

Table S1 Demographics and characteristics of HCC patients in the splenectomy and non-splenectomy groups

Study	Number of patients		Age (years)		Gender (male/female)		Hepatitis virology (HBV/HCV)		Child-Pugh classification (A/B)		Tumor diameter (cm)		Tumor number (solitary/multiple)		AFP (ng/mL)		WBC (10 ⁹ /L)		PLT (10 ⁹ /L)		TBil (mg/dL)		MVI (presence/absence)		Tumor differentiation (well-moderate/poor)		Esophageal varices (presence/absence)		Hypersplenism (slight/moderate/severe)	
	SPT	NSPT	SPT	NSPT	SPT	NSPT	SPT	NSPT	SPT	NSPT	SPT	NSPT	SPT	NSPT	SPT	NSPT	SPT	NSPT	SPT	NSPT	SPT	NSPT	SPT	NSPT	SPT	NSPT	SPT	NSPT	SPT	NSPT
Nagasue <i>et al.</i>	26	36	16/10 (≤65/>65)	16/10 (≤65/>65)	15/11	31/5	7/19	7/29	0/17	0/29	9/12/5 (<3/3-5/>5)	16/12/8 (<3/3-5/>5)	20/6	32/4	NA	NA	19/7 (≤4/>4)	11/25 (≤4/>4)	21/5 (≤100/>100)	16/20 (≤100/>100)	5/21 (<1/≥1)	24/12 (<1/≥1)	NA	NA	NA	NA	19/7	12/24	NA	NA
Wu <i>et al.</i>	41	485	60.1±8.7	59.4±12.1	28/13	392/93	23/18	287/198	29/10	390/75	4.62±2.69	6.96±4.22	34/7	393/92	1188±24	1119±247	2.45±0.35	6.25±1.20	38.2±2.1	152.3±3.1	1.53±0.21	1.02±0.14	6/35	169/316	38/3	336/149	23/18	72/413	NA	NA
Jiang <i>et al.</i>	61	82	46.6±9.9	44.8±10.2	59/2	77/5	53/8	70/12	25/36	38/44	2/46/13 (<2/2-5/>5)	2/46/13 (<2/2-5/>5)	48/13	66/16	24/37 (<20/≥20)	25/57 (<20/≥20)	2.22±0.67	3.25±0.46	35.5±12.9	11.5±8.6	NA	NA	NA	NA	NA	NA	61/0	82/0	0/25/36	82/0/0
Hirooka <i>et al.</i>	22	12	55.8±10.3	62.1±7.0	17/5	12/0	3/19	3/9	14/8	8/4	NA	NA	NA	NA	NA	NA	3.20 (1.42-8.50)	3.90 (2.53-5.75)	61±14	73±4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Kim <i>et al.</i>	19	39	51 (38-67)	56 (38-74)	13/6	33/6	16/3	29/9	19/0	39/0	3 (1-5)	2.8 (1-5)	NA	NA	NA	NA	3.49 (1.63-6.37)	5.25 (0.65-8.24)	61 (23-257)	141 (53-285)	1.0 (0.5-1.6)	0.7 (0.3-1.3)	6/11	19/20	8/6	24/9	10/9	8/31	NA	NA
Li <i>et al.</i>	60	121	55.2±9.8	55.8±11.0	46/14	100/21	55/4	105/17	52/8	107/14	47/13 (<5/≥5)	72/49 (<5/≥5)	47/13	102/19	19/41 (<20/≥20)	48/73 (<20/≥20)	3.4±0.8	4.3±1.4	70.5±21.6	88.3±29.8	NA	NA	5/55	9/112	42/18	76/45	NA	NA	56/4/0	117/4/0
Yang <i>et al.</i>	31	44	51.0±8.4	52.0±8.9	28/3	38/6	31/0	43/1	20/11	24/20	16/15 (<3/≥3)	21/23 (<3/≥3)	25/6	36/8	14/17 (<20/≥20)	18/26 (<20/≥20)	NA	NA	62±38	70±31	1.25±0.52	1.07±0.42	12/19	23/21	9/22	10/34	31/0	44/0	NA	NA
Zhang <i>et al.</i>	110	271	50.2±9.7	50.0±14.2	91/19	229/42	103/7	253/18	NA	NA	61/49 (<3/≥3)	151/120 (<3/≥3)	100/10	239/32	77/33 (≤400/>400)	193/78 (≤400/>400)	3.01±1.48	4.53±1.66	53.48±35.63	75.34±18.69	1.04±0.39	0.97±0.40	15/95	55/216	78/32	162/109	NA	NA	16/72/22	226/39/6
Pei <i>et al.</i>	95	95	52.0±11.1	51.8±8.7	82/13	81/14	89/6	90/5	0/95	0/95	48/47 (<3/≥3)	61/49 (<3/≥3)	88/7	87/8	36/59 (<20/≥20)	42/53 (<20/≥20)	3.02±1.58	3.07±0.71	48.80±21.58	49.48±12.60	1.39±0.73	1.44±1.04	NA	NA	NA	NA	95/0	95/0	NA	NA

SPT: the splenectomy group, NSPT: the non-splenectomy group, HBV: hepatitis B virus, HCV: hepatitis C virus, AFP: α-fetoprotein, WBC: white blood cell, PLT: platelet, TBil: total bilirubin, MVI: microvascular invasion, NA: data not available. In most blanks, categorical variables were presented as numbers, continuous variables were displayed as mean±standard deviation or median (range).

