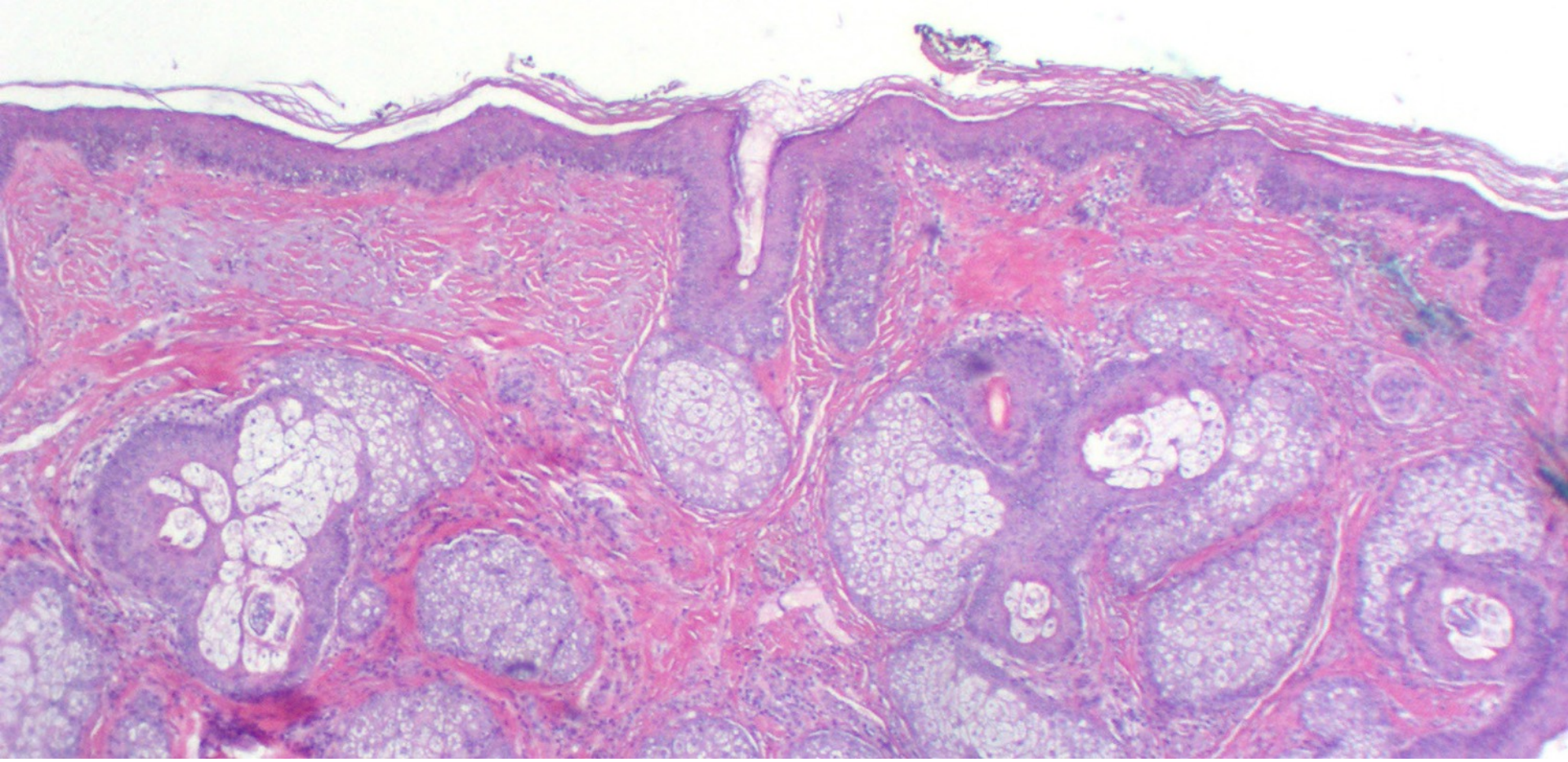


Dermatology: What is That?

Melissa E. Cyr, Ph.D., ANP-BC, FNP-BC

August 9, 2021

About the instructor…

Melissa Cyr, PhD, NP

melissacyr3@gmail.com

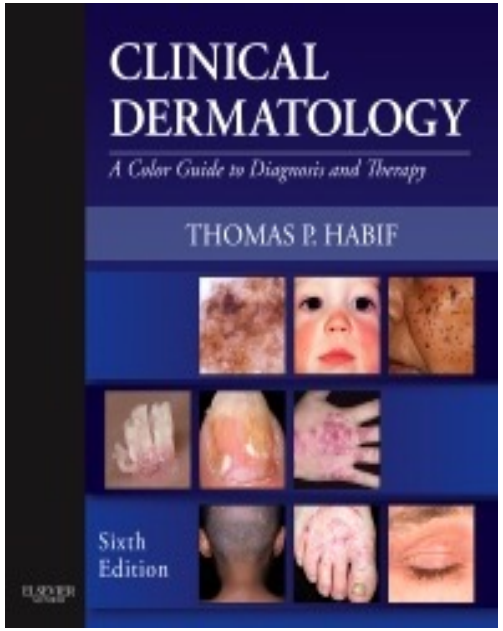
- 2009: MS Adult NP, Northeastern University
- 2011: Family NP Certificate, UMass Boston
- 2014: Post-graduate Dermatology Fellowship, Lahey Hospital & Medical Center
- 2019: Ph.D., Northeastern University
  - Focus: Access to Dermatology Care, Systems Science
- 2020-present:
  - Full-time Dermatology NP

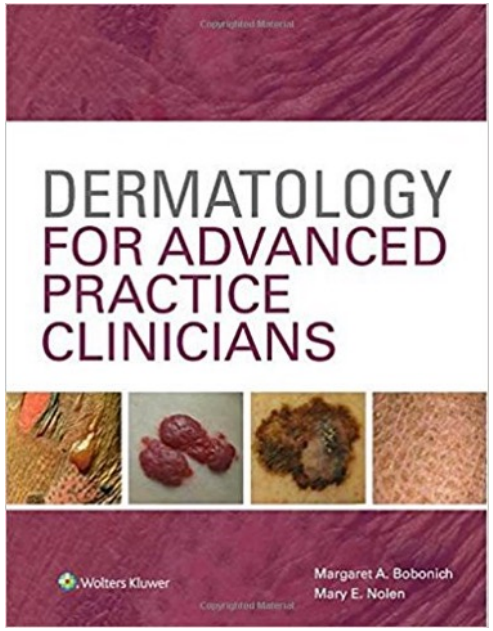
DSH DERMATOLOGY & SKIN HEALTH
Where Exceptional Care Comes First

Recommended Resources…

1. Recommended Practice References:

   - **Habif, T. P. (2015). *Clinical Dermatology: A Color Guide to Diagnosis and Therapy (6th ed.)*.**
     - Very highly recommended text, great investment!!
   - Bobonich, M. A. & Nolen, M. E. (2015). *Dermatology for Advanced Practice Clinicians (1st. ed.),* Wolters Kluwer: Philadelphia.
     - Written for NP/PAs, by NP/PAs
     - I hear chapter 13 is the best ;)
   - **DermNet NZ (Free Website!)**
     - http://www.dermnetnz.org/





Class Objectives

1. Gain skills needed to diagnose and treat common skin diagnoses.
2. Build a knowledge base that will enable the provider to properly treat, refer, and co-manage patients with chronic dermatologic conditions.
3. Identify common dermatology pearls and pitfalls, and gain confidence in practice when approaching a patient's skin concerns.

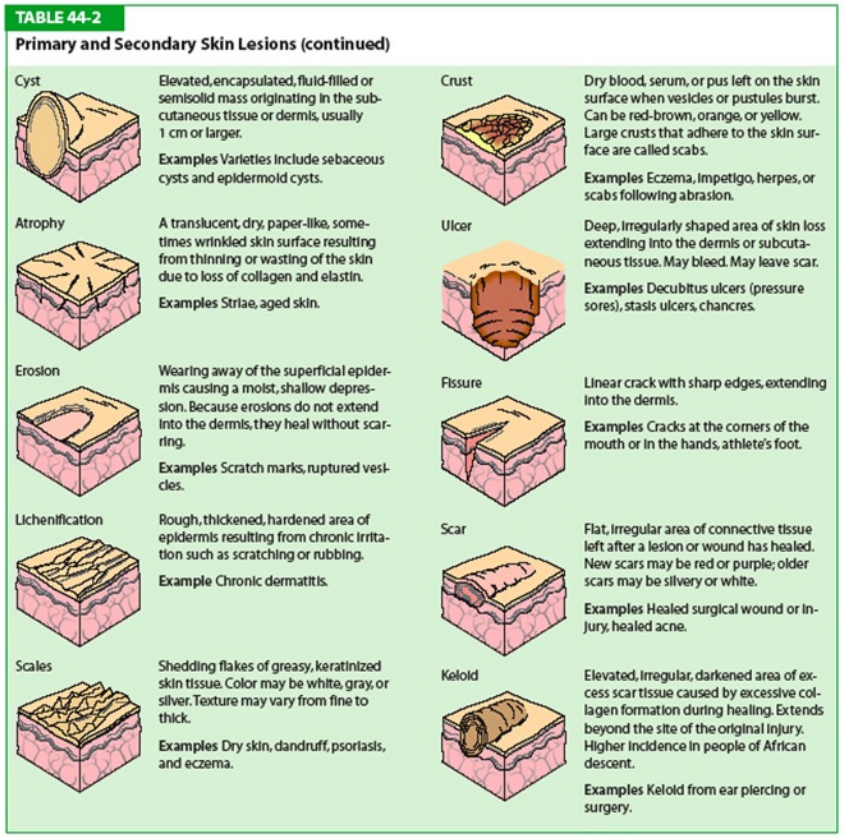


TABLE 44-2

Primary and Secondary Skin Lesions (continued)

Cyst
Elevated, encapsulated, fluid-filled or semisolid mass originating in the subcutaneous tissue or dermis, usually 1 cm or larger.
Examples Varieties include sebaceous cysts and epidermoid cysts.

Atrophy
A translucent, dry, paper-like, sometimes wrinkled skin surface resulting from thinning or wasting of the skin due to loss of collagen and elastin.
Examples Striae, aged skin.

Erosion
Wearing away of the superficial epidermis causing a moist, shallow depression. Because erosions do not extend into the dermis, they heal without scarring.
Examples Scratch marks, ruptured vesicles.

Lichenification
Rough, thickened, hardened area of epidermis resulting from chronic irritation such as scratching or rubbing.
Example Chronic dermatitis.

Scales
Shedding flakes of greasy, keratinized skin tissue. Color may be white, gray, or silver. Texture may vary from fine to thick.
Examples Dry skin, dandruff, psoriasis, and eczema.

Crust
Dry blood, serum, or pus left on the skin surface when vesicles or pustules burst. Can be red-brown, orange, or yellow. Large crusts that adhere to the skin surface are called scabs.
Examples Eczema, impetigo, herpes, or scabs following abrasion.

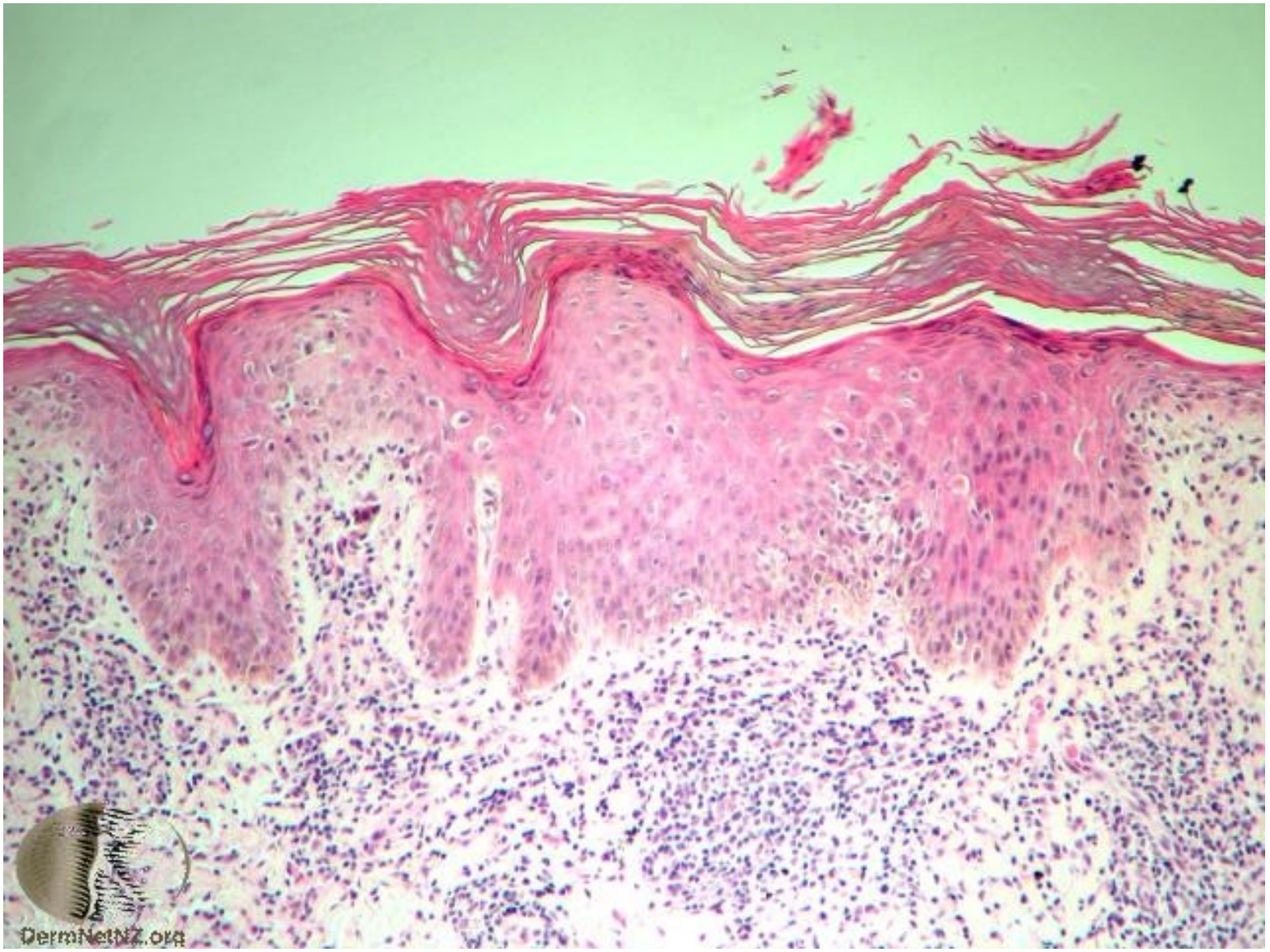
Ulcer
Deep, irregularly shaped area of skin loss extending into the dermis or subcutaneous tissue. May bleed. May leave scar.
Examples Decubitus ulcers (pressure sores), stasis ulcers, chancres.

Fissure
Linear crack with sharp edges, extending into the dermis.
Examples Cracks at the corners of the mouth or in the hands, athlete's foot.

Scar
Flat, irregular area of connective tissue left after a lesion or wound has healed. New scars may be red or purple; older scars may be silvery or white.
Examples Healed surgical wound or injury, healed acne.

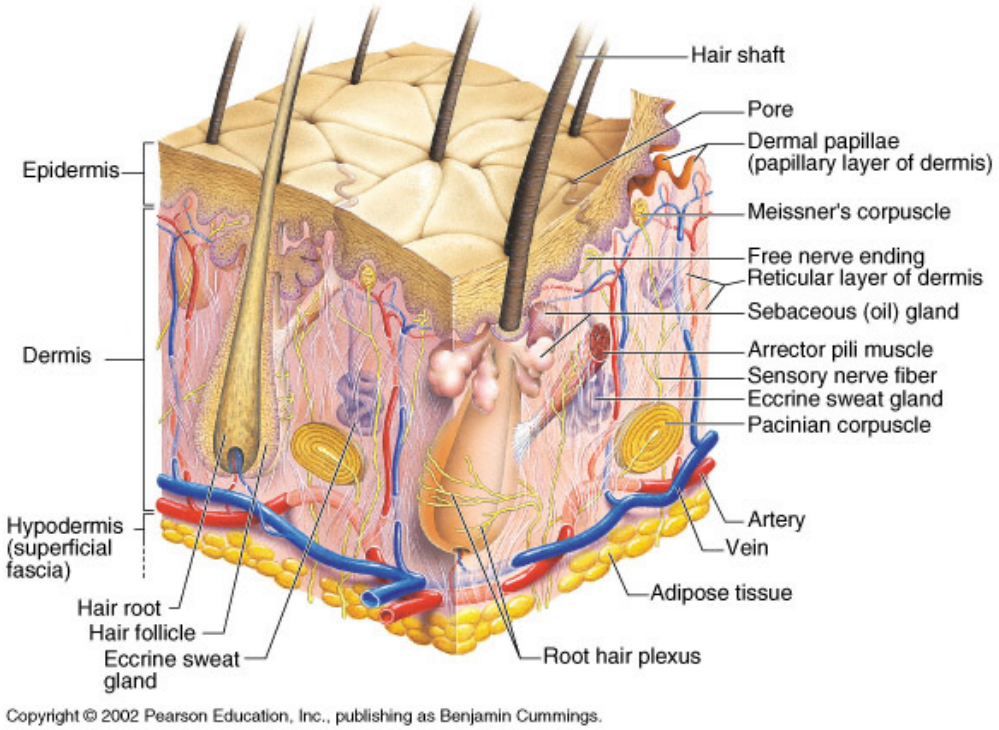
Keloid
Elevated, irregular, darkened area of excess scar tissue caused by excessive collagen formation during healing. Extends beyond the site of the original injury. Higher incidence in people of African descent.
Examples Keloid from ear piercing or surgery.

A Slice of Skin

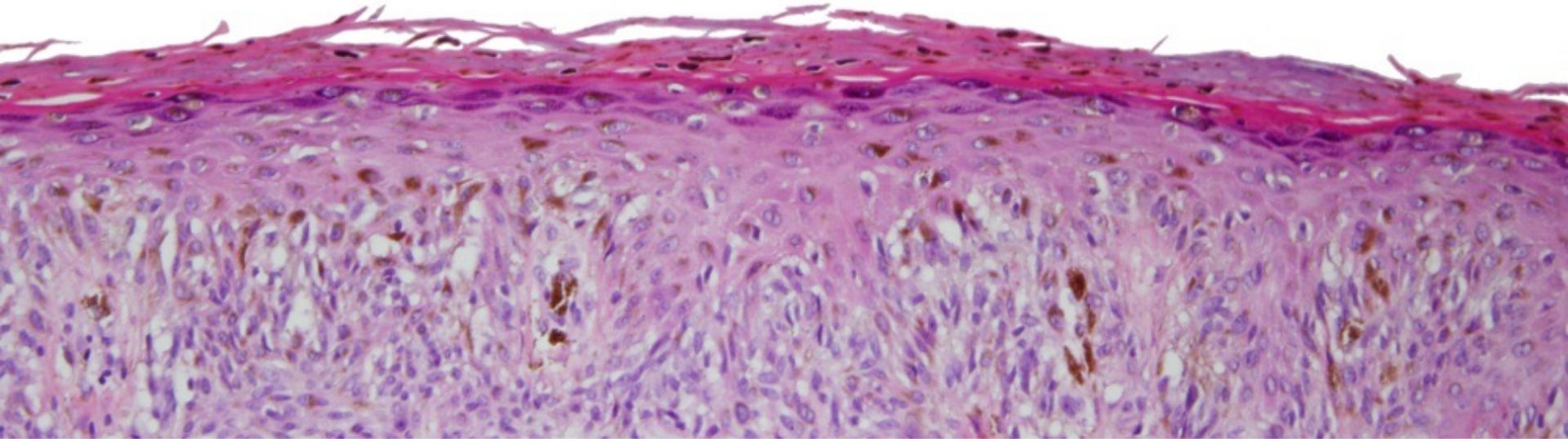


Anatomy

1. **Protection:**
   - Physical barrier
   - Fluids balance
   - UV radiation protection (melanin)
   - Infections
2. **Thermal regulation**
   - Temperature regulation
3. **Sensation**
4. **Endocrine function:**
   - Production of Cholecalciferol (D3) in the epidermis



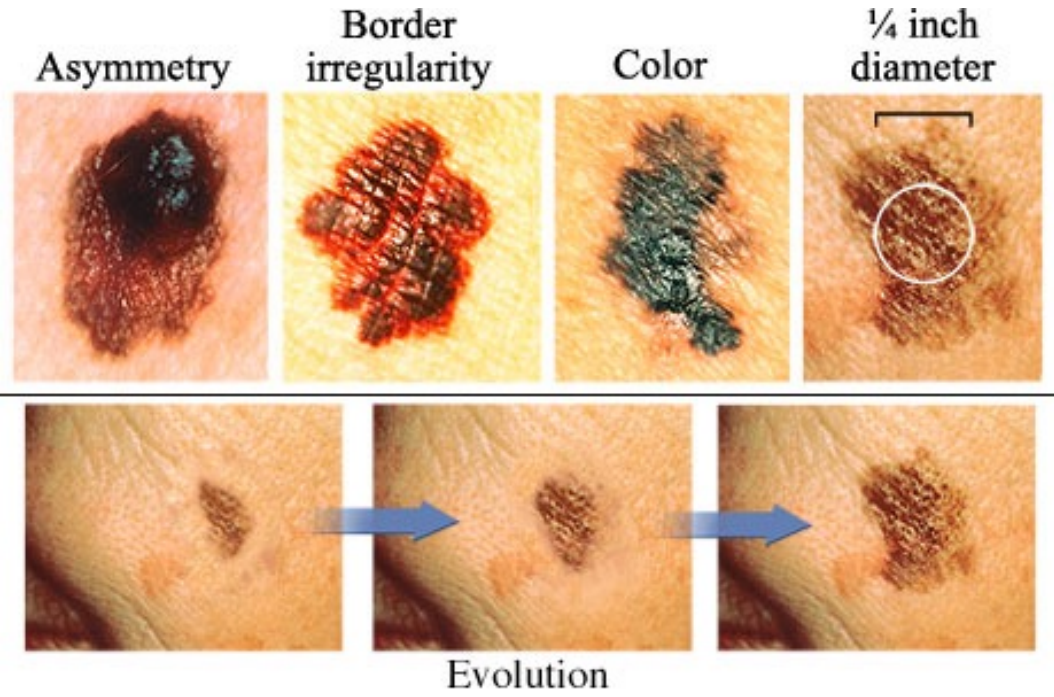
- Epidermis (outer layer)
- Dermis (middle layer)
- Hypodermis or subcutis (inner fatty layer)

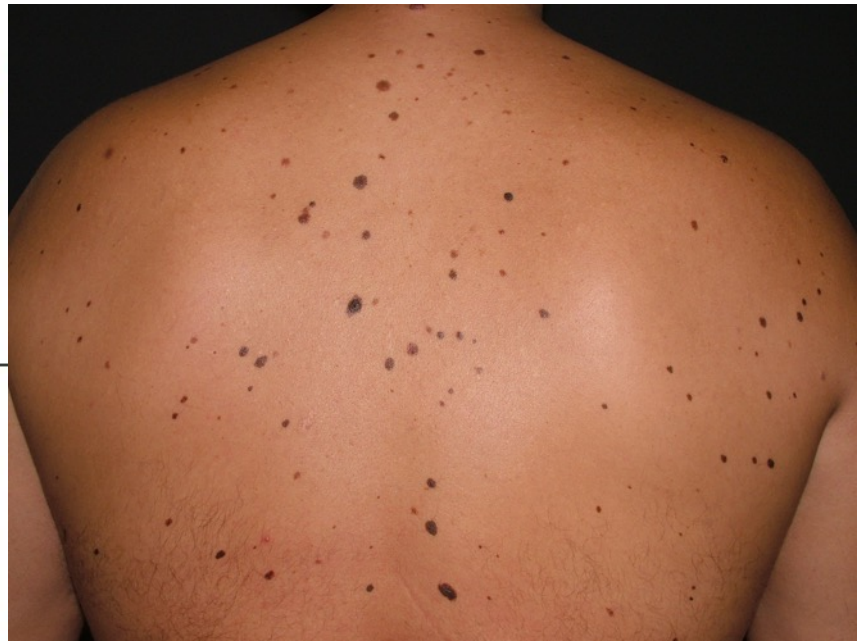


Common Benign Skin Lesions

Nevus (pleural: Nevi)

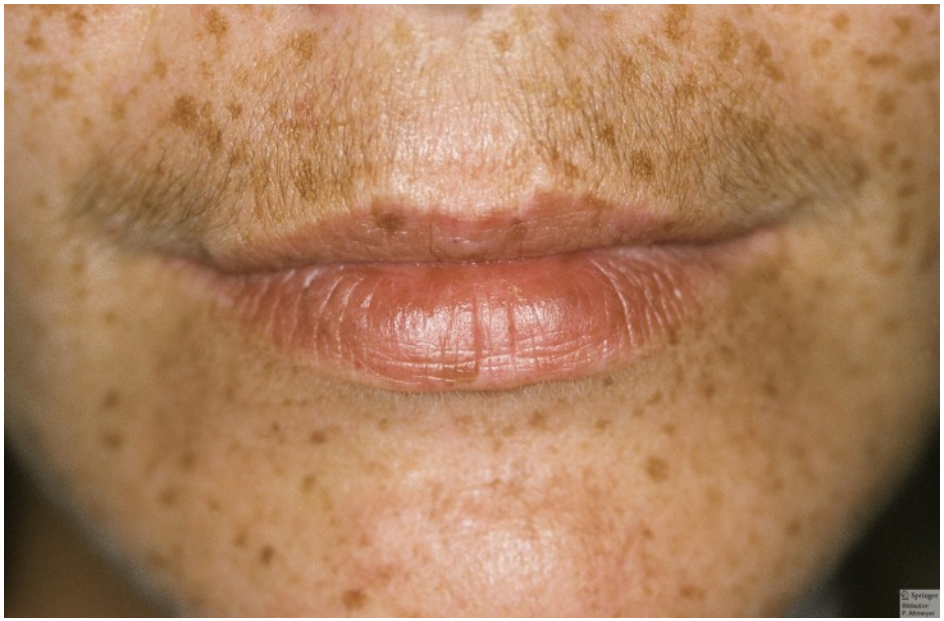
- AKA: Moles
- One of the most common skin lesions: benign and occur on almost every person
- Several variants of nevi- look for the ABCDE's "ugly duckling"
- Congenital – present at birth
- Incidence of new nevi peaks at age 40-50, then lesions start to diminish



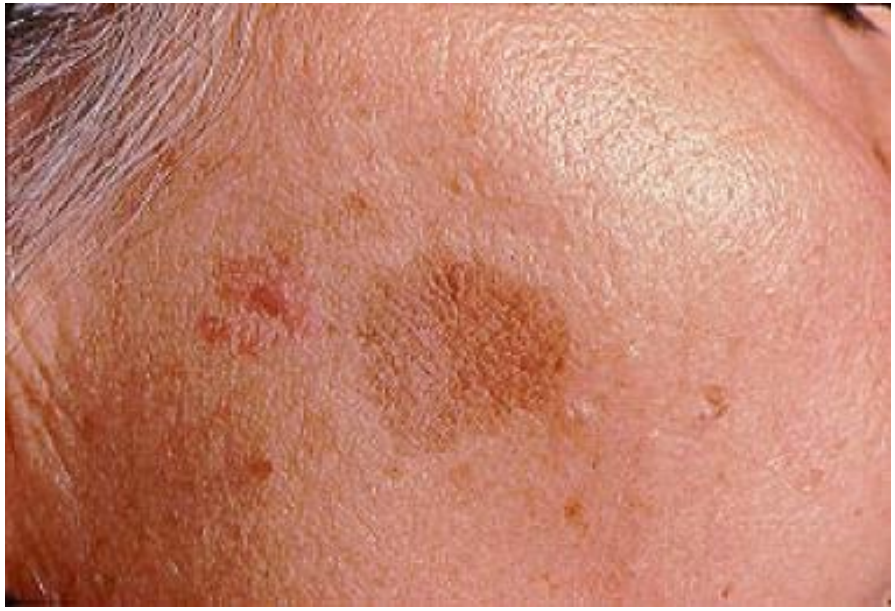


Lentigo (pleural: Lentigines)

