

(بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ)

MSS-2

Chronic inflammatory dermatoses and blistering disease.

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Chronic inflammatory dermatoses are persistent skin conditions that exhibit their most characteristic features over many months to years.

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The skin surface in some chronic inflammatory dermatoses is roughened as a result of excessive or abnormal scale formation and shedding (desquamation).



# 1. Psoriasis

أهم شيء في "Vital Organ"

- Psoriasis is a common chronic inflammatory dermatosis, affecting 1% to 2% of individuals.
- psoriasis is associated with an increased risk for heart attack and stroke, a relationship that may be related to a chronic inflammatory state.
- Psoriasis also is associated in up to 10% of patients with arthritis.

لماذا الظهيرة هي «تواليد» "Cytokine"

لأنه المدّة طويلة  
فهي تؤدي إلى تأثير  
بأغلب الأعضاء



# Pathogenesis

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- Psoriasis is a T cell-mediated inflammatory disease, presumed to be autoimmune in origin, although the antigens are not well described.
- Both genetic and environmental factors contribute to the risk.

positive Ground to have psoriasis

Chemo Kines  
Macrophages  
T-cell

Macro + T

راح يخبثوا

يعطو pro-infla

يخبلهم يخبثوا

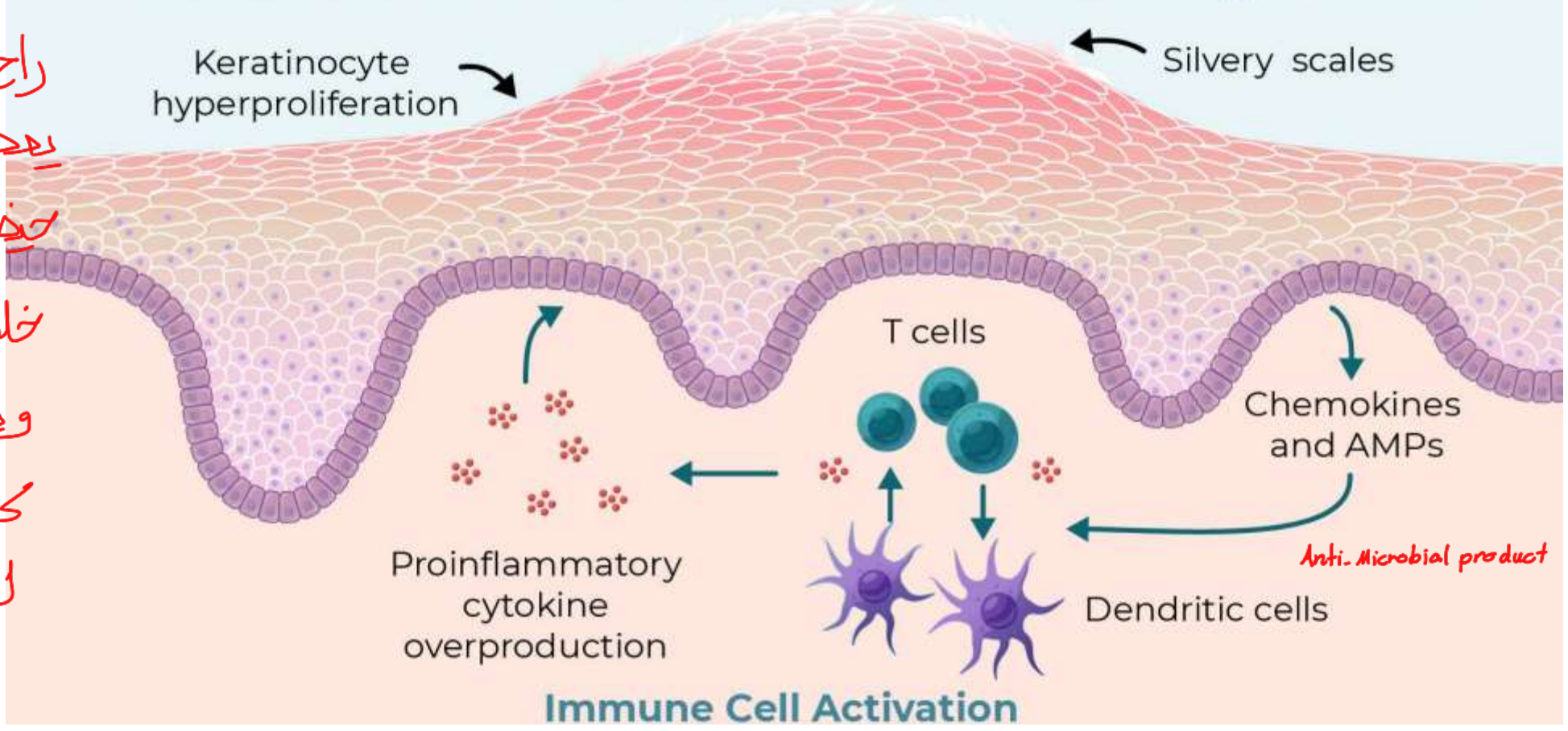
خلايا Basal

ويخبر عنده

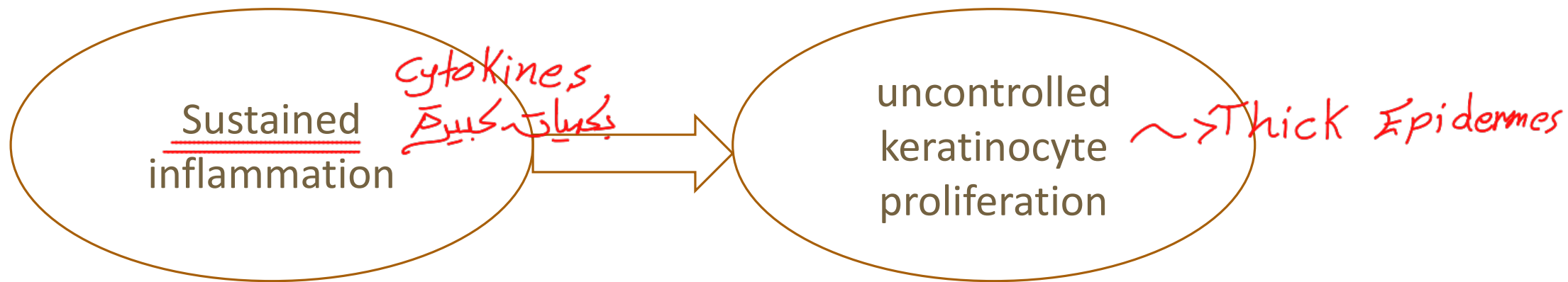
كمية من خلايا

Keratinocyte

# Psoriasis Is an Immune-Mediated Inflammatory Condition



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- Sensitized populations of T cells home to the dermis, including CD4+ TH17 and TH1 cells and CD8+ T cells, and accumulate in the epidermis.