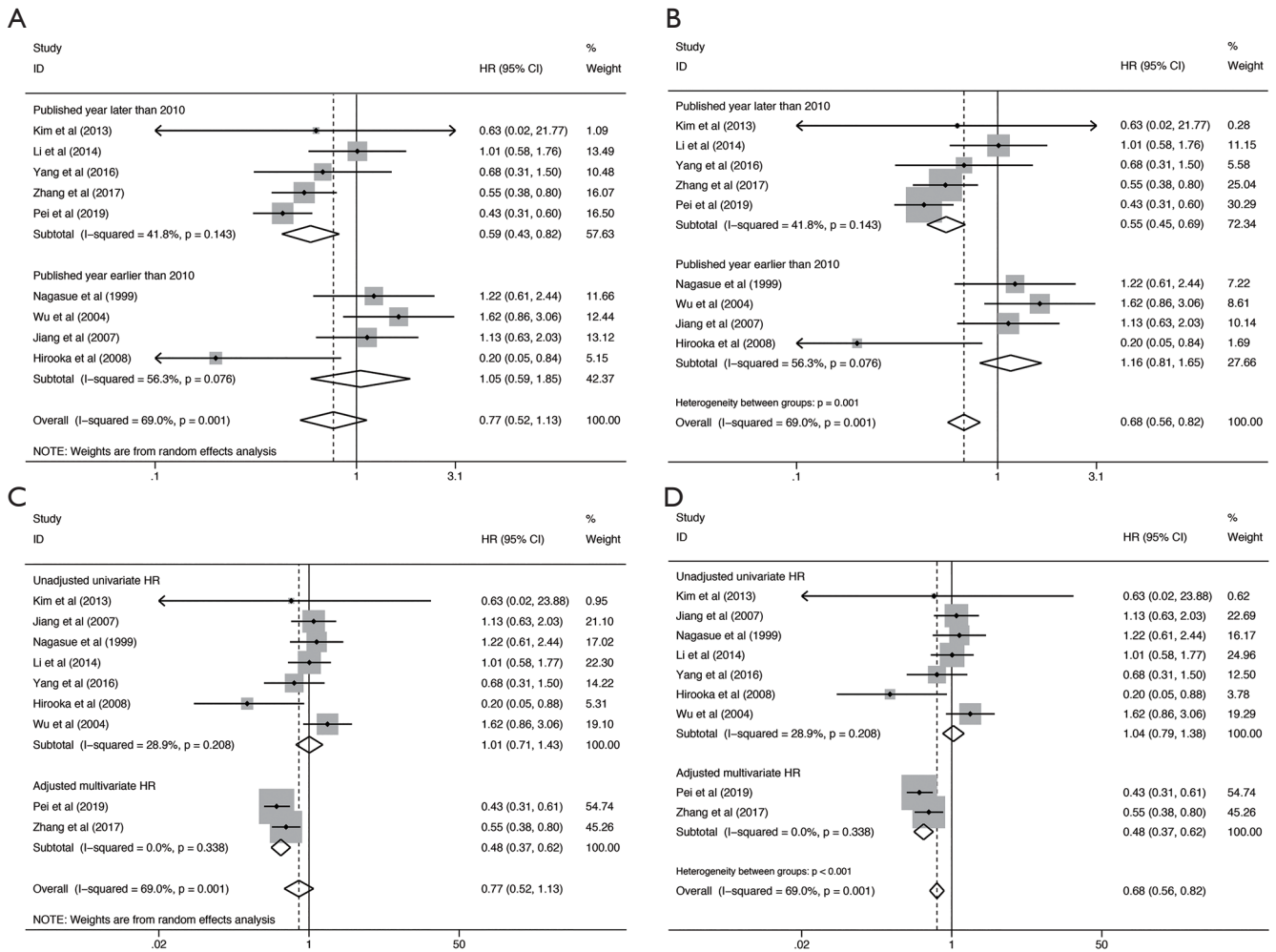


Figure S1 Forest plots of subgroup analyses according to the published year (later than 2010 vs. earlier than 2010) and the type of HR (unadjusted univariate HR vs. adjusted multivariate HR) for overall survival. (A) Forest plot of subgroup analysis according to the published year using the random-effects model; (B) Forest plot of subgroup analysis according to the published year using the fixed-effects model; (C) Forest plot of subgroup analysis according to the type of HR using the random-effects model; (D) Forest plot of subgroup analysis according to the type of HR using the fixed-effects model. Abbreviation: HR, hazard ratio.

