Supplementary Table 1 The Reagents for flow cytometric analysis of lymphocyte subsets

Specificity	CD3	CD4	CD8	CD16	CD19	CD56	CD45
Clone number	UCHT1	RAP-T4	HIT8a	CB16	HIB19	MEM-188	2D1
Immunoglobulin subtype	IgG1	IgG1	IgG1	IgG1	IgG1	IgG1	IgG1
Species	Mouse	Mouse	Mouse	Mouse	Mouse	Mouse	Mouse
Fluorescence staining	FITC	PC7	APC-Cy7	PE	APC	PE	PerCP-Cy5.5
λ Excitation wavelength	488nm	488nm	633nm	488nm	633nm	488nm	48nm
Emission peak	525nm	785nm	785nm	575nm	660nm	575nm	695nm

Abbreviations: FITC, Fluorescein Isothiocyanate; APC-Cy7, Allophycocyanin-Cyanine7; PE, Phycoerythrin; APC, Allophycocyanin; PerCP-Cy5.5, Peridinin-Chlorophyll-Protein -Cyanine5.5.

Supplementary Table 2 Detailed baseline characteristics of patients

Characteristics	N	Percent (%)
Gender	746	
Males	520	69.71
Females	226	30.29
Age (years)	746	
≥60	171	22.92
<60	575	77.08
ECOG score	746	
0-1	699	93.7
2	47	6.30
Pathology	746	
WHO type 1	184	24.66
WHO type 2	550	73.73
WHO type 3	12	1.61
GTV dose (Gy)	746	
≥70	657	88.07
<70	89	11.93
Treatment model	746	
RT alone	61	8.18
CCRT	150	20.11
NACT + RT	105	14.08
NACT + CCRT	59	7.91
RT + ACT	73	9.79
CCRT + ACT	71	9.52
NACT + RT + ACT	159	21.31
NACT + CCRT + ACT	68	9.12
CCRT Regimen	348	
Paclitaxel	94	27.01
Platinum	230	66.09
Nimotuzumab	24	6.90
Neoadjuvant/adjuvant Regimen	535	
Paclitaxel + platinum (TP)	476	88.97
Paclitaxel + platinum + fluorouracil (TPF)	27	5.05
Gemcitabine + platinum (GP)	26	4.86
Platinum + fluorouracil (PF)	6	1.12
Cycles of neoadjuvant/adjuvant chemotherapy	535	
≥4	353	65.98
<4	182	34.02

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Supplementary Table 2 (Continued).

Characteristics	N	Percent (%)
Primary tumor (T) stage	746	
T0	11	1.47
T1	74	9.92
T2	305	40.88
T3	207	27.75
T4	149	19.97
Regional lymph nodes (N) stage	746	
N0	78	10.46
N1	264	35.39
N2	268	35.92
N3	136	18.23
Clinical stage	746	
I	13	1.74
II	166	22.25
III	293	39.28
IV	274	36.73
EBV DNA (copies/ml)	746	
≥500	554	74.26
<500	192	25.74

Abbreviations: ECOG, Eastern Cooperative Oncology Group; GTV, gross tumor volume; RT, radiotherapy; CCRT, concurrent chemoradiation; NACT, neoadjuvant chemotherapy; ACT, adjuvant chemotherapy; WHO, World Health Organization; EBV, Epstein-Barr virus.

