Table 1 Association between clinicopathological characteristics and CUL4A expression levels

| | | CUL4A e | CUL4A expression | |
|---------------------------|-----|----------------|------------------|---------------------|
| | _ | Low | High | |
| Variables | n | (n = 54, %) | (n = 66, %) | P |
| Sex | | | | >0.999 ^b |
| Male | 97 | 44 (81.5) | 53 (80.3) | |
| Female | 23 | 10 (18.5) | 13 (19.7) | |
| Age (years) ^a | | 61.3 ± 8.0 | 63.1 ± 7.4 | 0.213° |
| Histology | | | | |
| Squamous cell carcinoma | | | | 0.011^{b} |
| Well differentiated | 48 | 27 (50) | 21 (31.8) | |
| Moderately differentiated | 60 | 19 (35.2) | 41 (62.1) | |
| Poorly differentiated | 12 | 8 (14.8) | 4 (6.1) | |
| Tumor size (mm) | | | | 0.121^{b} |
| <50 | 79 | 40 (74) | 39 (59.1) | |
| ≥50 | 41 | 14 (26) | 27 (40.9) | |
| Tumor depth | | | | <0.001 ^b |
| T1, T2 | 61 | 37 (68.6) | 24 (36.4) | |
| T3, T4 | 59 | 17 (21.4) | 42 (63.6) | |
| Lymph node metastasis | | | | 0.320^{b} |
| Absent | 48 | 25 (46.3) | 23 (34.8) | |
| Present | 72 | 29 (53.7) | 43 (65.2) | |
| Distant metastasis | | | | >0.999 ^d |
| Absent | 111 | 50 (92.6) | 61 (92.4) | |
| Present | 9 | 4 (7.4) | 5 (7.6) | |
| Lymphatic invasion | | | | >0.999 ^b |
| Negative | 35 | 16 (29.6) | 19 (28.8) | |
| Positive | 85 | 38 (70.4) | 47 (71.2) | |
| Venous invasion | | | | 0.014^{b} |
| Negative | 74 | 40 (74.1) | 34 (51.5) | |
| Positive | 46 | 14 (25.9) | 32 (48.5) | |

^a The values are express as the mean ± standard division; ^b Indicates the value obtained by the chi-square test; ^c Indicates the value obtained by an unpaired *t*-test; ^d Indicates data obtained by Fisher's exact test. CUL4A, Cullin4A

Table 2 Results of multivariate analysis of prognostic factors for the disease specific-survival of esophageal cancer patients

| Variables | | HR | 95% CI | P |
|-----------------------|-----------------|-------|-------------|---------|
| Tumor size (mm) | ≥50/ <50 | 1.551 | 0.850-2.859 | 0.151 |
| Tumor depth | T3, T4/T1, T2 | 4.127 | 1.860-9.157 | < 0.001 |
| Lymph node metastasis | Present/ absent | 3.162 | 1.309-7.638 | 0.011 |
| Distant metastasis | Present/ absent | 2.284 | 1.063-4.907 | 0.034 |
| Lymphatic invasion | Present/ absent | 1.175 | 0.558-2.474 | 0.672 |
| Venous invasion | Present/ absent | 0.564 | 0.293-1.085 | 0.086 |
| CUL4A expression | High/ Low | 1.994 | 1.017-3.909 | 0.045 |

HR, hazard ratio; CI, confidential interval; CUL4A, Cullin4A

Table 3 Relationship between CUL4A expression and pattern of esophageal cancer recurrence

| | CUL | | |
|-----------------------|-----------------|---------------------|----------------|
| Pattern of recurrence | Low (n = 54, %) | High $(n = 66, \%)$ | \overline{P} |
| All recurrence | 19 (35.2) | 43 (65.2) | 0.002ª |
| Lymph node | 14 (25.9) | 25 (37.9) | 0.177^{a} |
| Hematogenous | 12 (22.2) | 21 (31.8) | 0.305^{a} |
| Pleura | 0 (0) | 7 (10.6) | 0.013^{b} |

Some patients had a first recurrence at more than one site. ^a Indicates the value obtained by the chi-square test; ^b Indicates data obtained by Fisher's exact test. CUL4A Cullin4A