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Figure S1. A and B: Comparison of Kaplan–Meier curves in OS and RFS between the two cohorts. C: Kaplan–Meier curve of the stratified EHBH model in the training cohort
D: Kaplan–Meier curve of the stratified EHBH model in the internal validation cohort.

Figure S2. Contour plot of one- and five-year survival probabilities.

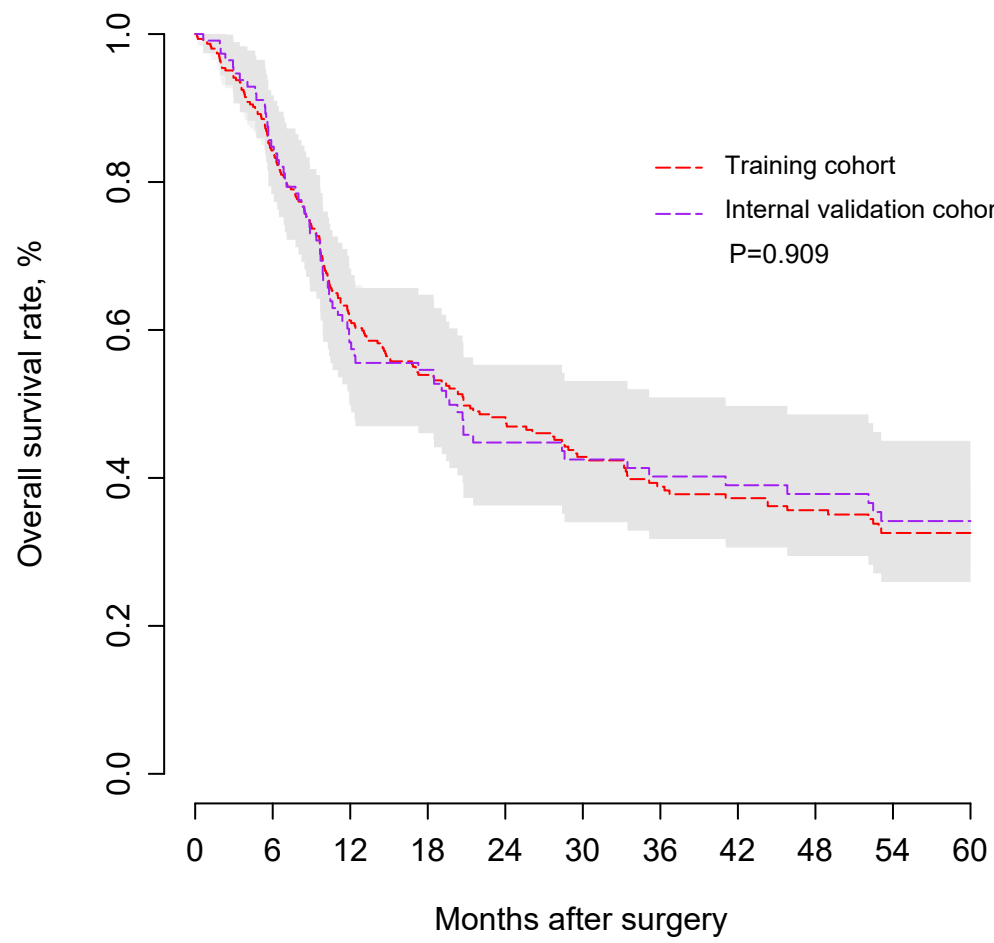
Figure S3. ROC curves of nomogram score in predicting the death of training cohort.

Figure S4. Predicted probability of death in different models.

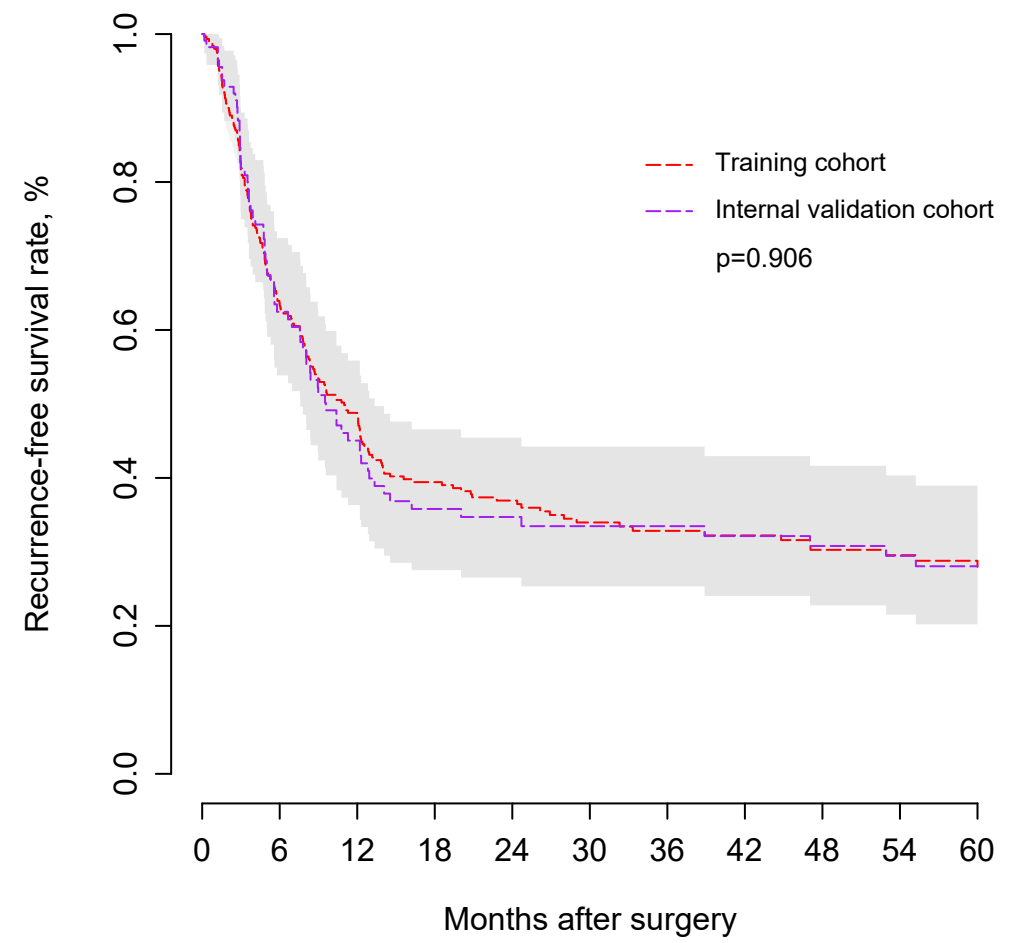
Table S1. Univariable and multivariable analyses of RFS.

Table S2. Comparison of the EHBH model and other clinical staging systems.

