

Table S1 Clinical and pathological characteristics in 702 colorectal cancer patients.

Variables	Categories	No. of patients (%)
Gender	Male	440(62.7)
	Female	262(37.3)
Age	≤60years	313(44.6)
	>60years	389(55.4)
Tobacco	Yes	120(17.1)
	No	582(82.9)
Alcohol	Yes	63(9.0)
	No	639(91.0)
Hypertension	Yes	143(20.4)
	No	559(79.6)
Diabetes	Yes	52(7.4)
	No	650(92.6)
Tumor stage	I	91(13.0)
	II	309(44.0)
	III	302(43.0)
Depth of invasion	T1-T2	107(15.2)
	T3-T4	595(84.8)
Lymph node	N0	400(57.0)
	N1-N2	302(43.0)
Tumor size	≤5cm	442(63.0)
	>5cm	260(37.0)
Differentiation	G1-G2	627(89.3)
	G3-G4	75(10.7)
Chemotherapy	Yes	464(66.1)
	No	238(33.9)
Fib	mg/L	3.18(1.12-6.40)
Alb	g/L	39.36(13.60-53.60)
pre-Alb	mg/L	190.05(17.10-463.50)
FPR		16.15(4.32-216.37)
AFR		12.66(3.54-37.14)
CEA	≤5 ng/mL	424(60.4)
	>5 ng/mL	210(29.9)
CA199	NA	68(9.7)
	≤37 U/mL	538(76.6)
	>37 U/mL	94(13.4)
CCI score	NA	70(10.0)
	0	323(62.0)
	1	152(29.2)
CFI score	2	46(8.8)
	0	228(43.6)
	1	209(40.0)
	2	86(16.4)

	0	210(40.3)
CCF score	1	190(36.5)
	2	97(18.6)
	3	24(4.6)

Abbreviation: Fib: fibrinogen; Alb: albumin; pre-Alb: pre-albumin; AFR: Alb/Fib ratio; FPR: Fib/pre-Alb ratio; CEA: carcinoembryonic antigen; CA199: carbohydrate antigen 19-9; NA: not available; CCI: CEA-CA199 score; CFI: CEA- FPR score; CCF: CEA-CA199-FPR score.

Table S2 The association between patients' pathological data and inflammatory biomarkers

Variables	tumor stage		<i>p</i>	tumor grade		<i>p</i>	Depth of invasion		<i>p</i>	Lymph node		<i>p</i>	tumor size		<i>p</i>
	I-II	III-IV		G1-G2	G3-G4		T1-T2	T3-T4		N0	N1-N2		<5	>5	
FPR	15.44(11.42-22.40)	17.47(11.80-27.35)	0.011	16.26(11.69-24.21)	14.94(9.92-25.27)	0.258	12.39(9.63-15.70)	17.41(12.37-26.19)	0.000	15.44(11.42-22.40)	17.48(11.80-27.35)	0.011	14.07(10.79-19.94)	22.73(14.98-34.20)	0.000
AFR	12.89(10.34-15.58)	12.22(9.77-16.09)	0.182	12.63(10.04-15.81)	12.83(10.36-15.83)	0.608	14.37(12.15-17.26)	12.20(9.93-15.55)	0.000	12.89(10.34-15.58)	12.22(9.77-16.09)	0.182	13.72(11.17-16.33)	10.84(8.63-13.84)	0.000
Fib (g/l)	3.10(2.52-3.61)	3.25(2.51-3.92)	0.099	3.17(2.51-3.72)	3.25(2.56-3.70)	0.875	2.87(2.31-3.42)	3.23(2.58-3.84)	0.000	3.10(2.52-3.61)	3.25(2.51-3.92)	0.099	2.93(2.45-3.52)	3.46(2.86-4.13)	0.000
Alb (g/l)	39.18(36.00-42.10)	39.60(36.62-42.00)	0.550	39.20(36.08-42.06)	39.64(37.00-42.30)	0.292	41.31(38.59-43.78)	39.08(35.80-41.78)	0.000	39.18(36.00-42.10)	39.60(36.62-42.00)	0.550	40.00(37.24-42.59)	37.93(34.80-40.95)	0.000
pre-Alb (mg/l)	195.3(148.0-242.9)	183.7(133.1-230.7)	0.051	188.3(138.3-236.5)	209.4(143.7-253.9)	0.173	218.7(177.6-278.3)	183.8(133.1-230.9)	0.000	195.3(148.0-242.9)	183.7(133.1-230.7)	0.051	205.6(159.2-247.5)	156.2(113.5-214.4)	0.000

*Normality test procedure indicated that these data don't follow normal distribution. The variables were presented by the median (25%-75% quartile). Difference between groups was tested by Mann-Whitney U.

Table S3 Univariate and multivariate analyses of CCI, CFI and CCF for three-year overall survival in CRC by Cox regression model.

