

Figure S1. Heatmap representation of non-negative matrix factorization clustering analysis.

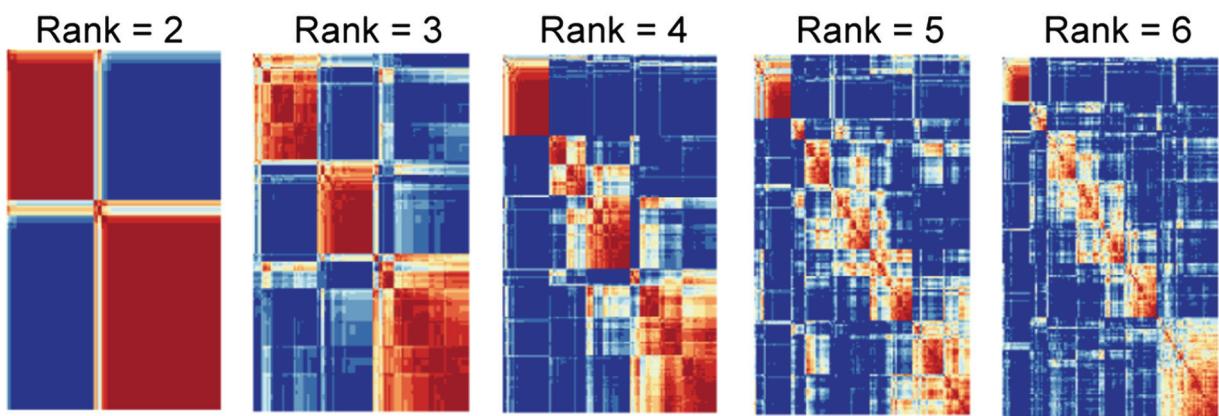


Figure S2. Difference in infiltration proportion of 22 immune cells between the two CRC subtypes, determined by the CIBERSORT algorithm on The Cancer Genome Atlas cohort.

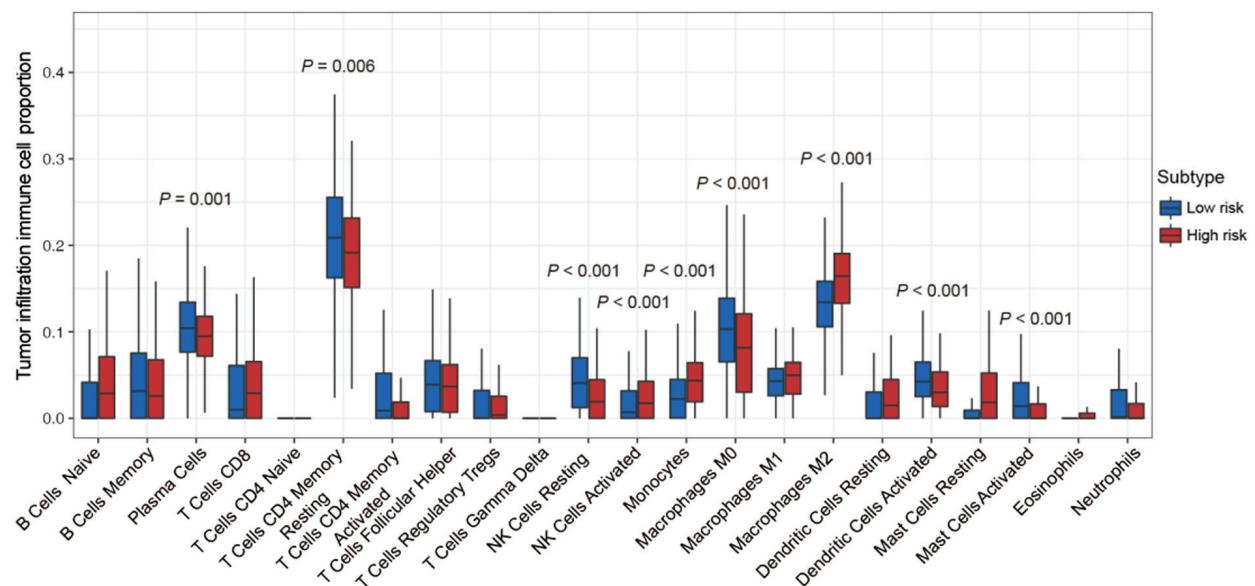


Figure S3. Multivariate logistic analysis of low-risk versus high-risk subtypes in association with tumor mutation burden, with DNA repair-related genes and clinical factors taken into consideration.

