

Dermatopathology- We've Only Just Begun

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APMG

Let us watch well our beginnings, and results will manage themselves.

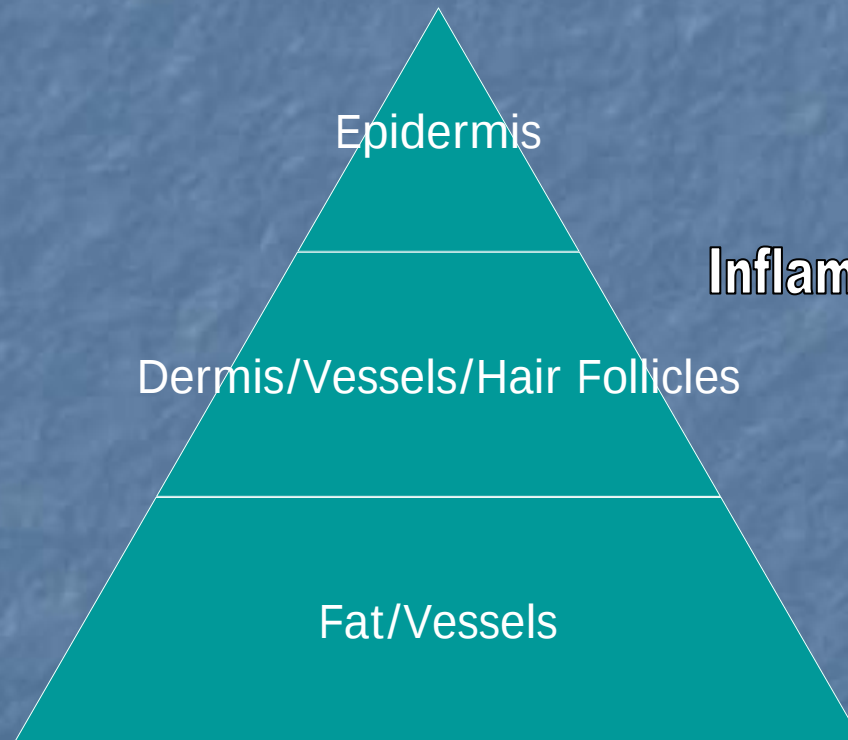
Alexander Clark

Patterns

Less Specific



More Specific

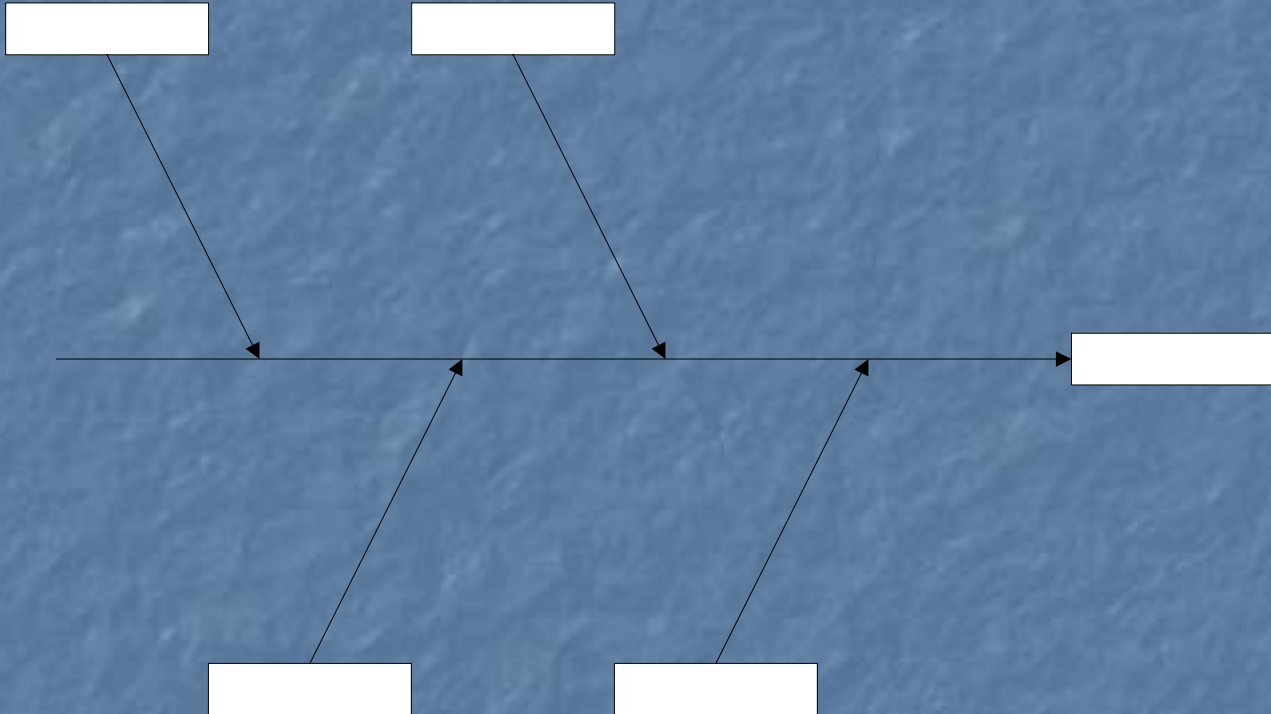


Epidermis

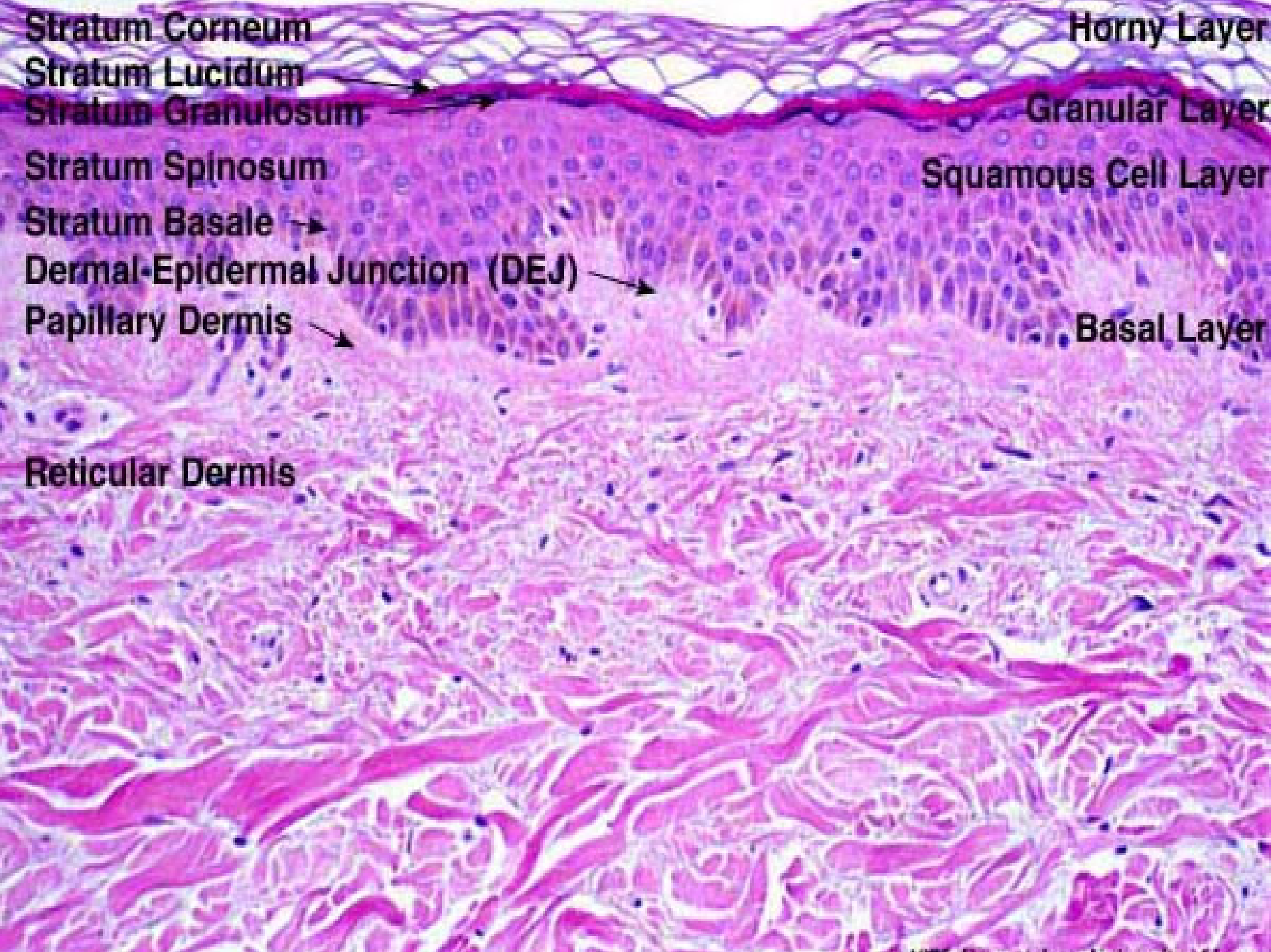
Dermis/Vessels/Hair Follicles

Fat/Vessels

Inflammatory Cell Type



Epidermis



Stratum Corneum

Stratum Lucidum

Stratum Granulosum

Stratum Spinosum

Stratum Basale

Dermal-Epidermal Junction (DEJ)

Papillary Dermis

Reticular Dermis

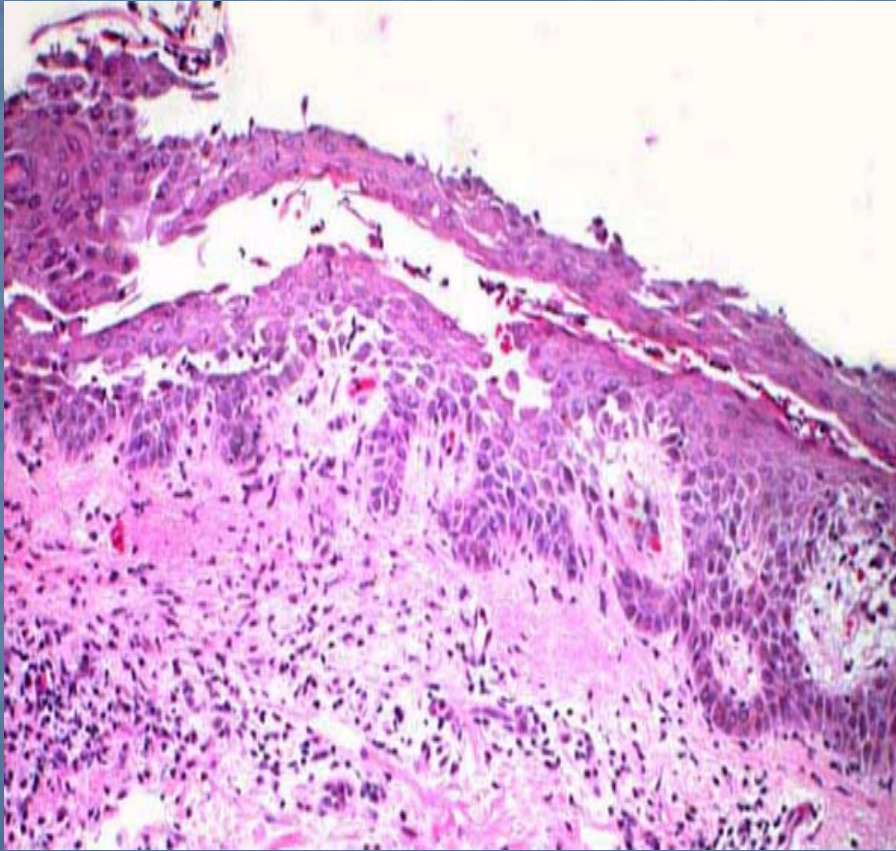
Horny Layer

Granular Layer

Squamous Cell Layer

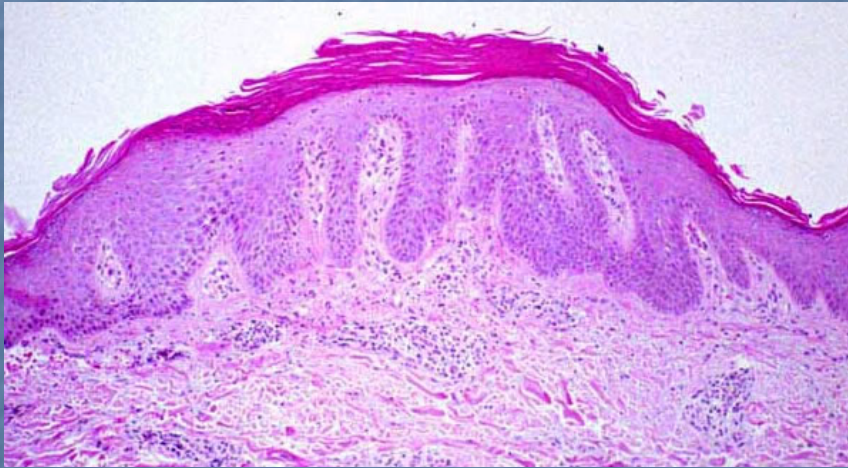
Basal Layer

Acantholysis



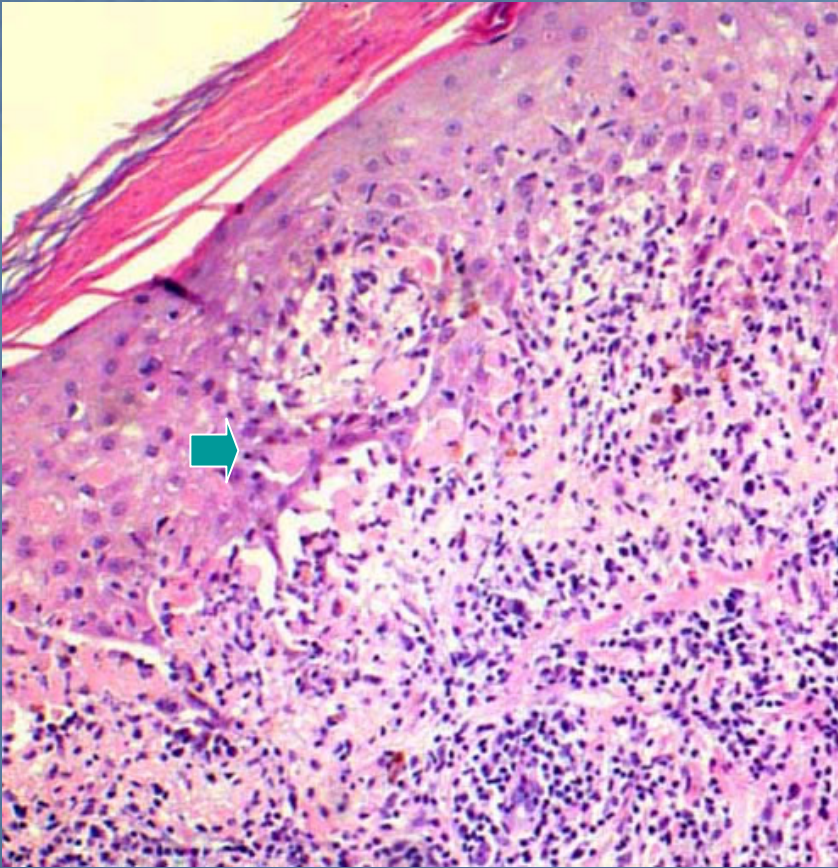
- Loss of cohesion between epidermal or adnexal keratinocytes
- Grover's disease, Pemphigus, Darier's disease, Hailey-Hailey

