Overview of Papulosquamous Disorders: Assessment, Treatment & Evaluation Pearls

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Skin, Bones, Hearts & Private Parts

Disclosures

* I am not speaking on behalf of, nor do I represent the Veterans Health Administration
* Advisory Board, Consultant, Speaker's Bureau:
  - AbbVie
  - Celgene
  - Lilly
  - Sanofi Genyzme
  - Regeneron
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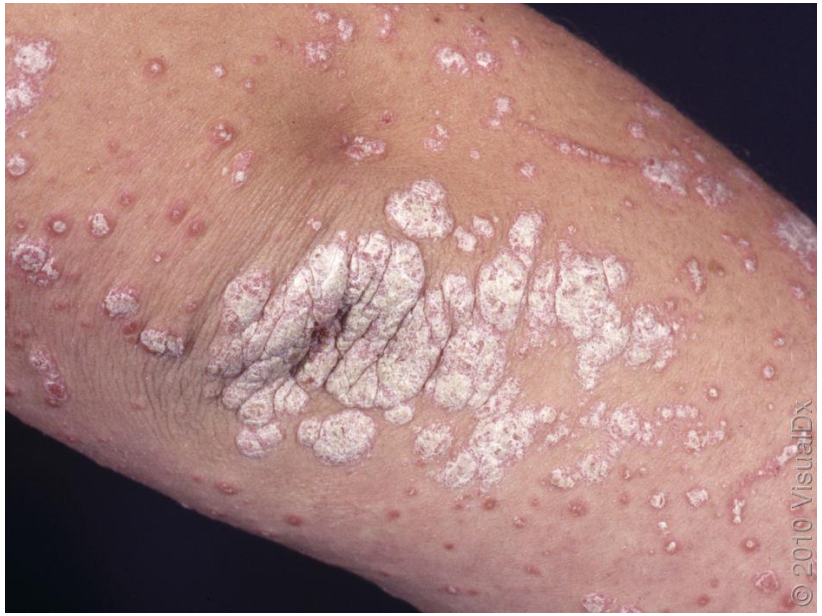
Objectives

* Identify clinical manifestations of 3 papulosquamous disorders commonly seen in the primary care setting.
* Identify evidence-based, cost-effective treatments for eczematous disorders.
* List 4 key patient education pearls appropriate for managing patients with papulosquamous disorders.

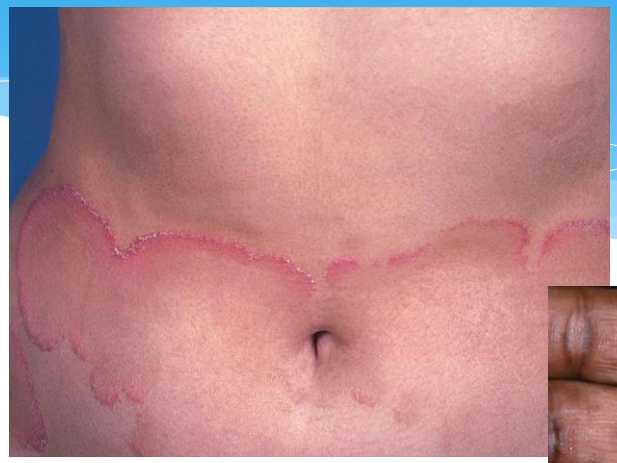
What the heck is a papulosquamous disorder?

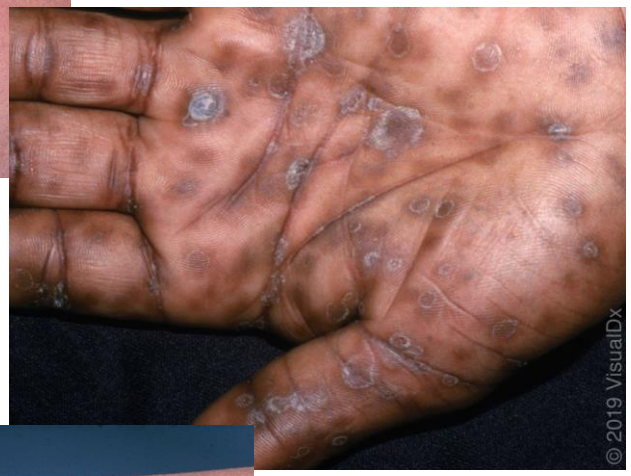
Papulosquamous disorders are a group of dermatologic conditions that are simply characterized as having papules and plaques.

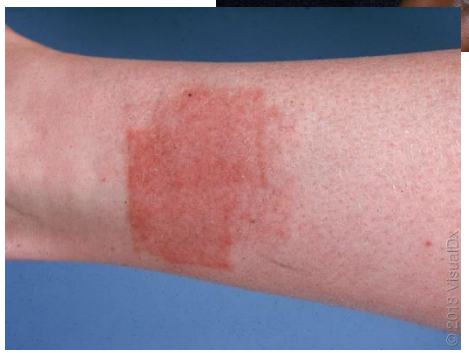


Papulosquamous Disorders

* Tinea corporis
* Lichen planus
* Lichen sclerosus
* Secondary syphilis
* Atopic dermatitis
* Contact dermatitis
* Seborrheic dermatitis
* Nummular eczema
* Subacute lupus erythematosus
* Pityriasis rosea
* Psoriasis







American Academy of Dermatology Simple Approach

* Rule out tinea corporis with KOH test
* If KOH is negative, is it psoriasis?

  -Look at classic distribution

  -Ask about h/o strep infection
* Could it be pityriasis rosea?

  -Teens/early 20s, +/- herald patch, follows skin lines
* Could it be syphilis?

All else should be responsive to topical steroids

AAD. "Learning module: Red scaly rash: The papulosquamous eruption" at https://www.aad.org/education/basic-derm-curriculum/suggested-order-of-modules/red-scaly-rash.

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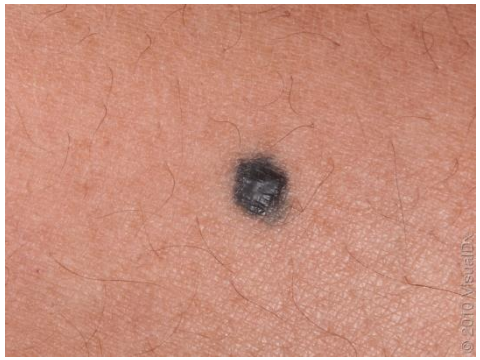
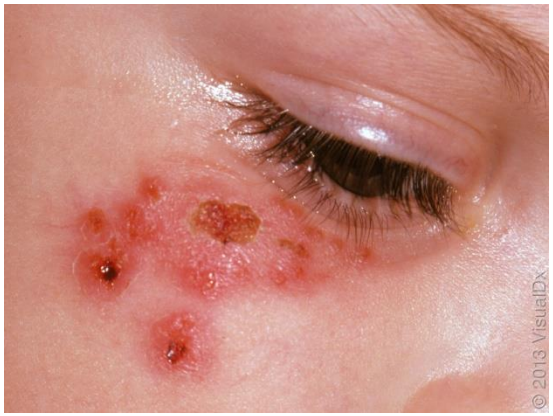
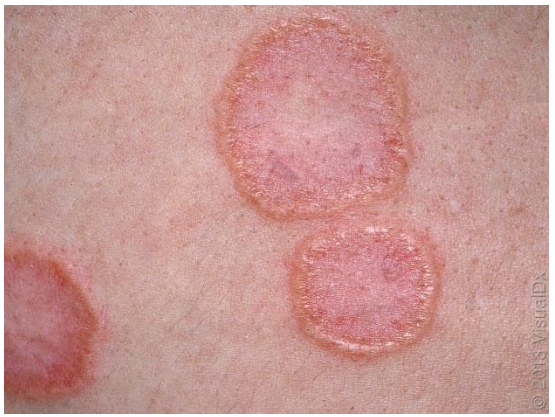
Evaluating the Patient

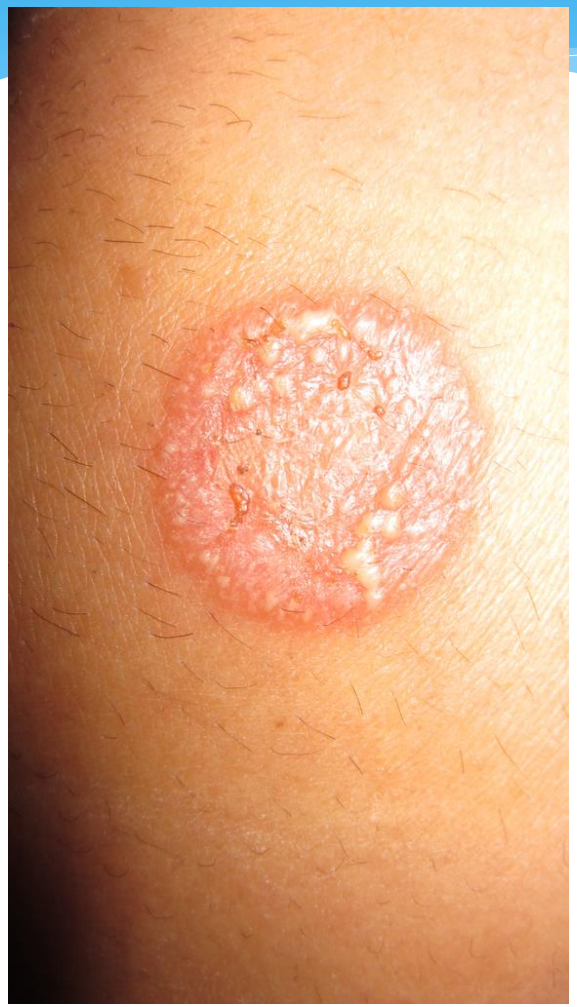
* Type of lesion (macule, papule, pustule)
* Location (left nare, rather than nose)
* Pattern (dermatomal, linear, reticulated)
* Color (erythematous, violaceous, skin-colored)
* Size (1 cm, 4mm)
* Presence of secondary characteristics (scaling, crusting, atrophy)







Tinea



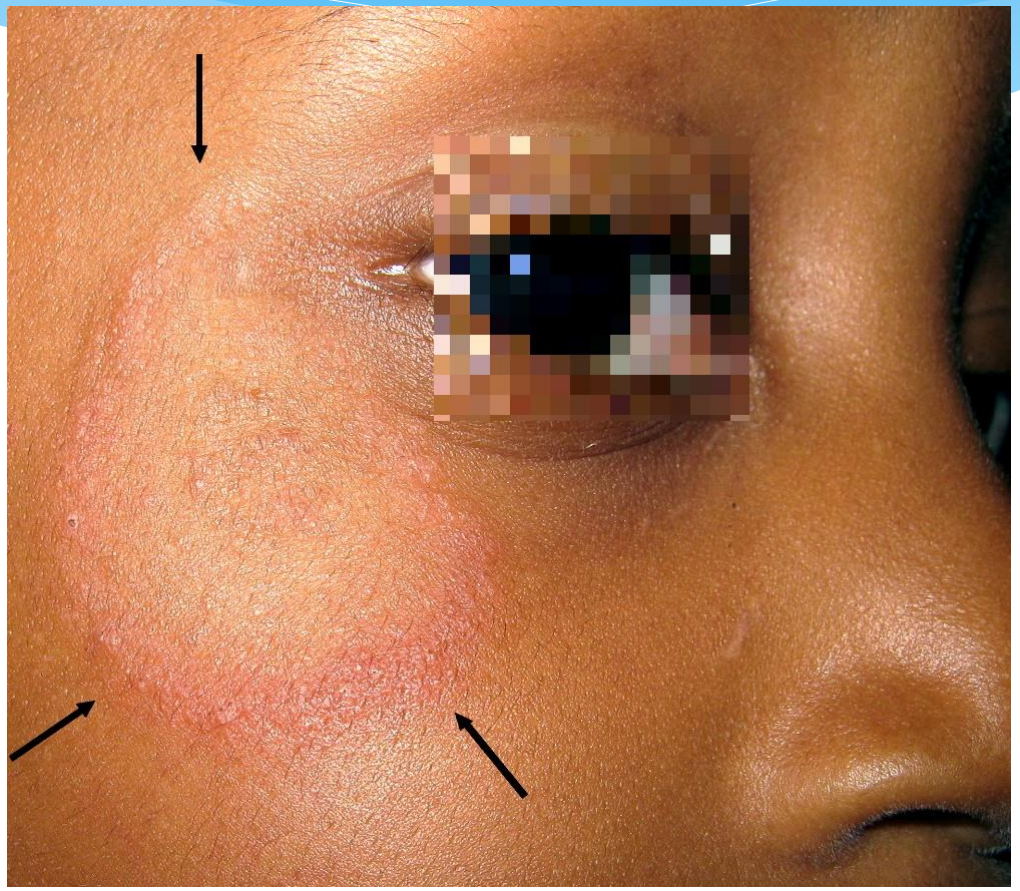
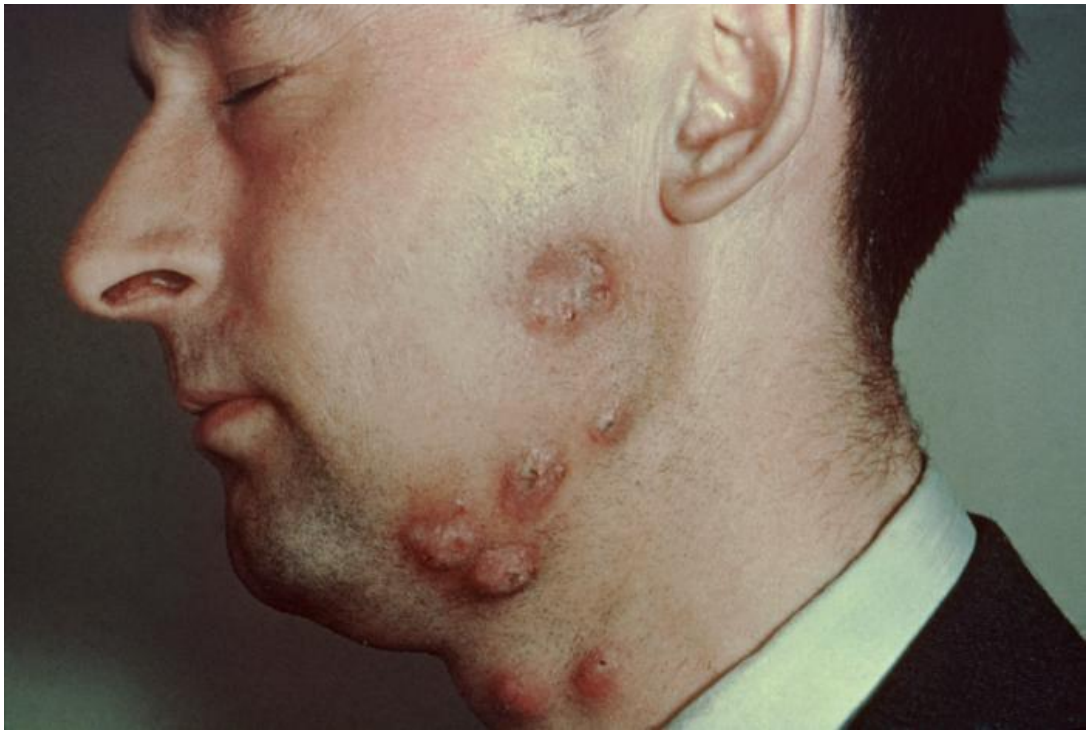


Image: https://en.wikipedia.org/wiki/Tinea_faciei#/media/File:Mycose_peau_glabre_-_Dermatophytosis.jpg

Reference:https://upload.wikimedia.org/wikipedia/commons/thumb/3/37/Tinea_corporis.png/575px-Tinea_corporis.png

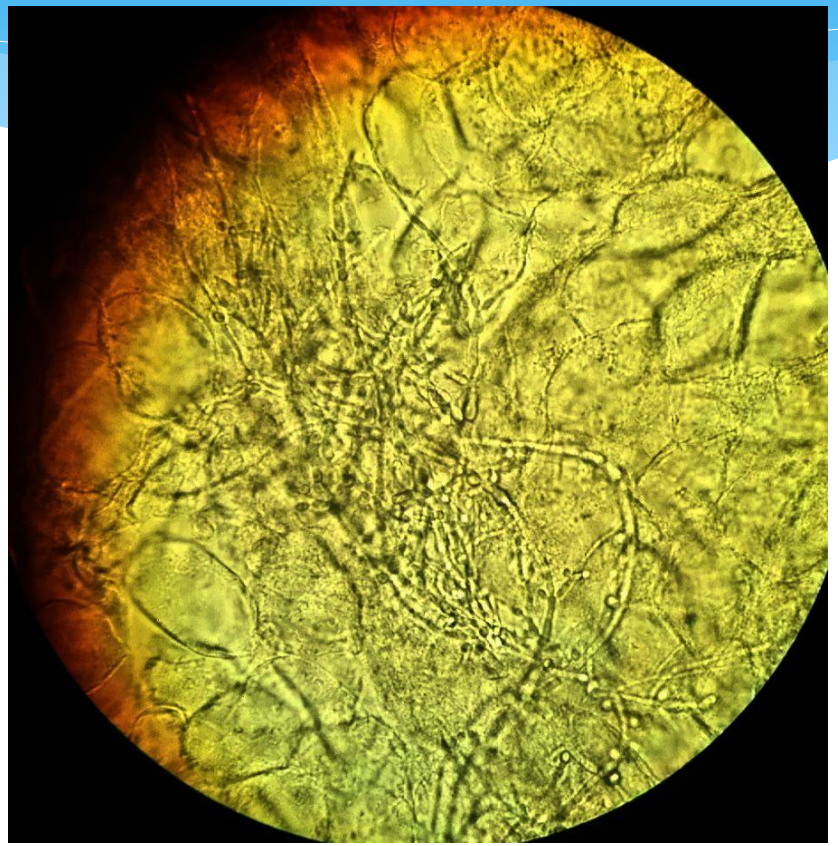
Tinea barbae



Reference: https://upload.wikimedia.org/wikipedia/commons/2/22/Tinea_barbae_4807_lores.jpg

Tinea

* Clinical presentation: scaling, well-demarcated, faintly pink/erythematous patches
* Differential diagnosis: psoriasis, contact dermatitis, eczema
* Test: Skin scraping for KOH test, swab for culture



https://en.wikipedia.org/wiki/KOH_test#/media/File:Vaginal_wet_mount_of_candidal_vulvovaginitis.jpg

Tinea Treatments

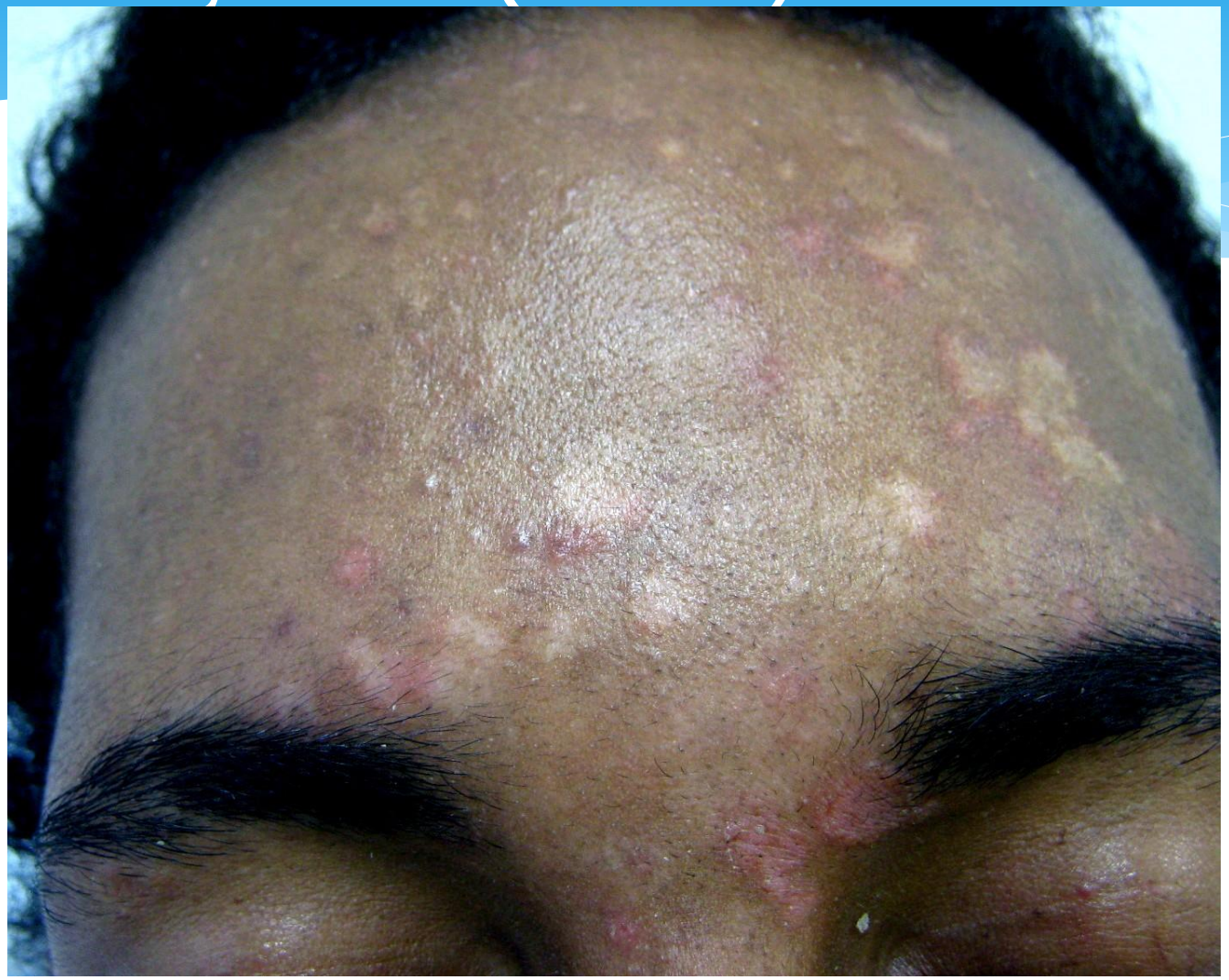
* Azoles (clotrimazole and miconazole) are fungistatic and should be used BID for active infection and consider biw for prevention
* Allylamines (terbinafine) are fungicidal and have higher cure rates than azoles (can be more expensive)
* Extensive involvement may require systemic tmt

  terbinafine 150mg po qd

  fluconazole (maybe)

