

Towards personalised therapy and potential disease modification

Peter SCHMID-GRENDELMEIER, Switzerland





Conflicts of Interests: Peter Schmid-Grendelmeier

I declare the following, real or perceived conflicts of interest:

Lecture and Consultancy fees from

AbbVIe, Aimunne, Almirall, ALK Abello, Amgen, Astra Zeneca, Biomed, Bühlmann, derma2Go, Euroimmun, Galderma, Glaxo Smith Kline, Jansen, LEO, Lilly, L'Oréal, Novartis, Permamd, Pfizer, Pierre Fabre, Roche Pharma, Ruwag, SanofiGenzyme, Stallergenes, Unifarco, Thermo Fisher

Research collaborations AbbVie, Bühlmann Diagnostics, LEO, Novartis, Pfizer, Stallergenes, Thermo Fisher

Zürich, 09. Oct 2027





T2T in Atopic Dermatitis

(Treat to target)

Better Access to Treatments for AD on a global scale



Disease modification in other disciplines

TABLE 1 Examples of early intervention trials/studies in non-dermatologic chronic inflammatory diseases.

	,	,	
Author(s)	Condition/population studied	Intervention vs. control	Outcomes/results
Van der Linden et al. (2010)	Rheumatoid arthritis (RA)	Treatment initiation >12 weeks vs. <12 weeks of symptom onset	Lower remission rates in delayed treatment group
Wevers-de Boear et al. (2012)	Rheumatoid arthritis (RA) and undifferentiated arthritis (UA)	Predictors of remission at 4 months from initiation of methotrexate 25 mg/week and prednisone 60 mg/day, which was tapered to 7.5 mg/day in 7 weeks.	Earlier treatment initiation was identified as a predictor of early remission in this cohort of 610 participants.
D'Haens et al. (2008)	Crohn's disease in treatment- naive patients	Corticosteroid vs. treatment with infliximab + azathioprine/ Methotrexate	Early aggressive treatment yielded greater remission rates 2 years post- initiation with similar safety.
Lee et al., 2010	Crohn's disease in paediatric patients naive to therapy	Prednisolone induction therapy + mesalamine & azathioprine for maintenance vs. 'aggressive' infliximab induction therapy & azathioprine for maintenance	Early aggressive intervention showed sig. higher disease remission. Remission persistent at 52 weeks.
Kim et al. (2011)	Crohn's disease in paediatric patients refractory to corticosteroid therapy (step-Up arm) and Crohn's disease in paediatric patients naive to therapy (top-down arm)	Prednisolone followed by maintenance mesalamine and azathioprine vs. 'aggressive' infliximab infusions with maintenance azathioprine	Early aggressive intervention showed sig. higher disease remission. Remission persistent at 52 weeks.

Neurology

Alzheimers disease

M. Parkinson

Pneumology

Cardiology



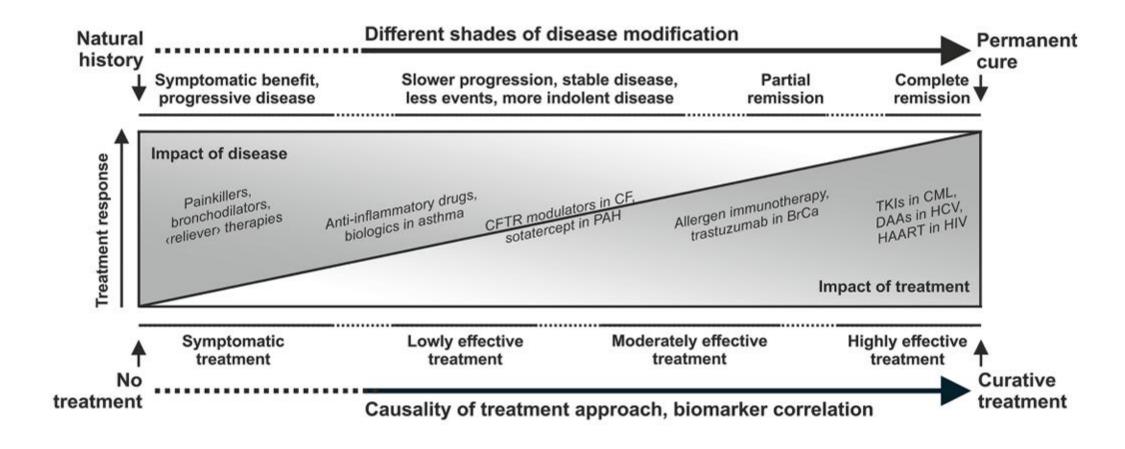
Jacobson Meet al....Simpson EL. Early intervention and disease modification in atopic dermatitis-the current state of the field and barriers to progress. J Eur Acad Dermatol Venereol. 2024 Apr;38(4):665-672

What means disease modification?

A **disease-modifying drug**, or **disease-modifying therapy** is a treatment that delays, slows or reverses the progression of a disease by targeting its <u>underlying cause</u>. They are distinguished from <u>symptomatic treatments</u> that treat the symptoms of a disease but do not address its underlying cause.

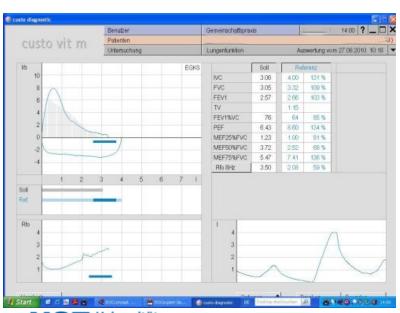


What means disease modification?











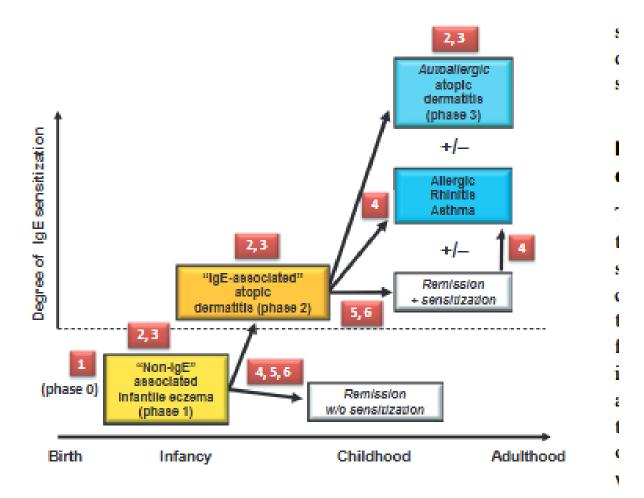


Disease modification in other skin diseases

Author	Condition/1 opulation studied	Intervention	Results
Peck et al. (1979)	Treatment-resistant cystic acne in 8 men and 6 women (average age 24 years)	Oral 13-cis-retinoic acid (daily average 2.0 mg/kg) for 4 months.	13/14 patients were clear at 4 months and the other had 75% improvement, After treatment discontinuation, all patients experienced prolonged remissions (<20 months-end of observation period)
Lebwohl et al. (2017)	Patients with moderate-to-severe psoriasis	Secukinumab treatment of moderate-to-severe psoriasis, PASI 75 responders continued double-blind secukinumab (300 mg) or switched to placebo (N=120).	21 and 10 percent of patients did not relapse for at least 1 or 2 years, respectively, and maintained low mean PASI scores: 2.7 after 1 year and 1.7 and after 2 years off-drug. The longer the duration of psoriasis prior to treatment, the less likely the relapse-free outcome was.
Huang and Tsai (2019)	95 patients with moderate-to- severe psoriasis who completed a biologic or tofacitinib trial and achieved PASI-75 at completion.	No intervention	Median time to relapse was 7.6 months. Patients who received treatment with the study drug within 2 years of diagnosis had lower relapse rates.
Han et al., (2022)	4468 patients with moderate-to- severe psoriasis >20 years old.	Treatment with ustekinumab $(n=2448)$ or anti-TNF- α inhibitors (adalimumab, etanercept and infliximab; $n=2020$)	Ustekinumab vs. TNF-α inhibitor group Hazard ratio of psoriatic patients developing heart failure: 0.641 (95% confidence interval: 0.415–0.985) vs 1 (reference) of ustekinumab vs. TNF-α inhibitor group
Robbins et al., (2018)	190 psoriasis patients with 1%–15% body surface involvement and Physician Global Assessment (5-point) score≥2 (mild)	Tapinarof cream (0.5%/1.0% QD/BID; 4 groups) vs. Tapinarof vehicle (QD/BID; 2 groups)	Tapinarof cream was superior to vehicle. Treatment efficacy was generally maintained until the end of the trial (4 weeks post-treatment)



Jacobson Meet al....Simpson EL. Early intervention and disease modification in atopic dermatitis-the current state of the field and barriers to progress. J Eur Acad Dermatol Venereol. 2024 Apr;38(4):665-672



Whether this kindof strategy is already feasible with the arsenal of availablemedical products such as topical steroids or calcineurininhibitors or whether the issue of safety, especially in infancyrequires the further development of new and safe compoundsfor this particular approach need to be clarified. In any case, the scientific community will face a number of new challengesduring this fascinating development ultimately leading to the reduction in the burden of AD and asthma.



Bieber T, Cork M, Reitamo S. Atopic dermatitis: a candidate for diseasemodifying strategy. Allergy. 2012 Aug;67(8):969-75 02.11.2025

Scores: SCORAD, EASI, IGA

Clinical subtypes Immunologic sbtypes

Lab parameters: IgE, Sensitizations

TARC?

Osteopotegerin?

A Real-World Case from Japan – Biomarker-Guided Management of AD Might Lead to Better Patient Outcomes¹



TARC, thymus- and activation-regulated chemokine.

Received: 3 November 2021 | Revised: 19 August 2022 | Accepted: 4 September 2022

DOI: 10.1111/all.15532

ORIGINAL ARTICLE

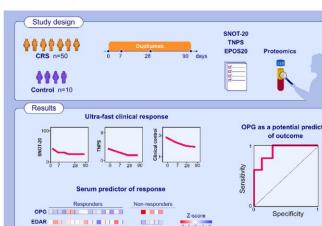
Allergen-Specific Immunotherapy and Biologics

Predicting dupilumab treatment outcome in patients with primary diffuse type 2 chronic rhinosinusitis

Michael B. Soyka¹ | Fabio S. Ryser² | Catrin Brühlmann¹ | Danielle Fehr^{3,4,5} | Jacqueline Dülgeroglu² | Peter Schmid-Grendelmeier^{3,5} | Marie-Charlotte Brüggen^{3,4,5} | Urs C. Steiner²

USZ Universitäts Spital Zürich

Figure adapted from: 1. Kataoka Y. / Dermatol. 2014:41(3):221-229.

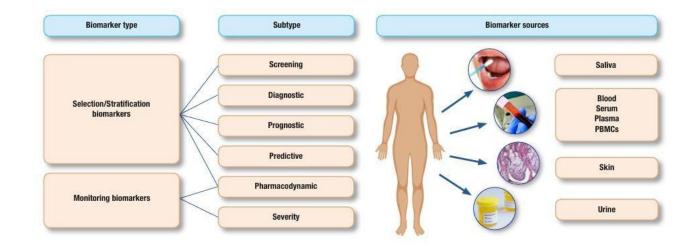


MAT-DE-2504063-1.0-09/2025 / MAT-AT-2501228-1.0-09/2025 / MAT-CH-2501401-1.0-09/2025



Scores: SCORAD, EASI, IGA

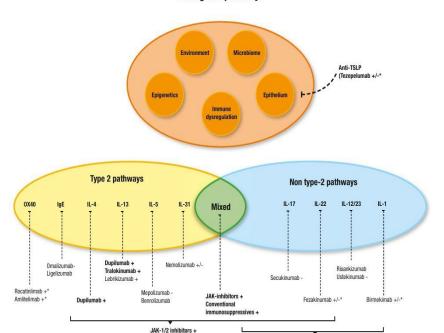
Clinical subtypes Immunologic sbtypes



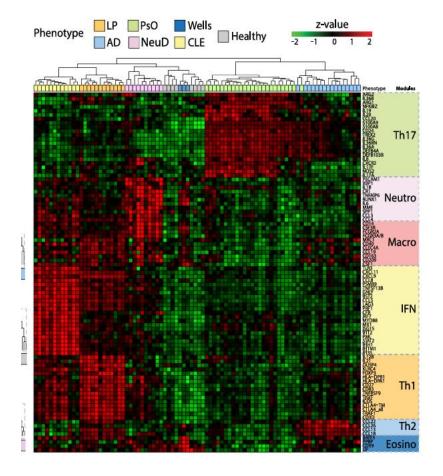
Bakker D et al Allergy Clin Immunol. 2023



Pathogenic pathways



JAK-3/ TYK-1/2 inhibitors +



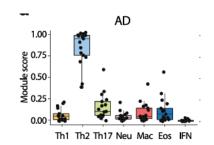


Table 2 | Treatments and module matching of non-responding patients

Patient ID Age	Gender	Initial Clinical Dx	Treatment	Modul	e scores		Module matching	Re-matched treatment - Response	
					Th1	Th2	Th17	_	
NR_001	67	М	AD	Dupilumab	0.82	0.11	0.32	non matched	-
NR_002	66	М	AD	Dupilumab	0.61	0.5	0.25	non matched	-
NR_003	66	М	AD	Dupilumab	0.66	0.29	0.52	non matched	-
NR_004	79	М	AD	Dupilumab	0.6	0.42	0.19	non matched	Baricitinib - 100% response
NR_005	33	М	AD	Dupilumab	0.43	0.15	0.03	non matched	Upadacitinib- 90% response
NR_006	88	F	PsO	Tildrakizumab	0.41	0.95	0.23	non matched	Dupilumab – 90% response
NR_007	65	М	PsO	Tildrakizumab	0.36	0.88	0.38	non matched	Dupilumab – 100% response
NR_008	66	М	PsO	Ixekizumab	0.05	0.84	0.33	non matched	Dupilumab - 90% response
NR_009	61	М	AD	Dupilumab	0.51	0.58	0.37	matched	-
NR_010	59	М	AD	Tralokinumab	0.25	0.76	0.13	matched	-
NR_011	58	М	PsO	Secukinumab	0.1	0.98	0.1	non matched	
NR_012	56	М	PsO	Secukinumab	0.32	0.96	0.12	non matched	-
NR_013	65	М	PsO	Ixekizumab	0.19	0.97	0.47	non matched	-
NR_014	47	F	AD	Dupilumab	0.17	0.1	0.38	non matched	-
NR_015	55	М	AD	Dupilumab	0.19	0.3	0.55	non matched	-
NR_016	59	М	AD	Dupilumab	0.1	0.11	0.36	non matched	Ixekizumab - 90% response
NR_017	18	F	PsO	Guselkumab	0.04	0.08	0.72	matched	-

Bold scores correspond to the dominant module score for each patient.

