

# Dermatology

# SKIN LESIONS



# MORPHOLOGY OF SKIN

- Why is morphology an essential feature of small animal dermatological diagnosis?

- There are two (2) types of morphological lesions:
  - Primary – The direct result of the pathology of the disease.
  - Secondary – These are a direct result of the secondary effects of the disease e.g pruritus

# TYPES OF LESIONS

## Primary

- Macule
- Patch
- Papule
- Plaque
- Nodule
- Tumour
- Pustule
- Wheal
- Vesicle
- Bulla

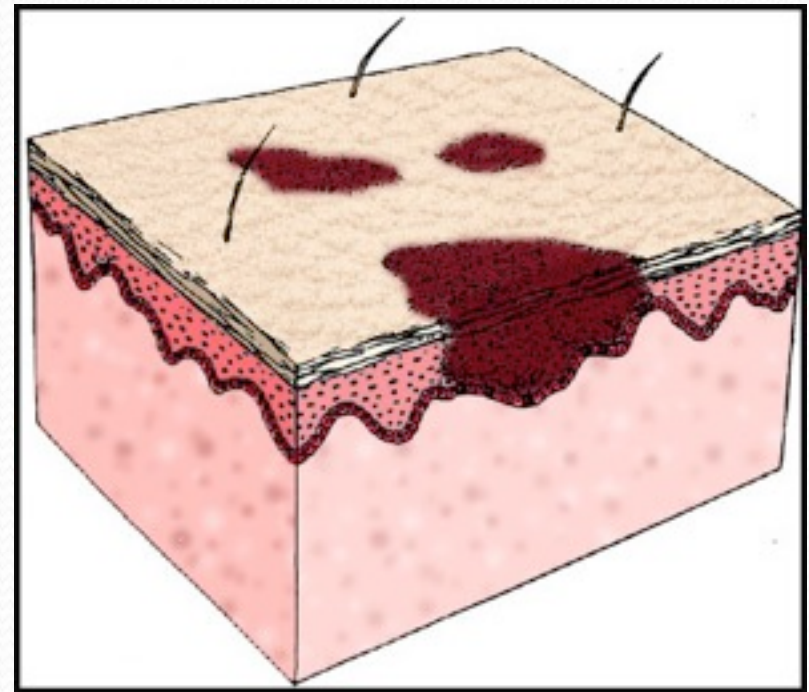
## Secondary

- Scale
- Crust
- Scar
- Ulcer
- Excoriation
- Lichenification
- Hyperpigmentation
- Hyperkeratosis

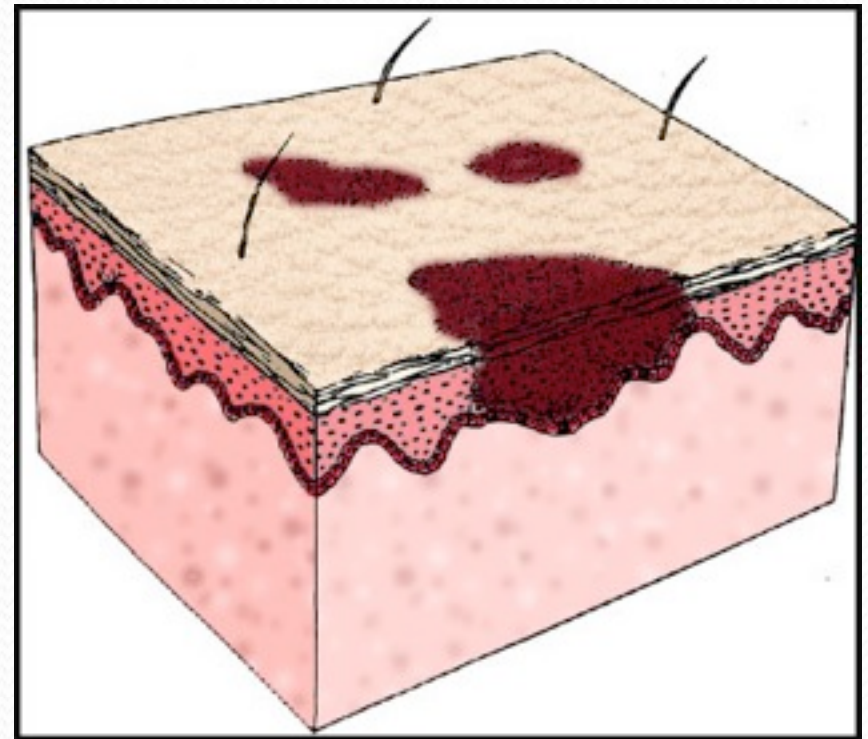
# PRIMARY LESIONS



- Circumscribed, flat spot
- **< 1cm in diameter**
- Characterised by a colour change of the skin



