

# Protection provided by covid-19 vaccines and previous infection against the Omicron variant

Results of Statistical Estimation

February 26, 2022 \*

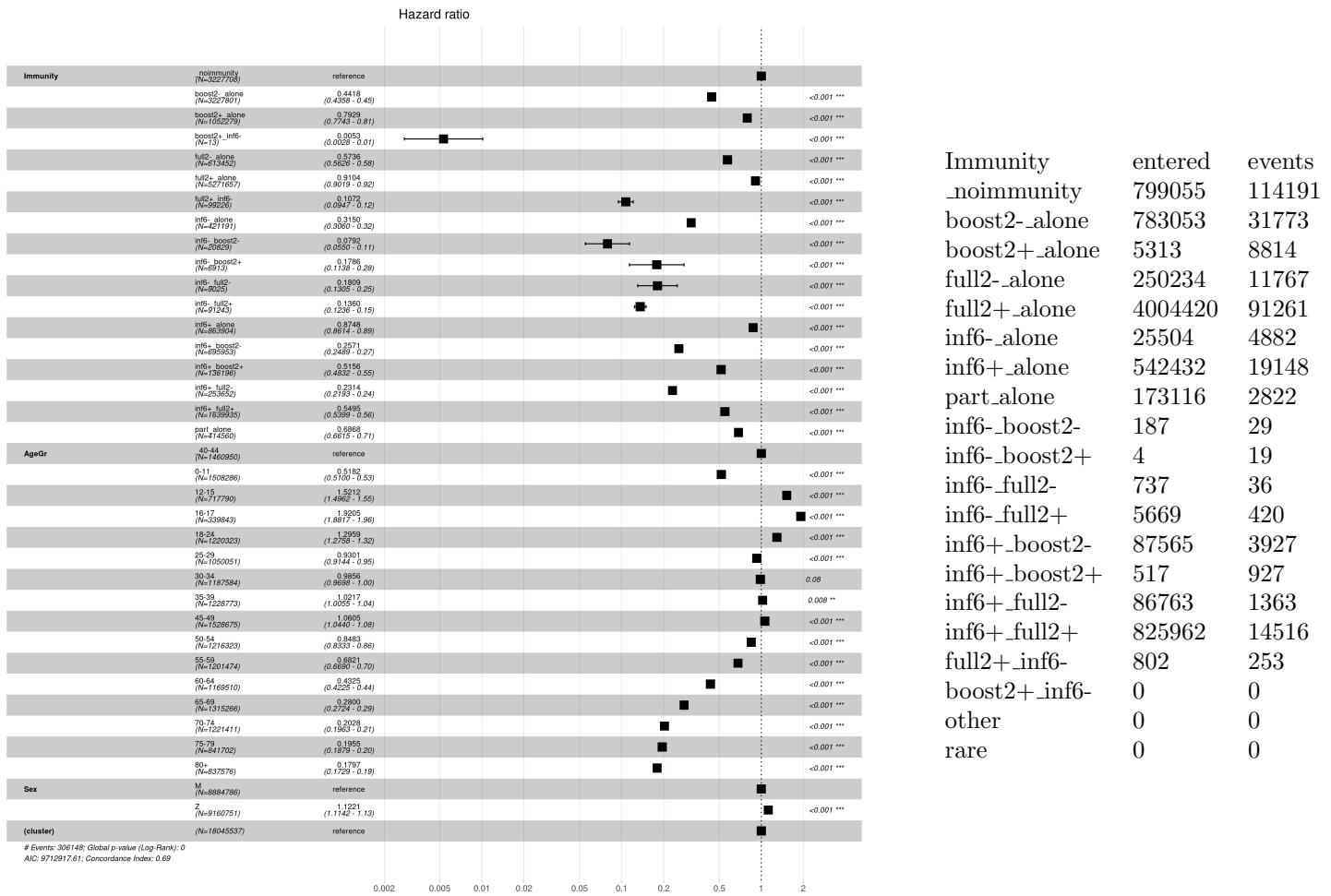
This material contains results of the analyses by Cox Regression (1–14) and Logistic Regression (15–19). The output information of the former include a forest plot of hazard ratios (the VE's and the protections can be computed by subtraction from one) and tables with the numbers of individuals<sup>1</sup> entering the study with the individual immunity statuses and the outcome numbers among people with the corresponding immunity statuses. The results of logistic regressions include forest plots of individual covariates and, in particular, the odds ratios between variants.

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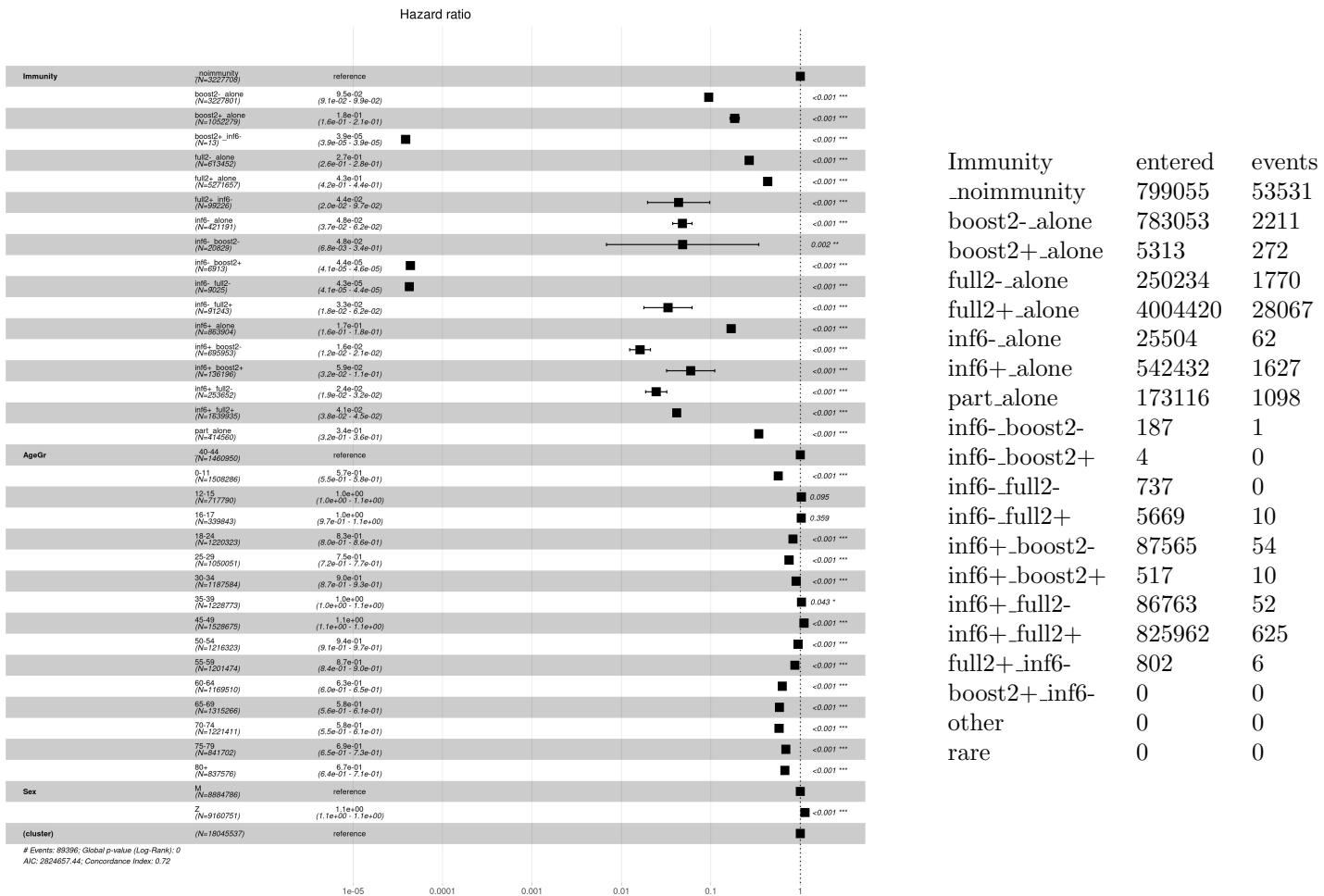
\*Minor corrections on July 24,22: (i) Wrong numbers of events in tables 7–10 corrected, (ii) rare categories grouped in Secs 16–19 to avoid the R's misleading reporting of zero event categories, (iii) typos in the preamble corrected and an explanatory footnote added.