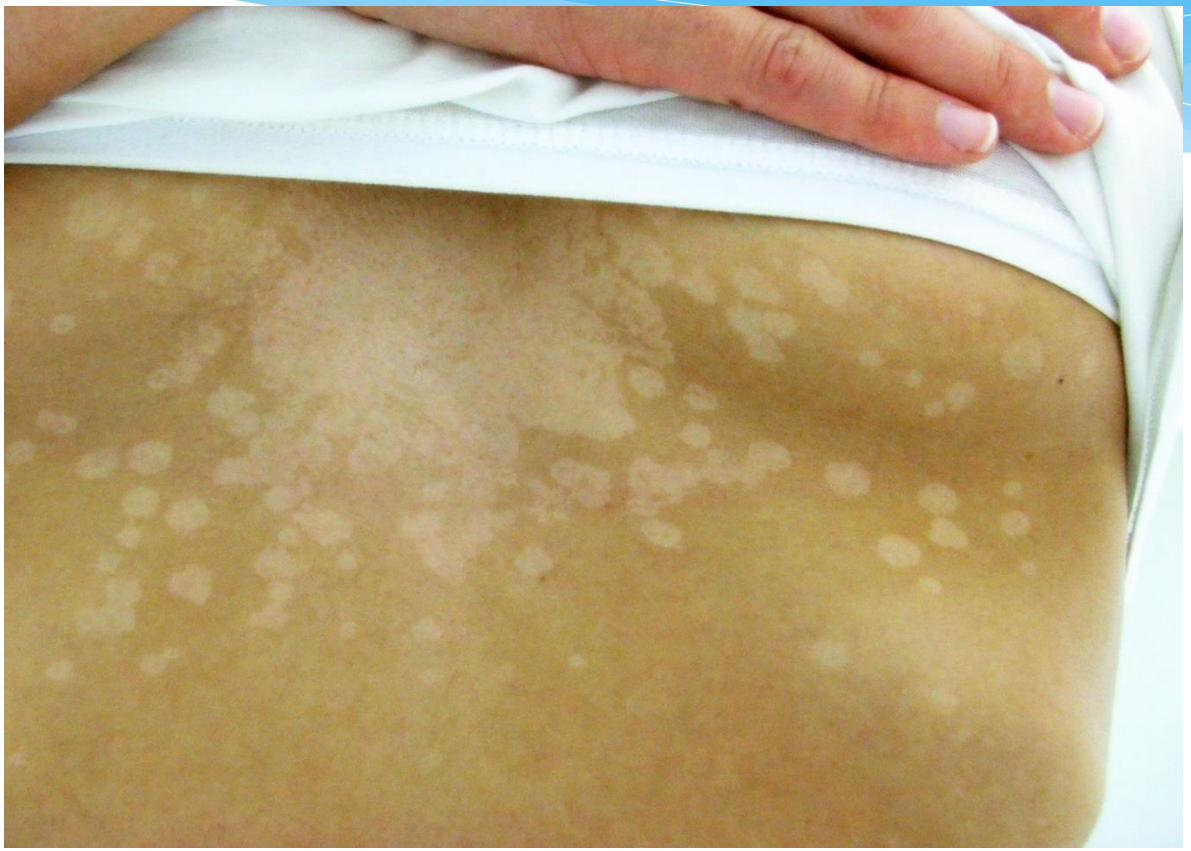
Reference: AAD. "Learning module: Red scaly rash: The papulosquamous eruption" at https://www.aad.org/education/basic-derm-curriculum/suggested-order-of-modules/red-scaly-rash.

Pityriasis (tinea) versicolor



Reference: https://upload.wikimedia.org/wikipedia/commons/3/3d/Pityriasis_versicolor_frontal_retouche.jpg

Tinea versicolor



Reference: https://upload.wikimedia.org/wikipedia/commons/8/83/Tinea_versicolor1.jpg

Tinea versicolor

Etiology:

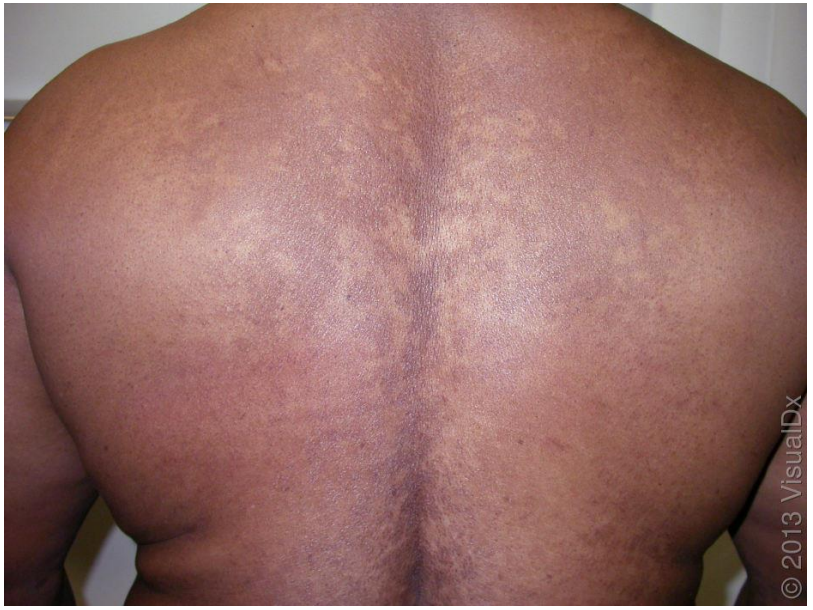
* Lipophillic yeast (Malassezia furfur)
* Resides in keratin and hair follicles during and after puberty

Demographics:

* Young adults, tapers off in 5^{th}-6^{th} decades

Predisposing factors:

* Hot and humid climate
* Sweating
* Oily skin



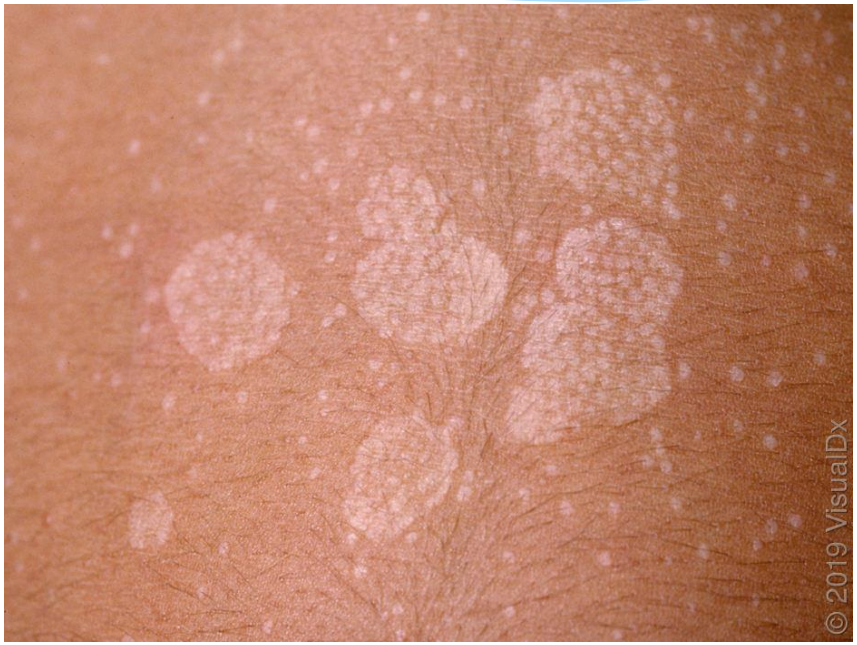
Tinea versicolor

Clinical presentation: round, hypopigmented patches with fine scaling typically on neck, trunk

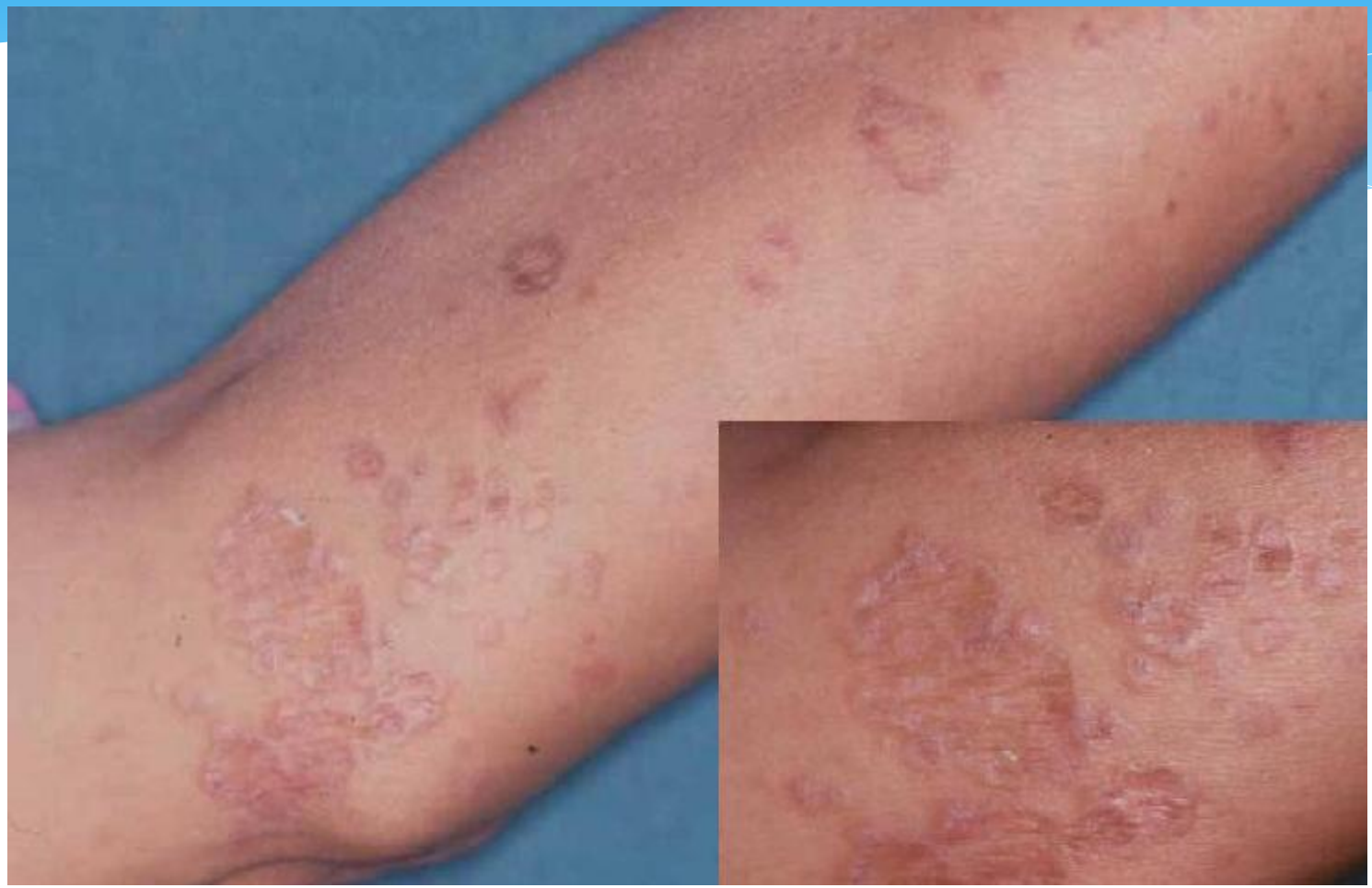
Differential diagnosis: psoriasis, contact dermatitis, eczema, vitiligo, cutaneous T-cell lymphoma

Test: Skin scraping for KOH test (spaghetti and meatball pattern)

Tmts: Selsun shampoo or ketaconazole shampoo 2-3/week; leave on for 5-10 mins and then rinse; clotrimazole or terbinafine cream, terbinafine 150mg po qd, fluconazole (maybe)

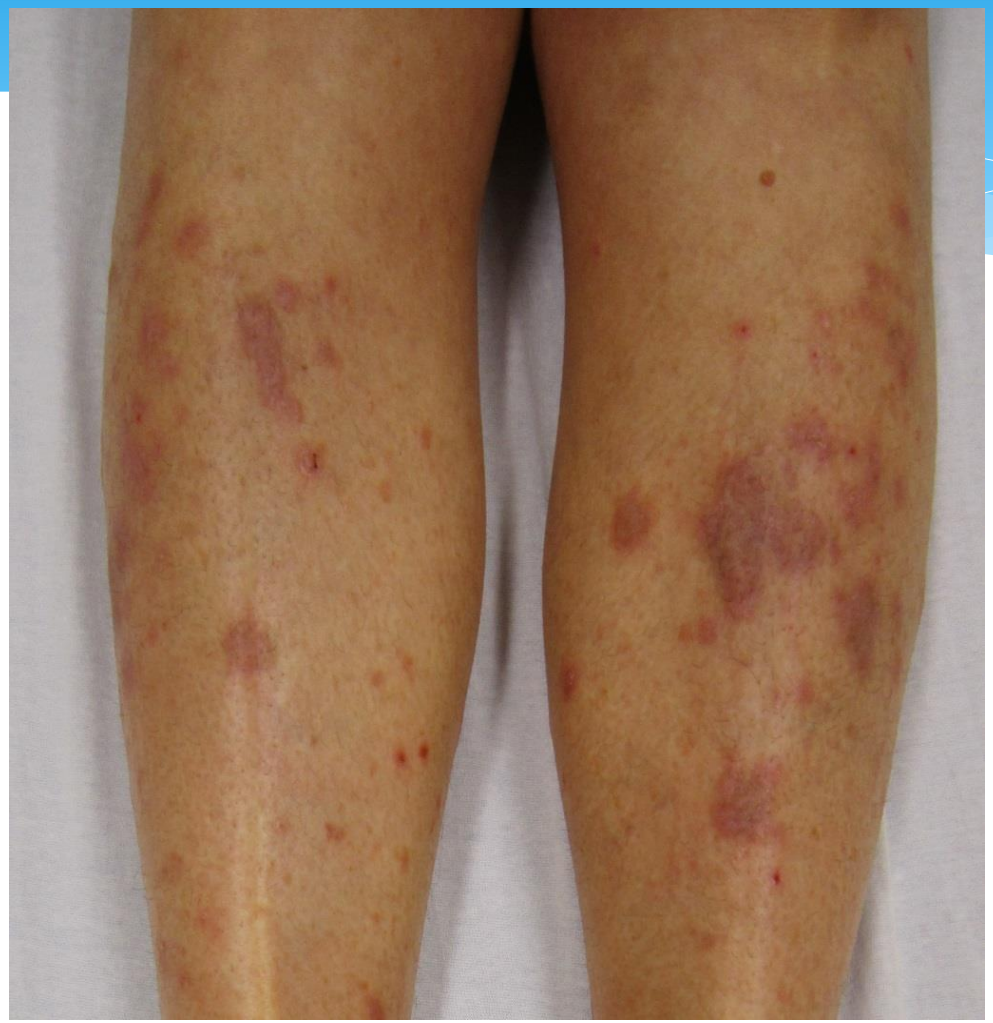


Lichen planus



Reference: https://upload.wikimedia.org/wikipedia/commons/7/70/Atrophic_lichen_planus.jpg

Lichen Planus



Reference:
https://upload.wikimedia.org/wikipedia/commons/f/f6/Lichen_Planus_(2).JPG

Lichen planus

Epidemiology:

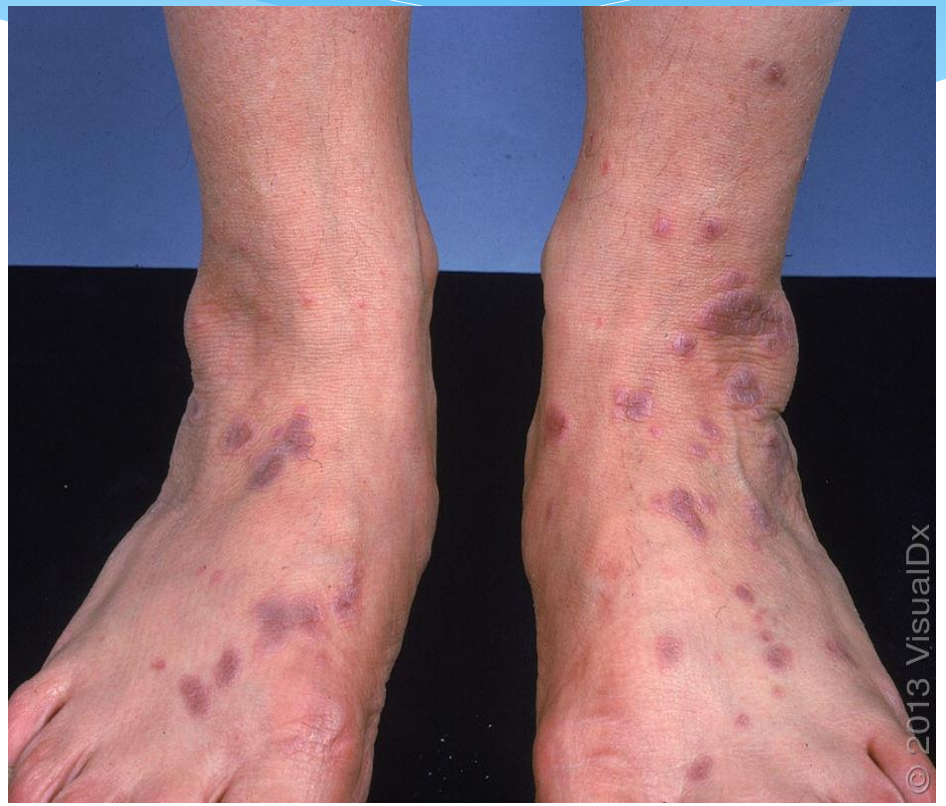
* Worldwide occurrence is less than 1% (but more common than you would think)

Demographics:

* 30-60 years; women>men

Etiology/Predisposing factors:

* Idiopathic in most cases
* Drugs, metal exposure, infection (Hep C)
* Genetic susceptibility



