Supplementary

Table S1 Univariate and multivariate analysis of different SMI cut-off values for OS and RFS

Definition	Body composition	N	Univariate analyses (OS) P	Univariate analyses (RFS) P	Multivariate analyses (OS) HR (95% CI) for RFS	P	Multivariate analyses (RFS) HR (95% CI) for OS	P
Our study	Nonsarcopenia	531	<0.001	<0.001	Reference	<0.001		<0.001
	Sarcopenia	196			3.686 (2.044–6.645)		1.485 (1.229–1.795)	
Kobayashi et al. (18)	Nonsarcopenia	532	<0.001	<0.001				
	Sarcopenia	195						
Prado et al. (29)	Nonsarcopenia	247	0.287	0.903				
	Sarcopenia	480						
Martin et al. (33)	Nonsarcopenia	470	0.164	0.821				
	Sarcopenia	257						
Sakurai et al. (34)	Nonsarcopenia	240	0.001	0.058	Reference			
	Sarcopenia	487			0.466 (0.261–0.832)	0.010		
Zhuang et al. (35)	Nonsarcopenia	528	<0.001	<0.001				
	Sarcopenia	199						
Iritani et al. (8)	Nonsarcopenia	664	0.042	0.214				
	Sarcopenia	63						

SMI, skeletal muscle index; OS, overall survival; RFS, recurrence-free survival; HR, hazard ratio; CI, confidence interval.

Table S2 Different SMI cutoff values for sarcopenia and the AUCs for OS and RFS

Cutoff value for sarcopenia	Cancer type	SMI (male)	SMI (female)	AUC of OS	P	AUC of RFS	P
Our study	HCC	40.86	30.71	0.592	<0.001	0.577	<0.001
Kobayashi et al. (18)	HCC	40.31	30.88	0.568	0.002	0.563	0.007
Prado et al. (29)	Solid tumors of the respiratory and gastrointestinal tracts	52.40	38.50	0.512	0.576	0.497	0.913
Martin et al. (33)	Lung cancer, gastrointestinal cancer	53.00 for BMI ≥25; 43.00 for BMI <25	41.00	0.528	0.195	0.512	0.589
Sakurai et al. (34)	Gastric Cancer	43.20	34.60	0.555	0.011	0.531	0.183
Zhuang et al. (35)	Gastric Cancer	40.80	34.90	0.578	P<0.001	0.567	0.004
Iritani et al. (8)	HCC	36.00	29.00	0.517	0.421	0.508	0.720

