CHAPTER 2

The European Group for Blood and Marrow Transplantation: Present and future

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1. Introduction
The European Group for Blood and Marrow Transplantation (EBMT) is a non-profit organisation, established in 1974 in order to allow scientists and physicians involved in clinical bone marrow transplantation to share experience and develop co-operative studies. Over the last 36 years the EBMT has developed into the leading scientific society in Europe and is at the cutting edge in the field of stem cell transplantation.

The mission of EBMT is to “foster excellence in science in order to further improve the outcomes of stem cell transplantation and inform all concerned, including patients and their families, about developments in the field”.

To this end, the Society works to the highest standards to promote all aspects associated with the transplantation of haematopoietic stem cells from all donor sources and donor types, including basic and clinical research, education, standardisation, quality control and accreditation for transplant procedures.

The EBMT plays a key role in:
- Measuring trends in transplant activity
- Collection and analysis of patient transplant data in Europe
- Classifying indications for stem cell transplantation for both neoplastic and non-neoplastic disorders in adults and children
- Initiating pioneering prospective studies employing new ideas and techniques within the field of HSCT and cellular therapy
- Networking and education of professionals
- Communications, lobbying and alliance building
- Setting strict quality standards
- Improving patient self-care through education and communication.

2. The EBMT today

2.1 EBMT as a scientific society - Developments in HSCT and cell therapy fields
The EBMT is supported by 3612 members, based in 536 transplant centres in 57 countries worldwide. The success of EBMT vastly depends on the capacity of the society to motivate and commit the member centres to contribute to the goals of EBMT through submitting transplant data to the central registry and enrolling patients in both retrospective, non-interventional observational trials and prospective clinical trials.

HSCT activity in Europe has significantly increased over recent years. The average number of HSCT performed within the EU is 293 per 10M inhabitants and 60% of the transplant teams associated with EBMT perform both autologous and allogeneic HSCT.
It is clear that the field of HSCT is a quickly growing one. Nevertheless, HSCT is currently facing multiple challenges. New drugs have recently appeared on the market. The new EU directive for prospective clinical trials has imposed major bureaucratic constraints which have significantly affected the development of clinical trials in Europe. Finally, and more recently, stem cells have been used for other purposes than haematopoietic rescue after high-dose therapy. EBMT as a transplant organisation has to face the clear need to find its own niche, focusing its scientific and research activities on diseases and indications where the advantage of having a large number of affiliated transplant centres overcomes the inherent difficulties of economic issues, and the geographical barriers of powerful and well-developed national scientific groups.

2.2 Scientific activities of the EBMT - The key players
The EBMT scientific activities are largely coordinated through the Working Party (WP) structure, which has grown over the years. The nature of the 11 current WPs is varied; the majority of them are disease-based WPs (acute leukaemia, aplastic anaemia, autoimmune diseases, chronic leukaemias, inborn errors, lymphomas and solid tumours) but others constitute the so-called “transversal” WPs with scientific activities extending across varied diseases (immunobiology, infectious diseases, late effects and paediatrics).
Over the last two decades HSCT nursing has grown rapidly and has acknowledged the care needs of the patients, their families and donors. HSCT nurses are involved in the decision-making process about treatment options for their patients. The EBMT Nurses Group started in January 1985 and is involved in the care of the HSCT patient. Finally, other scientific activities of the EBMT are nowadays coordinated through different Committees: Education, Nuclear Accident, Prospective Clinical Trials, Developmental, Outreach, Quality Assessment of the Grafts and Statistical.

2.3 Scientific activities of the EBMT - The tools
2.3.1 The Registry. The role of retrospective analyses
The HSCT Registry is one of the major treasures of EBMT. Data are entered and maintained in a central database with internet access. Each EBMT centre is represented in this database and users from a centre can view, modify, obtain reports and download their own data. In addition, all centres can obtain general overviews of the complete EBMT data. The database is run on a system called ProMiSe (Project Manager Internet Server). The national registries operating have become part of the EBMT data flow by mutual consent and are using the same central database. Most national registries enter data for those centres in their country which do not wish
to access the central database directly. For countries without national registries, the EBMT Data Office in Paris fulfills the same role. The EBMT Registry holds data on 350,888 transplants. Over two years ago the Board recognised the need to invest resources to improve our principal tool. EBMT needs to build a flexible and robust data management system that meets evolving needs and provides an integrated infrastructure to maximise the research potential in Europe in collaboration with members and partners.

