

Table S1 Location codes

Code	Location/histology
Location	
C22.0	Liver ^a
C22.1	Intrahepatic bile duct ^b
C23.9	Gallbladder
C24.0	Extrahepatic bile duct ^c
Histology	
8000	Neoplasm, malignant
8001	Tumor cells, malignant
8010	Carcinoma, NOS
8020	Carcinoma, undifferentiated, NOS
8050	Papillary carcinoma, NOS
8052	Papillary squamous cell carcinoma
8070	Squamous cell carcinoma, NOS
8140	Adenocarcinoma, NOS
8141	Scirrhus adenocarcinoma
8144	Adenocarcinoma, intestinal type
8145	Adenocarcinoma, diffuse type
8160	Cholangiocarcinoma
8162	Klatskin tumor
8210	Adenocarcinoma in adenomatous polyp
8211	Tubular adenocarcinoma
8260	Papillary adenocarcinoma
8480	Mucinous adenocarcinoma
8481	Mucin producing adenocarcinoma
8560	Adenosquamous carcinoma
8570	Adenocarcinoma with squamous metaplasia
8576	Hepatoid adenocarcinoma

^a, combined with histology code 8160 recoded to proximal cholangiocarcinoma and 8160 to intrahepatic cholangiocarcinoma; ^b, combined with histology code 8162 recoded to proximal cholangiocarcinoma; ^c, use site-specific factor 25 to differentiate between proximal and distal cholangiocarcinoma. NOS, not otherwise specified.

Table S2 Additional patient characteristics used for PSM

	No adjuvant therapy (N=1,768)	Adjuvant chemotherapy (N=411)	P value	No adjuvant chemotherapy (N=405)	Adjuvant chemotherapy (N=405)	P value
Percentage >24 years old with high school education						
1 st quartile	453 (25.6%)	99 (24.1%)	0.66	93 (23.0%)	98 (24.2%)	0.88
2 nd quartile	452 (25.6%)	108 (26.3%)		107 (26.4%)	106 (26.2%)	
3 rd quartile	412 (23.3%)	106 (25.8%)		98 (24.2%)	103 (25.4%)	
4 th quartile	451 (25.5%)	98 (23.8%)		107 (26.4%)	98 (24.2%)	
Median household income ^a						
1 st quartile	449 (25.4%)	101 (24.6%)	0.89	92 (22.7%)	99 (24.4%)	0.89
2 nd quartile	427 (24.2%)	104 (25.3%)		100 (24.7%)	102 (25.2%)	
3 rd quartile	438 (24.8%)	106 (25.8%)		114 (28.1%)	105 (25.9%)	
4 th quartile	453 (25.6%)	100 (24.3%)		99 (24.4%)	99 (24.4%)	
Poverty						
<5%	368 (20.8%)	88 (21.4%)	0.38	85 (21.0%)	86 (21.2%)	0.95
5–10%	455 (25.7%)	116 (28.2%)		106 (26.2%)	112 (27.7%)	
10–20%	512 (29.0%)	124 (30.2%)		127 (31.4%)	124 (30.6%)	
>20%	414 (23.4%)	81 (19.7%)		86 (21.2%)	81 (20.0%)	

^a, 2 missing values. PSM, propensity-score matching.

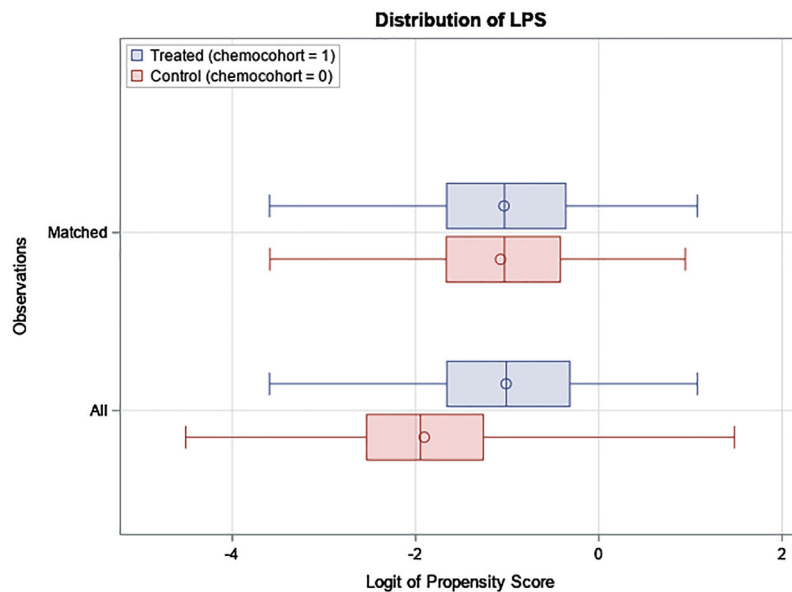


Figure S1 Distribution of the Logit propensity score (LPS), before and after matching.

Table S3 Adjusted interaction between receipt of chemotherapy and T/N-classification in the matched cohort in patients with survival >30 days postoperatively

Factor	HR	95% CI	P value
pN-stage stratified according to receipt of chemotherapy (yes vs. no)			
N0	1.017	0.799–1.293	0.893
N1/N2	0.795	0.598–1.057	0.115
pN-stage stratified according to receipt of chemotherapy (yes vs. no)			
T1	1.466	0.777–2.767	0.238
T2	1.179	0.868–1.600	0.292
T3	0.791	0.615–1.018	0.069
T4	0.475	0.242–0.932	0.031

Table S4 Adjusted interaction analysis between T-/N- classification, differentiation grade, receipt of aCT and survival in patients with survival >30 days postoperatively

Group	aCT (N)	No aCT (N)	HR	95% CI	P value
T1/T2, N0					
Well/moderate	85	86	1.31	0.86–1.98	0.207
Poor/undifferentiated	53	54	1.03	0.61–1.74	0.906
T1/T2, N1/N2					
Well/moderate	32	29	1.30	0.67–2.51	0.441
Poor/undifferentiated	34	26	1.35	0.68–2.70	0.393
T3/T4, N0					
Well/moderate	47	47	1.05	0.65–1.69	0.845
Poor/undifferentiated	61	54	0.81	0.54–1.23	0.323
T3/T4, N1/N2					
Well/moderate	43	33	0.86	0.51–1.43	0.555
Poor/undifferentiated	49	38	0.43	0.27–0.68	<0.001

aCT, adjuvant chemotherapy.