, Liberati AM, Harrison C, Roussou P, Wroclawska M, Karumanchi D, Sinclair K, Te Boekhorst PAW, Gisslinger H. Efficacy and safety of ruxolitinib in patients with myelofibrosis and low platelet count (50 × 10⁹/L to <100 × 10⁹/L) at baseline: the final analysis of EXPAND. Ther Adv Hematol. 2022 Sep 10;13:20406207221118429. doi: 10.1177/20406207221118429 . eCollection 2022.PMID: 36105914 Free PMC article.</p>	
46	<p>Koh MBC, Halter JP, Greinix HT, Aljurf M, Worel N. Prioritising health equity alongside donation safety - Authors' reply. Lancet Haematol. 2022 Nov;9(11):e803-e804. doi: 10.1016/S2352-3026(22)00302-7. Epub 2022 Sep 22. PMID: 36156201 https://www.thelancet.com/journals/lanhae/article/PIIS2352-3026(22)00302-7/fulltext</p>	
45	<p>Nina Worel, MD, Mahmoud Aljurf, MD, Chloe Anthias, MD, Andreas S Buser, MD, Meghann Cody, DNP, Mirjam Fechter, MD et al. Suitability of haematopoietic cell donors: updated consensus recommendations from the WBMT standing committee on donor issues. The Lancet Haematology. VOLUME 9, ISSUE 8, E605-E614, AUGUST 2022. https://www.thelancet.com/journals/lanhae/article/PIIS2352-3026(22)00184-3/fulltext</p>	
44	<p>Amal Alseraihy 1, Eoin McGrath 2, Dietger Niederwieser 3, Christian Chabannon 4, Jeff Szer 5, Mohamad Mohty 6, Mohamed A Kharfan-Dabaja 7, Kim Orchard 8, Joseph Schwartz 9, Walid Rasheed 10, Mickey Koh 11, Nicolaus Kröger 12, Yoshihisa Kodera 13, Riad El Fakih 10, Nina Worel 14, Lynn Manson 15, Tuula Rintala 16, Abdelghani Tabakhi 17, Bipin Savani 18, Usama Gergis 19, Anna Sureda 20, Paul W Eldridge 21, Ibrahim Yakoub-Agha 22, Mehdi Hamadani 23, Daniel Weisdorf 24, Hildegard Greinix 25, Mahmoud Aljurf 10 Worldwide Network for Blood and Marrow Transplantation Special Article on Key Elements in Quality and Accreditation in Hematopoietic Stem Cell Transplantation and Cellular Therapy Transplant Cell Ther. 2022 Aug;28(8):455-462. doi: 10.1016/j.jtct.2022.04.003. https://pubmed.ncbi.nlm.nih.gov/35413459/</p>	

