



Figure S1 Correlation between laboratory results and survival of patients with advanced NSCLC. (A) Levels of AGR between different PFS groups; (B) levels of NLR between different PFS groups; (C) levels of LDH between different PFS groups; (D) levels of CRP between different PFS groups; (E) levels of AGR between different OS groups; (F) levels of NLR between different OS groups; (G) levels of LDH between different OS groups; (H) levels of CRP between different OS groups. No significant difference was found. AGR, albumin to globulin ratio; NLR, neutrophils to leukocytes ratio; LDH, lactate dehydrogenase; CRP, C-reactive protein; PFS, progression-free survival; mPFS, median PFS; OS, overall survival; mOS, median OS; NSCLC, non-small cell lung cancer.

Table S1 Subgroup analysis of PFS in patients with advanced NSCLC receiving ICIs treatment

Group	N	Median PFS (95% CI) (months)	P value
Sex			0.081
Male	120	8.1 (6.8, 9.4)	
Female	41	7.6 (6.2, 9.0)	
Age (years)			0.022*
≥75	33	6.7 (5.2, 8.2)	
<75	128	8.4 (7.6, 9.2)	
Smoking history			0.390
Yes	48	6.9 (5.0, 8.8)	
No	113	8.5 (7.5, 9.5)	
ECOG-PS			0.001*
0–1	140	8.5 (7.8, 9.2)	
≥2	21	4.8 (2.6, 7.0)	
Histology type			0.272
LUAD	106	8.3 (7.4, 9.2)	
LUSC	53	8.1 (5.6, 10.7)	
NSCLC-NOS	2	5.3 (-)	
Brain metastasis			0.895
Yes	35	7.7 (5.7, 9.7)	
No	126	8.3 (7.3, 9.3)	
Bone metastasis			0.688
Yes	67	8.5 (7.2, 9.8)	
No	94	7.7 (6.2, 9.2)	
Liver metastasis			0.641
Yes	17	8.4 (3.8, 13.0)	
No	144	8.0 (7.0, 9.0)	
Previous surgery			0.613
Yes	27	9.2 (8.0, 10.4)	
No	134	7.8 (6.7, 8.9)	
Previous targeted therapy			0.346
Yes	43	8.4 (6.7, 10.1)	
No	118	7.9 (6.7, 9.1)	
Combination therapy			0.397
Yes	138	7.8 (6.7, 8.9)	
No	23	8.5 (7.4, 9.6)	
Treatment line			0.936
First line	77	7.2 (5.1, 9.2)	
Second or further line	84	8.4 (7.7, 9.1)	

*, P value <0.05. PFS, progression-free survival; NSCLC, non-small cell lung cancer; ICIs, immune checkpoint inhibitors; CI, confidence interval; ECOG-PS, Eastern Cooperative Oncology Group performance status; LUAD, lung adenocarcinoma; LUSC, lung squamous cell carcinoma; NOS, not otherwise specified.

Table S2 Subgroup analysis of OS in patients with advanced NSCLC receiving ICIs treatment

Group	N	Median OS (95% CI) (months)	P value
Sex			0.588
Male	126	18.3 (16.4, 20.2)	
Female	41	18.9 (17.2, 20.6)	
Age (years)			0.097
≥75	35	18.2 (15.7, 20.8)	
<75	132	18.9 (17.5, 20.3)	
Smoking history			0.112
Yes	51	18.9 (16.2, 21.6)	
No	116	18.8 (17.3, 20.3)	
ECOG-PS			<0.001*
0–1	146	19.5 (17.7, 21.4)	
≥2	21	12.8 (10.9, 14.7)	
Histology type			0.124
LUAD	108	18.3 (16.3, 20.3)	
LUSC	57	18.9 (17.6, 20.2)	
NSCLC-NOS	2	13.9 (–)	
Brain metastasis			0.036*
Yes	35	15.9 (14.5, 17.3)	
No	132	19.5 (18.1, 20.9)	
Bone metastasis			0.727
Yes	67	20.1 (17.8, 22.4)	
No	100	18.2 (17.2, 19.2)	
Liver metastasis			0.615
Yes	17	19.6 (12.0, 25.2)	
No	150	18.9 (17.6, 20.2)	
Previous surgery			0.763
Yes	29	18.1 (15.3, 20.9)	
No	138	18.9 (17.5, 20.3)	
Previous targeted therapy			0.204
Yes	43	19.9 (15.2, 24.6)	
No	124	18.6 (17.4, 19.8)	
Combination therapy			0.720
Yes	143	18.9 (17.6, 20.2)	
No	24	16.5 (14.6, 18.4)	
Treatment line			0.372
First line	83	18.8 (17.9, 19.7)	
Second or further line	84	19.5 (16.5, 22.5)	

*, P value <0.05. OS, overall survival; NSCLC, non-small cell lung cancer; ICIs, immune checkpoint inhibitors; CI, confidence interval; ECOG-PS, Eastern Cooperative Oncology Group performance status; LUAD, lung adenocarcinoma; LUSC, lung squamous cell carcinoma; NOS, not otherwise specified.