- Circumscribed, flat spot
- **> 1cm diameter**
- Characterised by colour change

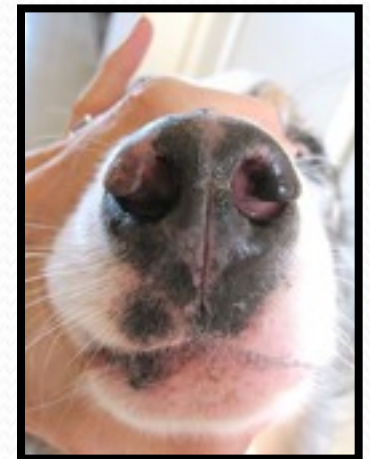
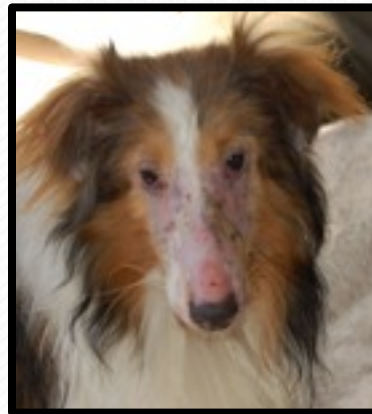




# Differential Diagnoses

- Depigmentation

- Vitiligo
- Discoid Lupus Erythematosus
- Uveodermatologic syndrome
- Mucocutaneous pyoderma



- Hyperpigmentation
  - Lentigo
  - Hormonal diseases
  - Post-inflammatory



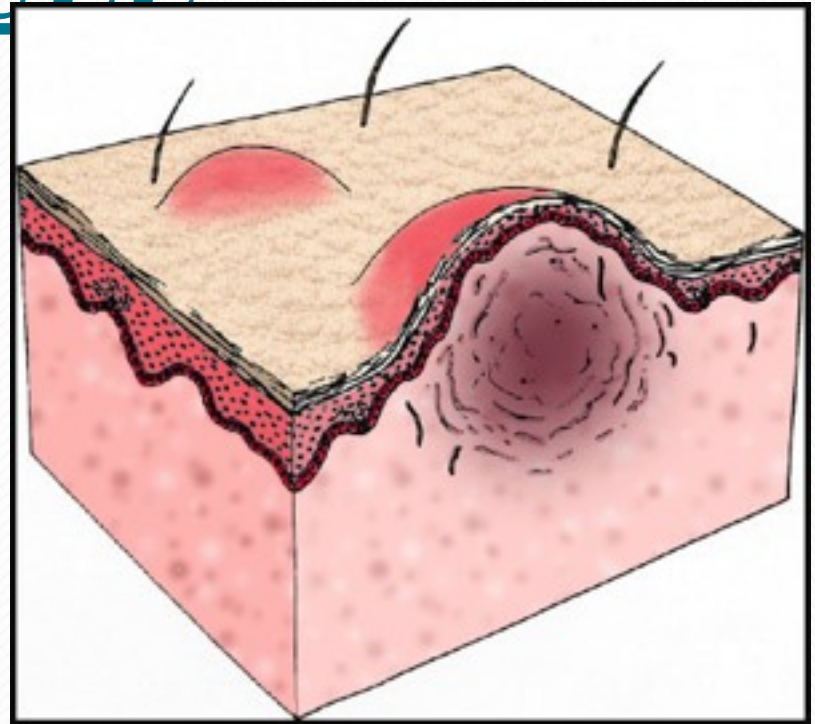
- Erythema

- Inflammation
  - Underlying disease
- Haemorrhage
  - Vasculopathies
  - Coagulopathies



