

**Supplementary Table 6. Stratification analysis of the incident risk of hepatic failure following zoster vaccination in the propensity score-matched cohort**

Hepatic failure	Events, n (%)	Incidence rate <sup>b)</sup>	aHR (95% CI)	
			Model 1 <sup>c)</sup>	Model 2 <sup>d)</sup>
Sex				
Male				
Unvaccinated	407 (0.13)	0.10	1.0 (reference)	1.0 (reference)
Vaccinated	233 (0.07)	0.06	0.60 (0.51 to 0.71) <sup>e)</sup>	0.60 (0.51 to 0.70) <sup>e)</sup>
Female				
Unvaccinated	417 (0.10)	0.10	1.0 (reference)	1.0 (reference)
Vaccinated	330 (0.08)	0.09	0.82 (0.71 to 0.95) <sup>e)</sup>	0.81 (0.70 to 0.94) <sup>e)</sup>
Age (yr)				
< 60				
Unvaccinated	345 (0.18)	0.08	1.0 (reference)	1.0 (reference)
Vaccinated	208 (0.11)	0.06	0.61 (0.51 to 0.73) <sup>e)</sup>	0.60 (0.51 to 0.72) <sup>e)</sup>
≥ 60				
Unvaccinated	479 (0.09)	0.12	1.0 (reference)	1.0 (reference)
Vaccinated	355 (0.07)	0.10	0.79 (0.69 to 0.91) <sup>e)</sup>	0.79 (0.68 to 0.90) <sup>e)</sup>
Region of residence				
Urban				
Unvaccinated	394 (0.12)	0.10	1.0 (reference)	1.0 (reference)
Vaccinated	305 (0.09)	0.08	0.80 (0.69 to 0.93) <sup>e)</sup>	0.79 (0.68 to 0.92) <sup>e)</sup>
Rural				
Unvaccinated	430 (0.11)	0.10	1.0 (reference)	1.0 (reference)
Vaccinated	258 (0.07)	0.07	0.63 (0.54 to 0.74) <sup>e)</sup>	0.62 (0.54 to 0.73) <sup>e)</sup>
Household income				
Low (0th–39th percentile)				
Unvaccinated	261 (0.12)	0.06	1.0 (reference)	1.0 (reference)
Vaccinated	178 (0.08)	0.05	0.72 (0.59 to 0.87) <sup>e)</sup>	0.71 (0.59 to 0.86) <sup>e)</sup>
Middle (40th–79th percentile)				
Unvaccinated	295 (0.11)	0.07	1.0 (reference)	1.0 (reference)
Vaccinated	201 (0.08)	0.05	0.72 (0.61 to 0.87) <sup>e)</sup>	0.72 (0.60 to 0.86) <sup>e)</sup>
High (80th–100th percentile)				
Unvaccinated	268 (0.10)	0.06	1.0 (reference)	1.0 (reference)
Vaccinated	184 (0.07)	0.05	0.70 (0.58 to 0.85) <sup>e)</sup>	0.69 (0.57 to 0.83) <sup>e)</sup>
Body mass index (kg/m <sup>2</sup> )				
< 23.0				
Unvaccinated	202 (0.11)	0.05	1.0 (reference)	1.0 (reference)
Vaccinated	141 (0.07)	0.04	0.73 (0.59 to 0.90) <sup>e)</sup>	0.72 (0.58 to 0.89) <sup>e)</sup>
23.0–24.9				
Unvaccinated	214 (0.11)	0.05	1.0 (reference)	1.0 (reference)
Vaccinated	135 (0.07)	0.04	0.66 (0.54 to 0.82) <sup>e)</sup>	0.66 (0.53 to 0.82) <sup>e)</sup>
≥ 25.0				
Unvaccinated	408 (0.12)	0.10	1.0 (reference)	1.0 (reference)
Vaccinated	287 (0.08)	0.08	0.73 (0.63 to 0.85) <sup>e)</sup>	0.72 (0.62 to 0.84) <sup>e)</sup>