<sup>1</sup>Only the individuals from the IHIS database are recorded here.

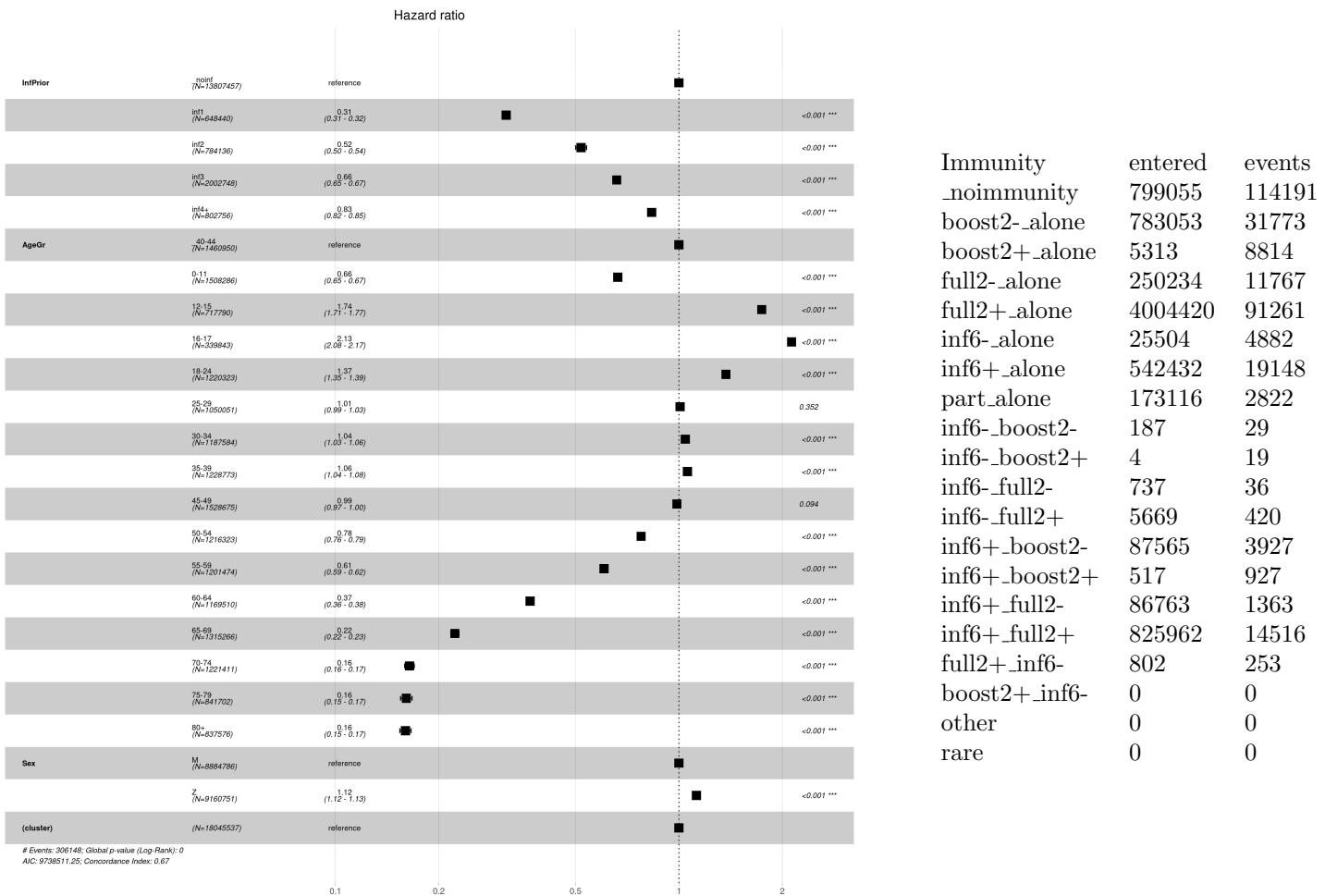
# 1 Infections – Omicron



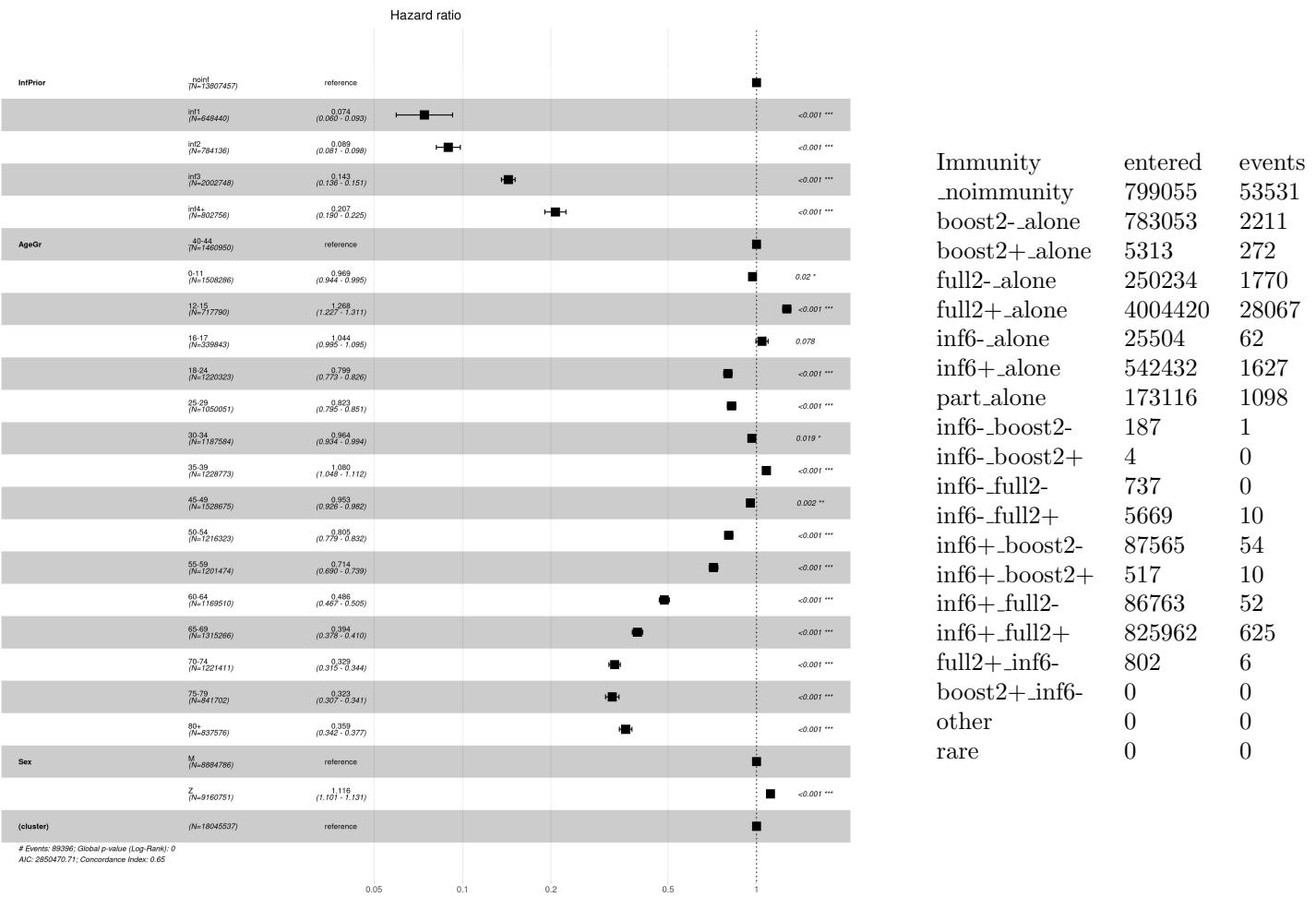
