

EP11.23: First-Line Immunotherapy for Elderly Advanced NSCLC: A Large Real-World Retrospective Cohort Study

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INTRODUCTION

- Immunotherapy is a standard first-line treatment for driver gene-negative advanced non-small cell lung cancer (NSCLC).
- However, older patients are underrepresented in clinical trials.
- This study investigated the real-world efficacy and safety in this population.

METHODS

Clinical data from 649 patients aged ≥ 65 years with advanced NSCLC treated at Hunan Cancer Hospital between June 2018 and December 2024 were retrospectively analyzed. Patients received either first-line immunotherapy (n = 389), including Immune checkpoint inhibitor (ICI) plus chemotherapy (n = 298) and ICI alone (n = 91), or chemotherapy (n = 260). Objective response rates (ORR), disease control rates (DCR), progression-free survival (PFS), overall survival (OS), and adverse events (AE) were compared. Cox regression analyses identified independent prognostic factors.

RESULTS

Table 1. Baseline clinicopathological characteristics of patients

Variables	Chemotherapy (n=260)	Immunotherapy (n=389)	P
Sex, n (%)			0.147
Female	54 (20.77)	100 (25.71)	
Male	206 (79.23)	289 (74.29)	
Age Three Group, n (%)			0.105
65-69	167 (64.23)	223 (57.33)	
70-74	71 (27.31)	115 (29.56)	
≥ 75	22 (8.46)	51 (13.11)	
ECOG PS, n (%)			0.395
≥ 2	37 (14.23)	65 (16.71)	
0-1	223 (85.77)	324 (83.29)	
Smoking history, n (%)			0.321
No	65 (25.00)	111 (28.53)	
Yes	195 (75.00)	278 (71.47)	
Pathological type, n (%)			0.398
LUAD	117 (45.00)	162 (41.65)	
LUSC	143 (55.00)	227 (58.35)	
TNM stage, n (%)			0.055
IIIB+IIIC	43 (16.54)	44 (11.31)	
IVA+IVB	217 (83.46)	345 (88.69)	
Lung metastasis, n (%)			0.161
No	186 (71.54)	258 (66.32)	
Yes	74 (28.46)	131 (33.68)	
Pleural metastasis, n (%)			0.144
No	203 (78.08)	284 (73.01)	
Yes	57 (21.92)	105 (26.99)	
Brain metastasis, n (%)			0.439
No	238 (91.54)	349 (89.72)	
Yes	22 (8.46)	40 (10.28)	
Liver metastasis, n (%)			0.660
No	236 (90.77)	349 (89.72)	
Yes	24 (9.23)	40 (10.28)	
Bone metastasis, n (%)			0.984
No	184 (70.77)	275 (70.69)	
Yes	76 (29.23)	114 (29.31)	

Table 2. Summary of irAEs

irAE	Immunotherapy (n=389)	
	Any grade	Grade ≥ 3
Immune-related adverse events, n (%)	185(47.6)	97(25.0)
Pneumonia, n (%)	185(47.6)	97(25.0)
Thyroid disorder, n (%)	110(28.3)	36(9.3)
Skin disorder, n (%)	18(4.6)	2(0.5)
Liver dysfunction, n (%)	16(4.1)	8(2.1)
Endocrine disorder, n (%)	21(5.4)	4(1.0)

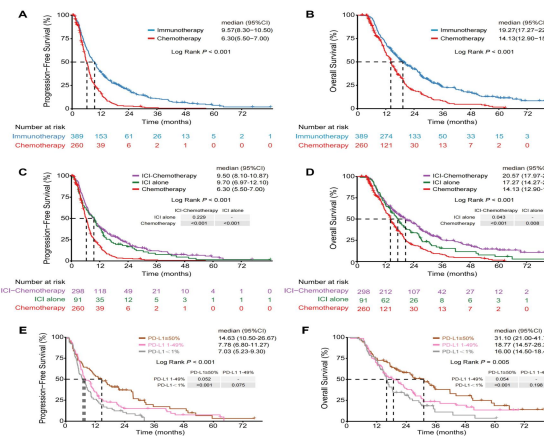


Fig. 1 Kaplan-Meier curve of PFS and OS in all patients

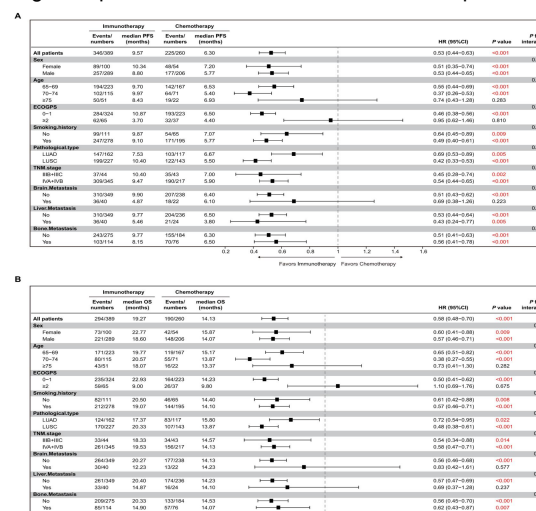


Fig. 2 Forest plot of subgroup analysis

RESULTS

- The baseline clinical characteristics of the Chemotherapy and Immunotherapy groups were generally well balanced (Table1).
- ICI-chemotherapy and ICI monotherapy outperformed chemotherapy. ICI-chemotherapy conferred longer OS (20.57 vs 17.27 months, $P=0.043$). In PD-L1 evaluable immunotherapy cohort, TPS $\geq 50\%$ predicted better survival (Fig.1).
- Subgroup analysis: no immunotherapy benefit in ≥ 75 y, ECOG PS ≥ 2 or brain-metastasis patients; only PFS benefit for liver-metastasis patients (Fig.2).
- Rates of all-grade and grade ≥ 3 TRAEs were comparable between groups; most irAEs were grade 1-2 (Table2).

DISCUSSION AND CONCLUSION

- First-line immunotherapy yields meaningful survival benefits in older (≥ 65 -year-old) patients with advanced NSCLC.
- ICI plus chemotherapy provides superior overall survival compared with ICI monotherapy.
- First-line immunotherapy exhibits favorable safety and tolerability among elderly patients.