

**Supplementary Table 1 Risk factors for tumor recurrence and death before propensity score matching**

Tumor recurrence	Death			Death	Tumor recurrence		
	OR	95% CI	P-value		OR	95% CI	P-value
Univariate				Univariate			
Group (cHCC-CC)	2.807	1.78- 4.506	< 0.001	Group (cHCC-CC)	2.257	1.403- 3.631	0.001
Sex (male)	2.841	1.037- 7.781	0.042	Sex (male)	2.149	0.867- 5.330	0.099
Recipient age	0.963	0.931- 0.997	0.031	Recipient age	0.984	0.952- 1.018	0.354
Locoregional therapy before LT	1.553	0.889- 2.713	0.122	Locoregional therapy before LT	1.635	0.931- 2.870	0.087
Number of locoregional therapies before LT > 3	1.667	1.058- 2.626	0.028	Number of locoregional therapies before LT > 3	1.233	0.773- 1.967	0.380
MELD	0.999	0.963- 1.038	0.979	MELD	1.006	0.971- 1.043	0.724
Type of LT (DDLT)	1.609	0.699- 3.707	0.264	Type of LT (DDLT)	2.496	1.242- 5.017	0.010
ABO-incompatibility	0.990	0.544- 1.800	0.973	ABO-incompatibility	0.853	0.450- 1.620	0.628

Tumor size > 3 cm	2.987	1.901- 4.693	< 0.001	Tumor size > 3 cm	2.864	1.814- 4.521	< 0.001
Tumor number > 3	1.923	1.167- 3.167	0.010	Tumor number > 3	1.377	0.799- 2.374	0.250
Milan criteria (beyond)	2.798	1.767- 4.431	< 0.001	Milan criteria (beyond)	2.202	1.390- 3.489	0.001
Tumor grade 3 or 4	1.526	0.915- 2.545	0.106	Tumor grade 3 or 4	1.360	0.800- 2.312	0.256
Microvascular invasion	1.909	1.212- 3.007	0.005	Microvascular invasion	1.726	1.092- 2.726	0.019
PVTT	1.956	1.004- 3.812	0.049	PVTT	1.739	0.865- 3.495	0.121
BDTT	0.512	0.071- 3.684	0.506	BDTT	1.414	0.346- 5.774	0.629
Intrahepatic metastasis	1.705	1.037- 2.803	0.036	Intrahepatic metastasis	1.397	0.837- 2.331	0.201
Multicentric occurrence	1.150	0.689- 1.918	0.593	Multicentric occurrence	1.007	0.593- 1.710	0.979
Encapsulation	1.735	1.008- 2.986	0.047	Encapsulation	1.249	0.711- 2.194	0.440

Tumor necrosis	2.061	1.304- 3.257	0.002	Tumor necrosis	2.272	1.430- 3.609	0.001
AFP > 20 ng/mL	1.575	1.004- 2.472	0.048	AFP > 20 ng/mL	1.445	0.920- 2.270	0.110
PIVKA-II > 40 mAU/mL	1.534	0.959- 2.454	0.074	PIVKA-II > 40 mAU/mL	1.619	1.014- 2.585	0.044
Multivariate				Multivariate			
Group (cHCC-CC)	2.799	1.733- 4.520	< 0.001	Group (cHCC-CC)	1.915	1.156- 3.173	0.012
Tumor size > 3 cm	1.885	1.110- 3.201	0.019	Tumor size > 3 cm	2.181	1.339- 3.554	0.002
Number of locoregional therapies before LT > 3	1.715	1.078- 2.727	0.023	Tumor necrosis	1.780	1.084- 2.529	0.023

OR: Odds ratio; CI: Confidence interval; cHCC-CC: Combined hepatocellular carcinoma-cholangiocarcinoma; LT: Liver transplantation; TACE: Transarterial chemoembolization; RFA radiofrequency ablation; MELD: Model for End-stage Liver Disease; DDLT: Deceased donor liver transplantation; PVTT: Portal vein tumor thrombosis; BDTT: Bile duct tumor thrombosis; CC: Cholangiocarcinoma; AFP: Alpha-fetoprotein; PIVKA-II: Prothrombin-induced by vitamin K absence-II.