

## Evaluation of roxadustat for anemia in CKD without dialysis

On July 24, 2019 an article was published in the New England Journal of Medicine to describe the Phase 3 results of roxadustat for treatment of chronic kidney disease induced anemia in patients not on dialysis. This drug was tested in a study involving 154 patients randomized in a 2:1 fashion to receive either roxadustat or placebo. The treatment group had significantly higher hemoglobin levels than those in the placebo group at the end of the trial.

This drug is in line to be the first in a new class of drugs that inhibit the poly(hydroxylase) domain that activates hypoxia-inducible factors (HIF). The drug exerts its effect through decreasing inflammation, altering iron handling and decreasing the hepcidin level. A key opinion leader in nephrology concluded that this new drug differed from standard treatment with erythropoietin and intravenous iron in two key ways. The first being the patients treated with roxadustat had lower serum levels of erythropoietin than those receiving erythropoietin; the second was that these patients also have lower levels of hepcidin. This nephrologist then suggested that the net effect of this would be avoiding some of the adverse effects associated with traditional ESA treatment.

While this new trial is promising longer-term safety data will be needed before this drug is approved. If the drug is able to exhibit safety, then it would be an innovation that facilitates the normalization of hemoglobin levels in patients with CKD while reducing the cardiovascular morbidity associated with ESAs.

### References:

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3. Kristen Monaco [Updated July 24, 2019]. Phase III Success for Novel Anemia Drug. MedpageToday. Available at: <https://www.medpagetoday.com/nephrology/anemia/81207>. Accessed July 25, 2019.

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