NORTHEAST
BUSINESS GROUP ON HEALTH

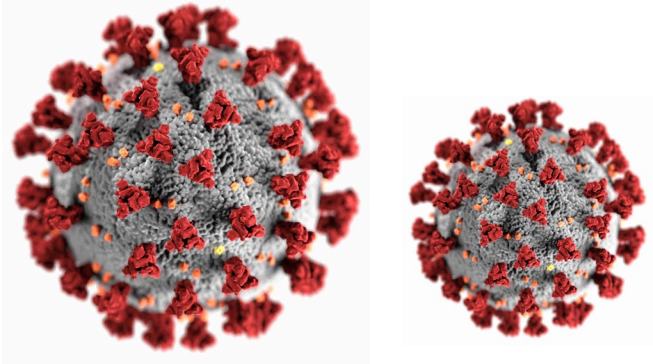
COVID-19 Update

Dr Mark Cunningham-Hill

Medical Director, NEBGH

Monday, November 29th 2021

Oo



Omicron

B.1.1.529

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HEAST
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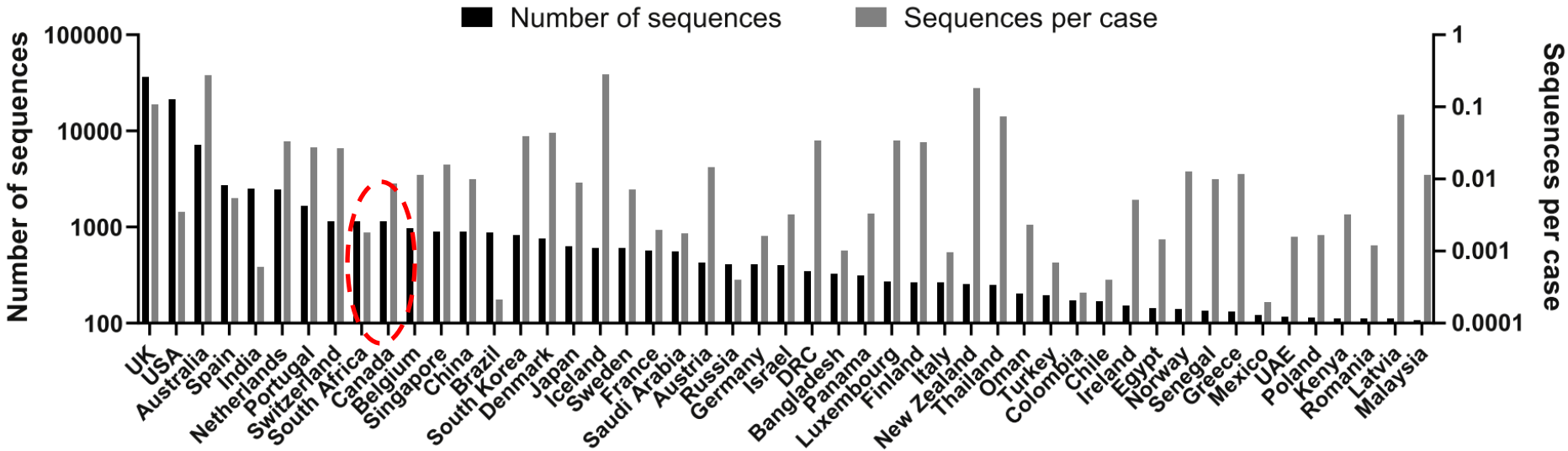
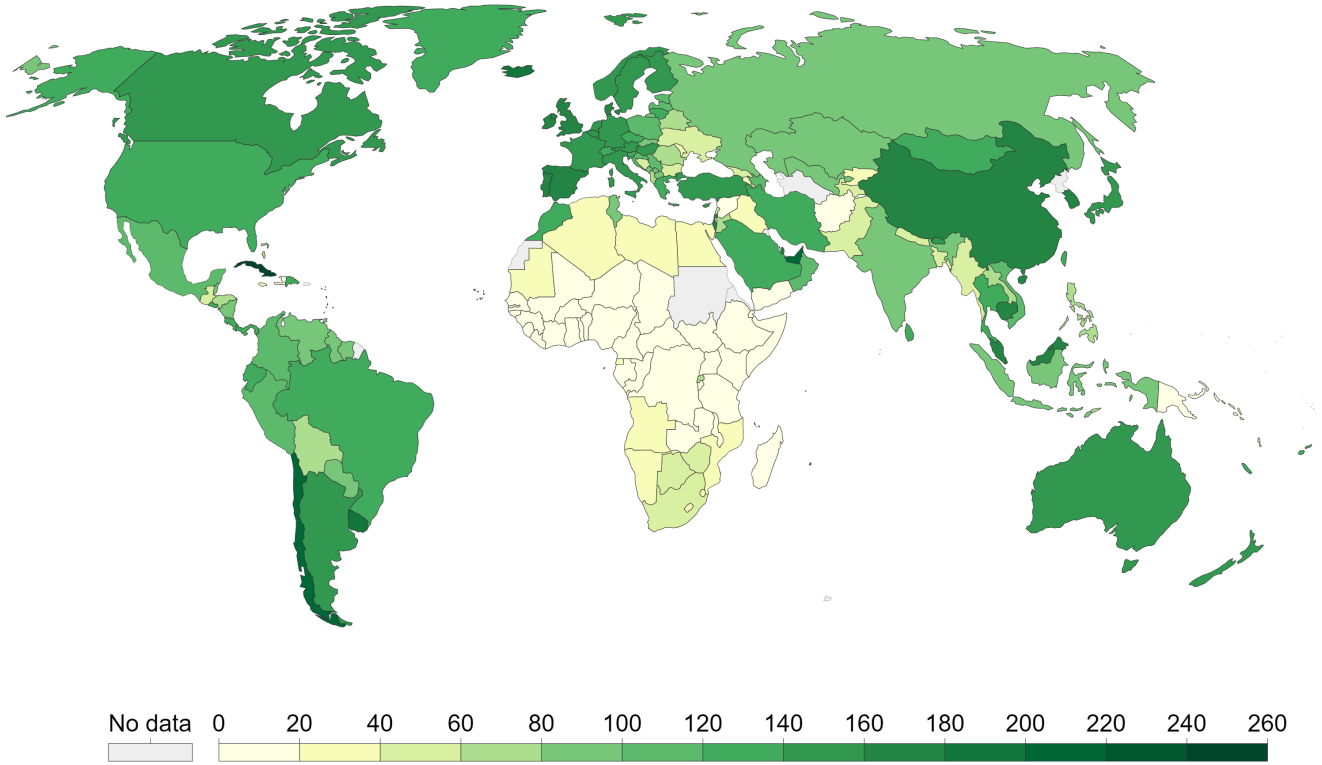

