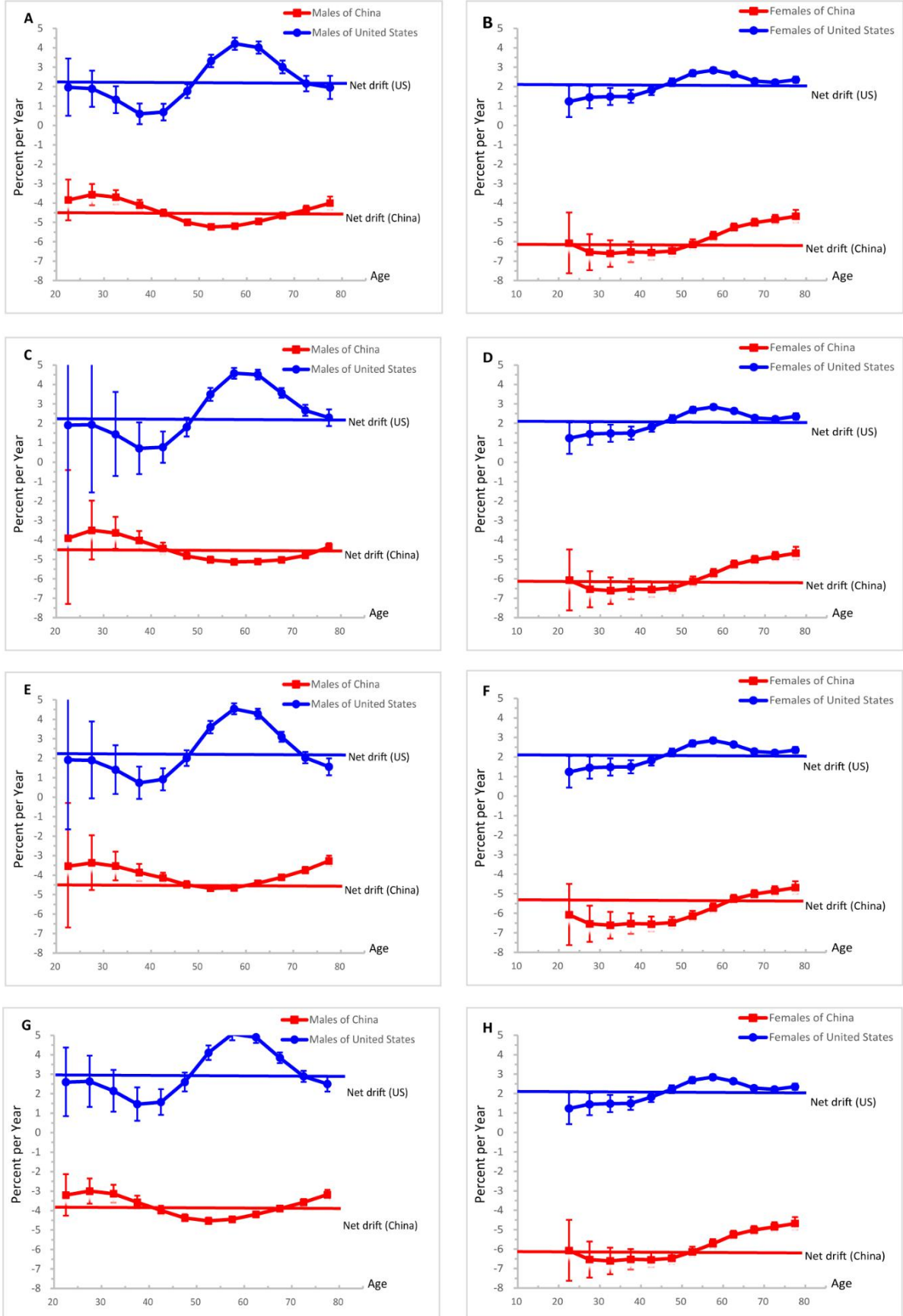


**Supplementary Figure 1:** Incidence of PLC among four causes by sex between China and the US from 1990 to 2019. The solid line indicates the CIR of liver cancer, and the dashed line indicates the ASIR of liver cancer. In addition, the red line indicates China, and the blue line indicates the US. (A) and (B) show the data derived for the total population of China and the US. (A) and (B) represent the trends of LCHB from 1990 to 2019; (C) and (D) represent the trends of LCHC from 1990 to 2019; (E) and (F) represent the trends of LCAL from 1990 to 2019; (G) and (H) represent the trends of NASH from 1990 to 2019. (A), (C), (E), and (G) represent the data of males, while (B), (D), (F), and (H) represent the data of females. ASIR: Age-standardized incidence rate; CIR: Crude incidence rate; LCAL: Alcohol use-related liver cancer; LCHB: HBV-related liver cancer; LCHC: HCV-related liver cancer; NASH: Nonalcoholic steatohepatitis; PLC: Primary liver cancer; US: United States.