  - These cells secrete cytokines and growth factors that induce keratinocyte hyperproliferation, resulting in the characteristic lesions.

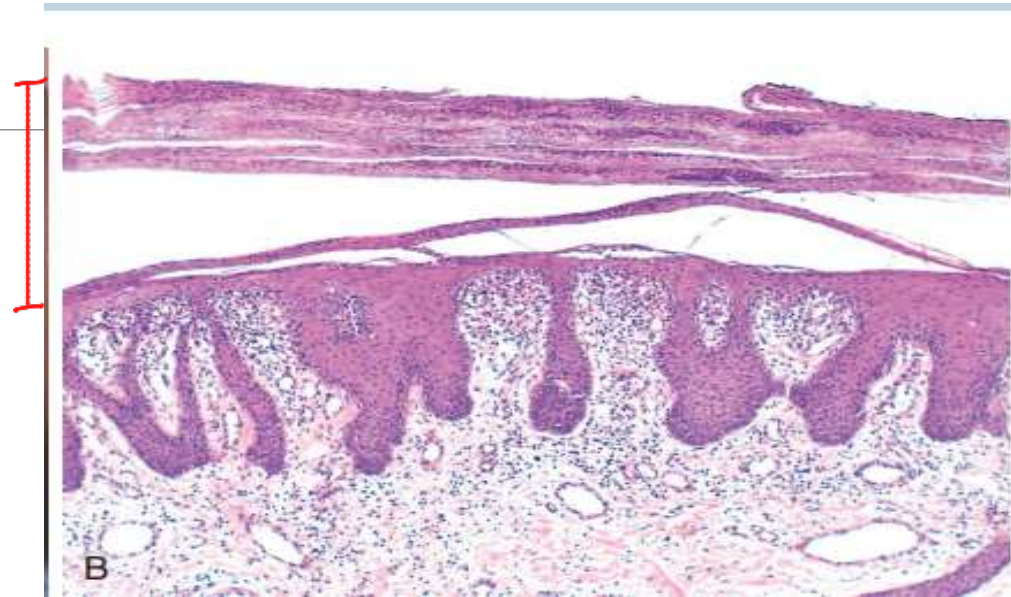




# MORPHOLOGY



well-demarcated, pink to salmon-colored plaque covered by loosely adherent silver-white scale



- \* epidermal thickening (acanthosis).
- \* regular downward elongation of the rete ridges
- \* Increased epidermal cell turnover and lack of maturation
- \* results in loss of the stratum granulosum
- \* extensive parakeratotic scale

parakeratotic: Cellular Stratum Corneum

الغزيرية تكون Acellular

وجود خلايا في الطبقة Stratum Corneum  
وجود خلايا في الطبقة الظاهرية عن نوعها في طبقة

# Clinical Features

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- Psoriasis most frequently affects the skin of the elbows, knees, scalp, lumbosacral areas, intergluteal cleft, glans penis, and vulva.
- Nail changes on the fingers and toes occur in 30% of cases.





# Treatment

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- Treatment is aimed at preventing the release or actions of inflammatory mediators.
- Mild disease is treated topically with ointments containing corticosteroids or other immunomodulatory agents,
- more severe disease is treated with phototherapy (which has immunosuppressive effects) or systemic therapy with immunosuppressive agents such as methotrexate or TNF antagonists

## 2. Lichen Planus

"LP"

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\* "Pruritic, purple, polygonal, papules, and plaques" are the tongue-twisting Ps that describe this disorder of skin and squamous mucosa

\* The lesions may result from a CD8+ T cell-mediated cytotoxic response against antigens in the basal cell layer and the dermoepidermal junction that are produced by unknown mechanisms



