

Master Class

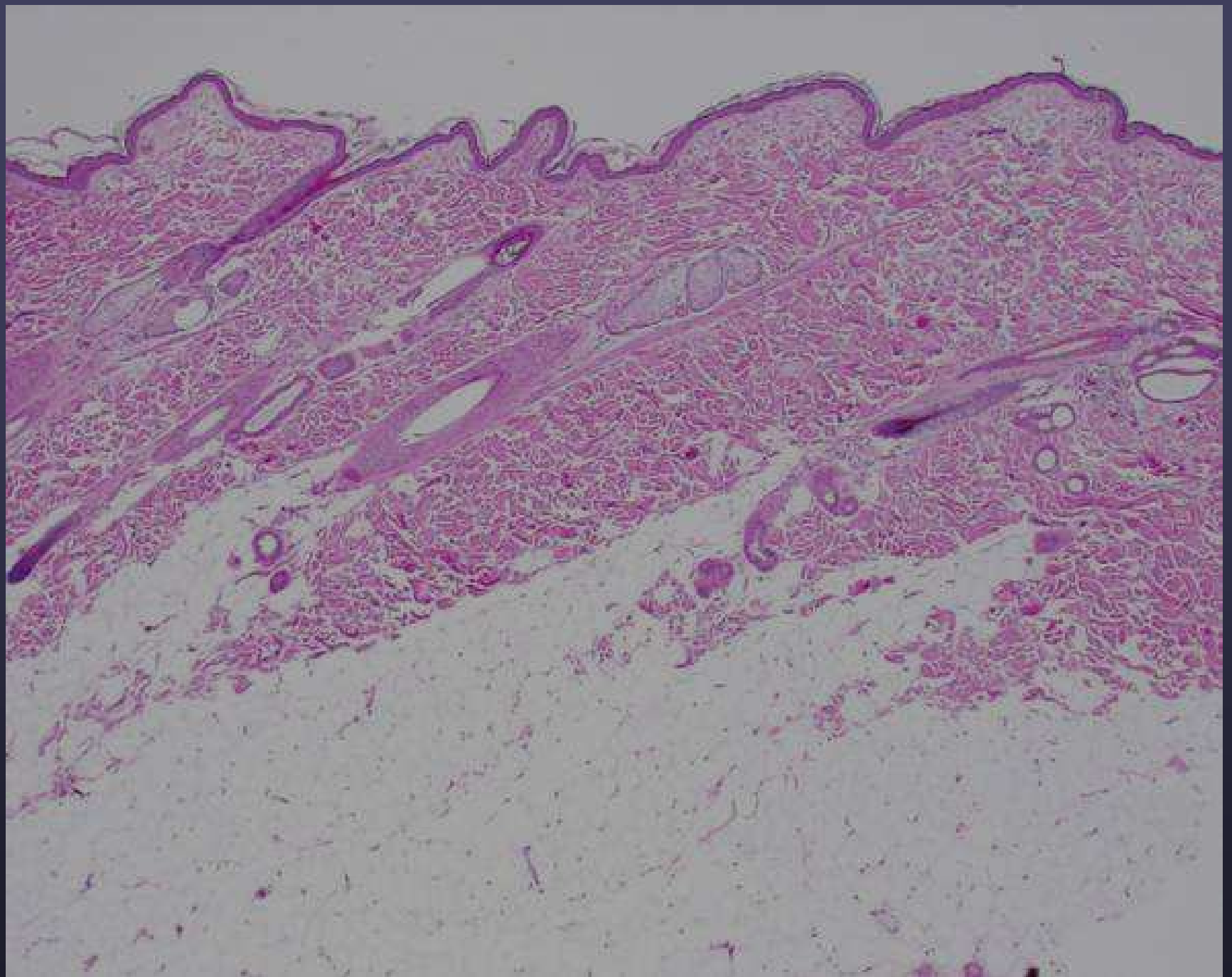
March 20, 2007

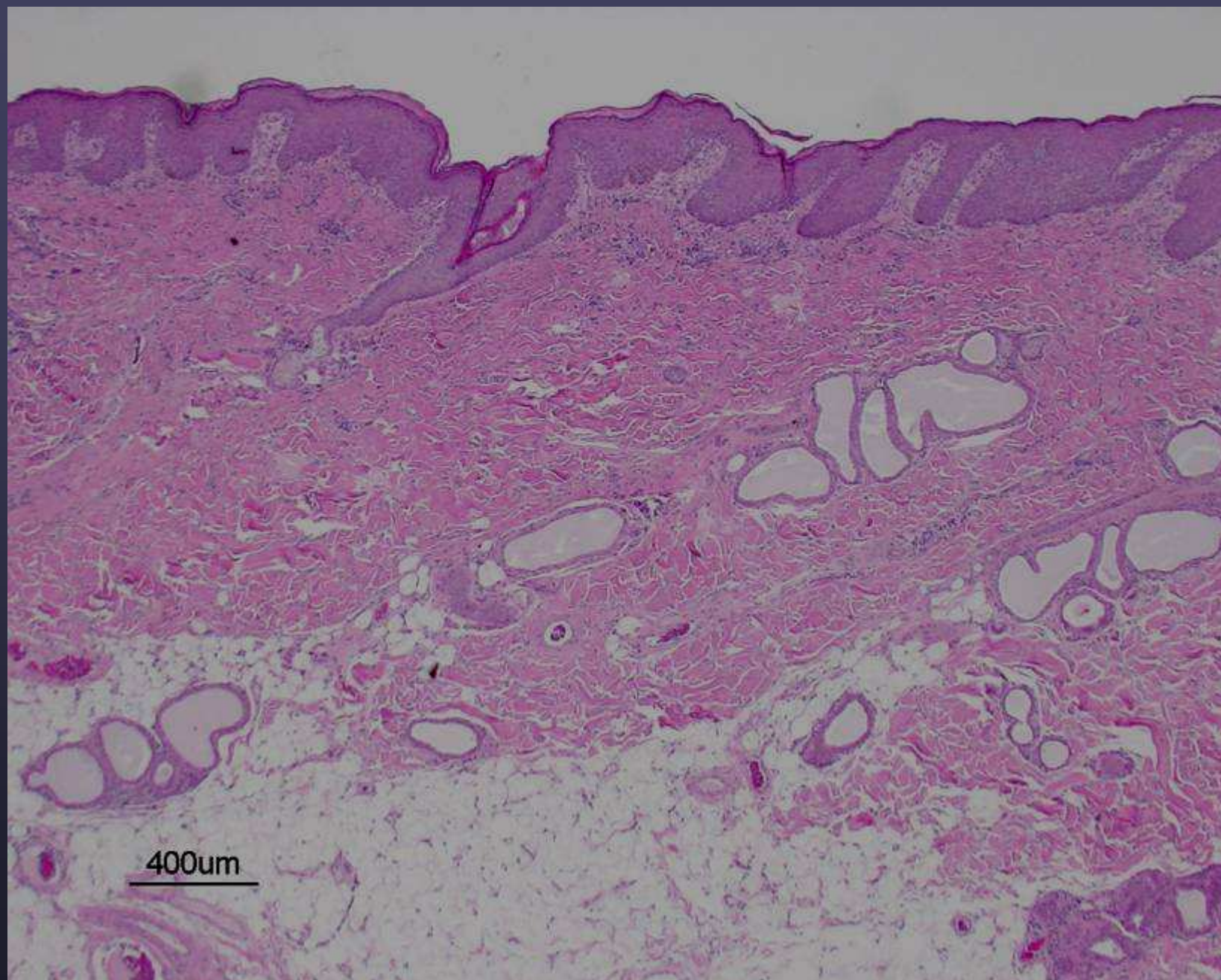
Average daily skin biopsy palate

- Species
- Site
- Pattern
- Morphologic diagnosis
- Clinical presentation
- Significance

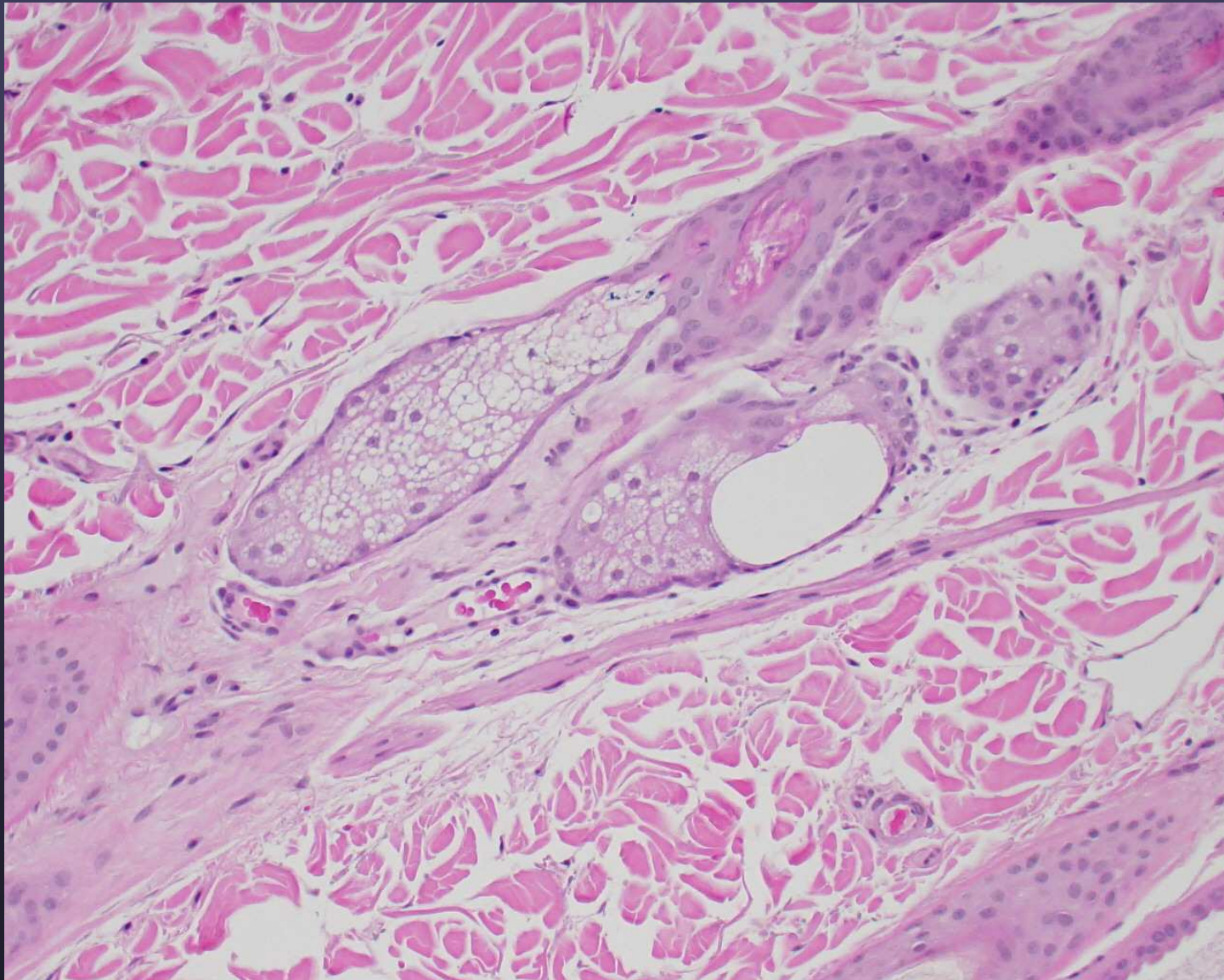
Case 1

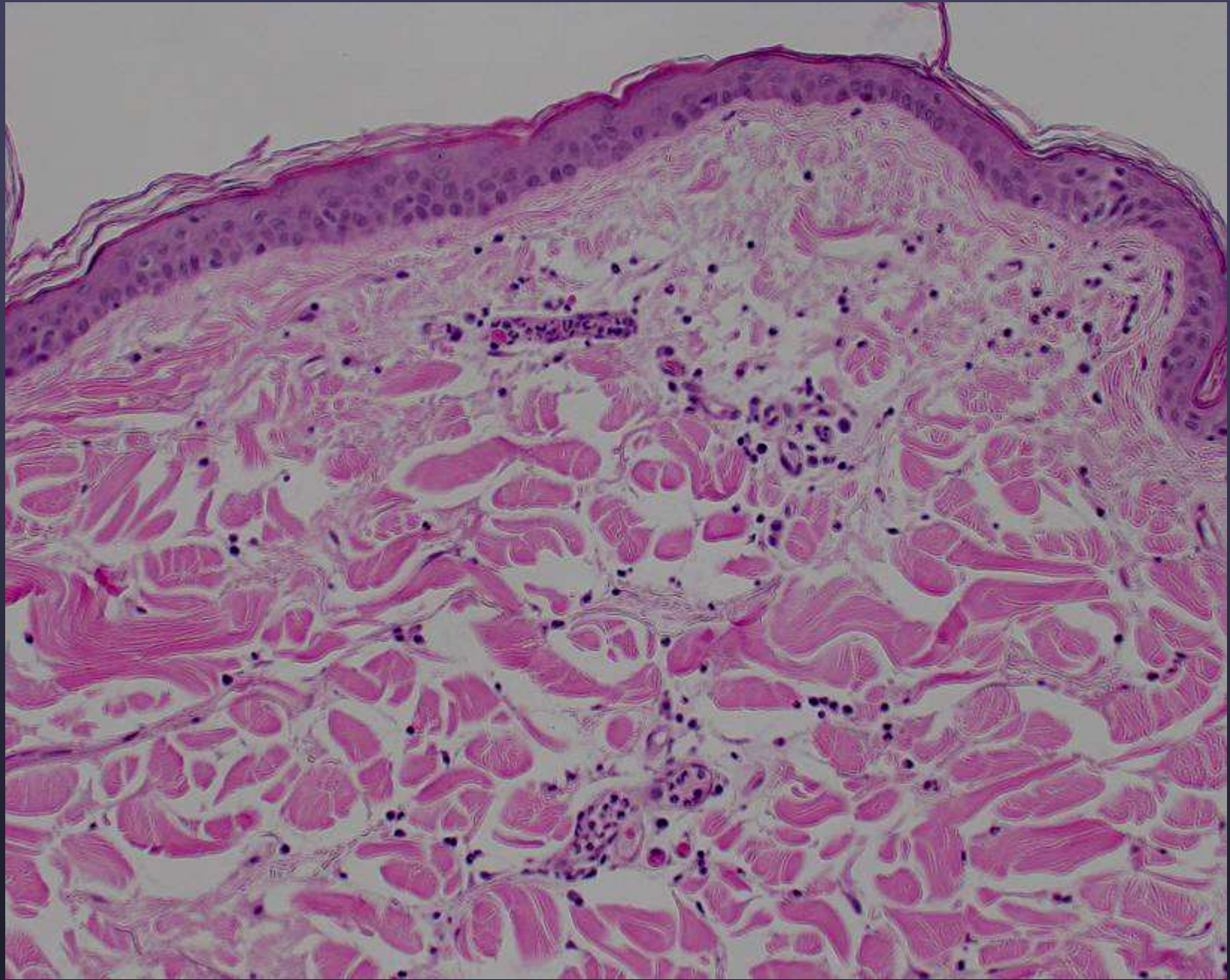
Two 6-mm punches

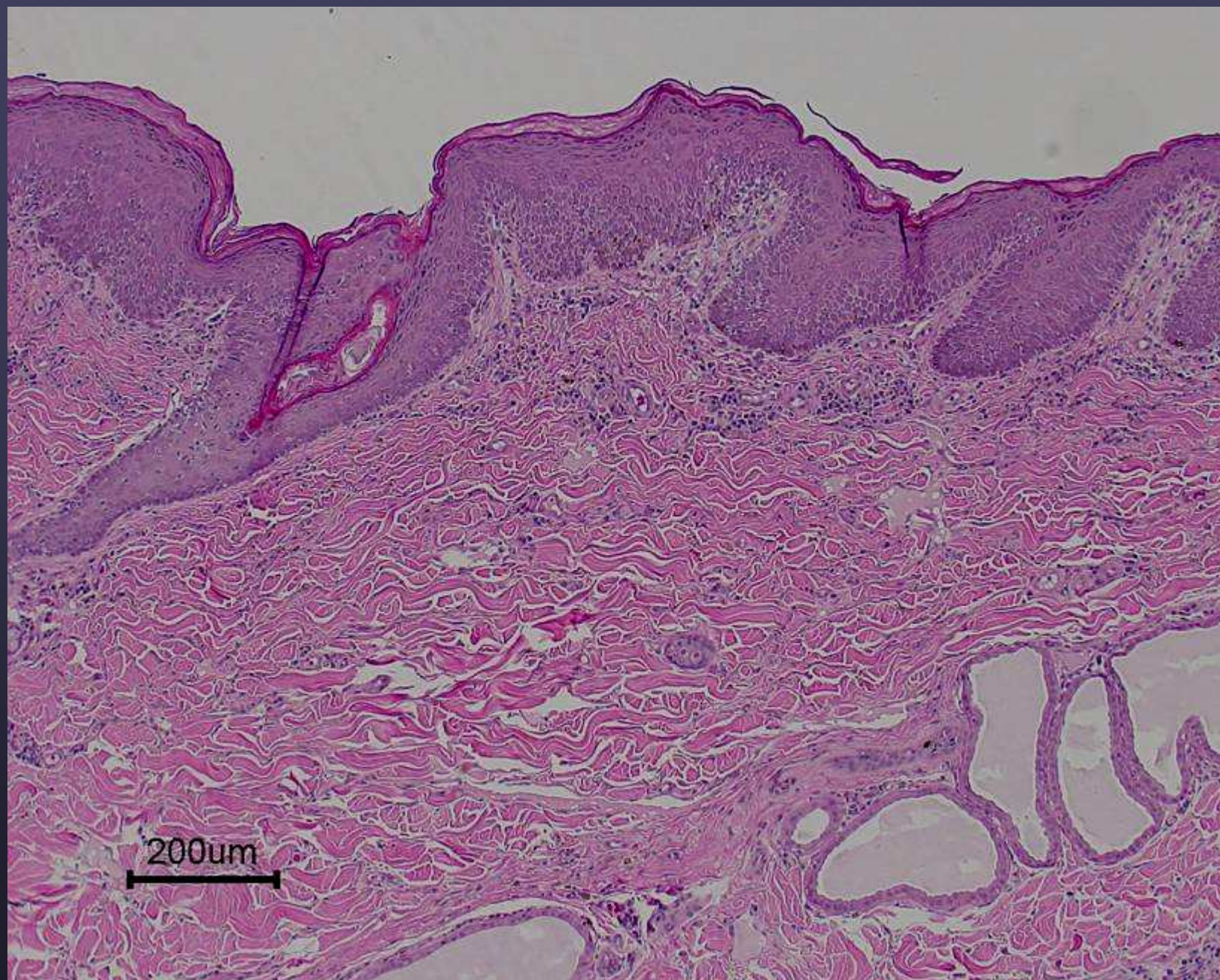


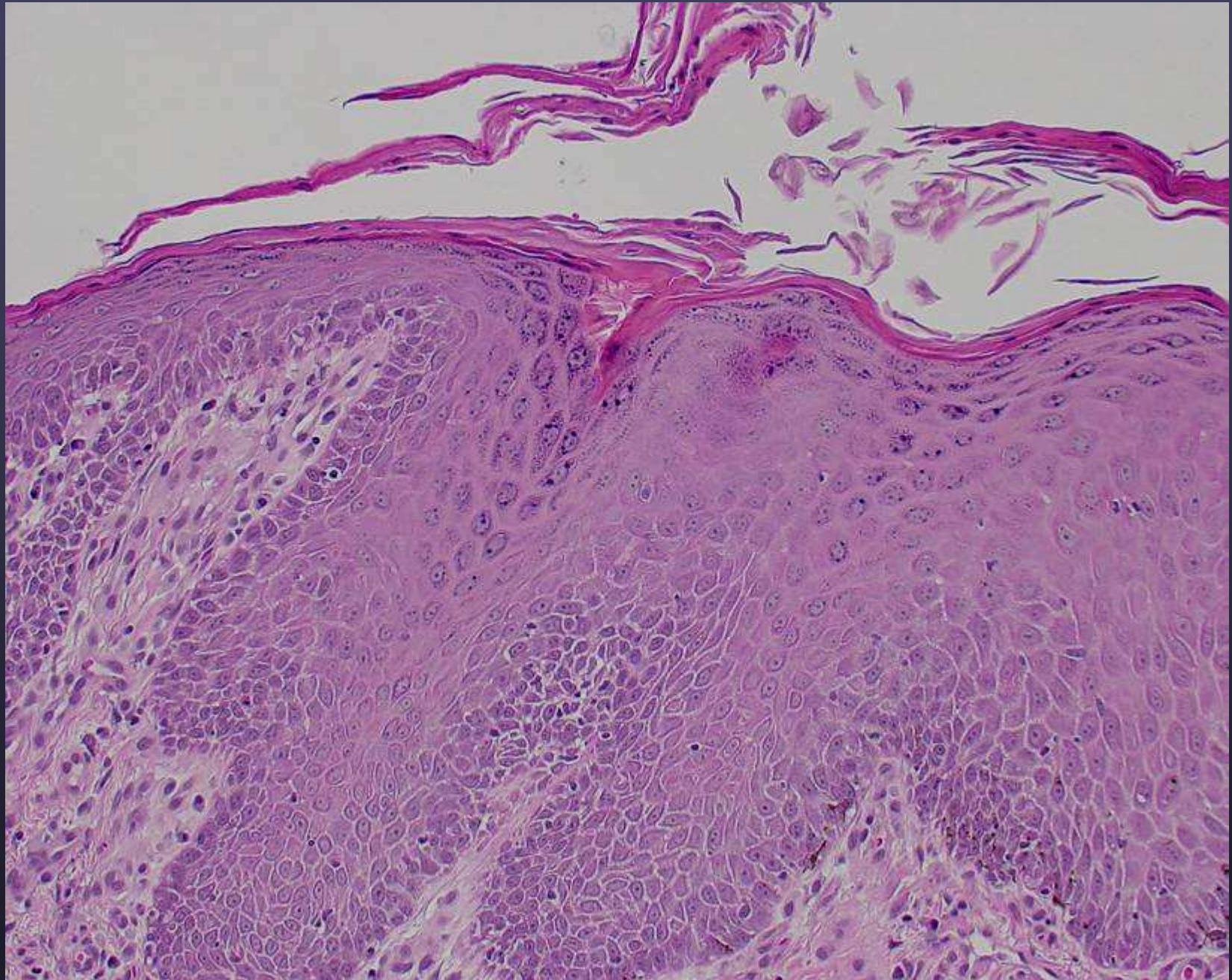


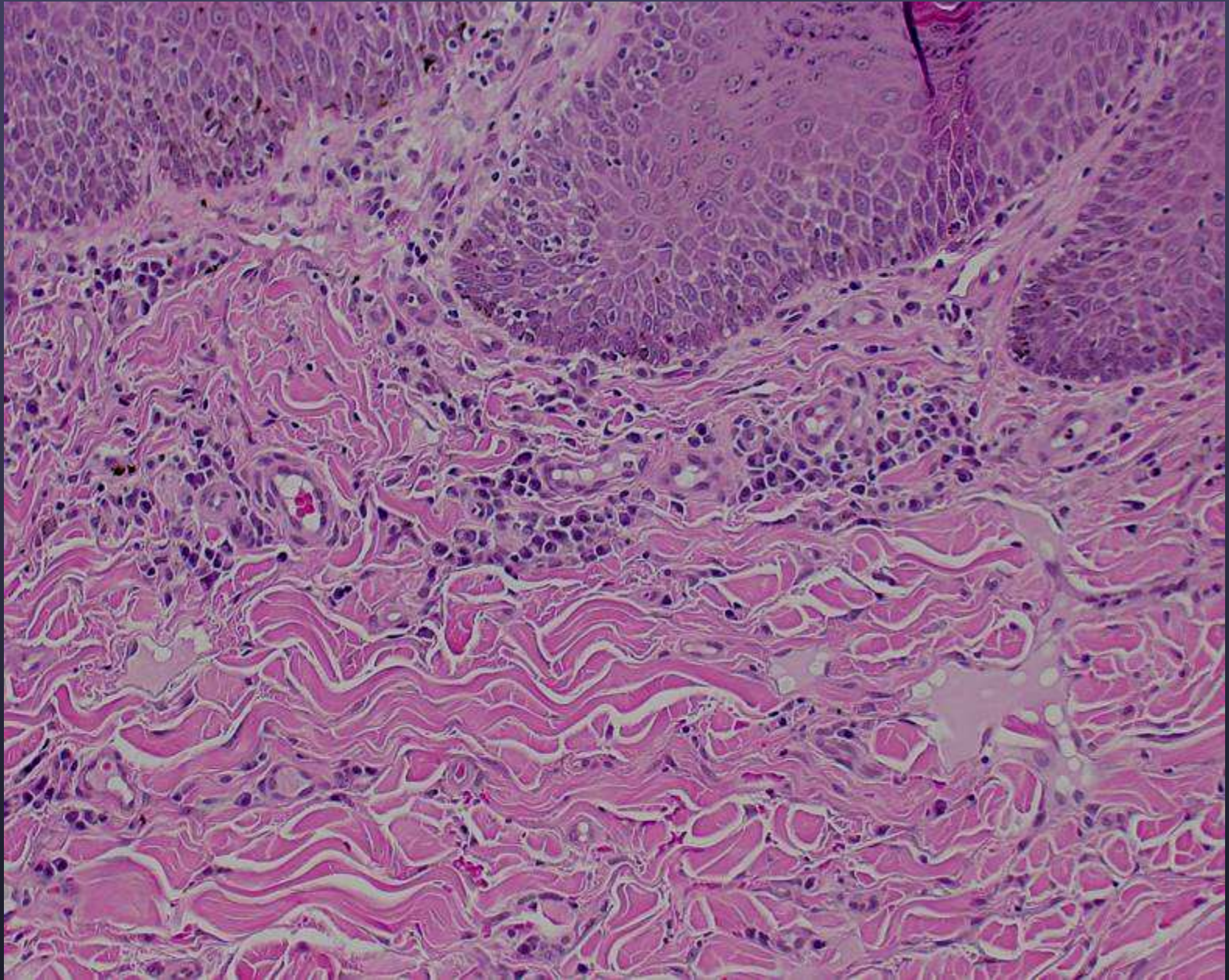


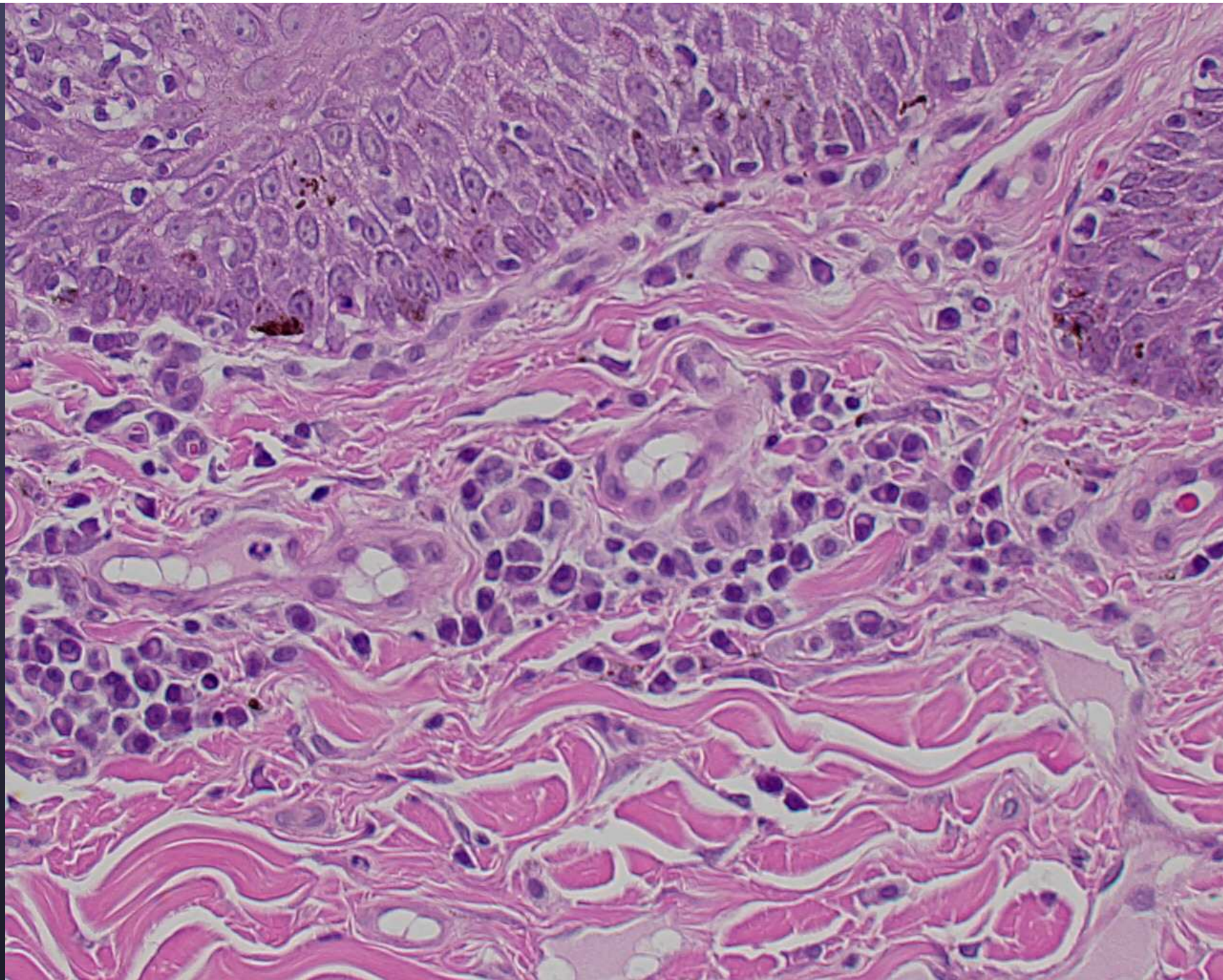












- Dog
- Superficial perivascular dermatitis
- Coat color? Maybe multicolor (unclear - not enough anagen follicles)
- Flank

Case 1

Veterinarian's Name: Dr. [unclear] **NO NAME ON SPECIMEN**
Submit Date: 2/22/07 Old man
Species: Cat Breed: Sheltie Sex: M Birthdate: 8/29/92

Biopsy Specimen: X Necropsy Specimen:

CASE HISTORY: Severely pruritic dog. Past 4 months generalized Epidermal collaretts
Skin scrape - neg for mites & yeast. Did not respond to Clavamox or cephalixin
& no improvement on Pred according to O. CBC/Chem panel was conc.

GROSS APPEARANCE: hyperkeratosis & epidermal collarettes

Number of Lesions: many Size: Generalized Duration: 5 months Growth Rate spreading over body

Treatment: Pred, Cephalixin, CLAVAMOX

PREVIOUS BIOPSIES (Provide number):

TENTATIVE CLINICAL DIAGNOSIS: Autoimmune? EM?

