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

More information at **https://insaflu.insa.pt/covid19**

Situation Report

October 8th, 2024

The National Institute of Health Doutor Ricardo Jorge, I.P. (INSA) has analysed **50421** SARS-CoV-2 genome sequences so far.

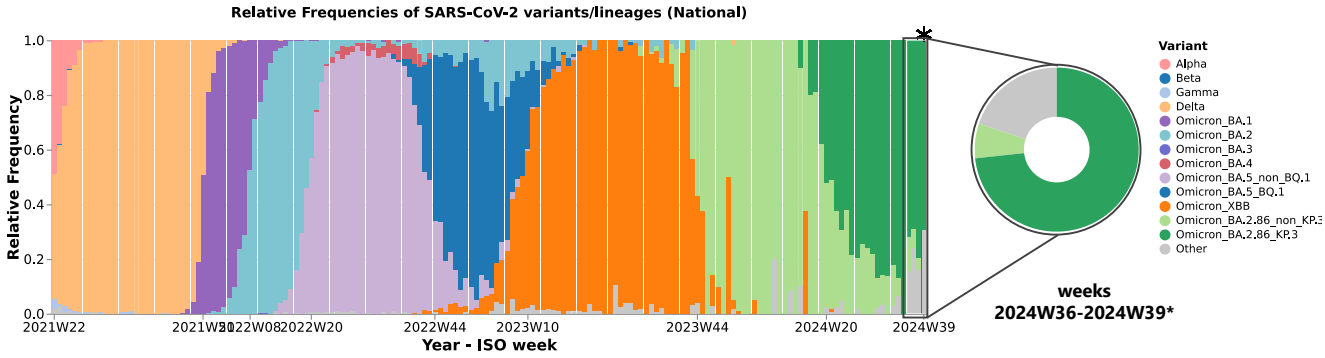


Figure 1: **Evolution of the weekly relative frequency of the SARS-CoV-2 variants circulating in Portugal between ISO weeks 22/2021 (31/05/21 - 06/06/21) and 39/2024 (23/09/24 – 29/09/24),** with emphasis on the latest weeks. *The presented relative frequencies refer to the period of ISO weeks 36/2024 to 39/2024. ***This and other graphs can be explored interactively on the website.***

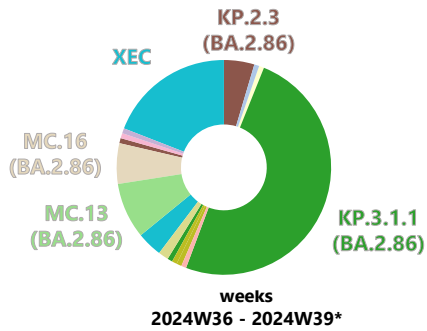
Main highlights

- The **lineage BA.2.86** of the Omicron variant has been **dominant in Portugal since week 44 of 2023**, following its first detection in week 33/2023. In the most recent nationwide sampling, covering the period between weeks 36/2024 and 39/2024, the BA.2.86 lineage showed a **declining trend**, with a **relative frequency of 80.15%** (Figure 1).

- The KP.3 sub-lineage and descendants are predominantly circulating in Portugal (Figure 1). Among these, the **KP.3.1.1 sub-lineage** stands out, also showing a decreasing trend in relative frequency, representing **49.6%** of the sequences analyzed between weeks 36/2024 and 39/2024. The KP.3 sub-lineage is included in the ECDC's list of variants of interest (https://www.ecdc.europa.eu/en/covid-19/variants-concern) (Figure 2).

- The **recombinant XEC lineage**, recently added to the ECDC's variants under monitoring list, was first detected in Portugal in week 31/2024 (Figure 2). In the latest sampling (weeks 36/2024 to 39/2024), it showed an **increasing trend in relative frequency**, accounting for **19.1%** of the sequences analyzed. Simultaneously, this lineage has been detected in several countries, with a **growing trend globally**.

Technical note: The recombinant lineage XEC resulted from the recombination between two BA.2.86 sublineages (KS.1.1 and KP.3.3). For better monitoring and interpretation of this report, XEC is presented independently from its ancestral lineage BA.2.86.



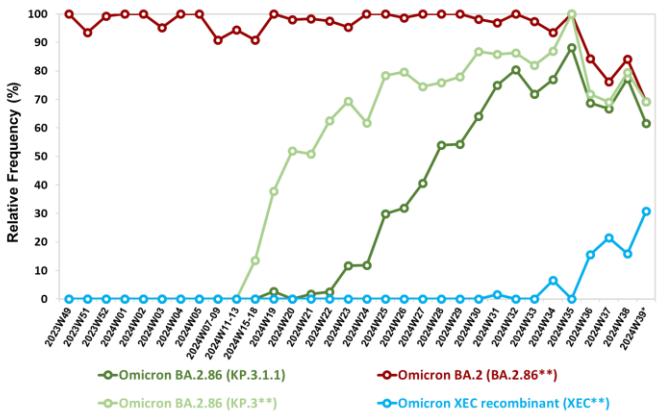


Figure 2: **Evolution of the relative frequency of some sub-lineages of interest circulating in Portugal.** The circular graph shows the distribution of the relative frequencies of SARS-CoV-2 sub-lineages in the period of ISO weeks 36/2024 and 39/2024 (02/09/24 – 29/09/24) **highlighting the most frequent sub-lineages in this period.** The evolution of relative frequencies of BA.2.86 (highlighting KP.3 and KP.3.1.1) and the recombinant lineage XEC during the last weeks is shown in the line plot. *The presented relative frequencies correspond to the sub-lineages and their descendants. ***Other graphs can be explored interactively on the website.***

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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/

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