

1 **Supplementary Materials: Dietary intake of one-carbon metabolism-related nutrients and hepatocellular carcinoma** 2 **survival in the Guangdong Liver Cancer Cohort**

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6 **Supplemental Table 1** Baseline Characteristics of Patients with Hepatocellular Carcinoma by Quartiles of Dietary Vitamin B2 Intake in the Guangdong Liver Cancer Cohort (N=905)

	Quartiles of Vitamin B2 Intake				<i>P</i> _{value}
	Q1 (n=226)	Q2 (n=226)	Q3 (n=226)	Q4 (n=227)	
Age (year) ^a	50.8 (11.5)	51.6 (12.3)	52.6 (11.7)	52.6 (12.2)	0.288
Sex, n (%)					0.022
Men	210 (92.5)	196 (90.2)	205 (88.5)	192 (83.7)	
Women	16 (7.5)	30 (9.8)	21 (11.5)	35 (16.3)	
Total energy intake (kcal/day) ^a	2140.1 (1717.6, 2564.1)	1740.4 (1442.6, 2104.0)	1766.8 (1419.8, 2211.2)	2009.2 (1611.7, 2452.0)	<0.001
Methionine intake,mg/d ^a	1074.0 (925.2, 1241.1)	1234.9 (1146.2, 1394.2)	1392.2 (1216.0, 1575.4)	1539.2 (1304.3, 1812.9)	<0.001
Vitamin B2 intake,mg/d ^a	0.7 (0.6, 0.8)	0.9 (0.9, 0.9)	1.0 (1.0, 1.1)	1.3 (1.2, 1.4)	<0.001
Vitamin B3 intake, mg/d ^a	24.0 (21.1, 26.8)	25.1(22.6, 27.4)	26.3 (23.3, 28.5)	26.5 (23.8, 29.7)	<0.001
Vitamin B6 intake, mg/d ^a	0.5 (0.4, 0.6)	0.7 (0.6, 0.8)	0.8 (0.7, 0.9)	1.0 (0.8, 1.1)	<0.001
Folate intake, μg/d ^a	138.8 (116.4, 166.7)	169.5 (149.1, 202.3)	187.0 (161.6, 221.4)	244.1 (195.0, 298.4)	<0.001
Vitamin B12 intake, μg/d ^a	1.0 (0.5, 1.5)	1.3 (1.0, 1.7)	1.5 (1.1, 2.3)	1.5 (1.0, 2.5)	<0.001
BMI≥28 kg/m ² , n (%)	11 (4.9)	12 (5.3)	15 (6.6)	16 (7.0)	0.726
Residence, n (%)					<0.001
Urban	128 (56.6)	159 (70.4)	159 (70.4)	173 (76.2)	
Rural	98 (43.4)	67 (29.6)	67 (29.6)	54 (23.8)	
Education level, n (%)					<0.001
Primary school or below	53 (23.5)	44 (19.5)	38 (16.8)	46 (20.3)	

