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**ASSESSMENT OF THE BALANCE OF INTRA-CARDIAC  
HEMODYNAMICS AND GLOMERULAR FILTRATION IN ANEMIA  
WITH DIFFERENT HEMODYNAMIC TYPES OF CHRONIC HEART  
FAILURE**

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**ABSTRACT**

*Renal fibrosis markers were evaluated in dynamics to study specific changes in the kidneys of patients with different hemodynamic types and functional classes of chronic heart failure with anemia and to evaluate the effectiveness of complex treatment. Renal fibrosis marker TGF- $\beta_1$  levels in the blood were  $2591.0 \pm 108.4$  and  $755.0 \pm 18.87$  pg / ml, respectively, in chronic heart failure with anemia and without anemia ( $p < 0.01$ ). This was indicative of a fibrosis process occurring in the kidney. After complex treatments with the addition of iron, the TGF- $\beta_1$  index decreased by 2.25 times ( $p < 0.01$ ), the clinical condition, quality of life and resistance to physical exertion changed significantly positively.*

**KEYWORDS:** *Chronic Heart Failure, Chronic Kidney Disease, Renal Dysfunction, Fibrosis Markers, Cystatin-S, TGF- $\beta_1$ , Ferro-Kinetic Indicators, Galectin-3, Hemodynamic Types.*

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