



BC Centre for Disease Control
Provincial Health Services Authority

Interferon Gamma Release Assay Testing Resource: Public Health and Community Health Nurses in BC

Page | 1

Historically, Latent Tuberculosis Infection (LTBI) diagnosis was based on risk assessment, chest x-ray (CXR) and Tuberculin Skin Test (TST) results. The TST is a well-studied and inexpensive test but has limitations. A TST may be false-positive if there is history of BCG vaccination or nontuberculous mycobacterial infection, or false negative if the client is immunocompromised.

IGRA's are immunological blood tests for LTBI. IGRA's are not influenced by prior BCG vaccination or most nontuberculous mycobacteria (e.g., *Mycobacterium avium*). IGRA tests can rule out LTBI in clients with a history of BCG or nontuberculous mycobacteria (false-positive TST). IGRA tests can add additional information in clients who are immunocompromised (false-negative TST). Thus IGRA testing can help prevent unnecessary LTBI therapy and can help identify clients who may benefit from LTBI therapy.

IGRA testing **does not replace** the TST but rather, is used in specific populations that require additional information to better determine LTBI status. IGRAs and TSTs are imperfect tests and must be interpreted within the context of the risks the individual faces of TB infection and the risks for progression to active TB disease (See [Provincial TB Manual](#) Table 3-1). Neither test can determine if TB infection is active or latent.

The two IGRA tests available in British Columbia (BC) are:

- QuantiFERON-Gold Plus® [QFT-Plus]
- T-SPOT®

Table of Contents:

[Ordering and availability of IGRA in BC](#)

[Indications for IGRA](#)

[IGRA Instructions on Collection Date](#)

[IGRA Sample Processing](#)

[Teaching Points to Consider](#)

[Procedures for IGRA Testing in BC](#)

[Additional Resources](#)



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Ordering and Availability of IGRA in BC

In BC, publically funded IGRA testing can only be ordered by BCCDC TB Services (TBS) physicians, TBS nurses, select physician specialists, and Federal Corrections, and can only be performed at designated testing sites. Please refer directly to the [eLab Handbook](#) or the BCCDC website for the most up to date list of [BC IGRA Screening Sites](#) and their hours of IGRA collection. See [Procedures for IGRA Testing in BC](#).

Private pay IGRA is also available at certain LifeLabs locations across the province. Please see the [LifeLabs website](#) for further information.

Indications for IGRA

Please refer directly to the BCCDC website for the most up to date [IGRA: Physician Guidelines](#).

IGRA Instructions on Collection Date

Fasting is **NOT** required. Please note that IGRA collection hours may not reflect actual business hours of the lab. Clients attending drop in sites should be encouraged to attend the lab early or well before end of IGRA collection times. This ensures the sample collected meets processing/transportation timelines.

IGRA Sample Processing

IGRA samples are only processed at the BC Public Health Laboratory in Vancouver. T-SPOT is kept at a very narrow temperature window and must arrive within a short time frame or the lab will not be able to test the sample. QFT-Plus is collected and processed on site prior to sending to the lab, thus may be better suited for rural collection sites.

Collection sites must have the ability to process samples on site and complete specific training from the BC Public Health Laboratory before being able to collect samples.

Additional screening sites are being added to increase access to IGRA across the province. Please refer to the BCCDC website for the most up to date list of [IGRA Screening Sites](#).



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Teaching Points to Consider

- TB discussion:
 - Explain how TB is transmitted, the difference between latent and active TB disease, risk of reactivation, and purpose/benefit of screening.
 - The difference between TST and IGRA. Please refer to [IGRA: Physician Guidelines](#) for comparison of TST vs. IGRA.
- IGRA discussion:
 - IGRA's test the body's immune response to previous exposure to TB (latent TB), can rule out false positive TST due (due to BCG or NTM), and may provide additional information for immune-compromised individuals.
 - IGRA does **NOT** tell you if you have active TB
- Resources that may help inform discussion include: (translated resources are available).
 - [IGRA TB Blood Test Fact Sheet](#)
 - [Latent TB Infection Fact Sheet](#)
 - [TB Germ – A Cunning World Traveler](#) (video)

