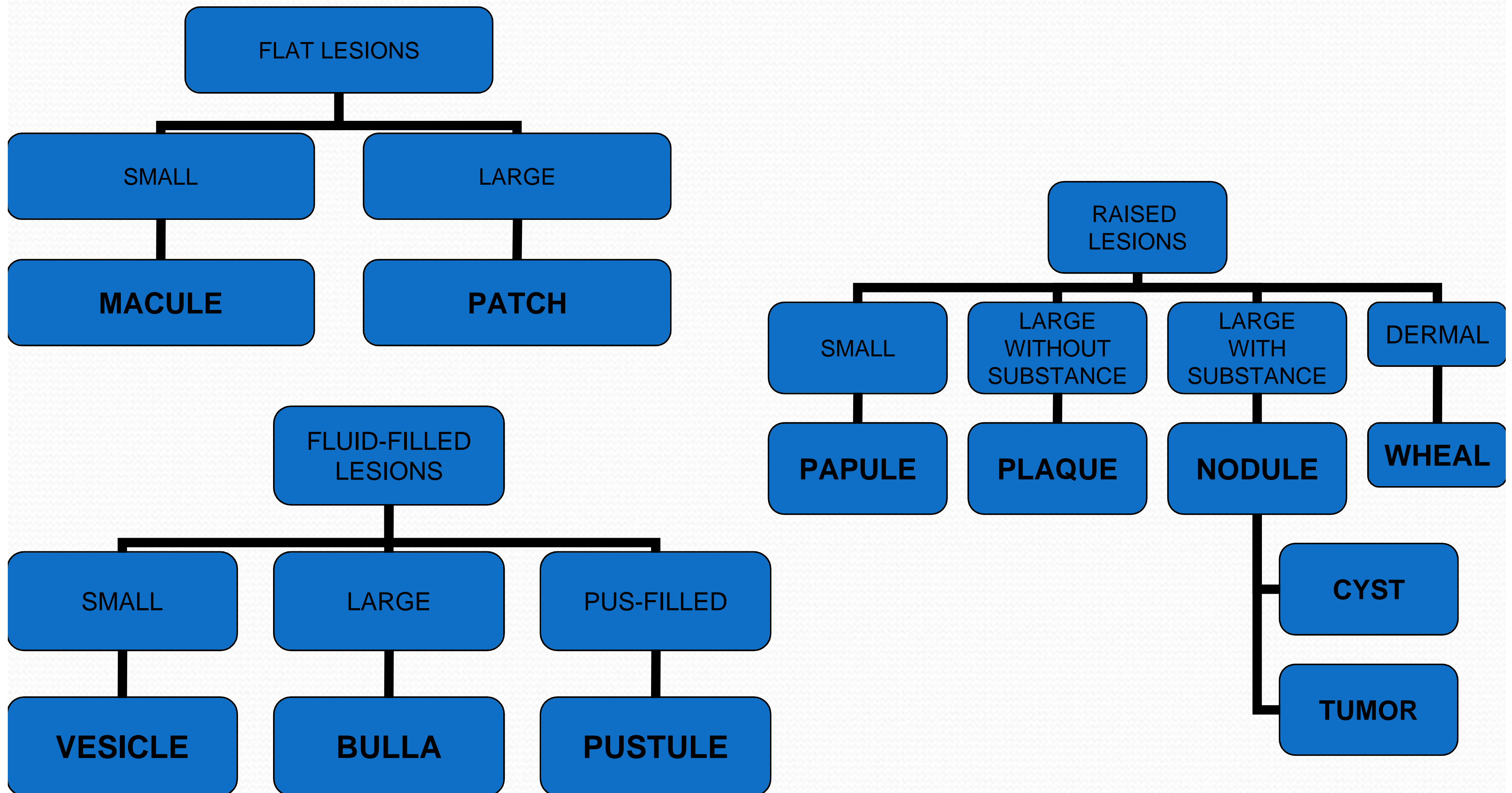
Dermatology 101 Review

Diagnostic Groupings

Review of Primary Lesions



Your description

- Location/Distribution
- Size/Configuration
- Border (Well-marginated/Poorly marginated)
- Color
- Morphological term
- Secondary Characteristics

- Example
  - On her right flank, there is a 1.5 cm well-marginated erythematous plaque with silvery scale.

Steroid potencies

- **VERY POTENT**
- (up to 600 times as potent as hydrocortisone)
  - **Clobetasol propionate (Temovate)**
  - Betamethasone dipropionate (Diprolene)
  - Halobetasol propionate (Ultravate)
- **POTENT**
- (over 100 times more potent than hydrocortisone)
  - **Fluocinonide (Lidex)**
  - Betamethasone valerate (Valisone)
  - Mometasone furoate (Elocon)
- **MODERATE**
- (2-25 times as potent as hydrocortisone)
  - Aclometasone dipropionate (Aclovate)
  - Fluocinolone acetonide (Synalar)
  - **Triamcinolone acetonide (Kenalog-inj and generic-top)**
  - Fluticasone propionate (Cutivate)
- **MILD**
  - **Hydrocortisone 0.5-2.5%**

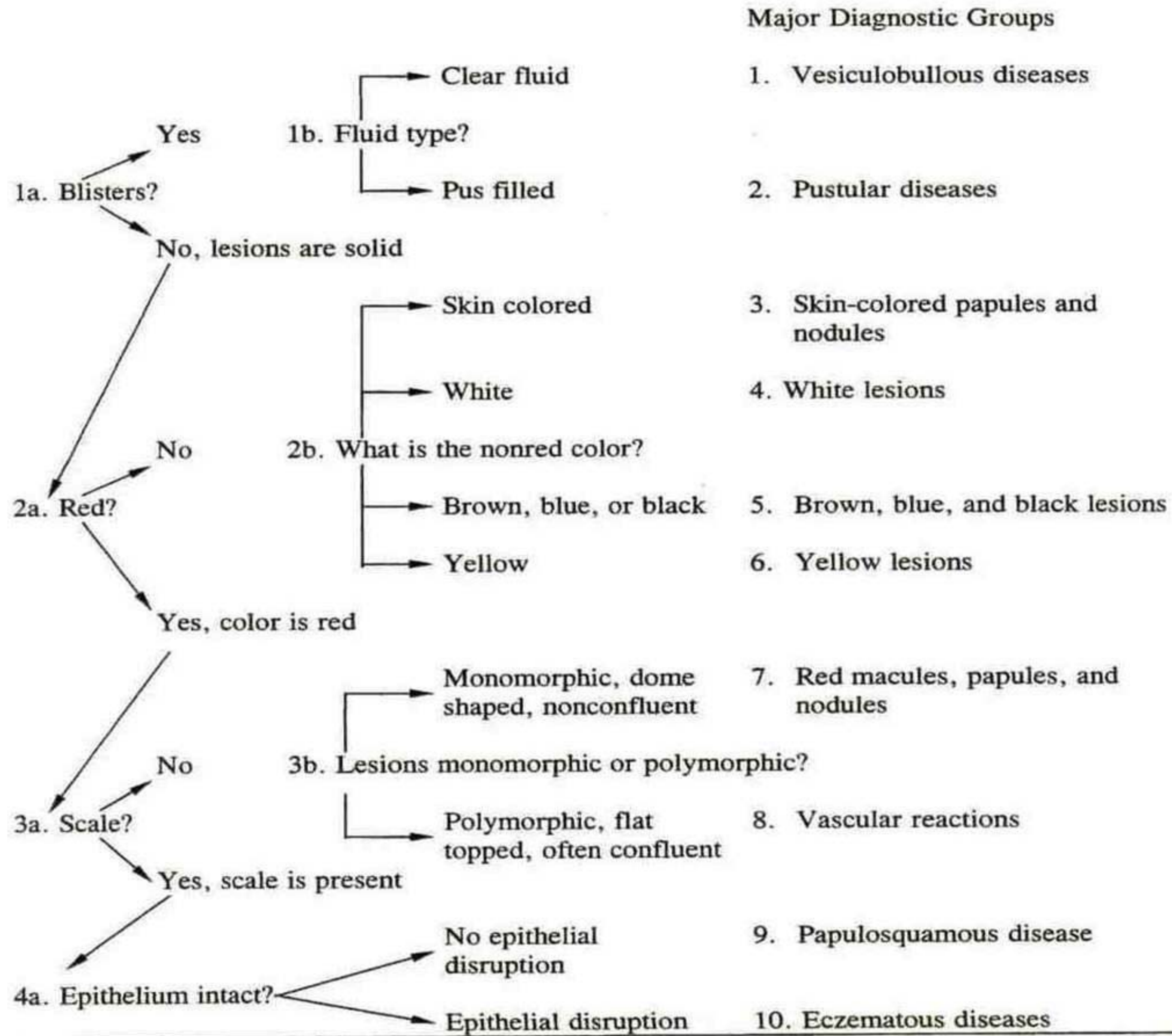
Vehicles

- The vehicle is also an important factor in the strength of your topical steroid
- OINTMENT > CREAM > LOTION
- *Any of the above under occlusion (ex. wet dressing) will make them stronger as well.

Dermatology 102

Using the Algorithm

To categorize a skin lesion you need to ask FOUR questions…

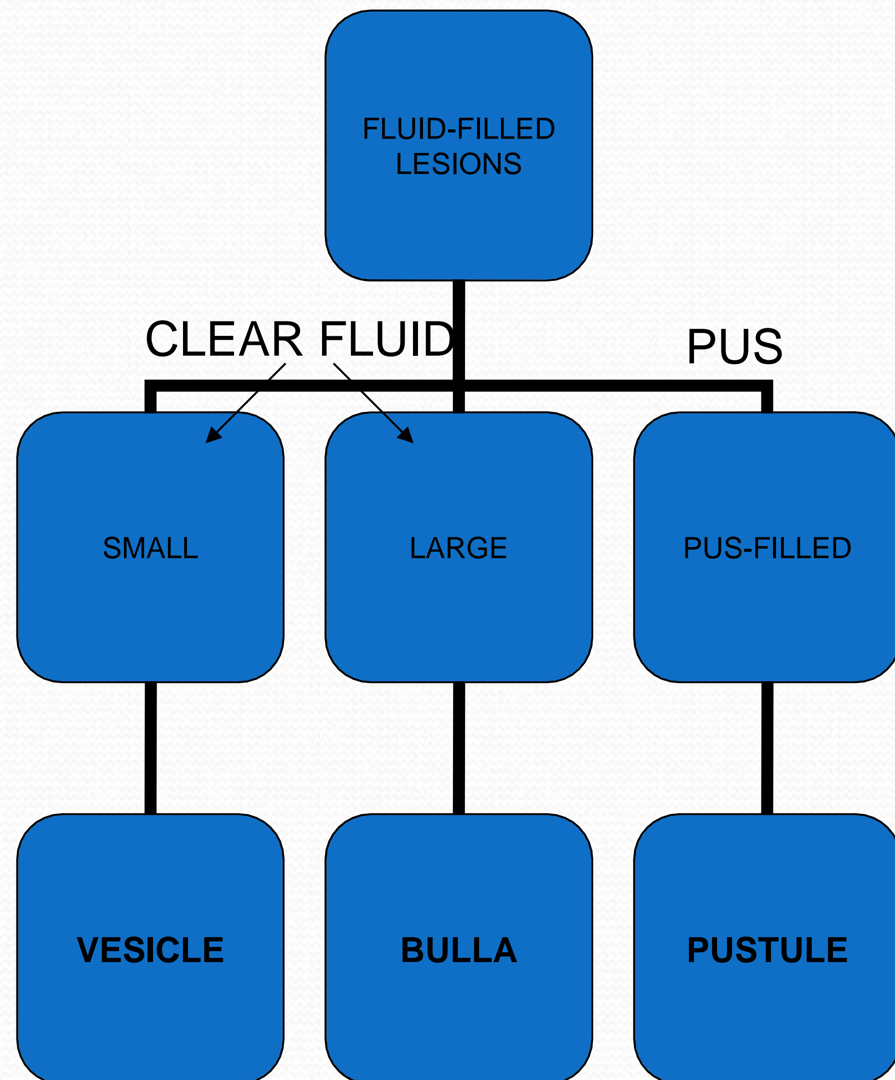


LYNCH ALGORITHM
Major Diagnostic Groups
1a. Blisters?
Yes
1b. Fluid type?
Clear fluid
1. Vesiculobullous diseases
Pus filled
2. Pustular diseases
No, lesions are solid
2a. Red?
No
2b. What is the nonred color?
Skin colored
3. Skin-colored papules and nodules
White
4. White lesions
Brown, blue, or black
5. Brown, blue, and black lesions
Yellow
6. Yellow lesions
Yes, color is red
3a. Scale?
No
3b. Lesions monomorphic or polymorphic?
Monomorphic, dome shaped, nonconfluent
7. Red macules, papules, and nodules
Polymorphic, flat topped, often confluent
8. Vascular reactions
Yes, scale is present
4a. Epithelium intact?
No epithelial disruption
9. Papulosquamous disease
Epithelial disruption
10. Eczematous diseases

Question #1:

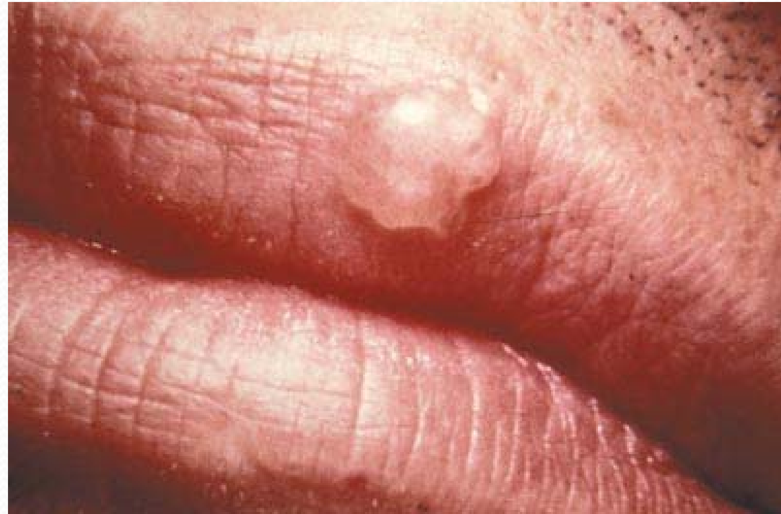
- **ARE THERE BLISTERS?**

- If YES…
- What type of fluid is within the blister?
    - Clear fluid?
    - Pus?



I. VESICULOBULLOUS DISEASES

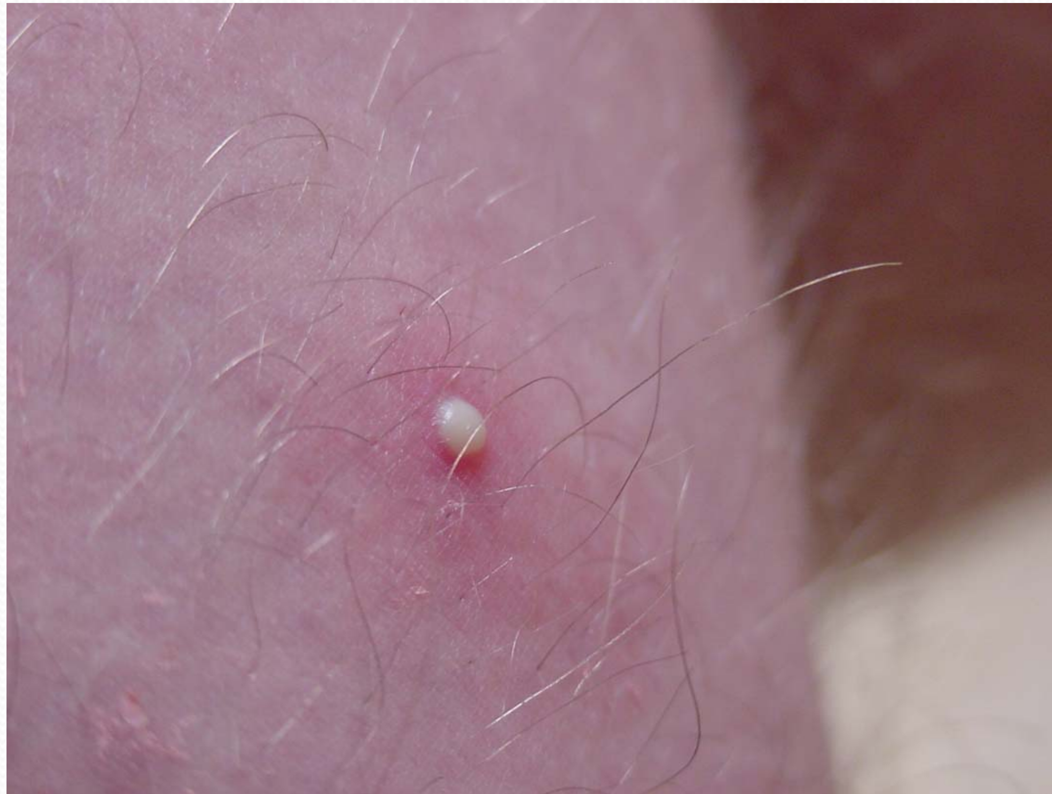
Blisters with clear fluid

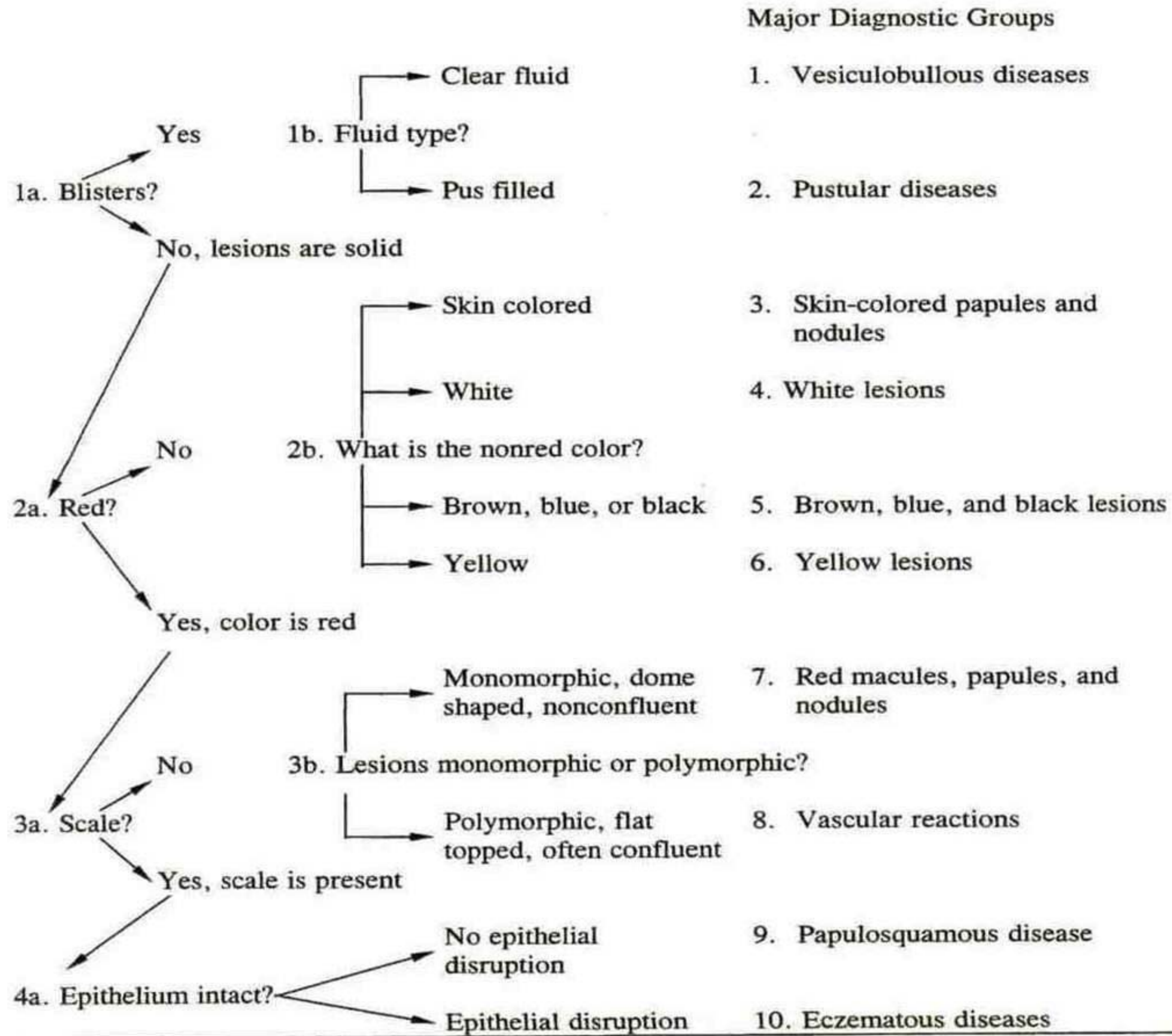


- Small = Vesicle
- Large = Bulla

II. PUSTULAR DISEASES

II. Blisters with PUS

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- Question #2a:

ARE THE LESIONS RED?

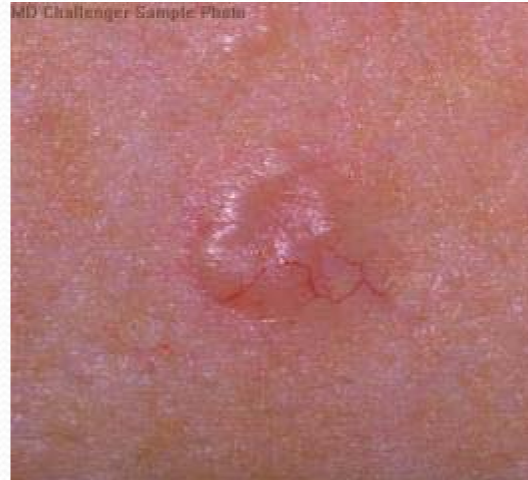
- If YES, continue with the algorithm
- If NO…

- Question #2b:
- WHAT IS THE COLOR OF THE LESIONS?

THE LESIONS ARE…

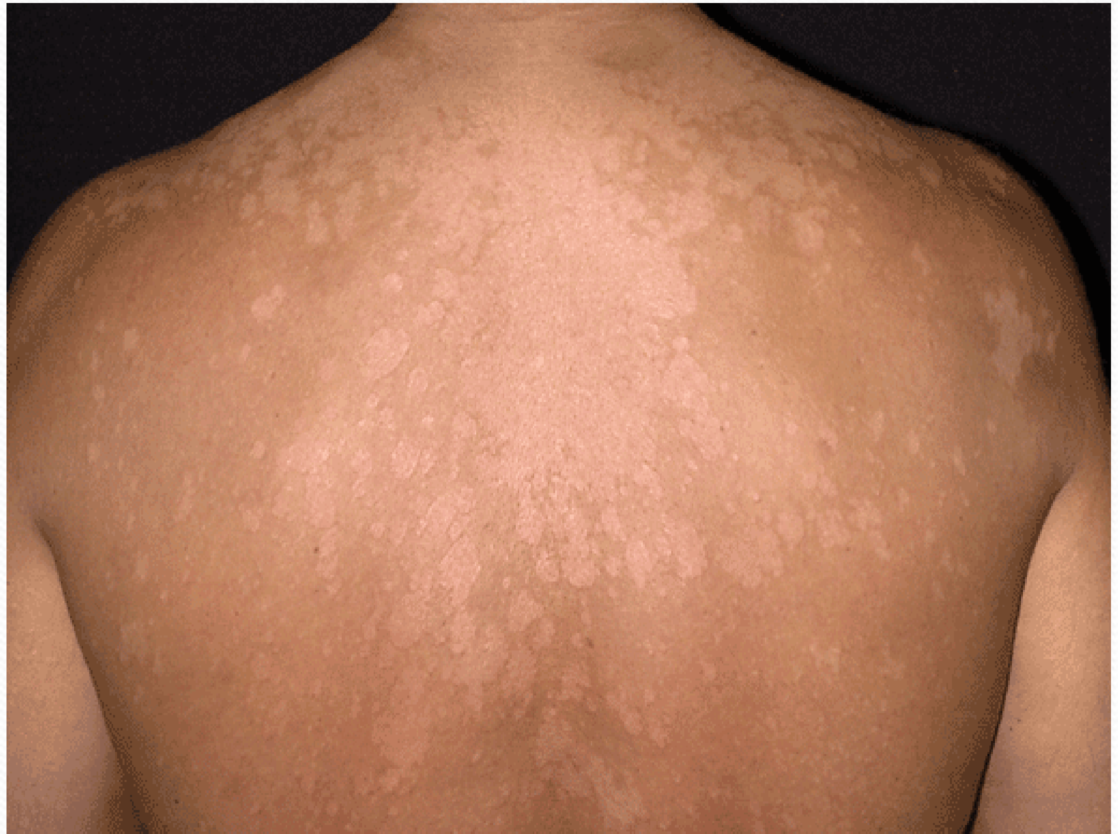
SKIN COLORED

III. SKIN COLORED PAPULES AND NODULES



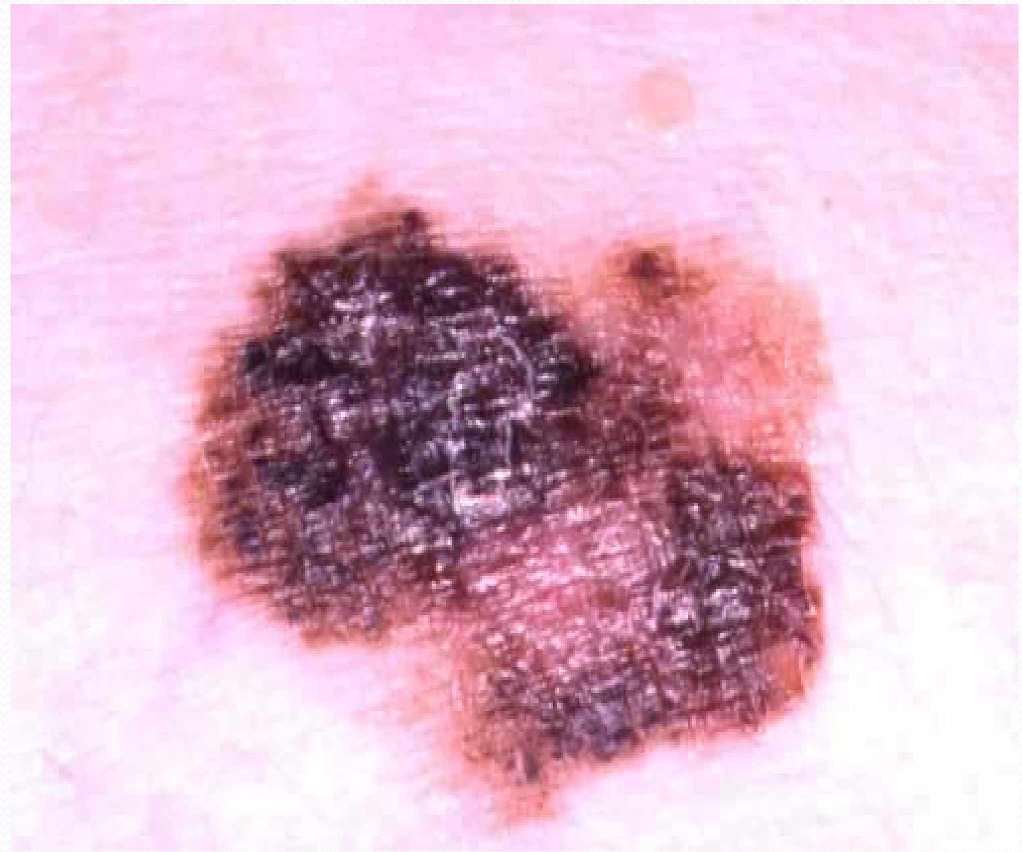
WHITE

IV. **WHITE LESIONS**



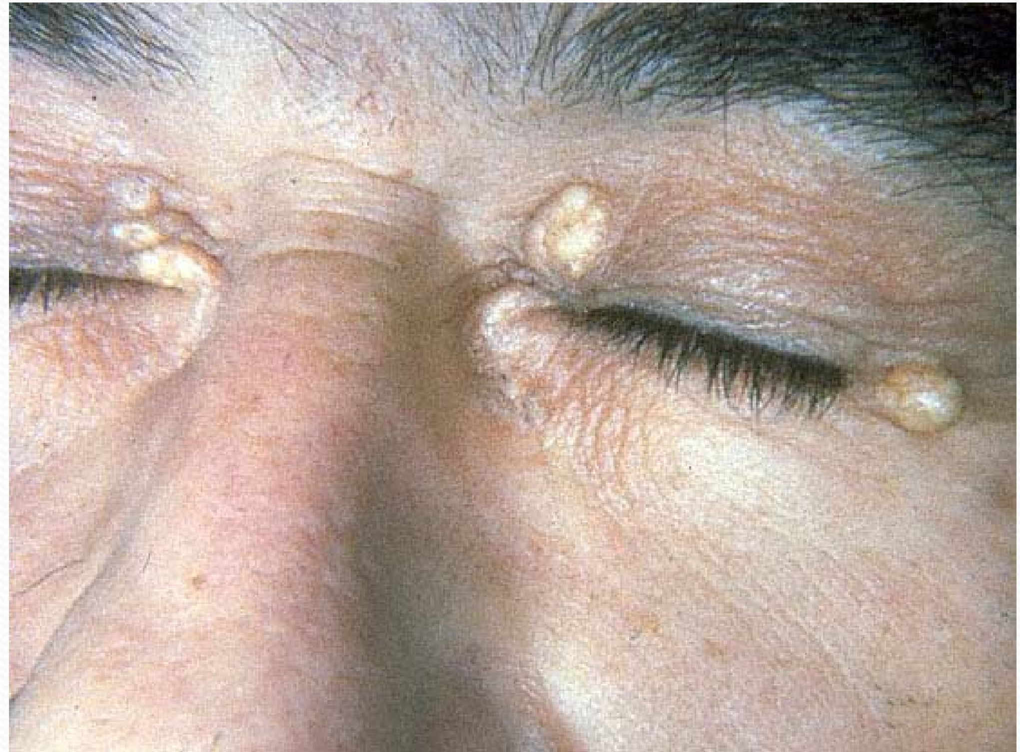
BROWN, BLUE, or BLACK

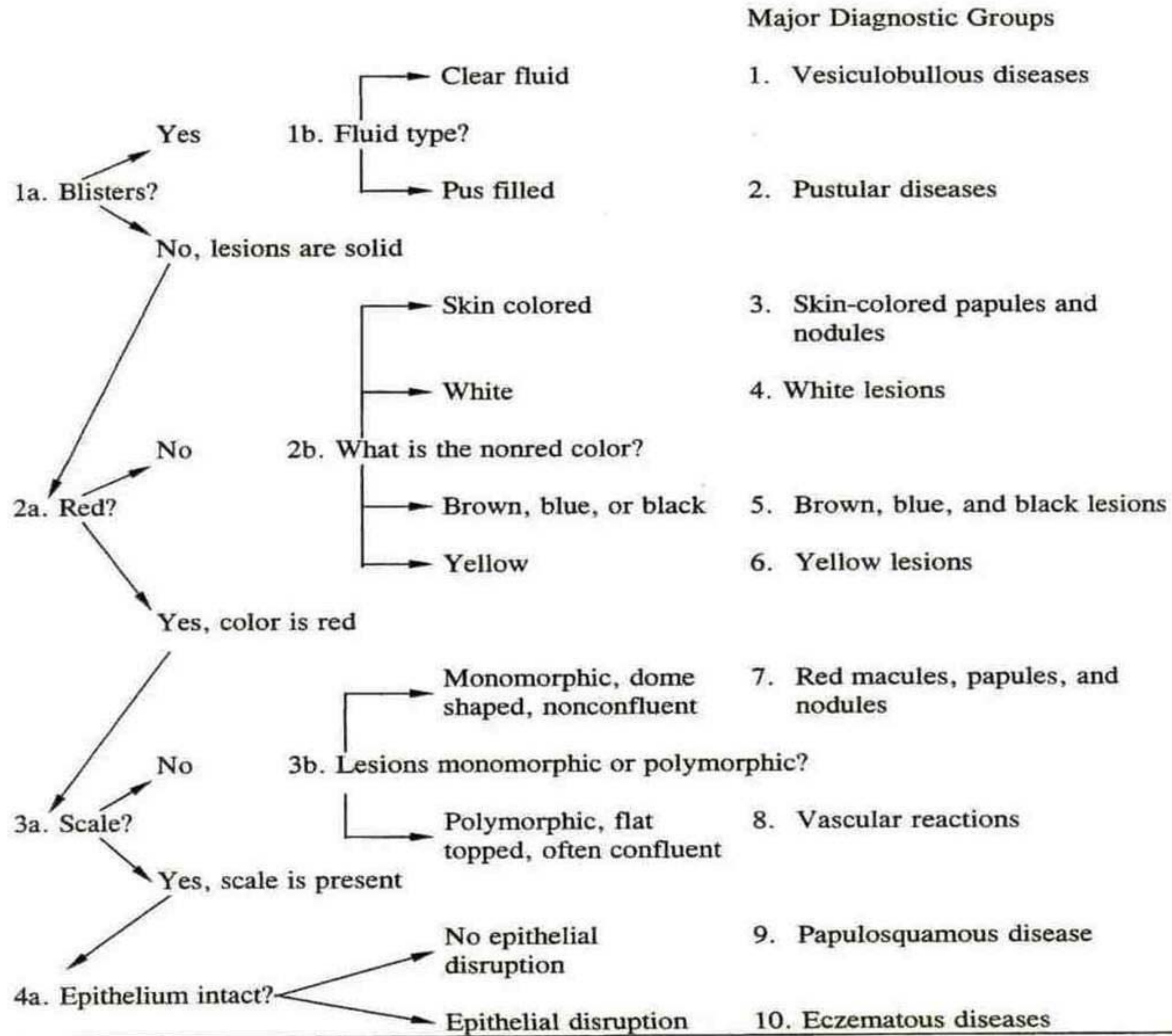
V. BROWN, BLUE OR BLACK LESIONS



YELLOW

VI. YELLOW LESIONS

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- Question #3a

IS THERE SCALE?

- If YES, continue with the algorithm
- If NO…

Question #3b

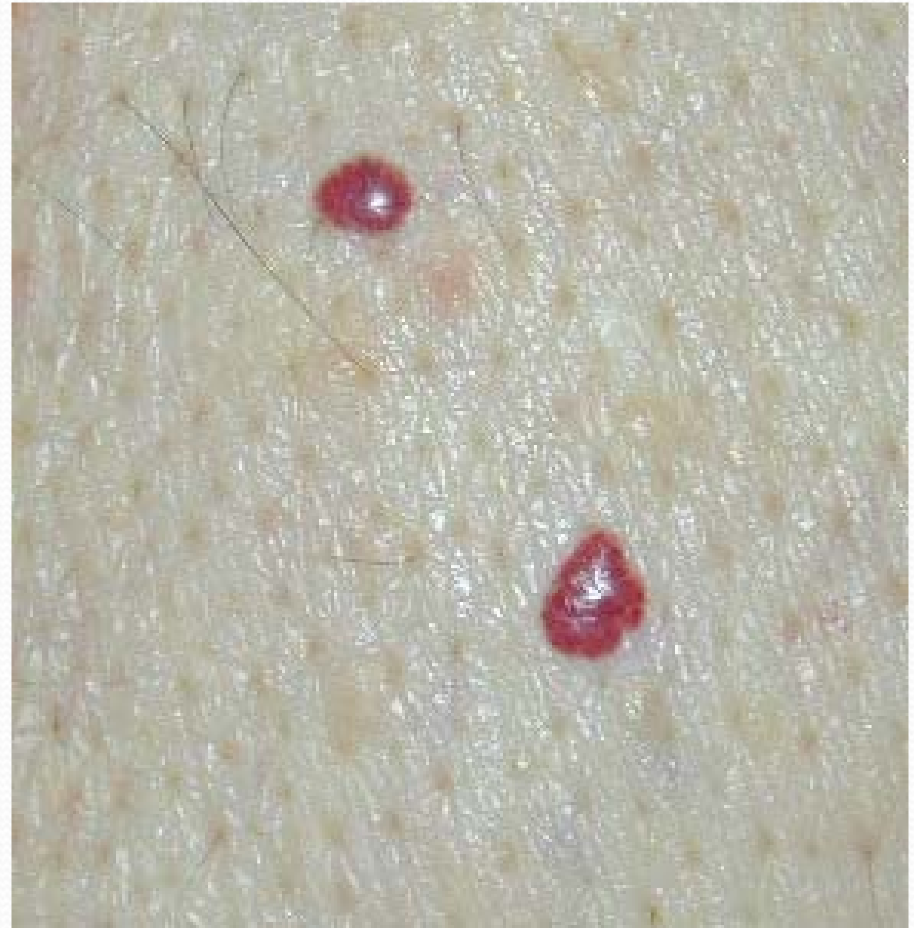
ARE THE LESIONS DOME-SHAPED OR FLAT-TOPPED?

The lesions are:

- SOLID
- RED
- DOME-SHAPED

(No scale)

VII. RED PAPULES AND NODULES

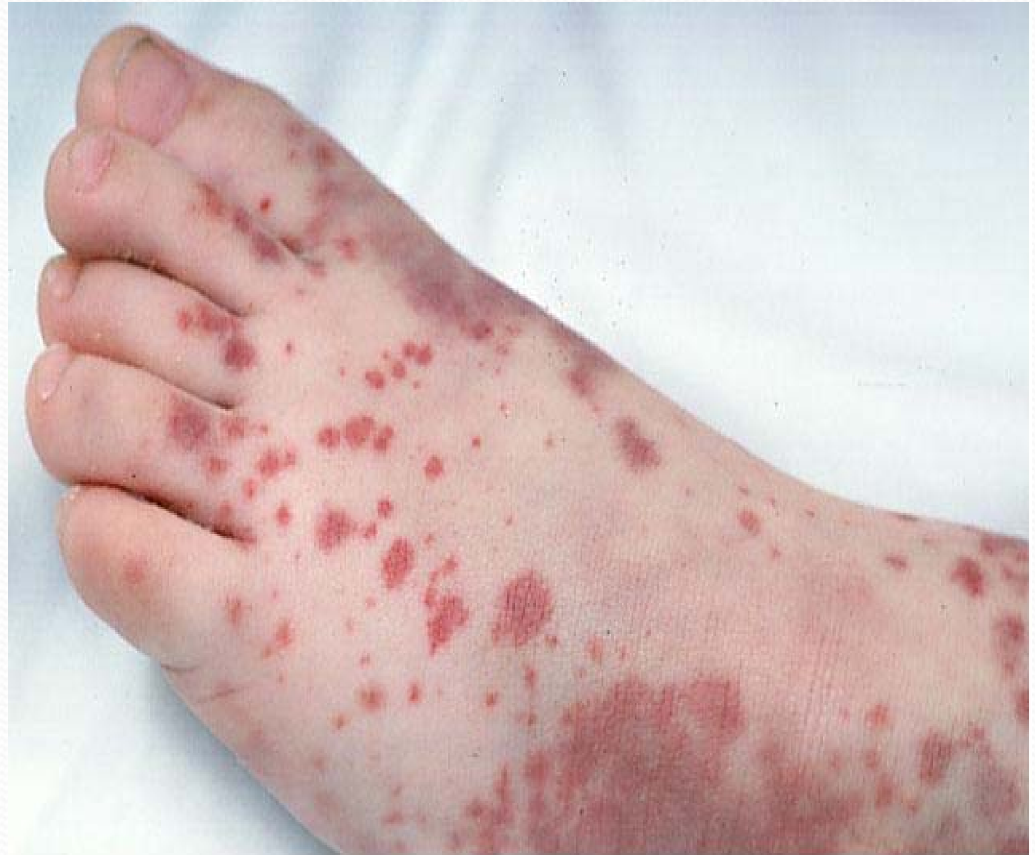


The lesions are:

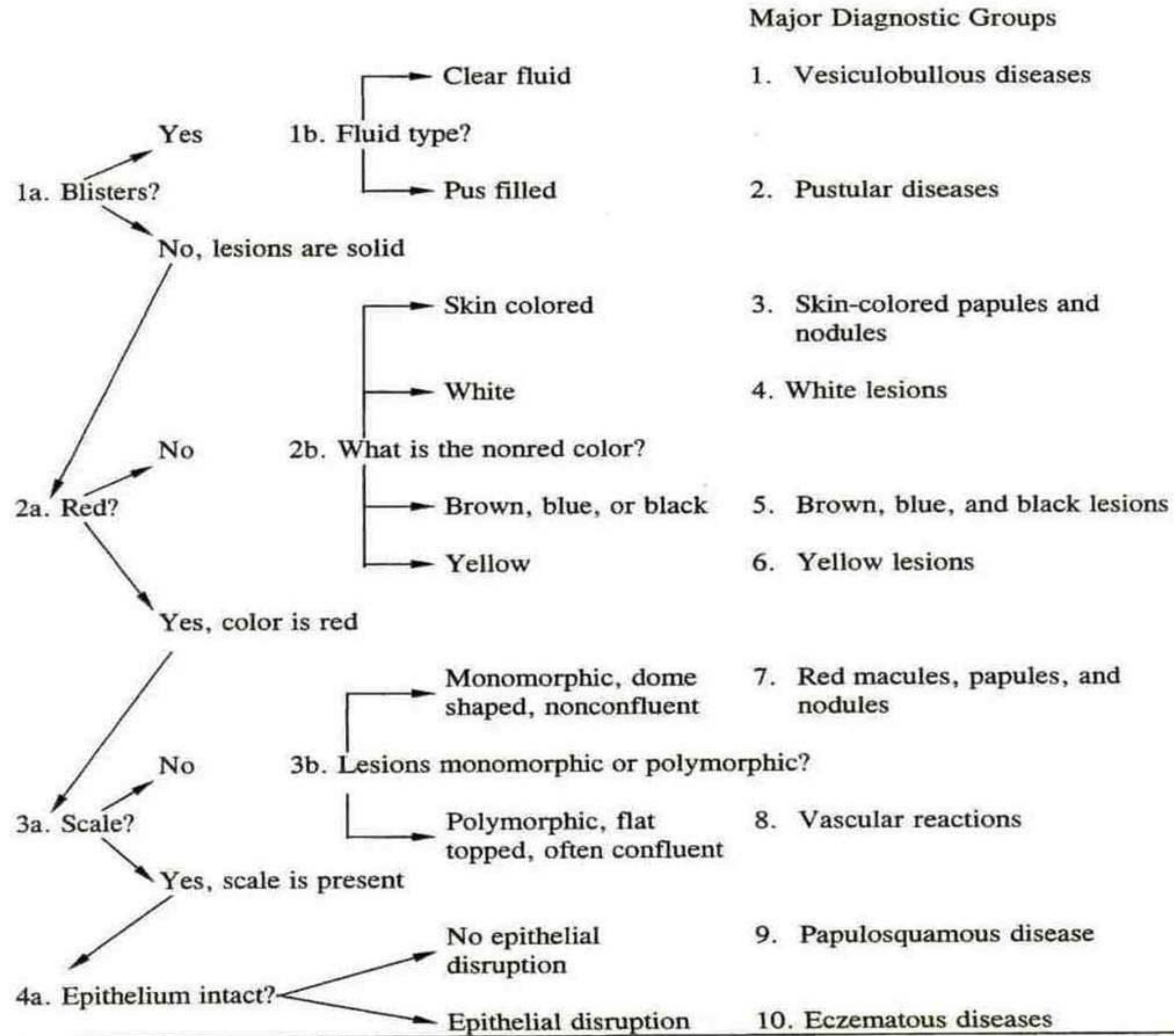
- SOLID
- RED
- FLAT-TOPPED

(No scale)

- **VIII. VASCULAR REACTIONS**



The last two categories…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YES, there is scale.

- The lesions are…
  - SOLID
  - RED and
  - SCALY

- Question 4:

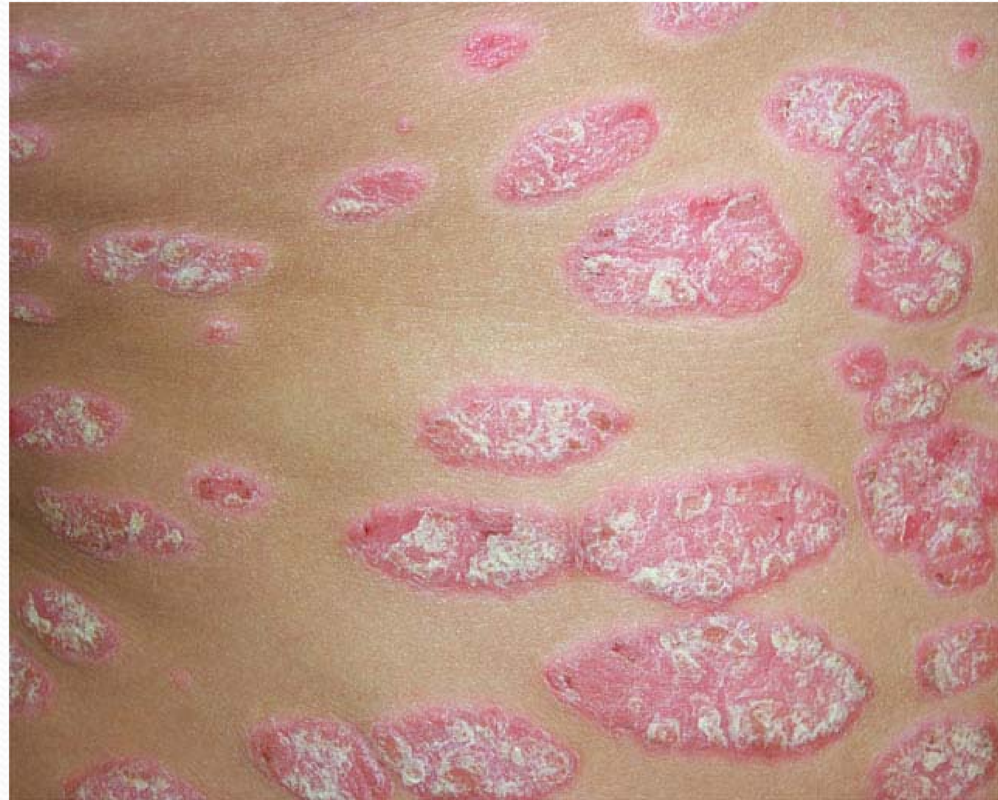
IS THERE EPITHELIAL DISRUPTION?

or

ARE THEY WELL-MARGINATED or POORLY-MARGINATED?

Well-marginated!

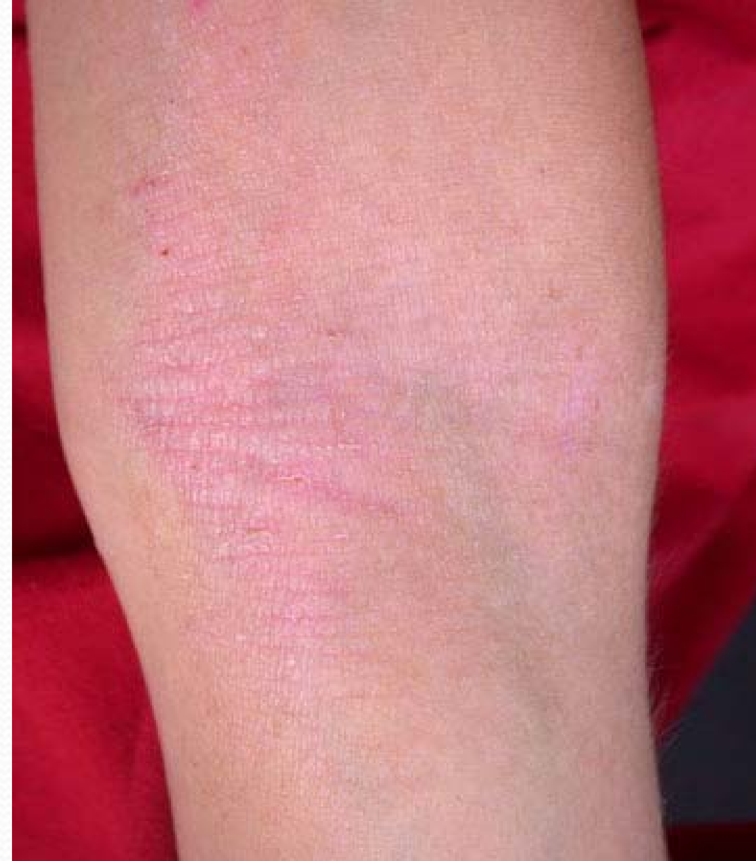
- Red
- Solid
- Scaly
- Well-marginated



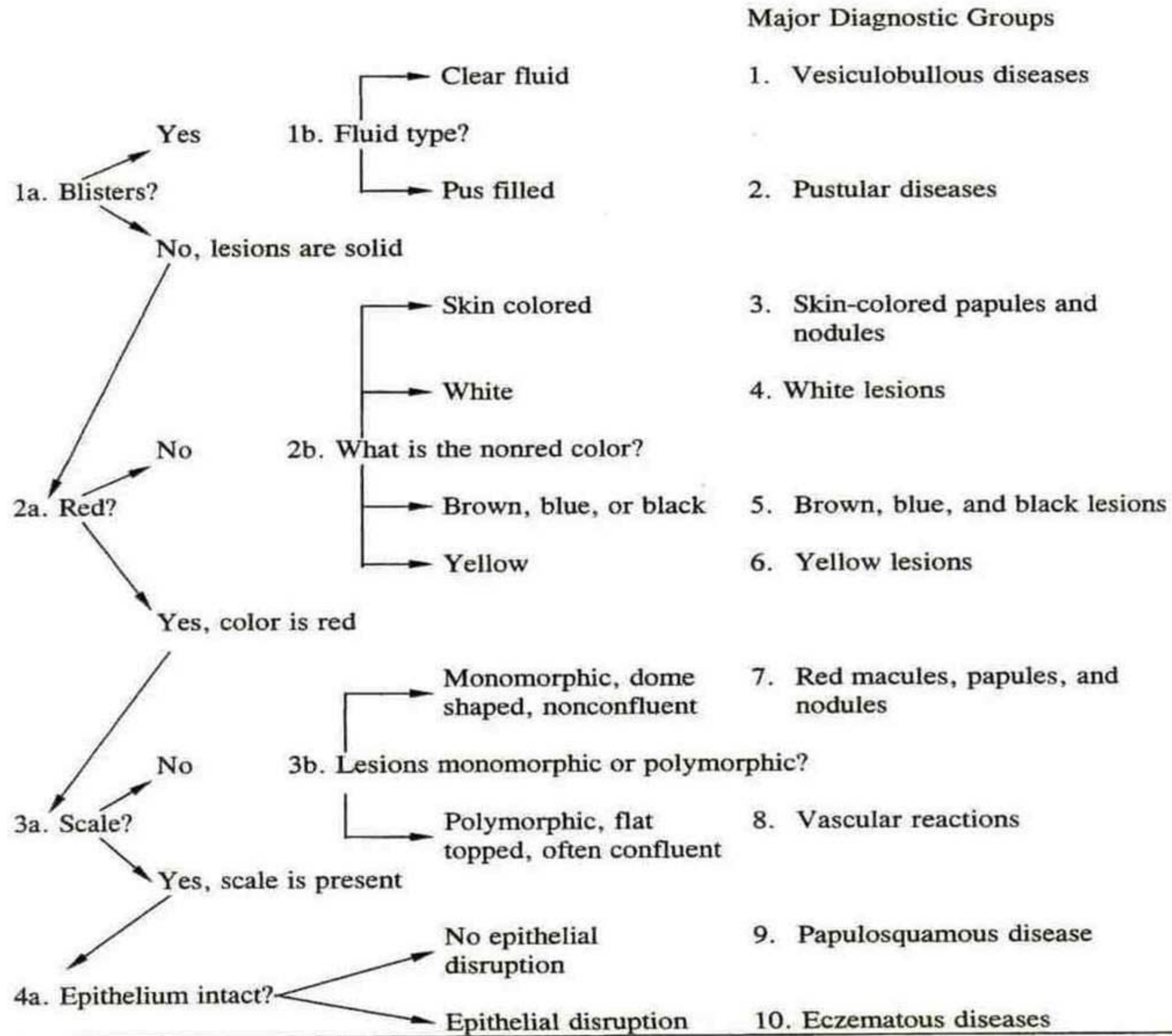
IX. PAPULOSQUAMOUS DISEASES

Poorly-marginated…

- Red
- Solid
- Scaly
- Poorly-marginated



X. ECZEMATOUS DISEASES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#

Now its time to cover some of the diseases…

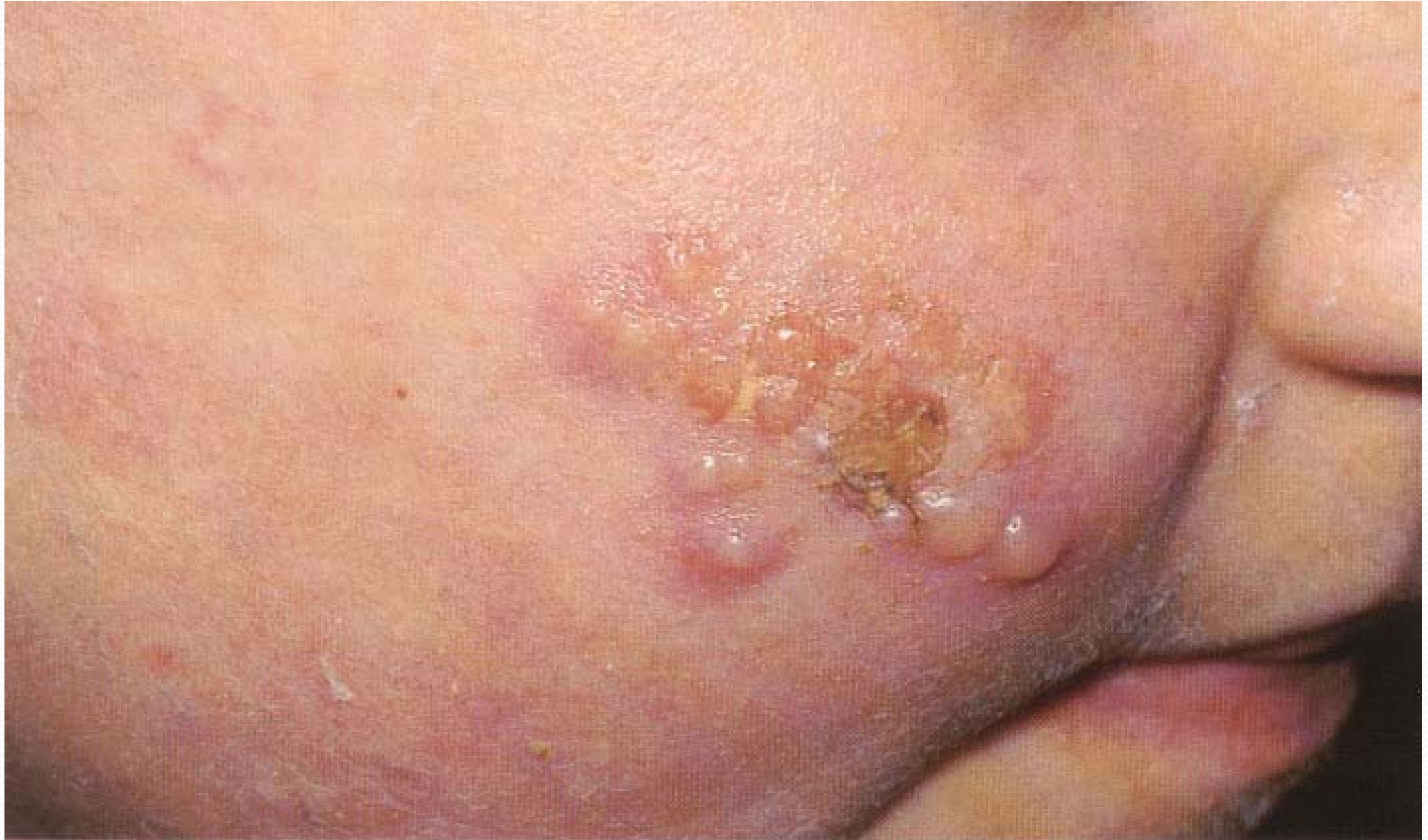
Dermatology 201

The diseases

Vesiculobullous Diseases

Case 1

- 15 year old woman
- Lesions on cheek which started 1 week ago with a **burning** / itching sensation
- Never had this before
- Some **tender nodes** on head and neck exam



Herpes Simplex

Description:

- On the right cheek, there are grouped vesicles on an erythematous plaque.

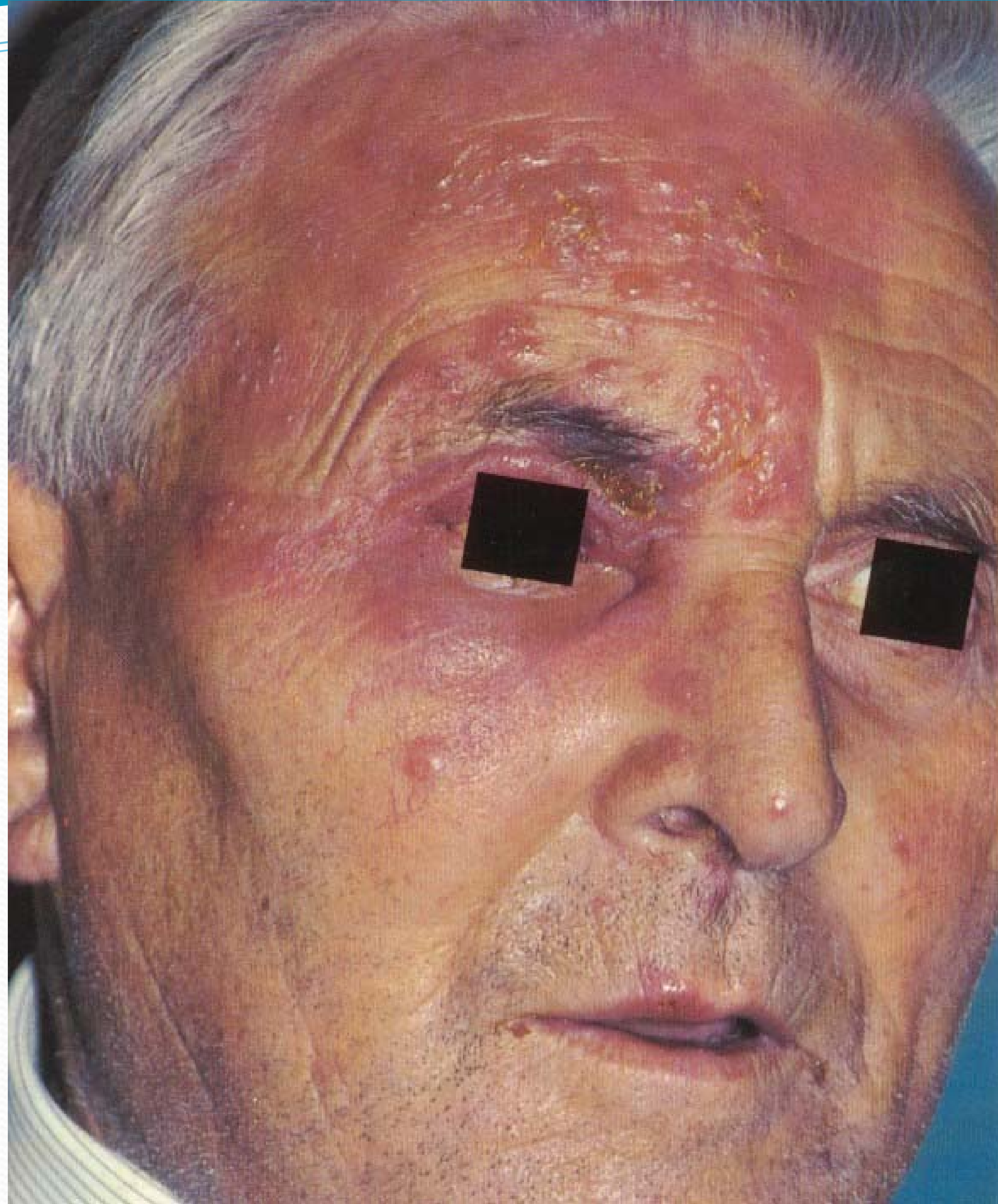
Epidemiology:

- Any age
- Transmitted by skin-skin contact
- Mucous membranes or keratinized skin

- How does the clinical presentation differ between a primary and a recurrent infection?
- What are precipitating factors for recurrence?

Case 2

- 65 year old man
- Severe pain and **allodynia** for 2 days and then **subsequently developed a rash**



Herpes Zoster

Description:

- On the right V1 branch of the trigeminal nerve dermatome, there are grouped vesicles on an erythematous plaque.

Epidemiology:

- Who is at risk?

- What is the significance of the lesion on the tip of the nose?

- What is the disease called with involvement of the geniculate ganglion?

Case 3

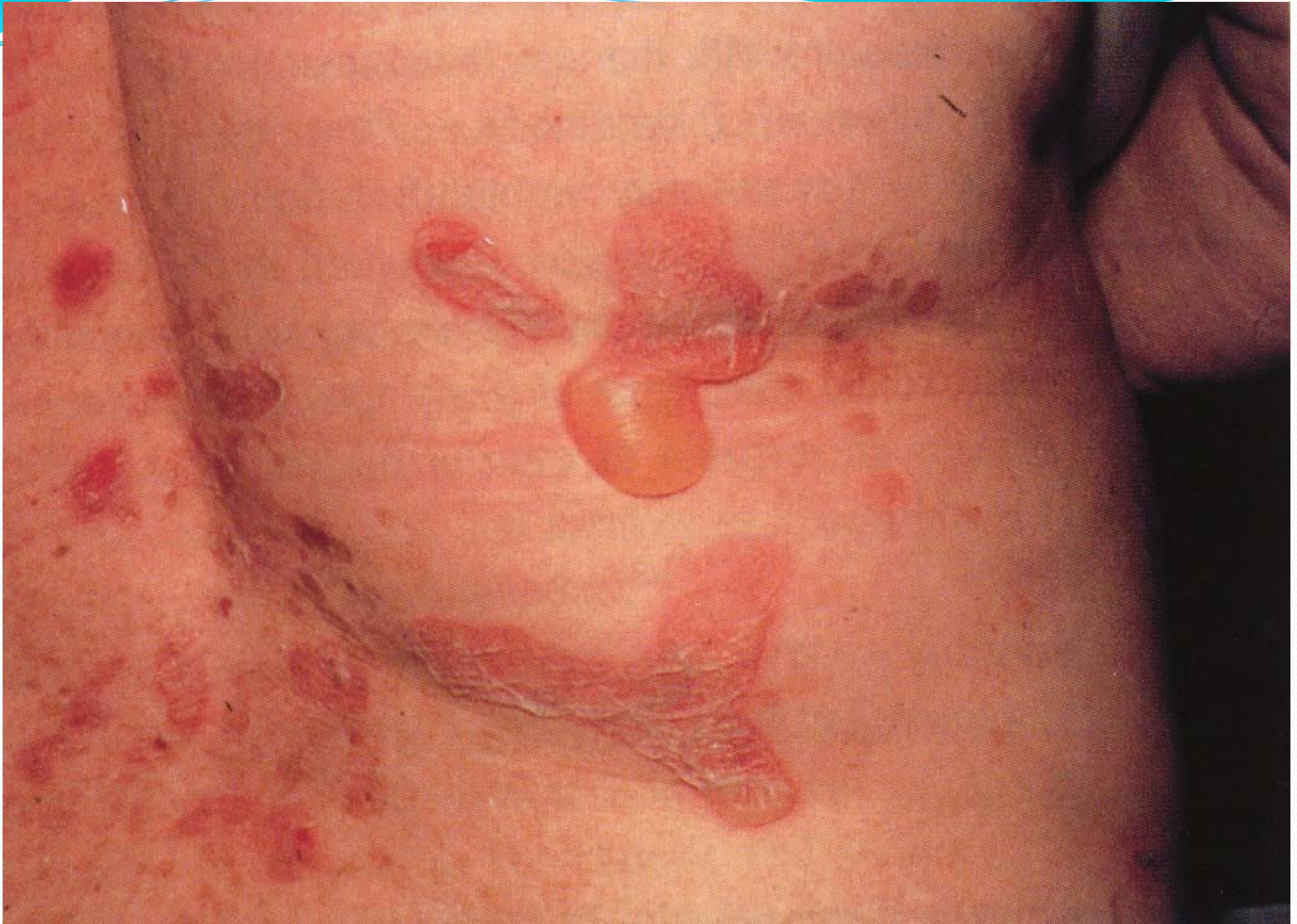
- 35 year old man
- Noticed “bumps” in between his fingers for the last 5 days. Had similar lesions a year ago which went away by themselves. They are very itchy.

Dyshidrotic Eczema

- Multiple 2 mm skin-colored, pruritic, deep-seated clear vesicles which may later develop into scaling and fissures.
- What would you want to know about his past medical history?
- What is a complication of the disease?
- Treatment?

Case 3

- 55 year old woman from **Lebanon**
- A couple months ago, had a couple of erosive lesions in her **mouth** which were tender. They spontaneously resolved. Now has noted lesions on her **back and abdomen** which are painful and blister. The blisters **rupture easily and spread with lateral pressure.**



Pemphigus Vulgaris

Description:

- Multiple polymorphic 1-3 cm bullae on the lower back that are easily ruptured (also involving the mouth)

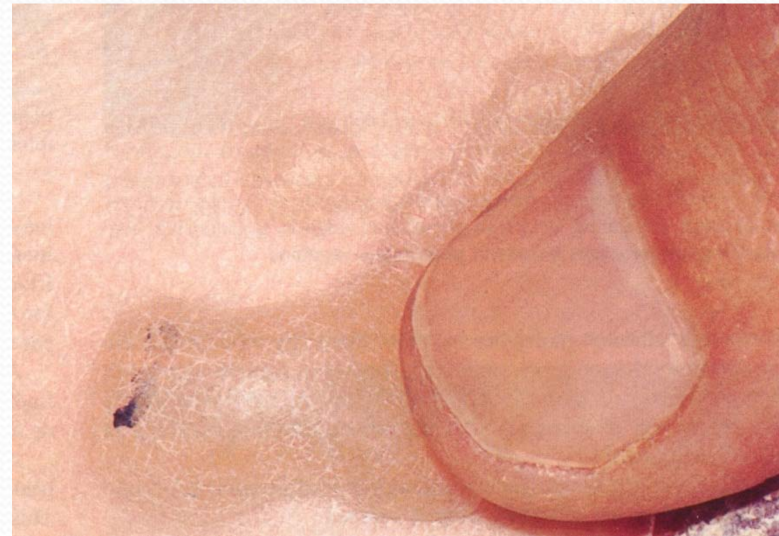
- Spread of the blister following application of lateral pressure to an active lesion: **NIKOLSKY's SIGN**

Epidemiology:

- Age 40-60
- Middle Eastern descent

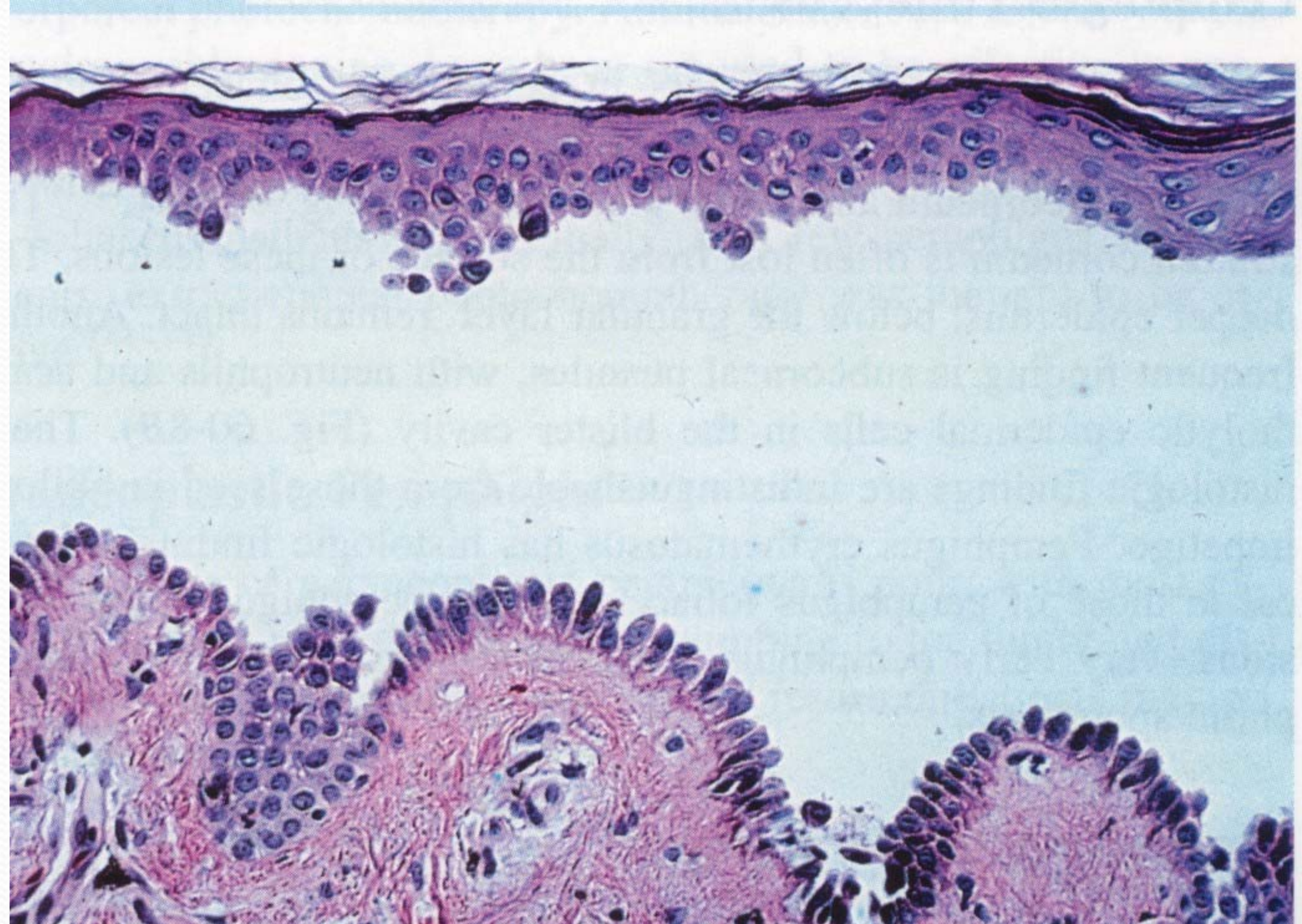
Diagnosis:

- **5 mm punch biopsy x 2!**
  - H and E (edge of the lesion)
  - Immunofluroescence (Michel's media) (perilesional normal skin)



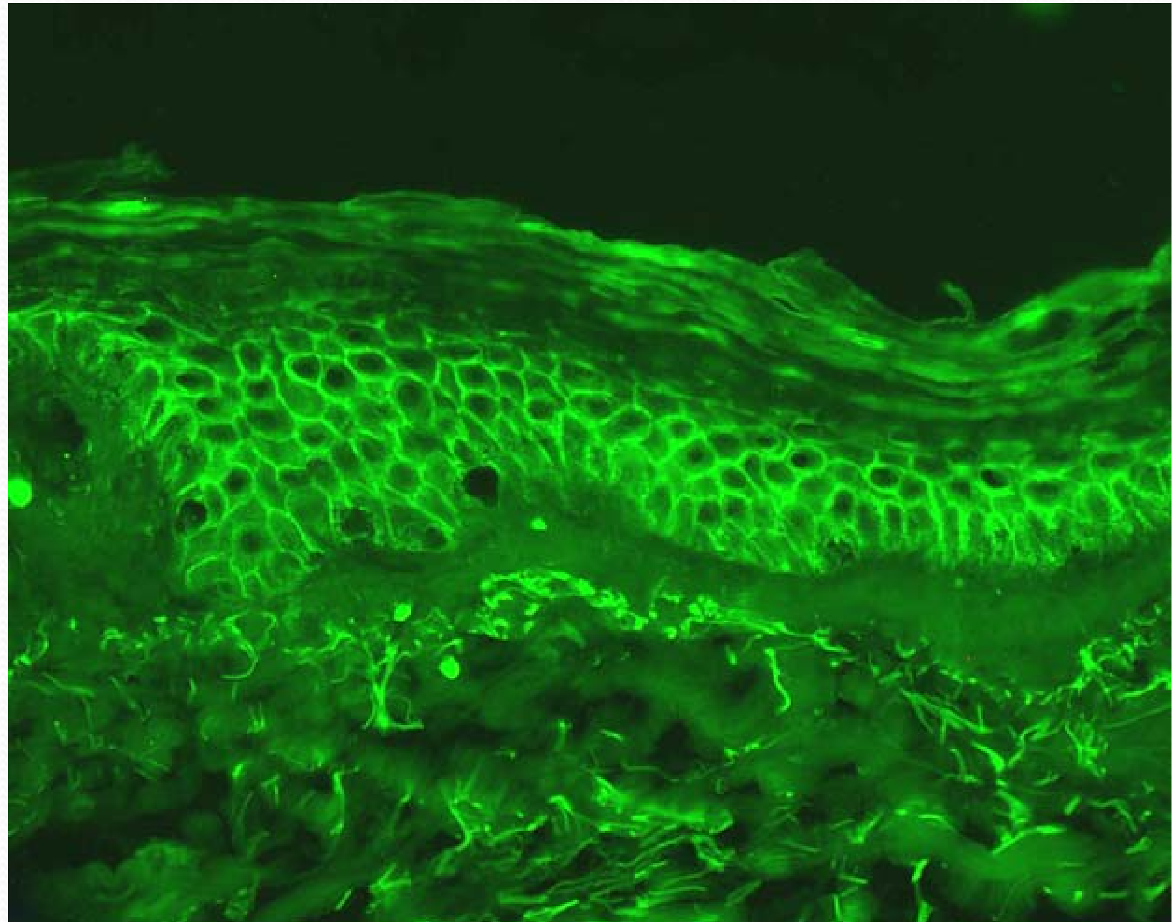
Pemphigus Vulgaris

Punch biopsy with H and E stain shows **acantholysis:** separation of the epidermis occurs **above the basal layer** revealing a "row of tombstones".



