Tales of a Rash Whisperer:
Untangling the Mystery of Adult Recalcitrant Eczematous Dermatitis

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University of California, San Francisco

Learning Objectives

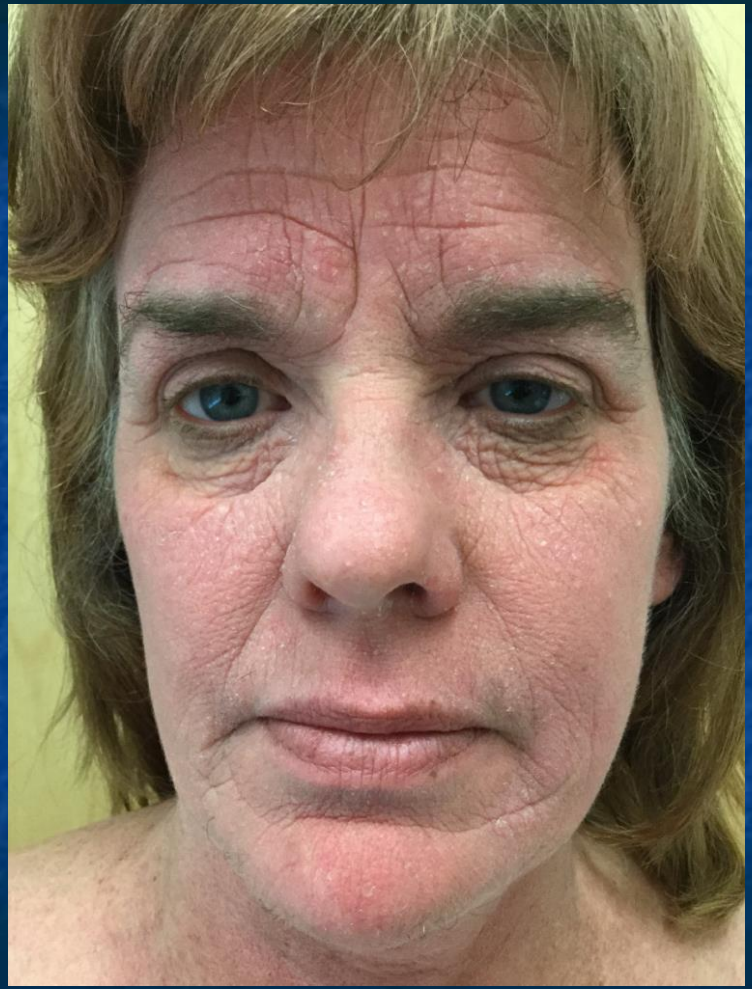
This talk details how physicians can approach patients with mixed eczematous and papulosquamous dermatitis in terms of diagnostic and management strategies.

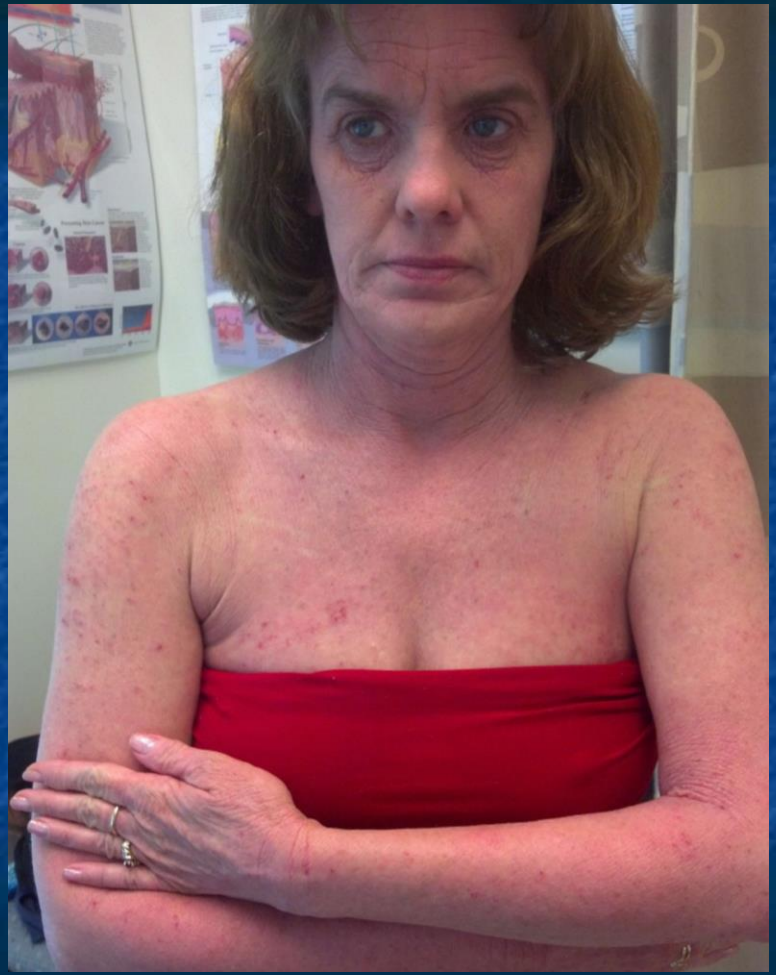
1. Outline visual context clues or patient history elements to distinguish between various forms of eczematous and papulosquamous dermatitis.
2. Examine the available diagnostic studies for patients presenting with recalcitrant eczematous dermatitis.
3. Detail the difference in management strategies for short term clearance and long term remission of recalcitrant eczematous dermatitis.

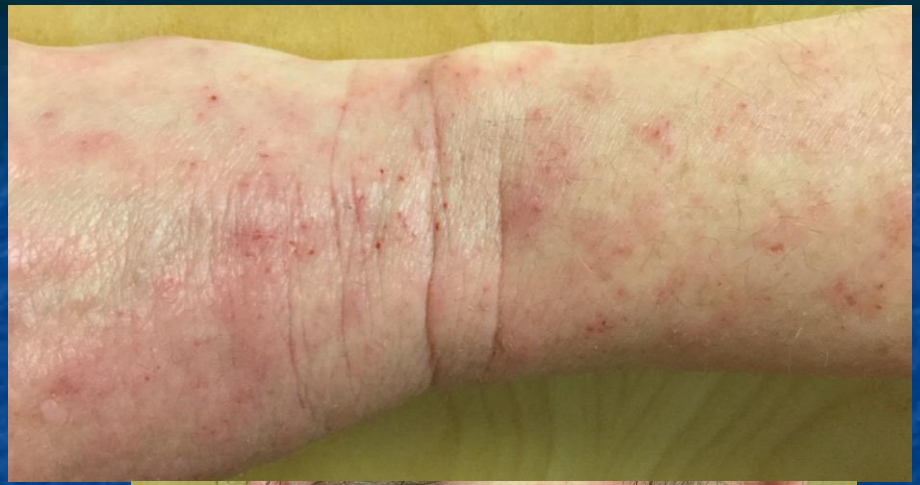
Where does the story begin?

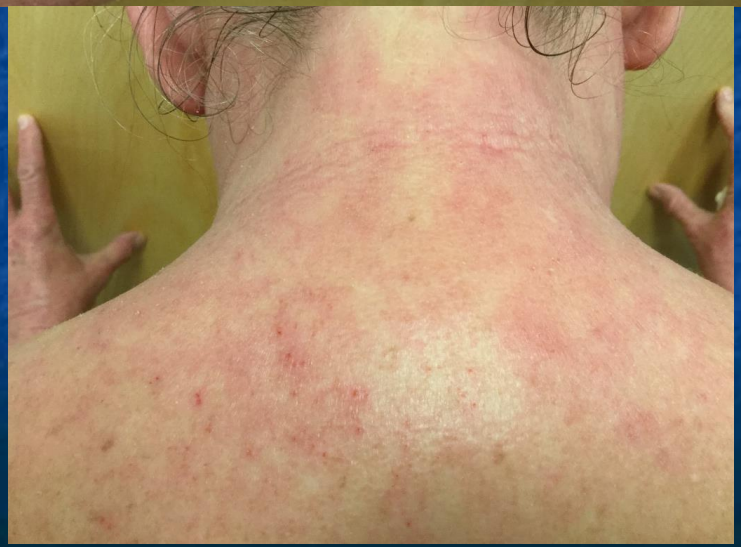
- Director of Medical Consultative Dermatology and Patch Testing at the Palo Alto Foundation Medical Group
- Associate Clinical Professor at UCSF

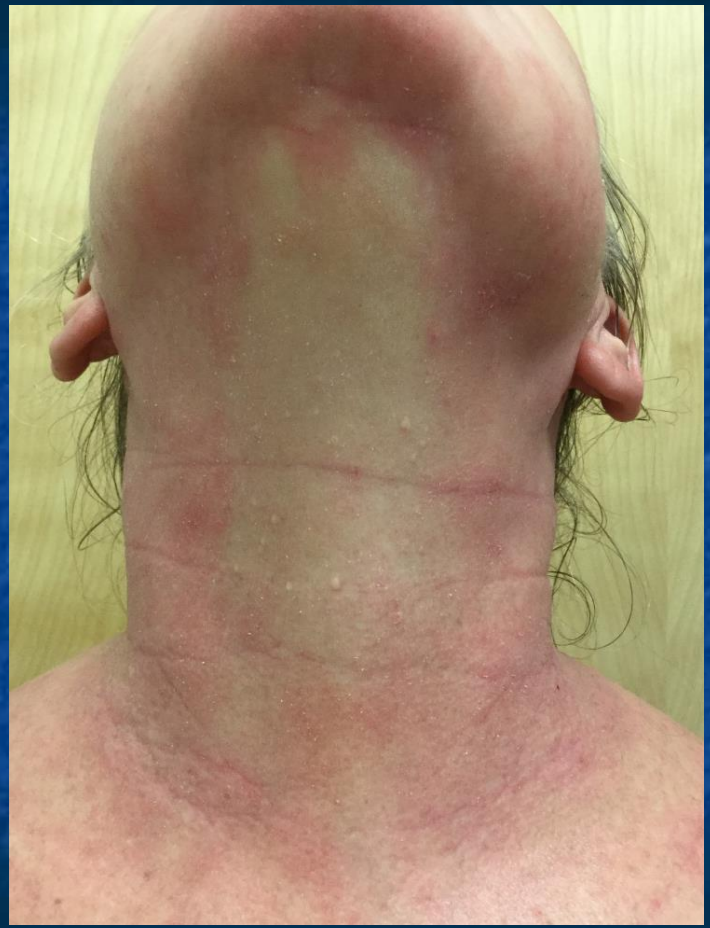
- 7000 consults for the allergists and dermatologists of Northern California (Bay Area)





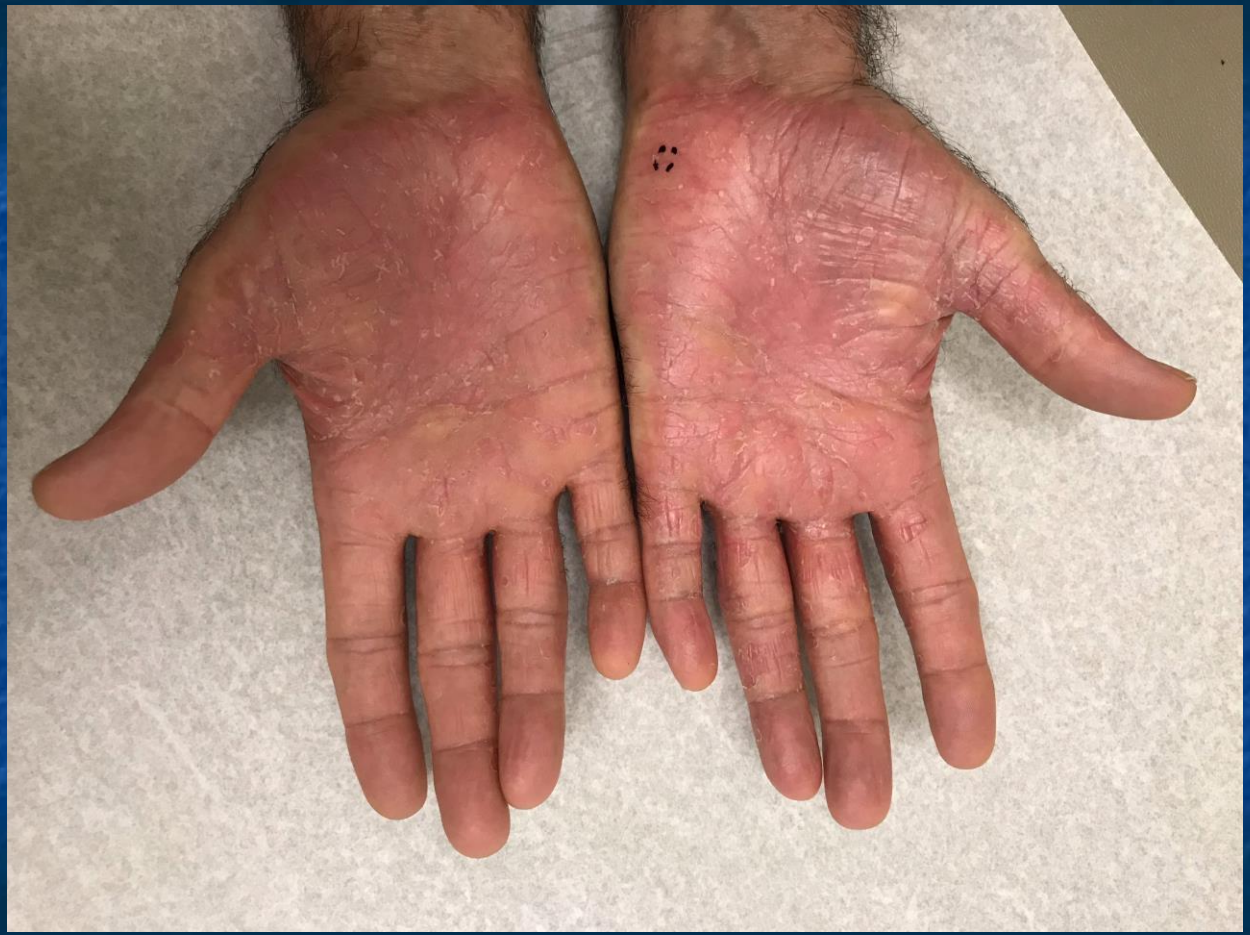






Intake for chronic rash

- Time frame
- Locations
- Personal products (body, face, hair, detergents, soaps)
- Occupation
- Topical otc/rx therapies
- Bacterial or viral cultures
- Oral Antibiotics/antimite/antifungals
- Antihistamines
- Systemic therapy (prednisone, IMK, AZA, mycophenolate, biologics, CSA)
- Biopsies including H&E and DIF
- Labs like celiac panel, ELISAs, leukemia/lymphoma panel
- History of atopy (childhood/adult)



Hand "psoriasis" for 30 years

- Methotrexate 6 years
- Acetretin 2 y
- Efalizumab 2 y
- Apremilast 2 m
- Alefacept 3 m
- Adalimumb/etanercept (TNF) contraindicated because of history of lymphoma

Current therapy:

- NBUVB 2 y
- Secukinumab (IL-17)

"There are no diagnostics that have been done"

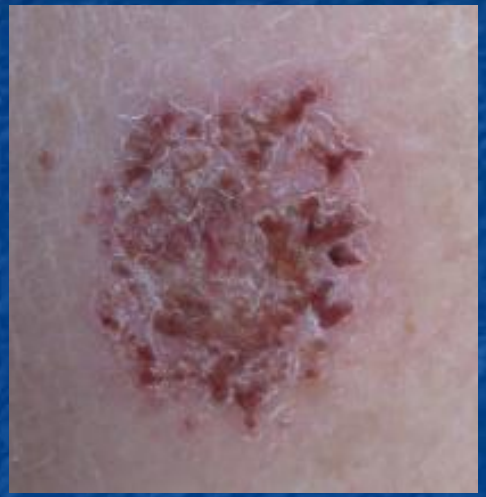
- No biopsy
- No patch testing

We are diagnosticians, and therefore we are therapeuticians.

"The doctor didn't know what I have."

