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EFFECTIVENESS AND SAFETY OF FIRST LINE CHEMOIMMUNOTHERAPY WITH PEMBROLIZUMAB FOR METASTATIC NON-SQUAMOUS NON-SMALL-CELL LUNG CANCER

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BACKGROUND AND IMPORTANCE

Lung carcinoma is the leading cause of cancer-related death in the world. Pembrolizumab is a human IgG4 monoclonal antibody that binds to the PD-1, enhancing the immune response of T-cells.

AIM AND OBJECTIVES

To evaluate effectiveness and safety of chemoimmunotherapy with pembrolizumab for metastatic non-squamous non-small cell lung cancer (NSQ-NSCLC), without driver mutations EGFR/ALK. Secondary endpoint was to evaluate the impact of different variables on overall survival (OS).

MATERIAL AND METHODS



Retrospective observational study (January-2018 to July-2024) including all patients with metastatic NSQ-NSCLC who received platinum-based chemotherapy and pembrolizumab.



- Data collected: histology, smoking, ECOG, metastasis, PD-L1 expression, chemotherapy, frequency and severity of adverse events (AEs), and treatment discontinuation due to AEs.
- Effectiveness was evaluated by median OS, progression-free survival (PFS), objective response rate (ORR) and disease control rate (DCR), calculated with Kaplan-Meier estimator, STATA® v.16.0. Multivariate analysis was performed by cox-regression, expressed as Hazard ratio (HR).

RESULTS

DATA COLLECTED	Pembrolizumab + Chemotherapy (n=88) n (%)
Sex	
Women	27 (31)
Men	61 (69)
Median age (RIC)	65 (56-70)
Smoking	
Ex/smokers	80 (91)
Never	8 (9)
Median Pack-Year-Index (RIC)	40 (25-50)
ECOG	
0	17 (20)
1	40 (45)
2	29 (33)
3	1 (1)
Histology	
Adenocarcinoma	77 (89)
Undifferentiated	7 (8)
Large cell carcinoma	2 (2)
Mixed	1 (1)
Metastasis	
Bone	47 (53)
Brain	26 (29)
Liver	16 (18)
PD-L1 expression	
< 1%, negative or not-performed	44 (50)
1-49%	29 (33)
≥50%	15 (17)
Chemotherapy	
Carboplatin	80 (91)
Cisplatin	8 (9)

EFFECTIVENESS VARIABLES	Pembrolizumab + Chemotherapy %
ORR	56
Complete response	9
DCR	69
Median OS (months) (95%CI)	10.6 (7.7-13.8)
Median PFS (months) (95%CI)	5 (4.3-7.7)
One-year OS rate	46
Five-year OS rate	13
One-year PFS	21
Five-year PFS	12

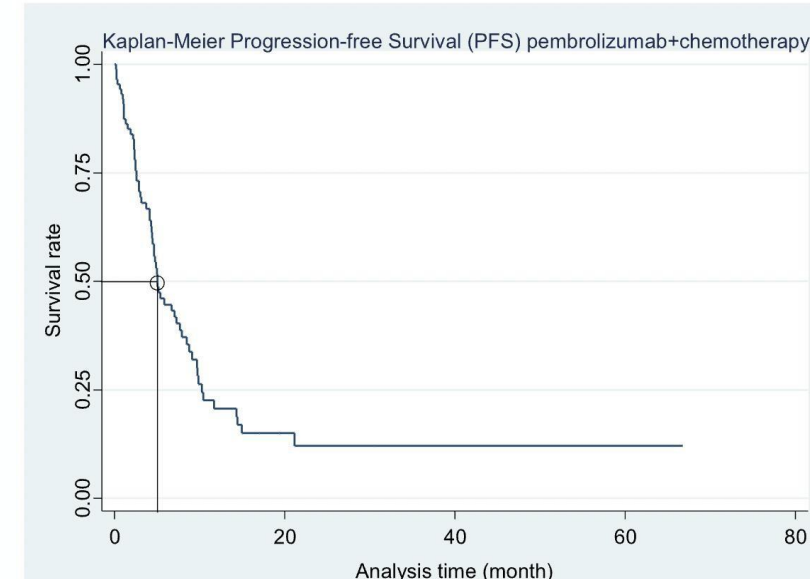
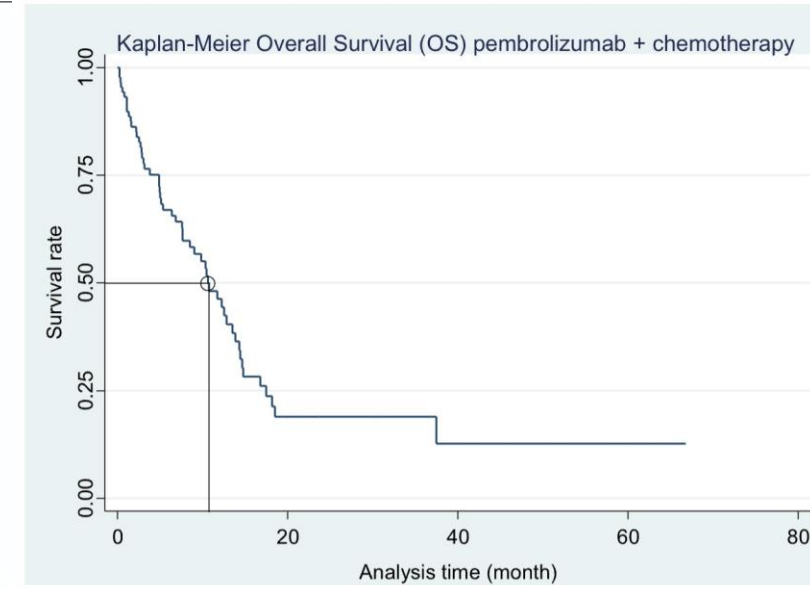
99% experienced AEs

47% suffered grade 3-4 AEs, mainly asthenia (22%).
17% discontinued treatment due to AEs.



ADVERSE EVENTS	Pembrolizumab + Chemotherapy %
Asthenia	57
Anemia	28
Neutropenia	26
Infection	24

Regarding multivariate analysis, statistical significant variables were: ex/smoker 5.0(95%CI:1.5-17);p=0.01; bone metastasis 2.6(95%CI:1.4-4.9);p=0.004; brain metastasis 1.9(95%CI:1.06-3.6);p=0.033 and ECOG 0-1 0.39(95%CI:0.21-0.72);p=0.003.



CONCLUSION AND RELEVANCE

- More than half of the patients responded to treatment, however only a small part were alive or free from disease five years later.
- Smoking, bone and brain metastasis were associated with less survival.
- Most patients experienced AEs that caused discontinuation of therapy, which emphasizes the need to adequately select patients.

