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JAMA Dermatology | Consensus Statement

Delphi Consensus Statement on Treatment of Severe Alopecia Areata in US Adults

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IMPORTANCE Alopecia areata (AA) is an autoimmune hair loss disorder that affects more than 7 million people in the US. Before US Food and Drug Administration–approved trials of Janus kinase inhibitors, numerous treatments had been explored, with variable efficacy and quality of evidence. The absence of standardized treatment guidelines may lead to poor treatment outcomes and payer coverage.

OBJECTIVE To establish a consensus on treatment for adults with severe AA in the US.

EVIDENCE REVIEW Systematic literature reviews for all known therapies used for treating AA were performed in PubMed from inception to December 2024. Inclusion criteria required studies to be randomized clinical trials or have an observational design, evaluate adult (≥18 years old) participants with moderate to severe AA (defined by Severity of Alopecia Tool scores >20%), and be published in English. Studies were excluded if they included patients with non-AA hair loss or if they exclusively evaluated pediatric participants or those with mild AA (Severity of Alopecia Tool scores ≤20%). Three rounds of anonymous, iterative online surveys were administered from May through November 2025. Consensus was predefined at an agreement threshold of 70% or greater. A definition of AA severity was proposed for determining patient eligibility. Experts with recent AA-related research and extensive clinical experience treating adults with severe disease indicated their agreement or disagreement with the use of 29 treatments for adults with severe AA. Treatments that reached consensus for inclusion were further explored with respect to therapeutic positioning, treatment regimens, and long-term management.

FINDINGS Thirty-one US-based AA experts completed 3 rounds of iterative surveys. Consensus was achieved on treatment of adults with severe alopecia areata, as defined by the Alopecia Areata Scale. Oral Janus kinase inhibitors represented the primary, long-term therapy for all patients, with dupilumab as an alternative option for patients with comorbid atopy. Supplemental treatments included oral and topical minoxidil; intralesional, oral, and high-potency topical corticosteroids; and topical Janus kinase inhibitors and prostaglandins, with body site–specific indications. Patient support resources should be offered alongside medical treatment.

CONCLUSION AND RELEVANCE This study defines expert-established consensus on treatment of adults with severe AA in the US. Additional high-quality investigations are needed to establish the efficacy of existing therapies in subpopulations and enable head-to-head comparisons of new and existing interventions. These recommendations are not indicated for children, pregnant patients, patients with mild to moderate disease, or those with underlying comorbidities; additional research is needed to inform treatment guidelines for these specific patient populations.

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Supplemental content

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Alopecia areata (AA) is a chronic, autoimmune, nonscarring hair loss condition with high disease course variability that affects 7 million people in the US.[1,2] Clinical presentation ranges from focal, patchy hair loss to complete loss of scalp, facial, and body hair.[2] It is well established that AA is psychosocially and financially burdensome, with detrimental overall effects on quality of life.[3-5]

Historically, treatment options for severe AA have consisted of off-label interventions with limited evidence and variable clinical efficacy.[2] In 2022, baricitinib was the first drug approved for treating severe AA by the US Food and Drug Administration (FDA), paving the way for the subsequent approval of ritlecitinib and deuruxolitinib in 2023 and 2024, respectively.[6] Despite these advances, robust data from active comparator, head-to-head trials are limited, hindering direct comparison between new and historical treatments.

Through partnership with the National Alopecia Areata Foundation (NAAF) and American Hair Research Society (AHRS), we aimed to provide the first set of expert recommendations for standardized treatment for adults with severe AA in the US. These recommendations are intended to educate and guide shared decision-making between clinicians and patients with severe AA and promote equitable access to evidence-based, clinically effective treatment.

Methods

This study was designed according to the Accurate Consensus Reporting Document (ACCORD) reporting guidelines and was approved by the Mass General Brigham institutional review board. The Delphi method was used to allow for nonbiased, systematic, and iterative consensus to be reached in the setting of limited existing, high-quality evidence for treating severe AA in the US.[7] US board-certified dermatologists were recruited via email to participate in this Delphi consensus study, with a target of 30 panelists to allow for a breadth of expertise and opinions. Participants were chosen based on their affiliations with professional organizations, contributions to AA research, and extensive clinical experience treating adults with severe AA. The Delphi steering group organized panelist recruitment and was composed of 2 panelist members representing NAAF (A.M. and B.K.) and AHRS (E.O. and M.H.), respectively. The exercise materials were piloted by the Delphi steering group and nonvoting researchers (S.G. and E.D.). The study protocol was not prospectively registered.

The Delphi exercise consisted of 3 rounds of anonymous, individual online surveys (eFigure in the Supplement). Before round 1, systematic literature reviews for all known therapies used for the treatment of AA were performed on PubMed from inception to December 2024. Inclusion criteria required studies to be randomized clinical trials or have an observational design, evaluate adult (≥18 years) participants with moderate to severe AA (defined by a Severity of Alopecia Tool [SALT] score >20%), and be published in English. Studies were excluded if they included patients with non-AA hair loss or if they evaluated pediatric participants or those with mild AA (SALT ≤20%) exclusively. A comprehensive overview of literature search terms and included studies can be reviewed in eTable 1 in the Supplement.

Table 1. Alopecia Areata (AA) Scale[9]

Baseline severity	Extent of scalp hair loss
Mild AA[a]	20% or Less scalp hair loss
Moderate AA[a]	21%-49% Scalp hair loss
Severe AA	50%-100% Scalp hair loss

[a] If mild or moderate, increase AA severity rating by 1 level if 1 or more of the following is present: (1) negative association with psychosocial functioning resulting from AA, (2) noticeable involvement of eyebrows or eyelashes, (3) inadequate response after at least 6 months of treatment, or (4) diffuse (multifocal) positive hair pull test results that is consistent with rapidly progressive AA. For the psychosocial effect evaluation, physicians should engage with patients to determine the association of AA with their emotional and psychological well-being, relationships, and lifestyle.

