

a

		OR	95% CI	p-value	adj. OR	adj. 95% CI	adj. p-value
SARC	Gene expression	1.002	1.003	1.27155e-02	1.001	1.002	0.137863195
	Replication timing	1.001	1.001	5.923750e-04	1.001	1.001	0.005241483
	HR+	1.027	1.042	2.504471e-03	1.027	1.042	0.002500672
		OR	95% CI	p-value	adj. OR	adj. 95% CI	adj. p-value
BRCA	Gene expression	1.001	1.001	1.442164e-03	1.000	1.000	6.024969e-01
	Replication timing	1.001	1.001	1.275105e-16	1.001	1.001	1.867458e-14
	HR+	0.981	0.986	2.168960e-10	0.981	0.986	2.094526e-10
		OR	95% CI	p-value	adj. OR	adj. 95% CI	adj. p-value
OV	Gene expression	1.001	1.002	1.514332e-06	1.001	1.001	4.918151e-02
	Replication timing	1.001	1.001	2.576320e-17	1.001	1.001	4.461715e-13
	HR+	0.978	0.984	6.987369e-10	0.978	0.984	6.738126e-10
		OR	95% CI	p-value	adj. OR	adj. 95% CI	adj. p-value
STAD	Gene expression	1.005	1.006	1.563595e-09	1.003	1.005	4.034915e-05
	Replication timing	1.002	1.002	3.937421e-10	1.001	1.002	9.798277e-06
	HR+	0.920	0.935	8.287776e-19	0.920	0.935	7.849440e-19
		OR	95% CI	p-value	adj. OR	adj. 95% CI	adj. p-value
UCEC	Gene expression	1.003	1.004	6.117072e-07	1.001	1.003	3.046928e-02
	Replication timing	1.002	1.002	2.727031e-17	1.002	1.002	7.761766e-13
	HR+	0.985	0.999	8.334689e-02	0.985	0.999	8.305730e-02

b

		OR	95% CI	p-value	adj. OR	adj. 95% CI	adj. p-value
SARC	Gene expression	1.002	1.004	1.526837e-01	1.001	1.003	0.42649498
	Replication timing	1.001	1.001	0.0085881963	1.001	1.001	0.01907994
	HR+	1.023	1.040	1.775363e-02	1.023	1.040	0.01774402
		OR	95% CI	p-value	adj. OR	adj. 95% CI	adj. p-value
BRCA	Gene expression	1.001	1.002	1.265203e-03	1.001	1.001	1.319747e-01
	Replication timing	1.001	1.001	4.460312e-13	1.001	1.001	2.750850e-11
	HR+	0.982	0.987	4.079702e-09	0.982	0.987	3.967313e-09
		OR	95% CI	p-value	adj. OR	adj. 95% CI	adj. p-value
OV	Gene expression	1.003	1.004	3.545397e-09	1.002	1.003	2.791644e-04
	Replication timing	1.001	1.001	1.975158e-17	1.001	1.001	1.156110e-12
	HR+	0.976	0.982	9.265347e-11	0.976	0.982	8.793635e-11
		OR	95% CI	p-value	adj. OR	adj. 95% CI	adj. p-value
STAD	Gene expression	1..008	1.010	1.967142e-08	1.006	1.008	3.352748e-05
	Replication timing	1.002	1.002	6.109771e-09	1.001	1.002	1.014445e-05
	HR+	0.916	0.931	4.133103e-18	0.916	0.931	3.917455e-18
		OR	95% CI	p-value	adj. OR	adj. 95% CI	adj. p-value
UCEC	Gene expression	1.006	1.008	6.044696e-07	1.004	1.006	3.843395e-03
	Replication timing	1.002	1.003	1.518564e-14	1.002	1.002	6.952681e-11
	HR+	0.988	1.002	1.715565e-01	0.988	1.002	1.711327e-01

**Supp Table 3. HR is a key factor of chromosomal translocation.** Linear regression model of normalized translocation number for each gene on gene expression, replication timing and HR for (a) all protein coding genes (b) non-silent genes show that HR is another important factor correkating with translocation distribution in tumors (p<0.001). There are more translocations in HR deficient samples (OR<1) except for SARC.