

Cost-per-Responder Analysis of Delgocitinib Topical Cream vs Dupilumab Subcutaneous Injection for Moderate-to-Severe Atopic Hand Eczema in the United States

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BACKGROUND: Chronic hand eczema (CHE) is an inflammatory skin disease of the hands and wrists associated with substantial socioeconomic and quality-of-life burden. Atopic hand eczema (AHE) is a CHE subtype. Delgocitinib (topical pan-Janus kinase inhibitor) is approved in the United States (US) for moderate-to-severe CHE, including AHE. Dupilumab (interleukin-4 and 13 receptor α antagonist) is approved for moderate-to-severe atopic dermatitis (AD), including AHE. **OBJECTIVE:** To evaluate the cost-per-responder (CPR) of delgocitinib vs dupilumab in adults with moderate-to-severe AHE inadequately controlled by topical corticosteroids from the perspective of a US third-party payer. **METHODS:** Annual delgocitinib cost was estimated based on 3.2 flares per year and consumption per flare from published clinical trials. Dupilumab cost was based on a continuous regimen: 600 mg initial dose then 300 mg every 2 weeks. Response rates were obtained from a published matching-adjusted indirect comparison using delgocitinib DELTA 1 and 2 trials (all CHE subtypes) and dupilumab LIBERTY-AD-HAFT trial (hand/foot AD). Response was defined as Investigator's Global Assessment for Chronic Hand Eczema (IGA-CHE) and Hand and Foot Investigator's Global Assessment (HF-IGA) score of 0/1 for CHE and AD, respectively. A 3% annual discount rate and 3-year horizon were applied. **RESULTS:** Delgocitinib showed lower CPR than dupilumab over 3 years. The 3-year CPR was \$102,082 for delgocitinib vs \$380,903 for dupilumab (savings: \$278,821 per responder). **LIMITATIONS:** Data directly comparing delgocitinib and dupilumab efficacy in AHE are not available. **CONCLUSION:** Delgocitinib topical cream had a lower predicted CPR than dupilumab for adults with moderate-to-severe AHE, yielding savings of 73% per responder. **KEYWORDS:** Chronic hand eczema, atopic hand eczema, delgocitinib cream, dupilumab, cost-per-responder

Chronic hand eczema (CHE) is a long-term, painful, pruritic, inflammatory skin disease of the hands and wrists characterized by episodes lasting longer than 3 months or recurring at least twice per year.^{1–3} The primary clinical characteristics include erythema, infiltration, hyperkeratosis, and edema. Other clinical manifestations include oozing, scaling, fissures, lichenification, erosions, itch and pain, dryness, cracking, and bleeding. These symptoms persist over an extended period due to the chronic nature of the disease.⁴ A recent US cross-sectional study, CHECK-US, estimated that 9.6% of the United States (US) population had self-reported physician-diagnosed CHE.⁵ The global 1-year prevalence of CHE is estimated to be between 4.7% and 9.1%.^{6,7}

CHE is a heterogeneous inflammatory skin disease with multiple exogenous (irritants, allergens, and pathogens) and endogenous (immune dysregulation and skin barrier dysfunction) drivers. CHE has 4 key etiologic subtypes: atopic hand eczema (AHE), irritant contact dermatitis, allergic contact dermatitis, and protein contact dermatitis.^{3,8} The CHECK-US study showed that among 928 people with CHE, 52.6% had AHE, 35.6% had allergic contact hand dermatitis, 32.3% had irritant contact hand dermatitis, 21.9% had vesicular/dyshidrotic eczema, and 17.4% had hyperkeratotic hand eczema; almost half of the population (46.5%) had multiple subtype diagnoses.⁹ The severity of CHE is often categorized as mild, moderate, or severe.⁶ Most patients in the CHECK-

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US study (65.1%) had moderate-to-severe disease.⁹

CHE often requires long-term treatment and leads to reduced quality of life and loss of work productivity.^{4,10–12} Notably, health-related quality of life for people with severe CHE is comparable to that for those with other chronic diseases such as rheumatoid arthritis and hepatitis.¹³ The annual cost of illness for a person with CHE in the US was estimated at \$5,425 in 2022,¹⁴ while a different study using workers' compensation claims found that the claims had an average cost to the employer of \$10,197 (2024) and that 11.5% of the claims had lost work time, with an average of 277 days (median 121 days) per claim.^{14,15} Given these negative effects of CHE, both for the person living with CHE and for society, effective disease management is essential.

