

S3-Leitlinie

Atopische Dermatitis – Leitlinienreport

AWMF-Register-Nr.: 013-027, 2023

ICD-10 Code: L20.8, L20.9, L28.0

Schlagworte: Atopische Dermatitis, atopisches Ekzem, Neurodermitis

Zitation der Leitlinie:

S3-Leitlinie „Atopische Dermatitis“ (AWMF-Registernr. 013-027) (2023) verfügbar unter:

<https://register.awmf.org/de/leitlinien/detail/013-027>

Zitation des Leitlinienreports:

Leitlinienreport der S3-Leitlinie „Atopische Dermatitis“ (AWMF-Registernr. 013-027) (2023) verfügbar unter: <https://register.awmf.org/de/leitlinien/detail/013-027>

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Guideline development report: German Adaptation of the EuroGuiDerm Guideline on Atopic Eczema

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Keywords: Dermatitis, Atopic [MeSH], Guideline [MeSH], Evidence-Based Medicine [MeSH], methods report, Review [MeSH]

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Introduction

This report describes the methods and processes used to develop the 2022 German adaptation (AWMF Registry No. 013/027) of the evidence- and consensus-based (S3) EuroGuiDerm Guideline on Atopic eczema.^{1,2}

When citing the German adaptation of the guideline, please use the reference below that fits the language version you are referring to:

- German version:
 - Werfel et al. Deutsche S3-Leitlinie zur atopischen Dermatitis, 2022. AWMF-Leitlinienregister (013-027).
- International version:
 - Wollenberg et al. European Guideline (EuroGuiDerm) on Atopic Eczema – part I: systemic therapy. JEADV. 2022 Sep;36(9):1409-1431. doi: 10.1111/jdv.18345
 - Wollenberg et al. European Guideline (EuroGuiDerm) on Atopic Eczema – part II: non-systemic treatments and treatment recommendations for special AE patient populations. JEADV. 2022 Nov;36(11):1904-1926. doi: 10.1111/jdv.18429

Nomination of experts

A range of national societies in Germany, Austria and Switzerland (see Table 1) nominated experts. To be eligible for nomination and participation, the experts had to fulfil at least one of the following criteria:

- Extensive clinical experience in the diagnosis and treatment of atopic dermatitis
- Relevant publications in the field of atopic dermatitis
- Relevant experience in evidence-based medicine

Additionally, one patient representative from the patient organisation Deutscher Neurodermitis Bund e.V. joined the guideline development group and had one vote.

Table 1: Guideline Development Group

Vertretung (Name)	Institut	Fachgesellschaft
Expert*innenkommission		
Prof. Dr. med. Aberer Werner*	Medizinische Universität Graz	Österreichische Gesellschaft für Dermatologie und Venerologie
Prof. Dr. med. Augustin Matthias*	Universitätsklinik Hamburg-Eppendorf Institut für Versorgungsforschung in der Dermatologie und bei Pflegeberufen	Arbeitsgemeinschaft Gesundheitsökonomie und Evidenzbasierte Medizin der Deutschen Dermatologischen Gesellschaft
Prof. Dr. med. Biedermann Tilo*	Klinikum rechts der Isar der TU München, Klinik und Poliklinik für Dermatologie und Allergologie	Deutsche Dermatologische Gesellschaft
Prof. Dr. med. Bauer, Andrea*	Klinik und Poliklinik für Dermatologie Universitätsklinikum Carl Gustav Carus Dresden	Arbeitsgemeinschaft Berufs- und Umweltdermatologie der Deutschen Dermatologischen Gesellschaft
Prof. Dr. med. Fölster-Holst Regina*	UKSH Kiel Klinik für Dermatologie, Venerologie und Allergologie	Arbeitsgemeinschaft Pädiatrische Dermatologie der Deutschen Dermatologischen Gesellschaft
PD Dr. med. Heratizadeh Annice*	Medizinische Hochschule Hannover	Arbeitsgemeinschaft Neurodermitisschulung e.V. Wissenschaftliche Dokumentation und Redaktion
Dipl. oec. troph. Kahle Julia*	Deutscher Allergie- und Asthmabund e.V.	Deutscher Allergie- und Asthmabund e.V.
Dr. med. Nemat Katja*	Selbständig in eigener Praxis (Kinderpneumologie/Allergologie am Kinderzentrum Dresden (Kid)). Nebentätigkeit am Universitätsklinikum der TU Dresden	Berufsverband der Kinder- und Jugendärzte e.V.
Dr. med. Neustädter Irina*	Hallerwiese Cnopfsche Kinderklinik Department of Paediatrics	Gesellschaft für Pädiatrische Allergologie und Umweltmedizin
Prof. Dr. med. Ott Hagen*	Kinder- und Jugendkrankenhaus AUF DER BULT	Deutsche Gesellschaft für Kinder- und Jugendmedizin e.V. Koordinator
Prof. Dr. med. Peters Eva*	Psychoneuroimmunologie Labor Klinik für Psychosomatik und Psychotherapie Justus-Liebig Universität Gießen	Deutsche Gesellschaft für Psychosomatische Medizin und Ärztliche Psychotherapie (DGPM), APD
Prof. Dr. med. Schmid-Grendelmeier Peter*	Dermatologische Klinik Universitätsspital Zürich	Arbeitsgemeinschaft Allergologie der Schweizerischen Gesellschaft für Dermatologie und Venerologie
Prof. Dr. med. Schmitt Jochen*	Med. Fakultät Carl Gustav Carus TU Dresden	Deutsches Netzwerk Versorgungsforschung e.V.
Prof. Dr. med. Simon Dagmar*	Universitätsklinik für Dermatologie, Inselspital	Schweizerische Gesellschaft für Dermatologie und Venerologie
Dr. Thomas Spindler*	Hochgebirgsklinik Davos-Wolfgang	Deutsche Gesellschaft für pädiatrische Rehabilitation und Prävention e.V. (DGpRP)
Prof. Dr. med. Traidl-Hoffmann*	Universitätsklinikum Augsburg	Arbeitsgemeinschaft Allergologie der Deutschen Dermatologischen Gesellschaft
Dr. med. von Kiedrowski Ralph*	1) Dermatologische Spezial- und Schwerpunktpraxis	Berufsverband Deutscher Dermatologen e.V.

	2) Company for Medical Study & Service Selters GmbH (CMS3)	
Prof. Dr. med. Werfel Thomas*	Medizinische Hochschule Hannover	Deutsche Dermatologische Gesellschaft Koordinator
Prof. Dr. med. Dr. h. c. Wollenberg Andreas*	Klinikum der Univ. München Dermatologie und Allergologie Vrije Universiteit Brussel Universitair Ziekenhuis Brussel Department of Dermatology	Europäische Koordination Leitlinie „Neurodermitis“, European Dermatology Forum, European Task Force for Atopic Dermatitis
Prof. Dr. med. Worm Margitta*	Charité-Universitätsmedizin Berlin	Deutsche Kontaktallergiegruppe e.V.; Deutsche Gesellschaft für Allergologie und Klinische Immunologie
Patient*innenvertretung		
Schwennesen Thomas*	Deutscher Neurodermitis Bund e.V.	Deutscher Neurodermitis Bund e.V.
Methodiker*innen		
PD Dr. Ricardo Niklas Werner	Moderation der Konsensus-Konferenzen	Division of Evidence-Based Medicine - Klinik für Dermatologie, Venerologie und Allergologie, Charité – Universitätsmedizin Berlin
Dr. Maria Kinberger	Methodische Betreuung	Division of Evidence-Based Medicine - Klinik für Dermatologie, Venerologie und Allergologie, Charité – Universitätsmedizin Berlin
* <i>stimmberechtigt</i>		

Management of conflicts of interest

All members of the guideline development group completed conflict of interest forms via the online portal or AWMF-Formular before the guideline development work began. The forms were developed by the Association of the Scientific Medical Societies in Germany (Arbeitsgemeinschaft der Wissenschaftlichen Medizinischen Fachgesellschaften e.V., AWMF) specifically for use in the development of clinical practice guidelines.³

The conflicts of interest of all members of the Guideline Development Group were assessed by the team from the Division of Evidence based Medicine (dEBM). Declared interests were classified as minimal, moderate or high, as recommended by the AWMF according the following criteria (see Table 2).

Table 2: Criteria for assessment of conflicts of interest

	No COI	Minimal COI	Moderate COI	High COI
Consulting activities	-	-	Honoraria regardless of the amount	

Work on advisory boards	-	-		
Paid lectures and/or training activities	-	honoraria ≤ €1500 per year (on average)	honoraria > €1500 per year (on average)	-
Paid authorships /co-authorships	-			-
Research grants/studies	-	Research grants for the clinic/institution	-	-
Owner's interests (patents, copyrights, stock options)	-	-	-	Personal owner's interests regardless of worth/amount

An overview of the conflict of interests of the members of the guideline development group can be found in Appendix 1.

