Dermatopathology

We've Only Just Begun

General Approach to Histopathologic Diagnosis

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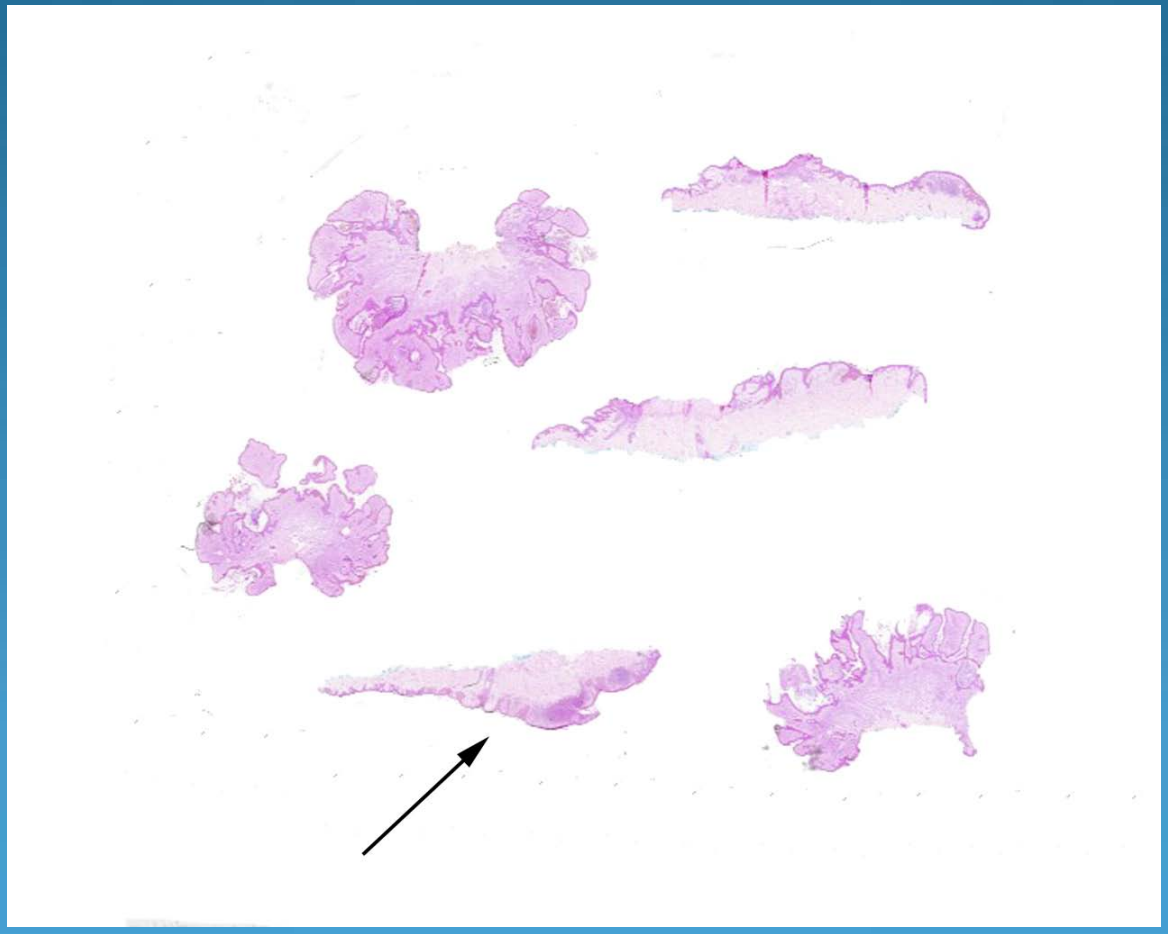
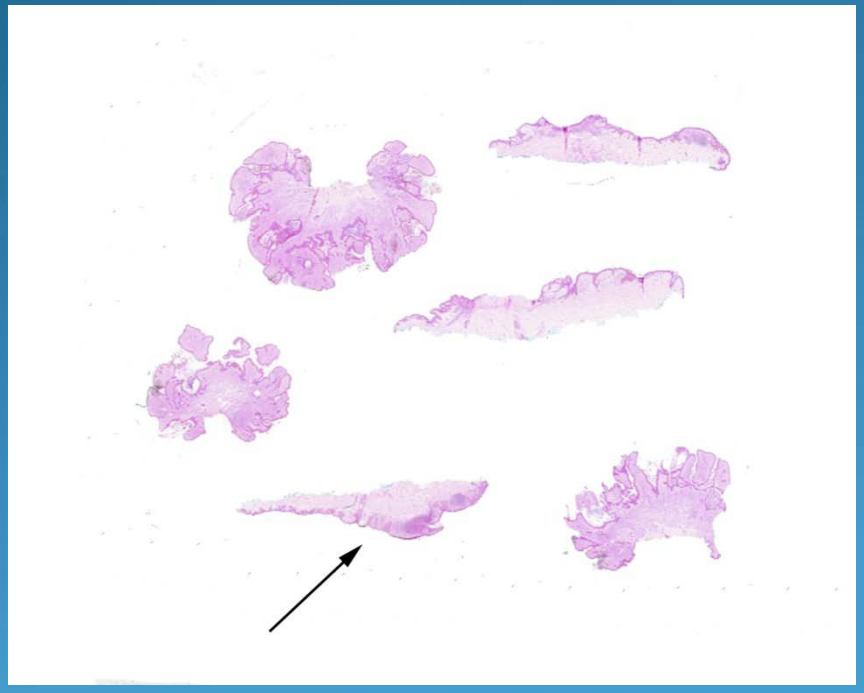
Play to Your Clinical Strengths!

- Look at the slide, is this a punch, shave, incision, excision, curetting?
- What is the age of the patient?
- Where is the biopsy site?

Type of biopsy?

