

COVID19 gransking: Andevni yvir tíð

Maria Skaalum Petersen, PhD, Lektari

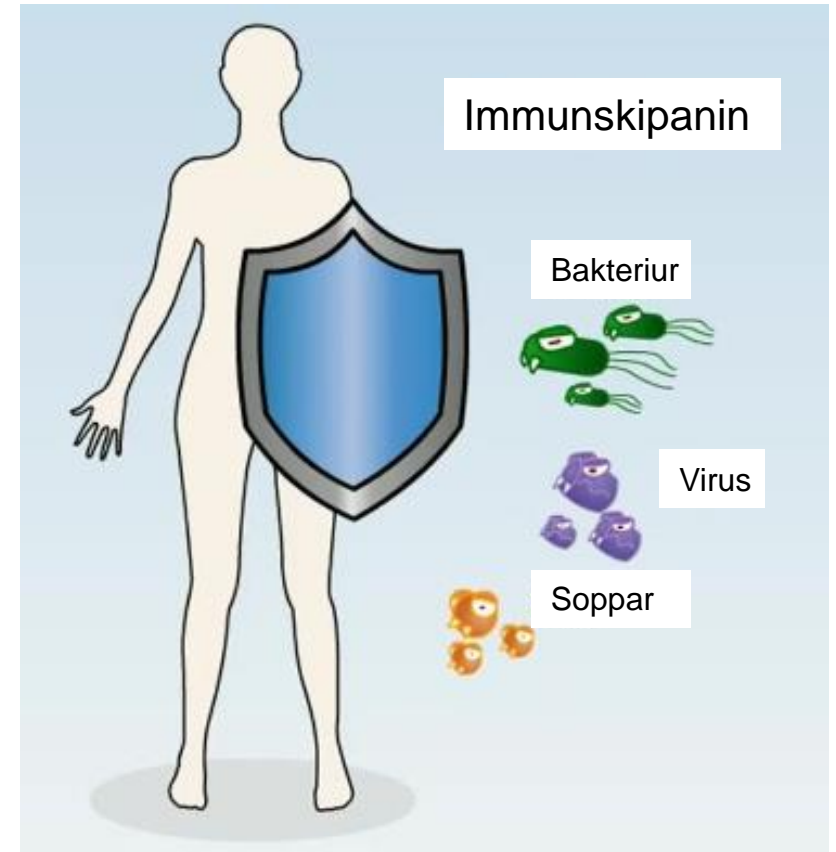
Deildin fyri Heilsu- og Sjúkrarøktarvísindi
Fróðskaparsetur Føroya

&

Deildin fyri Arbeiðs- og Almannaheilsu
Sjúkrahúsverk Føroya

Immunverjan

- Immunverjan er verjuskipanin hjá kroppinum
- Tá ein persónur verður smittaður, verða **andevni** framleidd, sum royna at berjast niður sjúkuna

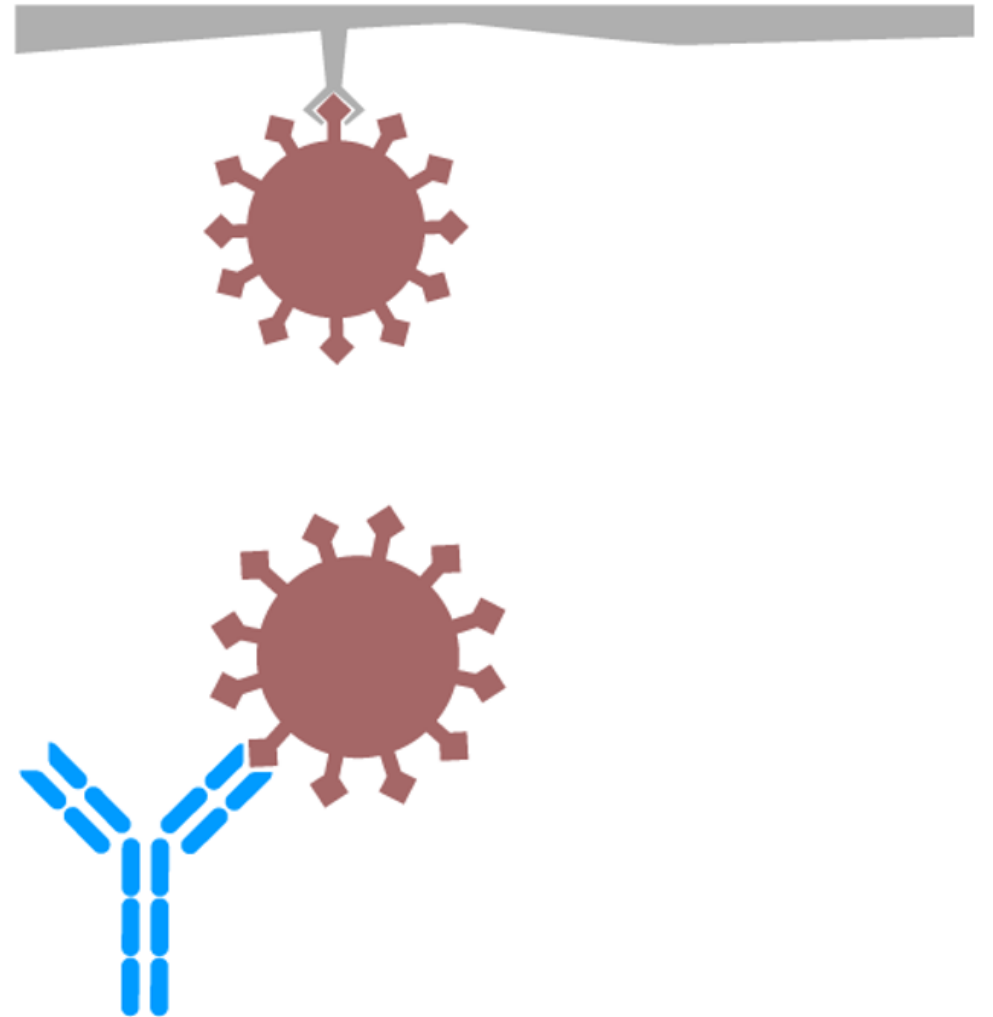


Immunverjan

Korona virus brúkar **spikes** (pílarnar) á uttaru síðuni til at binda seg til kyknurnar og smitta tær.

Kroppurin svarar við at framleiða....

