



Updates on National SARS-CoV genomic surveillance program

Omicron: new SARS-CoV-2 variant of concern

On 24 November 2021, South Africa notified the World Health Organization (WHO) of the presence of a new SARS-CoV-2 lineage: B.1.1.529. After a rapid assessment of the situation, the WHO designated it as a new variant of concern (VOC): Omicron^a.

Due to the emergence of the new Omicron variant, as well as the high incidence rates in the European context, the LNS had implemented an enhanced surveillance strategy to identify any new cases of Omicron in alignment with the updated ECDC guidelines

The strategy entails two phases of detection

- i) The genomic and molecular microbiology unit (LUX-GEMM) at LNS will introduced large-scale screening strategy using RT-PCR of all positive samples referred to the national reference laboratory for acute respiratory infection in real-time to allow early identification of suspicious Omicron variants (within 24h of reception). The system is currently upscaled to accommodate 2000 samples/week with plan for further expansion if the need arise in the coming weeks. Any probable case detected by RT-PCR will be confirmed by sequencing as recommended by ECDC
- ii) The LUX-GEMM will continue the recommended sequencing strategy for a representative sample as we increased our capacity to 1000 samples/ week and currently exploring expansion option if the needs arise in the coming week (889 specimens sequenced last week).

^a Two letters in the Greek alphabet were skipped, Nu (too similar to the English word “new”) and Xi (a common Chinese surname), following the WHO Best Practices for the Naming of New Human Infectious Diseases. ⁹

In addition to the representative samples that we sequence weekly and publish the results via [Respiratory Viruses Surveillance - Revilux - LNS](#), we will add a flash sequencing path from any unusual transmission events (e.g., increased transmission despite interventions in place), unexpected disease presentation/ severity, vaccine breakthrough reinfections, severely ill patients, and patients with known epidemiologic links to settings of Omicron transmission.

The epidemiological intelligence unit will continue its collaboration with neighboring countries and international public health organizations (e.g. ECDC and WHO) to ensure the timely reporting of genomic data to the public domain and inform any public health actions to ensure appropriate clinical care and support and to carry out contact tracing to break chains of transmission.

The situation in Luxembourg

There is no evidence of Omicron cases circulating in Luxembourg, as of 8th December 2021 (10 am).

Following media reports on the detection of the first case of Omicron SARS-CoV-2 in Luxembourg, the LNS would like to make some clarifications on false reporting of the first case of Omicron in Luxembourg as Direction of Health, Inspection sanitaire and LNS had been in direct contact with our Belgian counterparts and ECDC team to clarify this report once published on 04/12/2021 :

- The sample in question was reported to GISAID, a global platform for sharing genomic data, by Belgian laboratory of a patient tested in the Brussels region on 24/11/2021.
- The case is a Luxembourgish expatriate studying in Brussels with the registered address in the data base in Luxembourg, hence the confusion in reporting via GISAID. The case reported having had contact with positive cases in their occupational environment and being isolated in Brussels
- The patient is currently isolated in Belgium and had did not travel to Luxembourg during the weeks before infection.

The confusion about the case report had been resolved with ECDC and corrective action are in place for the GISAID data and total Omicron cases identified in Europe as published by ECDC have been reported by 19 countries in the EU/EEA: Austria (15), Belgium (11), Croatia (3), Czechia (1), Denmark (73), Finland (7), France (25), Germany (15), Greece (3), Iceland (12), Ireland (1), Italy (9), Latvia (2), the Netherlands (24), Norway (19), Portugal (34), Romania (2), Spain (7), and Sweden (11) according to information from public sources. One new EU/EEA country (Croatia) has reported the Omicron variant, and a number of probable cases are currently under investigation in several countries

[Epidemiological update: Omicron variant of concern \(VOC\) – data as of 7 December 2021 \(12.00\) \(europa.eu\)](#)