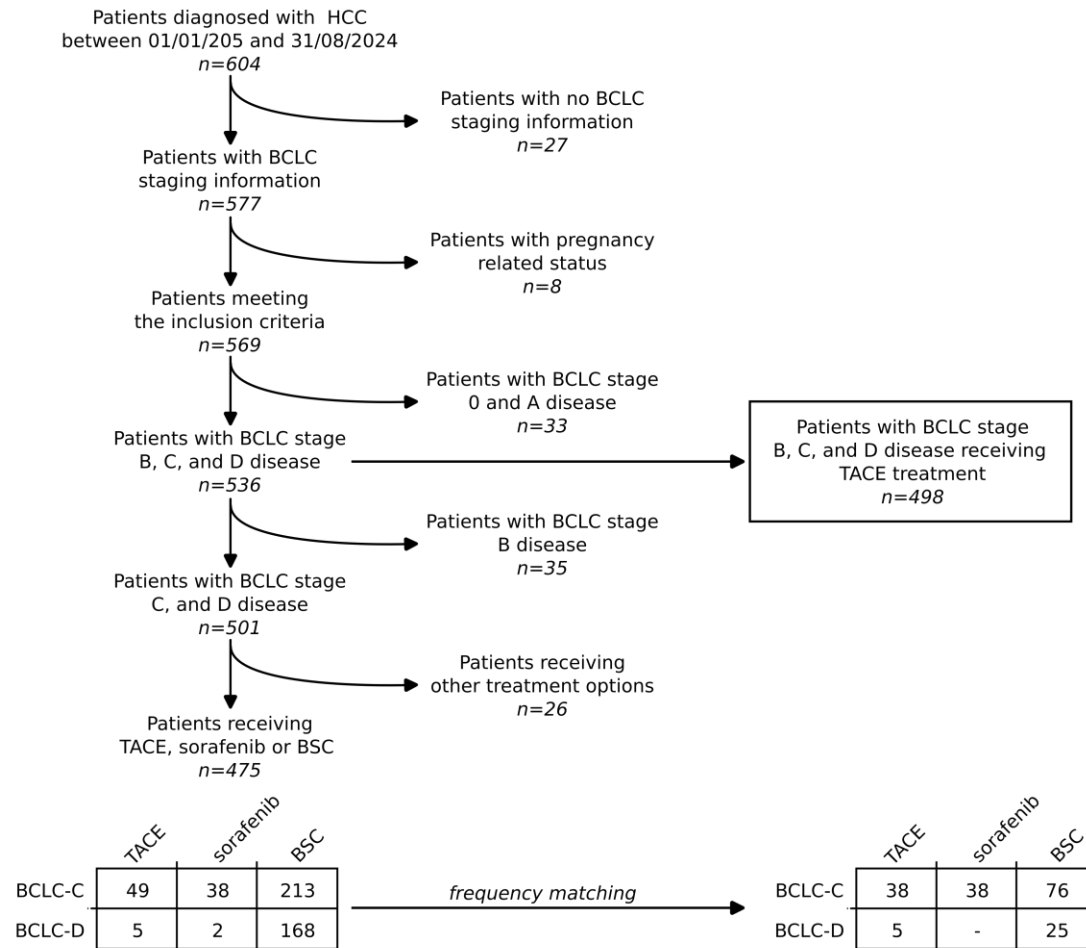
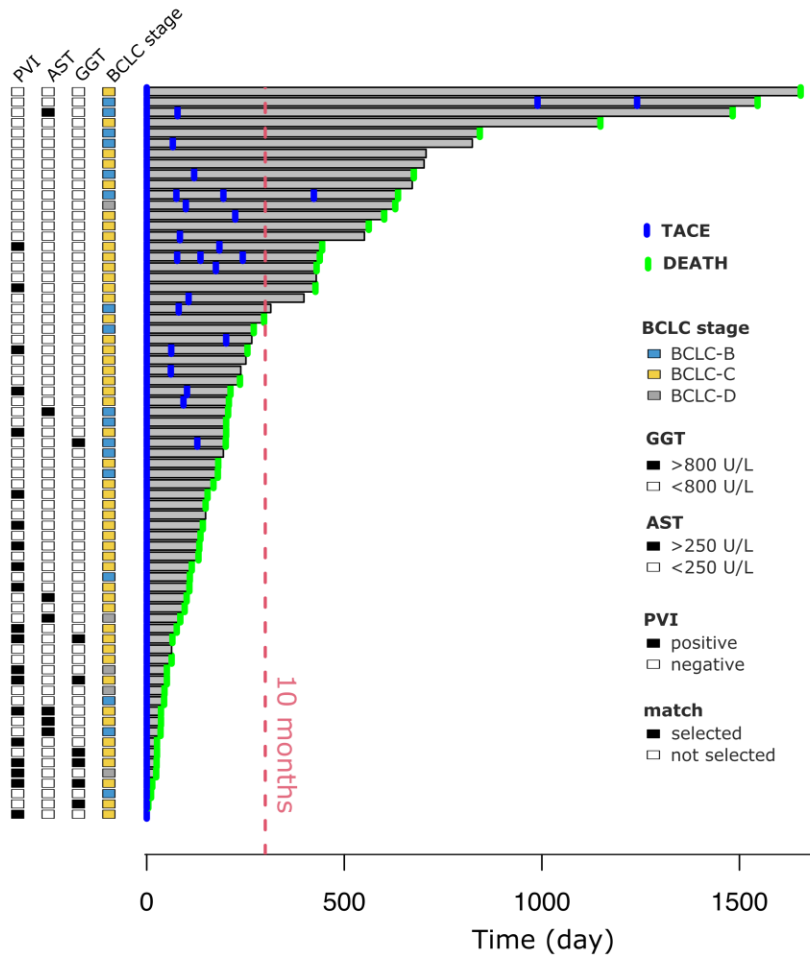




