



BC Centre for Disease Control
An agency of the Provincial Health Services Authority

655 West 12th Avenue
Vancouver, BC V5Z 4R4

**Clinical Prevention Services
Provincial STI/HIV Clinic**

Tel 604.707.5600
Fax 604.707.5604

www.bccdc.ca

www.SmartSexResource.com

Laboratory Results Suggestive of Acute HIV

To assist clinicians with the interpretation of HIV results when BCCDC Public Health Laboratory (BCPHL) staff notify them of probable acute HIV cases

HIV Laboratory Tests

Screening tests: Initial screening for HIV is via the 4th generation serology assay that detects both HIV antibodies and p24 antigen (this test does not differentiate between these two markers). If the initial screening test is reactive, a supplemental 4th generation serology assay test on an alternative platform is performed to confirm the status.

Confirmatory tests: The confirmatory immunoblot detects and differentiates antibodies against HIV-1 and HIV-2. Strong signals are needed for the immunoblot to detect the specific antibodies.

When the confirmatory immunoblot is non-reactive, indeterminate (could be weakly reactive), or not performed (where screening test signals are low) the laboratory will automatically test the sample by HIV-1 RNA nucleic acid test (NAT). This is in an effort to identify viremia in people who are in the process of seroconverting (i.e. acute HIV cases).

While screening test and immunoblot results are typically performed the same day as sample receipt, the NAT is performed and resulted on the business day following screening test and immunoblot testing. Testing is not performed on weekends or STAT holidays unless requested by Medical leadership.

Probable Acute HIV Results

The following screening test and immunoblot lab results are suggestive of a probable acute case:

4 th gen screening test reactive	Supplemental 4 th gen screening test reactive	HIV-1 or HIV-2* Immunoblot non-reactive, indeterminate, or not performed	HIV-1 NAT pending
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*HIV 2 infection is rarely identified in BC; it is endemic in West Africa

The laboratory automatically checks the history of the client's prior test results, but may not be able to link results if the individual previously tested anonymously, under a pseudonym, or out of province.

- Recent negative HIV testing results are a further indication that this may be an acute case

What do these Probable Acute results mean?

- These results are considered preliminary and NOT a confirmed case
- Final results can be expected in 1-4 days following NAT testing
- Interpretation of results are done in conjunction with previous testing history and assessment of client risk factors

What should I do when I receive a Probable Acute HIV result?

Please adhere to any relevant organizational/employer policies and procedures

The following is a list of recommended steps and items for discussion post receipt of probable acute HIV results from BCCDC HIVSS:

- Notify the testing healthcare provider*.
 - Outline that test results are preliminary and results should be interpreted in light of a client's previous testing history (ex. window period) and relevant risk factors**.
- Notify the client*.
 - Explain results are preliminary and that final results can be expected in 1-4 days
 - Emphasize need for collection of a 2nd sample as soon as possible to rule out labelling errors on initial sample
 - Review and confirm previous HIV testing history and potential risk factors for HIV acquisition**
 - Discuss supports while waiting for confirmatory testing
 - Discuss abstaining from sexual contact until confirmatory testing is completed
 - Consider what partner(s) may be eligible for nPEP

**Deferral of discussion until NAT diagnosis confirmation is not recommended due to the significant risk of onward transmission of HIV in acute cases.*

*** Though absence of client self-reported risk factors may suggest a false positive test result, this assumption should not be made as clients may in fact not report or perceive that risk factors for HIV acquisition exist.*

BCCDC HIVSS will notify the appropriate health authority immediately upon receipt of final results.