The overview of conflicts of interest was presented by the moderator of the consensus conference (Dr. Ricardo Niklas Werner) during the first online consensus conference on 11 July 2022 and then discussed with the entire group. The group agreed to follow the AWMF requirements that:

- (a) the group be facilitated during its meetings by a member without relevant conflicts of interest;
- (b) experts abstain from voting on recommendations in which they have conflicts of interest that have been rated as moderate; and
- (c) experts with high conflicts of interest not be permitted to take part in the group.

Voting abstentions during the consensus conference were recorded in the conference protocols. These are available upon request.

Funding

The adaptation process of the guideline was funded exclusively through the guideline-funding program of the Germany Dermatological Society (Deutsche Dermatologische Gesellschaft, DDG). The members

of the guideline development group received no payment for their work. The guideline development group worked independently and the DDG had no influence on the focus or content of the guideline.

National adaption process of the international guideline

A German translation of the consultation version of the European EuroGuiDerm Guideline was sent to the German Guideline Development Group. The guideline coordinators distributed the chapters and the corresponding recommendations to the members of the German guideline development group and asked them to review them and adapt or add to them if necessary. All suggested adjustments and comments were then compiled and reviewed by the guideline coordinators. In addition, the guideline coordinators inserted revised text sections and recommendations from the old German S2k guideline in some places on topics for which there were no corresponding chapters in the European guideline. The changes made were fed back to the entire German Guideline Development Group in a track-change version of the guideline document.

Three online consensus conferences (via Microsoft teams) were held to vote on the recommendations (11 July; 12 July and 31 August 2023). During the conference, all translated and adjusted recommendations from the EuroGuiDerm Guideline and the inserted adjusted recommendations from the old German S2k guideline were discussed and the group decided whether the recommendations could be accepted within the current German health care setting or if there was a need for change. Cost and economic considerations were also discussed (Wirtschaftlichkeitsgebot). All relevant comments were noted, discussed one by one, and this was followed by pre-voting (if needed), final discussion and final consensus voting. The discussion was facilitated by the Dr. Ricardo Niklas Werner (AWMF Guideline Councillor), using the nominal group technique. All nominated experts in the Guideline Development Group and the patient representative were entitled to vote. Abstentions due to conflicts of interest were noted. A strong consensus was the primary goal, which was defined a priori as >95% agreement. If that could not be achieved after extended discussion, consensus (≥75% agreement) was accepted. For the recommendations on systemic drugs in chapter 4 "Systemtherapie" and partly in chapter 6.2 "Schwangerschaft, Stillzeit, Kinderwunsch", a first vote was taken where all experts were allowed to vote. This was followed by a second vote, in which all experts who had indicated moderate COIs had to abstain. The result of the second vote was the result that was scored. The recommendations on the chapters "5.3 Nahrungsmittelallergien und Diäten", "5.4 Allergenspezifische Immuntherapie", "5.5 Komplementärmedizin", "6.1 Perspektive der Patient:innen" und "6.4 Beruflich Aspekte" were voted on in a two-stage online voting (via Lime Survey). The recommendation on tralokinumab was adjusted accordingly after the EMA approved the drug for adolescents over 12 years of age. The adjusted recommendation was also voted on again with an online voting via Lime Survey.





The formal wording of recommendations was translated into German, as explained in Table 3.

Table 3: Wording of recommendations, symbols and implications (adapted from Kaminski-Hartenthaler et. al, 2014)⁴

Strength	Wording	Symbols	Implications
Strong recommendation for the use of an intervention	‘We recommend ...’ „soll“	↑↑	We believe that all or almost all informed people would make a choice in favour of using this intervention. Clinicians will not have to spend as much time on the process of decision-making with the patient and may devote that time instead to overcoming barriers to implementation and adherence. In most clinical situations, the recommendation can be adopted as a policy.
Weak recommendation for the use of an intervention	‘We suggest ...’ „sollte“	↑	We believe that most informed people would make a choice in favour of using this intervention, but a substantial number would not. Clinicians and other health care providers will need to devote more time to the process of shared decision-making. Policy makers will have to involve many stakeholders and policy making will require substantial debate.
Open recommendation / No recommendation with respect to an intervention	‘We cannot make a recommendation with respect to’ „kann erwogen werden“	0	Currently, a recommendation in favour of or against using this intervention cannot be made due to certain circumstances (for example, unclear or balanced benefit-risk ratio, no data available).
Weak recommendation against the use of an intervention	‘We suggest against ...’ „sollte nicht“	↓	We believe that most informed people would make a choice against using this intervention, but a substantial number would not.
Strong recommendation against the use of an intervention	‘We recommend against ...’ „soll nicht“	↓↓	We believe that all or almost all informed people would make a choice against using this intervention. This recommendation can be adopted as a policy in most clinical situations.

In the guideline itself, the strength of the consensus reached for each recommendation is reported as shown in Table 4.

Table 4: Strength of consensus

100 % consensus	100% agreement	
Strong consensus	Agreement of >95% - < 100% participants	
Consensus	Agreement of >75-95% participants	
Agreement of the majority	Agreement of >50-75% participants	

The recommendations are presented throughout this guideline as displayed below: alongside the wording of the recommendations the arrow(s) and color indicate the direction and the strength of each recommendation. The rate of agreement (consensus strength) is also displayed as the actual percentage.

Dupilumab soll bei Kindern und Erwachsenen mit moderater bis schwerer AD, für die eine systemische Therapie in Frage kommt, eingesetzt werden.	↑↑	100% Evidenz- und konsensbasiert, siehe Evidenzbericht
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External consultation and approval of German guideline

The international S3 guideline and the German-language adaptation each underwent an extensive external review. In the former case various national professional societies, members of the European Dermatology Forum and pharmaceutical companies were included. In the German guideline the background information from the European guideline was used and adapted. All recommendations were reformulated and independently consented by the delegates of the German societies and working groups. The final review included the participating societies. During the preparation, discussion, consensus-building, and review of this guideline, no pharmaceutical companies or other third parties were involved.

All comments received were collected and reviewed by the guideline coordinators and the dEBM Team. Minor editorial changes were incorporated by the dEBM Team. Substantial comments were compiled in an overview document, which is available upon request.

Prior to the external review procedures, the members of the guideline development groups were also able to submit comments, which were dealt with in the same way (internal review).

The release of the adapted version for Germany took place after review by the 2+2 Commission of the German Dermatological Society / the Professional Association of German Dermatologists as well as other participating experts and reviewers.

Dissemination, implementation and evaluation of the German guideline

The success of a guideline depends on whether it is accepted and used in clinical practice. To this end, the dissemination of the guideline will take place within the framework of the existing DDG dissemination programme. It will be available on the AWMF homepage, as well as in print and online in a peer-reviewed journal. Furthermore, all of the experts involved in the development of the guideline were encouraged to give talks and present the results and recommendations of the guideline at conferences.

Updating the guideline

Clinical practice guidelines should ideally be updated at regular intervals to account for changes in technologies and evidence, as well as policy and infrastructure. This version of this guideline is valid until 15 June 2028. Contact person for an update is Prof. Dr. med. Thomas Werfel (Werfel.Thomas@mh-hannover.de).

The following sections are taken from the methods report of the EUROGUIDERM GUIDELINE ON ATOPIC ECZEMA von Wollenberg et al. (2022), available on the EuroGuiDerm website at <https://www.edf.one/de/home/Guidelines/Guidelines.html>. They apply equally to the German setting. For the appendices mentioned below please see the methods report of the EuroGuiDerm guideline, as well.

Search methods and results and evidence selection & critical appraisal of evidence

As part of the scoping exercise, we searched for existing guidelines, which did not lead to the identification of high quality (AGREE 2 evaluation) guidelines more recent than the 2018 version suitable for adaptation. We also developed the PICO framework for all key questions concerning systemic treatment, see Appendix 2. The living network meta-analysis (NMA), including GRADE assessments, on systemic immunomodulatory treatment for atopic eczema, which one of the guideline coordinators is leading on, was identified⁵. Since the aim is to create a living guidelines, this systematic review is the most suitable one to use as evidence base. The authors of the NMA identified 10321 records during the systematic search. After the screening process, 39 studies were included in the NMA.

Hence, the chapters on conventional systemic drugs (azathioprine, ciclosporin, systemic glucocorticosteroids, and methotrexate), biologics (dupilumab) and JAK-inhibitors (baricitinib) as well as systemic treatment for pediatric and adolescent populations are evidence-based. For mycophenolate mofetil no randomized controlled trials could be identified.

Based on the results by Drucker et al. ⁵ (2020, original publication), we developed Evidence to Decision (EtD) frameworks that enclosed the following information: population, intervention, comparison, main outcomes, setting, perspective, background, desirable and undesirable effects, certainty of evidence, balance of effects, values, resources required, cost-effectiveness, equity, acceptability and feasibility.