Acanthosis



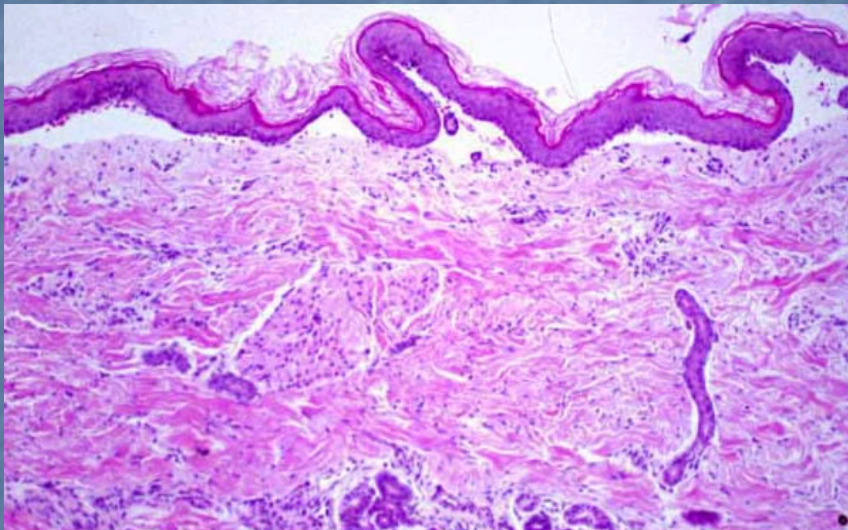
- The increase in the thickness of the stratum malpighii
- Acanthosis nigricans, Pale cell acanthoma

Apoptosis



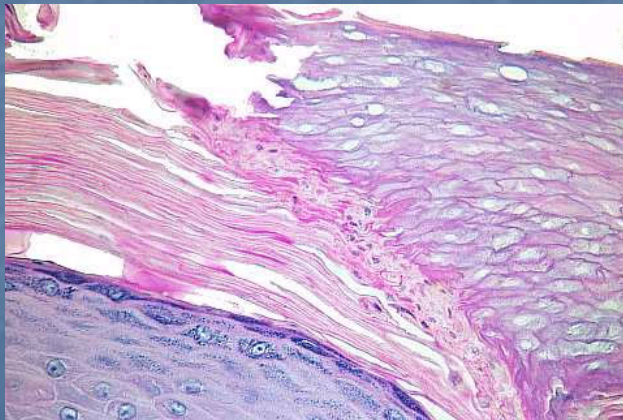
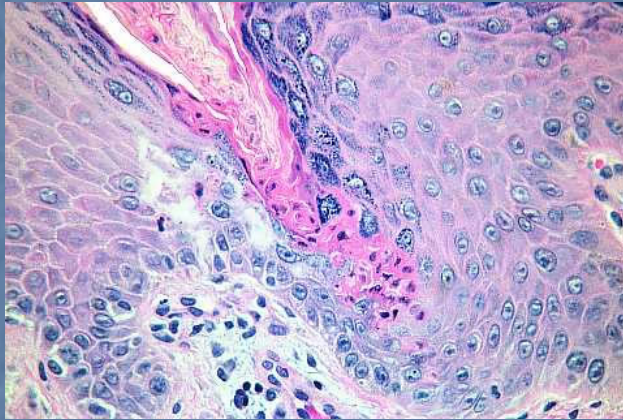
- Dropping off of colloid bodies from the epidermis into the dermis
- Occurs in disorders in which basal cell damage occurs, such as lichenoid tissue reactions
- Lichen planus, LPLK, DLE

Bulla



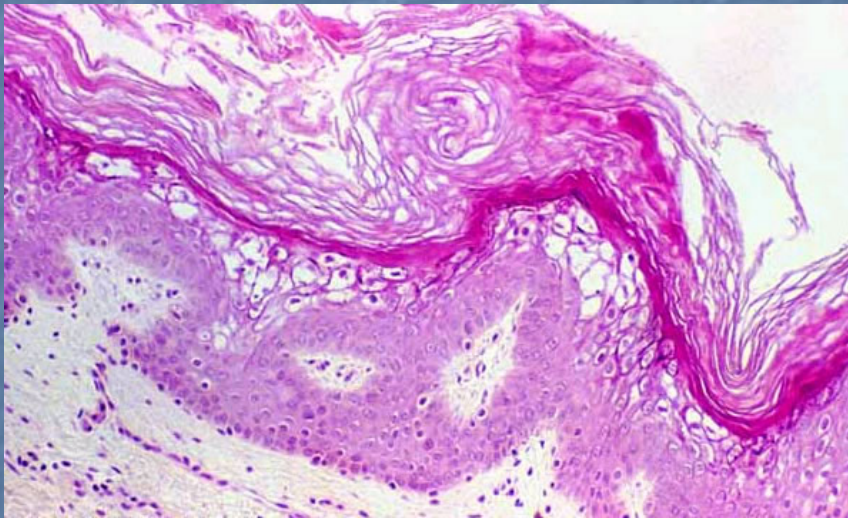
- Cavity of at least 5 mm in diameter forming within or below the epidermis
- Bullous pemphigoid, EBA, DH

Coronoid Lamella



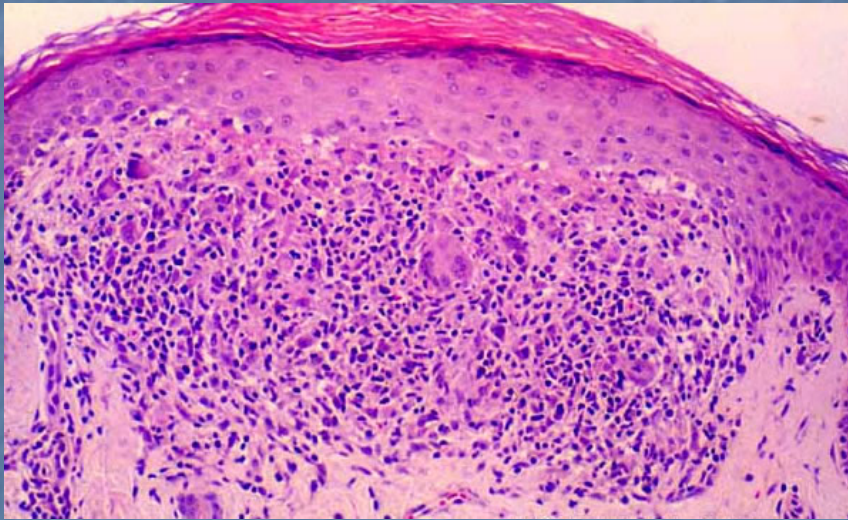
- The coronoid lamella is tilted toward the center of such a lesion
- Peripherally migrating clone of abnormal keratinocytes forming the coronoid lamella
- Porokeratosis

Epidermolytic Hyperkeratosis



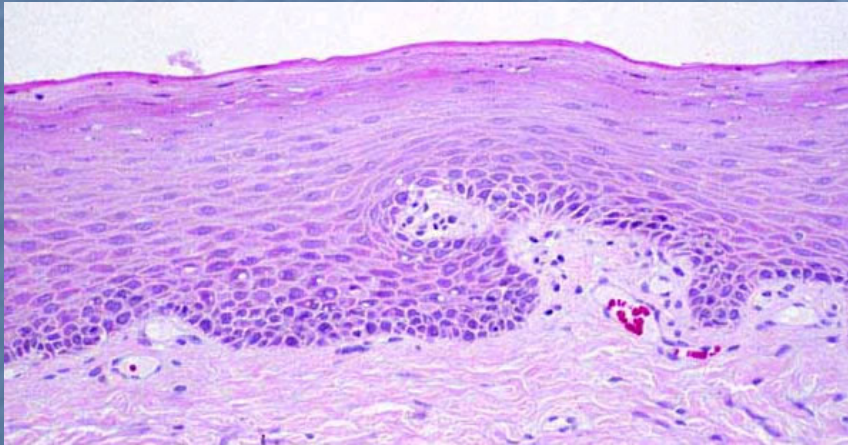
- Vacuolation of the keratohyaline granular layer
- Epidermolytic hyperkeratosis, Congenital Ichthyosiform erythroderma

Lichenoid (Interface)



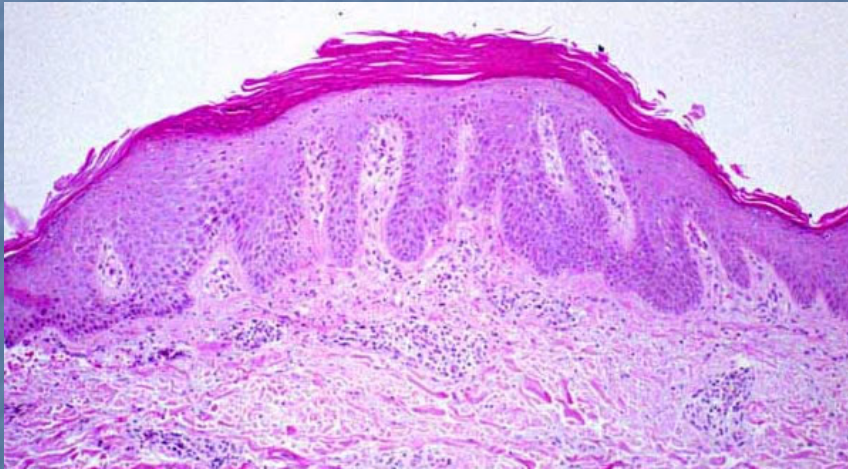
- Epidermal basal cell damage manifested with cell death or liquefactive degeneration (basal vacuolar change)
- Interface sometimes applied only to poikilodermatous reactions with mild basal damage with vacuolar change
- Lichen planus, Fixed drug eruption, LPLK

Parakeratosis



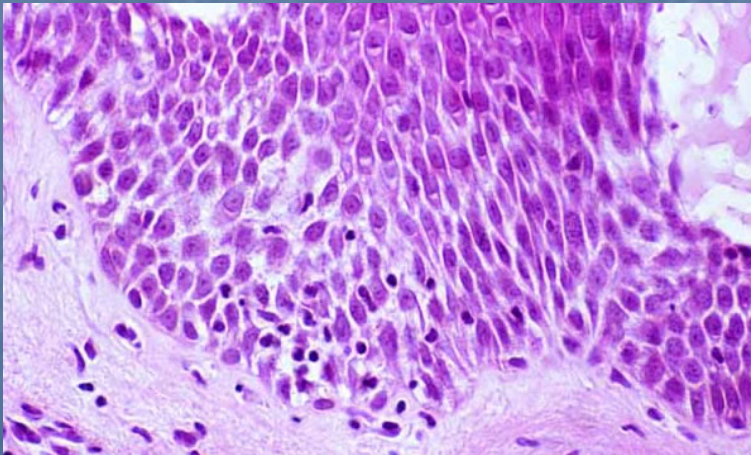
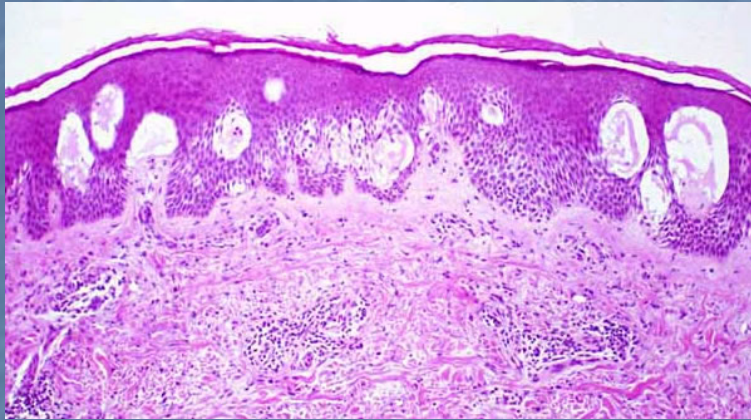
- Retention of nuclei in the stratum corneum
- Normal finding on mucous membranes
- Spongiotic dermatitis (Eczema)

Psoriasiform



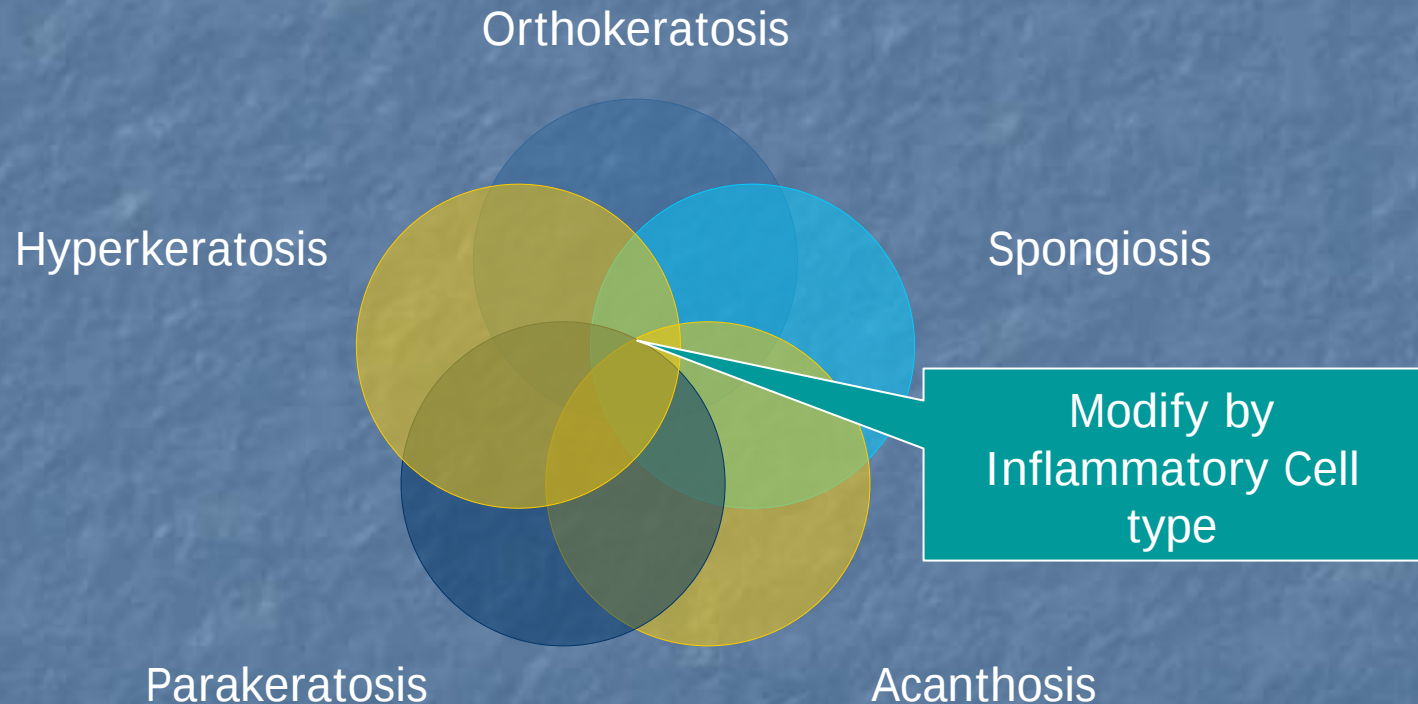
- Epidermal hyperplasia with regular elongation of rete ridges
- Several layers of scale resulting from bouts of activity
- Psoriasis, PRP, Lichen striatus, MF