Supplementary Figure 1 Study flow chart.



Supplementary Figure 2 Graphical representation of survival of BCLC stage B, C, and D patients undergoing TACE.

Supplementary Table 1 Demographic and clinical features of patients treated with TACE for BCLC stage B, C, and D disease

Feature	Outside criteria				
	Total	BCLC-B	BCLC-C	BCLC-D	<i>P</i> value
Demographics					
Gender					0.4923
Female, n (%)	20 (28.2)	4 (23.5)	14 (28.6)	2 (40.0)	
Male, n (%)	51 (71.8)	13 (76.5)	35 (71.4)	3 (60.0)	
Age (year), median [IQR]	54 [43 69]	50 [41 58]	54 [43 69]	64 [54 66]	0.1653
Signs on presentation					
BMI (kg/m2), median [IQR]	22.2 [19.625 26.9]	22.95 [21.475 30.15]	21 [18.85 26.05]	31.7 [26.8 34.1]	1.0000
Jaundice, n (%)	5 (7.0)	1 (5.9)	4 (8.2)	0 (0.0)	0.8922
Ascites, n (%)	11 (15.5)	2 (11.8)	7 (14.3)	2 (40.0)	0.2503
Palpable mass, n (%)	28 (39.4)	5 (29.4)	21 (42.9)	2 (40.0)	0.4277
Hepatomegaly, n (%)	26 (36.6)	9 (52.9)	16 (32.7)	1 (20.0)	0.0940
Comorbidities					
HIV, n (%)	10 (14.1)	3 (17.6)	7 (14.3)	0 (0.0)	0.3995
HBV, n (%)	42 (59.2)	10 (58.8)	31 (63.3)	1 (20.0)	0.3867
HCV, n (%)	6 (8.5)	0 (0.0)	6 (12.2)	0 (0.0)	0.4146
Obesity, n (%)	3 (4.2)	2 (11.8)	0 (0.0)	1 (20.0)	0.5835

Staging/Scoring					
CTP Grade					0.0035
A, n (%)	51 (71.8)	15 (88.2)	35 (71.4)	1 (20.0)	
B, n (%)	17 (23.9)	2 (11.8)	14 (28.6)	1 (20.0)	
C, n (%)	3 (4.2)	0 (0.0)	0 (0.0)	3 (60.0)	
MELD-Na Score, median [IQR]	10 [8 12]	9 [8 11]	10 [8 12]	12 [11 18]	0.0370

BCLC, Barcelona Clinic Liver Cancer; BMI, body mass index; CTP, Child-Turcotte-Pugh; HBV, hepatitis B virus; HCV, hepatitis C virus; HIV, human immunodeficiency virus; IQR, interquartile range; MELD-Na, model for end-stage liver disease - sodium.