## 2 Infections – Delta



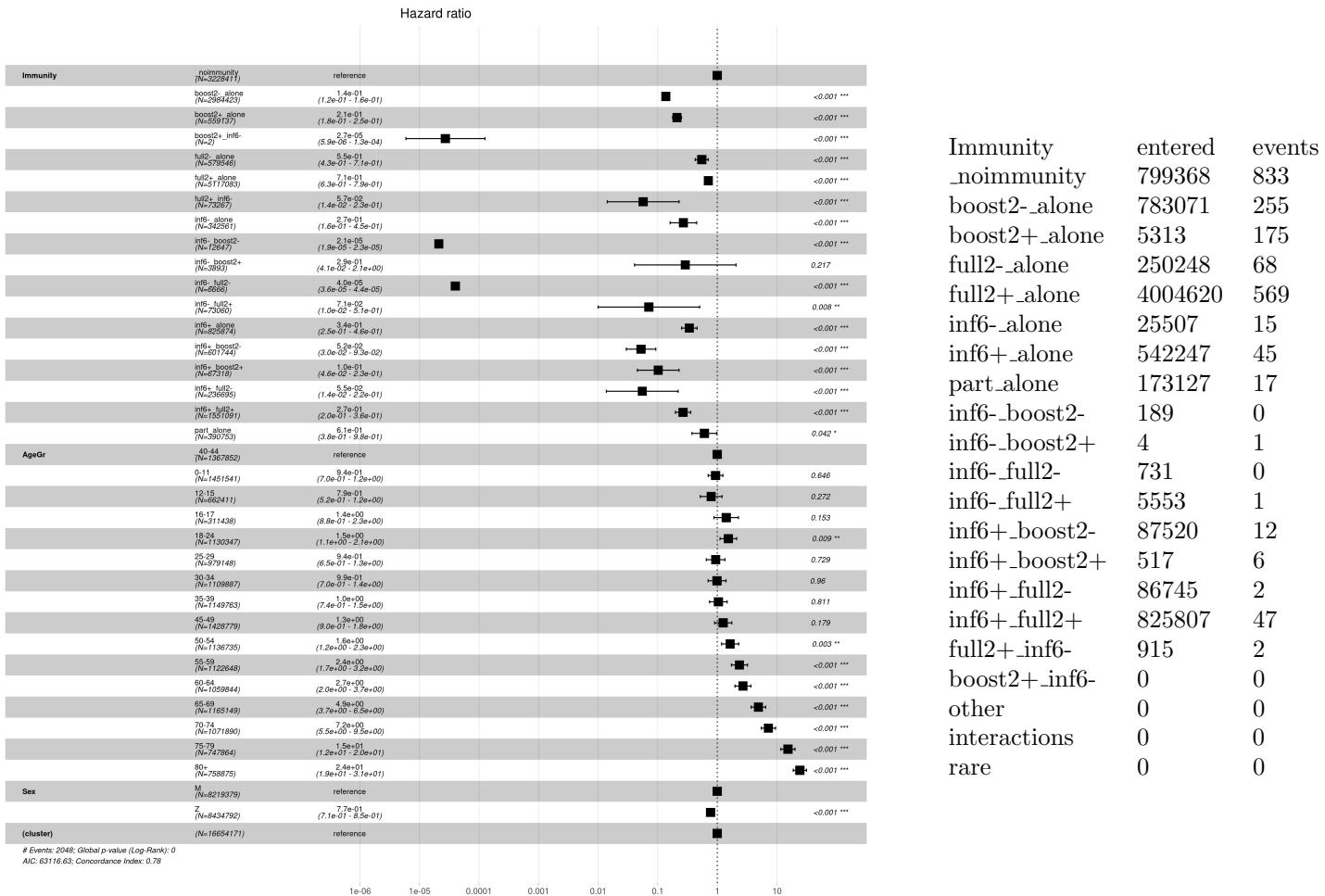
### 3 Re-infections – Omicron



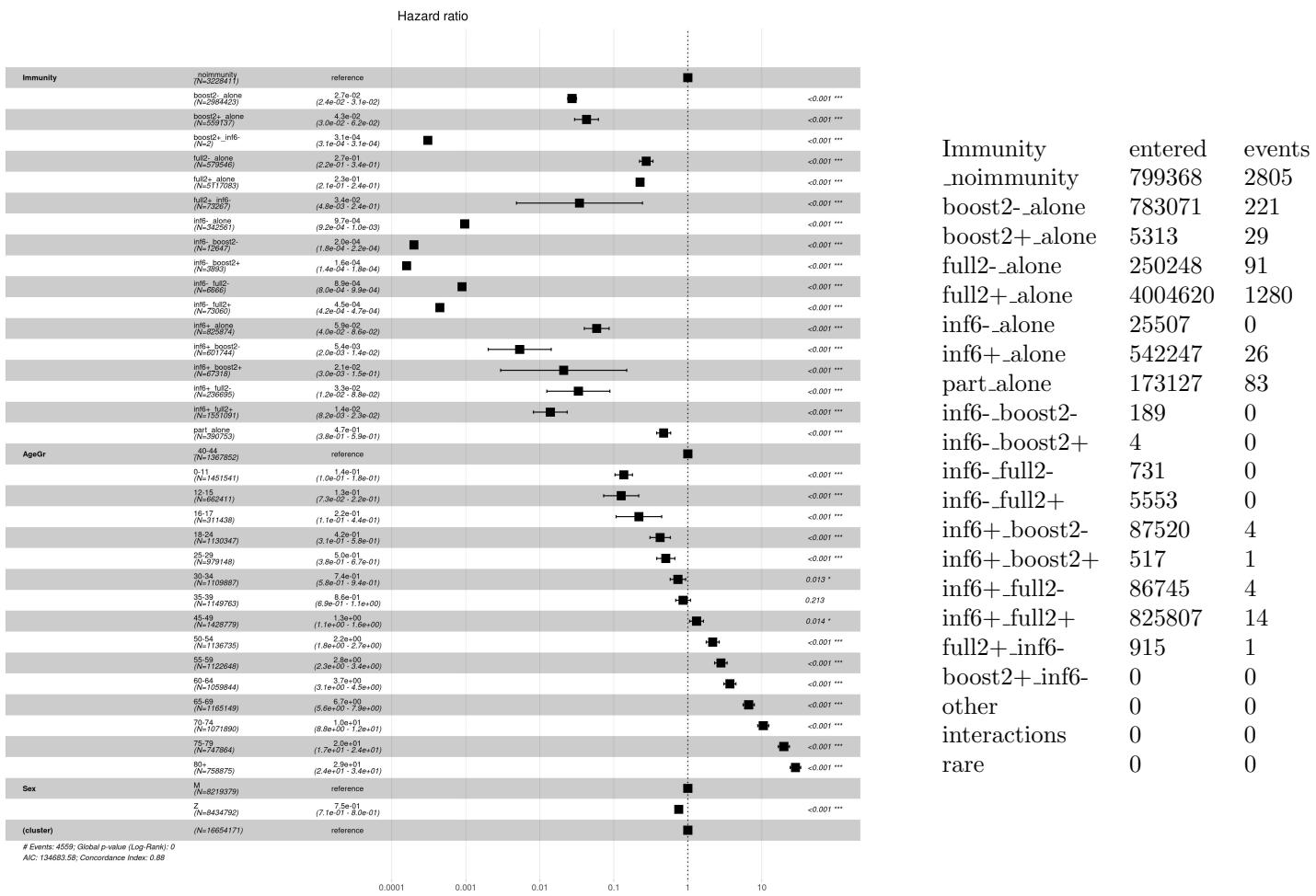