# PAPULE

- Solid elevation of skin
- **< 1cm in diameter**



# PLAQUE

- Flat-topped elevation
  - Coalesced papules
- **> 1cm diameter**



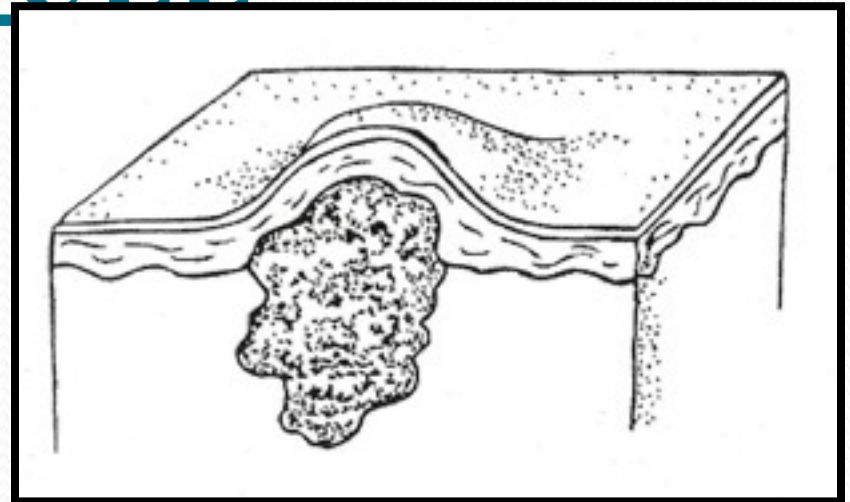
# Differential Diagnoses

- Demodicosis
- Bacterial folliculitis
- Fungal folliculitis
- Flea bite hypersensitivity
- Scabies
- Contact allergy
- Autoimmune skin disease
- Drug eruption



# NODULE

- Small, circumscribed, solid elevation
- Extends into deeper skin layers



# Differential Diagnoses

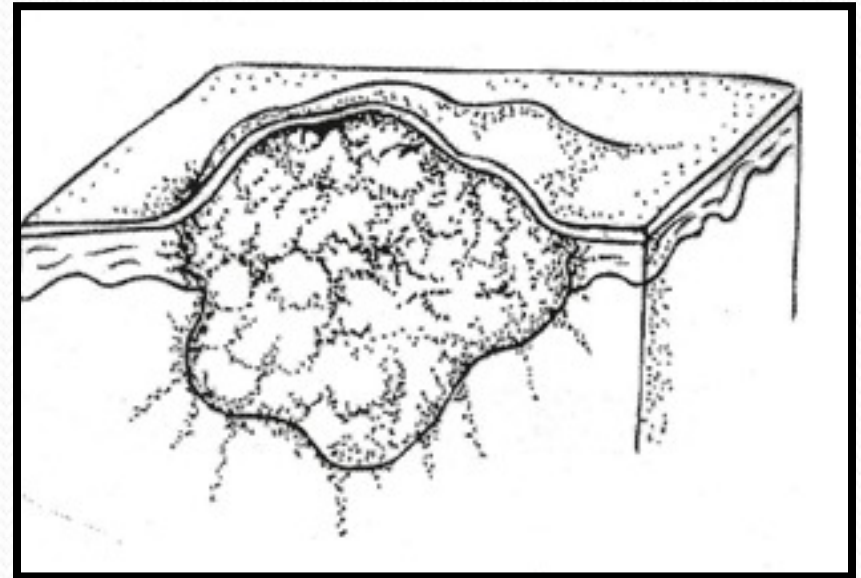
- Sterile granulomatous diseases
- Bacterial infections
- Fungal infections
- Neoplastic diseases
- Calcinosis cutis