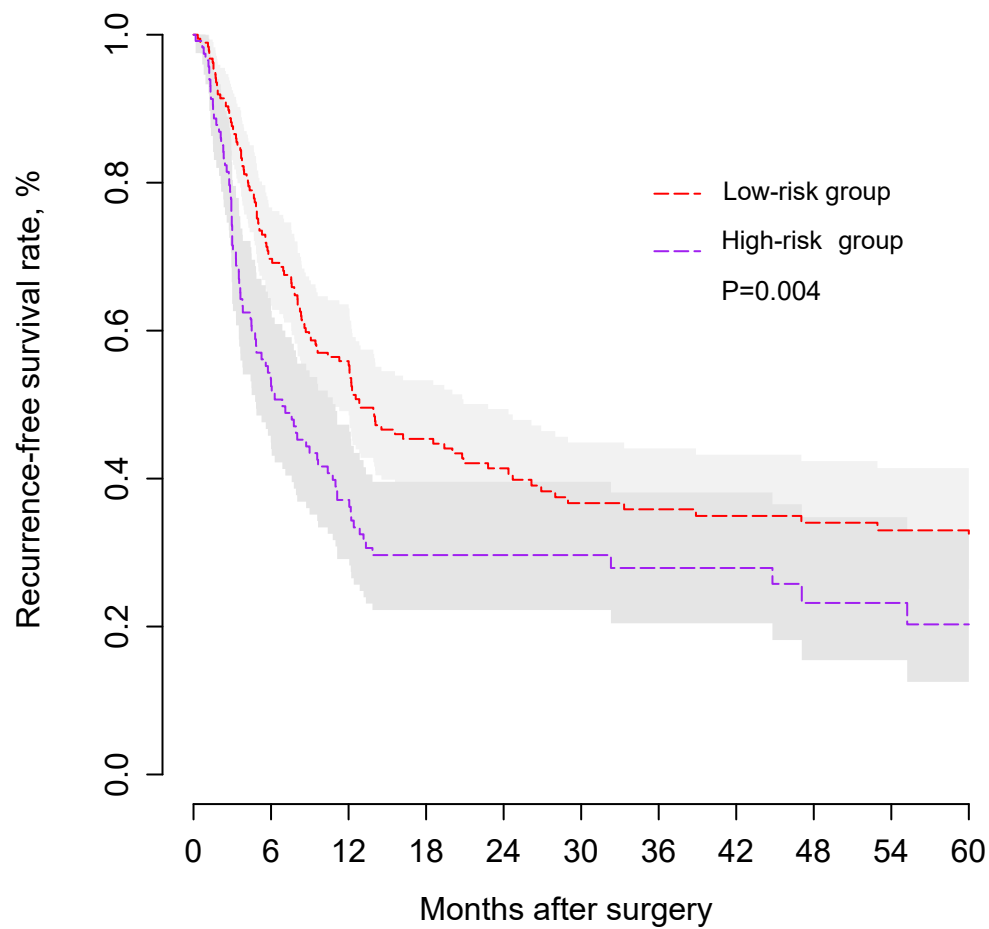
A: K-M curves of OS in two cohorts



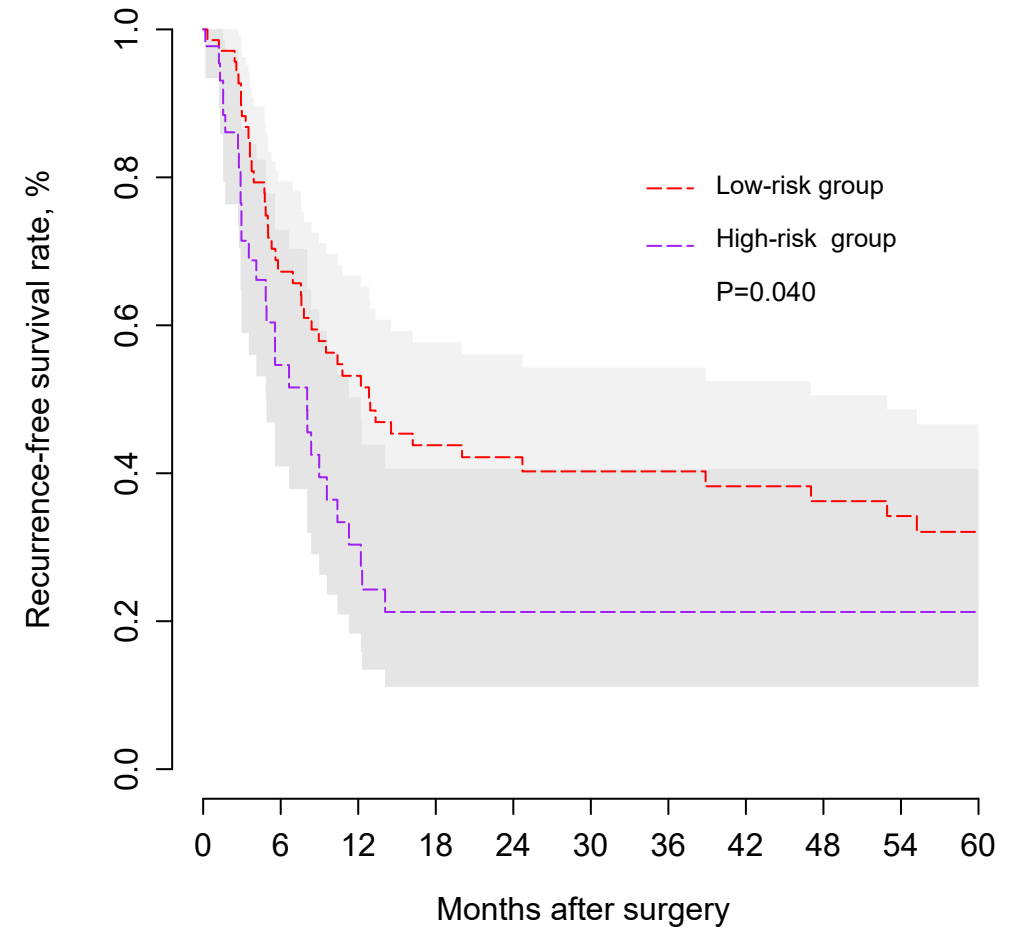
B: K-M curves of RFS in two cohorts



