**Supplementary Table S4**. Univariate and multivariate Cox regression analysis for mortality in advanced NSCLC patients

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| --- | --- | --- | --- | --- | --- |
| Variables | Univariate analysis | 　 | 　 | Multivariate analysis | 　 |
| 　 | 　 | HR (95% CI) | *P*-Value | 　 | HR (95% CI) | *P*-Value |
| Baseline information | 　 |  | 　 | 　 | 　 |
| 　 | Age (≥60 vs. <60) | 0.713 (0.446-1.141) | 0.159 | 　 | 0.817 (0.49201.356) | 0.434 |
| 　 | Gender (Male vs. Female) | 0.953 (0.558-1.629) | 0.861 | 　 | 2.481 (0.498-12.374) | 0.268 |
| 　 | Smoking history | 1.331 (0.793-2.232) | 0.279 | 　 | 4.192 (0.869-20.223) | 0.074 |
| 　 | Surgery treatment | 0.596 (0.305-1.164) | 0.130 | 　 | 0.711 (0.328-1.540) | 0.386 |
| 　 | ECOG performance status (0-1 vs. 2) | 0.601 (0.315-1.147) | 0.122 | 　 | 0.478 (0.226-1.009) | 0.053 |
| Clinical data | 　 | 　 | 　 | 　 | 　 |
| 　 | TNM classification (III vs. IV stage) | 3.286 (1.032-10.466) | 0.044\* | 　 | 3.059 (0.942-9.935) | 0.063 |
| 　 | Tumor invasion | 1.242 (0.836-1.845) | 0.283 | 　 | 1.131 (0.705-1.815) | 0.610  |
| 　 | Lymph node metastasis | 0.962 (0.568-1.632) | 0.887 | 　 | 0.613 (0.319-1.178) | 0.142 |
| 　 | Distant metastasis | 3.286 (1.032-10.466) | 0.044\* | 　 | 3.059 (0.942-9.935) | 0.063 |
| 　 | Metastatic sites (≥3 vs. <3) | 2.232 (1.384-3.601) | <0.001\*\*\* | 　 | 1.911 (1.032-3.540) | 0.040\* |
| 　 | Brain metastasis | 2.208 (1.402-3.479) | <0.001\*\*\* | 　 | 1.906 (1.128-3.222) | 0.016\* |
| 　 | Liver metastases | 1.656 (1.025-2.675) | 0.039\* | 　 | 1.564 (0.938-2.610) | 0.087 |
| 　 | Bone metastases | 1.698 (1.067-2.702) | 0.025\* | 　 | 0.698 (0.362-1.346) | 0.283 |
| Pathological characteristics | 　 | 　 | 　 | 　 | 　 |
| 　 | Histological subtype | 1.661 (0.988-2.792) | 0.056  | 　 | 1.023 (0.538-1.943) | 0.945 |
| 　 | PD-L1 TPS (Positive vs. Negative) | 1.122 (0.893-1.410) | 0.324 | 　 | 1.107 (0.850-1.442) | 0.450  |
| 　 | EGFR mutation status | 1.428 (0.801-2.547) | 0.228 | 　 | 0.710 (0.167-3.029) | 0.644 |
| 　 | EGFR mutation subtype | 1.320 (0.920-1.894) | 0.132 | 　 | 1.082 (0.527-2.221) | 0.830  |
| Past medical history | 　 | 　 | 　 | 　 | 　 |
| 　 | No. of prior systemic regimens (≥3 vs. <3) | 1.429 (1.098-1.860) | 0.008\*\* | 　 | 1.343 (1.024-1.761) | 0.033\* |
| 　 | Previous thoracic radiation therapy | 0.555 (0.310-0.995) | 0.048\* | 　 | 0.517 (0.268-1.000) | 0.049\* |
| 　 | Previous antivascular drug therapy | 1.444 (0.833-2.505) | 0.191 | 　 | 0.813 (0.404-1.638) | 0.563 |
| Treatment strategies | 　 | 　 | 　 | 　 | 　 |
| 　 | A+P combination vs. Anlotinib | 0.624 (0.477-0.814) | 0.001\*\* | 　 | 0.603 (0.420-0.866) | 0.006\*\* |
| 　 | A+P combination vs. Immunotherapy | 0.458 (0.218-0.964) | 0.040\* | 　 | 0.389 (0.155-0.974) | 0.044\* |
| 　 | Anlotinib vs. Immunotherapy  | 0.602 (0.315-1.148) | 0.123 | 　 | 0.352 (0.159-0.781) | 0.012\* |
| Abbreviations: *HR* hazard ratio, *CI* confidence interval, \**P*< 0.05, \*\**P*< 0.01, \*\*\**P*< 0.001 |