Supplementary Table 3. Multivariate analyses of hypoxia-gene signatures and additional prognostic factors assessed for all patients. HR = hazard ratio; 95% CI = 95 percent confidence interval; ECE = extracapsular extension.

|  |  |  |  |
| --- | --- | --- | --- |
|   | **Loco-regional control** | **Distant metastases** | **Overall survival** |
|   | **HR (95% CI)** | **p-value** | **HR (95% CI)** | **p-value** | **HR (95% CI)** | **p-value** |
| 15-gene signature | 3.73 (1.41-9.85) | **0.008** | 1.21 (0.62-2.38) | 0.581 | 1.50 (0.89-2.53) | 0.125 |
| HPV16 DNA | 0.14 (0.03-0.64) | **0.011** | 0.44 (0.17-1.15) | 0.095 | 0.32 (0.16-0.65) | **0.002** |
| ECE | 1.29 (0.58-2.86) | 0.534 | 2.90 (1.35-6.22) | **0.006** | 1.68 (1.00-2.83) | 0.051 |
| Oral cavity\* | 2.02 (0.87-4.68) | 0.102 | 2.16 (0.97-4.80) | 0.059 | 1.64 (0.94-2.86) | 0.083 |
| Hypopharynx\* | 0.73 (0.20-2.66) | 0.630 | 2.69 (1.06-6.84) | **0.037** | 0.73 (0.32-1.69) | 0.460 |
|  |  |  |  |  |  |  |
| 26-gene signature | 6.00 (1.38-26.1) | **0.017** | 1.64 (0.74-3.64) | 0.227 | 1.75 (0.94-3.25) | 0.077 |
| HPV16 DNA | 0.21 (0.05-0.92) | **0.039** | 0.49 (0.19-1.26) | 0.138 | 0.37 (0.18-0.77) | **0.007** |
| ECE | 1.49 (0.68-3.30) | 0.321 | 2.93 (1.37-6.29) | **0.006** | 1.77 (1.05-2.98) | **0.033** |
| Oral cavity\* | 1.68 (0.74-3.83) | 0.217 | 1.97 (0.89-4.40) | 0.096 | 1.51 (0.86-2.64) | 0.155 |
| Hypopharynx\* | 0.95 (0.26-3.45) | 0.932 | 2.83 (1.11-7.17) | **0.029** | 0.80 (0.35-1.85) | 0.602 |

\* Baseline oropharynx.