

CADTH Reference List

# Antinuclear Antibody Testing for Systemic Lupus Erythematosus or Connective Tissue Disease

**Authors:** Deba Hafizi, Aleksandra Grobelna

**Cite As:** Antinuclear Antibody Testing for Systemic Lupus Erythematosus or Connective Tissue Disease. Ottawa: CADTH; 2021 Jan. (CADTH reference list: summary of abstracts).

**Disclaimer:** The information in this document is intended to help Canadian health care decision-makers, health care professionals, health systems leaders, and policy-makers make well-informed decisions and thereby improve the quality of health care services. While patients and others may access this document, the document is made available for informational purposes only and no representations or warranties are made with respect to its fitness for any particular purpose. The information in this document should not be used as a substitute for professional medical advice or as a substitute for the application of clinical judgment in respect of the care of a particular patient or other professional judgment in any decision-making process. The Canadian Agency for Drugs and Technologies in Health (CADTH) does not endorse any information, drugs, therapies, treatments, products, processes, or services.

While care has been taken to ensure that the information prepared by CADTH in this document is accurate, complete, and up-to-date as at the applicable date the material was first published by CADTH, CADTH does not make any guarantees to that effect. CADTH does not guarantee and is not responsible for the quality, currency, propriety, accuracy, or reasonableness of any statements, information, or conclusions contained in any third-party materials used in preparing this document. The views and opinions of third parties published in this document do not necessarily state or reflect those of CADTH.

CADTH is not responsible for any errors, omissions, injury, loss, or damage arising from or relating to the use (or misuse) of any information, statements, or conclusions contained in or implied by the contents of this document or any of the source materials.

This document may contain links to third-party websites. CADTH does not have control over the content of such sites. Use of third-party sites is governed by the third-party website owners' own terms and conditions set out for such sites. CADTH does not make any guarantee with respect to any information contained on such third-party sites and CADTH is not responsible for any injury, loss, or damage suffered as a result of using such third-party sites. CADTH has no responsibility for the collection, use, and disclosure of personal information by third-party sites.

Subject to the aforementioned limitations, the views expressed herein do not necessarily reflect the views of Health Canada, Canada's provincial or territorial governments, other CADTH funders, or any third-party supplier of information.

This document is prepared and intended for use in the context of the Canadian health care system. The use of this document outside of Canada is done so at the user's own risk.

This disclaimer and any questions or matters of any nature arising from or relating to the content or use (or misuse) of this document will be governed by and interpreted in accordance with the laws of the Province of Ontario and the laws of Canada applicable therein, and all proceedings shall be subject to the exclusive jurisdiction of the courts of the Province of Ontario, Canada.

The copyright and other intellectual property rights in this document are owned by CADTH and its licensors. These rights are protected by the Canadian *Copyright Act* and other national and international laws and agreements. Users are permitted to make copies of this document for non-commercial purposes only, provided it is not modified when reproduced and appropriate credit is given to CADTH and its licensors.

**About CADTH:** CADTH is an independent, not-for-profit organization responsible for providing Canada's health care decision-makers with objective evidence to help make informed decisions about the optimal use of drugs, medical devices, diagnostics, and procedures in our health care system.

**Funding:** CADTH receives funding from Canada's federal, provincial, and territorial governments, with the exception of Quebec.

Questions or requests for information about this report can be directed to [requests@cadth.ca](mailto:requests@cadth.ca)

## Key Message

- No relevant clinical evidence or evidence-based guidelines were identified regarding the clinical effectiveness of antinuclear antibody testing in patients without symptoms for systemic lupus erythematosus or other connective tissue diseases.

## Research Questions

1. What is the clinical effectiveness of antinuclear antibody testing in patients without symptoms for systemic lupus erythematosus or other connective tissue diseases?
2. What are the evidence-based guidelines regarding antinuclear antibody testing in patients without symptoms for systemic lupus erythematosus or other connective tissue diseases?

