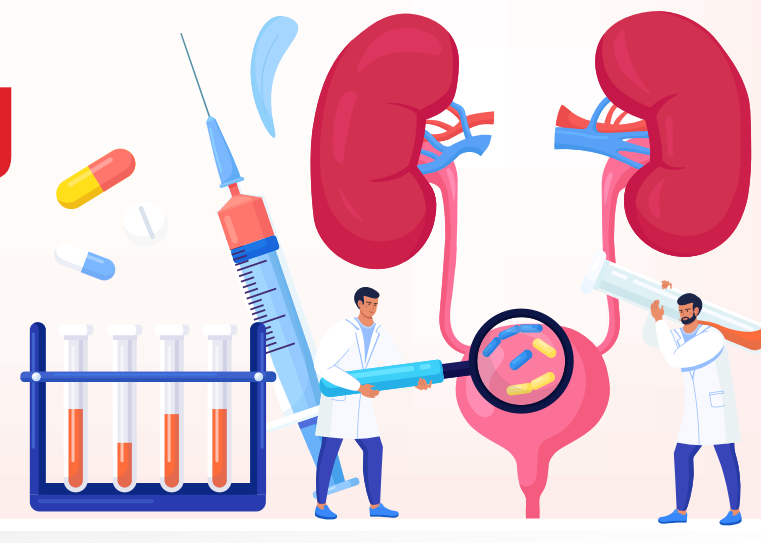


# Darbepoetin Alfa Augmenting Blood Indices in Renal Therapy Efficaciously



**Does darbepoetin alfa stand to be superior to epoetin alfa despite being administered less frequently at equivalent doses?**

Alkatheri *et al.* studied the efficacy of three different but comparatively equivalent doses of darbepoetin alfa (long acting) and epoetin alfa (short acting) in the treatment of anemia of adult CKD patients.

## Study population and intervention



Fifty five end-stage kidney disease patients aged >18 years were included. Twenty-two and 33 patients were treated with epoetin alfa QTIW and darbepoetin alfa QW, respectively. Patients were compared in lower, middle, and higher dose groups.

## Inclusion



End-stage kidney disease patients on regular hemodialysis for 3 months, age >18 years, naïve to epoetin alfa and darbepoetin alfa

## Exclusion



Patients with uncontrolled hypertension, heart diseases such as CHF or ones requiring emergency blood component transfusion or undergoing platelet transfusion, active neoplasia, viral hepatitis and on cyclosporine therapy.

