

Supplementary Table 2. Representative population

Category	
Disease	<ul style="list-style-type: none"> • Exposure: herpes zoster vaccination • Outcome: hepatobiliary diseases <p>Hepatobiliary diseases are defined as hepatic failure, chronic hepatitis, Inflammatory liver disease, liver cirrhosis, cholelithiasis, cholecystitis & cholangitis, acute pancreatitis, other diseases of the gallbladder and other diseases of the pancreas.</p>
Special considerations related to	
Sex	Males had a lower risk of developing every hepatobiliary disease after vaccination than females.
Age	The association between age and hepatobiliary diseases remained consistent across all subtypes. Following vaccination, individuals under 60 years had a significantly lower risk of all hepatobiliary diseases compared to those aged 60 years.
Socioeconomic status	The incidence of hepatobiliary diseases was found to be lower among individuals with low socioeconomic status after vaccination compared to those with middle or high socioeconomic status.
Geography of urban-rural interaction	The incidence rate of hepatobiliary diseases was observed to be lower among individuals living in rural areas.
Other considerations	Individuals with unhealthy lifestyles, such as smoking, excessive alcohol consumption, and insufficient physical activity, exhibited a lower incidence rate of hepatobiliary diseases following vaccination. In addition, those taking medications for coronary artery disease, hyperlipidemia, hypertension and diabetes had a reduced risk of hepatobiliary disease post-vaccination.
Overall representativeness of this study	Utilizing the Korean nationwide cohort of over four million individuals, we conducted a comprehensive evaluation of the risk of hepatobiliary diseases following herpes zoster vaccination compared to non-vaccinated controls. This study represents the most extensive analysis to date, offering a thorough assessment of the vaccine's potential protective effects against hepatobiliary disease incidence.