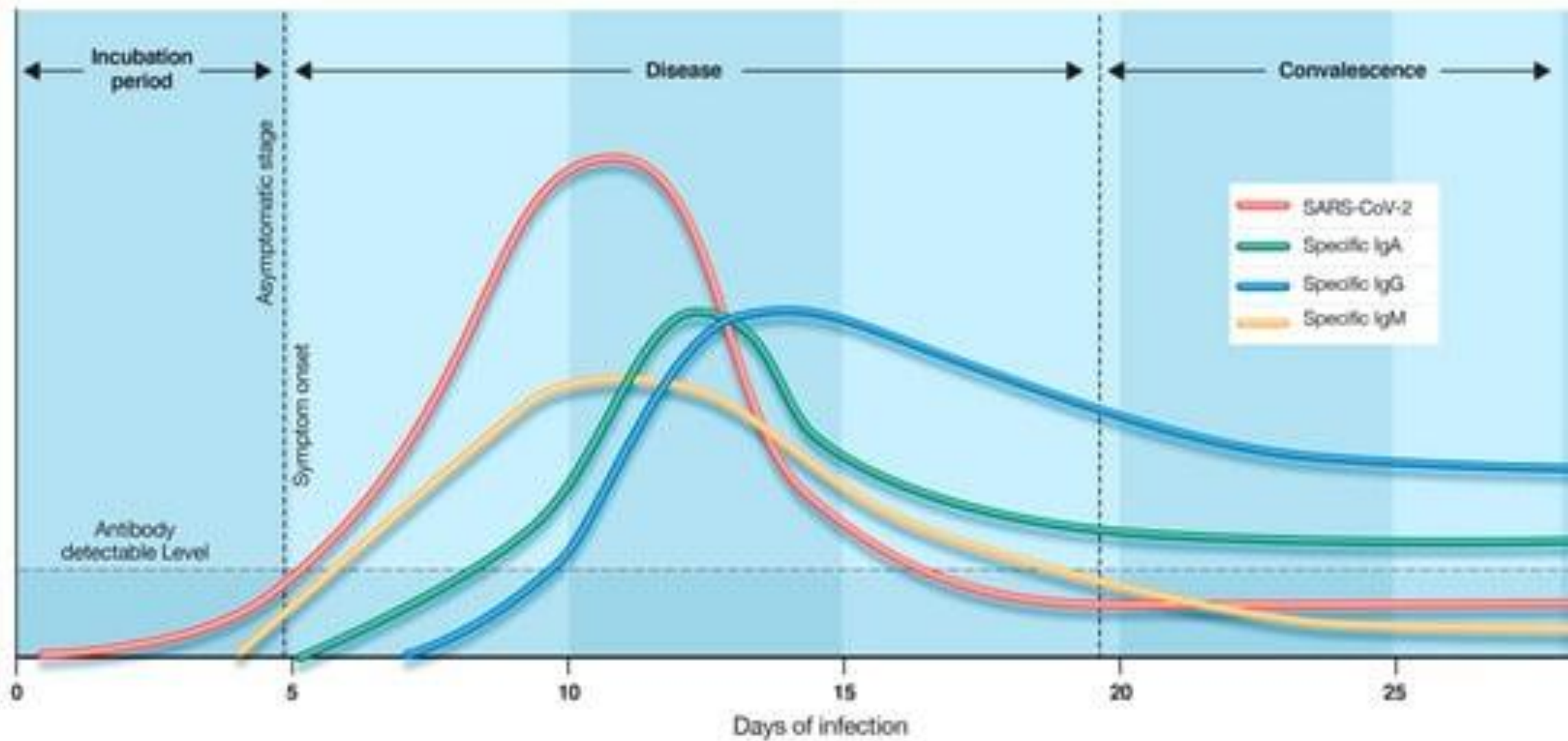
andevni við serligum **skapi**, sum binda til **spikes** og gera virusið óvirkið.



Immunverjan

- Andevni eru partur av immunverjuni og binda seg til korona virus og berja sostatt málrættað COVID-19 smittu
- Andevnir eita eisini **immunoglobulinir** (Ig) og finnast í fleiri formum
 - IgM
 - IgG
 - IgA

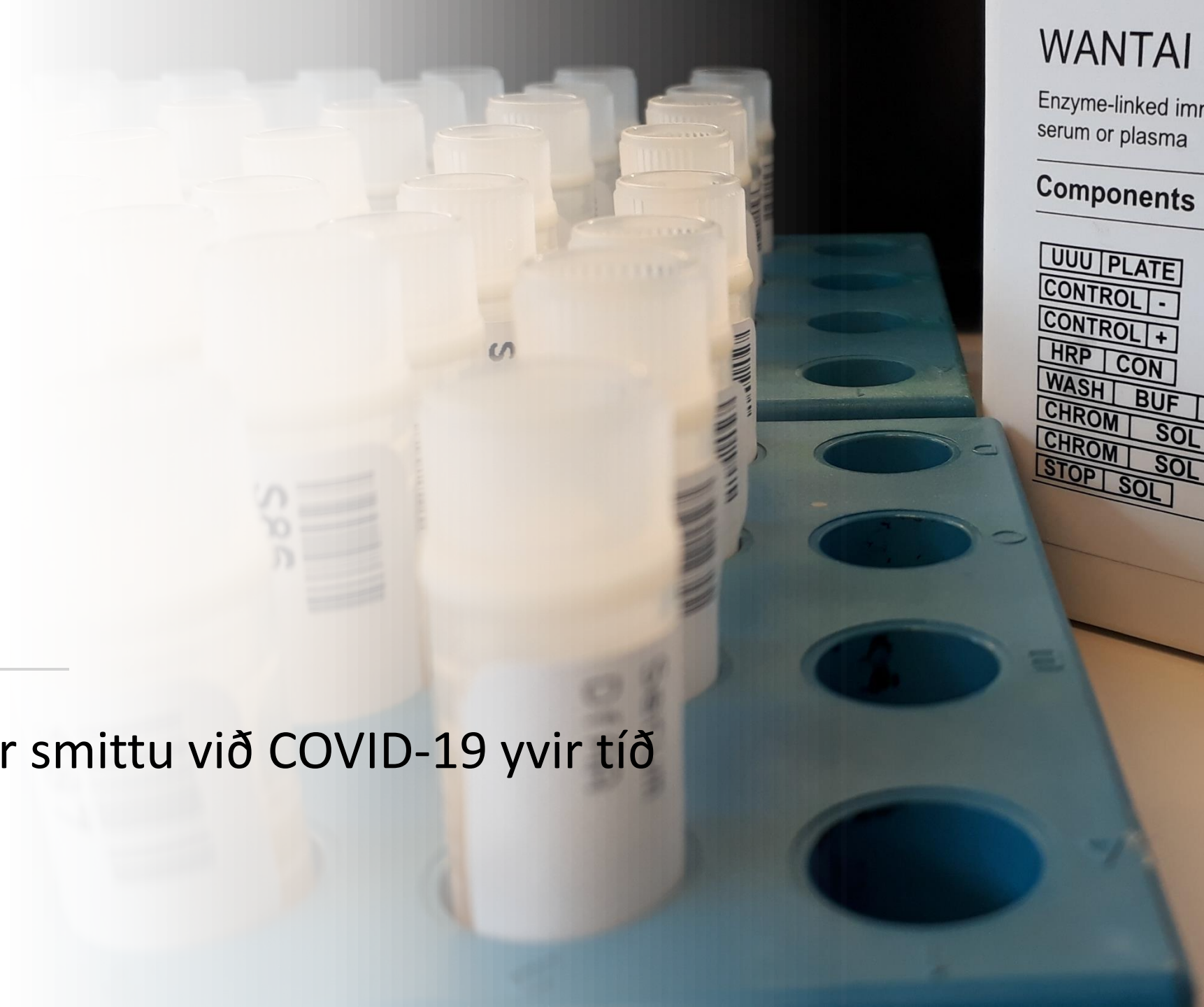






Endamál

At kanna andevnir eftir smittu við COVID-19 yvir tíð



Tann stóri spurningurinn

- Hava øll andevnir eftir smittu við COVID-19?
- Hvussu leingi eftir smittu hevur ein andevnir?
- Er ein mótstöðuførur, um ein hevur andevni móti COVID-19, og hvussu leingi, um so er?

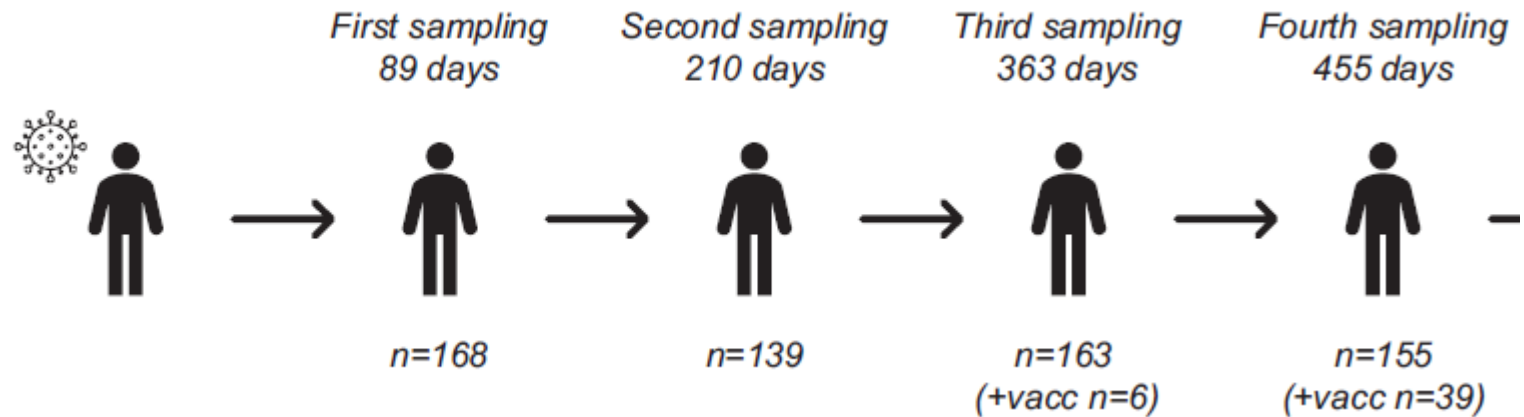


Mannagongd

Fyrsta bylgja

- Øll við **positivari** PCR kanning boðin at luttaka
- **169** av 187 luttóku, ~90%
- Boðin til blóðroynd 3, 7, 12, 15 og 22 mör

