

Supplementary Table 1 Relationship of EMT subtype with demographic and clinical characteristics

Characteristics	EMT subtype, <i>n</i> (%)			<i>P</i> value
	Epithelial	Mixed	Mesenchymal	
Cases	38(20.5)	107(57.8)	40(21.6)	
Age, years				
< 65	20 (52.6)	56 (52.3)	24 (60.0)	0.695
≥ 65	18 (47.4)	51 (47.7)	16 (40.0)	
Gender				
Female	7 (18.4)	34 (31.8)	15 (37.5)	0.163
Male	31 (81.6)	73 (68.2)	25 (62.5)	
Ethnicity				
Kazakh	18 (47.4)	47 (43.9)	24 (60.0)	0.220
Han	20 (52.6)	60 (56.1)	16 (40.0)	
Tumor size				
< 3 cm	29(76.3)	68 (63.6)	24 (60.0)	0.262
≥ 3 cm	9 (23.7)	39 (36.4)	16 (40.0)	
Lymph node metastasis				
No	28 (73.7)	73 (68.2)	27 (67.5)	0.794
Yes	10 (26.3)	34 (31.8)	13 (32.5)	
Tumor location				
Upper	0 (0.0)	8(7.5)	0 (0.0)	0.055
Middle	22 (57.9)	53 (49.5)	22 (55.0)	
Lower	16 (42.1)	46 (43.0)	18 (45.0)	
Differentiation				
High	3 (7.9)	13 (12.1)	7 (17.5)	0.413
Moderate	28 (73.7)	68 (63.6)	21 (52.5)	
Poor	7 (18.4)	26 (24.3)	12 (30.0)	
AJCC stage				

I	4 (10.5)	8 (7.5)	3 (7.5)	0.805
II	25 (65.8)	71 (66.4)	23 (57.5)	
III	7 (18.4)	20 (18.7)	8 (20.0)	
IV	2 (5.3)	8 (7.5)	6 (15.0)	
T stage				
T1	2 (5.3)	3 (2.8)	2 (5.0)	0.139
T2	19 (50.0)	48 (44.9)	11 (27.5)	
T3	17 (44.7)	49 (45.8)	25 (62.5)	
T4	0 (0.0)	7 (6.5)	2 (5.0)	
N stage				
N0	28 (73.7)	73 (68.2)	27 (67.5)	0.892
N1	7(18.4)	20 (18.7)	6 (15.0)	
N2	2 (5.3)	11 (10.3)	6 (15.0)	
N3	1 (2.6)	3 (2.8)	1 (2.5)	
M stage				
No	37 (97.4)	104 (97.2)	35 (87.5)	0.040^a
Yes	1 (2.6)	3 (2.8)	5 (12.5)	
Depth of invasion				
Mucosa	12 (31.6)	32 (29.9)	7 (17.5)	0.269
Muscularis/Full thickness	26 (68.4)	75 (70.1)	33 (82.5)	
Depth of invasion				
Mucosa/ Muscularis	27 (71.1)	58 (54.2)	15 (37.5)	
Full thickness	11 (28.9)	49 (45.8)	25 (62.5)	
Survival Status				
Dead	26 (68.4)	83 (77.6)	30 (75.0)	0.533
Alive	12 (31.6)	24 (22.4)	10 (25.0)	

^aStatistically significant.

Supplementary Table 2 Correlation of SOX2, E-cadherin, and vimentin with demographic and clinical characteristics

Characteristic	SOX2	<i>P</i> value	Vimentin	<i>P</i> value	E-cadherin	<i>P</i> value
	Spearman's ρ		Spearman's ρ		Spearman's ρ	
Age, yr (≥ 65 vs < 65)	-0.019	0.799	-0.074	0.317	0.008	0.909
Gender (Female vs Male)	0.021	0.780	-0.119	0.107	-0.061	0.412
Ethnicity (Han vs Kazakh)	-0.129	0.080	-0.049	0.507	-0.063	0.392
Tumor location (Upper vs Middle and Lower)	-0.013	0.859	-0.024	0.743	0.049	0.508
Tumor size (≥ 3 cm vs < 3 cm)	0.382	< 0.001¹	0.138	0.061	0.010	0.890
Degree of differentiation (High vs Moderate vs Poor)	-0.090	0.226	-0.023	0.758	-0.002	0.974
AJCC stage (I vs II vs III vs IV)	0.042	0.567	0.089	0.229	0.038	0.605
Metastasis (No vs Yes)	0.103	0.163	0.070	0.340	0.132	0.074
Lymph node metastasis (No vs Yes)	0.061	0.413	0.127	0.084	-0.069	0.349
Depth of invasion (Mucosa vs Muscularis & Full)	0.295	< 0.001¹	0.262	< 0.001¹	0.031	0.678
SOX2 expression (Positive vs Negative)	1	-	0.316	< 0.001¹	-0.115	0.119
Vimentin expression (Positive vs Negative)	0.316	< 0.001¹	1	-	-0.104	0.159
E-cadherin expression (Positive vs Negative)	-0.115	0.119	-0.104	0.159	1	-
EMT (Epithelial vs Mixed vs Mesenchymal)	0.149	0.044¹	0.666	< 0.001¹	0.673	< 0.001¹

¹Statistically significant.