2020 Symposia Series 2

The Continuum of Care in Atopic Dermatitis: Advances in Management

Learning Objectives

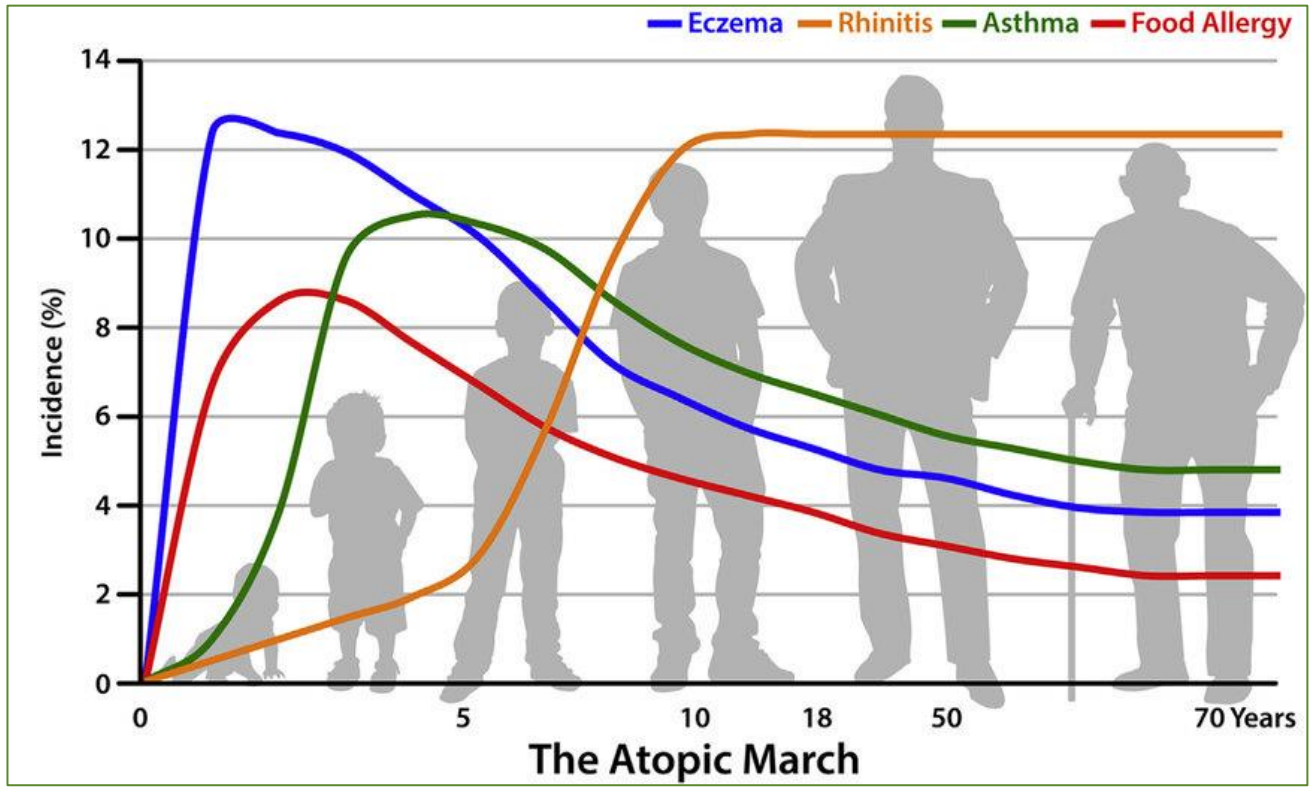
- Apply recommended proactive approaches to the identification and management of atopic dermatitis (AD)
- Identify treatment strategies for AD that include use of novel therapies as appropriate
- Implement strategies for long-term management of AD, with a focus on patient-centered management

Clinical Burden of AD

- Affects 11% to 25% of children
  - Onset most common between 3 and 6 months of age
    - 60% develop AD by 1 year, 90% develop by 5 years
- Affects up to 10% of adults
  - 10% to 30% of pediatric cases persist into adulthood
  - 1 in 4 adults with AD report adult-onset of symptoms

Eichenfield LF, et al. *J Am Acad Dermatol.* 2014;70:338-351; Ellis CN, et al. *Semin Cutan Med Surg*. 2012;31(3 Suppl):S18-S22; Kim JP, et al. *J Am Acad Dermatol.* 2016;75:681-687; Lee HH, et al. *J Am Acad Dermatol.* 2018;80:1526-1532; Shaw TE, et al. *J Invest Dermatol*. 2011;131:67-73; Silverberg JI, et al. *J Allergy Clin Immunol.* 2013;132:1132-1138.

Comorbidities



- Atopic diseases
  - Asthma
  - Hay fever/nasal allergies
  - Food allergies
- Non-atopic diseases
  - Skin infections
  - Sleep disturbances
  - Psychological burden (eg, depression, anxiety, ADHD)

ADHD = attention deficit hyperactivity disorder.

Czarnowicki T, et al. *J Allergy Clin Immunol.* 2017;139:1723-1734; Dalgard FJ, et al. *J Invest Dermatol.* 2015;135:984-991; Davidson WF, et al. *J Allergy Clin Immunol*. 2019;143:894-913; Jeon C, et al. *Drmatol Ther (Heidelb).* 2017;7:349-364; Legendre L, et al. *J Am Acad Dermatol.* 2015;72:992; Silverwood R, et al. *BMJ.* 2018;361:k1786; Strom MA. *Br J Dermatol.* 2016;175:920-929.

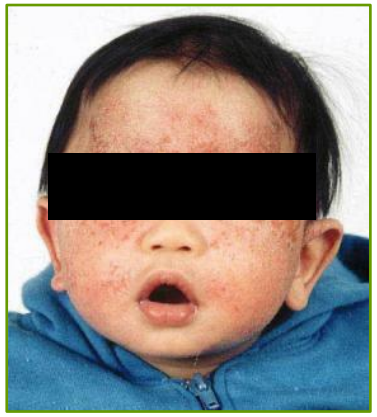
AD Is a Chronic, Pruritic, Inflammatory Skin Disease

American Academy of Dermatology Diagnostic Criteria		
Essential Features	**Important Features**	**Exclusionary Conditions**
• Pruritus ★ **Hallmark** • Eczema – Typical morphology and age-specific patterns – Chronic or relapsing history	• Usually early age of onset • Atopy – Personal/family history – IgE reactivity • Xerosis	• Scabies • Seborrheic dermatitis • Contact dermatitis • Ichthyoses • Cutaneous T-cell lymphoma • Psoriasis • Photosensitivity dermatoses • Immune deficiency diseases • Erythroderma of other causes • Connective tissue diseases

IgE = immunoglobulin E.

Eichenfield LF, et al. *J Am Acad Dermatol.* 2014;70:338-351; Paravar T. *Clin Dermatol.* 2018;36:525-532; Yew YW, et al. *J Am Acad Dermatol.* 2019;80:390-401.

