



# A Colorful Tour of Dermatologic Presentations in Primary Care

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# Cutaneous findings in the Newborn

Or, what is this?



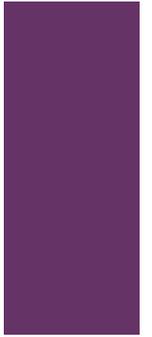
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# In the Beginning

Proof that babies are delivered by storks



# + What's the Diagnosis?



# + Nevus simplex = Stork bite = Salmon patch

- Red dilatation of blood vessels often on eyelid, face, or nape of neck (stork bite)
- They are usually small flat patches of pink or red skin with poorly defined borders
- These exanthems are very common and occur in over 40% of all newborns
- The facial patches are sometimes referred to as an “angel's kiss” and tend to fade over the first year of life



# + Nevus simplex = Stork bite = Salmon patch

- Often deepen in color with crying, straining with defecation, breath holding or with changes in ambient temperature
- Not painful or itchy
- Benign course, reassurance, lighten with age
- Those on the eyelids and below towards the nose usually disappear by 2 to 3 years of age
- Salmon patches are rarely detected after age 6 years – those on neck (stork bite) often fade and/or are covered up by hair through adult life



+ What is this?

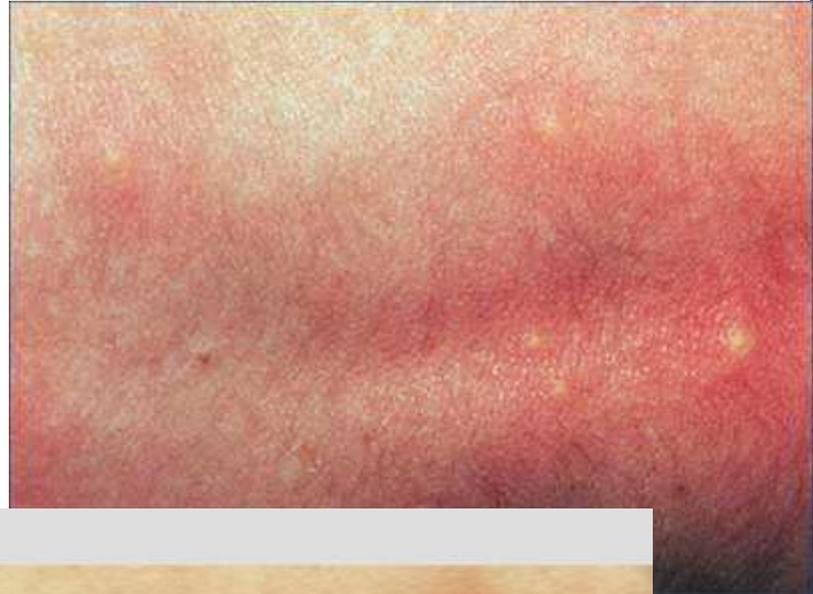


# + Cutis Marmorata

- Mottling of skin
- Transient phenomena
- Vascular response to cold with immature nervous system
- Superficial small blood vessels in the skin dilating (red color) and contracting (pale color) at the same time
- May persist for months
- Re-warming usually restores the skin to its normal appearance
- Occurs in about 50% of infants
- Generally resolves with increasing age and of no significance for most infants

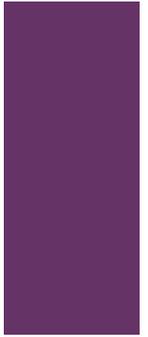


+ What's the diagnosis?



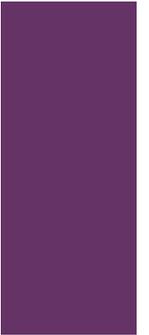


# Erythema Toxicum Neonatorum “E-Tox”



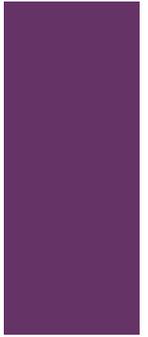
- Benign transient self-limiting eruption in the newborn seen in 40% of healthy full-term infants
- Follicular aggregation of eosinophils and neutrophils
- Resemble flea bites (yellow/beige papule on an erythematous base)
- Presents within first four days of life, peak at 48 hours
- Most cases resolve within five to fourteen days
- No treatment necessary

+ What is the diagnosis?





# Distribution



- **Crawling Children in diapers – typically seen on elbows and knees**
- **Older children and adults – typically present in folds of skin opposite to the elbow and kneecap, but spares armpits**
- **Other areas commonly involved include the cheeks, neck, wrists, and ankles.**

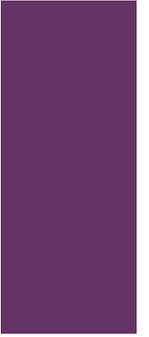
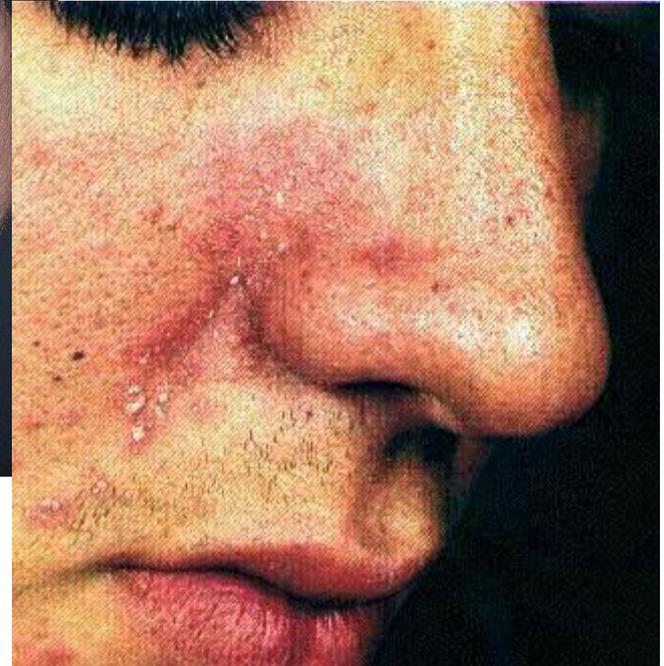
# + Atopic Dermatitis / Eczema

## ■ Treatment:

- Avoid triggers—cold, wet, irritants, emotional stress
- Aggressive hydration with cream based or petrolatum based moisturizer to restore skin barrier
- Less irritating soap
- Infants--Low potency corticosteroid ointments for maintenance
- Older children and adults—medium potency corticosteroid ointments, sparing the face
- Stronger corticosteroids ointments should be used for flares or refractory plaques short term only to avoid thinning of skin
- Calcineurin inhibitors (tacrolimus or picrolimus) –useful on face or eyelids
- Short course oral Prednisone only for severe flares
- Antihistamine therapy—
  - Children-Hydroxyzine, Benadryl (sedating)
  - Adults-Hydroxyzine or Doxepin

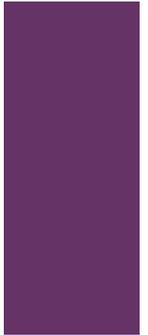


# + What is the diagnosis?



# + Seborrheic Dermatitis

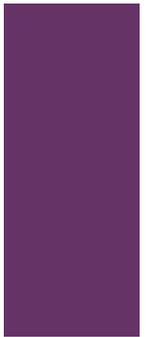
- Chronic, superficial, inflammatory disease predilection for the scalp, **eyebrows**, eyelids, **nasolabial creases**, lips, ears, **sternum**, axillae, submammary folds, umbilicus, **groin, and gluteal crease**
- Possibly related to an abnormal inflammatory response to certain fungal microorganisms that live naturally on the skin, belonging to the genus *Malassezia*
- Presentation: yellow, greasy, scaling on an erythematous base
- Dandruff is a mild form / Cradle cap is an infant form
- Those affected with Parkinson's disease can often have severe refractory seborrheic dermatitis





# Treatment

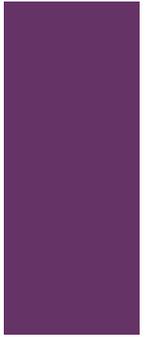
- Skin involvement – ketoconazole, naftifine or ciclopirox creams and gels (1% metronidazole gel may help for facial involvement)
- Alternatives include: calcineurin inhibitors (pimecrolimus or tacrolimus), sulfur or sulfonamide combinations
- Class IV or lower corticosteroid creams, lotions or solutions can be used sparingly for acute flares
- Scalp– Keratolytics to remove scale ( products with ingredients such as salicylic acid, lactic acid, urea or propylene glycol)
- Shampoos containing Selenium sulfide, ketoconazole, tar, zinc, pyrithione, fluocinolone, resorcin shampoos
- Resistant cases in adults: oral itraconazole, tetracycline antibiotics or phototherapy may be helpful



