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**Correction of Anemia with Erythropoietin during the Two-Year Pre-ESRD Period:**

### **II. Hematocrit and Serum Albumin Levels prior to ESRD**

Jay L Xue<sup>1,2</sup>, James P Ebben<sup>1</sup>, Wendy L St. Peter<sup>1,2\*</sup>, Edward G Constantini<sup>1</sup> and Allan J Collins<sup>1,2\*</sup>. (Sponsored by Allan Collins)<sup>1</sup>Nephrology Analytical Services, Minneapolis Medical Research Foundation, Minneapolis, MN; and <sup>2</sup>, University of Minnesota, Minneapolis, MN.

We have previously observed a variation in initiation date and frequency of administration of EPO to treat pre-ESRD anemia. We hypothesized that patients (pts) who receive more consistent pre-ESRD EPO would have improved hematocrit (HCT) and albumin levels at dialysis initiation. Methods: Incidence ESRD pts from 1995-97 aged 67+ (N=89,193) were evaluated for EPO therapy and HCT levels in the 2-year prior to the first ESRD service date (FSD). Pts were divided into 5 groups: no EPO (0), receiving EPO in  $\leq 25$  (I), 25-50 (II), 50-75 (III), and  $>75\%$  (IV) of possible pre-ESRD months, counted from the first EPO month to FSD. We analyzed the Hct increase in the first 4 months after initial EPO treatment by repeated measures methods. HCT and albumin levels at dialysis initiation were extracted (from the Medical Evidence Form) and analyzed using a generalized linear model, adjusting for incidence year, race, gender, age, diabetes, and pre-ESRD EPO group. Results: Only 13,877 (15.6%) pts received pre-ESRD EPO. Inconsistent pre-ESRD HCT information was available for EPO groups I & II, with increasing HCT data available in groups III & IV. Mean HCT levels in EPO Group IV pts steadily increased ( $P < 0.0001$ ) after the initial EPO treatment and plateaued at the 4th month of treatment. Pts who received consistent pre-ESRD EPO (III and IV) had higher ( $P < 0.0001$ ) HCTs and albumins at dialysis initiation compared to non-EPO treated patients.

| EPO status   | 0                 | I                 | II                | III               | IV                |
|--------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| No. patients | 74,356            | 5,236             | 2,397             | 2,059             | 4,081             |
| Albumin g/dL | 3.16 <sup>a</sup> | 3.21 <sup>b</sup> | 3.25 <sup>c</sup> | 3.32 <sup>d</sup> | 3.31 <sup>d</sup> |
| HCT, %       | 28.6 <sup>a</sup> | 28.6 <sup>a</sup> | 29.3 <sup>b</sup> | 29.7 <sup>c</sup> | 29.7 <sup>c</sup> |

\* Different letters in the same row differed at  $P < 0.05$ .

Conclusions: 1) Pts who received pre-ESRD EPO more consistently had higher HCTs and serum albumins than the other groups. 2) EPO Group IV demonstrated a consistent dose response rise in HCT by month 4.