LOCATION OF BIOPSIES: dorsal lumbar region

TISSUE SUBMITTED:

Diagnosis

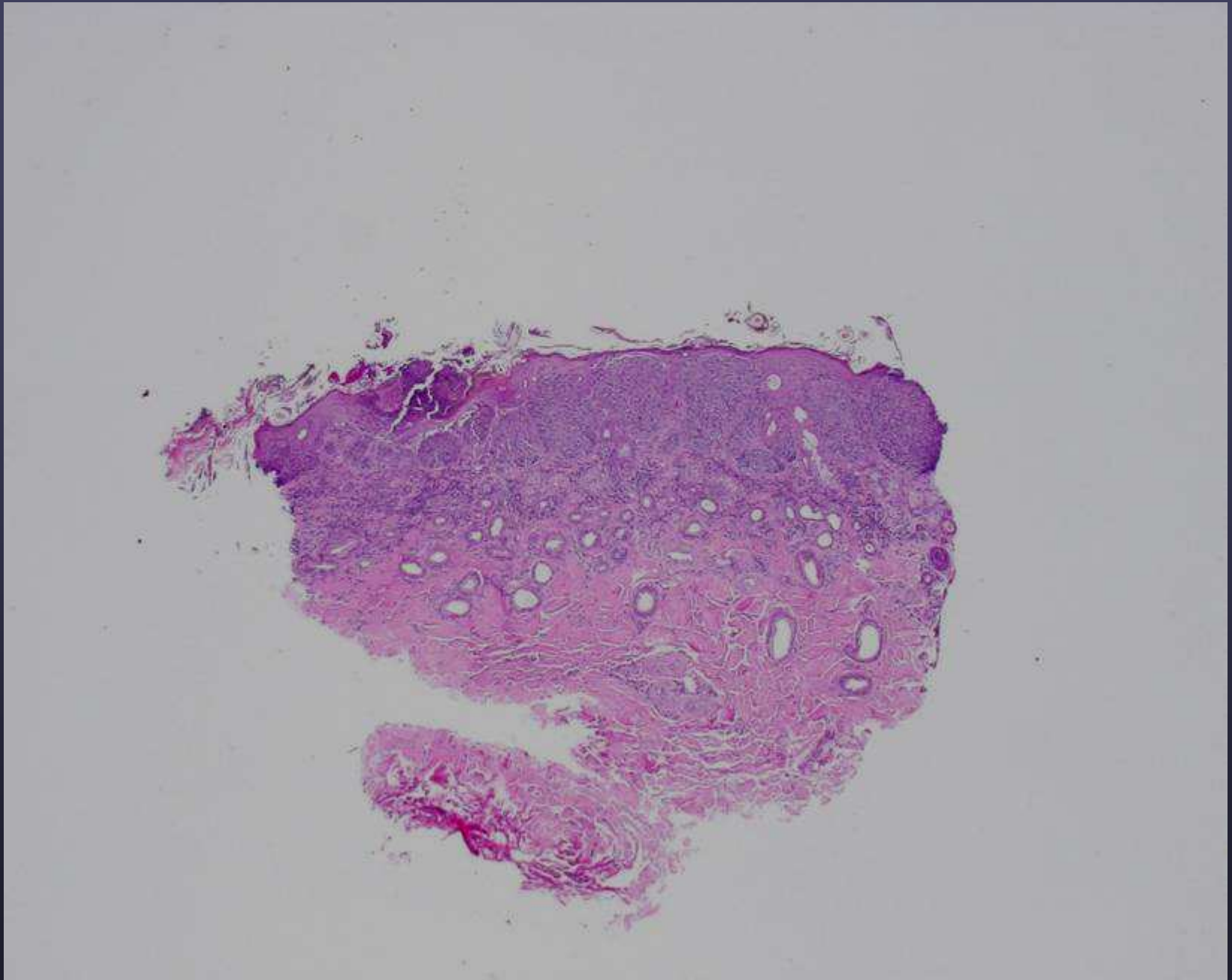
1. Hyperplastic plasmacytic superficial perivascular dermatitis with follicular atrophy- dorsum- canine.
2. Focal neutrophilic dermatitis- dorsum- canine.

Significance

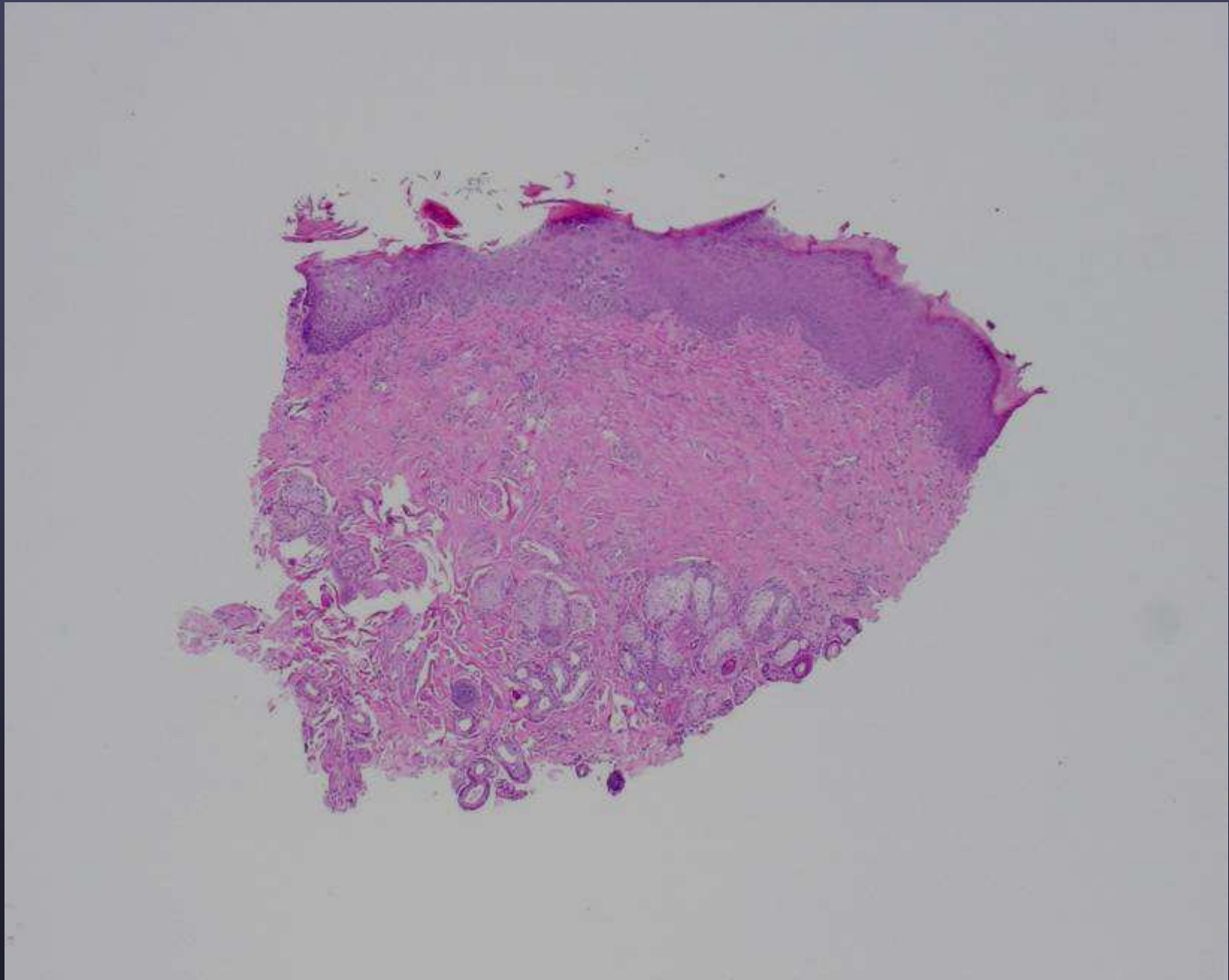
- Be cautious on this case
- One sample indicative of chronic trauma
- Superficial pv pattern is *not* diagnostic of allergic skin disease
- Would be unusual for dog of this age to have acute onset of “allergic dermatitis” unless parasitic (would also be unusual due to lack of eosinophils)
- Cannot rule out superficial bacterial skin infection

Case 2

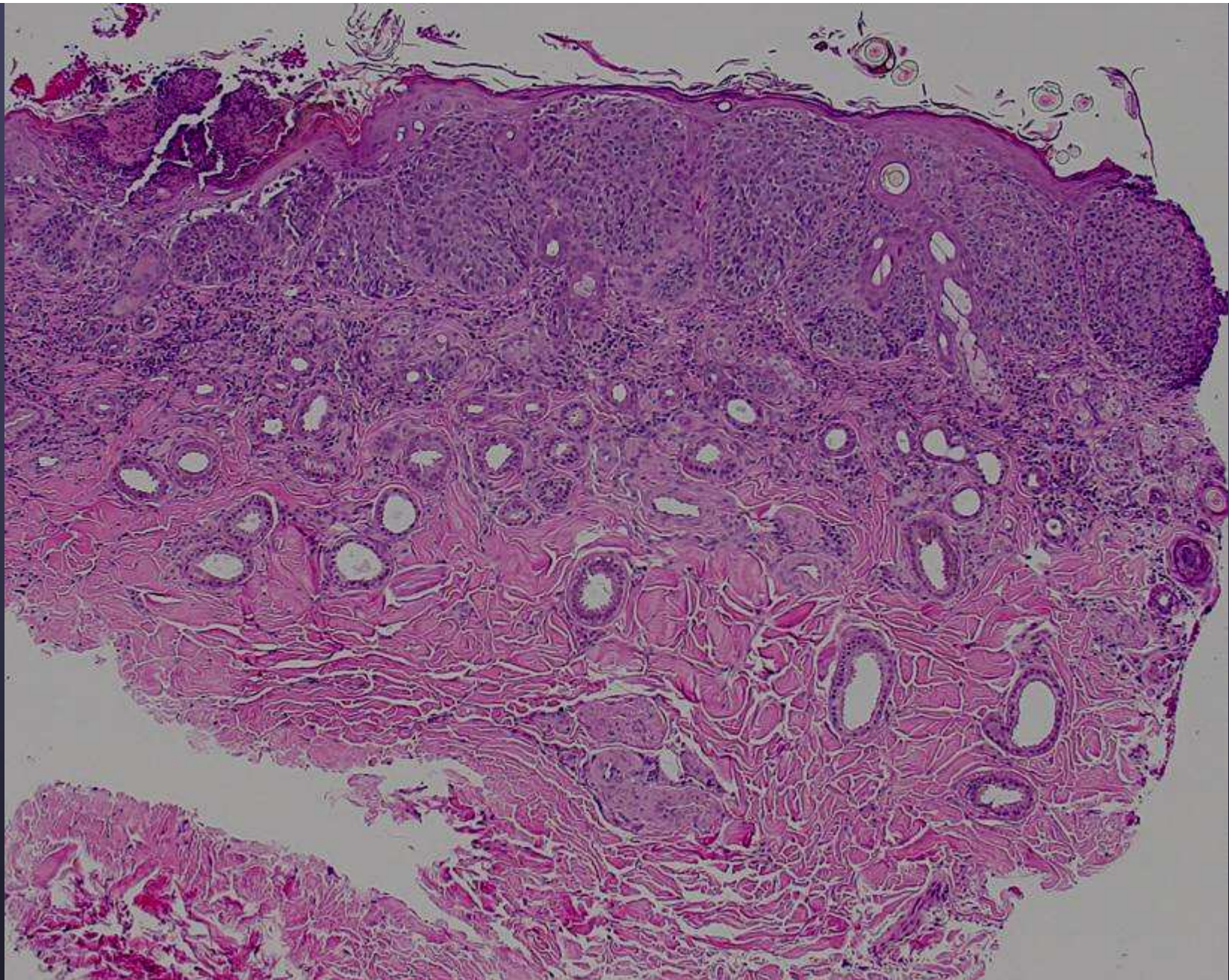
- Two 4-mm punches



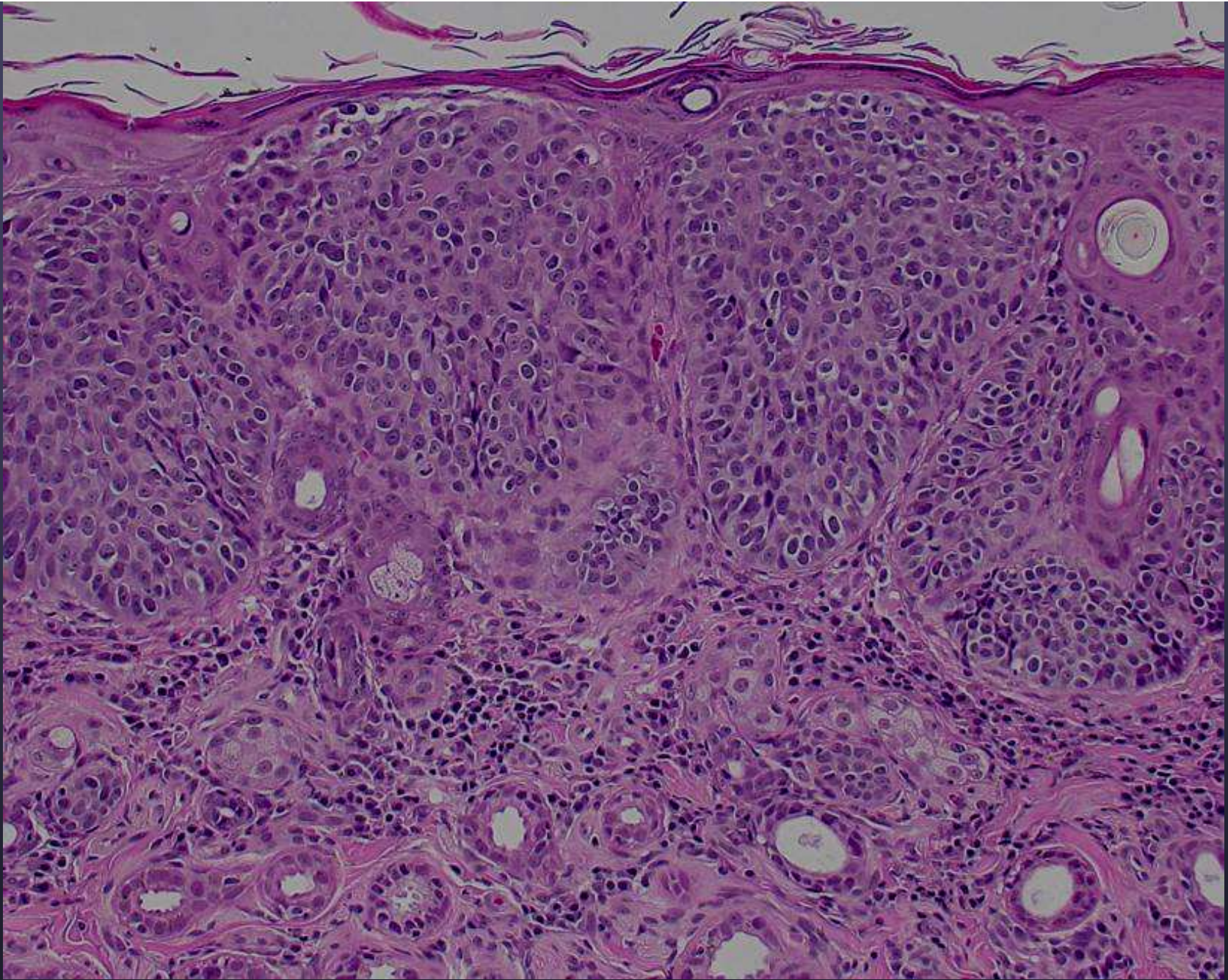
Case 2



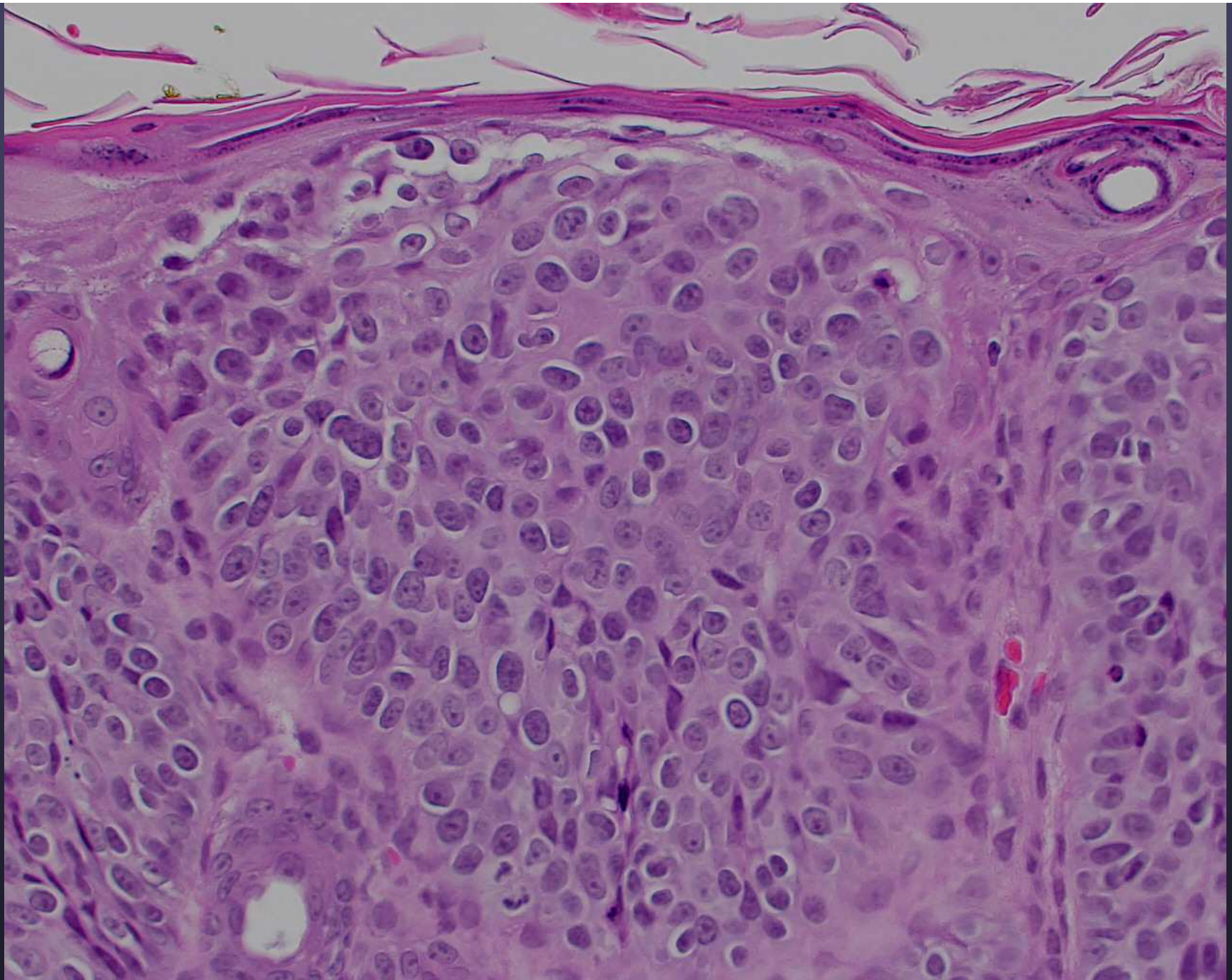
Case 2

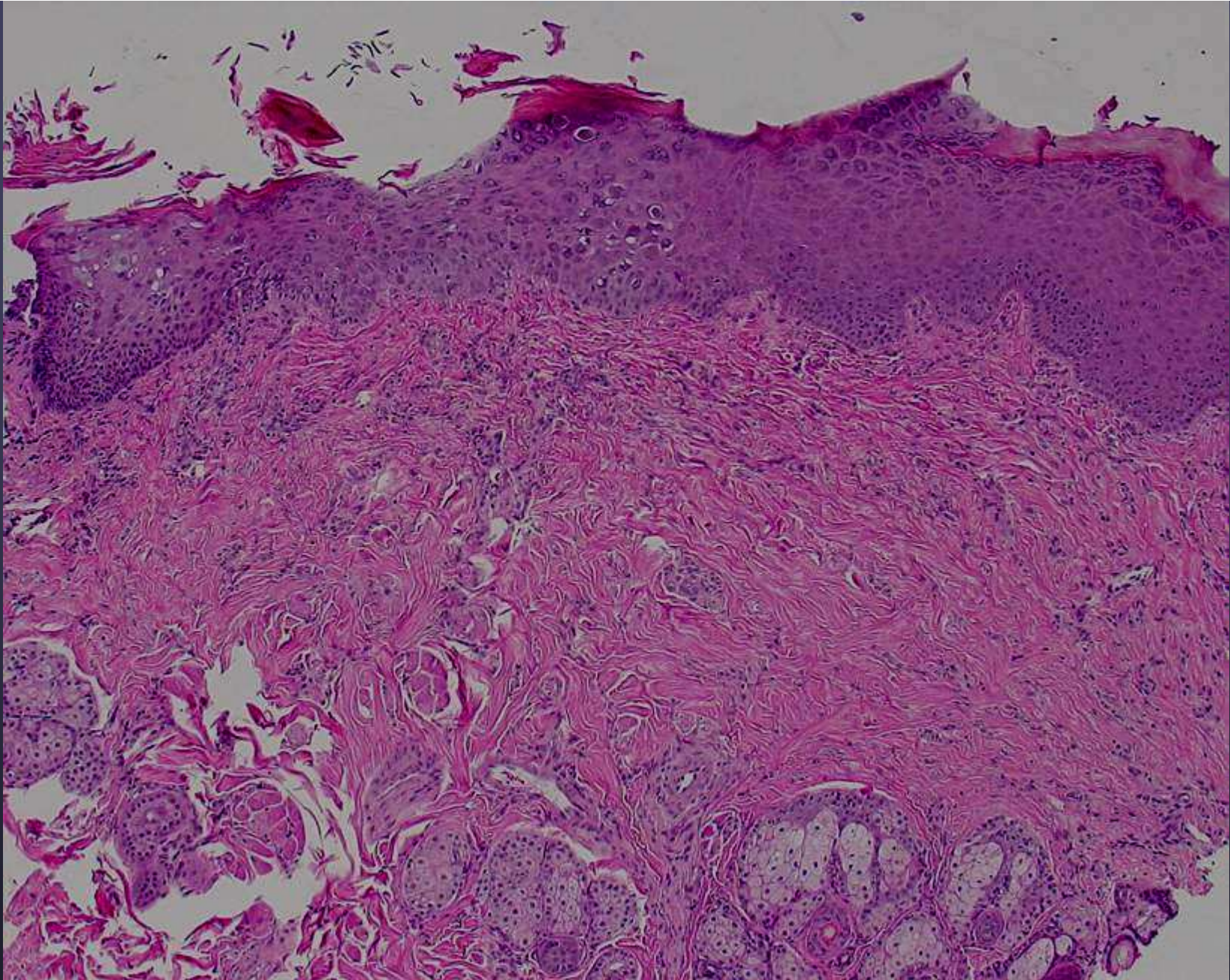


Case 2

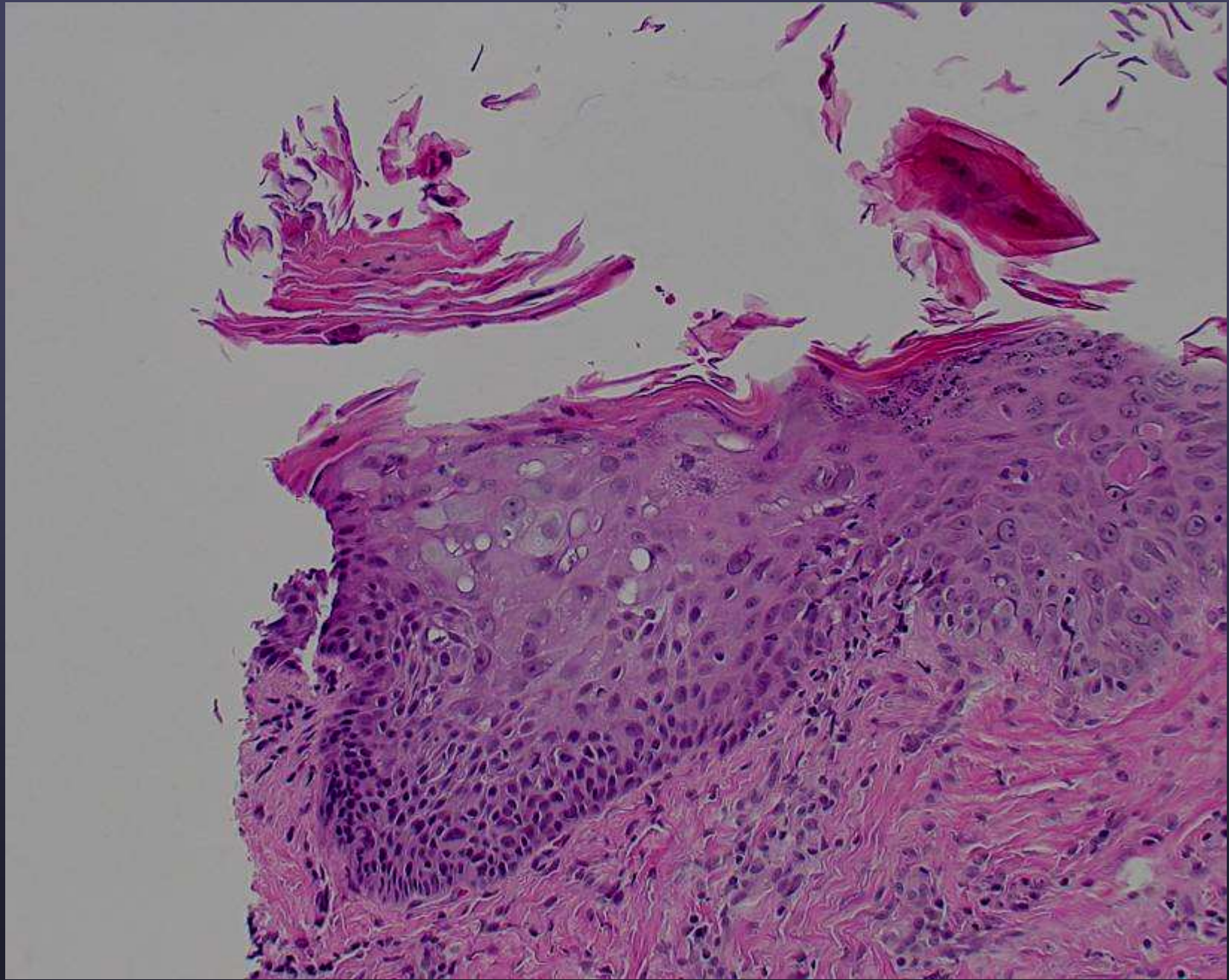


Case 2

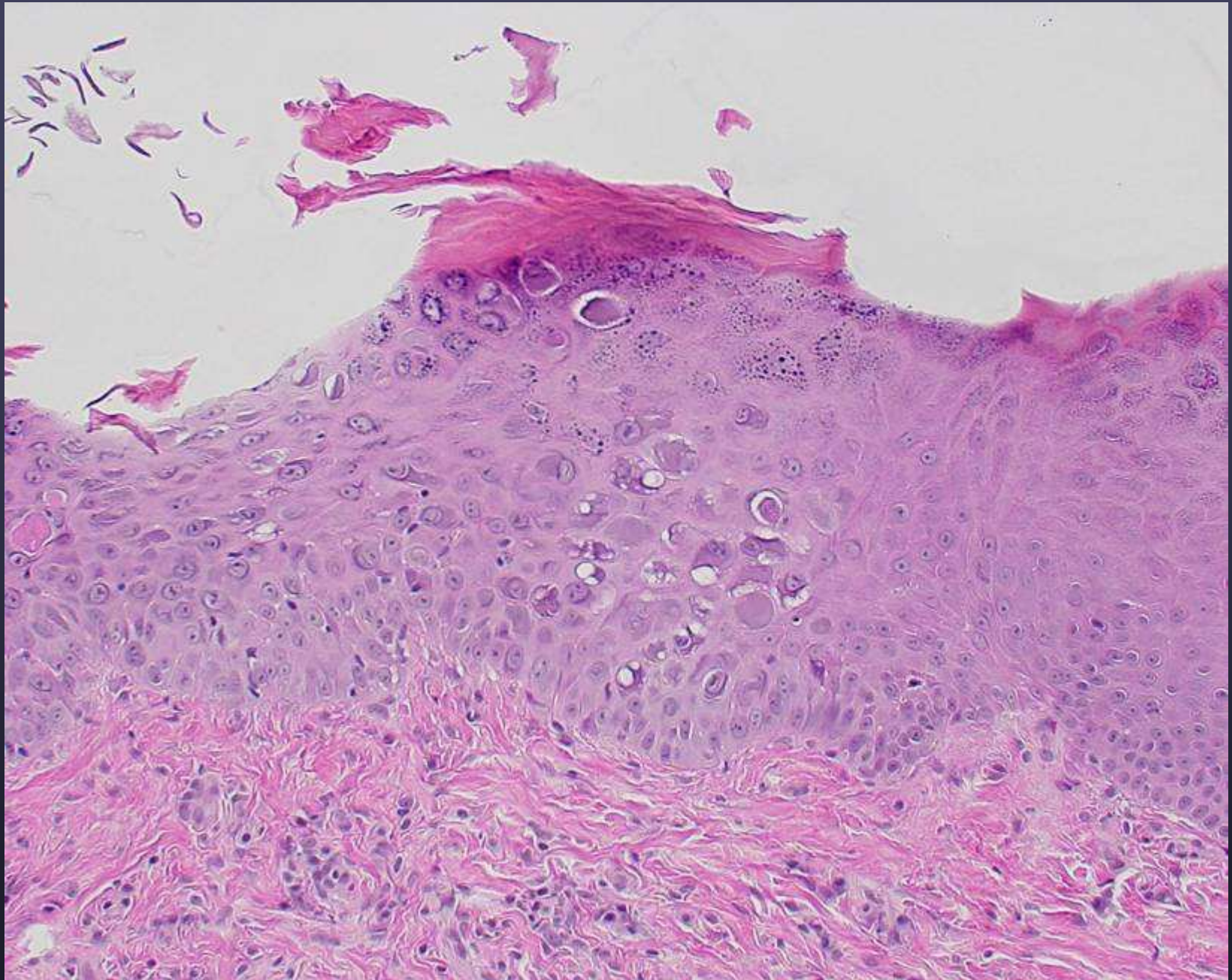




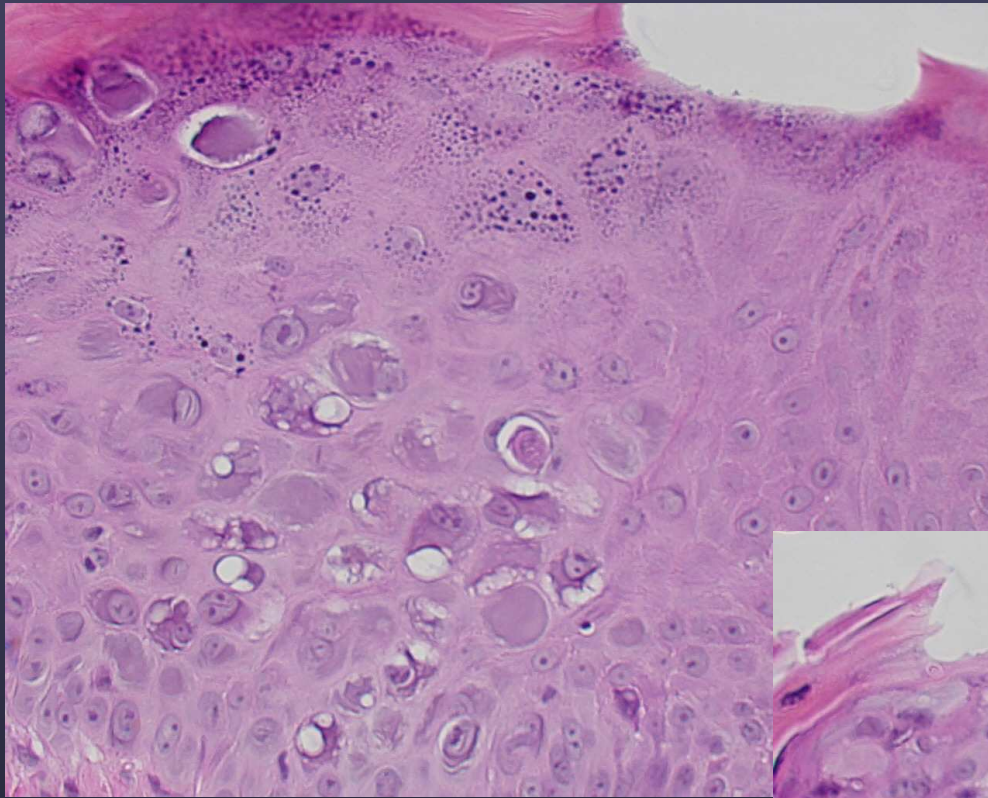
Case 2



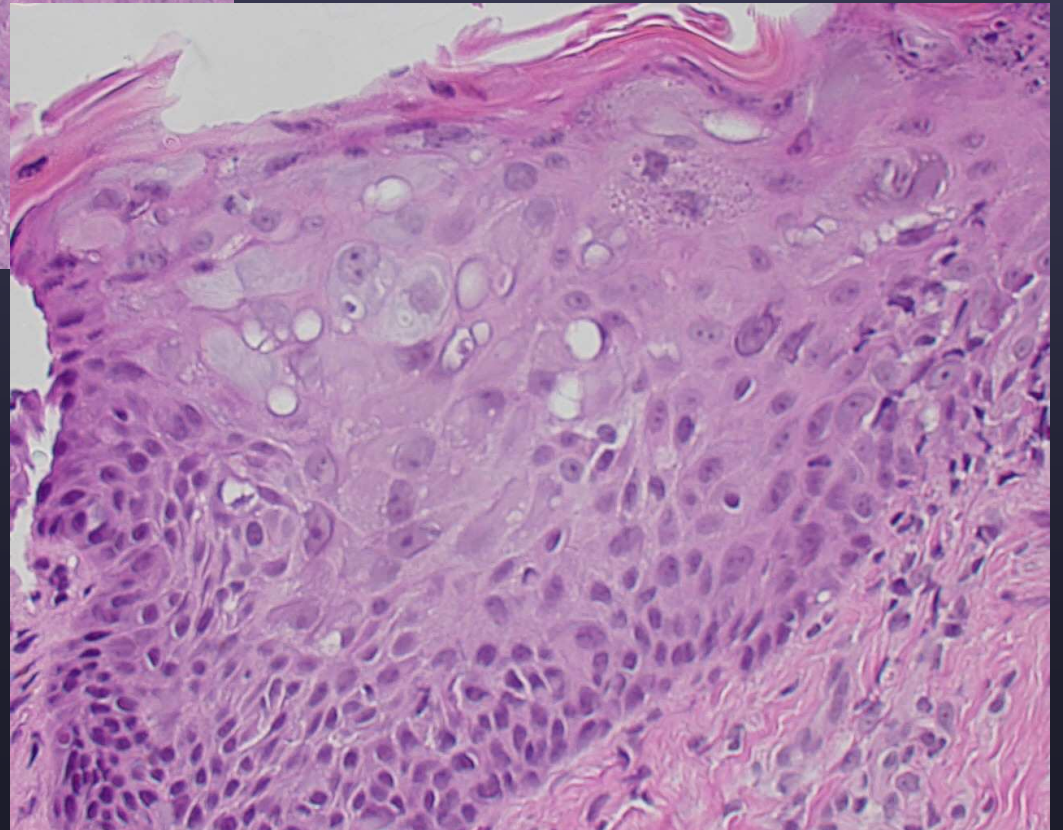
Case 2



Case 2



Case 2



Case 2

Submit Date: 3/14/07

Species: Feline Breed: DSH Sex: Female Birthdate: 5/10/00

Biopsy Specimen: ✓ Necropsy Specimen:

CASE HISTORY:
Irritation, erythema along right nasal planum
Previous history of Anal Squamous cell Carcinoma

GROSS APPEARANCE: Erythemic cutaneous lesion

Number of Lesions: 2 Size: — Duration: — Growth Rate: —

Treatment:

PREVIOUS BIOPSIES (Provide number): —

TENTATIVE CLINICAL DIAGNOSIS: Open R/O SCC

LOCATION OF BIOPSIES: ① nasal planum

TISSUE SUBMITTED:

Diagnosis- Case 2

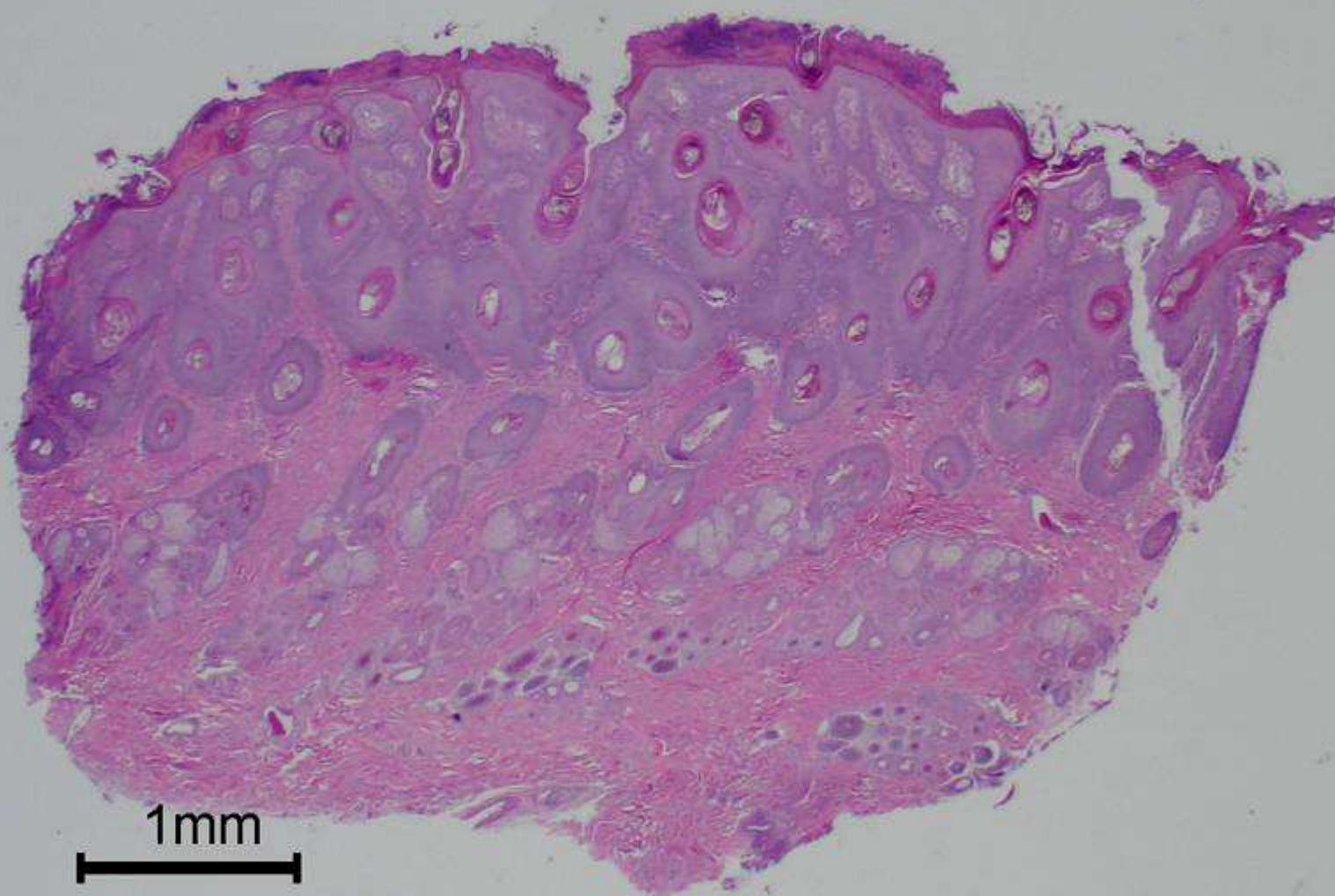
1. Viral plaque- haired skin (nasal region)- feline.
2. Scc in situ- haired skin (nasal region)- feline.

- Resembles bowens-like scc in situ in cats
- PPV association
- Not solar exposure
- Unusual due to *relatively* young age of cat

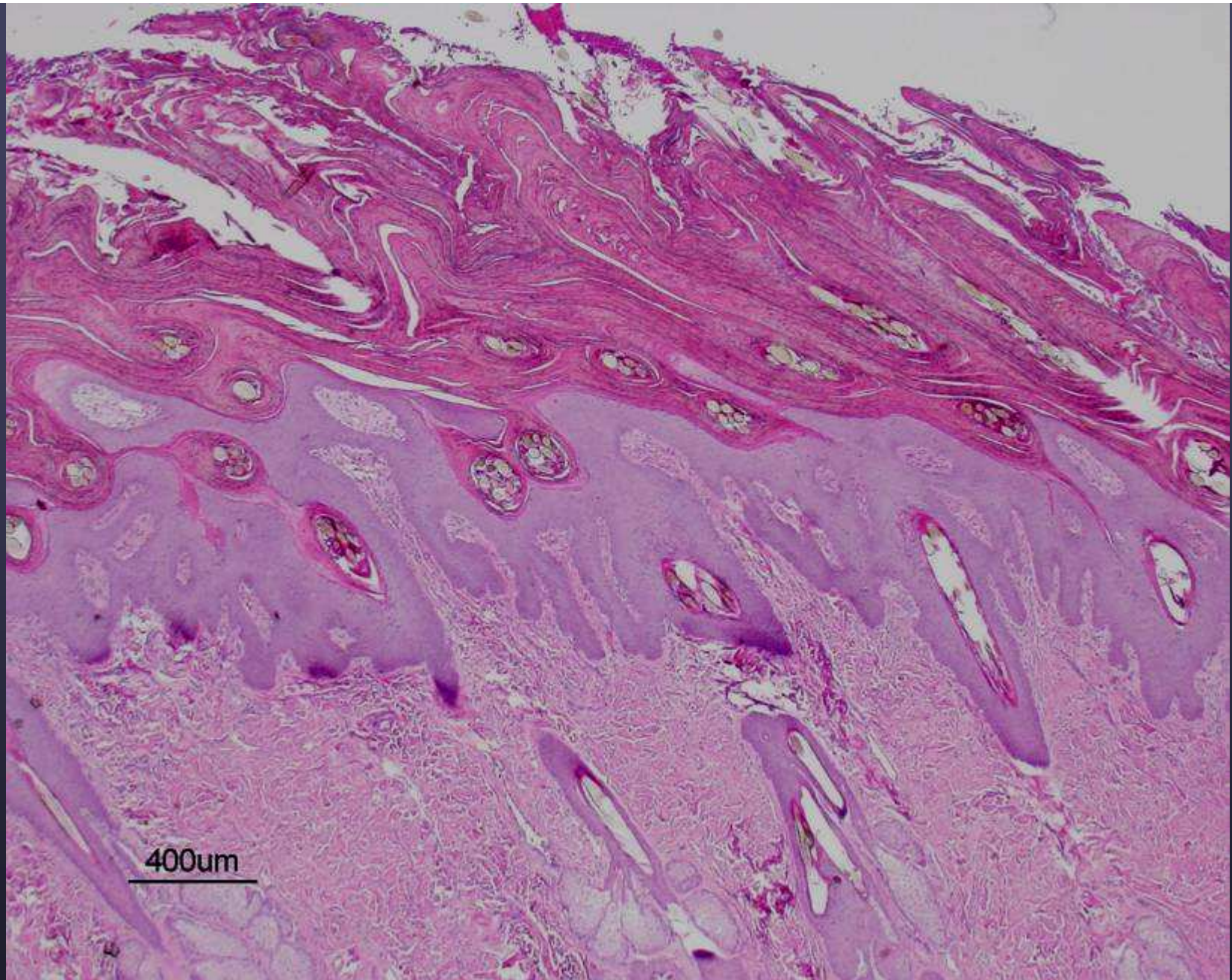
Case 3

- Two 6-mm punches

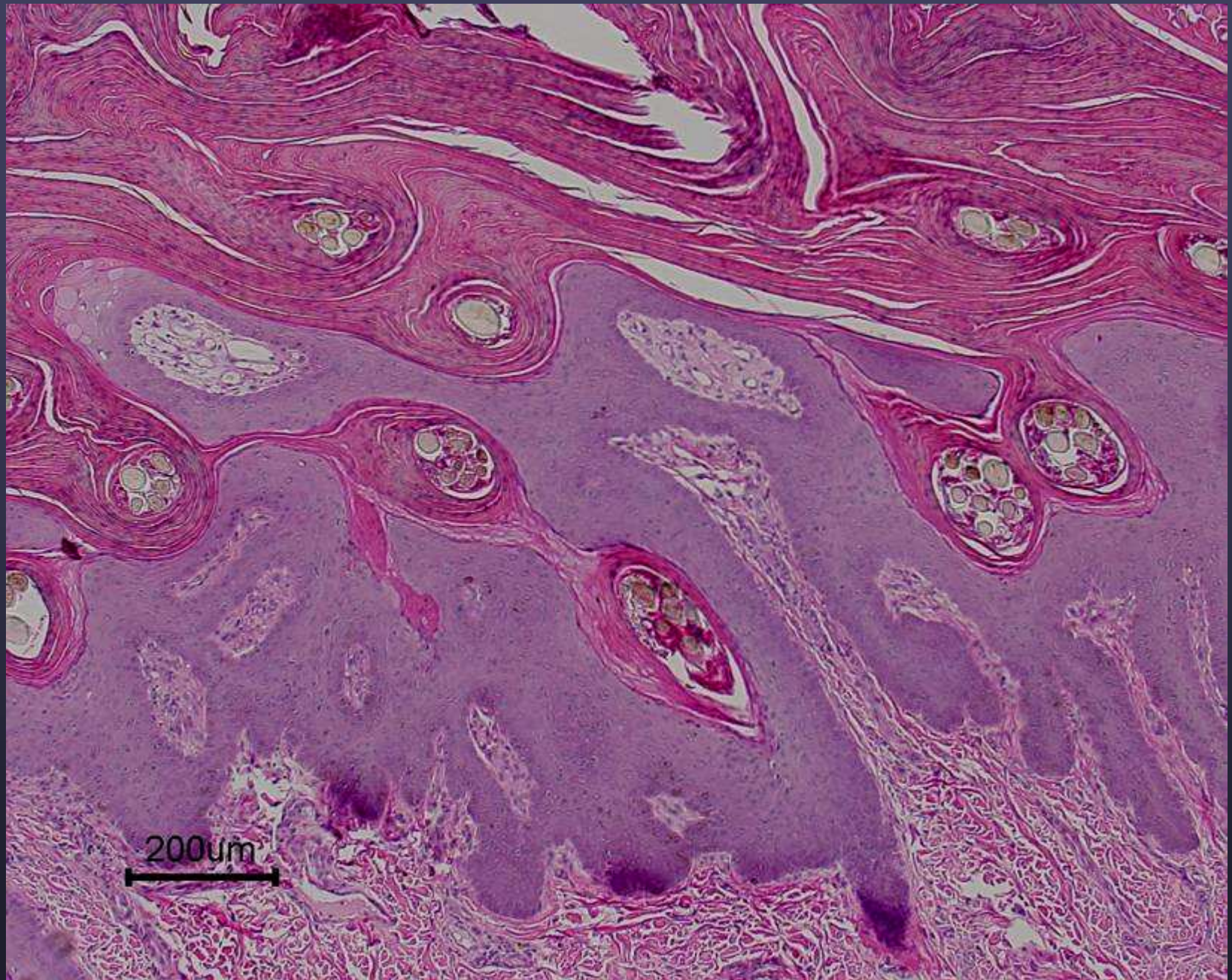




Case 3



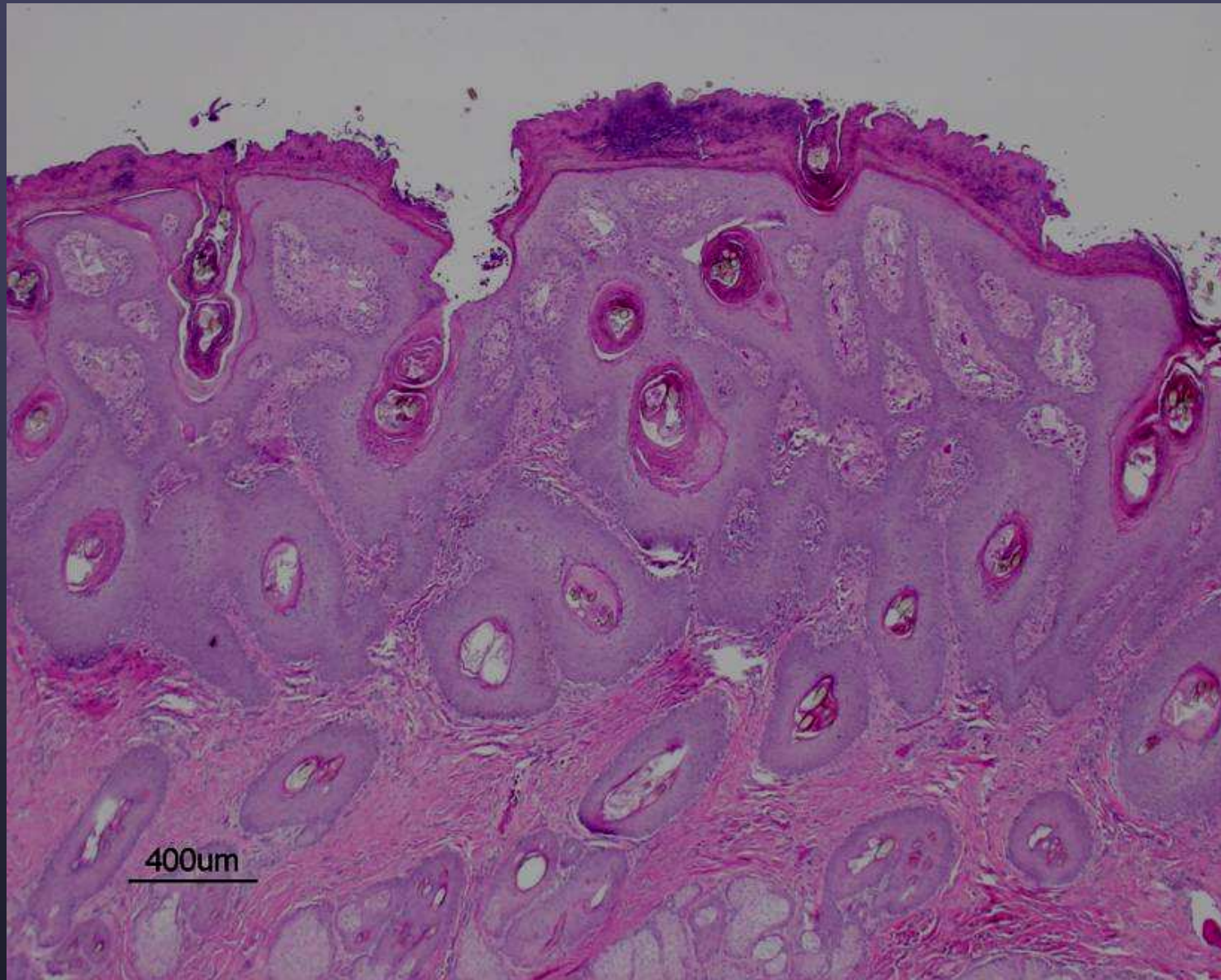
Case 3



Case 3



Case 3



Case 3

- Dog
- Distal limb
- Lightly pigmented coat
- Superficial pv + parakeratosis

Diagnosis: Case 3

- Superficial necrolytic dermatitis- haired skin- metatarsus- canine.

Case 3

Signalment/Hx

Submit Date: Thursday, March 08, 2007

Species: Canine Breed: Mixed Sex: Neutered Male Birthdate: 2/9/2001

Biopsy Specimen: x

Necropsy Specimen:

CASE HISTORY: two months ago boarded dog and when picked dog up chewing at the paws. Since then developed severe crusting of the elbows and mid metatarsal region with erosions/crusting presen periorally. No response to cephalexin or baytril. Some response to Medrol. Dog has been on U/D since puppyhood because of recurrent urinary bladder stones.

GROSS APPEARANCE : compact hyperkeratoses of the footpads with some fissuring (mild) and interpedal erosions, severe hyperkeratotic elbows and crusting of the mid-caudal metatarsal area on both legs. Erosions on the upper lip.

Number of Lesions: Size: Duration: Growth Rate:

Treatment: cephalexin, baytril, orbax, medrol

Previous Biopsies (Provide number): 2 *not found or search*

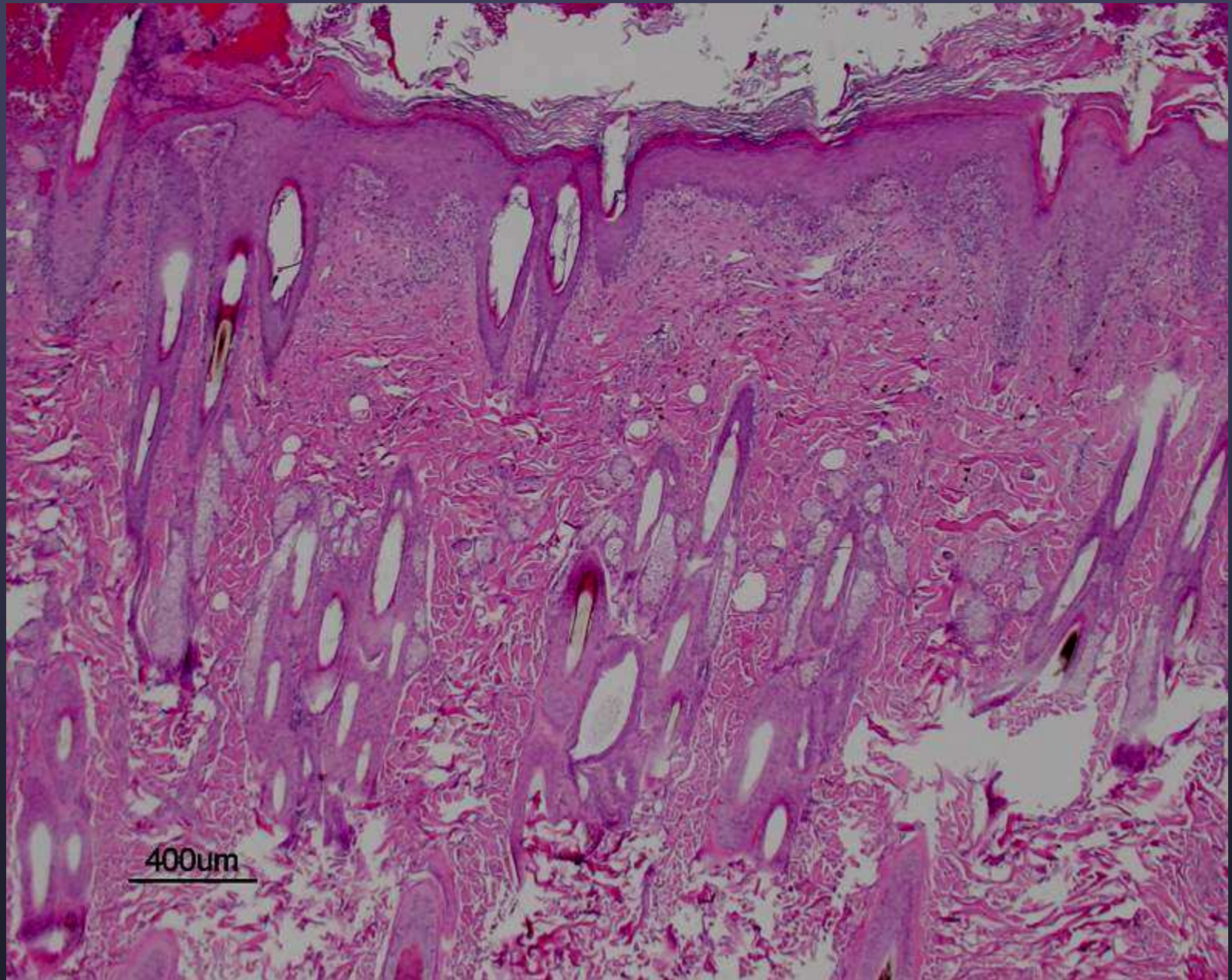
Tentative Clinical Diagnosis: Possible Necrolytic Migratory Erythema (either from chonic low protein diet or hepatic/pancreatic disease) or from pyoderma.

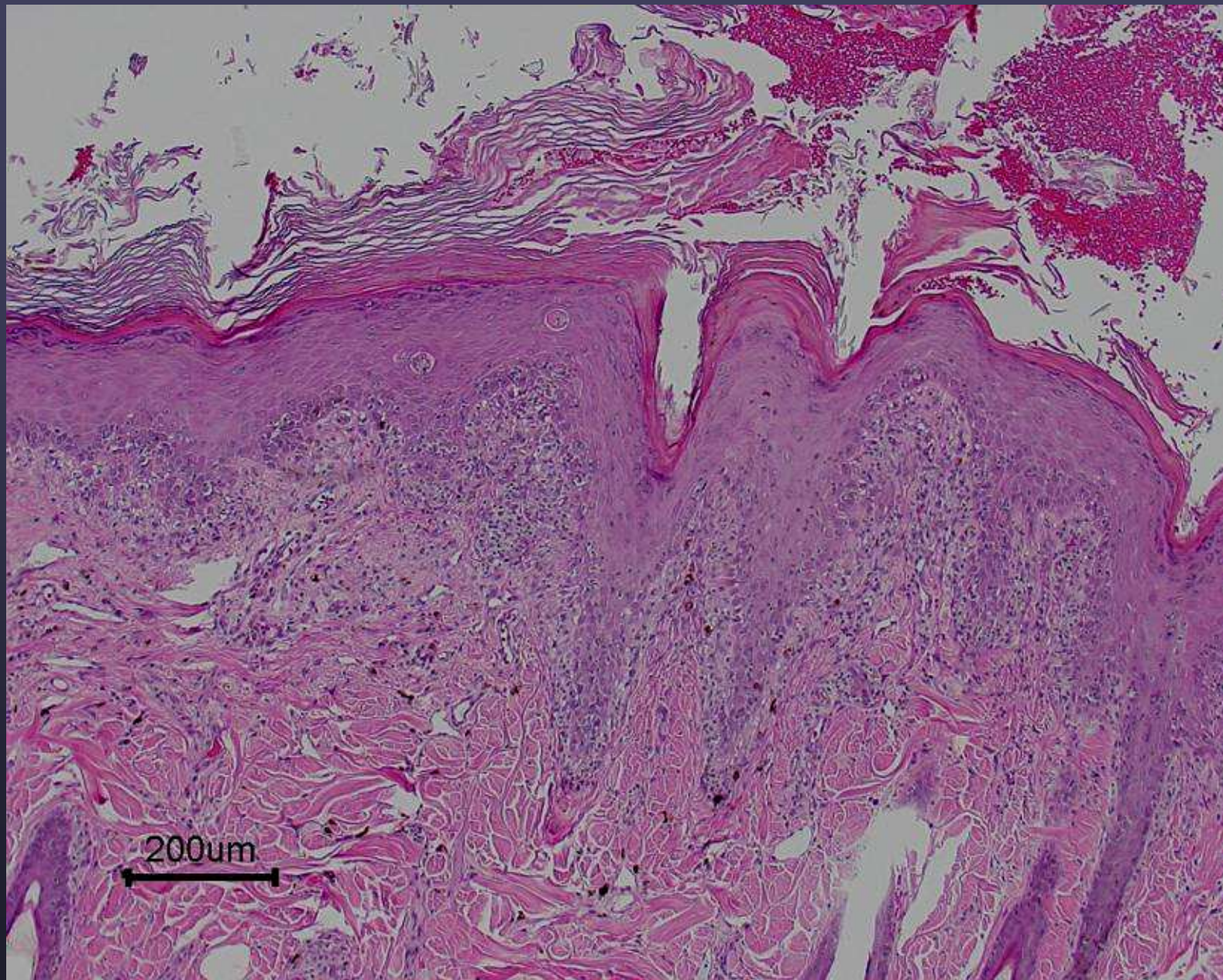
Location of Biopsies: caudal mid-metatarsal areas.