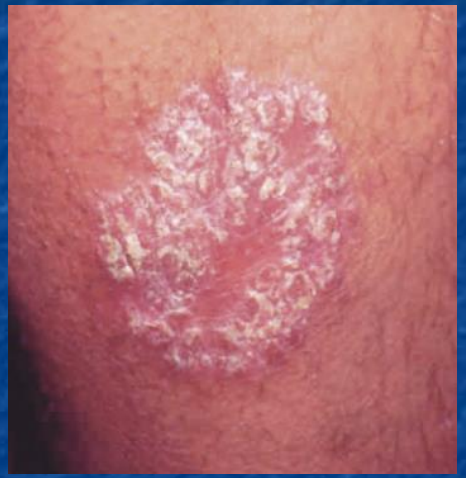
- Differential diagnosis
  1. Atopic dermatitis
  2. Psoriasis
  3. Irritant contact dermatitis
  4. Allergic contact dermatitis
- Diagnostic options
  1. Biopsy
  2. Patch testing
- Therapeutic options

Two “buckets” of rash



ECZEMATOUS “BUCKET”

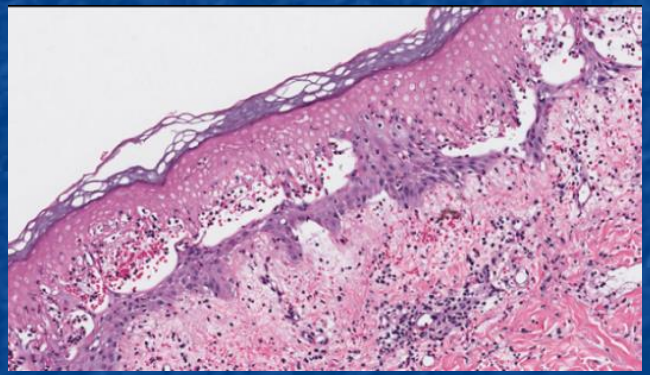
- Atopic dermatitis
- Allergic contact dermatitis
- Irritant contact dermatitis
- Seborrheic dermatitis



PAPULOSQUAMOUS “BUCKET”

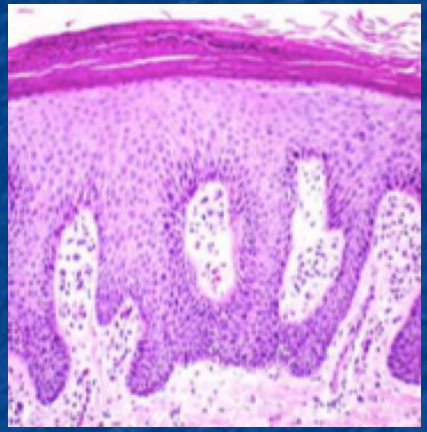
- Psoriasis
- Lichen planus
- Cutaneous lupus

Two "buckets" of rash



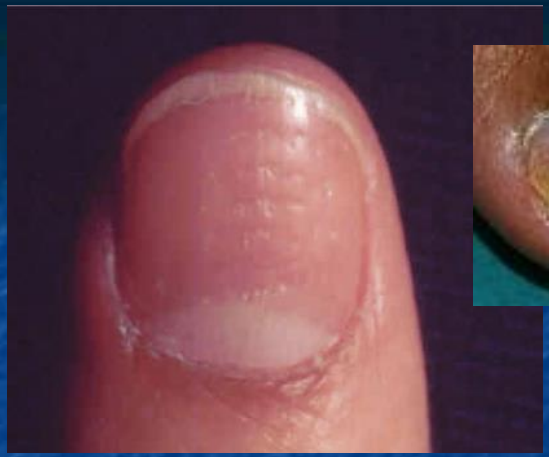
Spongiotic dermatitis (epidermis swells with water like a "sponge") with eosinophils (allergy cells)

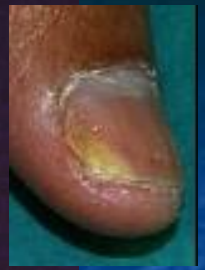
SKIN BARRIER COMPROMISED

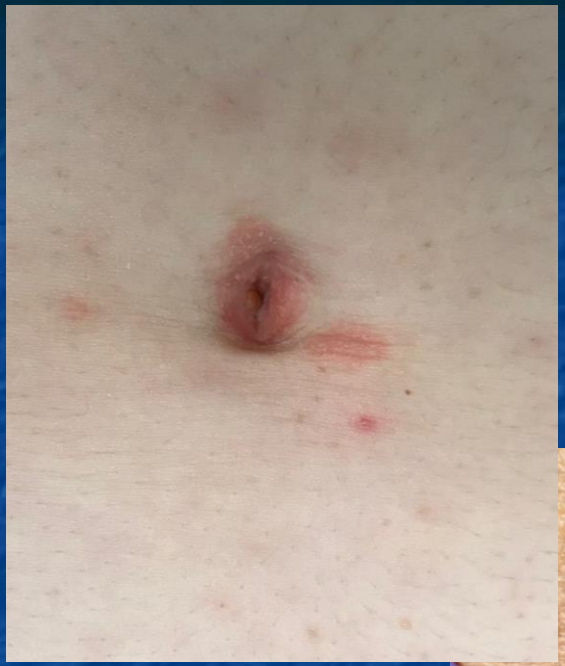


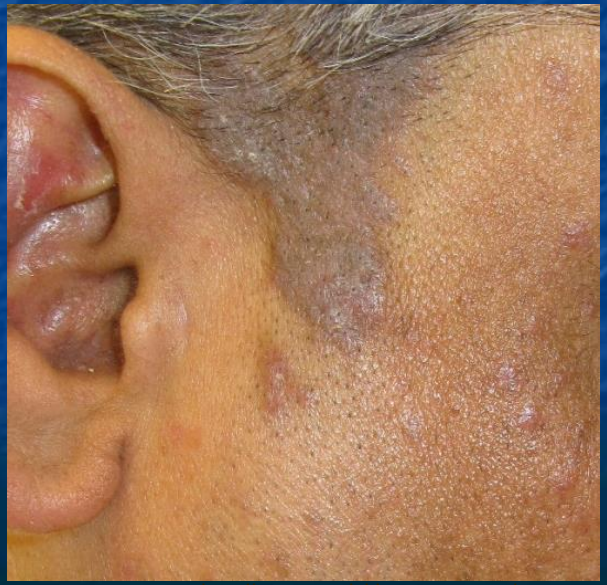
Papulosquamous dermatitis (epidermis is thickened)

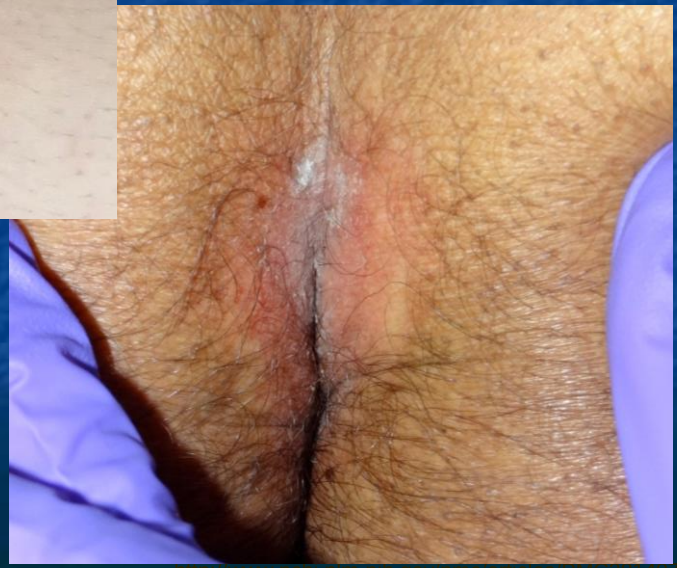
SKIN BARRIER NOT COMPROMISED











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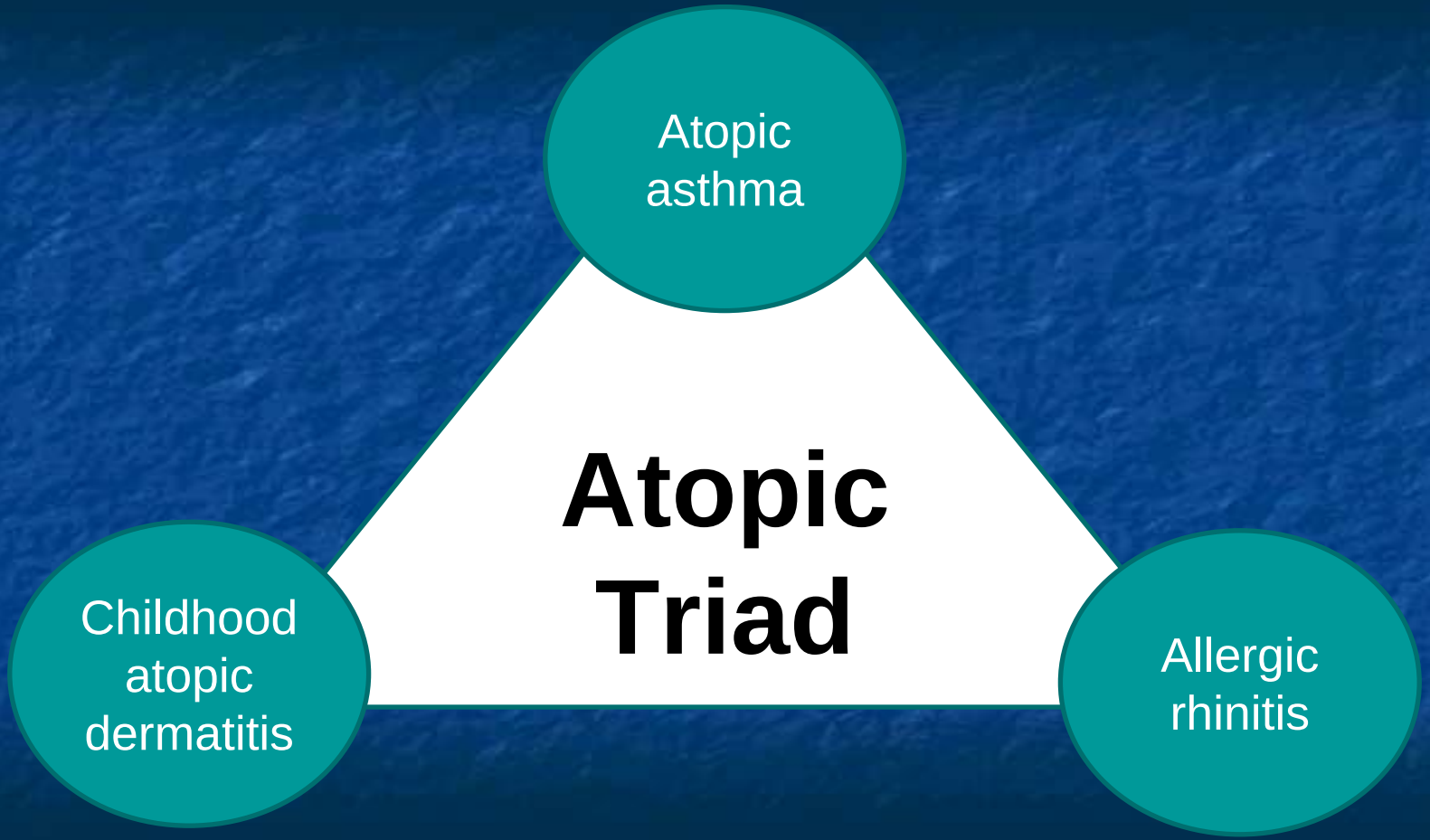
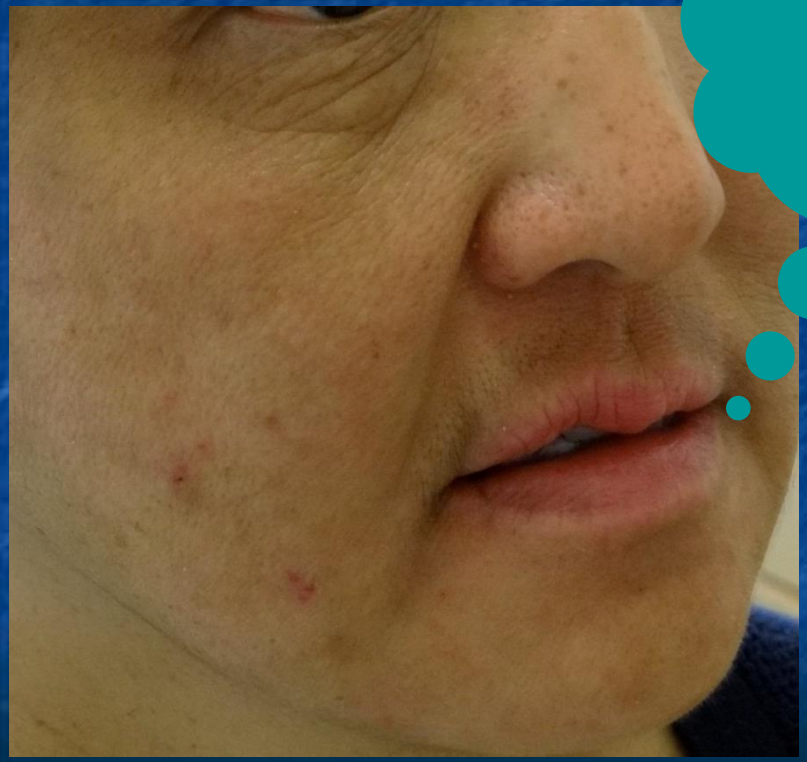
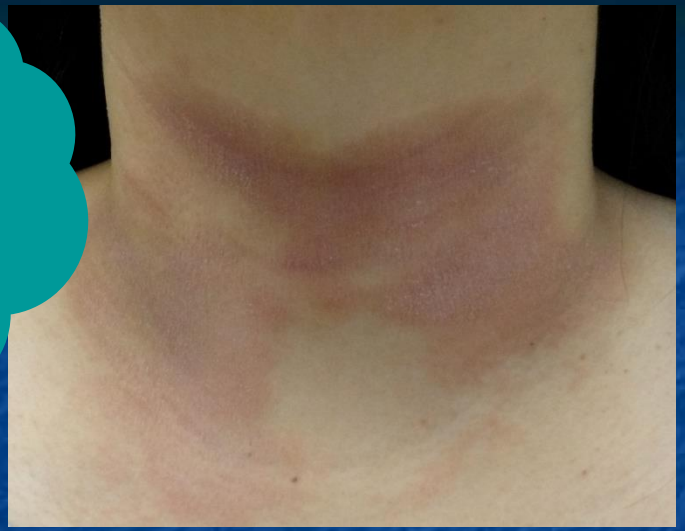
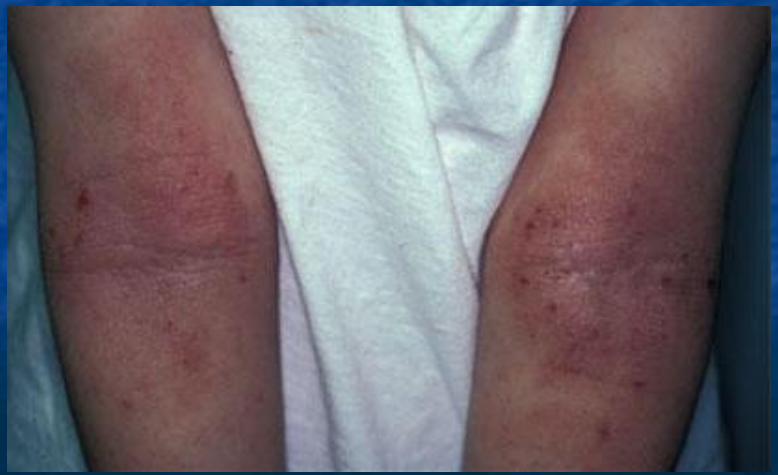

Atopic asthma
Atopic Triad
Childhood atopic dermatitis
Allergic rhinitis



“I feel like I am allergic to my own sweat.”





