SKIN
PSORIASIS

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Psoriasis vulgaris

- Characterized by red plaques with silver scales that show petechiae when removed.
  - No pustules
  - Pruritis common
- Bilateral but not symmetrical
    - Often spares exposed areas
- May be limited to elbows and knees or scalp
- Lumbosacral involvement
- May be limited to penis and anogenital region
- Nail pitting and discoloration in 25% of patients
  - Disease may be limited to nails

Psoriasis vulgaris

- Type I
- Early onset disease
- 75%
- Median age for women is 16 years-old
- Median age for men is 22 years-old
- Type II
- Late onset disease
- Median age 56 years-old
- Not seen in Native Americans
- Low incidence in West Africans, Japanese, Eskimos

Psoriasis vulgaris

- If one parent has psoriasis, 8% of offspring develop disease
- If both parents have psoriasis, 41% of offspring develop disease
- 66% HLA-Cw*0602 association
- 15% of patients will have arthritis
- Skin lesions may be induced by trauma (Koebner phenomenon)

Psoriasis vulgaris

- Seronegative spondyloarthritis of Reiter's disease type is associated with presence of HLA-B27.
- Seen in 5% of patients.
- Rare before age 20
- Involves sacroiliac joints, hips, cervical spine
- Associated with pustular psoriasis and psoriasis erythroderma
- There is a distal version of seronegative psoriasis that manifests as asymmetrical oligoarthritis
- DIP joints of hands and feet
- No subcutaneous nodules

Psoriasis

- Pathogenesis
- T-cell mediated disease.
- CD4+ T_H1 and T_H17 as well as CD8+ cells in epidermis
- TNF is major mediator of the lesion.
- Physical trauma (rubbing and scratching) stimulates the proliferative process
- Stress may lead to disease flares
- Acute onset should prompt check of HIV status

Psoriasis

- Pink to salmon-colored plaque covered by loosely adherent silver-white scale
- Histopathology
- Increased epidermal cell turnover results in epidermal thickening (acanthosis) with downward proliferation of rete ridges.
- Cell cycle shortens from 311 to 36 hours
- Mitoses above basal cell layer.
- Stratum granulosum is thinned; extensive overlying parakeratosis.
- Dermal vessels dilated near papillae.

Psoriasis

- Multiple, minute, bleeding points when the scale is lifted from the plaque (Auspitz sign).
- Neutrophils form small aggregates within slightly spongiotic foci of the superficial epidermis (spongiform pustules)
- And within the parakeratotic stratum corneum (Munro microabscesses).
- In pustular psoriasis, larger abscess-like accumulations of neutrophils are present directly beneath the stratum corneum

Uncommon types of psoriasis

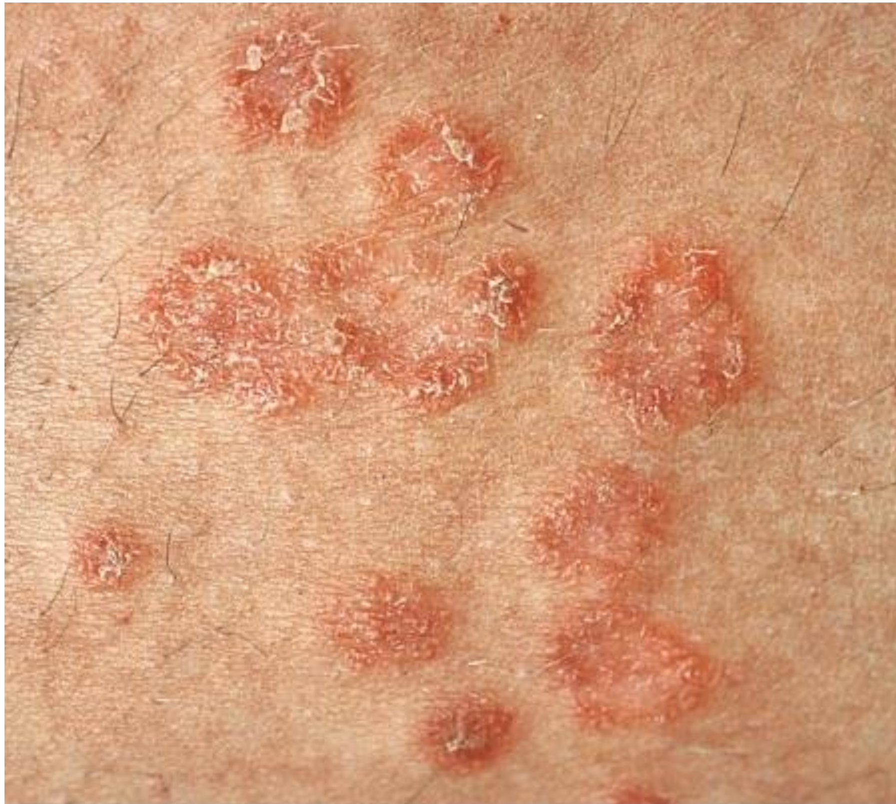
- Guttate
- Streptococcal pharyngitis precedes
- Typically self-limited though it takes months to clear
- Small, round lesions with silvery scales present over upper trunk and involving the nails
- Palmoplantar pustulosis
- 4 times more common in women
- Median age 50 years
- Pustules involve hands and feet
- Spare acral areas
- Unexplained remissions and exacerbations