	Quartiles of Vitamin B2 Intake				<i>P</i> value
	Q1 (n=226)	Q2 (n=226)	Q3 (n=226)	Q4 (n=227)	
Secondary school	146 (64.6)	147 (65.0)	146 (64.6)	109 (48.0)	
College or above	27 (11.9)	35 (15.5)	42 (18.6)	72 (31.7)	
Smoking status, n (%)					0.008
Never smoker	73 (32.3)	93 (41.2)	88 (38.9)	109 (48.0)	
Former or Current smoker	153 (67.7)	133 (58.8)	138 (61.1)	118 (52.0)	
Alcohol drinking status, n (%)					0.108
Never drinker	128 (56.6)	122 (54.0)	122 (54.0)	145 (63.9)	
Former or Current drinker	98 (43.4)	104 (46.0)	104 (46.0)	82 (36.1)	
Physical activity (MET-h/d) ^a	33.4 (27.0, 41.3)	28.7 (25.4, 35.8)	28.7 (25.0, 35.1)	28.6 (25.8, 34.6)	0.001
CRP level, n (%)					0.065
≥3.0 mg/L	107 (47.3)	109 (48.2)	123 (54.4)	132 (58.1)	
>3.0 mg/L	119 (52.7)	117 (51.8)	103 (45.6)	95 (41.9)	
With family history of PLC, n (%)	33 (14.6)	35 (15.5)	38 (16.8)	28 (12.3)	0.591
With chronic diseases, n (%)	207 (91.6)	204 (90.3)	209 (92.5)	209 (92.1)	0.846
Cancer treatment, n (%)					0.932
Surgery	106 (46.9)	108 (47.8)	117 (47.3)	113 (49.8)	
Other treatments	120 (53.1)	118 (52.2)	119 (52.7)	114 (50.2)	
BCLC stage, n (%)					0.035
0	18 (8.0)	22 (9.7)	22 (9.7)	34 (15.0)	
A	64 (28.3)	62 (27.4)	80 (35.4)	83 (36.6)	
B	21 (9.3)	23 (10.2)	23 (10.2)	21 (9.3)	
C	123 (54.4)	119 (52.7)	101 (44.7)	89 (39.2)	

7 Abbreviations: FLD, fatty liver disease; PLC, primary liver cancer; BCLC stage, Barcelona Clinic Liver Cancer stage.

8 ^a Values are mean ± SD or median (P25, P75), where appropriate.

9 **Supplemental Table 2** Baseline Characteristics of Patients with Hepatocellular Carcinoma by Quartiles of Dietary Vitamin B3 Intake in the Guangdong Liver Cancer Cohort (N=905)

	Quartiles of Vitamin B3 Intake				<i>P</i> value
	Q1 (n=226)	Q2 (n=227)	Q3 (n=225)	Q4 (n=227)	
Age (year) ^a	53.5 (11.5)	52.5 (12.0)	52.3 (12.5)	49.4 (11.5)	0.002
Sex, n (%)					0.056
Men	201 (88.9)	191 (84.1)	202 (89.8)	209 (92.1)	
Women	25 (11.1)	36 (15.9)	23 (10.2)	18 (7.9)	
Total energy intake (kcal/day) ^a	2128.5 (1657.2, 2567.9)	1729.8 (1354.0, 2132.8)	1799.4 (1523.3, 2144.6)	2031.9 (1714.1, 2481.5)	<0.001
Methionine intake, mg/d ^a	1098.7 (943.0, 1243.3)	1215.1 (1125.4, 1376.8)	1339.1 (1217.6, 1500.9)	1548.5 (1348.6, 1793.1)	<0.001
Vitamin B2 intake, mg/d ^a	0.9 (0.7, 1.0)	1.0 (0.8, 1.1)	1.0 (0.9, 1.1)	1.1 (0.9, 1.2)	<0.001
Vitamin B3 intake, mg/d ^a	20.9 (19.1, 21.8)	24.1 (23.4, 24.8)	26.7 (26.0, 27.3)	30.3 (29.0, 32.2)	<0.001
Vitamin B6 intake, mg/d ^a	0.6 (0.5, 0.8)	0.7 (0.6, 0.9)	0.7 (0.6, 0.9)	0.8 (0.6, 1.0)	<0.001
Folate intake, µg/d ^a	169.2 (133.1, 215.3)	177.2 (147.3, 219.4)	183.0 (153.5, 221.0)	187.4 (149.1, 242.3)	0.026
Vitamin B12 intake, µg/d ^a	1.5 (0.9, 2.3)	1.3 (0.9, 2.0)	1.4 (1.1, 2.0)	1.2 (0.5, 1.8)	0.289
BMI \geq 28 kg/m ² , n (%)	11 (4.9)	12 (5.3)	14 (6.2)	17 (7.5)	0.651
Residence, n (%)					0.752
Urban	160 (70.8)	157 (69.2)	151 (67.1)	151 (66.5)	
Rural	66 (29.2)	70 (30.8)	74 (32.9)	76 (33.5)	
Education level, n (%)					0.219
Primary school or below	45 (19.8)	45 (19.8)	53 (23.6)	38 (16.7)	
Secondary school	144 (63.7)	132 (58.1)	136 (60.4)	136 (59.9)	
College or above	37 (16.4)	50 (22.0)	36 (16.0)	53 (23.3)	
Smoking status, n (%)					0.251
Never smoker	83 (36.7)	99 (43.6)	83 (36.9)	98 (43.2)	
Former or Current smoker	143 (63.3)	128 (56.4)	142 (63.1)	129 (56.8)	
Alcohol drinking status, n (%)					0.092

