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ORIGINAL RESEARCH

Canadian Consensus Guidelines for the Management of Atopic Dermatitis with Topical Therapies

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ABSTRACT

Introduction: Atopic dermatitis (AD) is a highly prevalent disease in Canada with significant patient burden. Treatment guidance for topical therapy (the mainstay of AD management), with particular consideration of emerging treatments, may further improve patient care. Here, we aim to provide healthcare professionals with AD treatment recommendations from the perspective of 10 Canadian dermatologists with expertise in managing AD.

Methods: The panel of dermatologists conducted a systematic literature review and leveraged their clinical experience to develop generally accepted principles, consensus statements, and a treatment algorithm using an iterative consensus process.

Results: The panel collectively developed six generally accepted principles, 10 consensus

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statements, and a treatment algorithm. The guidance notes that assessment of disease severity should encompass both physician-rated measures and patient-reported outcomes. Disease education, lifestyle-based strategies (e.g., trigger avoidance), and supportive measures (e.g., moisturizers) can help reduce signs and symptoms of AD. Choice of therapy should consider disease-, patient-, and treatment-related factors. Although topical corticosteroids (TCS) are often used as first-line treatment in AD, they should be limited to intermittent short-term use. Noncorticosteroid topical therapies (e.g., topical calcineurin inhibitors; topical phosphodiesterase-4 inhibitors; and topical Janus kinase inhibitors) can be used for widespread involvement of AD according to approved use. Once treatment goals are achieved, noncorticosteroid topical maintenance therapy should continue to prevent flares and reduce the need for TCS.

Conclusion: Guidance reflecting the benefits and limitations of topical AD treatments in conjunction with patient understanding of treatment goals supports robust shared decision-making in the management of AD.

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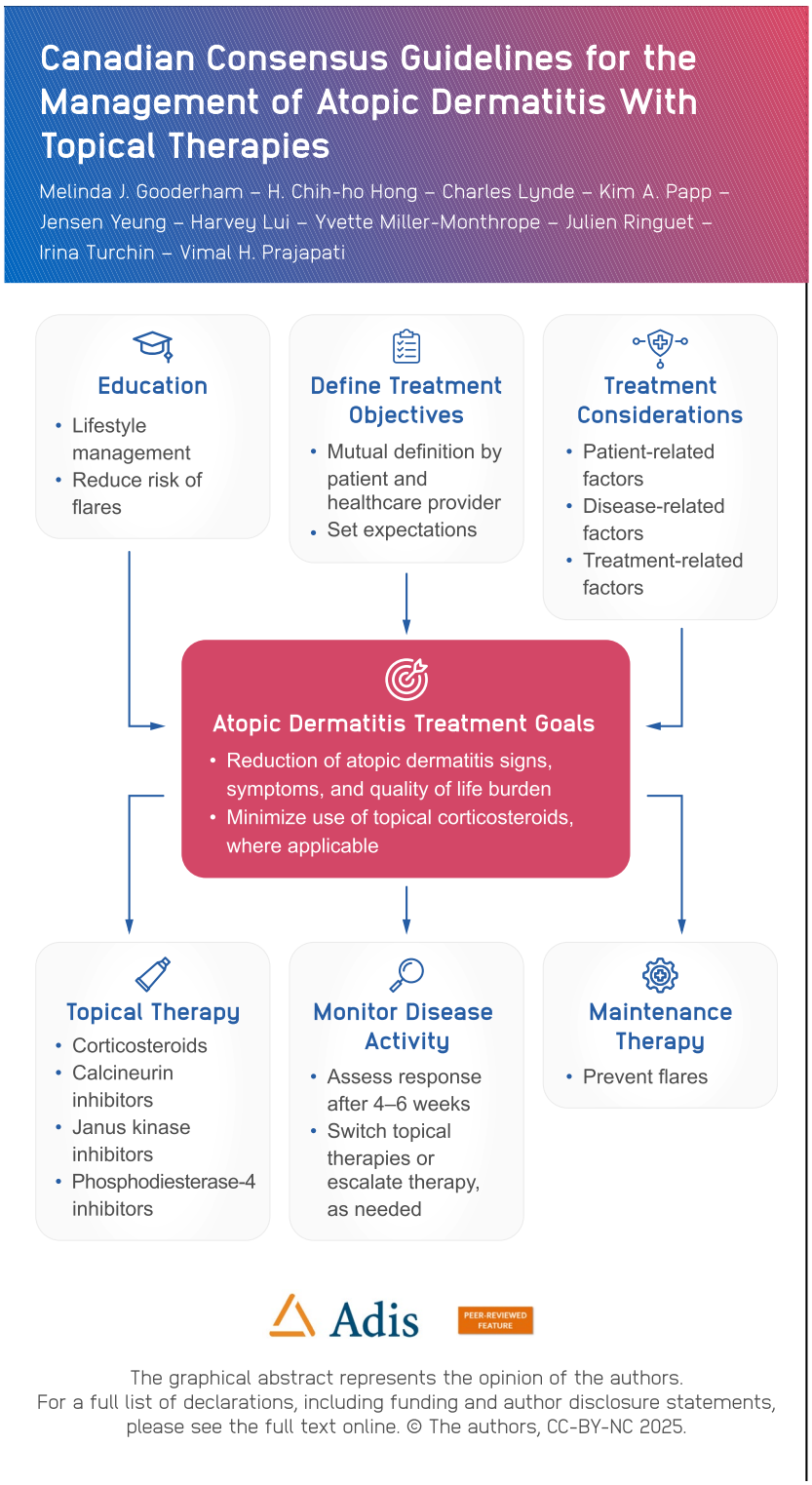