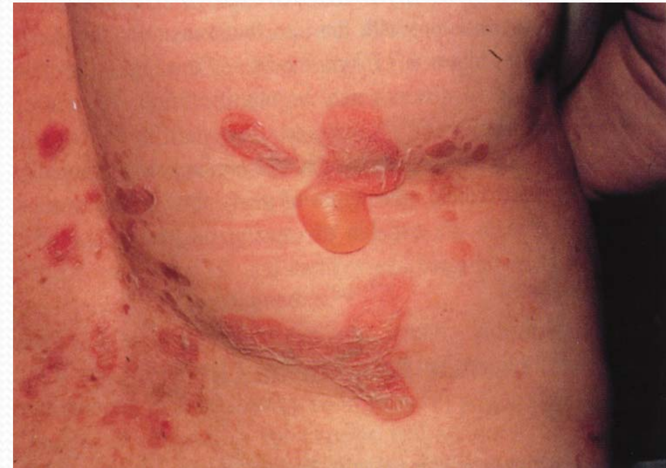
Pemphigus Vulgaris

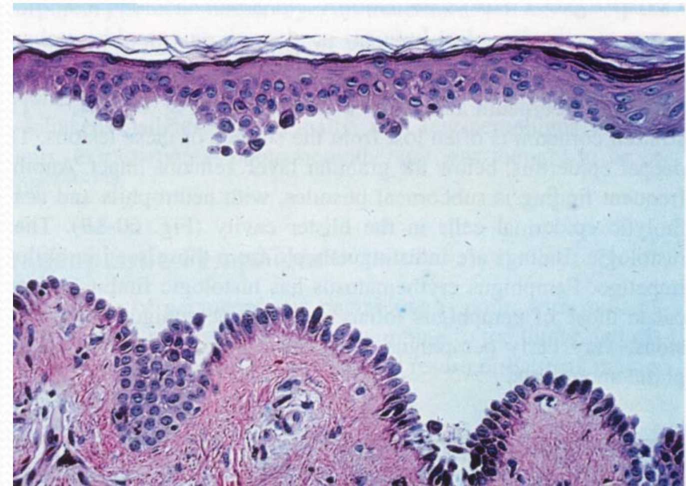
Direct immunofluorescence reveals **IgG and C3 stain at the cellular junctions** between the stratified squamous epithelial cells in the epidermis.



Treatment

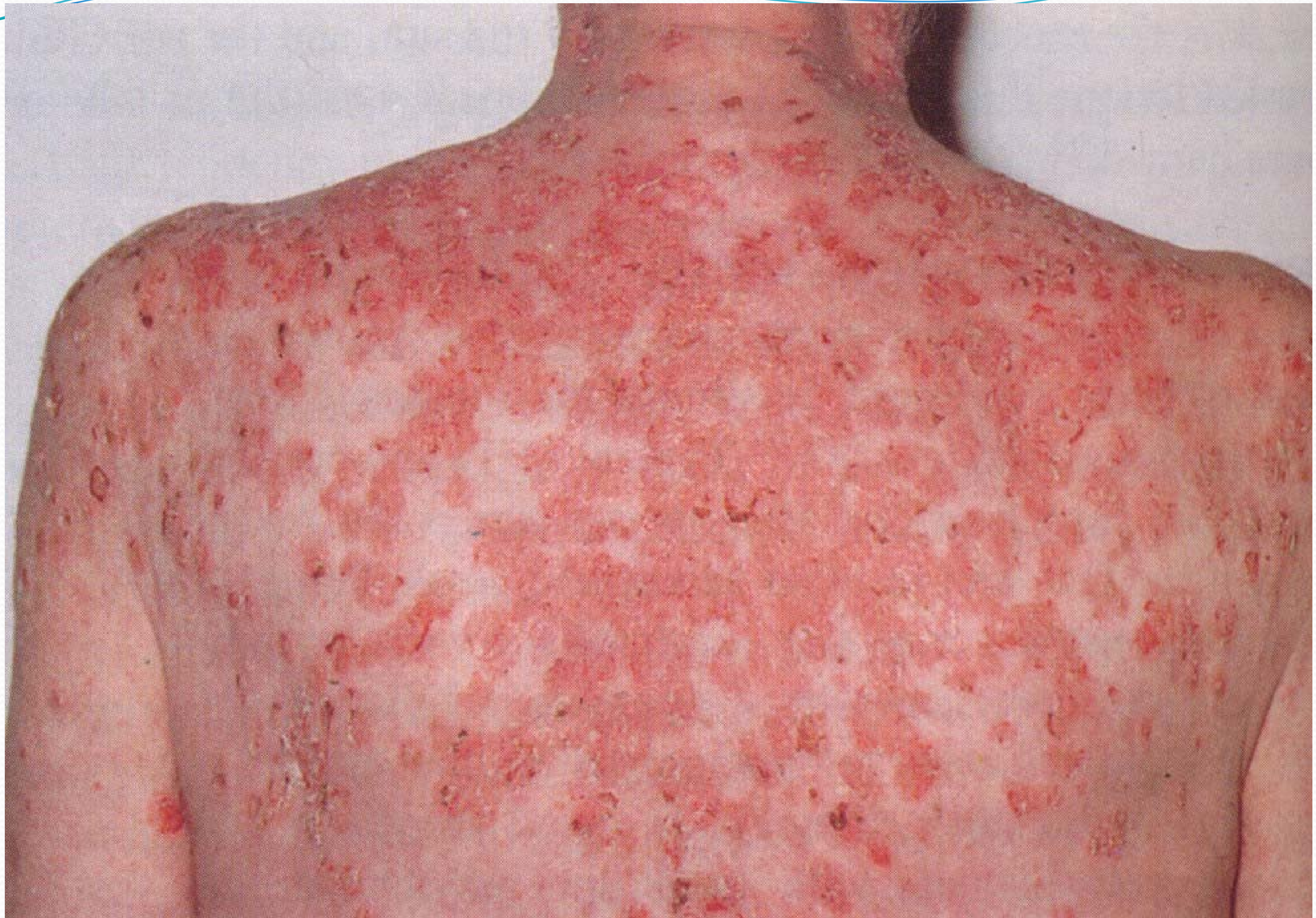
- Dermatology referral
- High-dose steroids
  - Prednisone 40-120 mg/day to start
  - Up to 200 mg/day
  - Complicated to manage
- Steroid sparing agent
  - Azathioprine or Cyclophosphamide





Case 4

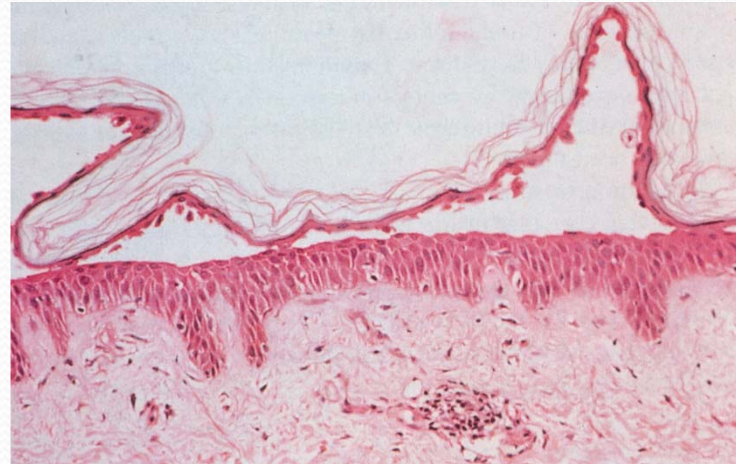
- 45 year old man
- Rash started on his face and then involved the back. Looks flaky and crusted. There is no mucosal involvement on exam.



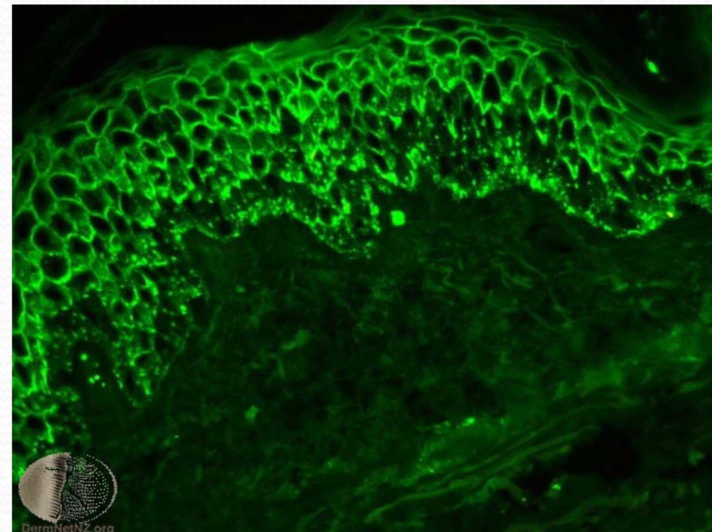
Pemphigus Foliaceus

Description:

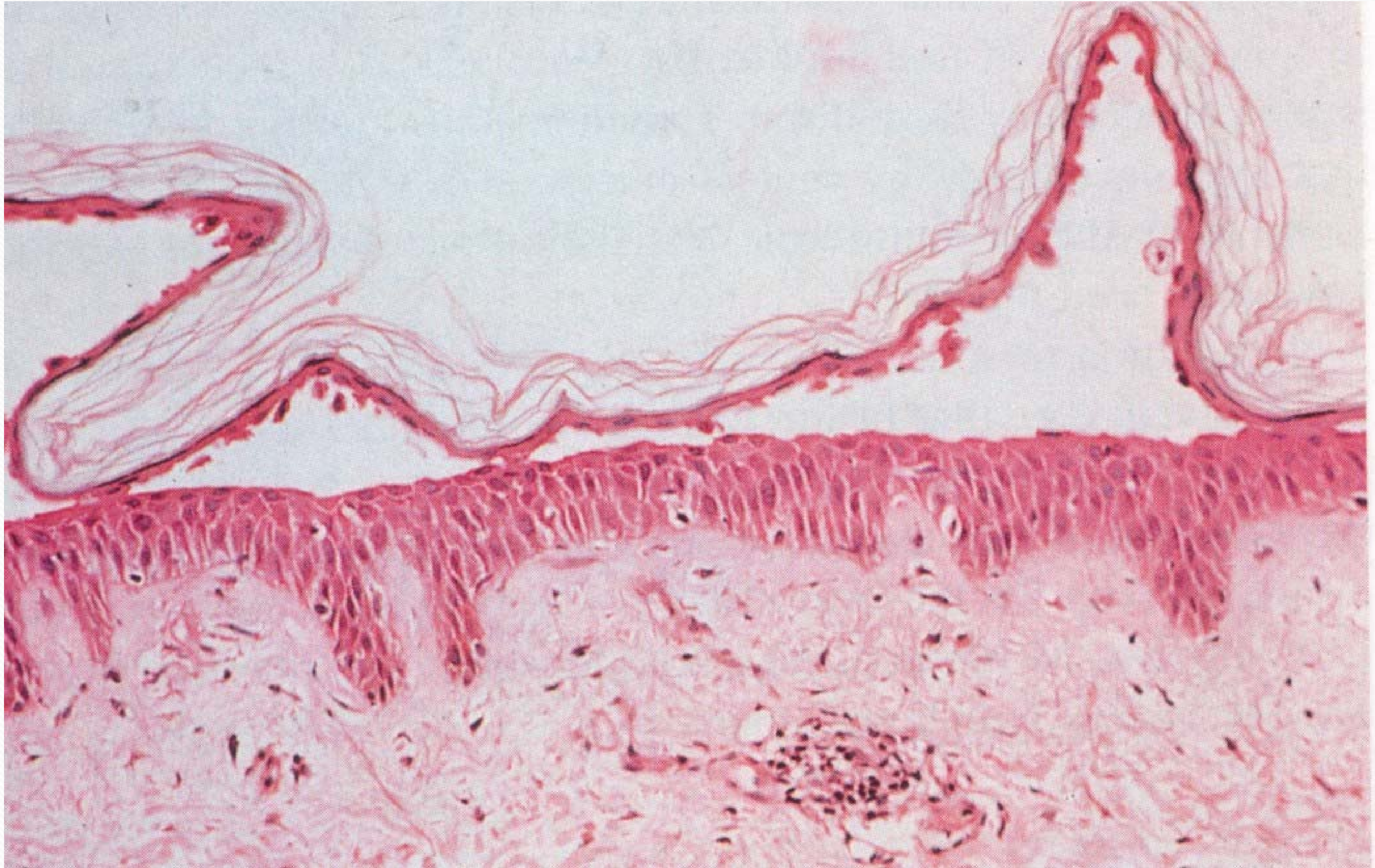
- On the back, there are multiple approximately 1 cm circular plaques with superficial erosion coalescing together. (with no mucous membrane involvement).



- Epidemiology:
- Ages 50-60
- Brazil and Columbia



- Diagnosis:
- You tell me!



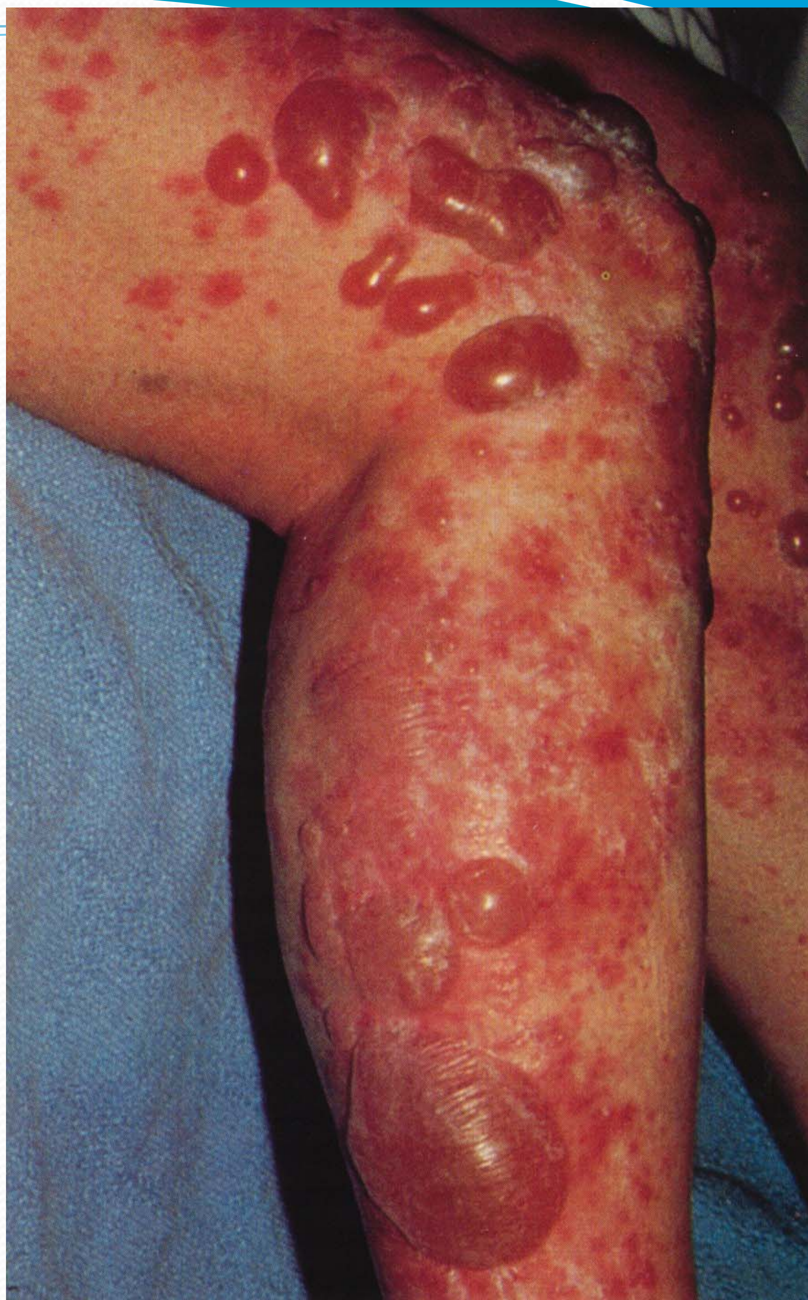
IgG Antibodies

- Antibodies against
  DESMOGLEIN 1 in DESMOSOMES

- Confirmatory test
  - Indirect Immunofluoresecence finds IgG antibodies in the serum

Case 5

- 70 year old woman
- 2 months ago had "hive-like" lesions which continued until the current lesions appeared



Bullous Pemphigoid

Description:

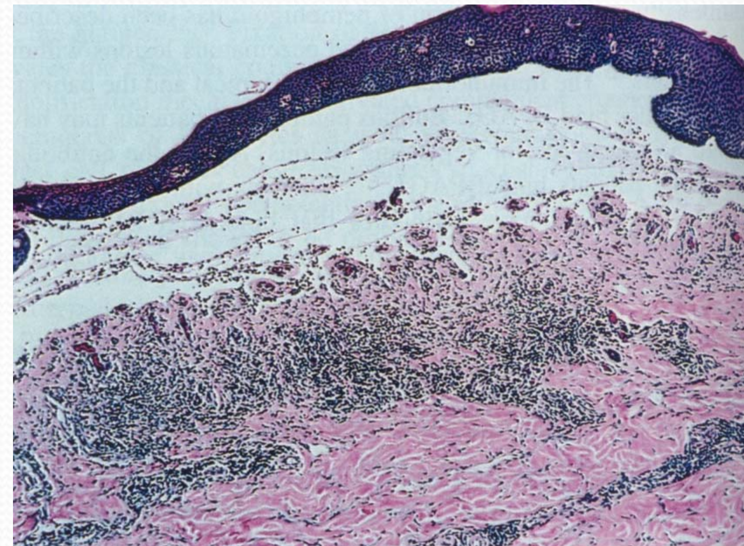
- On the legs, there are many 1-5 cm bullous lesions with firm, unruptured roofs on erythematous skin (often start as urticarial type lesion)

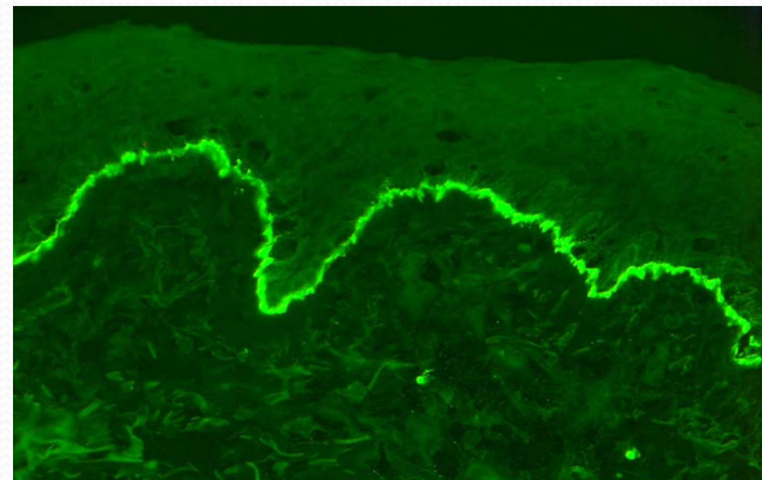
Epidemiology:

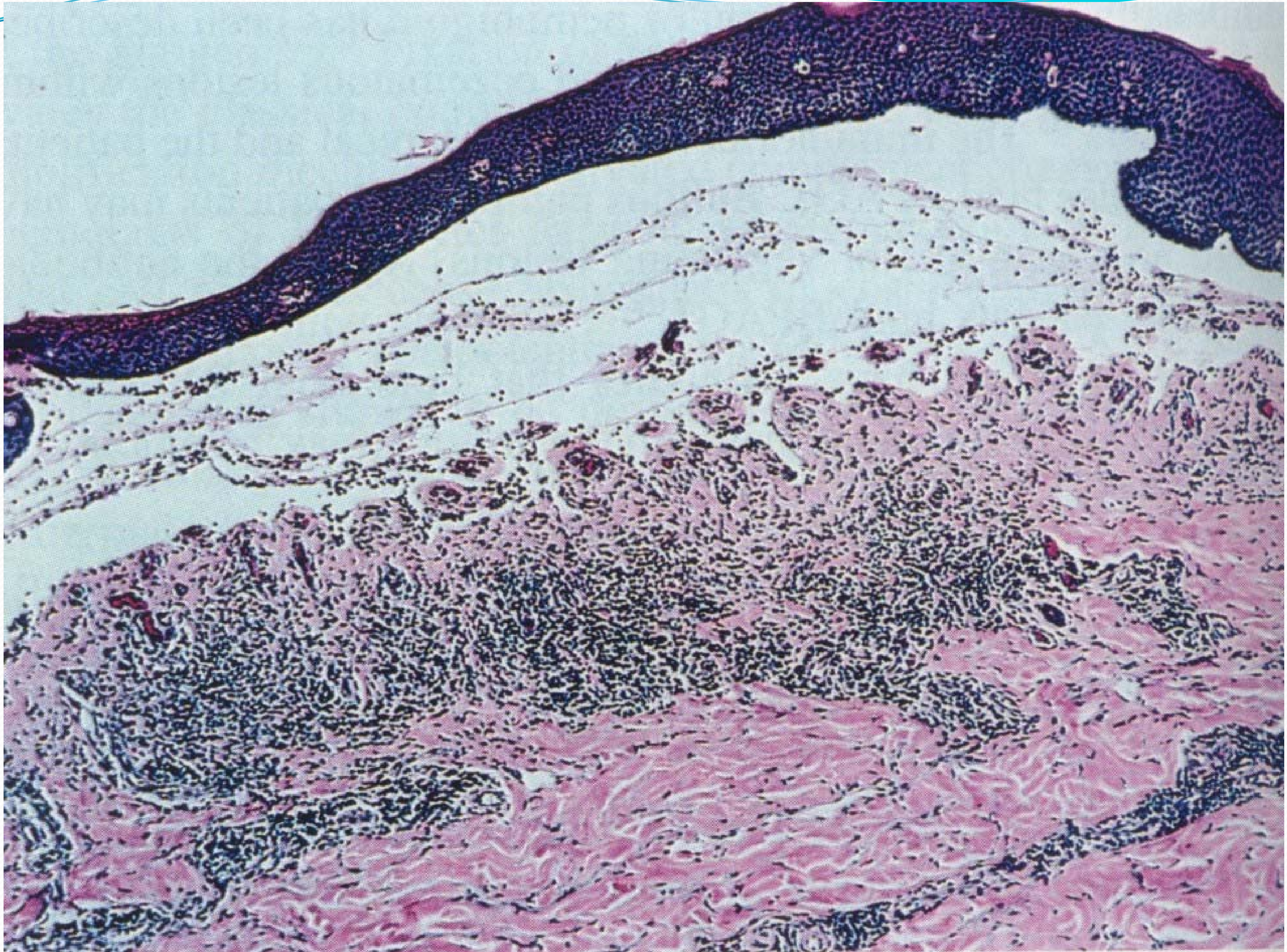
- > Age 60 or childhood

Diagnosis:

- You tell me!
- **Treatment:**
- Prednisone to induce remision
- Steroid-sparing agents
- Dapsone







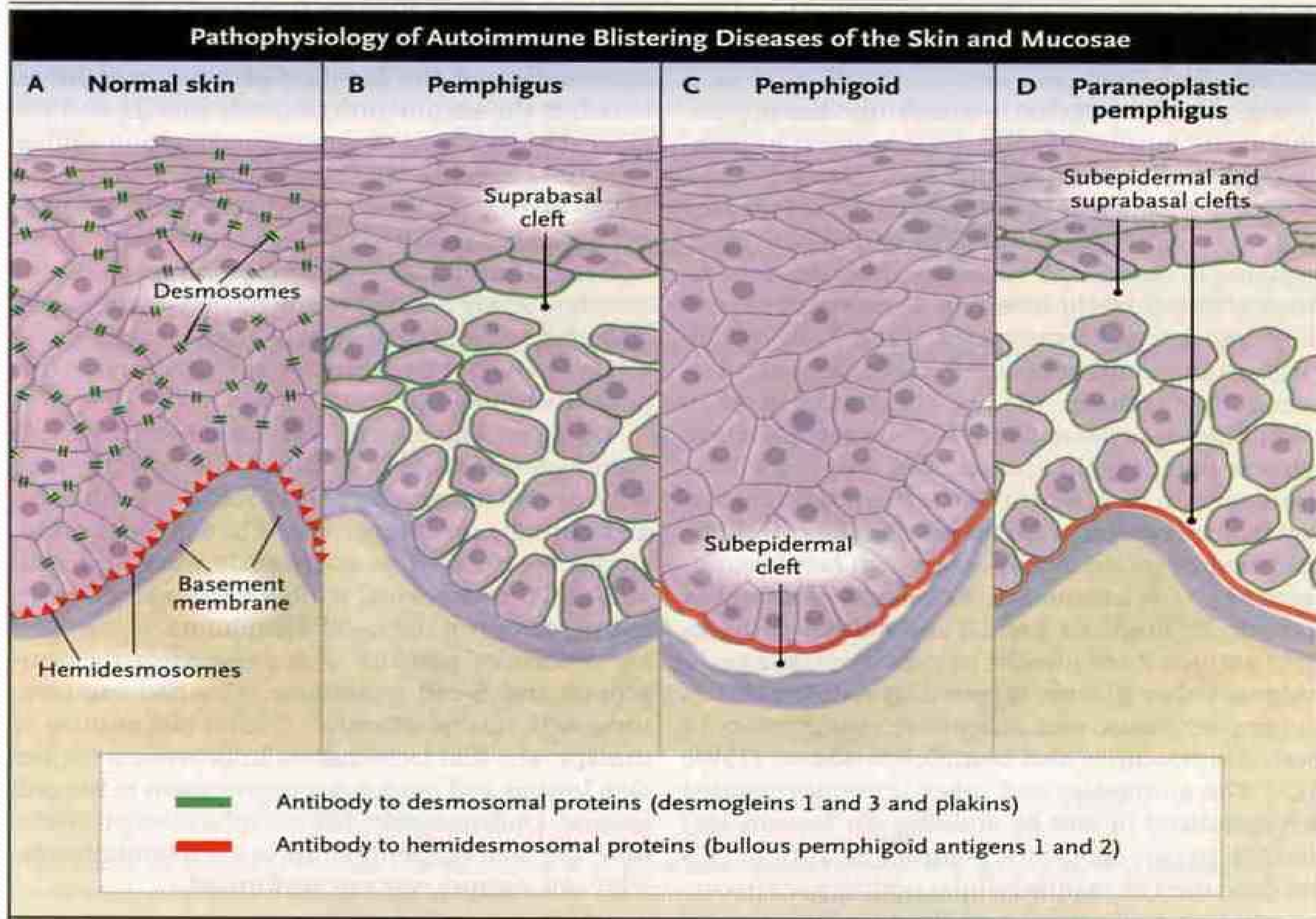
IgG Antibodies

- Antibodies against
  - Bullous pemphigoid antigen in HEMIDESMOSOMES
- Confirmatory test
  - Indirect Immunofluoresecence – serum IgG
  - *Level of Antibody NOT CORRELATED with level of disease and as the disease subsides, C3 deposits disappear.

Treatment

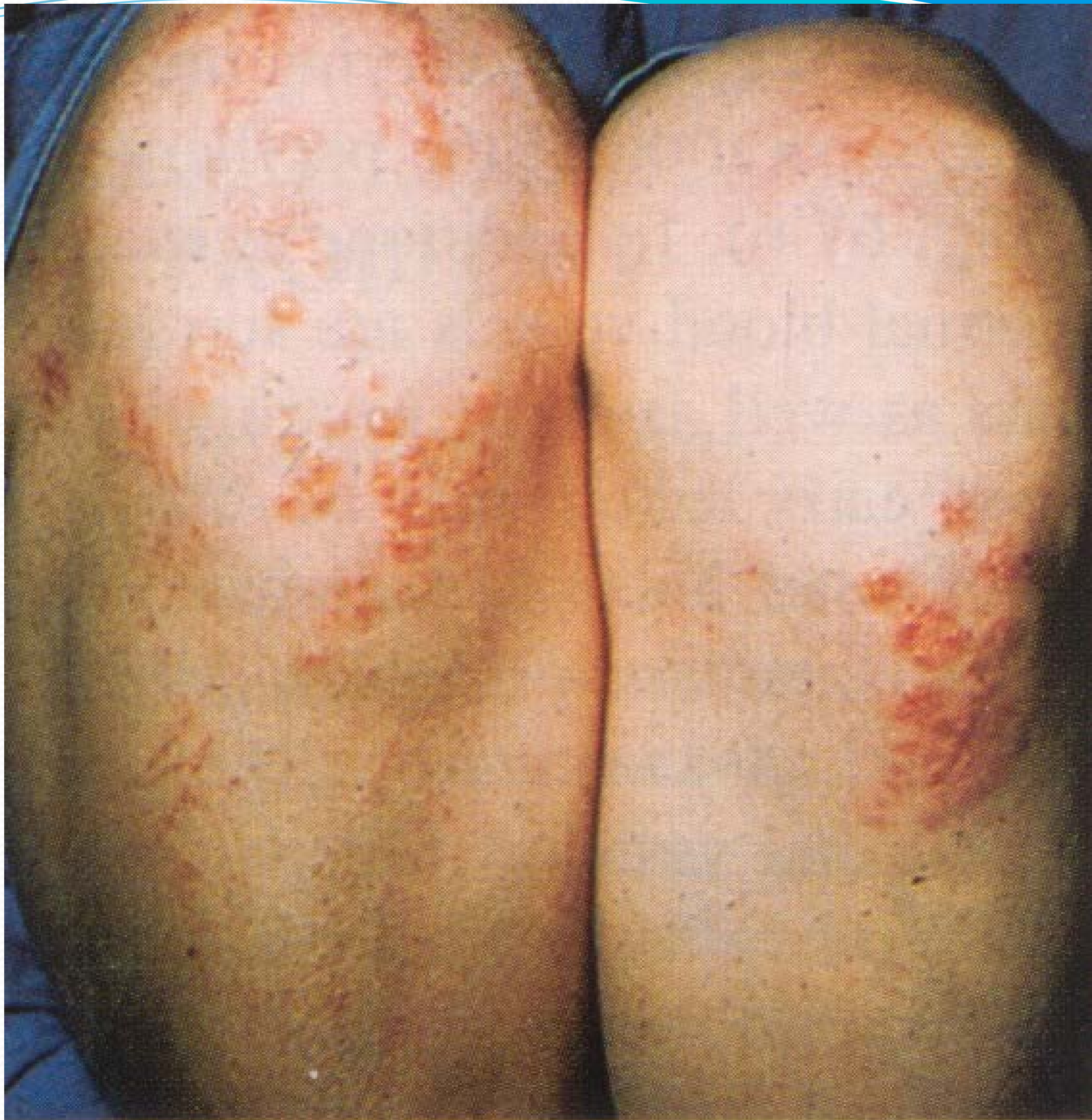
- Goals: Arrest blistering and limit secondary infection
- Itching: Hydroxyzine 10-50mg q4hr
  - Caution in elderly (sedation)
- Disease: Prednisone 1-1.5 mg/kg/day
- Dapsone to produce remission
- Sparing agents: tetra/minocycline
- IVIG if unresponsive

Comparison



Case 6

- 25 year old woman
- Intensely pruritic and “burning” rash on knees, elbows, and buttocks for the past several weeks. She has a past medical history of Hashimoto’s thyroiditis for which she takes thyroid supplement.



Dermatitis Herpetiformis

Description:

- On the extensor sides of both knees, there are small grouped vesicles on an erythematous base. (strikingly symmetrical, annular pattern)

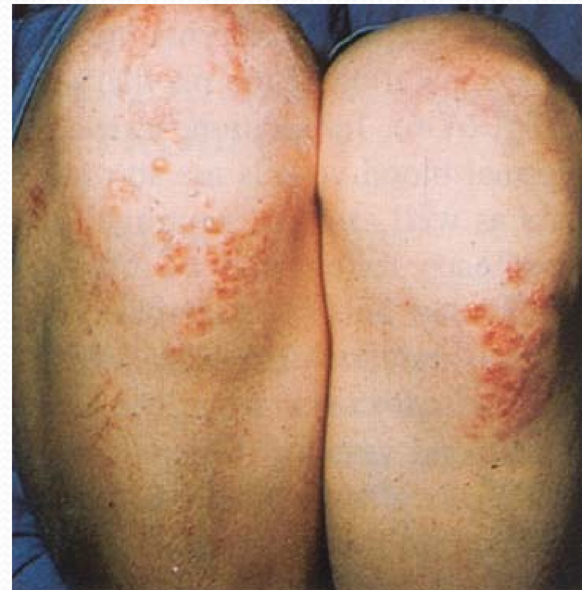
Epidemiology:

- Age 30-40

Diagnosis:

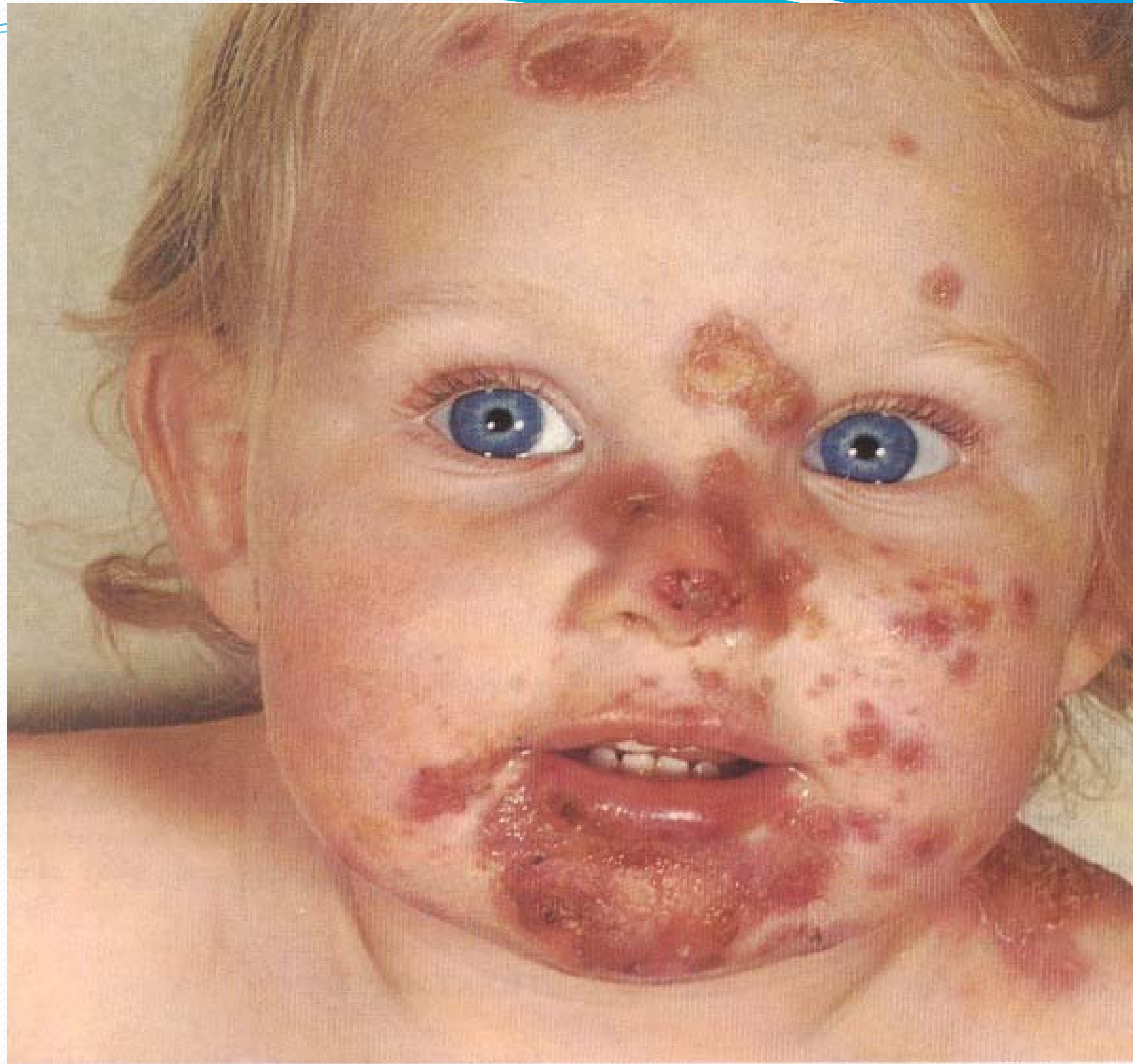
- You tell me!

- What autoantibody is involved and seen on biopsy?
- What treatment is helpful to control the disease?



Case 7

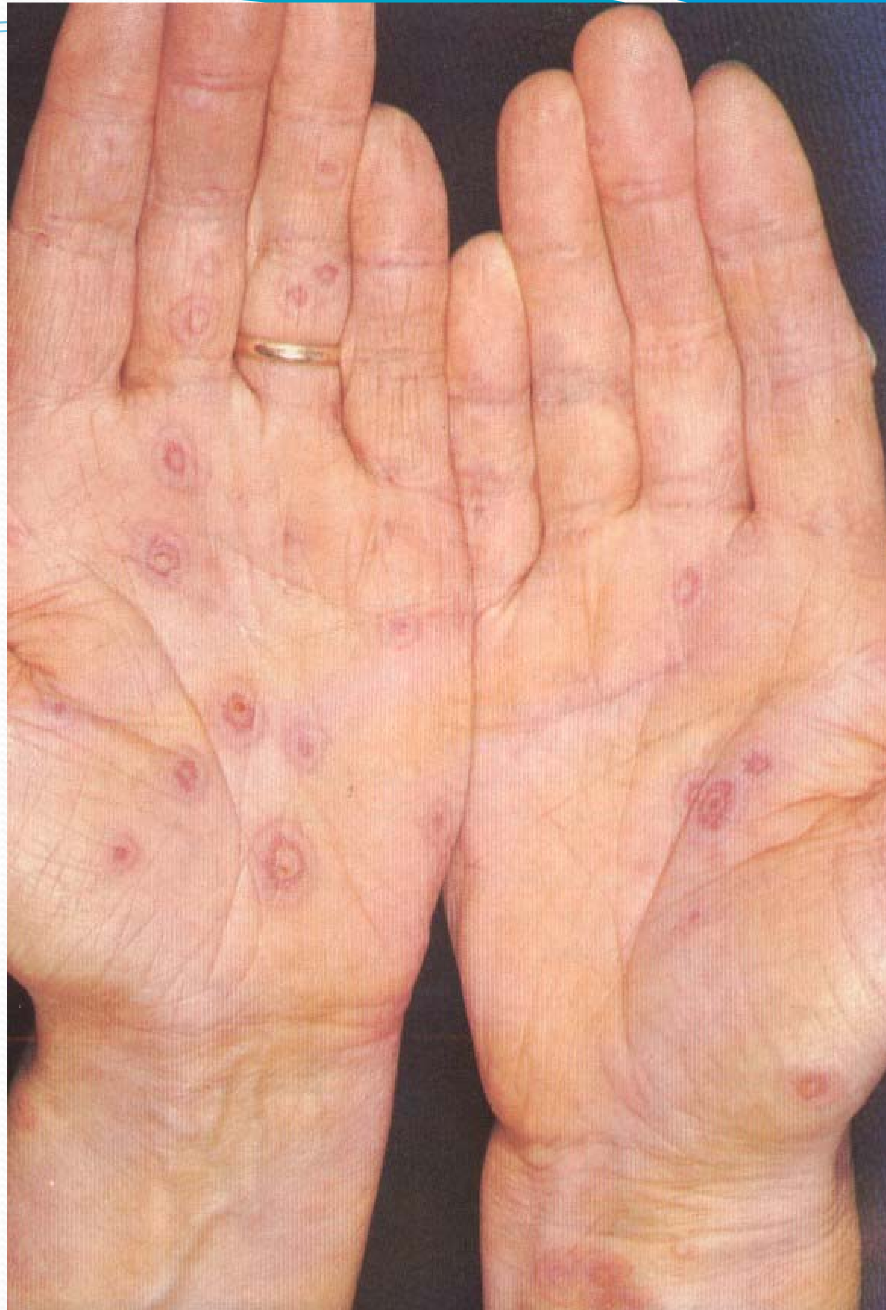
- 2 year-old child
- Day care
- Lesion duration: days
- Some regional lymphadenopathy on exam



- Multiple well-marginated honey-crusted erythematous erosions on the face
- Very contagious! (Daycare, close living quarters)
- Very superficial infection
- One of two organisms is usually to blame: what are they?
- Give a possible treatment…
- What is a feared complication?

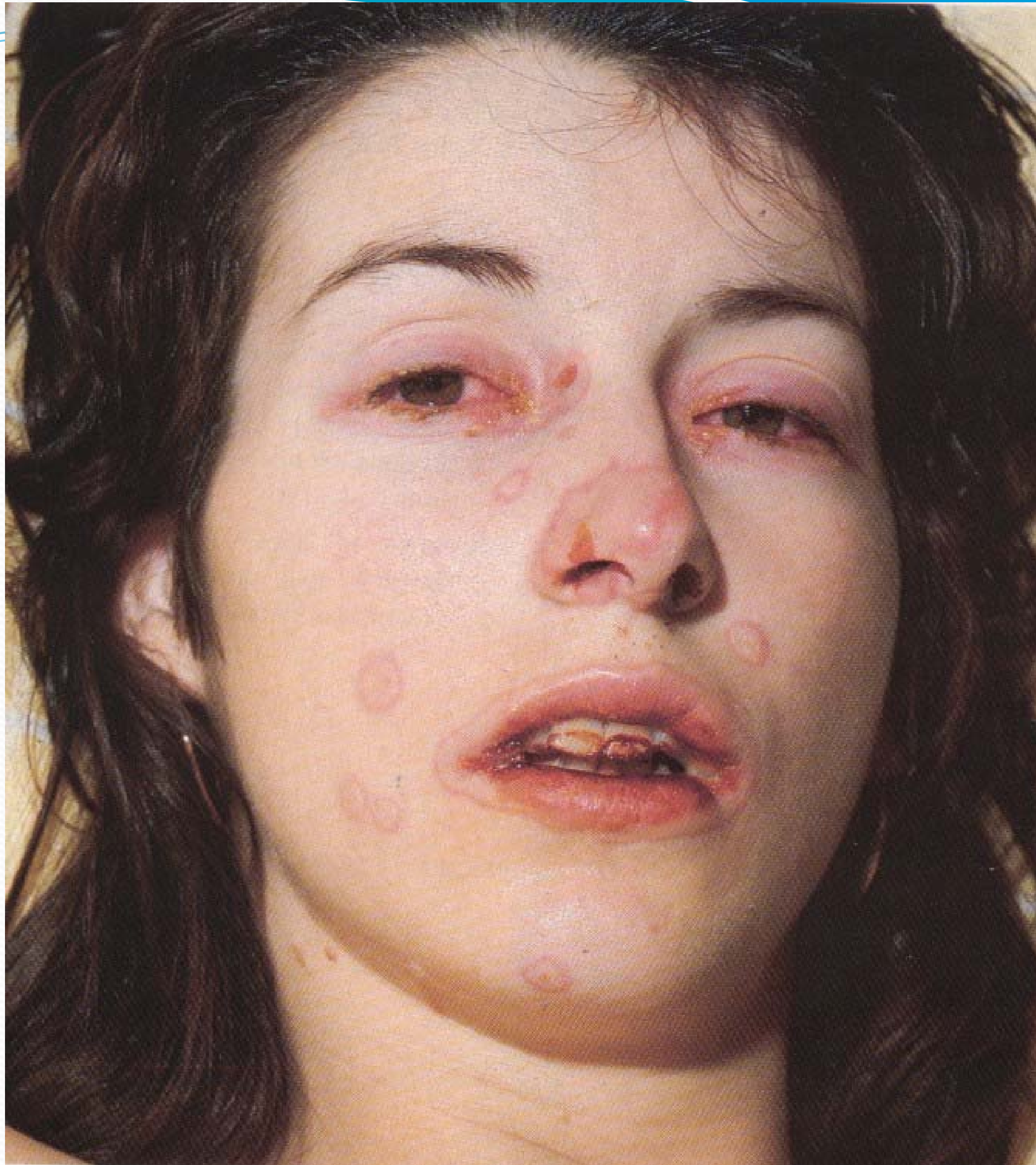
Case 7

- 28 year old woman
- History of a **lesion on her lip approximately 2 weeks ago**, which was painful and crusted and went away spontaneously. Now, complains of diffuse rash **involving her palms and soles** and arthralgias.



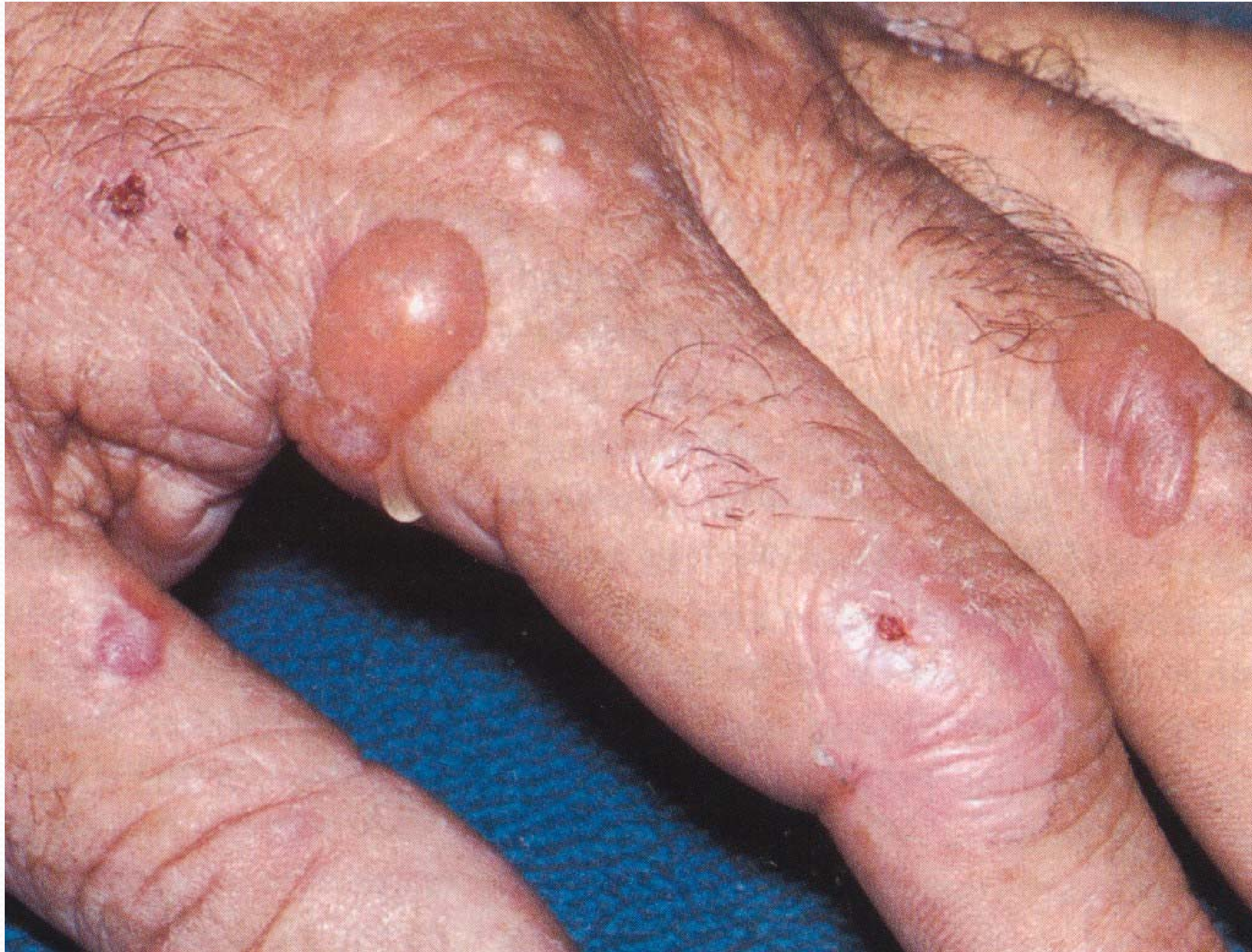
Erythema Multiforme Minor

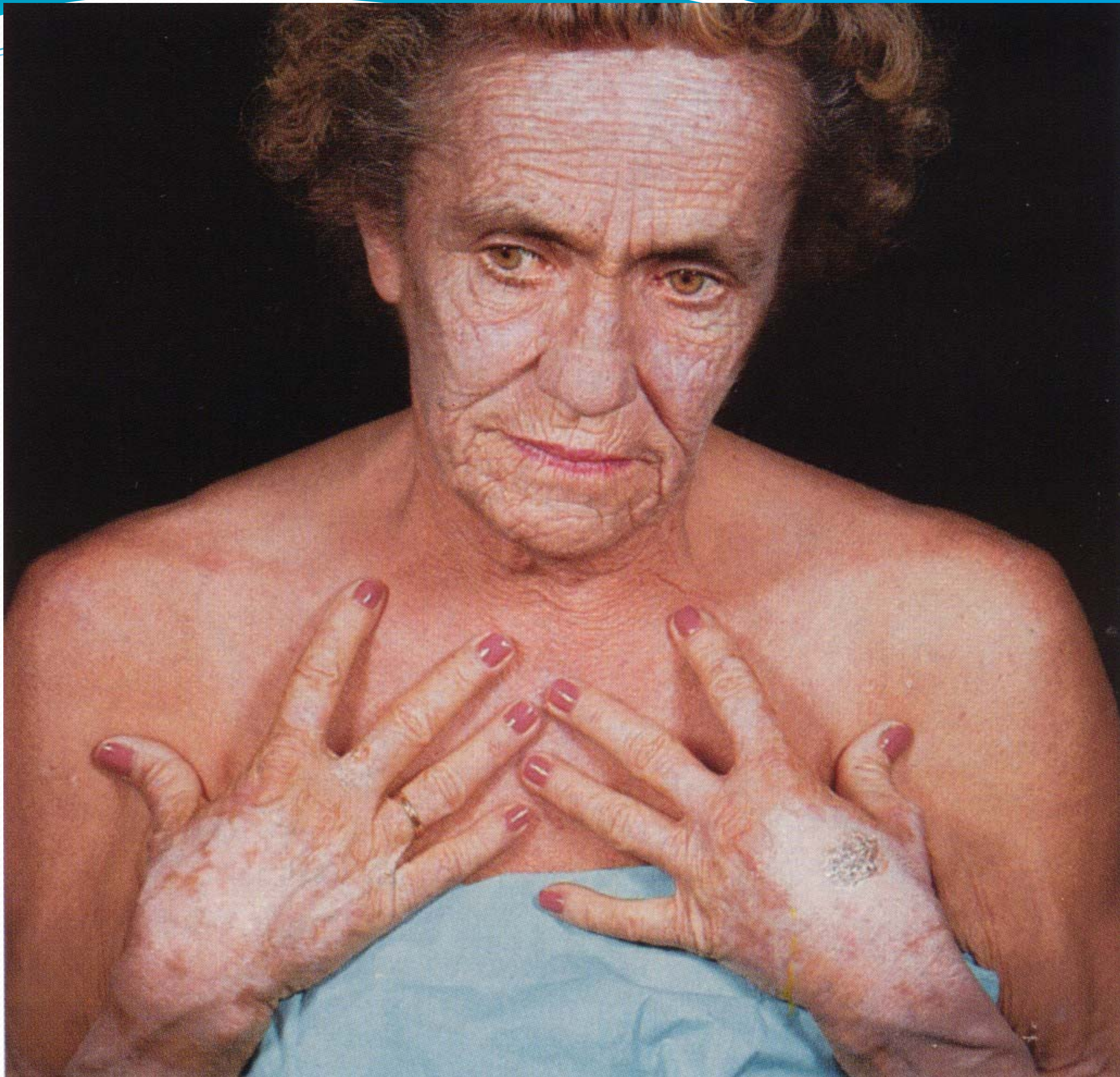
- <u>Description:</u>
- On the palms of both hands there are multiple 5 mm-1 cm targetoid lesions with central vesicles that appear necrotic.
- <u>Pathology:</u>
- Immune complex deposition in cutaneous microvasculature with mononuclear cells predominating (type 3 hypersensitivity)
- What 3 infections are often linked to EM Minor?
  - **Herpes simplex virus**
  - Coccidiodomycosis
  - Mycoplasma
- What is the spectrum of disease?
  - Erythema multiforme minor
  - Erythema multiforme major (SJS)
  - Toxic epidermal necrolysis (TEN)



Case 8

- 50 year old man
- Painful blisters in sun-exposed areas; heal with scarring, several months duration
- History of IVDU and chronic renal insufficiency





Porphyria Cutanea Tarda (PCT)

Description:

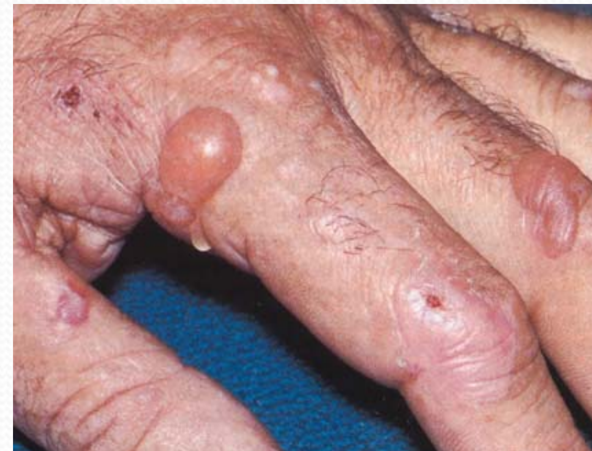
- On the dorsum of the hand, there are two 1 cm unruptured bullae, on the second MCP joint, there are three white papules, and on the second PIP joint there is a pink well-circumscribed scar.

Pathophysiology:

- Enzyme in heme synthesis "UROD" functioning at 25% capacity with build up of uroporphyrin in urine and plasma

Associations:

- HEPATITIS C (50%) (IVDU)
- Liver disease
  - Iron overload or etoh abuse
- Renal failure
  - Porphorins are renally excreted



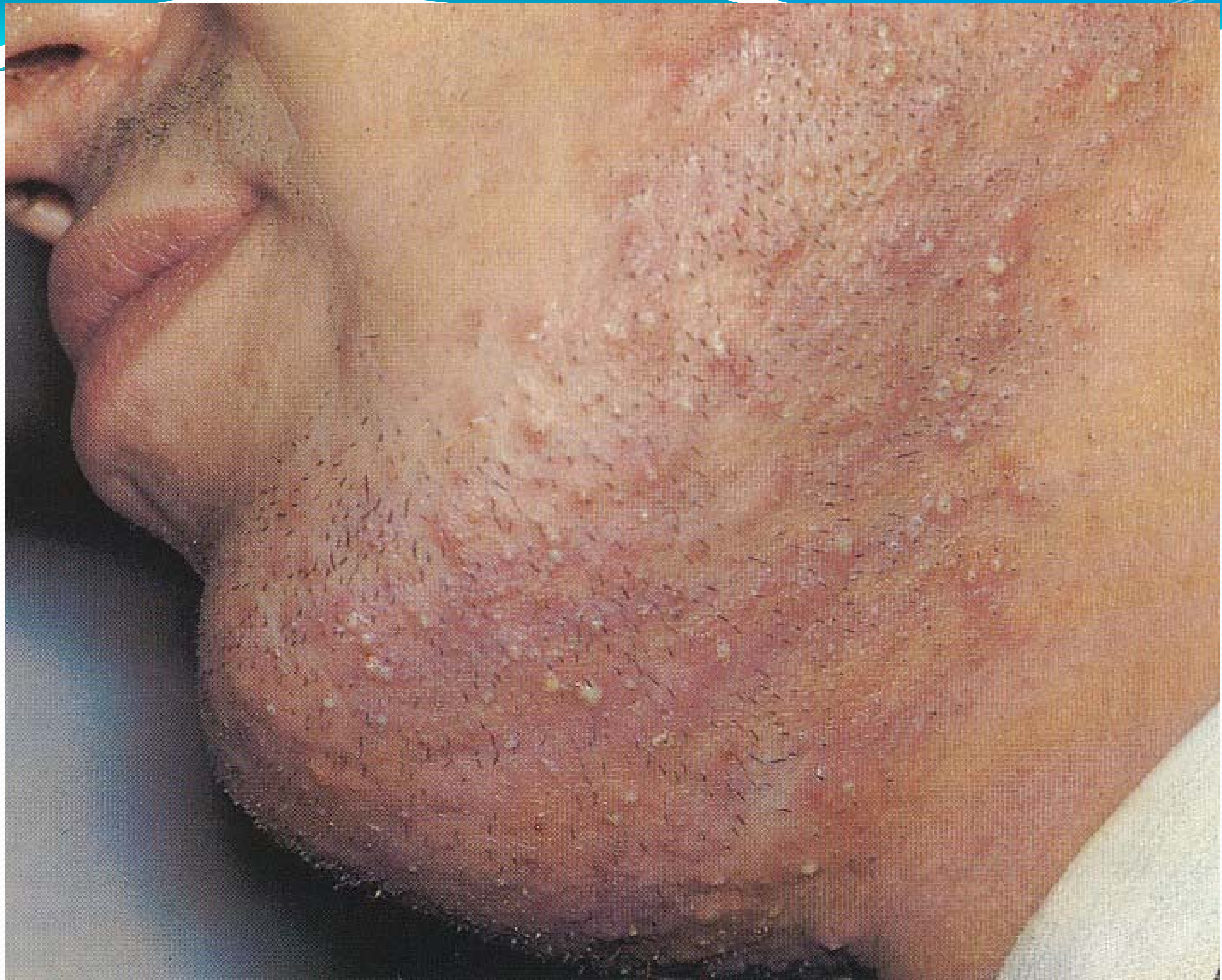
Vesiculobullous Diseases

- Herpes Simplex
- Herpes Zoster
- Pemphigus Vulgaris
- Pemphigus Folaceous
- Bullous Pemphigoid
- Dermatitis Herpetiformis
- Erythema Multiforme
- Porphyria Cutanea Tarda

PUSTULAR

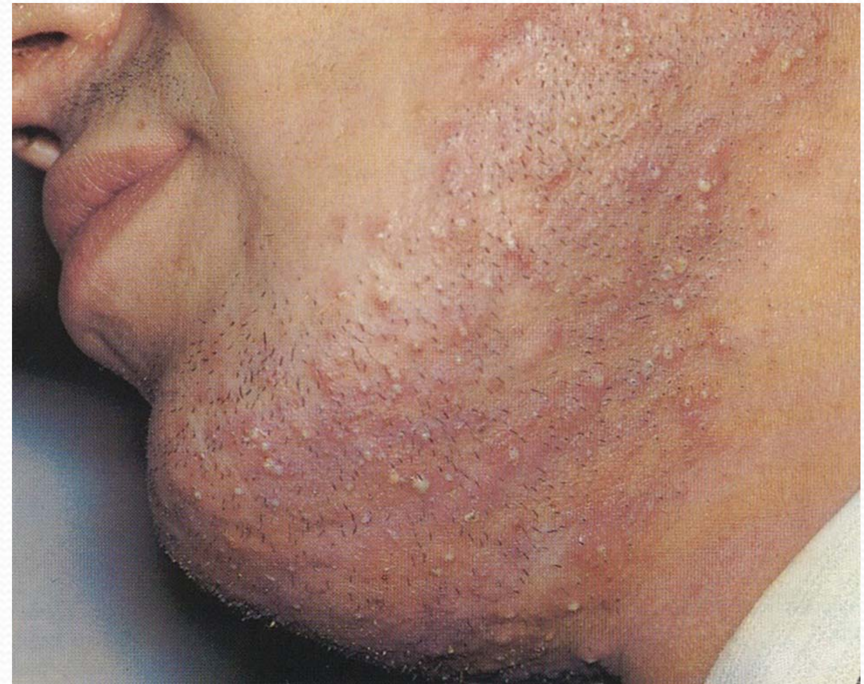
Case 1

- 25 year old man
- Rash on face, worsened by shaving
- Lesion duration: days
- Lesions are minimally tender, slightly pruritic

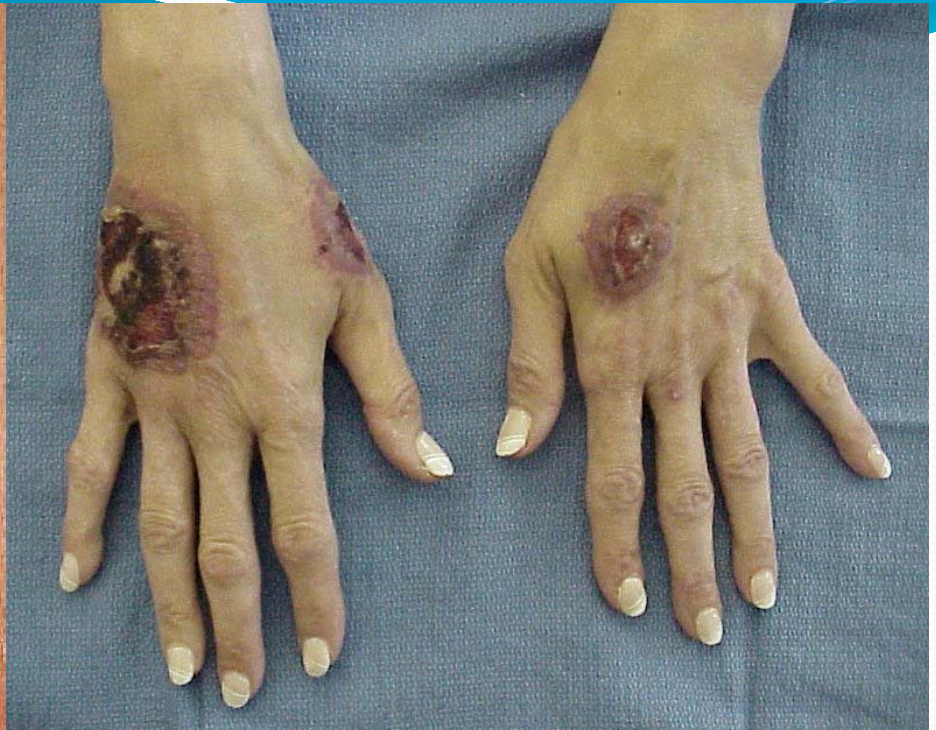


Superficial Folliculitis

- Multiple pustules that confined to ostium of hair follicle in the distribution of the beard
- What is the usual organism?
- Hot-tub folliculitis due to what organism?

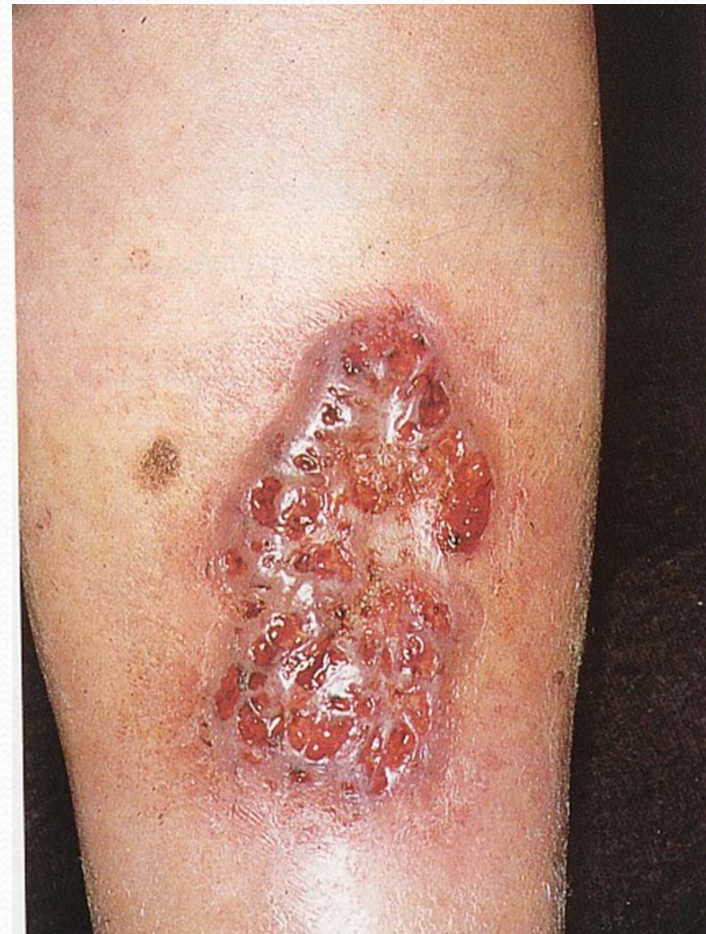


- A 42 year old woman
- Complains of a deep ulcer on the anterior shin which began 3 weeks ago. The patient thinks that she might have injured her leg on the edge of a coffee table, but isn't sure. She developed a nodule which broke down into a deep ulcer. On ROS, she has intermittent diarrhea and crampy abdominal pain.



