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ASSOCIATION OF ERYTHROPOESIS STIMULATING AGENT INDEX (ESA_i) HYPORESPONSIVENESS WITH MORTALITY IN NON-DIALYSIS DEPENDANT CHRONIC KIDNEY DISEASE (NDD-CKD) PATIENTS AND EFFECT MODIFICATION BY PLATELET

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ESA therapy targeting higher hemoglobin may be harmful due to off-target effects of higher ESA doses, like inducing thrombocytosis.

We examined the association between ESA_i (the ratio of weekly ESA dose and blood hemoglobin) and all-cause mortality in 1,232 males with CKD stage 1-5 of which 585 patients died (mortality rate, 95%CI: 117/1000 patient-years (108-127)) over a median follow-up 3.6 years. Associations of time-varying ESA_i with pre-dialysis mortality overall and in subgroups with different platelet counts were examined in Cox models with adjustment for demographics, comorbidities and labs. Nonlinear associations were explored by using cubic splines.

A one log-unit higher ESA_i was associated with a mortality hazard ratio (95%CI) of 1.95 (1.25-3.02), $p=0.003$). Compared to patients on no ESA, in those with ESA_i >1200 the adjusted HR of mortality (95% CI) in patients with platelet counts of <130, 130-320 and >320 was 2.3 (0.9-6.0), 1.2 (0.5-2.5) and 3.1 (0.6-15.4).

Increasing ESA_i is associated with higher mortality in patients with moderate and advanced NDD-CKD. This could be mediated by changes in platelet counts