For the subsections on the importance of the issues, equity, acceptability and feasibility we conducted a narrative review, see Table 4.

Table 4: Narrative review on patient(care needs or preferences

Key Question PICOS	<i>What are the relevant stakeholder's views, needs or preferences concerning atopic eczema management?</i>
Population	Adults and children (including their caretakers/families) with a clinical diagnosis of atopic dermatitis; carers; health care professionals
Context	Europe
Study design	SR, Qualitative research, surveys/questionnaire studies, discreet choice experiments, and similar
Source	Centre of Evidence Based Dermatology (CEBD) systematic lists ⁶ ; MEDLINE

Search strategy for stakeholders preferences used in MEDLINE (Ovid) 17 March 2020
1. ((patient\$ or subject\$ or child\$ or stakeholder or adolesc\$ or teenager) adj3 (need* or view* or prefer*)).ab,ti.

2. ((patient\$ or child\$) adj3 (survey or questionnaire or discreet choice or interview*)).ab,ti.
3. ((Psycho social or psycho\$ social) adj3 (need* or view* or prefer* or educat\$)).ab,ti.
4. 1 or 2 or 3
5. exp Dermatitis, Atopic/
6. atopic dermatitis.ab,ti.
7. atopic eczema.ti,ab.
8. 5 or 6 or 7
9. 4 and 8
10. limit 9 to yr="2010 -Current

Two EtD frameworks were developed on the following main questions: 1) What is the efficacy (improvement short-term disease control [signs and symptoms] as well as quality of life) and safety of conventional and novel systemic therapies for the treatment of AE? This includes the subgroup considerations: children and adolescents, and 2) What is the efficacy (improvement long-term disease control [signs and symptoms] as well as quality of life) and safety of conventional and novel systemic therapies for the treatment of AE?, see Evidence Report.

Identification of literature concerning the remaining chapters

All other chapters are consensus-based chapters. Nevertheless, the EuroGuiDerm Team supported authors groups by searching for existing systematic reviews. To do so, we used the resources made available by the Centre of Evidence Based Dermatology (CEBD) ⁶. The CEBD systematically search for and map systematic reviews on atopic eczema by topics. Lists are updated monthly.

All listed reviews published since 2013 were screened in line with the key questions specified in each chapter. Our exclusion criteria were: Reviews lacking risk of bias assessment of the included studies, including mixed patient populations (e.g psoriasis and atopic eczema patients) and narrative reviews. Cochrane reviews and systematic reviews with GRADE assessments were preferred for their higher methodological quality. We provided the author groups with the identified publications, see Table 3.

Furthermore, to include the latest evidence in the different chapters, we updated the search of 11 selected systematic reviews and if needed, updated the search strategy (search date 30 June 2020). Author were provided with EndNote files.

Lastly, for nine systematic reviews identified on complementary medicine, psychosomatic counselling and educational interventions one methodologist assessed the quality of the reviews using the Assessing the Methodological Quality of Systematic Reviews (AMSTAR-2) checklist.

More detailed information about the above mentioned steps, such as the AMSTAR 2 evaluation results, are available upon request (euroguiderm@debm.de).

Table 1: Overview of key questions, systematic reviews & methods

	Topic	Key Question(s) (KQ)	Methods	Identified systematic reviews
Consensus-based recommendations	Patient's perspective	What is the patient's or caregiver's perspective on living with AE? What are therefore the needs in terms of treatment and delivering care?	Narrative review	-
	General measures and avoidance strategies	Can the presence of pollen, animal dander, physical activity, perspiration, irritating clothing, psychological stress, pollution, tobacco provoke and elicit the development of skin symptoms in atopic patients? Can the avoidance of these above mentioned factors help to prevent the exacerbation of AE? Does the avoidance of AE triggers allow for longer remission periods or complete clearance of AE? Can individual prevention measures be identified in patient with AE?	Center of Evidence Based Dermatology (CEBD) screened for Cochrane review on house dust mite, pollen and animal dander on 19 March 2020; expanded on 01 July 2020 to include pollutants, tobacco smoke, sweat, clothing and stress; update of the search in MEDLINE (Ovid) for each of the identified systematic reviews.	"House dust mite reduction and avoidance measures for treating eczema." Nankervis et al. 2015 ⁷ (Cochrane Review) "Air pollution and atopic eczema: Systematic review of findings from environmental epidemiological studies." Krämer & Behrendt. 2019 ⁸ "A systematic review of vigorous physical activity in eczema" Kim & Silverberg 2016 ⁹ "Fabric selection in atopic dermatitis: An evidence-based review." Jaros et al. 2020 ¹⁰ "The association between maternal stress and childhood eczema: a systematic review". Chan et al. 2018 ¹¹ "Prenatal maternal psychosocial stress and offspring's asthma and allergic disease: A systematic review and meta-analysis". Flanigan et al. 2018 ¹²
Consensus-based recommendations	Basic emollient treatment and bathing	What basic treatments are effective and safe and can be recommended in patients with AE?	CEBD screened up to 19 March 2020., update search run for both of the identified reviews in MEDLINE (Ovid) and Embase (Ovid).	"Emollients and moisturisers for eczema." van Zuuren et al. 2017 (Cochrane Review) ¹³ "Efficacy and safety of wet wrap therapy for patients with atopic dermatitis: a systematic review and meta-analysis" Gonzalez-Lopez et al. 2017 ¹⁴
	Dietary intervention	Are diagnostic procedures for the elucidation of IgE-mediated food allergy (food specific IgE and/or SPT, diagnostic elimination diets and challenge tests) routinely recommended in AE patients with a history of food-induced immediate symptoms? Are diagnostic procedures for the elucidation of combined reactions to foods (immediate reactions plus food-induced eczema (food specific IgE and/or SPT, diagnostic elimination diets and challenge tests)	CEBD screened up to 19 March 2020; update search run for the identified review in MEDLINE (Ovid)and Embase (Ovid);	"Probiotics for treating eczema." Makrgeorgou et al 2018 (Cochrane Review) ¹⁵ "Oral evening primrose oil and borage oil for eczema." Bamford et al. 2013 (Cochrane Review) ¹⁶ "Dietary supplements for established atopic eczema." Bath-Hextall et al. 2012 (Cochrane Review) ¹⁷ "Dietary exclusions for established atopic eczema." Bath-Hextall et al. 2008 (Cochrane Review) ¹⁸

		<p>recommended in AE patients with a history of food-induced symptoms including worsening of eczema?</p> <p>Are diagnostic procedures for the elucidation of food as a trigger factor of AE (food specific IgE and/or SPT, elimination diets and challenge tests) recommended in AE patients with a history or suspicion of food-induced eczema?</p> <p>Is a therapeutic elimination diet recommended after the individual diagnosis of food allergy for food-induced AE?</p> <p>Are general dietary interventions (e.g. supplements of vitamins, general avoidance of certain foods e.g. cow's milk, gluten) recommended for the management of AE?</p> <p>Are probiotics recommended for the management of AE?</p>		
	Topical anti-inflammatory therapy	What is the efficacy (improvement in short and long-term disease control) and safety of topical anti-inflammatory therapies of AE?	CEBD screened on 5 May 2020.	<p>"Systematic review and meta-analysis comparing topical corticosteroids with vehicle/moisturizer in childhood atopic dermatitis." Fishbein et al. 2019 ¹⁹</p> <p>"Efficacy and safety of topical calcineurin inhibitors for the treatment of atopic dermatitis: meta-analysis of randomized clinical trials" Abędź & Pawliczak. 2019 ²⁰</p> <p>"Crisaborole ointment, 2%, for treatment of patients with mild-to-moderate atopic dermatitis: Systematic literature review and network meta-analysis" Fahrbach et al. 2020 ²¹</p> <p>"Topical tacrolimus for atopic dermatitis". Martins et al. 2015 (Cochrane review) ²²</p>
Consensus-based recommendations	Phototherapy	What is the efficacy and safety of different photo(chemo)therapy modalities (e.g. NB-UVB, PUVA, UVA1) for AE patients?	CEBD screened up to 19 March 2020,	"Photo(chemo)therapy in the management of atopic dermatitis: an updated systematic review with implications for practice and research." Garritsen et al. 2014 ²³
	Anti-pruritic therapy	Are there specific treatment options alleviating itch in AE?	CEBD screened up to 19 March 2020.	"Oral H1 antihistamines as 'add-on' therapy to topical treatment for eczema" Matteredne et al. 2019 (Cochrane Review) ²⁴
	Antimicrobial therapy	What is the effectiveness and safety of different antibacterial, antiviral and antifungal treatments for infectious complications and alongside standard and/or systemic therapy for maintenance treatment?	CEBD screened up to 19 March 2020.	<p>"Interventions to reduce Staphylococcus aureus in the management of eczema." George et al. 2019 (Cochrane Review) ²⁵</p> <p>"The role of yeast in atopic dermatitis revisited: a critical appraisal." Tsakok et al. 2015 ²⁶</p>