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# Vesicular Eruption

## What's The Diagnosis????



# + Dyshydrotic Eczema – acute and recurrent vesicular hand dermatitis

- Pruritus of the hands and feet
- Sudden onset of vesicles
- Burning pain or pruritus occasionally may be experienced before vesicles appear
- Tiny vesicles erupt first along lateral aspects of the fingers and then on the palms or soles
- Palms and soles may be red and wet with perspiration
- Vesicles usually persist for 3-4 weeks – fewer episodes after middle age
- Vesicle outbreaks may occur in waves



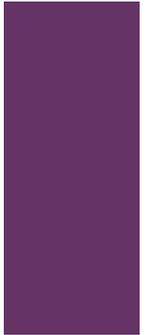
# Background and Predisposing Factors



- Vary in frequency from once per month to once per year
- Emotional stress, hyperhidrosis may be precipitating factors
- Personal or familial atopic history (atopic dermatitis, asthma, hay fever)
- Exposure to contact irritants before condition flares
- Human immunodeficiency virus (HIV) infection

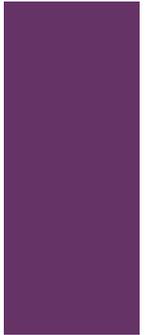
# + General Approach to Treatment

- Moisturize
- Topical steroids (usually moderate to high potency)
- Oral steroids if needed for acute flares
- Topical immune modulators
- Watch for super-infection



# + Treatment for the Bullae

- Use compresses with Burow solution (10% aluminum acetate) in a 1:40 dilution until bullae resolve (usually within a few days)
- Compresses with a 1:10.000 solution of potassium permanganate are also effective
- Drain large bullae with a sterile syringe, and leave the roof intact
- Prescribe systemic antibiotics that cover *Staphylococcus aureus* and group A streptococci



# + What's the diagnosis?



# + Two Types of Contact Dermatitis

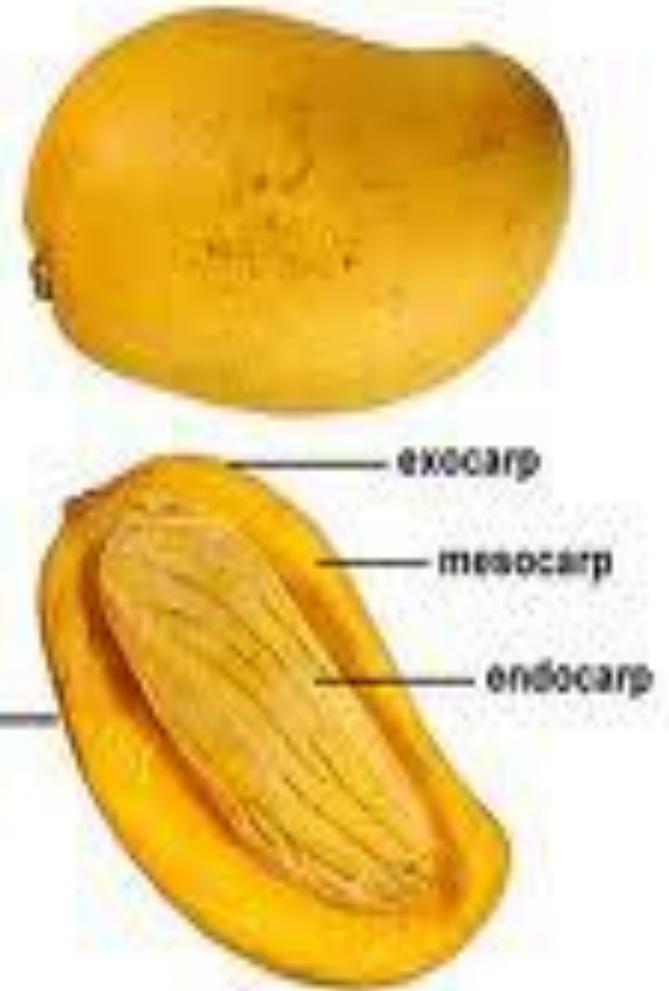
## ■ Allergic Contact Dermatitis:

Examples - poison ivy, poison oak, poison sumac, even the skin of mangos (the sap of the tree and rind of the mango contains the oil, urushiol)

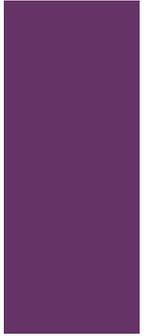
## ■ Irritant Dermatitis – touching or persistent contact with an irritant

Examples – nickel found in jewelry, buttons, chemicals in nail products, dyes in clothes, scented soaps, etc.

# + Common Plant Irritants and Allergens



# + Contact Dermatitis



Common signs and symptoms:

Erythematous exanthem

Blisters that may ooze

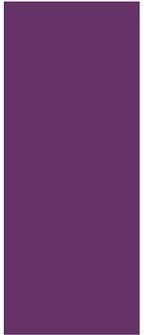
Pruritus, may be severe

Linear or discrete areas from direct contact

Pain, warmth or tenderness

# + Treatment

- Identify the cause and avoid, if possible
- Cool compresses
- Antihistamines
- Steroid Cream



# + What's the Diagnosis?

A Skin Hangover from Margaritaville???

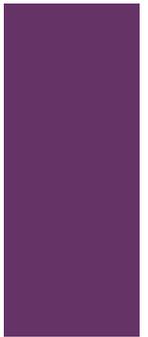




# Photodermatitis or Phytophotodermatitis

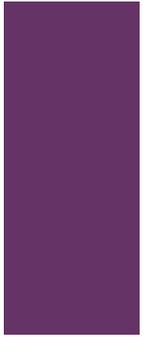
(abnormal skin reaction to sunlight - ultraviolet (UV) rays)

- Itchy bumps, blisters, or raised areas
- Lesions that resemble eczema
- Hyperpigmentation
- Outbreaks in areas of skin exposed to light
- Pain, redness, and swelling
- Chills, headache, fever, and nausea
- Long-term effects include thickening and scarring of the skin and an increased risk of skin cancer, if the cause is genetic





# What Causes Photodermatitis?



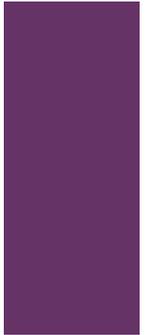
- Diseases, such as lupus or eczema, that also make skin sensitive to light
- Genetic or metabolic factors (inherited diseases or conditions, such as pellagra, caused by lack of niacin, vitamin B-3)
- Polymorphic light eruptions, characterized by sensitivity to sunlight
- Reactions to certain chemicals and medications



# Triggers of Photodermatitis

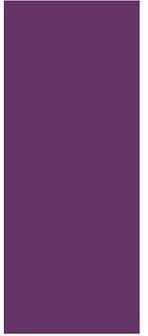
## ■ Direct Toxic Effect:

- Antibiotics (tetracycline and sulfonamides, etc.)
- Antifungals, such as griseofulvin
- Coal tar derivatives and psoralens (for psoriasis)
- Retinoids (tretinoin and medications containing retinoic acid)
- Nonsteroidal anti-inflammatory drugs (NSAIDs)
- Chemotherapy agents
- Sulfonylureas, Diuretics, Antidepressants (tricyclics), Antipsychotics, Anti-anxiety (benzodiazepines)
- Antimalarial drugs, such as quinine and other medications, used to treat malaria





# Triggers of Photodermatitis



## ■ Allergic reactions:

- Fragrances
- Sunscreens with PABA
- Industrial cleaners that contain salicylanilide
- Lavender



# Another Type = Phytophotodermatitis

- A cutaneous phototoxic inflammatory eruption resulting from contact with light-sensitizing botanical substances such as Furocoumarins
- The eruption usually begins approximately 24 hours after exposure and peaks at 48-72 hours. The phototoxic result may be intensified by wet skin, sweating, and heat
- Phytophotodermatitis typically manifests as a localized, burning, erythematous area that may subsequently blister
- Postinflammatory hyperpigmentation lasting weeks to months may ensue





# Herbs or oils that may sensitize to phytophotodermatitis

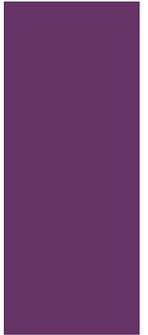


- St. John's wort (*Hypericum perforatum*)
- Angelica seed or root (*Angelica archangelica*)
- Arnica (*Arnica montana*)
- Celery stems (*Apium graveolens*)
- Lime oil/peel (*Citrus aurantifolia*) – Margarita Dermatitis

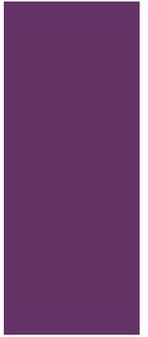


# Prevention and Treatment

- Treatment – cool compresses, remove offending substance, meds (glucocorticoids if needed)
- Limit sun exposure, especially intense midday sun.
- Use PABA free sunscreens
- Cover up with a long sleeved shirt, long pants, and a wide brimmed hat
- Sun protection if using any product or substance that causes sun sensitivity
- Avoid the use a tanning device

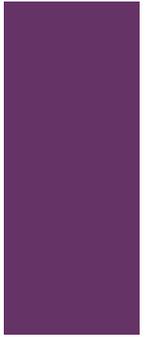


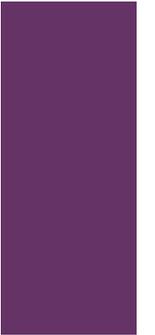
# + What is the diagnosis?