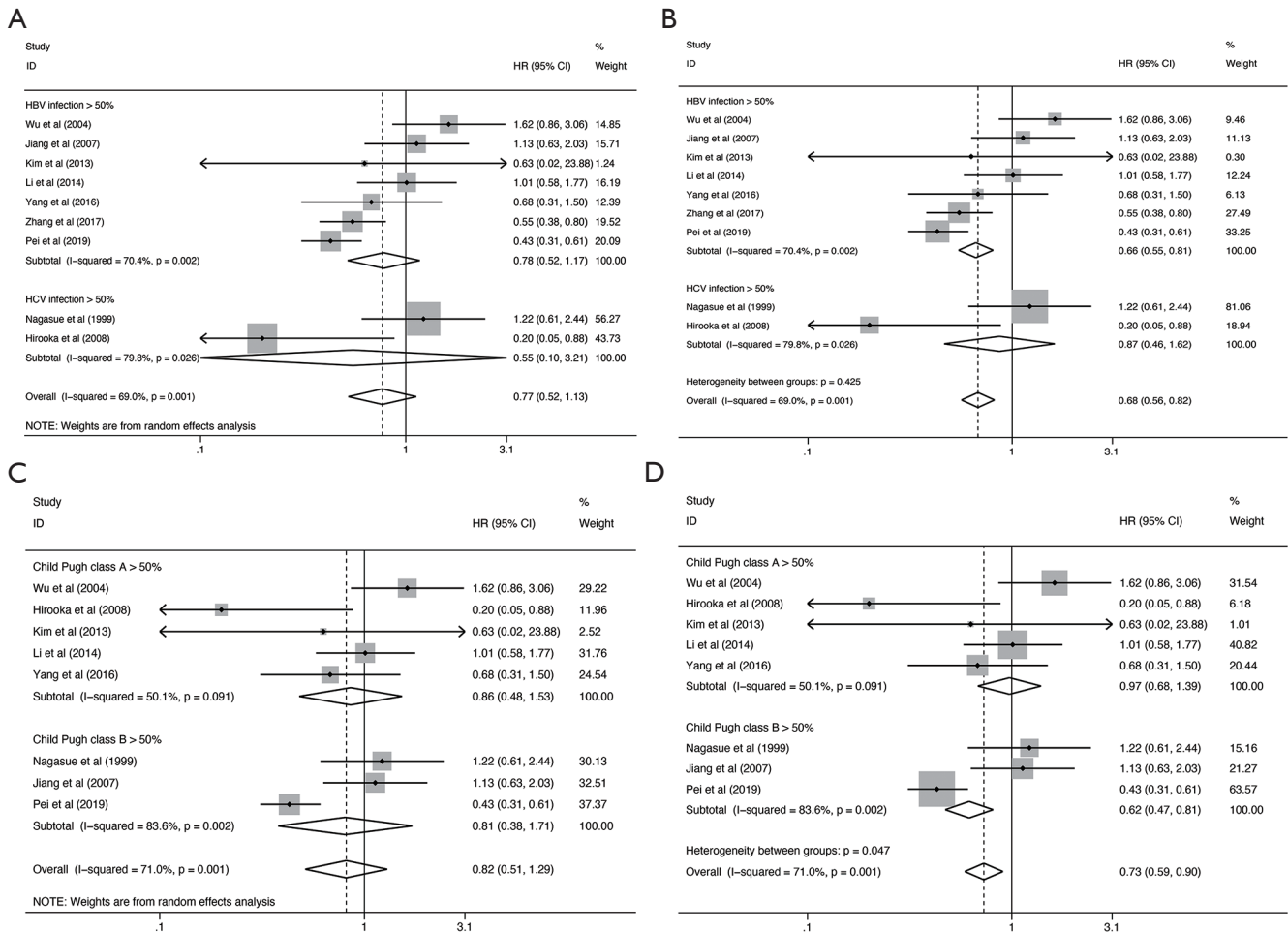
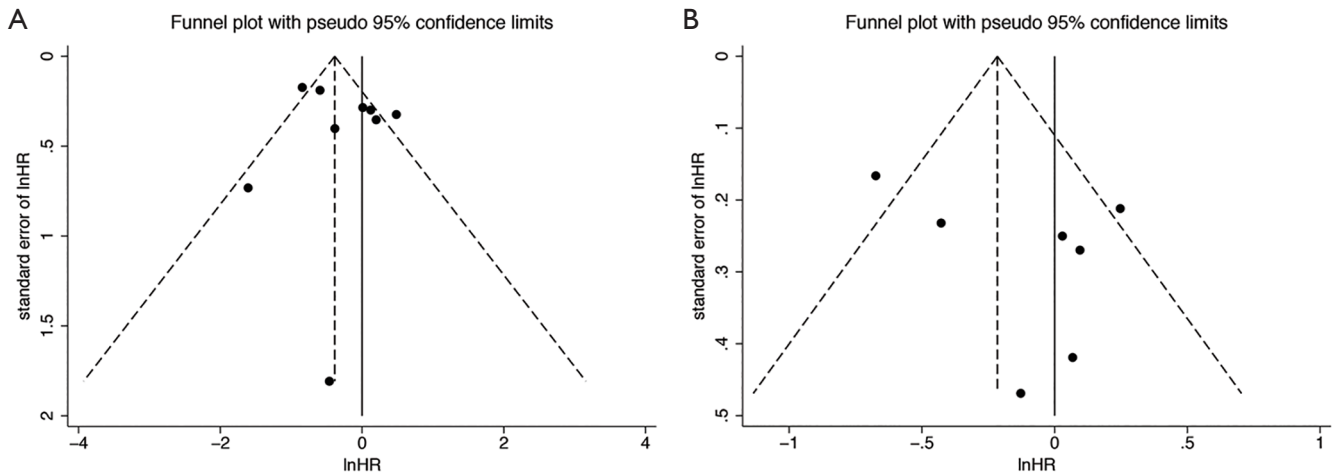


