

Dermatopathology Unknown Cases

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S24-18722 (STAT) Dermal Hypersensitivity

Specimen #1 - Skin, Thigh, Punch Biopsy:

- Superficial perivascular lymphocytic dermatitis with rare eosinophils and focal interface change. See comment.
- Negative for leukocytoclastic vasculitis.

Comment 1: The histopathology show changes of dermal hypersensitivity reaction to a drug or other ingestants. The histologic differential diagnosis may also include urticaria. Although DIF results show linear C3 reaction, this finding is noncontributory in this context. Case findings securely communicated to Dr. X on May 24, 2024 at 10:30 AM.

A PAS stain is negative for fungal forms. Additional levels (two sets) are examined.

Specimen #2 - Skin, Thigh, (DIF) Punch Biopsy:

- Direct immunofluorescence is positive for linear C3 while negative for IgG, IgA, IgM, and fibrinogen.

Comment 2: The frozen-section histopathology demonstrates intact epidermis without microvesicles.

Drug Rash

16 F, Edematous morbilliform rash and facial edema that started after amoxicillin (taken 5/17-5/21) with associated fever, eosinophilia, and elevated inflammatory markers.

Favor DRESS, however differential also includes viral exanthem, urticarial vasculitis, lichenoid drug eruption, morbilliform drug eruption, less likely TEN

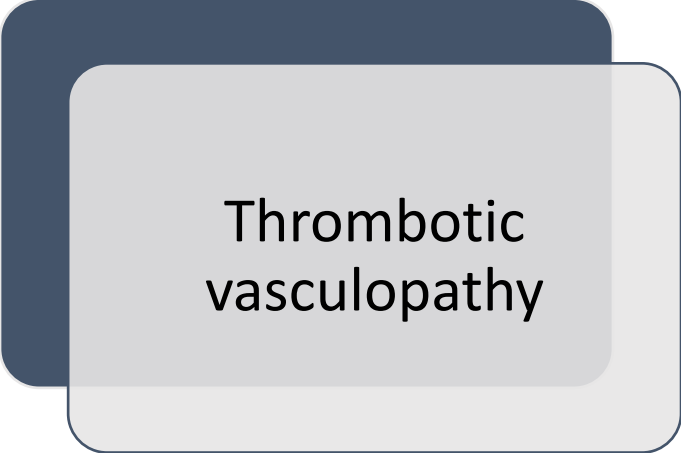




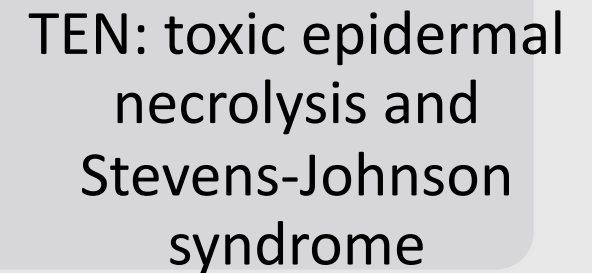
Dermatologic conditions needing STAT skin biopsy



