

Patient Preferences in Moderate-to-Severe Atopic Dermatitis (AD): A Discrete Choice Experiment (DCE)



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Objectives

- This discrete choice experiment (DCE) assessed and quantified the extent to which patients with moderate-to-severe AD in the US value different treatment attributes.

Results

- A total of N=300 participants completed the survey, with a mean age of 45 years (participant characteristics are shown in **Figure 2**).
- Clinical characteristics of the cohort are shown in **Figure 3**.
- Preference for Treatment Attributes**
- In the DCE, results from a conditional logit regression model showed that participants demonstrated strong preference for treatments with higher efficacy (in particular, higher chance of itch control), lower risk of adverse events (AEs), and less frequent blood tests ($p < 0.05$) (**Table 1**; **Figure 4**).
 - Frequency and mode of administration (i.e., oral vs injectable) did not significantly impact treatment choice ($p > 0.05$).

- These results also indicated that participants were willing to trade off varying chances of achieving meaningful itch control to avoid AE risks.
 - On average, participants were willing to trade off 35.4, 17.7, and 1.2 percentage points in the chance of achieving itch control to avoid 1 percentage point risk of cancer, heart problems, and respiratory infections, respectively (**Table 1**).

- Part-worth utility demonstrated the utility associated with each attribute level (**Figure 4**). Treatment attributes, from high to low relative importance, were itch control (38%), followed by risk of cancer (23%), risk of respiratory infections (18%), risk of heart problems (11%), sustained improvement in skin appearance (5%), blood test frequency (3%), and frequency and mode of administration (2%) (**Figure 5**).

- Results indicate that AD patients are more concerned with controlling itch than in improving skin appearance.

- Findings from the sensitivity analyses (N=219), excluding participants failing the dominance test and/or stability test, were consistent with the results generated from the full sample, indicating robustness of the findings (data not shown).

Conclusions

- Patients prefer treatments that maximize the chance of achieving meaningful itch control while minimizing the risk of AEs (cancer, respiratory infections, heart problems).
- These findings provide a basis for healthcare providers to identify and discuss treatment trade-offs with patients, which may help improve shared decision-making.

Figure 2. Participant Characteristics (N = 300)

