|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Clinical characteristics** | | **Cohorts** | | | |
| **TCGA-HNSC** |  | **GSE47443** | **GSE65858** |
| **Age** | ≤65year | 403 |  | 119 | 185 |
|  | ＞65year | 208 |  | 105 | 85 |
| **Stage** | I | 23 |  | 11 | 18 |
|  | II | 119 |  | 46 | 37 |
|  | III | 137 |  | 46 | 37 |
|  | IV | 318 |  | 120 | 178 |
|  | Unknow | 14 |  | 1 |  |
| **Grade** | G1 | 75 |  | 106 |  |
|  | G2 | 355 |  | 42 |  |
|  | G3 | 148 |  | 0 |  |
|  | G4 | 7 |  | 0 |  |
|  | Unknow | 26 |  | 77 |  |
| **T** | T1 | 41 |  |  | 35 |
|  | T2 | 175 |  |  | 80 |
|  | T3 | 171 |  |  | 58 |
|  | T4 | 208 |  |  | 97 |
|  | Tx | 16 |  |  |  |
| **N** | N0 | 292 |  |  | 94 |
|  | N1 | 101 |  |  | 32 |
|  | N2 | 184 |  |  | 132 |
|  | N3 | 10 |  |  | 12 |
|  | Nx | 24 |  |  |  |
| **M** | M0 | 579 |  |  | 263 |
|  | M1 | 6 |  |  | 7 |
|  | Mx | 26 |  |  |  |
| **Site** | Cheek mucosa | 19 |  |  |  |
|  | Floor of mouth | 60 |  |  |  |
|  | Larynx | 143 |  | 28 | 48 |
|  | Oral | 24 |  | 54 | 83 |
|  | Oropharynx | 98 |  | 63 | 102 |
|  | Tongue | 184 |  |  |  |
|  | Tonsil | 47 |  |  |  |
|  | Hypopharynx | 9 |  | 60 | 33 |
|  | Sinonasal Cavity |  |  | 19 |  |
|  | other | 37 |  |  | 4 |
| **HPV status** | Negative | 76 |  | 198 | 195 |
|  | Positive | 42 |  | 26 | 73 |
| **Smoking** | No | 285 |  | 63 | 48 |
|  | Yes | 326 |  | 160 | 222 |
| **Alcohol** | No | 197 |  | 81 | 31 |
|  | Yes | 400 |  | 130 | 239 |

**Table S1. The baseline information of HNSC in different cohorts.**