

Supplementary Table 1. Univariable and multivariable analysis of rebleeding.

characteristics	univariable analysis				multivariable analysis			
	β	HR	95%CI	P value	β	HR	95%CI	P value
Age (per year increase)	-0.006	0.994	(0.985,1.004)	0.217				
Sex (male vs female)	-0.619	1.858	(1.435,2.405)	<0.001	-0.629	0.533	(0.406,0.699)	<0.001
Etiology of cirrhosis (virus or not)	-0.108	0.898	(0.703,1.146)	0.387				
Platelet (per 109/L increase)	-0.001	0.999	(0.997,1.000)	0.141				
Hemoglobin (per g/L increase)	-0.012	0.988	(0.982,0.994)	<0.001	-0.010	0.991	(0.985,0.997)	0.002
Albumin (per g/L increase)	-0.004	0.996	(0.976,1.015)	0.658				
Total bilirubin (per μ mol/L increase)	-0.002	0.998	(0.990,1.007)	0.678				
Creatinine (per μ mol/L increase)	-0.005	0.995	(0.990,1.001)	0.086	-0.007	0.993	(0.988,0.999)	0.025
Sodium (per mmol/L increase)	0.007	1.007	(0.983,1.031)	0.567				
PT prolong (per second increase)	-0.022	0.979	(0.943,1.016)	0.257				
International normalized ratio (per unit increase)	0.227	1.255	(1.109,1.422)	<0.001	0.218	1.244	(1.086,1.425)	0.002
Child-Pugh score (per point increase)	0.007	1.007	(0.942,1.077)	0.829				
Child-Pugh class				0.813				
Class A VS B	0.057	1.059	(0.842,1.331)	0.625				
Class A VS C	0.113	1.119	(0.749,1.672)	0.582				
Class B VS C	0.506	1.057	(0.712,1.570)	0.783				
MELD score (per point increase)	0.000	1.000	(0.968,1.034)	0.978				
MELD-Na score (per point increase)	-0.014	0.986	(0.963,1.009)	0.239				
Ascites before TIPS (yes or no)	-0.014	0.986	(0.786,1.237)	0.901				

HE before TIPS (yes or no)	-3.015	0.049	(0.000,7.431)	0.239					
Red-color sign (yes or no)	0.126	1.135	(0.859,1.498)	0.374					
TIPS type	-0.206	0.814	(0.601,1.103)	0.185					
Stent diameter				<0.001					0.001
6-7mm vs 8mm	-0.963	0.382	(0.250,0.583)	<0.001	-0.745	0.475	(0.304,0.742)	0.001	
6-7mm vs 10mm	-1.396	0.248	(0.127,0.483)	<0.001	-1.170	0.310	(0.156,0.616)	0.001	
8mm vs 10mm	-0.433	0.115	(0.649,0.379)	0.115	-0.425	0.654	(0.381,1.121)	0.122	
Pre-TIPS PPG (per mmHg increase)	-0.002	0.998	(0.979,1.017)	0.820					
Post-TIPS PPG (per mmHg increase)	0.073	1.076	(1.047,1.106)	<0.001	0.043	1.044	(1.014,1.074)	0.003	
PPG decrease rates (per percentage increase)	-1.397	0.247	(0.137,0.446)	<0.001					

MELD: model for end-stage liver disease; PPG: portal pressure gradient; PT: prothrombin time;

TIPS: transjugular intrahepatic portosystemic shunt

Supplementary Table 2. Univariable and multivariable analysis of OHE.