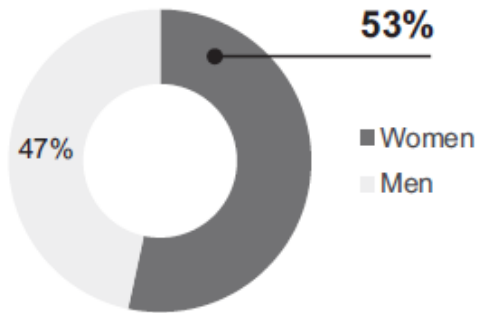
A1



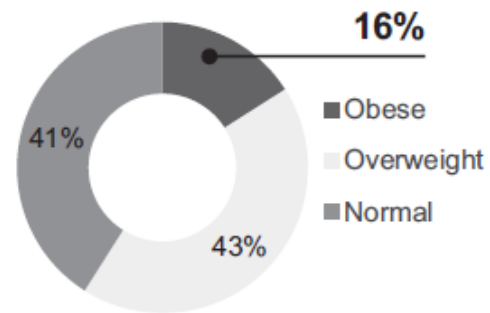
Fyrsta bylgja

B1

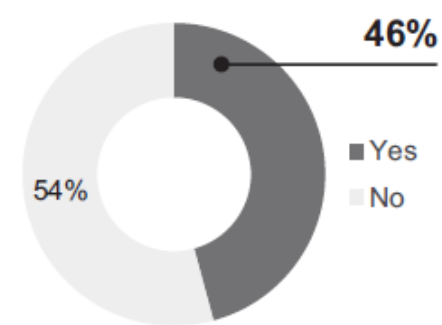
Gender



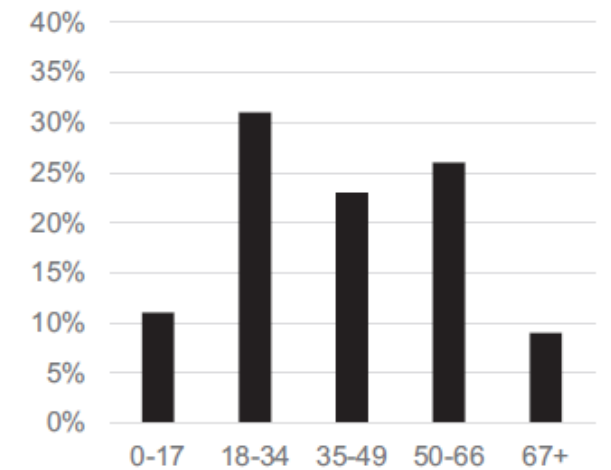
BMI



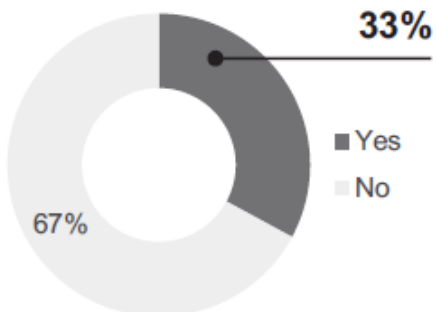
Ever smoker



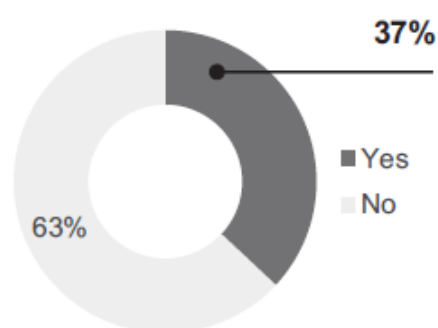
Age distribution



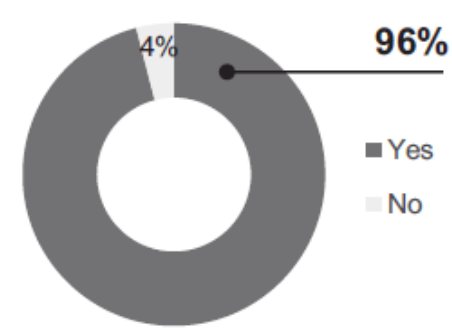
Self reported co-morbidity



Medication



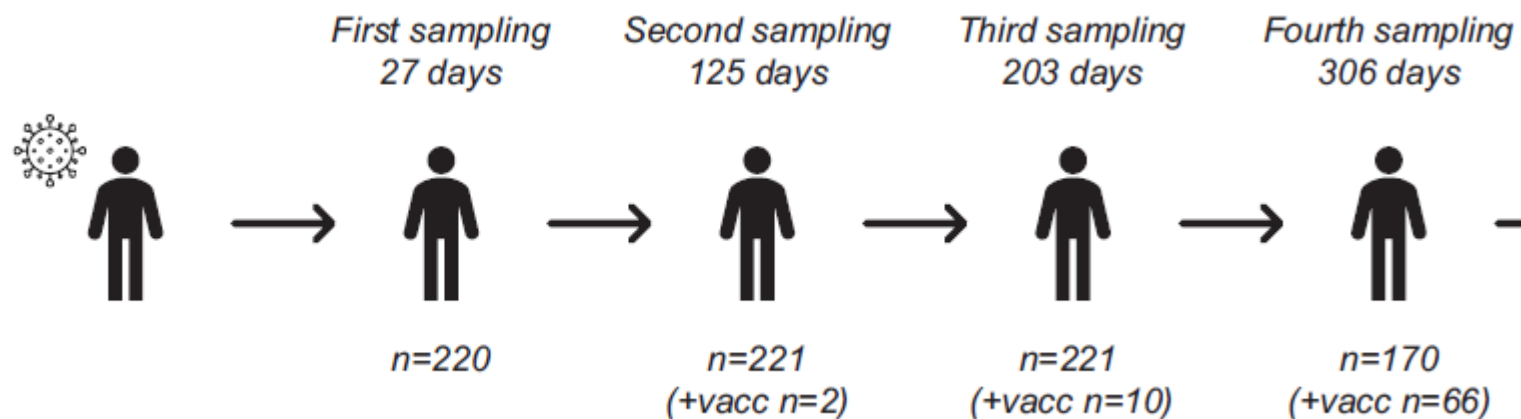
Symptoms



Önnur bylgja

- Öll við **positivari** PCR kanning frá aug til 26. dec 2020 boðin at luttaka
- **226** av 297 luttóku, ~76%
- Boðin til nýggja blóðroynd eftir 1, 3, 7, 12 og 15 mðr