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43	Correa C, Gonzalez-Ramella O, Baldomero H, Basquiera AL, Baena R, Arcuri L, Puga B, Rosales C, Chávez M, Hernández C, Maldonado B, Gómez-De León A, Mendoza N, Frutos C, Aranda L, Díaz L, Hernández M, Seber A, Karduss A, Jaimovich G, Martínez-Rolon J, Bonfim C, Greinix H, Koh MBC, Aljurf M, Iida M, Saber W, Niederwieser D, Atsuta Y, Galeano S; Latin American Bone Marrow Transplantation Group (LABMT); Worldwide Network for Blood and Marrow Transplantation (WBMT). Increasing access to hematopoietic cell transplantation in Latin America: results of the 2018 LABMT activity survey and trends since 2012. Bone Marrow Transplant. 2022 Jun;57(6):881-888. doi: 10.1038/s41409-022-01630-9 . Epub 2022 Mar 28. PMID: 35347244	
Published in 2021		
42	Dietger Niederwieser, Helen Baldomero, Nosa Bazuaye, Caitrin Bupp, Naeem Chaudhri, Selim Corbacioglu, Alaa Elhaddad, Cristóbal Frutos, Sebastian Galeano, Yoshiko Atsuta.... Wael Saber. One and a half million hematopoietic stem cell transplants: continuous and differential improvement in worldwide access with the use of non-identical family donors. Hematologica. Aug 12, 2021 https://haematologica.org/article/view/haematol.2021.279189	
41	Riad El Fakih, Hildegard Greinix, Mickey Koh, Bronwen Shaw, Mohamad Mohty Mohammad Al Nahedh, Wael Saber, Mohamed A.Kharfan-Dabaja, Miguel-Angel Perales, Bipin N.Savani, Navneet S.Majhail, Jakob R.Passweg, Anna Sureda, Syed Osman Ahmed, Eliane Gluckman, Marcie Riches, Areej El-Jawahri, Damiano Rondelli...Mahmoud Aljurf. Worldwide Network for Blood and Marrow Transplantation (WBMT) Recommendations Regarding Essential Medications Required To Establish An Early Stage Hematopoietic Cell Transplantation Program. Transplantation and Cellular Therapy. Volume 27, Issue 3, March 2021, Pages 267.e1-267.e5 https://www.sciencedirect.com/science/article/pii/S2666636720300622?via%3Dihub	
40	Dietger Niederwieser. The Chinese HCT survey: a non-manipulated haploidentical transplantation procedure makes a novel contribution to data sharing within the regional and global transplant registries and to worldwide knowledge. Bone Marrow Transplantation volume 56, pages 1229–1231 (2021) https://www.nature.com/articles/s41409-021-01220-1	
Published in 2020		
39	Mhamed Harif, Daniel Weisdorf, Nicolas Novitzky, Jeff Szer, Lahoucine Mahmal, Malek Benaklif, Tarek Ben Othman, Nosakhare Bazuaye, Eoin McGrath, Paul W Eldridge, Lamia Torjemane, Abdellah Madani, Redouane Ahmed Nacer, Reguia Belkhedim, Walid Rasheed, Syed O.Ahmed, Yoshihisa Kodera, Mahmoud Aljurf, Asmaa Quessara. Special report: Summary of the first meeting of African Blood and Marrow Transplantation (AfBMT) group, Casablanca, Morocco, April 19–21, 2018 held under the auspices of the	

	Worldwide Network for Blood and Marrow Transplantation (WBMT). Hematology/Oncology and Stem Cell Therapy, Volume 13, Issue 4, December 2020, Pages 202-207.	
38	Worel N, Shaw BE, Aljurf M, eds. Changes in Hematopoietic Cell Transplantation Practices in Response to COVID-19: A Survey from the Worldwide Network for Blood & Marrow Transplantation. Transplantation and Cellular Therapy. 2020 Nov 24. DOI: https://doi.org/10.1016/j.jtct.2020.11.019	WBMT
37	Kathy Loper, Michele W. Sugrue, Jay S. Raval, Joseph Yossi Schwartz, Kevin Land, Mickey Koh, Thilo Mengling, Hildegard Greinix, Jörg P. Halter, Christina M. Celluzzi, Maysum Chaudhri. Adverse event reporting for cellular therapy products: Current status and future directions. First published: 16 October 2020 https://doi.org/10.1111/trf.16062	
36	Ibrahim N. Muhsen, Shahrukh K. Hashmi, Dietger Niederwieser, Nicolaus Kroeger, Samir Agrawal, Marcelo C. Pasquini, Yoshiko Atsuta, Karen K. Ballen, Adriana Seber, Wael Saber, Mohamed A. Kharfan-Dabaja, Walid Rasheed, Shinichiro Okamoto, Nandita Khera, William A. Wood, Mickey B. C. Koh, Hildegard Greinix, Yoshihisa Kodera, Jeff Szer, Mary M. Horowitz, Daniel Weisdorf & Mahmoud Aljurf . Correction: Worldwide Network for Blood and Marrow Transplantation (WBMT) perspective: the role of biosimilars in hematopoietic cell transplant: current opportunities and challenges in low- and lower-middle income countries. Bone Marrow Transplantation volume 55, page837(2020). Published: 15 October 2019	
35	Andrew J. Cowan, Helen Baldomero, Yoshiko Atsuta, Nicolaus Kroeger, Daniel Weisdorf, Dietger Niederwieser. The Global State of Hematopoietic Cell Transplantation for Multiple Myeloma: An Analysis of the Worldwide Network of Blood and Marrow Transplantation Database and the Global Burden of Disease Study. Published: August 23, 2020 DOI: https://doi.org/10.1016/j.bbmt.2020.08.018	
34	Ram V Nampoothiri 1, Vivek Kumar 2, Joyita Bharati 2, Sheetal Lad 3, Kajal Arora 1, Pankaj Malhotra 1, Deepesh Lad 4. Hematopoietic stem cell donor with IgA nephropathy: Challenges and management algorithm. 2020 Aug;59(4):102781. doi: 10.1016/j.transci.2020.102781. Epub 2020 May 8. PMID: 32409153 DOI: 10.1016/j.transci.2020.102781	
33	Algwaiz G, Aljurf M, Koh M, eds. Real-World Issues and Potential Solutions in Hematopoietic Cell Transplantation during the COVID-19 Pandemic: Perspectives from the Worldwide Network of Blood and Marrow Transplantation and Center for International Blood and Marrow Transplant Research Health Services and International Studies Committee. Biology of Blood and Marrow Transplantation. 2020 Jul 24. DOI: https://doi.org/10.1016/j.bbmt.2020.07.021	WBMT and CIBMTR