Uncommon types of psoriasis

- <u>Pustular (Von Zumbusch)</u>
- Acute onset
- Burning erythema that rapidly spreads in hours
- Pinpoint pustules appear in clusters then become confluent
- Fever, malaise, leukocytosis prominent
- Impetigo herpetiformis with hypercalcemia is variant form seen in pregnancy
- May evolve into psoriasis vulgaris

Psoriasis

- **Scale** Fig. 3-1



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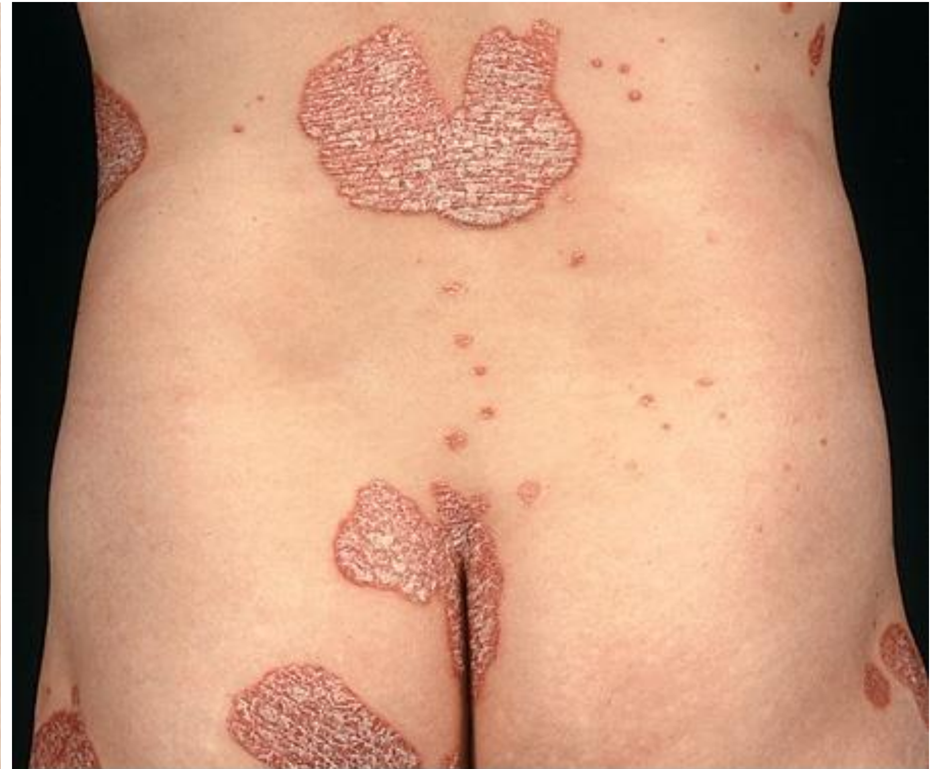
Plaque Fig. 3-4 Accessed 07/16/2010



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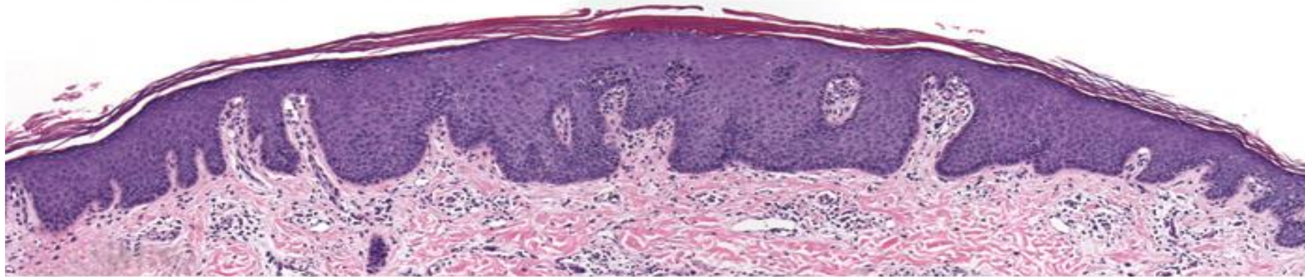
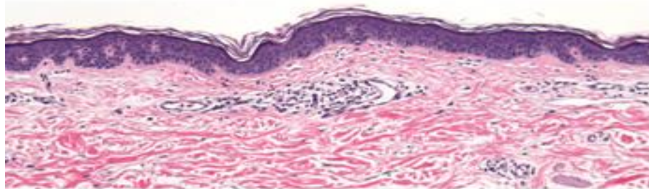
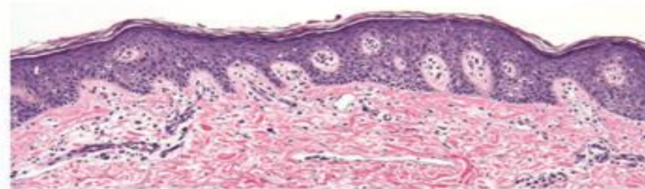
Psoriasis







