Dermatopathology Quiz Cases 137-143

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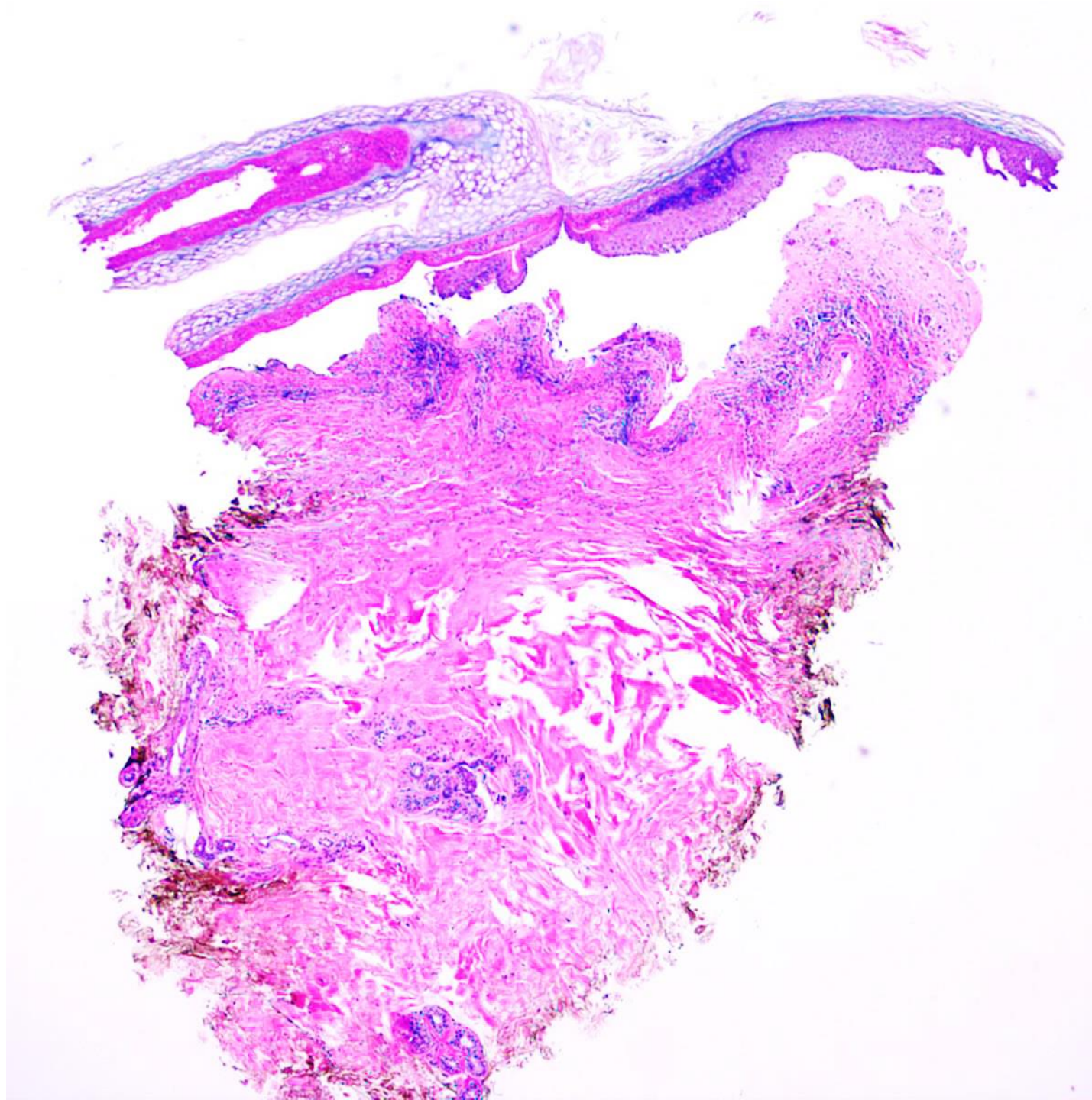
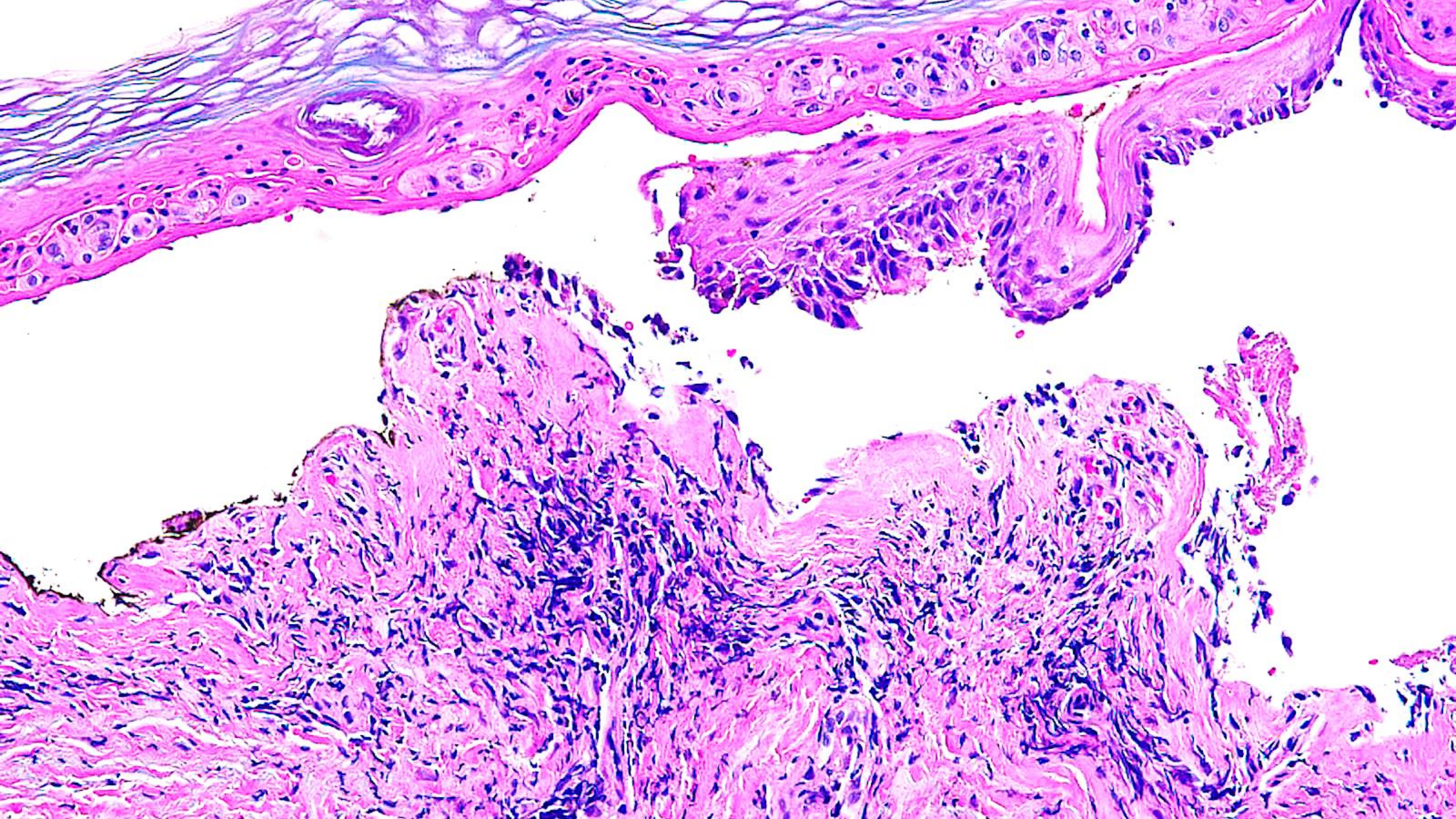
Test your knowledge of diagnostic skin pathology

