

**BACKGROUND**

Psoriasis is a chronic immune-mediated skin disease affecting 3% of the Canadian population, with plaque psoriasis (PsO) being the most common subtype.<sup>1,2</sup> The Psoriasis Area Severity Index (PASI) is a validated instrument to assess disease severity. PASI 100 and PASI 90 are commonly used to evaluate treatment effectiveness, indicating a 100% and 90% reduction in PASI score compared with baseline.<sup>2</sup> Biologic therapies have significantly improved the management of PsO.<sup>3</sup> However, their increasing utilization and high cost pose a significant economic burden to healthcare systems.<sup>4</sup> It is important for payers to consider the cost-effectiveness of biologic and subsequent entry biologic (SEB) therapies when making reimbursement decisions.

**OBJECTIVES**

The objective of this study was to assess the cost per responder (CpR) of brodalumab compared with other biologic and subsequent entry biologic (SEB) agents during the first year of therapy for the treatment of moderate to severe PsO in Canada.

**METHODS**

The CpR was calculated by dividing the treatment cost by the percentage of patients who responded to treatment, as defined by PASI score, for currently approved biologic and SEB agents in Canada.

$$\frac{\text{Treatment Cost First Year}}{\% \text{ of patients with PASI response}}$$

A literature search was conducted to identify published network meta-analyses (NMAs) assessing PASI 90 and PASI 100 responses across biologic treatments for PsO after one year of therapy (48–56 weeks). One NMA (Armstrong et al., 2022) met the inclusion criteria.<sup>5</sup> Tildrakizumab, certolizumab, and infliximab were not included in the selected NMA and were therefore excluded from this analysis.

Canadian treatment costs (\$CAD) were calculated using Health Canada-approved dosing regimens for the first year of therapy (including induction and maintenance phases) and Ontario wholesale list prices from the IQVIA DeltaPA database as of October 2025.<sup>6</sup> Cost excludes mark-ups and dispensing fees.

The primary analysis included all biologic treatments in the NMA, regardless of their public reimbursement status. PASI 100 response after one year of treatment was used as the primary outcome, with PASI 90 considered in a secondary analysis. Sensitivity analyses were conducted from the perspective of provincial public drug plans in Ontario, Quebec, and Alberta, using list prices from IQVIA DeltaPA or provincial formularies as of October 2025.

Treatment costs for the first year are provided in Table 1. Adalimumab SEBs have the lowest cost (\$12,724), whereas ixekizumab has the highest cost (\$32,944).

