

Table S1 Baseline characteristics of patients

characteristics	Group	N	%
Age	<60 years	118	50.8%
	≥60 years	114	
Gender	Male	188	81%
	Female	44	
Smoking	0–199	71	30.6%
	200–399	27	11.6%
	≥400	134	57.8%
Histology type	SCLC	87	37.5%
	Squamous carcinoma	69	29.7%
	Non-squamous non-SCLC	76	32.8%
Lines of treatment	1	174	75%
	≥2	58	
TNM stage	IIIb–IVa	184	79.3%
	IVb	48	

Table S2 The comparison of inflammatory markers before treatment, maximizing therapeutic benefits, and the time of disease progression

Values	Before treatment	Maximizing therapeutic benefits	Progression	P
NLR	3.85±2.83	3.20±3.06	4.05±3.64	0.073
MLR	0.39±0.19	0.41±0.19	0.44±0.29	0.128
ELR	0.09±0.09*	0.06±0.08*	0.14±0.38	<0.001
PLR	194.85±96.28**	166.07±84.76**	180.1±93.31	0.007
SII	1058.74±864.74 [#] \$	714.76±732.61 [#]	840.93±695.1 ^{\$}	<0.001
PIV	619.38±664.81 ^{##}	405.38±519.59 ^{##}	470.69±535.09	0.001
LDH (U/L)	257.66±149.94 ^{\$\$}	219.43±54.78 ^{\$\$}	255.39±151.65	0.013

Data are presented as mean ± SD. *, P<0.001; **, P=0.005; #, P<0.001; \$, P=0.044; ##, P=0.001; \$\$, P=0.005.

Table S3 Univariate analysis for PFS by Kaplan-Meier curves

Variables	N	PFS (days)	P	Variables	N	PFS (days)	P
Age, years			0.088	ELR1			0.016
<60	118	310±38.821		L	111	238±37.021	
≥60	114	252±29.668		H	110	343±44.963	
Gender			0.484	NLR2			0.169
Male	188	298±34.264		L	93	427±69.89	
Female	44	259±40.312		H	93	280±88.36	
Smoking index			0.835	MLR2			0.015
0–199	71	293±28.189		L	93	521±50.837	
200–399	27	257±35.909		H	93	280±29.743	
≥400	134	262±45.086		ELR2			0.018
Histology type			0.107	L	93	293±51.568	
SCLC	87	210±21.129		H	93	446±79.648	
Squamous carcinoma	69	343±46.755		PLR2			0.765
Non-squamous non-SCLC	76	377±71.292		L	94	343±67.214	
Lines of treatment			0.965	H	92	428±98.62	
1	174	256±28.359		SII2			0.765
≥2	58	311±27.84		L	93	345±64.448	
Stage			0.369	H	93	428±108.12	
IIIb-IVa	184	303±35.406		PIV2			0.87
IVb	48	242±27.247		L	93	343±42.048	
NLR0			0.764	H	93	428±106.031	
L	115	266±25.207		LDH2			0.953
H	113	293±42.646		L	76	287±70.941	
MLR0			0.703	H	76	318±64.97	
L	114	303±40.78		NLR3			0.208
H	114	266±33.574		L	60	210±13.832	
ELR0			0.585	H	58	211±27.199	
L	115	248±12.248		MLR3			0.327
H	113	311±31.343		L	59	210±13.714	
PLR0			0.982	H	59	216±26.88	
L	113	287±24.799		ELR3			0.324
H	115	293±55.409		L	59	206±15.36	
SII0			0.884	H	59	252±30.519	
L	115	298±32.087		PLR3			0.531
H	113	280±33.933		L	59	206±18.103	

Table S3 (continued)

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Variables	N	PFS (days)	P	Variables	N	PFS (days)	P
PIV0			0.588	H	59	217±26.4	
L	115	266±25.166		SII3			0.975
H	113	293±47.829		L	59	206±18.103	
LIPI			0.867	H	59	217±26.4	
0	78	254±24.749		PIV3			0.577
1	80	266±46.824		L	59	212±9.326	
2	20	428±141.02		H	59	209±28.37	
iSEND			0.852	LDH3			0.003
0	36	259±44.944		L	49	262±34.596	
1	176	280±33.846		H	50	198±20.624	
2	14	511±130.52					
LDH0			0.626				
L	89	254±26.112					
H	92	262±46.849					

Data are presented as mean ± SD. State 0: before treatment; state 1: before second treatment; state 2: maximizing therapeutic benefits; state 3: disease progression.

Table S4 The COX univariate and multivariate analysis for PFS with immune checkpoint inhibitor combined with platinum-based chemotherapy in advanced lung cancer

Variable	Univariate		Multivariate	
	HR (95% CI)	P	HR (95% CI)	P
Age (<60 vs. ≥60 years)	1.323 (0.958–1.828)	0.089		
Smoking index (0–199 vs. 200–399 vs. ≥400)		0.836		
1	1.196 (0.658–2.173)	0.557		
2	1.021 (0.715–1.458)	0.907		
Histology type (SCLC vs. squamous carcinoma vs. Non-squamous non-small cell lung cancer)		0.11		
1	0.681 (0.457–1.014)	0.058		
2	0.722 (0.492–1.058)	0.095		
NLR2 (<2.3839 vs. ≥2.3839)	1.302 (0.893–1.899)	0.17		
MLR2 (<0.3699 vs. ≥0.3699)	1.596 (1.091–2.334)	0.016	2.162 (1.116–4.191)	0.022
ELR2 (<0.034 vs. ≥0.034)	0.637 (0.437–0.929)	0.019	0.399 (0.189–0.842)	0.016
LDH2 (<210 vs. ≥210 U/L)	1.012 (0.675–1.517)	0.953		
NLR3 (<3.0315 vs. ≥3.0315)	1.273 (0.873–1.857)	0.211		
MLR3 (<0.3595 vs. ≥0.3595)	1.203 (0.83–1.744)	0.328		
ELR3 (<0.074 vs. ≥0.074)	0.829 (0.57–1.205)	0.325		
LDH3 (<216 vs. ≥216 U/L)	1.854 (1.218–2.821)	0.004	2.456 (1.334–4.523)	0.004