- **Ephelides (AKA: Freckles)**
  - Autosomal dominant trait, typically in fair skinned individuals
  - Present in children, lose prevalence with age

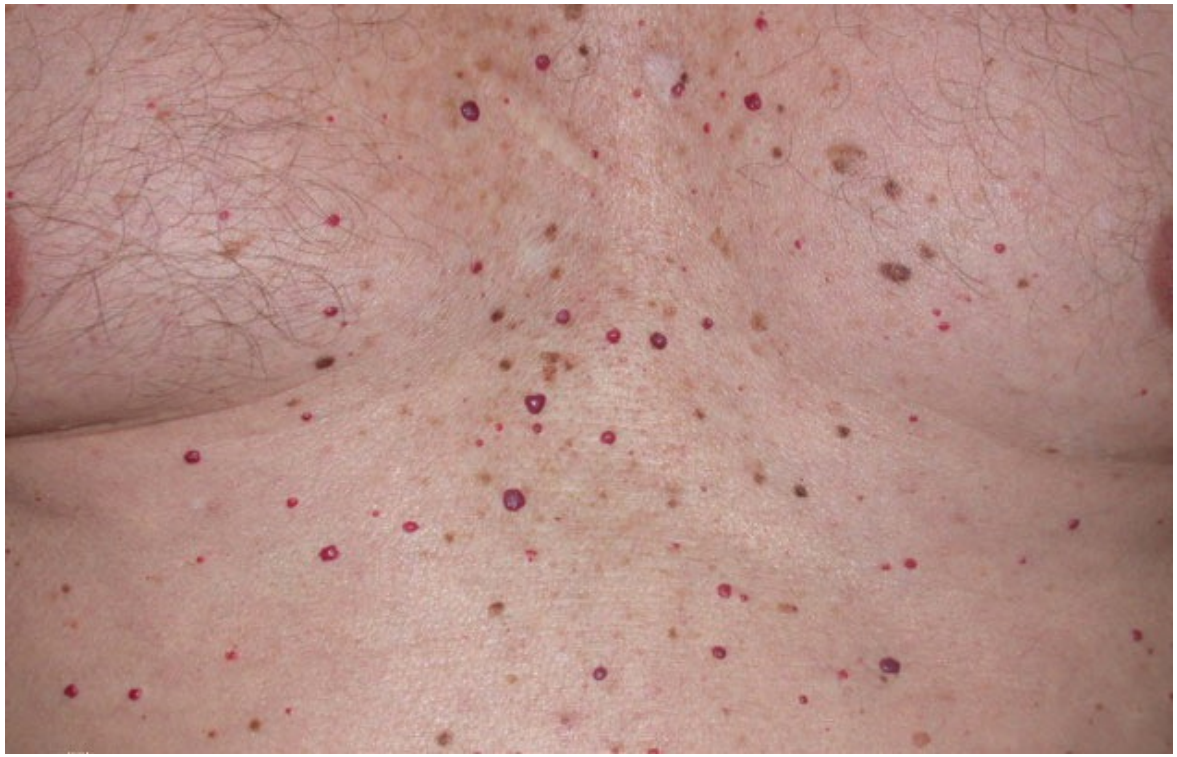


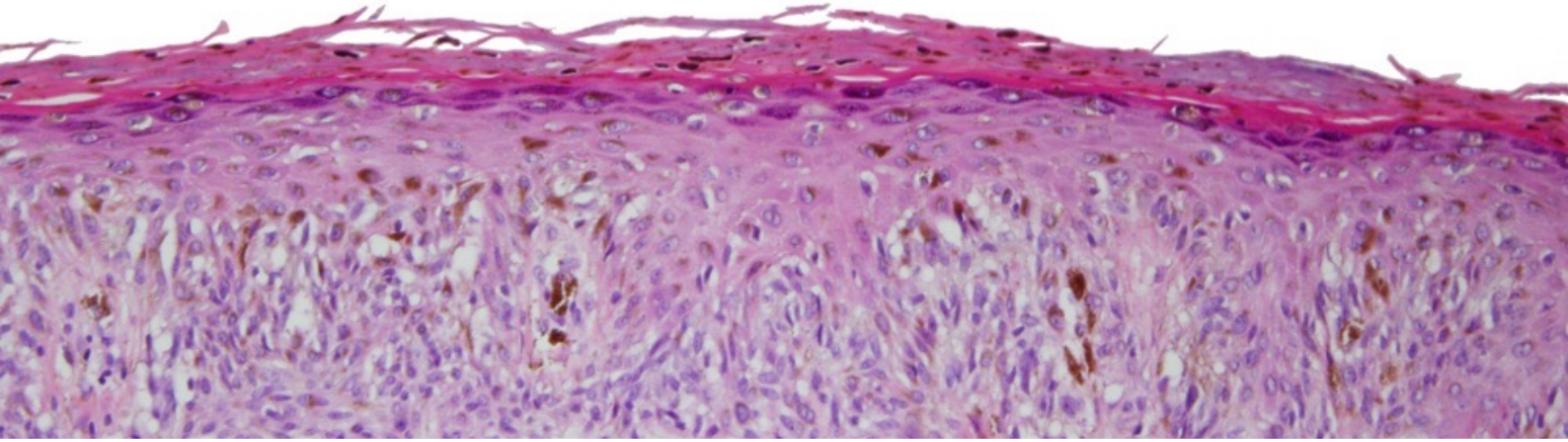
- **Lentigines (single: lentigo)**
  - Caused by sun exposure
  - Increase with age



Cherry angiomas (or hemangiomas)

- Most common vascular malformation
- Occurs in virtually everyone over age 30
- Trauma may produce slight bleeding

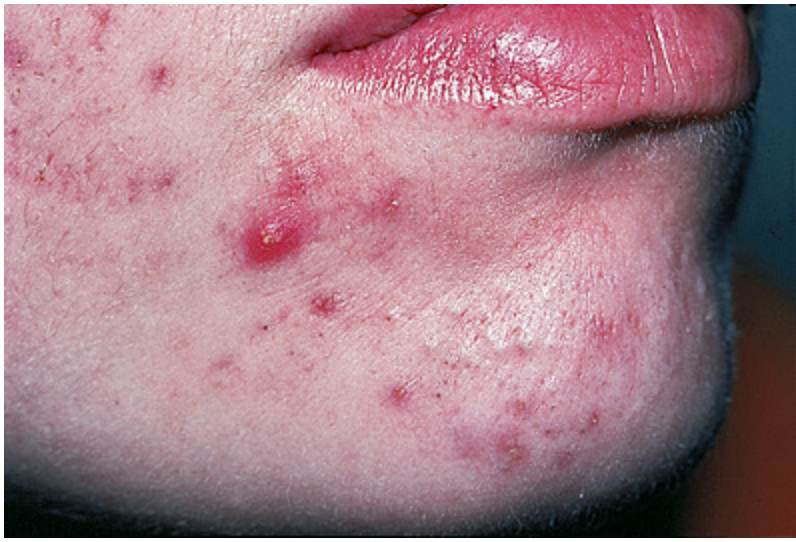


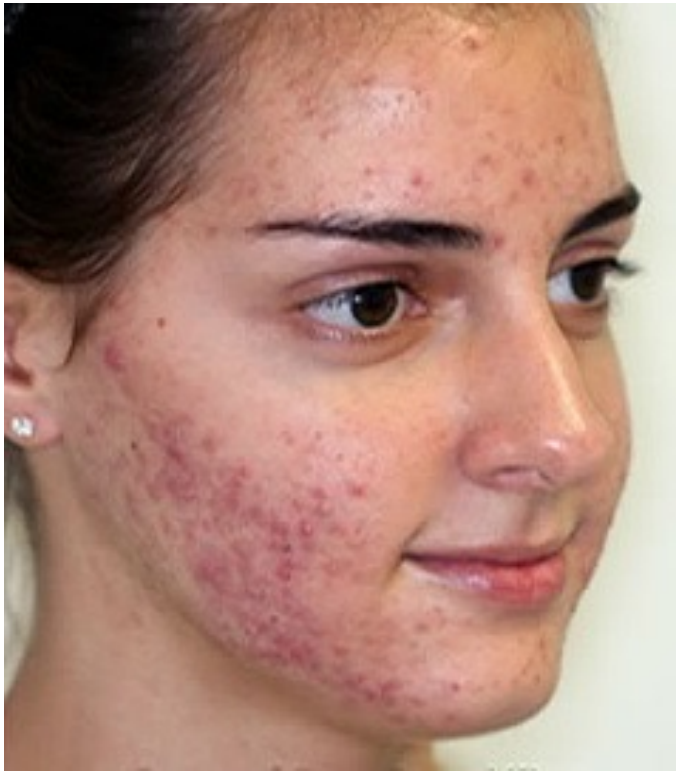


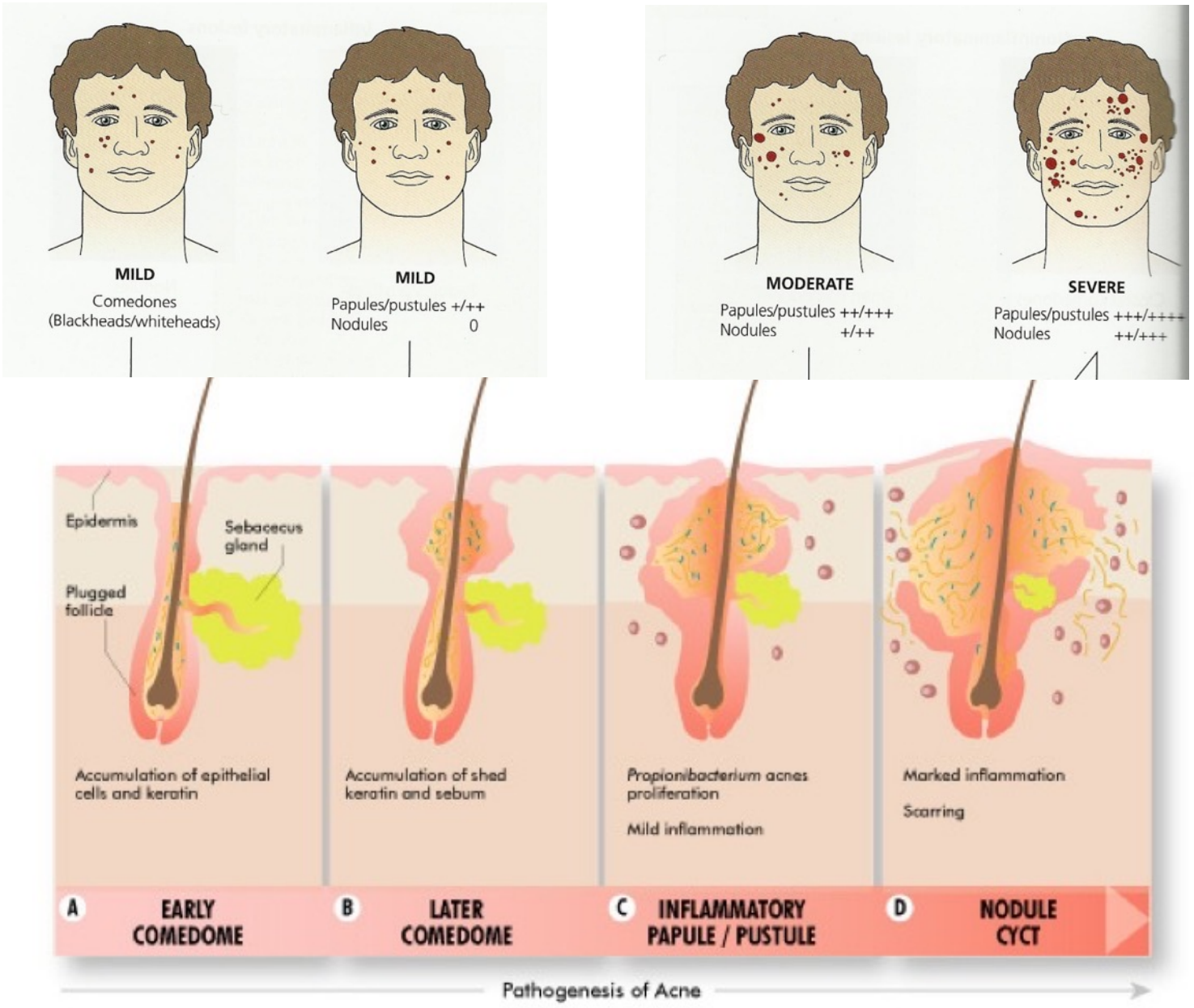
Acne-Rosacea & Related Dermatoses

Acne

- 85% of adolescence /young adults affected
- Hormonal influence (sebum production increases during onset of puberty)
- *Bacteria: P. acnes*, *P. granulosum*, & less common *P. parvum*
- Immune response causes inflammation seen in papules, nodules, & cysts
- High glycemic foods, dairy implicated in development/worsening







Ranges from mild comedonal acne to fulminant systemic disease.

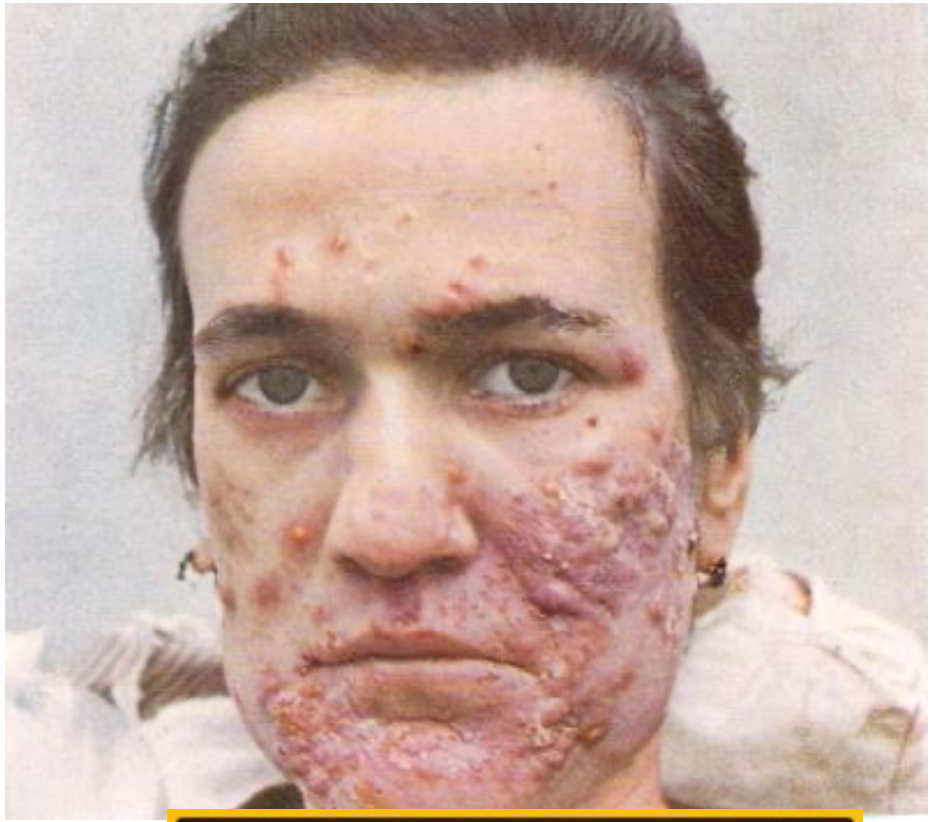
Acne Treatment

- Great wash regimen, twice daily
  - BP or salicylic acid wash
    -or-
  - Gentle cleanser
  - Apply topicals
  - Moisturize (Cerave AM/PM face lotion)

	Mild	Moderate	Severe
1st Line Treatment	Benzoyl Peroxide (BP) or Topical Retinoid -or- Topical Combination Therapy** BP + Antibiotic or Retinoid + BP or Retinoid + BP + Antibiotic	Topical Combination Therapy** BP + Antibiotic or Retinoid + BP or Retinoid + BP + Antibiotic -or- Oral Antibiotic + Topical Retinoid + BP -or- Oral Antibiotic + Topical Retinoid + BP + Topical Antibiotic	Oral Antibiotic + Topical Combination Therapy** BP + Antibiotic or Retinoid + BP or Retinoid + BP + Antibiotic -or- Oral Isotretinoin
Alternative Treatment	Add Topical Retinoid or BP (if not on already) -or- Consider Alternate Retinoid -or- Consider Topical Dapsone	Consider Alternate Combination Therapy -or- Consider Change in Oral Antibiotic -or- Add Combined Oral Contraceptive or Oral Spironolactone (Females) -or- Consider Oral Isotretinoin	Consider Change in Oral Antibiotic -or- Add Combined Oral Contraceptive or Oral Spironolactone (Females) -or- Consider Oral Isotretinoin

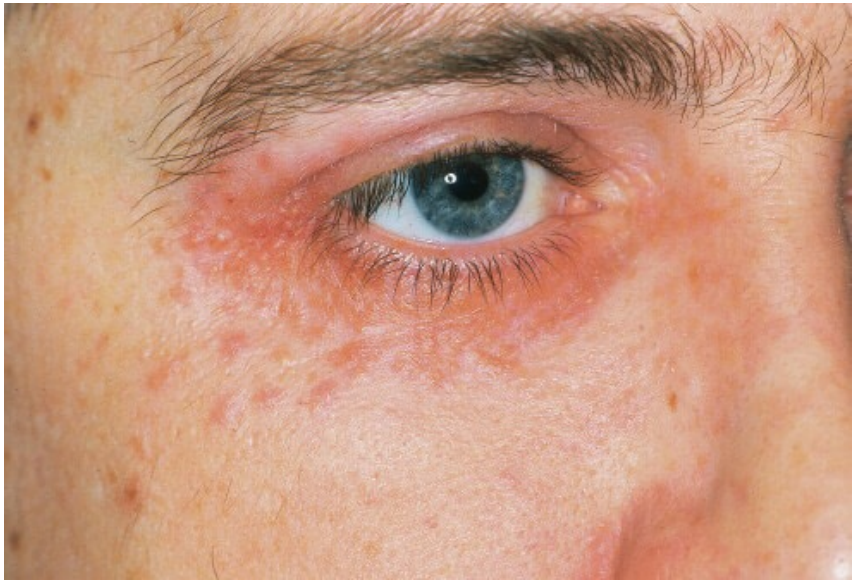
Isotretinoin

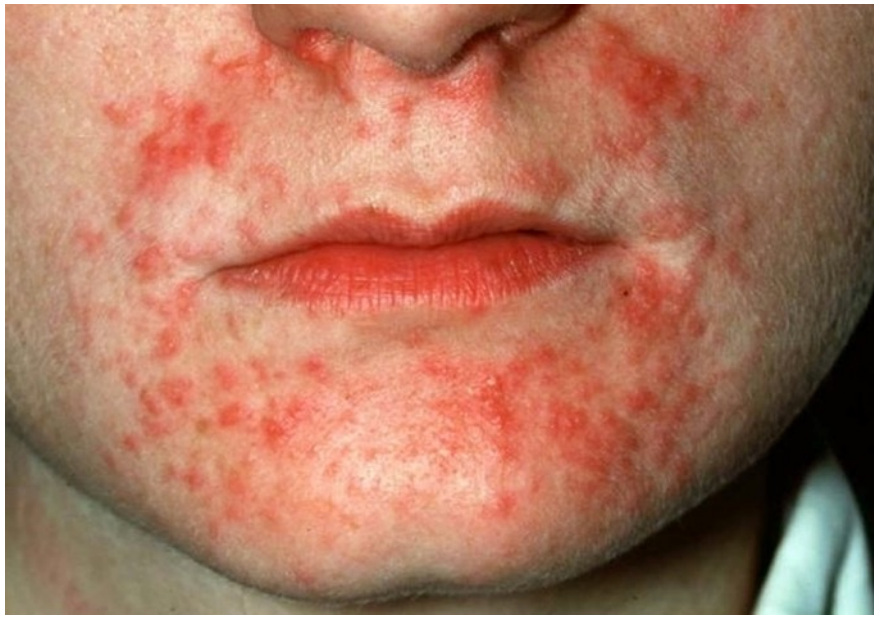
- Oral retinoin, Vitamin A derivative
- Can help produce long-term remission
- Sebaceous gland atrophy and reduces sebum production up to 90%
- **Side Effects**: Xerosis, Dryness of mucous membranes, Headaches, Depression
- Pregnancy category ‘X’ (IPledge)
- Contraindications/cautions (Epocrates.com): allergy soybean oil, breastfeeding, pediatrics, psychiatric history, bone metabolism d/o-osteoporosis, obesity, hyperlipidemia, DM, anorexia nervosa
- Labs: CBC, LFTs, Triglycerides, HCG

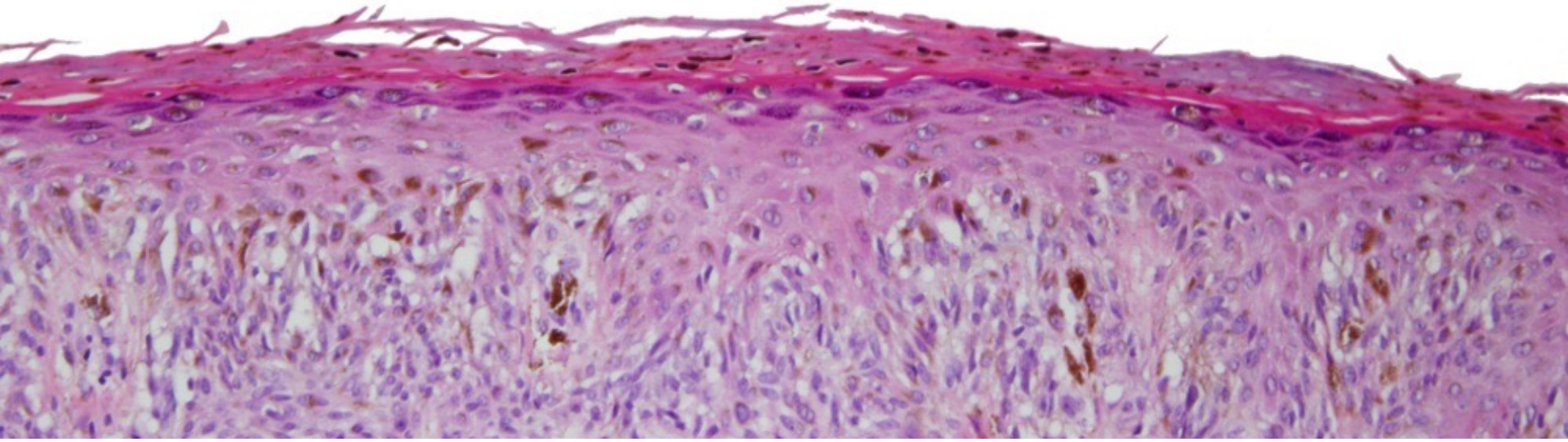


Perioral & Periorbital Dermatitis

- Most often seen in young females
- There is typically a clearing around the vermillion border
- Pathogenesis: unknown; prolonged steroid use on the face, exacerbated by certain creams (benzoyl peroxide, tretinoin, alcohol-based ABX lotions), use of heavy moisturizing creams
- Treatment:
  - 2-4 weeks of tetracycline or EES PO ABX;
  - Topical ABX are not very effective, but may try MetroGel 1% cream BID
  - Discontinue use of moisturizing creams and cosmetics



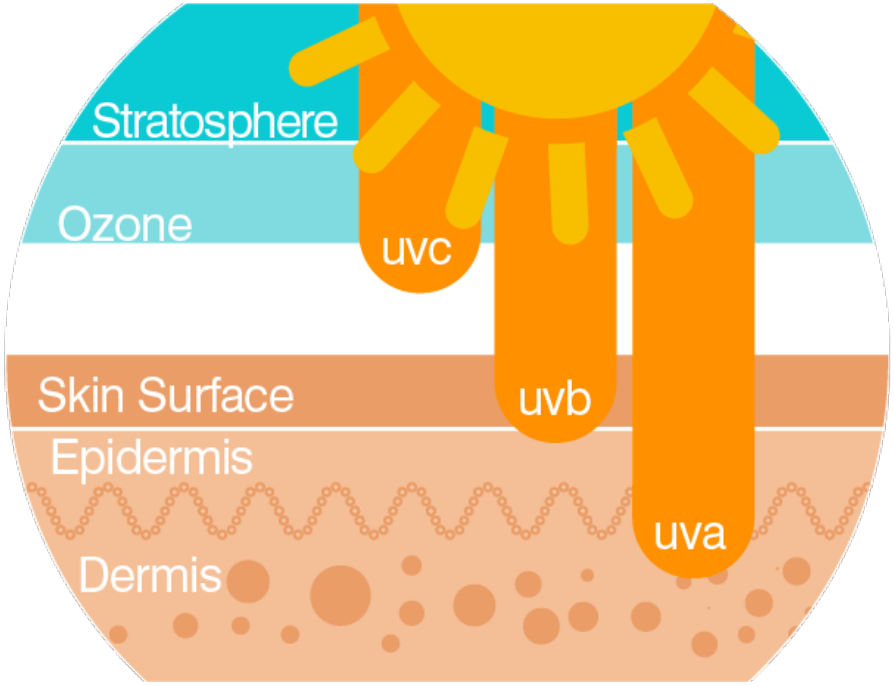


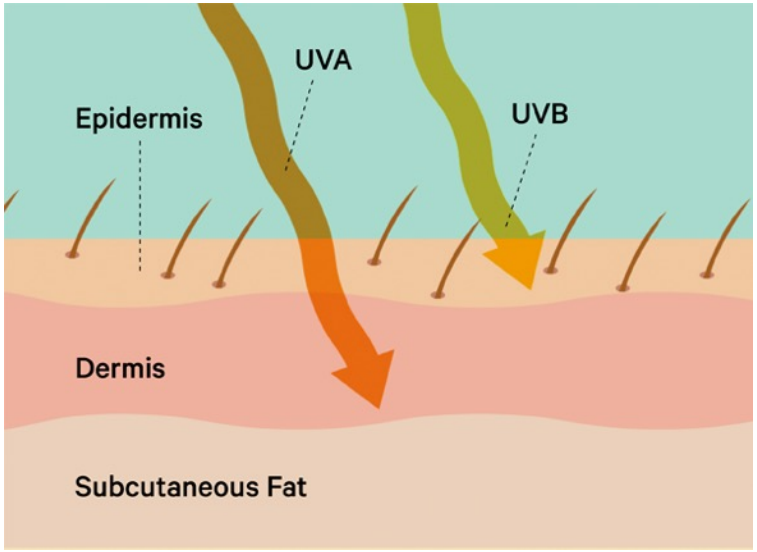


Pre-Malignant, Non-Melanoma & Melanoma Skin Lesions

Sun Damage…

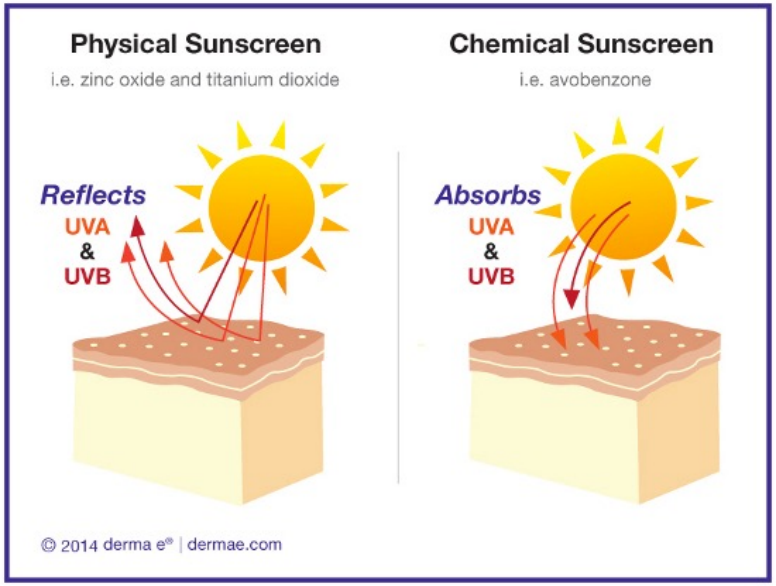
- **UVA- Think "A" for Aging (wrinkles)**
  - These rays penetrate deep into the skin
  - Contributes most to Squamous Cell Carcinomas
- **UVB- Think "B" for Burns & Basal**
  - These rays have more superficial skin penetration
  - Associated with Basal Cell Carcinomas
- Wear sunscreen daily!!
  - Even on cloudy days you receive 80% of the sun's rays





