

## **ACHIEVING HIGHER HEMOGLOBIN LOWERS RISK OF DEATH AND DIALYSIS INITIATION IN CHRONIC KIDNEY DISEASE**

Neenoo Khosla, Hongyan Du , Derek Larson, David Shin , Tammy Ho  
Evanston Hospital, NorthshoreUniversity Healthsystem, Evanston IL,  
USA

Recent trials have suggested that the mortality associated with higher hemoglobin (Hb) targets in chronic kidney disease (CKD) may be related to higher doses of epoetin (EPO). We hypothesized that in our single center CKD clinic higher EPO doses would be associated with an increased risk of death and dialysis initiation. Patients were followed for up to 36 months and average quarterly EPO doses (log transformed) and Hb were compared in survivors and non-survivors (death or dialysis initiation) using independent two sample *t* tests. A Kaplan-Meier plot was used to evaluate the difference in reaching outcome between high and low EPO dosing (cutoff at a median quarterly dose of 25000 U) via log-rank test. Hb correlation to EPO dosing was calculated using spearman correlation coefficient. A COX proportional hazard model including Hb and EPO as time-varying covariates was used to determine variables effect on reaching the primary outcome. Average quarterly EPO dosage (8.89 vs. 8.18 in log value,  $p=0.188$ ) and baseline HB (11.1 vs. 10.9,  $p=0.378$ ) was not different between survivors ( $n=156$ ) and non-survivors ( $n=52$ ). Survival was not affected by EPO dose ( $p=0.6162$ ). In each individual quarter, Hb was negatively correlated with EPO, regardless of survival status. A univariate COX proportional hazard model demonstrated that a higher Hb significantly reduced risk of death or dialysis initiation (HR: 0.739,  $p=0.02$ ) and EPO had no effect on reaching the endpoint. This analysis suggests that achieving higher HB in CKD is associated with lower rates of death and dialysis initiation and this relationship is independent of EPO dosing. Further studies are needed to validate these findings