

Supplementary

Table S1 The distribution of immunization and peripheral blood biomarkers at baseline (n=90)

Peripheral blood biomarkers	Median (IQR)
WBC ($\times 10^9$)	6.40 (5.15–8.13)
ANC ($\times 10^9$)	4.27 (3.18–5.82)
AMC ($\times 10^9$)	0.50 (0.37–0.67)
ALC ($\times 10^9$)	1.40 (0.91–1.89)
PLT ($\times 10^9$)	210.50 (171.00–262.25)
LDH (U/L)	200.00 (172.75–10.78)
Hb (g/L)	127.90 (155.60–145.20)
Alb	43.25 (39.35–46.70)
CEA (ng/mL)	4.88 (2.60–12.06)
TrxR	7.95 (6.68–10.63)
NLR	3.29 (2.21–4.60)
LMR	2.69 (1.69–4.12)
PLR	160.15 (110.40–232.30)
PAR ($\times 10^9$)	4.89 (3.96–6.32)
dNLR	2.12 (1.51–2.71)
PNI	50.33 (45.85–53.86)

WBC, white blood cell count; ANC, absolute neutrophil count; AMC, absolute monocyte count; ALC, absolute lymphocyte count; PLT, platelet; LDH, lactate dehydrogenase; Hb, hemoglobin; Alb, albumin; CEA, carcinoembryonic antigen; NLR, neutrophil-to-lymphocyte ratio; LMR, lymphocyte-to-monocyte ratio; PLR, platelet-to-lymphocyte ratio; PAR, platelet-to-albumin ratio; dNLR, derived NLR; PNI, prognostic nutritional index; IQR, interquartile range.

Table S2 The distribution of immunization and peripheral blood biomarkers change from baseline after 6 and 12 weeks of treatment

Peripheral blood biomarkers	No. of patients (n=90)	Percentage (%)
WBC _{6W}		
Up	41	54.4
Down	49	45.6
ANC _{6W}		
Up	46	51.1
Down	44	48.9
AMC _{6W}		
Up	45	50.0
Down	45	50.0
ALC _{6W}		
Up	42	46.7
Down	48	53.3
PLT _{6W}		
Up	37	41.1
Down	53	58.9
LDH _{6W}		
Up	50	55.6
Down	40	44.4
Hb _{6W}		
Up	33	36.7
Down	57	63.3
Alb _{6W}		
Up	44	48.9
Down	46	51.1
CEA _{6W}		
Up	39	43.3
Down	51	56.7
TrxR _{6W}		
Up	31	34.4
Down	59	65.6
NLR _{6W}		
Up	48	53.3
Down	42	46.7

Table S2 (continued)

Table S2 (continued)

Peripheral blood biomarkers	No. of patients (n=90)	Percentage (%)
LMR_{6W}		
Up	36	42.9
Down	48	57.1
PLR_{6W}		
Up	45	50.0
Down	45	50.0
PAR_{6W}		
Up	39	43.3
Down	51	56.7
dNLR_{6W}		
Up	46	51.1
Down	44	48.9
PNI_{6W}		
Up	45	50.0
Down	45	50.0
WBC_{12W}		
Up	45	50.0
Down	45	50.0
ANC_{12W}		
Up	46	51.1
Down	44	48.9
AMC_{12W}		
Up	43	47.8
Down	47	52.2
ALC_{12W}		
Up	36	40.0
Down	54	60.0
PLT_{12W}		
Up	38	42.2
Down	52	57.8
LDH_{12W}		
Up	43	47.8
Down	47	52.2

Table S2 (continued)**Table S2 (continued)**

Peripheral blood biomarkers	No. of patients (n=90)	Percentage (%)
Hb_{12W}		
Up	45	50.0
Down	45	50.0
Alb_{12W}		
Up	48	53.3
Down	42	46.7
CEA_{12W}		
Up	45	50.0
Down	45	50.0
TrxR_{12W}		
Up	53	58.9
Down	37	41.1
NLR_{12W}		
Up	46	51.1
Down	44	48.9
LMR_{12W}		
Up	48	53.3
Down	42	46.7
PLR_{12W}		
Up	47	52.2
Down	43	47.8
PAR_{12W}		
Up	39	43.3
Down	51	56.7
dNLR_{12W}		
Up	47	52.2
Down	43	47.8
PNI_{12W}		
Up	42	46.7
Down	48	53.3

WBC, white blood cell count; ANC, absolute neutrophil count; AMC, absolute monocyte count; ALC, absolute lymphocyte count; PLT, platelet; LDH, lactate dehydrogenase; Hb, hemoglobin; Alb, albumin; CEA, carcinoembryonic antigen; TrxR, thioredoxin reductase; NLR, neutrophil-to-lymphocyte ratio; LMR, lymphocyte-to-monocyte ratio; PLR, platelet-to-lymphocyte ratio; PAR, platelet-to-albumin ratio; dNLR, derived NLR; PNI, prognostic nutritional index.