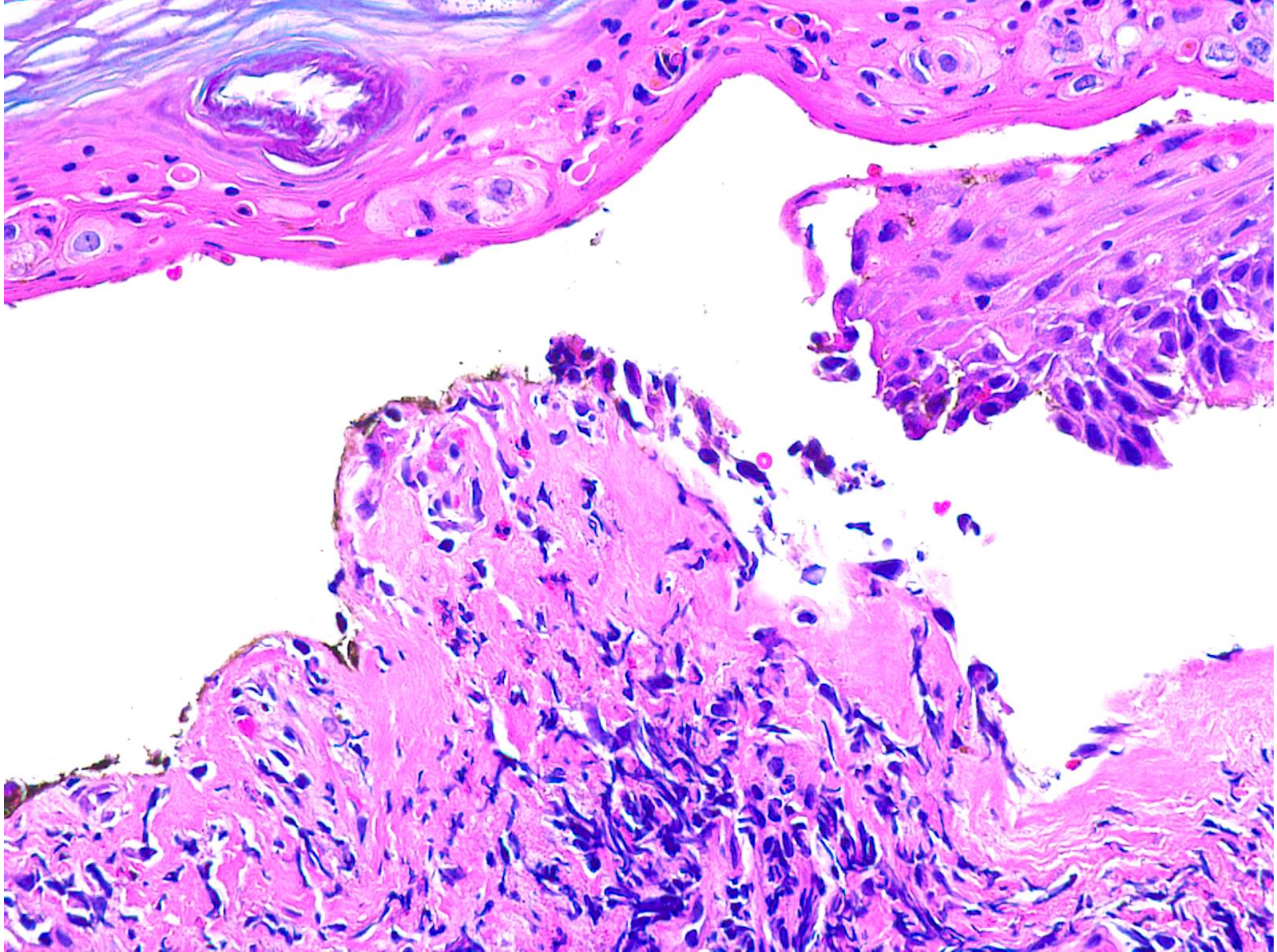
EXAMINE THE UNLABELED IMAGES

ANSWER THE QUESTIONS

FIND THE ANSWER KEY AND SUMMARY







Case 137. 89F Right shin, flaccid bullae. What is your diagnosis?

A. Bullous reaction to arthropod assault

B. Bullous lichen planus

C. Bullous pemphigoid

D. Epidermolysis bullosa acquisita

E. Cicatricial pemphigoid

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

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Case 138. 89F Right shin, flaccid bullae with erosions. What is the expected direct immunofluorescent results to confirm your diagnosis?

A. Linear, subepidermal C3, IgA; in lesional skin

B. Linear subepidermal C3, IgA; in perilesional skin

C. Linear subepidermal C3, IgG; in lesional skin

D. Linear subepidermal C3, IgG; in perilesional skin

E. Lace-like intraepidermal C3, IgG; in perilesional skin

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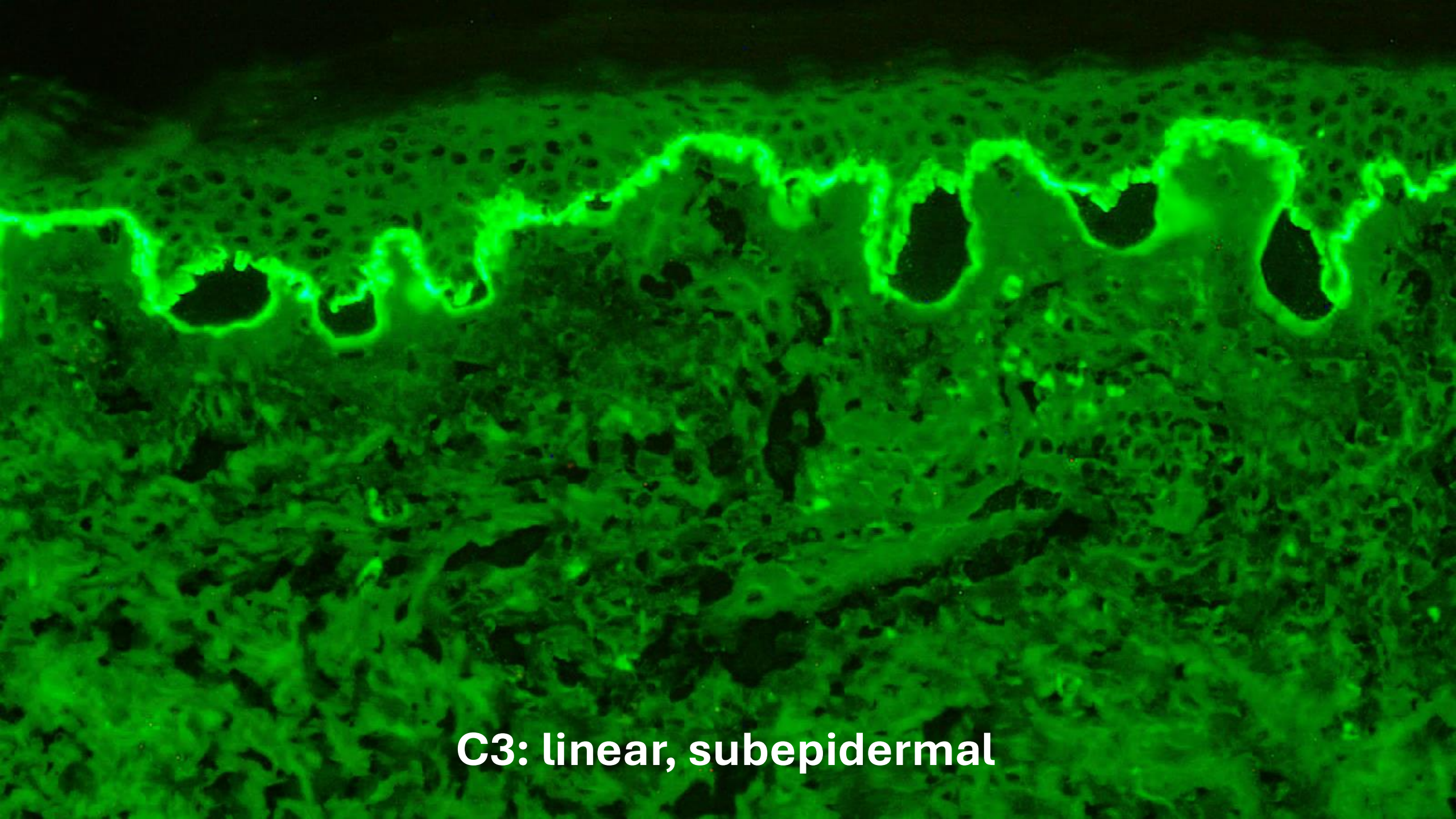
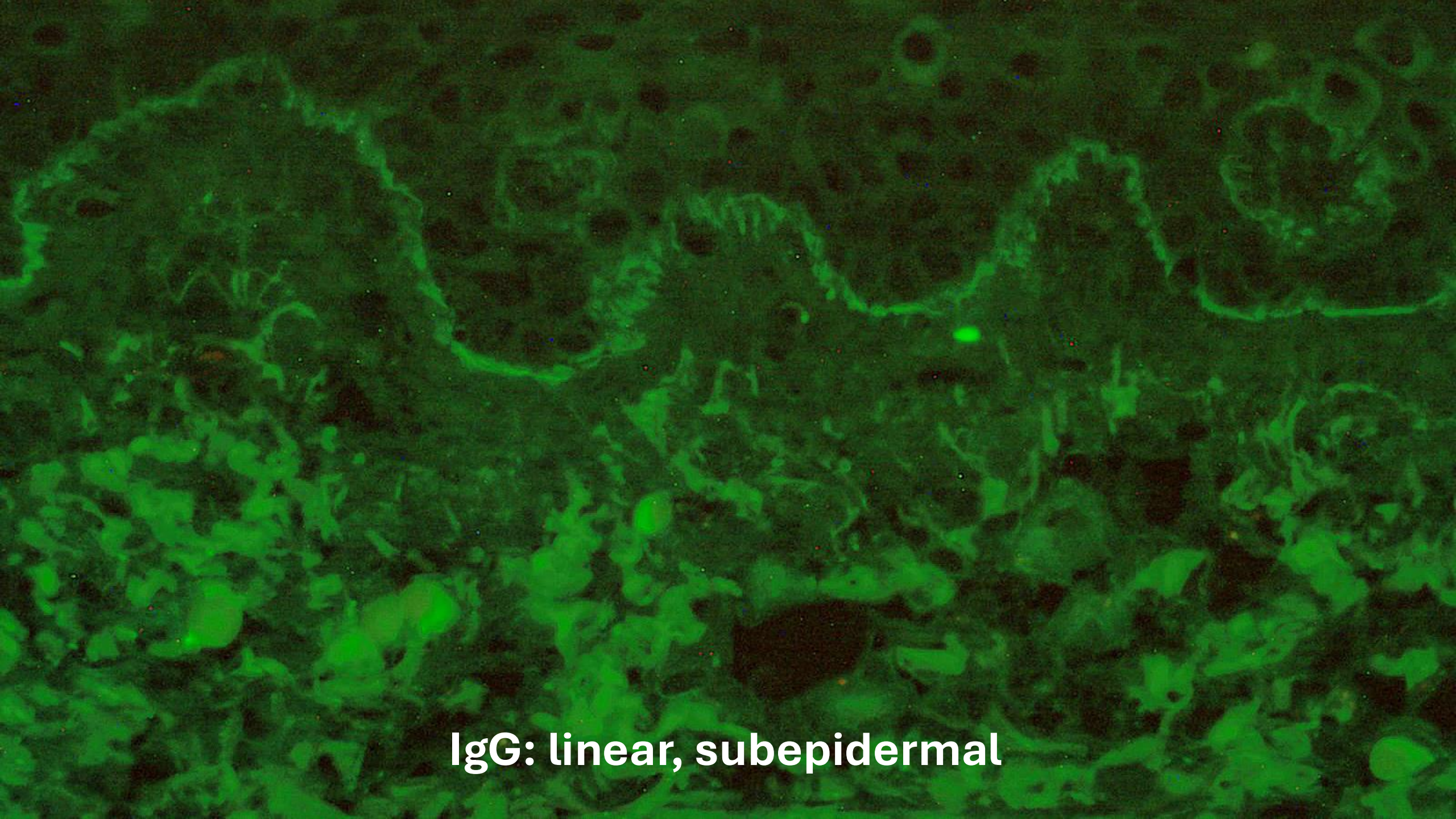
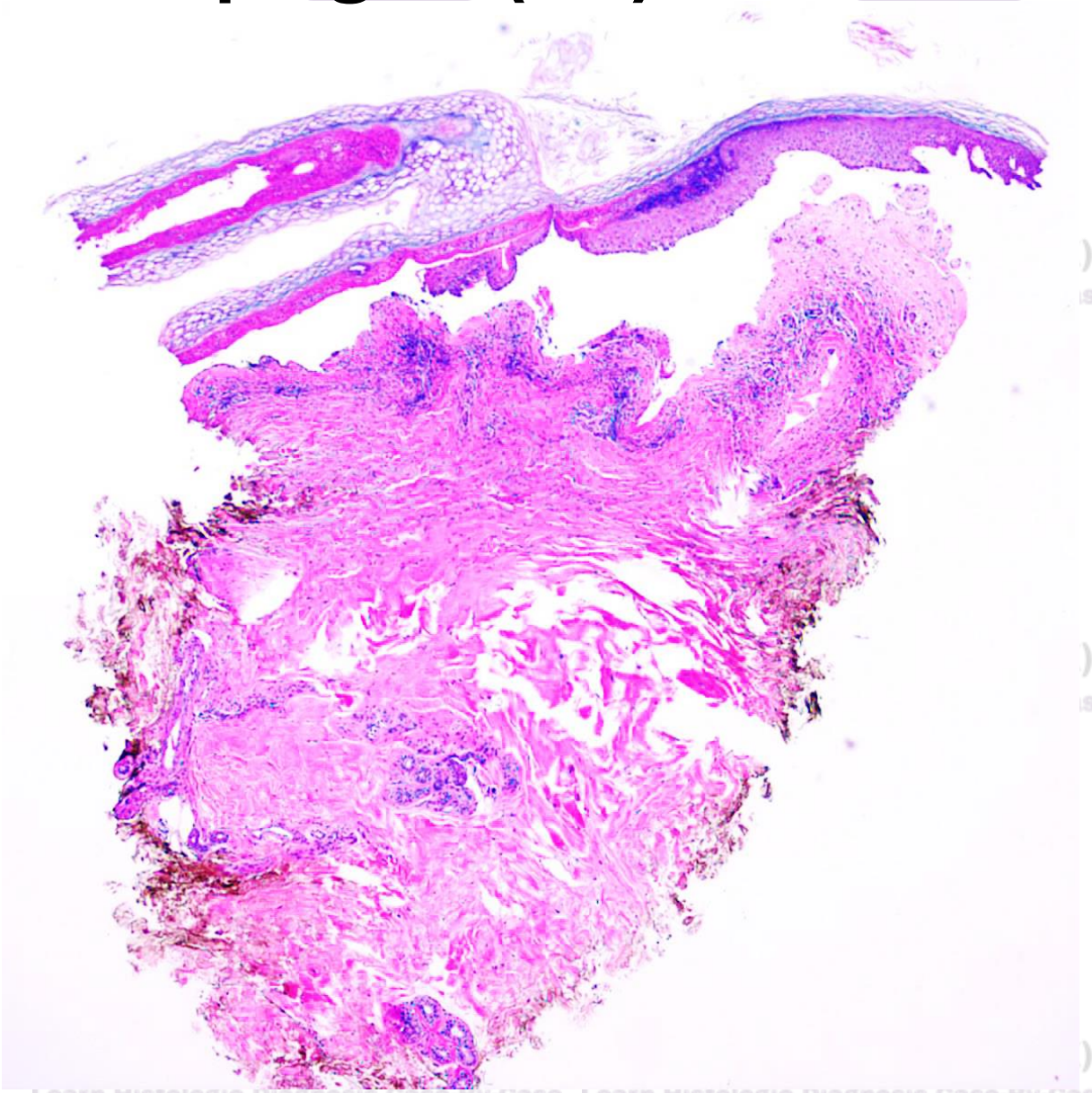