Procedures for IGRA Testing in BC

Referral for IGRA (and other) recommendations can be made by submitting a health care provider consult letter or a TB screening form (HLTH 939) to BCCDC TBS via:

Fax or Mail:
BCCDC Provincial TB Services
655 West 12th Avenue
Vancouver, BC V5Z 4R4
Fax: 604.707.2690

Public Health Panorama users email referrals to tbadmin@bccdc.ca including Client ID, Investigation ID, and reason for referral in the subject line.

Referrals should include a recent CXR (unless contraindicated):

- Within 3 months if immunocompromised
- Within 6 months if immunocompetent
- New CXR if symptomatic or new positive TST



Process for clients residing in Fraser Health or Vancouver Coastal Health (except Coast Garibaldi):

Once the referral is received, it will be reviewed and an appointment will be booked at one of the TB Clinics. Decision to draw IGRA (or not) at the clinic visit is based on [IGRA: Physician Guidelines](#). Rarely, if space is limited or if unable to travel, clients may be sent directly to alternative sites in the lower mainland. In this case, IGRA discussion occurs directly between the client and TB Clinic staff.

Process for clients residing in Interior Health, Northern Health, First Nations Health Authority, and Coast Garibaldi region of Vancouver Coastal Health (See [Process for Testing](#)):

Clients residing outside the lower mainland usually attend collection sites outside the lower mainland (e.g., clients residing in Powell River may find it more convenient to travel to Vancouver Island for IGRA), thus IGRA discussion occurs between the client and the public health nurse or most responsible physician.

1. Once referral is received, TBS will recommend IGRA (or not) based on [IGRA: Physician Guidelines](#).
2. Recommendations are mailed and/or faxed to the referring provider, in the form of a standard letter or dictation within 1 month of receiving CXR report.
3. Referring provider discusses IGRA recommendation from TBS with client and reports back to TBS indicating client consent and site for testing. Please refer directly to the BCCDC website for the most up to date list of [IGRA Screening Sites](#).

While the effect of live vaccines on IGRA has not yet been studied, it is possible that live vaccines may affect IGRA results. Clients should be encouraged to delay IGRA testing for 4 weeks after live virus vaccine was received. Information on live virus vaccines can be found in the [Provincial Immunization Manual](#).

If the client refuses IGRA testing or is unable to travel to a city where the test is offered, they can still choose to take preventative treatment if offered. This decision needs to be communicated to TBS.



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4. BCCDC TBS faxes IGRA requisition to the lab and/or referring provider. Instructions are included in the fax cover sheet and may vary depending on site of collection. Sites may require clients to book appointments ahead of time or offer drop in times. Once instructions are received, public health and community health nurses will call the client informing them of the instructions. Clients are encouraged to book appointments themselves or to call in advance to ensure the lab has received the requisition before attending drop in times.

Page | 5

All clients attending sites on Vancouver Island are asked to bring the IGRA requisition with them.

5. IGRA results are sent to the referring health care provider (if requested) and BCCDC TBS.

IGRA results are reviewed and interpreted by a TB physician in the context of TB risk assessment and CXR. Further follow-up recommendations (via standard letter [clearance or LTBI treatment offer] or dictation) will be mailed to referring physician and all physicians listed in external sources. This may take as long as one month.

Public Health Panorama users will receive an email when a narrative or standard letter is available.