Sunscreens…

- Look for a “broad-spectrum” sunscreen (UVA & UVB coverage)
- American Academy of Dermatology (AAD) recommends at least an SPF 30, reapply every 2 hours (more often when sweating/swimming)
- Physical sunscreen blocks the sun on the skin



For more information about sunscreens from the AAD visit: **https://www.aad.org/media/stats/prevention-and-care/sunscreen-faqs**

Sunscreens… (*cont*…)

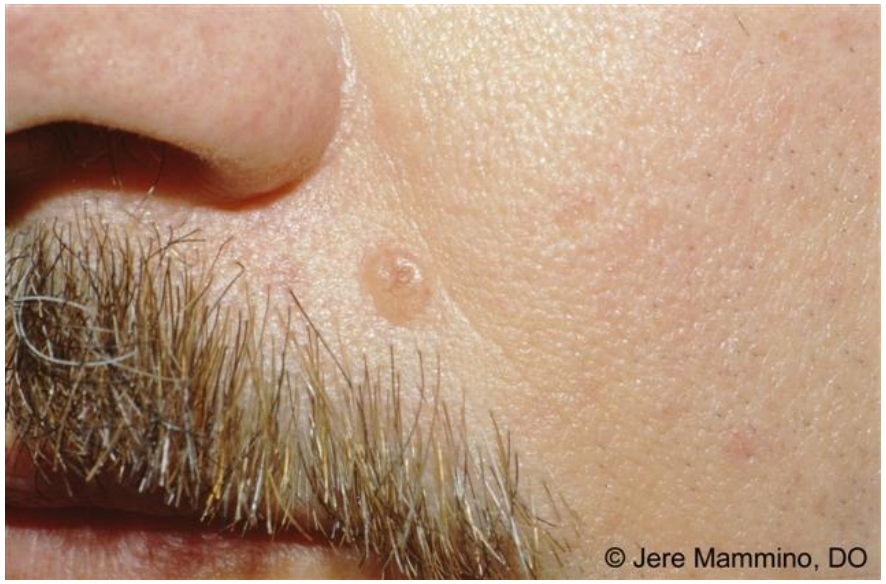
- Chemical sunscreens are absorbed into the skin and change UV rays into heat that is emitted from the skin
- Wear sunscreen daily!!
  - Even on cloudy days you receive 80% of the sun's rays
  - Sun protective clothing
- <u>There is no such thing as a safe tan!!!</u>

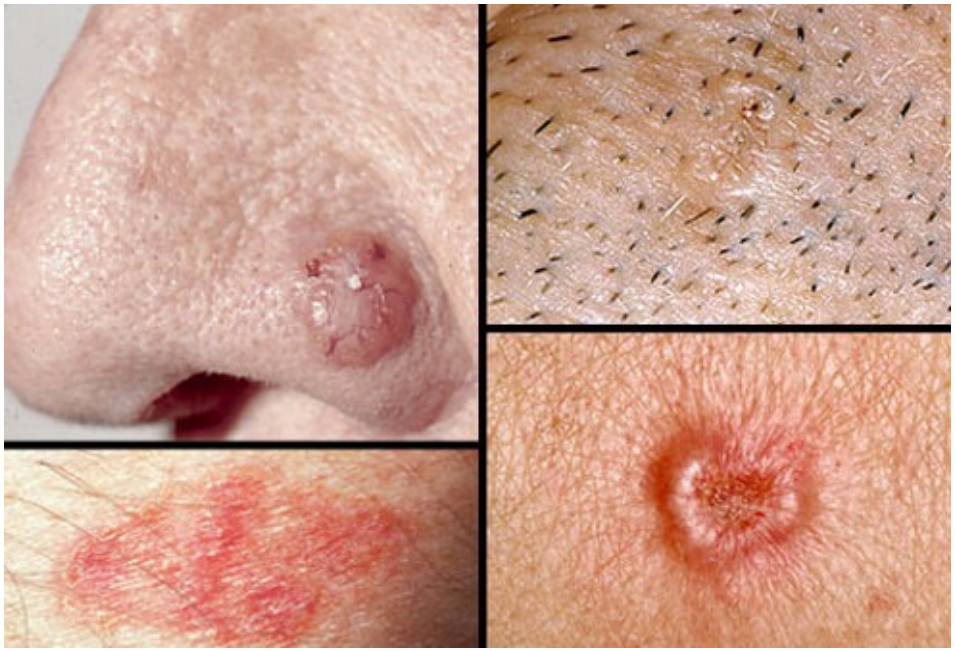
Recall: Benzene containing products

EWG Safer Sunscreens

Basal Cell Carcinomas (BCC)

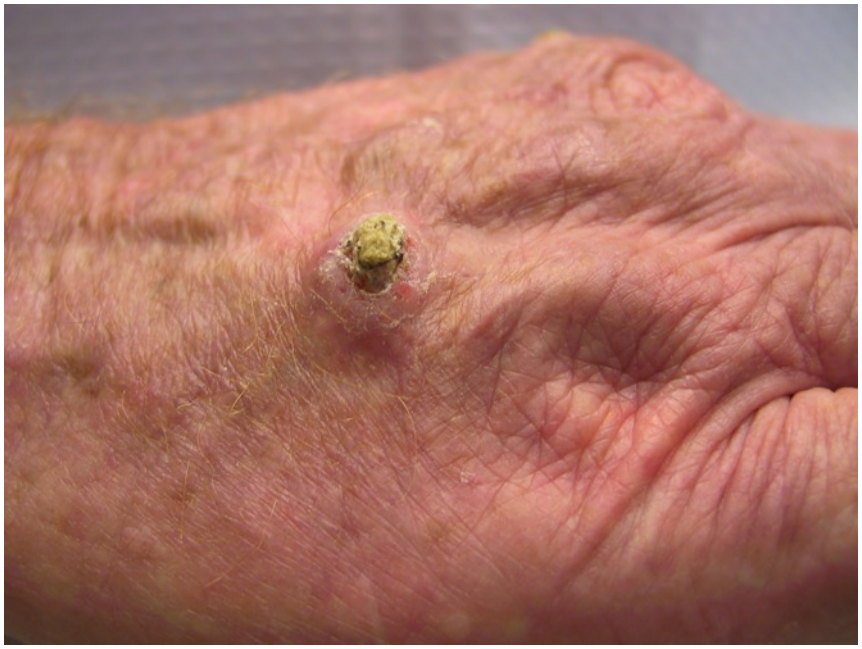
- The most common malignant skin lesion
- Presents as non-healing sore, scab, or ‘pimple’
- Varying presentation: Shiny, skin-colored, pink, pigmented; smooth, umbilicated, crusted
- Slow growing, but if left untreated can be extremely destructive
- Various subtypes and location guides treatment (< surgical)
- Increased chance of developing subsequent BCC

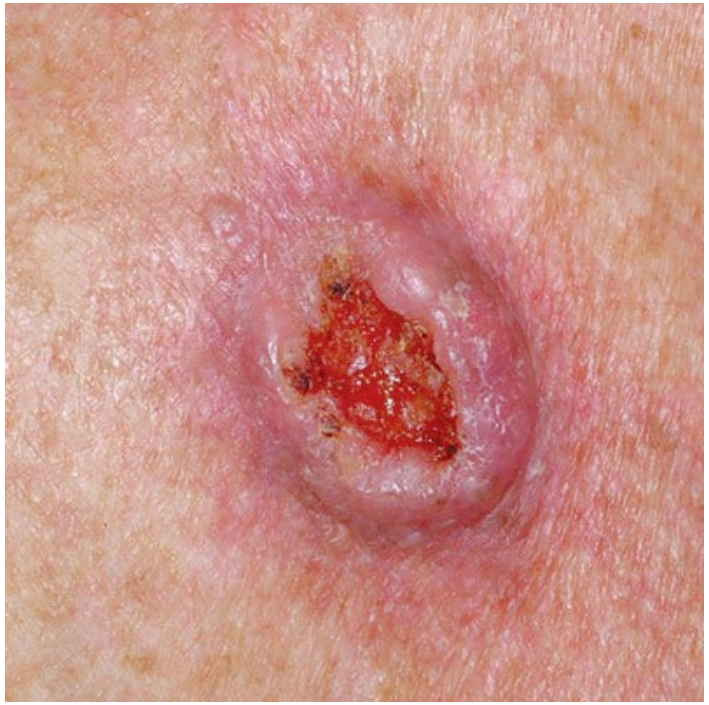




Squamous Cell Carcinomas (SCC)

- 20% of non-melanoma skin cancers are SCC
- Various subtypes and location guides treatment (< surgical)
- Associated with a substantial risk of metastasis if not treated in a timely manner
- Immunosuppressed patients have substantially high risk! (253-fold increase in renal transplant!!)
    - These patients should be referred to dermatology for skin checks!





Malignant Melanoma (MM)

- 5th most common cancer in men, 6th most common in females in the US
- Incidence increasing rapidly
- Risks: 1st degree family hx, UV radiation exposure, hx sunburns/tanning bed use, personal hx of MM or non-melanoma skin cancer (NMSC), high number of nevi (50+), immunosuppression

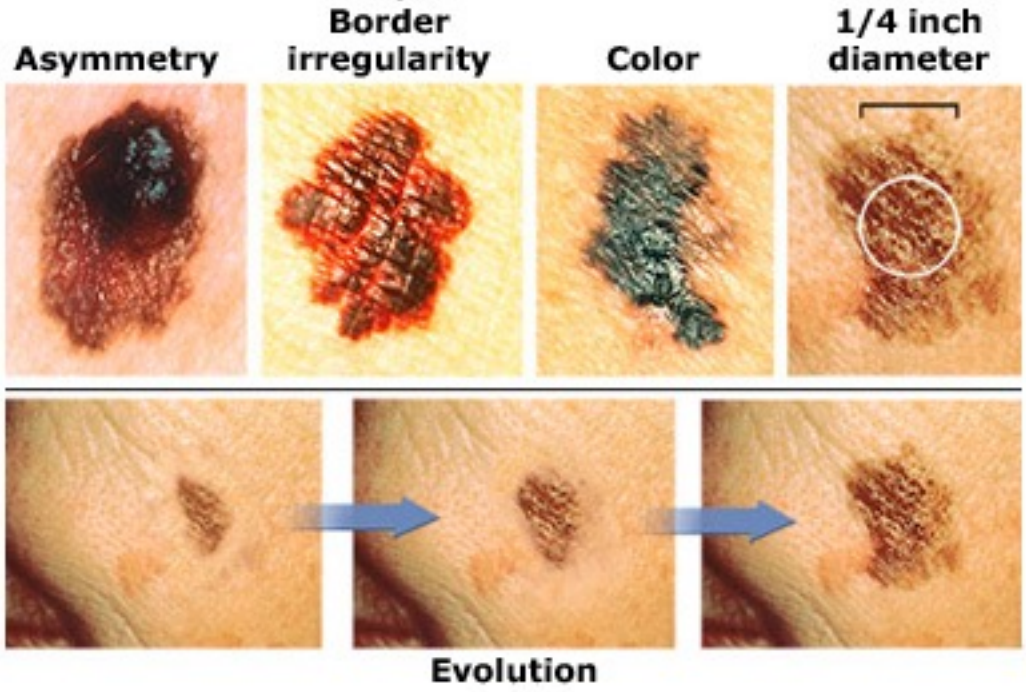
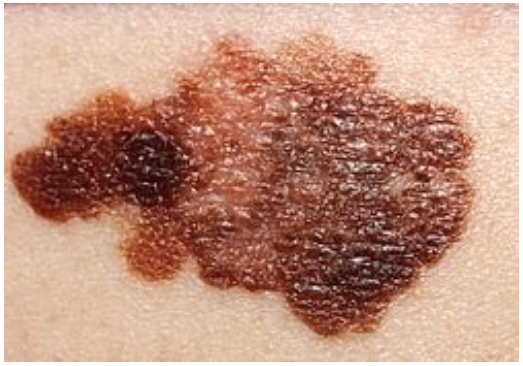
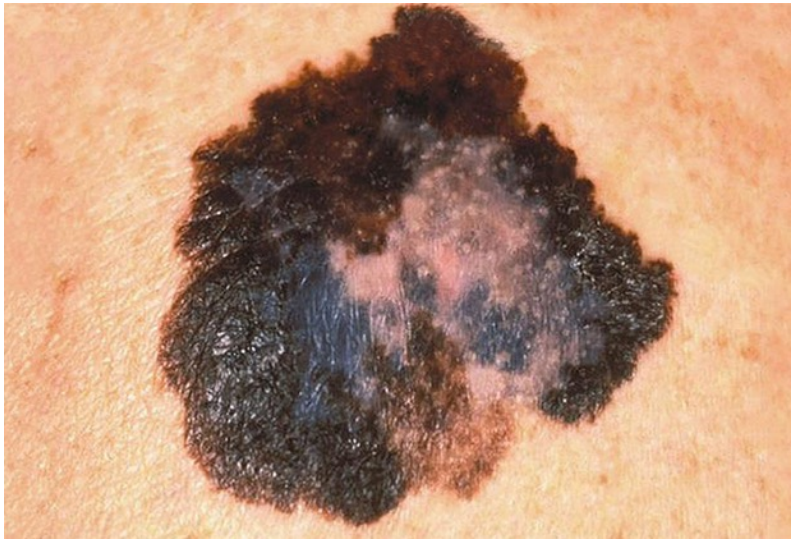


Image courtesy of Healthwise, Incorporated and NCI Visuals Online

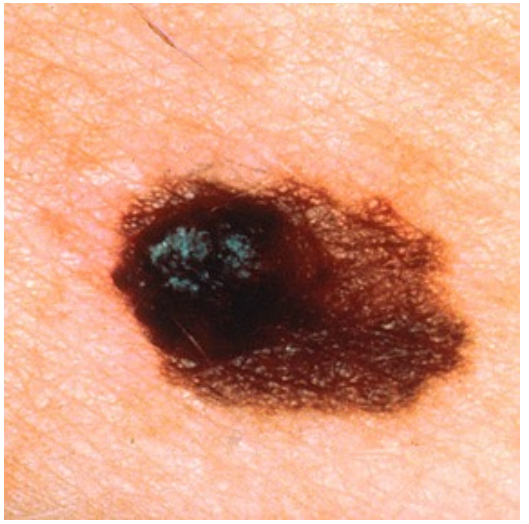


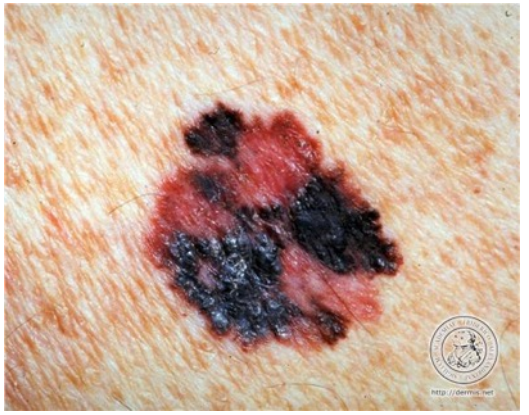


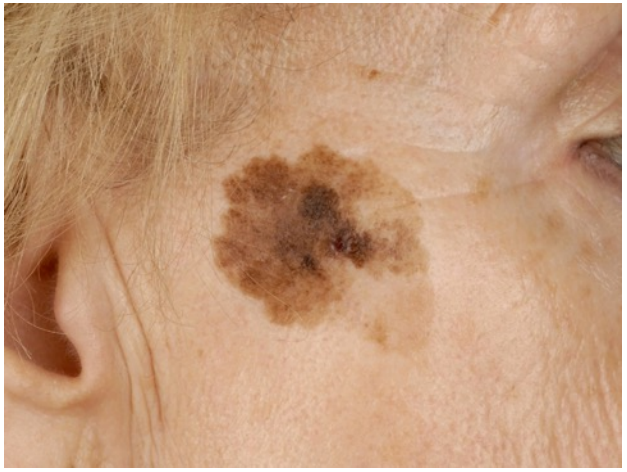
Variants of Melanoma

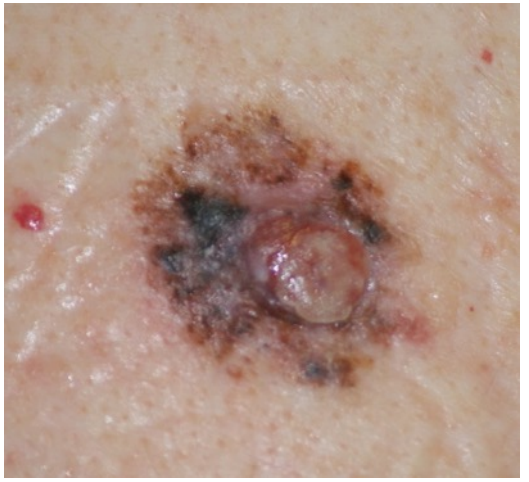
- Lentigo maligna
- Nodular melanoma
- Superficial spreading
- Ulcerated melanoma
- Amelanotic melanoma
- Acral-lentiginous (Palms/Soles)

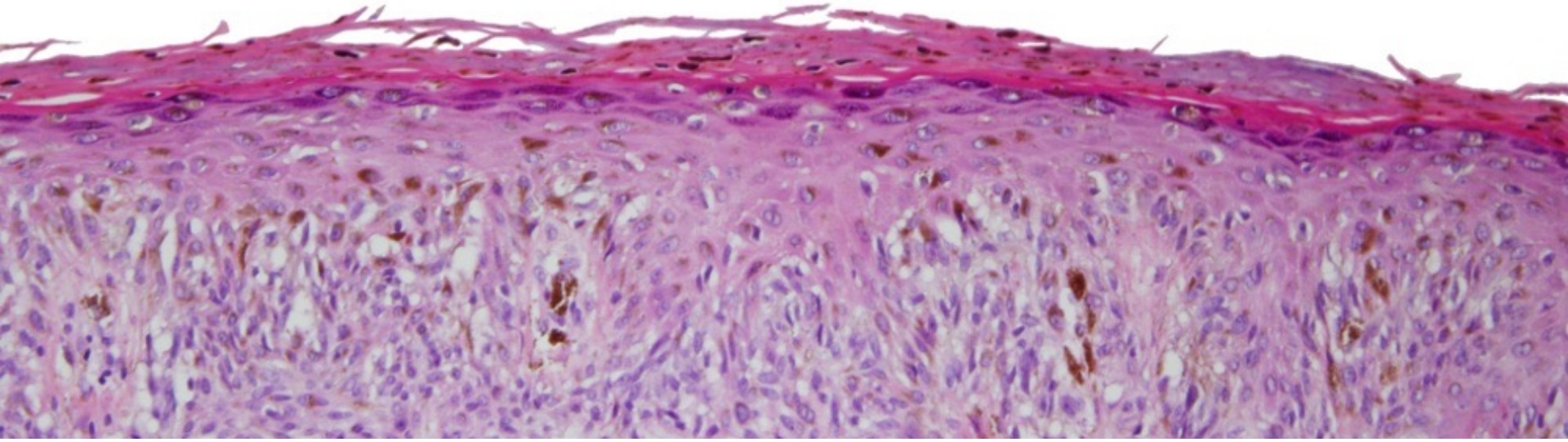
- Early detection and treatment is crucial for survival!!
  - Tumor thickness has greatest association with prognosis (< 0.8 mm = best prognosis)
  - Aggressive subtypes can grow almost 0.5 mm/month!!!









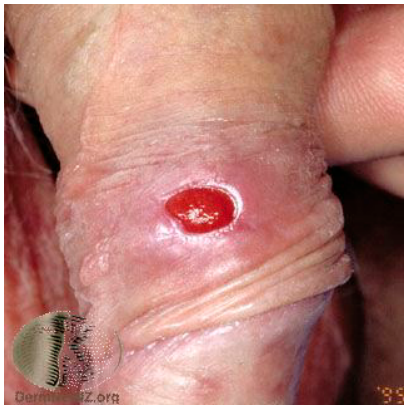


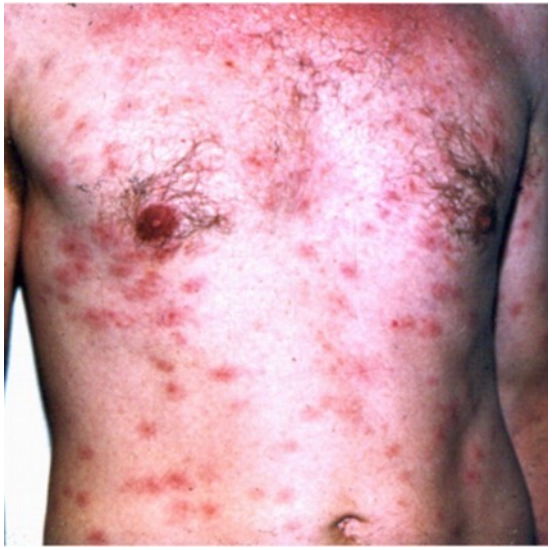
Sexually Transmitted Genital Dermatoses

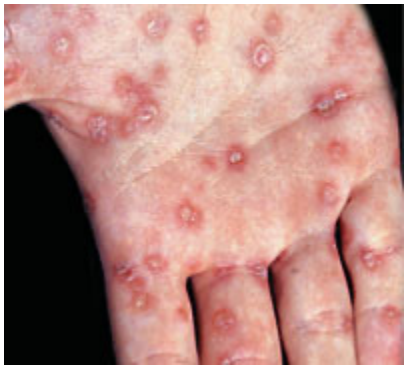
Syphilis

- **PAINLESS ULCER**
- STI caused by the bacteria *Treponema pallidum*
- **Three Stages:**
  - **Primary:** Appears initially as a painless sore (ulcer) where infection entered (usually the genitals, anus, mouth) known as a 'chancre'. May go unnoticed.
  - **Secondary:** Widespread rash & flu-like sx
  - **Tertiary:** May develop years later and cause a variety of problems affecting the brain, eyes, heart, and bones.
- **Diagnosis:** (*it's usually part of an STI panel…) Nontreponemal tests* (e.g., VDRL and RPR) are used for screening. If positive, further testing is needed…

Visit CDC website for detailed diagnostics & treatment information:
https://www.cdc.gov/std/syphilis/stdfact-syphilis-detailed.htm

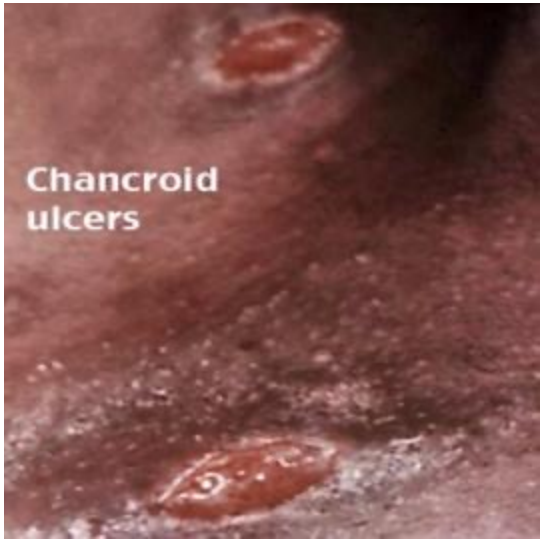


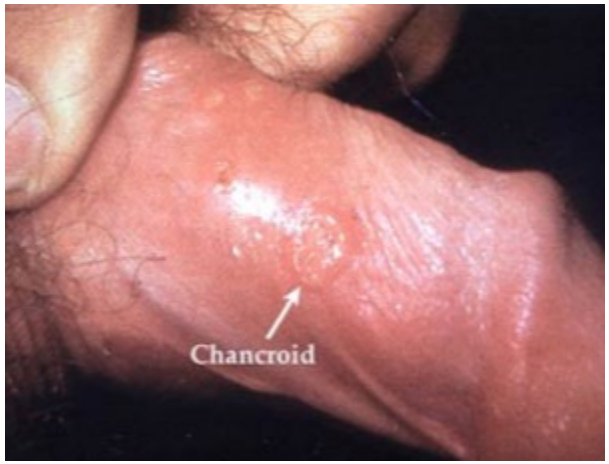




Chancroid

- **PAINFUL ULCER**
- STI caused by the bacteria *Haemophilus ducreyi*
- Limited in US: often seen in Africa & Carribean
- Characterized by painful red lumps that turn to ulcers on the genitals and painful swollen lymph glands
- Diagnosis: Difficult (because this is not super common in the US); requires culture with special media not widely available; generally rule out syphilis and herpes
    - According to the CDC: the combination of a painful genital ulcer and tender inguinal adenopathy suggests the diagnosis of chancroid

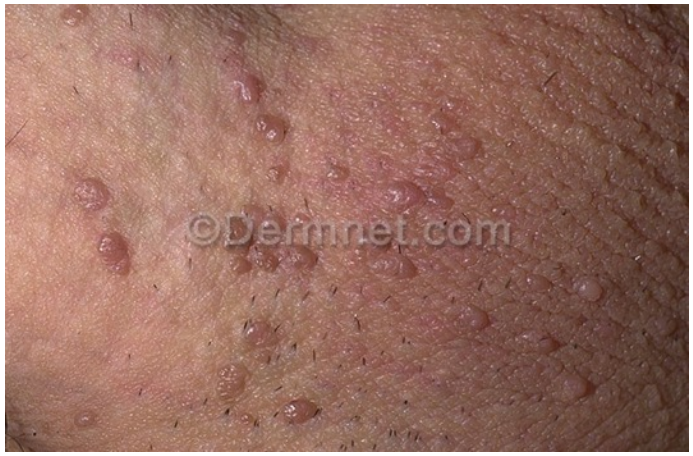


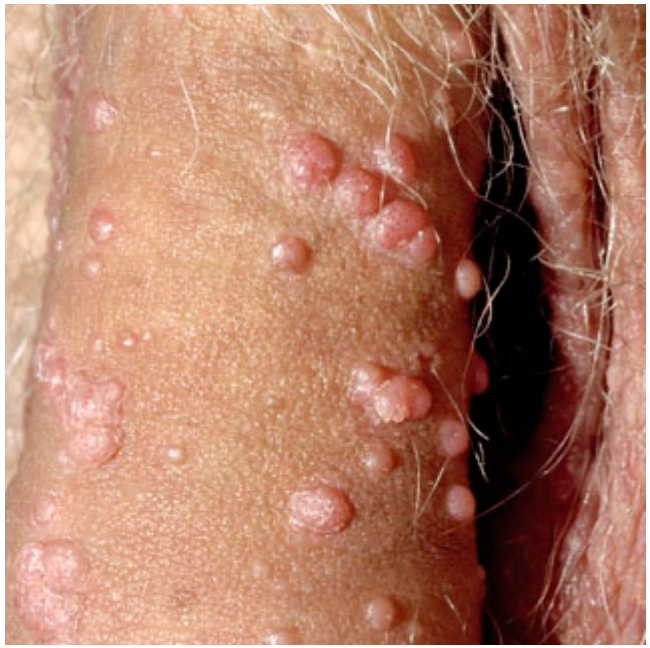


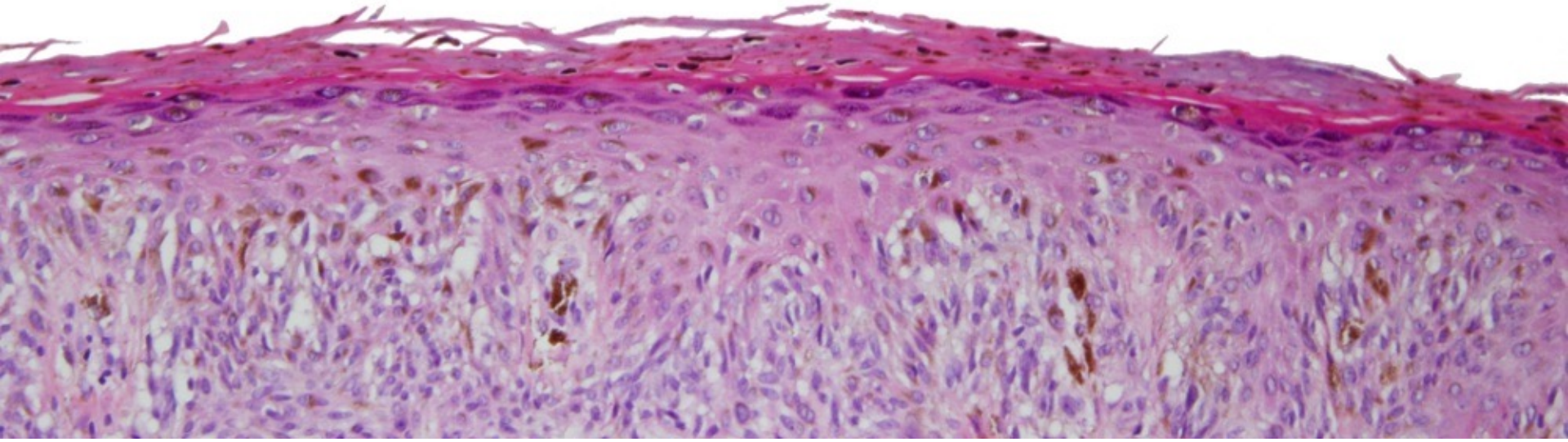
See CDC website for treatment regimens:
https://www.cdc.gov/std/tg2015/chancroid.htm