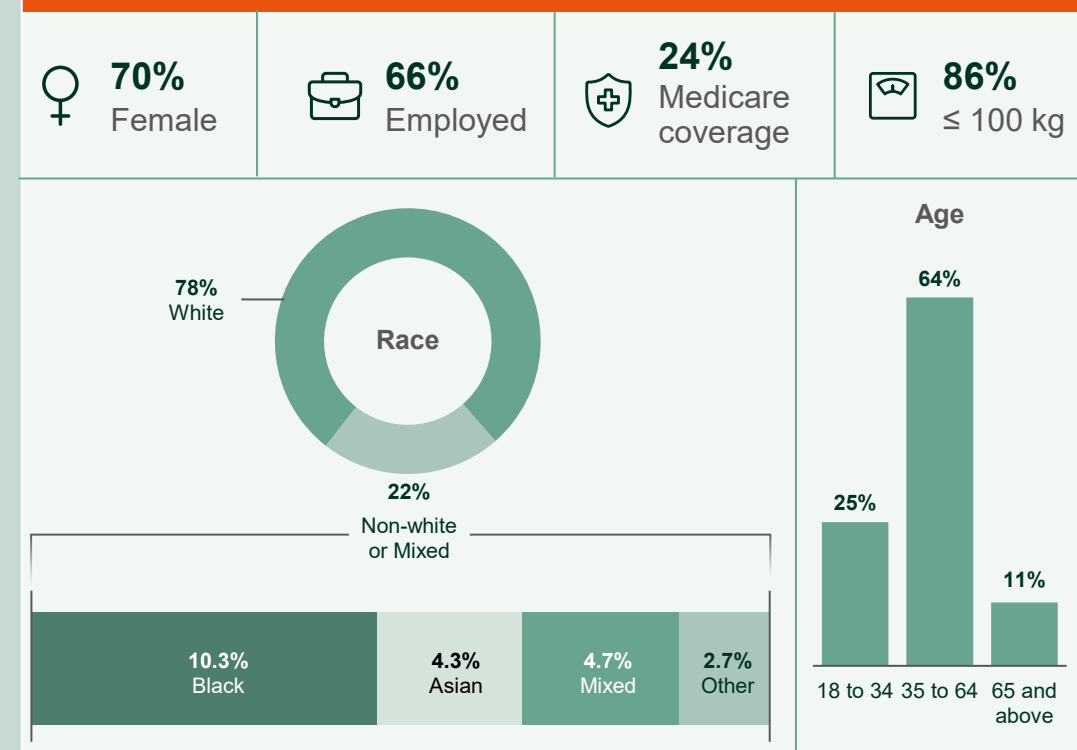


Figure 3. Clinical Characteristics (N = 300)

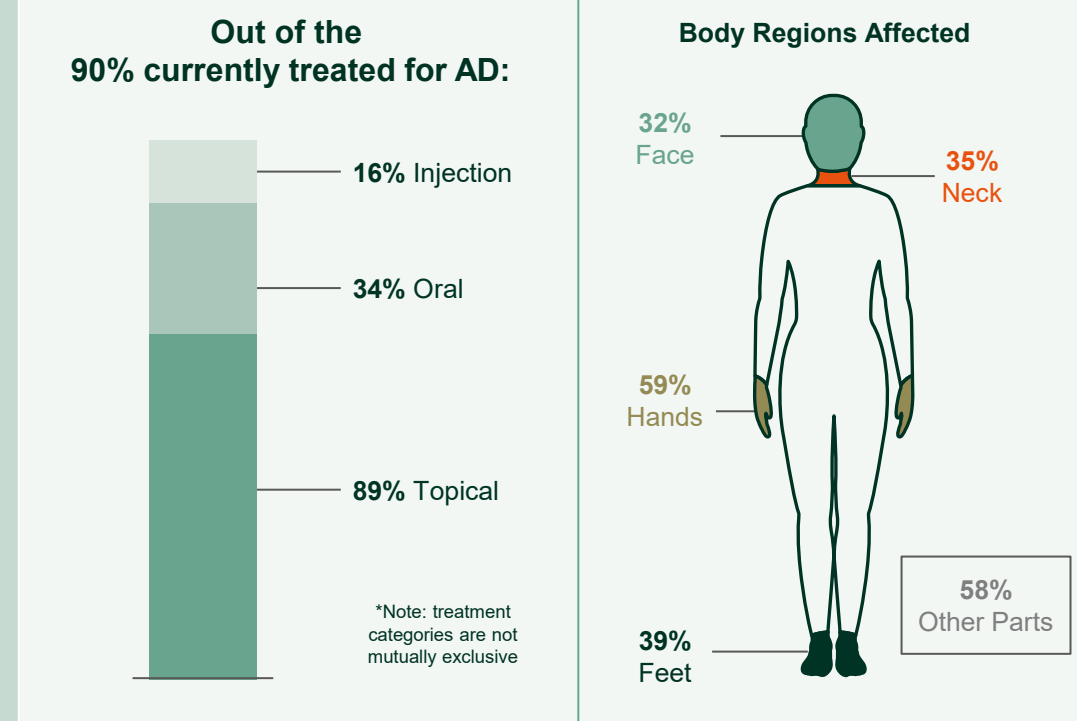
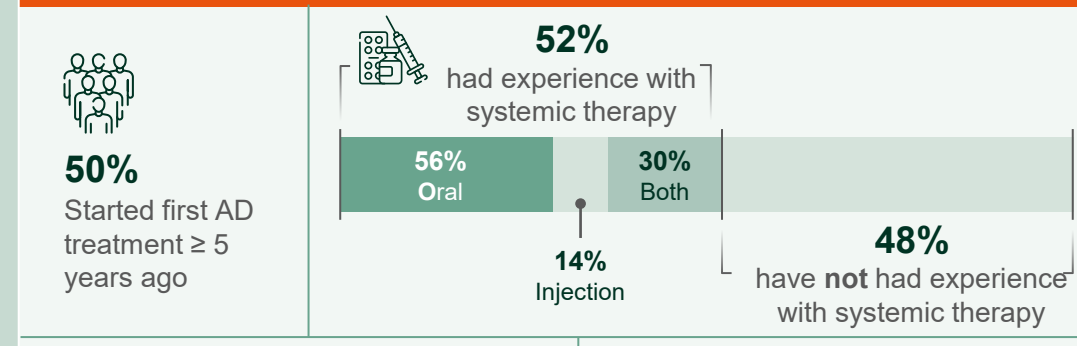


