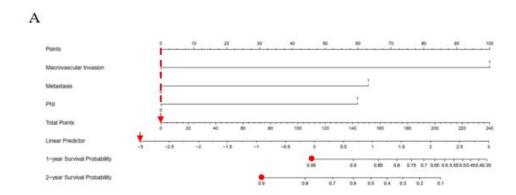
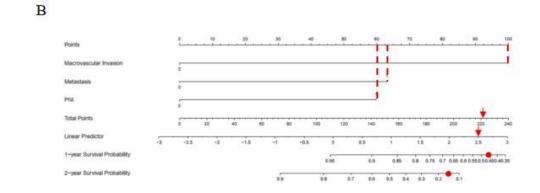


Supplementary Figure 1 Schematic of the method used to determine the optimal cutoff points for survival prediction. A: CRP; B: CAR; C: LCR; D: LMR; E: NLR; F: PLR; G: PNI; H: SII.

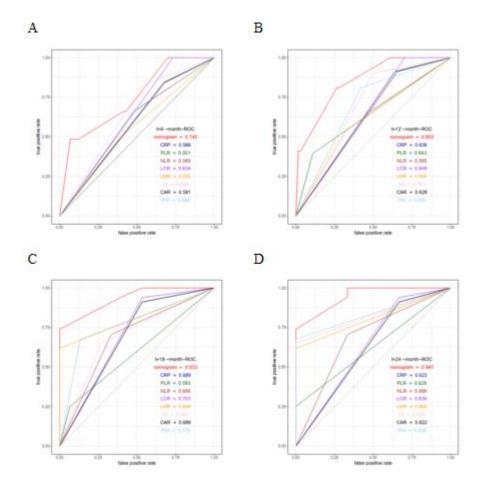


	Macrovascula r invasion	Metastasis	ALB, g/L	Lymphocyte count (×109/L)	PNI	1-year Survival Probability	2-year Survival Probability
Patient 1	no	no	45.6	1.46	52.9	95%	90%
Points	0	0	<u> 2120</u> 5	200	0	Total Points:	Linear Predictor: -3



	Macrovascula r invasion	Metastasis	ALB, g/L	Lymphocyte count (×109/L)	PNI	1-year Survival Probability	2-year Survival Probability
Patient 2	yes	yes	46.4	0.47	48.75	45%	15%
Points	100	62.5	-	<u>(00.2</u>)	60	Total Points: 222.5	Linear Predictor: 2.5

Supplementary Figure 2 Examples nomograms for predicting the survival probabilities of patients. A: Patient 1; B: Patient 2.



Supplementary Figure 3 Time-dependent receiver operating characteristic curves showing the survival predictions of the nomogram and different inflammation-based scores in HCC patients after lenvatinib therapy. A: 6 months; B: 12 months; C: 18 months; D: 24 months.

Supplementary Table 1 Combination therapies with lenvatinib

Combination therapy	<i>N</i> = 144
Programmed Death-1 inhibitors	138
HAIC	128
TACE	28

HAIC: Hepatic infusion chemotherapy; TACE: Transcatheter arterial chemoembolization.

Supplementary Table 2 Comparison of AUROC values for the nomogram and different inflammation-based scores

Metrics	6-month	12-month	18-month	24-month		
	AUROC	AUROC	AUROC	AUROC		
Nomogram	0.76	0.85 (79.84–90.76)	0.93 (89.61–96.99)	0.95 (89.74–99.66)		
	(64.58-84.42)					
CRP	0.59	0.64 (58.40-68.80)	0.69 (61.66-76.14)	0.62 (48.16–76.24)		
	(51.03-66.17)					
PLR	0.50	0.64 (55.41–73.19)	0.59 (53.12-65.48)	0.63)57.33-67.87)		
	(42.66–57.54)					
NLR	0.59	0.60 (51.03-68.97)	0.69 (59.91-77.29)	0.69 (53.61–83.59)		
	(48.88-68.92)					
LCR	0.63	0.65 (61.93–67.67)	0.70 (63.18-77.42)	0.64 (49.62–77.58)		
	(61.34-65.46)					
LMR	0.55	0.61 (51.81-69.99)	0.81 (74.49–87.31)	0.81 (74.49-87.31)		
	(44.81–65.79)					
SII	0.65	0.70 (64.42–75.88)	0.69 (60.62–77.98)	0.83 (76.08-89.12)		
	(56.18–72.82)					
CAR	0.58	0.63 (57.61–67.99)	0.69 (61.66-76.14)	0.62 (48.16-76.24)		

(50.54-65.66)

PNI 0.59 0.70 (62.57-76.43) 0.77 (69.41-84.99) 0.84 (77.37-90.23) (49.38-69.42)

Values are presented as the AUROC (95% confidence interval).

AUROC: Area under the receiver operating characteristic curve; CRP: C-reactive protein; PLR: Platelet-to-lymphocyte ratio; NLR: Neutrophil-to-lymphocyte ratio; LCR: Lymphocyte-to-C-reactive protein ratio; LMR: Lymphocyte-to-monocyte ratio; SII: Systemic immune-inflammation index; CAR: C-reactive protein-to-albumin ratio; PNI: Prognostic nutritional index.