SKIN CONDITIONS IN PRIMARY CARE

Alexandria Cooke, M.D.
Assistant Professor UTCOM Chattanooga FMR

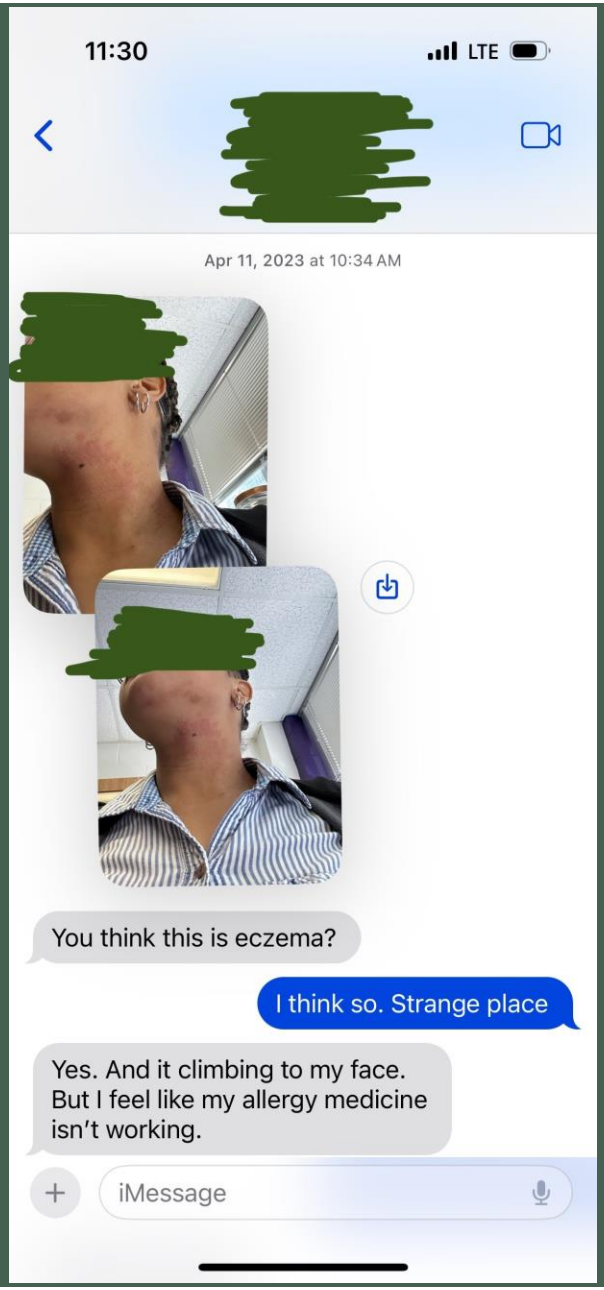
Disclosures

- None

Objectives

- Review descriptive terminology for skin lesions
- Identify common rashes and other skin conditions that present in the primary care setting
- Review treatment modalities for rashes and other skin conditions
- Discuss when biopsy is necessary for unresolved lesions

Is a picture really worth a thousand words?



History

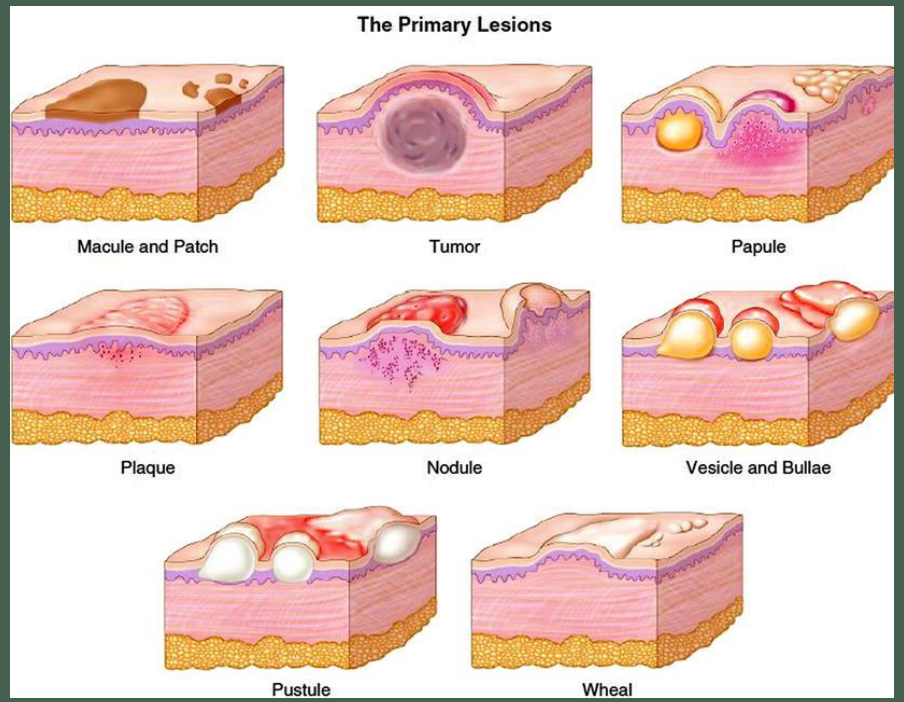
- Onset
- Distribution and spread
- Associated symptoms
  - Pruritus, fever, nausea, vomiting, diarrhea, etc.
- Exposures
- Medications
- Travel History
- Timing/onset

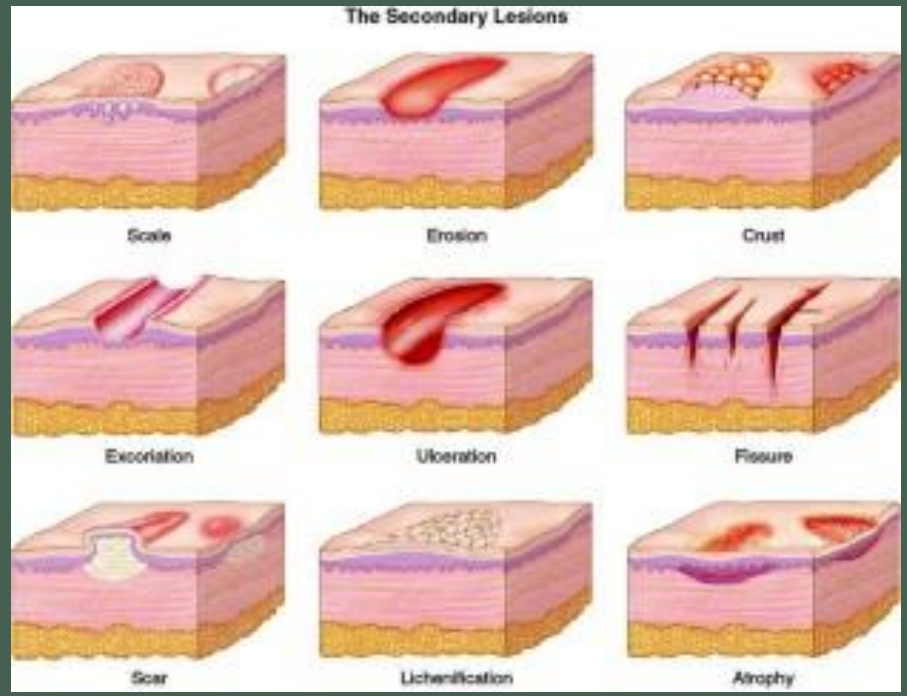
Exam - Morphology

- **Macule** - flat lesion less than 1 cm, without elevation or depression
- **Patch** - flat lesion greater than 1 cm, without elevation or depression
- **Plaque** - flat, elevated lesion, usually greater than 1 cm
- **Papule** - elevated, solid lesion less than 1 cm
- **Nodule** - elevated, solid lesion greater than 1 cm
- **Vesicle** - elevated, fluid-filled lesion, usually less than 1 cm
- **Pustule** - elevated, pus-filled lesion, usually less than 1 cm
- **Bulla** - elevated, fluid-filled lesion, usually greater than 1 cm

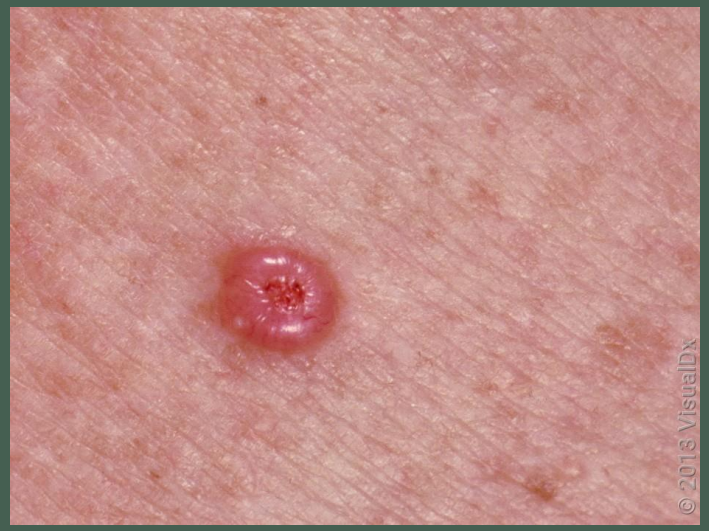
- Size
- Demarcation
- Color
- Distribution

EMR mobile app Photo/Media feature


The Primary Lesions
Macule and Patch
Tumor
Papule
Plaque
Nodule
Vesicle and Bullae
Pustule
Wheal


The Secondary Lesions
Scale
Erosion
Crust
Excoriation
Ulceration
Fissure
Scar
Lichenification
Atrophy

SKIN CANCER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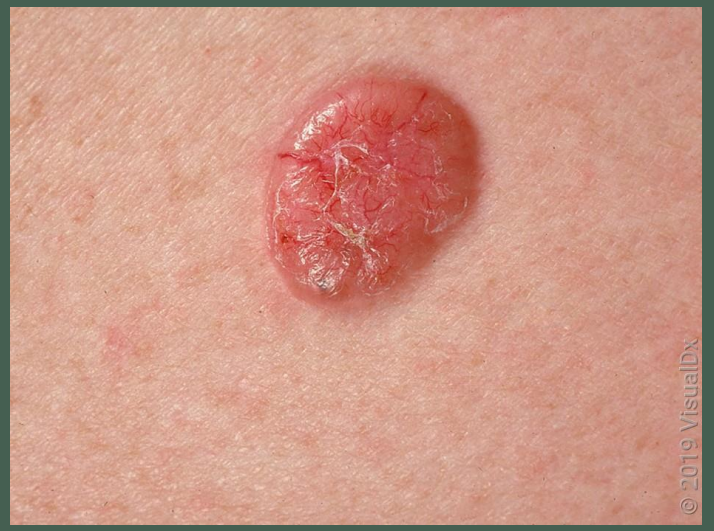
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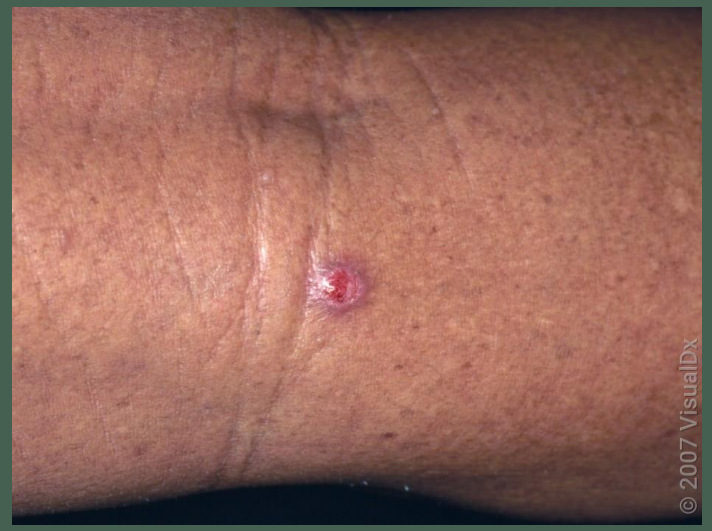
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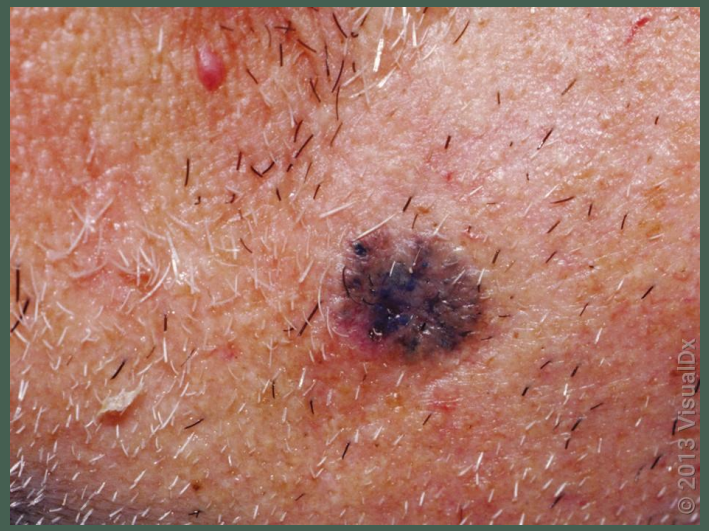
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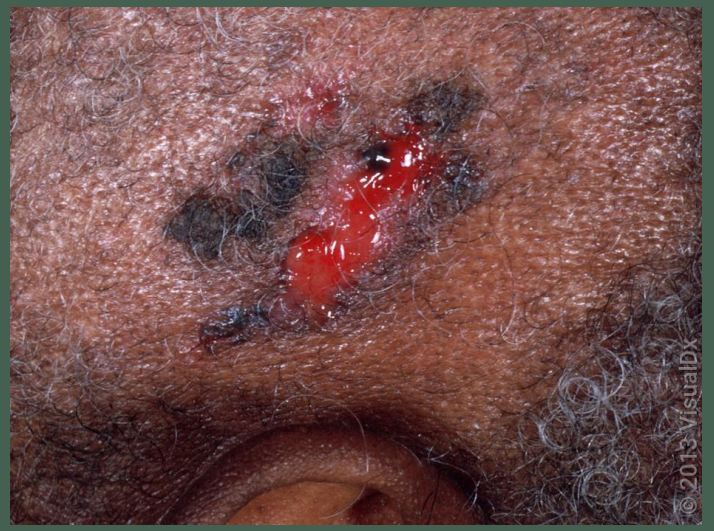
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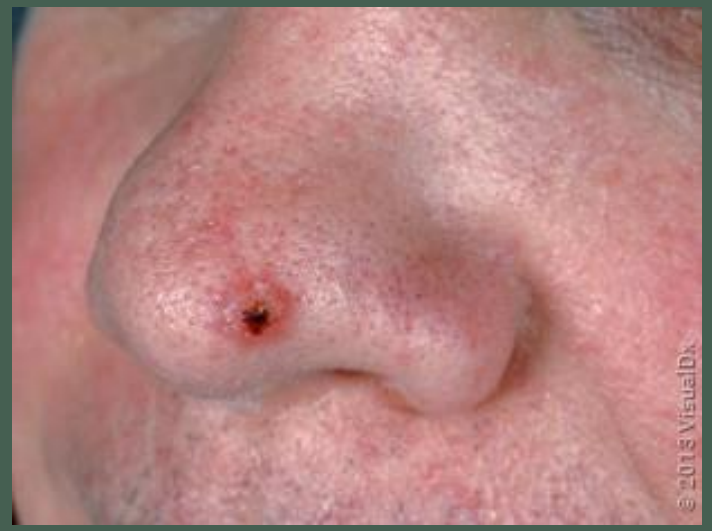
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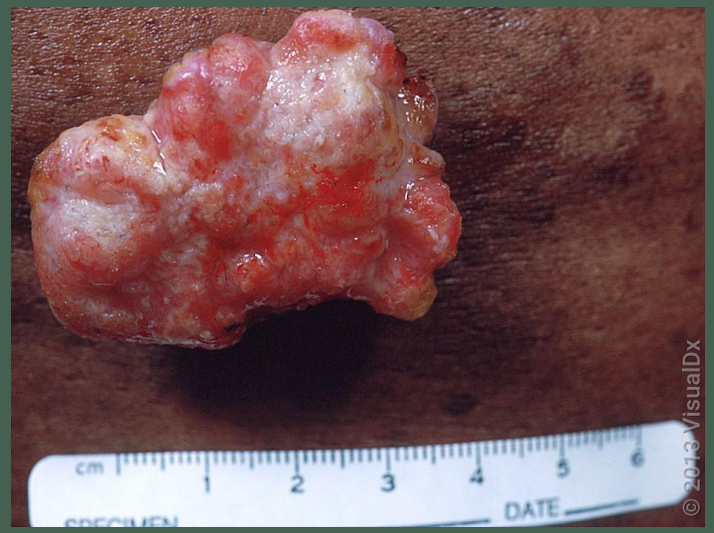
Basal Cell Carcinoma

- Most common skin cancer
- Men > Women; usually older than age 50
- Neoplasm of basal keratinocytes
- Several subtypes:
  - Nodular, superficial, infundibulocystic, fibroepithelial, morpheaform, infilitrative, micronodular, basospquamous
- Nodular BCC is the most common, typically on the face
- Risk factors:
  - Sun exposure, lighter skin, ionizing radiation, tanning beds, immunosuppression
- Metastasis is rare
- Smooth, pearly papule/nodule with rolled edges; telangiectasias and ulceration is common
- Pigmented nodules are common in Black and Hispanic individuals
- Management
  - Standard excision
  - Mohs micrographic surgery
- Follow up
  - High risk for other cutaneous malignancies, should have yearly total body skin exams.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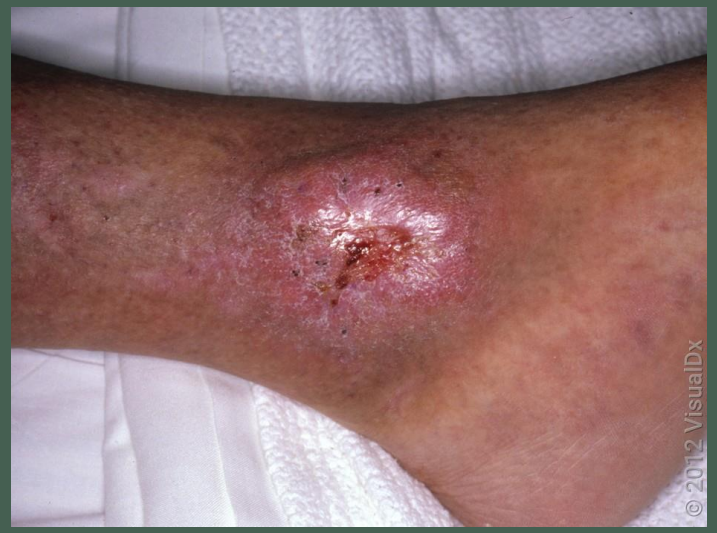
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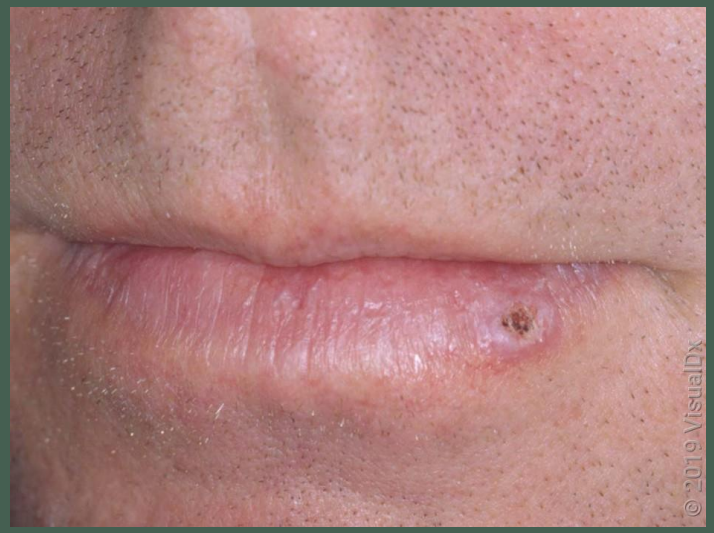
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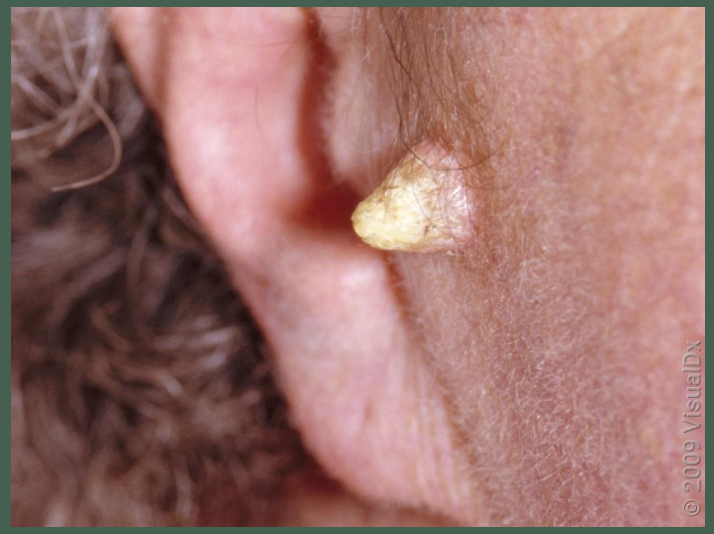
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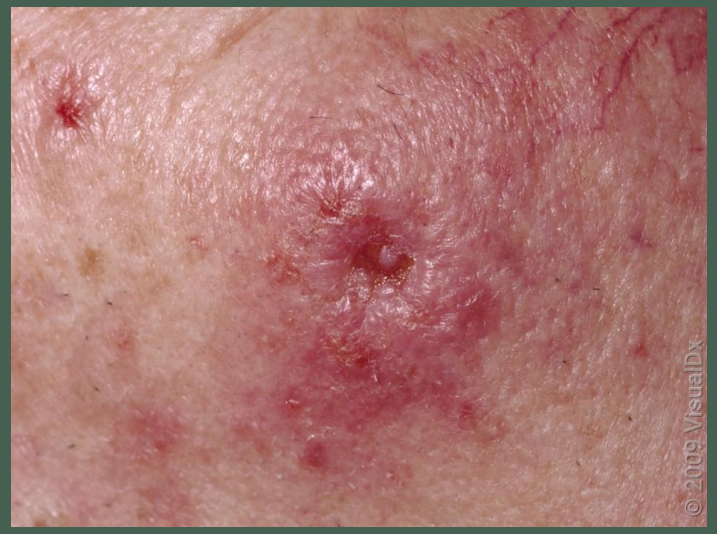
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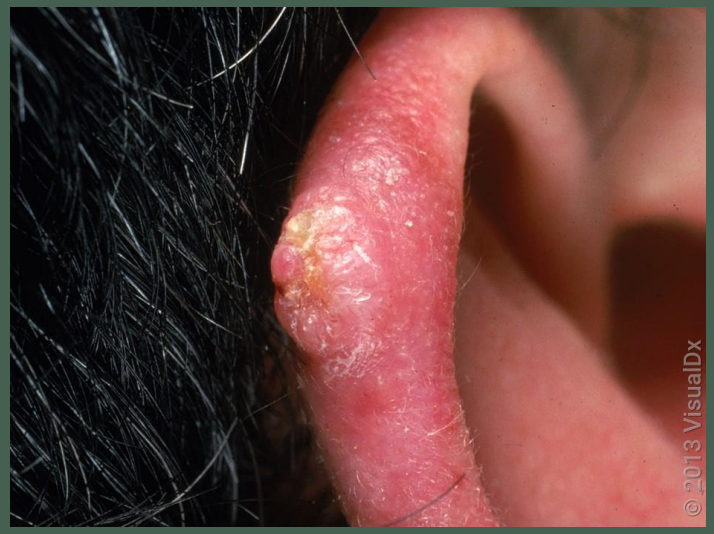
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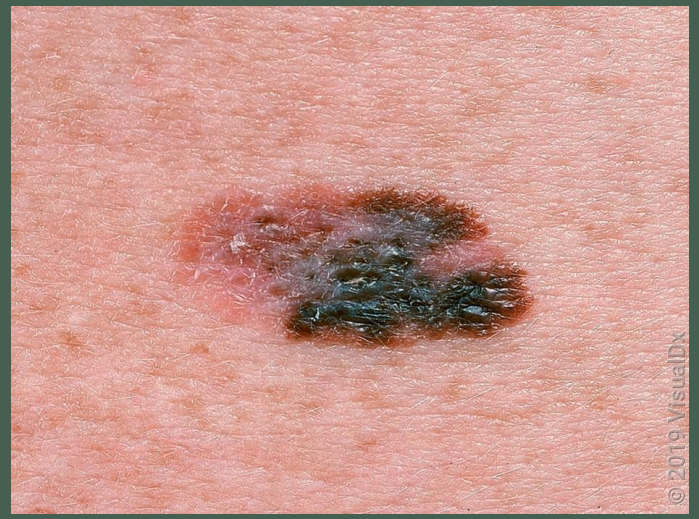
Squamous Cell Carcinoma