32	Koh M, Aljurf M, eds. Position paper on Unproven Cell-Based Therapies: Current Global Status and Recommendations to the World Health Organization. 2020 June (submitted to the WHO for endorsement)	WBMT
31	M.Aljurf, D.Weisdorf, K.Hashmi, A.Nassar, E.Gluckman, M.Mohty, D.Rizzo, M.Pasquini, M.Hamadani, W.Saber, P.Hari, M.Kharfan-Dabaja, N.Majhail, U.Gerges, A.Ali Hamidieh, F.Hussain, A. Elhaddad, H.K.Mahmoud, D.Niederwieser. Worldwide Network for Blood and Marrow Transplantation (WBMT) recommendations for establishing a hematopoietic stem cell transplantation program in countries with limited resources (Part II): Clinical, technical and socio-economic considerations. Hematology/Oncology and Stem Cell Therapy. Volume 13, Issue 1, March 2020, Pages 7-16.	
30	Koh M, Aljurf M, Greinix H, and Weisdorf D. Coronavirus and Haematopoietic Stem Cell Transplantation. WBMT website, 2020 Feb. 24, https://www.wbmt.org/wp-content/uploads/2020/03/WBMT_COVID-19-2.pdf	WBMT
29	Ram V Nampoothiri, Vivek Kumar, eds. Hematopoietic stem cell donor with IgA nephropathy: Challenges and management algorithm. Transfusion and Apheresis Science 2020 May 8; 102781. doi: 10.1016/j.transci.2020.102781 https://pubmed.ncbi.nlm.nih.gov/32409153/	
Published in 2019		
28	Frutos C, Enciso ME, eds. Bridging the gap using telemedicine: optimizing an existing autologous hematopoietic SCT unit into an allogeneic hematopoietic SCT unit in Paraguay with the help of the WBMT. Blood Advances. 2019 Dec 6;3(suppl 1): 45-47. DOI: 10.1182/bloodadvances.2019GS121781	
27	Aljurf M, eds. Worldwide Network for Blood & Marrow Transplantation (WBMT) special article, challenges facing emerging alternate donor registries. Bone Marrow Transplantation, 54, 1179-1188 (2019)	WBMT
26	Muhsen I, Correction: Worldwide Network for Blood and Marrow Transplantation (WBMT) perspective: the role of biosimilars in hematopoietic cell transplant: current opportunities and challenges in low- and lower-middle income countries. Bone Marrow Transplantation (2019) https://doi.org/10.1038/s41409-019-0658-2	
25	Pasquini M, Srivastava A, eds. Worldwide Network for Blood and Marrow Transplantation recommendations for establishing a hematopoietic stem cell transplantation program in countries with limited resources (part I): minimum requirements and beyond Biology of Blood and Marrow Transplantation (2019), 25 (2322-2329)	WBMT
24	Aljurf M, Weisdorf D, eds. Worldwide Network for Blood and Marrow Transplantation (WBMT) recommendations for establishing a hematopoietic	WBMT