Evidence-based recommendations	Systemic immunosuppressive treatment Biologics JAK inhibitors	What is the efficacy (improvement in short and long-term disease control (signs and symptoms) as well as quality of life) and safety of conventional and novel systemic therapies for the treatment of AE? Would changing from one systemic treatment to another lead to benefit in disease control? Does combination therapy of systemic treatments lead to additional benefit in disease control and quality of life?	CEBD screened up to 19 March 2020. A living systematic review with network meta-analysis was included and EtD Frameworks were developed.	"Systemic immunomodulatory treatments for patients with atopic dermatitis: a systematic review and network meta-analysis." Drucker et al. 2020 ⁵ (living systematic review) <i>Evidence to decision frameworks were developed.</i>
Consensus-based recommendation	Other systemic treatment	What is the effectiveness and safety of other systemic anti-inflammatory agents for AE?	CEBD screened up to 19 March 2020.	"Leukotriene receptor antagonists for eczema" Ferguson et al. 2018 (Cochrane Review) ²⁷
Consensus-based	Allergen-specific immunotherapy	What is the effectiveness and safety of allergen-specific immunotherapy for AE patients?	CEBD screened up to 19 March 2020.	"Specific allergen immunotherapy for the treatment of atopic eczema." Tam et al. 2016 (Cochrane Review) ²⁸
	Complementary medicine	What is the effectiveness and safety of complementary therapies for AE patients?	CEBD screened up to 19 March 2020; results assessed with AMSTAR-2.	"Topical application of Chinese herbal medicine for atopic eczema: a systematic review with a meta-analysis." Gu et al. 2014 ²⁹ "Chinese herbal medicine for atopic eczema" Gu et al. 2013 (Cochrane Review) ³⁰ "Alpine climate treatment of atopic dermatitis: a systematic review." Fieten et al. 2015 ³¹ "The effectiveness and safety of acupuncture for patients with atopic eczema: a systematic review and meta-analysis." Jiao et al. 2019 ³² "Complementary and alternative medicine for treatment of atopic eczema in children under 14 years old: a systematic review and meta-analysis of randomized controlled trials." Lu et al. 2018 ³³ "Effectiveness and safety of herbal medicine for atopic dermatitis: an overview of systematic reviews". Kwon et al 2020 ³⁴

Consensus-based recommendations	Psychosomatic counselling and educational interventions	What is the effectiveness of psychological and educational interventions for AE patients?	CEBD screened up to 5 May 2020, results assessed with AMSTAR-2.	"Psychological and educational interventions for atopic eczema in children." Ersser et al. 2014 (Cochrane Review) ³⁵ "Psychological and educational interventions for Atopic Dermatitis in Adults: a Systematic Review and Meta-analysis". Hashimoto et al. 2017 ³⁶ "Systematic review of self management interventions for people with eczema". Ridd et al. 2017 ³⁷ "Efficacy of health education on treatment of children with atopic dermatitis: a meta-analysis of randomized controlled trials". Li et al. 2020 ³⁸
Consensus-based recommendations	NEW: Considerations for pregnancy, breastfeeding or planning to have a child	What are the key differences in the management of AE in pregnant or breastfeeding women and for adults planning to have a child?	No systematic reviews were screened in the CEBD website for the KQ. Authors carried out a topic specific search in PubMed and a recent European task force position paper was considered.	"European task force on atopic dermatitis position paper: treatment of parental atopic dermatitis during preconception, pregnancy and lactation period." Vestergaard et al. 2019 ³⁹
Evidence-based recommendations	NEW: Considerations for pediatric and adolescent patients	Do paediatric AE patients show important phenotypic and diagnostic differences? Are there any differences between paediatric/adolescent and adult AE patients with regard to: the use of basic emollient therapy and other aspects of skin? the use of topical anti-inflammatory therapy? the use of systemic anti-inflammatory therapy? the use of adjuvant supportive measures?	A living systematic review with network meta-analysis was included, EtD Frameworks for systemic treatments were developed	"Systemic Immunomodulatory Treatments for Patients With Atopic Dermatitis: A Systematic Review and Network Meta-analysis." Drucker et al. 2020 ⁵
Consensus-based recommendations	NEW: Occupational aspects	What is the impact of AE on work life? Which risks do AE patients have when starting/during work life? How to counsel AE patients regarding work life?	No systematic reviews were screened for the KQ. Authors carried out a topic specific search in PubMed and did a narrative review of the evidence available.	"The impact of atopic dermatitis on work life - a systematic review." Nørreslet et al. ⁴⁰

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Appendix 1: Declarations of Interest

	Berater-bzw. Gutachter-tätigkeit	Mitarbeit in einem Wissenschaftlichen Beirat (advisory board)	Bezahlte Vortrags-/oder Schulungs-tätigkeit	Bezahlte Autoren-/oder Coautoren-schaft	Forschungs-vorhaben/ Durchführung klinischer Studien	Eigentümer-interessen (Patent, Urheberrecht, Aktienbesitz)	Indirekte Interessen	Einstufung bzgl. der Relevanz zu den Leitlinienkapiteln
Prof. Dr. med. Aberer Werner*	Nein	Takeda	Takeda	Nein	Nein	Nein	EAACI - Mitgliedschaft EADV - Mitgliedschaft ÖGDV - Mitgliedschaft	Allgemeiner Teil: Keine Systemische Therapie: Keine Nicht-systemische Therapie: Keine → Konsequenz: keine Einschränkungen
Prof. Dr. med. Augustin Matthias*	AbbVie Almirall Beiersdorf Eli Lilly Galderma LEO Pfizer Sanofi-Genzyme DAK Techniker KK	AbbVie Almirall Eli Lilly Galderma LEO Pfizer Sanofi-Genzyme	AbbVie Almirall Beiersdorf Eli Lilly Galderma LEO Pfizer Sanofi-Genzyme	AbbVie Almirall Eli Lilly LEO Sanofi	BMBF BMG DAK Hautnetz Hamburg e.V. PsoNet e.V. Stifterverband Techniker KK AbbVie Almirall Beiersdorf Eli Lilly Galderma LEO Pfizer	Nein	ADF - Mitgliedschaft DDG - Mitgliedschaft BVDD - Mitgliedschaft Hautnetz Hamburg e.V. - Mitgliedschaft EADV - Mitgliedschaft PsoNet e.V. - Mitgliedschaft	Allgemeiner Teil: Keine Systemische Therapie: Moderat Nicht-systemische Therapie: Keine → Konsequenz: Enthaltung bei Abstimmungen zur Systemtherapie

	Berater-bzw. Gutachter-tätigkeit	Mitarbeit in einem Wissenschaftlichen Beirat (advisory board)	Bezahlte Vortrags-/oder Schulungs-tätigkeit	Bezahlte Autoren-/oder Coautorenschaft	Forschungs-vorhaben/ Durchführung klinischer Studien	Eigentümer-interessen (Patent, Urheberrecht, Aktienbesitz)	Indirekte Interessen	Einstufung bzgl. der Relevanz zu den Leitlinienkapiteln
					Sanofi-Genzyme			
Prof. Dr. med. Bauer Andrea*	BG	Novartis	Sanofi Novartis Regeneron Abbvie	Leo Sanofi Novartis IVDK ESSCA	Leo Regeneron Lilly Novartis Celldex Amgen Astra Zeneca Phavaris Abbvie	Nein	ABD- Vorstand	Allgemeiner Teil: Keine Systemische Therapie: Moderat Nicht-systemische Therapie: Keine → Konsequenz: Enthaltung bei Abstimmungen zur Systemtherapie
Prof. Dr. med. Biedermann Tilo*	Abbvie Alk-Abello Boehr.-Ingelh. Leo Pharma Lilly Novartis Sanofi	Alk-Abello Leo Pharma Lilly Sanofi Viatrix	Alk-Abello Leo Pharma Lilly Novartis Sanofi Regeneron	Alk-Abello	Drittmittel für Förderung/Forschung/Studie	Nein	Beirat DGAKI Präsident der DDG 2019-2021 Präsidiumsmitglied DDG seit 2021	Allgemeiner Teil: Keine Systemische Therapie: Moderat Nicht-systemische Therapie: Keine → Konsequenz: Enthaltung bei Abstimmungen zur Systemtherapie
Prof. Dr. med. Fölster-Holst Regina*	Johnson&Johnson	Sanofi Pfizer Leo	Sanofi Pfizer Leo	Nein	Neubourg	Nein	Mitglied der AG Päd. Dermatologie in der DDG, past president	Allgemeiner Teil: Keine Systemische Therapie: Moderat