Age-Specific Patterns

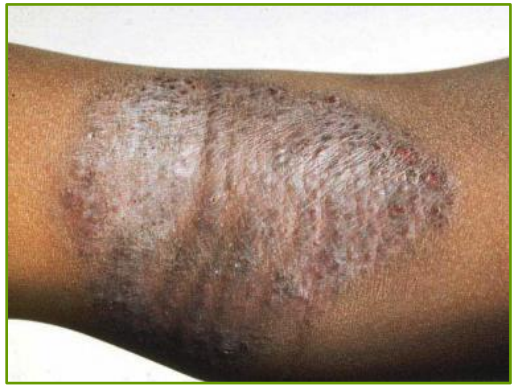


Infants

- Cheeks, forehead, scalp
- Extensor extremities (arms, legs)
- Flexural creases

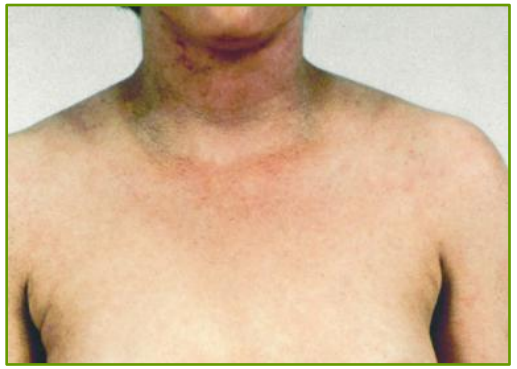
Adolescents

- Face
- Neck
- Palms
- Soles



Children

- Flexural creases
- Dorsum of hands
- Dorsum of feet
- Cheeks

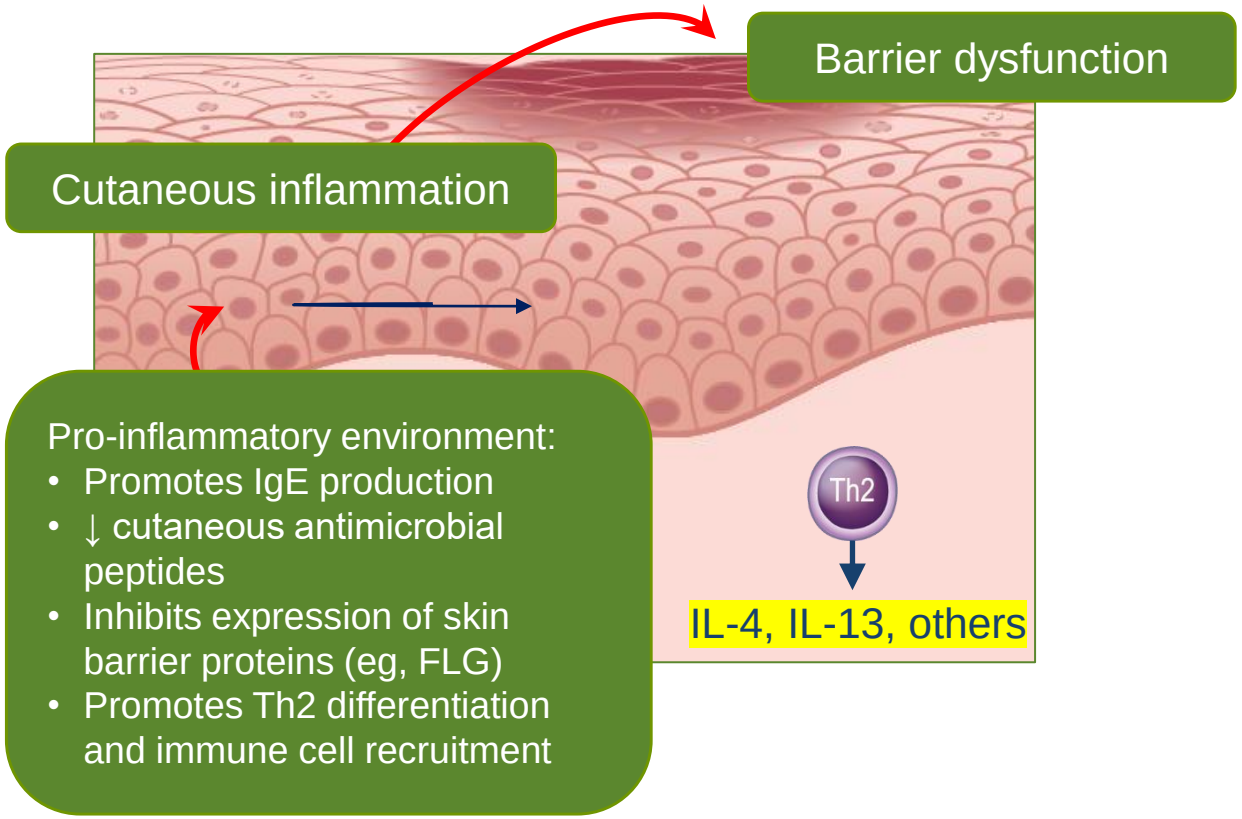


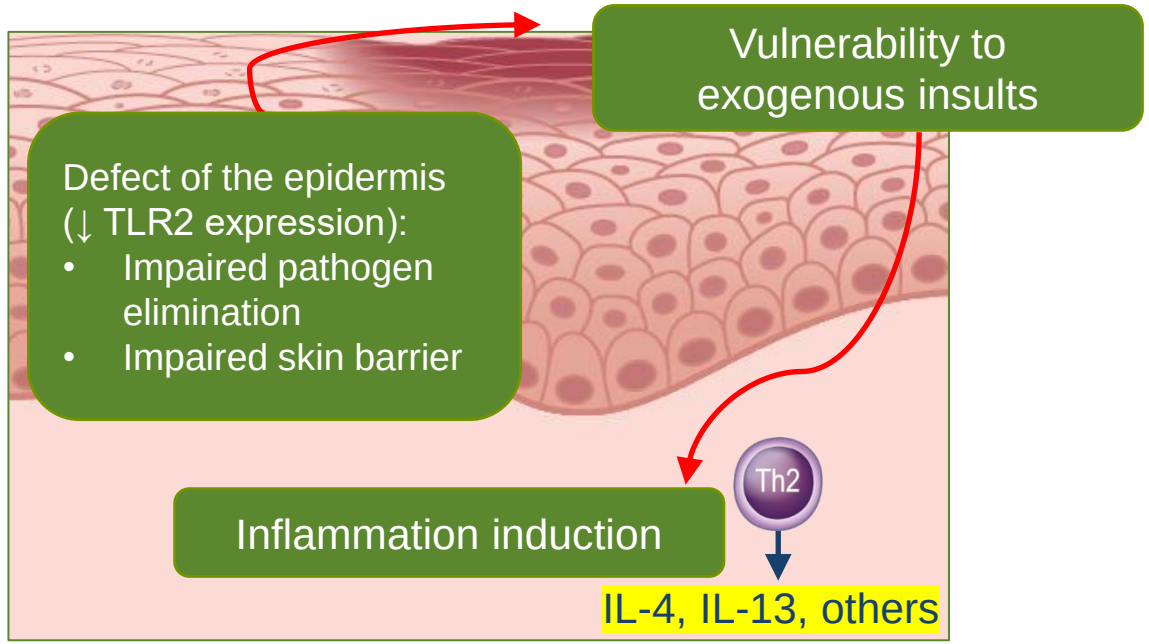
Adults

- Flexural creases
- Dorsum of hands
- Dorsum of feet

Eichenfield LF, et al. *J Am Acad Dermatol.* 2014;70:338-351; Ricci G, et al. *Dermatol Reports.* 2011;4:e1; Sugerman DT. *JAMA.* 2014;311:636.