Topical corticosteroids (TCS) are often used as first-line therapy for CHE.^{8,16} However, prolonged TCS use is associated with various adverse effects, and typically, this treatment is reserved for short-term use.^{16–19} Additionally, TCS have shown limited efficacy in severe CHE,²⁰ and patients with CHE unresponsive to TCS have a lower health-related quality of life compared to that of the CHE population (including all subtypes).^{13,21} The loss of productivity contributed to the total patient cost-month by 43.7%, followed by hospitalization (16.1%) and travel (10.3%), among patients with severe CHE refractory to potent TCS.²¹

In July 2025, delgocitinib cream, a first-in-class topical pan-Janus kinase inhibitor, became the first and only US Food and Drug Administration (FDA)-approved treatment for adults with moderate-to-severe CHE (of all subtypes, including AHE) for whom TCS were inadequate or inappropriate.^{22,23} Subcutaneous (SC) dupilumab, an interleukin (IL)-4/13 receptor α antagonist, is also approved for treatment of moderate-to-severe atopic dermatitis (AD; including when AD affects the hands) when topical therapies are inadequate or inappropriate.^{23–26} A study has shown that dupilumab is used off-label to treat patients with CHE.²⁷

A published matching-adjusted indirect comparison (MAIC) evaluated the efficacy of delgocitinib vs dupilumab using individual patient data from the DELTA 1 (NCT04871711) and DELTA 2 (NCT04872101) phase 3 trials (comparing delgocitinib to a cream vehicle)

and aggregate published data from the LIBERTY-AD-HAFT trial (comparing dupilumab to placebo injection; NCT04417894).²⁶ The DELTA trials included patients with CHE, while the LIBERTY-AD-HAFT trial included patients with AHE only.^{28,29} The MAIC was therefore conducted among patients with AHE to ensure comparability. In the MAIC, 3 endpoints were assessed after 16 weeks: (1) Investigator's Global Assessment of Chronic Hand Eczema (IGA-CHE) score of 0/1 from the DELTA trials, which, though the assessment is different and more stringent, was considered comparable to the Hand and Foot Investigator's Global Assessment (HF-IGA) score of 0/1 from the LIBERTY-AD-HAFT trial; (2) Hand Eczema Severity Index reductions of 90% (HECSI-90) from baseline; and (3) Hand Eczema Severity Index reductions of 75% (HECSI-75) from baseline. There was no statistically significant difference between delgocitinib and dupilumab across all the outcomes. Specifically, the odds ratios (ORs) comparing delgocitinib to dupilumab were 1.1 (95% CI: 0.3–3.4) for IGA-CHE/HF-IGA, 1.3 (95% CI: 0.4–4.9) for HECSI-90, and 1.2 (95% CI: 0.4–3.2) for HECSI-75. While not statistically significant, ORs favored delgocitinib across all endpoints.²⁶

The cost-effectiveness of delgocitinib topical cream vs that of dupilumab SC injection has not previously been investigated in a US setting for patients with AHE. Therefore, the objective of this analysis was to evaluate the cost-per-responder (CPR) of delgocitinib topical cream vs that of dupilumab SC injection in adults with moderate-to-severe AHE for whom TCS were inadequate or inappropriate from the perspective of a US third-party payer.

METHODS

Model overview. The CPR model was developed using Microsoft Excel to compare delgocitinib topical cream to dupilumab SC injection in adults with moderate-to-severe AHE for whom TCS were inadequate or inappropriate. Patients were assumed to remain on their designated treatment of delgocitinib or dupilumab for the entire time horizon of 3 years. The 3-year time horizon was considered adequate to represent all relevant differences in costs. The analysis was conducted from the perspective of a US third-party payer and included direct costs related to drug acquisition and monitoring, expressed in 2025 US dollars.

The model used a 1-week cycle length and applied an annual discount rate of 3% in accordance with the Second Panel on Cost-Effectiveness in Health and Medicine.³⁰

The CPR was derived by dividing the total costs by the proportion of patients who achieved a response, measured by the selected outcome measure. The cost per patient (CPP) represented the average treatment CPP.

Measuring responders. Proportions of patients achieving the desired outcome (ie, clear or almost clear hands) were applied in the model to define responders. Due to a lack of head-to-head data for delgocitinib vs dupilumab, these proportions were sourced from the MAIC comparing the efficacy of delgocitinib to that of dupilumab.²⁶ Three outcome measures were considered:

- The proportion of patients achieving an IGA-CHE/HF-IGA score of 0 or 1
- HECSI-90
- HECSI-75

The proportions of patients achieving a response with the selected outcome measure are shown in **Table 1**.