Pyoderma Gangrenosum

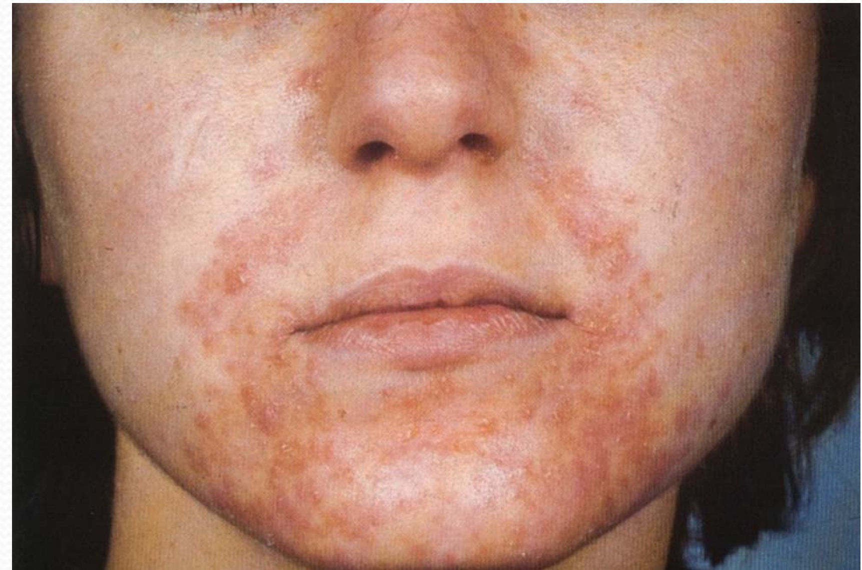
- Irregular, boggy, blue-red ulcer with undermined "heaped up" borders surrounding a purulent, necrotic base
- What systemic disease is it most commonly associated with?
- What should you NOT do to the lesion? Why?



- 30 year old woman
- She complains of rash surrounding her mouth for the last several months. She never had a problem with acne in her adolescence, but is distressed with her appearance and uses make up to try to hide the rash.

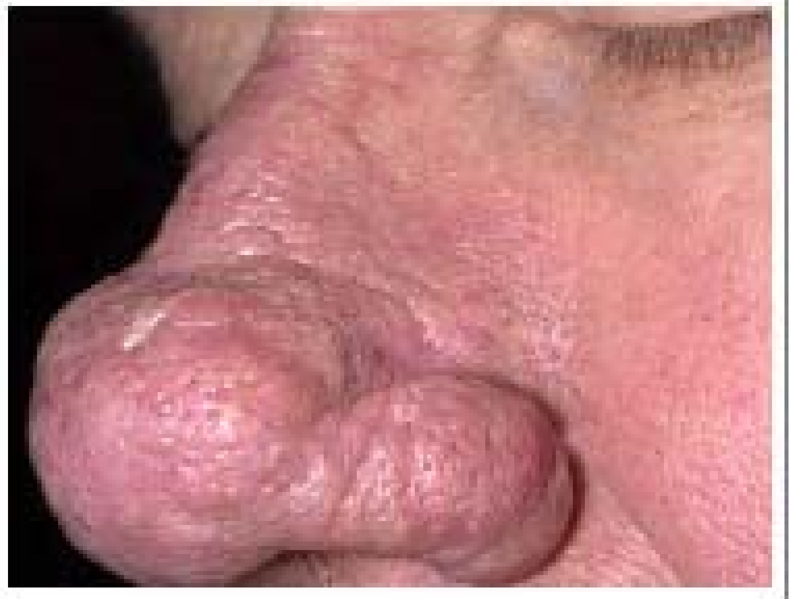
Perioral Dermatitis

- It resembles acne, with papules and pustules on an erythematous and sometimes scaling base
- Almost exclusively in females
- What do you want to ask about in medication history that could potentially cause this?



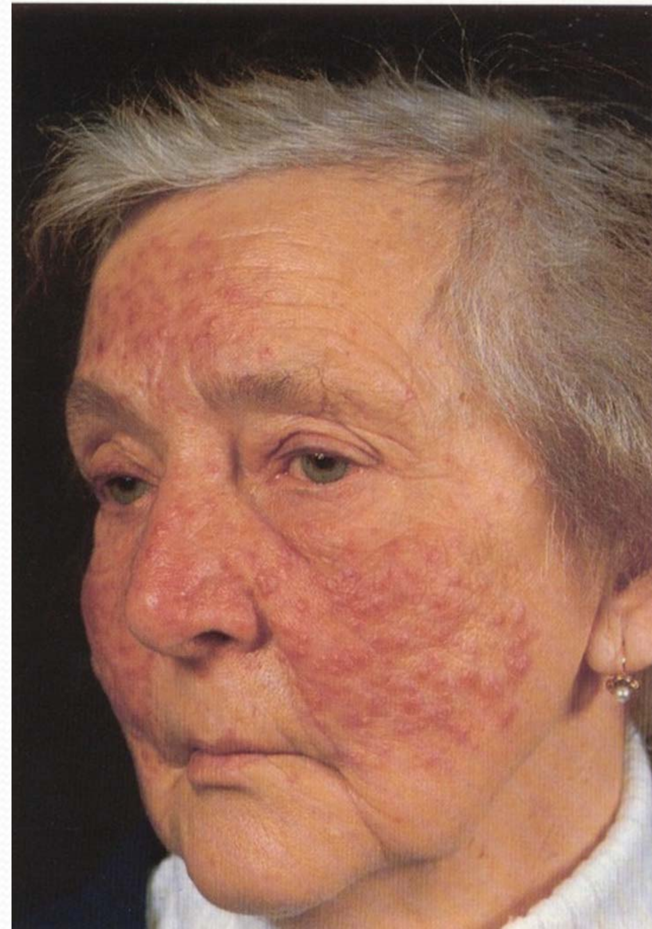
Case 4

- 50 year old woman
- Red rash on face for several months. Worsened with drinking hot tea and coffee.
- No systemic symptoms



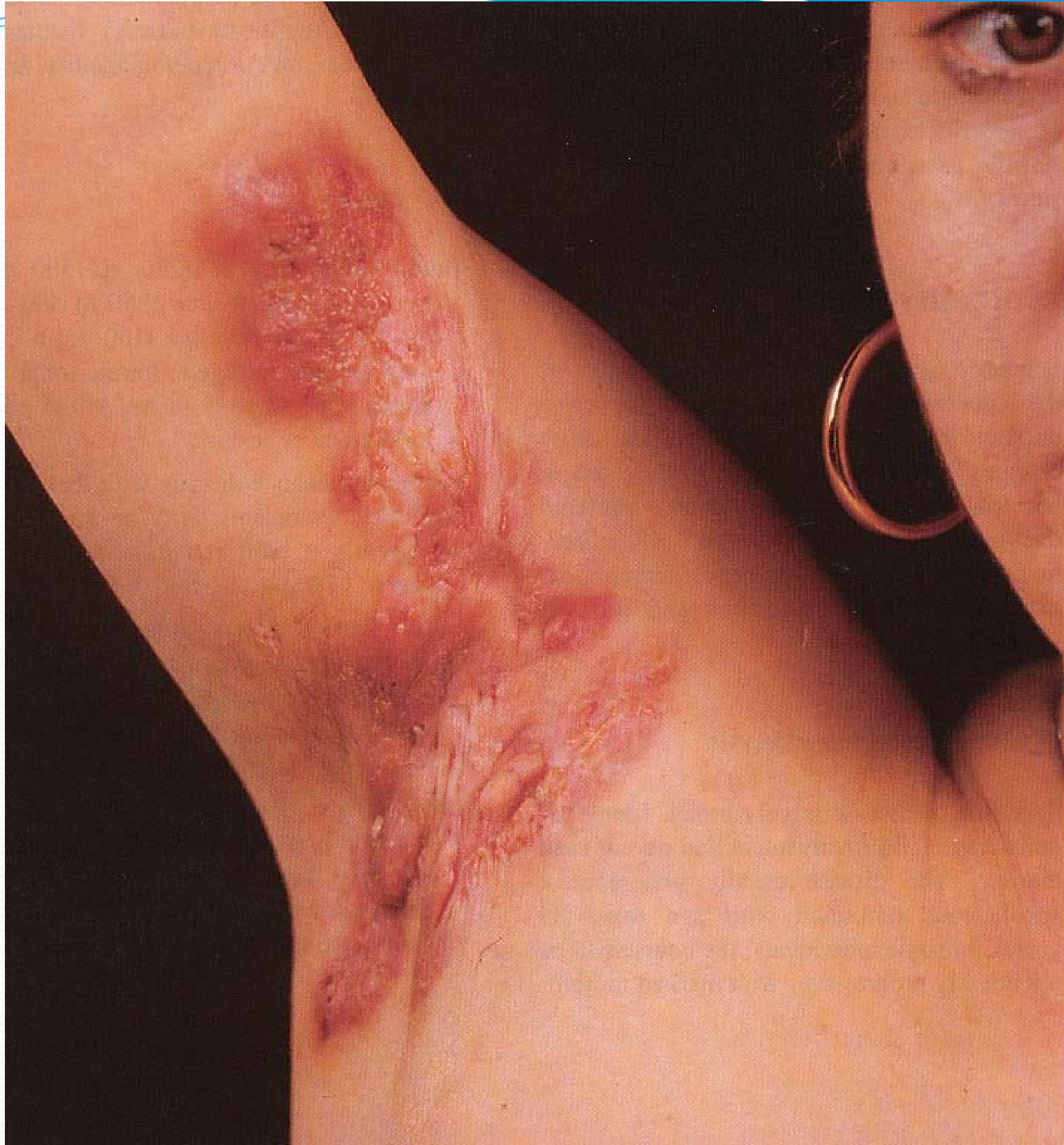
Rosacea

- Chronic acneform inflammation of the pilosebaceous units of the face, coupled with a peculiar increased reactivity of capillaries to heat, leading to flushing and telangiectasias
- NO comedones
- What organ of the face (besides the skin) is often involved?



Case 5

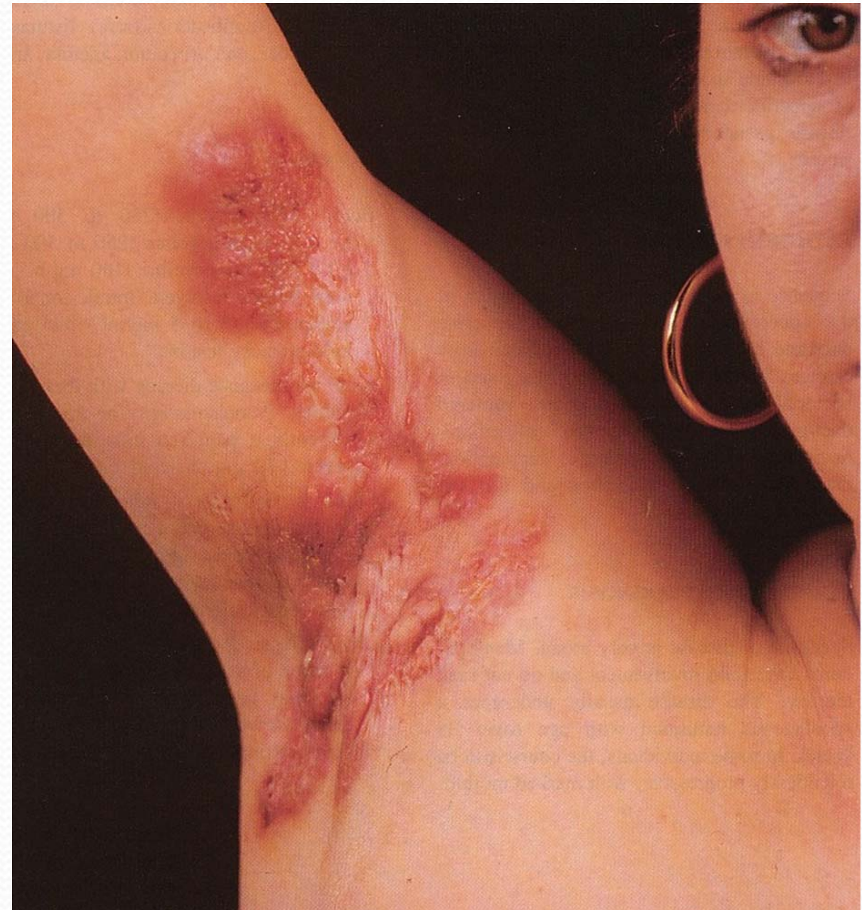
- 23 year old woman
- Complaints of pain in her axillary regions, right worse than left, and a history of abscesses that she had to have drained in her right axilla in the past.



Hidradenitis Suppurativa

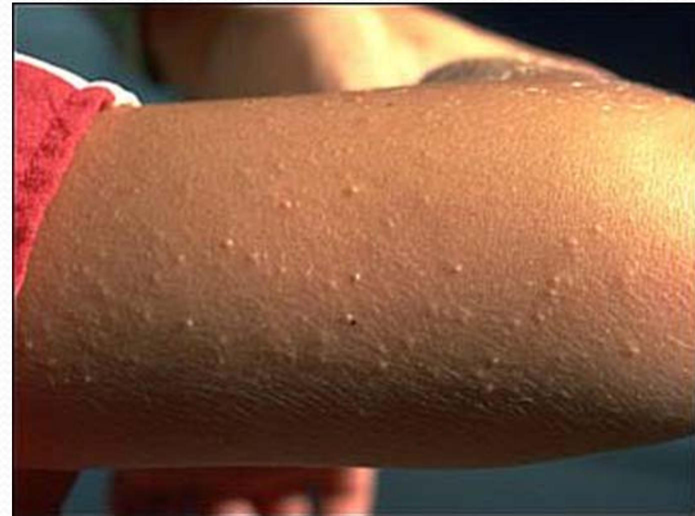
- Chronic, suppurative, scarring disease of apocrine glands, mostly involving the axillary and anogenital region

- What is the mainstay of treatment?



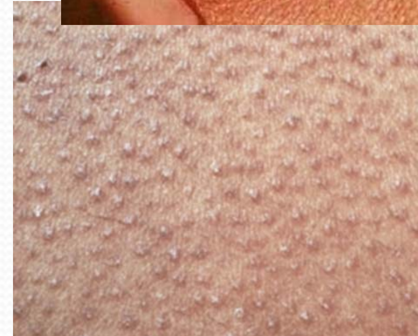
Case 6

- 20 year old woman
- Skin colored to white "bumps" for years on backs of upper arms and upper thighs
- Bothered by appearance
- PMH: asthma



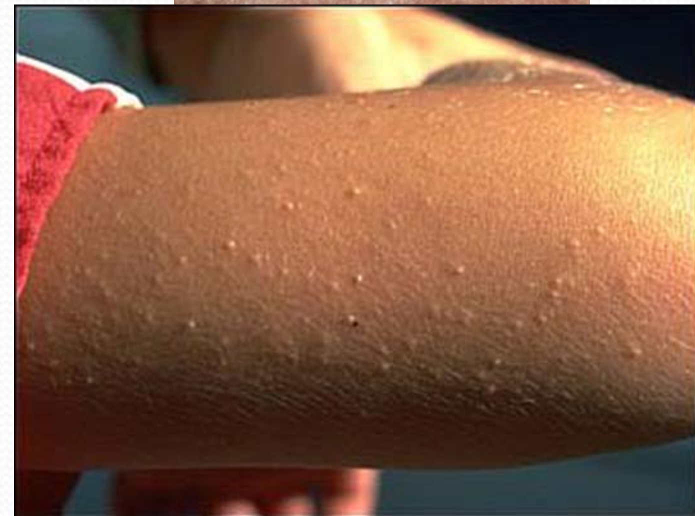
- Exam: "pseudo-pustules"

Keratosis Pilaris (KP)



- Distribution: Back of arms or thighs
- Follicular plugging
- 25% of population

- Association: Atopy
- Treatment: Lac-Hydrin lotion



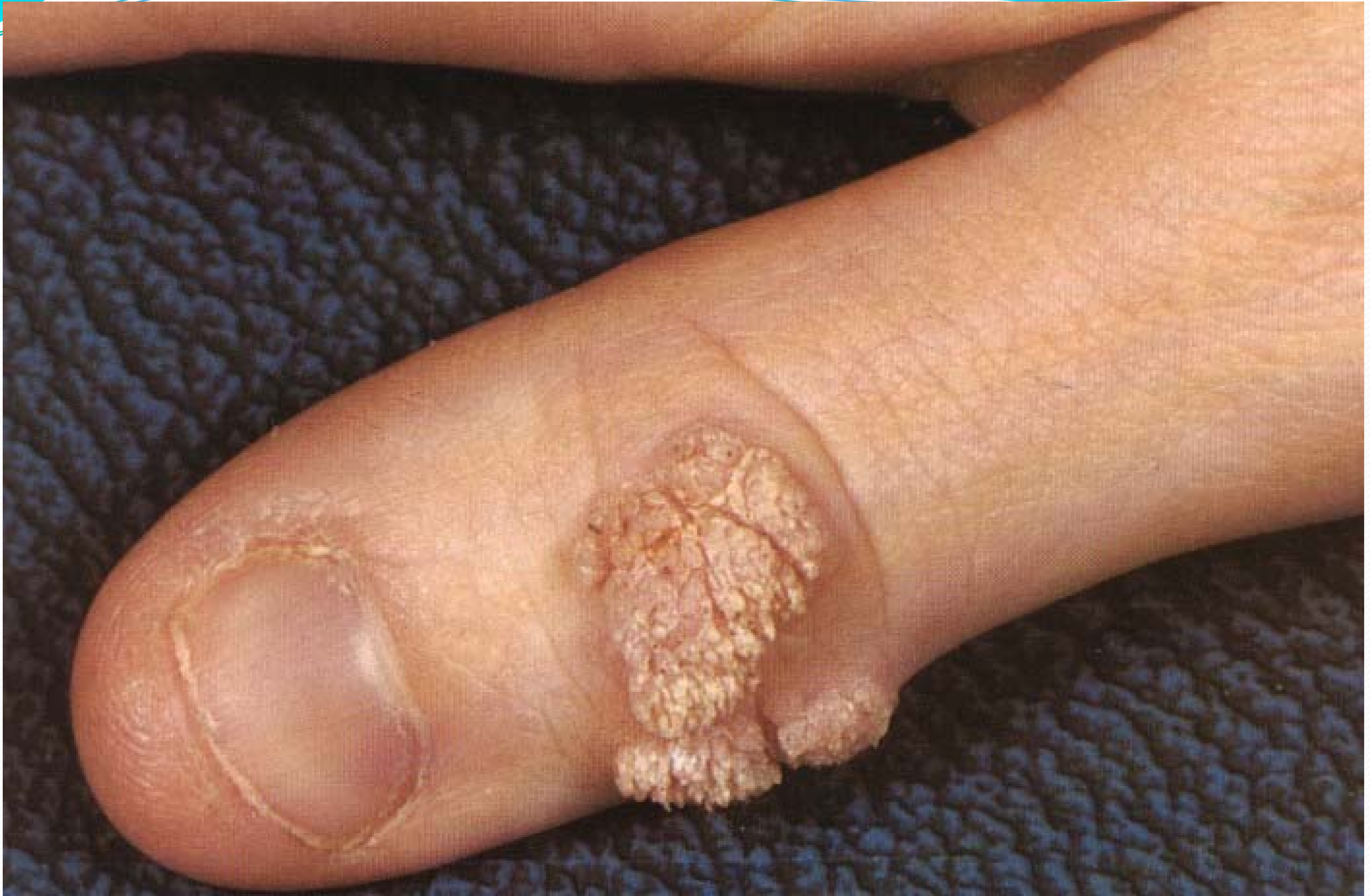
Pustular and Pseudopustular Diseases

- Superficial Folliculitis
- Pyoderma Gangrenosum
- Perioral dermatitis
- Rosacea
- Hidradenitis Suppuritiva
- Keratosis Pilaris

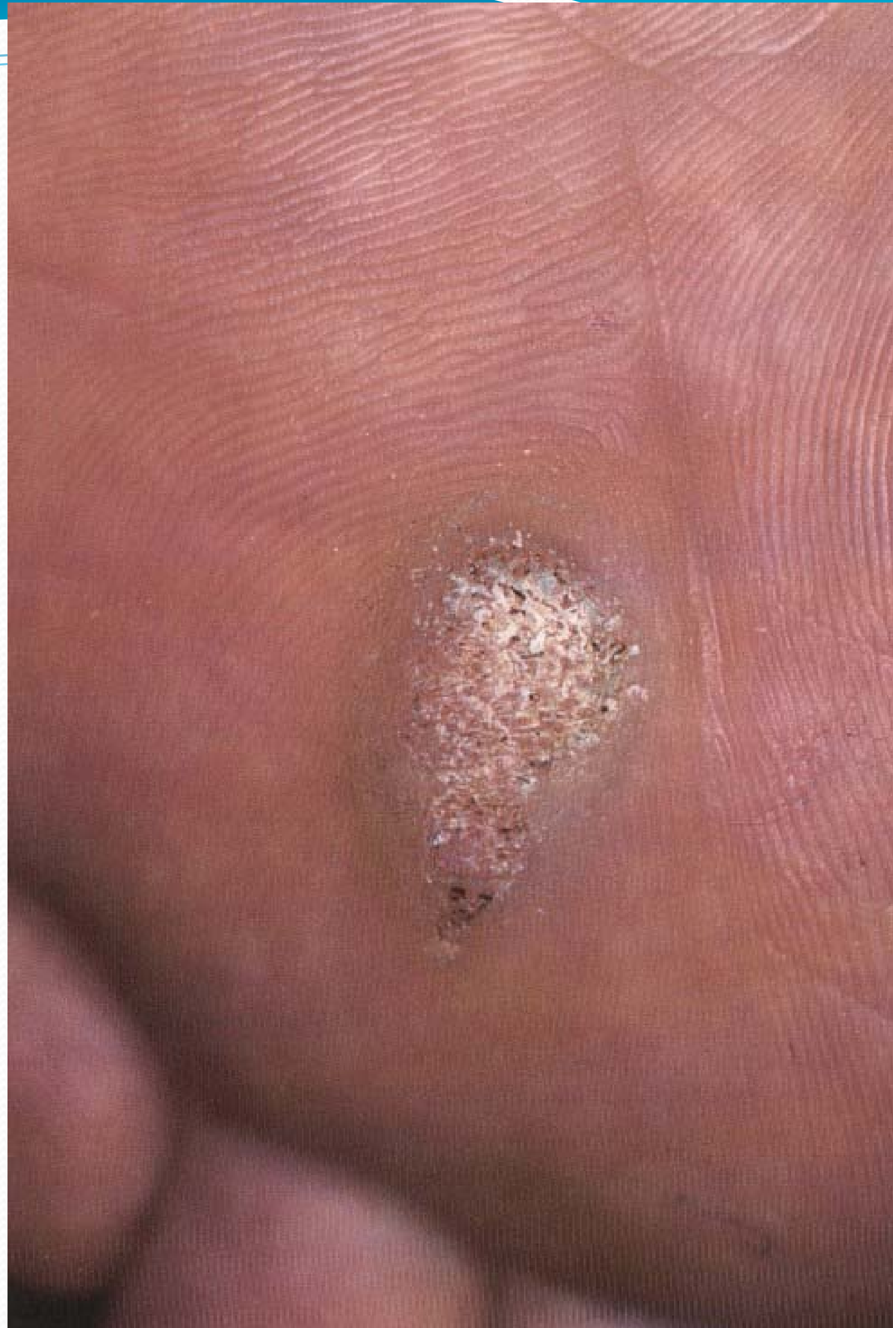
SKIN-COLORED PAPULES AND NODULES

Case 1

- 10 year old girl
- Lesion duration: months
- Seen on hands and knees
- Occasionally bleed painlessly when she picks at them
- Painful lesion on the bottom of her foot



- A one-cm flesh-colored nodule with frond-like protrusions on the surface
- What virus is causative?
- School children; incidence decreases after age 25
- Hyperkeratotic, “reddish-brown dots” seen with hand lens. What are these dots?

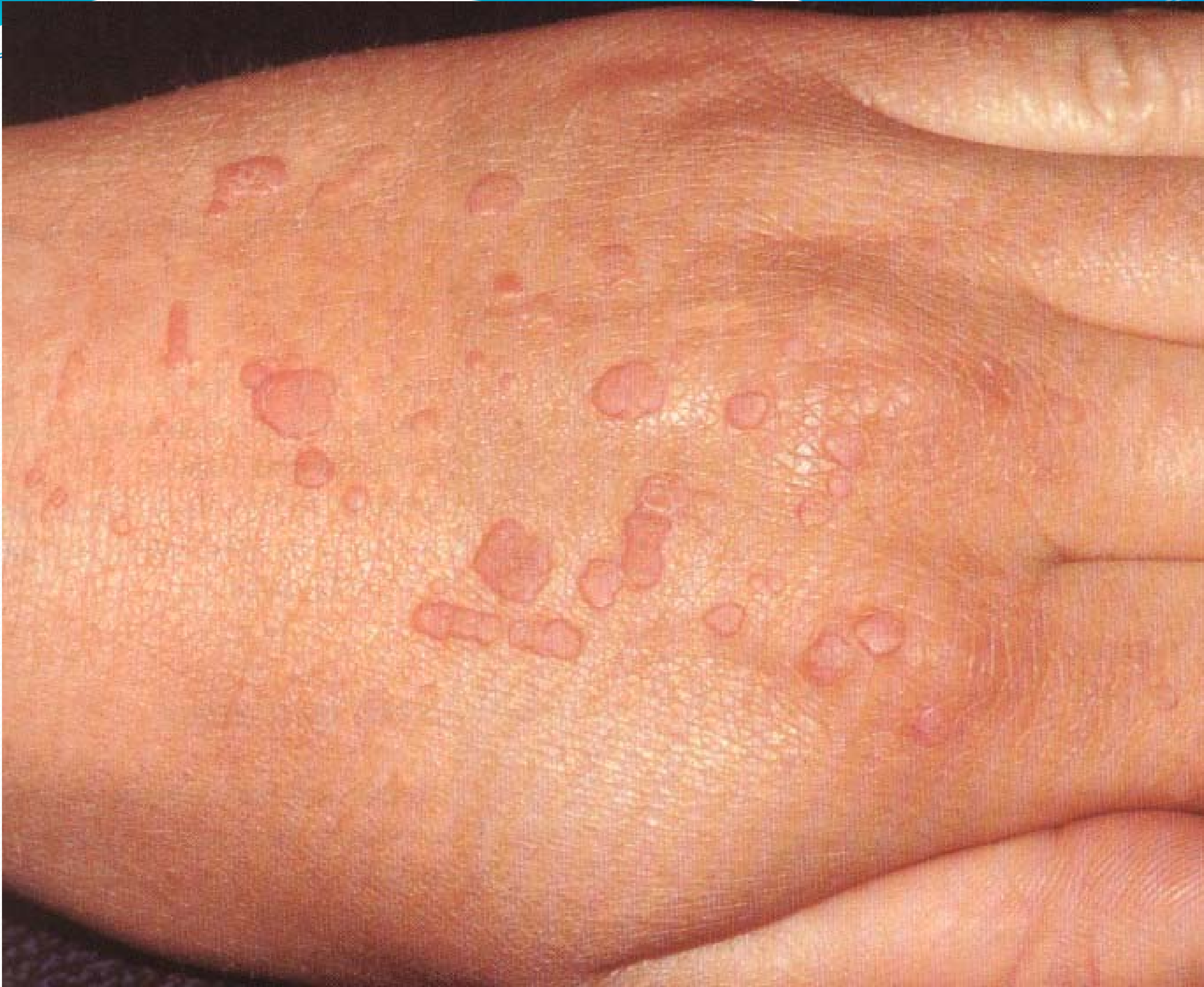


Verruca Plantaris

- One-cm flesh-colored flat-topped plaque with loss of skin markings and firm-pressed scale on the surface
- Lesions appear often on sites of pressure, may be multiple
- Tenderness may be marked
- What is in the differential?
- How do you tell the plantar wart from the other differential diagnoses?

Case 2

- 23 year old woman
- Noticed the lesions on her hands a couple months ago. First started as a couple of lesions, now many.
- Not painful or pruritic

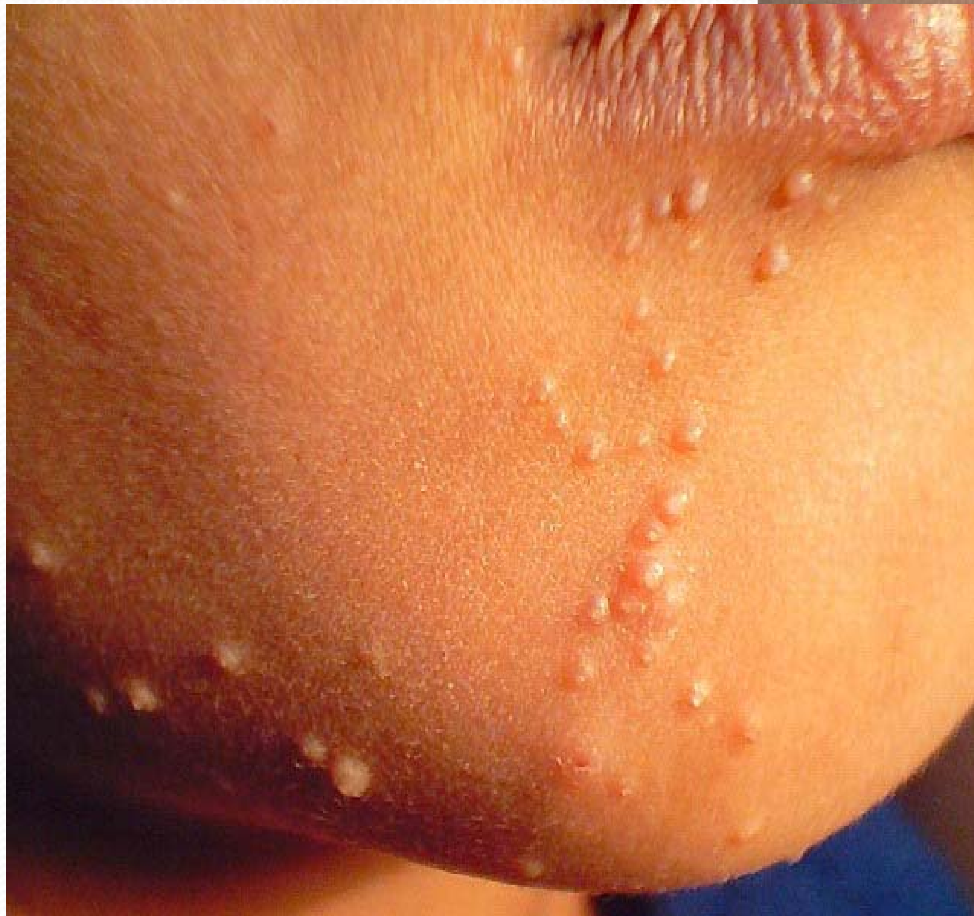


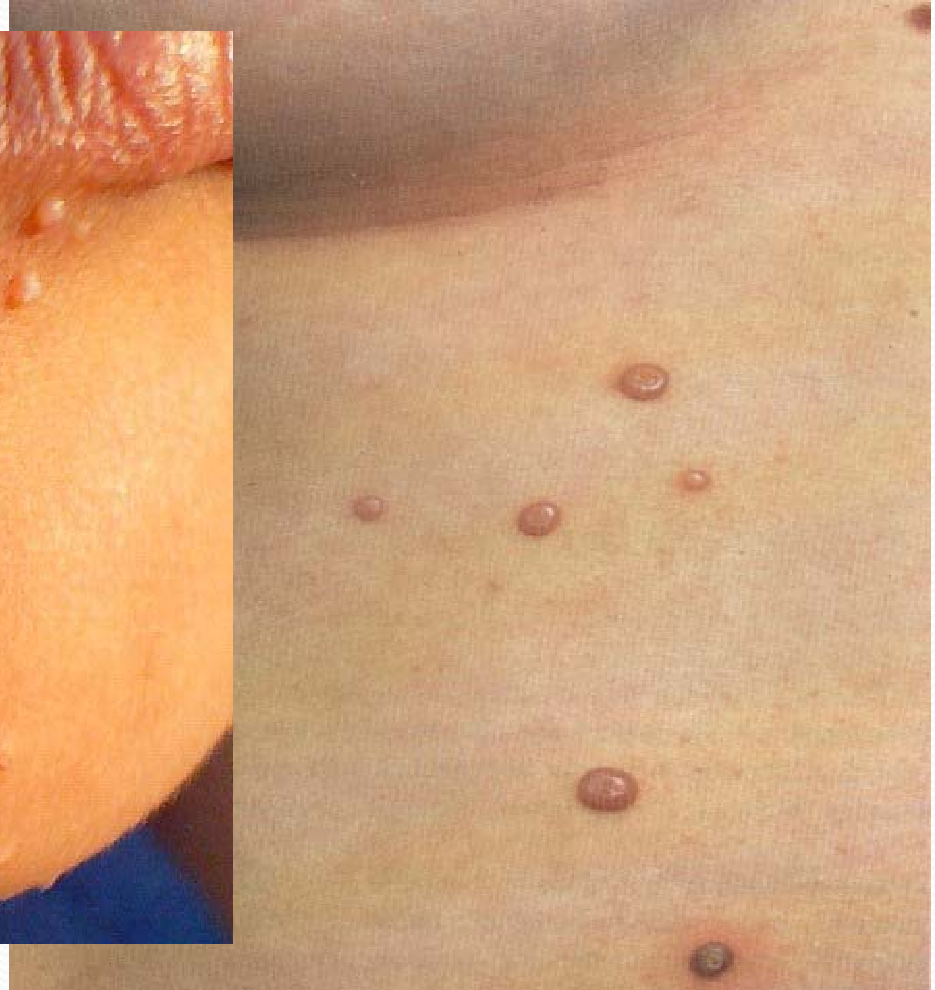
- Skin colored or light brown flat papules 1-5 mm
- Young children and adults
- Seen on face, dorsa of hands, shins
- What causes the linear lesions?

Case 3

- 19 year old sexually active male
- Lesions noted on face for the past 2-3 months
- Not pruritic or painful
- No systemic symptoms

Case 3

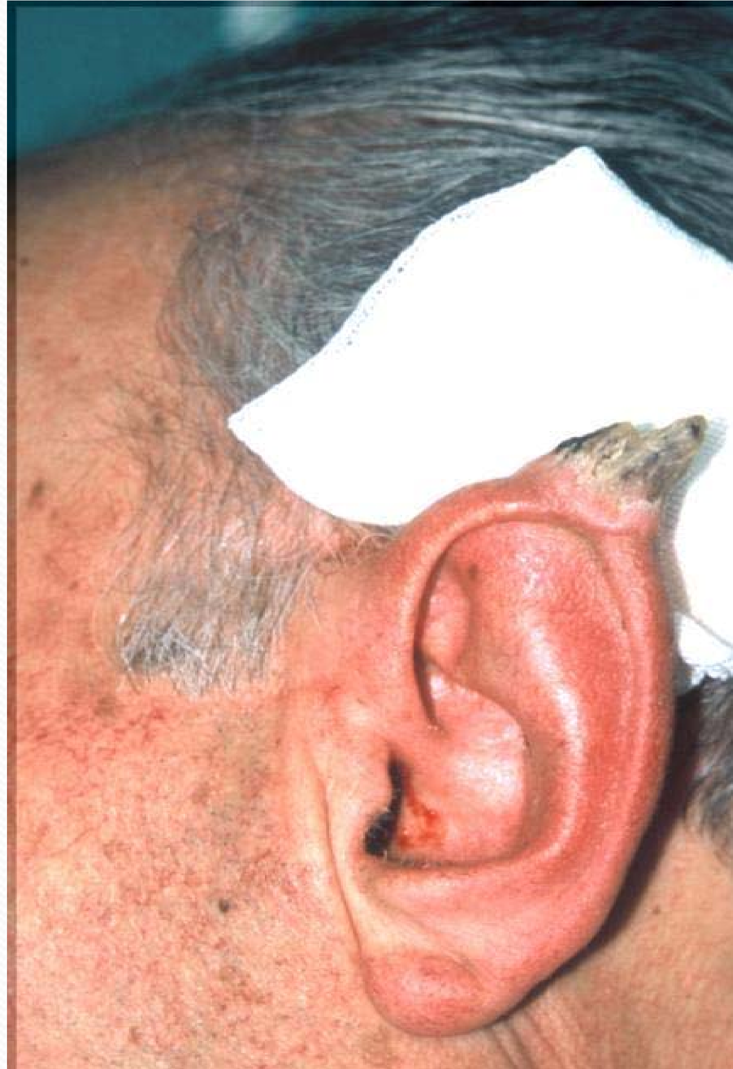




Molluscum Contagiosum

- Pearly-white or skin colored papules or nodules with **central umbilication**
- Children, Young Adults (sexually transmitted)
- What is the causative virus?
- Multiple facial lesions suggest what disease?

Case 4



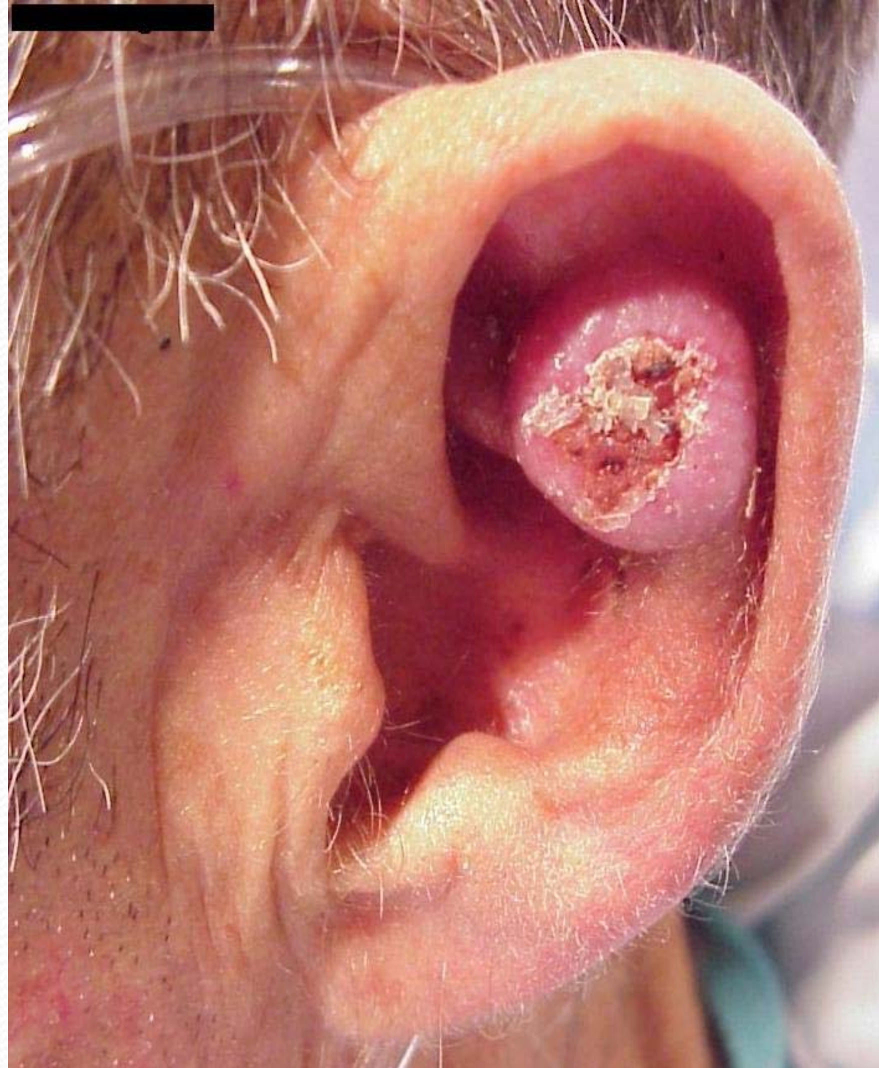
- Differential:
  - Keratoacanthoma
  - Actinic Keratosis
  - Squamous Cell Carcinoma

Keratoacanthoma

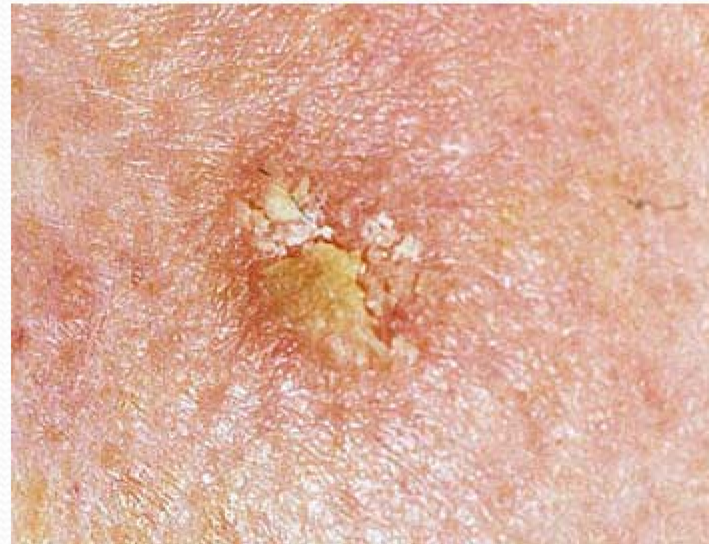
- Benign but mimics SCC

- Rapid growth
- Cental keratotic plug

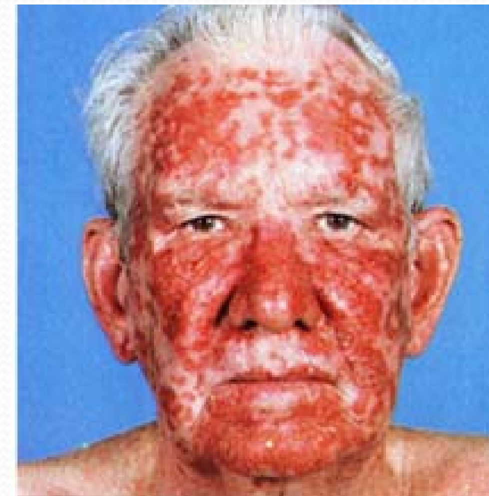
- Heals with scarring
- Surgical removal



Actinic Keratosis (AK)

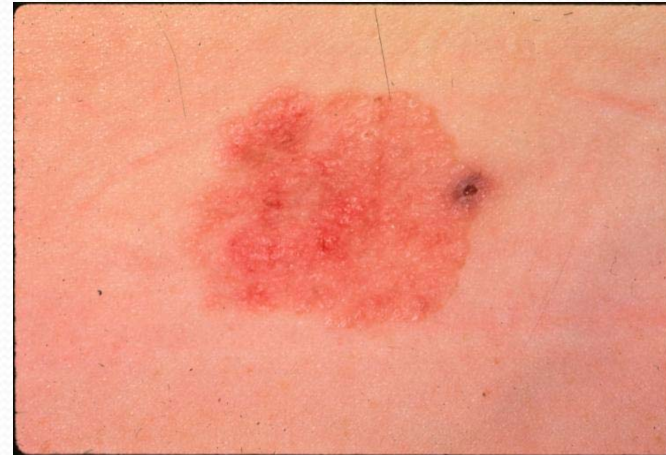


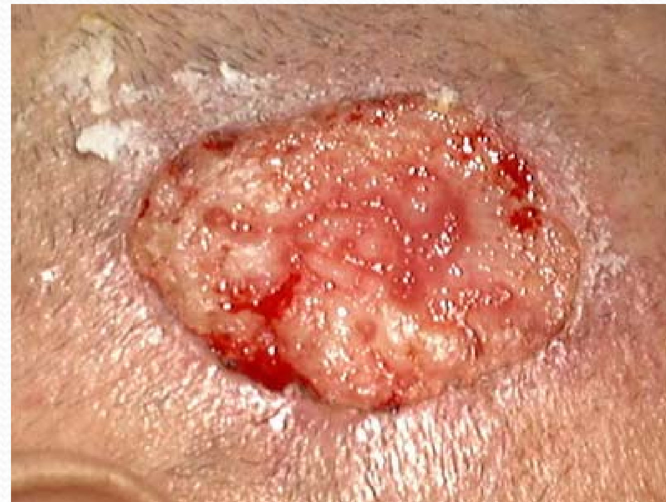
- Sun exposure
- Rough red scaly hyperkeratotic papules
- Rx: Cryotherapy if few; Efudex (topical 5-FU)if generalized
- SCC from AK: 1:1000



Squamous Cell Ca. (SCC)

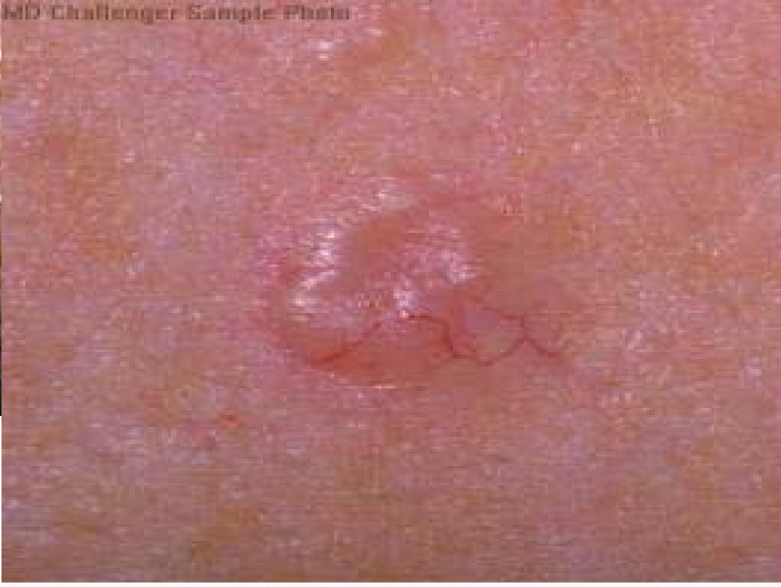
- SCC In Situ = Bowen's
- Well marginated, hyperkeratotic plaque usually in sun-exposed area
- Invasive SCC
  - Ulcerated
  - Metastatic (3-4%)
  - Risks:
    - Immunosuppression
    - Areas of chronic inflammation
    - Burn scars





Case 5

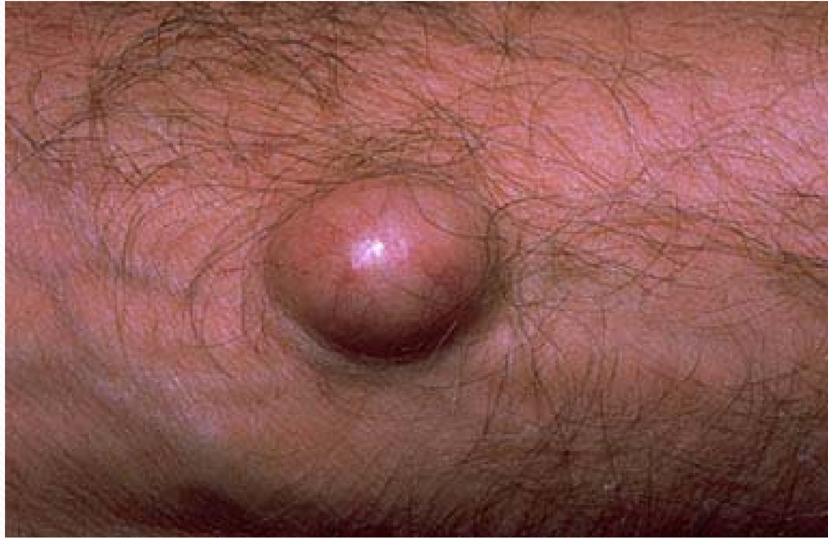
- 40 year old man
- Native to Arizona, likes to golf and play tennis
- Lesion present for a couple months, occasionally bleeds

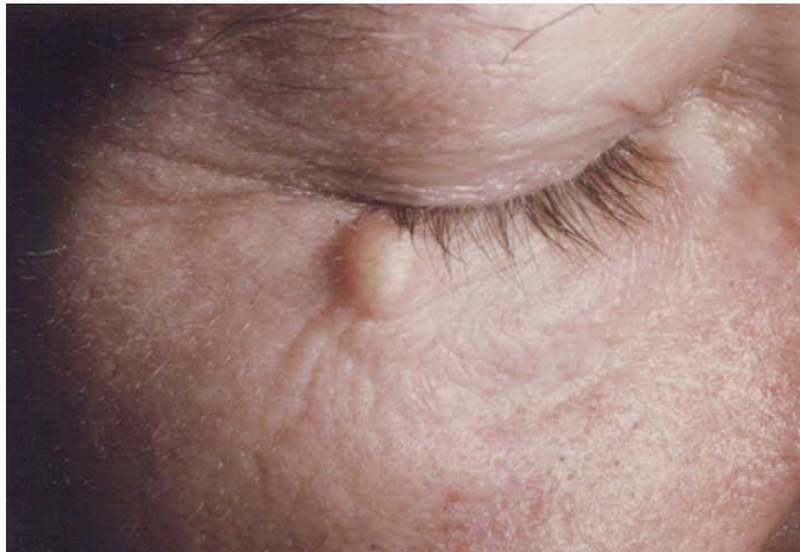

MD Challenger Sample Photo

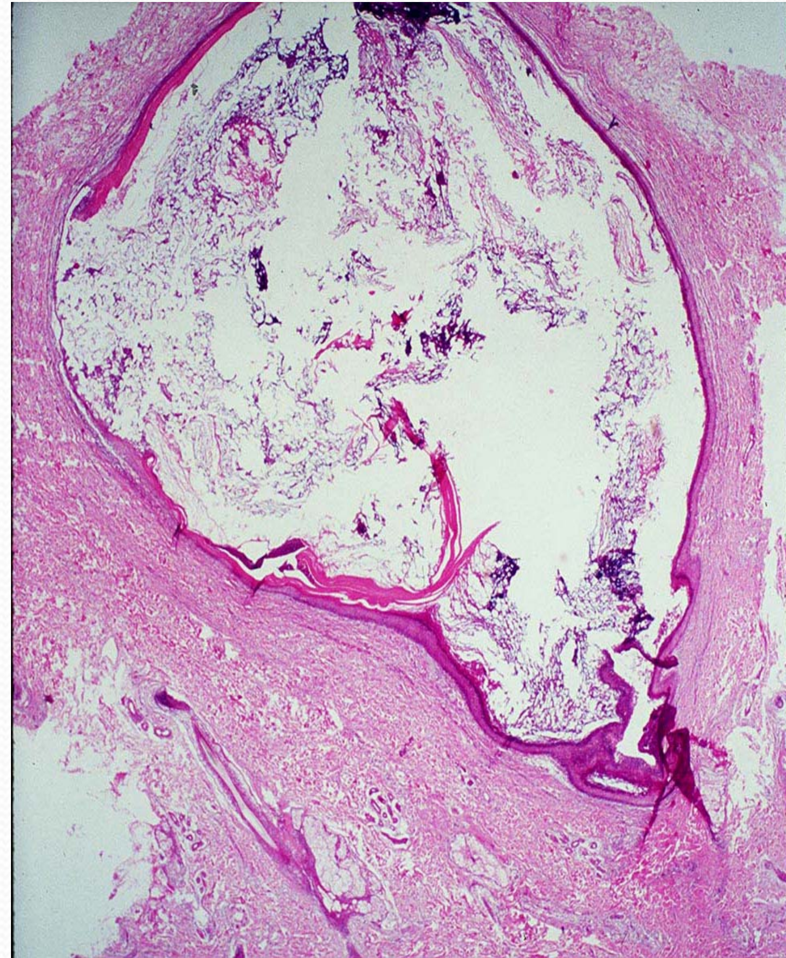
Basal Cell Carcinoma

- **Most common** NMSC
- ~1,000,000 new BCC/year
- Classic: Skin-colored **pearly** papule with **telangiectasia** and rolled borders
- Categories: Superficial, Nodular, Pigmented, Sclerosing
- **Rarely metastatic** – local invasion “Rodent ulcer”

Case 6







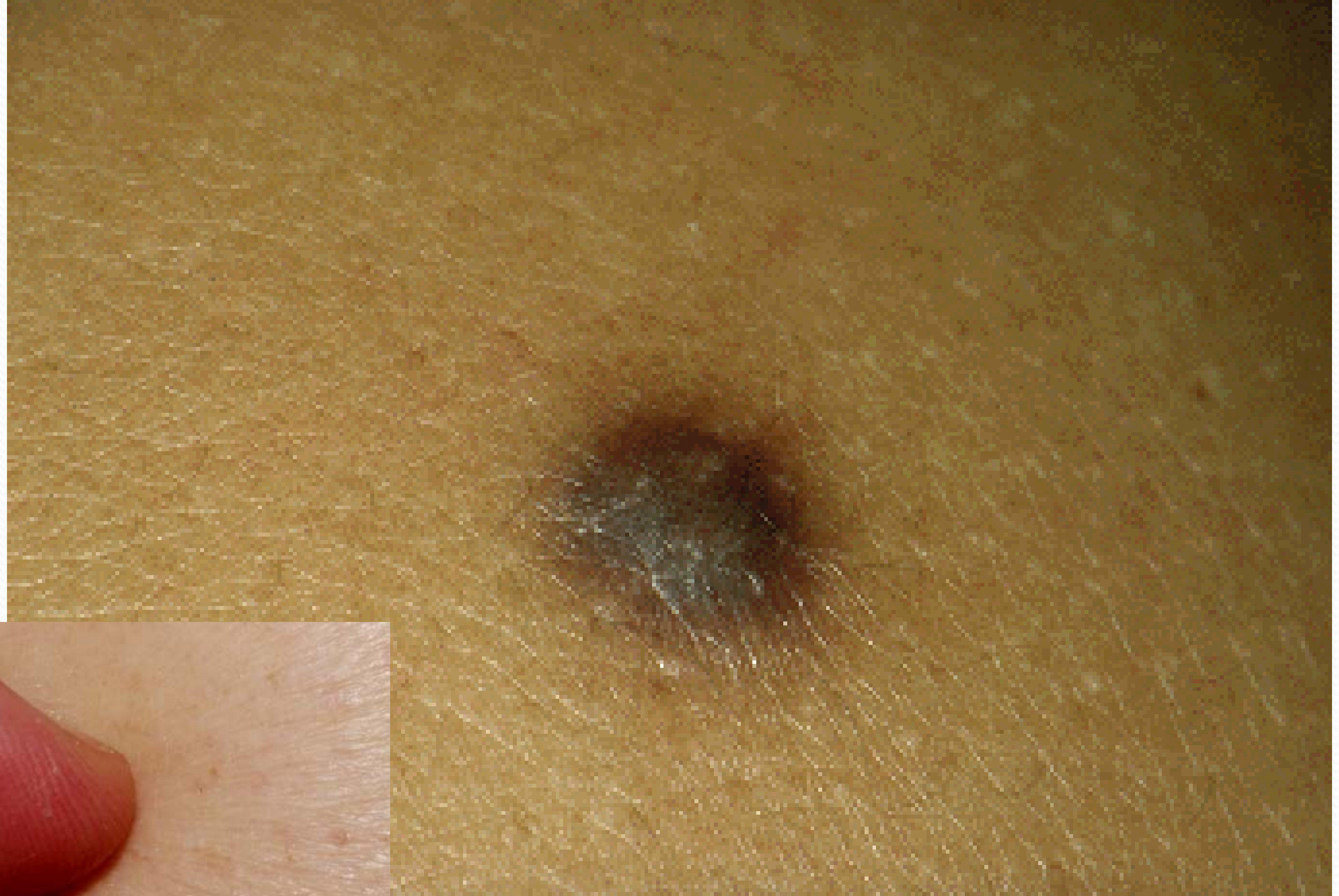
Epidermoid Cyst

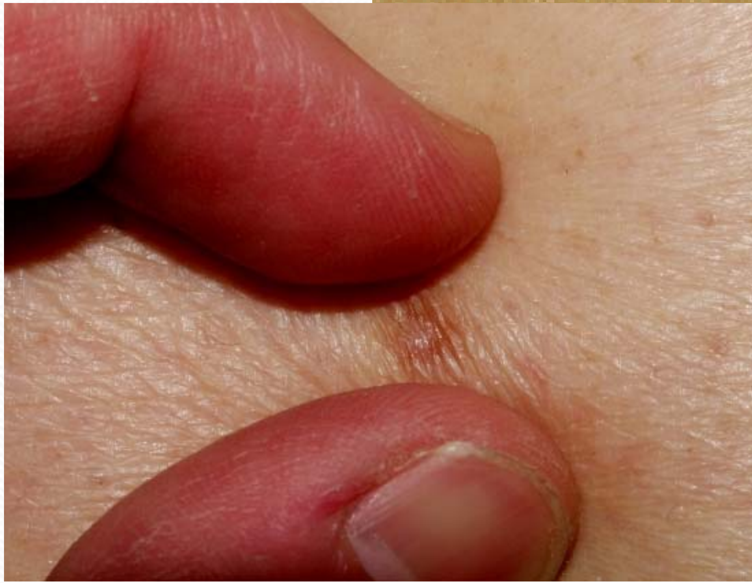
- Synonyms: Wen, sebaceous cyst, epidermal cyst

- Follicular with CENTRAL PORE
- Keratinaceous debris
- "CHEESY", smell rancid

- Ruptured cyst invokes inflammation; it does not mean it is infected!
- Important to remove sack or will recur!

Case 7





Dermatofibroma (DF)

- Very common!
- Adult females
- Lower leg
- Common post trauma/bite

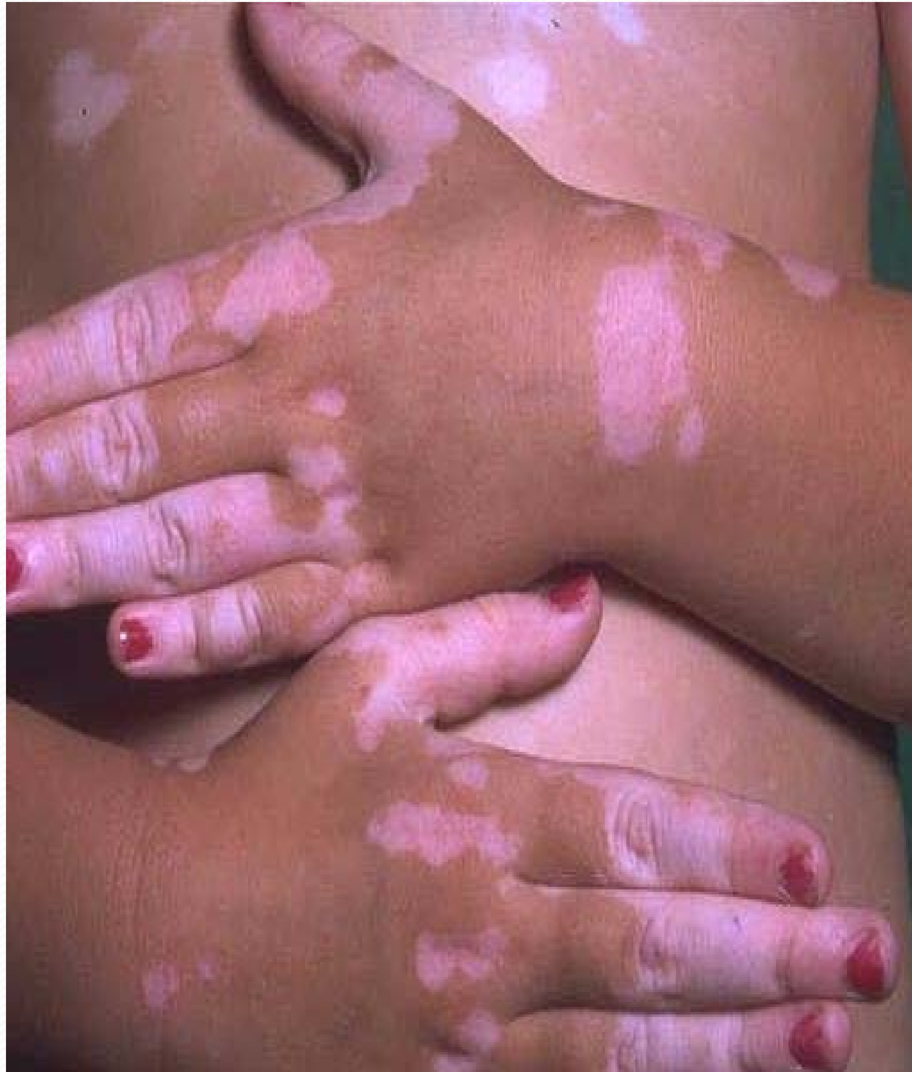
- DERMAL
- “Dimple sign”

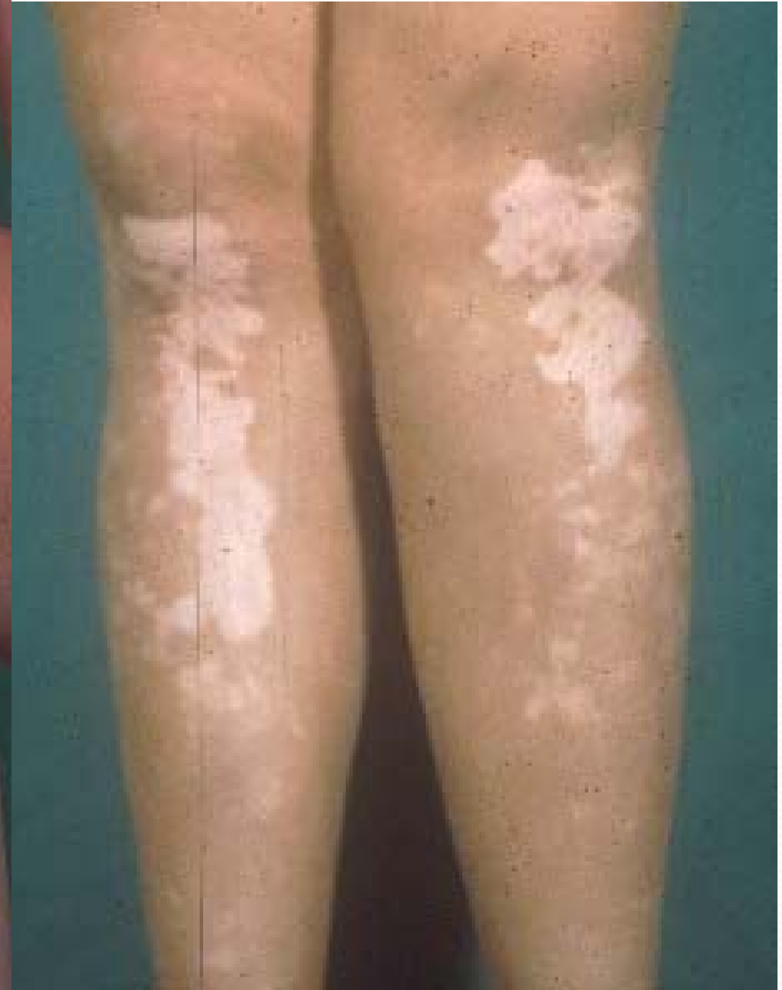
Skin-colored papules and nodules

- Verruca Vulgaris
- Verruca Plana
- Molluscum contagiosum
- Cutaneous Horn
- Keratoacanthoma
- Actinic keratosis
- Squamous cell CA
- Basal cell CA
- Epidermoid cyst
- Dermatofibroma

WHITE LESIONS

Case 1

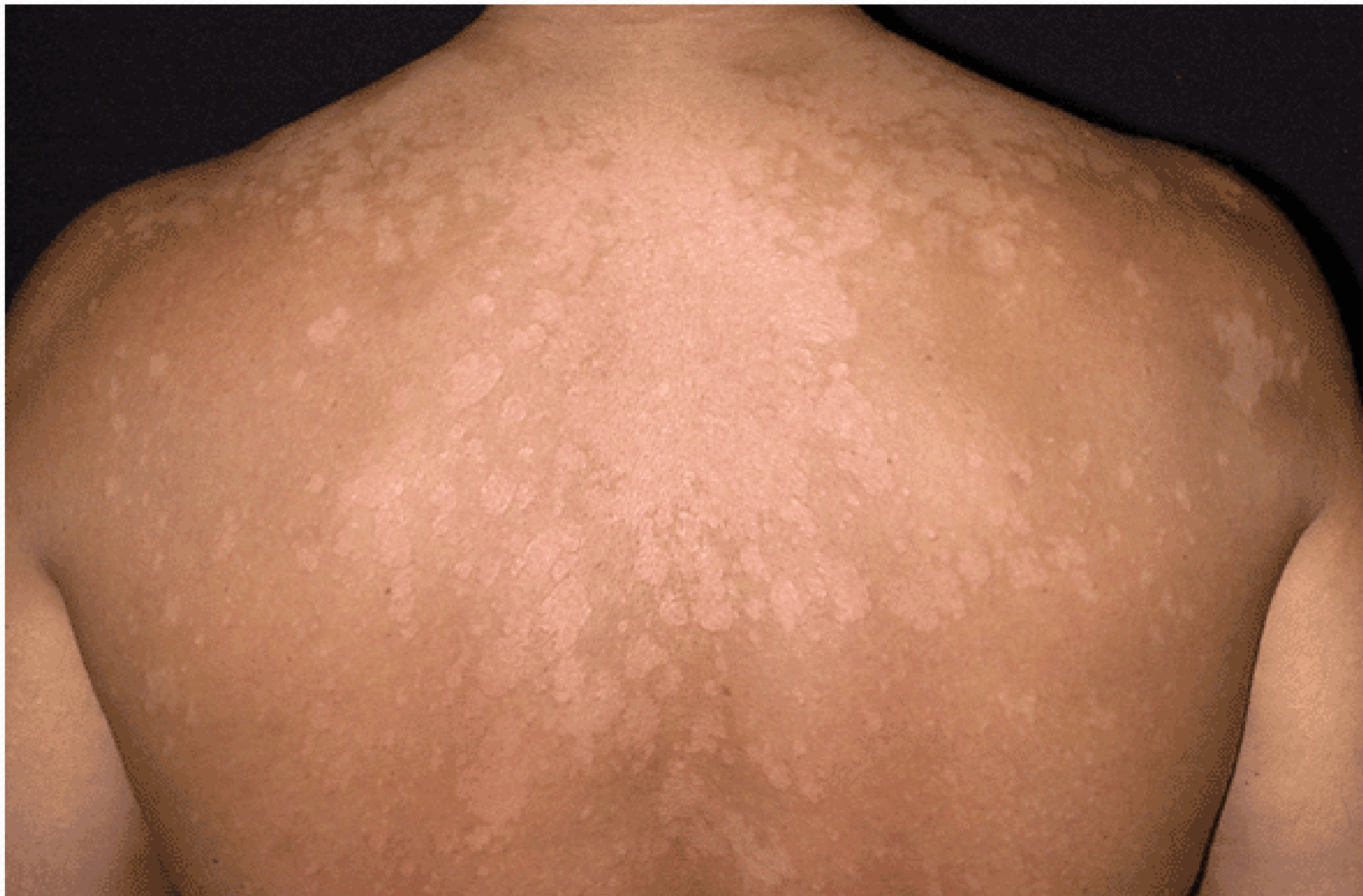




Vitiligo

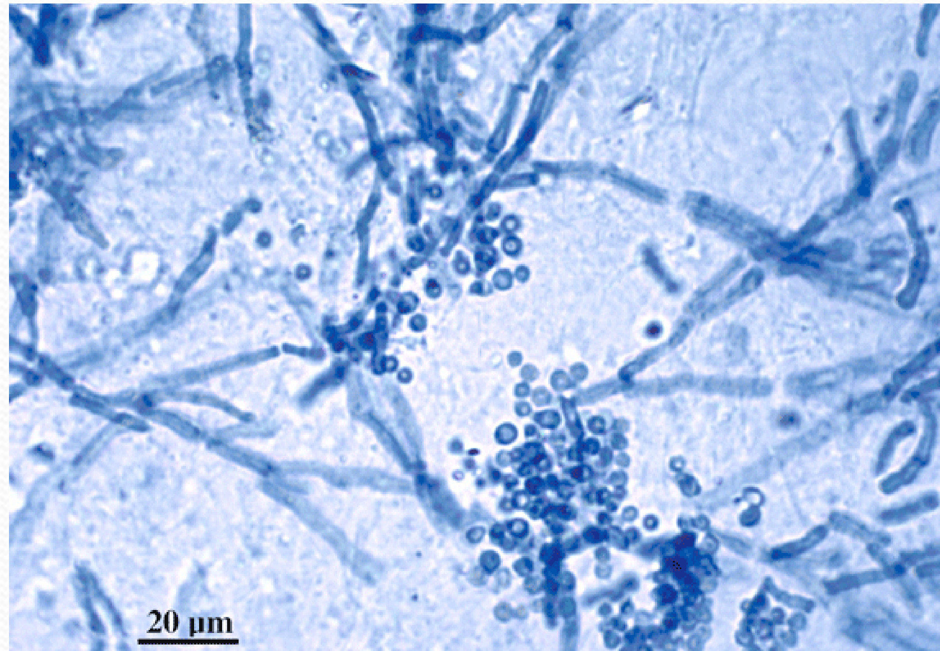
- Autoimmune destruction of melanocytes
- Poliosis: Vitiligo macule
- Association: Thyroid Disease (30%)
  - Also: Pernicious anemia, Addison's, Diabetes type 1
- Very difficult to treat in hairless areas!
  - Recruits melanocytes from follicles
  - Glucocorticoids and phototherapy

Case 2



Tinea Versicolor

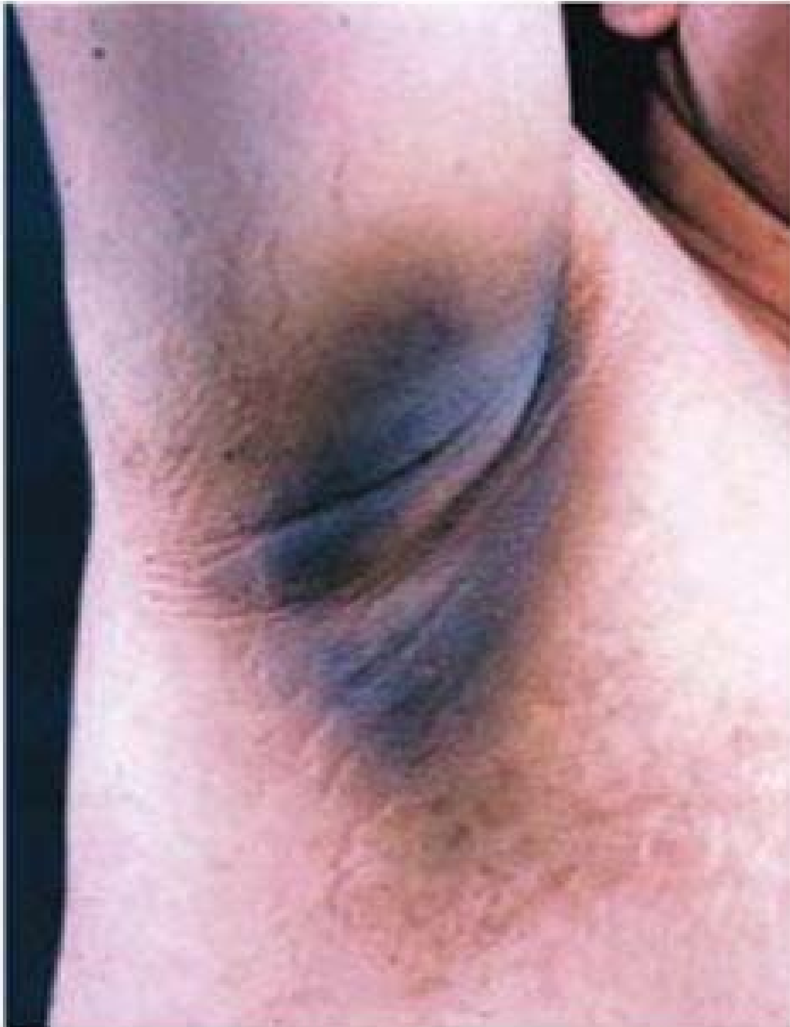
- Clinical: Hyper or hypopigmented
- KOH: Spaghetti and meatballs