## 4 Re-infections – Delta



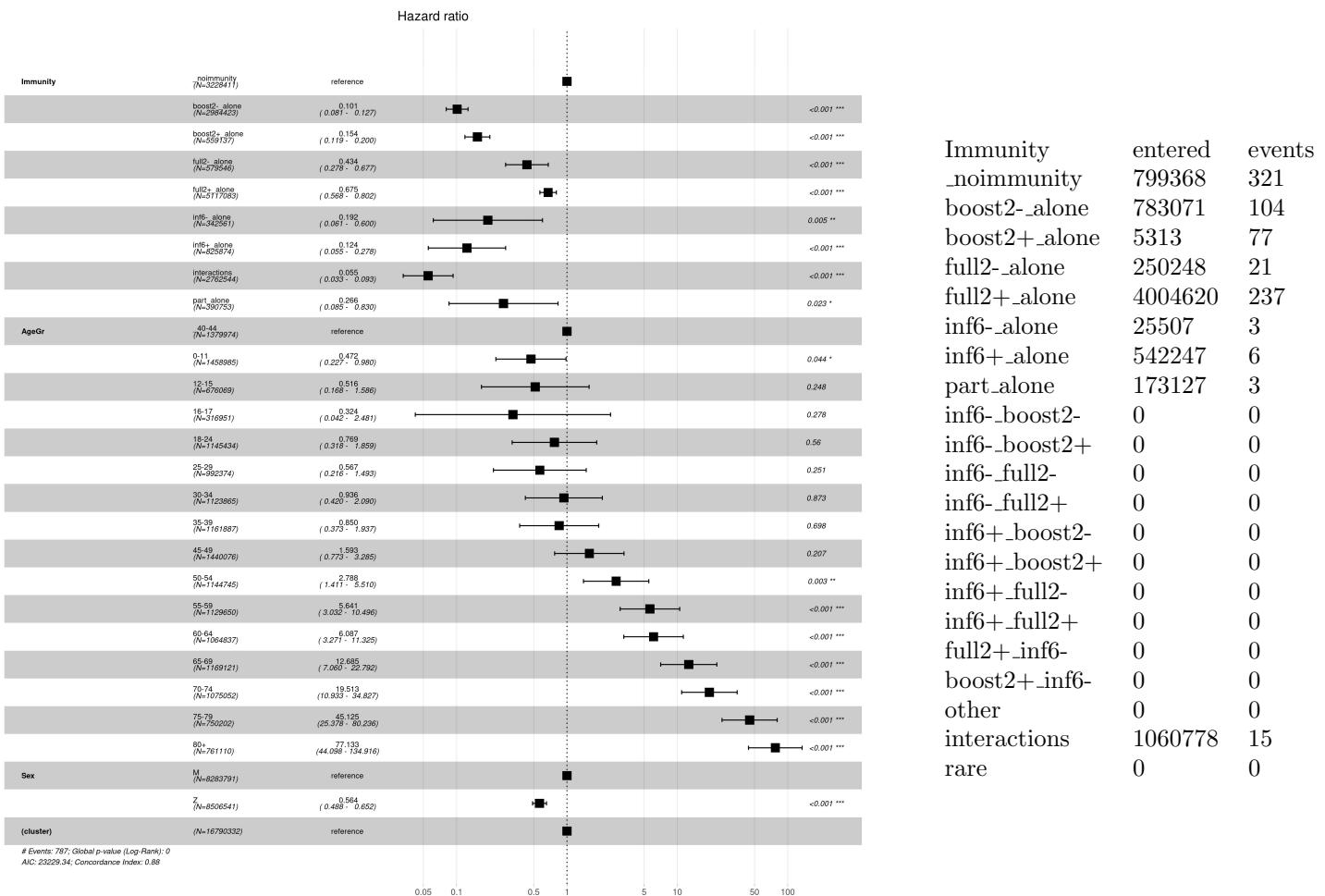
## 5 Hospitalizations – Omicron



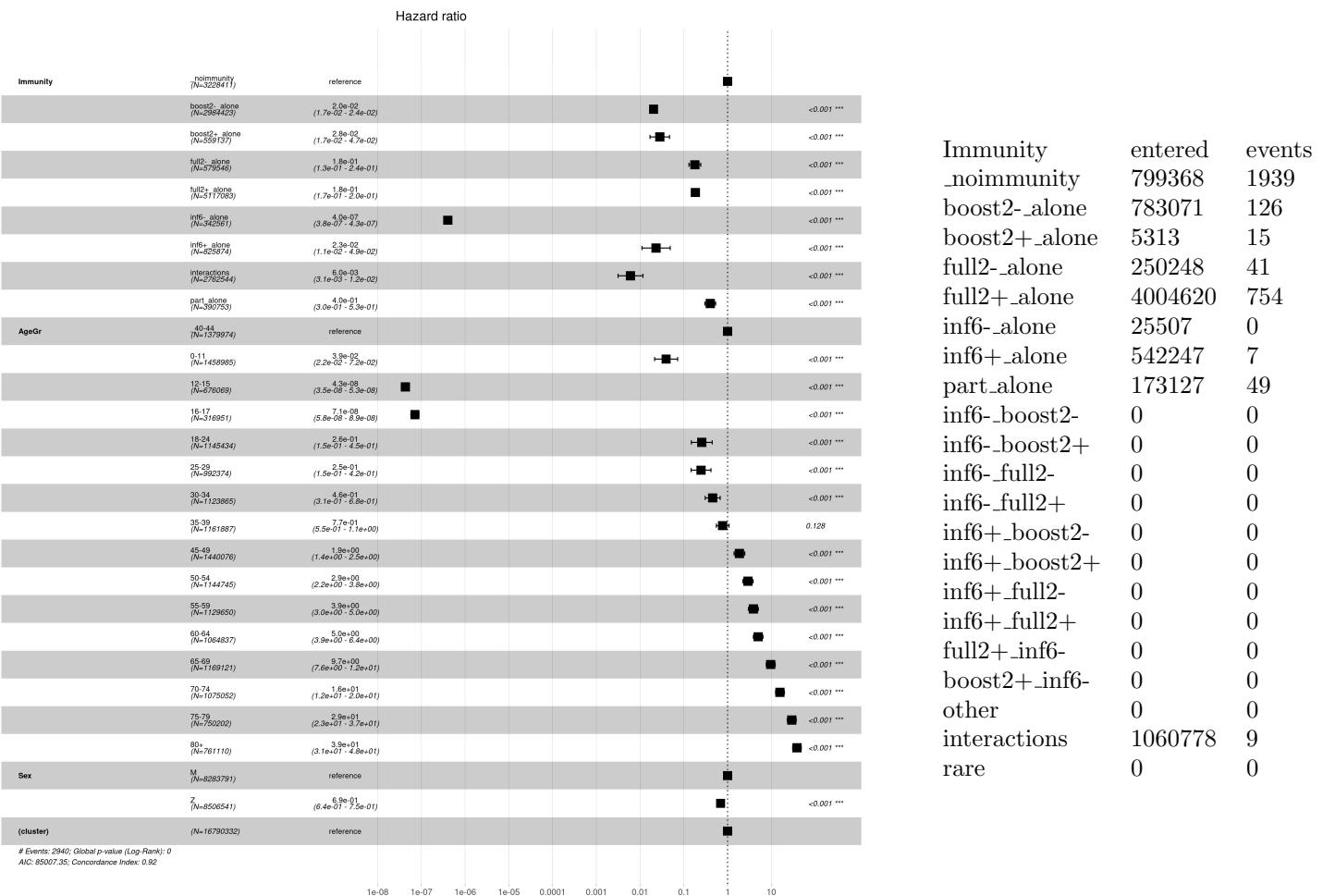
## 6 Hospitalizations – Delta



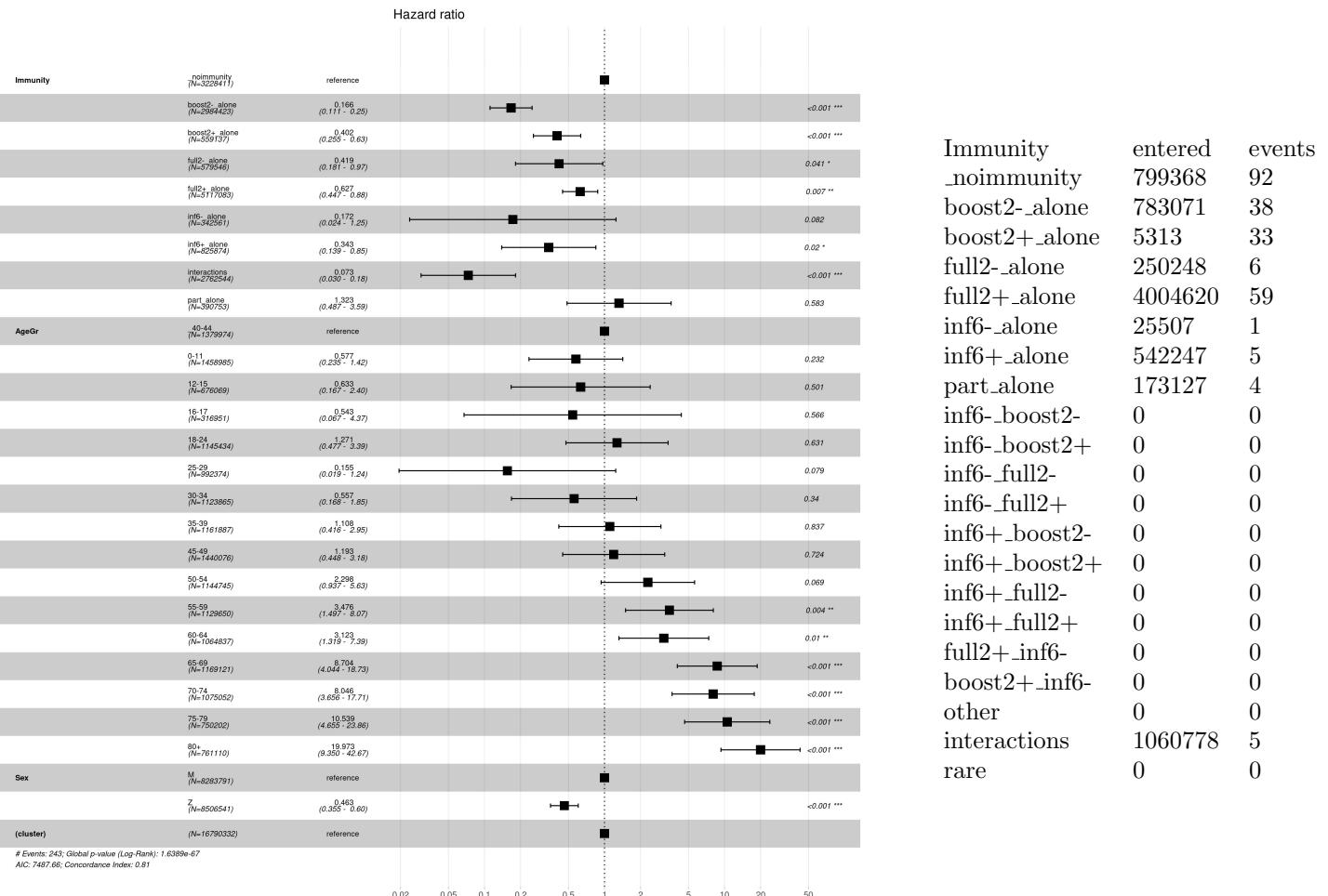