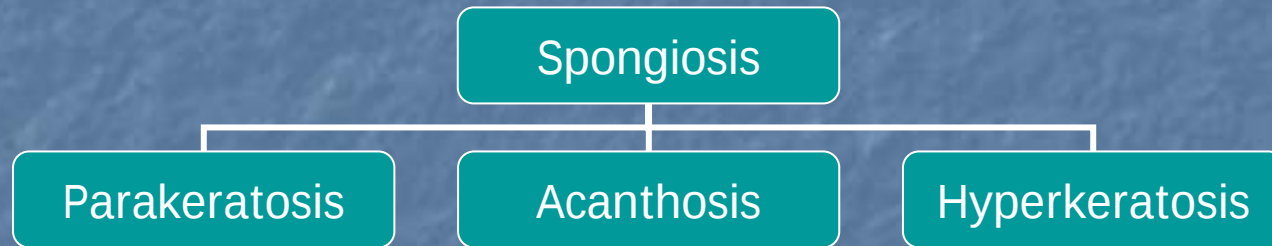
Spongiotic

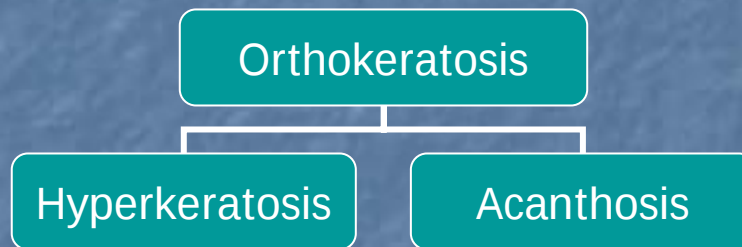


- Intraepidermal intercellular edema with widened intercellular spaces and elongation of intercellular bridges
- Subclassify by inflammatory cell type
- Eczema

Epidermal Reaction Patterns



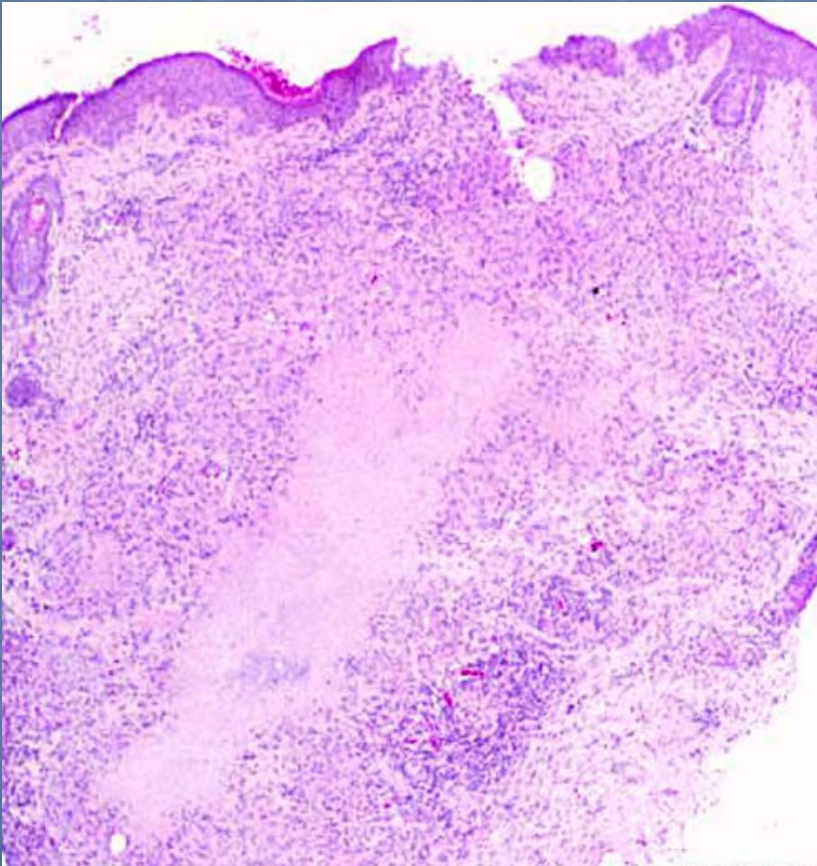




Epidermal/Dermal Reaction Patterns

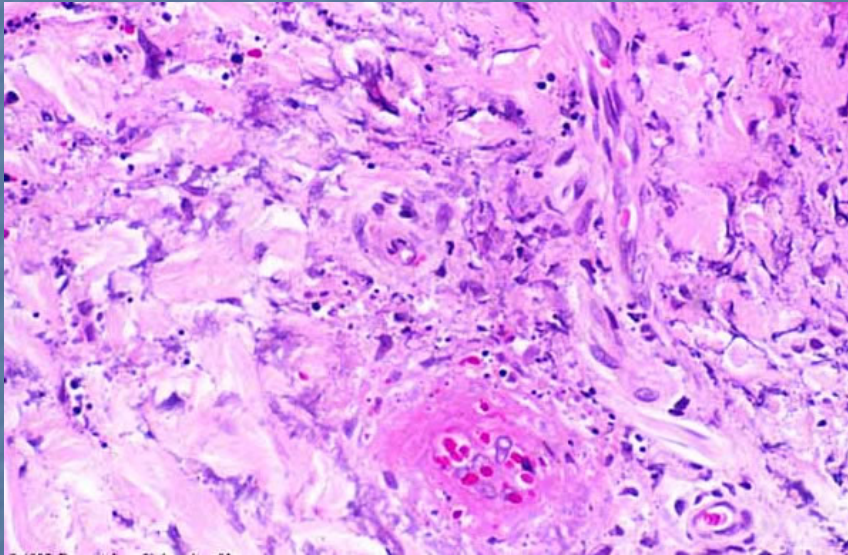
- Superficial perivascular
- Superficial and deep perivascular
- Nodular and diffuse
- Intraepidermal vesicular and pustular
- Subepidermal vesicular

Caseation Necrosis



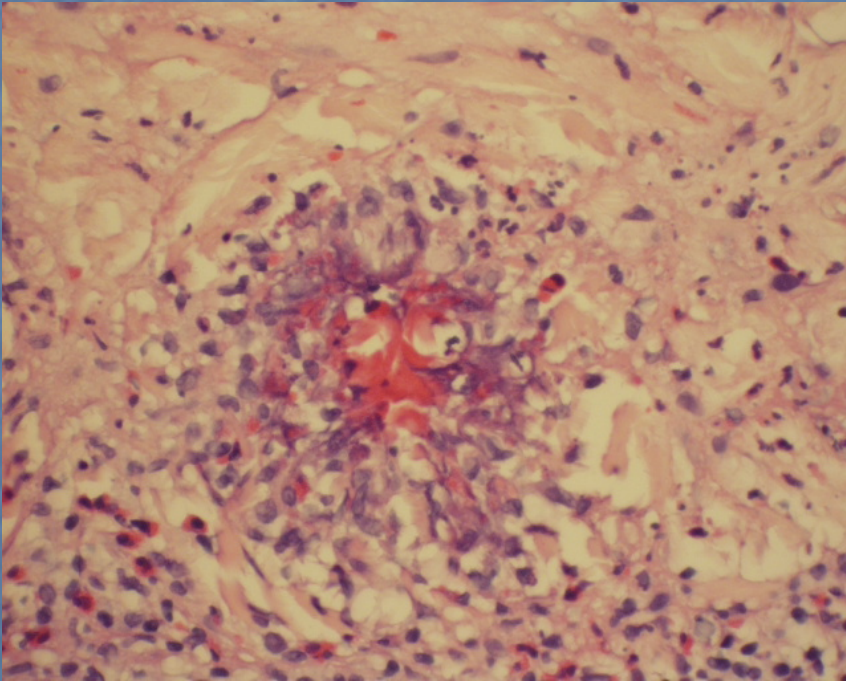
- Identical to coagulation necrosis and ischemic necrosis
- Affected tissue has lost its structural outline and appears as pale eosinophilic, amorphous and finely granular
- Tuberculosis, Necrobiotic xanthogranuloma

Fibrinoid Necrosis



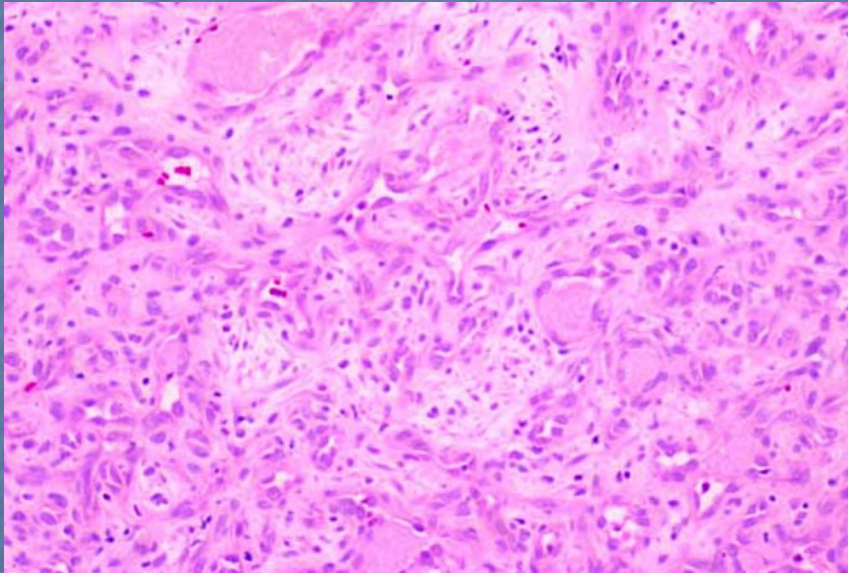
- Fibrin deposition in the wall of small vessels
- Commonly associated with leukocytoclastic vasculitis

Flame Figures



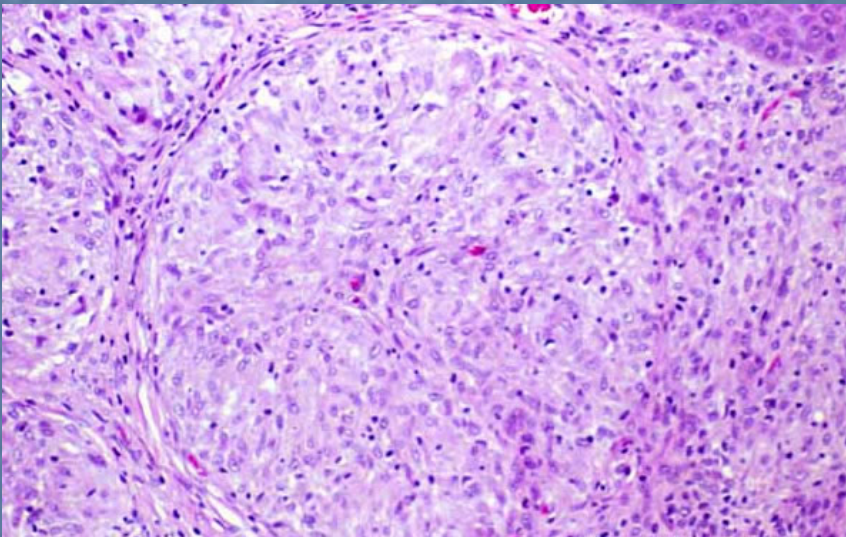
- Encrustation of eosinophilic granules around collagen
- Frequent in conditions with dermal eosinophilia
- Well's syndrome, arthropod, drug reactions

Granulation Tissue



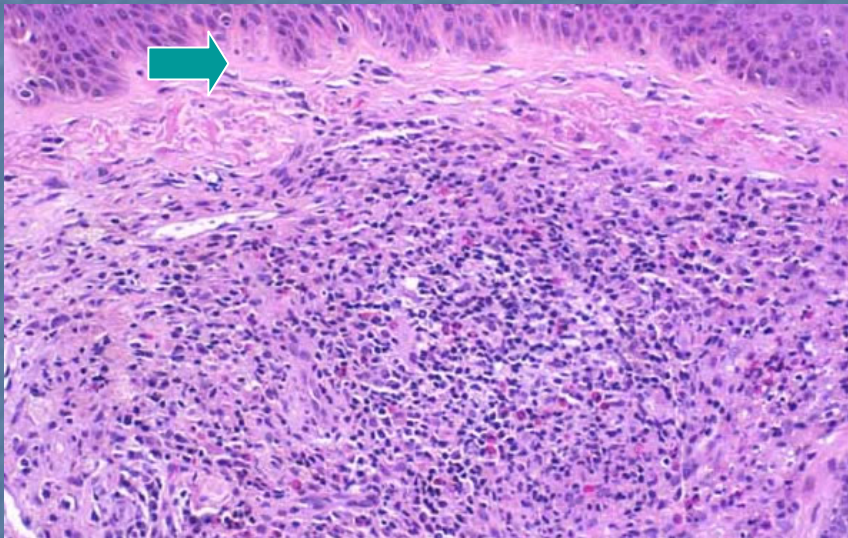
- Newly formed dermis arising in healing wounds and characterized by numerous fibroblasts and new capillaries and an infiltrate consisting of lymphoid cells, macrophages, and plasma cells
- Decubitus ulcer

Granuloma



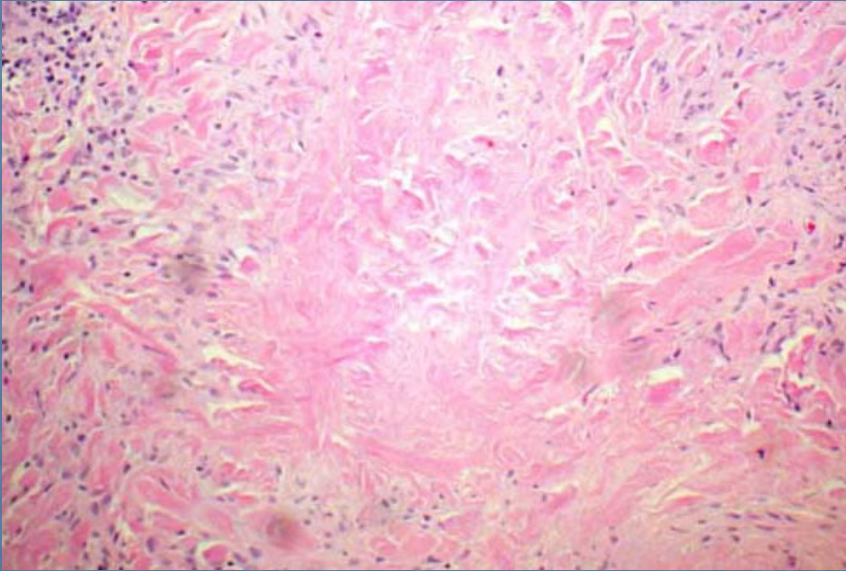
- Chronic proliferative lesion consisting of mononuclear cells and epithelioid cells or multinucleated giant cells or both
- Cells lie in groups and are often surrounded by lymphoid cells
- "Naked" granulomas have few to none of these surrounding lymphoid cells
- Sarcoidosis, foreign body