Leukocytoclastic
vasculitis



Thrombotic
vasculopathy



TEN: toxic epidermal
necrolysis and
Stevens-Johnson
syndrome

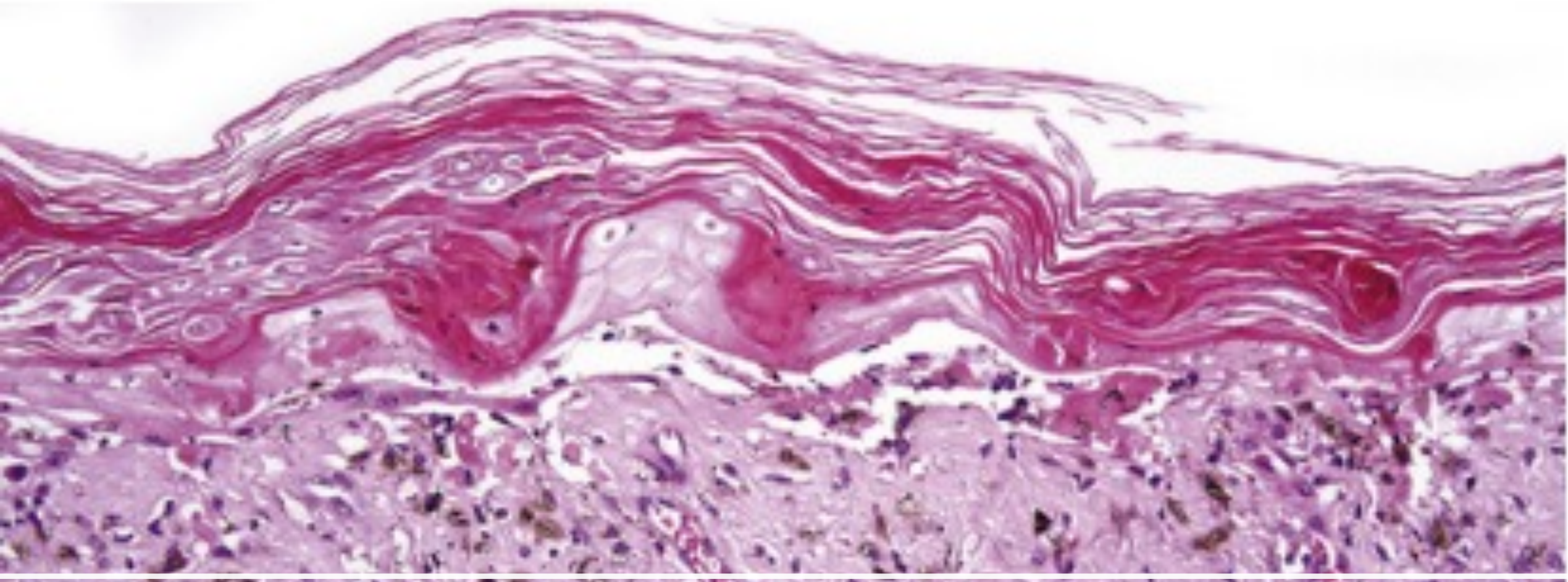
Drug reaction with eosinophilia and systemic symptoms (DRESS)

- Severe adverse drug reaction:
 - Extensive skin rash
 - Visceral organ involvement
 - Lymphadenopathy
 - Eosinophilia
 - Atypical lymphocytosis
- Heterogeneous clinical presentation and histopathology
- Not a histologic diagnosis



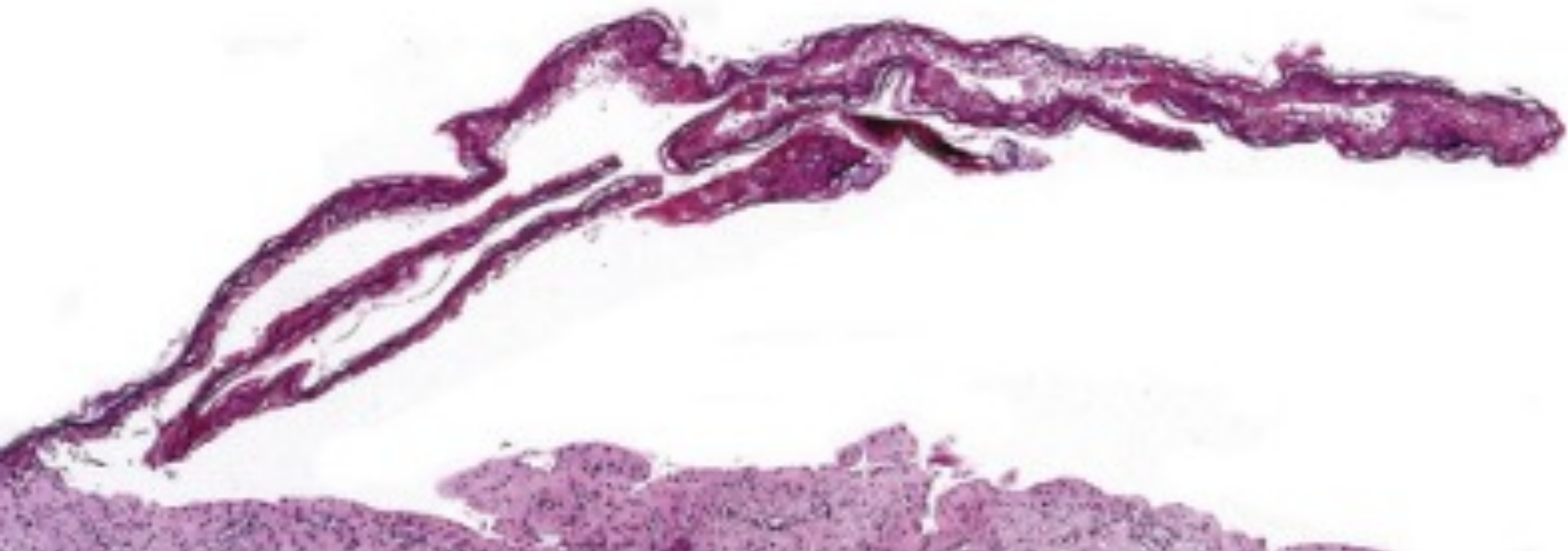
TEN: toxic epidermal necrolysis and Stevens-Johnson syndrome

