



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	<ul style="list-style-type: none"> • No variant of concern is detected. • This patient still has COVID-19.
Positive	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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,
nathan.zelyas@aplabs.ca

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

COVID-19 Variant Nucleic Acid Test (2 days ago)

COVID-19 Variant Nucleic Acid Test [View Cumulative Results](#)

Time Collected 13-Mar-2021 13:05 Time Received 13-Mar-2021 15:32
 Time Reported 13-Mar-2021 15:48 Time 13-Mar-2021 15:48
 Order Number Transmitted
 Status Final Ordering Provider Way, Jeffrey CE
 Relevant Information Location Foothills Medical Centre
 Specimen Type/Source

Comments Performed at ProvLab Calgary

Report Patient Name: MillCRT CB18 GL, Helix FMC IP
 Demographics PHN/ULI: 264543214
 (for verification purposes) Date of Birth: 24-DEC-1969
 Sex: M

Test	Result	Ref. Range (Units)	Abnormality
COVID-19 (RNA) Variant NAT	Negative		

Information and Comments:
 Specimen: Swab - Throat
 INTERPRETATION: This specimen tested negative for variants of concern. This is the final result. See <https://www.albertahealthservices.ca/topics/Page17381.aspx> for more information on COVID-19 variants of concern.
 METHOD: This nucleic acid test (NAT) detects the presence of mutations associated with SARS-CoV-2 variants of concern using real-time reverse-transcriptase PCR assays developed and validated at ProvLab. Nucleic acid sequencing may be used to determine the lineage.
 DISCLAIMER: These methods are for surveillance purposes, not clinical diagnostic purposes. They have not been cleared or approved by the US FDA or Health Canada and results should be interpreted in the clinical and epidemiological context.

Accession Number 21-072-700006
 Encounter Number 163444452
 Patient Location Unit 57A SSB - Foothills Medical Centre

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

COVID-19 Variant Nucleic Acid Test (2 days ago)

COVID-19 Variant Nucleic Acid Test [View Cumulative Results](#)

Time Collected 13-Mar-2021 13:01 Time Received 13-Mar-2021 15:32
 Time Reported 13-Mar-2021 15:48 Time 13-Mar-2021 15:48
 Order Number Transmitted
 Status Final Ordering Provider Way, Jeffrey CE
 Relevant Information Location Foothills Medical Centre
 Specimen Type/Source

Comments Performed at ProvLab Calgary

Report Patient Name: MillCRT CB18 GL, Helix FMC IP
 Demographics PHN/ULI: 264543214
 (for verification purposes) Date of Birth: 24-DEC-1969
 Sex: M

Test	Result	Ref. Range (Units)	Abnormality
COVID-19 (RNA) Variant NAT	Positive		Abnormal

Information and Comments:
 Specimen: Swab - Throat
 INTERPRETATION: This specimen is confirmed positive for a variant of concern. This is the final result. See <https://www.albertahealthservices.ca/topics/Page17381.aspx> for more information on COVID-19 variants of concern.
 METHOD: This nucleic acid test (NAT) detects the presence of mutations associated with SARS-CoV-2 variants of concern using real-time reverse-transcriptase PCR assays developed and validated at ProvLab. Nucleic acid sequencing may be used to determine the lineage.
 DISCLAIMER: These methods are for surveillance purposes, not clinical diagnostic purposes. They have not been cleared or approved by the US FDA or Health Canada and results should be interpreted in the clinical and epidemiological context.

COVID-19 (RNA) Lineage B.1.1.7

Accession Number 21-072-700002



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)

COVID-19 Variant Nucleic Acid Test (2 days ago)

COVID-19 Variant Nucleic Acid Test [View Cumulative Results](#)

Time Collected 13-Mar-2021 13:02 Time Received 13-Mar-2021 15:32
 Time Reported 13-Mar-2021 15:48 Time 13-Mar-2021 16:21
 Order Number Transmitted
 Status Final Ordering Provider Way, Jeffrey CE
 Relevant Information Location Foothills Medical Centre
 Specimen Type/Source

Comments Performed at ProVLab Calgary

Report Patient Name: MillCRT CB18 GL, Helix FMC IP
 Demographics PHN/ULI: 264543214
 (for verification Date of Birth: 24-DEC-1969
 purposes) Sex: M

