

## SUPPLEMENTARY TABLES

**Supplementary Table 1. Clinical and demographic information of HCC samples involved in the study.**

Parameters	P3	P7	P11	P21	P6	P34	P35	P37
<b>Gender</b>	Male	Male	Male	Male	Male	Male	Male	Male
<b>Operation date</b>	2017-11-14	2017-11-30	2017-12-12	2018-4-17	2017-11-28	2018-7-12	2018-7-17	2018-8-14
<b>Age</b>	58	52	60	62	55	58	38	54
<b>Smoking</b>	No	No	No	Yes	Yes	No	Yes	Yes
<b>Alcohol consumption</b>	No	No	No	Yes	No	No	Yes	No
<b>Hypertension</b>	No	Yes	No	Yes	Yes	No	No	No
<b>Diabetes</b>	Yes	Yes	No	No	No	No	No	No
<b>Family history</b>	No	No	No	No	No	No	No	No
<b>Viral hepatitis</b>	HBV	HBV	HBV	HBV	HBV	HBV	HBV	HBV
<b>HBV-DNA (IU/ml)</b>	5.41E+02	1.35E+04	<2.00E+1	7.04E+02	4.92E+05	<100	4.91E+04	2.19E+01
<b>AFP (ng/ml)</b>	2.19	10.6	17.11	419.92	186.1	0.8	10.857	1.677
<b>Cirrhosis</b>	No	Yes	Yes	No	No	No	Yes	Yes
<b>Tumor number</b>	1	2	1	4	2	1	1	1
<b>BLCL stage</b>	A	A	A	B	A	A	A	A
<b>Child-Pugh score</b>	5	5	7	5	5	5	5	5
<b>Recurrence</b>	-	2019-04-10	2020-01-20	-	-	-	-	-

**Supplementary Table 2. Scores of immune cells between the two groups.**

<b>Immune cells</b>	<b>Low TMB (Mn±SD) (%)</b>	<b>Percentage (%)</b>	<b>High TMB (Mn±SD) (%)</b>	<b>Percentage (%)</b>
<b>CD4_naive</b>	0.05±0.06	8.67%	0.06±0.05	10.29%
<b>CD8_naive</b>	0.05±0.05	8.38%	0.05±0.04	9.54%
<b>Tc</b>	0.22±0.11	34.45%	0.21±0.12	37.17%
<b>Tex</b>	0.07±0.09	11.54%	0.08±0.08	14.49%
<b>Tr1</b>	0.07±0.06	11.55%	0.04±0.04	7.47%
<b>nTreg</b>	0.06±0.05	9.49%	0.06±0.04	10.01%
<b>iTreg</b>	0.19±0.09	30.64%	0.17±0.08	31.17%
<b>Th1</b>	0.11±0.08	18.16%	0.09±0.07	15.94%
<b>Th2</b>	0.21±0.1	33.77%	0.16±0.11	27.98%
<b>Th17</b>	0.24±0.08	38.09%	0.29±0.11	51.48%
<b>Tfh</b>	0.15±0.11	24.00%	0.11±0.1	20.11%
<b>Tcm</b>	0.06±0.05	9.48%	0.06±0.04	10.24%
<b>Tem</b>	0.01±0.01	1.55%	0.01±0.02	2.41%
<b>NKT</b>	0.01±0.03	2.04%	0.02±0.03	3.37%
<b>MAIT</b>	0.23±0.1	36.80%	0.18±0.1	32.83%
<b>DC</b>	0.24±0.13	38.57%	0.17±0.11	30.24%
<b>B_cell</b>	0.15±0.06	23.19%	0.13±0.05	22.57%
<b>Monocyte</b>	0.11±0.06	17.79%	0.1±0.05	18.33%
<b>Macrophage</b>	0.37±0.15	58.72%	0.3±0.13	54.40%
<b>NK</b>	0.16±0.07	25.87%	0.16±0.07	29.48%
<b>Neutrophil</b>	0.16±0.06	24.88%	0.18±0.06	32.51%
<b>Tgd</b>	0.07±0.04	10.48%	0.09±0.05	15.60%
<b>CD4_T</b>	0.07±0.04	10.76%	0.05±0.04	9.00%
<b>CD8_T</b>	0.18±0.09	29.25%	0.18±0.1	32.49%

Abbreviation: MAIT, Mucosal associated invariant T cells; Tc, cytotoxic T cells; Tex, exhausted T cells; Tr1, type 1 regulatory cells; nTreg, Natural regulatory T cells; iTreg, Induced regulatory T cells; Th1, Type 1 T helper cells; Th2, Type 2 T helper cells; Th17, Type 17 T helper cells; Tfh, Follicular helper T cells; Tcm, Central memory T cells; Tem, Effector memory T cells; NKT, Natural killer T cells; MAIT, Mucosal-associated invariant T cells; DC, Dendritic cells; Tgd, Gamma-delta T cells; TMB, tumor mutational burden; Low\_ IF, low Infiltrating; High\_ IF, high Infiltrating.