characteristics	univariable analysis				multivariable analysis			
	β	HR	95%CI	P value	β	HR	95%CI	P value
Age (per year increase)	0.027	1.027	(1.020,1.035)	<0.001	0.028	1.028	(1.021,1.036)	<0.001
Sex (male vs female)	-0.019	0.981	(0.829,1.161)	0.827				
Etiology of cirrhosis (virus or not)	0.023	1.024	(0.860,1.128)	0.792				
Platelet (per 10 ⁹ /L increase)	0.000	1.000	(0.999,1.001)	0.618				
Hemoglobin (per g/L increase)	0.006	1.006	(1.001,1.010)	0.008	0.008	1.008	(1.003,1.012)	<0.001
Albumin (per g/L increase)	-0.034	0.967	(0.953,0.982)	<0.001				
Total bilirubin (per μ mol/L increase)	0.007	1.007	(1.002,1.012)	0.011				
Creatinine (per μ mol/L increase)	0.007	1.007	(1.003,1.010)	<0.001	0.006	1.006	(1.002,1.009)	0.001
Sodium (per mmol/L increase)	-0.002	0.998	(0.982,1.015)	0.827				
PT prolong (per second increase)	0.043	1.043	(1.023,1.064)	<0.001				
International normalized ratio (per unit increase)	0.171	1.186	(1.092,1.287)	<0.001	0.172	1.188	(1.083,1.303)	<0.001
Child-Pugh score (per point increase)	0.153	1.165	(1.112,1.221)	<0.001	0.153	1.165	(1.111,1.222)	<0.001
Child-Pugh class				<0.001				
Class A VS B	0.251	1.285	(1.075,1.536)	0.006				
Class A VS C	0.770	2.160	(1.673,2.788)	<0.001				
Class B VS C	0.519	1.681	(1.320,2.140)	<0.001				
MELD score (per point increase)	0.047	1.049	(1.025,1.072)	<0.001				
MELD-Na score (per point increase)	0.018	1.018	(1.004,1.033)	0.013				
Ascites before TIPS (yes or no)	0.315	1.370	(1.145,1.639)	0.001				

HE before TIPS (yes or no)	0.473	1.604	(0.830,3.100)	0.160					
Red-color sign (yes or no)	-0.080	0.923	(0.754,1.131)	0.440					
TIPS type	-0.048	0.953	(0.768,1.181)	0.659					
Stent diameter				0.043					0.011
6-7mm vs 8mm	0.175	1.191	(0.803,1.766)	0.386	0.207	1.230	(0.824,1.836)	0.312	
6-7mm vs 10mm	0.544	1.723	(1.055,2.813)	0.030	0.656	1.926	(1.168,3.175)	0.010	
8mm vs 10mm	0.369	1.447	(1.056,1.982)	0.021	0.449	1.566	(1.141,2.150)	0.006	
Pre-TIPS PPG (per mmHg increase)	0.004	1.004	(0.991,1.018)	0.524					
Post-TIPS PPG (per mmHg increase)	-0.013	0.987	(0.966,1.008)	0.230					
PPG decrease rates (per percentage increase)	0.442	1.555	(0.934,2.589)	0.090					

MELD: model for end-stage liver disease; PPG: portal pressure gradient; PT: prothrombin time;

TIPS: transjugular intrahepatic portosystemic shunt

Supplementary Table 3. Univariable and multivariable analysis of shunt dysfunction.

characteristics	univariable analysis				multivariable analysis			
	β	HR	95%CI	P value	β	HR	95%CI	P value
Age (per year increase)	-0.009	0.991	(0.981,1.001)	0.086				
Sex (male vs female)	-0.444	0.641	(0.493,0.834)	0.001	-0.386	0.680	(0.520,0.888)	0.005
Etiology of cirrhosis (virus or not)	0.014	1.014	(0.787,1.306)	0.914				
Platelet (per 10 ⁹ /L increase)	0.000	1.000	(0.998,1.001)	0.789				
Hemoglobin (per g/L increase)	-0.009	0.991	(0.985,0.997)	0.005	-0.008	0.992	(0.986,0.998)	0.012
Albumin (per g/L increase)	-0.012	0.988	(0.968,1.009)	0.257				
Total bilirubin (per μ mol/L increase)	-0.006	0.994	(0.985,1.003)	0.195				
Creatinine (per μ mol/L increase)	-0.002	0.998	(0.993,1.004)	0.521				
Sodium (per mmol/L increase)	-0.011	0.989	(0.967,1.013)	0.363				
PT prolong (per second increase)	-0.019	0.981	(0.943,1.020)	0.331				
International normalized ratio (per unit increase)	0.112	1.119	(0.931,1.344)	0.232				
Child-Pugh score (per point increase)	0.020	1.020	(0.951,1.093)	0.583				
Child-Pugh class				0.706				
Class A VS B	0.102	1.108	(0.870,1.410)	0.405				
Class A VS C	0.070	1.073	(0.697,1.651)	0.750				
Class B VS C	-0.032	0.968	(0.634,1.480)	0.882				
MELD score (per point increase)	-0.015	0.985	(0.952,1.020)	0.393				
MELD-Na score (per point increase)	-0.013	0.987	(0.963,1.012)	0.308				