Pathogenesis of Atopic Dermatitis: Inside-out and Outside-in

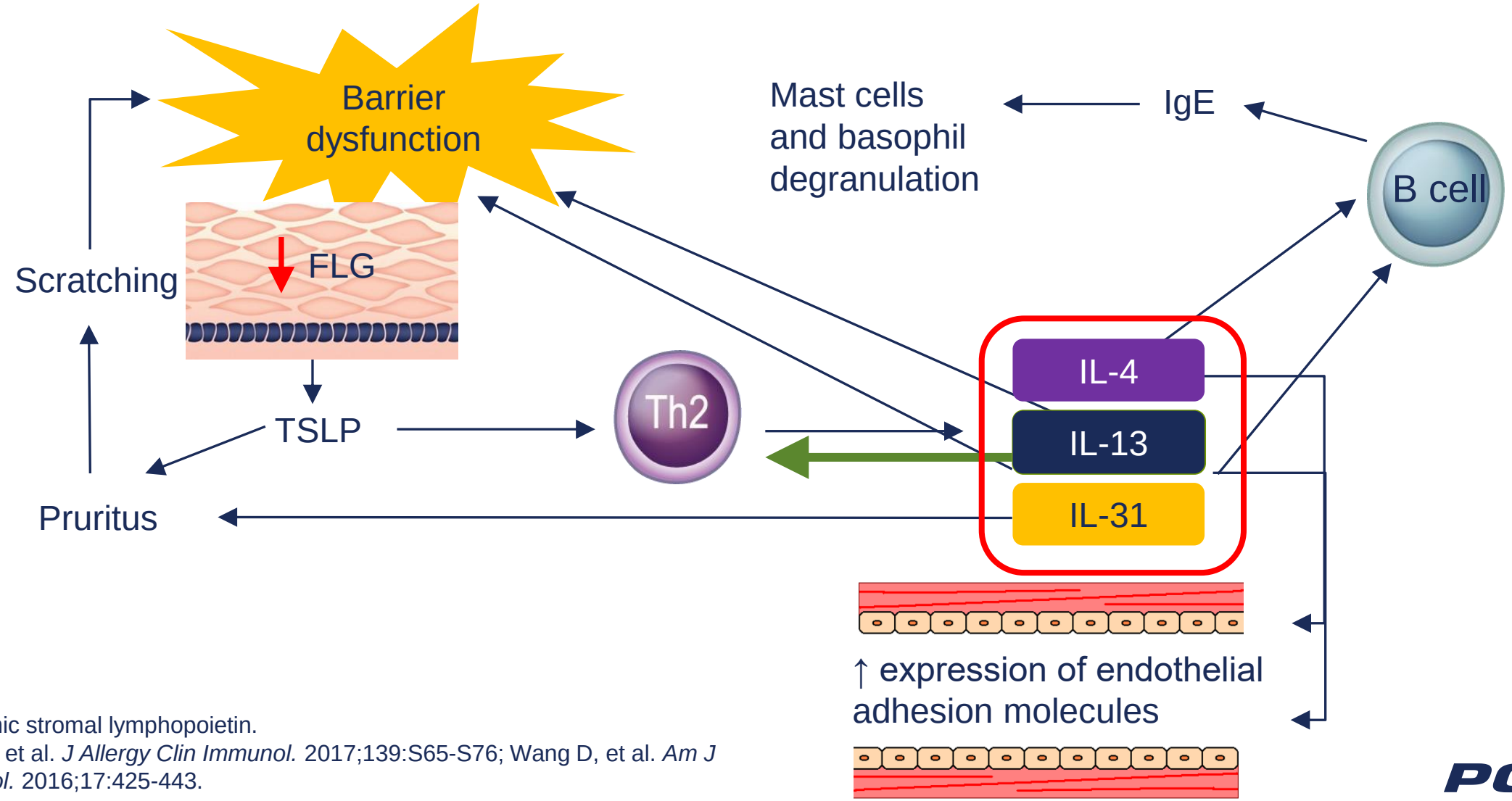




FLG = filaggrin; Th2 = T helper 2; TLR2 = toll-like receptor 2.

Huet F, et al. *J Dermatol Sci.* 2018;89:213-218; Silverberg JI. *Dermatol Clin*. 2017;35:327-334; Wang D, et al. *Am J Clin Dermatol.* 2016;17:425-443.

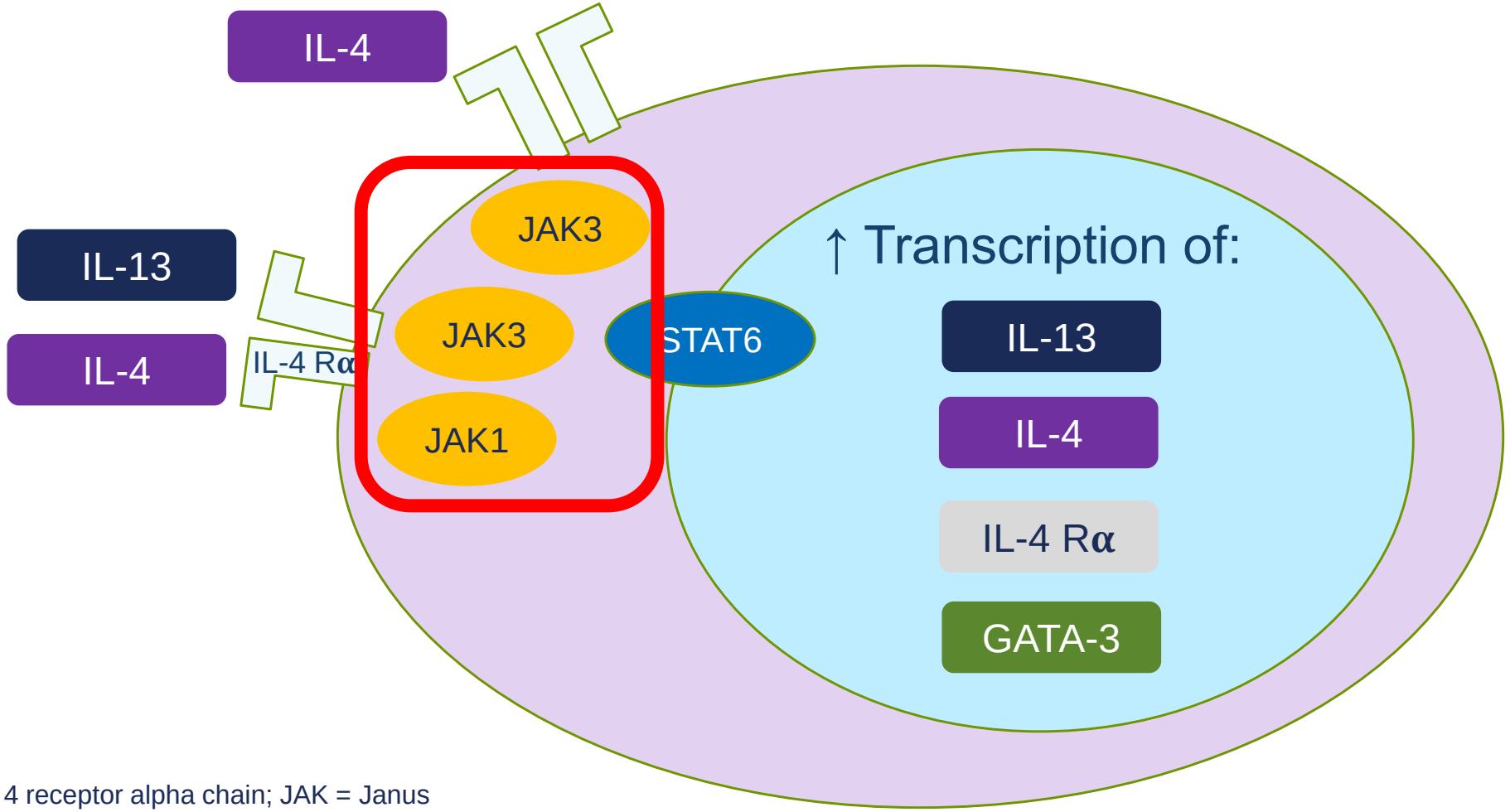
Adaptive Type 2 Immune Defects



TSLP = thymic stromal lymphopoietin.

