

Figure S1 The length of each red area was defined as a value representing the risk of multiple bile duct in graft. The red area in the right picture of the bile duct tree was defined as negative value.

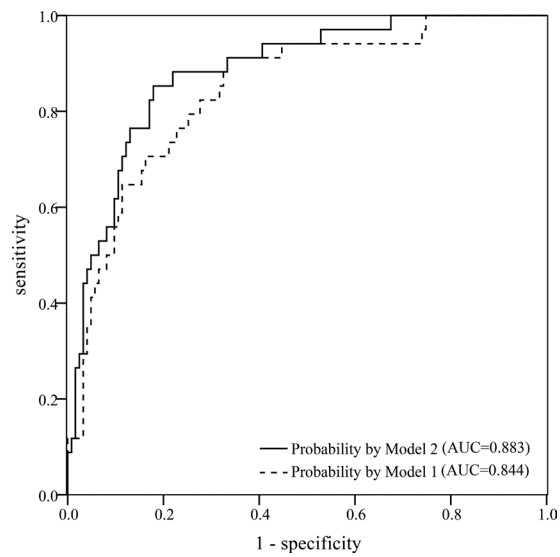


Figure S2 ROC curves of two logistic model for multiple biliary anastomoses.

Table S1 Baseline characteristics of donors and recipients after propensity matching

Characteristics	Open	Laparoscopic	P
n	52	52	
Age of recipient (year)	0.67, 0.33–6.00	0.83, 0.25–8.33	0.368
Gender of recipient			0.556
Male	23	26	
Female	29	26	
blood group of recipient			0.969
A	15	15	
AB	3	3	
B	12	14	
O	22	20	
Height of recipient (cm)	71.04±11.56	73.64±14.73	0.510
Weight of recipient (kg)	8.05, 5.00–22.00	8.15, 4.50–26.00	0.427
PELD score of recipient	14.13, –9.69–51.93	11.24, –9.82–51.55	0.658
Diagnosis			0.631
Acute hepatic failure	0	0	
Cholestasis disease	44	44	
Organic acidemia	2	1	
Tyrosinemia	0	1	
Urea cycle disorder	6	6	
Age of donor (year)	32.24±4.17	33.19±6.57	0.381
Gender of donor			0.327
Male	28	23	
Female	24	29	
Height of donor (cm)	167.40±8.23	167.65±7.71	0.873
Weight of donor (kg)	67.03±11.19	64.21±10.07	0.179
BMI of donor (kg/m ²)	23.71±3.30	22.83±3.13	0.167
Blood group of donor			0.517
A	13	15	
AB	2	4	
B	11	14	
O	26	19	
ABO blood group compatibly			1
Compatible	45	45	
Incompatible	7	7	

Table S2 Perioperative characteristics of donor and recipient after propensity matching

Characteristics	Open	Laparoscopic	P
Cold ischemia time (h)	1.60, 0.33–4.43	1.40, 0.35–3.22	0.343
Operation time of recipient (h)	6.69±1.43	6.52±1.51	0.561
Blood loss of recipient (mL)	100, 30–345	150, 40–700	0.001
Operation time of donor (h)	4.16±1.25	3.28±1.00	<0.001
Blood loss of donor (mL)	150, 5–400	50, 20–800	0.001
Left lateral graft weight (g)	249.64±80.00	263.27±56.57	0.363
GRWR (%)	2.84, 0.96–6.00	3.06, 1.27–5.24	0.742
Common trunk length of left biliary tract (cm)	1.30, –0.5–2.83	1.21, –0.5–2.97	0.408
Number of hepatic artery anastomosed			0.415
1	35	31	
2	17	21	
3	0	0	
Number of biliary duct anastomosed			0.037
1	44	33	
2	7	18	
3	1	1	
Length of donor ICU stay (day)	1, 0–2	1, 0–2	0.729
Length of donor hospital stay (day)	7, 5–12	7, 5–10	0.857

Table S3 Average laboratory indexes of recipient and donor after propensity matching

Indexes	Open	Laparoscopic	P
Average level of recipient's laboratory indexes (0–2 days)			
AST (IU/L)	455.60, 141.20–2764.77	775.70, 167.70–2221.35	<0.001
ALT (IU/L)	492.00, 175.67–3443.00	761.00, 257.00–2165.50	<0.001
INR	1.48, 1.07–2.96	2.04, 1.06–3.26	<0.001
Average level of donor's laboratory indexes (0–2 days)			
AST (IU/L)	160.55, 58.05–582.20	202.03, 81.90–987.87	0.297
ALT (IU/L)	223.50, 76.00–819.00	284.50, 56.67–1329.33	0.109
TBIL(μmol/L)	27.58, 10.25–60.65	22.73, 10.09–78.19	0.067

Table S4 Surgical complications and survival of donor and recipient after propensity matching

Complications	Open	Laparoscopic	P
Recipient surgical complications (Clavien-Dindo grade III-IV)			0.426
No	45	42	
Yes	7	10	
90 days cumulative graft survival	98.1%	96.2%	0.552
1 year cumulative graft survival	98.1%	96.2%	0.552
1 year cumulative recipient survival	98.1%	96.2%	0.552
Donor surgical complications (Clavien-Dindo grade III-IV)			0.434
No	47	50	
Yes	5	2	
1 year cumulative donor survival	100%	100%	1