**Table 1. Cost of biologic treatment during the first year (Base Case)**

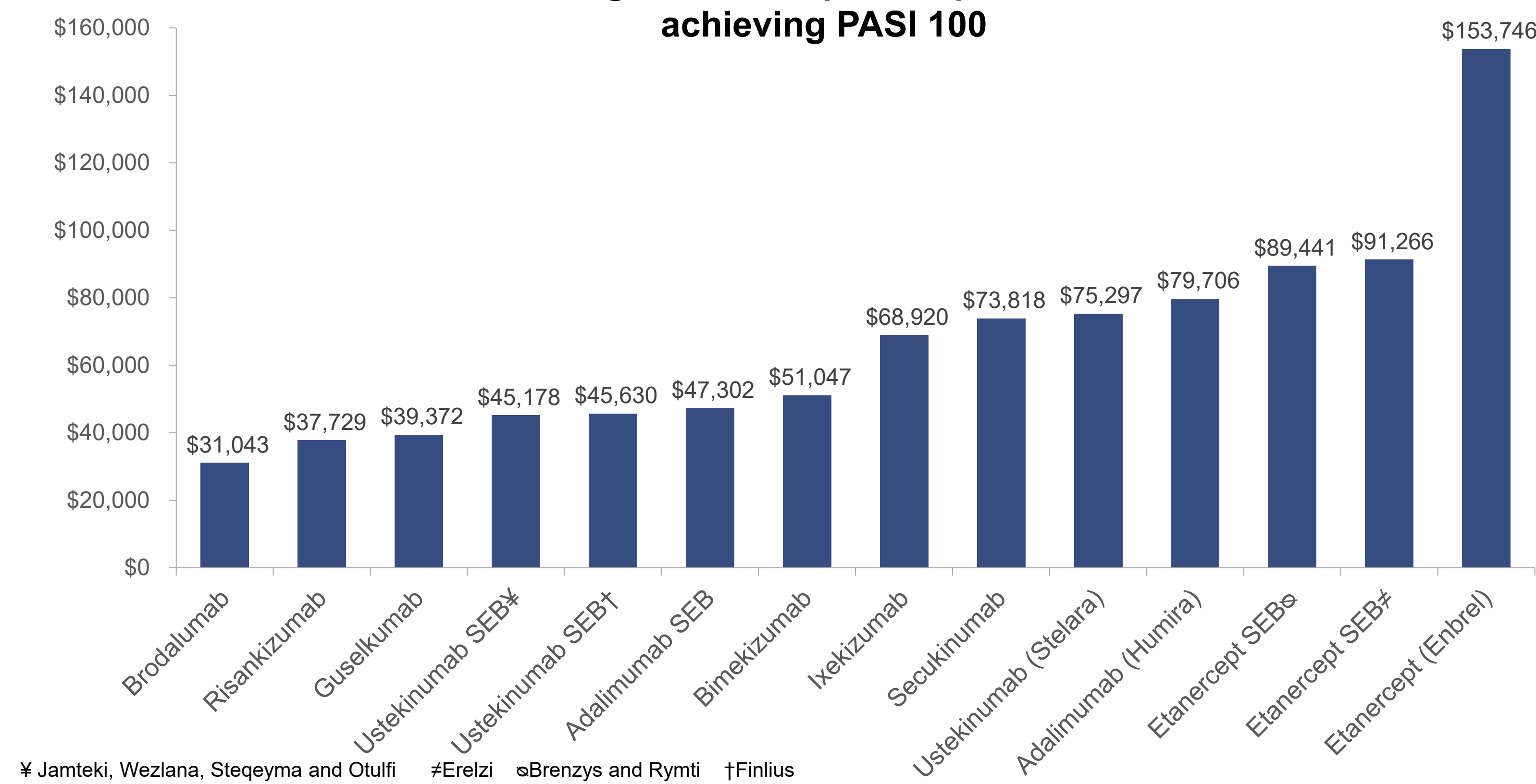
Drug Name	Number of Doses in First Year	Unit Price (\$CAD)	First Year Treatment Cost (\$CAD)
Adalimumab	27	\$ 794	\$ 21,441
Adalimumab SEB	27	\$ 471	\$ 12,724
Bimekizumab	18	\$ 1,625	\$ 29,250
Brodalumab	27	\$ 645	\$ 17,415
Etanercept	64	\$ 406	\$ 25,983
Etanercept SEB*	64	\$ 236	\$ 15,116
Etanercept SEB†	64	\$ 241	\$ 15,424
Guselkumab	7	\$ 3,060	\$ 21,418
Ixekizumab	17	\$ 1,938	\$ 32,944
Risankizumab	5	\$ 4,935	\$ 24,675
Secukinumab	32	\$ 953	\$ 30,487
Ustekinumab	5	\$ 4,593	\$ 22,966
Ustekinumab SEB‡	5	\$ 2,756	\$ 13,779
Ustekinumab SEB†	5	\$ 2,783	\$ 13,917

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**RESULTS - Primary Analysis**

Based on the primary analysis for CpR PASI 100, brodalumab had the lowest CpR at \$31,043 for the first year of treatment, while the etanercept innovator had the highest CpR at \$153,746. Brodalumab's CpR was 18% lower than risankizumab, the nearest comparator, which had a CpR of \$37,729 (Figure 1).

**Figure 1. Cost per Responder achieving PASI 100**



Results from the secondary analysis of CpR PASI 90 were consistent with those of the primary analysis for the lowest and highest CpR comparators. Brodalumab had the lowest CpR at \$22,156 in the first year of treatment, while the etanercept innovator had the highest CpR at \$69,473. Brodalumab's CpR was 12% lower than that of adalimumab SEB, which had a CpR of \$25,048. Detailed results for the secondary analysis of CpR PASI 90 are presented below (Figure not provided):

Brodalumab \$22,156; adalimumab SEB \$25,048; ustekinumab SEB \$25,008–\$25,258; guselkumab \$27,708; risankizumab \$29,064; bimekizumab \$36,839; etanercept SEB \$40,416–\$41,241; ustekinumab innovator \$41,680; adalimumab innovator \$42,206; ixekizumab \$45,756; secukinumab \$46,053; etanercept innovator \$69,473

**CONCLUSION**

These results demonstrate that brodalumab has the lowest first-year CpR across PASI 90 and PASI 100 outcomes compared with other assessed biologic therapies, including SEBs, in Canada. It also has the lowest CpR for PASI 100 in Ontario, Quebec, and Alberta from a provincial public drug plan perspective. PASI response rate is an important factor for dermatologists when determining biologic treatment<sup>7</sup>, and this analysis demonstrates that brodalumab offers the best value for money for patients, prescribers, and payers.

