

Supplementary Materials

Association of physical activity with the risk of hepatocellular carcinoma in patients with chronic hepatitis B

Supplementary Table S1. Definition of diagnosis

Supplementary Table S2. Multivariable analysis for HCC development in total study population

Supplementary Fig. S1. Physical activity of patients with and without cirrhosis

Supplementary Fig. S2. Comparison of physical activity between male and female

Supplementary Table S1. Definition of diagnosis

| Variable | Definition |
|---------------------------|--|
| Exclusion criteria | |
| HCV coinfection | ICD-10 code: B18.2 |
| HIV coinfection | ICD-10 codes: B20-B24 |
| Cancer | ICD-10 codes: C00-C97 |
| Covariables | |
| Cirrhosis | ICD-10 code: K7290, K7291, K74, K740, K7400, K7401, K7402, K7409 |
| Diabetes mellitus | ICD-10 codes: E100, E1000, E1001, E1002, E1003, E1008, E101, E1010, E1011, E1012, E1018, E102, E1020, E1021, E1022, E1028, E103, E1031, E1032, E1033, E1034, E1038, E104, E1040, E1041, E1042, E1048, E105, E1050, E1051, E1058, E106, E1060, E1061, E1062, E1063, E1064, E1068, E107, E1070, E1071, E1072, E1078, E108, E109, E11, E110, E1100, E1101, E1102, E1103, E1108, E111, E1110, E1111, E1112, E1118, E112, E1120, E1121, E1122, E1128, E113, E1131, E1132, E1133, E1134, E1138, E114, E1140, E1141, E1142, E1148, E115, E1150, E1151, E1158, E116, E1160, E1161, E1162, E1163, E1164, E1168, E117, E1170, E1171, E1172, E1178, E118, E119, E14, E140, E1400, E1401, E1402, E1403, E1408, E141, E1410, E1411, E1412, E1418, E142, E1420, E1421, E1422, E1428, E143, E1431, E1432, E1433, E1434, E1438, E144, E1440, E1441, E1442, E1448, E145, E1450, E1451, E1458, E146, E1460, E1461, E1462, E1463, E1464, E1468, E147, E1470, E1471, E1472, E1478, E148, E149. |
| Hypertension | ICD-10 codes: I10, I101, I109, I11, I110, I119, I12, I120, I129, I13, I130, I131, I132, I139, I15, I150, I151, I152, I1520, I1521, I1522, I1528, I158, I1580, I1588, I159 |
| Outcomes | |
| HCC | ICD-10 code C22 with the special cancer claim code V193 |

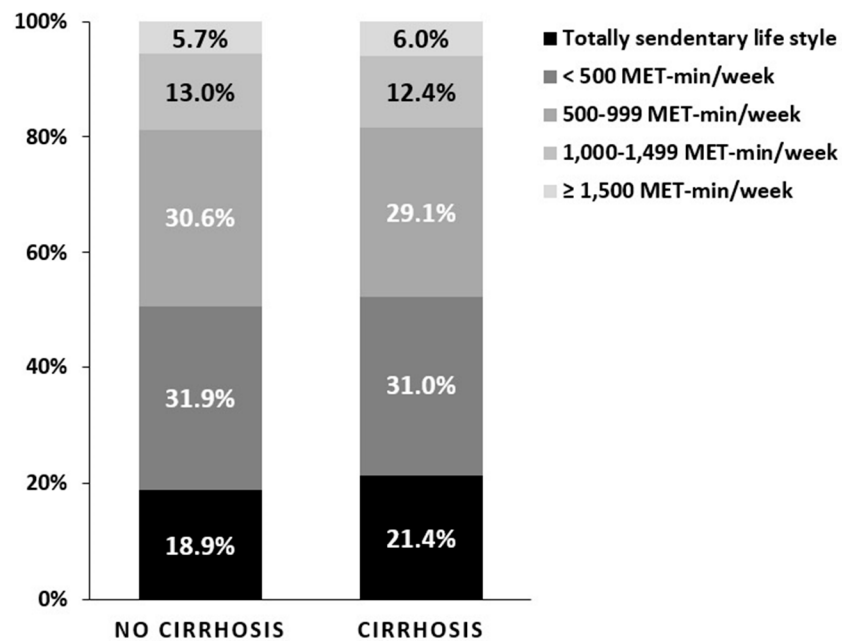
Supplementary Table S2. Multivariable analysis for HCC development in total study population (n=9,727)

| | HR | 95% CI | <i>P</i> value |
|---------------------------------|-----------|-----------|----------------|
| Physical activity | | | |
| Totally sedentary | Reference | | |
| < 500 MET-min/week | 0.82 | 0.68–0.99 | 0.039 |
| 500–1,000 MET-min/week | 0.74 | 0.61–0.89 | 0.002 |
| 1,000–1,500 MET-min/week | 0.64 | 0.50–0.84 | 0.001 |
| ≥ 1,500 MET-min/week | 0.70 | 0.51–0.97 | 0.032 |
| Antiviral therapy | | | |
| Entecavir | Reference | | |
| Tenofovir | 0.89 | 0.77–1.02 | 0.101 |
| Age | 1.04 | 1.03–1.05 | <0.001 |
| Sex (female vs male) | 0.67 | 0.55–0.82 | <0.001 |
| Diabetes mellitus | 1.36 | 1.03–1.80 | 0.032 |
| Hypertension | 1.39 | 1.09–1.77 | 0.009 |
| Body mass index | 1.03 | 1.01–1.06 | 0.004 |
| Smoking | | | |
| Never | Reference | | |
| Previous | 1.01 | 0.82–1.25 | 0.904 |
| Current | 1.32 | 1.09–1.62 | 0.006 |
| Significant alcohol consumption | 1.33 | 0.99–1.79 | 0.057 |

| | | | |
|-----------------------|-------|-------------|--------|
| AST | 1.000 | 0.998–1.001 | 0.779 |
| ALT | 0.998 | 0.996–0.999 | 0.005 |
| GGT | 1.002 | 1.002–1.003 | <0.001 |
| Fasting blood glucose | 1.000 | 0.998–1.003 | 0.687 |
| LDL cholesterol | 0.995 | 0.993–0.997 | <0.001 |

Abbreviations: ALT, Alanine aminotransferase; AST, aspartate aminotransferase; CI, confidence interval; GGT, gamma-glutamyl transferase; HCC, hepatocellular carcinoma; HR, hazard ratio; LDL, low-density lipoprotein; MET, metabolic equivalent of task. .

Supplementary Fig. S1. The proportions of physical activity classified into 5 categories stratified by the presence of cirrhosis. There was no significant difference of the proportions of physical activity between the two groups ($P=0.10$)



Supplementary Fig. S2. The proportions of physical activity classified into 5 categories stratified by sex. There was significant difference of the proportions of physical activity between the two groups ($P<0.001$): male patients had more physical activity than female patients.