Box. Treatment and Resources for Adults With Severe AA

Primary Treatment

For all patients: oral JAK inhibitors
- For responders, treatment should be continuous, long term, and uninterrupted, with the same drug and same dose
- Oral JAK inhibitors that are FDA approved for AA are preferred
- If response is incomplete after 6 months or longer of treatment, dose adjustments, switching the oral JAK inhibitor agent, or adjunctive therapies should be considered

Potential alternative for patients with atopic disease: dupilumab
- In patients with active atopic disease or a history of atopy, dupilumab may be considered for AA treatment

Patient Coping Resources

Cranial prostheses and camouflage
- If desired, adults with severe AA can elect to use cranial prostheses or camouflage as a primary or adjunctive therapy

Mental health evaluation
- The association of AA with patients' mental health should be explored, and, if indicated, patients should be referred to mental health services

Patient advocacy organizations
- Adults with severe AA should be made aware of patient advocacy organizations for education and support

Abbreviations: AA, alopecia areata; FDA, US Food and Drug Administration; JAK, Janus kinase inhibitor.

The synthesized data, in addition to links to primary articles, were peer reviewed by the Delphi steering group and presented for panelist review at the beginning of the Delphi exercise. At the conclusion of each round, anonymous results and comments were collected and summarized by 2 independent, nonvoting researchers (S.G. and E.D.) for presentation in subsequent rounds. The threshold for consensus was 70%. Written informed consent from expert participants was obtained at the beginning of each round.

In the first round, the Alopecia Areata Scale (AASc) was proposed to define severe AA. The AASc anchors disease severity by the percentage of terminal scalp hair loss as determined by SALT score, with the presence of certain factors increasing severity by 1 level (**Table 1**).[8,9] Next, a comprehensive list of 29 unique AA therapies was introduced, and experts indicated their current, potential, and/or historical use of each therapy. Treatments that achieved consensus for current or potential use were further

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Table 2. Adjunctive and Supplemental Treatments for Adults With Severe Alopecia Areata[a]

Treatment	Scalp	Facial hair	Eyebrows	Eyelashes
Minoxidil				
Low-dose oral minoxidil (0.625-5.0 mg, daily)	Yes	Yes	Yes	Yes
Topical minoxidil (5% for men and women)	Yes	Yes	Yes	No
Corticosteroids				
Intralesional corticosteroids (triamcinolone acetonide, 2.5-5.0 mg/mL, at 4-8 wk intervals)	Yes	Yes	Yes	No
High-potency topical corticosteroids	Yes	No	No	No
Oral corticosteroids (limit to <3 mo total treatment duration)	Yes	Yes	Yes	Yes
Topical prostaglandins	No	Yes	Yes	Yes
Topical JAK inhibitors	No	Yes	Yes	Yes

Abbreviation: JAK, Janus kinase inhibitor.

[a] These treatments may be considered as adjunctive or supplemental therapies to the primary alopecia areata treatment, with site-specific indications.

explored, and those not used and not considered for potential use were excluded.

Round 2 included follow-up questioning and a proposition to include 3 unique patient coping resources. Treatments that reached consensus for inclusion were assessed with respect to therapeutic positioning, treatment regimens, and management decision making. Treatments that did not reach consensus were again presented alongside aggregated round 1 results, anonymous comments, and systematic review materials.

The third round aimed to develop a finalized set of standardized treatment recommendations for adults with severe AA based on results and comments from prior rounds. A summary of clinical recommendations (**Box** and **Table 2**) and a longitudinal management model (**Figure**[10]) were proposed. Specific treatment regimens for included therapies were also explored.

Results

The Delphi exercise took place over 3 rounds of surveys administered between May and November 2025. Thirty-seven AA experts were invited to participate in the Delphi exercise, and 31 (83.8%) accepted. Experts were located throughout the US, with most having academic institution affiliations (26 of 30 [86.7%]) and a smaller subset working in private practice (8 of 30 [26.7%]). The mean (SD) duration of dermatologic practice was 21.2 (11.6) years, with a mean (SD) of 21.5 (11.3) years managing AA specifically. During the last 5 years, 14 of 30 (46.7%) of the expert cohort produced more than 10 AA-focused publications, and 19 of 30 (63.3%) had delivered more than 10 AA-focused presentations (eTable 2 in the Supplement). Panelist participation included 29, 30, and 27 experts in rounds 1, 2, and 3, respectively.

In round 1, consensus (26 of 29 [90%]) was met on the definition of severe AA as outlined by the AASc (Table 1).[9] After 3 rounds, consensus was reached for overall treatment of adults with severe AA (24 of 27 [88.9%]) and a longitudinal management model (23 of 27 [85.2%]) (Box; Table 2; Figure).

Oral JAK inhibitors reached consensus for inclusion as a primary, long-term therapy, with agents that are FDA approved for AA being preferred vs non–FDA-approved medications. Dupilumab also reached consensus as an alternative long-term, AA-directed therapy for patients with AA who have a history of or active atopic disease (defined as chronic allergic conditions, including atopic dermatitis, asthma, allergic rhinitis, and/or environmental allergies). In the absence of adverse effects or new-onset safety concerns, use of oral JAK inhibitors and dupilumab for patients who reached the treatment goal was recommended to be continuous, long-term, and uninterrupted, with the same drug at the same dose as long as the treatment response is maintained. JAK inhibitors and dupilumab should be given a trial period of at least 6 months, with extended trial periods (9-12 months) considered based on risk-benefit analyses and shared decision-making. For patients who do not experience the treatment goal within the established time frame, increasing the dose of the oral JAK inhibitor when multiple doses are available or switching to a different oral JAK inhibitor was agreed to be appropriate.