Cost. Delgocitinib cost was estimated using a flare-based approach, where treatment was administered only during flares, assuming 3.2 flares per year,²⁵ while dupilumab was modeled as continuous therapy.

Delgocitinib was administered twice daily (according to the label), with the consumption per administration being based on clinical trial data.³¹ As delgocitinib is administered during flares, patients are expected to end treatment when they achieve a positive response (ie, clear or almost clear hands) and start treatment when experiencing a new flare. To reflect this, the treatment duration per flare was estimated based on the percentage of patients achieving a positive response (achieving IGA-CHE/HF-IGA, HECSI-90, or HECSI-75) after 1, 2, 4, and 8 weeks of treatment during a clinical trial³² (treatment duration was capped at 8 weeks in line with the average duration per flare²⁵). Even though the data used to estimate treatment duration per flare were sourced from a population with severe CHE, it is assumed to be applicable to patients with moderate-to-severe AHE. The estimated treatment duration was applied in the analysis and differed depending on the selected outcome measure. The estimated treatment duration per flare is presented in

TABLE 1. Overview of key inputs used in the model and their sources

NAME OF PARAMETER	BASE CASE VALUE	SOURCE
Delgocitinib, treatment and monitoring		
Annual monitoring events	0	US FDA ²²
Number of administrations per week in case of flares	14	US FDA ²²
Number of annual flares	3.2	Borg et al ²⁵
Maximum treatment length per flare, weeks	8	Borg et al ²⁵
Estimated treatment duration per flare for IGA-CHE/HF-IGA, weeks	7.3	Giménez-Arnau et al ³²
Estimated treatment duration per flare for HECSI-90, weeks	7.1	Giménez-Arnau et al ³²
Estimated treatment duration per flare for HECSI-75, weeks	5.8	Giménez-Arnau et al ³²
Dupilumab, treatment and monitoring		
Annual monitoring events (physician visit)	1	Goodman, ³³ Neighborhood Health Plan of Rhode Island, ³⁴ OSCAR ³⁵
Initial dose, mg	600	US FDA ²⁴
Maintenance dose, mg	300	US FDA ²⁴
Number of administrations per week	0.5	US FDA ²⁴
Drug acquisition costs, WAC		
Dupilumab (2 pens, 300 mg), \$	3,993.36	NAVLIN ³⁷
Delgocitinib (1 tube, 30 g), \$	1,986.00	NAVLIN ³⁷
Monitoring costs		
Unit costs per physician visit, \$	88.95	Centers for Medicare and Medicaid Services ³⁶
Delgocitinib, efficacy at Week 16		
HECSI-75, %	54	Cohen et al ²⁶
HECSI-90, %	33	Cohen et al ²⁶
IGA-CHE/HF-IGA, %	35	Cohen et al ²⁶
Dupilumab, efficacy at Week 16		
HECSI-75, %	47	Cohen et al ²⁶
HECSI-90, %	19	Cohen et al ²⁶
IGA-CHE/HF-IGA, %	40	Cohen et al ²⁶
Model settings		
Annual discount rate, %	3	Sanders et al ³⁰
Time horizon, years	3	Assumption
HECSI-75: Hand Eczema Severity Index reduction of 75% from baseline; HECSI-90: Hand Eczema Severity Index reduction of 90% from baseline; HF-IGA: Hand and Foot Investigator's Global Assessment; IGA-CHE: Investigator's Global Assessment for Chronic Hand Eczema; US FDA: United States Food and Drug Administration; WAC: wholesale acquisition cost		

Table 1. To summarize, the average weekly cost for delgocitinib was calculated using the average treatment duration per flare, the number of annual flares, the number of administrations, the milligram (mg) consumption per administration, and the cost per mg of delgocitinib.

Per the FDA label, dupilumab was administered continuously with a 600-mg initial dose followed by 300 mg every 2 weeks.²⁴ The dosing and the cost per mg were used to estimate the total costs. Only monitoring activities differing between dupilumab and delgocitinib were considered in the analysis.

Thus, 1 physician visit every year was assumed necessary to monitor patients treated with dupilumab, based on its safety profile and in line with clinical guidelines for dupilumab use in AD.^{24,33–35} The cost of this visit came from the Centers for Medicare and Medicaid Services physician fee schedule.³⁶

Wholesale acquisition costs for delgocitinib and dupilumab as of October 2025 were applied.³⁷ Treatment-specific inputs and unit costs for both treatment regimens are presented in **Table 1**.