Number of sequences
Sequences per case
Number of sequences
Sequences per case
100000
10000
1000
100
1
0.1
0.01
0.001
0.0001
UK
USA
Australia
Spain
India
Netherlands
Portugal
Switzerland
South Africa
Canada
Belgium
Singapore
China
Brazil
South Korea
Denmark
Japan
Iceland
Sweden
France
Saudi Arabia
Austria
Russia
Germany
Israel
DRC
Bangladesh
Panama
Luxembourg
Finland
Italy
New Zealand
Thailand
Oman
Turkey
Colombia
Chile
Ireland
Egypt
Norway
Senegal
Greece
Mexico
UAE
Poland
Kenya
Romania
Latvia
Malaysia

COVID-19 vaccine doses administered per 100 people

All doses, including boosters, are counted individually. As the same person may receive more than one dose, the number of doses per 100 people can be higher than 100.

Our World in Data



Source: Official data collated by Our World in Data – Last updated 28 November 2021, 11:30 (London time)
OurWorldInData.org/coronavirus • CC BY

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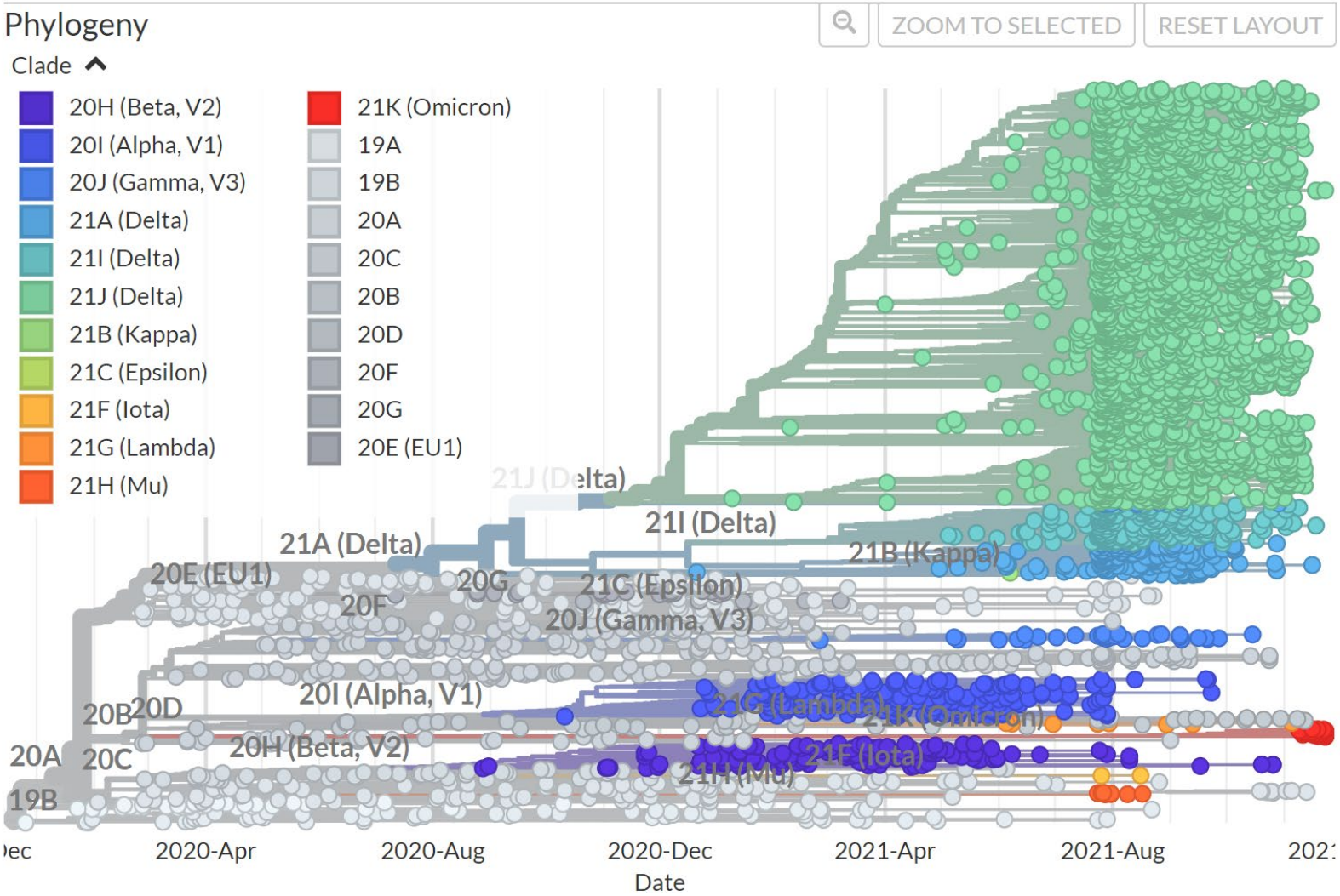
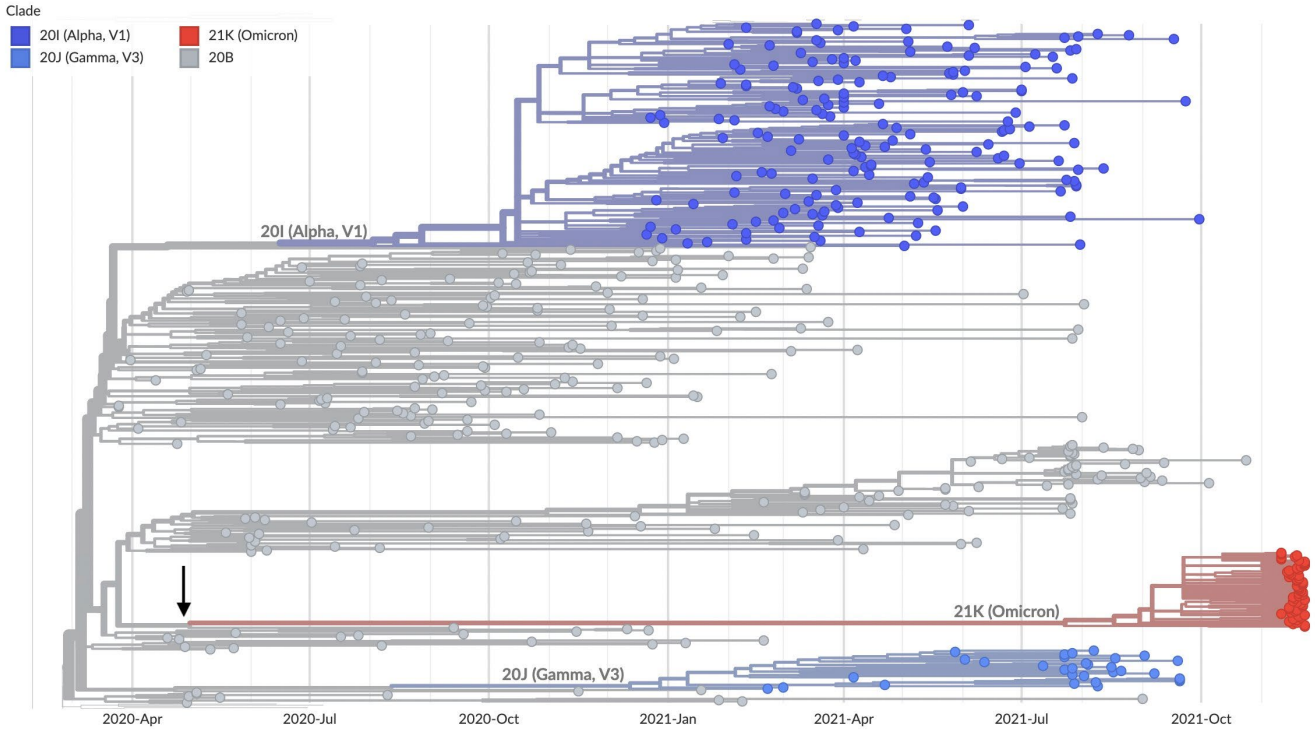

