

Study Title

Viability and Functional Evaluation of Cryopreservation Methods for T cell Populations

Study Description

Peripheral blood mononuclear cells (PBMNC) collected from leukaphereses of allogeneic hematopoietic stem cell (HSC) donors are often given to the transplantation recipients as prophylactic or therapeutic immunomodulatory therapy. This product has been generically named donor-derived leukocyte infusion (DLI). For decades, the reference cryoprotectant for these products was 10% DMSO. However, several studies on HSC engraftment have indicated that combinations of 4-5% DMSO and hydroxyethylstarch provide similar (or even better) post-thaw viability/function. Whether the functional response of different T-cell populations is similar or not is unknown. Hypothesis: 1. Cryopreservation may induce significant T-cell viability and functional defects which may differ for different T cell populations. 2. Different T cell populations may differ in their optimal cryopreservation medium requirements. In the participating sites the apheresis product will be collected and cryopreserved in different cryopreservation solutions (DMSO 5%; 10%; CryoStor 5% and CryoStor 10%). Fresh and cryopreserved cells will be shipped to the central laboratory (Univ of Cincinnati). The analysis will include testing for immunophenotype, viability, proliferation and cytokine release.

Study Status

Completed

Publication Number

110

Teams

CT

Study Leaders

Cancelas
