



# **CASES OF EOSINOPHILIC INFILTRATE**

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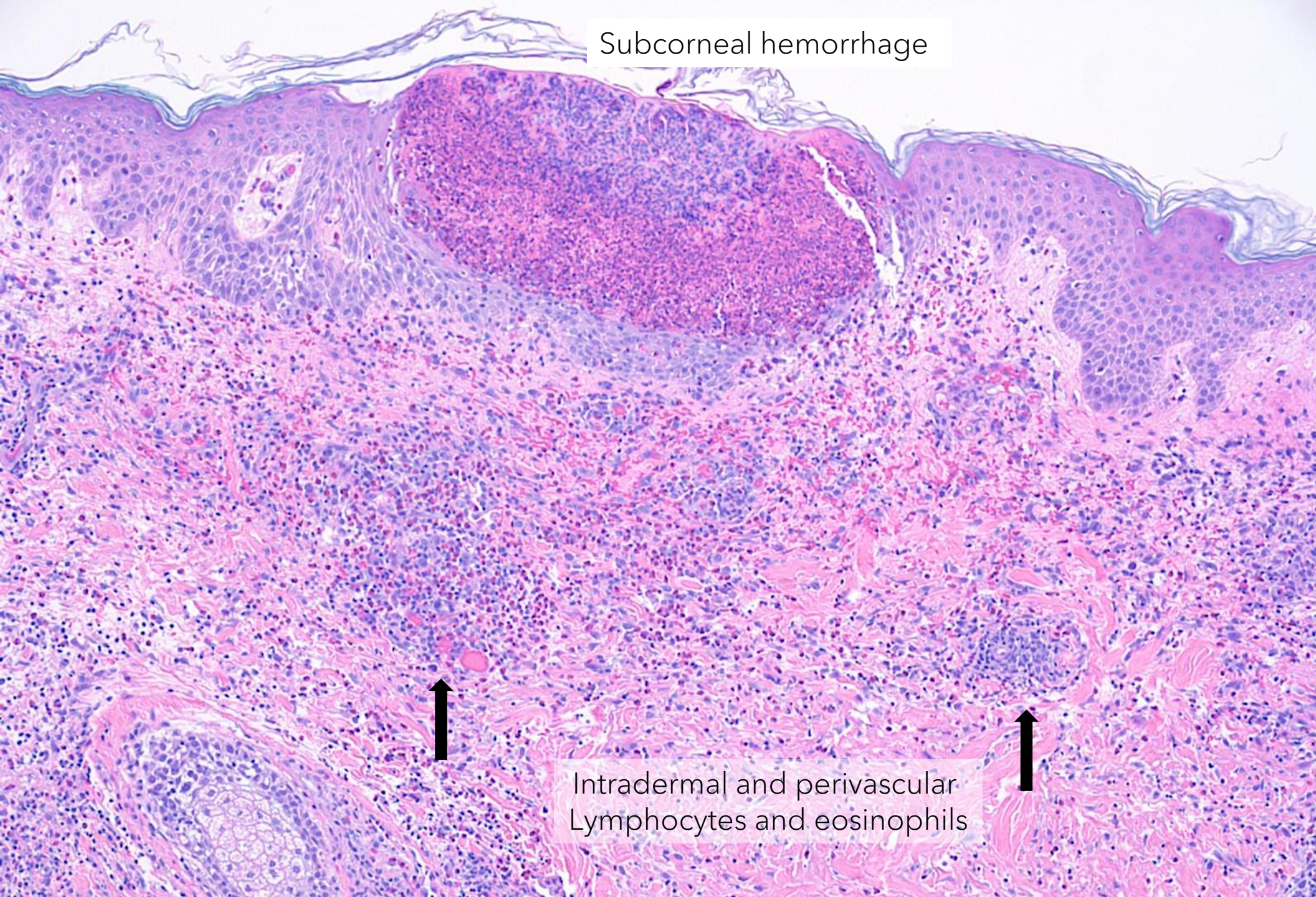
Subcorneal hemorrhage

Intradermal and perivascular  
infiltrate





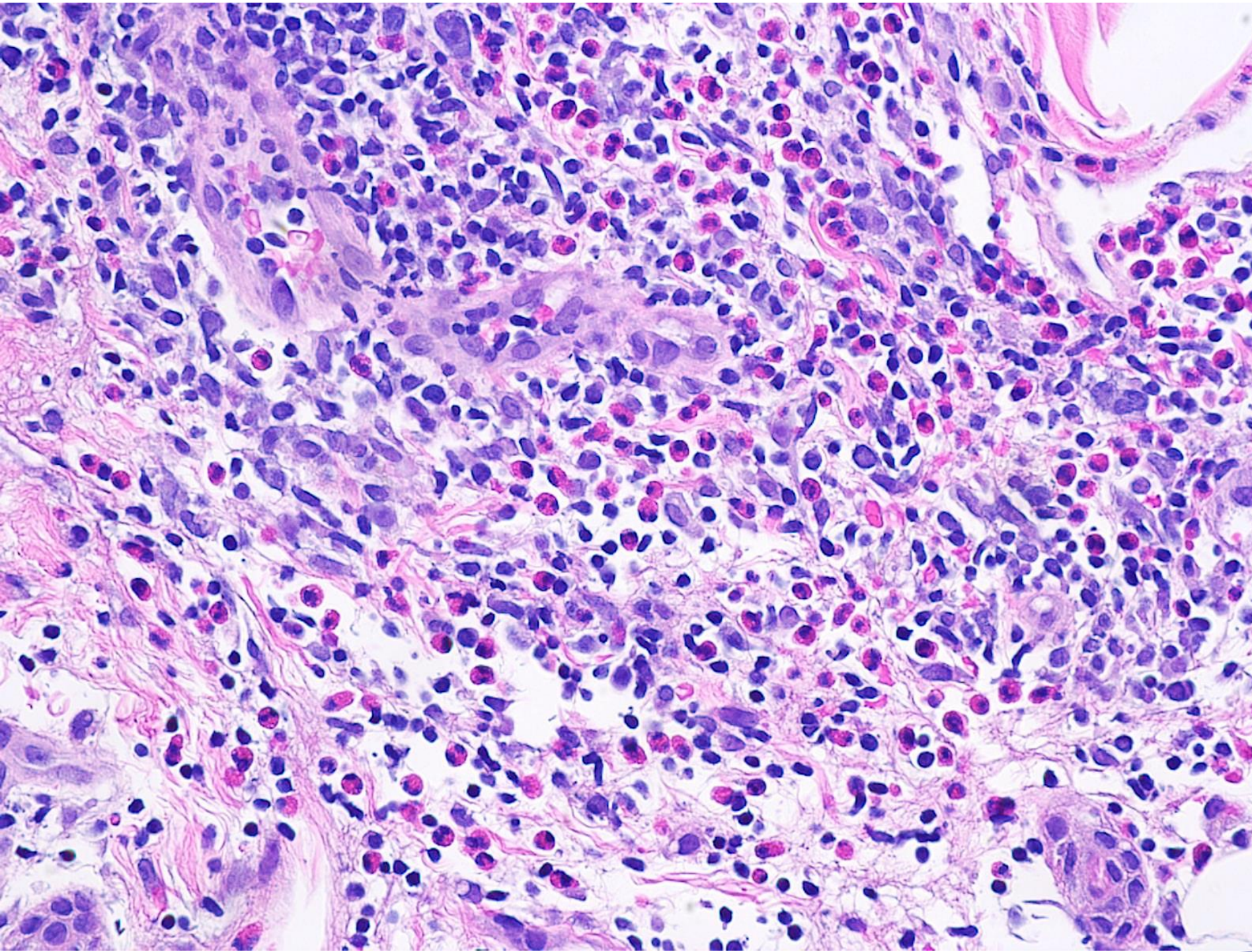
Subcorneal hemorrhage



Intradermal and perivascular  
Lymphocytes and eosinophils







Numerous  
lymphocytes and  
eosinophils



- **Clinical Information:** 78M Bed bugs? Scabies, urticaria? BP? (22-53212)

- **DIAGNOSIS:**

Skin, Left Groin, Punch Biopsy:

- Superficial-deep perivascular lymphocytic dermatitis with numerous eosinophils and punctum.

