

Figure S1 Flow chart of study design, characteristics of patient cohort. HPA, Human Protein Atlas; LADC, lung adenocarcinoma; TCGA, The Cancer Genome Atlas; TMAs, tissue microarrays.

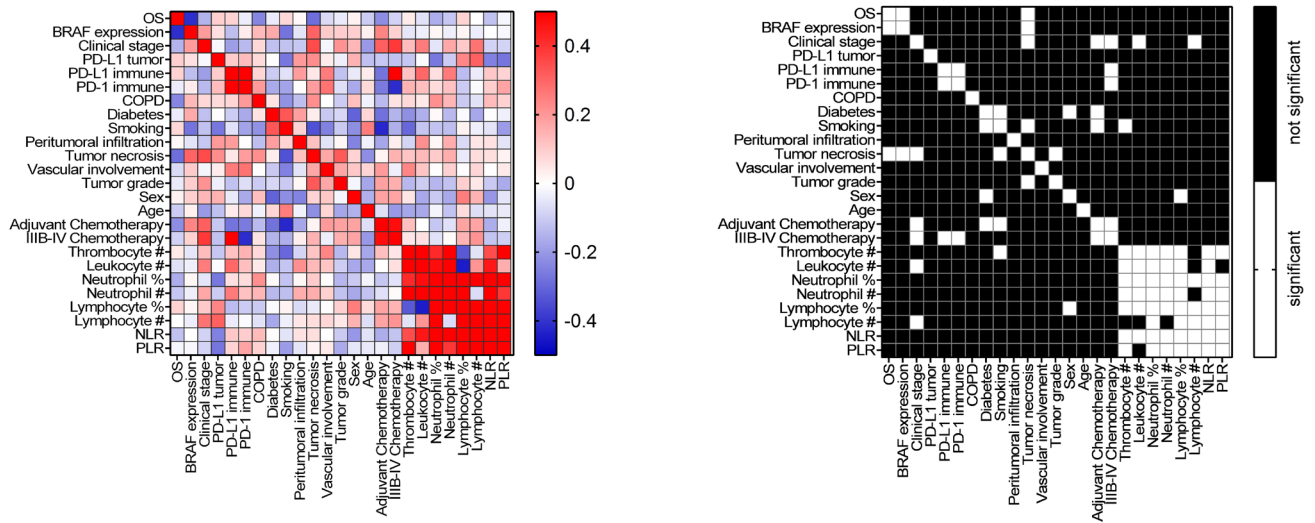


Figure S2 Correlation matrix of all clinicopathological parameters, including OS and BRAF expression. Red-blue scale refers to the coefficient value of, binary white-black scale refers to the P value of Spearman's correlation.

Table S1 P values for correlation coefficients (Spearman's) between clinicopathological parameters