# Grossly

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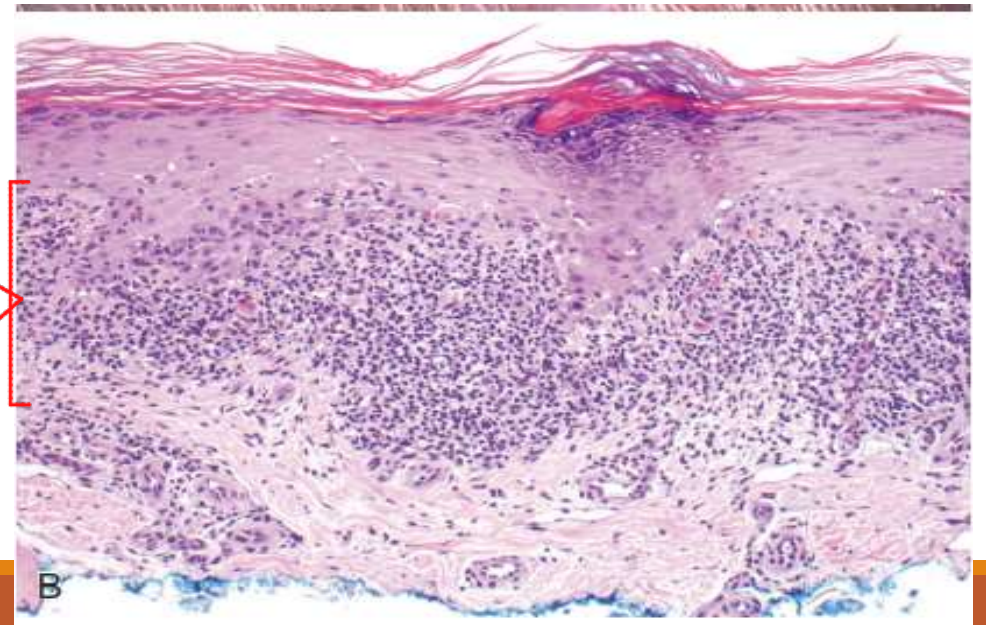
- \* Cutaneous lesions of lichen planus consist of pruritic, violaceous, flat-topped papules that may coalesce focally to form plaques .
- \* These papules are highlighted by white dots or lines termed Wickham striae.
- \* Hyperpigmentation may result from melanin loss into the dermis from damaged keratinocyte



# Microscopically

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- \* lichen planus is a prototypical interface dermatitis, so called because the inflammation and damage are concentrated at the interface of the squamous epithelium and papillary dermis.
- \* There is a dense, continuous infiltrate of lymphocytes along the dermoepidermal junction.
- \* Civatte bodies\* .A Nucleated Necrotic Keratinocyte.



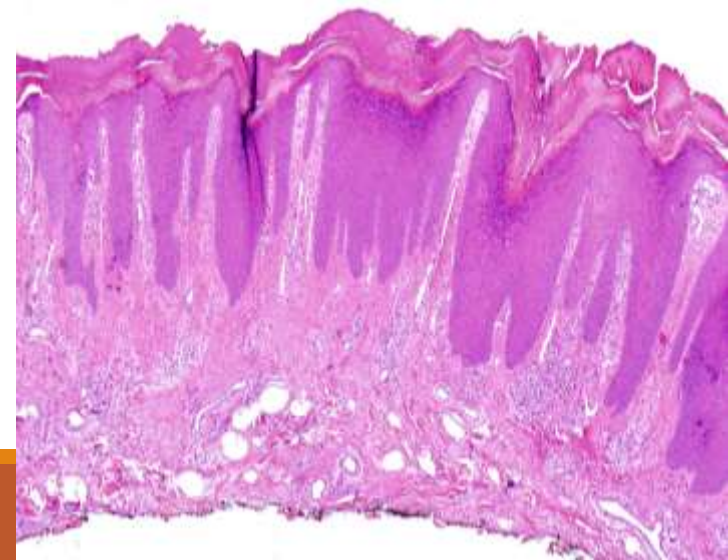
# 3- Lichen Simplex Chronicus

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- \* Lichen simplex chronicus manifests as roughening of the skin. It is a response to local repetitive trauma, usually from rubbing or scratching.
- \* The pathogenesis of lichen simplex chronicus is not understood, but the trauma probably induces epithelial hyperplasia and eventual dermal scarring.
- \* Microscopically :Lichen simplex chronicus is characterized by acanthosis, hyperkeratosis, and hypergranulosis.

→ Thick Stratum Corneum without Nucleus

Hyperkeratosis No Nucleus.  
para. Keratosis Nucleus.





# BLISTERING (BULLOUS) DISORDERS

تكون في ← Separation in one of the layers



ماكن تكون  
تأبجة لشيء  
ثاني، مثلاً:  
1-) Burn  
2-) Virus.  
3-) Tumor "wants".  
ooo.

