Screening Algorithm for Latent TB in Kidney Transplant Candidates and Potential Donors

Who to screen? 1) ALL transplant candidates 2) Kidney donors who meet 1 or more of following criteria: a) healthcare worker b) history of TB exposure c) history of injection drug abuse d) homelessness e) history of residence in correctional facility f) travel or residence in a TB endemic region

Who to screen?

Does the individual have a history of old TB (treated or untreated) with or without symptoms?

No

Screen for latent TB using either 2-step TB skin test or TB quantiferon gold serology test

Yes

Refer to specialist*. Do not screen for latent TB.

Yes

Does the individual have symptoms suggestive of active TB? i.e. 3 week history of cough and two of the following:

a) Fever/chills/night sweats
b) Unexplained weight loss
c) Hemoptysis
d) History of contact with someone with active TB
e) History of immigration from a country where TB is endemic

No

Does the individual have symptoms suggestive of active TB? i.e. 3 week history of cough and two of the following:

a) Fever/chills/night sweats
b) Unexplained weight loss
c) Hemoptysis
d) History of contact with someone with active TB
e) History of immigration from a country where TB is endemic

No

Yes

Refer to specialist*. Do not screen for latent TB.

2-STEP TB SKIN TEST

How to perform:
1. Plant TST. Live vaccines can cause false negative results. If receiving live vaccine, plant same day as vaccine or 4 weeks post vaccine.
2. Read result in 48-72 hours. (see below)
3. If positive, do not repeat. If negative, repeat TST (i.e. second step TST). Second step TST should be done minimum of 7 days, maximum of 365 days after first TST. Result is only considered NEGATIVE if both tests are negative.

How to interpret/read result:
- ≥5 mm induration is considered POSITIVE in individuals with ESRD, HIV, contact with infectious TB within past 2 years, on immunosuppression (steroid equivalent of prednisone ≥15 mg/d ≥ 1 month), chest x-ray demonstrating old TB
- ≥10 mm induration is considered POSITIVE in all other individuals

Pro: covered by OHIP, provider familiarity
Con: false positive in presence of non-tuberculous mycobacteria (NTM) or history of BCG

QUANTIFERON GOLD/INTERFERON GAMMA RELEASE ASSAY

How to perform:
QFT/IGRA can be done at LifeLabs or Gamma Dynacare. There is no special preparation for the test. Live vaccines can cause false negative results. If receiving live vaccine, collect sample for QFT/IGRA same day as vaccine or 4 weeks post vaccine.

How to interpret result:
Typical cutoff for positivity is 0.35 IU/mL but there is lack of consensus. Indeterminant or false negative results are likely in individuals with HIV, on immunosuppression, malnutrition (<90% ideal body weight) or when result is near cutoff (0.20-0.35 IU/mL).

Pro: not affected by NTM or BCG
Con: not covered by OHIP ($90), conversion/reversion near cutoff threshold

Order CXR and refer to specialist* for assessment

*TB clinic (respirology) @ St. Michael’s: tel: 416-864-6060 ext 2673 fax: 416-864-3027, or
Refer to respirology or infectious disease specialist locally

If positive

If positive