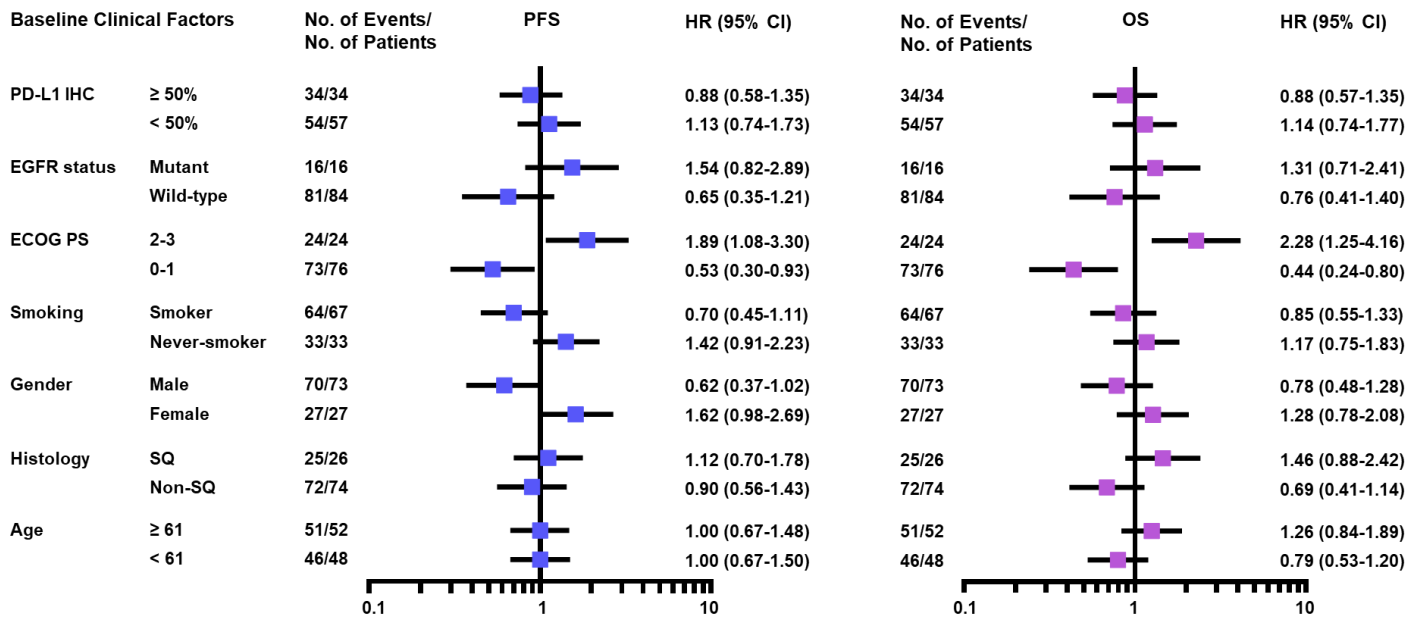


Supplementary Figure 1. Association of clinical benefit between PD-L1 and immune cells. Dot plot of color-coded clinical benefit of the patients. Dashed lines represent the cutoff values, which were 50% for PD-L1 and median for immune cells. DCB, durable clinical benefit; NDCB, non-durable clinical benefit



Supplementary Figure 2. Hazard ratios of advanced NSCLC treated with PD-1 blockade. Forest plots showing the hazard ratio (HR) of PFS and OS for baseline clinical factors.

Supplementary Table 1. ROC analysis of DCB at immune cell proportion in tumor region.

All (n=100)	CD8 T cell	CD4 T cell	B cell
AUC	0.626	0.698	0.697
<i>P</i> value	0.047	0.002	0.002
Cutoff			
Immune cell proportion (%)	0.4	1.32	0.12
≥ cutoff value			
Sensitivity (%)	67	80	78
Specificity (%)	50	50	50

ROC, receiver operating characteristic; DCB, durable clinical benefit

Supplementary Table 2. Comparison of immune cells between DCB and NDCB in NSCLC.

All (n=100)	Tumor, n			Stroma, n		
	DCB	NDCB	<i>P</i> value [#]	DCB	Non-DCB	<i>P</i> value [#]
T cell						
< median	8	47		11	39	
≥ median	22	23	0.0002,**	19	31	0.0809
Treg						
< median	14	36		11	28	
≥ median	16	34	0.6625	19	42	0.7541
B cell						
< median	7	41		10	35	
≥ median	23	29	0.0012,**	20	35	0.1247
Macrophage						
< median	6	20		16	30	
≥ median	24	50	0.3705	14	40	0.3354

DCB, durable clinical benefit; NDCB, non-durable clinical benefit; #, Chi-square test

Supplementary Table 3. Association between immune cell proportion in tumor and clinicopathological features

Variables	Status	No	CD8 ⁺ T cell (%)		CD4 ⁺ T cell (%)		Treg (%)		B cell (%)		Macrophage (%)	
			Mean± SE	P	Mean± SE	P	Mean± SE	P	Mean± SE	P	Mean± SE	P
Age	< 61	48	0.44 ± 0.1		1.18 ± 0.3		0.08 ± 0.0		0.24 ± 0.1		0.28 ± 0.1	
	≥ 61	52	0.92 ± 0.3	0.09	1.57 ± 0.4	0.39	0.12 ± 0.0	0.28	0.37 ± 0.2	0.54	0.46 ± 0.1	0.31
Gender	Male	73	0.84 ± 0.2		1.60 ± 0.3		0.12 ± 0.0		0.35 ± 0.1		0.46 ± 0.1	
	Female	27	0.28 ± 0.1	0.08	0.79 ± 0.2	0.11	0.05 ± 0.0	0.08	0.19 ± 0.1	0.50	0.15 ± 0.0	0.10
Histology	Non-SQ	74	0.72 ± 0.2		1.52 ± 0.3		0.09 ± 0.0		0.24 ± 0.1		0.41 ± 0.1	
	SQ	26	0.60 ± 0.2	0.69	0.98 ± 0.3	0.29	0.12 ± 0.0	0.53	0.51 ± 0.4	0.28	0.26 ± 0.1	0.43
Smoking	Smoker	67	0.76 ± 0.2		1.57 ± 0.3		0.11 ± 0.0		0.38 ± 0.2		0.47 ± 0.1	
	Never -smoker	33	0.54 ± 0.3	0.46	0.99 ± 0.3	0.22	0.07 ± 0.0	0.20	0.17 ± 0.1	0.36	0.17 ± 0.0	0.09

Supplementary Table 4. Association between PD-L1 and clinicopathological features (n = 91).

Variables	Status	No.	PD-L1 (%)	
			Mean \pm SE	<i>P</i> value
Age	< 61	43	27.2 \pm 5.4	0.5114
	\geq 61	48	32.2 \pm 5.2	
Gender	Male	69	35.2 \pm 4.5	0.0115, *
	Female	22	13.2 \pm 5.4	
Histology	Non-SQ	66	29.9 \pm 4.4	0.9992
	SQ	25	29.8 \pm 7.3	
Smoking	Smoker	63	34.2 \pm 4.7	0.0811
	Never-smoker	28	20.0 \pm 5.7	

SQ, squamous; DCB, durable clinical benefit; NDCB, non-durable clinical benefit