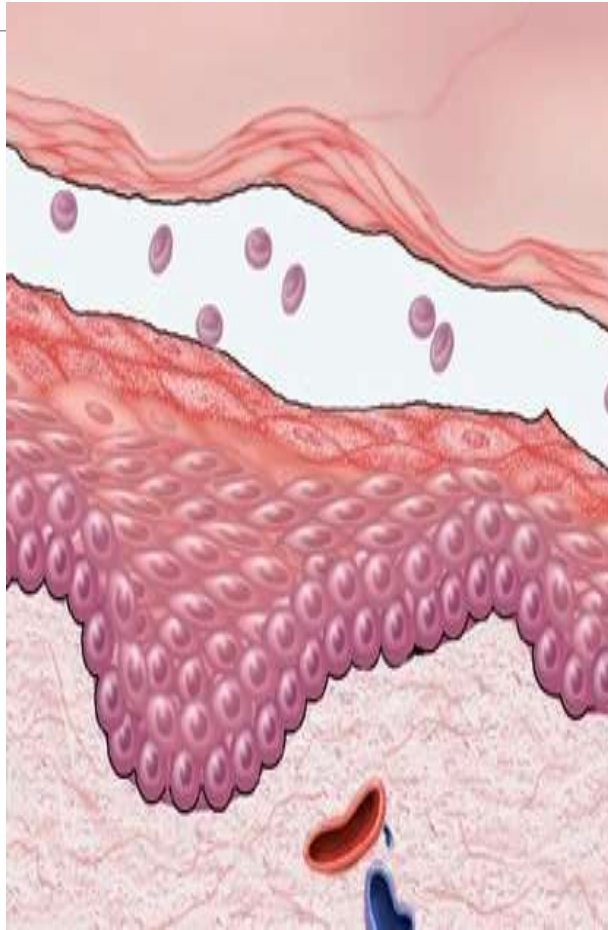
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\* Although vesicles and bullae (blisters) occur as secondary phenomena in several unrelated conditions (e.g., herpesvirus infection, spongiotic dermatitis), there is a group of disorders in which blisters are the primary and most distinctive feature. Which include:

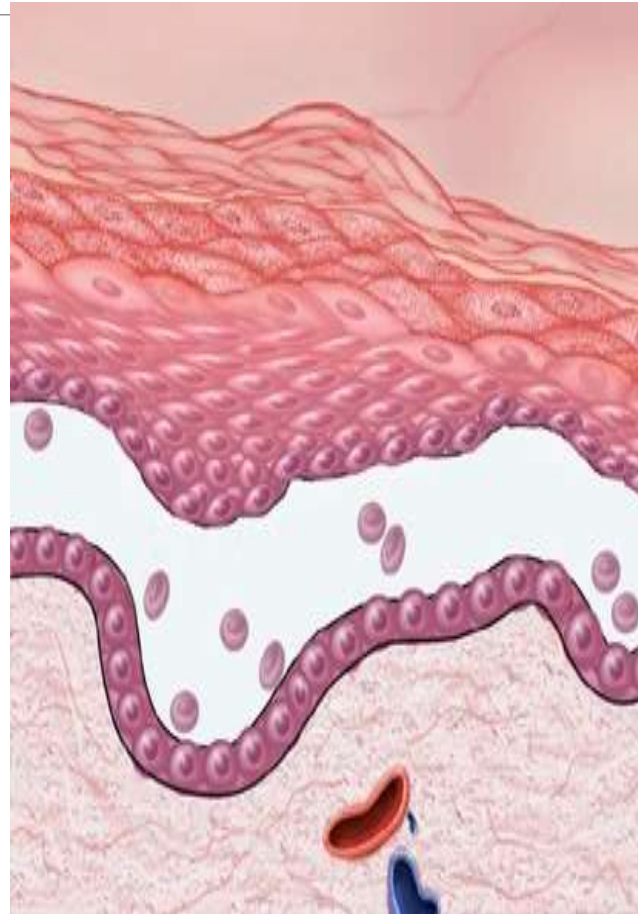
- 1-Pemphigus (Vulgaris and Foliaceus).
- 2-Bullous pemphigoid.

\* Blistering in these diseases tends to occur at specific **levels** within the skin, a morphologic distinction that is critical for diagnosis.

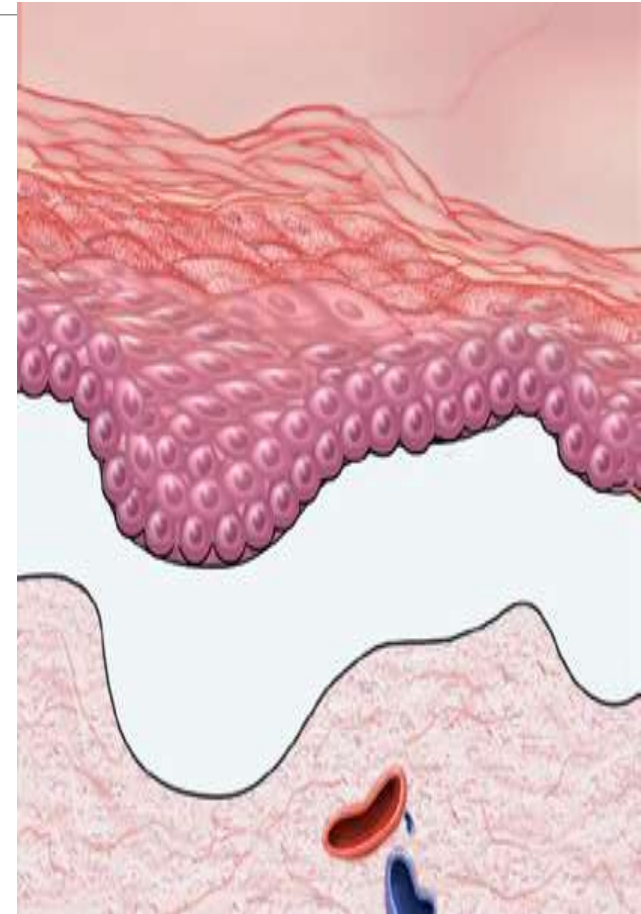
**Level of epidermal separation forms the basis of differential diagnosis for blistering disorders.**



**A-Subcorneal**



**B-Suprabasal**



**C-Subepidermal**

# 1-Pemphigus (Vulgaris and Foliaceus)

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\* Pemphigus is an uncommon autoimmune blistering disorder resulting from loss of normal **intercellular attachments** within the epidermis and the squamous mucosal epithelium.

