

Australian and New Zealand Paired Kidney Exchange Program

Protocol 10: Latent
Tuberculosis Infection Pathway
for Donors

Latent Tuberculosis Infection Pathway for Donors

Background

It is expected that participating renal transplant centres in the Australian and New Zealand Paired Kidney Exchange (ANZKX) Program apply appropriate infectious disease screening protocols in their donor work ups according to their risks of infection/ transmission to their matched recipient. This should include tuberculosis (TB) where appropriate.

Screening of kidney donors for latent tuberculosis infection (LTBI) is required for those who are deemed high risk of transmission.

Epidemiology

The incidence of TB in Australia and New Zealand sits between 5–6.3 cases per 100,000 (1, 2).

Factors associated with a higher risk of TB include:

- Birth or residence in a high-risk country or prolonged travel (>3 months) in high prevalence epidemiological areas (>40 per 100,000) as per WHO TB incidence report (6, 7).
- Close contact with persons with infectious TB.
- Healthcare worker.

Approximately 80–90% of TB cases in Australia and New Zealand occur among people born overseas, particularly those arriving from high TB prevalence countries such as India, Vietnam, the Philippines, China, and Nepal. The incidence of TB in first nation peoples in both countries is approximately 4 times the rate compared to non-indigenous populations. Using the Australian and New Zealand Living Kidney Donor (ANZKLD) registry (2003–2021), the ethnicity of living donors is 87.4% donors Caucasian, 4.2 % Asian, 1.9% Aboriginal and Torres Strait Islander and 0.3% Maori. Hence at least 10% of living kidney donors in Australia potentially have a higher risk of TB exposure.

Proposed pathway for LTBI in donors

The following pathway has been developed to ensure kidney donation to minimise risk of TB transmission in the program.

All donors should have the following tests as part of their assessment:

- Chest X-ray,
- QuantiFERON-TB Gold/IGRA (interferon gamma release assay) and
- Urinalysis.
 - If urine shows sterile pyuria, then 3 early morning urine samples should be sent for AAFB (acid alcohol fast bacteria) culture.

If the tests listed above are all negative, then the potential donor is deemed safe to proceed with kidney donation.

If the donor has **any** of the following results:

- Chest X ray with findings suggestive of previous infection with TB such as; apical fibrosis, hilar lymphadenopathy, calcified granuloma or pleural plaque.

- Positive QuantiFERON-TB Gold/IGRA (interferon gamma release assay).
- Positive urine culture for AAFB.

Then they should be referred to a local TB/chest clinic/infectious disease service and investigated for TB infection. If active infection is excluded, then latent TB (LTBI) should be considered to be present.

If a potential kidney donor has demonstrated the presence of active TB following investigation, the donation should not proceed, the patient should be referred to the unit TB clinic for institution of appropriate anti-tuberculous treatment and TB notification should occur.

The situation with a donor with LTBI is less clear-cut. Currently in Australia an individual diagnosed with LTBI is not routinely offered treatment unless they have additional risk factors associated with reactivation. Management of donors found to have LTBI is discussed in the next section.

Management of LTBI donors

Treatment of LTBI reduces the incidence of active TB by 60–90% depending on compliance. Treatment of LTBI can have adverse effects and hence currently individuals in Australia diagnosed with LTBI are offered treatment based on a risk assessment, comparing the risk of reactivation with the risk of drug toxicity.

In Australia variation in practice exists across units with respect to treatment of the LTBI donor and hence not all living kidney donors are routinely offered treatment. ANZKX acknowledges that decisions regarding treatment of LTBI donors should be made by the caring team in consultation with local TB/Infectious Diseases service.

The ANZKX program does not deem treatment of a LTBI donor a prerequisite to entering the program but requires notification of ANZKX of LTBI positivity of a donor and if treatment has been given.

