

Supplementary Table 1. Clinical characteristics of patients at the time of starting immunotherapy

Characteristics	All patients (n=451)	DPP4i users (n=38)	Non-DPP4i DM patients (n=131)	Non-DM patients (n=282)	P-value
Age (years)	62.3±12.4	68.3±10.2	66.4±11.6	59.5±12.3	<0.001
Male sex	373 (82.7)	31 (81.6)	107 (81.7)	235 (83.3)	0.901
Viral hepatitis	331 (78.1)	21 (55.3)	87 (70.7)	223 (84.8)	<0.001
ALBI grade					0.274
Grade 1	143 (31.8)	9 (23.7)	37 (28.5)	97 (34.5)	
Grade 2	247 (55.0)	26 (68.4)	72 (55.4)	149 (53.0)	
Grade 3	59 (13.1)	3 (7.9)	21 (16.2)	35 (12.5)	
ALT (IU/L)	40 (26–65)	35 (19–55)	38 (26–66)	42 (27–68)	0.203
Albumin (g/L)	35.8±6.6	35.1±5.8	34.9±7.0	36.2±6.5	0.113
Total bilirubin (µmol/L)	14.7 (9.3–27.0)	15.0 (9.5–30.3)	16.0 (9.8–27.0)	14.0 (9.2–26.7)	0.559
AFP (µg/L)	2.1 (0.8–3.7)	15.2 (5.2–2,405.0)	102.1 (5.7–2,050.0)	176.4 (6.1–10,165.0)	0.029
Platelet (×1,000/mm ³)	173 (123–254)	178 (109–222)	179 (130–237)	169 (122–261)	0.812
Prior liver surgery	111 (24.6)	11 (28.9)	28 (21.4)	72 (25.5)	0.534
Prior radiofrequency ablation	68 (15.1)	7 (18.4)	24 (18.3)	37 (13.1)	0.324
Tyrosine kinase inhibitors					
Sorafenib	124 (27.5)	7 (18.4)	41(31.3)	76 (27.0)	0.278
Lenvatinib	161 (35.7)	16 (42.1)	47 (35.9)	98 (34.8)	0.673
Other TKI	155 (34.4)	11 (28.9)	44 (33.6)	100 (35.5)	0.712
Line of systemic treatment starting with ICI					0.138
1st line	272 (60.3)	20 (52.6)	72 (55.0)	180 (63.8)	
2nd line or after	179 (39.7)	18 (47.4)	59 (45.0)	102 (36.2)	
Immune checkpoint inhibitor					
Ipilimumab	84 (18.6)	8 (21.1)	18 (13.7)	58 (20.6)	0.233
Nivolumab	243 (53.9)	17 (44.7)	76 (58.0)	150 (53.2)	0.327
Pembrolizumab	176 (39.0)	18 (47.4)	45 (34.3)	113 (40.1)	0.295
Atezolizumab	43 (9.5)	3 (7.9)	11 (8.4)	29 (10.3)	0.779
Statin	100 (22.2)	13 (65.8)	48 (36.6)	27 (9.6)	<0.001
Insulin		26 (19.8)	19 (50.0)		<0.001
Metformin		34 (89.5)	64 (48.9)		<0.001
Sulphonylurea		43 (10.4)	29 (76.3)		<0.001

Values are presented as mean±standard deviation, number (%), or median (interquartile range).

AFP, alpha fetoprotein; ALBI, albumin-bilirubin; ALT, alanine aminotransferase; DM, diabetes mellitus; DPP4i, dipeptidyl-peptidase 4 inhibitors.