

Genetic diversity of the novel coronavirus SARS-CoV-2 (COVID-19) in Portugal

More information at <https://insaflu.insa.pt/covid19>



Situation Report

September 20th, 2022

The National Institute of Health Doutor Ricardo Jorge, I.P. (INSA) has analysed **41685** SARS-CoV-2 genome sequences so far.

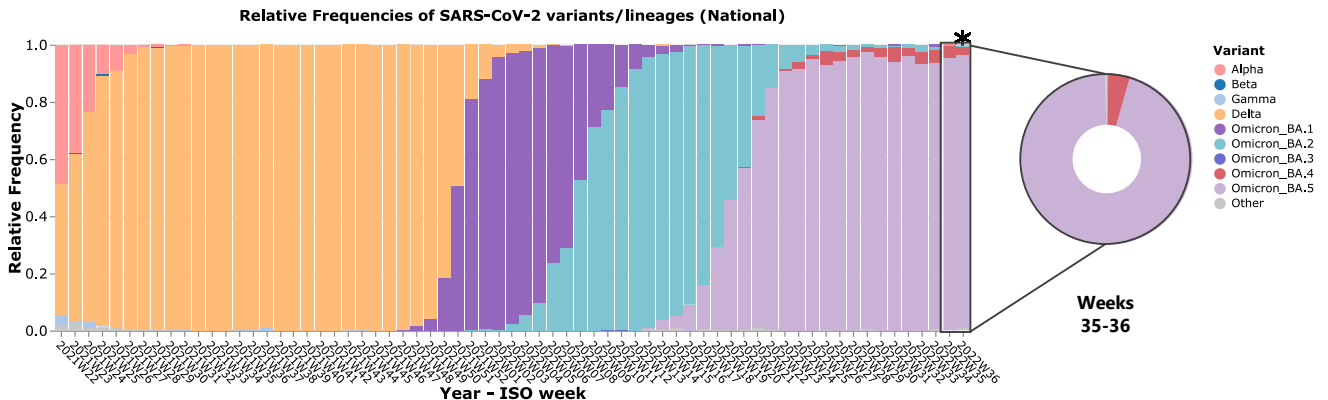


Figure 1: Evolution of the weekly relative frequency of the SARS-CoV-2 variants circulating in Portugal between ISO weeks 22 (31/05/21 - 06/06/21) and 36 (05/09/22 - 11/09/22). The frequencies presented for the last week under analysis (ISO week 36*) might change in the next report, given that some data from that period is still being processed. *This and other graphs can be explored interactively on the website.*

Main highlights

- **Lineage BA.5 of the variant Omicron** (including its multiple sub-lineages) is **dominant in Portugal** since week 19 (09/05/22 - 15/05/22) and presents a **relative frequency of 95.4%** according to the most recent national sequencing survey on week 36 (05/09/22 - 11/09/22).
- **Lineage BA.4 of the variant Omicron** has revealed a **stable relative frequency** in the latest sequencing surveys, representing **4.1%** of the sequences analysed in weeks 35 and 36.
- **Lineage BA.2 of the variant Omicron** was **dominant in Portugal between weeks 8 (21/02/22 - 27/02/22) and 19 (09/05/22 - 15/05/22)**. Since then, its relative frequency decreased continuously, representing **0.3%** of the sequences in weeks 35 and 36.
- On behalf of the continuous monitoring of the introduction and circulation of (new) SARS-CoV-2 (sub-)lineages in Portugal, **we have been observing the emergence of some mutations of interest**, namely mutations potentially associated with resistance to neutralizing antibodies. Among these, we highlight an additional **mutation in position 346 of Spike protein, which has already been detected in several sub-lineages of BA.2** (e.g., BA.2.75.2), **BA.4** (e.g., BA.4.6) and **BA.5** (e.g., BF.7), some of them showing considerable circulation in some countries. In Portugal, we highlight the circulation of **BF.7 and BA.4.6** sub-lineages, both with an **increasing trend in its relative frequency**, with values of **~4% and ~2%**, respectively, in the period of weeks 35 and 36.

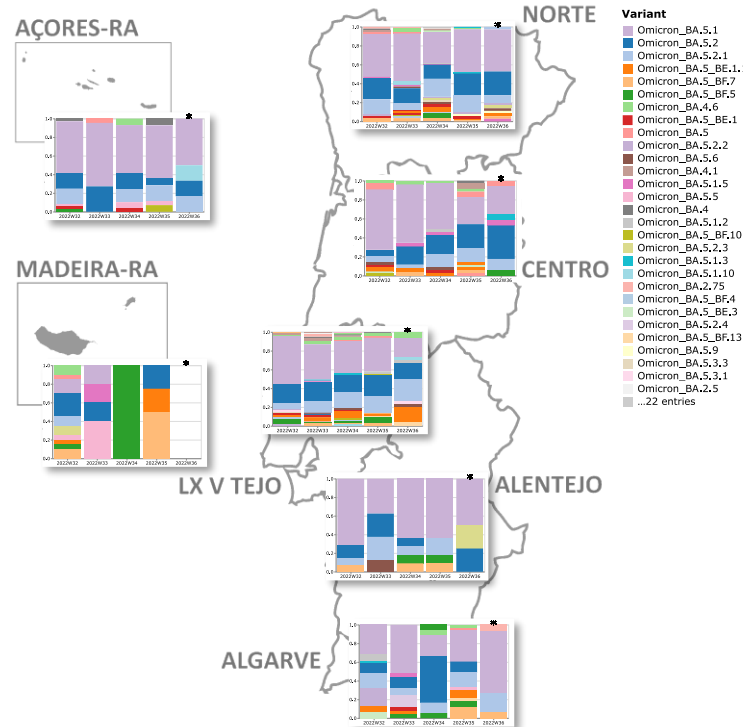


Figure 2: Evolution of the weekly relative frequency of SARS-CoV-2 lineages in each Health Region, between ISO weeks 32 (08/08/22 - 14/08/22) and 36 (05/09/22 - 11/09/22). Regional relative frequencies must be interpreted with caution due to the low number of samples in some of the regions. *It is expected that the frequencies presented for the last week under analysis (ISO week 36*) might change in the next report, given that some data from that period is still being processed. These and other graphs can be explored interactively on the website.*

Autorship

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Useful links

<https://www.ecdc.europa.eu/en/covid-19/situation-updates/variants-dashboard>
<https://www.who.int/activities/tracking-sars-cov-2-variants>
<https://covid-lineages.org/lineage-list.html>
<https://outbreak.info/>
<https://www.gisaid.org/>