Scientific Poster

Formulary Management of Biologics in Plaque Psoriasis in Canada

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Background

- Plaque psoriasis (PsO) biologics can be categorized as old-generation (anti–tumour necrosis factor and anti-interleukin [IL]-12 and IL-23 biologics) or new-generation (IL-17 and IL-23 inhibitors), the latter demonstrating improved efficacy in head-to-head trials.
- There is also an opportunity cost paid for originator biologics after loss of exclusivity (LoE) given the delayed launches and limited uptake of biosimilars in Canada.

Objective

To examine the current funding, exclusivity status, comparative evidence, and usage of biologics for PsO, as well as to estimate the expenses incurred on these medications since the LoE in Canada.

Methods

- Environmental scan of listing status and coverage criteria across Canadian public drug plan formularies
- Critical appraisal of systematic review and network metanalyses in PsO (published between January 1, 2016, and June 9, 2021)
- Retrospective analysis of claims data from the National Prescription Drug Utilization Information System (from 2016 to 2020)

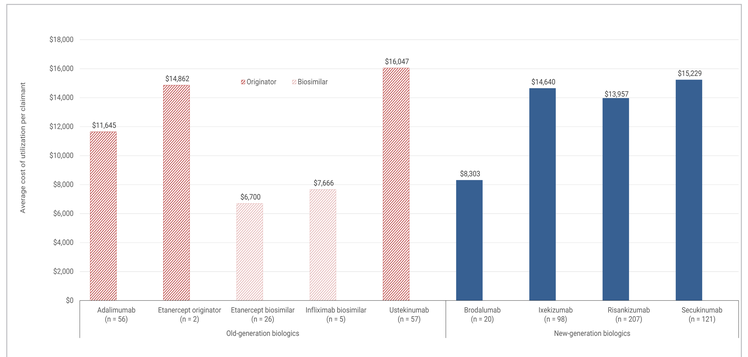
Results

Comparative Safety and Efficacy

- Eight systematic reviews with network meta-analyses were identified. New-generation biologics were more favourable compared to old-generation biologics in reaching 90% or 100% skin clearance, as measured with the Psoriasis Area Severity Index (PASI). The risk of side effects was similar between new-generation and old-generation biologics.
- Modern trials have more stringent primary outcomes for PASI response rates, using higher thresholds (PASI 90 or 100) than older trials (PASI 75). PASI 90 is also associated with improved patient quality of life compared to PASI 75 and has become the standard in measuring therapeutic efficacy in PsO.[1,2]

Costs

Figure 1: National Average Annual Cost of Utilization Per Claimant for PsO Biologics Among New Claimants With PsO Across Public Drug Plans in Canada (2020)



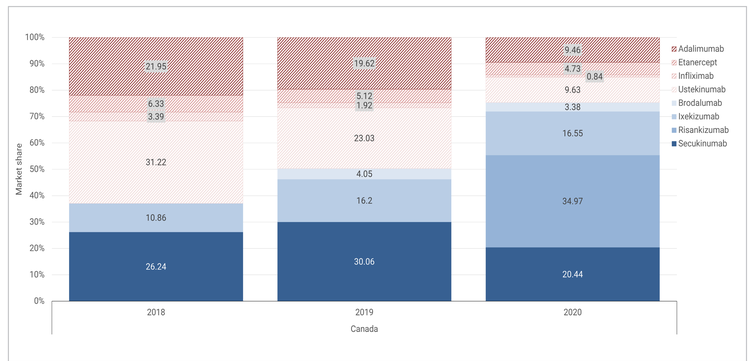
PsO = Plaque psoriasis.

Notes: Solid bars represent new-generation biologics and striped bars represent old-generation biologics.

Costs do not reflect product listing agreements between drug plans and manufacturers. There were no claims for the infliximab originator among new claimants with PsO in 2020.

Utilization

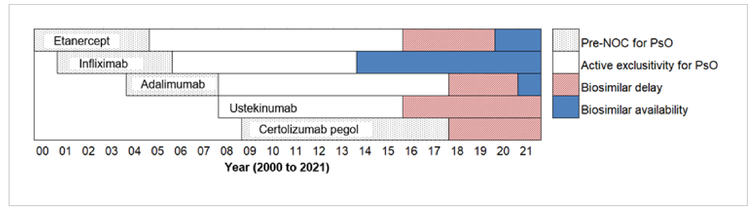
Figure 2: Market Share of Old-Generation Versus New-Generation Biologics Among New Claimants With PsO Across Public Drug Plans in Canada (2018 to 2020)



PsO = Plaque psoriasis.

Exclusivity

Figure 3: Time to Biosimilar Market Entry in Canada



NOC = Notice of Compliance; PsO = Plaque psoriasis.

Expenditures Since LoE

Public payers have spent $28 million on patients with PsO who initiated a biologic beyond its loss of exclusivity from 2016 to 2020.

Conclusions

- Decision-makers must continually review the place in therapy of treatments as new evidence emerges, and the value of costly biologics in Canada should be assessed to ensure their appropriate use.
- Given that biosimilar launches are often delayed in Canada, there is even more rationale to review drugs at or beyond exclusivity, given expenditures on old-generation originators and impending LoE of the new-generation molecules; some IL-17 biologics will soon lose data protection, which can further increase this opportunity cost.

References

1. Puig L. PASI90 response: the new standard in therapeutic efficacy for psoriasis. J Eur Acad Dermatol Venereol. 2015;29(4):645-648. Medline
2. Elewski BE, Puig L, Mordin M, et al. Psoriasis patients with psoriasis Area and Severity Index (PASI) 90 response achieve greater health-related quality-of-life improvements than those with PASI 75-89 response: results from two phase 3 studies of secukinumab. J Dermatolog Treat. 2017;28(6):492-499

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