

Figure S1 Calibration Curve by bootstrap method of the model. The apparent and the bias-corrected curves showed good agreement with the ideal curve in both (A) training cohort, and (B) validation cohort.

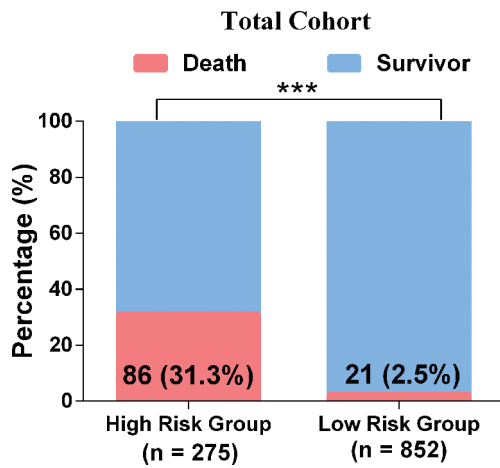


Figure S2 The predictive performance of the APP score for the postoperative 90-day mortality for huge HCC in the entire retrospective cohort. In the entire cohort, the higher incidence of 90-day mortality after hepatectomy was observed in the high-risk group (APP score >-1.96) compared with that of the low-risk group (APP score ≤ -1.96), (31.3% vs. 2.5%, *** $P < 0.001$).

Table S1 Detailed clinicopathologic characteristics of the training, validation, and prospective cohorts

Characteristics	Training cohort (n=798)	Validation cohort (n=329)	P value	Prospective cohort (n=93)
Diabetes mellitus				
No	719	294	0.709	82
Yes	79	35		11
Hypertension				
No	744	306	0.892	85
Yes	54	23		8
CNLC staging				
I-II	596	258	0.184	71
III	202	71		22
BCLC staging				
A	494	189	0.164	59
B-C	304	140		34
ALT (U/L)	80.9±228.3	71.0±167.2	0.473	40.7±39.8
Platelet counts (10 ⁹ /L)	193.6±77.1	202.1±74.0	0.090	207.9±66.8
TB (μmol/L)	14.0±13.0	13.5±17.4	0.642	13.7±4.9
Albumin (g/L)	39.6±4.2	39.2±3.8	0.096	42.0±4.4
Prothrombin time (s)	12.3±1.2	12.2±1.0	0.093	12.1±0.9
Creatine (μmol/L)	71.6±17.5	71.9±15.8	0.799	73.8±13.7
Blood loss (mL)	473.1±525.0	536.1±597.7	0.059	480.1±621.0
intraoperative transfusion				
No	444	258	0.637	76
Yes	134	71		17
Tumor differentiation				
I-II	563	265	0.001*	67
III-IV	235	64		26
Microvascular Invasion				
No	318	110	0.051	26
Yes	480	219		67

CNLC staging, China liver cancer staging; BCLC staging, Barcelona clinic liver cancer staging; GGT, γ -glutamyl transpeptidase; ALT, alanine aminotransferase; TB, total bilirubin.

Table S2 The subgroup analysis of APP score in the 90-day mortality in training and validation cohort

Cohort	AUC	95% CI	90-day mortality, n (%)	
			High risk group	Low risk group
Training cohort				
Cirrhosis				
Yes	0.800	0.737–0.863	42 (32.8)	0 (0.0)
No	0.860	0.804–0.917	20 (28.8)	15 (2.9)
Preoperative TACE				
Yes	0.965	0.927–1.00	5 (25.0)	0 (0.0)
No	0.863	0.824–0.902	57 (31.7)	15 (2.9)
Anatomical liver resection				
Yes	0.880	0.836–0.925	37 (35.9)	6 (2.3)
No	0.861	0.803–0.918	25 (25.7)	9 (2.7)
Validation cohort				
Cirrhosis				
Yes	0.885	0.797–0.973	8 (25.8)	1 (1.6)
No	0.918	0.863–0.973	16 (36.4)	5 (2.6)
Preoperative TACE				
Yes	0.906	0.805–1.00	1 (16.7)	0 (0.0)
No	0.905	0.857–0.954	23 (33.3)	6 (2.6)
Anatomical liver resection				
Yes	0.894	0.826–0.962	12 (27.3)	2 (1.9)
No	0.915	0.845–0.984	12 (38.7)	4 (2.7)

AUC, area under curve; 95% CI, 95% confidential interval; TACE, transcatheter arterial chemoembolization.