Ratio	Score	Univariate analysis			Multivariate analysis		
		HR	(95% CI)	<i>p</i>	HR	(95% CI)	<i>p</i>
CCI	0						
	1	2.495	1.509-4.125	<0.001	2.289	1.375-3.811	0.001
	2	5.926	3.348-10.489	<0.001	5.612	3.115-10.111	<0.001
CFI	0						
	1	3.021	1.633-5.588	<0.001	2.748	1.468-5.146	0.002
	2	6.957	3.686-13.134	<0.001	5.904	3.088-11.289	<0.001
CCF	0						
	1	2.770	1.413-4.125	0.003	2.578	1.302-5.103	0.007
	2	5.902	2.999-11.614	<0.001	4.753	2.366-9.552	<0.001
	3	12.082	5.405-27.007	<0.001	11.518	5.049-26.041	<0.001

Abbreviation: HR: hazard ratio; CI: confidence interval; CCI: CEA-CA199 score; CFI: CEA- FPR score; CCF: CEA-CA199-FPR score.

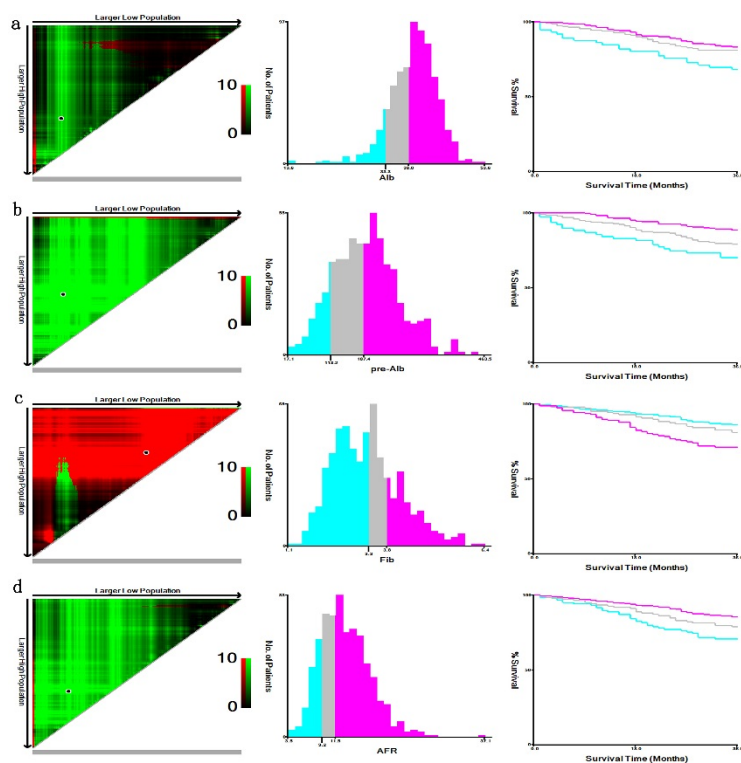


Figure S1 The X-tile plots of preoperative circulating Alb (a), pre-Alb (b), Fib (c) and AFR (d) in 702 surgically resected CRC patients.

Abbreviations: AFR, albumin-to-fibrinogen ratio; Alb, albumin; Fib, fibrinogen; pre-Alb, pre-albumin.