Genital Warts

- Caused by HPV (6 & 11)
- At least 75% of sexually active adults have been infected with at least one type of anogenital HPV at some time in their life.
- HPV is incorporated into skin cells and stimulates them to proliferate, causing a visible wart.
- <u>Treatment:</u> Podophyllotoxin cream, immune stimulating cream (imiquimod), LN2 (q4-6 wks), 5FU, laser/electrosurgery



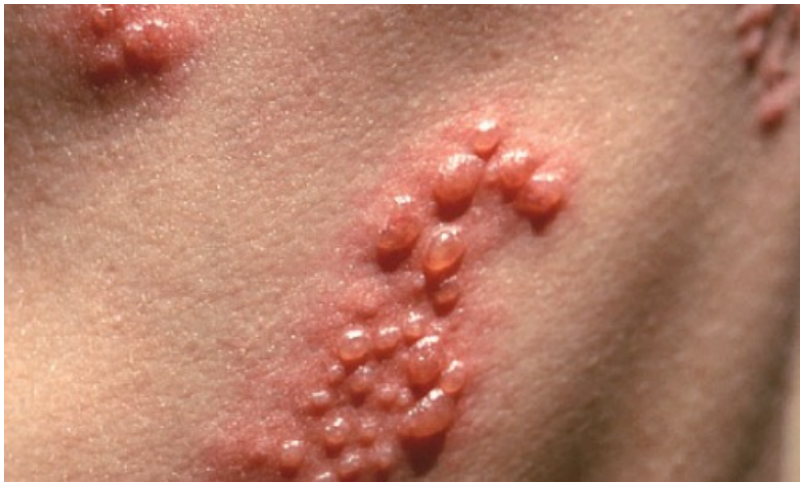


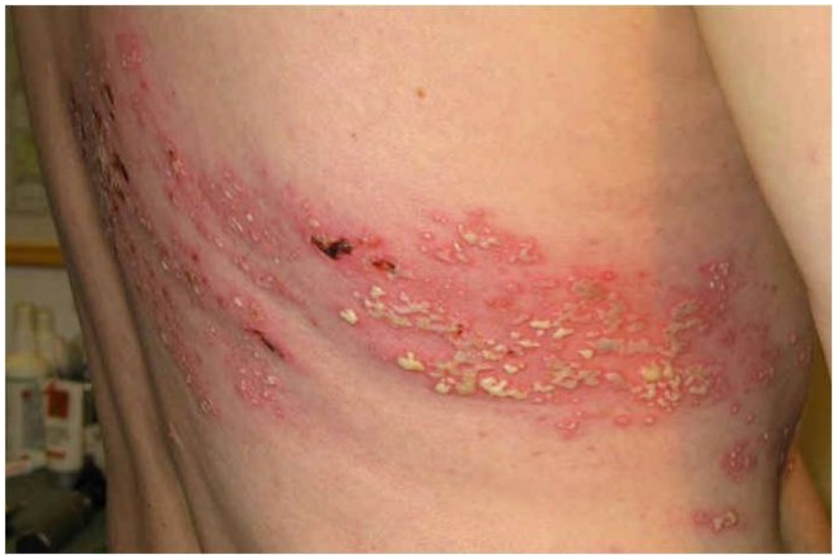


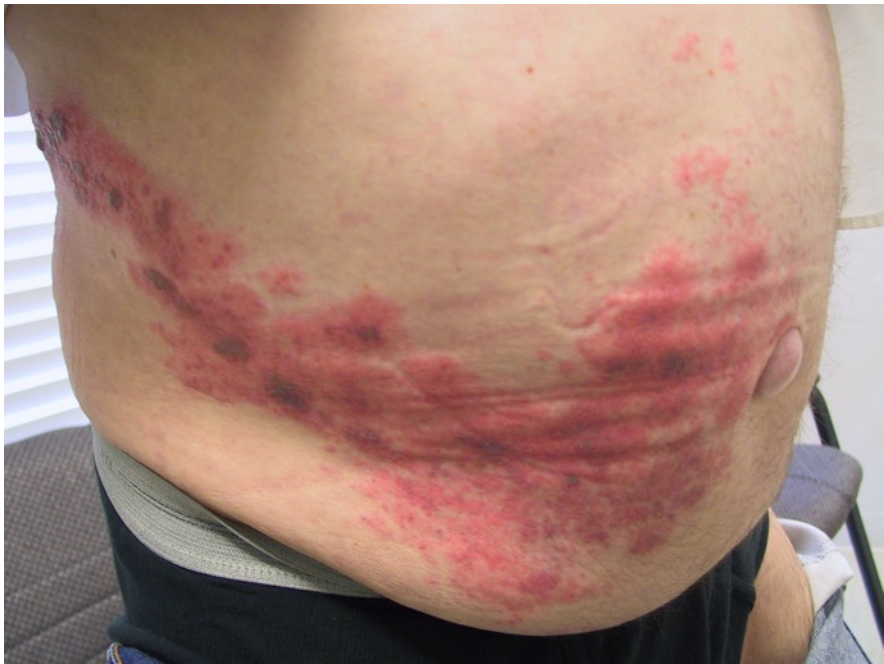
Infectious Processes of the Skin: Viral, Fungal, & Bacterial

Herpes Zoster

- AKA Shingles
- Typically involves 1-2 dermatomes
- Effects 10-20% of individuals of all ages
  - May occur despite having shingles vaccine!
- Immunosuppressed patients are at greater risk
- Just because they had the shingles vaccine doesn't mean they cannot get shingles!
  - Per CDC: Vaccine reduces shingles risk by 51% and PHN by 67%

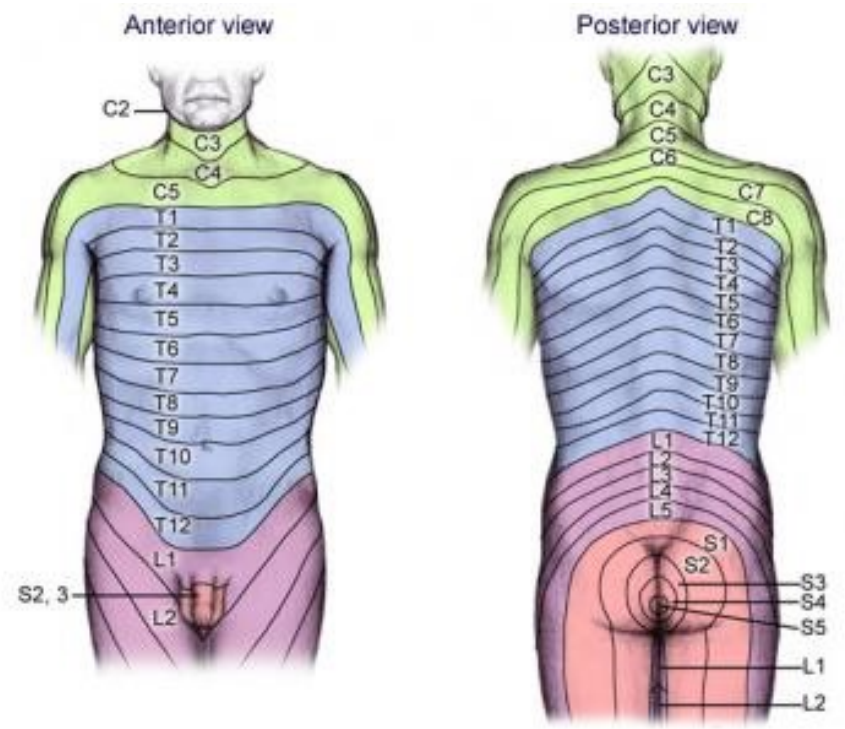






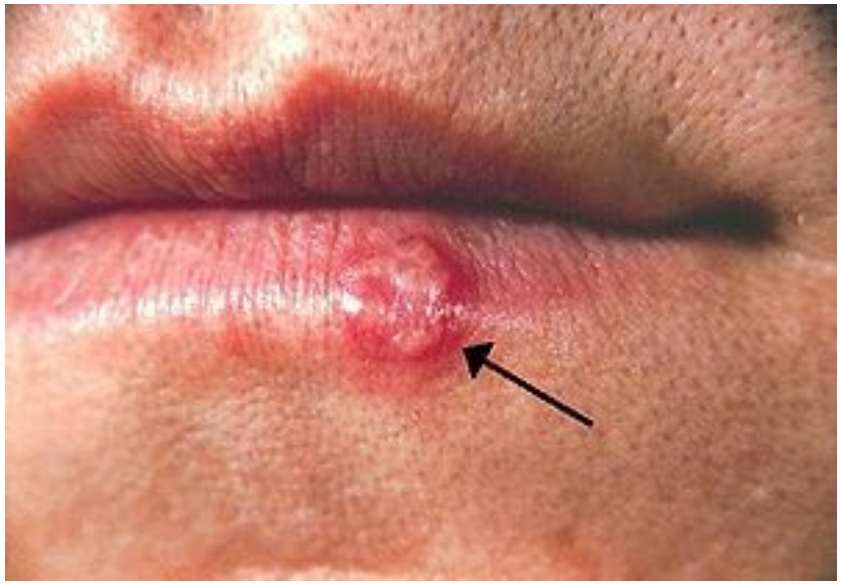
Herpes Zoster

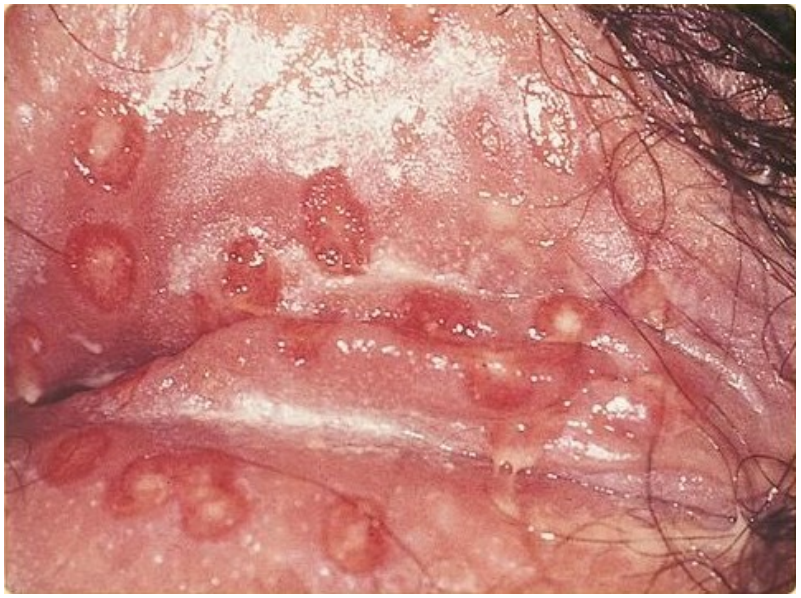
- Generally will present with pre-eruptive pain, itching, or burning, 4-5 days prior to skin eruption along the dermatome
    - May mimic other painful conditions (e.g back pain, pleurisy, abdominal pain, etc.
- Eruptive phase red swollen plaques that develop vesicles or purulent fluid
- Early treatment reduces risk of pain associated (postherpetic neuralgia)
- **Start treatment w/in 72 hours for best outcomes!!!**
- <u>Adult (Immunocompetent) Treatment</u>:
    - Valacyclovir: 1 gm TID x 7 days
    - Acyclovir: 800 mg QID x 7 days
    - Famciclovir: 500 mg Q8H x 7 days



Herpes Simplex Virus (1,2)

- Recurrent, lifelong infection with 2 serotypes (1 & 2)
- HSV2 effecting 50 million people in the US alone (1:5 estimates)
- Most oral cases are caused by 1, genital by 2 (but not always)



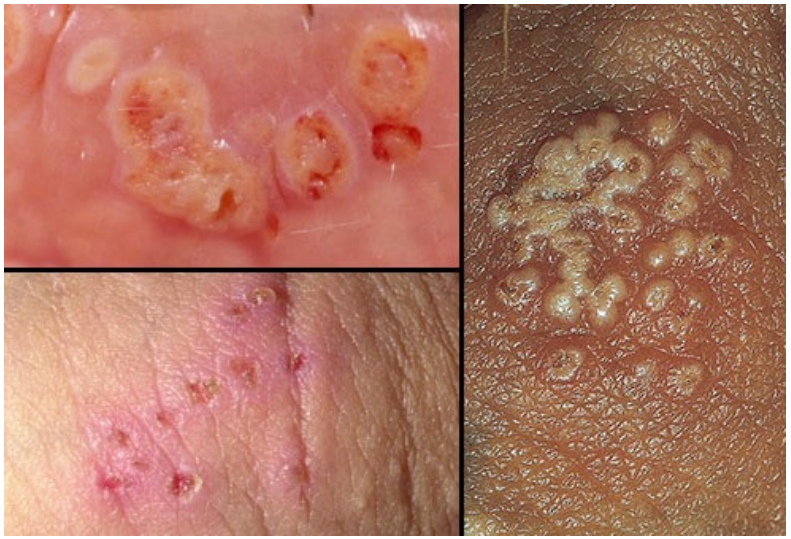


Herpes Simplex Virus: Labial-Oral Outbreaks

- AKA cold sore
- Treatment:
  - Oral antivirals have modest effect if started very early after outbreak
    - At the "*tingle*" (Stage 1)
    - Valtrex 2 grams Q12 hours x2
  - Topicals: Apply Q2 hours!
    - Acyclovir, Denavir, Abreva (OTC)

Herpes Simplex Virus: Genital

- First-episode:
  - Vesicles appear 6 days after sexual contact
  - May experience constitutional sx (fever, myalgia, lethargy, dysuria, discharge, inguinal lymphadenopathy)
  - Females generally experience worse initial outbreaks
- Virus can be cultured for 5 days after outbreaks from active lesion
  - PCR is gold standard testing
- To reduce transmission, avoid sexual contact until reepithelialization is complete
  - Avoid sexual contact with active lesions
  - Use condoms



Genital Herpes Simplex: CDC 2015 Treatment Guidelines

Initial Outbreak

*Recommended Regimens**

•Acyclovir 400 mg orally three times a day for 7–10 days

OR

•Acyclovir 200 mg orally five times a day for 7–10 days

OR

•Valacyclovir 1 g orally twice a day for 7–10 days

OR

•Famciclovir 250 mg orally three times a day for 7–10 days

*Treatment can be extended if healing is incomplete after 10 days of therapy.

Suppressive Therapy

Recommended Regimens

•Acyclovir 400 mg orally twice a day

OR

•Valacyclovir 500 mg orally once a day*

OR

•Valacyclovir 1 g orally once a day

OR

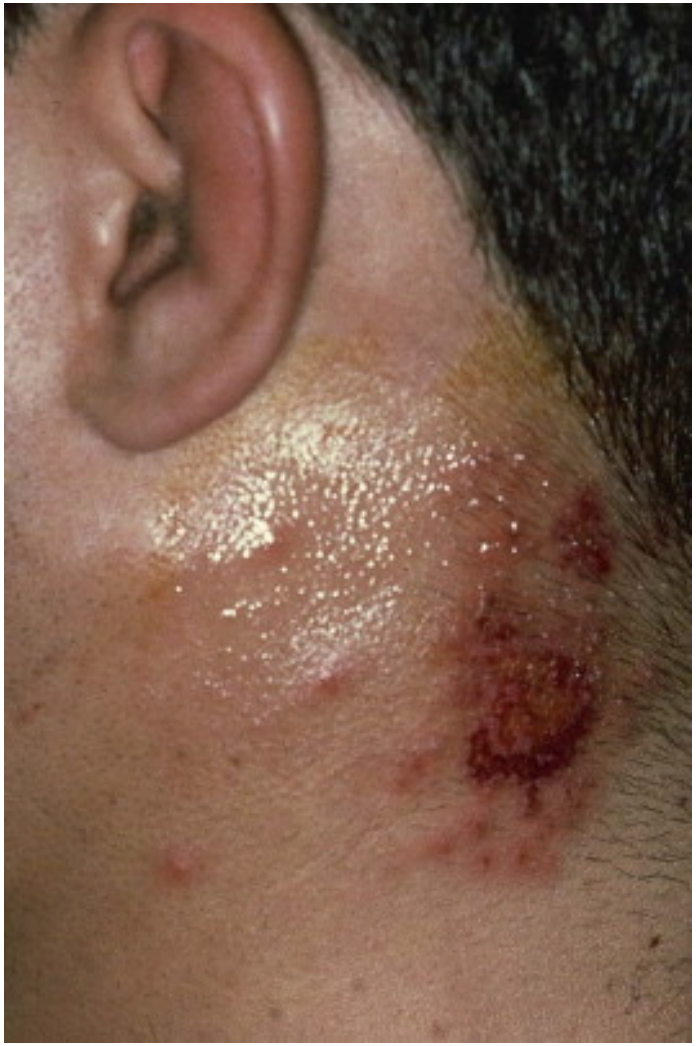
•Famiciclovir 250 mg orally twice a day

*Valacyclovir 500 mg once a day might be less effective than other valacyclovir or acyclovir dosing regimens in persons who have very frequent recurrences (i.e., ≥10 episodes per year).

CDC. (2015). Genital HSV infections. Retrieved on December 27, 2016 from https://www.cdc.gov/std/tg2015/herpes.htm

Herpes Gladiatorum

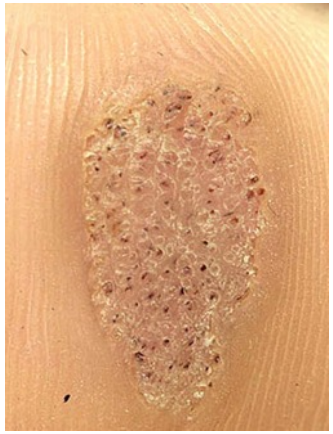
- Occurs in wrestlers and rugby players
- Occurs in all areas in direct contact with the face of the infected wrestler
- Onset 4–11 days after exposure with 24 hour flu-like prodrome
- Frequently misdiagnosed as a bacterial folliculitis
- Those with a confirmed h/o orolabial herpes should be on suppressive antiviral therapy

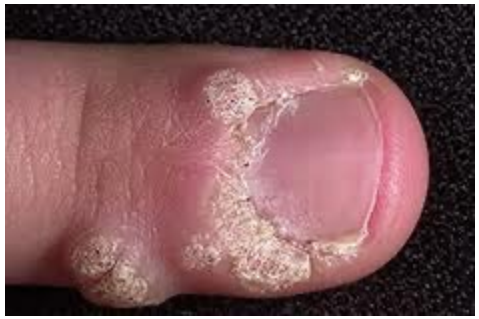


Verruca Vulgaris & Molluscum

Verruca Vulgaris

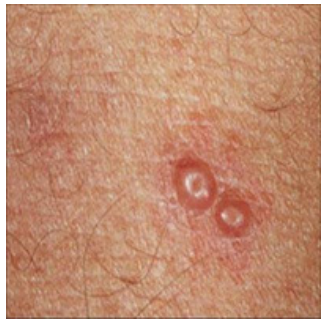
- Caused by HPV (2, 3, 4, 27, 29, & 57)
- Common in school-aged children (but can occur at any age), eczema, immunosuppressed pts
- Hyperkeratotic, filiform, capillary dotting
- Treatment: Topical sal acid; LN2 (q4-6 wks); electrosurgery/laser; immune stimulating agents; or time (2 yrs…)

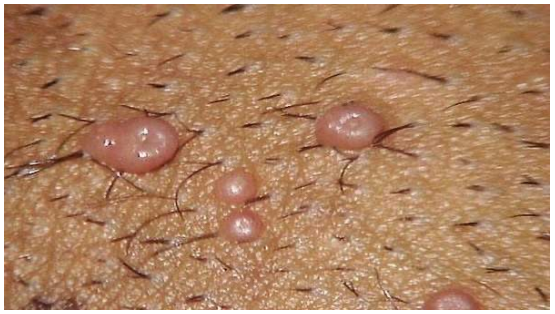




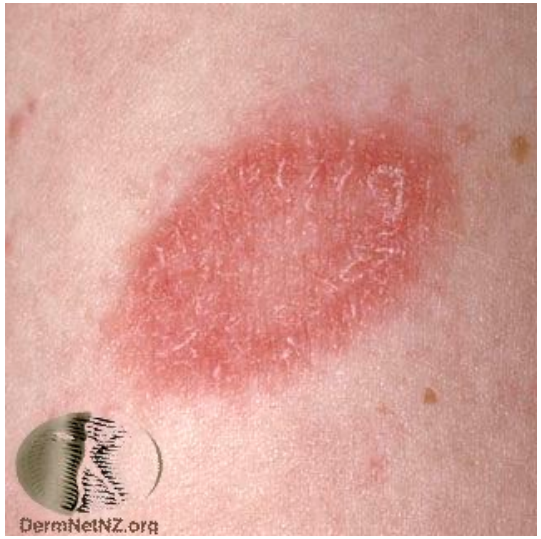
Molluscum

- Viral etiology (pox virus)
- Round, shiny papules with central umbilication; <pink
- < Infants and young children, Eczema, immunosuppressed pts
- Treatment: LN2 (q4-6 wks); curettage/ picking out the ‘core’; Podophyllotoxin cream; cantharidine solution; immune stimulating agents

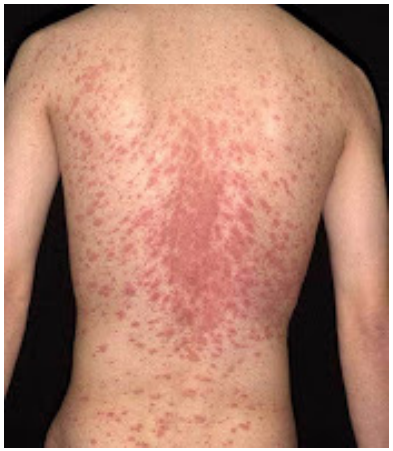




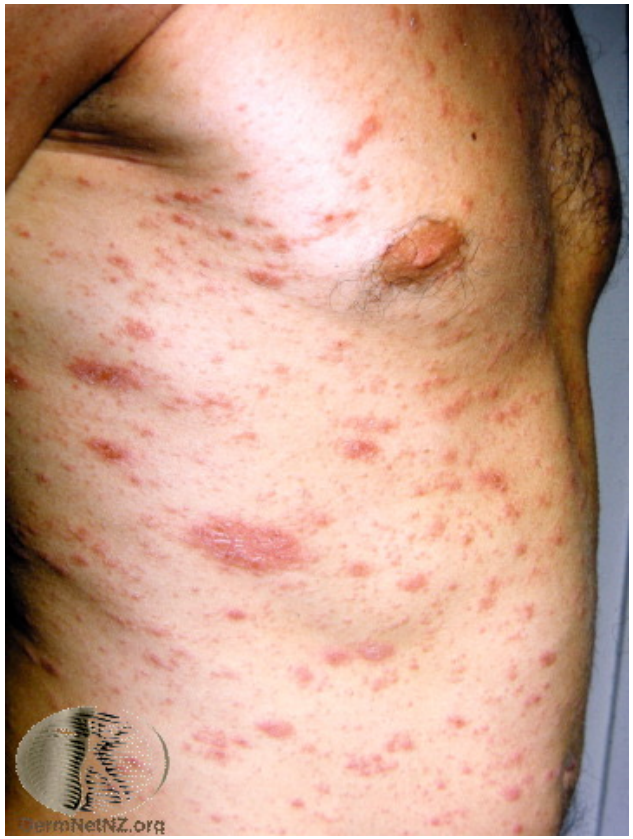
Pityriasis Rosea



- Viral rash which lasts about 6–12 weeks,
- < teenagers/young adults
- Initial single ‘herald patch’ = an oval pink or red plaque 2–5 cm in diameter, with a scale trailing just inside the edge of the lesion like a collaret.
- Then development of multiple, smaller oval red patches/plaques with inner ‘collaret of scaling’ or annular primarily on trunk in a “fir tree” pattern.
- Self limiting; supportive treatment (topical steroids for itching, etc…)

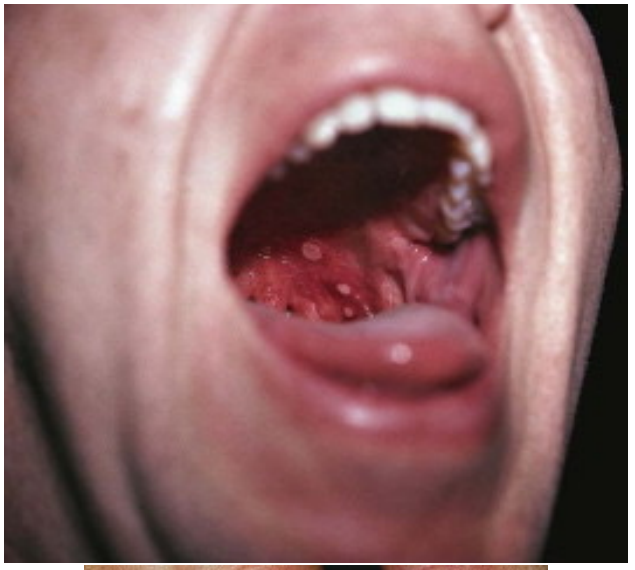


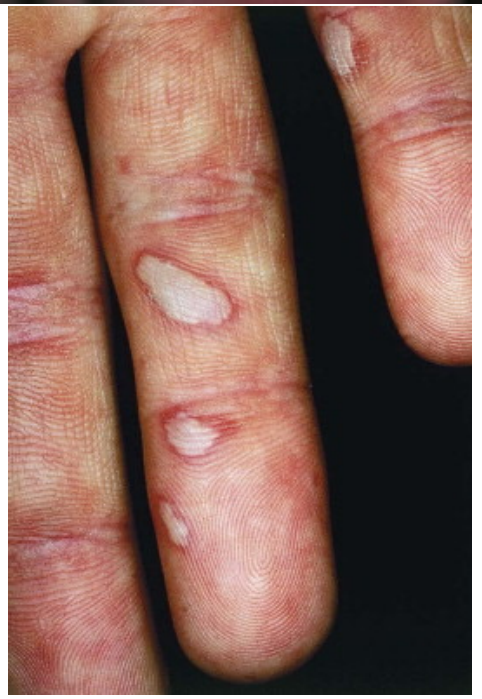
Fir tree? I don’t see it… lol



Coxsackie Virus

- Hand Foot and Mouth Disease
  - Usually a mild illness
  - Infection begins with a fever and sore mouth
  - 90% of cases develop oral lesions, small rapidly ulcerating vesicles surrounded by a red areola
  - Lesions on the hands and feet (palms and soles mostly) are asymptomatic red papules that quickly become small, gray, 3–7 mm vesicles surrounded by a red halo
  - Vesicles and erythematous, edematous papules may occur on the buttocks
  - The infection is usually mild and seldom lasts more than a week
  - Treatment is supportive, with the use of topical anesthetics