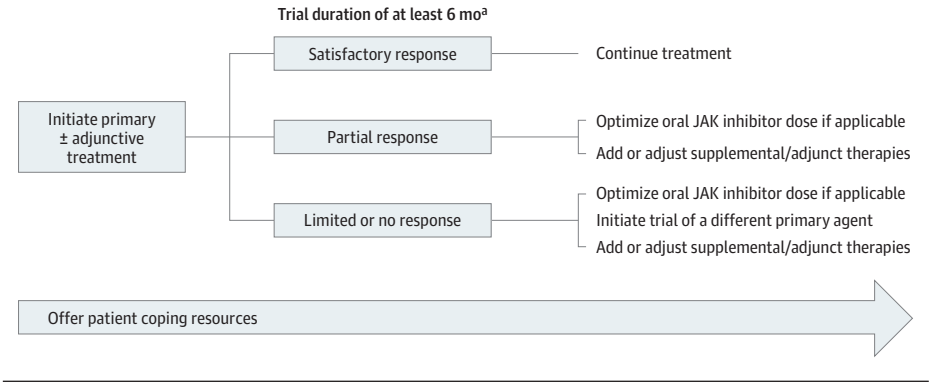
Additional therapies reached consensus for inclusion as adjunctive or supplemental therapies to the primary treatment. These treatments may be initiated concurrently with the primary treatment or sequentially to augment response, depending on individual patient goals. Oral minoxidil should be initiated at a dose range of 0.625 to 2.50 mg, and topical minoxidil should be initiated at a concentration of 5% for scalp, beard, and eyebrow hair loss. Intralesional corticosteroids achieved consensus as an adjunctive therapy for scalp, eyebrow, and beard hair loss, with triamcinolone acetonide as the preferred agent at concentrations of 2.5 to 5.0 mg/mL administered at 4- to 8-week intervals. High-potency topical corticosteroid use was agreed on as an adjunctive therapy for scalp hair loss only. Oral corticosteroids also reached consensus for inclusion as an adjunctive therapy, favoring a short-term (<30 days), high-dose (>10 mg) bridge approach, or pulse therapy (1-12 days per month) for 3 months or shorter. Lastly, topical prostaglandins and JAK inhibitors achieved consensus as an adjunctive therapy for eyebrow, eyelash, and beard hair loss given their safety for use on the face; however, these therapies were excluded for treating scalp hair loss due to limited data supporting their efficacy.

Three patient coping resources also reached consensus for inclusion. Cranial prostheses and camouflage reached consensus for inclusion as a primary or adjunctive therapeutic option if desired by the patient. Clinicians may assist patients in obtaining insurance coverage for camouflage options by writing letters of medical necessity that recognize these items as durable medical equipment. The association of AA with patients' psychosocial functioning and mental health should be explored in routine practice, and, if appropriate, patients should receive referrals to mental health services. Pa-

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Figure. Flowchart of Longitudinal Management of Adults With Severe Alopecia Areata



[a]Oral Janus kinase (JAK) inhibitors may require extended trial durations of up to 12 months to exhibit efficacy.[10]

tients should also be made aware of patient advocacy organizations, such as NAAF, for education and support.

The use of continuous, high-dose (>10 mg) oral corticosteroids for longer than 3 months and long-term, low-dose systemic corticosteroids as primary monotherapy achieved consensus for exclusion. Other historic therapies that achieved consensus for exclusion include methotrexate, mycophenolate mofetil, hydroxychloroquine, azathioprine, cyclosporine, dietary supplements, ezetimibe-simvastatin, low-level light therapy, and UV phototherapy (**Table 3**). For scalp hair loss, topical JAK inhibitors, topical prostaglandins, and midpotency topical corticosteroids also achieved consensus for exclusion due to limited data supporting their efficacy.

Therapies that failed to reach the consensus threshold for inclusion or exclusion included antihistamines (16 of 29 [55.2%] favored exclusion), anthralin (19 of 29 [65.5%] favored exclusion), intramuscular corticosteroids (17 of 29 [58.6%] favored exclusion), topical immunotherapy (diphenylcyclopropenone, squaric acid dibutyl ester; 17 of 29 [58.6%] favored exclusion), excimer laser therapy (19 of 28 [67.9%] favored exclusion), platelet-rich plasma injections (19 of 28 [67.9%] favored exclusion), and inosiplex and interleukin-2 (18 of 27 [66.6%] favored exclusion). Complete round-by-round results are available in eTable 3 in the Supplement.

Discussion

This joint NAAF and AHRS Delphi consensus statement establishes expert-informed clinical treatment recommendations for adults with severe AA in the US. This clinical framework aims to improve equity and access to effective AA treatment by establishing a standard of care to inform patients, clinicians, payers, and the medical industry. At the core of these treatment recommendations, shared decision-making is emphasized to empower patients throughout the process of AA treatment.[11] Identifying outstanding gaps within this framework may help inform ongoing research to address unmet needs among the AA patient population and strengthen future recommendations.

