

**Supplementary Table 1.** Cox regression analysis of transarterial chemoembolization versus systemic therapies across different multivariable models

Therapy	Univariable		Model 1*		Model 2 <sup>†</sup>		Model 3 <sup>‡</sup>		Model 4 <sup>§</sup>	
	HR (95% CI)	P-value	HR (95% CI)	P-value	HR (95% CI)	P-value	HR (95% CI)	P-value	HR (95% CI)	P-value
TACE	1 (reference)		1 (reference)		1 (reference)		1 (reference)		1 (reference)	
Sorafenib	2.53 (1.79-3.57)	<0.001	2.37 (1.67-3.36)	<0.001	2.49 (1.75-3.54)	<0.001	2.26 (1.52-3.36)	<0.001	2.20 (1.47-3.31)	<0.001
Lenvatinib	1.98 (1.33-2.95)	<0.001	1.68 (1.11-2.56)	0.015	1.79 (1.19-2.68)	0.005	1.58 (1.00-2.49)	0.048	1.34 (0.84-2.15)	0.222
IO	1.18 (0.72-1.93)	0.518	1.17 (0.71-1.92)	0.542	1.15 (0.70-1.89)	0.579	1.13 (0.67-1.92)	0.644	1.13 (0.67-1.93)	0.646

HR, hazard ratio; CI, confidence interval; TACE, transarterial chemoembolization; IO, immunotherapy; ALBI, albumin-bilirubin; AFP, alpha-fetoprotein; PIVKA, protein induced by vitamin K absence or antagonist; PV, portal vein.

\*Adjusted age, sex, ALBI grade; <sup>†</sup>Adjusted age, sex, AFP, PIVKA, size, number, PV invasion; <sup>‡</sup>Adjusted age, sex, ALBI grade, AFP, PIVKA, size, number, PV invasion (all).