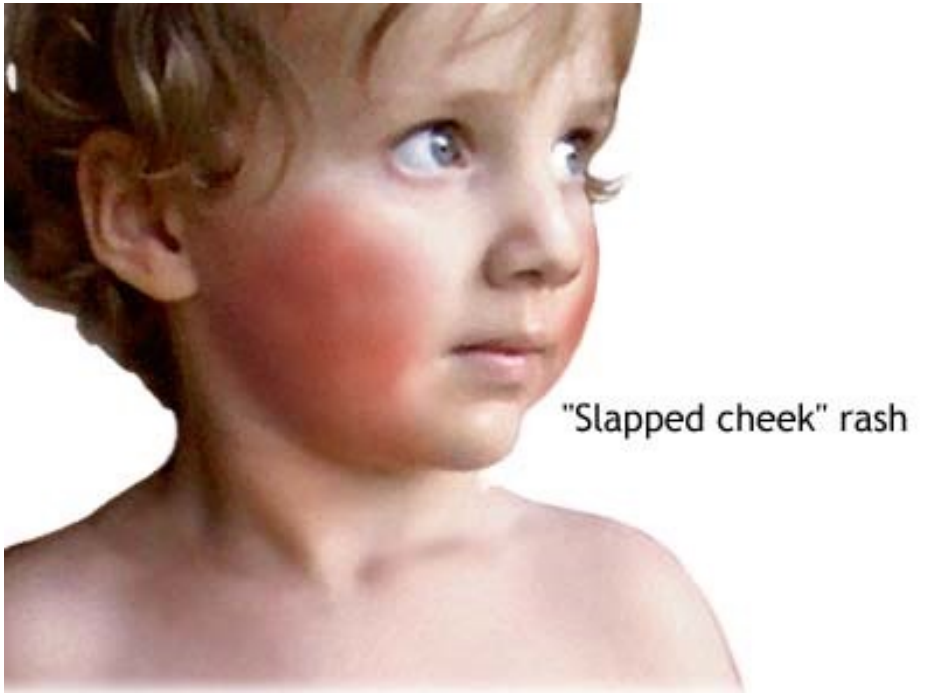


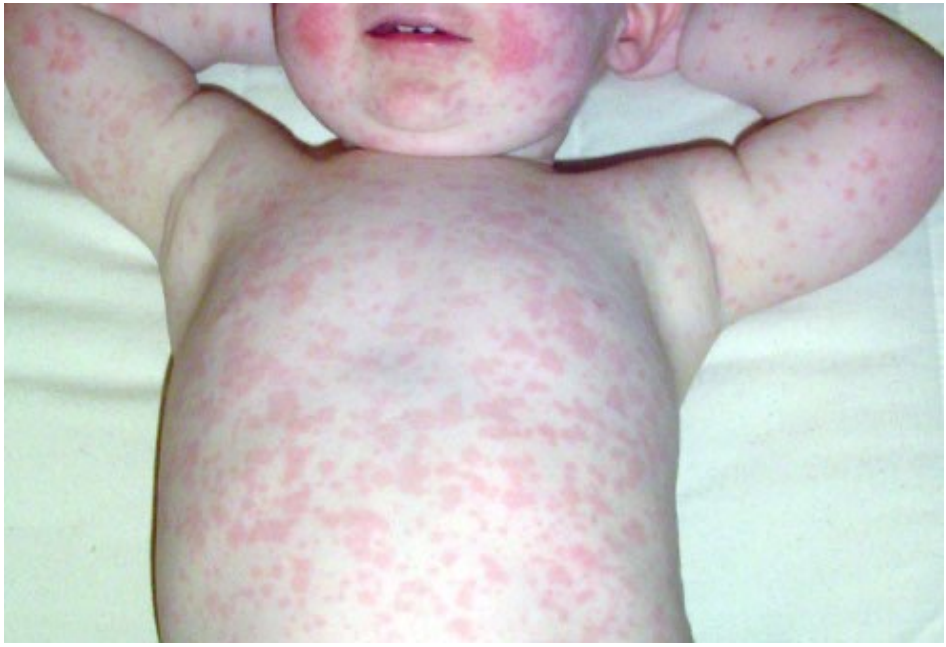


Parvovirus

- Erythema infectiosum (fifth disease)
- Benign infectious exanthem that occurs in epidemics in the late winter and early spring.
- Isolation not necessary, viral shedding done by the time symptoms occur

- Three phases
  1. “Slapped cheek”- asymptomatic erythema of the cheeks, typically diffuse and macular, but tiny translucent papules may be present.
  2. Reticulated/lacy rash on extremities and trunk (5-9 days)
  3. Recurring stage- The eruption is markedly reduced or invisible, only to recur after the patient is exposed to heat (especially when bathing) or sunlight, or in response to crying or exercise.



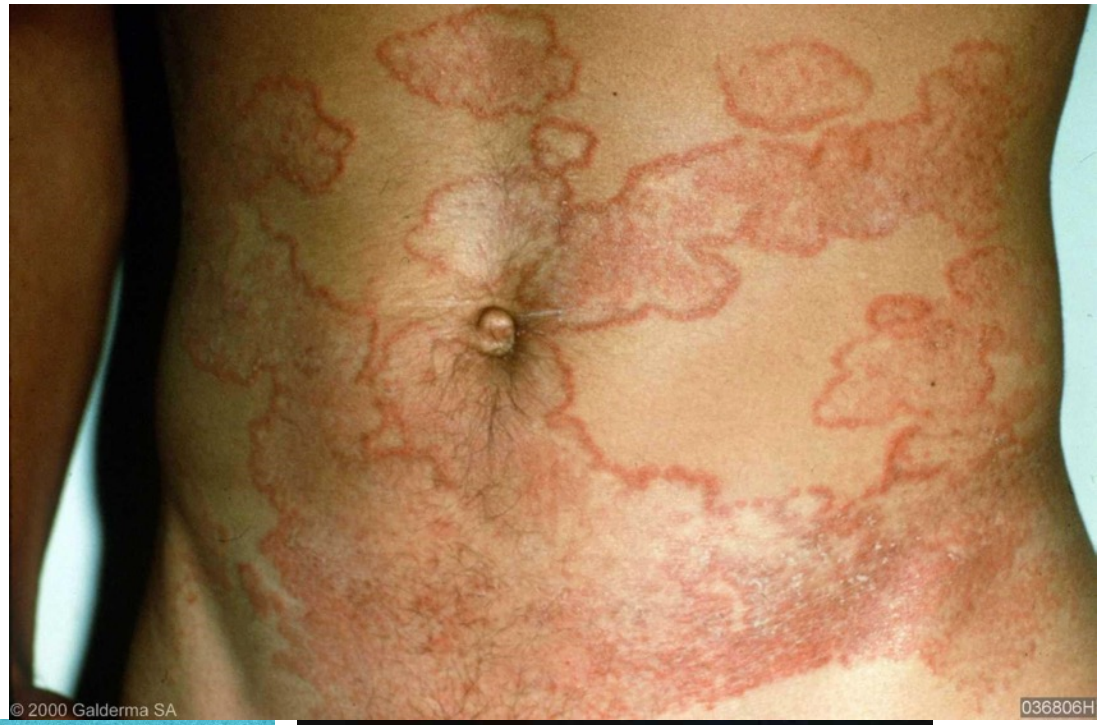


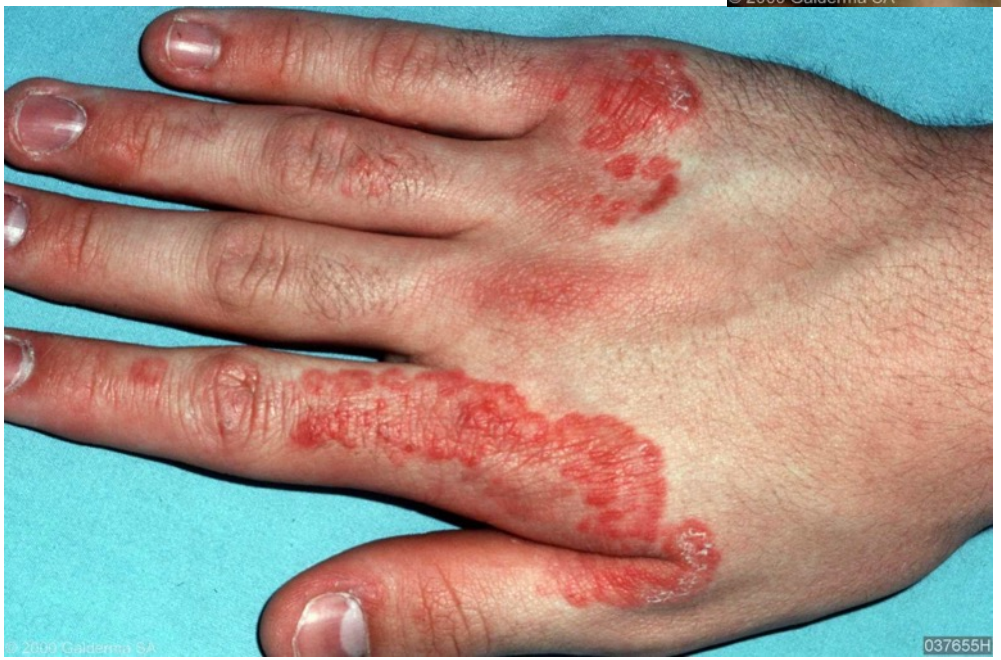
Fungal Infections

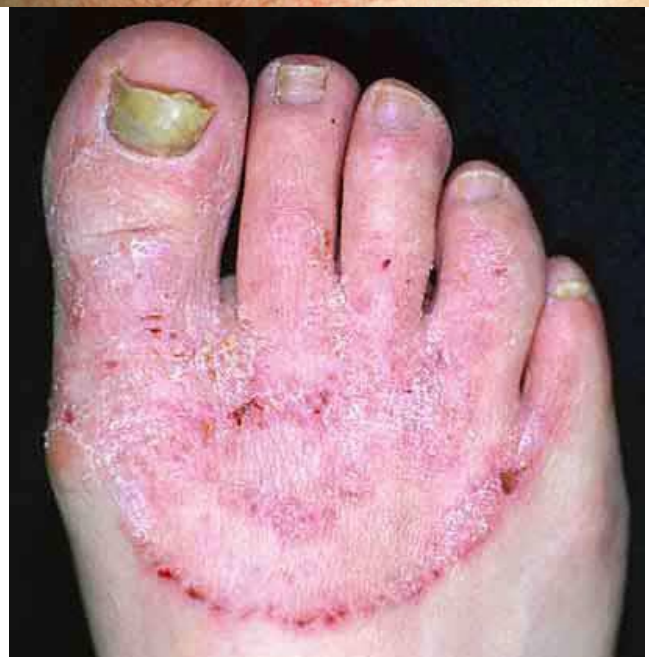
- AKA: Tinea

<u>Defined based on body location…</u>

- Hand: Tinea *manuum*
- Foot: Tinea *pedis*
- Groin: Tinea *cruris*
- Body: Tinea *corporis*
- Nail: Tinea *Unguium*

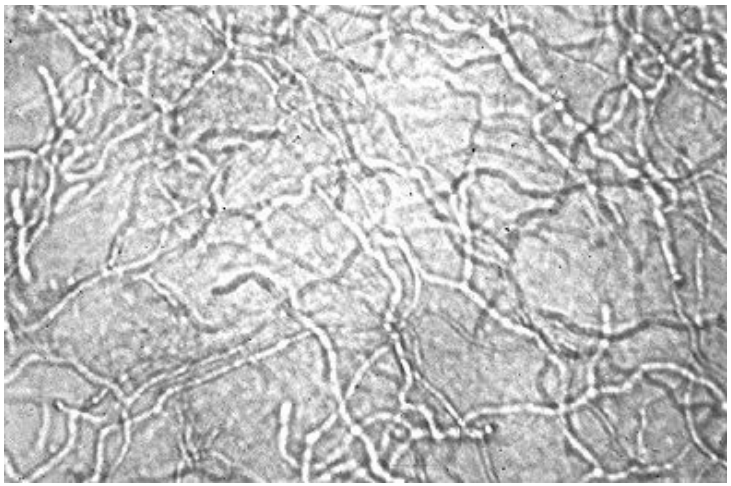






Tinea

- Diagnosis: In dermatology, we scrape the scale with a #12 blade and perform a KOH prep to examine for hyphae
- Presentation: Red, scaling, prominent border, macerated body folds
- May be vesicular or pustular



Tinea Hyphae on KOH test

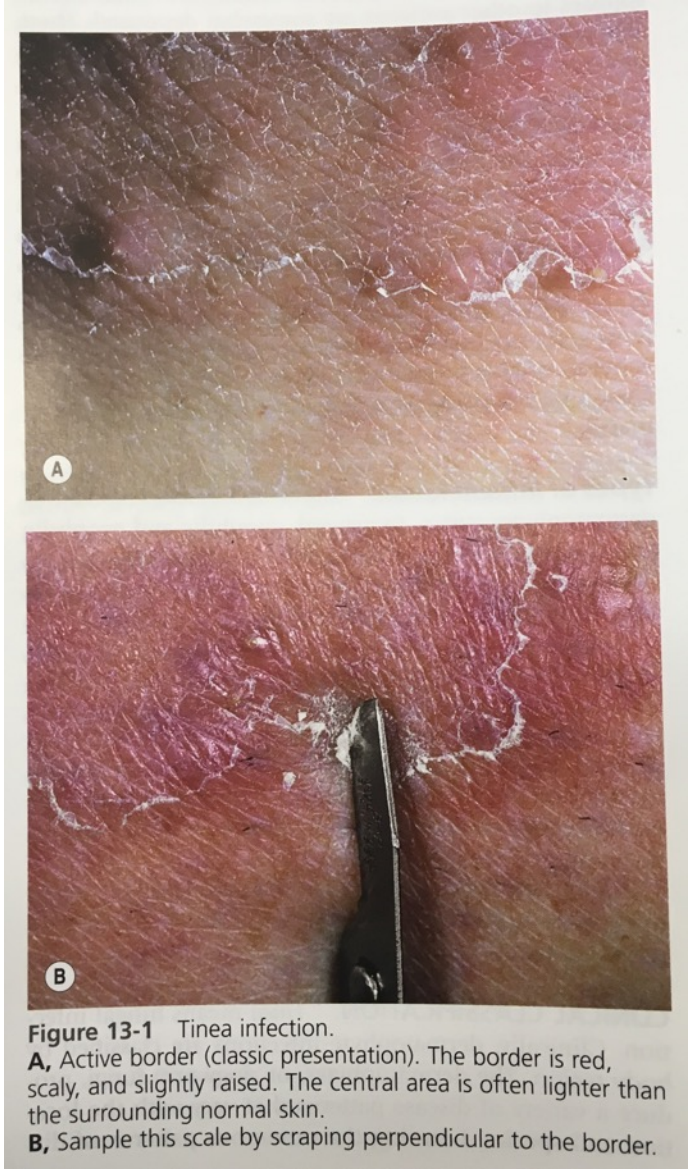
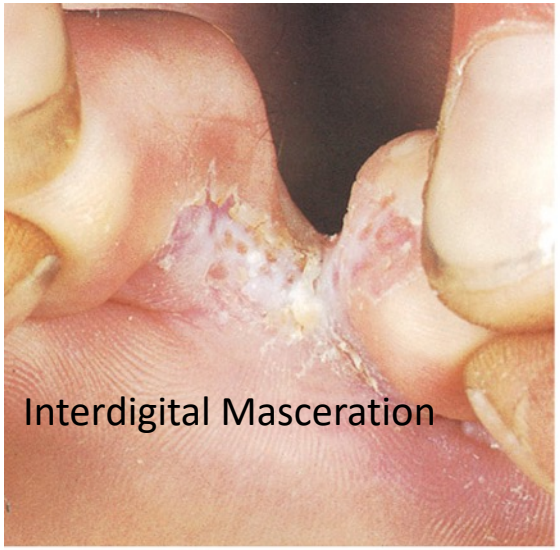


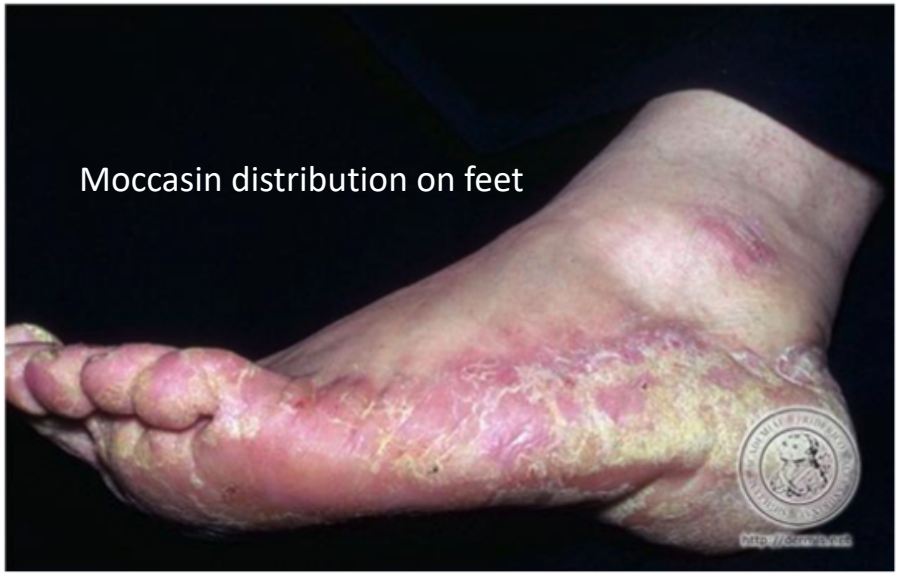
Figure 13-1 Tinea infection.
A, Active border (classic presentation). The border is red, scaly, and slightly raised. The central area is often lighter than the surrounding normal skin.
B, Sample this scale by scraping perpendicular to the border.

Habif, T. P. (2010). Clinical dermatology: a color guide to diagnosis and therapy. *Elsevier*, *13*(978-0-7234-3541–9), p. 492

Tinea Pedis

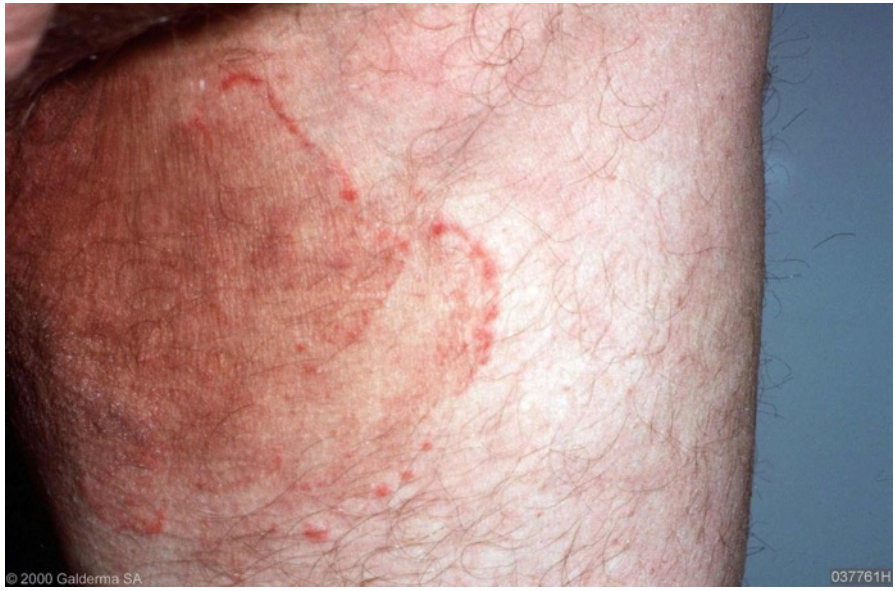
- <u>Treatment:</u>
  - Econazole 1% cream -or- Terbinafine 1% cream (OTC) BID x 4 weeks
  - Cotton socks, powders to absorb moisture (ZeaSorb OTC)
  - If hyperkeratotic type (thick, dry skin) may add ammonium lactate lotion (OTC)





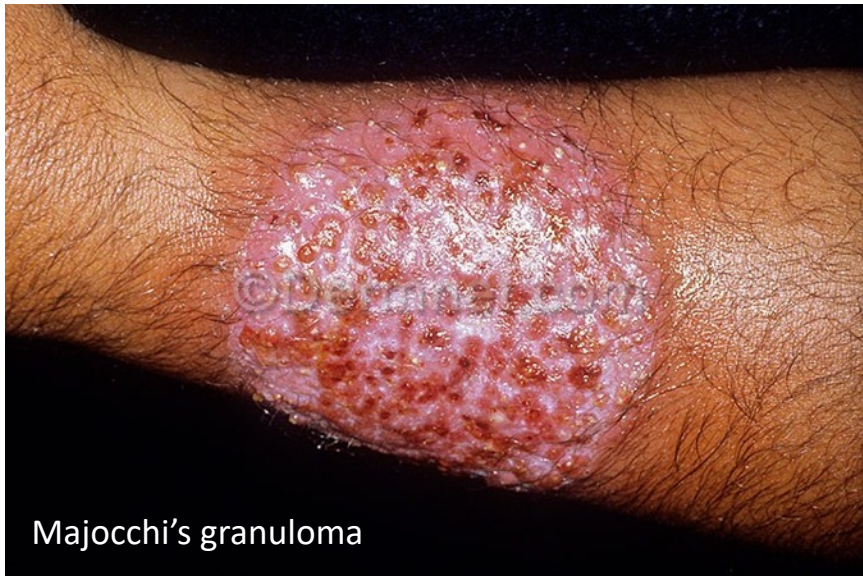
Tinea Cruris

- AKA jock itch
- Men > Women
- Common differential Dx: Intertrigo (non-infectious), erythrasma (bacterial), inverse psoriasis
- Treatment:
  - Topical antifungal (e.g., terbinafine, econazole) BID x 10 days
  - Absorbent powders for moisture
    - Keep areas clean & dry!
  - If itchy, **SHORT TERM** (<7 days) 1% hydrocortisone cream with antifungal If non-responsive, think about referral
- If no improvement, refer: Few rare conditions may need biopsy



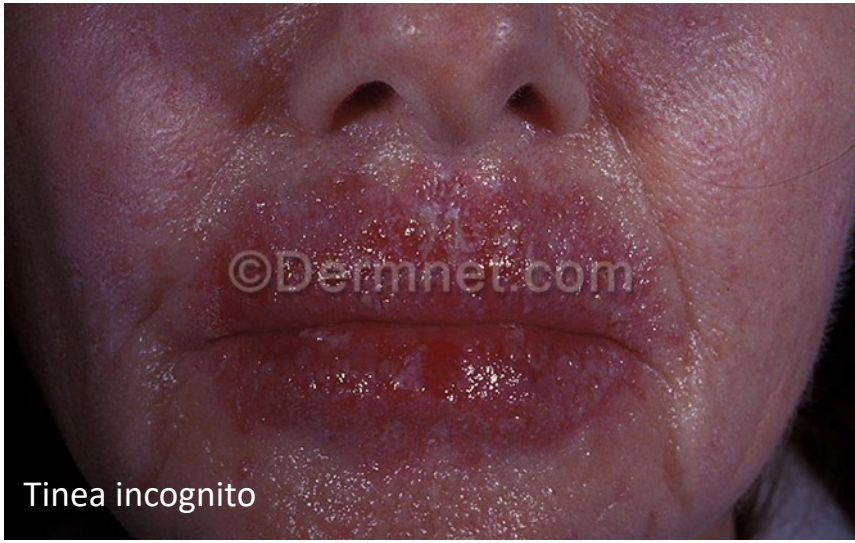
Few Tinea Complications…

- Majocchi's granuloma
- Occurs in hair bearing areas, immunosuppression, or inappropriately treated tinea (patients given steroids to treat tinea)
- Nodular, firm, fluctuant mass
- Requires oral antifungals to treat (e.g., PO terbinafine)



Majocchi's granuloma

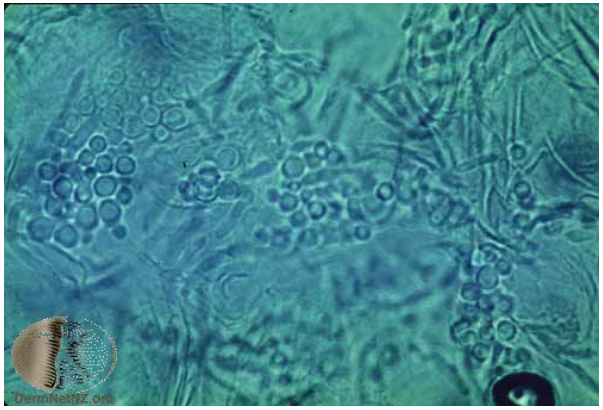
- Tinea incognito
- Occurs when fungal infections are treated with topical steroids
- Rash improves, then flares again once steroid is stopped

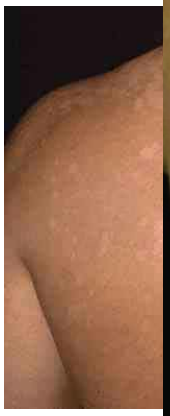


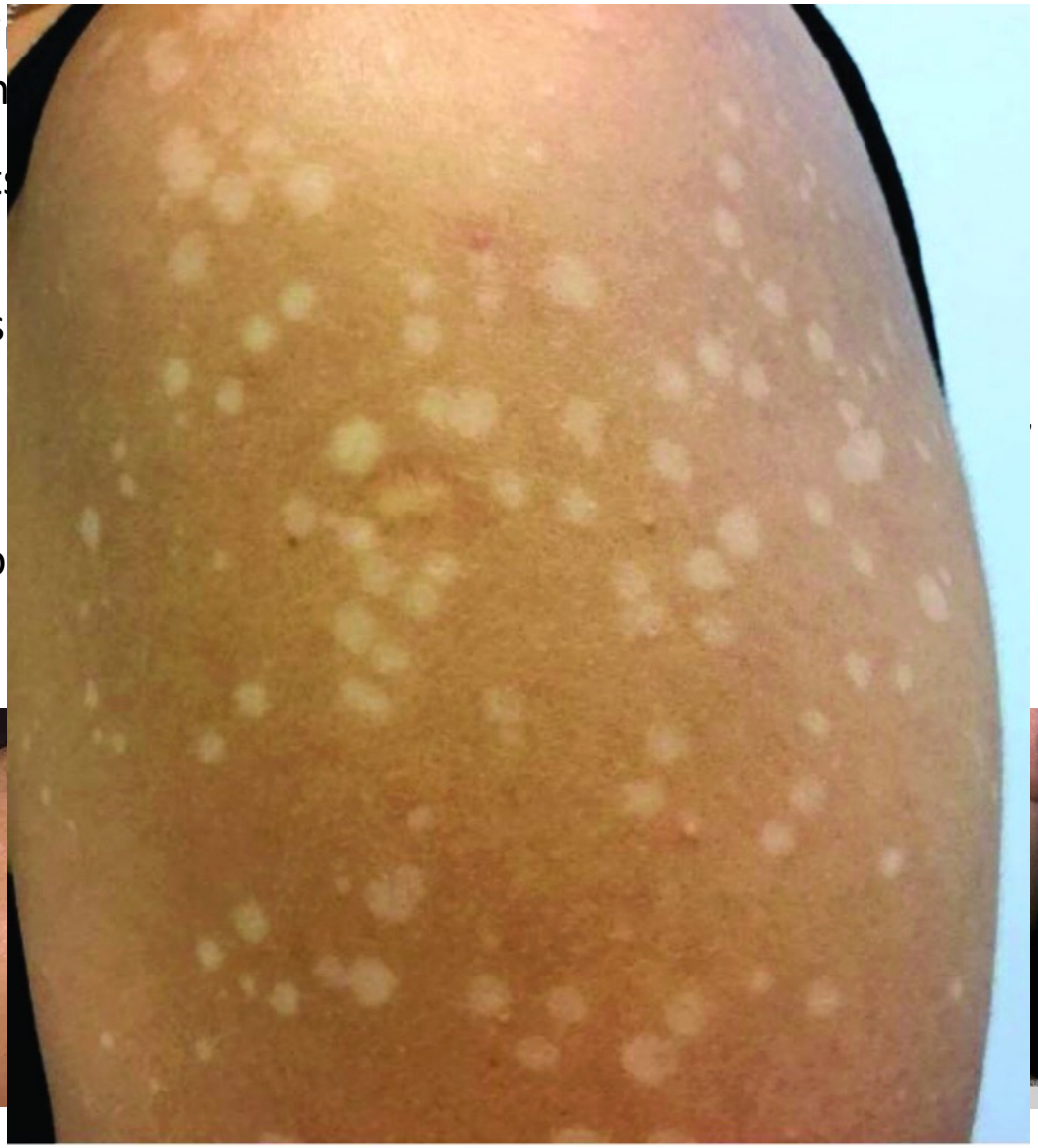
Tinea incognito

Tinea Versicolor

- Tinea versicolor is a common yeast i
  discolored patches appear on the ch
- Most commonly affects young adult
  individuals who perspire heavily
- Dx: clinical presentation; + 'curtain s
- Tx: **2.5% Selenium sulfide shampoo**
  may require maintenance)
  - Topical antifungals (ketoconazo

