1. LBMDR – Registry Organization

Lithuanian Bone Marrow Donor Registry (LBMDR) was established in Hematology, Oncology and Transfusion Medicine Center of Vilnius University Hospital Santariskiu Klinikos, Vilnius, Lithuania (www.santa.lt) in 2004. LBMDR cooperates with BMDW (Bone Marrow Donors Worldwide), WMDA (World Marrow Donor Association) and EBMT (European Group for Blood and Marrow Transplantation).

LBMDR facilitates unrelated donor search for 2 transplant centers – Vilnius University Hospital Santariskiu Klinikos (for adults) and Children’s Hospital, Affiliate of Vilnius University Hospital Santariskiu Klinikos (for children).

Stem cells/donor lymphocytes are collected by the Apheresis unit of Hematology, Oncology and Transfusion Medicine Center of Vilnius University Hospital Santariskiu Klinikos. The unit performs about 180 stem cell collections annually (both for allogeneic and autologous use).

As a part of Vilnius University Hospital Santariskiu Klinikos, LBMDR is served by modern Laboratory Medicine Center (hematological, biochemical, microbiological, flow cytometric analysis, infectious diseases markers) and Department of Molecular and Regenerative Medicine. Immunogenetics unit performs intermediate and high (SBT) resolution HLA typing – EFI accreditation since 2014.

LBMDR Address:

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## 2. Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>AA</td>
<td>Aplastic anemia</td>
</tr>
<tr>
<td>ALL</td>
<td>Acute lymphoid leukemia</td>
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<tr>
<td>AML</td>
<td>Acute myeloid leukemia</td>
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<td>BM</td>
<td>Bone marrow</td>
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<td>BMDW</td>
<td>Bone marrow donors worldwide</td>
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<td>CLL</td>
<td>Chronic lymphoid leukemia</td>
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<tr>
<td>CML</td>
<td>Chronic myeloid leukemia</td>
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<td>CMML</td>
<td>Chronic myelomonocytic leukemia</td>
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<td>DLI</td>
<td>Donor lymphocyte infusion</td>
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<td>DNA</td>
<td>Deoxyribonucleic acid</td>
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<td>EBMT</td>
<td>European group for blood and marrow transplantation</td>
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<td>HLA</td>
<td>Human leukocytes antigen</td>
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<td>HSCT</td>
<td>Hematopoietic stem cell transplantation</td>
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<td>LBMDR</td>
<td>Lithuanian bone marrow donor registry</td>
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<tr>
<td>MDS</td>
<td>Myelodysplastic syndrome</td>
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<tr>
<td>MM</td>
<td>Multiple myeloma</td>
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<tr>
<td>MPN</td>
<td>Myeloproliferative neoplasms (except CML)</td>
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<tr>
<td>NHL</td>
<td>Non-Hodgkin's lymphoma</td>
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<tr>
<td>PB</td>
<td>Peripheral blood</td>
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<tr>
<td>SBT</td>
<td>Sequence based typing</td>
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<tr>
<td>WMDA</td>
<td>World marrow donor association</td>
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3. LBMDR Donors

LBMDR actively recruits voluntary bone marrow donors. 1347 new donors were recruited in 2013. By the end of 2013, 9158 volunteer donors (0.31% of Lithuanian population) have been registered with LBMDR. All donors are HLA-A, B, C, DRB1 typed. Most of the donors (78%) belong to 18-35 year old age group.

Fig. 1. Distribution of donors in LBMDR: annual and accumulated number.

Fig. 2. Distribution of LBMDR donors by sex: annual and accumulated number.
Fig. 3. Distribution of LBMDR donors by age groups: annual and accumulated number.
4. Donor Search for Patients Transplanted in Lithuania

2004-2013

Median search duration - 30 days

Initiated searches 520

Proceeded 471
Canceled 49 (9.4%)

Acceptable donor found 449 (95.3%)

10/10 316 (67.1%)
9/10 119 (25.3%)
8/10 14 (2.9%)

No acceptable donor found 22 (4.7%)

Tx performed

10/10 237 (75% used)
9/10 93 (78% used)
8/10 13 (93% used)
5. Donor Search and Donations for International Patients

Year 2013

133 new preliminary unrelated donor searches for new international patients were performed in LBMDR in 2013. Requests for further donor typing (DNA high resolution) were received in 27 cases. All requests were fulfilled. 34 blood samples of LBMDR donors were requested for confirmatory typing, 30 of them were effectively shipped.

Fig. 4. Number of donations from LBMDR donors.