The publication of retrospective analyses represents the major part of the scientific output of the EBMT. Last year 46 retrospective analyses from 150 studies were published in major peer-reviewed journals giving a total impact factor for 2009 of 140 and a ratio impact factor/number of publications of 8. A special mention must be made of the “Indications and Recommendations Manuscript” that the EBMT Board regularly publishes in the journal Bone Marrow Transplantation. The most recent version of the recommendations, published in 2010, are more comprehensive and detailed and are extensively used, not only by centres or individuals, but also by national health authorities and health insurance companies looking for economical and reimbursement issues.

2.3.2 The Increasing EBMT activity in non-interventional observational clinical trials

EBMT has significantly increased the number of on-going and ready-to-start non-interventional observational studies (NIS). Nowadays the EBMT trial portfolio includes 15 studies. Although NIS are not designed to modify treatment strategies in a given population of patients they aim to prospectively collect data on clinical practice issues and responses to a homogeneous treatment procedure.

Prospective Clinical Trials. The Prospective Clinical Trials Committee. EBMT has recently faced the difficulties inherent in the development of the 2001 EU Directive on Prospective Clinical Trials, significantly exacerbated because of the European nature of the organisation itself. A very active approach was undertaken by the Prospective Clinical Trials Office with the objective to review the status of the different on-going prospective clinical trials and meanwhile the initiation of new EBMT Sponsored Clinical Trials was put on hold. An Action Plan has recently been approved by the EBMT Board which will address the issues facing the Clinical Trials Office.

2.4 The increasing commitment of EBMT to education

EBMT’s mission is “to foster excellence in science in order to further improve the outcomes of HSCT and inform all concerned, including patients and their families, about developments in the field”. The EBMT Education Committee is undertaking a strategic review of the educational side of the organisation with the aim of
consolidating and improving the educational opportunities offered to EBMT members. Elements that fall under the “EBMT Education” umbrella include the EBMT Handbook and Annual Training Course, both organised in conjunction with the European School of Haematology. In addition, a number of specialist courses and sessions are organised on an annual basis through the various WPs and Committees.

2.5 EBMT in the context of the European Union
The EBMT is an active member of the Committee for Advanced Therapies (CAT) of the European Medicines Agency (EMA). It is a multidisciplinary committee, gathering together some of the best available experts in Europe to assess the quality, safety and efficacy of advanced therapy medicinal products (ATMPs), and to follow scientific developments in the field. In this context, EBMT participated as an external expert in the EUSTITE Project (European Union Standards and Training in the Inspection of Tissue Establishments). In addition, EBMT itself and several WPs of the EBMT have participated in EU-funded projects such as the European Leukaemia Net (ELN), AlloStem, Eurocord-Ed, SOHOV&S Project and the CLINT Project (facilitation of international prospective clinical trials in stem cell transplantation).

2.6 Regulatory environment and JACIE Accreditation
The Joint Accreditation Committee-ISCT (Europe) and EBMT is a non-profit body established in 1998 for the purposes of assessment and accreditation in the field of HSCT. JACIE's primary aim is to promote high quality patient care and laboratory performance in haematopoietic stem cell collection, processing and transplantation centres through an internationally recognised system of accreditation. There are currently 224 registered centres, 75 inspections in preparation (including re-accreditations), 198 completed inspections, 104 facilities accredited and 34 re-accreditations in progress. Seventeen countries in Europe have already adopted the JACIE model.

2.7 EBMT budget and income sources
The EBMT budget allocated to all of these activities is close to 2,5M€ and the organisation supports salaries for around 35 FTEs in 4 main offices (Barcelona, London, Paris and Leiden-Rotterdam). The financial structure is based on three main sources of income (EBMT Membership, Corporate Sponsors and the profits of the Annual Congress).

3. The EBMT in the future
Throughout its existence the EBMT has been evolving as an organisation, but an important stage has now been reached where fundamental change is required in order
to respond to present and future challenges. The opportunity to make such changes occurs only occasionally and it is important to use this time creatively. In April 2010 the EBMT found itself in a position where creative changes could be made. This was afforded by the arrival of a new President ready to govern a Board made-up of equal numbers of experienced and new Board Members, combined with the creation of a new Executive Director position, backed by the knowledge and motivation of the Operations Team. Recognition is also due to the outgoing Board who left the organisation in a favourable financial situation.