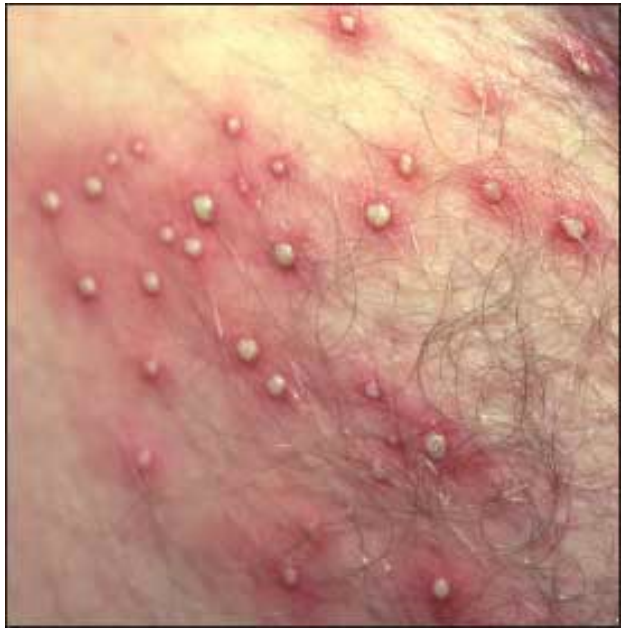


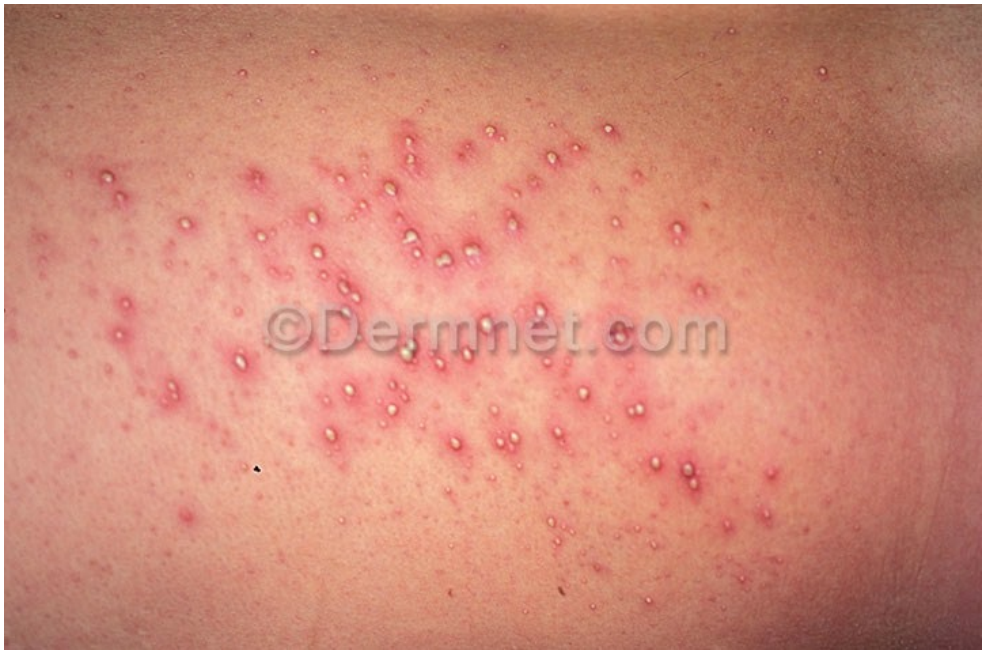




Folliculitis

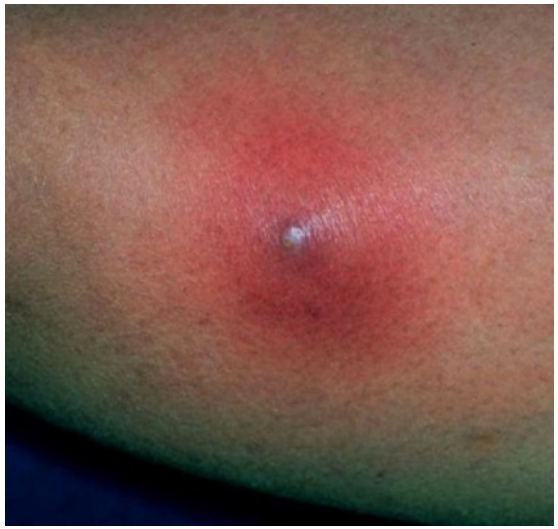
- Inflammation of hair follicle caused by infection, chemical irritation (products), or physical injury (shaving/ingrown hairs)
- Most common bacterial etiology: *Staphylococcal* infection
- Treatment:
  - Antibacterial wash (Dial, Benzoyl peroxide); topical antibiotic gel
  - Shaving techniques: shave with hair growth, not against; trim instead of shave, avoid waxing/tweezing

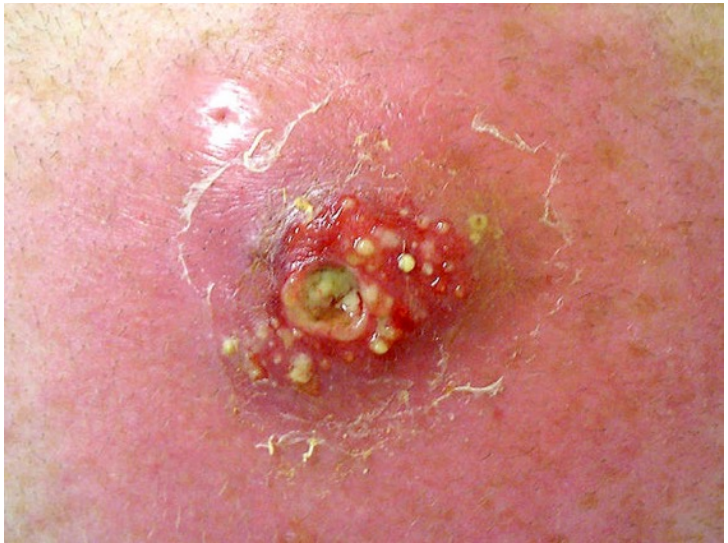




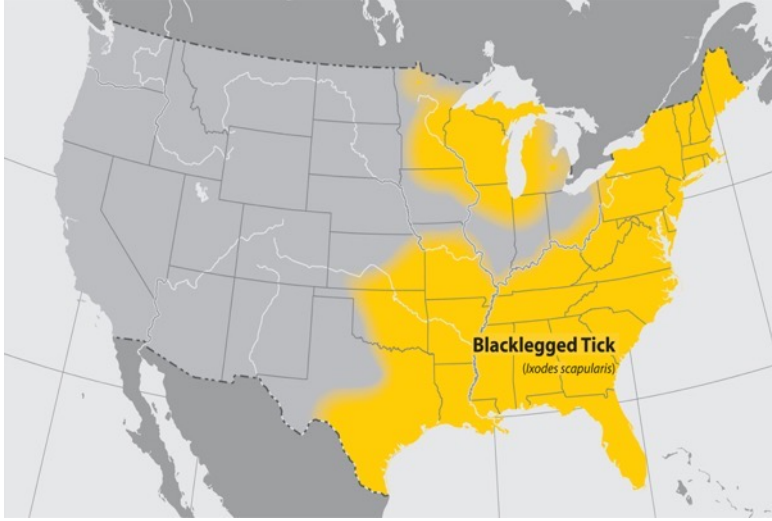
Furuncle/Carbuncle

- AKA “Abscess” or ”boils”
  - Furuncle = 1; carbuncle= many (*I remember this as: many people can ride in a car* :)
  - Deep seated, tender nodule, may drain
- *S. aureus* is most common cause
- Treatment:
  - Culture & treat with appropriate PO ABX if necessary
  - Incision & drainage (if fluctuant)
  - Warm compresses

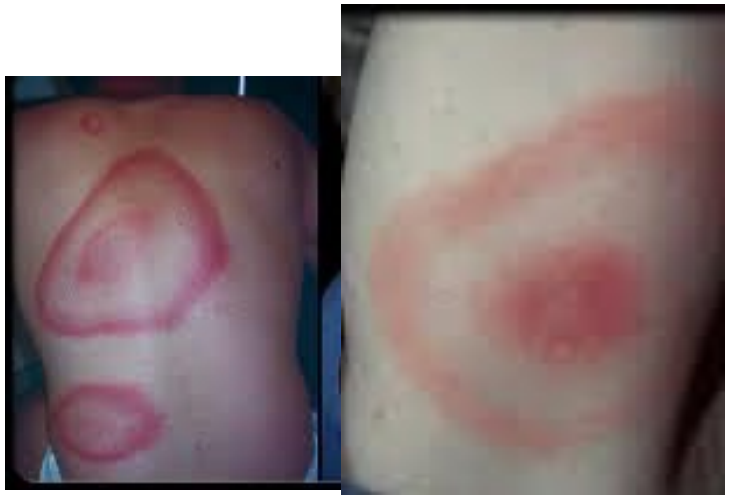


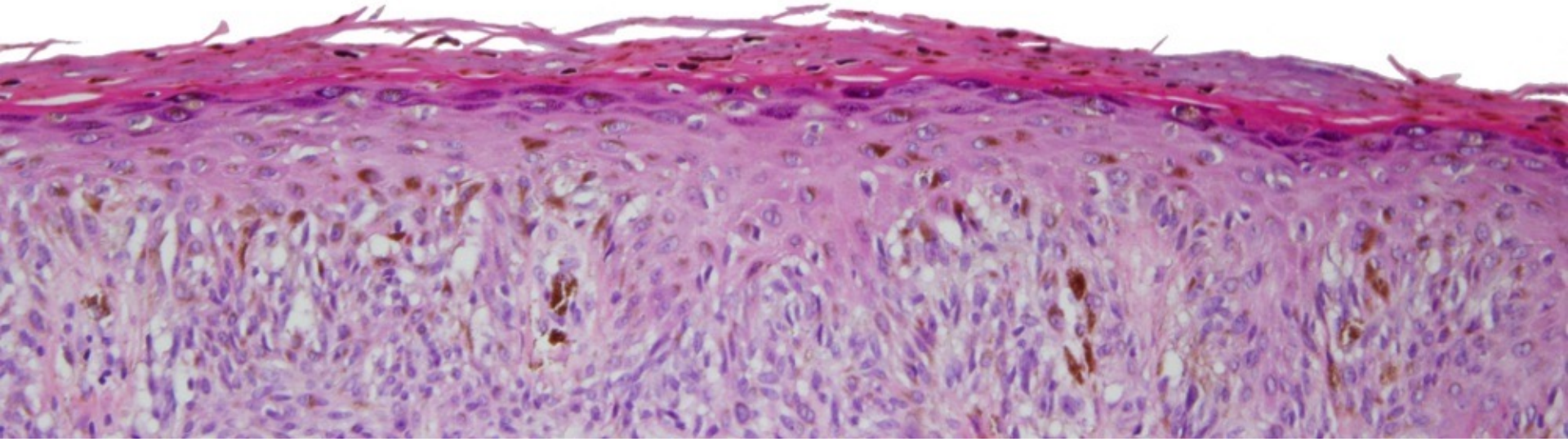


Lyme Disease



- Caused by the spirochete *Borrelia burgdorferi*
- There is a 20% risk of Lyme disease after 72 hours of tick feeding vs. 1% with tick feeding <72 hours
- Erythema migrans (EM):"chronic migrating red rash,"
  - Earliest manifestation of Lyme disease, 78%
  - Single skin lesion, 60% of patients within 3 days to 4 weeks after tick bite
  - EM can occur anywhere; most common areas are thighs, groin, axillae
  - Resolves spontaneously over several weeks even without therapy
  - *Does not always exhibit central clearing*
- Systemic influenza-like symptoms including fatigue, fever, chills, headache, myalgias, arthralgias may be present. Lymphadenopathy may also occur (19%)

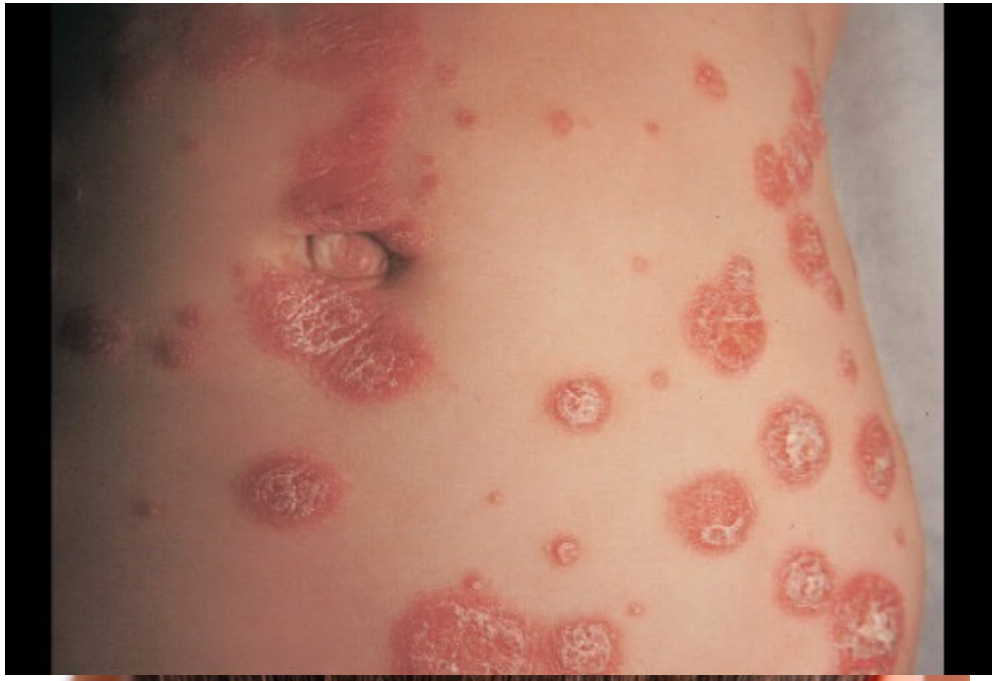


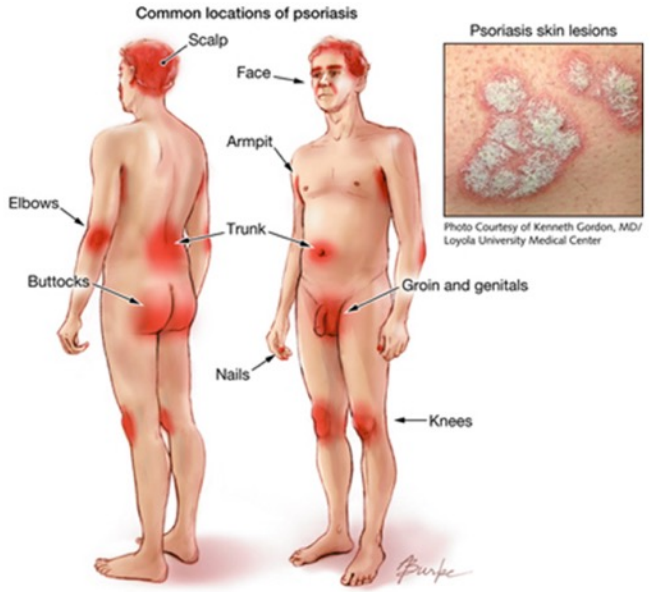


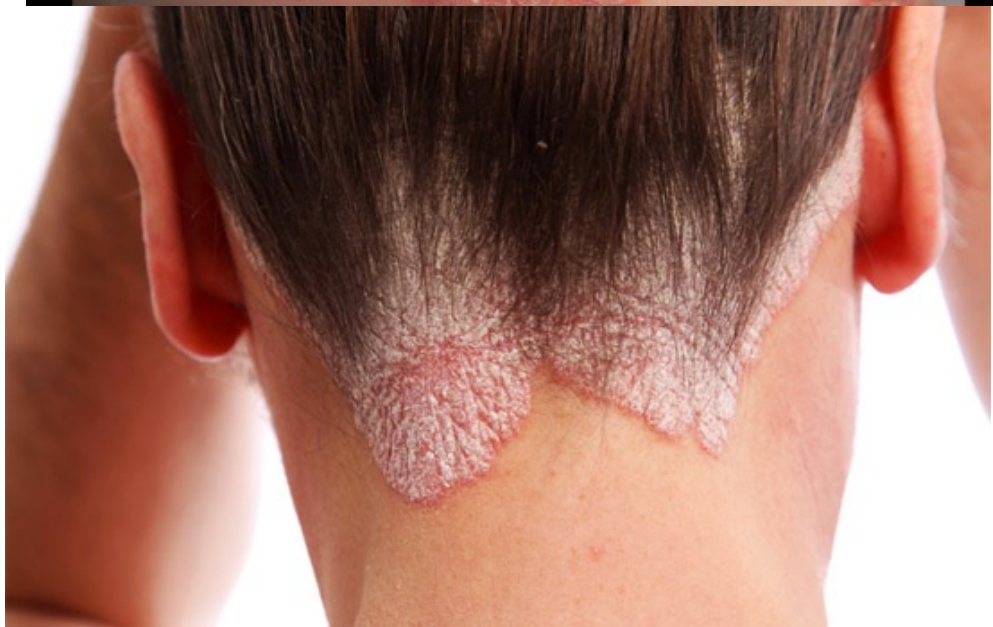
Papulosquamous Rashes

Psoriasis

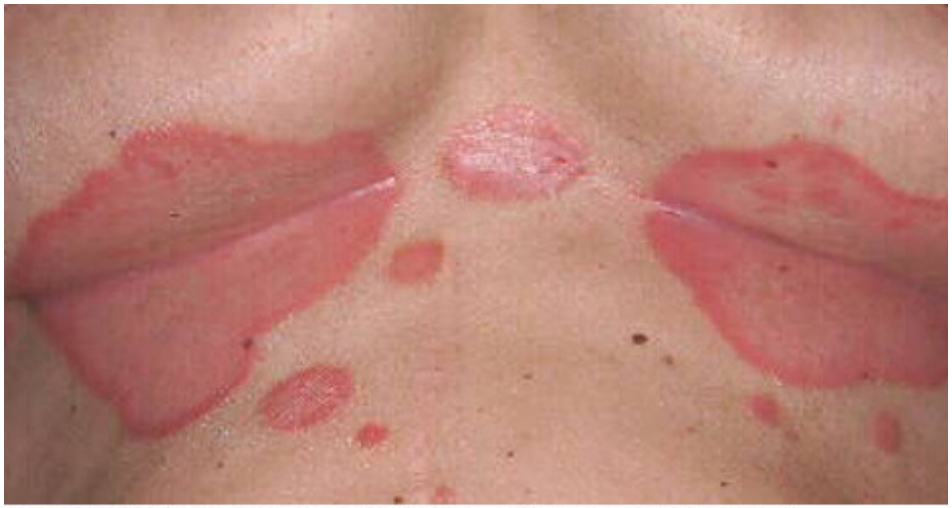
- Chronic disease, waxes & wanes
- Ranges from mild to severe
- Can effect skin, joints, nails,
- Immune-mediated, inflammatory process; familial association
- 1-3% of the population effected
- Often psychological manifestations are most difficult for patients to cope with

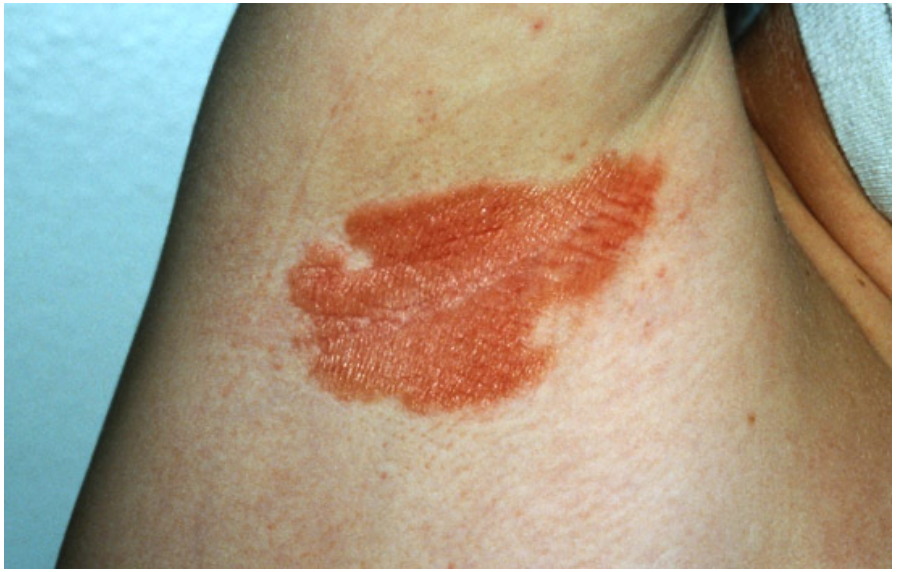


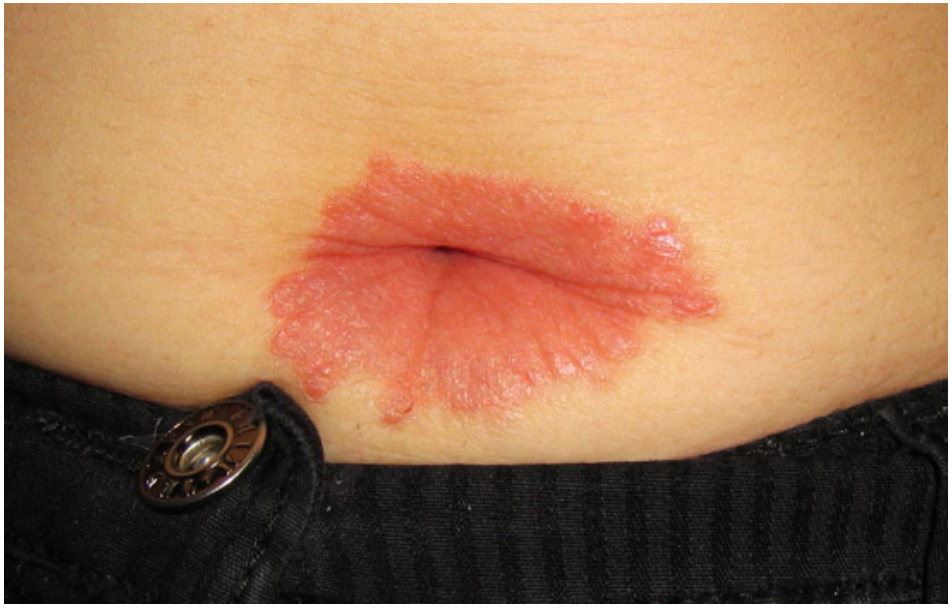




Inverse Psoriasis

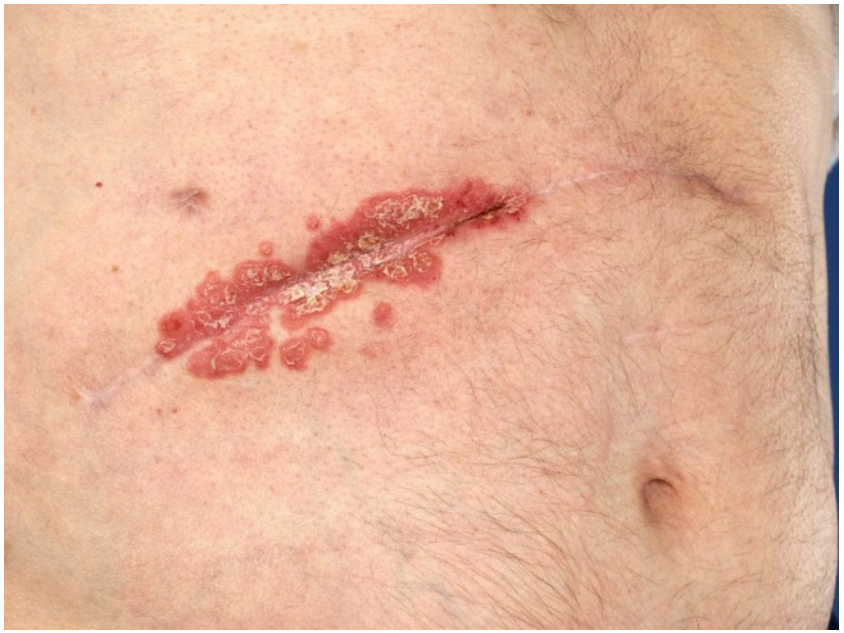


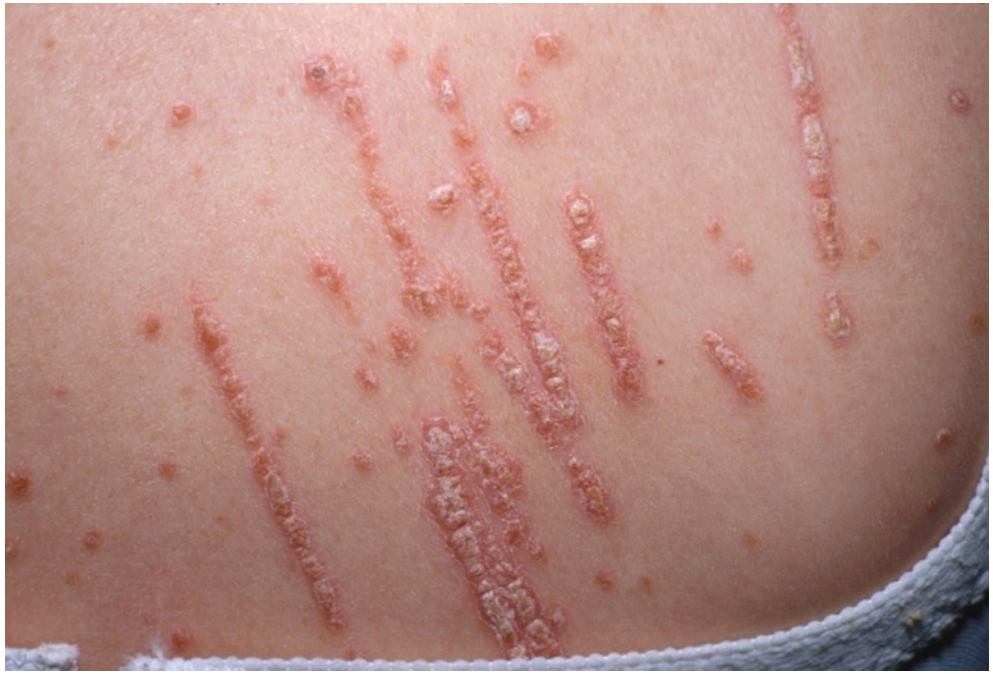


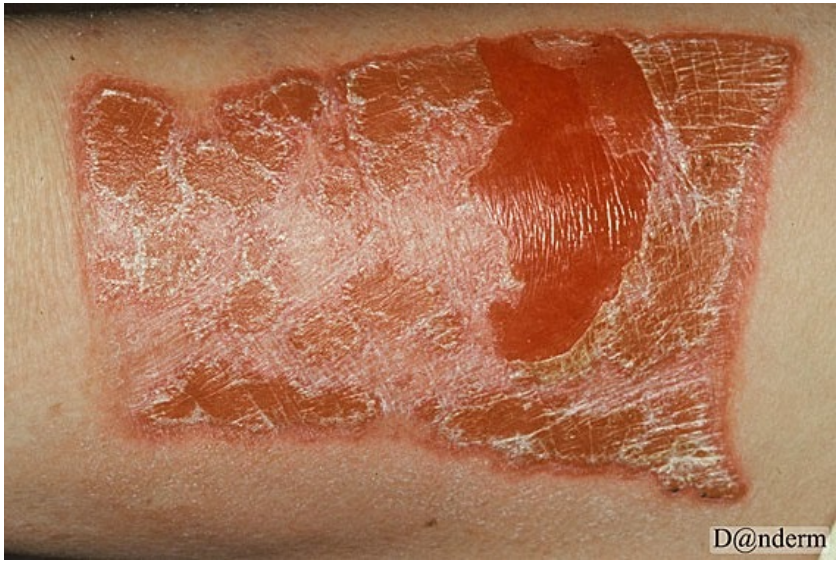


Koebner Phenomenon

- May develop in areas of trauma (scratching, sunburn, surgery, friction, etc…)
- For this reason, psoriasis is often seen on elbows, knees, shins, scalp, gluteal cleft
- Seen in other dermatology conditions (but common in psoriasis)

