

Supplementary Table 4. The hazard ratio (95% CI) for the incidence risk of hepatobiliary diseases following zoster vaccination in the propensity score-matched cohort

	Events, n (%)	Incidence rate ^{b)}	aHR (95% CI)	
			Model 1 ^{c)}	Model 2 ^{d)}
Any hepatobiliary events				
Unvaccinated	108,007 (14.77)	29.75	1.0 (reference)	1.0 (reference)
Vaccinated	89,764 (12.28)	26.93	0.86 (0.86 to 0.87) ^{e)}	0.86 (0.85 to 0.87) ^{e)}
Hepatic failure				
Unvaccinated	824 (0.11)	0.20	1.0 (reference)	1.0 (reference)
Vaccinated	563 (0.08)	0.15	0.71 (0.64 to 0.79) ^{e)}	0.71 (0.63 to 0.78) ^{e)}
Inflammatory liver disease				
Unvaccinated	43,846 (6.00)	11.14	1.0 (reference)	1.0 (reference)
Vaccinated	36,502 (4.99)	10.23	0.88 (0.86 to 0.89) ^{e)}	0.87 (0.86 to 0.88) ^{e)}
Liver cirrhosis				
Unvaccinated	3,394 (0.46)	0.82	1.0 (reference)	1.0 (reference)
Vaccinated	2,405 (0.33)	0.65	0.75 (0.71 to 0.79) ^{e)}	0.74 (0.70 to 0.77) ^{e)}
Chronic hepatitis				
Unvaccinated	23,765 (3.25)	5.91	1.0 (reference)	1.0 (reference)
Vaccinated	18,599 (2.54)	5.11	0.82 (0.81 to 0.84) ^{e)}	0.81 (0.80 to 0.83) ^{e)}
Cholecystitis, cholangitis				
Unvaccinated	9,176 (1.26)	2.24	1.0 (reference)	1.0 (reference)
Vaccinated	7,197 (0.98)	1.95	0.83 (0.81 to 0.86) ^{e)}	0.82 (0.80 to 0.85) ^{e)}
Cholelithiasis				
Unvaccinated	19,980 (2.73)	4.95	1.0 (reference)	1.0 (reference)
Vaccinated	15,643 (2.14)	4.28	0.83 (0.81 to 0.84) ^{e)}	0.82 (0.80 to 0.84) ^{e)}
Acute pancreatitis				
Unvaccinated	4,251 (0.58)	1.03	1.0 (reference)	1.0 (reference)
Vaccinated	3,429 (0.47)	0.93	0.85 (0.81 to 0.89) ^{e)}	0.84 (0.80 to 0.88) ^{e)}
Others ^{a)}				
Unvaccinated	24,549 (3.36)	6.10	1.0 (reference)	1.0 (reference)
Vaccinated	22,072 (3.02)	6.08	0.95 (0.94 to 0.97) ^{e)}	0.95 (0.93 to 0.96) ^{e)}

aHR, adjusted hazard ratio; CI, confidence interval.

^{a)}Others include other diseases of the gallbladder and pancreas.

^{b)}Incidence rate expressed as per 1,000 person-years.

^{c)}Models 1: adjusted for age (50–54, 55–59, 60–64, and ≥ 65 years) and sex.

^{d)}Model 2: adjusted for age (50–54, 55–59, 60–64, and ≥ 65 years); sex; household income (low income, middle income, and high income); region of residence (urban and rural); Charlson comorbidity index (0, 1, and ≥ 2); obesity (underweight [$< 18.5 \text{ kg/m}^2$], normal [$18.5\text{--}22.9 \text{ kg/m}^2$], overweight [$23.0\text{--}24.9 \text{ kg/m}^2$], and obese [$\geq 25.0 \text{ kg/m}^2$]); blood pressure (systolic blood pressure $< 140 \text{ mmHg}$ and diastolic blood pressure $< 90 \text{ mmHg}$ and systolic blood pressure $\geq 140 \text{ mmHg}$ or diastolic blood pressure $\geq 90 \text{ mmHg}$); fasting blood glucose (< 100 and $\geq 100 \text{ mg/dL}$); glomerular filtration rate (< 60 , $60\text{--}89$, and $\geq 90 \text{ mL/min/1.73 m}^2$); smoking status (non-, ex-, and current smoker); alcohol consumption (drinks; < 1 , $1\text{--}2$, $3\text{--}4$, and ≥ 5 days per week); aerobic physical activity (sufficient and insufficient); and history of medication use for coronary artery disease, diabetes mellitus, dyslipidemia, and hypertension.

^{e)}Significant differences ($p < 0.05$).