Keywords: Atopic dermatitis; Janus kinase inhibitor; Phosphodiesterase-4 inhibitor; Topical calcineurin inhibitor; Topical corticosteroid

Key Summary Points

Why carry out this study?

Atopic dermatitis is primarily treated with topical therapy, and guidance on the use of new and emerging treatments may further improve patient care.

The study asked how a panel of 10 Canadian dermatologists with expertise in managing atopic dermatitis would propose managing the disease.

What was learned from the study?

The panel provided generally accepted principles, consensus recommendations, and a treatment algorithm for the management of atopic dermatitis that reflect the changing atopic dermatitis treatment landscape.

Healthcare providers will be better prepared to assess disease severity in patients with atopic dermatitis and use a recently expanded repertoire of topical treatments in conjunction with other supportive measures to optimize patient therapy.

DIGITAL FEATURES

This article is published with digital features, including a graphical abstract to facilitate understanding of the article. To view digital features for this article go to https://doi.org/10.6084/m9.figshare.28573703.

INTRODUCTION

Atopic dermatitis (AD) is a chronic and relapsing immune-mediated inflammatory disease of the skin characterized by intense pruritus and typical eczematous morphology, including erythema, edema, excoriation, lichenification, oozing/crusting, and/or xerosis [1]. Signs and symptoms typically begin in infancy or childhood and may continue into or first appear in adulthood [2–4]. AD can negatively affect sleep, mental health, and quality of life (QoL) [5, 6]. In Canada, the prevalence of AD is approximately 15% for children and 4% for adults, with the majority of patients having mild-to-moderate disease severity [7, 8].

Optimal management of AD involves assessment of disease burden, education, and non-pharmacologic flare-mitigating measures that are most often accompanied by topical therapy and sometimes systemic therapy [9–11]. It has become necessary to revisit these topics given recent changes in the treatment landscape (e.g., approval of topical therapies that inhibit phosphodiesterase-4 [PDE-4i] [12] and Janus kinase [JAKi] [13]) to ensure adequate guidance.

Here, we provide generally accepted principles, consensus recommendations, and a practical treatment algorithm for the management of AD, as developed by a panel of 10 Canadian dermatologists with expertise in managing AD.

METHODS

A panel of 10 Canadian dermatologists with substantial clinical and research experience in AD participated in an iterative consensus process for the development of generally accepted principles, consensus statements, and a treatment algorithm.

At a meeting in November 2022, the full panel convened to propose themes, clinical questions, and population, intervention, control, and outcomes (PICO) terms that would guide a subsequent literature review. A literature review was then conducted that aimed to address the question "What is the disease burden in patients with AD treated with topical therapies?", including the characterization of disease burden before topical therapies were used (Supplementary Material Table 1). It also aimed to address the question "How should treatment algorithms be modified to incorporate new topical therapies for AD?" with a focus on new treatments or

those for which fewer data were available during the development of the 2023 American Academy of Dermatology guidelines (Supplementary Material Table 2).

A subset of the full panel of dermatologists (MJG, HCH, CL, KAP, and JY) used data extracted from the literature search and expert opinion to draft, validate, and refine generally accepted clinical principles, consensus statements, and a treatment algorithm. This process occurred at a meeting in June 2023, with further refinement occurring asynchronously among the five subpanel members; a survey was used to categorize statements as generally accepted principles or consensus statements.

At an in-person meeting in September 2023 consisting of the full 10-member panel, generally accepted principles were discussed, and the final consensus statements and treatment algorithm were voted on using an iterative consensus process. Voting occurred according to a 5-point Likert scale (1, "strongly disagree"; 5, "strongly agree"), with ≥ 75% agreement (i.e., mean Likert score ≥ 3.75 out of 5) required to reach consensus.