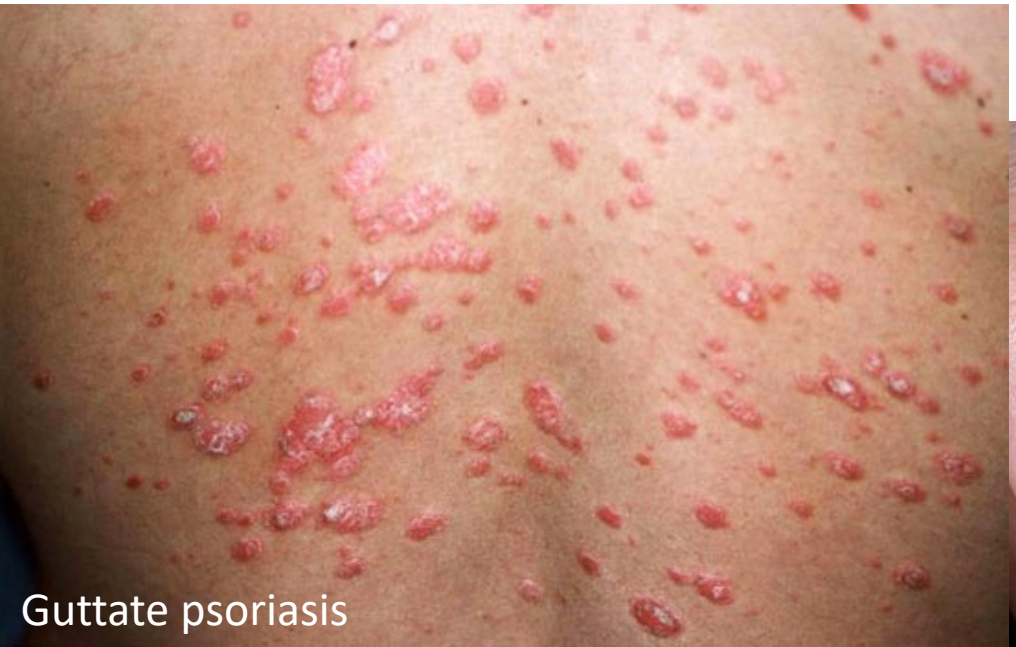






Psoriasis Treatment

- **Top treatment**: Topical steroids and/or calcipotriene (Vitamin D derivative); tar-based shampoos/creams; emollients
    - All other treatments should be managed by dermatology (light therapy, biologics, methotrexate, etc…)
- Guttate variant: Screen for strep (and treat PRN)
- Quit smoking, lose weight
- Screen for depression
- Screen for joint involvement and refer to rheumatology PRN



Guttate psoriasis

Nail changes (may present similar to onychomycosis)

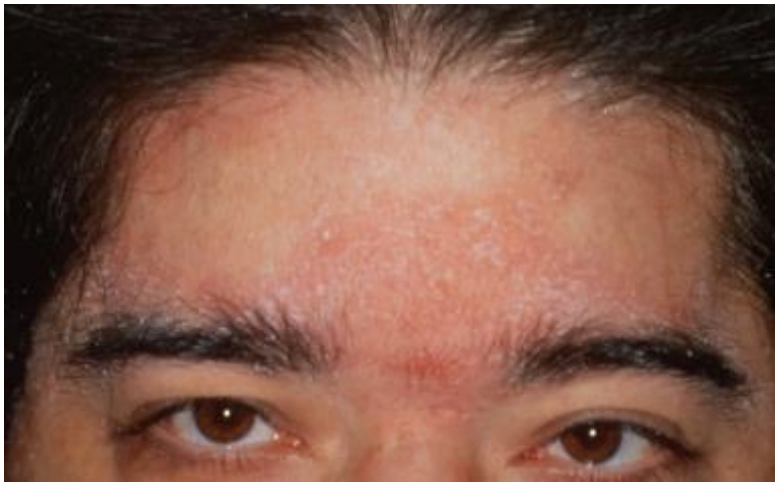
Topical Steroids

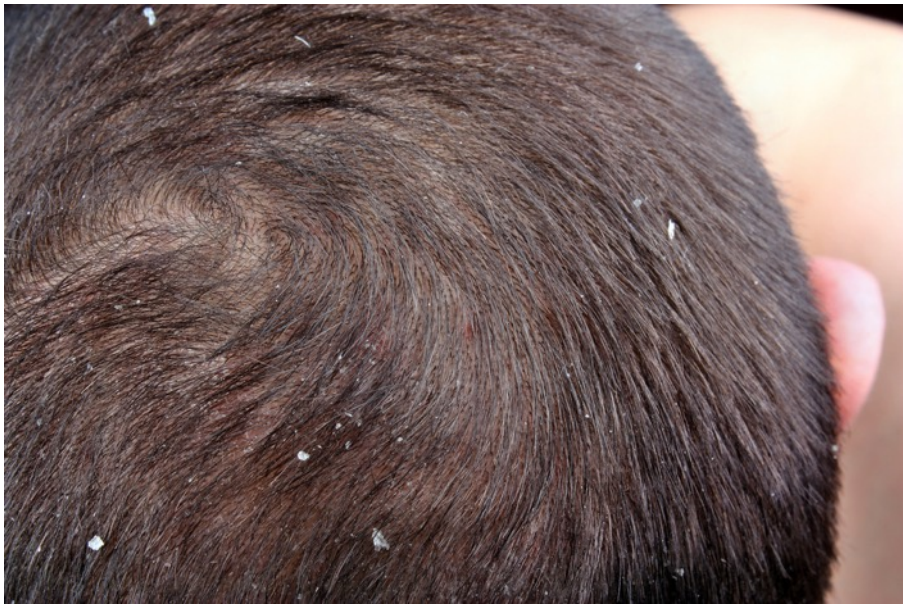
- **Pearl**: Rather than learning all the steroids, find 1 low, mid, and high potency steroid you like, and use those.
  - I generally use: Augmented betamethasone (H), Triamcinolone (M), & 2.5% hydrocortisone (L) d/t insurance coverage
- Vehicle matters: Ointments are generally stronger than creams
  - Use the correct vehicle for body area you are treating- e.g., solution, foam, or gel for scalp
  - Ointment is great for thick, dry lesions (e.g., psoriasis)
- **Generally, don't use steroids longer than 2 weeks/month!!!**
  - = Skin atrophy
  - = Tachyphylaxis (steroids stop working)
  - ***Use with **EXTREME** caution on face/body folds!!

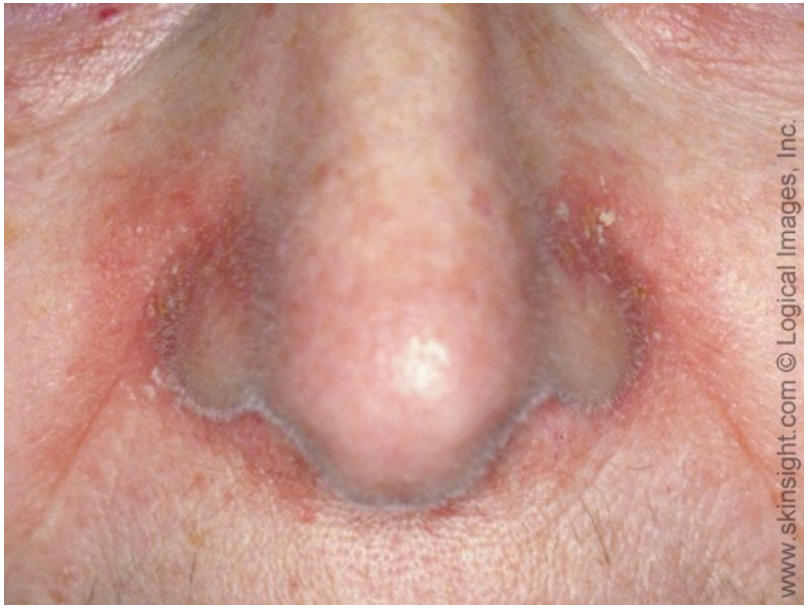
GENERIC NAME	EXAMPLES OF BRANDED PRODUCTS
CLASS 1—SUPER POTENT	
0.05% clobetasol propionate	Clobex® Lotion/Spray/Shampoo, Olux®E Foam, Temovate E® Emollient/ Cream/Ointment Gel/Scalp
0.05% halobetasol propionate	Ultravate® Cream
0.1% fluocinonide	Vanos® Cream
CLASS 2—POTENT	
0.05% diflorasone diacetate	ApexiCon® E Cream
0.1% mometasone furoate	Elocon® Ointment
0.1% halcinonide	Halog® Ointment
0.25% desoximetasone	Topicort® Cream/Ointment
CLASS 3—UPPER MID-STRENGTH	
0.05% fluocinonide	Lidex-E® Cream
0.05% desoximetasone	Topicort® LP Cream
CLASS 4—MID-STRENGTH	
0.1% clocortolone pivalate	Cloderm® Cream
0.1% mometasone furoate	Elocon® Cream
0.1% triamcinolone acetonide	Aristocort® A Cream, Kenalog® Ointment
0.1% betamethasone valerate	Valisone Ointment
0.025% fluocinolone acetonide	Synalar® Ointment
CLASS 5—LOWER MID-STRENGTH	
0.05% fluticasone propionate	Cutivate® Cream/Cutivate Lotion
0.1% prednicarbate	Dermatop® Cream
0.1% hydrocortisone probutate	Pandel® Cream
0.1% triamcinolone acetonide	Aristocort® A Cream, Kenalog® Lotion
0.025% fluocinolone acetonide	Synalar® Cream
CLASS 6—MILD	
0.05% alclometasone dipropionate	Aclovate® Cream/Ointment
0.05% desonide	Verdeso™ Foam, Desonate Gel™
0.025% triamcinolone acetonide	Aristocort A Cream, Kenalog Lotion
0.1% hydrocortisone butyrate	Locoid Cream/Ointment
0.01% fluocinolone acetonide	Derma-Smoothe/FS® Scalp Oil, Synalar® Topical Solution
CLASS 7—LEAST POTENT	
2%/2.5% hydrocortisone	Nutracort® Lotion, Synacort® Cream
0.5- 1% hydrocortisone	Cortaid® Cream/Spray/Ointment and many other over-the-counter products

Seborrheic Dermatitis

- Common, chronic, inflammatory disease (waxes & wanes)
- AKA: Scalp dandruff
  - May occur on face & chest as well
- Many people associate with dry skin and stop washing scalp, when in fact, these patients generally have oily skin (contributing to sx)

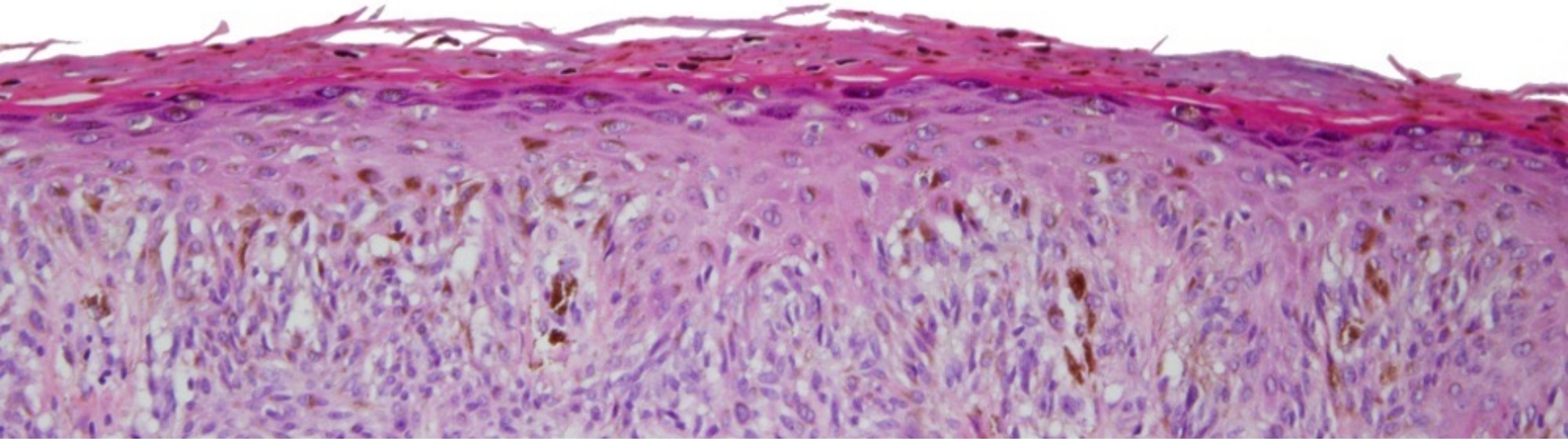






Seborrheic Dermatitis

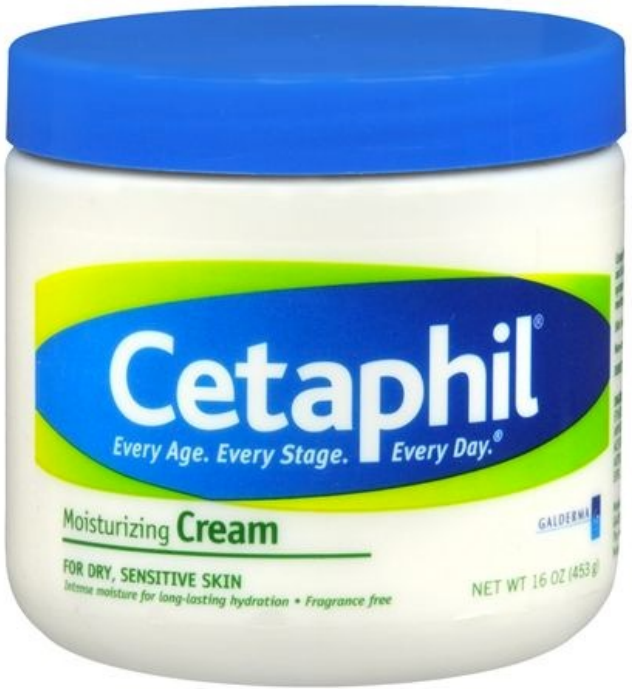
- Treatment:
  - OTC: Wash affected areas with medicated antidandruff shampoo (Daily or QOD)
    - Head & Shoulders, Ketoconazole 1%, Zinc, Salicylic acid, Selenium sulfide, ciclopirox, tar based
    - Leave on 3-5 minutes prior to rinsing
  - Rx: Ketoconazole 2% cream, ciclopirox cream, Sulfacetamide lotion, metronidazole 0.75% cream/gel QD-BID PRN
  - For thick scalp flakes: Dermasmooth-FS (contains steroid and peanut oil)



Dry Skin Variants

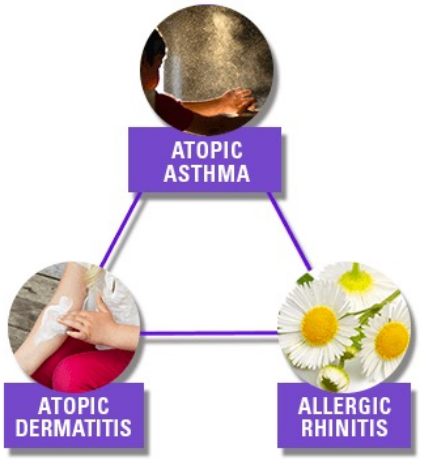
Dry Skin Management

- AKA Xerosis
- Worse during winter months
- Keep baths & showers short
  - Avoid hot water
  - Pat dry, then apply moisturizer after bathing
- Moisturizer: Ointments and creams are more effective than lotions
  - Avoid fragrance, dyes
  - Cetaphil cream (tub), Aveeno eczema lotion
- Avoid harsh soaps like Dial & Irish Springs (Dove unscented is great!)
- Use a humidifier during winter months
- Wear soft cotton fabrics

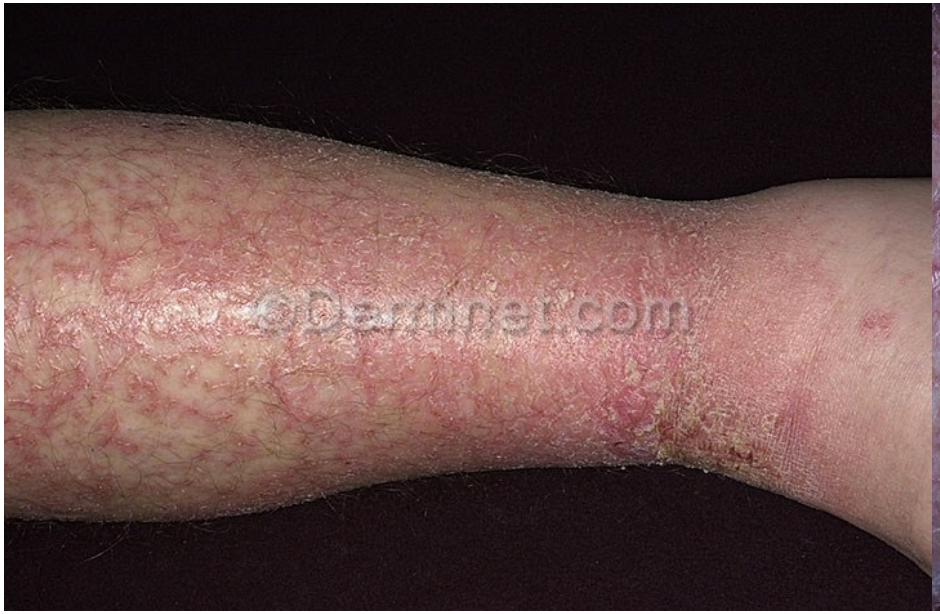


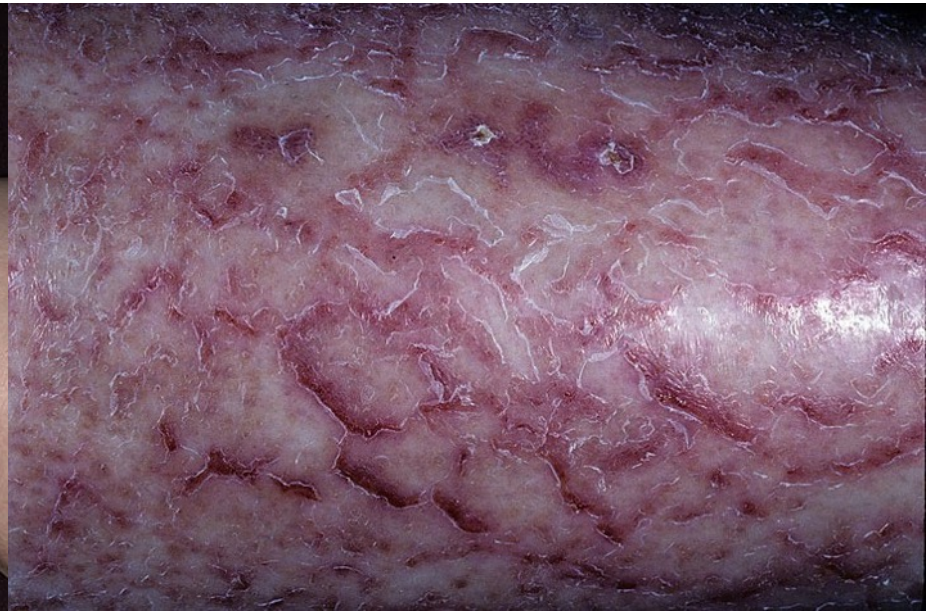
Asteatotic Dermatitis

- AKA Eczema craquelé (for “cracked” skin appearance)
- Excessively dry skin, typically presents during the winter and in the elderly
- Often Hx of “the atopic triad”
- Pain >> pruritus
- May ooze/drain
- Tx: Topical steroids, emollients, topical ABX if infected



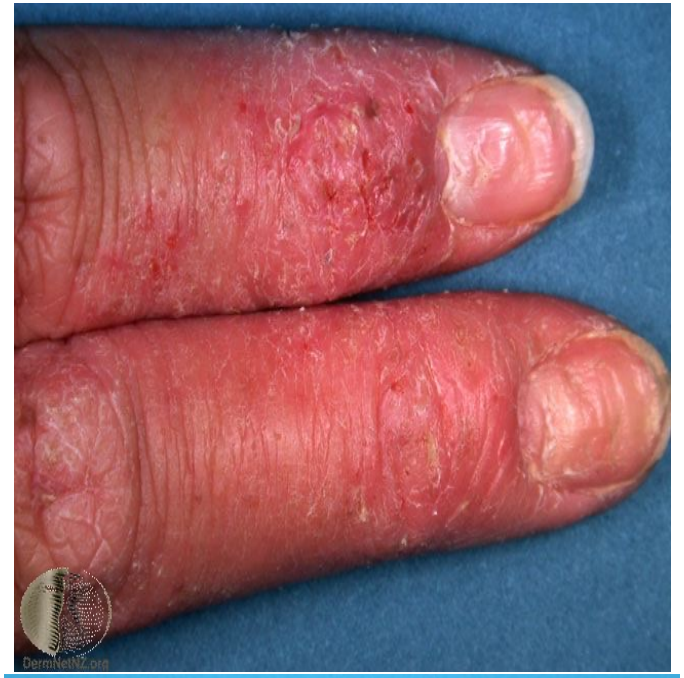
The Atopic Triad

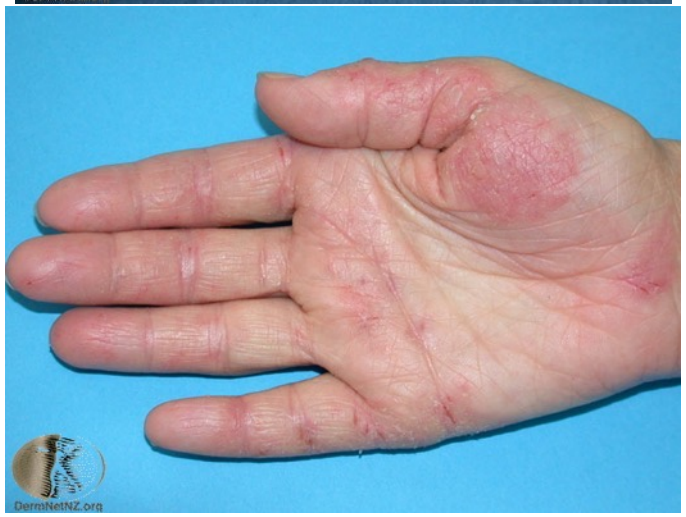


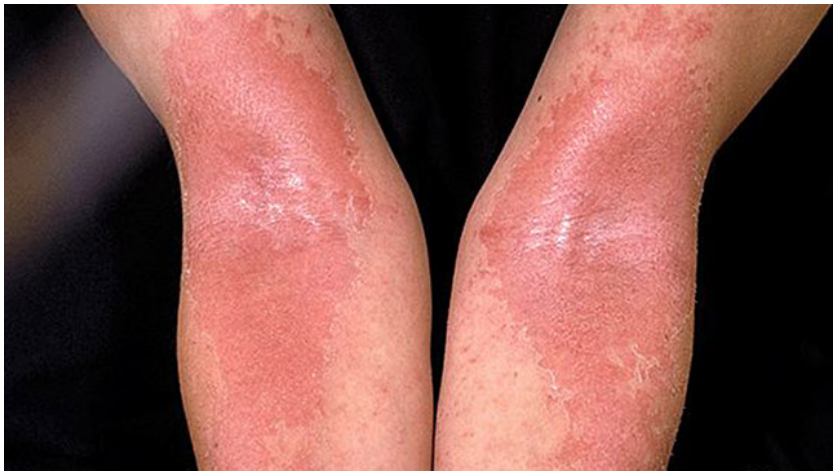


Atopic Dermatitis (AKA Eczema)

- A chronic pruritic condition of the skin that is associated with a personal or family history of atopic disease
- Hallmarks are pruritus and indistinct borders
- **Treatment:** Emollients, topical steroids, bleach bath, antibiotics (secondary infection), biologics

