

Table S1: Demographics and characteristics of 179 patients from GEO.

Characteristics^a	Total (N=179)
Age	
<60	91 (50.8%)
≥60	88 (49.2%)
Gender	
Male	146 (81.6%)
Female	33 (18.4%)
Alcohol use	
Yes	106 (59.2%)
No	73 (40.8%)
Tumor grade	
G1	49 (27.4%)
G2	98 (54.7%)
G3	32 (17.9%)
T stage	
T1	12 (6.7%)
T2	27 (15.1%)
T3	110 (61.5%)
T4	30 (16.8%)
N stage	
N0	83 (46.4%)
N1	62 (34.6%)
N2	22 (12.3%)
N3	12 (6.7%)
Stage	
I	7 (3.9%)
II	71 (39.7%)
III	85 (47.5%)
IV	16 (8.9%)

^aN stage, T stage and Stage were determined according to American Joint Committee on Cancer 8th edition.

Table S2: Detailed clinical characteristics of 10 Patients for RT-PCR.

ID	Age	Sex	Pathological type	Tumor Grade	T stage	N stage	Stage
P1	67	male	ESCC	G2	T3	N0	II
P2	55	male	ESCC	G2	T3	N1	III
P3	62	male	ESCC	G3	T3	N2	III
P4	65	female	ESCC	G1	T1	N0	I
P5	74	male	ESCC	G3	T3	N0	II
P6	54	male	ESCC	G1	T3	N1	III
P7	66	male	ESCC	G3	T2	N0	I
P8	62	male	ESCC	G3	T2	N0	I
P9	60	male	ESCC	G1	T3	N1	III
P10	63	male	ESCC	G2	T3	N0	II

^a N stage, T stage and Stage were determined according to American Joint Committee on Cancer 8th edition

Table S3: Demographic characteristics of the 154 patients used for IHC.

Characteristics ^a	Total (N=154)
Age	
<60	62 (40.3%)
≥60	92 (59.7%)
Gender	
female	25 (16.2%)
male	129 (83.8%)
Alcohol use	
Yes	99 (64.3%)
No	55 (35.7%)
Tumor grade	
G1	12 (7.8%)
G2	78 (50.6%)
G3	64 (41.6%)
T stage	
T1	8 (5.2%)
T2	25 (16.2%)
T3	121 (78.6%)
N stage	
N0	61 (39.6%)
N1	59 (38.3%)
N2	26 (16.9%)
N3	8 (5.2%)
Stage	
I	14 (9.1%)
II	49 (31.8%)
III	83 (53.9%)
IV	8 (5.2%)

^a N stage, T stage and Stage were determined according to American Joint Committee on Cancer 8th edition.

