Supplementary Table 1, online only. Factors associated to length of stay by the univariate analysis (n = 748)

Variable	β (95% CI)	P
Gender		
Male	Reference	
Female	-3.06 (-5.00- -1.13)	0.002
Age, years	-0.06 (-0.13-0.01)	0.090
Number of historical hospitalizations, times	0.40 (-0.03-0.83)	0.069
Surgery history		
Yes	Reference	
No	-0.33 (-1.75-1.10)	0.652
Vascular disease history		
Yes	Reference	
No	-0.07 (-2.00-1.86)	0.941
Drinking history		
Yes	Reference	
No	-1.28 (-2.81-0.24)	0.100
Smoking history		
Yes	Reference	
No	-1.283 (-2.67-0.21)	0.095
Insurance type		
Out-of-pocket	Reference	
Urban and rural resident medical insurance	-1.09 (-4.84-2.66)	0.570
Social insurance	-0.1 (-3.623-3.36)	0.940
Employee medical insurance	-0.24 (-3.76-3.29)	0.895
Surgical approach		
No surgery	Reference	
Open surgery	8.76 (6.08-11.44)	<0.001
Interventional surgery	2.77 (0.95-4.58)	0.003

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	β (95% CI)	P value
Diseased limb		
Unilateral lower limb	Reference	
Bilateral lower limbs	-0.05 (-1.50-1.41)	0.948
Weight loss		
Yes	Reference	
No	-4.21 (-9.12-0.70)	0.094
Rest pain		
Yes	Reference	
No	0.92 (-0.93, 2.76)	0.330
Fontaine classification		
Class I	Reference	
Class II	0.64 (-2.93-4.21)	0.726
Class III	-2.85 (-8.23-2.52)	0.300
Class IV	0.06 (-4.30-4.42)	0.979
ACCI, scores	-0.05 (-0.51-0.41)	0.824
Urea, mmol/L	-0.12 (-0.37-0.14)	0.362
CRP, mg/L	0 (-0.02-0.01)	0.567
TP, g/L	0.10 (-0.04-0.23)	0.166
LDL-C, mmol/L	-0.35 (-1.10-0.41)	0.371
HDL-C, mmol/L	-0.40 (-2.84-2.05)	0.751
FIB, g/L	0.29 (-0.22-0.79)	0.269
APTT, s	0 (-0.08-0.07)	0.994
TT, s	-0.04 (-0.12-0.03)	0.262
PT-INR	0.52 (-4.25-5.30)	0.830

CI, Confidence interval; *β*, regression coefficients; *ACCI*, age-adjusted Charlson comorbidity index; *CRP*, C-reactive protein; *TP*, total protein; *LDL-C*, low density lipoprotein cholesterol; *HDL-C*, high density lipoproteins cholesterol; *FIB*, fibrinogen; *APTT*, activated partial thromboplastin time; *TT*, thrombin time; *PT-INR*, prothrombin time international normalized ratio.