	Berater-bzw. Gutachter-tätigkeit	Mitarbeit in einem Wissenschaftlichen Beirat (advisory board)	Bezahlte Vortrags-/oder Schulungs-tätigkeit	Bezahlte Autoren-/oder Coautoren-schaft	Forschungs-vorhaben/ Durchführung klinischer Studien	Eigentümer-interessen (Patent, Urheberrecht, Aktienbesitz)	Indirekte Interessen	Einstufung bzgl. der Relevanz zu den Leitlinienkapiteln
		Johnson& Johnson Neubourg	Johnson& Johnson Neubourg					Nicht-systemische Therapie: Keine → Konsequenz: Enthaltung bei Abstimmungen zur Systemtherapie"
PD Dr. med. Heratizadeh Annice*	Nein	Pierre Fabre Beiersdorf Novartis Klinge Pharma Sanofi AbbVie Lilly Almirall Janssen Leo	Pierre Fabre Beiersdorf Novartis Nutrica Sanofi Abbvie Lilly ALK Leo	AbbVie	AbbVie Beiersdorf Aisonett	Nein	Mitglied: DGAKI, EAACI, DDG, AGNES e.V., ETFAD, ISAD-OPEND, DKG Vorstandsmitglied (akkreditierter Beirat)der AGNES e.V.	Allgemeiner Teil: Keine Systemische Therapie: Moderat Nicht-systemische Therapie: Keine → Konsequenz: Enthaltung bei Abstimmungen zur Systemtherapie
Dipl. oec. troph. Kahle Julia*	Nein	Nein	Nein	Nein	Nein	Nein	Mitglied: AGNES, DGAKI, EACCI, VDOe	Allgemeiner Teil: Keine Systemische Therapie: Keine Nicht-systemische Therapie: Keine

	Berater-bzw. Gutachter-tätigkeit	Mitarbeit in einem Wissenschaftlichen Beirat (advisory board)	Bezahlte Vortrags-/oder Schulungs-tätigkeit	Bezahlte Autoren-/oder Coautorenschaft	Forschungs-vorhaben/ Durchführung klinischer Studien	Eigentümer-interessen (Patent, Urheberrecht, Aktienbesitz)	Indirekte Interessen	Einstufung bzgl. der Relevanz zu den Leitlinienkapiteln
								→ Konsequenz: keine Einschränkungen
Dr. med. Kinberger Maria	Unfallkasse Berlin Polizei Berlin	Nein	Nein	Nein	Nein	Nein	Mitglied: DDG, BVDD, BDG	Allgemeiner Teil: Keine Systemische Therapie: Keine Nicht-systemische Therapie: Keine → Konsequenz: keine Einschränkungen
Dr. med. Nemat Katja*	Nein	Sanofi-Aventis Aimmune Medizinische Fakultät der TU Dresden, Institut für Epidemiologie	GWT Dresden Kid/Encourag ee.V. Intercom Dresden Dt. Akademie für Entwicklungs-förderung Di-Text Fa. HAL Allergy AeDA Firma Stallergenes/ Cogitando	Helmholtz-Institut München GPA-Zeitschrift Allergopharma GmbH	Nein	Nein	Mitglied: in EAACI, DGAKI, DGKJ, GPP BAPP/gf. Vorstand, AeDA/Vorstand, APPA und GPA/Vorstand	Allgemeiner Teil: Keine Systemische Therapie: Moderat Nicht-systemische Therapie: Keine → Konsequenz: Enthaltung bei Abstimmungen zur Systemtherapie

	Berater-bzw. Gutachter-tätigkeit	Mitarbeit in einem Wissenschaftlichen Beirat (advisory board)	Bezahlte Vortrags-/oder Schulungs-tätigkeit	Bezahlte Autoren-/oder Coautoren-schaft	Forschungs-vorhaben/ Durchführung klinischer Studien	Eigentümer-interessen (Patent, Urheberrecht, Aktienbesitz)	Indirekte Interessen	Einstufung bzgl. der Relevanz zu den Leitlinienkapiteln
			BAPP e.V.					
Dr. med. Neustädter Irina*	Nein	Sanofi-Aventis	LETI GmbH Nutricia Allergopharma Novartis Abbvie Aimmune	AGPAS Anaphylaxie Register GPA	Universität Tübingen Universität Lübeck Universität Dresden	Nein	GPA/AGPAS (Vorstand) AGNES (Vorstand)	Allgemeiner Teil: Keine Systemische Therapie: Moderat Nicht-systemische Therapie: Keine → Konsequenz: Enthaltung bei Abstimmungen zur Systemtherapie“
Prof. Dr. med. Ott Hagen*	Nein	Nein	infectopharm	Nein	Scioderm Amryt Deutsche Stiftung Kinderdermatologie Appenrodt-Stiftung Hannover Kompetenznetz Patientenschulung im Kindes- und Jugendalter IEB Debra, Papilio e.V., Deutsche Stiftung	Nein	Mitglied im erweiterten Vorstand von GPA, NAPP, DGAKI	Allgemeiner Teil: Keine Systemische Therapie: Keine Nicht-systemische Therapie: Keine → Konsequenz: keine Einschränkungen

	Berater-bzw. Gutachter-tätigkeit	Mitarbeit in einem Wissenschaftlichen Beirat (advisory board)	Bezahlte Vortrags-/oder Schulungs-tätigkeit	Bezahlte Autoren-/oder Coautoren-schaft	Forschungs-vorhaben/ Durchführung klinischer Studien	Eigentümer-interessen (Patent, Urheberrecht, Aktienbesitz)	Indirekte Interessen	Einstufung bzgl. der Relevanz zu den Leitlinienkapiteln
					Kinderdermatologie			
Prof. Dr. med. Peters Eva*	Nein	Nein	Nein	Nein	Nein	Nein	Deutsche Gesellschaft für Immunologie (DGFI) Sprecherin des Arbeitskreises Neuroendokrinoimmunologie (AKNEI) Arbeitsgemeinschaft Dermatologische Forschung Sprecherin des Arbeitskreises Dermatoendokrinologie (ADE) Deutsches Kollegium für Psychosomatische Medizin (DKPM) Sprecherin des Arbeitskreises Psychodermatologie (AkPsychDerm)	Allgemeiner Teil: Keine Systemische Therapie: Keine Nicht-systemische Therapie: Keine → Konsequenz: keine Einschränkungen
Prof. Dr. med. Schmid-Grendelmeier Peter*	Nein	AbbVie ALK Abello Allergopharma Astra Zeneca Bencard Biomed Galderma Glaxo Smith Kline Jansen LEO Lilly	AbbVie Almirall Astra Zeneca Biomed Glaxo Smith Kline Jansen LEO Lilly L`Oréal Menarini Novartis Pfizer	Nein	Leo	Nein	Präsident SGAI 2015 - 2017, nun Vorstandsmitglied SGAI Treasurer Int Society for Atopic Dermatitis ISAD Mitglied Scientific Board Christine Kühne Center for Allergy research andn Care CK-CARE Mitglied SR AHA.Schweiz. Allergiezentrum Schweiz Mitglied SGDv, DGAKI, EAACI, EADV	Allgemeiner Teil: Keine Systemische Therapie: Moderat Nicht-systemische Therapie: Keine → Konsequenz: Enthaltung bei Abstimmungen zur Systemtherapie

	Berater-bzw. Gutachter-tätigkeit	Mitarbeit in einem Wissenschaftlichen Beirat (advisory board)	Bezahlte Vortrags-/oder Schulungs-tätigkeit	Bezahlte Autoren-/oder Coautorenschaft	Forschungs-vorhaben/ Durchführung klinischer Studien	Eigentümer-interessen (Patent, Urheberrecht, Aktienbesitz)	Indirekte Interessen	Einstufung bzgl. der Relevanz zu den Leitlinienkapiteln
		L'Oréal Menarini Novartis Pfizer Pierre Fabre Roche Pharma Sanofi Genzyme Stallergenes Thermo Fisher	Pierre Fabre Roche Pharma SanofiGenzyme Thermo Fisher					
Prof. Dr. med. Schmitt Jochen*	Novartis	Sanofi Lilly ALK Novartis	Nein	Nein	Novartis Sanofi ALK Pfizer	Nein	Mitglied: -	Allgemeiner Teil: Keine Systemische Therapie: Moderat Nicht-systemische Therapie: Keine → Konsequenz: Enthaltung bei Abstimmungen zur Systemtherapie
Schwennesen Thomas*	Nein	Nein	Nein	Nein	Nein	Nein	Deutscher Neurodermitis Bund e.V.	Allgemeiner Teil: Keine Systemische Therapie: Keine