This consensus statement was designed specifically for adults with severe AA as defined by the AASc criteria, a holistic measure that builds on the SALT score by incorporating psychosocial effects, nonscalp hair loss, disease course, and treatment response into the determination of severity. To date, registrational clinical trials have enrolled patients with severe scalp hair loss, as defined by the Alopecia Areata Investigator Global Assessment scale, which accounts only for a percentage of scalp hair loss.[12] Although this reductive definition of severity does not capture the full effect of AA on patients, it has been broadly adopted by payers, limiting access for patients with less scalp hair loss but a high disease burden. Formally adopting the AASc as the foundation for determining disease severity, which has also been incorporated into other international AA treatment guidelines, is a critical step in evolving our classification of AA as our understanding of the disease and its effects matures.[13,14]

As the only treatment class approved by the FDA for AA, oral JAK inhibitors have the most well-established safety and efficacy profile for treating severe AA.[15-17] Yet, step therapy requirements and coverage delays or denials commonly create barriers for patients to assess these effective treatments.[18-20] This consensus statement establishes oral JAK inhibitors as the first-line, primary treatment for adults with severe AA, serving as the standard for disease management. This first-line positioning of oral JAK inhibitors for severe AA is consistent with other international expert recommendations.[14] While the lack of head-to-head comparator trials undermines the ability to compare efficacy between oral JAK inhibitor agents, drugs that are FDA approved for AA are preferred vs off-label oral JAK inhibitors due to a better understanding of their safety and efficacy in AA, especially with long-term use.[15-17] As with all treatments, a thoughtful evaluation of individual patient risk profiles should be balanced alongside consideration of treatment benefits, and safety monitoring protocols should be followed according to up-to-date guidelines.

Given the documented loss of efficacy with oral JAK inhibitor withdrawal and dose reduction,[21,22] treatment for responders should be long term and uninterrupted, with the same drug and dose, as long as the treatment response is maintained and continued treatment is deemed safe by the clinician. Treatment failure with one oral JAK inhibitor does not predict failure with a different oral JAK inhibitor,[23-26] and patients who have not reached the treatment goal while taking one oral JAK inhibitor may consider switching within the treatment class after an appropriate trial duration. Yet, the emotional and psychological effect of multiple treatment failures should be considered, and it is crucial that expectations for outcomes within specific time frames be discussed as early as possible. Excluding new-onset comorbidities and adverse drug effects, treatment response should be assessed no sooner than 6 months after treatment initiation. Waiting up to

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12 months is appropriate if progress is promising, as data have shown that a partial response (≥30% scalp hair regrowth from baseline) at 6 to 9 months is associated with complete or near-complete scalp hair regrowth at 12 months.[27] Similarly, eyebrow/eyelash regrowth in partial scalp hair responders may be associated with eventual complete or near-complete scalp hair regrowth.[28]

Dose-dependent efficacy has been demonstrated with baricitinib, ritlecitinib, and deuruxolitinib,[15-17,21] with baricitinib having 2 doses approved for AA. A partial or limited response while taking the lower dose of baricitinib will frequently be followed by complete or near-complete hair regrowth when the dose is increased[29]; therefore, dose optimization of baricitinib should be considered in patients who exhibit a partial or limited response with the lower dose.

When evaluating the treatment response, the decision to label hair regrowth as satisfactory, partial, or limited to no response was left intentionally ambiguous. Given that an acceptable result to one patient may be unacceptable to another, clinicians should engage in shared decision-making with patients, with consideration for objective clinical findings (SALT score, AASc severity) and patient feedback (personal hair regrowth satisfaction, individual goals) to determine success. Future work should aim to develop clinical assessment tools that combine objective clinical findings with patient-reported satisfaction to quantify these terms with greater precision.

Case reports, case series, and a relatively small, randomized, placebo-controlled clinical trial have supported the efficacy of dupilumab in some patients with AA, particularly for those with comorbid atopy and/or elevated baseline serum immunoglobulin E levels.[30] As such, this consensus statement excluded dupilumab for treating patients with nonatopic AA, which was consistent with other international guidelines,[13] and its inclusion within this treatment framework as a primary AA-directed therapy is specific to patients with AA with active or historic atopic disease. However, as oral JAK inhibitors have a greater quality of evidence and demonstrated superiority to dupilumab in network meta-analyses, they have remained the preferred primary treatment for all patients with AA, regardless of comorbid atopy.[31]

Many treatments have limited or low-quality evidence supporting their efficacy in AA but can be considered as supplemental or adjunctive treatments to the primary AA therapy. Such treatments include topical minoxidil,[32-42] oral minoxidil,[43-46] intralesional corticosteroids,[47-50] high-potency topical corticosteroids,[51-55] oral corticosteroids,[56-59] topical JAK inhibitors,[60-62] and topical prostaglandins,[63,64] each with site-specific considerations based on efficacy, safety, and feasibility of application (Box and Table 2). Given the paucity of available data on combination therapy for treating severe AA, supplementary treatments may be administered in tandem or in sequence with the primary therapy, with shared decision-making guiding treatment selection and duration. It is generally recommended to maximize efficacy through use of concurrent primary and adjunctive therapies before deeming any singular agent a treatment failure. However, more data are needed to support this recommendation. Future studies should evaluate the safety and efficacy of combination therapy for patients with severe AA.

Within these treatment recommendations, we believe it is important to highlight the role of patient coping resources. Consistent with other international treatment guidelines,[13] patients may elect to use cranial prostheses and/or camouflage as a primary or supplemental therapy given their capacity to restore and enhance social confidence and quality of life for patients with AA.[65-67] Clinicians can support patients by providing letters of medical necessity for cranial prostheses to assist with insurance coverage in light of high out-of-pocket costs.[5,18] Given the known association between psychiatric comorbidities and AA,[3,4] it is recommended that physicians should explore the global association of AA with emotional and psychological well-being, relationships, and lifestyle,[9] and, when indicated, patients should be offered referrals to appropriate mental health services.