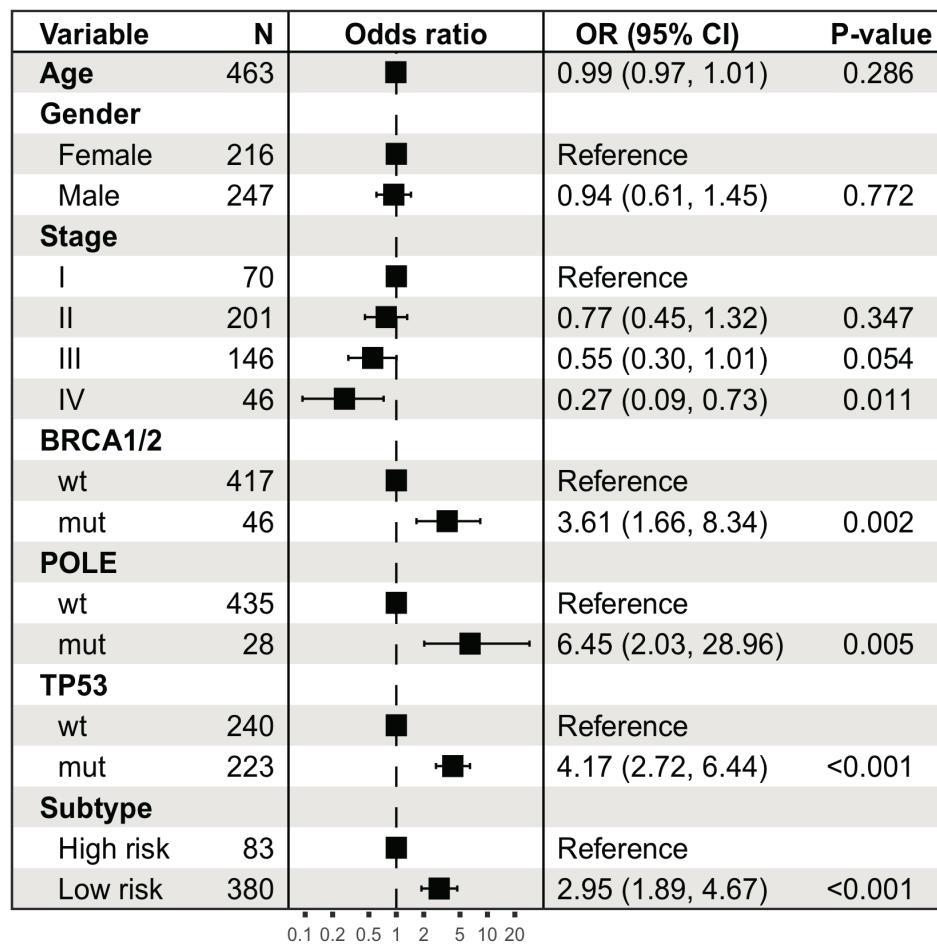


Table SI. Clinical characteristics of four CRC cohorts.

	TCGA	GSE103479	GSE38832	GSE87211
Age (range, mean)	31-90, 66.33	35-88, 64.26	32-89, 59.63	38-88, 63.16
Gender				
Male	338	83	69	182
Female	302	72	53	160

Table SII. Summary of TCGA and three validation datasets included in the present study.

Datasets	Platforms	Sample size, n
TCGA	Illumina RNAseq HTSeq	662
GSE103479	Almac Diagnostics Custom Xcel array	155
GSE38832	Affymetrix Human Genome U133 Plus 2.0 Array	122
GSE87211	Agilent-026652 Whole Human Genome Microarray 4x44K v2	132
Total		1,281

TCGA, The Cancer Genome Atlas.

Table SIII. Genes (n=53) with P<0.01 upon univariate survival analysis.

Gene	P-value
<i>CD1B</i>	0.000140798
<i>PCOLCE2</i>	0.000148648
<i>HSPA1A</i>	0.000876168
<i>INHBB</i>	0.001003066
<i>FABP4</i>	0.001019566
<i>GPSM1</i>	0.001038065
<i>MMP1</i>	0.001208366
<i>ATP2A1</i>	0.001731698
<i>CD1A</i>	0.001880768
<i>GPX3</i>	0.001894362
<i>CYP11A1</i>	0.002024162
<i>FAM127A</i>	0.002438041
<i>LEP</i>	0.002710278
<i>SRPX</i>	0.002718509
<i>WNT10B</i>	0.002802413
<i>ANGPTL4</i>	0.002998865
<i>AOC3</i>	0.003119582
<i>CXCL1</i>	0.003536822
<i>RAB3IL1</i>	0.003609254
<i>MFNG</i>	0.003705367
<i>HLX</i>	0.003798359
<i>MMP3</i>	0.004290524
<i>CCBE1</i>	0.004771208
<i>NFATC4</i>	0.004846608
<i>APOD</i>	0.005133551
<i>SPEG</i>	0.005325678
<i>ALAS2</i>	0.005664381
<i>C7</i>	0.005698703
<i>SLC39A8</i>	0.005814463
<i>LRCH4</i>	0.006130749
<i>DTX1</i>	0.006624096
<i>CALB2</i>	0.006929051
<i>RBM3</i>	0.007458747
<i>KCTD1</i>	0.007468853
<i>FUT5</i>	0.007606405
<i>TPM2</i>	0.007817163
<i>ACACB</i>	0.007869533
<i>DPP7</i>	0.007892607
<i>PTGIS</i>	0.008346155
<i>CCL22</i>	0.008391792
<i>ICOS</i>	0.008717258
<i>DAPK1</i>	0.008776385
<i>SYNGR3</i>	0.008798855
<i>EPHB2</i>	0.009037823
<i>BCL6</i>	0.009038485
<i>NPTXR</i>	0.009287815
<i>HMMR</i>	0.009295231
<i>CDC25C</i>	0.009470687
<i>CECR6</i>	0.009552709
<i>IL13RA2</i>	0.009601268
<i>FAM102A</i>	0.009762443
<i>CXCL2</i>	0.009836522
<i>PRTN3</i>	0.009992521