Supplementary Table 2 Univariate analysis of hazard ratios for patients treated with TACE using quartiles, quintiles, and clinical thresholds categorizations

Variable	Clinical thresholds			Quartile		Quintile	
	Ref.	median [95%CI]	<i>P</i> value	median [95%CI]	<i>P</i> value	median [95%CI]	<i>P</i> value
Platelet count	186 - 454 U/mL	0.99 [0.52 1.87]	0.966	0.64 [0.29 1.4]	0.264	0.61 [0.3 1.26]	0.186
INR	0.9 - 1.3	1.27 [0.67 2.39]	0.462	0.9 [0.43 1.9]	0.789	0.94 [0.47 1.88]	0.853
Sodium	135 - 145 mEq/L	1.67 [0.86 3.26]	0.131	1.51 [0.75 3.03]	0.25	1.67 [0.86 3.26]	0.131
Urea	6 - 24 mmol/L	1.25 [0.61 2.56]	0.544	1.78 [0.88 3.59]	0.11	1.38 [0.71 2.68]	0.342
Creatinine	49 - 90 mmol/L	1.12 [0.57 2.19]	0.751	0.77 [0.37 1.62]	0.494	0.84 [0.41 1.72]	0.63
Albumin	35 - 52 g/L	2.32 [1.21 4.46]	0.012	1.76 [0.87 3.57]	0.119	2.08 [1.06 4.07]	0.034
T-bilirubin	5 - 21 mmol/L	1.11 [0.55 2.23]	0.774	0.98 [0.46 2.06]	0.949	1.11 [0.55 2.23]	0.774
C-bilirubin	0 - 3 mmol/L	0.67 [0.26 1.72]	0.401	1.31 [0.66 2.64]	0.441	1.17 [0.6 2.31]	0.641
ALT	7 - 35 U/L	0.99 [0.52 1.89]	0.979	1.62 [0.76 3.44]	0.212	1.47 [0.72 3]	0.288
AST	13 - 35 U/L	2.13 [0.75 6.04]	0.153	1.24 [0.57 2.69]	0.594	1.48 [0.74 2.98]	0.27
ALP	42 - 98 U/L	0.34 [0.08 1.45]	0.145	2.37 [1.17 4.81]	0.017	2.43 [1.23 4.8]	0.01
GGT	<40 U/L	2.64 [0.36 19.36]	0.338	2.27 [1.1 4.67]	0.026	2.26 [1.14 4.48]	0.02

ALT, alanine transaminase; ALP, Alkaline phosphatase; AST, aspartate aminotransferase; C-bilirubin, conjugated bilirubin; CI, confidence interval; GGT, gamma-glutamyl transferase; International normalized ratio; T-bilirubin, total bilirubin.

Supplementary Table 3. Demographic and clinical features of patients with BCLC stage C and D disease receiving TACE, stratified by survival time (≤10 months vs. >10 months)

Feature	≤10 months (n=33)	>10 months (n=15)	P value
Demographics			
Gender			0.2060
Female, n (%)	9 (27.3)	7 (46.7)	
Male, n (%)	24 (72.7)	8 (53.3)	
Age (year), median [IQR]	54 [44 67]	66 [49 72]	0.2080
Symptoms			
Pain, n (%)	27 (81.8)	9 (60.0)	0.1520
Weight loss, n (%)	25 (75.8)	5 (33.3)	0.0091
GI bleeding, n (%)	0 (0.0)	0 (0.0)	
Fever, n (%)	0 (0.0)	1 (6.7)	0.3120
Signs on presentation			
BMI (kg/m²), median [IQR]	21.4 [18.8 26.3]	24.6 [24.5 26.1]	0.1710
Jaundice, n (%)	3 (9.1)	1 (6.7)	1.0000
Ascites, n (%)	6 (18.2)	3 (20.0)	1.0000
Palpable mass, n (%)	17 (51.5)	3 (20.0)	0.0592

Hepatomegaly, n (%)	12 (36.4)	2 (13.3)	0.1710
Comorbidities			
HIV, n (%)	5 (15.2)	1 (6.7)	0.6500
HBV, n (%)	21 (63.6)	7 (46.7)	0.3490
HCV, n (%)	1 (3.0)	5 (33.3)	0.0085
Obesity, n (%)	0 (0.0)	1 (6.7)	0.3120
Habits			
Smoker, n (%)	9 (27.3)	1 (6.7)	0.1400
Drinker, n (%)	15 (45.5)	3 (20.0)	0.1170
Staging/Scoring			
CTP grade			0.8820
A, n (%)	20 (60.6)	10 (66.7)	
B, n (%)	11 (33.3)	4 (26.7)	
C, n (%)	2 (6.1)	1 (6.7)	
MELD-Na Score, median [IQR]	11 [8 12]	10 [7.5 12.5]	0.6290
BCLC stage			1.0000
C, n (%)	29 (87.9)	14 (93.3)	
D, n (%)	4 (12.1)	1 (6.7)	
ECOG-PS			1.0000