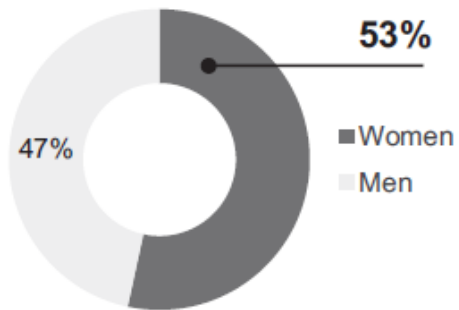
A2



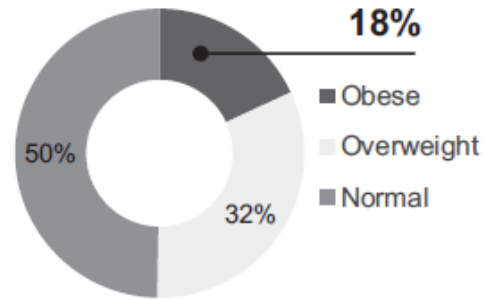
Önnur bylgja

B2

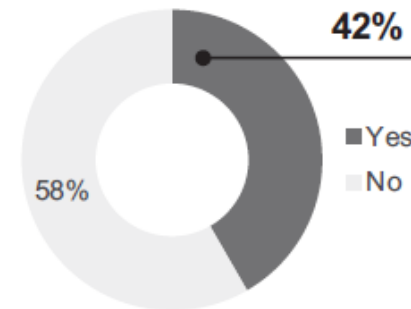
Gender



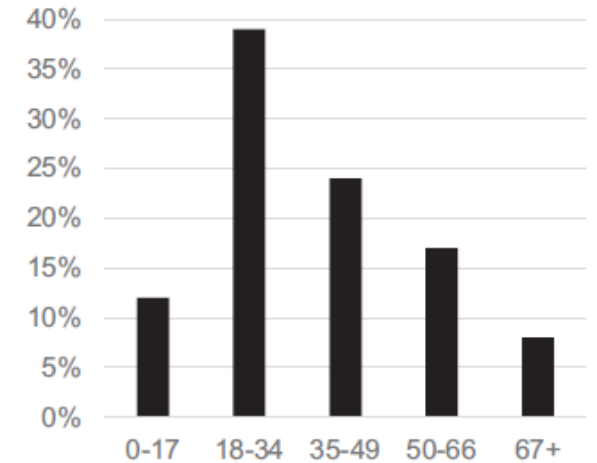
BMI



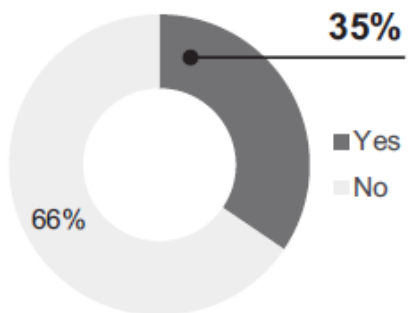
Ever smoker



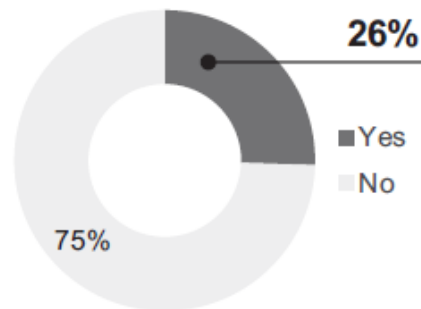
Age distribution



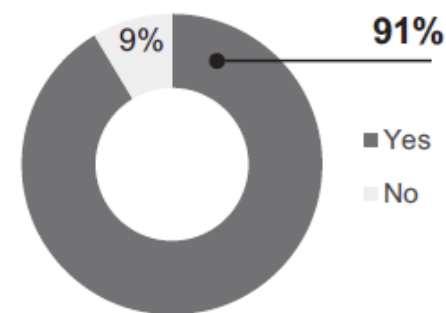
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Medication



Symptoms



Kanning av andevnum



Kanning av andevnum

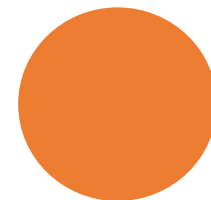
- Kanning av andevnum (blóðroynd)
 - Vísir um tú *hefur havt* virus í kroppinum
 - Verður mátað í blóðroynd

- Kanning av virus – PCR test (poding)
 - Vísir um tú *hefur* virkið virus í kroppinum (RNA)

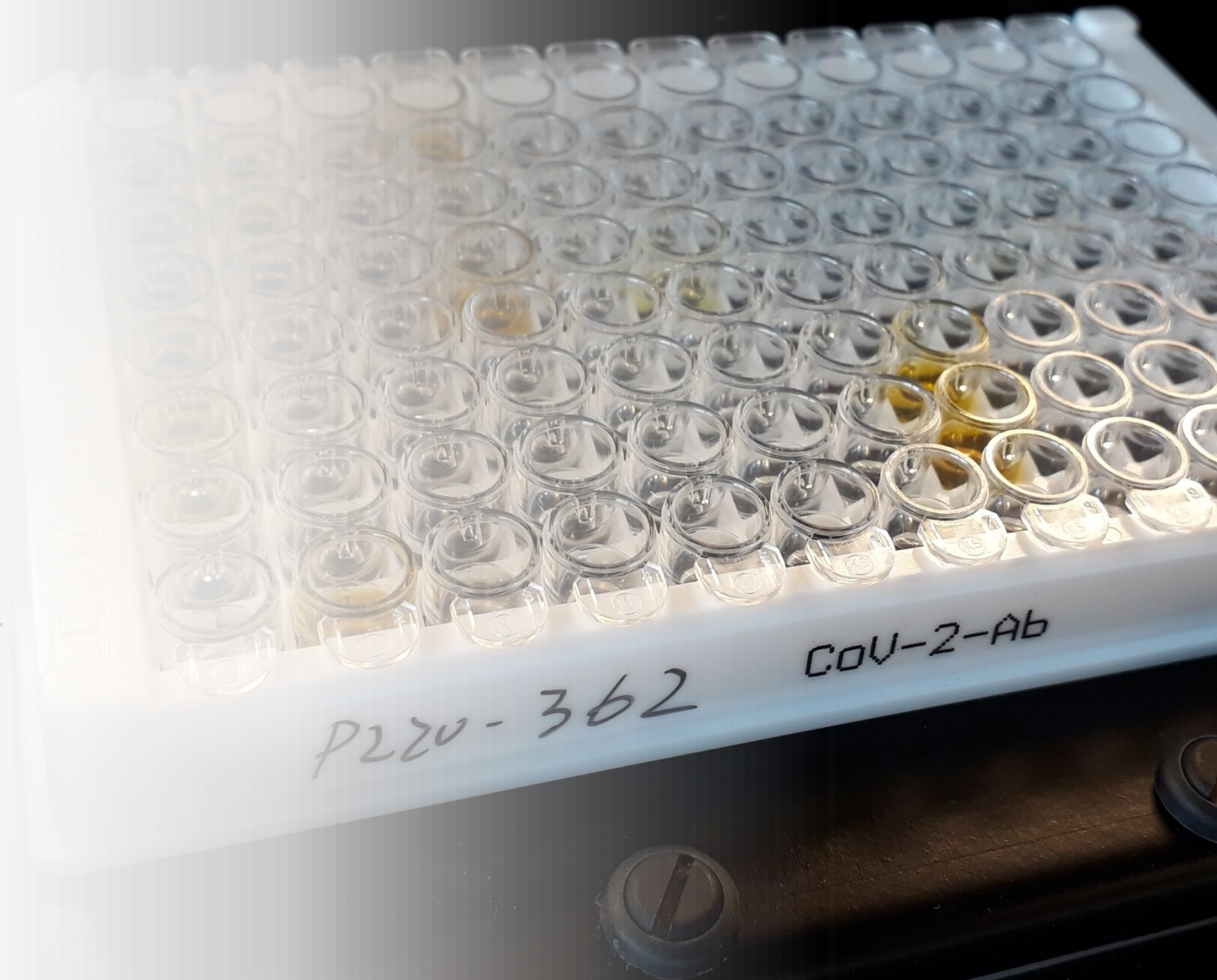


Kanning av andevnum

- Wantai test kit
 - mátar total andevni
 - ein **kvalitativ** test (**ja/nei**)
- Kanning gjörd á Heilsufrøðiligu Starvsstovuni
- Andevir
 - mátar IgG, IgA og IgM
 - ein **kvantitativ** kanning (**tal**)
- Kanning gjörd á Ríkisssjúkrahúsinum



Úrslit



> *Open Forum Infect Dis.* 2021 Jul 15;8(8):ofab378. doi: 10.1093/ofid/ofab378. eCollection 2021 Aug.

