PLATELET TO LYMPHOCYTE RATIO (PLR) AS BIOLOGICAL MARKER OF INTEREST IN IMMUNOTHERAPY

Inflammation plays a major role in the progression of neoplasms such as non-small cell lung cancer (NSCLC), so it is vitally important to find biomarkers that are easily applicable and reproducible in routine clinical practice that allow us to classify patients according to their forecast.

AIM AND OBJECTIVES

To analyze the inflammatory marker platelet/lymphocyte ratio (PLR) as a predictor of efficacy in immunotherapy treatments; to assess whether there is a relationship between PLR value and response to treatment.

MATERIALS AND METHODS

In this study, we included NSCLC patients treated with pembrolizumab. We collected demographic data, hematological data, clinical data, treatment time and survival time. We used descriptive analysis to describe the data, survival analysis using Kaplan-Meier (OS, PFS) and log-Rank test (p LR-t) for comparison.

RESULTS

A total of 74 patients were analyzed. The median age was 65 [83-37] years. PLR was calculated as the absolute platelet count/absolute lymphocyte count. Patients were categorized into two groups based on the cut-off value of PLR=200.

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<th>PLR &gt; 200</th>
<th>PLR &lt; 200</th>
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<td>Median</td>
<td>26</td>
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The Kaplan-Meier survival curves showed that patients with PLR > 200 had a lower overall survival and progression-free survival compared to those with PLR < 200. The log-Rank test showed a statistically significant difference (p < 0.05).

CONCLUSION AND RELEVANCE

PLR and the presence of metastases correlates with PFS and OS. PLR, with a cut-off value=200, appears useful as a prognostic biomarker for patients with NSCLC treated with pembrolizumab; higher PLR values result in lower PFS and OS (HR>1 in PFS and OS).