

TB Screening: KCC Patients Referred for Transplant

2 sessions (same session repeated):

January 18, 2023

January 19, 2023



Outline

- What is tuberculosis (TB)?
- Why screen patients for Latent TB Infection prior to transplant?
- How is screening done now? Why change?
- What are the changes as of February 1, 2023?
- Who suggested the changes?
- 3 step protocol for TB screening
- KCC start up tasks
- PROMIS data entry

What is Tuberculosis (TB)?

- Disease caused by the bacteria *Mycobacterium tuberculosis*
- Spreads from person to person through droplets in the air
- Usually affects the lungs, but can also affect other parts of the body, such as lymph nodes, the brain, kidneys, or the spine
- 2 types of TB:
 - Active TB disease: Usually symptomatic & often transmissible (infectious)
 - TB infection (Latent TB infection or LTBI): Bacteria is in the body but no symptoms & not transmissible (infectious).

Why screen for Latent TB Infection prior to transplant?

- If latent TB infection (LTBI) is left untreated, there is a ~5% lifetime risk of progressing to active TB
- This risk for reactivation TB disease is higher for people with chronic kidney disease & after kidney transplant (immune system is further compromised by the anti-rejection medications)
- Screening & treating patients with LTBI prior to transplant reduces this risk
- Treatment for LTBI takes several months – usually 4-9 months.

The sooner the treatment begins, the sooner the transplant can occur!

How is screening done now? Why change?

Current process

KCC/Reg Tx Ctre	Submit as part of pre-transplant referral workup (organize with GP or public health): <ul style="list-style-type: none">• Tuberculin Skin Test (TST)• Chest x-ray (within 6 mos)
Prov Tx Ctre (VGH or SPH)	Organize regionally (if testing available where person lives) &/or on-site during assessment visit: <ul style="list-style-type: none">• Risk assessment• IGRA blood test• Chest x-ray (if not within 6 mos)

Drawbacks

TST highly impacted by:

- Prior BCG vaccine or exposure to non-tuberculous mycobacteria (NTM) = false positive result
- Poor immune response (e.g., kidney disease) = false negative result

Screening done twice

Potential delay in treatment/transplant

What are the changes as of Feb 1, 2023?

Role	Current process	As of Feb 1, 2023
KCC/Reg Tx Ctre	Submit as part of pre-transplant referral workup (organize with GP or public health): <ul style="list-style-type: none"> • Tuberculin Skin Test (TST) • Chest x-ray (within 6 mos) 	Submit as part of pre-transplant referral workup: <ul style="list-style-type: none"> • Risk assessment • IGRA blood test • Chest x-ray (within 6 mos)
Prov Tx Ctre (VGH or SPH)	Organize as part of on-site assessment (even if previous negative TST): <ul style="list-style-type: none"> • Risk assessment • IGRA blood test • Chest x-ray (if not within past 6 mos) 	Organize screening in occasional situations if patient unable to get IGRA blood test done while in KCC/Regional Transplant Centre

Benefits of change

IGRA:

- Not influenced by prior BCG vaccine or exposure to non-tuberculous mycobacteria (NTM)
- More accurate in immunocompromised patients

When done as pre-transplant referral workup:

- Duplicate testing eliminated
- TB infection picked up earlier = earlier treatment/transplant

Consistent with process for new dialysis patients. If dialysis required, does not need to be repeated

Who suggested the changes?

- BC Transplant, BCCDC & the Medical Directors of the VGH & SPH Transplant Centres confirmed IGRA as the best test
- Change to have IGRA testing done in KCC jointly recommended by BCR (Kidney Care Committee), BCT, BCCDC & the Transplant Centres because:
 - Earlier treatment (if required) & reduction in possibility of transplant delay
 - Avoidance of duplicate/unnecessary testing
- BC Renal has been working with BCCDC on the details & with the PROMIS Team to modify PROMIS to accommodate this new group

3-step protocol for TB screening

- TB screening (risk assessment) questionnaire
 - Print from PROMIS (demographics auto populate)
 - Complete with patient & enter responses into PROMIS
- IGRA blood test (if previous result available, do not repeat)
 - Print req from PROMIS (demographics auto populate)
 - Give req to patient to take to lab www.bccdc.ca/resource-gallery/Documents/Educational%20Materials/TB/IGRAsites.pdf
- Chest x-ray within the past 6 months
 - Print req from PROMIS (demographics auto populate)
 - Give req to patient to take to any hospital imaging department
- Send “alert” to BCCDC via PROMIS.
 - Allows BCCDC to access all 3 components
 - TB physician will complete the analysis
 - Report/letter will be sent to primary nephrologist, KCC, GP & uploaded into PROMIS

Island Health KCCs & TB Services

- Same process as for other HA KCCs
- BCCDC TB Services will fax the TB screening questionnaire, IGRA blood test results & chest x-ray report to Island Health TB Clinic (BCCDC will also upload chest x-ray report into PROMIS).
- The Island Health TB Clinic will analyze the results and issue a report/letter
- The Island Health TB Clinic will alert BCCDC TB Services of the report/letter in Panorama. BCCDC will upload the report into PROMIS. Island Health TB Clinic will follow-up the results with the patient/appropriate care providers

KCC Start up tasks

- Set up a system to track the status of the TB screening components (e.g., excel worksheet)
 - Names & dates of transplant referral initiation
 - Dates of questionnaire completion & when lab & x-ray req's given to patient
 - Date BCCDC was alerted to completion of process (via "Alert BCCDC" in PROMIS)
- Incorporate into the pre-printed orders for KCC patients referred for transplant:
 - Complete TB screening questionnaire
 - IGRA blood test (QFT – Plus)
 - Chest x-ray within the past 6 months

Step 1: TB screening questionnaire

- Print blank questionnaire from PROMIS (demographics auto populate) (clerk)
- Complete questionnaire with patient (RN)
- Enter responses into PROMIS (RN or clerk)
- Note questionnaire has been entered into PROMIS on the TB tracking sheet (excel spreadsheet) (RN or clerk)

Real time demonstration in PROMIS

Step 2: IGRA blood test

- Check Care Connect/PROMIS for previous IGRA test result
- If no previous test:
 - Print req from PROMIS (demographics auto populate) (clerk)
 - Give req to patient to take to lab www.bccdc.ca/resource-gallery/Documents/Educational%20Materials/TB/IGRAsites.pdf
 - Blood samples require special handling & transport to the provincial lab
 - Blood can only be drawn at designated hospital labs during specific days/hours
 - Enter date the req was given to patient in PROMIS (or date of previous IGRA)
- Note that patient was provided the req (or date of previous IGRA) on the TB screening tracking sheet (excel spreadsheet)

Real time demonstration in PROMIS

Step 3: Chest x-ray

- Check Care Connect/PROMIS for chest x-ray within past 6 months
- If none:
 - Print req from PROMIS (demographics auto populate) (clerk)
 - Give req to patient to take to any hospital imaging department (clerk or RN)
 - Enter date the req was provided to patient in PROMIS (or date of chest x-ray done in past 6 months)
- Note that patient was provided the req (or date of previous chest x-ray) on TB screening tracking sheet (excel spreadsheet)

Real time demonstration in PROMIS

Final step: Alert BCCDC

- Once all 3 activities have been completed, alert BCCDC via PROMIS
 - Both the chest x-ray order date & IGRA order date must be entered to enable the “alert” button in PROMIS
- Note that BCCDC has been “alerted” and that all activities have been completed on the TB tracking sheet (excel spreadsheet)

Real time demonstration in PROMIS

Questions?