SARS-CoV-2 Natural Antibody Response Persists for at Least 12 Months in a Nationwide Study From the Faroe Islands

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Guðrið Andorsdóttir⁹, Shahin Gaini^{2 5 10 11}, Pál Weihe^{1 2}, Peter Garred³

> *J Intern Med.* 2022 Aug 23. doi: 10.1111/joim.13560. Online ahead of print.

Factors influencing the immune response over 15 months after SARS-CoV-2 infection: A longitudinal population-wide study in the Faroe Islands

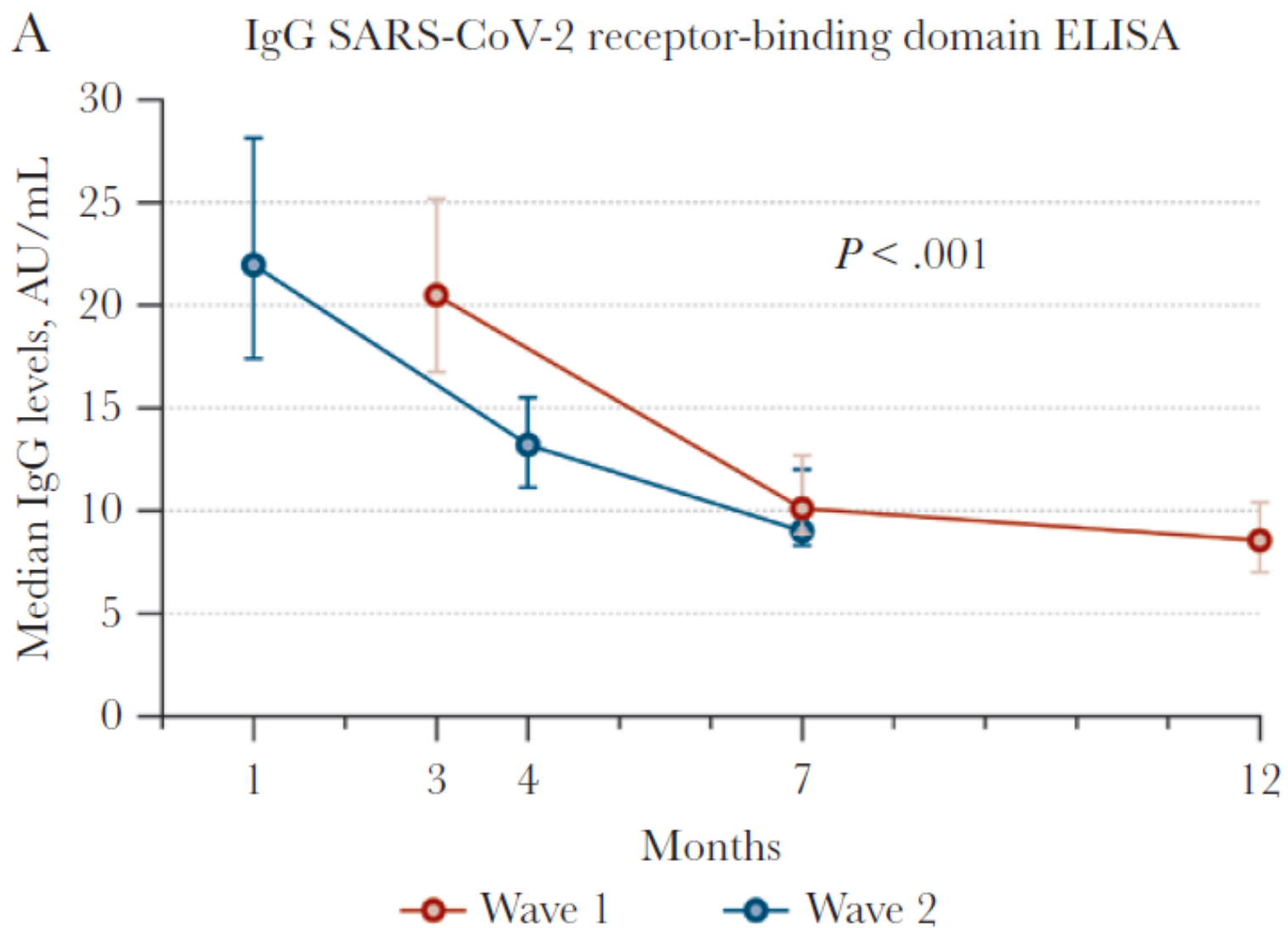
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Table 2. Seropositivity in polymerase chain reaction (PCR)-confirmed COVID-19 cases from the Faroe Islands in the period March to December 2020 was assessed by different methods per sampling and stratified according to waves

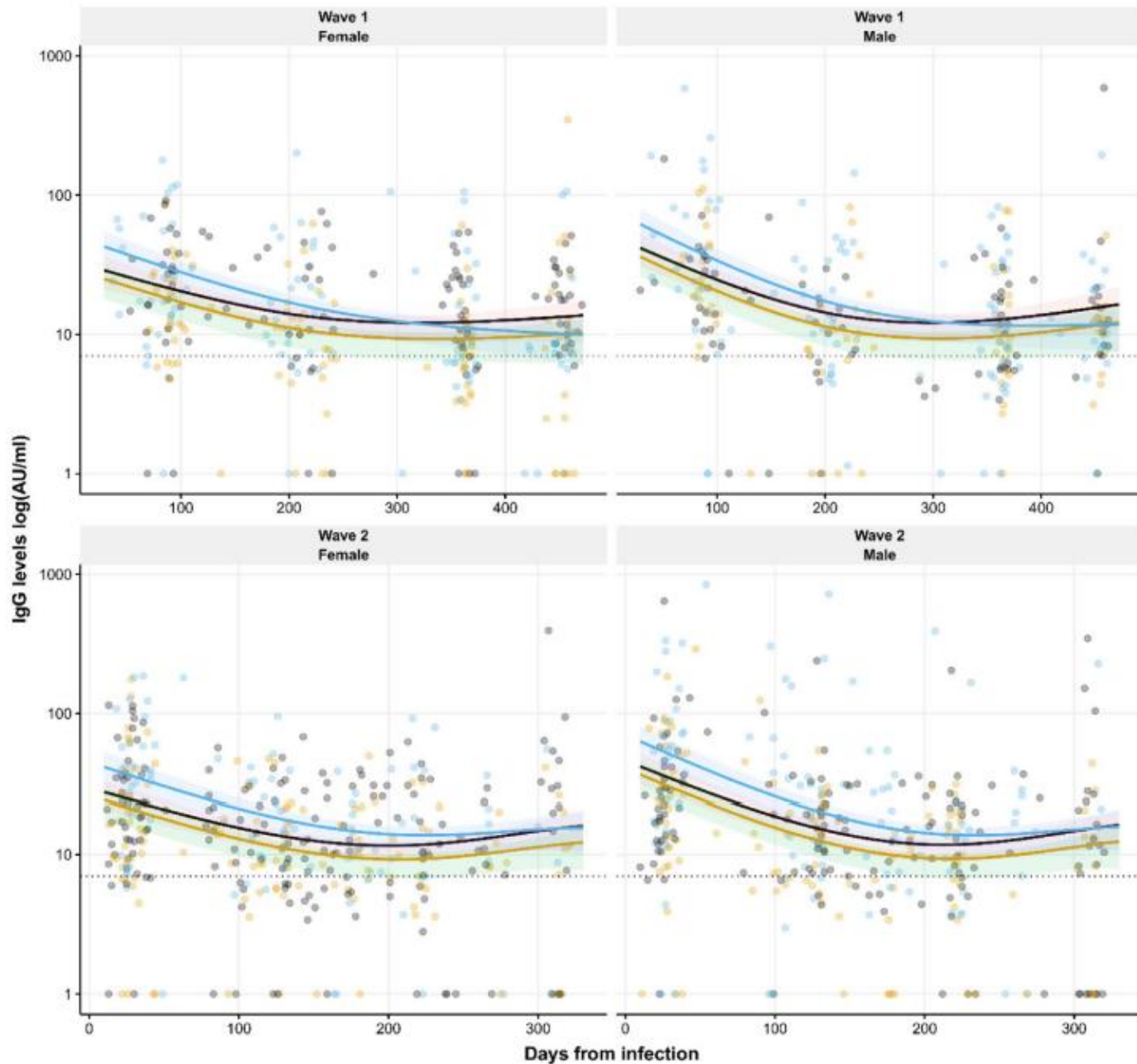
	Seropositivity wave 1 n (%)	Seropositivity wave 2 n (%)
First sampling	n = 168	n = 220
Total antibodies (Wantai)	167 (99.4)	212 (96.4)
Any antibody ^a	163 (97.0) ^b	212 (96.4) ^b
IgG	159 (94.6) ^b	207 (94.1) ^b
IgM	28 (16.7)	116 (52.7) ^b
IgA	74 (44.0)	173 (78.6) ^b
Neutralizing antibodies	155 (92.3)	183 (83.2) ^b
Second sampling	n = 139	n = 219
Total antibodies (Wantai)	138 (99.3)	215 (98.2)
Any antibody ^a	131 (94.2) ^b	208 (95.0) ^b
IgG	128 (92.1) ^b	208 (95.0) ^b
IgM	10 (7.2)	22 (10.0)
IgA	58 (41.7)	94 (42.9)
Neutralizing antibodies	133 (96.4) ^b	205 (93.6) ^b
Third sampling	n = 157	n = 211
Total antibodies (Wantai)	155 (98.7) ^b	208 (98.6) ^b
Any antibody ^a	150 (95.5) ^b	194 (91.9) ^b
IgG	148 (94.3) ^b	194 (91.9) ^b
IgM	7 (4.5)	16 (7.6)
IgA	52 (33.1)	59 (28.0)
Neutralizing antibodies	146 (93.0) ^b	184 (87.2) ^b
Fourth sampling	n = 116	n = 104
Total antibodies (Wantai)	115 (99.1)	103 (99.0)
Any antibody ^a	109 (94.0)	79 (76.0)
IgG	105 (90.5)	76 (73.1)
IgM	4 (3.4)	3 (2.9)
IgA	22 (19.0)	44 (23.1)
Neutralizing antibodies	107 (92.2)	95 (91.3)