0, n (%)	2 (6.1)	0 (0.0)
1, n (%)	22 (66.7)	10 (71.4)
2, n (%)	8 (24.2)	4 (28.6)
3, n (%)	1 (3.0)	0 (0.0)
4, n (%)	0 (0.0)	0 (0.0)

Supplementary Table 3 To be continued

Feature	≤10 months	>10 months	P value
Blood tests			
HBV VL (×10 ³), median [IQR]	14 [0 708]	1 [0 522]	0.6340
WBC (cells/nL), median [IQR]	7.27 [5.59 9.39]	6.72 [5.015 7.375]	0.1390
Platelet count (U/mL), median [IQR]	258 [205 364]	194 [124.5 249]	0.0386
INR, median [IQR]	1.18 [1.11 1.37]	1.16 [1.12 1.36]	0.7710
Sodium (mEq/L), median [IQR]	136 [134 139]	139 [136.5 143]	0.0241
Urea (mmol/L), median [IQR]	4.4 [3.4 5.4]	4.5 [3.75 6.9]	0.5930
Creatinine (mmol/L), median [IQR]	69 [55 81]	71 [57 84.5]	0.5190
Albumin (g/L), median [IQR]	36 [30 40]	39 [35 41]	0.3670
T-bilirubin (mmol/L), median [IQR]	15 [9 22]	13 [8 20]	0.7640
C-bilirubin (mmol/L), median [IQR]	8 [5 18]	10 [5 12.5]	0.9820
ALT (U/L), median [IQR]	53 [27 85]	43 [30 58]	0.3730
AST (U/L), median [IQR]	118 [65 187]	66.5 [50.25 80.25]	0.0418
ALP (U/L), median [IQR]	197 [156 428]	137 [114 181.5]	0.0081
GGT (U/L), median [IQR]	281 [129 732]	184 [90.5 331.5]	0.1220
CEA (U/L), median [IQR]	3.3 [2 4.3]	2 [1.8 5.7]	0.7480
CA19.9 (U/L), median [IQR]	73 [16 252.5]	37 [33 44]	0.3930

AFP (mg/L), median [IQR]	2.6 [0.3 36.2]	0.0 [0.0 2.4]	0.0570
Imaging			
Cirrhosis present			0.5320
Unknown / Not recorded, n (%)	1 (3.0)	0 (0.0)	
No, n (%)	15 (45.5)	4 (28.6)	
Yes, n (%)	17 (51.5)	10 (71.4)	
Degree of differentiation			1.0000
Not assessed, not reported, n (%)	1 (20.0)		
Poorly, n (%)		-	
Moderately, n (%)	2 (40.0)	-	
Well, n (%)	2 (40.0)	-	
PVI, n (%)	17 (51.5)	2 (14.3)	0.0237
PVI with occlusion, n (%)	16 (48.5)	2 (14.3)	0.0473
Focal			0.2940
Multi-focal, n (%)	21 (63.6)	6 (46.2)	
Single-focal, n (%)	12 (36.4)	7 (53.8)	
Lung metastasis, n (%)	4 (12.1)	0 (0.0)	0.2940

AFP, alpha-fetoprotein; ALT, alanine transaminase; ALP, Alkaline phosphatase; AST, aspartate aminotransferase; BCLC, Barcelona Clinic Liver Cancer; BMI, body mass index; CA19.9, carbohydrate antigen 19-9; C-bilirubin, conjugated bilirubin; CEA, carcinoembryonic antigen; CTP, Child-Turcotte-Pugh; ECOG-PS, Eastern

Cooperative Oncology Group Performance Status; GGT, gamma-glutamyl transferase; GI, gastrointestinal; HBV, hepatitis B virus; HCV, hepatitis C virus; HIV, human immunodeficiency virus; International normalized ratio; IQR, interquartile range; MELD-Na, model for end-stage liver disease – sodium; PVI, portal vein infiltration; T-bilirubin, total bilirubin; VL, viral load; WBC, white blood cell count.