This article is based on previously conducted studies and does not contain any new studies with human participants or animals performed by any of the authors.

RESULTS AND DISCUSSION

Literature Search and Expert Statements

The first question ("What is the disease burden in patients with AD treated with topical therapies?") resulted in 33 sources for data extraction. Findings helped inform the practical assessment of disease severity based on clinical and patient-oriented characteristics. The second question ("How should treatment algorithms be modified to incorporate new topical therapies for AD?") resulted in 111 sources for data extraction. Findings informed clinical practice and treatment considerations, particularly for newer topical therapies, such as topical JAKi and topical PDE-4i. Following discussions and an iterative consensus process, six generally accepted principles (Table 1) and 10 consensus statements (Table 2) were adopted. The final treatment algorithm (Fig. 1) had a level of agreement of 94%.

Assessment of Disease Burden

Disease burden is a function of the clinical severity of AD in terms of visibly apparent skin pathology as well as patient-centric features, such as the frequency and severity of skin itch and pain, and the resulting effects on QoL (e.g., sleep; mental health burden; and school/work productivity) [5, 6]. Quantitative AD-validated assessment tools may help healthcare providers assess disease severity and engage in shared decision-making with the patient about treatment options. Body surface area (BSA) is a basic metric used for quantifying disease extent. The Eczema Area and Severity Index (EASI) (range, 0–72 [higher score indicates greater severity]), which has been validated in patients with AD, considers morphologic skin pathology (erythema; induration/edema/papulation; excoriations; and lichenification) and is weighted by BSA and body region [14]. The Investigator's Global Assessment (IGA) has a 5-point scale (range, 0–5 [higher score indicates greater severity]) based on the overall appearance of morphologic skin features (e.g., erythema; papulation; lichenification; and oozing/crusting) and has been validated in patients with AD [15].

Patient-reported outcomes validated in AD assess patient-centric perspectives on disease severity. The Dermatology Life Quality Index (DLQI) is a 10-question patient questionnaire about itch/pain, daily activities, and QoL impact (range, 0–30 [higher score indicates greater impairment]) [16]. The DLQI has been validated in patients with AD and other dermatologic diseases [16]. The Patient-Oriented Eczema Measure (POEM) is an AD-validated assessment tool with seven questions that consider itch, sleep disturbance, and characteristics of affected skin (range, 0–28 [higher score indicates greater severity]) [17]. Numerical rating scales (NRS) have been developed to assess itch [18] and sleep disturbance [19] in AD (range, 0 [no itch or no sleep loss due to AD] to 10 [worst itch or did not sleep at all]).

Table 1 Generally accepted principles for AD

Statement
Disease burden
Clinical disease severity in patients with AD can be assessed by BSA, EASI, and IGA. In addition, the patient perspective can be assessed by DLQI, POEM, pruritus NRS, and sleep disturbance
Treatment considerations
Consider patient's preference, age, sensitive areas, disease extent, chronicity, severity, and patient-reported symptoms when evaluating treatment options for AD
It is important to involve the patient with AD in therapeutic decisions
Low AD disease activity may impact QoL
Maintenance therapy
Maintenance therapy is an essential part of the management of patient with AD
Safety
Noncorticosteroid topical therapies are generally not recommended for the treatment of AD in patients who are pregnant or breastfeeding

AD atopic dermatitis, *BSA* body surface area, *DLQI* Dermatology Life Quality Index, *EASI* Eczema Area and Severity Index, *IGA* Investigator's Global Assessment, *NRS* numerical rating scale, *POEM* Patient-Oriented Eczema Measure, *QoL* quality of life

Scoring Atopic Dermatitis (SCORAD) is an AD-validated assessment tool that incorporates both objective physician-rated signs (extent of BSA; intensity of erythema, edema/papulation, oozing/crusting, excoriation, lichenification, and dryness [scale of 0–3]) and patient-reported symptoms (pruritus and sleep loss [scale of 0–10]) of AD; the total score ranges from 0 to 103 [20].

Although patient-centric scores can be used to serially assess changes in disease severity over time and in response to treatment, open-ended questions may be a more practical alternative in the clinic [21]. Assessment of disease severity should encompass both physician-rated measures and patient-reported outcomes because of potential for significant QoL impact even in patients displaying milder apparent disease activity, especially among those with involvement of more visible or sensitive areas (e.g., scalp; face/neck; hands/feet; genitals) [21]. Although the above assessment tools are commonly used in clinical trials, BSA, IGA, and pruritus NRS are the most practical for assessing disease severity in routine clinical practice [Consensus Statement 1 (Table 2)] [22].