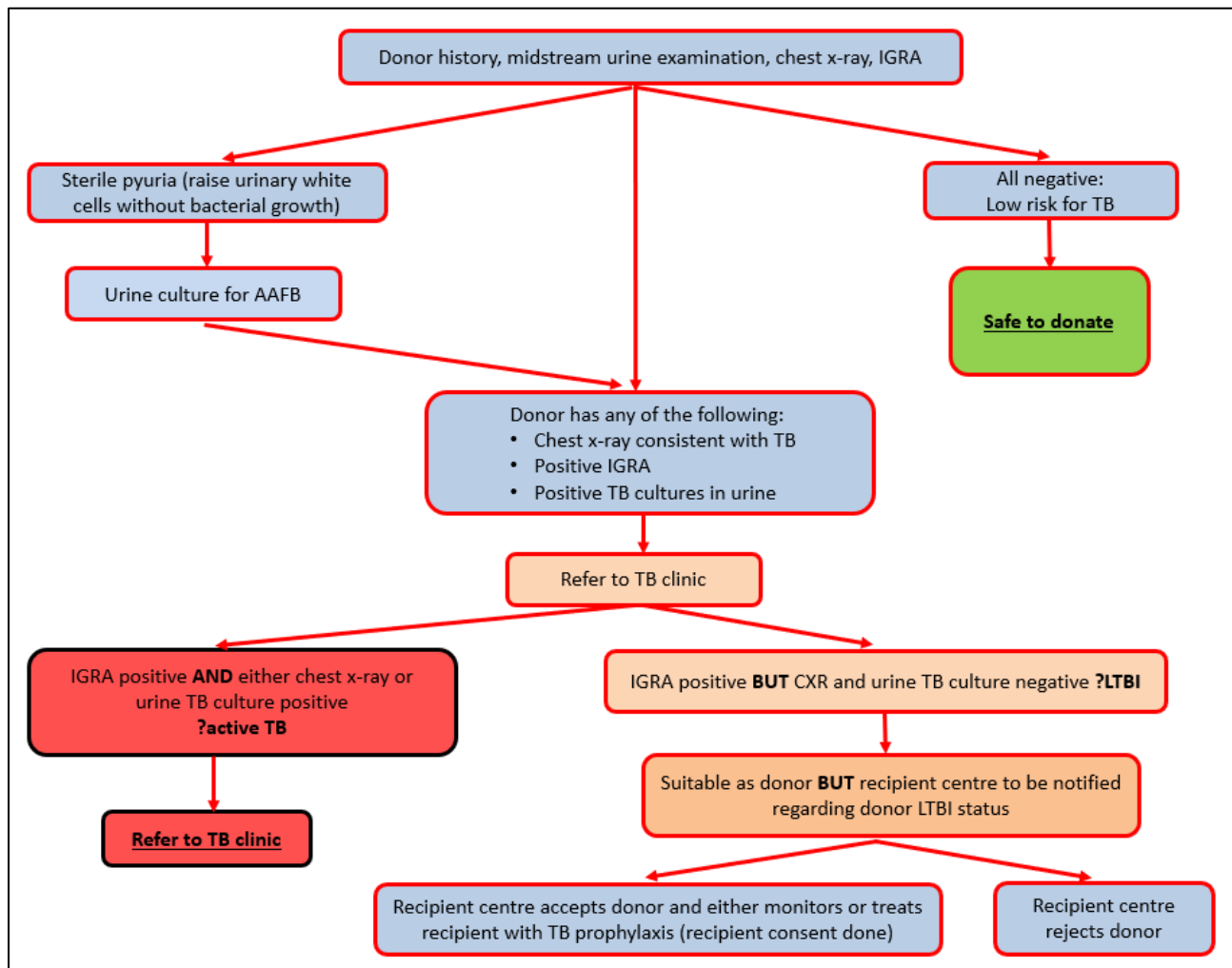
Expected outcome of matched donors with LTBI

At the time of matching the ANZKX will notify a matched recipient centre if a donor has been diagnosed with LTBI and whether treatment has occurred or not. The recipient centre may choose one of three options:

- 1 to reject the donor,
- 2 to accept the donor and give prophylaxis to their recipient or
- 3 to accept the donor and monitor their recipient for TB infection.

*In the situation where a donor is accepted who has been identified with LTBI and has not been treated, informed consent of the recipient must be obtained. The ANZKX **Latent Tuberculosis Donors – Recipient Consent** form will need to be signed, and a copy uploaded to the KPD enrolment in OrganMatch via the transplantation portal.*

When a donor is accepted who has been treated for LTBI, the risk of transmission is exceedingly low. Consequently, the recipient centre will be informed of that the donor has received treatment in order that vigilance for TB occurs in the setting of a febrile illness with their recipient.

Figure 1: Screening for active and latent TB Infection

Contributing Authors

The ANZKX Program would like to thank the following Infectious Diseases physician and microbiologist who provided expert comment on the development of this protocol.

