

**Table S1: Multivariable Cox Proportional Hazards Regression Model for the Risk of Patient Mortality**

Variable	Estimate	P-value	Hazard Ratio	95% CI	
				Lower Bound	Upper Bound
Age (years)	0.00	0.46	1.00	0.99	1.01
Male gender (ref: female)	-0.16	0.19	0.86	0.68	1.08
Living donor (ref: deceased)	0.03	0.87	1.03	0.72	1.48
Incidental CCA (ref: no)	0.09	0.44	1.10	0.86	1.40
MELD exception (ref: no)	-0.21	0.27	0.81	0.56	1.18
Recent era (ref: before Jan 18 <sup>th</sup> , 2010)	-0.16	0.41	0.85	0.58	1.25
MELD exception by era interaction effect	0.25	0.28	1.29	0.81	2.04
Laboratory MELD score (ref: < 15)		0.002			
15 – 19	0.22	0.16	1.25	0.92	1.70
20 – 24	0.29	0.10	1.33	0.95	1.87
25 – 29	0.35	0.15	1.43	0.88	2.31
30 – 34	0.046	0.91	1.05	0.49	2.22
35 – 39	-0.12	0.76	0.89	0.42	1.87
≥ 40	1.30	< 0.001	3.68	2.04	6.63
Center-level CCA LTs per active year (ref: > 12)		< 0.001			
1	0.95	< 0.001	2.58	1.66	4.03
> 1 and ≤ 2	0.76	< 0.001	2.14	1.53	2.99
> 2 and ≤ 4	0.63	0.002	1.88	1.27	2.77
Waiting time (months)	0.00	1.00	1.00	0.99	1.01

Abbreviations: CCA = cholangiocarcinoma; CI = confidence interval; LT = liver transplantation; MELD = Model for End-Stage Liver Disease; ref = reference group.