Nonpharmacologic Therapy

Education about the disease and lifestyle-based strategies, such as trigger avoidance, can help reduce signs and symptoms of AD [23]. Moisturizers have been recommended for daily use (often multiple times per day and especially after bathing) to support and restore the skin's barrier function and prevent flares [9, 10, 24]. Bathing practices, such as baths containing a dilute concentration of bleach, have been previously suggested as an adjunctive therapy for AD [9], but their benefits are not supported by strong evidence (Consensus Statement 2). Therefore, bleach baths are not routinely recommended.

Wet wraps involve the use of wet dressings to prevent excoriation, improve skin hydration, and enhance skin penetration of topical therapies (usually lower potency topical corticosteroids [TCS]) during exacerbations; they are

Table 2 Consensus statements for AD

Statement	Level of agreement, %	Mean (SD) Likert score[a]
Disease burden		
1. For routine clinical practice, BSA, IGA, and pruritus assessment are the most practical disease severity measures in patients with AD	98	4.9 (0.3)
Bleach baths, wet wraps, and moisturizers		
2. Bleach baths have been used as an adjunctive therapy for AD, but their benefits are not supported by evidence. Therefore, bleach baths are not recommended	94	4.7 (0.6)
3. Although wet wraps may be helpful for extensive or recalcitrant AD, they are impractical for routine use	96	4.8 (0.4)
Topical therapies		
4. TCS in AD should ideally be limited to short-term use. If there is insufficient response after 4 weeks of treatment, consider alternative therapeutic options	90	4.5 (0.5)
5. Noncorticosteroid topical therapies can be used for widespread involvement of AD according to approved use	90	4.5 (0.5)
6. Topical JAKi do not have the same risk profile as TCS in AD and may be used continuously for extended periods on all sites, including sensitive areas	98	4.9 (0.3)
7. Treatment with TCS, TCI, topical PDE-4i, or topical JAKi is not advised in patients with AD who have an active skin infection unless they are receiving appropriate antimicrobial therapy	92	4.6 (0.5)
8. Off-label use of topical therapy in AD may be necessary to achieve the desired treatment outcomes	98	4.9 (0.3)
9. Topical JAKi can be used concomitantly with biologic therapies in the treatment of AD	80	4.0 (1.5)
10. The thresholds for considering phototherapy and systemic therapies for AD may shift as a wider disease spectrum may be amenable to treatment with novel noncorticosteroid topical therapies	92	4.6 (0.7)

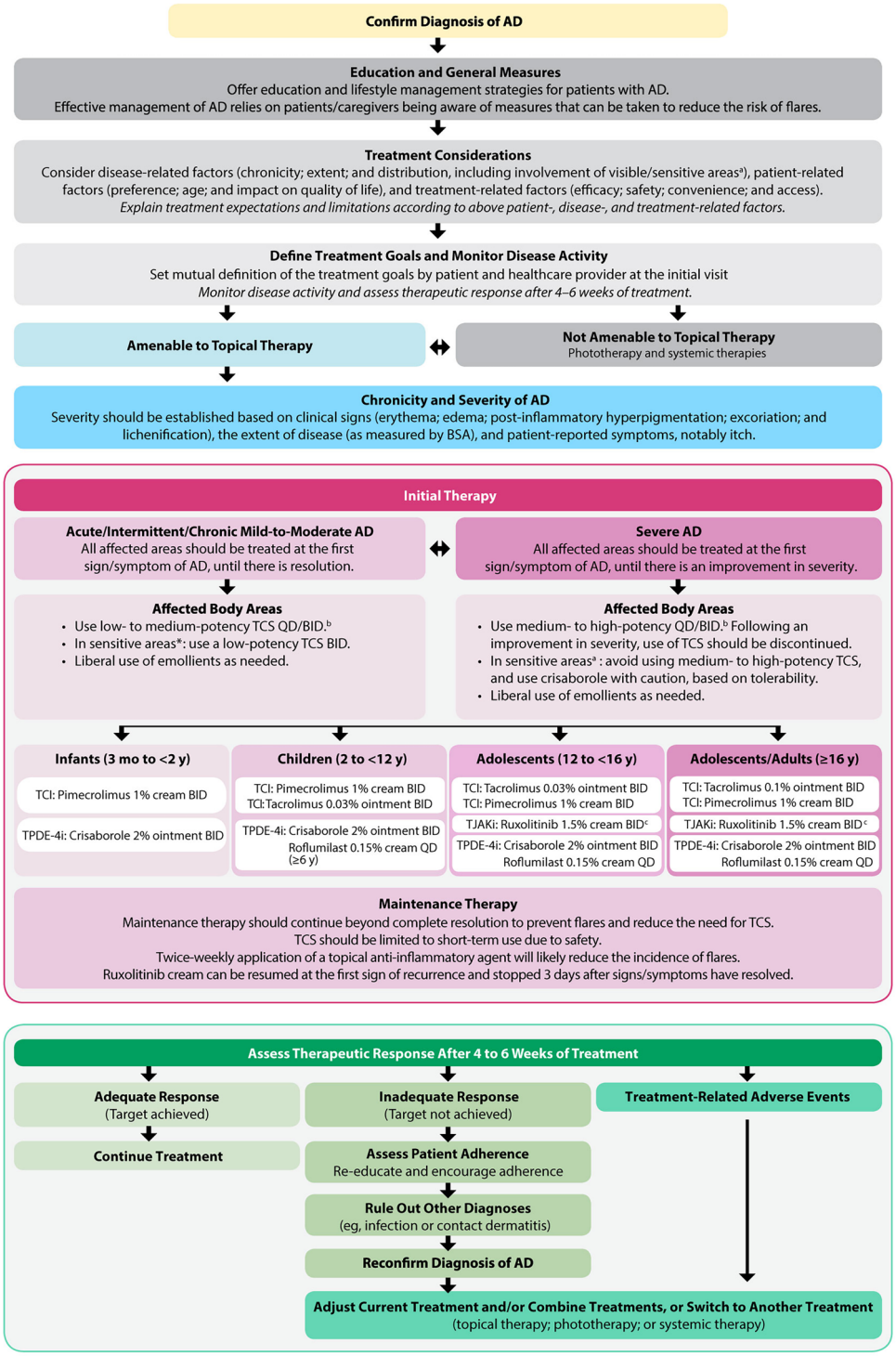
AD atopic dermatitis, *BSA* body surface area, *IGA* Investigator's Global Assessment, *JAKi* Janus kinase inhibitors, *PDE-4i* phosphodiesterase-4 inhibitors, *TCI* topical calcineurin inhibitors, *TCS* topical corticosteroids