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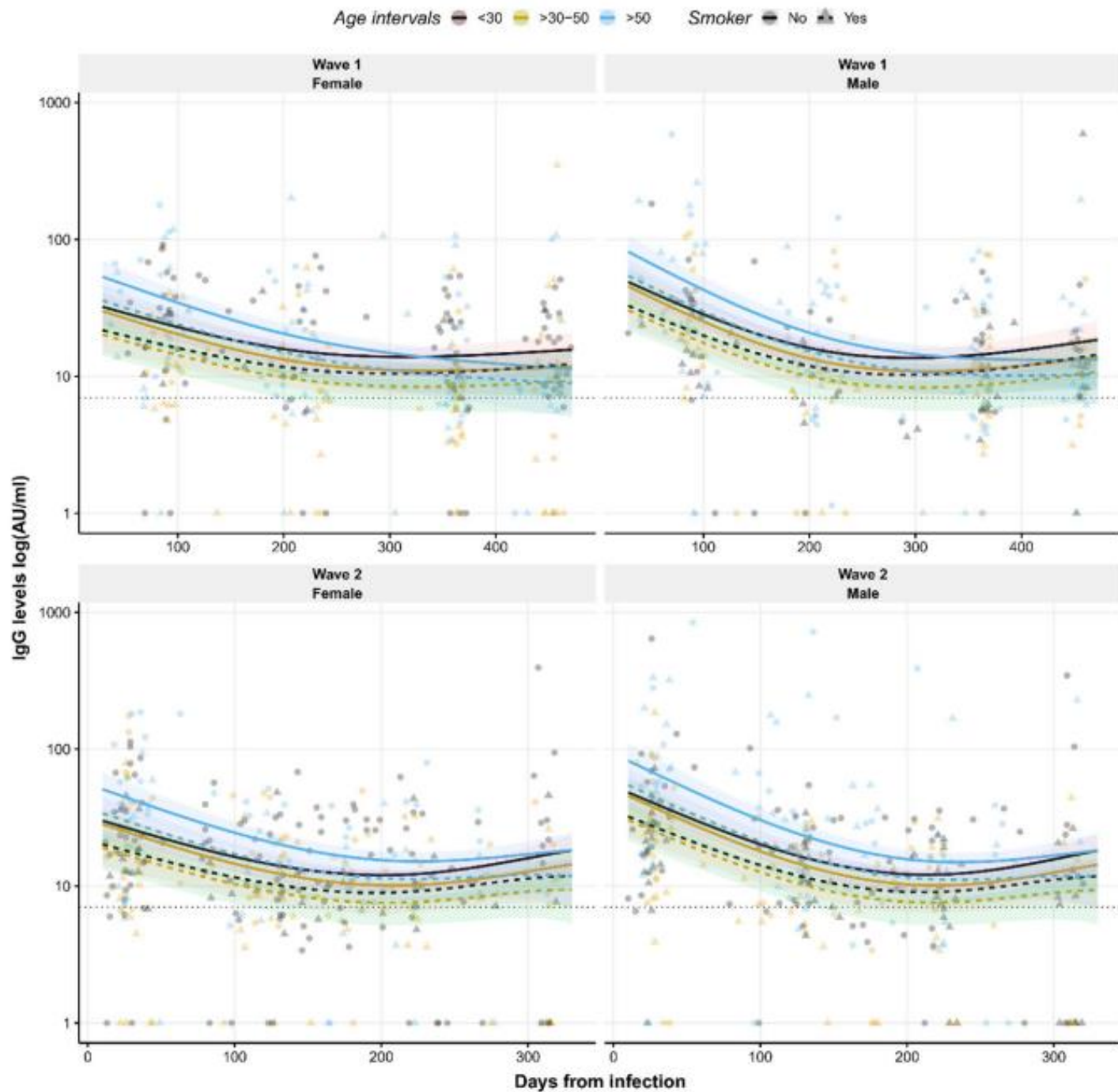
Age intervals ● <30 ● >30-50 ● >50