- Are related conditions
- Severe drug hypersensitivity reaction
- Short prodromal illness
- Painful rash on face, neck and shoulders
- Erythematous target lesions (may vary)
- Flaccid, fluid-filled bullae
- Proximal and moves down
- Mucosal involvement, whole body may become affected



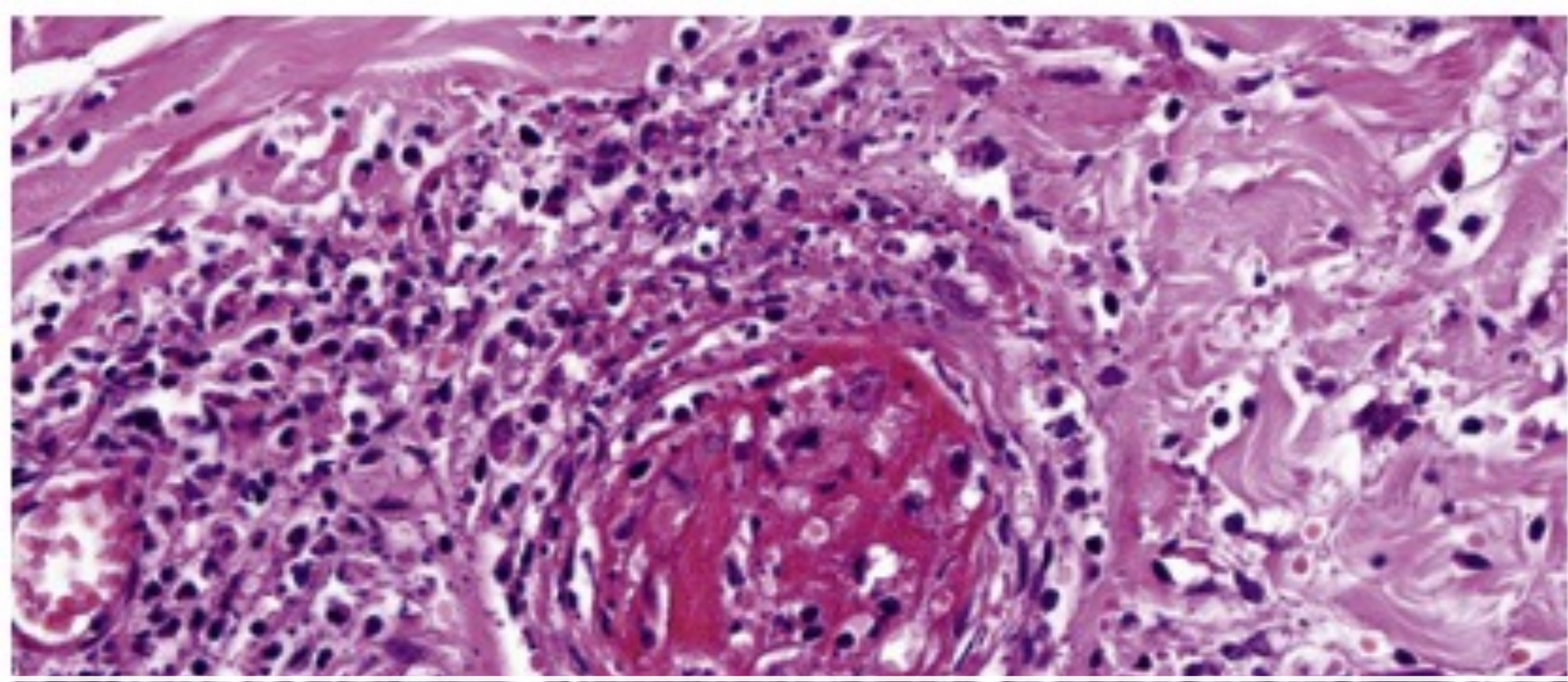
TEN: Full thickness necrosis of the blister roof