[a]The Likert scale ranges from 1 to 5, with higher scores indicating more agreement

generally considered safe [25]. Although wet wraps may be helpful for extensive or recalcitrant AD [26], they are impractical for routine use (Consensus Statement 3) because substantial time and effort are required for implementation and patients and/or their caregivers must be carefully educated on their proper use [10].

Considerations for Pharmacologic Therapy

If supportive measures do not control disease, pharmacologic interventions are advised [9, 10]. The choice of therapy should consider disease-related factors (severity; extent; distribution [e.g., involvement of visible and/


Confirm Diagnosis of AD
Education and General Measures
Offer education and lifestyle management strategies for patients with AD.
Effective management of AD relies on patients/caregivers being aware of measures that can be taken to reduce the risk of flares.
Treatment Considerations
Consider disease-related factors (chronicity; extent; and distribution, including involvement of visible/sensitive areas[a]), patient-related factors (preference; age; and impact on quality of life), and treatment-related factors (efficacy; safety; convenience; and access).
Explain treatment expectations and limitations according to above patient-, disease-, and treatment-related factors.
Define Treatment Goals and Monitor Disease Activity
Set mutual definition of the treatment goals by patient and healthcare provider at the initial visit
Monitor disease activity and assess therapeutic response after 4–6 weeks of treatment.
Amenable to Topical Therapy
Not Amenable to Topical Therapy
Phototherapy and systemic therapies
Chronicity and Severity of AD
Severity should be established based on clinical signs (erythema; edema; post-inflammatory hyperpigmentation; excoriation; and lichenification), the extent of disease (as measured by BSA), and patient-reported symptoms, notably itch.
Initial Therapy
Acute/Intermittent/Chronic Mild-to-Moderate AD
All affected areas should be treated at the first sign/symptom of AD, until there is resolution.
Severe AD
All affected areas should be treated at the first sign/symptom of AD, until there is an improvement in severity.
Affected Body Areas
• Use low- to medium-potency TCS QD/BID.[b]
• In sensitive areas*: use a low-potency TCS BID.
• Liberal use of emollients as needed.
Affected Body Areas
• Use medium- to high-potency QD/BID.[b] Following an improvement in severity, use of TCS should be discontinued.
• In sensitive areas[a] : avoid using medium- to high-potency TCS, and use crisaborole with caution, based on tolerability.
• Liberal use of emollients as needed.
Infants (3 mo to <2 y)
TCI: Pimecrolimus 1% cream BID
TPDE-4i: Crisaborole 2% ointment BID
Children (2 to <12 y)
TCI: Pimecrolimus 1% cream BID
TCI: Tacrolimus 0.03% ointment BID
TPDE-4i: Crisaborole 2% ointment BID
Roflumilast 0.15% cream QD (≥6 y)
Adolescents (12 to <16 y)
TCI: Tacrolimus 0.03% ointment BID
TCI: Pimecrolimus 1% cream BID
TJAKi: Ruxolitinib 1.5% cream BID[c]
TPDE-4i: Crisaborole 2% ointment BID
Roflumilast 0.15% cream QD
Adolescents/Adults (≥16 y)
TCI: Tacrolimus 0.1% ointment BID
TCI: Pimecrolimus 1% cream BID
TJAKi: Ruxolitinib 1.5% cream BID[c]
TPDE-4i: Crisaborole 2% ointment BID
Roflumilast 0.15% cream QD
Maintenance Therapy
Maintenance therapy should continue beyond complete resolution to prevent flares and reduce the need for TCS.
TCS should be limited to short-term use due to safety.
Twice-weekly application of a topical anti-inflammatory agent will likely reduce the incidence of flares.
Ruxolitinib cream can be resumed at the first sign of recurrence and stopped 3 days after signs/symptoms have resolved.
Assess Therapeutic Response After 4 to 6 Weeks of Treatment
Adequate Response
(Target achieved)
Continue Treatment
Inadequate Response
(Target not achieved)
Assess Patient Adherence
Re-educate and encourage adherence
Rule Out Other Diagnoses
(eg, infection or contact dermatitis)
Reconfirm Diagnosis of AD
Treatment-Related Adverse Events
Adjust Current Treatment and/or Combine Treatments, or Switch to Another Treatment
(topical therapy; phototherapy; or systemic therapy)