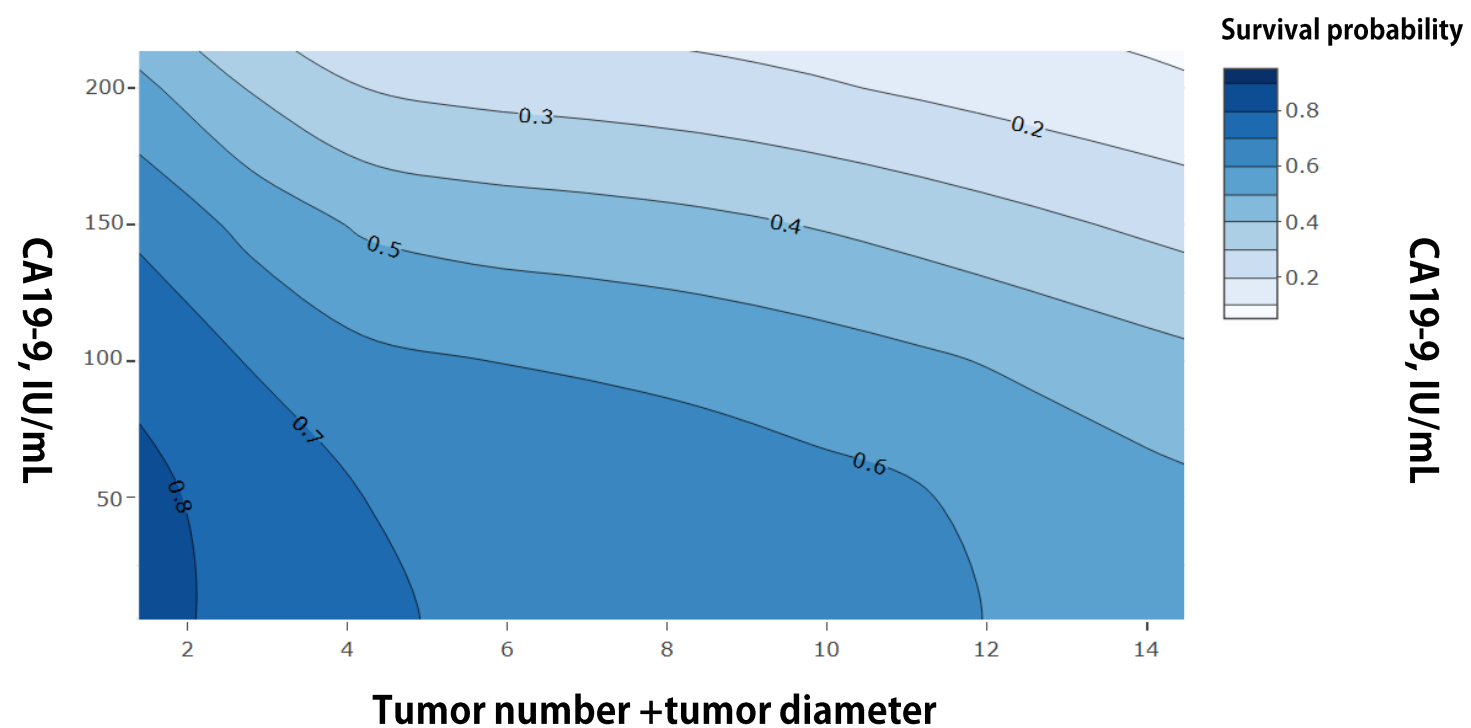
C: K-M curves of RFS in training cohort



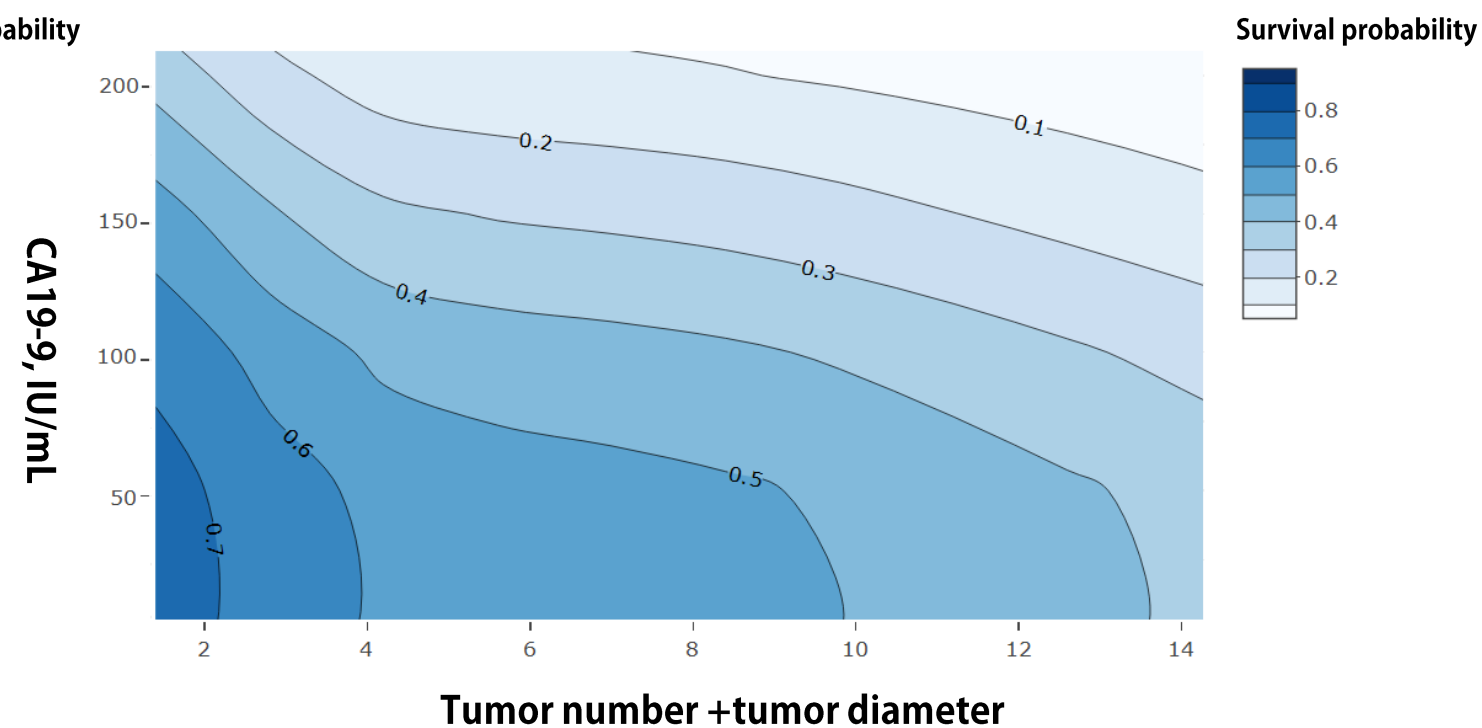
D: K-M curves of RFS in internal validation cohort