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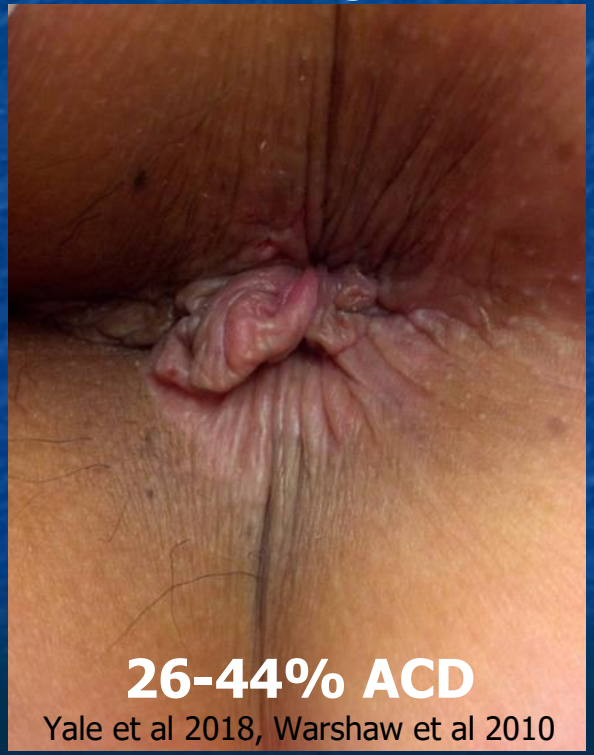
http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2814072/

Location and patterns for ACD…

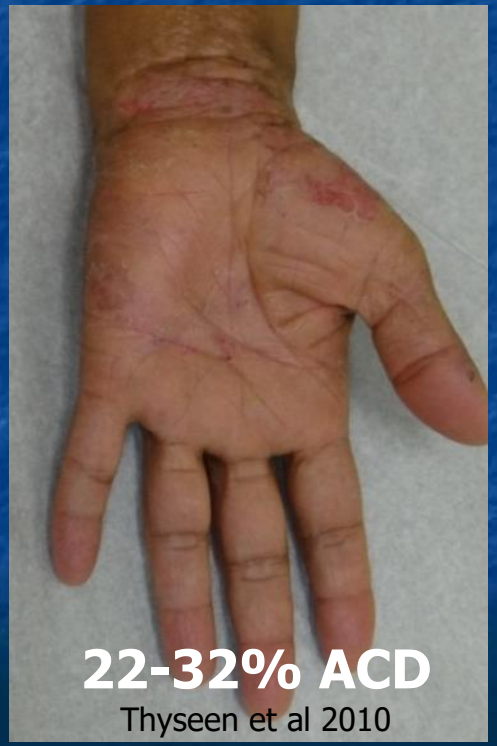
Perianal or genital



26-44% ACD

Yale et al 2018, Warshaw et al 2010

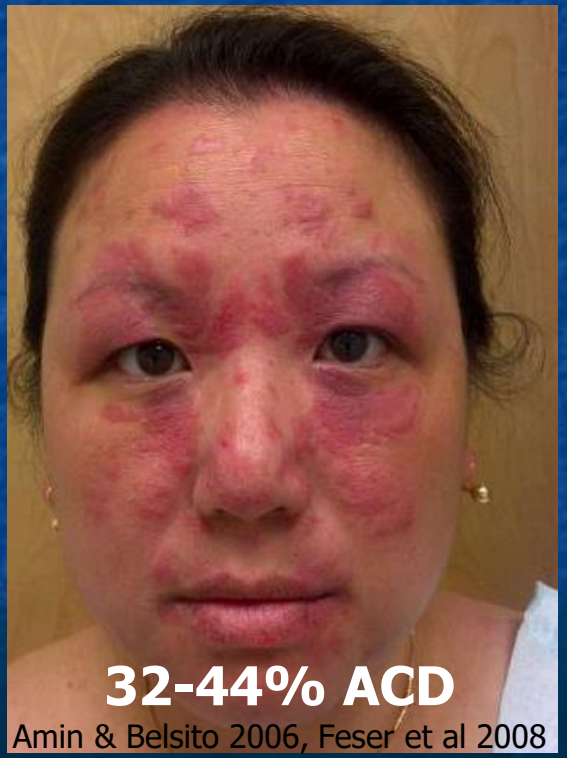
Hands



22-32% ACD

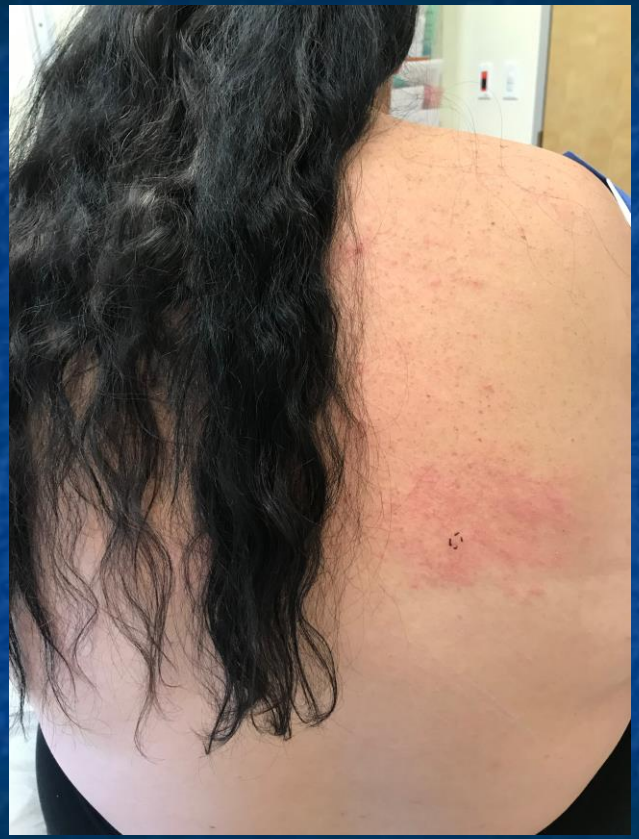
Thyseen et al 2010

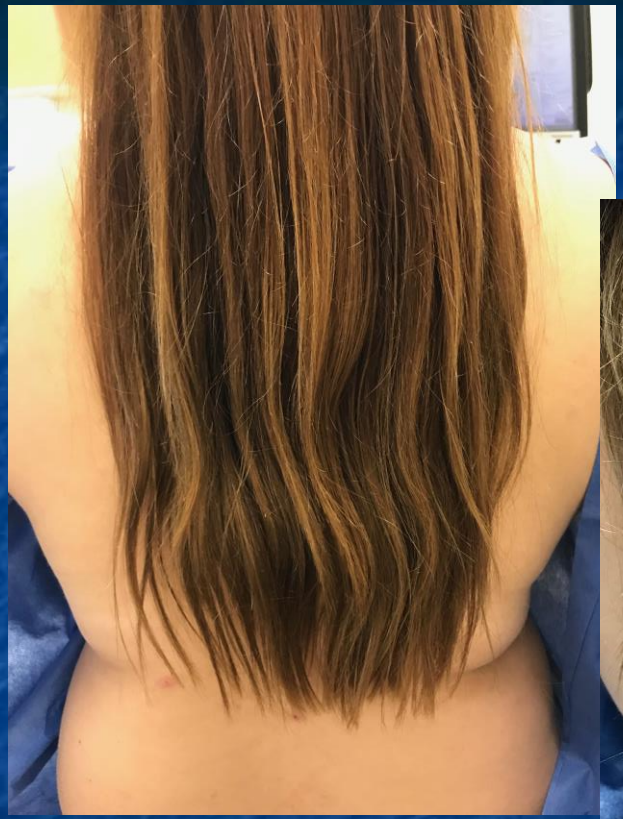
Eyelids and face

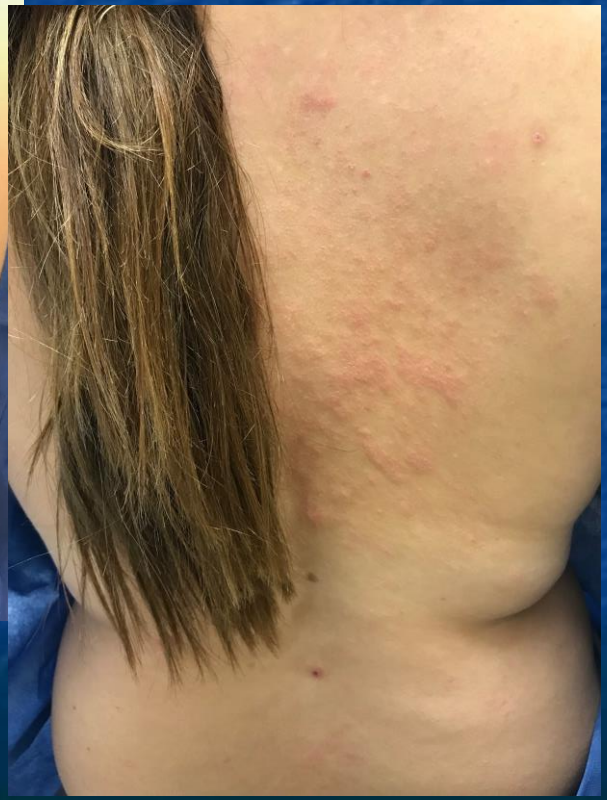


32-44% ACD

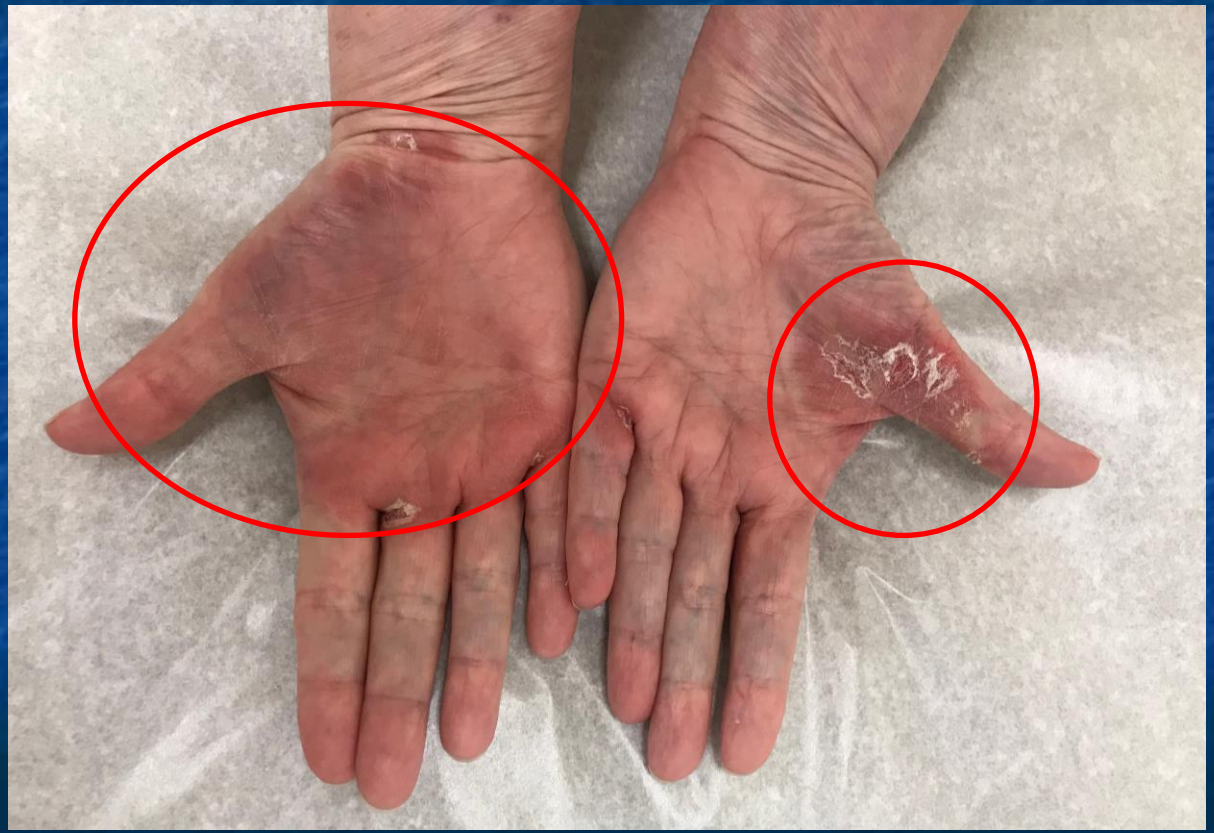
Amin & Belsito 2006, Feser et al 2008

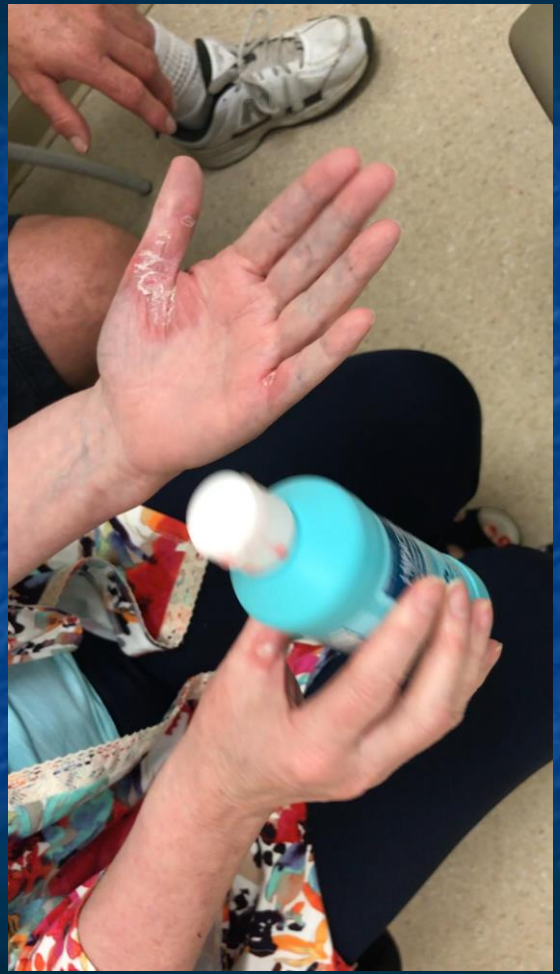


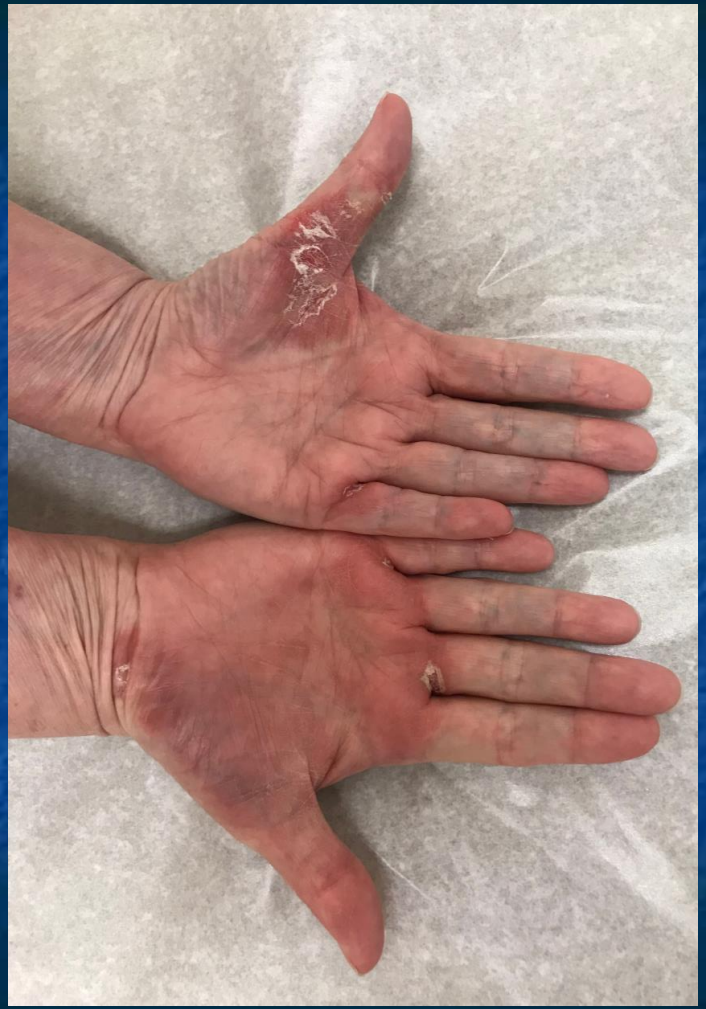




Noticing patterns

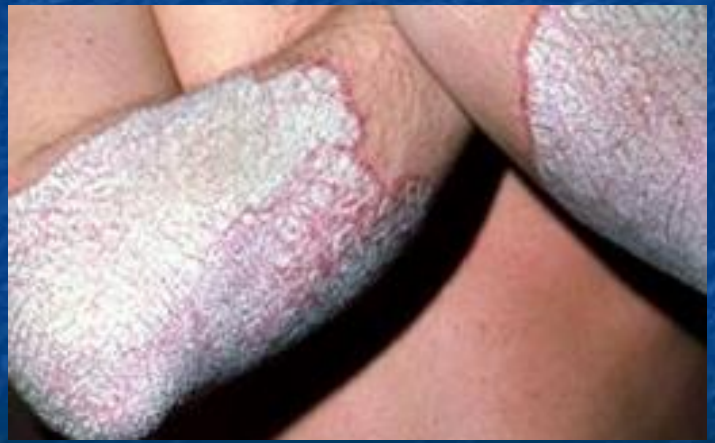


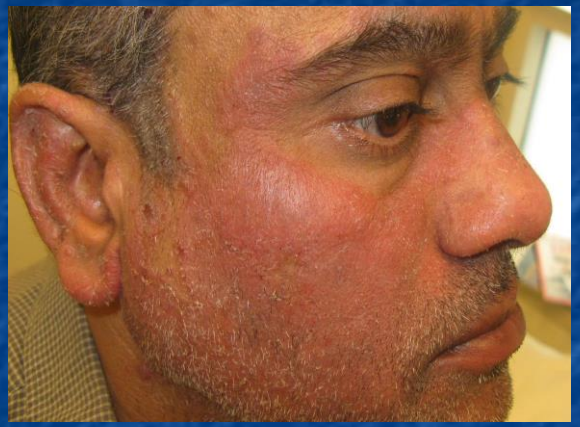


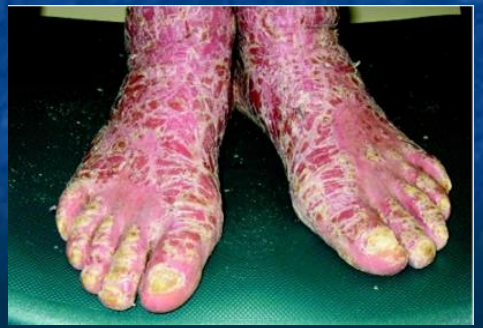


Sometimes these can be difficult to distinguish on clinical exam.

