

CADTH RAPID RESPONSE REPORT: SUMMARY OF ABSTRACTS

# Tuberculosis Screening for People with Chronic Conditions: Guidelines

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## Research Question

What are the evidence-based guidelines regarding tuberculosis screening for populations with existing chronic conditions?

## Key Findings

One systematic review of guidelines and six evidence-based guidelines were identified regarding tuberculosis screening for populations with existing chronic conditions.

## Methods

A limited literature search was conducted by an information specialist on key resources including PubMed, the Cochrane Library, the University of York Centre for Reviews and Dissemination (CRD) databases, the websites of Canadian and major international health technology agencies, as well as a focused internet search. The search strategy was comprised of both focused controlled vocabulary (wherein the terms appeared in major subject headings only), such as the National Library of Medicine's MeSH (Medical Subject Headings), and keywords. The main search concepts were tuberculosis, screening, and chronic conditions. Search filters were applied to limit retrieval to health technology assessments, systematic reviews, meta-analyses, or network meta-analyses, and guidelines. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2010 and June 24, 2020. Internet links were provided, where available.

This report is a component of a larger CADTH Condition Level Review on tuberculosis. A condition level review is an assessment that incorporates all aspects of a condition, from prevention, detection, treatment, and management. For more information on CADTH's Condition Level Review of tuberculosis, please visit the project page (<https://www.cadth.ca/tuberculosis>).

## Selection Criteria

One reviewer screened citations and selected studies based on the inclusion criteria presented in Table 1.

**Table 1: Selection Criteria**

<b>Population</b>	Any person with an existing chronic condition (e.g., diabetes, renal disease, HIV, organ transplant)
<b>Intervention</b>	Screening for tuberculosis infection (active or latent)
<b>Comparator</b>	No comparator required
<b>Outcomes</b>	Guidelines and recommendations (screening frequency, methods of screening)
<b>Study Designs</b>	Health technology assessments, systematic reviews, evidence-based guidelines

## Results

One systematic review of guidelines<sup>1</sup> and six evidence-based guidelines<sup>2-7</sup> were identified regarding tuberculosis (TB) screening for populations with existing chronic conditions. No relevant health technology assessments were identified.

References of potential interest that did not meet the inclusion criteria are provided in the appendix.

## Overall Summary of Findings

One systematic review of guidelines<sup>1</sup> and six evidence-based guidelines<sup>2-7</sup> regarding TB screening for populations with existing chronic conditions were identified. A summary of relevant recommendations is provided in Table 2. As part of the condition level review, one of the guidelines<sup>4</sup> in this report was previously included in a CADTH report<sup>8</sup> on guidelines for identification of TB. The detailed critical appraisal of these two guidelines can be found in that report.<sup>8</sup>

**Table 2: Summary of Relevant Recommendations**

Systematic Reviews
Hasan, 2019 <sup>1</sup>
<ul style="list-style-type: none"> <li>IGRA and TST should be included in the LTBI screening algorithm of individuals with HIV or those who have received transplants (page 7).</li> </ul>
Evidence-Based Guidelines
Panel on Opportunistic Infections in Adults and Adolescents with HIV, 2019 <sup>2</sup>
<ul style="list-style-type: none"> <li>Individuals with HIV should be tested for LTBI at the time of HIV diagnosis (V-2). <b>(Strong recommendation, quality of evidence: II)</b></li> </ul>
Nast, 2018 <sup>3</sup>
Specific recommendations not available in abstract.
National Institute for Health and Care Excellence, 2016 <sup>4</sup>
<ul style="list-style-type: none"> <li>Both IGRA and TST should be offered to individuals with HIV or those have received a solid organ or allogeneic stem cell transplant (page 16).</li> </ul>
Santin, 2016 <sup>5</sup>
Specific recommendations not available in abstract.
Keith, 2014 <sup>6</sup>
<ul style="list-style-type: none"> <li>Patients with autoimmune bullous dermatoses should be tested for TB prior to starting rituximab treatment.</li> </ul>
World Health Organization, 2013 <sup>7</sup>
<ul style="list-style-type: none"> <li>Individuals with HIV should be screened for active TB at every visit to a health facility (page 68). <b>(Strong recommendation, very low-quality evidence)</b></li> </ul>

IGRA = interferon-gamma release assay; LTBI = latent tuberculosis infection; TB = tuberculosis; TST = tuberculin skin test

## References Summarized

### Health Technology Assessments

No literature identified.

### Systematic Reviews and Meta-Analyses

1. Hasan T, Au E, Chen S, Tong A, Wong G. Screening and prevention for latent tuberculosis in immunosuppressed patients at risk for tuberculosis: a systematic review of clinical practice guidelines. *BMJ Open*. 2018 Sep 12;8(9):e022445.  
[PubMed: PM30209157](#)