Seremet T....Gilliet M. Immune modules to guide diagnosis and personalized treatment of inflammatory skin diseases. Nat Commun. 2024 Dec 18;15(1):10688



• 1: We have to define/consider subtypes



The immuno-development of Atopic Dermatitis

Traidl-Hoffmann C......Schmid-Grendelmeier P. Navigating the evolving landscape of atopic dermatitis: Challenges and future opportunities: The 4th Davos declaration. Allergy. 2024 Aug 4

a) Neonates;

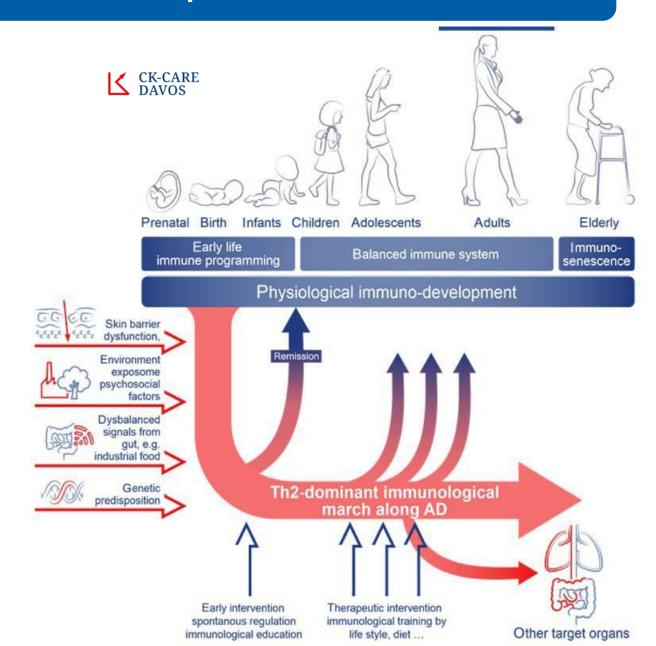
b) Infants

c) Adolescents and adults



Adapted from Weidinger & Novak Lancet 2015





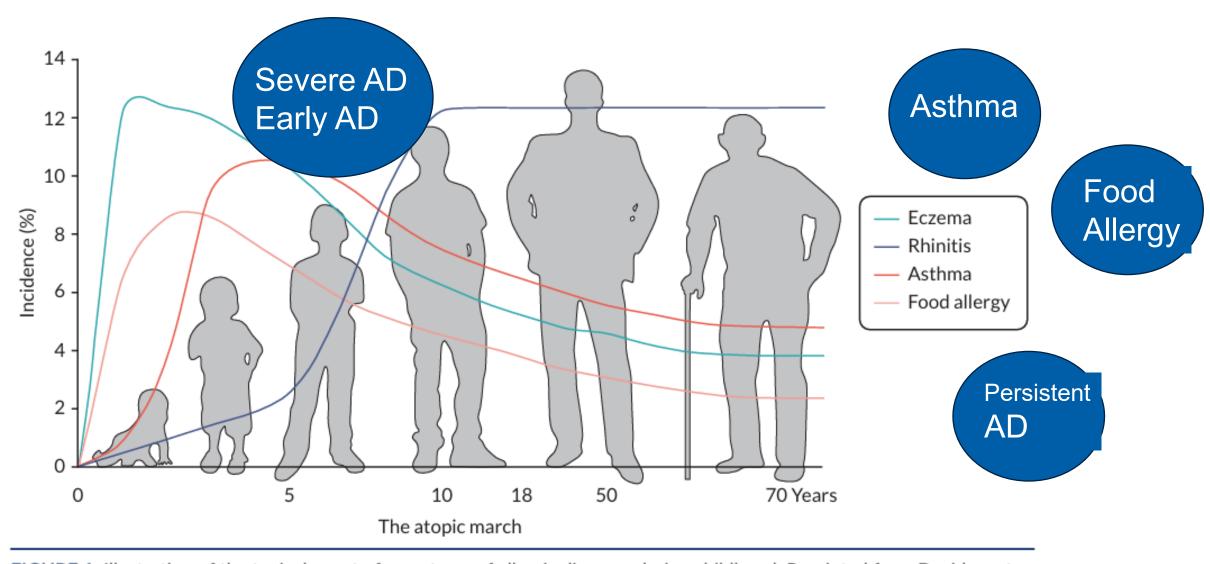
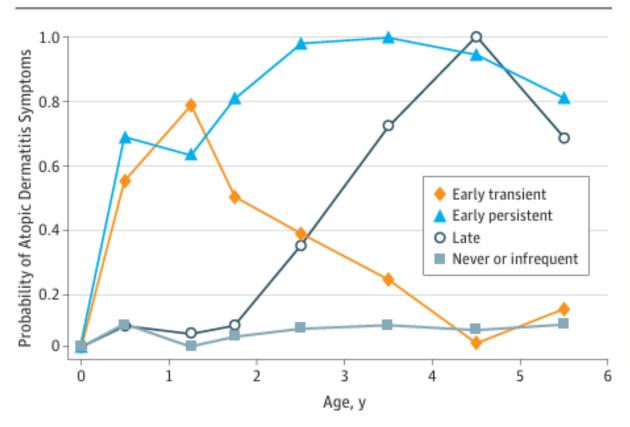


FIGURE 1 Illustration of the typical onset of symptoms of allergic diseases during childhood. Reprinted from Davidson*et al.* (2019),¹⁵ Copyright (2023), with permission from Elsevier.



Factors associated with AD onset Shared factors Study population Multiple atopic comorbidities --*no. of atopic Allergies -White dermographism -n=736 Childhood vs control Patient stratification Food allergy Maternal food allergy AD onset throughout life Childhood-onset <18 years Palmar hyperlinearity n=562 (76.4%) Academic background Adult-onset Allergic rhinitis Palmar all hyperlinearity ≥18 years n=174 (23.6%) Cigarette smoke Academic & background Adult vs control Active smoking Conjunctivitis Controls n=167 - Non-stopic control Adjusted OR Atopic control CK-CARE-ProRaD

Roduit C et al. Phenotypes of Atopic Dermatitis Depending on the Timing of Onset and Progression in Childhood. JAMA Pediatr. 2017 Jul 1;171(7):655-662

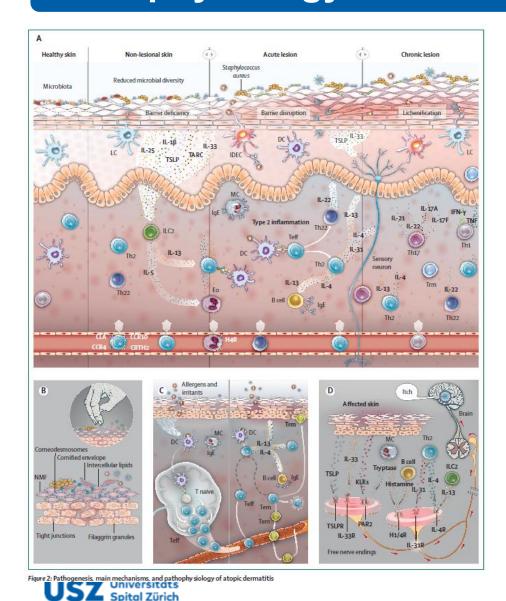
Maintz L et al, Atopic dermatitis: Correlation of distinct risk factors with age of onset in adulthood compared to childhood. Allergy. 2023 Aug;78(8):2181-2201



- 1: We have to define/consider subtypes
- 2: Different approaches for childhood and adult AD



Pathophysiology and mechanism of AD



Immune **D**eviation

IBD-DDD

Barrier Ddisruption

Microbe Dysbiosis

Many new insights:

- Role of mediators and cell function
- Disrupted barrier function
- Role of environment
 - Allergens (Food?)
 - Microbiome
 - Mycobiome

Adapted from:

Trigger factors in AD

Guttman-Yassky E, Renert-Yuval Y, Brunner PM.

Atopic dermatitis.

Lancet. 2025 Feb 15;405:583-596

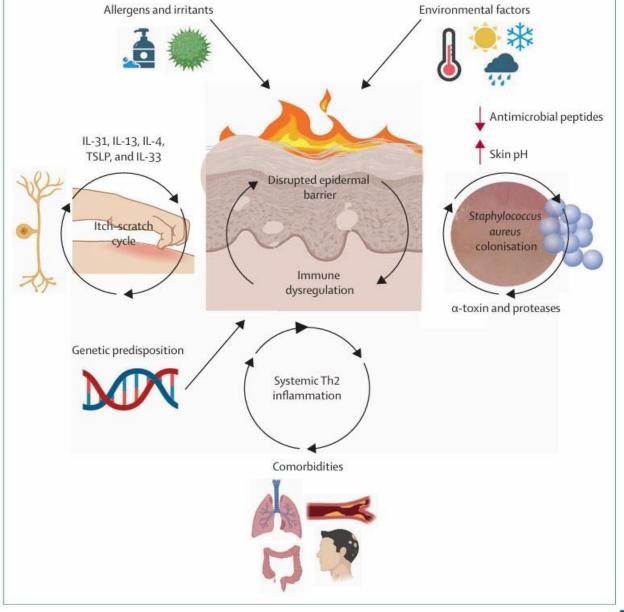


Figure 3: Common triggers and drivers of atopic dermatitis skin inflammation and barrier disruption



Trigger factors in AD

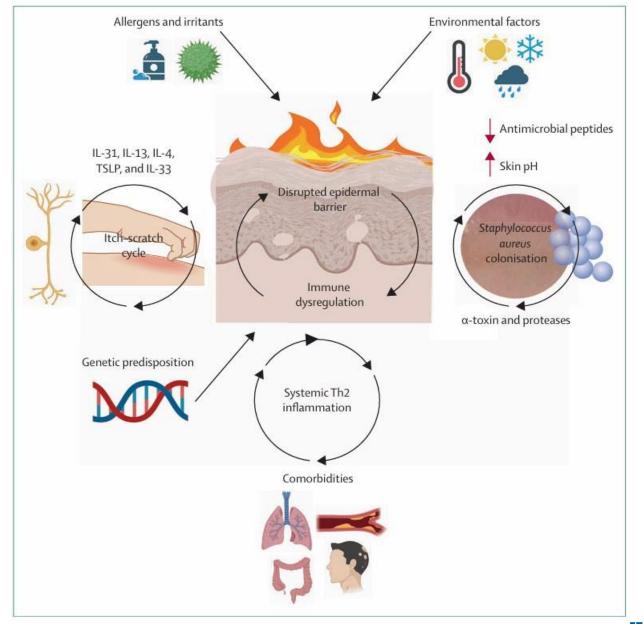
Guttman-Yassky E, Renert-Yuval Y, Brunner PM.

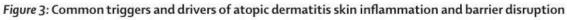
Atopic dermatitis.

