AAD
DermWorld
directions in residency
A Publication of the American Academy of Dermatology | Association

boards fodder

Atopic dermatitis treatment

By Karina J. Cancel-Artau, MD, Diana V. Rodríguez-Rivera, MD, and Xavier Sánchez-Flores, MD

Medication	Indication	Dosage form and strength	Frequency	Routine labs	Side effects	Age
Topical therapy						
Topical corticosteroids	Failed to respond to good skin care and regular use of emollients	Varies. Mid- or higher-potency TCS for acute flares. Maintenance w/ least potent and effective TCS	Apply twice daily to affected areas for ~2 weeks. Maintenance 1-2 times per week to affected areas.	None	Purpura, telangiectasia, striae, hypertrichosis, acneiform or rosacea-like eruptions, ACD. Tachyphylaxis. HPA axis suppression. Linear growth suppression. Hyperglycemia HTN.	Adults and children
Tacrolimus: calcineurin inhibitor	Moderate to severe (failed to respond adequately to other topical therapy)	Ointment, 0.03%, 0.1%	Apply twice daily to affected areas Maintenance 2-3 times per week to affected areas.	None	Headache. Burning, pruritus, erythema, skin infection, allergic reaction. Hypersensitivity reaction. Otitis media, flu-like symptoms, cough, fever. Malignancy (skin and lymphoma).	0.03% in ≥ 2 years 0.1% in ≥ 15 years
Pimecrolimus: calcineurin inhibitor	Mild to moderate (failed to respond adequately to other topical therapy)	Cream, 1%	Apply twice daily to affected areas. Maintenance 2-3 times per week to affected areas.	None	Headache. Fever, influenza, nasopharyngitis, URT infection, cough, bronchitis. Local burning, application site reaction. Malignancy (skin and lymphoma).	≥ 2 years
Crisaborole: PDE-4 inhibitor	Mild to moderate	Ointment, 2%	Apply twice daily to affected areas.	None	Application site pain (burning, stinging).	≥ 3 months
Ruxolitinib: JAK1 and JAK2 inhibitor (do not combine with other biologic or immunosuppressive agents)	Mild to moderate (not adequately controlled with other topical therapy)	Cream, 1.5%	Apply twice daily to affected areas of up to 20% BSA.	None	**Black box warning**[1] Nasopharyngitis. Application-site erythema and pruritus, acneiform eruptions.	≥ 12 years

Karina J. Cancel-Artau, MD, is a PGY-2 in the department of dermatology at the University of Puerto Rico School of Medicine in San Juan, Puerto Rico.

Diana V. Rodríguez-Rivera, MD, is a PGY-4 in the department of dermatology at the University of Puerto Rico School of Medicine in San Juan, Puerto Rico.

Xavier Sánchez-Flores, MD, is a board-certified dermatologist and pediatric dermatologist at the University of Puerto Rico School of Medicine in San Juan, Puerto Rico.

Atopic dermatitis treatment

By Karina J. Cancel-Artau, MD, Diana V. Rodríguez-Rivera, MD, and Xavier Sánchez-Flores, MD

Medication	Indication	Dosage form and strength	Frequency	Routine labs	Side effects	Age
Biologic therapy						
Dupilumab: Human monoclonal IgG_4 antibody against IL-4 receptor alpha chain, common to both IL-4 and IL-13 cytokines	Moderate to severe (not adequately controlled with topical therapy)	Single-dose pre-filled syringe: 300 mg/2 mL 200 mg/1.14 mL 100 mg/0.67 mL Single-dose pre-filled pen: 300 mg/2 mL 200 mg/1.14 mL	Adult: 600 mg once, then 300 mg every 2 weeks Pediatric: 6 to 17 y/o ≥ 60 kg: as adults 30 to < 60 kg: 400 mg once, then 200 mg every 2 weeks 15 to < 30 kg: 600 mg once, then 300 mg every 4 weeks 6 months to 5 y/o 15 to < 30 kg: 300 mg every 4 weeks 5 to < 15 kg: 200 mg every 4 weeks	None	Antibody development. Injection site reactions. URT infection, conjunctivitis.	≥ 6 months
Tralokinumab-ldrm: Human monoclonal IgG_4 antibody against IL-13	Moderate to severe (not adequately controlled with topical therapy)	Single-dose pre-filled syringe: 150 mg/mL	600 mg once, then 300 mg every 2 weeks Patients < 100 kg who achieve clear to almost clear skin after 16 weeks of treatment, 300 mg every 4 weeks may be considered	None	URT infection. Injection site reactions. Conjunctivitis.	≥ 18 years