## 7 Oxygen therapy – Omicron



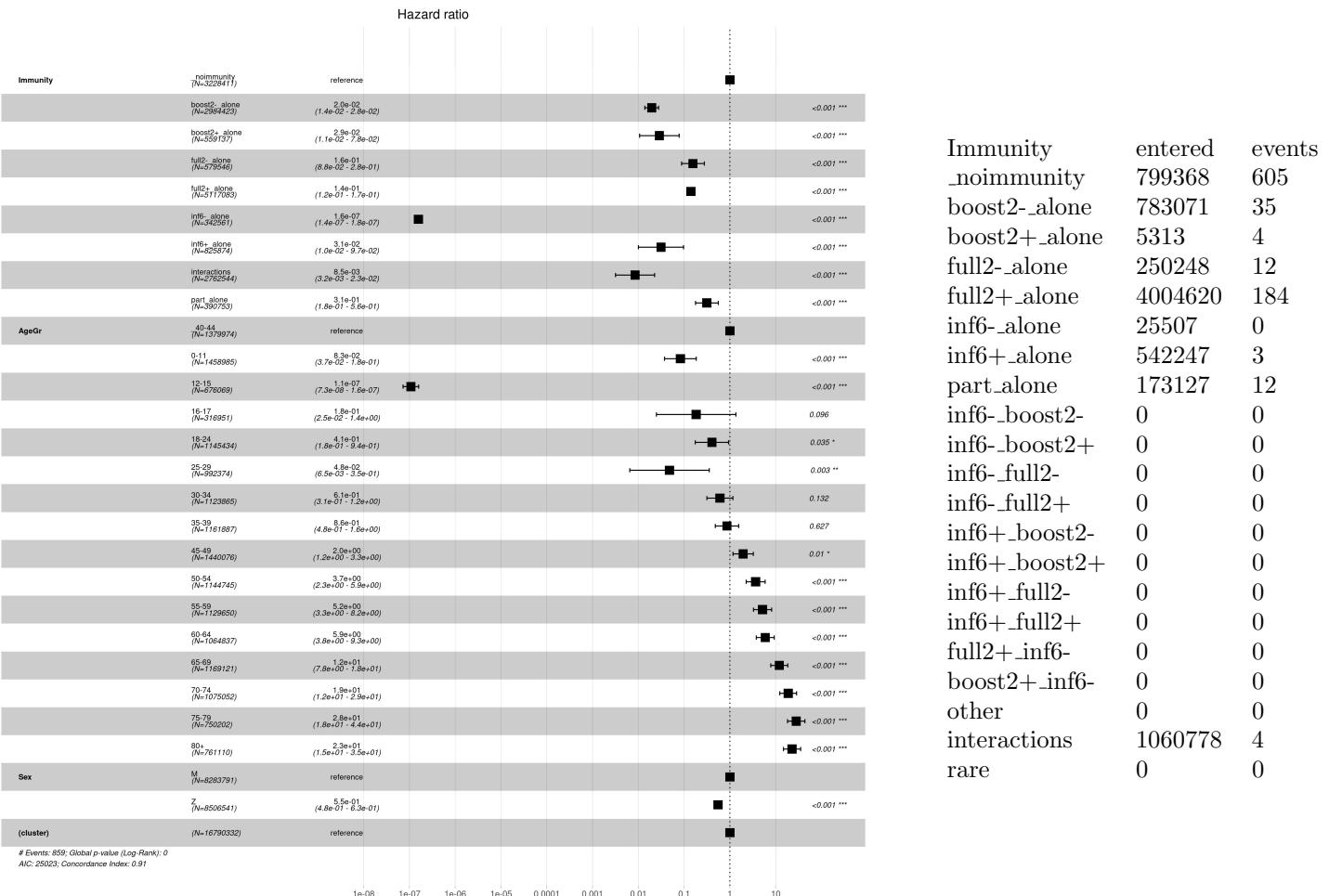
## 8 Oxygen therapy – Delta



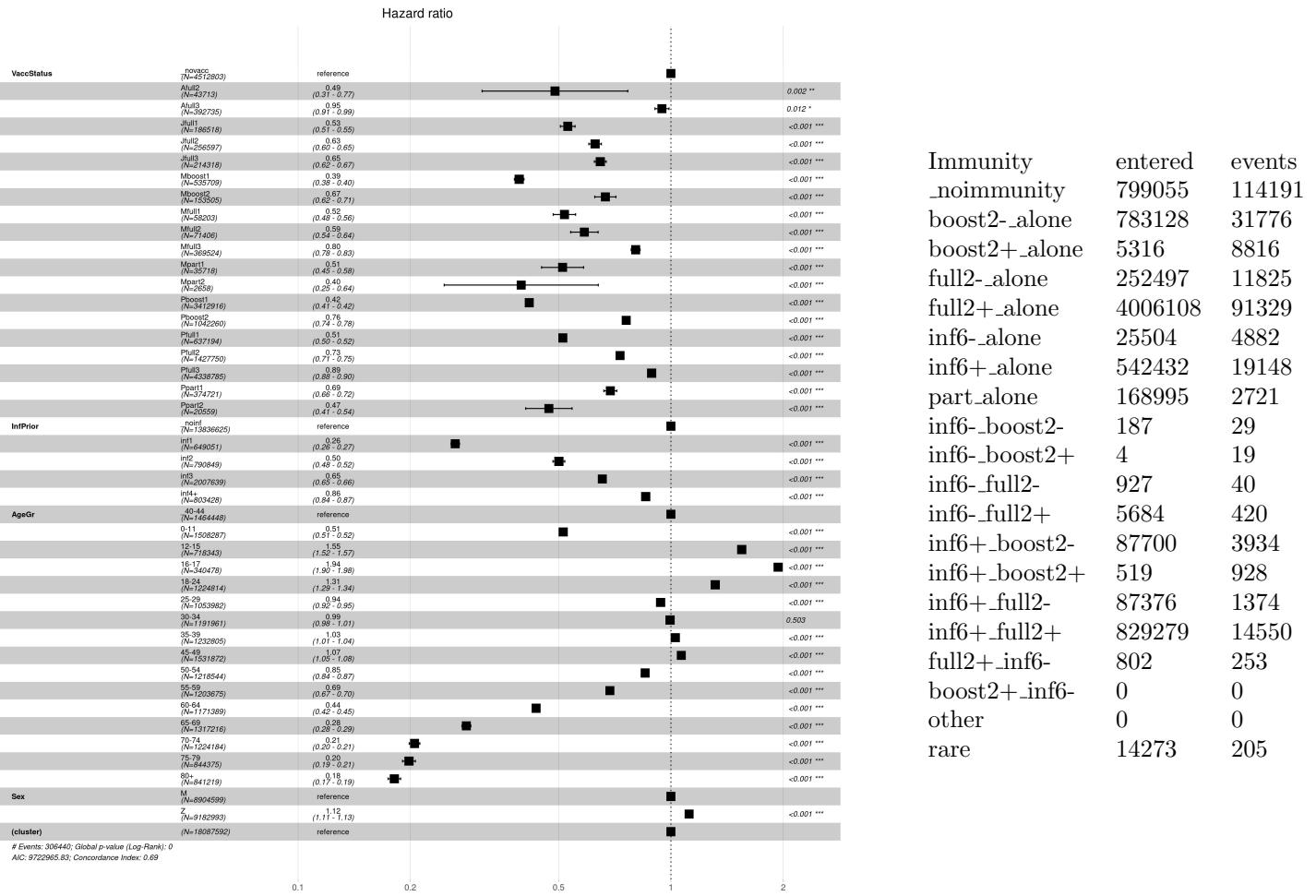