- Dr Peter Boan, Infectious Diseases Physician and Microbiologist, Fiona Stanley Hospital, WA
— Current Chair of the [TSANZ Transplant Infectious Disease Special Interest Group \(TIDSIG\)](#).

References:

- 1 Commonwealth Department of Health, Notification rate and number of notifications of Tuberculosis 2022. *Personal correspondence 25/07/2023.*
- 2 Australia Faces Unique Challenges in Tuberculosis Control and Prevention – Royal College of Pathologists of Australasia (RCPA), 31 July 2024
<https://www.rcpa.edu.au/Library/Publications/PathWay/Docs/Australia-faces-unique-challenges-in-tuberculosis>
- 3 Overcoming barriers in tuberculosis control: a case study from a remote community of South Australia The Lancet Regional Health – Western Pacific, July 2025; Volume 60
Inauen J, Storken A, Gill C et al.
[https://www.thelancet.com/journals/lanwpc/article/PIIS2666-6065\(25\)00141-5/fulltext](https://www.thelancet.com/journals/lanwpc/article/PIIS2666-6065(25)00141-5/fulltext)
- 4 Tuberculosis disease management guidelines and immunisation information – Health New Zealand (Te Whatu Ora)
<https://www.healthnz.govt.nz/health-professionals/guidance-standards/topic/conditions/tuberculosis>
- 5 Registry based Living Kidney Donor Follow-Up in Australia: An ANZLKD Analysis 2003-2021
David NG, et al, Nephrology (Carlton) 2025 Jun 17;30(6)
<https://pmc.ncbi.nlm.nih.gov/articles/PMC12171669/>
- 6 TB incidence – WHO Global Tuberculosis Report 2025
<https://www.who.int/teams/global-programme-on-tuberculosis-and-lung-health/tb-reports/global-tuberculosis-report-2025/tb-disease-burden/1-1-tb-incidence>
- 7 List of countries where tuberculosis (TB) is common – NSW Health (Source: [WHO Global Tuberculosis Report 2025](#)) <https://www.health.nsw.gov.au/Infectious/tuberculosis/Pages/high-incidence-countries.aspx>
- 8 Mycobacterium Tuberculosis infection in solid organ transplantation: Guidelines from the infectious diseases community of practice of the American Society of Transplantation.
Subramanian AK, Theodoropoulos NM; on behalf of the Infectious Diseases Community of Practice of the American Society of Transplantation. Clinical Transplantation Vol 33, Issue 9. Sept 2019.
<https://onlinelibrary.wiley.com/doi/10.1111/ctr.13513>
- 9 Clinical Testing and Diagnosis of Tuberculosis – CDC April 2025
<https://www.cdc.gov/tb/hcp/testing-diagnosis/index.html>
- 10 Tuberculosis NICE Guideline Latent TB Recommendations – National Institute for Health and Care Excellence (NICE), last updated Feb 2024
<https://www.nice.org.uk/guidance/ng33/chapter/Recommendations#latent-tb>
- 11 Diagnosis and Management of Tuberculosis in Transplant Donors: A Donor-Derived Infections Consensus Conference Report. Morris M.I., et al. American Journal of Transplantation, Volume 12, Issue 9 (Sept 2012), pages 2288-2300.
<http://onlinelibrary.wiley.com/doi/10.1111/j.1600-6143.2012.04205.x/epdf>
- 12 Guidance for Identifying Risk Factors for Mycobacterium tuberculosis (MTB) during Evaluation of Potential Living Kidney Donors – Organ Procurement & Transplantation Network (OPTN), March 2026
<https://www.hrsa.gov/optn/professionals/resources/guidance/guidance-for-identifying-risk-factors-for-mycobacterium-tuberculosis-mtb-during>

VERSION CONTROL			
Version	Date	Author	Comments
V 1.0	Jul 2019	ANZKX Team	AKX transitioned to ANZKX.
V 1.0	Feb 2021	ANZKX Team	Reviewed no changes.
V 2.0	Nov 2021	ANZKX Team	MMEx transitioned to OrganMatch.
V 3.0	July 2026	ANZKX Team	- DonateLife logo updated. - QuantiFERON-TB Gold/IGRA (interferon gamma release assay) added to protocol for all donors. - Content reviewed and updated with ID specialist (Dr Peter Boan). - References checked and links updated if required.