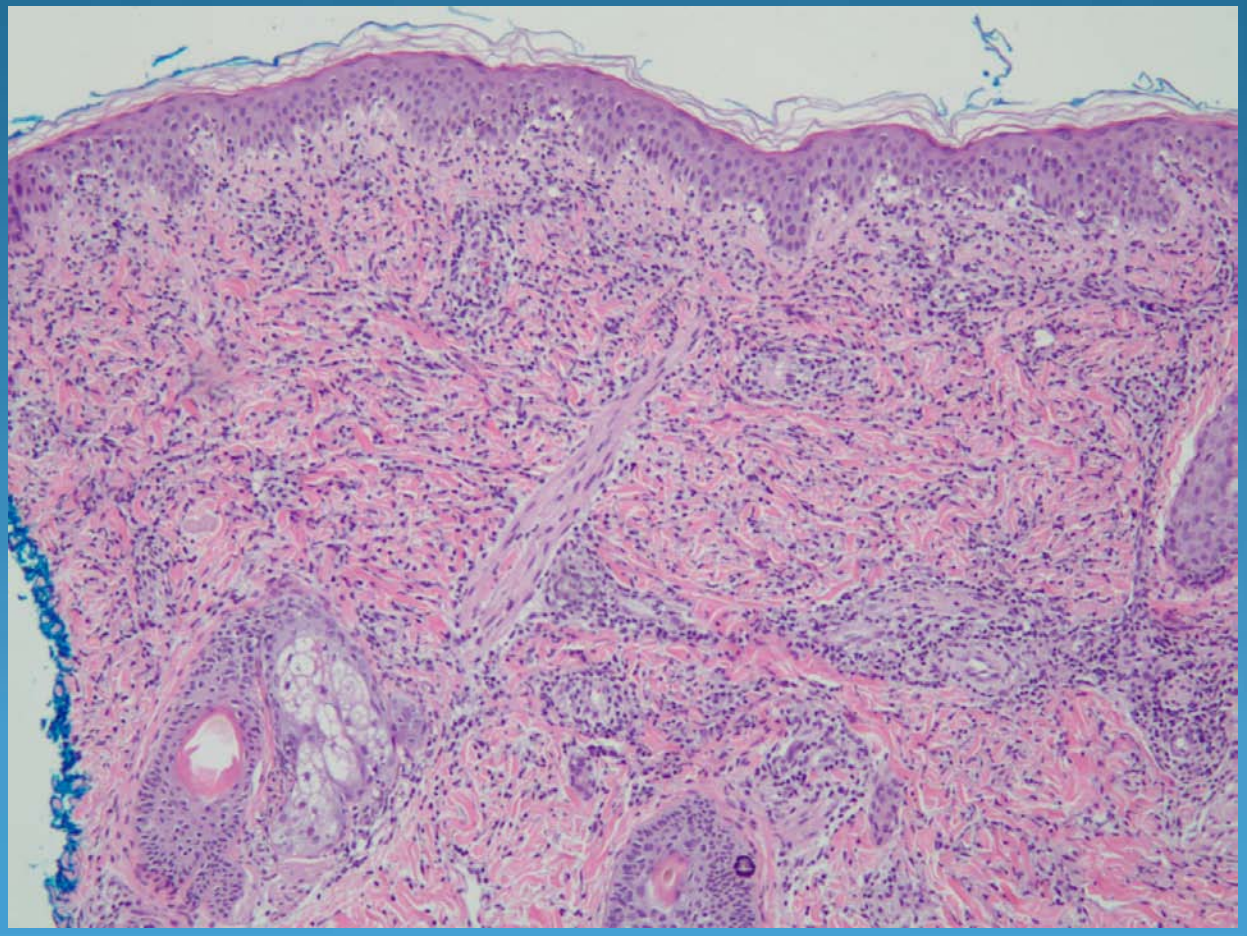


Type of Biopsy-Shave

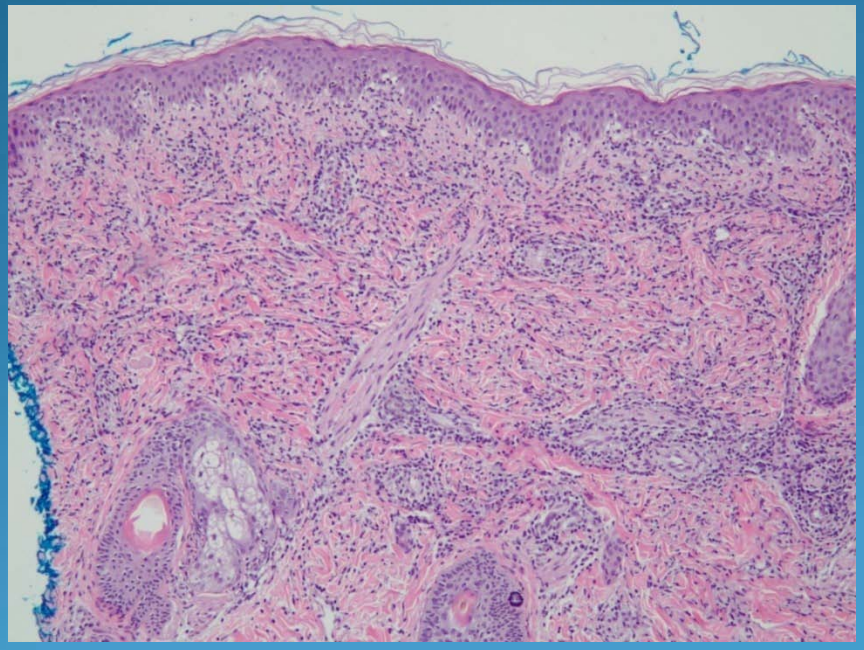


- In general, punch biopsies may be for inflammatory
- Shave biopsies for epithelial or pigmented lesion
- Curetting for fragmented or friable lesion
- Excision for neoplasm

Approximate age of this patient?

