ALBERTA PRECISION LABORATORIES

Leaders in Laboratory Medicine

Laboratory Bulletin

Date: **March 17, 2021**
To: **All Health Care Providers**
From: **Alberta Precision Laboratories (APL) – Public Health Laboratory**
Re: **Reporting COVID-19 variant of concern test results**

PLEASE POST OR DISTRIBUTE AS WIDELY AS APPROPRIATE

Key messages

- Starting March 18, 2021, COVID-19 positive samples will have variant of concern test results reported to the ordering clinician as they currently receive reports. Reports will also be available on Netcare and Connect Care (reporting in SCM to follow). See the appendix for example Netcare reports.
- Variant of concern test results will be reported separately from routine COVID-19 diagnostic tests (e.g., COVID-19 nucleic acid tests, the ID NOW test, antigen-based tests) as "COVID-19 Variant Nucleic Acid Test."

Interpretation of COVID-19 Variant Nucleic Acid Test results.

Result	Interpretation
Negative	• No variant of concern is detected. • **This patient still has COVID-19.**
Positive	• A variant of concern is detected. The lineage (strain) will be reported as B.1.1.7, B.1.351, or P.1. • "See Lineage Conf" indicates that the lineage result is pending and will be reported later.
Unresolved	• The viral load is too low to perform variant testing. • **The strain could potentially still be a variant of concern and should not be treated as negative.** • **This patient still has COVID-19.**

- Positive and unresolved results will be reported as abnormal (i.e., with red font in Netcare).
- Infection prevention and control (IPC) precautions continue to be based on symptoms and risk assessment. **These test results should not be used to discontinue IPC precautions.**

Background

- Current SARS-CoV-2 variants of concern include B.1.1.7, B.1.351, and P.1. It is anticipated that more variants of concern will be identified over time.

- Variant of concern testing is done for all COVID-19 positive samples tested by APL or DynaLIFE using real-time PCR assays that detect the N501Y mutation and the 69/70 deletion in the Spike gene of SARS-CoV-2. Nucleic acid sequencing is also performed when required.
- Currently, all variant of concern testing is performed at the APL – Public Health Laboratories (Edmonton and Calgary sites).
- All samples that test positive for a variant of concern are reported to Public Health and IPC (for hospitalized patients).
- Reporting variant of concern test results to physicians and downstream reporting applications will help support the Public Health and IPC management of cases.

Actions required

- No action is required.
- SARS-CoV-2 variant of concern testing will start being reported to clinicians, Netcare, and Connect Care on March 18, 2021.
- For questions regarding variant of concern testing, please contact the APL – Public Health Laboratory COVID-19 Virologist on-call (Edmonton 780-407-8822; Calgary 403-333-4942).
- For questions regarding Public Health management of variants of concerns, please contact your local Medical Officer of Health on-call.
- For questions regarding type and duration of isolation precautions for COVID-19 suspect or positive patients (including those testing positive or unresolved for a variant of concern) in healthcare facilities, please contact your local IPC team.

