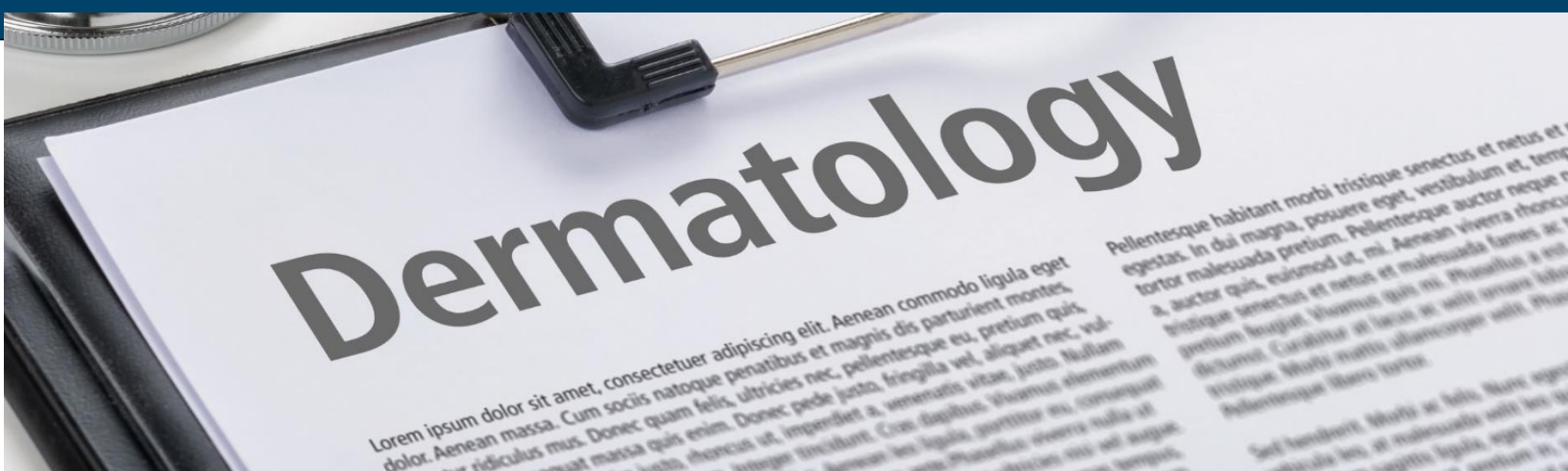


Advances in Dermatology: 2022 in Review

By Cather McKay MD, FAAD



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The past year brought many exciting advances in the field of dermatology. Below is a summary to help you continue providing up-to-date care for your patients.

Psoriasis

Topical options for psoriasis expanded this year to include tapinarof cream (Vtama), an aryl hydrocarbon receptor–modulating agent, and phosphodiesterase-4 (PDE4) inhibitor roflumilast cream (Zoryve). Additional indications for both are expected in the future.

The approval of oral tyrosine kinase 2 (TYK2) inhibitor deucravacitinib was welcomed in September, with trials in psoriatic arthritis ongoing¹. IL-36 inhibitor spesolimab was also approved in September for generalized pustular psoriasis².

Risankizumab (Skyrizi) gained indications for psoriatic arthritis and Crohn’s disease this year. Apremilast (Otezla) is now indicated for all severities of psoriasis as of late 2021 and is in trials for palmoplantar pustulosis (PPP)³.

Guidelines for psoriatic arthritis were published by the Group for Research and Assessment of Psoriasis and Psoriatic Arthritis (GRAPPA) this year to include recommendations on new medications and use of biosimilars⁴.

Atopic dermatitis

The American Academy of Dermatology is updating guidelines for atopic dermatitis (AD), with the first publication regarding comorbidities released this year⁵.

The revolution in AD treatment continues with the long-awaited approval of two oral JAK inhibitors, abrocitinib (Cibinqo) and upadacitinib (Rinvoq) in January. Approval was delayed due to safety concerns in post-marketing surveillance of tofacitinib (Xeljanz) in patients with rheumatoid arthritis. Safety data specifically in patients with atopic dermatitis appears to be reassuring but still necessitates patient selection and counseling⁶.

Indications for dupilumab expanded further to include severe atopic dermatitis down to the age of 6 months, and prurigo nodularis in adults. When using dupilumab in young children, live vaccine schedules must be considered⁷.

PDE-4 inhibitors difamilast ointment and oral orismilast may be on the horizon for AD and other indications⁸. Another IL-13 inhibitor lebrikizumab is also expected in the near future. A novel OX-40 inhibitor rocatinlimab is under investigation, while the IL-33 inhibitor astegolimab failed to show superiority to placebo^{9,10}.