### Guidelines and Recommendations

2. Panel on Opportunistic Infections in Adults and Adolescents with HIV. Guidelines for the prevention and treatment of opportunistic infections in adults and adolescents with HIV: recommendations from the Centers for Disease Control and Prevention, the National Institutes of Health, and the HIV Medicine Association of the Infectious Diseases Society of America. 2019.  
[https://aidsinfo.nih.gov/contentfiles/lvguidelines/adult\\_oi.pdf](https://aidsinfo.nih.gov/contentfiles/lvguidelines/adult_oi.pdf)
3. Nast A, Amelunxen L, Augustin M, et al. S3 Guideline for the treatment of psoriasis vulgaris, update - Short version part 2 - Special patient populations and treatment situations. *J Dtsch Dermatol Ges*. 2018 Jun;16(6):806-813.  
[PubMed: PM29873906](#)
4. National Institute for Health and Care Excellence. Tuberculosis. (*NICE Guideline NG33*); 2016. <https://www.nice.org.uk/guidance/ng33>  
*See: Recommendation 1.2.1.3*
5. Santin M, García-García JM, Domínguez J. Guidelines for the use of interferon-γ release assays in the diagnosis of tuberculosis infection. *Enferm Infecc Microbiol Clin*. 2016 May;34(5):303.e301-313.  
[PubMed: PM26917222](#)
6. Keith PJ, Wetter DA, Wilson JW, Lehman JS. Evidence-based guidelines for laboratory screening for infectious diseases before initiation of systemic immunosuppressive agents in patients with autoimmune bullous dermatoses. *Br J Dermatol*. 2014 Dec;171(6):1307-1317.  
[PubMed: PM25130049](#)
7. Systematic screening for active tuberculosis: principles and recommendations. Geneva (CH): WHO; 2013. <https://www.who.int/tb/tbscreening/en/>  
*See: Recommendations on risk groups to be screened for active TB, Recommendation 2, page 68*

## Appendix — Further Information

### Previous CADTH Reports

8. Identification of Tuberculosis: A Review of the Guidelines. (*CADTH Rapid response report: summary with critical appraisal*). Ottawa (ON): CADTH; 2020.  
<https://cadth.ca/identification-tuberculosis-review-guidelines>

### Clinical Practice Guidelines – Unclear Methodology

9. Executive summary of the GeSIDA consensus document on control and monitoring of HIV-infected patients. *Enferm Infecc Microbiol Clin*. 2019 Aug-Sep;37(7):467-475.  
[PubMed: PM29793873](#)
10. Subramanian AK, Theodoropoulos NM. Mycobacterium tuberculosis infections in solid organ transplantation: Guidelines from the infectious diseases community of practice of the American Society of Transplantation. *Clin Transplant*. 2019 Sep;33(9):e13513.  
[PubMed: PM30817030](#)
11. Wyndham-Thomas C, Dirix V, Goffard JC, et al. 2018 Belgian guidelines for the screening for latent tuberculosis in HIV-infected patients. *Acta Clin Belg*. 2019 Aug;74(4):242-251.  
[PubMed: PM30036162](#)
12. Navas C, Torres-Duque CA, Munoz-Ceron J, et al. Diagnosis and treatment of latent tuberculosis in patients with multiple sclerosis, expert consensus. On behalf of the Colombian Association of Neurology, Committee of Multiple Sclerosis. *Mult Scler J Exp Transl Clin*. 2018 Jan-Mar;4(1):2055217317752202.  
[PubMed: PM29372069](#)
13. Rodríguez-Jiménez P, Mir-Viladrich I, Chicharro P, et al. Prevention and treatment of tuberculosis infection in candidates for biologic therapy: A multidisciplinary consensus statement adapted to the dermatology patient. *Actas Dermosifiliogr*. 2018 Sep;109(7):584-601.  
[PubMed: PM29871738](#)
14. Mir Viladrich I, Daudén Tello E, Solano-López G, et al. Consensus Document on Prevention and Treatment of Tuberculosis in Patients for Biological Treatment. *Arch Bronconeumol*. 2016 Jan;52(1):36-45.  
[PubMed: PM26187708](#)
15. Bumbacea D, Arend SM, Eyuboglu F, et al. The risk of tuberculosis in transplant candidates and recipients: a TBNET consensus statement. *Eur Respir J*. 2012 Oct;40(4):990-1013.  
[PubMed: PM22496318](#)
16. Morris MI, Daly JS, Blumberg E, et al. Diagnosis and management of tuberculosis in transplant donors: a donor-derived infections consensus conference report. *Am J Transplant*. 2012 Sep;12(9):2288-2300.  
[PubMed: PM22883346](#)

17. Nordgaard-Lassen I, Dahlerup JF, Belard E, et al. Guidelines for screening, prophylaxis and critical information prior to initiating anti-TNF-alpha treatment. *Dan Med J*. 2012 Jul;59(7):C4480.  
[PubMed: PM22759856](#)

## Review Articles

18. Romanowski K, Clark EG, Levin A, Cook VJ, Johnston JC. Tuberculosis and chronic kidney disease: an emerging global syndemic. *Kidney Int*. 2016;90(1):34-40.  
<https://www.kidney-international.org/article/S0085-2538%2816%2930053-9/pdf>
19. Adamu B. Peculiarities of tuberculosis in kidney transplant recipients. *Ann Afr Med*. 2013 Jul-Sep;12(3):143-147.  
[PubMed: PM24005585](#)
20. Krishnamoorthy S, Kumaresan N, Zumla A. Latent tuberculosis infection and renal transplantation - Diagnosis and management. *Int J Infect Dis*. 2019 Mar;80s:S73-s76.  
[PubMed: PM30738187](#)