Sensitivity analyses. To investigate the robustness of the results and understand

the impact of variation in key model inputs, deterministic sensitivity analyses (DSA) were conducted by separately varying key parameters by $\pm 20\%$: proportion of patients achieving an IGA-CHE/HF-IGA score of 0 or 1, HECSI-90, or HECSI-75; flare frequency; maximum treatment duration per flare for delgocitinib; dosage per application; and discount rate. The results of these analyses are presented using tornado diagrams.

Scenario analyses were performed to assess the robustness of the results when the assumption of an annual monitoring event being required for dupilumab was removed. Thus, only drug acquisition costs were compared.

RESULTS

CPR results. Across the 3 outcome measures of IGA-CHE/HF-IGA, HECSI-90, and HECSI-75, the CPR analyses showed that the delgocitinib total CPR was \$102,082, \$106,839, and \$52,735, respectively, over the 3-year time horizon, while the total 3-year CPR of dupilumab was \$380,903, \$816,510, and \$327,300, respectively, over the 3 years. Delgocitinib costs were lower by \$278,821, \$709,671, and \$274,565 for outcome measures IGA-CHE/HF-IGA, HECSI-90, and HECSI-75, respectively, per responder over the period of 3 years. The percentage reduction in CPR from using delgocitinib instead of dupilumab over the 3-year time horizon was 73%, 87%, and 84% using IGA-CHE/HF-IGA, HECSI-90, and HECSI-75, respectively. The CPR over 3 years is presented in **Figure 1**. **Table 2** presents the CPR in more detail.

CPP results. The results of the analyses showed that the total CPP for delgocitinib was \$28,530 to \$36,137 over the 3-year time horizon, depending on the outcome measure used to define responders. The variation in the CPP results for delgocitinib is due to 3 variations in treatment duration. As dupilumab is a continuous treatment, the CPP of dupilumab was \$153,504 over the 3-year time horizon, regardless of the outcome measure used to define responders. The cost savings from the use of delgocitinib vs dupilumab ranged from \$117,367 to \$124,974 (76%–81%) per patient, depending on the outcome measure used to define responders. The CPP over the 3-year time horizon is presented in **Figure 2**. The CPP results are presented in more detail in **Table 3**.

Sensitivity analyses. The DSA varied the key parameters by $\pm 20\%$, including the proportion of patients achieving an IGA-CHE/HF-IGA score of 0 or 1, HECSI-90, or HECSI-75; flare frequency; maximum treatment duration per flare for delgocitinib; dosage per administration; and discount rate. The DSA results are presented in **Figure 3** and show the difference in CPR between delgocitinib and dupilumab. The parameters with the greatest impact on CPR were dupilumab efficacy, treatment duration per flare for delgocitinib, delgocitinib efficacy, and the delgocitinib dose per administration.

In the analysis using IGA-CHE/HF-IGA to define responders, the DSA showed that varying the 4 most impactful key parameters separately by $\pm 20\%$ resulted in the following differences in CPR between delgocitinib and dupilumab: dupilumab efficacy ($-\$374,047$ to $-\$215,337$), delgocitinib treatment duration per flare ($-\$327,749$ to $-\$278,821$), delgocitinib efficacy ($-\$295,835$ to $-\$253,300$), and delgocitinib dose per administration ($-\$299,237$ to $-\$258,405$); thus, the CPR was lower for delgocitinib vs dupilumab in all instances.

Similarly, in the analysis using HECSI-90, the DSA resulted in the following differences in CPR between delgocitinib and dupilumab for each varied parameter: dupilumab efficacy ($-\$913,798$ to $-\$573,586$), delgocitinib treatment duration per flare ($-\$759,690$ to $-\$709,671$), delgocitinib efficacy ($-\$727,477$ to $-\$682,961$), and delgocitinib dose per administration ($-\$731,039$ to $-\$688,303$). The results indicated that the CPR was lower for delgocitinib vs dupilumab in all instances.

Lastly, in the analysis using HECSI-75, the DSA found the following differences in CPR between delgocitinib and dupilumab for each varied parameter: dupilumab efficacy ($-\$356,390$ to $-\$220,015$), delgocitinib efficacy ($-\$283,354$ to $-\$261,381$), delgocitinib treatment duration per flare ($-\$296,030$ to $-\$274,565$), and delgocitinib dose per administration ($-\$285,112$ to $-\$264,018$); again, results indicated that the CPR was lower for delgocitinib vs dupilumab in all instances.