C3: linear, subepidermal


IgG: linear, subepidermal

Summary: Bullous Pemphigoid (BP)

- **Histologic Findings:**
  - **Subepidermal blister** with a **dermal inflammatory infiltrate** rich in **eosinophils**.
  - Early lesions may show eosinophilic spongiosis.
  - The blister cavity contains fibrin, eosinophils, and neutrophils.
- **Direct Immunofluorescence (DIF) Findings:**
  - **Gold Standard: Linear IgG and C3 deposition along the BMZ.** C3 is almost always present and can be the only finding.



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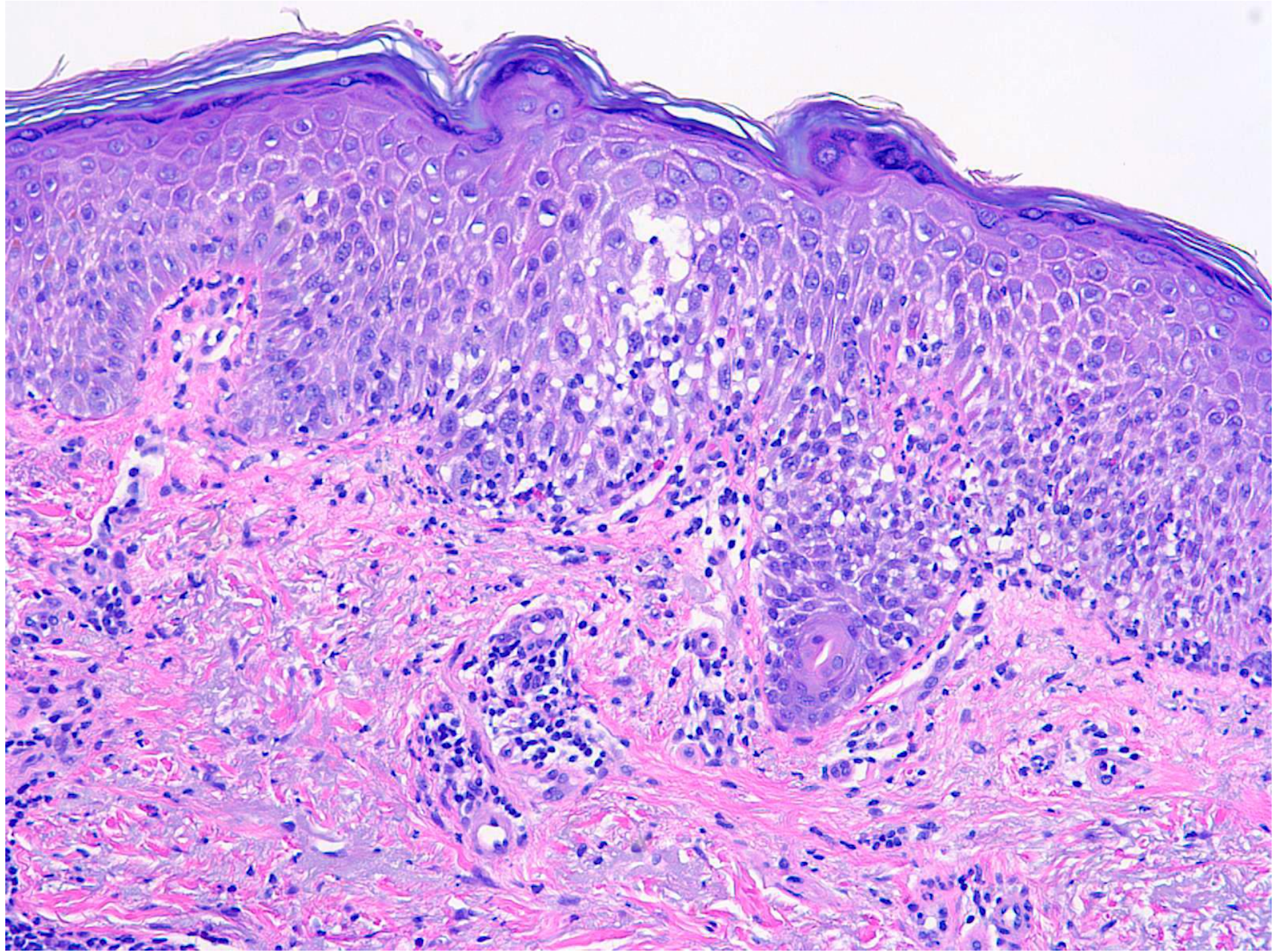


C3: linear, subepidermal

Case 139. 68M Left forearm, Right plantar foot; Eczematous, bullous rash started 2 months after Moderna COVID-19 vaccine. What is your diagnosis?

A. Bullous reaction to arthropod assault

B. Bullous drug reaction

C. Drug-induced bullous pemphigoid

D. Vaccine untoward reaction

E. Drug-induced bullous pemphigoid/Vaccine untoward reaction

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E. Drug-induced bullous pemphigoid/Vaccine untoward reaction