Supplementary Table 3 The p-values of pre- and post-propensity score matching for lymphocyte subsets in the high and low groups based on median grouping

Baseline	H vs. L(n)	P value (χ^2 test)						P value (Wilcoxon test)			
		Male	NACT	ACT	CCRT	EB-DNA Positive	Stage	Age	GTV dose	CCRT.Num	CT.Num
B cell											
Pre-PSM	376 vs. 370	0.389	0.342	0.941	0.597	0.008*	0.038*	0.265	0.529	0.594	0.908
Post-PSM	332 vs. 322	0.736	1.000	0.934	0.815	0.635	0.797	0.439	0.326	0.859	0.924
CD4+ cell											
Pre-PSM	374 vs. 372	0.052	0.213	0.836	0.122	0.494	0.033*	0.032*	0.056	0.065	0.060
Post-PSM	321 vs. 321	1.000	0.875	0.933	0.813	1.000	0.674	0.615	0.760	0.772	0.463
CD8+ cell											
Pre-PSM	373 vs. 373	0.936	0.107	0.029	0.660	0.180	0.066	0.000*	0.065	0.713	0.095
Post-PSM	323 vs. 323	0.494	0.875	0.449	0.937	0.423	0.152	0.409	0.428	0.880	0.813
CD4+/CD8+ ratio											
Pre-PSM	376 vs. 370	0.226	0.999	0.042*	0.411	0.436	0.136	0.000*	0.045*	0.227	0.346
Post-PSM	328 vs. 328	0.734	1.000	0.619	0.876	0.937	0.823	0.560	0.448	0.702	0.970
Total T cell											
Pre-PSM	373 vs. 373	0.232	0.019*	0.274	0.883	0.766	0.142	0.000*	0.026*	0.867	0.051
Post-PSM	326 vs. 326	0.933	0.938	0.933	0.938	0.936	0.587	0.400	0.320	0.883	0.454
NK cell											
Pre-PSM	374 vs. 372	0.000*	0.421	0.375	0.023*	0.420	0.012*	0.000*	0.289	0.067	0.715
Post-PSM	322 vs. 322	0.540	0.937	1.000	0.527	0.936	0.179	0.242	0.951	0.610	0.757
Lymphocyte											
Pre-PSM	375 vs. 371	0.018*	0.040*	0.096	0.950	0.440	0.048*	0.119	0.462	0.828	0.125
Post-PSM	326 vs. 326	0.347	0.638	0.800	0.814	0.873	0.519	0.515	0.537	0.908	0.595

Supplementary Table 3 (Continued).

Post-treatment	H vs. L(n)	P value (χ 2 test)						P value (Wilcoxon test)			
		Male	NACT	ACT	CCRT	EB-DNA Positive	Stage	Age	GTV dose	CCRT.Num	CT.Num
B cell											
Pre-PSM	375 vs. 371	0.258	0.001*	0.000*	0.000*	0.244	0.008*	0.000*	0.022*	0.001*	0.000*
Post-PSM	273 vs. 273	0.924	0.732	0.638	0.441	0.381	0.762	0.228	0.549	0.489	0.573
CD4+ cell											
Pre-PSM	373 vs. 373	0.811	0.884	0.435	0.463	0.551	0.568	0.026*	0.268	0.238	0.727
Post-PSM	351 vs. 351	0.869	0.940	0.872	0.880	0.818	0.977	0.548	0.484	0.653	0.945
CD8+ cell											
Pre-PSM	373 vs. 373	0.381	0.884	0.012*	0.056	0.456	0.464	0.566	0.417	0.077	0.066
Post-PSM	342 vs. 342	0.618	0.760	0.290	0.878	0.641	0.506	0.569	0.694	0.710	0.265
CD4+/CD8+ ratio											
Pre-PSM	373 vs. 373	0.811	1.000	0.160	0.001*	0.371	0.020*	0.265	0.407	0.001*	0.774
Post-PSM	339 vs. 339	0.803	0.939	0.806	0.355	0.938	0.054	0.707	0.771	0.401	0.939
Total T cell											
Pre-PSM	374 vs. 372	0.104	0.421	0.033*	0.946	0.700	0.073	0.299	0.176	0.915	0.159
Post-PSM	349 vs. 349	0.679	0.820	0.330	0.939	1.000	0.032*	0.920	0.579	0.910	0.640
NK cell											
Pre-PSM	374 vs. 372	0.000*	0.941	0.916	0.611	0.258	0.013*	0.000*	0.996	0.560	0.194
Post-PSM	311 vs. 311	0.377	0.936	0.932	0.936	0.627	0.452	0.566	0.555	0.871	0.961
Lymphocyte											
Pre-PSM	373 vs. 373	0.001*	0.884	0.435	0.660	0.655	0.588	0.151	0.028*	0.482	0.417
Post-PSM	333 vs. 333	0.440	0.938	0.870	0.877	0.937	0.331	0.827	0.180	0.882	0.860

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Supplementary Table 3 (Continued).