Figure S2 Forest plots of subgroup analyses according to the hepatitis viral background (HBV >50% vs. HCV >50%) and the Child-Pugh grade (class A >50% vs. class B >50%) for overall survival. (A) Forest plot of subgroup analysis according to the hepatitis viruses using the random-effects model; (B) Forest plot of subgroup analysis according to the hepatitis viruses using the fixed-effects model; (C) Forest plot of subgroup analysis according to the Child-Pugh grade using the random-effects model; (D) Forest plot of subgroup analysis according to the Child-Pugh grade using the fixed-effects model. Abbreviations: HBV, hepatitis B virus; HCV, hepatitis C virus.



	Overall survival	Disease-free survival
Number of studies	9	7
P values for Begg's test	0.917	0.456
P values for Egger's test	1.000	0.287

Figure S3 Publication bias of the included studies for overall survival and disease-free survival. (A) Funnel plot of overall survival; (B) Funnel plot of disease-free survival; (C) Quantitative assessment of the publication bias using the Begg's and Egger's tests.

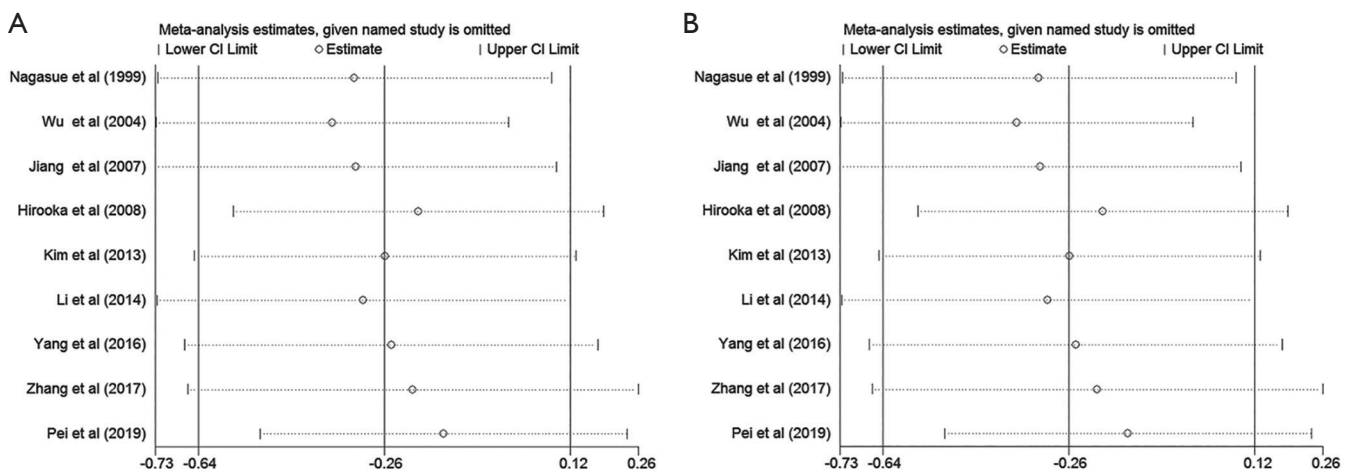


Figure S4 Sensitivity analyses for the evaluation of potential heterogeneity of overall survival and disease-free survival. (A) sensitivity analysis of overall survival; (B) sensitivity analysis of disease-free survival.