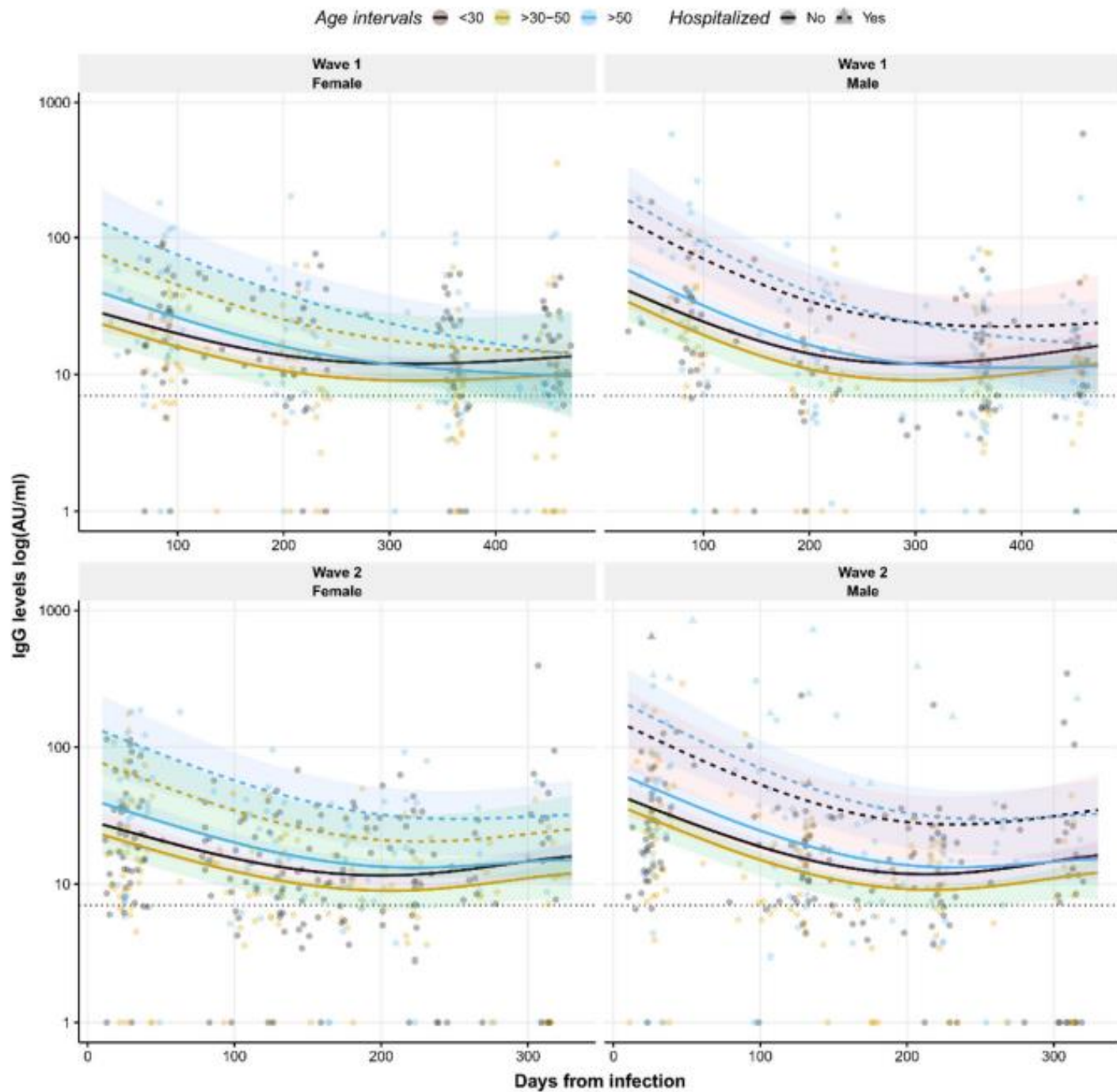
- Stórt spenn í virði av IgG

- Menn hövdu hægri virðir við byrjan, men lækkingin var skjótari

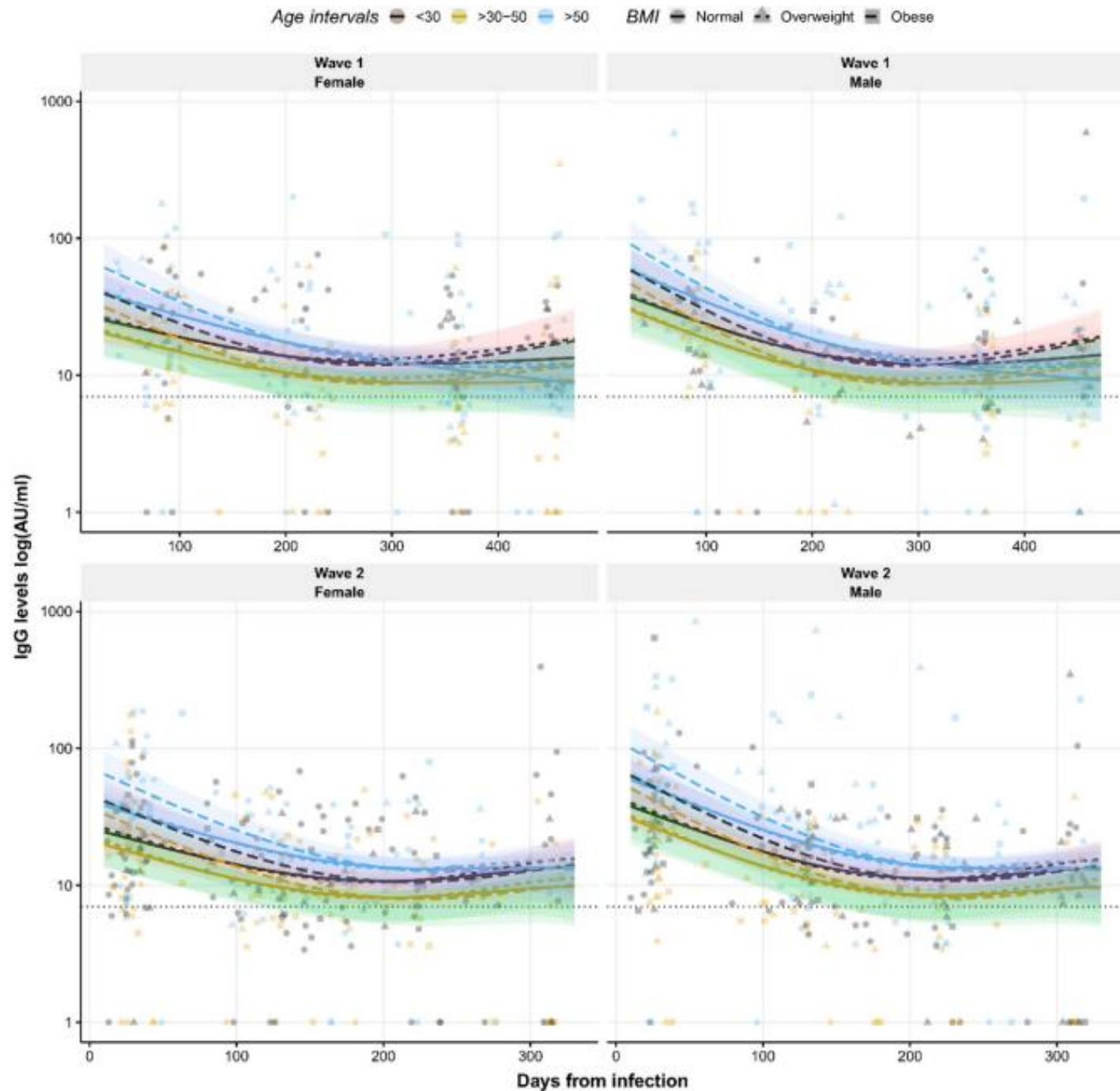
- Eldri hövdu hægri virðir við byrjan, men lækkingin var skjótari