SMI, skeletal muscle index; AUC, area under the ROC curve; ROC, receiver operating characteristic; OS, overall survival; RFS, recurrence-free survival; HCC, hepatocellular carcinoma.
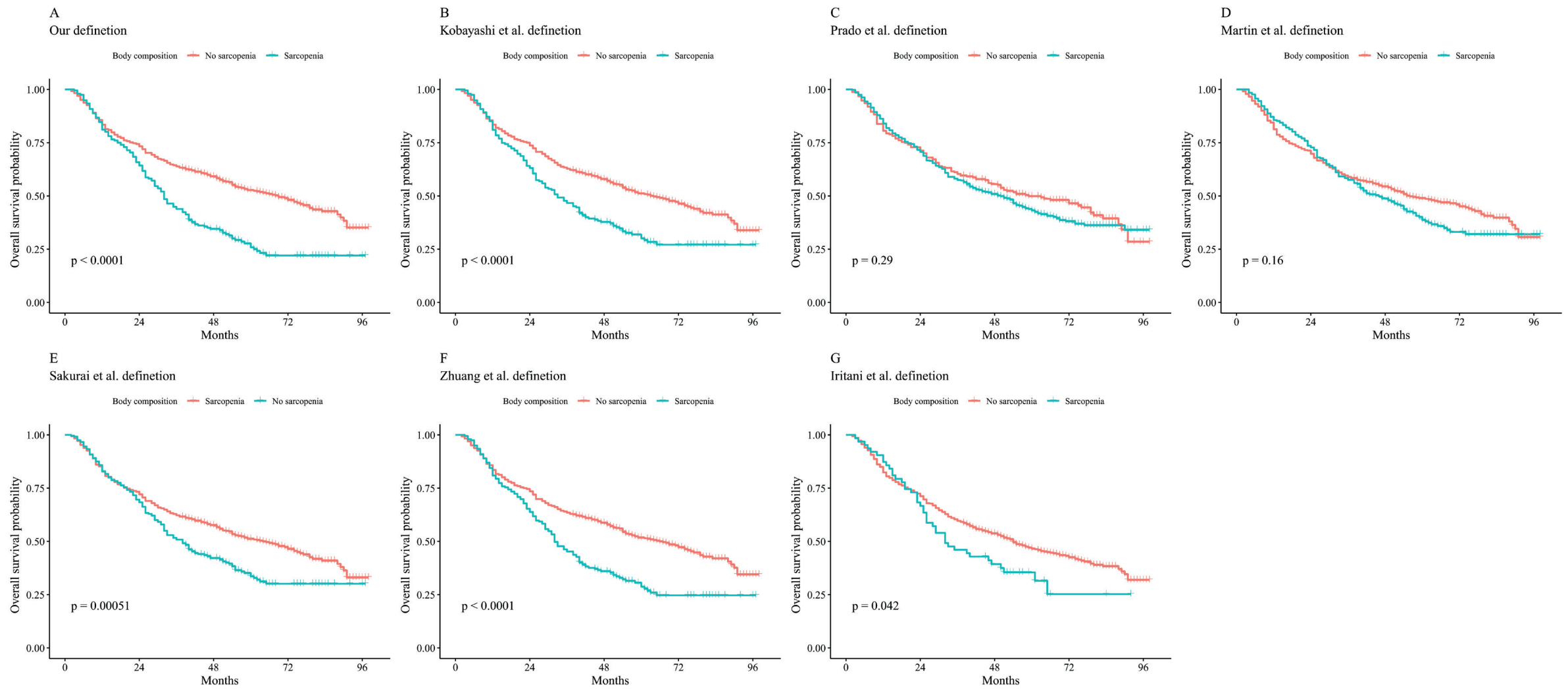
Figure S1 OS rates after hepatectomy for HCC classified according to two body composition categories (no sarcopenia and sarcopenia) by SMI cutoff value. (A-G) OS rates in the no sarcopenia group and sarcopenia group by SMI cutoff value. OS, overall survival; HCC, hepatocellular carcinoma; SMI, skeletal muscle index.
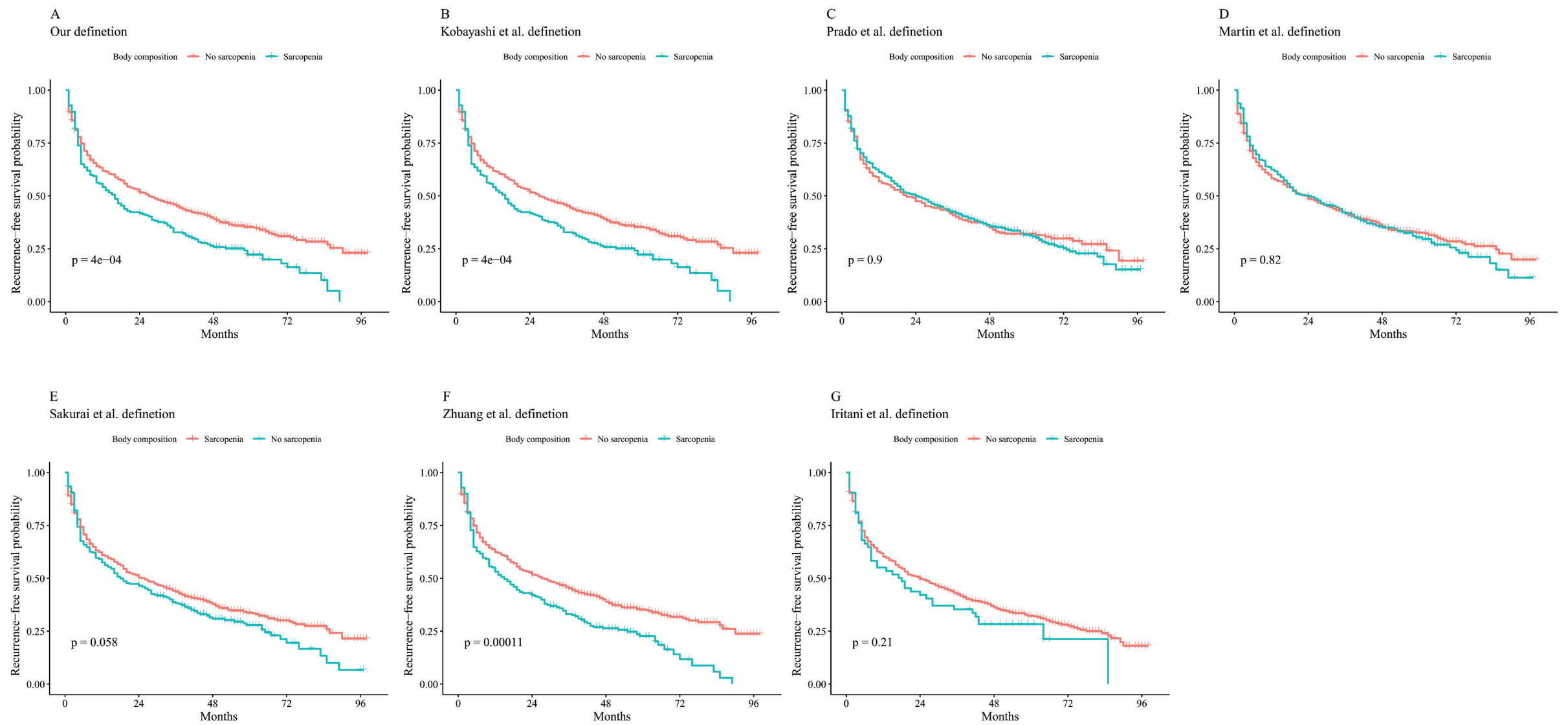
Figure S2 RFS rates after hepatectomy for HCC classified according to two body composition categories (no sarcopenia and sarcopenia) by SMI cutoff value. (A-G) RFS rates in the no sarcopenia group and sarcopenia group by SMI cutoff value. RFS, recurrence-free survival; HCC, hepatocellular carcinoma; SMI, skeletal muscle index.
