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Evaluation on T Cell Microenvironment in Chronic B cell Lymphomas, a Flowcytometry Approach †

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Abstract: The constant interaction of cancer cells and their microenvironment between the various compartments: stromal, extracellular matrix, noncellular components is essential in the initiation and evolution of tumoral growth. The reciprocal cell-cell interaction between the tumoral and T cells that target them is important for the survival and proliferation of malignant cells. In this view, we proposed an evaluation of the T cell microenvironment, the main t cell subsets, for the most common B cell lymphoma: chronic lymphocytic leukemia (CLL) using flow cytometry. Our study evaluated peripheral blood of 51 patients with CLL, treated and nontreated, by flow cytometry using a panel with 2 tubes and 18 markers, targeting regulatory T cell subpopulations, specifically T regs subsets to evaluate the total or absolute numbers and variations in correlation with the disease grade, risk scale, treatment exposure, etc. Our results showed that T cell microenvironments play an important role in CLL, patients with high risk presenting significative modifications in the CD4/CD8 compartments, especially in certain the T reg subsets; also various T cells markers like the expression of CD39, or values of CD4+/CD57+ proved a possible marker for identification of high-risk forms of CLL. In conclusion, the evaluation of T cell subsets (T effectory, T central memory, naïve T) can be used for a good risk group assignment, and the expression of CD39 can be used as a marker of high-risk CLL.

Keywords: microenvironment; regulatory T cells; chronic lymphocytic leukemia; flow cytometry; risk factor.

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Conflicts of Interest

The authors declare no conflict of interest.