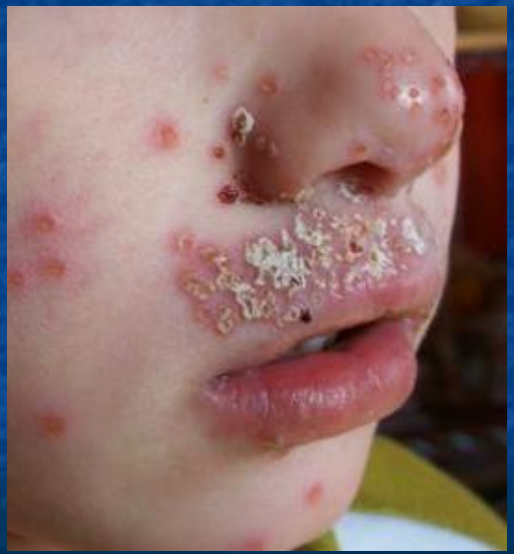
Papulosquamous (psoriasis)







Eczematous (atopic dermatitis)



http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2957827 http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1798489/ http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2814072/

So how do we tell these apart?

Eczematous dermatitis responds extremely well to barrier repair; papulosquamous dermatitis not so much (topical steroids only go so far in psoriasis patients)

"Barrier repair" = EMOLLIATION (and topical steroid) NOT PREDNISONE

Without emolliation (repair of the skin barrier), it is like using…

Heroin for depression

Prednisone for pneumonia

Vodka for delirium tremens

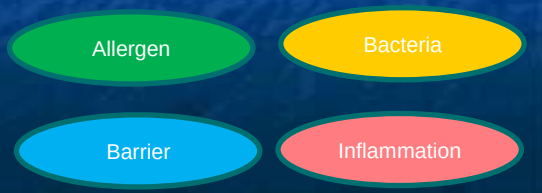
It will suppress the condition, but it may come back with a vengeance!

-Matthew Zirwas, Adult Atopic Dermatitis lecture AAD 2010

Soak and Smear

* TREAT THE WHOLE SKIN (SUBCLINICAL DERMATITIS) *

- 7.5 oz of moisturizer with 2 oz (60 g) of desoximetasone ointment (can keep in refrigerator for cooling effect)
- Take a bath for 15 minutes in warm water (not hot water!)
- 1 cup of vinegar or ¼ cup of bleach in adult sized tub
- Spread this mixture from the neck down
  - Twice a day for a week
  - Once a day for a week
  - Every other day for a week



ABC's and 123's of topical corticosteroids

POTENCY

7) Hydrocortisone
6) Desonide
5) Alclometasone
4) Triamcinolone
3) Fluocinonide 0.05%
2) Desoximetasone
1) Clobetasol

STEROID ALLERGY CLASS

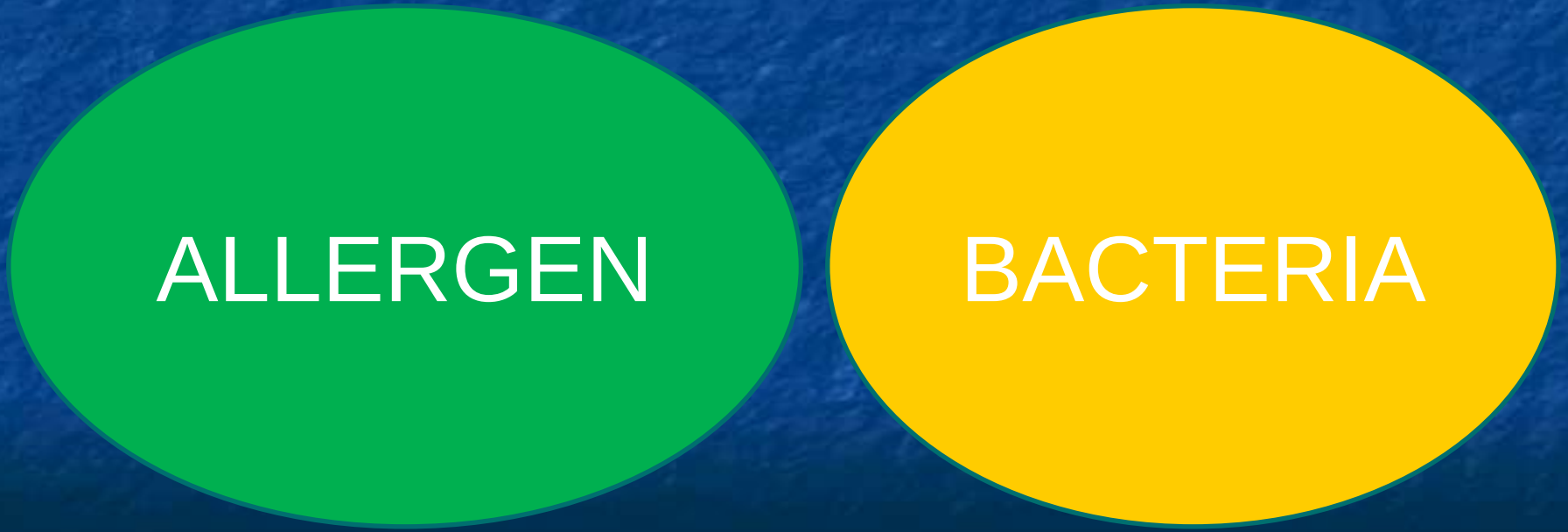
A) Hydrocortisone

B) Desonide
Triamcinolone
Fluocinonide

C) Desoximetasone

D) Clobetasol
Alclometasone

Mild AD for majority of life and flare within the past few months/years



Two phases: Rescue and Long-term

ALLERGEN

BACTERIA

BARRIER

INFLAMMATION

Soak and Smear

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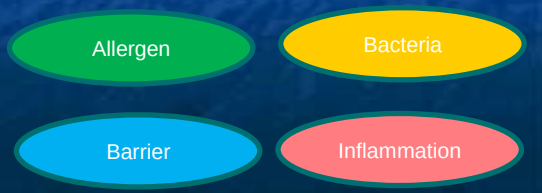

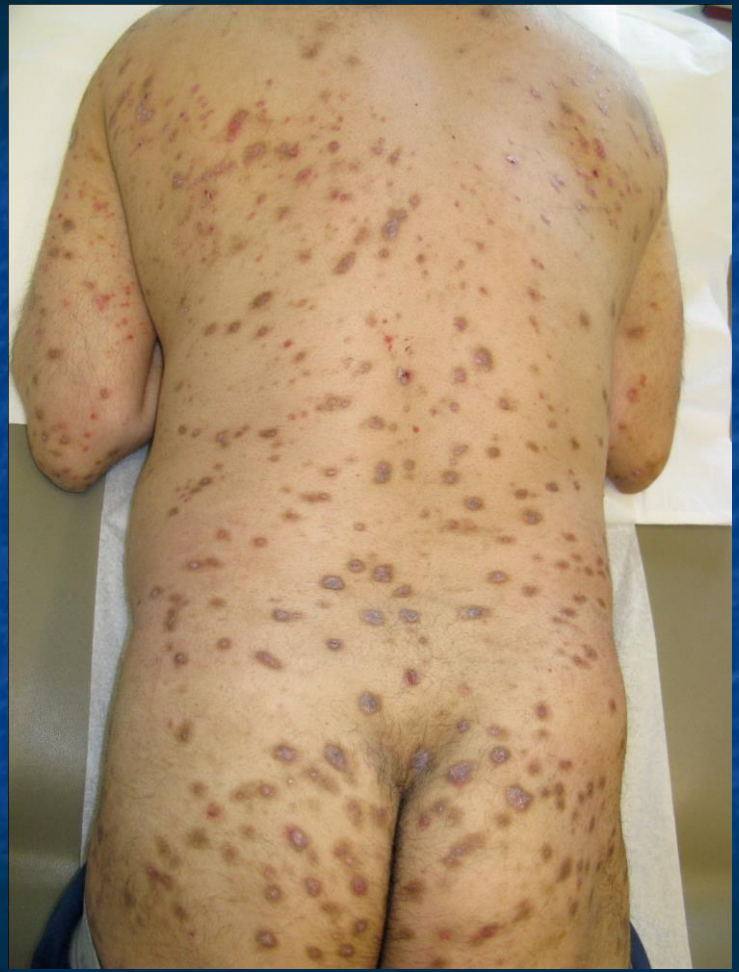

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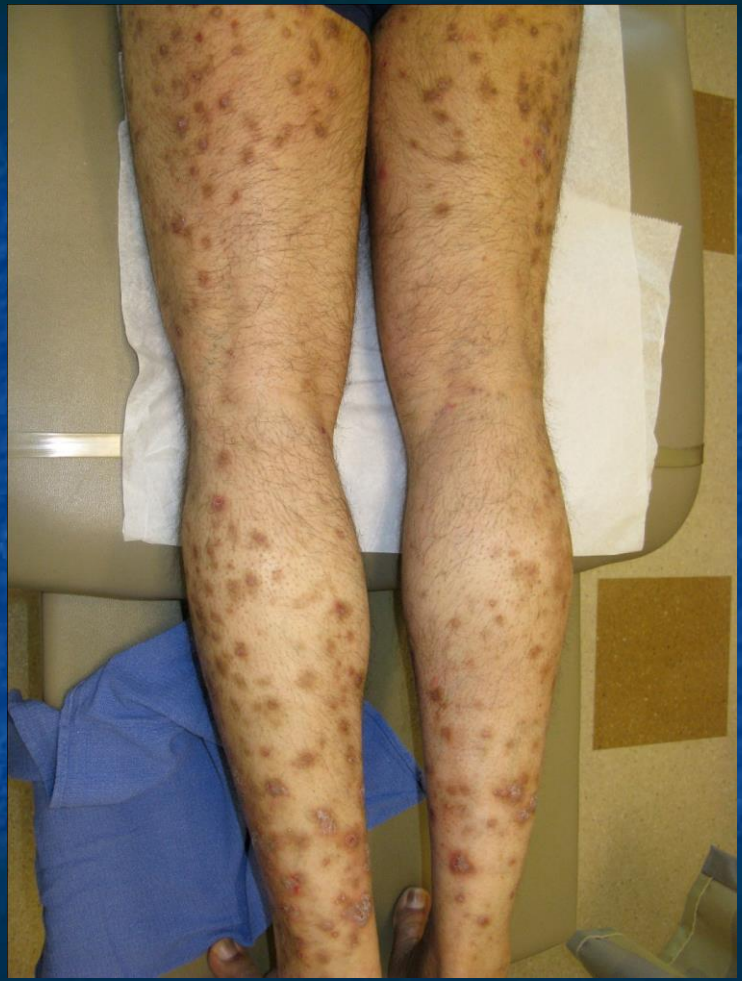
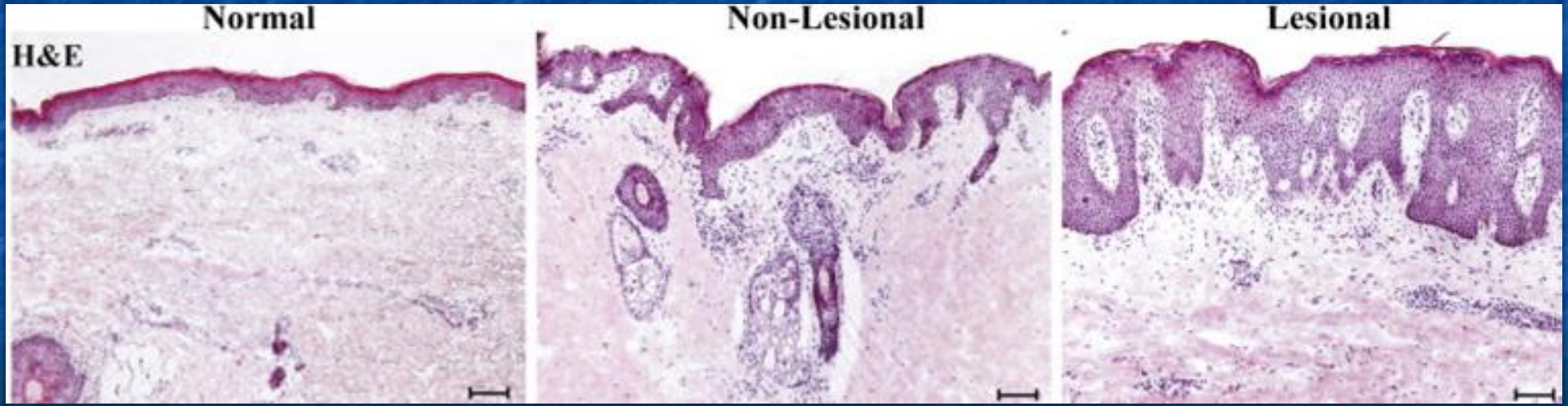


http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2814072/

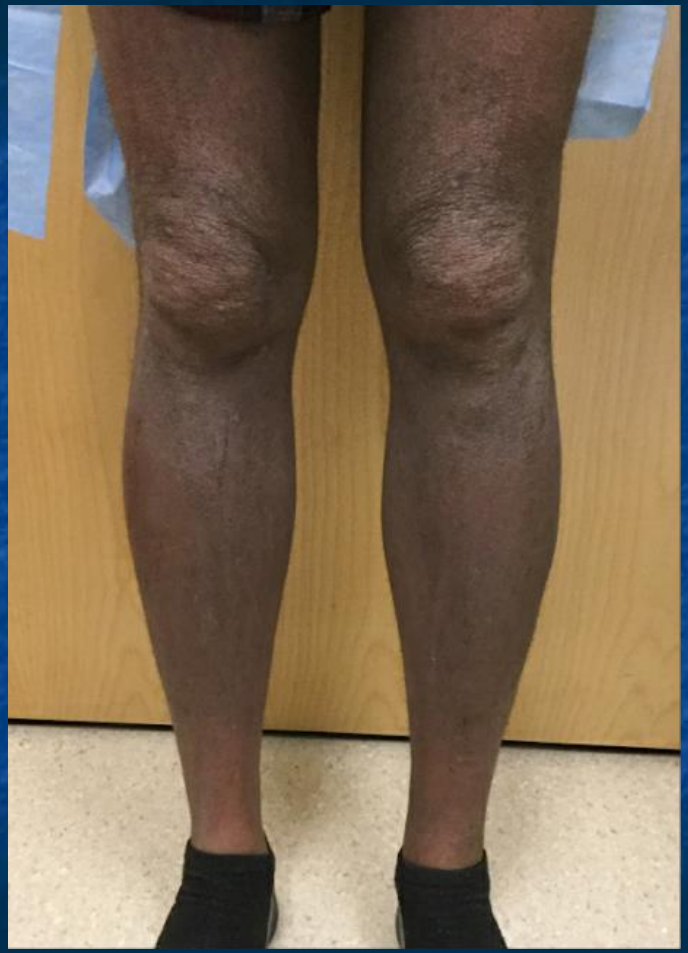
Why could soak and smear be considered both DIAGNOSTIC and therapeutic particularly in our Skin of Color patients with eczematous dermatitis?

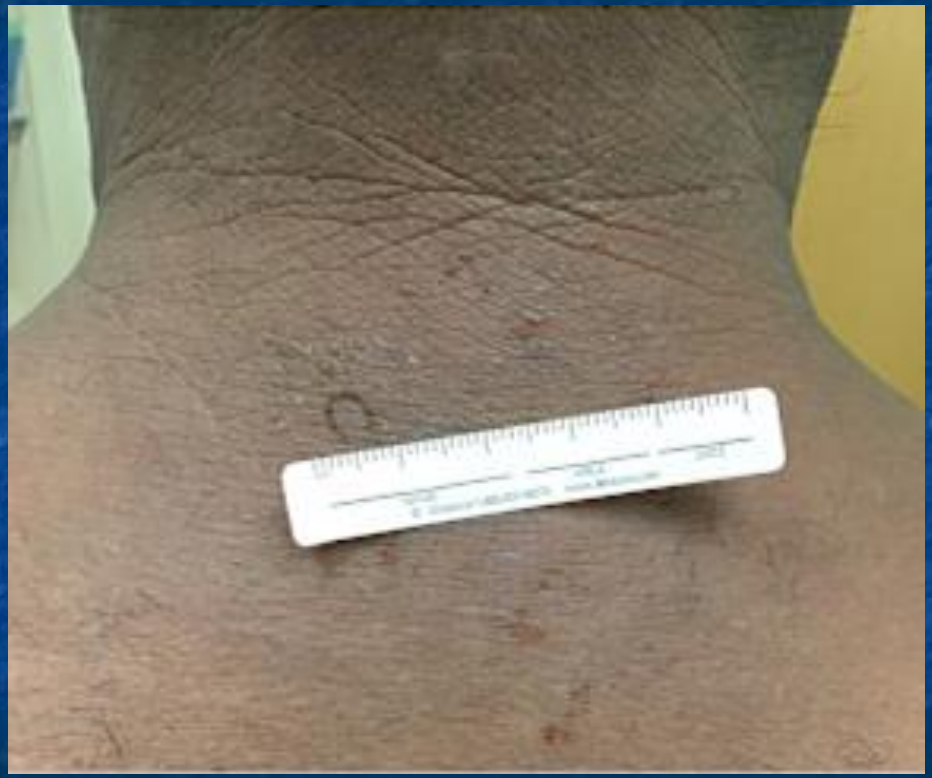
Wilson BN, Alexis A, Murase JE. Art of Prevention: Atopic Dermatitis in Women and Families of Color -- Prevalence, Recognition, and Prevention. International Journal of Women's Dermatology. December 2021.