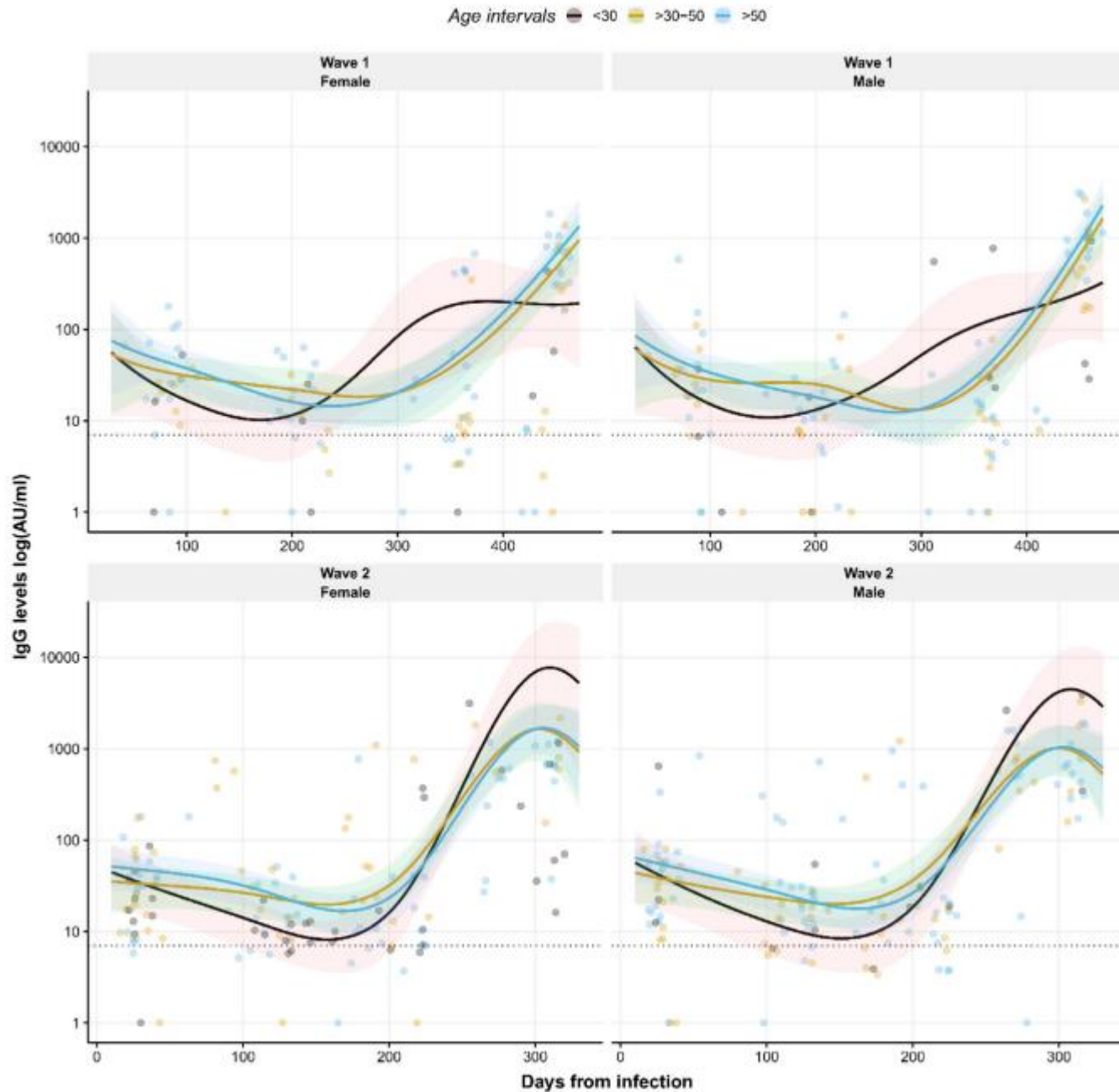
- Roykjarar hövdu lægri IgG virðir



- Tey, sum hava verið innlögð, hævdu hægri virðir



- Hjá fólki við hægri BMI lækkaði IgG skjótari



- Koppseting er sum ein boostari – hægri virðir enn eftir infektión

Antistof mængde

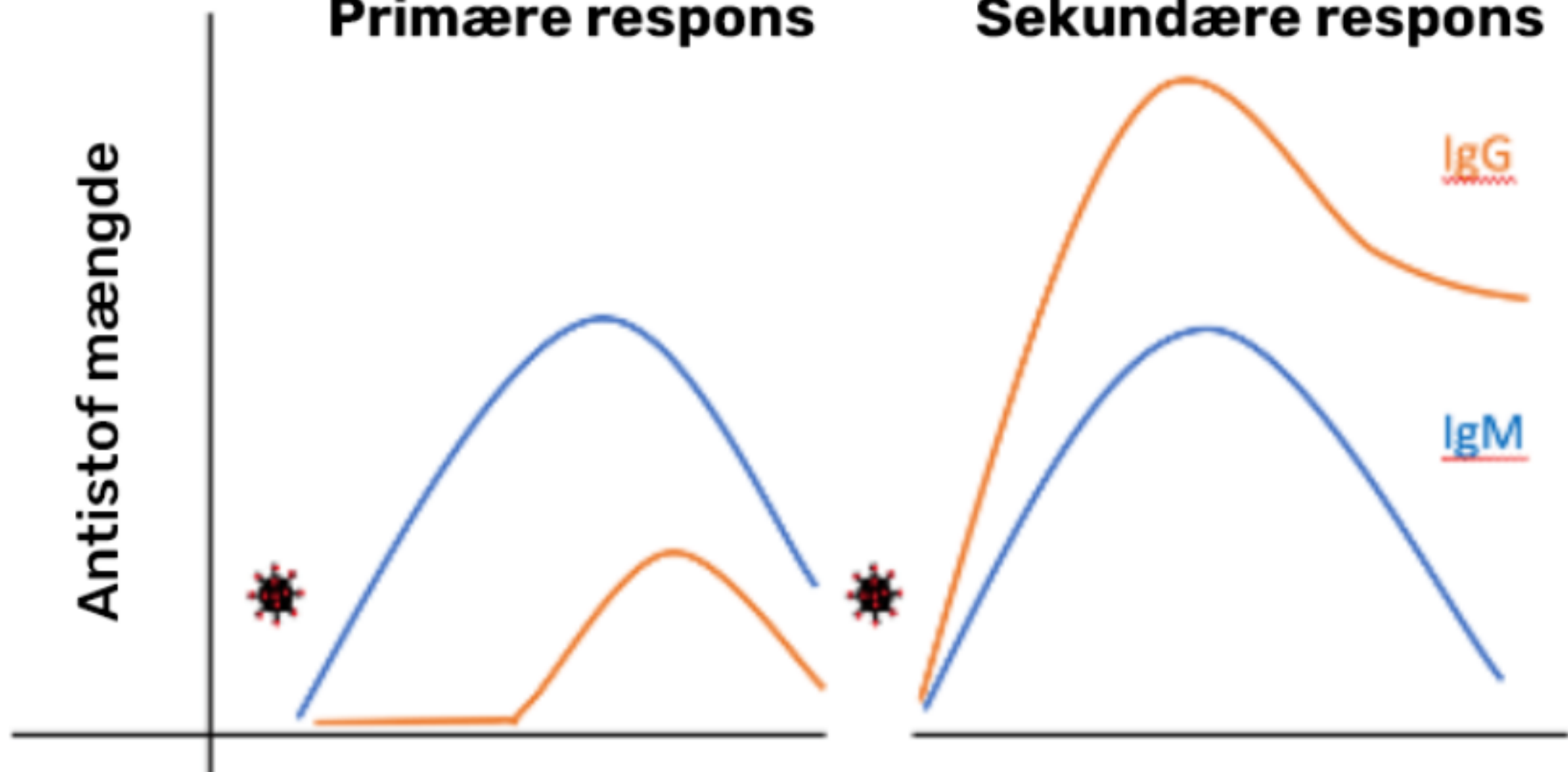
Primære respons

Sekundære respons



IgG

IgM



Niðurstøða

- Flest øll framleiða andevnir
- Eftir 15 mðr hævdu 94% enn andevnir, serliga IgG
- IgG broytist yvir tíð
 - andevnini lækka støðugt fyrstu 7 mðr. fyri síðan at vera meira støðug
- Kyn, aldur, royking og at vera innlagdur á sjúkrahúsið hevði ávirkan á IgG andevnir



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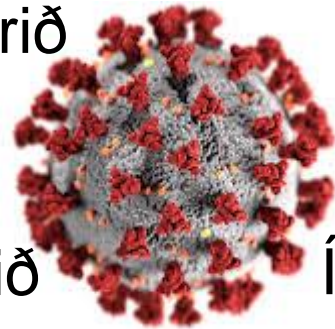
Samstarv

Depilin fyri Heilsu- og
Almannagransking

Fróðskaparsetrið

Heilsufrøðiliga
Starvsstovan

Ríkissjúkrahúsið



Landssjúkrahúsið

Ílegusavnið

Deildin fyri Arbeiðs- og
Almannaheilsu

Fígging



novo
nordisk
fonden



SP/F BORGARTÚN og SP/F KRÚNBORG



Vísinda) *vøka*