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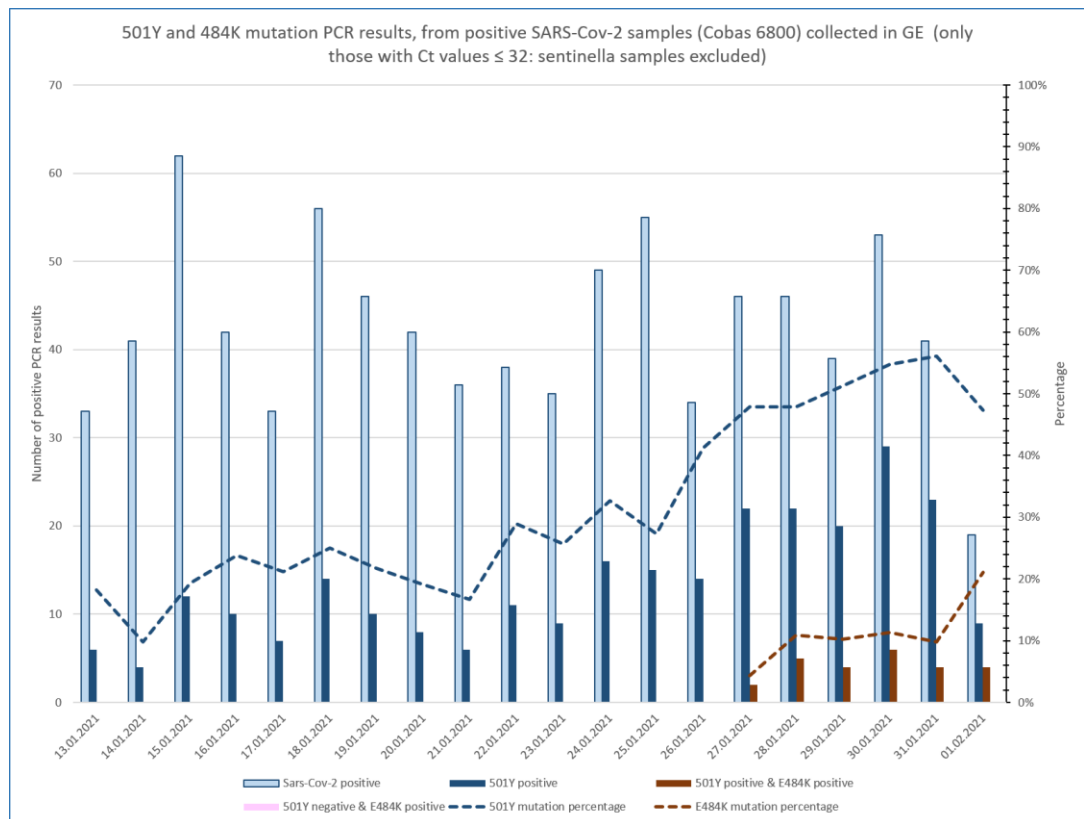
Diagnostic Department

SARS-CoV-2 variants: follow-up of previous updates in Geneva

SARS-CoV-2 testing at HUG

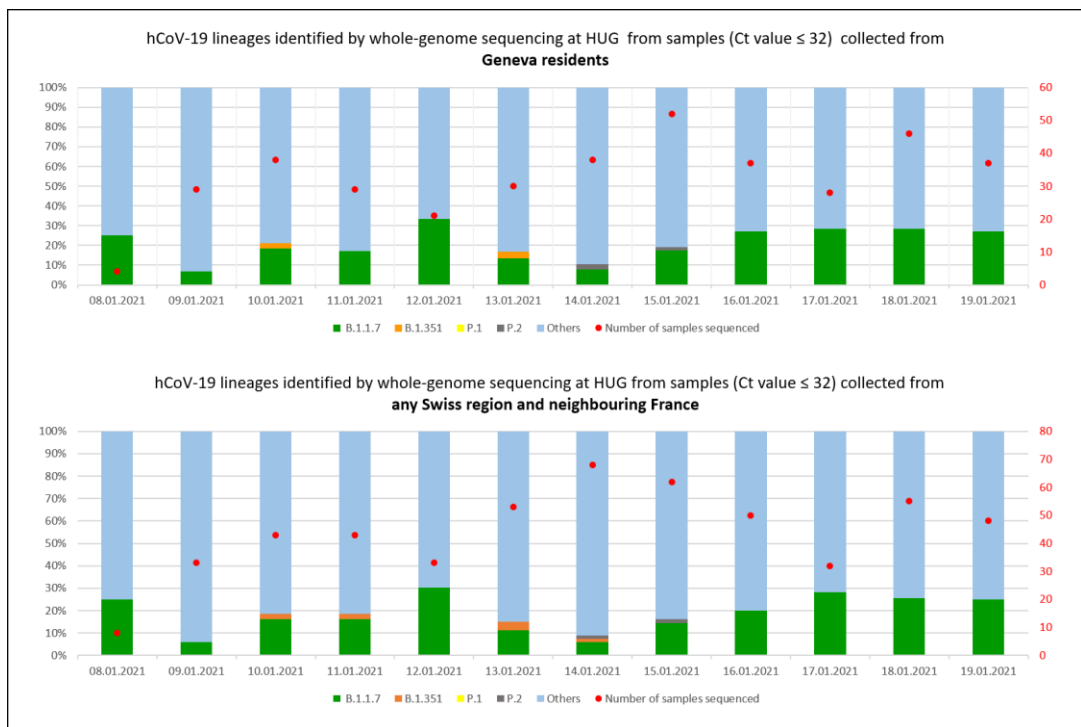
Since the end of year 2020, between 500 and 800 SARS-CoV-2 tests are performed daily at HUG, using different techniques, with between 40 and 100 positive results per day. Among the Cobas 6800 RT-PCR positive samples, those with a Ct value ≤ 32 are used for 501Y and 484K mutations screening by specific RT-PCR assays.

501Y and 484K mutation screening by RT-PCR among SARS-CoV-2 positive samples collected in GE and addressed to our laboratory for primary diagnosis



All 484K positive samples shown on this graph also had the 501Y mutation. We had only one SARS-CoV-2 positive sample (23.01.2021) displaying the 484K mutation without having the 501Y mutation. This sample is still under investigation and is not depicted on the graph. Importantly, the last five bars of the graph are biased by the investigation of an outbreak in a school in Geneva, involving a 501Y-positive/484K-positive variant. Sanger sequencing results are currently available for two 484K-positive samples from this school cluster, and confirm the presence of the B.1.351 variant.

Most recent whole genome sequencing results performed on SARS-CoV-2 positive samples collected in GE and addressed to our laboratory



Of note, the color code is different between both graphs since SARS-CoV-2 variants can only be classified with certainty via sequencing.

Conclusions

We observe a continuous increase in the percentage of B.1.1.7 variant among SARS-CoV-2 positive samples in the Geneva area, currently exceeding 40%. A cluster identified in a school in Geneva is most likely due to the B1.351 variant. Additional confirmatory sequencing is underway. Two P.2 variant (one of the variants detected in Brazil) sequences have been identified by WGS so far.

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