

THE ROLE OF EXPRESSION OF SOLUBLE CD44 IN SALIVA AND CD44 ANTIGEN IN ORAL  
LEUKOPLAKIA

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**Aim.** The aim of this study was to determine whether and how the CD44 protein expression in leukoplakia tissues correlates with positive SolCD44 test presence and their role in oral leukoplakia.

**Methods.** SolCD44 and total protein expression in saliva were determined using an OncAlert® Oral Cancer Rapid test. Immunohistochemical visualization of the researched antigens was performed on the formalin-fixed paraffin-embedded oral leukoplakia and control tissue. CD44 and CD9 proteins were assessed by a standard polymer-based visualization En-vision method by Dako Denmark. Statistical processing of data has been performed.

**Results.** Comparison of paired associations of total protein, SolCD44, mean number of CD44 expressed epithelial layers in leukoplakia tissue, and macrophages below the basement membrane between control group and patients with leukoplakia showed statistically significant results ( $p < 0.0001$ ). It is shown that the total protein indicates low or elevated risk of possible malignant transformation processes in leukoplakia. Statistically significant differences between higher total protein level and clinical forms of oral leukoplakia ( $p < 0.0001$ ), as well as CD44-labeled epithelial cell layer decrease ( $p < 0.0001$ ), were found. This possibly points to the onset of the stemness loss in leukoplakia tissue. CD9 antigen expression in the exosomes of the oral epithelium explained the intercellular flow of SolCD44 and other fluids in the leukoplakia area.

**Conclusion.** The OncAlert® Oral Cancer Rapid test is a valuable screening method in daily clinical practice, in terms of complementing clinical diagnostics methods and to assess the potential for early malignancy.