Phylogeny
ZOOM TO SELECTED
RESET LAYOUT
Clade
20H (Beta, V2)
20I (Alpha, V1)
20J (Gamma, V3)
21A (Delta)
21I (Delta)
21J (Delta)
21B (Kappa)
21C (Epsilon)
21F (Iota)
21G (Lambda)
21H (Mu)
21K (Omicron)
19A
19B
20A
20C
20B
20D
20F
20G
20E (EU1)
21J (Delta)
21I (Delta)
21A (Delta)
21B (Kappa)
20E (EU1)
20G
21C (Epsilon)
20F
20J (Gamma, V3)
20I (Alpha, V1)
20B
20D
21G (Lambda)
21K (Omicron)
20A
20C
20H (Beta, V2)
21F (Iota)
21H (Mu)
19B
2020-Apr
2020-Aug
2020-Dec
2021-Apr
2021-Aug
Date



- This extremely long branch (>1 year) indicates an extended period of circulation in a geography with poor genomic surveillance
- Or continual evolution in a chronically infected individual before spilling back into the population

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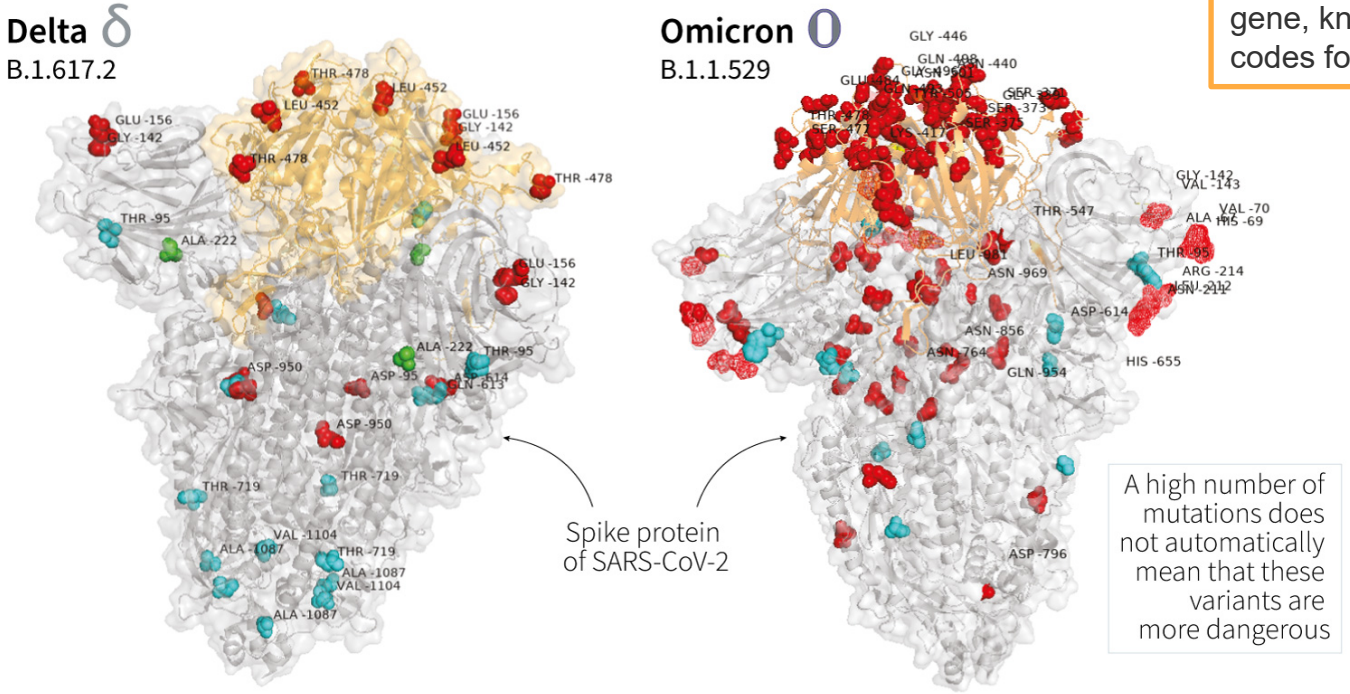
Covid-19 Delta and Omicron variants

An image of the new variant by the Bambino Gesu hospital in Rome shows a greater amount of mutations on the Omicron variant compared to the Delta variant

Areas with mutations

more than 70% | 40 to 70% | 15 to 40% | 5 to 15% | 1 to 5%

Thirty-two separate mutations are associated with just one gene, known as S, which codes for the Spike protein



E484K – immune avoidance
N501Y – increased transmissible
D614G – increased infectivity (cell binding)

Source: Bambino Gesu hospital in Rome, images of the natural tertiary structure of the spike proteins of the Delta and Omicron variants compared to the original SARS CoV-2 protein spike

