Allogeneic Stem Cell Transplantation in HIV-1 Infected Individuals

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**Aims**

The EpiStem consortium is building a prospective observational cohort of cases of allogeneic stem cell transplantation (SCT) in HIV-1-infected individuals with life-threatening hematological malignancies throughout Europe.

EpiStem invites clinicians to enroll patients who are eligible for an SCT procedure. The consortium provides:

- Clinical guidance (on hematological procedures, tropism testing, interpretation of HIV drug resistance, drug-drug interactions)
- IRB approvals support
- Donor search in international databases and CCR5Δ32 testing
- Systematic monitoring and in depth sampling protocols

Enrolled patients fully benefit from the EpiStem scientific efforts to explore viral reservoir reductions, innate and adaptive immunity changes and potential HIV-1 eradication. The treating hematologist and infectious disease specialist are invited to join the EpiStem workgroups.

**Results**

- Cord blood units in multiple European blood banks and adult donors have been genotyped to generate a pan European registry of CCR5Δ32 available donors.
- Currently 18 patients have been recruited. 12 have been transplanted.
- Four patients were transplanted with CCR5Δ32 donor cells.
- So far 5 patients have successfully passed the 6 months follow-up after transplantation, and 8 patients have died after transplantation, despite achieving full donor cell chimerism in some cases.
- Preliminary analysis of virological and immunological data from blood and tissue samples shows a systematic reduction of HIV-1 reservoirs to very low levels.

**Organisation**

**Project 1**
Observational Study
A Wensing / G Hütter
Col: Diez, Kuball, Rocha, van Besien, Schulze zur Wiesch

**Project 2**
Donor Testing
V Rocha
Col: Hütter, Wensing

**Project 3**
Molecular Virology
M Nijhuis
Col: Martinez-Picado, Wensing

**Project 4**
Cellular Virology
J Martinez-Picado
Col: Nijhuis, Schulze zur Wiesch

**Project 5**
Immunology
A Saez-Cirion
Col: Martinez-Picado, J Schulze zur Wiesch

**Project 6**
Evaluation and Recommendations
G Hütter
Col: Diez, Kuball, Rocha, van Besien, Schulze zur Wiesch, Wensing

**Sample flow**

**Data flow**

**Patient Overview**

Results

<table>
<thead>
<tr>
<th>Adult Donor</th>
<th>umbilical cord</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>1+1</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>8</td>
<td>4</td>
</tr>
</tbody>
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www.epistem-project.org