The DSA thereby showed that delgocitinib remained lower in CPR across all varied parameters regardless of the outcome measure used to define responders.

The scenario analysis showed that excluding monitoring events for dupilumab had a minimal impact on the 3-year savings per responder

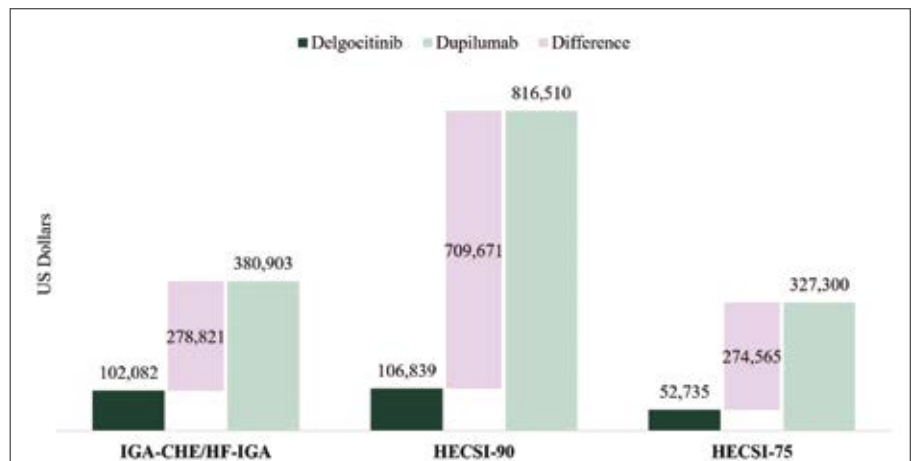


FIGURE 1. Total cost-per-responder results over 3 years for each outcome measure for delgocitinib and dupilumab
HECSI-75: Hand Eczema Severity Index reduction of 75% from baseline; HECSI-90: Hand Eczema Severity Index reduction of 90% from baseline; IGA-CHE/HF-IGA: Investigator's Global Assessment of Chronic Hand Eczema/Hand and Foot Investigator's Global Assessment; US: United States

TABLE 2. The cost-per-responder results for each outcome measure in Year 1, Year 2, and Year 3 for delgocitinib and dupilumab, in United States dollars

		YEAR 1	YEAR 2	YEAR 3
IGA-CHE/HF-IGA	Delgocitinib	35,038	34,017	33,027
	Dupilumab	133,993	125,280	121,631
	Difference	-98,955 (74%)	-91,262 (73%)	-88,604 (73%)
HECSI-90	Delgocitinib	36,671	35,603	34,566
	Dupilumab	287,229	268,552	260,730
	Difference	-250,558 (87%)	-232,949 (87%)	-226,164 (87%)
HECSI-75	Delgocitinib	18,100	17,573	17,061
	Dupilumab	115,136	107,650	104,514
	Difference	-97,036 (84%)	-90,076 (84%)	-87,453 (84%)

HECSI-75: Hand Eczema Severity Index reduction of 75% from baseline; HECSI-90: Hand Eczema Severity Index reduction of 90% from baseline; IGA-CHE/HF-IGA: Investigator's Global Assessment of Chronic Hand Eczema/Hand and Foot Investigator's Global Assessment