## Endpoints



Clinical effect on blood indices including RBC count, Hb, and HCT levels

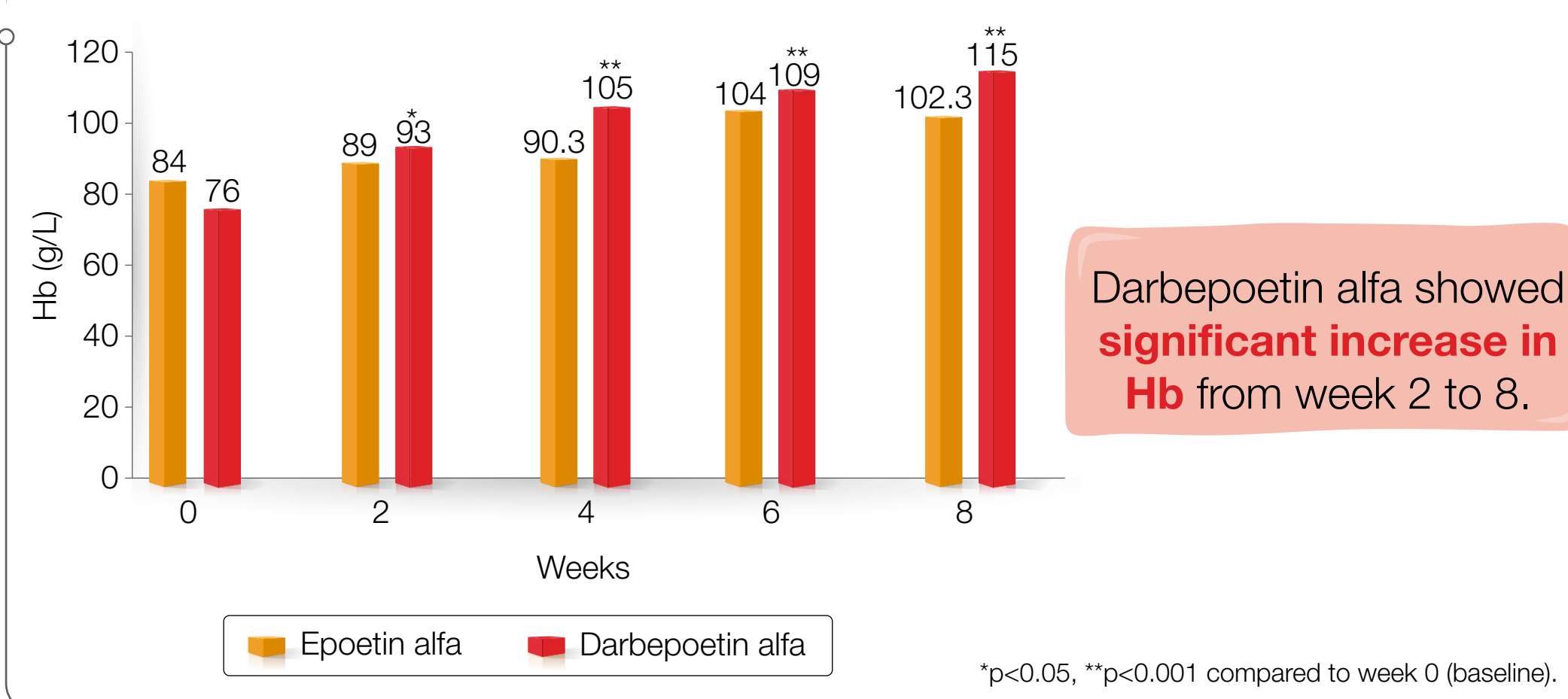


**The subcutaneous administration of darbepoetin alfa unfolds to be a potent remedy for blood biochemistry in CKD.**

## Comparative clinical efficacy:

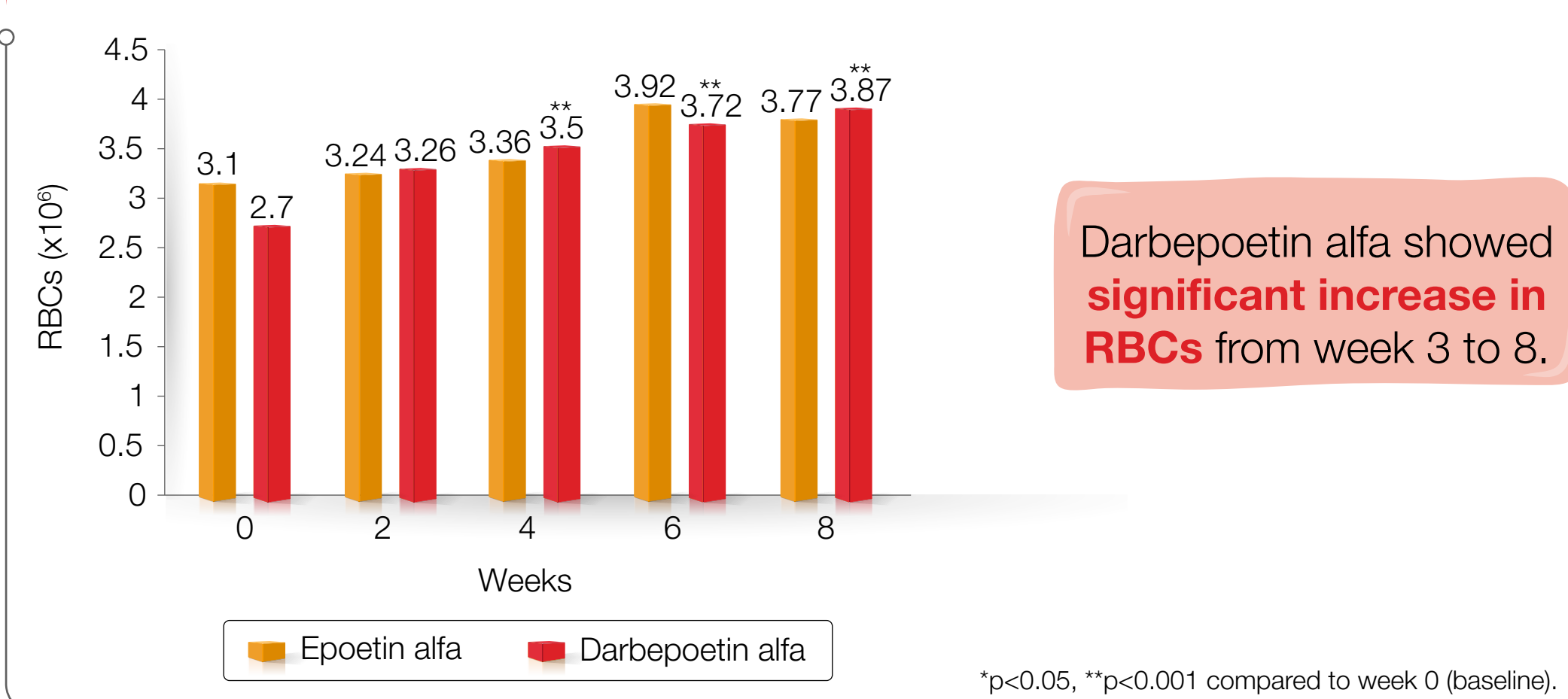
Darbepoetin alfa 60 µg QW vs. epoetin alfa 6000 IU QTIW