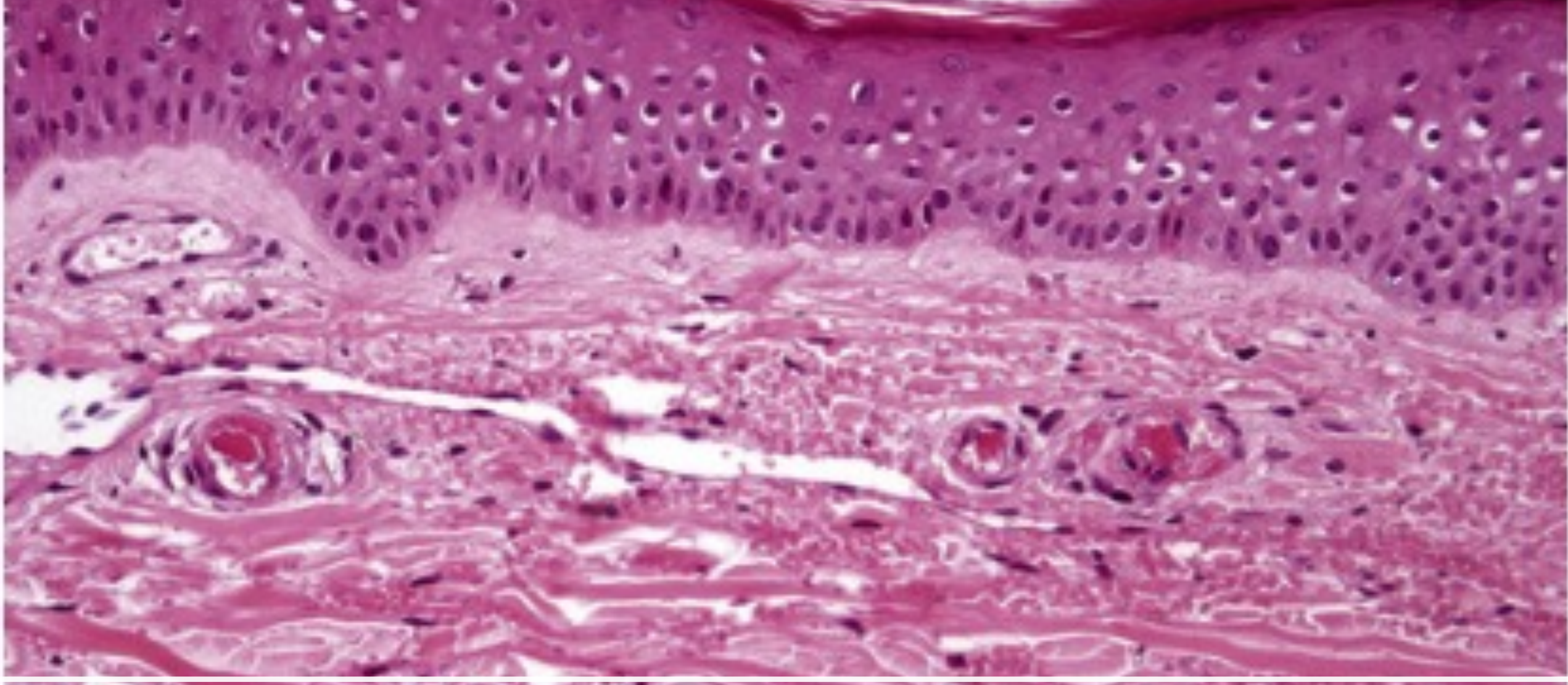
Toxic epidermal necrolysis





Leukocytoclastic vasculitis





Thrombotic vasculopathy



S24-18447 28M, Right Leg, skin lesion

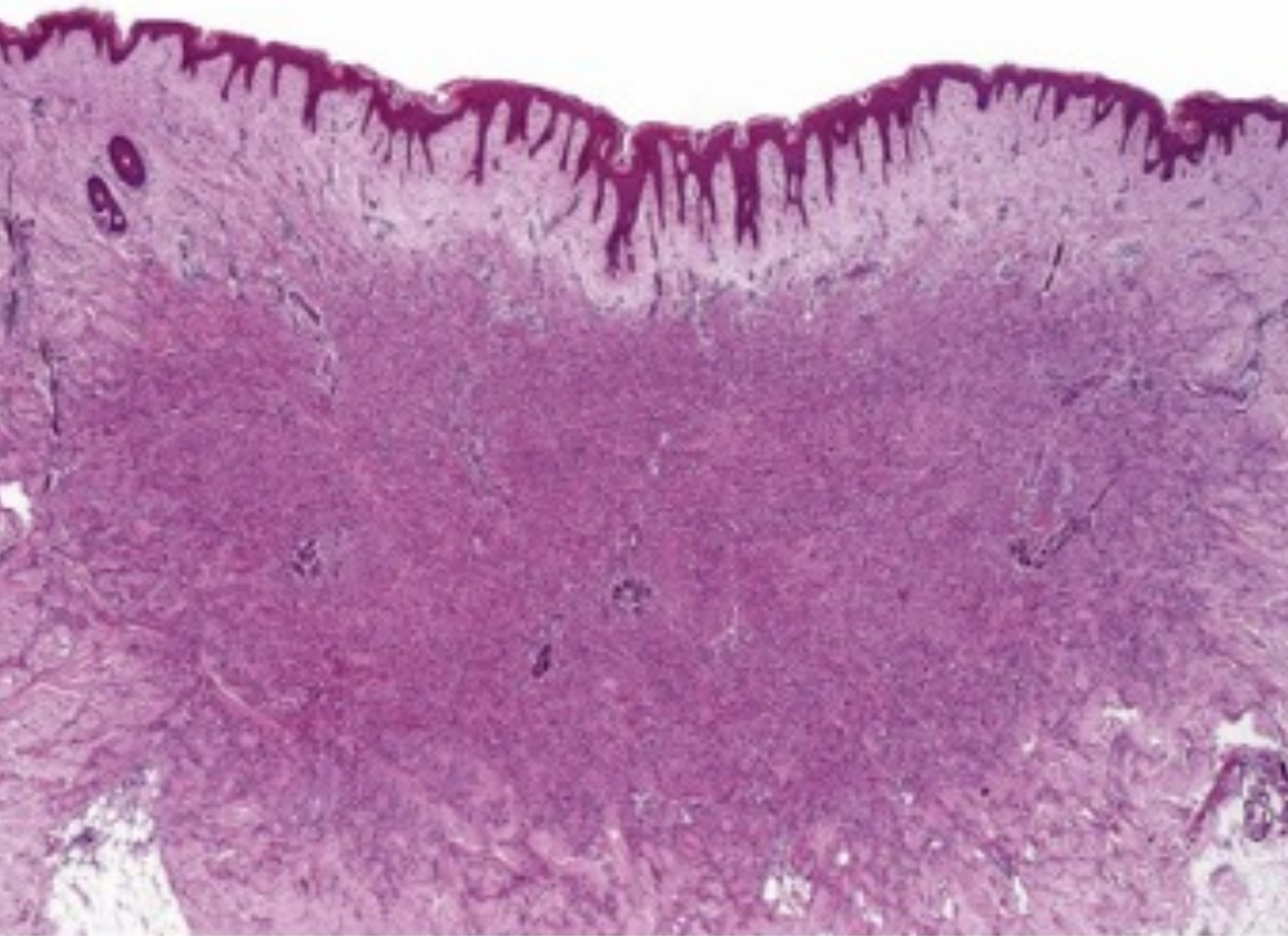
Skin, Right Leg, Excision:

- Dermatofibroma, hemosiderotic variant, extending to the tissue edges and base. See comment.

Comment: Two additional sections are submitted for histopathology and examined. Additional levels (two sets) are examined in blocks 1A, 1B, and 1C. By immunohistochemistry, the tumor cells are positive for factor XIIIa while negative for CD34.

Fibrous histiocytoma (dermatofibroma)