\* There are three major variants:

- Pemphigus vulgaris (the most common type)
- Pemphigus foliaceus
- Paraneoplastic pemphigus which is associated with internal malignancy.

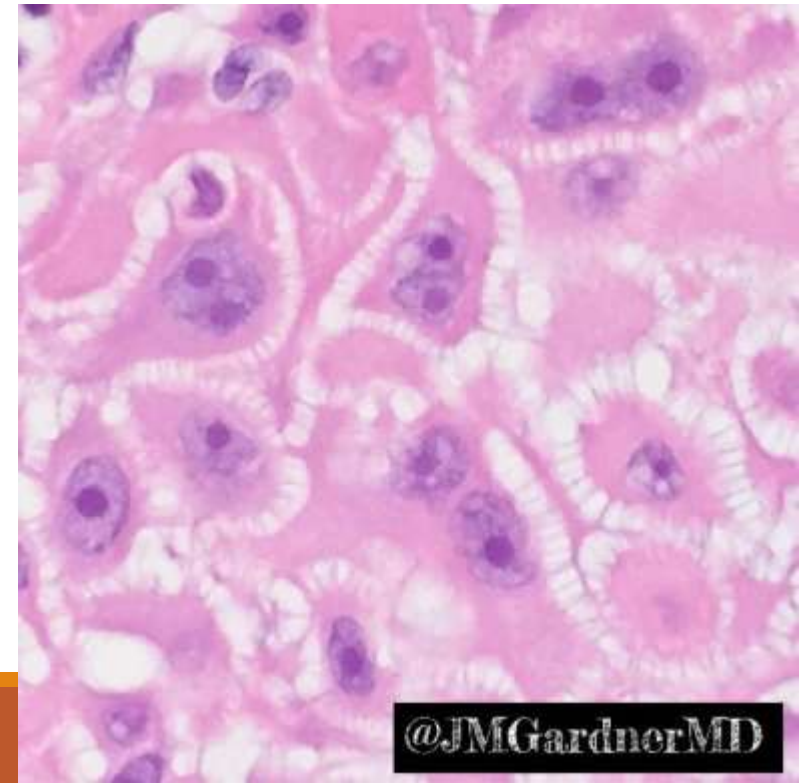
# Pathogenesis

\* Autoimmune diseases caused by: Antibody mediated hypersensitivity reactions. (Type II)

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\* Pathogenic antibodies: IgG autoantibodies

- 1- Bind to intercellular desmosomal proteins of skin & mucous membranes.
- 2- Disrupt intercellular adhesive function of desmosomes.
- 3- Activate intercellular proteases.



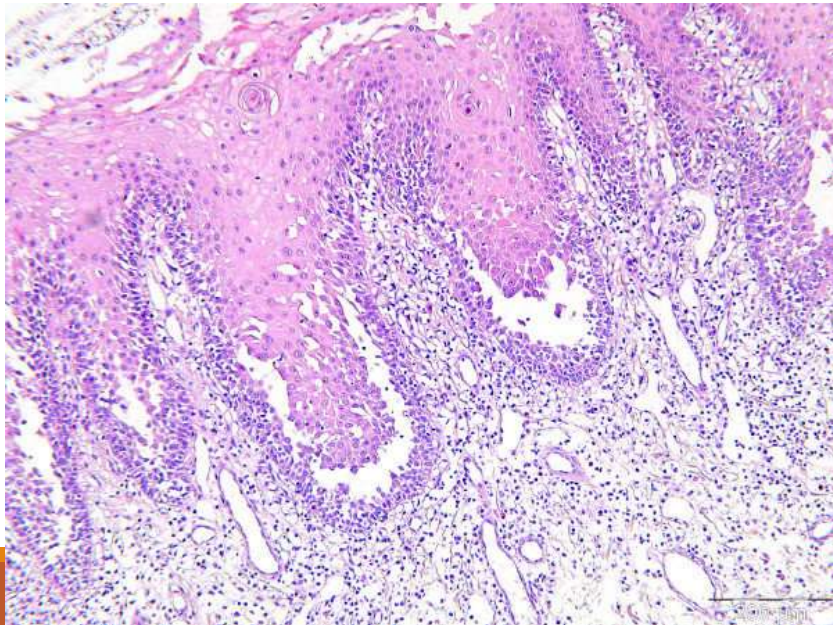


So the histological picture in all forms of pemphigus is:

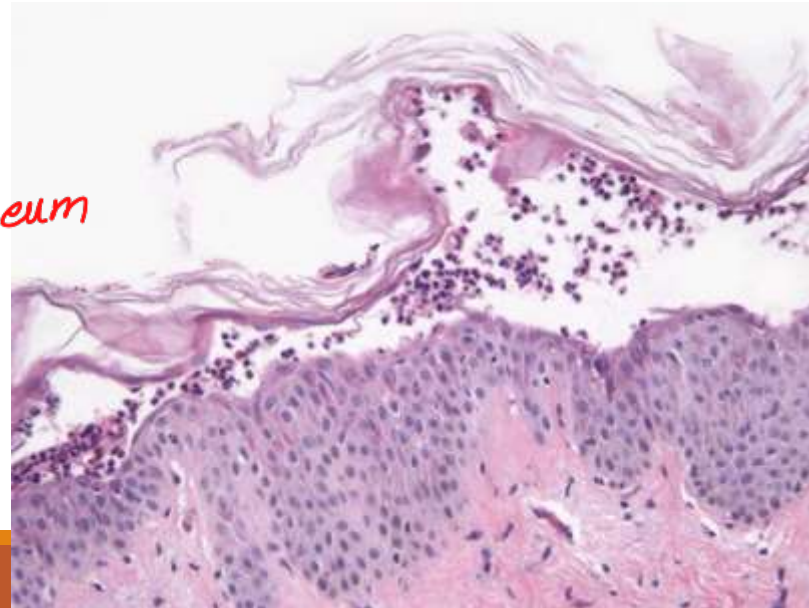
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## Acantholysis