	Berater-bzw. Gutachter-tätigkeit	Mitarbeit in einem Wissenschaftlichen Beirat (advisory board)	Bezahlte Vortrags-/oder Schulungs-tätigkeit	Bezahlte Autoren-/oder Coautorenschaft	Forschungs-vorhaben/ Durchführung klinischer Studien	Eigentümer-interessen (Patent, Urheberrecht, Aktienbesitz)	Indirekte Interessen	Einstufung bzgl. der Relevanz zu den Leitlinienkapiteln
								Nicht-systemische Therapie: Keine → Konsequenz: keine Einschränkungen
Prof. Dr. med. Simon Dagmar*	AbbVie	AstraZeneca	Galderma	Lilly	LEO	Nein	Mitglied: EADV	Allgemeiner Teil: Keine Systemische Therapie: Moderat Nicht-systemische Therapie: Keine → Konsequenz: Enthaltung bei Abstimmungen zur Systemtherapie
Dr. Thomas Spindler*	Nein	Nein	Landesapothekerkammer Bayern Gesellschaft für pädiatrische Allergologie und Umweltmedizin	Pädiatrische Allergologie, Allergologie: 1000 Fragen Pädiatrische Pneumologie	Nein	Nein	Geschäftsführender Vorstand der GPA als Schatzmeister Leitlinienbeauftragter der DGpRP Seniorvorsitzender der AGPAS QM-Beauftragter AG Asthmaschulung Konventdelegierter der GPA in der DGKJ	Allgemeiner Teil: Keine Systemische Therapie: Keine Nicht-systemische Therapie: Keine → Konsequenz: keine Einschränkungen
Prof. Dr. med. Traidl-Hoffmann Claudia*	Journal "Allergy"	Lilly Novartis Töpfer	Nein	Nein	Nein	Nein	Mitglied: KLUG, Deutsche Allianz Klimawandel und Gesundheit	Allgemeiner Teil: Keine Systemische Therapie: Moderat

	Berater-bzw. Gutachter-tätigkeit	Mitarbeit in einem Wissenschaftlichen Beirat (advisory board)	Bezahlte Vortrags-/oder Schulungs-tätigkeit	Bezahlte Autoren-/oder Coautoren-schaft	Forschungs-vorhaben/ Durchführung klinischer Studien	Eigentümer-interessen (Patent, Urheberrecht, Aktienbesitz)	Indirekte Interessen	Einstufung bzgl. der Relevanz zu den Leitlinienkapiteln
		Klinge Pharma						Nicht-systemische Therapie: Keine → Konsequenz: Enthaltung bei Abstimmungen zur Systemtherapie
Dr. med. von Kiedrowski Ralph*	AbbVie Almirall Amgen Biogen BMS Janssen-Cilag LEO Lilly Medac MSD Novartis Pfizer UCB	AbbVie Almirall Amgen Biogen BMS Janssen-Cilag, LEO Lilly Medac MSD Novartis Pfizer Sanofi UCB	AbbVie Almirall Amgen Biogen BMS Janssen-Cilag LEO Lilly Medac MSD Novartis Pfizer Sanofi UCB	AbbVie Almirall Amgen Biogen BMS Janssen-Cilag LEO Lilly Medac MSD Novartis Pfizer Sanofi UCB	AbbVie Almirall Hermal Biogen Celgene Foamix Janssen-Cilag LEO Lilly Medac Menlo MSD Novartis Pfizer Regeneron Sanofi Tigercut	Nein	Berufsverband der Deutschen Dermatologen (BVDD)/Vorstand-Präsident Deutsche Dermatologische Gesellschaft (DDG)/Präsidium und Vorstand	Allgemeiner Teil: Keine Systemische Therapie: Moderat Nicht-systemische Therapie: Keine → Konsequenz: Enthaltung bei Abstimmungen zur Systemtherapie

	Berater-bzw. Gutachter-tätigkeit	Mitarbeit in einem Wissenschaftlichen Beirat (advisory board)	Bezahlte Vortrags-/oder Schulungs-tätigkeit	Bezahlte Autoren-/oder Coautorenschaft	Forschungs-vorhaben/ Durchführung klinischer Studien	Eigentümer-interessen (Patent, Urheberrecht, Aktienbesitz)	Indirekte Interessen	Einstufung bzgl. der Relevanz zu den Leitlinienkapiteln
					UCB			
Prof. Dr. med. Werfel Thomas*	Nein	Almirall ALK Schering Bencard Lilly MSD Novartis Pfizer Regeneron/Sanofi Roche Stallergene Leo	AbbVie ALK Schering Leo Meda Novartis Pfizer/Regeneron/Sanofi	Nein	Abbvie Leo Novartis Sanofi/Regeneration	Nein	Vorstand: DGAKI, DDG Mitglied: ADF, ABD, BVDD	Allgemeiner Teil: Keine Systemische Therapie: Moderat Nicht-systemische Therapie: Keine → Konsequenz: Enthaltung bei Abstimmungen zur Systemtherapie
PD Dr. Werner Ricardo Niklas	Nein	Nein	Nein	Nein	Nein	Nein	Mitglied: DDG, DSTIG	Allgemeiner Teil: Keine Systemische Therapie: Keine Nicht-systemische Therapie: Keine → Konsequenz: keine Einschränkungen
Prof. Dr. med. Dr. h. c. Wollenberg Andreas*	Almirall Galderma	Almirall Galderma	AbbVie Almirall	Nein	Galderma Leo pharma	Nein	Mitglied: DDG, EADV, DGAI, EAACI, AAAAI, ISAD	Allgemeiner Teil: Keine Systemische Therapie: Moderat

	Berater-bzw. Gutachter-tätigkeit	Mitarbeit in einem Wissenschaftlichen Beirat (advisory board)	Bezahlte Vortrags-/oder Schulungs-tätigkeit	Bezahlte Autoren-/oder Coautorenschaft	Forschungs-vorhaben/ Durchführung klinischer Studien	Eigentümer-interessen (Patent, Urheberrecht, Aktienbesitz)	Indirekte Interessen	Einstufung bzgl. der Relevanz zu den Leitlinienkapiteln
	GSK Leo Pharma Lilly Pfizer Pierre Fabre Sanofi-Aventis	Leo Pharma Lilly Novartis Pfizer Pierre Fabre Regeneron Sanofi-Aventis	Bioderma Galderma Leo pharma Lilly Loreal Novartis Pfizer Pierre Fabre Regeneron Sanofi-Aventis		Lilly Novartis Pfizer Pierre Fabre Regeneron Sanofi-Aventis			Nicht-systemische Therapie: Keine → Konsequenz: Enthaltung bei Abstimmungen zur Systemtherapie
Prof. Dr. med. Worm Margitta*	ALK Mylan Stallergenes Allergopharma Aimmune Sanofi-Aventis Leo Pharma DBV Technologies Kymab	ALK Mylan Stallergenes Aimmune Novartis Lilly Sanofi-Aventis Leo Pharma AbbVie Boehringer	ALK Mylan Stallergenes Biotest Novartis Lilly Sanofi-Aventis Leo Pharma Pfizer AbbVie Amgen	Nein	IVDK Eli Lilly Sanofi Aventis Leo Pharma AbbVie Deutschland GmbH Co. KG Pfizer Pharma GmbH	Nein	Mitglied: BDG, DDG, DGAKI (aktuell Präsidentin), EAACI Vorsitzende von NORA e. V. und NABB e. V.	Allgemeiner Teil: Keine Systemische Therapie: Moderat Nicht-systemische Therapie: Keine → Konsequenz: Enthaltung bei Abstimmungen zur Systemtherapie

	Berater-bzw. Gutachter-tätigkeit	Mitarbeit in einem Wissenschaftlichen Beirat (advisory board)	Bezahlte Vortrags-/oder Schulungs-tätigkeit	Bezahlte Autoren-/oder Coautoren-schaft	Forschungs-vorhaben/ Durchführung klinischer Studien	Eigentümer-interessen (Patent, Urheberrecht, Aktienbesitz)	Indirekte Interessen	Einstufung bzgl. der Relevanz zu den Leitlinienkapiteln
		Worg Pharmaceuti cs Kymab	AstraZeneca Beiersdorf					
*stimmberechtigtes Mitglied des Autorengremiums								

Appendix 1: Scoping document of the EuroGuiDerm Atopic Dermatitis guideline – created in April 2020

Update of the EuroGuiDerm Atopic Dermatitis (AD) guideline

SCOPING DOCUMENT

1. Planned methodological approach (guideline or consensus statement)

- EuroGuiDerm^a Guideline on the systemic treatment for atopic dermatitis
- EuroGuiDerm Consensus Statement on topical therapy, phototherapy and other treatment options for AD