Grenz Zone



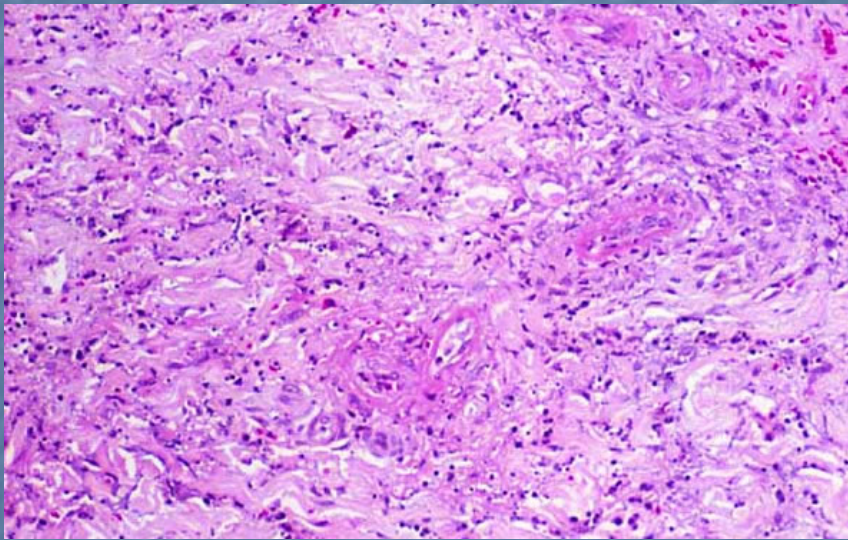
- A narrow area of uninvolved dermis between the epidermis and a dermal inflammatory or neoplastic infiltrate. "Grenz" is German for "border"
- Some lymphomas, granuloma faciale

Necrobiosis



- Altered collagen that loses its normal eosinophilic coloration and fibrillar appearance, becoming slightly bluish and "smudged"
- Necrobiosis lipoidica, some infections

Nuclear Dust



- Fragmented nuclei scattered in the dermis, predominantly around blood vessels
- Leukocytoclastic vasculitis, granuloma faciale, Sweet's syndrome

No Epidermal Changes
Perivascular
Interstitial

*Modify by Inflammatory Cell Type

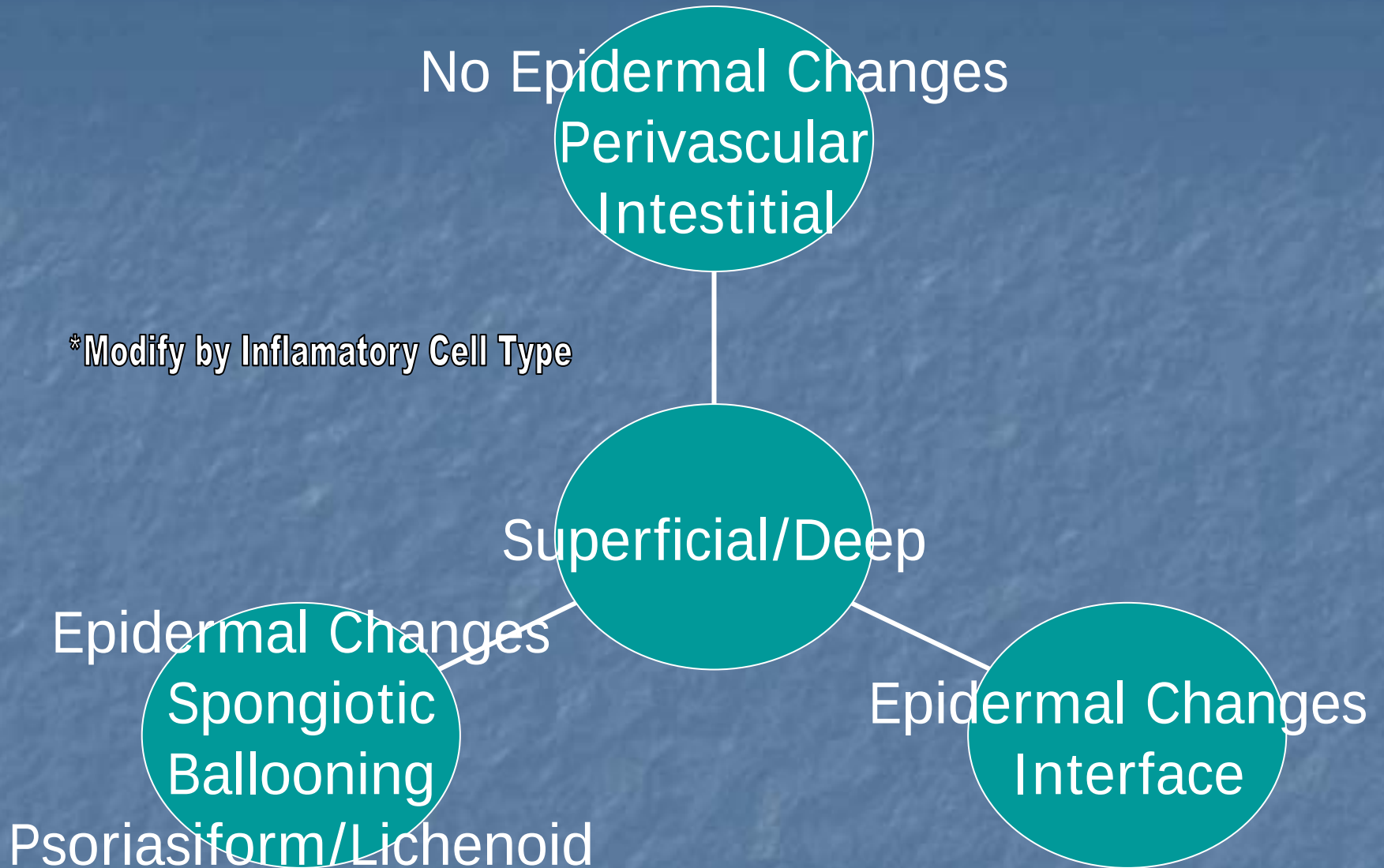
Superficial/Deep

Epidermal Changes

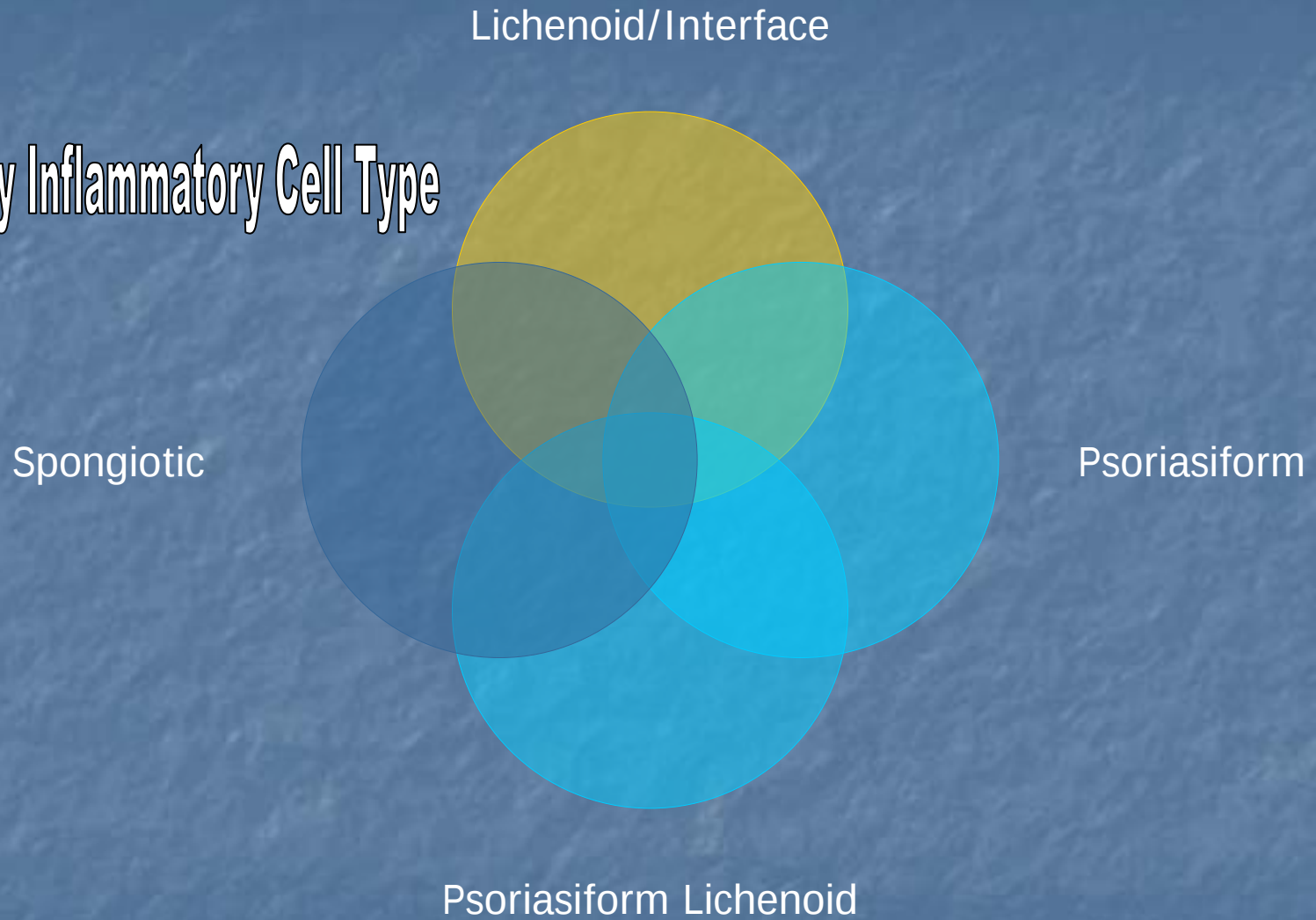
Spongiotic
Ballooning

Psoriasiform/Lichenoid

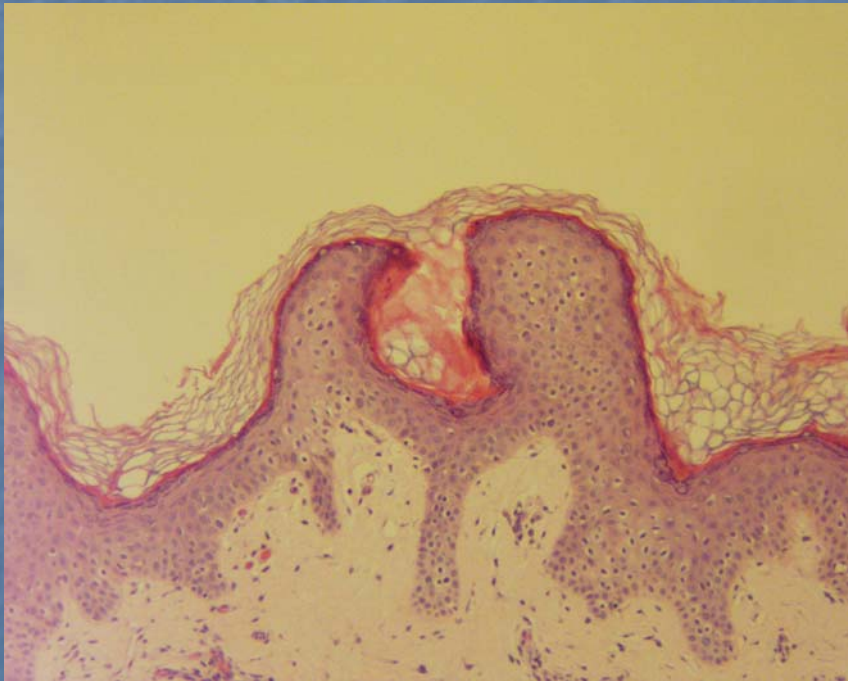
Epidermal Changes
Interface



Modify by Inflammatory Cell Type

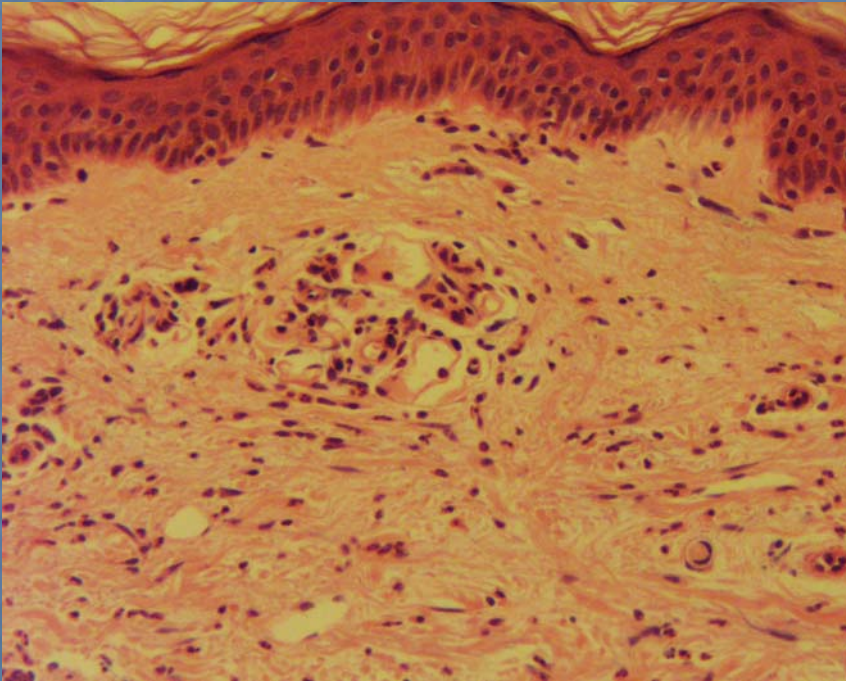


Superficial Perivascular No Epidermal Changes



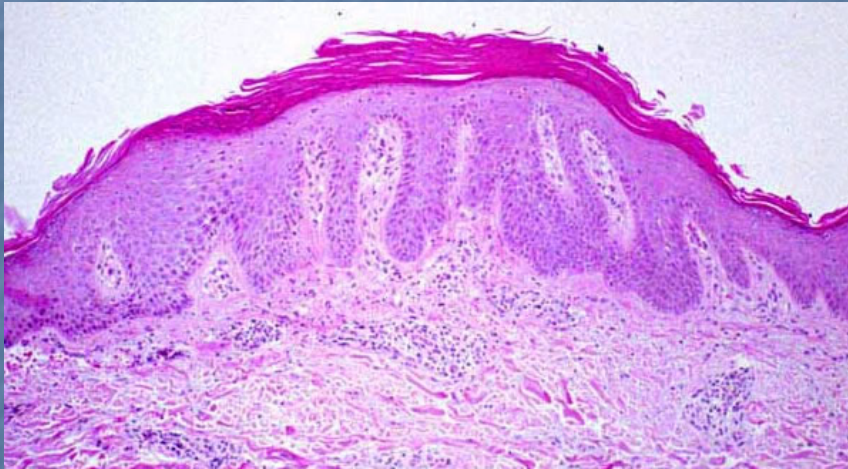
- Tinea versicolor
- Dermatophytosis
- Erythrasma
- Pitted keratolysis
- Vitiligo
- Schamberg's disease
- Viral exanthems
- Drug eruption (one type)
- Urticaria, late
- Erythema figuratum, superficial

