

Supplementary Table 11. Stratification analysis of the incident risk of cholelithiasis following zoster vaccination in the propensity score-matched cohort

Cholelithiasis	Events, n (%)	Incidence rate ^{b)}	aHR (95% CI)	
			Model 1 ^{c)}	Model 2 ^{d)}
Sex				
Male				
Unvaccinated	9,739 (3.07)	2.41	1.0 (reference)	1.0 (reference)
Vaccinated	7,144 (2.22)	1.96	0.78 (0.76 to 0.81) ^{e)}	0.77 (0.75 to 0.80) ^{e)}
Female				
Unvaccinated	10,241 (2.48)	2.53	1.0 (reference)	1.0 (reference)
Vaccinated	8,499 (2.08)	2.33	0.87 (0.84 to 0.89) ^{e)}	0.86 (0.83 to 0.88) ^{e)}
Age (yr)				
< 60				
Unvaccinated	7,217 (3.71)	1.79	1.0 (reference)	1.0 (reference)
Vaccinated	5,228 (2.66)	1.43	0.74 (0.72 to 0.77) ^{e)}	0.73 (0.71 to 0.76) ^{e)}
≥ 60				
Unvaccinated	12,763 (2.38)	3.16	1.0 (reference)	1.0 (reference)
Vaccinated	10,415 (1.95)	2.85	0.87 (0.85 to 0.90) ^{e)}	0.87 (0.85 to 0.89) ^{e)}
Region of residence				
Urban				
Unvaccinated	9,344 (2.75)	2.31	1.0 (reference)	1.0 (reference)
Vaccinated	7,520 (2.22)	2.06	0.84 (0.82 to 0.87) ^{e)}	0.83 (0.81 to 0.86) ^{e)}
Rural				
Unvaccinated	10,636 (2.72)	2.63	1.0 (reference)	1.0 (reference)
Vaccinated	8,123 (2.07)	2.22	0.81 (0.79 to 0.84) ^{e)}	0.80 (0.78 to 0.83) ^{e)}
Household income				
Low (0th–39th percentile)				
Unvaccinated	5,776 (2.73)	1.43	1.0 (reference)	1.0 (reference)
Vaccinated	4,375 (2.08)	1.20	0.81 (0.78 to 0.84) ^{e)}	0.80 (0.77 to 0.83) ^{e)}
Middle (40th–79th percentile)				
Unvaccinated	7,280 (2.75)	1.80	1.0 (reference)	1.0 (reference)
Vaccinated	5,616 (2.15)	1.54	0.83 (0.80 to 0.86) ^{e)}	0.82 (0.79 to 0.85) ^{e)}
High (80th–100th percentile)				
Unvaccinated	6,924 (2.71)	1.71	1.0 (reference)	1.0 (reference)
Vaccinated	5,652 (2.18)	1.55	0.84 (0.81 to 0.87) ^{e)}	0.83 (0.80 to 0.86) ^{e)}
Body mass index (kg/m ²)				
< 23.0				
Unvaccinated	4,376 (2.29)	1.08	1.0 (reference)	1.0 (reference)
Vaccinated	3,562 (1.86)	0.98	0.86 (0.82 to 0.90) ^{e)}	0.85 (0.81 to 0.89) ^{e)}
23.0–24.9				
Unvaccinated	5,221 (2.61)	1.29	1.0 (reference)	1.0 (reference)
Vaccinated	4,086 (2.05)	1.12	0.83 (0.80 to 0.87) ^{e)}	0.83 (0.79 to 0.86) ^{e)}
≥ 25.0				
Unvaccinated	10,383 (3.06)	2.57	1.0 (reference)	1.0 (reference)
Vaccinated	7,995 (2.35)	2.19	0.81 (0.79 to 0.83) ^{e)}	0.80 (0.78 to 0.83) ^{e)}

