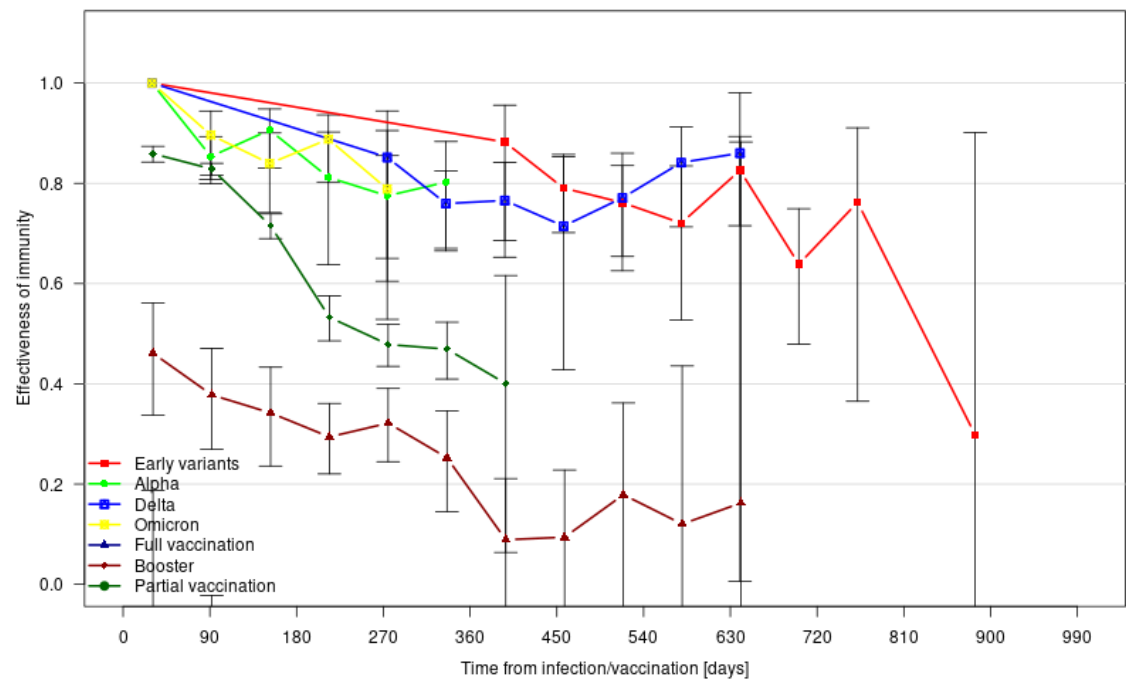
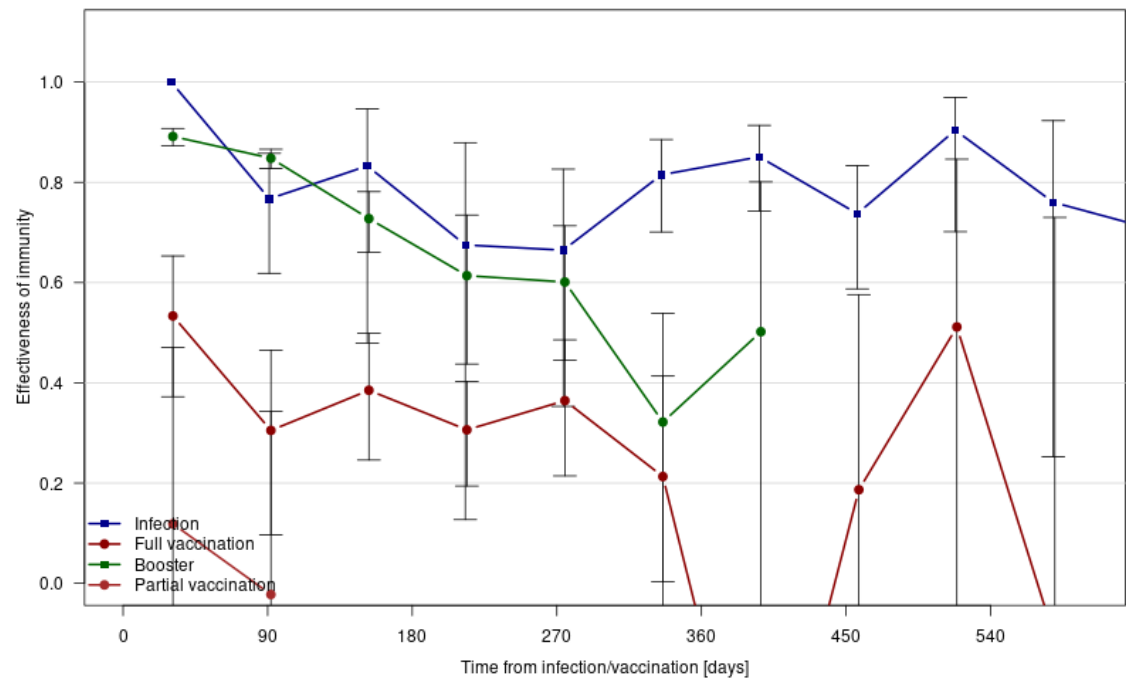


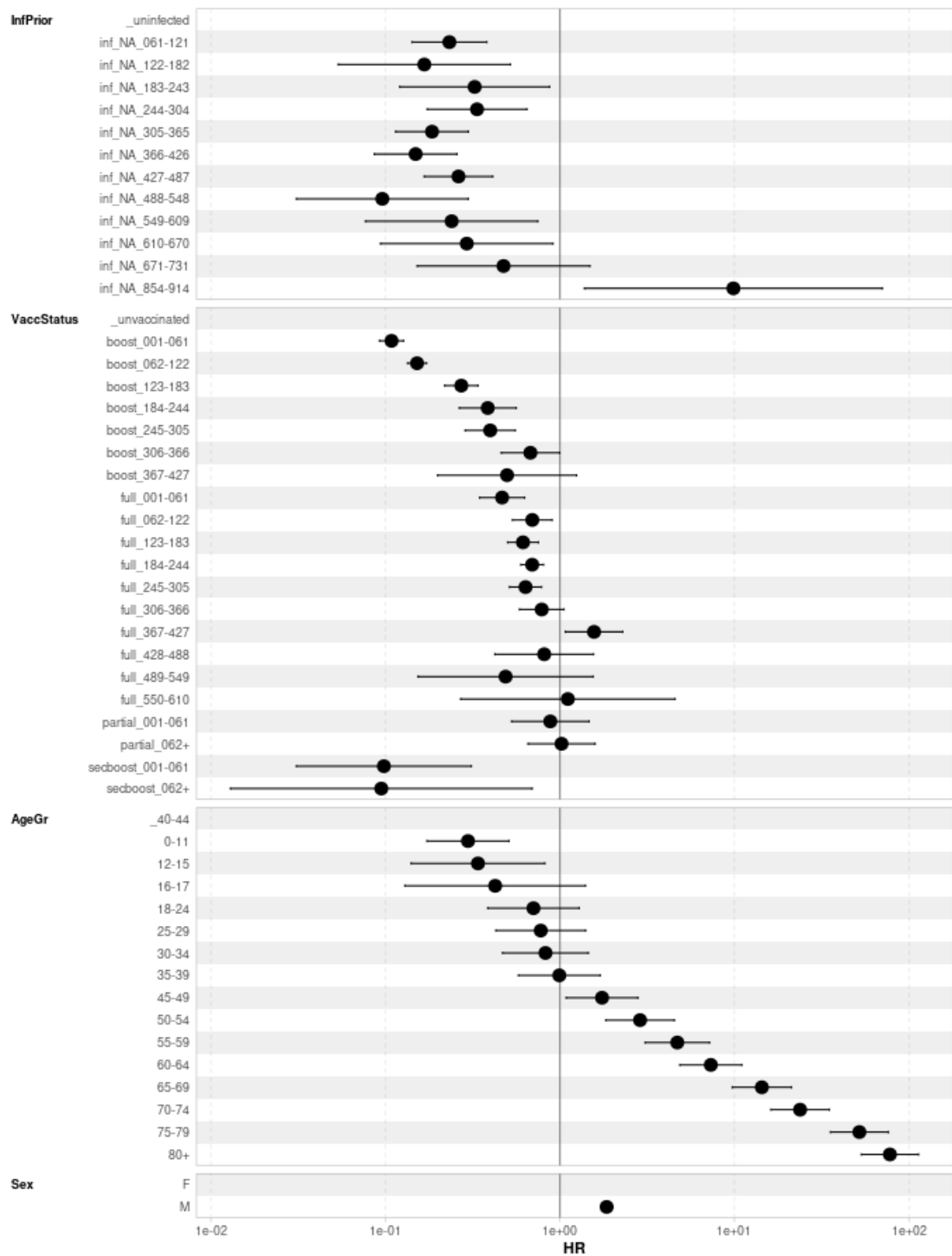
# Vyvanuti III

Results of Statistical Estimation

March 6, 2023

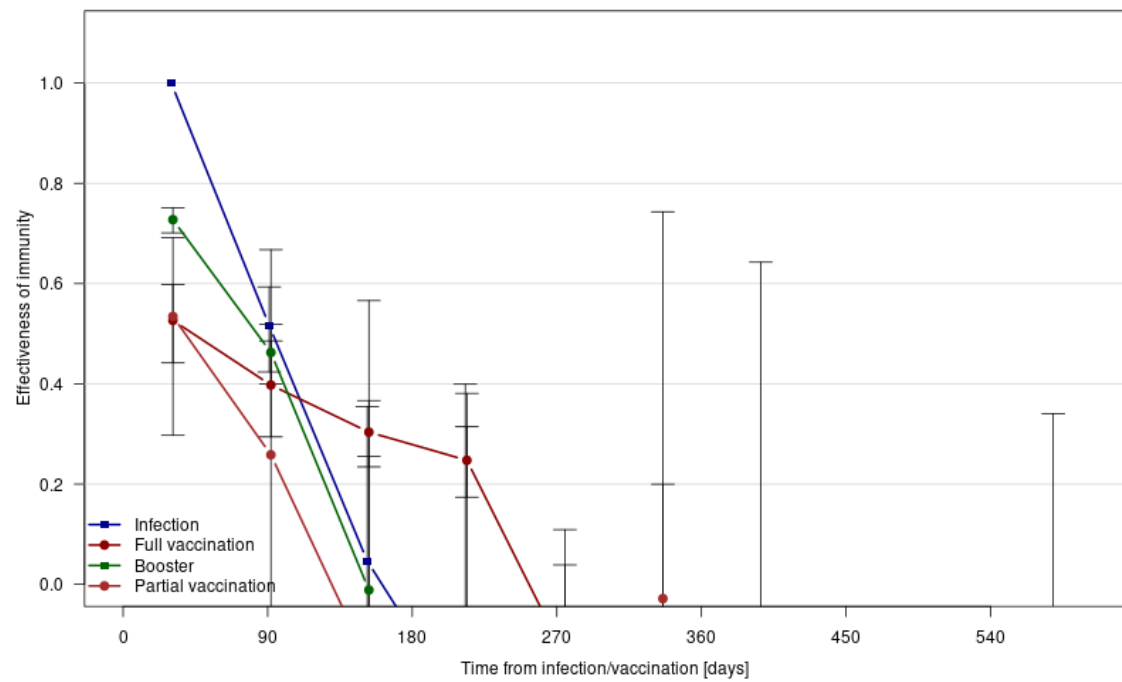
# 1 Serious course – Omicron

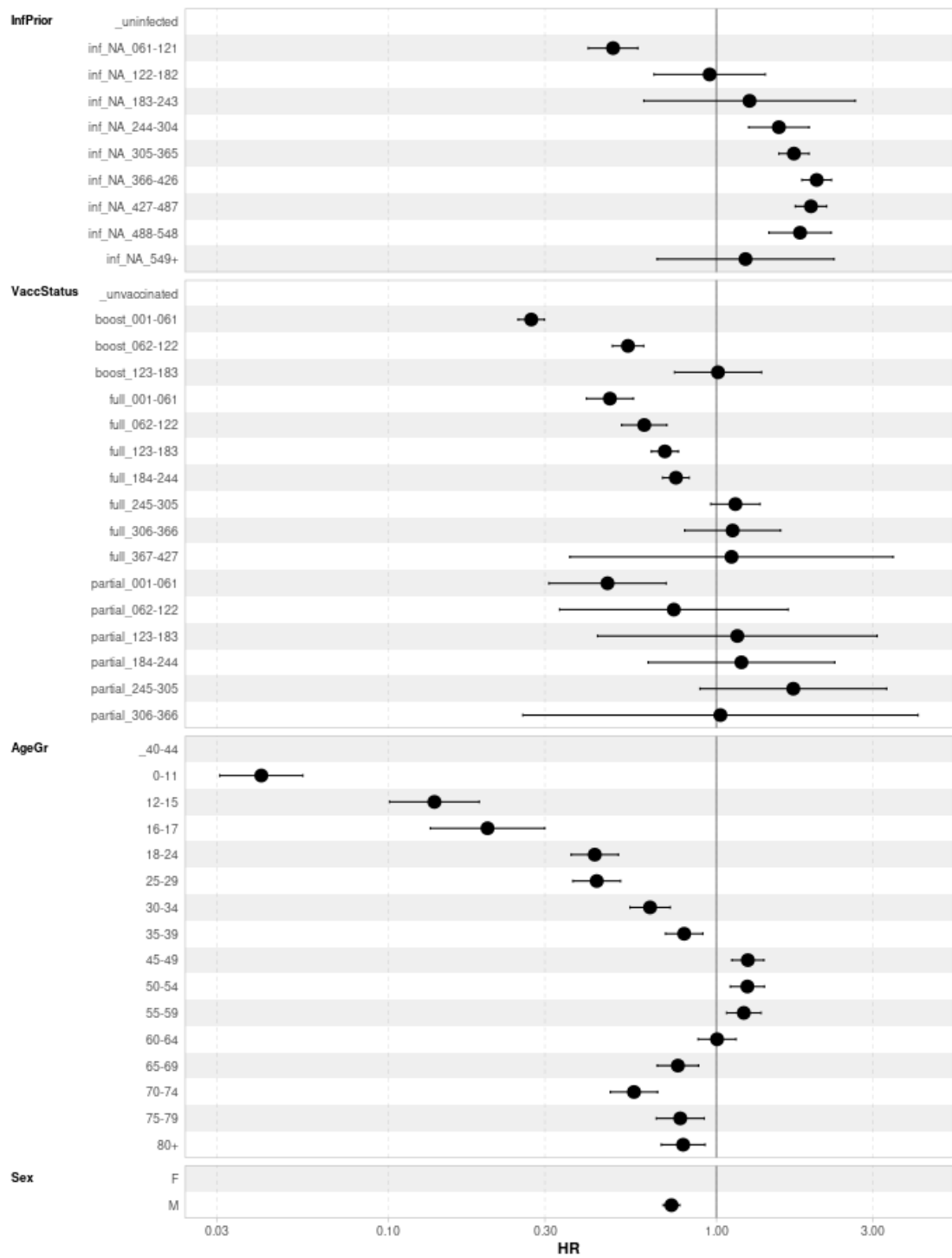






## 2 Long covid – Omicron

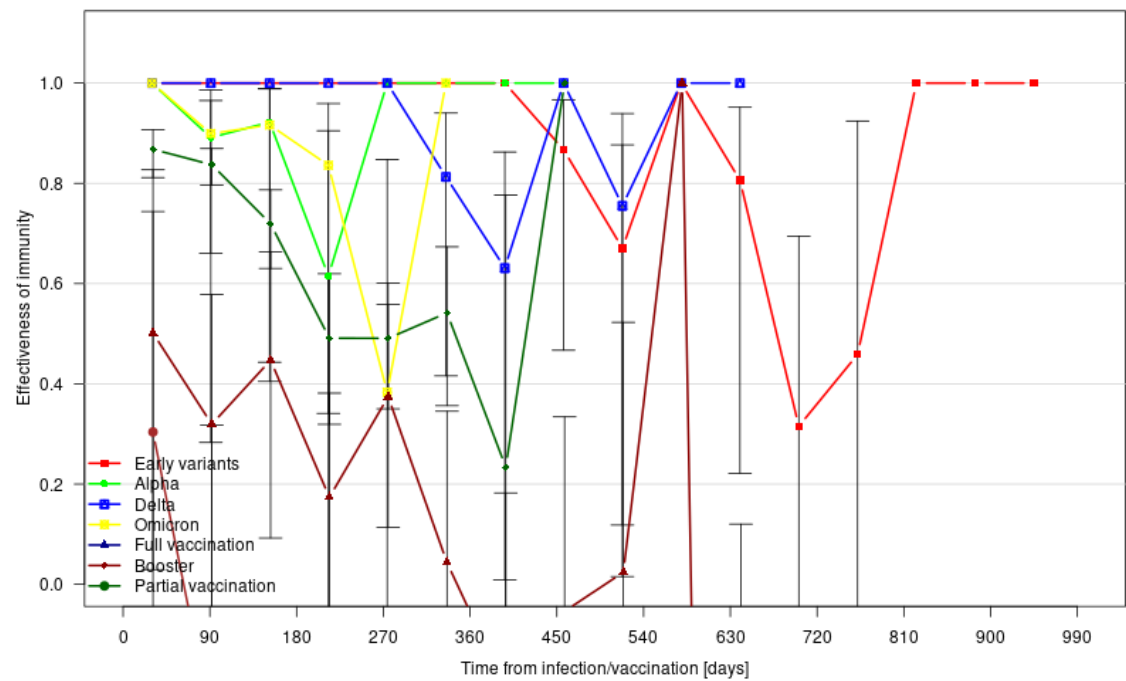
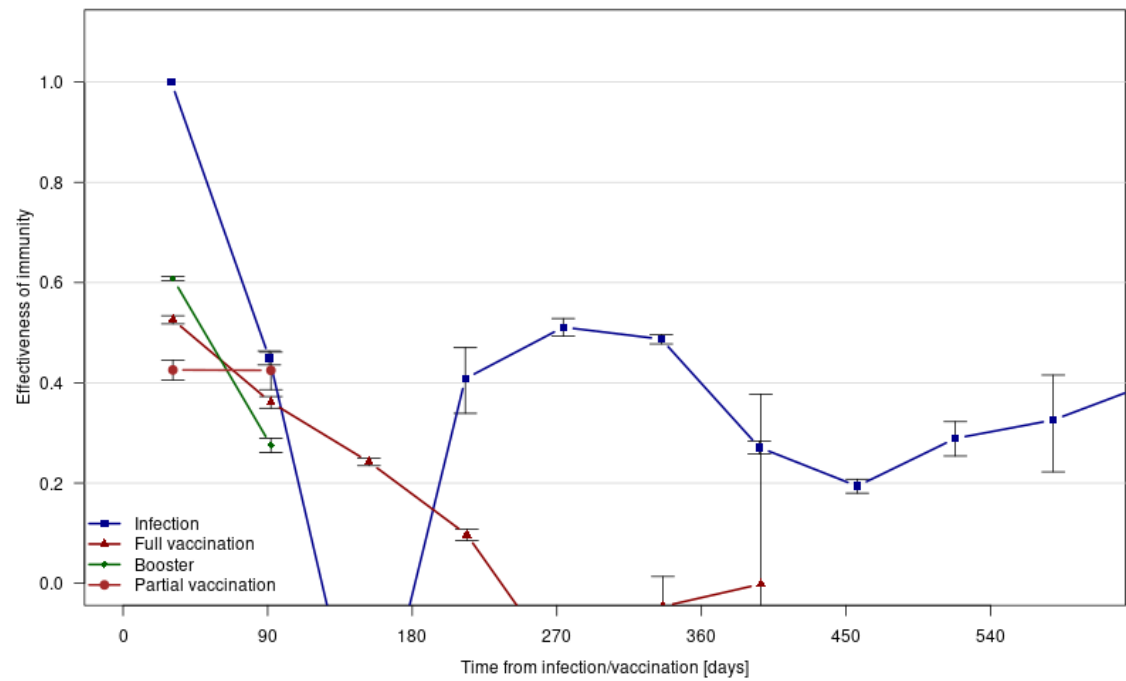




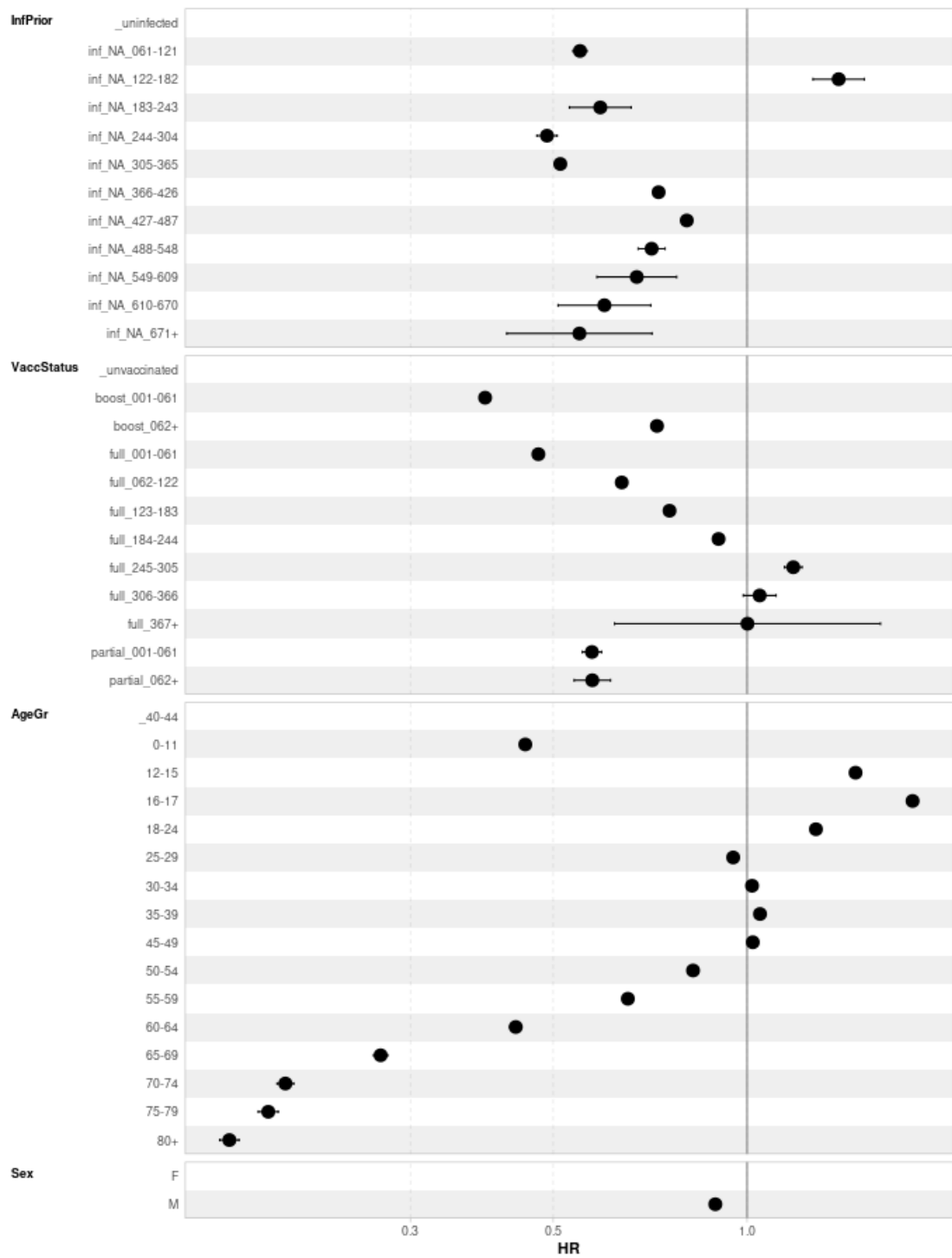
Characteristic	N	Event N	HR (95% CI) <sup>1</sup>	p-value
InfPrior				
_uninfected	19,805,238	7099	—	
inf_ALPHA_183-243	142,507	3	1.25 (0.40 to 3.89)	0.70
inf_ALPHA_244-304	842,808	104	1.47 (1.21 to 1.79)	<0.001
inf_ALPHA_305-365	891,589	646	1.83 (1.69 to 1.99)	<0.001
inf_ALPHA_366-426	501,529	309	2.13 (1.90 to 2.40)	<0.001
inf_DELTA_061-121	1,051,961	354	0.57 (0.51 to 0.64)	<0.001
inf_DELTA_122-182	507,628	118	0.88 (0.74 to 1.06)	0.19
inf_DELTA_183-243	28,033	9	0.98 (0.51 to 1.89)	0.96
inf_DELTA_244-304	6,493	2	1.80 (0.45 to 7.20)	0.41
inf_EARLY_366-426	1,018,559	214	2.09 (1.82 to 2.39)	<0.001
inf_EARLY_427-487	1,155,367	648	1.85 (1.71 to 2.01)	<0.001
