

Table S1 Chi-square test for correlation of factors

Variable	n	df	Method	P.signif	Statistic	P value
Sex-Primary site	5,008	6	Chi-square test	***	180.25	<0.001
Sex-Age	5,008	3	Chi-square test	***	55.138	<0.001
Sex-Race	5,008	2	Chi-square test	**	9.651	0.008
Sex-Histology	5,008	2	Chi-square test	***	109.541	<0.001
Sex-Tumor size	5,008	2	Chi-square test	-	2.017	0.365
Sex-AJCC T	5,008	1	Chi-square test	-	<.001	0.978
Age-Race	5,008	6	Chi-square test	***	40.048	<0.001
Age-Histology	5,008	6	Chi-square test	***	406.019	<0.001
Age-Tumor size	5,008	6	Chi-square test	***	190.908	<0.001
Age-AJCC T	5,008	3	Chi-square test	***	188.352	<0.001
Age-Primary site	5,008	18	Chi-square test	***	136.819	<0.001
Race-Histology	5,008	4	Chi-square test	-	8.944	0.062
Race-Tumor size	5,008	4	Chi-square test	***	33.795	<0.001
Race-AJCC T	5,008	2	Chi-square test	***	25.354	<0.001
Race-Primary site	5,008	12	Chi-square test	***	394.993	<0.001
Histology-Tumor size	5,008	4	Chi-square test	***	77.19	<0.001
Histology-AJCC T	5,008	2	Chi-square test	***	30.911	<0.001
Histology-Primary site	5,008	12	Chi-square test	***	258.186	<0.001
Tumor size-AJCC T	5,008	2	Chi-square test	***	911.923	<0.001
Tumor size-Primary site	5,008	12	Chi-square test	***	92.629	<0.001
AJCC T-Primary site	5,008	6	Chi-square test	***	51.123	<0.001

** , means $P < 0.01$; ***, means $P < 0.001$. AJCC T, American Joint Committee on Cancer Tumor.