# + Seborrheic Keratosis

- Facts: Oval, raised, brown to black sharply demarcated papules or plaques; they appear “stuck on” or “warty”
- Involving mostly chest or back but can be anywhere
- Pathogenesis: Unknown
- Treatment: Removed by liquid nitrogen, curettage, light fulguration, shave removal, and CO2 laser vaporization



A stack of various newspapers and magazines, showing different headlines and colors, positioned on the left side of the graphic.

**NEWS &  
UPDATES**

**STAY INFORMED**

The graphic features a stack of newspapers on the left. To the right of the stack, the words "NEWS &" are written in a blue, sans-serif font, and "UPDATES" is written in a larger, bold, black, sans-serif font. Below this text is a blue rectangular box with the words "STAY INFORMED" in white, bold, sans-serif capital letters.



# The Rash of Zika



# + Updated Map of Aedes Mosquito Range April 2016



 *Aedes aegypti*



 *Aedes albopictus*

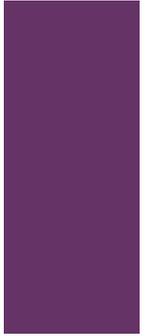


*Aedes aegypti*



*Aedes albopictus*

# + The Estimates



The United States has **more than 60%** of their populations residing in areas conducive to **seasonal Zika virus transmission**

Mexico, Colombia, and the **USA** have an estimated 30.5, 23.2, and **22.7** million people, respectively, living in **areas conducive to year-round transmission**

Source: The Lancet [Volume 387, No. 10016](#), p335–336, 23 January 2016

# + Reported Clinical Symptoms Among Confirmed Zika Virus Cases

## **Macular or papular rash 90% - often pruritic**

Subjective fever 65%

Arthralgia 65%

Conjunctivitis 55%

Myalgia 48%

Headache 45%

Retro-orbital pain 39%

Edema 19%

Vomiting 10%



## + Flash Quiz - What's the Diagnosis?

- A 12-year-old male was seen two weeks ago with a sore throat. The rapid strept test was positive and treatment was started with amoxicillin. His parents call regarding a new rash that has erupted all over his body. The palms and soles remain uninvolved. What is this???



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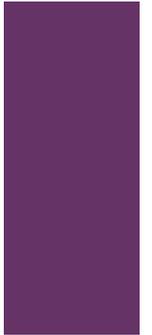
Possible link to streptococcal  
infection?

Appear as drop-like papules



+ Which one of the following is the most likely diagnosis of this patient's exanthem?

- a. Drug rash
- b. Pityriasis rosea
- c. Streptococcal scalded skin syndrome
- d. Mycoplasma pneumonia cutanie
- e. Guttate Psoriasis

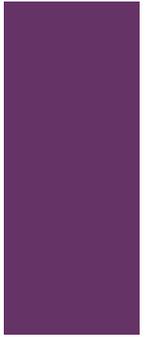


# + Guttate Psoriasis

- Small, salmon-pink (or red) papules usually appear suddenly on the skin two to three weeks after a streptococcal respiratory infection – group A beta hemolytic streptococcus
- The drop-like lesions may itch
- The outbreak usually starts on the trunk, arms, or legs and sometimes spreads to the face, ears, or scalp
- The palms and the bottoms of the feet are usually not affected.

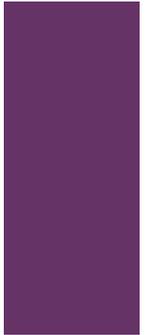
# + Guttate Psoriasis

- Trigger is usually a streptococcal infection
- More common in children and young adults
- The eruption of the scaly, “drop-like” papules on the trunk and extremities usually appears two to three weeks after a streptococcal throat infection
- Streptococcal superficial perianal dermatitis in children has also been linked with guttate psoriasis
- Often mistaken for a drug rash because antibiotics may have been initiated for the streptococcal infection
- Throat cultures for streptococcal pharyngitis should be obtained
- Has a good prognosis and may disappear spontaneously or may benefit from phototherapy



# + Treatment

- Usually goes away in a few weeks to months without treatment
- Simple reassurance and moisturizers to soften the skin may be sufficient care
- Treatment depends on the severity of the outbreak. Topical steroids, although effective, could be bothersome because the outbreak occurs over a large portion of the body in most cases of guttate psoriasis
- Antibiotics: If someone has a history of psoriasis, take a throat culture if individual has a sore throat. If culture results positive, start antibiotics if not already begun
- Phototherapy: Sunlight can help clear up this type of psoriasis
- The doctor may prescribe a short course of broadband ultraviolet B or narrowband ultraviolet B

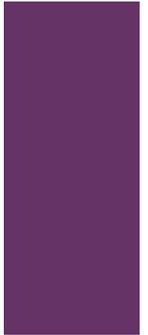


# + What is the diagnosis?

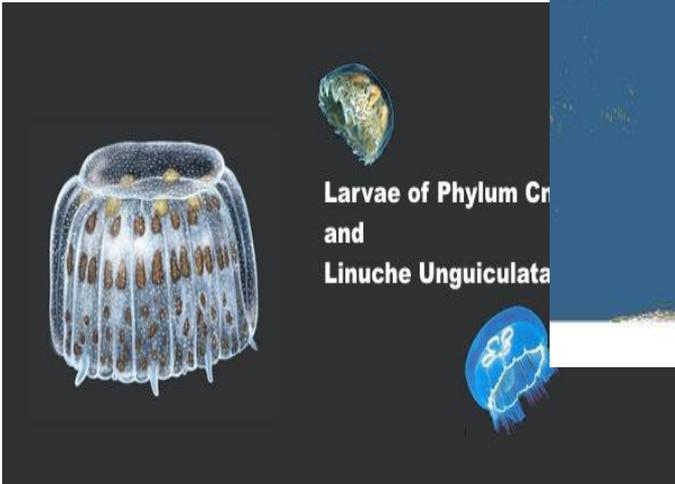
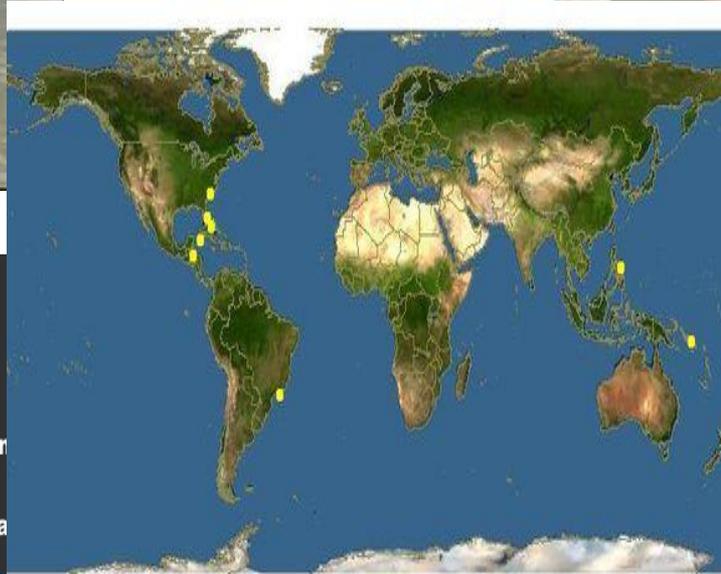


# + Molluscum Contagiosum

- Facts: Affects young children, sexually active adults, and immunosuppressed
- Pathogenesis: Pox virus via skin-to-skin contact especially if wet
- Appearance: smooth surfaced, firm, dome-shaped pearly papules, many times umbilicated
- Treatment: Young immunocompetent children – do not treat or use of topical tretinoin—usually spontaneous resolution
  - Other options include topical cantharidin, light cryotherapy, or manual extraction of core



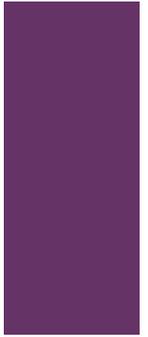
# + What's the Diagnosis?





