Title: Hepatitis B virus infection and the risk of gastrointestinal cancers among Chinese population: a prospective cohort study

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Supplementary table 1. The association of HBV infection with the risk of GI cancer exclude participants who occurred GI cancer within the  $1^{st}$  year or with cirrhosis.

|   | HBsAg Seronegative |              | HBsAg Seropositive |              | Adjusted Hazard Ratios |
|---|--------------------|--------------|--------------------|--------------|------------------------|
|   | Cases              | Person-years | Cases              | Person-years | (95% CI)               |
| Excluding GI cancers occurred within the 1st year       |                    |              |                    |              | _                      |
| Liver cancer <sup>a</sup>                               | 217                | 1126615      | 155                | 30881        | 21.26(16.93~26.70)     |
| Gallbladder or extrahepatic bile duct cancer $^{\rm b}$ | 105                | 1127009      | 43                 | 31285        | 12.53(8.45~18.57)      |
| Colorectal cancer                                       | 597                | 1124623      | 29                 | 31246        | 1.77(1.16~2.97)        |
| Pancreatic cancer                                       | 148                | 1126905      | 12                 | 31332        | 1.82(1.08~3.96)        |
| Excluding patients with cirrhosis                       |                    |              |                    |              |                        |
| Liver cancer <sup>a</sup>                               | 229                | 1125971      | 138                | 29978        | 22.99(18.49~28.59)     |
| Gallbladder or extrahepatic bile duct cancer $^{\rm b}$ | 109                | 1126340      | 36                 | 30276        | 12.92(9.46~20.47)      |
| Colorectal cancer                                       | 633                | 1123979      | 26                 | 30205        | 1.71(1.35~2.)          |
| Pancreatic cancer                                       | 151                | 1126237      | 11                 | 30291        | 1.72(1.11~3.89)        |

Note: All models were adjusted for age, sex, BMI, TG, TC, hs-CRP, TBil, ALT, diabetes, family income, educational background, marital status, salt consumption, current smoker, drinking status, physical activity, and family history of cancer.

a: Further adjusted for liver cirrhosis and fatty liver disease.

b: Further adjusted for gallstone disease and gallbladder polyp.

Supplementary table 2. The association of HBV infection with the risk of GI cancer by time window of cancer diagnosis.

|   | HBsAg Seronegative |              | HBsAg Seropositive |              | Adjusted Hazard Ratios |  |  |  |
|---|--------------------|--------------|--------------------|--------------|------------------------|--|--|--|
|   | Cases              | Person-years | Cases              | Person-years | (95% CI)               |  |  |  |
| The adjusted HRs (95%CI) for GI cancer diagnosis < 3 years        |                    |              |                    |              |                        |  |  |  |
| Liver cancer <sup>a</sup>   | 70                 | 3019         | 44                 | 156          | 9.37(5.91~14.86)       |  |  |  |
| Gallbladder or extrahepatic bile duct cancer $^{\rm b}$           | 17                 | 3074         | 3                  | 183          | 2.68(0.57~12.52)       |  |  |  |
| Colorectal cancer   | 113                | 3001         | 2                  | 181          | 0.38(0.09~1.54)        |  |  |  |
| Pancreatic cancer   | 33                 | 3057         | 1                  | 181          | 0.55(0.07~4.04)        |  |  |  |
| The adjusted HRs (95%CI) for GI cancer diagnosis within 3-5 years |                    |              |                    |              |                        |  |  |  |
| Liver cancer <sup>a</sup>   | 30                 | 8044         | 31                 | 341          | 29.66(16.84~52.22)     |  |  |  |
| Gallbladder or extrahepatic bile duct cancer <sup>b</sup>         | 8                  | 8061         | 0                  | 377          | NA                     |  |  |  |
| Colorectal cancer   | 110                | 7091         | 3                  | 373          | 0.66(0.21~2.11)        |  |  |  |
| Pancreatic cancer   | 13                 | 8052         | 1                  | 370          | 1.94(0.24~15.39)       |  |  |  |
| The adjusted HRs (95%CI) for GI cancer diagnosis > 5 years        |                    |              |                    |              |                        |  |  |  |
| Liver cancer <sup>a</sup>   | 136                | 1115566      | 100                | 30397        | 24.39(18.44~32.27)     |  |  |  |
| Gallbladder or extrahepatic bile duct cancer $^{\rm b}$           | 86                 | 1115876      | 41                 | 30736        | 19.99(13.72~29.11)     |  |  |  |

| Colorectal cancer | 413 | 1114559 | 24 | 30692 | 1.80(1.12~2.89) |
|-------------------|-----|---------|----|-------|-----------------|
| Pancreatic cancer | 108 | 1115800 | 11 | 30781 | 2.03(1.09~3.67) |

Note: All models were adjusted for age, sex, BMI, TG, TC, hs-CRP, TBil, ALT, diabetes, family income, educational background, marital status, salt consumption, current smoker, drinking status, physical activity, and family history of cancer.

a: Further adjusted for liver cirrhosis and fatty liver disease.

b: Further adjusted for gallstone disease and gallbladder polyp.