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CADTH Reference List

Newer Biologics for the Treatment of Plaque Psoriasis

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CADTH

Authors: Shannon Hill, Melissa Walter, Monika Mierzwinski-Urban

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Questions or requests for information about this report can be directed to **requests@cadth.ca**

Key Messages

- Two health technology assessments and 29 systematic reviews (7 with meta-analyses and 19 with network meta-analyses) were identified regarding the clinical effectiveness of newer biologics compared to older biologics in patients with plaque psoriasis.
- Four evidence-based guidelines were identified regarding the use of newer biologics in patients with plaque psoriasis.

Research Questions

1. What is the clinical effectiveness of newer biologics compared to older biologics in patients with plaque psoriasis?
2. What are the evidence-based guidelines regarding the use of newer biologics in patients with plaque psoriasis?

Methods

Literature Search Methods

A limited literature search was conducted by an information specialist on key resources including MEDLINE, Embase, the Cochrane Database of Systematic reviews, the international HTA database, the websites of Canadian and major international health technology agencies, as well as a focused internet search. The search strategy comprised both controlled vocabulary, such as the National Library of Medicine's MeSH (Medical Subject Headings), and keywords. The main search concepts were newer biologics (secukinumab, ixekizumab, brodalumab, or risankizumab) and psoriasis. CADTH-developed search filters were applied to limit retrieval to health technology assessments, systematic reviews, meta-analyses, network meta-analyses, or guidelines. Comments, newspaper articles, editorials, letters, and conference abstracts were excluded. The search was also limited to English language documents published between January 1, 2016 and June 9, 2021. Internet links were provided, where available.

Selection Criteria

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. Open access full-text versions of evidence-based guidelines were reviewed when abstracts were not available.

Results

Two health technology assessments[1,2] and 29 systematic reviews[3-31] (7 with meta-analyses[3,4,6,8,9,11,12] and 19 with network meta-analysis)[13-31] were identified regarding the

Table 1: Selection Criteria

Criteria	Description
Population	Patients (18 years or older) with moderate to severe plaque psoriasis
Intervention	The following newer biologics • Anti-IL-17s (i.e., secukinumab, ixekizumab, brodalumab) • Anti-IL-23 (i.e., risankizumab)
Comparator	Q1: the following older generation biologics • Anti-TNF (i.e., etanercept, adalimumab) • IL12/23 inhibitor (i.e., ustekinumab) • Q2: Not applicable
Outcomes	Q1: Clinical effectiveness (e.g., disease progression, remission, responders, HRQoL), safety (adverse events, harms) Q2: Recommendations regarding which biologics to use and if any biologics were given priority over others
Study designs	Health technology assessments, systematic reviews, evidence-based guidelines

HRQoL = health-related quality of life; IL = interleukin; TNF = tumour necrosis factor.

clinical effectiveness of newer biologics compared to older biologics in patients with plaque psoriasis. Four evidence-based guidelines were identified regarding the use of newer biologics in patients with plaque psoriasis.[32-35]

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

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