Tissue Submitted: skin

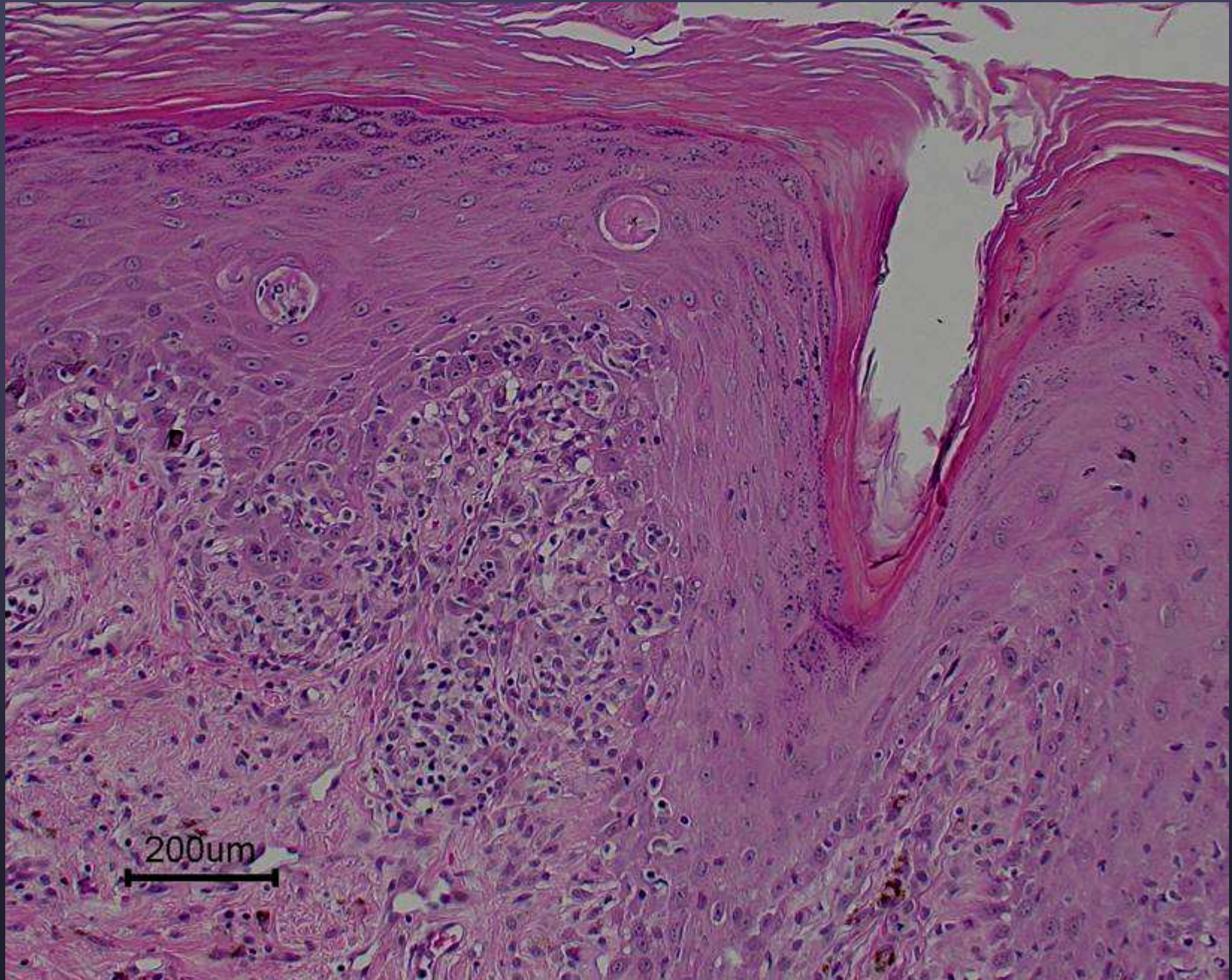
Case 4

- One 6-mm punch

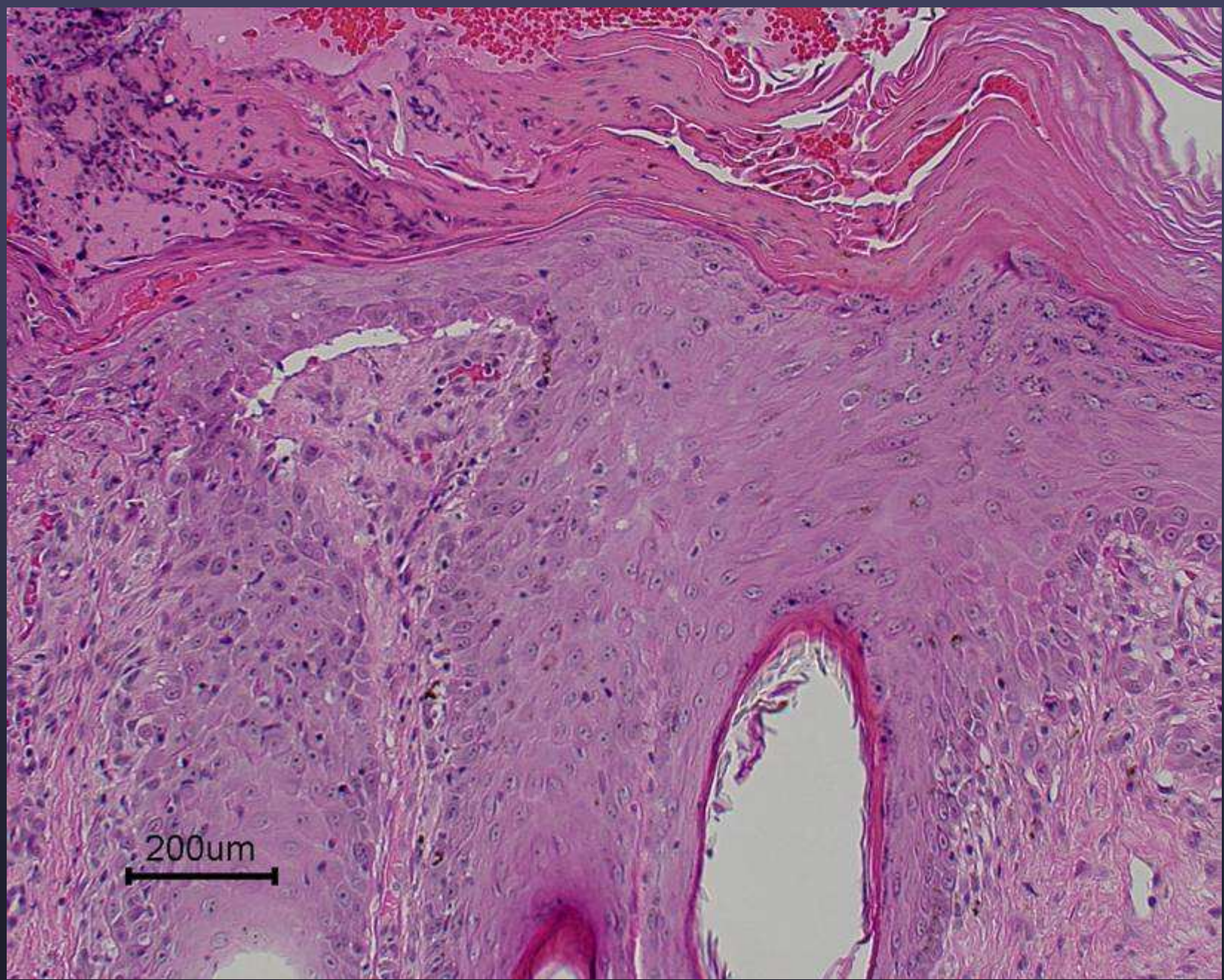




Case 4



Case 4



- Dog
- Location-- not the dorsum, flank, face or distal limb
- Lightly pigmented haircoat
- Interface pattern

Case 4

Signalment/Hx

Submit Date: Tuesday, March 13, 2007

Species: Canine Breed: Terrier, Soft-Coated Wheaten Sex: Neutered Male Birthdate: 2/27/2000

Biopsy Specimen: x Necropsy Specimen: _____

CASE HISTORY: several month history of crusting areas on the head. Treated with steroids and antibiotics with some improvement

GROSS APPEARANCE : crusting 1 to 2 cm in diameter on top of the head

Number of Lesions: _____ Size: _____ Duration: several months. Growth Rate: slow

Treatment: antibiotics (cephalexin)

Previous Biopsies (Provide number): _____

Tentative Clinical Diagnosis: open

Location of Biopsies: dorsum of the head

Tissue Submitted: skin

Entire Specimen [☐] Wedge [☐] Tru-Cut [☐] Punch [☒] Frag [☐] Endoscopic [☐] Other [☐]

Sample Type: _____ Mass [☐] _____ Organ [☐] _____ Necropsy Specimen [☐]

Lymph Node Involvement: NO **Encapsulated:** NO **Excisional Biopsy:** NO

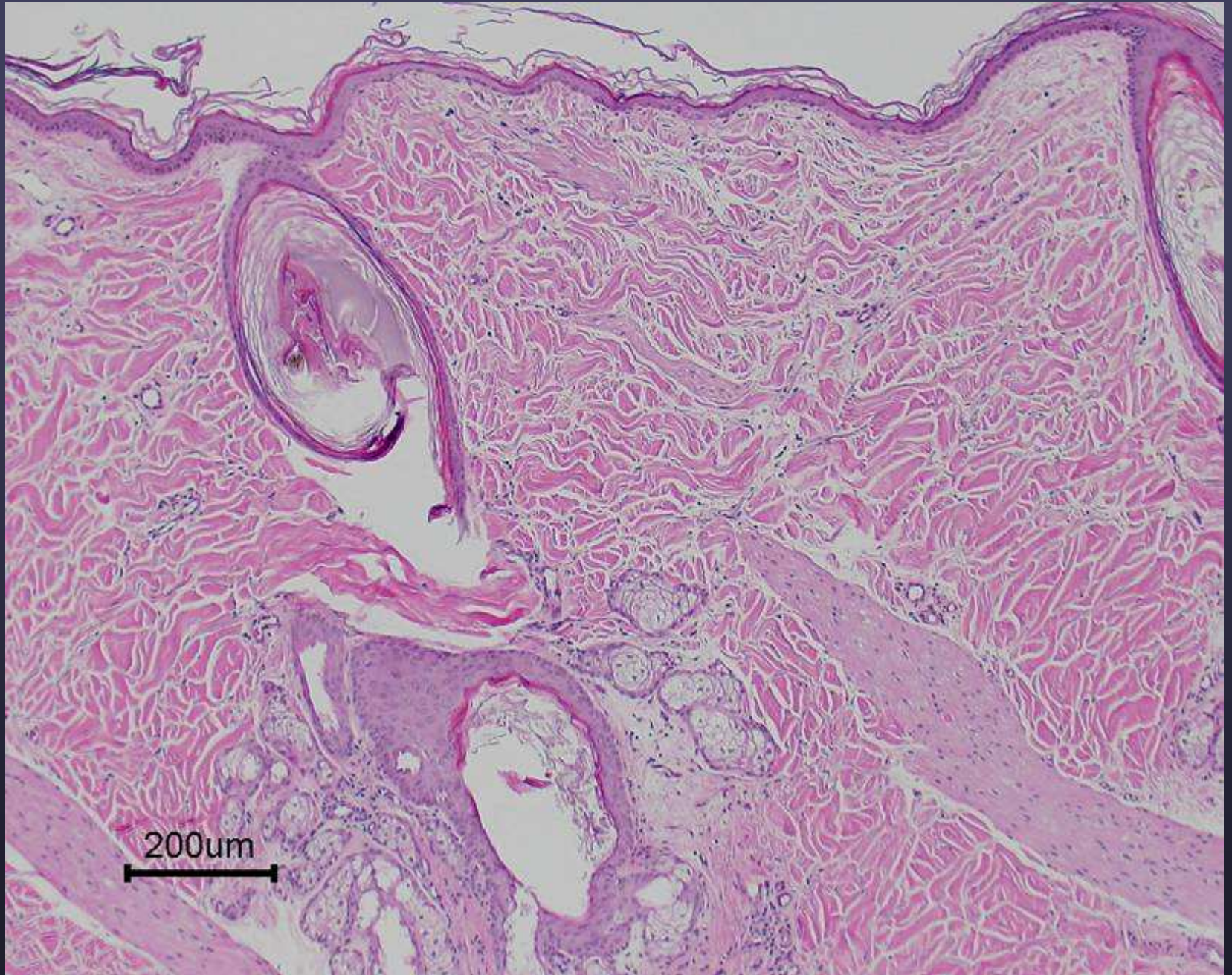
FOR PATHOLOGIST'S USE ONLY

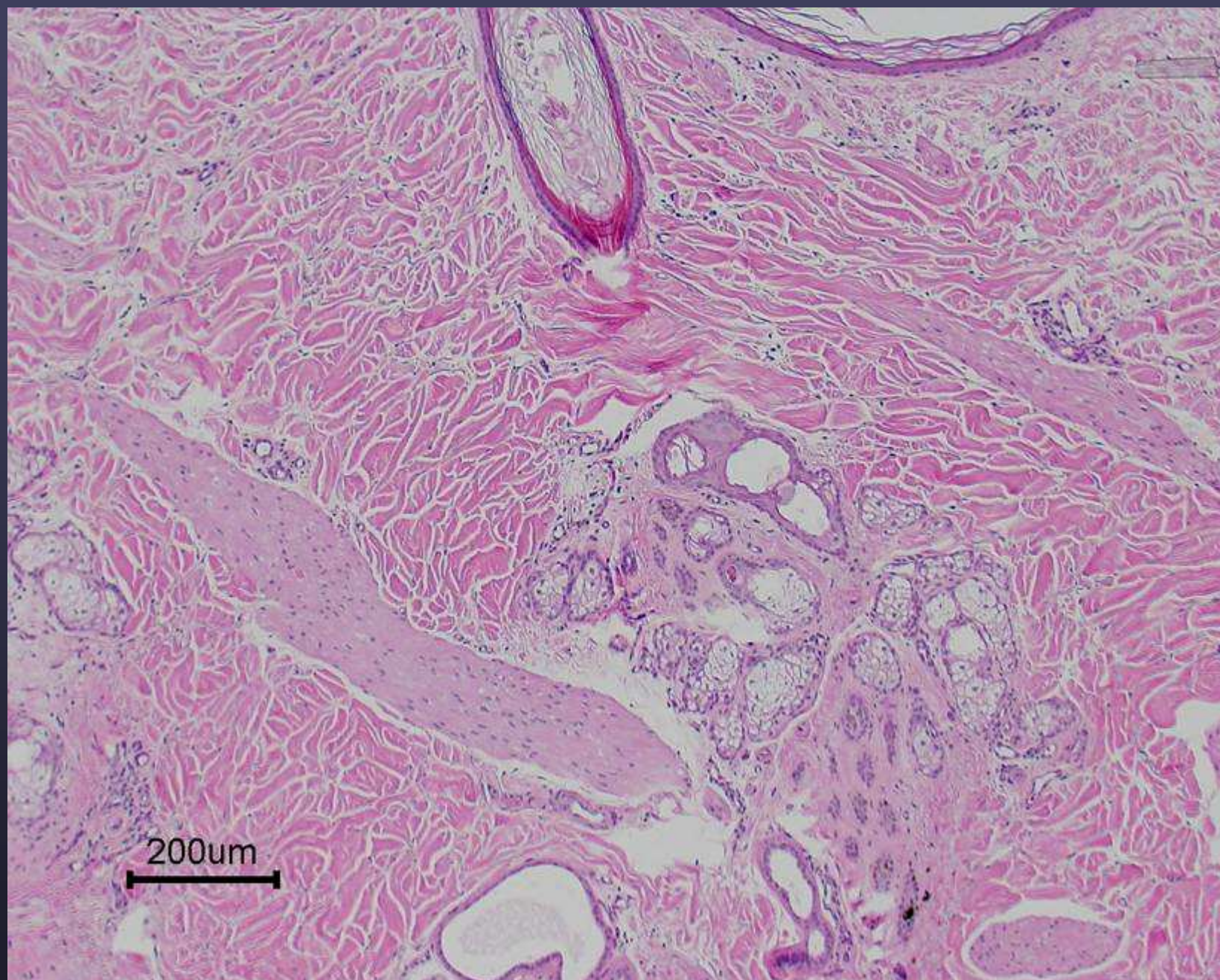
Diagnosis: Case 4

- Lymphocytic interface dermatitis with basal and multifocal suprabasilar individual keratinocyte necrosis with hyperkeratosis and crusting, dorsal head-canine.