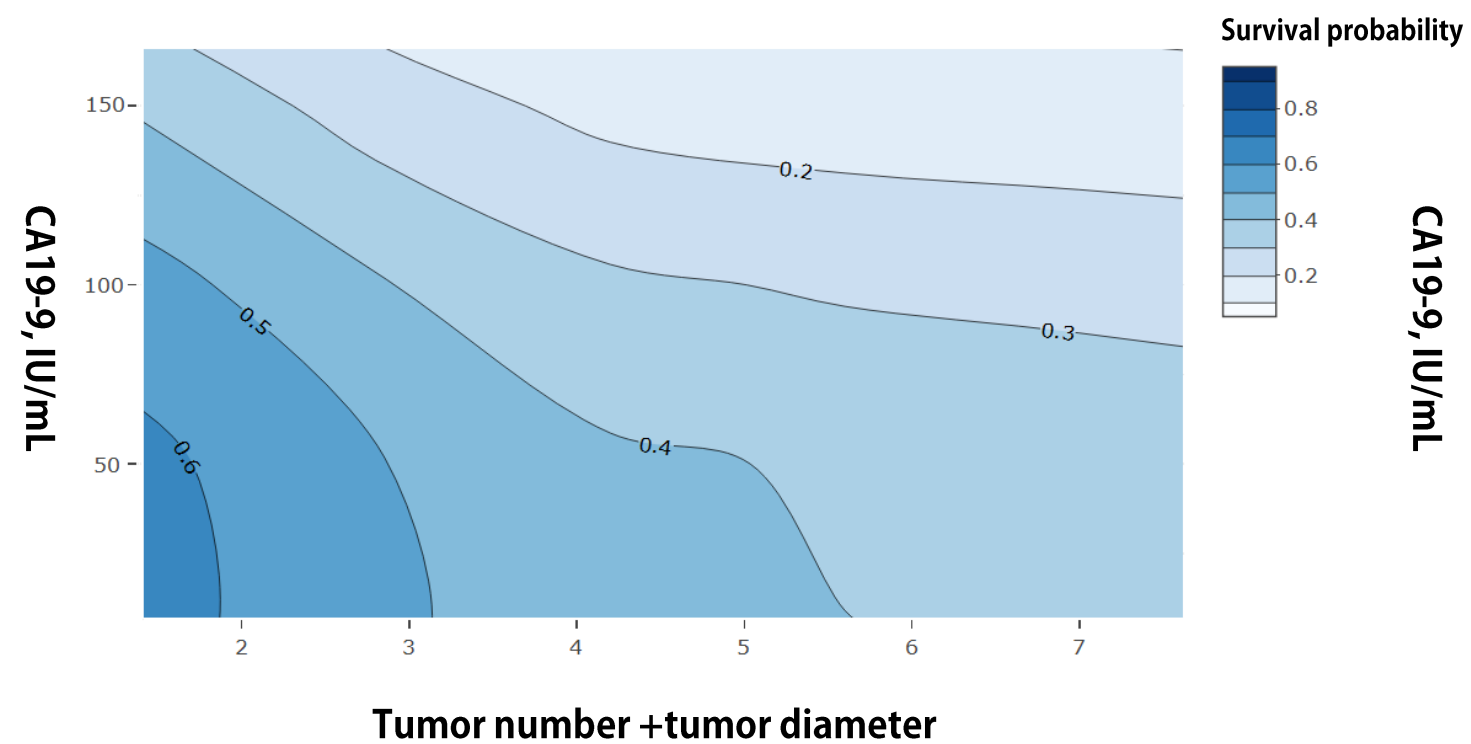
A: 1-year overall survival rate of cirrhotic ICC without satellite nodules



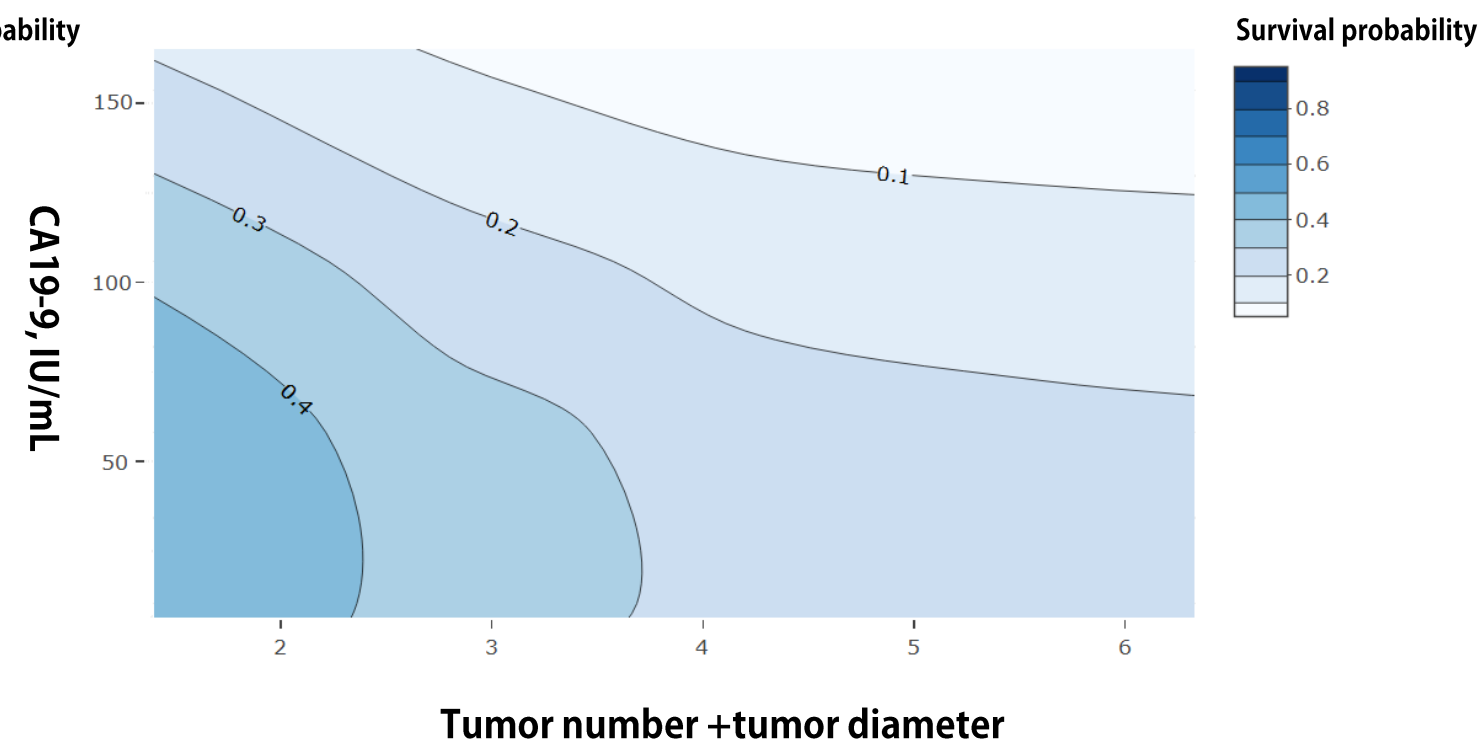
B: 1-year overall survival rate of cirrhotic ICC with satellite nodules