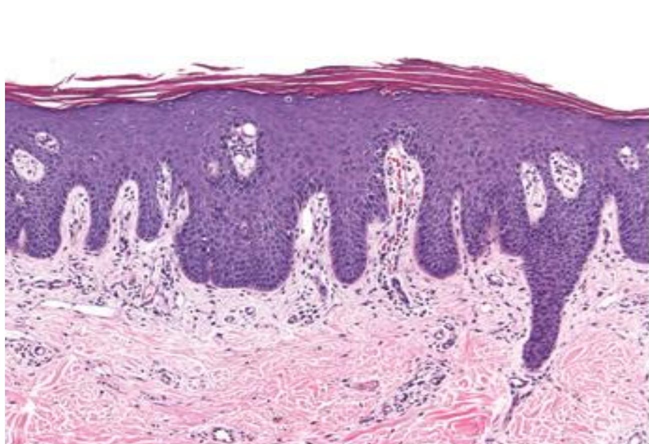


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Fig. 18-3 Accessed 04/18/2011

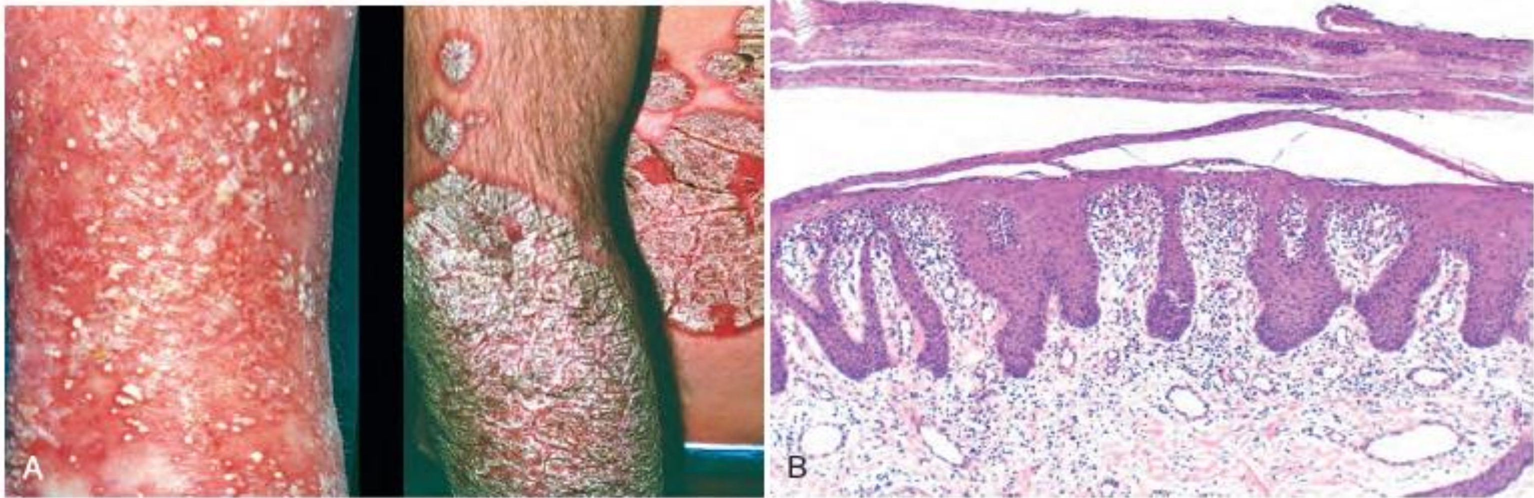

Figure 25-25 Psoriasis. **A,** Early lesions may be dominated by inflammation, marked by the presence of small pustules and erythema *(left).* Established chronic lesions are erythematous and covered by a characteristic silver-white scale *(right).* **B,** Microscopically there is epidermal hyperplasia, parakeratotic scale, and accumulation of neutrophils within the superficial epidermis.