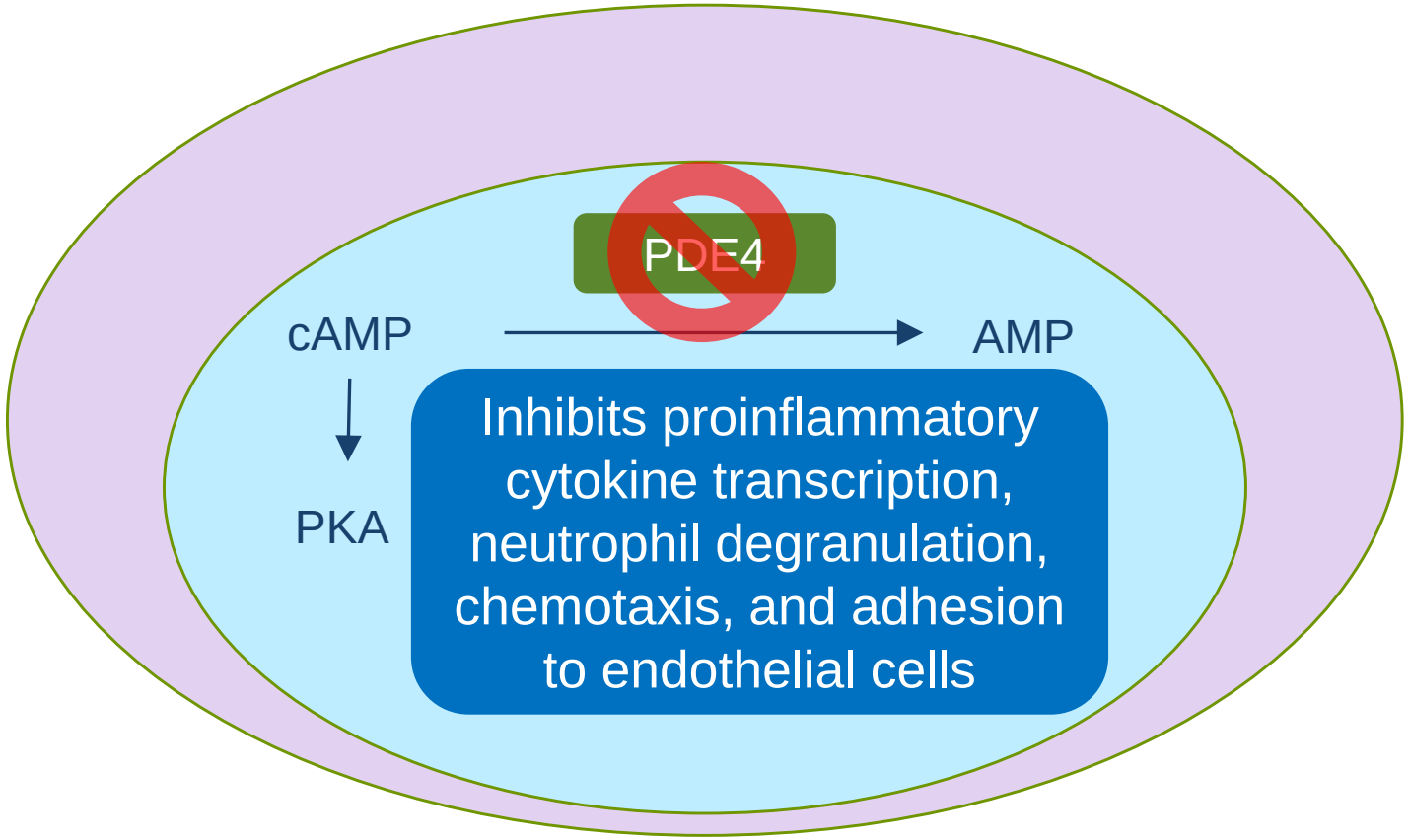
Brunner PM, et al. *J Allergy Clin Immunol.* 2017;139:S65-S76; Wang D, et al. *Am J Clin Dermatol.* 2016;17:425-443.

Cytokine Activation of Th2 Lymphocyte



IL-4Rα = interleukin 4 receptor alpha chain; JAK = Janus kinase; STAT = signal transducer and activator of transcription.
Wang D, et al. *Am J Clin Dermatol.* 2016;17:425-443.

PDE4 Inhibitors Block the Degradative Action of PDE4 on cAMP



AMP = adenosine monophosphate; cAMP = cyclic adenosine monophosphate; PDE4 = phosphodiesterase type 4; PKA = protein kinase A.

Brunner PM, et al. *J Allergy Clin Immunol*. 2017;139:S65-S76; Samrao A, et al. *Arch Dermatol.* 2012;148:890-897.

Case Study: Jim, an 8-year-old boy with pruritus

Chief Complaint	• Severe itchiness that keeps him up at night • Pruritic, erythematous, eczematous rash affecting face, flexural areas of neck, chest, palms, flexural areas of knee (30% BSA)
History	• AD since infancy • Symptoms worse, more continuous in past year (flares every 4-6 weeks) • Seasonal allergy
Social History	• Student, on gymnastics team • Lives with parents; no pets

BSA = body surface area.

Definition of Moderate to Severe AD

- At least one of the following features
  - Involvement of ≥10% BSA
  - Involvement of areas important for function or highly visible areas (soles, palms, genitals, neck, face)
  - Significantly reduced QoL (**interference with sleep or daily activities**)

Actively assess:

- Degree of pruritus
- Effects on sleep
- Impact on daily activities and work/school
- Disease persistence

QoL = quality of life.

Boguniewicz M, et al. *J Allergy Clin Immunol Pract.* 2017;5:1519-1531; Eichenfield LF, et al. *J Am Acad Dermatol.* 2014;70:338-351; Eichenfield LF, et al. *Pediatrics.* 2015;136:554-565.

AD Severity Assessment

Investigator's Global Assessment

Not validated, but a primary endpoint in many clinical trials and simple to document

- 0 = Clear
- 1 = Almost clear
- 2 = Mild
- 3 = Moderate
- 4 = Severe

Validated scoring systems used in clinical trials, but not routinely used in office

- EASI
- DLQI
- POEM
- SCORAD
- PO-SCORAD

DLQI = Dermatology Life Quality Index; POEM = Patient-oriented Eczema Measure; PO-SCORAD = Patient-oriented SCORAD.

Boguniewicz M, et al. *J Allergy Clin Immunol Pract.* 2017;5:1519-1531; Boguniewicz M, et al. *Ann Allergy Asthma Immunol.* 2018;120:10-22; Eichenfield LF, et al. *J Am Acad Dermatol.* 2014;70:338-351.

AD Step-care Management

AD Severity			
Non-lesional	**Mild**	**Moderate**	**Severe**
Basic Management	**Basic Management**	**Basic Management + Topical Anti-inflammatory Medication**	**Basic Management + Referral to AD Specialist**

• Skin care
  – Liberal and frequent moisturizer
  – Warm baths/showers with non-soap cleansers
• Trigger avoidance
	• Skin care
	  – Liberal and frequent moisturizer
	  – Warm baths/showers with non-soap cleansers
	• Antiseptics
	  – Dilute bleach bath up to 2x weekly
	  – Antibiotics for infections
	• Trigger avoidance
		• Apply to areas of previous flares
		• Maintenance TCS
		  – Low potency 1 to 2x daily (including face)
		  – Medium potency 1 to 2x weekly (except face)
		• OR Maintenance TCI (pimecrolimus, tacrolimus)
		  – 1 to 2x daily
		  – 2 to 3x weekly (not FDA-labeled)
		• OR Crisaborole 2% 2x daily
			• Dupilumab
			• Systemic immunosuppressants
			  – Cyclosporine*
			  – Methotrexate*
			  – Mycophenolate*
			  – Azathioprine*
			  – Corticosteroids**
			• Consider acute treatment
			  – Wet wrap therapy
			  – Hospitalization
			• Phototherapy

*Not FDA approved for AD; **FDA approved for AD but not for long-term maintenance.
TCI = topical calcineurin inhibitor.
Boguniewicz M, et al. *Ann Allergy Asthma Immunol.* 2018;120:10-22.

