

## ***Hemoglobin, Transferrin Saturation and Ferritin Profiles and Quality of Life in Chronic Kidney Disease Patients Undergoing Routine Hemodialysis in Sanglah Hospital***

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### ***Abstract***

Anemia is a common finding in patients with CKD, with a prevalence that increases gradually as eGFR declines. The prevalence of renal anemia depends on the size of the study and the selection of participants. Diabetic status increases the prevalence of anemia in patients with CKD. Anemia in CKD is due primarily to reduced production of erythropoietin in the kidney and secondarily to shortened red cell survival. Erythropoietin (EPO) is produced by peritubular cells in the kidneys of the adult and in hepatocytes in the fetus. These cells are sensitive to hypoxia that once sensed leads to an increase in EPO production. EPO circulates in the plasma and induces red cell production in the bone marrow after successful binding to erythroid progenitor cells. Apart from EPO, folate, B<sub>12</sub> and iron are needed to assure effective erythropoiesis. Factors that can dysregulate this process include inflammation, uremic toxins, hypothyroidism, hypersplenism and ongoing infection.

The investigation of renal anemia requires the assessment of a variety of biological indices. Among them, the complete blood count, the reticulocyte index, B<sub>12</sub>, folate, ferritin levels and the saturation of transferrin are the most valuable tools in revealing the cause of renal anemia.

**Keywords:** chronic kidney disease, anemia prevalence, erythropoietin receptors, ferritin, transferrin saturation

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### ***Biography:***

Hongwei Wu is doing his PhD study in Jinan University. He is the doctor of The First Affiliated Hospital of Jinan University and major in nephritis. He has published 3 papers in professional journals.