- Second most common skin cancer
- Men > Women
- Typically found on sun exposed areas
  - Head, neck, arms, hands,
- Risk factors:
  - Lighter skin, sun exposure, immunosuppression, tobacco use, chronic non-healing wounds
  - Actinic keratoses transform into skin cancer at a rate of ~ 10%
- Metastasis is rare
- Hyperkeratotic, firm papule/nodule; ulceration may be present
  - Color varies from red, pink, skin colored
- Management
  - Excision 4-6 mm margins
  - Mohs micrographic surgery
  - Curettage & Electrodesiccation can be considered for small low risk SCC
- Follow up
  - High risk for other cutaneous malignancies, should have yearly total body skin exams.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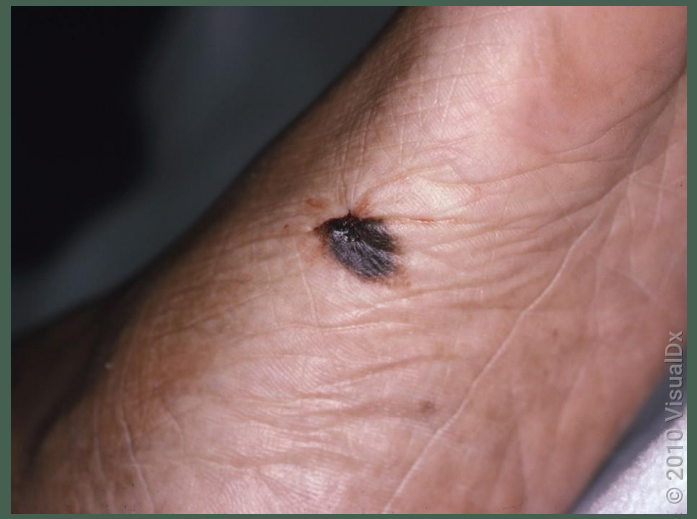
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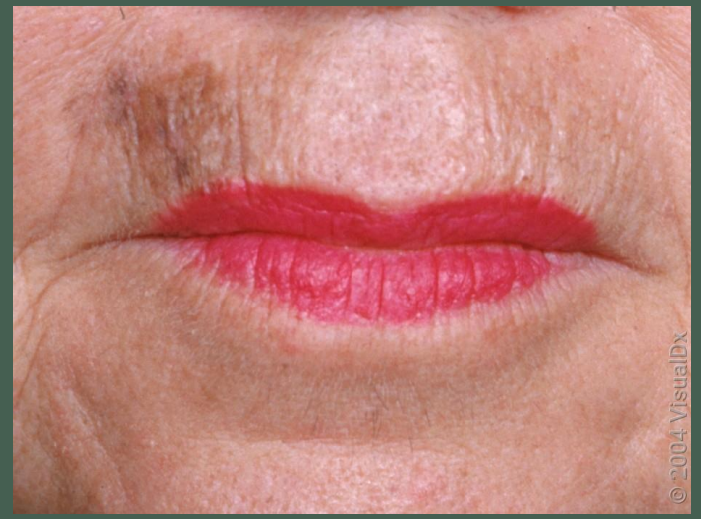
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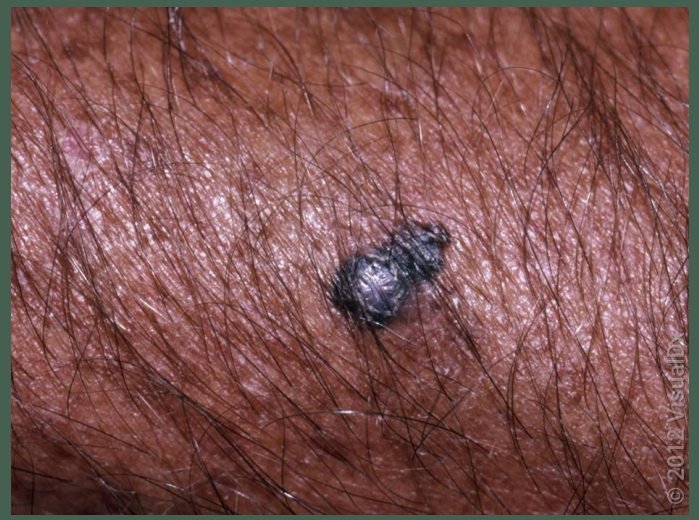
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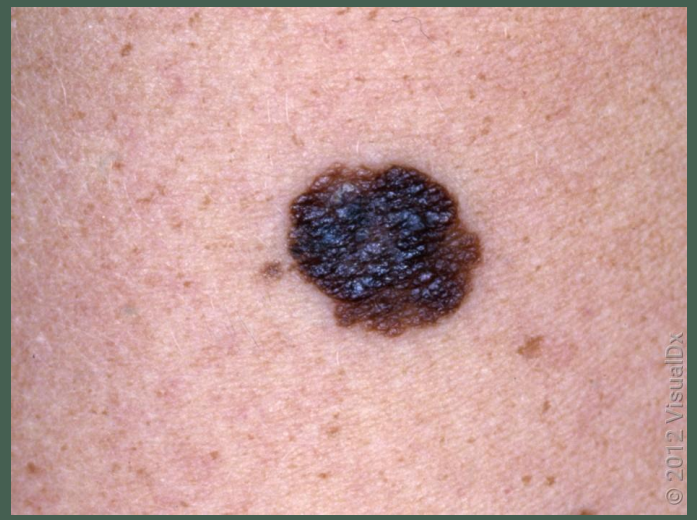
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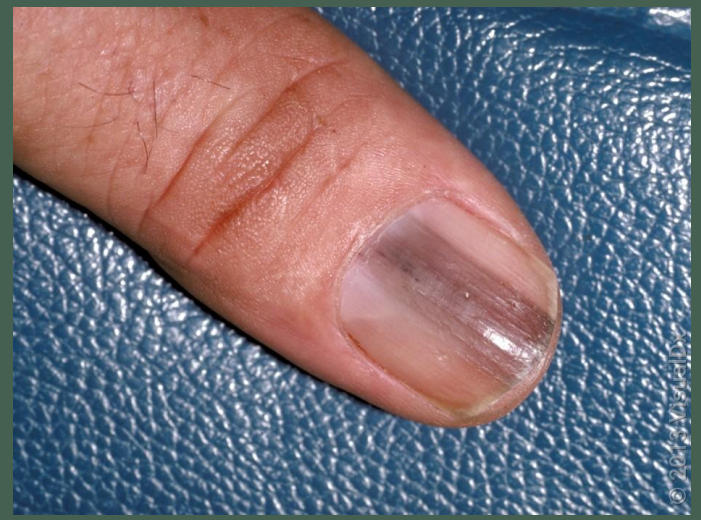
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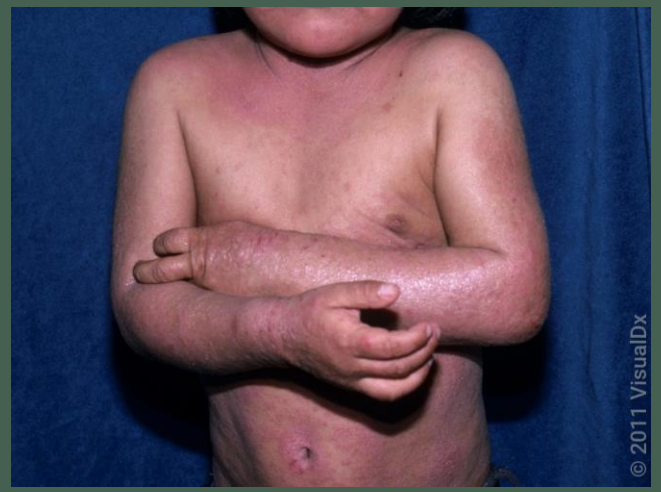
Melanoma

- Aggressive neoplasm of melanocytes
  - Skin, mucous membranes, nails
- Subtypes
  - Superficial spreading, nodular, lentigo maligna, acral lentiginous
- Risk Factors
  - Personal/family history, severe sunburns, changing moles, congenital nevus (>20 cm), multiple atypical nevi
- High risk of metastasis

- Asymmetry of pigmented lesions
- Irregularity of Borders,
- Change of Color
- Large Diameter (>6mm)
- Evolution
- Initial Management
  - Excision
  - Lymph node biopsy may be indicated
- Follow up
  - Serial exams needed given high risk of recurrence

Basal Cell Carcinoma	Squamous Cell Carcinoma	Melanoma
Most Common	Second Most Common	Most Aggressive
Flesh colored, rounded, pearly bump	Red firm bump, patch, or sore that won't heal	ABCDE signs
Head, neck, arms	Ear, face, neck, arms, chest, back	Can develop from a mole or de novo
Metastasis rare	Metastasis rare	High risk of metastasis

NON-CANCER LESIONS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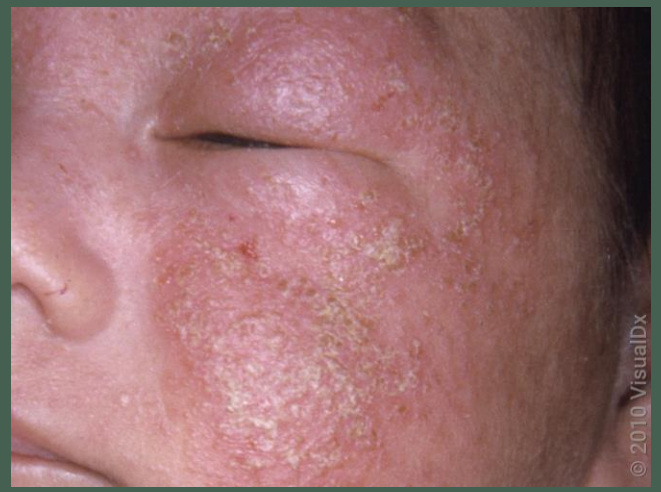
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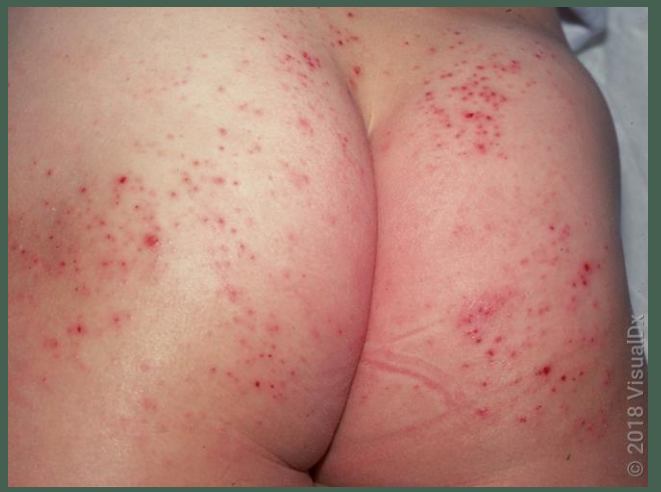
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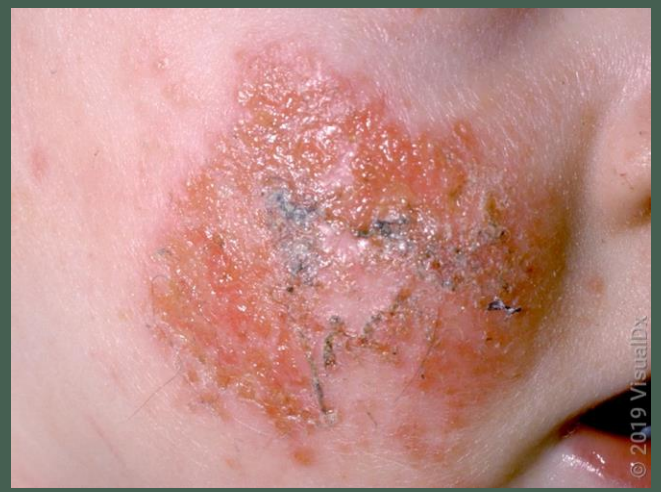
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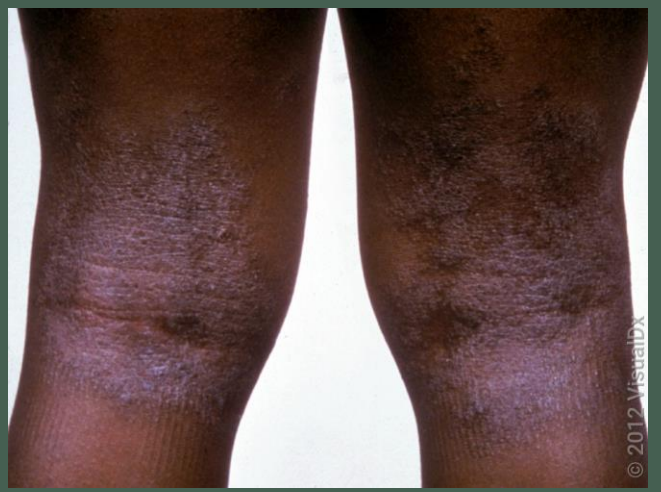
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Atopic Dermatitis (Eczema)

- Etiology: genetic and environmental factors
- Affects 20% of children in USA
- Presentation
  - Chronic, pruritic, erythematous plaques and papules
  - Dry scaly skin
  - Distribution varies
- Treatment
  - Gentle cleansers, emollients, moisturizing creams, topical steroids, oral steroids
  - Wet wraps!

- Acute – erythema, vesicles, bullae, weeping, crusting
- Subacute – scaly plaques, papules, round erosions, crusts
- Chronic eczema – lichenification, scaling, hyper- and hypopigmentation

TABLE 1

Skin Conditions Responsive to Topical Corticosteroid Treatment

High-potency steroids (groups I and II)

- Alopecia areata
- Atopic dermatitis (resistant)
- Bullous pemphigoid
- Discoid lupus
- Dyshidrotic eczema
- Hyperkeratotic eczema
- Labial adhesion
- Lichen planus
- Lichen sclerosus (skin)
- Lichen simplex chronicus
- Melasma
- Nummular eczema
- Poison ivy (severe)
- Psoriasis
- Vitiligo

Medium-potency steroids (groups III, IV, and V)

- Anal inflammation (severe)
- Asteatotic eczema
- Atopic dermatitis
- Dermatitis (severe)
- Infantile acropustulosis
- Intertrigo (severe, short term)
- Lichen sclerosus (vulva)
- Nummular eczema
- Scabies (after scabicide)
- Seborrheic dermatitis
- Stasis dermatitis

Low-potency steroids (groups VI and VII)

- Dermatitis (diaper)
- Dermatitis (eyelids)
- Dermatitis (face)
- Intertrigo
- Perianal inflammation
- Phimosis

Adapted with permission from Ference JD, Last AR. Choosing topical corticosteroids. Am Fam Physician. *2009;79(2):135.*

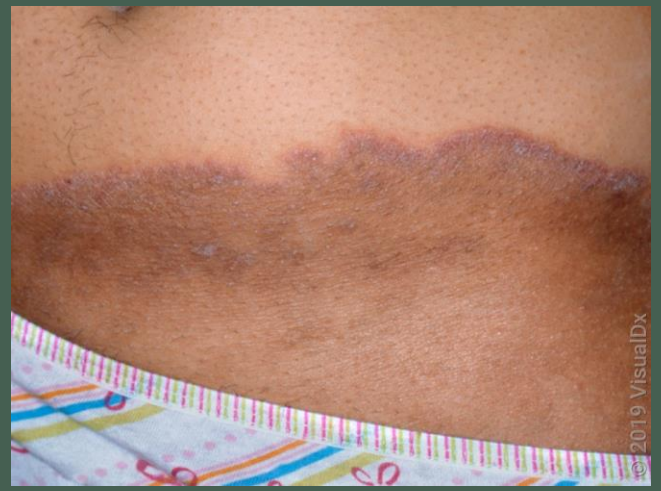
TABLE 2

Potency Ratings of Topical Corticosteroids

Class (potency)	Agent	Formulations	Maximum duration*
I (super high)	Betamethasone dipropionate augmented 0.05%	Ointment, lotion, gel	3 weeks
	Clobetasol propionate 0.05%	Ointment, cream, lotion, gel, foam, solution, shampoo, spray	
	Fluocinonide 0.1%	Cream	
	Flurandrenolide 4 mcg per cm^2	Tape	
	Halobetasol propionate 0.05%	Ointment, cream	
II (high)	Amcinonide 0.1%	Ointment, cream	12 weeks
	Betamethasone dipropionate 0.05%	Ointment	
	Betamethasone dipropionate augmented 0.05%	Cream	
	Desoximetasone 0.25%	Ointment, cream	
	Desoximetasone 0.05%	Gel	
	Diflorasone diacetate 0.05%	Ointment	
	Fluocinonide 0.05%	Ointment, cream, gel, solution	
	Halcinonide 0.1%	Ointment, cream, solution	
III, IV, V (medium)	Amcinonide 0.1%	Lotion	12 weeks
	Betamethasone dipropionate 0.05%	Cream, lotion	
	Betamethasone valerate 0.12%	Foam	
	Betamethasone valerate 0.1%	Ointment, cream, lotion	
	Diflorasone diacetate 0.05%	Cream	
	Fluocinolone acetonide 0.025%	Ointment, cream	
	Flurandrenolide 0.05%	Ointment, cream, lotion	
	Fluticasone propionate 0.05%	Cream, lotion	
	Fluticasone propionate 0.005%	Ointment	
	Hydrocortisone butyrate 0.1%	Ointment, cream, lotion, solution	
	Hydrocortisone valerate 0.2%	Ointment, cream	
	Mometasone furoate 0.1%	Ointment, cream, lotion, solution	
	Triamcinolone acetonide 0.5%	Ointment, cream	
	Triamcinolone acetonide 0.1%	Ointment, cream, lotion	
	Triamcinolone acetonide 0.147 mg per g	Spray	
VI, VII (low)	Alclometasone dipropionate 0.05%	Ointment, cream	No specified limit
	Desonide 0.05%	Ointment, cream, lotion, gel, foam	
	Fluocinolone acetonide 0.01%	Cream, solution, oil	
	Hydrocortisone 1%	Ointment, cream, lotion, spray	
	Hydrocortisone 2.5%	Ointment, cream, lotion, solution	
	Triamcinolone acetonide 0.025%	Ointment, cream, lotion	

*—According to expert guidelines, shorter durations should be used in children, for thin skin such as the face, or in occluded areas such as the groin and skinfolds.