◂**Fig. 1** Algorithm for the topical therapy of AD in children, adolescents, and adults. [a]Sensitive areas include the face (eyelids and perioral region), neck, axillary/inguinal region, and genital region. [b]Cochrane review has shown that QD application of TCS is as effective as BID application of TCS. [c]Ruxolitinib (1.5% cream) can be resumed at the first sign of recurrence and stopped 3 days after signs/symptoms have resolved. *AD* atopic dermatitis, *BID* twice daily, *BSA* body surface area, *QD* once daily, *TCI* topical calcineurin inhibitor, *TCS* topical corticosteroid, *TJAKi* topical Janus kinase inhibitor, *TPDE-4i* topical phosphodiesterase-4 inhibitor

or sensitive areas]; chronicity; symptoms), patient-related factors (age; impact on QoL; preference), and treatment-related factors (efficacy; safety; convenience; access; cost). Topical therapies are the mainstay of AD treatment, as they are generally considered safe and effective [10, 27].

It is important to involve the patient with AD in therapeutic decisions. A mutual definition of treatment goals should be decided by the patient and healthcare provider and periodically reevaluated.

Topical Therapies

TCS have low-, medium-, high-, and very high-potency formulations. High- and very high-potency TCS are the most efficacious of the topical therapies, but carry a greater risk of adverse events (AEs) [10, 28, 29]. AEs may include local cutaneous AEs, such as atrophy, striae, and hypopigmentation (more commonly in patients with darker skin tones), as well as rare systemic AEs, such as adrenal insufficiency (due to hypothalamic–pituitary–adrenal axis suppression) if sufficient systemic absorption occurs [28]. Corticosteroid addiction/withdrawal is a possibility but is most often associated with extended use of high-potency formulations [30, 31]. Given these risks, TCS in AD should ideally be limited to intermittent short-term use (Consensus Statement 4) [10].

Noncorticosteroid topical therapies (Table 3) can be used for widespread involvement of AD (including on sensitive skin) according to approved use (Consensus Statement 5) and do not carry the risk of causing the corticosteroid-induced AEs listed above [12, 32, 33]. Topical calcineurin inhibitors (TCI) are one such noncorticosteroid alternative and include tacrolimus (0.03% and 0.1% ointment) and pimecrolimus (1% cream), which are approved for second-line use for moderate-to-severe and mild-to-moderate disease, respectively [32, 33]. Tacrolimus 0.1% ointment has comparable efficacy to medium-potency TCS, and tacrolimus 0.03% ointment and pimecrolimus 1% cream are comparable to low-potency TCS [29]. AEs may include local stinging and/or burning (approximately 20–58% of patients for tacrolimus, and 8–28% of patients for pimecrolimus in some studies) [34–36]. Although rare cases of skin cancer and lymphoma have also been reported with TCI, a causal relationship has not been established [32, 33], and this risk has not been substantiated by recent long-term analyses [37, 38]. A boxed warning about these malignancies has since been removed for tacrolimus ointment and pimecrolimus cream in Canada [32, 33].

Topical PDE-4i are another noncorticosteroid alternative. Crisaborole (2% ointment) is approved for mild-to-moderate AD [12]. Efficacy relative to vehicle was modest in phase 3 studies [36, 39]. Like TCI, AEs include stinging and/or burning (approximately 4% of patients in phase 3 studies [36, 40] and 14% and 32% of patients in real-world studies [41, 42]) at the application site. Roflumilast (0.15% cream) was approved in 2024 for mild-to-moderate AD in the USA [43] and approved in March 2025 in Canada [44]. It has demonstrated moderate anti-inflammatory action relative to vehicle cream in phase 3 studies [45].