# Seabather's Eruption

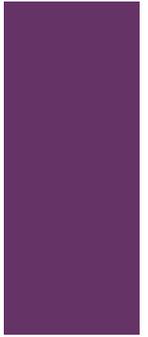
## “Ocean Itch”



- Dermatologic reaction to stinging cells from the larva of thimble jellyfish and sea anemones
- Become “trapped” in bathing suits
- May begin as itchy, then painful and/or stinging sensation while in water
- Four to 24 hours later – possible intense and pruritic rash
- In severe cases, “flu-like” symptoms
- Usually located in area of bathing suit and/or t-shirt worn while swimming



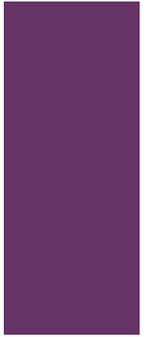
# Prevention and Treatment



- Listen to local beach reports
- Persons with severe reactions to restrict beach water activities
- Wear tight fitting tight weave suits, a wet suit works best
- Avoid loose fitting t-shirts
- Remove bathing suit while still wet – bring a second suit
- Shower without suit, salt water if possible if not, then fresh water and lots of soap to the areas covered by the swimming suit
- Anti-itch medication (colloidal oatmeal lotions, hydrocortisone cream, antihistamine)
- Wash swimming suits with detergent

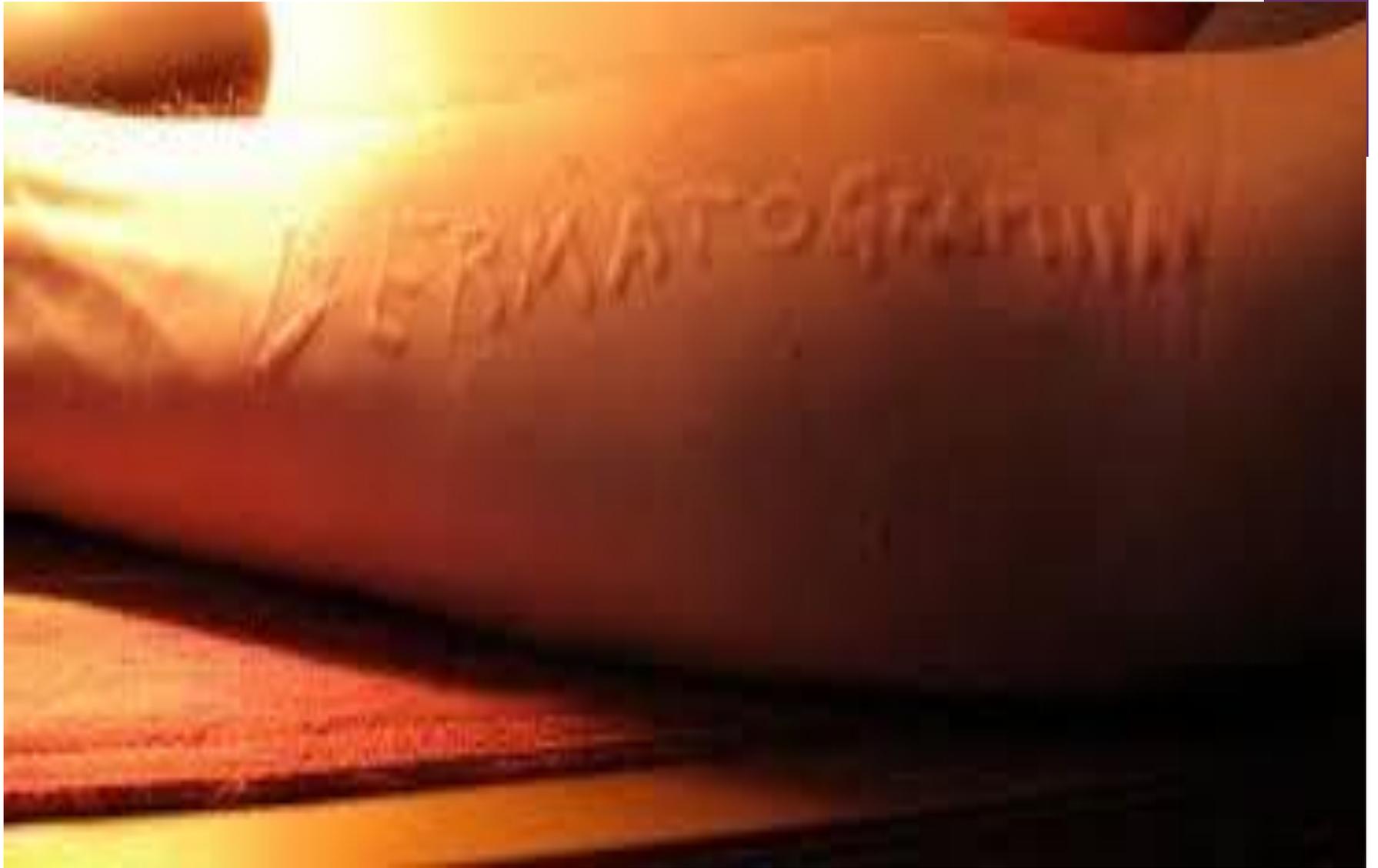


# WHAT'S THE DIAGNOSIS?



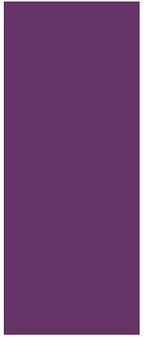
- Sometimes itchy
- Sometimes burning type sensation
- Pressure on the skin can cause it
- Can be distressing but is not life threatening
- Can last minutes, hours or days







# TYPES



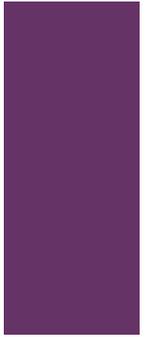
- **Red dermatographism** : most common type - develops as small raised scratches on the skin which occurs on trunk.
- **Follicular dermatographism** : prominent follicular papules on the skin with a well defined background.
- **Cholinergic dermatographism** : somewhat large embedded with punctuate wheals resembling urtica. Brought on by a physical stimulus. Although this stimulus might be considered to be heat, the actual precipitating cause is sweating
- **Delayed dermatographism** : papules develop after several hours of initial response forming deep wheal like structure.

# + Symptoms and Causes

- Generalized pruritis itchiness or the sensation of burning
- Irritation at one site of the body can result in mast cells in other parts of the body releasing histamine although they have not been directly stimulated
- Can be induced by tight or abrasive clothing, watches, glasses, heat, cold, or anything that causes stress to the skin or the patient
- In many cases it is merely a minor annoyance, but in some rare cases symptoms are severe enough to impact a patient's life.

# + Treatment Approaches

- Antihistamines
- A combination of 2 or more antihistamines may be required
- Moisturize to reduce scratching in case of dry skin
- Xolair (Omalizumab) – 150 mg SC – may relieve persistent symptoms of persistent urticaria within days
- Narrowband ultraviolet (UV)-B phototherapy and oral psoralen plus UV-A light therapy have both been used as treatments for symptomatic dermographism – relapse often occurs in two to three months
- Decrease and/or avoid symptom triggers



# + What is the Diagnosis?



# + Erythema Migrans

- Facts: Manifestation of Lyme disease; caused by *Borrelia burgdorferi*
- Occurs in approximately 50% of patients most commonly on legs, groin, and axilla
- 3-32 days after tick bite there is a gradual expansion of redness around an initial papule creating a target-like lesion
- Rarely pruritic or painful
- Primary and secondary lesions fade in approx. 28 days
- Treatment: Doxycycline 100mg BID for 10-30 days

+ What is the diagnosis?

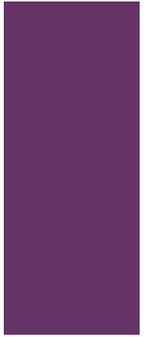


# + Acne Rosacea

- Facts: Persistent erythema of the convex surfaces of the face
  - Commonly assoc. with telangiectasia, flushing, erythematous papules and pustules
- Cheeks and nose of light skinned women age 30-50 most commonly affected
- Severe phymatous changes in men
- Exacerbated by stressful stimuli, spicy food, exercise, cold or hot, and alcohol
- Pathophysiology: Abnormal vasomotor response to stimuli
- Treatment: Sunscreen, avoidance of triggers, laser, metronidazole cream, sodium sulfacetamide, sulfa cleansers and creams, azaleic acid, Low dose Tetracycline or Minocycline po daily



# + What is the diagnosis?



# + Comedonal Acne (Open and Closed)

- Facts: Chronic inflammatory disease of the pilosebaceous follicles, characterized by comedones, papules, pustules, nodules, and often scars
- *Propionibacterium acnes* – gram + anaerobic rod
- Comedo – Open filled with blackened keratin or closed yellowish papules – 1mm
- Papules and pustules – 1 to 5 mm caused by inflammation and edema – may enlarge and become nodular with tracts and eventual scarring; Many times colonated by *P. acnes*
- Usually on face, upper trunk, neck and upper arms
- Affected by androgens and their effect on the sebaceous gland at puberty and pregnancy