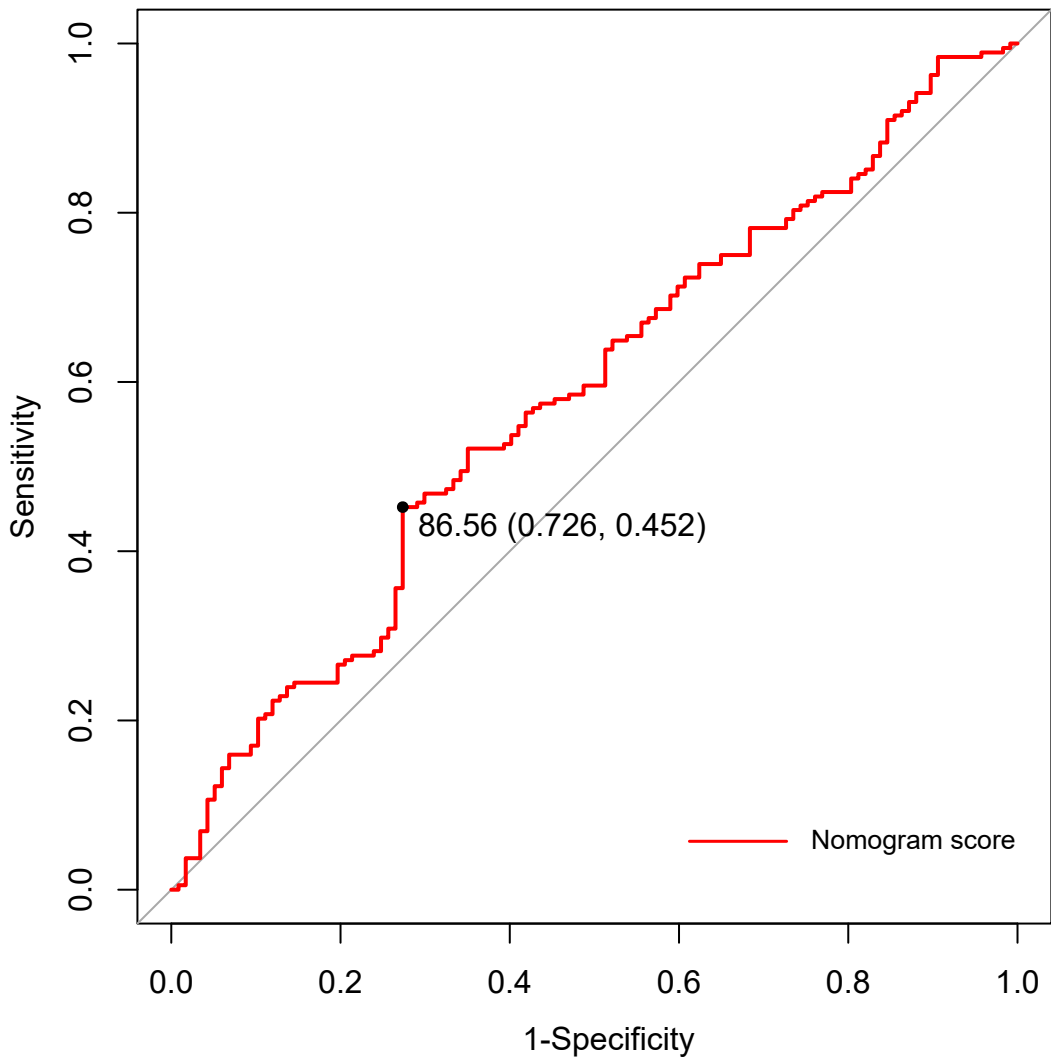


C: 5-year overall survival rate of cirrhotic ICC without satellite nodules



D: 5-year overall survival