

Characteristic	Total Patients (N=15)	Responders (n=8)	Non-responders (n=7)
Age, years			
Median (Range)	63 (53-72)	62 (53-72)	67 (56-72)
Gender, n (%)			
Male	15 (100.0)	8 (100.0)	7 (100.0)
Female	0	0	0
Pathological Type, n (%)			
Lung Squamous Cell Carcinoma (LUSC)	15 (100.0)	8 (100.0)	7 (100.0)
Smoking Status, n (%)			
Smoker	14 (93.3)	7 (87.5)	7 (100.0)
Non-smoker	1 (6.7)	1(12.5)	0
Tumor Stage, n (%)			
IIB	3 (20.0)	1(12.5)	2 (28.6)
IIIA	5 (33.3)	4 (50.0)	1 (14.3)
IIIB	7 (46.7)	3 (37.5)	4 (57.1)
PD-L1 Expression, n (%)			
<1%	1 (6.7)	0	1 (14.3)
1-50%	3 (20.0)	1 (12.5)	2 (28.6)
>50%	2 (13.3)	2 (25.0)	0
Unknown	9 (60.0)	5 (62.5)	4 (57.1)
Treatment Cycles, n (%)			
2 cycles	12 (80.0)	7 (87.5)	5 (71.4)
3 cycles	3 (20.0)	1 (12.5)	2 (28.6)
Treatment Regimen, n (%)			
Nab-paclitaxel+Carboplatin+Pembrolizumab	1 (6.7)	1 (12.5)	0
Nab-paclitaxel+Carboplatin+Sintilimab	7 (46.7)	4 (50.0)	3 (42.9)
Nab-paclitaxel+Carboplatin+Toripalimab	6 (40.0)	3 (37.5)	3 (42.9)
Nab-paclitaxel+Cisplatin+Sintilimab	1(6.7)	0	1(14.3)

Table EV2. The Clinical Characteristic Distribution Table of scRNA-seq Cohort. This table is a summary of clinical information of patients who contribute samples for scRNA-seq. The data summarized based on Table EV1.

Age: The age of patients.

Gender: The gender of patients.

Pathological Type: The cancer type of patients.

Smoking Status: The patients with smoking index higher than 0 were labeled as smoker and others were labeled as non-smoker.

Tumor Stage: The stage information of tumor.

PD-L1 Expression: The expression rate of PD-L1 in tumors.

Treatment Cycles: The treatment cycles of patients.

Treatment Regimen: The treatment regimen used for patients.