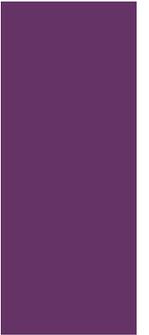
# + Acne

- Treatment:
- Benzoyl peroxide – washes and creams – antibacterial effect
- Topical Retinoids – promotes desquamation of follicular epithelium / good for closed comedonal acne and prevention of new lesions
- Systemic and topical antimicrobials –
  - Clindamycin and erythromycin topical – anti-inflammatory and antibacterial effects
  - Sulfa Sodium acetamide, and salicylic acid creams and washes – decreases inflammation and good for acne rosacea
  - Oral antibiotics – tetracycline, doxycycline, minocycline, erythromycin, clindamycin – low dose for their anti-inflammatory properties
  - Oral Contraceptives / Spironolactone – androgen blocking effect
  - Isotretinoin – Oral retinoid – for severe acne only / category X / May cause severe dryness / Black box warning for suicidality

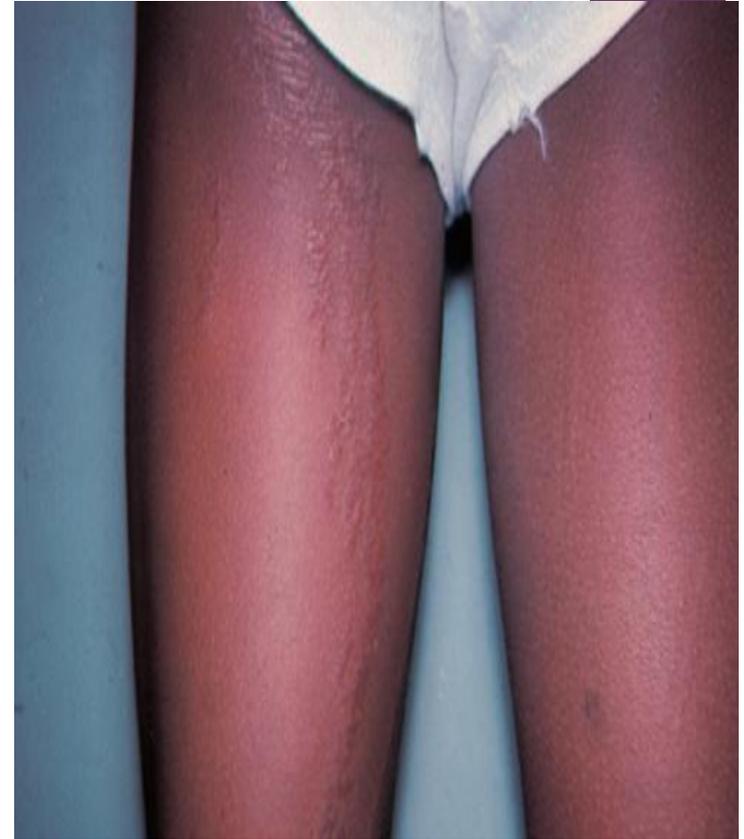


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# A Zebra



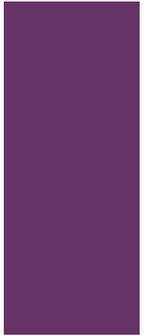
# + What's the Diagnosis?



- Hint – Human's have stripes
- Goes along lines of Blaschko

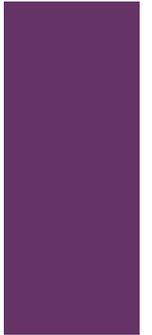
# + Lichen Striatus

- Unknown cause
- Starts as small pink, red or flesh colored papules that over the course of one or two weeks join together to form a dull red slightly scaly linear band
- Usually 2mm to 2cm in width and may be a few cm in length, may extend the entire length of the limb
- Most commonly on one arm or leg but can affect the neck or trunk
- Usually there are no symptoms but some patients may complain of slight or intense itching.
- Most common between ages 3 to 15, females more than males
- Usually resolves on own within 3 to 12 months



# + Treatment

- No one effective treatment
- Moisturizers to help treat pruritis and dry skin
- Topical steroids
- Immunomodulator such as pimecrolimus (Elidel) cream may clear the lesions – may take a few weeks to lighten
- May leave temporary pale or dark marks (hypopigmentation or hyperpigmentation).



# + Aquarium Cleaning Concern



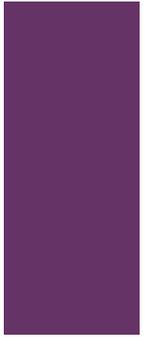
# + What's the Diagnosis?





# Mycobacterium Marinum

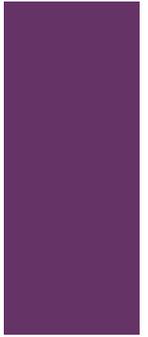
## Fish Tank Granuloma



- Higher risk for those whose occupations may expose them to contaminated fresh or saltwater
- Aquariums with a high density of fish and warm water provide good conditions for M. Marinum
- Skin trauma or open wound provides easier access for possible M. marinum infection (incubation period 21 days to over 30 days)
- Primary skin lesions typically present as a solitary granuloma, nodule or papule on an extremity
- Lesion can slowly enlarge into a verrucous plaque
- About 20 to 40 percent of patients have a spread of lesions along areas of lymphatic drainage
- Less commonly - infection in the joints with arthritis-type symptoms. This is associated with a puncture or open wound that becomes infected

# Mycobacterium Marinum

## Fish Tank Granuloma



- Diagnosis is usually by tissue culture
- Can begin treatment with clinical suspicion while pending culture results
- Tetracyclines, fluoroquinolones, macrolides, sulfonamides and rifampin appear to be effective
- A combination of two (2) active agents until one to two months after resolution of lesions - minimum of 6 months
- Surgical debridement reserved for infections that involve the deep tissues or for those with continual pain
- Prevention:

Wash hands, use gloves and equipment when cleaning aquarium

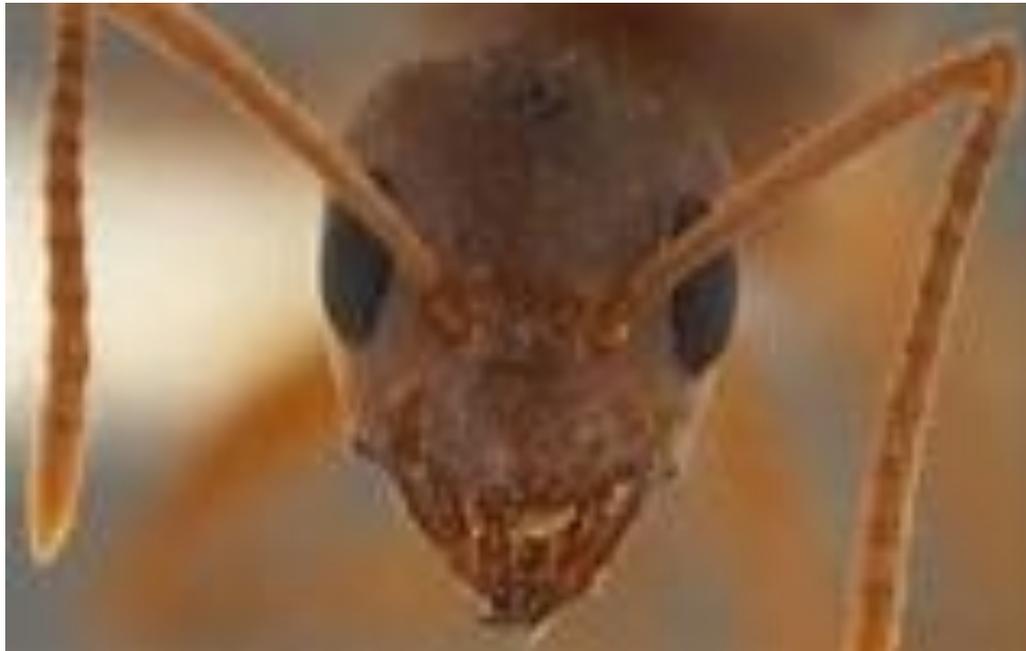
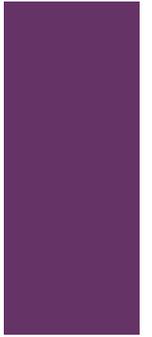
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# Alternative Way to Clean Tank



+

# Sting Wars







# Fire Ants

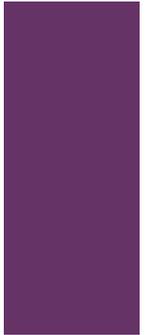


# + Reactions to Fire Ant Stings

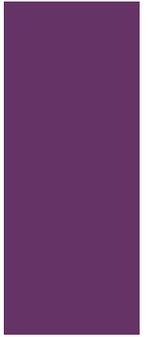
- Initial symptoms – depends upon the person
- May be small and itchy and go away in 30 – 60 minutes
- May be a burning or stinging sensation
- Red welts and hives may appear
- Pus-like (dead tissue) lesions may follow
- A severe allergic response may occur in rare cases