Supplementary Table 4 Demographic and clinical features of patients with BCLC stage C disease classified by treatment. Patients were selected using the frequency matching procedure

Feature	TACE (n=38)	Sorafenib (n=38)	BSC (n=76)	P value
Demographics				
Gender				0.5430
Female, n (%)	10 (26.3)	6 (15.8)	15 (19.7)	
Male, n (%)	28 (73.7)	32 (84.2)	61 (80.3)	
Age (year), median [IQR]	59.5 [43.2 69.0]	42.0 [36.0 56.7]	46.5 [37.0 62.2]	0.0021
Symptoms				
Pain, n (%)	31 (81.6)	30 (78.9)	60 (78.9)	0.9660
Weight loss, n (%)	23 (60.5)	20 (52.6)	46 (60.5)	0.6980
GI bleeding, n (%)	0 (0.0)	1 (2.6)	6 (7.9)	0.2070
Fever, n (%)	2 (5.3)	2 (5.3)	5 (6.6)	1.0000
Signs on presentation				
BMI (kg/m²), median [IQR]	22.1 [19.3 26.1]	22.4 [20.6 23.6]	22.4 [18.9 25.2]	0.9720
Jaundice, n (%)	3 (7.9)	1 (2.6)	4 (5.3)	0.5810
Ascites, n (%)	4 (10.5)	9 (23.7)	21 (27.6)	0.1060
Palpable mass, n (%)	19 (50.0)	13 (34.2)	20 (26.3)	0.0417

Hepatomegaly, n (%)	13 (34.2)	26 (68.4)	44 (57.9)	0.0092
Comorbidities				
HIV, n (%)	5 (13.2)	5 (13.2)	6 (7.9)	0.6090
HBV, n (%)	21 (55.3)	25 (65.8)	41 (53.9)	0.4890
HCV, n (%)	5 (13.2)	1 (2.6)	2 (2.6)	0.0681
Obesity, n (%)	0 (0.0)	0 (0.0)	1 (1.3)	1.0000
Habits				
Smoker, n (%)	7 (18.4)	12 (31.6)	16 (21.1)	0.3260
Drinker, n (%)	13 (34.2)	12 (31.6)	25 (32.9)	1.0000
Staging/Scoring				
CTP grade				0.7350
A, n (%)	29 (76.3)	29 (76.3)	52 (69.3)	
B, n (%)	9 (23.7)	8 (21.1)	22 (29.3)	
C, n (%)	0 (0.0)	1 (2.6)	1 (1.3)	
MELD-Na Score, median [IQR]	10 [8 12]	9.5 [8 13]	10 [9 12]	0.5280
BCLC stage				
C, n (%)	38 (100.0)	38 (100.0)	76 (100.0)	
ECOG-PS				0.6910
0, n (%)	1 (2.6)	0 (0.0)	0 (0.0)	

1, n (%)	25 (65.8)	22 (57.9)	44 (57.9)
2, n (%)	12 (31.6)	15 (39.5)	30 (39.5)
3, n (%)	0 (0.0)	1 (2.6)	2 (2.6)
4, n (%)	0 (0.0)	0 (0.0)	0 (0.0)