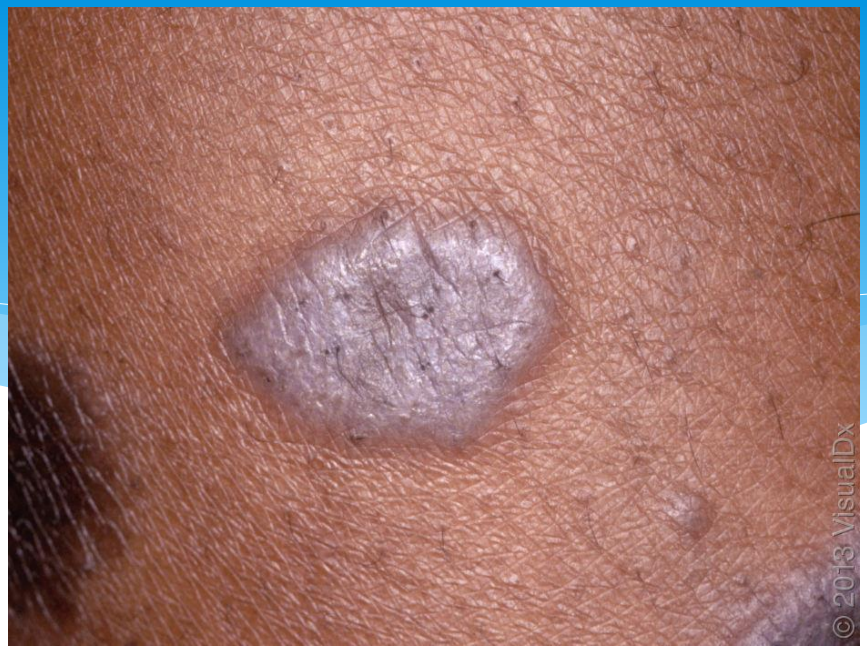
Lichen planus

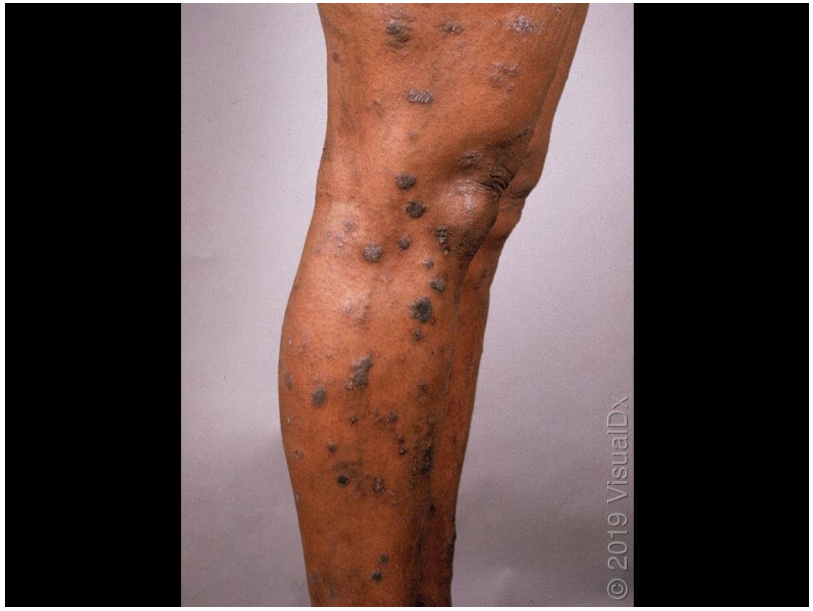
Clinical presentation: 5 P's (purple, pruritic, polygonal, papular, planar); oral/genital lesions white lacy pattern; likes the wrists, lumbar back, shins, scalp, oral mucosa, penis; can last for weeks-years

Differential diagnosis: psoriasis, graft vs host disease, lupus, Kaposi's sarcoma

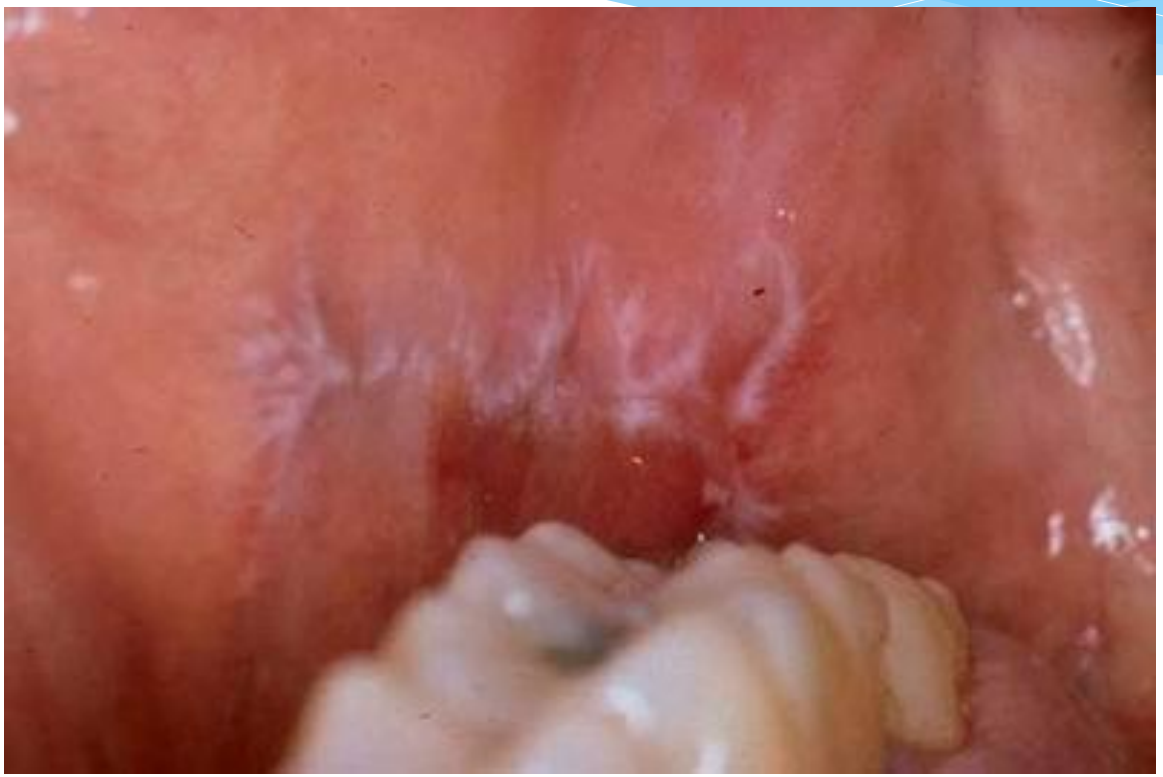
Test: biopsy

Tmts: topical or intralesional steroids, cyclosporine, prednisone, retinoids (refer to Derm for hard-to-treat cases)





Lichen planus: Wikham's stria



Reference: https://upload.wikimedia.org/wikipedia/commons/4/48/Lichen_planusWickham's.jpg

Lichen sclerosus

Etiology:

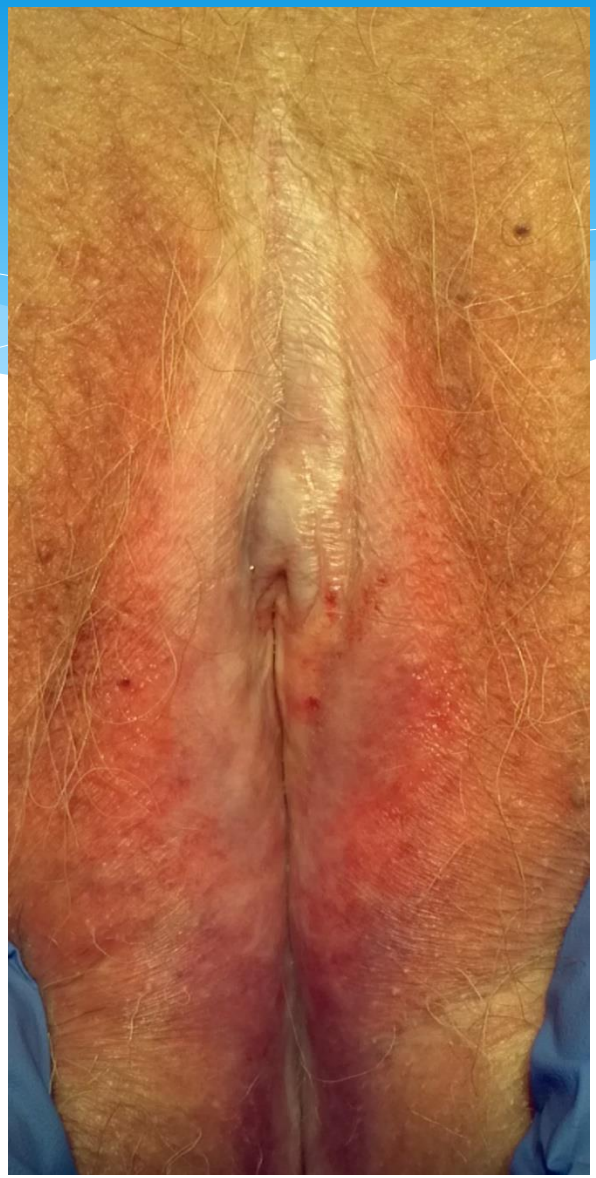
* Unclear what causes this; may have to do with hormones; genetic predisposition

Demographics:

* 10 times more common in women than men

Predisposing factors:

* Post menopause
* Genetic



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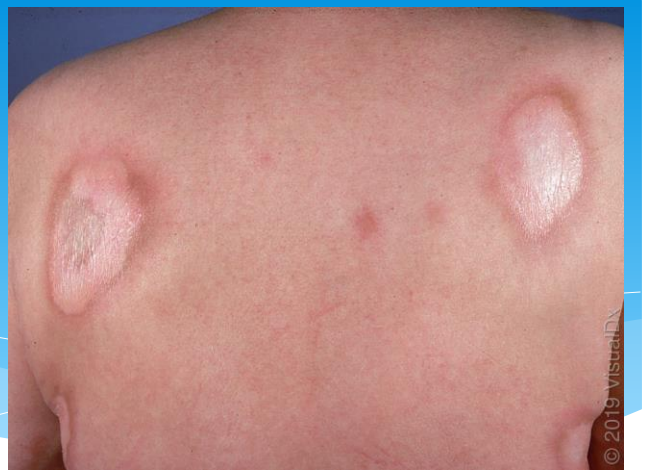
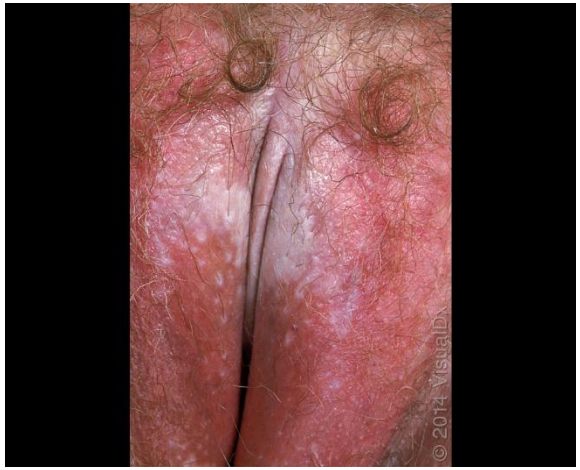
Lichen sclerosus



Clinical presentation: genital, anal areas; erythematous patches, hypopigmentation, porcelain-white macules and plaques, bruising, erosions, excoriations; can cause phimosis in boys; can be painful, itchy



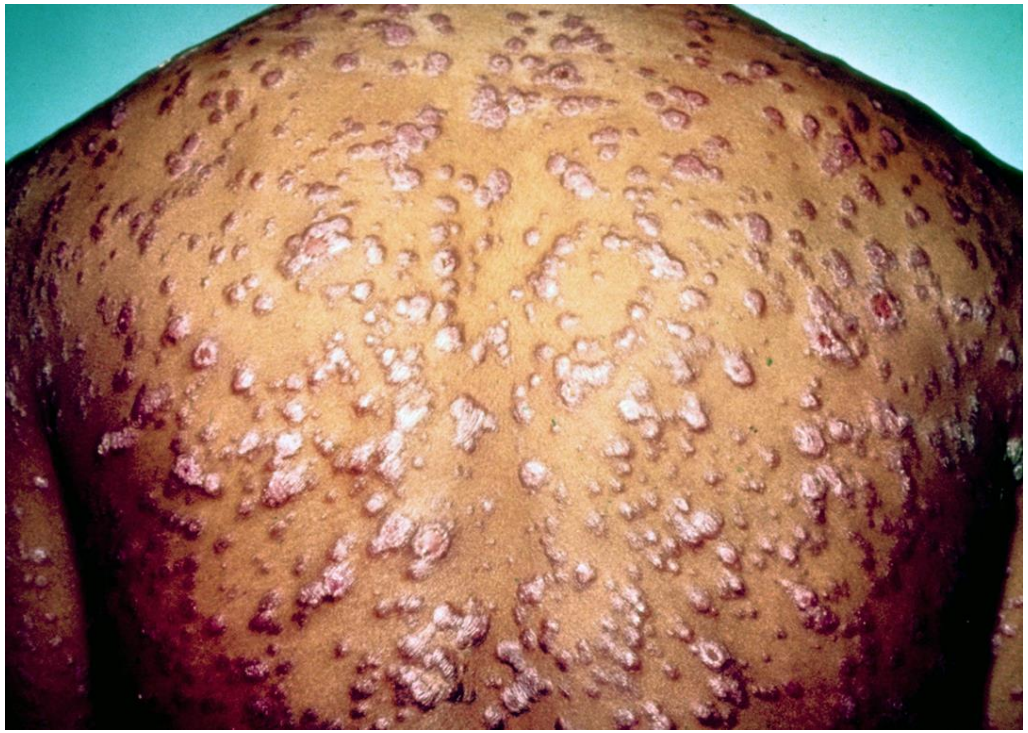
Differential diagnosis: psoriasis, graft vs host disease, lupus, Kaposi's sarcoma

Test: biopsy

Tmts: topical or intralesional steroids—watch for skin thinning!----, tacrolimus and pimecrolimus ointments; surgical intervention

Note: Can be very debilitating; sexual dysfunction

Syphilis



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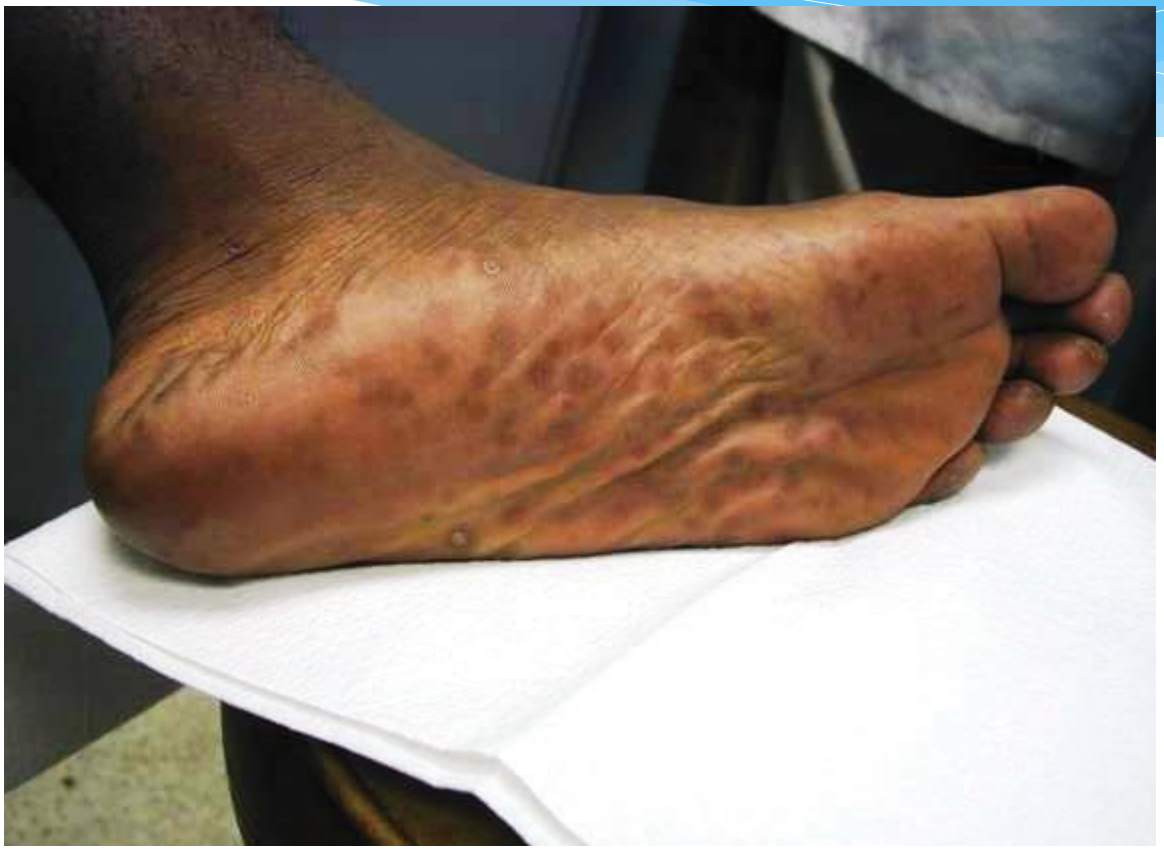
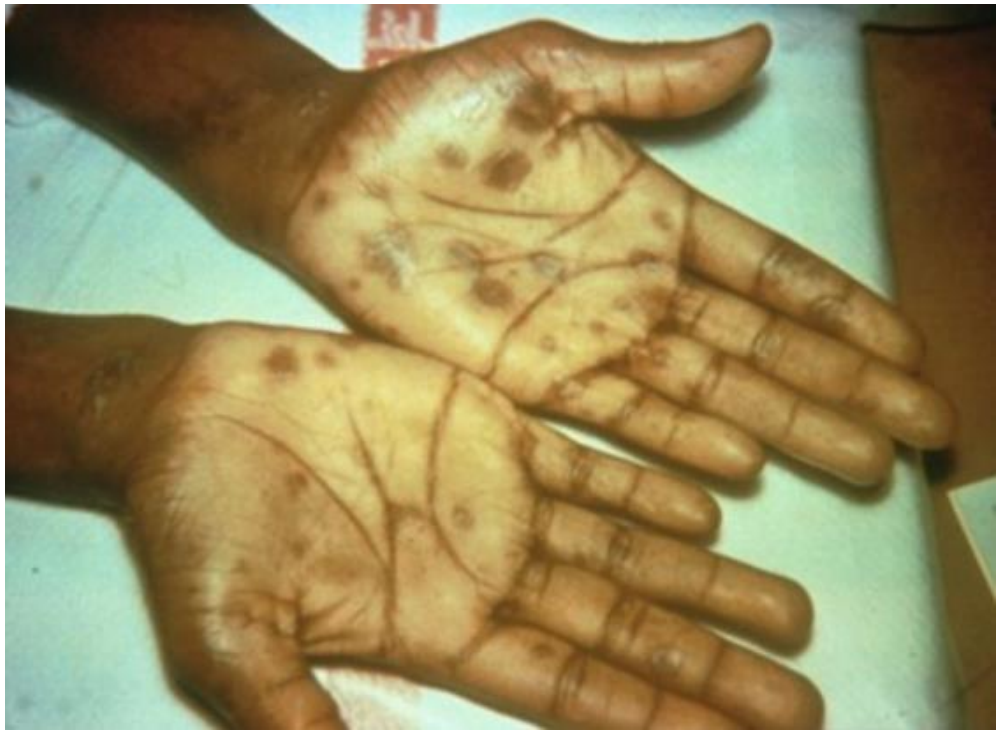
Syphilis



https://simple.wikipedia.org/wiki/Syphilis#/media/File:Secondary_stage_syphilis_sores_(lesions)_on_the_soles_of_the_feet._Plantar_lesions-CDC.jpg

Syphilis

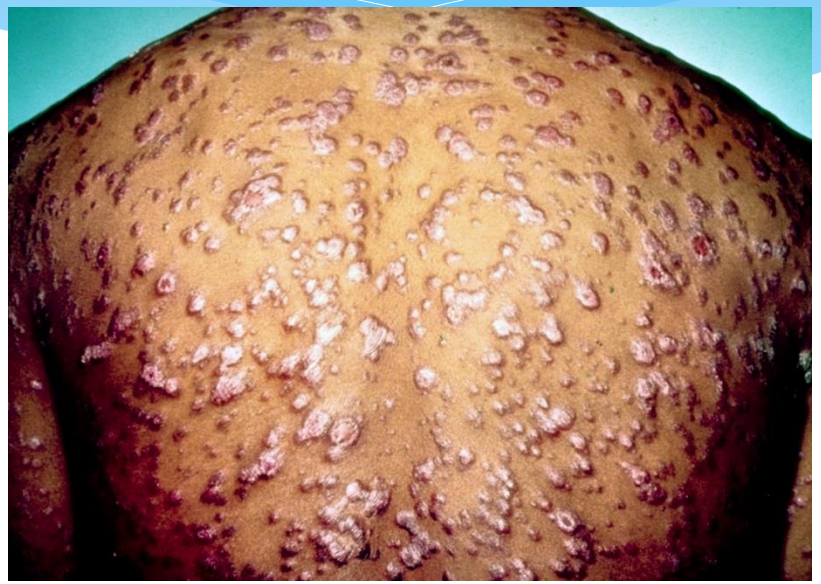


https://upload.wikimedia.org/wikipedia/commons/a/a3/Secondary_syphilis-palmar_rash.PNG