Comment: Overall, the findings support secondary changes to arthropod assault. No mouth parts or scabietic parts are identified on multiple sections. The histologic differential diagnosis may also include dermal hypersensitivity reaction to a drug or other ingestants and less likely urticaria.

Skin, Left Groin, Punch Biopsy for Direct Immunofluorescence:

- Negative for immunoreaction.

- **Teaching Points:**

Need multiple sections to hunt for mouth or scabietic parts

- **Minimal Diagnostic Criteria:**

Intracorneal burrow

Scabies, scabietic parts, eggs, or scybala (fecal matter)

- **Differential Diagnosis:**

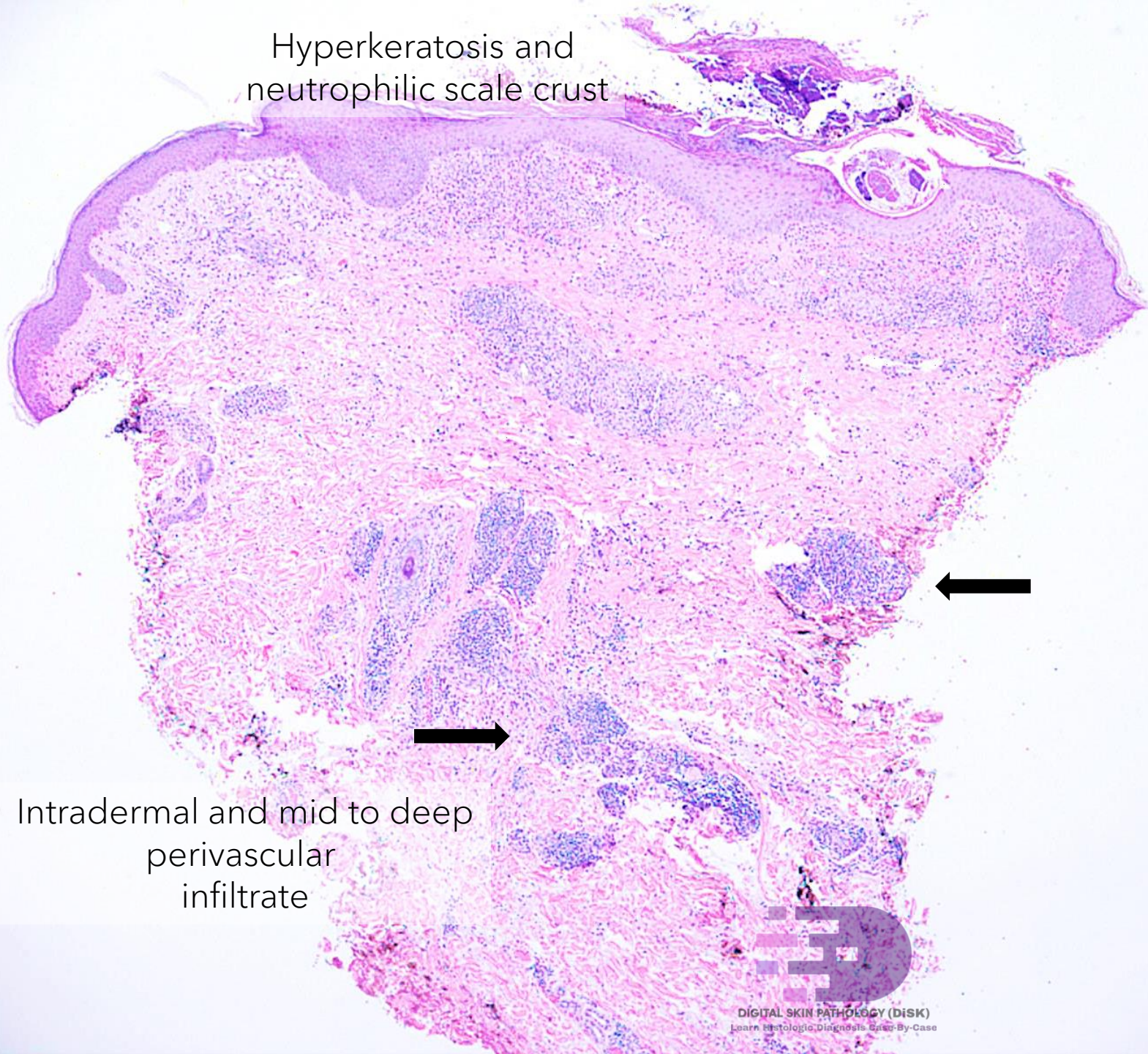
*Demodex folliculorum*

Dermal hypersensitivity reaction

Urticaria

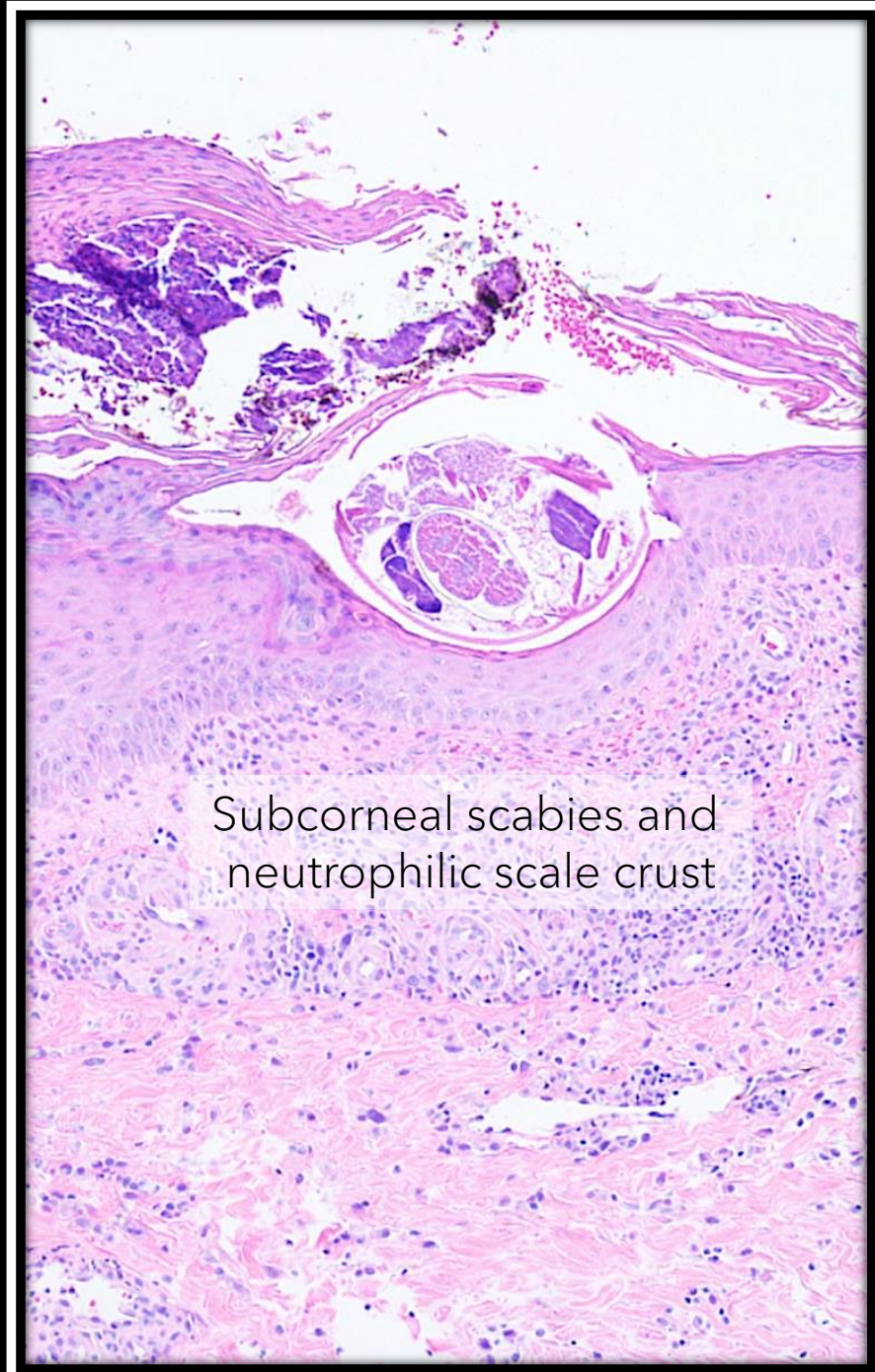


Hyperkeratosis and  
neutrophilic scale crust

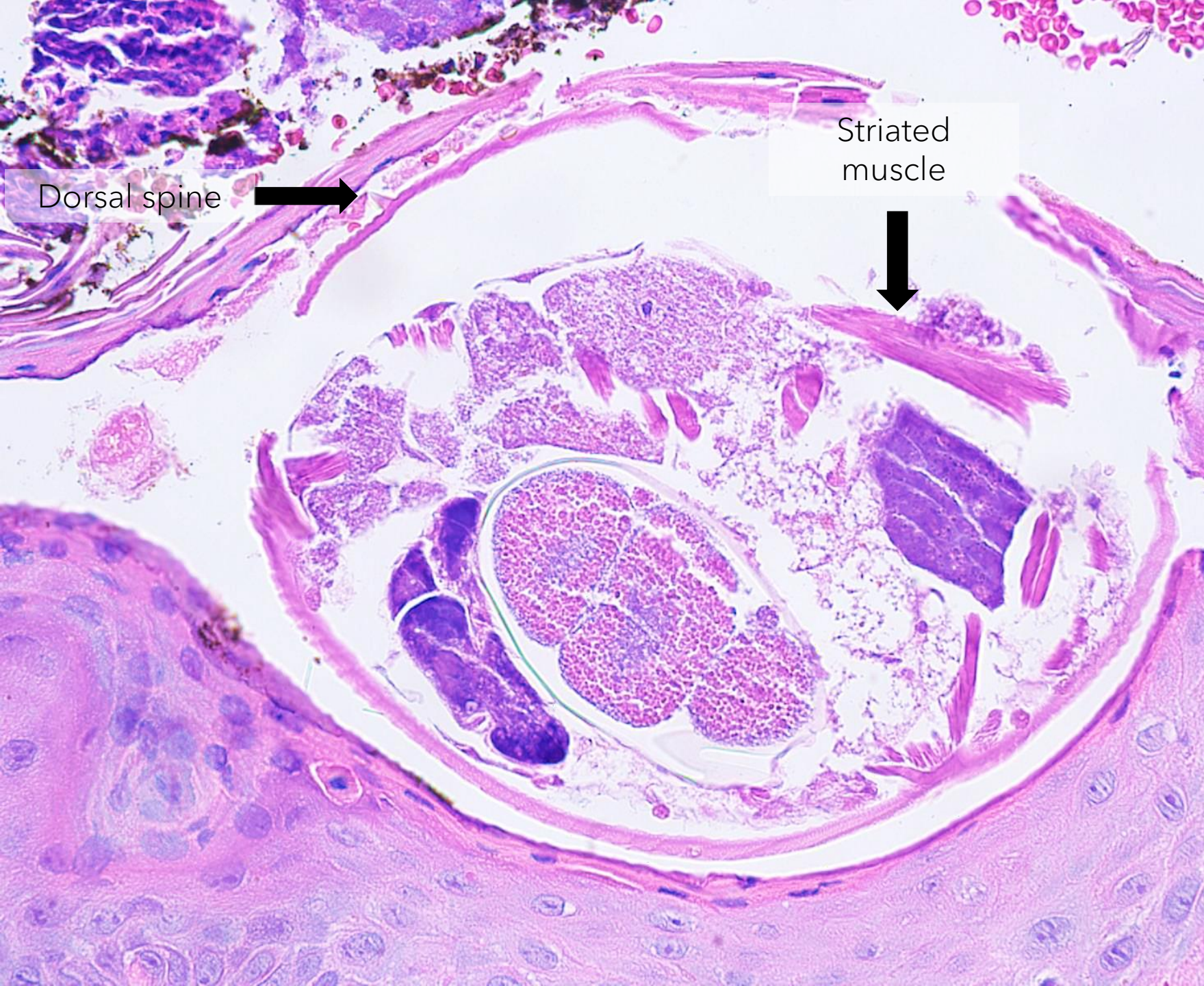


Intradermal and mid to deep  
perivascular  
infiltrate

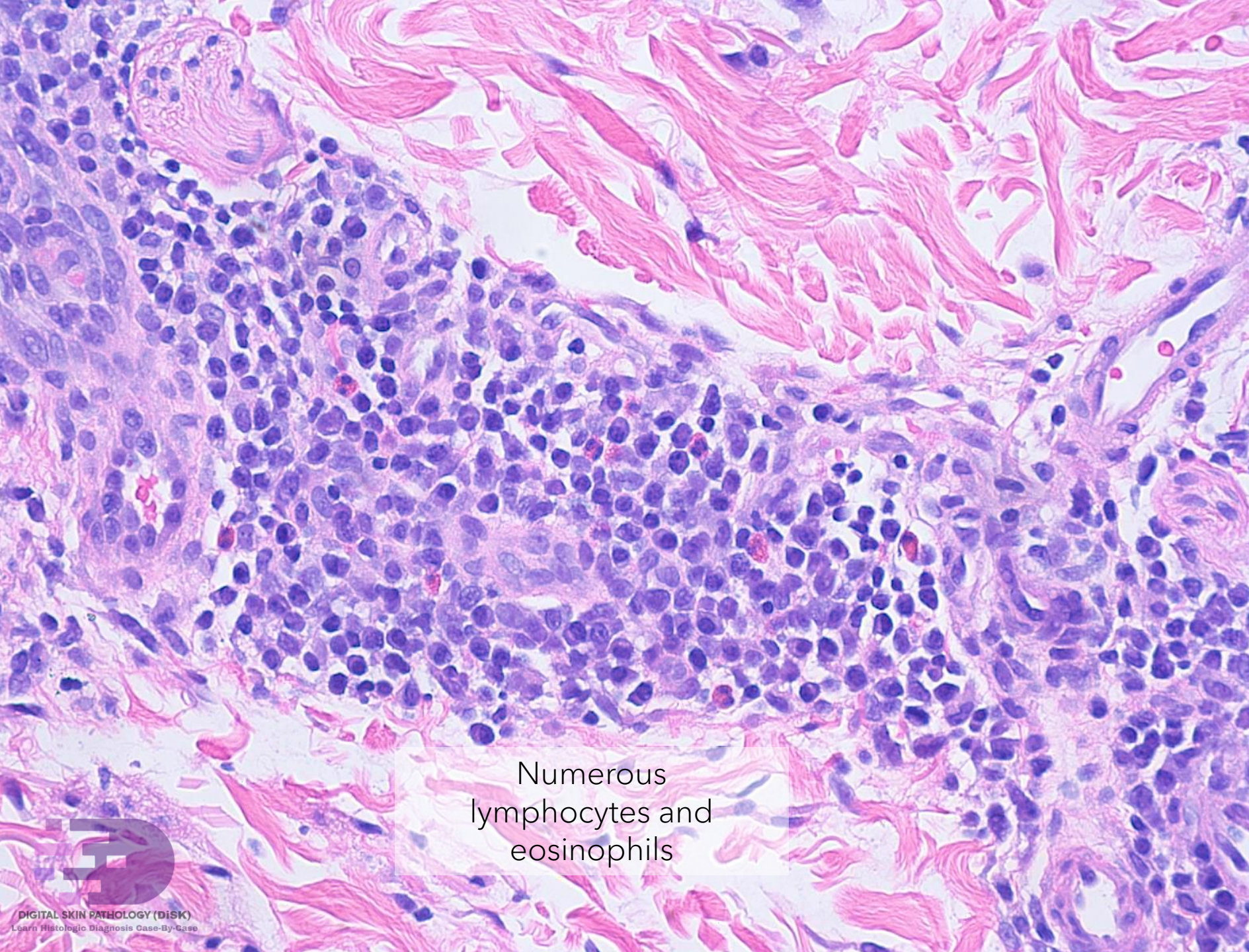
Subcorneal scabies and  
neutrophilic scale crust