# TUMOUR

- Neoplastic enlargement
- Composed of:
  - Skin
  - Subcutaneous tissue



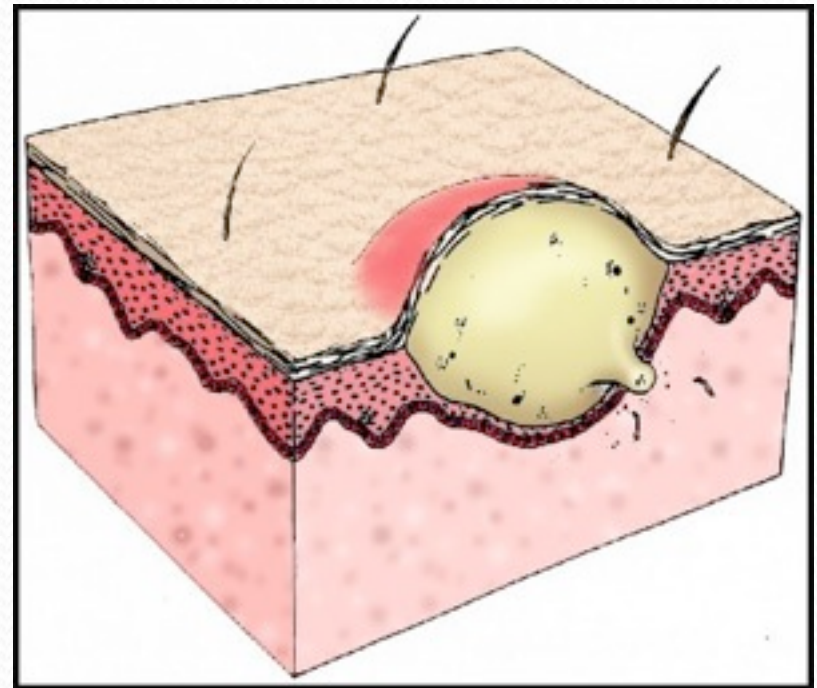
# Differential Diagnoses

- Sterile granulomatous disease
- Bacterial infection
- Fungal infection
- Neoplasia



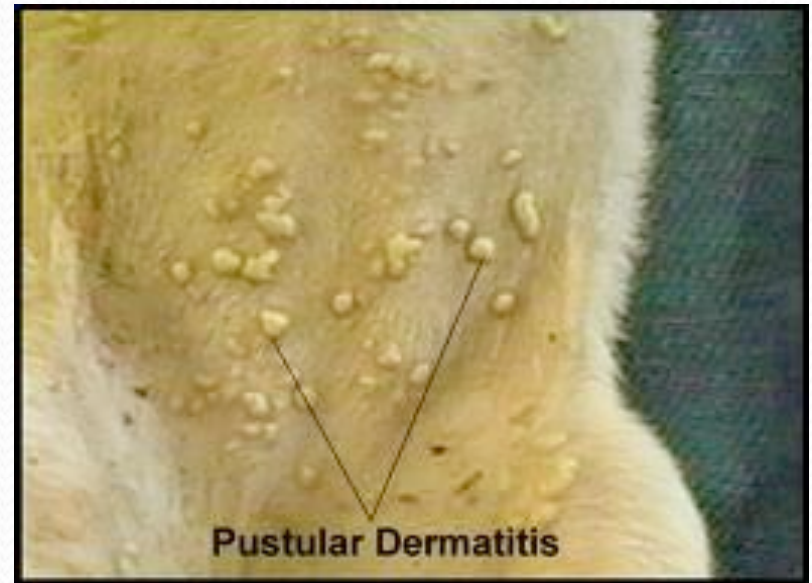
# PUSTULE

- Small, circumscribed skin elevation
- Small superficial skin abscess
- Usually yellow



# Differential Diagnoses

- Neutrophils
  - Bacterial infection
  - Fungal infection
  - Autoimmune skin disease