Atopic dermatitis treatment

By Karina J. Cancel-Artau, MD, Diana V. Rodríguez-Rivera, MD, and Xavier Sánchez-Flores, MD

Medication	Indication	Dosage form and strength	Frequency	Routine labs	Side effects	Age
JAK inhibitors						
Upadacitinib: inhibits JAK1> JAK2/JAK3/ TYK2	Refractory, moderate to severe (not adequately controlled with other systemic drug products, including biologics)	Extended-release tablet, 15 mg, 30 mg	15 mg PO daily If < 65 y/o and estimated GFR > 30 mL/min, consider increasing to 30 mg PO daily if an inadequate response is achieved	Baseline: PPD, hepatitis panel, B-hCG, CBC, LFTs Periodic follow-up: CBC, LFTs, PPD, and hepatitis panel At 12 weeks: lipid profile	**Black Box Warning**[2] Acne. URT infection, herpes simplex infection. Headache. Lab abnormalities: neutropenia, lymphopenia, anemia, increase in lipids, liver enzymes, and CPK.	≥ 12 years
Abrocitinib: inhibits JAK1	Refractory, moderate to severe (not adequately controlled w/ other systemic drugs, including biologics)	Tablet, 50 mg, 100 mg, 200 mg	100 mg PO daily Consider increasing to 200 mg PO daily if inadequate response is achieved after 12 weeks	Baseline: PPD, hepatitis panel, CBC. Follow-up: At 4 weeks: CBC, lipid panel At 4 weeks after dose increase: CBC	**Black Box Warning**[2] Nausea. Infection, nasopharyngitis. Acne. Headache. Lab abnormalities: thrombocytopenia, lymphopenia, increase in lipids and CPK.	≥ 12 years

[1]Bacterial, mycobacterial, invasive fungal, viral, and opportunistic infections. Malignancies (lymphomas, lung cancer, non-melanoma skin cancer). Cardiovascular death, non-fatal myocardial infarction, non-fatal stroke. Thromboembolic events (DVT, PE, arterial thrombosis). Thrombocytopenia, anemia, neutropenia. Increase in total cholesterol, LDL cholesterol, triglycerides.

[2]Bacterial, mycobacterial, fungal, viral, and opportunistic infections. Malignancies (lymphomas, lung cancer, non-melanoma skin cancer). All-cause mortality, cardiovascular death, myocardial infarction, stroke. Thromboembolic events (DVT, PE, arterial thrombosis).

References:

1. Eichenfield LF, Tom WL, Berger TG, et al. Guidelines of care for the management of atopic dermatitis: section 2. Management and treatment of atopic dermatitis with topical therapies. J Am Acad Dermatol. 2014;71(1):116-132. doi:10.1016/j.jaad.2014.03.023.
2. Tacrolimus ointment [package insert]. Deerfield, IL: Astellas Toyoma Co., Ltd.; 2011.
3. Pimecrolimus ointment [package insert]. Mississauga, Ontario: Contract Pharmaceutical Limited; 2014.
4. Crisaborole ointment [package insert]. New York, United States: Pfizer Labs; 2020.
5. Ruxolitinib cream [package insert]. North Carolina, United States: Incyte Corporation.; 2022.
6. Dupilumab injection [package insert]. New York, United States: Regeneron Pharmaceuticals, Inc.; 2017.
7. Tralokinumab-ldrm injection [package insert]. New Jersey, United States: LEO Pharma Inc.; 2022.
8. Upadacitinib extended-release tablets [package insert]. Illinois, United States: Abbvie Inc.; 2022.
9. Abrocitinib tablets [package insert]. New York, United States: Pfizer Labs; 2022.