**Supplementary Table 1: Cumulative incidence function (%) and absolute excess risk (%) by 5 years from diagnosis, adjusted for competing risks, in EVER-SMOKERS. The results are stratified by aetiology and disease stage. (Cases: n=3070. Without liver cirrhosis: n=68,529)**

|  |
| --- |
| **Aetiology/disease stage Compensated Decompensated** |
|   |  |  |  |  |  |  |  |
| **Viral hepatitis** | **Cases** | **Without liver cirrhosis** | **Excess** | **95% CI** | **Cases** | **Without liver cirrhosis** | **Excess** | **95% CI** |  |
| Liver\* | 27.47 | 0.11 | 27.36 | (23.30, 31.41) | 38.69 | 0.10 | 38.59 | (29.98, 47.20) |  |
| Non-liver neoplasm | 2.58 | 3.42 | -0.84 | (-2.23, 0.55) | 20.64 | 3.42 | 17.22 | (9.77, 24.68) |  |
| Circulatory | 2.11 | 1.76 | 0.35 | (-0.57, 1.28) | 7.09 | 1.77 | 5.32 | (1.53, 9.12) |  |
| Respiratory | 0.92 | 0.63 | 0.29 | (-0.23, 0.81) | 1.30 | 0.62 | 0.68 | (-0.34, 1.70) |  |
| Other† | 7.81 | 1.40 | 6.41 | (4.86, 7.96) | 15.05 | 1.41 | 13.64 | (8.04, 19.25) |  |
| **AI/Metabolic disease** |  |  |  |  |  |  |  |  |  |
| Liver\* | 17.40 | 0.10 | 17.30 | (15.0, 19.6) | 51.70 | 0.10 | 51.60 | (41.60, 61.60) |  |
| Non-liver neoplasm | 3.99 | 3.42 | 0.57 | (-0.83, 1.97) | 4.56 | 3.42 | 1.14 | (-1.56, 3.84) |  |
| Circulatory | 1.52 | 1.76 | -0.24 | (-0.92, 0.44) | 2.81 | 1.76 | 1.05 | (-0.94, 3.05) |  |
| Respiratory | 0.74 | 0.62 | 0.12 | (-0.22, 0.45) | 2.10 | 0.62 | 1.48 | (0.19, 2.73) |  |
| Other† | 2.47 | 1.40 | 1.08 | (0.27, 1.90) | 10.66 | 1.40 | 9.26 | (5.17, 13.35) |  |
| **Alcohol** |  |  |  |  |  |  |  |  |  |
| Liver\* | 30.49 | 0.09 | 30.40 | (27.61, 33.19) | 46.48 | 0.08 | 46.40 | (42.97, 49.83) |  |
| Non-liver neoplasm | 5.76 | 3.42 | 2.34 | (1.37, 3.32) | 5.79 | 3.42 | 2.37 | (1.15, 3.59) |  |
| Circulatory | 4.28 | 1.81 | 2.47 | (1.80, 3.15) | 4.86 | 1.78 | 3.08 | (1.95, 4.2) |  |
| Respiratory | 1.81 | 0.64 | 1.17 | (0.75, 1.60) | 1.70 | 0.63 | 1.07 | (0.63, 1.51) |  |
| Other† | 5.27 | 1.42 | 3.85 | (2.93, 4.78) | 6.84 | 1.42 | 5.42 | (4.33, 6.52) |  |
| **Unspecified** |  |  |  |  |  |  |  |  |  |
| Liver\* | 7.55 | 0.09 | 7.46 | (6.04, 8.89) | 26.1 | 0.09 | 25.98 | (22.11, 29.69) |  |
| Non-liver neoplasm | 12.69 | 3.45 | 9.24 | (7.67, 10.81) | 20.42 | 3.45 | 16.97 | (13.08, 20.85) |  |
| Circulatory | 3.55 | 1.77 | 1.78 | (1.12, 2.44) | 5.74 | 1.77 | 3.97 | (2.77, 5.17) |  |
| Respiratory | 0.70 | 0.62 | 0.08 | (-0.13, 0.29) | 1.64 | 0.62 | 1.02 | (0.61, 1.44) |  |
| Other† | 2.80 | 1.40 | 1.40 | (0.84, 1.97) | 6.30 | 1.43 | 4.87 | (3.35, 6.39) |   |

 \*includes hepatocellular carcinoma. \*\* excludes hepatocellular carcinaoma. †includes missing cause of death. Ever-smoker includes current and ex-smokers. CI=confidence interval. AI=autoimmune. †includes missing cause of death. Confidence intervals calculated by Bootstrapping with 50 iterations.