Δ values	H vs. L(n)	P value (χ 2 test)						P value (Wilcoxon test)			
		Male	NACT	ACT	CCRT	EB-DNA Positive	Stage	Age	GTV dose	CCRT.Num	CT.Num
B cell											
Pre-PSM	373 vs. 373	0.473	0.660	0.001*	0.028*	0.025*	0.000*	0.774	0.935	0.028*	0.008*
Post-PSM	315 vs. 315	0.930	1.000	0.670	0.873	1.000	0.516	0.785	0.769	0.952	0.987
CD4+ cell											
Pre-PSM	375 vs. 371	0.018*	0.380	0.796	0.457	0.533	0.030	0.026	0.031	0.411	0.115
Post-PSM	319 vs. 319	0.795	0.874	0.799	1.000	1.000	0.260	0.928	0.342	0.900	0.940
CD8+ cell											
Pre-PSM	374 vs. 372	0.278	0.213	0.000*	0.937	0.834	0.537	0.000*	0.001*	0.831	0.001*
Post-PSM	309 vs. 309	1.000	0.629	0.378	0.936	0.805	0.792	0.500	0.298	0.975	0.674
CD4+/CD8+ ratio											
Pre-PSM	370 vs. 376	0.226	0.341	0.000*	0.428	0.574	0.119	0.000*	0.011*	0.408	0.145
Post-PSM	304 vs. 304	1.000	0.570	0.302	0.935	0.410	0.318	0.682	0.489	0.953	0.185
Total T cell											
Pre-PSM	373 vs. 373	0.577	0.057	0.019*	0.186	0.655	0.061	0.027*	0.006*	0.182	0.004*
Post-PSM	332 vs. 332	0.866	1.000	0.867	0.938	0.634	0.947	0.632	0.428	0.733	0.679
NK cell											
Pre-PSM	373 vs. 373	0.381	0.187	0.639	0.941	0.882	0.741	0.193	0.129	0.674	0.502
Post-PSM	345 vs. 345	0.867	0.170	1.000	0.446	0.938	0.902	0.332	0.219	0.317	0.536
Lymphocyte											
Pre-PSM	373 vs. 373	0.690	0.305	0.211	0.941	0.941	0.198	0.017*	0.074	0.950	0.121
Post-PSM	335 vs. 335	0.933	0.938	1.000	1.000	0.753	0.829	0.836	0.903	0.929	0.757

Note: * P<0.05.

Abbreviations: H, group with above median value; L, group with below median value; NACT, neoadjuvant chemotherapy; ACT, adjuvant chemotherapy; CCRT, concurrent chemoradiation; CT, chemotherapy; EBV, Epstein-Barr virus; Num, number; PSM, propensity score matching; Δ values, differences between post-treatment and baseline counts.

Supplementary Table 4 Part of the p-values for 5-year survival between the high and low groups after propensity score matching

	B cell	NK cell	Lymphocyte
Baseline			
PFS	0.840	0.450	0.072
OS	0.230	0.160	0.093
Post-treatment			
PFS	0.620	0.210	0.840
OS	0.940	0.980	0.840
Δ values			
PFS	0.290	0.460	0.055
OS	0.520	0.750	0.460

Abbreviations: PFS, progression-free survival; OS, overall survival; Δ values, differences between post-treatment and baseline counts.