AFP

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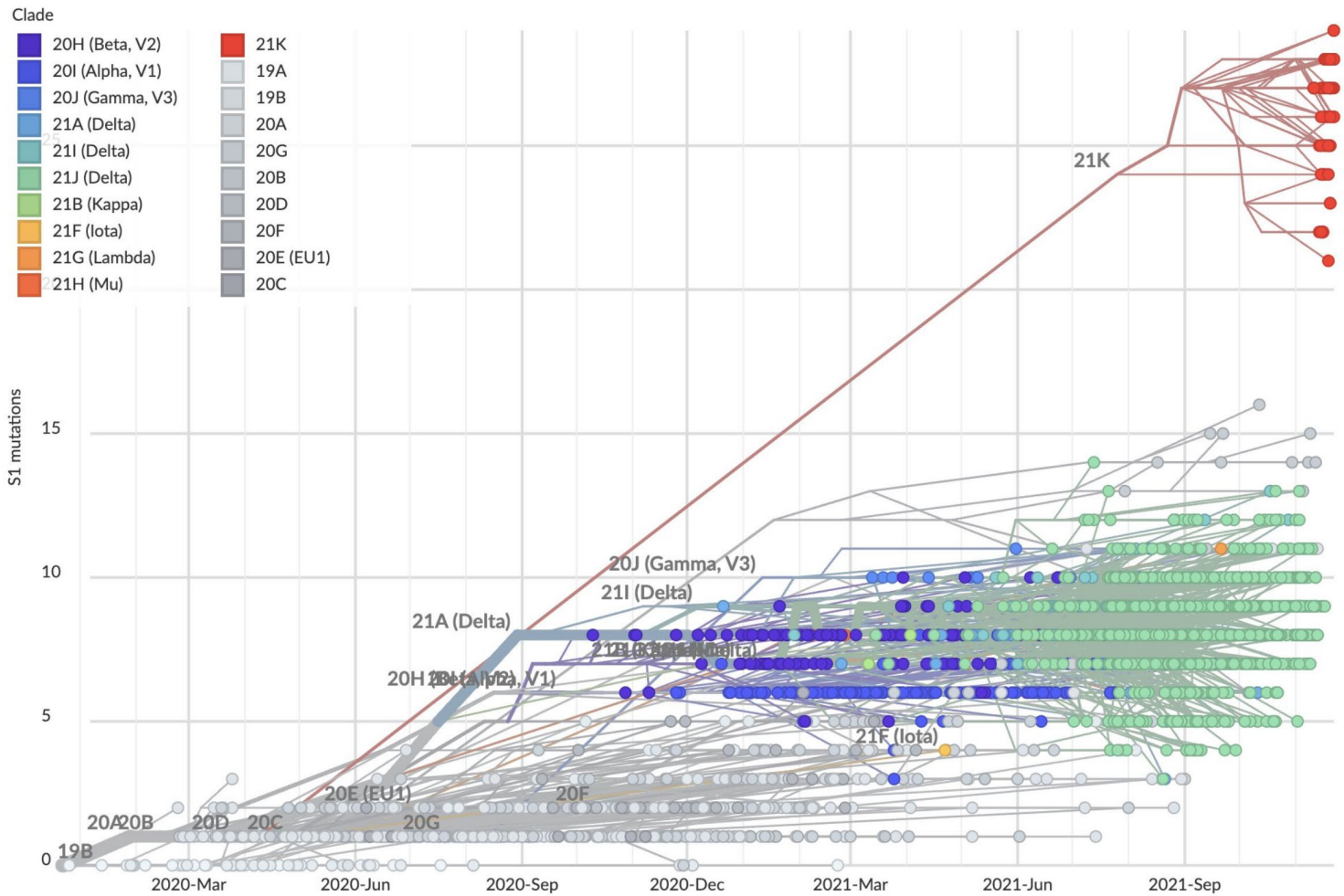
Clade
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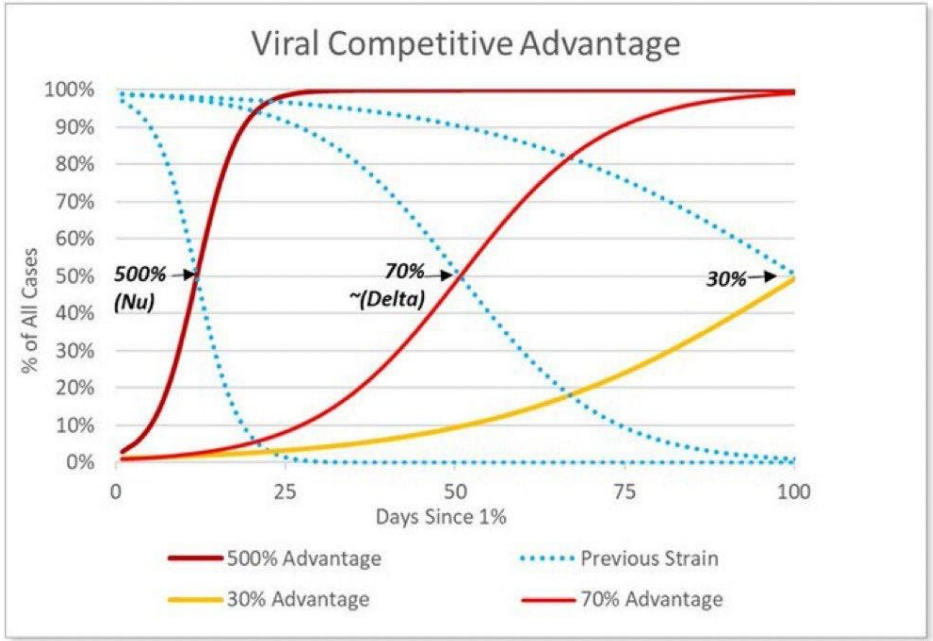
21F (Iota)
21G (Lambda)
21H (Mu)
21K
19A
19B
20A
20G
20B
20D
20F
20E (EU1)
20C
S1 mutations
0
5
10
15
2020-Mar
2020-Jun
2020-Sep
2020-Dec
2021-Mar
2021-Jun
2021-Sep
21K
20J (Gamma, V3)
21I (Delta)
21A (Delta)
21F (Iota)
20E (EU1)
20F
20A
20B
20D
20C
20G
19B