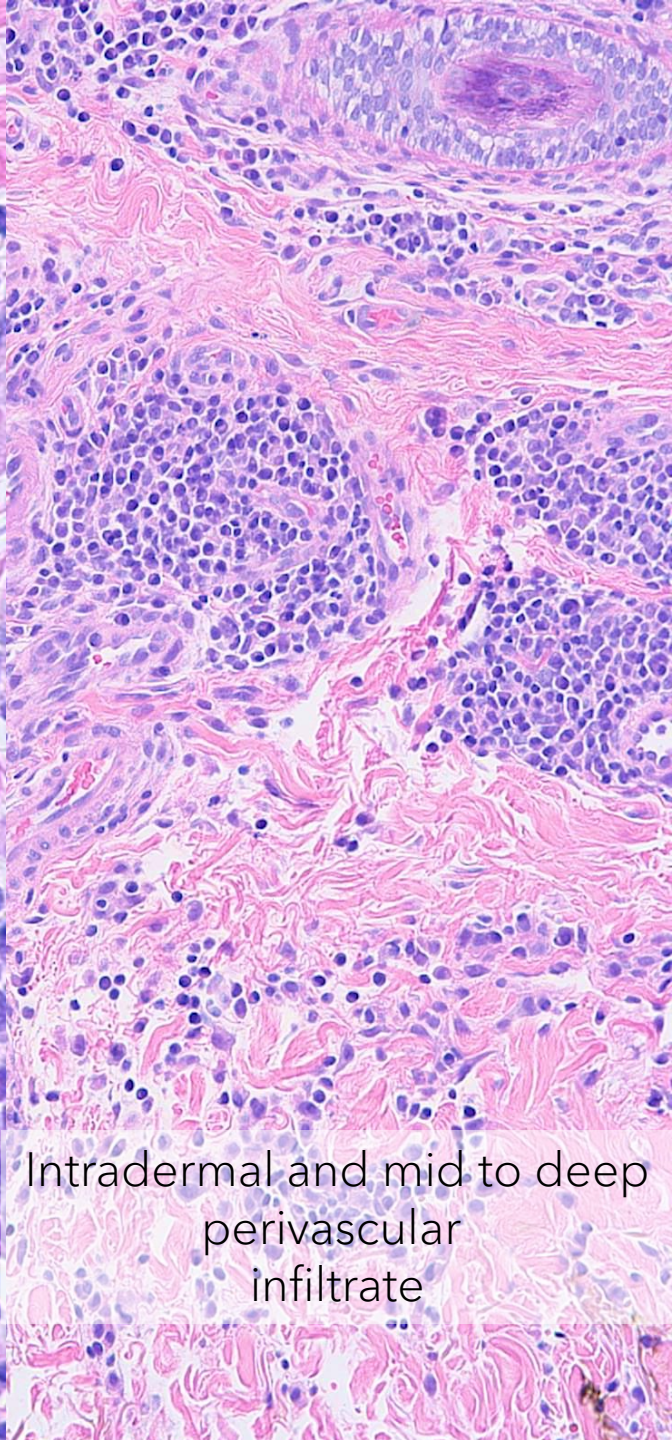








Numerous  
lymphocytes and  
eosinophils

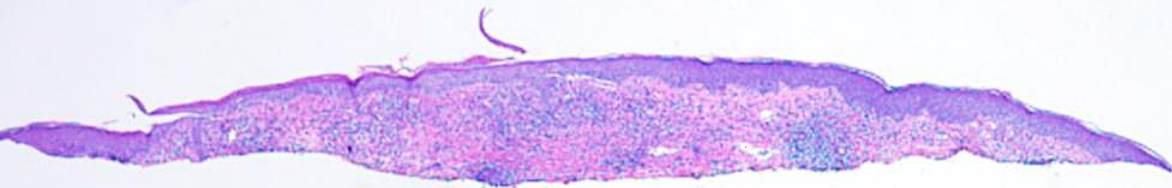


Intradermal and mid to deep  
perivascular  
infiltrate

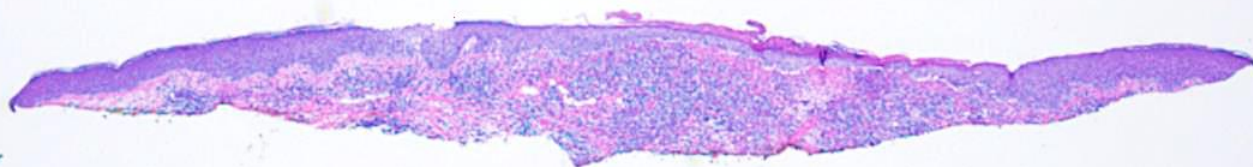


- **Clinical Information:** 55/F; A-C: multiple hyperpigmented macules with few pink slightly excoriated papules on bilateral upper extremities. Bright pink papules, some with central keratotic cores and crusting on left inferior axilla, extending on the flank, scattered on lower back, with larger papules with keratotic cores on right hip. Well defined pink, slightly macular rash on upper back with linear, exfoliation marks, and fewer excoriated pink papules. Improved from prior. R/O acquired perforating collagenosis versus Prurigo versus eczematous dermatitis versus PLC versus less likely arthropod assault (22-50902).
- **DIAGNOSIS:**
  - Skin, Left Inferior Axilla, Punch Biopsy:
    - Scabies.
  - Skin, Right Hip and Right Lower Paraspinal Back, Punch Biopsies:
    - Superficial-deep perivascular lymphocytic dermatitis with eosinophils
    - No scabies identified.
  - Comment: the definitive features of scabies are identified in biopsy left axilla only. Superficial-deep perivascular lymphocytic dermatitis with eosinophils can also be seen in secondary changes to arthropod assault, which maybe superimposed.
- **Teaching Points:**
  - Need multiple sections to hunt for mouth or scabietic parts
- **Minimal Diagnostic Criteria:**
  - Intracorneal mite, eggs, or scybala (fecal matter)
  - Chitinous exoskeleton with spines/spikes
- **Differential Diagnosis:**
  - Arthropod bite reaction
  - Tick bite
  - Dermal hypersensitivity reaction