Supplementary Table 4 To be continued

Feature	TACE	Sorafenib	BSC	P value
Blood tests				
HBV VL (×10 ³), median [IQR]	13 [0 348]	4 [1 5918]	166 [3 1261]	0.2760
WBC (cell/nL), median [IQR]	6.6 [5.2 8.6]	7.9 [5.8 12.1]	9.2 [6.4 12.6]	0.0035
Platelet count (U/mL), median [IQR]	224 [179 309]	316 [188 479]	276 [175 404]	0.0669
INR, median [IQR]	1.15 [1.09 1.35]	1.19 [1.12 1.36]	1.21 [1.12 1.34]	0.4600
Sodium (mEq/L), median [IQR]	137 [134 139]	138 [136 140]	136 [134 138]	0.0122
Urea (mmol/L), median [IQR]	4.5 [3.8 6.0]	4.2 [3.6 5.4]	4.2 [3.5 5.9]	0.8220
Creatinine (mmol/L), median [IQR]	73.5 [58.2 87.5]	70.5 [61.2 80.0]	69.5 [57.0 79.2]	0.6740
Albumin (g/L), median [IQR]	38.0 [32.2 40.7]	36.0 [35.0 41.7]	36.0 [31.5 39.5]	0.3020
T-bilirubin (mmol/L), median [IQR]	12.5 [8.0 20.0]	11.0 [8.0 16.5]	17.0 [11.0 26.7]	0.0212
C-bilirubin (mmol/L), median [IQR]	6.0 [4.2 14.0]	5.5 [4.0 7.7]	9.0 [5.0 14.2]	0.1330
ALT (U/L), median [IQR]	52.5 [24.2 91.0]	44.0 [25.0 74.5]	45.0 [33.0 86.0]	0.5390
AST (U/L), median [IQR]	83.0 [51.0 156.0]	71.0 [40.2 192.0]	108.0 [69.0 179.0]	0.1890
ALP (U/L), median [IQR]	161.5 [132.7 257.2]	233.0 [143.2 327.5]	230.0 [144.0 365.5]	0.1770
GGT (U/L), median [IQR]	239.0 [125.5 500.7]	337.5 [189.7 429.5]	323.5 [160.0 508.7]	0.7030
CEA (U/L), median [IQR]	3.3 [2.0 4.4]	2.3 [1.4 3.9]	2.5 [1.6 5.0]	0.6050
CA19.9 (U/L), median [IQR]	44.0 [14.5 118.0]	85.6 [30.9 283.3]	50.5 [14.0 108.5]	0.5080

AFP (mg/L), median [IQR]	2.5 [0.2 59.5]	5.5 [0.0 75.9]	11.3 [0.2 97.8]	0.3650
Imaging				
Cirrhosis present				0.2830
Unknown / Not recorded, n (%)	1 (2.6)	5 (13.2)	6 (8.0)	
No, n (%)	16 (42.1)	17 (44.7)	40 (53.3)	
Yes, n (%)	21 (55.3)	16 (42.1)	29 (38.7)	
Degree of differentiation				0.0031
Not assessed, not reported, n (%)	1 (25.0)	16 (94.1)	12 (92.3)	
Poorly, n (%)	0 (0.0)	1 (5.9)	0 (0.0)	
Moderately, n (%)	1 (25.0)	0 (0.0)	1 (7.7)	
Well, n (%)	2 (50.0)	0 (0.0)	0 (0.0)	
PVI, n (%)	12 (31.6)	8 (21.1)	24 (31.6)	0.5100
PVI with occlusion, n (%)	11 (28.9)	7 (18.4)	24 (31.6)	0.3240
Focal				0.1080
Multi-focal, n (%)	23 (62.2)	17 (53.1)	46 (74.2)	
Single-focal, n (%)	14 (37.8)	15 (46.9)	16 (25.8)	
Lung metastasis, n (%)	4 (10.5)	3 (7.9)	12 (15.8)	0.5290

AFP, alpha-fetoprotein; ALT, alanine transaminase; ALP, Alkaline phosphatase; AST, aspartate aminotransferase; BCLC, Barcelona Clinic Liver Cancer; BSC, best supportive care; BMI, body mass index; CA19.9, carbohydrate antigen 19-9; C-bilirubin, conjugated bilirubin; CEA, carcinoembryonic antigen; CTP, Child-Turcotte-

Pugh; ECOG-PS, Eastern Cooperative Oncology Group Performance Status; GGT, gamma-glutamyl transferase; GI, gastrointestinal; HBV, hepatitis B virus; HCV, hepatitis C virus; HIV, human immunodeficiency virus; International normalized ratio; IQR, interquartile range; MELD-Na, model for end-stage liver disease – sodium; PVI, portal vein infiltration; TACE, transarterial chemoembolization; T-bilirubin, total bilirubin; VL, viral load; WBC, white blood cell count.

Supplementary Table 5 Demographic and clinical features of patients with BCLC stage D disease classified by treatment. Patients were selected using the frequency matching procedure

Feature	TACE (<i>n</i> =5)	BSC (<i>n</i> =25)	P value
Demographics			
Gender			0.5650
Female, n (%)	2 (40.0)	5 (20.0)	
Male, n (%)	3 (60.0)	20 (80.0)	
Age (year), median [IQR]	64.0 [54.0 66.0]	53.0 [42.0 61.0]	0.1190
Symptoms			
Pain, n (%)	2 (40.0)	19 (76.0)	0.1430
Weight loss, n (%)	4 (80.0)	19 (76.0)	1.0000
GI bleeding, n (%)	0 (0.0)	3 (12.0)	1.0000
Fever, n (%)	0 (0.0)	2 (8.0)	1.0000
Signs on presentation			
BMI (kg/m²), median [IQR]	31.7 [26.8 34.1]	21.5 [18.1 25.1]	0.1010
Jaundice, n (%)	0 (0.0)	7 (28.0)	0.3040
Ascites, n (%)	2 (40.0)	14 (56.0)	0.6420
Palpable mass, n (%)	2 (40.0)	6 (24.0)	0.5890