Lysis of intercellular adhesive junctions between neighboring squamous epithelial cells results in detached cells.



sub corneum



# 1-Pemphigus vulgaris:

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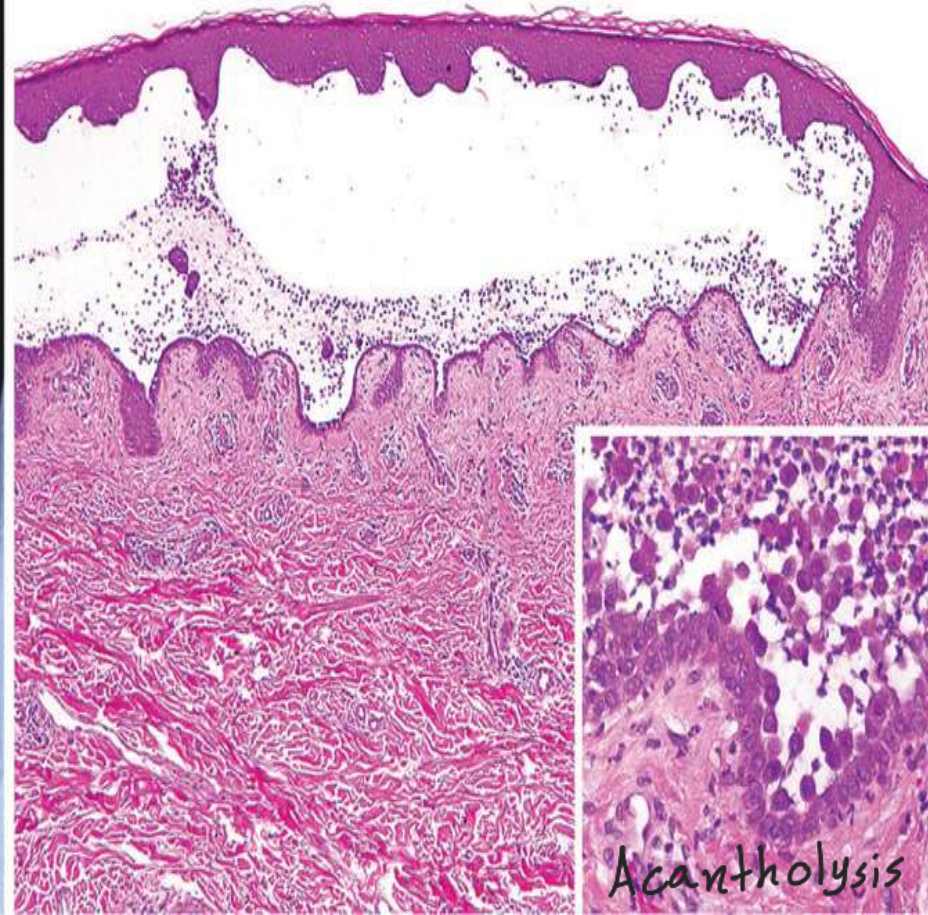
- Most common type.
- Involves both mucosa & skin of scalp, face, axillae, groin, trunk, & points of pressure. *مفكس ٨*
- The lesions are superficial vesicles & bullae rupture easily leaving deep & extensive erosions covered with serum crust.





## Pemphigus vulgaris:

- \* Erosion on leg: Group of confluent, unroofed blisters.
- \* Suprabasal acantholysis results in intraepidermal blister.



