

Supplementary Table 7. Stratification analysis of the incident risk of inflammatory liver disease following zoster vaccination in the propensity score-matched cohort

Inflammatory liver disease	Events, n (%)	Incidence rate ^{b)}	aHR (95% CI)	
			Model 1 ^{c)}	Model 2 ^{d)}
Sex				
Male				
Unvaccinated	19,454 (6.12)	4.94	1.0 (reference)	1.0 (reference)
Vaccinated	15,705 (4.88)	4.40	0.86 (0.84 to 0.88) ^{e)}	0.85 (0.83 to 0.87) ^{e)}
Female				
Unvaccinated	24,392 (5.90)	6.20	1.0 (reference)	1.0 (reference)
Vaccinated	20,797 (5.08)	5.83	0.89 (0.87 to 0.91) ^{e)}	0.89 (0.87 to 0.90) ^{e)}
Age (yr)				
< 60				
Unvaccinated	16,365 (8.41)	4.16	1.0 (reference)	1.0 (reference)
Vaccinated	13,248 (6.74)	3.71	0.83 (0.81 to 0.85) ^{e)}	0.82 (0.80 to 0.84) ^{e)}
≥ 60				
Unvaccinated	27,481 (5.12)	6.98	1.0 (reference)	1.0 (reference)
Vaccinated	23,254 (4.35)	6.52	0.90 (0.89 to 0.92) ^{e)}	0.90 (0.88 to 0.92) ^{e)}
Region of residence				
Urban				
Unvaccinated	21,315 (6.28)	5.41	1.0 (reference)	1.0 (reference)
Vaccinated	18,044 (5.32)	5.06	0.88 (0.87 to 0.90) ^{e)}	0.88 (0.86 to 0.90) ^{e)}
Rural				
Unvaccinated	22,531 (5.75)	5.72	1.0 (reference)	1.0 (reference)
Vaccinated	18,458 (4.71)	5.17	0.87 (0.85 to 0.89) ^{e)}	0.86 (0.85 to 0.88) ^{e)}
Household income				
Low (0th–39th percentile)				
Unvaccinated	13,365 (6.33)	3.40	1.0 (reference)	1.0 (reference)
Vaccinated	10,634 (5.06)	2.98	0.85 (0.83 to 0.87) ^{e)}	0.84 (0.82 to 0.86) ^{e)}
Middle (40th–79th percentile)				
Unvaccinated	15,854 (5.99)	4.03	1.0 (reference)	1.0 (reference)
Vaccinated	13,020 (4.98)	3.65	0.88 (0.86 to 0.90) ^{e)}	0.88 (0.86 to 0.90) ^{e)}
High (80th–100th percentile)				
Unvaccinated	14,627 (5.73)	3.72	1.0 (reference)	1.0 (reference)
Vaccinated	12,848 (4.96)	3.60	0.90 (0.88 to 0.92) ^{e)}	0.89 (0.87 to 0.91) ^{e)}
Body mass index (kg/m ²)				
< 23.0				
Unvaccinated	9,836 (5.14)	2.50	1.0 (reference)	1.0 (reference)
Vaccinated	8,325 (4.35)	2.33	0.89 (0.86 to 0.91) ^{e)}	0.88 (0.86 to 0.91) ^{e)}
23.0–24.9				
Unvaccinated	11,499 (5.74)	2.92	1.0 (reference)	1.0 (reference)
Vaccinated	9,379 (4.71)	2.63	0.87 (0.84 to 0.89) ^{e)}	0.86 (0.84 to 0.88) ^{e)}
≥ 25.0				
Unvaccinated	22,511 (6.63)	5.72	1.0 (reference)	1.0 (reference)
Vaccinated	18,798 (5.52)	5.27	0.88 (0.86 to 0.89) ^{e)}	0.87 (0.85 to 0.89) ^{e)}