Nonpharmacologic Therapy — Foundational Management

- Avoid known irritants/triggers
  - Allergy testing only when history suggests significant concern for allergies
- Warm baths/showers with non-soap cleansers or mild soaps, followed by moisturizers (including uninvolved skin)
- Bleach baths (5-10 min, 2-3 times weekly) helpful for frequent bacterial infections
  - Literature: ½ cup 6% bleach in full bathtub of water (40 gallons) or 50 mL in ¼ tub of water for children <12 years old
  - In practice: ¼ cup 6% bleach in full bathtub of water, and rinse off

Eichenfield LF, et al. *J Am Acad Dermatol.* 2014;71:116-132; Eichenfield LF, et al. *Pediatrics.* 2015;136:554-565.

Nonpharmacologic Therapy — Foundational Management (cont'd)

- Moisturizers (including uninvolved skin)
  - Apply liberally within 2 to 3 minutes after bathing to improve skin hydration
  - Reapply liberally throughout the day
  - May decrease cumulative incidence of AD by 50% at 6 months in infants at high risk for AD (first degree relative with AD, asthma, or allergic rhinitis)
- Ointments are best to seal and decrease evaporation

Eichenfield LF, et al. *J Am Acad Dermatol.* 2014;71:116-132; Eichenfield LF, et al. *Pediatrics.* 2015;136:554-565; Huang JT, et al. *Pediatrics.* 2009;123:e808-e814; Nichol NH. In: *Dermatologic Nursing Essentials: A Core Curriculum.* 3rd edition. 2016:114-130; Simpson EL, et al. *J Allergy Clin Immunol.* 2014;134:818-823.

Topical Corticosteroids

- Mainstay of anti-inflammatory therapy for AD in children and adults
  - Use after lack of response to good skin care and moisturizers alone
  - Once- or twice-daily application
    - Adult fingertip unit (~0.5 g) over affected area equal to 2 adult palms
- Address steroid “phobia”
  - Determine adherence to adequate TCS prior to systemic therapies

Eichenfield LF, et al. *J Am Acad Dermatol.* 2014;71:116-132.

Topical Calcineurin Inhibitors

- Short-term or non-continuous chronic treatment of AD, when TCS is ineffective or inadvisable (steroid sparing)
- Approved for age ≥2 years
- Inhibit calcineurin-dependent T-cell and mast-cell activation
- Available agents:
  - Tacrolimus ointment for moderate to severe AD
  - Pimecrolimus cream for mild to moderate AD
    - Adverse effects: stinging/burning, potential risk of secondary infections, rare cases of malignancy

Eichenfield LF, et al. *J Am Acad Dermatol.* 2014;71:116-132.

Crisaborole

- Topical PDE4 inhibitor for mild to moderate AD
- Initially approved by the FDA in 2016 based on results of two randomized, placebo-controlled, phase 3 trials
- Expanded FDA approval in March 2020 for children aged 3 to <24 months based on the phase 4 CrisADe CARE trial
- Most common side effect: burning or stinging at the application site

CrisADE CARE = Safety, Effectiveness, and Pharmacokinetics of Crisaborole in Infants Aged 3 to <24 Months with Mild-to-Moderate Atopic Dermatitis: A Phase IV Open-Label Study.

Boguniewicz M, et al. *Ann Allergy Asthma Immunol*. 2018;120:10-22.e12; Clinicaltrials.gov. clinicaltrials.gov/ct2/show/NCT03356977. Accessed May 28, 2020; Eucrisa [prescribing information]. Pfizer; 2020; Paller AS, et al. *J Am Acad Dermatol*. 2016;75:494-503.e6. Schlessinger J, et al.*Am J Clin Dermato*l. 2020;21(2):275-284.

Phototherapy

- Second-line treatment
- Can be used as maintenance therapy in chronic disease
- Requires local access and clinician competence
- Dosing and scheduling of light based on minimal erythema dose and/or Fitzpatrick skin type
- Clinician-directed home phototherapy possible
- Adverse effects: actinic damage, local erythema and tenderness, pruritus, burning, stinging

Sidbury R, et al. *J Am Acad Dermatol.* 2014;71:327-349.

Proactive Management

Reactive Approach

- TCS application to affected skin only
- Stop or taper once visible lesions are cleared

Proactive Approach (Prevention of Flares)

- Long-term, intermittent anti-inflammatory therapy to previously affected skin
  - Continue TCS 1-2 times/week or TCI 2-3 times/week after disease stabilization
- Ongoing emollient therapy of unaffected skin

Eichenfield LF, et al. *Pediatrics.* 2015;136:554-565; Sidbury R, et al. *J Am Acad Dermatol.* 2014;71:1218-1233; Wollenberg A, et al. *J Eur Acad Dermatol Venereol.* 2016;30:729-747.

Wet Wrap Therapy

A **Bathe** child

B **Pat away excess water**; immediately **apply TCS** to affected area **+ cream/ointment** to non-lesional skin

C **Apply wet layer** (thin cotton or cotton-blend pajamas); in infants/small children, first **place wet tube socks** over hands

D **Apply second (heavier PJs) dry layer**; place **second layer of dry tube socks** over hands

E **Wrap head** with warm, wet gauze, only if significantly affected

F **Wrap same area** with dry gauze

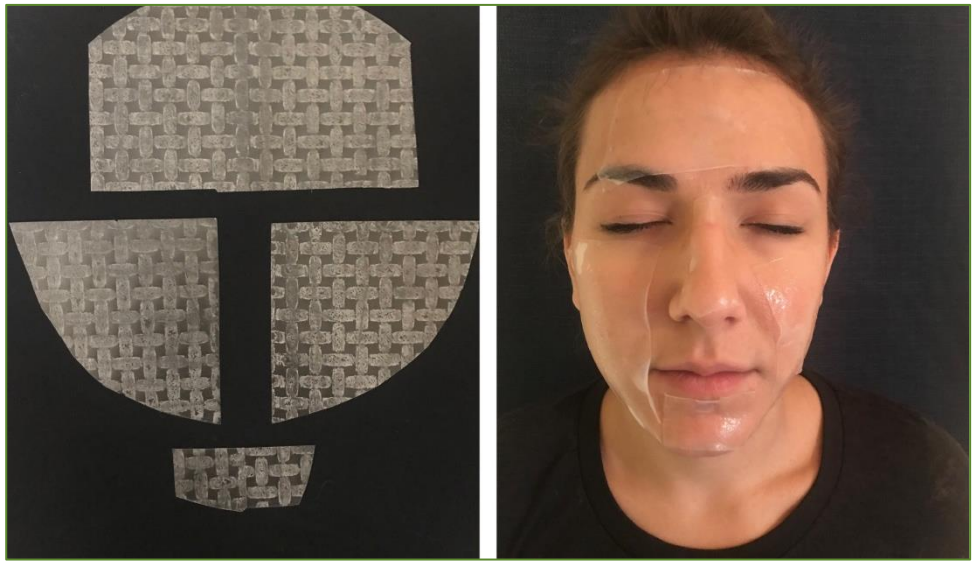
G **Apply expandable surgical netting** to hold wraps in place

H **Make sure patient can see and move** properly; comfort child and take steps to avoid chilling

Brar K, et al. *J Allergy Clin Immunol Pract*. 2019;7:1-16; Nicol NH. *Am J Nurs.* 1987;87:1560-1563; Nicol NH. *Immunol Allergy Clin N Am*. 2017;37:123-139. Photos used with permission.

Rice Paper Facial Wet Wraps

- Do-it-yourself hypoallergenic mask
- Rice paper cut out improves hydration and medication penetration
  1. Cut to fit
  2. Soak in warm water until a gel-like sheet
  3. Apply over thin layer of emollient or TCS
  4. Leave on 10 to 15 minutes
- Apply to volar forearm first to assess tolerability



Maarouf M et al. *Pediatr Dermatol.* 2018;35:748-753.