Patients may also benefit from resources available through patient advocacy organizations, such as NAAF, for education, community, and support. Finally, it is important to highlight the role of active nonintervention. After receiving counseling on available treatment options, some patients may elect to not pursue medical intervention, and they should be supported in their choice. When patients are deciding whether to pursue medical treatment vs active nonintervention, a thoughtful discussion about the risks and benefits of both management routes is vital, including counseling on hair regrowth expectations and consideration of the emotional effect of repeated treatment failures or disease relapse after temporary treatment success.

Equally critical to the treatments recommended for inclusion are those that did not reach consensus for inclusion. In light of the limited evidence for efficacy and safety of older medications used for AA treatment, their risk/benefit ratio should be reconsidered and their use minimized (Table 3). These therapies may be deemed appropriate in specific clinical settings as determined by patients with AA and clinicians but should not serve as required steps to achieve coverage eligibility for expert consensus-recommended treatments.

Other low-evidence AA treatments were excluded for treatment of adults with severe AA. Exclusion of older immunosuppressive agents, including methotrexate, azathioprine, cyclosporine, and

Table 3. Treatments That Did Not Reach Consensus or Were Excluded From Treatment Recommendations

Consensus	Treatment
Consensus not reached (<70%)	Intramuscular corticosteroids
	Anthralin
	Diphenylcyclopropenone
	Squaric acid dibutyl ester
	Low-level light therapy
	Platelet-rich plasma injections
	Antihistamines
	Inosiplex
	Interleukin-2
Consensus reached (≥70%): exclude from treatment recommendations	Methotrexate
	Cyclosporine
	Mycophenolate mofetil
	Azathioprine
	Hydroxychloroquine
	Excimer laser therapy
	UV phototherapy
	Ezetimibe simvastatin
	Dietary supplements

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mycophenolate mofetil, is a divergence of this US consensus statement from other international guidelines, which weakly recommend these agents for severe AA or consider them to be second-line, third-line, or fourth-line options.[13,14] While these treatments have been used historically for AA treatment, high-quality evidence establishing their safety and efficacy in AA is lacking; as such, these agents have been excluded from this consensus statement in favor of effective, evidence-based interventions. These guidelines are not intended to limit patient options, and individualized patient circumstances may lead to selection of these agents based on specific clinical scenarios.

These treatment recommendations represent the consensus of 30 dermatologists with extensive AA clinical experience and research achievements but may not reflect the broader perspectives of other clinicians or researchers. Many AA treatments have weak or limited clinical trial evidence, and as a result, the strengths of these recommendations are limited. More data from randomized, placebo-controlled trials are needed to establish long-term efficacy and safety of AA therapies, and head-to-head comparator trials are needed across and within drug classes to better establish treatment superiority. As the treatment armamentarium expands and head-to-head clinical trials establish comparative efficacy, consensus recommendations are subject to change. Future work may be strengthened by including patients within the consensus process to reflect core treatment outcome domains from a patient perspective. These recommendations were not designed for children, pregnant patients, patients with comorbidities, or patients with mild to moderate AA; further research is needed to inform guidelines in these distinct patient populations.

Conclusions

This joint NAAF and AHRS Delphi consensus statement introduces the, what is to our knowledge, first standardized treatment recommendations for adults with severe AA in the US. This clinical framework aims to inform and guide clinicians to improve treatment outcomes and enhance accessibility to effective AA treatment. Oral JAK inhibitors are the first-line, primary treatment for severe AA, and their use should be long term and uninterrupted. Dupilumab represents an optional, alternative AA therapy for patients with well-documented comorbid atopy. Supplementary treatments include minoxidil, corticosteroids, topical JAK inhibitors, and topical prostaglandins, each with site-specific indications. Many treatments did not reach consensus or were excluded from these recommendations in light of limited efficacy and/or low-quality evidence. These recommendations are not designed for pediatric patients, pregnant patients, or those with mild to moderate disease. Further investigations are warranted to advance and expand the AA therapeutic repertoire and establish comprehensive treatment guidelines for all patients with AA.

ARTICLE INFORMATION

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REFERENCES

1. National Alopecia Areata Foundation. Alopecia areata. Accessed August 4, 2025. https://www.naaf.org/alopecia-areata/

2. Dahabreh D, Jung S, Renert-Yuval Y, Bar J, Del Duca E, Guttman-Yassky E. Alopecia areata: current treatments and new directions. *Am J Clin Dermatol*. 2023;24(6):895-912. doi:10.1007/s40257-023-00808-1

3. Toussi A, Barton VR, Le ST, Agbai ON, Kiuru M. Psychosocial and psychiatric comorbidities and health-related quality of life in alopecia areata: a systematic review. *J Am Acad Dermatol*. 2021;85(1):162-175. doi:10.1016/j.jaad.2020.06.047

4. Mostaghimi A, Soliman AM, Li C, Barqawi YK, Grada A. Immune-mediated and psychiatric comorbidities among patients newly diagnosed

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with alopecia areata. *JAMA Dermatol*. 2024;160(9):945-952. doi:10.1001/jamadermatol.2024.2404

5. Gregoire S, Biba U, Sanchez K, et al. The financial and time burden of alopecia areata. *J Dermatol*. 2025;52(12):1892-1896. doi:10.1111/1346-8138.70004

6. Sanchez K, Englander H, Salloum L, et al. Evaluating current and emergent JAK inhibitors for alopecia areata: a narrative review. *Dermatol Ther (Heidelb)*. 2025;15(10):2749-2764. doi:10.1007/s13555-025-01517-9