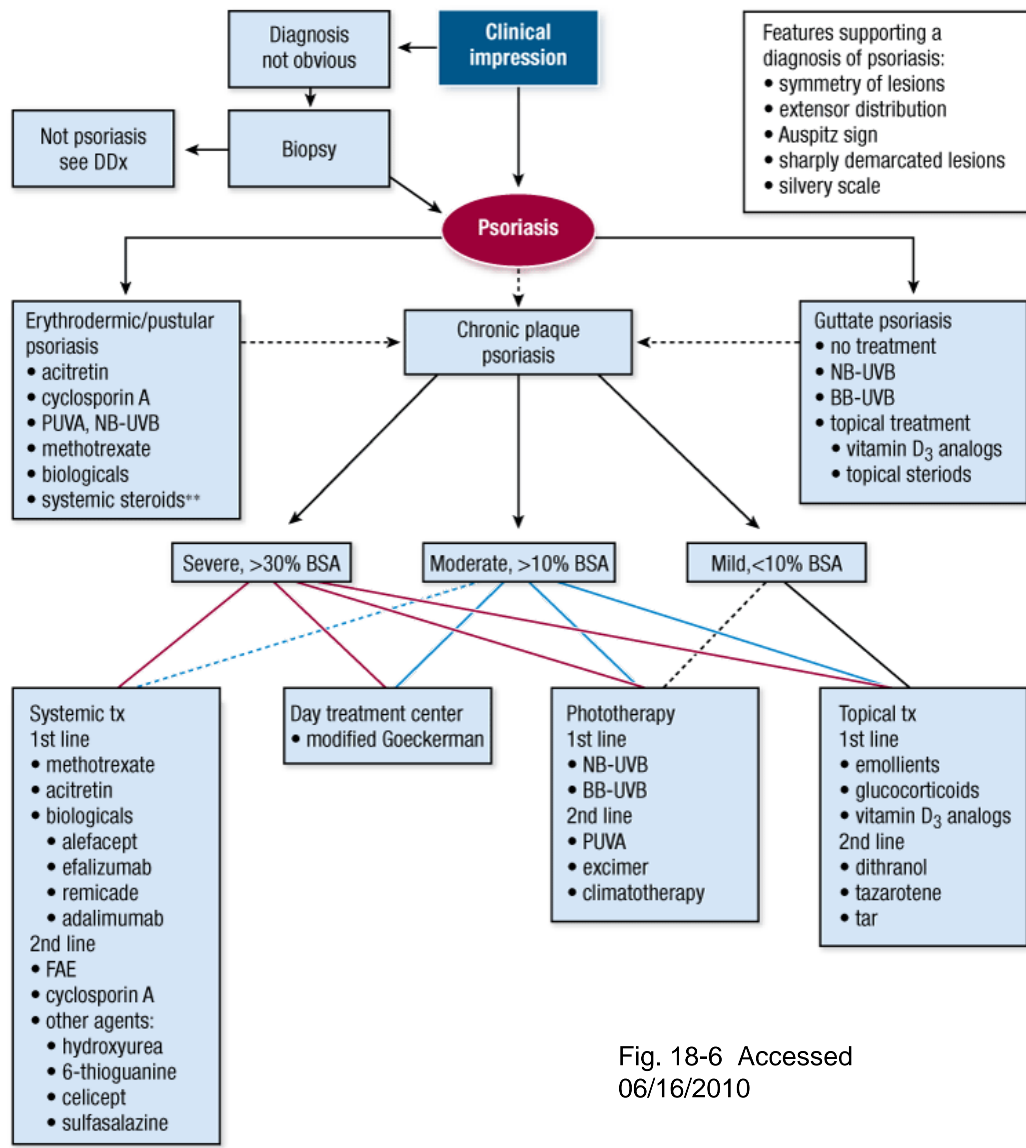

Fig. 18-6 Accessed 06/16/2010

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Seborrheic dermatitis

- Classically involves regions with a high density of sebaceous glands, such as the scalp, forehead (especially the glabella), external auditory canal, retroauricular area, nasolabial folds, and parasternal area.
- Etiology unknown
- May be due to dopamine deficiency (Parkinson's)
- Colonization by Malassezia fungi

Seborrheic dermatitis

- Macules and papules on an erythematous-yellow, often greasy base, typically in association with extensive scaling and crusting.
- Fissures may also be present, particularly behind the ears.
- Dandruff is the common clinical expression of seborrheic dermatitis of the scalp.

Seborrheic dermatitis

- Histopathology
- Parakeratotic layers containing neutrophils and serum are present at the ostia of hair follicles (follicular lipping).
- A superficial perivascular inflammatory infiltrate generally consists of an admixture of lymphocytes and neutrophils.
- With HIV infection, apoptotic keratinocytes and plasma cells may also be present.