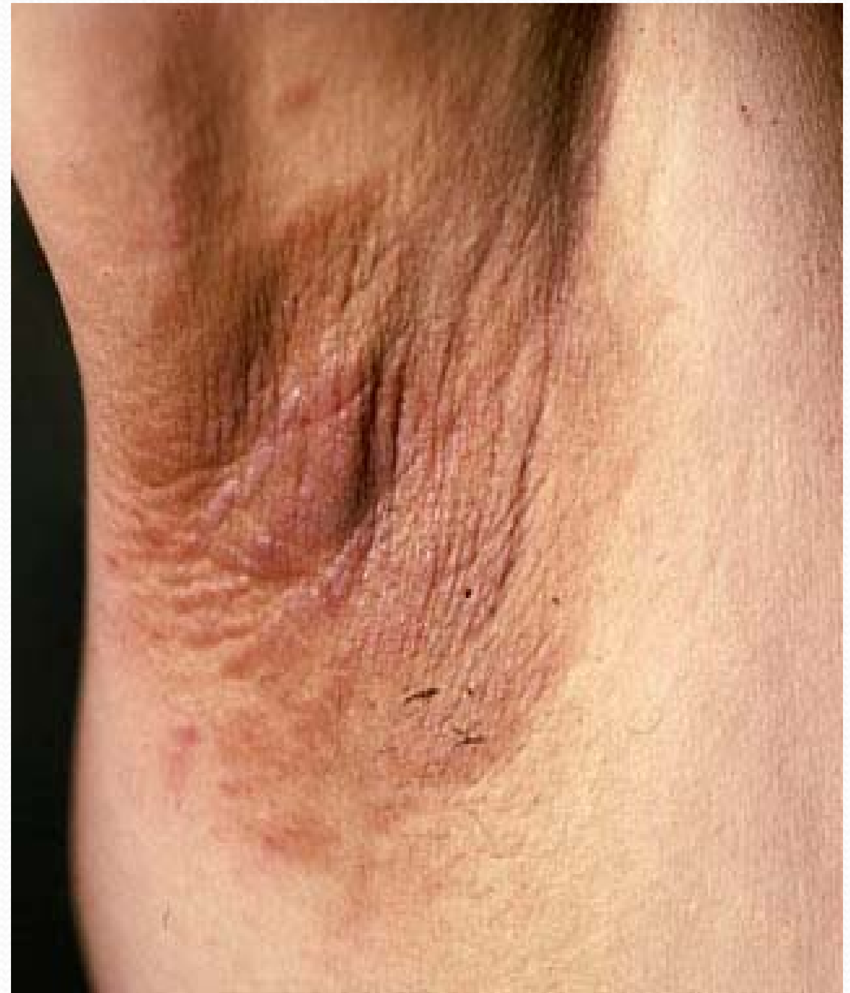


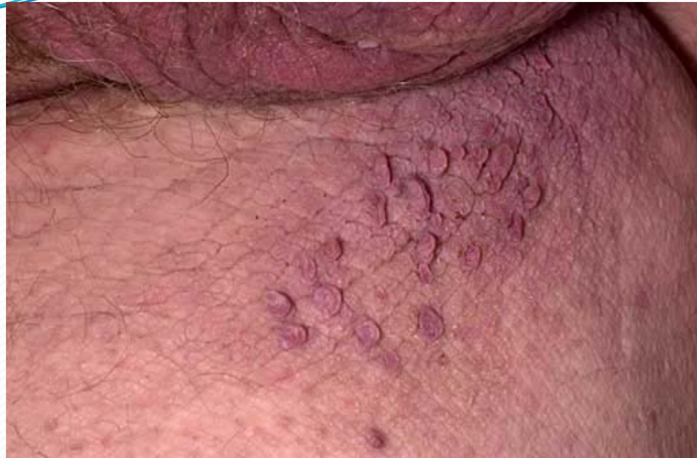
- Vitiligo
- Tinea versicolor

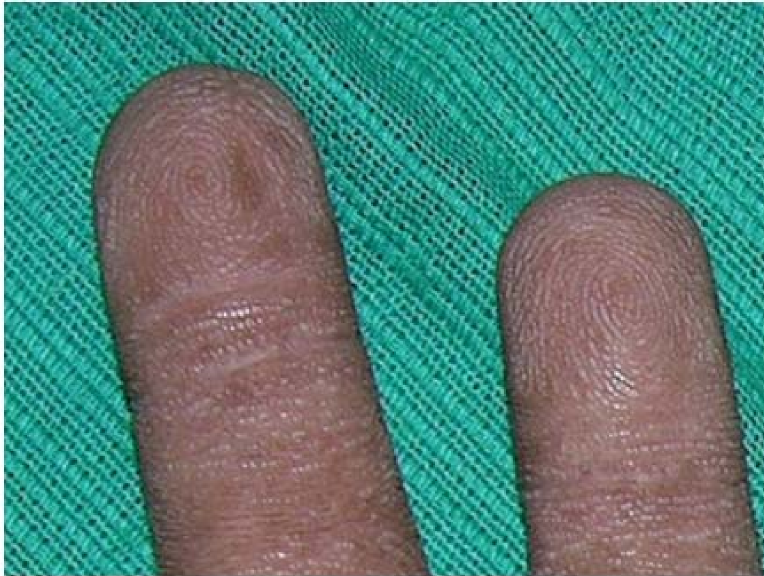
BLUE, BLACK, and BROWN LESIONS

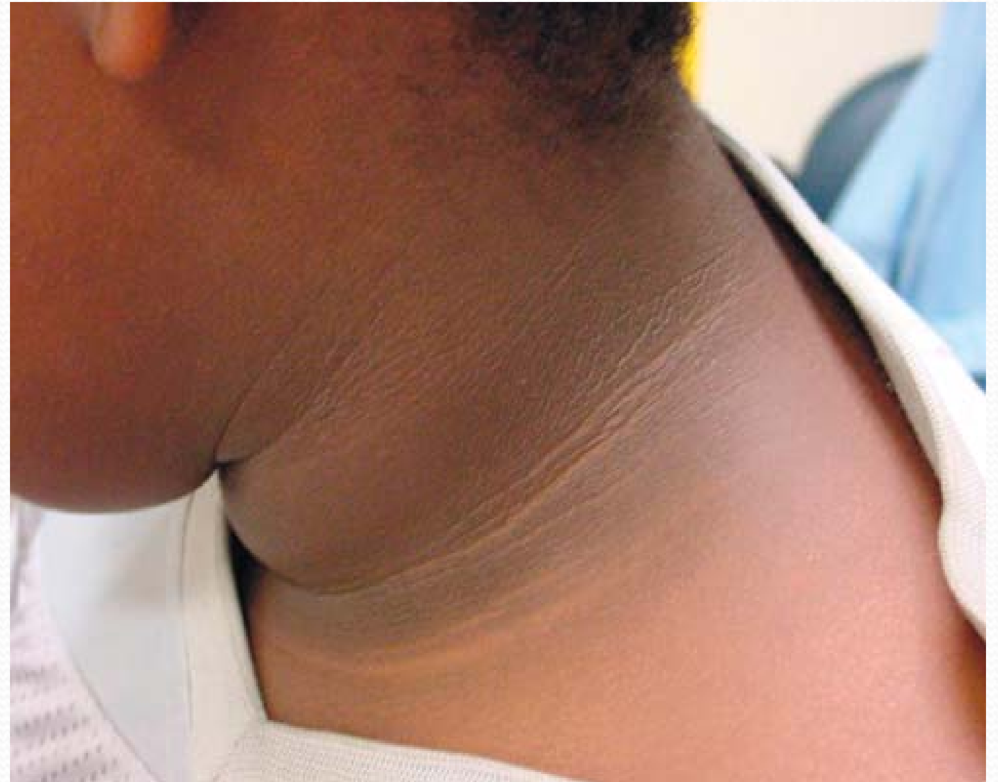
Case 1







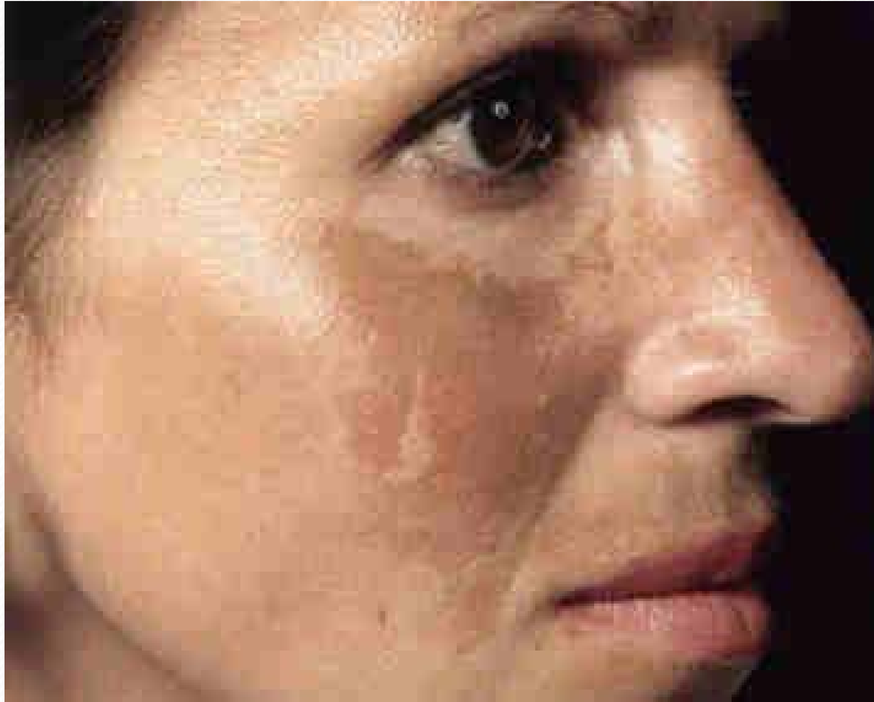


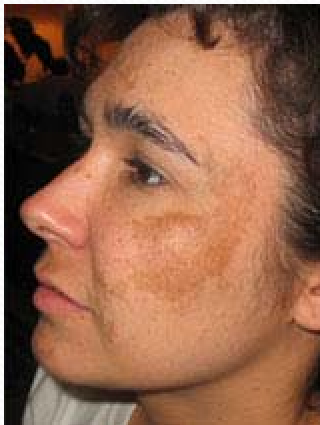


1. Internal Malignancy
   - Adenocarcinoma
   - More mucosal involvement

2. Insulin Resistance
   - Presumed mechanism: ↑↑ **IGF**
   - Skin tags (acrochordon)
   - Tripe palms

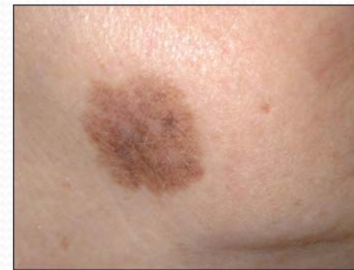
Case 2

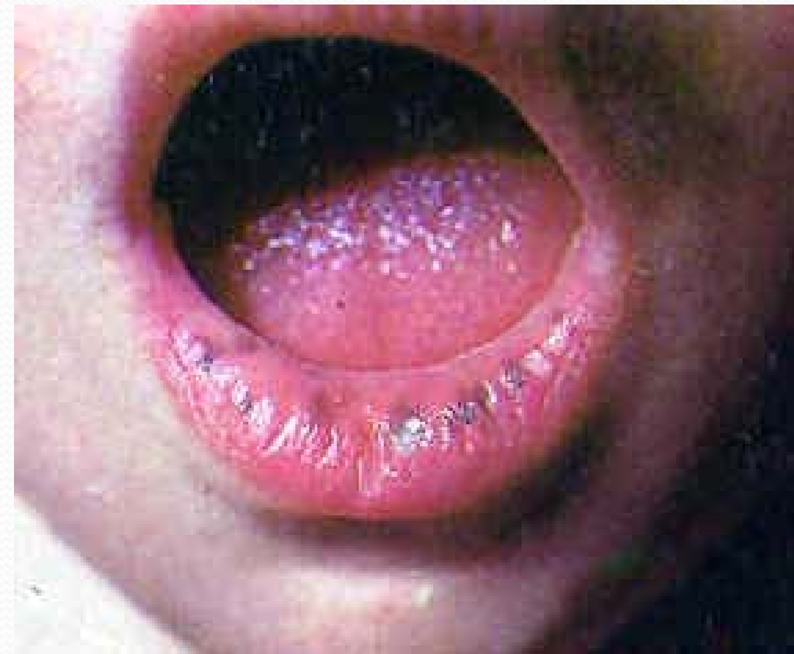




- 90% Female
- ? Due to progesterone
- Risk factors: Pregnancy, OCPs
  - Always in addition to sun
- Tx: Bleaching + Sunscreen

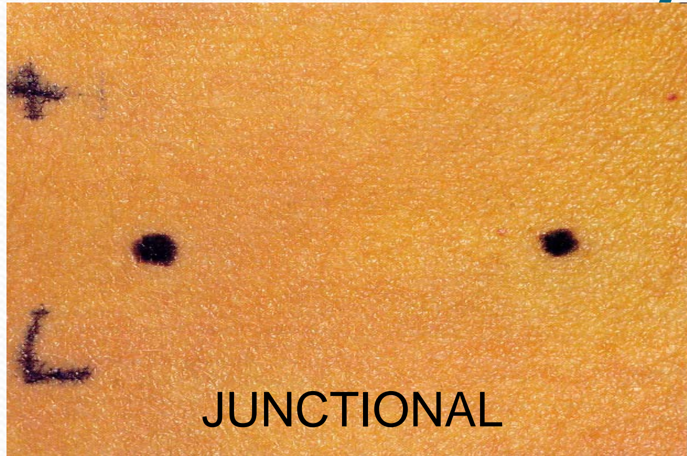
Case 3:
Ephelides versus Lentigines
(Freckles) (Liver spots)

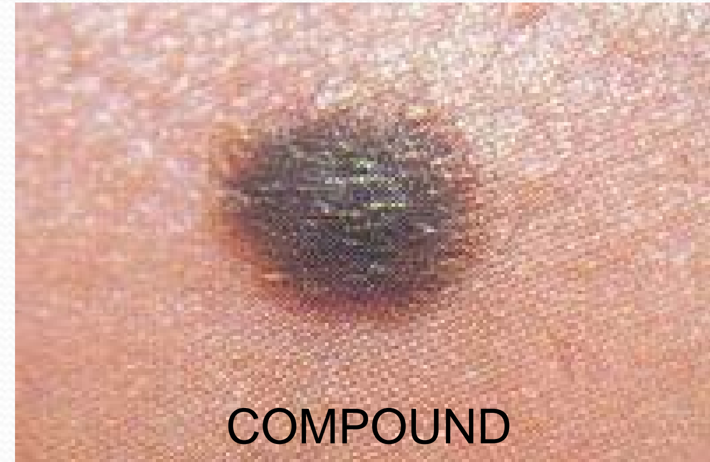


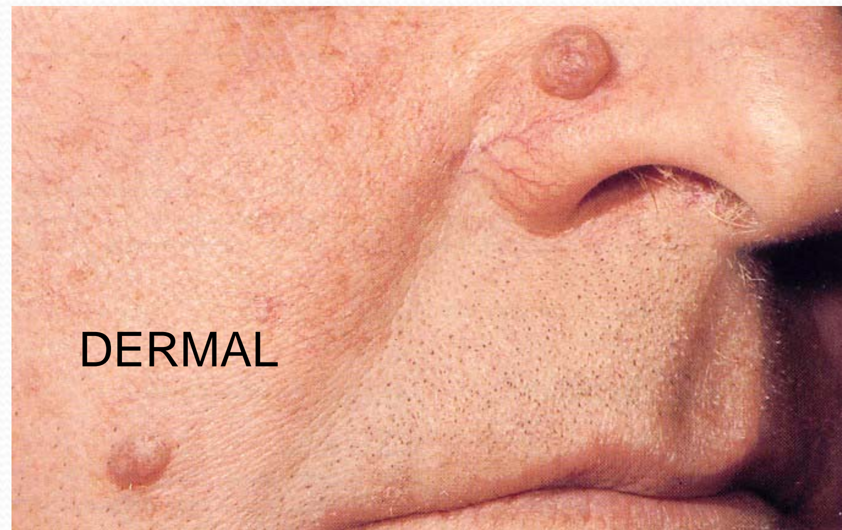


PEUTZ-JEGHERS
(poyts-yay-gurz)

Case 3: Types of Nevi



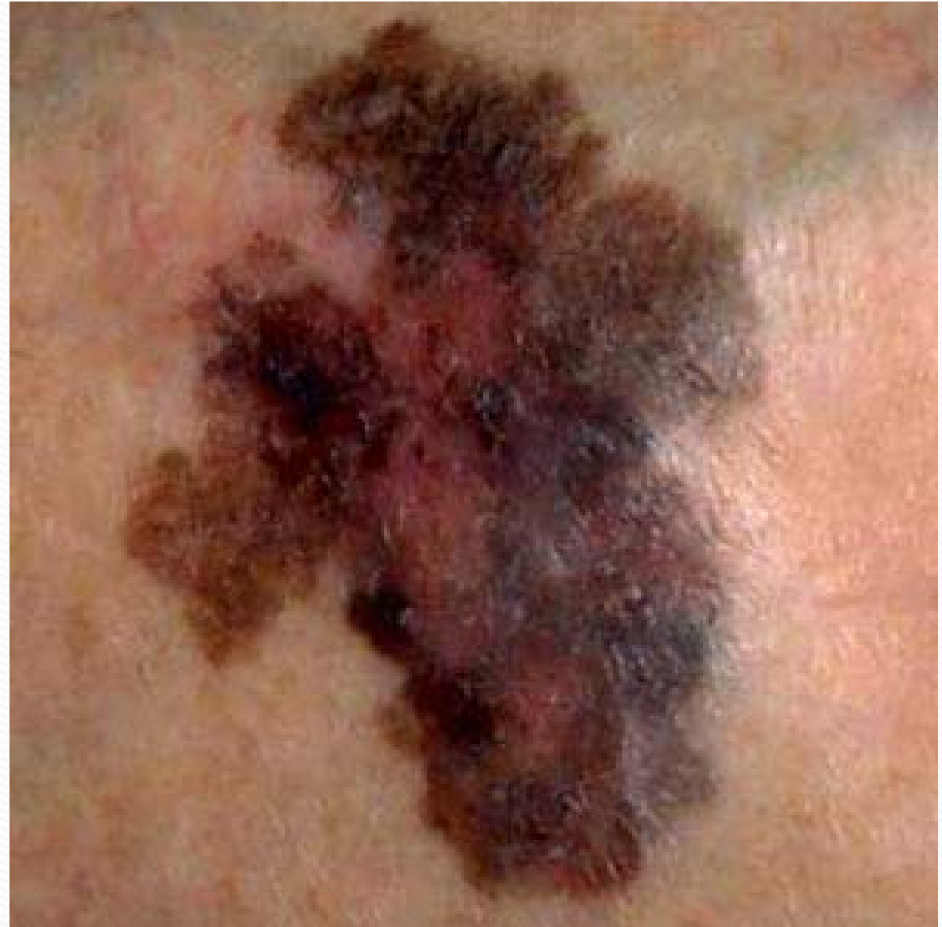




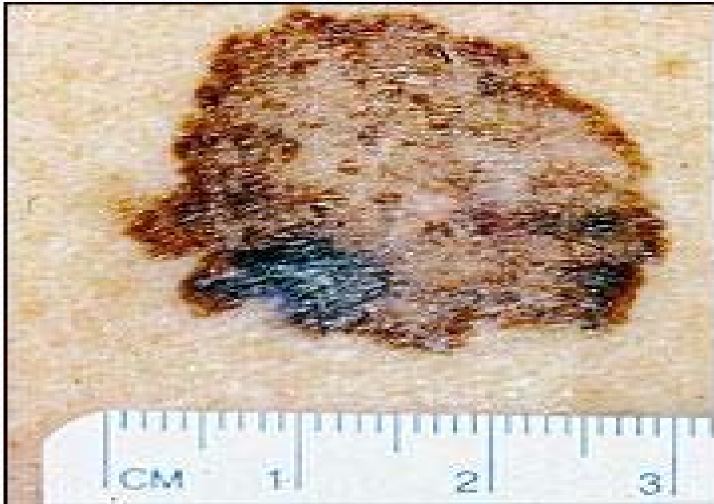
Case 4: Melanoma

- Asymmetry
- Border Irregularities
- Color Variation
- Diameter < 6mm
- Elevation

- Dermatologists like to refer to the “flag sign”.

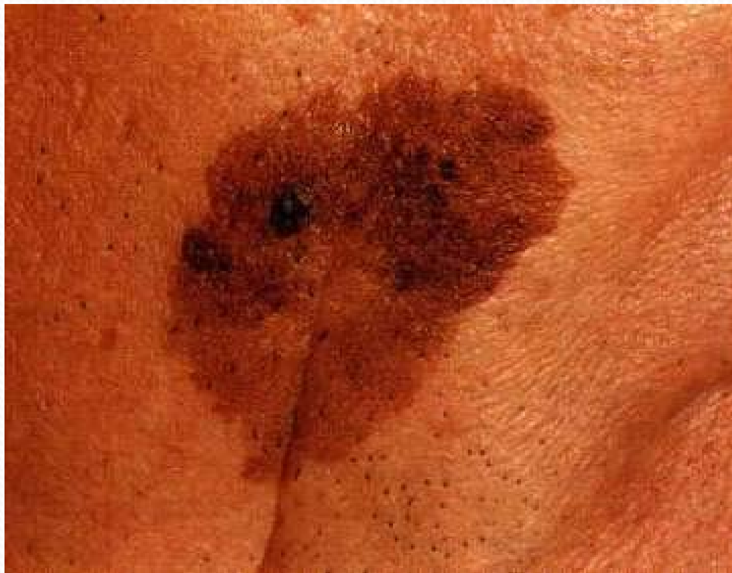


Types of melanomas

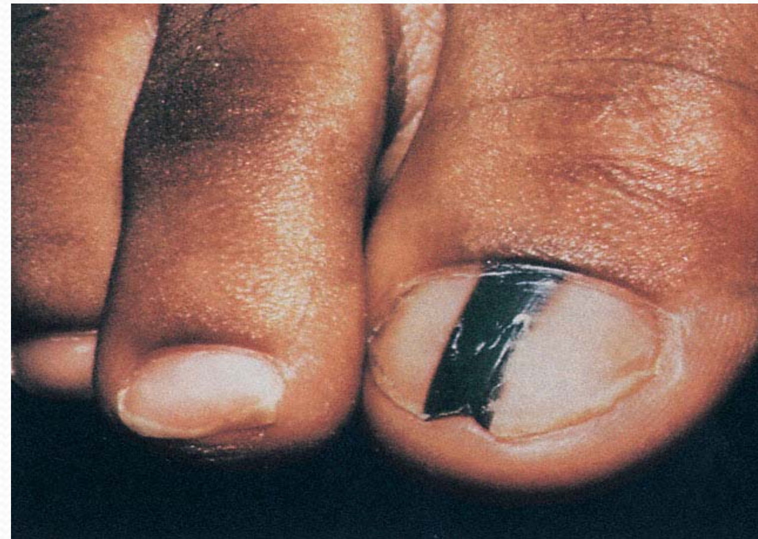


Superficial spreading

Nodular



Lentigo maligna melanoma



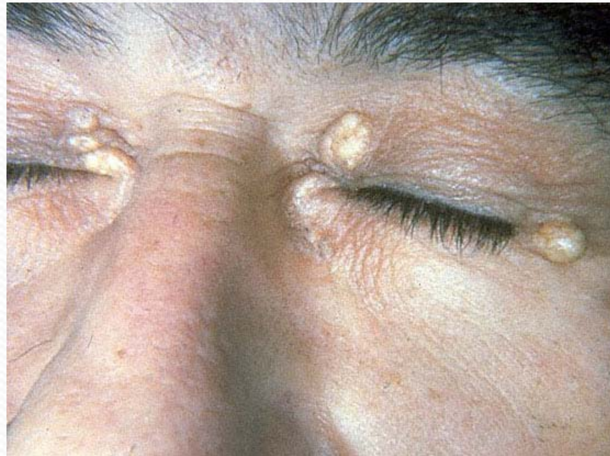
Acral melanoma

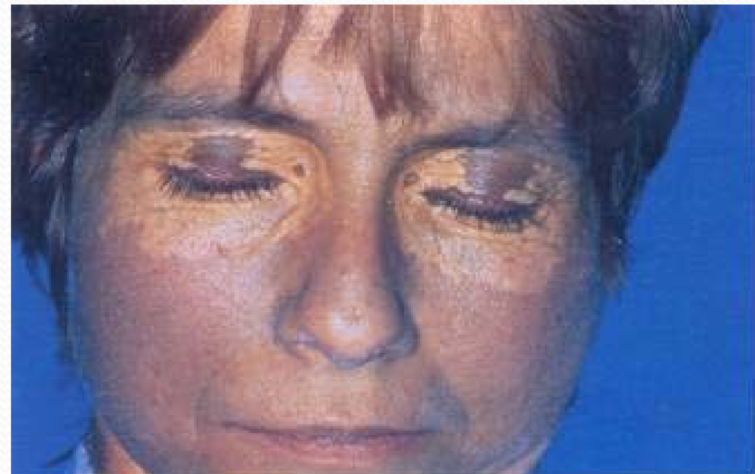
Blue, Black and Brown Lesions

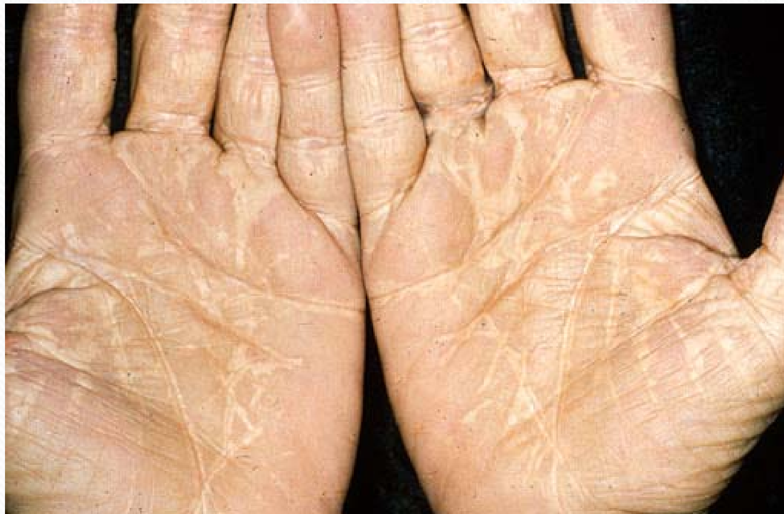
- Acanthosis Nigricans
- Melasma
- Nevus
- Melanoma

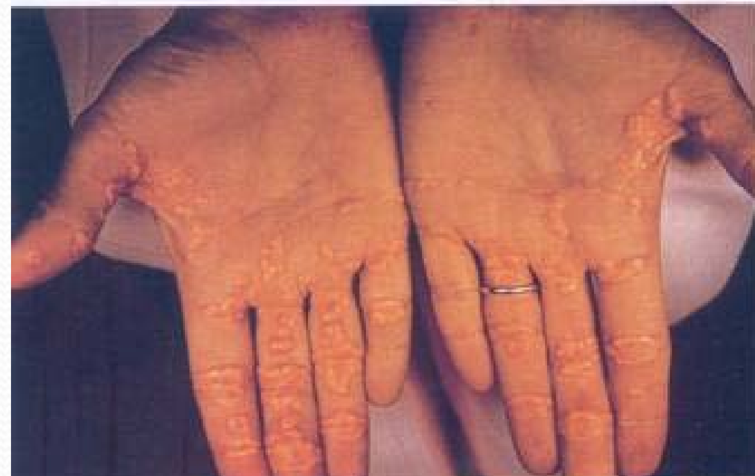
YELLOW LESIONS

Case 1





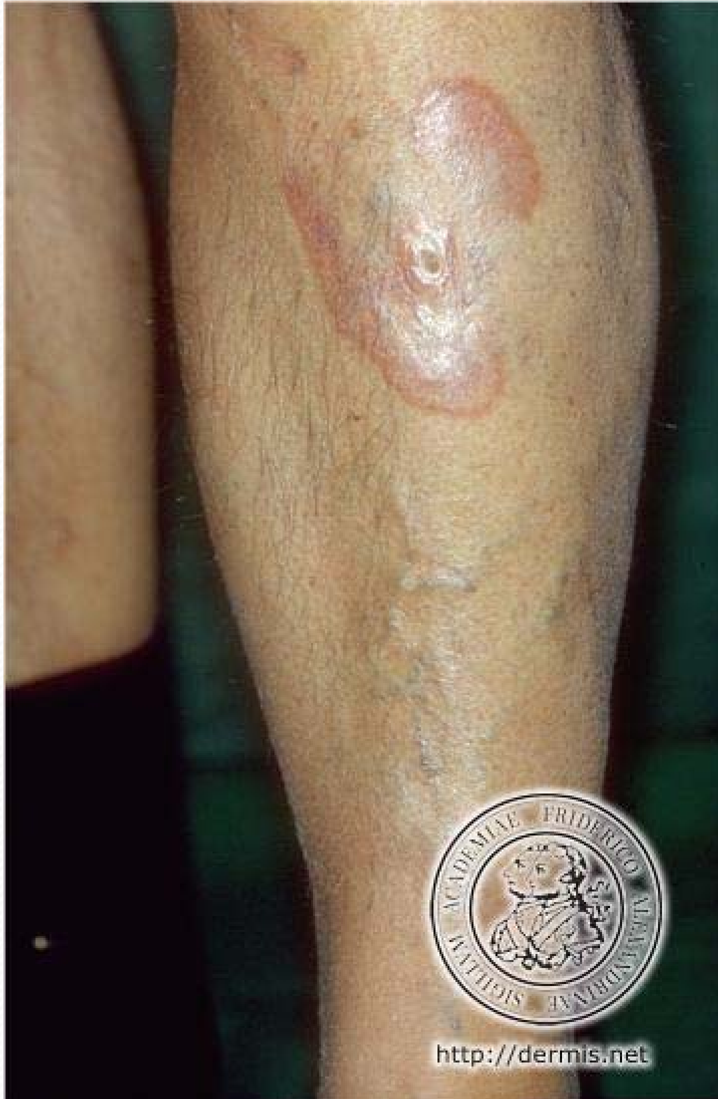


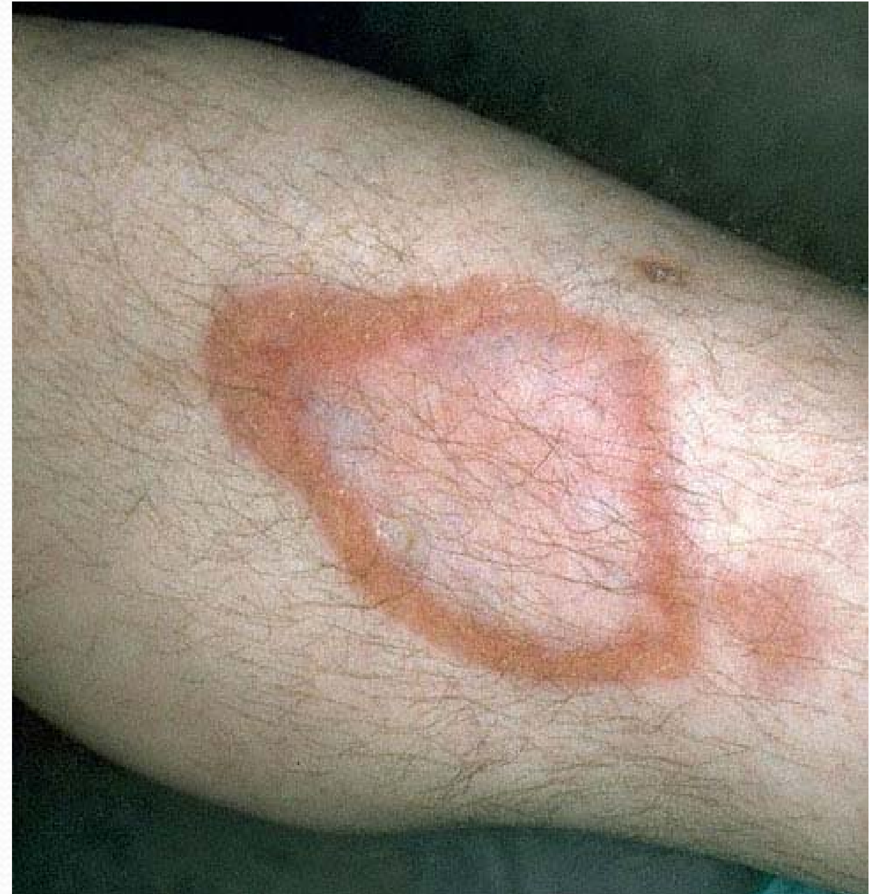


- TYPES
  - Tendinous xanthoma
  - Tuberous xanthoma
  - Eruptive xanthoma
  - Palmar xanthoma
  - Xanthalasma

- Lipid abnormalities

Case 2





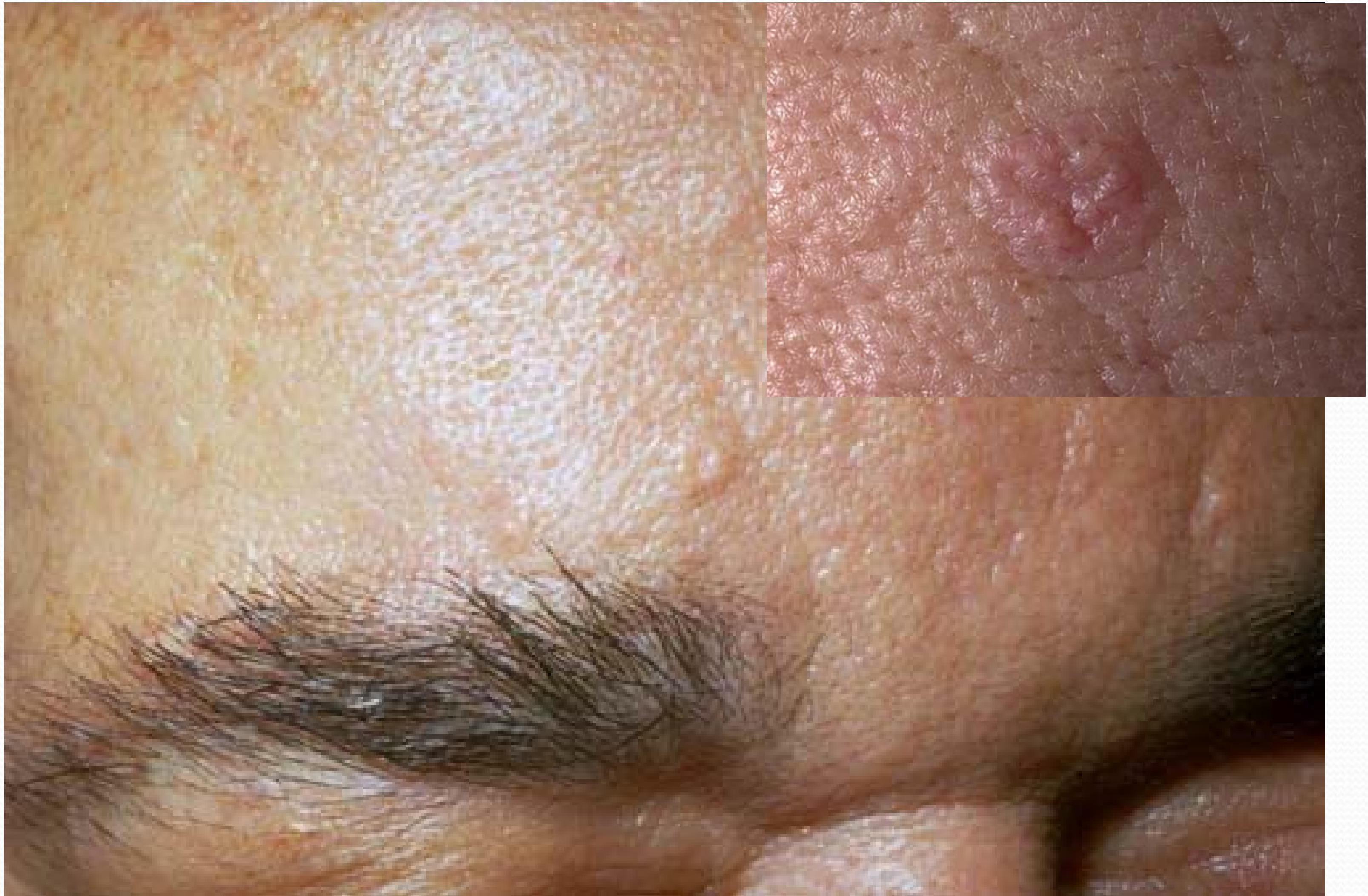
Necrobiosis Lipoidica

- Previously called: NLD

- 1/3 Patients DM
- 1/3 Abnormal GTT
- 1/3 Normal Glucose Tolerance

- Control of DM does not affect course of skin lesion

- Glucocorticoids (Topical/Intralesional)

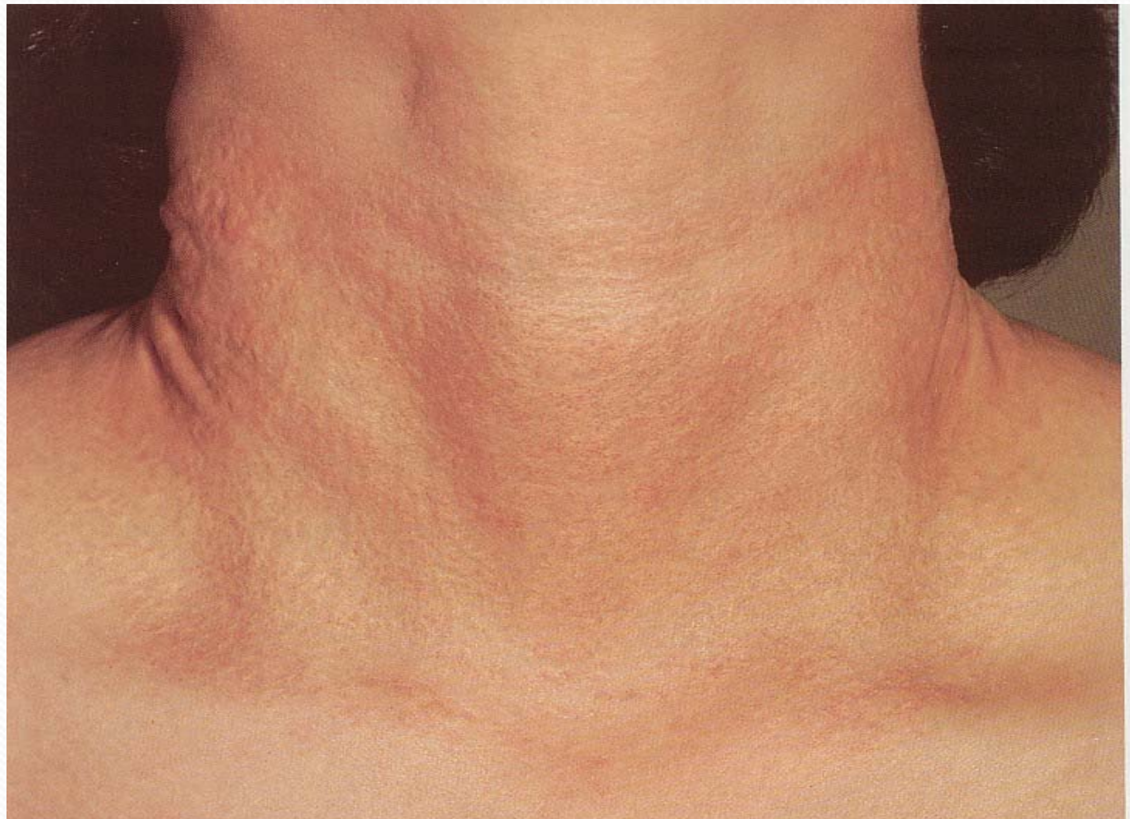


Case 3

MI at age 37

Angioid streaks on retinal exam

"Chicken-skin" appearance to neck



Pseudoxanthoma elasticum

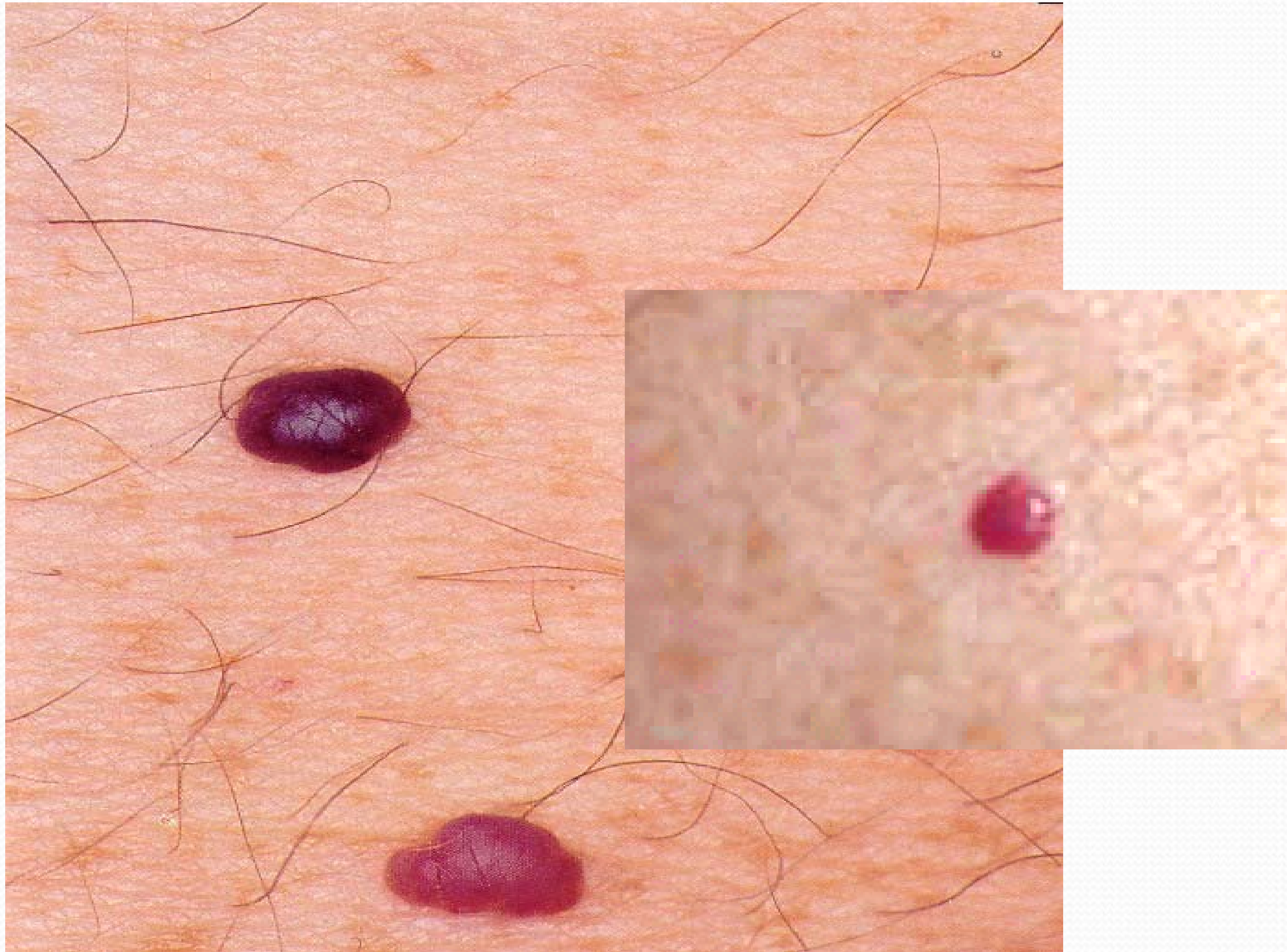
- Connective tissue disorder (Elastin)
  - Skin: **Peau d'orange**
  - Blood vessels: **Premature MI**, Renovascular HTN, Claudication
  - Eye: **Angioid streaks of retina**
  - GI: Gastric artery hemorrhage (hematemesis)

- "Chicken skin"
- Genetic Counseling

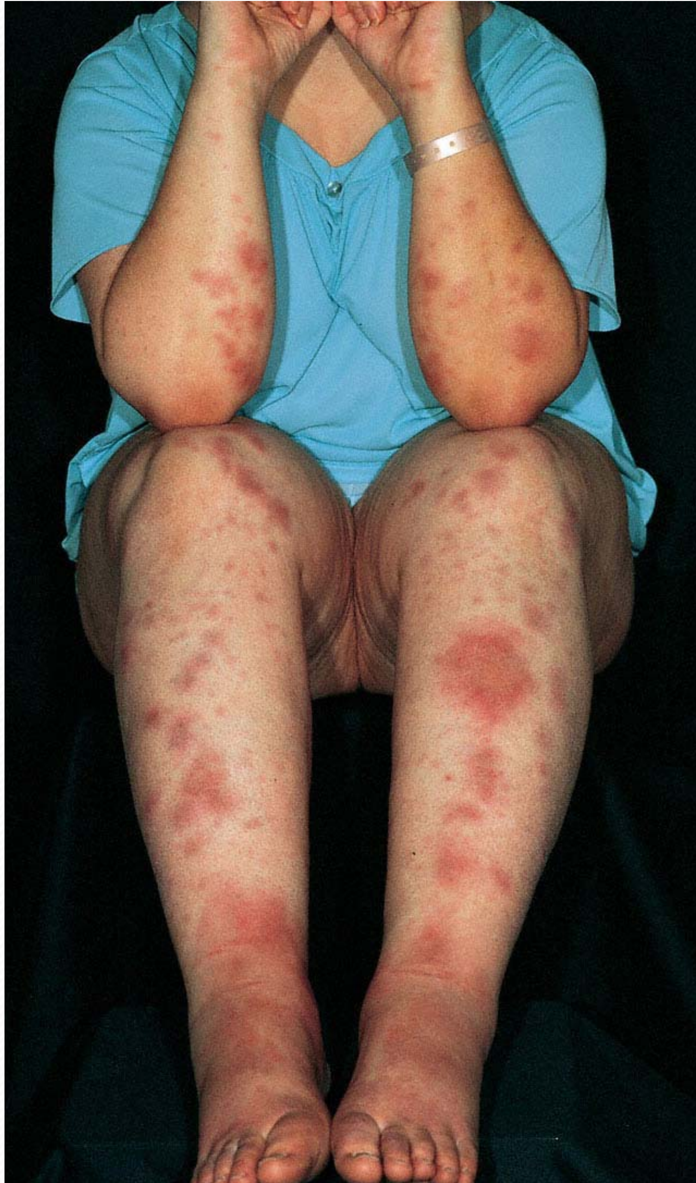
- Xanthomata
- Necrobiosis Lipoidica
- Pseudoxanthoma Elasticum

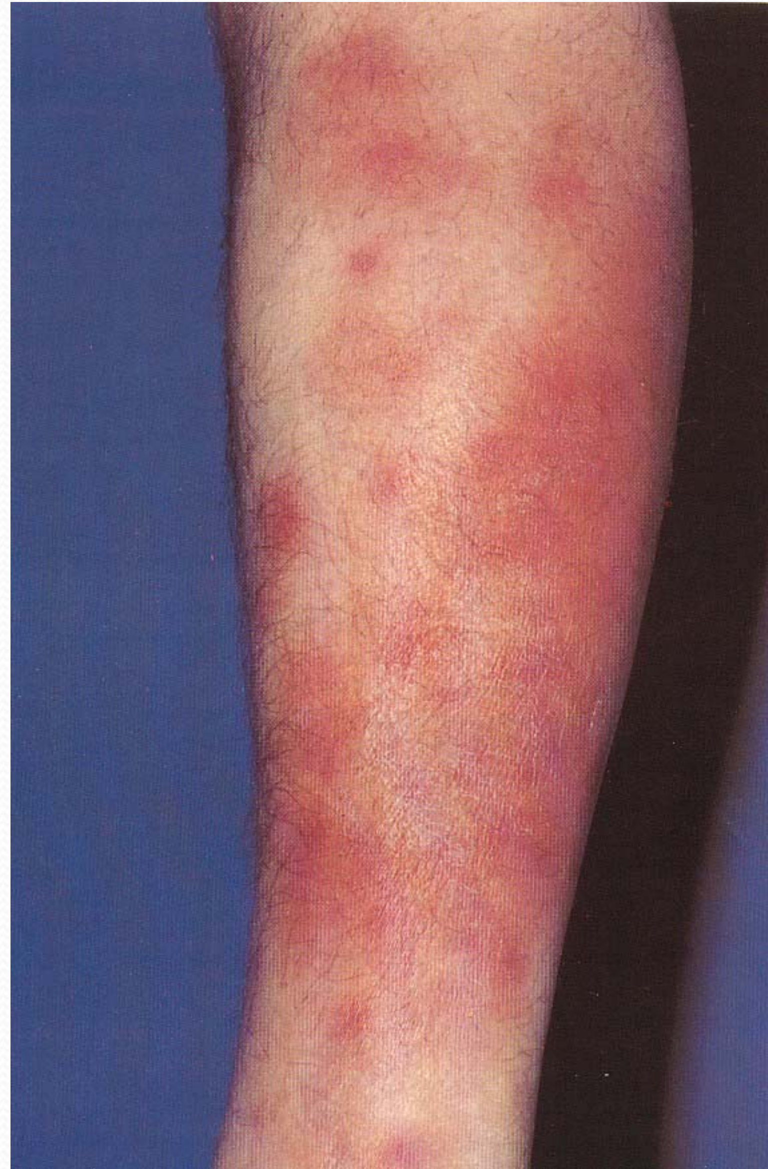
RED PAPULES AND NODULES

Case 1: Cherry Angiomata



Case 2

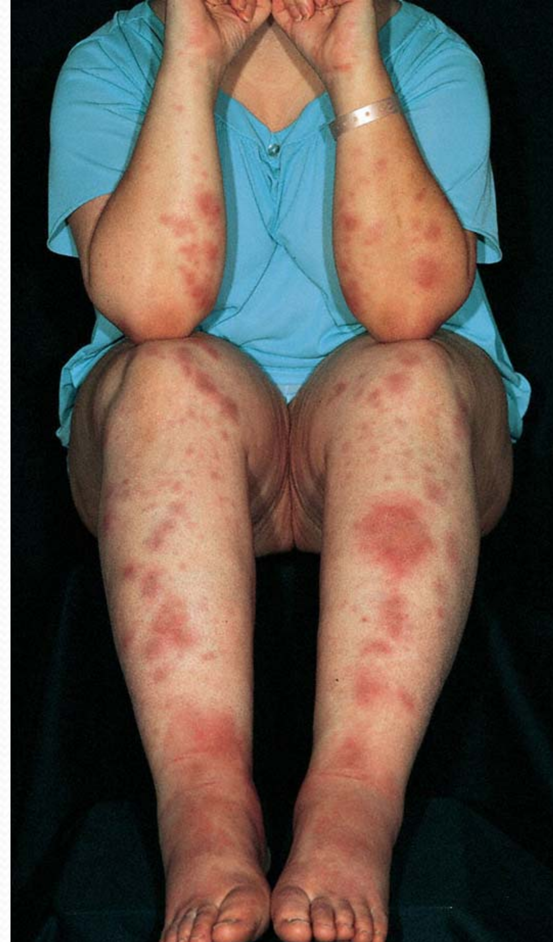




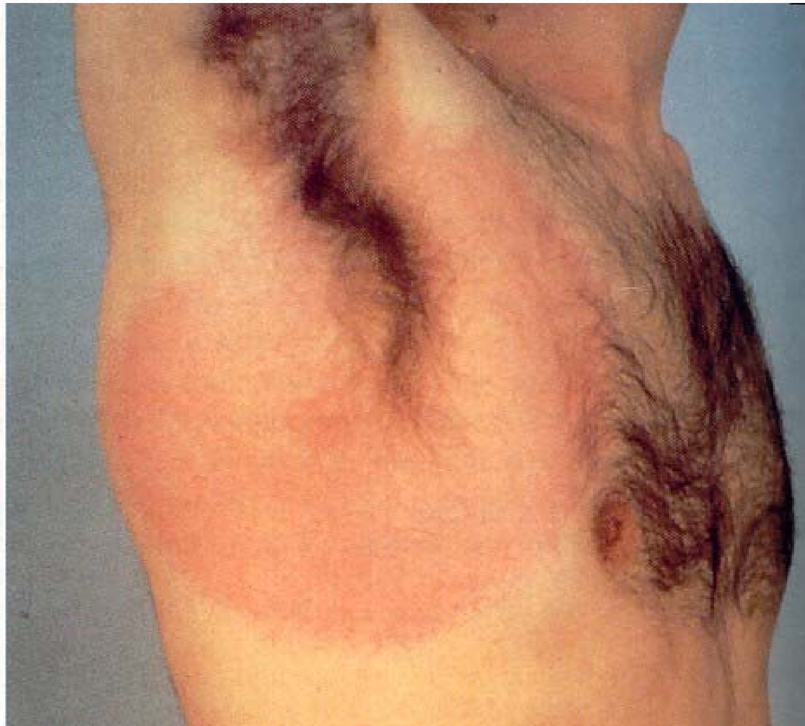
Erythema Nodosum (EN)

- NECK:
  - Post-streptococcal infxn
- CHEST
  - Cocci/Sarcoidosis
- ABDOMEN
  - Inflammatory bowel dz
- PELVIS
  - OCPs

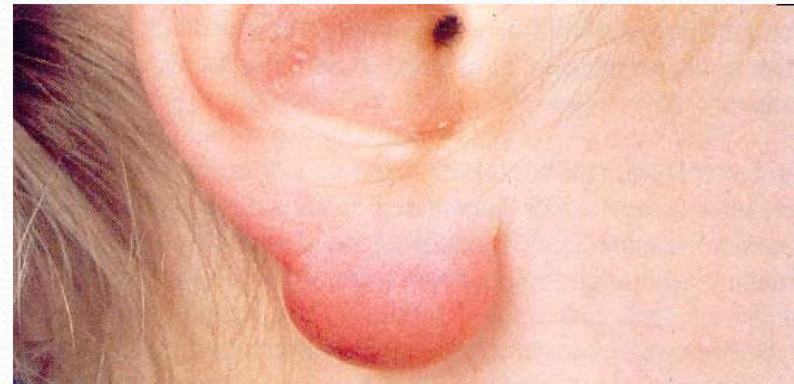
- TENDER deep inflammation of CT around fat



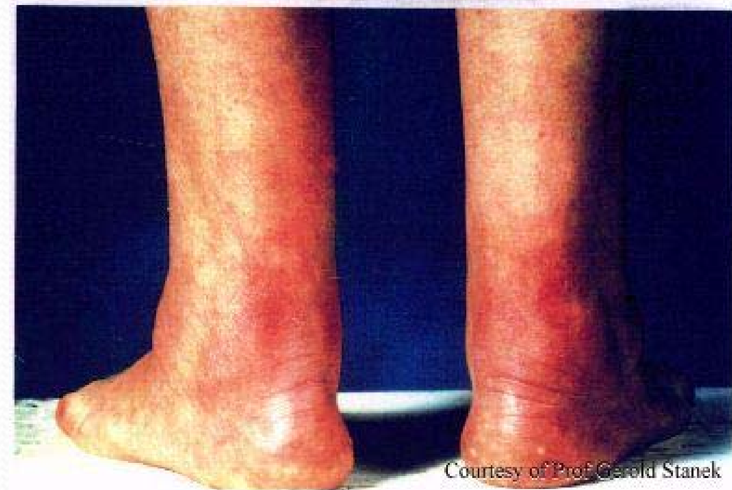
Case 3: Lyme disease



ERYTHEMA CHRONICUM MIGRANS



LYMPHOCYTOMA CUTIS

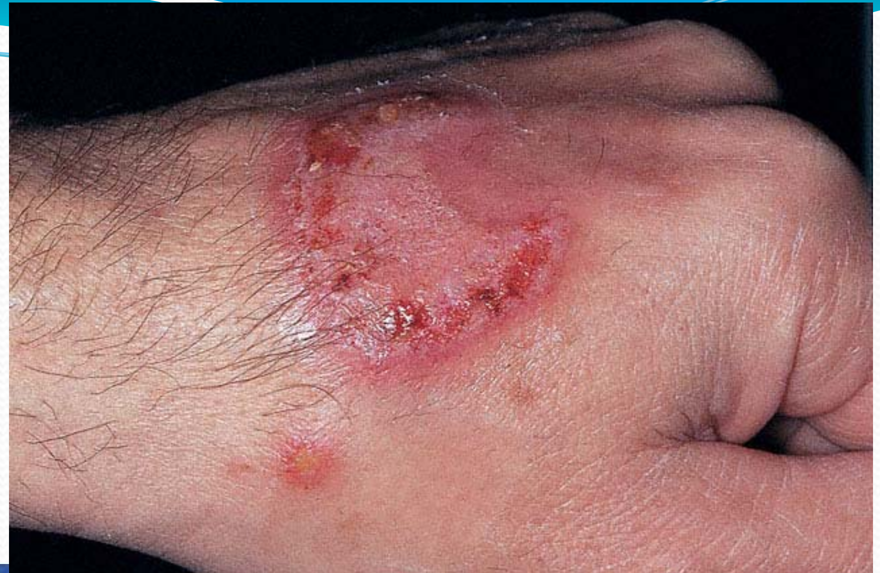


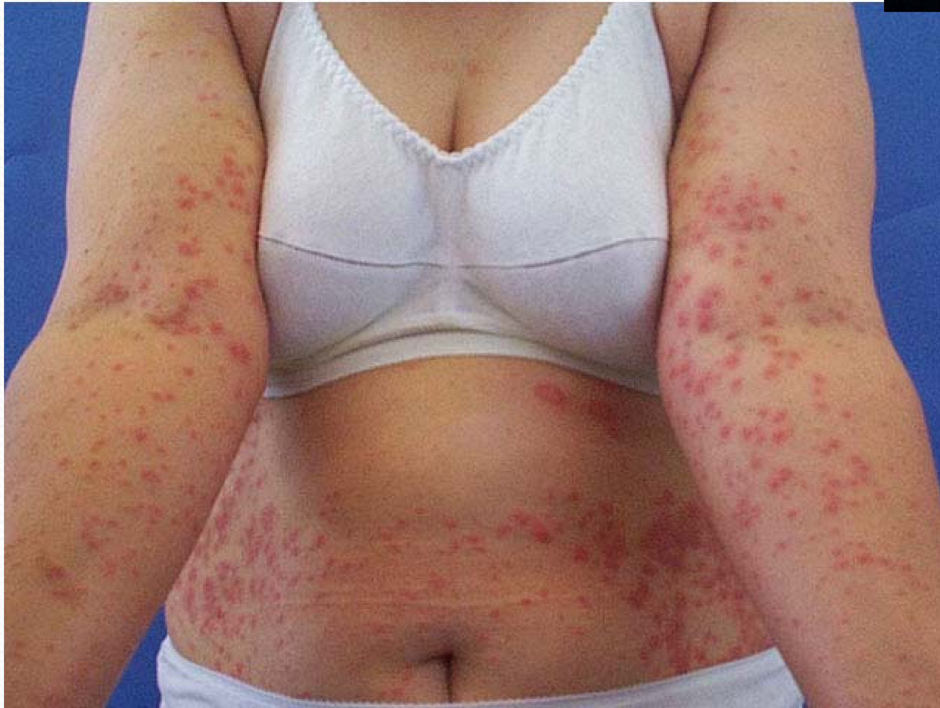
ACRODERMATITIS CHRONICA ATROPHICANS

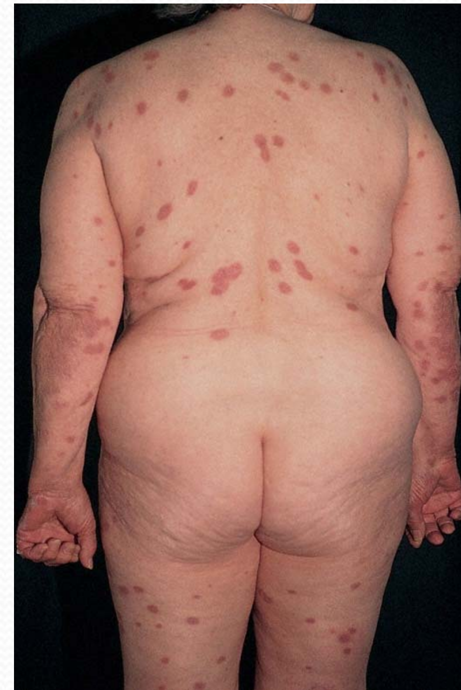
What is the organism?

Borrelia Burgdorferi

Case 4







SWEET'S SYNDROME
(Acute Neutrophilic Dermatosis)

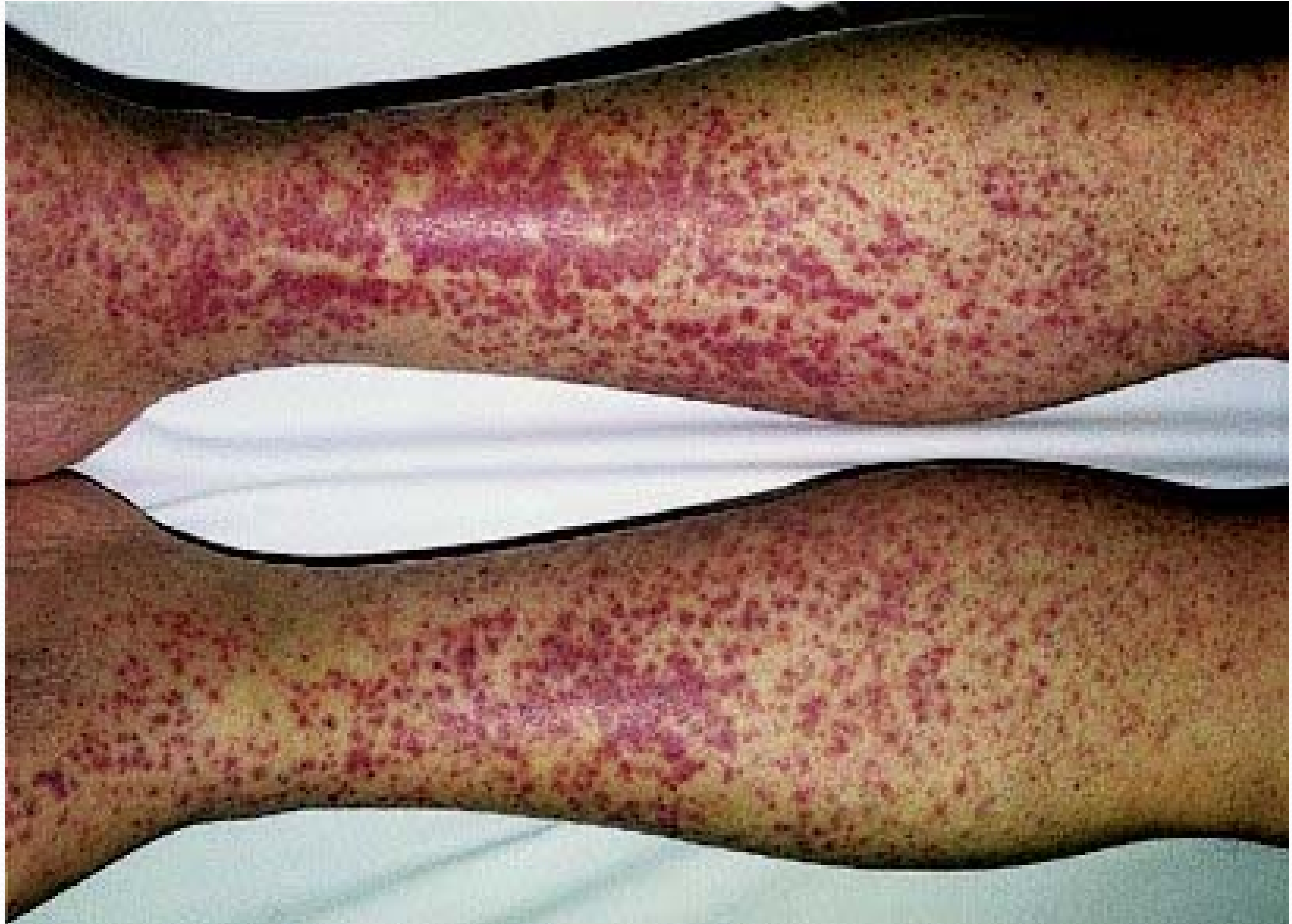
- Red tender plaques
- Sweet's is a reaction to an internal condition.
- It may follow:
  - Upper respiratory tract infection (strep throat)
  - Vaccination
  - **Inflammatory bowel disease** (UC or Crohn's)
  - Rheumatoid arthritis
  - Blood disorders including **leukemia** (AML).
  - **Internal cancer** (bowel, GU or breast)
  - Pregnancy
  - **Drugs** (G-CSF, NSAIDs, cotrimoxasole)
- Sometimes difficult to distinguish from PG

Red papules and nodules: (solid, red, non-scaling)

- Cherry angiomata
- Erythema nodosum
- Erythema chronicum migrans
- Sweet’s syndrome

VASCULAR REACTIONS

Case 1



Henoch-Schonlein Purpura

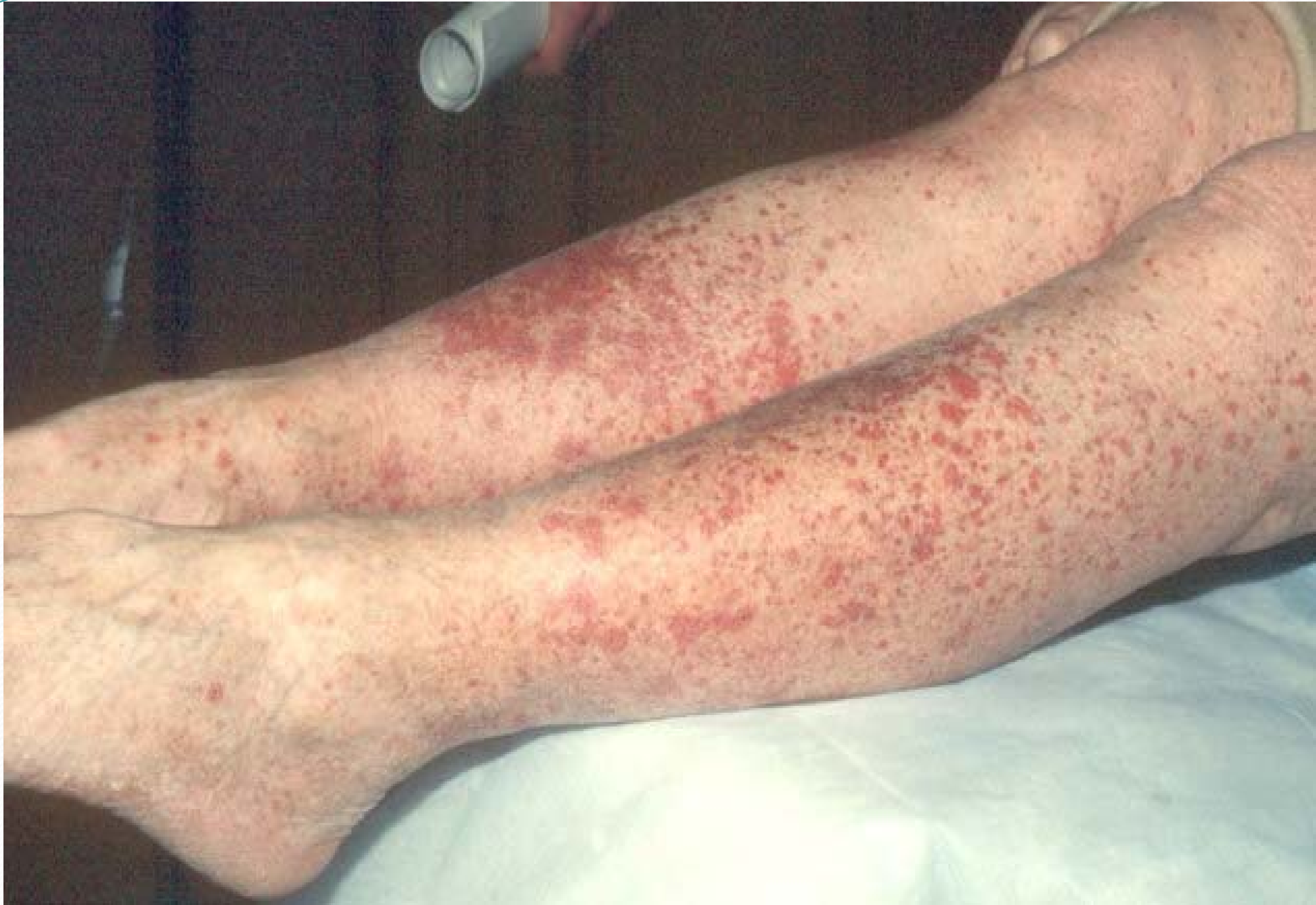
- Palpable Purpura
- Non-blanching on diascopy

- Association? URI (75%)
- GI: Bowel angina or bloody diarrhea
- Arthritis

- UA…HEMATURIA (RBC casts)
- What is HSP localized to the kidney?