7. Hohmann E, Beaufils P, Beiderbeck D, et al. Guidelines for designing and conducting Delphi consensus studies: an expert consensus Delphi study. *Arthrosc J Arthrosc Relat Surg*. 2025:S0749806325002348. doi:10.1016/j.arthro.2025.03.038

8. Olsen E, Hordinsky M, McDonald-Hull S, et al; National Alopecia Areata Foundation. Alopecia areata investigational assessment guidelines. *J Am Acad Dermatol*. 1999;40(2 pt 1):242-246. doi:10.1016/S0190-9622(99)70195-7

9. King BA, Mesinkovska NA, Craiglow B, et al. Development of the alopecia areata scale for clinical use: Results of an academic-industry collaborative effort. *J Am Acad Dermatol*. 2022;86(2):359-364. doi:10.1016/j.jaad.2021.08.043

10. Zhang X, Jiang Y. Predictors and management of inadequate response to JAK inhibitors in alopecia areata. *Am J Clin Dermatol*. 2024;25(6):975-986. doi:10.1007/s40257-024-00884-x

11. Reyes-Hadsall S, Drake L, Han JJ, et al. Shared decision-making, therapeutic choice, and decisional regret in patients with alopecia areata. *JAMA Dermatol*. 2022;158(10):1187-1191. doi:10.1001/jamadermatol.2022.3025

12. Wyrwich KW, Kitchen H, Knight S, et al. The Alopecia Areata Investigator Global Assessment scale: a measure for evaluating clinically meaningful success in clinical trials. *Br J Dermatol*. 2020;183(4):702-709. doi:10.1111/bjd.18883

13. Harries MJ, Ascott A, Asfour L, et al. British Association of Dermatologists living guideline for managing people with alopecia areata 2024. *Br J Dermatol*. 2025;192(2):190-205. doi:10.1093/bjd/ljae385

14. Rudnicka L, Arenbergerova M, Grimalt R, et al. European expert consensus statement on the systemic treatment of alopecia areata. *J Eur Acad Dermatol Venereol*. 2024;38(4):687-694. doi:10.1111/jdv.19768

15. Kwon O, Senna MM, Sinclair R, et al. Efficacy and safety of baricitinib in patients with severe alopecia areata over 52 weeks of continuous therapy in two phase III trials (BRAVE-AA1 and BRAVE-AA2). *Am J Clin Dermatol*. 2023;24(3):443-451. doi:10.1007/s40257-023-00764-w

16. King B, Zhang X, Harcha WG, et al. Efficacy and safety of ritlecitinib in adults and adolescents with alopecia areata: a randomised, double-blind, multicentre, phase 2b-3 trial. *Lancet*. 2023;401(10387):1518-1529. doi:10.1016/S0140-6736(23)00222-2

17. King B, Senna MM, Mesinkovska NA, et al. Efficacy and safety of deuruxolitinib, an oral selective Janus kinase inhibitor, in adults with alopecia areata: results from the phase 3 randomized, controlled trial (THRIVE-AA1). *J Am Acad Dermatol*. 2024;91(5):880-888. doi:10.1016/j.jaad.2024.06.097

18. Needle CD, Brinks AL, Piraccini BM, Starace MVR, Shapiro J, Lo Sicco KI. Call to action: JAK inhibitor access and advocacy for alopecia areata patients. *Int J Dermatol*. 2025;64(10):1930-1932. doi:10.1111/ijd.17807

19. Klein EJ, Taiwò D, Kakpovbia E, Laughter M, Nohria A, Lo Sicco KI. Disparities in Janus kinase inhibitor access for alopecia areata: a retrospective analysis. *Int J Womens Dermatol*. 2024;10(2):e155. doi:10.1097/JW9.0000000000000155

20. Needle CD, Brinks AL, Anyanwu N, et al. Investigating barriers to systemic Janus kinase inhibitor access for alopecia areata. *J Am Acad Dermatol*. 2025:S0190-9622(25)02953-6. doi:10.1016/j.jaad.2025.10.006

21. King B, Ohyama M, Senna M, et al. Outcomes of down-titration in patients with severe scalp alopecia areata initially treated with baricitinib 4-mg: week 152 data from BRAVE-AA2. *J Am Acad Dermatol*. 2025;92(2):299-306. doi:10.1016/j.jaad.2024.09.072

22. King B, Ko J, Kwon O, et al. Baricitinib withdrawal and retreatment in patients with severe alopecia areata: the BRAVE-AA1 randomized clinical trial. *JAMA Dermatol*. 2024;160(10):1075-1081. doi:10.1001/jamadermatol.2024.2734

23. Ehsani A, Razavi Z, Rahimnia A, et al. Switching JAK inhibitors: evaluating baricitinib's effectiveness in alopecia areata after tofacitinib failure. *Arch Dermatol Res*. 2025;317(1):491. doi:10.1007/s00403-025-04035-y

24. Silva I, Khattri S. Jak inhibitor intraclass switch in alopecia areata patients: a retrospective review of cases at an academic center. *Arch Dermatol Res*. 2025;317(1):411. doi:10.1007/s00403-025-03848-1

25. Van Helmond SC, Willaert M, Nguyen VH, Nijsten T, Waalboer-Spuij R, Hijnen D. Real-world effectiveness and safety of Janus kinase inhibitors in alopecia areata: a retrospective cohort study of 72 patients. *Acta Derm Venereol*. 2025;105:adv42990. doi:10.2340/actadv.v105.42990

26. Kalil L, Craiglow BG, King B. Successful treatment of alopecia areata with one JAK inhibitor after failure of other JAK inhibitors. *JAMA Dermatol*. 2025:e253537. doi:10.1001/jamadermatol.2025.3537