	OS	BRAF expression	Clinical stage	PD-L1 tumor	PD-L1 immune	PD-1 immune	COPD	Diabetes	Smoking	Peritumoral infiltration	Tumor necrosis	Vascular involvement	Tumor grade	Sex	Age	Adjuvant Chemotherapy	IIIB-IV Chemotherapy
OS	0	0.000763	0.241551	0.563213	0.598497	0.816963	0.064548	0.759698	0.601903	0.925438	0.023551	0.561587	0.74075	0.831517	0.42956	0.074135	0.47092
BRAF expression	0.000763	0	0.127222	0.704975	0.432744	0.818382	0.294224	0.197741	0.062992	0.677231	0.014664	0.426803	0.448072	0.460597	0.806196	0.05499	0.480733
Clinical stage	0.241551	0.127222	0	0.920224	0.256885	0.412248	0.556476	0.343638	0.432398	0.392801	0.00512	0.877775	0.100276	0.279774	0.118297	0.013573	0.001747
PD-L1 tumor	0.563213	0.704975	0.920224	0	0.610644	0.425636	0.681235	0.980042	0.159516	0.230374	0.174079	0.816255	0.84282	0.36499	0.452546	0.501244	0.465102
PD-L1 immune	0.598497	0.432744	0.256885	0.610644	0	3.24E-05	0.633632	0.544195	0.769435	0.241066	0.780044	0.116881	0.471764	0.794074	0.819164	0.091425	3.29E-05
PD-1 immune	0.816963	0.818382	0.412248	0.425636	3.24E-05	0	0.244054	0.318928	0.348112	0.973552	0.242396	0.092284	0.693555	0.308224	0.651826	0.109227	0.00883
COPD	0.064548	0.294224	0.556476	0.681235	0.633632	0.244054	0	0.683077	0.147867	0.328526	0.089475	0.991949	0.436866	0.341713	0.826892	0.291947	0.680618
Diabetes	0.759698	0.197741	0.343638	0.980042	0.544195	0.318928	0.683077	0	0.024525	0.139789	0.78958	0.398295	0.542165	0.015275	0.524596	0.028584	0.250555
Smoking	0.601903	0.062992	0.432398	0.159516	0.769435	0.348112	0.147867	0.024525	0	0.566259	0.01829	0.093635	0.47837	0.132146	0.084983	0.002919	0.290259
Peritumoral infiltration	0.925438	0.677231	0.392801	0.230374	0.241066	0.973552	0.328526	0.139789	0.566259	0	0.336809	0.662087	0.891577	0.051609	0.823499	0.1662	0.799335
Tumor necrosis	0.023551	0.014664	0.00512	0.174079	0.780044	0.242396	0.089475	0.78958	0.01829	0.336809	0	0.172079	0.009946	0.503643	0.076596	0.861523	0.23548
Vascular involvement	0.561587	0.426803	0.877775	0.816255	0.116881	0.092284	0.991949	0.398295	0.093635	0.662087	0.172079	0	0.176319	0.387872	0.509411	0.118063	0.784763
Tumor grade	0.74075	0.448072	0.100276	0.84282	0.471764	0.693555	0.436866	0.542165	0.47837	0.891577	0.009946	0.176319	0	0.875495	0.167864	0.149941	0.225004
Sex	0.831517	0.460597	0.279774	0.36499	0.794074	0.308224	0.341713	0.015275	0.132146	0.051609	0.503643	0.387872	0.875495	0	0.220866	0.156281	0.159703
Age	0.42956	0.806196	0.118297	0.452546	0.819164	0.651826	0.826892	0.524596	0.084983	0.823499	0.076596	0.509411	0.167864	0.220866	0	0.621535	0.108093
Adjuvant Chemotherapy	0.074135	0.05499	0.013573	0.501244	0.091425	0.109227	0.291947	0.028584	0.002919	0.1662	0.861523	0.118063	0.149941	0.156281	0.621535	0	6.90E-05
IIIB-IV Chemotherapy	0.47092	0.480733	0.001747	0.465102	3.29E-05	0.00883	0.680618	0.250555	0.290259	0.799335	0.23548	0.784763	0.225004	0.159703	0.108093	6.90E-05	0

Table S2 Correlation coefficients (Spearman's) between clinicopathological parameters

