

## Diagnostic significance in determining level of urinary neutrophil gelatinase associated lipocalin as biomarker for activity of Lupus nephritis

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**Background:** The aim of this study was to compare the level of urinary Neutrophil gelatinase associated lipocalin (uNGAL) in the group of patients with active lupus nephritis with group with lupus nephritis in remission and to determine the correlation of uNGAL level with other parameters of disease activity.

**Methods:** The prospective study included a group of 40 patients, homogeneous in terms of demographic data (gender, age, body weight, type of lupus nephritis and therapeutic modality); 20 were associated with lupus nephritis in remission and 20 with active disease. We compared the parameters of groups in 3 visits over 2 months: proteinuria, urinary protein and creatinine ratio-Upr/Cr, SLEDAI/r score, C3, C4, ANA, dsDNA antibodies, uNGAL. All patients had creatinine clearance  $\geq$  60 ml/min. U NGAL was determined by immunochemical test performed on Abbott ARCHITECT i2000SR immunoassay analyzer.

**Results:** A statistically significant difference ( $p < 0.001$ ) was observed for the comparison of anti dsDNA antibodies, proteinuria, Upr/cre, SLEDAI/r index, uNGAL between these two groups. The uNGAL was significantly correlated with parameters of active disease  $p < 0.001$ , the values of the area under the ROC curve (AUC) the maximum sensitivity of 95% sensitivity and 100% specificity expressed in u NGAL.

The coordinates of the ROC curve for the uNGAL, limit. "cut-off" was 52.95 ng/ml. All patients with uNGAL more than 52.95 ng/ml, should be in the group with active disease, and none in the group with lupus nephritis in remission.

**Conclusions:** This study suggests that the determination of uNGAL in patients with lupus nephritis in daily clinical practice can contribute to the optimal effect of treatment.

### Biography

Violeta Rabrenovic Ph.D. graduated from University of Belgrade Faculty of Medicine, and completed her specialization in internal medicine with subspecialization in nephrology at Military Medical Academy in Belgrade, Serbia. She is a physician at Clinic of Nephrology at Military Medical Academy in Belgrade, Serbia. She has over 100 citations in her name, either as lead author or as contributing author.

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