	Quartiles of Vitamin B3 Intake				<i>P</i> value
	Q1 (n=226)	Q2 (n=227)	Q3 (n=225)	Q4 (n=227)	
Never drinker	116 (51.3)	142 (62.6)	133 (59.1)	126 (55.5)	
Former or Current drinker	110 (48.7)	85 (37.4)	92 (40.9)	101 (44.5)	
Physical activity (MET-h/d) ^a	29.7 (25.7, 39.1)	28.6 (25.0, 35.8)	29.1 (25.6, 36.5)	29.8 (26.3, 36.1)	0.452
CRP level, n (%)					0.574
≥3.0 mg/L	113 (50.0)	120 (52.9)	112 (49.8)	126 (55.5)	
>3.0 mg/L	113 (50.0)	107 (47.1)	113 (50.2)	101 (44.5)	
With family history of PLC, n (%)	42 (18.6)	30 (13.2)	25 (11.1)	37 (16.3)	0.119
With chronic diseases, n (%)	208 (92.0)	204 (89.9)	205 (91.1)	212 (93.4)	0.581
Cancer treatment, n (%)					0.055
Surgery	99 (43.8)	98 (43.2)	115 (51.1)	122 (53.7)	
Other treatments	127 (56.2)	129 (56.8)	110 (48.9)	105 (46.3)	
BCLC stage, n (%)					0.804
0	23 (10.2)	28 (12.3)	26 (11.6)	19 (8.4)	
A	72 (31.9)	77 (33.9)	73 (32.4)	67 (29.5)	
B	25 (11.1)	22 (9.7)	18 (8.0)	23 (10.1)	
C	106 (46.9)	100 (44.1)	108 (48.0)	118 (52.0)	

10 Abbreviations: FLD, fatty liver disease; PLC, primary liver cancer; BCLC stage, Barcelona Clinic Liver Cancer stage.

11 ^a Values are mean ± SD or median (P25, P75), where appropriate.

12 **Supplemental Table 3** Baseline Characteristics of Patients with Hepatocellular Carcinoma by Quartiles of Dietary Vitamin B6 Intake in the Guangdong Liver Cancer Cohort (N=905)