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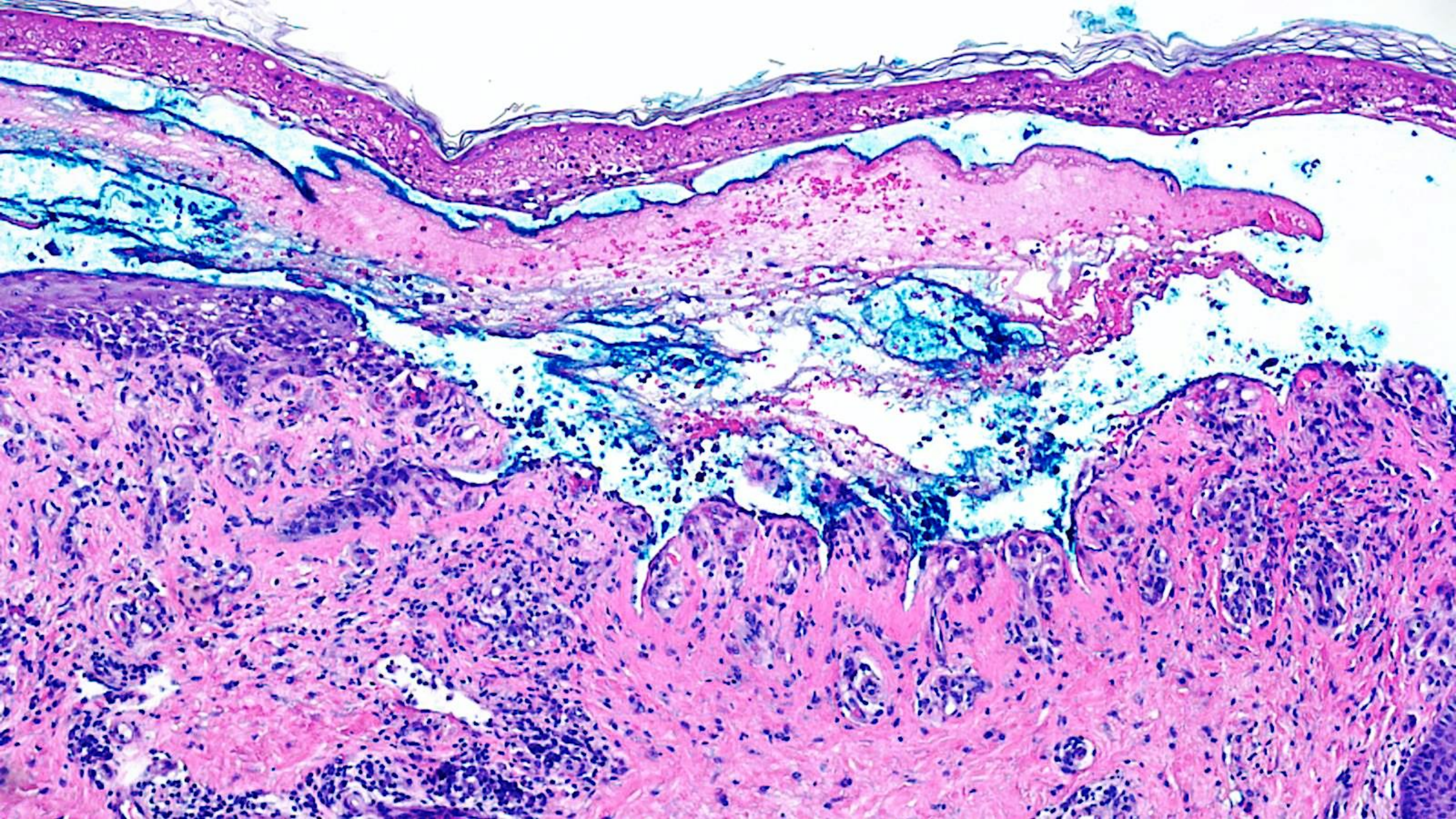
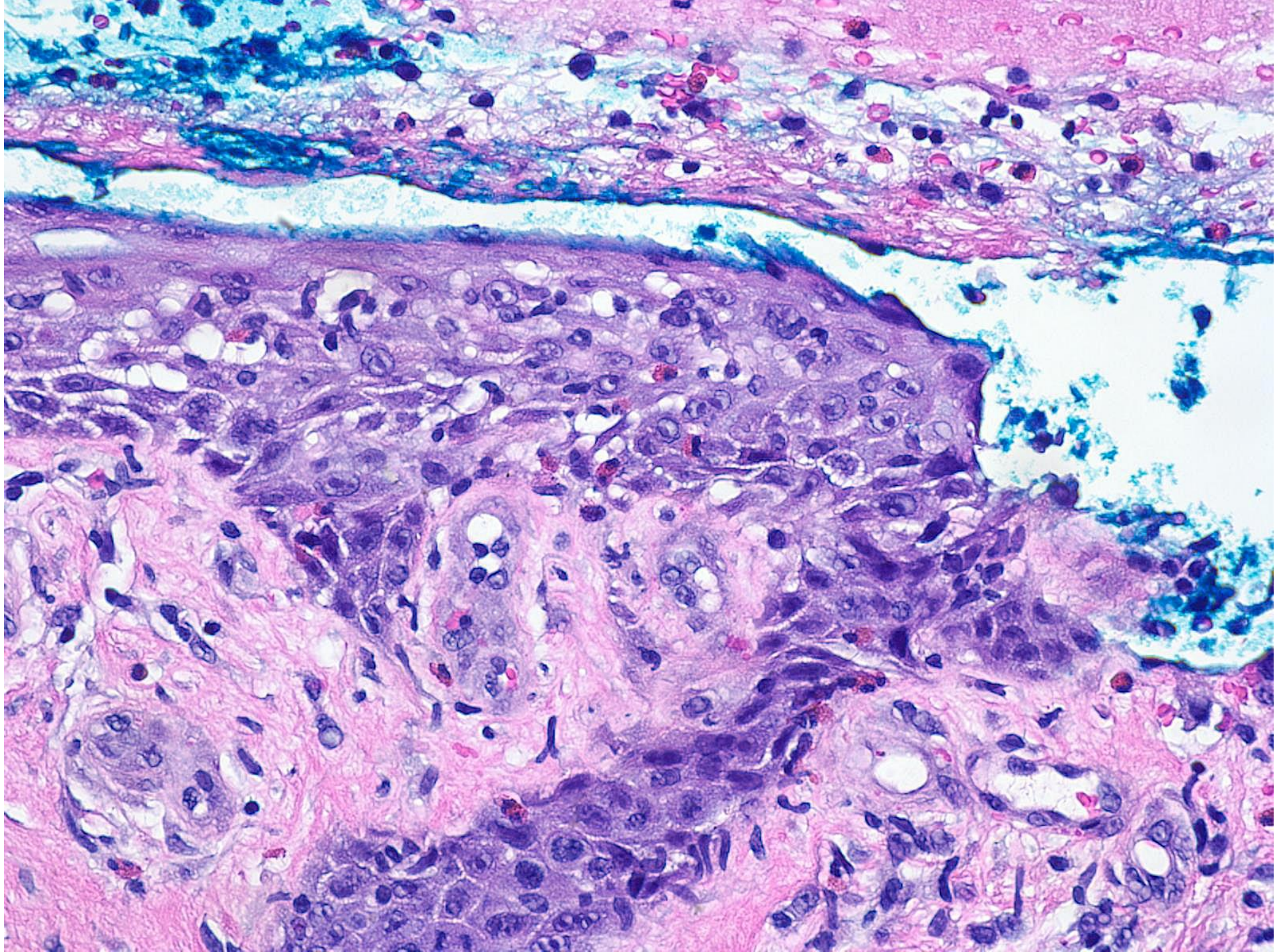
Summary: vaccine-induced and drug-induced bullous pemphigoid (BP)

Feature	Vaccine-Induced BP	Drug-Induced BP
Primary Trigger	**Vaccines** (e.g., COVID-19 mRNA, Influenza, Pertussis)	**Medications** (e.g., DPP-4 inhibitors, PD-1 inhibitors, Furosemide)
Clinical Presentation	Classic BP; may have stronger **localized/injection-site** presentation initially	Classic BP; often widespread from outset
Histology (H&E)	**Identical:** Subepidermal blister, eosinophil-rich infiltrate	**Identical:** Subepidermal blister, eosinophil-rich infiltrate
DIF Findings	**Identical:** Linear IgG and C3 along basement membrane zone	**Identical:** Linear IgG and C3 along basement membrane zone

The **key to diagnosis** for both is a high index of suspicion based on the **temporal relationship** to the potential trigger (recent vaccination or medication history).





Case 140. 84M with chronic renal failure, on hemodialysis. Bullae on legs. DIF-. What is your diagnosis?

A. Bullosis diabeticorum

B. Bullous fixed drug eruption

C. Bullous pemphigoid, cell-poor variant

D. Drug-induced bullous pemphigoid

E. Porphyria cutanea tarda

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Learn Histologic Diagnosis Case-By-Case

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DIGITAL SKIN PATHOLOGY (DiSK)
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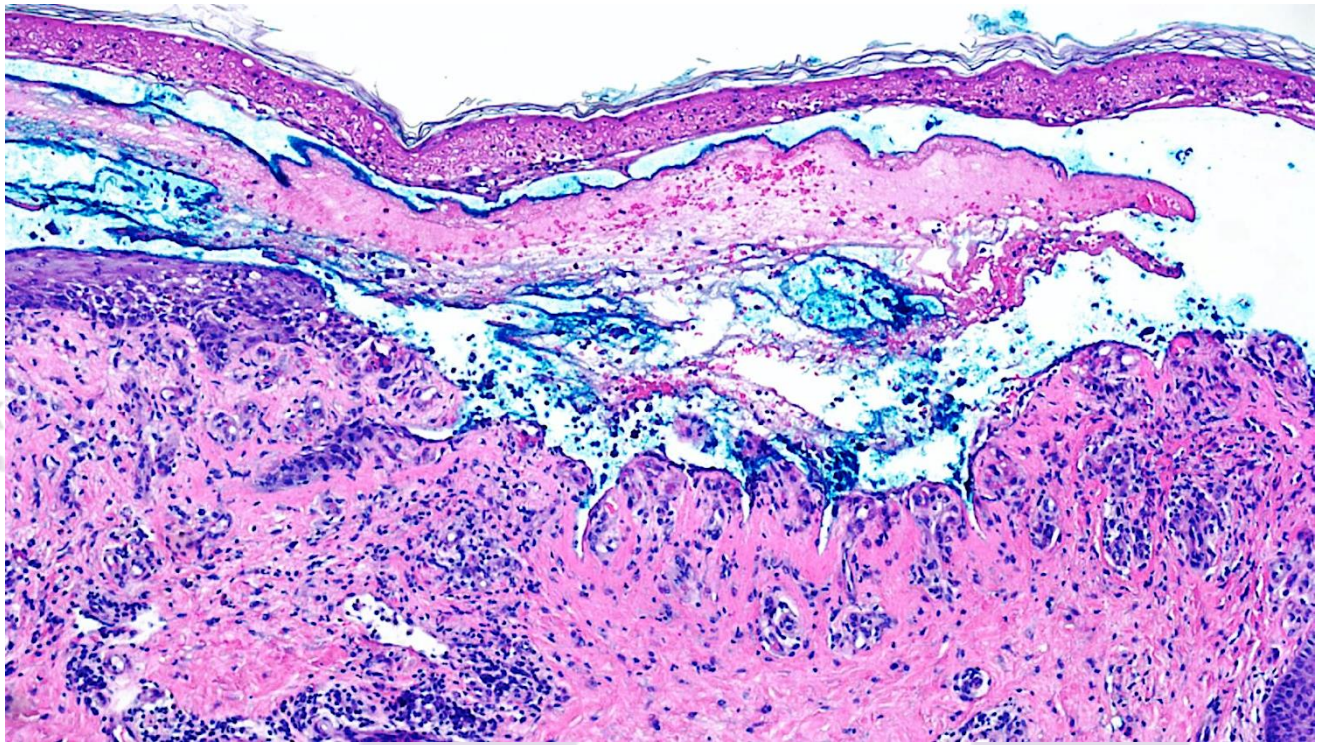
Summary: Bullous fixed drug eruption

- **Low Power:** A **subepidermal blister** with a markedly necrotic epidermis.
- **High Power:**
  - The hallmark is **necrosis (death) of keratinocytes** throughout the entire epidermis, leading to the blister formation.
  - The dermis shows a dense, mixed inflammatory infiltrate (lymphocytes, neutrophils, eosinophils) that is typically **"lichenoid"** (a band-like infiltrate obscuring the dermo-epidermal junction).
  - **Melanin incontinence**



Differential diagnosis:

- Pseudoporphyria: "caterpillar bodies", solar elastosis and thickening of the vascular walls.
- Stevens-Johnson Syndrome / Toxic Epidermal Necrolysis (SJS/TEN): Full-thickness epidermal **necrosis** with **a paucity of lymphocytes** in the dermis.