Inquiries and feedback may be directed to:
Dr. Nathan Zelyas, Medical Microbiologist, APL – Public Health Laboratory,
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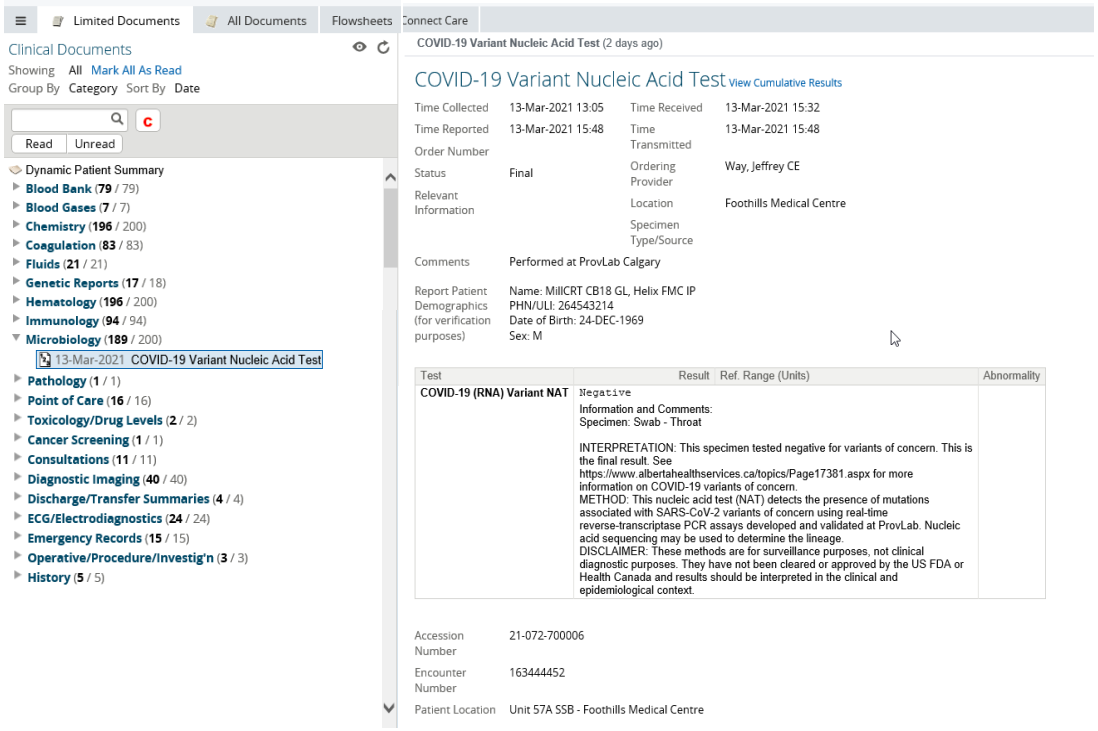
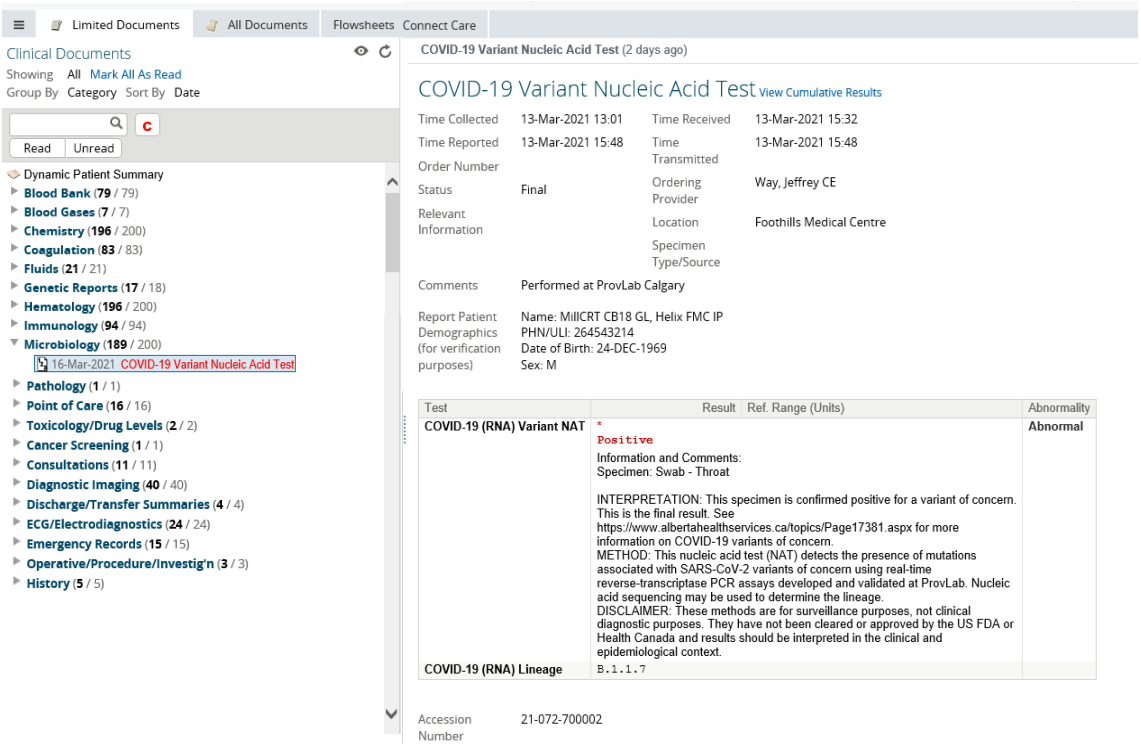
Approved by:
Dr. Graham Tipples, Medical Scientific Director, APL – Public Health Laboratory

