# STATISTICAL RELATIONSHIP BETWEEN BIOMARKERS WITH PROGNOSTIC VALUE IN ANTI-PDL1 TREATMENTS IN CANCER PATIENTS

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M.A. TOLEDO DAVIA,

- N. LABRADOR ANDUJAR, A.R. RUBIO SALVADOR,
- C. BLAZQUEZ ROMERO, L. TORRALBA FERNANDEZ,
- C. JIMENEZ MENDEZ, R. PRIETO GALINDO,
- A. DOMINGUEZ BARAHONA, P. AGUADO BARROSO,
- E. GOMEZ FERNANDEZ, P. MOYA GOMEZ

Hospital Universitario de Toledo (Spain)

# **BACKGROUND AND IMPORTANCE**

The prognostic value of biomarkers such as the Neutrophil/Lymphocyte Ratio (NLR), Derived Neutrophil/Lymphocyte Ratio (dNLR) and Platelet/Lymphocyte Ratio (PLR) is frequently studied in patients with anti-PDL1 treatments in the context of oncological pathologies.

# **AIM AND OBJECTIVES**

To analyze whether there is a statistical relationship between these three parameters and to analyze the biomarkers as a predictor of efficacy in immunotherapy treatments.

# **MATERIALS AND METHODS NSCLC** patients **PEMBROLIZUMAB** Data collected Gender, age, hematological data, treatment time, survival time. Cut-off value NLR=5 SPSS v.25 dNLR=3 NLR\* PLR=200 dNLR\* PLR\* **DESCRIPTIVE ANALYSIS** Sample descriptive statistics. **SURVIVAL ANALYSIS** Kaplan Meier: log-Rank test (p LR-t) The Spearman CORRELATION between biomarkers, (the non-normality was checked using the Kolmogorov-Smirnov test)

\*NLR=absolute neutrophil count/absolute lymphocyte count, dNLR=absolute neutrophil count/[absolute leucocyte-neutrophil count] and PLR=absolute platelet count/absolute lymphocyte count).

#### **RESULTS** PATIENTS DISTRIBUTION (n, total n=74) Median age: 65 [83-37] years 200 dNLR PLR NLR ■ MEN **PLR>200** 26 19% **■WOMEN** PLR<200 42 dNLR>3 26 42 dNLR<3 NLR>5 41 NLR<5 Progression-free survival Overwal survival **BIOMARKER** Median IC95% p LR-t Median IC95% p LR-t (months) (months) NLR<5 16,1 (10,5-21,6) 24,9 (18,5-31,3) 0,05 0,01 NLR>5 12,5 (5,1-19,9) 17,4 (9,1-25,6) dNLR<3 14,7 (9-20) 23 (17,1-30,6) 0.04 0.09 dNRL>3 11,5 (13,7-19,3) 17,09 (8,2-25) PLR<200 15,6 (10,15-21,1) 26,3 (19,87-32,64) **0,001** 0,04 **PLR>200** 9,9 (2,86-17,1) 11,3 (3,86-18,79) Spearman coeficients p LR-t: Log rank test as hypothesis NLR-dNLR 0,934 (p=0) contrast test. NLR-PLR 0,697 (p=0) was considered statistically

### **CONCLUSION AND RELEVANCE**

dNLR-PLR 0,616 (p=0)

For the three biomarkers there are **significant differences** in terms of survival results for the selected cut-off points, offering these **prognostic value for our patients**. Spearman's test indicates that **there is a correlation** between the biomarkers.



CONTACT: mtoledod@sescam.jccm.es

significant p<0.05.