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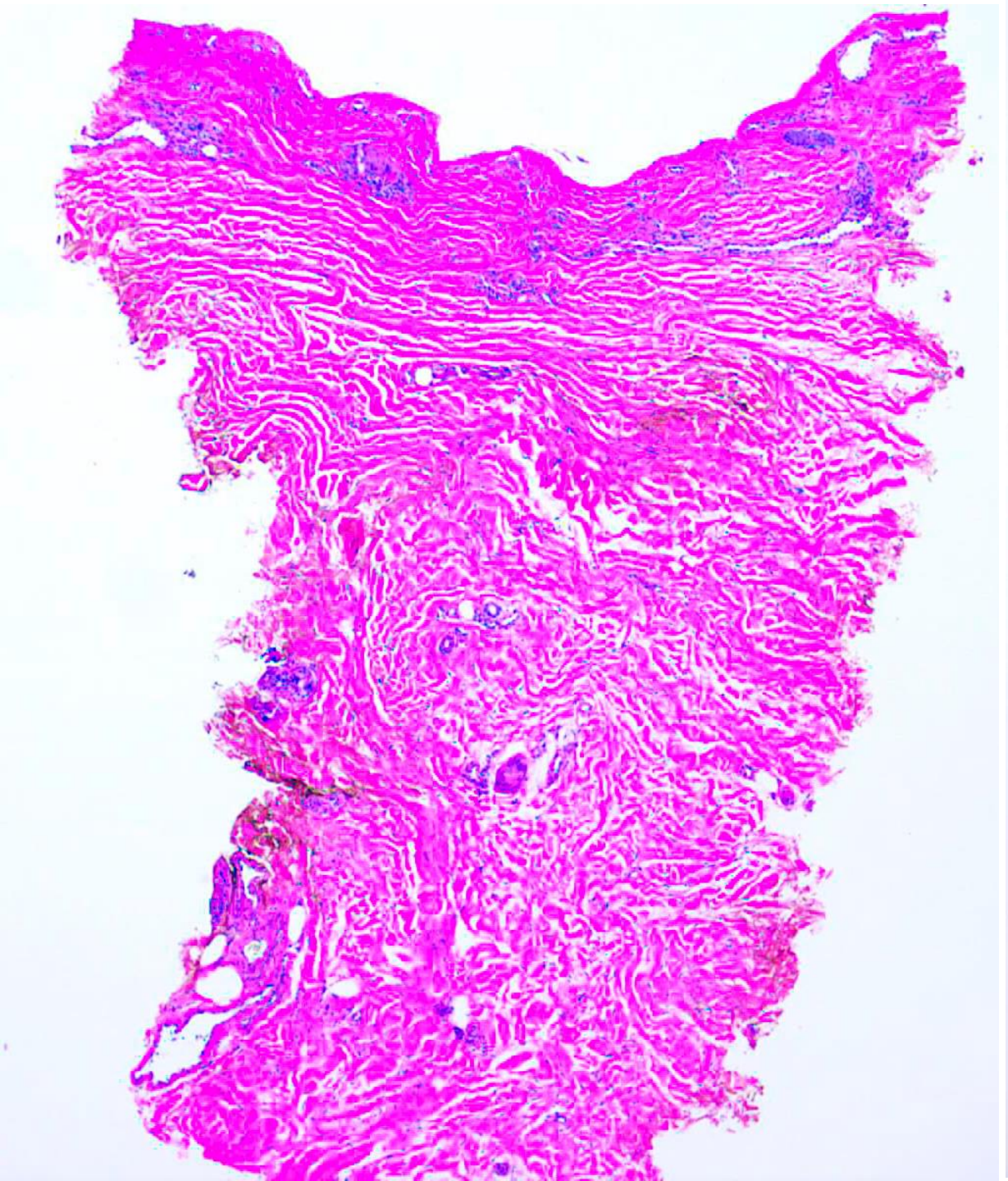

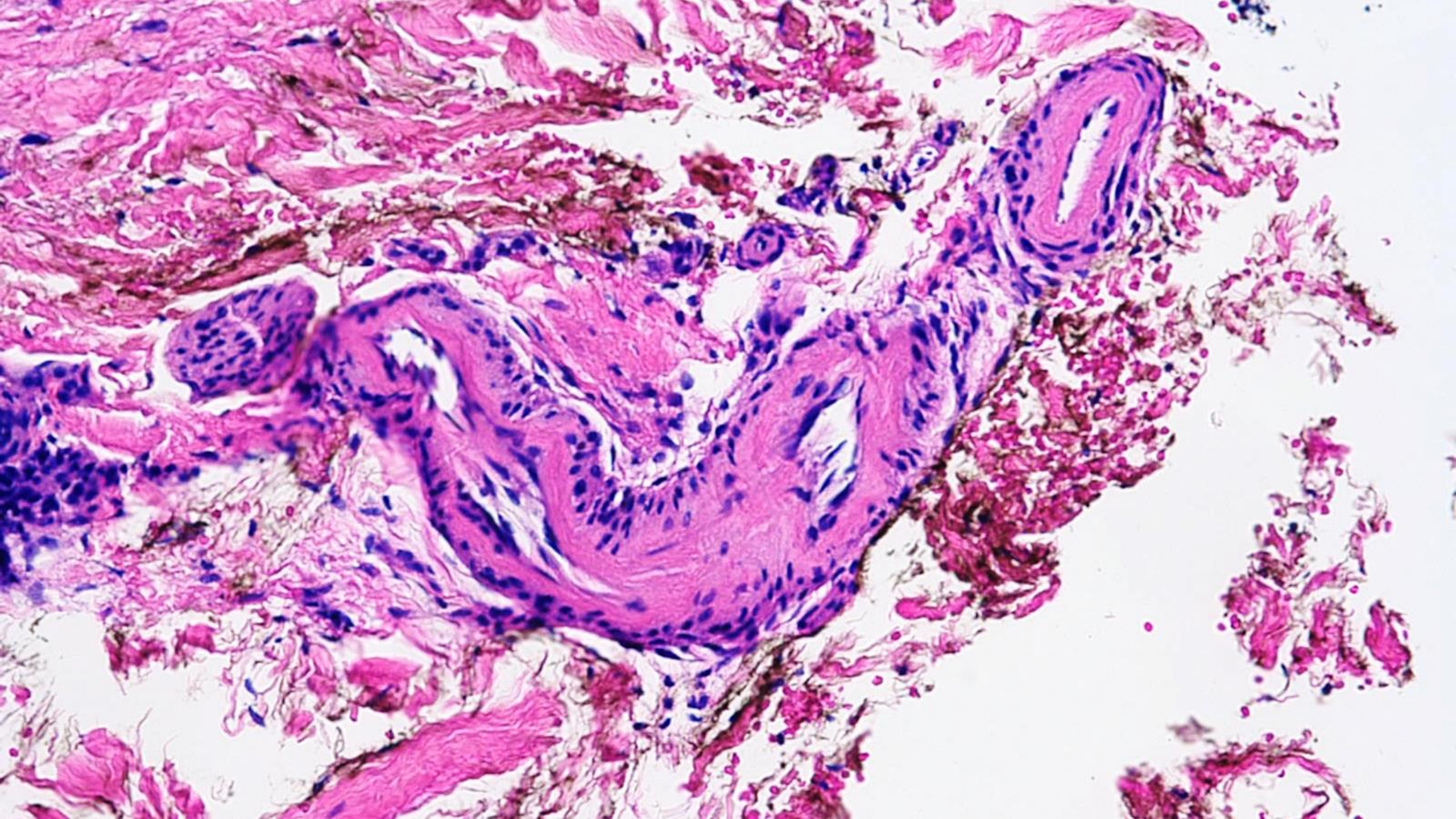

Case 140. 58F, solitary bulla on left knee and hyperpigmented patches on lower legs; r/o BP. What is your diagnosis?

A. Traumatic blister

B. Bullous fixed drug eruption

C. Bullous pemphigoid

D. Drug-induced bullous pemphigoid

E. Porphyria cutanea tarda

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

Case 140. 58F, solitary bulla on left knee and hyperpigmented patches on lower legs; r/o BP. What is your diagnosis?

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Case 141. 58F, solitary bulla on left knee and hyperpigmented patches on lower legs; r/o BP. What is the expected direct immunofluorescent results to confirm your diagnosis?