Superficial Perivascular/Interstitial No Epidermal Changes



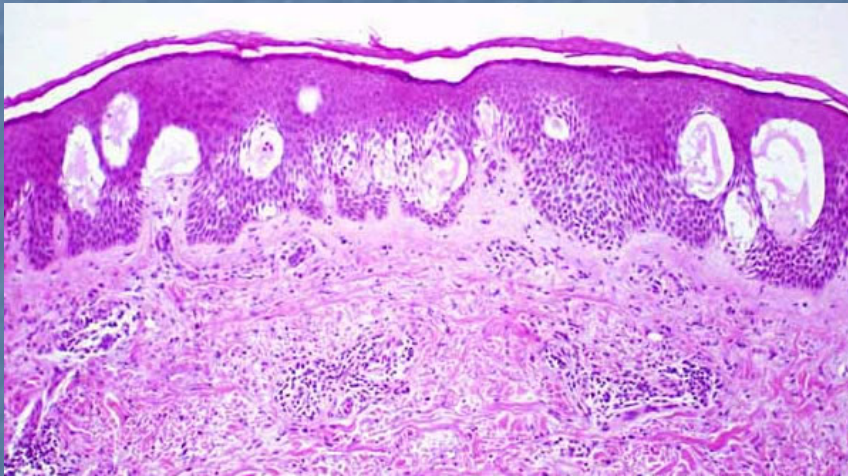
- Schamberg's disease
PUPPP
- Dermatitis herpetiformis
Linear IgA dermatosis
Dermatitis herpetiformis-like drug eruptions
Acute discoid lupus erythematosus/SLE
Leukocytoclastic vasculitis
Erythema marginatum
- Bullous pemphigoid/Herpes gestationis, urticarial
Pemphigus vulgaris, urticarial
Arthropod
PUPPP
- Urticaria
- Postinflammatory pigmentary alteration
Macular amyloidosis
- Urticaria pigmentosa
Brachioradial pruritis

Superficial Perivascular Psoriasiform



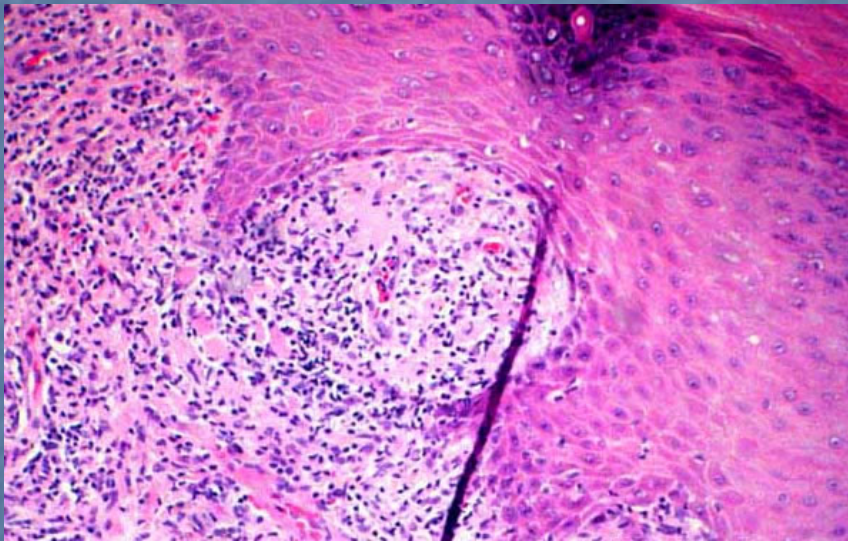
- Psoriasis
- Allergic contact dermatitis
- Nummular dermatitis
- Dyshidrotic dermatitis
- Pityriasis rubra pilaris
- Seborrheic dermatitis
- Dermatophytosis
- Candidiasis
- Lichen simplex chronicus
- Prurigo nodularis
- Acanthoma fissuratum
- Pressure papule from prosthesis
- Surfer's nodules
- Chondrodermatitis nodularis helcis

Superficial Perivascular Spongiotic Psoriasiform



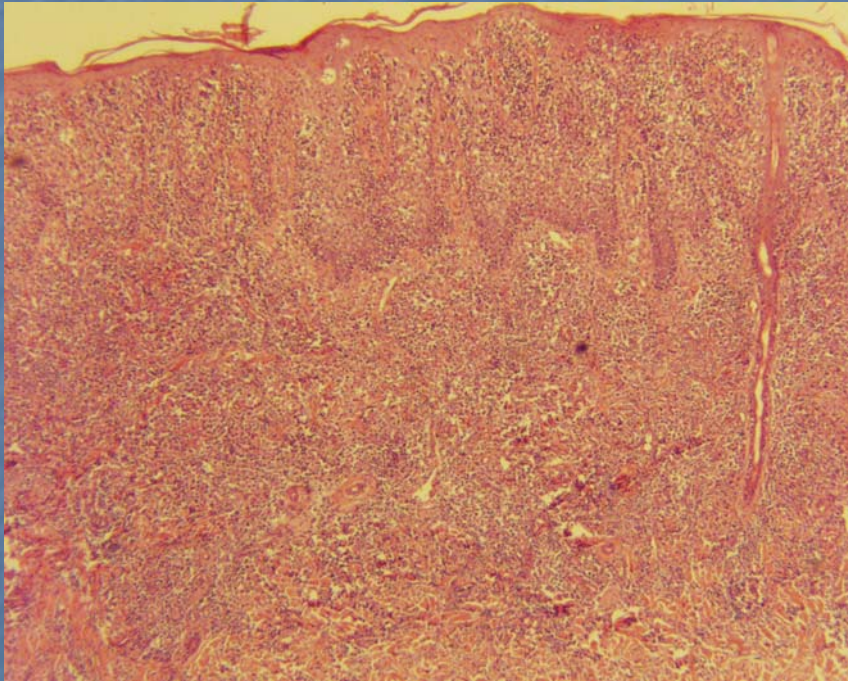
- Allergic contact dermatitis
- Nummular dermatitis
- Dyshidrotic dermatitis
- Id reaction
- Seborrheic dermatitis
- Nonbullous congenital ichthyosiform erythroderma
- Lichen striatus

Superficial Perivascular Lichenoid/Interface



- Lichen planus
- Lichenoid drug
- Pityriasis lichenoides
chronica
- DLE
- Dermatomyositis
- GVH
- EM

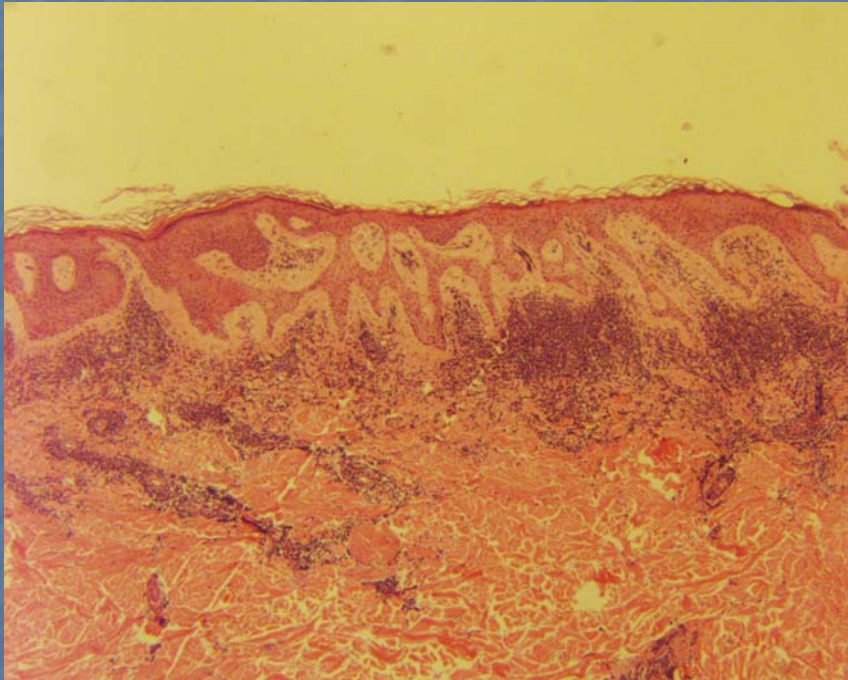
Superficial Perivascular Psoriasiform/Lichenoid



- Lichen striatus
- Bullous pemphigoid
- Herpes gestationis,
urticarial
- Mycosis fungoides

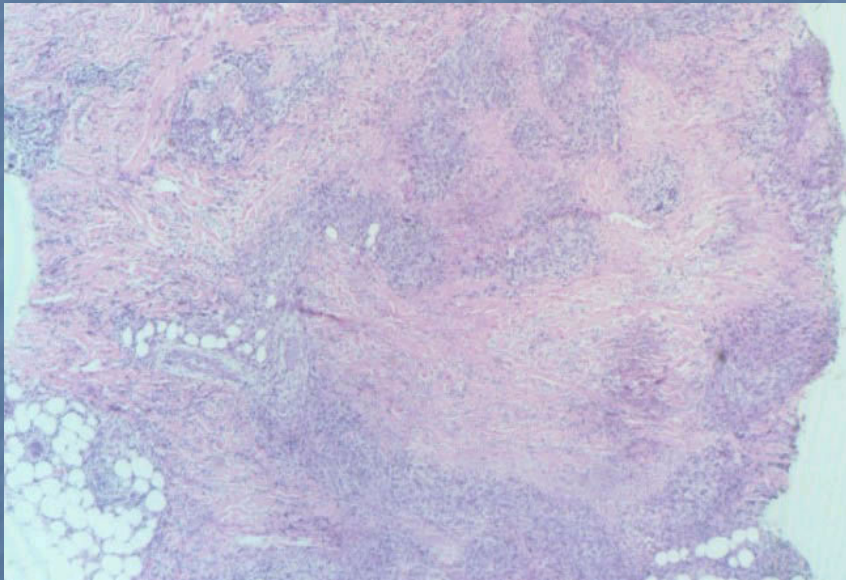
Superficial/Deep

No Epidermal Changes



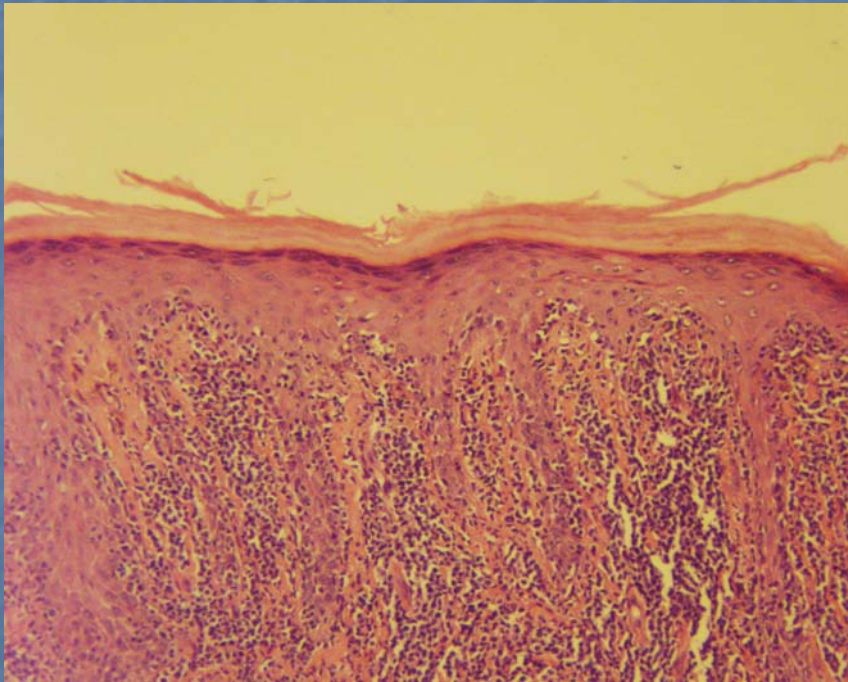
- Polymorphous light eruption, early
Erythema figuratum
Erythema chronicum migrans
Pernio
Erythema nodosum
PMLE
DLE, tumid
CLL
B-cell lymphoma
- Arthropod insult
- Erythema chronicum migrans
Scleroderma
- Leprosy, indeterminate

Superficial/Deep Perivascular and Interstitial



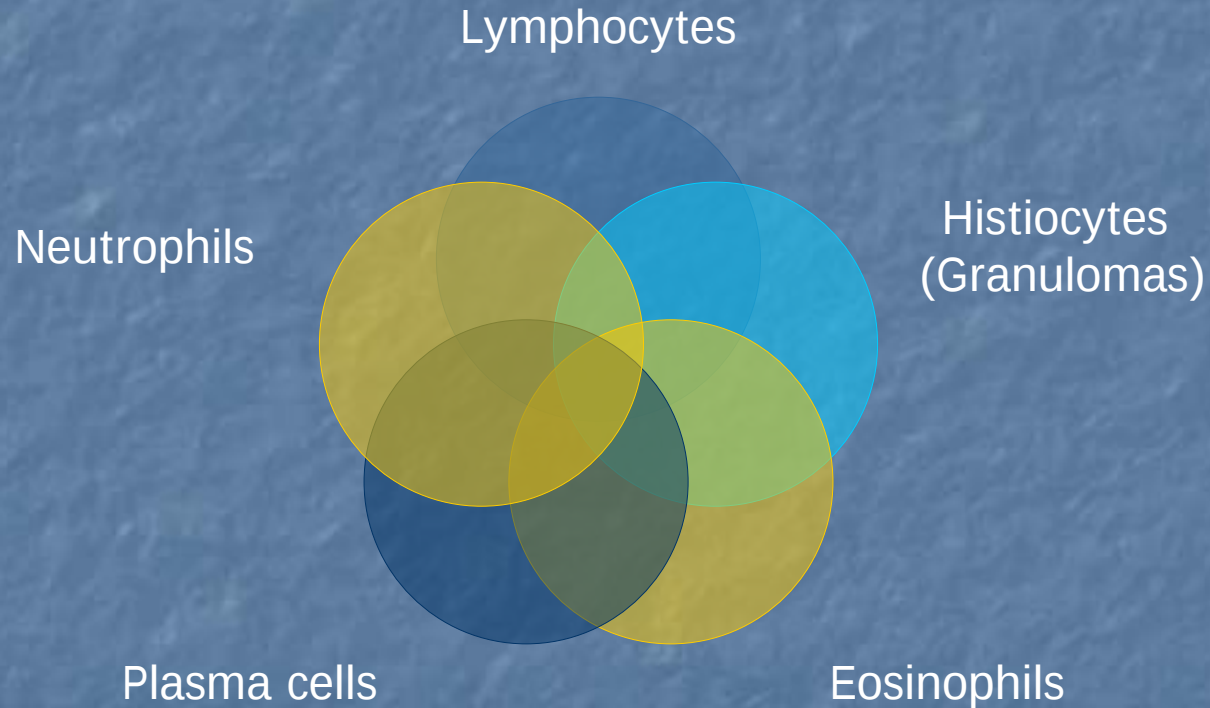
- Suppurative folliculitis, periphery
Neutrophilic eccrine hidradenitis
Flea bite
Cellulitis
Erythropoietic protoporphyria
- Arthropod
Erythema chronicum migrans
Well's syndrome
- Granuloma annulare
Necrobiosis lipoidica
Interstitial granulomatous dermatitis with arthritis
Mycosis fungoides, granulomatous