rate of cirrhotic ICC with satellite nodules





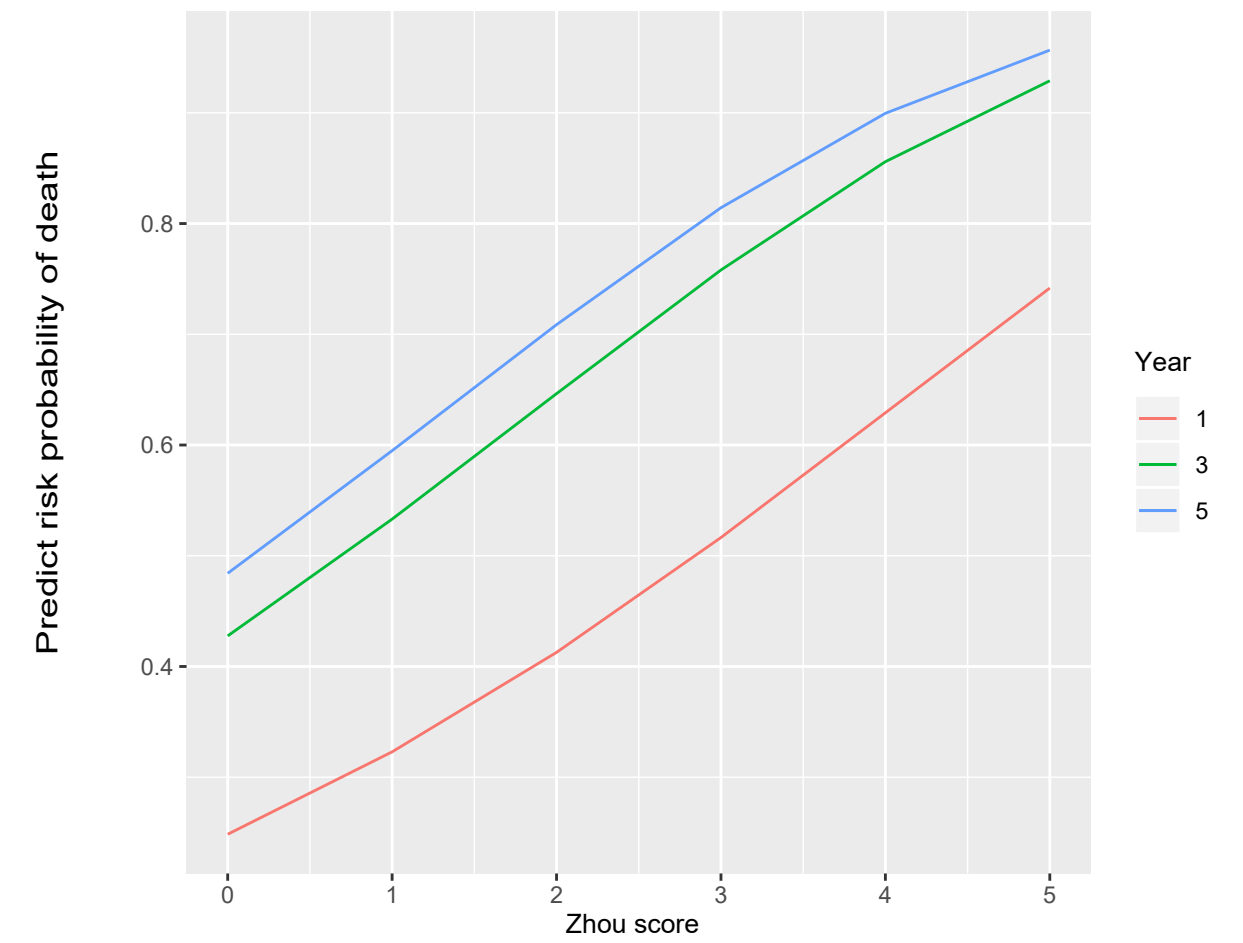
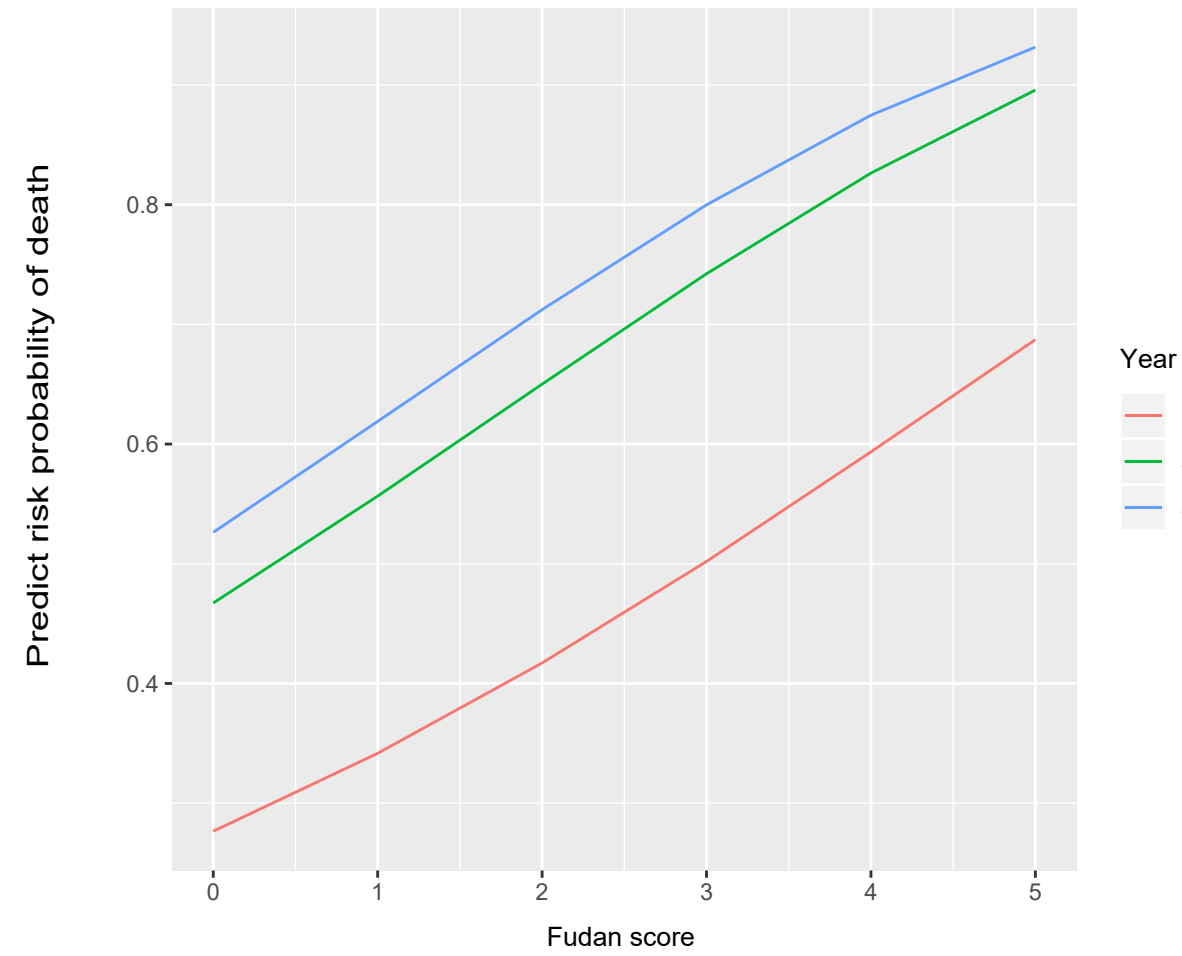