Supplementary Table 6. Continued

Hepatic failure	Events, n (%)	Incidence rate <sup>b)</sup>	aHR (95% CI)	
			Model 1 <sup>c)</sup>	Model 2 <sup>d)</sup>
Smoking status <sup>a)</sup>				
Non-smoker				
Unvaccinated	516 (0.10)	0.12	1.0 (reference)	1.0 (reference)
Vaccinated	385 (0.08)	0.10	0.78 (0.68 to 0.89) <sup>e)</sup>	0.77 (0.68 to 0.88) <sup>e)</sup>
Smoker				
Unvaccinated	308 (0.14)	0.07	1.0 (reference)	1.0 (reference)
Vaccinated	178 (0.08)	0.05	0.60 (0.50 to 0.72) <sup>e)</sup>	0.59 (0.49 to 0.72) <sup>e)</sup>
Alcohol consumption (day per week)				
< 1				
Unvaccinated	326 (0.08)	0.08	1.0 (reference)	1.0 (reference)
Vaccinated	191 (0.05)	0.05	0.62 (0.52 to 0.74) <sup>e)</sup>	0.62 (0.52 to 0.74) <sup>e)</sup>
1–4				
Unvaccinated	478 (0.15)	0.12	1.0 (reference)	1.0 (reference)
Vaccinated	359 (0.11)	0.10	0.77 (0.67 to 0.88) <sup>e)</sup>	0.77 (0.67 to 0.88) <sup>e)</sup>
≥ 5				
Unvaccinated	20 (0.17)	0.005	1.0 (reference)	1.0 (reference)
Vaccinated	13 (0.10)	0.003	0.63 (0.31 to 1.26)	0.62 (0.31 to 1.25)
Physical activity				
Insufficient physical activity				
Unvaccinated	644 (0.11)	0.16	1.0 (reference)	1.0 (reference)
Vaccinated	428 (0.08)	0.12	0.70 (0.62 to 0.79) <sup>e)</sup>	0.69 (0.61 to 0.78) <sup>e)</sup>
Sufficient physical activity				
Unvaccinated	180 (0.11)	0.04	1.0 (reference)	1.0 (reference)
Vaccinated	135 (0.08)	0.04	0.76 (0.61 to 0.95) <sup>e)</sup>	0.75 (0.60 to 0.93) <sup>e)</sup>
Medication use for coronary artery disease				
No				
Unvaccinated	789 (0.11)	0.19	1.0 (reference)	1.0 (reference)
Vaccinated	541 (0.08)	0.15	0.71 (0.64 to 0.80) <sup>e)</sup>	0.71 (0.63 to 0.79) <sup>e)</sup>
Yes				
Unvaccinated	35 (0.13)	0.01	1.0 (reference)	1.0 (reference)
Vaccinated	22 (0.09)	0.01	0.67 (0.39 to 1.14)	0.67 (0.39 to 1.14)
Medication use for hypertension				
No				
Unvaccinated	524 (0.11)	0.13	1.0 (reference)	1.0 (reference)
Vaccinated	373 (0.08)	0.10	0.76 (0.67 to 0.87) <sup>e)</sup>	0.75 (0.66 to 0.86) <sup>e)</sup>
Yes				
Unvaccinated	300 (0.12)	0.07	1.0 (reference)	1.0 (reference)
Vaccinated	190 (0.08)	0.05	0.62 (0.52 to 0.75) <sup>e)</sup>	0.62 (0.51 to 0.74) <sup>e)</sup>

Supplementary Table 6. Continued

Hepatic failure	Events, n (%)	Incidence rate <sup>b)</sup>	aHR (95% CI)	
			Model 1 <sup>c)</sup>	Model 2 <sup>d)</sup>
Medication use for diabetes				
No				
Unvaccinated	708 (0.11)	0.17	1.0 (reference)	1.0 (reference)
Vaccinated	471 (0.07)	0.13	0.70 (0.62 to 0.79) <sup>e)</sup>	0.70 (0.62 to 0.78) <sup>e)</sup>
Yes				
Unvaccinated	116 (0.12)	0.03	1.0 (reference)	1.0 (reference)
Vaccinated	92 (0.09)	0.02	0.76 (0.58 to 1.00)	0.76 (0.57 to 0.99) <sup>e)</sup>
Medication use for hyperlipidemia				
No				
Unvaccinated	710 (0.11)	0.17	1.0 (reference)	1.0 (reference)
Vaccinated	481 (0.08)	0.13	0.72 (0.64 to 0.81) <sup>e)</sup>	0.71 (0.63 to 0.80) <sup>e)</sup>
Yes				
Unvaccinated	114 (0.11)	0.03	1.0 (reference)	1.0 (reference)
Vaccinated	82 (0.07)	0.02	0.68 (0.51 to 0.90) <sup>e)</sup>	0.67 (0.50 to 0.89) <sup>e)</sup>

aHR, adjusted hazard ratio; CI, confidence interval.

<sup>a)</sup>Non-smoker indicates individuals who do not currently smoke.

<sup>b)</sup>Incidence rate expressed as per 1,000 person-years.

<sup>c)</sup>Models 1: adjusted for age (50–54, 55–59, 60–64, and ≥ 65 years) and sex.

<sup>d)</sup>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  $\geq 5$  days per week); aerobic physical activity (sufficient and insufficient); and history of medication use for coronary artery disease, diabetes mellitus, dyslipidemia, and hypertension.

<sup>e)</sup>Significant differences ( $p < 0.05$ ).