	Quartiles of Vitamin B6 Intake				<i>P</i> value
	Q1 (n=227)	Q2 (n=226)	Q3 (n=226)	Q4 (n=226)	
Age (year) ^a	52.7 (11.8)	51.3 (11.8)	53.0 (12.2)	50.8 (11.9)	0.143
Sex, n (%)					0.007
Men	210 (92.5)	208(92.0)	195 (86.3)	190 (84.1)	
Women	17 (7.5)	18 (8.0)	31 (13.7)	36 (15.9)	
Total energy intake (kcal/d) ^a	2089.7 (1715.2, 2603.2)	1740.7 (1407.3, 2131.9)	1768.5 (1443.8, 2186.8)	2030.8 (1663.9, 2454.6)	<0.001
Methionine intake, mg/d ^a	1112.2 (954.7, 1255.8)	1246.1 (1121.7, 1380.2)	1399.8 (1214.3, 1567.4)	1553.2 (1248.7, 1820.4)	<0.001
Vitamin B2 intake, mg/d ^a	0.8 (0.7, 0.9)	0.9 (0.8, 1.0)	1.0 (0.9, 1.1)	1.2 (1.0, 1.3)	<0.001
Vitamin B3 intake, mg/d ^a	24.3 (21.7, 27.0)	24.9 (22.4, 27.4)	26.0 (23.1, 28.4)	26.4 (23.7, 30.0)	<0.001
Vitamin B6 intake, mg/d ^a	0.5 (0.4, 0.5)	0.6 (0.6, 0.7)	0.8 (0.8, 0.8)	1.1 (1.0, 1.2)	<0.001
Folate intake, µg/d ^a	138.0 (115.7, 166.9)	169.6 (150.5, 201.1)	195.2 (168.6, 226.4)	241.2 (187.5, 296.8)	<0.001
Vitamin B12 intake, µg/d ^a	1.0 (0.5, 1.6)	1.4 (0.9, 1.8)	1.5 (1.1, 2.2)	1.5 (1.0, 2.5)	<0.001
BMI≥28 kg m ⁻² , n (%)	11 (4.8)	12 (5.3)	15 (6.6)	16 (7.1)	0.714
Residence, n (%)					<0.001
Urban	128 (56.4)	156 (69.0)	166 (73.5)	169 (74.8)	
Rural	99 (43.6)	70 (31.0)	60 (26.5)	57 (25.2)	
Education level, n (%)					<0.001
Primary school or below	68 (30.0)	44 (19.5)	47 (20.8)	22 (9.7)	
Secondary school	136 (59.9)	140 (61.9)	134 (59.3)	138 (61.1)	
College or above	23 (10.1)	42 (18.6)	45 (19.9)	66 (29.2)	
Smoking status, n (%)					<0.001
Never smoker	62 (27.3)	88 (38.9)	98 (43.4)	115 (50.9)	
Former or Current smoker	165 (72.7)	138 (61.1)	128 (56.6)	111 (49.1)	
Alcohol drinking status, n (%)					0.452

	Quartiles of Vitamin B6 Intake				<i>P</i> value
	Q1 (n=227)	Q2 (n=226)	Q3 (n=226)	Q4 (n=226)	
Never drinker	125 (55.1)	129 (57.1)	124 (54.9)	139 (61.5)	
Former or Current drinker	102 (44.9)	97 (42.9)	102 (45.1)	87 (38.5)	
Physical activity (MET-h/d) ^a	31.2 (25.4, 40.5)	36.1 (30.3, 38.6)	29.1 (25.8, 35.0)	28.5 (25.4, 33.9)	<0.001
CRP level, n (%)					0.006
≥3.0 mg/L	112 (49.3)	99 (43.8)	128 (56.6)	132 (58.4)	
>3.0 mg/L	115 (50.7)	127 (56.2)	98 (43.4)	94 (41.6)	
With family history of PLC, n (%)	30 (13.2)	33 (14.6)	37 (16.4)	34 (15.0)	0.823
With chronic diseases, n (%)	208 (91.6)	204 (90.3)	208 (92.0)	209 (92.5)	0.848
Cancer treatment, n (%)					0.290
Surgery	106 (46.7)	99 (43.8)	110 (48.7)	119 (52.7)	
Other treatments	121 (53.3)	127 (56.2)	116 (51.3)	107 (47.3)	
BCLC stage, n (%)					<0.001
0	19 (8.4)	19 (8.4)	16 (7.1)	42 (18.6)	
A	60 (26.4)	61 (27.0)	85 (37.6)	83 (36.7)	
B	22 (9.7)	23 (10.2)	25 (11.1)	18 (8.0)	
C	126 (55.5)	123 (54.4)	100 (44.2)	83 (36.7)	

13 Abbreviations: FLD, fatty liver disease; PLC, primary liver cancer; BCLC stage, Barcelona Clinic Liver Cancer stage.

14 ^a Values are mean ± SD or median (P25, P75), where appropriate.