A. Linear, subepidermal C3, IgA; in lesional skin

B. Linear subepidermal C3, IgA; in perilesional skin

C. Vascular deposits of C3, IgG; in lesional skin

D. Vascular deposits of C3, IgG; in perilesional skin

E. Vascular deposits of C3, IgM; in perilesional skin

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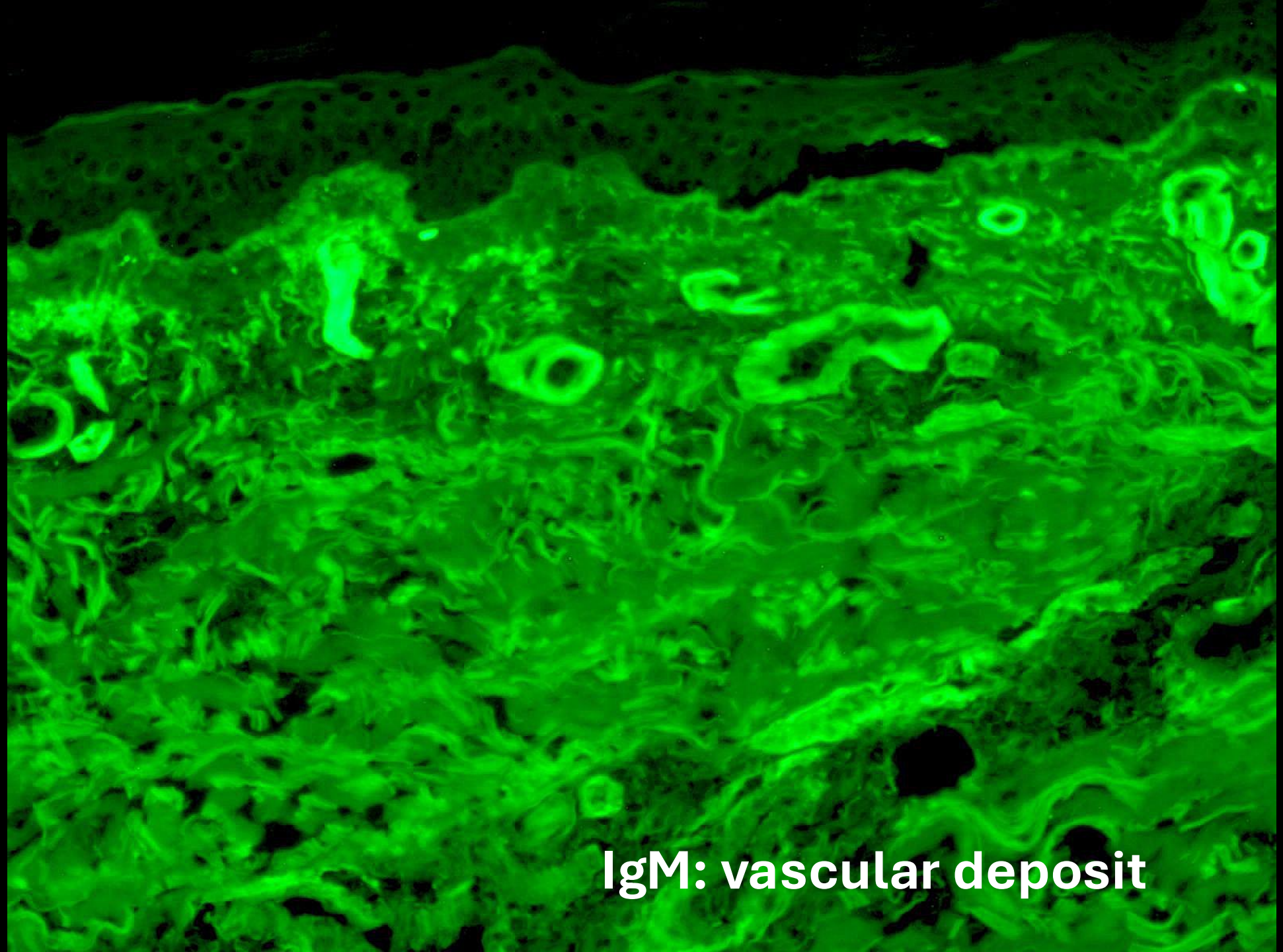
Learn Histologic Diagnosis Case-By-Case


IgM: vascular deposit

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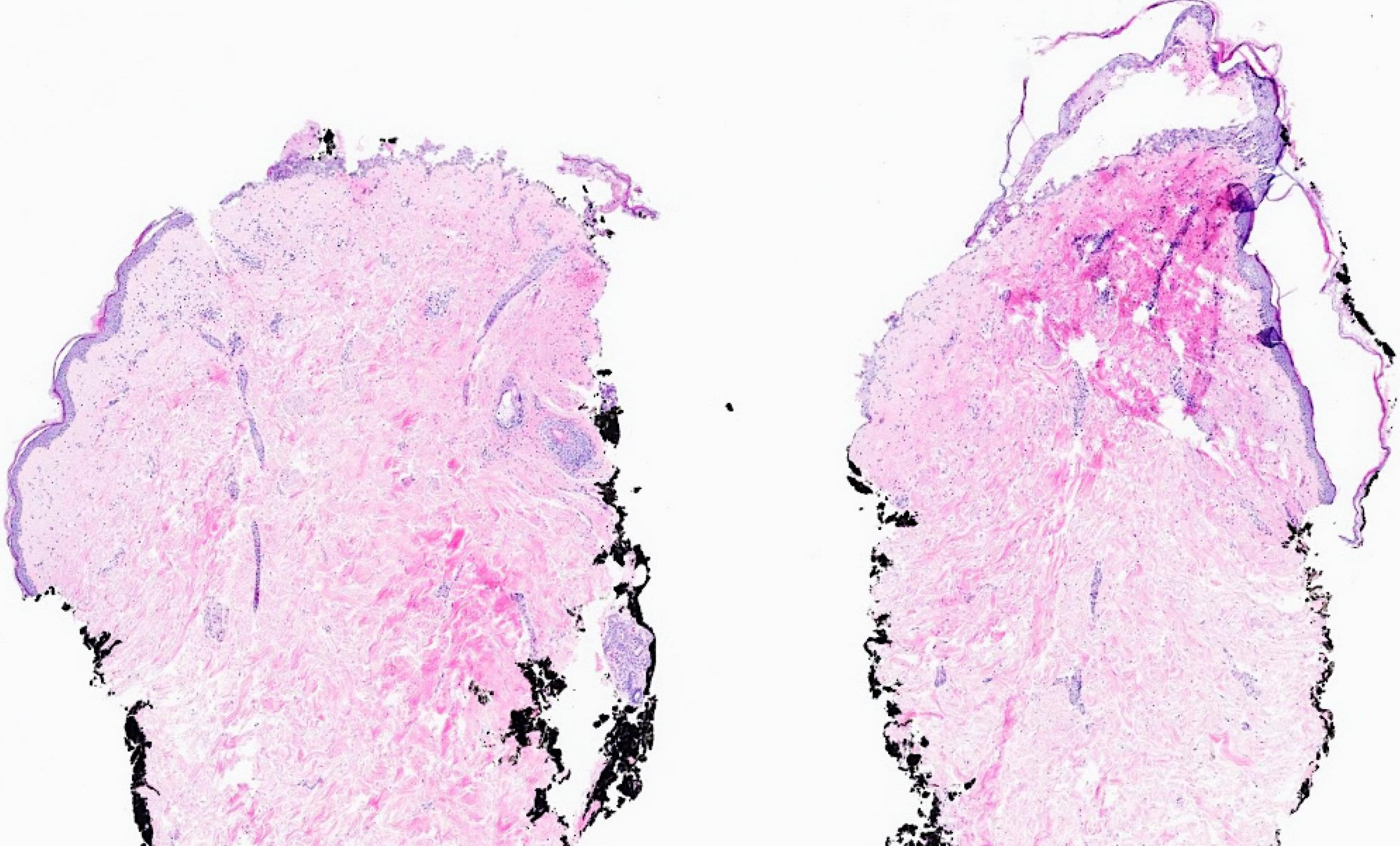
D. Vascular deposits of C3, IgG; in perilesional skin

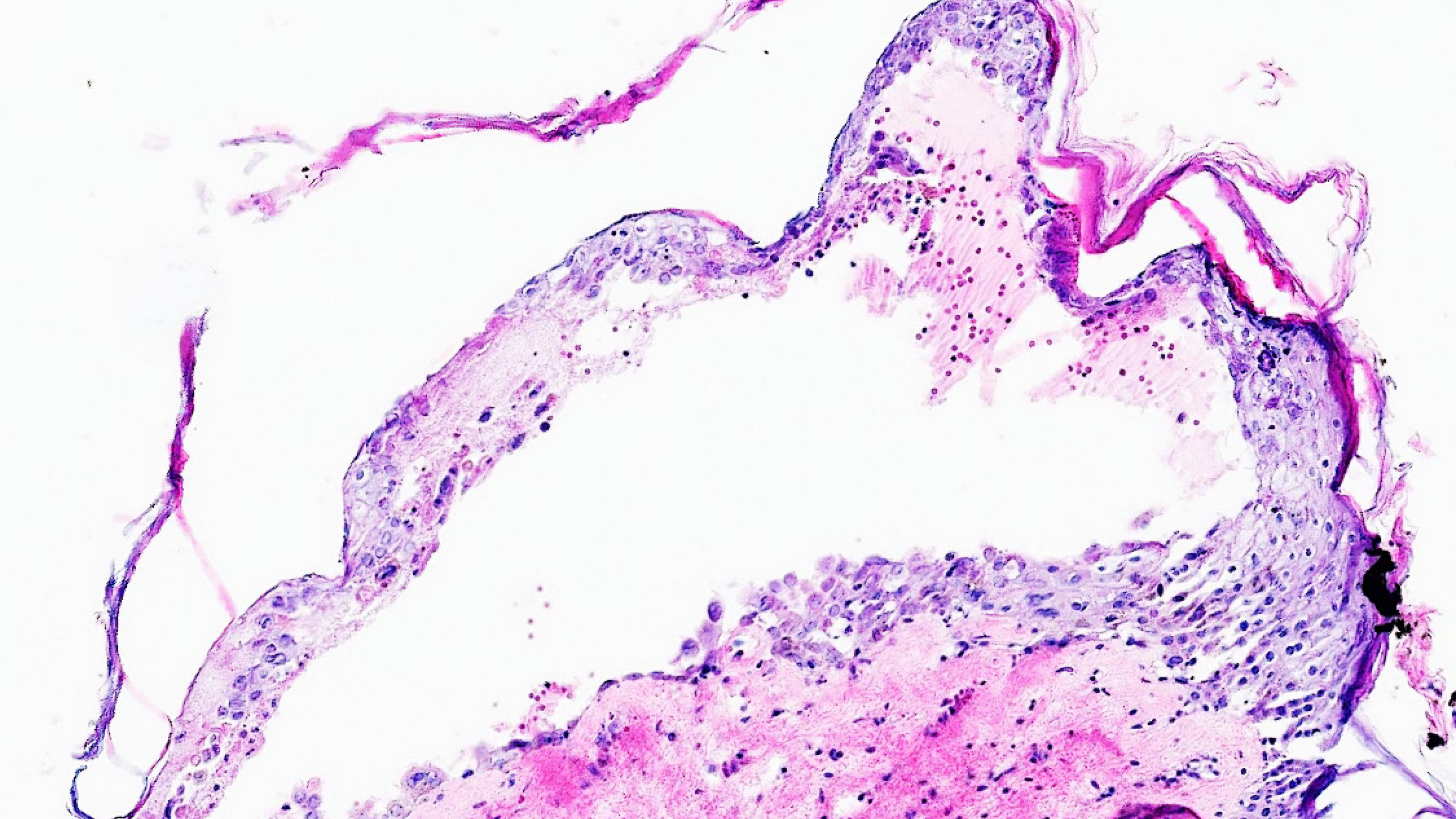
E. Vascular deposits of C3, IgM; in perilesional skin