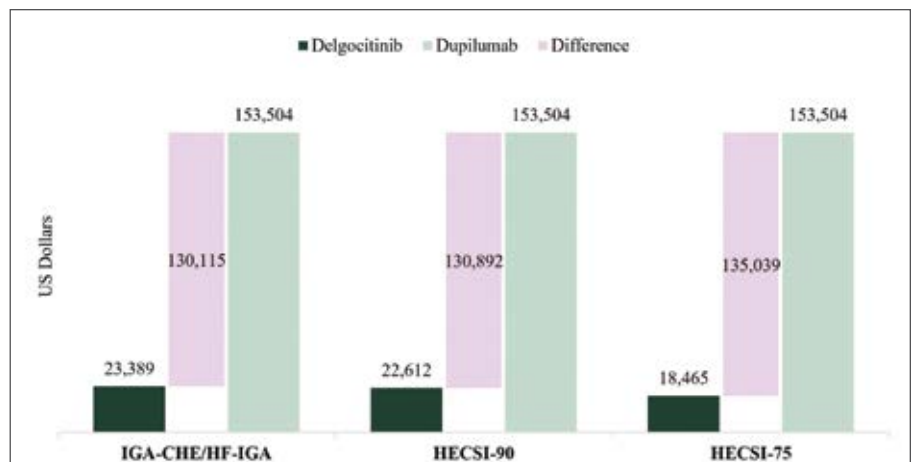


FIGURE 2. Total cost-per-patient results over 3 years for each outcome measure for delgocitinib and dupilumab
HECSI-75: Hand Eczema Severity Index reduction of 75% from baseline; HECSI-90: Hand Eczema Severity Index reduction of 90% from baseline; IGA-CHE/HF-IGA: Investigator's Global Assessment of Chronic Hand Eczema/Hand and Foot Investigator's Global Assessment; US: United States

TABLE 3. The cost-per-patient results for each outcome measure in Year 1, Year 2, and Year 3 for delgocitinib and dupilumab, in United States dollars

		YEAR 1	YEAR 2	YEAR 3
IGA-CHE/HF-IGA	Delgocitinib	12,403	12,042	11,691
	Dupilumab	53,999	50,488	49,017
	Difference	-41,596 (77%)	-38,446 (76%)	-37,326 (76%)
HECSI-90	Delgocitinib	11,991	11,642	11,303
	Dupilumab	53,999	50,488	49,017
	Difference	-42,008 (78%)	-38,846 (77%)	-37,714 (77%)
HECSI-75	Delgocitinib	9,792	9,507	9,230
	Dupilumab	53,999	50,488	49,017
	Difference	-44,207 (82%)	-40,981 (81%)	-39,787 (81%)

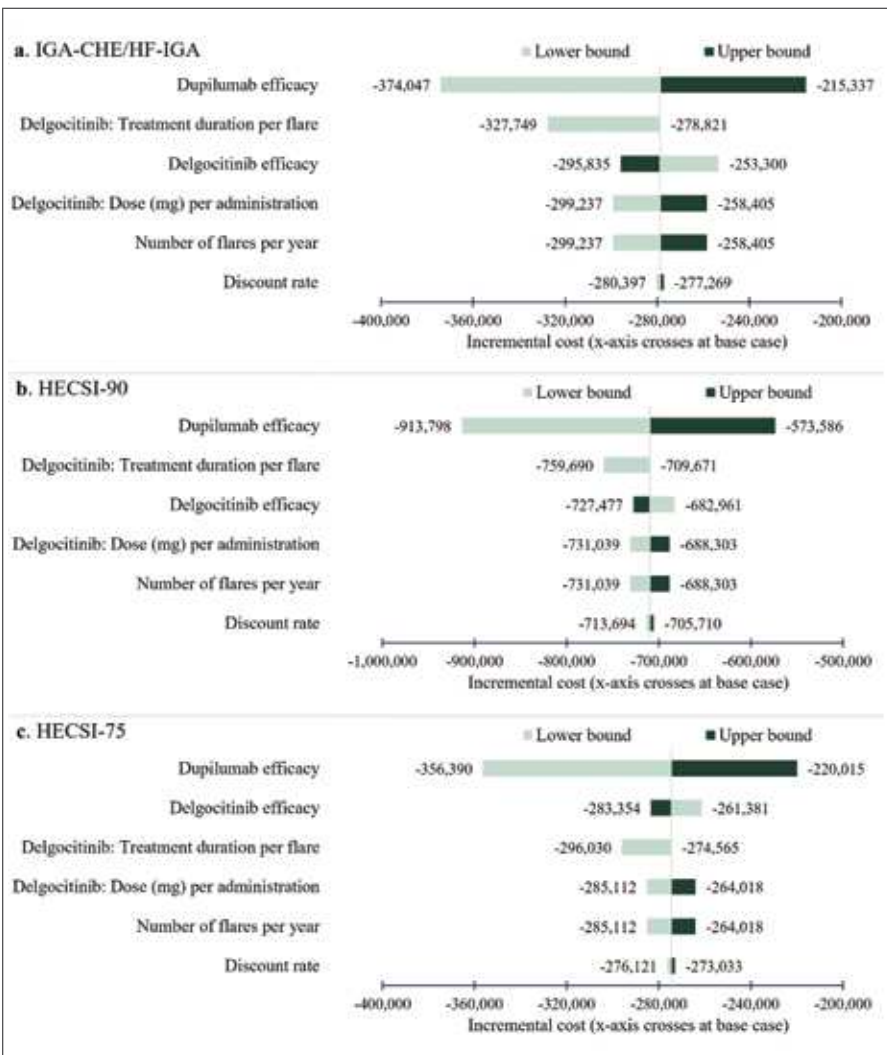
HECSI-75: Hand Eczema Severity Index reduction of 75% from baseline; HECSI-90: Hand Eczema Severity Index reduction of 90% from baseline; IGA-CHE/HF-IGA: Investigator's Global Assessment of Chronic Hand Eczema/Hand and Foot Investigator's Global Assessment