15 **Supplemental Table 4** Baseline Characteristics of Patients with Hepatocellular Carcinoma by Quartiles of Dietary Vitamin B12 Intake in the Guangdong Liver Cancer Cohort (N=905)

	Quartiles of Vitamin B12 Intake				<i>P</i> value
	Q1 (n=227)	Q2 (n=225)	Q3 (n=226)	Q4 (n=227)	
Age (year) ^a	51.4 (11.4)	52.3 (12.2)	52.2 (12.8)	51.9 (11.3)	0.858
Sex, n (%)					0.014
Men	204 (89.9)	192 (85.3)	194 (85.8)	213 (93.8)	
Women	23 (10.1)	33 (14.7)	32 (14.2)	14 (6.2)	
Total energy intake (kcal/d) ^a	2318.3 (2007.1, 2647.7)	1774.1 (1532.5, 2113.6)	1560.3 (1211.7, 1919.7)	1933.9 (1586.8, 2503.7)	<0.001
Methionine intake, mg/d ^a	1142.7 (977.7, 1298.8)	1245.0 (1112.9, 1397.9)	1330.2 (1172.6, 1493.9)	1597.7 (1262.6, 1859.9)	<0.001
Vitamin B2 intake, mg/d ^a	0.9 (0.7, 1.1)	0.9 (0.8, 1.1)	1.0 (0.9, 1.1)	0.9 (1.1, 1.2)	<0.001
Vitamin B3 intake, mg/d ^a	24.8 (21.2, 28.0)	25.3 (22.9, 27.6)	25.3 (23.3, 27.7)	25.8 (23.3, 29.0)	0.001
Vitamin B6 intake, mg/d ^a	0.6 (0.4, 0.8)	0.7 (0.6, 0.9)	0.7 (0.6, 0.9)	0.8 (0.6, 1.0)	<0.001
Folate intake, µg/d ^a	178.3 (138.0, 246.1)	182.6 (153.1, 224.2)	178.2 (146.7, 217.6)	177.7 (141.9, 221.0)	<0.001
Vitamin B12 intake, µg/d ^a	0.4 (0.1, 0.7)	1.1 (1.0, 1.2)	1.6 (1.5, 1.8)	2.8 (2.3, 4.3)	<0.001
BMI≥28 kg/m ² , n (%)	14 (6.2)	8 (3.6)	17 (7.5)	15 (6.6)	0.322
Residence, n (%)					0.401
Urban	146 (64.3)	154 (68.4)	162 (71.7)	157 (69.2)	
Rural	81 (35.7)	71 (31.6)	64 (28.3)	70 (30.8)	
Education level, n (%)					0.044
Primary school or below	45 (19.8)	45 (20.0)	40 (17.7)	51 (22.5)	
Secondary school	154 (67.8)	127 (56.4)	136 (60.2)	131 (57.7)	
College or above	28 (12.3)	53 (23.6)	50 (22.1)	45 (19.8)	
Smoking status, n (%)					0.114
Never smoker	95 (41.9)	99 (44.0)	93 (41.2)	76 (33.5)	
Former or Current smoker	132 (58.1)	126 (56.0)	133 (58.8)	151 (66.5)	
Alcohol drinking status, n (%)					0.271