inf_EARLY_488-548	618,424	342	1.61 (1.45 to 1.80)	<0.001
inf_EARLY_549-609	64,939	20	1.49 (0.96 to 2.31)	0.075
inf_EARLY_610-670	21,318	4	0.83 (0.31 to 2.22)	0.71
inf_EARLY_671+	12,301	7	1.23 (0.59 to 2.58)	0.58
inf_NA_061-121	427,648	27	0.38 (0.26 to 0.56)	<0.001
inf_NA_305-365	551,299	71	1.63 (1.29 to 2.07)	<0.001
inf_NA_366-426	524,103	435	1.91 (1.74 to 2.11)	<0.001
inf_NA_427-487	215,536	74	1.82 (1.45 to 2.30)	<0.001
inf_OMICRON_061-121	221,560	5	0.18 (0.08 to 0.44)	<0.001
VaccStatus				
_unvaccinated	5,704,159	3676	—	
boost_001-061	4,583,685	1279	0.30 (0.28 to 0.32)	<0.001
boost_062-122	3,626,320	1846	0.54 (0.50 to 0.57)	<0.001
boost_123+	606,071	273	0.85 (0.75 to 0.97)	0.013
full_001-061	1,081,941	212	0.44 (0.38 to 0.50)	<0.001
full_062-122	2,592,271	413	0.59 (0.53 to 0.65)	<0.001
full_123-183	5,303,738	850	0.71 (0.66 to 0.77)	<0.001
full_184-244	3,211,985	1296	0.74 (0.69 to 0.79)	<0.001
full_245-305	1,002,154	431	0.93 (0.84 to 1.03)	0.17
full_306-366	143,378	98	1.04 (0.85 to 1.28)	0.68
full_367-427	26,999	15	0.90 (0.54 to 1.49)	0.68
partial_001-061	632,924	37	0.53 (0.39 to 0.74)	<0.001