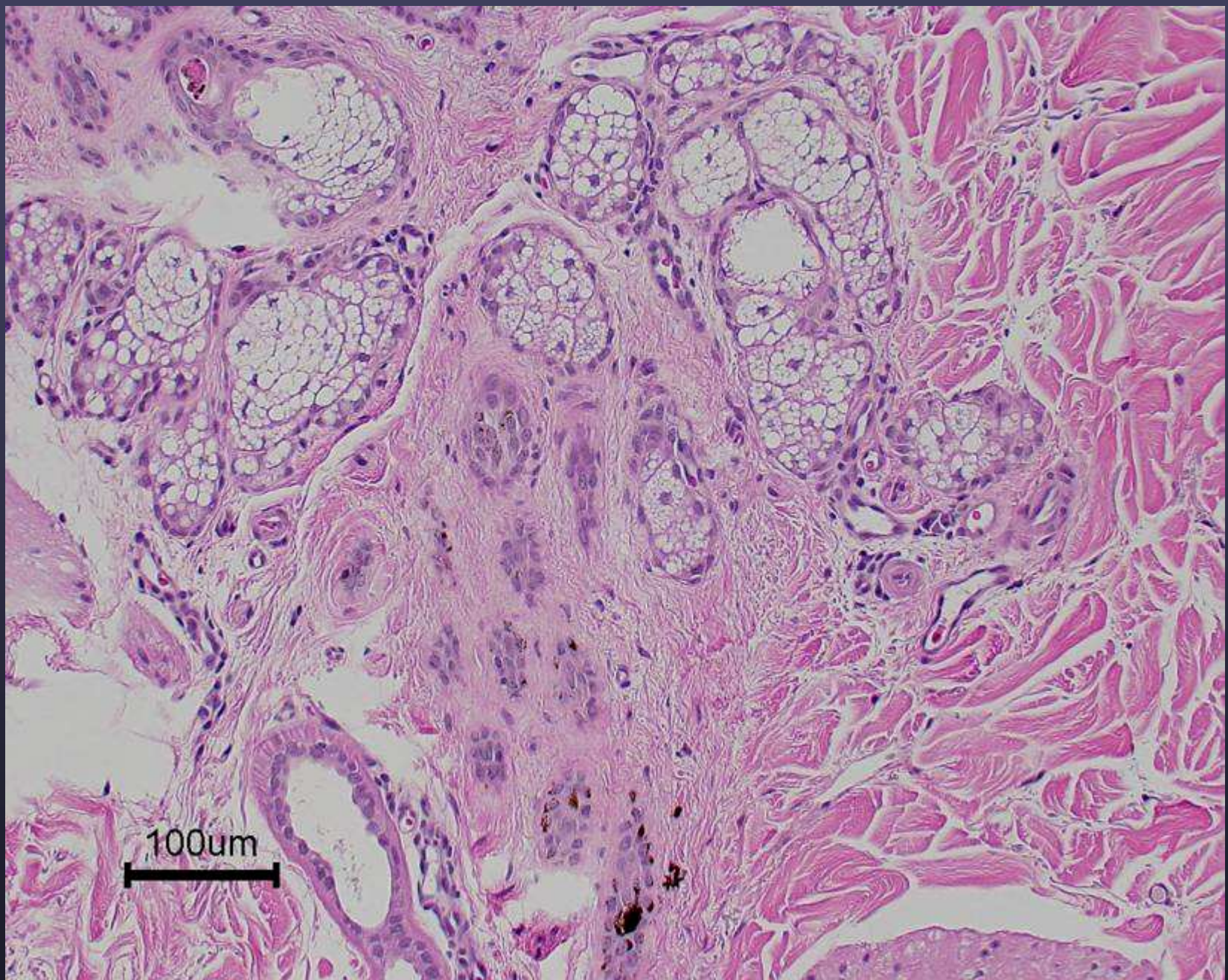
Case 5

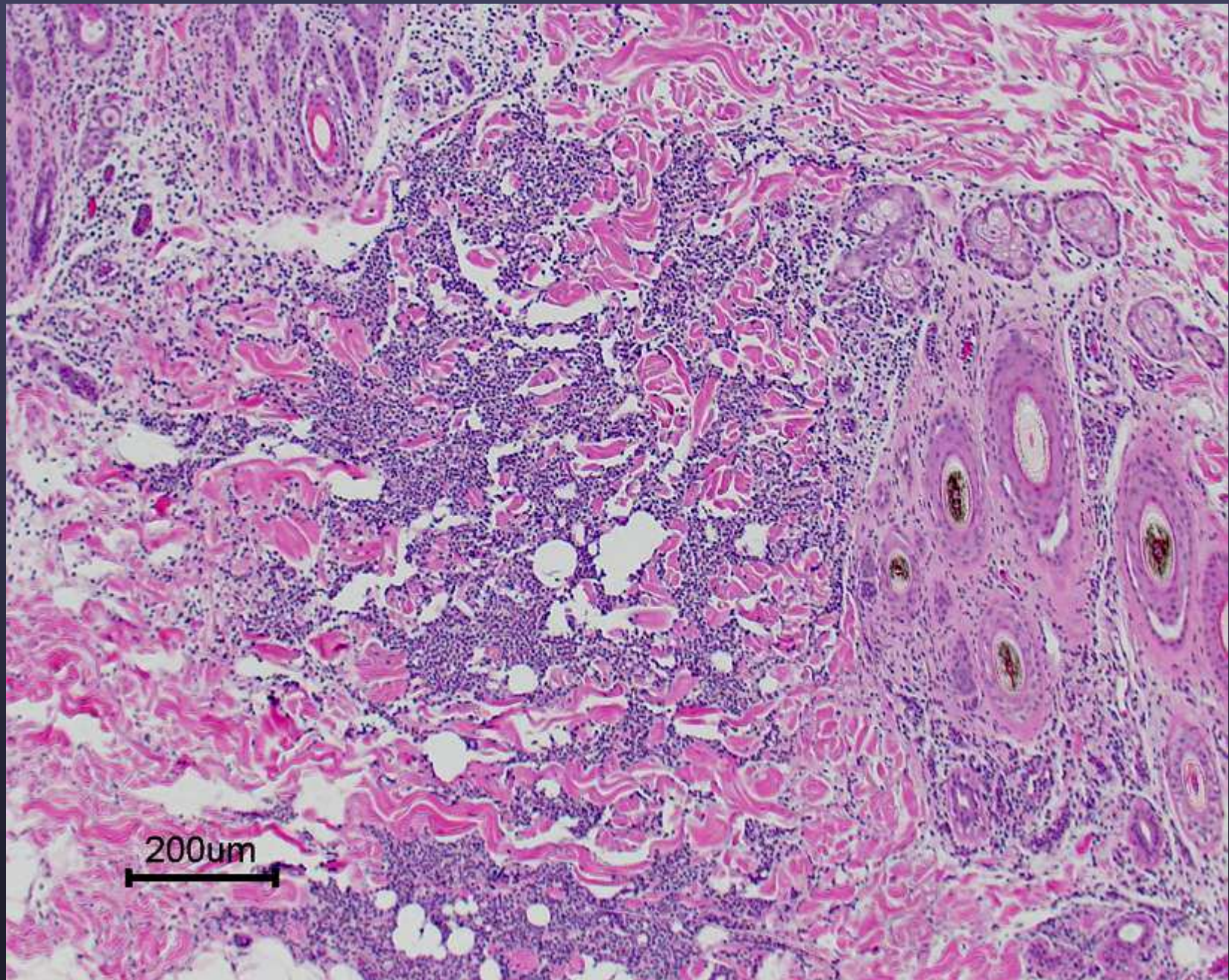
- Two 6-mm punch biopsies

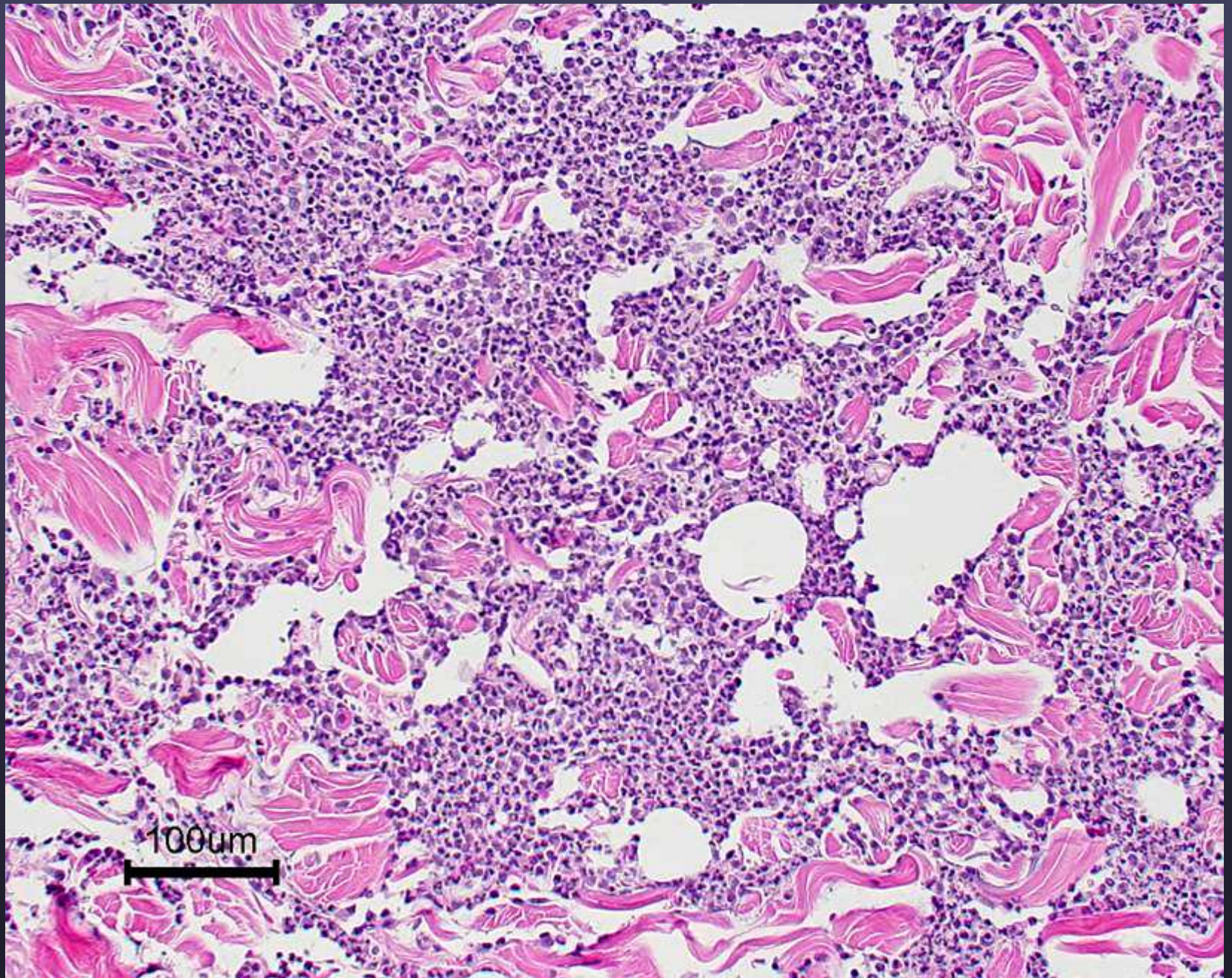


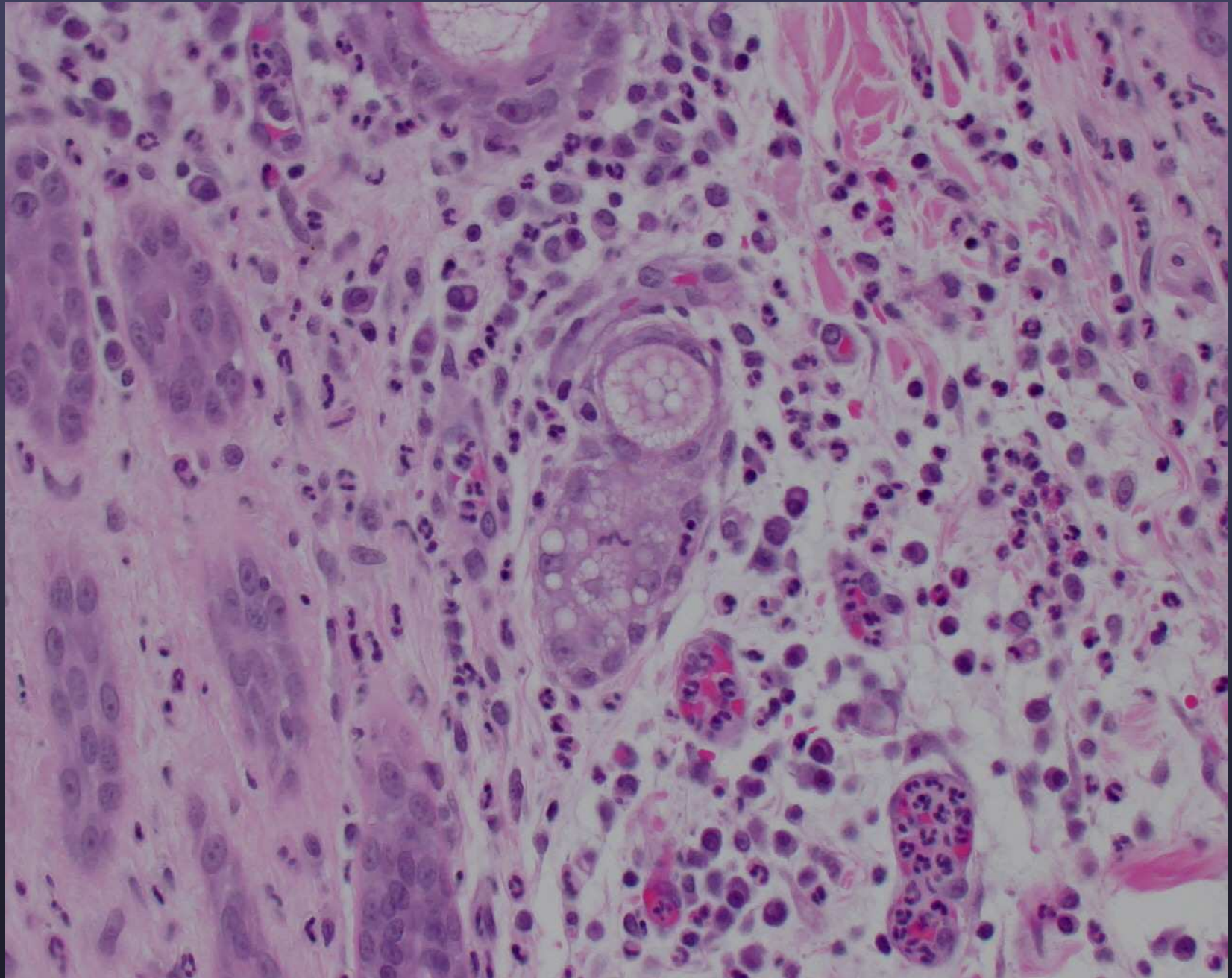


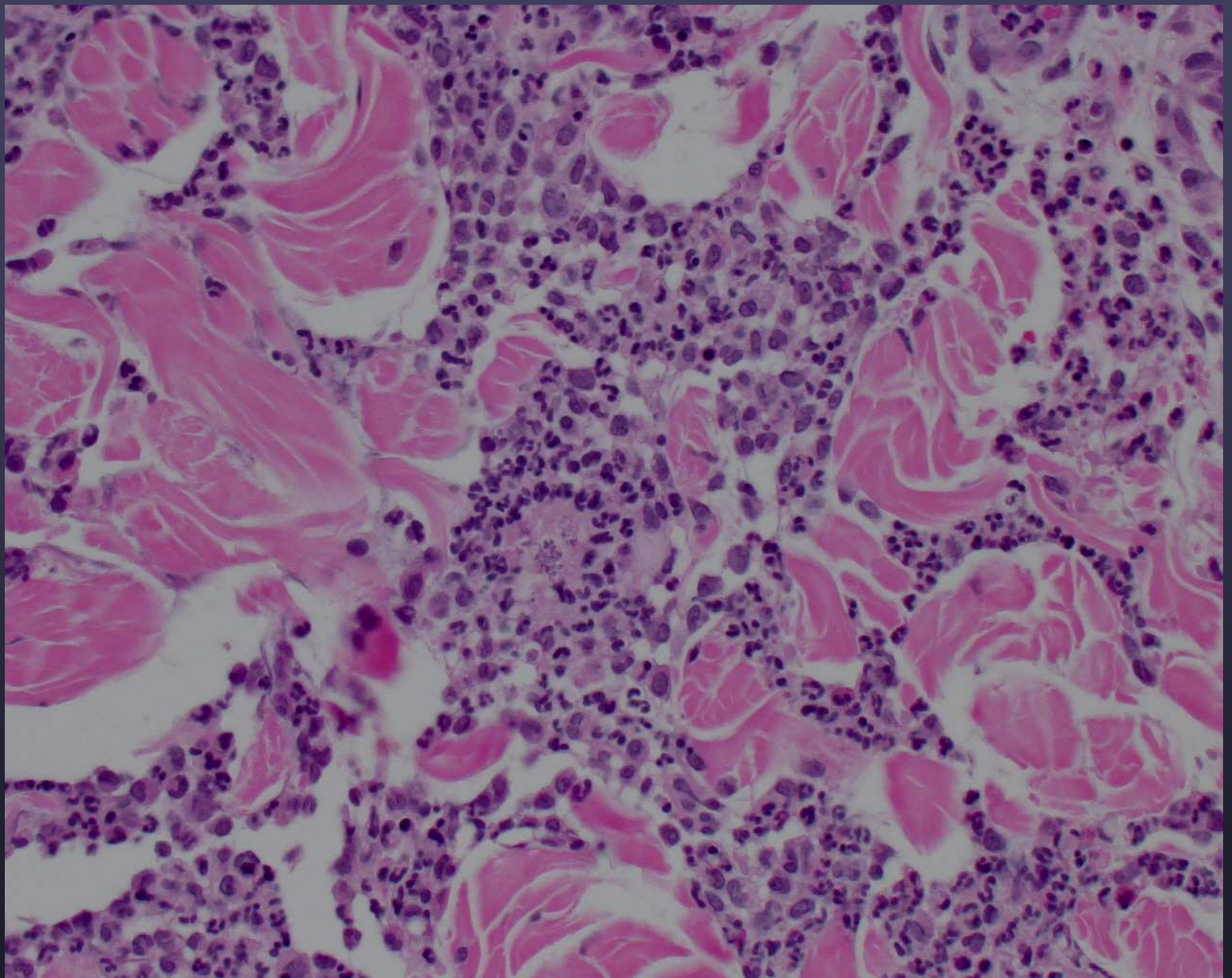


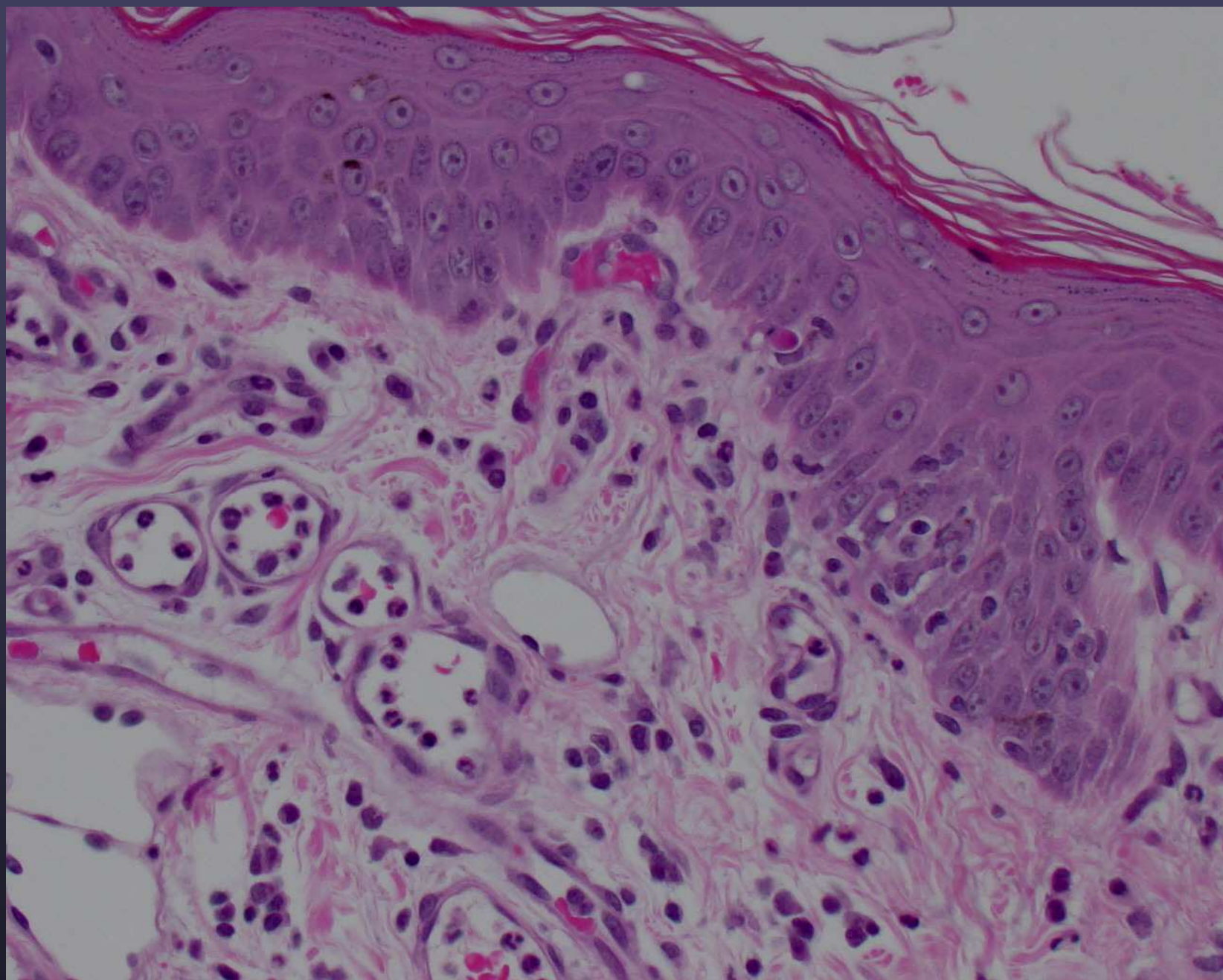












- Dog
- Dorsum, maybe flank
- Pigmented coat- moderately
- Breed unpredictable

Pattern

- Perifolliculitis/furunculosis
- Atrophic derm

Case 5 Diagnosis

- Suppurative furunculosis with intralesional bacterial cocci, right flank-canine.
- Epidermal and follicular atrophy-dorsolumbosacral area- canine.

Recommend C/S

Case 5 Signalment/Hx

GLENMOORE, PENNSYLVANIA 19343

Date Submitted: 3/14/07

Species: Canine Breed: HUSK. Sex: MN Age: 10 yr

Biopsy Specimen: X Necropsy Specimen: _____

CASE HISTORY:

Number of Lesions: 2

Duration: ~2 months

Size: _____

Rate of Growth: _____

Cross Appearance: _____

Lifelong Hx of seizures (managed w/ Phenobarb) and "allergic" skin disease. Flareups occur yearround (worse in fall). No Δ on 21d food trial x 10 wks. Dog responds well to Aox/steroids in the short term. Owners decline Heka Blood testing for allergies—dog becomes v. pruritic off of Pred. Current lesions consist of alopecia, erythema, crusting / scaling and hyperpigmentation. (variable pruritus). Recent CBC/CP = MAKP, Bile Acids ↑ ^{sl. elevated} (17/21.9)

Treatment (if any): Keflex 1000 mg BID x 4 wks, *Pred 10 mg EOD x ~10 mo.

Issues Submitted (Tumor, Organs - Specify): SKIN

Location where tissues were taken from: SKIN - (2) flank, Dorsum

Lymph Node Involvement: | YES | NO | Encapsulated: | YES | NO | Excisional Biopsy: | YES | NO |

Anticipated Clinical Diagnosis: _____

FOR PATHOLOGISTS USE ONLY: _____

Significance

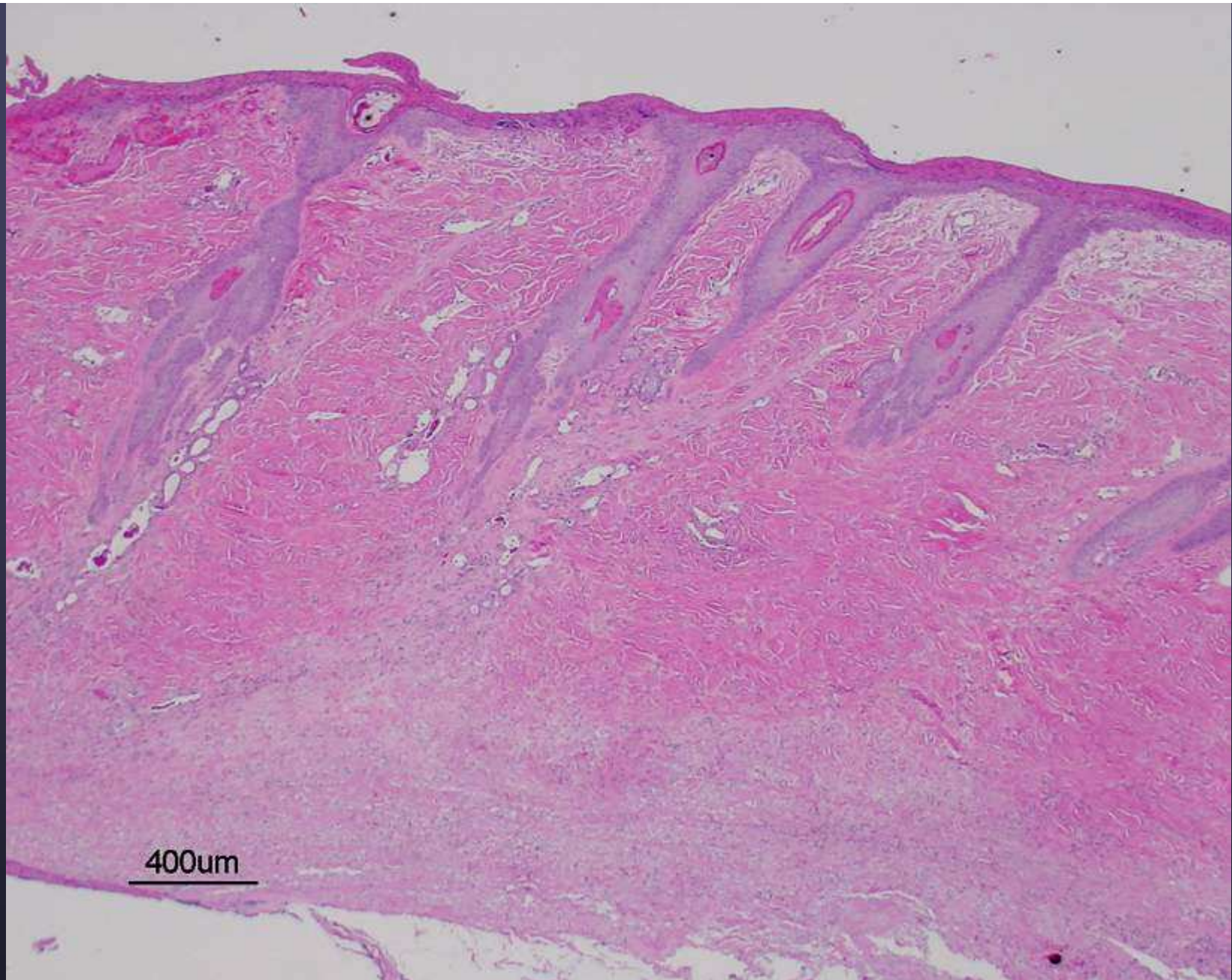
- In the modern world of MDR infections, failure to respond to abx is virtually meaningless.
- Always recommend C/S
- MRSA/MRSI/S. schleiferi- unpredictable sensitivity patterns