Lancet. 2025 Feb 15;405:583-596

Clinical history:

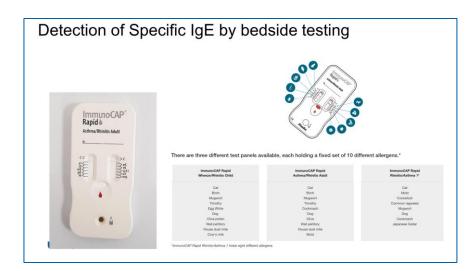
- Provoking factors
- Allergologic work up
- Dietary habits
- Sleeping behaviour
- etc

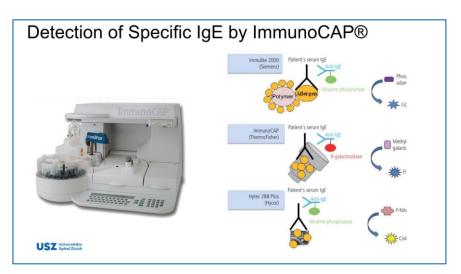


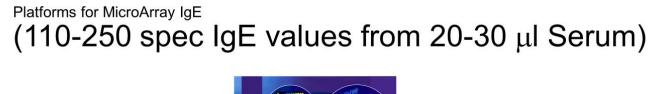




How to detect IgE in the serum









ALEX Allergy Explore

ALEX

Patterns of molecular sensitization allow to differentiate different clinical subtypoes of AD





Scala E, et al A microarray-based IgE-molecular mimicry index (IgE-MMI): A biomarker for disease severity, clinical phenotypes, and therapeutic response in atopic dermatitis? Allergy. 2024 Nov 4

	Generalized eczema	Prurigo-like AD	Nummular eczema	Erythroderma	Psoriasifor m dermatitis	Lichen simplex chronicus	S
Flexural dermatitis	PRV: 8.248 (1.65-41.20)ç SA: 0.202 (0.06-0.65)^ PSA: 3.268 (1.27-8.44)§	MnSOD: 8.672 (1.04-72.39)§ AK: 0.164 (0.05-0.52)ç	ş	Casein: 0.033 (0.00-0.74)§		ENO : 0.006 (0.00-0.27)ç	
Head and neck dermatitis	PSA : 5.351 (1.48-19.39)§	MnSOD: 19.637 (2.01-192.30)§	20	©.		ENO: 0.019 (0.00-0.9)§	
Portrait dermatitis	CYP: 32.067 (4.45-231.23)^	CYP: 17.719 (1.86-168.67)§	NPC-2: 17.669 (1.53-203.82)§	¥			

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Parantones

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Food diversity prevetns food allergy

The NEW ENGLAND JOURNAL of MEDICINE

ESTABLISHED IN 1812

FEBRUARY 26, 2015

VOL. 372 NO. 9

Randomized Trial of Peanut Consumption in Infants at Risk for Peanut Allergy

George Du Toit, M.B., B.Ch., Graham Roberts, D.M., Peter H. Sayre, M.D., Ph.D., Henry T. Bahnson, M.P.H., Suzana Radulovic, M.D., Alexandra F. Santos, M.D., Helen A. Brough, M.B., B.S., Deborah Phippard, Ph.D., Monica Basting, M.A., Mary Feeney, M.Sc., R.D., Victor Turcanu, M.D., Ph.D., Michelle L. Sever, M.S.P.H., Ph.D., Margarita Gomez Lorenzo, M.D., Marshall Plaut, M.D., and Gideon Lack, M.B., B.Ch., for the LEAP Study Team*

No peanut

Regular peanut consumption

higher rate of panut allergy lower risk of peanut allergy

CONCLUSIONS

The early introduction of peanuts significantly decreased the frequency of the development of peanut allergy among children at high risk for this allergy and modulated immune responses to peanuts. (Funded by the National Institute of Allergy and Infectious Diseases and others; ClinicalTrials.gov number, NCT00329784.)





Food intake Prevention of food allergy
Emollients use: no additional use for Food allergy
AD: Prevetion does not work

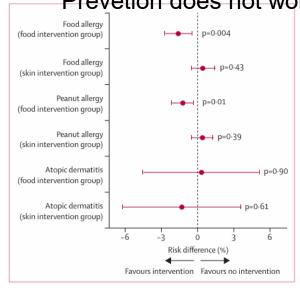


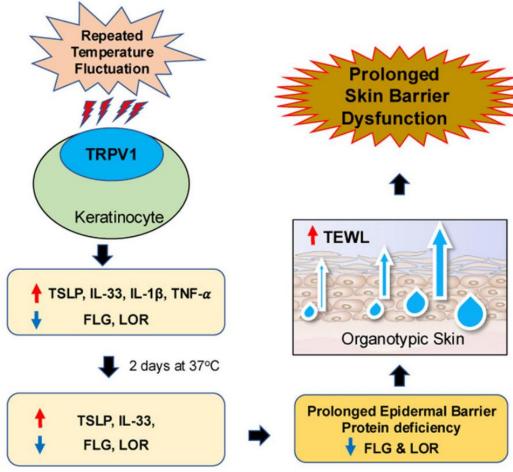
Figure 3: Risk reduction of food allergy for each primary prevention strategy Error bars show 95% CIs. Food allergies are presented as main effects, whereas atopic dermatitis is presented as a marginal estimate.

Early regular use of skin emollients did not reduce food allergy at 36 months.

Skjerven HO et al Early food intervention and skin emollients to prevent food allergy in young children (PreventADALL): a factorial, multicentre, cluster-randomised trial. Lancet. 2022 Jun 25;399(10344):2398-2411

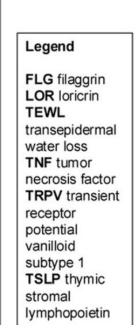
Repeated temperature fluctuation causes prolonged skin barrier dysfunction through TRPV1 Repeated Temperature Fluctuation Skin Barrier Dysfunction TRPV1 Keratinocyte

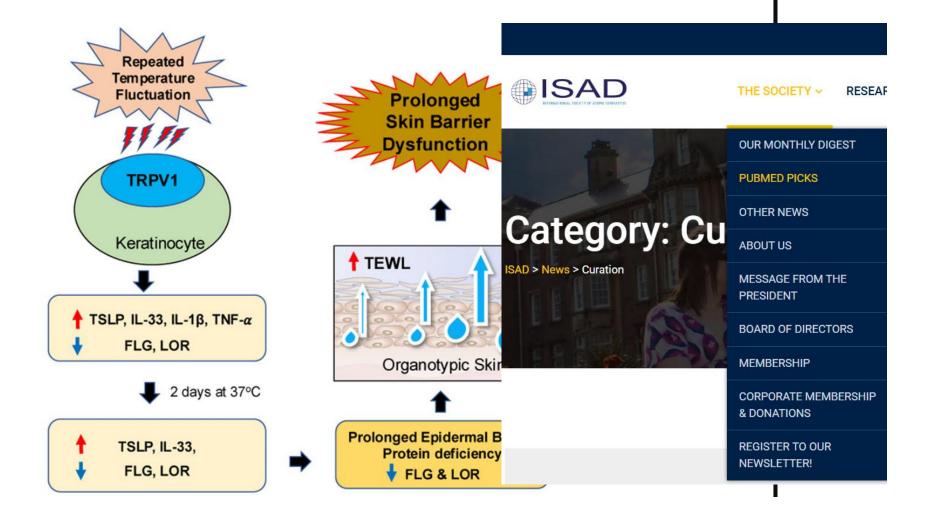
FLG filaggrin
LOR loricrin
TEWL
transepidermal
water loss
TNF tumor
necrosis factor
TRPV transient
receptor
potential
vanilloid
subtype 1
TSLP thymic
stromal
lymphopoietin





Repeated temperature fluctuation causes prolonged skin barrier dysfunction through TRPV1







- 1: We have to define/consider subtypes
- 2: Different approaches for childhood and adult AD
- 3. We have to define (and exclude/avoid) Trigger factors



Itch





Itch







Sleep disturbance



Itch

Hand eczema

Sleep distur





Face involvement

Itch

Hand eczema

Sleep disturbance



Face involvement

Isolation

Itch

Hand eczema

Sleep disturbance





Face involvement

Itch

Hand eczema

Sleep disturbanc

Unpredictable flares

Isolation



Smell



Face involvement

Isolation

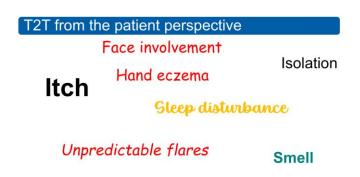
Itch

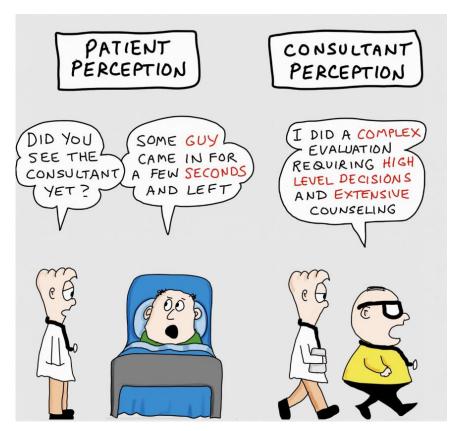
Hand eczema

Sleep disturbance









SCORAD EASI IGA

Biomarkers

T2T from the doctor's perspective



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- 1: We have to define/consider subtypes
- 2: Different approaches for childhood and adult AD
- 3. We have to define (and exclude/avoid) Trigger factors
- 4. We have to integrate the needs and expections of our patients



Disease modification in AD

The state of the s

Author	Intervention vs. control	Outcomes	Results
Schneider et al. (2016)	Pimecrolimus vs. standard of care	Development of asthma	50% dropout rate. No significant difference.
Van der Aa et al. (2010)	Synbiotic-enriched formula vs. placebo	Incidence of asthma symptoms and use of asthma medication at 1-year follow-up.	Synbiotics were superior to placebo in both outcomes.
Warner et al. (2001)	Cetirizine vs. placebo	Incidence of asthma over three-year follow-up	No difference between cetirizine and placebo.
Fukiuie et al. (2016)	Proactive topical steroid vs. standard of care	AD control, quality of life, aeroallergen IgE sensitization	Proactive therapy was superior to standard of care for AD control, QoL and levels of house mite-specific IgE despite no difference in amount of medication used with similar safety profile.
Miyaji et al. (2019)	Proactive aggressive topical steroid therapy 4 months before vs after diagnosis (retrospective).	Food allergy at 2 years of age (defined as a positive oral food challenge and/or history of anaphylaxis).	Patients treated within 4 months of diagnosis had lower levels of food allergy at 2 years of age by -DBPCFC
Nadeau et al. (enrolling) SEAL Study	Proactive topical steroid with or without ceramide emollient vs. standard of care	Food allergy determined by oral food challenges.	Anticipated results in 2027
Yamamoto-Hanada et al. (2023)	Proactive topical steroid (full body) vs. standard of care	Food allergy (oral food challenge-proven IgE-mediated hen's egg allergy at 28 weeks of age)	Proactive therapy was superior to conventional treatment in reducing hen's egg allergy. Proactive therapy-treated participants had lower body weight and height at follow-up



Jacobson Meet al....Simpson EL. Early intervention and disease modification in atopic dermatitis-the current state of the field and barriers to progress. J Eur Acad Dermatol Venereol. 2024 Apr;38(4):665-672

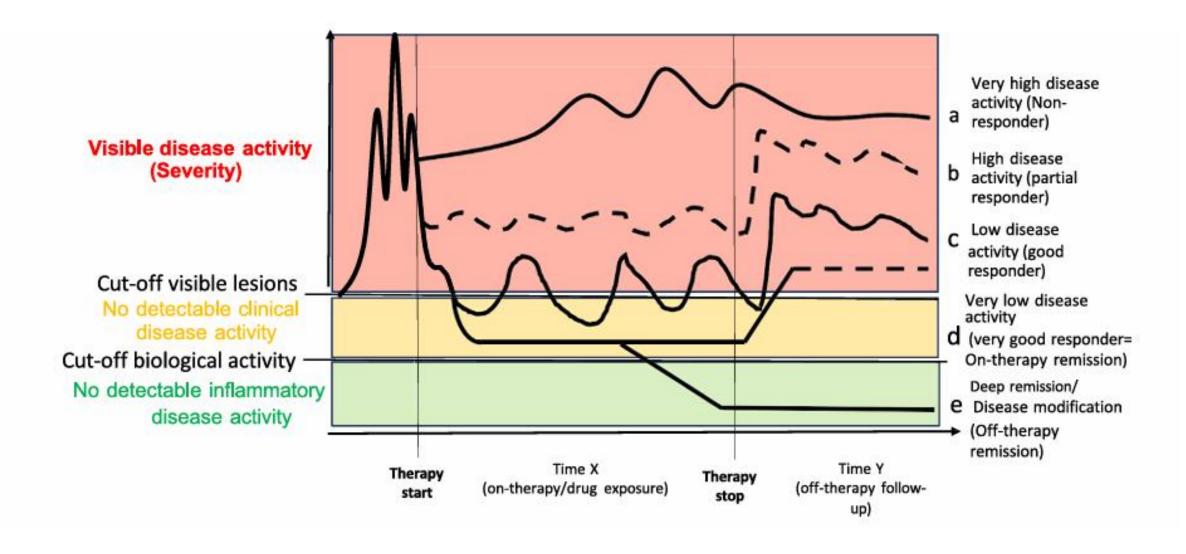
Disease modification in AD

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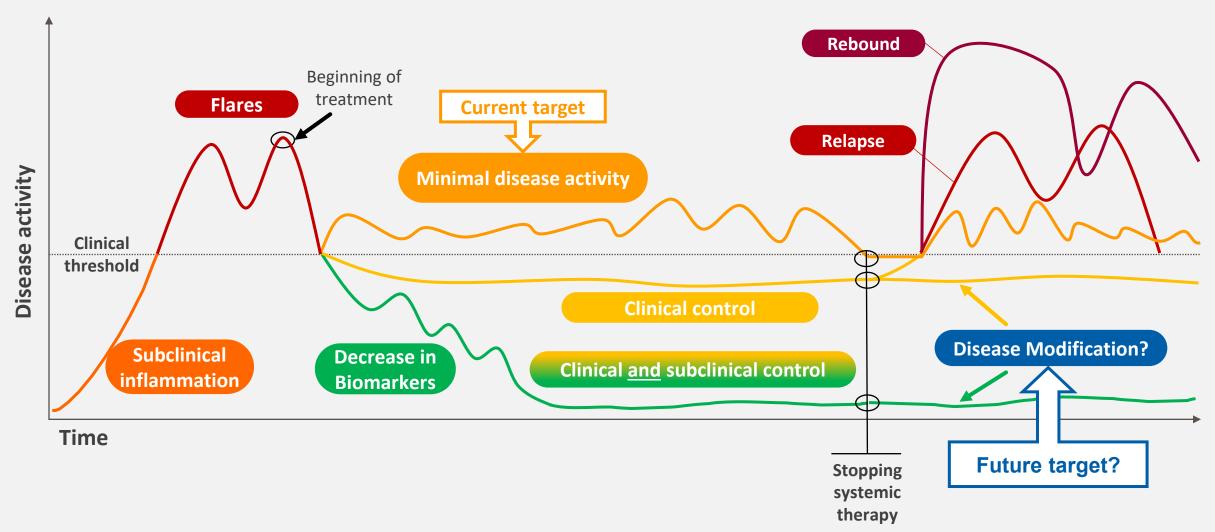
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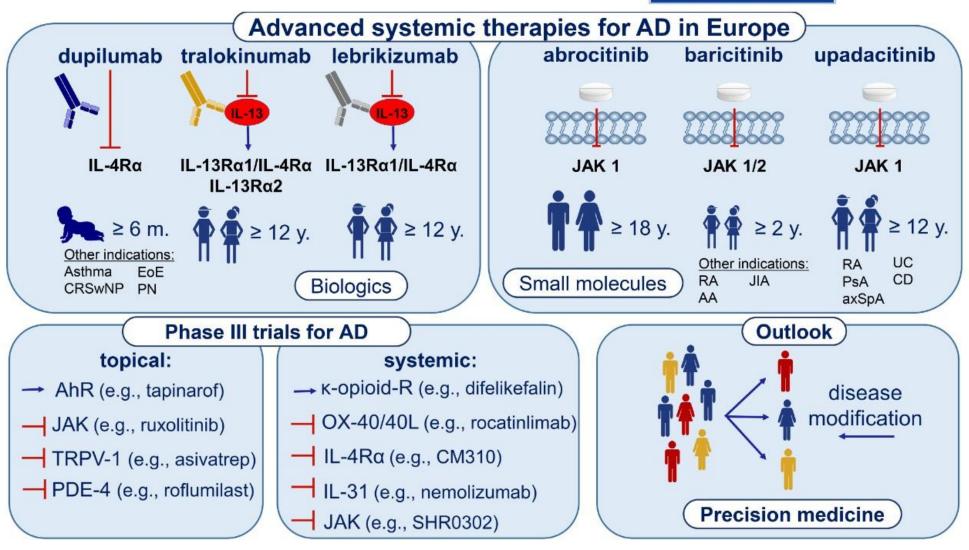




