**Supplementary Table 4. Multivariable subdistribution hazards for death at 5y – with competing risk of Subsequent Malignant Neoplasm (SMN)**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Overall** | | **Stage 0** | | **Stage I-II** | | **Stage III** | | **Stage IV** | |
|  | HR | 95% CI | HR | 95% CI |  |  | HR | 95% CI | HR | 95% CI |
| Urban-high income (ref) |  |  |  |  |  |  |  |  |  |  |
| Urban-middle income | 1.09 | 1.06, 1.13 | 1.09 | 0.99, 1.19 | 1.1 | 1.05, 1.14 | 1.1 | 1.05, 1.16 | 1.09 | 1.02, 1.17 |
| Urban-low income | 1.16 | 1.12, 1.21 | 1.19 | 1.05, 1.34 | 1.17 | 1.11, 1.23 | 1.14 | 1.07, 1.21 | 1.12 | 1.03, 1.22 |
| Rural-high-income | 0.98 | 0.92, 1.05 | 0.96 | 0.78, 1.19 | 0.98 | 0.90, 1.08 | 1.04 | 0.93, 1.17 | 0.98 | 0.83, 1.16 |
| Rural-middle-income | 1.21 | 1.15, 1.27 | 1.15 | 0.97, 1.36 | 1.24 | 1.16, 1.33 | 1.2 | 1.10, 1.31 | 1.08 | 0.95, 1.23 |
| Rural-low-income | 1.19 | 1.12, 1.26 | 0.99 | 0.80, 1.21 | 1.16 | 1.06, 1.26 | 1.27 | 1.16, 1.39 | 1.15 | 1.01, 1.33 |
|  |  |  |  |  |  |  |  |  |  |  |
| Age at diagnosis |  |  |  |  |  |  |  |  |  |  |
| 71-75 | 1.25 | 1.20, 1.29 | 1.29 | 1.15, 1.45 | 1.34 | 1.27, 1.42 | 1.17 | 1.09, 1.25 | 1.14 | 1.04, 1.24 |
| 76-80 | 1.56 | 1.50, 1.61 | 1.75 | 1.56, 1.95 | 1.71 | 1.62, 1.80 | 1.52 | 1.42, 1.62 | 1.18 | 1.08, 1.28 |
| 80+ | 2.55 | 2.47, 2.64 | 2.7 | 2.43, 2.99 | 3.14 | 2.99, 3.30 | 2.48 | 2.33, 2.63 | 1.27 | 1.18, 1.37 |
|  |  |  |  |  |  |  |  |  |  |  |
| Race/ethnicity |  |  |  |  |  |  |  |  |  |  |
| Non-Hispanic Black | 1.24 | 1.19, 1.30 | 1.1 | 0.96, 1.26 | 1.19 | 1.11, 1.27 | 1.26 | 1.17, 1.36 | 1.24 | 1.13, 1.35 |
| Hispanic | 0.85 | 0.76, 0.95 | 0.79 | 0.53, 1.20 | 0.84 | 0.70, 1.00 | 0.89 | 0.74, 1.06 | 0.78 | 0.60, 1.03 |
| Asian | 0.78 | 0.71, 0.86 | 0.91 | 0.71, 1.17 | 0.69 | 0.60, 0.80 | 0.78 | 0.65, 0.93 | 0.97 | 0.75, 1.26 |
| Other | 0.84 | 0.76, 0.92 | 0.95 | 0.72, 1.26 | 0.79 | 0.69, 0.92 | 0.81 | 0.67, 0.98 | 0.92 | 0.74, 1.15 |
|  |  |  |  |  |  |  |  |  |  |  |
| Elixhauser comorbidity index |  |  |  |  |  |  |  |  |  |  |
| 1 | 1.18 | 1.14, 1.21 | 1.24 | 1.13, 1.35 | 1.23 | 1.18, 1.28 | 1.13 | 1.08, 1.18 | 1.11 | 1.03, 1.18 |
| 2+ | 2.03 | 1.97, 2.09 | 2.18 | 1.98, 2.40 | 2.28 | 2.18, 2.38 | 1.88 | 1.79, 1.98 | 1.48 | 1.39, 1.58 |
|  |  |  |  |  |  |  |  |  |  |  |
| Stage at diagnosis |  |  |  |  |  |  |  |  |  |  |
| Stage I-II | 1.41 | 1.35, 1.46 |  |  |  |  |  |  |  |  |
| Stage III | 2.49 | 2.39, 2.60 |  |  |  |  |  |  |  |  |
| Stage IV | 7.11 | 6.71, 7.54 |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| Surgery (ref=none ) |  |  |  |  |  |  |  |  |  |  |
| Partial mastectomy | 0.37 | 0.36, 0.39 | 0.48 | 0.41, 0.55 | 0.33 | 0.31, 0.36 | 0.27 | 0.26, 0.30 | 0.67 | 0.61, 0.73 |
| Total mastectomy | 0.47 | 0.45, 0.49 | 0.52 | 0.44, 0.61 | 0.41 | 0.38, 0.44 | 0.41 | 0.38, 0.43 | 0.61 | 0.56, 0.65 |
|  |  |  |  |  |  |  |  |  |  |  |
| Any chemotherapy (ref=no) |  |  |  |  |  |  |  |  |  |  |
| Yes | 0.79 | 0.77, 0.81 | 1 | 0.92, 1.08 | 0.89 | 0.86, 0.92 | 0.83 | 0.80, 0.87 | 0.47 | 0.45, 0.50 |