

TUMOR NECROSIS FACTOR- α AND MONOCYTE CHEMOATTRACTANT PROTEIN-1 AS BIOMARKERS IN CHRONIC MYELOID LEUKEMIA

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Chronic myeloproliferative neoplasms (MPN) are specific clonal hematopoietic stem-cell disorders that continuously and without interruption activate the physiologic signal-transduction pathways necessary for normal and adequate hematopoiesis. A marked proinflammatory milieu in chronic myeloid leukemia (CML) is led by many interleukins. This study aimed to evaluate differences in plasma levels of tumor necrosis factor- α (TNF- α) and monocyte chemoattractant protein (MCP-1) between chronic-phase CML patients and healthy individuals as controls.

The study included 50 consecutive patients diagnosed with CML in the chronic phase and under the standard tyrosine kinase inhibitor (TKI) treatment, as well as 20 healthy controls. Blood concentrations of tumor necrosis factor- α (TNF- α) and monocyte Chemoattractant protein-1 (MCP-1) were measured by the enzyme-linked immunosorbent assay method. The levels of MCP-1 were higher in patients than in controls (334.37 vs. 172.18 pg/ml, $p = 0.006$), while no difference was determined for TNF- α .

There is great importance of MCP-1 and IL-6 as novel, strong, and predictive plasma biomarkers for treatment-free remission in CML. Additional and future research in this field will be of special and great importance in understanding the pathophysiology and treatment of myeloproliferative diseases.

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