Ascites before TIPS (yes or no)	0.160	1.173	(0.919,1.497)	0.199					
HE before TIPS (yes or no)	-0.316	0.729	(0.181,2.930)	0.656					
Red-color sign (yes or no)	0.066	1.068	(0.786,1.451)	0.673					
TIPS type	-0.185	0.831	(0.605,1.142)	0.254					
Stent diameter				0.019					0.047
6-7mm vs 8mm	-0.444	0.642	(0.379,1.085)	0.098	-0.265	0.768	(0.446,1.322)	0.340	
6-7mm vs 10mm	-1.155	0.315	(0.140,0.706)	0.005	-0.991	0.371	(0.164,0.842)	0.018	
8mm vs 10mm	-0.712	0.491	(0.261,0.924)	0.028	-0.726	0.484	(0.257,0.911)	0.025	
Pre-TIPS PPG (per mmHg increase)	0.006	1.006	(0.986,1.027)	0.561					
Post-TIPS PPG (per mmHg increase)	0.057	1.059	(1.029,1.090)	<0.001	0.042	1.043	(1.011,1.075)	0.007	
PPG decrease rates (per percentage increase)	-1.283	0.277	(0.147,0.523)	<0.001					

MELD: model for end-stage liver disease; PPG: portal pressure gradient; PT: prothrombin time;

TIPS: transjugular intrahepatic portosystemic shunt

Supplementary Table 4. Univariable and multivariable analysis of mortality.

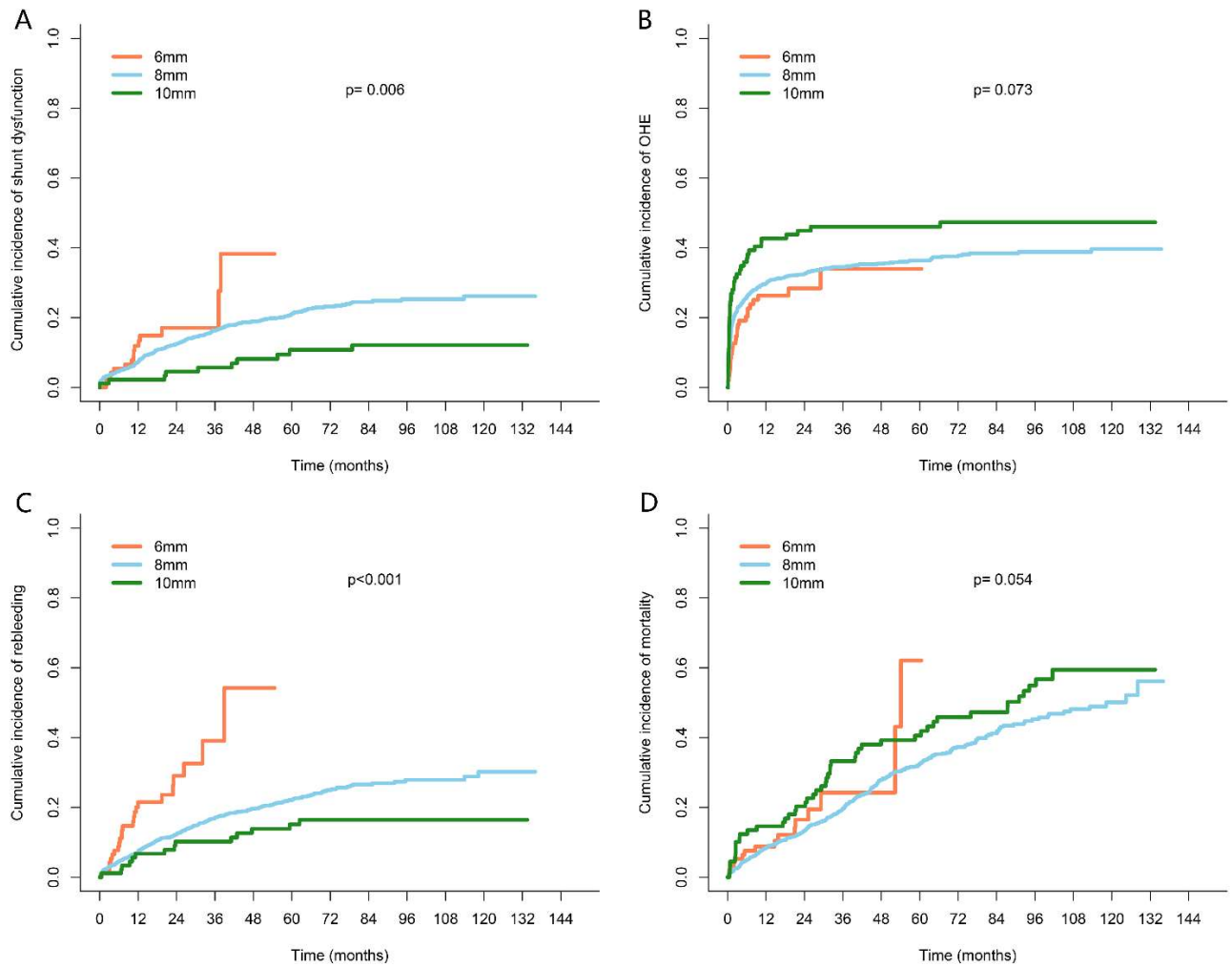
characteristics	univariable analysis				multivariable analysis			
	β	HR	95%CI	P value	β	HR	95%CI	P value
Age (per year increase)	0.039	1.039	(1.031,1.048)	<0.001	0.039	1.039	(1.031,1.048)	<0.001
Sex (male vs female)	0.244	1.276	(1.060,1.536)	0.010				
Etiology of cirrhosis (virus or not)	-0.243	0.785	(0.647,0.952)	0.014				
Platelet (per 109/L increase)	-0.001	0.999	(0.997,1.000)	0.075				
Hemoglobin (per g/L increase)	0.001	1.001	(0.997,1.006)	0.554				
Albumin (per g/L increase)	-0.043	0.958	(0.942,0.974)	<0.001				
Total bilirubin (per μ mol/L increase)	0.020	1.020	(1.015,1.026)	<0.001				
Creatinine (per μ mol/L increase)	0.003	1.003	(0.999,1.008)	0.117				
Sodium (per mmol/L increase)	-0.028	0.972	(0.956,0.989)	0.001				
PT prolong (per second increase)	0.043	1.044	(1.019,1.070)	0.001				
International normalized ratio (per unit increase)	0.086	1.090	(0.932,1.275)	0.279				
Child-Pugh score (per point increase)	0.209	1.233	(1.173,1.296)	<0.001	0.147	1.158	(1.088,1.233)	<0.001
Child-Pugh class				<0.001				
Class A VS B	0.513	1.670	(1.359,2.052)	<0.001				
Class A VS C	1.004	2.730	(2.061,3.618)	<0.001				
Class B VS C	0.492	1.635	(1.262,2.120)	<0.001				
MELD score (per point increase)	0.070	1.072	(1.047,1.099)	<0.001	0.030	1.030	(1.001,1.060)	0.046
MELD-Na score (per point increase)	0.038	1.039	(1.022,1.055)	<0.001				
Ascites before TIPS (yes or no)	0.494	1.639	(1.337,2.008)	<0.001				

