

Table S1. Clinical features of patients with HCC in the validation cohort

	n=100	%
Age (year)	50(42-78)	
Sex		
male	72	72.0%
female	28	28.0%
HbsAg		
negative	12	12.0%
positive	88	88.0%
ALT (U/L)		
≤45	70	70.0%
>45	30	30.0%
AFP (ng/ml)		
≤13.6	45	45.0%
>13.6	55	55.0%
Cirrhosis		
absent	15	15.0%
present	85	85.0%
Vascular invasion		
absent	34	34.0%
present	66	66.0%
Tumor multiplicity		
solitary	69	69.0%
multiple	31	31.0%
Tumor size (cm)		
≤5	62	62.0%
>5	38	38.0%
Edmondson grade		
I-II	57	57.0%
III-IV	43	43.0%
GLB (g/L)		
≤ 32.7	46	46%
> 32.7	54	54%
ALB(g/L)		
≤ 40.6	49	49%
> 40.6	51	51%
AGR		
≤ 1.4	40	40%
> 1.4	60	60%

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3 **Table S2. Univariate and multivariate survival analyses evaluating GLB, ALB, and AGR**
 4 **influencing CSS in HCC of the validation cohort.**

Variable	Univariate analysis			Multivariate analysis	
	5-year CCS	Log rank χ^2 test	P	HR(95%CI)	P
Sex		0.373	0.469		NI
	Male	29.4%			
	Female	25.3%			
Age		0.159	0.308		NI
	≤60	30.6%			
	>60	28.5%			
HbsAg		0.371	0.570		NI
	negative	28.1%			
	positive	26.6%			
ALT (U/L)		0.775	0.750		NI
	≤45	31.2%			
	>45	27.7%			
AFP (ng/ml)		0.833	0.375		NI
	≤13.6	29.5%			
	>13.6	25.7%			
Cirrhosis		2.433	0.085		NI
	absent	30.5%			
	present	25.9%			

Vascular invasion			8.235	0.012		0.004
	absent	22.4%			Reference	
	present	35.1%			2.054 (1.431-3.115)	
Tumor multiplicity			17.832	0.000		0.000
	solitary	21.2%			Reference	
	multiple	47.1%			0.322 (0.239-0.562)	
Tumor size (mm)			25.815	0.000		0.000
	≤ 5	36.1%			Reference	
	> 5	14.7%			2.228 (1.493-3.159)	
Edmondson grade			25.446	0.000		0.000
	I-II	37.7%			Reference	
	III-IV	15.5%			2.663 (1.794-4.155)	
GLB (g/L)			9.956	0.002		0.032
	≤ 32.7	29.3%			Reference	
	> 32.7	15.3%			1.376 (1.049-2.795)	
ALB (g/L)			10.038	0.003		0.039
	≤ 40.6	22.2%			Reference	
	> 40.6	40.1%			0.622 (0.439-0.972)	
AGR			13.172	0.000		0.194
	≤ 1.4	24.3%			Reference	
	> 1.4	38.7%			0.711 (0.419-1.134)	

5 NI: not included in multivariate survival analysis

6 HR: hazard ratio, CI: confidence interval, GLB: globulin, ALB: albumin, AGR:

7 albumin/globulin ratio

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