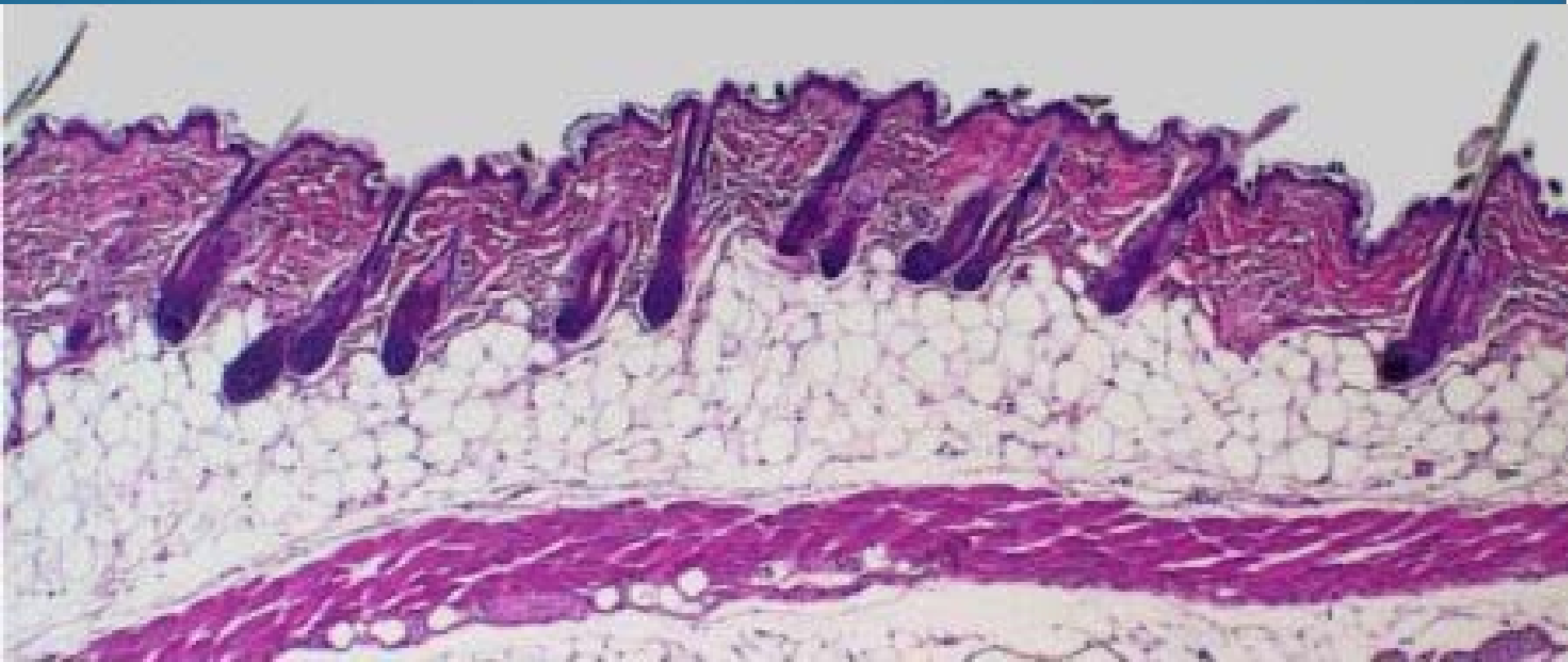


Approximate Age Pre-Adolescent

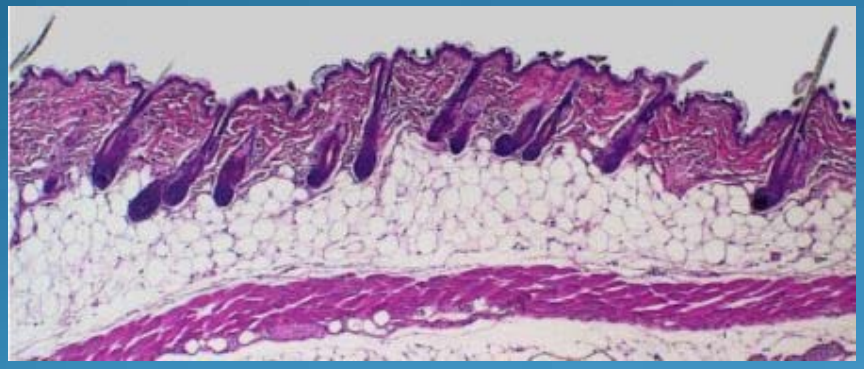


- Immature and small pilosebaceous units with undeveloped sebaceous lobules
- No solar elastosis

Location?

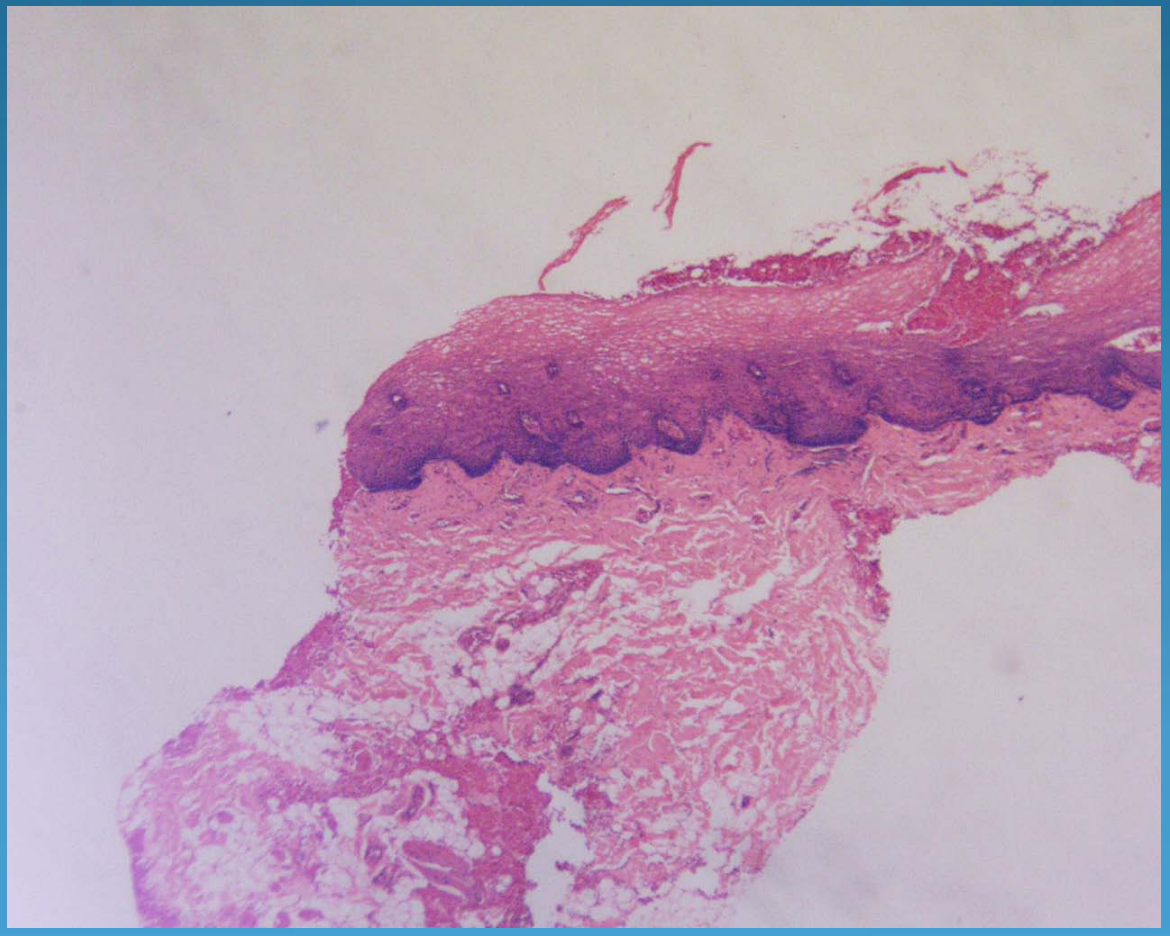


Location-Scalp

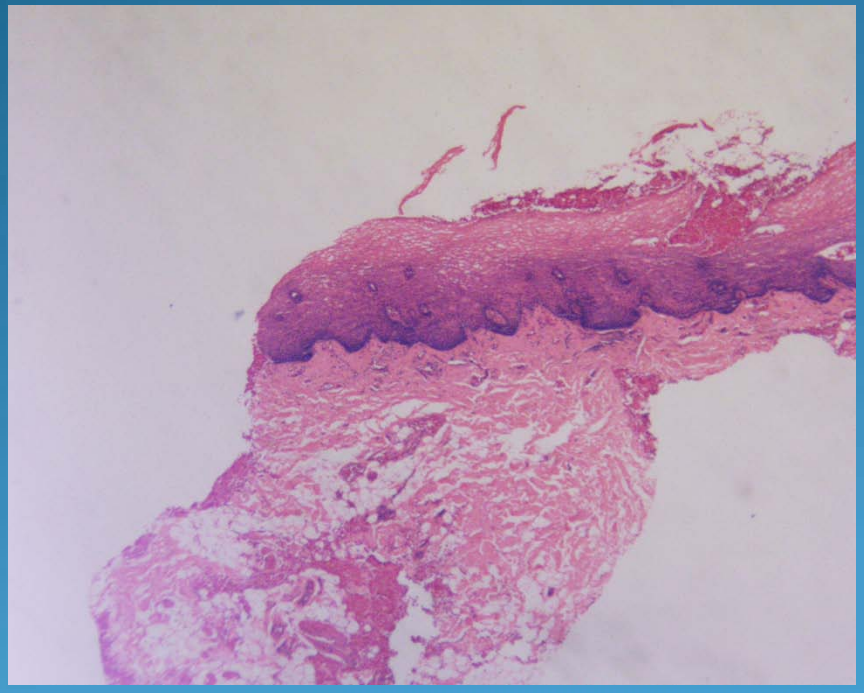


- Numerous hair follicles embedded within subcutaneous adipose tissue
- If biopsy is deep, may contain skeletal muscle

Location?



