

Table S1 Univariate analysis of factors associated with long-term survival after resection of pCCA

Variable	N	Survival (median, months)	Univariable analysis	
			HR (95% CI)	P value
Sex				
Female vs. male	152/183	34/28	0.796 (0.609–1.041)	0.095
Age				
≥60 vs. <60 years	183/152	31/33	1.141 (0.873–1.492)	0.334
Maximum diameter				
≥3 vs. <3 cm	129/206	31/34	1.163 (0.887–1.524)	0.275
Bismuth type				
III/IV vs. I/II	180/155	34/30	0.962 (0.738–1.255)	0.775
Hepatitis				
With vs. without	250/85	32/33	1.060 (0.783–1.435)	0.708
TBIL				
≥142.4 vs. <142.4 μmol/L	168/167	28/34	1.355 (1.035–1.772)	0.027*
DBIL				
≥128.9 vs. <128.9 μmol/L	168/167	29/33	1.288 (0.985–1.685)	0.064
IBIL				
≥16.4 vs. <16.4 μmol/L	168/167	32/33	1.248 (0.955–1.630)	0.104
ALT				
≥98.0 vs. <98.0 IU/L	168/167	28/34	1.147 (0.879–1.496)	0.311
AST				
≥80.0 vs. <80.0 IU/L	168/167	28/35	1.238 (0.949–1.614)	0.115
ALP				
≥328.0 vs. <328.0 IU/L	168/167	30/34	1.099 (0.842–1.434)	0.488
GGT				
≥337.0 vs. <337.0 IU/L	168/167	29/33	1.058 (0.811–1.380)	0.679
CA19-9				
≥215.3 vs. <215.3 U/mL	168/167	29/35	1.428 (1.093–1.865)	0.009*
CEA				
≥3.0 vs. <3.0 ng/mL	168/167	27/35	1.439 (1.102–1.880)	0.008*
Cholelithiasis				
With vs. without	80/255	36/30	0.849 (0.616–1.170)	0.318
Preoperative bile duct drainage				
With vs. without	63/272	28/33	1.143 (0.808–1.617)	0.451
Postoperative complication				
With vs. without	57/278	26/33	1.312 (0.930–1.849)	0.122
Hospitalization time				
≥17.0 vs. <17.0 days	192/143	30/33	1.059 (0.807–1.389)	0.679
Fluke				
With vs. without	11/324	33/26	0.917 (0.432–1.948)	0.822
Perineural invasion				
With vs. without	294/41	28/58	3.046 (1.850–5.015)	<0.001*
Positive margin status				
With vs. without	46/289	20/34	1.942 (1.367–2.759)	<0.001*
Vascular invasion				
With vs. without	142/193	25/37	1.643 (1.259–2.144)	<0.001*
Adjuvant therapy				
With vs. without	25/310	37/30	0.695 (0.396–1.218)	0.204
Pathological differentiation				
Well	34	58	Ref.	–
Moderately	236	33	2.445 (1.435–4.165)	0.001
Poorly	65	21	4.197 (2.327–7.570)	<0.001
T category (7th)				
T1	14	58	Ref.	–
T2a	74	36	1.756 (0.747–4.129)	0.196
T2b	87	30	2.141 (0.920–4.982)	0.077
T3	67	24	2.916 (1.245–6.827)	0.014
T4	93	29	2.571 (1.111–5.952)	0.027
N category (7th)				
N0	234	35	Ref.	–
N1	62	27	1.442 (1.032–2.014)	0.032
N2	39	22	1.887 (1.295–2.750)	0.001
AJCC TNM stage (7th)				
I	12	NA	Ref.	–
II	111	36	2.616 (0.951–7.202)	0.063
IIIA	52	25	4.143 (1.474–11.648)	0.007
IIIB	44	27	4.000 (1.409–11.357)	0.009
IVA	77	31	3.576 (1.289–9.916)	0.014
IVB	39	22	5.503 (1.948–15.539)	0.001
T category (8th)				
T1	14	58	Ref.	–
T2a	80	36	1.770 (0.754–4.152)	0.189
T2b	98	31	2.109 (0.911–4.882)	0.082
T3	75	23	3.141 (1.351–7.304)	0.008
T4	68	32	2.495 (1.063–5.859)	0.036
N category (8th)				
N0	234	35	Ref.	–
N1	73	24	1.494 (1.097–2.035)	0.011
N2	13	21	2.147 (1.189–3.877)	0.011
M1	15	24	1.777 (0.960–3.287)	0.067
AJCC TNM stage (8th)				
I	12	NA	Ref.	–
II	120	37	2.562 (0.932–7.038)	0.068
IIIA	56	23	4.470 (1.598–12.508)	0.004
IIIB	46	33	3.227 (1.129–9.225)	0.029
IIIC	73	24	4.365 (1.581–12.051)	0.004
IVA	13	21	6.286 (2.021–19.549)	0.001
IVB	15	24	5.205 (1.653–16.390)	0.005

*, P<0.05. TBIL, total bilirubin; DBIL, direct bilirubin; IBIL, indirect bilirubin; ALT, alanine aminotransferase; AST, aspartate amino transferase; ALP, alkaline phosphatase; GGT, gamma-glutamyl transpeptidase; CEA, carcinoembryonic antigen; CA19-9, carbohydrate antigen 19-9; NA, not available.