when comparing delgocitinib to dupilumab. In the analysis using IGA-CHE/HF-IGA, the difference between the base case and the scenario without monitoring costs was \$641 (\$278,821 vs \$278,180). Using HECSI-90, the difference was \$1,374 (\$709,671 vs \$708,297), and for HECSI-75, the difference was \$550 (\$274,565 vs \$274,015).

DISCUSSION

This analysis evaluated the CPR of delgocitinib topical cream vs dupilumab SC injection in adults with moderate-to-severe AHE for whom TCS were inadequate or inappropriate from the perspective of a US third-party payer. To our knowledge, this is the first analysis to assess the CPR of delgocitinib compared to that of dupilumab. The model demonstrated that delgocitinib topical cream had a lower CPR compared to dupilumab SC injection. The 3-year savings per responder when delgocitinib was used instead of dupilumab ranged from \$274,565 to \$709,671 (73%–87%), dependent on the outcome measure used to define responders. The CPR difference was smallest when using HECSI-75 and largest when using HECSI-90. The large disparity in CPR for dupilumab when using HECSI-90 to define responders compared to using HECSI-75 or IGA-CHE/HF-IGA can be explained by differences in the response rates across the different endpoints. The response rates were 47% for HECSI-75, 40% for IGA-CHE/HF-IGA, and only 19% for HECSI-90 for dupilumab. Since the response rate is used to estimate the CPR by dividing the total cost by the response rate, a lower response rate results in a higher CPR.

The CPP of delgocitinib was also lower than that of dupilumab. The 3-year savings per patient when delgocitinib was used instead of dupilumab ranged from \$117,367 to \$124,974. While the CPP for delgocitinib was lower than for dupilumab, the savings were larger when considering the CPR. The DSA reinforced the results of the analysis, as the lower CPR of delgocitinib cream vs that of dupilumab SC injection for moderate-to-severe AHE was robust to $\pm 20\%$ variations in key parameters. The 4 parameters most strongly impacting the results were dupilumab efficacy, the maximum treatment duration per flare for delgocitinib, delgocitinib efficacy, and the dose per administration of delgocitinib. The relative

**FIGURE 3.** Results of the deterministic sensitivity analyses showing the impact on the incremental cost per responder of varying key parameters by $\pm 20\%$, US dollars

HECSI-75: Hand Eczema Severity Index reduction of 75% from baseline; HECSI-90: Hand Eczema Severity Index reduction of 90% from baseline; IGA-CHE/HF-IGA: Investigator's Global Assessment of Chronic Hand Eczema/Hand and Foot Investigator's Global Assessment, US: United States

impact of each parameter varied depending on the outcome measure selected. Furthermore, the scenario analysis showed that the results were unaffected by removal of the assumption that dupilumab required an annual monitoring event, as the CPR changed by less than \$1,400 in all outcome measures. Thus, delgocitinib continued to demonstrate a lower CPR compared to dupilumab in this scenario.

Systemic treatments such as dupilumab typically have more safety considerations than topical treatments.³⁸ A recent budget impact analysis predicted that delgocitinib coverage for moderate-to-severe CHE unsuitable for TCS would reduce monitoring and adverse event costs vs standard care (including systemics) in a hypothetical US commercial health plan.³⁹ In the present study, the costs of adverse events were not included in the model; exclusion of these safety considerations might have resulted in underestimation of cost savings associated with delgocitinib.

In Europe and Canada, alitretinoin is approved for the treatment of severe CHE, and evidence suggests that it may also be used as an off-label treatment for moderate-to-severe CHE.^{38–42} The CPR of delgocitinib reported in this study was supported by a German analysis that assessed the CPR of delgocitinib vs that of alitretinoin in a population with moderate-to-severe CHE. The German CPR analysis was based on head-to-head efficacy data and showed that delgocitinib had a lower CPR compared to alitretinoin using both IGA-CHE and HECSI-90 to define responders.⁴³ However, alitretinoin is not approved by the FDA and was therefore not considered a comparator in a US setting.