partial_062+	93,215	65	0.97 (0.76 to 1.25)	0.84
AgeGr				
_40-44	2,412,987	1030	—	
0-11	1,868,695	71	0.03 (0.02 to 0.04)	<0.001
12-15	1,063,910	64	0.11 (0.09 to 0.15)	<0.001
16-17	524,258	35	0.16 (0.11 to 0.22)	<0.001
18-24	1,912,760	321	0.39 (0.35 to 0.45)	<0.001
25-29	1,593,339	403	0.51 (0.46 to 0.58)	<0.001
30-34	1,875,521	604	0.69 (0.62 to 0.76)	<0.001
35-39	1,977,419	742	0.84 (0.76 to 0.92)	<0.001
45-49	2,669,208	1421	1.38 (1.27 to 1.49)	<0.001
50-54	2,120,531	1228	1.50 (1.38 to 1.62)	<0.001
55-59	2,051,629	1235	1.53 (1.41 to 1.67)	<0.001
60-64	1,833,899	893	1.22 (1.11 to 1.33)	<0.001
65-69	2,027,285	708	0.92 (0.83 to 1.01)	0.093
70-74	1,913,093	608	0.83 (0.75 to 0.92)	<0.001
75-79	1,367,536	500	0.96 (0.86 to 1.07)	0.50
80+	1,396,770	628	0.96 (0.87 to 1.07)	0.46
Sex				
F	14,576,895	6370	—	
M	14,031,945	4121	0.67 (0.65 to 0.70)	<0.001

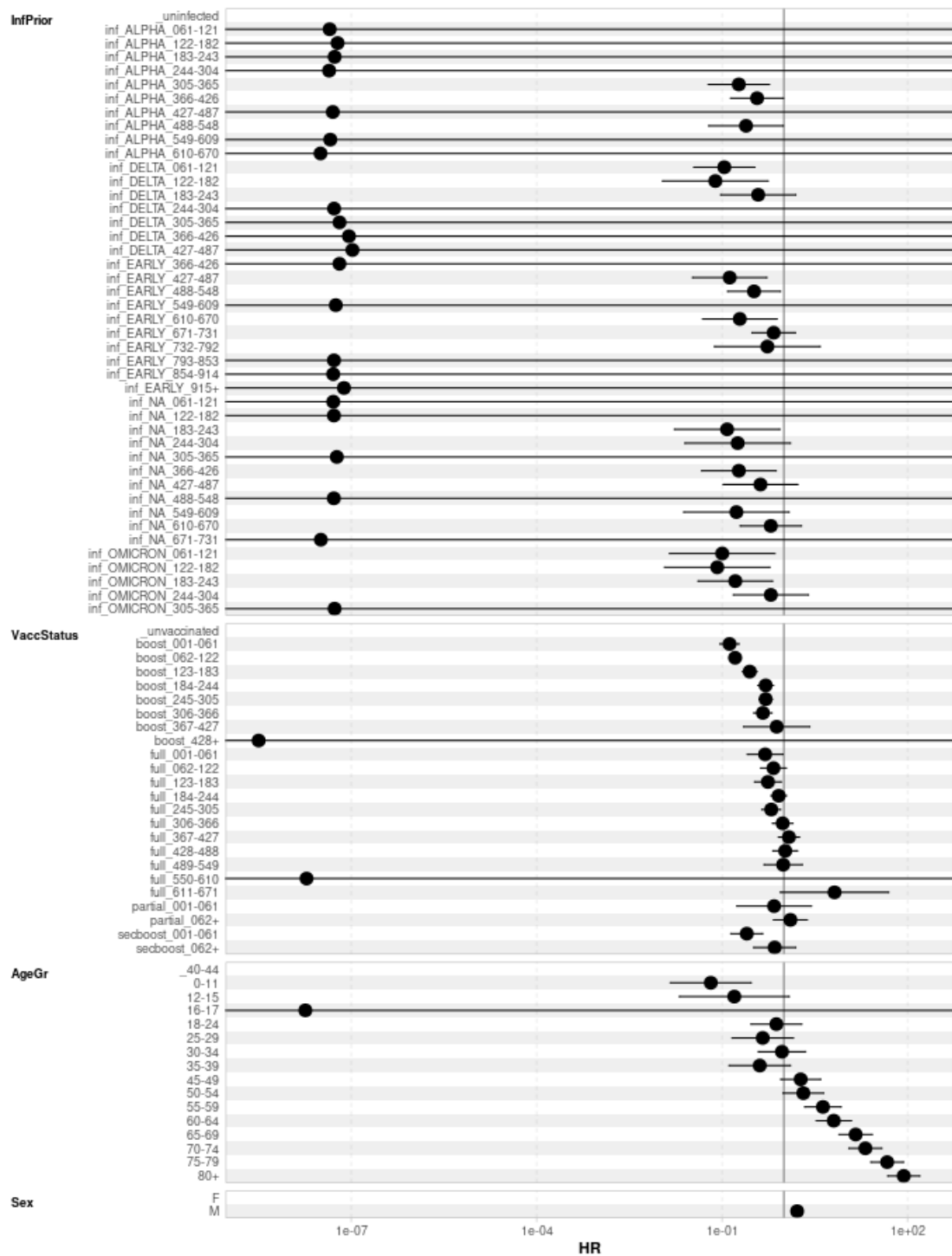
<sup>1</sup> HR = Hazard Ratio, CI = Confidence Interval

### 3 Infections – Omicron









# Serious Course Given Infection

```
Estimate Std. Error z value Pr(>|z|)
(Intercept) -4.95684 0.06136 -80.785 < 2e-16 ***
