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Geneva, September 21, 2022

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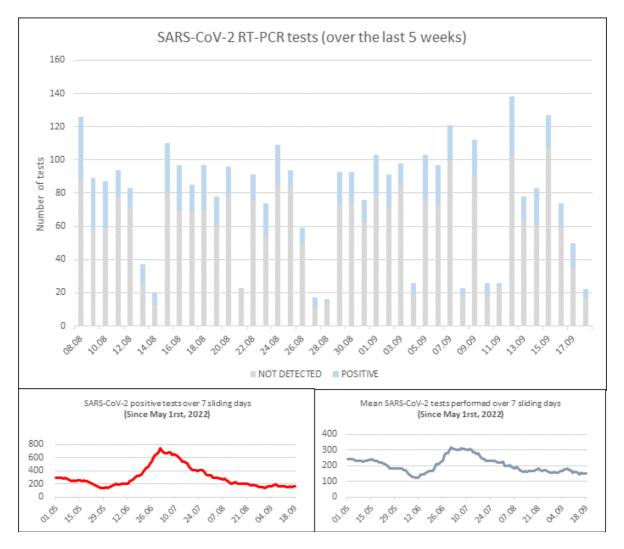
**Diagnostic Department** 

## SARS-CoV-2 genomic surveillance in Geneva: bi-weekly update

## **Highlights:**

- The total number of positive tests and the overall positivity rate are globally stable since beginning of September, 2022 (Figure 1).
- S-Drop out screening (week 37): 2 out of 76 (2.6%) specimens did not display the S-gene target failure, possibly indicating the presence of the BA.2.75 variant (sequencing confirmation pending). Of note, these 76 specimens represent all the samples tested during this period with a Ct value ≤32.

**Figure 1:** Number of SARS-CoV-2 tests performed at the HUG laboratory of virology (per day). Positive tests are displayed in light blue (top). Bottom left: SARS-CoV-2 positive tests over 7 sliding days. Bottom right: mean SARS-CoV-2 tests performed over 7 sliding days.



Due to a technical problem, no new sequencing data is available. The analysis will be repeated and aggregated in the next report.

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## The laboratory of virology of the Geneva University Hospitals as a sentinel site for the Geneva area

The number of tests (PCR and antigen tests) performed at the Geneva University Hospitals represented around 42% (1111/2674) and 34% (1033/3004) of the total number of tests performed in the canton of Geneva during weeks 36 and 37 of 2022, respectively. Roughly 32% and 27% of the positive specimens collected in the Geneva area were processed at HUG during weeks 36 and 37 (160/498 and 163/610), respectively. Samples collected from symptomatic individuals at our outpatient testing center are tested by RT-PCR. Specimens analyzed in our laboratory originate from ambulatory and hospitalized patients as well as symptomatic and/or asymptomatic health care workers.

The number of positive tests in the canton and the total number of tests done during the surveilled weeks are available on the website from Federal Office of Public Health (COVID- 19 Suisse | Coronavirus | Dashboard (admin.ch)). During weeks 36 and 37 in the canton of Geneva, the number of RT-PCR tests continued to decrease compared to the two previous weeks. The number of confirmed cases decreased in comparison to the past 2 weeks and the proportion of positive tests was between 20 and 30%.

## Methods and collaborations

The laboratory has reintroduced from week 37 the screening for the "S Drop out" (Taqpath RT-PCR assay) in order to monitor BA.2.75.

WGS is carried out in close collaboration with the Health 2030 Genome Center in Geneva and Philippe Le Mercier from the Swiss Institute of Bioinformatics. The national genomic surveillance program is ongoing in Switzerland since March 1, 2021 and includes specimens collected at HUG with a Ct-value ≤32. In some instances, sequencing can be done on specimens sent by other laboratories in Switzerland within the surveillance program or by request of the cantonal physician team. Phylogenetic analysis data are produced by Nextstrain, in collaboration with Richard Neher's group at the University of Basel and analyzed by Emma Hodcroft, from the Geneva Center of Emerging Viral Diseases and University of Geneva. In addition, partial Sanger sequencing may be done by our laboratory.

Geographic distribution, transmission advantage estimates and detailed numbers of available sequences over time in the canton of Geneva are available on the CoVSpectrum platform, run by Tanja Stadler's group at ETH Zurich.

These reports are produced in collaboration with the Geneva Cantonal Physician team, which provides information on epidemiological links. For epidemiological data, please refer to the report of the cantonal physician team.