Supplementary Table 11. Continued

Cholelithiasis	Events, n (%)	Incidence rate ^{b)}	aHR (95% CI)	
			Model 1 ^{c)}	Model 2 ^{d)}
Smoking status ^{a)}				
Non-smoker				
Unvaccinated	12,996 (2.57)	3.22	1.0 (reference)	1.0 (reference)
Vaccinated	10,413 (2.08)	2.85	0.85 (0.82 to 0.87) ^{e)}	0.84 (0.82 to 0.86) ^{e)}
Smoker				
Unvaccinated	6,984 (3.09)	1.73	1.0 (reference)	1.0 (reference)
Vaccinated	5,230 (2.27)	1.43	0.79 (0.76 to 0.82) ^{e)}	0.78 (0.75 to 0.81) ^{e)}
Alcohol consumption (day per week)				
< 1				
Unvaccinated	8,925 (2.20)	2.21	1.0 (reference)	1.0 (reference)
Vaccinated	6,516 (1.61)	1.78	0.78 (0.75 to 0.80) ^{e)}	0.77 (0.75 to 0.80) ^{e)}
1–4				
Unvaccinated	10,693 (3.41)	2.65	1.0 (reference)	1.0 (reference)
Vaccinated	8,823 (2.81)	2.42	0.86 (0.83 to 0.88) ^{e)}	0.85 (0.83 to 0.87) ^{e)}
≥ 5				
Unvaccinated	362 (3.00)	0.09	1.0 (reference)	1.0 (reference)
Vaccinated	304 (2.30)	0.08	0.83 (0.72 to 0.97) ^{e)}	0.82 (0.70 to 0.96) ^{e)}
Physical activity				
Insufficient physical activity				
Unvaccinated	15,449 (2.75)	3.82	1.0 (reference)	1.0 (reference)
Vaccinated	12,062 (2.17)	3.30	0.83 (0.81 to 0.85) ^{e)}	0.82 (0.80 to 0.84) ^{e)}
Sufficient physical activity				
Unvaccinated	4,531 (2.66)	1.12	1.0 (reference)	1.0 (reference)
Vaccinated	3,581 (2.04)	0.98	0.81 (0.78 to 0.85) ^{e)}	0.80 (0.77 to 0.84) ^{e)}
Medication use for coronary artery disease				
No				
Unvaccinated	19,126 (2.71)	4.73	1.0 (reference)	1.0 (reference)
Vaccinated	14,939 (2.12)	4.09	0.82 (0.81 to 0.84) ^{e)}	0.82 (0.80 to 0.83) ^{e)}
Yes				
Unvaccinated	854 (3.26)	0.21	1.0 (reference)	1.0 (reference)
Vaccinated	704 (2.72)	0.19	0.87 (0.79 to 0.97) ^{e)}	0.87 (0.79 to 0.96) ^{e)}
Medication use for hypertension				
No				
Unvaccinated	12,790 (2.63)	3.17	1.0 (reference)	1.0 (reference)
Vaccinated	9,741 (2.04)	2.67	0.83 (0.80 to 0.85) ^{e)}	0.82 (0.80 to 0.84) ^{e)}
Yes				
Unvaccinated	7,190 (2.94)	1.78	1.0 (reference)	1.0 (reference)
Vaccinated	5,902 (2.33)	1.62	0.82 (0.79 to 0.85) ^{e)}	0.82 (0.79 to 0.85) ^{e)}

Supplementary Table 11. Continued

Cholelithiasis	Events, n (%)	Incidence rate ^{b)}	aHR (95% CI)	
			Model 1 ^{c)}	Model 2 ^{d)}
Medication use for diabetes				
No				
Unvaccinated	16,814 (2.65)	4.16	1.0 (reference)	1.0 (reference)
Vaccinated	12,979 (2.07)	3.55	0.83 (0.81 to 0.85) ^{e)}	0.82 (0.80 to 0.84) ^{e)}
Yes				
Unvaccinated	3,166 (3.28)	0.78	1.0 (reference)	1.0 (reference)
Vaccinated	2,664 (2.59)	0.73	0.81 (0.77 to 0.86) ^{e)}	0.81 (0.77 to 0.85) ^{e)}
Medication use for hyperlipidemia				
No				
Unvaccinated	17,061 (2.73)	4.22	1.0 (reference)	1.0 (reference)
Vaccinated	13,158 (2.12)	3.60	0.83 (0.81 to 0.85) ^{e)}	0.82 (0.80 to 0.84) ^{e)}
Yes				
Unvaccinated	2,919 (2.77)	0.72	1.0 (reference)	1.0 (reference)
Vaccinated	2,485 (2.22)	0.68	0.82 (0.78 to 0.87) ^{e)}	0.82 (0.77 to 0.86) ^{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 ($p < 0.05$).