Table S3 Results of univariate and multivariate Cox regression analysis for PFS and OS

Variables	PFS and OS progression					
	Univariate			Multivariate		
	HR	95% CI	P value	HR	95% CI	P value
Gender	0.773	0.420–1.425	0.410	0.753	0.387–1.465	0.403
Age	0.666	0.403–1.099	0.112	0.803	0.468–1.376	0.424
Smoking	0.921	0.546–1.552	0.756	1.129	0.639–1.994	0.676
WBC _{6W}	1.260	0.767–2.069	0.361	1.151	0.672–1.971	0.609
ANC _{6W}	1.347	0.818–2.217	0.242	1.104	0.644–1.893	0.720
AMC _{6W}	1.284	0.782–2.109	0.323	1.452	0.840–2.509	0.182
ALC _{6W}	1.021	0.621–1.679	0.934	–	–	–
EON _{6W}	0.990	0.593–1.654	0.970	1.328	0.765–2.306	0.314
PLT _{6W}	0.795	0.479–1.320	0.375	–	–	–
LDH _{6W}	1.338	0.800–2.237	0.267	0.827	0.477–1.435	0.500
Hb _{6W}	0.888	0.531–1.485	0.651	1.093	0.633–1.886	0.750
Alb _{6W}	1.279	0.779–2.102	0.331	0.715	0.409–1.250	0.239
TrxR _{6W}	1.598	0.955–2.674	0.074	–	–	–
NLR _{6W}	1.324	0.800–2.190	0.275	0.946	0.549–1.630	0.842
LMR _{6W}	0.877	0.534–1.441	0.605	0.814	0.475–1.396	0.455
PLR _{6W}	0.724	0.440–1.193	0.206	–	–	–
PAR _{6W}	0.838	0.507–1.385	0.491	–	–	–
dNLR _{6W}	1.152	0.701–1.893	0.577	0.844	0.490–1.455	0.543
PNI _{6W}	1.319	0.802–2.166	0.275	0.908	0.530–1.555	0.726
WBC _{12W}	1.452	0.879–2.397	0.145	–	–	–
ANC _{12W}	1.432	0.868–2.360	0.159	–	–	–
AMC _{12W}	1.224	0.746–2.008	0.424	1.039	0.605–1.785	0.889
ALC _{12W}	1.025	0.622–1.687	0.923	1.014	0.590–1.742	0.960
EON _{12W}	0.959	0.578–1.591	0.870	1.002	0.576–1.744	0.994
LDH _{12W}	0.691	0.419–1.114	0.148	1.127	0.652–1.949	0.668
Hb _{12W}	0.999	0.608–1.641	0.997	1.044	0.610–1.788	0.874
Alb _{12W}	1.263	0.767–2.080	0.358	0.997	0.583–1.706	0.992
TrxR _{12W}	0.747	0.454–1.231	0.253	1.053	0.609–1.823	0.852
NLR _{12W}	1.185	0.721–1.947	0.503	1.421	0.827–2.443	0.203
LMR _{12W}	0.727	0.443–1.194	0.208	0.869	0.502–1.503	0.615
PLR _{12W}	1.306	0.791–2.154	0.297	–	–	–
PAR _{12W}	1.520	0.917–2.518	0.104	1.716	0.996–2.956	0.052
dNLR _{12W}	1.124	0.684–1.847	0.644	–	–	–
PNI _{12W}	0.861	0.524–1.415	0.555	0.888	0.519–1.519	0.665

“–” means that univariate has meaningful variables in Table 4. PFS, progression-free survival; OS, overall survival; WBC, white blood cell count; ANC, absolute neutrophil count; AMC, absolute monocyte count; ALC, absolute lymphocyte count; EON, eosinophil number; PLT, platelet; LDH, lactate dehydrogenase; Hb, hemoglobin; Alb, albumin; TrxR, thioredoxin reductase; NLR, neutrophil-to-lymphocyte ratio; LMR, lymphocyte-to-monocyte ratio; PLR, platelet-to-lymphocyte ratio; PAR, platelet-to-albumin ratio; dNLR, derived NLR; PNI, prognostic nutritional index; HR, hazard ratio; CI, confidence interval.