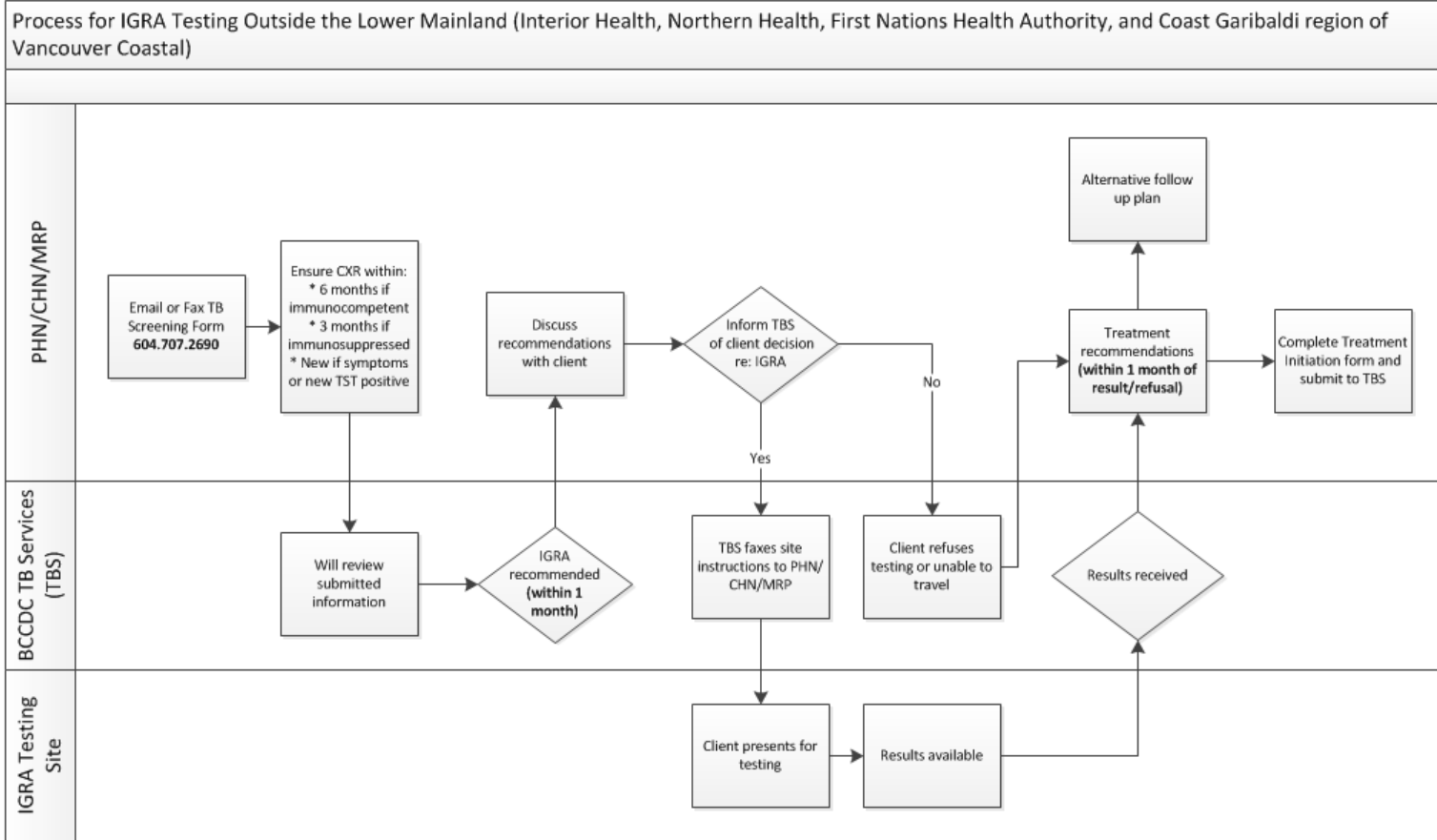
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Process for Testing:





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This process may take as long as two - three months. To prevent delay, please ensure TB Screening Form is complete and encourage client to complete CXR as soon as possible.

Page | 7

Additional Resources

- [Provincial TB Manual](#)
- [TB Screening Decision Support Tool](#)
- Forms
 - [TB Screening Form](#)
 - [Treatment Initiation Form](#)
 - [TB Medication Reorder Form](#)
 - [Notification of Abnormal AST Form](#)
 - [Treatment Completion Form](#)

TB Nurse Consultants can be reached at **604.707.5678** or TBNurseConsultants@bccdc.ca



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