Traditional Systemic Immunomodulatory Agents

- Adjust to minimal effective dose once response is attained and sustained
- Continue adjunctive therapies
- Avoid systemic corticosteroids if possible
  - Reserve for acute, severe exacerbations, or as a short-term bridge to other systemic therapy
  - Rebound flares

Sidbury R, et al. *J Am Acad Dermatol.* 2014;71:327-349.

Traditional Systemic Immunomodulatory Agents (cont'd)

	Cyclosporine A	Azathioprine	Methotrexate	Mycophenolic Acid
Starting dose, children	5 mg/kg/day	50 mg/day	10-15 mg/m^2/week	MMF: 20-50 mg/kg/day
Maintenance dose, children	2.5-3 mg/kg/day	2-3 mg/kg/day	↑ by 2.5-5 mg/week to effective dose. Taper by 2.5 mg/week to lowest effective dose	MMF: ↑ daily dose by 500 mg increments every 2 to 4 weeks
Starting dose, adults	5 mg/kg/day	50 mg/day	5 mg/week	MMF: 1000-2000 mg/day (EC-MPA 1440 mg/day)
Maintenance dose, adults	2.5-3 mg/k/day	2-3 mg/kg/day	↑ to 25 mg/week max	MMF: 2000 mg/day (EC-MPA 1440 mg/day)
Time to symptom relief	2 weeks	8 to 12 weeks	8 to 12 weeks	4 to 12 weeks

MMF = mycophenolate mofetil; EC-MPA = enteric-coated mycophenolate sodium.

Megna M. *Dermatol Ther.* 2017;7:1-23; Wollenberg A, et al. *J Eur Acad Dermatol Venereol.* 2016;30:729-747.

Side Effect Profile of Traditional Systemic Immunomodulatory Agents

Drug	Potential Toxicities
Cyclosporine	Renal impairment, hypertension, headache, tremor, paresthesia, hypertrichosis, gingival hyperplasia, nausea, vomiting, diarrhea, myalgias, hypertriglyceridemia, increased risk of infections and malignancies
Azathioprine	Bone marrow suppression, increased risk of infections and malignancies, nausea, vomiting, diarrhea, pancreatitis, hepatitis
Methotrexate	Elevated liver enzymes, cytopenias, interstitial pneumonitis, pulmonary fibrosis, ulcerative stomatitis, nausea, vomiting, diarrhea, fatigue, chills/fever, photosensitivity, alopecia, increased risk of infections and malignancies
Mycophenolate mofetil	Diarrhea, nausea, vomiting, abdominal cramps, leukopenia, anemia, increased risk of infections, thrombocytopenia, multifocal leukoencephalopathy, hypercholesterolemia, electrolyte abnormalities, peripheral edema, hypertension, increased risk of malignancies

Sidbury R, et al. *J Am Acad Dermatol.* 2014;71:327-349.

Case Study (cont'd): Jim's Therapy Over the Past 2 Years

- Jim is now 10 years old and embarrassed about his appearance
- Pruritus significantly disrupting sleep
- Feels "exhausted" and struggles to keep up with school and gymnastics
- His teacher recommends ADHD evaluation

Case Study (cont'd): Jim's Therapy Over the Past 2 Years

- Maintenance TCS
  - Discontinued: made his face and hands greasy
- Tried topical tacrolimus and crisaborole
  - Discontinued: intolerable burning and stinging from both agents
- AD became more persistent 1 year ago and cyclosporine A was started
  - Discontinued: headaches
- Currently using hydrocortisone 2.5% cream (low potency TCS, group 7) for his face and triamcinolone 0.1% (medium potency TCS, group 4) for his body for AD flares
  - Dislikes the greasiness, but feels he "has no choice"

Unmet Needs in Moderate to Severe AD Management

- Treating only AD flares is inadequate for frequent flares or persistent disease with daily symptoms
- Topical therapies
  - Not effective for severe disease
  - Impractical for extensive disease
  - Do not address systemic inflammation
- Systemic immunosuppressants (eg, oral corticosteroids, cyclosporine, methotrexate, azathioprine)
  - Poor side effect and tolerability profiles

Silverberg JI, et al. *Dermatol Clin.* 2017;35:327-334.

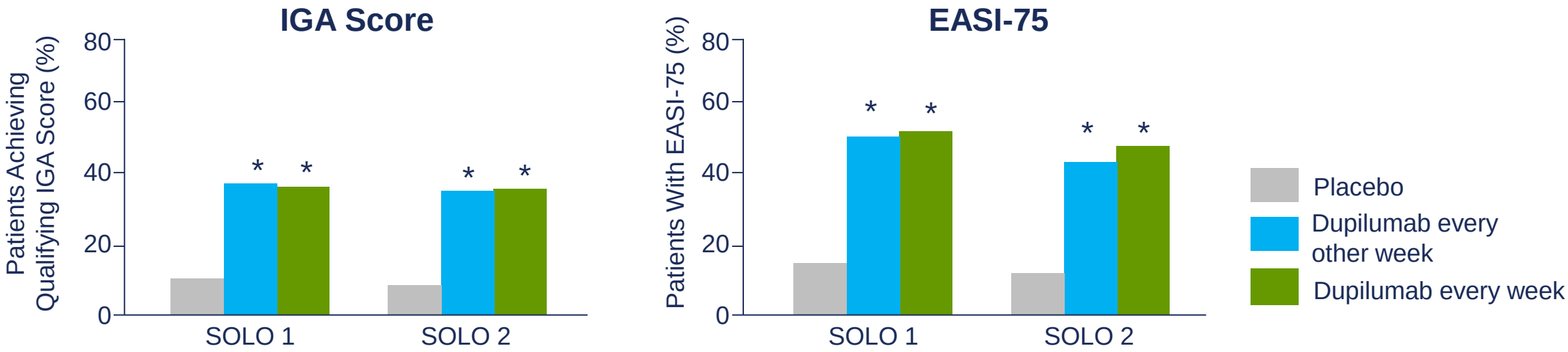
Dupilumab

- Fully human monoclonal antibody against IL-4 receptor α subunit: blocks IL-4 and IL-13
- FDA approvals
  - Adults with moderate to severe AD not adequately controlled by topical therapies (March 2017)
  - Patients ≥12 years with moderate to severe AD not adequately controlled with topical prescription therapies, with or without TCS (September 2019)
  - Children age 6 to 11 with moderate to severe AD who have inadequate response to TCS (May 26, 2020)

Barrett, J. www.drugtopics.com/autoimmune-diseases/fda-approves-dupilumab-atopic-dermatitis-children. Accessed May 26, 2020; Beck LA, et al. *N Engl J Med.* 2014;371:130-139; Blauvelt A, et al. *Lancet*. 2017;389:2287-2303;; Dupixent [prescribing information]. Regeneron; 2019; Sanofi US. www.news.sanofi.us/2020-05-26-FDA-approves-Dupixent-R-dupilumab-a. Accessed May 28, 2020; Simpson EL, et al. *N Engl J Med.* 2016;375:2335-2348. Cork MJ, et al. *Br J Dermatol.* 2020;182:85-96.