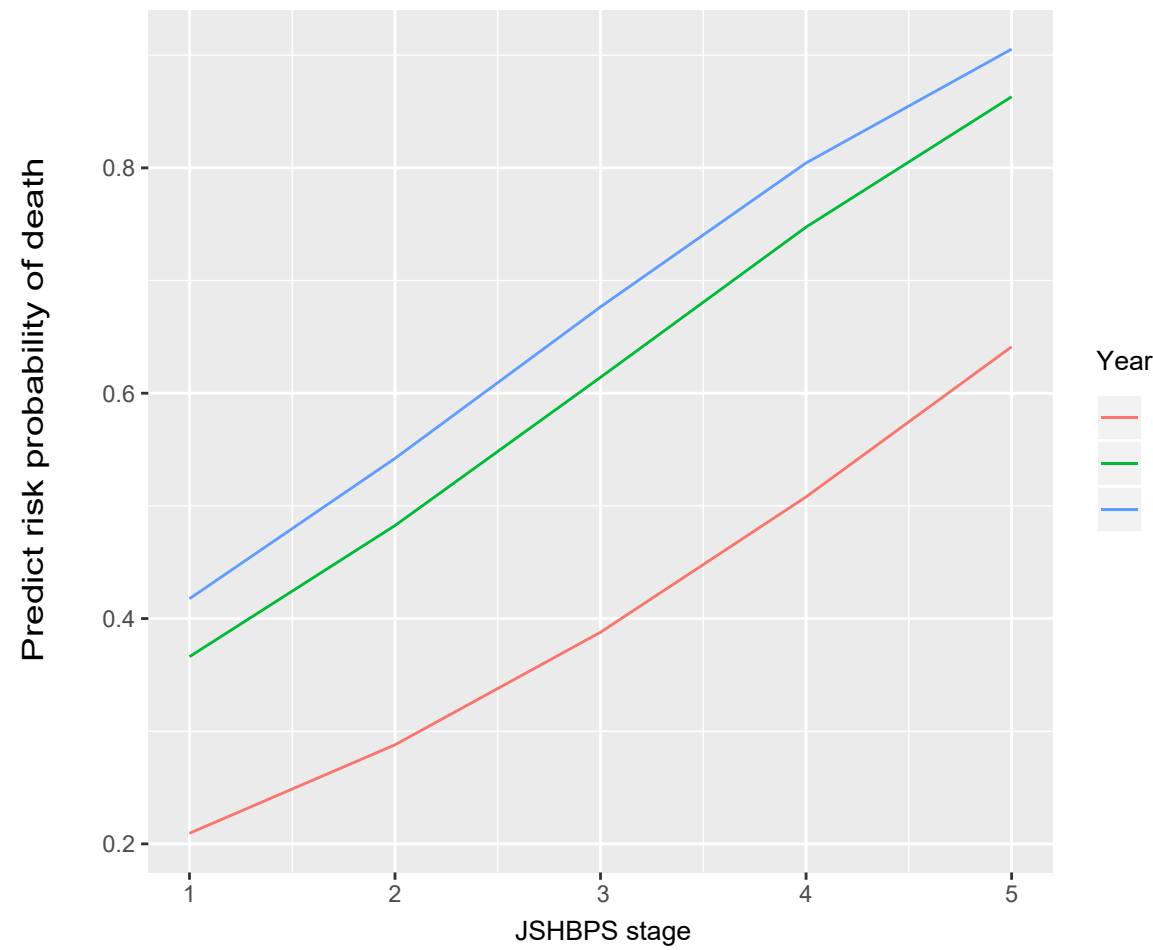
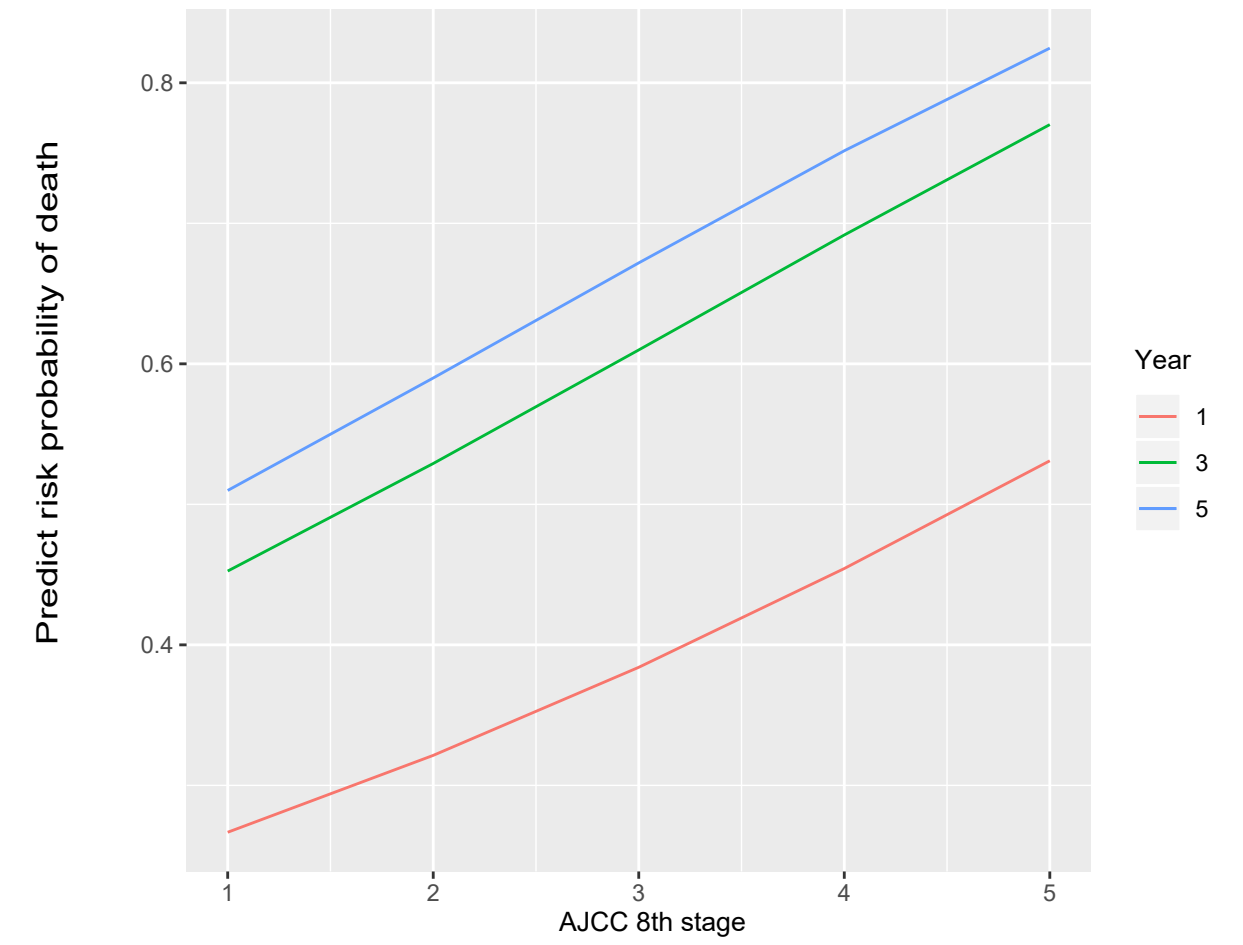
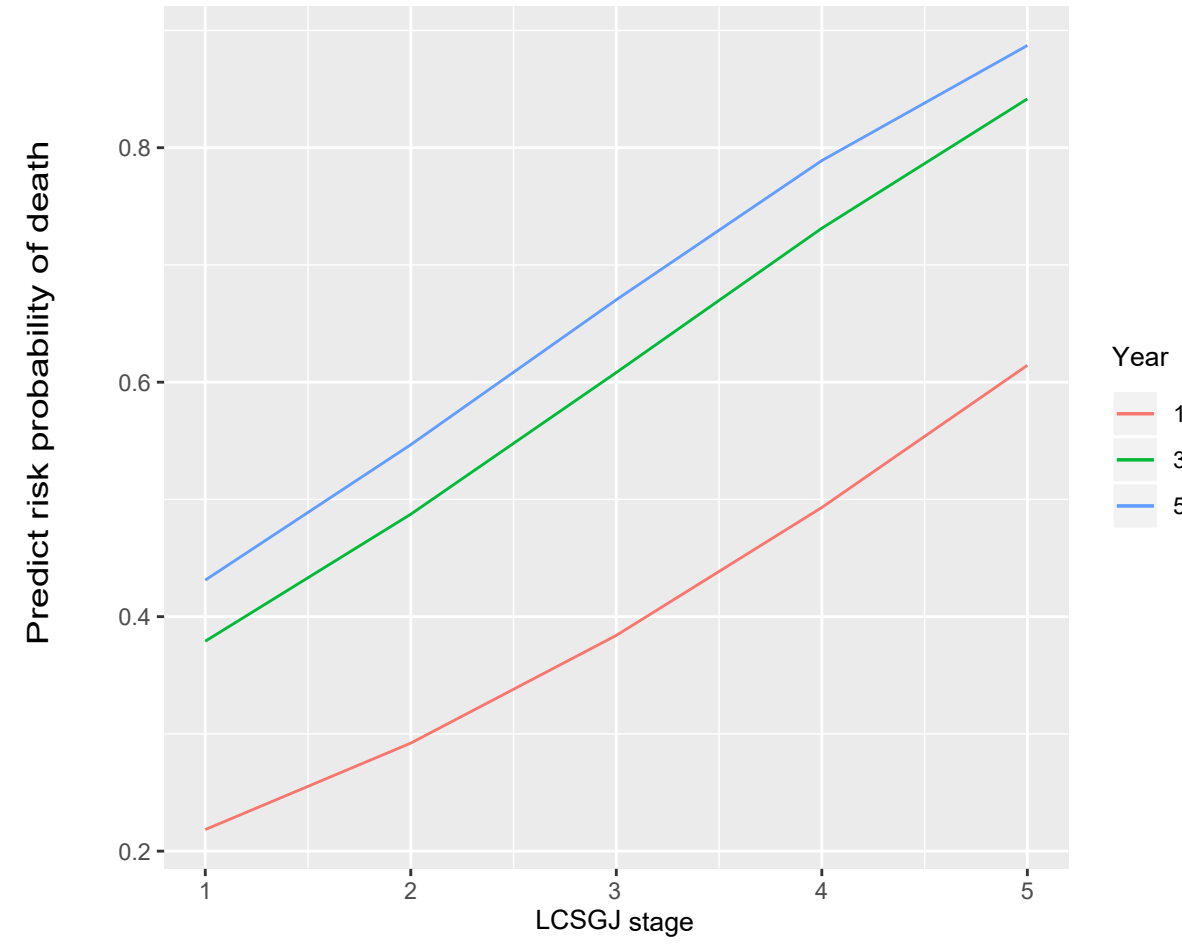
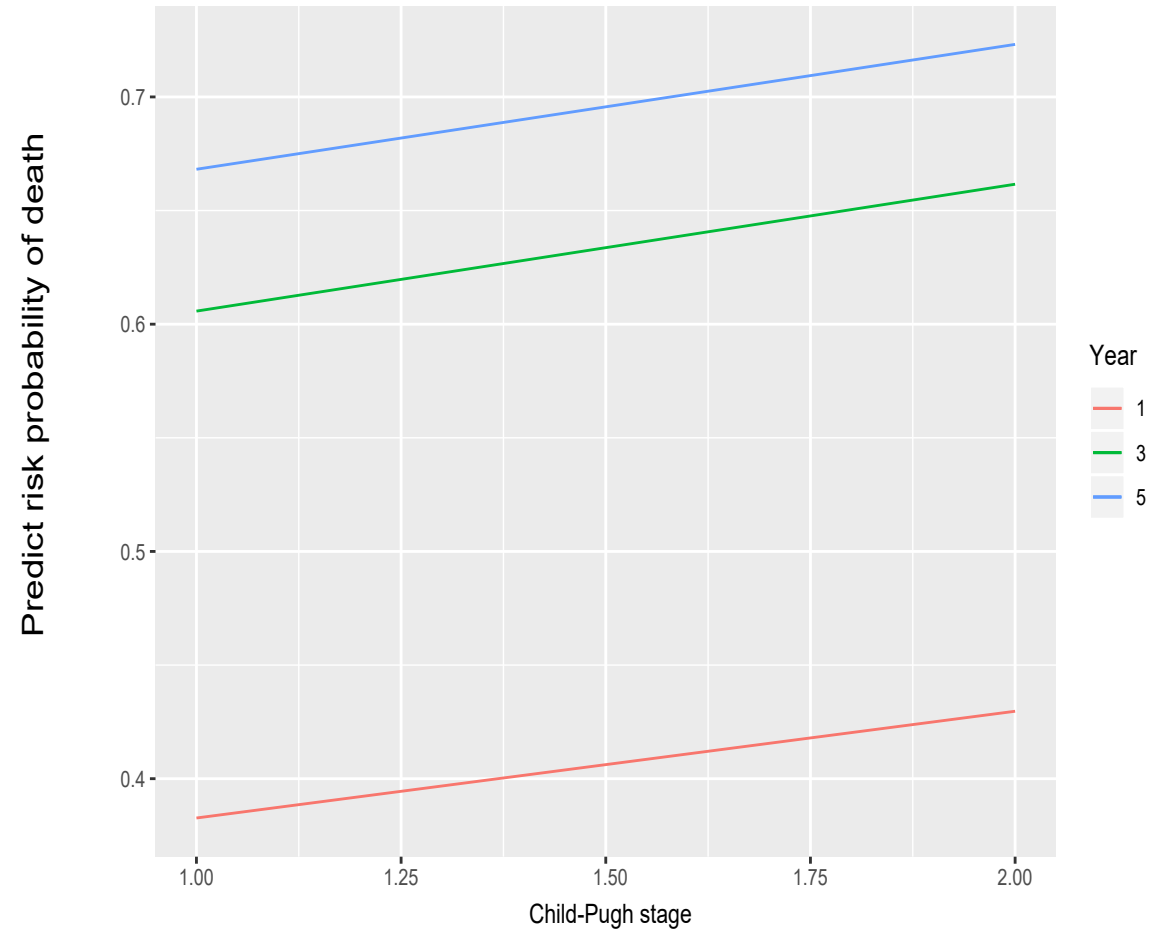