2. Broadly defined scope

population/region/setting/interventions/comparisons/outcomes

- Population: Patients (all ages, all genders) with atopic dermatitis (AD; syn. atopic eczema) of all severities. Including special circumstances: pregnancy and concomitant allergic disease.
- Region: Europe
- Setting: Dermatologists and allergists in clinical practice
- Interventions/treatment approaches :
 - o Systemic anti-inflammatory treatment (*Table 2*)
 - o General measure and avoidance strategies
 - o Basic emollient therapy and bathing
 - o Dietary intervention
 - o Topical anti-inflammatory treatment (including pro-active treatments)
 - o Phototherapy
 - o Antimicrobial therapy
 - o Complementary medicine
 - o Psychosomatic counselling
 - o Educational interventions

Table 2: Systemic anti-inflammatory treatments*

Conventional immunosuppressants	TH2-blockers	Anti-IL 31	Small molecules	Other
Azathioprine	Dupilumab	Nemolizumab	Apremilast	Alitretinoin

^a The EDF has launched in 2018 the European Centre for Guidelines Development EuroGuiDerm in collaboration with Prof. Alexander Nast from the Division of Evidence-Based Medicine, Department of Dermatology, Charité University, Berlin. More information can be found on the EDF website: <https://www.edf.one/home/Guidelines/Guideline-Methods-.html>

Cyclosporine	Tralokinumab		Abrocitinib	Adirforant
Methotrexate	Lebrikizumab		Baricitinib	Corticosteroids (oral, IV, IM)
Mycophenolate			Upadacitinib	

****Included are only those treatments deemed most relevant to clinical practice and those expected to get market authorization within the next ~ 1.5 years.***

- Comparisons: Direct, indirect and placebo.
- Outcomes: The Harmonising Outcome Measures for Eczema (HOME)⁴¹ as well as the *European Dermatology Forum (EDF) atopic dermatitis guideline committee 2018*^{42, 43} have both performed extensive exercises to determine essential outcomes in atopic dermatitis. It was deemed unnecessary to repeat this process for the update of the guideline.

The core outcomes for AD in a trial setting (HOME)^b or when it comes to the choice of therapy^{42, 43} selected for the guideline update are:

- o Clinical signs: *Eczema Area and Severity Index (EASI)*;
- o Overall disease severity as measured by the composite score *SCORing of Atopic Dermatitis (SCORAD) index*;
- o Patient-reported symptoms: *Patient-Oriented Eczema Measure (POEM)*;
- o Quality of life: *Dermatology Life Quality Index (DLQI)*, *Children's Dermatology Life Quality Index (CDLQI)*, *Infant's Dermatitis Quality of Life Index (IDQOL)*.

Other outcomes selected additionally here:

- o Objective SCORAD (*o-SCORAD*);
- o Patient-oriented SCORAD (*PO-SCORAD*);
- o Investigator's Global Assessment (*IGA*, percentage of patients with IGA of 0 "clear" or 1 "almost clear") if no other objective score is reported;
- o Visual analogue scale itch (*VAS-itch*);
- o Typical adverse events: clinically relevant serious adverse effects of each systemic treatment, such as infection with all agents, conjunctivitis with the new biologic agents, renal function impairment and hypertension with cyclosporine, and gastrointestinal side effects with methotrexate.

^b The other outcomes recommended by the HOME initiative were: NRS, RECAP and ADCT but these have only been recently recommended and validation studies are still ongoing and trials will not measure outcomes with these instruments yet.

3. Existing evidence and clinical guidance

This section provides a general overview of existing systematic review and guidelines.

Systematic reviews

The Centre for Evidence Based Dermatology (CEBD)⁶ in Nottingham, United Kingdom, provides an overview of systematic reviews (monthly updates) since 2000, with the objective to inform clinicians about new guidelines and systematic reviews on atopic eczema. *Therefore, we did not perform a scoping search for systematic reviews. Depending on the final key questions chosen to be answered in the guideline, the CEBD lists will be used as a first resources for evidence.*

Guidelines

We conducted a non-exhaustive search^c in the Guidelines International Network (G-I-N), National Institute for Health and Care Excellence (NICE), Scottish Intercollegiate Guidelines Network (SIGN), ECRI Guidelines Trust, Association of the Scientific Medical Societies (AWMF) and PubMed databases for existing guidelines published during the last 5 years, see **appendix 3**. We identified 12 guidelines⁴⁴⁻⁵⁵: Seven of the 12 identified guidelines were from Europe^{44, 46-49, 55, 56} (only one was published since the last update and is a local adaptation of the European guidelines⁴⁹). Only two guidelines as well as the additional treatment updates of the NICE guideline for atopic dermatitis were evidence-based. Those three guidelines considered for adaptation are listed below, for the AGREE II evaluation (domain 3 only), see appendix S2.

- *“Clinical practice guidelines for the management of atopic dermatitis 2018.” Japan*⁵⁰
- *“Guidelines on Management of Atopic Dermatitis in India: An Evidence-Based Review and an Expert Consensus.”*⁵¹
- *“Treating atopic eczema in children aged 12 and under and treating eczema in people over 12.”*⁵⁷

4. The purpose and objectives of guideline/ consensus statement

Background:

- New topical and systemic treatments for atopic dermatitis have been developed and approved.
- Several guidelines for the treatment of atopic dermatitis exist, but recommendations vary⁵⁸ and evidence-based recommendations for novel treatments are needed.
- Different prescribing practices between dermatologists across Europe and lack of experience in particular with systemic treatments have been reported⁵⁹. There is

^c *This is a general overview of what guidelines currently exist. Please do let us know if you know of any others.*

therefore a need for current guidance and treatment algorithms on conventional and emerging therapies. Besides, expert consensus advice on managing patients in special circumstances such as during pregnancy or, for example, with allergic comorbidities is essential ⁶⁰.

- There is also a lack of clear guidance on switching patients from one systemic therapy to another and combined systemic therapy.

Objectives:

- To update the existing European AD treatment guideline.
- To generate recommendations and treatment algorithms on novel and established systemic treatments for atopic dermatitis based on the latest evidence.
- Provide guidance in the management of atopic dermatitis patients during pregnancy and AD patients with allergic comorbidities.
- Provide guidance on systemic drug switching and combination treatment.

5. Targeted users of guideline/consensus statement

- Dermatologists and allergists across Europe.

6. Connecting with relevant other organisations

- We are considering the evidence-based expert and non-expert opinion output of the HOME initiative (See above).
- We are considering the evidence-based expert opinion output of the European Task Force on Atopic Dermatitis (ETFAD). Members of the ETFAD are also in the guideline group, and we will make references to the work of the ETFAD where needed.
- Involvement of patients: patient representatives will be part of the guideline development group. A scoping review concerning patient needs will be conducted.
- A compressive, living systemic review and network meta-analysis (NMA) of systemic therapies is being published in late April 2020 ⁶¹. Members of the NMA team are also in the guideline group.

7. Stakeholder recruitment

- National societies contributing financially to the EDF guidelines fund are contacted via email with a call for experts; those suggestions are priorities in the selection of experts to become members of the guideline development group (GDG).
- The guideline co-coordinators and the members of the EuroGuiDerm Board of Directors are also invited to suggest members.
- EDF members were invited to self-nominate twice via the EuroGuiDerm newsletter.

8. Other key issues

- Atopic dermatitis is associated with a high burden of disease in Europe ⁶², and there is a need for effective and long-term treatment for children and adults with atopic dermatitis ⁶³.
- Economic evaluations based on interventions in children and adults are scarce. Resource usage and costs vary according to country and health care systems, making extrapolation from one setting to another difficult ⁶⁴.
- Interventions for improving access to care, patient education and treatment adherence should be explored. Furthermore, patients' preferences should be taken into account ⁶⁵.

9. Proposed key questions

Evidence-based questions:

- (1) What is the efficacy (improvement in short and long-term disease control [signs and symptoms] as well as quality of life) and safety of conventional and novel systemic therapies for the treatment of AD? This question will be answered in three parts:
 - i. Expert consensus for acute disease/flare control;
 - ii. Evidence-based, 12-16 weeks;
 - iii. Evidence-based, >16-52 week.
- (2) Would changing from one systemic treatment to another lead to benefit in disease control?
- (3) Does combination therapy of systemic treatments lead to additional benefit in disease control and quality of life?

The evidence-based sections will be based on a living systematic review lead by Carsten Flohr⁶¹.

Consensus-based questions:

- (4) What is the efficacy (improvement in short and long-term disease control) and safety of topical anti-inflammatory therapies of AD?
- (5) What is the effectiveness and safety of different phototherapy regimen (e.g. NB-UVB, PUVA, UVA1) for AD patients?
- (6) What is the effectiveness of different therapeutic patient education regimen used for AD and does therapeutic patient education reduce the risk of patients experiencing side effects from topical and/or systemic treatments?
- (7) What are the important provocation factors for AD (such as climate, allergen exposure (e.g. house dust mite, mould), skin irritants, food allergens, stress, water hardness), and how should patients avoid them?
- (8) What is the optimal skin care regimen for AD patients, for instance regarding bathing (frequency, temperature, duration, bath additives (oils/emollients/bleach), emollient use afterwards yes/no), and showering?