Secondary Syphilis

Clinical presentation:

* Painless chancre (often missed by pt)
* Prodromal symptoms include malaise, fever, headache, stiff neck, myalgias, arthralgias, photophobia, mental changes
* Any age
* Macules and papules 0.5-1cm round to oval; pink or brownish red
* Small asmptx white/grey lesions in the oral mucosa



https://upload.wikimedia.org/wikipedia/commons/e/eb/2ndsyphil2.jpg

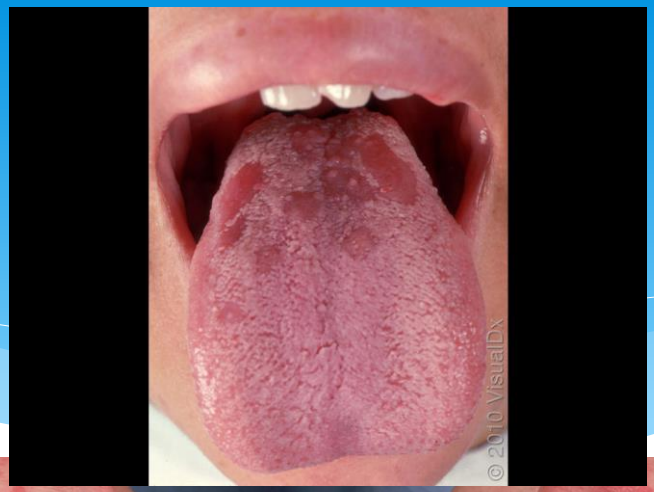
Etiology:

* Spirochete T. pallidum
* Transmitted thru skin and mucosa

Differential diagnosis:

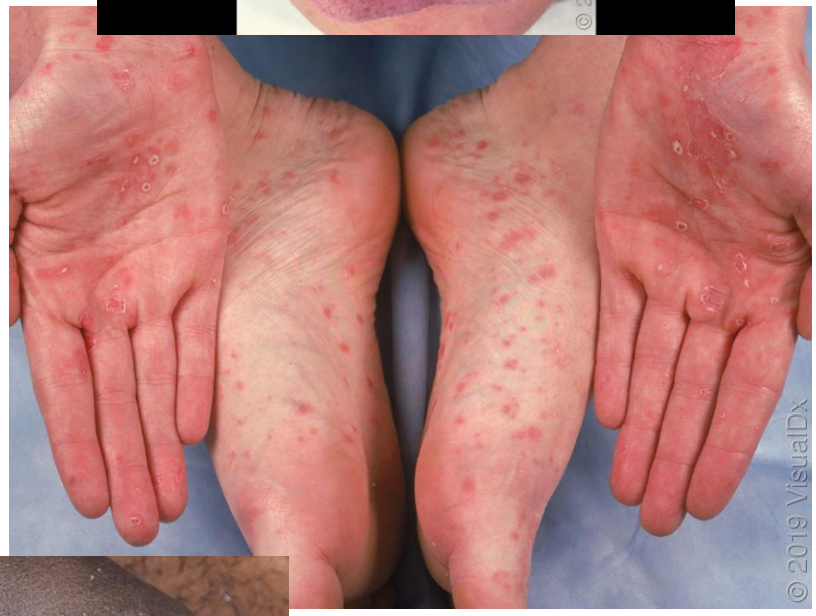
* psoriasis, contact dermatitis, eczema, ANYTHING (Great Pretender)

Syphilis



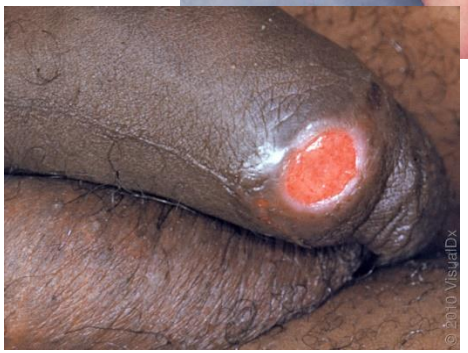
Test:

* RPR
* Skin biopsy



Tmts:

* Chancre heals in 4-6 weeks (without tmt)
* Benzathine PCN G 2.4 million units in a single dose IM
* Doxycycline 100mg bid x 14 days



Atopic dermatitis

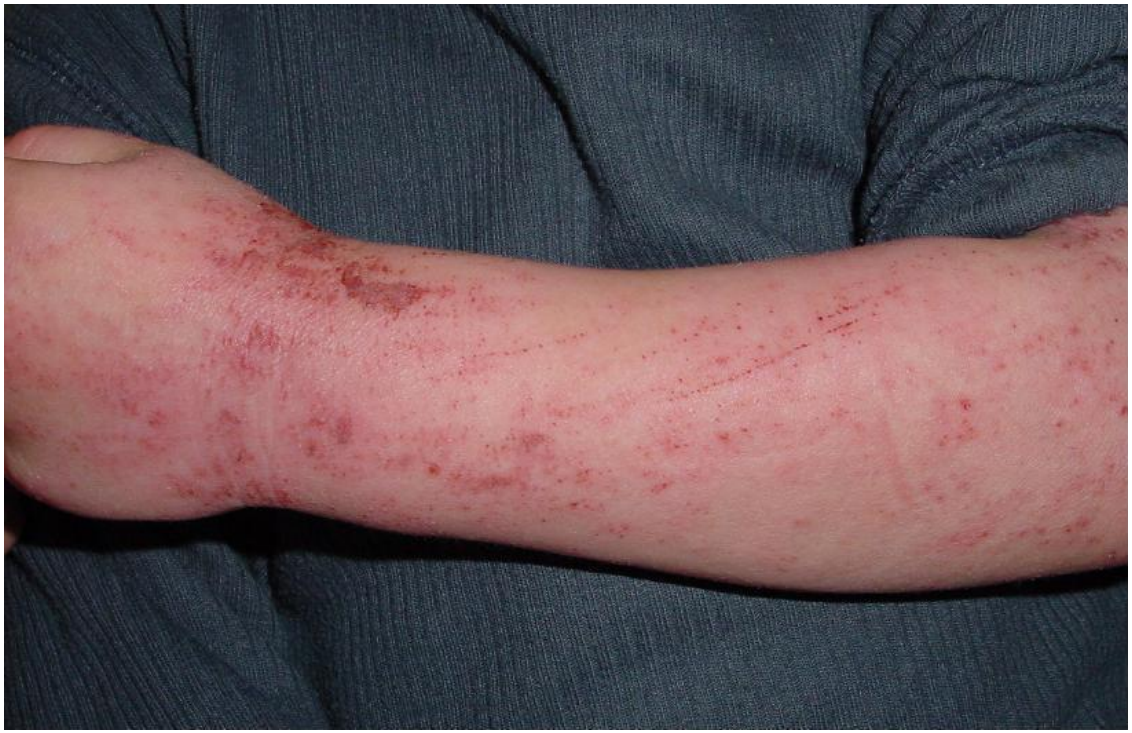


Image: https://upload.wikimedia.org/wikipedia/commons/6/63/Atopic_dermatitis_child.JPG

Atopic Dermatitis

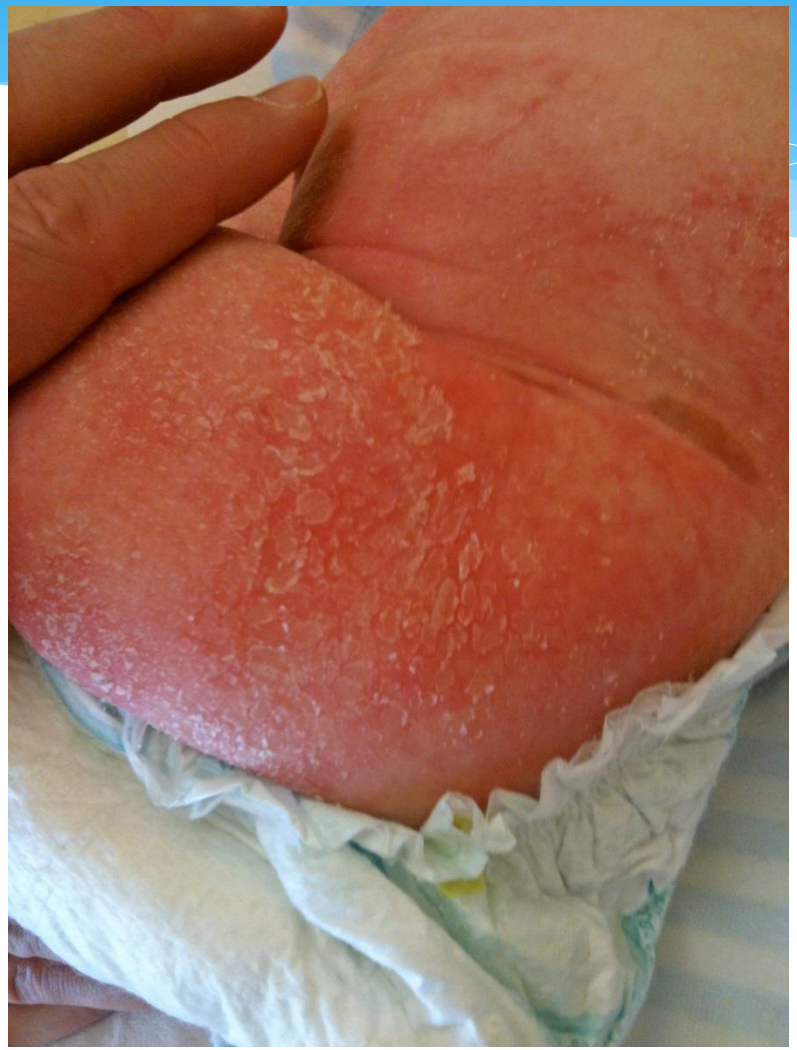


Image: https://upload.wikimedia.org/wikipedia/commons/f/fc/Atopic_dermatitis_child_3.jpg

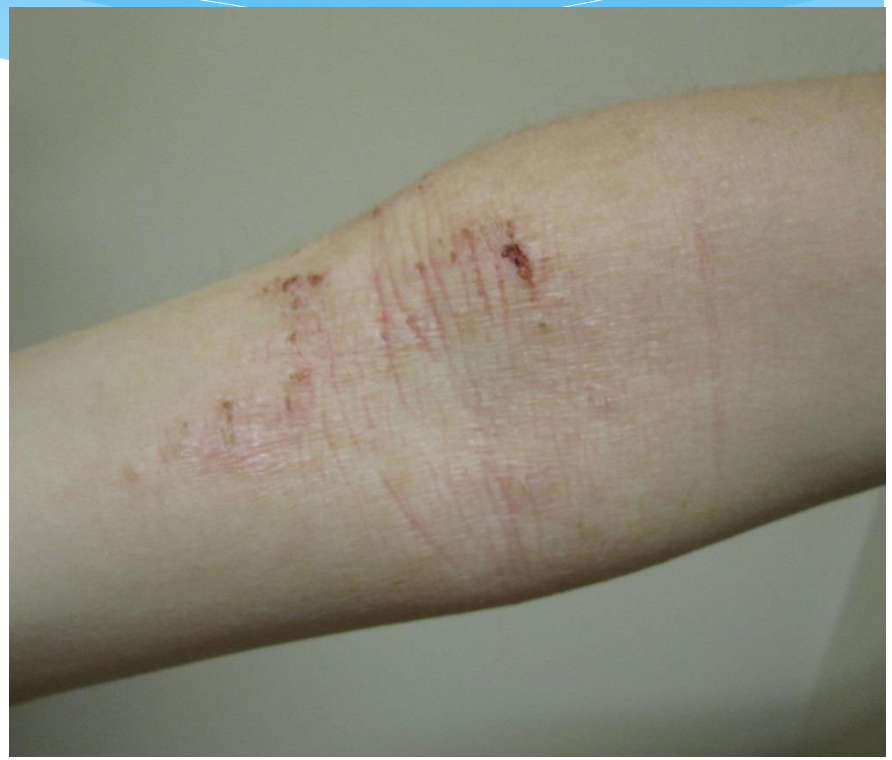
Atopic dermatitis

Clinical presentation:

* Infancy to early teens, sometimes adults
* Very pruritic
* Erythematous, excoriated, scaling patches and plaques, lichenification
* Face, flexural areas
* Can become secondarily infected
* Sleep-deprived parents and pts.

Etiology:

* Affects 10-20% of infants, young children
* IgE mediated, family hx
* Atopy (eczema, asthma, hay fever)



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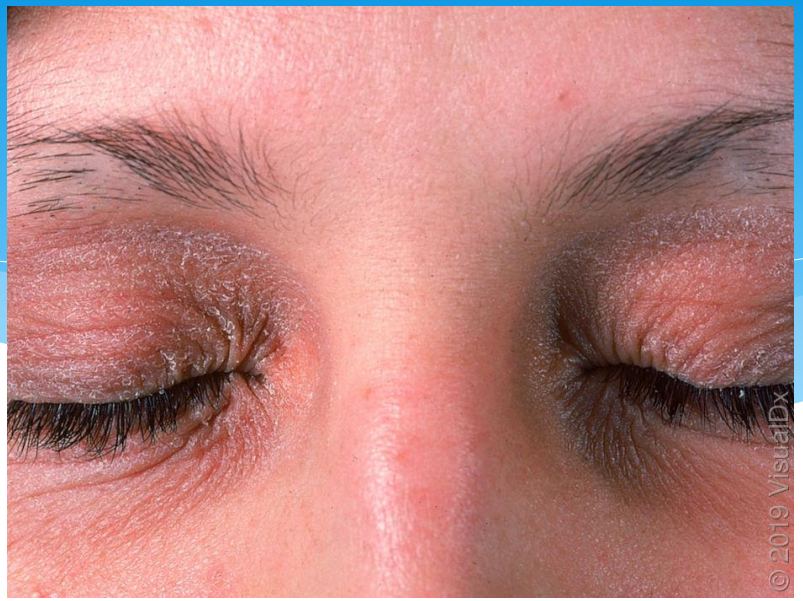
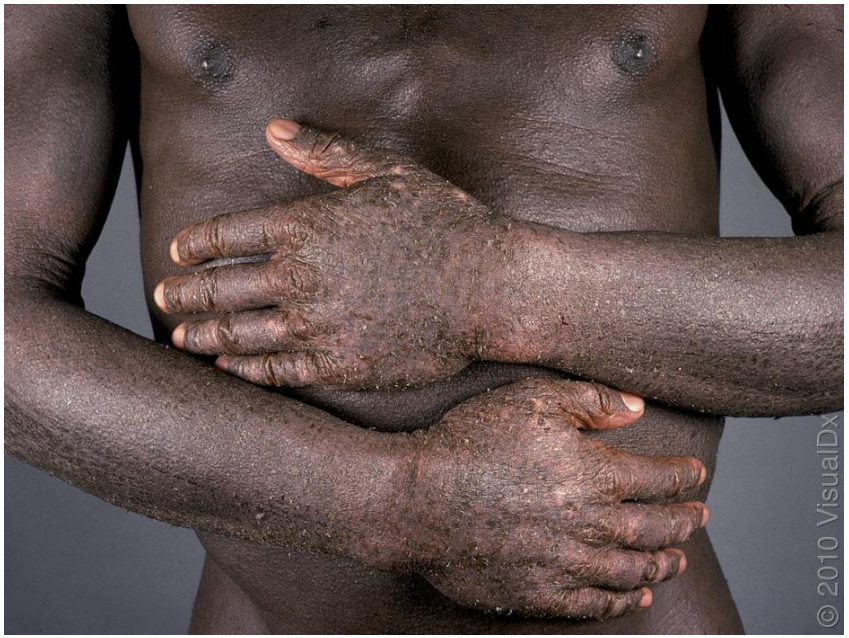
Atopic dermatitis



Test:

* Clinical presentation
* Skin biopsy



Tmt:

* Removal of irritants (wool, food allergy)
* Mild soaps
* Skin hydration is paramount
* Topical steroids and immunomodulators
* Antihistamines

Contact dermatitis

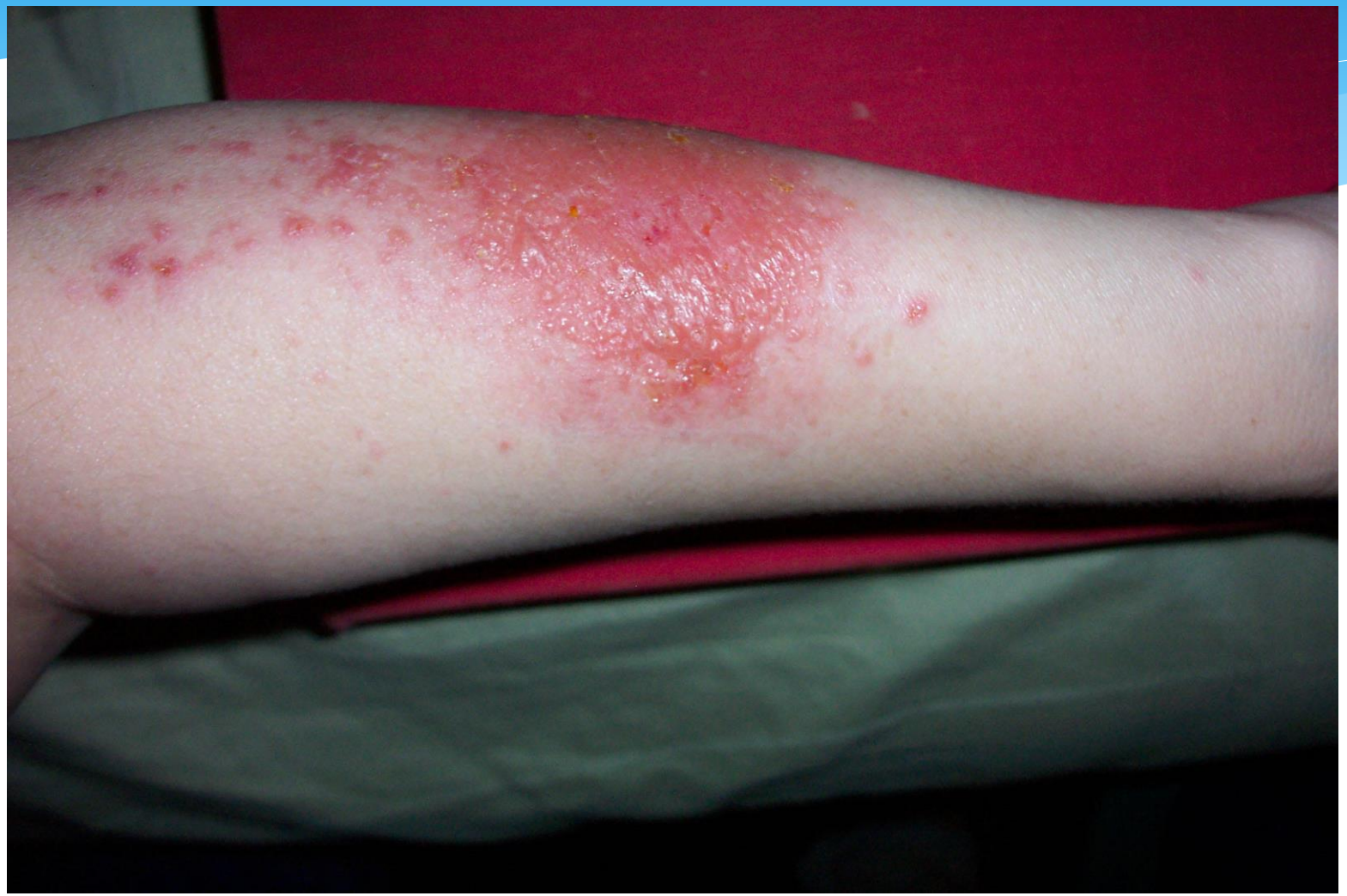


Image: https://upload.wikimedia.org/wikipedia/commons/8/81/Urushiol-induced_contact_dermatitis_7_days_after_contact.jpg