Against this background the EBMT Board has taken on the crucial task of developing a 3-year Strategic Plan to cover the period 2011–2013. This process commenced in May 2010 with the development of a Vision document elaborated by the President and developed in discussion with the Board. The Vision document encompasses 4 key areas: Excelling in Science, Advancing Clinical Practice, Improving Governance and Maximising Resources. Transparent and participative consultation with stakeholders (volunteers, members, staff, collaborative partners, industry, etc.) has been fundamental to the process of identifying the principal needs and the steps required to meet them.

Working Groups consisting of representatives of the Board, Committee Chairs, guests and staff were established to work on these 3 areas in preparation for the Strategy Meeting held in October 2010. Each Working Group reviewed the current situation and produced a SWOT analysis related to the areas under review. These documents formed the basis for discussion of the Strategic Objectives and the actions required to achieve them. In relation to the area of Resources, IT consultants Birchman Group were contracted to carry out a review of EBMT’s Information Systems and to produce an IT Plan for 2011–2014.

In parallel, a Membership Survey was conducted to evaluate the needs and wishes of the membership base. The survey was completed by 506 members, from 345 centres in 45 countries, which represents approx. 65% of member centres. The results of the survey were presented at the outset of the strategy meeting to inform the discussions and will be further evaluated as part of the strategy. An analysis and overview of the scientific output of the EBMT was also presented as a benchmarking exercise. This analysis will be refined to take into account the output of relevant EBMT Committees, reviews and editorials and will be adjusted for factors in the Citation Index.

3.1 Excelling in science and advancing clinical practice

In the current resource-limited climate where competition on a scientific level is increasingly tough, a major priority for the EBMT is to establish a well-formulated Scientific Policy to steer the research direction and future investment of the
Despite leading the field of stem cell transplantation in Europe, in a context of changing indications and regulations, as well as continuous evolution, it is essential to evaluate the current situation in order to remain relevant and forward looking. In this context a review and restructuring of EBMT Working Parties and Committees will be conducted with a view to defining priorities, improving synergies and exploiting the EBMT’s research potential to a maximum. One aim will be to establish a strong presence in the Cell Therapy field – as the production of cell-based therapeutic products is a unique feature of EBMT activities, with strong implications for product harmonisation as well as human safety - and fostering closer links with the International Society for Cellular Therapy (ISCT) and others.

Building effective partnerships at a central, national and international level is fundamental to the strategy. The EBMT is privileged to have leaders of “groups of excellence” within its membership and would like to stimulate further innovative research through identifying groups working on translational research, mostly - although not exclusively - in the two main relevant fields to its activities: immune recognition of tumour and infectious targets and stem cell biology, and facilitating forums to explore new synergies and ways of working together: EBMT may choose to focus its attention on translational research, while partnering with other scientific societies that promote more basic approaches. Similarly, there is strong potential for productive collaborations with national societies and study groups on the European level, and to facilitate activities of members globally through joint initiatives with international partners.

The EBMT Registry represents a key tool for the scientific research and regulatory activities of the Society and its partners. Another major strand of the strategy plan is to update the Registry System with state-of-the-art software designed to meet future data collection and retrieval needs. By creating a consortium of partners including national and donor registries, ascertaining needs and what each party can contribute, the goal is to share resources and create a system of maximum utility. The overall aim is to significantly improve the research infrastructure in Europe whilst promoting standardised data collection and international harmonisation. While data collection must be improved and harmonised, organising sample collection to complement the registry activities is of utmost importance, in view of the growing needs to assess increasing numbers of biological parameters in the context of daily care as well as during the conduct of biomedical research. In relation to developing data reporting and maximising scientific research potential, the European Union, Pharma Industry and Biotech Companies are vital partners. The EBMT will seek to capitalise on these relationships by adopting a win-win approach, developing platforms for effective interaction, and modelling different elements in order to synergise with key decision-makers.
Building on a strong Registry base, retrospective and non interventional studies will remain the cornerstone of the EBMT and efforts will be dedicated over the next 3 years to optimising study coordination and conduct. A Study Office structure will be created to oversee all EBMT studies and personnel, and processes for inviting member centres to participate in studies will be streamlined.

In spite of the well-documented challenges of conducting trans-national clinical trials in the academic setting and the difficulties experienced in this regard over the last four years, EBMT remains committed to performing prospective clinical trials. Academic clinical trials aimed at acquiring scientific knowledge form the basis for continuously improving patient care. Improved vision, strategy and governance will be critical for the effective management of clinical trials. Following an in-depth review of EBMT clinical trials, a new clinical trials committee is to be established to provide more effective leadership. The number of trials will be limited for manageability and the challenge lies in identifying niche studies that only the EBMT can perform, as well as creating opportunities for cooperation with national study groups.