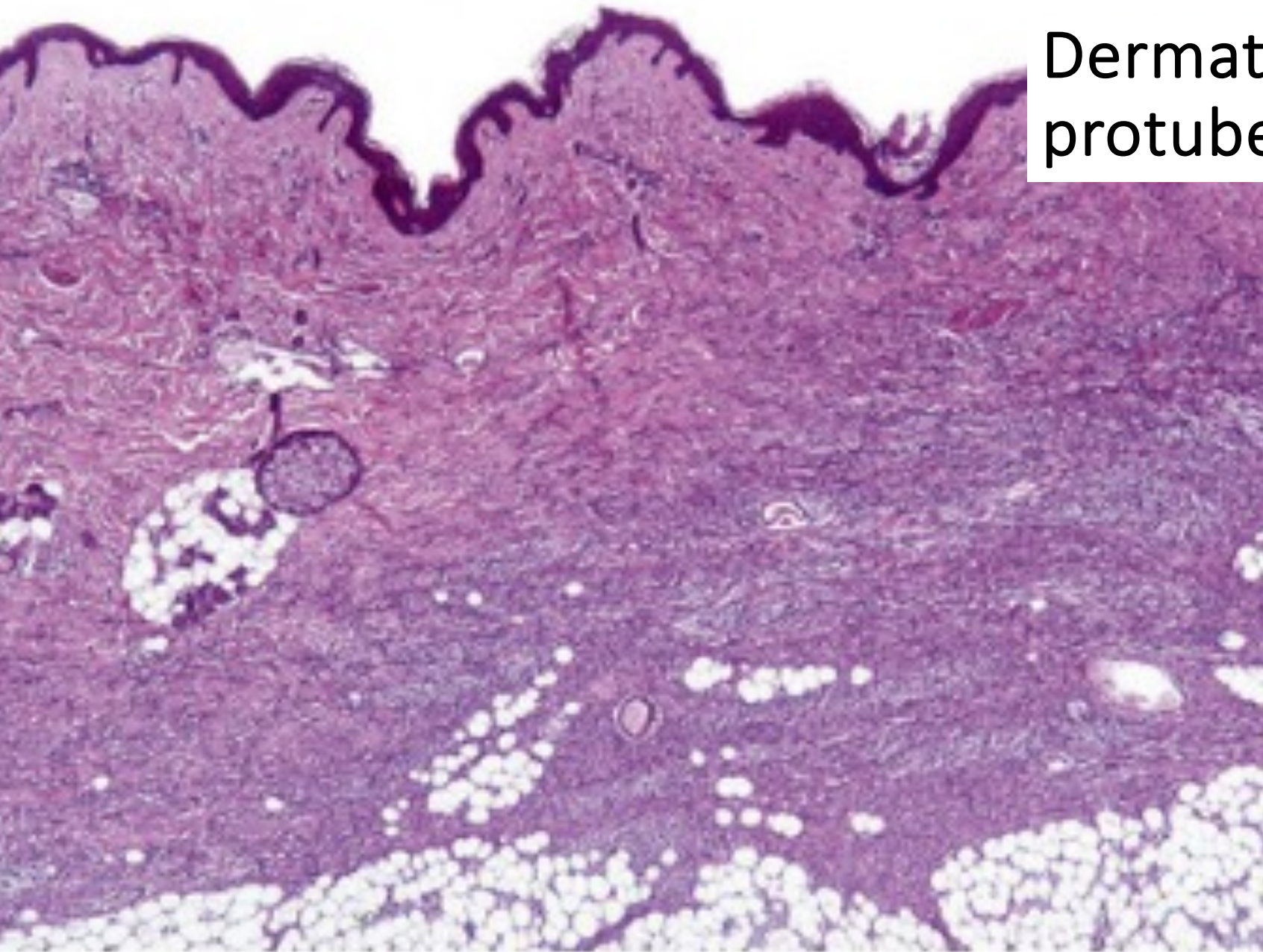
- Most common benign cutaneous soft tissue tumor
- Many histologic variants
- Middle aged adult females
- Lower limbs
- Neoplastic process (not reactive)
 - Regular, epithelioid, cellular, and aneurysmal fibrous histiocytoma: Rearrangements of the protein kinase C genes (*PRKCB* and *PRKCD*)
 - Epithelioid variant: *ALK* rearrangements
- May extend into subcutaneous adipose tissue (not sarcoma, DFSP)
- IHC: **CD34**-, Factor XIIIa+ (background dendrocytes)



Fibrous histiocytoma (dermatofibroma)

- Epidermal hyperplasia
- Follicular induction
- Placed in central reticular dermis
- May extend into subcutaneous adipose tissue

Dermatofibrosarcoma protuberans



- No epidermal hyperplasia/changes
- Mid dermal location
- Infiltration of the subcutaneous adipose tissue (lace-like or honeycomb pattern)
- **CD34+**
- Fibrosarcomatous transformation
- *Col1A1-PDGFB* FISH

S24-17925, 42F Right cheek, lesion

Skin, Right Cheek, Excision:

- Neurofibroma, extending to the tissue edges and base.