Table 1. DCE Analyses (N = 300)

	Preference Weight	P-value	Willingness to Trade-Off ¹	Relative Importance	Relative Importance Ranking
Efficacy					
Sustained improvement in skin appearance (months)	0.017	< 0.001*	-	5%	5
Itch control (percentage points)	3.818	< 0.001*	Reference	38%	1
Adverse Events					
Risk of respiratory infections (percentage points)	-4.513	< 0.001*	1.18	18%	3
Risk of cancer (percentage points)	-135.245	< 0.001*	35.42	23%	2
Risk of heart problems (percentage points)	-67.467	< 0.001*	17.67	11%	4
Frequency and Mode of Administration					
One pill every day (reference)	-	-	-	2%	7
One injection every 2 weeks	-0.118	0.091	0.03		
One injection every 4 weeks	-0.038	0.594	0.01		
Blood Tests Frequency					
Not required (reference)	-	-	-	3%	6
Once a year	-0.153	0.029*	0.04		
Four times a year	-0.133	0.046*	0.04		

* Indicates a p-value < 0.05
 Note:
 [1] The number indicates how many percentage points of chance in achieving meaningful itch control an average patient is willing to trade off in order to avoid a particular attribute. For adverse events, the trade-off is expressed with respect to a 1 percentage point reduction in the risk of having the adverse event.