VariantOfInfRA12 -1.15218 0.02339 -49.256 < 2e-16 ***
VariantOfInfRA45 -1.34204 0.03138 -42.771 < 2e-16 ***
VariantOfInfOmicron -1.36236 0.03689 -36.933 < 2e-16 ***
InfPriorinf_NA.061-121 -0.62933 0.13455 -4.677 2.91e-06 ***
InfPriorinf_NA.122-182 -1.19443 0.18257 -6.542 6.06e-11 ***
InfPriorinf_NA.183-243 -1.21496 0.16146 -7.525 5.29e-14 ***
InfPriorinf_NA.244-304 -1.12842 0.13841 -8.153 3.56e-16 ***
InfPriorinf_NA.305-365 -1.17236 0.12517 -9.366 < 2e-16 ***
InfPriorinf_NA.366-426 -1.52596 0.14108 -10.816 < 2e-16 ***
InfPriorinf_NA.427-487 -1.52339 0.14792 -10.299 < 2e-16 ***
InfPriorinf_NA.488-548 -1.21620 0.13972 -8.705 < 2e-16 ***
InfPriorinf_NA.549-609 -1.45716 0.17157 -8.493 < 2e-16 ***
InfPriorinf_NA.610-670 -1.66746 0.20644 -8.077 6.62e-16 ***
InfPriorinf_NA.671-731 -0.96393 0.18615 -5.178 2.24e-07 ***
InfPriorinf_NA.732-792 -1.16670 0.50742 -2.299 0.021489 *
InfPriorinf_NA.793-853 -8.21277 41.88643 -0.196 0.844554
InfPriorinf_NA.854-914 0.08324 1.02476 0.081 0.935263
InfPriorinf_NA.915+ -8.45505 69.91290 -0.121 0.903741
VaccStatusboost.001-061 -1.56909 0.04441 -35.330 < 2e-16 ***