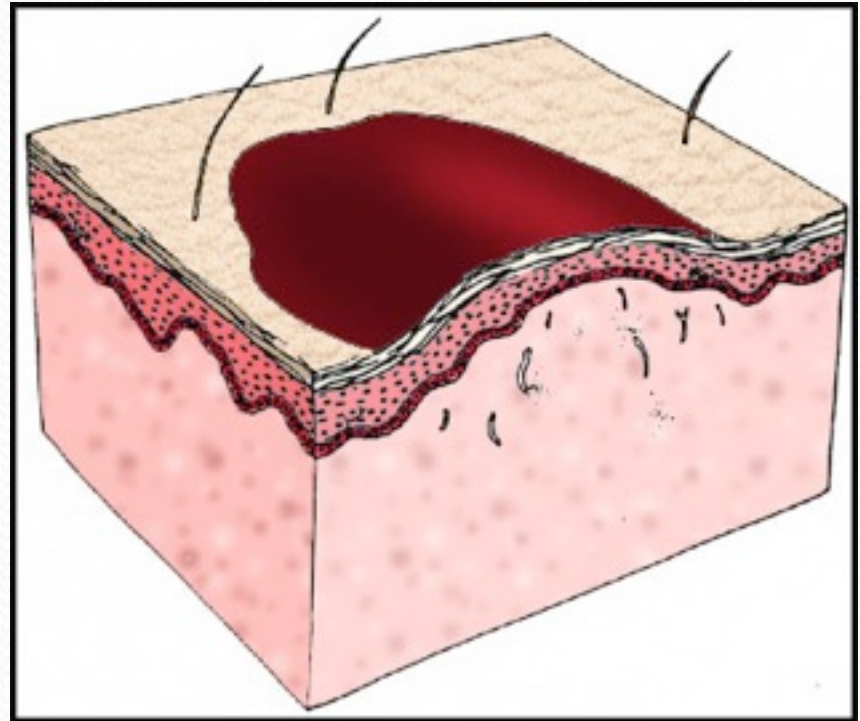


- Eosinophils
  - Flea bite hypersensitivity
  - Contact hypersensitivity
  - Parasites
  - Immune-mediated skin disease



# WHEEL

- Sharply circumscribed
- Raised lesion
- Edematous
- Two presentations:
  - White/pink elevated ridge
  - Round edematous swelling



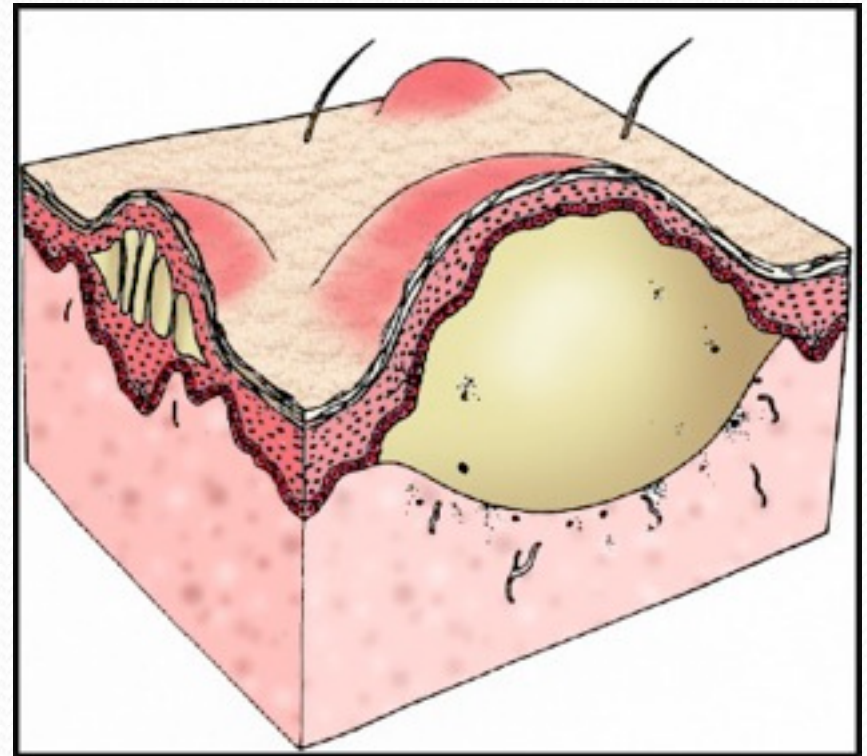
# Differential Diagnoses

- Urticaria
- Insect bites
- Other hypersensitivities
- Drug eruption



# VESICLE

- Sharply circumscribed
- Elevated
- Filled with clear, free fluid
- **≤ 1cm diameter**