LBMDR donations abroad (2004-2013):
1 – Slovakia; 1 – Norway; 1 – Poland; 1 – Ireland; 1 – Spain; 1 – Finland; 1 – USA.
6. Unrelated Donor Transplantations in Lithuania

LBMDR facilitates unrelated donor search and transplantations for 2 transplant centers – Vilnius University Hospital Santariskiu Klinikos (for adults) and Children’s Hospital, Affiliate of Vilnius University Hospital Santariskiu Klinikos (for children).

**Fig. 5.** Distribution of unrelated donor HSCT in Lithuania: annual and accumulated number.

**Fig. 6.** Distribution of unrelated donor HSCT by adult and children patients: annual and accumulated number.
**Fig. 7.** Distribution of unrelated donor HSCT by stem cell source: annual and accumulated number.

![Bar chart showing distribution of unrelated donor HSCT by stem cell source over the years 2004 to 2013.]

- **BM**: Annual number of HSCT
- **BM**: Accumulated number of HSCT
- **PB**: Annual number of HSCT
- **PB**: Accumulated number of HSCT

**Parameters**:
- **BM**: Bone Marrow
- **PB**: Peripheral Blood

**Groups**:
- **8/10**: Annual number of HSCT
- **8/10**: Accumulated number of HSCT
- **9/10**: Annual number of HSCT
- **9/10**: Accumulated number of HSCT
- **10/10**: Annual number of HSCT
- **10/10**: Accumulated number of HSCT

**Legend**:
- Red bar: Annual number
- Green bar: Accumulated number

**Data Points**:
- **2004**
  - BM: 0
  - PB: 0
- **2013**
  - BM: 12
  - PB: 68

**Legend Details**:
- 8/10: Annual number of HSCT: 0, 2, 1, 0, 3, 3, 0, 2, 1, 0
- 8/10: Accumulated number of HSCT: 0, 2, 3, 3, 6, 9, 9, 11, 12, 12
- 9/10: Annual number of HSCT: 1, 3, 14, 5, 11, 8, 15, 12, 11, 14
- 9/10: Accumulated number of HSCT: 1, 4, 18, 23, 34, 42, 57, 69, 80, 94
- 10/10: Annual number of HSCT: 0, 11, 10, 29, 26, 18, 33, 30, 41, 39
- 10/10: Accumulated number of HSCT: 0, 11, 21, 50, 76, 94, 127, 157, 198, 237

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**Fig. 8.** Distribution of unrelated donor HSCT by donor matching grade: annual and accumulated number.

![Bar chart showing distribution of unrelated donor HSCT by donor matching grade over the years 2004 to 2013.]

**Parameters**:
- **8/10**: Annual number of HSCT
- **8/10**: Accumulated number of HSCT
- **9/10**: Annual number of HSCT
- **9/10**: Accumulated number of HSCT
- **10/10**: Annual number of HSCT
- **10/10**: Accumulated number of HSCT

**Groups**:
- **8/10**: Eight and Ten
- **9/10**: Nine and Ten
- **10/10**: Ten and Ten

**Legend**:
- Red bar: Annual number
- Green bar: Accumulated number

**Data Points**:
- **2004**
  - 8/10: 0
  - 9/10: 1
  - 10/10: 0
- **2013**
  - 8/10: 68
  - 9/10: 226
  - 10/10: 275

**Legend Details**:
- 8/10: Annual number of HSCT: 0, 2, 1, 0, 3, 3, 0, 2, 1, 0
- 8/10: Accumulated number of HSCT: 0, 2, 3, 3, 6, 9, 9, 11, 12, 12
- 9/10: Annual number of HSCT: 1, 3, 14, 5, 11, 8, 15, 12, 11, 14
- 9/10: Accumulated number of HSCT: 1, 4, 18, 23, 34, 42, 57, 69, 80, 94
- 10/10: Annual number of HSCT: 0, 11, 10, 29, 26, 18, 33, 30, 41, 39
- 10/10: Accumulated number of HSCT: 0, 11, 21, 50, 76, 94, 127, 157, 198, 237

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The Lithuanian Bone Marrow Donor Registry continues to play a crucial role in providing bone marrow donors for transplantation procedures.
Fig. 9. Number of unrelated donor HSCT by diagnosis (2004-2013).

Fig. 10. Unrelated donor HSCT recipients treated with DLI.
7. Cooperators and Friends

OHLB “Kraujas” – association of patients with oncohematological diseases (“Blood”)

www.kraujas.lt

“Be good” – bone marrow donor recruitment program, initiated by LBMDR and OHLB “Kraujas”

www.begood.lt