Contact dermatitis

Clinical presentation:

* Scaling, red patches; can follow outline of allergen
* Pruritus, burning, swelling

Etiology:

* Very common in all age groups
* Usually appears within 24-48 hours after exposure to the allergen

Testing/Tmt:

* Avoidance of irritant
* Topical steroids,
* Patch testing if unable to determine culprit

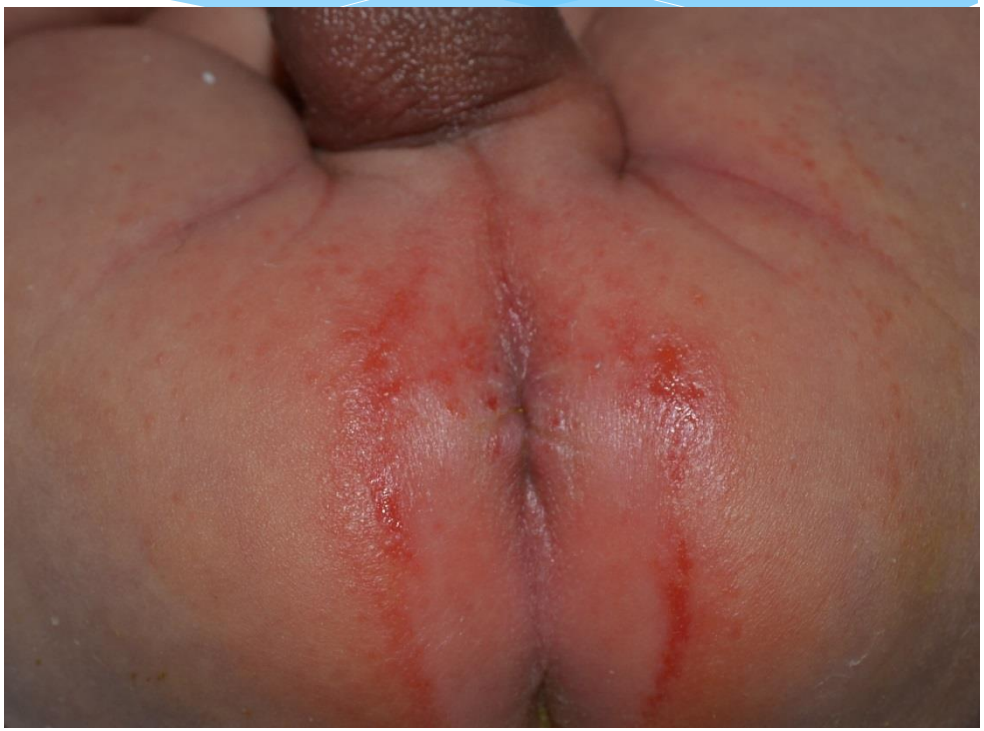


Image: https://upload.wikimedia.org/wikipedia/commons/b/bf/Irritant_diaper_dermatitis.jpg

Allergic contact dermatitis

Testing:

* Patch testing if unable to determine culprit
* Skin biopsy

Treatment:

* Avoidance of allergen
* Topical steroids
* Calcineurin inhibitors
* Moisturizers
* Antihistamines

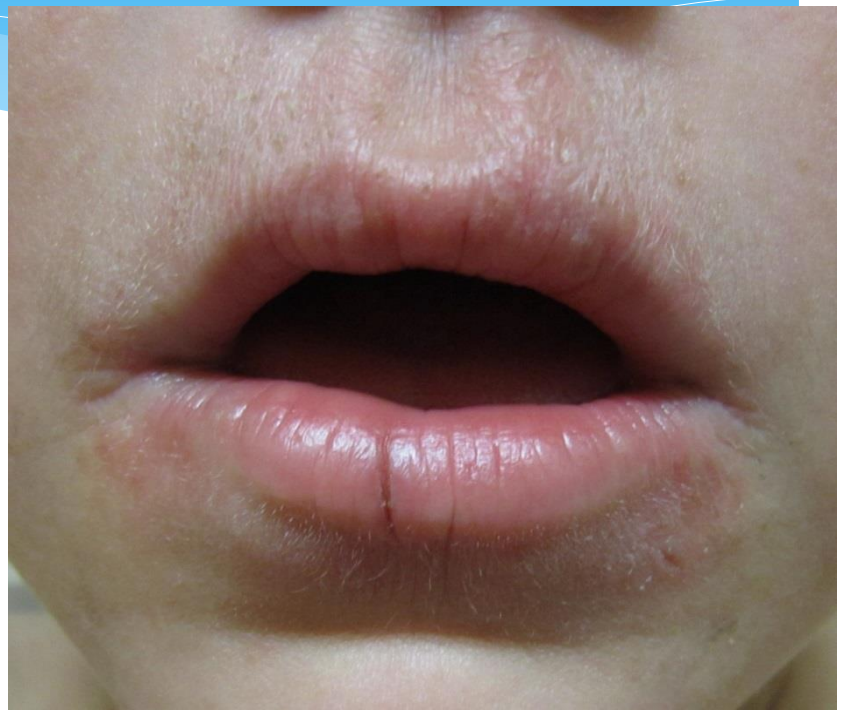


Image: https://upload.wikimedia.org/wikipedia/commons/7/78/Perioral_dermatitis.JPG

Seborrheic dermatitis

Clinical presentation:

* Chronic, recurring
* Scaly, pink-yellow patches/plaques involving the face, ears, eyebrows, scalp, and sometimes the mid chest
* Can be itchy

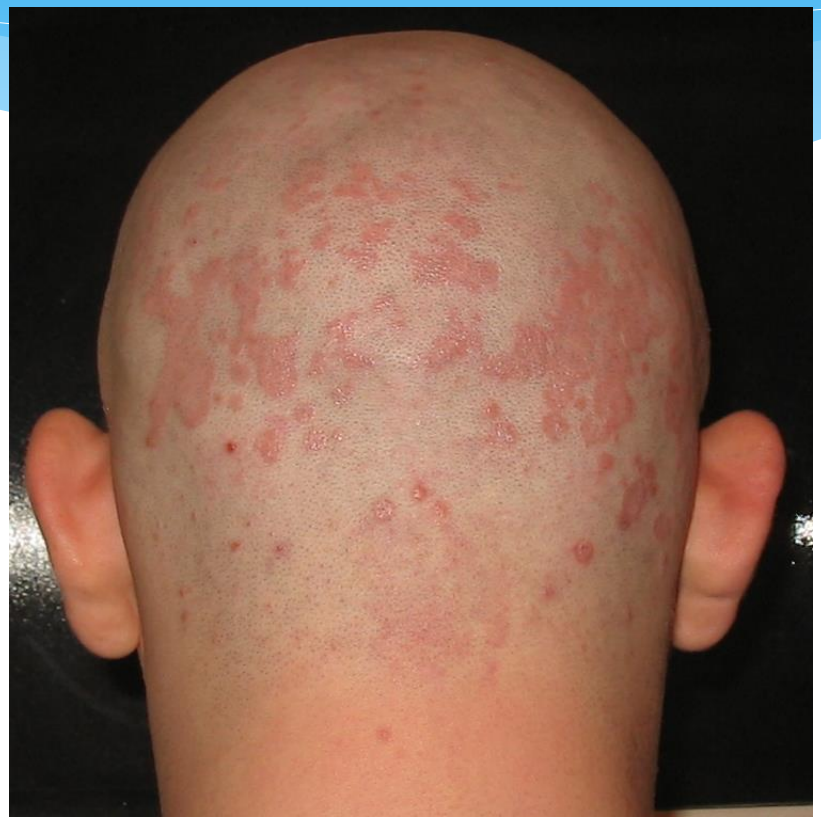
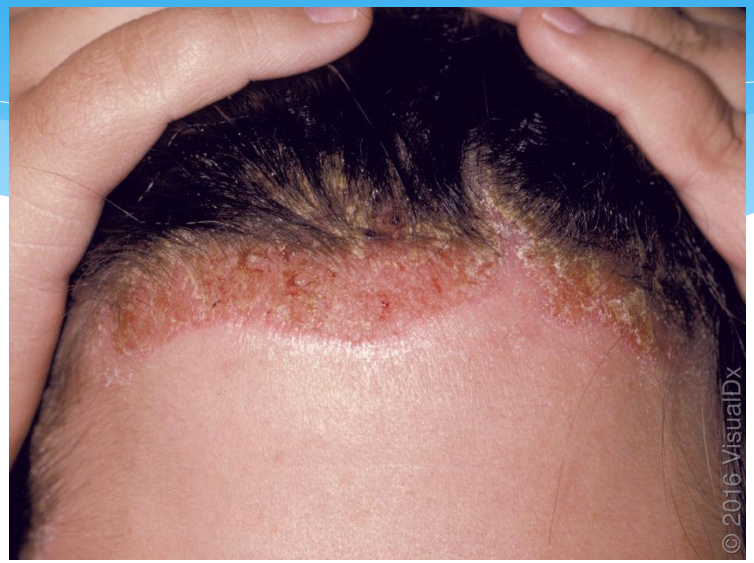


Image: https://upload.wikimedia.org/wikipedia/commons/f/f4/Seborrhoeic_dermatitis_head.jpg

Seborrheic dermatitis

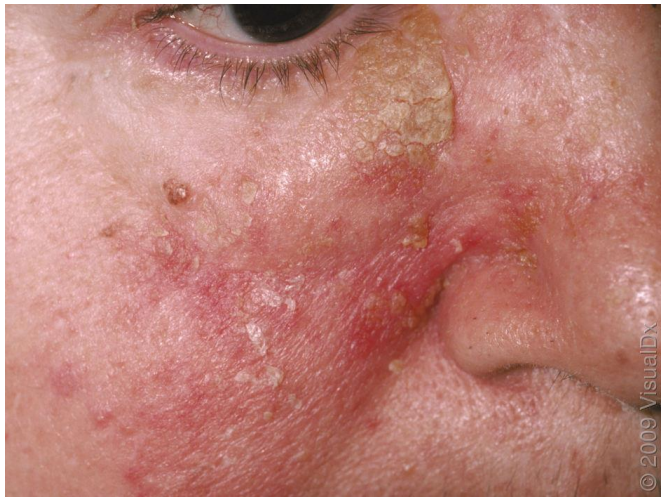
Test:

* Clinical presentation/history
* Biopsy

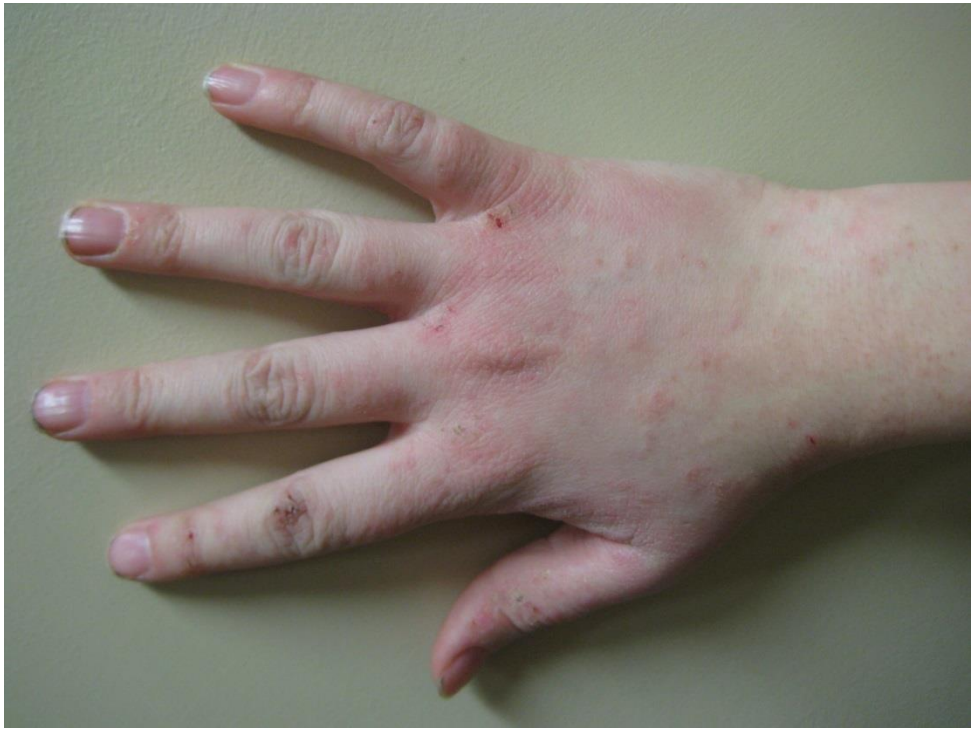


Treatments:

* Anti-fungal and Selsun shampoos creams
* Low potency steroids



Nummular dermatitis



https://zh.wikipedia.org/wiki/%E7%9A%AE%E8%86%9A%E7%82%8E

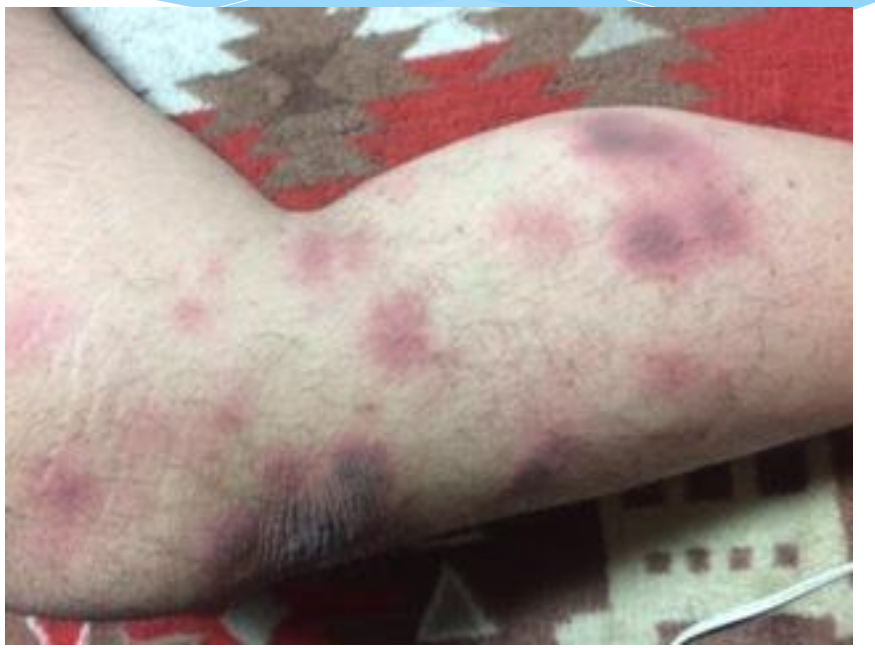
Nummular dermatitis

Clinical presentation:

* Coin-shaped, itchy, scaling patches typically on exts and trunk
* Worse in winter months
* More common in atopics

Etiology:

* Genetic predisposition
* ? S. aureus but not proven



https://commons.wikimedia.org/wiki/File:Nummular_eczema.JPG

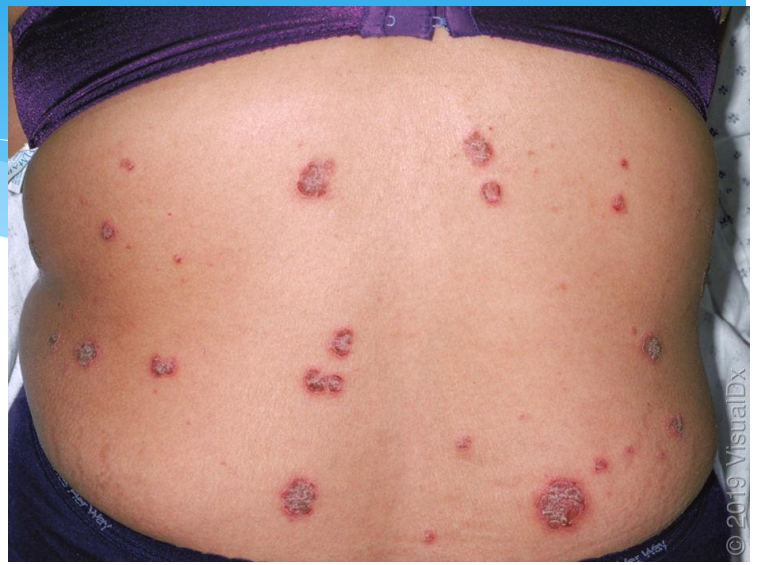
Nummular dermatitis

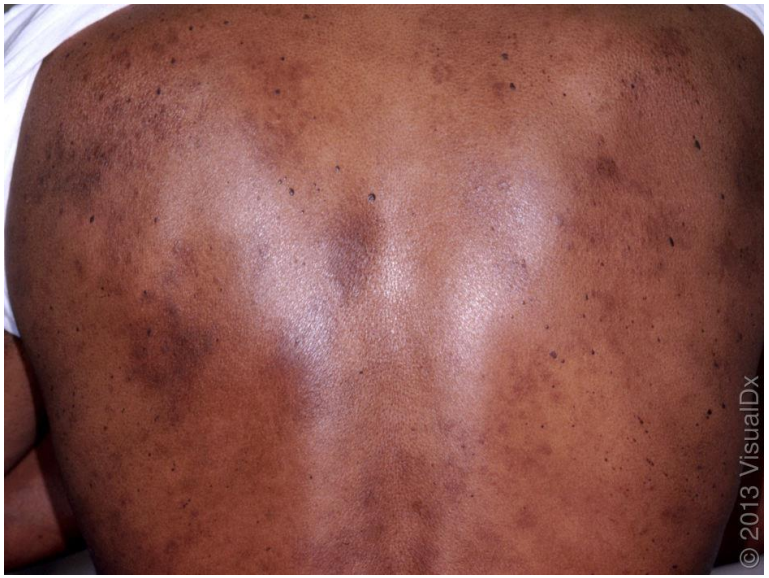
Test:

* Clinical presentation
* Skin biopsy

Treatments:

* Moisturizers (KEY)
* Topical steroids
* Calcineurin inhibitors (tacrolimus)
* Antihistamines
* Coal tar products (itch)
* Phototherapy
* Sensitive-skin products





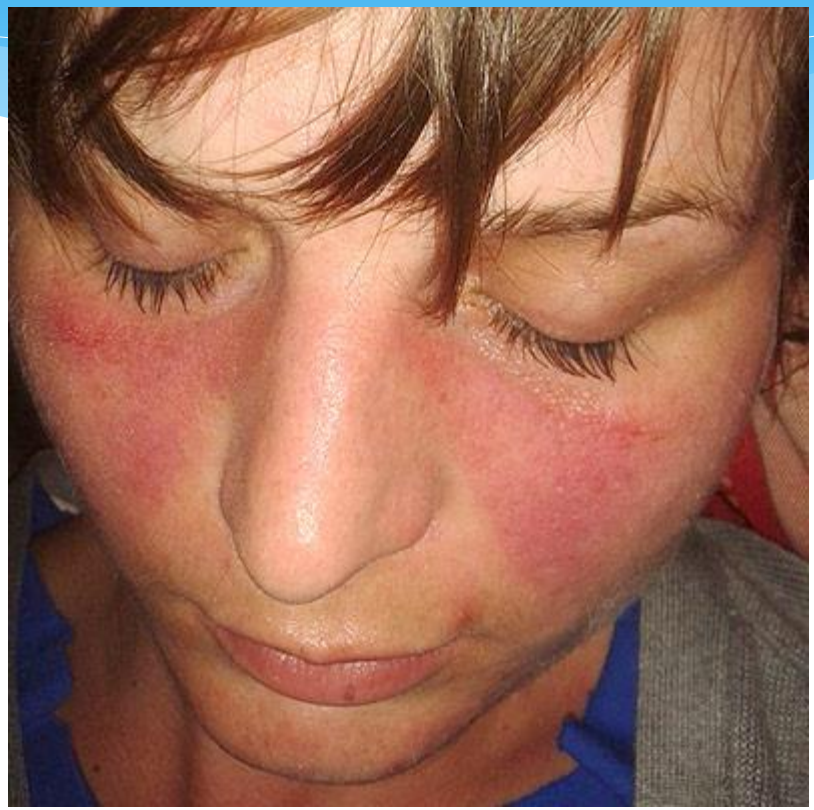
Subacute cutaneous lupus erythematosus

Clinical presentation:

* Pink, red-brown, violaceous annular patches, plaques
* Sometimes scaling
* Butterfly pattern
* Face, shoulders, extensor arms, hands, V-neck, upper back
* Can have arthralgias, photosensitivity, renal disease