Figure 4. Part-worth Utilities

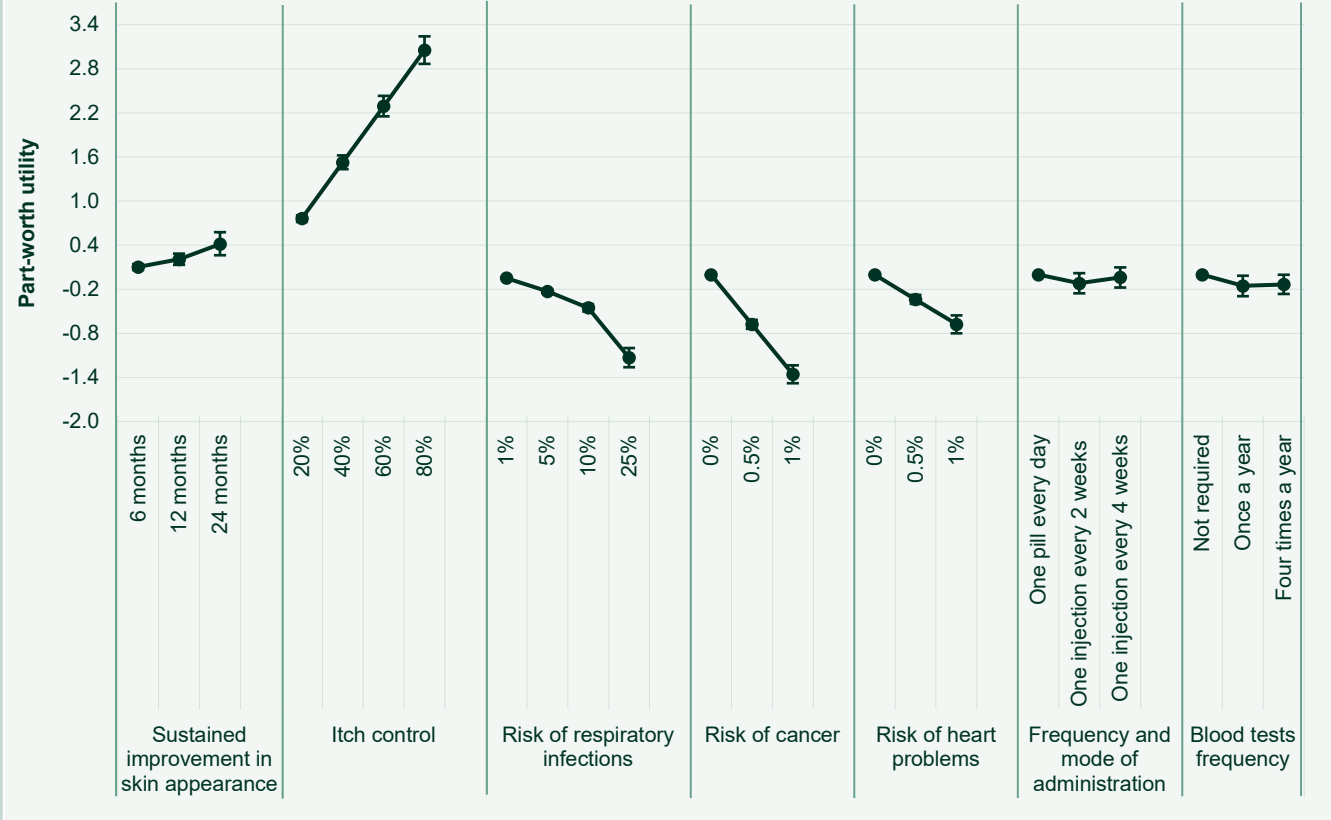
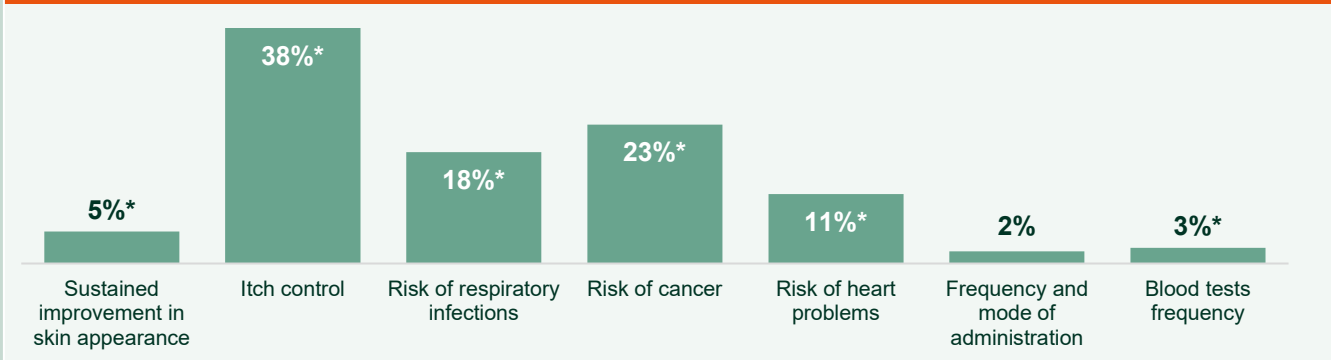