## 2-Pemphigus foliaceus:

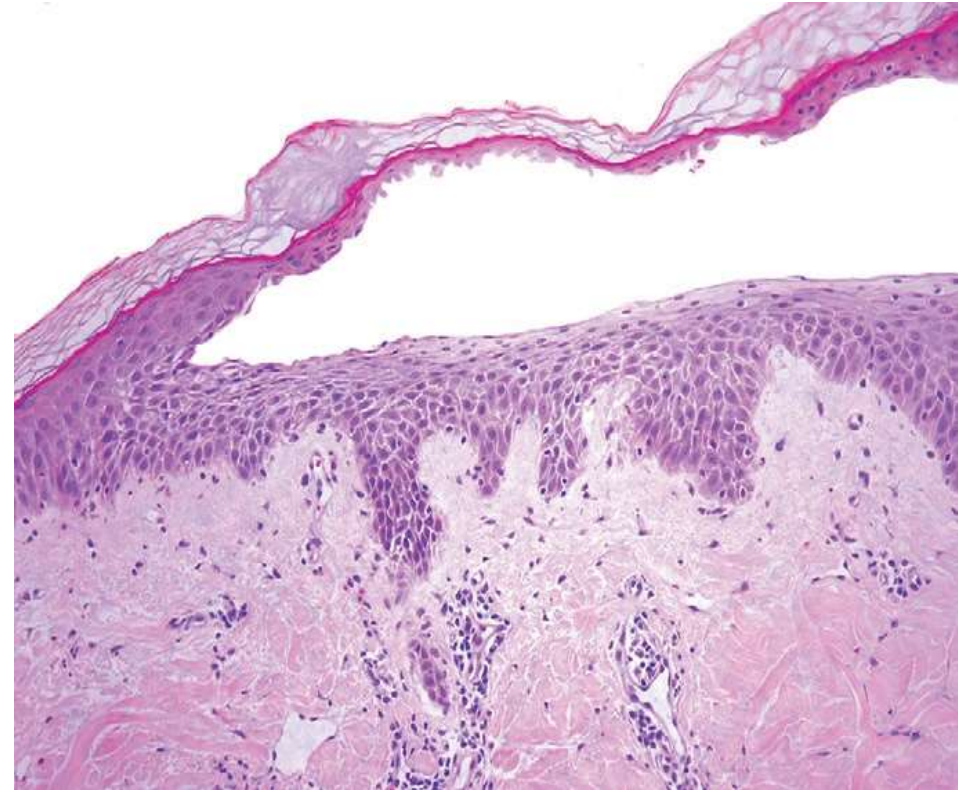
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- \* Rare variant, clinically more benign form of pemphigus.
- \* Bullae are confined to the skin with infrequent involvement of mucous membranes.<sup>x X</sup>
- \* Blisters are superficial with more limited zones of erythema & crusting of ruptured blisters.





## Pemphigus foliaceus:



less severely eroded than those seen in pemphigus vulgaris.

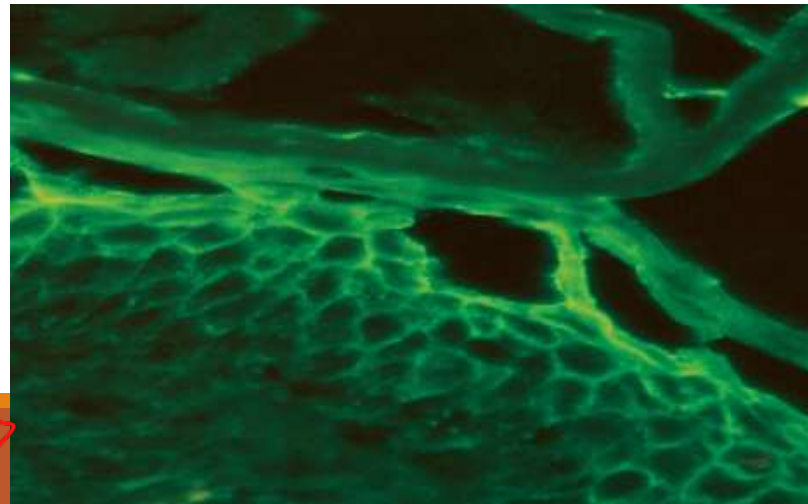
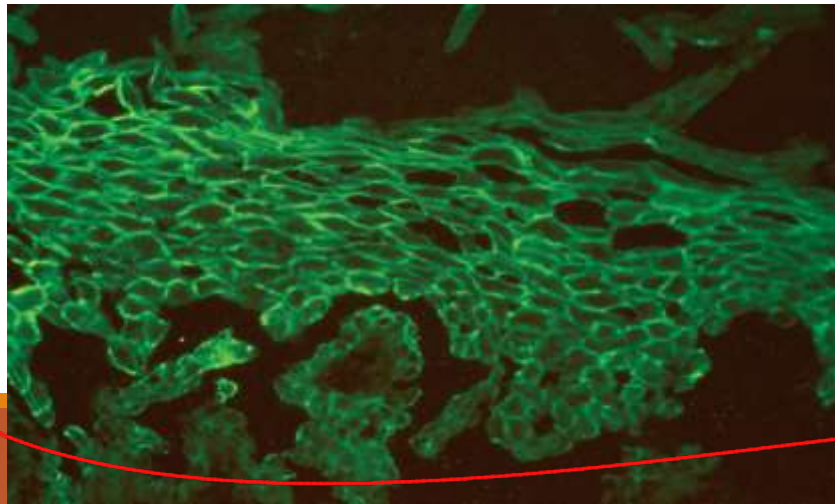
subcorneal blister.



# Diagnosis

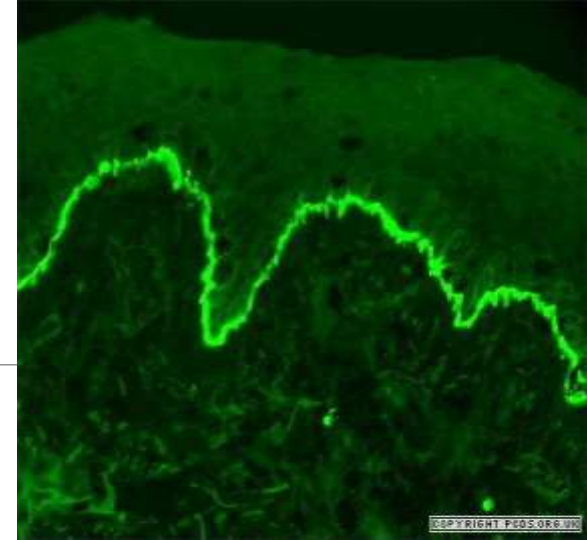
- Made on clinical, histopathologic, immunopathologic and serologic findings.
- Histopathology
  - Biopsy for H&E taken from the edge of the blister
- Immunopathology
  - Direct immunofluorescence (most sensitive):
    - Pemphigus vulgaris: Uniform deposition of Ig (green) along cell membrane of keratinocytes (fishnet pattern).
    - Pemphigus foliaceus: Ig deposits confined to superficial layers of epidermis

شبكة كبدية



## 2-Bullous pemphigoid:

ما في "Acantholysis"



\* Acquired blistering disorder with autoimmune basis.

