

Supplementary Table 8. Stratification analysis of the incident risk of liver cirrhosis following zoster vaccination in the propensity score-matched cohort

Liver cirrhosis	Events, n (%)	Incidence rate ^{b)}	aHR (95% CI)	
			Model 1 ^{c)}	Model 2 ^{d)}
Sex				
Male				
Unvaccinated	1,980 (0.62)	0.48	1.0 (reference)	1.0 (reference)
Vaccinated	1,269 (0.39)	0.34	0.68 (0.63 to 0.73) ^{e)}	0.67 (0.63 to 0.72) ^{e)}
Female				
Unvaccinated	1,414 (0.34)	0.34	1.0 (reference)	1.0 (reference)
Vaccinated	1,136 (0.28)	0.31	0.84 (0.78 to 0.91) ^{e)}	0.82 (0.76 to 0.89) ^{e)}
Age (yr)				
< 60				
Unvaccinated	1,363 (0.70)	0.33	1.0 (reference)	1.0 (reference)
Vaccinated	910 (0.46)	0.25	0.68 (0.63 to 0.74) ^{e)}	0.67 (0.62 to 0.73) ^{e)}
≥ 60				
Unvaccinated	2,031 (0.38)	0.49	1.0 (reference)	1.0 (reference)
Vaccinated	1,495 (0.28)	0.40	0.79 (0.74 to 0.84) ^{e)}	0.78 (0.73 to 0.84) ^{e)}
Region of residence				
Urban				
Unvaccinated	1,499 (0.44)	0.36	1.0 (reference)	1.0 (reference)
Vaccinated	1,143 (0.34)	0.31	0.80 (0.74 to 0.86) ^{e)}	0.78 (0.73 to 0.85) ^{e)}
Rural				
Unvaccinated	1,895 (0.48)	0.46	1.0 (reference)	1.0 (reference)
Vaccinated	1,262 (0.32)	0.34	0.71 (0.66 to 0.76) ^{e)}	0.70 (0.65 to 0.75) ^{e)}
Household income				
Low (0th–39th percentile)				
Unvaccinated	1,009 (0.48)	0.25	1.0 (reference)	1.0 (reference)
Vaccinated	653 (0.31)	0.18	0.69 (0.63 to 0.76) ^{e)}	0.68 (0.62 to 0.76) ^{e)}
Middle (40th–79th percentile)				
Unvaccinated	1,218 (0.46)	0.30	1.0 (reference)	1.0 (reference)
Vaccinated	919 (0.35)	0.25	0.81 (0.75 to 0.89) ^{e)}	0.80 (0.73 to 0.87) ^{e)}
High (80th–100th percentile)				
Unvaccinated	1,167 (0.46)	0.28	1.0 (reference)	1.0 (reference)
Vaccinated	833 (0.32)	0.22	0.73 (0.66 to 0.79) ^{e)}	0.71 (0.65 to 0.78) ^{e)}
Body mass index (kg/m ²)				
< 23.0				
Unvaccinated	868 (0.45)	0.21	1.0 (reference)	1.0 (reference)
Vaccinated	611 (0.32)	0.16	0.74 (0.67 to 0.82) ^{e)}	0.73 (0.66 to 0.81) ^{e)}
23.0–24.9				
Unvaccinated	851 (0.42)	0.21	1.0 (reference)	1.0 (reference)
Vaccinated	555 (0.28)	0.15	0.69 (0.62 to 0.77) ^{e)}	0.68 (0.61 to 0.76) ^{e)}
≥ 25.0				
Unvaccinated	1,675 (0.49)	0.41	1.0 (reference)	1.0 (reference)
Vaccinated	1,239 (0.36)	0.33	0.77 (0.72 to 0.83) ^{e)}	0.76 (0.71 to 0.82) ^{e)}