Case 6

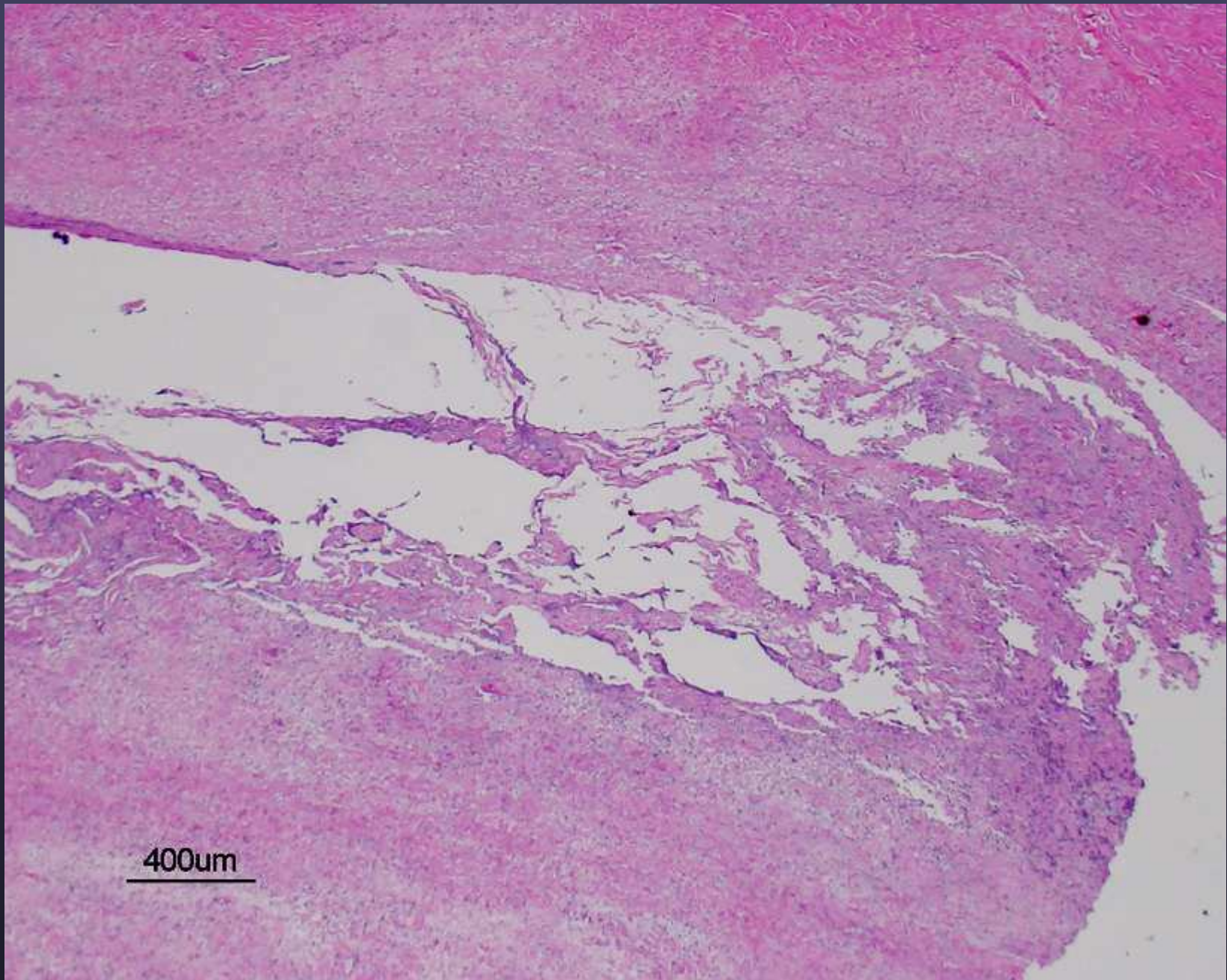
- Two 6-mm punch biopsies



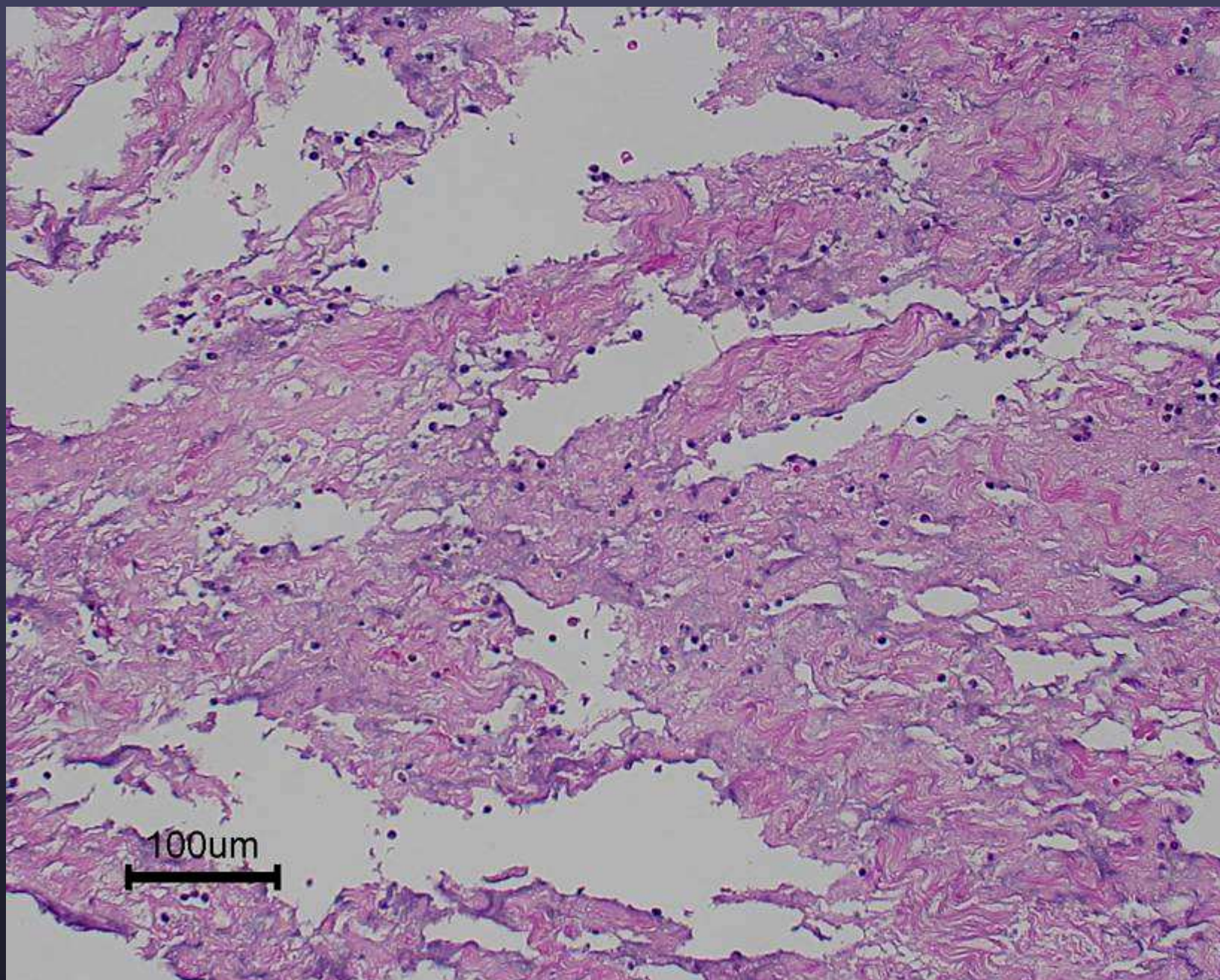
Case 6

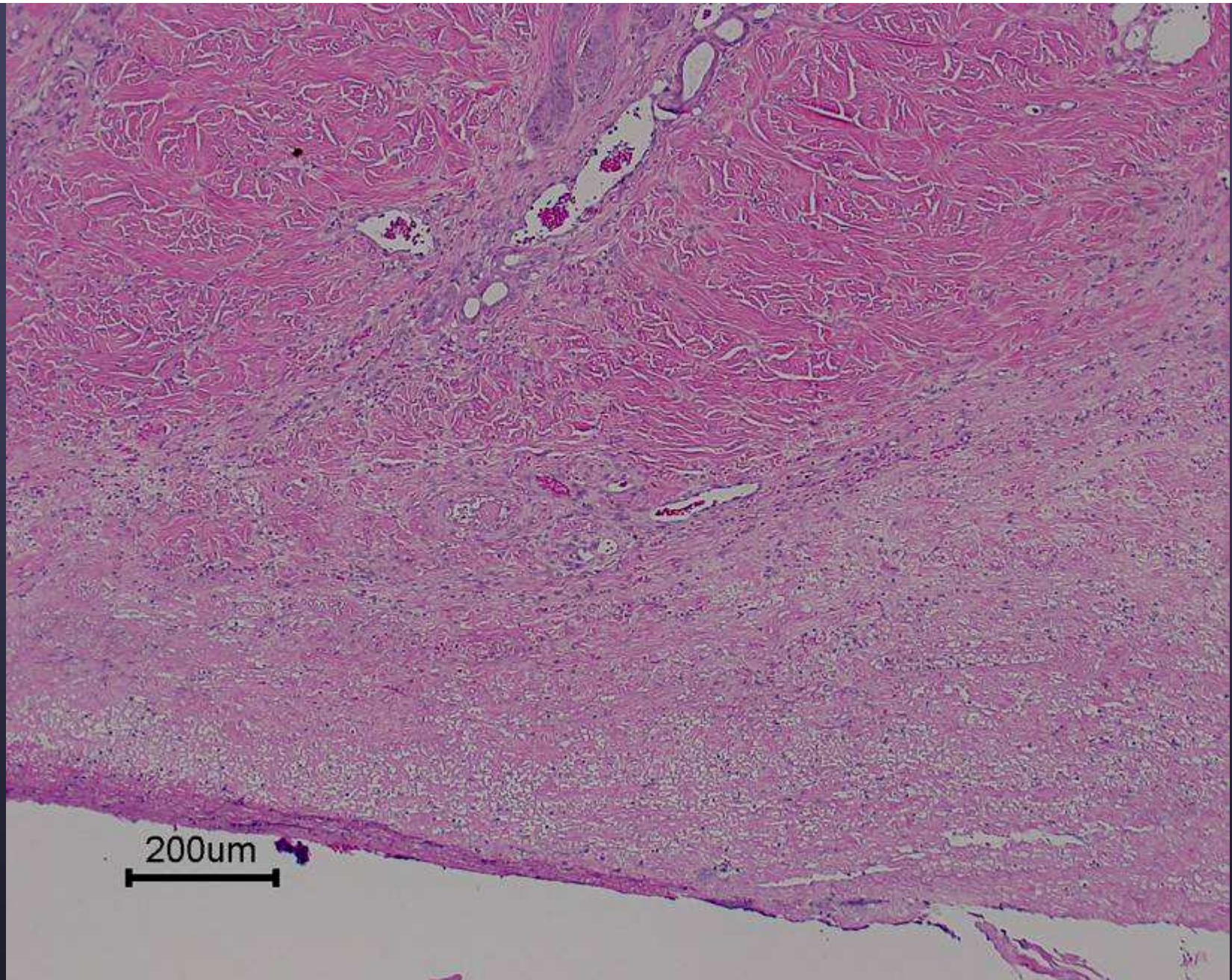


Case 6

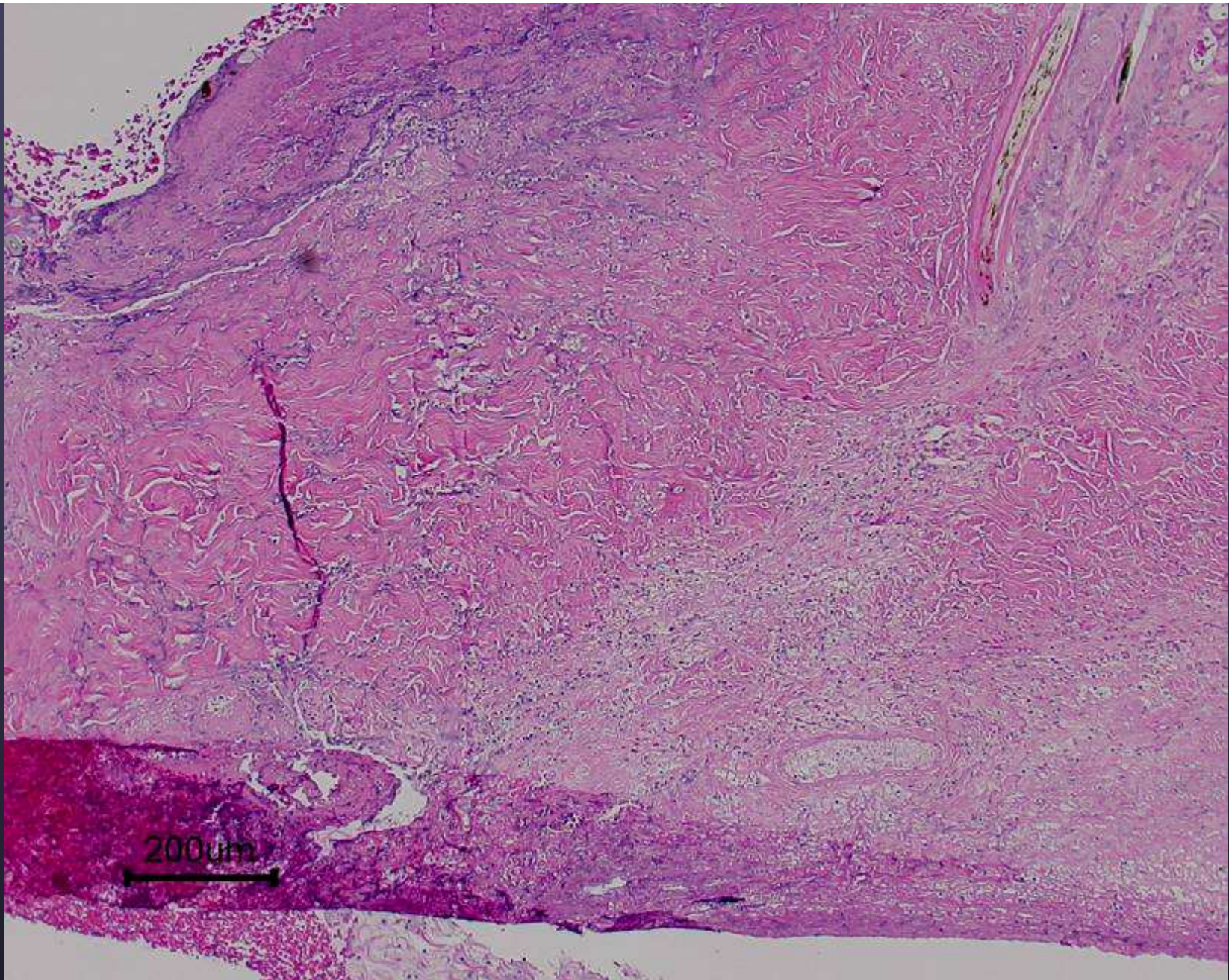


Case 6

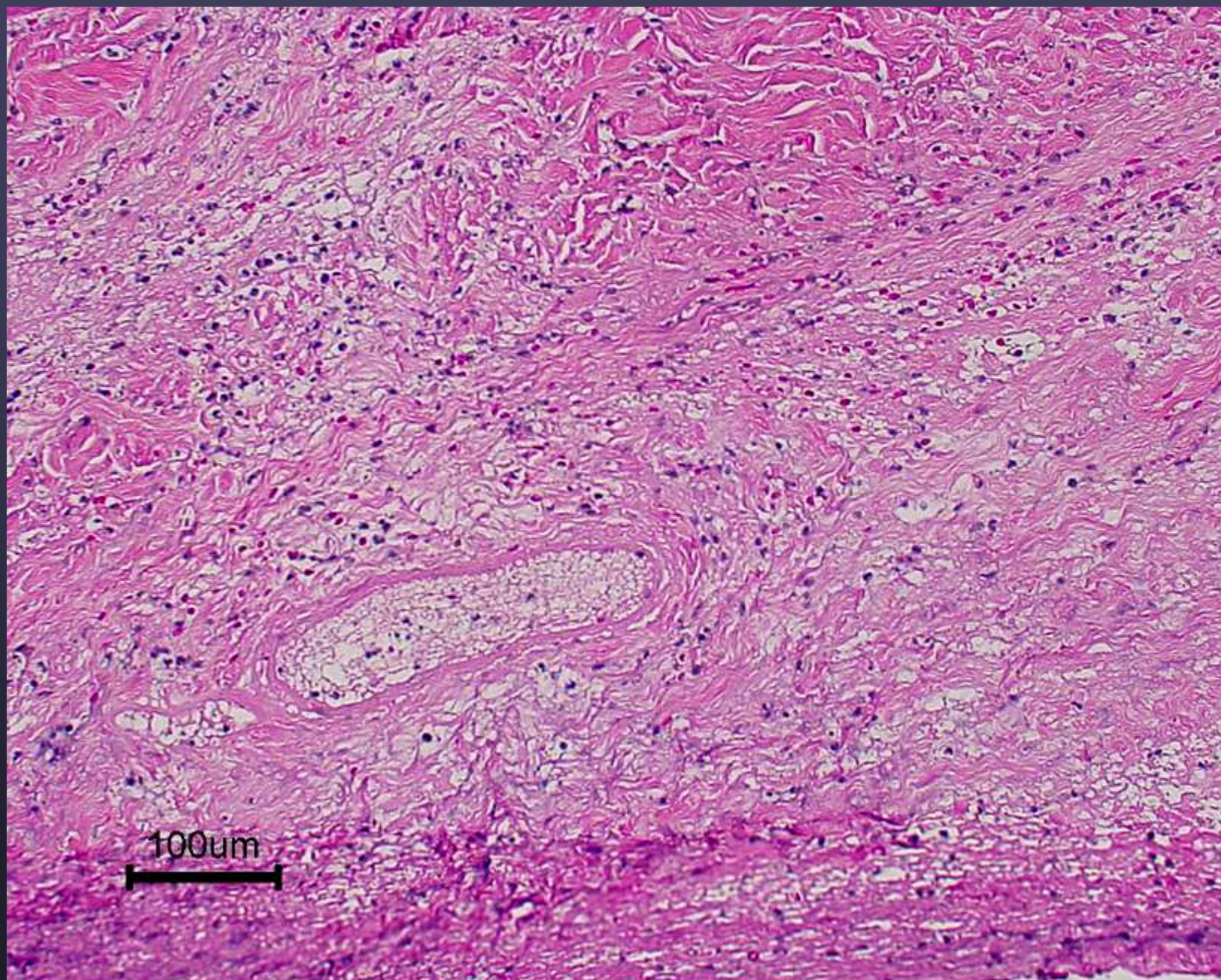


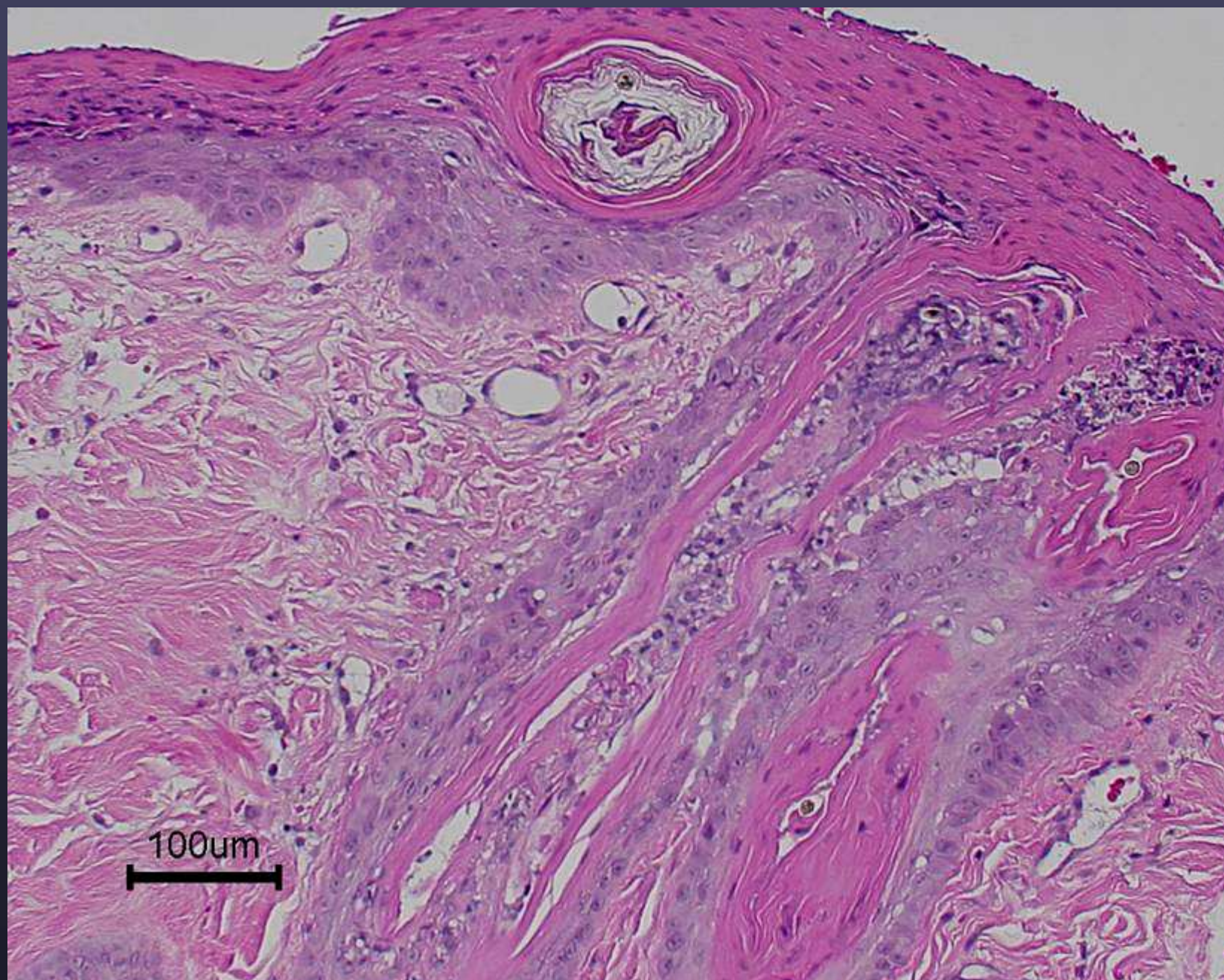


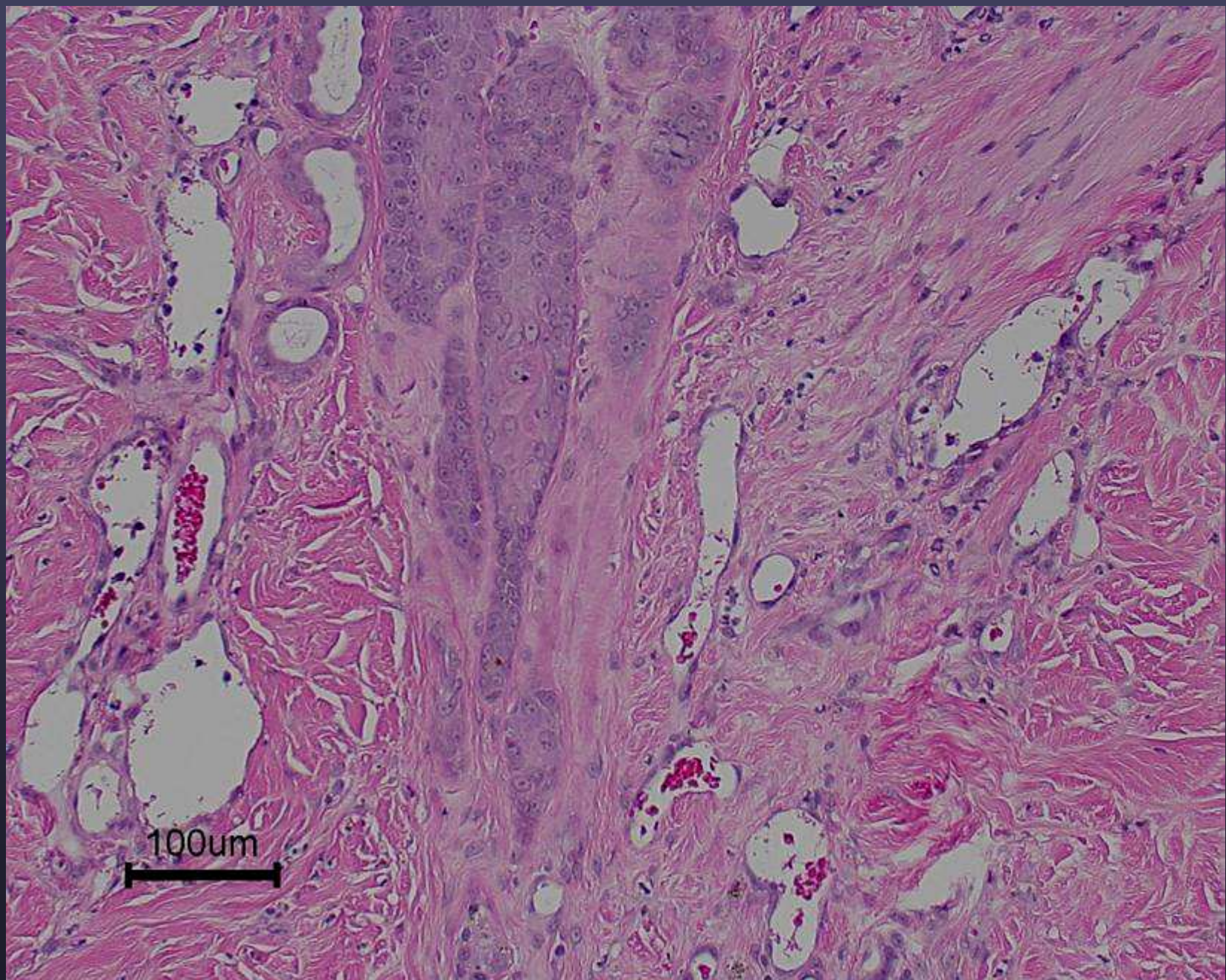
Case 6

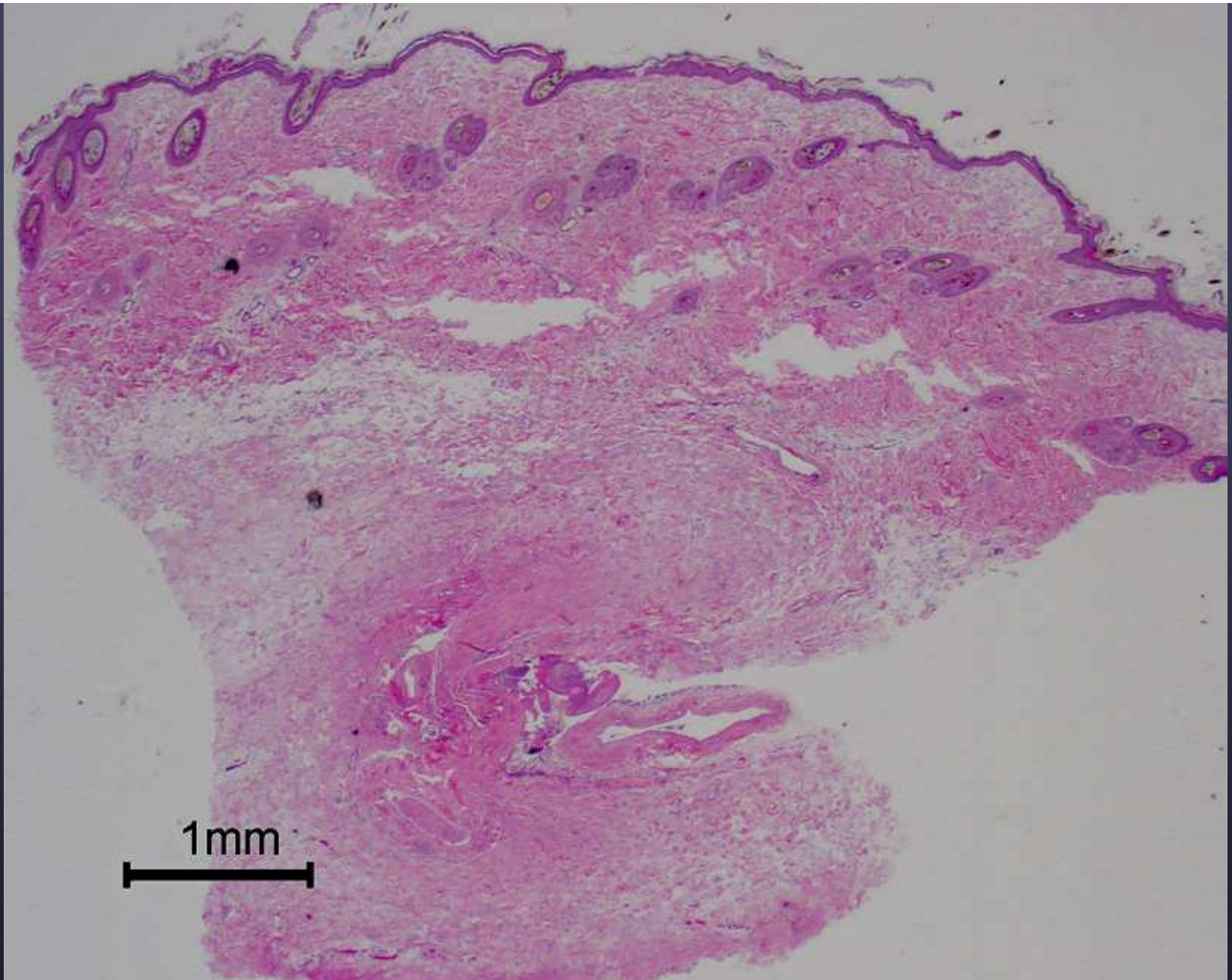


Case 6

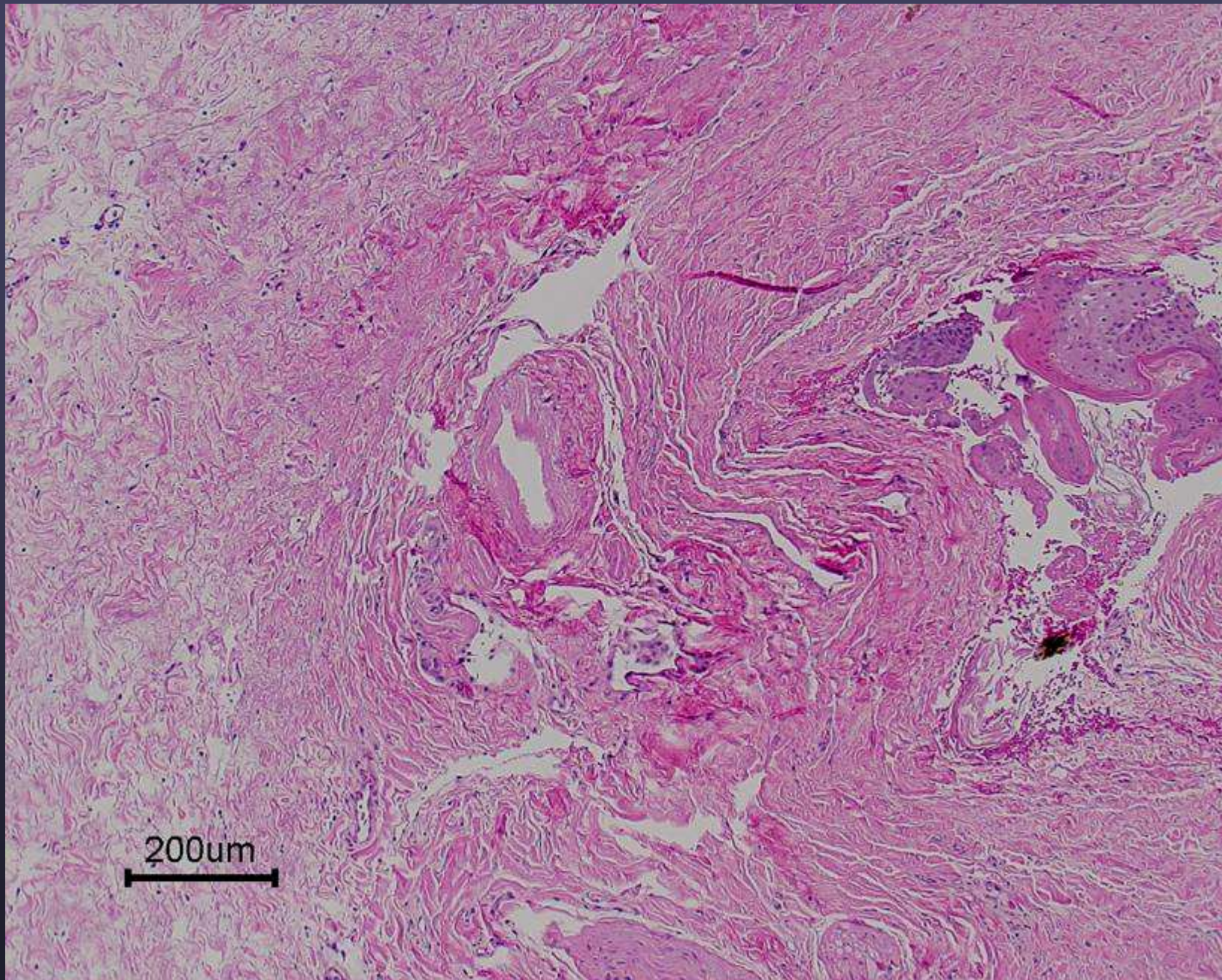




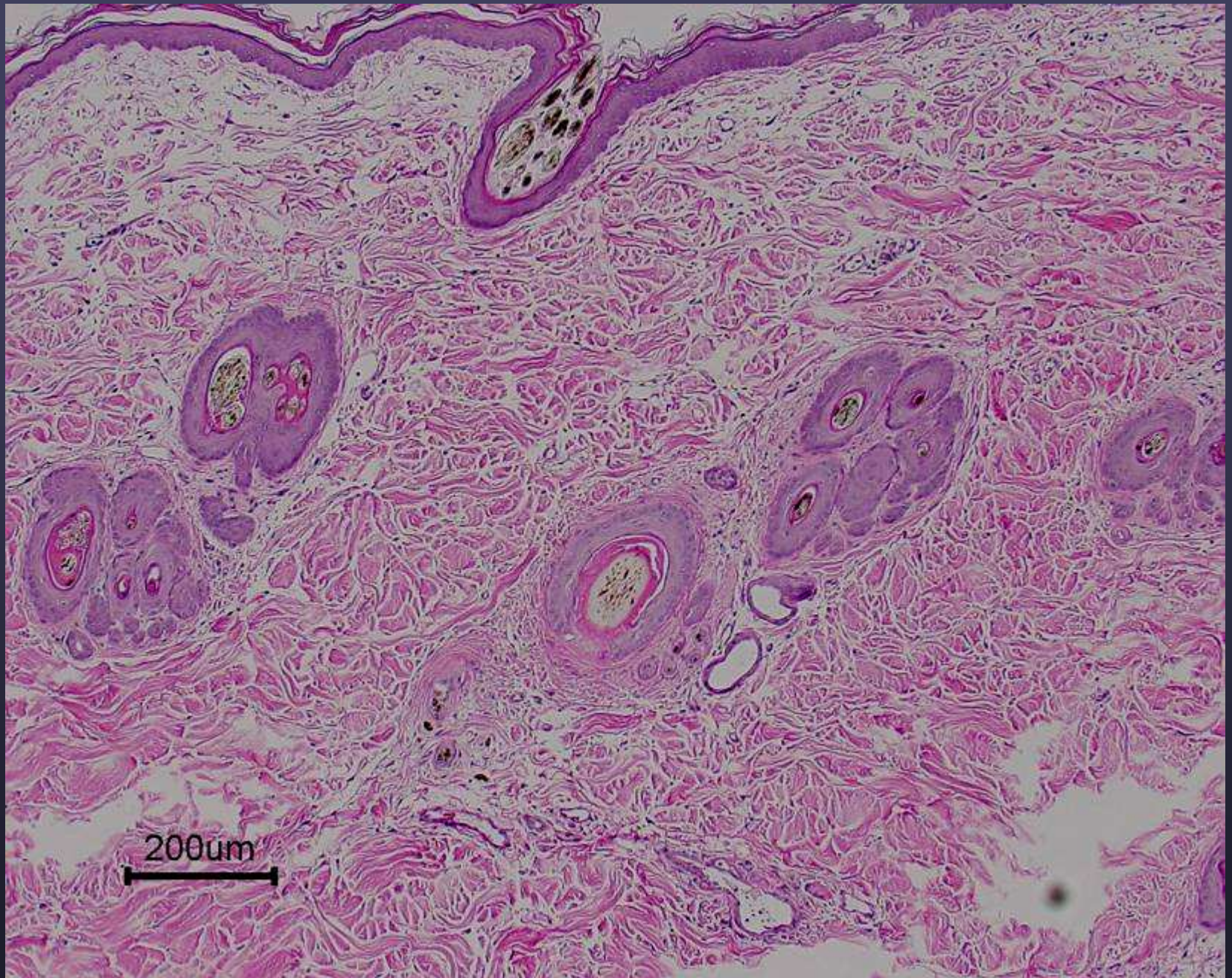




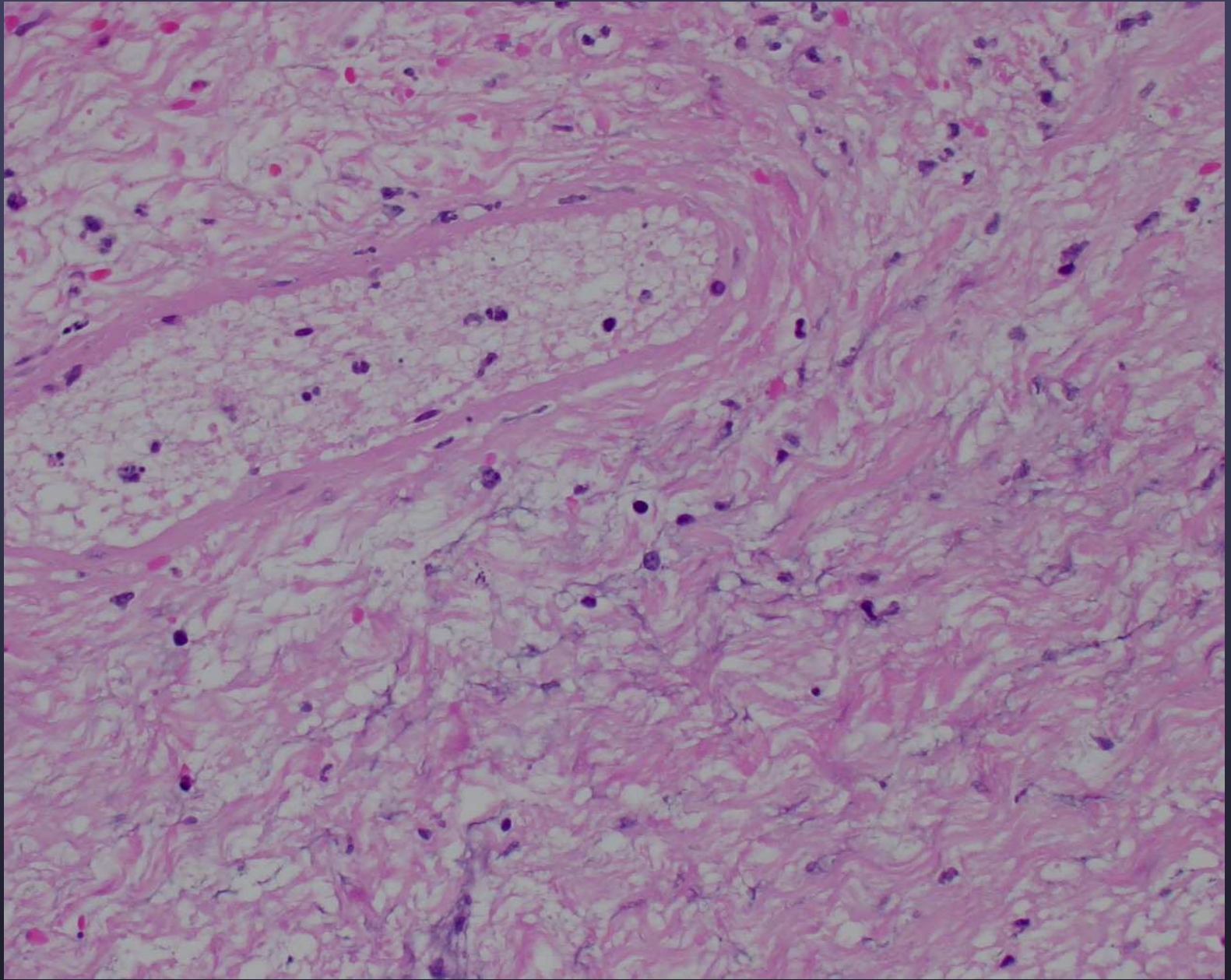
Case 6



Case 6



Case 6



Case 6

- When in doubt, guess dog
- Bx not from face or dorsum, maybe limb?
- Coat color-? Moderate HF pigmentation
- Pattern- diffuse derm

Case 6 History/Signalment

C PIT BULL X 08MAR05 F

3834 BERGH MEMORIAL ANIMAL
HOSPITAL (ASPCA)
NEW YORK, NY 10128

PRESENTED RECUMBANT AND NEAR DEATH. SEVERELY EMACIATED HYPOTHERMIC, SEVERELY DEHYDRATED, LOW PCB/T.B, PLATELETS, OTHER ABN CONSISTENT W/SHOCK AND STARVATION SUPPORTIVE CARE INSTITUTED

SEVERE UNILATERAL PITTING HINDLIMB EDEMA DEVELOPED WITHIN 48 HOURS. SKIN OF LATERAL AFFECTED LIMB ERYTHEMATOUS - WELL DEMARCATED FIRM LESION (LOOKS LIKE ESCHAR) AND POSITIVE NIKOLSKY'S SIGN AT PERIPHERY. SEROHEMORRHAGIC DISCHARGE WHEN MANIPULATED. LESION EXPANDED BY -20% IN 24 HOURS.

CYTOLOGY = DEEP PYODERMA, SKIN (DISTAL LIMB)
2 DAYS DURATION; RAPID GROWTH; TREATMENT: UNASYNE, ENROFLOXACIN, IV FLUIDS/HISTIOSARC, PACKED RBCS PEPCID, SUCRALFATE, HYDROTHERAPY

Case 6 Diagnosis

- Severe necrotizing cellulitis and focal vasculitis with regional dermal necrosis, and sclerosis- hindlimb- canine.

Significance

- Sepsis
- Vasculitis
- “Worrisome” histopathologic changes

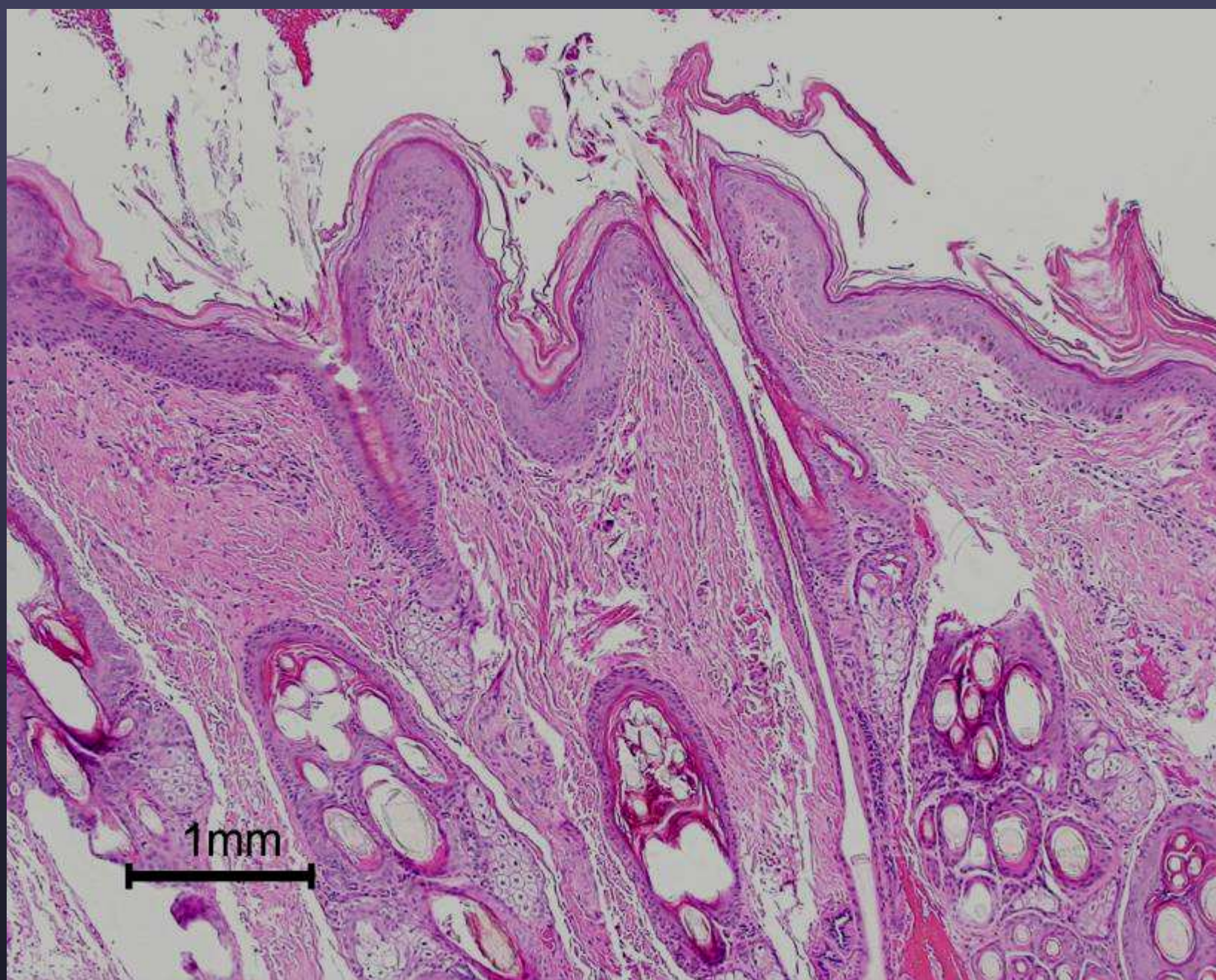
Case 7

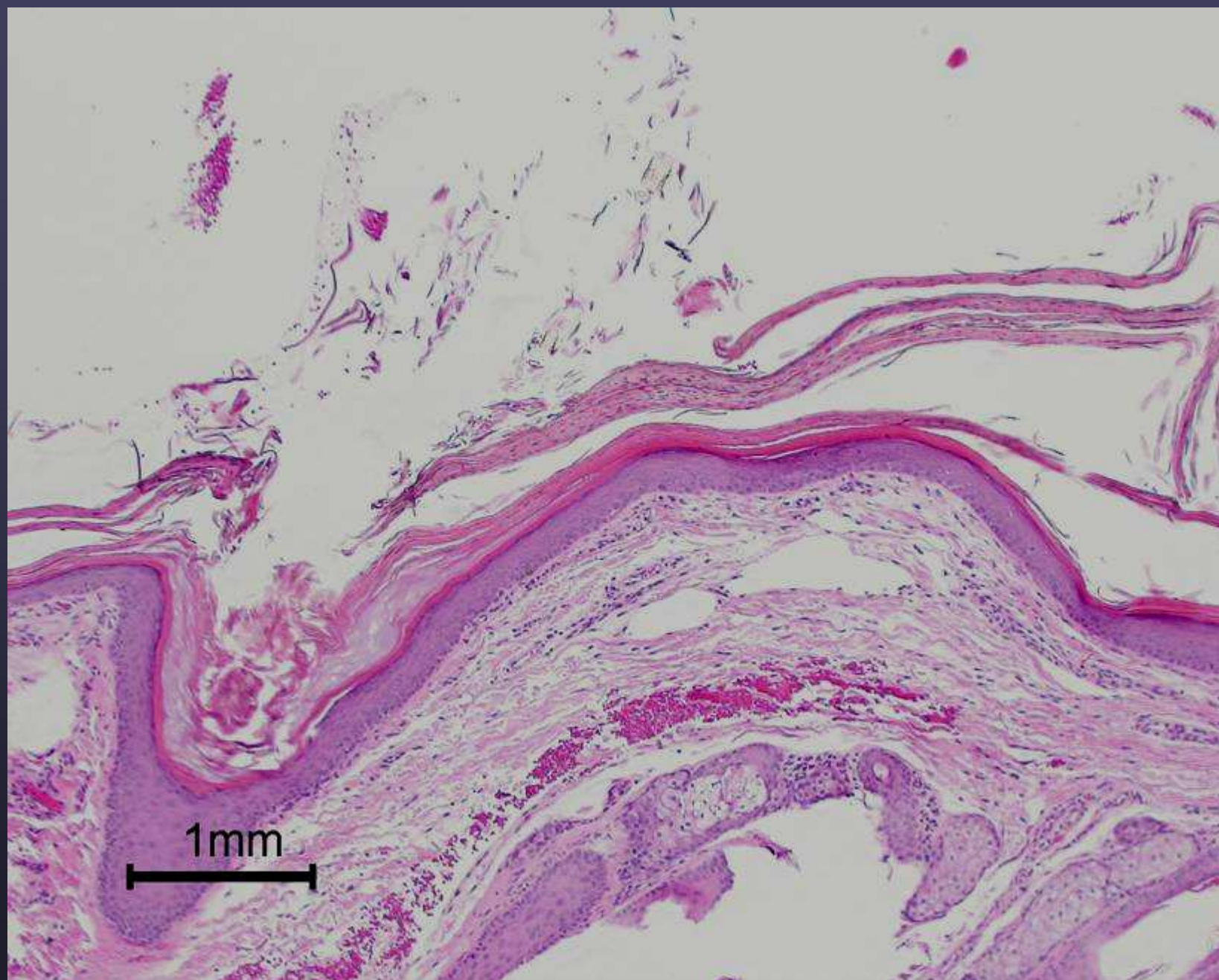
- Two tiny punches (3-4- mm?)



1mm

This is a low-magnification histological image of a tissue section, likely stained with hematoxylin and eosin (H&E). The tissue is irregularly shaped and shows a complex internal structure. A prominent feature is a large, dark, irregularly shaped mass in the upper left quadrant, which appears to be a dense area of tissue, possibly a tumor or a large cyst. Below this mass, there is a large, pale, irregularly shaped area that contains numerous small, dark, circular structures, which could be glandular or ductal structures. To the right of this large pale area, there is a smaller, more compact, and darker mass. A scale bar in the bottom left corner indicates a length of 1mm.





Case 7

Date Submitted:

3/14/07

Species:

K-9

Breed:

Sheltie

Sex:

FCS

Date of Birth:

2/27/97

Biopsy Specimen:

☒

Necropsy Specimen:

☐

Cytology Specimen:

☐

CASE HISTORY:

Number of Lesions:

1

Duration:

Size:

N/A

Rate of Growth:

N/A

Gross Appearance:

0. Soft tissue swelling around nail bed of digit 2, F; limping noted, oozing serous discharge from nail bed

Treatment:

Cephalexin, Mohman soaks, Malarach flush

Previous Biopsies:

No

TISSUES SUBMITTED:

Entire Specimen ☐

Wedge ☐

Tru-Cut ☐

Punch ☒

Frag ☐

Endoscopic ☐

Other ☐

Sample Submitted:

Mass ☐

Organ ☒

Necropsy Specimen ☐

Location where tissues were taken from:

SKIN

Lymph Node Involvement:

YES ☒ NO ☐

Encapsulated:

YES ☒ NO ☐

Excisional Biopsy:

YES ☒ NO ☐

TENTATIVE CLINICAL DIAGNOSIS:

Open

Case 7

- Mild epidermal hyperplasia with dermal edema and lamellar orthokeratotic to parakeratotic hyperkeratosis- periungual haired skin- canine.

