**Supplementary Table 2:** Regression coefficients of dynamic-effect RMTL regression (all data)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Variable | Time function | Coefficient | SE | Z value | P value |
| Intercept |  | -0.190  | 0.071  | -2.669  | 0.008  |
|  |  | 0.114  | 0.024  | 4.830  | <0.001  |
| Age (ref: 65-74) |  |  |  |  |  |
| age 75+ |  | -0.095  | 0.033  | -2.827  | 0.005  |
|  |  | 0.044  | 0.010  | 4.266  | <0.001  |
| T stage (ref: T1) |  |  |  |  |  |
| T2 |  | 0.006  | 0.001  | 8.050  | <0.001  |
| N stage (ref: N1) |  |  |  |  |  |
| N2 |  | 0.006  | 0.001  | 5.105  | <0.001  |
| N3 |  | -0.414  | 0.082  | -5.080  | <0.001  |
|  |  | 0.168  | 0.025  | 6.792  | <0.001  |
| Grade (ref: grade Ⅰ) |  |  |  |  |  |
| Ⅱ |  | 0.002  | 0.001  | 2.915  | 0.004  |
| Ⅲ & Ⅳ  |  | -0.211  | 0.041  | -5.197  | <0.001  |
|  |  | 0.085  | 0.013  | 6.591  | <0.001  |
| ER status (ref: negative) |  |  |  |  |  |
| positive  |  | 0.253  | 0.057  | 4.447  | <0.001  |
|  |  | -0.121  | 0.021  | -5.664  | <0.001  |
|  |  | 0.005  | 0.001  | 4.111  | <0.001  |
| PR status (ref: negative) |  |  |  |  |  |
| positive  |  | -0.025  | 0.009  | -2.938  | 0.003  |
| Breast surgery (ref: mastectomy) |  |  |  |  |  |
| BCS |  | -0.002  | 0.001  | -2.424  | 0.015  |
| Chemotherapy (ref: no) |  |  |  |  |  |
| yes |  | 0.147  | 0.041  | 3.563  | <0.001  |
|  |  | -0.084  | 0.016  | -5.242  | <0.001  |
|  |  | 0.004  | 0.001  | 3.399  | 0.001  |