# BULLA

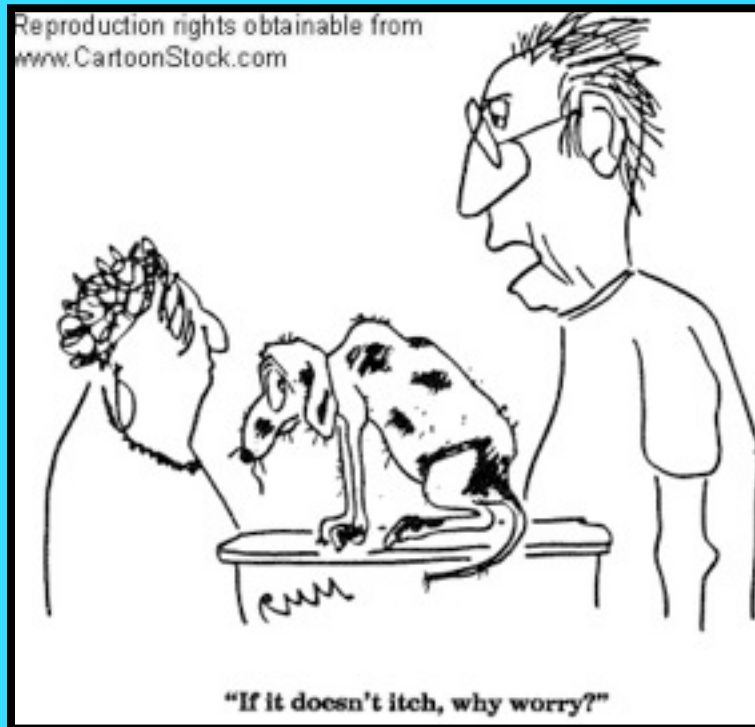
- Sharply circumscribed
- Elevated
- Filled with clear, free fluid
- **≥ 1cm diameter**



# Differential Diagnoses

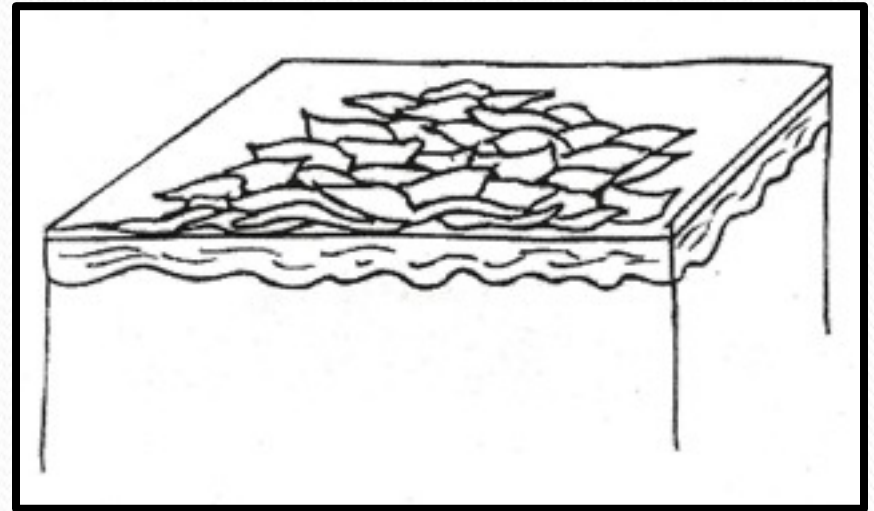
- Immune-mediated diseases
- Congenital skin diseases
- Viral diseases
- Irritant dermatitis

# SECONDARY LESIONS



# SCALE

- Can be either **PRIMARY** or **SECONDARY**
- Accumulation of loose fragments of horny layer of skin
- Final product of epidermal keratinization
- Common in seborrhoea, generalised demodicosis and chronic allergic dermatitis



- Consistency:

- Branny
- Fine
- Powdery
- Flaky
- Plate like
- Greasy
- Dry
- Loose
- Adhering

- Colour:

- White
- Silvery
- Yellow
- Brown
- Gray

# Differential Diagnoses

- **Primary lesion**
  - Follicular dysplasia
  - Idiopathic seborrheas
  - Ichthyosis