Significance

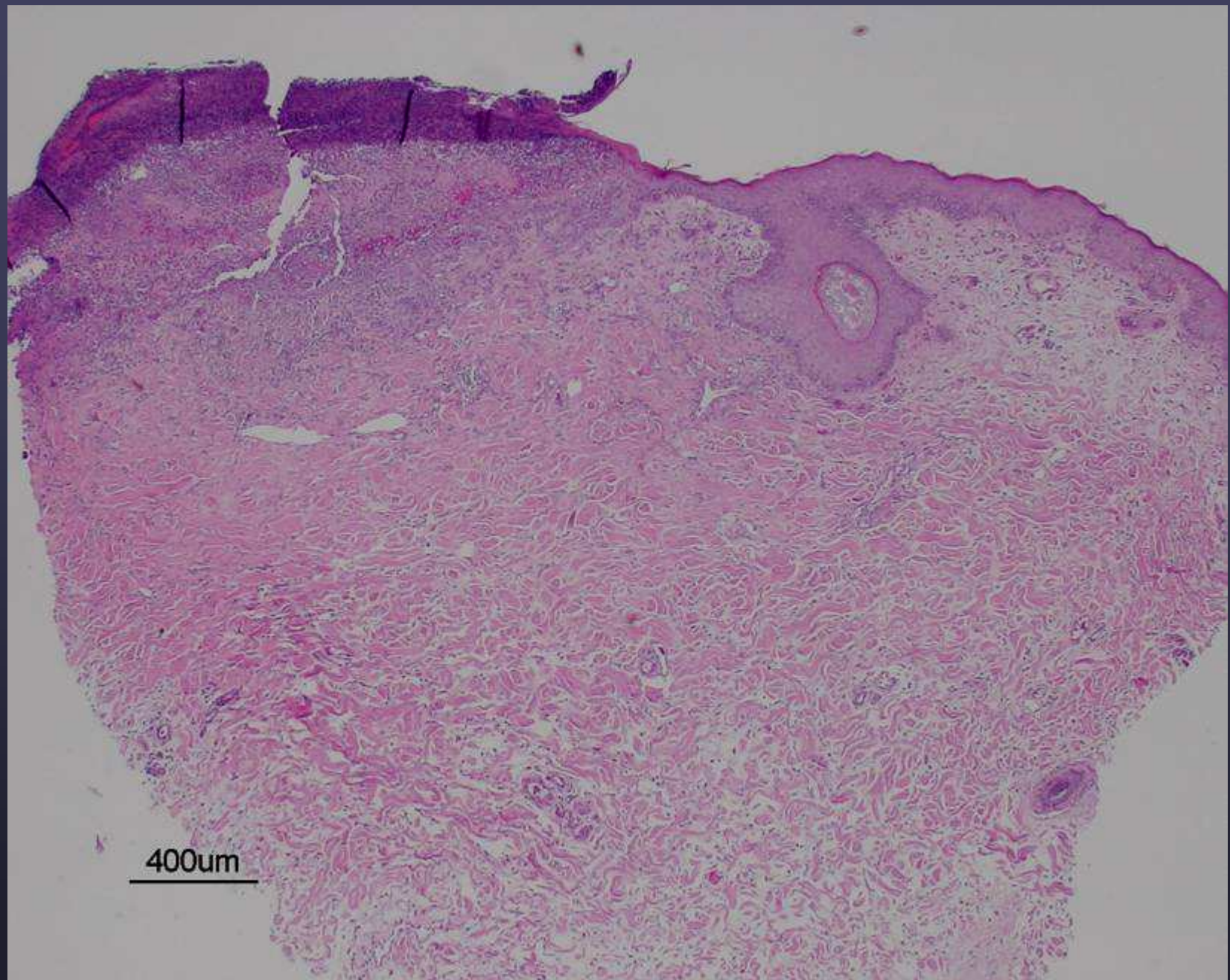
- Is this biopsy a true representative of the clinical lesion?
- Could the hyperkeratosis be response to superficial irritation (e.g topical tx)?
- Recommend excisional bx of toe if swelling persistent

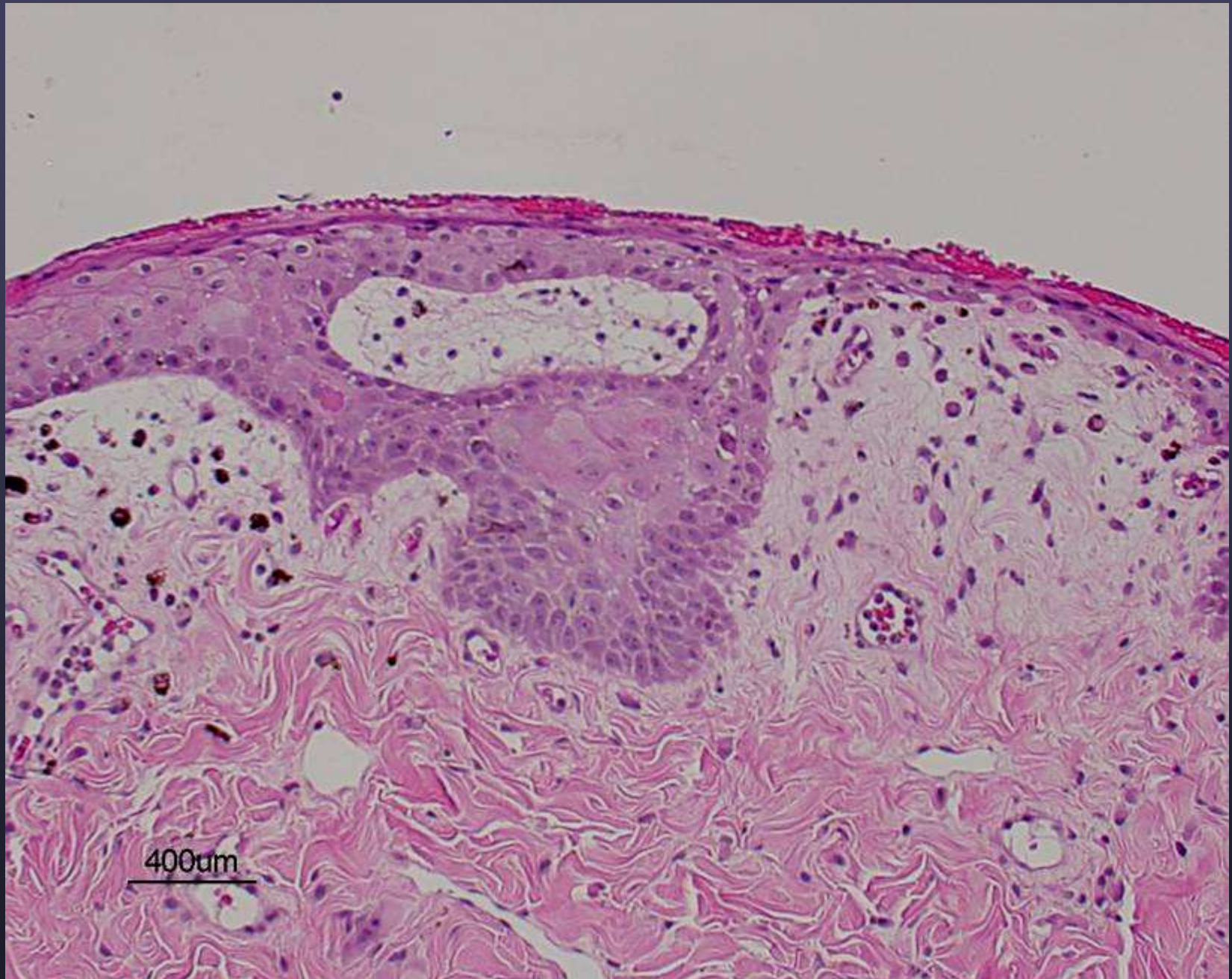
Case 8

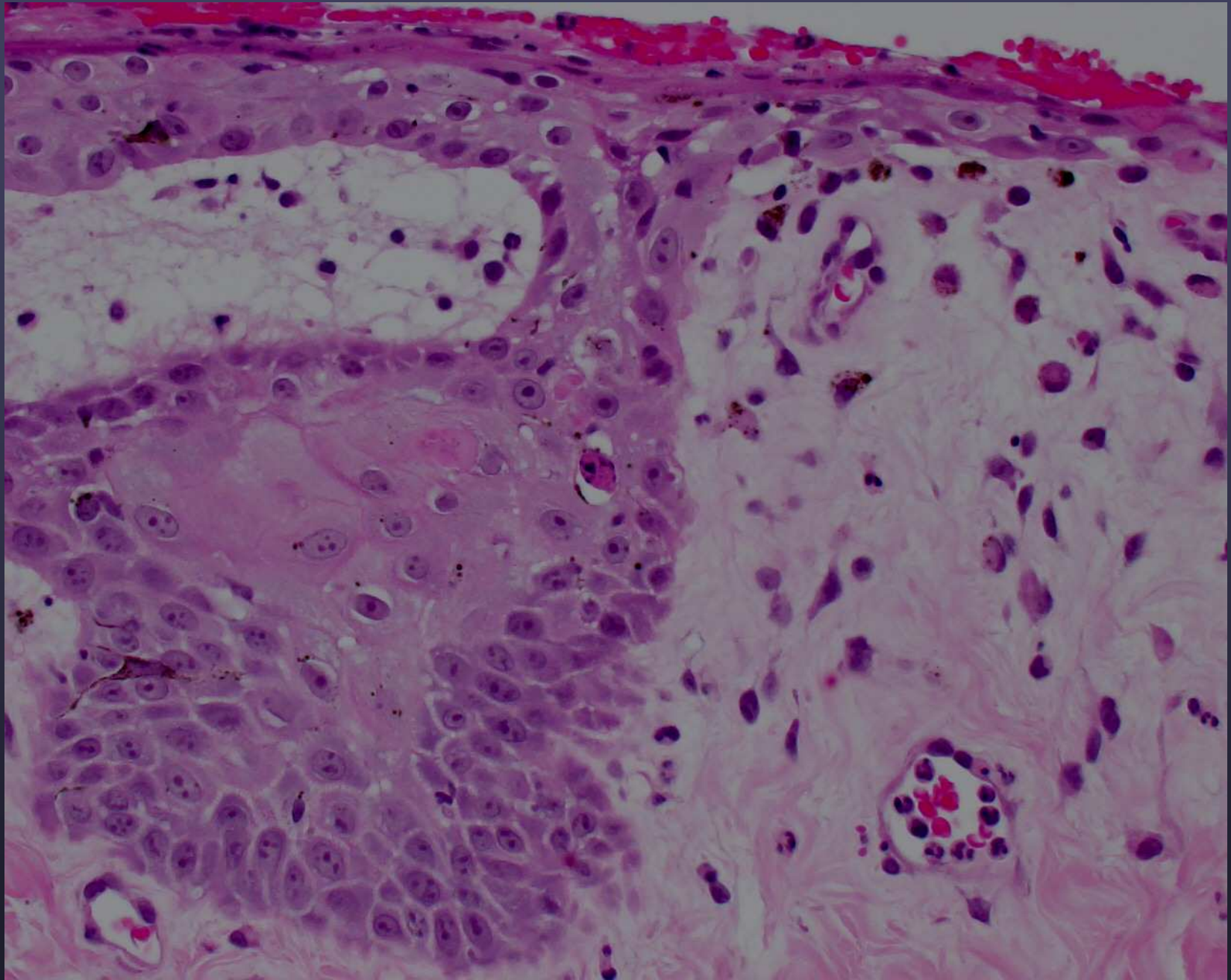
- 3 punches

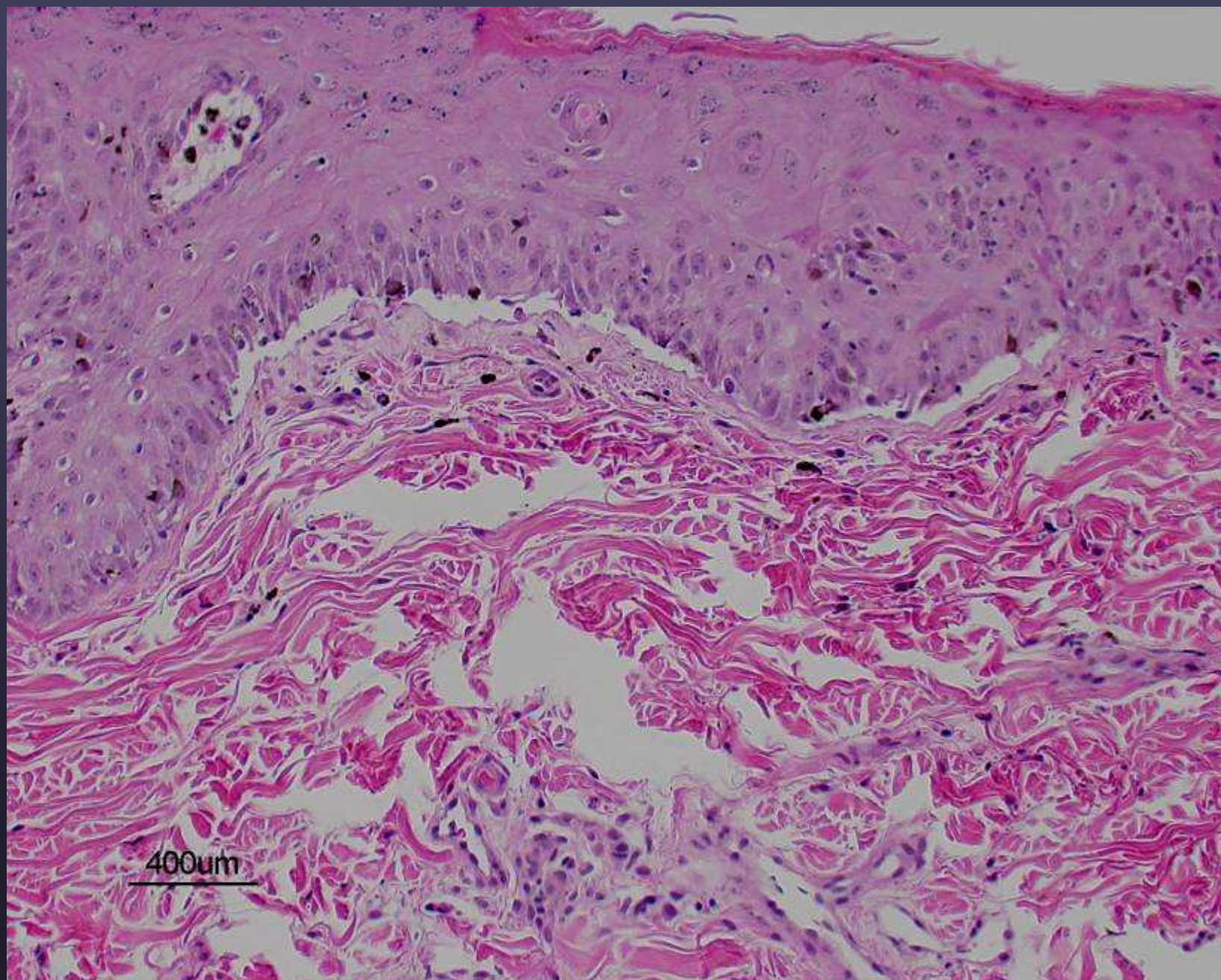


400um









- Dog
- Ear, lip or face
- Pattern: interface derm

Diagnosis Case 8

1. INTERFACE DERMATITIS WITH PIGMENTARY INCONTINENCE, DERMOEPIDERMAL CLEFTING AND MULTIFOCAL INDIVIDUAL KERATINOCYTE NECROSIS - CANINE.
2. ULCERATIVE DERMATITIS WITH SUPPURATIVE CRUSTS - CANINE.

Comment: Probable vasculitis

CASE 8 SIGNALMENT/HISTORY

C TERRIER X 20JUN04 CHICO M

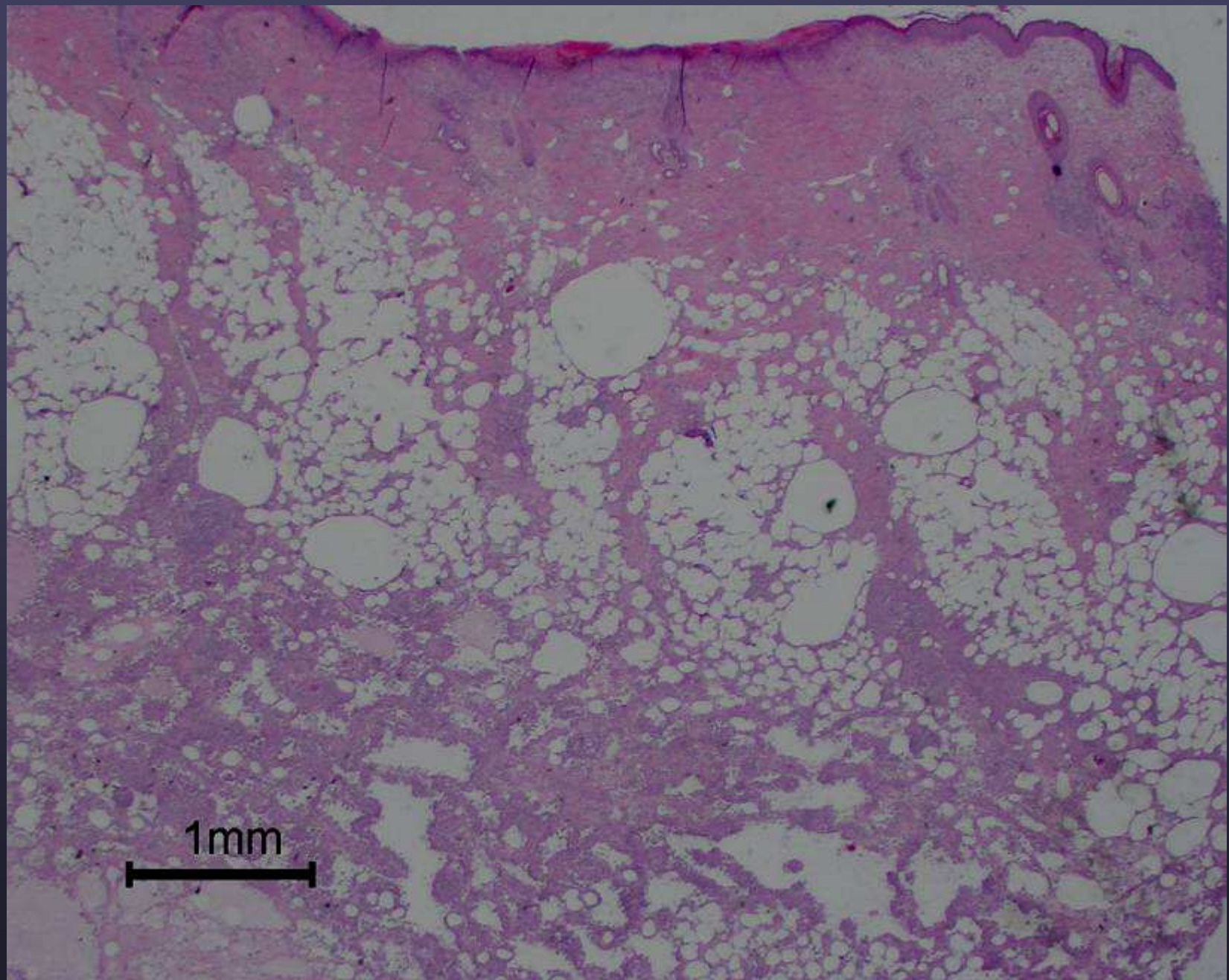


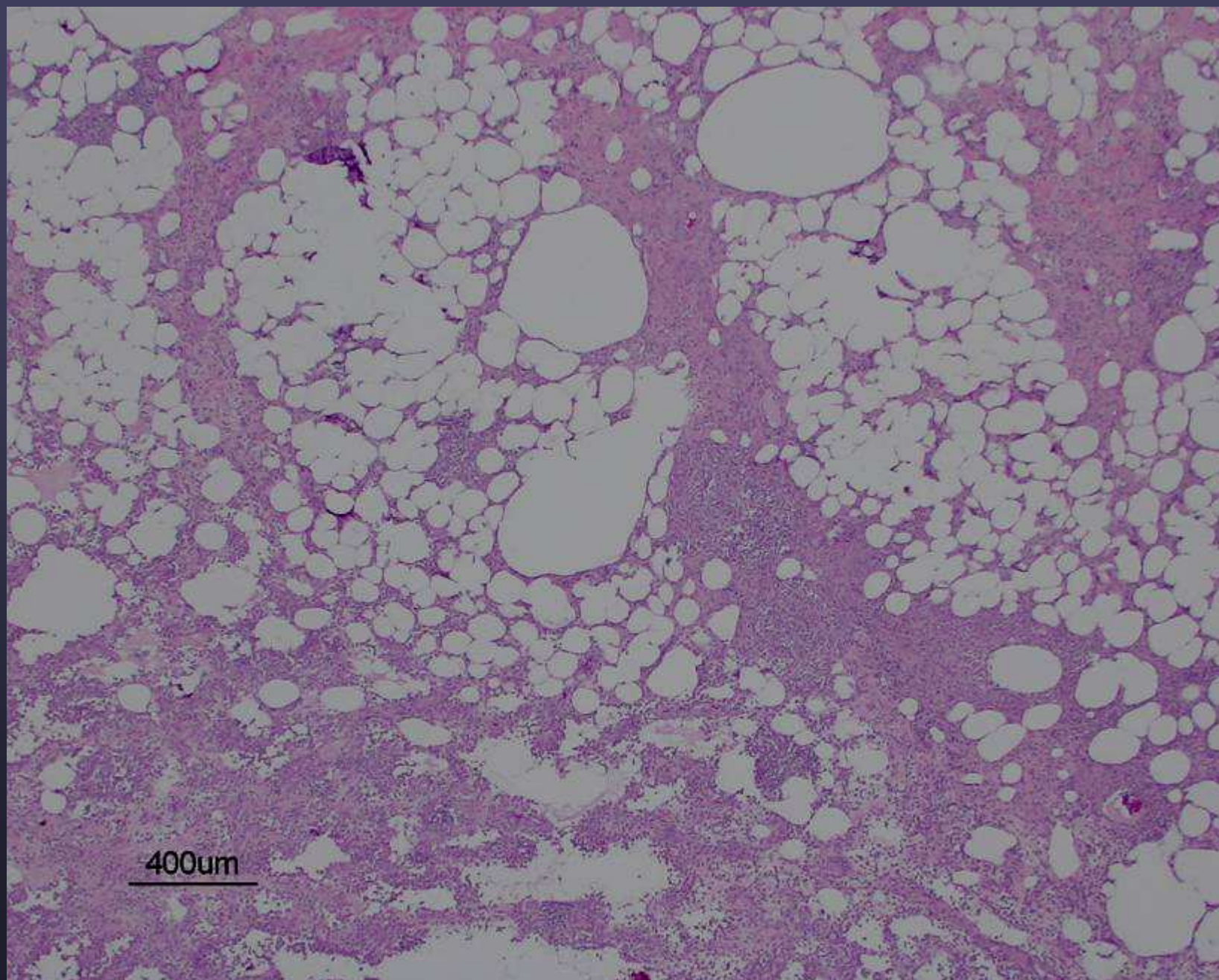
12/27/06 "HOT SPOT" LEFT FACE, LETHARGIC RECENTLY
RX 250 MG CEPHALEXIN TID 2 WKS
1/8/07 CHEILITIS LEFT SIDE PERFORMED SKIN BX. SUBMITTED
TO ANTECH, THYROID PROFILE TO MICHIGAN. RESULTS: BX -
PYODERMA. RX CLAVAMOX 125-G BID THYROID EQUIVOCAL.
RECOMMEND TRIAL OF THYRO TABS 0.2 MG, 1 BID. NOW HAS
PERIPLURAL EDEMA, HYPOALBUMENIA.
MULTIPLE LESIONS; DURATION: WKS, MOS; SLOW GROWTH
PREVIOUS BIOPSIES: ENCLOSED, ALSO THYROID PROFILE &
CHEMISTRY