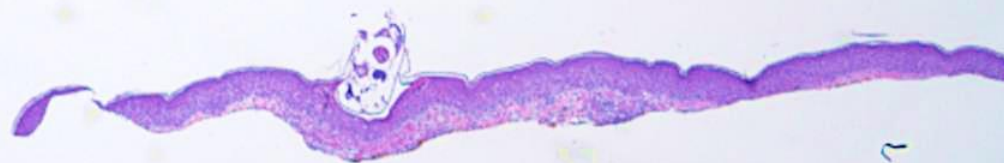




Heavy dermal infiltrate  
(busy dermis)

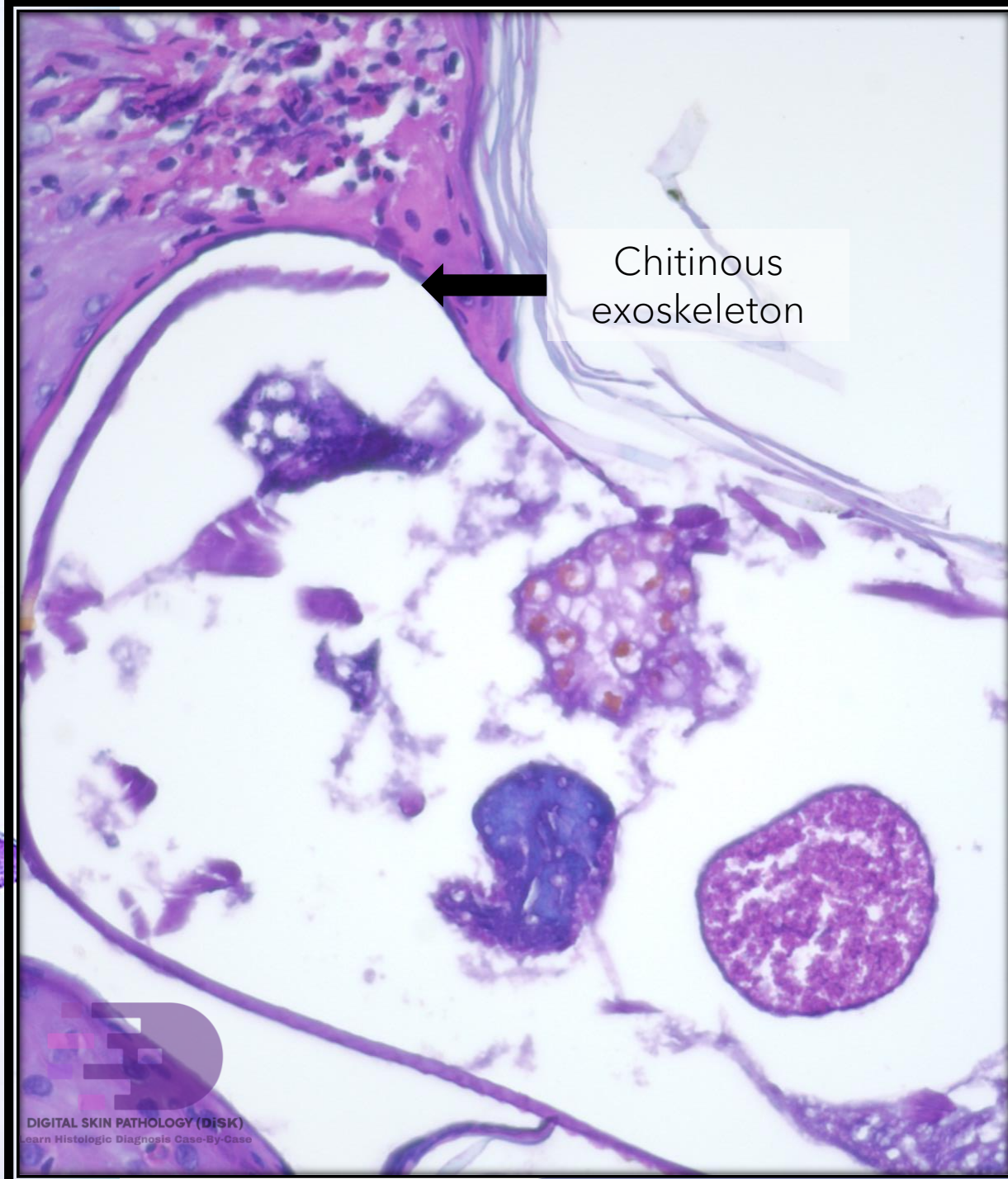


Possible mite

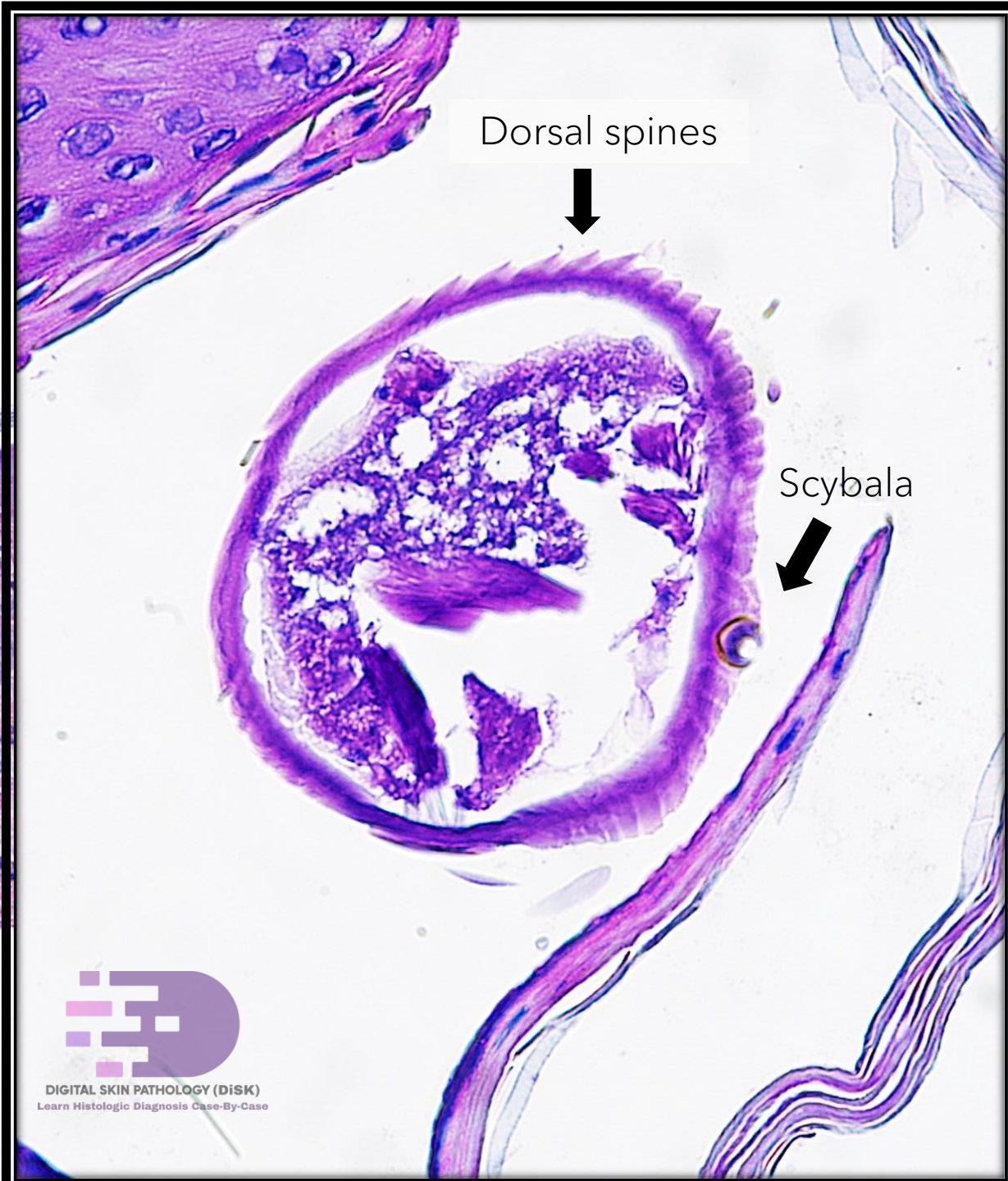


DIGITAL SKIN PATHOLOGY (DiSK)  
Learn Histologic Diagnosis Case-By-Case





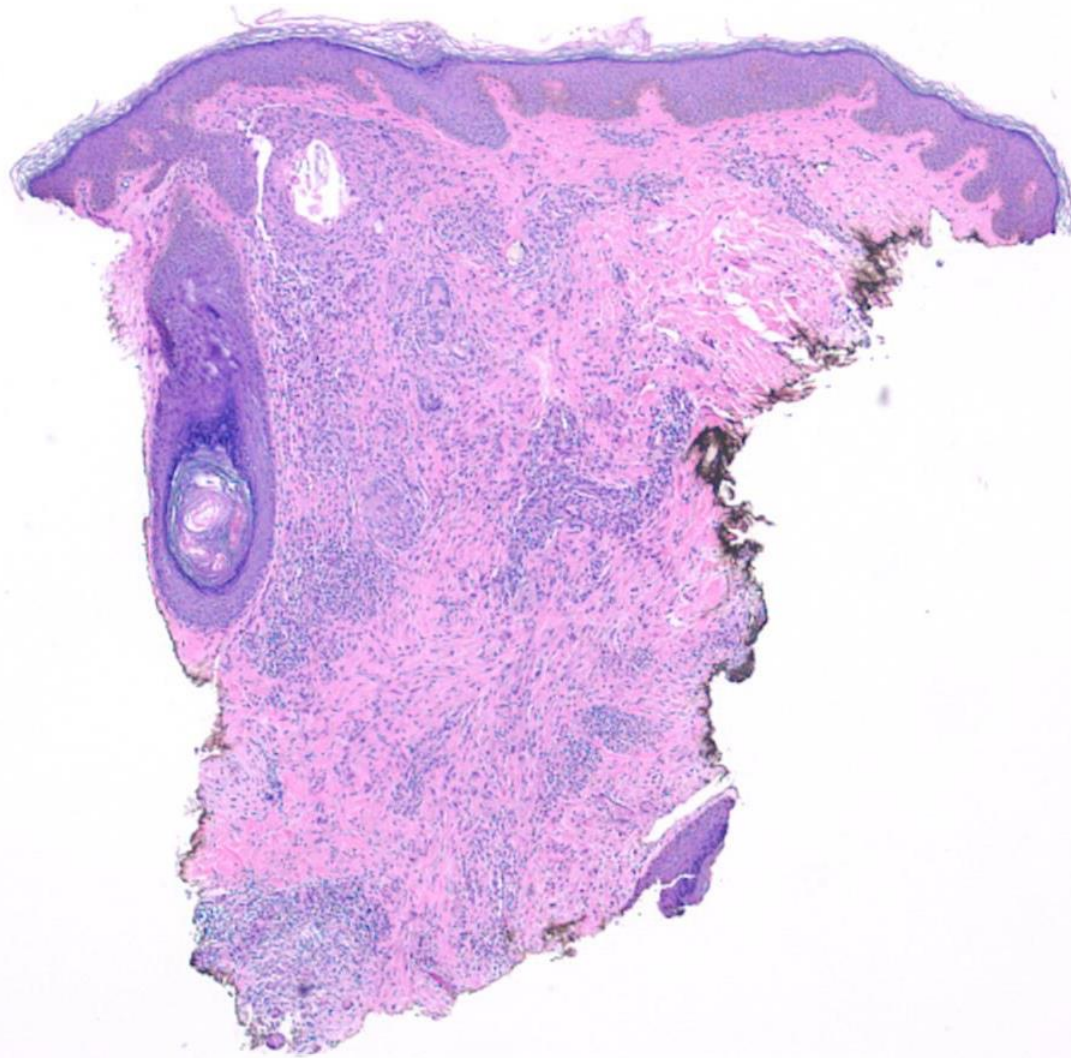




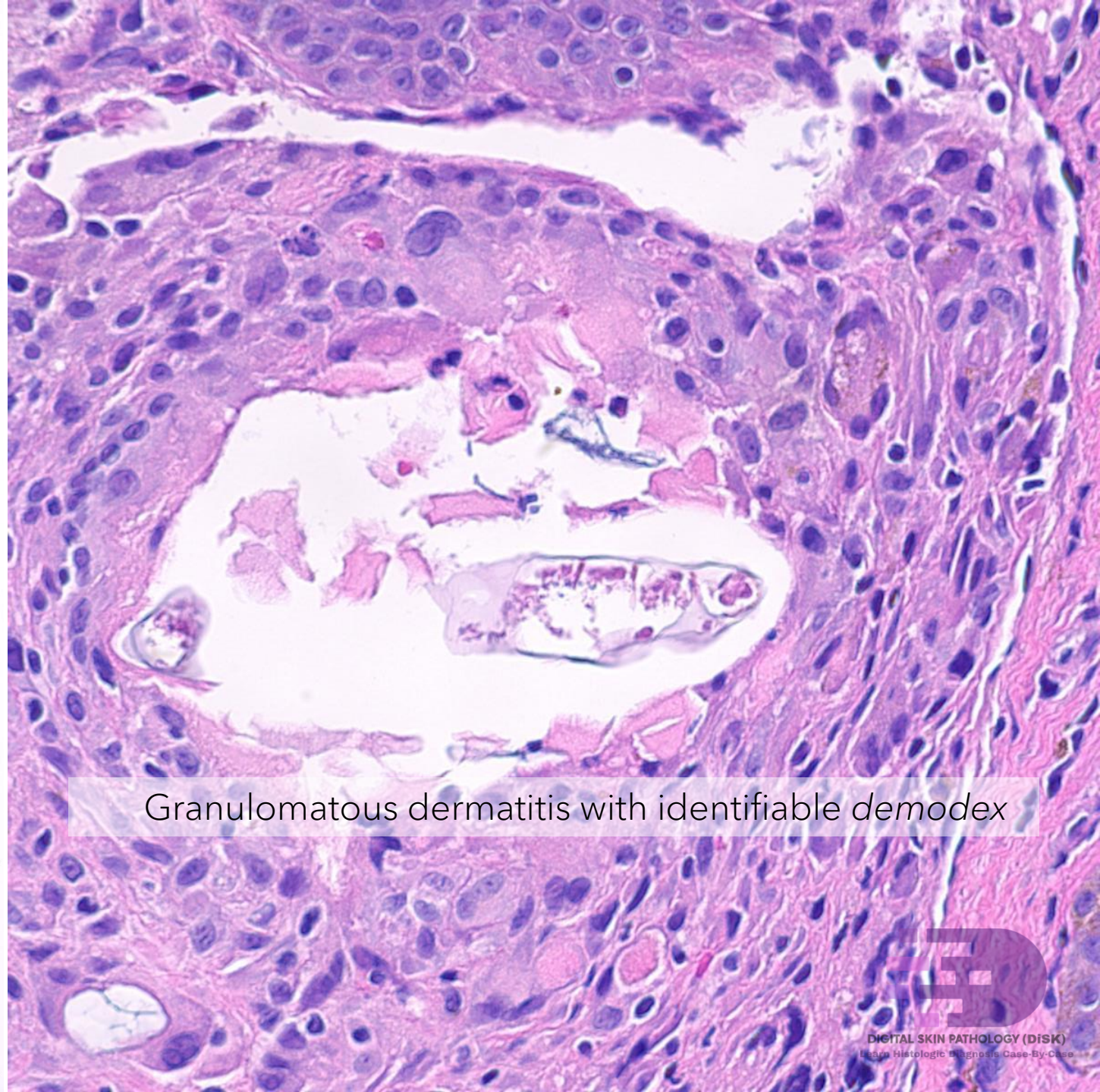


- Clinical Information: 65F; R/O dermatitis, not responding to topicals (22-13803)
- DIAGNOSIS:
  - Skin, Right Breast, Shave Biopsy:
  - Scabies.
- Teaching Points:
  - Need multiple sections to hunt for mouth or scabietic parts
  - Examine the epidermis carefully
- Minimal Diagnostic Criteria:
  - Intracorneal mite, eggs, or scybala (fecal matter)
  - Chitinous exoskeleton with spines/spikes
- Differential Diagnosis:
  - Arthropod bite reaction
  - Tick bite
  - Dermal hypersensitivity reaction





