

Meeting: 1003, Atlanta, Georgia, AMS CP 1, AMS Contributed Paper Session

1003-62-1299 **Mouchumi Bhattacharyya*** (mbhattac@pacific.edu), 3601 Pacific Avenue, Department of Mathematics, Stockton, CA 95211. *Assessing the Risks of the Two Graft Versus Host Diseases.*

Graft versus host disease (GVHD) is a complication that often arises after allogeneic bone marrow transplantations. There are two types of GVHD - acute and chronic. Using a proportional hazard regression model and data obtained from the international bone marrow transplant registry, we investigate the risks of the two diseases. We do so by comparing the hazard of death of a group of patients having one of the two diseases to the hazard of death of a control group of patients who do not have either of the two diseases. For chronic GVHD, we compare the results of proportional hazard model to the results of a simple two population proportion hypothesis test problem and show how the conclusions differ in the two situations. Along the way we point out certain interesting aspects of the data, a few of which contradict some of the commonly believed notions about the two diseases. (Received October 04, 2004)