VaccStatusboost.062-122 -1.67000 0.03481 -47.982 < 2e-16 ***
VaccStatusboost.123-183 -1.70134 0.04283 -39.722 < 2e-16 ***
VaccStatusboost.184-244 -1.28401 0.04658 -27.564 < 2e-16 ***
VaccStatusboost.245-305 -1.34670 0.04055 -33.213 < 2e-16 ***
VaccStatusboost.306-366 -1.39133 0.05104 -27.260 < 2e-16 ***
VaccStatusboost.367-427 -0.95796 0.22544 -4.249 2.14e-05 ***
VaccStatusboost.428+ -9.41519 254.29841 -0.037 0.970466
VaccStatusfull.001-061 -0.60506 0.08081 -7.488 7.02e-14 ***
VaccStatusfull.062-122 -0.83653 0.06269 -13.345 < 2e-16 ***
VaccStatusfull.123-183 -1.27675 0.03331 -38.330 < 2e-16 ***
VaccStatusfull.184-244 -0.95184 0.03797 -25.066 < 2e-16 ***
VaccStatusfull.245-305 -0.89741 0.04848 -18.512 < 2e-16 ***
VaccStatusfull.306-366 -0.62356 0.07052 -8.843 < 2e-16 ***
VaccStatusfull.367-427 -0.51027 0.07564 -6.746 1.52e-11 ***
VaccStatusfull.428-488 -0.51334 0.08388 -6.120 9.36e-10 ***
VaccStatusfull.489-549 -0.78500 0.13404 -5.856 4.73e-09 ***
VaccStatusfull.550-610 -0.47015 0.23678 -1.986 0.047073 *
VaccStatusfull.611-671 -0.61393 1.07313 -0.572 0.567261
VaccStatuspartial.001-061 -0.35991 0.09921 -3.628 0.000286 ***