Bieber T, Maintz L, Phad GE, Brüggen MC. From Disease Control to Disease Modification: The Atopic Dermatitis Disease Activity Index. Allergy. 2025 Aug 29

To Achieve Modification of Disease Course, Both Clinical and Subclinical Control of AD Might Be Required



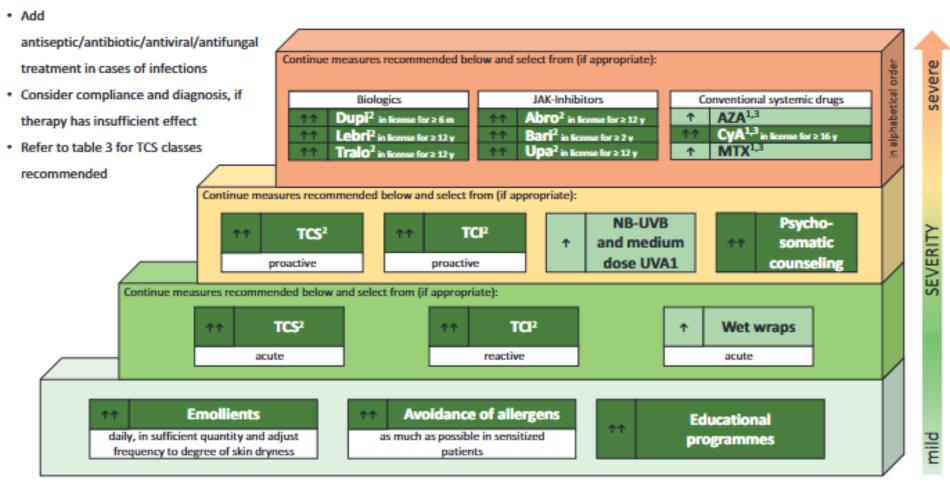




Müller S, Maintz L, Bieber T. Treatment of atopic dermatitis: Recently approved drugs and advanced clinical development programs. Allergy. 2024 Jan 8. doi: 10.1111

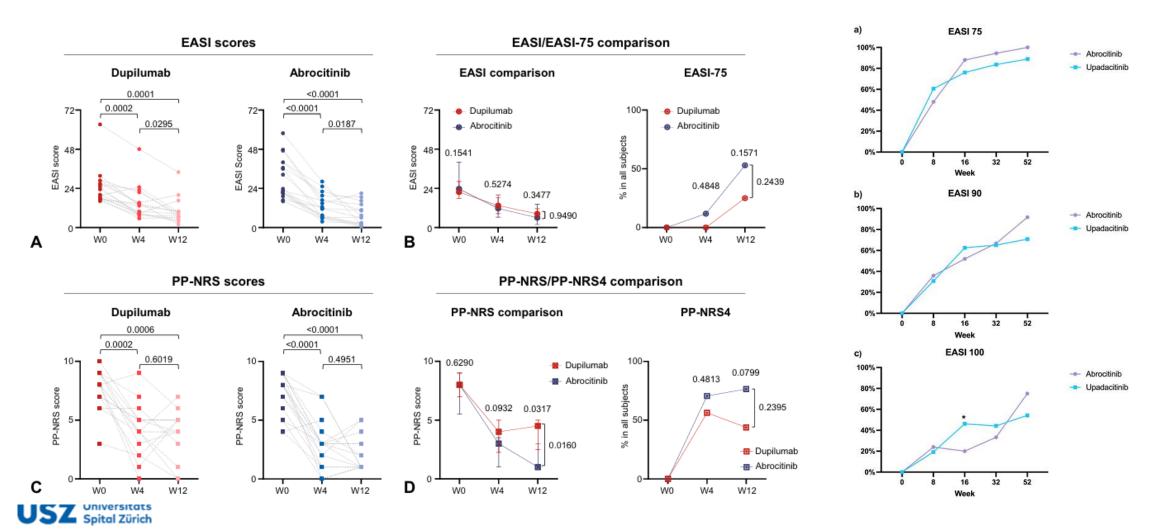
Wollenberg A et al. European Guideline (EuroGuiDerm) on atopic eczema: Living update. J Eur Acad Dermatol Venereol. 2025 May 2. doi: 10.1111

EuroGuiDerm Guideline on Atopic Eczema Stepped-care plan for children and adolescents with atopic eczema

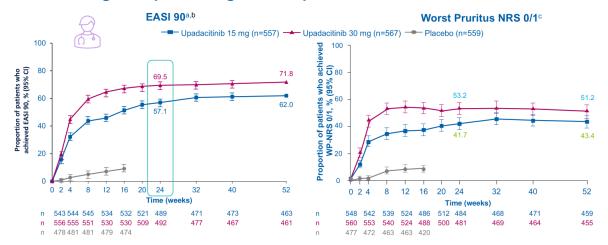




Ibba L et al.. Gargiulo L. Real-World Effectiveness and Safety of Upadacitinib and Abrocitinib in Moderate-to-Severe Atopic Dermatitis: A 52-Week Retrospective Study. J Clin Med. 2025 Apr 24;14(9):2953

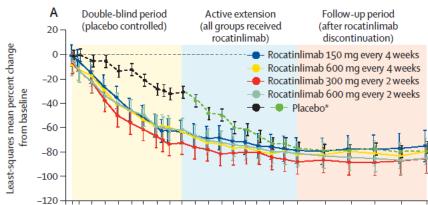


Reaching the optimal target with Upadacitinib



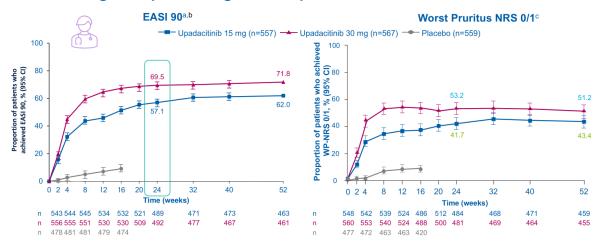
aCombined data from Measure Up 1 and Measure Up 2 studies (ITT population, NRI-C analysis). ®Response rates at each visit. Weeks 2 and 16 were multiplicity controlled. Missing due to COVID-19 which were imputed by Mir 1 in upadacitinib 15 mg, 5 in upadacitinib 30 mg, and 1 in placebo at Week 12; and 1 in upadacitinib 15 mg, 6 in upadacitinib 30 mg, and 5 in placebo at Week 16. For patients with Worst Pruritus NRS >1 at baseline CI, confidence interval; COVID-19, coronavirus disease 2019; EASI 90, ≥90% improvement in Eczema Area and Severity Index; WP-NRS, Worst Pruritus Numeric Spital Zürich

Adapted from Simpson EL. Papp KA, Blauvelt A, et al. Efficacy and Safety of Upadacitisis Patients With Moderate to Severe Alope Chematiss. Analysis of rollow-up Data From the Measure Up 1 and Measure Up 2 Randomized Clinical 1092;158(4):04-47



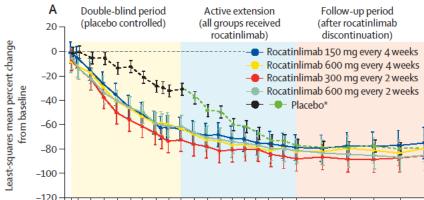
Guttman-Yassky E. et al An anti-OX40 antibody to treat moderate-to-severe atopic dermatitis: a multicentre, double-blind, placebo-controlled phase 2b study. Lancet. 2023 Jan 21;401(10372):204-214

Reaching the optimal target with Upadacitinib



Combined data from Measure Up 1 and Measure Up 2 studies (ITT population, NRI-C analysis). ⁹Response rates at each visit. Weeks 2 and 16 were multiplicity controlled. Missing due to COVID-19 which were imputed by Mi: 1 in upadactitin 15 mg, 5 in upadactitin 30 mg, and 1 in placebo at Week 12; and 1 in upadactitin 15 mg, 6 in upadactitin 15 mg, 6 in upadactitin 15 mg, 6 in upadactitin 16 mg, 6 mg, and 5 in placebo at Week 16, ⁵For patients with Worst Purtius NRS >1 at baseline CI, confidence interval; COVID-19, coronavirus disease 2019; EASI 90, ≥90% improvement in Eczema Area and Severity Index; WP-NRS, Worst Pruritus Numeric

Adapted from Simpson EL, Papp KA, Blauvelt A, et al. Efficacy and Safety of Upadacitini Patients With Indocrate to Severe Atopic Dermatiss: Analysis of Follow-up Uata From Measure Up 1 and Measure Up 2 Randomized Clinical Trials, 3AMA Derma



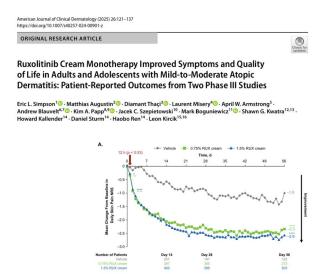
Guttman-Yassky E. et al An anti-OX40 antibody to treat moderate-to-severe atopic dermatitis: a multicentre, double-blind, placebo-controlled phase 2b study. Lancet. 2023 Jan 21;401(10372):204-214







Delgocitinib cream 20 mg/g (n=249)





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Disease Modification in AD – A Complex and Evolving Definition*1,2





Modification of the disease itself¹

"Any intervention that endurably impacts the **pathomechanisms** and the **natural course of the disease** leading to a **sustained remission** after cessation of treatment"

Impact on associated comorbidities¹

"Any intervention successfully preventing the development or the progression of atopic comorbidities (food allergy, allergic asthma and/or allergic rhinitis, before or during their development)"

Unique disease characteristics make it difficult to clearly define what disease modification means for AD



AD is not universally progressive in nature²



Disease course varies widely by individual²



Spontaneous remission is common in pediatric patients²

Can we achieve a preventive effect on AD or on the Atopic march?

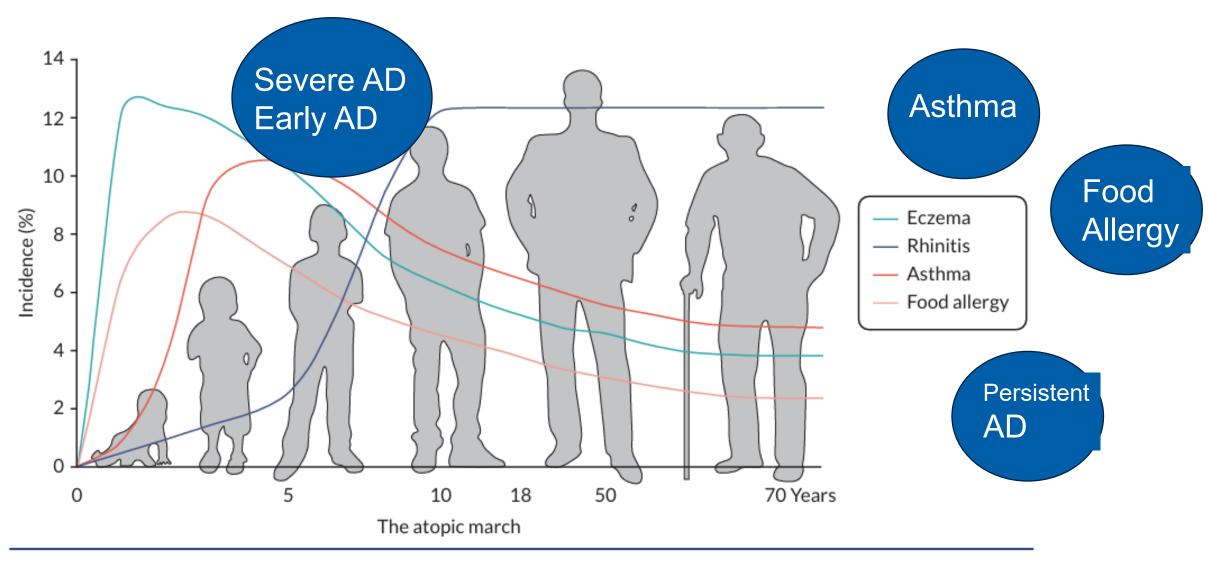
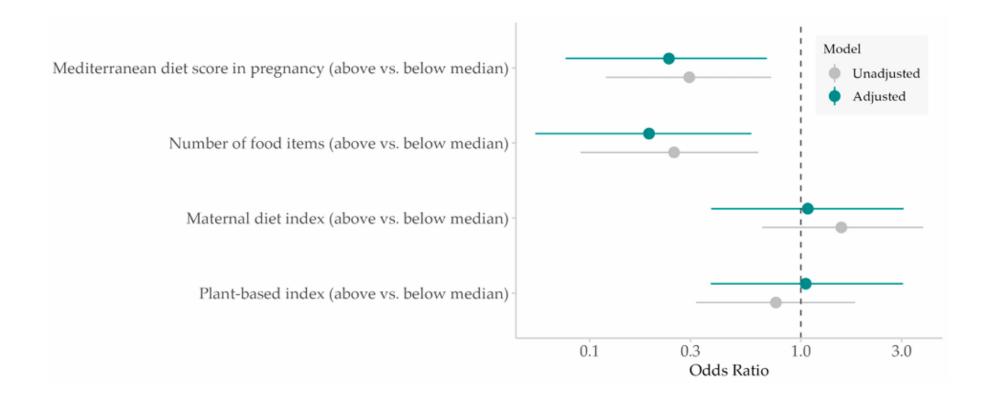


FIGURE 1 Illustration of the typical onset of symptoms of allergic diseases during childhood. Reprinted from Davidson*et al.* (2019), ¹⁵ Copyright (2023), with permission from Elsevier.