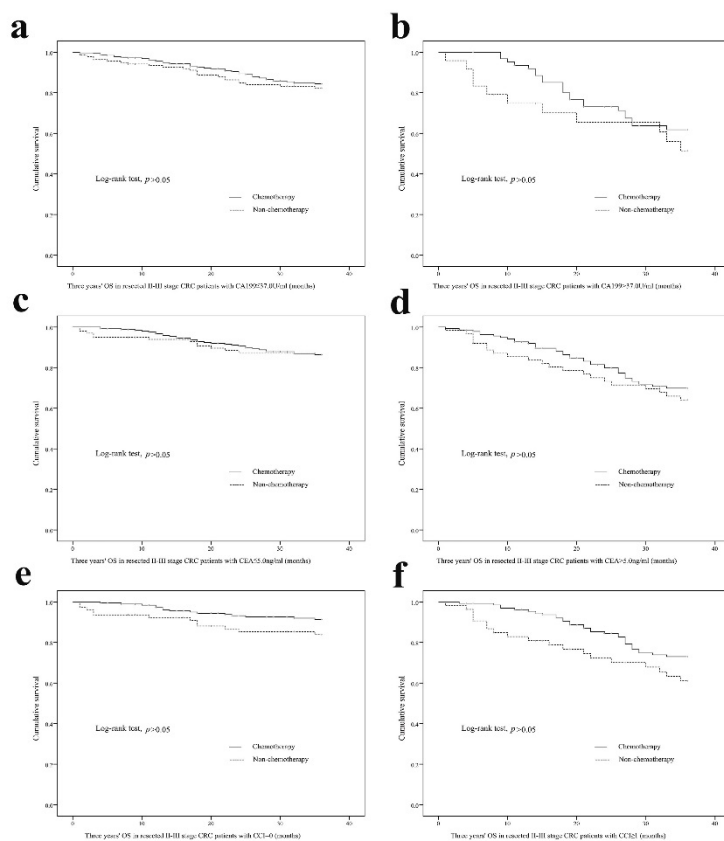
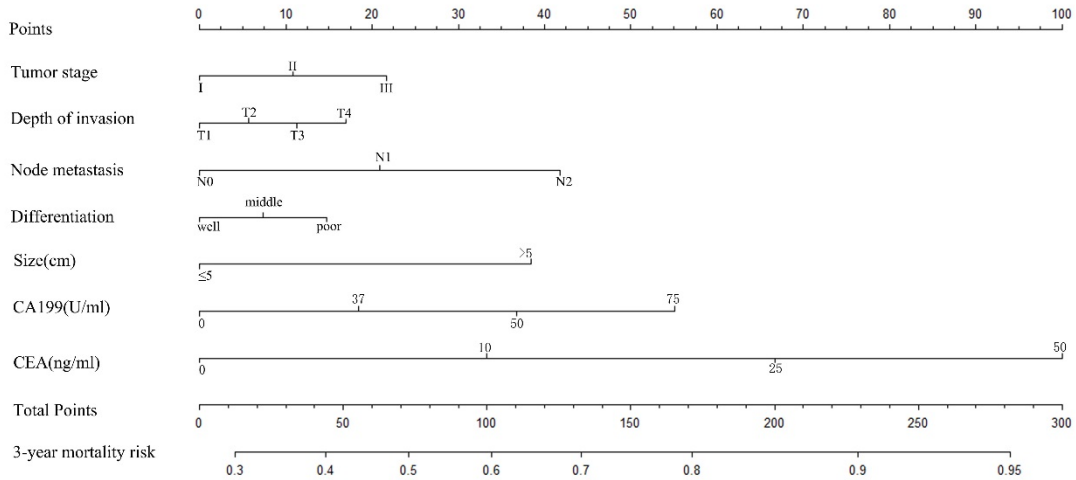


Figure S2 Kaplan-Meier curves analysis of stage II-III CRC patients whether or not receiving adjuvant chemotherapy with high or low subgroups according to CA199, CEA and CCI. a: CA199 \leq 37.0U/ml; b: CA199 $>$ 37.0U/ml; c: CEA \leq 5.0ng/ml; d: CEA $>$ 5.0ng/ml; e: CCI=0; f: CCI \geq 1.

Abbreviations: CA199, carbohydrate antigen 19-9; CCI, CEA-CA199; CEA, carcinoembryonic antigen; CRC, colorectal cancer.

a



b

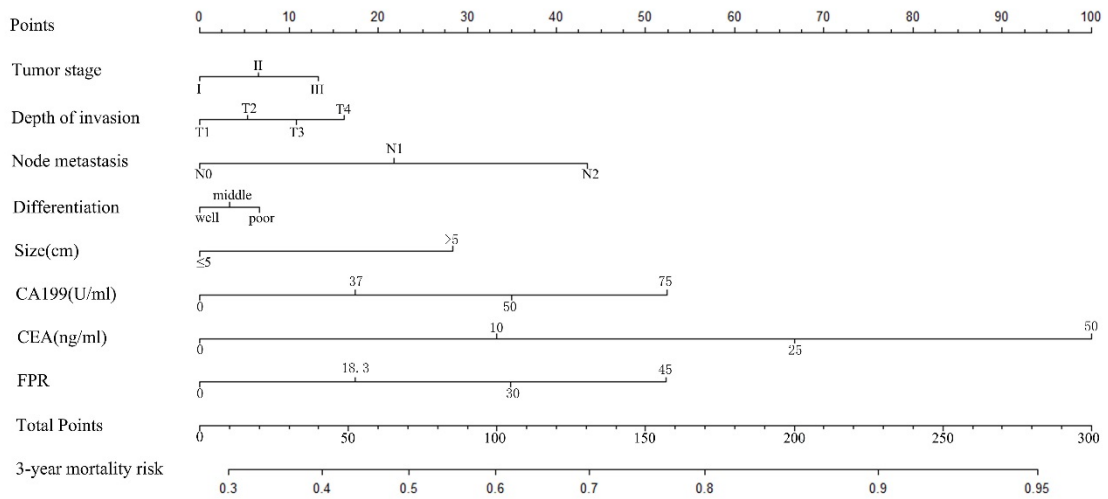


Figure S3 Nomogram predicted 3-years' OS and evaluated the predicted accuracy of significant clinical pathological characteristics and the FPR.

Abbreviations: CA199, carbohydrate antigen 19-9; CEA, carcinoembryonic antigen; CRC, colorectal cancer; FPR, fibrinogen-to-pre-albumin ratio; OS, overall survival.