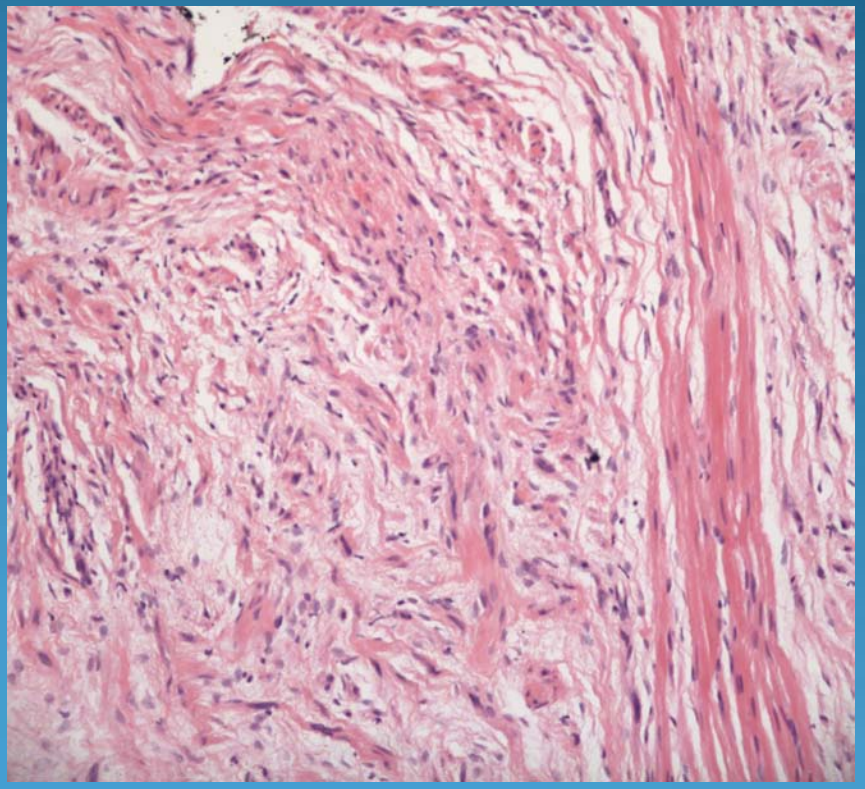
Location-Oral Mucosa

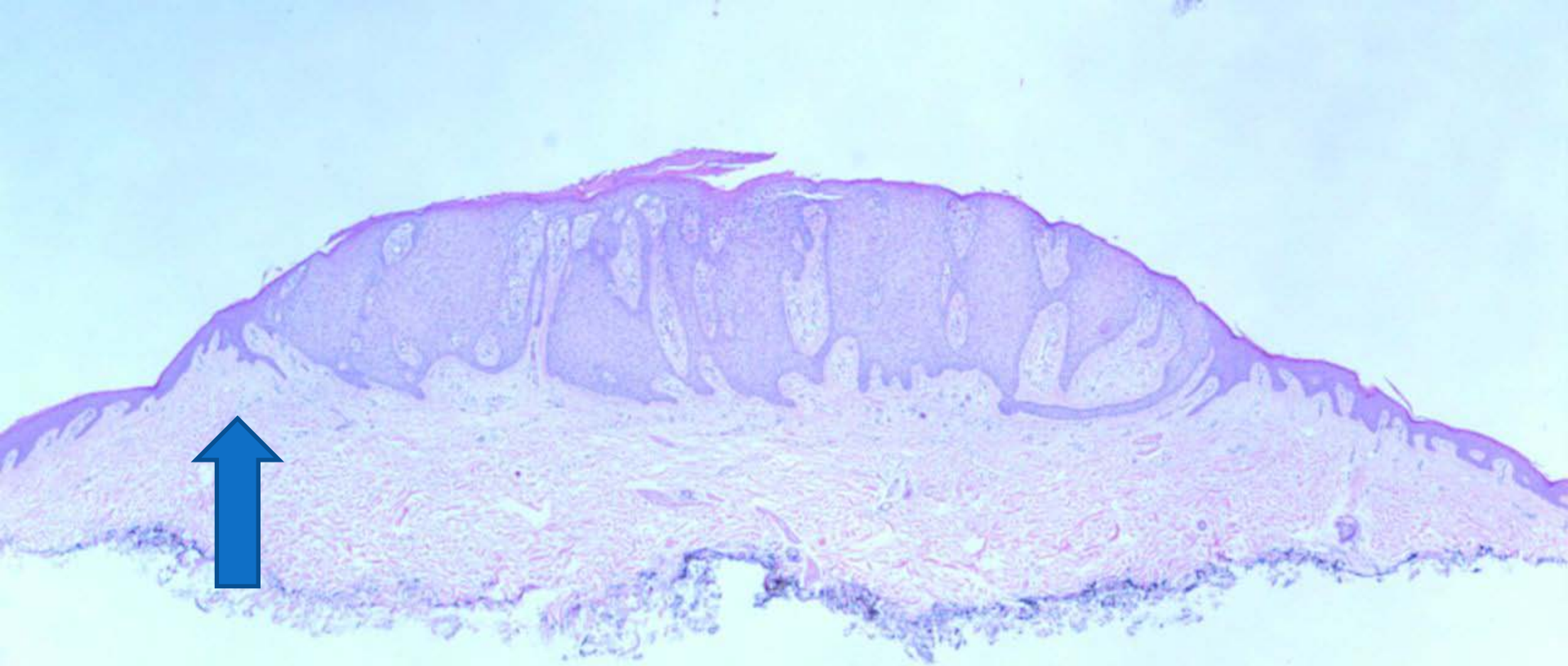


- Non-keratinizing squamous mucosa
- Parakeratosis normal
- Loose submucosal tissue with vascular ectasia
- May have strands of skeletal muscle
- DDX: Penile mucosa, eyelid, vagina/vulva

Find Your Reference Points

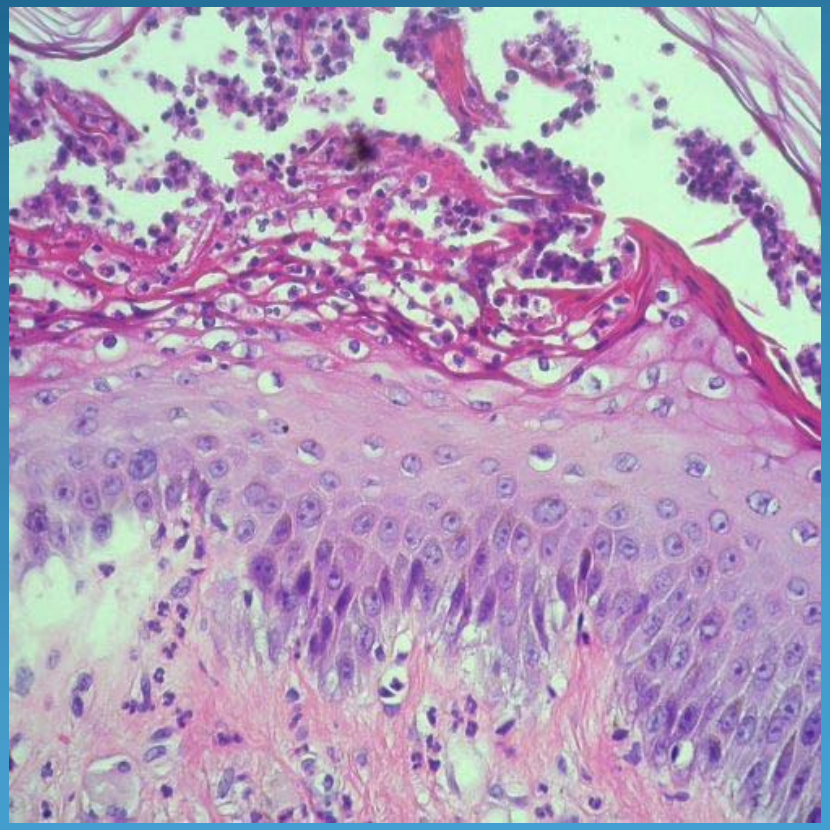
- Look for relatively normal skin, if present, and compare.
- Is the process acute, subacute, or chronic?
- Find reference cells (white cells, red blood cells, histiocytes, endothelial cells) and compare to lesional cells