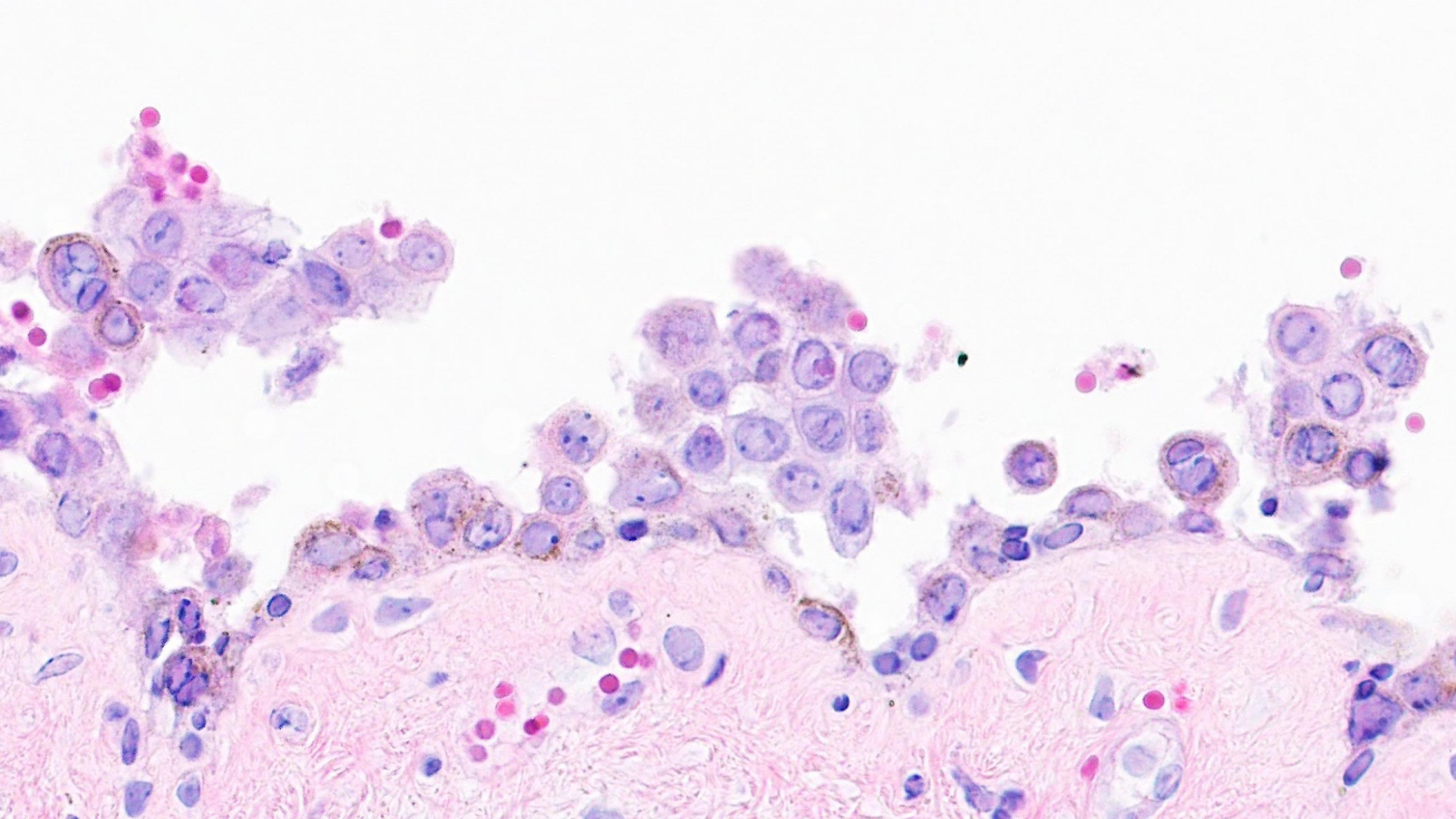
DIGITAL SKIN PATHOLOGY (DiSK)
Learn Histologic Diagnosis Case-By-Case

Summary: Porphyria Cutanea Tarda (PCT)

- **Clinical Features:** Sporadic or familial. Blisters on sun-exposed and trauma-prone skin (dorsa of hands). Scarring, milia, facial hypertrichosis, hyperpigmentation. Associated with liver disease.
- **Histopathologic Features:** Subepidermal blister with sparse perivascular lymphocytic infiltrate. "Caterpillar bodies" in blister roof. Marked solar elastosis. Thick-walled papillary dermal blood vessels (PAS+). Blister in lamina lucida.
- **DIF:** Deposits of C3 (and sometimes IgG, IgM, IgA) around upper dermal vessels and/or at the DEJ.
- **Porphyrin Studies:** Elevated uroporphyrin in urine; elevated isocoproporphyrin in feces.
- **Differential Diagnosis:** Minimally inflammatory subepidermal blistering disorders: hereditary/acquired EB, pseudoporphyria, cell-poor BP, traumatic blisters, bullosis diabeticorum.
- Thickened vessel walls, elastosis, and specific DIF findings are helpful.







Case 142. 72M, abdomen, 6-day h/o pruritic tense bullae on the trunk after systemic antifungal treatment . What is your diagnosis?

A. Bullous erythema multiforme

B. Bullous drug reaction with acantholysis

C. Varicella-zoster virus infection

D. Coxsackievirus (Hand-Foot-and-Mouth Disease)

E. Herpes simplex virus infection

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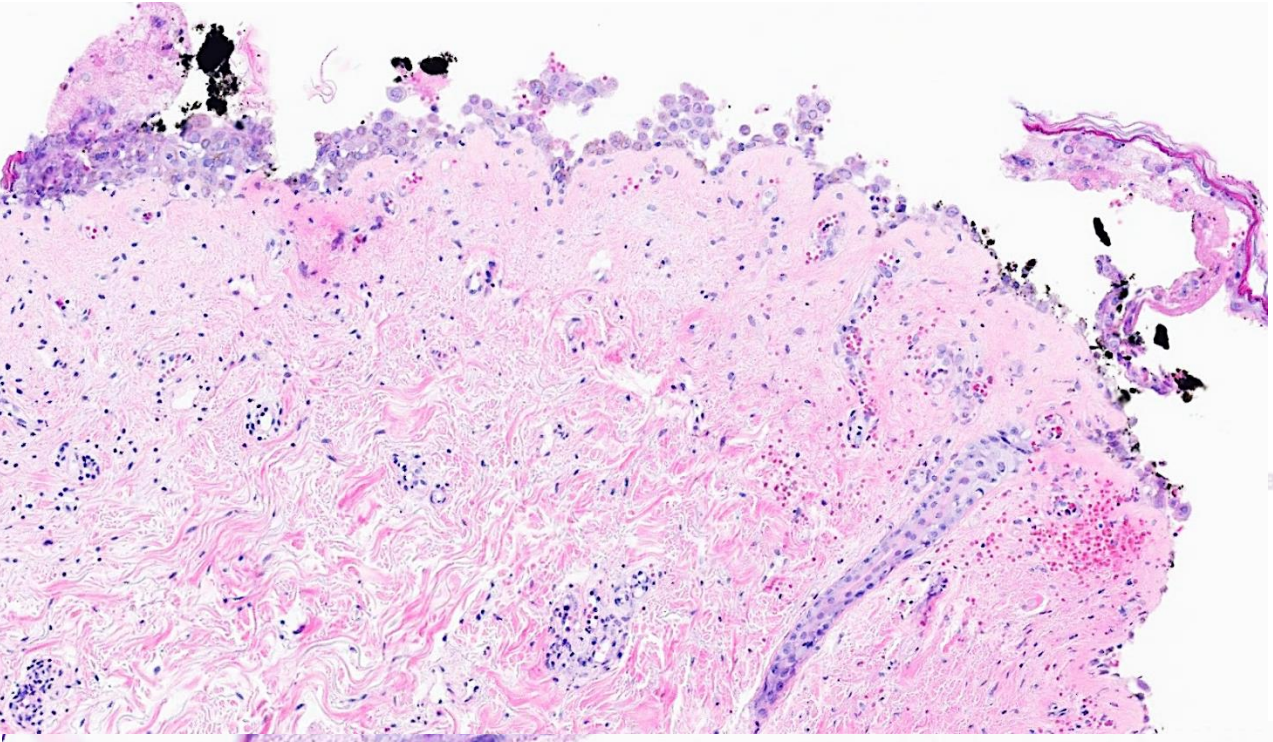