	Quartiles of Vitamin B12 Intake				<i>P</i> value
	Q1 (n=227)	Q2 (n=225)	Q3 (n=226)	Q4 (n=227)	
Never drinker	135 (59.5)	133 (59.1)	132 (58.4)	117 (51.5)	
Former or Current drinker	92 (40.5)	92 (40.9)	94 (41.6)	110 (48.5)	
Physical activity (MET-h/d) ^a	30.5 (26.4, 39.2)	30.8 (26.6, 38.3)	28.1 (24.6, 34.2)	28.6 (25.1, 35.2)	0.030
CRP level, n (%)					0.863
≥3.0 mg/L	123 (54.2)	113 (50.2)	118 (52.2)	117 (51.5)	
>3.0 mg/L	104 (45.8)	112 (49.8)	108 (47.8)	110 (48.5)	
With family history of PLC, n (%)	34 (15.0)	40 (17.8)	33 (14.6)	27 (11.9)	0.374
With chronic diseases, n (%)	206 (90.7)	202 (89.8)	212 (93.8)	209 (92.1)	0.444
Cancer treatment, n (%)					0.303
Surgery	99 (43.6)	118 (52.4)	110 (48.7)	107 (47.1)	
Other treatments	128 (56.4)	107 (47.6)	116 (51.3)	120 (52.9)	
BCLC stage, n (%)					0.895
0	26 (11.5)	22 (9.8)	26 (11.5)	22 (9.7)	
A	68 (30.0)	76 (33.8)	78 (34.5)	67 (29.5)	
B	26 (11.5)	19 (8.4)	19 (8.4)	24 (10.6)	
C	107 (47.1)	108 (48.0)	103 (45.6)	114 (50.2)	

16 Abbreviations: FLD, fatty liver disease; PLC, primary liver cancer; BCLC stage, Barcelona Clinic Liver Cancer stage.

17 ^a Values are mean ± SD or median (P25, P75), where appropriate

Supplemental Table 5 Baseline Characteristics of Patients with Hepatocellular Carcinoma by Quartiles of Dietary Folate Intake in the Guangdong Liver Cancer Cohort (N=905)

	Quartiles of Folate Intake				<i>P</i> value
	Q1 (n=227)	Q2 (n=225)	Q3 (n=226)	Q4 (n=227)	
Age (year) ^a	51.8 (12.0)	50.1 (11.9)	53.0 (11.6)	52.8 (12.1)	0.037
Sex, n (%)					0.023
Men	210 (92.5)	203 (90.2)	200 (88.5)	190 (83.7)	
Women	17 (7.5)	22 (9.8)	26 (11.5)	37 (16.3)	
Total energy intake (kcal/d) ^a	2089.7 (1629.0, 2562.8)	1723.7 (1409.9, 2091.4)	1848.8 (1532.1, 2120.7)	2015.0 (1668.2, 2382.9)	<0.001
Methionine intake, mg/d ^a	1154.0 (980.8, 1436.9)	1290.7 (1147.8, 1472.5)	1302.7 (1156.4, 1512.6)	1353.1 (1183.1, 1611.2)	<0.001
Vitamin B2 intake, mg/d ^a	0.8 (0.7, 0.9)	0.9 (0.8, 1.0)	1.0 (0.9, 1.1)	1.2 (1.0, 1.4)	<0.001
Vitamin B3 intake, mg/d ^a	24.9 (21.7, 27.9)	25.2 (22.9, 27.5)	25.5 (23.0, 27.9)	26.0 (23.1, 29.0)	0.316
Vitamin B6 intake, mg/d ^a	0.5 (0.4, 0.7)	0.7 (0.6, 0.8)	0.8 (0.6, 0.9)	1.0 (0.8, 1.1)	<0.001
Folate intake, µg/d ^a	124.5 (103.8, 135.2)	163.5 (155.1, 169.8)	197.8 (188.7, 211.2)	268.7 (244.0, 315.4)	<0.001
Vitamin B12 intake, µg/d ^a	1.3 (0.8, 2.1)	1.4 (1.0, 2.1)	1.4 (1.0, 2.1)	1.2 (0.7, 1.9)	0.268
BMI≥28 kg/m ² , n (%)	14 (6.2)	12 (5.3)	17 (7.5)	11 (4.8)	0.646
Residence, n (%)					0.059
Urban	142 (62.6)	149 (66.2)	164 (72.6)	164 (72.2)	
Rural	85 (37.4)	76 (33.8)	62 (27.4)	63 (27.8)	
Education level, n (%)					<0.001
Primary school or below	56 (22.9)	43 (19.6)	49 (18.9)	33 (18.6)	
Secondary school	148 (65.2)	145 (64.4)	123 (54.4)	132 (58.1)	
College or above	23 (10.1)	37 (16.4)	54 (23.9)	62 (27.3)	
Smoking status, n (%)					<0.001
Never smoker	73 (32.2)	79 (35.1)	97 (42.9)	114 (40.1)	
Former or Current smoker	154 (67.8)	146 (64.9)	129 (57.1)	113 (59.9)	
Alcohol drinking status, n (%)					0.775
Never drinker	124 (54.6)	128 (56.9)	130 (57.5)	135 (59.5)	
Former or Current drinker	103 (45.4)	97 (43.1)	96 (42.5)	92 (40.5)	
Physical activity (MET h/d) ^a	29.6 (25.2, 39.5)	29.8 (25.9, 37.4)	28.9 (25.2, 36.2)	29.0 (25.9, 35.0)	0.333
CRP level, n (%)					0.179
≥3.0 mg/L	110 (48.5)	113 (50.2)	116 (51.3)	134 (58.1)	