Table S3 Univariate and multivariate Cox regression models of clinical characteristics and PFS in patients with NSCLC

Group	Univariate Cox regression analyses		Multivariate Cox regression analyses	
	HR (95% CI)	P value	HR (95% CI)	P value
Sex (male vs. female)	0.725 (0.503, 1.044)	0.084	–	–
Age (≥ 75 vs. < 75 years)	1.574 (1.063, 2.332)	0.024*	1.407 (0.915, 1.896)	0.120
Smoking history (yes vs. no)	0.394 (0.826, 1.625)	0.394	–	–
ECOG-PS (≥ 2 vs. 0–1)	2.246 (1.402, 3.598)	0.001*	2.317 (1.411, 3.806)	0.001*
Histology type (LUSC vs. LUAD)	0.813 (0.583, 1.135)	0.224	–	–
Brain metastasis (yes vs. no)	0.975 (0.667, 1.426)	0.895	–	–
Bone metastasis (yes vs. no)	1.067 (0.777, 1.464)	0.690	–	–
Liver metastasis (yes vs. no)	1.127 (0.679, 1.868)	0.644	–	–
Previous surgery (yes vs. no)	0.899 (0.593, 1.364)	0.617	–	–
Previous targeted therapy (yes vs. no)	1.183 (0.832, 1.683)	0.350	–	–
Previous chemotherapy (yes vs. no)	0.820 (0.599, 1.124)	0.218	–	–
Combination therapy (yes vs. no)	1.211 (0.774, 1.896)	0.402	–	–
Treatment line (second or further line vs. first line)	0.987 (0.724, 1.347)	0.936	–	–

*, P value < 0.05 . PFS, progression-free survival; NSCLC, non-small cell lung cancer; HR, hazard ratio; CI, confidence interval; ECOG-PS, Eastern Cooperative Oncology Group performance status; LUSC, lung squamous cell carcinoma; LUAD, lung adenocarcinoma.

Table S4 Univariate and multivariate Cox regression models of clinical characteristics and OS in patients with NSCLC

Group	Univariate Cox regression analyses		Multivariate Cox regression analyses	
	HR (95% CI)	P value	HR (95% CI)	P value
Sex (male vs. female)	0.907 (0.634, 1.295)	0.590	–	–
Age (≥ 75 vs. < 75 years)	1.375 (0.941, 2.007)	0.099	–	–
Smoking history (yes vs. no)	1.160 (0.834, 1.614)	0.379	–	–
ECOG-PS (≥ 2 vs. 0–1)	2.325 (1.456, 3.713)	$< 0.001^*$	2.325 (1.397, 3.869)	0.001*
Histology type (LUSC vs. LUAD)	0.706 (0.503, 0.991)	0.044*	0.764 (0.510, 1.144)	0.192
Brain metastasis (yes vs. no)	1.491 (1.023, 2.173)	0.038*	1.259 (0.831, 1.909)	0.277
Bone metastasis (yes vs. no)	0.946 (0.691, 1.294)	0.728	–	–
Liver metastasis (yes vs. no)	0.879 (0.531, 1.456)	0.617	–	–
Previous surgery (yes vs. no)	0.940 (0.629, 1.407)	0.764	–	–
Previous targeted therapy (yes vs. no)	1.256 (0.882, 1.787)	0.207	–	–
Previous chemotherapy (yes vs. no)	0.726 (0.531, 0.994)	0.046*	0.664 (0.453, 0.973)	0.036*
Combination therapy (yes vs. no)	0.924 (0.598, 1.426)	0.721	–	–
Treatment line (second or further line vs. first line)	1.115 (0.845, 1.565)	0.375	–	–

*, P value < 0.05 . OS, overall survival; NSCLC, non-small cell lung cancer; HR, hazard ratio; CI, confidence interval; ECOG-PS, Eastern Cooperative Oncology Group performance status; LUSC, lung squamous cell carcinoma; LUAD, lung adenocarcinoma.