Information from references 1 and 17-19.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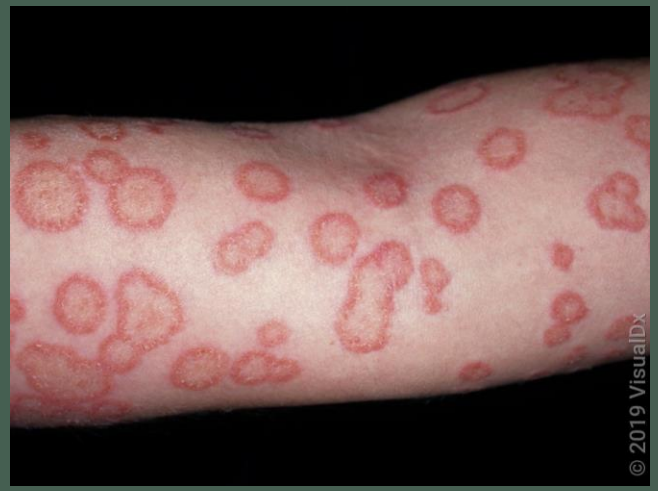
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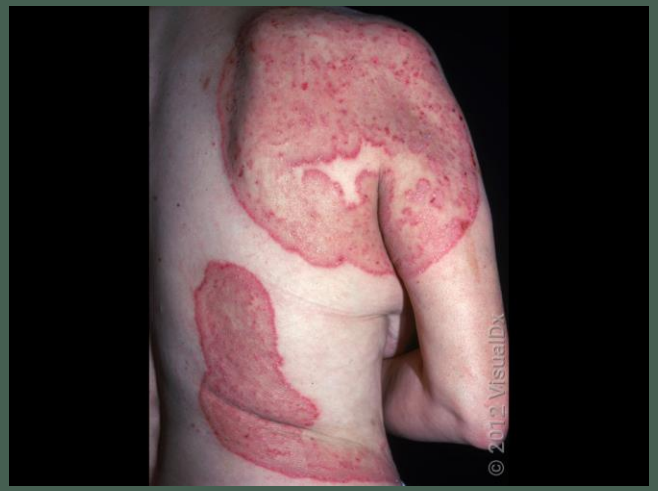
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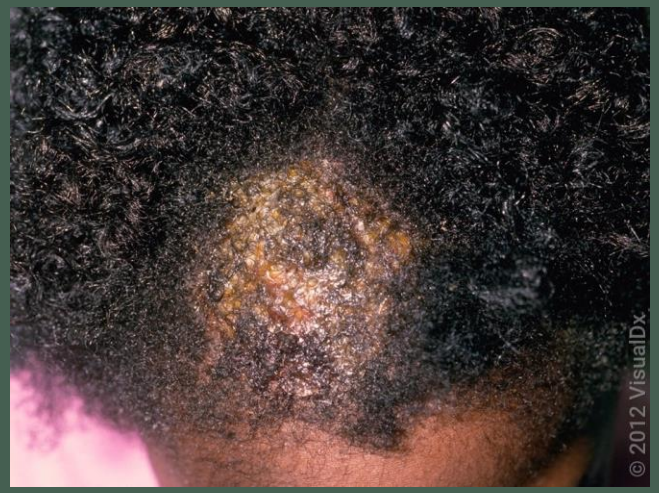
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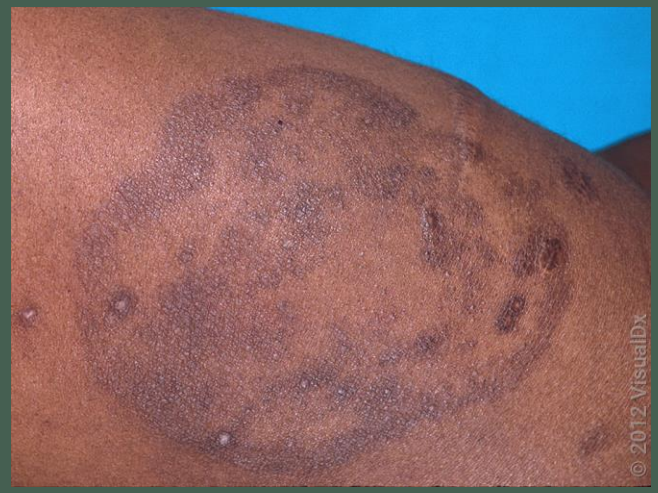
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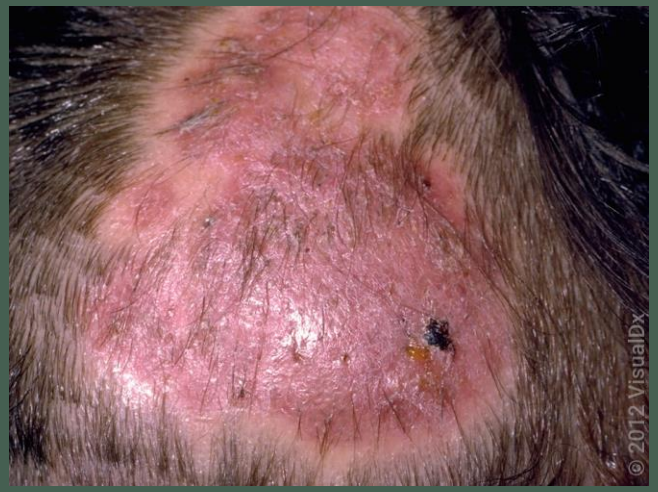
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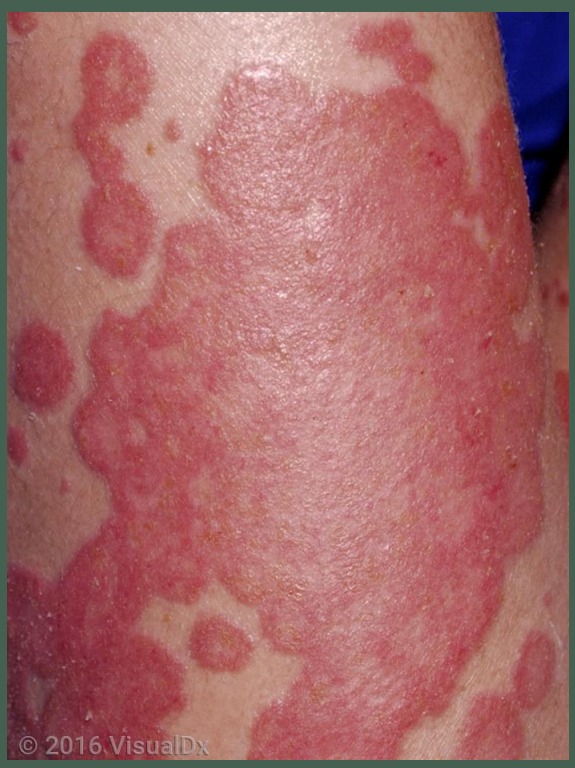
Tinea Infections

- Etiology: several different fungal species
- Presentation
  - Erythematous scaly patch or plaque with raised border and central clearing
- Diagnosis
  - Clinical but can confirm with KOH microscopy, periodic acid-Schiff staining, or fungal culture

- Treatment:
  - Topical Antifungals
    - **Nystatin only treats Candida**! Pick topical agent that has antidermatophyte activity; i.e. Clotrimazole, Miconazole, Terbinafine.
  - Oral Antifungals if resistant to topical or large area affected
  - Avoid use of topical steroids to reduce risk of topical corticosteroid induced atrophy
  - If treatment fails
    - Ensure completion of treatment
    - Consider biopsy to ensure correct diagnosis
    - Consider antifungal resistance and obtain susceptibility testing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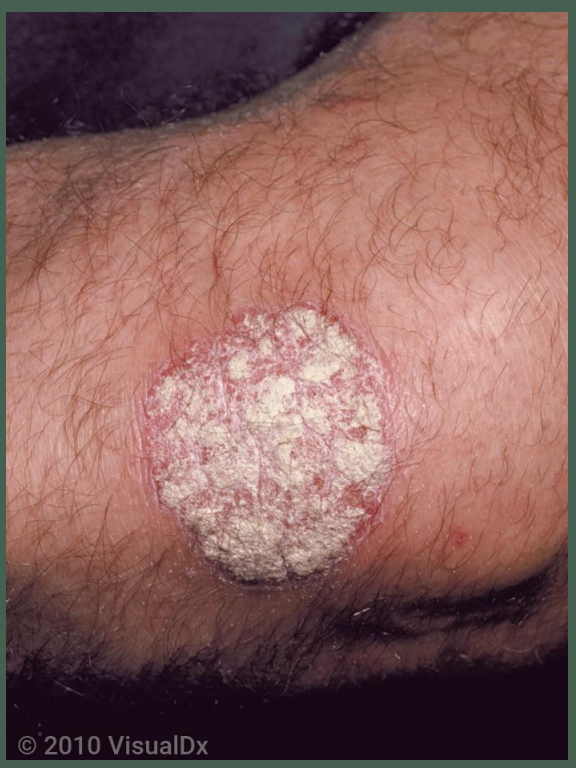
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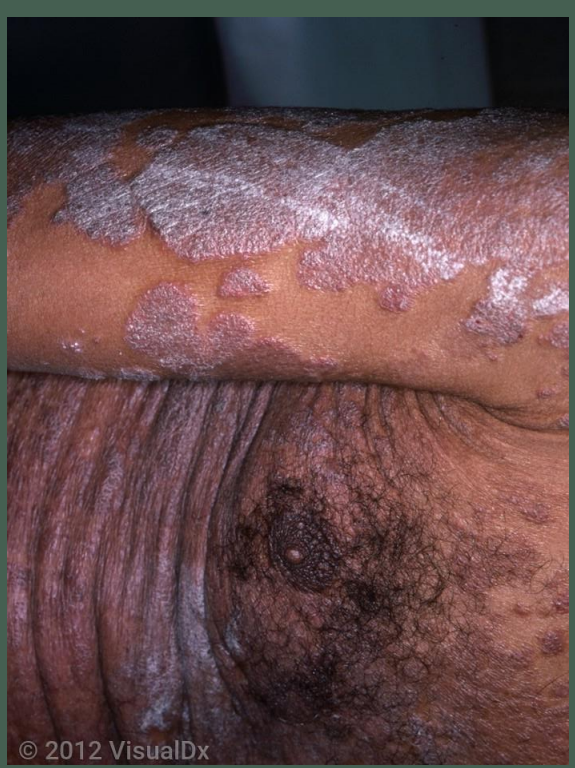
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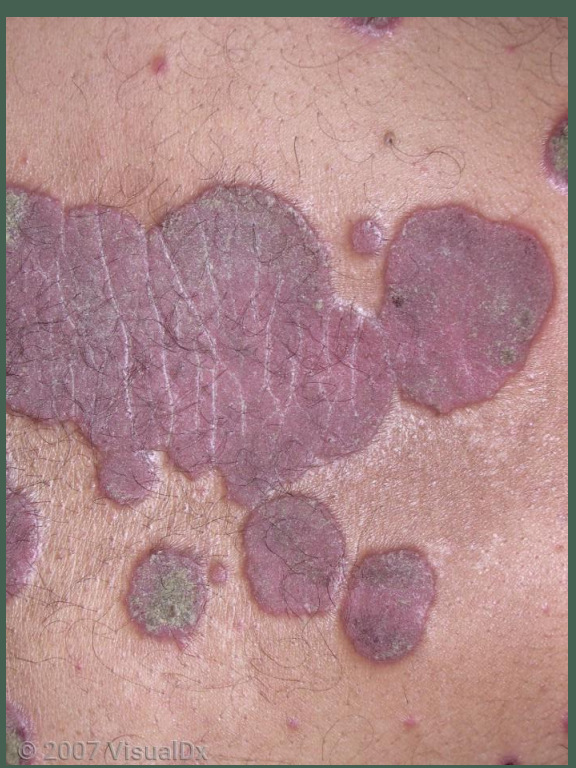
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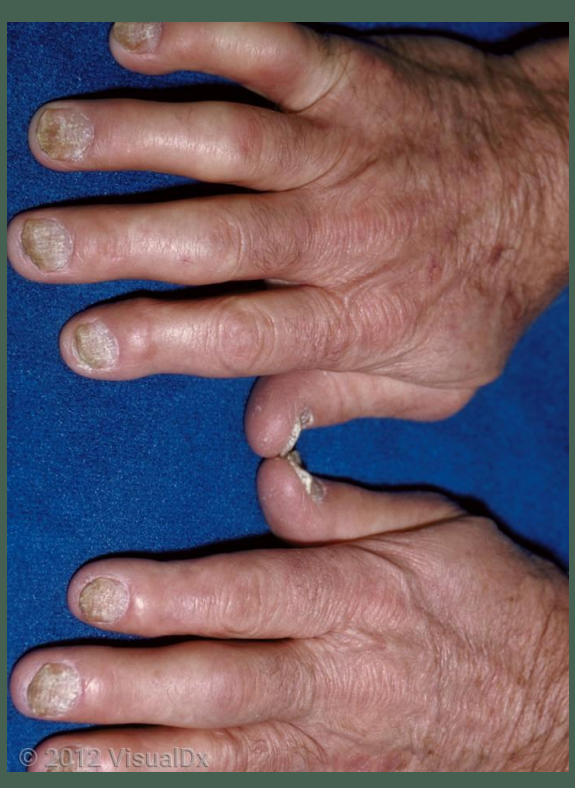
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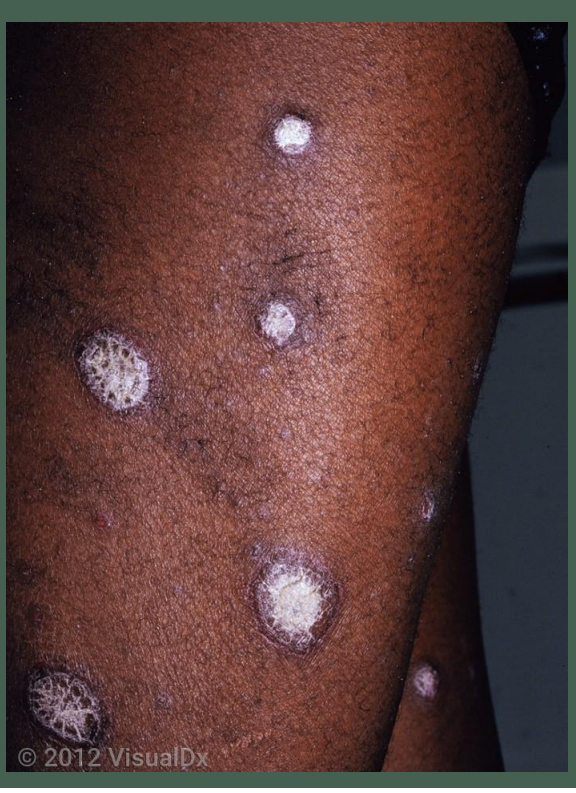
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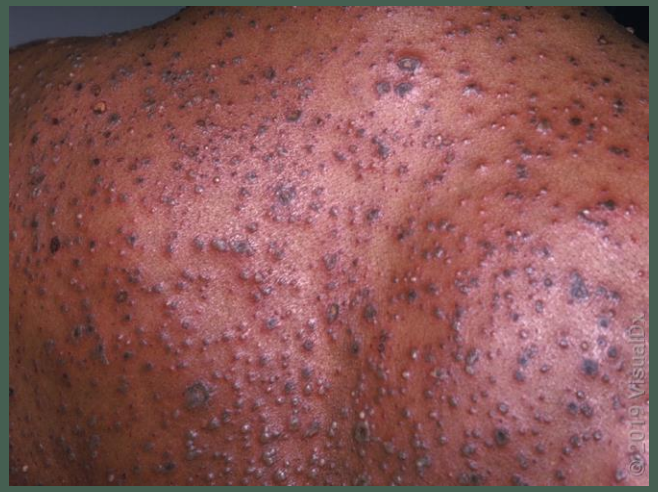
Psoriasis

- Etiology: genetic and environmental factors
- Chronic, relapsing inflammatory disease
- Presentation
  - well-demarcated, pruritic, erythematous plaques with sliver scale; most commonly on scalp elbows, knees; erythema may be subtle and papules may appear more pink/purple on skin of color
- Clinical diagnosis, can confirm with biopsy

- Treatment:
  - Topical Corticosteroids (high or mid potency)
  - Vitamin D analogs – Calcipotriene cream
  - Topical Retinoid – Tazarotene 0.1% gel
  - Topical PDE4 inhibitor – Roflumilast 0.3% cream
  - Ultraviolet Light therapy
  - Systemic therapy → Methotrexate, Mycophenolate mofetil, Cyclosporine, Biologic therapy
- Referral to Dermatology for refractory or atypical cases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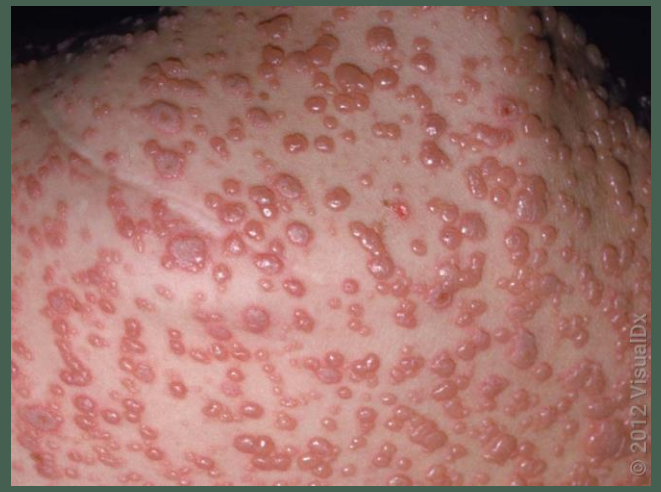
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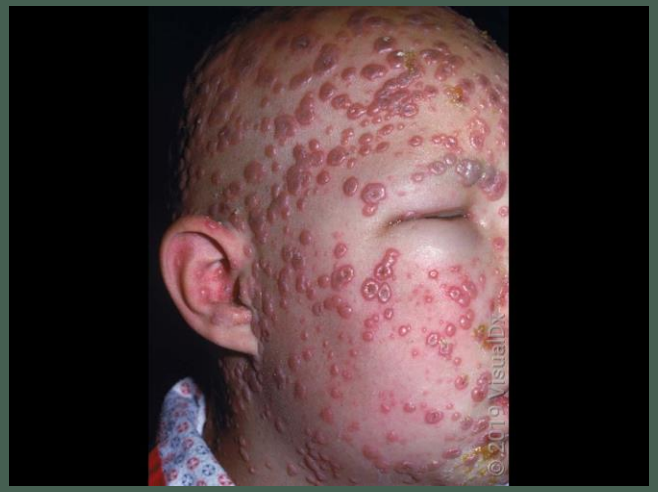
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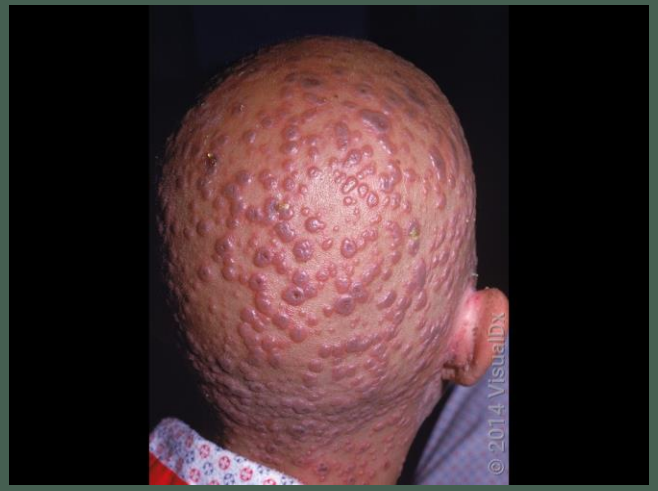
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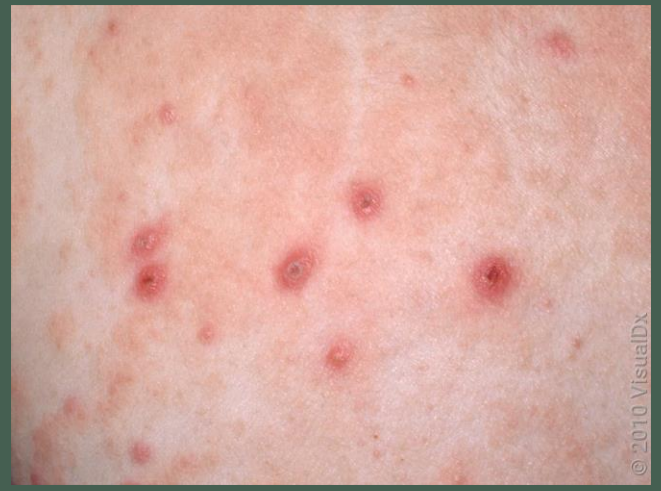
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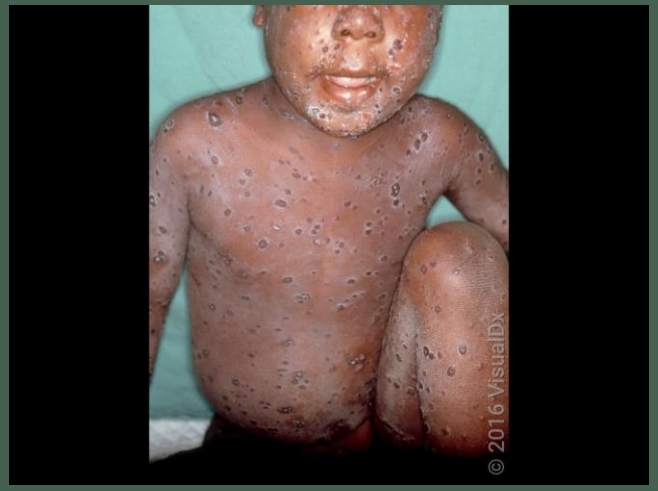
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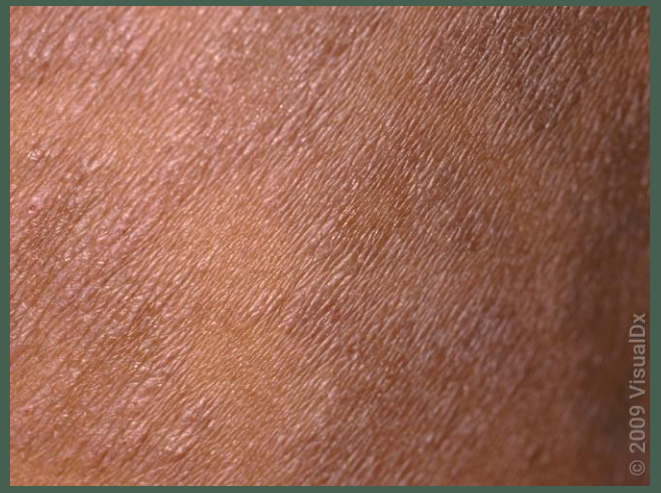
Varicella (Chickenpox)