Influence on diet during pregnancy on the development of AD in the child

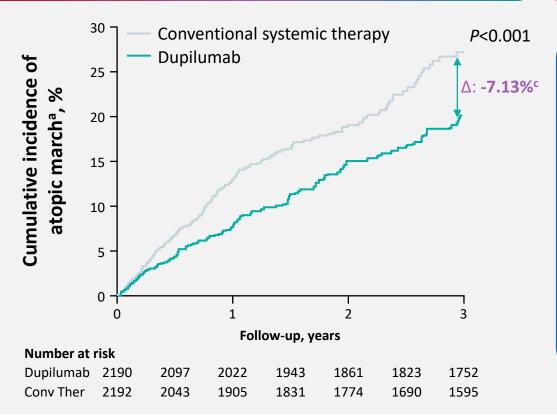


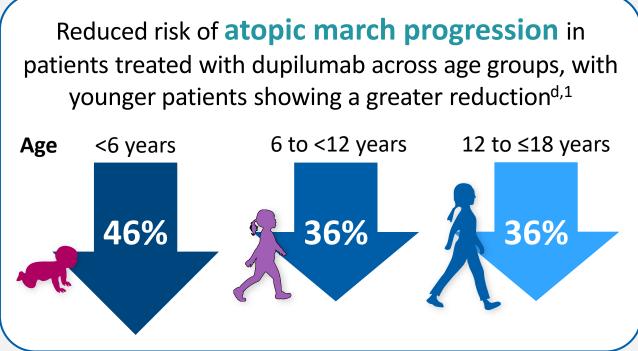
Early Intervention with Dupilumab May Be Associated with Reduced Risk of Atopic Comorbidities in Pediatric Patients With AD¹

TriNetX

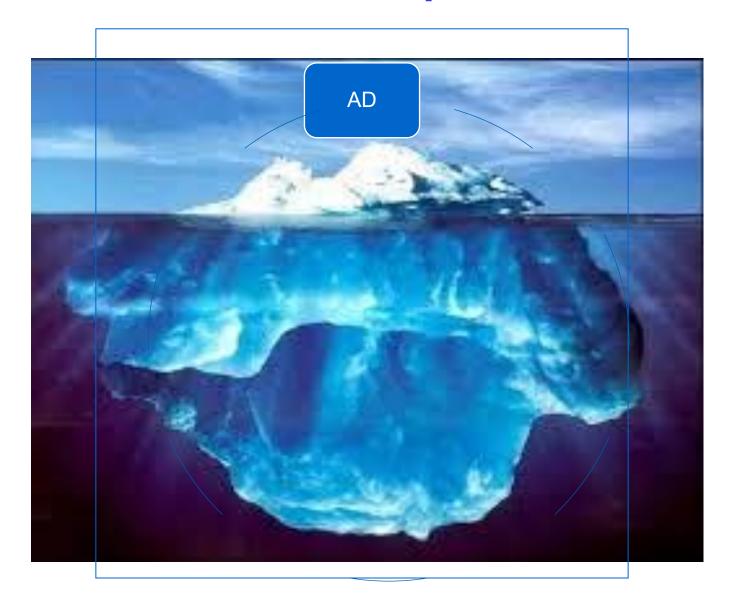
Cumulative incidence of atopic march progression^a in pediatric AD patients (≤18 years) treated with dupilumab vs conventional systemic therapy^{b,1}

Risk of atopic march progression^a with dupilumab vs conventional systemics stratified by age during the 3-year observation period¹

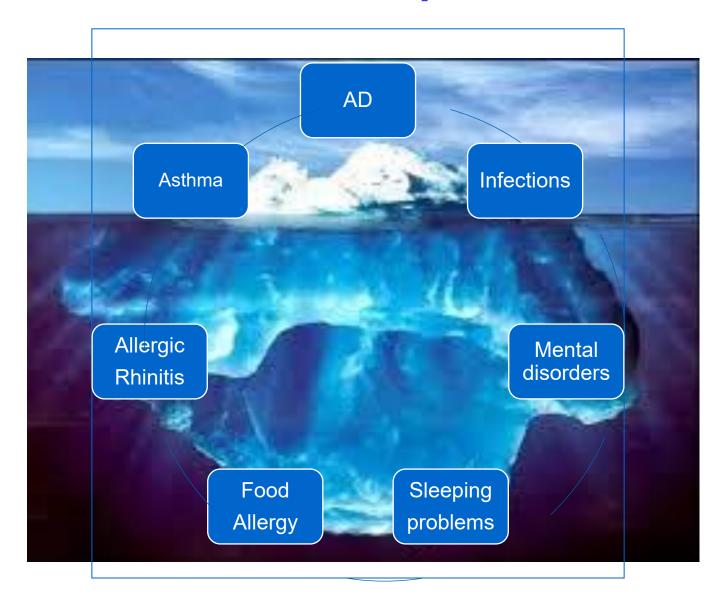




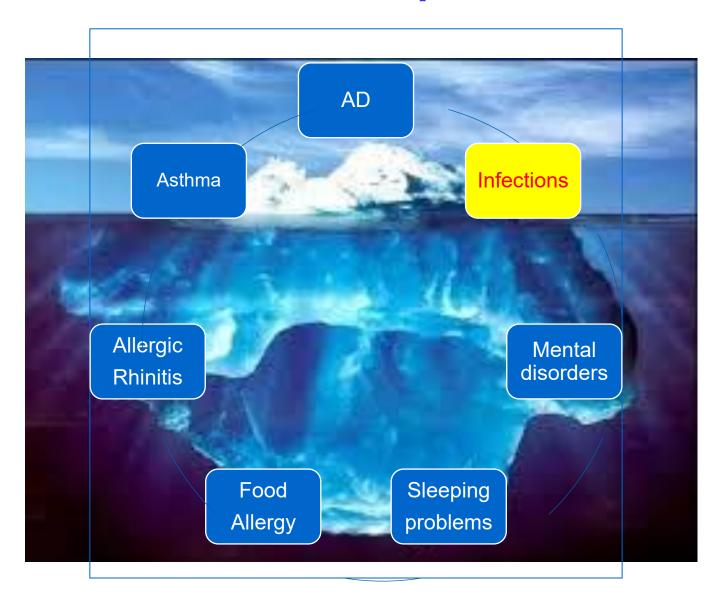
Graph adapted with permission from Lin T-L, et al. 2024. Figures adapted from: 1. Lin T-L, et al. *J Am Acad Dermatol*. 2024;91:466–473.













Patients With Moderate-to-Severe AD Have an Increased Risk of Skin Infection, Including Infections With *S. aureus*^{1,2}

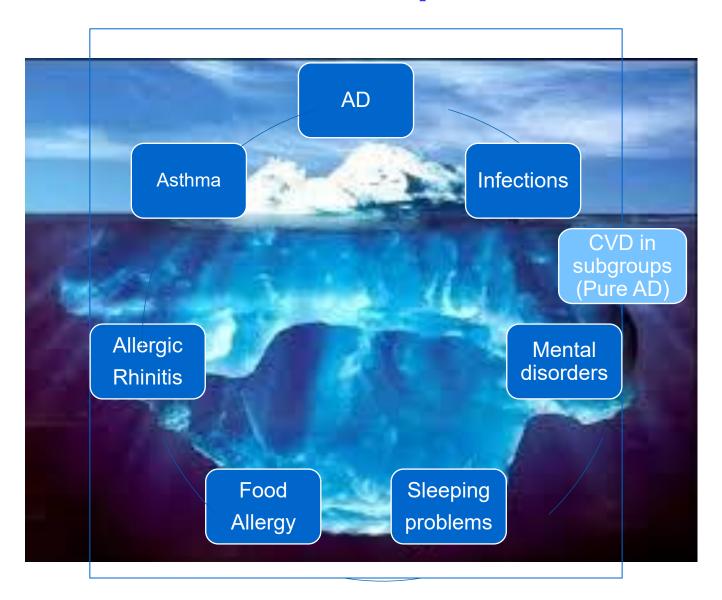
Bacterial infections





Photo courtesy: Dr Vania Carvalho for viral infections; Prof. Peter Schmid for S.aureus and bacterial infections

1. Wang V. *Ann Allergy Asthma Immunol*. 2021;126:3–12. 2. Alexander H, et al. *British J Dermatol*. 2020;182:1331–1342.







Current updates in the epide dermatitis

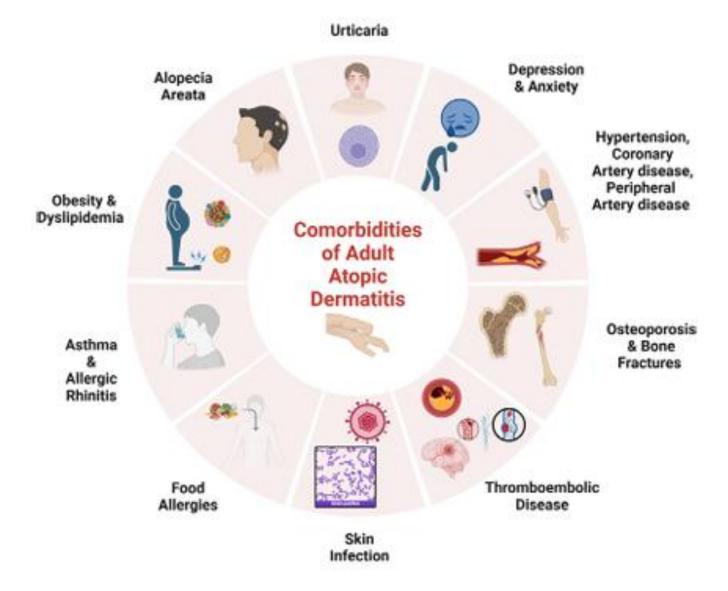


Figure 2. Comorbidities deemed moderately to highly probably associated with adult atopic dermatitis according to the American Academy of Dermatology guidelines on comorbidities. Created in BioRender.



^{*} Department of Dermatology, Medical College of Wisconsin, N

[†] Department of Dermatology, The George Washington Univer.



Current updates in the epide dermatitis

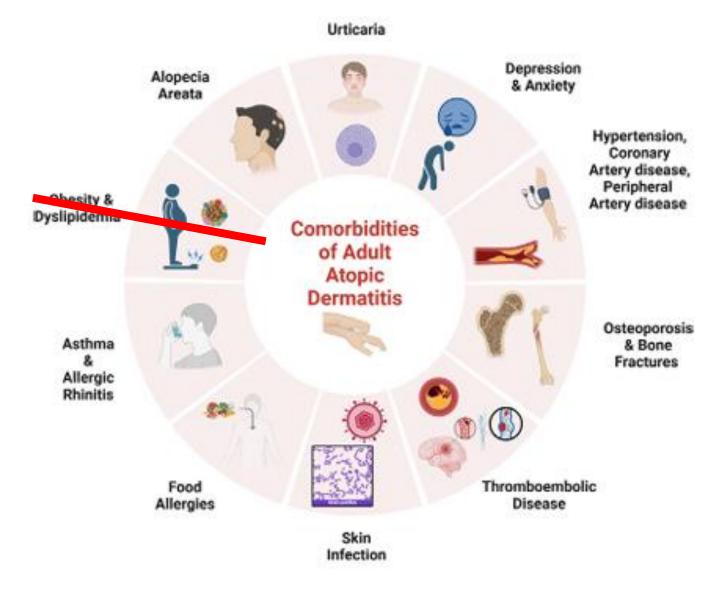


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Current updates in the epide dermatitis

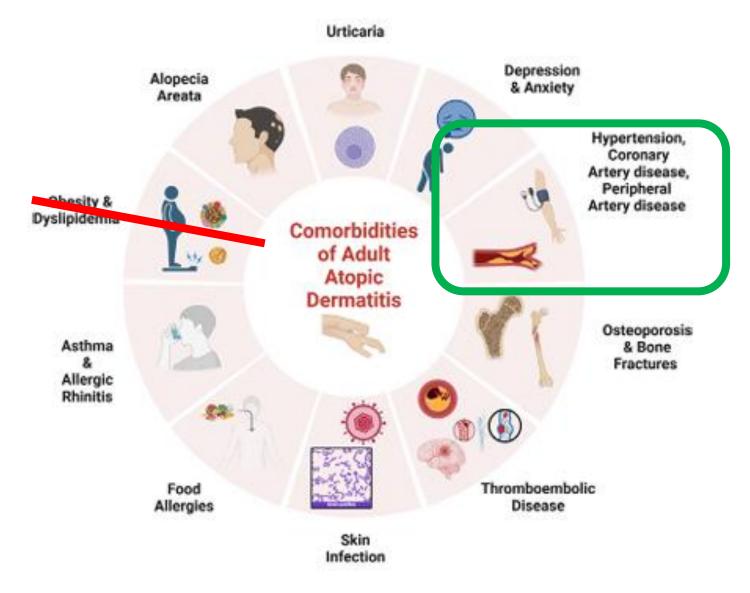


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ORIGINAL ARTICLE 🙃 Full Access