# + Treatment

- Cool compresses with elevation
- Antihistamines and topical steroid for pruritis if needed
- If large area affected, systemic steroids may be helpful
- Auvi-Q or EpiPen if history of allergic reaction
- Wear shoes and socks when walking in “at-risk” areas
- Wear garden gloves when working in those areas



# + Hot Tub Party

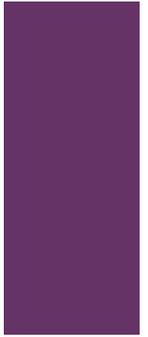


# + Itchy and Irritated





# Hot Tub Time Machine – the itchy clock is ticking



- The exanthem onset is usually 48 hours (range, 8 h to 5 d) after exposure to contaminated water, but it can occur as long as 14 days after exposure
- Lesions began as pruritic, erythematous macules that progress to papules and pustules
- Lesions involve exposed skin, but they usually spare the face, the neck, the soles, and the palms.
- The rash usually clears spontaneously in 2-10 days, rarely recurs, and heals without scarring

+

# What's the Diagnosis?





# ***Pseudomonas***

## ***Dermatitis/Folliculitis***



- *P aeruginosa*, ubiquitous gram negative organism found in soil and fresh water
- Gains entry through hair follicles or via breaks in the skin
- Minor trauma from wax depilation or vigorous rubbing with sponges may facilitate the entry of organisms into the skin
- Hot water, high pH (>7.8), and low chlorine level (<0.5 mg/L) all predispose to infection
- The exanthem onset is usually 48 hours (range, 8 h to 5 d) after exposure to contaminated water, but it can occur as long as 14 days after exposure

# + *Pseudomonas* *Dermatitis/Folliculitis*

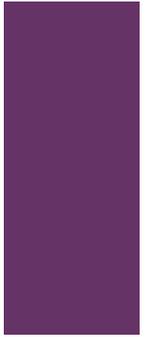
Diagnosis	Management
<ul style="list-style-type: none"><li>•Clinical presentation and history</li><li>•The diagnosis is best verified by results of bacterial culture growth from either a fresh pustule or a sample of contaminated water.</li><li>•Gram stain of a pustule</li></ul>	<ul style="list-style-type: none"><li>--<i>P. aeruginosa</i> is usually a self-limited infection, clearing in 2-10 days</li><li>--Most cases do not require treatment</li><li>•For complicated cases: associated mastitis, persistent infections, exudate, immunosuppression, a course of Ciprofloxacin 500-750 BID may be helpful</li></ul>



## Quick Note

Symptomatic relief of *Pseudomonas* folliculitis may be achieved through the use of acetic acid 5% compresses for 20 minutes twice a day to 4 times a day

Other option includes Burow's (5% aluminum subacetate) solution to help relieve the pruritis and facilitate healing of lesions



# + What is the diagnosis

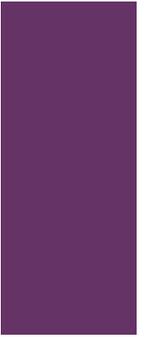


# + Tinea Pedis

- Affects all ages but is more common in adults
- Frequently due to *Trichophyton (T.) rubrum* – often causes moccasin-type patterns of infection – lasts a long time and difficult to treat. Usually patchy fine dry scaling on the sole of the foot. In severe cases, the toenails become infected and can thicken, crumble, and even fall out
- May be vesicular or in the toe webs (more likely with *Trichophyton mentagrophytes*) - infection appears suddenly, is severe, and is easily treated
- Predisposing factors: exposed to the spores (moist damp environments, skin innately produces less fatty acid, occlusive footwear, hyperhidrosis, immunosuppression, lymphedema)
- **Treatment** -- topical antifungal creams with or without keratolytics such as urea, oral antifungals for nail involvement, avoidance of occlusion in damp environments, and drying soaks to assist with vesicular varieties

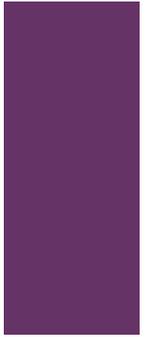


# + What's the diagnosis?



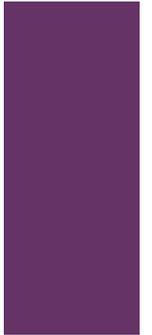
# + Intertrigo

- Inflammatory skin condition
- Often accompanied by secondary infection (fungal, bacterial)
- Involves skin folds – warm, moist regions
- More likely found under breasts, axilla, underneath abdominal pannus, inner side of thigh, genital region, crease of neck



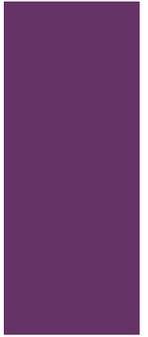
# + Intertrigo

- Risk factors
  - Obesity
  - Skin on skin rubbing
  - Warm moist skin
  - Diabetes
  - Tight clothing
  - Have a splint, brace or artificial limb
  - Urinary and fecal incontinence



# + Intertrigo- Clinical Features

- Erythema, sometimes brownish appearance
- Macerated plaques – sometimes raw, crusting, oozing
- Satellite papules/pustules
- Peripheral scaling and/or cracking
- Pruritic
- Sometimes painful
- Sometimes malodorous



# + Treatment- Intertrigo

- Address predisposing factors – minimize friction and moisture
- Topical antifungal agent
- Drying agent
- Topical steroids
- Systemic antifungal
- Antibacterial if needed

+

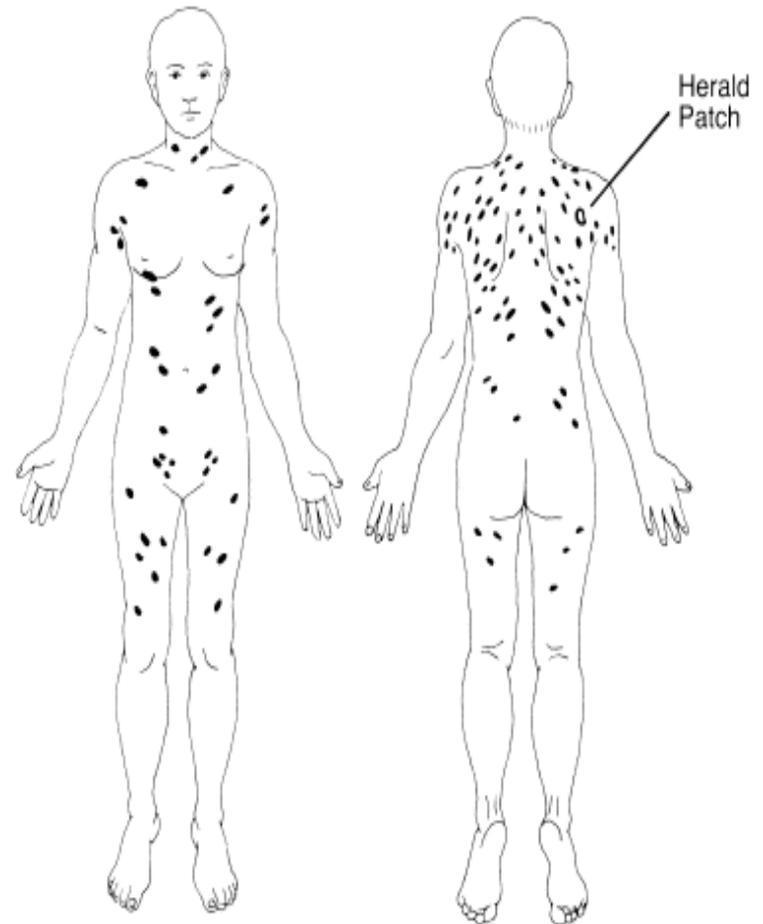
# What's the diagnosis?



# † Pityriasis Rosea

## ■ Symptoms/exam

- Herald patch appears several days before the rest of the exanthem
- Days later small plaques appear on the trunk, arms and thighs
- Delicate peripheral collarette of scale distributed parallel to the lines of the ribs, creating “Christmas tree” distribution



# + Pityriasis Rosea

- Benign, self-limited eruption
- Generally affects adolescents and young adults as a response to a viral infection
- Most commonly seen between ages 10 – 35 and during pregnancy

# + Pityriasis Rosea - Treatment

- Directed to symptom relief with antihistamines for itching
- Moderate-potency steroids may be used for itching if necessary
- Spontaneous resolution usually occurs within 1-2 months.

+ What is the diagnosis?