IgA Nephropathy (Berger's Disease)

Case 2

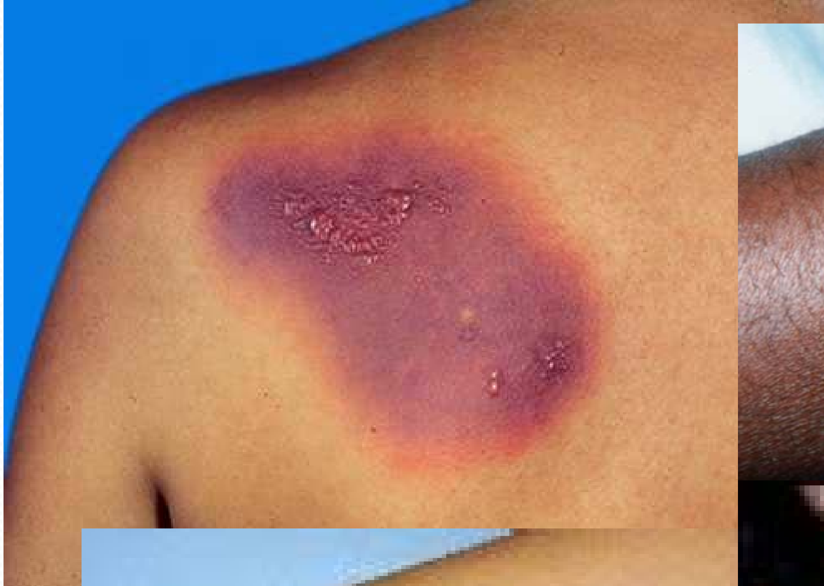


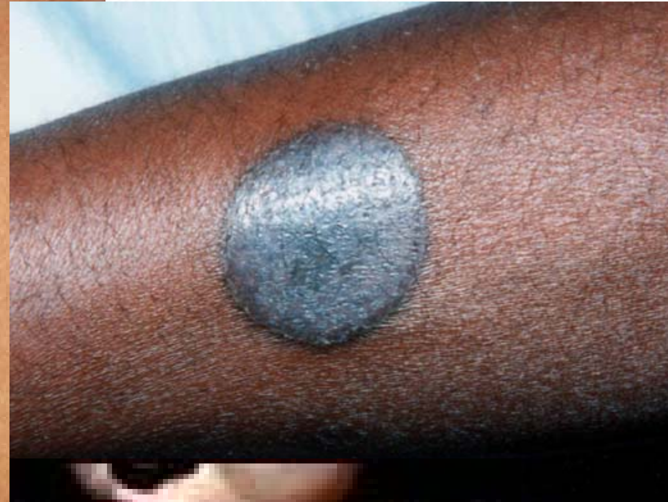
Leukocytoclastic Vasculitis

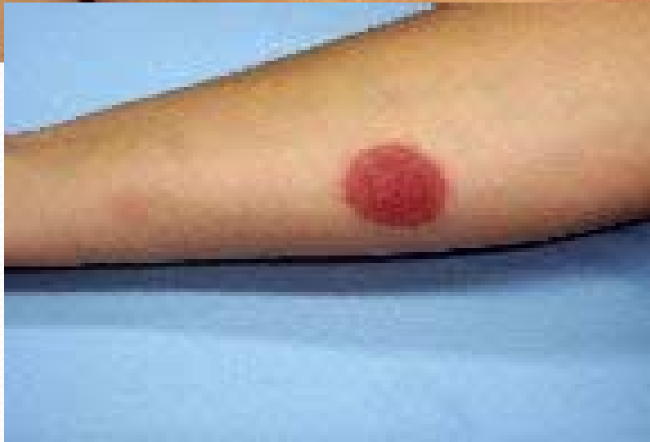
- Palpable Purpura
- Histologic diagnosis (no etiology)

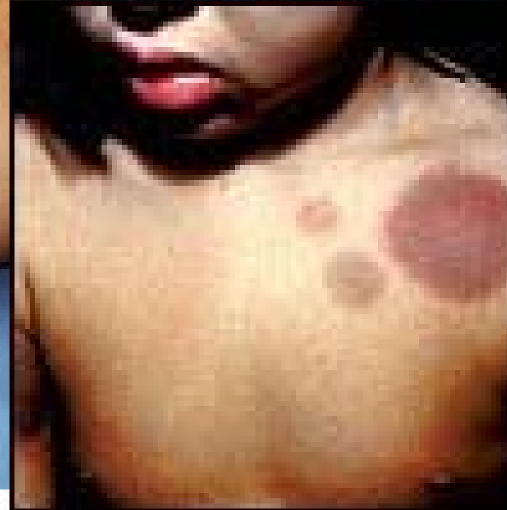
- Small vessel necrotizing vasculitis
  - MOST COMMON
- Immune complexes in walls of post-capillary venules
- Major cause: Drugs

Case 3: Fixed Drug Eruption





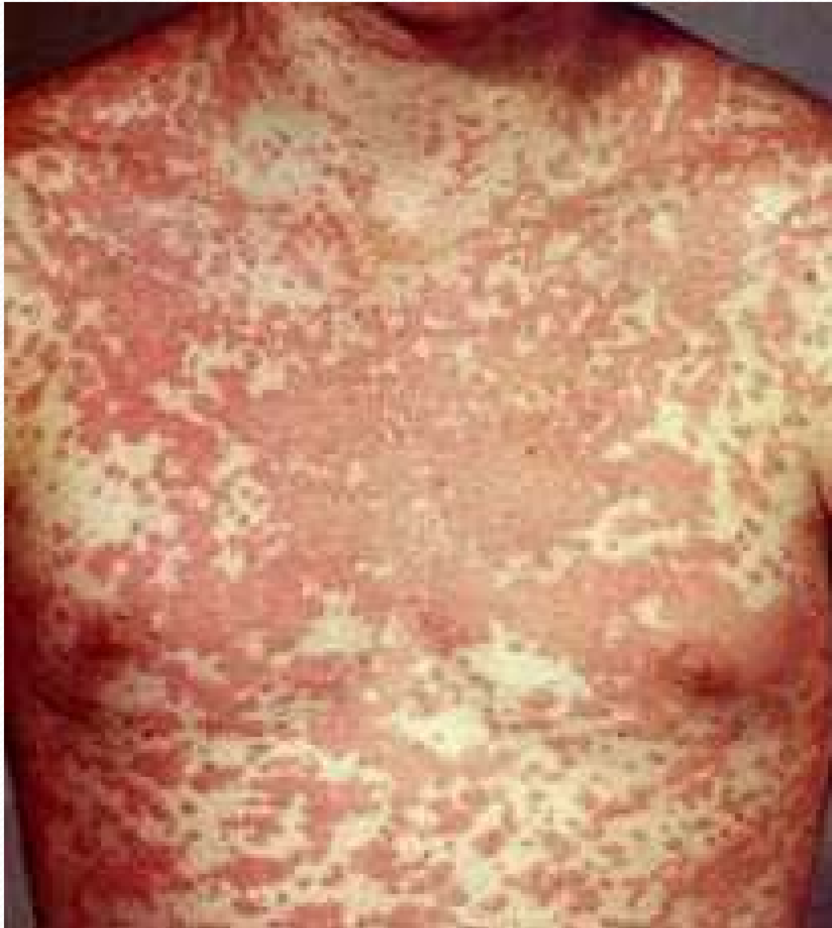


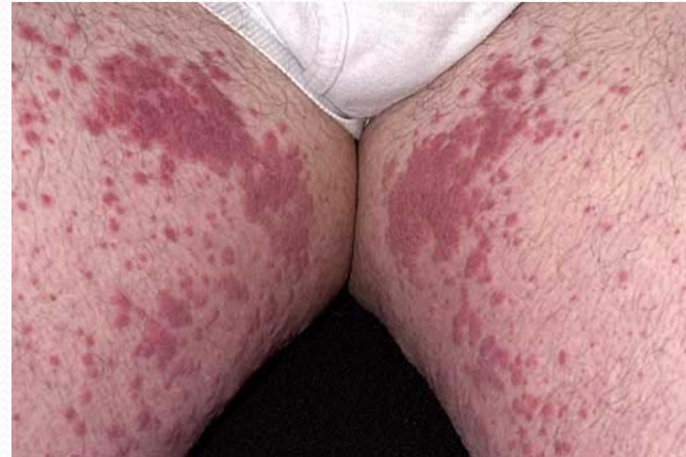


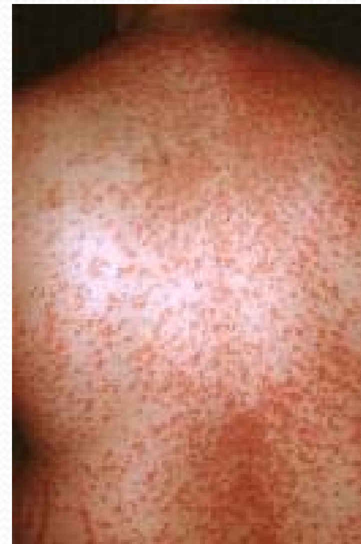
MOST COMMON SITE?

GLANS PENIS

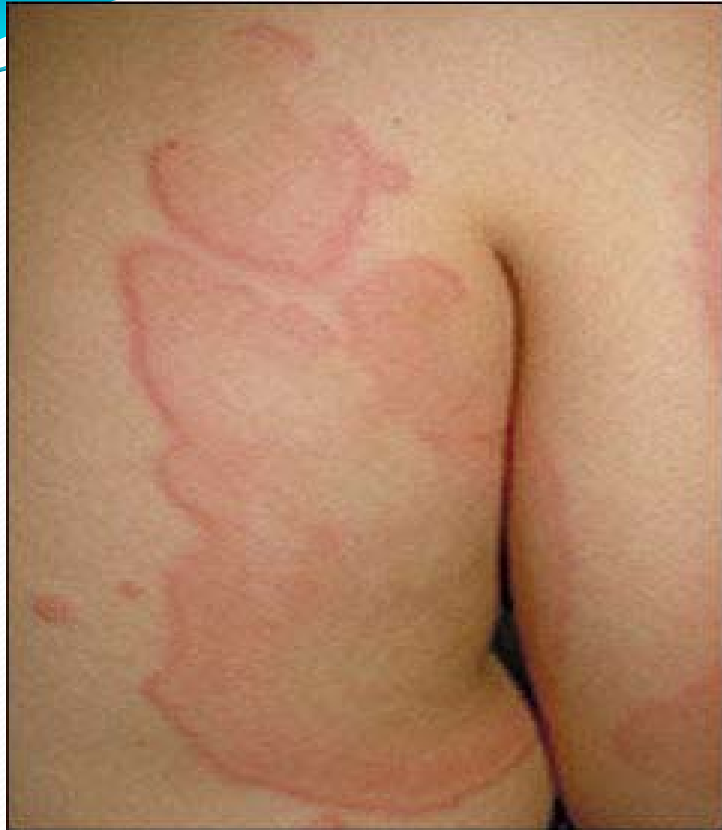
Case 3:
Morbilliform Drug Eruption

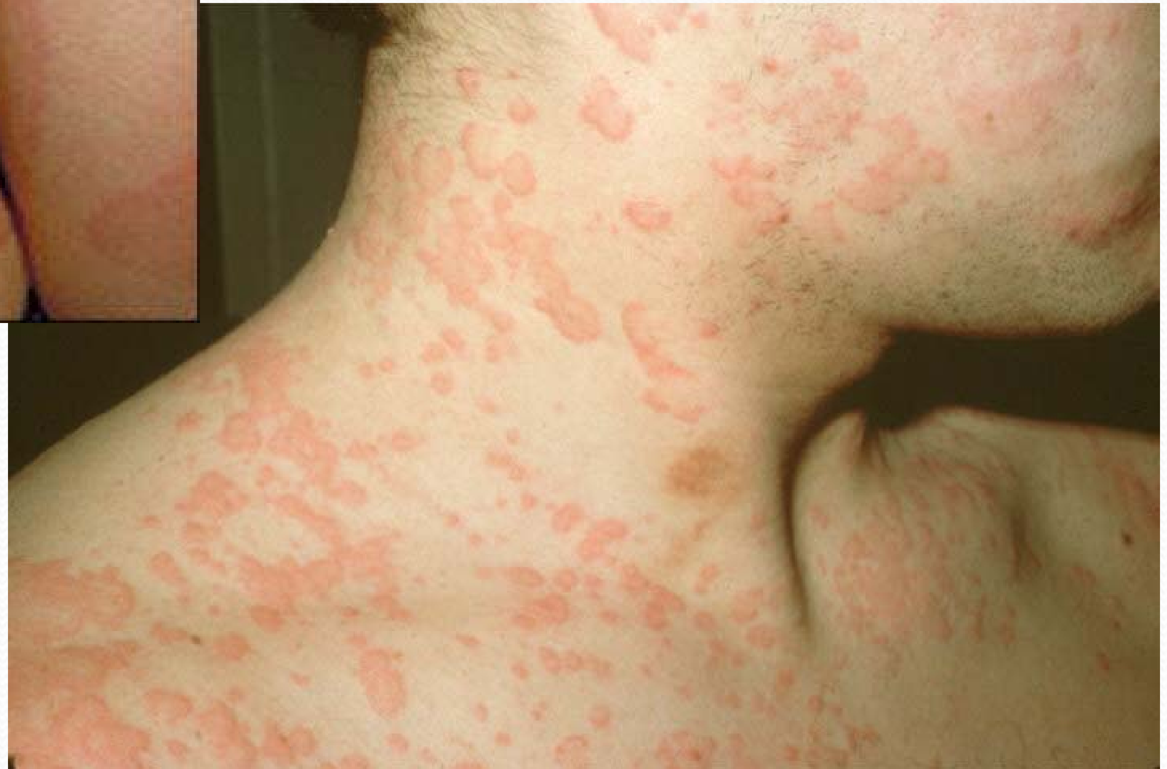






Case 4



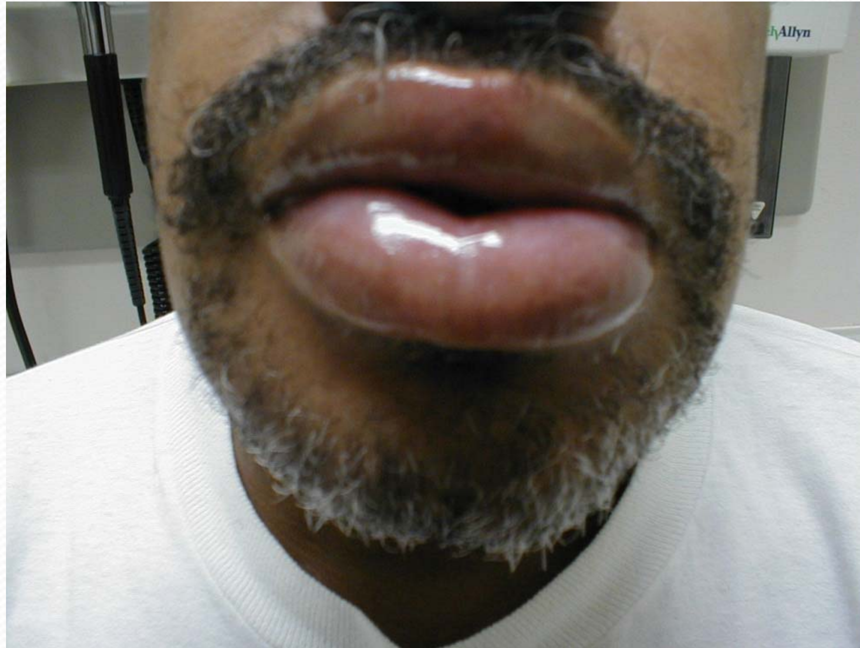


- Wheals (Hives)
- Blanching on diascopy

- Classification: Acute or Chronic
- Many physical and immunologic causes

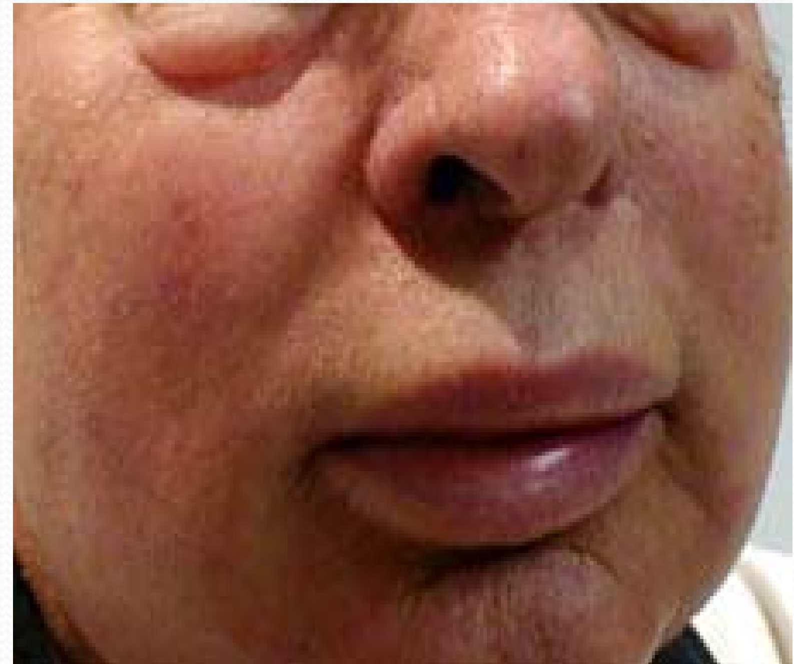
- Changes in size and shape and can disappear - DYNAMIC

Case 5: Angioedema

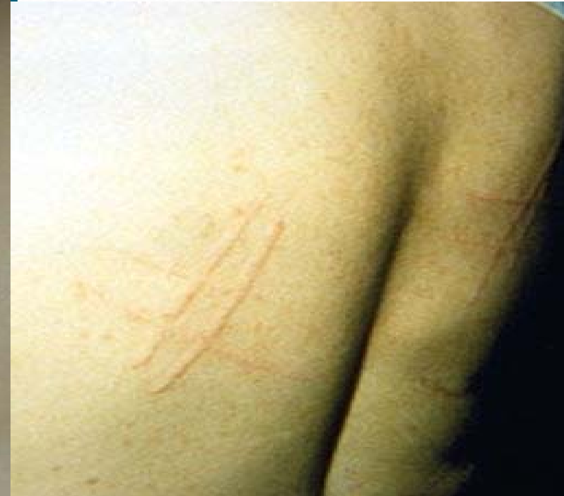


- Hereditary or Acquired

First test to check is C4!



Dermatographism

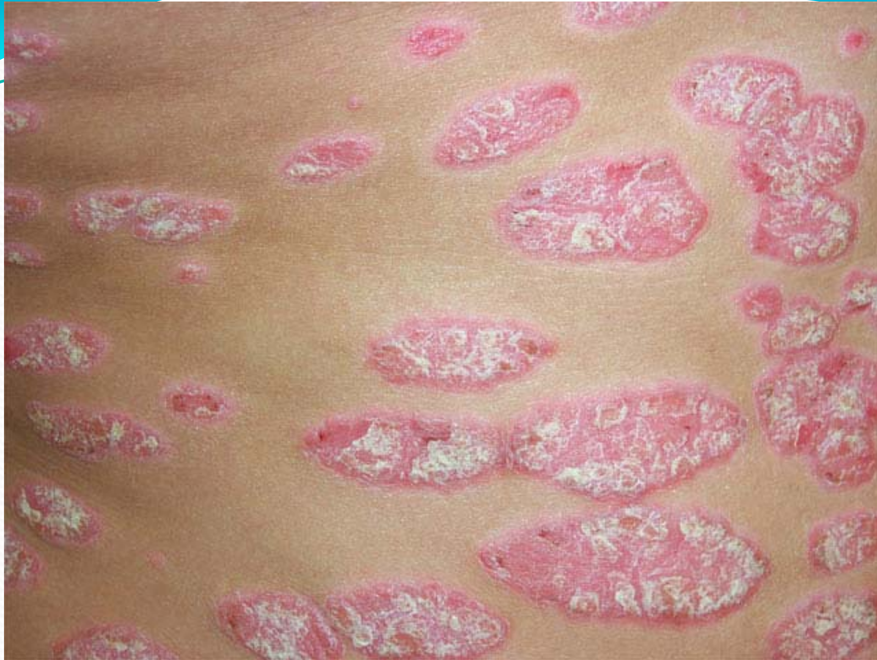


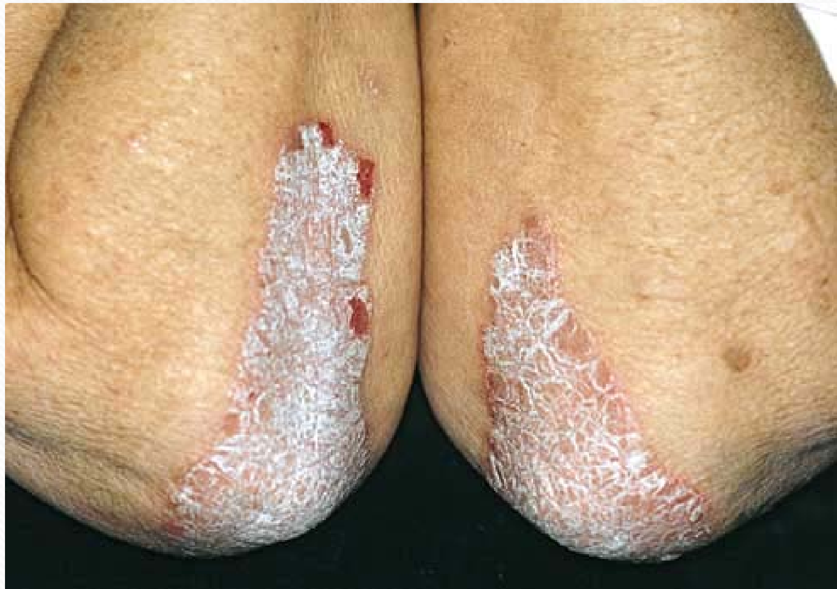
- Henoch-Schonlein Purpura
- Leukocytoclastic vasculitis
- Morbilliform drug eruption
- Urticaria
- Angioedema

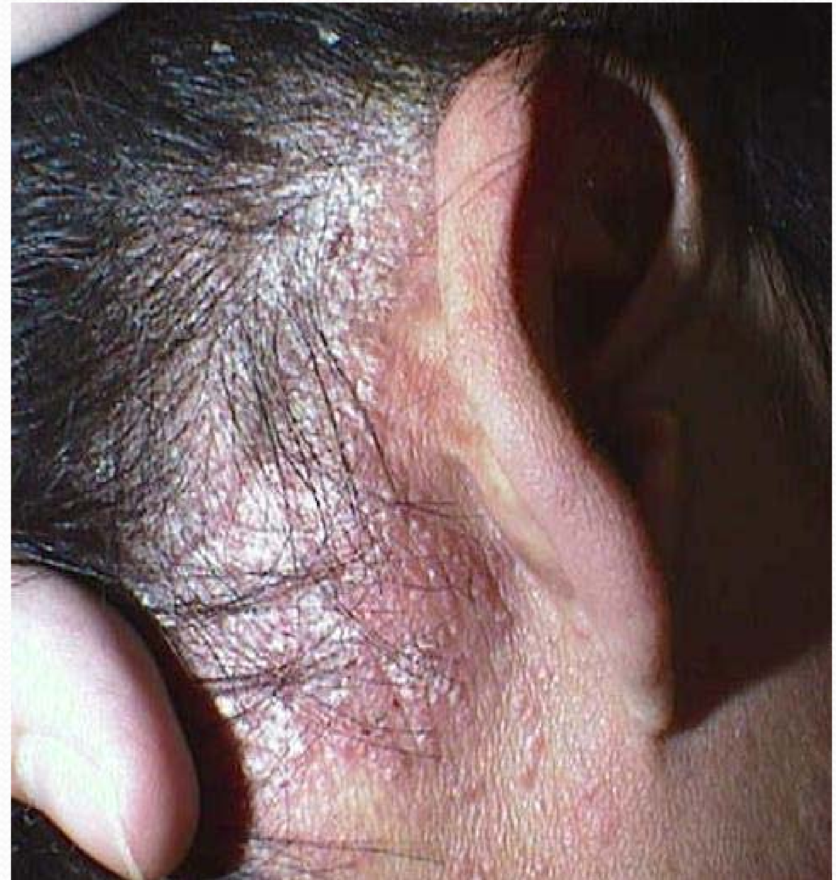
PAPULOSQUAMOUS

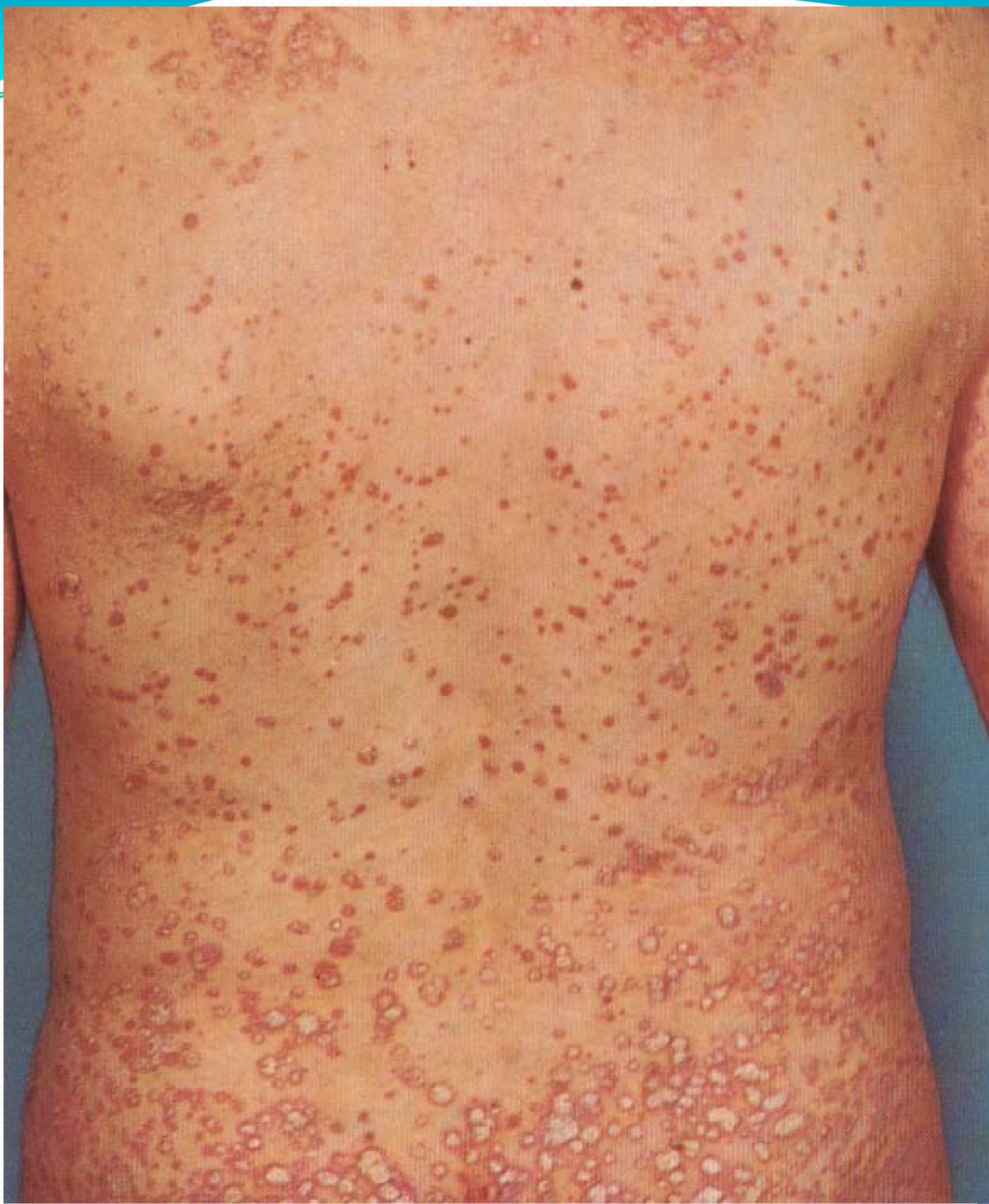
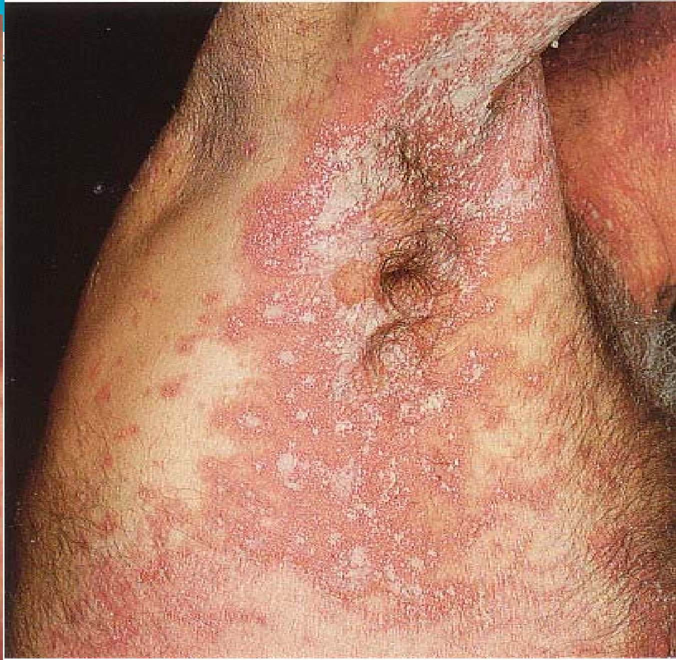
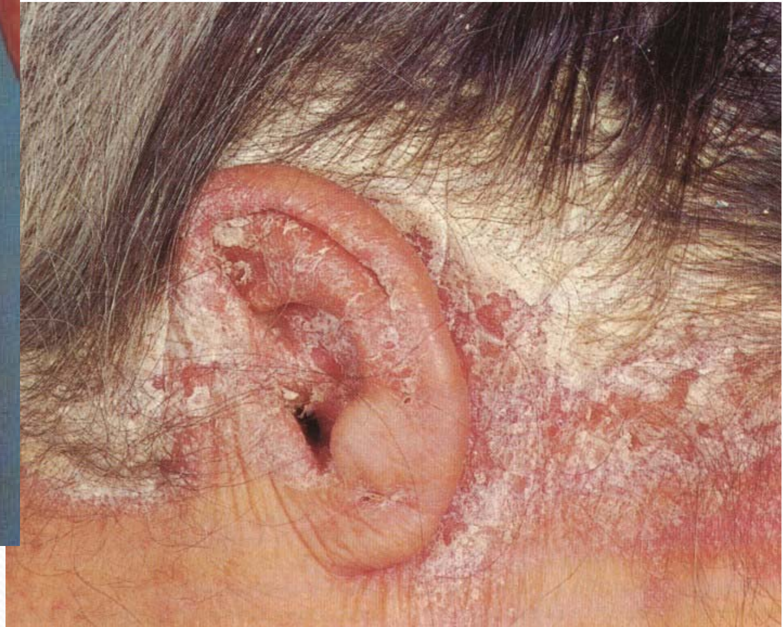
The 3 Ps, 3Ls, and Fungus!

Case 1



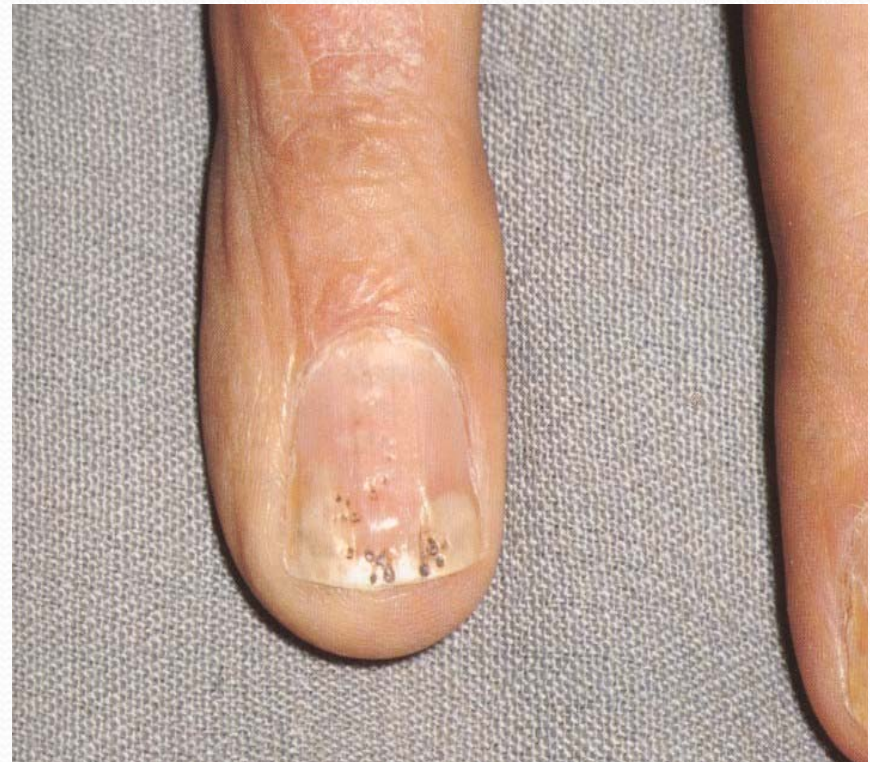




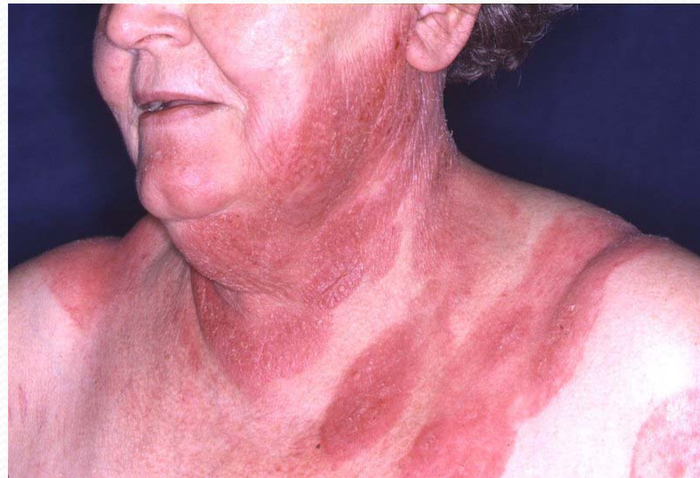
PSORIASIS

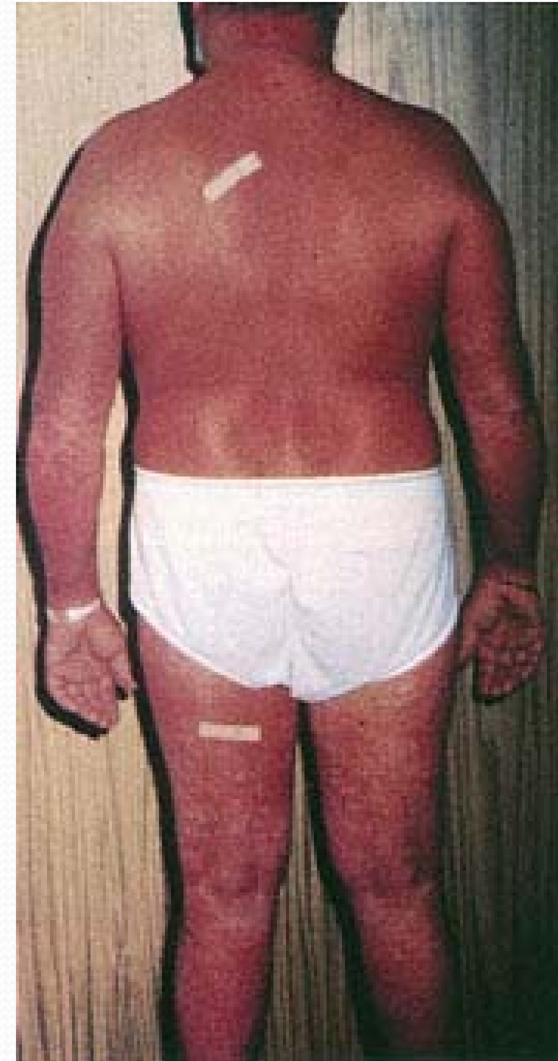
- Many types
  - Plaque
  - Scalp
  - Pustular
  - **Guttate**
    - **POST-STREP**
- Nail pitting
- Onycholysis
- Oil spots

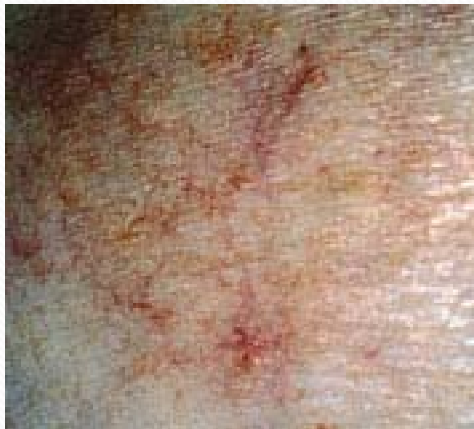


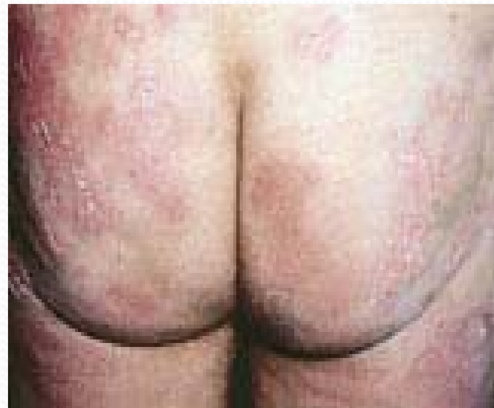
Case 2:

Parapsoriasis – Cutaneous T-cell Lymphoma (Mycosis Fungoides and Sezary Syndrome)

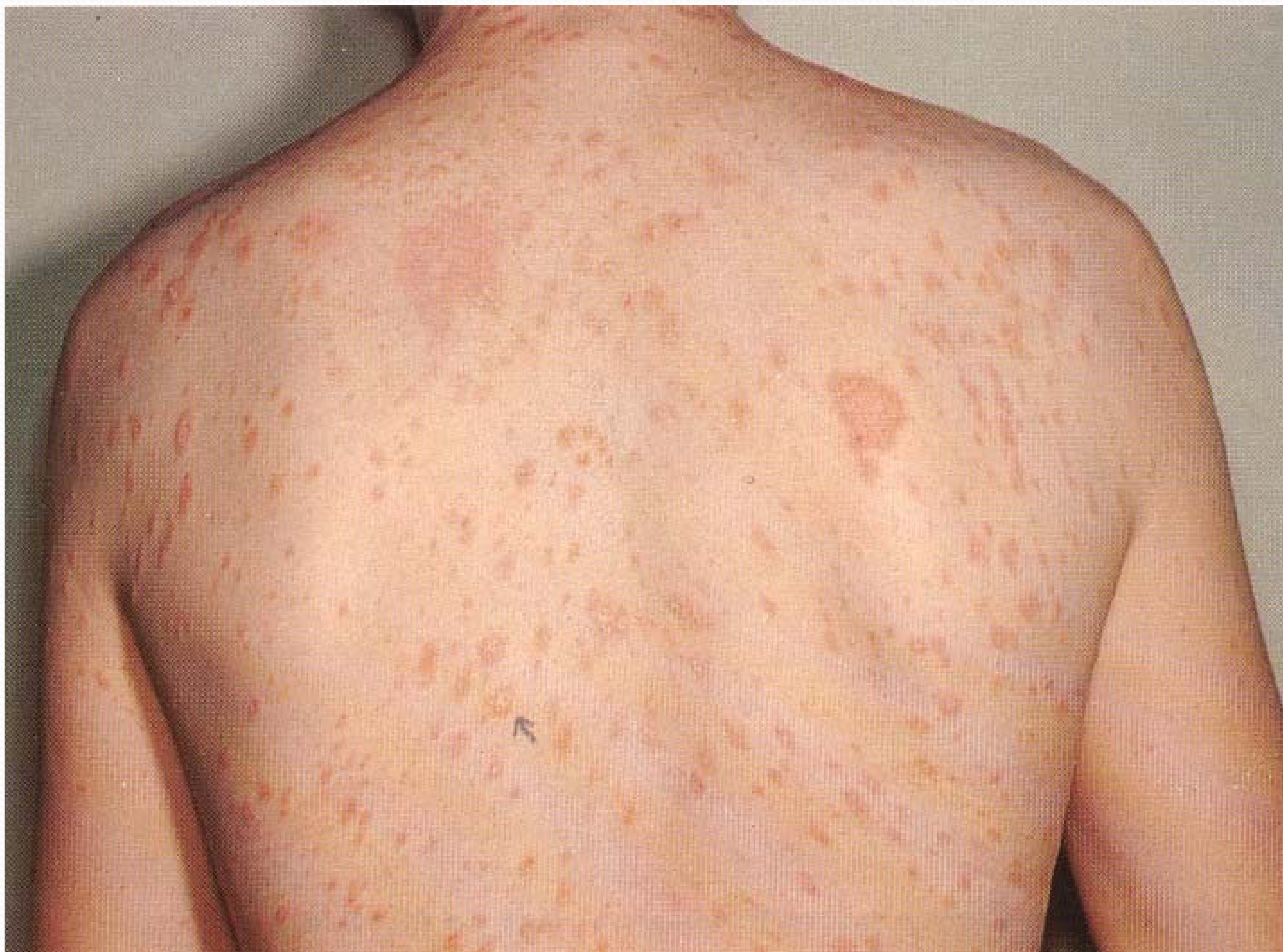




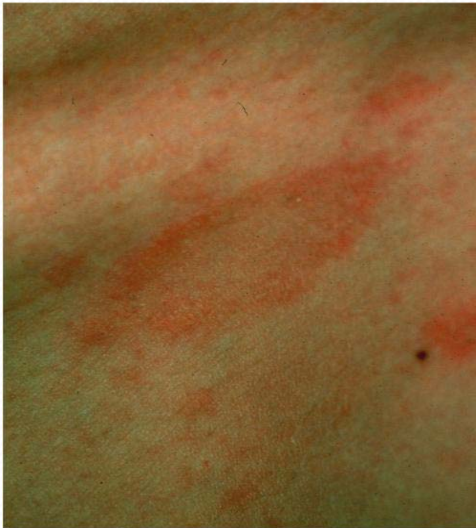


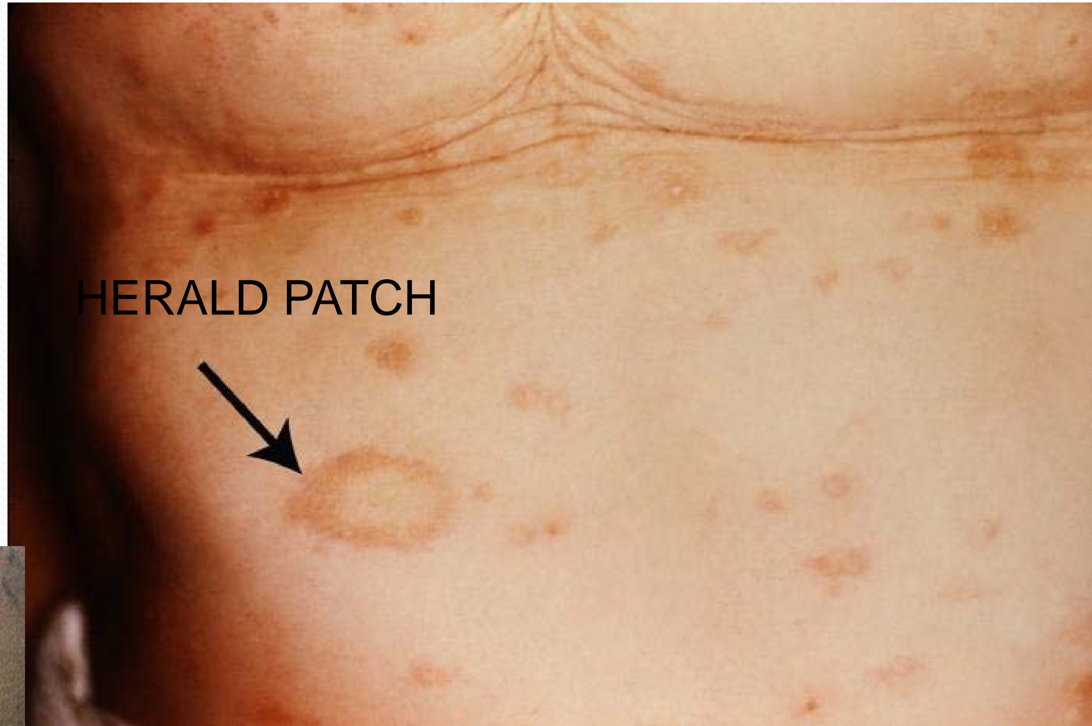


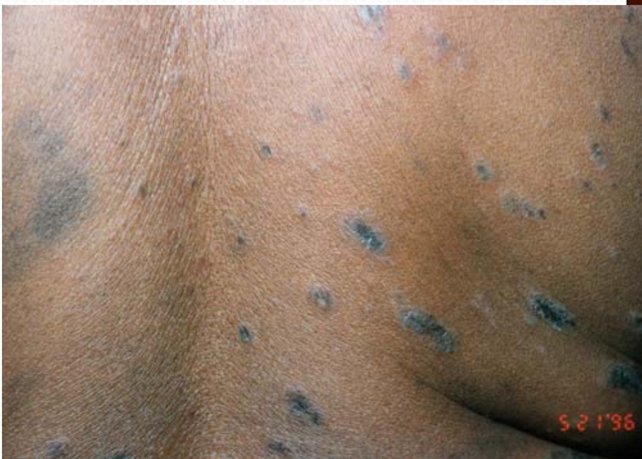
Case 3



Pityriasis Rosea







DISTRIBUTION?

PROBABLE VIRUS?

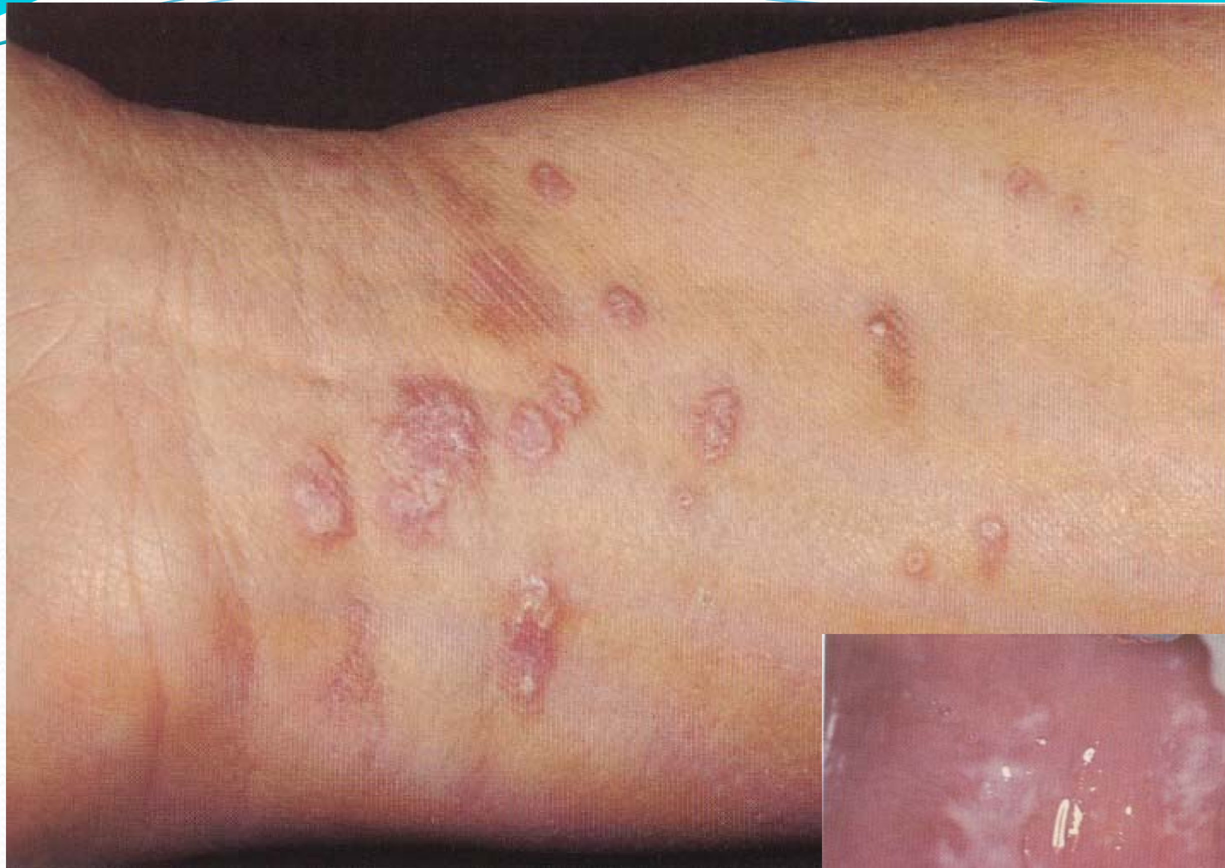
HHV-7

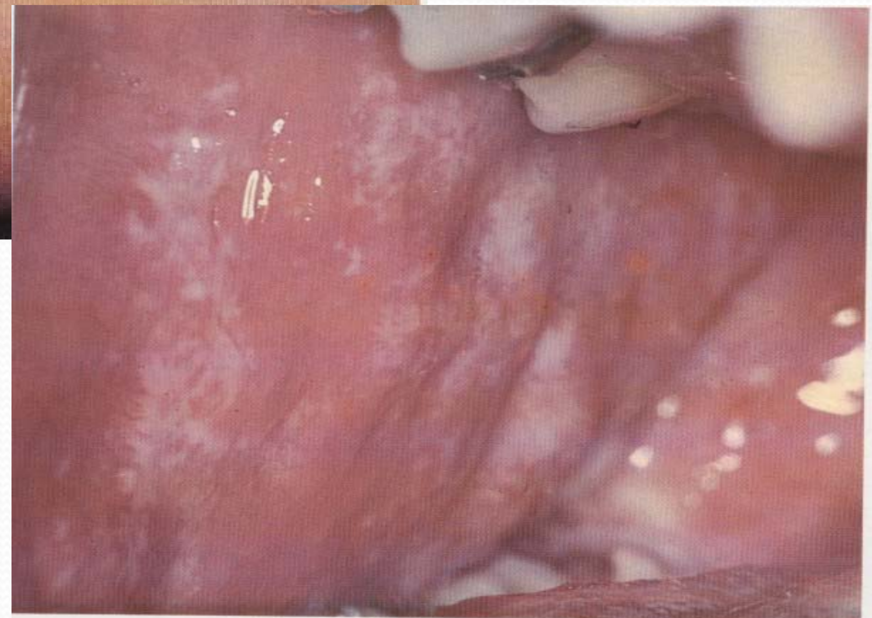
3Ps: Papulosquamous

- Psoriasis
- Parapsoriasis
- Pityriasis Rosea

- Now to the Ls…

Case 4





LICHEN PLANUS

<u>Classic description</u>

- 5Ps
  - PURPLE
  - POLYGONAL
  - PLANAR
  - PRURITIC
  - PAPULES
- What are the little white lines atop the LP?

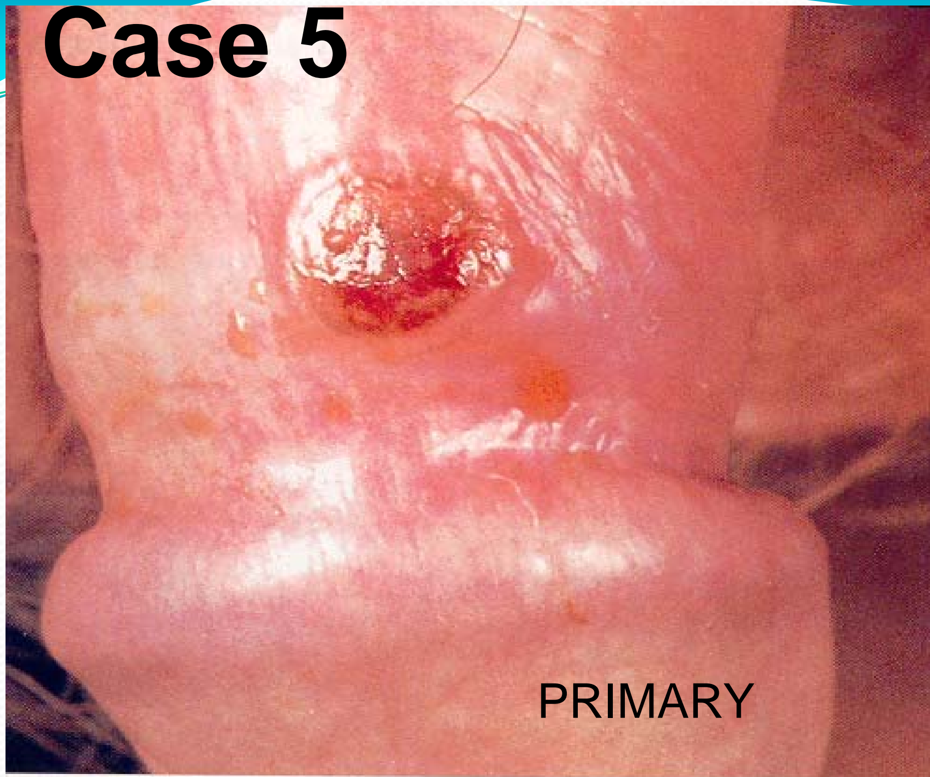
  WICKHAM'S STRIAE

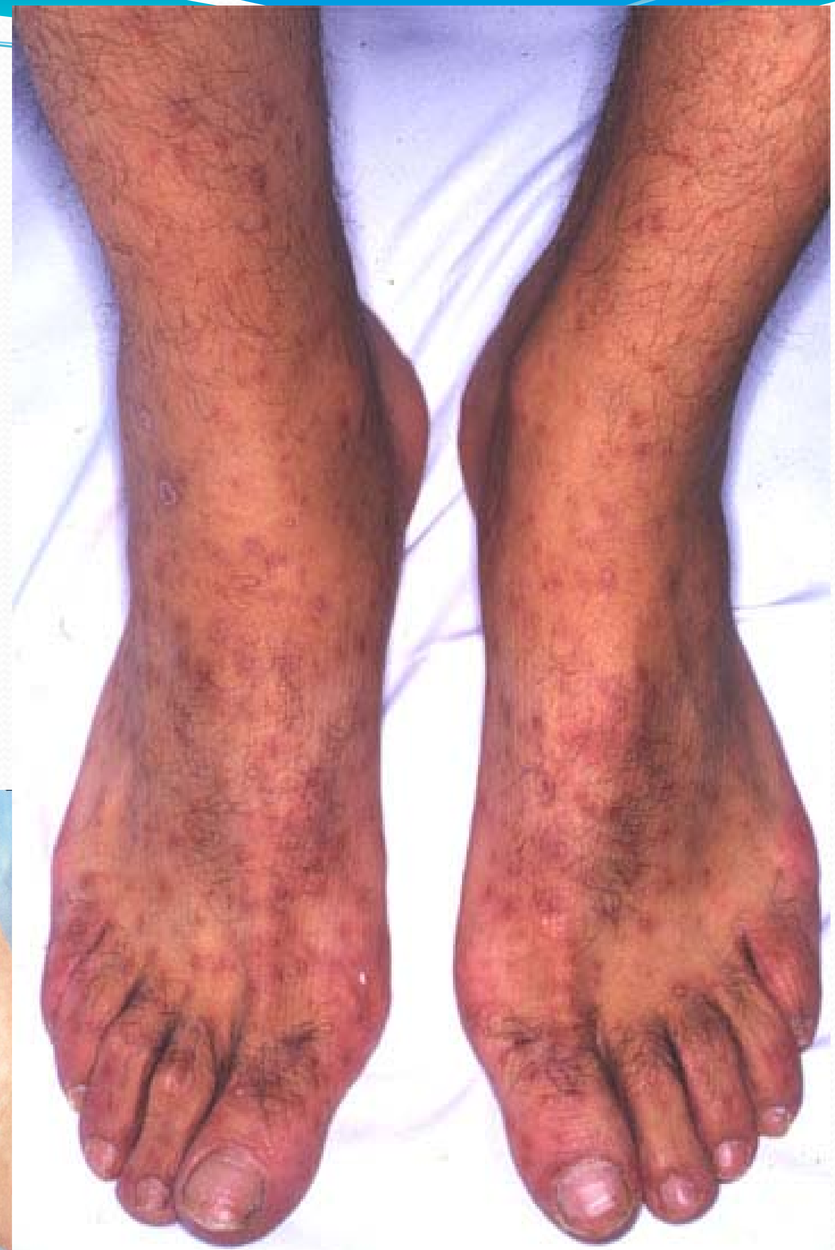
- Major Association?

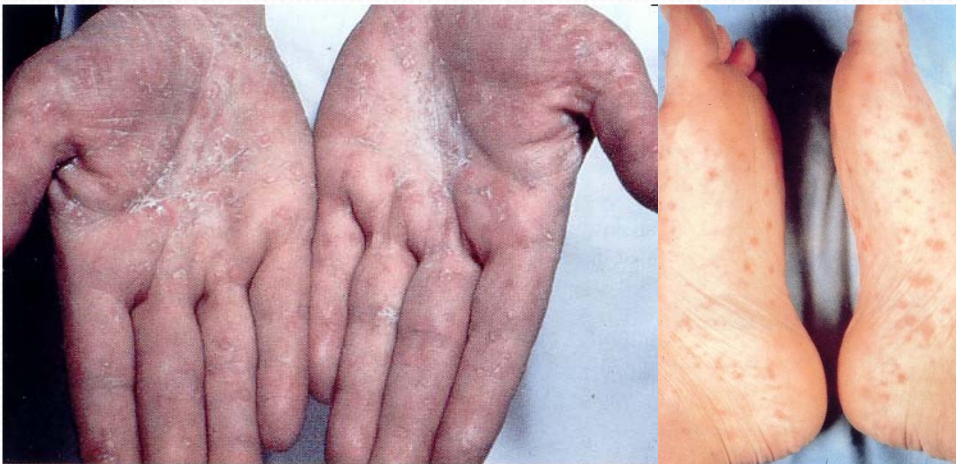
  HEPATITIS C

When you see a papulosquamous disease, be careful because it could be…

Case 5







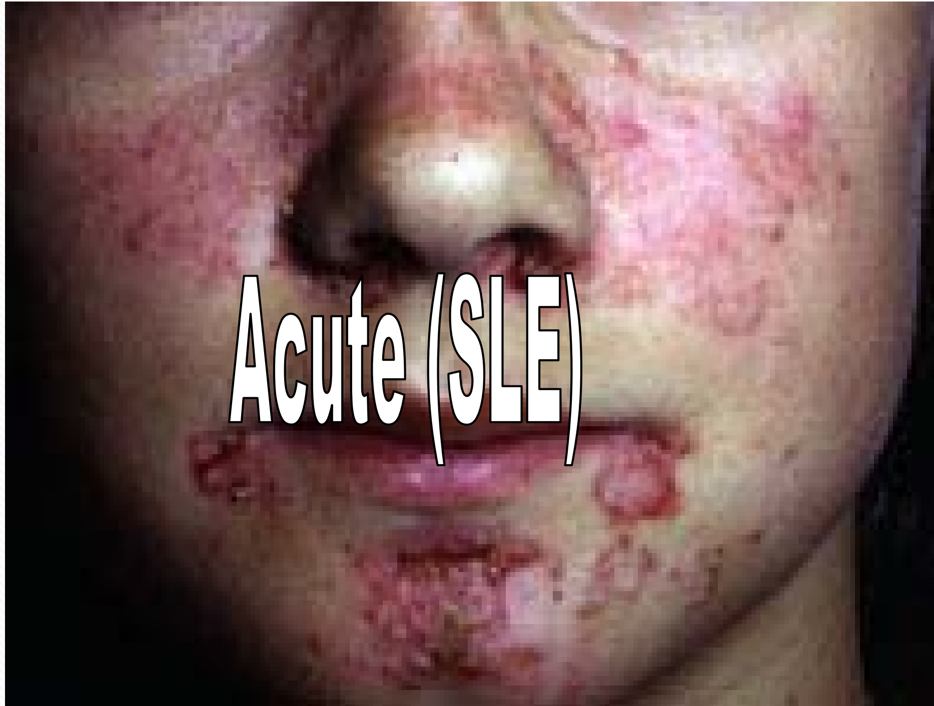
Lues (Secondary Syphilis)

- Palms and soles involved
- Primary lesion: Chancre
- Secondary (in addition to rash)?