## 9 ICU therapy – Omicron



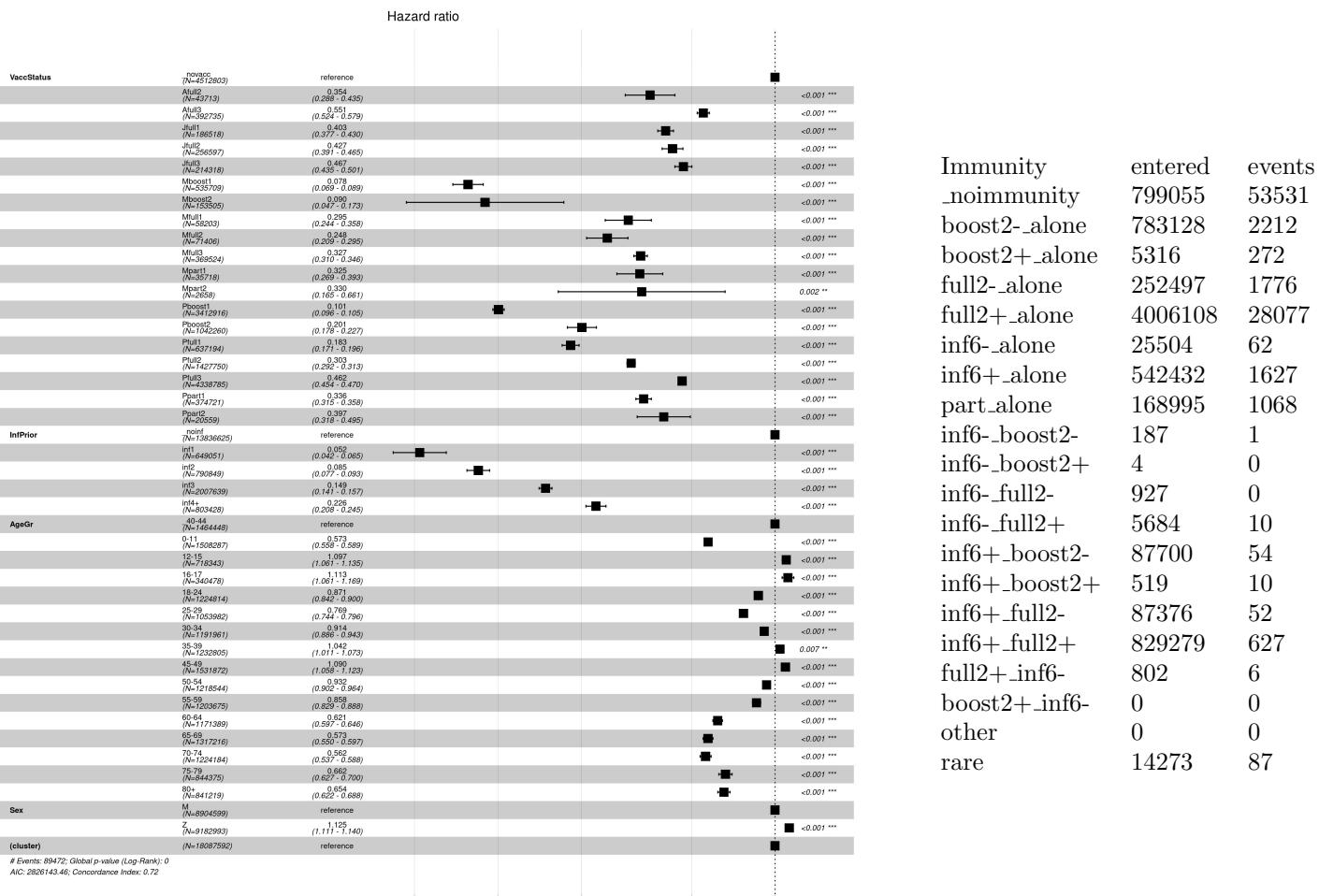
## 10 ICU therapy – Delta



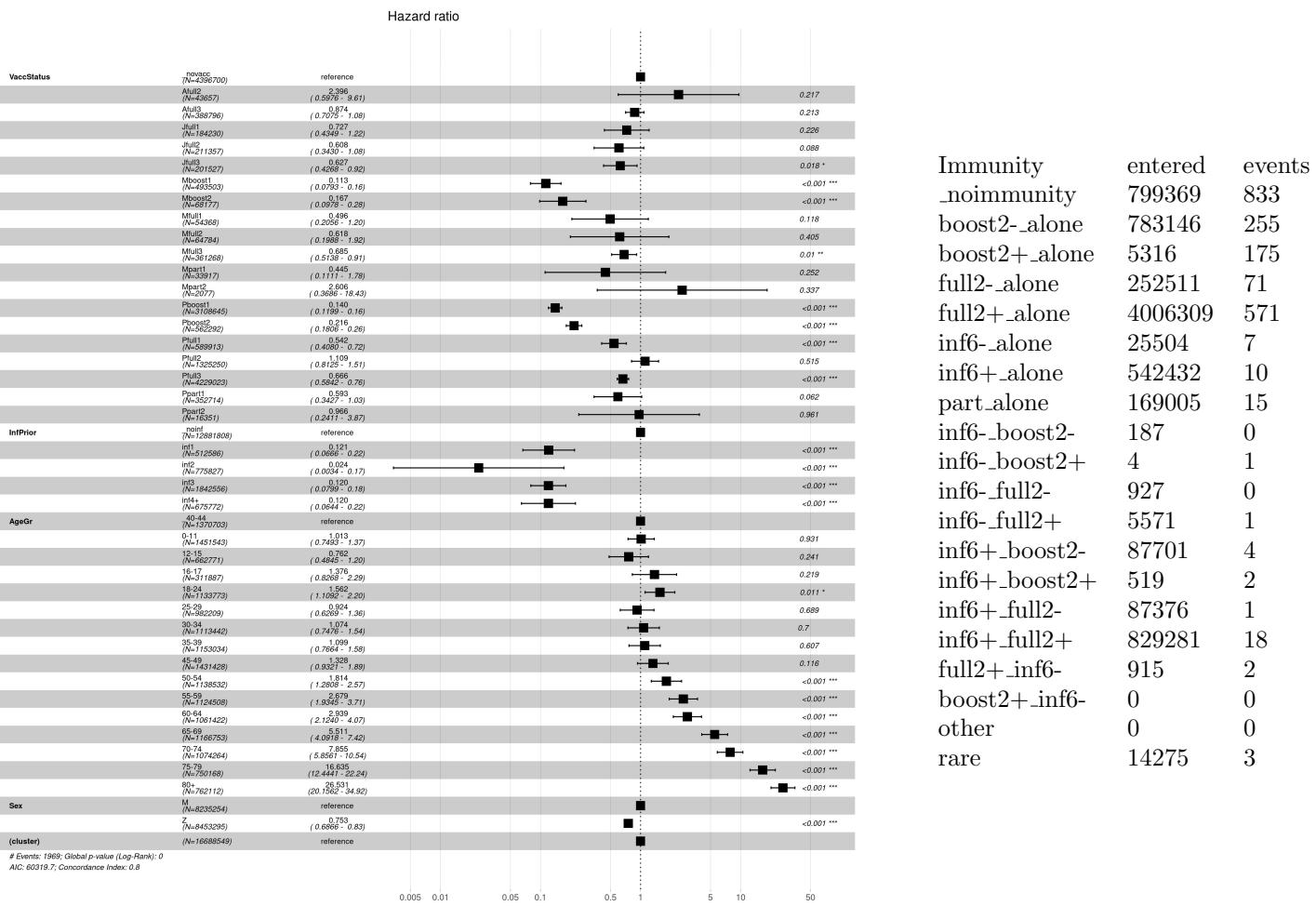
## 11 Infections by Vaccines - Omicron



