

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

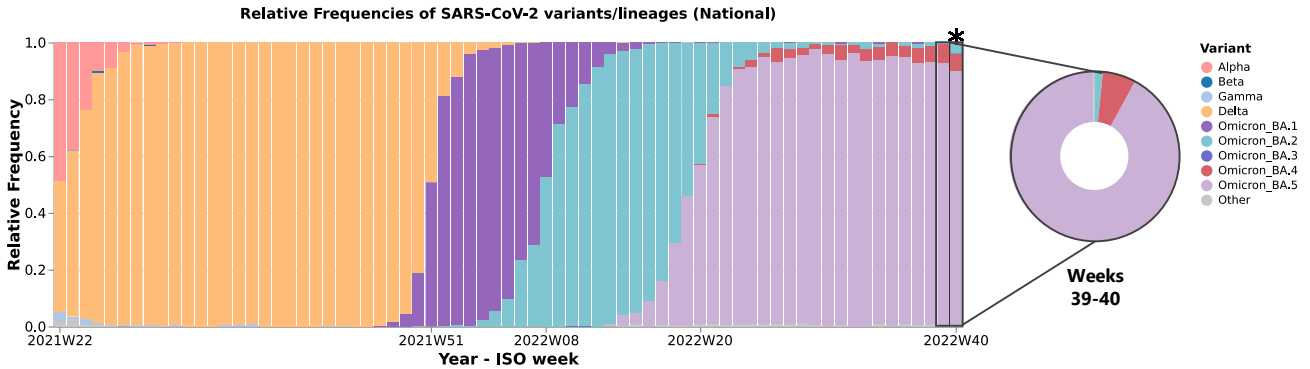
More information at <https://insaflu.insa.pt/covid19>



## Situation Report

October 18<sup>th</sup>, 2022

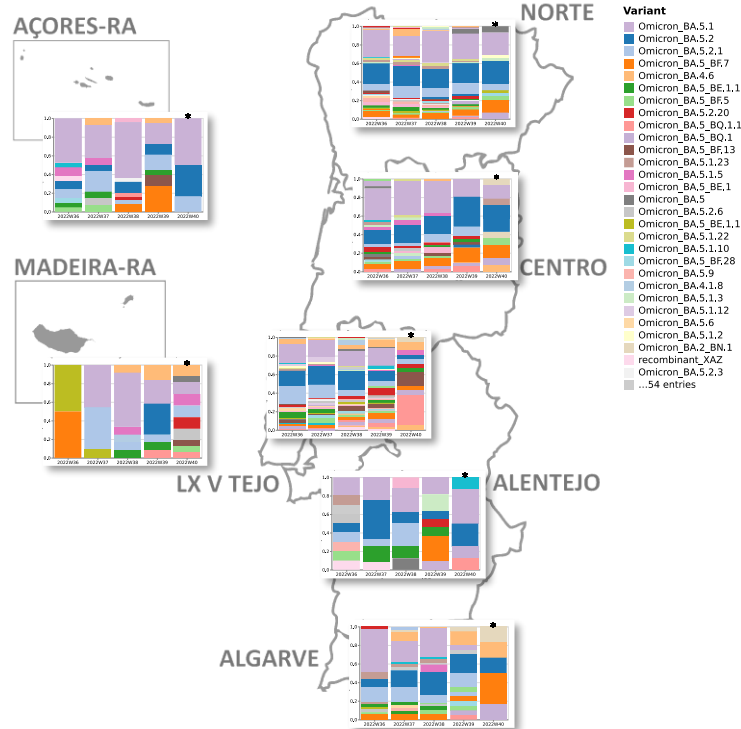
The National Institute of Health Doutor Ricardo Jorge, I.P. (INSA) has analysed **42781** SARS-CoV-2 genome sequences so far.



**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 40 (03/10/22 - 09/10/22).** The frequencies presented for the last week under analysis (ISO week 40\*) 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 90.0%** according to the most recent national sequencing survey on week 40 (03/10/22 - 09/10/22).
- Lineage **BA.4** of the variant **Omicron** has slightly increased its **relative frequency** in the latest sequencing surveys, **representing 6.3%** of the sequences analysed in weeks 39 and 40.
- 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 **1.6%** of the sequences in weeks 39 and 40.
- 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 and BQ.1.1), some of them showing considerable increase of circulation in some countries. In Portugal, we highlight **the recent increase of the relative frequencies of BF.7 and BQ.1.1 sub-lineages**, with values of **9.0% and 4.9%**, respectively, in the period of weeks 39 and 40 (in comparison with 4.5% and 0.4% registered in the period of weeks 37 and 38).



**Figure 2: Evolution of the weekly relative frequency of SARS-CoV-2 lineages in each Health Region, between ISO weeks 36 (05/09/22 - 11/09/22) and 40 (03/10/22 - 09/10/22).** 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 40\*) 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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### Recommended citation

National Institute of Health (INSA) Doutor Ricardo Jorge. Genetic diversity of the novel coronavirus SARS-CoV-2 (COVID-19) in Portugal. Lisbon, Portugal INSA; 2022. Available at: <https://insaflu.insa.pt/covid19>

### 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://cov-lineages.org/lineage\\_list.html](https://cov-lineages.org/lineage_list.html)  
<https://outbreak.info/>  
<https://www.gisaid.org/>