\* Pathogenesis

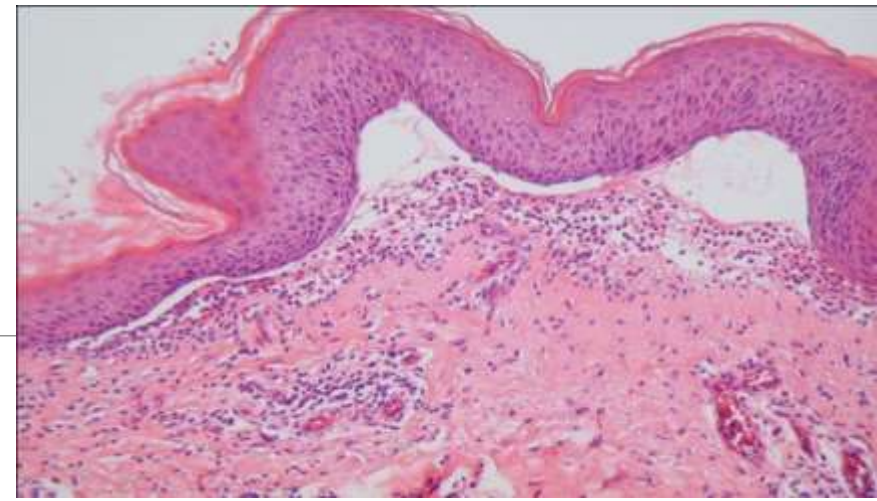
- Blistering is triggered by linear deposition of IgG antibodies in epidermal basement membrane.
- Deposition of IgG antibody detected by direct immunofluorescence as linear band outlining the subepidermal basement membrane zone.
- Tense bullae filled with clear fluid

more tense ??  
لا تده طبقة  
الجلد  
فوقها



# Microscopically

- Subepidermal nonacantholytic blisters.
- Perivascular infiltrate of lymphocytes & eosinophils.
- Superficial dermal edema.
- Basal cell vacuolization gives rise to fluid-filled blister.
- Blister roof consists of full thickness with intact intercellular junctions so epidermis not rupture easily. (Key distinction from blisters in pemphigus)



ليس صعب انه  
= حيس rupture الالتهاب

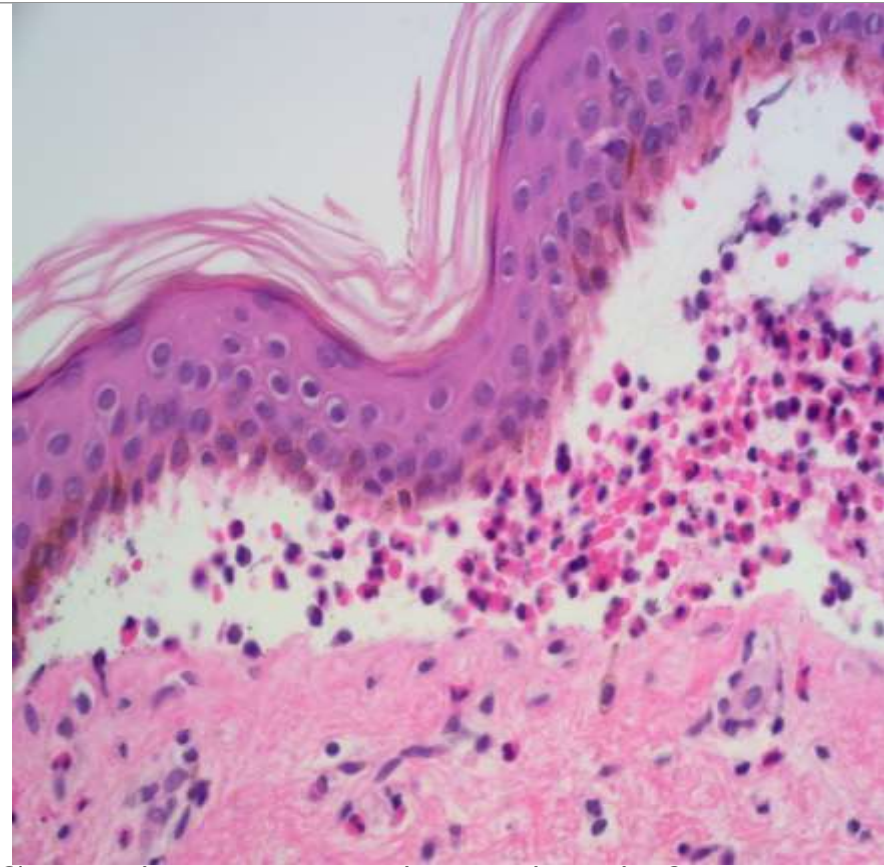
- 1) Thick Epidermes
- 2) Epidermis intact "No seperation"



# Bullous pemphigoid.



**Tense blister**



**Subepidermal vesicle with inflammatory infiltrate rich in eosinophils.**