

Table SI. Univariate and multivariate cox regression analysis for progression-free survival in all patients.

| Variables | Univariate analysis | | | Multivariate analysis | | |
|---------------------------|---------------------|-------------|---------|-----------------------|-------------|---------|
| | HR | 95% CI | P-value | HR | 95% CI | P-value |
| Age, years | | | | | | |
| <60 | 1 | | | | | |
| ≥60 | 0.761 | 0.464-1.247 | 0.278 | | | |
| Sex | | | | | | |
| Male | 1 | | | | | |
| Female | 1.134 | 0.641-2.008 | 0.666 | | | |
| Smoking history | | | | | | |
| No | 1 | | | | | |
| Yes | 0.796 | 0.48-1.319 | 0.376 | | | |
| Histology | | | | | | |
| Squamous | 1 | | | | | |
| Non-squamous | 1.066 | 0.653-1.74 | 0.799 | | | |
| TNM stage | | | | | | |
| III | 1 | | | 1 | | |
| IV | 2.244 | 1.246-4.044 | 0.007 | 2.146 | 1.188-3.874 | 0.011 |
| ECOG PS | | | | | | |
| 0 | 1 | | | | | |
| ≥1 | 1.466 | 0.702-3.063 | 0.309 | | | |
| Therapy line | | | | | | |
| 1st | 1 | | | 1 | | |
| ≥2nd | 1.53 | 0.954-2.454 | 0.078 | 1.393 | 0.862-2.254 | 0.176 |
| Gene mutations | | | | | | |
| Wild | 1 | | | | | |
| Mutant | 1.712 | 0.809-3.62 | 0.16 | | | |
| Expression level of FXR | | | | | | |
| Low | 1 | | | | | |
| High | 0.701 | 0.437-1.125 | 0.141 | | | |
| Expression level of PD-L1 | | | | | | |
| Low | 1 | | | | | |
| High | 0.575 | 0.339-0.974 | 0.040 | 0.653 | 0.382-1.117 | 0.120 |

The variables with univariate regression P-value <0.1 were included in multivariate regression analysis. CI, confidence interval; HR, hazard ratio; TNM, tumor-node-metastasis; ECOG PS, Eastern Cooperative Oncology Group performance status; FXR, farnesoid X receptor; PD-L1, programmed death-ligand 1.

Table SII. Univariate and multivariate cox regression analysis for overall survival in all patients.

| Variables | Univariate analysis | | | Multivariate analysis | | |
|---------------------------|---------------------|--------------|---------|-----------------------|--------------|---------|
| | HR | 95% CI | P-value | HR | 95% CI | P-value |
| Age, years | | | | | | |
| <60 | 1 | | | 1 | | |
| ≥60 | 3.724 | 1.12-12.378 | 0.032 | 4.117 | 1.235-13.727 | 0.021 |
| Sex | | | | | | |
| Male | 1 | | | | | |
| Female | 0.839 | 0.318-2.216 | 0.723 | | | |
| Smoking history | | | | | | |
| No | 1 | | | | | |
| Yes | 1.441 | 0.581-3.574 | 0.430 | | | |
| Histology | | | | | | |
| Squamous | 1 | | | | | |
| Non-squamous | 0.968 | 0.442-2.117 | 0.935 | | | |
| TNM stage | | | | | | |
| III | 1 | | | 1 | | |
| IV | 2.282 | 0.862-6.041 | 0.097 | 2.585 | 0.973-6.867 | 0.057 |
| ECOG PS | | | | | | |
| 0 | 1 | | | | | |
| ≥1 | 2.387 | 0.565-10.079 | 0.237 | | | |
| Therapy line | | | | | | |
| 1st | 1 | | | | | |
| ≥2nd | 1.107 | 0.513-2.387 | 0.795 | | | |
| Gene mutations | | | | | | |
| Wild | 1 | | | | | |
| Mutant | 0.602 | 0.173-2.087 | 0.423 | | | |
| Expression level of FXR | | | | | | |
| Low | 1 | | | | | |
| High | 0.553 | 0.255-1.201 | 0.134 | | | |
| Expression level of PD-L1 | | | | | | |
| Low | 1 | | | | | |
| High | 0.49 | 0.198-1.215 | 0.124 | | | |

The variables with univariate regression P-value <0.1 were included in multivariate regression analysis. CI, confidence interval; HR, hazard ratio; TNM, tumor-node-metastasis; ECOG PS, Eastern Cooperative Oncology Group performance status; FXR, farnesoid X receptor; PD-L1, programmed death-ligand 1.