

# PD-L1 EXPRESSION AND HISTOLOGICAL TYPE AS PREDICTORS OF RESPONSE IN METASTATIC NON-SMALL CELL LUNG CANCER (NSCLC) PATIENTS TREATED WITH PEMBROLIZUMAB IN FIRST LINE

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## BACKGROUND AND IMPORTANCE

In patients with NSCLC and programmed death ligand-1 (PD-L1) expression  $\geq 50\%$ , pembrolizumab as first-line treatment has shown an increase in survival over platinum-based chemotherapy. To date, It is not know whether higher PD-L1 expression is associated with longer survival.

## AIM AND OBJECTIVES

Evaluation of the impact of PD-L1 expression levels on progression-free survival (PFS) and overall survival (OS), in patients receiving first-line pembrolizumab treatment for NSCLC and its association to histologic type.

## MATERIAL AND METHODS

**Design:** retrospective analysis

**Study population:** patients with metastatic NSCLC and PD-L1 expression level of  $\geq 50\%$ , treated with pembrolizumab monotherapy.

**Data analysis:** 

**ROC curve:** optimal PD-L1 cut-off point to identify a greater possibility of response.

**Event time distributions:** Kaplan–Meier methodology.

**Study variables:**

- ✓ Efficacy of pembrolizumab according to PD-L1 expression in terms of **PFS** and **OS**.
- ✓ Influence of hystologic type (adenocarcinoma and non-adenocarcinoma) of NSCLC on response in terms of PFS and OS.

## RESULTS

**49 patients included:** 36 adenocarcinoma (73.5%) and 13 non-adenocarcinoma (26.5%).

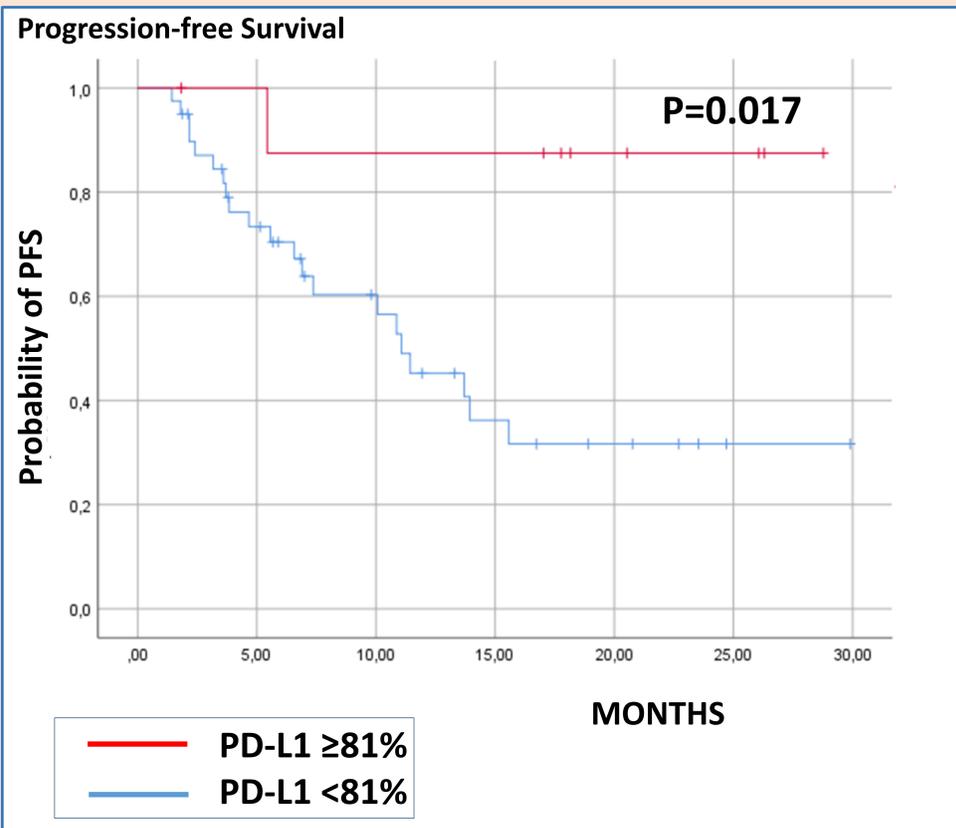
**ROC PD-L1 cut-off point was 81%** → 40 patients (81.6%) had PD-L1 expression  $< 81\%$  and 9 (18.4%)  $\geq 81\%$ .

**Median PFS PD-L1  $< 81\%$  group: 14.7 months** (95%CI:7.0-15.1).

**Median PFS PD-L1  $\geq 81\%$  group: 25.8 months** (95%CI: not reached) (**P=0.017**).

No differences were found in OS.

In addition, the subgroup of patients with adenocarcinoma and PD-L1 expression  $\geq 81\%$  had better PFS outcomes.



## CONCLUSION AND RELEVANCE

**Statistically significant differences in PFS** were found in patients with **NSCLC and PD-L1  $\geq 81\%$  expression**. **Adenocarcinoma with PD-L1  $\geq 81\%$**  seem to **benefit the most from pembrolizumab treatment**. These findings could have implications for treatment selection based in NSCLC PD-L1 expression and histology. Future research is needed.



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