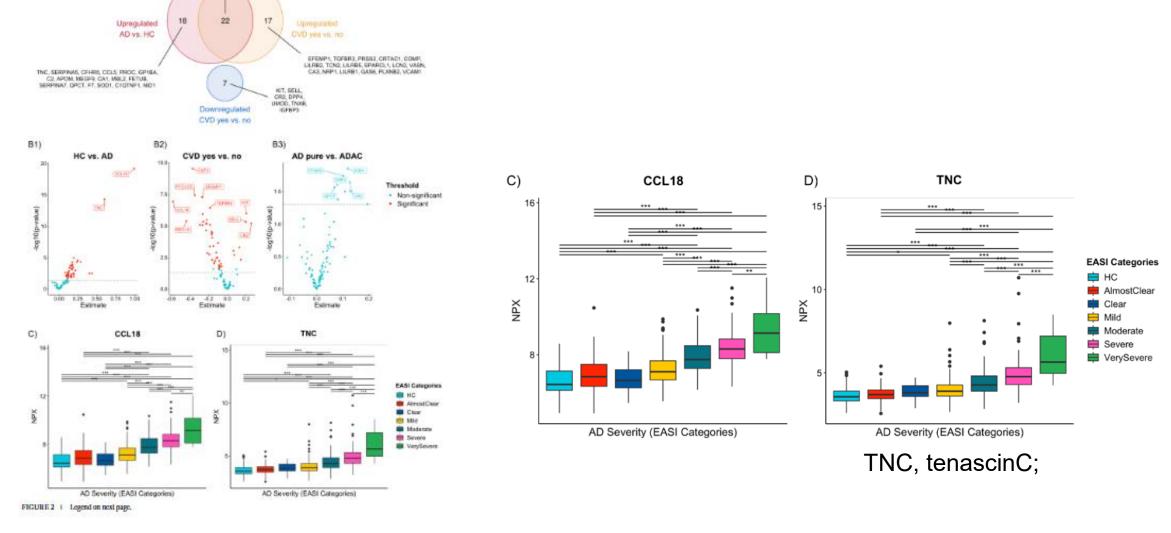
Deciphering the Connection Between Atopic Dermatitis and Cardiovascular Diseases: Analysis of Clinical Associations and Cardiometabolic Proteins

Danielle Fehr , Van Hung Huynh-Tran, Laura Maintz, David Niederseer, Milad Ameri, Anita Dreher, Cezmi A. Akdis, Roger Lauener, Claudio Rhyner, Claudia Traidl-Hoffmann, Peter Schmid-Grendelmeier, Thomas Bieber, Marie-Charlotte Brüggen ... See fewer authors

- 677 AD patients and 79 nonatopic controls from an observational multicenter case—control study (ProRaD:Prospective longitudinal study investigating the remission phase in patients with atopic dermatitis and other allergy-associated diseases).
- AD severity and atopic metabolic, and cardiovascular conditions as well as risk factors
- Serum samples: targeted proteomics (cardiometabolics panel, Olink)



Disease severity may be a risk factor for CVD in pure AD patients, but not in those with atopic comorbidities



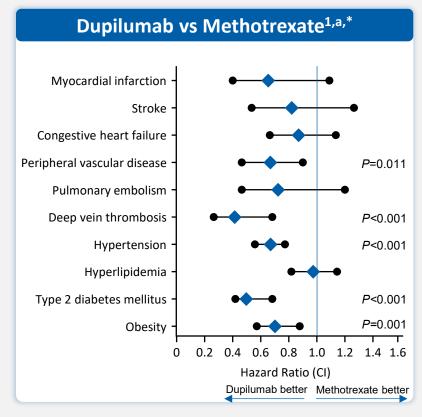


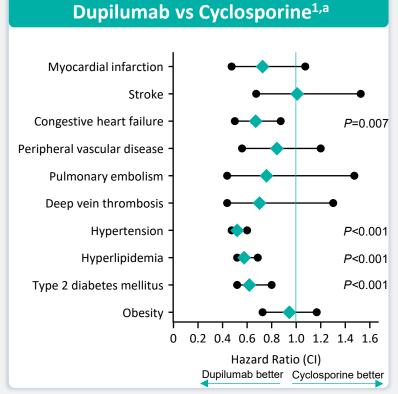
Targeting IL-4 and IL-13 Was Associated with Decreased **Cardiometabolic Risk** in Adult AD Patients Compared to Conventional Systemics and Oral JAK Inhibitors

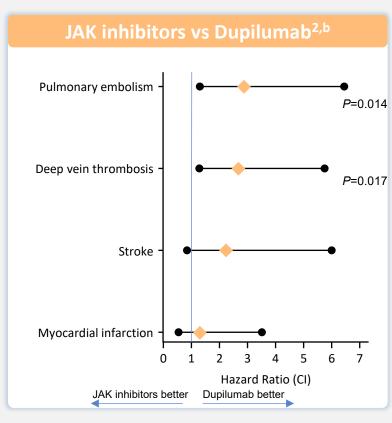


TriNetX

Risk of cardiovascular and metabolic outcomes among AD patients treated with systemic therapies







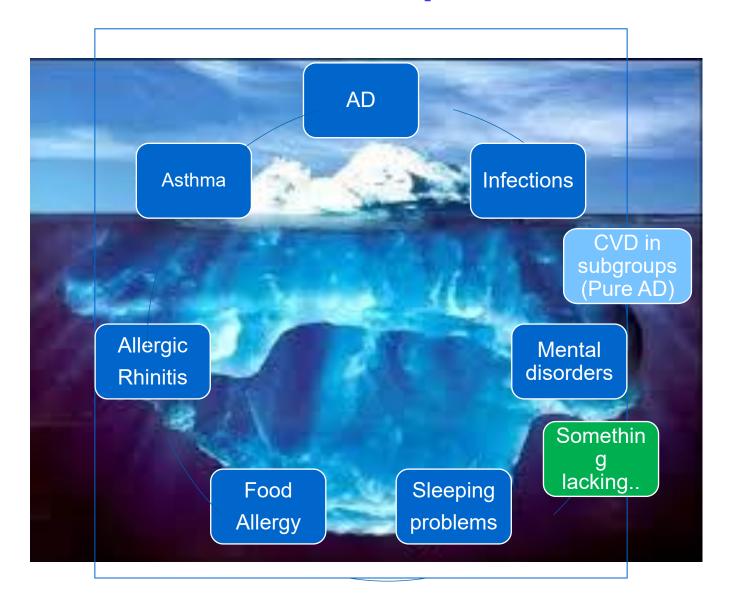
^aGlobal retrospective cohort study comprised two distinct analyses comparing patients with AD under different treatments: (i) initiators of dupilumab (n = 10,151) versus methotrexate (n= 10,151) and (ii) initiators of dupilumab (n = 6,629) versus 1 N.T (n = 6,629). Study groups were compared regarding the risk of 8 cardiovascular and 4 metabolic outcomes during the initial year following drug initiation

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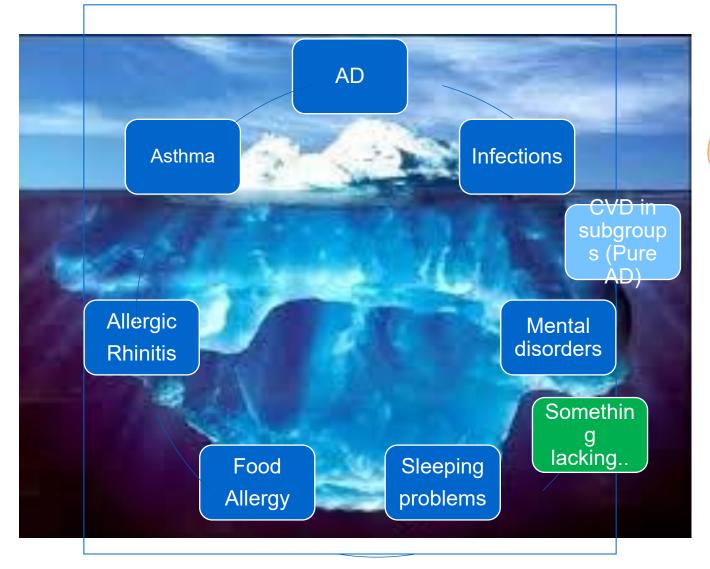
DM, diabetes mellitus; DVT, deep vein thrombosis; PVD, peripheral vascular disease.

- 1: We have to define/consider subtypes
- 2: Different approaches for childhood and adult AD
- 3. We have to define (and exclude/avoid) Trigger factors
- 4. We have to integrate the needs and expections of our patients
- 5: Adress not only SAD but also comorbidities

















Current updates in the epide dermatitis

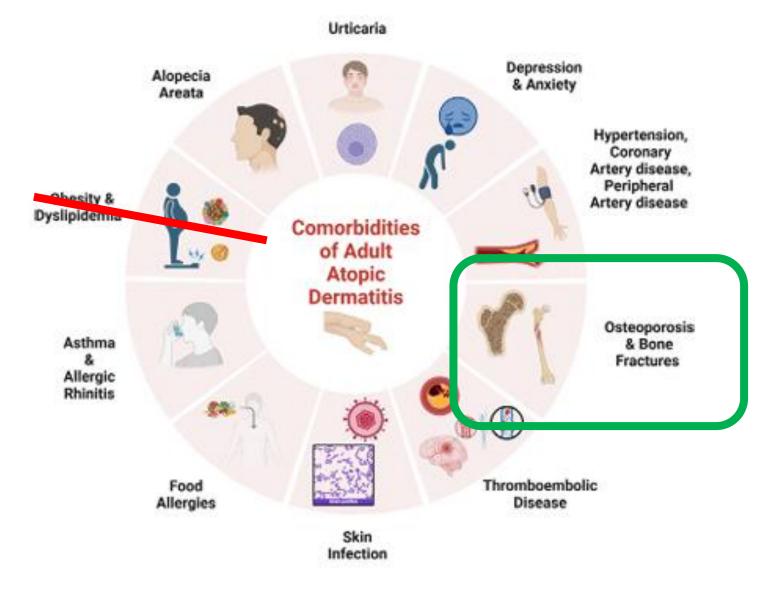


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^{*} Department of Dermatology, Medical College of Wisconsin, N

[†] Department of Dermatology, The George Washington Univer:

Bone mineral density, osteopenia osteoporosis, and fracture risk increased in patients with AD

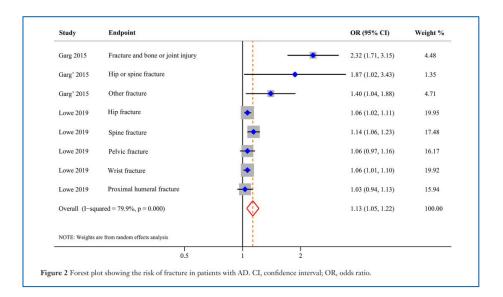


Original Article

Page 1 of 11

Bone mineral density, osteopenia, osteoporosis, and fracture risk in patients with atopic dermatitis: a systematic review and metaanalysis

Di Wu^{1#}, Xiang-Dong Wu^{1#}, Xi Zhou¹, Wei Huang², Changqi Luo³, Yong Liu¹



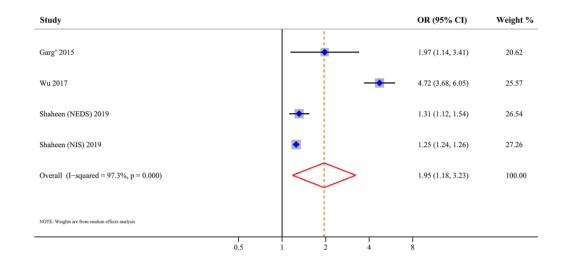


Figure 3 Forest plot showing the risk of osteoporosis in patients with AD. CI, confidence interval; OR, odds ratio.

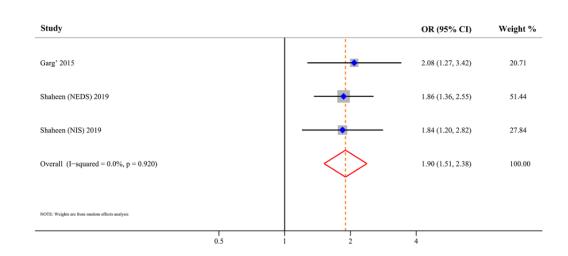


Figure 4 Forest plot showing the risk of osteopenia in patients with AD. CI, confidence interval; OR, odds ratio.