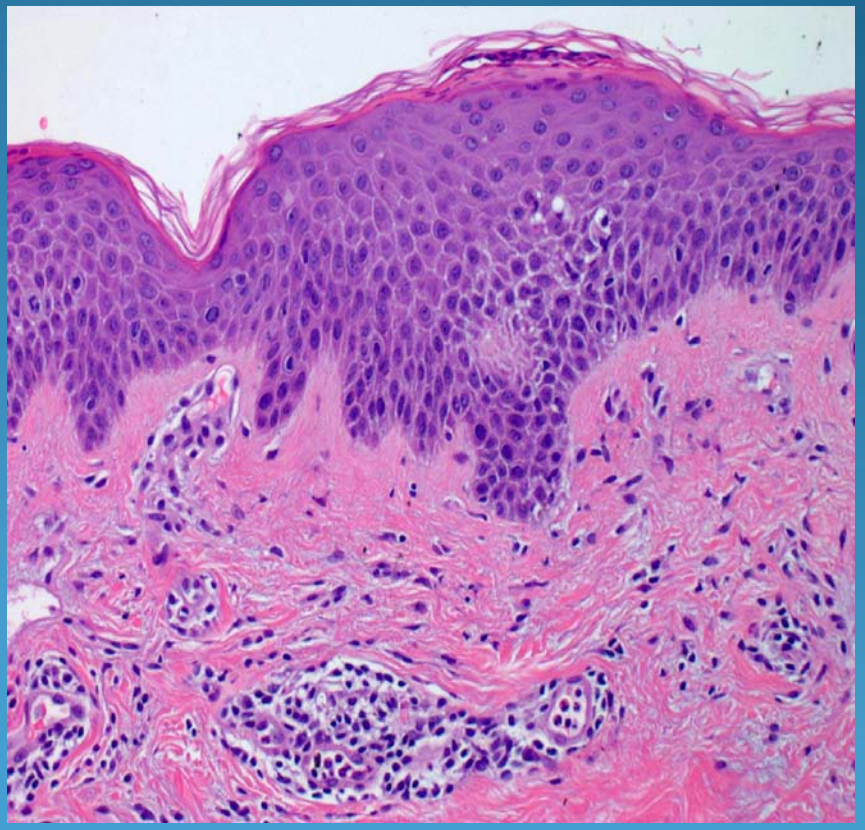




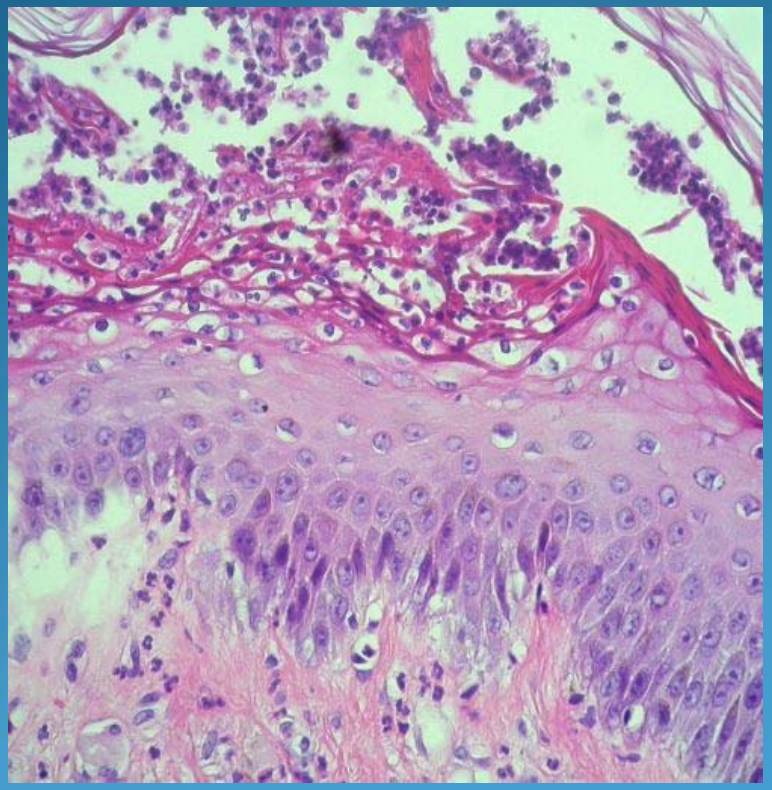
Junction of relatively normal skin
and lesional skin

Which is Acute? Subacute?