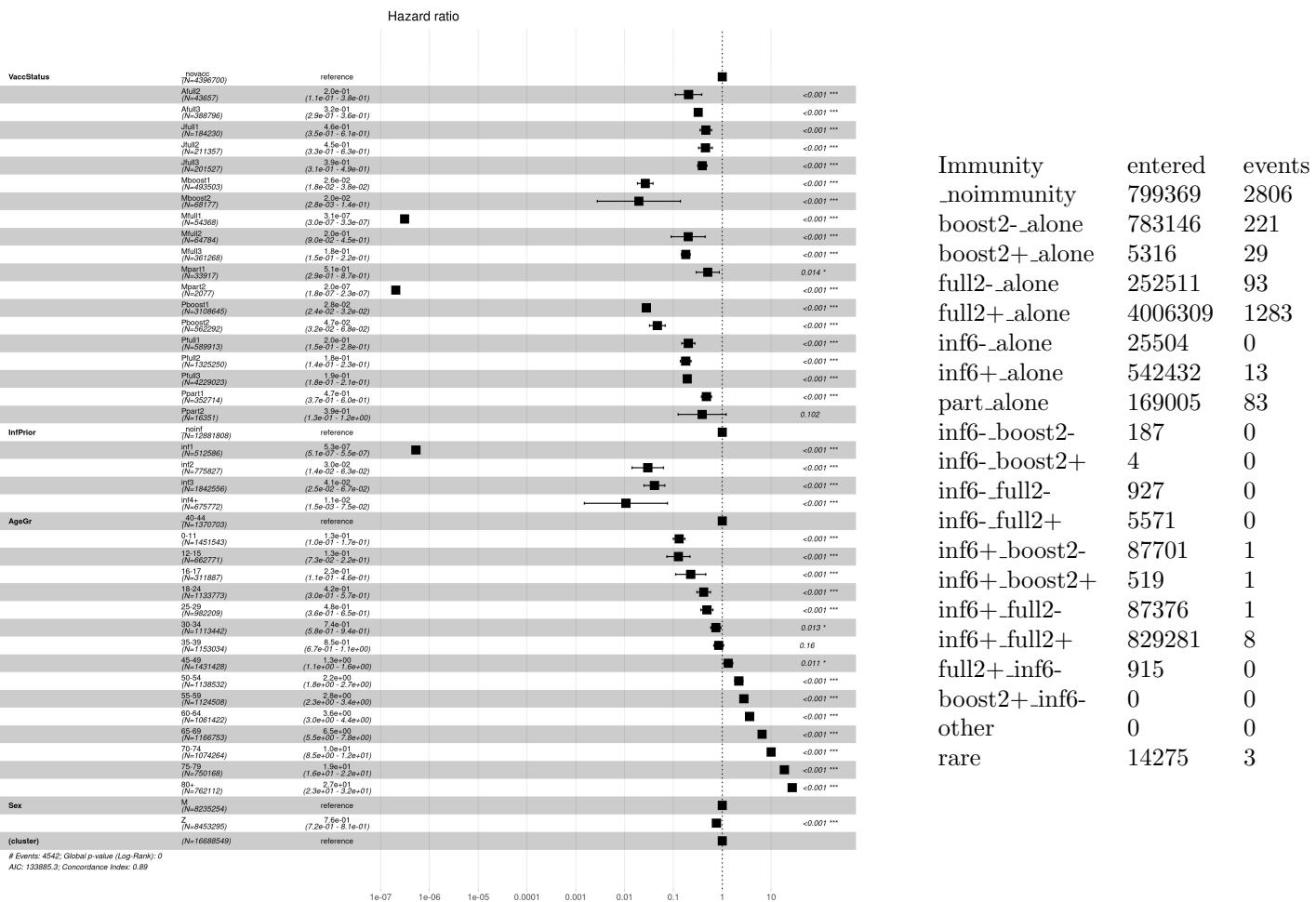
## 12 Infections by Vaccines - Delta



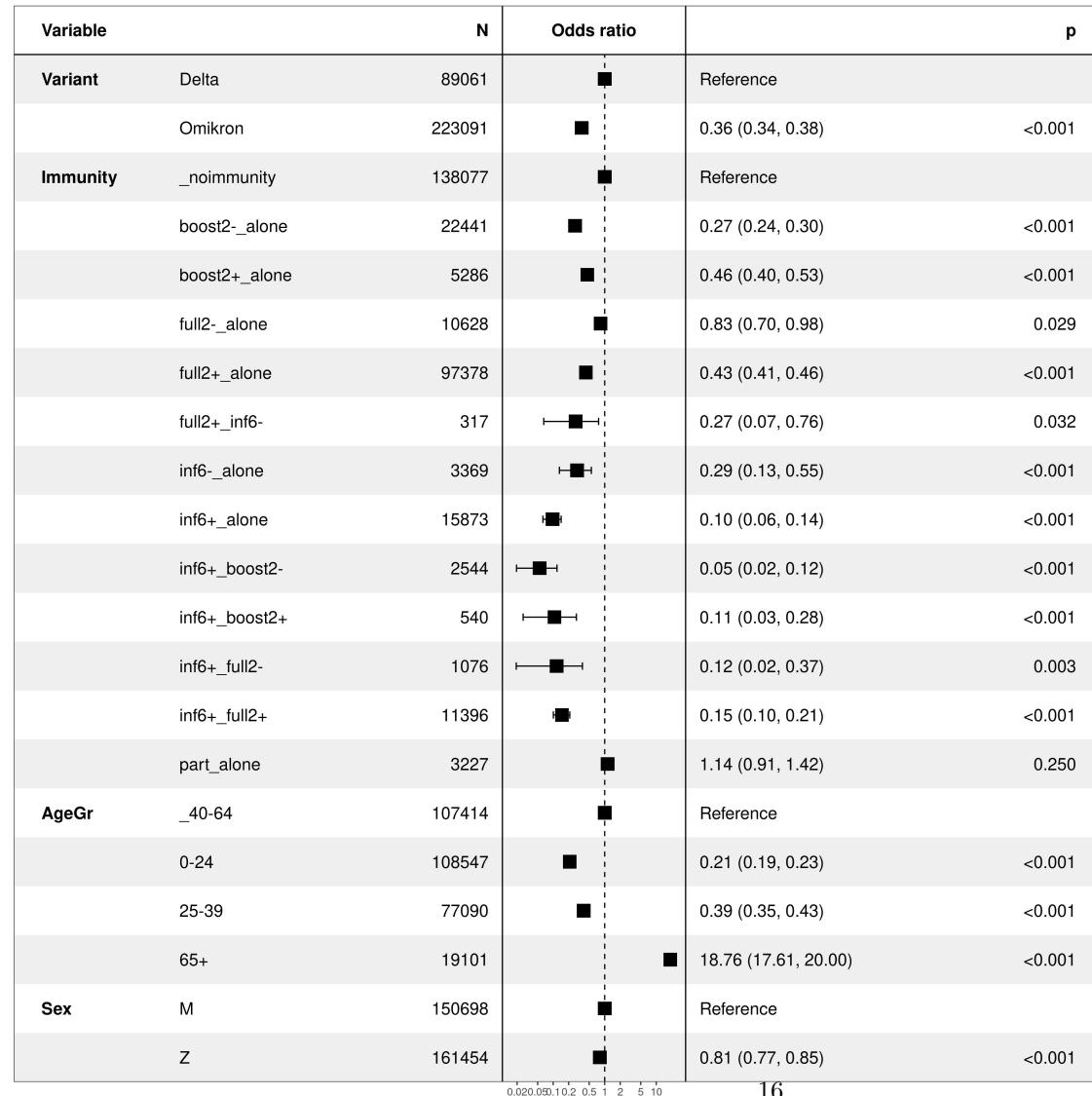
## 13 Hospitalizations by Vaccines - Omicron