Supplementary Table 8. Continued

Liver cirrhosis	Events, n (%)	Incidence rate ^{b)}	aHR (95% CI)	
			Model 1 ^{c)}	Model 2 ^{d)}
Smoking status ^{a)}				
Non-smoker				
Unvaccinated	1,970 (0.39)	0.48	1.0 (reference)	1.0 (reference)
Vaccinated	1,474 (0.29)	0.40	0.79 (0.74 to 0.84) ^{e)}	0.78 (0.73 to 0.83) ^{e)}
Smoker				
Unvaccinated	1,424 (0.63)	0.35	1.0 (reference)	1.0 (reference)
Vaccinated	931 (0.40)	0.25	0.68 (0.63 to 0.74) ^{e)}	0.67 (0.62 to 0.73) ^{e)}
Alcohol consumption (day per week)				
< 1				
Unvaccinated	1,331 (0.33)	0.32	1.0 (reference)	1.0 (reference)
Vaccinated	887 (0.22)	0.24	0.71 (0.65 to 0.77) ^{e)}	0.70 (0.65 to 0.77) ^{e)}
1–4				
Unvaccinated	1,895 (0.61)	0.46	1.0 (reference)	1.0 (reference)
Vaccinated	1,428 (0.45)	0.38	0.78 (0.73 to 0.84) ^{e)}	0.77 (0.72 to 0.83) ^{e)}
≥ 5				
Unvaccinated	168 (1.39)	0.04	1.0 (reference)	1.0 (reference)
Vaccinated	90 (0.68)	0.02	0.52 (0.40 to 0.68) ^{e)}	0.53 (0.41 to 0.69) ^{e)}
Physical activity				
Insufficient physical activity				
Unvaccinated	2,577 (0.46)	0.63	1.0 (reference)	1.0 (reference)
Vaccinated	1,835 (0.33)	0.49	0.76 (0.71 to 0.80) ^{e)}	0.75 (0.70 to 0.79) ^{e)}
Sufficient physical activity				
Unvaccinated	817 (0.48)	0.20	1.0 (reference)	1.0 (reference)
Vaccinated	570 (0.33)	0.15	0.71 (0.64 to 0.79) ^{e)}	0.70 (0.63 to 0.78) ^{e)}
Medication use for coronary artery disease				
No				
Unvaccinated	3,271 (0.46)	0.79	1.0 (reference)	1.0 (reference)
Vaccinated	2,282 (0.32)	0.62	0.73 (0.69 to 0.77) ^{e)}	0.72 (0.69 to 0.76) ^{e)}
Yes				
Unvaccinated	123 (0.47)	0.03	1.0 (reference)	1.0 (reference)
Vaccinated	123 (0.48)	0.03	1.07 (0.84 to 1.38)	1.06 (0.83 to 1.36)
Medication use for hypertension				
No				
Unvaccinated	2,203 (0.45)	0.54	1.0 (reference)	1.0 (reference)
Vaccinated	1,518 (0.32)	0.41	0.74 (0.70 to 0.79) ^{e)}	0.73 (0.69 to 0.78) ^{e)}
Yes				
Unvaccinated	1,191 (0.49)	0.29	1.0 (reference)	1.0 (reference)
Vaccinated	887 (0.35)	0.24	0.74 (0.68 to 0.81) ^{e)}	0.74 (0.68 to 0.81) ^{e)}

Supplementary Table 8. Continued

Liver cirrhosis	Events, n (%)	Incidence rate ^{b)}	aHR (95% CI)	
			Model 1 ^{c)}	Model 2 ^{d)}
Medication use for diabetes				
No				
Unvaccinated	2,844 (0.45)	0.69	1.0 (reference)	1.0 (reference)
Vaccinated	1,969 (0.31)	0.53	0.74 (0.70 to 0.78) ^{e)}	0.73 (0.69 to 0.77) ^{e)}
Yes				
Unvaccinated	550 (0.57)	0.13	1.0 (reference)	1.0 (reference)
Vaccinated	436 (0.42)	0.12	0.77 (0.68 to 0.87) ^{e)}	0.77 (0.67 to 0.87) ^{e)}
Medication use for hyperlipidemia				
No				
Unvaccinated	3,097 (0.50)	0.75	1.0 (reference)	1.0 (reference)
Vaccinated	2,185 (0.35)	0.59	0.75 (0.71 to 0.80) ^{e)}	0.74 (0.70 to 0.78) ^{e)}
Yes				
Unvaccinated	297 (0.28)	0.07	1.0 (reference)	1.0 (reference)
Vaccinated	220 (0.20)	0.06	0.71 (0.60 to 0.84) ^{e)}	0.70 (0.59 to 0.83) ^{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 ($p < 0.05$).