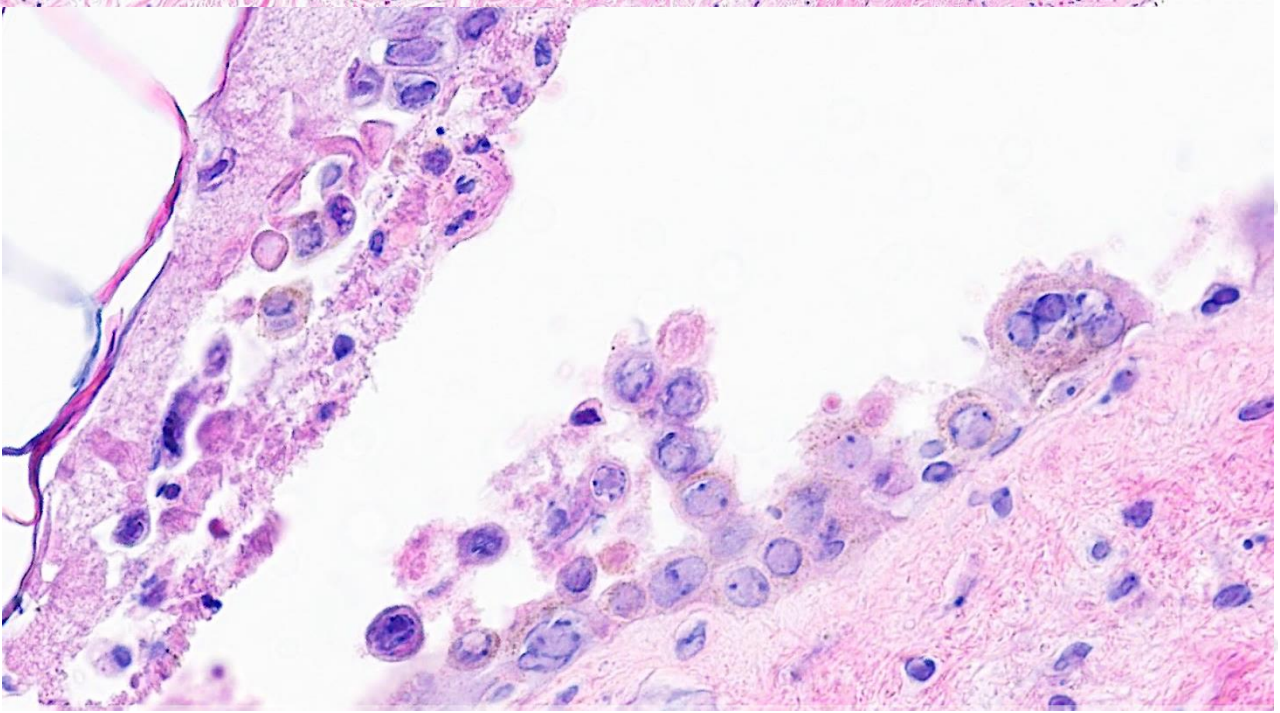

Summary: VZV

Epidermal Changes:

- Ballooning degeneration of keratinocytes (swollen, pale cytoplasm).
- Intranuclear eosinophilic inclusions (Cowdry type A).
- Multinucleated giant cells (syncytial formation due to viral cytopathic effect).
- Vesicle formation (intraepidermal or subepidermal).

Dermal Changes:

- Lymphocytic infiltrate (perivascular and interstitial).
- Leukocytoclastic vasculitis (in severe cases).
- Necrosis (in immunocompromised hosts).

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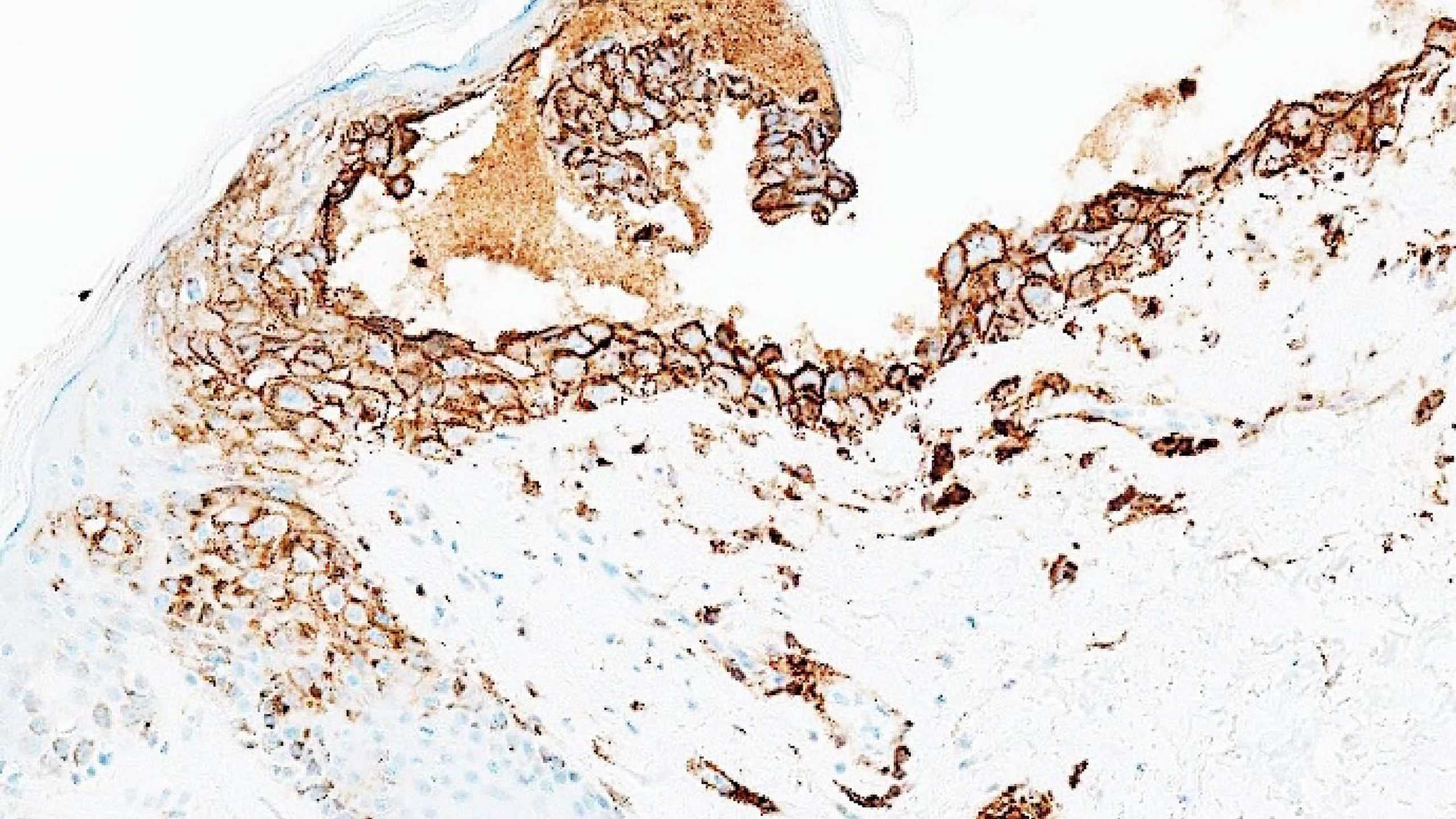

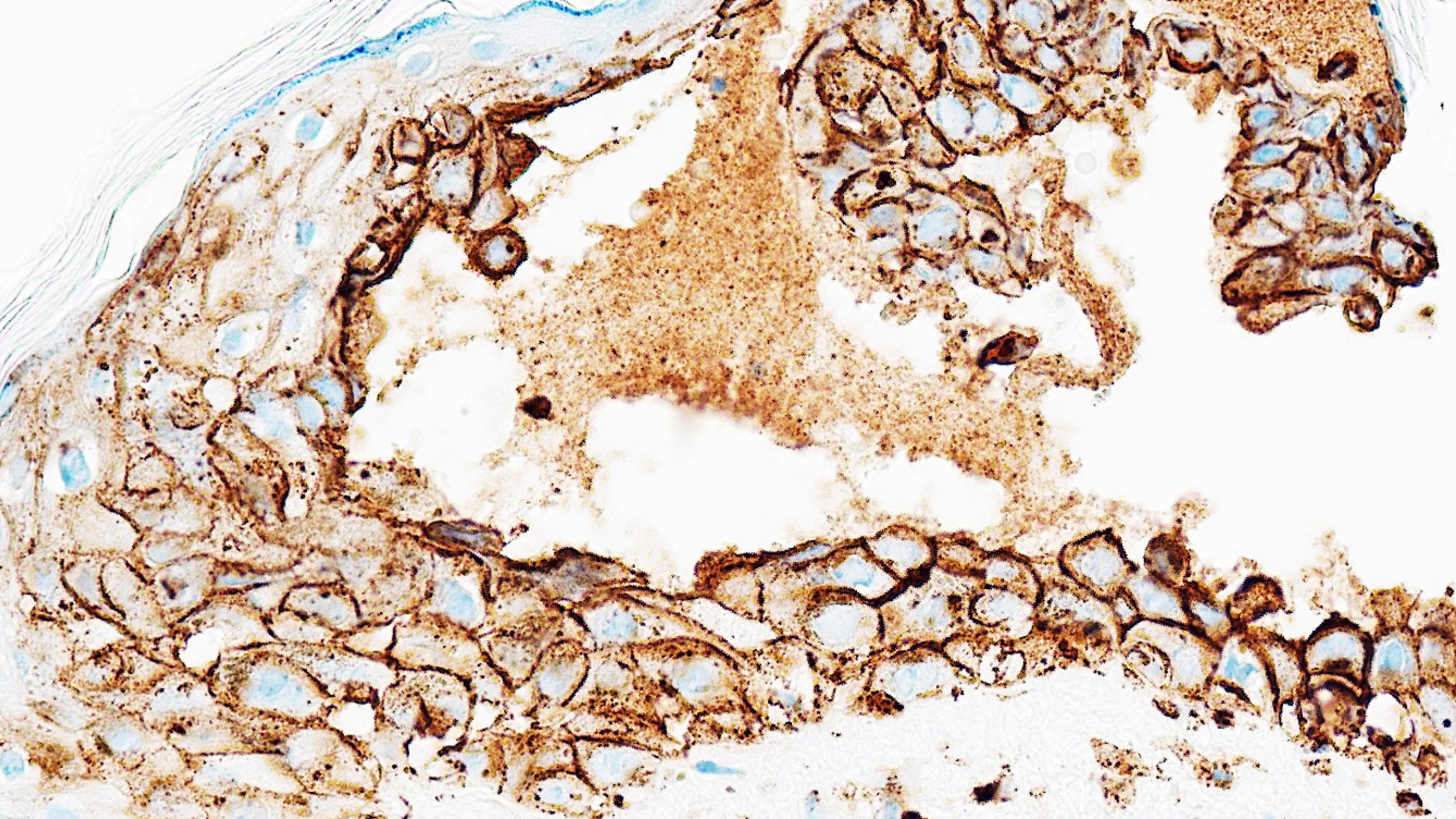

Case 143. Which immunohistochemistry test is most specific in confirming the diagnosis for case no. 141?

A. HSV1

B. HSV2

C. VZV

D. Spirochetal antigen

E. HHV-8

DIGITAL SKIN PATHOLOGY (DiSK)
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Case 143. Which immunohistochemistry test is most specific in confirming the diagnosis for case no. 129?

A. HSV1

B. HSV2

C. VZV

D. Spirochetal antigen

E. HHV-8

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