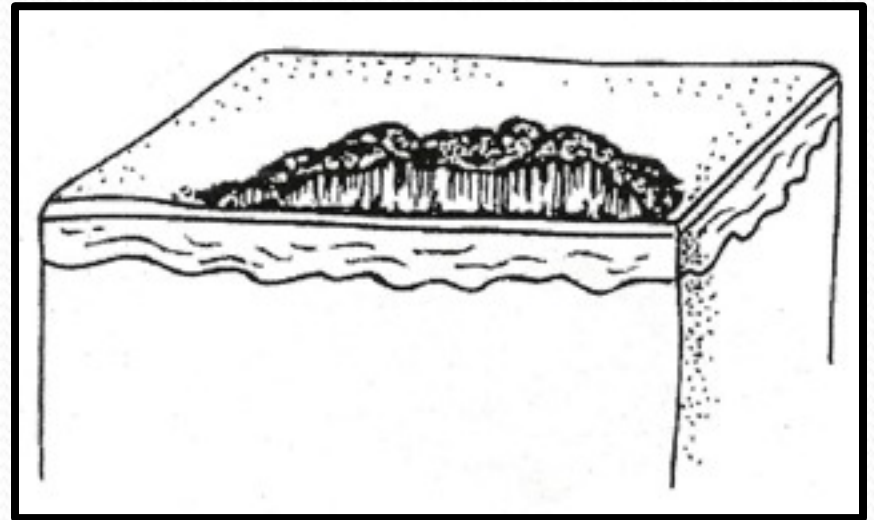


- **Secondary lesion**
  - Chronic skin inflammation



# CRUST

- Can be **PRIMARY** or **SECONDARY**
- Dried exudate on surface of a lesion
- Formed when dried fluids (e.g blood, pus, serum, medication) adhere to surface and mingle with hair





# Differential Diagnoses

- **Primary lesion**
  - Idiopathic seborrhea
  - Zinc-responsive dermatitis
  - Metabolic epidermal necrosis

- **Secondary Lesion**
  - Variety of skin diseases
  - Discussed previously



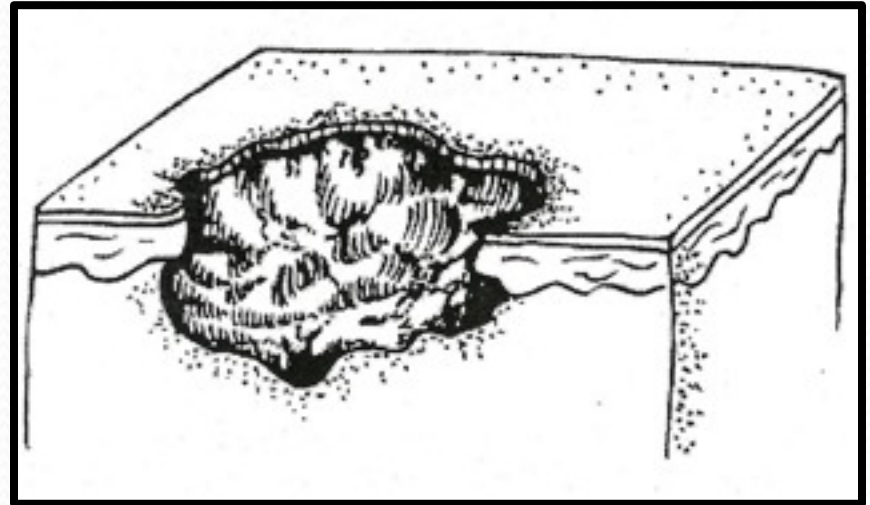
# SCAR

- Area of fibrous tissue
- Replaces:
  - Damaged dermis
  - Damaged SC tissue
- Usually:
  - Atrophic
  - Depigmented



# ULCER

- Break in continuity of epidermis
- Exposes underlying dermis
- Severe pathological process
- Heals with scars