Hepatomegaly, n (%)	1 (20.0)	12 (48.0)	0.3550
Comorbidities			
HIV, n (%)	0 (0.0)	5 (20.0)	0.5560
HBV, n (%)	1 (20.0)	16 (64.0)	0.1380
HCV, n (%)	0 (0.0)	1 (4.0)	1.0000
Obesity, n (%)	1 (20.0)	0 (0.0)	0.1670
Habits			
Smoker, n (%)	2 (40.0)	5 (20.0)	0.5650
Drinker, n (%)	4 (80.0)	11 (44.0)	0.3300
Staging/Scoring			
CTP grade			0.5040
A, n (%)	1 (20.0)	1 (4.0)	
B, n (%)	1 (20.0)	7 (28.0)	
C, n (%)	3 (60.0)	17 (68.0)	
MELD-Na Score, median [IQR]	12 [11 18]	19 [14 23]	0.4670
ECOG-PS			1.0000
0, n (%)	0 (0.0)	0 (0.0)	
1, n (%)	3 (60.0)	15 (60.0)	
2, n (%)	1 (20.0)	5 (20.0)	

3, n (%)	10 (20.0)	5 (20.0)
4, n (%)	0 (0.0)	0 (0.0)

Supplementary Table 5 To be continued

Feature	TACE	BSC	P value
Blood tests			
HBV VL (×10 ³), median [IQR]	0 [0 0]	1475 [203 13405]	0.1140
WBC (cell/nL), median [IQR]	7.3 [5.0 9.1]	9.9 [5.7 12.1]	0.6760
Platelet count (U/mL), median [IQR]	119 [117 277]	219 [152 326]	0.3300
INR, median [IQR]	1.13 [1.12 1.17]	1.37 [1.21 1.69]	0.0154
Sodium (mEq/L), median [IQR]	138 [136 139]	134 [131 137]	0.0362
Urea (mmol/L), median [IQR]	4.4 [4.2 4.5]	5.5 [3.5 8.8]	0.4040
Creatinine (mmol/L), median [IQR]	67.0 [63.0 73.0]	76.0 [58.0 87.0]	0.3730
Albumin (g/L), median [IQR]	40.0 [33.0 43.0]	26.0 [22.0 31.0]	0.0131
T-bilirubin (mmol/L), median [IQR]	26.0 [21.0 34.0]	44.0 [16.0 104.0]	0.3580
C-bilirubin (mmol/L), median [IQR]	12.0 [9.0 18.0]	27.0 [10.0 53.0]	0.2310
ALT (U/L), median [IQR]	27.0 [16.0 32.0]	85.0 [48.0 150.0]	0.0069
AST (U/L), median [IQR]	65.0 [57.0 140.0]	224.0 [151.0 345.0]	0.1130
ALP (U/L), median [IQR]	197.0 [156.0 212.0]	381.0 [204.0 512.0]	0.1130
GGT (U/L), median [IQR]	281.0 [269.0 491.0]	317.0 [144.0 555.0]	0.8020
CEA (U/L), median [IQR]	4.3 [3.5 36.9]	3.3 [2.2 4.1]	0.3120
CA19.9 (U/L), median [IQR]	78.0 [61.5 171.0]	70.0 [39.0 241.2]	0.7730

AFP (mg/L), median [IQR]	1.1 [0.0 1.3]	2.2 [0.0 60.5]	0.1910
Imaging			
Cirrhosis present			0.3160
Unknown / Not recorded, n (%)	0 (0.0)	1 (4.0)	
No, n (%)	0 (0.0)	9 (36.0)	
Yes, n (%)	5 (100.0)	15 (60.0)	
Degree of differentiation			1.0000
Not assessed, not reported, n (%)	0 (0.0)	3 (50.0)	
Poorly, n (%)	0 (0.0)	1 (16.7)	
Moderately, n (%)	0 (0.0)	2 (33.3)	
Well, n (%)	0 (0.0)	0 (0.0)	
PVI, n (%)	2 (40.0)	9 (36.0)	1.0000
PVI with occlusion, n (%)	2 (40.0)	9 (36.0)	1.0000
Focal			0.2890
Multi-focal, n (%)	5 (100.0)	16 (69.6)	
Single-focal, n (%)	0 (0.0)	7 (30.4)	
Lung metastasis, n (%)	0 (0.0)	3 (12.0)	1.0000