## Methods

### Literature Search Methods

This report is an update of a literature search strategy developed for a previous CADTH report. For the current report, a limited literature search was conducted on key resources including MEDLINE, the Cochrane Database of Systematic Reviews, the international HTA database, Canadian and major international health technology agencies, as well as a focused internet search. Methodological filters were applied to limit retrieval to health technology assessments, systematic reviews, meta-analyses, and guidelines. Where possible, retrieval was limited to the human population. The initial search was also limited to English-language documents published between January 1, 2010 and March 4, 2015. For the current report, database searches were rerun on January 11, 2021 to capture any articles published since the initial search date. The search of major health technology agencies was also updated to include documents published since March 2015.

### Selection Criteria and Summary Methods

One reviewer screened literature search results (titles and abstracts) and selected publications according to the inclusion criteria presented in Table 1. Full texts of study publications were not reviewed. The Overall Summary of Findings section was based on information available in the abstracts of selected publications. Open-access, full-text versions of evidence-based guidelines were reviewed when abstracts were not available and relevant recommendations were summarized.

### Results

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

**Table 1: Selection Criteria**

Criteria	Description
<b>Population</b>	Patients with no signs or symptoms of systemic lupus erythematosus or connective tissue disease; or without a clinical evaluation that suggests systemic lupus erythematosus or connective tissue disease
<b>Intervention</b>	Antinuclear antibody testing
<b>Comparator</b>	Q1: No screening Q2: Not applicable
<b>Outcomes</b>	Q1: Clinical effectiveness (e.g., benefits and harms [false-positives, harms of follow-up]) Q2: Recommendations regarding the use of antinuclear antibody testing in patients without symptoms for systemic lupus erythematosus or other connective tissues diseases
<b>Study Designs</b>	Health technology assessments, systematic reviews, and evidence-based guidelines

## Overall Summary of Findings

No relevant literature was found regarding the clinical effectiveness of antinuclear antibody testing in patients without symptoms for systemic lupus erythematosus or other connective tissue diseases; therefore, no summary can be provided.

## References

### Health Technology Assessments

No literature was identified.

### Systematic Reviews and Meta-analyses

No literature was identified.

### Guidelines and Recommendations

No literature was identified.

## Appendix 1: References of Potential Interest

### Previous CADTH Reports

1. Antinuclear antibody testing for systemic lupus erythematosus or connective tissue disease: clinical effectiveness and guidelines. (CADTH rapid response report: summary of abstracts). Ottawa (ON): CADTH; 2015: <https://www.cadth.ca/sites/default/files/pdf/htis/mar-2015/RB0816%20ANA%20testing%20for%20SLE%20or%20Connective%20Tissue%20Disease%20Final.pdf> Accessed 2021 Jan 13.

### Non-Randomized Studies

#### *Alternative Intervention*

2. Lesuis N, Hulscher ME, Piek E, et al. Choosing Wisely in Daily Practice: An Intervention Study on Antinuclear Antibody Testing by Rheumatologists. *Arthritis Care Res (Hoboken)*. 2016 Apr;68(4):562-569. [Medline](#)

#### *Population Not Specified*

3. Mohammed AS, Boddu P, Mael D, Samee M, Villines D. Inappropriate use of commercial Antinuclear Antibody Testing in a community-based US hospital: a retrospective study. *J Community Hosp Intern Med Perspect*. 2016;6(4):32031. [Medline](#)

#### *Alternative Population – Signs of Lupus*

4. Ferrari R. Evaluation of the Canadian Rheumatology Association Choosing Wisely recommendation concerning anti-nuclear antibody (ANA) testing. *Clin Rheumatol*. 2015 Sep;34(9):1551-1556.. [Medline](#)

### Position Statements

5. American College of Rheumatology. Position statement. Methodology of testing for antinuclear antibodies. 2009; <https://www.rheumatology.org/Portals/0/Files/Methodology%20of%20Testing%20Antinuclear%20Antibodies%20Position%20Statement.pdf>. Accessed 2021 Jan 19. .

### Review Articles

6. Grygiel-Górniak B, Rogacka N, Puszczewicz M. Antinuclear antibodies in healthy people and non-rheumatic diseases - diagnostic and clinical implications. *Reumatologia*. 2018;56(4):243-248. . [Medline](#)
7. Gallagher K, Viswanathan A, Okhravi N. Association of systemic lupus erythematosus with uveitis. *JAMA Ophthalmol*. 2015 Oct;133(10):1190-1193. [Medline](#)