- Etiology: Varicella-zoster virus (VZV)
- Spread via respiratory droplets and direct contact
- Incubation period of 2-3 weeks, 1-3 day prodrome of fever and malaise, rash lasts 3-7 days
- Erythematous macules with central papules → vesicles/pustules → crusting
- Contagious period: 2 days before rash until all vesicles are crusted
- Diagnosis typically clinically
  - PCR for VZV
  - Tzanck smear → multinucleate giant cells (cannot differentiate HSV and VZV)
- Treatment is mostly supportive
  - Antihistamines
  - Calamine lotion
  - Analgesics
  - Immune globulin recommend for post exposure prophylaxis for immunocompromised
  - Acyclovir or Valacyclovir for high-risk individuals
- Vaccination
  - Live attenuated vaccine
  - 2 dose series
    - 1st dose 12-15 months
    - 2nd dose 4-6 years
    - 13+ years without immunity: 2 doses 4-8 weeks apart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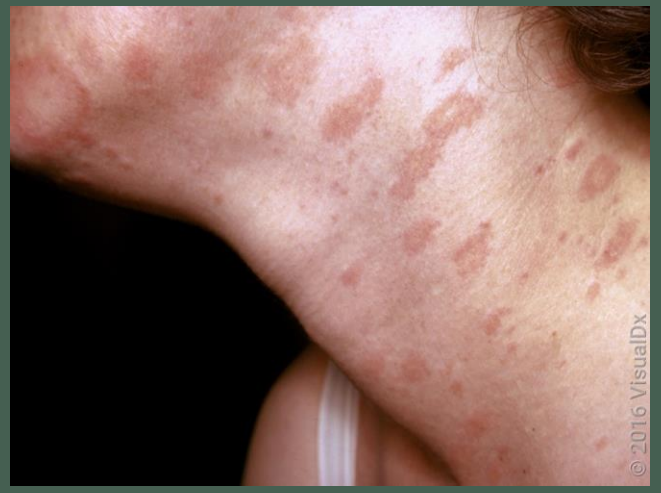
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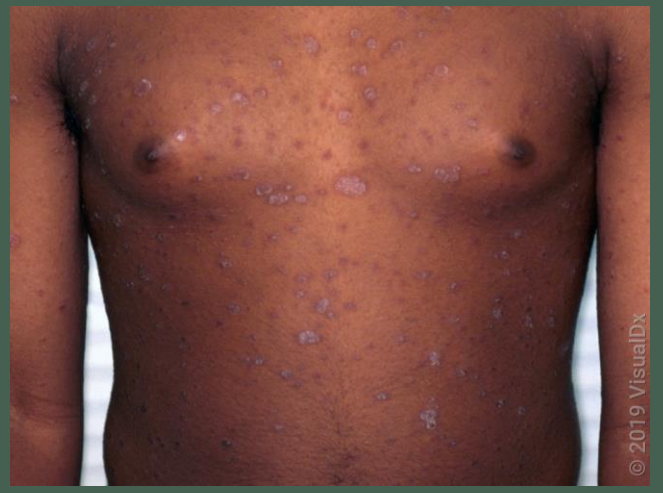
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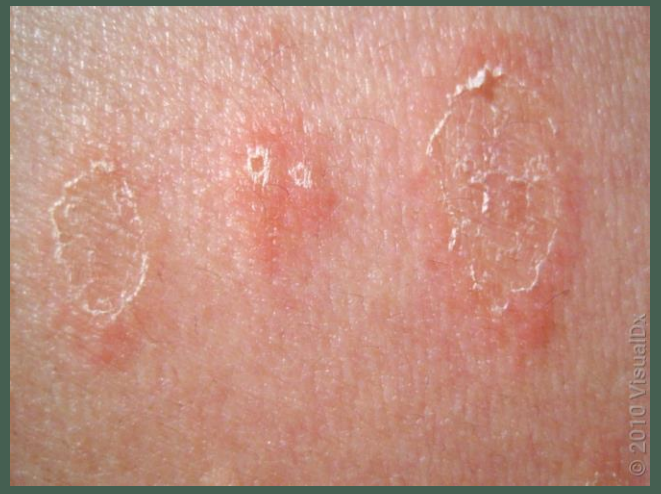
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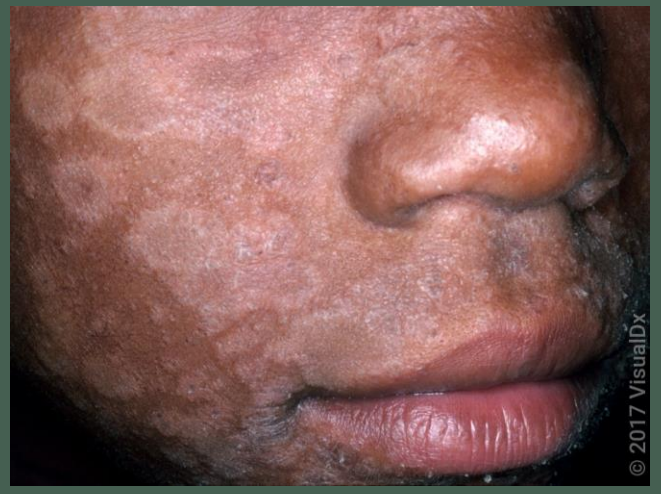
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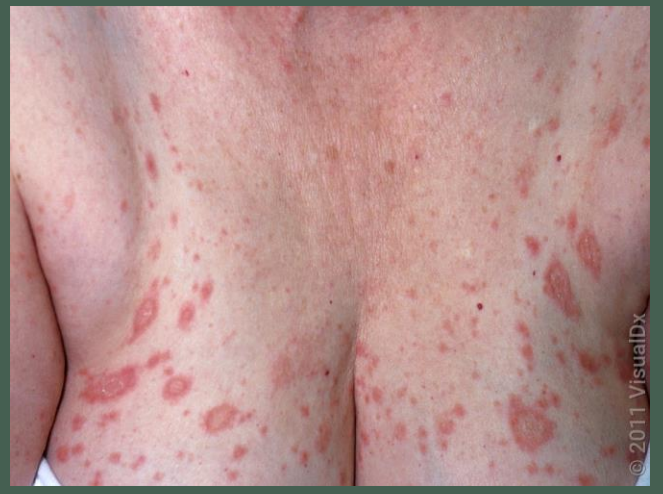
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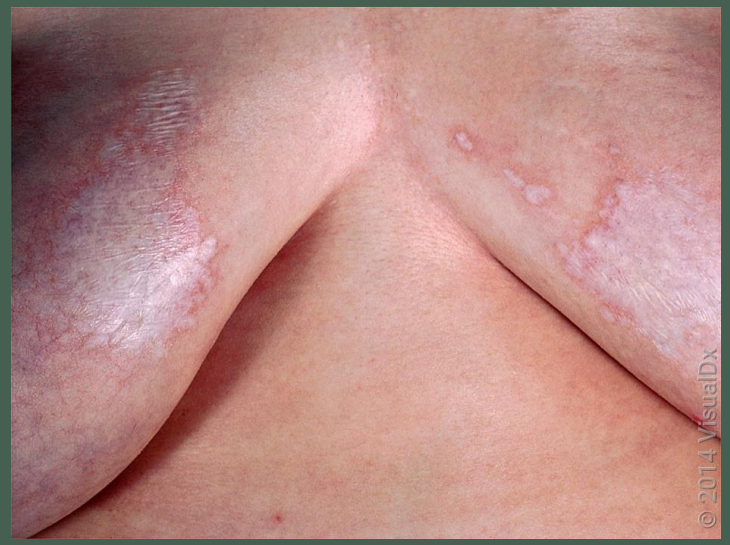
Pityriasis Rosea

- Etiology unknown (maybe associated with HHV6 and HHV7?)
- Typically affects adolescents and young adults
  - If occurs during pregnancy, increased risk of fetal demise and miscarriage
- Herald patch
  - Oval shaped, 2-10 cm patch with peripheral scale
  - Typically appears a few weeks before smaller lesions
  - Often misdiagnosed as tinea
- Rash is bilateral and symmetric
  - "Christmas tree pattern"
  - Discrete oval, erythematous, scaly, plaques and patches on trunk and upper extremities
  - Often spares the face, palms, and soles
- May be associated with mild URI sx and itching
- Duration: 2-12 weeks
- Diagnosis is clinical
- Supportive care, Self-limited
- Drugs that cause Pityriasiform Eruption:
  - Captopril, Clonidine, Omeprazole, NSAIDs, Metronidazole, Terbinafine, Lamotrigine
    - Lesions are usually red-violet in color
    - Often no herald patch
    - May be associated with eosinophilia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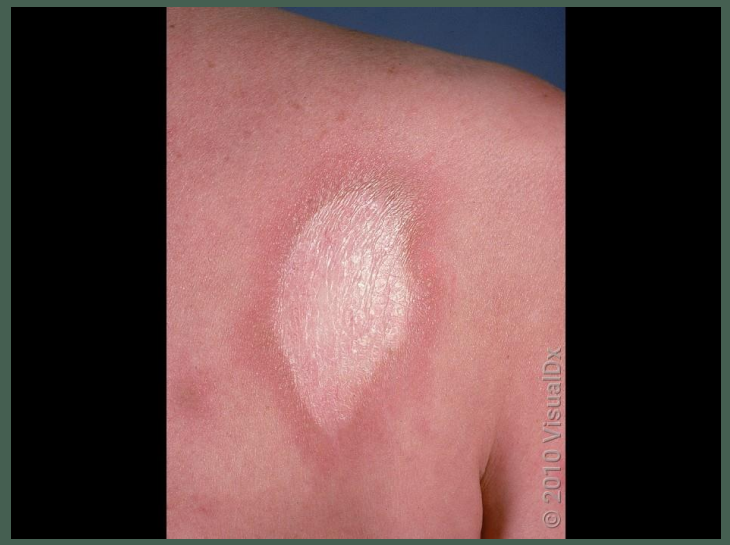
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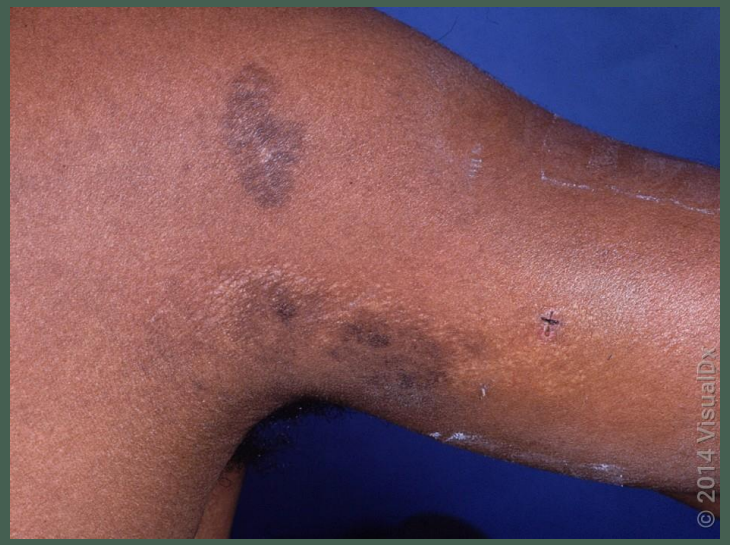
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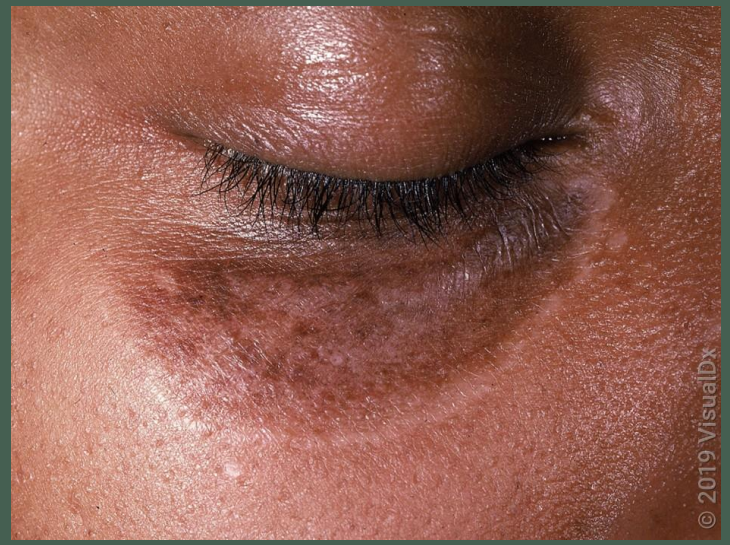
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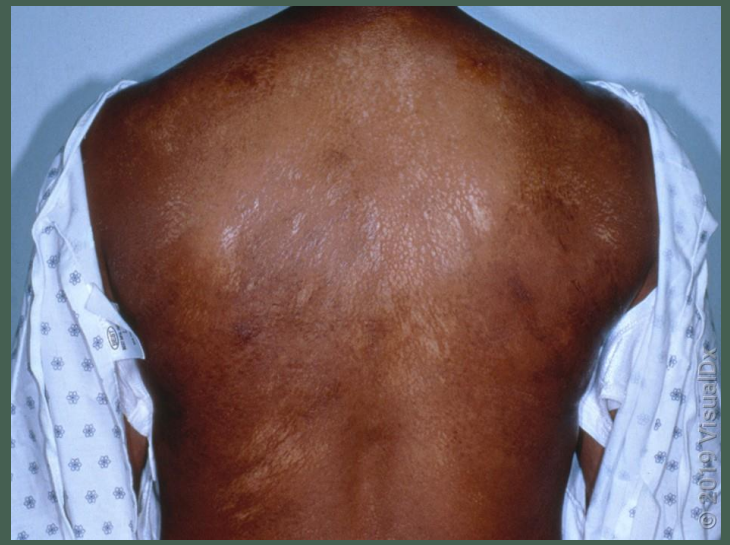
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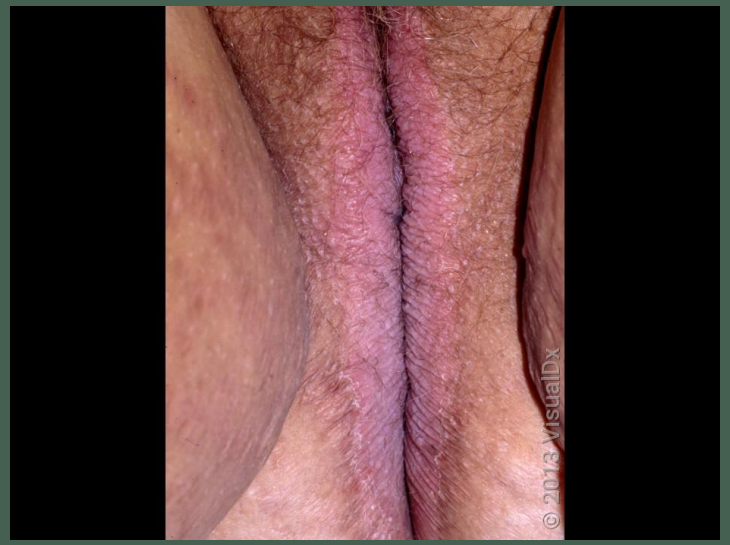
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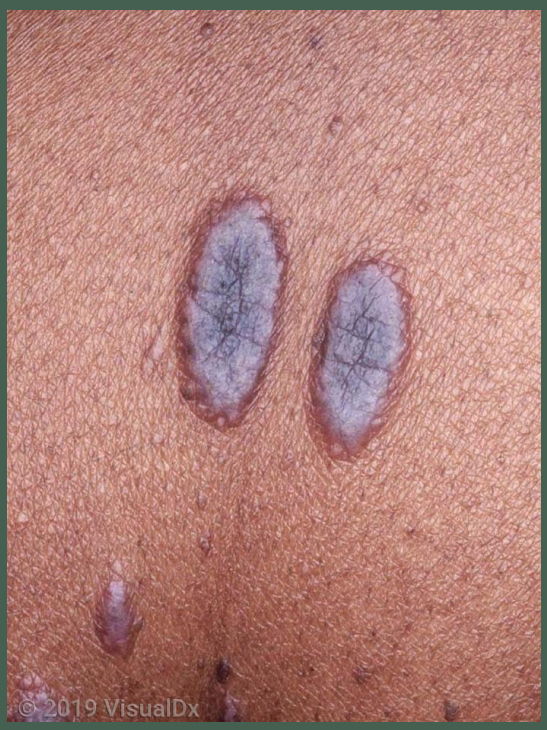
Lichen Sclerosus

- Etiology: likely autoimmune mechanism
- Presentation:
  - Chronic relapsing disease
  - Dry, pruritic, atrophic, white plaques primarily found on anogenital skin with surrounding erythema
  - Can lead labial fusion, erosion, and ulceration if not treated
  - Higher risk of Squamous cell carcinoma if untreated
- Clinical diagnosis, biopsy to confirm/rule out cancer
- Treatment:
  - High Potency topical corticosteroids
    - Clobetasol Propionate 0.05%
    - Ointment > Cream
  - Topical Immunomodulators
  - Avoidance of irritants, gentle skin cleansers and moisturizers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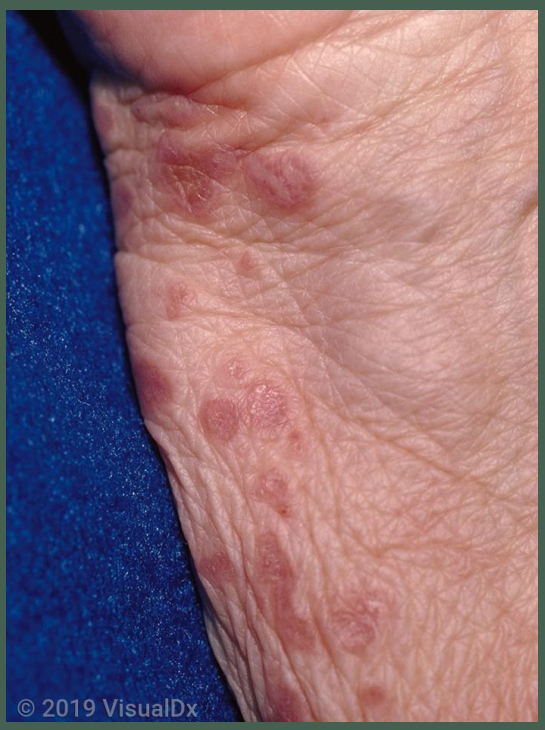
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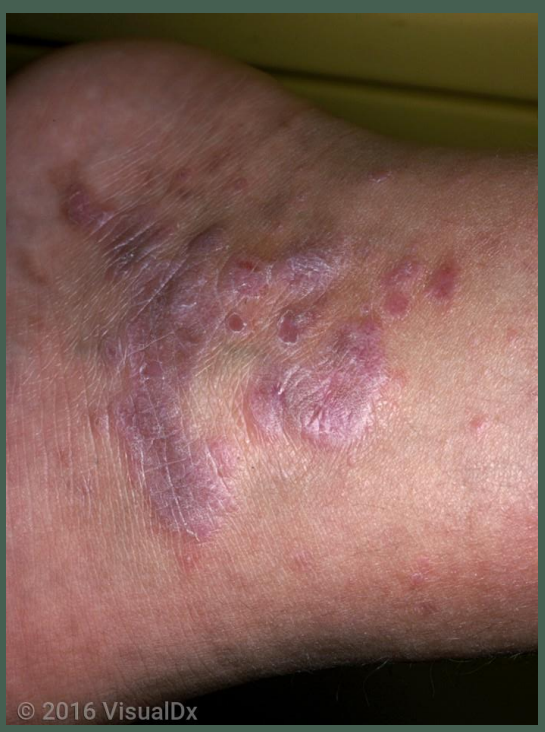
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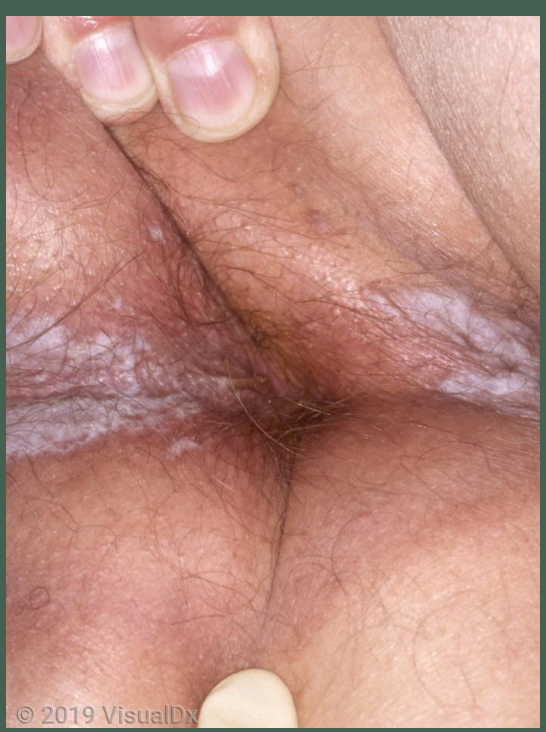
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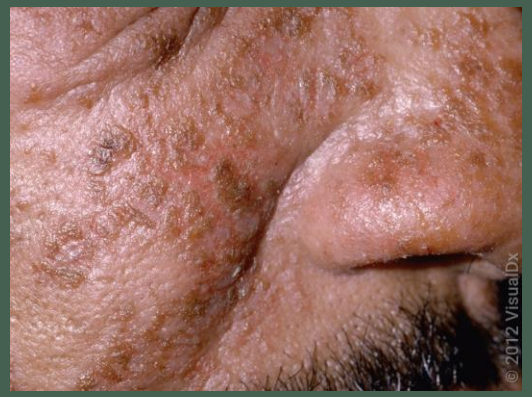
Lichen Planus

