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## S100A4 protein regulates cell trafficking in B-Cell Lymphomas.

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B-cells lymphomas are clinically, pathologically and molecularly heterogeneous disease. They are classified according to the morphologic, genotypic, and biologic features of the lymphoma cells present in the diagnostic samples. Various researches were performed to develop prognostic markers to characterize the stages of disease. Studies have shown a link between some members of the S100 protein family expression and neoplastic disorders. Some of the S100 proteins are overexpressed in multiple cancers and has been shown to be correlated with poor prognosis. S100 proteins are important for metastatic development in different tumours. Until today there is no investigation about expression and role of these proteins in B-cells lymphoma. In order to investigate the role of S100 proteins as prognostic markers in B-cell lymphoma we performed bioinformatics analysis. Two proteins from the S100 family, S100A4/A6, were activated in DLBCL and CLL. An immunohistochemistry analysis of 60 blocks of different types of lymphomas has shown a positive expression of S100A4 in the majority of CLL, MCL, DLBCL cases and no expression was detected in the analysed follicular lymphoma cases. However, S100A6 expression was not detected in all analysed lymphoma cases. Western blotting analysis of the peripheral blood samples of CLL patients showed a high level of S100A4 expression in most samples. Low or negative expression of S100A4 correlated with a longer survival rate. Detailed analysis of bone marrow haematopoietic stem cell (HSC) samples has shown a co-expression of S100A4 with CD34, CD133 and CD10 indicating that S100A4 expression can be considered as a potential biomarker of HSC in B-cells lymphoma. Key words: B-cells lymphoma, DLBCL, CLL, S100A4 protein, S100A6 protein, haematopoietic stem cells.

### Biography

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