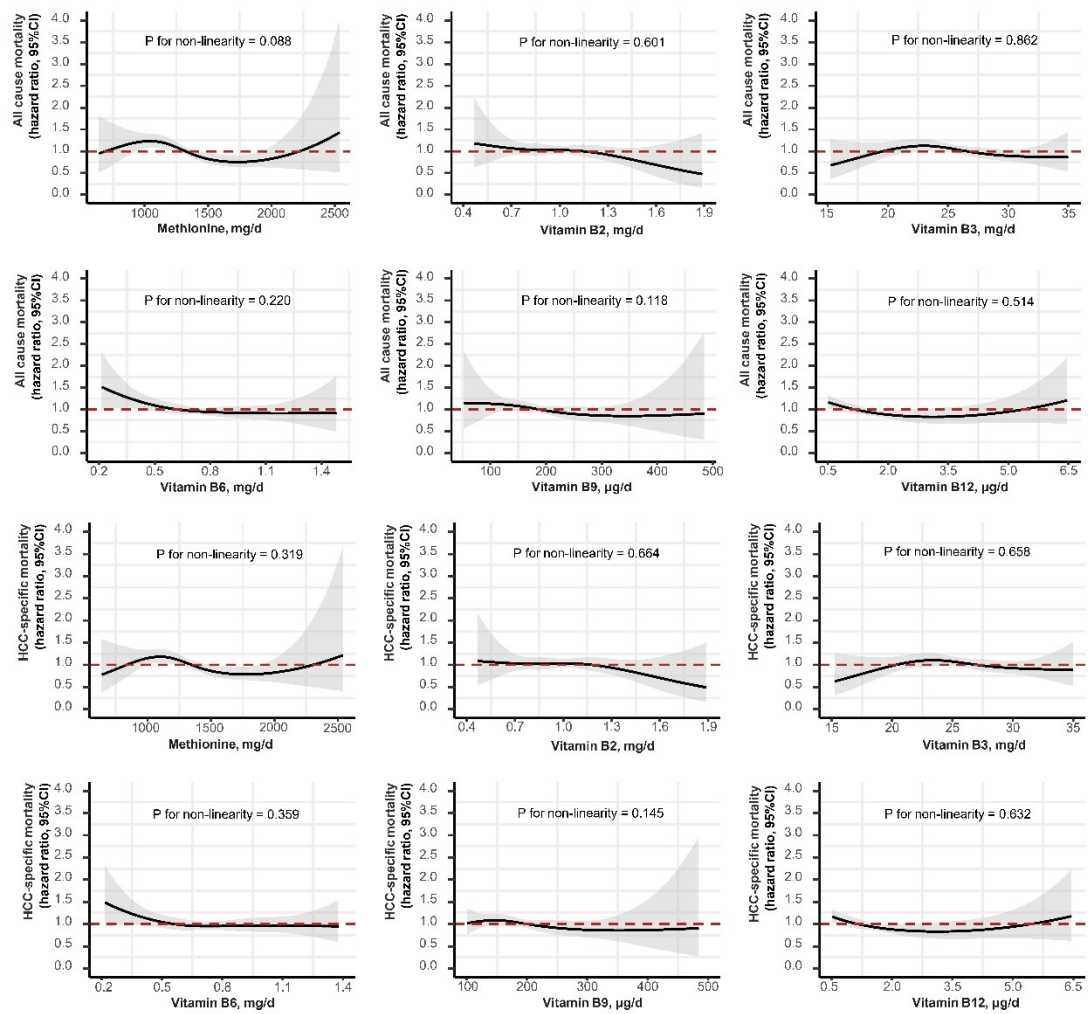
	Quartiles of Folate Intake				<i>P</i> value
	Q1 (n=227)	Q2 (n=225)	Q3 (n=226)	Q4 (n=227)	
>3.0 mg/L	117 (51.5)	112 (49.8)	110 (48.7)	92 (41.9)	
With family history of PLC, n (%)	37 (16.3)	24 (10.7)	38 (16.8)	35 (15.4)	0.236
With chronic diseases, n (%)	215 (94.7)	200 (88.9)	203 (89.8)	211 (93.0)	0.091
Cancer treatment, n (%)					0.100
Surgery	111 (48.9)	92 (40.9)	115 (50.9)	116 (51.1)	
Other treatments	116 (51.1)	133 (59.1)	111 (49.1)	111 (48.9)	
BCLC stage, n (%)					0.022
0	18 (7.9)	22 (9.8)	22 (9.8)	34 (15.0)	
A	61 (26.9)	64 (28.4)	83 (36.7)	81 (35.7)	
B	23 (10.1)	25 (11.1)	17 (7.5)	23 (10.1)	
C	125 (55.1)	114 (50.7)	104 (46.0)	89 (39.2)	