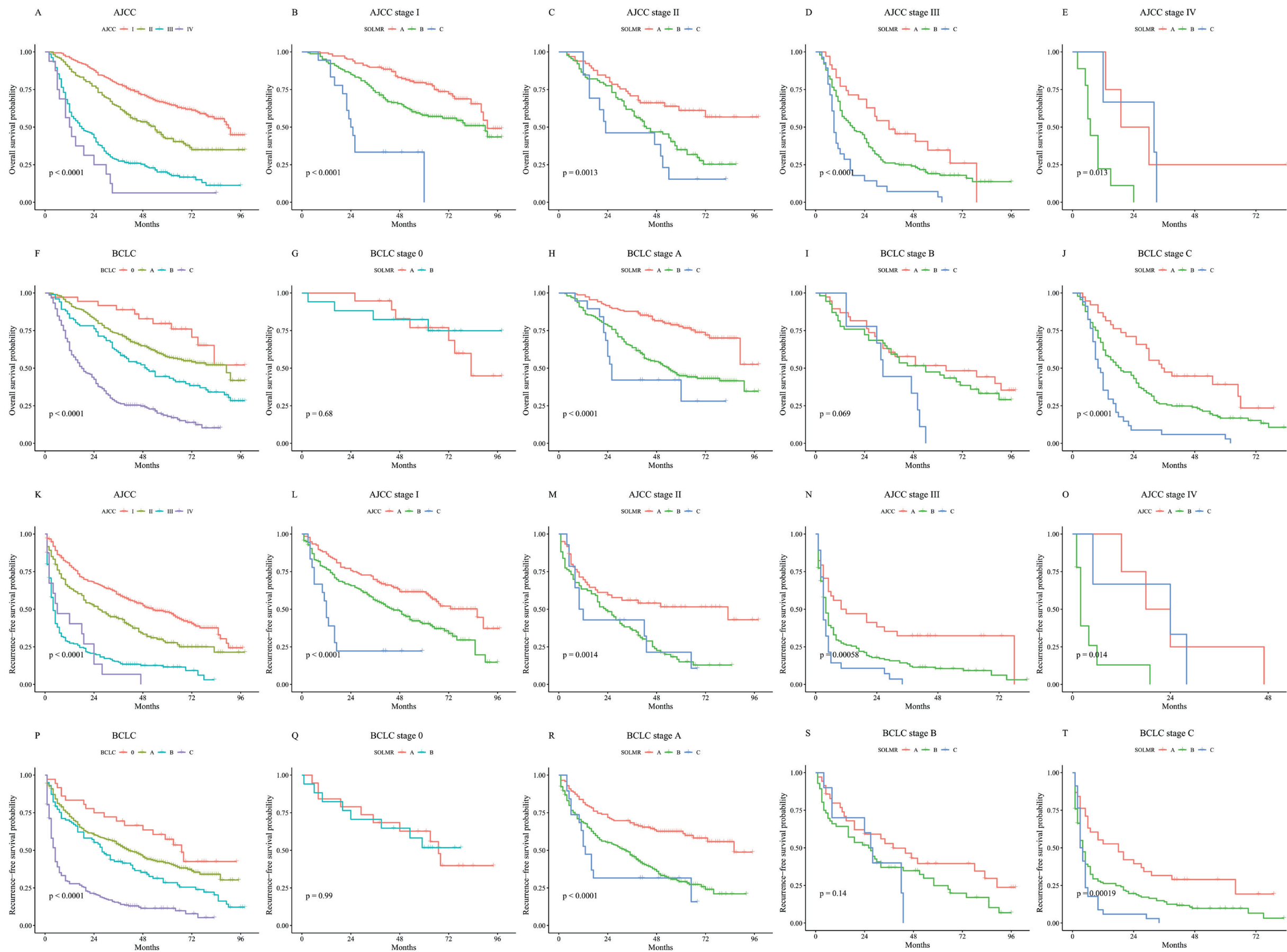
Figure S3 OS and RFS rates after hepatectomy for HCC classified according to SOLMR grades in the 8th edition AJCC and the BCLC staging systems. (A-E) OS rates classified according to SOLMR grades in the 8th edition AJCC staging systems. (F-J) OS rates classified according to SOLMR grades in the 8th edition AJCC staging systems. (K-O) RFS rates classified according to SOLMR grades in the 8th edition AJCC staging systems. (P-T) RFS rates classified according to SOLMR grades in the 8th edition AJCC staging systems. OS, overall survival; RFS, recurrence-free survival; HCC, hepatocellular carcinoma; AJCC, the American Joint Committee on Cancer 8th edition; BCLC, Barcelona Clinic Liver Cancer.