Figure 5. Attributes Relative Importance Based on DCE Results



*Indicates a p-value < 0.05 from the conditional logistic regression

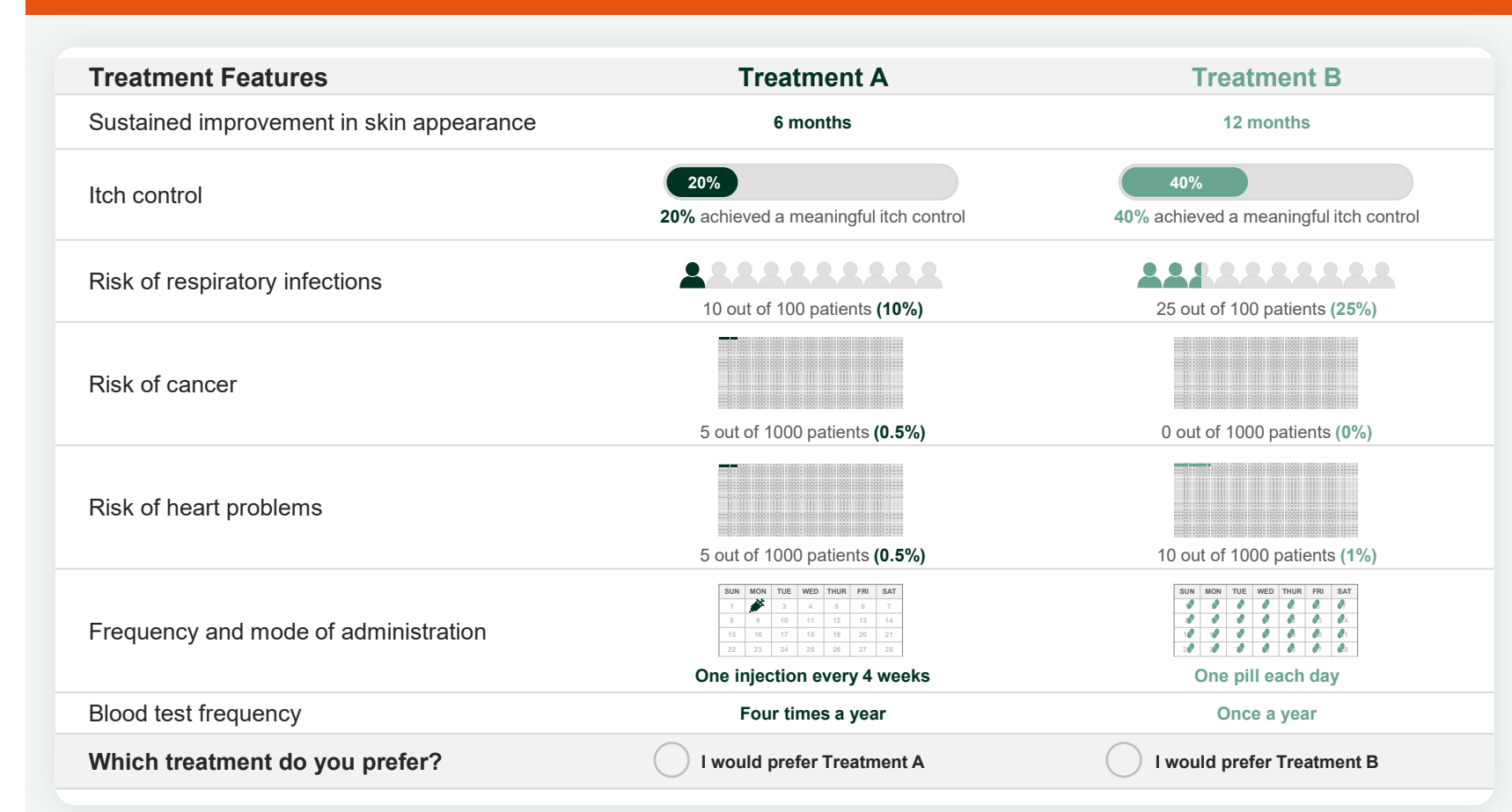
Background

- Atopic dermatitis (AD) affects approximately 5-10% of adults worldwide and can place a significant burden on the lives of patients and their caregivers.¹
- Newer treatments for moderate-to-severe AD, including biologic therapies and Janus-kinase (JAK) inhibitors, are associated with varied levels of efficacy, safety, monitoring, and administration requirements.
- Despite variations in newer treatment options for AD patients, patient preferences for different treatment attributes are not well characterized in the United States (US).²

Methods

- An online DCE survey was conducted in June 2023 with participants recruited via an existing panel of geographically and demographically diverse AD patients in the US.
- Eligible participants were adults (≥ 18 years) who had (1) been diagnosed with AD for at least one year, (2) self-reported moderate-to-severe AD or experience with systemic therapy, and (3) experienced inadequate response to topical treatments.
- The following seven attributes were selected for inclusion in the DCE based on an initial qualitative interview phase and input from clinical experts: sustained improvement in skin appearance, itch control, risk of respiratory infection, risk of cancer, risk of heart problems, frequency and mode of administration, and blood test frequency.
- In the DCE, participants were presented with 12 choice tasks (including 2 tasks designed to assess internal validity), and the survey ended with questions about participant demographic and clinical characteristics.
- Choice tasks each displayed a pair of hypothetical treatment profiles, and participants were asked to select the profile that best reflected their preferences between the two profiles (**Figure 1**).
- A conditional logit regression model was used to assess patient preferences for different treatment attributes, including willingness to trade-off between attributes, part worth utility, and the relative importance of each attribute.
- A sensitivity analysis was conducted excluding participants who failed internal validity tests, including a dominance test (where all attributes in one profile were better than those in the other profile) and/or stability test (repeating one of the previous choice tasks).

Figure 1. Example of a Choice Card



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