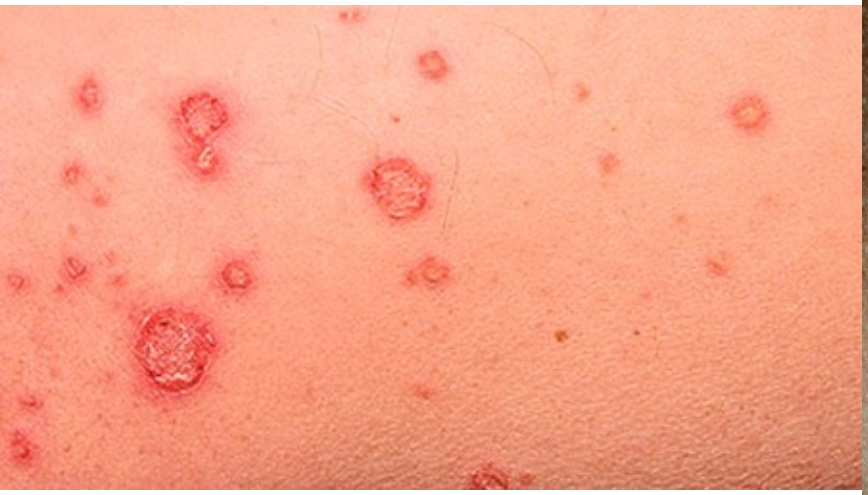


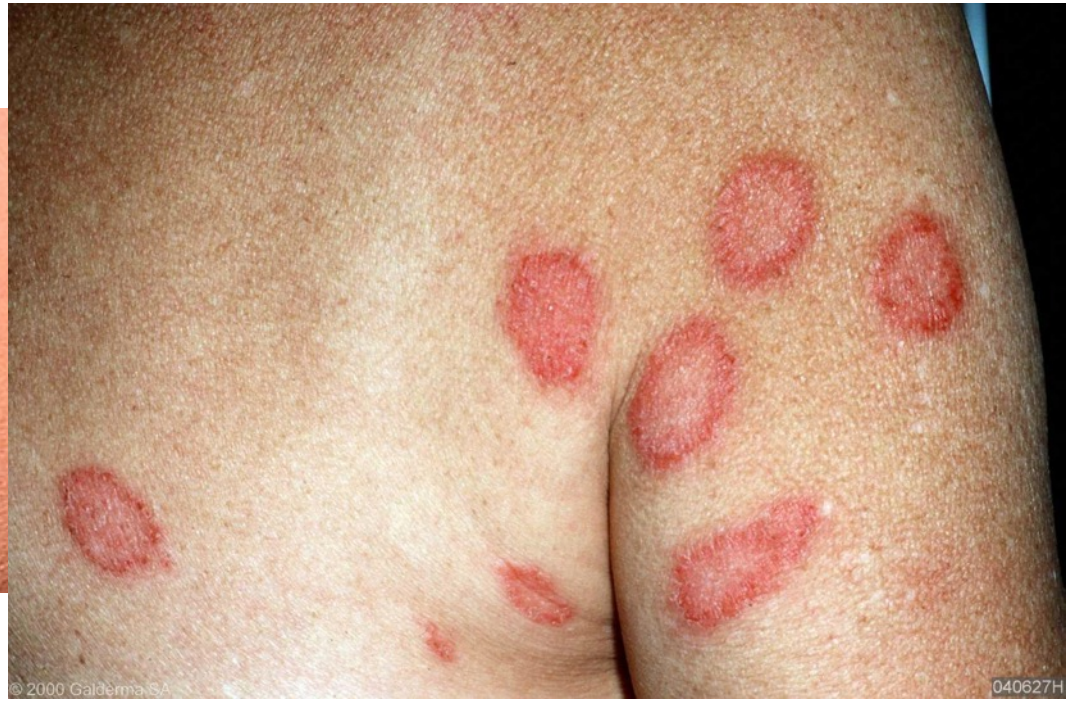




Nummular Dermatitis

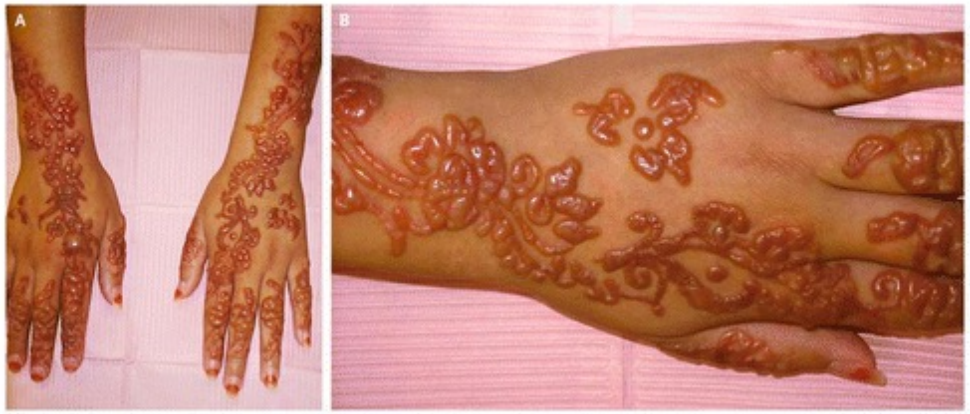
- Coin-shaped, scaly red, dry plaques
- Itchy, generally with background of xerosis (dry skin)
- Please (please, please) ensure this is not fungal
  - Send skin scraping for lab KOH when in doubt
- <u>Tx:</u> Topical steroids, emolients

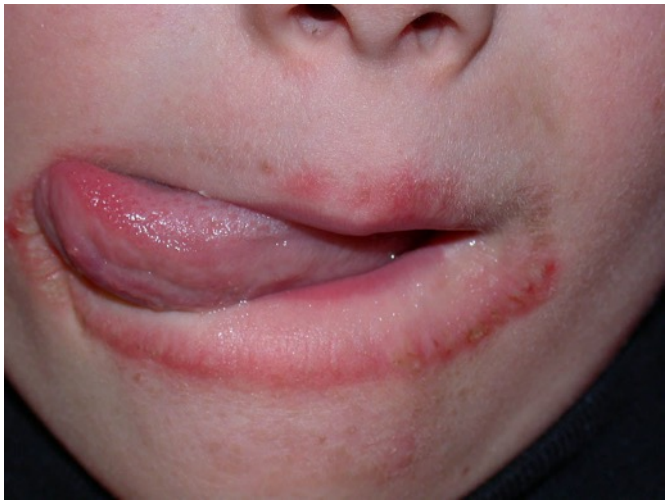


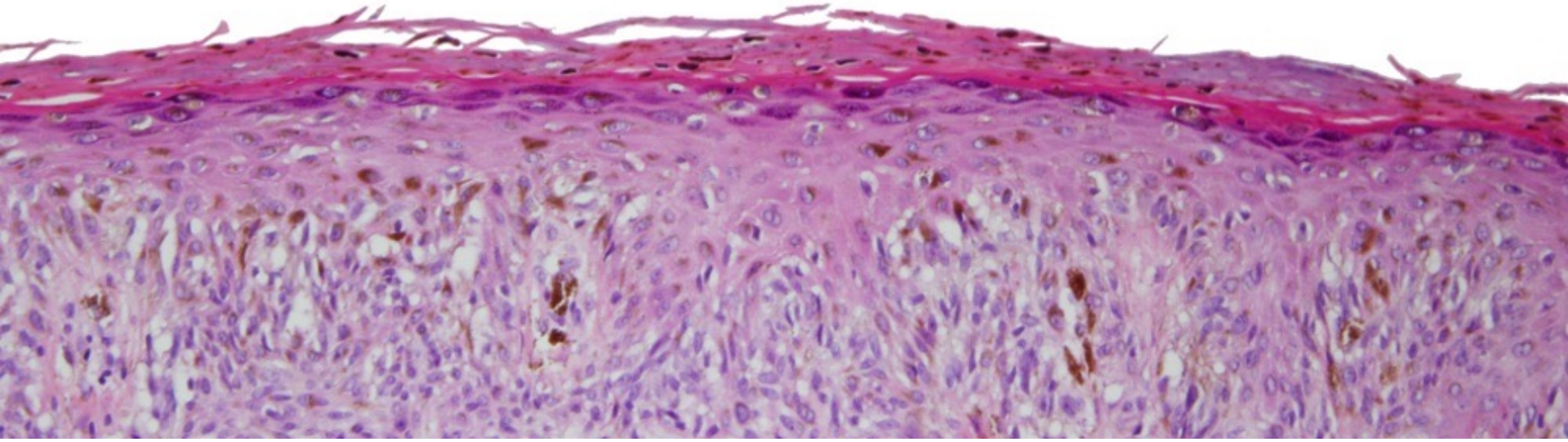


Contact vs. Irritant Dermatitis

Contact Dermatitis	Irritant Dermatitis
• Etiology: Allergy (inflammatory immune response) • Treatment: Find etiology & avoid; Patch-testing; topical steroids • May be occupational (occupational contacts) • Make-up, cosmetic products (preservatives), leather, formaldehyde, jewelry, etc…	• Etiology: Irritation (physical/chemical) • Treatment: Find etiology & fix it; Topical steroids; barrier creams; lipid-rich moisturizers



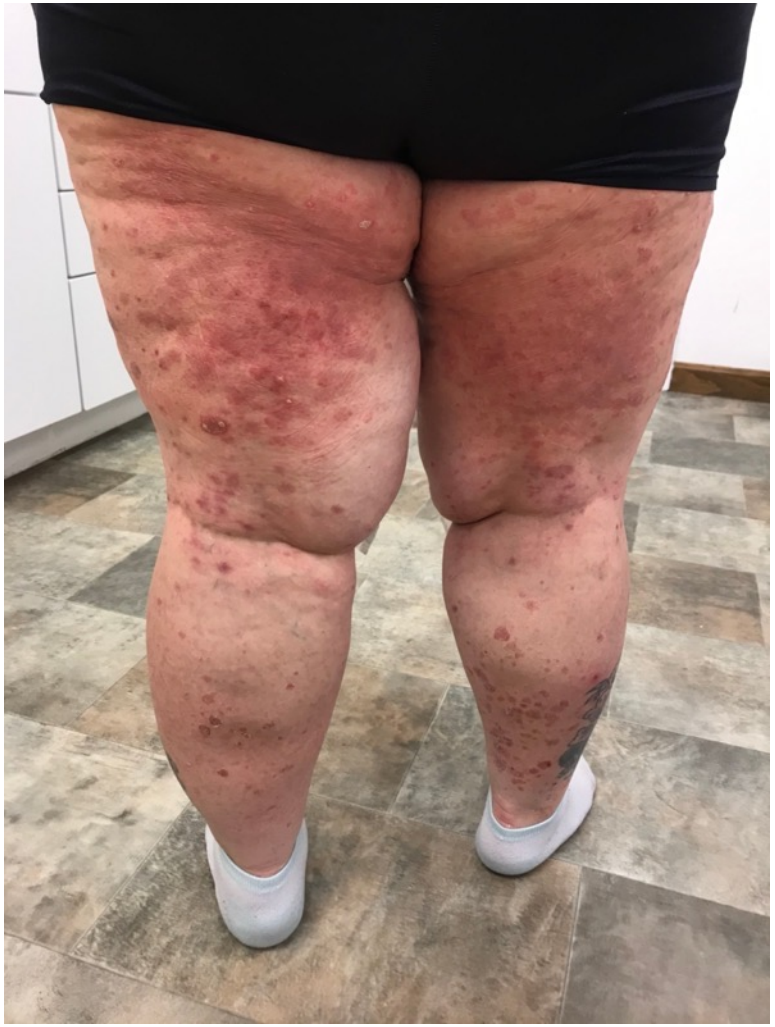


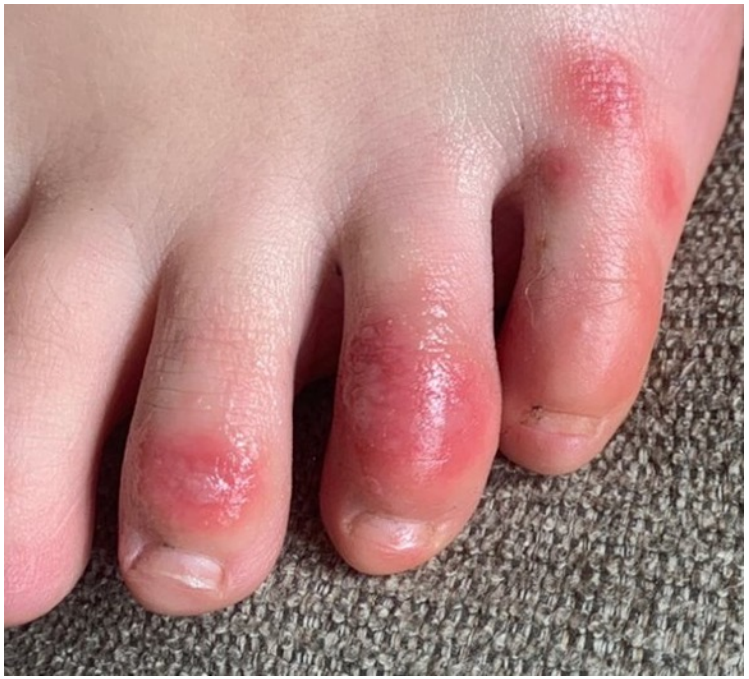


COVID-19 Manifestations

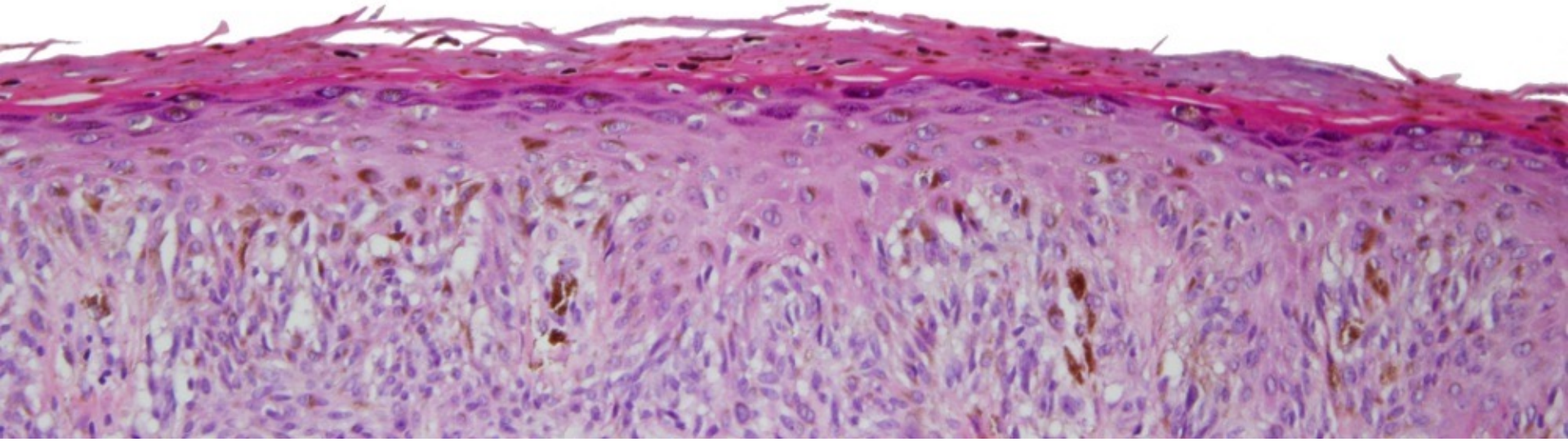
COVID-19 Manifestations

New onset Psoriasis





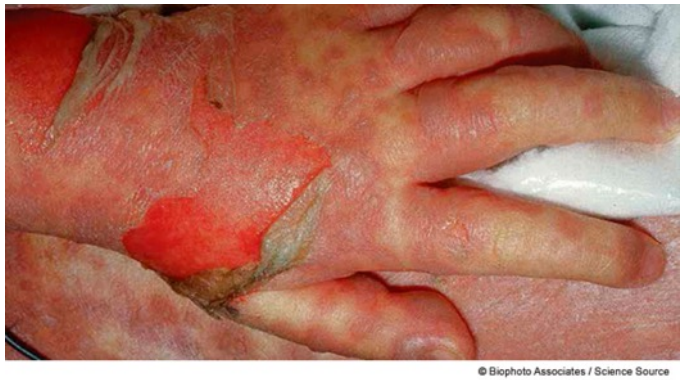
COVID toes

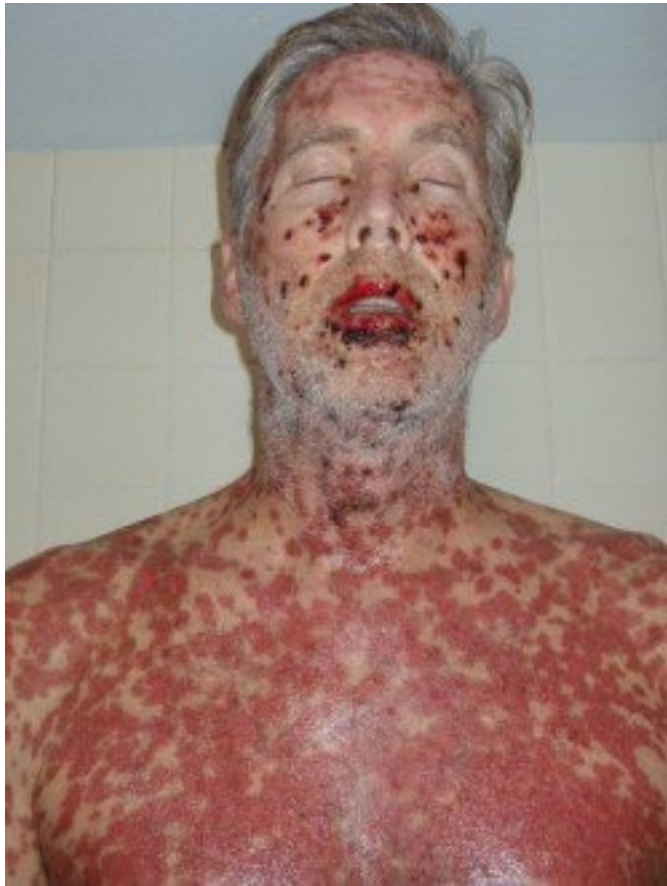


Dermatology Emergencies!

Stevens-Johnson Syndrome/Toxic Epidermal Necrolysis

- SJS-TEN: Often seen as a spectrum (TEN is more extensive)
- Rare: seen most often in slow acetylator genotypes, immunocompromised pts, epilepsy, and with undergoing certain cancer treatments
- Drugs are cause in 95% of cases
- Vesiculobullous (blisters) of skin, mouth, eyes, and genitals; fever; ocular sx can lead to blindness





Common Drugs Culprits	
Acetaminophen	NSAIDs
Allopurinol	Phenobarbital
Aminopenicillins	Phenytoin
Carbamazepine	Quinolones
Cephalosporins	Sulfonamides
Chlormezanone	Trimethoprim-sulfamethoxazole
Corticosteroids	Valproic acid

Stevens-Johnson Syndrome/Toxic Epidermal Necrolysis

- SJS = 5% mortality; TEN = 40% mortality
- **Emergency management**: (**REFER!!!**)
  - Patients may be hospitalized
  - IV-fluid & electrolyte management
  - Airway management; intubation PRN
  - Ophthalmologist management of ocular sx

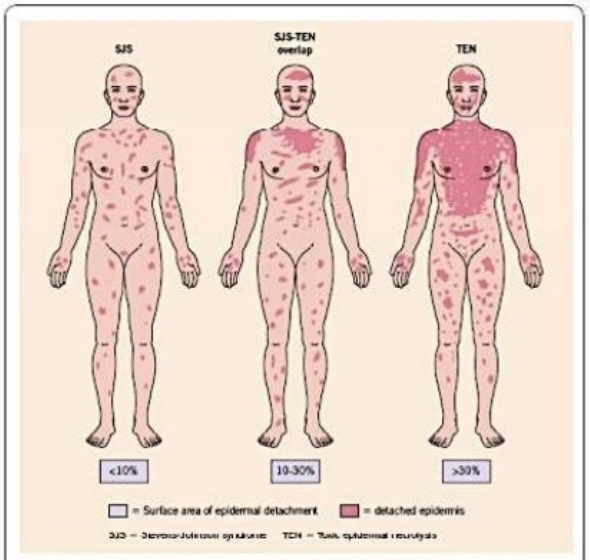
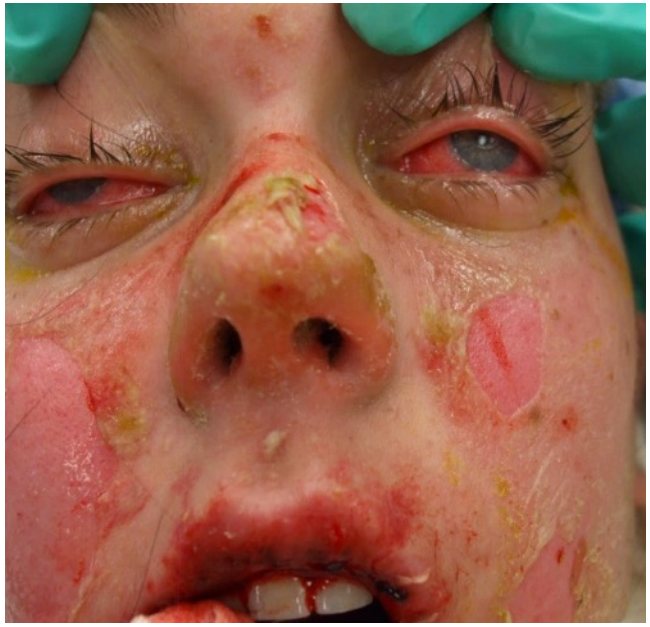
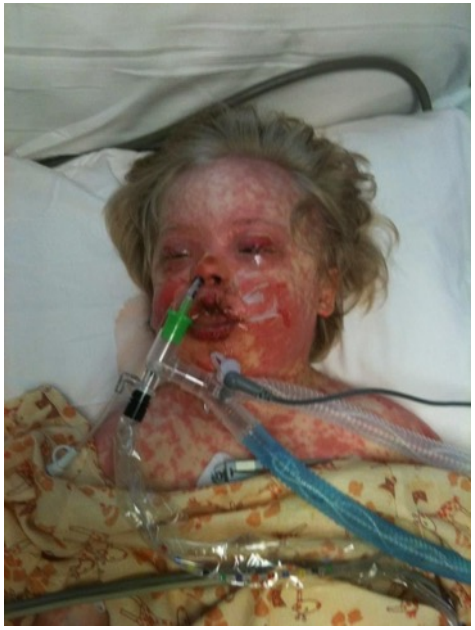
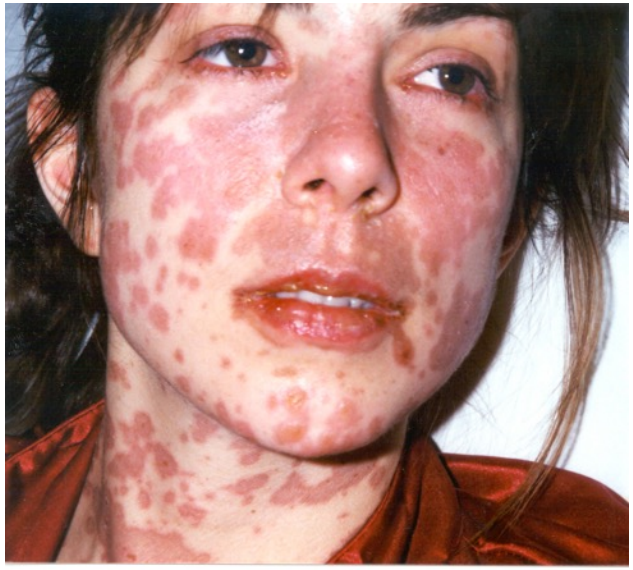


Figure 1 Pictural representation of SJS, SJS-TEN overlap and TEN showing the surface of epidermal detachment (Adapted from Fig 21.9 Bolognia and Bastuji-Garin S. et al. Arch Derm 129: 92, 1993)







Necrotizing Fasciitis

- Rapidly progressing skin infection that can become fatal within hours
- Often begins as a trivial skin lesion w/unrelenting pain
- Progresses over a matter of hours to become cyanotic, blistered and necrotic, with deep gangrene.
- Patients typically present with systemic involvement, including high fever, tachycardia, hypotension and septic shock. **EMERGENCY MANAGEMENT!!**

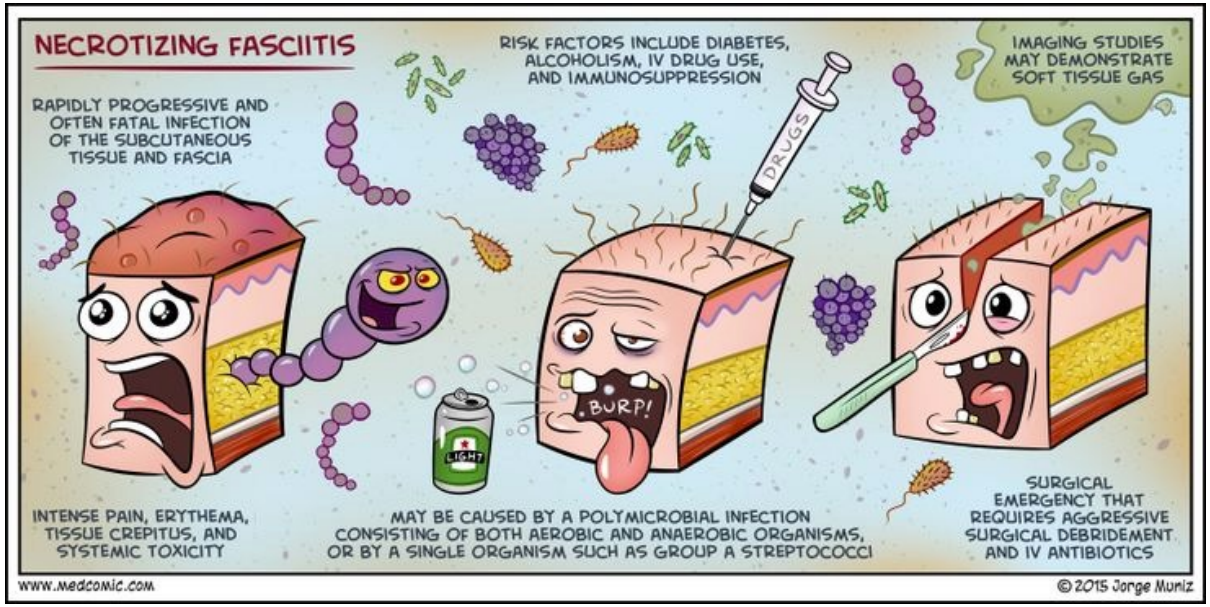
Box 9-2 Features That Suggest a Necrotizing Infection*

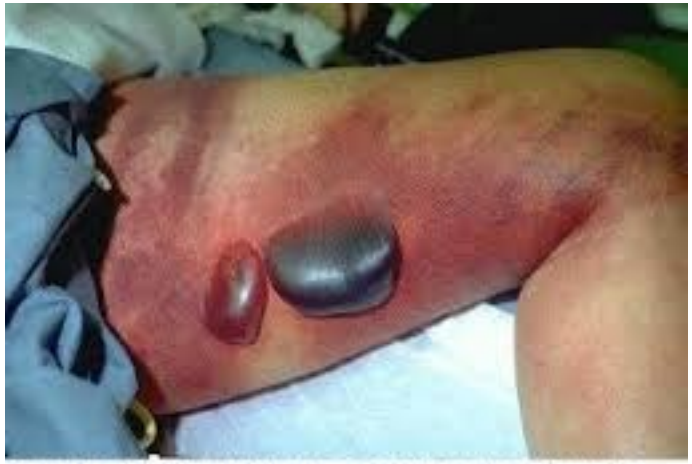
1. Severe, constant pain
2. Bullae related to occlusion of deep blood vessels
3. Skin necrosis or ecchymosis that precedes skin necrosis
4. Gas in the soft tissues, detected by palpation or imaging
5. Edema that extends beyond the margin of erythema
6. Cutaneous anesthesia
7. Hard, wooden feel of the subcutaneous tissue, extending beyond the area of apparent skin involvement
8. Rapid spread, especially during antibiotic therapy
9. Systemic toxicity—fever, leukocytosis, delirium, renal failure
10. CT scan or MRI may show edema extending along the fascial plane

Adapted from Practice guidelines for the diagnosis and management of skin and soft-tissue infections, *Clin Infect Dis* 41:1373-1406, 2005. *PMID: 16231249*

*Features that suggest that deeper tissues are involved.

Habif, T. P. (2010). Clinical dermatology: a color guide to diagnosis and therapy. *Elsevier*, *13*(978-0-7234-3541–9), p. 348





These large, dark, boil-like blisters are a diagnostic symptom of necrotizing fasciitis (also known as flesh-eating disease).
(Source: EMBBS, 1998 http://medchoice.com/)

References

American Academy of Dermatology (2016). Retrieved on December 20, 2016 from https://www.aad.org/

Centers for Disease Control and Prevention. (2015). Genital HSV infections. Retrieved on December 27, 2016 from https://www.cdc.gov/std/tg2015/herpes.htm

Cyr, M. (2012). Benign epidermal neoplasms [Powerpoint slides]. Lahey Clinic Dermatology NP Powerpoint Series.

Habif, T. P. (2010). *Clinical dermatology: a color guide to diagnosis and therapy* (5th ed.). St. Louis, MO: Mosby Elsevier.

Questions?

Thank you!!