It is extremely important to treat the WHOLE skin (subclinical dermatitis is everywhere)



Suarez-Farinas M et al. J Allergy Clin Immunol 2011; 127:954-964. e1-4



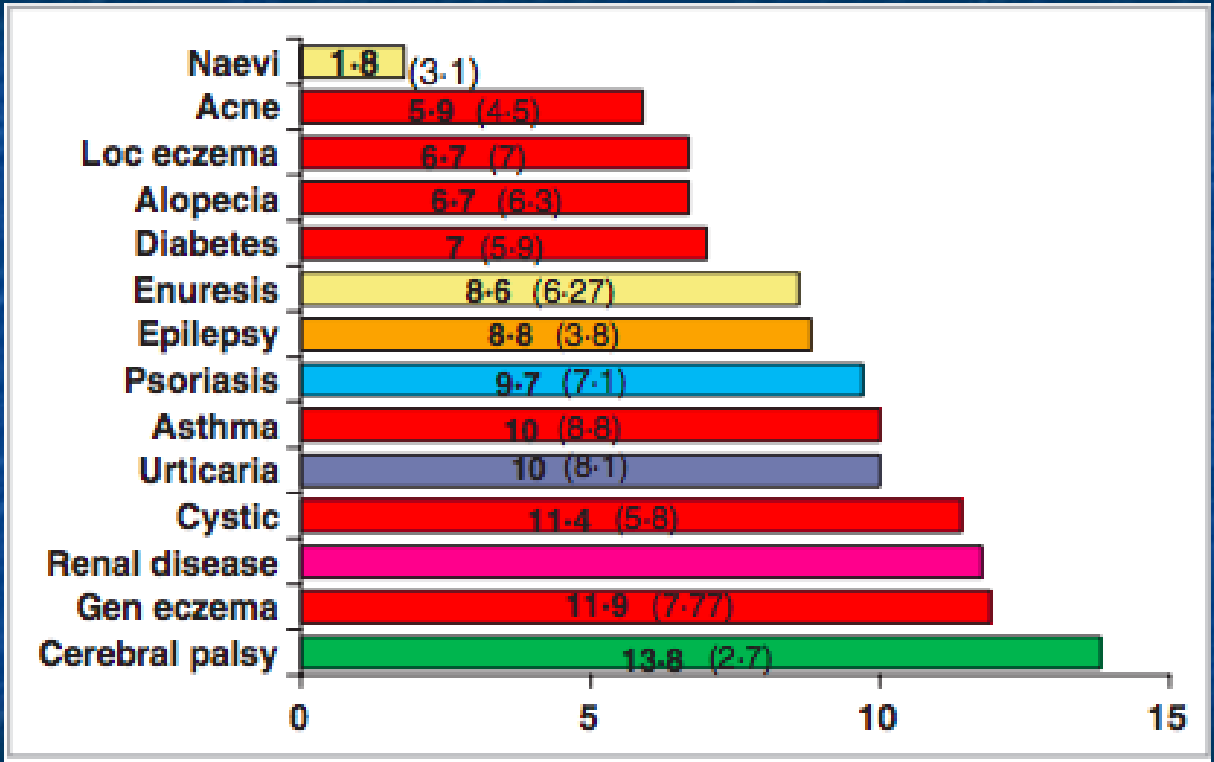


When it is difficult to assess the level of erythema, it becomes even more important to ask about pruritus!

1. Does the itch distract you from activities during the day? (5-7)
2. Does the itch wake you up at night? (8-10)
3. NRS (0-10 worst itch in the past 24h?)

Gottlieb A, Feng J, et al. JAAD 2009; 63(4): 580-6.

Comparative Impact on QOL

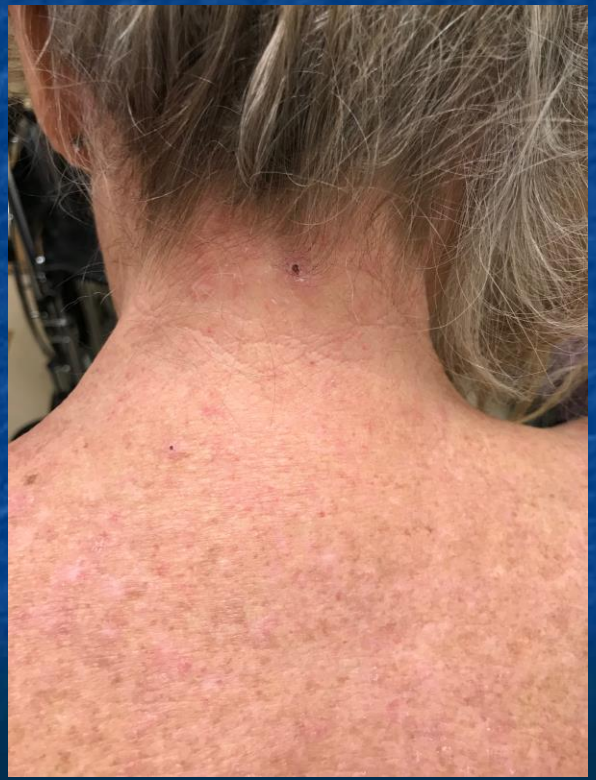


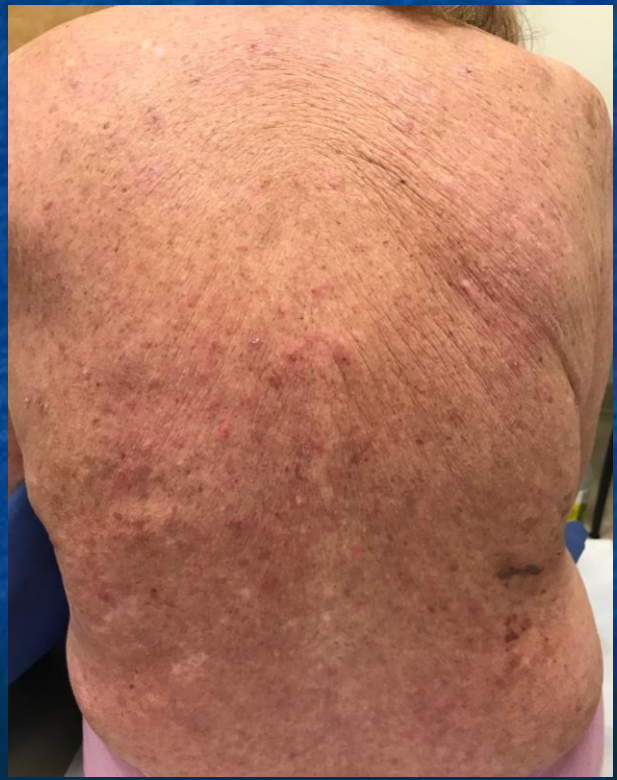
Beattie PE, Lewis-Jones MS. Br J Dermatol. 2006; 155: 145-151.

Plan that clears the majority of AD

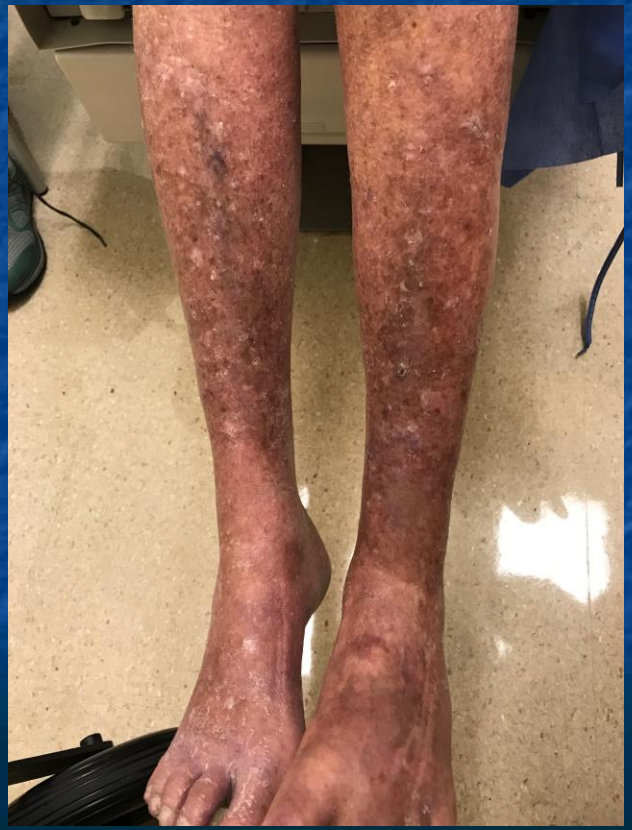
- Calm down skin with soak and smear and bacterial culture/antibiotics (back clear enough to patch test)
- Perform patch testing
  - North American Contact Dermatitis Series (80, Dormer)
  - External Agents/Emulsifier Tray (27, Allergeaze)
  - Fragrance (48, Dormer)
  - Corticosteroid (13, Allergeaze)
  - Personal products
- 2-3 months of allergen avoidance
- Dupilumab or other AD systemic therapy

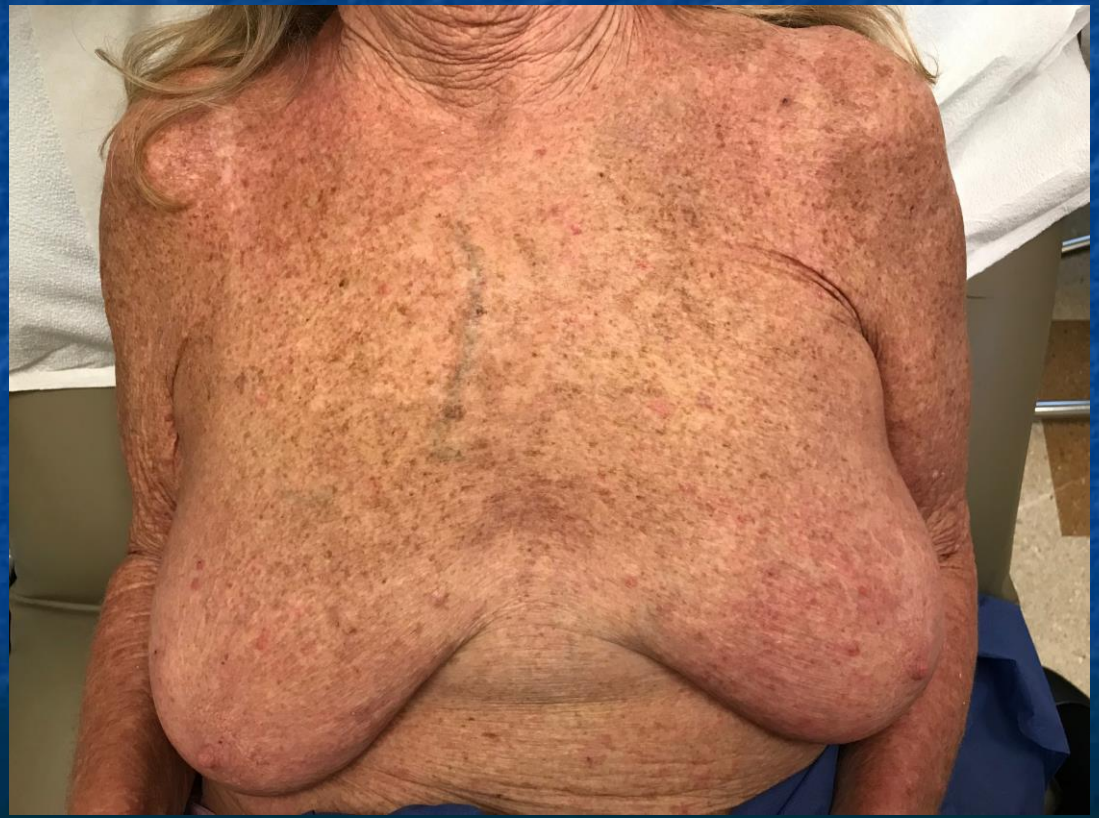
“Atopic Dermatitis” that has failed dupilumab



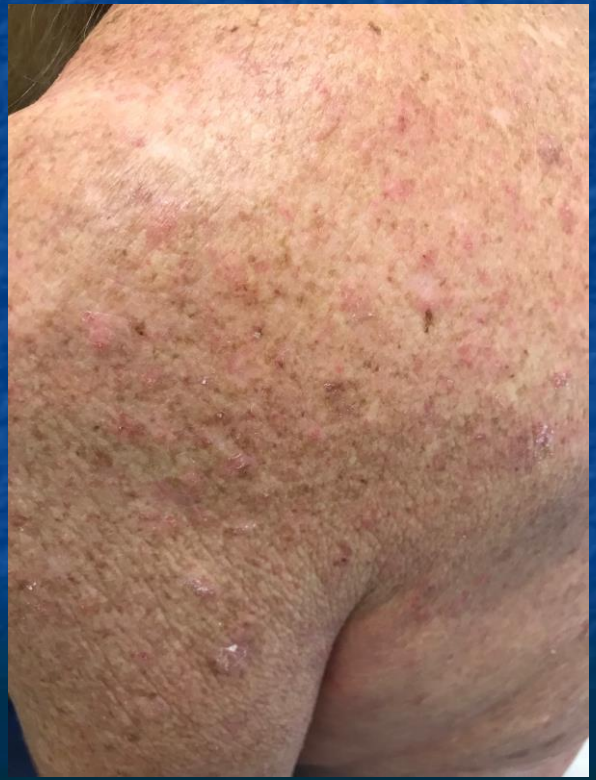


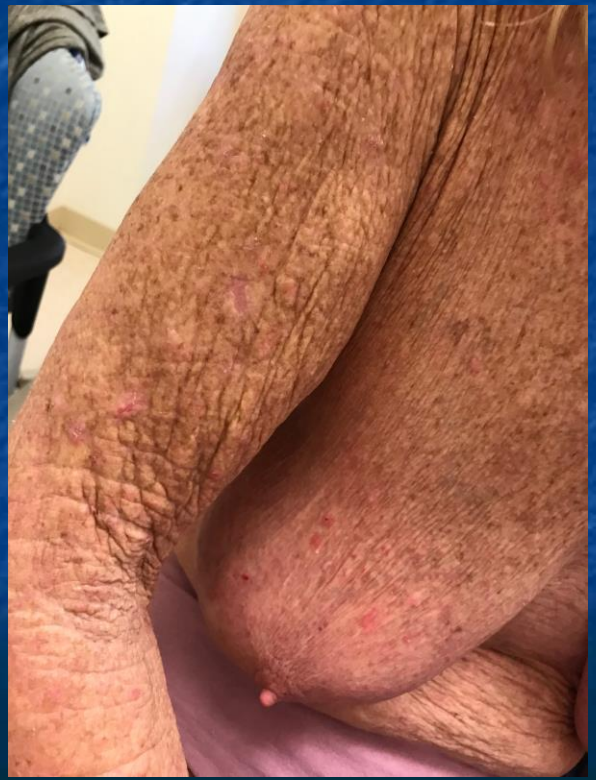
Atopic Dermatitis that has failed dupilumab