**Fig.1:** Efficacy of darbepoetin alfa vs. epoetin alfa on Hb.



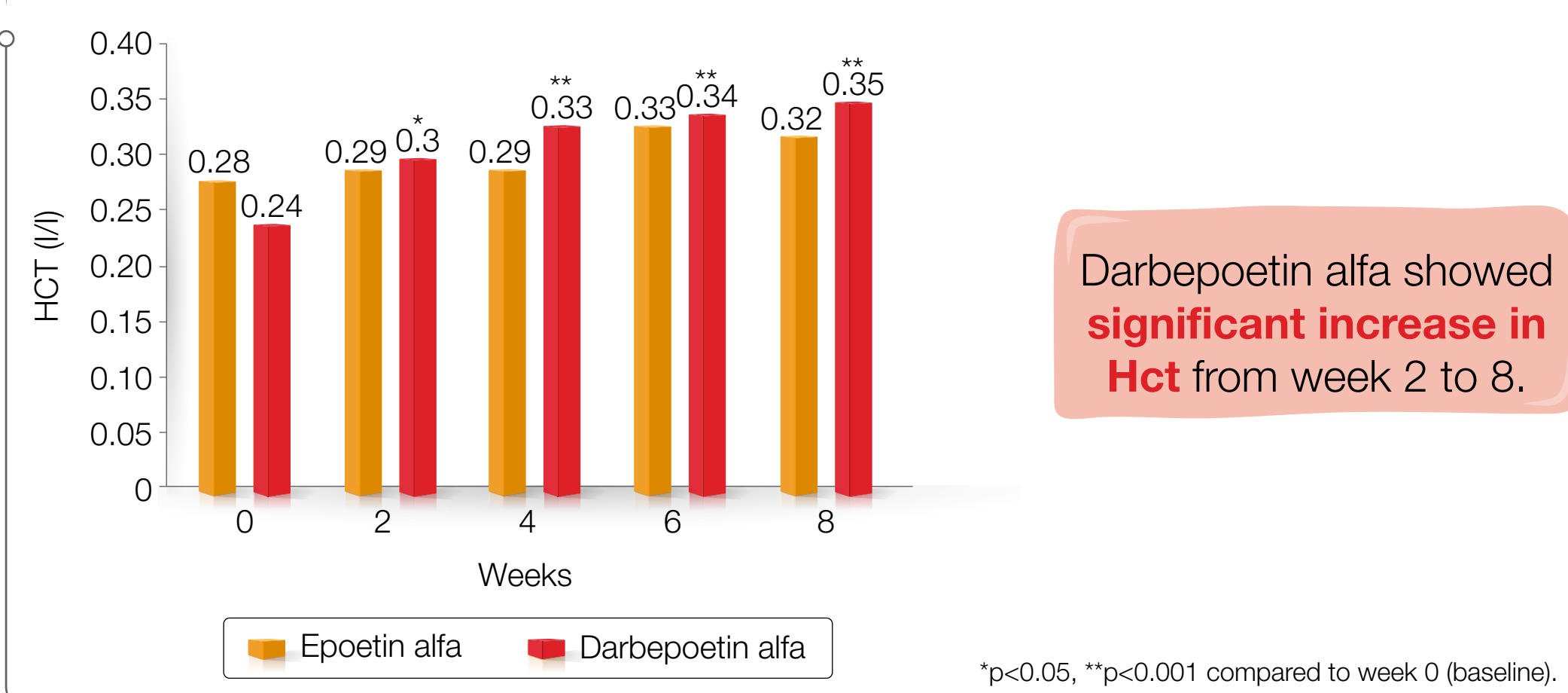
Darbepoetin alfa showed **significant increase in Hb** from week 2 to 8.

**Fig. 2:** Efficacy of darbepoetin alfa vs. epoetin alfa on RBC.



Darbepoetin alfa showed **significant increase in RBCs** from week 3 to 8.

**Fig. 3:** Efficacy of darbepoetin alfa vs. epoetin alfa on HCT.



Darbepoetin alfa showed **significant increase in Hct** from week 2 to 8.

Darbepoetin alfa at 40, 60, 80, and 100 µg QW significantly increased Hb parallel to significant increase in RBCs and HCT.

Darbepoetin alfa maintained Hb levels within approved target range but epoetin alfa failed to stop the fluctuation in Hb levels.

Extended serum half-life of darbepoetin alfa may elevate biological activity and enable its administration less frequently.

**For CKD patients undergoing hemodialysis, darbepoetin alfa QW displays to be more potent in ameliorating blood parameters than equal doses of epoetin alfa QTIW in different dose groups.**

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