Vitiligo

Ruxolitinib cream (Opzelura) became the first prescription treatment approved for vitiligo when it gained the indication in addition to atopic dermatitis¹¹. The RECELL[®] autologous cell harvesting system, already approved for treating burns, shows promise in vitiligo repigmentation¹².

Acne and Rosacea

A tretinoin-benzoyl peroxide combination cream (Twynéo) became available for acne this year, and a fixed-dose clindamycin, benzoyl peroxide and adapalene is expected in the future based on successful trials¹³. Benzoyl peroxide 5% cream Epsolay was approved for rosacea in April.

A 1726 nm wavelength energy device (AviClear) which targets sebaceous glands was FDA-cleared for mild to severe acne with potential for long-lasting results.

A retrospective meta-analysis of over 4.5 million individuals on spironolactone showed no significant association with cancer¹⁴. Despite this and similar studies, spironolactone still carries an FDA warning for possible tumorigenicity based on high dose animal studies.

Hidradenitis suppurativa

Biologic treatment options for hidradenitis suppurativa are expected to expand as secukinumab (Cosyntex) nears FDA review¹⁵. JAK inhibitors such as upadacitinib (Rinvoq) and the selective JAK1 inhibitor povorcitinib are showing early promise as well^{16,17}.

Infectious disease

An international outbreak of monkeypox, now called mpox by the World Health Organization, occurred this year with cases in the US peaking in August. Aiding in the control of this outbreak is the vaccine JYNNEOS which is given in two doses, four weeks apart, and protects against both mpox and smallpox. The vaccine is indicated for post-exposure prophylaxis and in those at high risk of exposure.¹⁸

Hair Disorders

Oral JAK inhibitor baricitinib (Olumiant) was approved for severe alopecia areata in adults in June, in addition to its use in RA and COVID-19¹⁹. Oral ritlecitinib and ivarmacitinib suspension, both JAK inhibitors, are in development.

Oral minoxidil is increasingly used in various forms of hair loss and even came to the attention of the public when the New York Times published the article “An Old Medicine Grows New Hair for Pennies a Day, Doctors Say.”²⁰

Connective Tissue Disorders

Deucravacitinib (Sotyktu)²¹, anti-blood dendritic cell antigen 2 (BDCA2) antibody litifilimab²², and iberdomide²³, a modulator of transcription factors in leukocyte development, are all in trials for systemic lupus erythematosus.

Data supporting the use of apremilast (Otezla)²⁴, intravenous immune globulin (IVIg)²⁵, and tofacitinib²⁶, for refractory dermatomyositis was also published this year.

Genodermatoses

The FDA has granted a breakthrough designation to a topical isotretinoin formulation for the treatment of congenital ichthyoses²⁷. Sirolimus 0.2% gel (Hyftor) became the first treatment approved for facial angiofibroma in tuberous sclerosis complex²⁸.

Melanoma

Refinement of treatment protocols for advanced melanoma in recent years has improved 5-year survival to approximately 50%.

In 2021 pembrolizumab (Keytruda) was approved for adjuvant use in resected stage IIB and IIC melanoma, with further evidence of improved survival presented this year²⁹. Adjuvant nivolumab in the same group shows improved survival compared to placebo in phase 3 trials not yet published.

The new combination of relatlimab, which blocks lymphocyte-activation gene 3 (LAG-3), with nivolumab (Opdualag), showed superior progression-free survival to nivolumab alone and was approved in March³⁰.

In November the FDA granted orphan drug designation to a novel treatment targeting histone deacetylase 6 (HDAC6) which works by stabilizing macrophages in the M1 phenotype promoting an antitumor response³¹.

Lifileucel, a tumor-infiltrating lymphocyte (TIL) therapy in which autologous lymphocytes are isolated from resected tumor, shows promise in advanced melanoma patients who have disease progression on immune checkpoint or targeted therapy³². TIL therapy outperformed ipilimumab in unresectable or metastatic melanoma³³.

Cosmetics

Allergan's Juvederm Volbella became the only filler approved for tear troughs in February, in addition to its indication for lips and perioral rhytides. Juvederm Volux was approved for jawline definition in July.

Revance's longer lasting daxibotulinumtoxinA (Daxxify) received approval in September to treat glabellar lines and is making its way into clinics now. Galderma has two liquid, ready-to-use formulations of botulinum toxin in development as well.

The Editorial Committee of the Women's Dermatologic Society hope you find this and all editorials helpful for your practice. We wish you a happy holiday season!

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