Superficial/Deep Epidermal Lichenoid-Interface

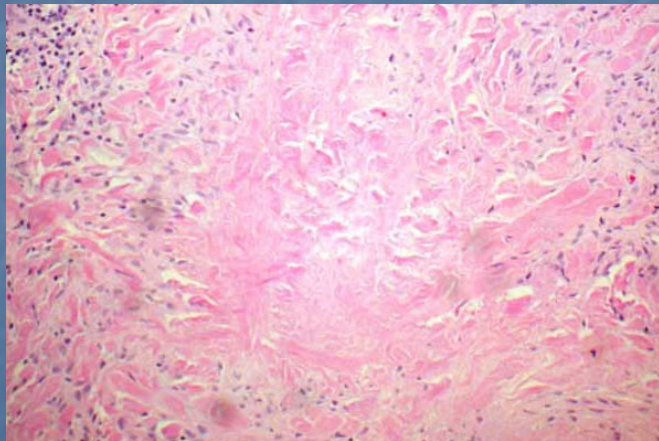
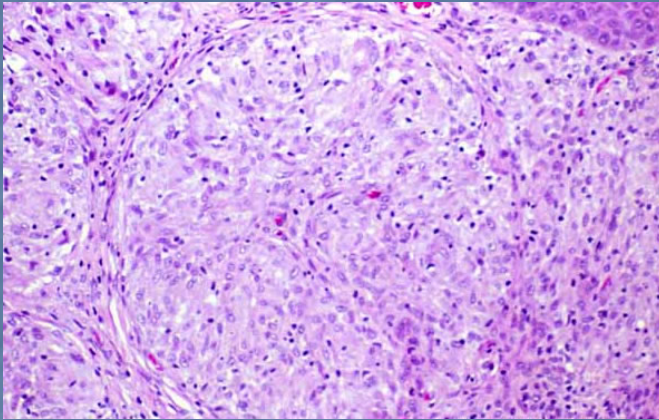


- PLEVA
Fixed drug eruption
Dermatophytosis
LyP
GVH
DLE
Acrodermatitis
chronica atrophicans
Mycosis fungoides,
plaque

Nodular/Diffuse Dermatitis

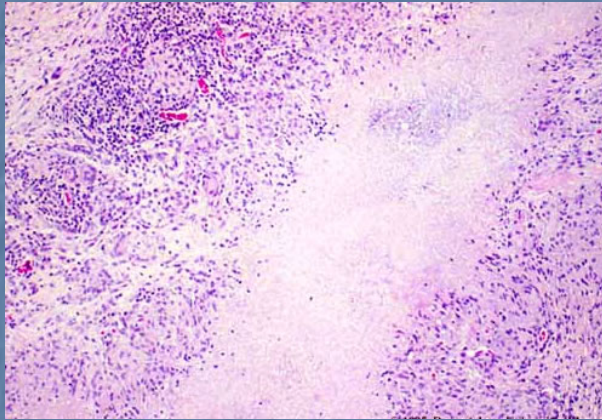


Nodular/Diffuse Dermatitis

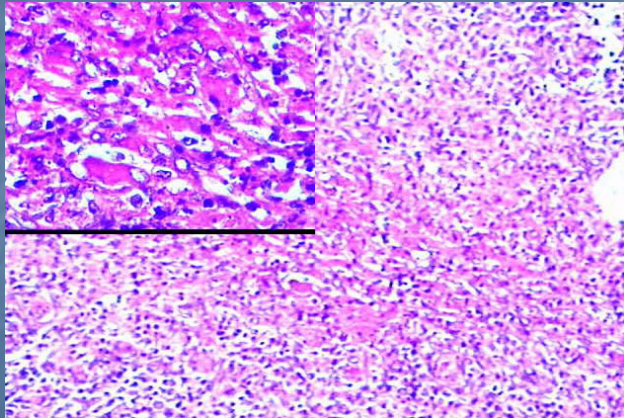


- Histiocytes (Granulomas)
 - Sarcoidal
 - Tuberculoid
 - Palisaded
 - Suppurative

Nodular/Diffuse Dermatitis

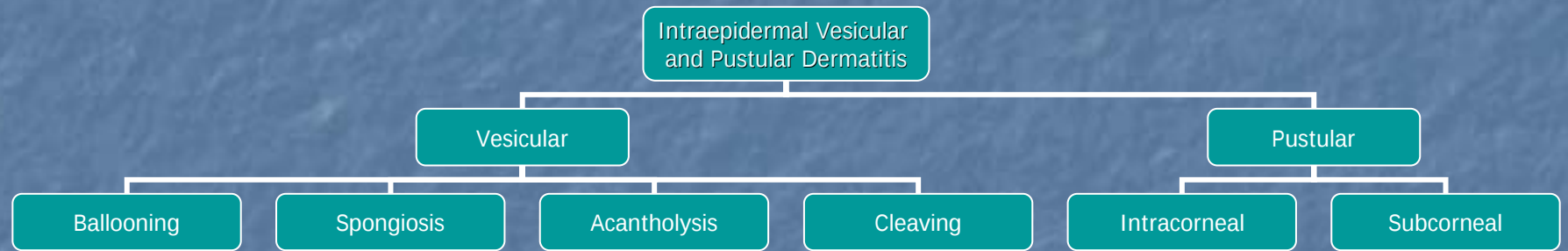


- Histiocytes (Granulomas)
 - Tuberculoid
 - Suppurative



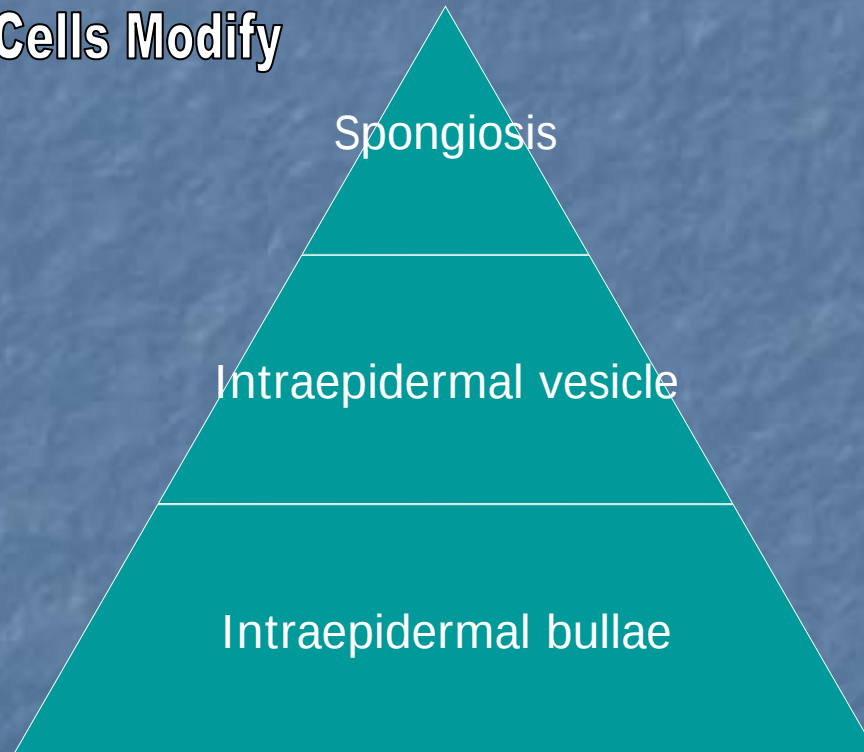
Nodular/Diffuse Dermatitis

Cell Type	Diagnosis
Neutrophils	Sweets
Eosinophils	Well's, Hypersensitivity
Plasma cells	Lyme disease
Histiocytes	Granulomatous diseases
Mixed	Granuloma faciale

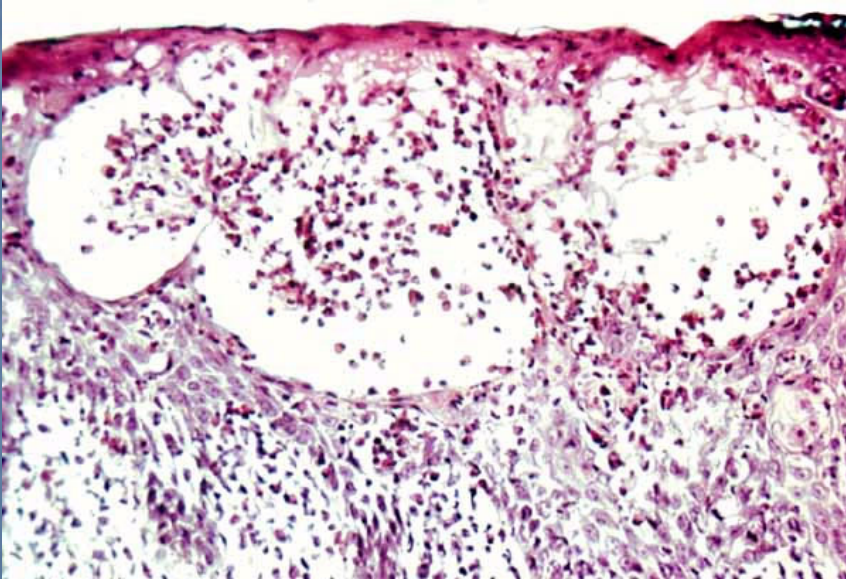


Intraepidermal Vesicular Dermatoses

Inflammatory Cells Modify

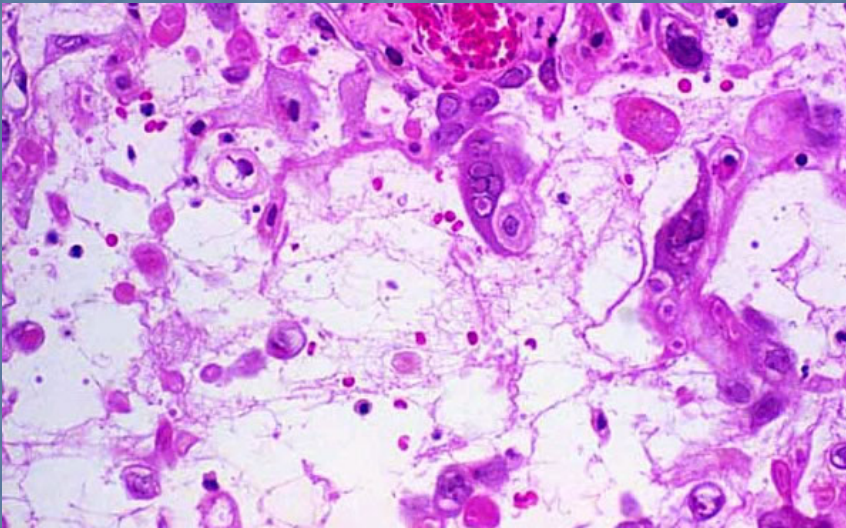


Intraepidermal Spongiosis



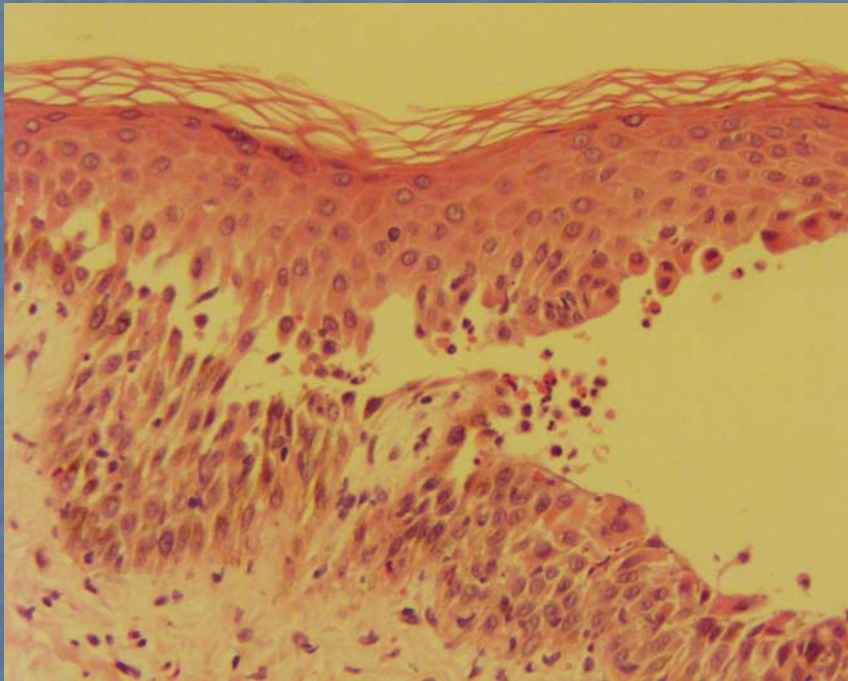
- Allergic contact dermatitis
Nummular dermatitis
Dyshidrotic dermatitis
Id reaction
Photoallergic dermatitis, early
Dermatophytosis
Miliaria rubra
Gianotti-Crosti syndrome
Pityriasis rosea
Erythema annulare centrifugum
Seborrheic dermatitis
Lichen striatus
Pityriasis alba
Mycosis fungoides, macule/patch
- PUPPP
Allergic contact dermatitis
Nummular dermatitis
Dyshidrotic dermatitis
Id reaction
Bullous pemphigoid
Herpes gestationis
Pemphigus vulgaris, urticarial
Incontinentia pigmenti
Toxic erythema of newborn
Arthropod assault

Intraepidermal Ballooning



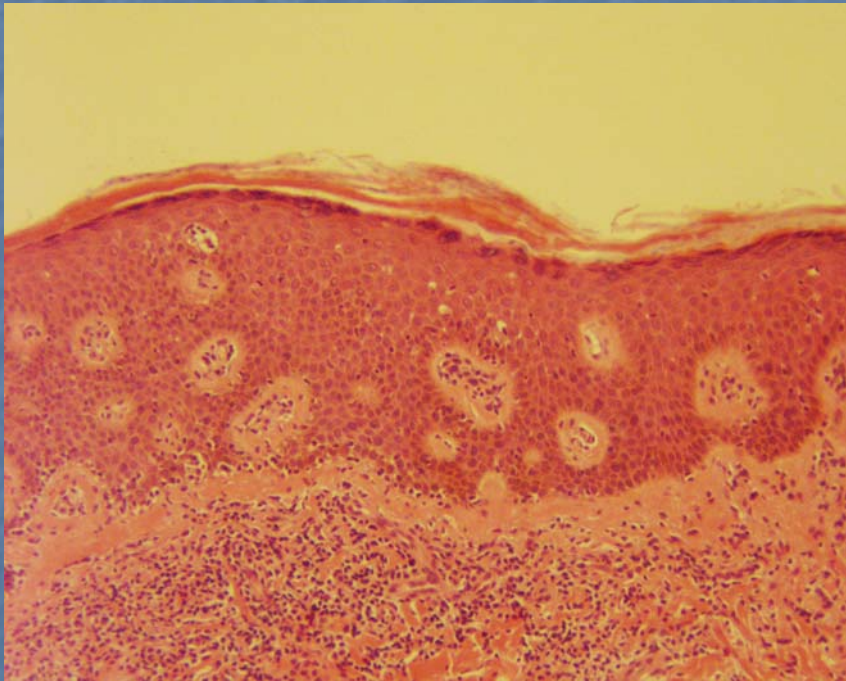
- Herpes
Orf
Parapox infection
- Measles
- Hydroa
aestivale/Hydroa
vacciniforme