**REFERENCES**

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- Based in part on data obtained under license from IQVIA Solutions Canada Inc. (IQVIA) for the following information service: DeltaPA (Extract Date October 21, 2025). All rights reserved. The statements, findings, conclusions, views, and opinions contained and expressed herein are not necessarily those of IQVIA or any of its affiliated or subsidiary entities.
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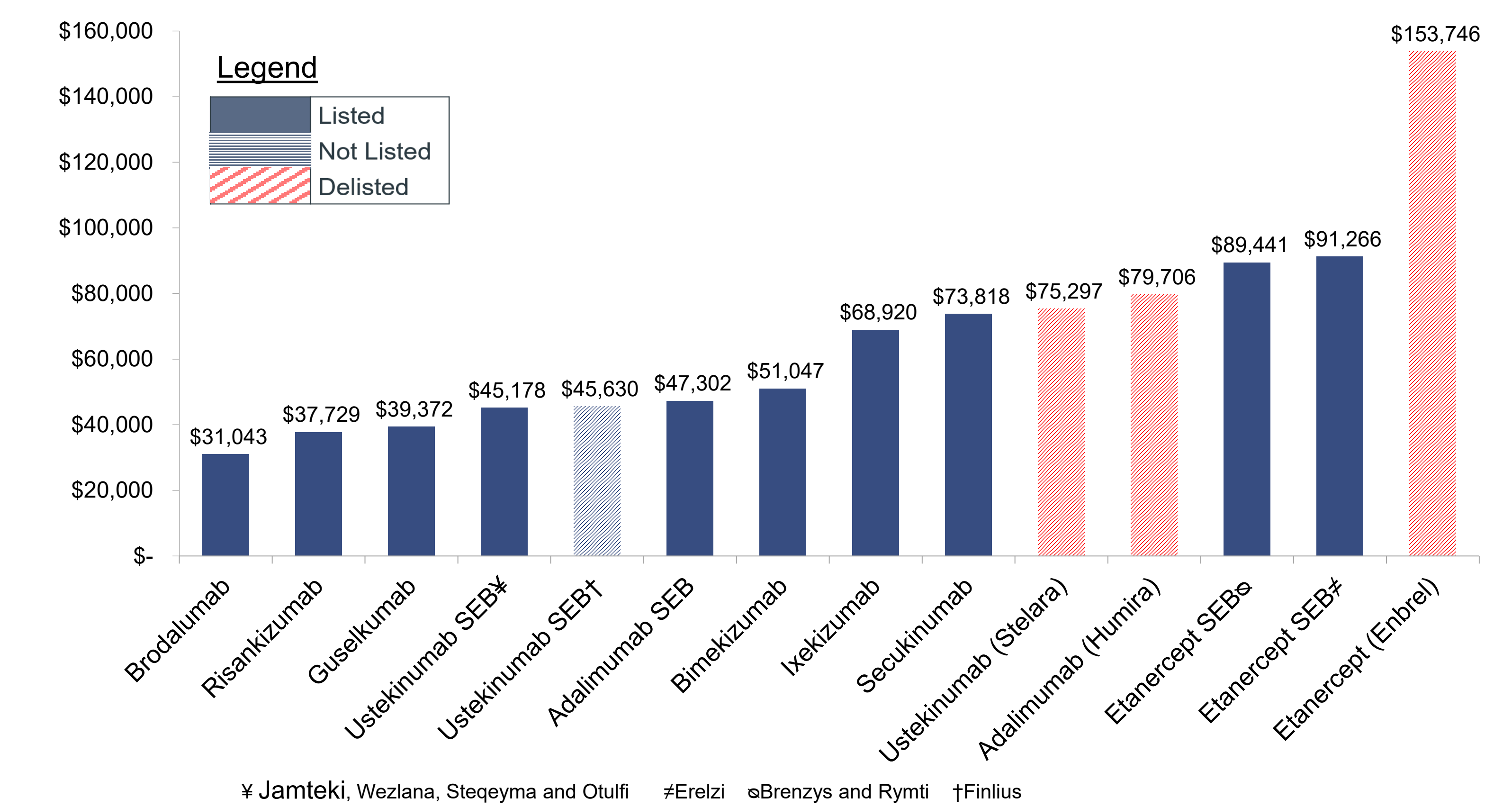
**RESULTS – Sensitivity Analysis**

The sensitivity analysis from the public plan perspective showed variations in CpR ranges compared with the primary analysis (which assumed that all agents were reimbursed) due to the implementation of biosimilar substitution policies and differences in drug listings across jurisdictions.