Ruxolitinib (1.5% cream), a topical JAKi, is another noncorticosteroid alternative for mild-to-moderate AD most recently approved in Canada [13]. Efficacy was improved compared with triamcinolone acetonide (0.1% cream), a medium-potency TCS in a phase 2 study [46, 47]. Treatment is well tolerated, with infrequent occurrences of application site reactions [46, 48–50]. The JAKi class carries a boxed warning (serious infections; malignancies; major adverse cardiovascular events [MACE]; and thrombosis [13]), which originated from data with orally administered tofacitinib when compared with

Table 3 Noncorticosteroid topical therapies

Name	Manufacturer	Formulation	Application frequency	Indication	Health Canada approval date	Pivotal study
TCI						
Pimecrolimus (Elidel®) [33]	Bausch Health, Canada	1% cream	BID	Second-line therapy for short-term and intermittent long-term therapy of mild-to-moderate AD in nonimmunocompromised patients aged ≥ 3 months, in whom the use of alternative, conventional therapies is deemed inadvisable because of potential risks, or in the treatment of patients who are not adequately responsive to or intolerant of alternative, conventional therapies	Nov 3, 2011 (aged ≥ 2 years) Oct 17, 2019 (aged ≥ 3 months)	Luger TA, et al. [64] Meurer M, et al. [65] Sigurgeirsson B, et al. (phase 3) [66]

Table 3 continued

Name	Manufacturer	Formulation	Application frequency	Indication	Health Canada approval date	Pivotal study
Tacrolimus (Protopic®) [32]	LEO Pharma	0.03% and 0.1% ointment	BID	Second-line therapy in adults (0.03% and 0.1% ointment) and children aged 2–15 years (0.03% ointment) for short- and long-term intermittent treatment of moderate-to-severe AD in nonimmunocompromised patients, in whom the use of conventional therapies is deemed inadvisable because of potential risks, or in those who are not adequately responsive to or intolerant of conventional therapies. It is also indicated for maintenance therapy to prevent flares and prolong flare-free intervals in patients with moderate-to-severe AD experiencing a high frequency of flares (i.e., occurring ≥ 5 times per year) who have had an initial response (i.e., lesions cleared, almost cleared or mildly affected) with ≤ 6 weeks of treatment BID	Feb 17, 2011	Paller A, et al. (phase 3) [67] Hanifin JM, et al. (phase 3) [68] Soter N, et al. (phase 3) [69] Reitamo S, et al. (phase 3) [70] Reitamo S, et al. (phase 3) [71]

Table 3 continued

Name	Manufacturer	Formulation	Application frequency	Indication	Health Canada approval date	Pivotal study
Topical PDE-4i						
Crisaborole (Eucrisa™) [12]	Pfizer Canada	2% ointment	BID	Topical treatment of mild-to-moderate AD in adults and pediatric patients aged ≥ 3 months	Nov 7, 2018 (aged ≥ 2 years) July 15, 2021 (aged ≥ 3 months)	Paller AS, et al. (phase 3) [36]
Roflumilast [44]	Arcutis Canada	0.15% cream	QD	Topical treatment of mild-to-moderate AD in adults and pediatric patients aged ≥ 6 years	Mar 17, 2025	Simpson EL, et al. (phase 3) [45]
Topical JAKi						
Ruxolitinib (Opzelura®) [13]	Incyte Biosciences Canada	1.5% cream	BID	Topical treatment of mild-to-moderate AD in patients aged ≥ 12 years, for whom AD not adequately controlled with conventional topical prescription therapies (TCI, TCS) or when those therapies are not advisable	Oct 11, 2024	Papp K, et al. (phase 3) [48]

AD atopic dermatitis, *BID* twice daily, *JAKi* Janus kinase inhibitor, *PDE-4i* phosphodiesterase-4 inhibitor, *QD* once daily, *TCI* topical calcineurin inhibitor, *TCS* topical corticosteroid

subcutaneously administered adalimumab in adults or etanercept in adults aged ≥ 50 years with rheumatoid arthritis [51–53]. However, observed incidences of such events in phase 3 studies of ruxolitinib (0.75% and 1.5% cream) were not increased and were generally comparable to the overall AD population [48]; serious infections, MACE, or thromboses have not been found in the first year following its US approval [54]. Since topical JAKi do not have the same risk profile as TCS in AD, they may be suitable for continual use over extended periods on all sites including sensitive areas for this chronic disease (Consensus Statement 6).

