**Supplementary Table S1. Association of each marker in salivary rinses collected with or without brush with selected clinical features.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  | Odds | Ratio | (95% | Ci) |  |  |  |  |  |
|  | *P16* |  | *CCNA1* |  | *DCC* |  | *TIMP3* |  | *MGMT* |  | *DAPK* |  | *MINT31* |  |
|  | WB§ | WOB‡ | WB | WOB | WB | WOB | WB | WOB | WB | WOB | WB | WOB | WB | WOB |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Smoking Status | 2.13 [0.22, 20.72] | 1.06 [0.09, 12.4] | 0.74 [0.2, 2.74] | 0.9 [0.23, 3.55] | 1.77 [0.47, 6.66] | 0.72 [0.22, 2.44] | 0.27 [0.08, 0.94] | 0.47 [0.14, 1.49] | 1.55 [0.41, 5.88] | 1.52 [0.48, 4.84] | 2.76 [0.3, 25.68] | 1.28 [0.29, 5.6] | 1  [0.16, 6.09] | 0.77 [0.12, 5.04] |
| HPV | NA | NA | 0.16 [0.04, 0.61] | 0.31 [0.09, 1.08] | 0.27 [0.08, 0.86] | 0.47 [0.16, 1.42] | 0.87 [0.28, 2.68] | 0.96 [0.33, 2.76] | 0.26 [0.08, 0.87] | 0.7 [0.25, 1.96] | 0.69 [0.15, 3.09] | 0.55 [0.15, 2.02] | NA | 0.16 [0.02, 1.52] |
| Primary Tumor Site¦ | NA | NA | 0.14 [0.03, 0.57] | 0.09 [0.02, 0.43] | 0.12 [0.03, 0.45] | 0.41 [0.13, 1.25] | 0.86 [0.28, 2.62] | 0.87 [0.31, 2.48] | 0.36 [0.11, 1.18] | 0.65 [0.23, 1.81] | 0.1 [0.01, 0.86] | 0.64 [0.17, 2.36] | NA | NA |
| Clinical TNM Stage | 0.05  [0, 0.52] | 0.14 [0.01, 1.61] | 0.3 [0.08, 1.12] | 0.19 [0.05, 0.69] | 0.21 [0.06, 0.77] | 0.22 [0.07, 0.77] | 0.44 [0.12, 1.57] | 1.46 [0.4, 5.29] | 0.39 [0.11, 1.41] | 0.55 [0.17, 1.8] | 0.26 [0.05, 1.07] | 0.46 [0.11, 1.85] | 0.11 [0.02, 0.68] | 0.42 [0.06, 2.81] |
| Pathological Nodal Stage | 0.08 [0.01, 0.74] | 0.19 [0.02, 2.27] | 0.31 [0.09, 1.09] | 0.32 [0.09, 1.08] | 0.25 [0.07, 0.85] | 0.39 [0.12, 1.24] | 0.69 [0.2, 2.33] | 2.78 [0.65, 8] | 0.61 [0.18, 2.08] | 0.69 [0.23, 2.07] | 0.32 [0.07, 1.5] | 0.69 [0.18, 2.71] | 0.15 [0.02, 0.95] | 0.61 [0.09, 3.96] |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

¶ Odds Ratios and 95% CI was determined using multivariate analysis (logistic regression). Statistical significance was indicated as red. NA, not achieved.

§ WB = salivary rinses collected with an exfoliating brush.

‡ WOB= salivary rinses collected without a brush.

¦ Primary tumor site (Oral cavity) was associated with promoter methylation of *CCNA1*, *DCC*, and *DAPK* in the salivary rinse samples collected with an exfoliating brush, and with promoter methylation of *CCNA1* in the salivary rinse samples collected without brush.