	OS	BRAF expression	Clinical stage	PD-L1 tumor	PD-L1 immune	PD-1 immune	COPD	Diabetes	Smoking	Peritumoral infiltration	Tumor necrosis	Vascular involvement	Tumor grade	Sex	Age	Adjuvant Chemotherapy	IIIB-IV Chemotherapy
OS	1	-0.41016	-0.15095	0.09546	0.086988	-0.03829	-0.23817	-0.03964	0.078079	0.011933	-0.28282	-0.07392	-0.04252	0.027124	-0.10047	-0.22479	-0.09174
BRAF expression	-0.41016	1	0.195799	0.062604	-0.1293	0.037992	0.136492	0.165817	-0.27337	-0.05304	0.30381	0.101072	0.0973	0.093879	0.031276	0.24107	0.089731
Clinical stage	-0.15095	0.195799	1	-0.01705	-0.19123	-0.13891	0.078116	-0.1244	-0.11999	-0.11044	0.351262	-0.01994	0.212416	0.139431	-0.20043	0.311966	0.389631
PD-L1 tumor	0.09546	0.062604	-0.01705	1	0.098656	0.131289	0.070878	0.004259	-0.2682	0.196572	0.222145	0.038445	-0.03327	0.149098	-0.12385	-0.11097	-0.12046
PD-L1 immune	0.086988	-0.1293	-0.19123	0.098656	1	0.691693	0.081007	-0.10297	-0.05916	0.192219	0.046197	0.255207	-0.12033	-0.04318	0.037826	-0.274	-0.61346
PD-1 immune	-0.03829	0.037992	-0.13891	0.131289	0.691693	1	0.199229	-0.16846	-0.18074	0.005487	0.191687	0.273304	-0.06606	-0.16746	0.07458	-0.2605	-0.41379
COPD	-0.23817	0.136492	0.078116	0.070878	0.081007	0.199229	1	0.05334	-0.21439	-0.12723	0.21931	0.001319	-0.10139	0.123828	-0.02859	-0.13713	0.053777
Diabetes	-0.03964	0.165817	-0.1244	0.004259	-0.10297	-0.16846	0.05334	1	0.327728	0.189679	0.034584	-0.10917	-0.0789	-0.30685	0.082346	-0.27817	-0.14813
Smoking	0.078079	-0.27337	-0.11999	-0.2682	-0.05916	-0.18074	-0.21439	0.327728	1	0.08582	-0.34292	-0.24739	-0.10597	-0.22286	0.25395	-0.42479	-0.15754
Peritumoral infiltration	0.011933	-0.05304	-0.11044	0.196572	0.192219	0.005487	-0.12723	0.189679	0.08582	1	0.122017	-0.05568	0.017523	-0.24441	-0.02844	-0.17518	0.032406
Tumor necrosis	-0.28282	0.30381	0.351262	0.222145	0.046197	0.191687	0.21931	0.034584	-0.34292	0.122017	1	0.172813	0.32249	0.085122	-0.22295	0.02224	0.150414
Vascular involvement	-0.07392	0.101072	-0.01994	0.038445	0.255207	0.273304	0.001319	-0.10917	-0.24739	-0.05568	0.172813	1	0.172532	0.109772	0.083979	0.197332	-0.03482
Tumor grade	-0.04252	0.0973	0.212416	-0.03327	-0.12033	-0.06606	-0.10139	-0.0789	-0.10597	0.017523	0.32249	0.172532	1	-0.02014	-0.17591	0.183521	0.155043
Sex	0.027124	0.093879	0.139431	0.149098	-0.04318	-0.16746	0.123828	-0.30685	-0.22286	-0.24441	0.085122	0.109772	-0.02014	1	-0.15516	0.179306	0.177859
Age	-0.10047	0.031276	-0.20043	-0.12385	0.037826	0.07458	-0.02859	0.082346	0.25395	-0.02844	-0.22295	0.083979	-0.17591	-0.15516	1	-0.06289	-0.20276
Adjuvant Chemotherapy	-0.22479	0.24107	0.311966	-0.11097	-0.274	-0.2605	-0.13713	-0.27817	-0.42479	-0.17518	0.02224	0.197332	0.183521	0.179306	-0.06289	1	0.476435
IIIB-IV Chemotherapy	-0.09174	0.089731	0.389631	-0.12046	-0.61346	-0.41379	0.053777	-0.14813	-0.15754	0.032406	0.150414	-0.03482	0.155043	0.177859	-0.20276	0.476435	1