27. King B, Shapiro J, Ohyama M, et al. When to expect scalp hair regrowth during treatment of severe alopecia areata with baricitinib: insights from trajectories analyses of patients enrolled in two phase III trials. *Br J Dermatol*. 2023;189(6):666-673. doi:10.1093/bjd/ljad253

28. Mostaghimi A, Augustin M, Harada K, et al. Continued treatment with baricitinib results in meaningful scalp responses among scalp non-responder patients with eyebrow/eyelash regrowth in the first year. *J Eur Acad Dermatol Venereol*. 2025;39(6):e490-e492. doi:10.1111/jdv.20334

29. Ko JM, Mayo TT, Bergfeld WF, et al. Clinical outcomes for uptitration of baricitinib therapy in patients with severe alopecia areata: a pooled analysis of the BRAVE-AA1 and BRAVE-AA2 trials. *JAMA Dermatol*. 2023;159(9):970-976. doi:10.1001/jamadermatol.2023.2581

30. Guttman-Yassky E, Renert-Yuval Y, Bares J, et al. Phase 2a randomized clinical trial of dupilumab (anti-IL-4Rα) for alopecia areata patients. *Allergy*. 2022;77(3):897-906. doi:10.1111/all.15071

31. Husein-ElAhmed H, Husein-ElAhmed S. Comparative efficacy of oral Janus kinase inhibitors and biologics in adult alopecia areata: a systematic review and bayesian network meta-analysis. *J Eur Acad Dermatol Venereol*. 2024;38(5):835-843. doi:10.1111/jdv.19797

32. Fiedler-Weiss VC. Topical minoxidil solution (1% and 5%) in the treatment of alopecia areata. *J Am Acad Dermatol*. 1987;16(3 Pt 2):745-748. doi:10.1016/S0190-9622(87)80003-8

33. Price VH. Topical minoxidil (3%) in extensive alopecia areata, including long-term efficacy. *J Am Acad Dermatol*. 1987;16(3 Pt 2):737-744. doi:10.1016/S0190-9622(87)70096-6

34. Price VH. Double-blind, placebo-controlled evaluation of topical minoxidil in extensive alopecia areata. *J Am Acad Dermatol*. 1987;16(3 Pt 2):730-736. doi:10.1016/S0190-9622(87)70095-4

35. Maitland JM, Aldridge RD, Main RA, White MI, Ormerod AD. Topical minoxidil in the treatment of alopecia areata. *BMJ (Clin Res Ed)*. 1984;288(6419):794. doi:10.1136/bmj.288.6419.794-a

36. Fenton DA, Wilkinson JD. Topical minoxidil in the treatment of alopecia areata. *BMJ (Clin Res Ed)*. 1983;287(6398):1015-1017. doi:10.1136/bmj.287.6398.1015

37. Fransway AF, Muller SA. 3 percent topical minoxidil compared with placebo for the treatment of chronic severe alopecia areata. *Cutis*. 1988;41(6):431-435.

38. Khoury EL, Price VH, Abdel-Salam MM, Stern M, Greenspan JS. Topical minoxidil in alopecia areata: no effect on the perifollicular lymphoid infiltration. *J Invest Dermatol*. 1992;99(1):40-47. doi:10.1111/1523-1747.ep12611409

39. El Taieb MA, Ibrahim H, Nada EA, Seif Al-Din M. Platelets rich plasma versus minoxidil 5% in treatment of alopecia areata: a trichoscopic evaluation. *Dermatol Ther*. 2017;30(1). doi:10.1111/dth.12437

40. Toma DM, Atallah RB, Eldahshan RM. Comparative study between topical methotrexate 1% gel and minoxidil 5% gel in the treatment of localized alopecia areata. *Dermatol Ther*. 2022;35(9):e15696. doi:10.1111/dth.15696

41. Ghafoor R, Saher N, Ali SM. The role of 5% minoxidil versus platelet-rich plasma in treatment of alopecia areata. *J Coll Physicians Surg–Pak JCPSP*. 2024;34(6):650-653. doi:10.29271/jcpsp.2024.06.650

42. White SI, Friedmann PS. Topical minoxidil lacks efficacy in alopecia areata. *Arch Dermatol*. 1985;121(5):591. doi:10.1001/archderm.1985.01660050039009

43. Valido K, Kalil L, Peterson D, King B. Combination oral minoxidil and baricitinib treatment of alopecia areata. *J Am Acad Dermatol*. 2025:S0190-9622(25)02132-2. doi:10.1016/j.jaad.2025.05.1393

44. Fiedler-Weiss VC, Rumsfield J, Buys CM, West DP, Wendrow A. Evaluation of oral minoxidil in the treatment of alopecia areata. *Arch Dermatol*. 1987;123(11):1488-1490. doi:10.1001/archderm.1987.01660350088019

45. Kalil L, Valido K, Peterson D, King B. Oral minoxidil treatment of alopecia areata. *J Am Acad Dermatol*. 2025;93(4):1099-1101. doi:10.1016/j.jaad.2025.05.1446

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46. Wambier CG, Craiglow BG, King BA. Combination tofacitinib and oral minoxidil treatment for severe alopecia areata. *J Am Acad Dermatol*. 2021;85(3):743-745. doi:10.1016/j.jaad.2019.08.080

47. Ganjoo S, Thappa DM. Dermoscopic evaluation of therapeutic response to an intralesional corticosteroid in the treatment of alopecia areata. *Indian J Dermatol Venereol Leprol*. 2013;79(3):408-417. doi:10.4103/0378-6323.110767