VaccStatuspartial.062+ -0.26516 0.10006 -2.650 0.008050 **
VaccStatussecboost.001-061 -1.65068 0.10389 -15.888 < 2e-16 ***
VaccStatussecboost.062+ -1.56338 0.19219 -8.135 4.13e-16 ***
AgeGr0-11 -2.02145 0.12233 -16.524 < 2e-16 ***
AgeGr12-15 -3.29145 0.32186 -10.226 < 2e-16 ***
AgeGr16-17 -2.27529 0.33873 -6.717 1.85e-11 ***
AgeGr18-24 -1.11008 0.13138 -8.450 < 2e-16 ***
AgeGr25-29 -0.92290 0.12379 -7.456 8.94e-14 ***
AgeGr30-34 -0.75537 0.10689 -7.067 1.58e-12 ***
AgeGr35-39 -0.42705 0.09509 -4.491 7.09e-06 ***
AgeGr45-49 0.44457 0.07702 5.772 7.84e-09 ***
AgeGr50-54 1.01122 0.07414 13.640 < 2e-16 ***
AgeGr55-59 1.51534 0.07012 21.610 < 2e-16 ***
AgeGr60-64 2.20547 0.06766 32.598 < 2e-16 ***
AgeGr65-69 3.00849 0.06442 46.698 < 2e-16 ***
AgeGr70-74 3.67310 0.06311 58.200 < 2e-16 ***
AgeGr75-79 4.18680 0.06300 66.459 < 2e-16 ***
AgeGr80+ 4.88464 0.06180 79.045 < 2e-16 ***

SexM 0.48347 0.01647 29.351 < 2e-16 ***
```

# Long Covid Given Infection

```
Estimate Std. Error z value Pr(>|z|)
(Intercept) -3.98140 0.03200 -124.409 < 2e-16 ***
Seriouscovidproxy 1.54051 0.03515 43.825 < 2e-16 ***