# + Staph aureus (poss. MRSA)

- Facts: Gram positive cocci appear usually as pustules, furuncles, or erosions with honey-colored crusts
- Staph aureus is normal inhabitant of the nares
- Treatment: MSSA – Cephalexin\*
- Previously MRSA was only nosocomial, but now is widespread and quickly becoming a community acquired epidemic
- If lesion purulent or not responding to initial treatment\*
  - MRSA Community Acquired– TMP-SMX (most strains sensitive), Clindamycin, or Doxycycline
  - Treat nares with mupirocin
  - I & D of abscess

# + What is the diagnosis?

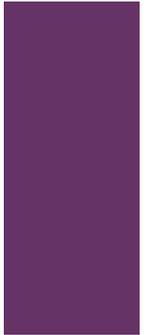


# + Rocky Mountain Spotted Fever

- Facts: centrifugal vasculitis manifested by widespread blanching macules and papules most prominent on the extremities especially palms and soles – onset 2-5 days after flu-like symptoms
- Associated with severe headache, fever, other flu-like symptoms, non-pitting edema of b/l ankles
- Thrombocytopenia, hyponatremia, and/or elevated liver enzyme levels are often helpful predictors of RMSF
- *Rickettsia rickettsii* infection after wood tick bite
- Diagnosis: *R. Rickettsii* organism blood test – antibodies often not present during first week of illness
- Treatment: doxycycline 100mg bid x 7 – 14 days



# Treatment



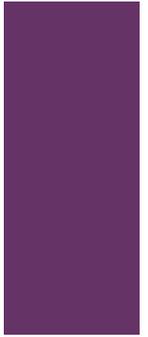
<b>Age Category</b>	<b>Drug</b>	<b>Dosage</b>	<b>Maximum</b>	<b>Duration (Days)</b>
<b>Adults</b>	Doxycycline	100 mg twice per day, orally or IV	100 mg/dose	Patients should be treated for at least 3 days after the fever subsides and until there is evidence of clinical improvement. Minimum course of treatment is 5-7 days.
<b>Children weighing &lt;100 lbs. (45.4 kg)</b>	Doxycycline	2.2 mg/kg per dose twice per day, orally or IV	100 mg/dose	

# + What is the diagnosis?



# + Impetigo

- Facts: Usually occurs in early childhood, commonly in Summer
- Staph, strep, or combined infection w/ discrete thin walled vesicles that become pustular and then rupture releasing thin straw-colored, seropurulent discharge; forms stratified golden crusts when dry
- Mostly on exposed parts of the body, face and neck; spreads peripherally and clears centrally
- 2-5% incidence of acute glomerulonephritis w/ Grp A b-hemolytic strep
- Treatment: Oral antibiotics –semi-synthetic penicillin or first generation cephalosporin (unless MRSA is suspected) and topical antibiotic such as Bactroban or Altanax
- Soak crusts often

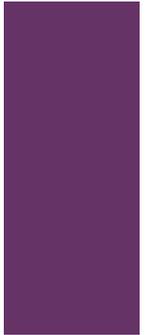


# + What's the Diagnosis?



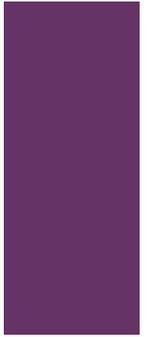
# + Acanthosis Nigricans

- Velvety, light brown to black markings
- Often occur along the neck, in armpits, groin and under breasts
- Can be associated with healthy people or associated in those with:
  - Diabetes (especially in those with high insulin levels)
  - Addison's disease, hypothyroidism
  - Use of oral contraceptives





# Acanthosis Nigricans- Treatment



- Reduce circulating insulin - ADA Diet
- Decrease weight if obese
- Treat contributing medical conditions (hypothyroidism, etc.)
- Retin-A, alpha hydroxyacids and salicylic acid may help
- Avoid medications that contribute to condition

# + What's the Diagnosis?



# + Herpetic Whitlow

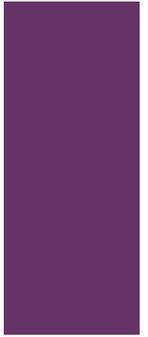
- Pain and edema of a finger – often with vesicular lesions
- Herpes simplex virus 1 (HSV-1) and herpes simplex virus 2 (HSV-2) causative organisms - ?history of genital herpes?
- Most commonly involved digits are the thumb and index fingers – typically affects terminally phalynx
- History of a prodrome of fever or malaise may precede the onset of symptoms by several days
- Autoinoculation is a common route, especially in children
- Those caring for or coming in contact with someone that has typical lesions are at risk
- Previous episode in the same digit suggest reactivation and recurrence





# Herpetic Whitlow

- Self limited
- Treatment most often is directed toward symptomatic relief
- In primary infections, topical acyclovir 5% has been demonstrated to shorten the duration of symptoms and viral shedding
- Oral acyclovir may prevent recurrence. Doses of 800 mg twice daily initiated during the prodrome may abort the recurrence
- Famciclovir or valacyclovir may also shorten the clinical manifestations of acute occurrence



# + Sun Related Skin Concerns

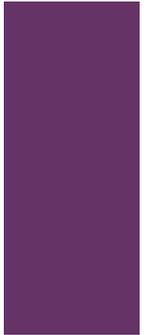


# + What's the Diagnosis?



# + Keratoacanthoma

- Keratoacanthomas are potentially a low-grade subtype of squamous cell carcinoma
- Develop rapidly as solitary, painless lesions on sun-exposed skin (usually on hands, face, neck dorsum of upper extremities) with a characteristic crateriform “volcano-like” appearance
- May spontaneously involute and resolve leaving an atrophic scar – however treatment is recommended
- Patients will rarely present with multiple, eruptive keratoacanthomas
- Often arise within scars or sites of skin injury, including following attempted, incomplete removal of individual keratoacanthomas





# Management & Therapy Tips

- Keratoacanthomas are potentially a sub-type of squamous cell cancer with a distinct clinical appearance, which develop rapidly and may self resolve.
- As a type of squamous cell, most keratoacanthomas warrant treatment. Important to biopsy.
- Surgical excision, intralesional chemotherapy (such as with methotrexate, 5-fluorouracil, or in some cases bleomycin), or other destructive modalities may be employed.



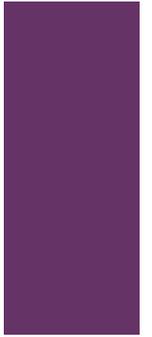
+ Working On More Than A Tan  
On a Path toward a diagnosis of?



# +WHAT'S THE DIAGNOSIS?



+ Actinic Keratosis = AK



# + Actinic (solar) keratosis – clinical features

- Poorly circumscribed
- Variable texture – smooth or scaly
- Variable color - flesh colored, pigmented or erythematous
- Macules or papules on sun-exposed areas
- Benign
- **Can be premalignant for squamous cell CA**

# + AK on bottom lip = Actinic Cheilitis

## Potential Signs

- Whitish scale on bottom lip
- Rough scaly lip
- Splitting lips or your
- Lips always feel dry

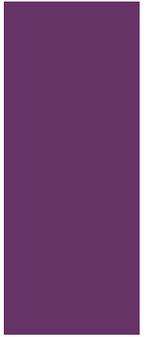
## Actinic Cheilitis



# + Actinic Keratosis – AK

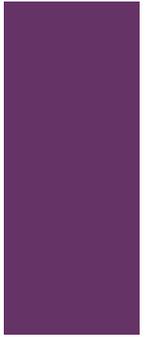
Who is most at risk?

- Hair color is naturally blond or red
- Fair skin
- Eyes are naturally blue, green, or hazel
- Skin freckles or burns when in the sun
- 40 years of age or older
- Weakened immune system
- Roofers (have a higher risk because they work with tar and spend their days outdoors)
- AK's appear earlier in people who use tanning beds and sun lamps



# + Actinic (solar) keratosis

- Diagnosis:
- Suspicion for AK
- Biopsy



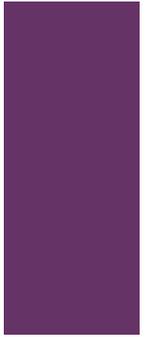
# + Treatment for AK

## ■ PROCEDURES

- Cryotherapy
- Chemical peel
- Curettage – possibly followed by Electrosurgery
- Photodynamic therapy (PDT)
- Laser resurfacing

## ■ MEDICATIONS

- 5-fluorouracil (5-FU) cream
- Diclofenac sodium gel
- Imiquimod cream
- Ingenol mebutate gel



# + What is the Diagnosis?



# + Basal Cell Carcinoma

- Facts: Common in fair-skinned people with UVR (blistering sunburns as a child) and immunosuppression
- Usually appears as a small waxy, translucent, “pearly” or “rolled border” around a central depression that may be ulcerated, crusting or bleeding; telangiectasias course throughout
- Commonly on the head or neck (esp nose)
- These tumors grow slowly and more laterally; rarely metastatic
- Treatment: Biopsy suspected lesions
  - Imiquimod if superficial lesions, photodynamic therapy or excision with clean margins;
  - MOHS surgery if cosmetic area or extensive, invasive lesion

+ What is the diagnosis?