Dupilumab: Efficacy in Adults — SOLO 1 and SOLO 2

- Subcutaneous dupilumab (300 mg) administered weekly or every other week x 16 weeks
- Primary endpoints: patients (%) achieving IGA 0 (clear) or 1 (almost clear) and ≥2-point improvement from baseline; patients (%) achieving at least 75% improvement in EASI score from baseline

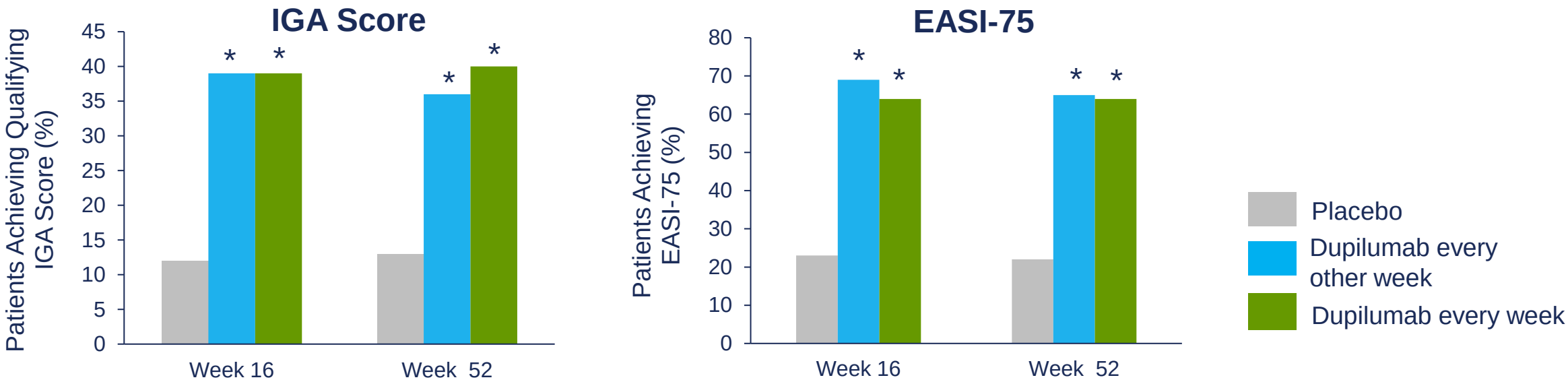


**P* <.0001 compared with placebo.

Simpson EL, et al. *N Engl J Med.* 2016;375:2335-2348.

Dupilumab: Efficacy in Adults — LIBERTY AD CHRONOS

- All groups used concomitant topical corticosteroids ± calcineurin inhibitors
- Dupilumab 300 mg subcutaneously every week or every other week, or placebo for 1 year



*P <.0001 compared with placebo + topical steroids.
Blauvelt A, et al. *Lancet*. 2017;389:2287-2303.

Dupilumab: Safety in Adults

	SOLO 1 and 2: 16 Weeks (pooled)			LIBERTY AD CHRONOS: 52 Weeks With TCS			LIBERTY AD CAFE: 16 Weeks With TCS		
Event, %	Placebo (N = 222)	Dupilumab Every Other Week (N = 229)	Dupilumab Every Week (N = 218)	Placebo (N = 315)	Dupilumab Every Other Week (N = 110)	Dupilumab Every Week (N = 315)	Placebo (N = 108)	Dupilumab Every Other Week (N = 107)	Dupilumab Every Week (N = 110)
≥1 Adverse event (AE)	69	69	68	84	88	83	69	72	69
≥1 Serious AEs	5	2	2	5	4	3	2	2	2
Injection site reaction	7	12	17	8	15	19	0	1	4
AD exacerbation	33	13	13	46	18	17	15	8	8
Headache	5	9	7	6	5	8	8	9	9
Conjunctivitis	2	10	7	8	14	19	3	11	7
Nasopharyngitis	9	9	10	19	23	19	17	21	16
Adjudicated skin infection	4	2	2	18	11	8	8	2	4
All infections/infestations	31	31	31	58	57	53	41	46	43

Blauvelt A, et al. *Lancet*. 2017;389:2287-2303; Bruin-Weller, et al. *Br J Dermatol*. 2018;178:1083-1101; Thaci D. *J Dermatol Sci.* 2019;94:266-275.

Dupilumab: Efficacy and Safety in Adolescents 12 to 17 Years

- Phase 3 trial in 251 adolescents with moderate to severe AD not adequately controlled with TCS
- Improvement as early as week 4
- Safety profile similar to adults

Efficacy (16 weeks)	Placebo	Dupilumab
IGA 0-1, % ★	2	24*
EASI improvement from baseline, %	24	66*
EASI 75, %	8	42*
Peak pruritus NRS improvement from baseline, %	5	37*

★Primary endpoint; **P* <.0001 (compared with placebo).
NRS = numerical rating scale.
Simpson EL, et al. *JAMA Dermatol.* 2020;156:44-56.

Dupilumab: Efficacy and Safety in Younger Pediatric Patients

	6 to 11 Years (n = 38)		12 to 17 Years (n = 40)	
	2 mg/kg	4 mg/kg	2 mg/kg	4 mg/kg
EASI improvement from baseline, % ★	76	63	66	70
Peak pruritus NRS improvement from baseline, %	42	40	31	38
IGA 0-1, %	17	21	10	35

- Phase 2a trial and subsequent phase 3 open-label extension in children and adolescents with moderate to severe AD for whom TCS was inadequate
- Single-dose dupilumab SC followed by 8 weeks of follow-up, then followed by 4 weekly doses
- Pharmacokinetic profile was consistent with that of adults
- Most AEs were mild, transient, and unrelated

★Primary endpoint; SC = subcutaneously.

Cork MJ, et al. *Br J Dermatol.* 2020;182:85-96.

Emerging Options for Moderate to Severe AD

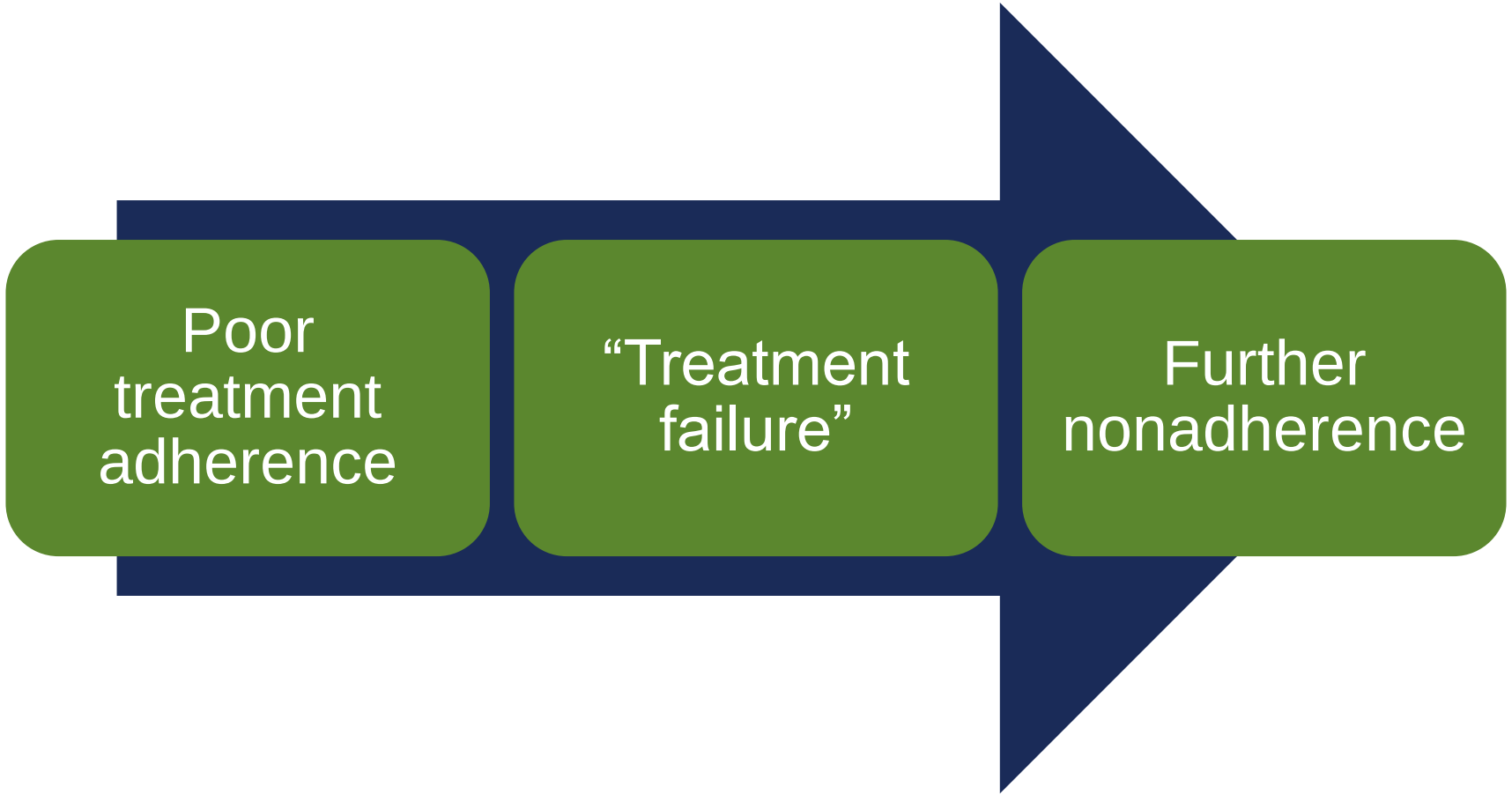
Nationaleczema.org lists treatments in development by phase and route, and clinical trial opportunities

