

S4 Table. Multivariable analysis of overall and breast cancer-specific survival among patients with prior cancer before propensity score matching

| | HR (95% CI) | p-value | Breast cancer-specific SHR (95% CI) | Breast cancer-specific p-value |
|-------------------------------|------------------|---------|-------------------------------------|--------------------------------|
| Prior cancer diagnosis | | | | |
| No | Reference | - | Reference | - |
| Yes | 1.18 (1.07-1.30) | 0.001 | 0.64 (0.56-0.74) | < 0.001 |
| Age (yr) | | | | |
| < 40 | Reference | - | Reference | - |
| 40-64 | 1.11 (1.03-1.20) | 0.010 | 1.08 (1.00-1.16) | 0.061 |
| > 64 | 1.48 (1.36-1.61) | < 0.001 | 1.14 (1.05-1.25) | 0.002 |
| Race | | | | |
| White | Reference | - | Reference | - |
| Black | 1.28 (1.21-1.34) | < 0.001 | 1.10 (1.03-1.16) | 0.002 |
| Hispanic | 0.99 (0.93-1.06) | 0.839 | 1.01 (0.94-1.08) | 0.796 |
| Other | 0.91 (0.84-0.98) | 0.011 | 0.85 (0.78-0.92) | < 0.001 |
| Marital status | | | | |
| Married | Reference | - | Reference | - |
| Single | 1.18 (1.12-1.24) | < 0.001 | 1.11 (1.05-1.18) | < 0.001 |
| Sep/wid/div | 1.27 (1.21-1.33) | < 0.001 | 1.16 (1.11-1.22) | < 0.001 |
| Unknown | 1.03 (0.94-1.14) | 0.480 | 0.98 (0.88-1.09) | 0.644 |
| Grade | | | | |
| G1 | Reference | - | Reference | - |
| G2 | 1.21 (1.11-1.31) | < 0.001 | 1.22 (1.12-1.34) | < 0.001 |
| G3/G4 | 0.99 (0.93-1.06) | < 0.001 | 1.48 (1.35-1.62) | < 0.001 |
| Unknown | 1.21 (1.10-1.32) | < 0.001 | 1.23 (1.11-1.36) | < 0.001 |
| ER | | | | |
| Positive | Reference | - | Reference | - |
| Negative | 1.48 (1.40-1.57) | < 0.001 | 1.26 (1.18-1.35) | < 0.001 |
| Unknown | 1.35 (1.09-1.69) | 0.007 | 1.25 (1.00-1.58) | 0.055 |
| PR | | | | |
| Positive | Reference | - | Reference | - |
| Negative | 1.29 (1.23-1.36) | < 0.001 | 1.26 (1.18-1.35) | < 0.001 |
| Unknown | 1.35 (1.09-1.69) | 0.101 | 1.13 (0.90-1.40) | 0.292 |
| Treatment | | | | |
| No | Reference | - | Reference | - |
| Surg only | 0.55 (0.52-0.58) | < 0.001 | 0.63 (0.59-0.67) | < 0.001 |
| Chemo only | 0.73 (0.69-0.76) | < 0.001 | 0.88 (0.83-0.93) | < 0.001 |
| Surg & Chemo | 0.39 (0.37-0.41) | < 0.001 | 0.52 (0.49-0.55) | < 0.001 |

HR, hazard ratio; CI, confidence interval; SHR, subdistribution hazard ratio; Sep/wid/div, separated/widowed/divorced; ER, estrogen receptor; PR, progesterone receptor; Surg., surgery; Chemo., chemotherapy.