	<p>stem cell transplantation program in countries with limited resources (part II): Clinical, technical and socio-economic considerations</p> <p>Epub 2019: https://www.sciencedirect.com/science/article/pii/S165838761930055X?via%3Dihub</p>	
Published in 2018		
23	<p>Gluckman E, Niederwieser D, Aljurf M, eds. Establishing a hematopoietic stem cell transplantation unit: A practical guide. 1st ed. Springer International Publishing; 2018. springer.com/us/book/9783319593562</p>	WBMT
22	<p>Baldomero H, Aljurf M, Narrowing the gap for hematopoietic stem cell transplantation in the East-Mediterranean/African region: comparison with global HCT indications and trends.</p>	WBMT/EMBMT
21	<p>Harif M, Weisdorf D, Novitzky N, Szer J, Mahmal L, Benakli M, Ben Othman T, Bazuaye N, McGrath E, Eldridge PW, Torjemane L, Madani A, Ahmed Nacer R, Belkhedim R, Rasheed W, Ahmed SO, Kodera Y, Aljurf M, Niederwieser DW, Qessar A. Special report: Summary of the first meeting of African Blood and Marrow Transplantation (AfBMT) group, Casablanca, Morocco, April 19-21, 2018 held under the auspices of the Worldwide Network for Blood and Marrow Transplantation (WBMT). Hematol Oncol Stem Cell Ther. in press https://www.sciencedirect.com/science/article/pii/S1658387619300482?via%3Dihub</p>	
20	<p>Cuende N, Rasko JEJ, Koh MBC, Dominici M, Ikonomou L. Cell, tissue and gene products with marketing authorization in 2018 worldwide. Cytotherapy. 2018 Nov;20(11):1401-1413.</p>	
Published in 2017		
19	<p>Hashmi S, Weisdorf D, Greinix H, El Solh H, Niederwieser D, Szer J, Aljurf M, eds. Special Issue: Proceedings of WBMT. Hematology/ Oncology and Stem Cell Therapy. 2017 Dec 1; 10(4):167-326.</p>	WBMT
18	<p>Weisdorf D, Ruiz-Arguelles GJ, Srivastava A, Gómez-Almaguer D, Szer J. Economic challenges in hematopoietic cell transplantation: How will new and established programs face the growing costs? Biology of Blood and Marrow Transplantation. 2017 Nov 1; 23(11):1815-1816. Epub 2017 Aug 7. dx.doi.org/10.1016/j.bbmt.2017.07.026</p>	WBMT
17	<p>Aljurf MD, Gluckman E, Dufour C, eds. Congenital and acquired bone marrow failure. 1st ed. Elsevier; 2017 Jan 9. elsevier.com/books/congenital-and-acquired-bone-marrow-failure/aljurf/978-0-12-804152-9</p>	WBMT Education and Dissemination Committee

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Published in 2016		
16	Niederwieser D, Baldomero H, Szer J, Gratwohl M, Aljurf M, Atsuta Y, Bouzas LF, Confer D, Greinix H, Horowitz M, Iida M, Lipton J, Mohty M, Novitzky N, Nunez J, Passweg J, Pasquini MC, Kodera Y, Apperley J, Seber A, Gratwohl A. Hematopoietic stem cell transplantation activity worldwide in 2012 and a SWOT analysis of the Worldwide Network for Blood and Marrow Transplantation Group including the global survey. Bone Marrow Transplantation. 2016 Jun 1; 51(6):778-785. Epub 2016 Feb 22. PMC4889523. dx.doi.org/10.1038/bmt.2016.18	WBMT
15	Yoshimi A, Baldomero H, Horowitz M, Szer J, Niederwieser D, Gratwohl A, Kodera Y. Global use of peripheral blood vs bone marrow as source of stem cells for allogeneic transplantation in patients with bone marrow failure. JAMA. 2016 Jan 12; 315(2):198-200. Epub 2016 Jan 12. dx.doi.org/10.1001/jama.2015.13706	WBMT
14	Dominici M, Nichols KM, Levine AD, Rasko JE, Forte M, O'Donnell L, Koh MB, Bollard CM, Weiss DJ. Science, ethics and communication remain essential for the success of cell-based therapies. Brain Circ. 2016 Jul-Sep;2(3):146-151.	
Published in 2015		
13	Apperley J, Niederwieser D, Huang XJ, Nagler A, Fuchs E, Szer J, Kodera Y. Haploidentical hematopoietic stem cell transplantation: A global overview comparing Asia, the European Union, and the United States. Biology of Blood and Marrow Transplantation. 2016 Jan 1; 22 (1):23-23. Epub 2015 Nov 10. dx.doi.org/10.1016/j.bbmt.2015.11.001	WBMT
12	Keever-Taylor CA, Slaper-Cortenbach I, Celluzzi C, Loper K, Aljurf M, Schwartz J, McGrath E, Eldridge P, Alliance for Harmonisation of Cellular Therapy Accreditation. Training practices of cell processing laboratory staff: Analysis of a survey by the Alliance for Harmonization of Cellular Therapy Accreditation. Cytotherapy. 2015 Dec 1; 17(12):1831-1844. Epub 2015 Oct 9. dx.doi.org/10.1016/j.jcyt.2015.08.006	AHCTA (WBMT Accreditation Committee)
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APPENDIX H: WBMT PRESIDENTS