# + Squamous Cell Carcinoma

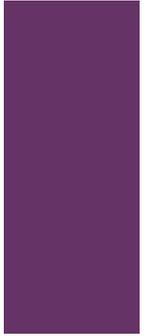
- Facts: 2<sup>nd</sup> most common form of skin cancer
- Common in fair-skinned people from UVR.
- Usually at site of initial actinic keratosis; appears from an indurated base and becomes elevated with telangiectasias becoming progressively nodular and ulcerated—hidden by a thin crust
- Usually on the face, ear, lips, mouth or dorsal hand and arms
- Increased likelihood with immunosuppression
- Can develop into large masses and spread deeper into the tissues and occasionally to other parts of the body
- Treatment: Biopsy suspected lesion; Electrodesiccation and curettage x 3 and/or 5-FU, or imiquimod if small & superficial

# + What is the diagnosis?



# + Melanoma

- Facts: Cancer of the pigment producing cells in the epidermis, or upper surface of the skin.
- Frequently metastatic if not found early
- Most common locations are the exposed parts of the skin, particularly the face and neck
- Hereditary forms have a predilection for areas of sun protection— palms, soles, fingernails and vaginal mucosa



# + Melanoma Cont' d

## Variants of melanoma

-lentigo maligna - flat and thin variant, frequently presenting as a large freckle

-superficial spreading - flat, or only slightly raised, and a bit more uniform in color

-nodular melanoma – elevated and often rounded growth of the cancer

-acral lentiginous - occurs on the palms and soles of the hands and feet, or in the cuticles or nail bed

-desmoplastic - does not often produce pigment and is the most difficult to diagnose without a biopsy

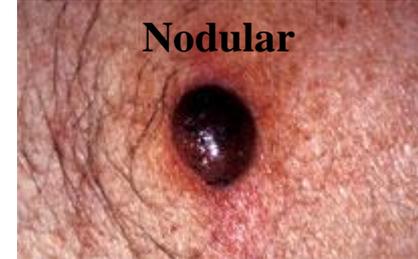
Desmoplastic



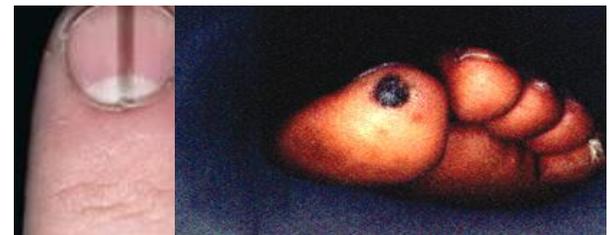
Superficial Spreading



Nodular



Acral Lentiginous



# + ABCD's

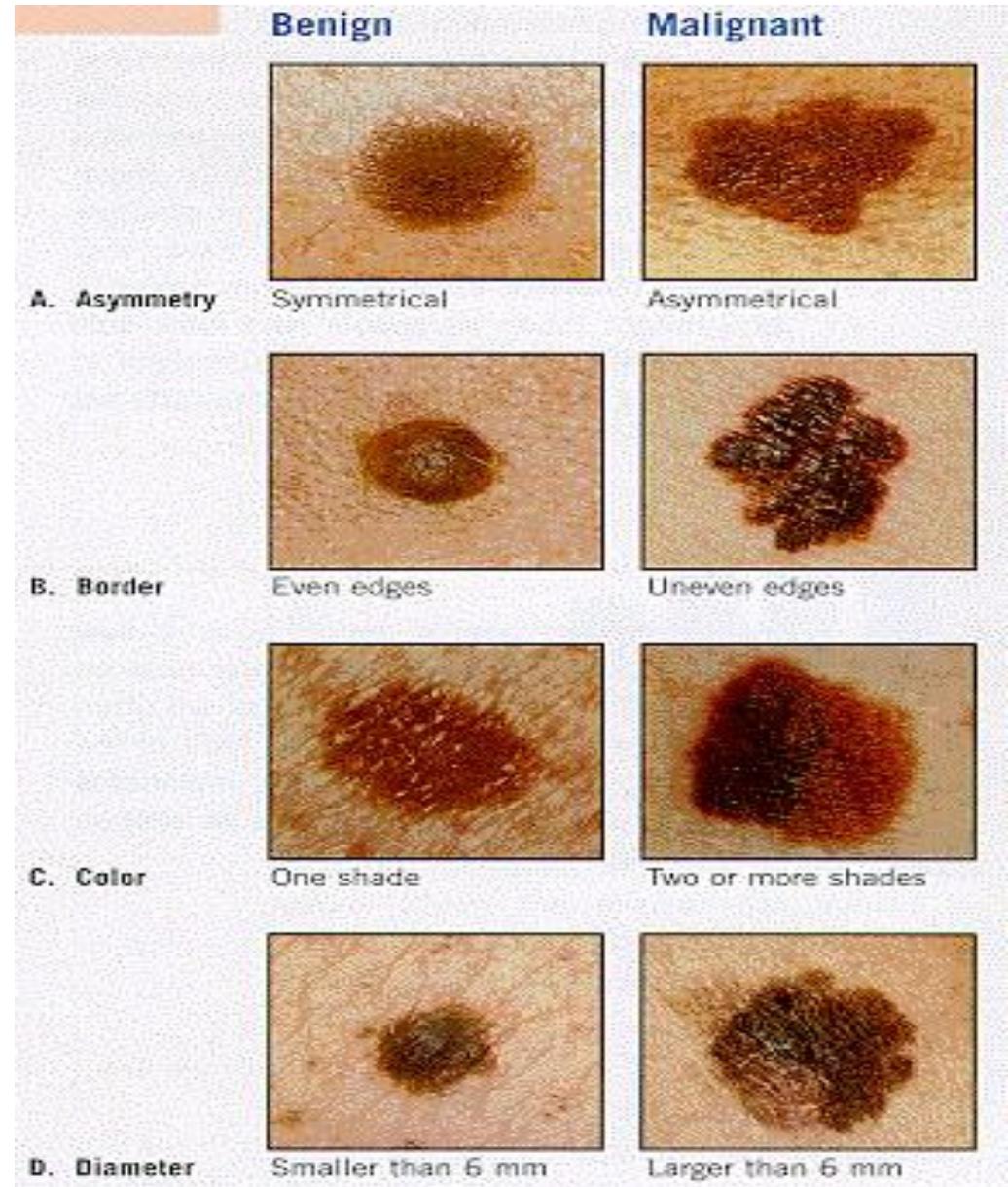
**Asymmetry** - Melanoma lesions are typically irregular in shape. Benign moles are round.

**Border** - Melanoma lesions typically have uneven borders, while benign moles have smooth, even borders.

**Color** - Melanoma lesions often contain many shades of brown or black; benign moles are usually one shade.

**Diameter** - Melanoma lesions are often more than 5 millimeters in diameter (the size of a pencil eraser); benign moles are smaller.

**Evolutionary Change** - Documented change of appearance in the lesion over time.





# The American Joint Committee on Cancer (AJCC) TNM System

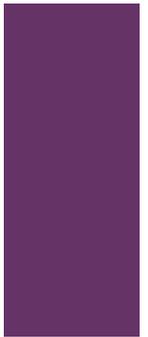
## ■ Three Key Components

- **T - tumor** (how far it has grown within the skin - thickness and other factors – ulceration and mitotic rate)
- **N - spread to nearby lymph nodes**
- **M - whether the melanoma has metastasized** to distant organs, which organs it has reached, and on blood levels of LDH.
- Two types of staging for melanoma:
  - *Clinical staging* - what is found on physical exam, biopsy/removal of the main melanoma, and any imaging tests that are done.
  - *Pathologic staging* - determined after node biopsy results – may be higher than clinical stage



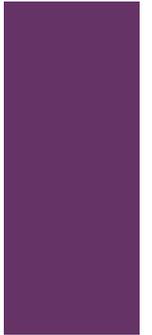
# + Melanoma

- **Melanoma Diagnostics Indicators**
- **Breslow Thickness** - the Breslow's Depth of Invasion is the most important determinant of prognosis for melanomas
- Increased tumor thickness is correlated with metastasis and poorer prognosis
- Breslow Thickness and Survival Rate:
  - <1mm: 5-year survival is 95-100%
  - 1-2mm: 5-year survival is 80-96%
  - 2.1-4mm: 5-year survival is 60-75%
  - >4mm: 5-year survival is 37-50%



# + Melanoma

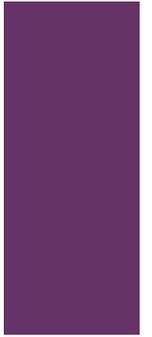
- MOHS may be an option for lentigo maligna which has frequent asymmetrical growth patterns
- Sentinel Node Biopsy in pt' s whose melanoma is thicker than 1 mm, or if ulceration present
- Adjuvant therapy if node positive or increased tumor thickness



# + Melanoma



+ Questions?  
Or itching to leave?



+

Thank you to UNECOM!



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