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Supplementary Table 2, online only. Estimated coefficients for explanatory variables associated with length of stay by generalized linear
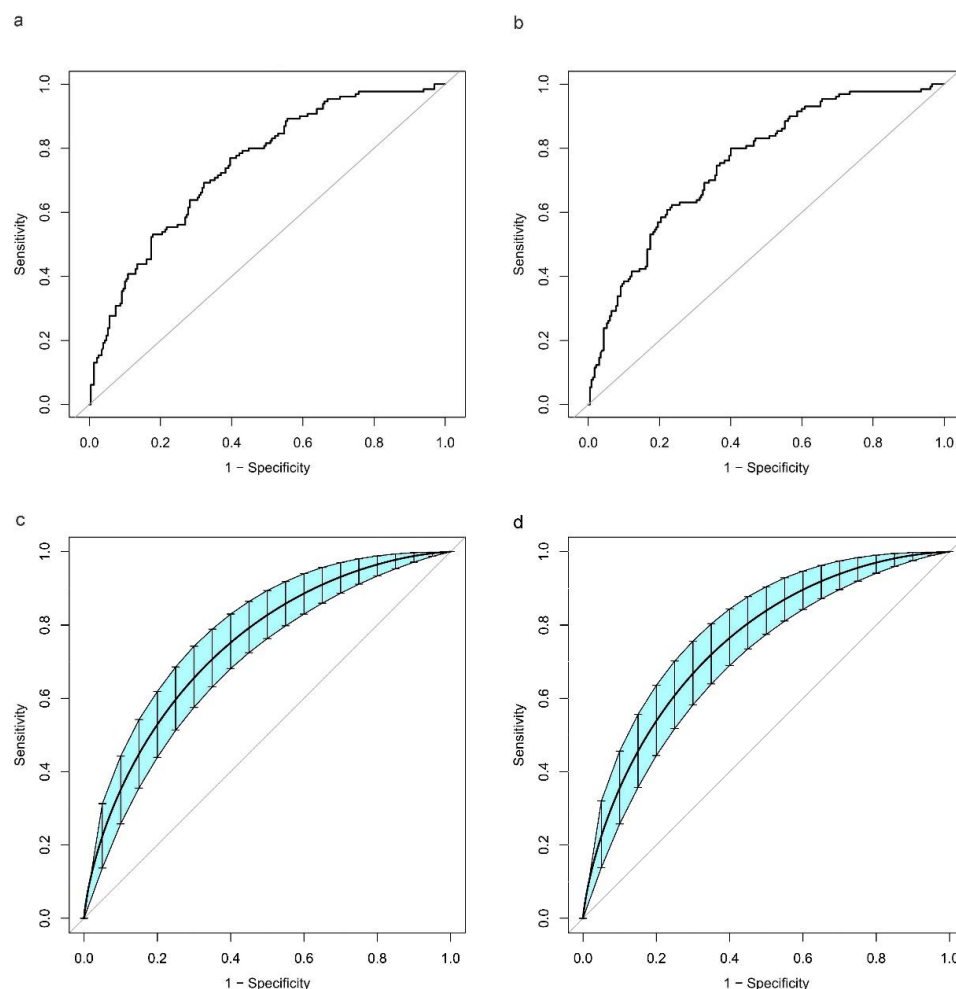
model

Variable	Estimate	SE	t value	95%CI	*P*
Intercept	11.19	7.96	1.41	-4.40-26.79	0.160
Hcy	0.16	0.05	3.03	0.06-0.26	0.002
Gender					
Male	Reference				
Female	-2.05	1.21	-1.69	-4.42-0.32	0.091
Age, years	-0.07	0.05	-1.41	-0.17-0.03	0.160
Number of historical hospitalizations, times	0.14	0.26	0.55	-0.37-0.66	0.582
Surgery history					
Yes	Reference				
No	-1.02	0.88	-1.15	-2.74-0.71	0.249
Vascular disease history					
Yes	Reference				
No	0.72	1.28	0.56	-1.80-3.23	0.578
Drinking history					
Yes	Reference				
No	0.68	0.94	0.72	-1.16-2.52	0.470
Smoking history					
Yes	Reference				

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No	-0.02	0.97	-0.02	-1.92-1.87	0.982
Insurance type					
Out-of-pocket	Reference				
Urban and rural resident medical insurance	-1.25	2.24	-0.56	-5.63-3.13	0.577
Social insurance	1.17	2.07	0.56	-2.89-5.23	0.573
Employee medical insurance	-0.60	2.10	-0.28	-4.71-3.51	0.776
Surgical approach					
No surgery	Reference				
Open surgery	7.88	1.94	4.07	4.08-11.67	<0.001
Interventional surgery	2.21	1.21	1.82	-0.17-4.59	0.070
Diseased limb					
Unilateral lower limb	Reference				
Bilateral lower limbs	0.24	0.81	0.29	-1.35-1.83	0.770
Weight loss					
Yes	Reference				
No	-4.03	3.13	-1.29	-10.17-2.11	0.199
Rest pain					
Yes	Reference				
No	0.30	1.41	0.21	-2.46-3.06	0.830
Fontaine classification					
Class I	Reference				
Class II	-2.35	2.20	-1.07	-6.66-1.97	0.288
Class III	-4.88	3.05	-1.60	-10.86-1.10	0.110