- Etiology: multifactorial; autoreactive T lymphocytes attack keratinocytes
- Presentation (6 P's)
  - Purple(pink), Planar, Polygonal, Pruritic, Papules, and Plaques.
  - Typically on the wrists, shins, hands; sometimes on the anogenital skin
- ACE-I, Beta-Blockers, Methyldopa, CCBs, NSAIDs, Thiazide diuretics and several other drugs can cause a similar eruption
- Clinical diagnosis, can biopsy for confirmation
- Treatment
  - Oral antihistamines
  - High or mid potency topical corticosteroids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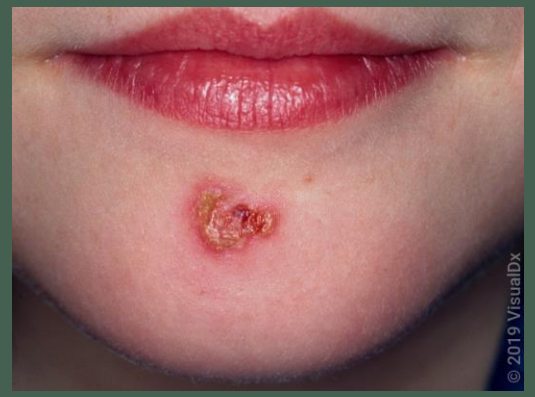
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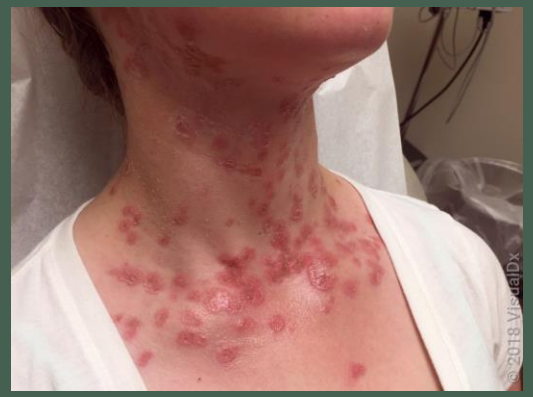
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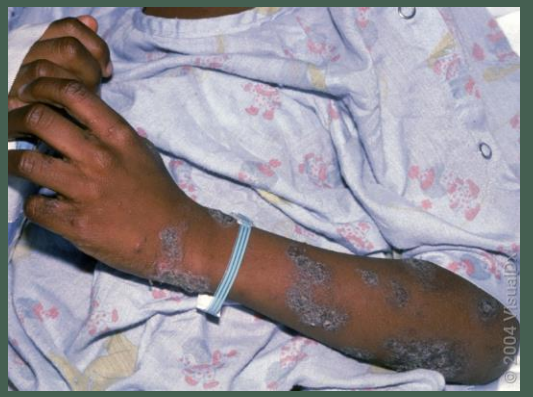
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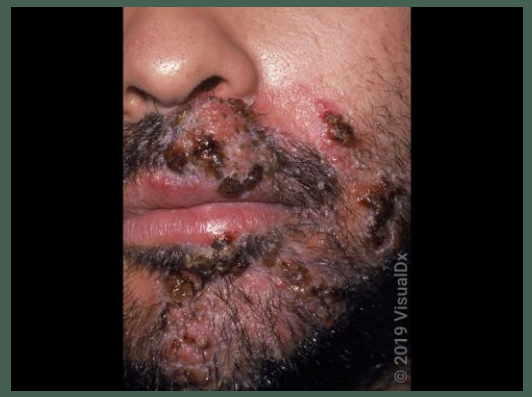
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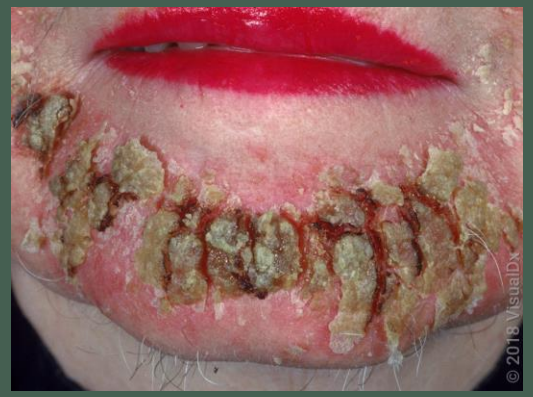
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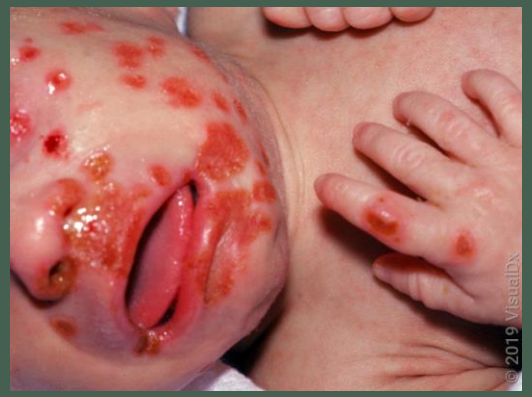
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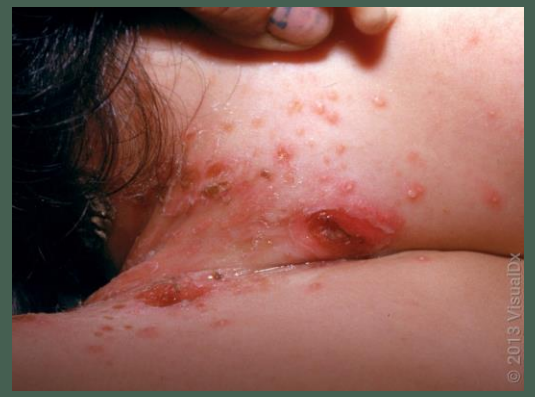
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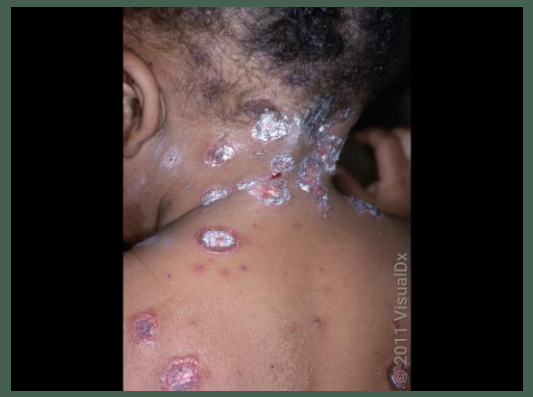
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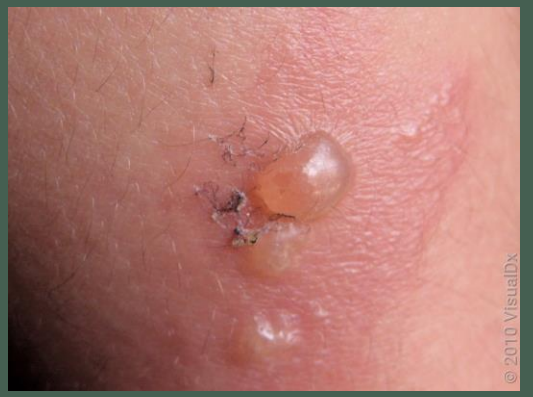
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Impetigo

Bullous

- Etiology: Staph aureus exfoliative toxin
- Typically affects neonates
- Presentation
  - Flaccid bullae → rupture leaving behind crusted erosions
  - Lesions spread quickly, typically face and extremities
- Associated symptoms
  - Fever, URI symptoms
- Spread by direct contact; contagious!
- Self-limited
  - Antibiotics can be used to prevent complications and further spread
    - Progression to staphylococcal scaled skin syndrome is rare
  - Duration 2-6 weeks

Non-Bullous

- Etiology: Strep pyogenes and Staph aureus
- Typically affects school-aged children
- Presentation
  - Vesicles or pustules with a thick yellow crust
  - Look like erosions
- Associated symptoms
  - Mild lymphadenopathy
- Highly contagious
- If high suspicion for MRSA, get cultures and start empiric antibiotics


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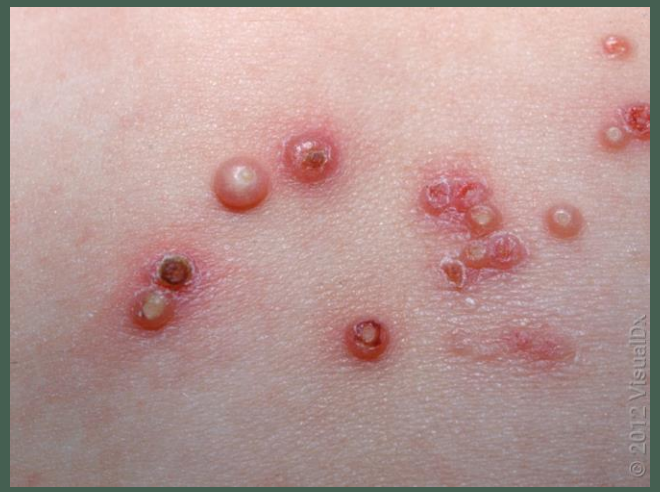
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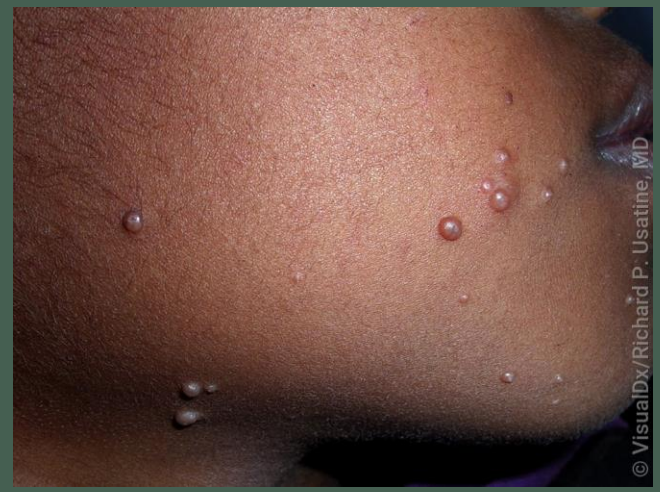
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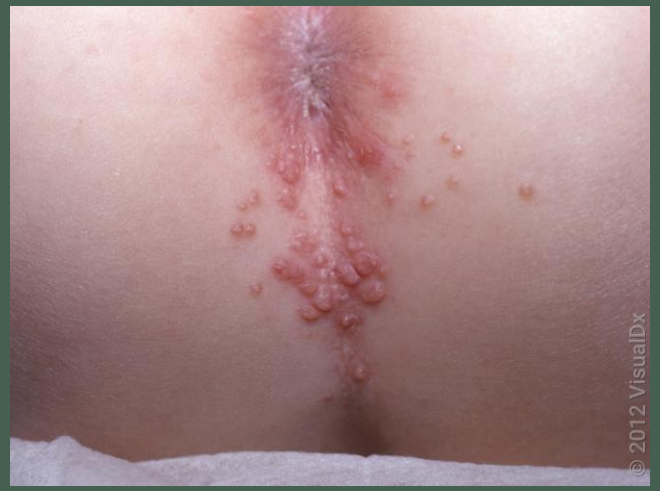
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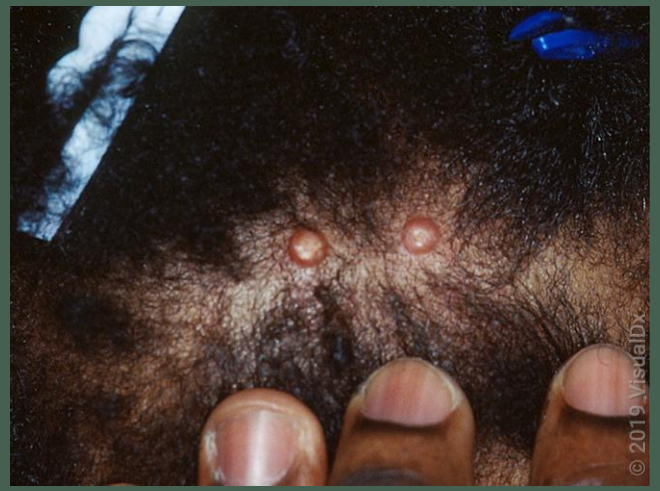
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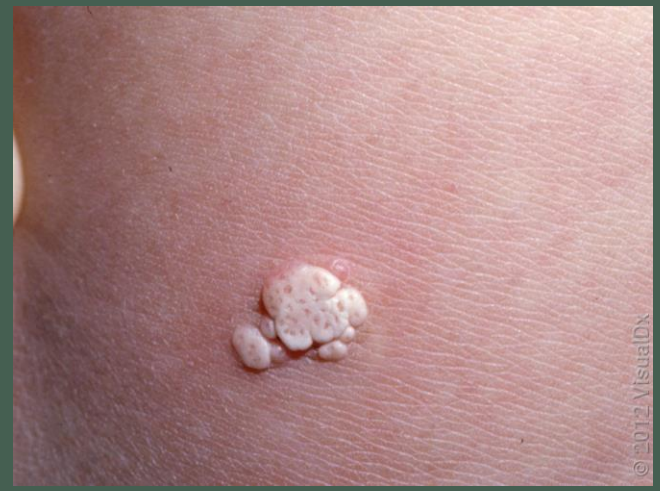
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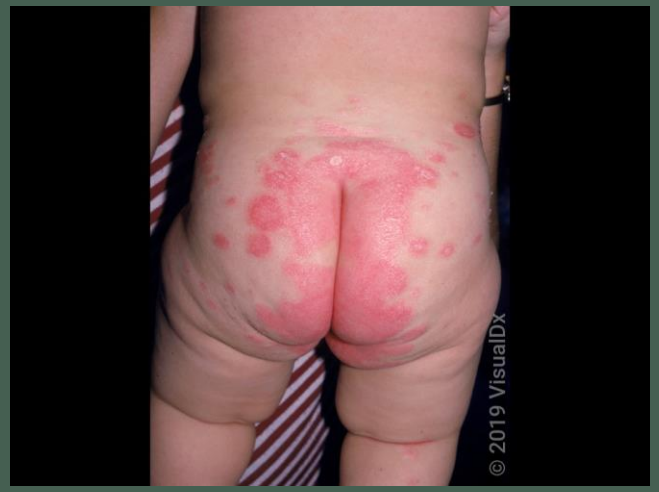
Molluscum Contagiosum

- Etiology: poxvirus
- Highly contagious, transmitted by direct contact
- Typically affects 2-11 year olds
- Presentation
  - Flesh colored lesions, pearly papules with central umbilication
  - Typically spares oral mucosa
  - Lesions may be present in genital region and conjunctiva
  - Can precipitate dermatitis
- Clinical diagnosis
- Self-limited, but duration of lesions months to years
  - For lesions that persistent can consider cryotherapy, Imiquimod, intralesional immunotherapy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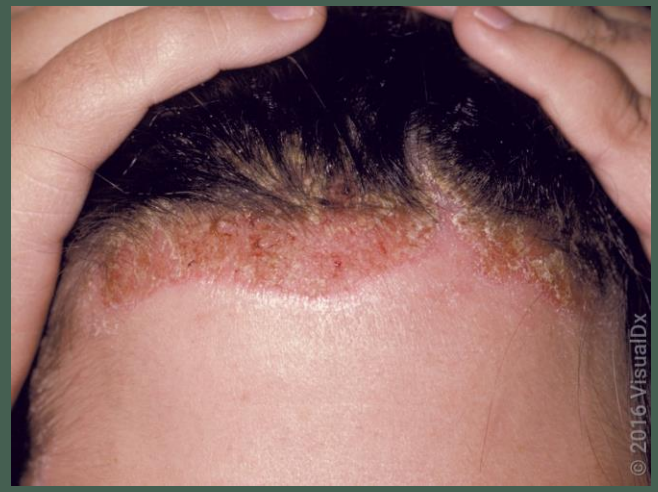
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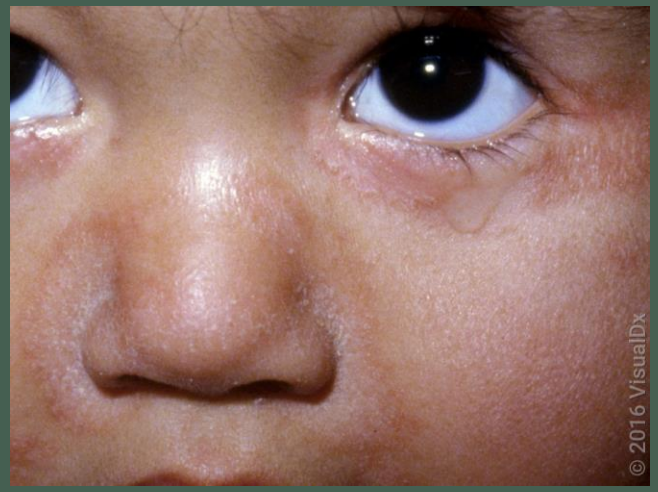
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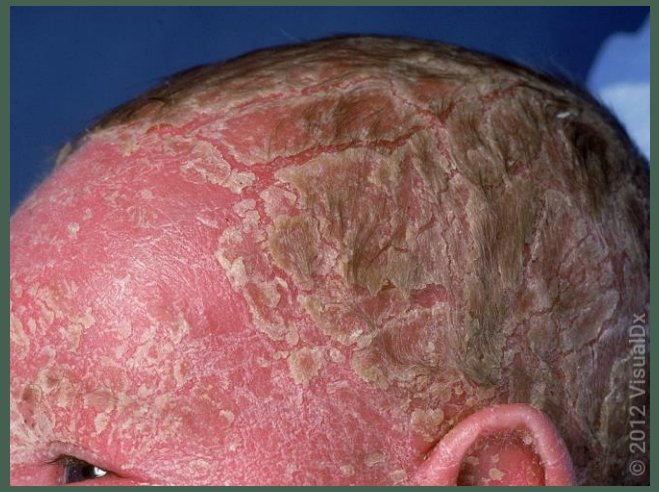
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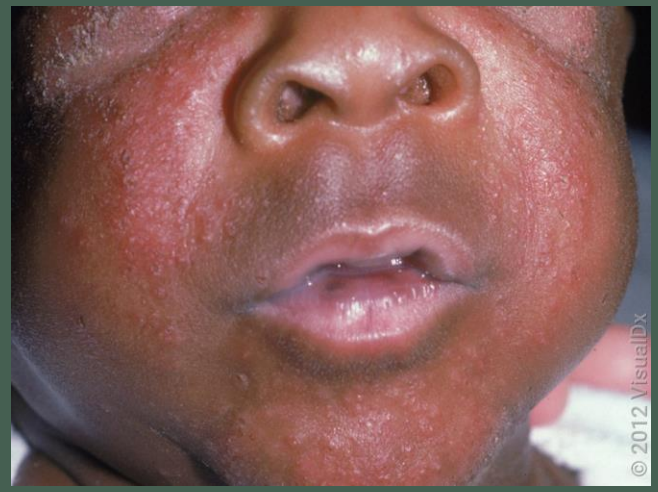
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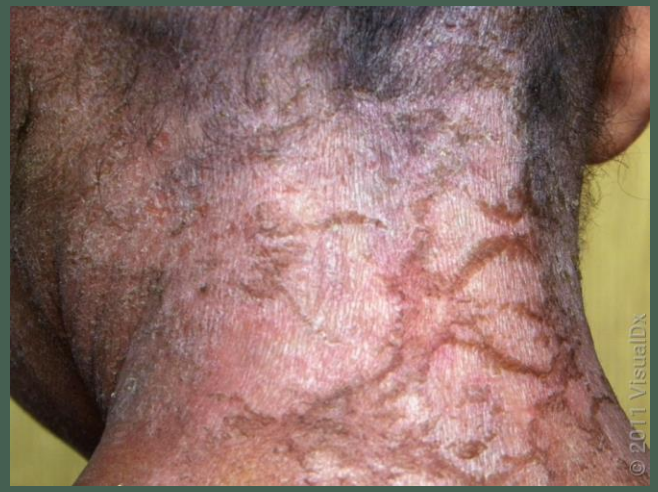
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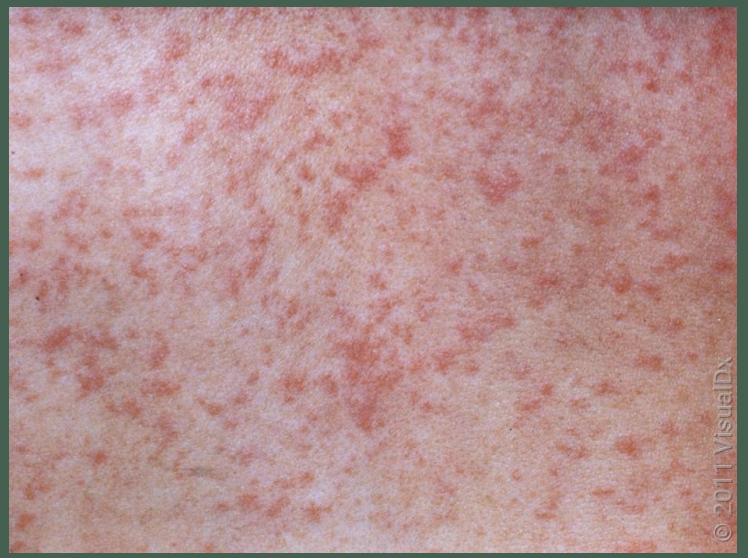
Seborrheic Dermatitis