What we don't know - yet

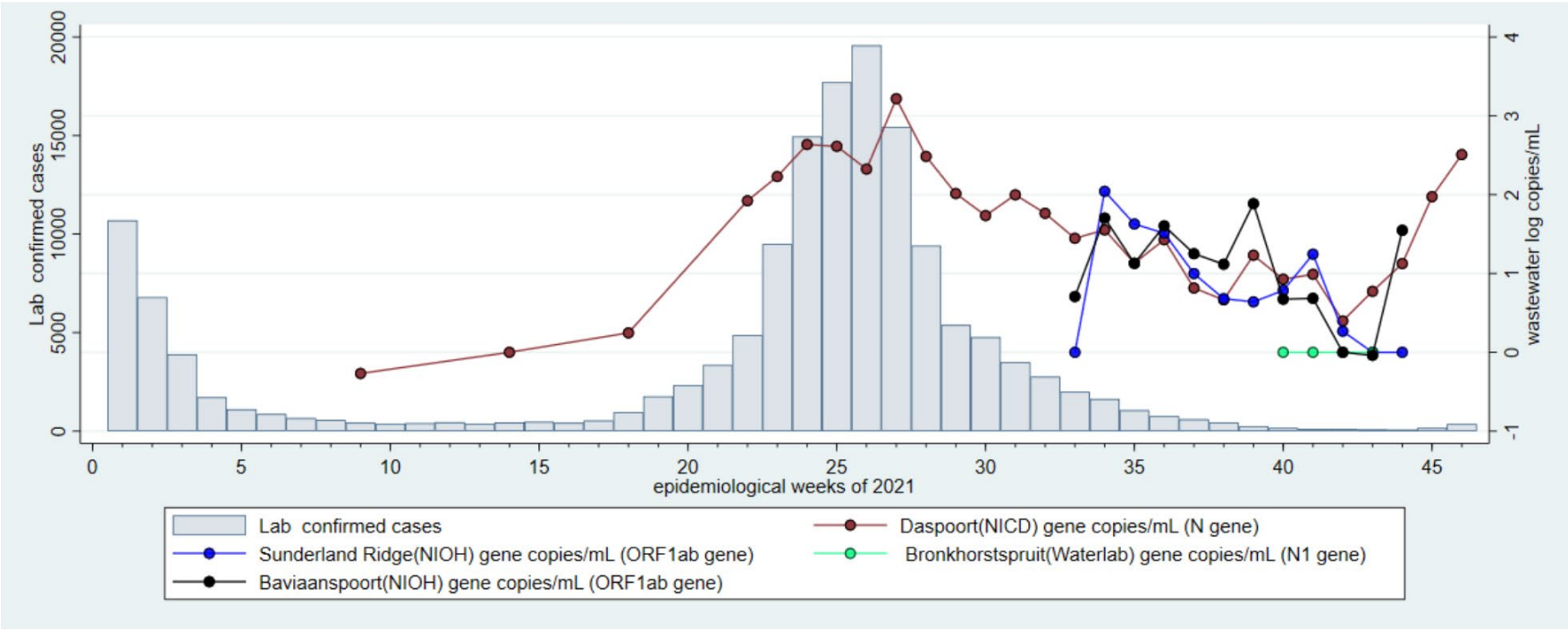
- **Transmissibility**: It is not yet clear whether Omicron is more transmissible (e.g., more easily spread from person to person) compared to other variants, including Delta.