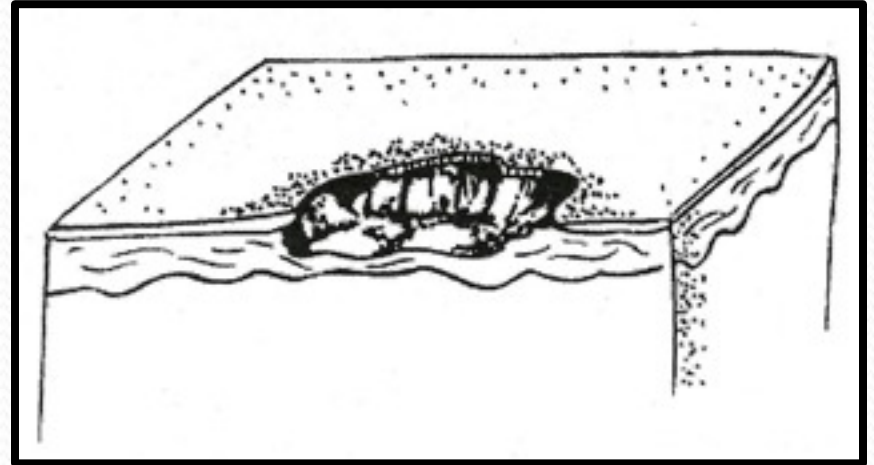
# Differential Diagnoses

- Associated with trauma
  - Infection
  - Allergy
- Immune-mediated diseases



# EROSION

- Shallow ulcer
- Does not penetrate basal cell layer
- Heals without scars



# Differential Diagnoses

- Usually associated with self-trauma due to:
  - Infection
  - Allergy



# EXCORIATION

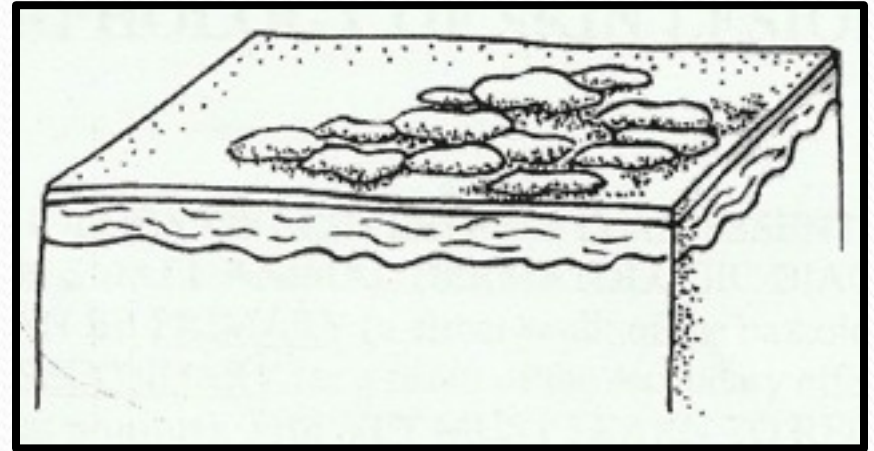
- Superficial removal of epidermis
- Due to:
  - Scratching
  - Biting
  - Rubbing
  - 2<sup>o</sup> to pruritus





# LICHENIFICATION

- Thickened, hardened superficial layers of skin
- Result of friction
- Colour:
  - Normal
  - Hyperpigmented



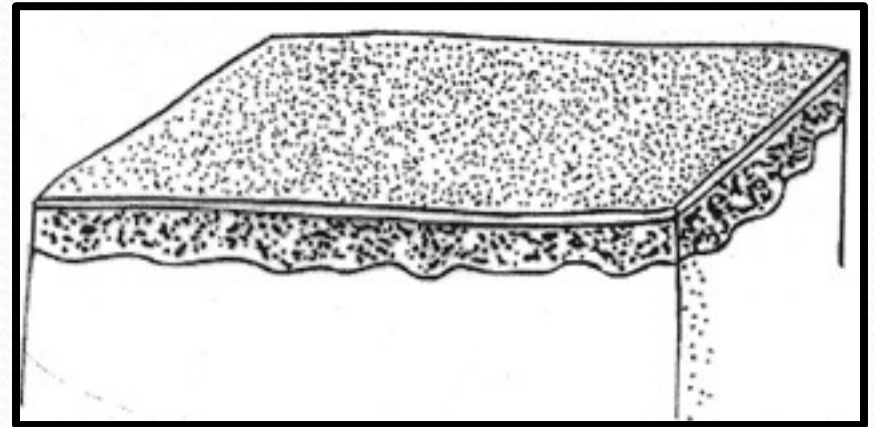
# Differential Diagnoses

- Chronic skin diseases
- Pruritic skin diseases



# HYPERPIGMENTATION

- **PRIMARY** or **SECONDARY**
- Excessive skin colouration
- Due to increased deposition of melanin
- Varies in colour
  - Light grey → Black



# Differential Diagnoses

- **Primary Lesion**
  - Endocrine dermatoses



- **Secondary Lesion**
  - Post-inflammatory changes



# HYPERKERATOSIS

- Increased thickness of horny layer of skin
- Sites:
  - Normal skin
  - Digital pads
  - Planum nasale
- Pattern of keratogenic hyperplasia:
  - Planes
  - Ridges
  - Circular
  - Feathered projections



# Differential Diagnoses

- Canine Distemper Virus
- Actinic keratosis
- Seborrheic keratosis



# THE END!!!