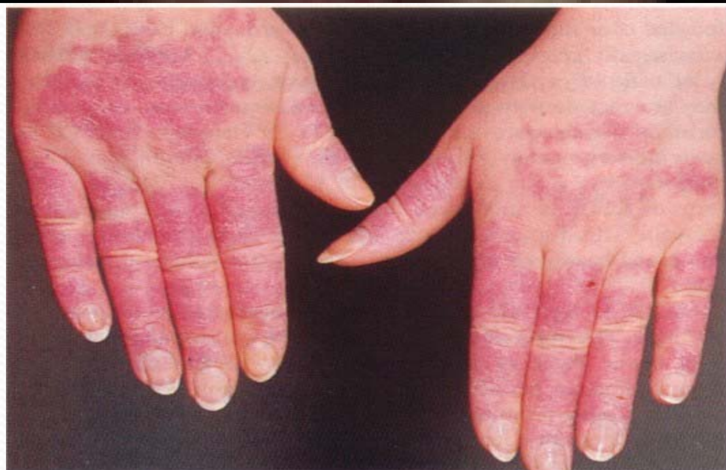
CONDYLOMA LATA

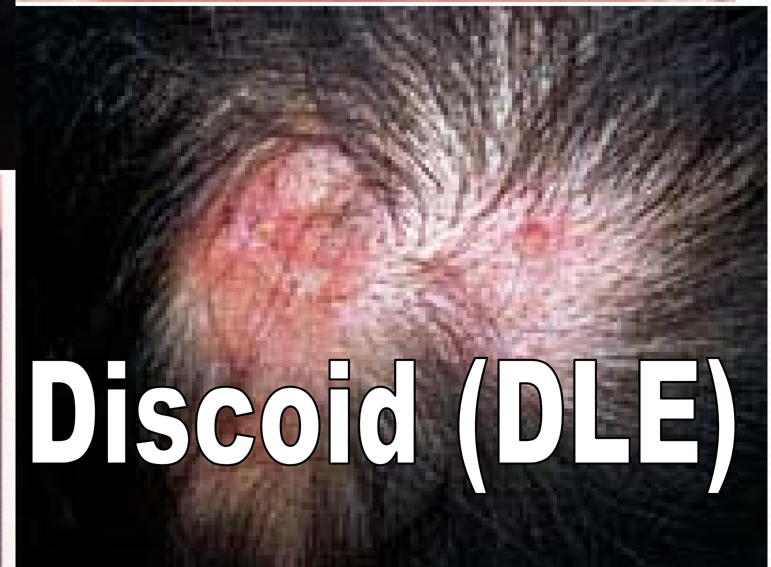
- Tertiary: Neurosyphilis/Aortitis/Gummas

Case 6: LUPUS



KNUCKLE
SPARING

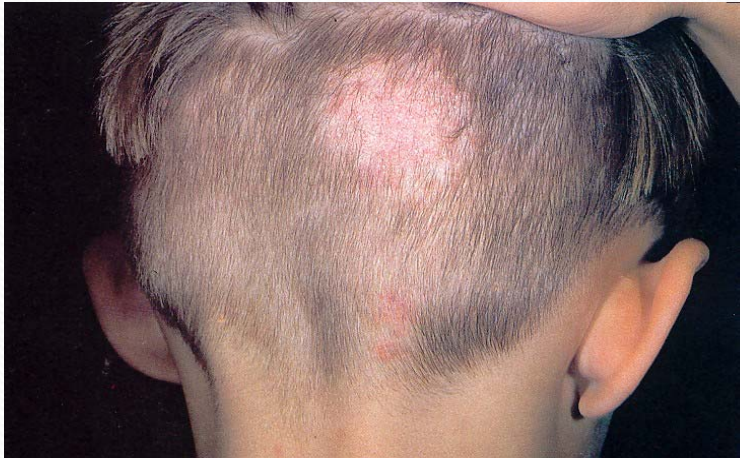


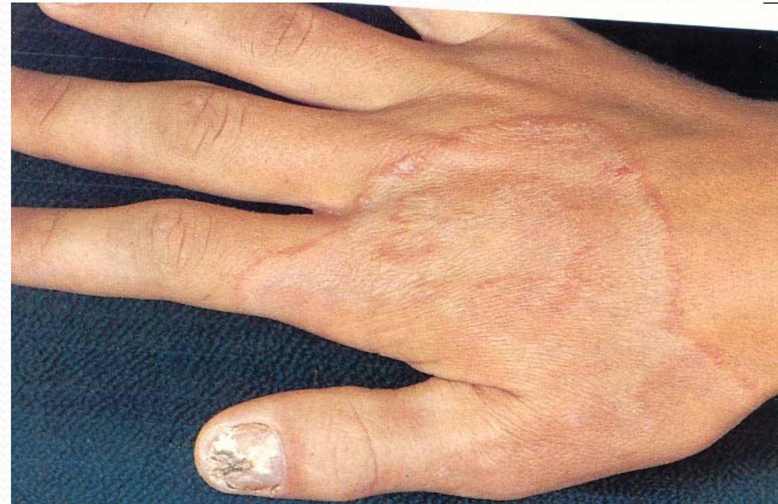


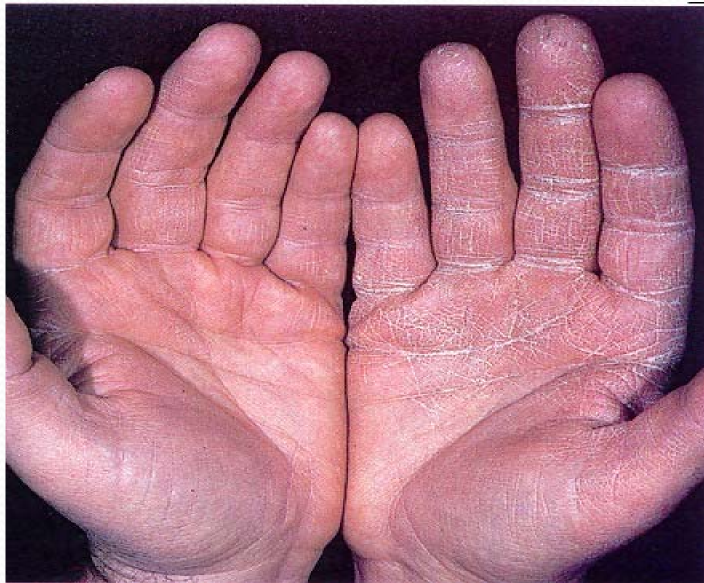
Papulosquamous= 3P's, 3L's

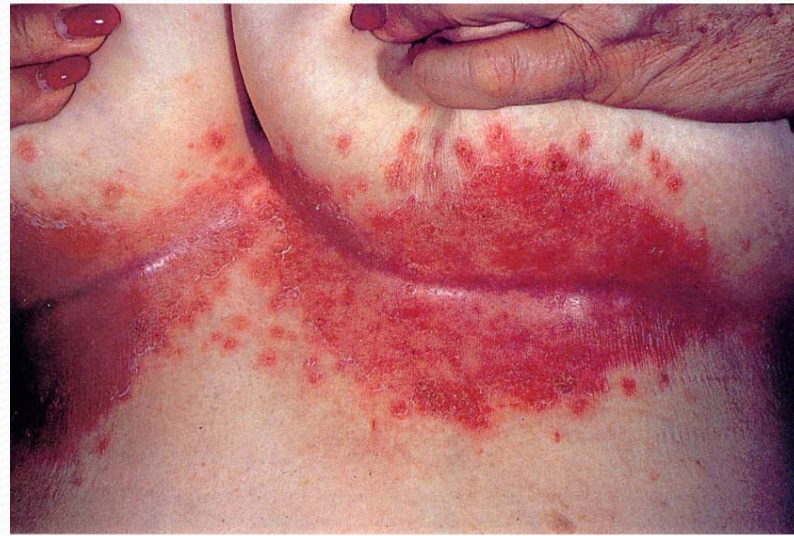
- Psoriasis
- Parapsoriasis
- Pityriasis Rosea
- Lichen Planus
- Lues (Secondary Syphilis)
- Lupus
- AND

Fungal Infections







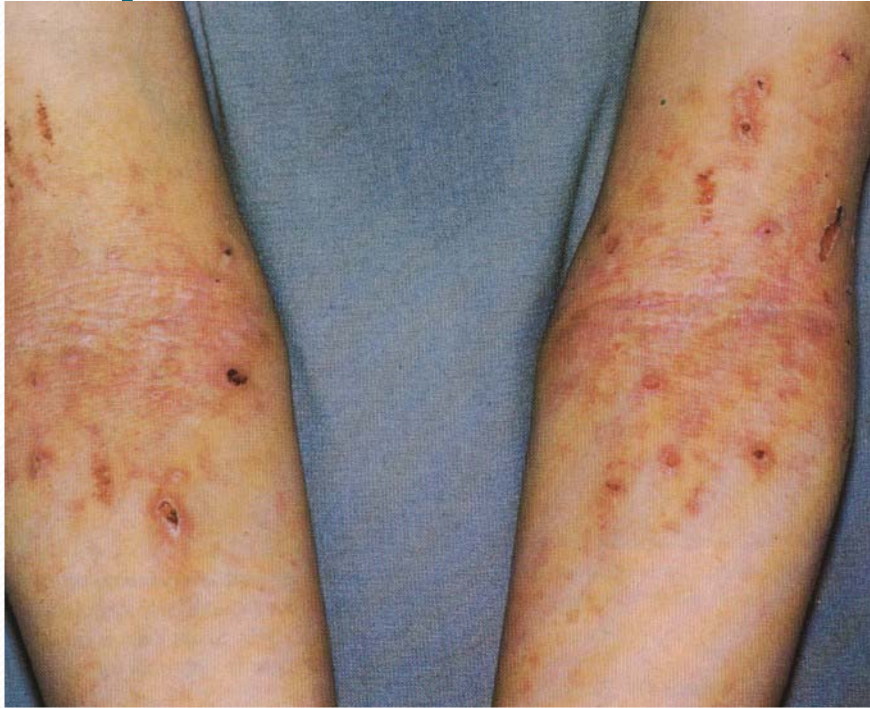


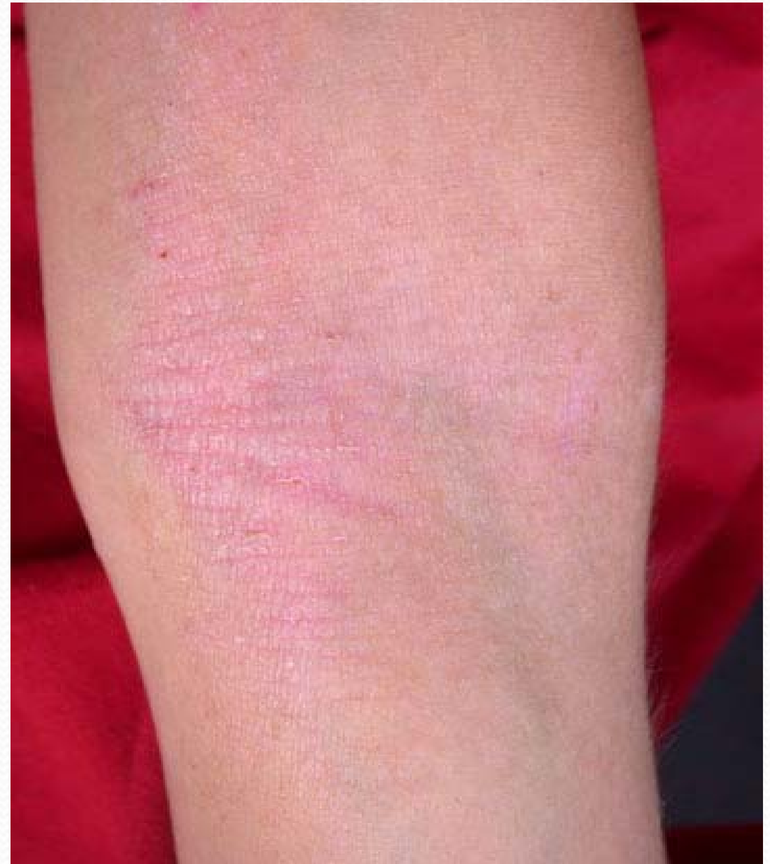
COMMON GROIN DERMATOSES

- Psoriasis (inverse)
- Tinea Cruris
- Erythasma
- Irritant Contact
- Allergic Contact
- Candidiasis
- Intertrigo

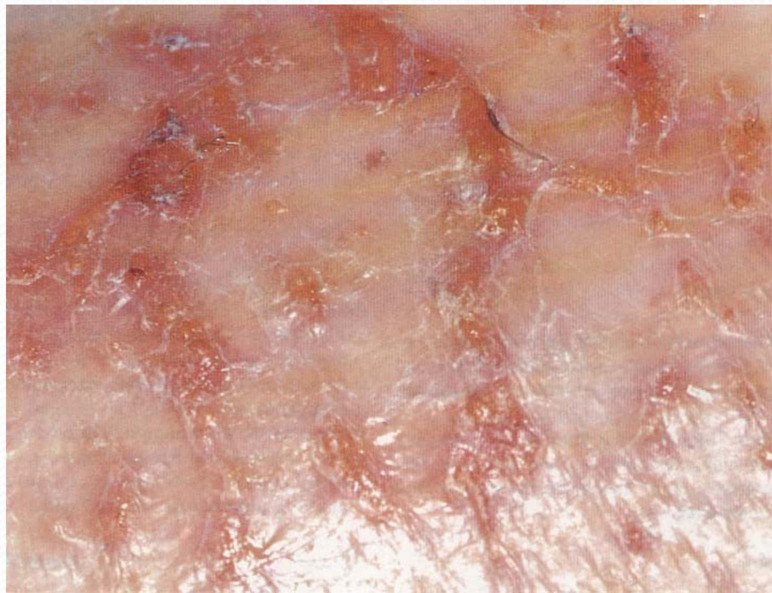
ECZEMATOUS DISEASES

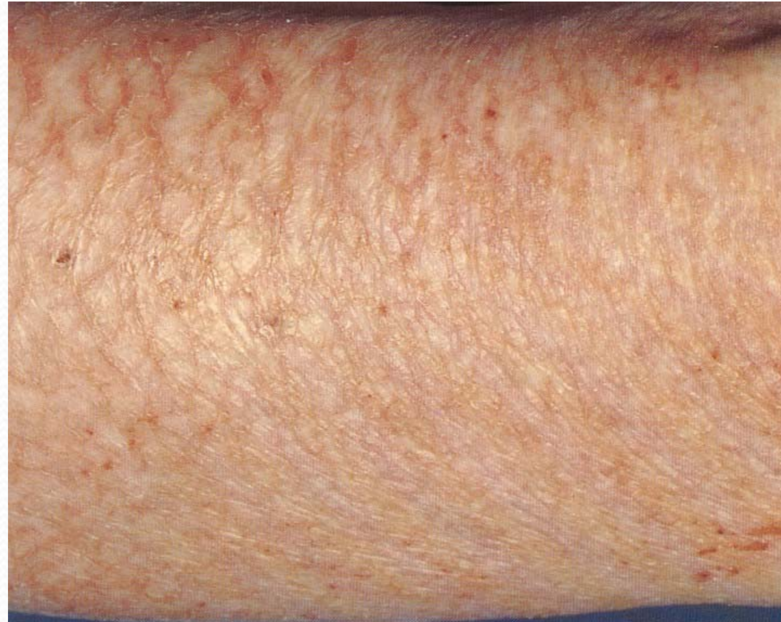
Atopic Dermatitis



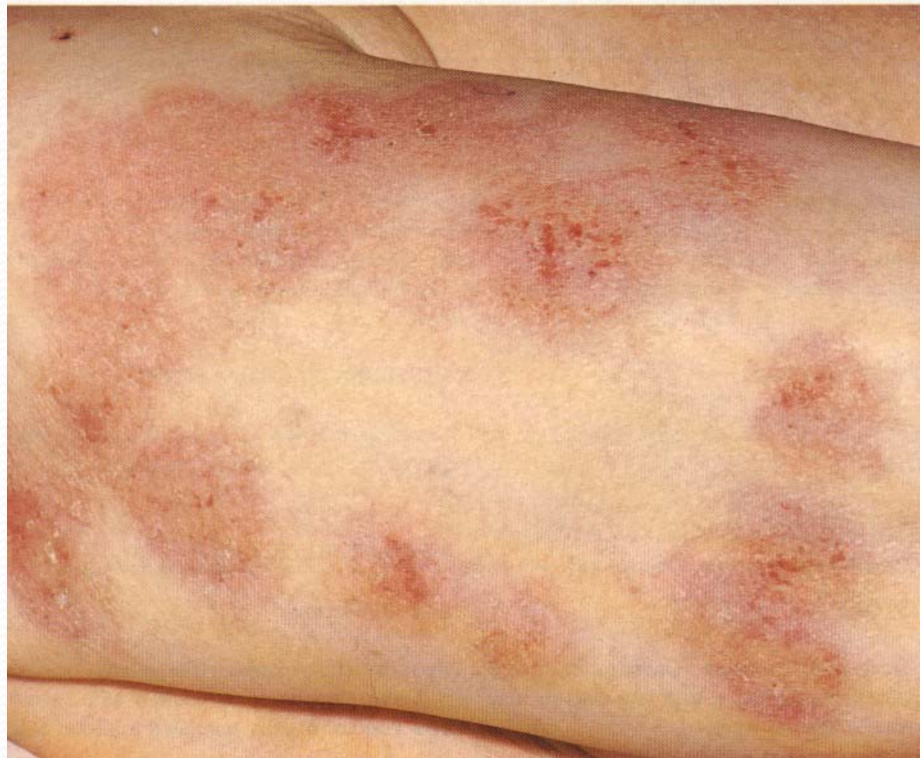


Asteatotic Dermatitis (Eczema Craquele)

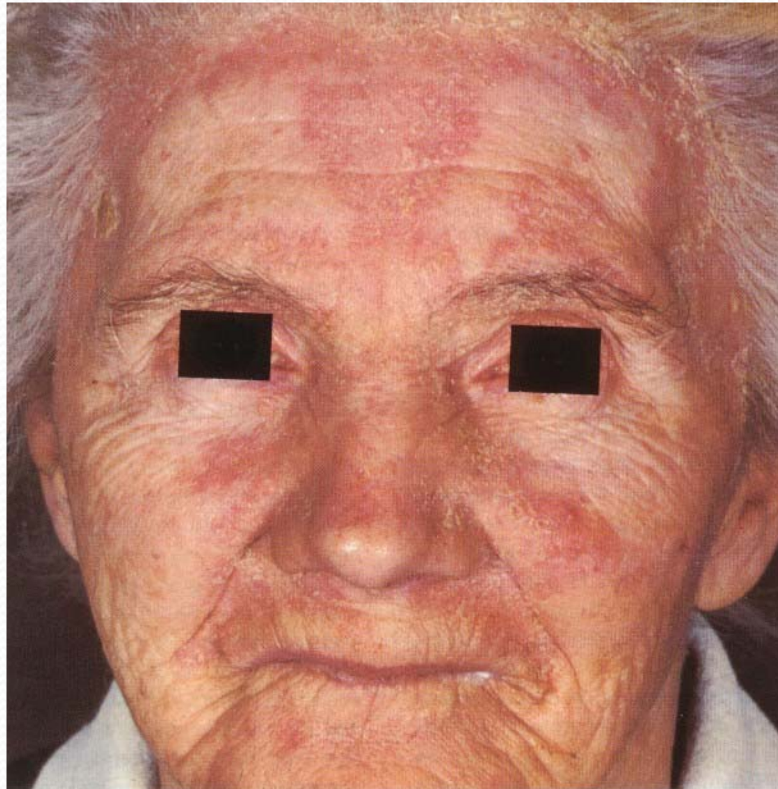




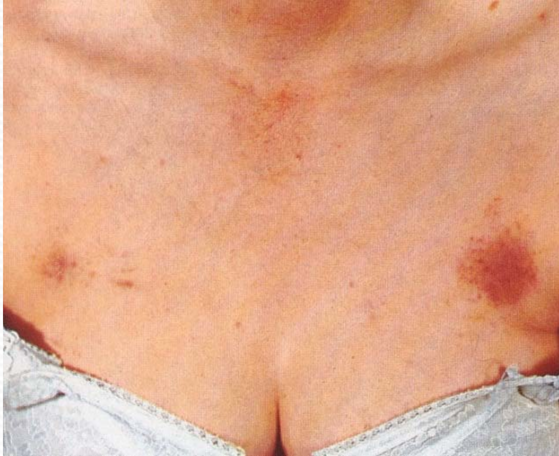
Nummular Eczema

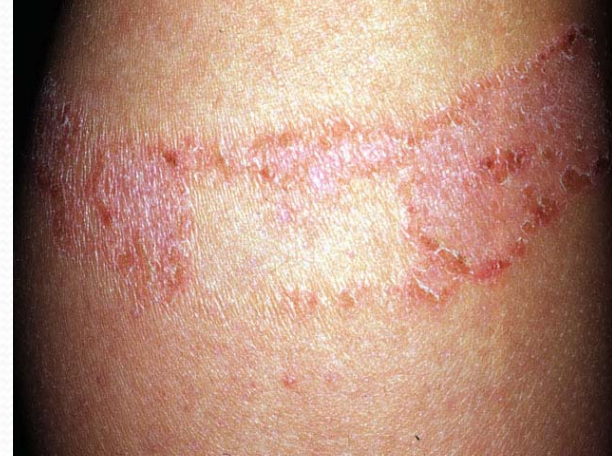


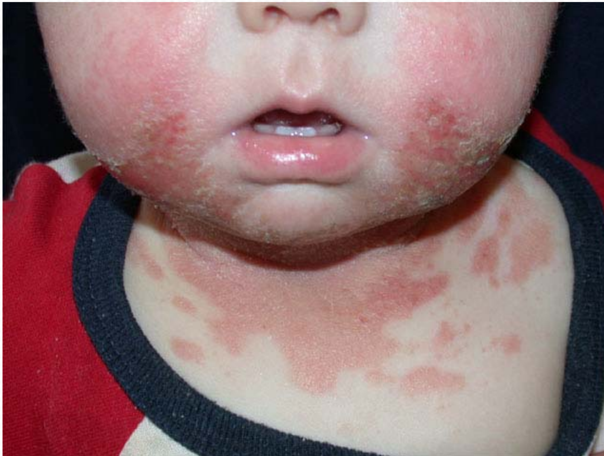
Seborrheic Dermatitis (Dandruff)

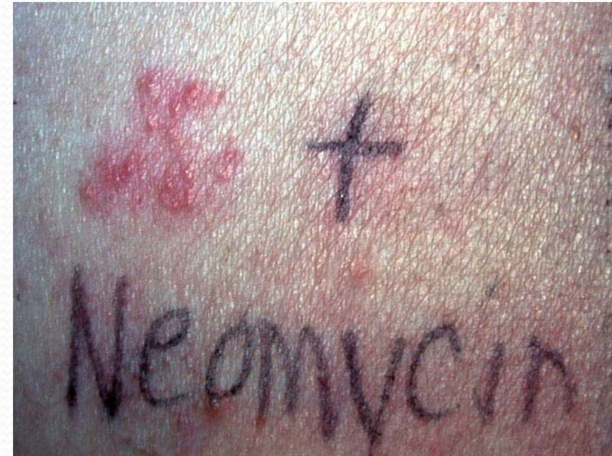


Contact Dermatitis





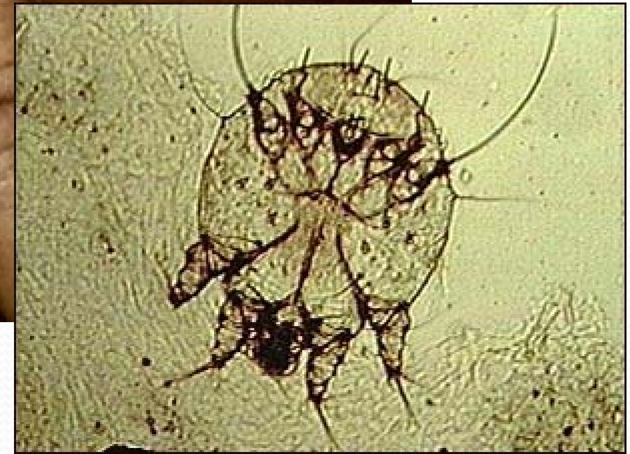




What kind of testing is this??
PATCH TESTING

- Allergic Contact
  - Nickel
  - Neomycin
  - Tape
- Irritant Contact
  - Lip-lickers
  - Dribble
  - Chemicals

Last one! Scabies

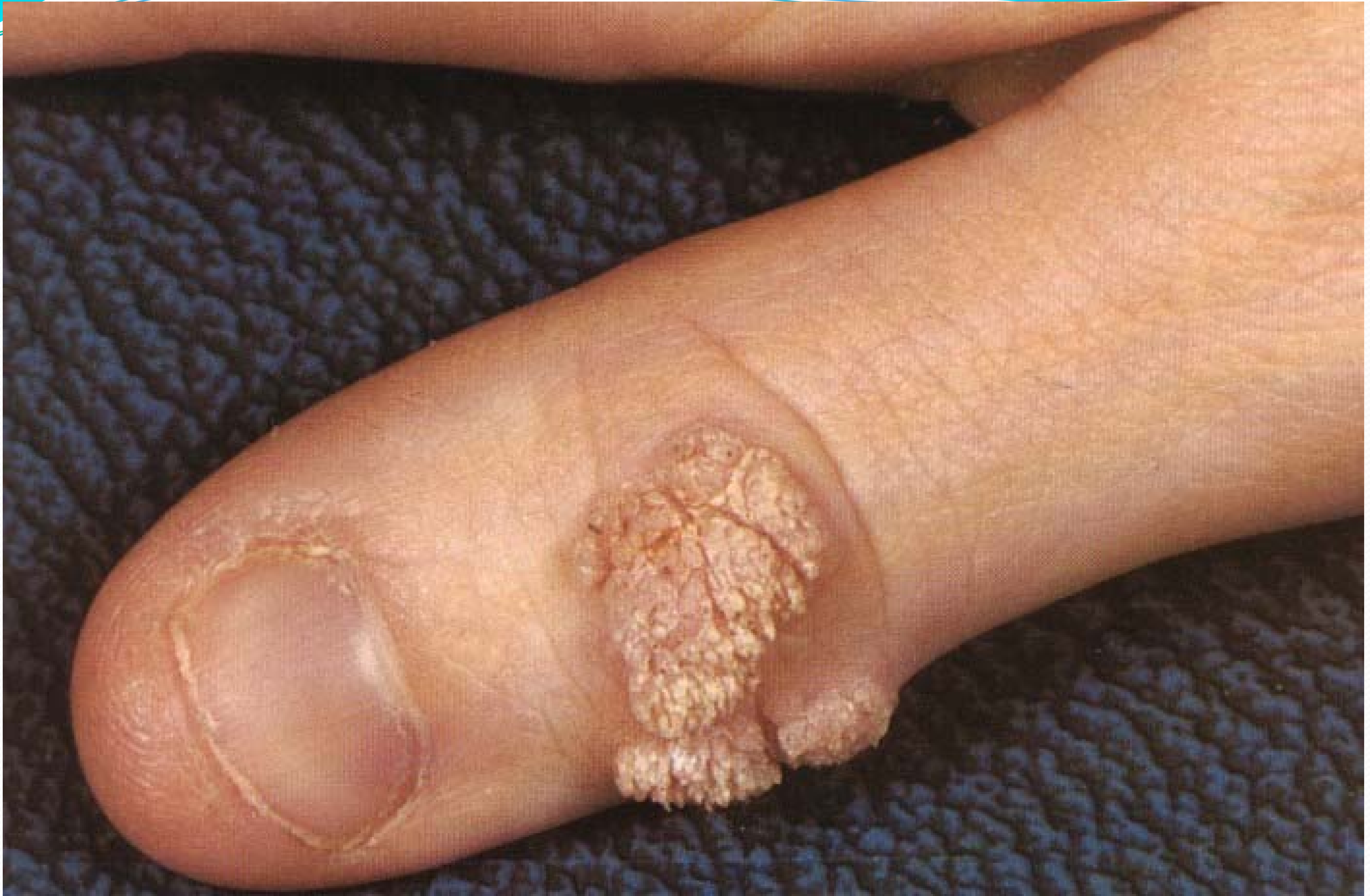


Eczematous Diseases

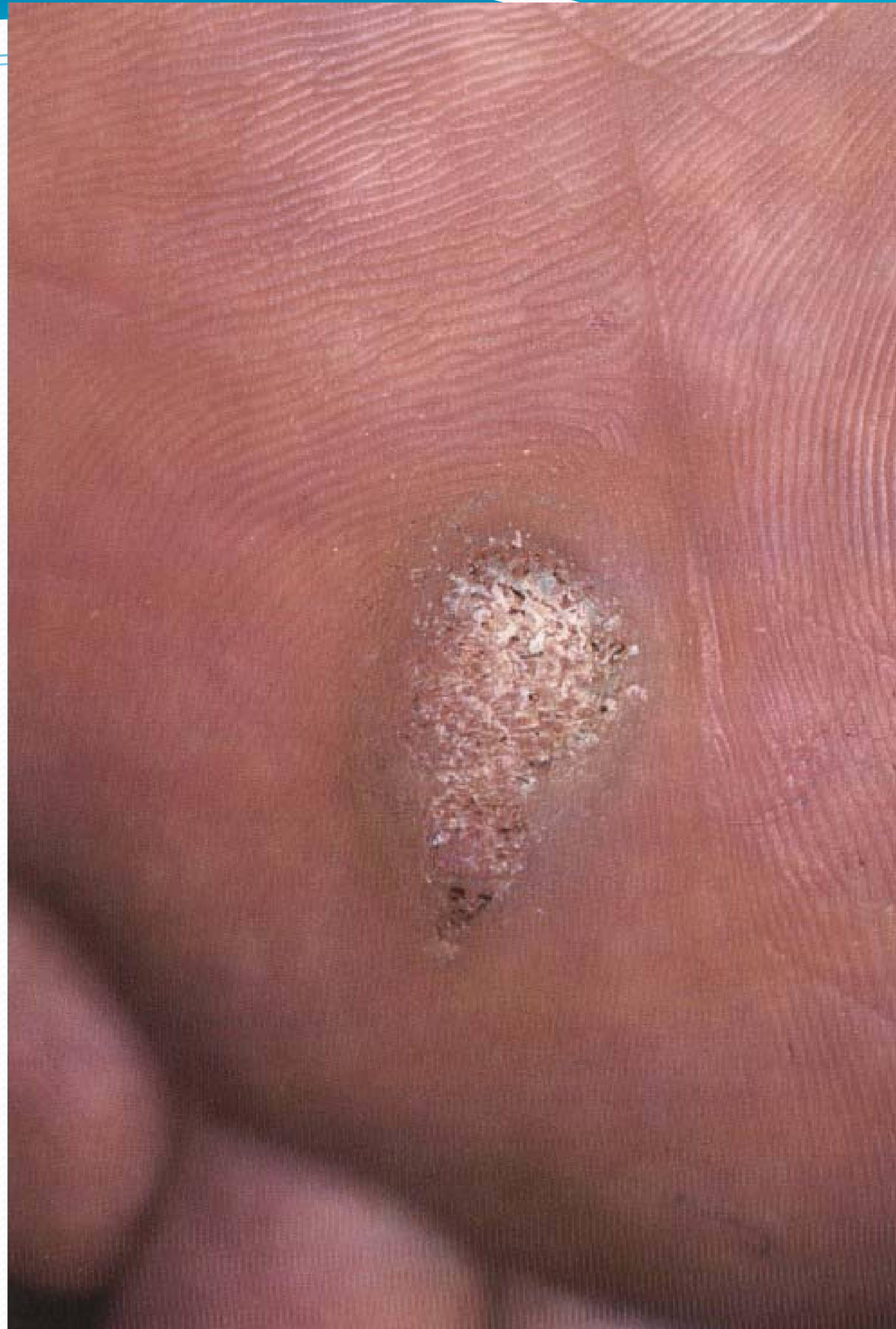
- Atopic dermatitis
- Eczema craquelatum (asteatotic)
- Seborrheic dermaitis
- Contact dermatitis
- Scabies

SKIN-COLORED PAPULES AND NODULES

- 10 year old girl
- Lesion duration: months
- Seen on hands and knees
- Occasionally bleed painlessly when she picks at them
- Painful lesion on the bottom of her foot



- A one-cm flesh-colored nodule with frond-like protrusions on the surface
- What virus is causative?
- School children; incidence decreases after age 25
- Hyperkeratotic, “reddish-brown dots” seen with hand lens. What are these dots?

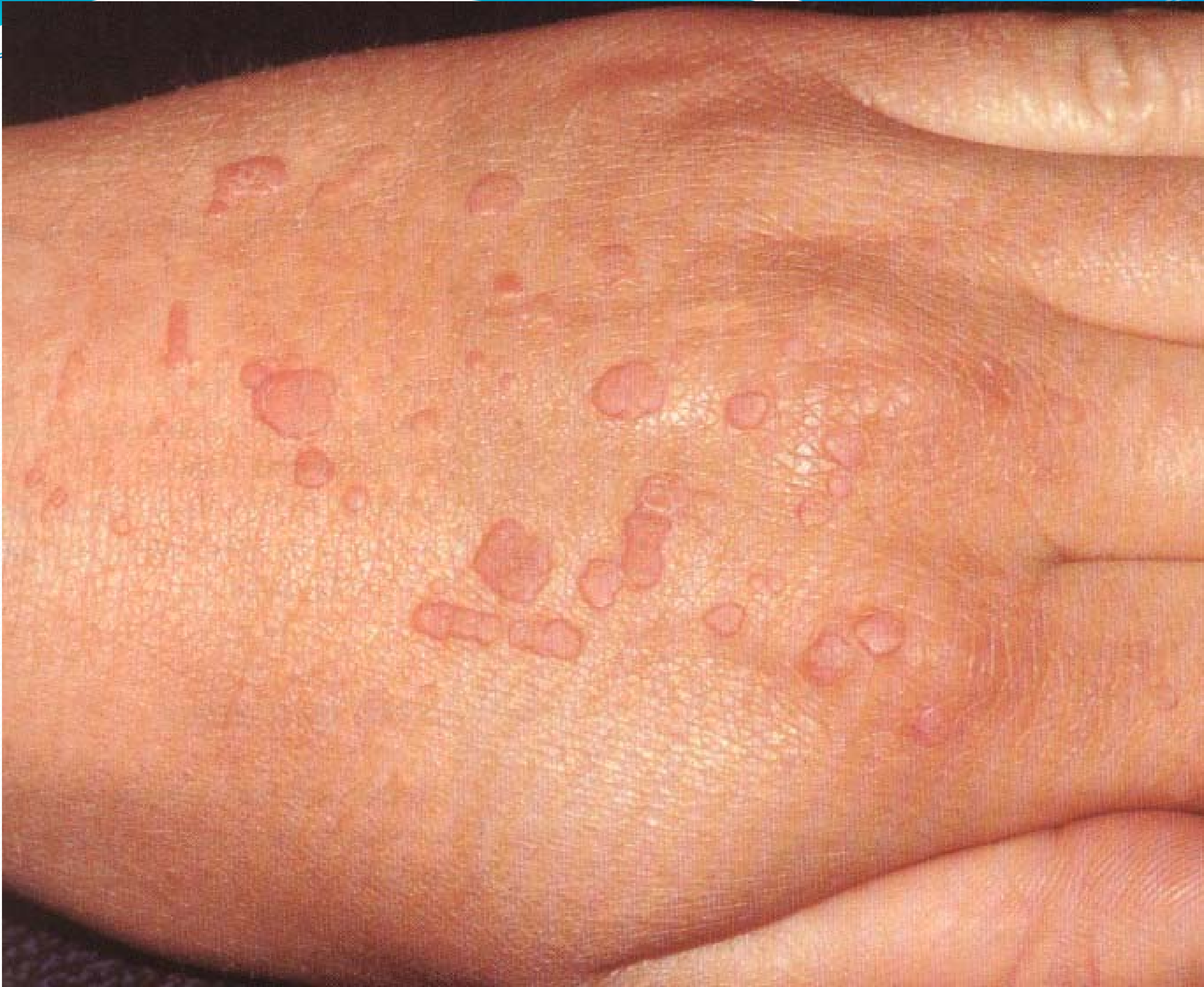


Verruca Plantaris

- One-cm flesh-colored flat-topped plaque with loss of skin markings and firm-pressed scale on the surface
- Lesions appear often on sites of pressure, may be multiple
- Tenderness may be marked
- What is in the differential?
- How do you tell the plantar wart from the other differential diagnoses?

Case 2

- 23 year old woman
- Noticed the lesions on her hands a couple months ago. First started as a couple of lesions, now many.
- Not painful or pruritic



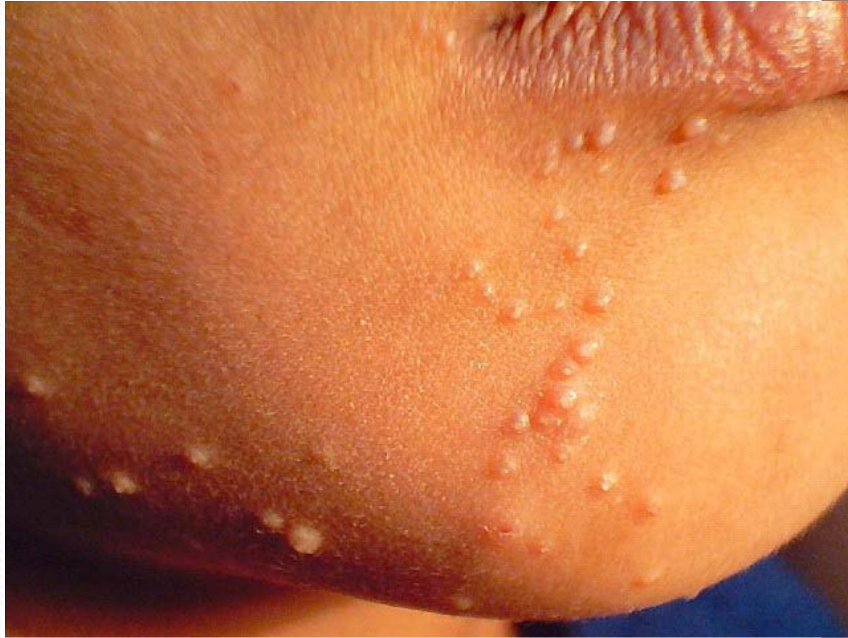
Verruca Plana (“Flat Wart”)

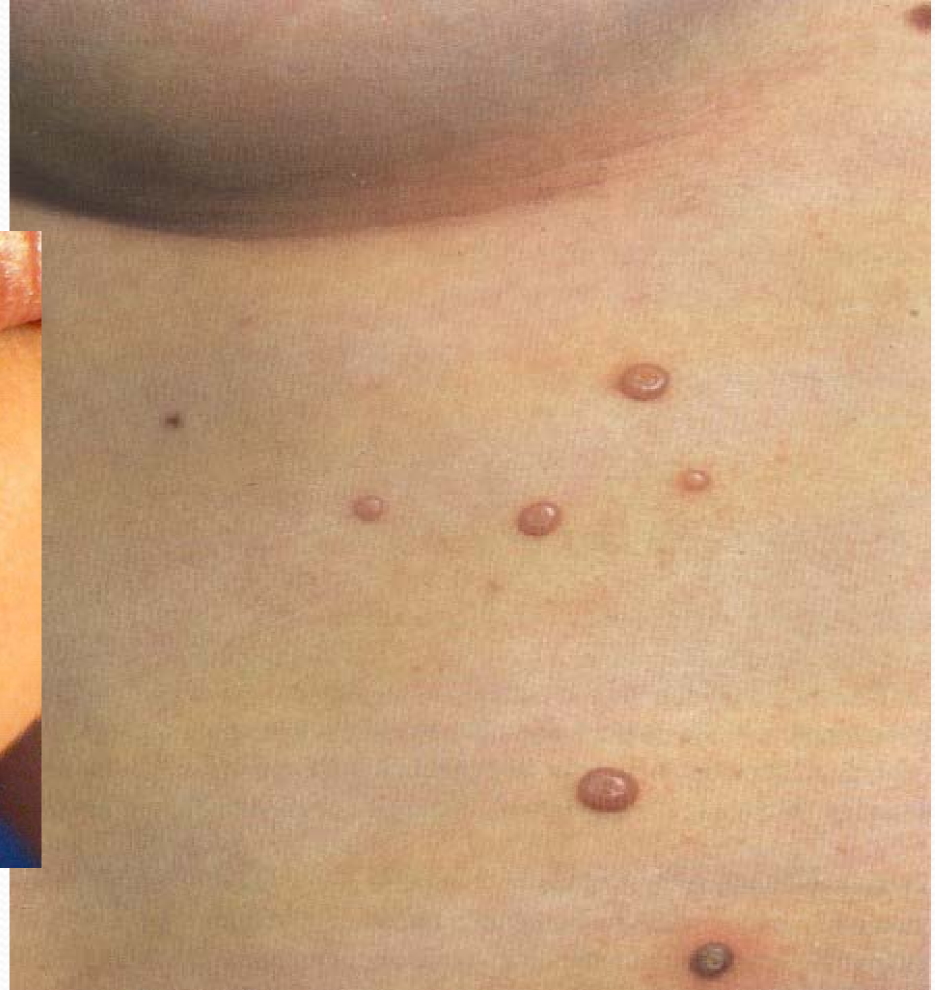
- Skin colored or light brown flat papules 1-5 mm
- Young children and adults
- Seen on face, dorsa of hands, shins
- What causes the linear lesions?

Case 3

- 19 year old sexually active male
- Lesions noted on face for the past 2-3 months
- Not pruritic or painful
- No systemic symptoms

Case 3

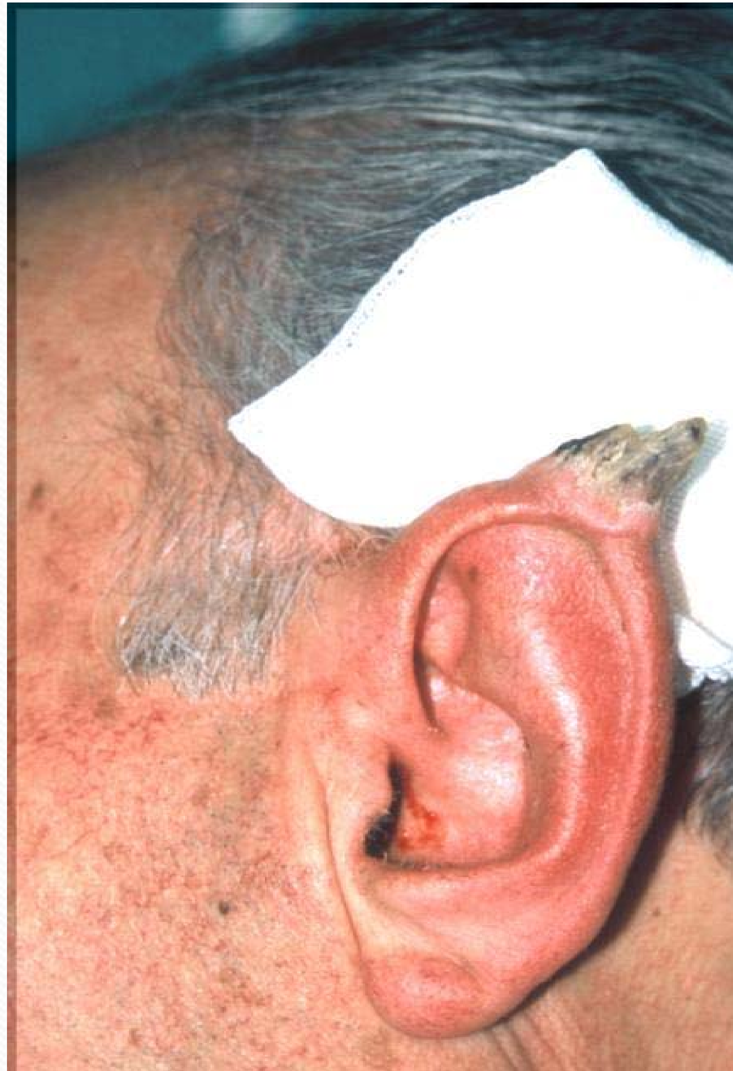




Molluscum Contagiosum

- Pearly-white or skin colored papules or nodules with **central umbilication**
- Children, Young Adults (sexually transmitted)
- What is the causative virus?
- Multiple facial lesions suggest what disease?

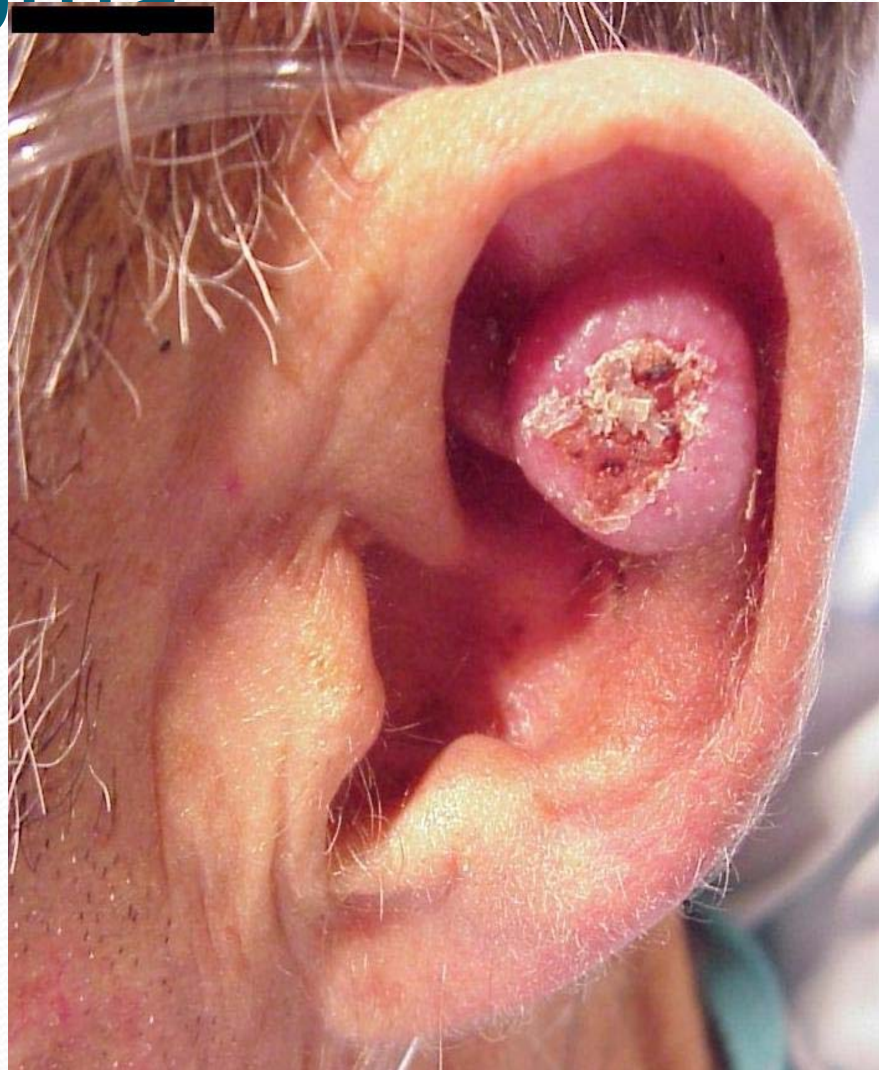
Case 4



- Differential:
  - Keratoacanthoma
  - Actinic Keratosis
  - Squamous Cell Carcinoma

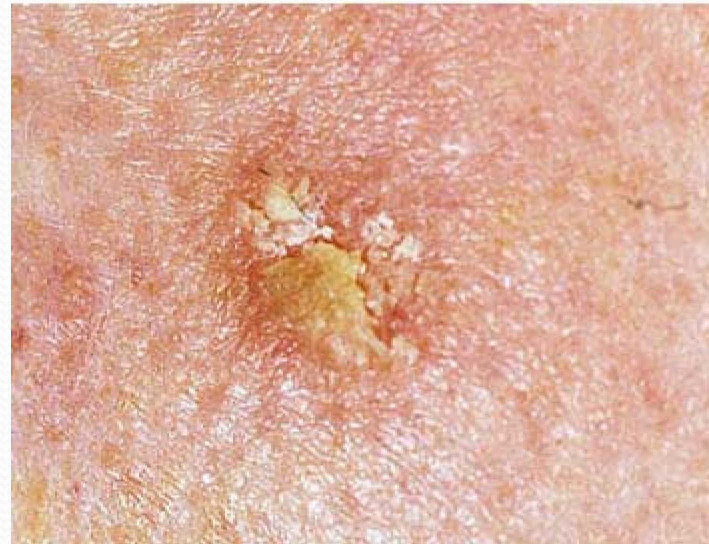
Keratoacanthoma

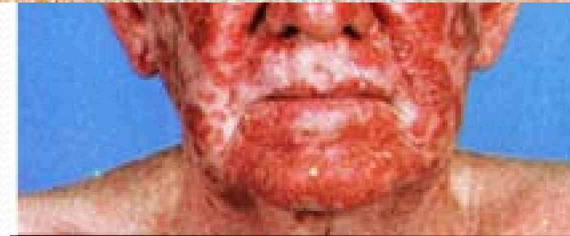
- Benign but mimics SCC
- Rapid growth
- Cental keratotic plug
- Heals with scarring
- Surgical removal



Actinic Keratosis (AK)

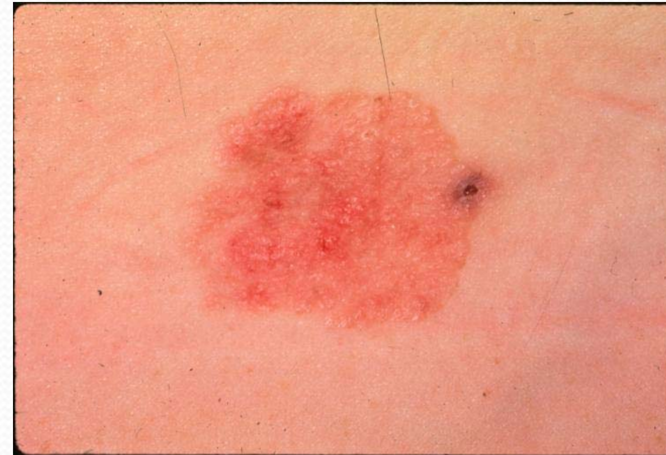
- Sun exposure
- Rough red scaly hyperkeratotic papules
- Rx: Cryotherapy if few; Efudex (topical 5-FU)if generalized
- SCC from AK: 1:1000

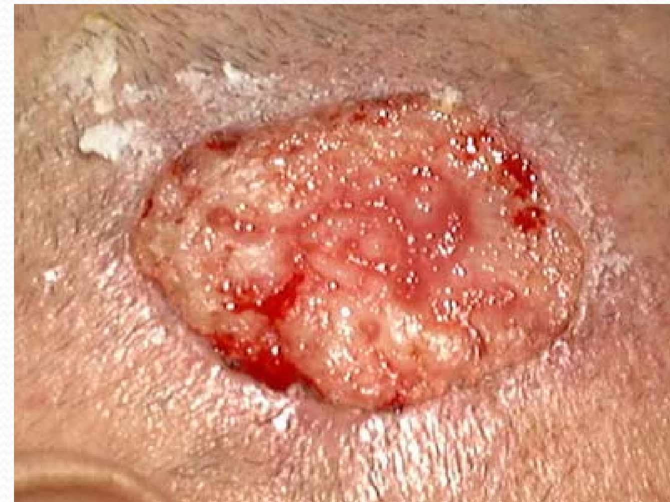




Squamous Cell Ca. (SCC)

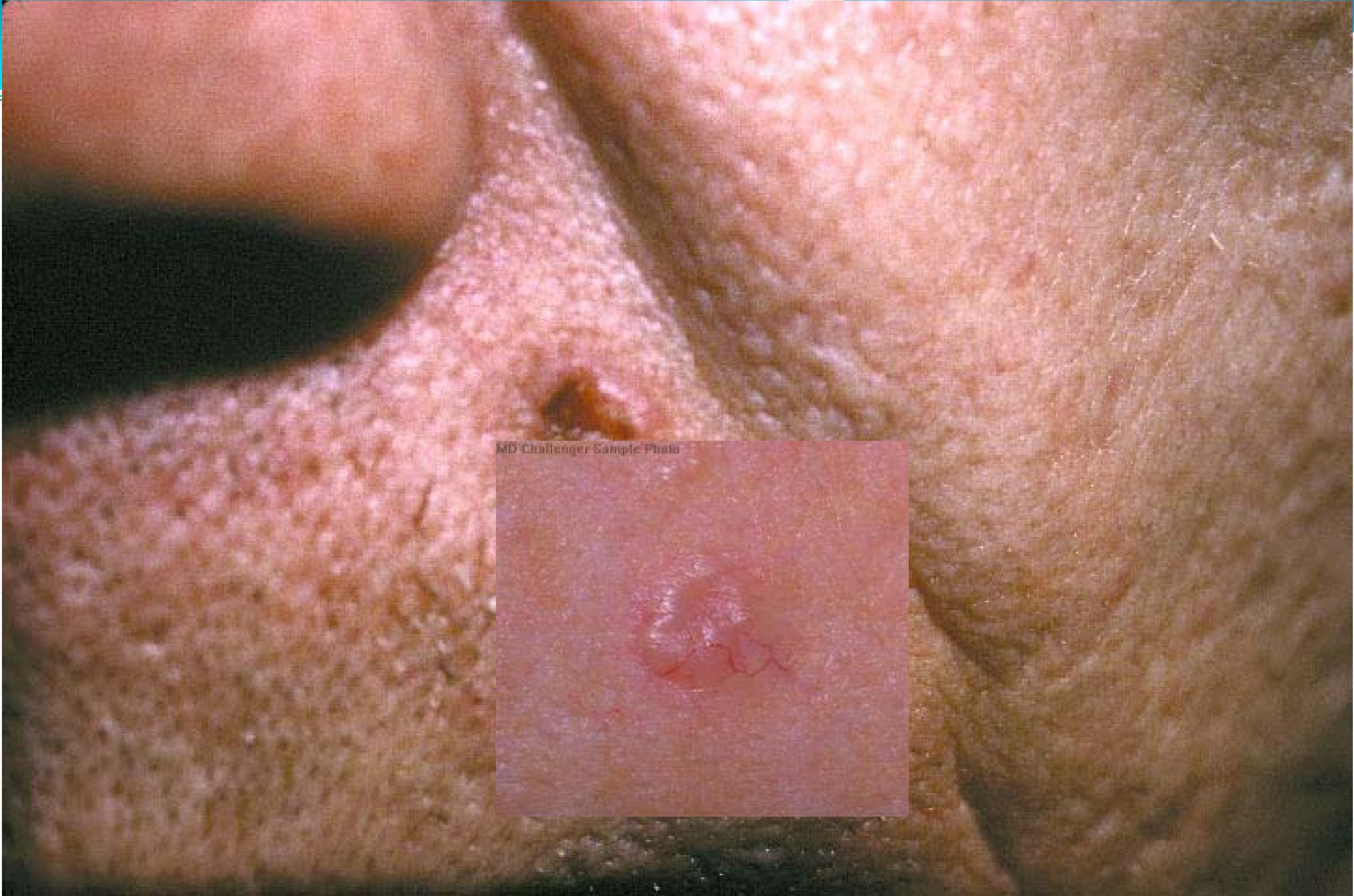
- SCC In Situ = Bowen's
- Well marginated, hyperkeratotic plaque usually in sun-exposed area
- Invasive SCC
  - Ulcerated
  - Metastatic (3-4%)
  - Risks:
    - Immunosuppression
    - Areas of chronic inflammation
    - Burn scars





Case 5

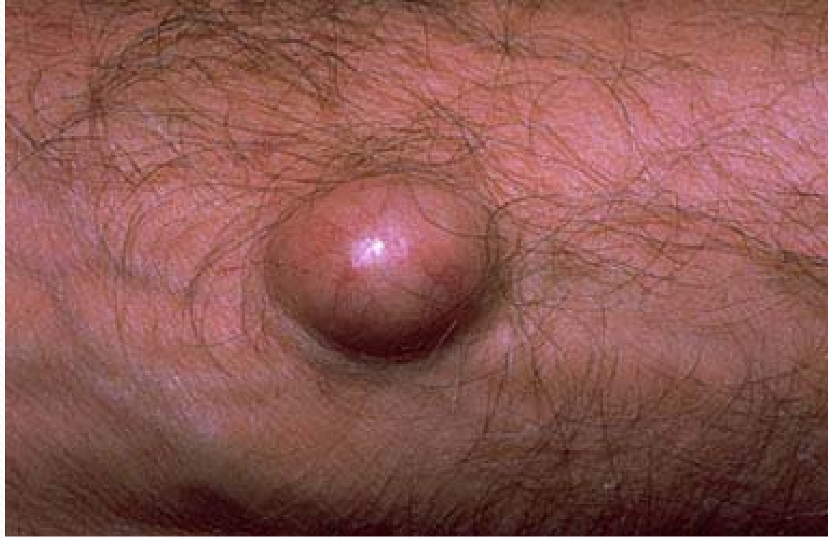
- 40 year old man
- Native to Arizona, likes to golf and play tennis
- Lesion present for a couple months, occasionally bleeds

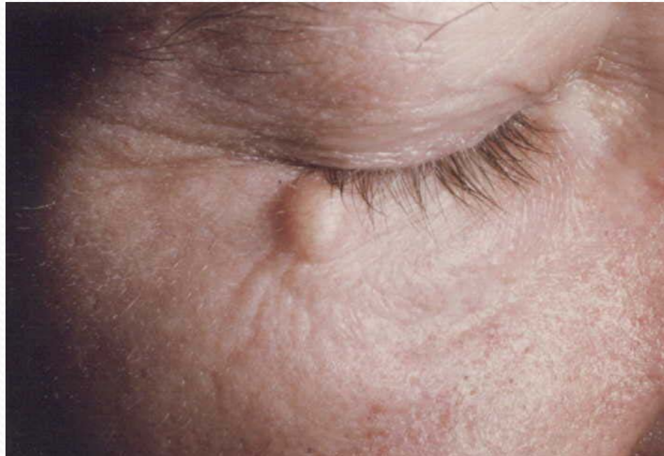

MD Challenger Sample Photo

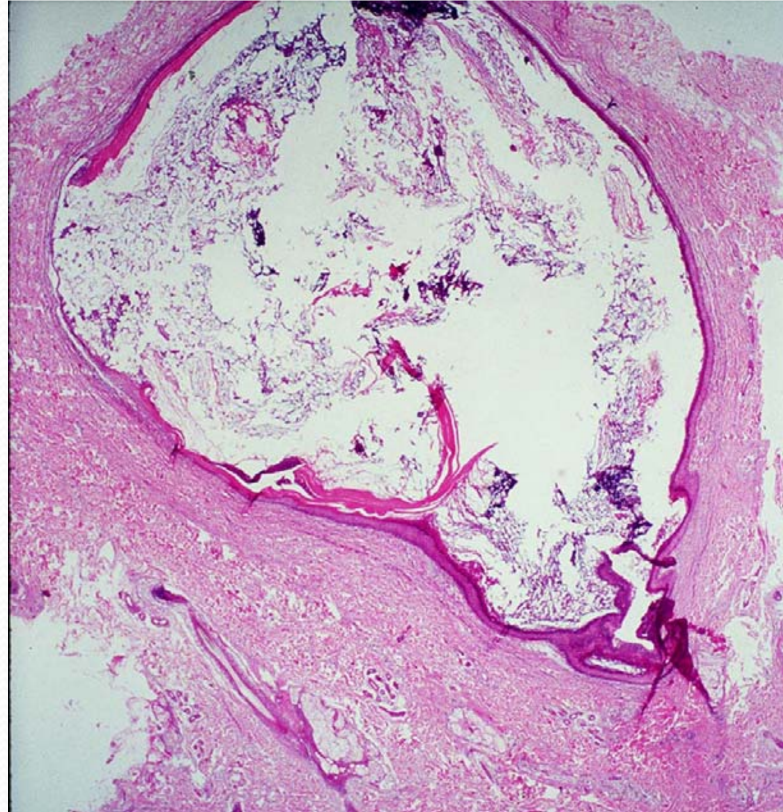
Basal Cell Carcinoma

- **Most common** NMSC
- ~1,000,000 new BCC/year
- Classic: Skin-colored **pearly** papule with **telangiectasia** and rolled borders
- Categories: Superficial, Nodular, Pigmented, Sclerosing
- **Rarely metastatic** – local invasion “Rodent ulcer”

Case 6



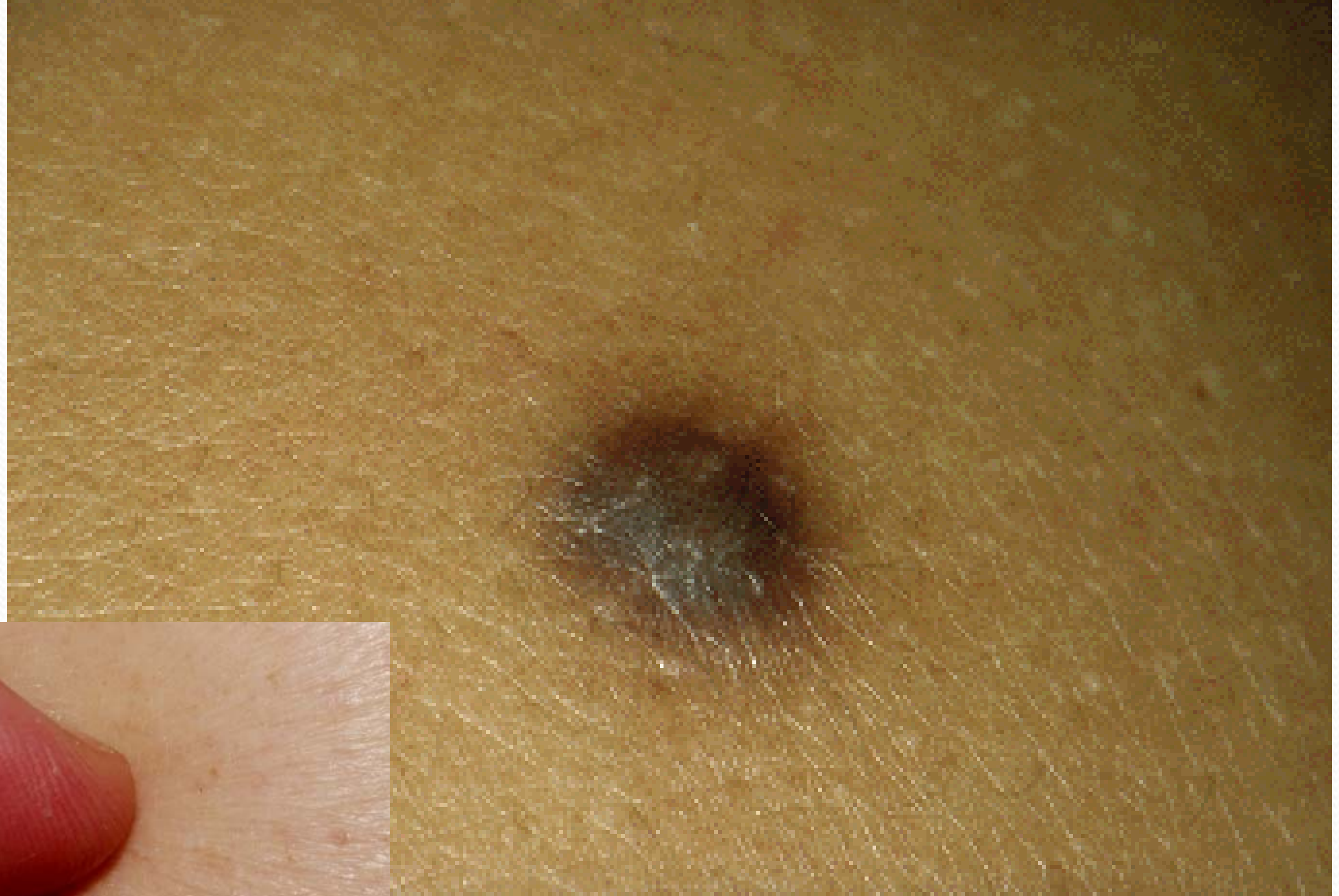


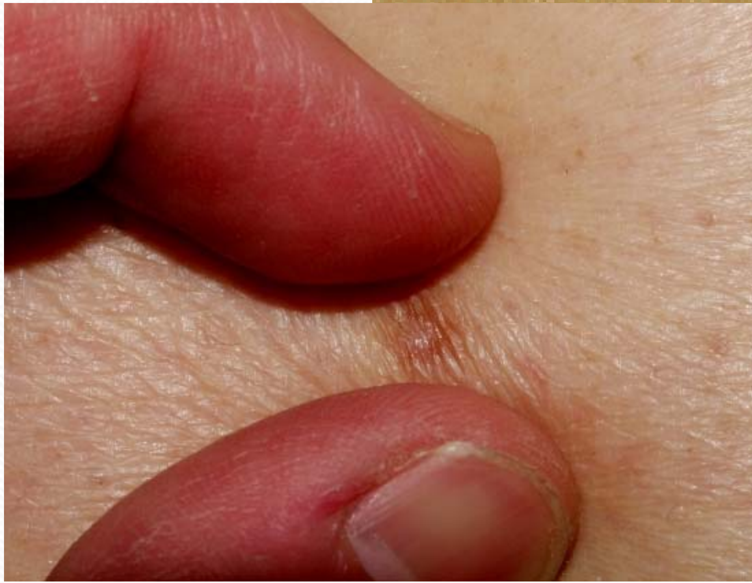


Epidermoid Cyst

- Synonyms: Wen, sebaceous cyst, epidermal cyst
- Follicular with CENTRAL PORE
- Keratinaceous debris
- “CHEESY”, smell rancid
- Ruptured cyst invokes inflammation; it does not mean it is infected!
- Important to remove sack or will recur!

Case 7





Dermatofibroma (DF)

- Very common!
- Adult females
- Lower leg
- Common post trauma/bite

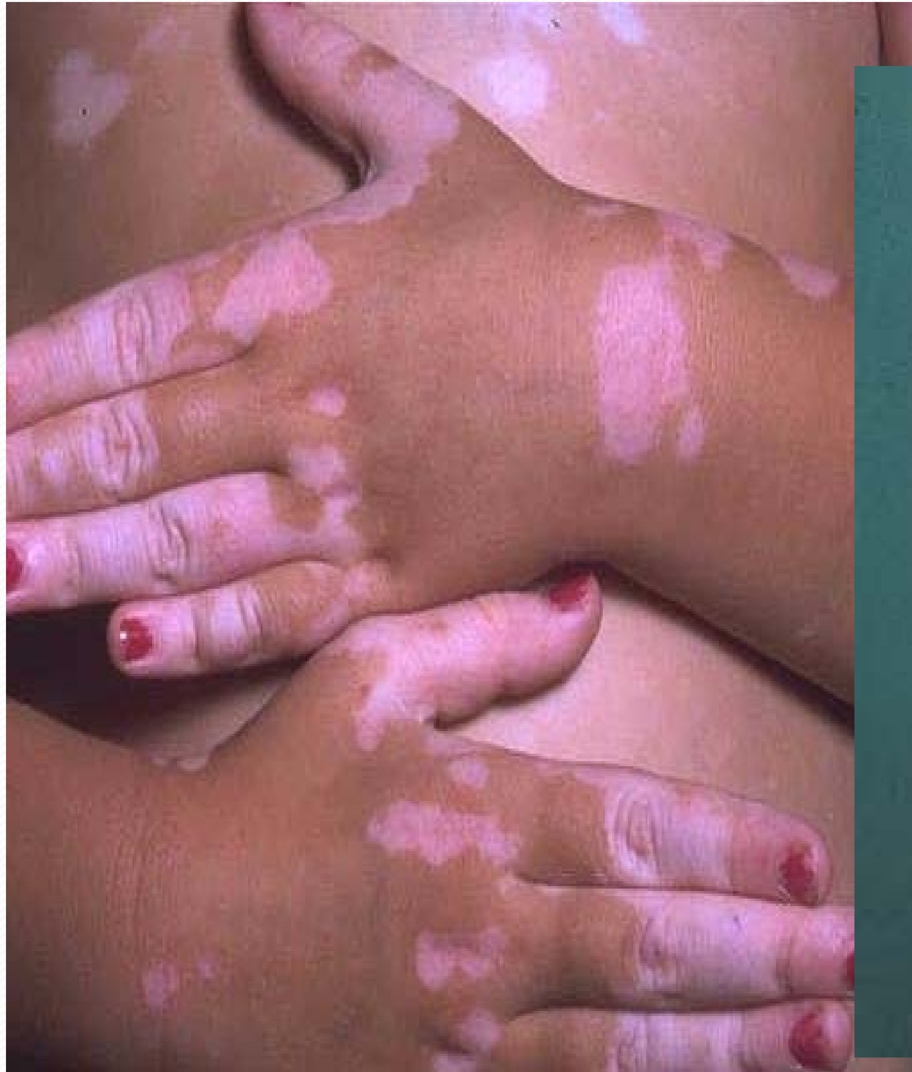
- DERMAL
- “Dimple sign”

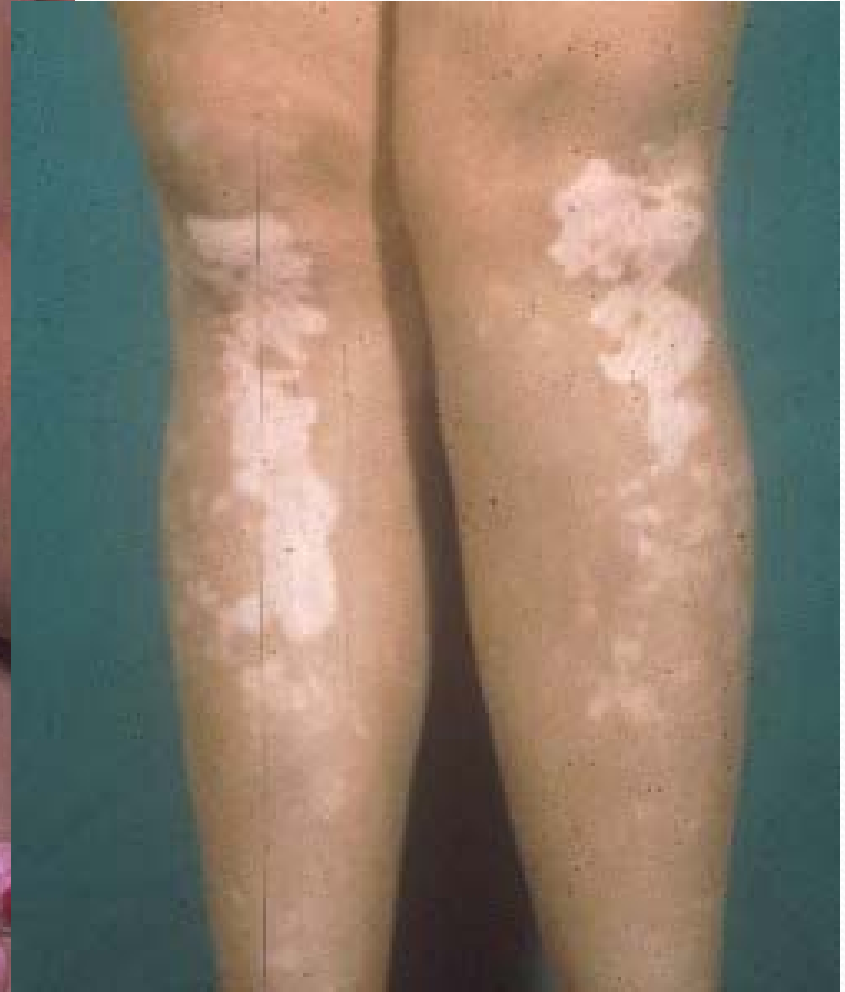
Skin-colored papules and nodules

- Keratoacanthoma
- Actinic keratosis
- Squamous cell CA
- Basal cell CA
- Epidermoid cyst
- Dermatofibroma
- Verruca Vulgaris
- Verruca Plantaris
- Verruca Plana
- Molluscum contagiosum
- Cutaneous Horn

WHITE LESIONS

Case 1

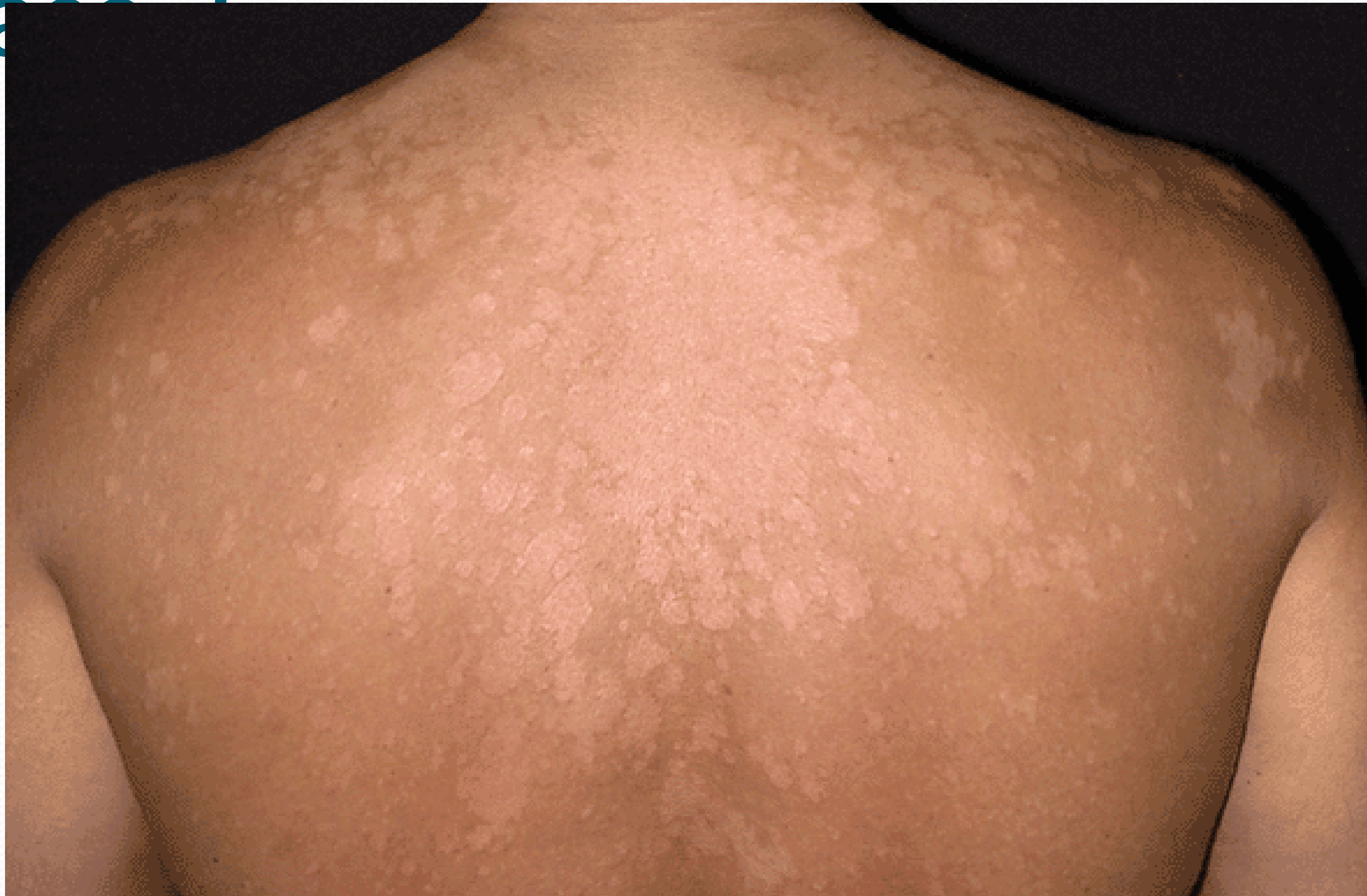




Vitiligo

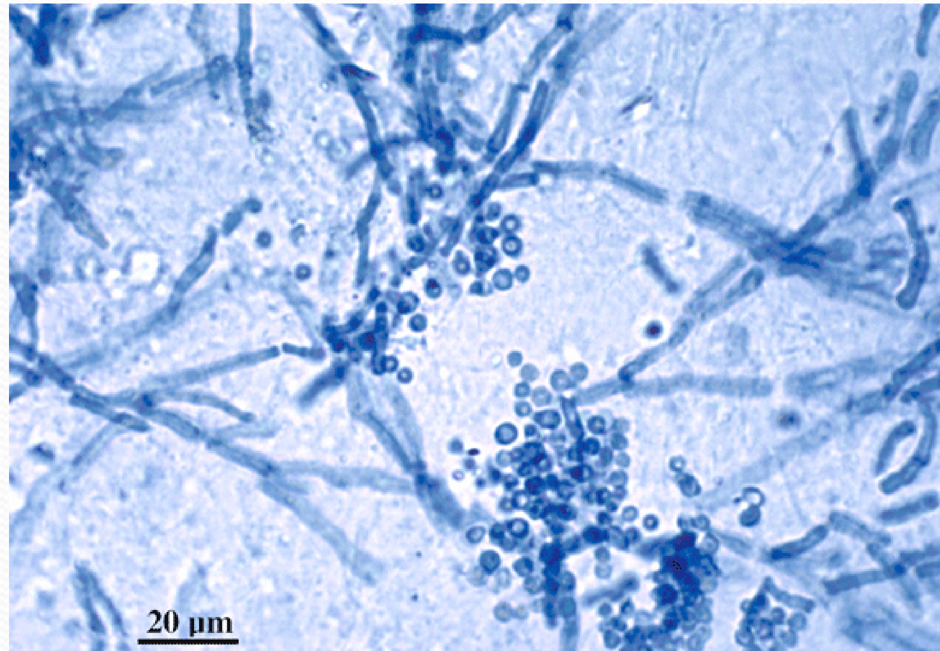
- Autoimmune destruction of melanocytes
- Poliosis: Vitiligo macule
- Association: Thyroid Disease (30%)
  - Also: Pernicious anemia, Addison's, Diabetes
- Very difficult to treat in hairless areas!
  - Recruits melanocytes from follicles
  - Glucocorticoids and phototherapy

