

**Supplementary Table 1 The perioperative data (*n* = 544)**

<b>The perioperative details</b>	<b>Values</b>
Blood loss during operation (mL)	200.00 (100.00–250.00)
Total volume of Liquid (mL/kg)	235.00 (180.00–302.00)
Transfusion threshold (g/ dL)	6.00 (5.40–6.70)
Postoperative Hb level (g/ dL)	8.50 (7.50–9.60)
No RBC transfusion intraoperative (%)	47 (8.60)
No RBC transfusion perioperative (%)	35 (6.40)

Data represent numbers (percentages) for categorical variables or median (interquartile ranges) for continuous variables. RBC: Red blood cell; Hb, Hemoglobin.

**Supplementary Table 2 Univariate analysis of one-yr patient survival**

Independent predictive factor	HR	95%CI	P value
Month age (mo)			
≤ 36	1		
> 36	0.609	0.219-1.691	0.341
Gender			
Male	1		
Female	1.050	0.602-1.831	0.864
Weight (kg)			
≤ 10	1		
> 10	0.459	0.195-1.076	0.073
Diagnosis			
Cholestatic cirrhosis	1		
Metabolic disease	0.215	0.030-1.555	0.128
Others	0.219	0.003-13.874	0.473
Previous KP			
No	1		
Yes	0.845	0.474-1.505	0.567
PELD score			
≤ 2	1		
> 2	2.801	1.112-7.057	0.029*
Preoperative Hb (g/dL)			
≤ 8	1		
> 8	0.540	0.305-0.956	0.034*
Anesthesia duration (min)			
≤ 600	1		
> 600	1.822	0.995-3.336	0.052
Operation duration (min)			
≤ 480	1		
> 480	2.022	1.142-3.580	0.016*
Anhepatic phase (min)			
≤ 40	1		
> 40	0.814	0.465-1.426	0.473
Intraoperative blood loss (mL)			
≤ 200	1		
> 200	1.603	0.890-2.887	0.116
GRWR (%)			
2 ≤ x ≤ 4	1		
<2 or > 4	0.975	0.506-1.877	0.938
Cold ischemia time (min)			
≤ 60	1		
> 60	0.663	0.369-1.189	0.168
Perioperative RBC transfusion (U)			
≤ 1	1		

> 1	1.071	0.605-1.896	0.814
Perioperative blood transfusion (U)			
Yes	1		
No	0.044	0.000-4.858	0.194
Postoperative length of stay (d)			
≤ 30	1		
> 30	0.754	0.390-1.455	0.399
ICU MV duration (h)			
≤ 24	1		
> 24	1.475	0.646-3.366	0.356
ICU length of stay (d)			
≤ 9	1		
> 9	2.604	1.382-4.904	0.003*

HR: Hazard ratio; CI: Confidence interval; PELD: Pediatric of end-stage liver disease; KP: Kasai procedure; RBC: Red blood cell; Hb: Hemoglobin; GRWR: Graft to recipient weight ratio; ICU: Intensive care unit; MV: Mechanical ventilation. \*Variables significantly associated with patient survival ( $P < 0.05$ ), entered into the multivariate Cox regression model.

**Supplementary Table 3 Univariate analysis of 3-year patient survival**

Independent predictive factor	HR	95%CI	P value
Month age (mo)			
≤ 36	1		
> 36	0.561	0.225-1.395	0.213
Gender			
Male	1		
Female	0.906	0.559-1.467	0.687
Weight (kg)			
≤ 10	1		
> 10	0.527	0.261-1.064	0.074
Diagnosis			
Cholestatic cirrhosis	1		
Metabolic disease	0.163	0.023-1.173	0.072
Others	0.793	0.295-2.129	0.645
Previous KP			
No	1		
Yes	0.861	0.522-1.422	0.560
PELD score			
≤ 2	1		
> 2	2.628	1.200-5.753	0.016*
Preoperative Hb (g/dL)			
≤ 8	1		
> 8	0.616	0.371-1.021	0.060
Anesthesia duration (min)			
≤ 600	1		
> 600	1.695	0.995-2.888	0.052
Operation duration (min)			
≤ 480	1		
> 480	1.885	1.141-3.113	0.013*
Anhepatic phase (min)			
≤ 40	1		
> 40	0.952	0.584-1.552	0.845
Intraoperative blood loss (mL)			
≤ 200	1		
> 200	1.334	0.786-2.264	0.286
GRWR (%)			
2 ≤ x ≤ 4	1		
< 2 or > 4	0.901	0.504-1.612	0.726
Cold ischemia time (min)			
≤ 60	1		
> 60	0.764	0.460-1.271	0.301
Perioperative RBC transfusion (U)			
≤ 1	1		

> 1	0.853	0.511-1.423	0.542
Perioperative blood transfusion (U)			
Yes	1		
No	0.591	0.186-1.881	0.373
Postoperative length of stay (d)			
≤ 30	1		
> 30	0.915	0.533-1.570	0.746
ICU MV duration (h)			
≤ 24	1		
> 24	1.403	0.681-2.891	0.359
ICU length of stay (d)			
≤ 9	1		
> 9	2.428	1.400-4.212	0.002*

HR: Hazard ratio; CI: Confidence interval; PELD: Pediatric of end-stage liver disease; KP: Kasai procedure; RBC: Red blood cell; Hb: Hemoglobin; GRWR: Graft to recipient weight ratio; ICU: Intensive care unit; MV: Mechanical ventilation. \*Variables significantly associated with patient survival ( $P < 0.05$ ), entered into the multivariate Cox regression model.

