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CADTH Reference List

Human Leukocyte Antigen B27 for the Detection of Spondyloarthropathy

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Summary of Abstracts

CADTH

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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**

Key Messages

- No evidence was identified regarding the diagnostic accuracy of human leukocyte antigen B27 testing for the detection of spondyloarthropathy in patients with low back pain and no other symptoms.
- No evidence was identified regarding the clinical effectiveness of human leukocyte antigen B27 testing for the detection of spondyloarthropathy in patients with low back pain and no other symptoms.
- No evidence-based guidelines were identified regarding human leukocyte antigen B27 testing for the detection of spondyloarthropathy in patients with low back pain and no other symptoms.

Research Questions

1. What is the diagnostic accuracy of human leukocyte antigen B27 testing for the detection of spondyloarthropathy in patients with low back pain and no other symptoms?
2. What is the clinical effectiveness of human leukocyte antigen B27 testing for the detection of spondyloarthropathy in patients with low back pain and no other symptoms?
3. What are the evidence-based guidelines for human leukocyte antigen B27 testing for the detection of spondyloarthropathy in patients with low back pain and no other symptoms?

Methods

Literature Search Methods

This report is an update of a literature search strategy developed for a previous CADTH report.[1] 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. No filters were applied to limit the retrieval by study type. The initial search was limited to English-language documents published between January 1, 2010 and March 6, 2015. For the current report, database searches were rerun on January 12, 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.

Table 1: Selection Criteria

Criteria	Description
Population	Patients with low back pain and no symptoms of spondyloarthropathy (inflammatory back pain ≥ 3 months duration with age of onset < 45 years, peripheral synovitis, enthesitis, dactylitis, psoriasis, or uveitis)
Intervention	Human leukocyte antigen B27 testing
Comparator	Other tests, testing when symptoms are present
Outcomes	Q1: Diagnostic accuracy (e.g., sensitivity, specificity) Q2: Clinical effectiveness (benefits and harms [e.g., false-positives, false-negatives]) Q3: Recommendations regarding the use of human leukocyte antigen B27 in patients with low back pain and no symptoms of spondyloarthropathy
Study designs	Health technology assessments, systematic reviews, randomized controlled trials, non-randomized studies, evidence-based guidelines

Results

No health technology assessments, systematic reviews, randomized controlled trials, or non-randomized studies were identified regarding the diagnostic accuracy or clinical effectiveness of human leukocyte antigen B27 testing for the detection of spondyloarthropathy in patients with low back pain and no other symptoms. Additionally, no evidence-based guidelines were identified regarding human leukocyte antigen B27 testing for the detection of spondyloarthropathy in patients with low back pain and no other symptoms.

References of potential interest that did not meet the inclusion criteria are provided in Appendix 1.

Overall Summary of Findings

No relevant literature was found regarding the diagnostic accuracy or clinical effectiveness of human leukocyte antigen B27 testing for the detection of spondyloarthropathy in patients with low back pain and no other symptoms. Therefore, no summary can be provided. Additionally, no relevant evidence-based guidelines were found regarding human leukocyte antigen B27 testing for the detection of spondyloarthropathy in patients with low back pain and no other symptoms. Therefore, no summary can be provided.

References

Health Technology Assessments

No literature was identified.

Systematic Reviews and Meta-analyses

No literature was identified.

Randomized Controlled Trials

No literature was identified.

Non-Randomized Studies

No literature was identified.

Guidelines and Recommendations

No literature was identified.

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Appendix 1: References of Potential Interest

Previous CADTH Reports

1. CADTH. Human leukocyte antigen B27 for the detection of spondyloarthropathy: diagnostic accuracy, clinical effectiveness, and guidelines. (*CADTH rapid response report: summary of abstracts*). Ottawa (ON): CADTH; 2015 Mar: https://cadth.ca/sites/default/files/pdf/htis/mar-2015/RB0817%20HLA-B27%20for%20Detection%20of%20Spondyloarthropathy%20Final.pdf Accessed 2021 Jan 18.

Non-Randomized Studies

Alternative Population — Suspected Spondyloarthropathy

2. Riechers E, Baerlecken N, Baraliakos X, et al. Sensitivity and specificity of autoantibodies against CD74 in nonradiographic axial spondyloarthritis. *Arthritis Rheumatol*. 2019 May;71(5):729-735. Medline
3. Ziade N, Abi Karam G, Merheb G, et al. HLA-B27 prevalence in axial spondyloarthritis patients and in blood donors in a Lebanese population: results from a nationwide study. *Int J Rheum Dis*. 2019 Apr;22(4):708-714. Medline
4. Ziade NR, Mallak I, Merheb G, et al. Added value of anti-CD74 autoantibodies in axial SpondyloArthritis in a population with low HLA-B27 prevalence. *Front Immunol*. 2019 Mar;10:574. Medline

Guidelines and Recommendations

Methodology Not Specified

5. Canadian Rheumatology Association. Don't order an HLA-B27 unless spondyloarthritis is suspected based on specific signs or symptoms. In: *Rheumatology: six things physicians and patients should question.* Toronto (ON): Choosing Wisely Canada. 2020 Jul. https://choosingwiselycanada.org/rheumatology/ Accessed 2021 Jan 18.
   See: 2. Don't order an HLA-B27 unless spondyloarthritis is suspected based on specific signs or symptoms.