Mechanism	Agent	Route	Status/Phase**
Anti–IL-13 mAb	Lebrikizumab	SC	2
	Tralokinumab	SC	3
Anti–IL-31 mAb	Nemolizumab	SC	2
JAK1/2/3 inhibitor	Delgocitinib (JTE-052)	Topical	3
JAK1/2 inhibitor	Baricitinib	Oral	3
JAK 1 inhibitor	PF-04965842	Oral	3
JAK1-selective inhibitor	Upadacitinib	Oral	3

*For agents not yet approved by the FDA, AD severity information is derived from clinical trial population from ClnicalTrials.gov or manufacturer's announcements; **as of May 20, 2020; mAb = monoclonal antibody.

ClinicalTrials.gov. www.clinicaltrials.gov/ct2/show/NCT03349060?term=B7451012&rank=1. Accessed May 28, 2020; ClinicalTrials.gov. clinicaltrials.gov/ct2/show/NCT03363854. Accessed May 28, 2020; Guttman-Yassky E, et al. *JAMA Dermatol.* 2020;156:411-420; Guttman-Yassky E, et al. *J Allergy Clin Immunol.* 2020;145:877-884; Kabashima K, et al. *J Allergy Clin Immunol.* 2018;142:1121-1130; Lilly. investor.lilly.com/news-releases/news-release-details/lilly-and-incyte-announce-positive-top-line-results-north. Accessed May 28, 2020; Nakagawa H, et al. *J Am Acad Dermatol*. 2020; 82:823-831.

Adherence to Therapies in AD



Stalder JF et al. *Allergy. 2017*;71:1713-1719.

Strategies to Promote Adherence/Shared Decision-Making in AD Management

Trust

- Take time to listen to the patient and/or caregiver
- Quality of patient-provider relationship
- Shorter time to follow-up/check-in

Individualized Treatment

- Solicit patient's preference (eg, greasiness of an ointment)
- Understand the patient's goals and expectations (eg, less itching, better sleep, clearer skin, or other issues affecting QoL)

Education

- Treatment options: reduce fears and misconceptions
- Structured education, nurse-led workshops
- Written action plans

Bass A, et al. *J Clin Med*. 2015;4:231-242; Eichenfield LF, et al. *Pediatrics.* 2015;136:554-565; O'Toole A, et al. *J Cutan Med Surg*. 2013;17:276-282; Sidbury R, et al. *J Am Acad Dermatol.* 2014;71:1218-1233; Stalder JF et al. *Allergy. 2017*;71:1713-1719.

Sample Personalized AD Action Plan from National Jewish Health

Name: _____

Clinician or Clinic: _____

Clinic Phone: _____

If Itching and Scratching Is Starting:	
Instead of scratching I can	• **Apply moisturizer** • Apply cool compress and moisturizer • Pat the itchy skin
I can do something else	I like to: _____ _____ _____

Green Zone (doing well; skin is clear)

- Take a bath (or shower) with warm water once a day; soak for 10-15 minutes
- Use a gentle cleanser (labeled “sensitive skin”); avoid scrubbing
- Apply moisturizer at least twice a day
- Avoid triggers and irritants; keep fingernails short

Yellow Zone (mild rash and itching)

- Continue Green Zone care (daily bath and moisturizer)
- Face: Apply _____ 2 times per day to the red itchy, rash areas
- Body: Apply _____ 2 times per day to the red itchy, rash areas
- Do not put moisturizer over medicine
- For daytime itching take _____ For nighttime itching take _____
- Also take/do: _____

Red Zone (severe rash and itching)

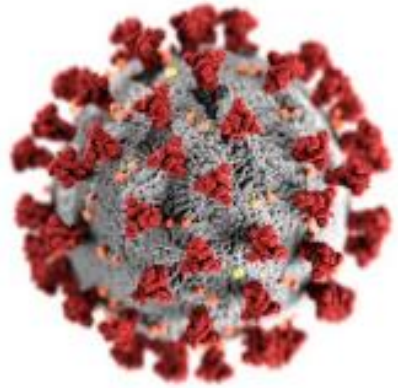
- **Increase baths (2X day max) and moisturizers to 2-3 times a day**
- Face: Apply _____ 2 times per day to the red, itchy, rashy areas
- Body: Apply _____ 2 times per day to the red, itchy, rashy areas
- For daytime itching take _____ For nighttime itching take _____
- Also take/do: _____
- Watch for signs of infection (increase redness, pus-filled bumps or oozing, cold sores or fever blisters)
- Call your healthcare provider

Adapted from Brar K, et al. *J Allergy Clin Immunol Pract*. 2019;7:1-16.

Case Conclusion

- Since Jim is 10 years old and eligible for dupilumab therapy, he and his mother elect to begin treatment after discussion with his clinician
- Jim continues to practice foundational hygiene and skin care
- He tolerates the medication without problems and has achieved good results
- His sleep improves and he is functioning better socially, in school, and on the gymnastics team
- You suggest that he return for follow-up in 3 to 6 months, or sooner if he experiences a flare in the “red zone” that doesn’t resolve in 3 to 5 days

Treating AD with Biologics During the COVID-19 Pandemic



American Academy of Dermatology Guidance

- Patients already on biologic therapy who have not tested positive or exhibited signs/symptoms of COVID-19
  - Insufficient evidence to recommend discontinuation of biologics
- Patients on biologic therapy who have tested positive for COVID-19
  - Discontinue or postpone biologic therapy until patient recovers from COVID-19
- Patients being considered for biologic therapy initiation
  - Assess risk vs benefits in low-risk patients; in high-risk patients consider deferring

American Academy of Dermatology. assets.ctfassets.net/1ny4yoiyrqia/PicgNuD0IpYd9MSOwab47/023ce3cf6eb82cb304b4ad4a8ef50d56/Biologics_and_COVID-19.pdf. Accessed May 20, 2020.

PCE Action Plan

- ✓ Reconsider diagnosis of AD if pruritus is absent
- ✓ Consider the underlying pathophysiology when treating AD
- ✓ Use a simple scoring system such as IGA when evaluating AD
- ✓ Optimize nonpharmacologic therapies for AD
- ✓ Be proactive to prevent AD flares
- ✓ Use systemic therapies for moderate to severe AD when appropriate
- ✓ Create a personalized AD action plan for every patient

PCE Promotes Practice Change

2020 Symposia Series 2