

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

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



Situation Report

April 9th, 2024

The National Institute of Health Doutor Ricardo Jorge, I.P. (INSA) has analysed **49186** SARS-CoV-2 genome sequences so far.

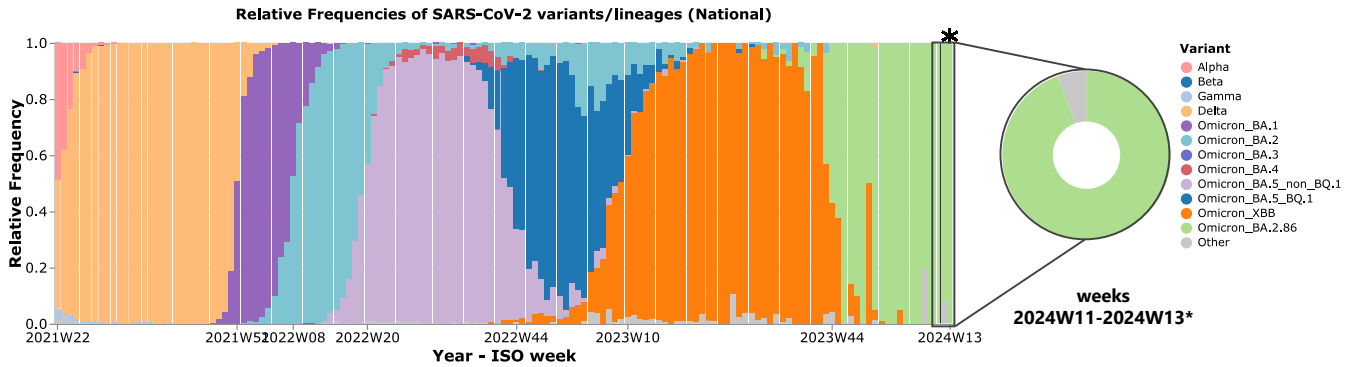


Figure 1: Evolution of the weekly relative frequency of the SARS-CoV-2 variants circulating in Portugal between ISO weeks 22/2021 (31/05/21 - 06/06/21) and 09/2024 (25/03/24 a 31/03/24), with emphasis on the latest weeks. *The interpretation of the presented relative frequencies during this period (ISO weeks 11/2024 to 13/2024) should take into account the current low sampling. *This and other graphs can be explored interactively on the website.*

Main highlights

- The **XBB lineage** (and its descendants) **was dominant in Portugal, from week 10 of 2023 up to week 43 (Figure 1)**, presenting a decreasing trend since then. In the latest survey (weeks 11/2024 to 13/2024), no sequences of this lineage were detected (Figure 2).
- The **BA.2 lineage** was dominant in Portugal in the first months of 2022, having maintained a discreet circulation since then, until the emergence of its **sub-lineage BA.2.86**. This sub-lineage **is dominant in Portugal since week 44 of 2023**, with a **relative frequency of 94.4%** in the latest sampling between weeks 11/2024 and 13/2024 (Figure 2). Its sub-lineage JN.1 and descendants are predominantly circulating in Portugal (Figure 2).
- In the latest sampling (weeks 07/2024 to 09/2024), no new sequences of the **recombinant lineage XDS** were detected (Figure 2).
- All lineages detected in this latest sampling exhibit a similar mutational profile in the Spike protein ("BA.2.86-like"), which is considerably divergent from the former dominant main lineage (XBB). This profile endows them a higher potential for immune system evasion and, potentially, increased transmissibility.

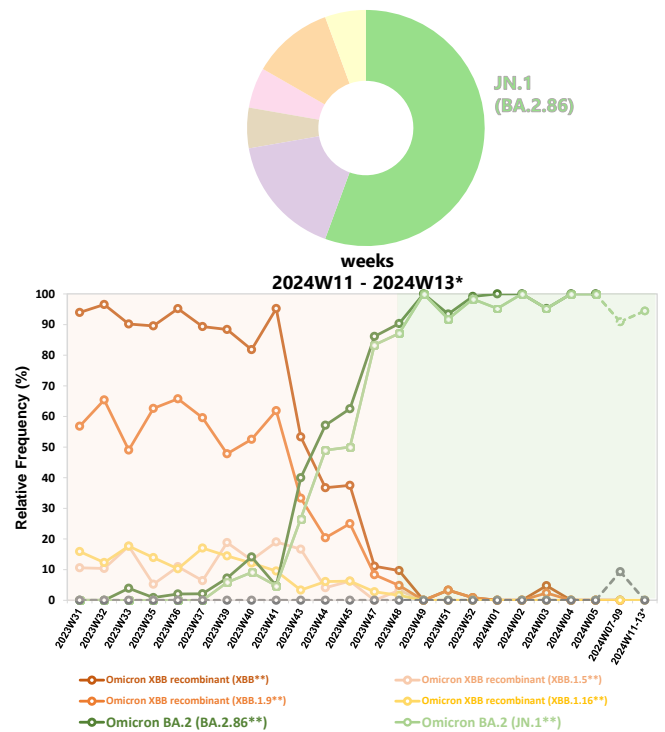


Figure 2: Evolution of the relative frequency of some sub-lineages of interest circulating in Portugal. The circular graph shows the distribution of the relative frequencies of SARS-CoV-2 sub-lineages in the period of ISO weeks 11/2024 and 13/2024 (11/03/24 - 31/03/24). The evolution of XBB, XBB.1.5, XBB.1.9, XBB.1.16, BA.2.86, JN.1 and XDS relative frequencies during the last weeks is shown in the line plot. *The interpretation of the presented relative frequency during this period (ISO weeks 11/2024 to 13/2024) should take into account the current low sampling. ** The presented relative frequencies correspond to the sub-lineages and their descendants. *Other graphs can be explored interactively on the website.*

Autorship

Genomics and Bioinformatics Unit
Department of Infectious Diseases
NATIONAL INSTITUTE OF HEALTH DOUTOR RICARDO JORGE
Avenida Padre Cruz, 1649-016 Lisboa, PORTUGAL

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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://cov-lineages.org/lineage_list.html
<https://outbreak.info/>
<https://www.gisaid.org/>