

**Supplementary Table 4. Univariate and multivariate analysis of prognostic factors associated with overall survival and recurrence-free survival in the validation cohort.**

Variables	Overall survival			Recurrence-free survival		
	Univariate <i>P</i> value	Multivariate <i>P</i> value	Multivariate HR (95% CI)	Univariate <i>P</i> value	Multivariate <i>P</i> value	Multivariate HR (95% CI)
<b>Gender</b>						
Male/Female	0.936	NA		0.380		
<b>Age (years)</b>						
<65/≥65	0.313	NA		<b>0.021</b>	0.050	3.808 (0.998-14.530)
<b>Primary site</b>						
Head/Body or tail	0.566	NA		0.491		
<b>Differentiation</b>						
I/II/III	0.111	NA		0.109		
<b>T stage</b>						
T1+T2/ T3+T4	0.183	NA		0.843		
<b>N stage</b>						
N0/N1-2	0.178	NA		0.163		
<b>TNM stage</b>						
I/II/III	0.342	NA		0.291		
<b>Perineural invasion</b>						
No/Yes	0.232	NA		<b>0.046</b>	0.192	4.265 (0.484-37.605)
<b>CA19-9</b>						
< 37/ ≥ 37 U/L	0.410	NA		0.748		
<b>CEA</b>						
< 5/ ≥ 5 ng/mL	0.701	NA		0.352		
<b>TBIL</b>						

≤ 20.4/ > 20.4 μmol/L	0.394	NA		0.125		
<b>Albumin</b>						
< 35/ ≥ 35 g/L	0.249	NA		0.666		
<b>ALT</b>						
≤ 35/ > 35 U/L	0.628	NA		0.613		
<b>AST</b>						
≤ 40/ > 40 U/L	0.798	NA		0.831		
<b>GGT</b>						
≤ 60/ > 60 U/L	0.577	NA		0.822		
<b>Glucose</b>						
≤ 5.6/ > 5.6 mmol/L	0.145	NA		0.315		
<b>Tumor-associated neutrophils N1</b>	<b>0.013</b>	0.136	0.940 (0.866-1.020)	<b>0.008</b>	0.444	0.975 (0.914-1.040)
<b>Tumor-associated neutrophils N2</b>	<b>0.002</b>	<b>0.045</b>	1.069 (0.993-1.149)	<b>0.001</b>	<b>0.043</b>	1.067 (1.002-1.153)
<b>Tumor-infiltrating Tregs</b>	<b>0.034</b>	0.970	0.997 (0.867-1.147)	<b>0.001</b>	0.784	0.991 (0.893-1.101)
<b>Tumor-infiltrating CD8+ T cells</b>	<b>0.016</b>	0.699	1.019 (0.925-1.124)	<b>0.002</b>	0.789	0.988 (0.906-1.078)