PTCy, Abatacept, and Short Course of Tacrolimus (CAST) for Acute GVHD Prevention after Haploidentical Hematopoietic Cell Transplantation

A collaborative study from New York University Langone Health

Study Details:

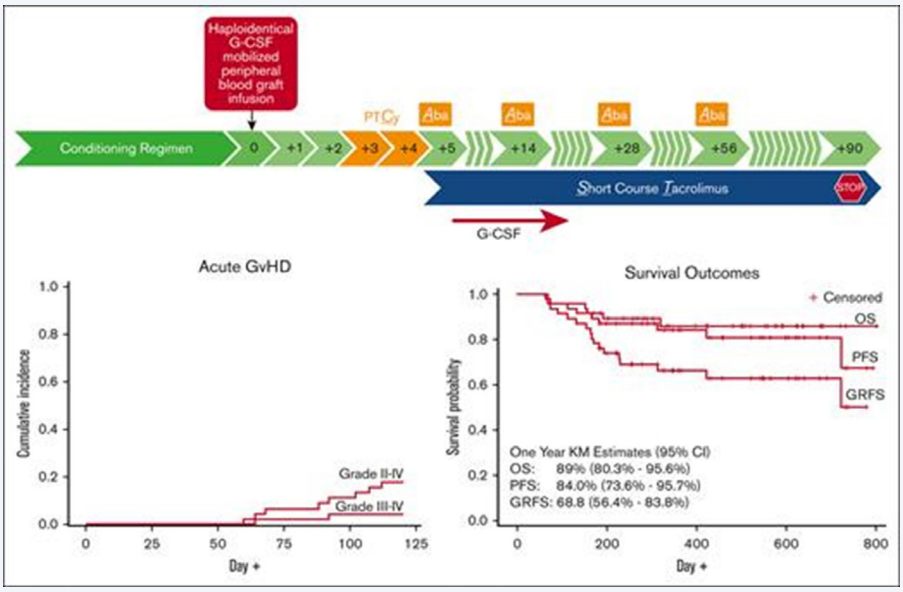
A single-center Phase 1b-II study evaluated the safety and efficacy of the CAST regimen (post-transplant cyclophosphamide, abatacept, and short-course tacrolimus) in reducing acute graft-versus-host disease (aGVHD) risk following haploidentical hematopoietic cell transplantation (haplo HCT).

Adult patients aged 18 – 74 (n=46) undergoing haplo HCT for hematologic malignancies were enrolled to assess CAST efficacy in reducing the risk of grades II – IV aGVHD by day 120 post-transplant. Conditioning regimens varied based on patient factors like age, performance, and disease type/status.

Results at a Glance:

- The incidence of grades II – IV aGVHD was 17.4% at 120 days post-transplant. Only 4.4% of patients developed more severe, grade III – IV aGVHD.
- The trial demonstrated favorable 1-year outcomes, with a treatment-related mortality of 4.4%, overall survival of 85.9%, and progression-free survival of 84.1%.
- After 1 year, 66.1% of patients experienced neither GVHD nor a relapse of their initial condition.

Figure: Acute GVHD and Survival Outcomes



Clinical Impact:

The clinical trial results suggest the CAST regimen was safe and effective in reducing the rates of grades II – IV aGVHD following haplo HCT. Although the numbers were small, this is a promising option for reducing the risk of aGVHD and offers a basis for future larger-scale trials potentially addressing health disparities in donor availability across diverse populations.

Read the publication in *Blood Advances* (DOI:10.1182/bloodadvances.2023010545).

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