Priority Research Questions in Atopic Dermatitis (AD)

An International Eczema Council (IEC) eDelphi Consensus

OBJECTIVE

To identify and reach consensus on a set of research questions to be prioritized for future work in AD from the perspective of clinicians involved in AD patient care and research.

METHODS

Identified **5 domains**, based on:

- A 2015 pilot exercise by IEC members to determine research priorities
- Prior systematic reviews

1. **Epidemiology**
   Including phenotype, disease course, disease/psychological burden and comorbidities
2. **Pathophysiology and molecular mechanisms**
   Including genomics and immunology
3. **Translational research**
   Including stratified/personalized/precision and systems medicine (including models)
4. **Therapeutics**
   Including nonpharmacological interventions, such as psychological support and educational programs
5. **Other**

Conducted a 3-round electronic Delphi (eDelphi) process with IEC members

ROUND 1

Participants submit ≤3 research questions they believe are highest priority in AD, and align each question to 1 of the 5 domains.

Duplicate and overlapping questions are consolidated.

ROUND 2

Participants score importance of each question on a 1-9 scale. Questions not meeting consensus are dropped.

Consensus predefined as:

- **≥70%** of participants scoring an item as **7-9 (critically important)**; and
- **<15%** scoring it as **1-3 (not important)**

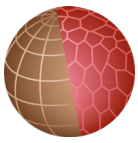
ROUND 3

Participants are shown the groups' scores and re-score each remaining question on the 1-9 scale.

RESULTS

Respondent demographics

From **22** countries in **6** continents (North America and Europe overrepresented)



96% physicians

90% based at university teaching hospitals

Among those caring for patients with AD:

45% care primarily for adults

22% primarily for children

33% for both

ROUND 1

82 IEC members invited,
68 responded (**83%**)
197 questions submitted
62 questions → Round 2 after consolidation

ROUND 2

93* IEC members invited,
63 responded (**68%**)
8 questions met consensus criteria → Round 3

*Additional participants who joined IEC after Round 1 were invited to participate in Round 2

ROUND 3

63 IEC members invited,
59 respondents (**94%**)
8 questions again met consensus criteria

	Priority research questions that met consensus criteria after Round 3	% scored: 1-3	% scored: 7-9
1	Can we predict who will develop chronic disease, associated comorbidities, and/or adverse outcomes? (**epidemiology**)	0%	83%
2	Can clinically meaningful subtypes of AD be defined based on age at onset, genetics, environmental factors, and clinical features? (**epidemiology**)	0%	82%
3	How do we best classify AD (disease endotype) to predict clinical outcomes (eg, prognosis, systemic disease) and therapeutic outcomes (drug endotype)? (**pathophysiology**)	0%	88%
4	Which therapeutic strategies can prevent/modify the course of AD and prevent the development of comorbidities? (**therapeutics, epidemiology, translational**)	0%	88%
5	Which topical and systemic treatments are safest and most effective for short- and long-term disease control? (**therapeutics**)	2%	85%
6	What is the comparative effectiveness and side-effect profile of systemic AD treatments (both classical and new)? (**therapeutics**)	0%	97%
7	How can AD be subclassified using biomarker assessments and other tests in ways that allow better prediction of severity, disease course, treatment response, and comorbidities? (**translational, pathophysiology, therapeutics**)	2%	85%
8	What are the mechanisms and potential therapeutic strategies to reduce and control disease flares in AD? (**translational**)	0%	85%

CONCLUSIONS

The research questions prioritized indicate the need for multidisciplinary research, including epidemiology, clinical trials, and molecular medicine, to address challenges in understanding this complex disease and optimizing patient care. Strengths of the work included the high response rates and the clear consensus that emerged.

Abuabara K, Nicholls SG, Langan SM, Guttman-Yassky E, Reynolds NJ, Paller AS, Brown SJ; International Eczema Council Priority Research Group. Priority research questions in atopic dermatitis: an International Eczema Council eDelphi consensus. *Br J Dermatol*. 2021. Online ahead of print.
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