Supplementary Table 7. Continued

Inflammatory liver disease	Events, n (%)	Incidence rate ^{b)}	aHR (95% CI)	
			Model 1 ^{c)}	Model 2 ^{d)}
Smoking status ^{a)}				
Non-smoker				
Unvaccinated	29,682 (5.87)	7.54	1.0 (reference)	1.0 (reference)
Vaccinated	24,925 (4.98)	6.99	0.88 (0.87 to 0.90) ^{e)}	0.88 (0.87 to 0.90) ^{e)}
Smoker				
Unvaccinated	14,164 (6.27)	3.60	1.0 (reference)	1.0 (reference)
Vaccinated	11,577 (5.03)	3.25	0.86 (0.84 to 0.88) ^{e)}	0.85 (0.83 to 0.87) ^{e)}
Alcohol consumption (day per week)				
< 1				
Unvaccinated	19,869 (4.90)	5.05	1.0 (reference)	1.0 (reference)
Vaccinated	15,301 (3.79)	4.29	0.81 (0.80 to 0.83) ^{e)}	0.81 (0.80 to 0.83) ^{e)}
1–4				
Unvaccinated	22,952 (7.33)	5.83	1.0 (reference)	1.0 (reference)
Vaccinated	20,330 (6.47)	5.70	0.92 (0.90 to 0.94) ^{e)}	0.91 (0.90 to 0.93) ^{e)}
≥ 5				
Unvaccinated	1,025 (8.49)	0.26	1.0 (reference)	1.0 (reference)
Vaccinated	871 (6.59)	0.24	0.83 (0.76 to 0.91) ^{e)}	0.83 (0.76 to 0.91) ^{e)}
Physical activity				
Insufficient physical activity				
Unvaccinated	33,613 (5.99)	8.54	1.0 (reference)	1.0 (reference)
Vaccinated	27,820 (5.01)	7.80	0.88 (0.87 to 0.89) ^{e)}	0.87 (0.86 to 0.89) ^{e)}
Sufficient physical activity				
Unvaccinated	10,233 (6.01)	2.60	1.0 (reference)	1.0 (reference)
Vaccinated	8682 (4.95)	2.43	0.87 (0.84 to 0.89) ^{e)}	0.86 (0.84 to 0.89) ^{e)}
Medication use for coronary artery disease				
No				
Unvaccinated	42,306 (6.00)	10.75	1.0 (reference)	1.0 (reference)
Vaccinated	35,242 (5.00)	9.88	0.88 (0.86 to 0.89) ^{e)}	0.87 (0.86 to 0.88) ^{e)}
Yes				
Unvaccinated	1,540 (5.88)	0.39	1.0 (reference)	1.0 (reference)
Vaccinated	1,260 (4.87)	0.35	0.87 (0.80 to 0.93) ^{e)}	0.86 (0.80 to 0.93) ^{e)}
Medication use for hypertension				
No				
Unvaccinated	29,083 (5.98)	7.39	1.0 (reference)	1.0 (reference)
Vaccinated	23,618 (4.94)	6.62	0.88 (0.86 to 0.89) ^{e)}	0.87 (0.86 to 0.89) ^{e)}
Yes				
Unvaccinated	14,763 (6.04)	3.75	1.0 (reference)	1.0 (reference)
Vaccinated	12,884 (5.09)	3.61	0.87 (0.85 to 0.89) ^{e)}	0.87 (0.85 to 0.89) ^{e)}

Supplementary Table 7. Continued

Inflammatory liver disease	Events, n (%)	Incidence rate ^{b)}	aHR (95% CI)	
			Model 1 ^{c)}	Model 2 ^{d)}
Medication use for diabetes				
No				
Unvaccinated	38,112 (6.01)	9.68	1.0 (reference)	1.0 (reference)
Vaccinated	31,517 (5.02)	8.83	0.88 (0.87 to 0.90) ^{e)}	0.88 (0.86 to 0.89) ^{e)}
Yes				
Unvaccinated	5,734 (5.94)	1.46	1.0 (reference)	1.0 (reference)
Vaccinated	4,985 (4.84)	1.40	0.83 (0.80 to 0.86) ^{e)}	0.83 (0.80 to 0.87) ^{e)}
Medication use for hyperlipidemia				
No				
Unvaccinated	37,056 (5.92)	9.41	1.0 (reference)	1.0 (reference)
Vaccinated	30,497 (4.92)	8.55	0.88 (0.87 to 0.89) ^{e)}	0.88 (0.86 to 0.89) ^{e)}
Yes				
Unvaccinated	6,790 (6.44)	1.72	1.0 (reference)	1.0 (reference)
Vaccinated	6,005 (5.37)	1.68	0.84 (0.82 to 0.87) ^{e)}	0.84 (0.81 to 0.87) ^{e)}

aHR, adjusted hazard ratio; CI, confidence interval.

^{a)}Non-smoker indicates individuals who do not currently smoke.

^{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 ($p < 0.05$).