Etiology:

* 10% of the lupus population
* Uncommon in skin of color
* Young and middle age
* Women>men
* Precipitating factor: SUNLIGHT

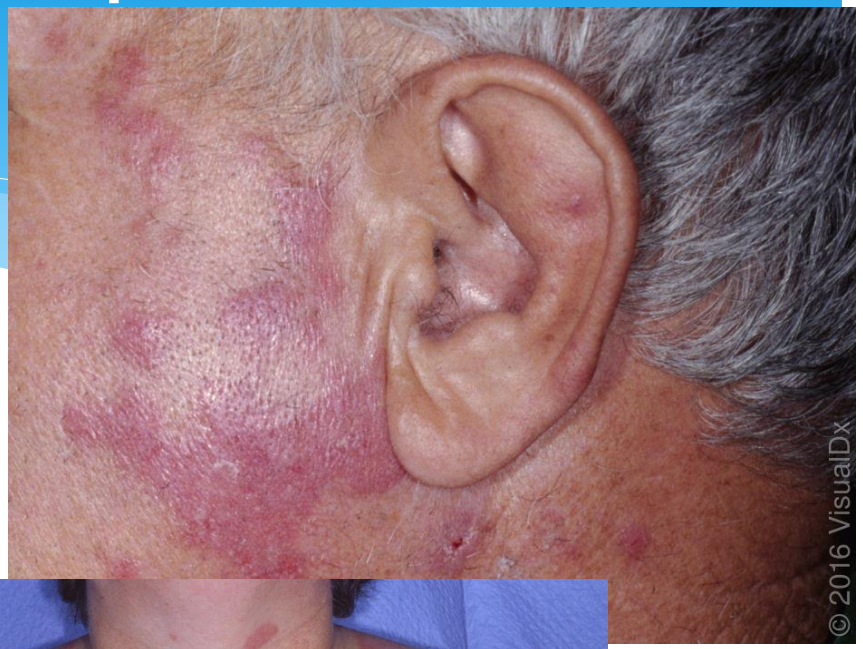


https://en.wikipedia.org/wiki/Systemic_lupus_erythematosus#/media/File:Lupusfoto.jpg

Subacute cutaneous lupus erythematosus

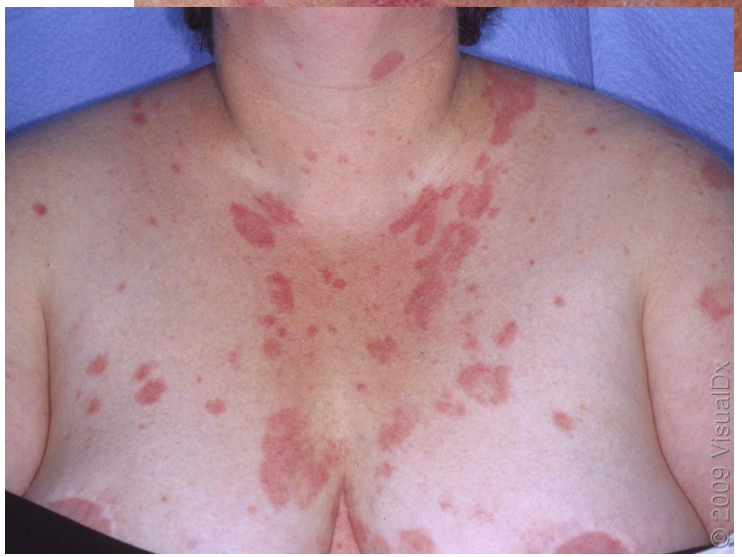
Testing:

* Skin biopsy
* ANA
* SS-A, SS-B



Tmt:

* Sun protection/avoidance
* Topical steroids
* Calcineurin inhibitors
* Systemic thalidomide
* Hydroxychloroquine
* Prednisone

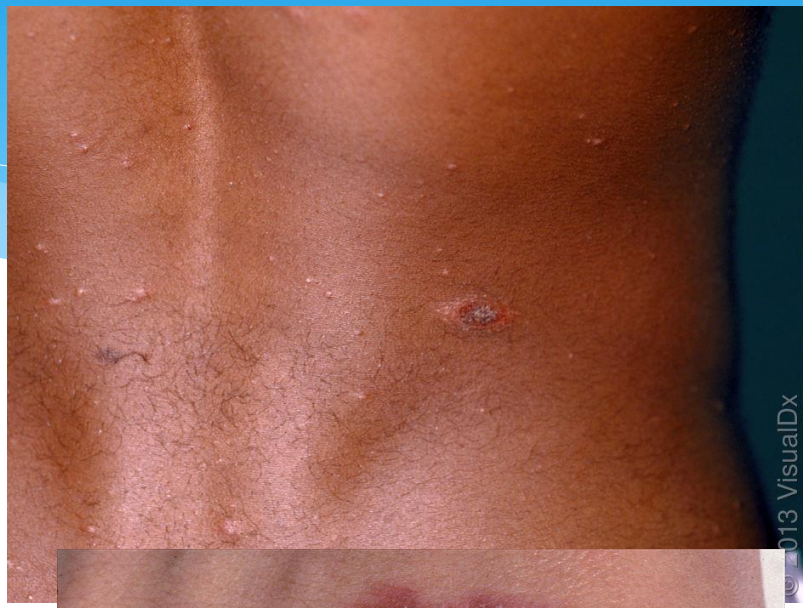


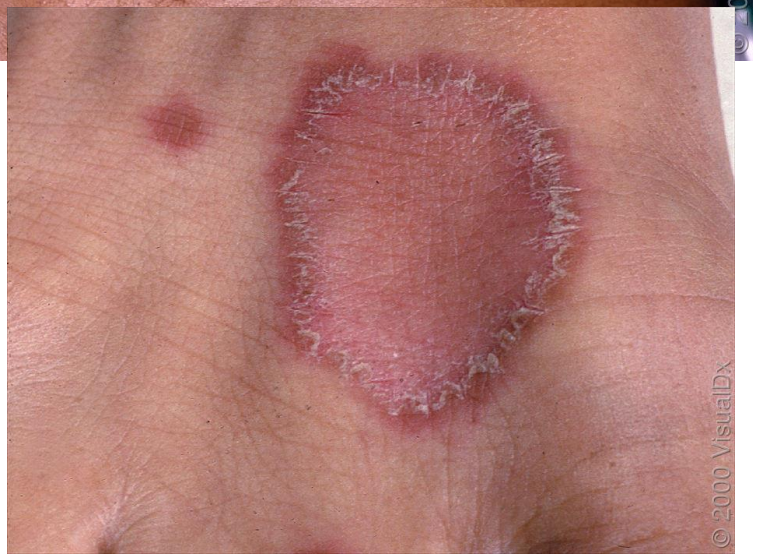
Refer to Dermatology and Rheumatology!

Pityriasis rosea

Clinical presentation:

* acute onset
* young people
* herald patch
* round salmon-pink macules and patches in Christmas tree pattern; grey, brown, purple patches in darker skin
* can be itchy but not always;
* can have flu-like symptoms





Etiology:

* Unknown
* Possibly triggered by HPV 7

Differential diagnosis:

* psoriasis, contact dermatitis, eczema

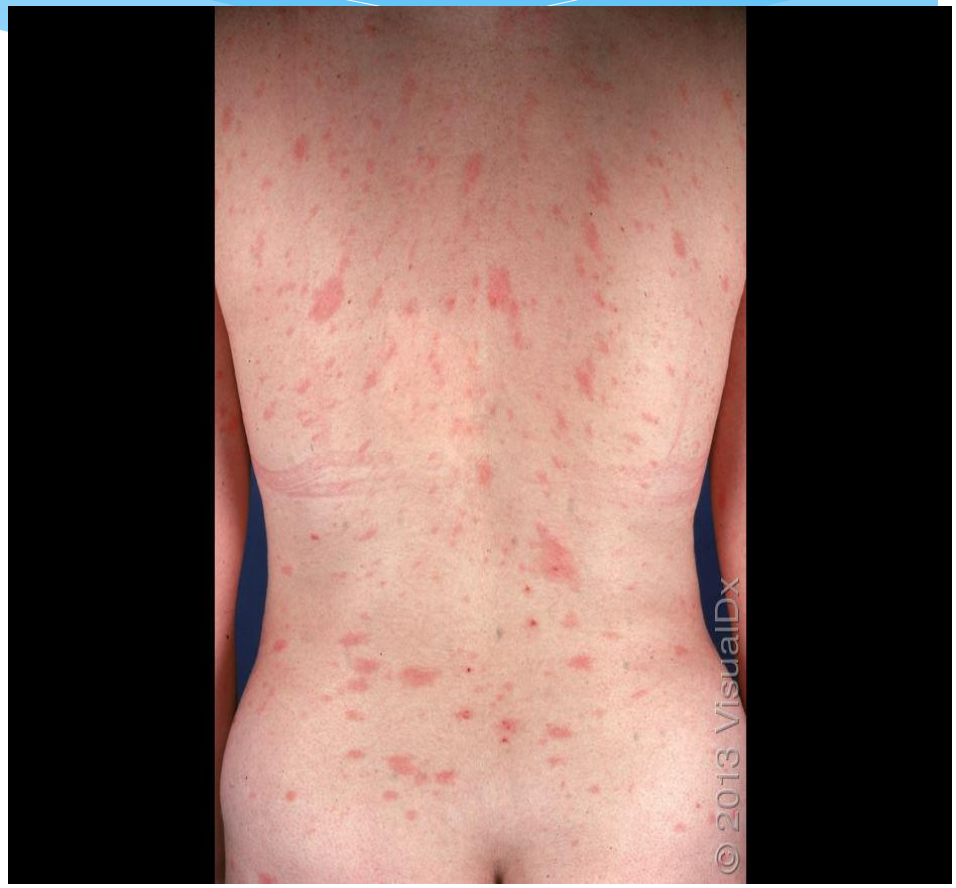
Pityriasis rosea

Test:

* KOH to r/o tinea; skin biopsy

Tmts:

* Self limiting and spontaneous resolves in 6 weeks
* Anti-itch lotions
* Antihistamines
* Topical steroids
* Natural sunlight or phototherapy



Pityriasis rosea

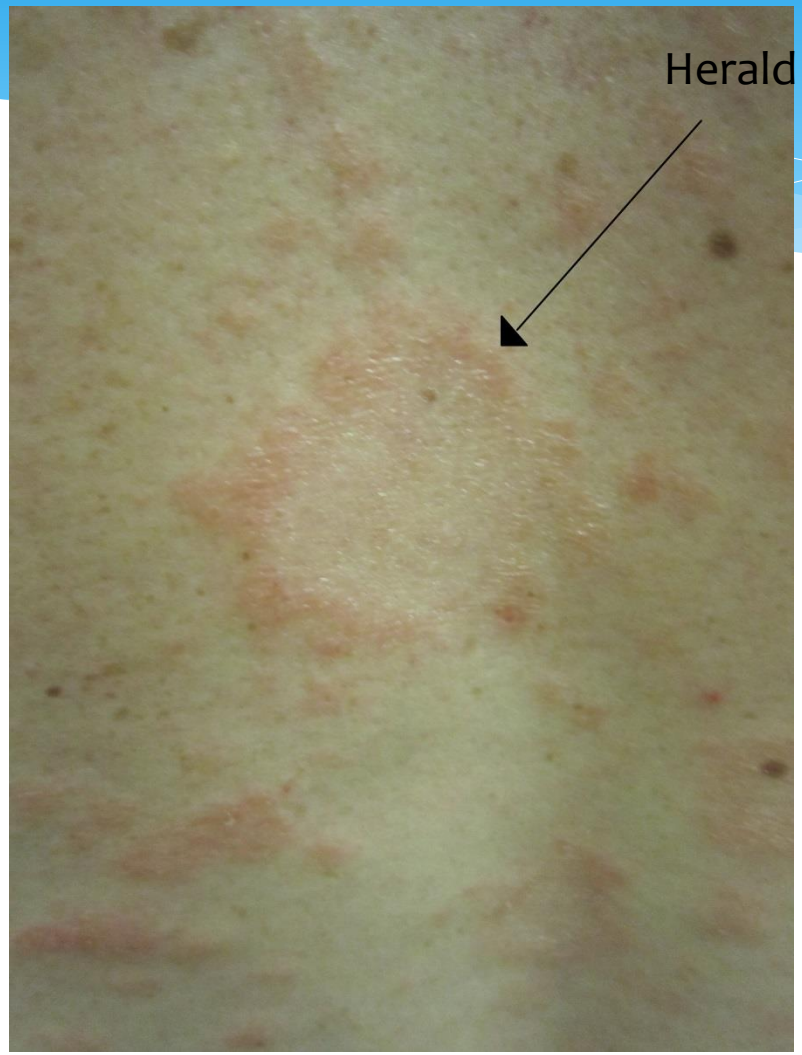
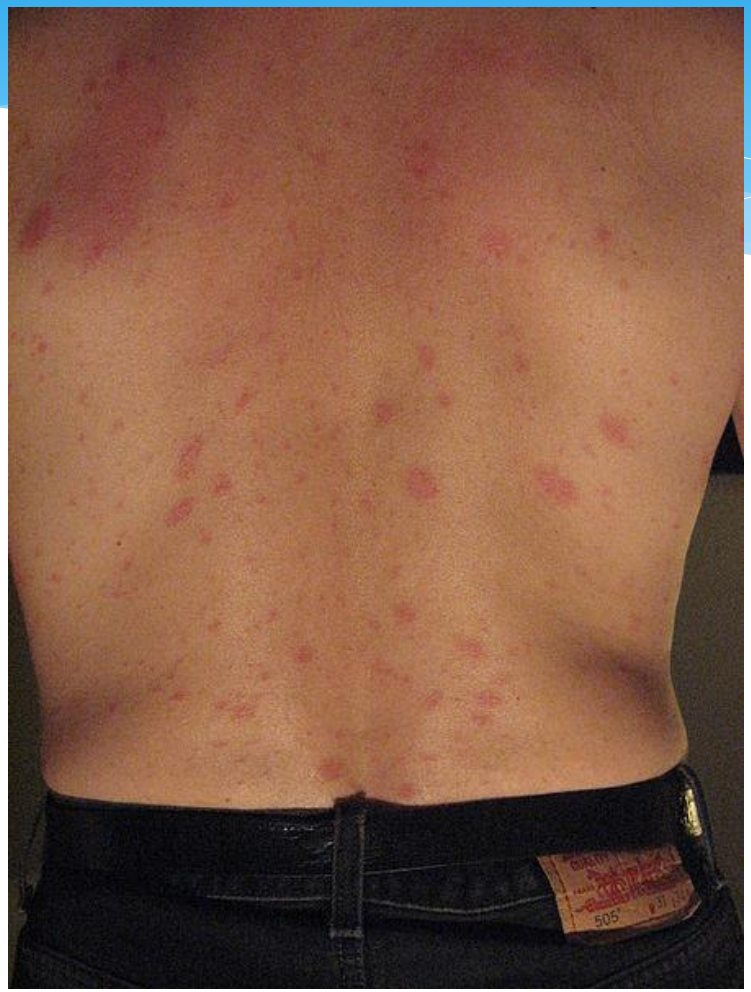


Image: James Heilman, MD at https://en.wikipedia.org/wiki/Pityriasis_rosea#/media/File:Pityriasisrosa.png

Pityriasis Rosea



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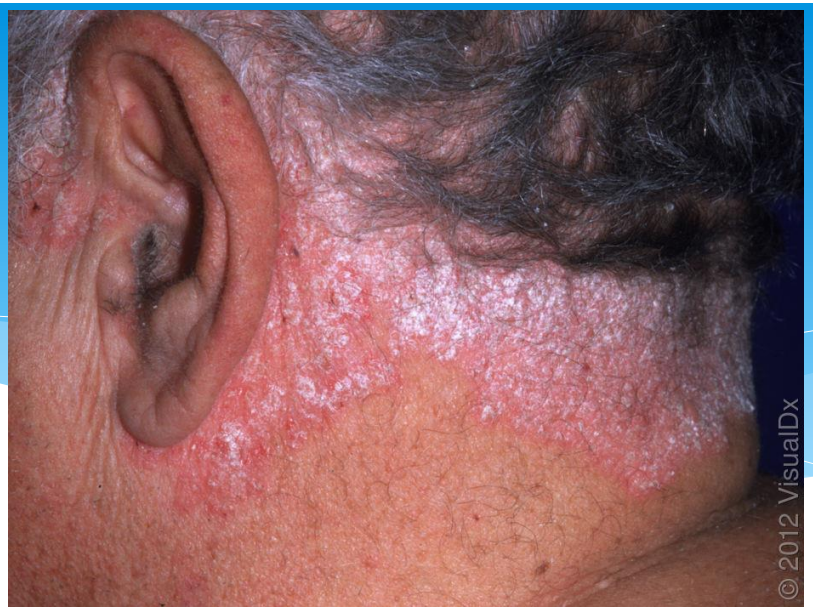
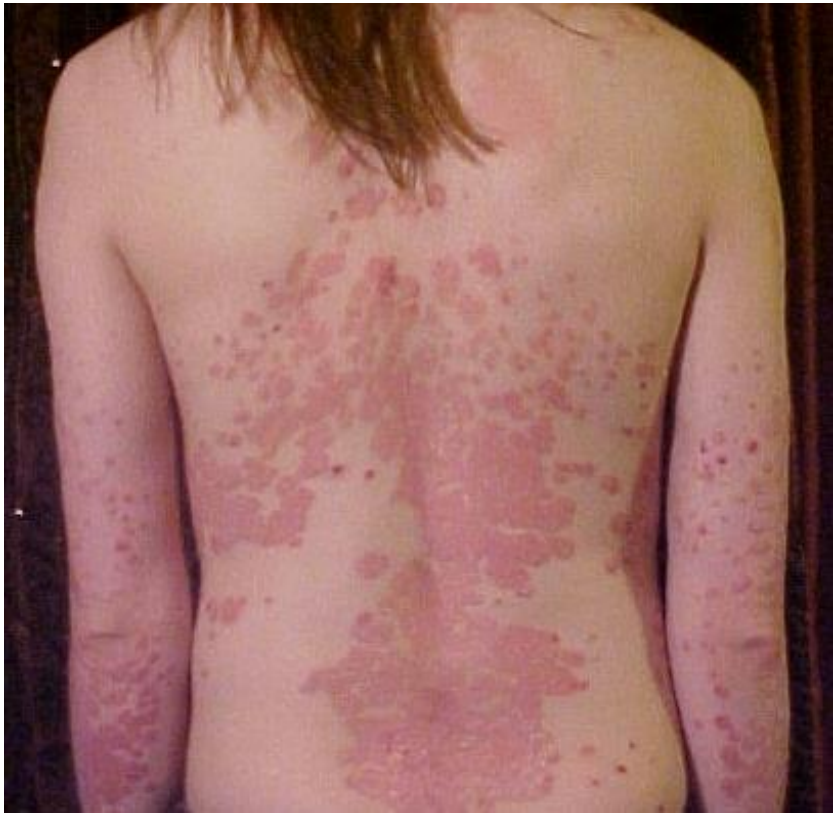
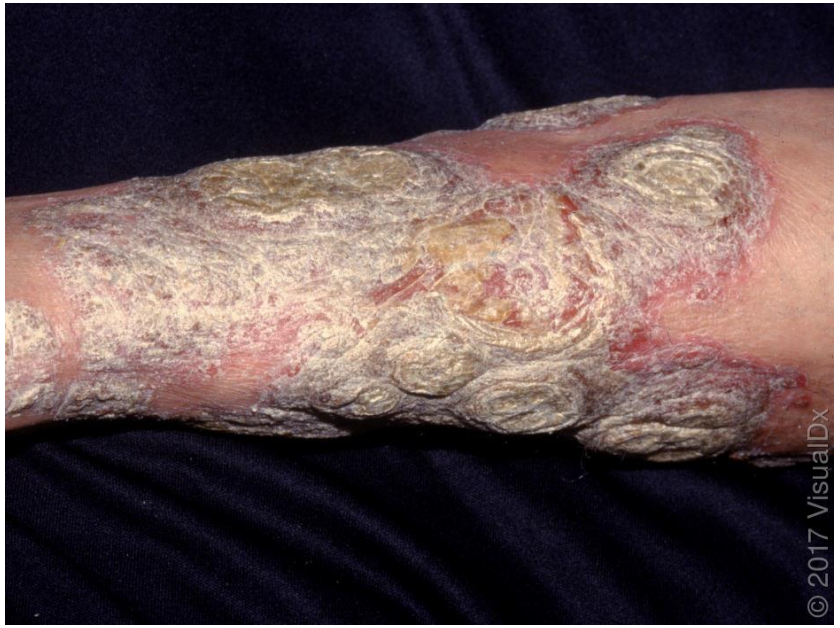
Psoriasis