**Supplementary Table 2: Cumulative incidence function (%) and absolute excess risk (%) by 5 years after diagnosis, adjusted for competing risks, in NON-SMOKERS. The results are stratified by aetiology and disease stage (Cases: n=1582. Without liver cirrhosis: n=65,262)**

|  |
| --- |
| **Aetiology/disease stage Compensated Decompensated** |
|   |  |  |  |  |  |  |  |
| **Viral hepatitis** | **Cases** | **Without liver cirrhosis** | **Excess** | **95% CI** | **Cases** | **Without liver cirrhosis** | **Excess** | **95% CI** |  |
| Liver\* | 14.45 | 0.05 | 14.40 | (11.87, 16.93) | 30.28 | 0.06 | 30.22 | (23.74, 36.71) |  |
| Non-liver neoplasm\*\* | 1.64 | 2.08 | -0.44 | (-1.42, 0.53) | 15.16 | 2.09 | 13.07 | (8.11, 18.03) |  |
| Circulatory | 1.62 | 1.27 | 0.35 | (-0.64, 1.35) | 6.60 | 1.28 | 5.32 | (1.15, 9.49) |  |
| Respiratory | 0.46 | 0.30 | 0.16 | (-0.09, 0.41) | 0.73 | 0.29 | 0.44 | (-0.27, 1.16) |  |
| Other† | 7.09 | 1.21 | 5.88 | (3.80, 7.97) | 15.41 | 1.21 | 14.19 | (8.42, 20.0) |  |
| **AI/Metabolic** |  |  |  |  |  |  |  |  |  |
| Liver\* | 15.49 | 0.08 | 15.37 | (12.39, 18.35) | 41.71 | 0.07 | 41.64 | (30.26, 51.50) |  |
| Non-liver neoplasm\*\* | 2.46 | 2.08 | 0.38 | (-0.70, 1.46) | 3.03 | 2.08 | 0.95 | (-1.41, 3.30) |  |
| Circulatory | 1.03 | 1.27 | -0.24 | (-1.01, 0.52) | 2.32 | 1.27 | 1.05 | (-0.88, 2.99) |  |
| Resp | 0.35 | 0.29 | 0.06 | (-0.11, 0.24) | 1.11 | 0.29 | 0.82 | (0.17, 1.47) |  |
| Other† | 2.19 | 1.21 | 0.98 | (0.16, 1.80) | 10.23 | 1.21 | 9.02 | (5.04, 12.99) |  |
| **Alcohol** |  |  |  |  |  |  |  |  |  |
| Liver\* | 33.13 | 0.09 | 33.04 | (29.32, 36.76) | 47.37 | 0.08 | 47.29 | (42.82, 51.76) |  |
| Non-liver neoplasm\*\* | 3.75 | 2.09 | 1.66 | (1.06, 2.25) | 4.05 | 2.09 | 1.96 | (1.10, 2.82) |  |
| Circulatory | 3.78 | 1.31 | 2.47 | (1.76, 3.18) | 4.36 | 1.28 | 3.08 | (2.04, 4.11) |  |
| Respiratory | 0.93 | 0.31 | 0.62 | (0.42, 0.81) | 0.94 | 0.30 | 0.64 | (0.39, 0.89) |  |
| Other† | 4.91 | 1.23 | 3.65 | (2.97, 4.34) | 6.85 | 1.22 | 5.63 | (4.39, 6.87) |  |
| **Unspecified** |  |  |  |  |  |  |  |  |  |
| Liver\* | 6.04 | 0.07 | 5.97 | (4.81,7.13) | 18.93 | 0.06 | 18.87 | (15.86, 21.88) |  |
| Non-liver neoplasm\*\* | 7.97 | 2.10 | 5.87 | (4.68, 7.05) | 13.59 | 2.12 | 11.47 | (9.26, 13.68) |  |
| Circulatory | 3.05 | 1.27 | 1.78 | (1.01, 2.54) | 5.26 | 1.29 | 3.97 | (2.53, 5.42) |  |
| Respiratory | 0.35 | 0.30 | 0.05 | (-0.06, 0.15) | 0.85 | 0.30 | 0.55 | (0.32, 0.77) |  |
| Other† | 2.49 | 1.21 | 1.28 | (0.81, 1.75) | 5.82 | 1.23 | 4.59 | (3.32, 5.86) |   |

 \*includes hepatocellular carcinoma. \*\* excludes hepatocellular carcinoma. †includes missing cause of death. CI=confidence interval. AI=autoimmune. Confidence intervals were calculated by Bootstrapping with 50 iterations.