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**CRISP**

Abstract

[Back to Hit List](#)**Grant Number:** 1R01DK066011-01A2**PI Name:** COTTER, DENNIS J.**PI Email:** dcott@mtppi.org**PI Title:****Project Title:** Epoetin Therapy and Survival of Hemodialysis Patients

Abstract: *DESCRIPTION (provided by applicant): Our objective is to use a Marginal Structural Model (MSM) to explore the causal relationship of epoetin dose on mortality for hemodialysis patients receiving this therapy. The MSM will enable us to distinguish causal effects by creating a pseudo-population that is effectively randomized on the treatment decisions made by physicians for patients with the observed histories. The current trend of increasing epoetin doses and increasing hematocrits has yet to show an impact on the ESRD population's mortality rates. More than 20 million Americans have chronic kidney disease and an equal number are at increased risk. Approximately 378,000 Americans progress to end-stage renal disease (ESRD) and require routine dialysis or undergo a kidney transplant. Anemia is a common occurrence in patients with ESRD and over 90% of in-center hemodialysis patients receive epoetin treatment for this condition. Despite the fact that hematocrit increased from 30 percent in 1993 to 34.5 percent in 2000 and mean epoetin dose per week increased from approximately 8,500 units/adm to 13,400 units/adm over this time, approximately 155,000 ESRD patient deaths have occurred over the last two and one half years. In fact, the adjusted one-year death rate remains unabated; essentially constant at 230 deaths per thousand during this time. This rate is, according to NIDDK, "unacceptably high". K/DOQI clinical practice guidelines cited several studies that report an association between higher hematocrits and survival. However, some of these studies also report a negative association between hematocrit and epoetin dose, highlighting that hematocrit is actually an outcome of both epoetin dosing and sensitivity to epoetin, confounding the analysis of hematocrit and survival. Therefore, it is not appropriate to interpret the published associations between hematocrit and survival as a causal relationship. A better understanding of the relationship between epoetin dose and survival will provide a basis for improving current treatment guidelines and may thereby decrease the mortality rate of these patients. The results will be disseminated to the public through peer-reviewed journals. Our goal is to ensure that treatment patterns for this high-risk population are rationally based to provide the patients with the best possibilities for survival.*

Thesaurus Terms:

There are no thesaurus terms on file for this project.

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