This study focused on patients with AHE because dupilumab is not approved by the FDA for all subtypes of CHE. Since the CPR of delgocitinib in this study was only assessed in the AHE subtype, the study may underestimate the relative value of delgocitinib in the CHE population (including all subtypes). Future research should explore real-world effectiveness and long-term outcomes of delgocitinib and its comparators in the CHE population (including all subtypes). Efficacy data in the CHE population (including all subtypes) could provide stronger evidence for the lower CPR of delgocitinib compared to that of alternative treatments. For now, this study serves as a first step in considering delgocitinib as a low-CPR treatment for CHE in the US.

Strengths and limitations. A key strength of this study lies in the flare-based model structure, which captures the episodic nature of CHE more realistically compared to continuous models. When delgocitinib is modeled as a treatment administered at the discretion of the healthcare provider during CHE flares (rather than as a continuous treatment), the cost of delgocitinib is more accurately predicted and aligns with the expected use. Estimated delgocitinib use in the present analysis was informed by a retrospective chart review of 792 patients with moderate-to-severe CHE treated with topical or systemic therapy, with a mean number of 3.2 flares in a typical 12-month period (SD: 1.7; range: 1–12).²⁵ Flare rate varies between patients; in the present investigation, DSA, which varied the flare rate, supported the conclusions of the primary analysis. Dupilumab was administered continuously in the model to comply with the label.²⁴ In that way, the treatment pathways of both dupilumab and delgocitinib were represented as accurately as possible. Furthermore, the CPR approach was chosen for its simplicity and clinical relevance. Unlike other modeling approaches (eg, cost-utility analyses), CPR directly links treatment cost to achieving a defined clinical response, making it suitable for conditions like AHE. While CPR is easier to interpret and requires fewer assumptions, it does not typically capture long-term health benefits or indirect costs, which are typically addressed in cost-utility analyses. Therefore, CPR analyses should be viewed as a complementary method that provides clear, actionable insights when comparing therapies to different dosing regimens and efficacy profiles.^{42–45}

A limitation of this study was that due to a lack of head-to-head data for delgocitinib vs dupilumab, the response rates used in the model were sourced from an MAIC.²⁶ Indirect comparisons must meet the assumption of transitivity, which requires that studies used in indirect comparisons be comparable in design, study population, outcomes, and interventions.^{46–48} An MAIC addresses this assumption by matching study populations as identically as possible on selected baseline parameters, thereby allowing comparison. By matching study populations in this way, an MAIC may be more reliable than other indirect comparison methods in which study populations might vary. It could be argued

that most characteristics across the studies in the MAIC used in the present analysis met the transitivity assumption. An important potential challenge to the transitivity assumption was that 52% of the patients in the LIBERTY-AD-HAFT trial who received dupilumab had moderate-to-severe AD on body parts other than the hands,²⁹ whereas patients with AD involvement on parts of the body other than the hand were excluded from the DELTA trials. In clinical practice, patients with moderate-to-severe AD involving areas other than the hands and feet may be more likely to receive systemic treatment, such as dupilumab, than topical treatment alone. Adjusting the population in the MAIC to exclude patients with AD involvement beyond the hands could affect the outcome of the MAIC and, thereby, the CPR estimates of the model. However, clinical data indicate that dupilumab efficacy is comparable across anatomical regions,^{29,49,50} and for the conclusions of the present CPR analysis to change, the efficacy of dupilumab would need to increase dramatically relative to delgocitinib. Thus, minor adjustments in population are unlikely to offset the substantial CPR gap favoring delgocitinib as cost effective compared to dupilumab, as shown in a DSA. Additionally, in the MAIC, the IGA-CHE scale used in the DELTA trials was compared to the HF-IGA scale in the LIBERTY-AD-HAFT trial. While both scales have an equal number of levels, they differ slightly in the description of each level, with the IGA-CHE scale having stricter definitions for the lower levels than the HF-IGA scale does. This could have caused an underestimation of the efficacy of delgocitinib in the comparison.²⁶

Furthermore, before performing the MAIC, some patients had to be excluded. This could render efficacy parameters more uncertain. However, this limitation was partially addressed by the large variations in key parameters in the DSA, which revealed that the CPR results were robust to $\pm 20\%$ changes in the response rates.

CONCLUSION

The CPR model suggests that delgocitinib topical cream reduces CPR compared to dupilumab SC injection for treating patients with moderate-to-severe AHE. Delgocitinib addresses a critical unmet need and provides clinical and economic value to patients with CHE, payers, and society.

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