Case 2

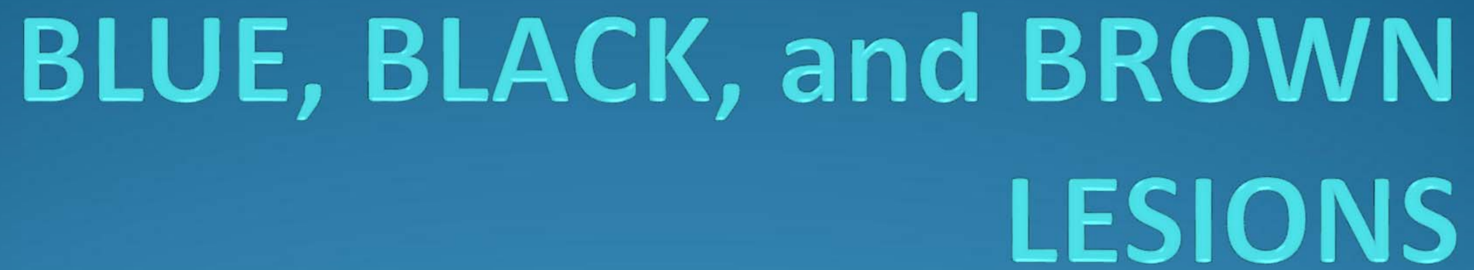


Tinea Versicolor

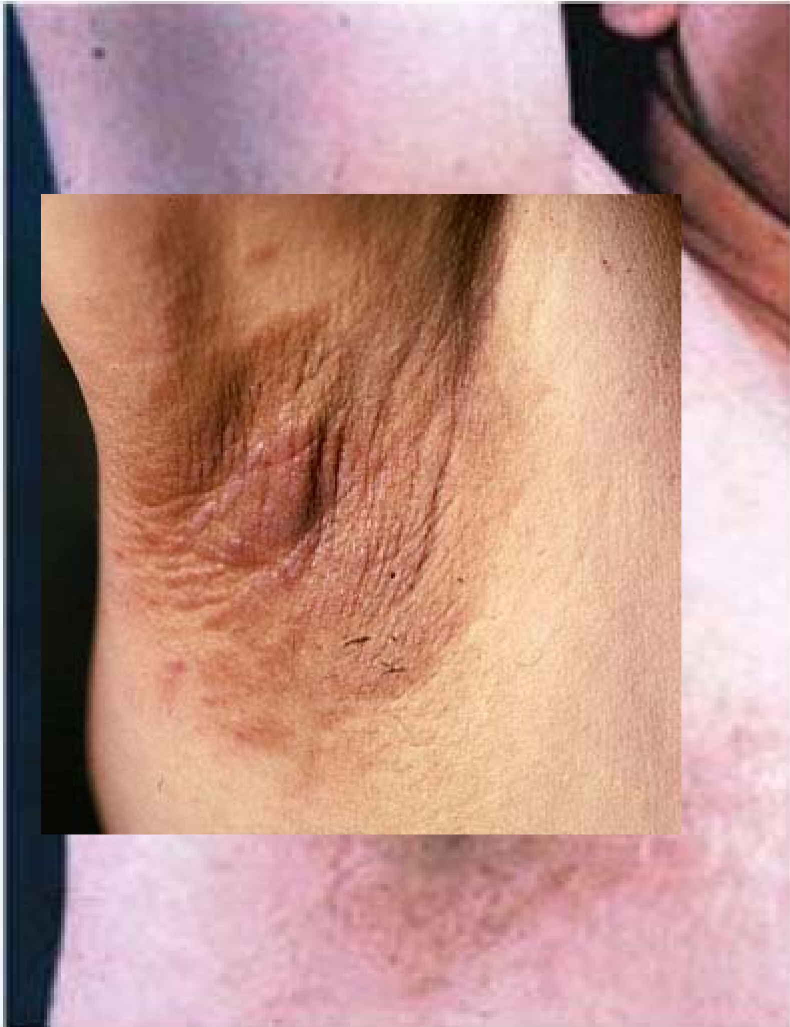
- Clinical: Hyper or hypopigmented
- KOH: Spaghetti and meatballs

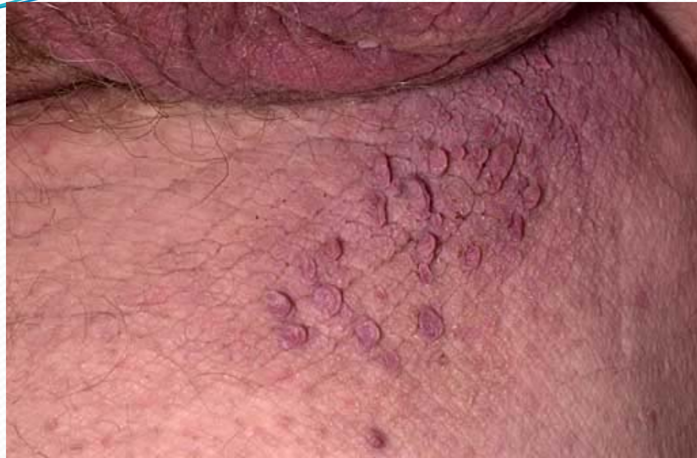
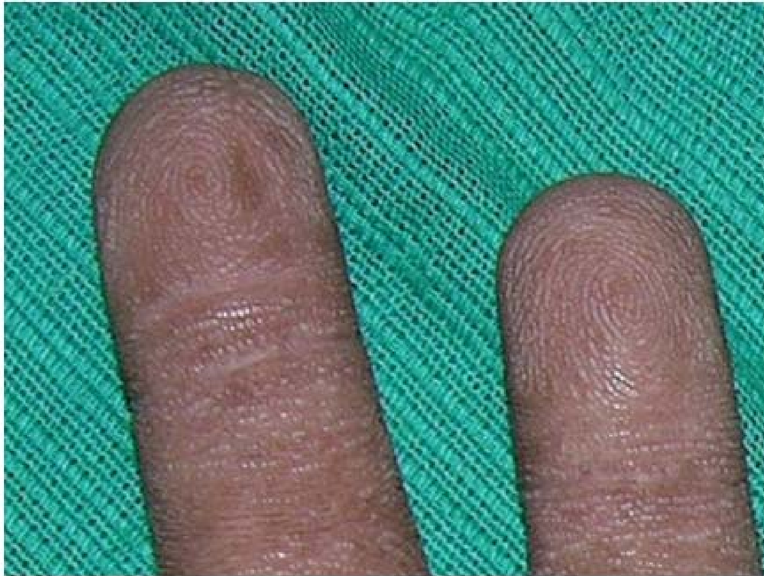
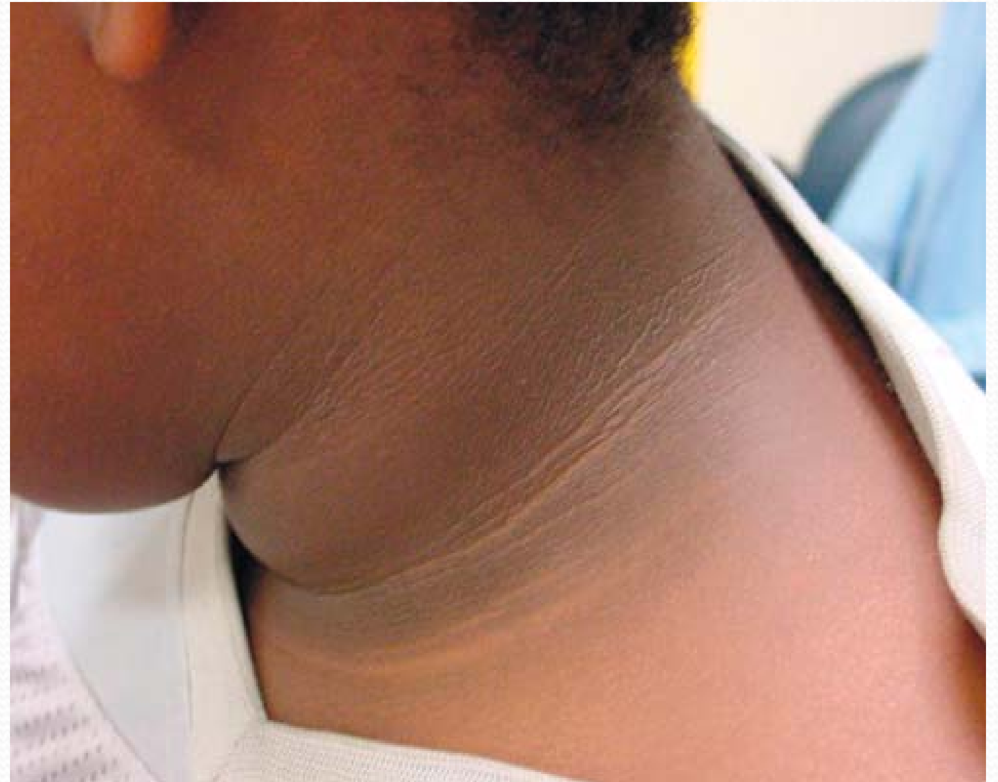


- Vitiligo
- Tinea versicolor


BLUE, BLACK, and BROWN
LESIONS

Case 1

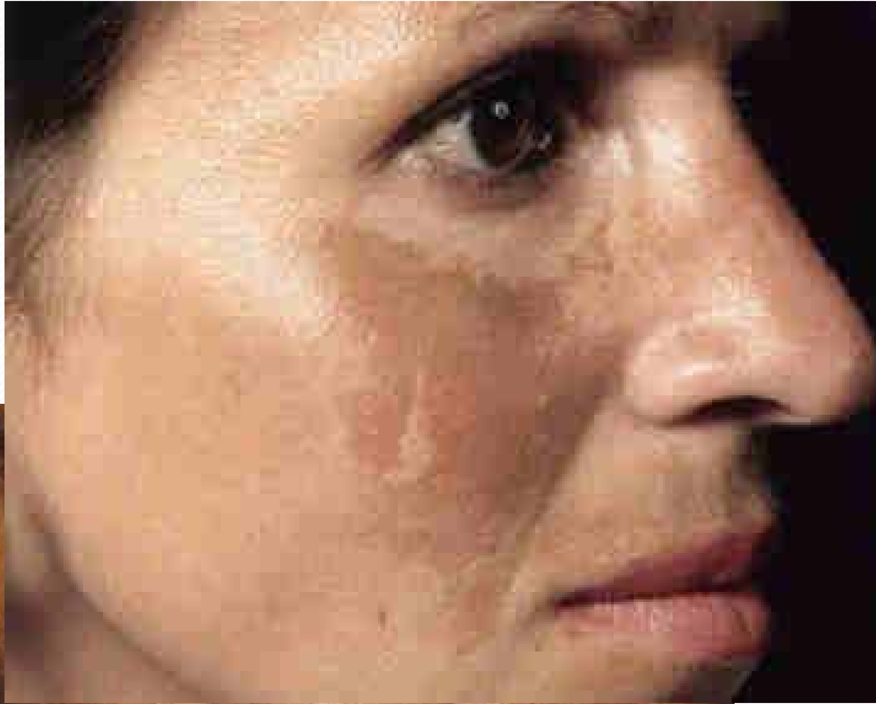


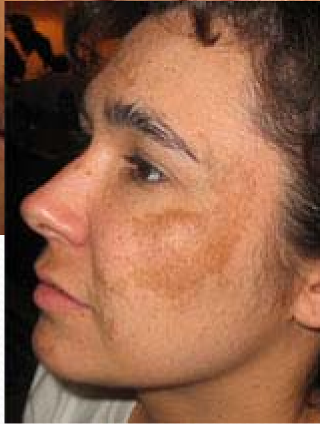




1. Internal Malignancy
   - Adenocarcinoma
   - More mucosal involvement

2. Insulin Resistance
   - Presumed mechanism: ↑↑ **IGF**
   - Skin tags (acrochordon)
   - Tripe palms

Case 2

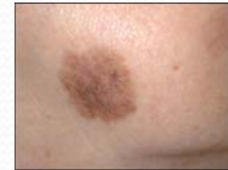


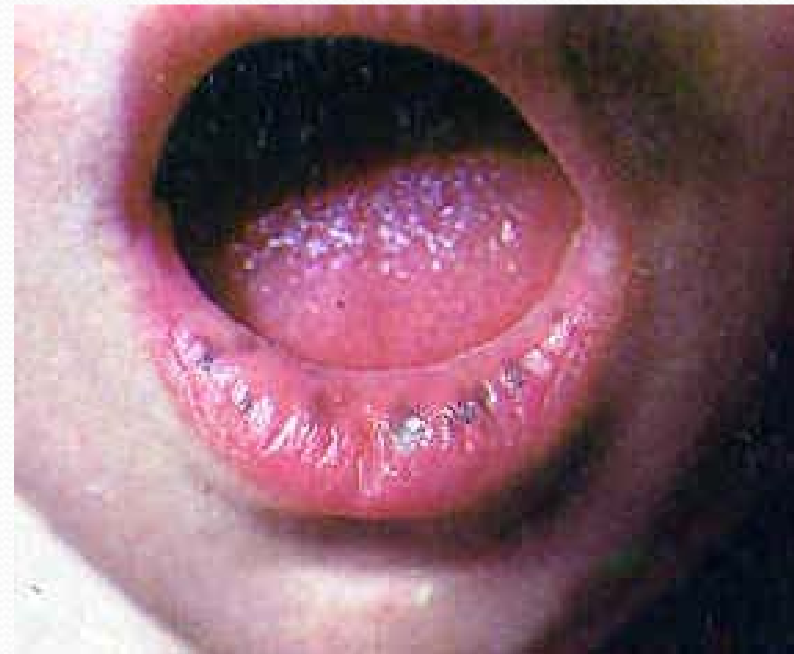


Melasma (Chloasma) “Mask of Pregnancy”

- 90% Female
- ? Due to progesterone
- Risk factors: Pregnancy, OCPs
  - Always in addition to sun
- Tx: Bleaching + Sunscreen

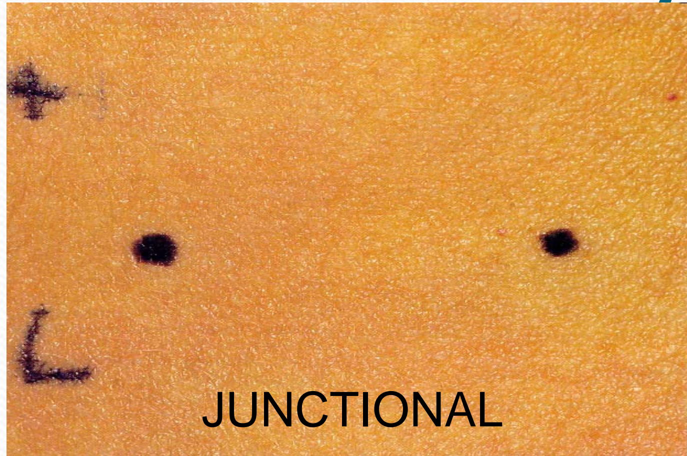
Case 3:
Ephelides versus Lentigines
(Freckles) (Liver spots)

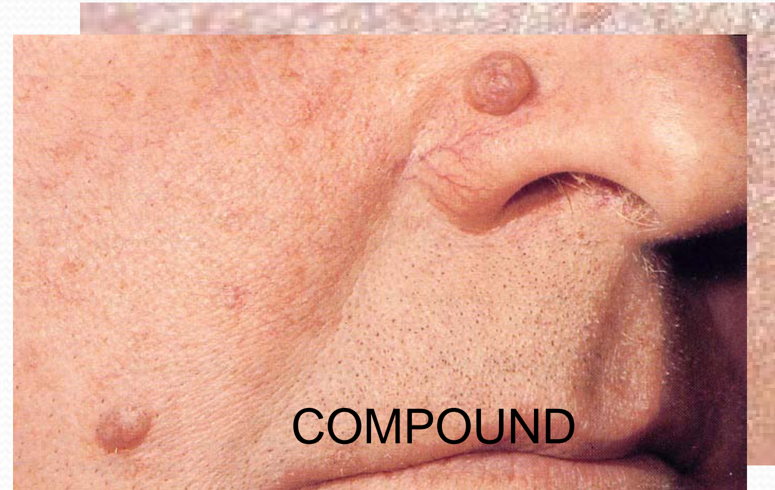




PEUTZ-JEGHERS
(poyts-yay-gurz)

Case 4: Types of Nevi



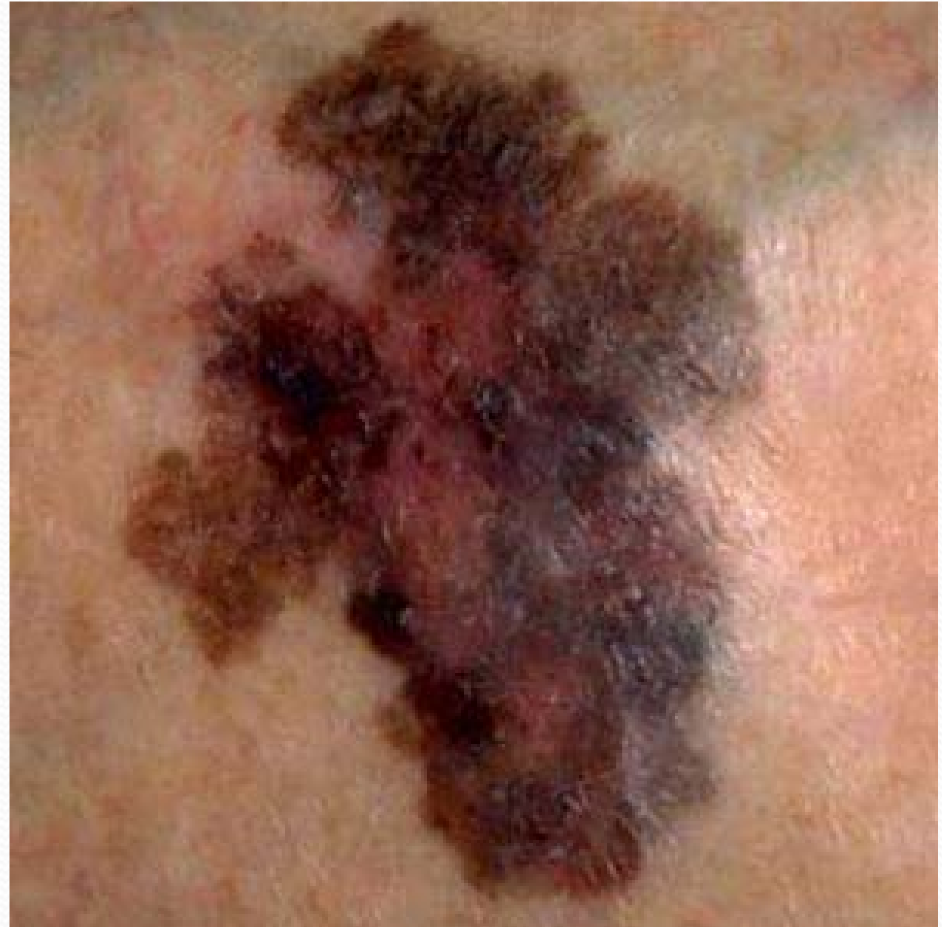


DERMAL

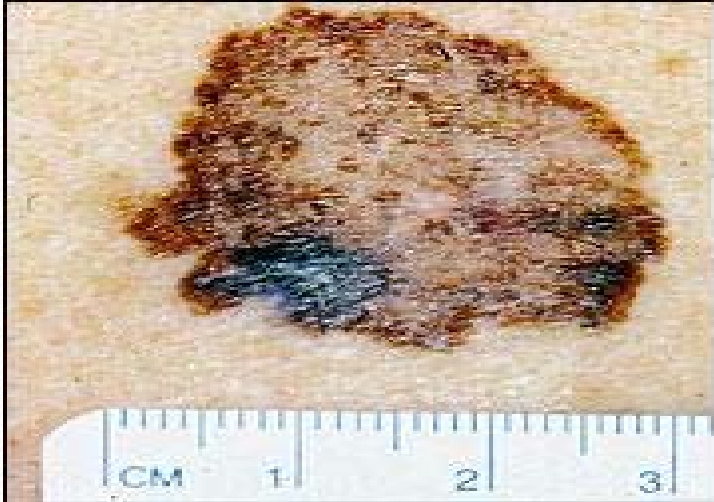
Case 5: Melanoma

- Asymmetry
- Border Irregularities
- Color Variation
- Diameter < 6mm
- Elevation

- Dermatologists like to refer to the “flag sign”.

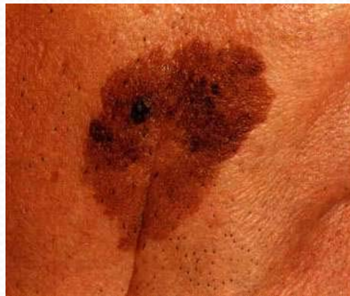


Types of melanomas

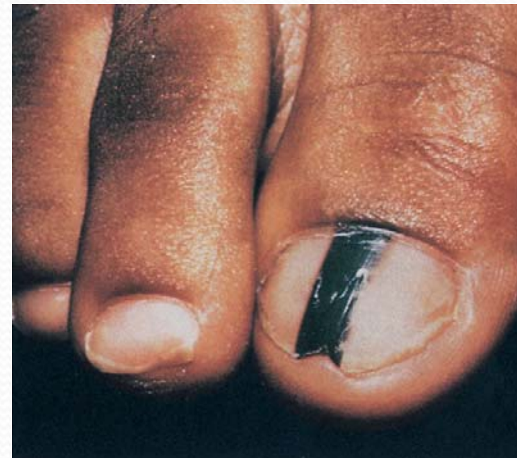


Superficial spreading

Nodular



Lentigo maligna melanoma



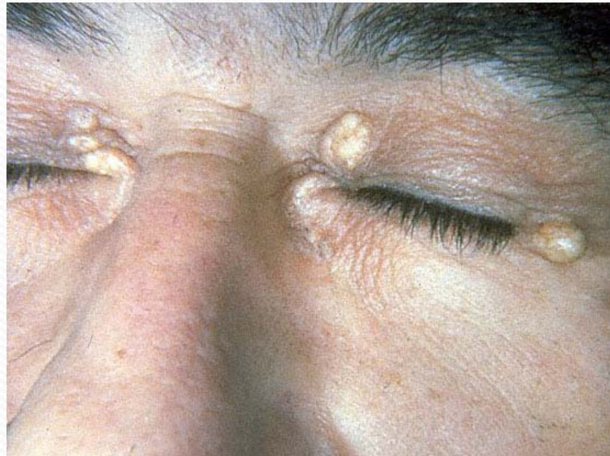
Acral melanoma

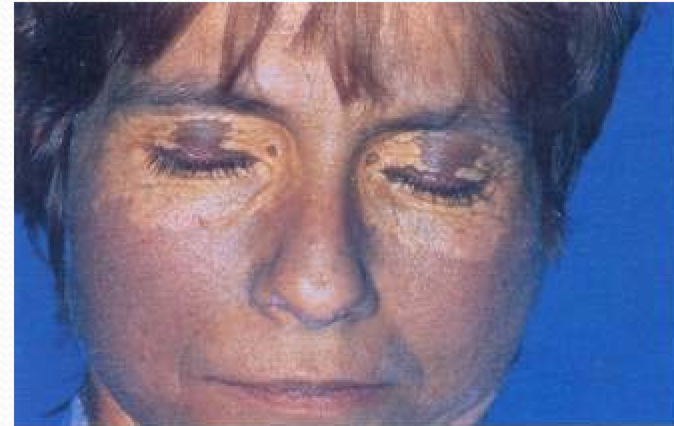
Blue, Black and Brown Lesions

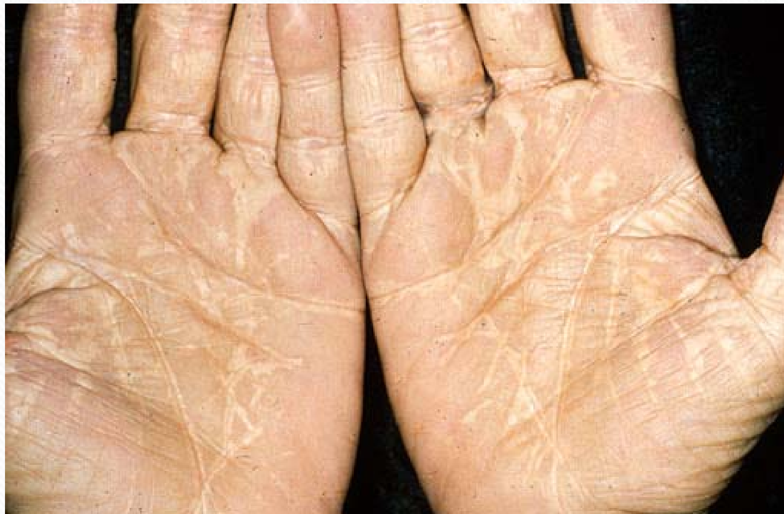
- Acanthosis Nigricans
- Melasma
- Ephelides
- Lentigines
- Nevus
- Melanoma

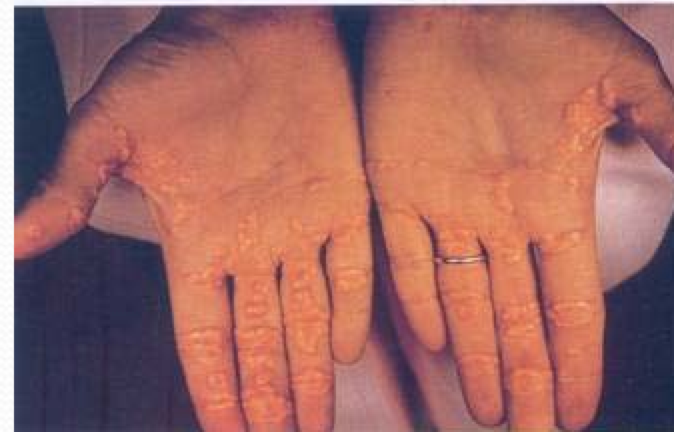
YELLOW LESIONS

Case 1







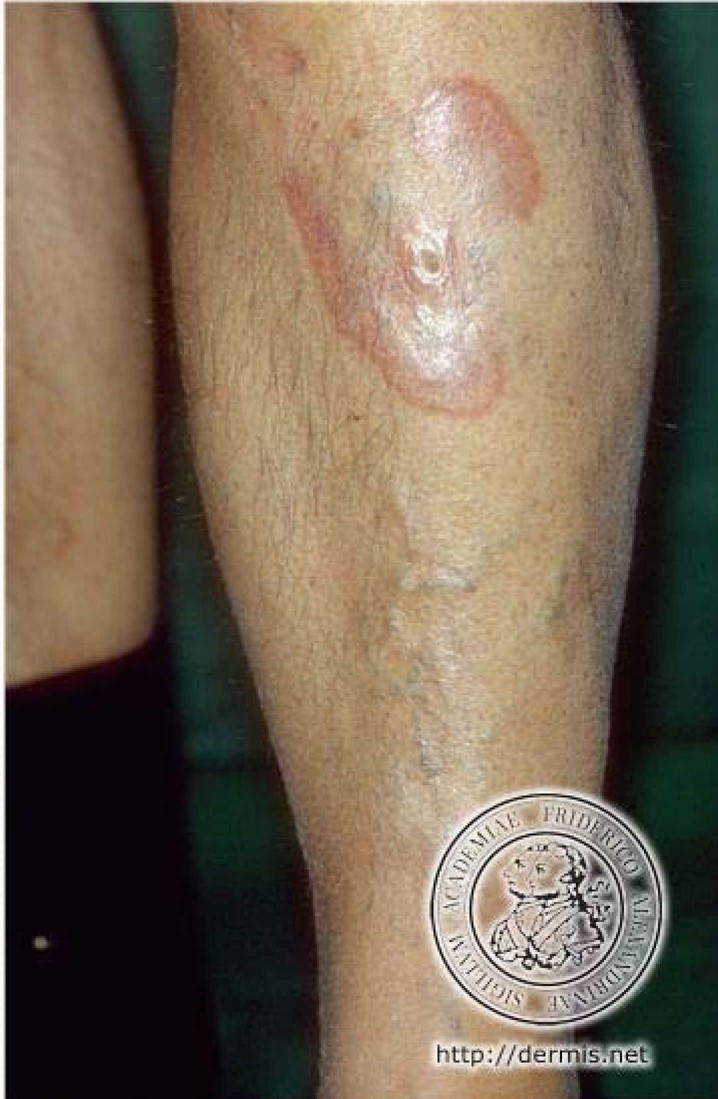


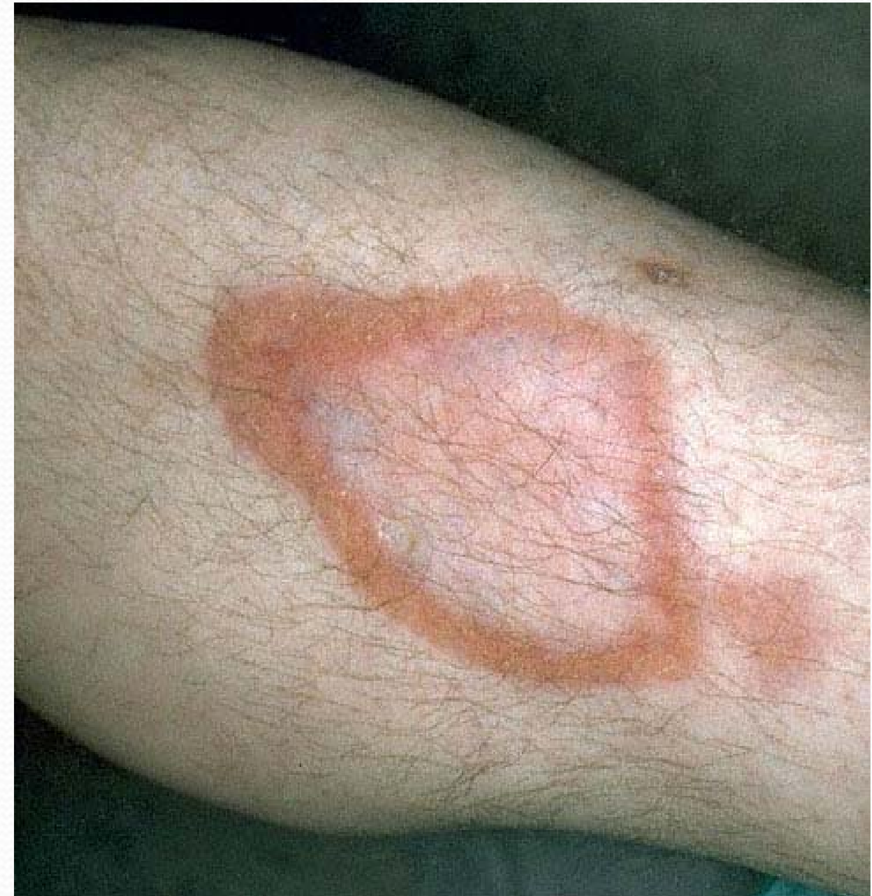
Xanthomata

- TYPES
  - Tendinous xanthoma
  - Tuberous xanthoma
  - Eruptive xanthoma
  - Palmar xanthoma
  - Xanthalasma

- Lipid abnormalities

Case 2





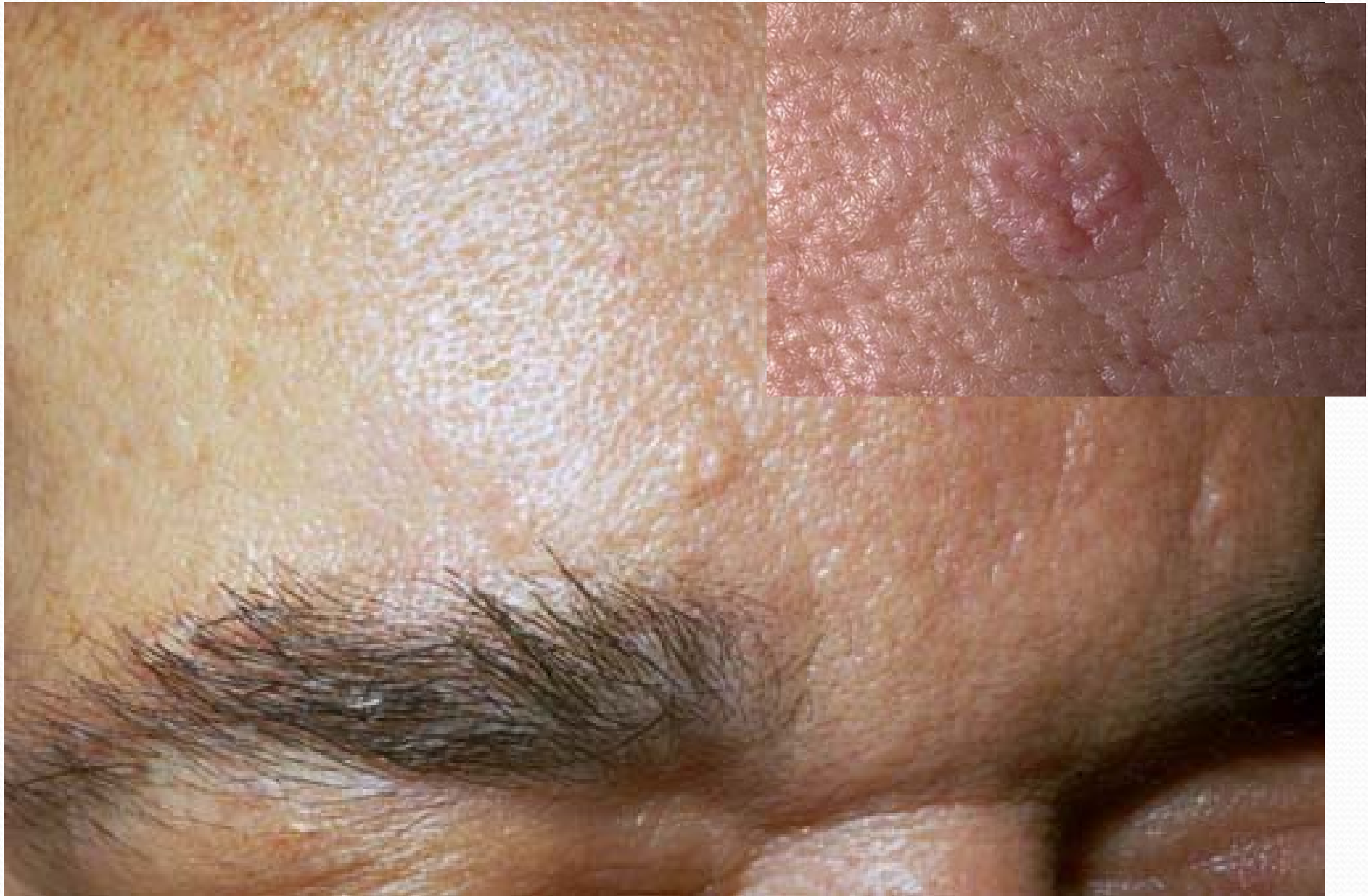
Necrobiosis Lipoidica

- Previously called: NLD

- 1/3 Patients DM
- 1/3 Abnormal GTT
- 1/3 Normal Glucose Tolerance

- Control of DM does not affect course of skin lesion

- Glucocorticoids (Topical/Intralesional)

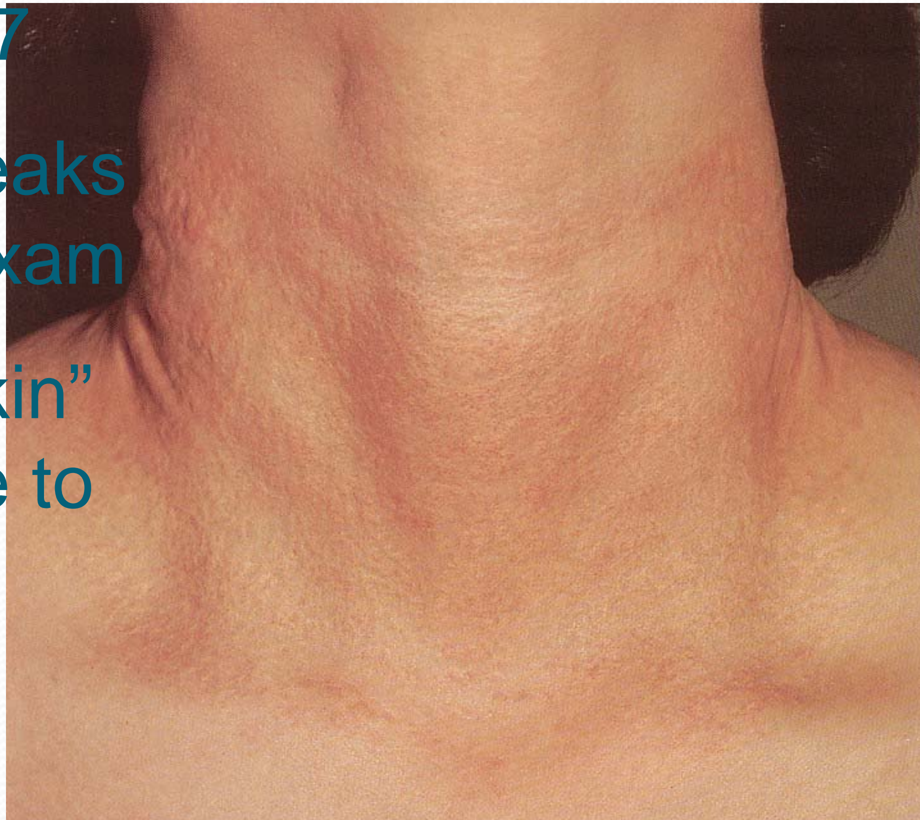


Case 3

MI at age 37

Angioid streaks on retinal exam

"Chicken-skin" appearance to neck



Pseudoxanthoma elasticum

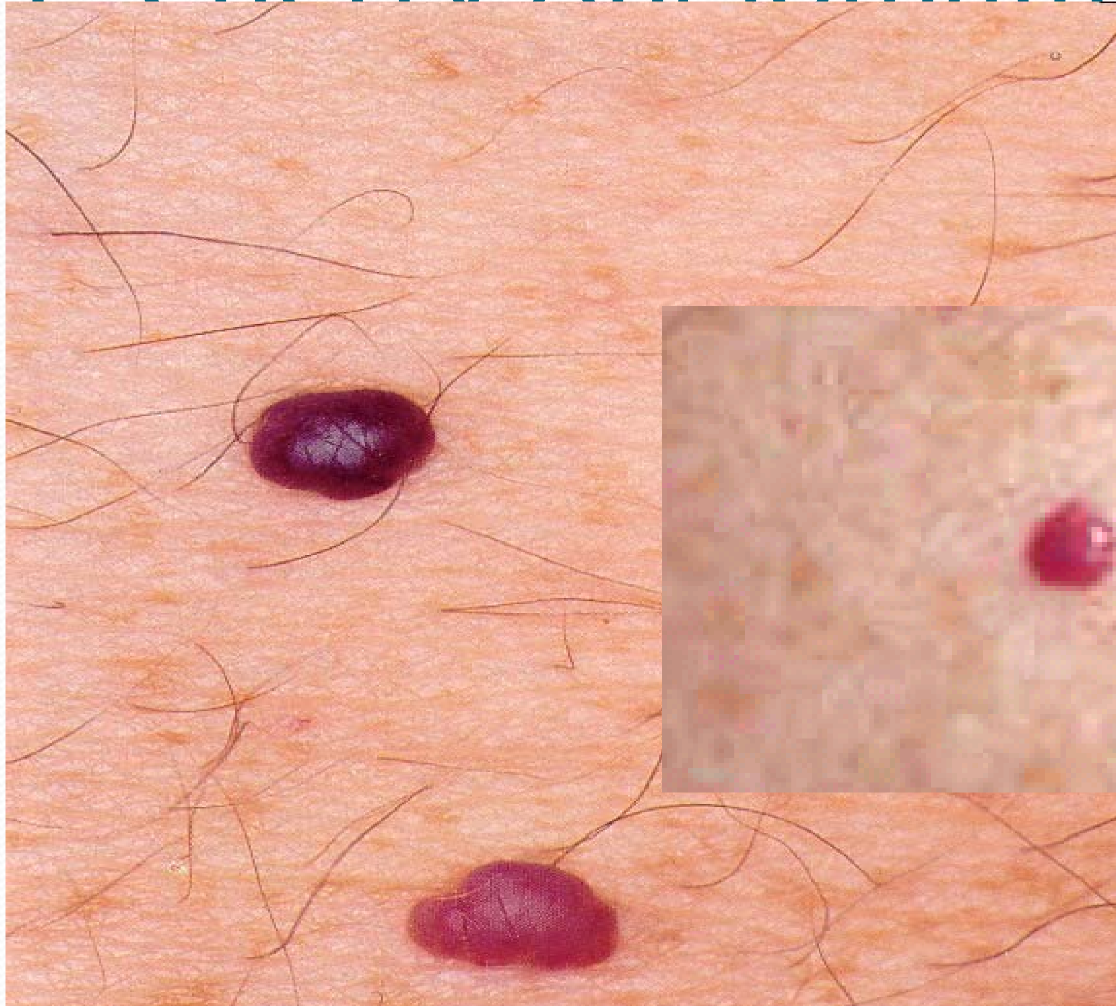
- Connective tissue disorder (Elastin)
  - Skin: **Peau d'orange**
  - Blood vessels: **Premature MI**, Renovascular HTN, Claudication
  - Eye: **Angioid streaks of retina**
  - GI: Gastric artery hemorrhage (hematemesis)

- "Chicken skin"
- Genetic Counseling

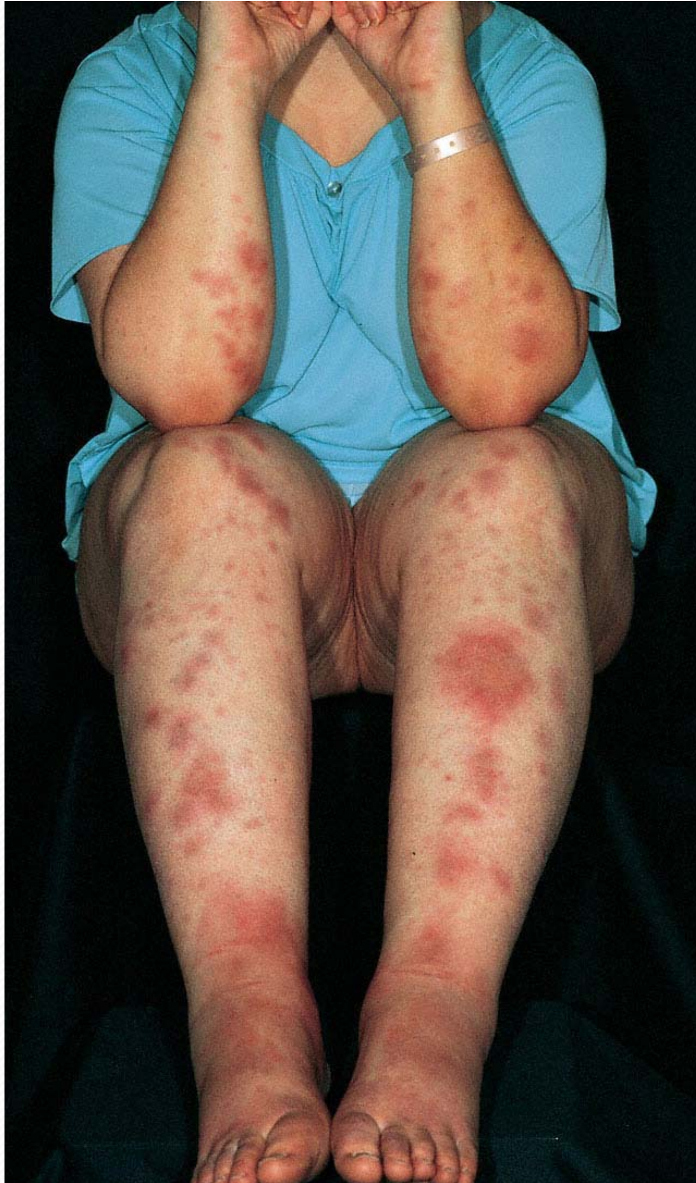
- Xanthomata
- Necrobiosis Lipoidica
- Pseudoxanthoma Elasticum

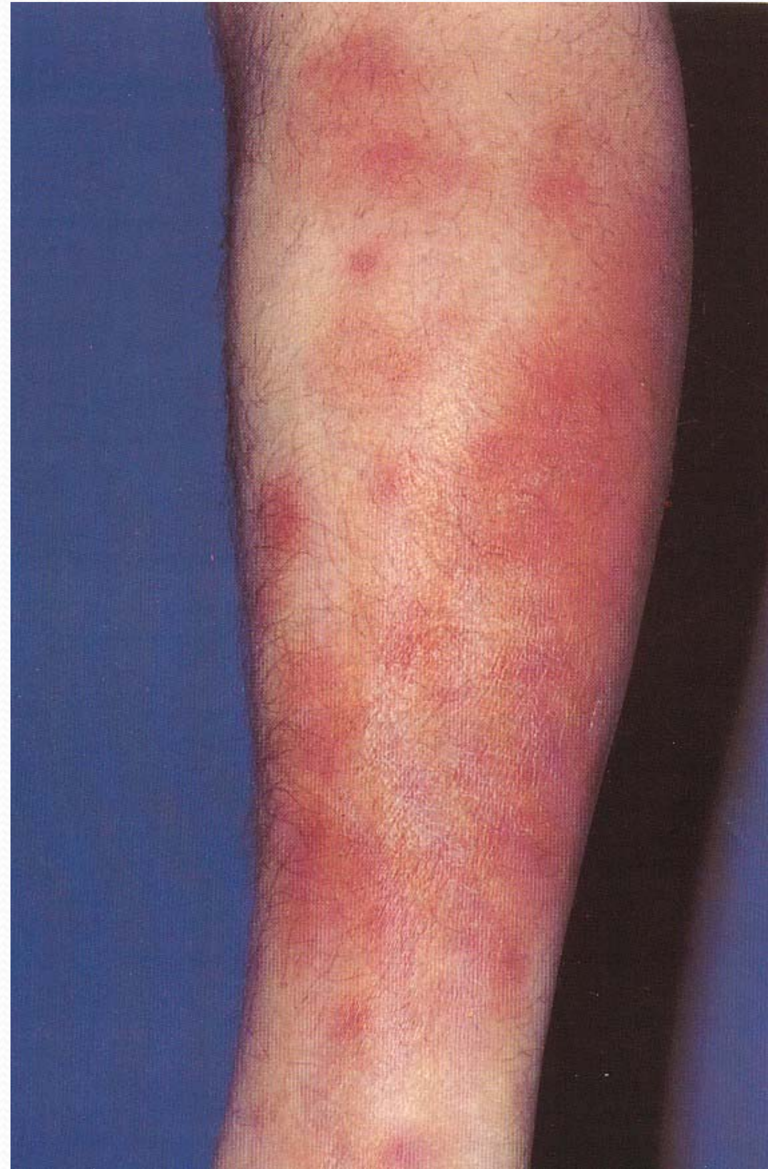
RED PAPULES AND NODULES

Case 1: Cherry Angiomata



Case 2



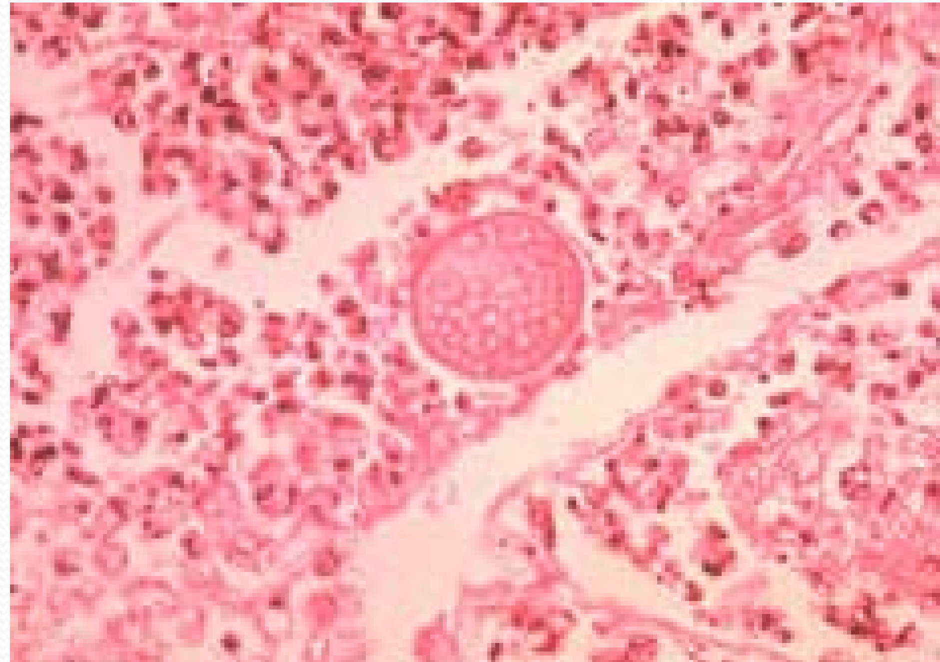


Erythema Nodosum (EN)

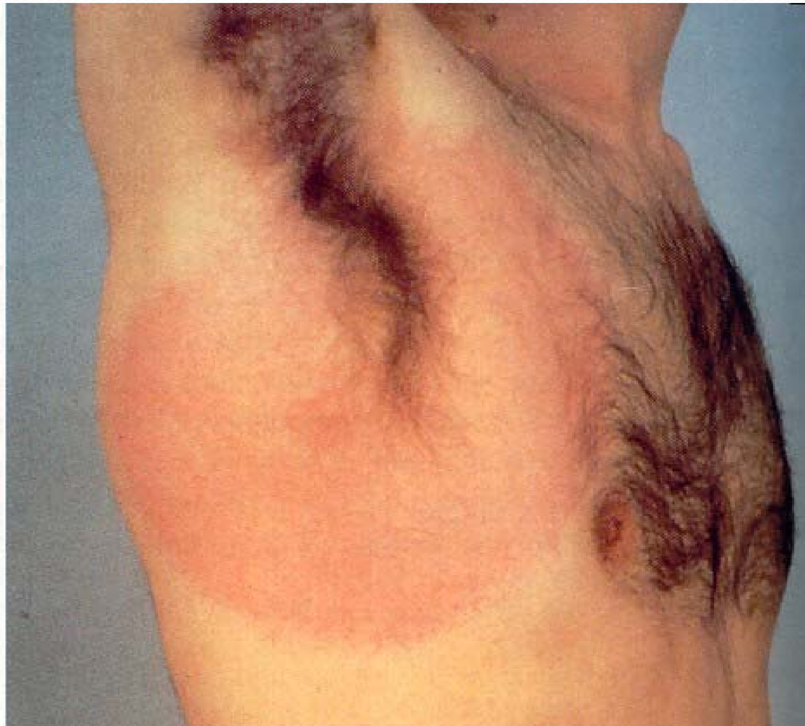
- Poststreptococcal
- Cocci
- OCPs
- IBD
- Sarcoidosis

- TENDER

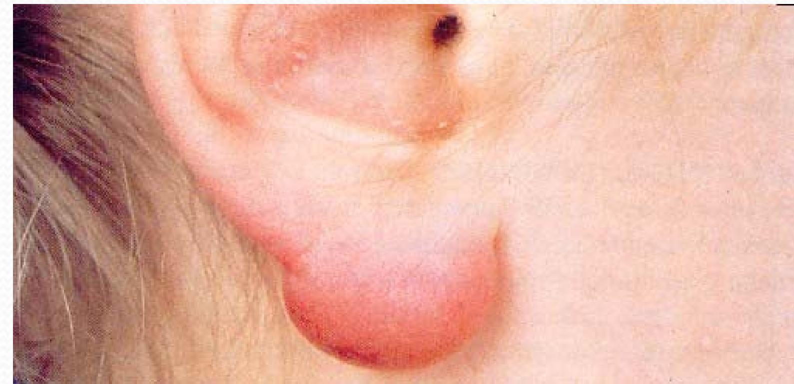
- PANNICULITIS
  - Very deep



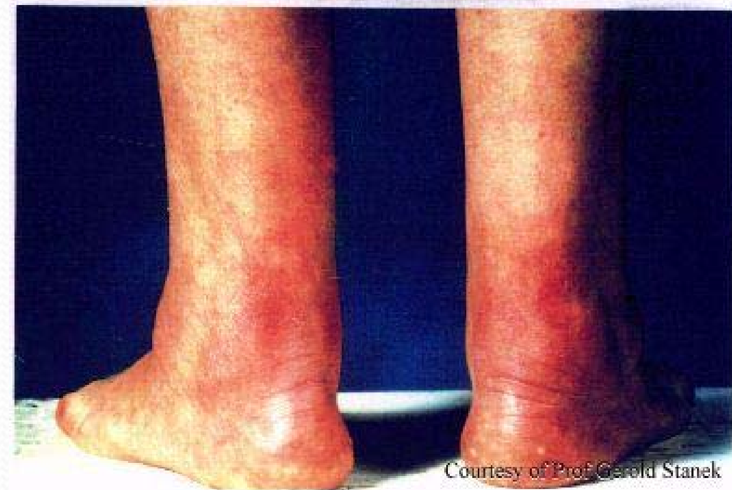
Case 3: Lyme disease



ERYTHEMA CHRONICUM MIGRANS



LYMPHOCYTOMA CUTIS

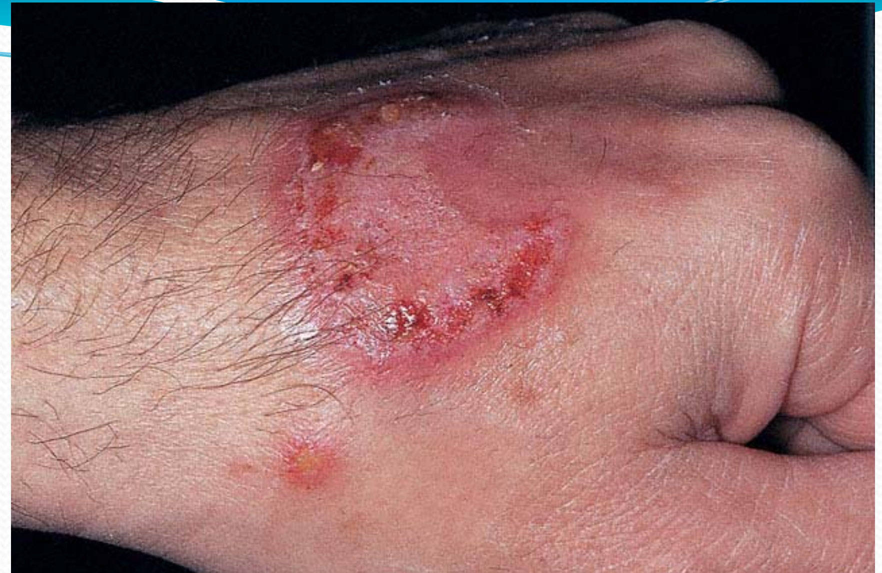


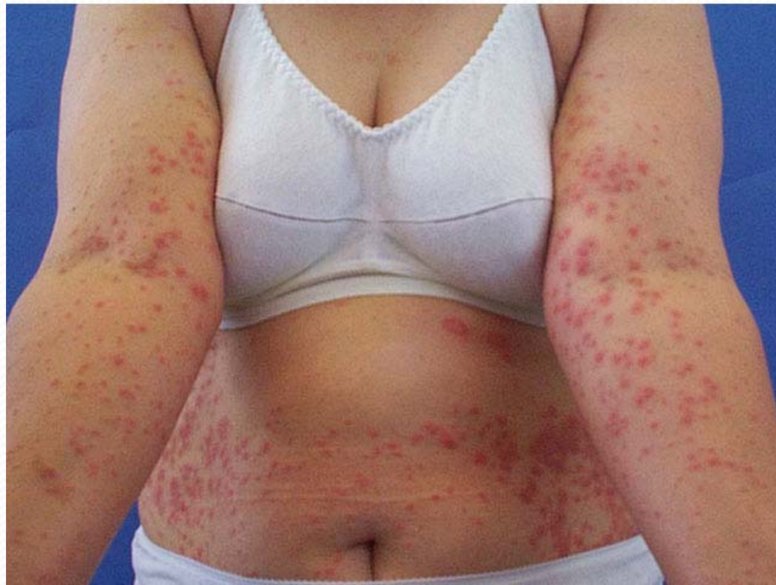
ACRODERMATITIS CHRONICA ATROPHICANS

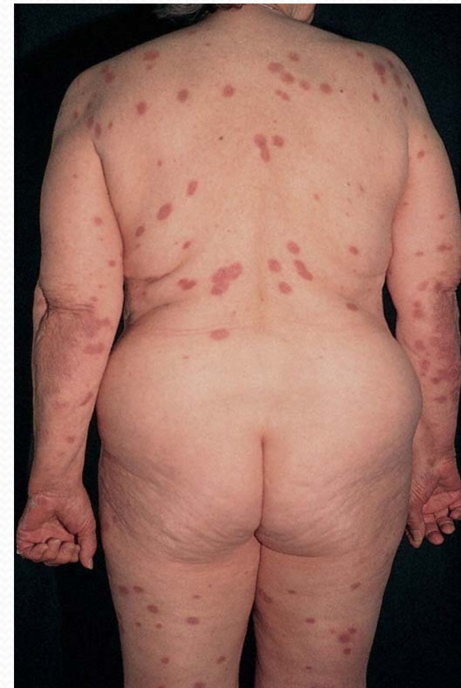
What is the organism?

Borrelia Burgdorferi

Case 4







SWEET'S SYNDROME

(Acute Neutrophilic Dermatosis)

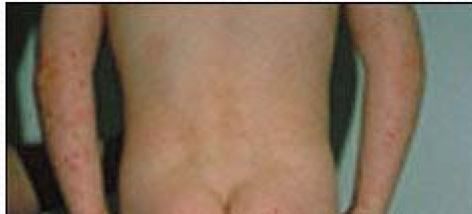
- Red tender plaques
- Sweet's is a reaction to an internal condition.
- It may follow:
  - Upper respiratory tract infection (strep throat)
  - Vaccination
  - **Inflammatory bowel disease** (UC or Crohn's)
  - Rheumatoid arthritis
  - Blood disorders including **leukemia** (AML).
  - **Internal cancer** (bowel, GU or breast)
  - Pregnancy
  - **Drugs** (G-CSF, NSAIDs, cotrimoxasole)
- Sometimes difficult to distinguish from PG

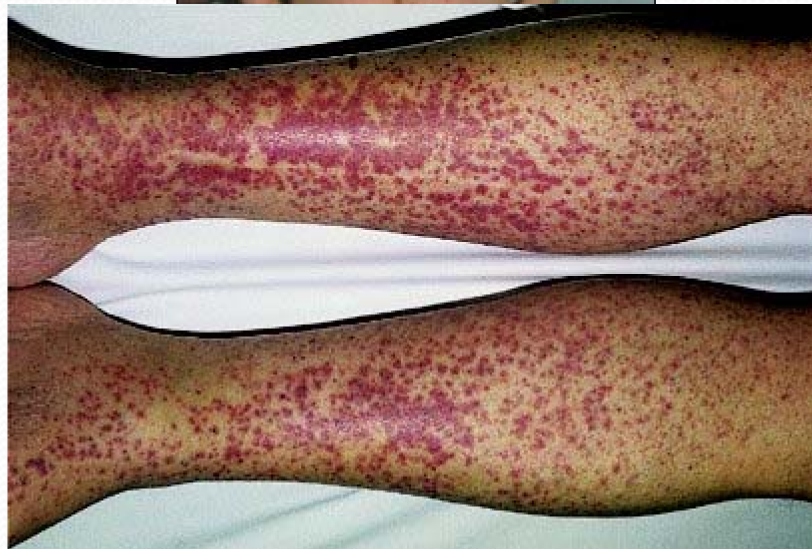
Red papules and nodules: (solid, red, nonscaling)

- Cherry angiomata
- Erythema nodosum
- Erythema chronicum migrans
- Sweet’s syndrome

VASCULAR REACTIONS

Case 1





Henoch-Schonlein Purpura

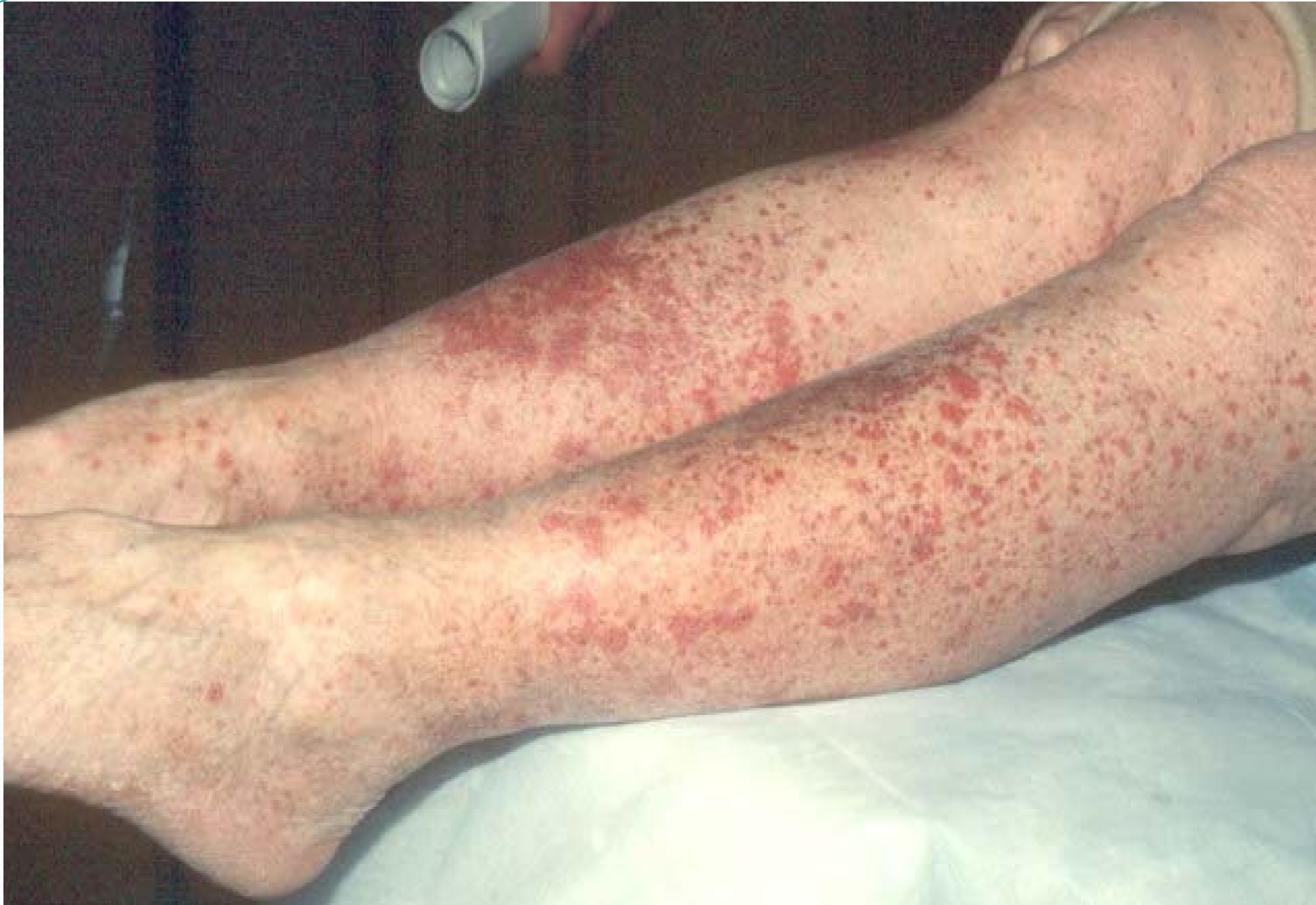
- Palpable Purpura
- Non-blanching on diascopy

- Association? URI (75%)
- GI: Bowel angina or bloody diarrhea
- Arthritis

- UA…HEMATURIA (RBC casts)
- What is HSP localized to the kidney?

IgA Nephropathy (Berger's Disease)

Case 2

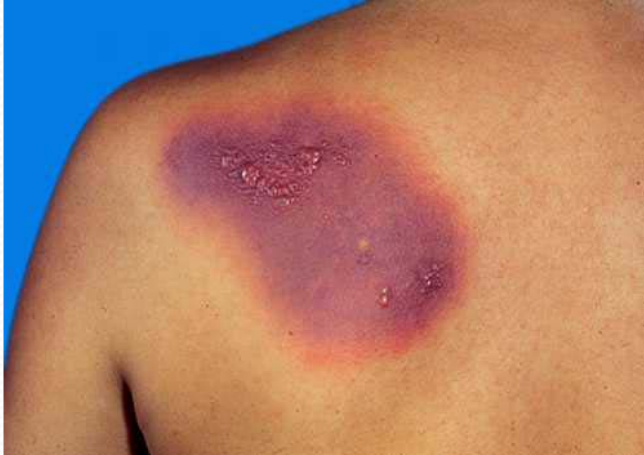


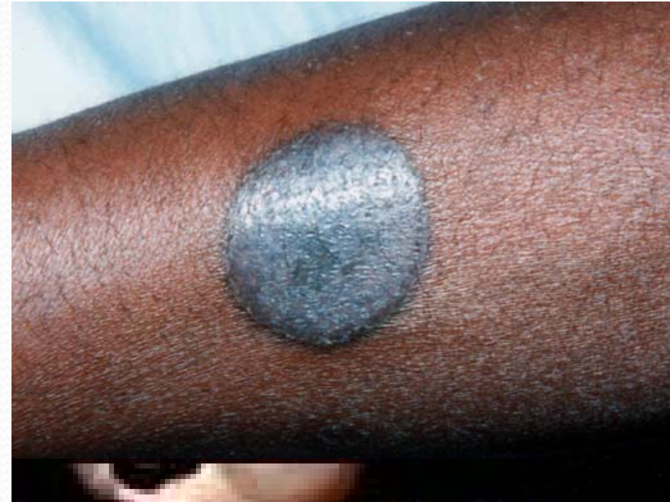
Leukocytoclastic Vasculitis

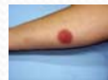
- Palpable Purpura
- Histologic diagnosis (no etiology)

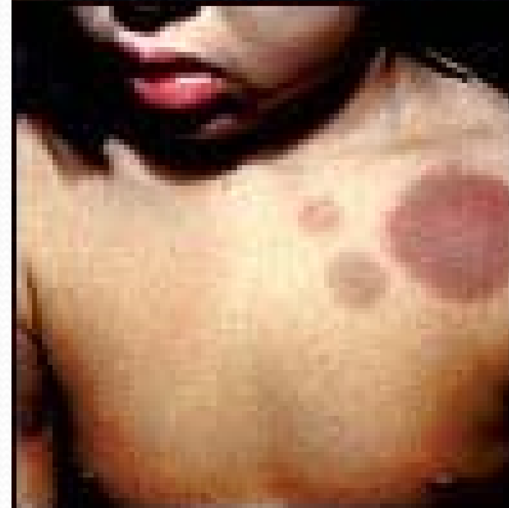
- Small vessel necrotizing vasculitis
  - MOST COMMON
- Immune complexes in walls of post-capillary venules
- Major cause: Drugs

Case 3: Fixed Drug Eruption





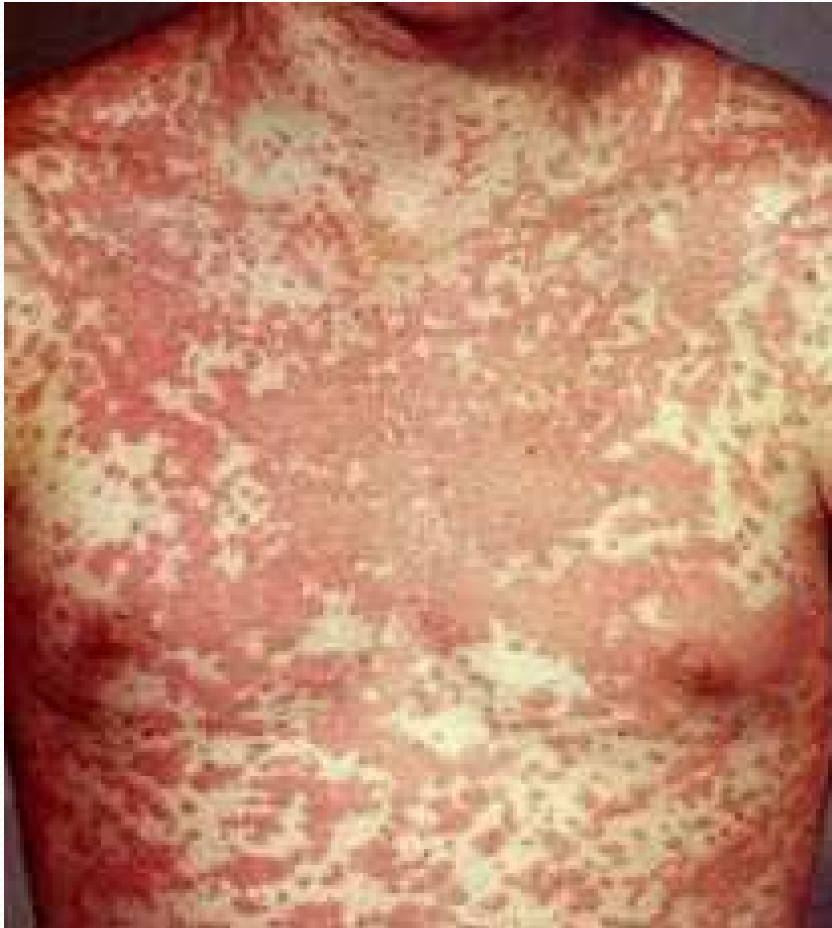


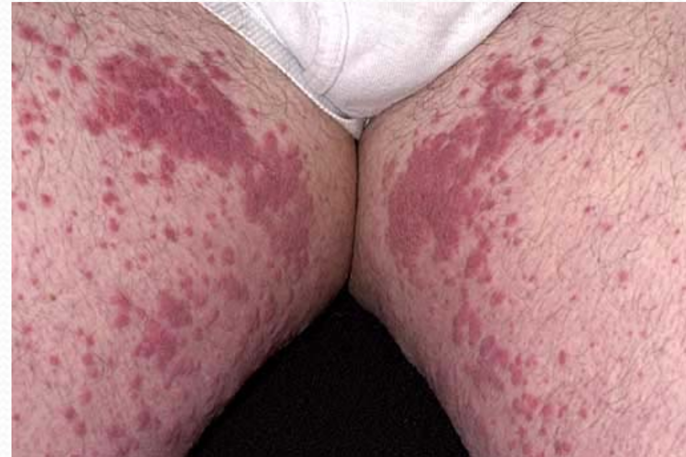


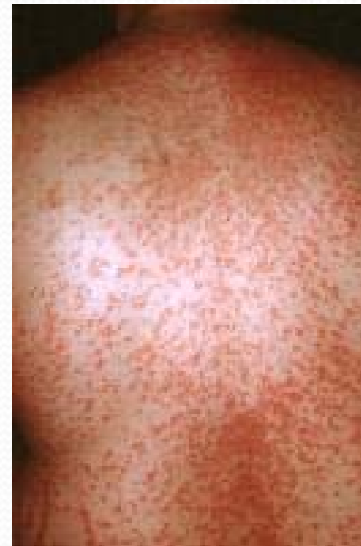
MOST COMMON SITE?