Variant0fInfBA12 -0.32014 0.02287 -13.998 < 2e-16 ***
Variant0fInfBA45 -7.48823 37.80651 -0.198 0.842993
Variant0fInfOmicron -0.39877 0.02655 -15.020 < 2e-16 ***
InfPriorinf.NA.061-121 1.04630 0.05411 19.335 < 2e-16 ***
InfPriorinf.NA.122-182 1.00557 0.09517 10.566 < 2e-16 ***
InfPriorinf.NA.183-243 0.96626 0.22357 4.322 1.55e-05 ***
InfPriorinf.NA.244-304 0.98819 0.08558 11.547 < 2e-16 ***
InfPriorinf.NA.305-365 1.18037 0.03901 30.261 < 2e-16 ***
InfPriorinf.NA.366-426 1.05149 0.03446 30.510 < 2e-16 ***
InfPriorinf.NA.427-487 0.85562 0.03947 21.679 < 2e-16 ***
InfPriorinf.NA.488-548 0.83565 0.05674 14.728 < 2e-16 ***
InfPriorinf.NA.549-609 0.97512 0.22311 4.371 1.24e-05 ***
InfPriorinf.NA.610-670 0.61373 0.45405 1.352 0.176482
InfPriorinf.NA.671+ 0.77549 0.38574 2.010 0.044390 *
VaccStatusboost.001-061 -0.28067 0.03107 -9.034 < 2e-16 ***
VaccStatusboost.062-122 -0.16329 0.03041 -5.369 7.90e-08 ***
VaccStatusboost.123+ -0.21595 0.06517 -3.314 0.000921 ***
VaccStatusfull.001-061 -0.08901 0.05971 -1.491 0.136030
VaccStatusfull.062-122 -0.07555 0.04323 -1.748 0.080488 .
VaccStatusfull.123-183 -0.23017 0.02689 -8.561 < 2e-16 ***