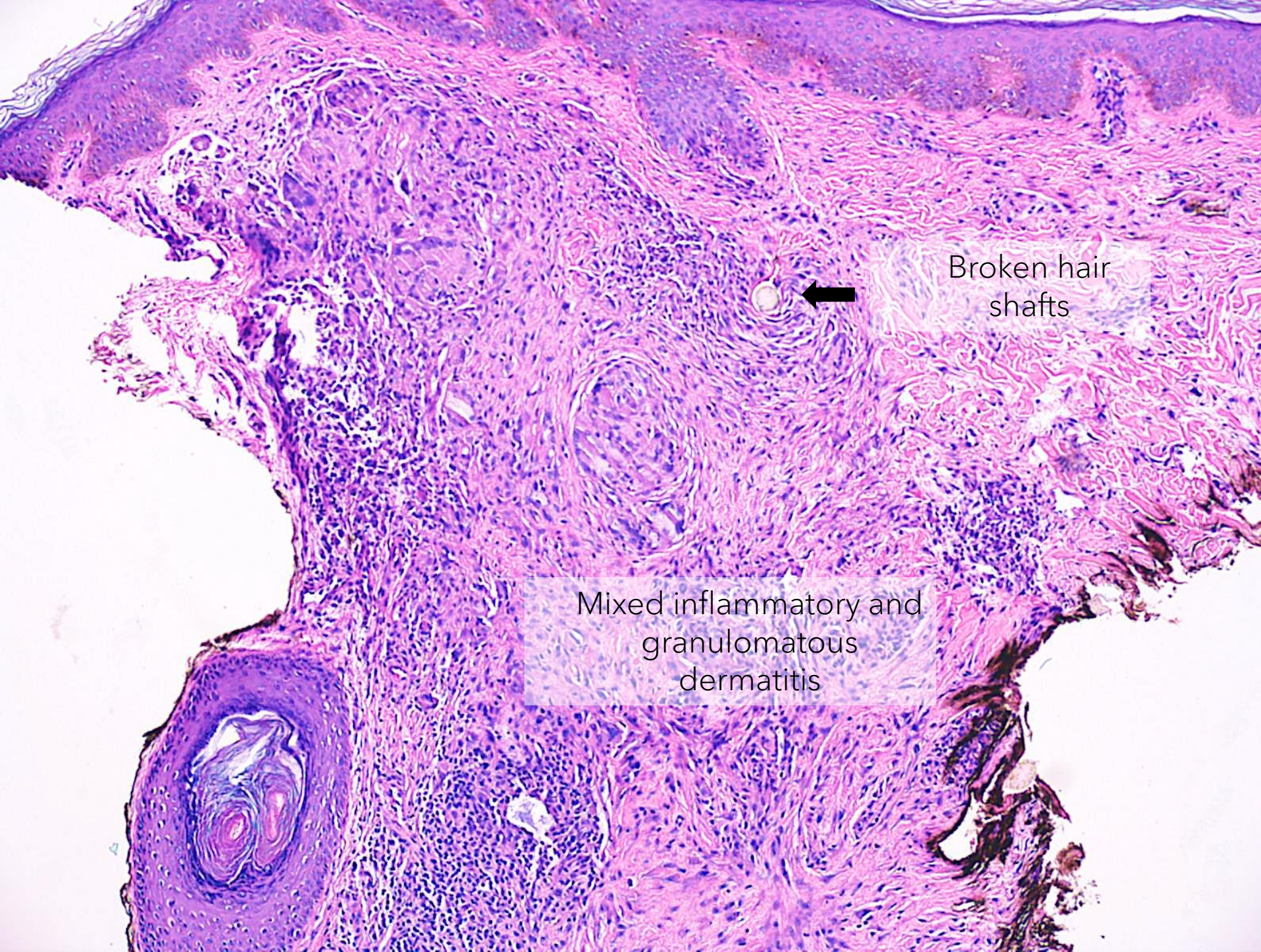
Intradermal and mid to deep  
perivascular  
infiltrate



Granulomatous dermatitis with identifiable *demodex*







Broken hair  
shafts

Mixed inflammatory and  
granulomatous  
dermatitis





- **Clinical Information:** 39F, 2-mm firm hyperpigmented papule on the left lateral cheek. DDX: rosacea versus acne versus Gram-negative folliculitis (22-53932).

- **DIAGNOSIS:**

Skin, Left Lateral Cheek, Punch Biopsy:

- Ruptured granulomatous folliculitis with *Demodex folliculorum*.
- Comment: The histologic differential diagnosis includes granulomatous rosacea, ruptured *demodex* folliculitis, perioral dermatitis and acne. See reference.

Reference: Ramelet AA, Delacrétaz J. Etude histo-pathologique de la dermatite périale [Histopathologic study of perioral dermatitis]. Dermatologica. 1981;163(5):361-9. French.

- **Teaching Points:**

- Deeper histologic sections are needed to reveal foreign particles, and/or microorganisms
- Use GMS, Gram, and Fite or AFB for high suspicion of microorganisms

