**Supplementary Table 1** Clinicopathologic characteristics of patients with ESCC and associations of smoking and alcohol consumptions

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Smoking | *P* | Alcohol | *P* |
| Light n = 34 (%) | Heavyn = 30 (%) | Light n = 26 (%) | Heavyn = 38 (%) |
| Sex |  |  | 0.116 |  |  | **0.024** |
|  Male | 30 (88.2) | 30 (100) |  | 22 (84.6) | 38 (100) |  |
|  Female | 4 (11.8) | 0 (0.0) |  | 4 (15.4) | 0 (0.0) |  |
| Age (years)  |  |  | 0.151 |  |  | 0.450 |
|  ≤60 | 11 (32.4) | 15 (50.0) |  | 9 (34.6) | 17 (44.7) |  |
|  >60 | 23 (67.6) | 15 (50.0) |  | 17 (65.4) | 21 (55.3) |  |
| Location |  |  | 0.412 |  |  | 0.784 |
|  Upper/Middle | 22 (64.7) | 23 (76.7) |  | 19 (73.1) | 26 (68.4) |  |
|  Lower | 12 (35.3) | 7 (23.3) |  | 7 (26.9) | 12 (31.6) |  |
| Differentiation |  |  | 0.075 |  |  | 0.450 |
|  WD | 10 (29.4) | 16 (53.3) |  | 9 (34.6) | 17 (44.7) |  |
|  MD/PD | 24 (70.6) | 14 (46.7) |  | 17 (65.4) | 21 (55.3) |  |
| T category |  |  | 0.207 |  |  | 0.124 |
|  T1-T2 | 22 (64.7) | 14 (46.7) |  | 18 (69.2) | 18 (47.4) |  |
|  T3-T4 | 12 (35.3) | 16 (53.3) |  | 8 (30.8) | 20 (52.6) |  |
| N category  |  |  | **0.040** |  |  | 0.609 |
|  N0 | 25 (73.5) | 14 (46.7) |  | 17 (65.4) | 22 (57.9) |  |
|  N1-3 | 9 (26.5) | 16 (53.3) |  | 9 (34.6) | 16 (42.1) |  |
| AJCC stage |  |  | 0.071 |  |  | 0.795 |
|  I-II | 25 (73.5) | 15 (50.0) |  | 17 (65.4) | 23 (60.5) |  |
|  III-IV | 9 (26.5) | 15 (50.0) |  | 9 (34.6) | 15 (39.5) |  |
| Lymphatic invasion |  |  | 0.314 |  |  | 0.456 |
|  Absent | 16 (47.1) | 10 (33.3) |  | 12 (46.2) | 14 (36.8) |  |
|  Present | 18 (52.9) | 20 (66.7) |  | 14 (53.8) | 24 (63.2) |  |
| Vascular invasion |  |  | 0.736 |  |  | 1.000 |
|  Absent | 24 (70.6) | 20 (66.7) |  | 18 (69.2) | 26 (68.4) |  |
|  Present | 10 (29.4) | 10 (33.3) |  | 8 (30.8) | 12 (31.6) |  |
| Perineural invasion |  |  | 0.351 |  |  | 0.534 |
|  Absent | 29 (85.3) | 22 (73.3) |  | 22 (84.6) | 29 (76.3) |  |
|  Present | 5 (14.7) | 8 (26.7) |  | 4 (15.4) | 9 (23.7) |  |
| Skip lesion |   |  | 0.067 |  |  | 0.847 |
|  Absent | 30 (88.2) | 20 (66.7) |  | 20 (76.9) | 30 (78.9) |  |
|  Present | 4 (11.8) | 10 (33.3) |  | 6 (23.1) | 8 (21.1) |  |
| TIL density |   |  | **0.018** |  |  | 0.180 |
| Low | 7 (20.6) | 15 (50.0) |  | 6 (23.1) | 16 (42.1) |  |
| High | 27 (79.4) | 15 (50.0) |  | 20 (76.9) | 22 (57.9) |  |
| HPV |   |  | 0.469 |  |  | 0.406 |
|  Negative | 34 (100) | 29 (96.7) |  | 25 (96.2) | 38 (100) |  |
|  Positive | 0 (0.0) | 1 (3.3) |  | 1 (3.8) | 0 (0.0) |  |
| MSI status |   |  | 0.322 |  |  | 0.089 |
|  MSS/pMMR | 30 (88.2) | 23 (76.7) |  | 24 (92.3) | 29 (76.3) |  |
| MSI/dMMR | 4 (11.8) | 7 (23.3) |  | 2 (7.7) | 9 (23.7) |  |
| *PIK3CA* gene |   |  | 0.850 |   |  | 0.564 |
|  Wildtype | 30 (88.2) | 26 (86.7) |  | 22 (84.6) | 34 (89.5) |  |
|  Mutated | 4 (11.8) | 4 (13.3) |  | 4 (15.4) | 4 (10.5) |  |