VaccStatusfull.184-244 -0.20331 0.02956 -6.878 6.06e-12 ***
VaccStatusfull.245-305 -0.13222 0.04785 -2.763 0.005721 **
VaccStatusfull.306-366 -0.14312 0.10264 -1.394 0.163177
VaccStatusfull.367-427 -0.29111 0.26302 -1.107 0.268387
VaccStatuspartial.001-061 -0.08751 0.10199 -0.858 0.390891
VaccStatuspartial.062+ 0.20779 0.11342 1.832 0.066933 .
AgeGr0-11 -2.89737 0.10445 -27.739 < 2e-16 ***
AgeGr12-15 -2.36644 0.10788 -21.937 < 2e-16 ***
AgeGr16-17 -2.08048 0.14414 -14.434 < 2e-16 ***
AgeGr18-24 -1.03982 0.05674 -18.327 < 2e-16 ***
AgeGr25-29 -0.62232 0.05081 -12.248 < 2e-16 ***
AgeGr30-34 -0.41377 0.04379 -9.450 < 2e-16 ***
AgeGr35-39 -0.26034 0.04079 -6.382 1.74e-10 ***
AgeGr45-49 0.28847 0.03462 8.332 < 2e-16 ***
AgeGr50-54 0.47446 0.03597 13.191 < 2e-16 ***
AgeGr55-59 0.65063 0.03593 18.108 < 2e-16 ***
AgeGr60-64 0.72490 0.03909 18.546 < 2e-16 ***
AgeGr65-69 0.81487 0.04113 19.810 < 2e-16 ***
AgeGr70-74 0.85773 0.04353 19.705 < 2e-16 ***
AgeGr75-79 0.88091 0.04776 18.445 < 2e-16 ***
AgeGr80+ 0.72010 0.04737 15.201 < 2e-16 ***

SexM -0.21183 0.01700 -12.462 < 2e-16 ***
```