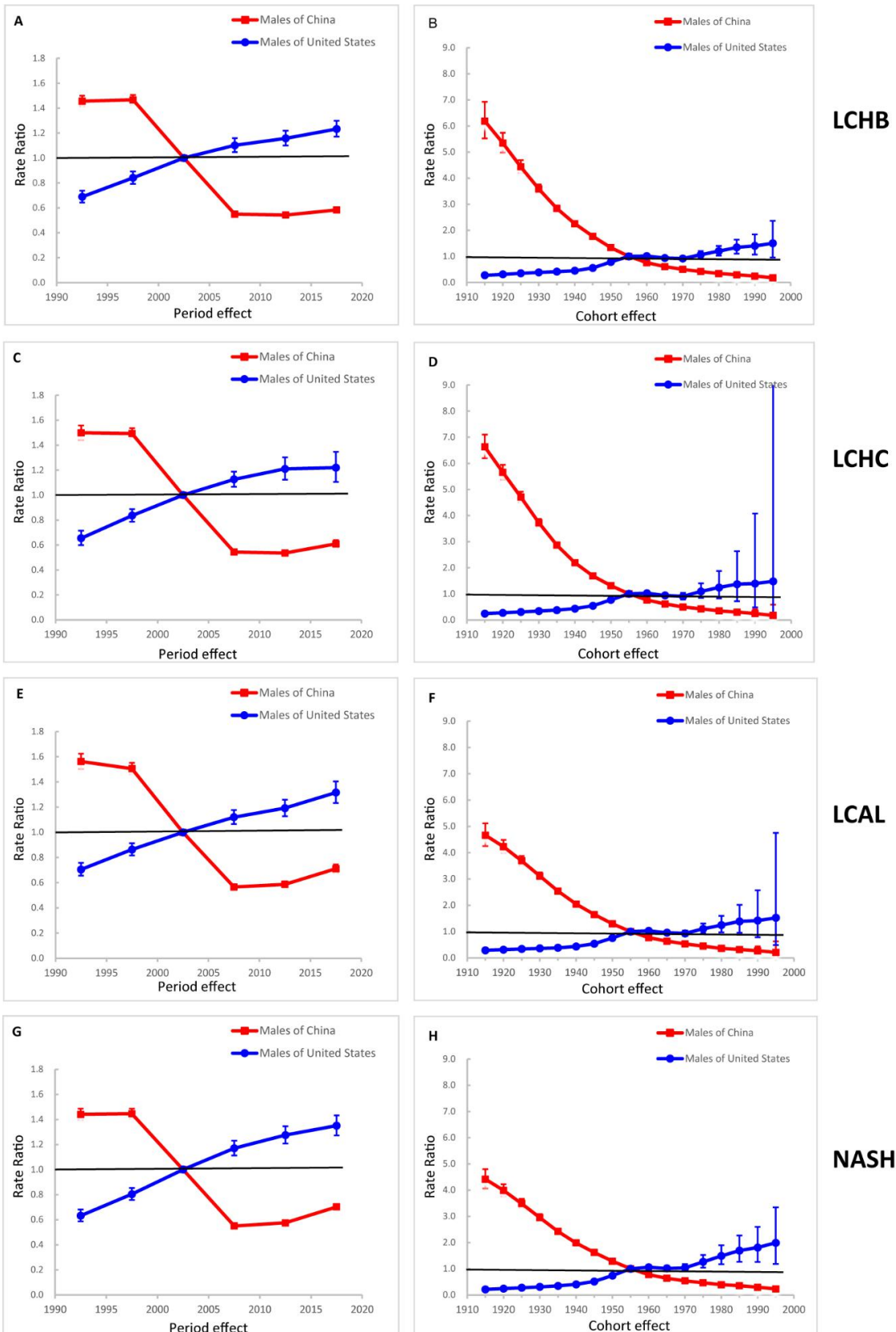
LCHB

LCHC

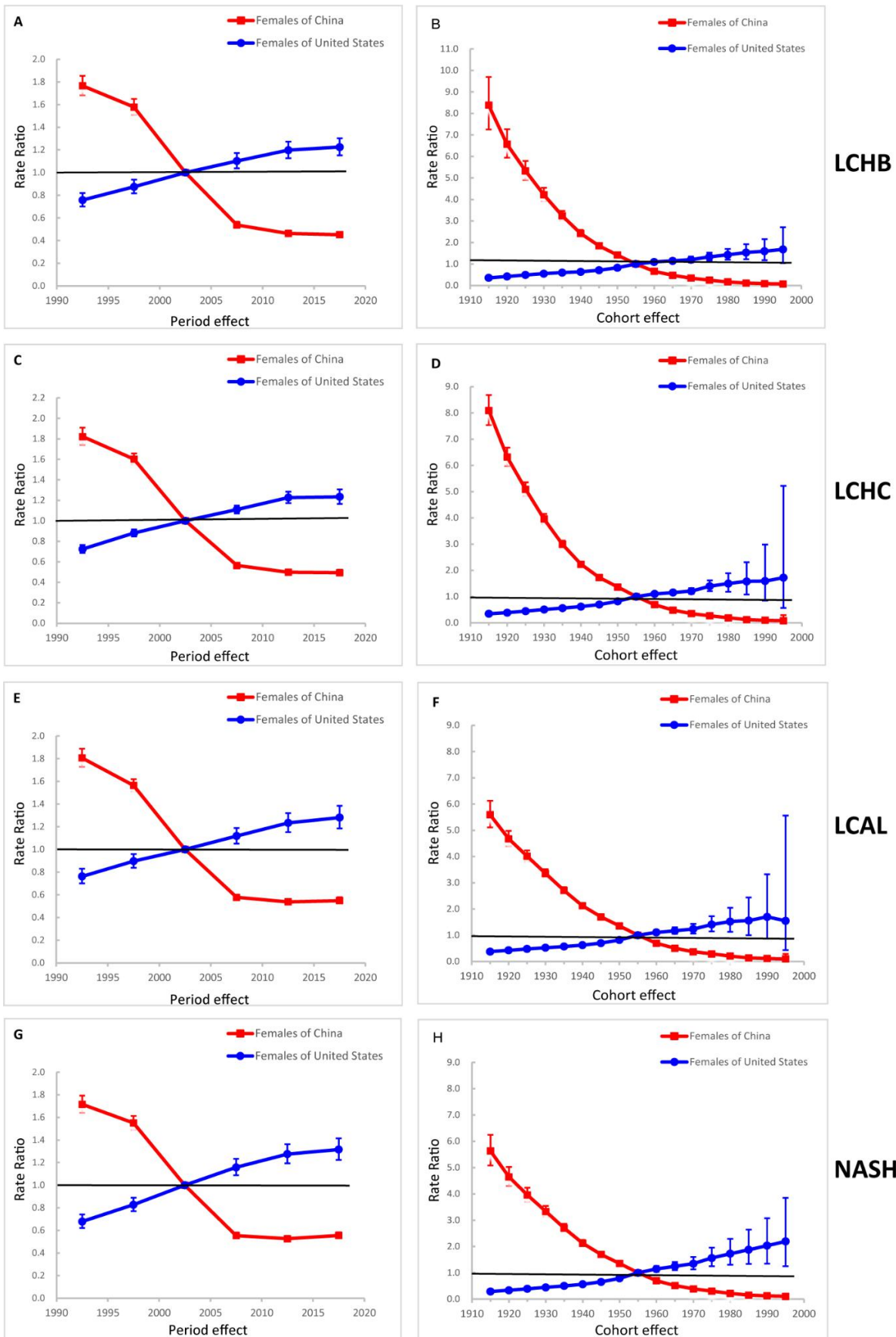
LCAL

NASH

**Supplementary Figure 2:** Incidence net drift and local drift among four causes of PLC by sex. The red line indicates China, and the blue line indicates the US. The hinges indicate the 95% CI of the corresponding age. (A), (C), (E), and (G) represent the data derived from males with the corresponding type of liver cancer, and (B), (D), (F), and (H) represent the data derived from females with the corresponding liver cancer. CI: Confidence interval; LCAL: Alcohol use-related liver cancer; LCHB: HBV-related liver cancer; LCHC: HCV-related liver cancer; NASH: Nonalcoholic steatohepatitis; PLC: Primary liver cancer; US: United States.



**Supplementary Figure 3:** Period and cohort effects among four causes of PLC by male sex from 1990 to 2019. The red line indicates Chinese males, and the blue line indicates US males. The hinges indicate 95% UI of the corresponding period/-birth cohort effects. (A), (C), (E), and (G) represent the period effects with corresponding liver cancer and (B), (D), (F), and (H) represent birth cohort effects with corresponding liver cancer. LCAL: Alcohol use-related liver cancer; LCHB: HBV-related liver cancer; LCHC: HCV-related liver cancer; NASH: Nonalcoholic steatohepatitis; PLC: Primary liver cancer; UI: Uncertainty interval; US: United States.



**Supplementary Figure 4:** Period and cohort effects among four causes of PLC by female sex from 1990 to 2019. The red line indicates Chinese females, and the blue line indicates US females. The hinges indicate 95% UI of the corresponding period/birth cohort effects. (A), (C), (E), and (G) represent the period effects with corresponding liver cancer and (B), (D), (F), and (H) represent birth cohort effects with corresponding liver cancer. LCAL: Alcohol use-related liver cancer; LCHB: HBV-related liver cancer; LCHC: HCV-related liver cancer; NASH: Nonalcoholic steatohepatitis; PLC: Primary liver cancer; UI: Uncertainty interval; US: United States.