- Idiopathic inflammatory disease associated with Malassezia furfur
- Macules or plaques with scale on the scalp, nasolabial folds, intertriginous areas, buttocks

- Diagnosis is clinical
- Treatment
  - Shampoos: Ketoconazole, salicylic acid, Selenium sulfide,
  - Topical steroids
  - Topical Imidazole creams
  - For infants use mild shampoos and low potency topical creams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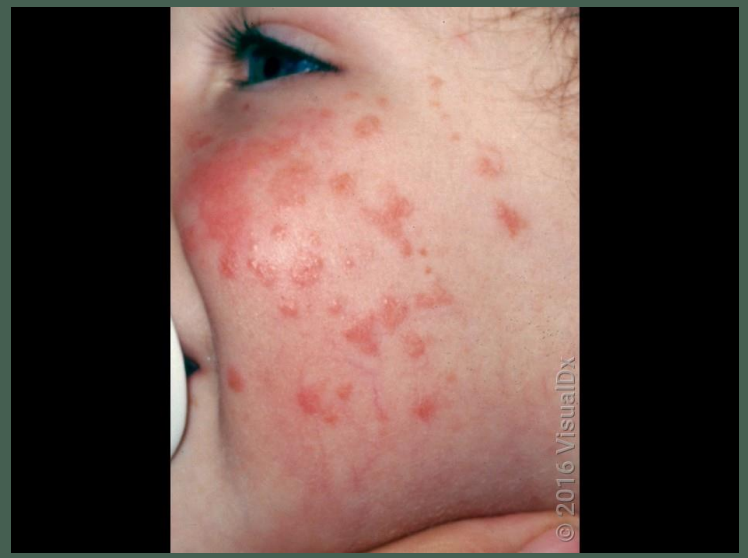
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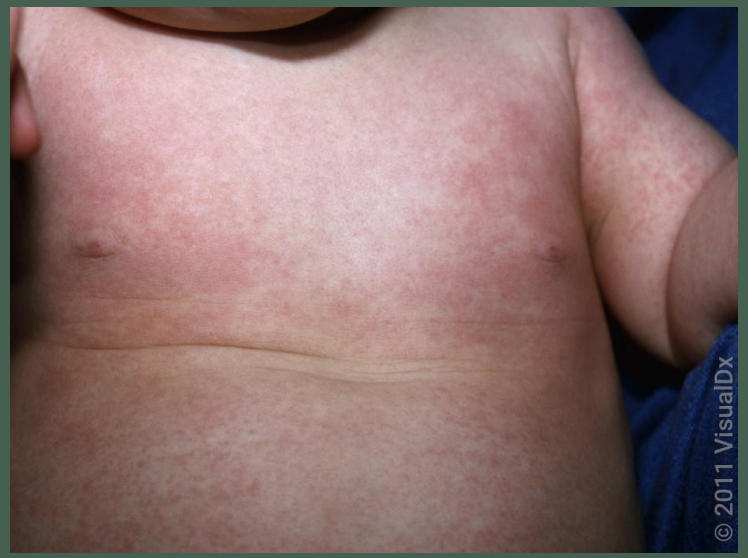
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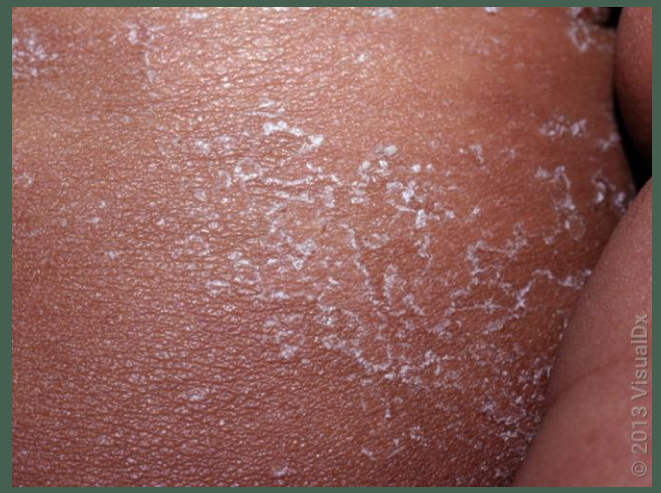
Roseola (Sixth disease)

- Etiology: HHV -6 and HHV-7
- Typically affects children under 3 years old
  - 6 -12 months most common
- High fever for 1-5 days
  - May be associated with mild cough, rhinorrhea, diarrhea
  - Overall typically well-appearing
- After the fever → rash for 1-2 days
  - Erythematous macular/maculopapular rash
  - Trunk → peripheral spread
  - Looks like Rubeola (Measles)
- Clinical Diagnosis
- Self-limited, no treatment required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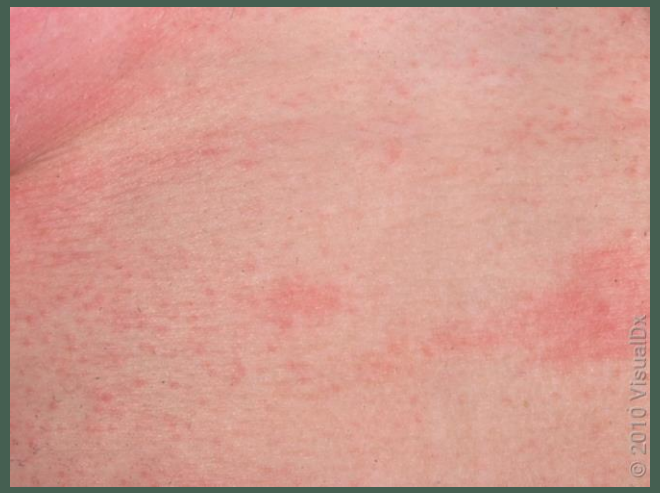
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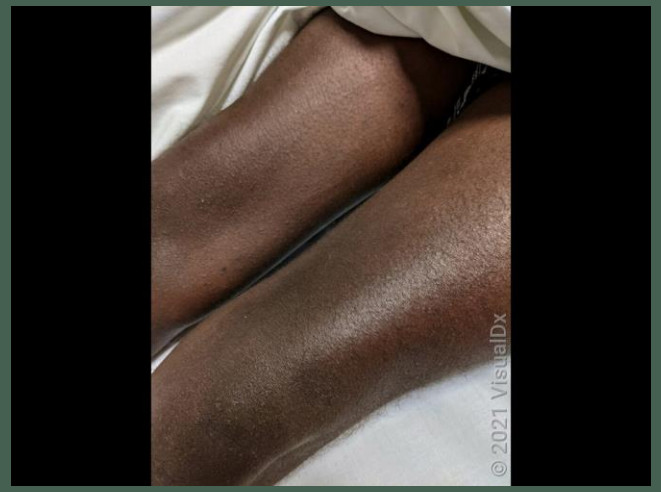
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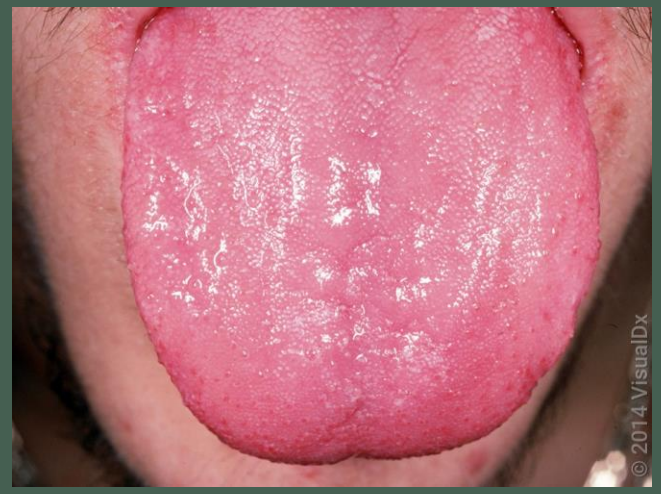
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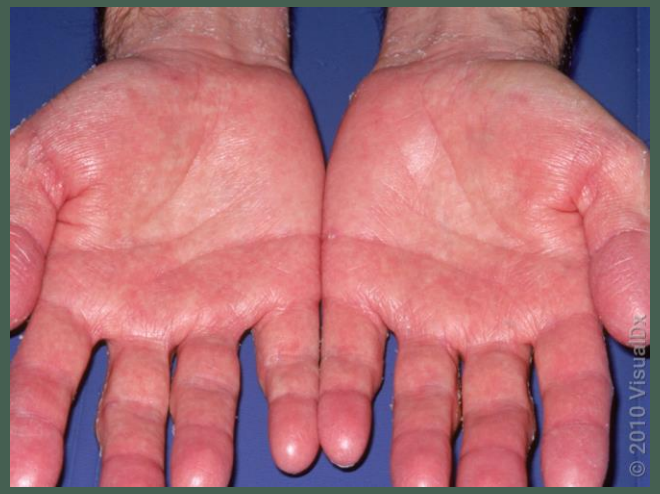
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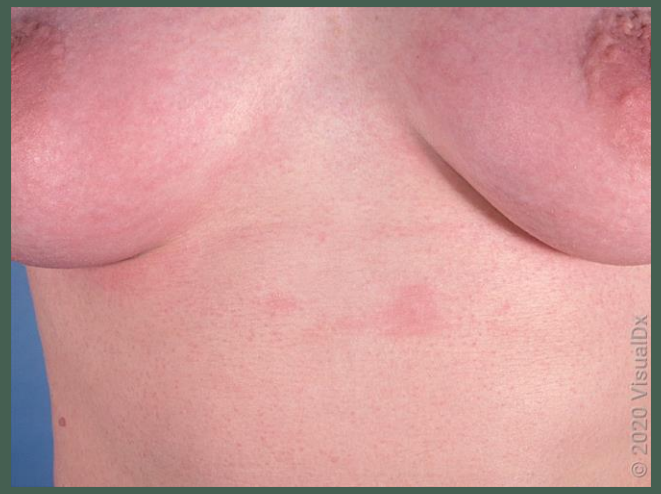
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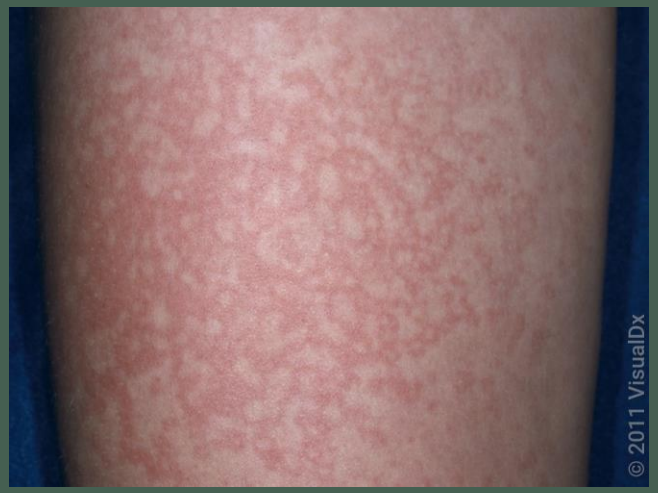
Scarlet Fever

- Etiology: group A beta-hemolytic strep exotoxin
- Presentation
  - Fever and sore throat for 1-2 days → Rash
  - Rash starts on upper trunk spreads through body, often spares palms and soles
  - Erythematous, blanching, fine macules (looks like sunburn and feels like sandpaper)
  - Petechiae on the palate and erythematous swollen papillae on the tongue (strawberry tongue) may be present
- Duration: 4-6 weeks, typically there is a period of desquamation

- Diagnosis
  - Rapid antigen tests have sensitivity of 86%
  - Throat culture has sensitive of 90-95%
- Treatment
  - Penicillin
  - Azithromycin, Erythromycin, Clindamycin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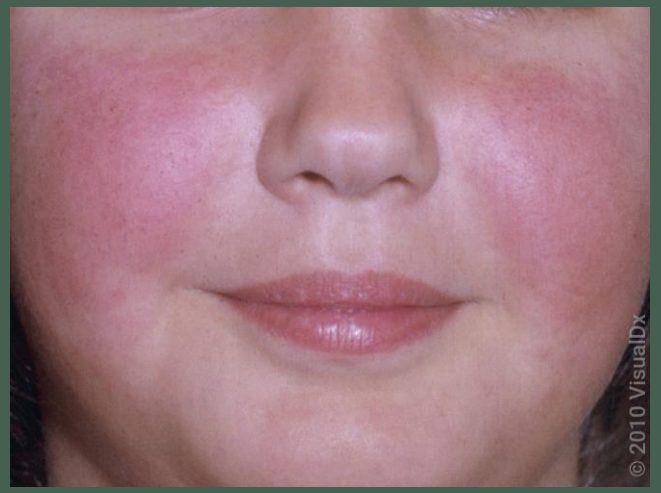
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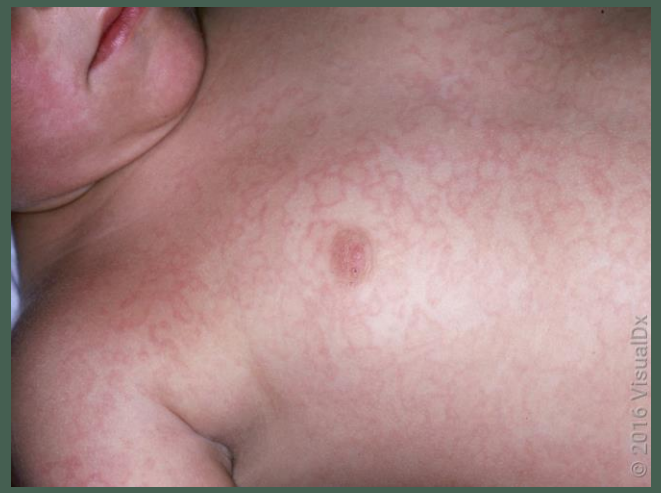
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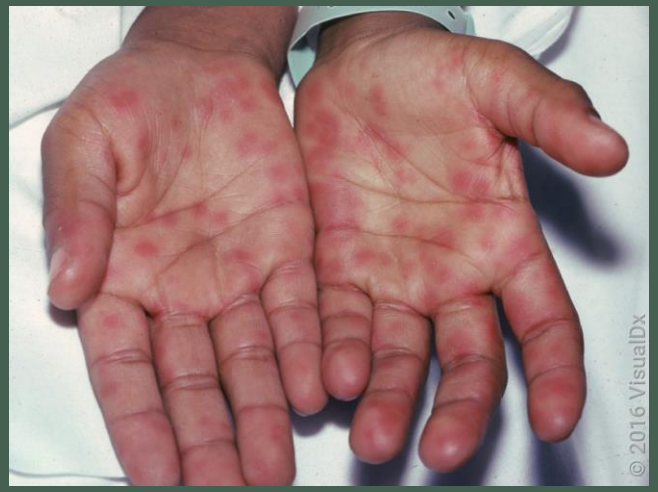
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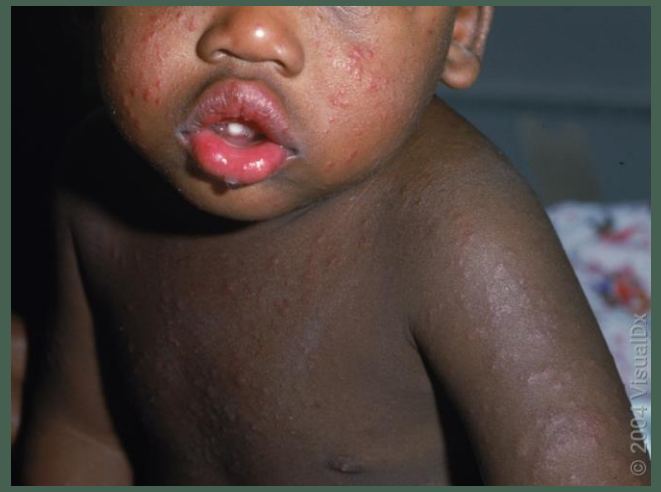
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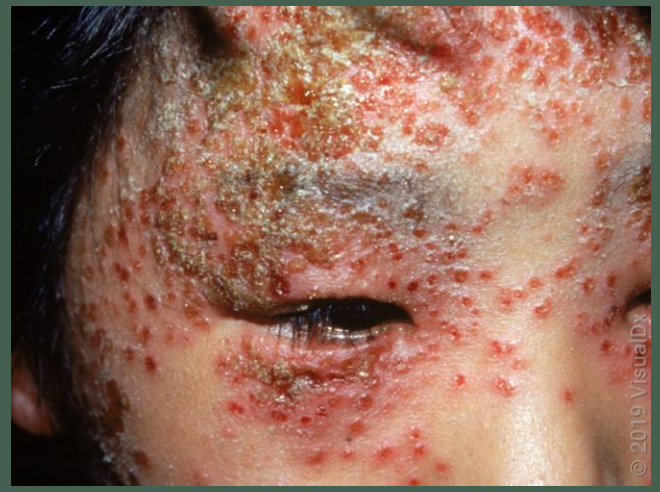
Erythema Infectiosum (Fifth disease)

- Etiology: Parvovirus B19
- Typically seen in young children
- Presentation
  - Low grade fever, sore throat, malaise, nausea → rash
  - "Slapped cheek" facial rash followed by patches and macules on the extremities
  - Reticular/lacy pattern on the trunk
- Duration 1-6 weeks
- Supportive care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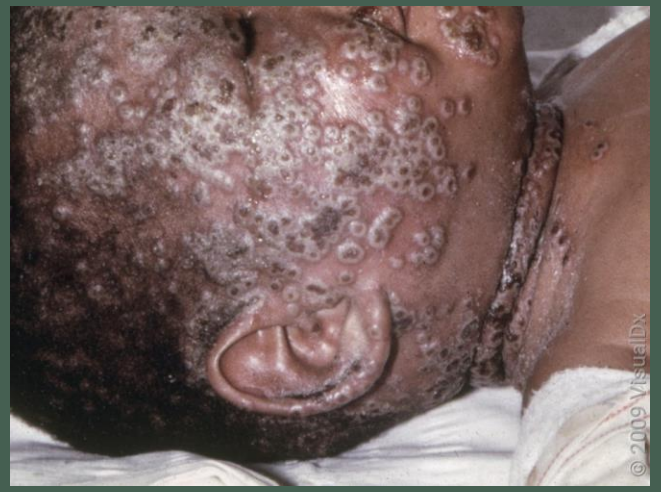
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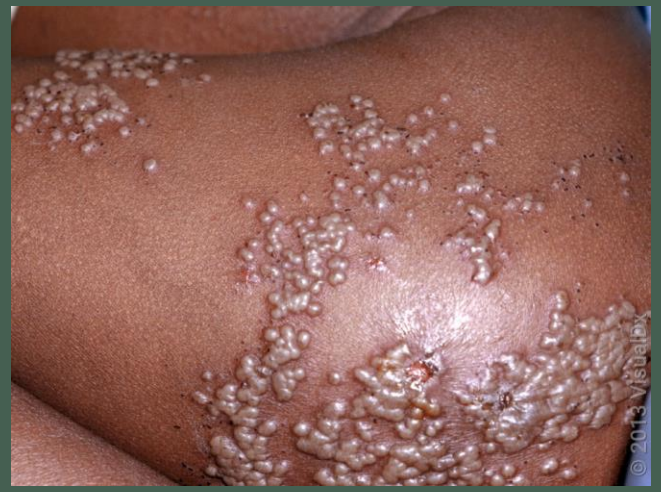
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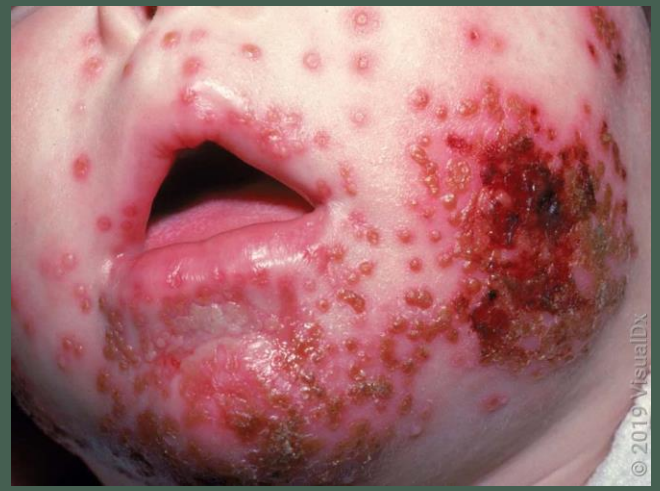
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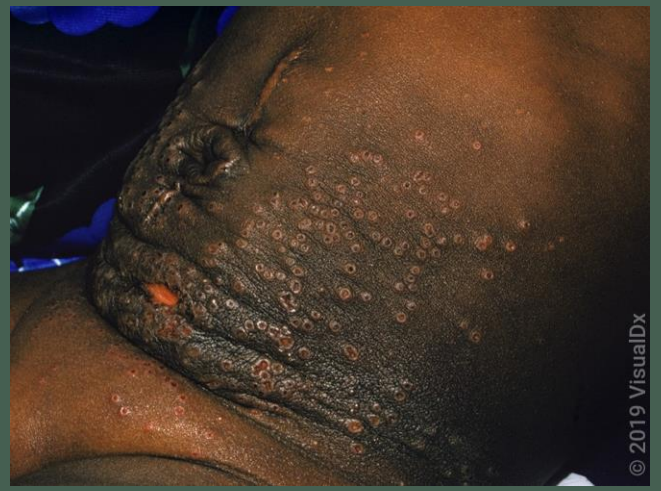
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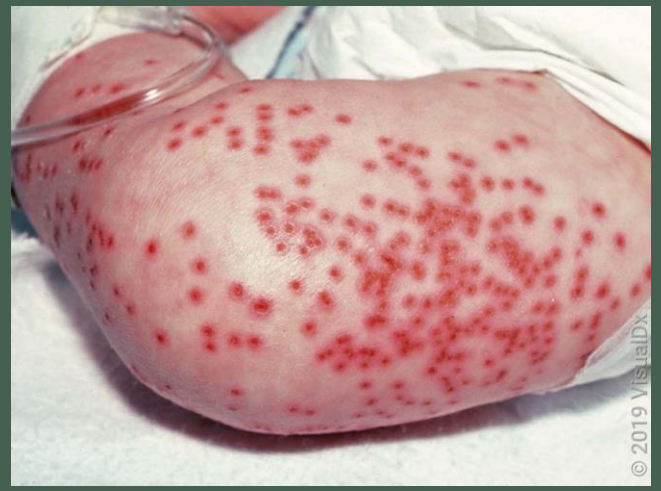
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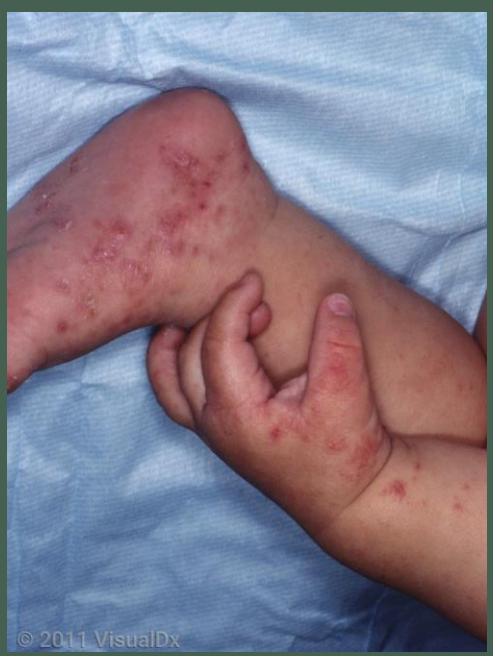
Eczema Herpeticum (Kaposi Varicelliform Eruption)