Gauteng Province

A: City of Tshwane South (sub-districts 3, 4, 6, and 7)

A



What we don't know - yet

- **Severity of disease**: It is not yet clear whether infection with Omicron causes more severe disease compared to infections with other variants:
  - Preliminary data suggests that cases from Omicron have been mild even in unvaccinated individuals
  - However, there are increasing rates of hospitalization in South Africa, but this may be due to increasing overall numbers of people becoming infected, rather than a result of specific infection with Omicron.
  - There is currently no information to suggest that symptoms associated with Omicron are different from those from other variants.
  - Initial reported infections were among university students—younger individuals who tend to have more mild disease
  - All variants of COVID-19 can cause severe disease or death, in particular for the most vulnerable people, and thus prevention is always key.

What we don't know - yet

- **Effectiveness of prior SARS-CoV-2 infection**
  - Preliminary evidence suggests there may be an increased risk of reinfection with Omicron (ie, people who have previously had COVID-19 could become reinfected more easily with Omicron), as compared to other variants of concern, but information is limited. More information on this will become available in the coming days and weeks.

- **Effectiveness of vaccines**:
  - WHO, Researchers and Vaccine industry are working to understand the potential impact of this variant on vaccines.
  - Vaccines remain critical to reducing severe disease and death, including against the dominant circulating variant, Delta.
  - Current vaccines remain effective against severe disease and death.

- **Effectiveness of current treatments**:
  - Corticosteroids and antivirals will likely still be effective
  - Monoclonal antibodies are being assessed to see if they are still as effective given the changes to parts of the virus in the Omicron variant.

What we don't know - yet

- **Effectiveness of current tests**:
  - PCR tests continue to detect infection, including infection with Omicron
    - Causes S-gene dropout – failure to detect 1 of the 3 target genes – potential surrogate marker for Omicron
  - A nucleotide deletion at position 9 which some rapid antigens look for:
    - Studies are ongoing to determine whether there is any impact on other types of tests, including rapid antigen detection tests.

Known or suspected cases of Omicron variant (28 Nov 2021)

- Possible local transmission in Belgium and Hong Kong
- 13 out of 61 passengers arriving from S Africa in the Netherlands tested positive for Omicon

My Thoughts

- Don’t panic!
- We will know a lot more in the coming days
- Organizations:
  - Cautious approach to international travel
  - Watch and wait to see what the data on Omicron is before making any big announcements on changing ways/places of work
  - Encourage or mandate where possible vaccinations
  - Consider how boosters are included as part of the definition of ‘fully vaccinated’
  - Continue or review masking policies
  - Maintain the ventilation systems
- Individuals:
  - Get vaccinated; Get your booster
  - Wear a mask in public places, especially indoors
  - Cautious approach to international travel

Questions

Upcoming NEBGH virtual events:

- **Dec. 6 –** Monday COVID-19 Update w/ Dr. Mark
- **Dec. 9 -** Pharmacy Benefits Strategies for Now - and Later
- **Dec. 16 –** 27th Annual Tribute to Leadership