Additional considerations are necessary when using topical therapies for the treatment of patients with AD who are pregnant or breastfeeding. Noncorticosteroid topical therapies are generally not recommended for the treatment of patients with AD who are pregnant or breastfeeding, largely because of lack of data regarding potential risks [12, 13, 32, 33]. However, their use may be justified in some cases [55].

Treatment with TCS [56], TCI [32, 33], topical PDE-4i [36], or topical JAKi [13] is not advised in patients with AD who have an active skin infection unless they are receiving appropriate concomitant antimicrobial therapy (Consensus Statement 7).

Initial Therapy

Initial therapy of mild-to-moderate AD should begin with low- or medium-potency TCS once daily (QD) or twice daily (BID) on affected body areas until visible skin findings have resolved. In sensitive areas, a low-potency TCS should be used QD or BID.

First-line treatment of severe AD should begin with medium- or high-potency TCS until disease severity has improved or the recommended duration of treatment has been reached. In sensitive areas, medium- or high-potency TCS should be avoided. For TCS, QD may be equally as effective as BID dosing [57]. Liberal, as-needed use of emollients should accompany therapy [58]. Specific best practices for emollient use have been discussed previously [11]. Other treatments may be used when TCS are not desired because of potential risks or when AD is not adequately controlled or patients are intolerant to TCS.

TCI are often second line with the specific drug and concentration depending on patient age, according to the label (Fig. 1). Tacrolimus has been approved in patients aged 2–15 years (0.03% ointment BID) and patients aged ≥ 16 years (0.1% ointment BID) [32]. Pimecrolimus (1% cream BID) has been approved in patients aged ≥ 3 months [33]. After TCI, other therapies may be used. Crisaborole (2% ointment BID) is approved in patients aged ≥ 3 months [12], and ruxolitinib (1.5% cream BID) is approved in Canada for use in patients aged ≥ 12 years [13]. These therapeutic options are recommended on the basis of their effectiveness and clinical experience and are in alignment with their indicated ages for use and line of use [12, 13, 32, 33].

Emergence of treatment-related AEs during management or the inability to achieve treatment goals by 6 weeks (or 4 weeks for TCS [Consensus Statement 4]) may necessitate adjusting current treatment or switching to or adding another treatment (topical therapy, phototherapy, or systemic therapy) or a combination of these. In cases of inadequate response, lack of adherence, environmental triggers, infection, and competing diagnoses should first be excluded as reasons for nonresponse [9].

When modifying treatment, off-label use of topical therapy in AD may be necessary to achieve the desired treatment outcomes (Consensus Statement 8). For instance, tacrolimus (0.1% ointment) may be needed to control disease in children aged 2–15 years [59]. Clinical experience suggests that topical JAKi can be used concomitantly with systemic biologics in the treatment of AD [60] (Consensus Statement 9), despite the combination being a limitation of use in the label [13].

Although treatments beyond topical therapies may be needed for refractory cases, the threshold for considering phototherapy and systemic therapies for AD may shift toward topical therapies as a wider disease spectrum may be amenable to treatment with novel noncorticosteroid topical therapies (Consensus Statement 10) [61].

Maintenance Therapy

If the goal of initial therapy is achieved, maintenance therapy should continue beyond complete resolution to prevent flares and reduce the need for TCS. Maintenance therapy is an essential part of the management of patients with AD; twice-weekly application of a topical anti-inflammatory agent will likely reduce the incidence of flares [9, 10, 48, 62, 63]. BID TCS should be limited to intermittent short-term use due to safety [10]. Tacrolimus (0.03% and 0.1% ointment), applied QD twice per week, is indicated for maintenance therapy in patients with a high frequency of flares (e.g., at least five times per year) [32]. Ruxolitinib (1.5% cream) can be resumed at the first sign of recurrence and stopped 3 days after signs/symptoms have resolved. Proactive topical therapy specifically for patients with moderate-to-severe AD has been discussed previously [9, 11]. Patients with frequent recurrence despite maintenance therapy may be candidates for systemic therapy [21].

Limitations

The broad applicability of these guidelines may be limited in some areas since opinions originated exclusively from experts practicing in Canada.

CONCLUSIONS

The management of AD continues to evolve. Assessment of disease severity should consider both physician-rated measures and patient-reported outcomes. Emerging topical therapies focus on new targets underlying inflammation and the itch–scratch cycle. Improved clarity around the benefits, risks, and limitations of available therapies supports the development of robust treatment algorithms. Further, there is an understanding that maintenance therapy provides an opportunity to avoid disease flares and maintain patient QoL. It is important that treatment decisions for AD consider disease-, patient-, and treatment-related factors and are based on a mutual understanding of therapeutic goals in conjunction with the patient.

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Declarations

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