

## Haploidentical vs. Matched Unrelated Donor Transplants Using Post-Transplant Cyclophosphamide for Lymphoma: A Joint CIBMTR/EBMT Study

### WHY?

To evaluate the impact of matched unrelated donors (MUD) and haploidentical related donors (Haplo) on outcomes of allogeneic hematopoietic stem cell transplantation (HCT) for lymphoma using post-transplant cyclophosphamide (ptCy) based graft vs host disease (GVHD) prevention.

The study team hypothesized that the use of ptCy eliminates the advantage between HLA matched and mismatched graft sources

### WHAT?



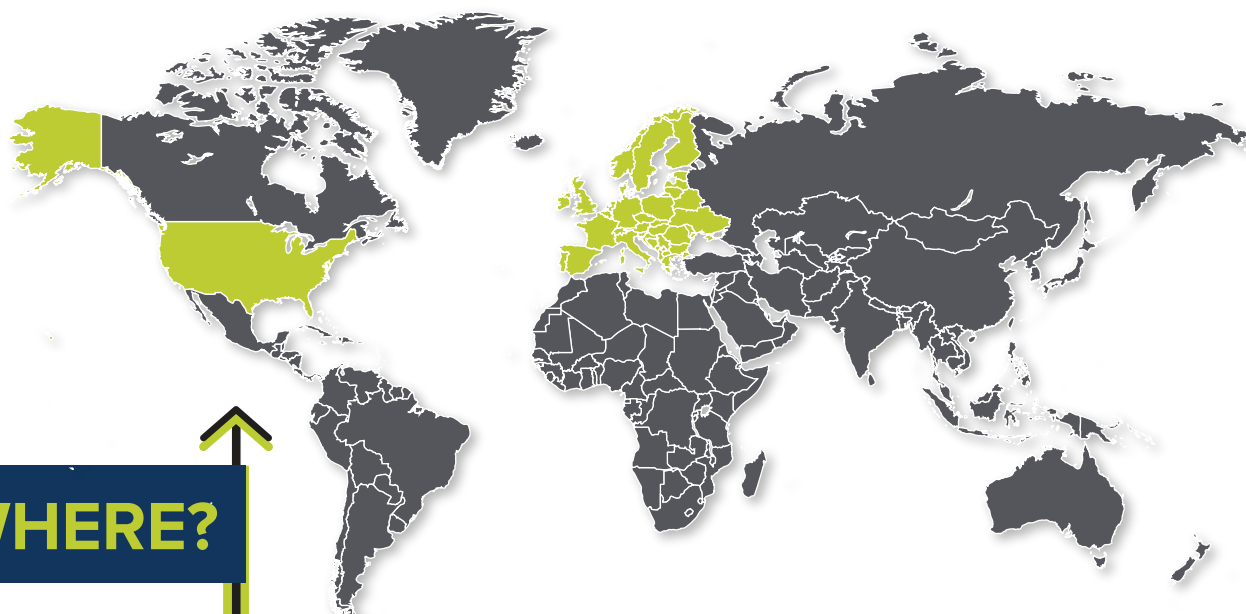
Compare outcomes between patients with lymphoma receiving HCT using either a high resolution 8/8 MUD or Haplo using a uniform GVHD prevention strategy including ptCy.

### WHO?

## 2,155 adult patients

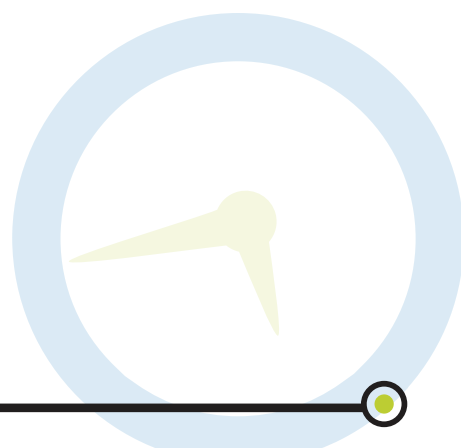
who received either a first Haplo (N=1,843) or MUD (N=312) HCT for the treatment of lymphoma (non-Hodgkin or Hodgkin) from 2010-2019 using ptCy based GVHD prevention reported to CIBMTR or EBMT.

### WHERE?



### WHEN?

## 2010-2019



### IMPACT/FINDINGS:

Patients who received an HCT with ptCy and a MUD had better overall survival ( $p=0.0043$ ), progression-free survival (stable disease after HCT) ( $p=0.017$ ) and lower non-relapse mortality ( $p=0.022$ ) than those who had a Haplo donor. Additionally, patients who had a MUD had lower rates of acute and chronic GVHD ( $p<0.01$ ).

These results provide evidence that **MUD 8/8 should be prioritized over a Haplo donor**, if available, when using ptCy and that the use of ptCy-based GVHD prevention does not eliminate the negative impacts of HLA mismatching. This also adds to the importance of continued efforts to find matched unrelated donors for patients with lymphoma in need of HCT.

## FROM THE EXPERTS

*When there is a choice of a donor for the patient, making the selection is critical for ensuring the best possible transplant outcomes. In this study, we find that matching on HLA between the donor and the patient still matters even with the use GVHD prophylaxis regimens such as post-transplant cyclophosphamide."*



**Yung-Tsi Bolon, PhD**  
Director, Bioinformatics and Immunobiology Research  
CIBMTR

*It is important to favor a matched unrelated donor over a haploidentical donor if the patient has enough time to wait for such a donor. HLA compatibility still has a role in the post-transplant cyclophosphamide era. The less HLA compatibility, the more immunological complications. As Stephen Spellman says, "the right donor at the right time!"*



**Alberto Mussetti, MD**  
Director Hematopoietic Cell Transplant/Cell Therapy Unit  
ICO Institut Català d'Oncologia Hospitalet de Llobregat, Barcelona, Spain

*While not all patients will have a matched unrelated donor available on the worldwide registries, these data suggest that an unrelated donor search is warranted for all patients with lymphoma in need of allogeneic transplant. Better HLA matching leads to improved outcomes even in the context of post-transplant cyclophosphamide-based graft versus host disease prophylaxis."*



**Stephen Spellman**  
Vice President, Research Senior Scientific Director  
National Marrow Donor Program, CIBMTR



#BeTheMatch