- **Minimal Diagnostic Criteria:**

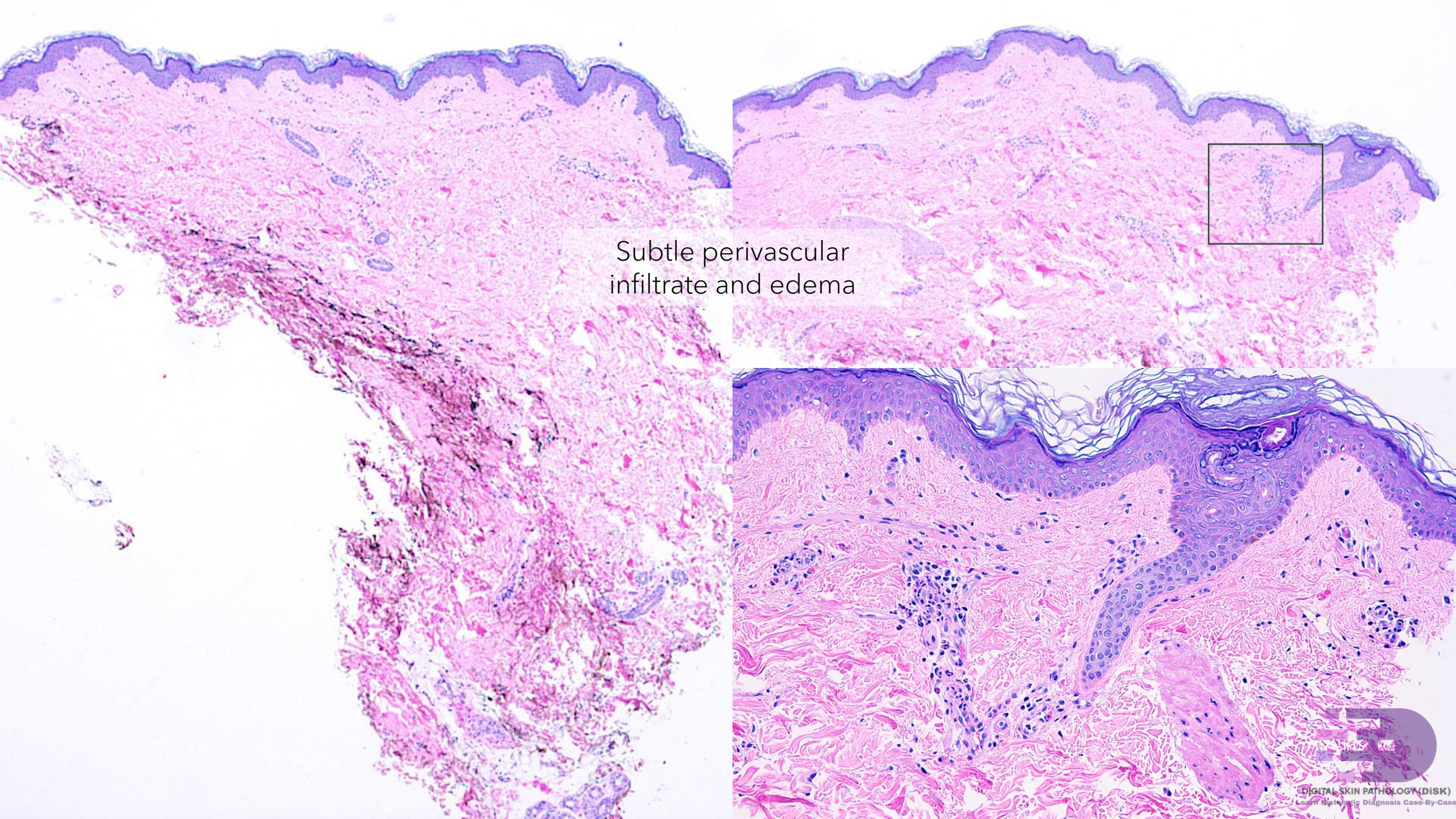
- Granulomatous dermatitis with identifiable *demodex* species

- **Differential Diagnosis:**

- Ruptured *demodex* folliculitis
- Perioral dermatitis
- Acne

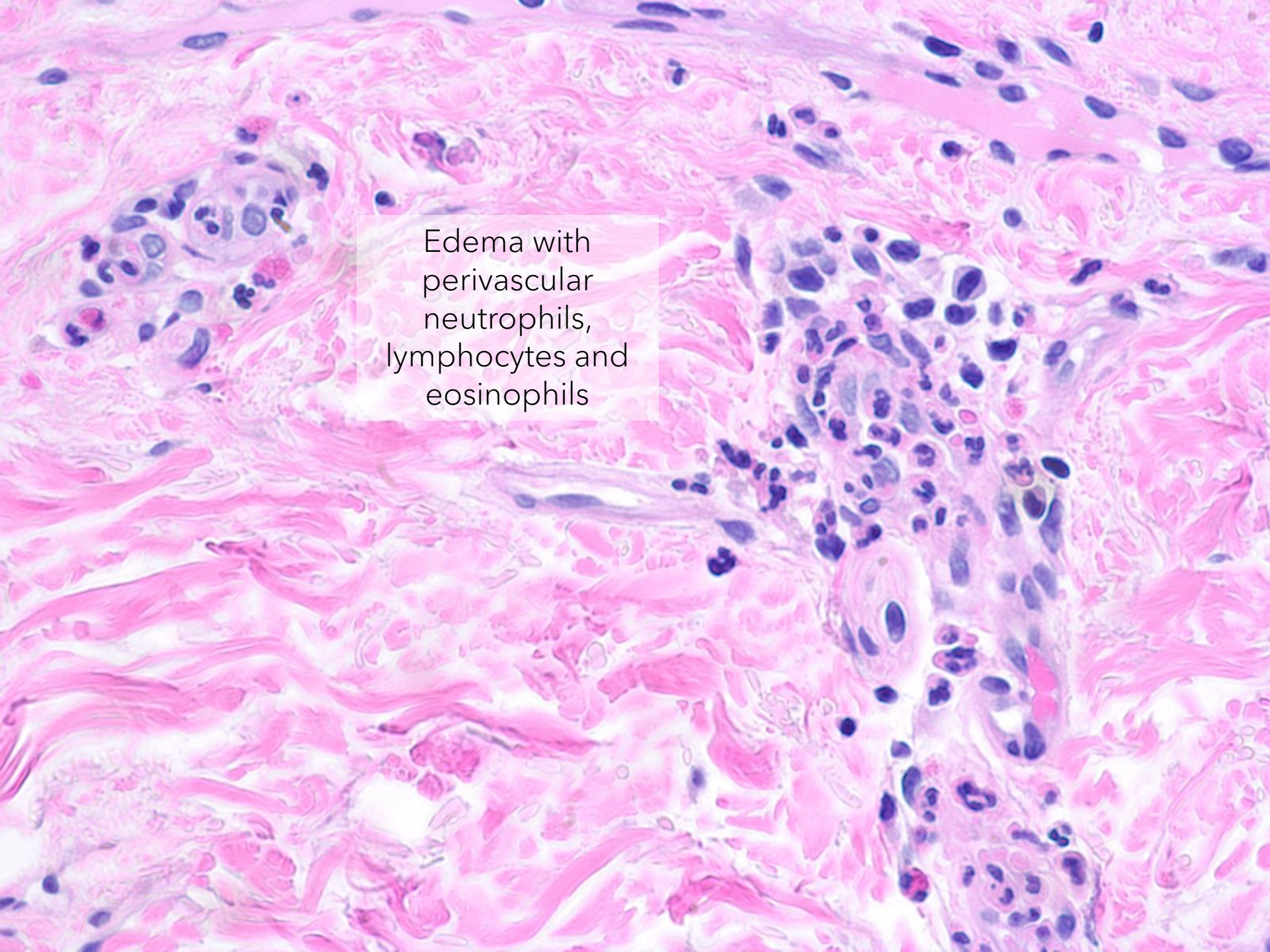






Subtle perivascular  
infiltrate and edema



A histological slide stained with hematoxylin and eosin (H&E) showing a tissue section with significant edema (pale, pinkish areas) and a dense infiltrate of inflammatory cells, including neutrophils, lymphocytes, and eosinophils. The cells are stained dark purple/blue, and the surrounding tissue is pink. A semi-transparent text box is overlaid on the left side of the image.

Edema with  
perivascular  
neutrophils,  
lymphocytes and  
eosinophils





- **Clinical Information:** 36M, Collection of edematous, pink papules, biopsy does not include the entirety of the rash, rule out urticaria versus mastocytosis (23-16314).
- **DIAGNOSIS:**

Skin, Left Medial Upper Extremity, Punch Biopsy:

  - Superficial perivascular lymphocytic dermatitis with neutrophils and eosinophils.
  - Comment: In the appropriate clinical context, the findings support, acute urticaria. Immunohistochemistry for mast cell tryptase is negative for mastocytosis.
- **Teaching points:**
  - Look for eosinophils lining up against the dermal-epidermal junction (urticarial phase of bullous pemphigoid)
- **Minimal Diagnostic Criteria:**
  - Subtle to moderate collection of neutrophils and eosinophils around superficial-mid blood vessels
  - Dermal edema
- **Differential Diagnosis:**
  - Dermal hypersensitivity reaction
  - Timid response to arthropod bite
  - Urticarial bullous pemphigoid (in elderly and if eosinophils line up against the dermal-epidermal junction)