Intraepidermal with Acantholysis



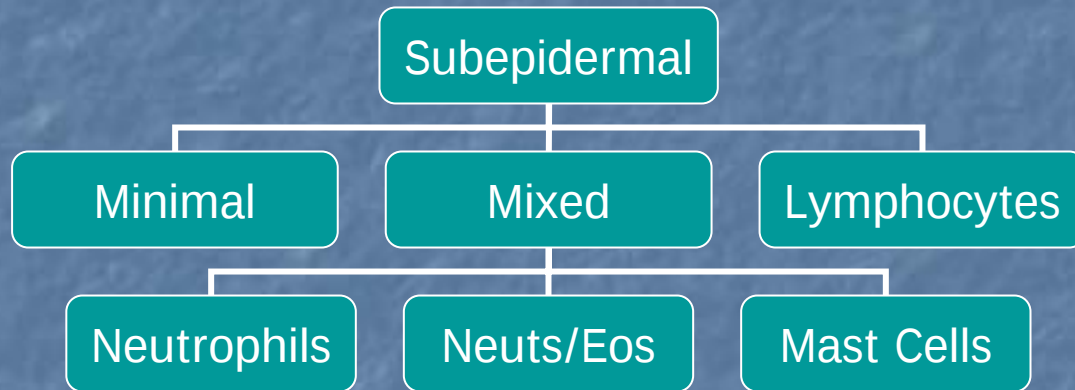
- Pemphigus vulgaris
Pemphigus vegetans
Pemphigus erythematosus
Pemphigus foliaceus
Fogo selvagem
- Grover's disease

Intraepidermal Spongiotic Psoriasiform/Lichenoid

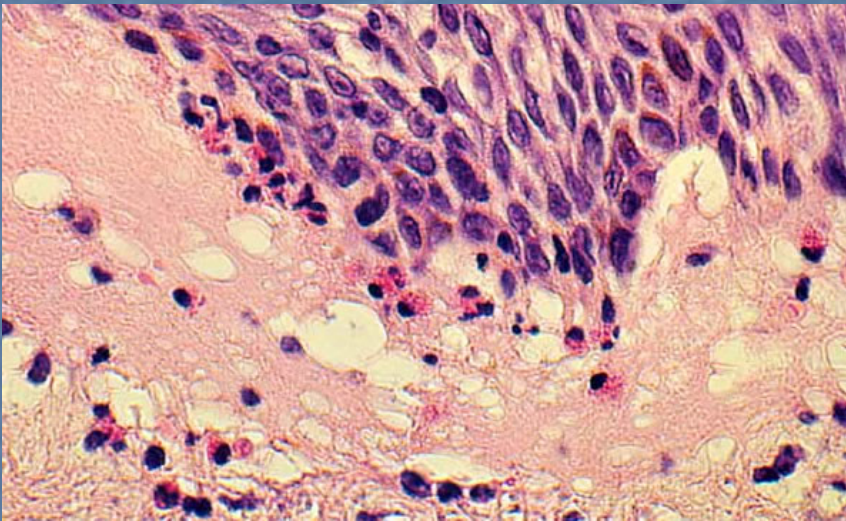


- Allergic contact dermatitis
Nummular dermatitis
Dyshidrotic dermatitis
Id reaction
Seborrheic dermatitis
Nonbullous congenital
ichthyosiform erythroderma
Lichen striatus
- Lichen striatus
Bullous pemphigoid
Herpes gestationis, urticarial
MF

Subepidermal Vesicular Dermatoses



Subepidermal Vesicular Dermatoses

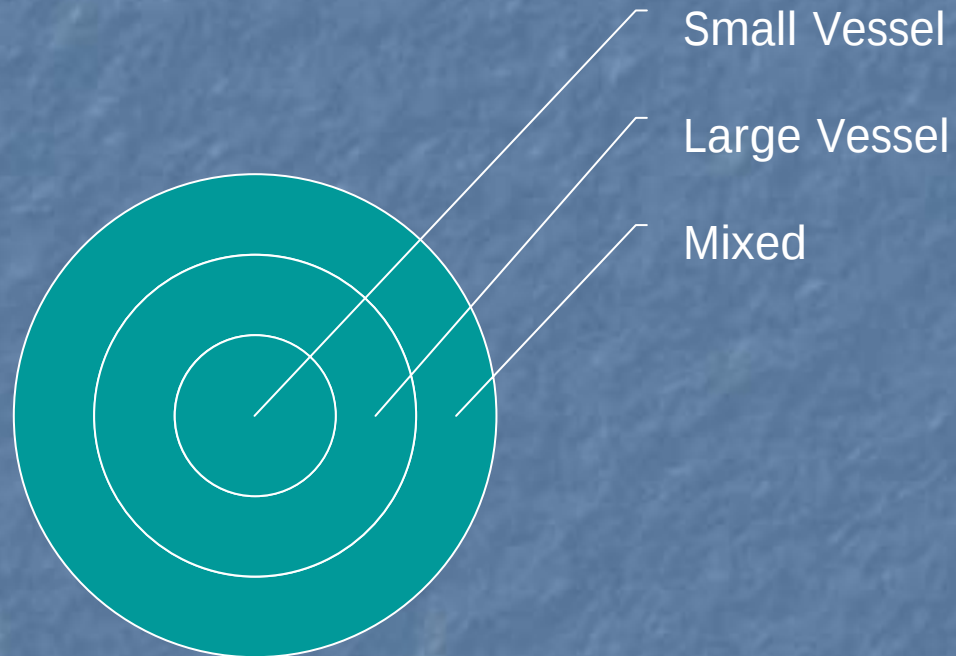


- Bullous pemphigoid/Herpes gestationis
- Cicatricial pemphigoid
- Dermatitis herpetiformis/Linear IgA disease
- EBA
- Bullous LE
- Bullous mastocytosis
- Bullous amyloidosis
- Drug reactions
- LP

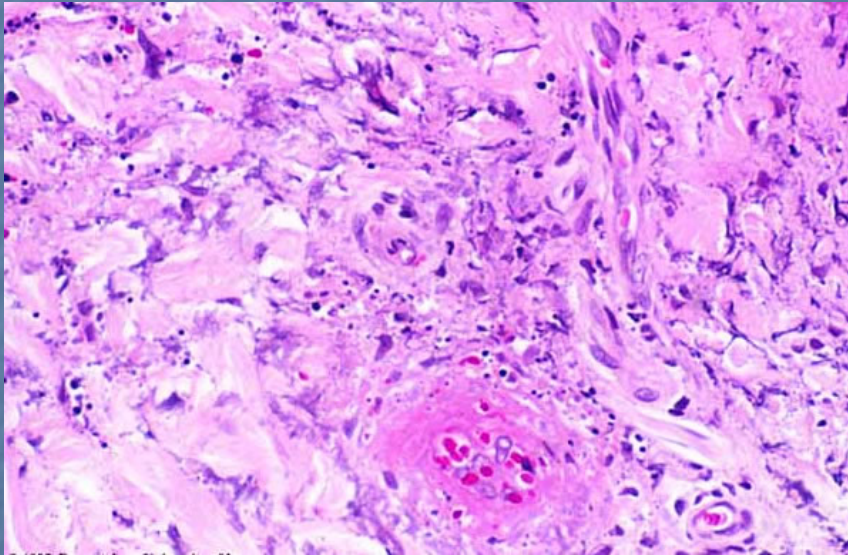
Special Categories

- Vasculitis
- Alopecia
- Folliculitis/Perifolliculitis
- Fibrosing dermatitis
- Panniculitis

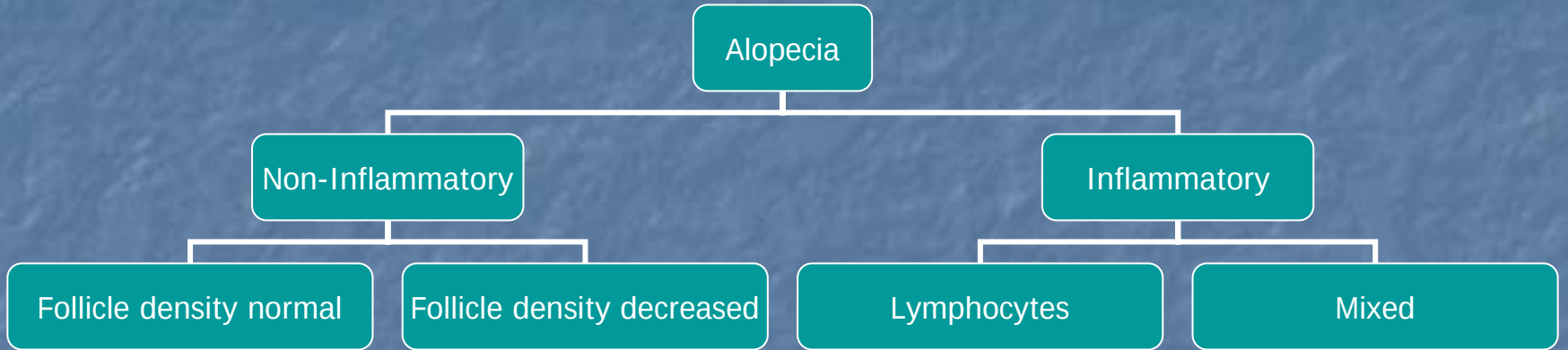
Vasculitis



Vasculitis

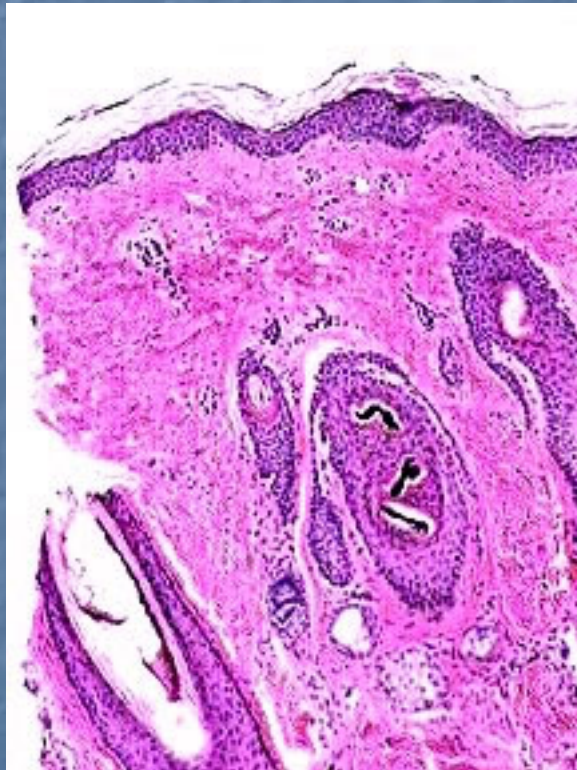


- Leukocytoclastic vasculitis
Microscopic arteritis
- Polyarteritis nodosa
Erythema induratum



