

**Supplementary Table 1.** Baseline characteristics by the treatment group after IPTW

Characteristic	Overall (n=150)	Group		P-value
		Regorafenib (n=102)	Nivolumab (n=48)	
Age (years)	62 (55–69)	62 (54–70)	64 (57–68)	0.92
Male	122 (81.6)	87 (82.0)	36 (81.0)	0.89
HCC etiology				0.96
HBV	127 (85.2)	90 (85.4)	38 (85.1)	
Others	22 (14.8)	15 (14.6)	7 (14.9)	
Child-Pugh score				0.59
5	80 (53.5)	58 (55.3)	21 (47.7)	
6	51 (33.8)	33 (31.1)	19 (42.1)	
7–9	19 (12.7)	14 (13.5)	5 (10.2)	
Vascular invasion	77 (51.4)	52 (49.1)	25 (55.8)	0.53
Biliary invasion	5 (3.4)	5 (4.3)	1 (3.3)	0.75
Intrahepatic tumor burden				0.82
None	25 (16.7)	16 (15.6)	6 (14.3)	
<50%	93 (62.0)	66 (62.4)	26 (57.8)	
≥50%	32 (21.3)	23 (22.0)	13 (27.8)	
Extrahepatic metastases	120 (80.0)	83 (78.7)	33 (73.8)	0.63
Lymph node	54 (36.0)	37 (34.7)	12 (27.7)	
Lung	77 (51.3)	53 (50.6)	24 (54.1)	
Bone	32 (21.3)	20 (18.5)	8 (18.6)	
Peritoneum	24 (16.0)	15 (13.8)	7 (15.2)	
Others	3 (2.0)	1 (0.7)	2 (5.4)	
Portal hypertension	64 (42.7)	48 (45.7)	19 (43.2)	0.82
BCLC stage				0.97
B	5 (3.3)	3 (3.2)	1 (3.1)	
C	145 (96.7)	102 (96.8)	44 (96.9)	
Laboratory data				
Albumin (g/dL)	3.7 (3.2–4.0)	3.6 (3.3–4.1)	3.7 (3.2–3.9)	0.48
Total bilirubin (mg/dL)	1.0 (0.7–1.4)	1.0 (0.7–1.4)	1.0 (0.7–1.3)	0.73
AST (IU/L)	53 (36–78)	45 (34–77)	63 (40–79)	0.54
ALT (IU/L)	37 (22–55)	37 (20–55)	42 (25–54)	0.62
ALP (IU/L)	148 (89–224)	150 (89–224)	157 (89–247)	0.94
Creatinine (mg/dL)	1.08 (1.02–1.15)	0.80 (0.64–0.93)	0.82 (0.70–0.93)	0.82
Platelet count (×10 <sup>9</sup> /L)	150 (106–212)	148 (106–216)	162 (103–207)	0.79
INR	1.08 (1.02–1.15)	1.09 (1.02–1.15)	1.08 (1.03–1.16)	0.91
AFP (ng/mL)	621.5 (15.5–6,833.0)	566.2 (18.2–7,386.3)	878.5 (15.5–7,585.2)	0.69
PIVKA (mAU/mL)	1,826 (177–9,007)	1,625 (207–8,790)	2,744 (148–13,067)	0.93
MoRAL	653.6 (211.8–1,573.3)	689.2 (207.3–1,573.3)	636.9 (244.6–1,261.1)	0.93

Values are presented as median (interquartile range) or number (%) of patients.

HCC, hepatocellular carcinoma; HBV, hepatitis B virus; BCLC, Barcelona Clinic Liver Cancer; AST, aspartate aminotransferase; ALT, alanine aminotransferase; ALP, alkaline phosphatase; INR, international normalized ratio; AFP, alpha-fetoprotein; PIVKA, protein induced by vitamin K absence or antagonist; MoRAL, model to predict tumor recurrence after living donor liver transplantation.