**Supplementary Table 3. Identifying criteria of incident and prevalent diseases**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Diseases | Incident diseases | Prevalent diseases | | |
|  | ICD-10 codes | ICD-10 codes | ICD-9 codes | Self-reported code used in UK Biobank |
| Liver diseases | Alcoholic cirrhosis of liver: K70.3  Cirrhosis, compensated: K74.6  Esophageal varices, not bleeding: I85.9, I98.2  Gastric varices, not bleeding: I86.4  Esophageal varices, bleeding: I85.0, I98.3  Ascites: R18  Hepatorenal syndrome: K76.7  Portal hypertension: K76.6  Liver Transplantation: Z94.4  HCC: C22.0  Liver cancer, unspecified: C22.9 | B16-19.x, K70.0–K70.3, K70.9, K71.3–K71.5, K71.7, K73.x, K74.0-K74.2, K76.0, K76.2–K76.4, K76.8, K76.9, Z94.4, I85.0, I85.9, I86.4, I98.2, K70.4, K71.1, K72.1, K72.9, K76.5, K76.6, K76.7, K74.3-K74.6, C22.0-C22.9, K75.4 | 571.2, 571.4-571.6, 456.0-456.21, 572.2-572.8 | 1506, 1155-1160, 1604, 1136, 1024 |
| Cardiovascular diseases | I21.x, I22.x, I25.2, I09.9, I11.0, I13.0, I13.2, I25.5, I42.0, I42.5–I42.9, I43.x, I50.x, P29.0 | I21.x, I22.x, I25.2, I09.9, I11.0, I13.0, I13.2, I25.5, I42.0, I42.5–I42.9, I43.x, I50.x, P29.0 | 410.x, 412.x; 428.x | 1066, 1074-1080 |
| Chronic kidney diseases | I12.0, I13.1, N03.2–N03.7, N05.2–N05.7, N18.x, N19.x, N25.0, Z49.0–Z49.2, Z94.0, Z99.2 | I12.0, I13.1, N03.2–N03.7, N05.2–N05.7, N18.x, N19.x, N25.0, Z49.0–Z49.2, Z94.0, Z99.2 | 582.x, 583-583.7, 585.x, 586.x, 588.x | 1192-1197, 1405 |
| Cancers | C00.x–C26.x, C30.x–C34.x, C37.x–C41.x, C43.x, C45.x–C58.x, C60.x–C76.x, C81.x–C86.x, C88.x, C90.x–C97.x, excluding C22.0, C22.9 | C00.x–C26.x, C30.x–C34.x, C37.x–C41.x, C43.x, C45.x–C58.x, C60.x–C76.x, C81.x–C86.x, C88.x, C90.x–C97.x | 140.x-172.x, 174.x-195.8, 200.x-208.x | 1004-1023, 1025-1088 |

The disease code reference: *Medical Care* 2005;43(11):1130-1139, *and Hepatology* 2021; doi: 10.1002/hep.31726.