48. Rajan M B, Bhardwaj A, Singh S, et al. Identification of novel step-up regimen of intralesional triamcinolone acetonide in scalp alopecia areata based on a double-blind randomized controlled trial. *Dermatol Ther*. 2021;34(1):e14555. doi:10.1111/dth.14555

49. Abell E, Munro DD. Intralesional treatment of alopecia areata with triamcinolone acetonide by jet injector. *Br J Dermatol*. 1973;88(1):55-59. doi:10.1111/j.1365-2133.1973.tb06672.x

50. Chu TW, AlJasser M, Alharbi A, Abahussein O, McElwee K, Shapiro J. Benefit of different concentrations of intralesional triamcinolone acetonide in alopecia areata: an intrasubject pilot study. *J Am Acad Dermatol*. 2015;73(2):338-340. doi:10.1016/j.jaad.2015.04.049

51. Tosti A, Iorizzo M, Botta GL, Milani M. Efficacy and safety of a new clobetasol propionate 0.05% foam in alopecia areata: a randomized, double-blind placebo-controlled trial. *J Eur Acad Dermatol Venereol*. 2006;20(10):1243-1247. doi:10.1111/j.1468-3083.2006.01781.x

52. Tosti A, Piraccini BM, Pazzaglia M, Vincenzi C. Clobetasol propionate 0.05% under occlusion in the treatment of alopecia totalis/universalis. *J Am Acad Dermatol*. 2003;49(1):96-98. doi:10.1067/mjd.2003.423

53. Charuwichitratana S, Wattanakrai P, Tanrattanakorn S. Randomized double-blind placebo-controlled trial in the treatment of alopecia areata with 0.25% desoximetasone cream. *Arch Dermatol*. 2000;136(10):1276-1277. doi:10.1001/archderm.136.10.1276

54. Ucak H, Kandi B, Cicek D, Halisdemir N, Dertlıoğlu SB. The comparison of treatment with clobetasol propionate 0.05% and topical pimecrolimus 1% treatment in the treatment of alopecia areata. *J Dermatolog Treat*. 2012;23(6):410-420. doi:10.3109/09546634.2011.590788

55. Pascher F, Kurtin S, Andrade R. Assay of 0.2 percent fluocinolone acetonide cream for alopecia areata and totalis. Efficacy and side effects including histologic study of the ensuing localized acneform response. *Dermatologica*. 1970;141(3):193-202.

56. Asilian A, Fatemi F, Ganjei Z, Siadat AH, Mohaghegh F, Siavash M. Oral pulse betamethasone, methotrexate, and combination therapy to treat severe alopecia areata: a randomized, double-blind, placebo-controlled, clinical trial. *Iran J Pharm Res*. 2021;20(1):267-273. doi:10.22037/ijpr.2020.113868.14536

57. Chowdhury MM, Rahman MH, Wahab MA. Efficacy of combination therapy for the management regime of alopecia areata. *Mymensingh Med J*. 2007;16(2)(suppl):S19-S22.

58. Kar BR, Handa S, Dogra S, Kumar B. Placebo-controlled oral pulse prednisolone therapy in alopecia areata. *J Am Acad Dermatol*. 2005;52(2):287-290. doi:10.1016/j.jaad.2004.10.873

59. Bin Saif GA, Al-Khawajah MM, Al-Otaibi HM, et al. Efficacy and safety of oral mega pulse methylprednisolone for severe therapy resistant alopecia areata. *Saudi Med J*. 2012;33(3):284-291. doi:10.15537/1658-3175.5508

60. Mikhaylov D, Glickman JW, Del Duca E, et al. A phase 2a randomized vehicle-controlled multi-center study of the safety and efficacy of delgocitinib in subjects with moderate-to-severe alopecia areata. *Arch Dermatol Res*. 2023;315(2):181-189. doi:10.1007/s00403-022-02336-0

61. Bokhari L, Sinclair R. Treatment of alopecia universalis with topical Janus kinase inhibitors—a double blind, placebo, and active controlled pilot study. *Int J Dermatol*. 2018;57(12):1464-1470. doi:10.1111/ijd.14192

62. Olsen EA, Kornacki D, Sun K, Hordinsky MK. Ruxolitinib cream for the treatment of patients with alopecia areata: a 2-part, double-blind, randomized, vehicle-controlled phase 2 study. *J Am Acad Dermatol*. 2020;82(2):412-419. doi:10.1016/j.jaad.2019.10.016

63. Bhat S, Handa S, De D. A randomized comparative study of the efficacy of topical latanoprost versus topical betamethasone diproprionate lotion in the treatment of localized alopecia areata. *Indian J Dermatol Venereol Leprol*. 2021;87(1):42-48. doi:10.25259/IJDVL_787_19

64. Rafati M, Mahmoudian R, Golpour M, Kazeminejad A, Saeedi M, Nekoukar Z. The effect of latanoprost 0.005% solution in the management of scalp alopecia areata, a randomized double-blind placebo-controlled trial. *Dermatol Ther*. 2022;35(6):e15450. doi:10.1111/dth.15450

65. Park J, Kim DW, Park SK, Yun SK, Kim HU. Role of hair prostheses (wigs) in patients with severe alopecia areata. *Ann Dermatol*. 2018;30(4):505-507. doi:10.5021/ad.2018.30.4.505

66. Montgomery K, White C, Thompson A. A mixed methods survey of social anxiety, anxiety, depression and wig use in alopecia. *BMJ Open*. 2017;7(4):e015468. doi:10.1136/bmjopen-2016-015468

67. Inui S, Inoue T, Itami S. Psychosocial impact of wigs or hairpieces on perceived quality of life level in female patients with alopecia areata. *J Dermatol*. 2013;40(3):225-226. doi:10.1111/1346-8138.12040

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