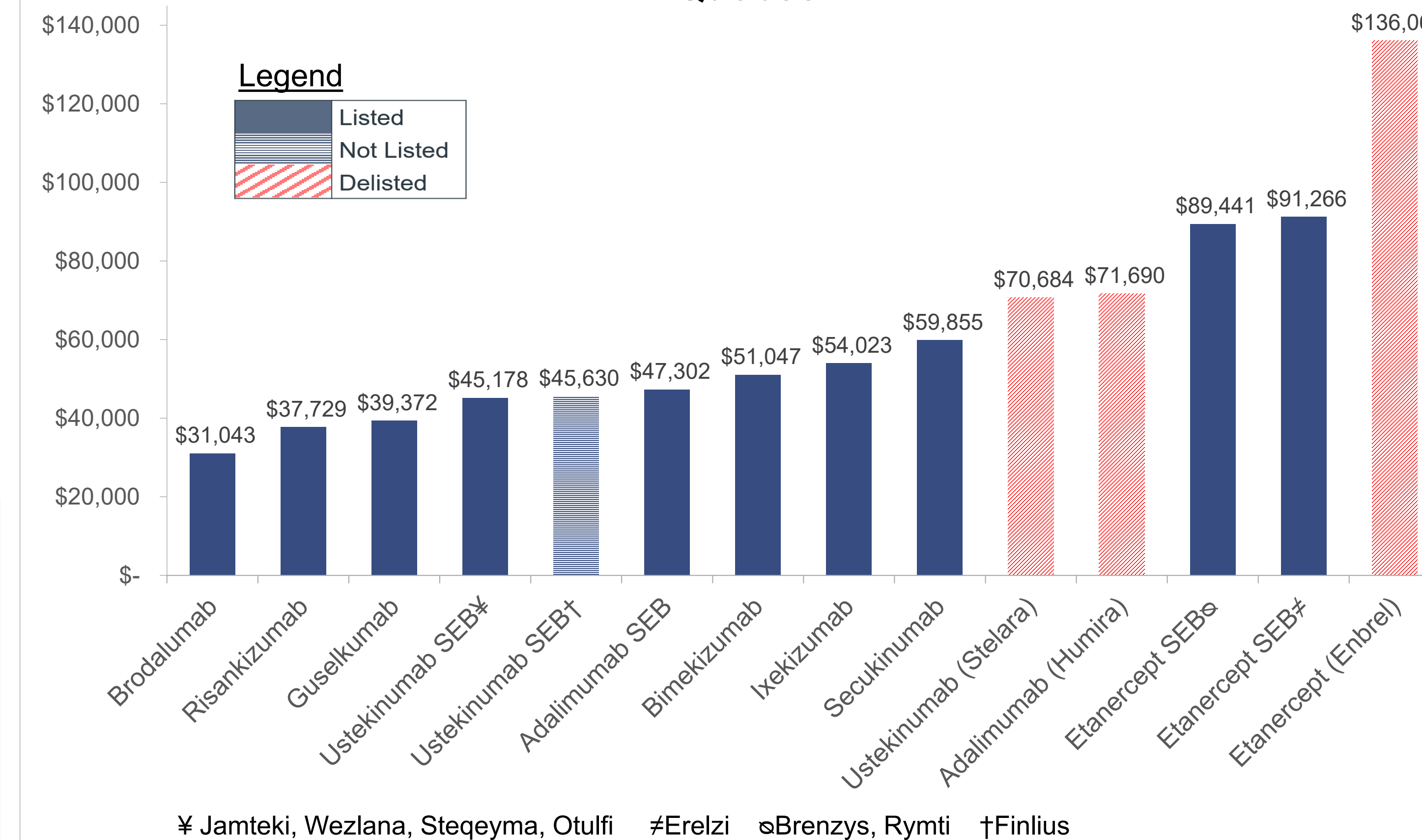
- In Ontario**, the CpR for PASI 100 had a narrower range than in the primary analysis. While brodalumab remained the lowest-cost agent, the upper bound decreased to \$91,266 due to the delisting of the etanercept innovator (Figure 2).
- In Quebec**, the CpR for PASI 100 also had a narrower range than in the primary analysis. While brodalumab remained the lowest-cost agent, the upper bound decreased to \$91,266 due to the delisting of the etanercept innovator\* (Figure 3).
- In Alberta**, the CpR for PASI 100 also had a narrower range: the lower bound increased to \$37,729 because brodalumab is not listed, while the upper bound decreased to \$91,266 due to the delisting of the etanercept innovator (Figure 4).