Class IV	-2.73	2.57	-1.06	-7.77-2.31	0.289
ACCI, scores	0.01	0.35	0.03	-0.67-0.69	0.973
Urea, mmol/L	-0.11	0.14	-0.79	-0.38-0.16	0.431
CRP, mg/L	0.01	0.02	0.49	-0.02-0.04	0.621
TP, g/L	0.02	0.07	0.26	-0.13-0.16	0.794
LDL-C, mmol/L	0.02	0.43	0.05	-0.83-0.87	0.961
HDL-C, mmol/L	0.81	1.45	0.56	-2.03-3.65	0.577
FIB, g/L	0.16	0.43	0.36	-0.69-1.00	0.718
APTT, s	-0.03	0.09	-0.40	-0.20-0.13	0.688
TT, s	-0.03	0.04	-0.69	-0.10-0.05	0.491
PT-INR	3.91	3.05	1.28	-2.08-9.89	0.201

Insurance type and surgical approach were coded as binary dummy variables.
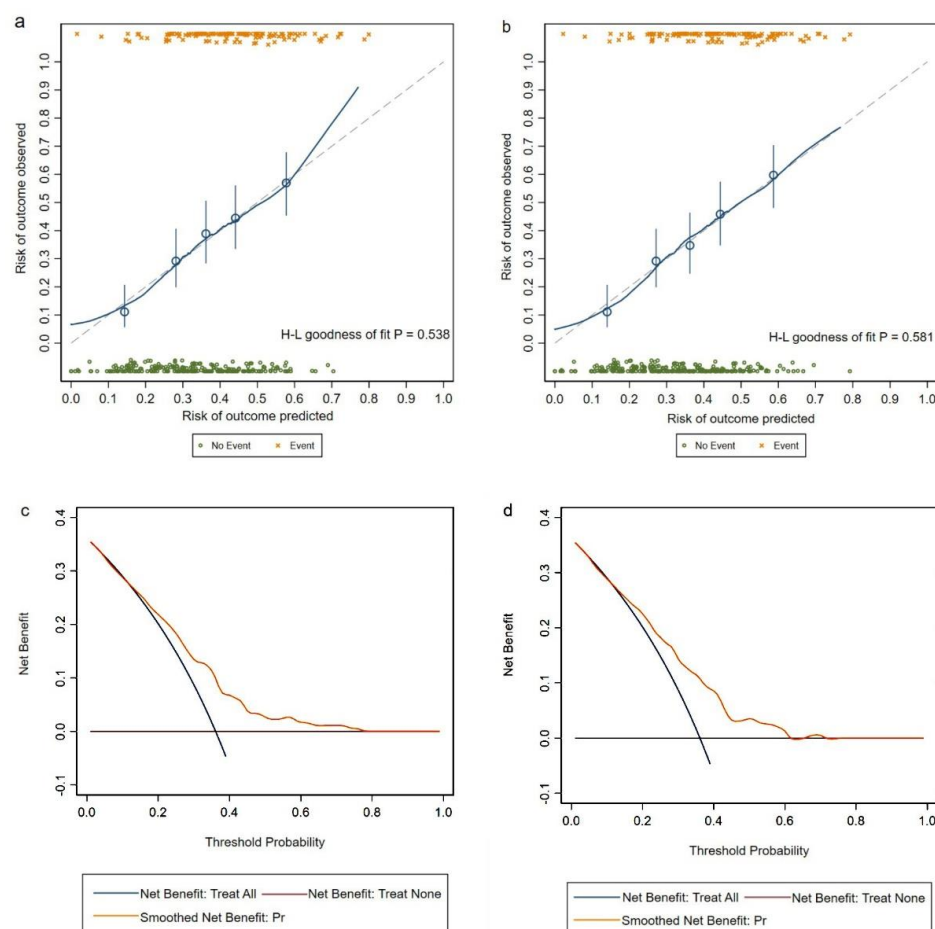
Hcy, homocysteine; *CI*, Confidence interval; *ACCI*, age-adjusted Charlson comorbidity index; *CRP*, C-reactive protein; *TP*, total protein; *LDL-C*, low density lipoprotein cholesterol; *HDL-C*,

