

**Table S1** Comparisons between patients with inoperable HCC treated with and without chemotherapy after PSM

Variable	With chemotherapy (N=1,579)	Without chemotherapy (N=1,579)	P value
Age (years)			0.31
[18–60]	663 (41.99)	635 (40.22)	
(60–85]	916 (58.01)	944 (59.78)	
Sex			0.34
Male	1,229 (77.83)	1,251 (79.23)	
Female	350 (22.17)	328 (20.77)	
Race			0.72
White	1,098 (69.54)	1,083 (68.59)	
Black	223 (14.12)	239 (15.14)	
Other	258 (16.34)	257 (16.28)	
Summary stage			0.69
Localized	701 (44.40)	684 (43.32)	
Regional	546 (34.58)	569 (36.04)	
Distant	332 (21.03)	326 (20.65)	
T stage			0.45
T1	574 (36.35)	578 (36.61)	
T2	309 (19.57)	290 (18.37)	
T3	616 (39.01)	612 (38.76)	
T4	80 (5.07)	99 (6.27)	
N stage			0.60
N0	1,368 (86.64)	1,378 (87.27)	
N1	211 (13.36)	201 (12.73)	
M stage			0.86
M0	1,266 (80.18)	1,270 (80.43)	
M1	313 (19.82)	309 (19.57)	
AJCC group			0.61
I	486 (30.78)	496 (31.41)	
II	247 (15.64)	220 (13.93)	
III	438 (27.74)	449 (28.44)	
IV	408 (25.84)	414 (26.22)	
Tumor size (cm)			0.61
(0–5]	628 (39.77)	636 (40.28)	
(5–10]	621 (39.33)	596 (37.75)	
>10	330 (20.90)	347 (21.98)	
Pretreatment AFP			0.62
Negative	382 (24.19)	394 (24.95)	
Positive	1,197 (75.81)	1,185 (75.05)	
Marital status			0.70
Married	759 (48.07)	770 (48.77)	
Never married	820 (51.93)	809 (51.23)	
SDW	469 (22.58)	503 (26.66)	

Data are shown as n (%). HCC, hepatocellular carcinoma; PSM, propensity score matching; AJCC, American Joint Committee on Cancer; AFP, alpha fetoprotein; SDW, separated, divorced, widowed.

**Table S2** Basic characteristics of patients with HCC in the training and validation group

Variable	Training group (N=1,456)	Validation group (N=621)	P value
Age (years)			0.06
[18–60]	628 (43.13)	240 (38.65)	
(60–85]	828 (56.87)	381 (61.35)	
Sex			0.91
Male	1,155 (79.33)	494 (79.55)	
Female	301 (20.67)	127 (20.45)	
Year of diagnosis			0.91
2010	232 (15.93)	97 (15.62)	
2011	244 (16.76)	94 (15.14)	
2012	240 (16.48)	98 (15.78)	
2013	248 (17.03)	110 (17.71)	
2014	251 (17.24)	115 (18.52)	
2015	241 (16.55)	107 (17.23)	
Race			0.52
White	1,004 (68.96)	432 (69.57)	
Black	196 (13.46)	91 (14.65)	
Other	256 (17.58)	98 (15.78)	
Summary stage			0.34
Localized	651 (44.71)	264 (42.51)	
Regional	518 (35.58)	242 (38.97)	
Distant	287 (19.71)	115 (18.52)	
T stage			0.64
T1	498 (34.20)	213 (34.30)	
T2	321 (22.05)	122 (19.65)	
T3	567 (38.94)	254 (40.90)	
T4	70 (4.81)	32 (5.15)	
N stage			0.79
N0	1,248 (85.71)	535 (86.15)	
N1	208 (14.29)	86 (13.85)	
M stage			0.65
M0	1,186 (81.46)	511 (82.29)	
M1	270 (18.54)	110 (17.71)	
AJCC stage			0.60
I	421 (28.91)	183 (29.47)	
II	264 (18.13)	100 (16.10)	
III	398 (27.34)	183 (29.47)	
IV	373 (25.62)	155 (24.96)	
Tumor size (cm)			0.17
(0–5]	601 (41.28)	235 (37.84)	
(5–10]	576 (39.56)	247 (39.77)	
>10	279 (19.16)	139 (22.38)	
Pretreatment AFP			0.07
Negative	371 (25.48)	135 (21.74)	
Positive	1,085 (74.52)	486 (78.26)	
Marital status			0.92
Married	810 (55.63)	347 (55.88)	
Other	646 (44.37)	274 (44.12)	

Data are shown as n (%). HCC, hepatocellular carcinoma; AJCC, American Joint Committee on Cancer; AFP, alpha fetoprotein.