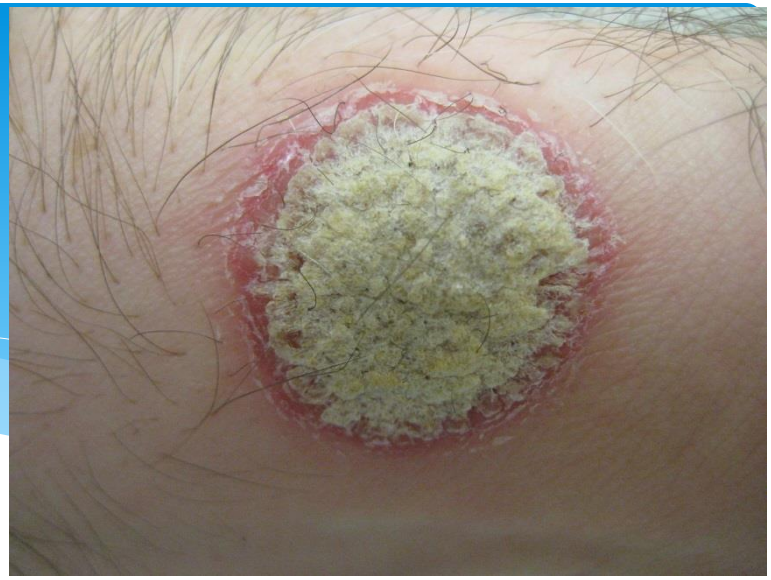




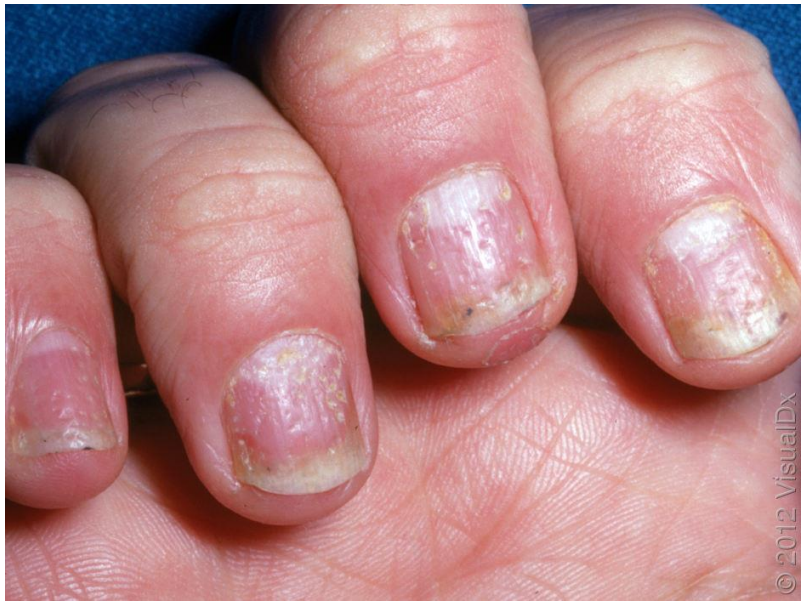
https://en.wikipedia.org/wiki/Psoriasis#/media/File:Psoriasis_on_back1.jpg

Clinical Presentation

* Sharply demarcated, scaly erythematous plaques
* Most common sites scalp, elbows and knees followed by the nails, hands, feet and trunk
* Nail changes may include pitting, onycholysis, thickening of nail plate, and subungual debris

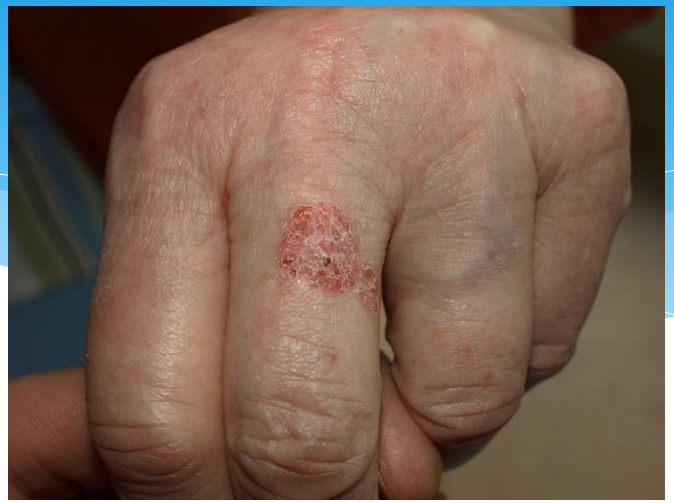


Reference: https://commons.wikimedia.org/wiki/File:Psoriasis2010.JPG



Differential Diagnosis

* Psoriasis can mimic many other conditions, especially if it has an unusual presentation.
* Bowen's disease (SCIS) is pink and scaly; single lesion; found in both sun-exposed and sun-protected areas.
* Eczema can appear as lichenified scaling papules and plaques.



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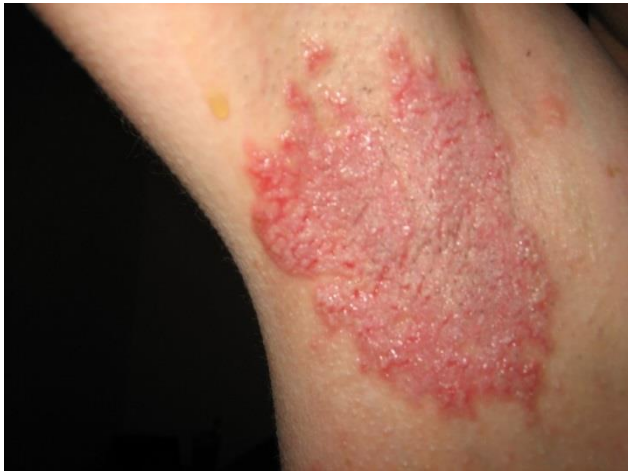
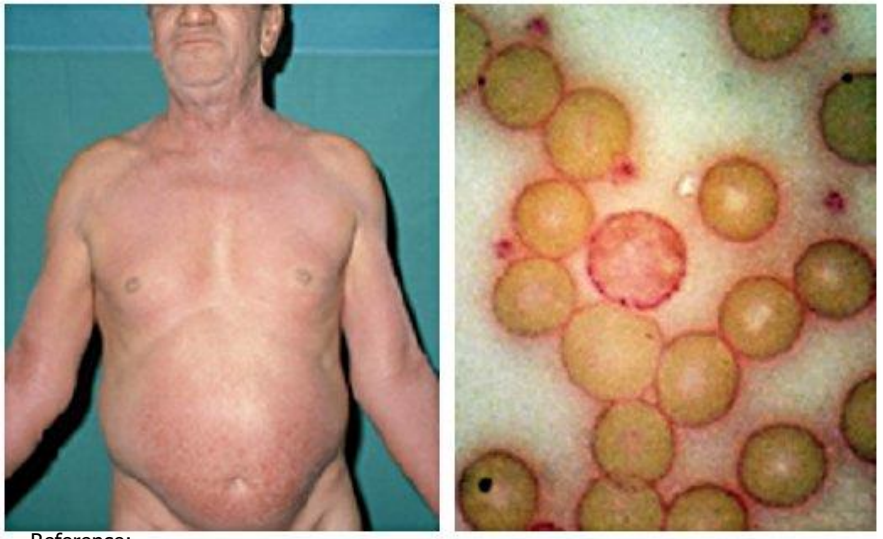


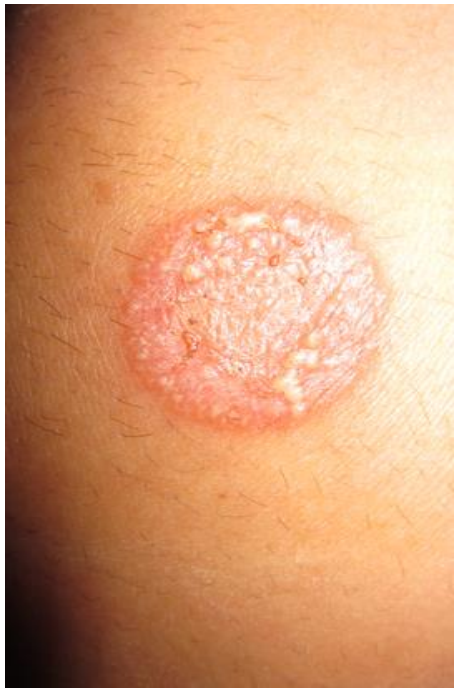
https://upload.wikimedia.org/wikipedia/commons/f/f6/HHD_R_Axilla.jpg

* Mycosis fungoides is a T-cell lymphoma; can present as patches or plaques; usually no scale; can be erythrodermic



Reference:
https://upload.wikimedia.org/wikipedia/commons/b/bb/S%C3%A9zary's_disease.jpg

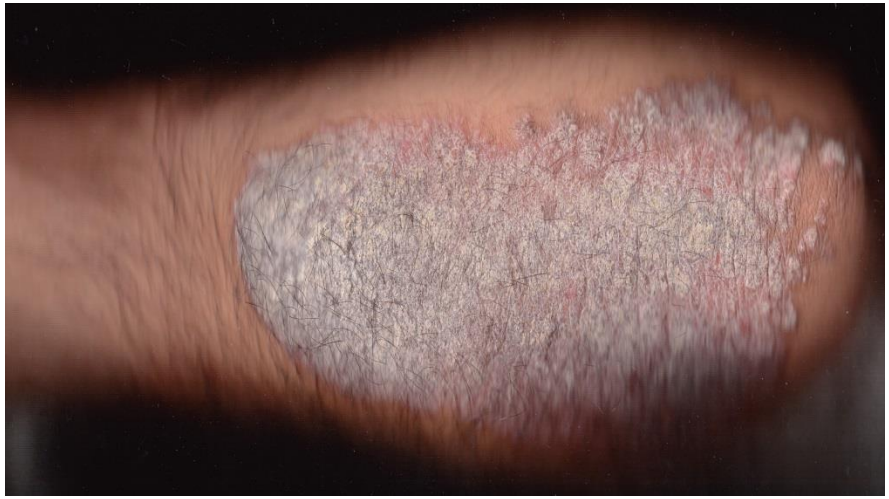
* Tinea corporis can mimic psoriasis with pink, scaling "ringworm" appearance



https://upload.wikimedia.org/wikipedia/commons/thumb/3/37/Tinea_corporis.png/270px-Tinea_corporis.png

Psoriasis Pathophysiology

* Localized and systemic inflammation
* Defects in the immune system
* Can be initiated by infection, stress, surgery, medications
* Epidermal hyperproliferation
* Clinically evident as scaling, cracking



https://upload.wikimedia.org/wikipedia/commons/c/c8/An_Arm_Covered_With_Plaque_Type_Psoriasis.jpg

Psoriasis Pathophysiology

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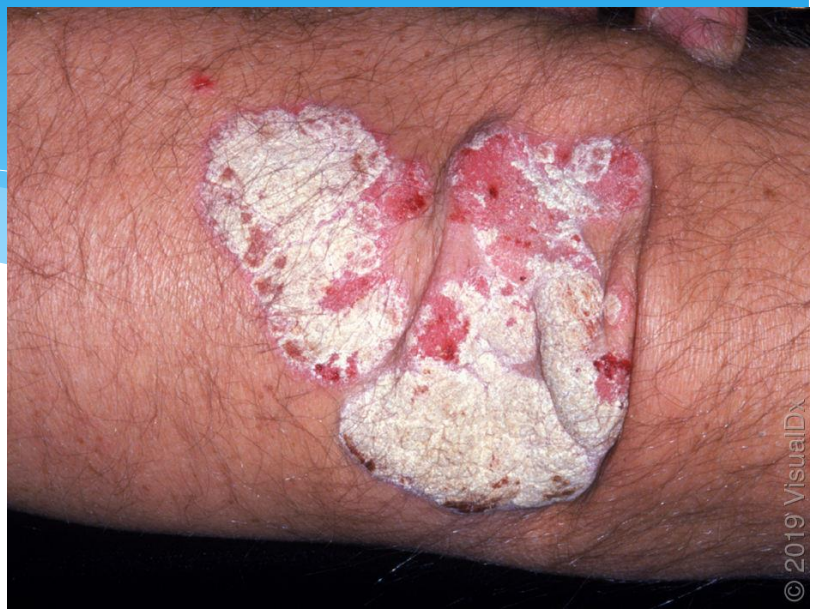
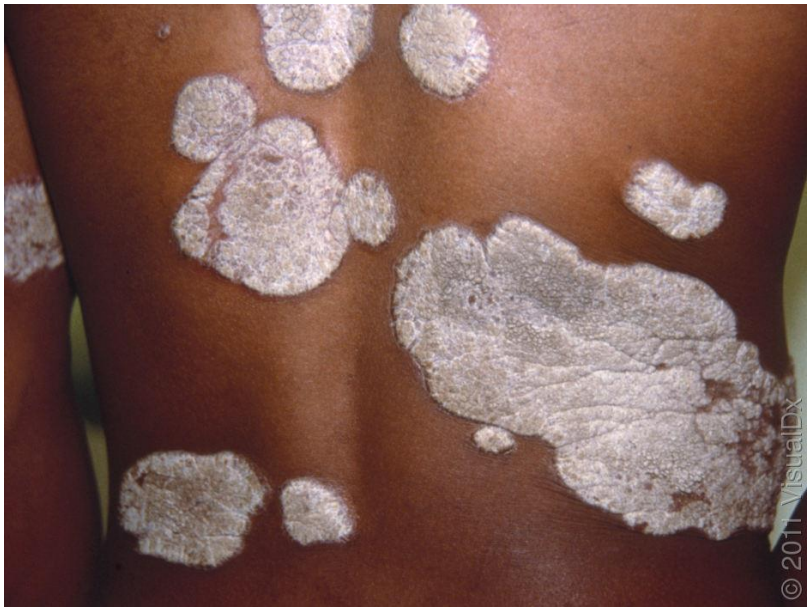
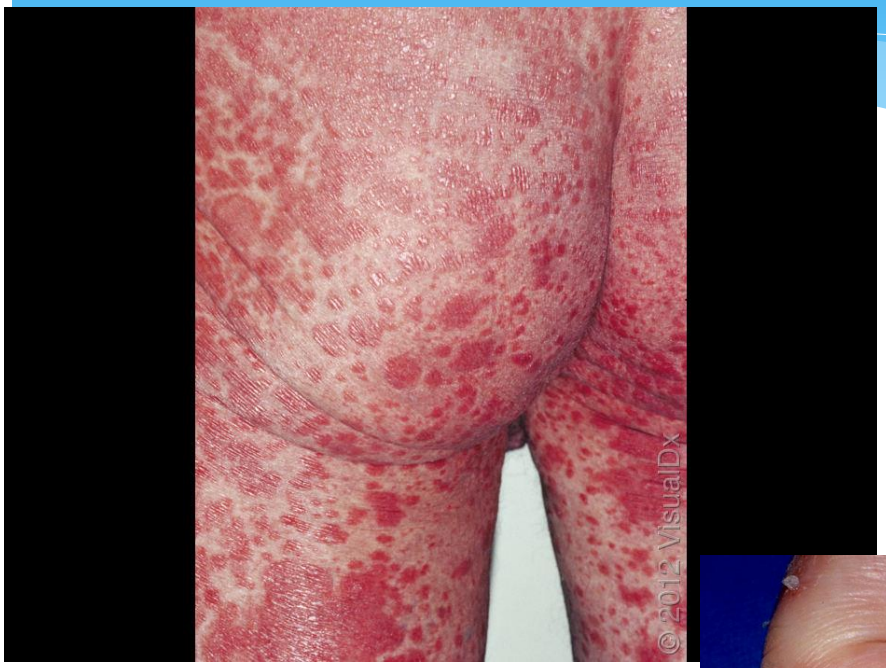
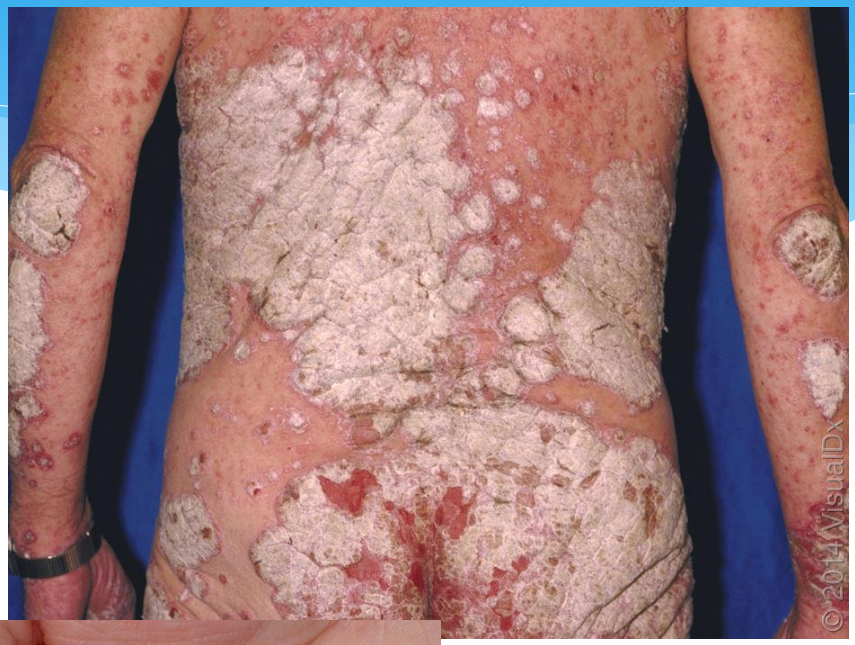
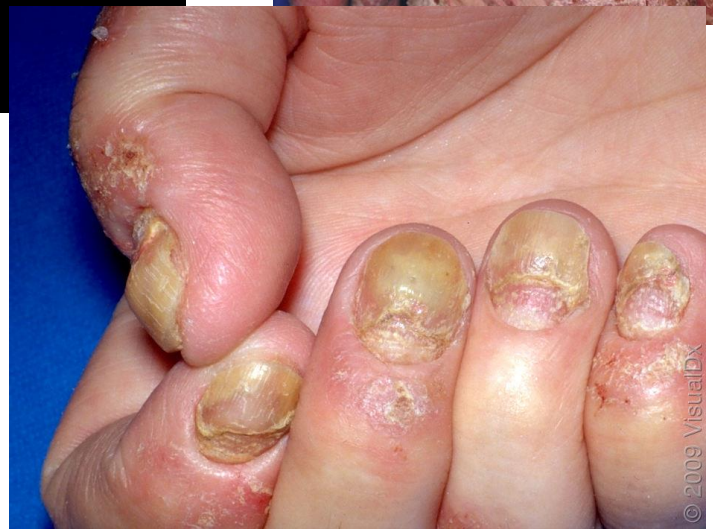