The beneficiaries of EBMT’s scientific research are ultimately the patients, which makes advancing clinical practice through education and training a fundamental element of the strategy. To date, education initiatives within the EBMT have evolved organically without a strategic overview or planning. In order to draw the diverse strands together, the Education strategy entails a focus on three key areas: scope, organisation and financing. The aim is to build a balanced, high quality educational programme covering the needs of the EBMT Community. The organisation will be based on a mixed model, building a strong and streamlined organisational structure which encourages local initiative within established parameters, supported by robust central co-ordination and overview. Nurses and allied health professionals are at the heart of patient care and in view of this it is aimed to dedicate resources to increasing the level of research, training and education for nurses. The EBMT Nurses Group will review Nursing Strategy.

### 3.2 Improving governance

Good governance is the bedrock for effective, efficient and accountable implementation of the EBMT mission. The EBMT has already begun a process of professionalisation, resulting in the appointment of an Executive Director in January 2010. The Board recognises the need for responsible governance and intends to consolidate these advances by devising a system of governance in which Science, Education and Quality are well represented, and aims to promote effective decision-making through the following measure:

- Review structure of current Board and develop it into a Scientific Board with a remit for the scientific direction.
• Review structure and mandate of the Executive Committee and develop a representative body which is empowered to take decisions for the efficient and effective management of the organisation.

• Review current Working Party/Committee structure and decide how to reorganise them to meet the current scientific and other needs of the Society.

It will be important to reinforce the role of the Executive Director and the Management Team in the Operational arena and introduce a system of Business Planning to improve decision-making and accountability (strategic plan, annual plans, annual review, etc.) and to increase efficiency within the EBMT Offices through common management policies and a clear definition of responsibilities of each office. Strong internal and external communications are important aspects of accountability and dissemination. To these ends, strategies will be aimed at increasing the level of Board communications, lobbying and alliances:

• To develop a more professional organisational structure: The Board, Working Parties, Committees and the Executive Director/Management Team

• To increase the level of Board communications, lobbying and alliances

• To increase efficiency within the EBMT Offices.

3.3 Maximising resources

Last, but not least, is the maximisation of resources. There is a clear need for integrated information systems across the organisation to improve the management of finances, communications, databases and studies. Improving the EBMT’s web presence and the creation of an online communications infrastructure is an important element of the communication strategy. Not only is there a need to improve the resources at the disposal of the EBMT and its members, but also to increase the level of resources to fund core activities. The Annual Congress is an important scientific, educational and networking event, as well as a major source of income for the Society. In this regard it is important to develop the congress to remain competitive, whilst refining the venue selection process in order to minimise risk and maximise profit. It is also essential to develop the relationship with Industry and official Donors and to implement new fundraising strategies aimed at diversifying and developing the funding base of the Society. The EBMT will also continue to promote JACIE as the global standard and system of accreditation, as well as the watchdog for regulatory changes in Europe and worldwide.

4. Conclusions

The success of this long process will be based on the commitment and a comprehensive and shared vision among all members of the organisation. We need
to work together towards introducing a new model of organisation based on a clear mandate and vision, which will foster excellence in science in order to further improve the outcome of SCT and inform all concerned, including patients and their families.

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**References**

**Multiple Choice Questionnaire**
To find the correct answer, go to [http://www.esh.org/online-training/handbook/](http://www.esh.org/online-training/handbook/)

1. **Please identify which of the one does not represent a key role for EBMT:**
   a) Measuring trends in stem cell transplantation activity
   b) Pioneering prospective clinical trials in the transplantation field
   c) Networking and education of professionals
   d) Paying a percentage of the transplant budget of each patient to the relevant country

2. **With respect to the organisational characteristics of the EBMT, please indicate the correct answer:**
   a) The EBMT is supported by 3612 members, based in 536 transplant centres in 57 countries around the world
   b) The EBMT scientific activities are largely conducted through the Working Party Structure. There are 13 Working Parties in total
   c) The Executive Committee of the EBMT is constituted by the President, the Secretary and the Treasurer
   d) Both a and c are correct
3. Please, indicate which of the following represents a challenge for EBMT:
   a) The new EU directive in relation to prospective clinical trials
   b) The development of new drugs that are challenging the role of stem cell transplantation in some indications
   c) The fact that stem cells are being used for additional purposes other than haematopoietic stem cell transplantation
   d) All of the above