Supplementary Table 1 Clinical characteristics of the study population.

	training cohort (n=379)		validation cohort (n=123)		P value
	n	Summary measure	n	Summary measure	
Preoperative variables					
Gender, Male/Female	379	219/160 (57.8%/42.2%)	123	100/23 (81.3%/18.7%)	< 0.001
Age(year), <65/≥65	379	259/120 (68.3%/31.7%)	123	109/14 (88.6%/11.4%)	< 0.001
Diabetes mellitus, yes/no	379	83/296 (21.9%/78.1%)	123	20/103 (16.3%/83.7%)	0.178
Portal vein thrombosis, yes/no	379	157/222 (41.4%/58.6)	123	33/90 (26.8%/73.2%)	0.004
Splenectomy, yes/no	379	74/305 (19.5%/80.5%)	123	12/111 (9.8%/90.2%)	0.012
Etiology of cirrhosis, viral hepatitis/other	379	207/172 (54.6%/45.4%)	123	95/28 (77.2%22.8%)	< 0.001
TIPS indication, EGVB/refractory ascites	379	342/37 (90.2%/9.8%)	123	104/19 (84.6%/15.4%)	0.082
WBC (×109/L), <4.0/≥4.0	379	250/129 (66.0%/34.0%)	123	67/56 (54.5%/45.5%)	0.022
PLT (×109/L), < 100/≥100	379	255/124 (67.3%/32.7%)	123	95/28 (77.2%/22.8%)	0.037
ALT (U/L), ≤40/>40	379	332/47 (87.6%/12.4%)	123	108/15 (87.8%/12.2%)	0.952

TBil (μmol/L), ≦ 17.1/17.2-34.2/34.3-51.3/> 51.3	379	188/143/36/12 (49.6%/37.7%/9.5%/3.2%)	123	37/58/17/11 (30.1%/47.2%/13.8%/8.9%)	< 0.001
Alb (g/L), <35.0/≥35.0	379	262/117 (69.1%/30.9%)	123	67/56 (54.5%/45.5%)	0.003
Na (mmol/L), <135/≥135	379	27/352 (7.1%/92.9%)	123	18/105 (14.6%/85.4%)	0.011
Scr (μmol/L), <133/≥133	379	365/14 (96.3%/3.7%)	123	113/10 (91.9%/8.1%)	0.045
INR, <1.5/≥1.5	374	333/41 (89.0%/11.0%)	123	87/36 (70.7%/29.3%)	< 0.001
FIB, <2.0/≥2.0	373	252/121 (67.6%/32.4%)	123	54/69 (43.9%/56.1%)	< 0.001
Scores at study enrollment					
Child-Pugh score	365	7.0 (6.0-8.0)	123	7.0 (6.0-7.0)	< 0.001
MELD score	374	10.0 (8.0-11.0)	123	12.0 (10.0-14.0)	< 0.001
MELD-Na score	374	10.0 (8.0-12.0)	123	12.0 (10.0-14.0)	< 0.001

CLIF-C AD score	374	37.0 (33.0-44.0)	123	41.0 (37.0-47.0)	< 0.001
Intraoperative variables					
Stent diameter (mm),<8/≥8	379	141/238 (37.2%/62.8%)	123	0/123 (0%/100%)	< 0.001
Puncture site, Left branch/Right branch/Bifurcation/Trunk	379	93/105/107/74 (24.5%/27.7%/28.2%/19.5%)	120	30/18/40/32 (25.0%/15.0%/33.3%/26.7%)	0.030

Supplementary Table 2 Performance of different models in the entire cohort.

Model	AUC(95% CI)	*P* value[a]
①Age+TBil+Na	0.792(0.730-0.853)	
②Age+TBil	0.768(0.703-0.833)	0.149
③Age+TBil+Na+DM	0.798(0.736-0.859)	0.590
④Age+TBil+Na+PLT	0.794(0.735-0.854)	0.773
⑤Age+TBil+Na+INR	0.795(0.732-0.857)	0.658
⑥Age+TBil+Na+DM+PLT+INR	0.798(0.735-0.860)	0.675
⑦Child-Pugh grade	0.693(0.611-0.776)	0.018
⑧MELD score	0.696(0.623-0.769)	0.002
⑨MELD-Na score	0.731(0.662-0.801)	0.022
⑩CLIF-C AD score	0.659(0.577-0.741)	0.002
⑪Risk score	0.787(0.729-0.845)	0.645

[a]*P* values represent the comparison of *AUC* functions for the Age+TBil+Na prediction model *vs* each other model. TBil: Total bilirubin; Na: sodium; DM: Diabetes mellitus; PLT: Platelet; INR: International normalized ratio; MELD: Model for end-stage liver disease; CLIF-C AD: Chronic liver failure consortium acute decompensation.

Supplementary Table 3 The predictive probability of the incidence of ACLF within 1 year after TIPS for different risk scores.

Total points	3 points	4 points	5 points	6 points	7 points	8 points
Predictive probability	2.3%	6.8%	18.4%	41.0%	68.2%	86.9%