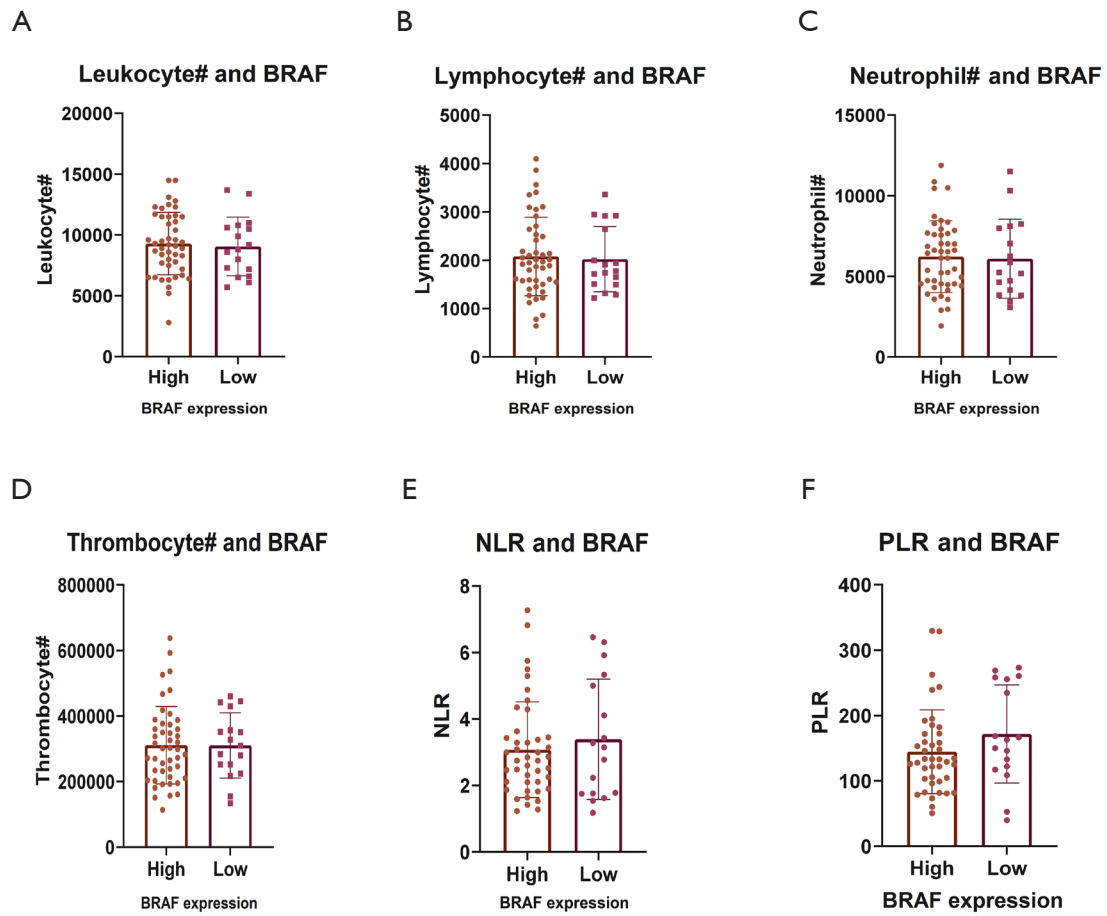


Figure S3 BRAF expression according to preoperative blood parameters. High expressor patients exhibit average BRAF RNA score >2, low expressor patients exhibit average BRAF RNA score 0-1.99. Metric data is shown as the median of compared groups, and graphs indicate the mean and corresponding standard deviation.

