

Labstrack – January 2014

HIV Baseline Genotyping

To Health Care Providers:

Effective immediately, the Public Health Ontario Laboratories (PHOL) will refer all eligible specimens to the British Columbia Centre for Excellence (BCCfE) in Vancouver for baseline HIV genotyping to determine drug resistance prior to the start of therapy. The HIV viral load for eligible specimens will be measured and reported to the requesting clinician prior to referral to the BCCfE.

Since 2005, baseline HIV genotyping for patients who have not yet started antiretroviral (ARV) therapy has been available upon request to clinicians in Ontario. HIV genotyping to determine drug resistance before ARV treatment is critical in informing the selection of the optimal ARV treatment regimen for HIV infected patients. To date, evaluation of HIV resistance patterns has shown a high level of resistant strains circulating in one jurisdiction. Using a less than optimum ARV regimen can lead to a delayed response to treatment and further emergence of drug resistance. Thus, determining a patient's drug resistance profile before starting treatment is now considered best practice in Canada.

Eligibility criteria for baseline HIV Genotyping:

- No previous HIV viral load on record at PHOL
- Treatment naïve patient (i.e., the patient is not on therapy)
- Plasma sample with viral load ≥ 1000 copies per mL

All specimens submitted for HIV Viral Load testing will automatically be reviewed for eligibility. To assist with determining eligibility, please indicate on the HIV Viral Load requisition whether the patient is treatment naïve.

Specific HIV Genotyping requests:

Specific requests for HIV Genotyping will continue to be sent to the BCCfE, and should be submitted using the F-C-HV-142 test requisition, available at <http://www.publichealthontario.ca/Requisitions>. Tropism testing will not be referred to BCCfE unless requested using an F-C-HV-142 test requisition.

HIV Baseline Genotyping (Continued)

Specimen Submission:

- Collect blood in EDTA or PPT tubes: 1 x 10 mL tube or 2 x 7 mL tubes.
- Whole blood submitted in EDTA or PPT tubes must be received at a [PHO Laboratory](#) or designated HIV viral load submission site within 6 hours of collection of the blood.
- Designated HIV viral load submission sites:
 - Children’s Hospital for Eastern Ontario, Ottawa
 - Hospital for Sick Children, Toronto
 - Mt. Sinai Hospital, Toronto
- Alternatively, the tube of blood may be centrifuged and the plasma transferred into a Viral Load polypropylene transport vial (provided by PHOL) within 6 hours of collection. The vial containing the plasma should then be frozen. The minimum volume required is 3.5 mL of frozen plasma. PPT tubes that have been centrifuged within 6 hours of collection must be received at PHO laboratories within 24 hours of collection, before 2:00 p.m. Monday to Friday.
- Place specimen in a biohazard bag and seal. Plasma vials should be stored frozen. Frozen vials should be shipped on dry ice or ice packs to the nearest [PHO Laboratory](#) within 2-3 days to prevent any delay in testing.

Test Ordering:

Use the HIV Viral Load Monitoring test requisition F-C-HV-139, available at <http://www.publichealthontario.ca/Requisitions>. Under “Treatment Information” select the Baseline box.

Turnaround Times:

Genotyping tests to determine antiretroviral drug resistance are referred out directly from PHOL to BCCfE. Samples received at CHEO, HSC and MSH will be forwarded to the Toronto PHOL for shipping to BCCfE. The expected turnaround time for results is approximately 3-6 weeks. Test results will be forwarded by PHOL to the submitter as soon as they are received.

For further information:

- Contact the PHOL Customer Service Centre at 416-235-6556 or 1-877-604-4567 (toll-free), or by email at CustomerServiceCentre@oahpp.ca
- For PHOL specimen collection information and previous Lababstracts, refer to <http://www.publichealthontario.ca/Labs>
- The current version of the PHOL General Test Requisition and other forms are available at <http://www.publichealthontario.ca/Requisitions>
- To subscribe to future Lababstracts, email lababstracts@oahpp.ca
- To register for Autofax and receive laboratory reports by fax directly from our laboratory information system as soon as they are released, contact the PHOL Customer Service Centre.