**Table S3.** Univariate and Multivariable Cox regression analysis of predictive factors in two cohorts treated with immune checkpoint inhibitors.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Univariate analysis** |  | **Multivariate analysis** |
| **Variable** | **HR** | **95%CI** | ***P-*value** |  | **HR** | **95%CI** | ***P-*value** |
| **MSK NSCLC ICI (PFS, n=240)**  |
| TMB (≥median *vs.* <median) | 0.73 | 0.55 – 0.97 | **0.030** |  | 0.63 | 0.47 – 0.84 | **0.002** |
| CNA (≥ lower tertile *vs.*＜lower tertile) | 1.34 | 1.00 – 1.81 | 0.054 |  | 1.51 | 1.11 – 2.05 | **0.009** |
| HRD (mut *vs.* wt) | 0.73 | 0.52 – 1.03 | 0.070 |  |  |  |  |
| Smoker (yes *vs.* no) | 0.69 | 0.49 – 0.97 | **0.033** |  |  |  |  |
| Gender (male *vs.* female) | 1.09 | 0.83 – 1.44 | 0. 544 |  |  |  |  |
| Age (≥65 *vs.* <65) | 1.20 | 0.91 – 1.59 | 0.207 |  |  |  |  |
| **Dana-Farber ICI (OS, n=98)** |
| TMB (≥median *vs.* <median) | 0.49 | 0.26 – 0.93 | **0.028** |  | 0.36 | 0.13 – 0.96 | **0.041** |
| CNA (≥ lower tertile *vs.*＜lower tertile) | 3.27 | 1.42 – 7.56 | **0.006** |  | 3.63 | 1.14 –11.55 | **0.029** |
| HRD (mut vs. wt) | 0.83 | 0.44 – 1.56 | 0.552 |  |  |  |  |
| Gender (male *vs.* female) | 0.53 | 0.28 – 1.03 | 0.059 |  |  |  |  |
| Smoker (yes *vs.* no) | 1.17 | 0.50 – 2.73 | 0.716 |  |  |  |  |

Abbreviations: NSCLC, non-small cell lung cancer; HRD, homologous recombination deficiency; TMB, tumor mutation burden; CNA, copy number alterations; HR, hazard ratio; CI, confidence interval; PFS, progression free survival; OS, overall survival. The cutpoint of TMB and CNA in each cohort was calculated independently.