- Etiology: HSV 1 or 2
- Typically in setting of pre-existing skin disease (i.e. eczema)
- Presentation: vesicles, pustules, and punched-out erosions with hemorrhagic crust
- Risk of superimposed bacterial infection with Staph aureus or Strep pyogenes
- Fever, lymphadenopathy, and malaise may be present
- Medical emergency in neonates, infants, and children
  - Early antiviral treatment
    - Acyclovir preferred
    - Valacyclovir can be used in kids >12 years old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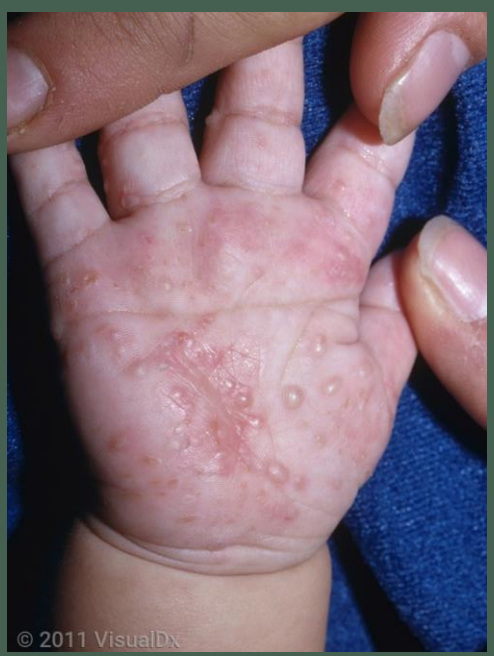
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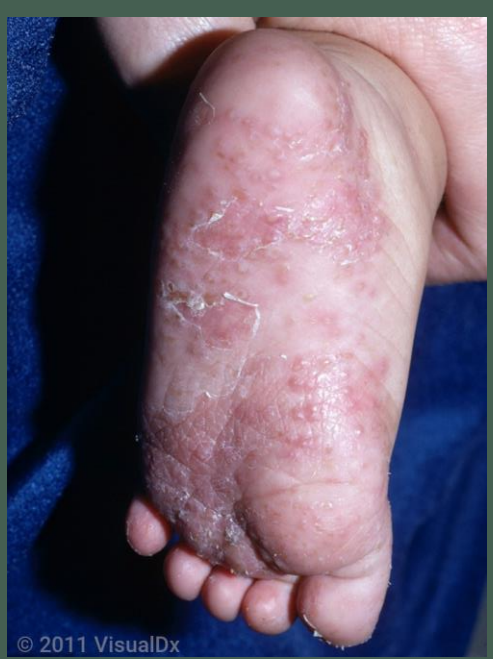
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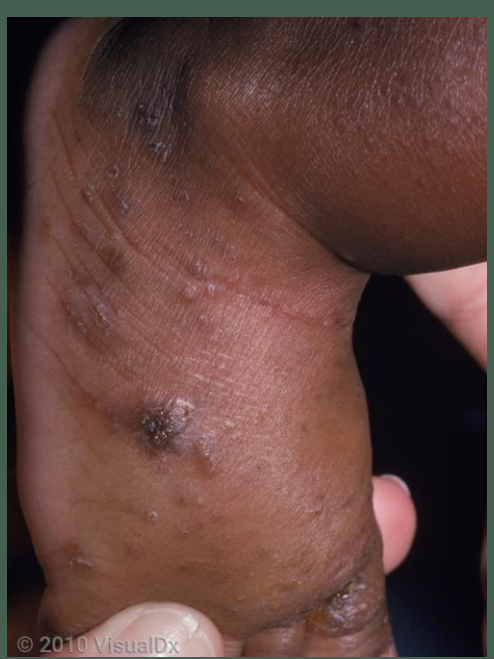
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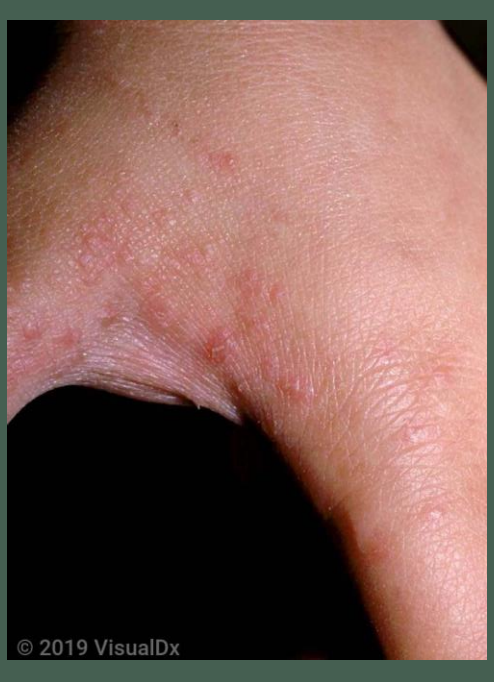
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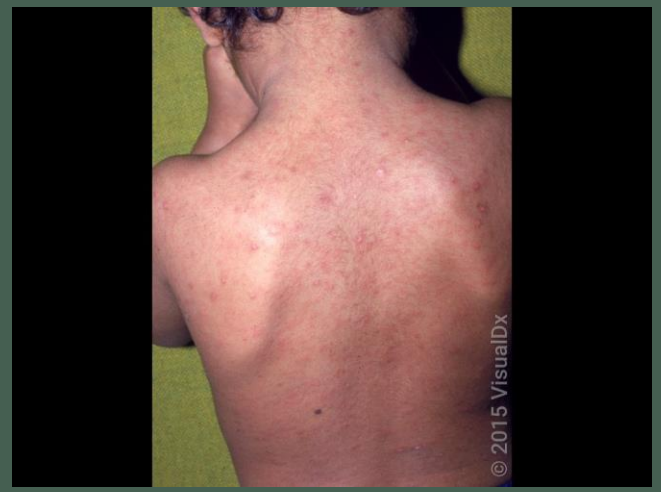
Scabies

- Etiology: Sarcoptes scabiei mite
- Typically in children under 2 years old
- Direct skin-to-skin contact
- Presentation: intense pruritus, burrows on the epidermis and red-brown nodules, excoriations
  - Look in web spaces of hands, wrists, ankles, axilla, genital region, umbilicus
- Risk of superimposed bacterial infection

- Treatment:
  - Bedding and closing washed in hot water and dried on high heat
  - Permethrin cream
  - Oral Ivermectin
  - Antihistamines for pruritus
- Retreatment is often necessary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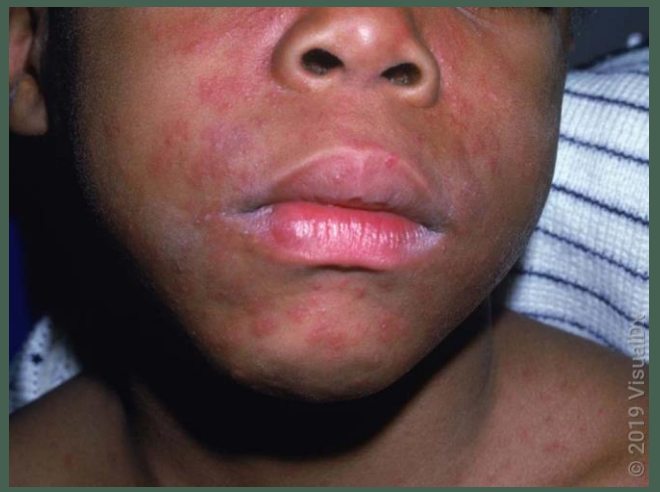
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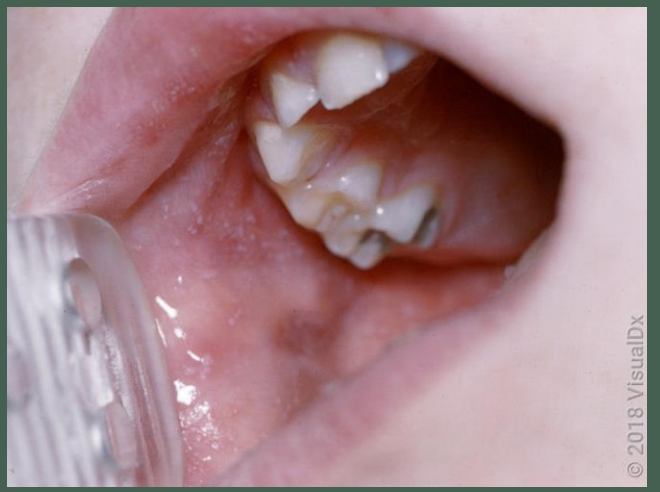
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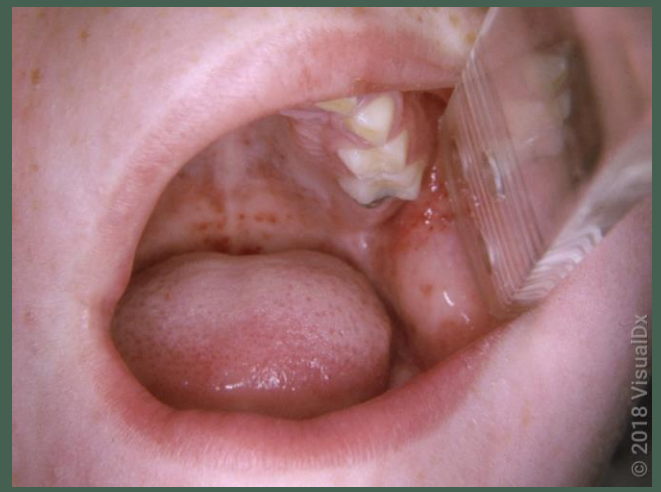
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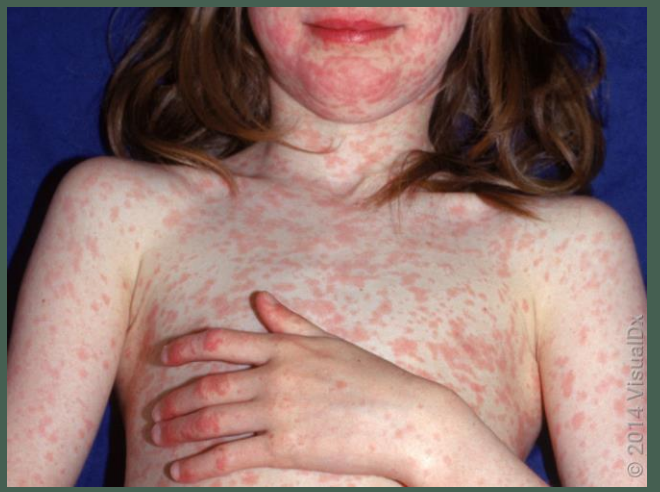
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Measles (Rubeola)

- Etiology: ssRNA virus (Paramyxoviridae)
- Typically seen in children under 5 years old
- Most common during winter and spring
  - Spread by respiratory droplets
  - Developing countries > Developed countries
- High fever (up to 105), URI symptoms, conjunctivitis for 3-4 days → Rash
- Koplik spots appear on day 2 or 3
  - Minute while papule with central blue/white coloration on buccal mucosa, may appear red
- Measles rash often starts on forehead and behind ears then spreads in cephalo-caudad distribution
  - Erythematous maculopapular rash that blanches
  - Peaks for 3-4 days, then starts to fade
  - Desquamation at 1 week
- Diagnosis is clinical
- Treatment is supportive
  - Post exposure prophylaxis in high-risk individuals with vaccine (72 hours) or immunoglobulin (6 days)
  - Vitamin A supplementation
- Vaccination – live attenuated virus (MMR)
  - Dose 1 at 12-15 months
  - Dose 2 at 4-6 years
  - Adults born after 1957 without evidence of immunization should receive 1 dose of MMR
- In 2000 the US declared measles had been eliminated…
  - Outbreaks occurring among unvaccinated/under-vaccinated individuals typically imported by unvaccinated travelers
  - CDC reported 58 cases of measles in 2023; as of May 30th, 2024 there were 146 reported cases
  - Reportable disease in most states

Measles in the USA

U.S. Cases in 2024

Total cases

146

Age
Under 5 years: **65 (45%)**
5-19 years: **33 (23%)**
20+ years: **48 (33%)**

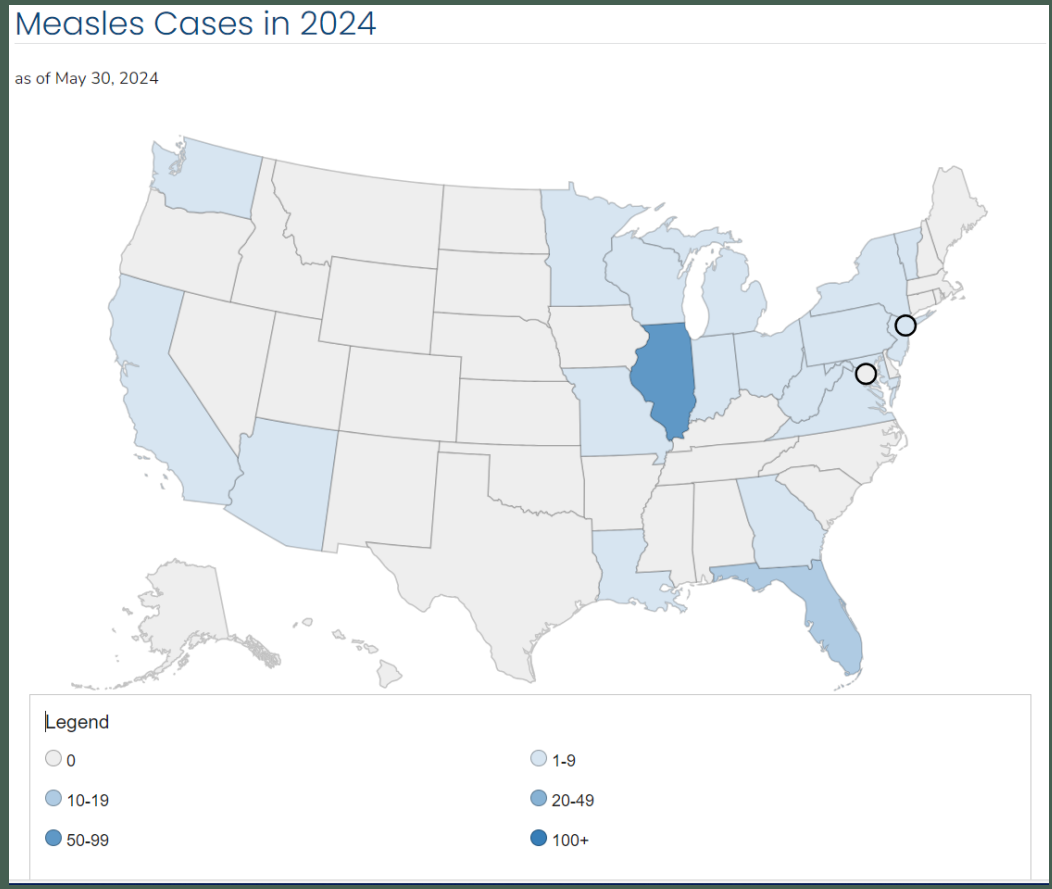
Vaccination Status
Unvaccinated or Unknown: **83%**
One MMR dose: **12%**
Two MMR doses: **5%**

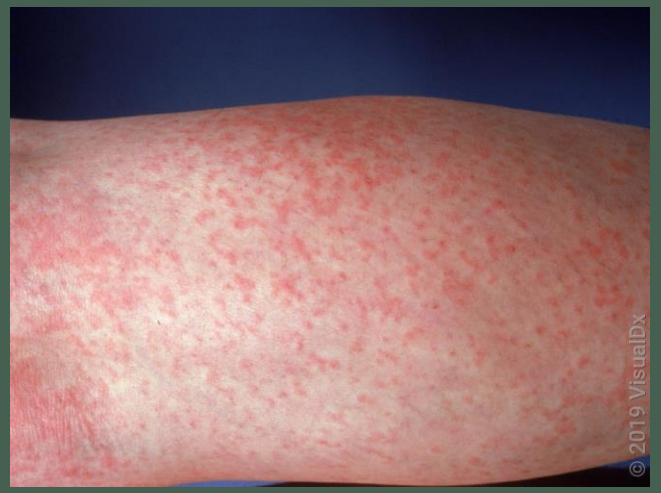
U.S. Hospitalizations in 2024

55%

55% of cases hospitalized (80 of 146) for isolation or for management of measles complications.

