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Estimation of gamma-delta-1 T cell receptor (γδ-1 TCR) expression in bone marrow lymphocyte population in lymphoma malignum and multiple myeloma

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Abstract:
Gamma-delta-1 T lymphocytes participate in the human body protection against tumor development by an intrinsic cytolytic activity against tumor cell, like sarcoma, leukemia and lymphoma. So aims of our study were: 1) estimation of gamma-delta-1 T cell receptor (γδ-1 TCR) expression in bone marrow lymphocyte population of lymphoma malignum (NHL) and multiple myeloma (MM) patients, 2) quantitative comparison of the whole γδ-1 T cell population and activated γδ-1 T $CD25^+$ and γδ-1 T $CD69^+$ cell subpopulations in bone marrow and peripheral blood of NHL and MM patients, 3) attempt to find a relationship between percentage of bone marrow γδ-1 T lymphocytes in newly diagnosed NHL and MM patients and clinical outcome.
γδ-1 T lymphocytes were estimated by double-color flow cytofluorymetry. In NHL and MM patients, percentages of all γδ-1 T and activated γδ-1 T $CD25^+$ and γδ- 1 T $CD69^+$ cells were higher in bone marrow than peripheral blood. Higher percentage of activated γδ-1 T $CD25^+$ lymphocytes in bone marrow, measured at the time of diagnosis, may be a new good prognostic marker of lymphoma malignum.

Key words:
gamma-delta T cell receptor, bone marrow, lymphocyte, lymphoma malignum, multiple myeloma