GLANS PENIS

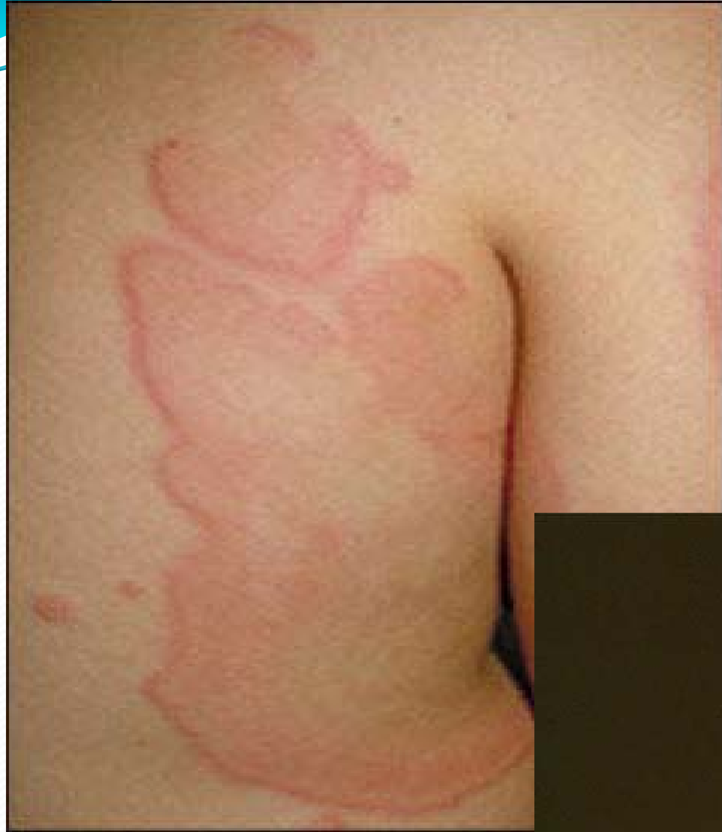
Case 4:
Morbilliform Drug Eruption

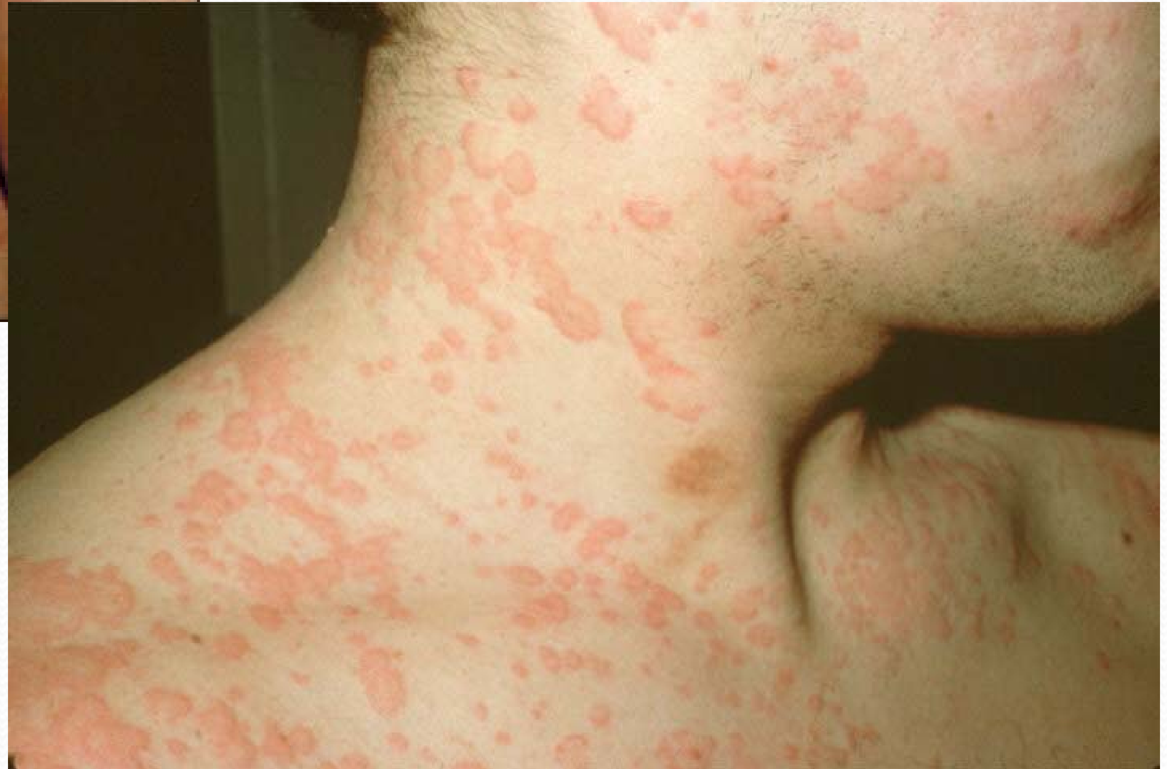






Case 5



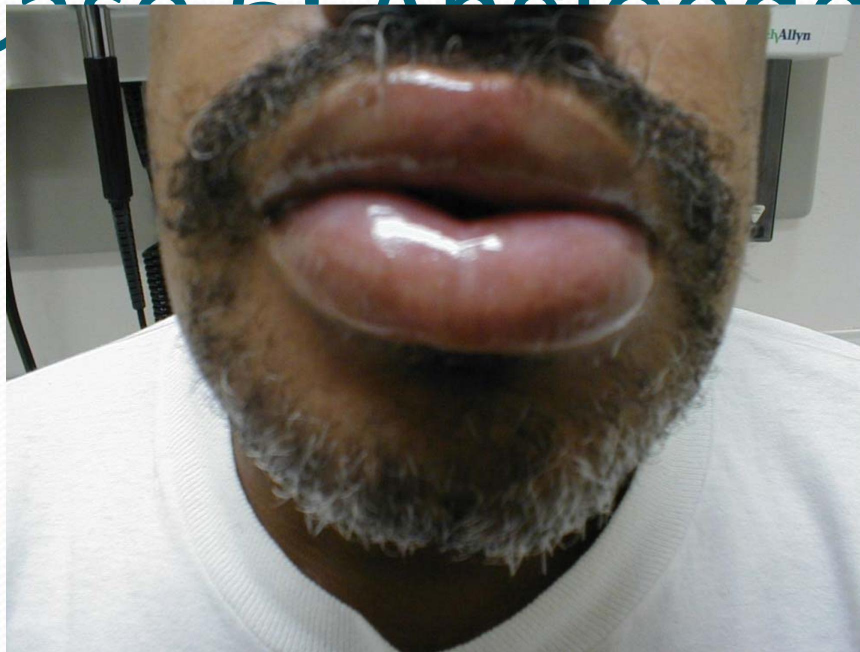


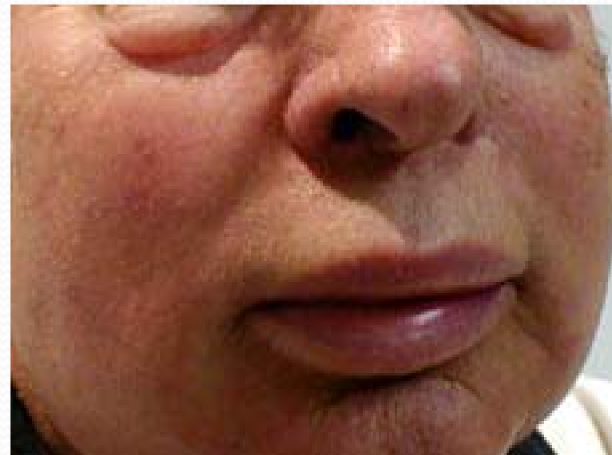
- Wheals (Hives)
- Blanching on diascopy

- Classification: Acute or Chronic
- Many physical and immunologic causes

- Changes in size and shape and can disappear - DYNAMIC

Case 6: Angioedema

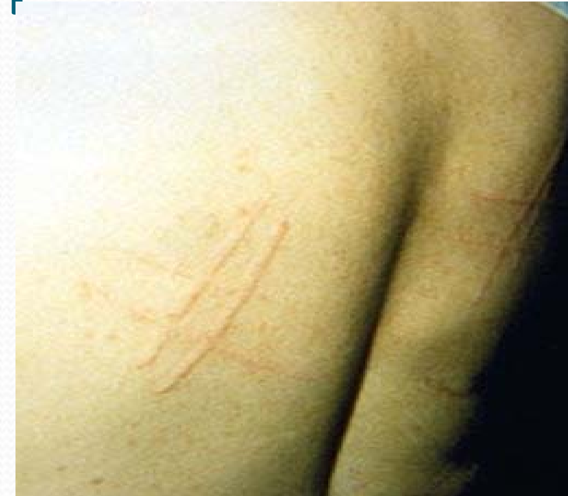




Hereditary Defect?

C1INH

Dermatographism

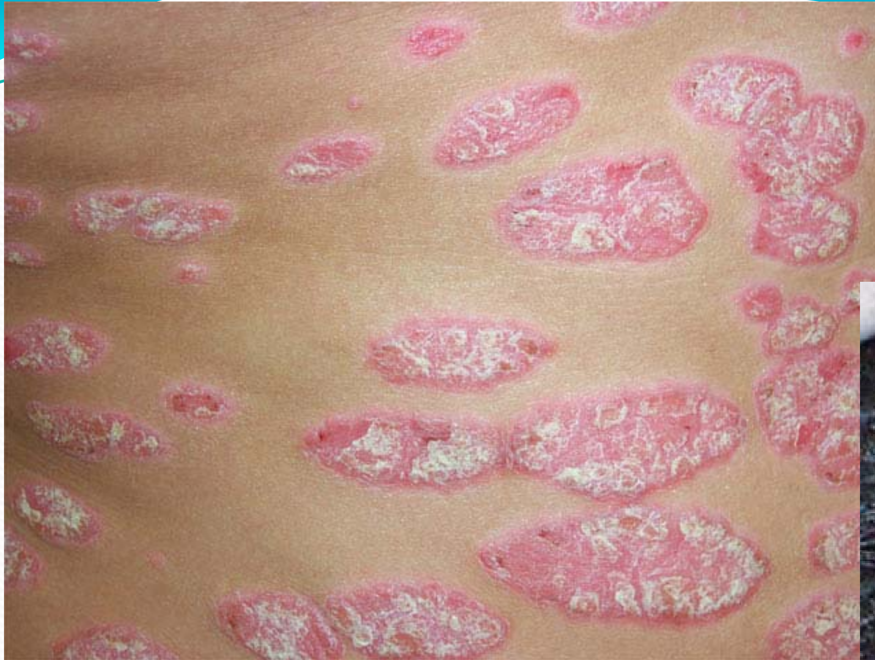


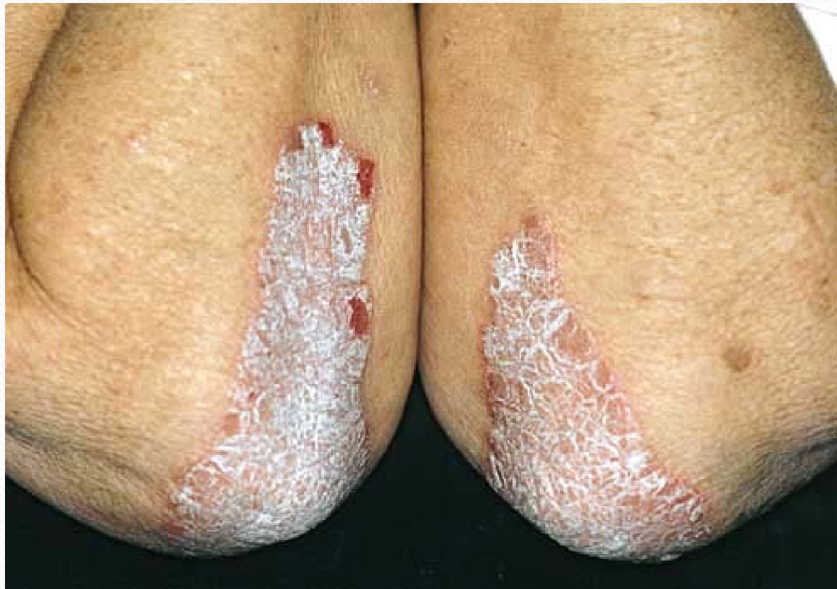
- Henoch-Schonlein Purpura
- Leukocytoclastic vasculitis
- Fixed drug eruption
- Morbilliform drug eruption
- Urticaria
- Angioedema

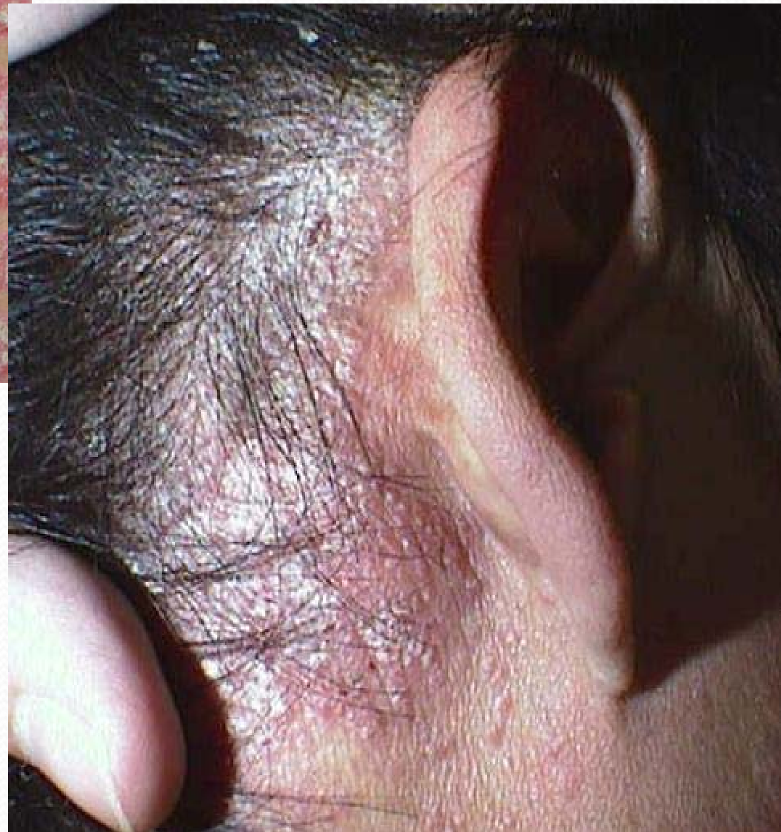
PAPULOSQUAMOUS

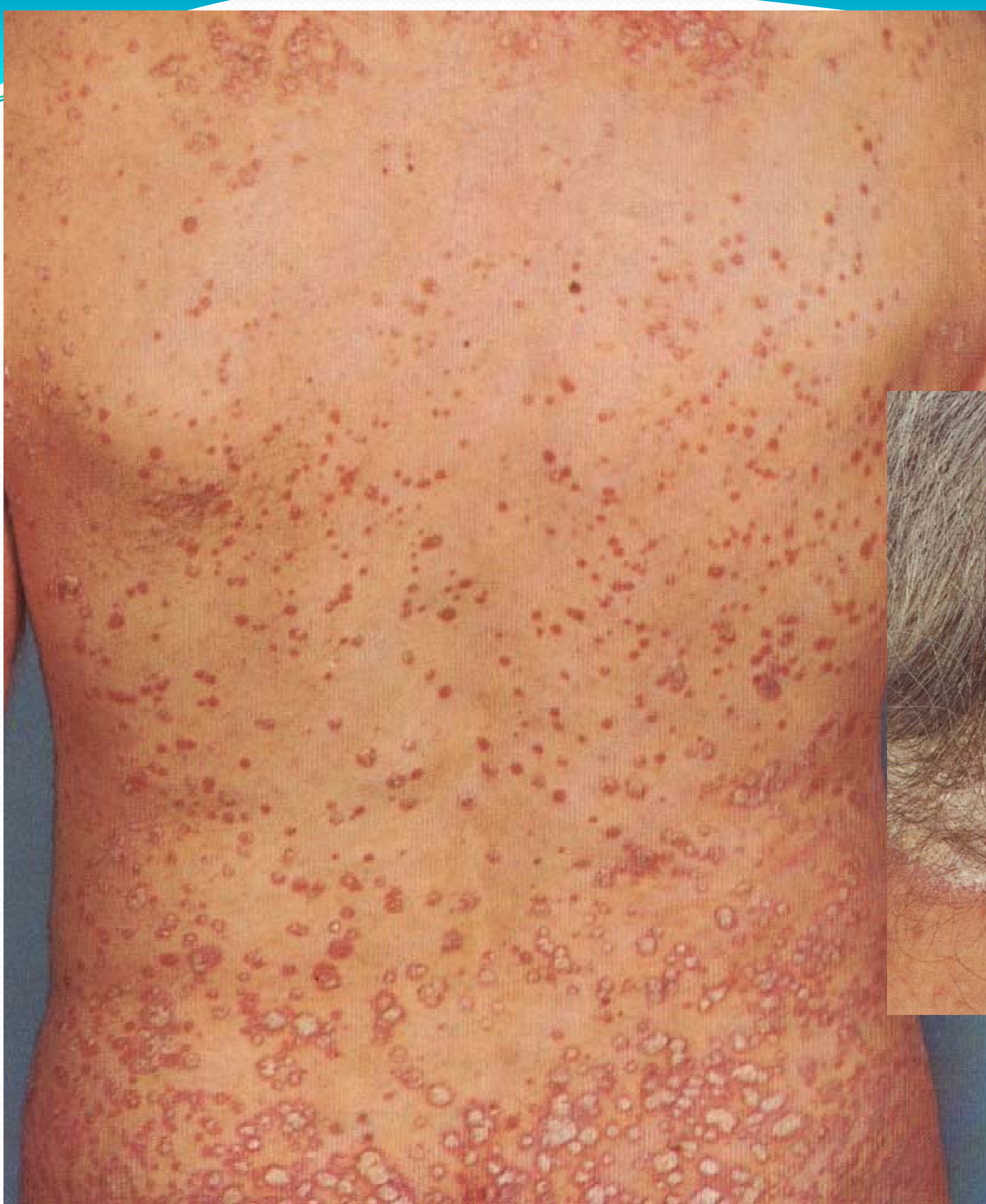
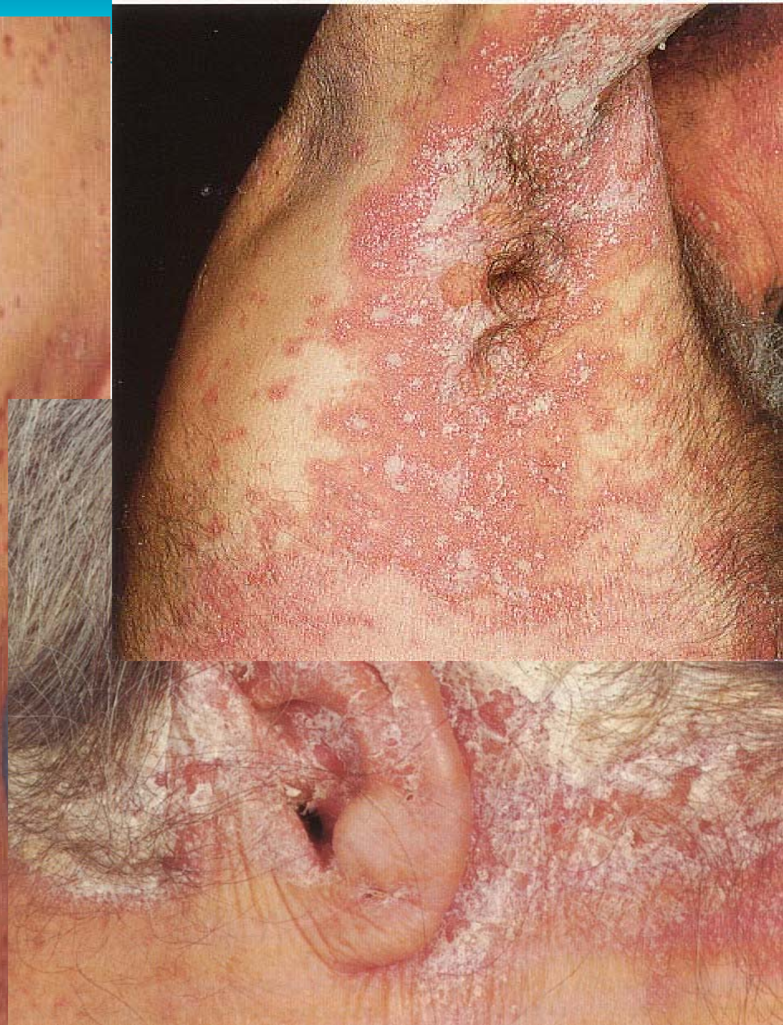
The 3 Ps, 3Ls, and Fungus!

Case 1



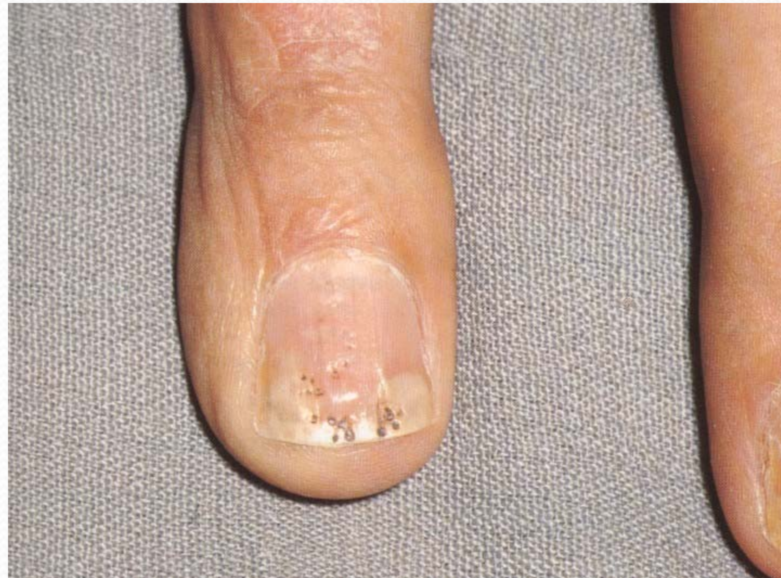




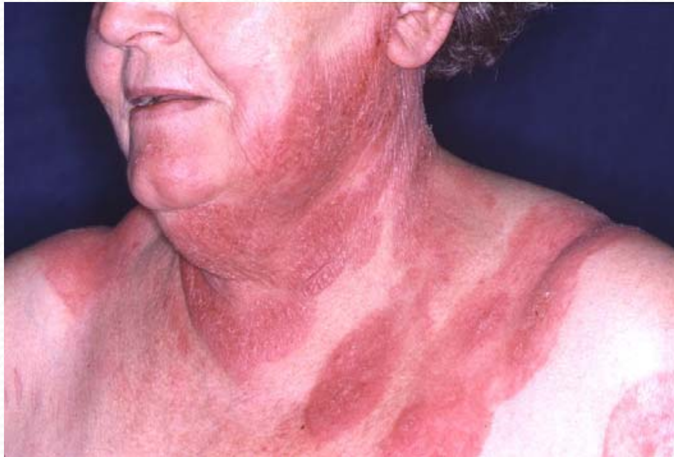
PSORIASIS

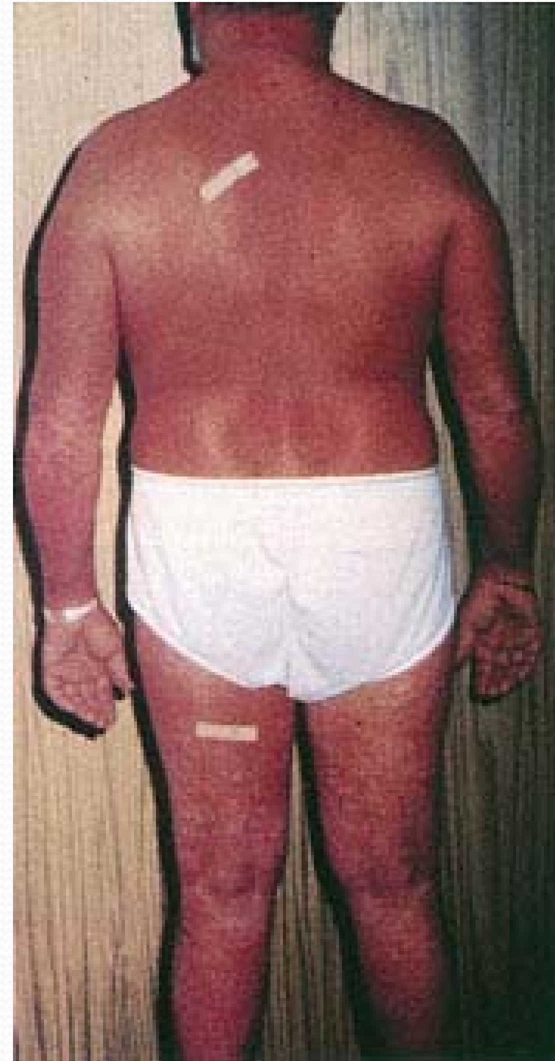
- Many types
  - Plaque
  - Scalp
  - Pustular
  - **Guttate**
    - **POST-STREP**
- Nail pitting
- Onycholysis
- Oil spots

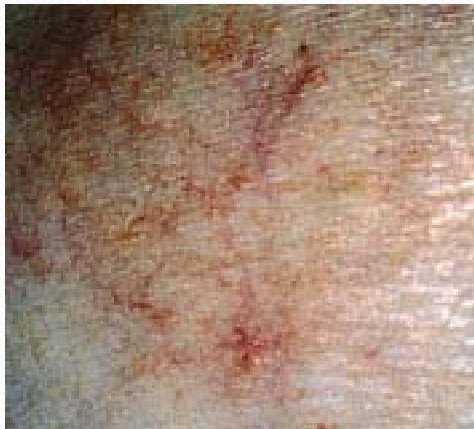


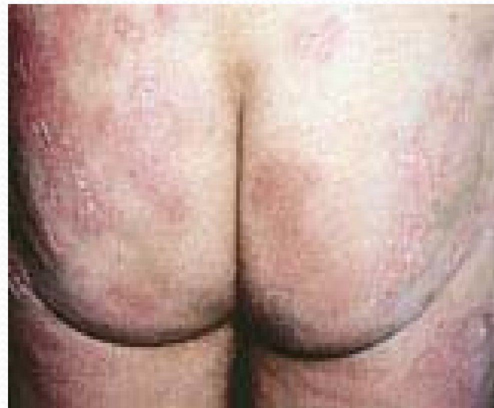
Case 2:

Parapsoriasis – Cutaneous T-cell Lymphoma (Mycosis Fungoides and Sezary Syndrome)

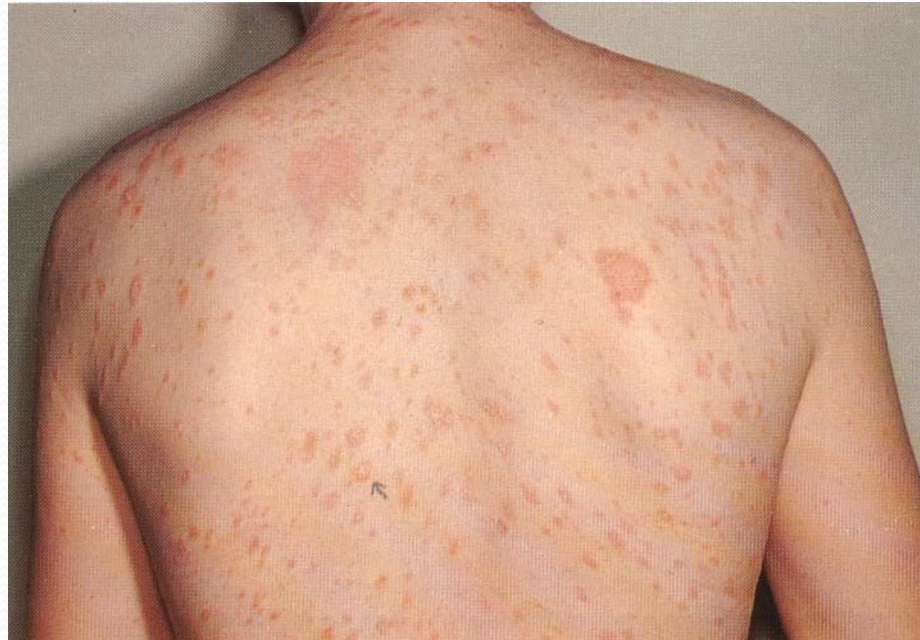




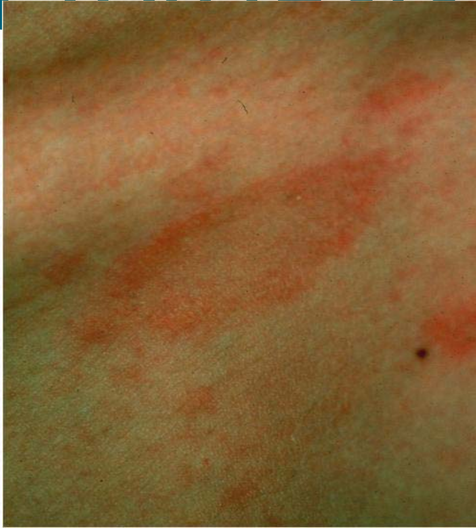


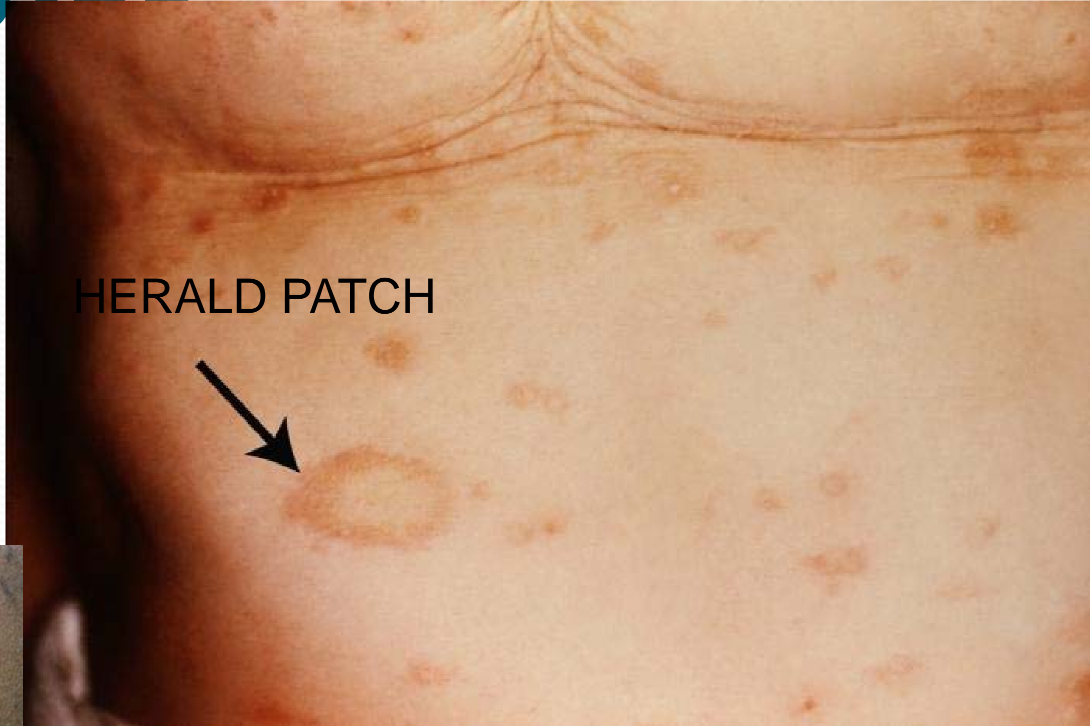


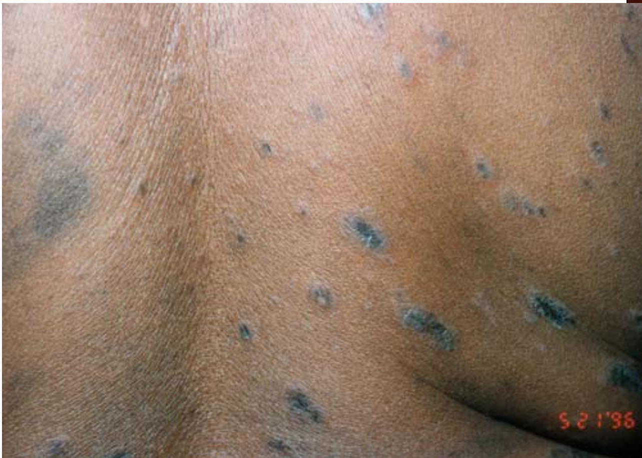
Case 3



Pityriasis Rosea







DISTRIBUTION?

PROBABLE VIRUS?

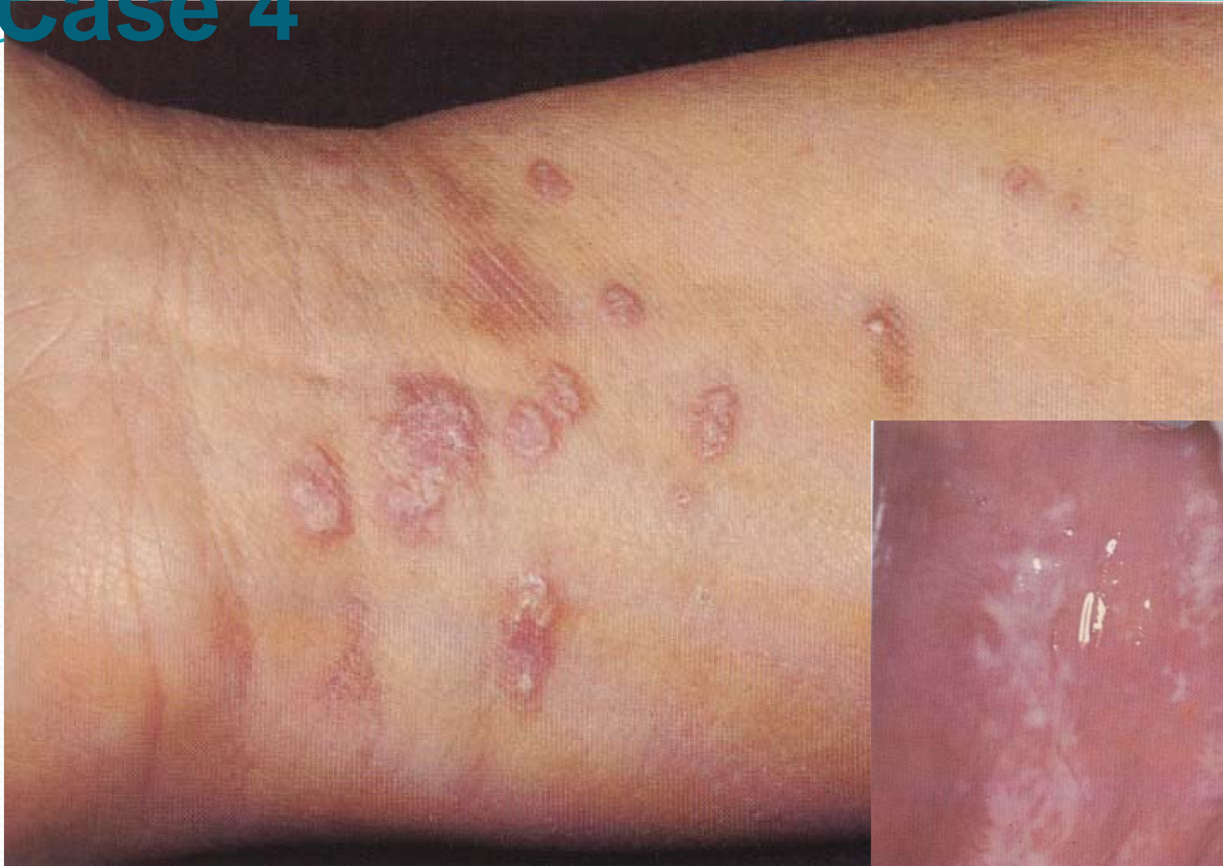
HHV-7

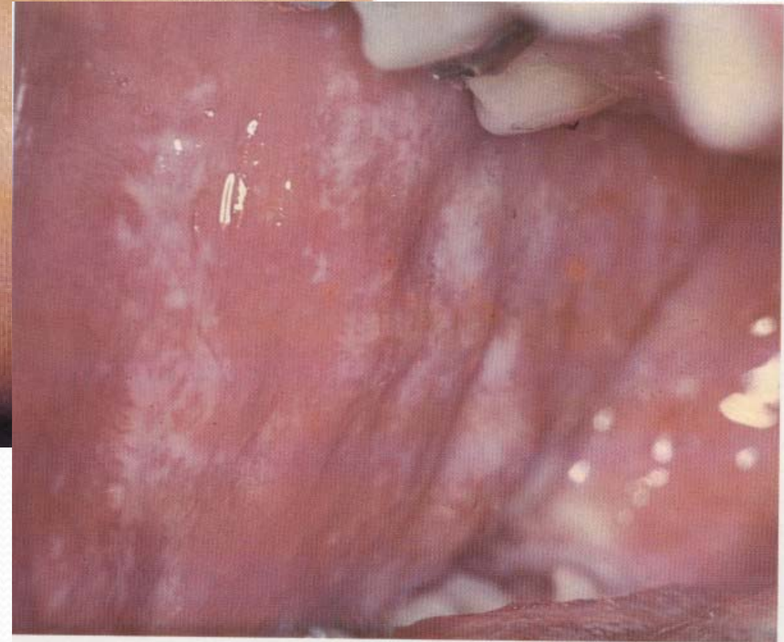
3Ps: Papulosquamous

- Psoriasis
- Parapsoriasis
- Pityriasis Rosea

- Now to the Ls…

Case 4





LICHEN PLANUS

<u>Classic description</u>

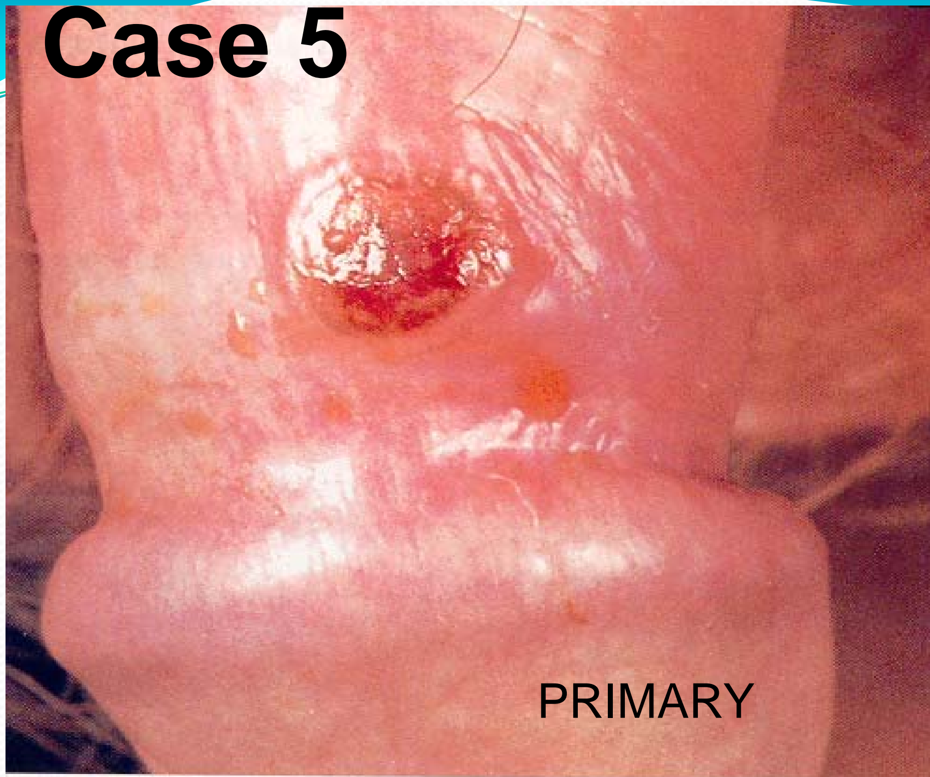
- 5Ps
  - PURPLE
  - POLYGONAL
  - PLANAR
  - PRURITIC
  - PAPULES
- What are the little white lines atop the LP?
- Major Association?

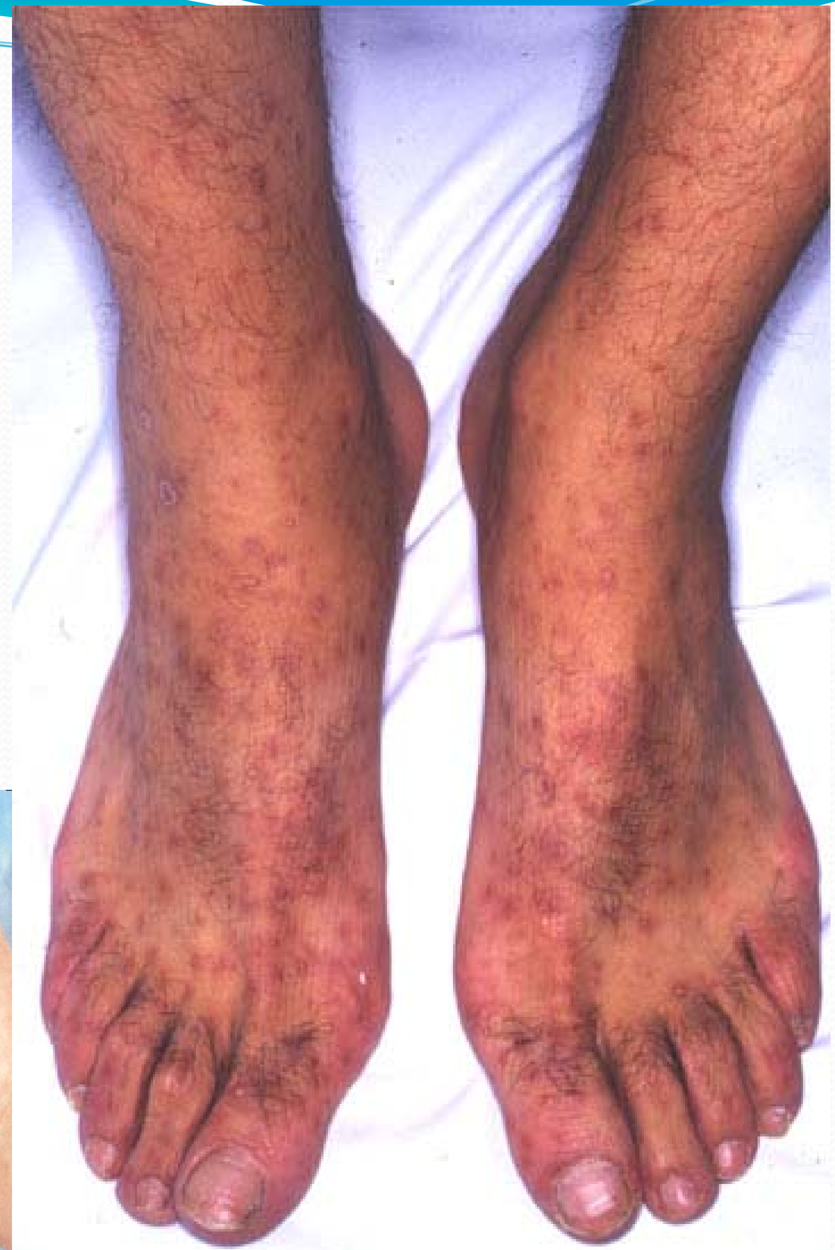
WICKHAM'S STRIAE

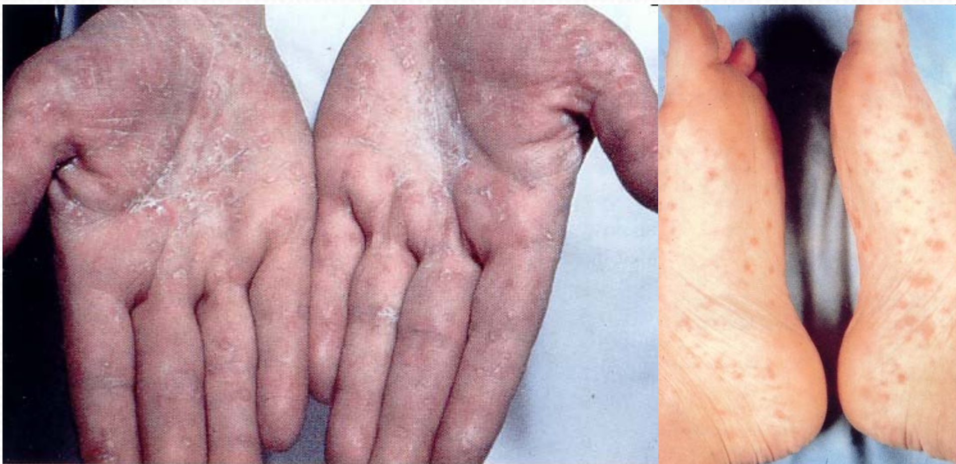
HEPATITIS C

When you see a papulosquamous disease, be careful because it could be…

Case 5







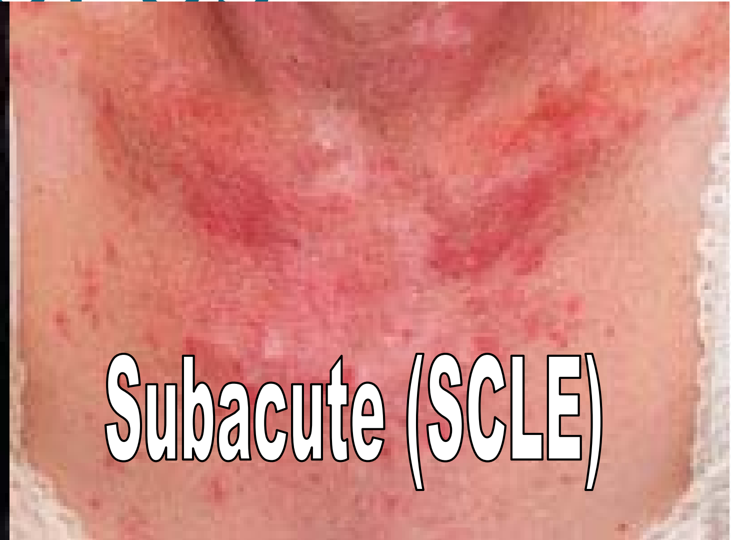
Lues (Secondary Syphilis)

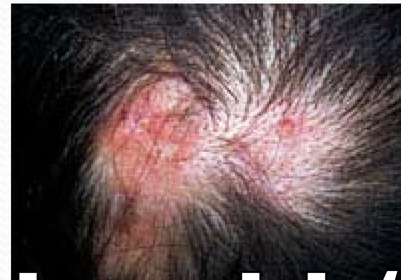
- Palms and soles involved
- Primary lesion: Chancre
- Secondary (in addition to rash)?

CONDYLOMA LATA

- Tertiary: Neurosyphilis

Case 6: LUPUS



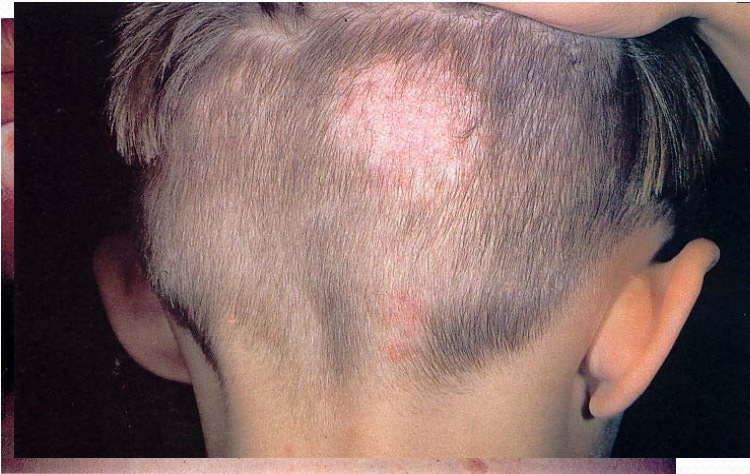


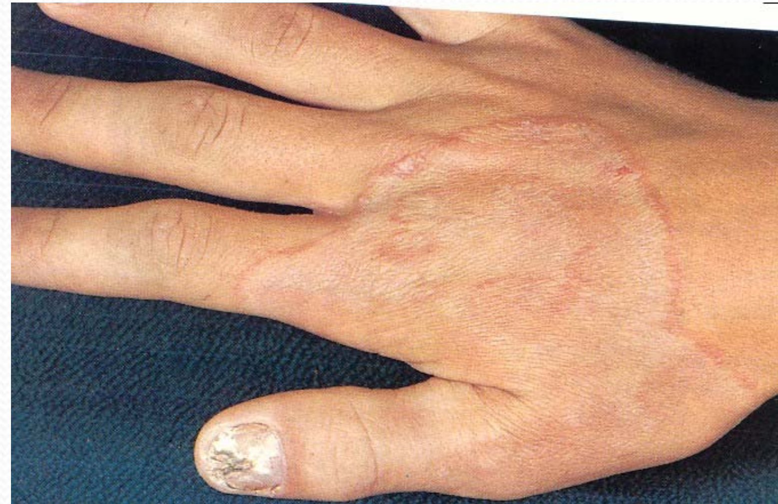
Discoid (DLE)

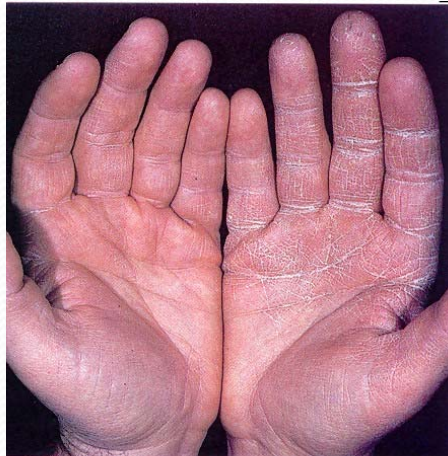
KNUCKLE
SPARING

- Psoriasis
- Parapsoriasis
- Pityriasis Rosea
- Lichen Planus
- Lues (Secondary Syphilis)
- Lupus
- AND

Fungal Infections





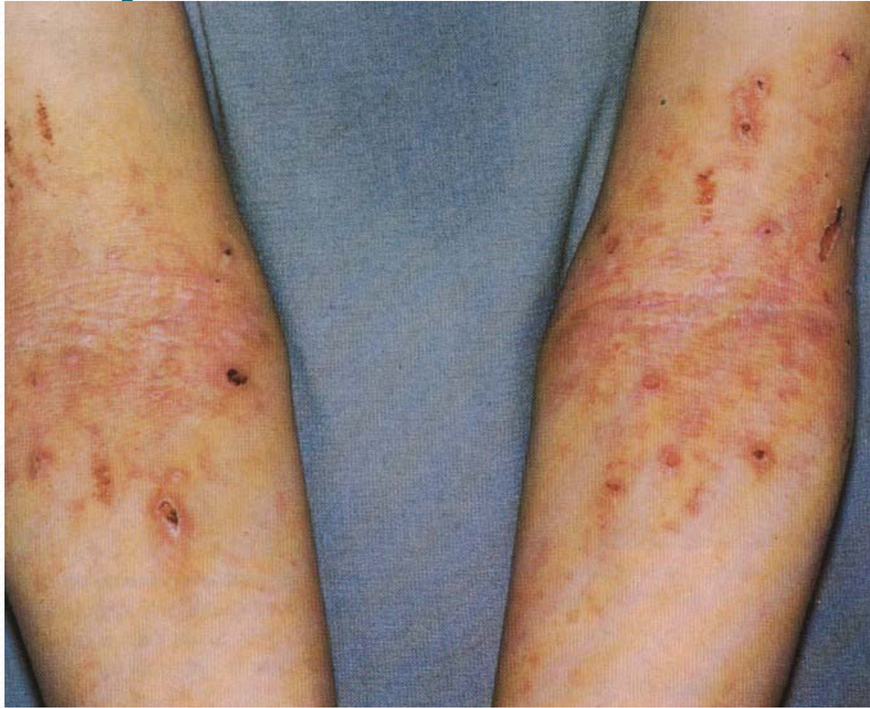


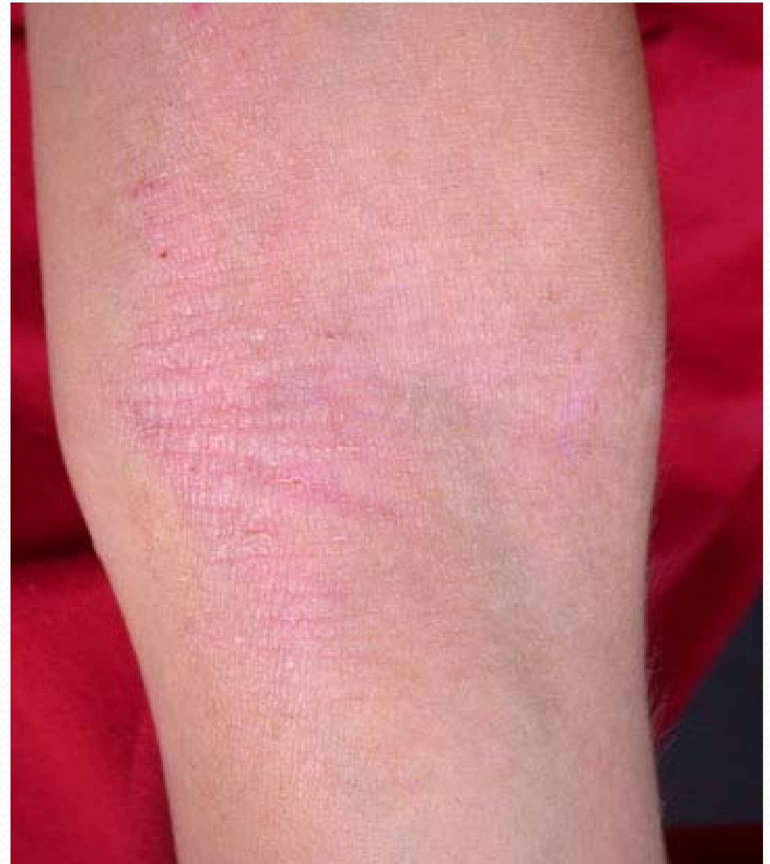
COMMON GROIN DERMATOSES

- Psoriasis (inverse)
- Tinea Cruris
- Erythasma
- Irritant Contact
- Allergic Contact
- Candidiasis
- Intertrigo

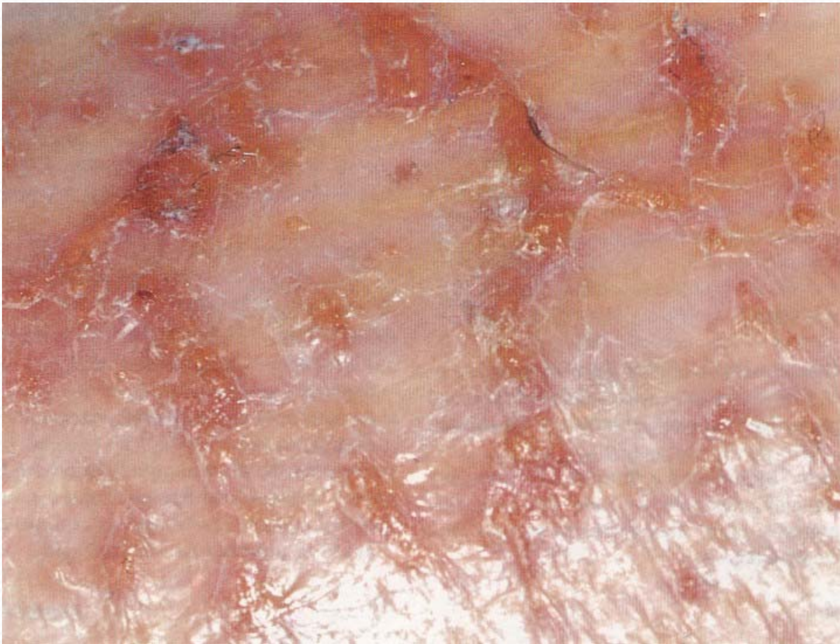
ECZEMATOUS DISEASES

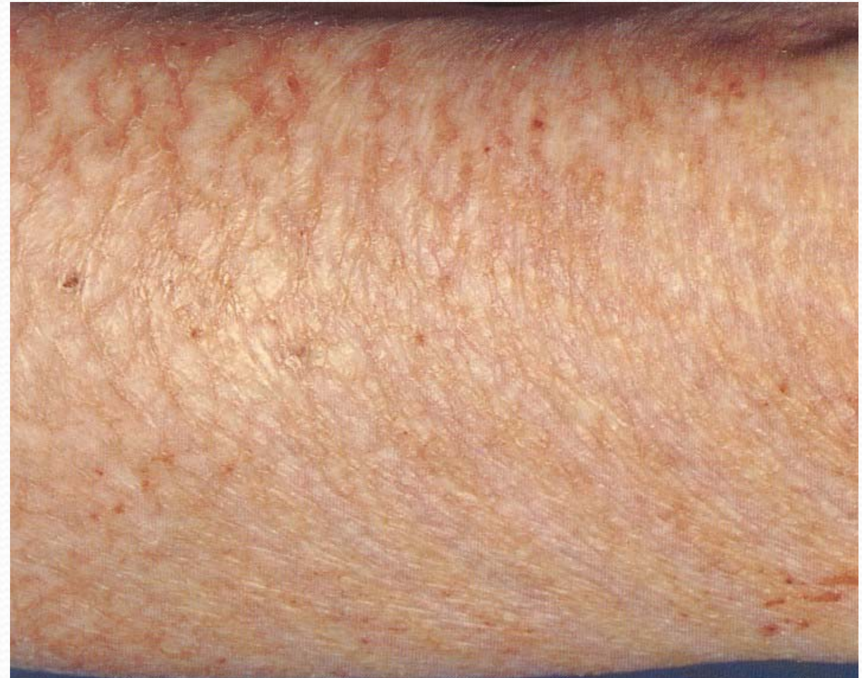
Atopic Dermatitis



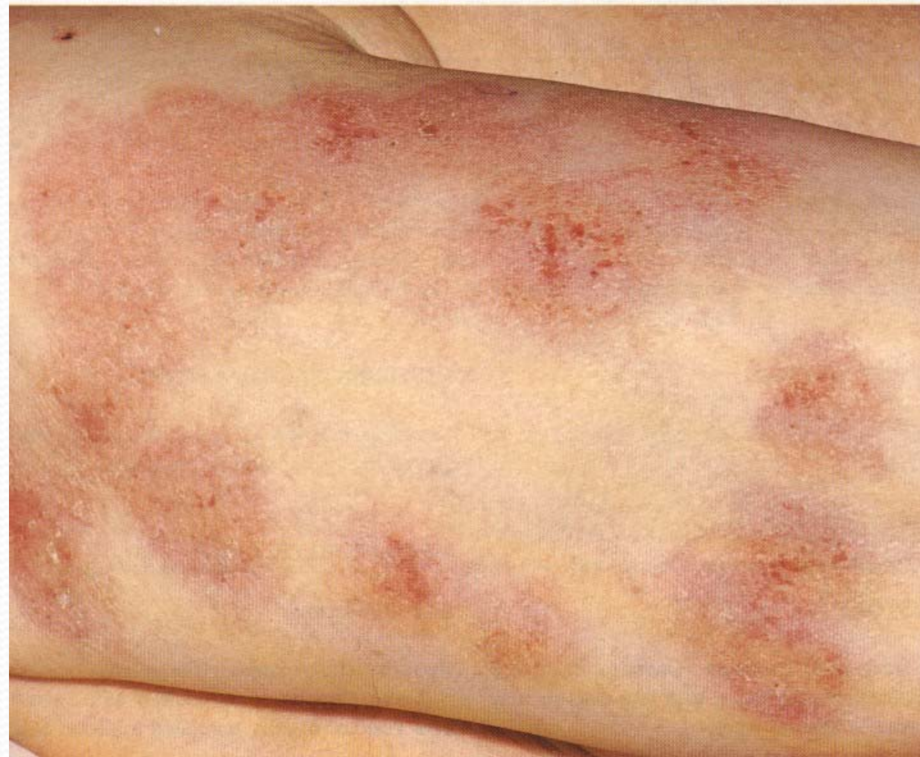


Asteatotic Dermatitis (Eczema Craquele)





Nummular Eczema



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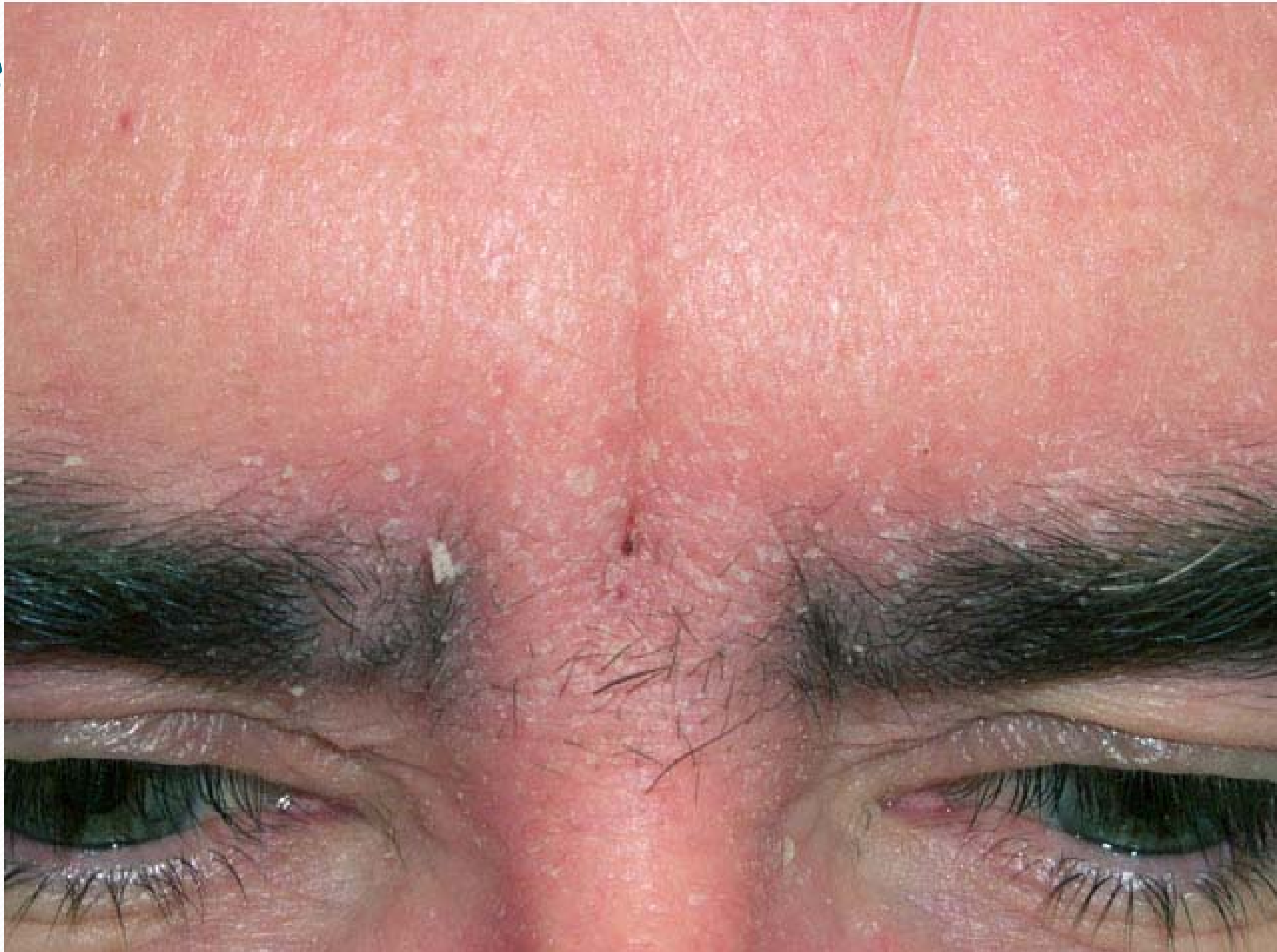
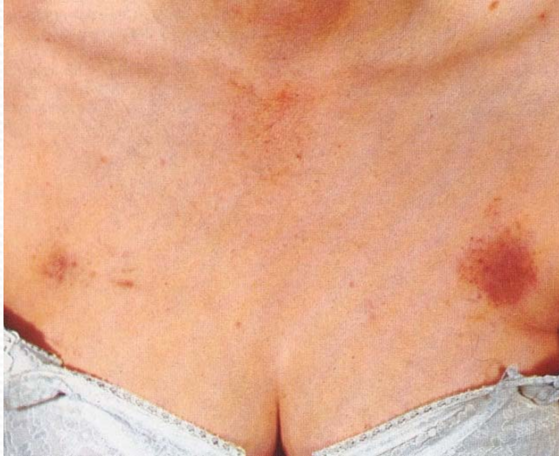
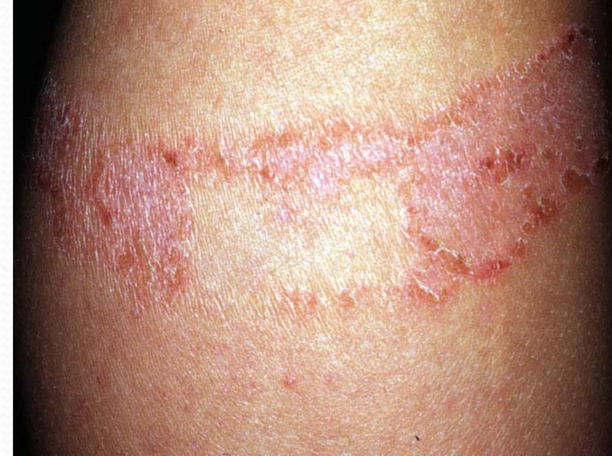
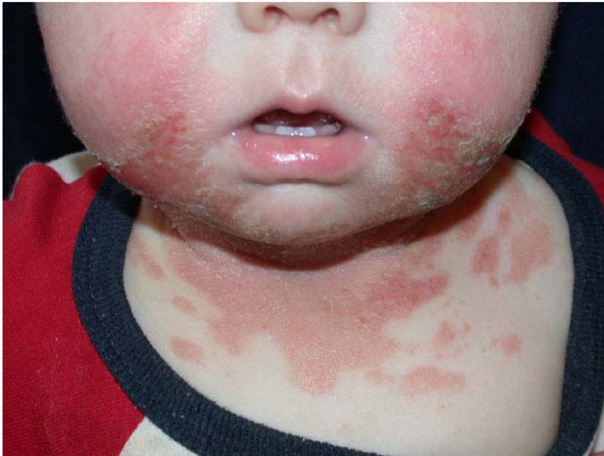
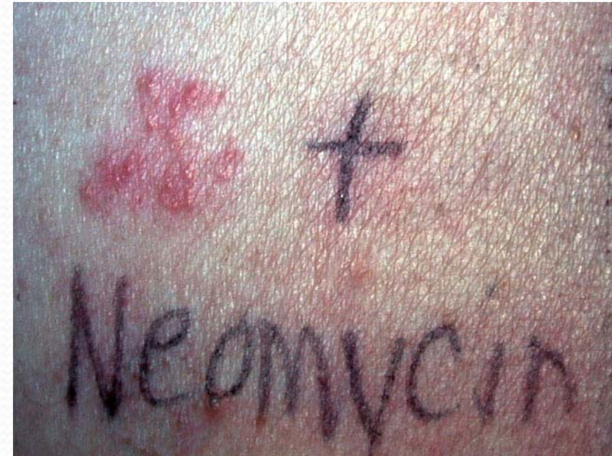


Contact Dermatitis





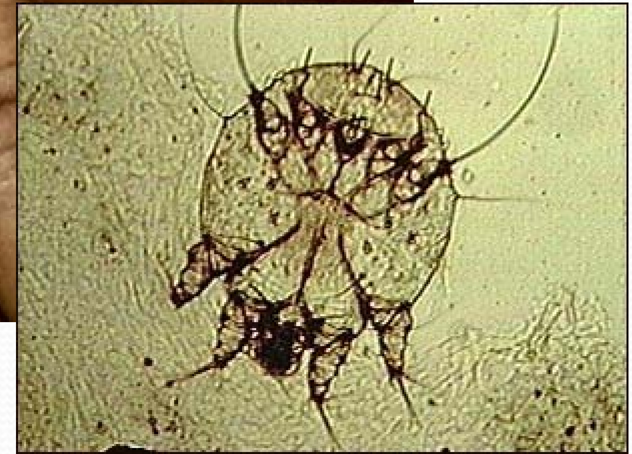




What kind of testing is this??
PATCH TESTING

- Allergic Contact
  - Nickel
  - Neomycin
  - Tape
- Irritant Contact
  - Lip-lickers
  - Dribble
  - Chemicals

L



Eczematous Diseases

- Atopic dermatitis
- Eczema craquelatum (asteatotic)
- Nummular eczema
- Seborrheic dermaitis
- Contact dermatitis
- Scabies