Appendix – Example Netcare COVID-19 Variant Nucleic Acid Test reports

Negative COVID-19 Variant Nucleic Acid Test

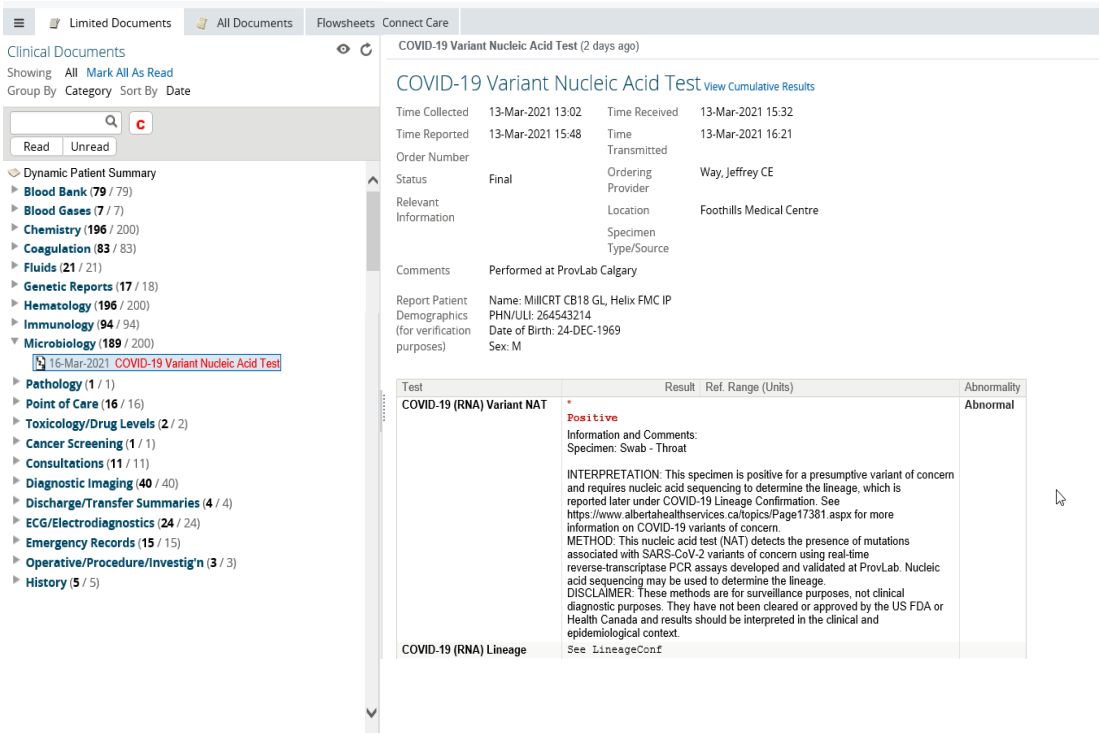


Positive for B.1.1.7 COVID-19 Variant Nucleic Acid Test

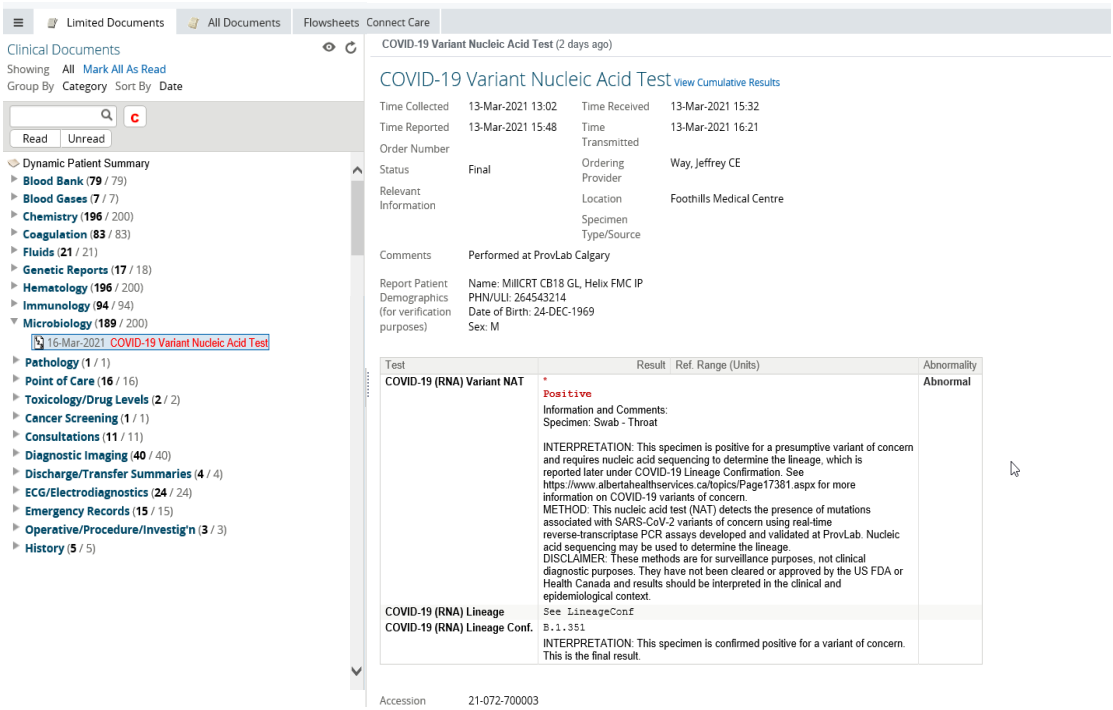


Positive COVID-19 Variant Nucleic Acid Test for variant of concern but requiring follow-up nucleic acid sequencing to determine lineage

- Initial report includes only COVID-19 Variant NAT and COVID-19 Lineage with "See Lineage Conf" reported (reported in same report later)



- Same report is updated later with COVID-19 Lineage Confirmation result (see bottom of report)



Unresolved COVID-19 Variant Nucleic Acid Test