Test	Result	Ref. Range (Units)	Abnormality
COVID-19 (RNA) Variant NAT	Positive Information and Comments: Specimen: Swab - Throat INTERPRETATION: This specimen is positive for a presumptive variant of concern and requires nucleic acid sequencing to determine the lineage, which is reported later under COVID-19 Lineage Confirmation. See https://www.albertahealthservices.ca/topics/Page17381.aspx for more information on COVID-19 variants of concern. METHOD: This nucleic acid test (NAT) detects the presence of mutations associated with SARS-CoV-2 variants of concern using real-time reverse-transcriptase PCR assays developed and validated at ProVLab. Nucleic acid sequencing may be used to determine the lineage. DISCLAIMER: These methods are for surveillance purposes, not clinical diagnostic purposes. They have not been cleared or approved by the US FDA or Health Canada and results should be interpreted in the clinical and epidemiological context.		Abnormal
COVID-19 (RNA) Lineage	See LineageConf		

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

COVID-19 Variant Nucleic Acid Test (2 days ago)

COVID-19 Variant Nucleic Acid Test [View Cumulative Results](#)

Time Collected 13-Mar-2021 13:02 Time Received 13-Mar-2021 15:32
 Time Reported 13-Mar-2021 15:48 Time 13-Mar-2021 16:21
 Order Number Transmitted
 Status Final Ordering Provider Way, Jeffrey CE
 Relevant Information Location Foothills Medical Centre
 Specimen Type/Source

Comments Performed at ProVLab Calgary

Report Patient Name: MillCRT CB18 GL, Helix FMC IP
 Demographics PHN/ULI: 264543214
 (for verification Date of Birth: 24-DEC-1969
 purposes) Sex: M

Test	Result	Ref. Range (Units)	Abnormality
COVID-19 (RNA) Variant NAT	Positive Information and Comments: Specimen: Swab - Throat INTERPRETATION: This specimen is positive for a presumptive variant of concern and requires nucleic acid sequencing to determine the lineage, which is reported later under COVID-19 Lineage Confirmation. See https://www.albertahealthservices.ca/topics/Page17381.aspx for more information on COVID-19 variants of concern. METHOD: This nucleic acid test (NAT) detects the presence of mutations associated with SARS-CoV-2 variants of concern using real-time reverse-transcriptase PCR assays developed and validated at ProVLab. Nucleic acid sequencing may be used to determine the lineage. DISCLAIMER: These methods are for surveillance purposes, not clinical diagnostic purposes. They have not been cleared or approved by the US FDA or Health Canada and results should be interpreted in the clinical and epidemiological context.		Abnormal
COVID-19 (RNA) Lineage	See LineageConf		
COVID-19 (RNA) Lineage Conf	B.1.351 INTERPRETATION: This specimen is confirmed positive for a variant of concern. This is the final result.		

Accession 21-072-700003



Unresolved COVID-19 Variant Nucleic Acid Test

[Limited Documents](#) | [All Documents](#) | [Flowsheets](#) | [Connect Care](#)

COVID-19 Variant Nucleic Acid Test (2 hours ago)

[View Cumulative Results](#)

Time Collected: 16-Mar-2021 10:01 | Time Received: 16-Mar-2021 10:30
 Time Reported: 16-Mar-2021 10:32 | Time Transmitted: 16-Mar-2021 10:32
 Order Number: | Ordering Provider: Way, Jeffrey CE
 Status: Final | Location: Foothills Medical Centre
 Relevant Information: | Specimen Type/Source:

Comments: Performed at ProvLab Calgary

Report Patient Name: MillCRT CB18 GL, Helix FMC IP
 Demographics PHN/UJI: 264543214
 Date of Birth: 24-DEC-1969
 Sex: M

Test	Result	Ref. Range (Units)	Abnormality
COVID-19 (RNA) Variant NAT	<p>Unresolved</p> <p>Information and Comments: Specimen: Swab - Throat</p> <p>INTERPRETATION: Unresolved results can occur with low viral loads and should not be considered negative for a variant of concern without other test results. This is the final result. See https://www.albertahealthservices.ca/topics/Page17381.aspx for more information on COVID-19 variants of concern.</p> <p>METHOD: This nucleic acid test (NAT) detects the presence of mutations associated with SARS-CoV-2 variants of concern using real-time reverse-transcriptase PCR assays developed and validated at ProvLab. Nucleic acid sequencing may be used to determine the lineage.</p> <p>DISCLAIMER: These methods are for surveillance purposes, not clinical diagnostic purposes. They have not been cleared or approved by the US FDA or Health Canada and results should be interpreted in the clinical and epidemiological context.</p>		Abnormal
COVID-19 (RNA) Lineage	See Note		

Accession Number: 21-075-700037