HE before TIPS (yes or no)	0.244	1.277	(0.529,3.082)	0.587					
Red-color sign (yes or no)	0.001	1.001	(0.795,1.261)	0.991					
TIPS type	0.126	1.134	(0.905,1.421)	0.274					
Stent diameter				0.053					0.006
6-7mm vs 8mm	-0.299	0.742	(0.448,1.229)	0.246	-0.119	0.888	(0.534,1.476)	0.647	
6-7mm vs 10mm	0.040	1.041	(0.585,1.854)	0.891	0.376	1.456	(0.814,2.604)	0.205	
8mm vs 10mm	0.339	1.403	(1.035,1.904)	0.029	0.497	1.643	(1.210,2.233)	0.001	
Pre-TIPS PPG (per mmHg increase)	0.011	1.011	(0.995,1.028)	0.162					
Post-TIPS PPG (per mmHg increase)	-0.008	0.992	(0.967,1.018)	0.545					
PPG decrease rates (per percentage increase)	0.627	1.872	(1.018,3.442)	0.044					

MELD: model for end-stage liver disease; PPG: portal pressure gradient; PT: prothrombin time;

TIPS: transjugular intrahepatic portosystemic shunt

Supplementary Figure 1. Outcomes of patients with competing risk analysis.



The cumulative incidence of rebleeding (A), OHE (B), shunt dysfunction (C), and mortality (D) of patients in different diameter stents with competing risk analysis.

†Patients in 6mm stents vs 8mm stents; ‡Patients in 6mm stents vs 10mm stents;

§Patients in 8mm stents vs 10mm stents.