Percent of Age Group Hospitalized
Under 5 years: **65% (42 of 65)**
5-19 years: **42% (14 of 33)**
20+ years: **50% (24 of 48)**

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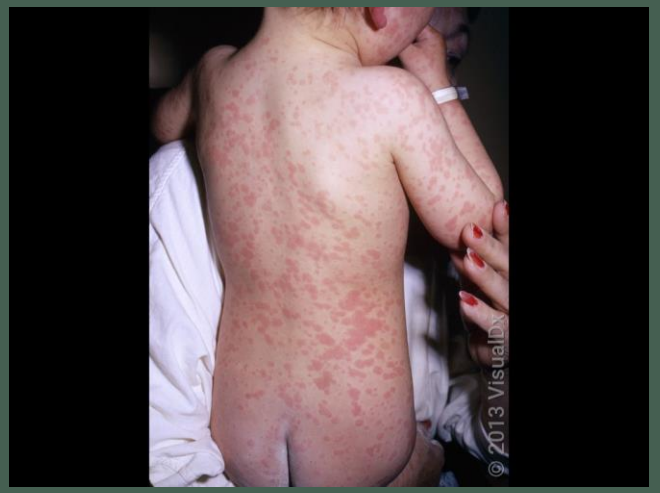
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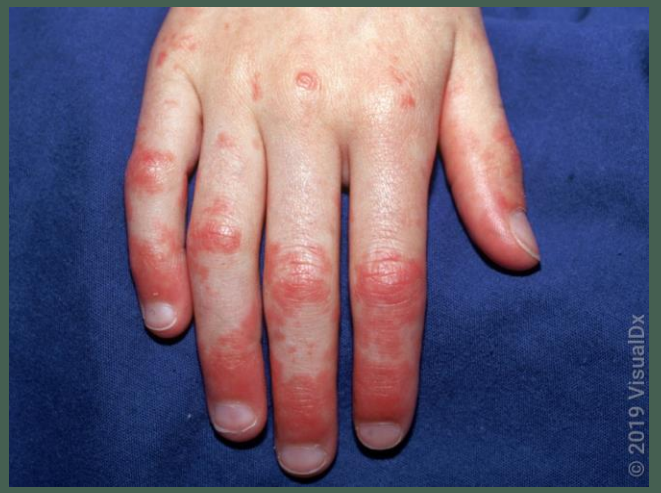
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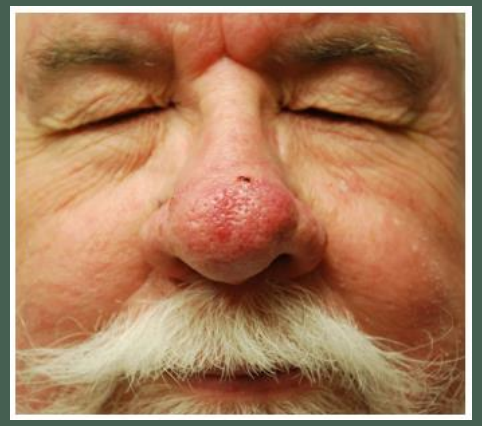
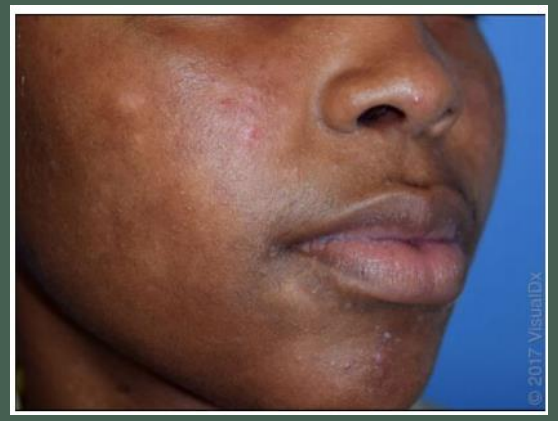
Rubella (German Measles)

- Etiology: Rubella Virus (RNA virus)
- Transmission: respiratory
- Incubation period 14-21 days, prodrome 1-7 days, followed by rash that starts on face and spreads caudally
- Pink macules and papules → desquamation
  - Petechiae of soft palate can be present (Forchheimer spots)
- Diagnosis is typically clinically
  - May see leukopenia on CBC during acute phase
  - Atypical lymphocytes (Turk cells) on smear
- Treatment is supportive
- Vaccination – live attenuated virus (MMR)
  - Dose 1 at 12-15 months
  - Dose 2 at 4-6 years
  - Adults without immunity: 1 dose; healthcare personal need 2 doses
- Highest risk is for pregnant patients
  - TORCH infection
  - Vaccine contraindicated in pregnancy

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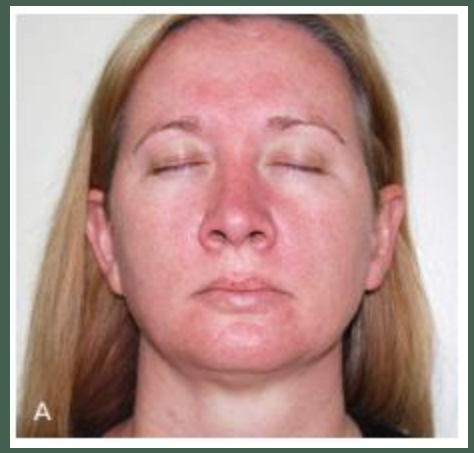
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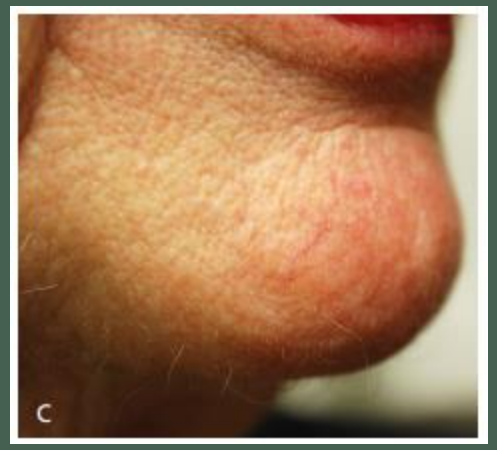
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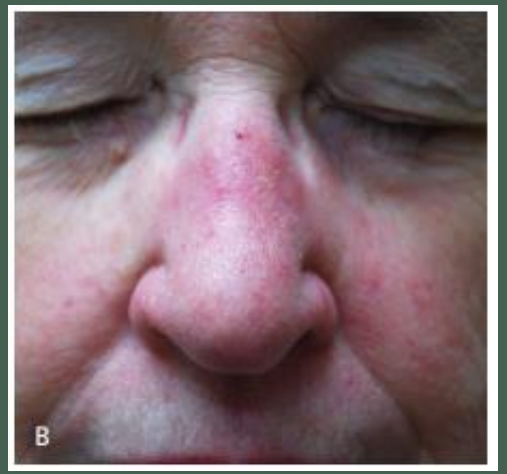
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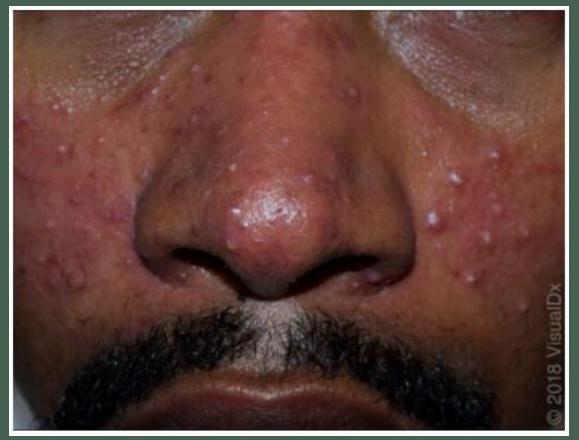
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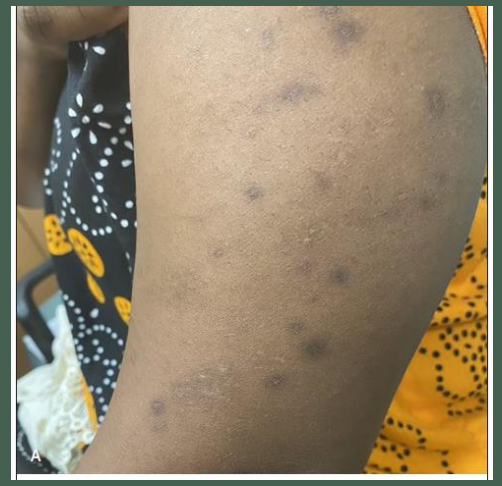
Rosacea

- Typically involves central face
  - Erythema, inflammatory papules/pustules, telangiectasia, hyperplasia
- Diagnosis requires at least 1
  - Flushing, nontransient erythema, papules/pustules, or telangiectasia
- Women > Men
- Unknown etiology
- Triggers: UV light, heat, spicy foods, alcohol, emotional stress, etc.
- Commonly misdiagnosed as acne, dermatitis, lupus

- Treatment
  - Avoid triggers
  - Mild cleansers, facial moisturizer with SPF
    - Avoid astringents, toners, etc. that can be irritating and drying
  - Metronidazole 0.75% lotion or cream; 1% gel
  - Azelaic Acid 15% gel
  - Sulfacetamide 10%/sulfur 5% cream/foam/lotion
  - Brimonidine 0.33% gel
  - Ivermectin 1% cream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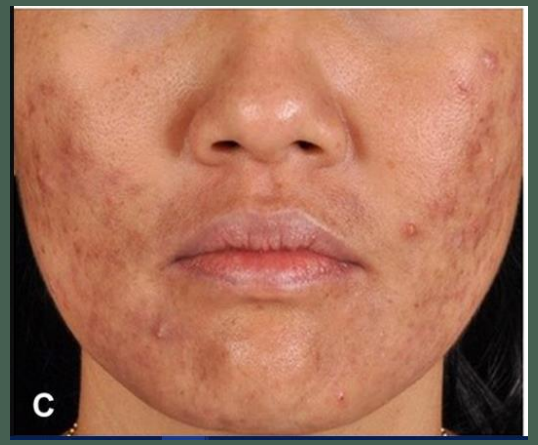
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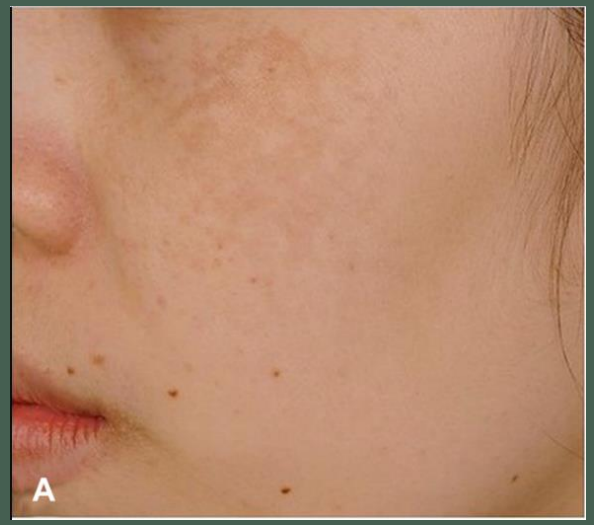
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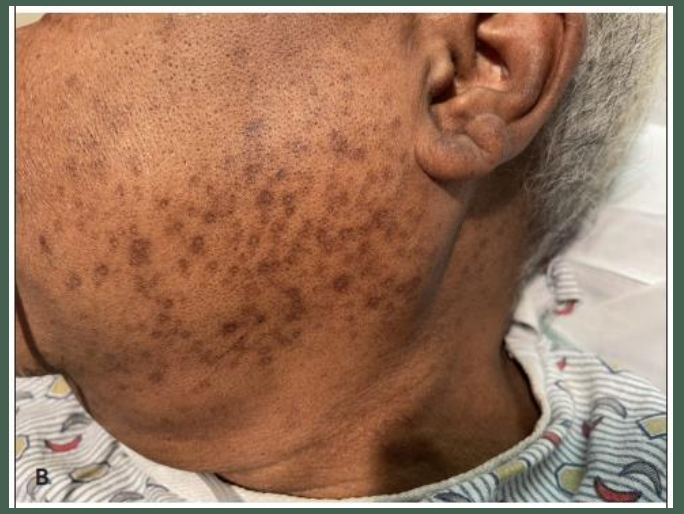
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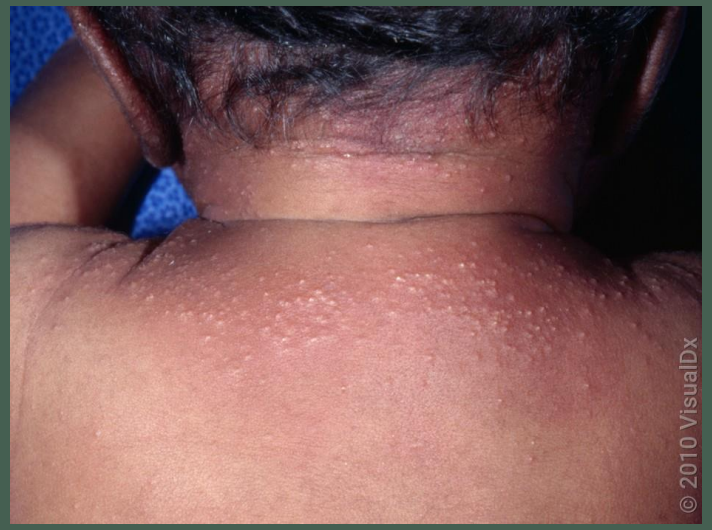
Post inflammatory Pigmentation

- Reactive Hypermelanosis
- Occurs after endogenous inflammation or external injury
  - Acne, pseudofolliculits barbae, atopic dermatitis, lichen planus, psoriasis, contact dermatitis, insect bites, chemical burns, cryotherapy, laser treatment
- Sunscreen with SPF 30 + for prevention

- Treatments
  - Hydroquinone 4% BID x 3 months
  - Fluocinolone 0.01%/hydroquinone 4%/tretinoin 0.1% (Tri-Luma)
  - Tretinoin, Retinoids, Azelaic acid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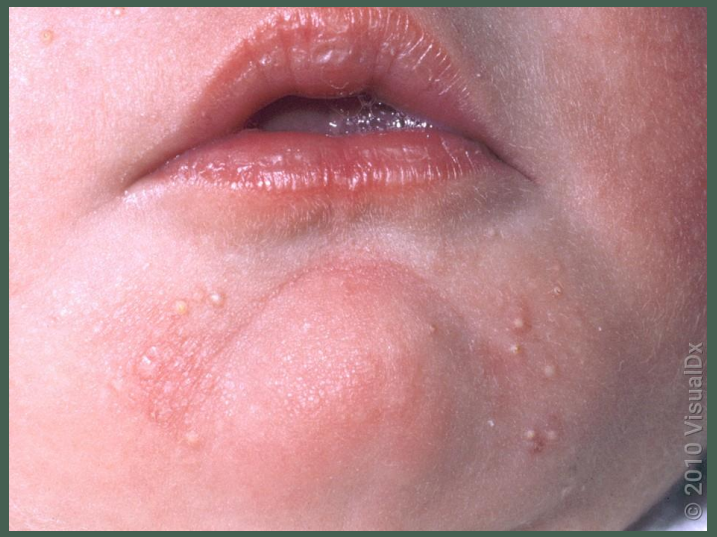
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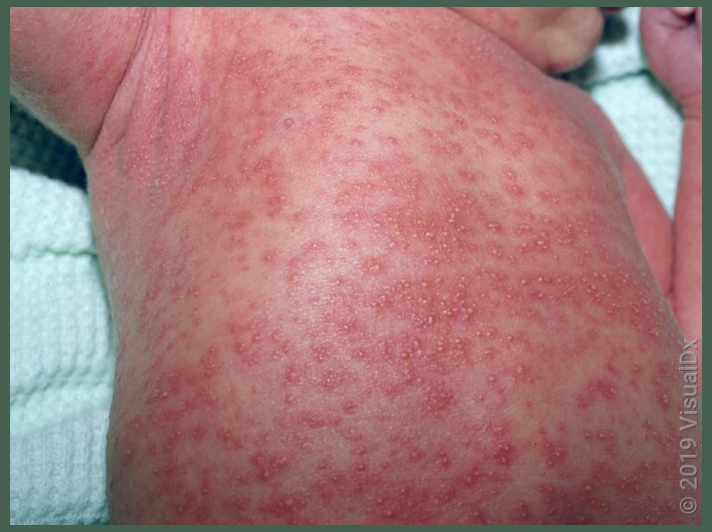
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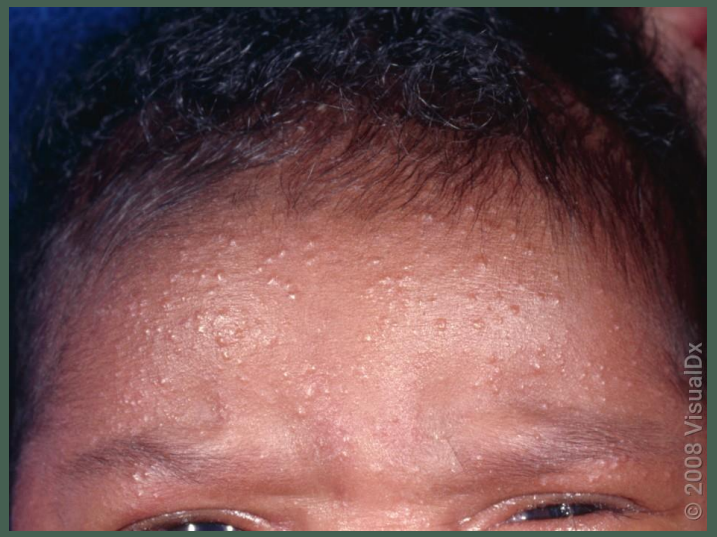
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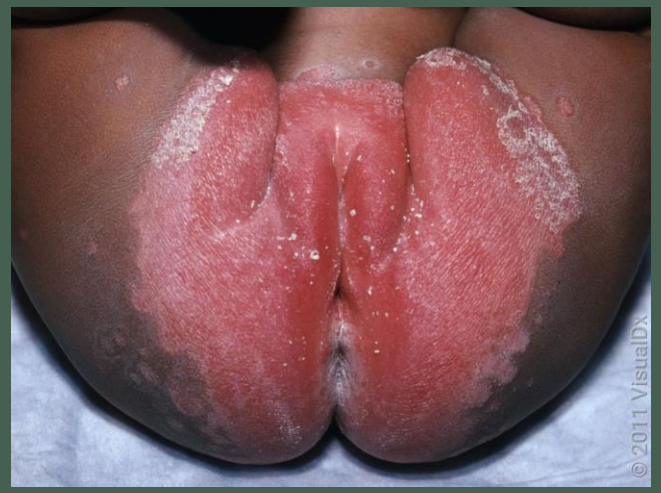
Erythema Toxicum Neonatorum

- Etiology: unknown
- Seen in newborns, usually within the first week of life
  - Terms babies > Premature babies
- Multiple erythematous macules and papules on face, trunk, and extremities
  - Spares palms and soles
- No systemic symptoms
- Self-limited
- Not contagious
- Lots of reassurance for parents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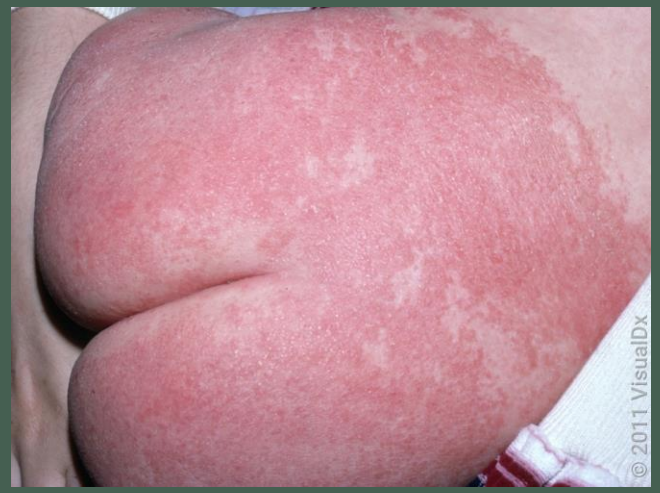
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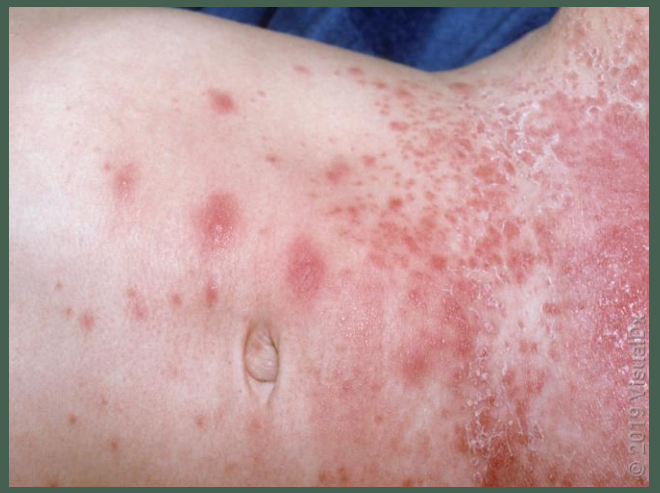
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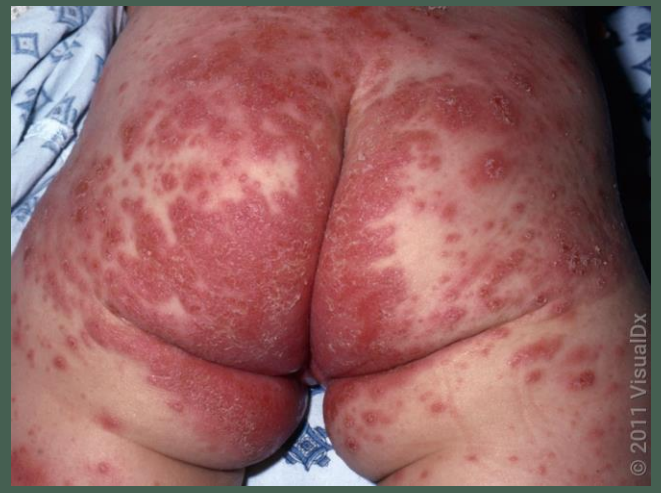
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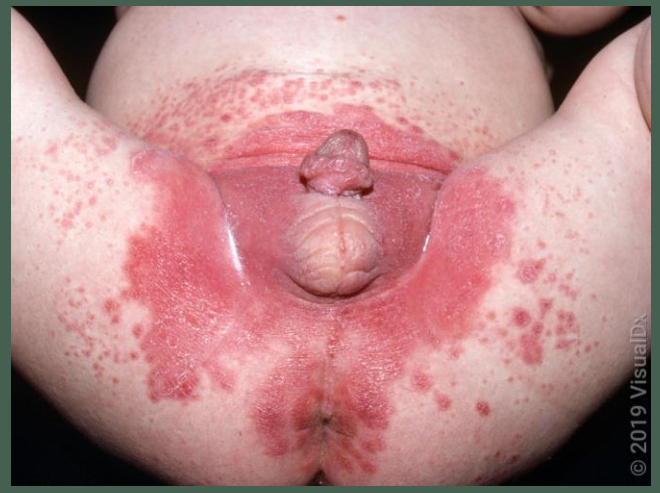
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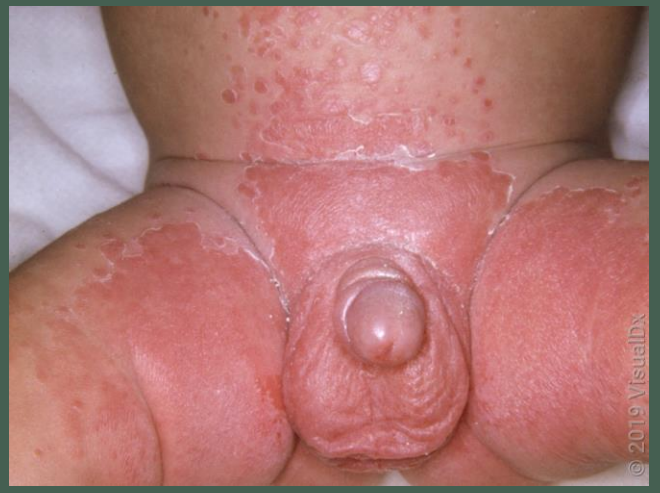
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Diaper dermatitis

- Etiology:
  - Contact dermatitis
  - Candidal dermatitis
- Typically appears around 6 weeks old
- Confluent area of erythematous (beefy red) plaques/papules, sometimes scaly
- Treatment
  - Frequent diaper changes to avoid excessive moisture
  - Topical antifungal
  - Topical barrier cream with zinc

Take Home Points

- When in doubt, biopsy!
- Be familiar with steroid potency (or keep a chart handy)
- Serial follow up to ensure resolution
- If a lesion does not resolve or has atypical features, biopsy and/or refer to Dermatology

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