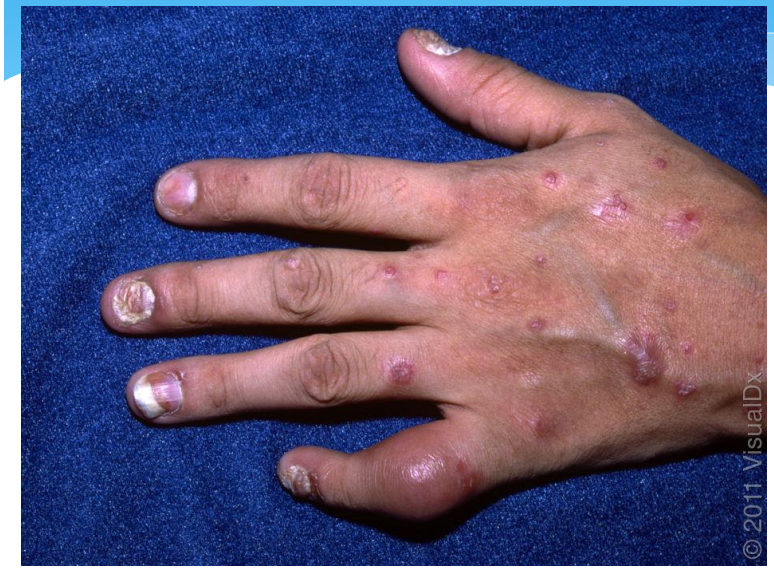
Severity of Psoriasis

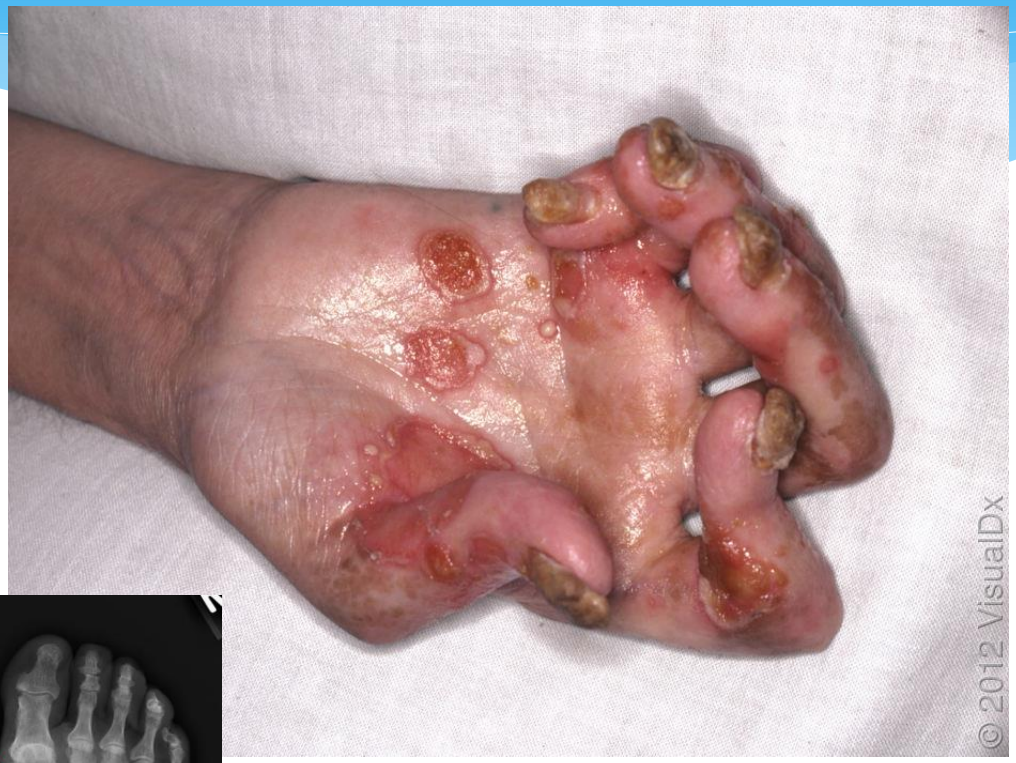


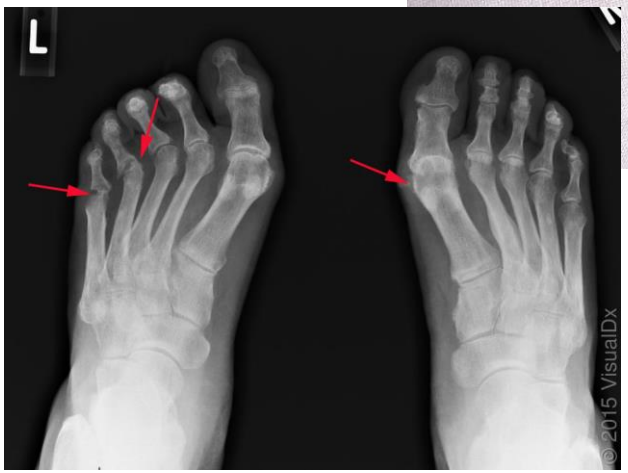




Psoriatic Arthritis

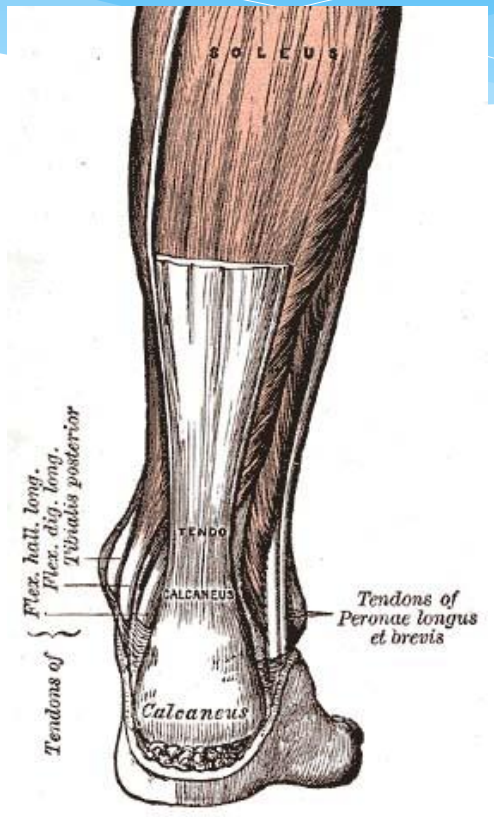






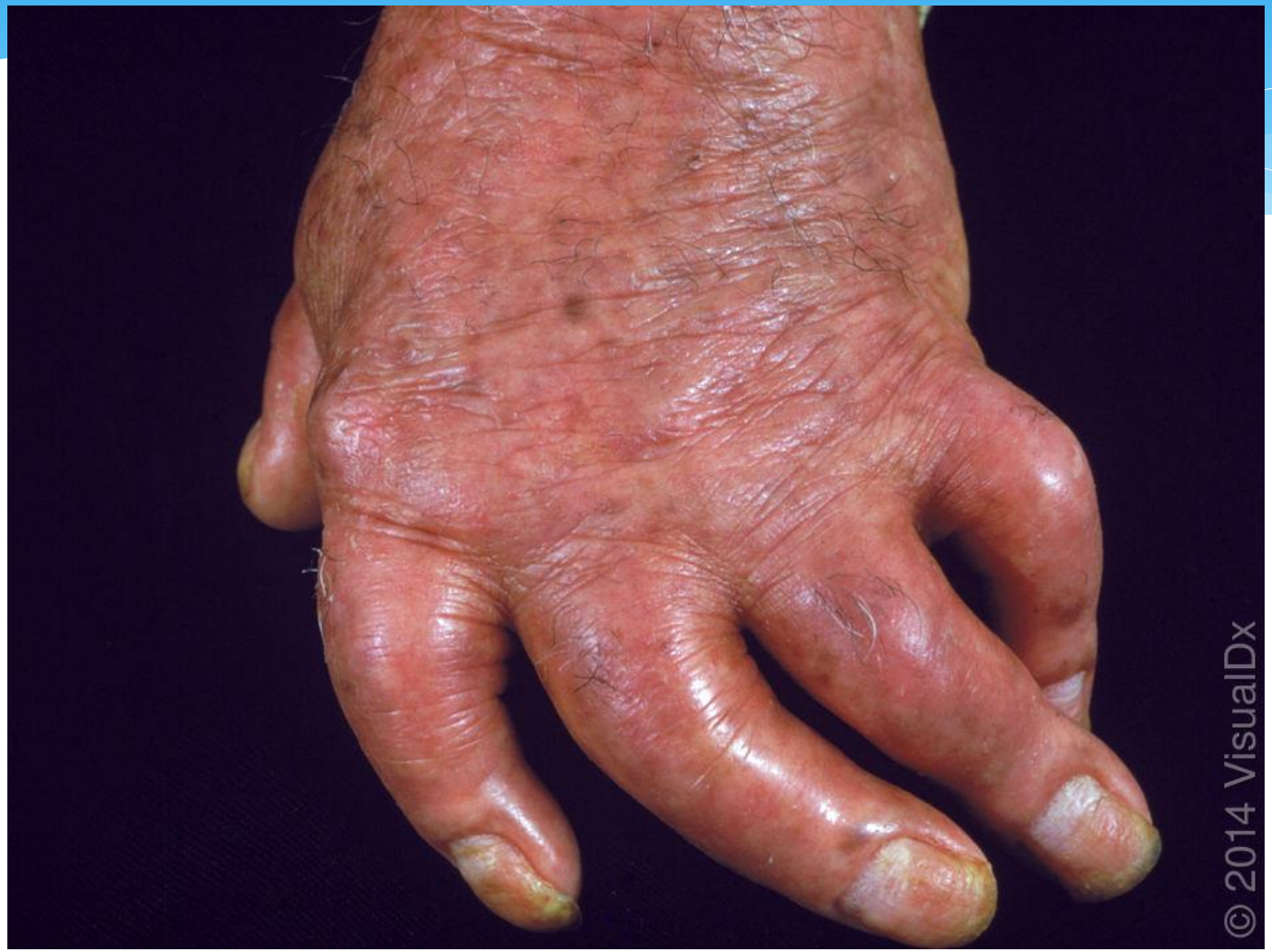
Enthesitis

* Inflammation involving tendon and ligament insertions into bone
* Occurs in 1 of 3 people with psoriatic arthritis
* Heel tenderness common



Reference: https://upload.wikimedia.org/wikipedia/commons/3/3c/Achilles-tendon.jpg

Joint damage is irreversible!



Papulosquamous treatment options

Which topical?

* Shampoos---scalp/hairy areas---leave on for 5-10 mins and then rinse
* Lotions/Solutions---thinner but good for scalp/hairy areas
* Foams---feel good, light; not as penetrating
* Creams---feel better going on, doesn't last as long as others
* Gels---cooling, some can be irritating if in an alcohol base
* Ointments---greasy, messy, most effective----penetrates deeper

How to use topicals appropriately

* Must use consistently (once or twice a day for active lesions)
* Use appropriate topical vehicle (ointment, cream, lotion) for appropriate body parts
* Covering after application helps with mess, helps absorption—sauna suit/saran wrap
* Pay attention to sunlight, time of day (some are less effective in sunlight)

Classification of Agents

* Corticosteroids
* Calcineurin inhibitors
* Vitamin D3 analogs
* Topical retinoids
* Keratolytics (thinning agents)
* Anti-pruritics (itch prevention)
* Emollients

Corticosteroids

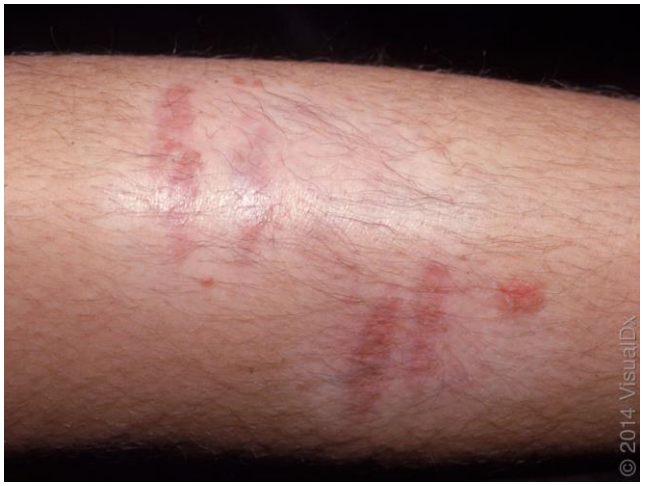
* Has been used since the 1950's
* Mainstay of treatment of psoriasis
* Works as an anti-inflammatory agent (psoriasis is an inflammatory disease)
* Very effective (80% of patients treated with high-potency topical corticosteroids experience clearance).
* Once daily application is as effective as twice a day.
* Even in "remission" use on alternate days to stay clear

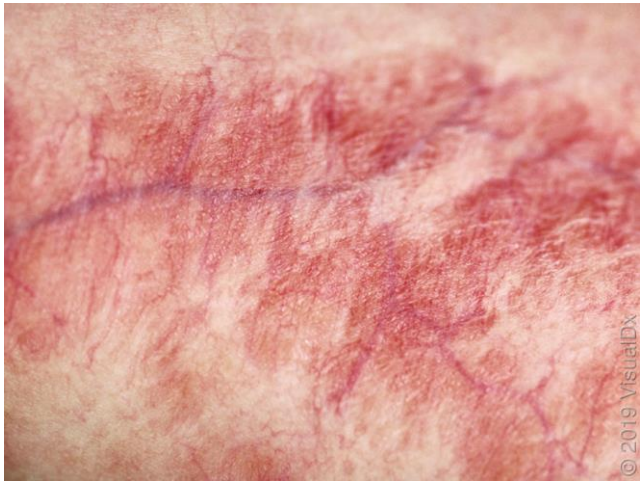
Corticosteroids

* Mild, medium and potent strength classifications
* Hydrocortisone is a mild potency steroid and 1% can be purchased over the counter.
* Clobetasol is an example of a high potency steroid
* Mild strength is good to use in flexural areas where other topicals can cause irritation
* Occlusion definitely helps absorption

Contraindications for topical steroids

* Bacterial, viral or fungal infections
* Skin is thinning
* Moderate to strong potency should be avoided on the face, axillae, groin areas due to thin skin
* Allergies (contact dermatitis) to steroids or vehicle
* Pregnancy or breast-feeding





Classifications of steroids

* Class 1 -Very potent (up to 600 times as potent as hydrocortisone)
* Class 2 -Potent (I50-100 times as potent as hydrocortisone)
* Class 3 -Moderate (2-25 times as potent as hydrocortisone)
* Class 4 –Mild (Hydrocortisone 1-2.5%)

Absorption of topical steroids

* Forearm absorbs 1%
* Armpit absorbs 4%
* Face absorbs 7%
* Eyelids and genitals absorb 30%
* Palm absorbs 0.1%
* Sole absorbs 0.05%

(DermNet NZ) http://dermnetnz.org/treatments/topical-steroids.html

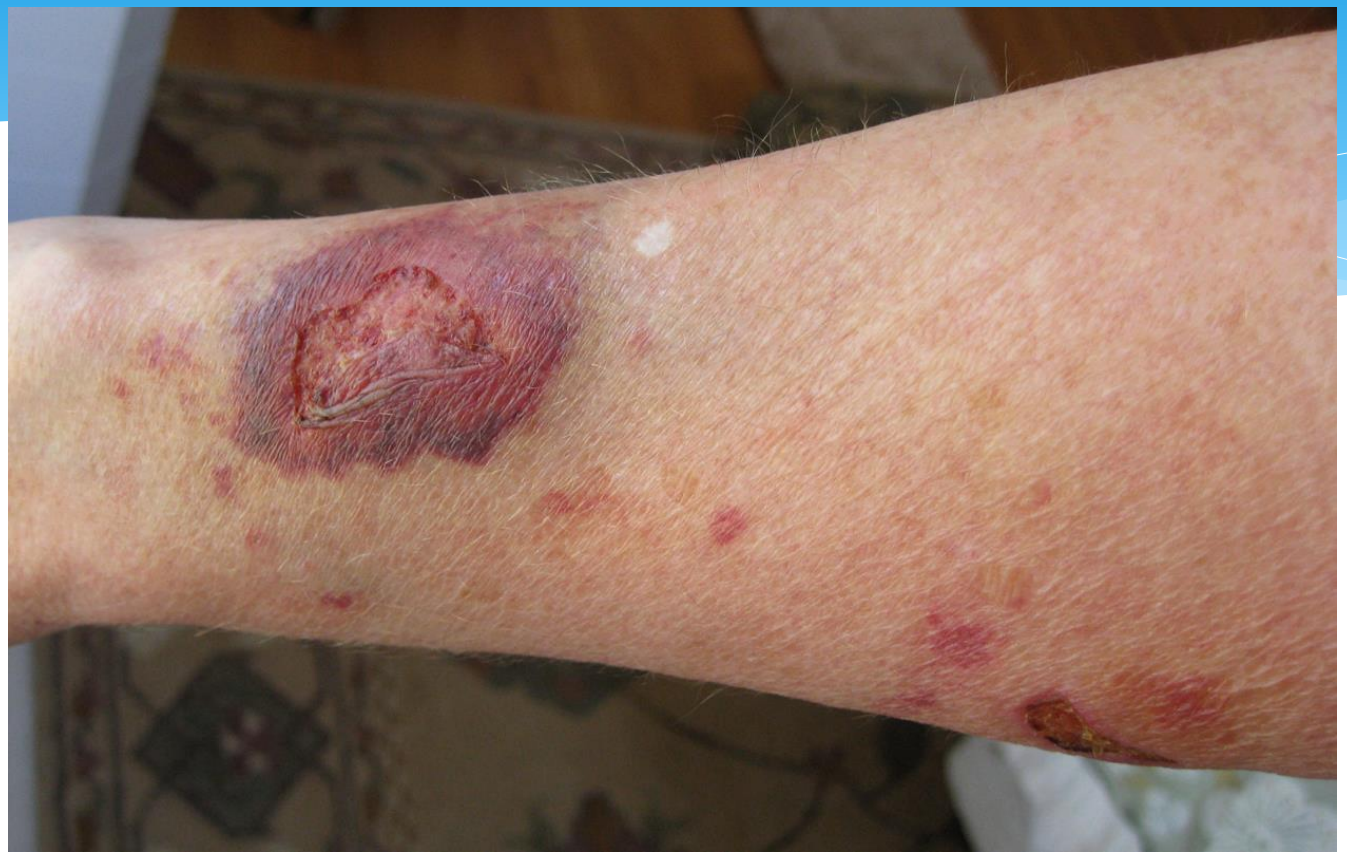
Side Effects of Steroids

Local side effects of topical steroids include:

- Skin thinning (atrophy) and stretch marks
- Easy bruising and tearing of the skin
- Perioral dermatitis (rash around the mouth)
- Enlarged blood vessels (telangiectasia)
- Susceptibility to skin infections (especially fungal)

Systemic side effects:

- Cushing Syndrome (hypertension, diabetes, edema)
- Adrenal Gland Suppression (stops natural steroid production)



https://en.wikipedia.org/wiki/Steroid_atrophy#/media/File:Atrophied_skin.png

Calcineurin inhibitors

* Tacrolimus, pimecrolimus
* 0.1-1% cream, ointments BID
* FDA: atopic dermatitis
* Ok to use on face, axillae, anogenital areas
* No skin atrophy
* Burns initially but then ok

Calcineurin inhibitors

Black box warning:

"Long-term safety of topical calcineurin inhibitors has not been established, and rare cases of malignancy (eg, skin and lymphoma) have been reported in patients treated with topical calcineurin inhibitors including pimecrolimus. Avoid continuous long-term use in any age group and apply to limited areas affected by atopic dermatitis. Not indicated for use in children less than 2 years of age"

Other topical agents

* Coal tar 5-20% (LCD)is anti-inflammatory and helps with itching

  -avoid in pregnancy

  -stains/smells

  -often used for scalp in shampoos/lotions
* Salt water baths very effective for itching/redness

  -don't spend a lot of money on "specialized salts"

Emollients

* Petrolatum (best kept secret)
  -ok to use everywhere
  -patients don't like due to greasiness

* Urea cream (moisturizes, thins)
  -do not get near eyes, mouth, mucous membranes
  -comes in foams/creams, gels, shampoos, lotions, pads

* Ammonium lactate (antipruritic but also moisturizes)

* Non-scented, sensitive skin moisturizers

* Coconut oil, olive oil

Patient education pearls

1. Moisturizing is essential for helping to control the itch.
2. Avoid scratching
3. Take medications as prescribed
4. Consider alarm setting on phone, reminder texts as a way to remember to take medications
5. For medicated shampoos: apply to affected areas, leave on for 5-10 minutes and then rinse
6. Consider wrapping area with saran wrap to help creams/ointments soak in and keep topicals from rubbing off

ICD-10-CM Diagnosis Code

* L44.8 Other specified papulosquamous disorders
* L44.9 Papulosquamous disorder, unspecified
* L45 Papulosquamous disorders in diseases classified elsewhere

Objectives revisited

* *Identify clinical manifestations of 3 papulosquamous disorders commonly seen in the primary care setting:*

  atopic dermatitis, nummular eczema, psoriasis

* *Identify evidence-based, cost-effective treatments for eczematous disorders:*

  Hydrocortisone, petroleum jelly, antihistamines

* *List 4 key patient education pearls appropriate for managing patients with papulosquamous disorders.*

Objectives revisited

List 4 key patient education pearls appropriate for managing patients with papulosquamous disorders:

1. *Moisturizing is essential for helping to control the itch.*
2. *Avoid scratching*
3. *Take medications as prescribed*
4. *Consider alarm setting on phone, reminder texts as a way to remember to take medications*

References

* AAD. “Learning module: Red scaly rash: The papulosquamous eruption” at https://www.aad.org/education/basic-derm-curriculum/suggested-order-of-modules/red-scaly-rash.
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Thank you!

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