Wu D et al.Ann Transl Med. 2021 Jan;9(1).40

Fracture incidence in children after developing atopic dermatitis

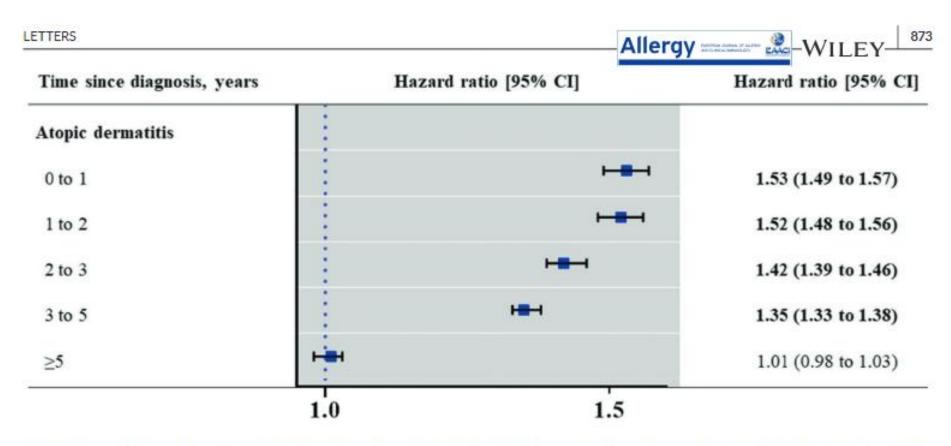


FIGURE 1 Adjusted HR for the likelihood of incident fracture at different time points after AD diagnosis. Blue dots indicate adjusted HR for AD; Whiskers represent 95% CIs. AD, atopic dermatitis; CI, confidence interval; HR, hazard ratio



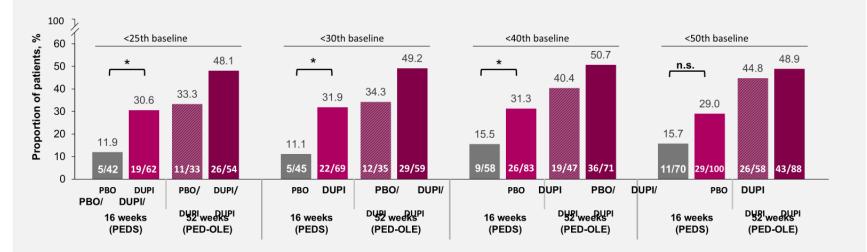
Lee SW et al. Fracture incidence in children after developing atopic dermatitis: A Korean nationwide birth cohort study. Allergy. 2023 Mar;78(3):871-875

Treatment with Dupilumab Significantly Improved Vertical Growth in Children of Lower Stature with AD¹



LIBERTY AD PEDS & PED-OLE

PEDS: 16 weeks on PBO/DUPI +TCS
PED-OLE: 36 weeks on DUPI (no TCS)



Catch-up growth observed with dupilumab treatment in the 16-week PEDS trial was reproducible in placebo patients that switched to dupilumab at week 16, with ~33-44% achieving ≥5 percentile height improvement at week 52¹

*p<0.05, n.s., not significant. White numbers inside bars denote number of patients achieving ≥5 percentile improvement over total patients per group.

BL. baseline: PBQ; placebe; DUPI, dupilumab; PBO/DUPI, placebo group in PEDS that transitioned to dupilumab treatment in PED-OLE at Week 52; DUPI/DUPI, dupilumab treatment group in PEDS that remained on dupilumab treatment.in PED-OLE at Week 52.

Figure adapted from: 1. Irvine A, et al. Growth Analysis in Children Aged 6 to 11 Years With Severe AtopicDermatitis and Impact of Dupilumab Treatment on Height. Poster Presented at the Relevant Advanced Practice Immuno-Dermatology Symposium (RAPIDS); Rio Grande, Puerto Rico; April 9 - 13, 2025.

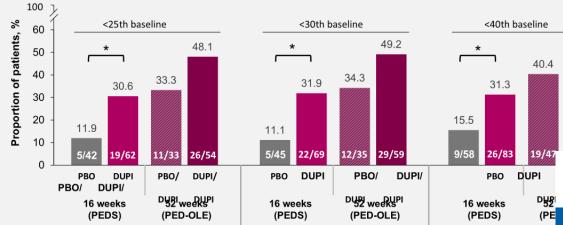


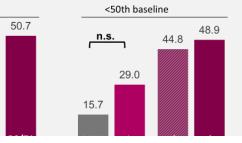
Treatment with Dupilumab Significantly Improved Vertical Growth in Children of Lower Stature with AD¹



LIBERTY AD PEDS & PED-OLE

PEDS: 16 weeks on PBO/DUPI +TCS
PED-OLE: 36 weeks on DUPI (no TCS)





Growth Observed in Pediatric Dupilumab Patients Appears to Be Irrespective of the Reduced Cumulative Topical Corticosteroid Usage¹



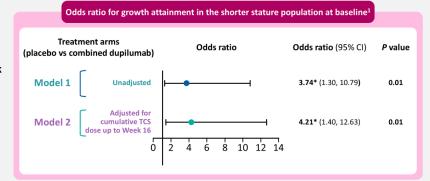
LIBERTY AD PEDS

Catch-up growth observed with dupilumab treatment in the 16-week PEDS triathat switched to dupilumab at week 16, with ~33-44% achieving ≥5 percent

*p<0.05, n.s., not significant. White numbers inside bars denote number of patients achieving ≥5 percentile improvement over total patients per group. BL, pasetine, PBQ, placebe, DUPI, dupilumab, PBO/DUPI, placebo group in PEDS that transitioned to dupilumab treatment in PED-OLE at Week 52; dupilumab treatment-in PED-OLE at Week 52.

Figure adapted from: 1. Irvine A, et al. Growth Analysis in Children Aged 6 to 11 Years With Severe AtopicDermatitis and Impact of Dupilumab Treatm Immuno-Dermatology Symposium (RAPIDS); Rio Grande, Puerto Rico; April 9 - 13, 2025.

Cumulative doses of low- and medium-potency topical corticosteroids used in the 16-week placebo-controlled PEDS trial were significantly lower in patients treated with dupilumab compared to placebo (P=0.034)¹ (data not shown)



These data suggest that topical corticosteroids may not impact growth in 16 weeks, or that a potential negative effect of TCS use on growth during that period could be counteracted by treatment with dupilumab

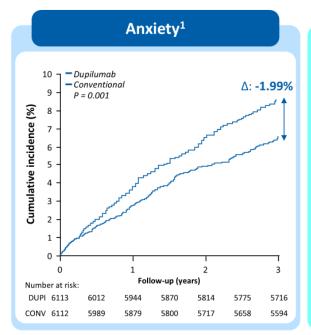


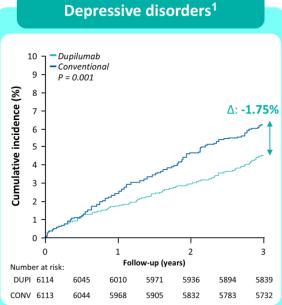
Lower Incidence of Neuropsychiatric Disorders Was Seen in Adults with AD Treated with Dupilumab vs. Conventional Therapy in TriNetX¹

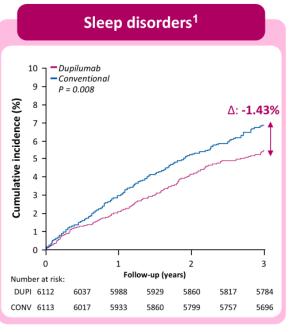
TriNetX



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Figures adapted from: 1. Lin TL, et al. Ann Allergy Asthma Immunol. 2025;134(3):333-340.e6.

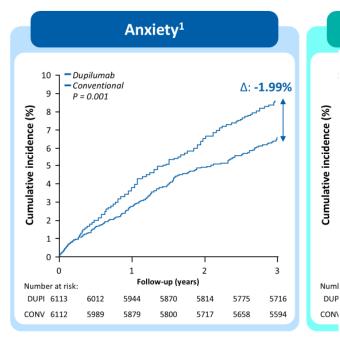
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Lower Incidence of Neuropsychiatric Disorders Was Seen in Adults with AD Treated with Dupilumab vs. Conventional Therapy in TriNetX¹

TriNetX





Figures adapted from: 1. Lin TL, et al. Ann Allergy Asthma Immunol. 2025;134(3)::

Depressive disorders¹

Sleep disorders¹

There Is Growing Evidence for the Association of Various Systemic Diseases With AD including bone health

Mental health



Adult patients with AD have a higher likelihood of depression than patients with other chronic diseases^{1,2}



Pediatric patients with AD are 2–6 times more likely to have anxiety, depression, and ADHD than those without AD^{2,3}

Cardiovascular health

Adult and pediatric patients with AD are at higher risk for various cardiovascular events than those without AD^{4,a}



Pulmonary embolism



Myocardial infarction



Deep vein thrombosis



Stroke

Bone health

Evidence suggests that AD is associated with:



Decreased bone mineral density^{5,6}



Increased risk of fractures^{7,8}



Growth impairment in children and adolescents⁹

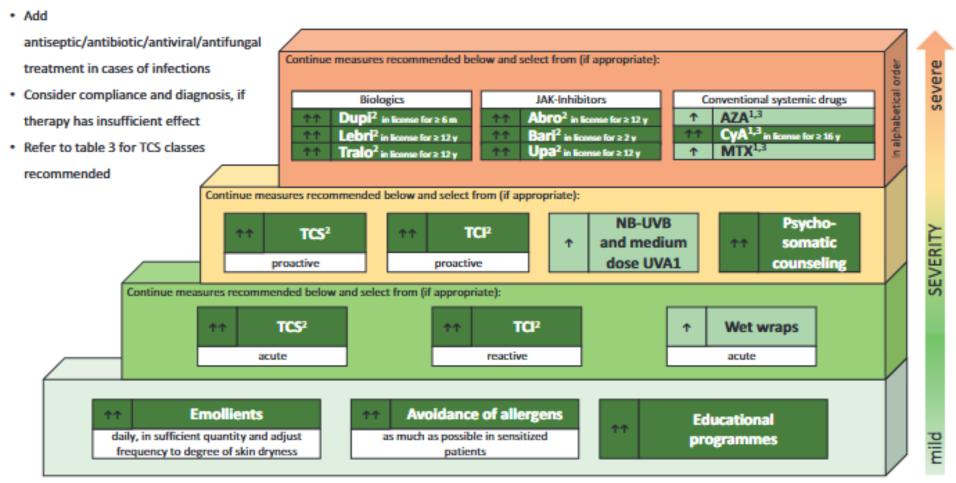
^{1.} Thyssen JP, et al. J Allergy Clin Immunol. 2023;151:1155–1162. 2. Johnson JK, et al. Dermatitis. 2024;35:386–391. 3. Hou A, Silverberg JI. Pediatr Dermatol. 2021;38:606–612. 4. Wan J, et al. J Allergy Clin Immunol. 2020;145:487–488. 9. Silverberg JI. Pediatr Allergy Immunol. 2015;26:54–61. 7. Lee AW, et al. Allergy. 2023;78:871–875. 8. Arkwright PD, Mughal MZ. J Allergy Clin Immunol. 2020;145:487–488. 9. Silverberg JI, et al. JAMA Dermatology. 2015;151:401–409.





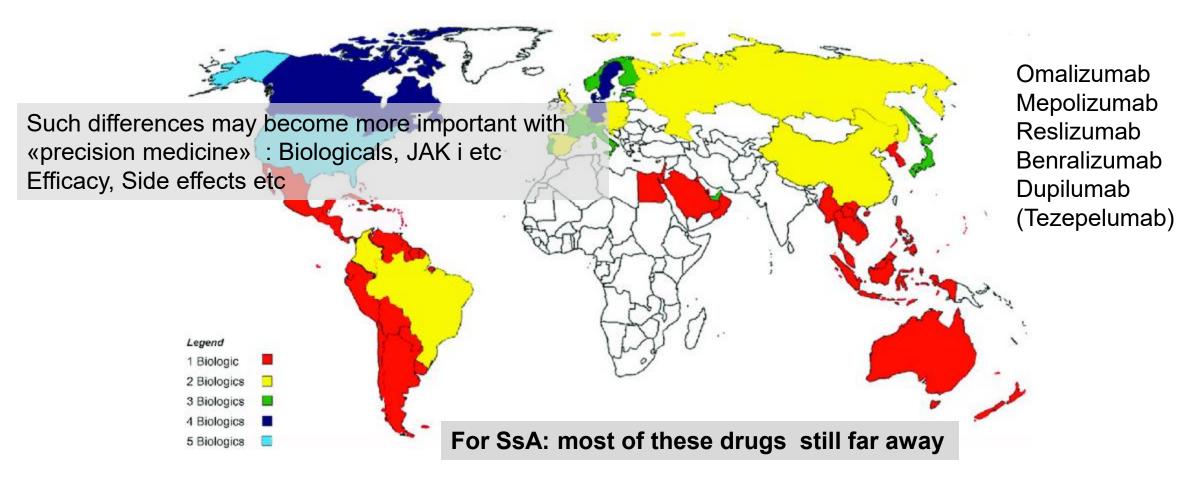
Wollenberg A et al. European Guideline (EuroGuiDerm) on atopic eczema: Living update. J Eur Acad Dermatol Venereol. 2025 May 2. doi: 10.1111

EuroGuiDerm Guideline on Atopic Eczema Stepped-care plan for children and adolescents with atopic eczema





Availability of biologics in asthma worldwide



Caminati, M. & Morais-Almeida, Mario & Bleecker, E. & Ansotegui, I. & Canonica, G.W. & Bovo, C. & Senna, Gianenrico. (2021). Biologics and global burden of asthma: A worldwide portrait and a call for action. World Allergy Organization Journal. 14. 100502. 10.1016/j.waojou.2020.100502.

