PROGNOSTIC ROLE OF HAEMATOLOGICAL PARAMETERS IN EXTENDED-STAGE SMALL-CELL LUNG CANCER PATIENTS TREATED WITH ATEZOLIZUMAB IN COMBINATION WITH CHEMOTHERAPY

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BACKGROUND AND IMPORTANCE

The neutrophil-lymphocyte ratio (NLR) and eosinophil count have been proposed as possible prognostic markers in immunotherapy-treated patients with different tumors types.

OBJECTIVES

To determine the prognostic role of NLR and eosinophil count in patients with extended-stage small-cell lung cancer (ES-SCLC) treated with atezolizumab in combination with chemotherapy.

MATERIALS AND METHODS

Retrospective observational study that included patients with ES-SCLC treated with atezolizumab+carboplatin+etoposide between September-2021-December-2023.

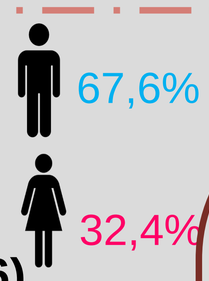
Variables collected

- **Sex, age**
- **Eastern Cooperative Oncology Group Stage Performance Status** (ECOG PS)
- **Baseline brain or liver metastases**
- **Causes of treatment discontinuation**
- **Neutrophil-lymphocyte ratio and eosinophil count** (EAR) at two time points (baseline and first radiological assessment)
- **Objective response rate** (ORR)
- **Median progression-free survival** (PFS) **and overall survival** (OS).

Statistical analysis: the Kaplan–Meier method was used for estimating the probability of survival. The log-rank test was used to determine the relationship between each variable and OS. Cox regression model was performed with the variables that had shown statistical significance.

RESULTS

37 patients were included



mean age 65 years (±7.6)

18.9% had brain metastases **40.5%** liver metastases **94.6%** ECOG<2.

At the data cut-off date (August 2024):

9 patients remained alive and **two** were still undergoing treatment

56.7% discontinued treatment due to progression, **21.6%** died, **8.1%** had clinical deterioration and **5.4%** due to toxicity.

43.2% had partial response, **24.3%** stable disease, **21.6%** progression and in the remainder response was not assessed

Median **PFS** and **OS** were **4 months** (95% CI 3.1-4.9) and **8 months** (95% CI 5.06-10.94),respectively.

- In univariate analysis, variables significantly associated with lower OS were: **NLR≥3 at first radiological assessment** (p<0.001), **baseline EAR ≥90** (p=0.007), **EAR at first radiological assessment≥40** (p=0.045) and the presence of **brain metastases** (p=0.043).
- In multivariate analysis, NLR<3 was the only independent predictor variable of OS with median OS **10 months** (95% CI:3.05-16.93) vs **5 months** (95% CI:3.15-6.85); HR=0.25; p=0.017.

CONCLUSIONS

NLR<3 at the first radiological assessment was identified as an independent predictor of OS in patients with ES- SCLC treated with atezolizumab in combination with chemotherapy.

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