

Table 3. Risk of Omicron SARS-CoV-2 infection, COVID-19 related-hospitalisation and severe disease by vaccination status, among heart failure/ischemic heart disease cases and matched controls.

No. of mRNA vaccine doses <sup>c</sup>	SARS-CoV-2 infection, aHR (95% CI) <sup>a</sup>		COVID-19 hospitalisation, aHR (95% CI) <sup>a,b</sup>		Severe COVID-19 disease, aHR (95% CI) <sup>a,b</sup>	
	Heart failure	Controls	Heart failure	Controls	Heart failure	Controls
Unvaccinated/partially vaccinated	0.81 (0.71–0.94)	0.54 (0.49–0.59)	0.98 (0.82–1.18)	0.90 (0.78–1.04)	1.18 (0.88–1.58)	1.51 (1.17–1.96)
Fully vaccinated, not boosted	1.00 (NA)	1.00 (NA)	1.00 (NA)	1.00 (NA)	1.00 (NA)	1.00 (NA)
Boosted	0.81 (0.75–0.87)	0.89 (0.85–0.94)	0.42 (0.37–0.48)	0.31 (0.28–0.35)	0.35 (0.28–0.43)	0.25 (0.20–0.31)
Double boosted (≥4 doses)	0.79 (0.71–0.88)	0.92 (0.86–0.99)	0.28 (0.23–0.34)	0.18 (0.16–0.22)	0.19 (0.13, 0.27)	0.15 (0.10, 0.21)
No. of mRNA vaccine doses <sup>c</sup>	Ischaemic heart disease	Controls	Ischaemic heart disease	Controls	Ischaemic heart disease	Controls
Unvaccinated/partially vaccinated	0.57 (0.52–0.62)	0.51 (0.48, 0.54)	0.92 (0.81, 1.04)	0.85 (0.78, 0.93)	1.07 (0.85, 1.35)	1.23 (1.04–1.44)
Fully vaccinated, not boosted	1.00 (NA)	1.00 (NA)	1.00 (NA)	1.00 (NA)	1.00 (NA)	1.00 (NA)
Boosted	0.91 (0.87–0.95)	0.98 (0.95–1.00)	0.37 (0.34–0.40)	0.34 (0.32–0.36)	0.27 (0.23–0.32)	0.25 (0.22–0.28)
Double boosted (≥4 doses)	0.91 (0.87–0.96)	0.98 (0.95–1.01)	0.23 (0.20–0.25)	0.19 (0.18–0.21)	0.15 (0.12–0.19)	0.14 (0.12–0.17)

aHR: adjusted hazard ratio; CI: confidence interval; NA: not applicable

<sup>a</sup> Calendar-time scale cox regression, controlling for age, sex, ethnicity, socioeconomic status (housing type), comorbidities, vaccination status.

<sup>b</sup> Restricted to infected individuals only.

<sup>c</sup> Individuals who received 0 mRNA vaccine dose were considered unvaccinated; individuals who received 1 mRNA vaccine dose only were considered partially vaccinated; full vaccination was defined as having completed a primary 2-dose vaccine series (either BNT162b2 or mRNA-1273, at least 8 weeks apart). Fully-vaccinated individuals who received additional mRNA vaccine doses at least 6 to 9 months after the second dose were considered boosted. Unvaccinated and partially vaccinated individuals were consolidated in the same category due to the small number of unvaccinated/partially vaccinated cases in our population.