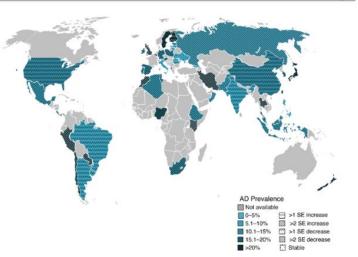


POSITION STATEMENT



Atopic dermatitis: A global health perspective

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Ousmane Faye<sup>1</sup> | Carsten Flohr<sup>2,3</sup> | Kenji Kabashima<sup>4,5</sup> | Lin Ma<sup>6</sup> | Amy S. Paller<sup>7</sup> |
Roberto Takaoka <sup>18,19</sup> | Andreas Wollenberg <sup>18,19,20,21</sup> | Yik Weng Yew <sup>22</sup> |
Jose A. Ruiz Postigo<sup>23</sup> | Peter Schmid-Grendelmeier<sup>18,24,25,26</sup> | Alain Taïeb<sup>18,27</sup>
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POSITION STATEMENT



Atopic dermatitis: A global health perspective

GADA Director

Kenj artin erg¹⁸ ende

How common is atopic dermatitis?





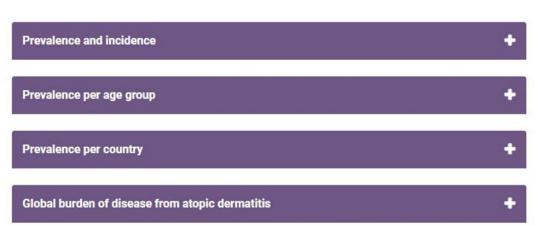
Professor Carsten Flohr UK

GADA Core Team



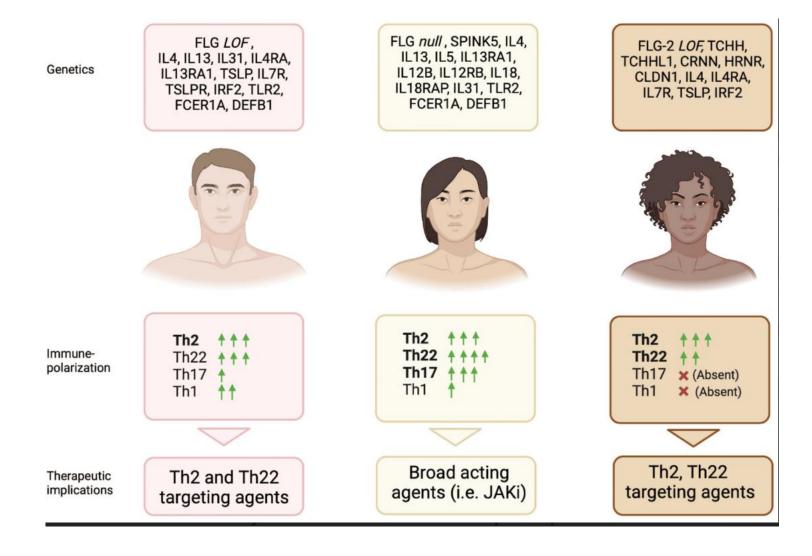
Dr. Suzanne Keddie UK

Atopic dermatitis affects around 20% of children and up to 10% of adults. Yet, the prevalence and disease burden of atopic dermatitis varies considerably between countries. The reasons for these variations are still poorly understood.





Overview of Atopic Dermatitis in 3 Different Ethnic Groups





Chiricozzi A et al..... Girolomoni G. Overview of Atopic Dermatitis in Different Ethnic Groups. J Clin Med. 2023 Apr 4;12(7):2701

Overview of Atopic Dermatitis in 3 Different Ethnic Groups

Evidence for different immune signatures and sensitization patterns in sub-Saharan African vs.
Central European atopic dermatitis patients

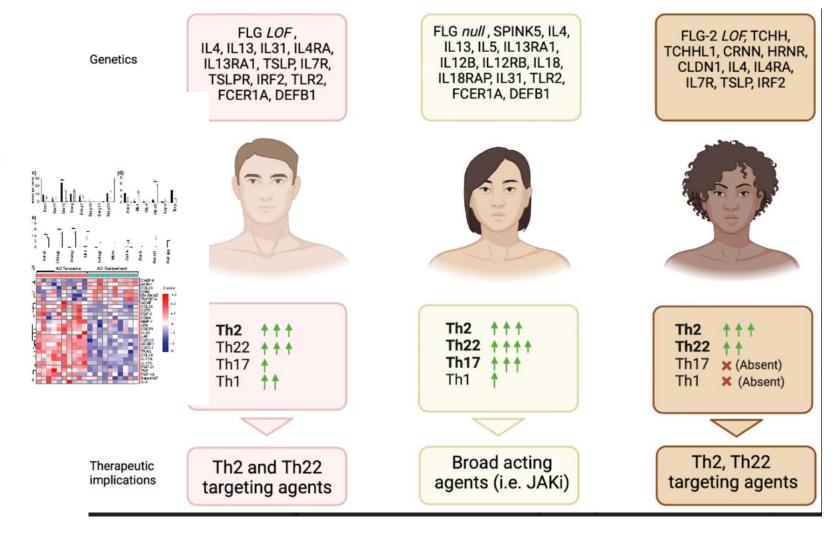
- IL-17 -dominated signature in SsA patients

CCL19
CXCL1
TFG-beta
CCL25
TRAIL
FGF-5
TRAIL
TRITC
L-17C
L-17C
L-17C
TNF
CXCL5
TNF
CXC

- exhibiting dominant T_H2 and T_H22 skewing
- attenuation of lipid metabolism-related products

Lang CCV et al. Ann Allergy Asthma Immunol. 2021 Sep;127(3):334-341 Lang CCV et al. J Eur Acad Dermatol Venereol. 2021 Feb;35(2):e140-e142

USZ Universitäts Spital Zürich





Chiricozzi A et al..... Girolomoni G. Overview of Atopic Dermatitis in Different Ethnic Groups. J Clin Med. 2023 Apr 4;12(7):2701

Improved acces to treatment in AD on a global scale

Meeting WHO- ISAD
Patients, experts and Industry 23.10.2025



WHO – ISAD Strategies for AD in SubSaharan Africa 6.-8. June 2022 Antananarivo, Madagascar





Accepted in Aug 2025

EML application « Moisturizers for AD » submitted Nov 1st 2024

> Inclusion of urea- and glycerol-based topical moisturizers on the EML and EMLc for the treatment of atopic dermatitis in adults and children

Applicants: International Society of Atopic Dermati

Co-Applicant:
WHO Department of control of Neglected Trop

Persons to contact: Prof Alain Dr. Jose Ruiz Postigo, Wi-Faieb, ISAD Email: postigo/@who.int

Email: alain.taieb@u-bordeau Phone: + 33 647679795 Writing group: dermatologists, pharmacists, from academia or industry.

Support: GlobalSkin (Patient advocacy) ILDS (Int League Derm Soc) ASDV (African Soc Derm Vener)

223 | WHO Expert Committee on the Selection and Use of Essential Medicines





- 1: We have to define/consider subtypes
- 2: Different approaches for childhood and adult AD
- 3. We have to define (and exclude/avoid) Trigger factors
- 4. We have to integrate the needs and expections of our patients
- 5: Adress not only SAD but also comorbidities
- 6: Adapted T2T and treatment approaches for different cultural and socioecconomic settings







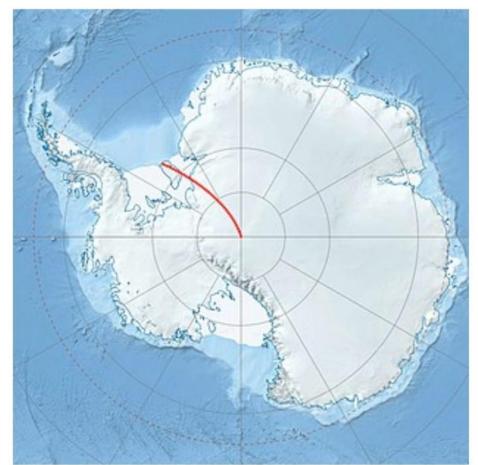






AMCC Anterior Mid Cingulate Cortex

Soloexpedition zum Südpol

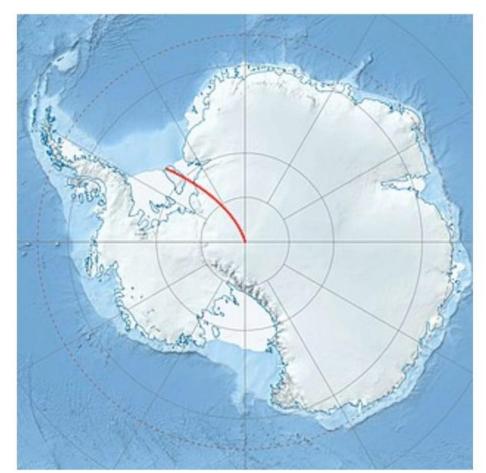


Die 1381 Kilometer lange Route der Expedition Anja Blachas von der Gould Bay auf der Berkner-Insel bis zum Südpol



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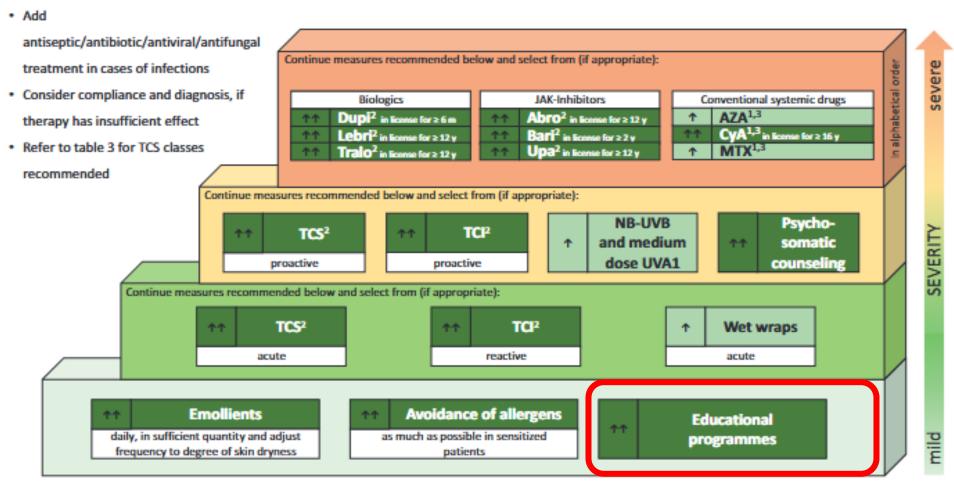


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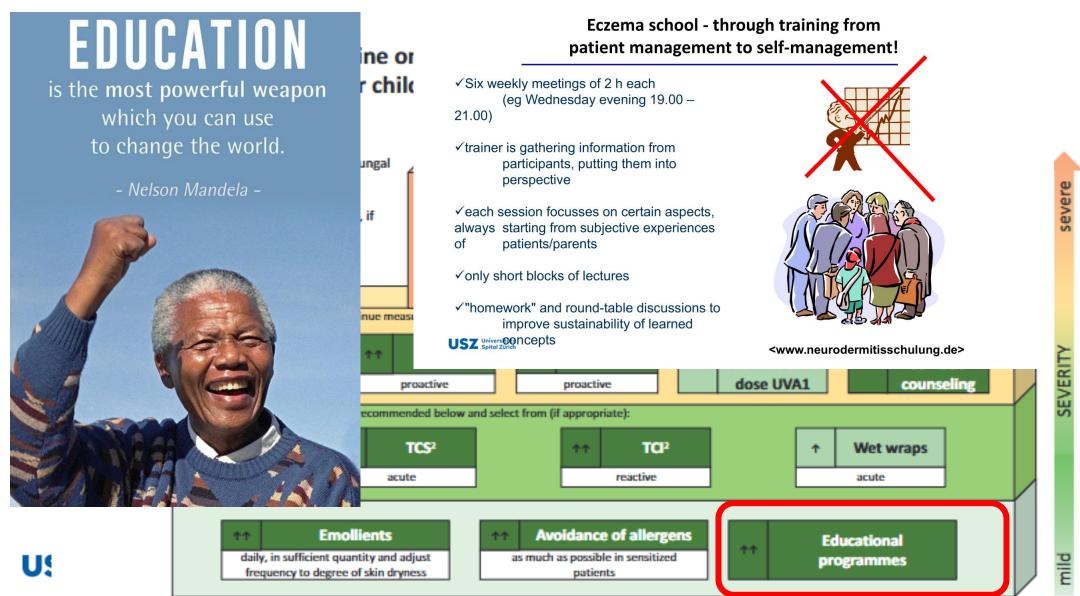
Wollenberg A et al. European Guideline (EuroGuiDerm) on atopic eczema: Living update. J Eur Acad Dermatol Venereol. 2025 May 2. doi: 10.1111

EuroGuiDerm Guideline on Atopic Eczema Stepped-care plan for children and adolescents with atopic eczema





Wollenberg A et al. European Guideline (EuroGuiDerm) on atopic eczema: Living update. J Eur Acad Dermatol Venereol. 2025 May 2. doi: 10.1111



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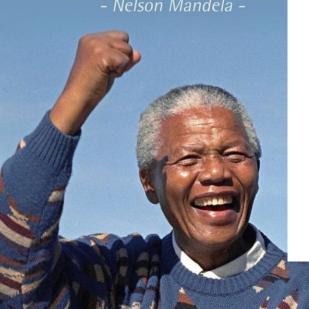


Towards personalized therapy and potential disease modification in AD: We are closer than ever

EDUCATION

is the most powerful weap which you can use to change the world.

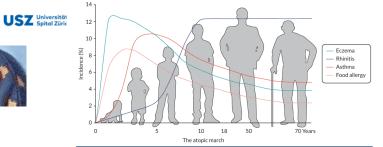
- Nelson Mandela -



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T2T from the patient perspective

Author | file name | 00.00.19

CONSULTANT Patient Related Outcomes

SCORAD **EASI IGA**



Biomarkers

m the doctor's perspective





T2T in Atopic Dermatitis (Treat to target)

Better Access to Treatments for AD on a global scale