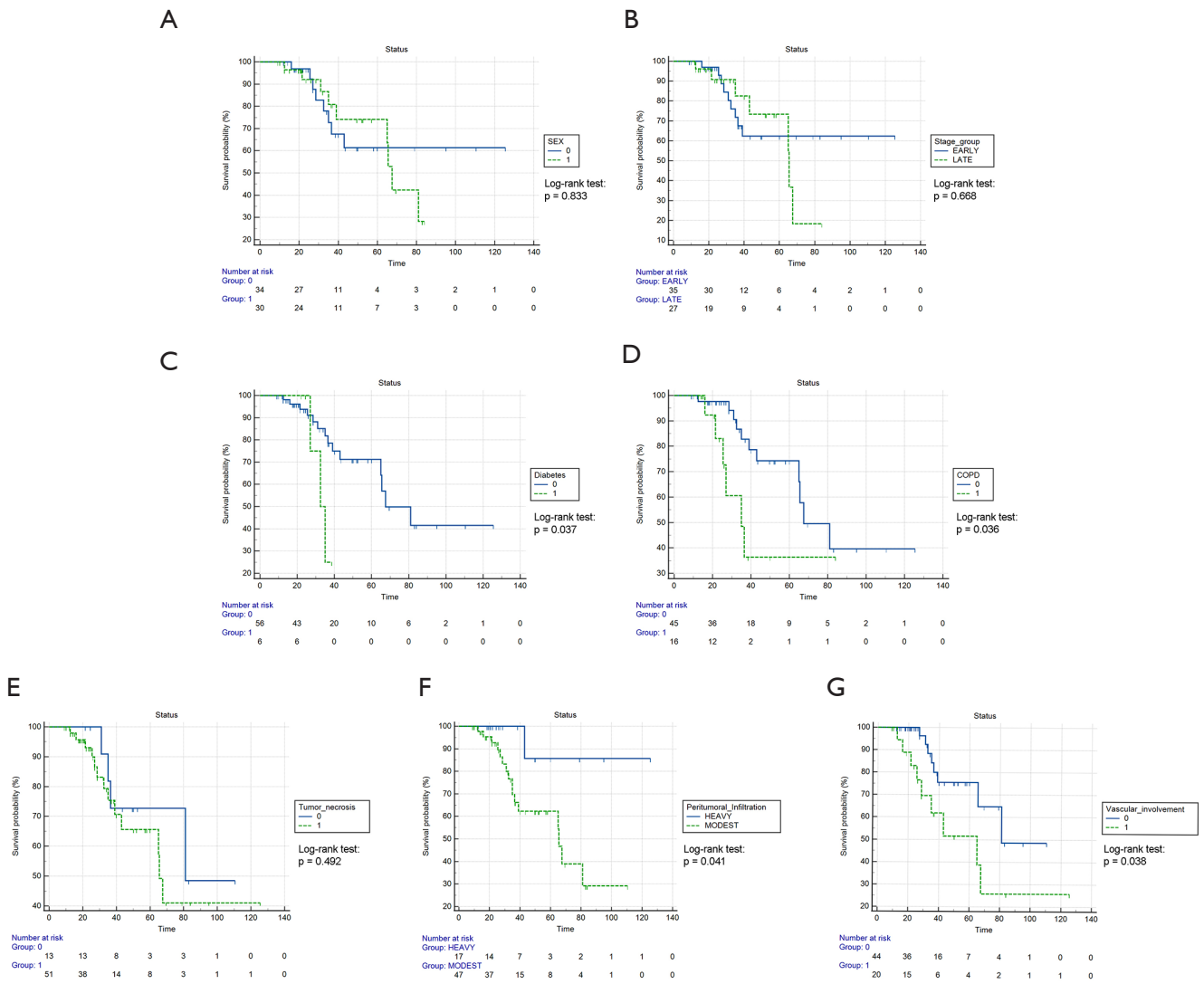


Figure S4 Additional KMs. OS is shown on KM curves according to (A) sex (0-male, 1-female); (B) stage [early (I-II) *vs.* late (III-IV)]; (C) diabetes (0-not present, 1-present); (D) COPD (0-not present, 1-present); (E) tumor necrosis (0-not present, 1-present); (F) peritumoral infiltration [Heavy (3) *vs.* Modest (1-2)] and (G) vascular involvement (0-not present, 1-present).