Abbreviations: AFP, alpha-fetoprotein; ALT, alanine transaminase; ALP, Alkaline phosphatase; AST, aspartate aminotransferase; BCLC, Barcelona Clinic Liver Cancer; BSC, best supportive care; BMI, body mass index; CA19.9, carbohydrate antigen 19-9; C-bilirubin, conjugated bilirubin; CEA, carcinoembryonic antigen;

CTP, Child-Turcotte-Pugh; ECOG-PS, Eastern Cooperative Oncology Group Performance Status; GGT, gamma-glutamyl transferase; GI, gastrointestinal; HBV, hepatitis B virus; HCV, hepatitis C virus; HIV, human immunodeficiency virus; International normalized ratio; IQR, interquartile range; MELD-Na, model for end-stage liver disease – sodium; PVI, portal vein infiltration; TACE, transarterial chemoembolization; T-bilirubin, total bilirubin; VL, viral load; WBC, white blood cell count.

Supplementary Table 6 Median, RMST, and relative 95%CI values of each group in the matched patients with BCLC-C disease

	All patients	GGT>800 U/L or AST>250 or PVI	GGT<800 U/L and AST<250 U/L and no PVI
Median-based survival analysis			
TACE (day), median [95%CI]	201 [136 438]	101 [36 201]	430 [208 NA]
Sorafenib (day), median [95%CI]	150 [110 271]	151 [61 NA]	131 [110 354]
BSC (day), median [95%CI]	68 [45 103]	68 [45 103]	67 [39 130]
Restricted mean survival time (RMST) analysis			
TACE (day), RMST [95%CI]	175 [146 204]	88 [61 116]	256 [218 296]
Sorafenib (day), RMST [95%CI]	156 [127 184]	113 [89 136]	183 [135 231]
BSC (day), RMST [95%CI]	98 [77 119]	75 [59 91]	115 [78 151]

AST, aspartate aminotransferase; BSC, best supportive care; CI, confidence interval; GGT, gamma-glutamyl transferase; PVI, portal vein infiltration; RMST, restricted mean survival time; TACE, transarterial chemoembolization.

Supplementary Table 7 Side effects related to TACE and sorafenib treatment

Feature	All patients TACE	Matched patients TACE (<i>n</i> =40)	Sorafenib (<i>n</i> =40)	P value
Total known with side effect, n (%)	10 (18.5%)	6 (15.0%)	22 (55.0%)	0.0003
Total specific side effect, n (%)	10 (18.5%)	6 (15.0%)	16 (40.0%)	0.0230
Bleeding (Epistaxis, rectal, vaginal), n (%)	0 (0.0%)	0 (0.0%)	4 (10.0%)	0.1156
GI symptoms (nausea, vomiting, diarrhoea), n (%)	2 (3.7%)	2 (5.0%)	7 (17.5%)	0.1543
Liver failure, n (%)	1 (1.9%)	0 (0.0%)	2 (5.0%)	0.4937
Liver abscess, n (%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1.000
Blistering / rash / alopecia, n (%)	0 (0.0%)	0 (0.0%)	3 (7.5%)	0.2405
Ischaemic / thrombotic event, n (%)	1 (1.9%)	1 (2.5%)	2 (5.0%)	1.000
Post TACE syndrome, n (%)	2 (3.7%)	0 (0.0%)	0 (0.0%)	0.273
Acute kidney injury / renal failure, n (%)	2 (3.7%)	2 (5.0%)	0 (0.0%)	0.4937
Reactive pleural effusion, n (%)	1 (1.9%)	1 (2.5%)	0 (0.0%)	1.000
Intrahepatic bile duct obstruction, n (%)	1 (1.9%)	0 (0.0%)	0 (0.0%)	1.000
Doxorubicin induced ophthalmoplegia, n (%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1.000
Ascites, n (%)	3 (5.6%)	3 (7.5%)	0 (0.0%)	0.2405

GI, gastrointestinal; TACE, transarterial chemoembolization.

P values were calculated comparing patients treated with sorafenib and matched patients treated with TACE.