2007-2009: Founder and chair of initial working party – Dietger Niederwieser

President	Year
Dietger Niederwieser	2010-2014
Yoshihisa Kodera	2014-2016
Jeff Szer	2016-2018
Daniel Weisdorf	2018-2020
Hildegard Greinix	2020-2022
Mahmoud Aljurf	2023-2024

APPENDIX I: TERMS AND ABBREVIATIONS

Term / Abbreviation	Definition
AABB	Association for the Advancement of Blood & Biotherapies
AFBMT	African Blood and Marrow Transplant Group
AHCTA	Alliance for the Harmonization of Cellular Therapy Accreditation
ANZTCT	Australia and New Zealand Transplant and Cellular Therapies Ltd
APBMT	Asia-Pacific Blood and Marrow Transplantation Group
ASTCT	American Society for Transplantation and Cellular Therapy
ASH	American Society of Hematology
BIG V&S SARE	Bologna Initiative for Global Vigilance and Surveillance of Adverse Reactions and Events
BMT	Blood and marrow transplantation
CIBMTR	Center for International Blood and Marrow Transplant Research
CME	Continuing medical education
EBMT	European Society for Blood and Marrow Transplantation
ECDC	European Centre for Disease Prevention and Control
ELN	European Leukemia Network
ESH	European School of Hematology
FACT	Foundation for Accreditation of Cellular Therapy
GTA	Global transplant activity
HCT	Hematopoietic stem cell transplantation
ICCBBA	International Council for Commonality in Blood Banking Automation
ISBT	International Society of Blood Transfusion
ISCT	International Society of Cellular Therapy
LABMT	Latin American Blood and Marrow Transplant Society
MPHO	Medical products of human origin
NGO	Non-government organization
NMDP	National Marrow Donor Program

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RITN	Radiation Injury Treatment Network
SOHO V&S	Vigilance and Surveillance of Substances of Human Origin
TAS	Transplant Activity Survey
TTS	The Transplant Society
UK	United Kingdom
UN	United Nations
WBMT	Worldwide Network for Blood and Marrow Transplantation
WHO	World Health Organization
WMDA	World Marrow Donor Association

APPENDIX J: LETTER VOLUNTARY FEE WBMT MEMBER SOCIETIES



WBMT Voluntary Fee 2023

October 2023

Dear XXX,

I would like to start by thanking you and your organization, XXX, for your continued support to the WBMT.

With your commitment our organization conducted several activities which impacted the diffusion and knowledge of hematopoietic stem cell donation and transplantation at a global level.

Our standing committees organized several well-attended webinars, focusing on multiple topics of global interest and of great impact on hematopoietic stem cell donation and transplantation, but also on other important educational topics in cooperation with various member organizations of WBMT. Traditionally our webinars have well selected topics of global interest and presentations are delivered by renowned speakers. Most of our webinar activities were attended by multi-hundreds of participants around the globe from more than 50 countries.

Our WBMT standing committees had very successful and well-attended committee meetings and started several new projects, consensus documents about global HSCT issues. In addition, we have been working closely with the WHO on several projects including the WHO listing of essential medications, unproven cell therapies and regulatory issues related to HSCT, CART and ATMP.

To speed up the global survey, a new database (GTR) has been implemented that will support all providing transplant data and will allow timely publication of our results.

During the last 12 months, important publications from our standing committees have been accepted in high impact factor journals including 3 publications in Lancet Haematology. We hope these publications focussing on global HSCT issues will help in HSCT patient care worldwide.

To further support our core activities, namely educational and scientific activities, and to cover our annual costs (administrative support, global survey, IT support and website), we would also like to ask this year for the annual membership fee of EUR 2,500.00 to be paid before end of November.



**Worldwide Network for Blood and Marrow
Transplantation**

We very much appreciate your support and we are open to negotiations in case the current situation does not allow you to transfer this fee.

Thank you all for your generous support and looking forward to seeing you.

With best regards,

Mahmoud Aljurf, MD, MPH
President, WBMT