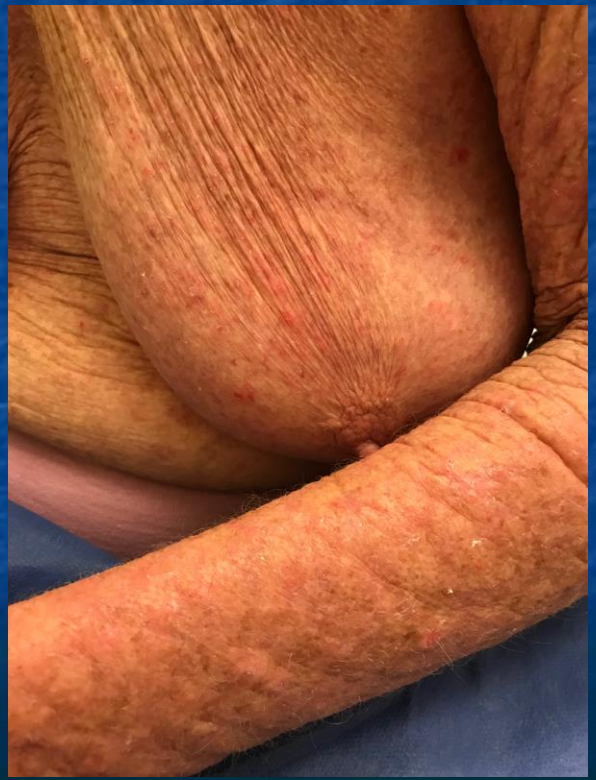




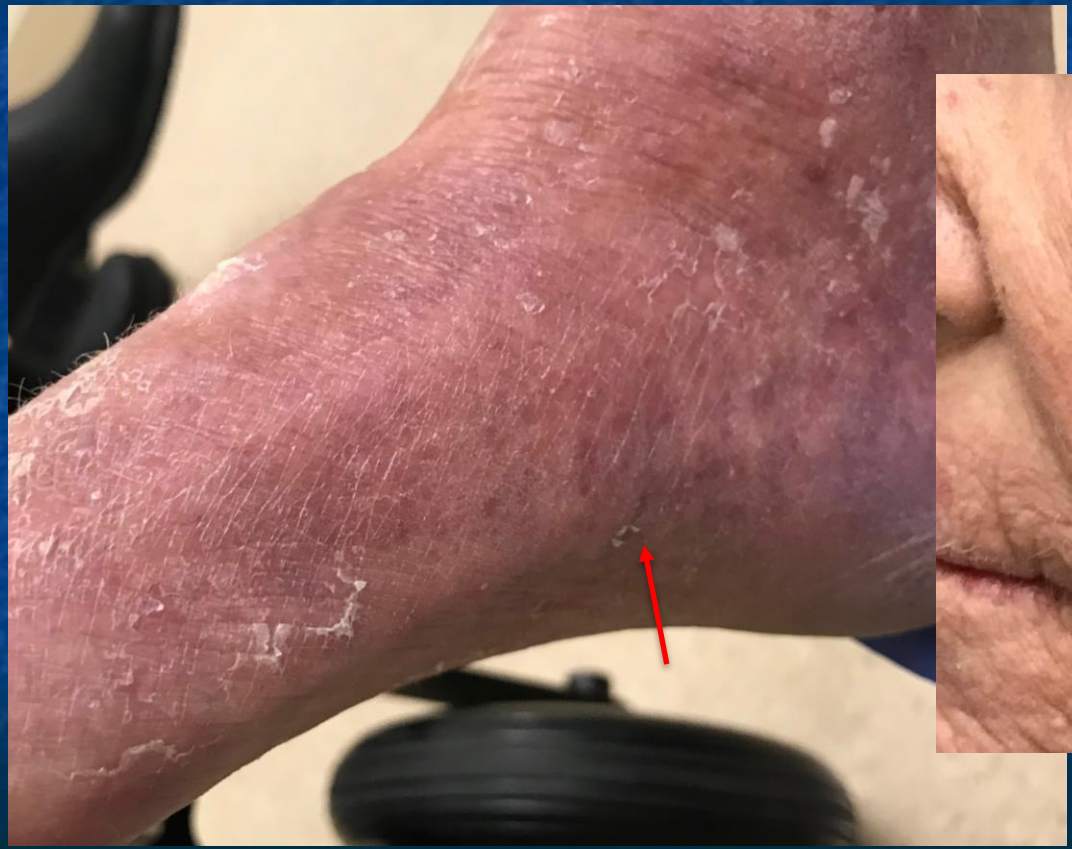
Atopic Dermatitis that has failed dupilumab

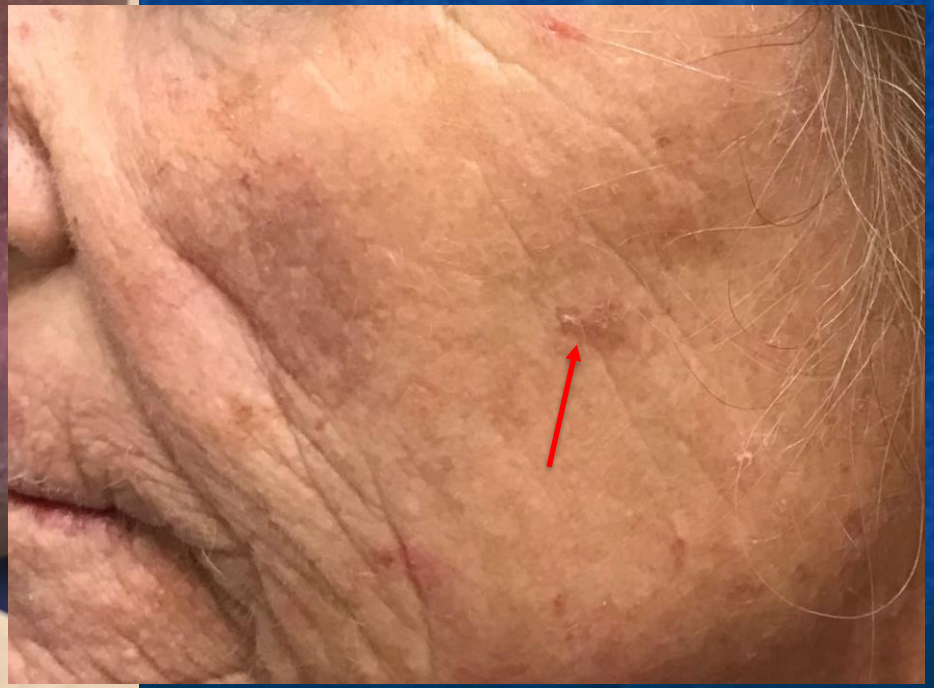


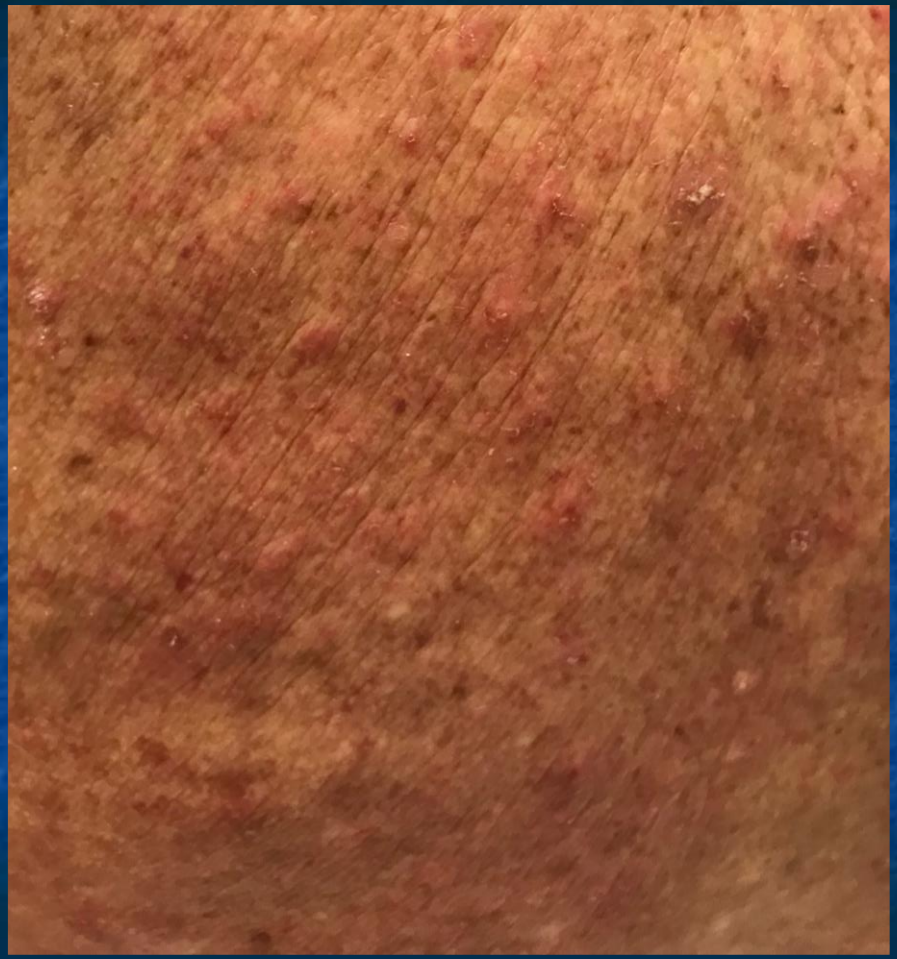


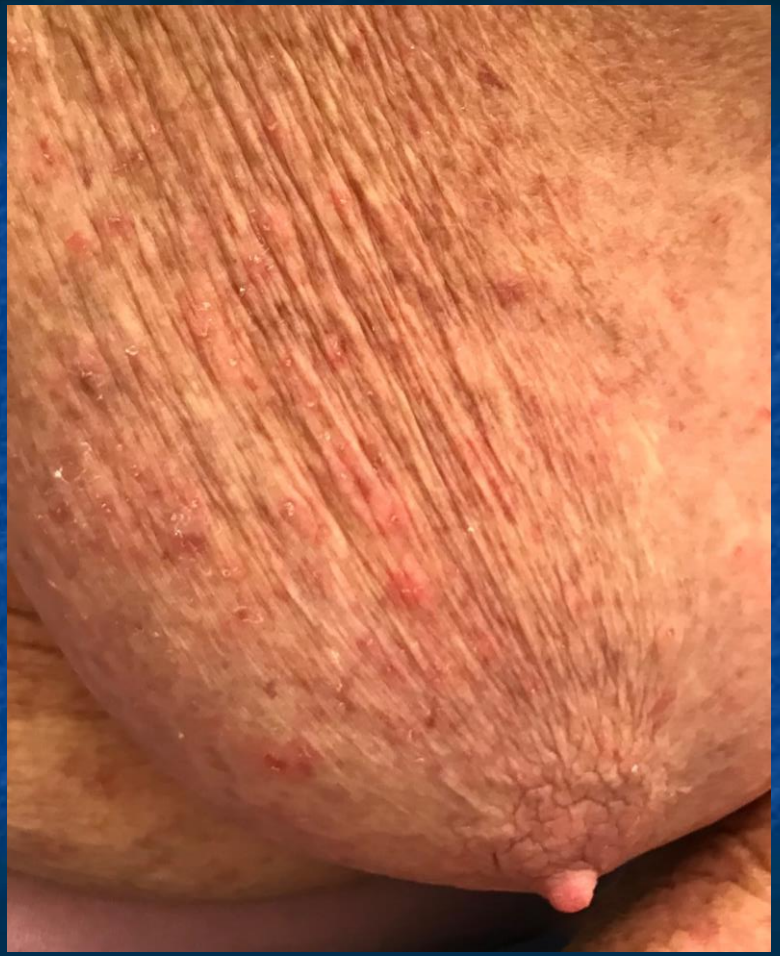


A closer look…





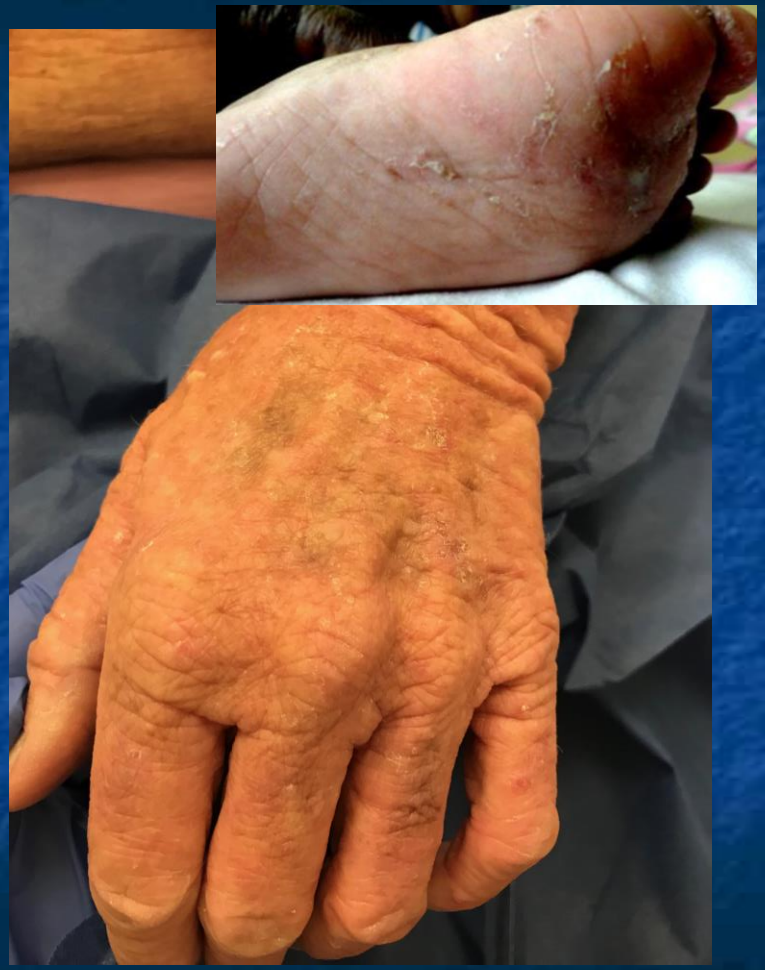




Scabies in the Elderly

- More common on the face and scalp
- Complete sparing of the fingerwebs
- Burrows on the sides and soles of the feet

Make sure permethrin is applied to hairline, scalp, neck, temples, cheeks, and forehead!



Scabies in the Elderly. Suresh R, Raffi J, Murase JE, Bulter D. WDS International Forum World Congress Milan, Italy July 2019.

Do not undertreat!!!

I + P

P

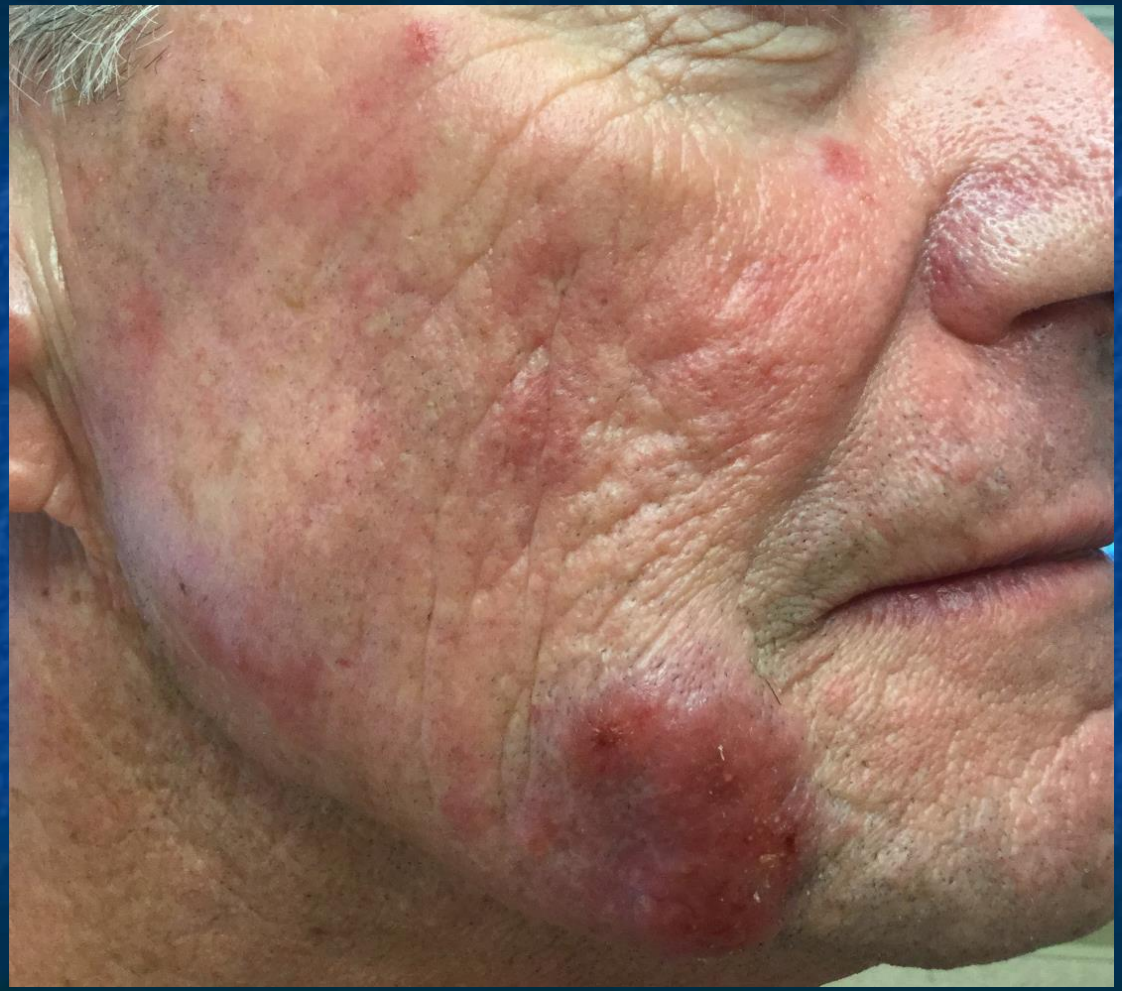
I + P

(one week apart)

I = Ivermectin at 0.2 mg/kg

P = Permethrin from neck down (unless elderly)

Braun M, Suresh R, Raffi J, Butler DC, Murase JE. The Challenge of Diagnosing Scabies in the Elderly: A Case and a Novel Therapeutic Approach. International Journal of Women's Dermatology. 2020; 6(5): 452-453



Atopic Dermatitis that has failed 4 m dupilumab:

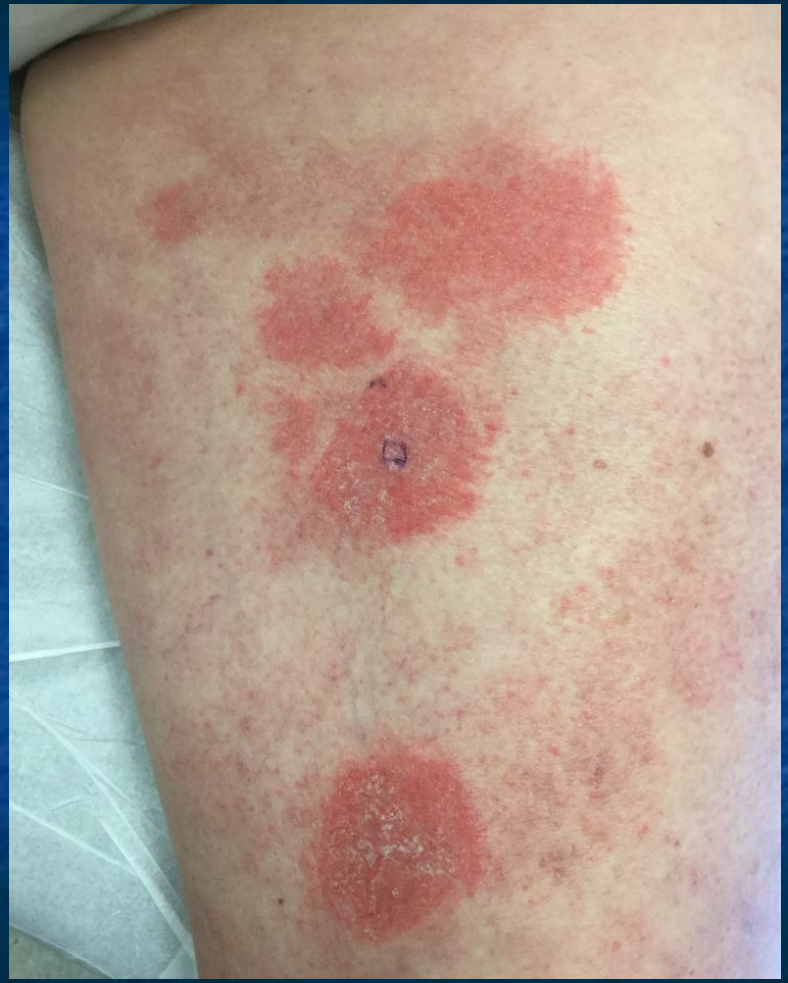
Right cheek 5 y prior: suppurative folliculitis involving multiple hair follicles

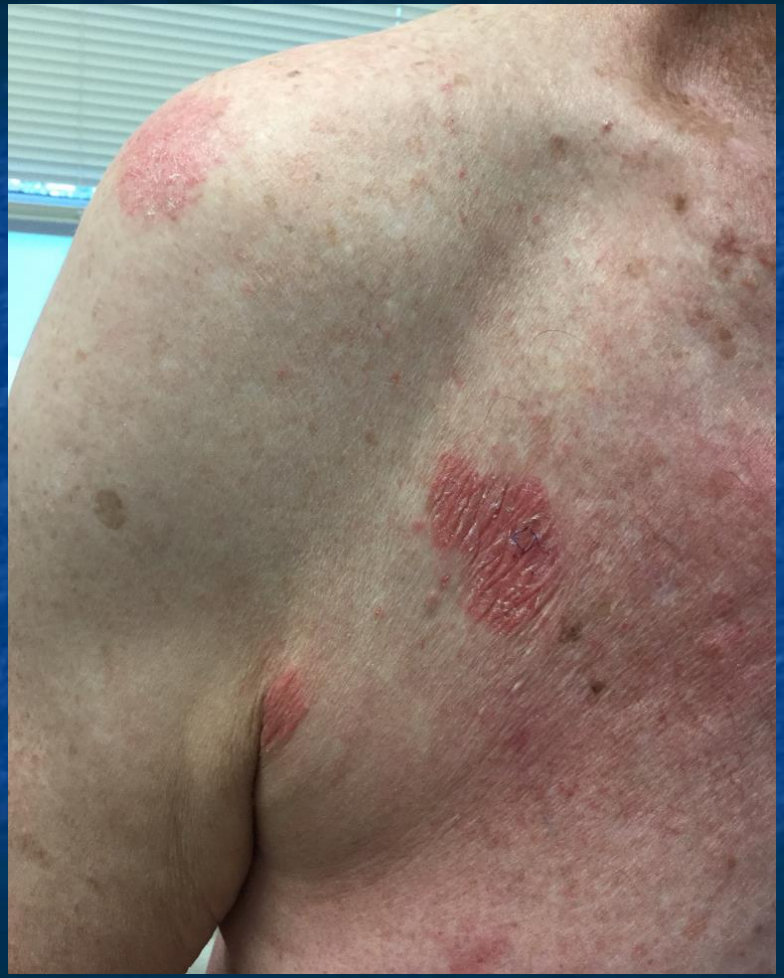
Right cheek 1 y prior:
Pandermal mixed lymphohistiocytic infiltrate and granulomatous perifolliculitis compatible with severe granulomatous rosacea

Lower back and leg 2 y prior:
Subacute spongiotic dermatitis
Patch testing 2 y prior:
NACDS unrevealing, no impt w/ hypoallergenic regimen

http://www.goodskincare.com.au/wp-content/uploads/2016/06/Bellybutton-Psoriasis-300x208.jpg/

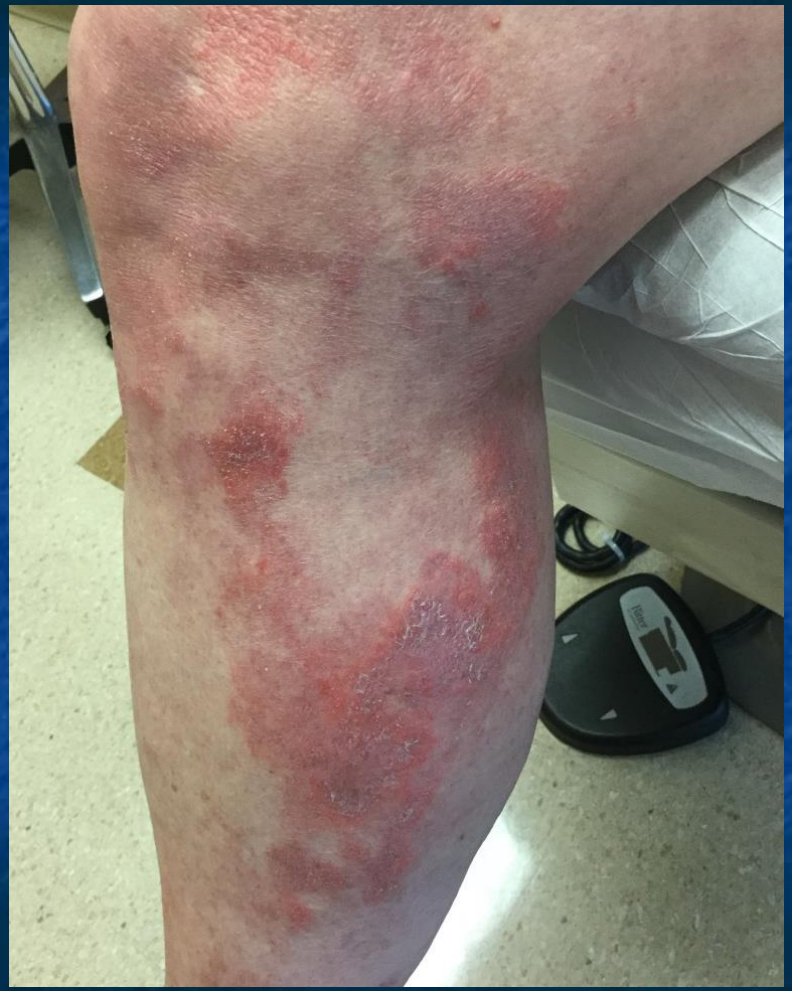
http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2814072/

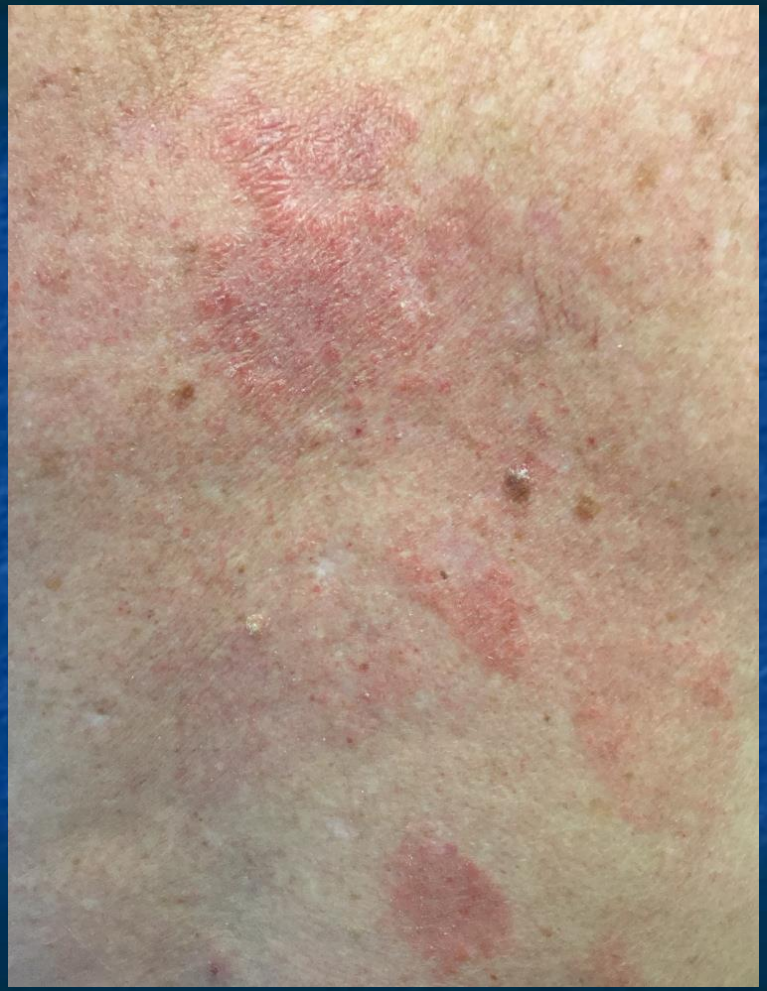




http://www.goodskincare.com.au/wp-content/uploads/2016/06/Bellybutton-Psoriasis-300x288.jpg/

http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2814072/



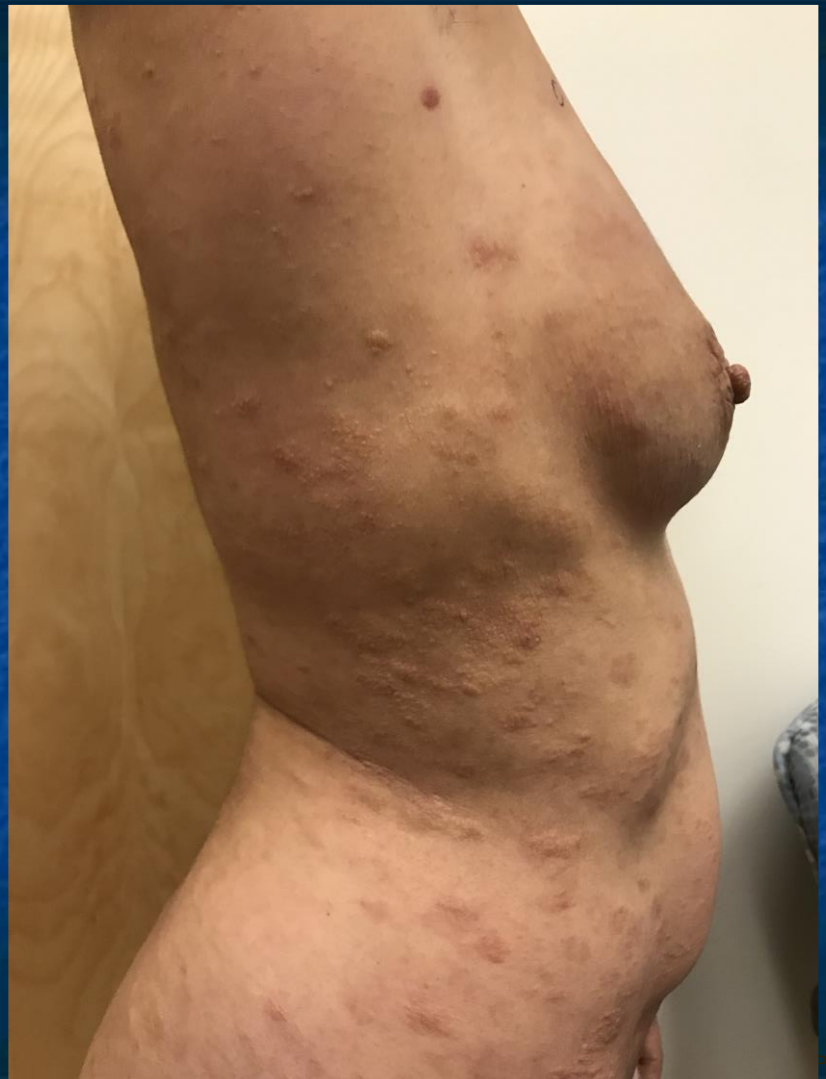


http://www.goodskincare.com.au/wp-content/uploads/2016/06/Bellybutton-Psoriasis-300x288.jpg/

http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2814072/

Diagnosis on rebiopsy: TCR Delta-expressing epidermotropic and folliculotropic T-cell lymphoma

Lesson learned:
-Clinical impression takes precedence over the pathology!!!
- Consider how to make 2 diagnoses 1

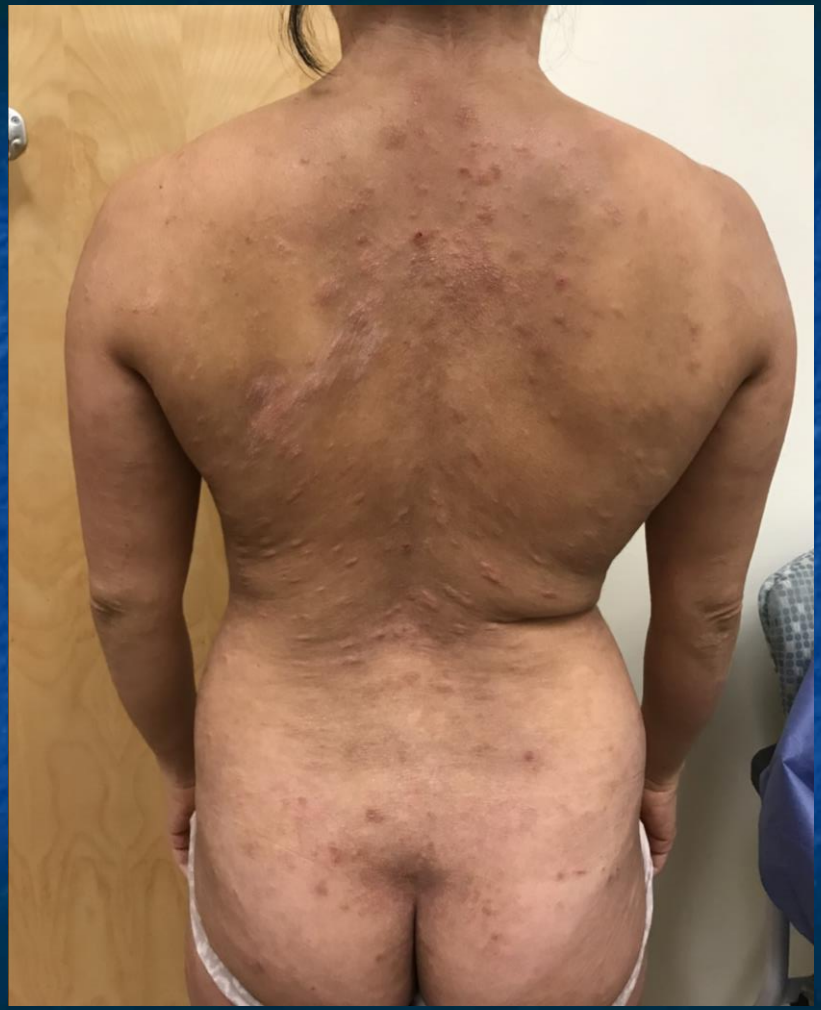


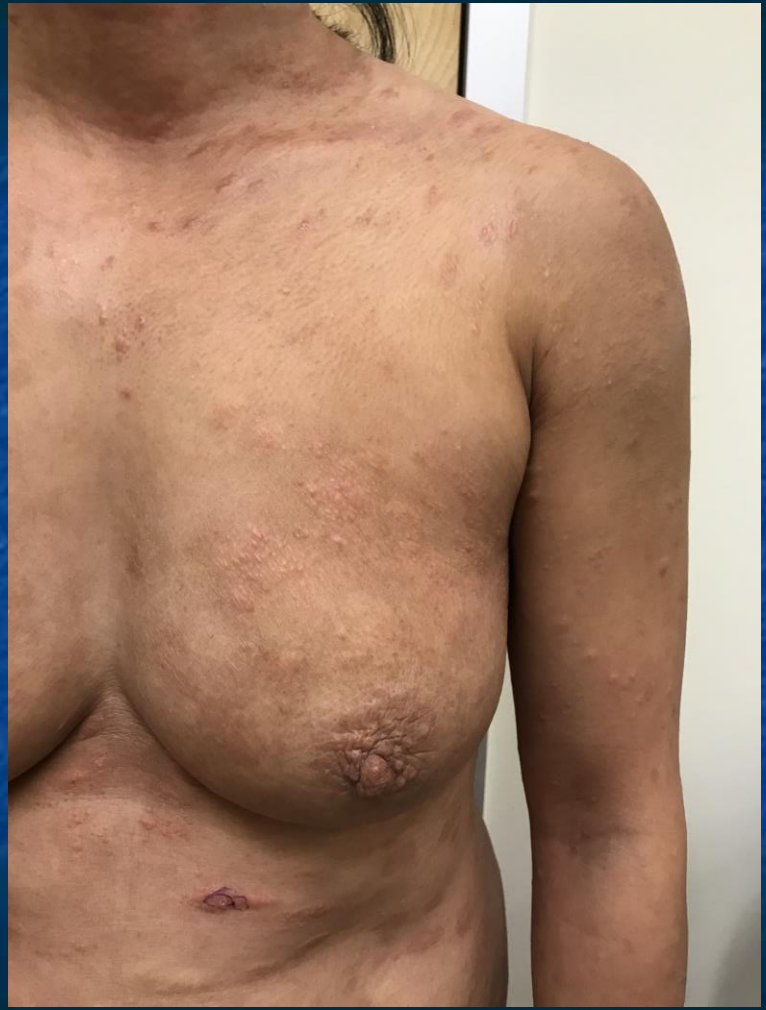
Atopic Dermatitis that has failed 11 m dupilumab:

4 years of pruritus, no response to 155 narrowband UVB treatments, cyclosporine up to 200 mg, guselkumab, methotrexate up to 17.5 mg weekly

Left scalp 6 mos prior: Superficial perivascular and perifollicular lymphohistiocytic infiltrate

Right chest 3 years prior: Slight spongiosis and papillary dermal fibrosis and increased mucin





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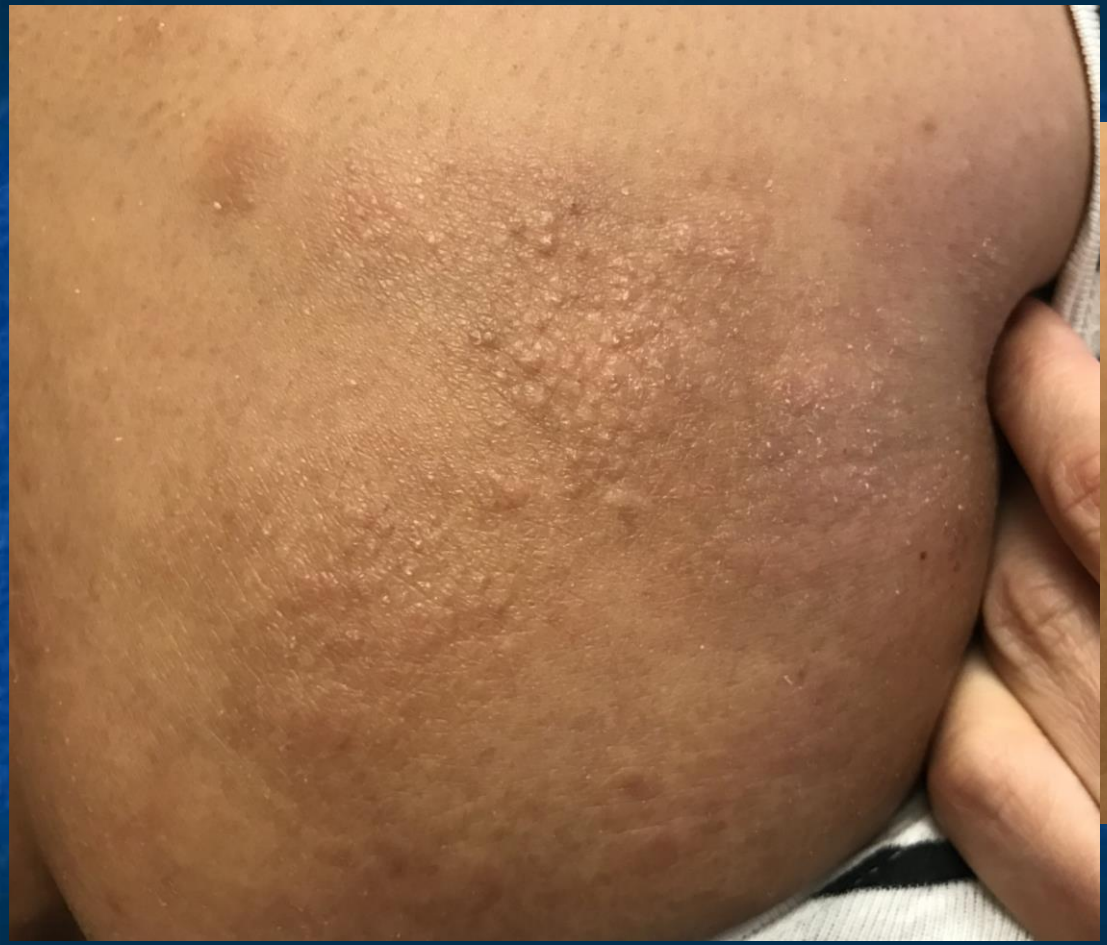

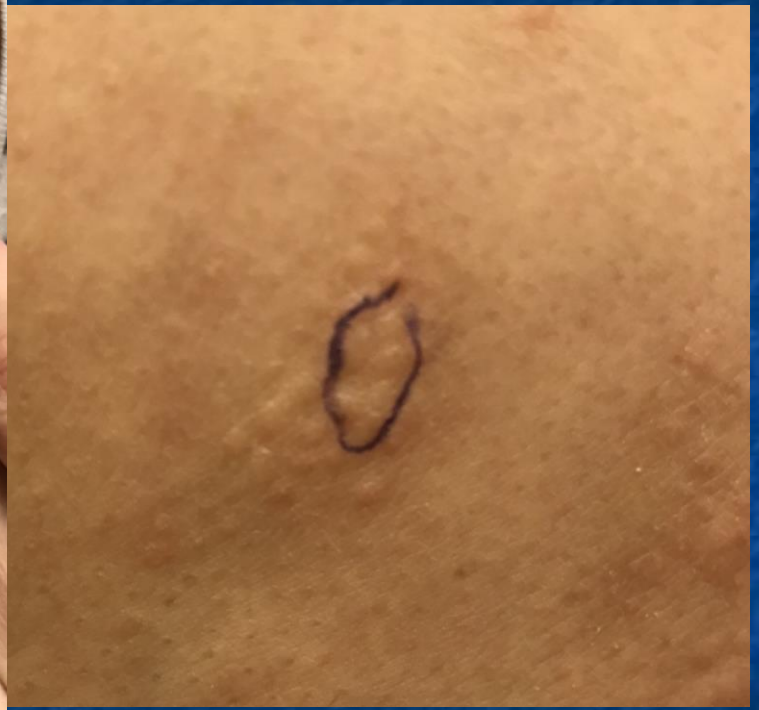

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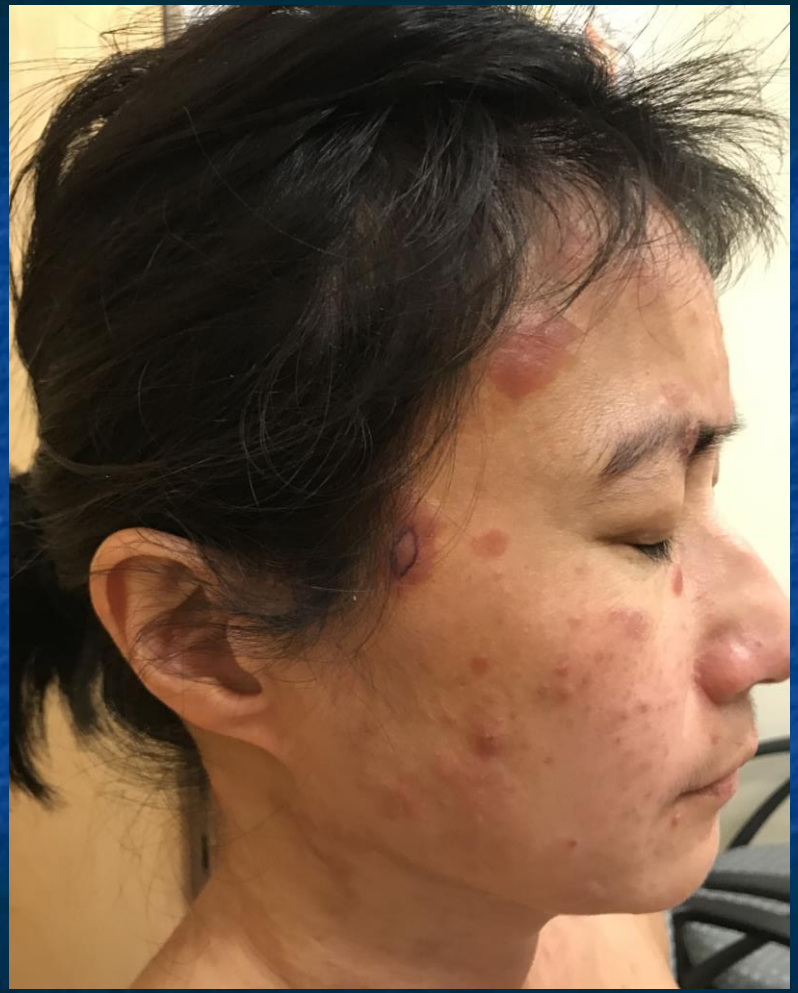
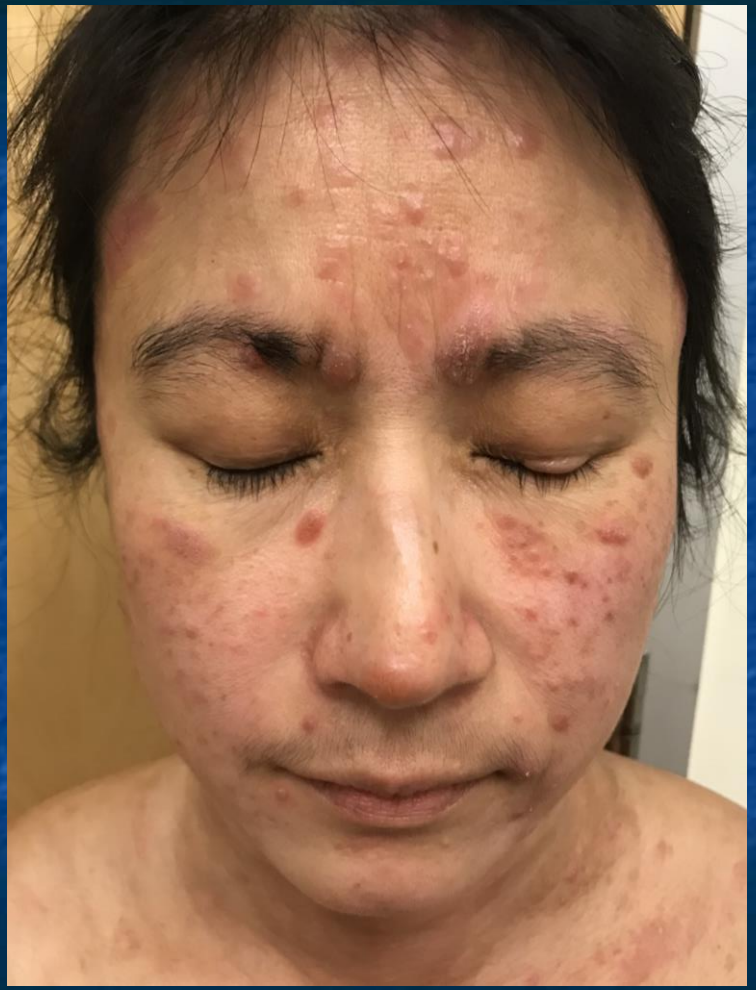
http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2814072/





http://www.goodskincare.com.au/wp-content/uploads/2016/06/Bellybutton-Psoriasis-300x208.jpg/

http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2814072/

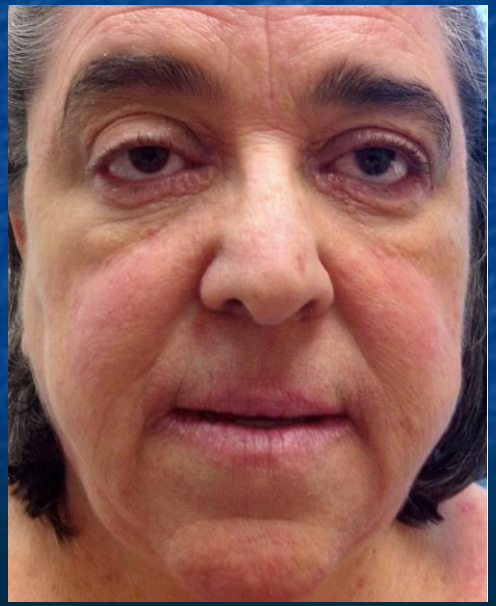
Semaan S, Abel MK, Raffi J, Murase JE. A clinician's guide to cutaneous T-cell lymphoma presenting as recalcitrant eczematous dermatitis in adults. International Journal of Women's Dermatology. 2021 May 4; 7(4): 422-427.

Table 1
Summary of clinical pearls for cutaneous T-cell lymphoma

History	Inquire about history and progression of systemic symptoms, such as fevers, chills, malaise, fatigue, and weight loss
Physical examination	Assess for lesions confined to bathing trunk distribution in non–sun-exposed areas, such as the buttocks, medial thighs, and breasts (compared with allergic contact dermatitis, which commonly presents on the hands, eyelids, face, and/or perianal/genital area) Perform extensive lymph node examination of all cervical, supraclavicular, axillary, and inguinal lymph nodes when clinical suspicion of cutaneous T-cell lymphoma is high
Biopsy	Low threshold to biopsy annular lesions when KOH examination is negative for hyphal elements, dermatitis is follicle-centric, atrophic plaques with a cigarette paper-like consistency are present, or dermatitis is located in doubly covered areas of the trunk and extremities Obtain multiple biopsies with adequate tissue (broad shave biopsy is recommended), and repeat biopsy if clinicopathologic discrepancy or if the patient develops large, nodular lesions Stop corticosteroids at least 2 weeks prior to obtaining a biopsy Have a low threshold to re-biopsy if there is lymphocyte exocytosis and/or parapsoriasis on previous biopsies Have a low threshold to re-biopsy if there is chronic residual dermatitis after patch testing and allergen avoidance or if dermatitis is recalcitrant to standard therapy
Tests/laboratory testing	Repeat complete blood count because leukocytosis may take time to develop, and consider manual complete blood count if white blood cell count is elevated Flow cytometry (leukemia/lymphoma blood panel) may aid in diagnosis

Most common "Dupilumab Failure"

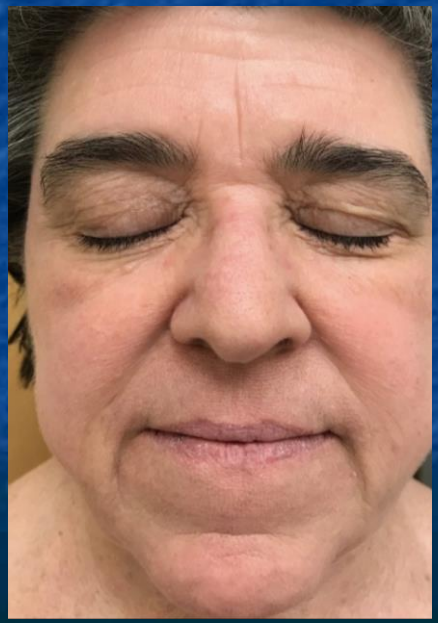
- Suresh R, Murase JE. The Role of Expanded Series Patch Testing in Identifying Causality of Residual Facial Dermatitis Following Initiation of Dupilumab Therapy. Journal of the American Academy of Dermatology Case Reports. 2018: 4(9), 899-904.



6 years prior to D: NACDG, Sunscreen, Corticosteroid

9 months after D: Corticosteroid, Emulsifiers, Eye medicaments, Fragrance, Sunscreen, Cosmetics, patient products

RESULT
Allergy to limonene in Wen shampoo



Take-home points

- Be a diagnostician, and then a therapeutician
- Use clinical context clues and/or biopsy to distinguish eczematous and papulosquamous dermatitis
- Remember itch is invisible—the onus is on the clinician to ask!
- Remember pigment can mask the degree of erythema and severity of the dermatitis

Thank you for your kind attention.
Any questions? Comments?

Jenny Murase jemurase@gmail.com