Existing confidential Product Listing Agreements (PLAs) between provinces and manufacturers are not reflected in the sensitivity analysis; therefore, the results may not represent the actual costs to public drug plans.

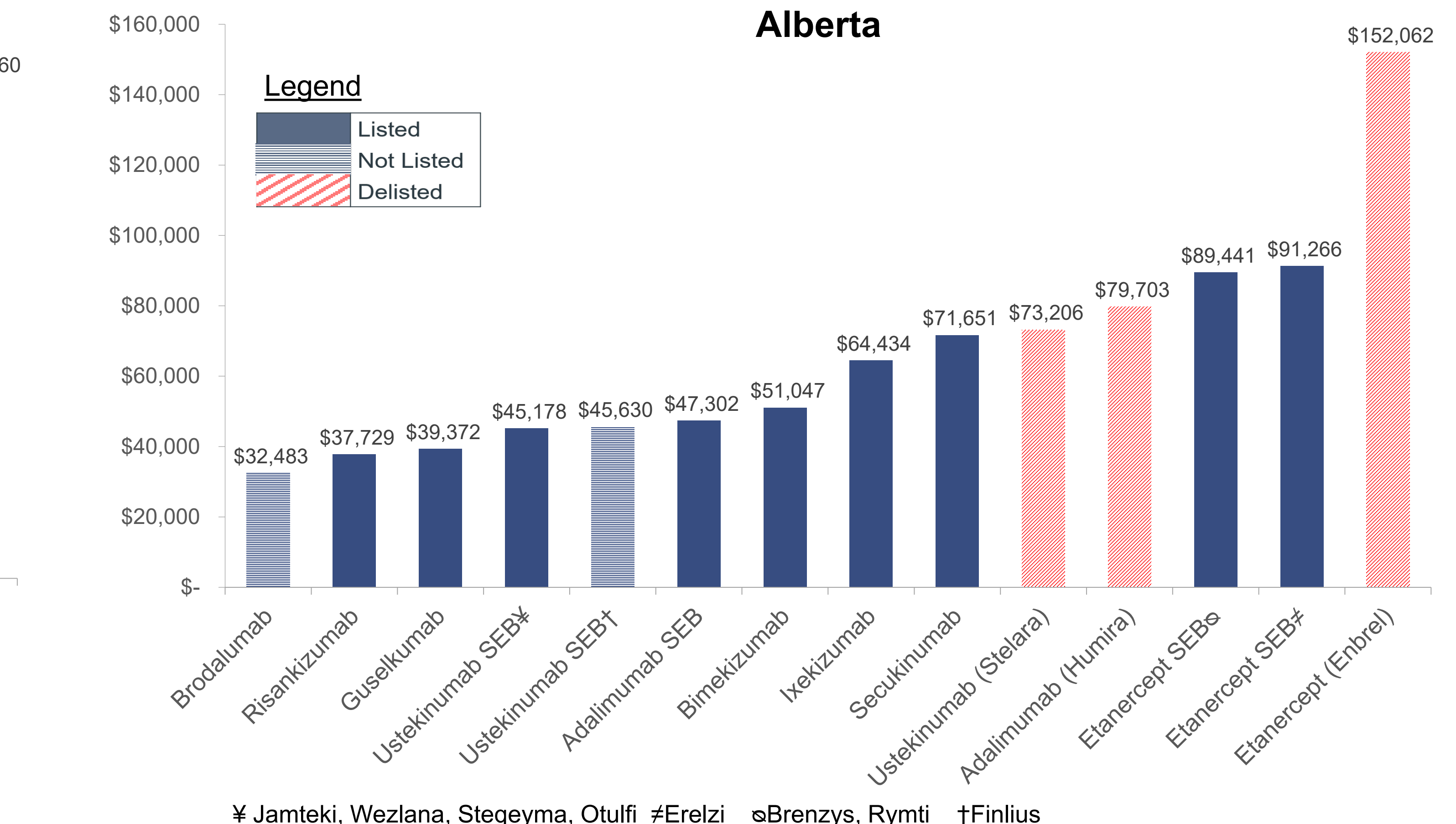
**Figure 2. Cost per Responder for PASI 100 Ontario**



**Figure 3. Cost per Responder for PASI 100 Quebec**



**Figure 4. Cost per Responder for PASI 100 Alberta**



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\* Etanercept, adalimumab and ustekinumab innovators may remain covered in Quebec for select patients undergoing treatment who meet specific criteria