high density lipoproteins cholesterol; *FIB*, fibrinogen; *APTT*, activated partial thromboplastin time; *TT*, thrombin time; *PT-INR*, prothrombin time international normalized ratio.

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Supplementary Figure 1, online only. Receiver operating characteristic curves for
predicting a length of stay of > 9 days. (a) Reference model in predicting a LOS of > 9
days in LEAD patients; (b) Reference model adding Hcy level in predicting a LOS of >
9 days in LEAD patients; (c) Reference model in predicting a LOS of > 9 days in LEAD
patients by using bootstrap resampling (500 times); (d) Reference model adding Hcy
level in predicting a LOS of > 9 days in LEAD patients by using bootstrap resampling
(500 times). The variables in the reference model included gender, age, number of
historical hospitalizations, surgical history, vascular disease history, drinking history,
smoking history, insurance type, surgical approach, diseased limb, rest pain, Fontaine

classification, ACCI, Urea, CRP, TP, LDL-C, HDL-C, FIB, APTT, TT, and PT-INR.

LEAD, Lower extremity arterial disease; *Hcy*, homocysteine; *LOS*, length of stay; *ACCI*, age-adjusted Charlson comorbidity index; *CRP*, C-reactive protein; *TP*, total protein; *LDL-C*, low density lipoprotein cholesterol; *HDL-C*, high density lipoproteins cholesterol; *FIB*, fibrinogen; *APTT*, activated partial thromboplastin time; *TT*, thrombin time; *PT-INR*, prothrombin time international normalized ratio.

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Supplementary Figure 2, online only. Calibration plots and decision curve analysis for predicting a length of stay of > 9 days. (a) Calibration plot: reference model in predicting a LOS of > 9 days in LEAD patients; (b) Calibration plot: reference model adding Hcy level in predicting a LOS of > 9 days in LEAD patients. The prediction accuracy increased when the solid line was closer to the dotted line. (c) Decision curve analysis: reference model in predicting a LOS of > 9 days in LEAD patients; (d) Decision curve analysis: reference model adding Hcy level in predicting a LOS of > 9 days in LEAD patients. The orange solid line is from the prediction model, the blue line is for all patients with LOS of > 9 days, and the red horizontal line indicates no patients

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with LOS of > 9 days. The graph depicts the expected net benefit per patient relative to the prediction of LOS of > 9 days risk. The net benefit increases as the model curve is extended. The variables in the reference model included gender, age, number of historical hospitalizations, surgical history, vascular disease history, drinking history, smoking history, insurance type, surgical approach, diseased limb, rest pain, Fontaine classification, ACCI, Urea, CRP, TP, LDL-C, HDL-C, FIB, APTT, TT, and PT-INR. *LEAD*, Lower extremity arterial disease; *Hcy*, homocysteine; *LOS*, length of stay; *ACCI*, age-adjusted Charlson comorbidity index; *CRP*, C-reactive protein; *TP*, total protein; *LDL-C*, low density lipoprotein cholesterol; *HDL-C*, high density lipoproteins cholesterol; *FIB*, fibrinogen; *APTT*, activated partial thromboplastin time; *TT*, thrombin time; *PT-INR*, prothrombin time international normalized ratio.