Table S1. Univariable and multivariable analyses of RFS

Variable	Univariable analysis			Multivariable analysis		
	HR	95%CI	<i>P</i> value	HR	95%CI	<i>P</i> value
Age, year	1.002	0.989 - 1.015	0.787			
Gender, Male vs. Female	1.253	0.817 - 1.921	0.301			
BMI	0.981	0.946 - 1.017	0.297			
CSPH, Yes vs. No	1.237	0.918 - 1.667	0.161			
Diabetes, Yes vs. No	1.275	0.740 - 2.196	0.380			
HBsAg, Yes vs. No	0.955	0.640 - 1.425	0.823			
Anti-HCV, Yes vs. No	0.301	0.075 - 1.215	0.074			
TBIL, mg/dL	0.981	0.916 - 1.052	0.593			
ALB, g/L	0.997	0.969 - 1.027	0.854			
ALT, IU/L	1.000	0.999 - 1.001	0.338			
AST, IU/L	1.000	0.999 - 1.001	0.161			
GGT, IU/L	1.000	0.999 - 1.001	0.904			
PT, second	1.070	0.943 - 1.214	0.293			
PLT, ×10 ⁹ /L	1.000	0.998 - 1.002	0.919			
AFP, µg/L	1.000	0.999 - 1.001	0.592			
CEA, µg/L	1.003	1.001 - 1.005	0.001			
CA19-9, IU/mL	1.001	0.999 - 1.002	<0.001	1.001	1.000-1.002	0.001
Child-Pugh grade, B vs. A	0.787	0.457 - 1.356	0.388			

Total tumor diameter, cm	1.084	1.044 - 1.125	<0.001	1.055	1.013-1.104	0.010
Tumor distribution, Bilateral vs. Unilateral	1.096	0.743 - 1.617	0.643			
No. of tumor, per	1.478	1.311 - 1.667	<0.001	1.412	1.241-1.608	<0.001
Satellite nodules, Yes vs. No	1.579	1.134 - 2.197	0.006	1.607	1.151-2.246	0.005
Tumor capsule, Yes vs. No	0.980	0.784 - 1.225	0.862			

Abbreviations: CSPH, clinically significant portal hypertension; BMI, Body Mass Index; HBsAg, hepatitis B surface antigen; HCV, hepatitis C virus; TBIL, total bilirubin; ALB, albumin; ALT, alanine transaminase; AST, aspartate aminotransferase; GGT, gamma-glutamyl transpeptidase; PT, prothrombin time; PLT, platelet; AFP, alpha-fetoprotein; CEA, carcinoembryonic antigen; CA19-9, carbohydrate antigen 19-9.

Table S2. Comparison of the EHBH model and other clinical staging systems

	C-index (95%CI)	Change (95%CI)	P change
EHBH model	0.710 (0.673-0.748)		
Child-Pugh stage	0.519 (0.481-0.558)	-0.191 (-0.244 — -0.140)	<0.0001
LCSGJ stage	0.579 (0.537-0.620)	-0.131 (-0.170 — -0.093)	<0.0001
AJCC 8th stage	0.589 (0.551-0.628)	-0.121 (-0.159 — -0.084)	<0.0001
JSHBPS stage	0.589 (0.548-0.630)	-0.121 (-0.158 — -0.048)	<0.0001
Fudan score	0.594 (0.552-0.636)	-0.116 (-0.162 — -0.074)	<0.0001
Zhou score	0.598 (0.557-0.639)	-0.112 (-0.153 — -0.072)	<0.0001

Abbreviation: LCSGJ, liver cancer study group of Japan; AJCC: American Joint Committee on Cancer; JSHBPS, Japanese Society of Hepato-Biliary-Pancreatic Surgery.