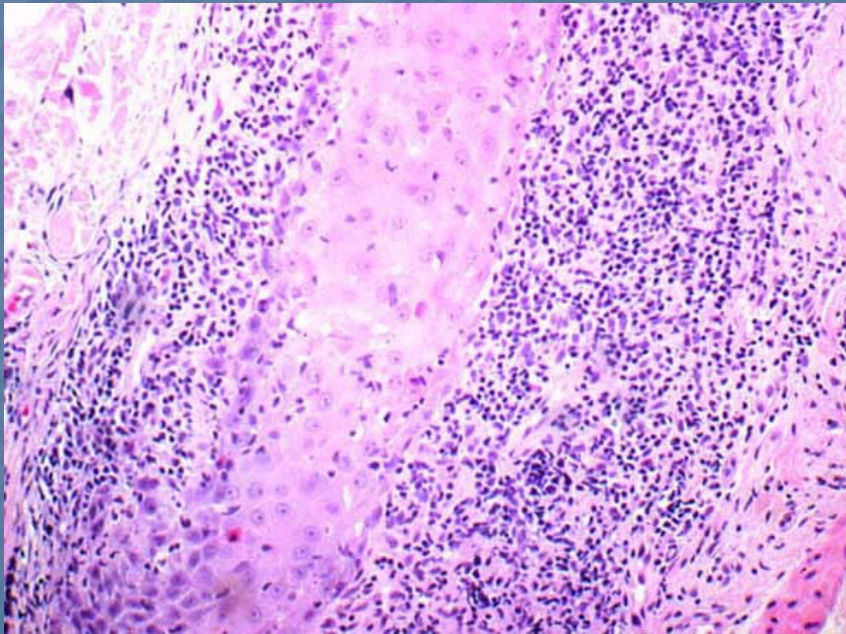
Alopecia

Non-Inflammatory

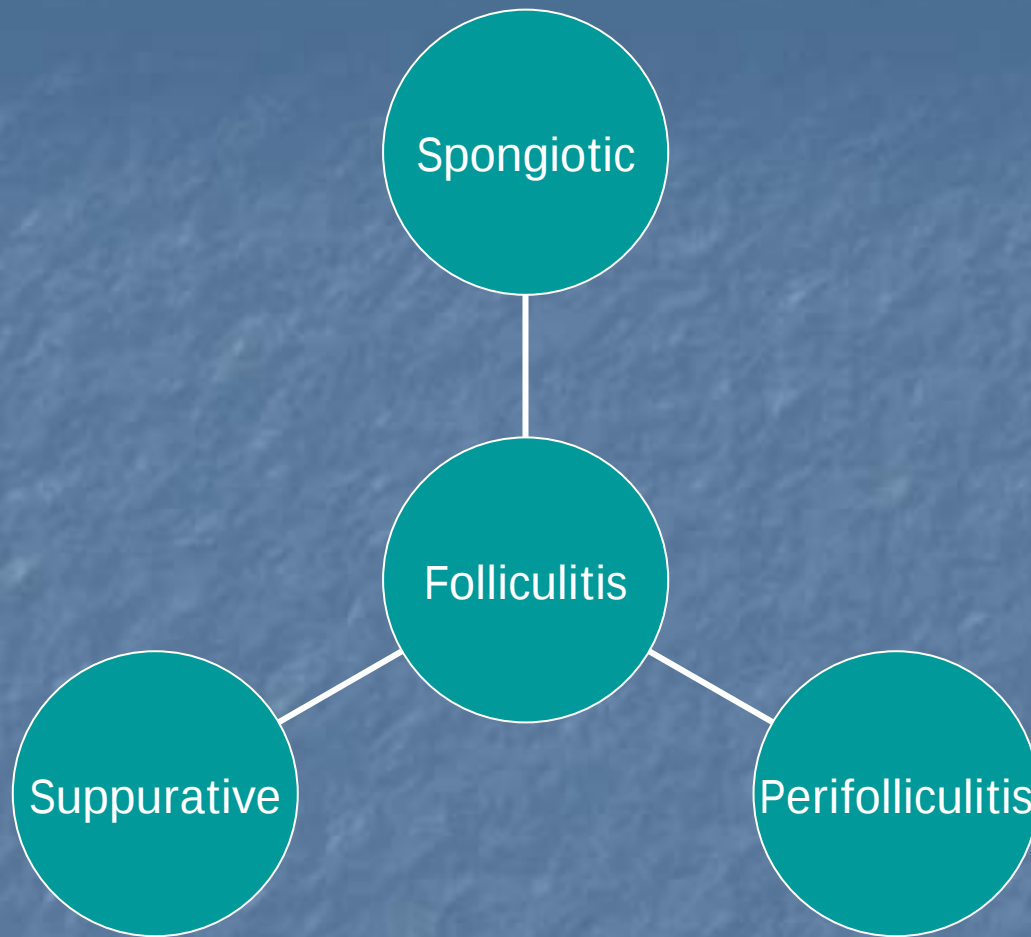


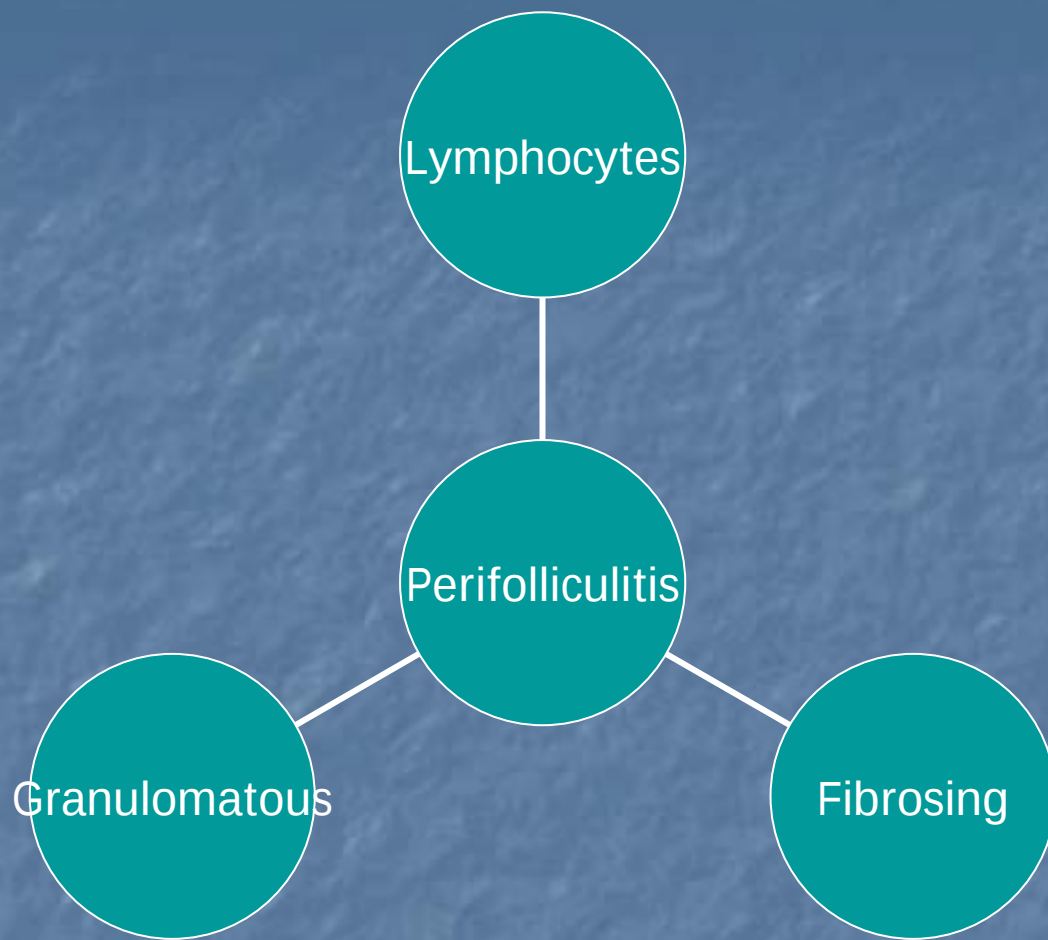
- Follicle density normal
 - Androgenic alopecia
 - Telogen effluvium
 - Trichotillomania
- Follicle density decreased
 - Traction alopecia

Alopecia Inflammatory

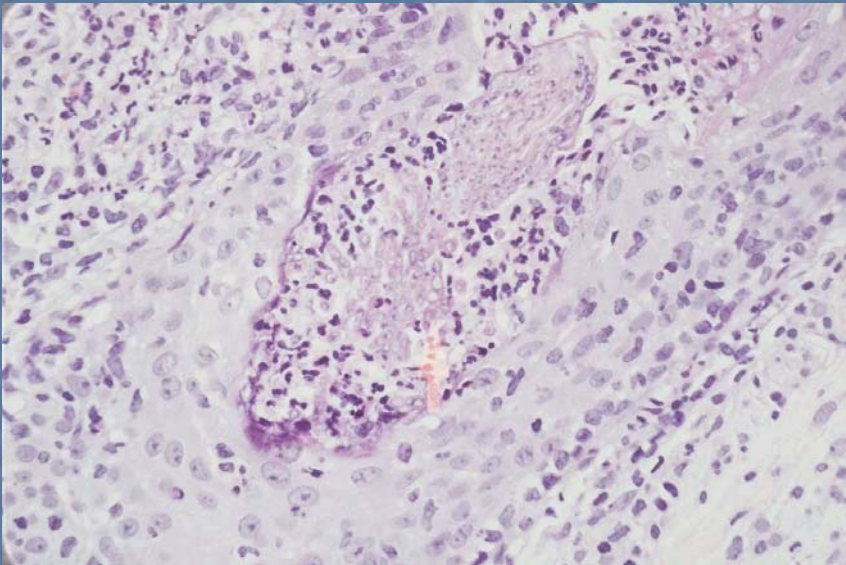


- Alopecia areata
 - Lichen planopilaris
 - DLE
 - Scleroderma
- Folliculitis decalvans
 - Tinea capitis
 - Majocchi's granuloma
 - Burns/Radiation
- Syphilis
- Scar
 - LPP
 - Scleroderma
 - DLE



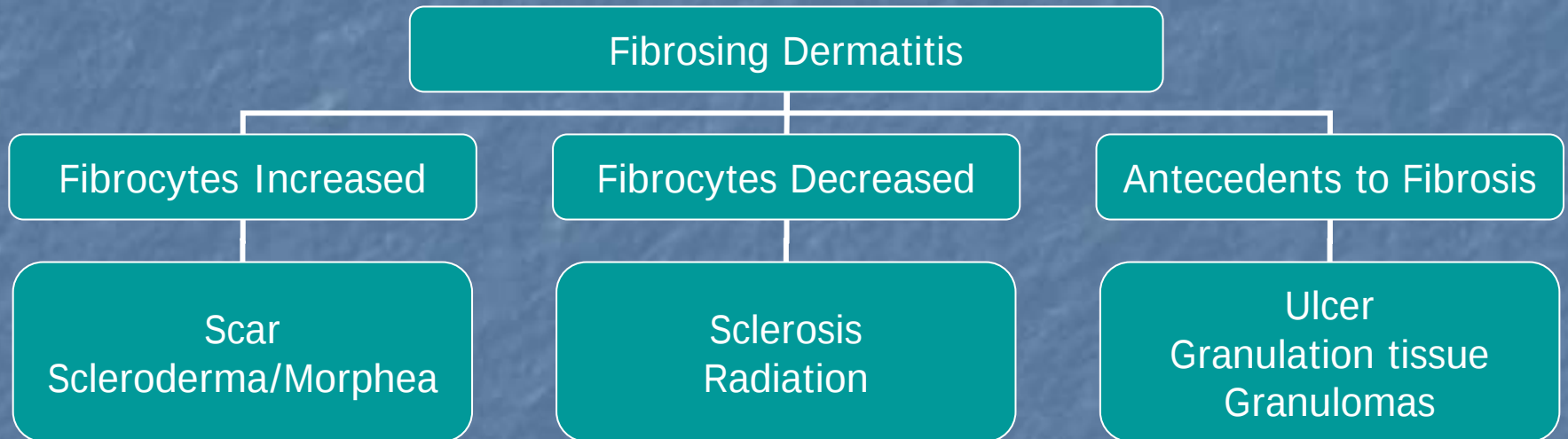


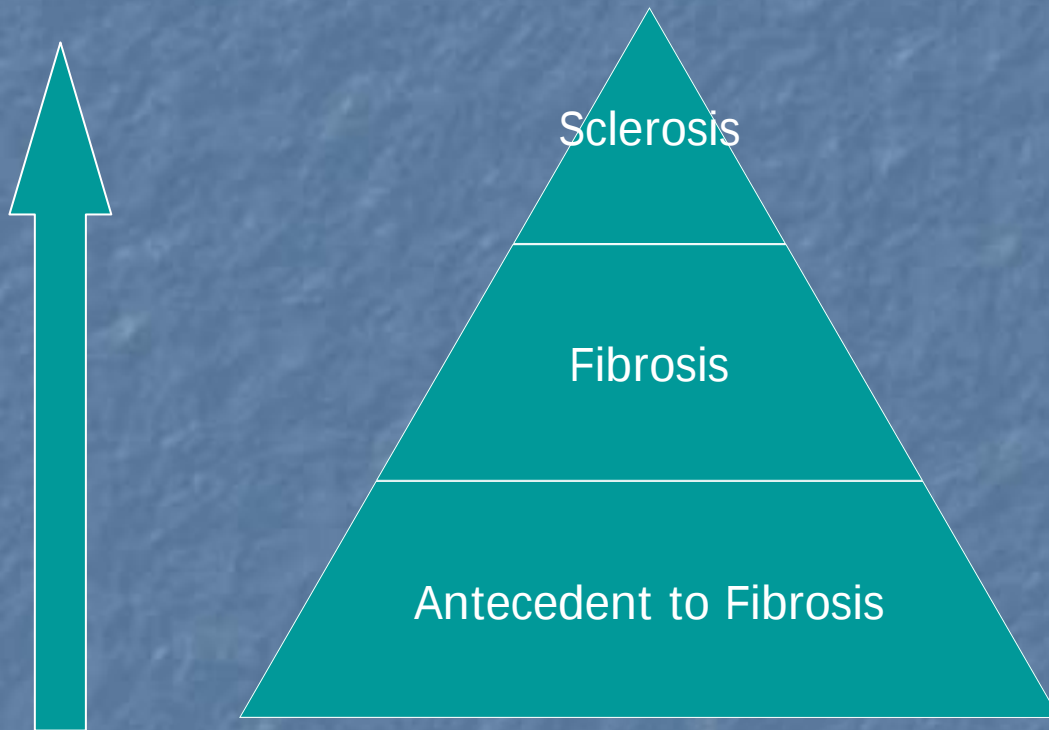
Folliculitis/Perifolliculitis



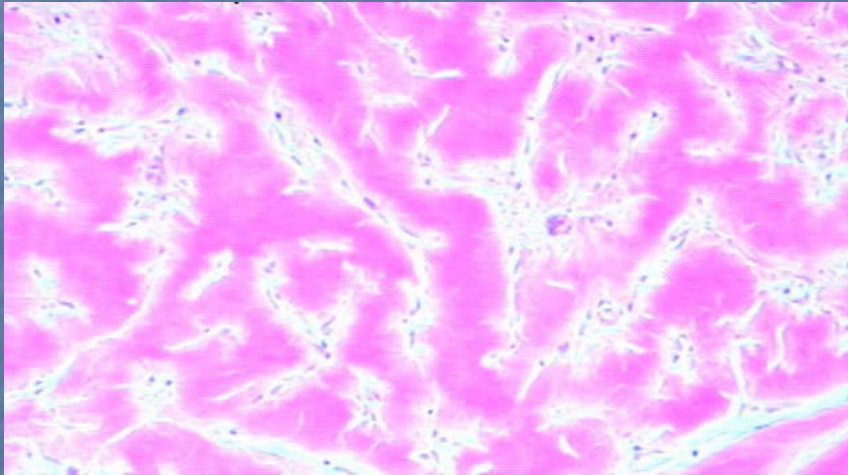
- Infectious (Staph, Strep, Dermatophytosis Endothrix/Ectothrix)
- Acne vulgaris
Acne rosacea
Perforating disorders
- Infundibulofolliculitis
Alopecia mucinosa
- Perifolliculitis
 - Scurvy
 - Lichen planopilaris
 - DLE
 - Rosacea
 - Keratosis pilaris

Fibrosing Dermatitis





Fibrosing Dermatitis

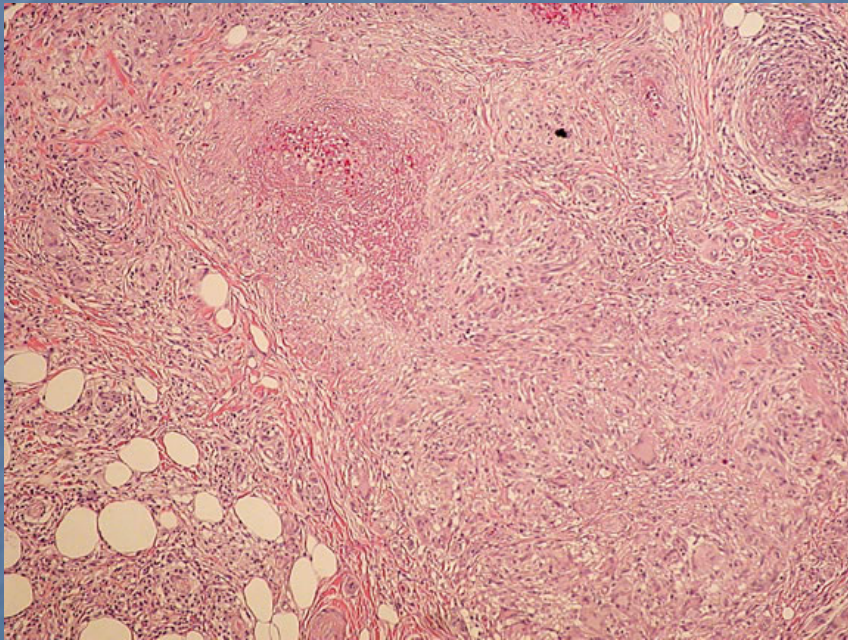


- Scar
 - Chronic lymphedema
 - Keloid
 - Dermatofibroma
- Anetoderma
 - Acrodermatitis
 - chronica atrophicans
 - LSEA/Morphea
 - Radiation sclerosis

Panniculitis



Panniculitis



- Erythema nodosum
Erythema induratum
- Lupus panniculitis
Infectious
Pancreatic fat
necrosis
Lymphoma
SubQ fat necrosis
Poststeroid
panniculitis

Questions

Would you have invested?



Microsoft Corporation, 1978

- People talk fundamentals and superlatives and then make some changes of detail.

Oliver Wendell Holmes Jr. (1841 - 1935)