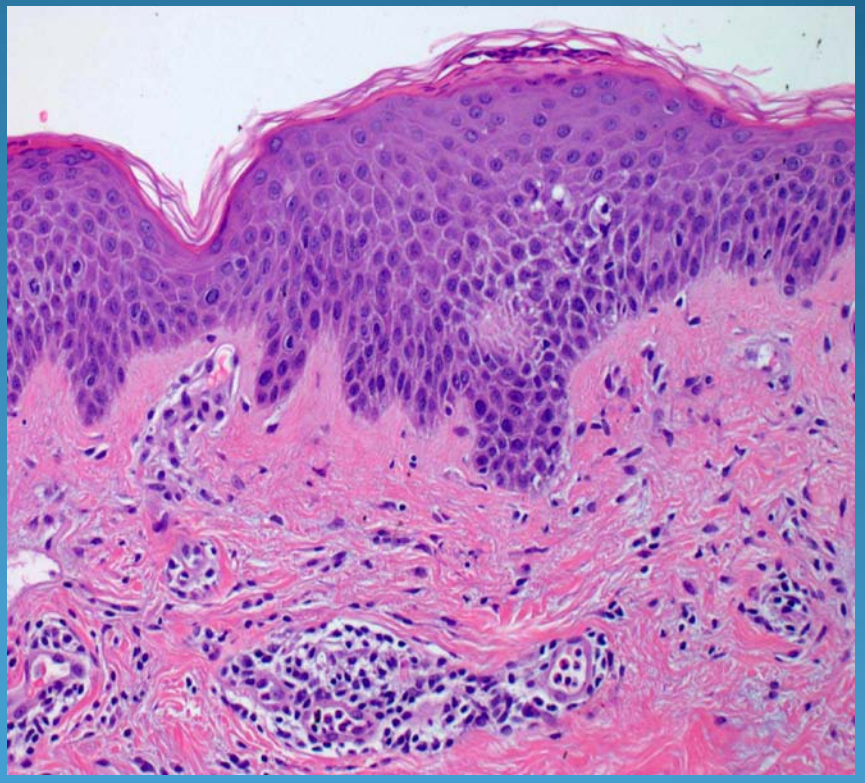




Acute



Subacute



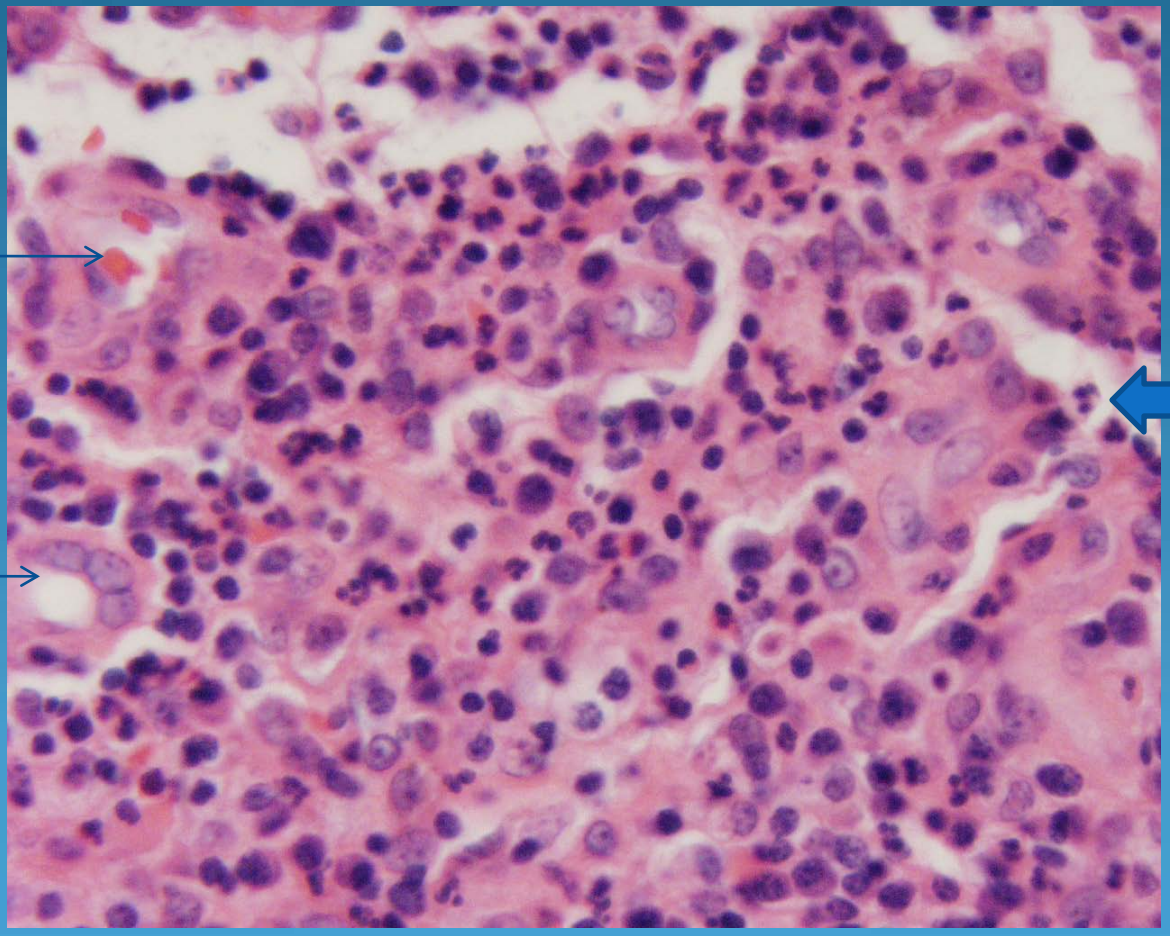
Acute

- Orthokeratotic basketweave stratum corneum
- Intra and sub-epidermal vesicles, variable inflammatory cells infiltrate

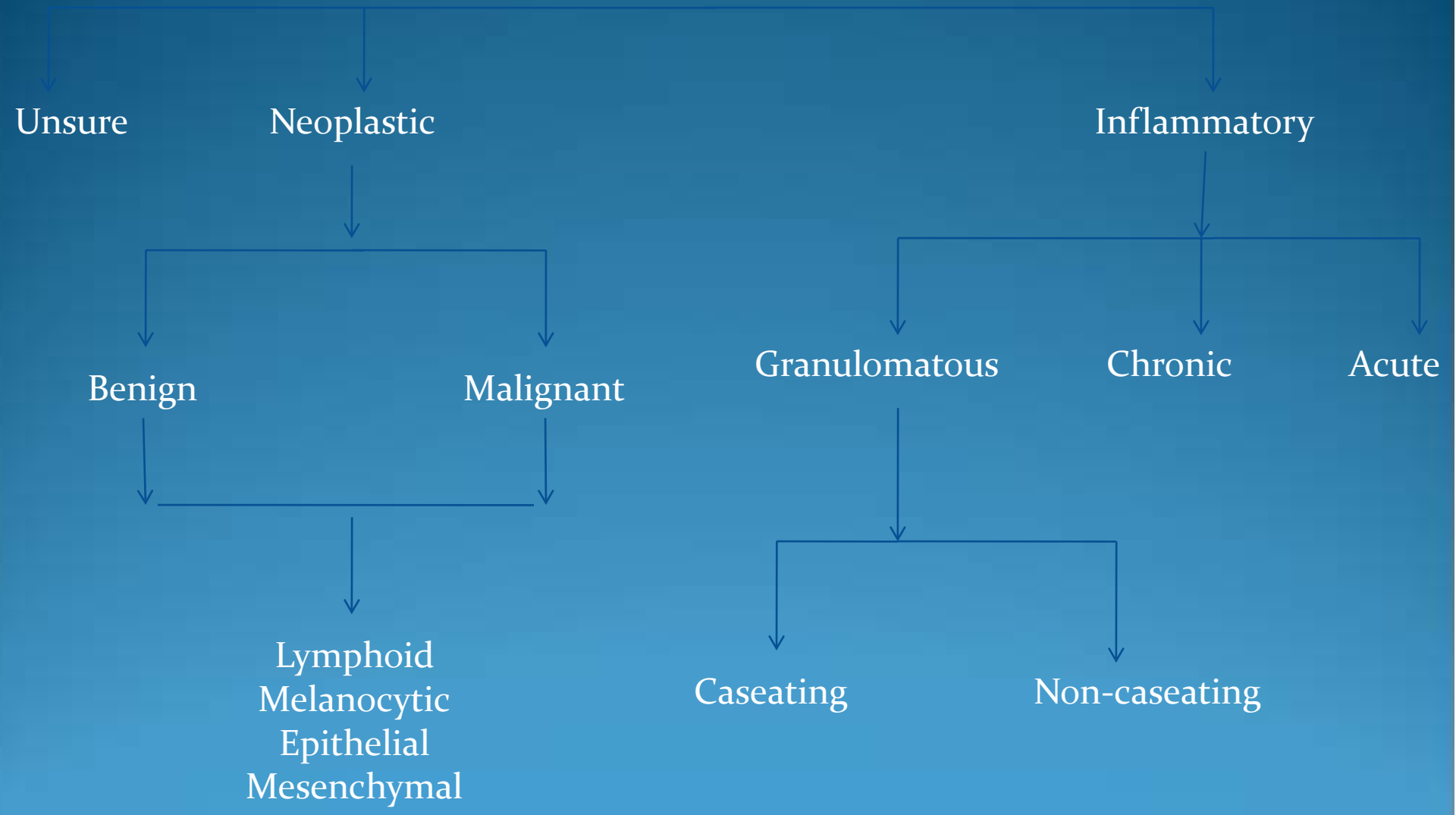
Subacute

- Parakeratotic scale-even in the absence of underlying epidermal spongiosis, this constitutes a spongiotic dermatitis
- Minimal epidermal changes
- Chronic has more epidermal hyperplasia