- (9) What is the effectiveness and safety of dietary exclusions or supplements for the treatment of AD?
- (10) What is the effectiveness and safety of different antibacterial, antiviral and antifungal treatments for infectious complications and alongside topical and/or systemic therapy?
- (11) What is the effectiveness and safety of complementary and alternative diagnostic and therapeutic procedures for AD patients?
- (12) What is the effectiveness of psychological/psychosomatic/psychotherapeutic interventions for AD patients?
- (13) What are key differences in the diagnosis and management of pediatric compared to adult AD (consider infants, children and adolescents separately).
- (14) What are key differences in the management of AD in pregnant women?

Appendix 3: Scoping document - search for existing guidelines

Search terms

atopic dermatit* OR atopic eczem* OR neurodermitis (in PubMed additionally with “guideline” in title)

Search date

13 January 2020 (PubMed search limited to years 2017 - 2020)

Title	Organisation(s)	Date	Country/Region	Sources	Comments
Атопічний дерматит. Адаптована клінічна настанова, заснована на доказах [Atopic dermatitis. Adapted evidence-based guideline] ⁴⁴	MoH (UA) - The State Expert Center, Ministry of Health, Ukraine	Jul 04, 2016	Ukraine	G-I-N	language: Ukrainian
Evidence-Based Clinical Practice Guidelines for atopic dermatitis in Traditional Korean Medicine ⁴⁵	KIOM (KO) Korea Institute of Oriental Medicine	Jul 11, 2016	Republic of Korea	G-I-N	-
Atooppinen ekseema [Atopic eczema] ⁴⁶	CC (FI) - Current Care Guidelines / the Finnish Medical Society Duodecim	Feb 03, 2009 (update 2016)	Finland	G-I-N	language: Finnish
Neurodermitis. S2e-LL (DDG) [Neurodermatitis] ⁴⁸	AWMF (DE) - Association of Scientific Medical Societies	Mar 31, 2020	Germany	G-I-N	not evidence-based and is under review (not published)
British Association of Dermatologists' guidelines for the management of contact dermatitis 2017. ⁴⁷	British Association of Dermatologists (BAD)	Feb, 2017	United Kingdom	ECRI	guideline on contact dermatitis
Neurodermitis (S2k) ⁵⁶	AWMF (DE) - Association of Scientific Medical Societies	Mar, 2015	Germany	AWMF	language: German
Italian guidelines for therapy of atopic dermatitis-Adapted from consensus-based European guidelines for treatment of atopic eczema (atopic dermatitis). ⁴⁹	SIDeMaST, ADOI, SIDAPA	Nov, 2019	Italy	PubMed	based on old EDF GL
Clinical practice guidelines for the management of atopic dermatitis 2018. ⁵⁰	Katoh et al.	Dec, 2019	Japan	PubMed	boxes w/ recommendations, use of evidence levels (old Oxford)

Guidelines on Management of Atopic Dermatitis in India: An Evidence-Based Review and an Expert Consensus. ⁵¹	Rajagopalan et al.	May, 2019	India	PubMed	Key Qs in appendix, use of evidence levels (old Oxford)
Atopic dermatitis guidelines: Diagnosis, systemic therapy, and adjunctive care. ⁵²	Sidbury et al.	Sep, 2018	United States	PubMed	summary of 2014 AAD Guidelines
Consensus-based European guidelines for treatment of atopic eczema (atopic dermatitis) in adults and children: part I. ⁴²	EDF	May, 2018	Europe	PubMed	old EDF GL
Consensus-based European guidelines for treatment of atopic eczema (atopic dermatitis) in adults and children: part II. ⁴³	EDF	Jun, 2018	Europe	PubMed	old EDF GL
Guidelines for the management of atopic dermatitis (eczema) for pharmacists. ⁵³	Wong et al.	May, 2017	Canada	PubMed	-
Japanese guidelines for atopic dermatitis 2017. ⁵⁴	Katayama et al.	Apr, 2017	Japan	PubMed	-
Atopic dermatitis: current treatment guidelines. Statement of the experts of the Dermatological Section, Polish Society of Allergology, and the Allergology Section, Polish Society of Dermatology. ⁵⁵	Nowicki et al.	Aug, 2015	Poland	PubMed	-

SCOPING DOCUMENT - Appendix S2: AGREE II evaluation (domain 3 only) of guidelines potentially suitable for adaptation

AGREE II-Domain 3: Rigour of development									
Guidelines	7. Systematic methods were used to search for evidence.	8. The criteria for selecting the evidence are clearly described.	9. The strengths and limitations of the body of evidence are clearly described.	10. The methods for formulating the recommendations are clearly described.	11. The health benefits, side effects, and risks have been considered in formulating the recommendations.	12. There is an explicit link between the recommendations and the supporting evidence.	13. The guideline has been externally reviewed by experts prior to its publication.	14. A procedure for updating the guideline is provided.	Quality score (0%-100%)
<p>Clinical practice guidelines for the management of atopic dermatitis 2018</p> <p>Katoh et al. 2018</p>	<p>PubMed, Japana Centra Vevuo Medicina, and Cochrane Library were searched for the relevant literature published by the end of December 2015. But complete search strategy not given</p>	<p>Designs of studies used as references for the determination of the evidence level. Old Oxford was used for level of evidence</p>	<p>The evidence level was an eventual judgment concerning the "quality of evidence" based on evidence concerning important outcomes reached as a consensus of the committee</p>	<p>Recommendations were comprehensively evaluated on the basis of the magnitude of benefits expected from the recommended treatments and balance between the benefits and harm or burdens that may be caused by the treatments in consideration of the evidence level, clinical experience, balance between benefits and harms, values, and wishes for treatment. No information given on how consensus was reached</p>	<p>In consideration of the evidence level, clinical experience, balance between benefits and harms, values, and wishes for treatment</p>	<p>Each recommendation is followed by a description graph and level of evidence</p>	<p>No information given</p>	<p>No information given</p>	<p>17%</p>
Rating	2	2	2	2	3	3	1	1	
<p>Guidelines on Management of Atopic Dermatitis in India: An Evidence-Based Review and an Expert Consensus</p> <p>Rajagopalan et al. 2019</p>	<p>An extensive literature search was done in MEDLINE, Google Scholar, Cochrane, and other resources. Articles published in the past 10 years were reviewed. But complete search strategy not given</p>	<p>Articles published in the past 10 years were reviewed and recommendations were graded based on the quality of evidence as per GRADE. For level of evidence and strength of recommendation old oxford was used</p>	<p>Their discussions were based on literature from clinical research articles and also from their experience and acumen</p>	<p>The members gave their independent views on the preselected recommendations in agree and disagree scale with an Indian perspective. No information given on how consensus was reached.</p>	<p>Unclear if harms and benefits were taken into account for every recommendation. Harms are listed in some recommendation boxes and text.</p>	<p>Each recommendation is presented in a box with level of evidence and evidence is described in the text</p>	<p>No information given</p>	<p>No information given</p>	<p>15%</p>
Rating	2	2	2	2	2	3	1	1	
<p>NICE interactive flowchart: Treating Eczema in people aged 12 and under Treating eczema in people over 12</p> <p>Last updated: 31 July 2018</p>	<p>For NICE guidelines review questions must be developed and literature searches are planned and carried out. For clinical pathways sources for updates for treatment are listed some of them included the search strategy many updated on the clinical pathway are from STA.</p>	<p>Each technology appraisal included as source had PICO and inclusion and exclusion criteria.</p>	<p>All evidence is appraised and biases also identified also cost are taken into account. Because this is a pathway it was difficult to identify the quality of evidence used for each recommendation.</p>	<p>Appraisal Committee bases its recommendations on the evidence presented, including statements from consultees and commentators and the views expressed by clinical specialists, commissioning experts and patient experts at the Committee meeting. The TSA included in the pathways overlook of comments from stakeholders and experts.</p>	<p>The appraisal committee take into account impact of benefits and harms and also cost-effectiveness, but in the pathway only the recommendations are given. In the sources cited the complete information can be found.</p>	<p>All recommendations and it respective source is given, but no studies are cited in the text or ExD frameworks given, this can only be found checking the source.</p>	<p>Either NICE guidelines or TSA have to be checked by external stakeholders. This is give on a summary table with comments from each stakeholder and actions taken by the appraisal committee.</p>	<p>No information given, but an update is plan for the Eczema treatment in people aged 12 and under guidelines. Also TSA provide dates for possible updates.</p>	<p>8%</p>
Rating	5	7	6	5	6	5	7	6	

Versionsnummer: 4.0

Erstveröffentlichung: 07/2002

Überarbeitung von: 06/2023

Nächste Überprüfung geplant: 06/2028

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