

Supplementary Table 1. Characteristics of the Ten NSCLC Patients with Therapy Discontinuation After Treatments for 2 Years or More.

Patient #	PD-L1 Status	Line of Systemic Therapy for ICI	Best Response
1	100%	1	PR
2	Unknown	3	CR
3	Unknown	2	PR
4	Unknown	2	PR
5	Unknown	2	PR
6	80%	1	CR
7	100%	1	CR
8	90%	1	PR
9	0%	2	PR
10	10%	1	PR

CR, complete response; ICI, immune checkpoint inhibitor; NSCLC, non-small cell lung cancer; PD-L1, programmed death ligand 1; PR, partial response.

Supplementary Table 2. Cox Proportional Hazard Regression Analysis of the Effect of Various Parameters on Progression-Free Survival and Overall Survival (BMI as a continuous variable).

Variable	Progression-free survival			Overall survival		
	HR	95% CI	P-value	HR	95% CI	P-value
Age (75 vs 60) †	0.87	0.67-1.13	0.32	0.90	0.68-1.19	0.61
Sex (male vs female)	1.26	0.92-1.72	0.15	1.29	0.92-1.81	0.14
ECOG PS (0-1 vs ≥ 2)	0.53	0.38-0.74	< 0.01	0.43	0.30-0.62	< 0.01
BMI (30 vs 20) †	0.61	0.40-0.94	0.07	0.44	0.28-0.71	< 0.01
Smoking (never vs current/former)	2.07	1.26-3.41	< 0.01	1.48	0.86-2.56	0.16
irAE (time-varying)	1.22	0.82-1.82	0.32	0.72	0.46-1.12	0.14

†Age and BMI were fit as continuous variables in the multiple Cox regression model. Hazard ratios and 95% CI for the approximate interquartile range are shown. P-values are from Wald null hypothesis tests for each variable over its entire range.

BMI, body mass index; CI, confidence interval; ECOG PS, Eastern Cooperative Oncology Group performance-status score; HR, hazard ratio; irAE, immune-related adverse events.

Supplementary Table 3. Cox Proportional Hazard Regression Analysis of PD-L1 TPS on Progression-Free Survival and Overall Survival.

Variable	Progression-free survival			Overall survival		
	HR	95% CI	P-value	HR	95% CI	P-value
PD-L1 TPS ( $\geq 50\%$ vs $< 50\%$ )	0.72	0.45-1.14	0.16	0.78	0.46-1.32	0.35
ECOG PS (0-1 vs $\geq 2$ )	0.63	0.46-0.86	$< 0.01$	0.44	0.31-0.62	$< 0.01$

CI, confidence interval; ECOG PS, Eastern Cooperative Oncology Group performance-status score; HR, hazard ratio; PD-L1, programmed death ligand 1; TPS, tumor proportion score.

Supplementary Table 4. Cox Proportional Hazard Regression Analysis of EGFR Mutation on Progression-Free Survival and Overall Survival.

Variable	Progression-free survival			Overall survival		
	HR	95% CI	P-value	HR	95% CI	P-value
EGFR mutation (Pos vs Neg)	2.41	1.35-4.30	$< 0.01$	0.85	0.42-1.72	0.65
ECOG PS (0-1 vs $\geq 2$ )	0.58	0.42-0.81	$< 0.01$	0.46	0.32-0.65	$< 0.01$

CI, confidence interval; ECOG PS, Eastern Cooperative Oncology Group performance-status score; EGFR, epidermal growth factor receptor; HR, hazard ratio; Neg, negative; Pos, positive.

Supplementary Table 5. Cox Proportional Hazard Regression Analysis of KRAS Mutation on Progression-Free Survival and Overall Survival.

Variable	Progression-free survival			Overall survival		
	HR	95% CI	P-value	HR	95% CI	P-value
KRAS mutation (Pos vs Neg)	1.21	0.77-1.90	0.41	1.33	0.82-2.17	0.25
ECOG PS (0-1 vs $\geq 2$ )	0.63	0.46-0.86	$< 0.01$	0.45	0.32-0.65	$< 0.01$

CI, confidence interval; ECOG PS, Eastern Cooperative Oncology Group performance-status score; HR, hazard ratio; Neg, negative; Pos, positive.

Supplementary Figure 1. Median overall survival by ECOG and BMI as predicted by the multiple Cox regression model in Supplemental Table 1. Median overall survival is estimated for a female, age of 66 years, never smoker, with no immune-related adverse events.

BMI, body mass index; ECOG, Eastern Cooperative Oncology Group performance status.