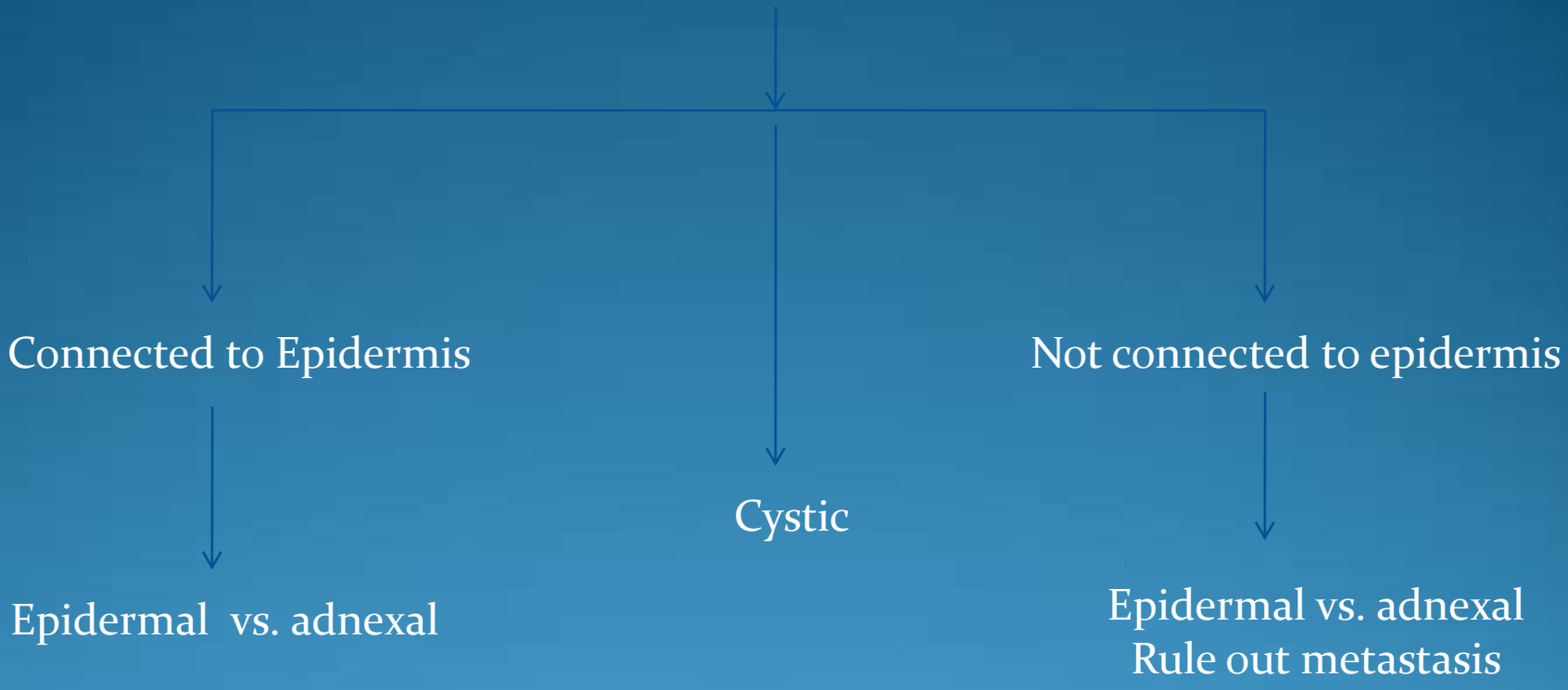
Reference Cells



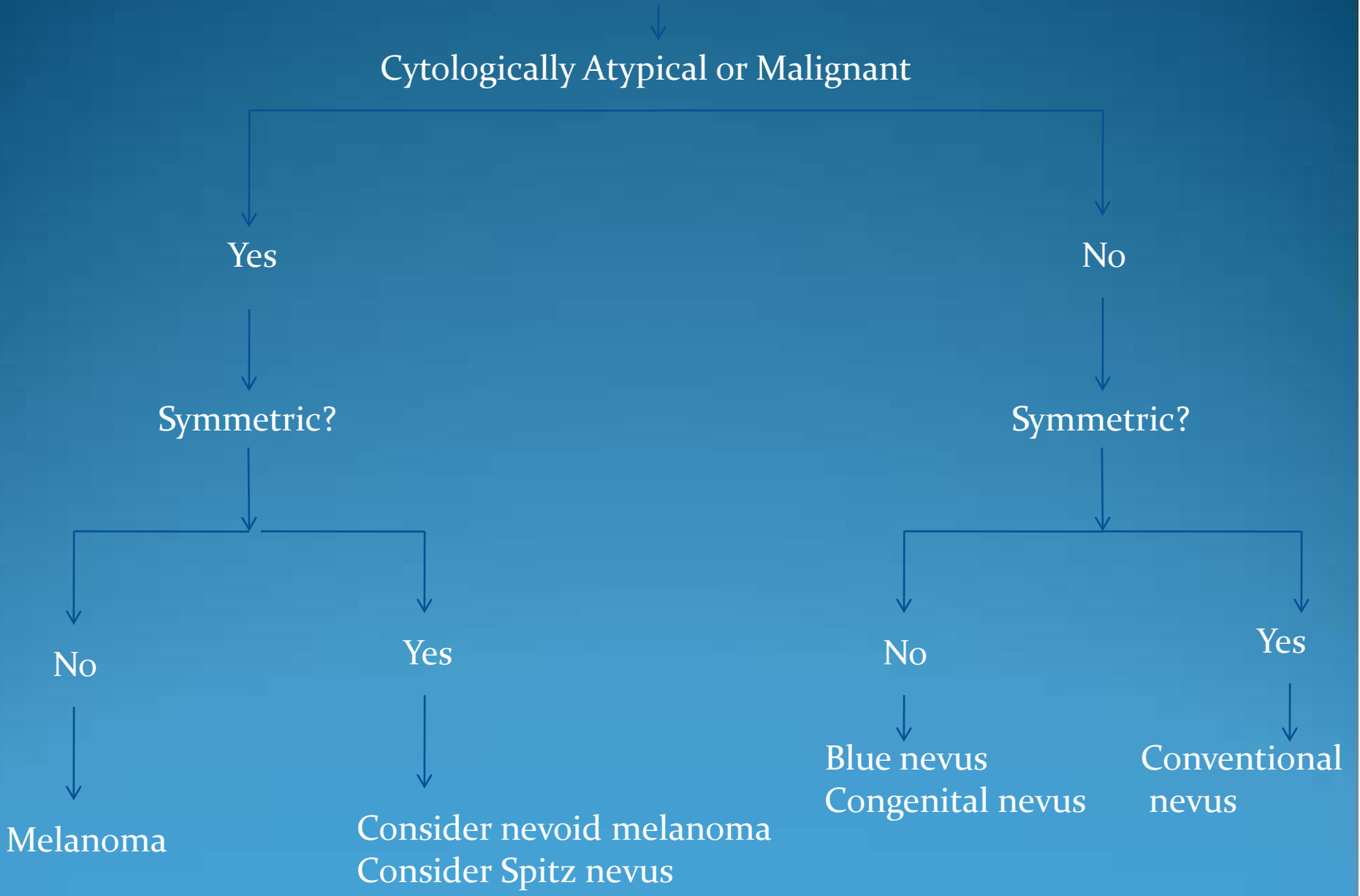
Disease Process

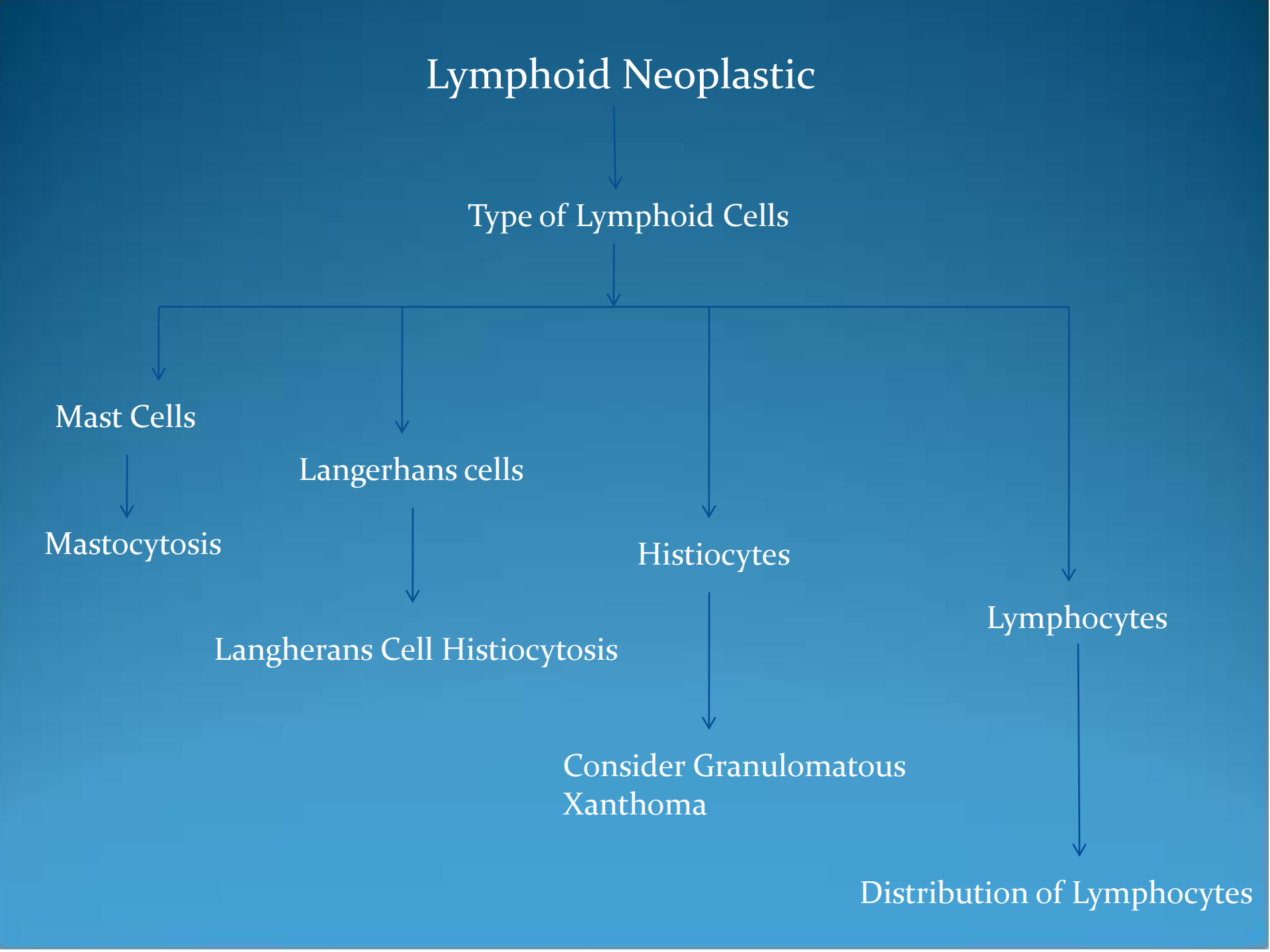


Epithelial Neoplastic



Melanocytic Neoplasia




Lymphoid Neoplastic
Type of Lymphoid Cells
Mast Cells
Mastocytosis
Langerhans cells
Langherans Cell Histiocytosis
Histiocytes
Consider Granulomatous Xanthoma
Lymphocytes
Distribution of Lymphocytes

Lymphoid Neoplastic

Distribution of Lymphocytes

Epidermotropism or
Dermal-Epidermal junction

T-Cell lymphoma
Consider Leukemia cutis

Dermal Predominant
or Subcutaneous Adipose Tissue

B-cell lymphoma
B-cell pseudolymphoma

Mesenchymal Neoplastic

Spindle Cells

- Neural
- Smooth muscle
- Fibrohistiocytic
- Vascular
- Melanocytic
- Sarcomatoid carcinoma

Mixed Spindled and Epithelioid