## 14 Hospitalizations by Vaccines - Delta



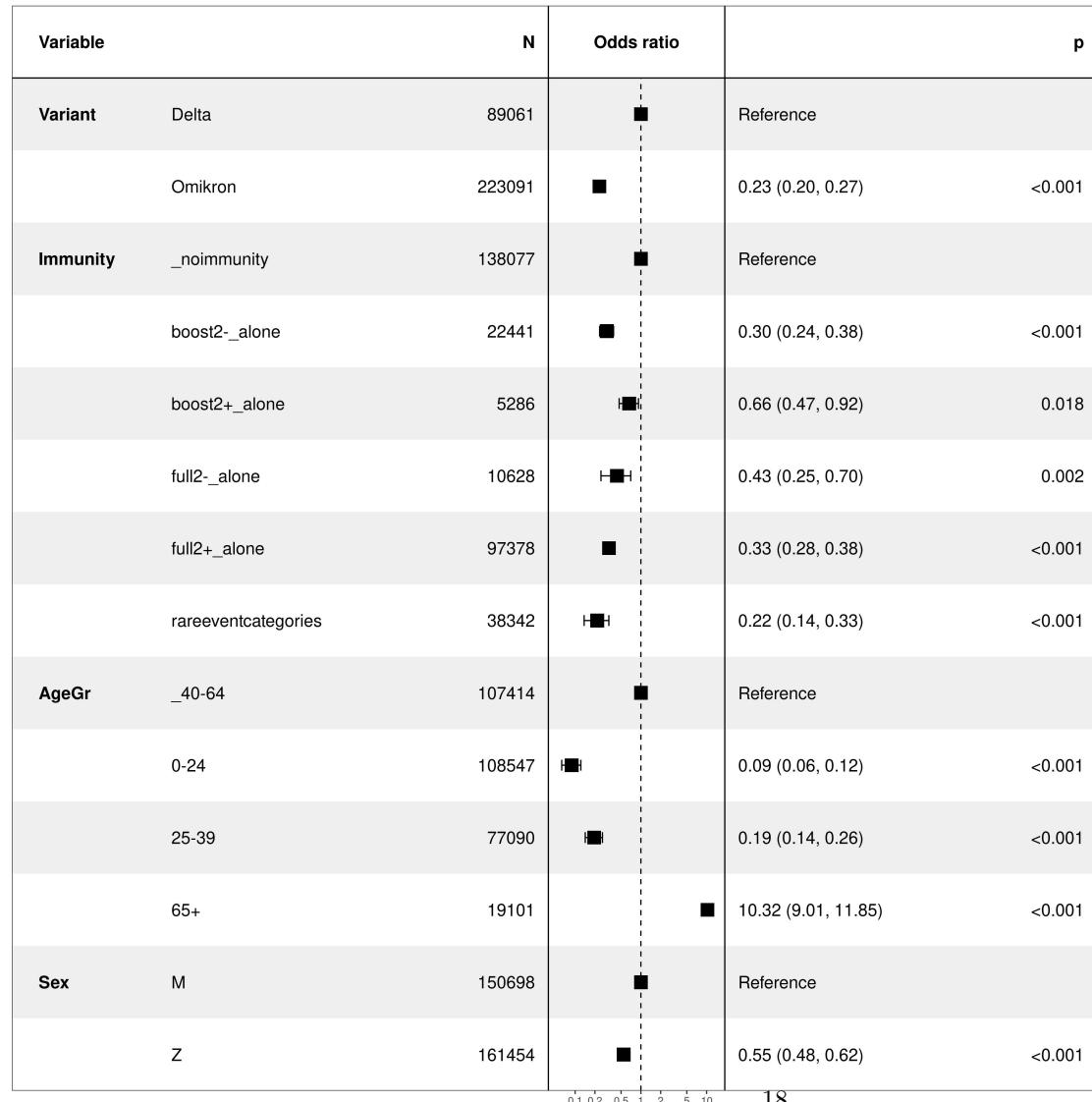
## 15 Hospitalization given Infection



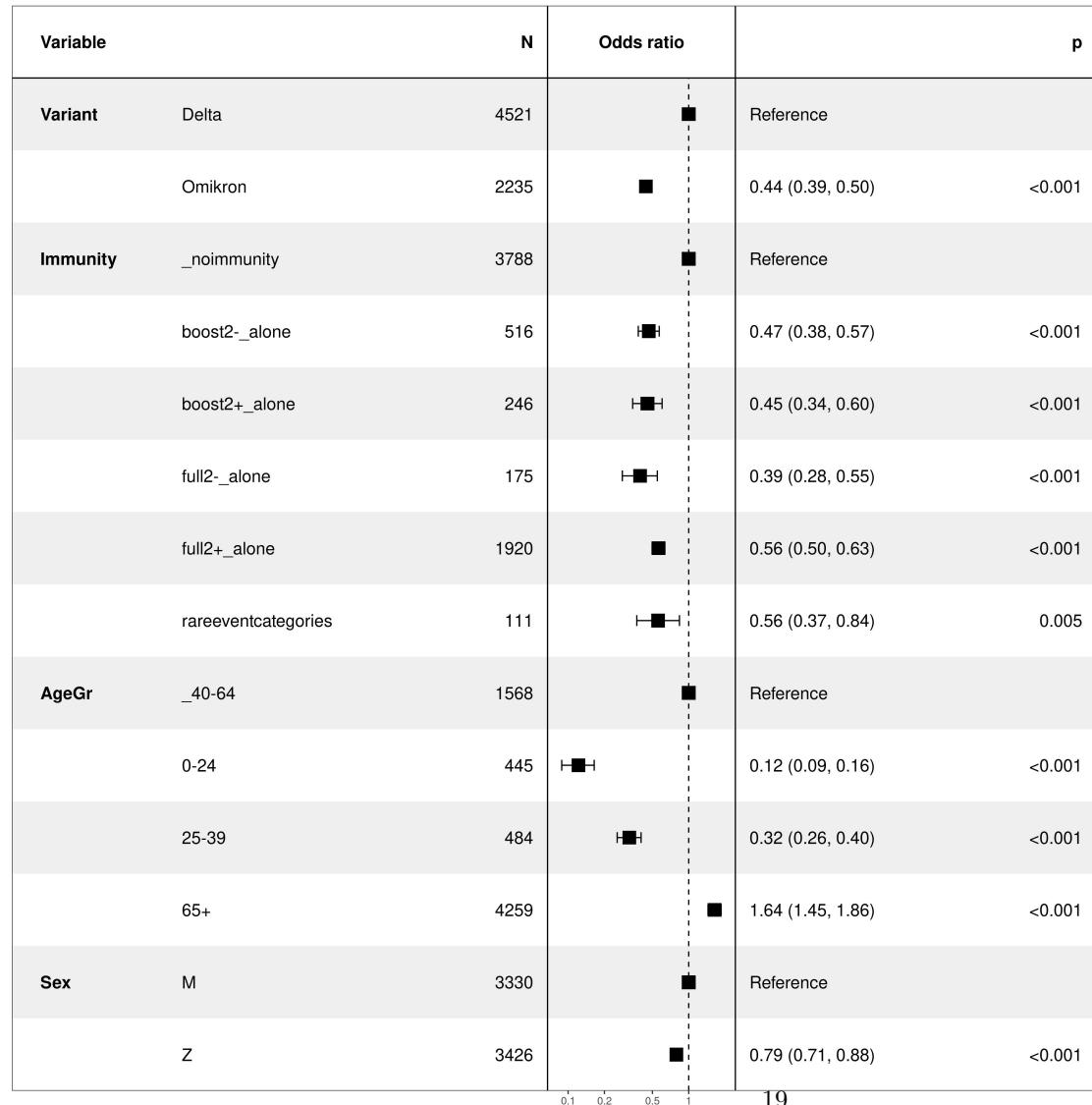
## 16 Oxygen given Infection

Variable		N	Odds ratio	p
<b>Variant</b>	Delta	89038	1	Reference
	Omkron	223041	0.23 (0.21, 0.25)	<0.001
<b>Immunity</b>	_noimmunity	138077	1	Reference
	boost2-_alone	22441	0.22 (0.19, 0.25)	<0.001
	boost2+_alone	5286	0.37 (0.30, 0.46)	<0.001
	full2-_alone	10628	0.55 (0.42, 0.71)	<0.001
	full2+_alone	97378	0.35 (0.32, 0.38)	<0.001
	rareeventcategories	38269	0.15 (0.11, 0.20)	<0.001
<b>AgeGr</b>	_40-64	107391	1	Reference
	0-24	108545	0.05 (0.03, 0.06)	<0.001
	25-39	77082	0.20 (0.17, 0.24)	<0.001
	65+	19061	18.66 (17.21, 20.26)	<0.001
<b>Sex</b>	M	150658	1	Reference
	Z	161421	0.72 (0.67, 0.77)	<0.001

## 17 ICU given Infection



## 18 Oxagen given Hospitalization



## 19 ICU given Hospitalization

