

#133 PERIPHERAL BLOOD-BASED BIOMARKERS OF PROGNOSIS AND TREATMENT RESPONSE IN PATIENTS WITH NON-SMALL CELL LUNG CANCER TREATED WITH PD-1 INHIBITORS

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BACKGROUND

- ❑ To date, there remains an urgent need for more accurate biomarkers to predict clinical outcomes in patients with **advanced-stage non-small cell lung cancer (NSCLC)** treated with **PD-1 inhibitors**.
- ❑ The primary aim of our study was to evaluate the **prognostic** and **predictive** value of **peripheral blood-based biomarkers**, both at **baseline (pre-treatment)** and **post-treatment**, in this challenging clinical setting.

METHODS

- ❑ A retrospective study of the clinicopathological features and treatment data of **117 patients with advanced-stage NSCLC**, treated with **nivolumab or pembrolizumab** at the Oncology Unit of Sotiria Athens General Hospital, was performed.
- ❑ Baseline and post-treatment absolute counts of neutrophils (**ANC**), lymphocytes (**ALC**), monocytes (**AMC**), eosinophils (**AEC**) and platelets (**PLT**), **LDH** as well as the ratio of neutrophils to lymphocytes (**NLR**), platelets to lymphocytes (**PLR**) and myeloid to lymphoid cells (**M:L**) were correlated with **treatment response**, **durable clinical benefit** (defined as absence of disease progression at 6 months) and progression-free survival (**PFS**).

RESULTS

- ❑ **58,1%** of patients had no immune-related adverse events (**irAEs**), while rash and hyperthyroidism were observed in 17.9% and 12.8% of patients, respectively.
- ❑ **Durable clinical benefit (DCB)** rates were significantly lower in patients with increased pretreatment **ANC, AMC, PLT, NLR, PLR, M:L** and **PLT \geq 400 K/ μ l** as well as post-treatment **ANC \geq 7500/ μ l, AMC \geq 650/ μ l, NLR \geq 5 and PLR $>$ 160.**
- ❑ Increased pretreatment **PLR** and **PLT \geq 400K/ μ** as well as increased post-treatment **ANC, AMC, PLT, NLR, PLR, M:L, LDH, ANC $>$ 7500/ μ l, AMC $>$ 650/ μ l, PLT $>$ 400K/ μ l, NLR $>$ 5 and PLR $>$ 160** were all correlated with **reduced PFS**.
- ❑ In **multivariate analysis**, increased **pretreatment PLR** [HR (95% CI): **0,79 (0,63 – 0,99)**; **p=0,040**] was independently correlated with **worse PFS**.

	HR (95% CI)+	P
Immunotherapy line	1 (ref)	
	2	3,16 (1,34 – 7,42) 0,008
Number of infusions	0,47 (0,39 – 0,57)	<0,001
PLR (pretreatment)	0,79 (0,63 – 0,99)	0,040



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Pre-treatment PLR may independently predict prognosis in advanced NSCLC patients treated with PD-1 inhibitors