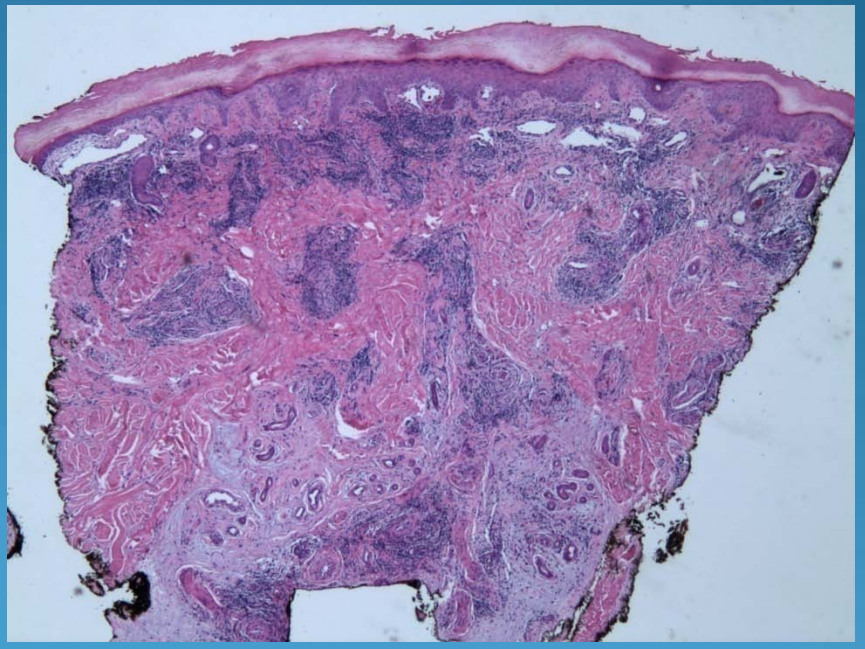
- Neural
- Smooth muscle
- Fibrohistiocytic
- Vascular
- Melanocytic
- Sarcomatoid carcinoma
- Synovial sarcoma
- Epithelioid sarcoma
- Liposarcoma

Epithelioid Cells

- Neural
- Smooth muscle
- Fibrohistiocytic
- Vascular
- Melanocytic
- Sarcomatoid carcinoma

Inflammatory

- Use the inflammatory algorithms
- Carefully decide what type of inflammatory cells
- Beware of mixed inflammatory patterns-esp with infections and drugs
- Always consider a malignant lymphoid infiltrate



What if I am Unsure?

- Look very closely at the cells and determine where the focus of activity is on the slide
- Look for evidence of malignancy-mitotic figures esp. atypical mitotic figures, bizarre multinucleated cells
- Compare the cells with normal histopathological landmarks