Abbreviations: FLD, fatty liver disease; PLC, primary liver cancer; BCLC stage, Barcelona Clinic Liver Cancer stage.

^a Values are mean \pm SD or median (P25, 25, P75), where appropriate.

Supplemental Table 6 Top five contributors of food sources (percentage contribution to total intake) of one-carbon metabolism related nutrients among HCC patients

Nutrient	Food source	Proportion (%)
Methionine	Grains and their products	44.1
	Pork loin cooked	22.4
	Sea fish	4.9
	Eggs	3.7
	Poultry	3.3
Vitamin B2	Grains and their products	32.3
	Vegetables	20.8
	Pork loin cooked	16.2
	Fruits	5.0
	Eggs	3.9
Vitamin B3	Grains and their products	56.5
	Pork loin cooked	17.5
	Vegetables	7.6
	Fruits	2.6
	Poultry	2.6
Vitamin B6	Vegetables	32.6
	Pork loin cooked	20.0
	Fruits	13.8
	Grains and their products	9.2
	Poultry	7.9
Vitamin B12	Pork loin cooked	61.5
	Sea fish	17.8
	Processed meat and vegetable	8.8
	Grains and their products	2.6
	Shrimps	1.2
Folate	Vegetables	37.8
	Grains and their products	27.1
	Soys and products	8.8
	Fruits	8.4
	Eggs	5.1



Supplemental Figure 1 Multivariable adjusted hazard ratios for all cause mortality and HCC-specific mortality according to dietary intake of one-carbon metabolism-related nutrients on a continuous scale. Solid black lines are multivariable adjusted hazard ratios, with shaded area showing 95% confidence intervals derived from restricted cubic spline regressions with three knots. Reference lines for no association are indicated by the dashed red lines at a hazard ratio of 1.0. Analyses were adjusted for sex, age, body mass index, energy intake, physical activity, education level, smoking status, alcohol drinking status, presence of chronic diseases, Barcelona Clinic Liver Cancer stage and treatment.