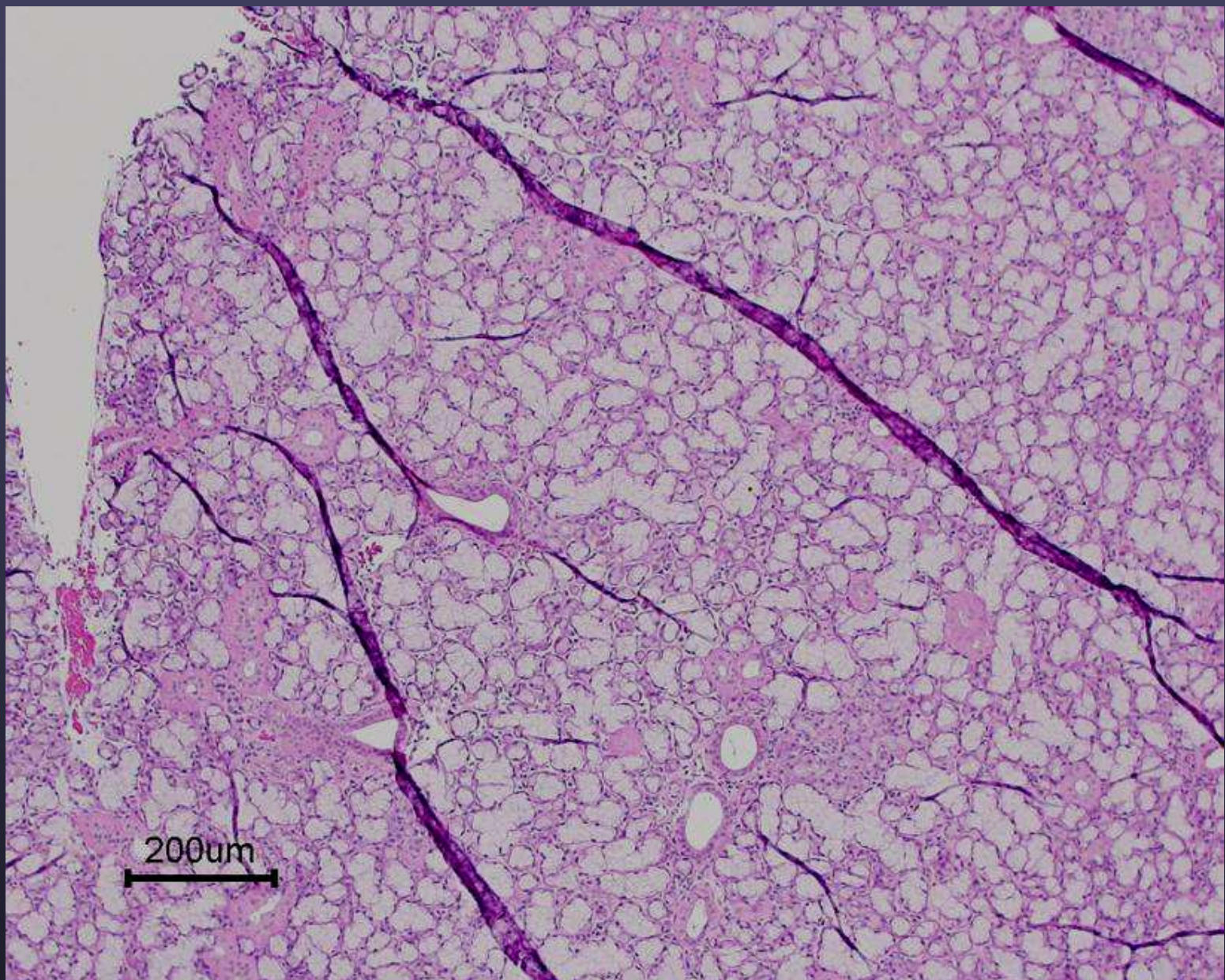
&

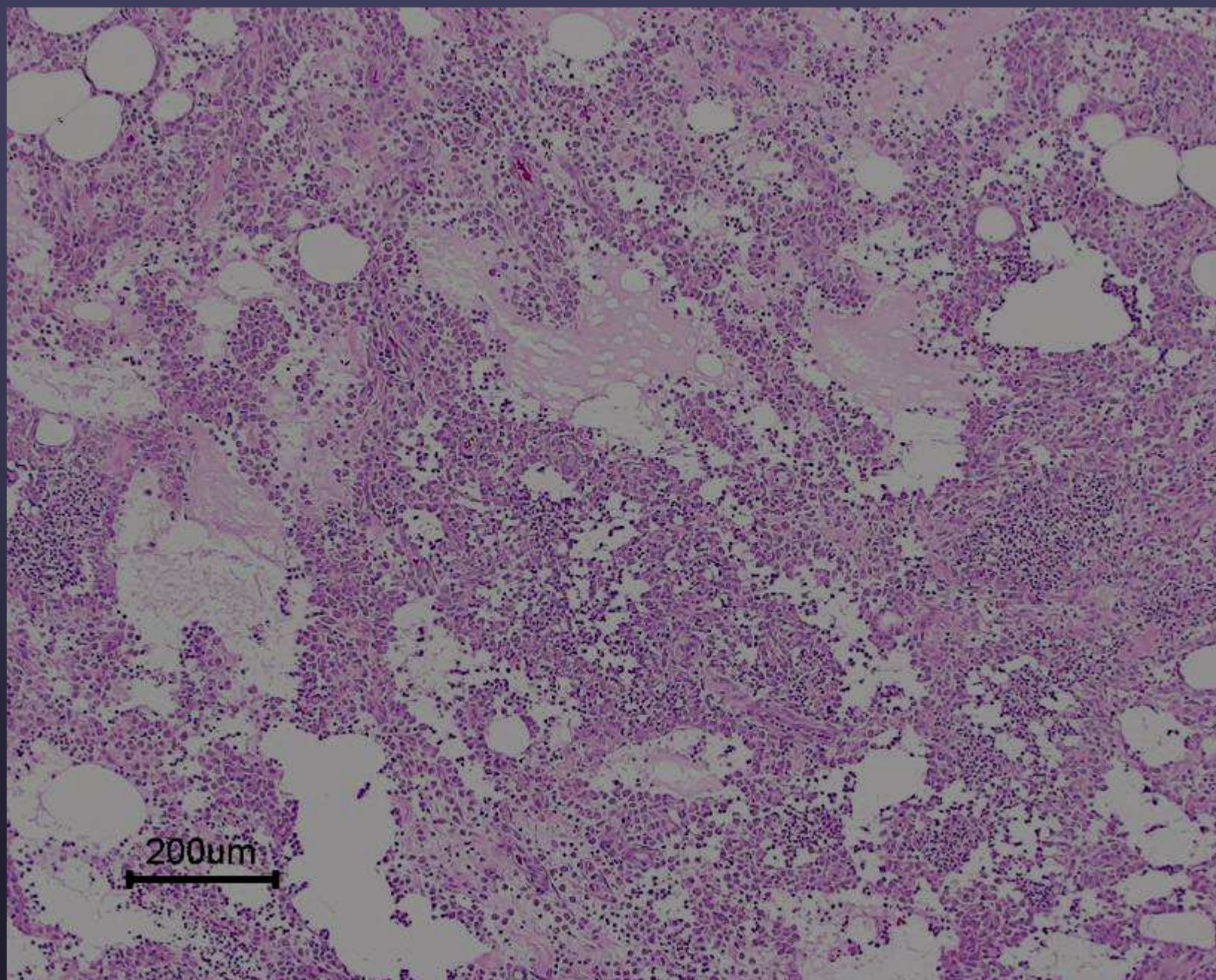
Case 9

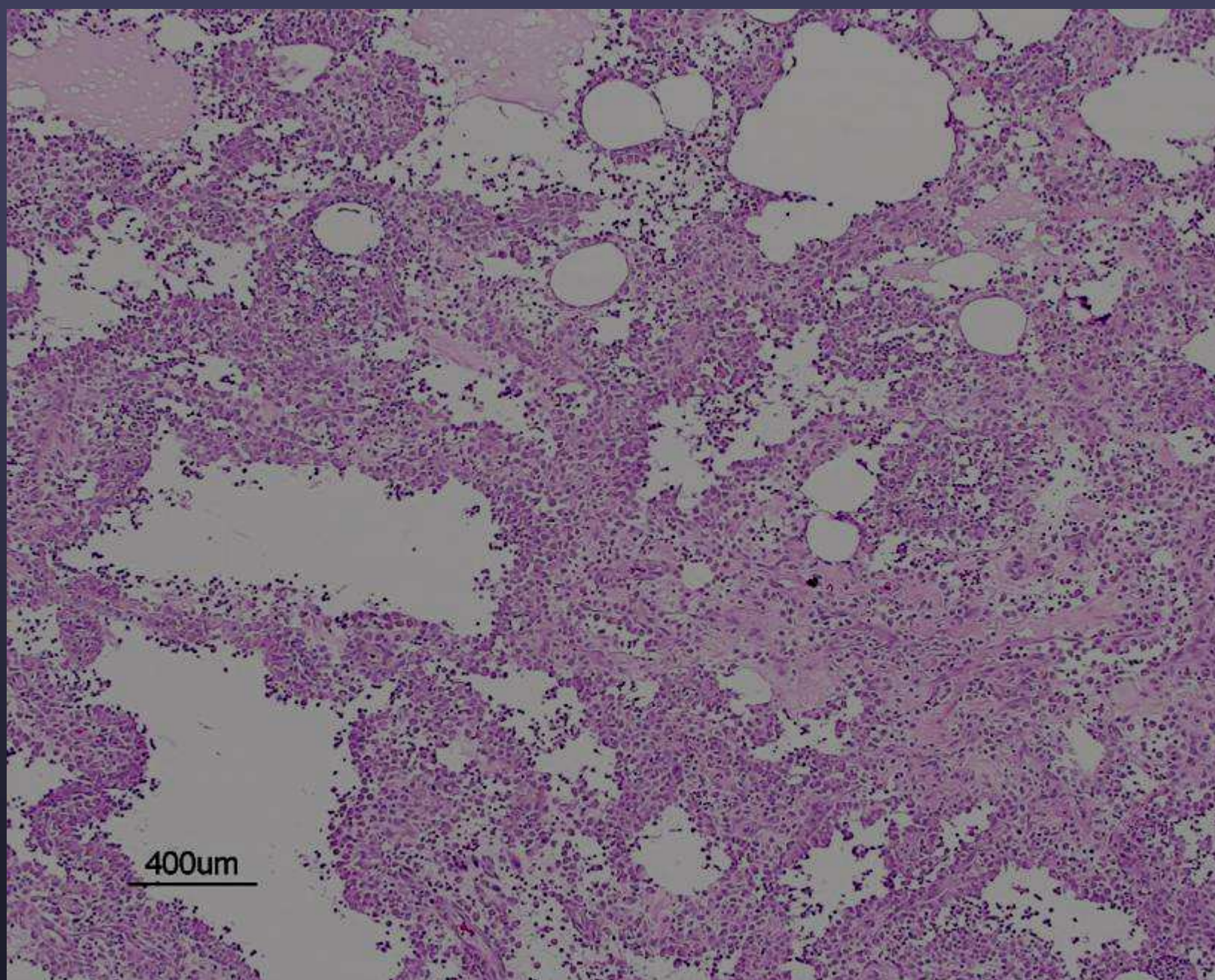
- 1 excisional biopsy
- 1 tru-cut

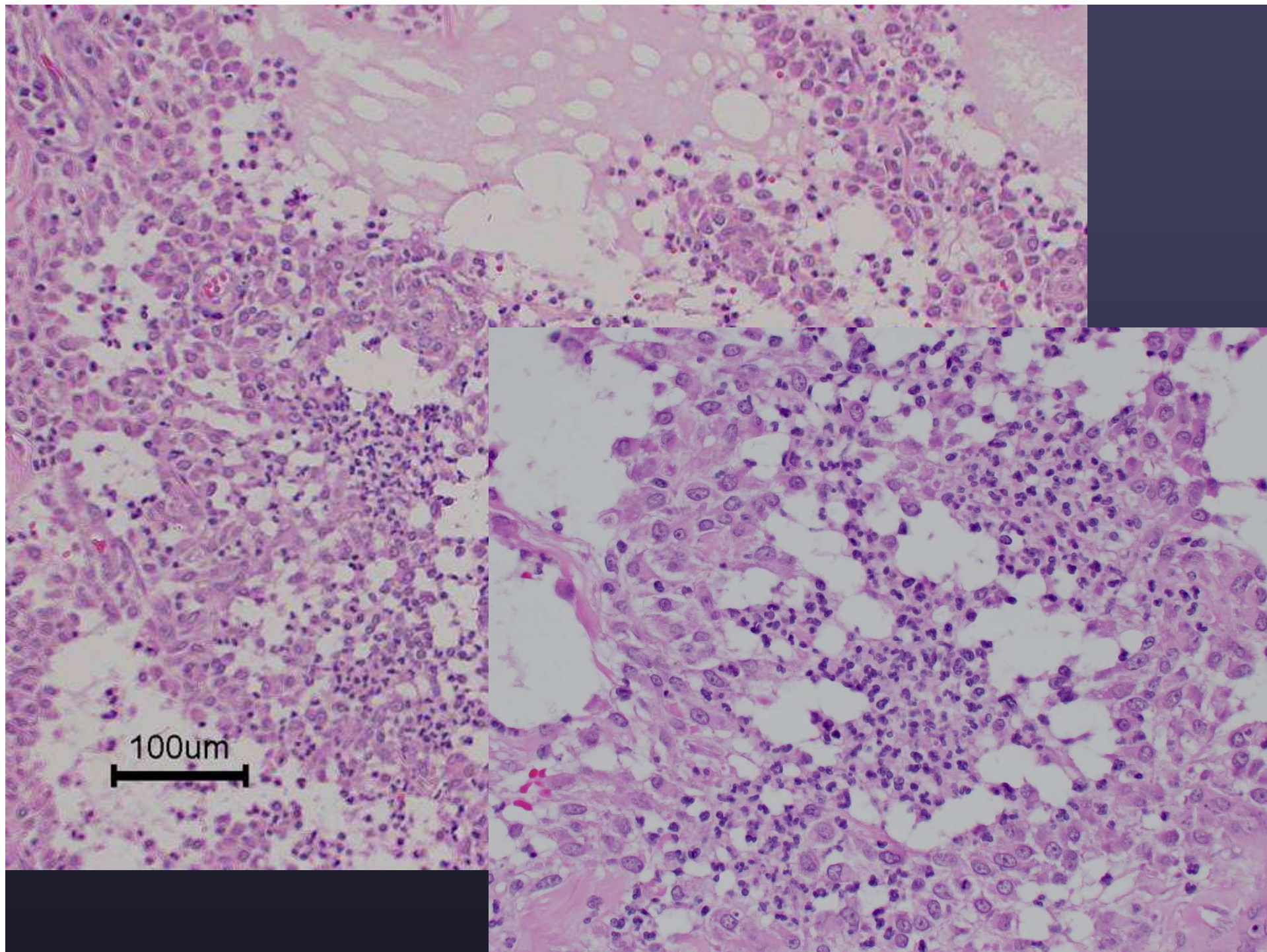












Case 9 Signalment/Hx

LANGHORNE, PENNSYLVANIA 15047

Date Submitted: 3/15/07

Species: K9 Breed: G. Shep X Sex: F/S Age: 9y

Biopsy Specimen: X Necropsy Specimen: _____

CASE HISTORY:

Number of Lesions: ~4

Duration: 1 month

Size: other areas 3x2cm

Rate of Growth: _____

Gross Appearance: _____

opening, draining
developing sore - skin
purplish stippling

Treatment (if any): open, debride, cultures & biopsied

Tissues Submitted (Tumor, Organs - Specify): pyogranulomatous tissue-neck, submandibular lymph

Location where tissues were taken from: see above

Lymph Node Involvement: | (YES) | NO | Encapsulated: | YES | (NO) | Excisional Biopsy: | YES | NO |

Tentative Clinical Diagnosis: Pyogranulomatous inflammation - cause?

developed 2 abscesses on neck ~ Feb 20th. Brought to ER clinic - lanced, drained, & biopsied (B-2007-13003). Placed on Baytril. Area has been nonhealing w/ new area on caudal neck (~2.5cm x 3cm) ~ developing. Other 2 abscesses open & draining. Neck & chest rads okay. Dog otherwise systemically okay (↑WBC). Neck ultrasound - 2 'granulomatous masses' w/ fistulous tracts bet. all 4 areas from dorsal neck to ventral neck. Submitted cultures, including aerobic/anaerobic, fungal, nocardia & actinomyces to Micro. Please perform any special stains needed (no FBs found, no history trauma/bite wounds per owner). enlarged 3cm, rand, smooth

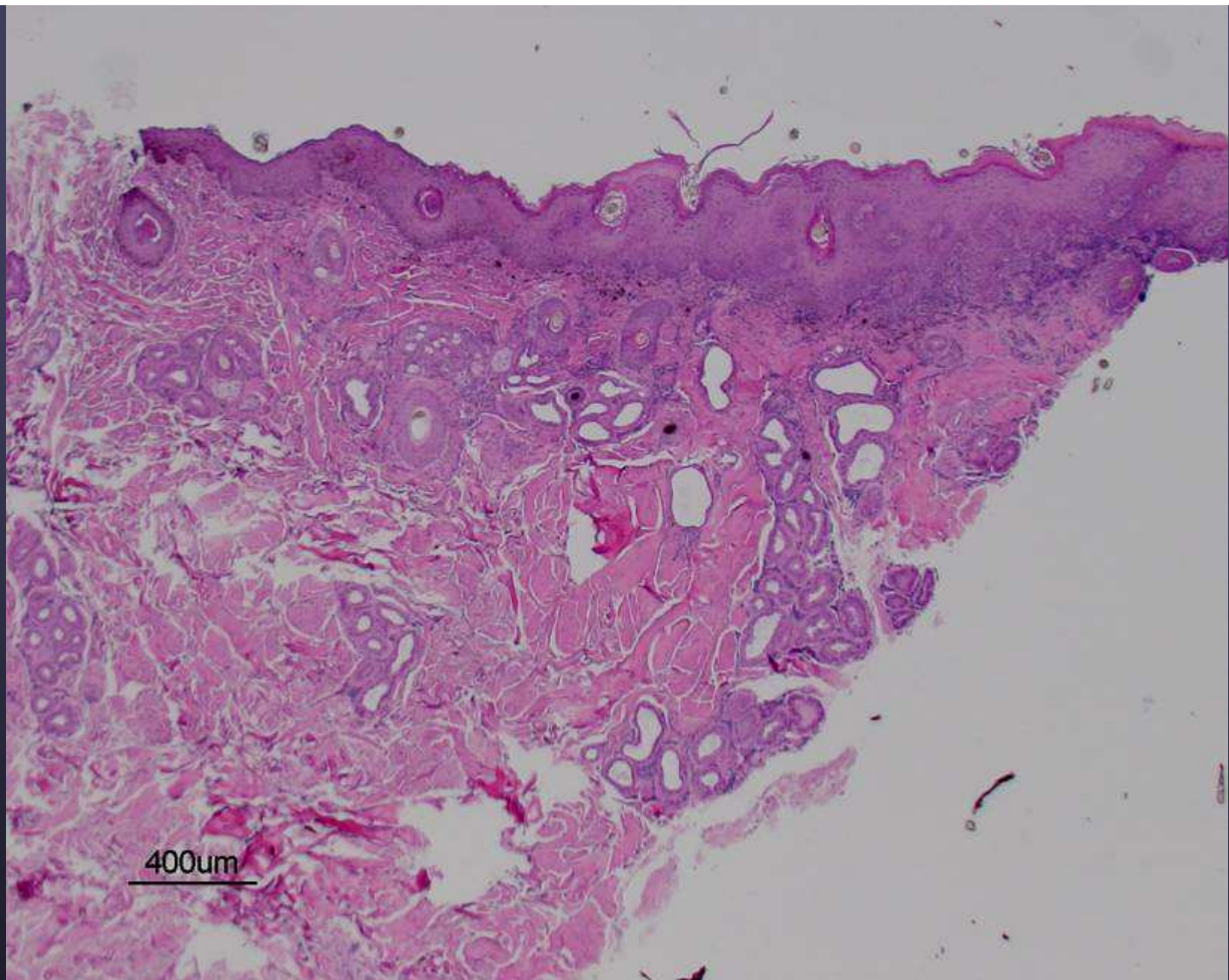
Case 9 Diagnosis

- Granulomatous panniculitis
- Normal salivary gland
- GMS, AF, Gram- neg

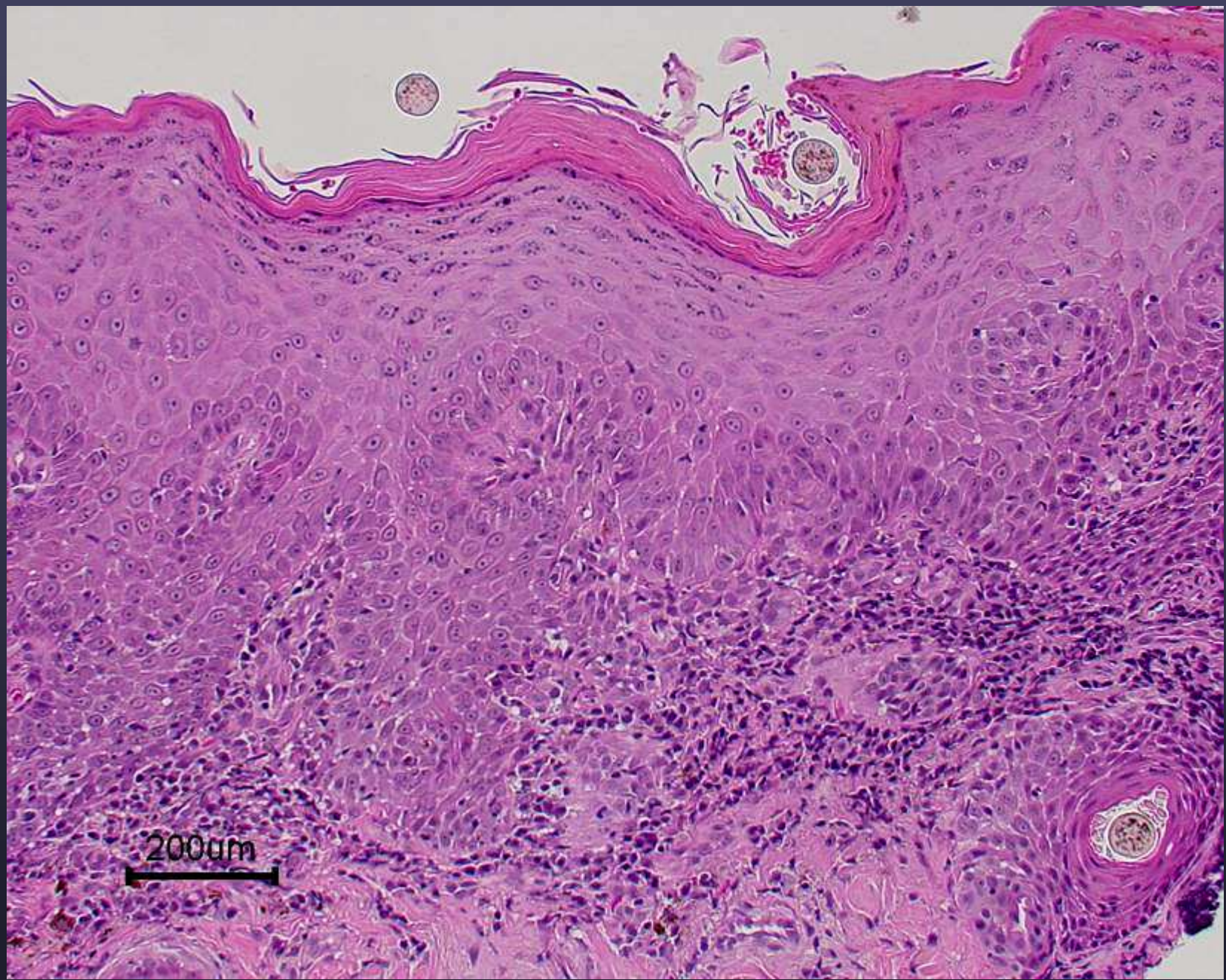
Case 10

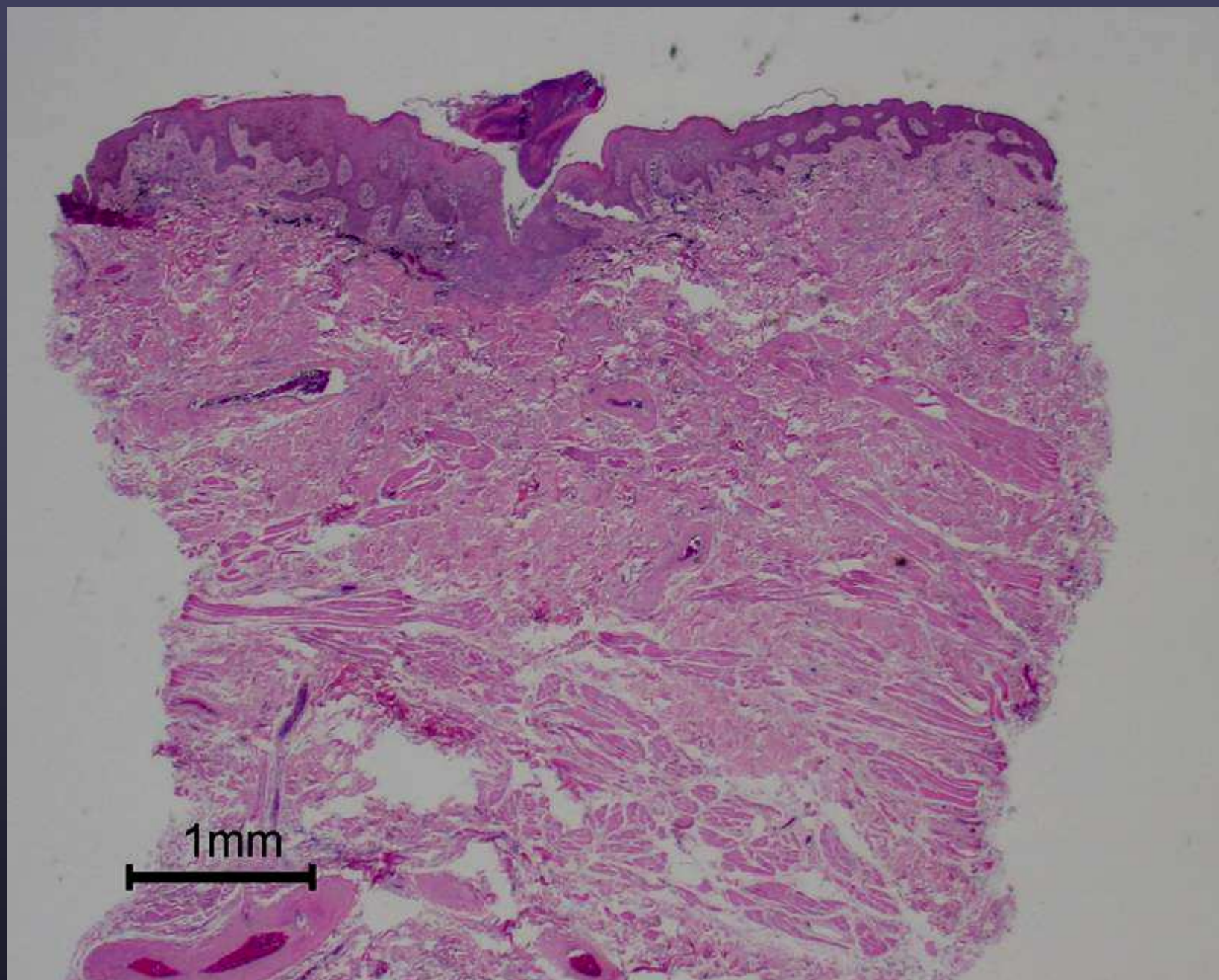
- Two 4-mm punch biopsies

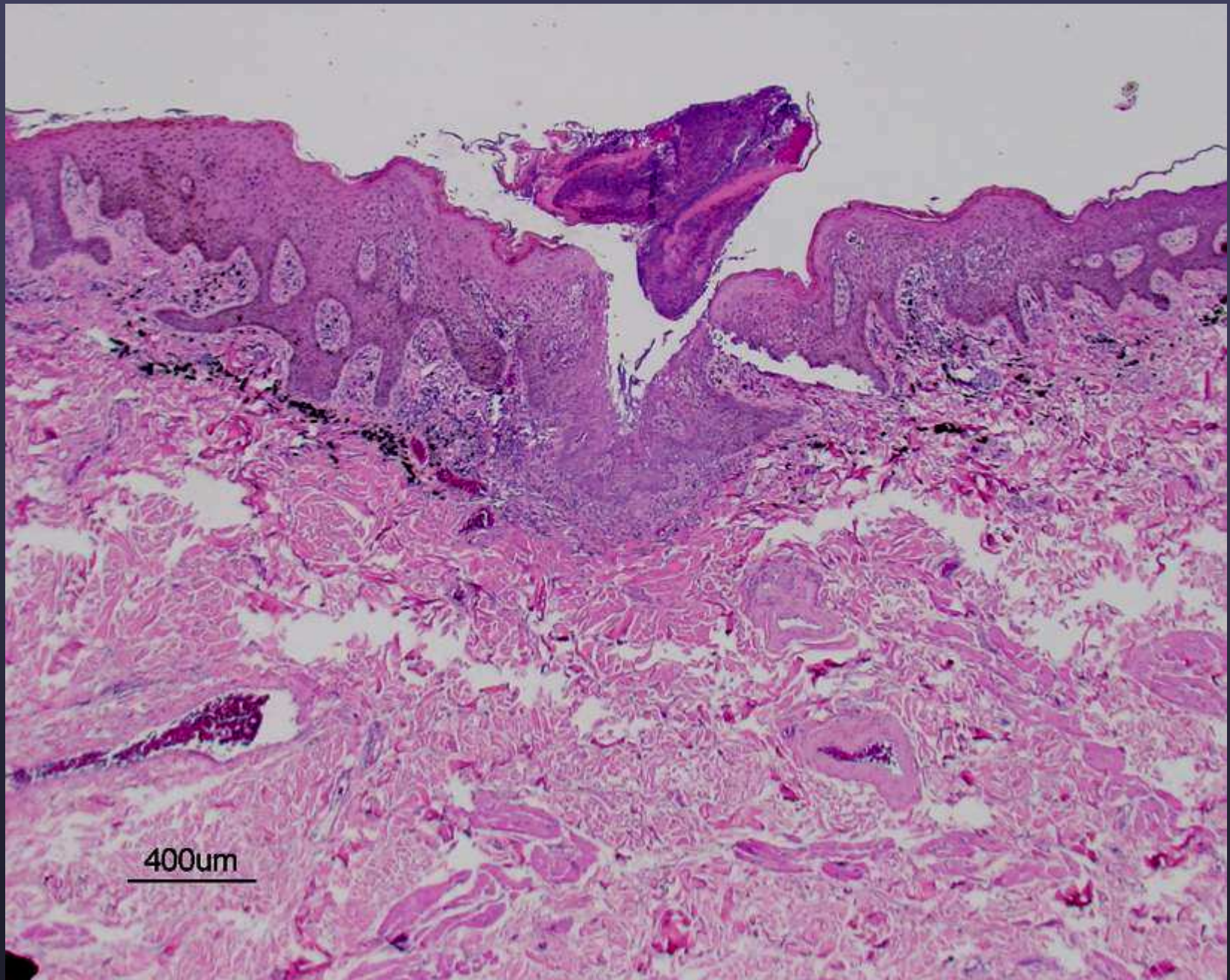


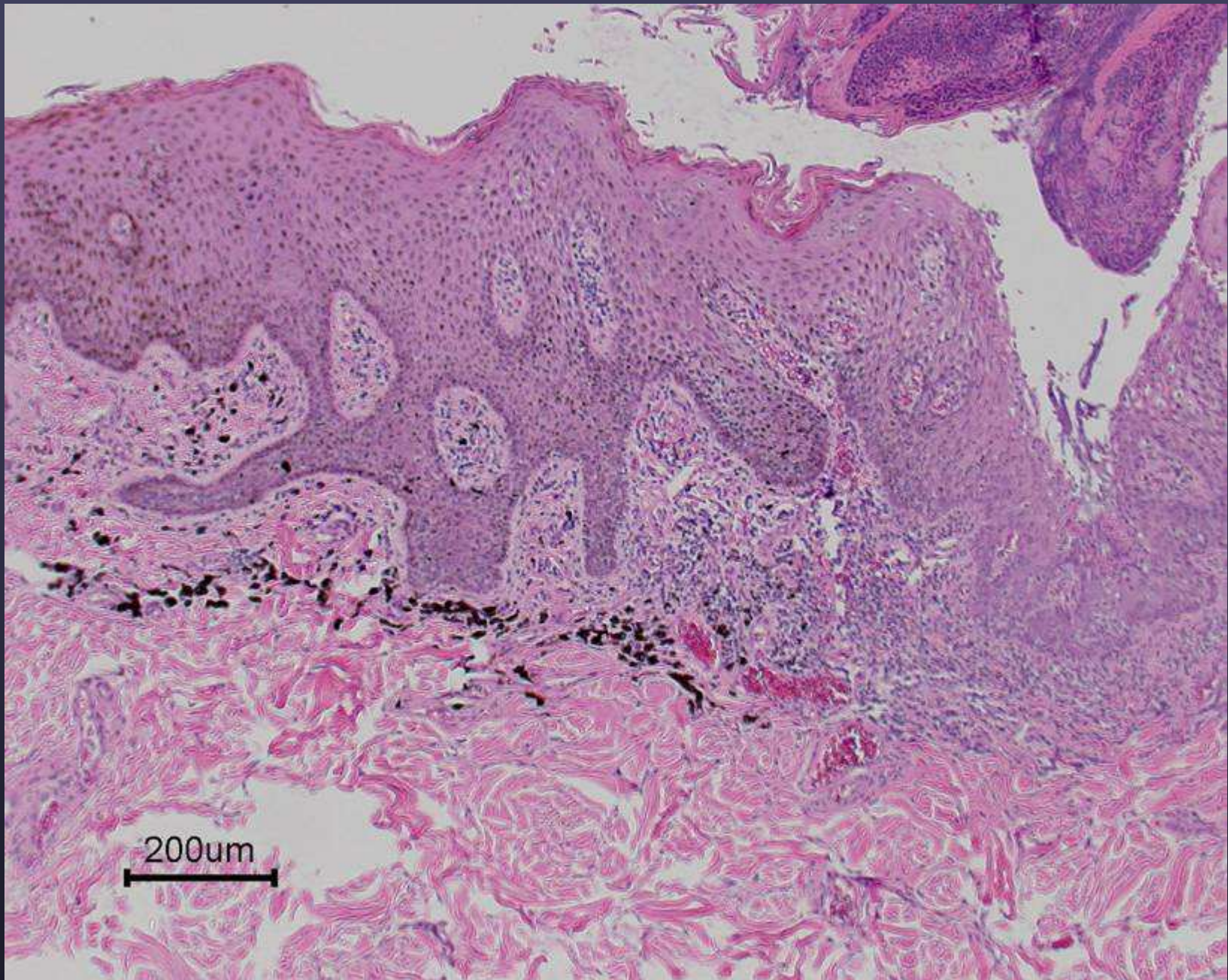


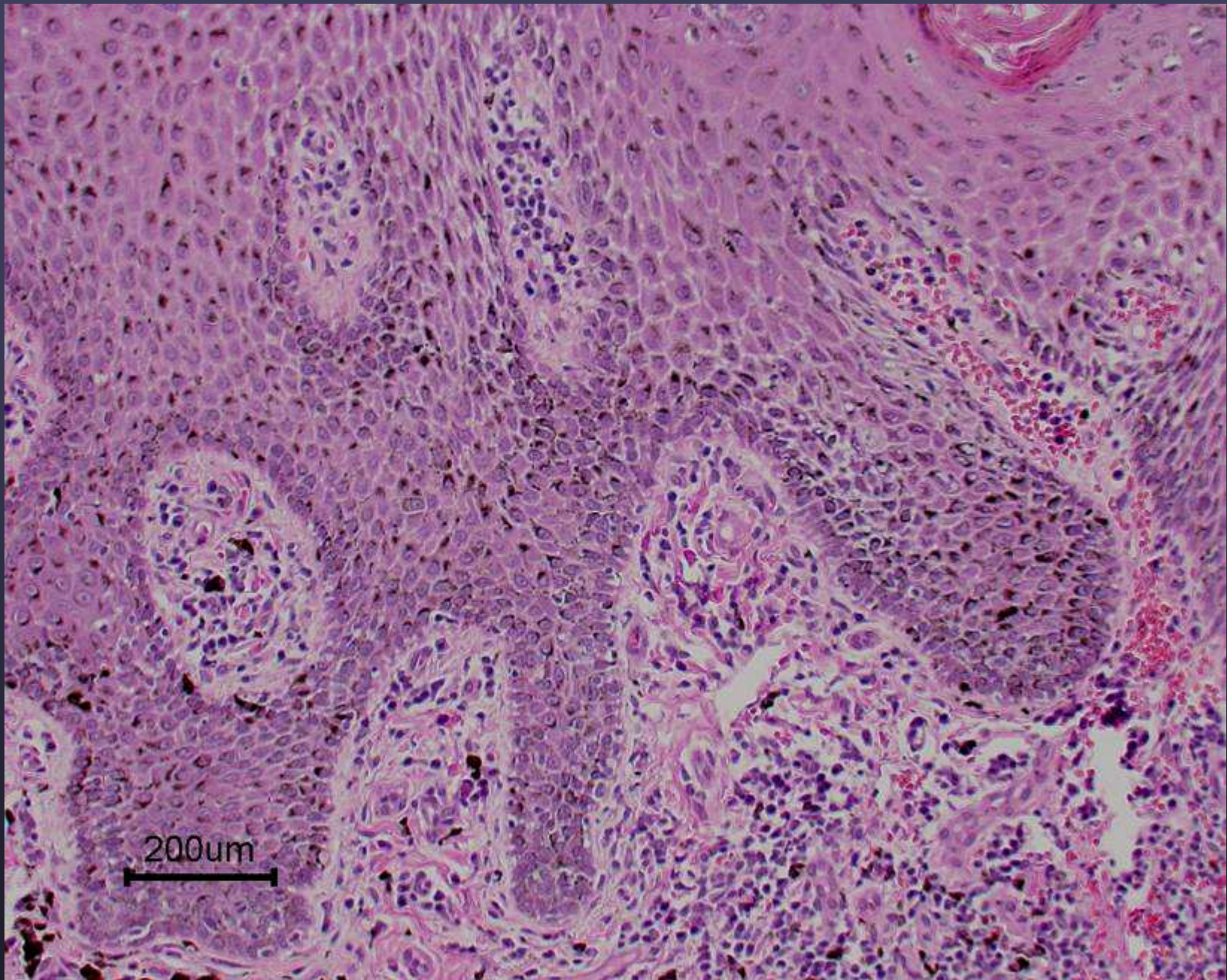
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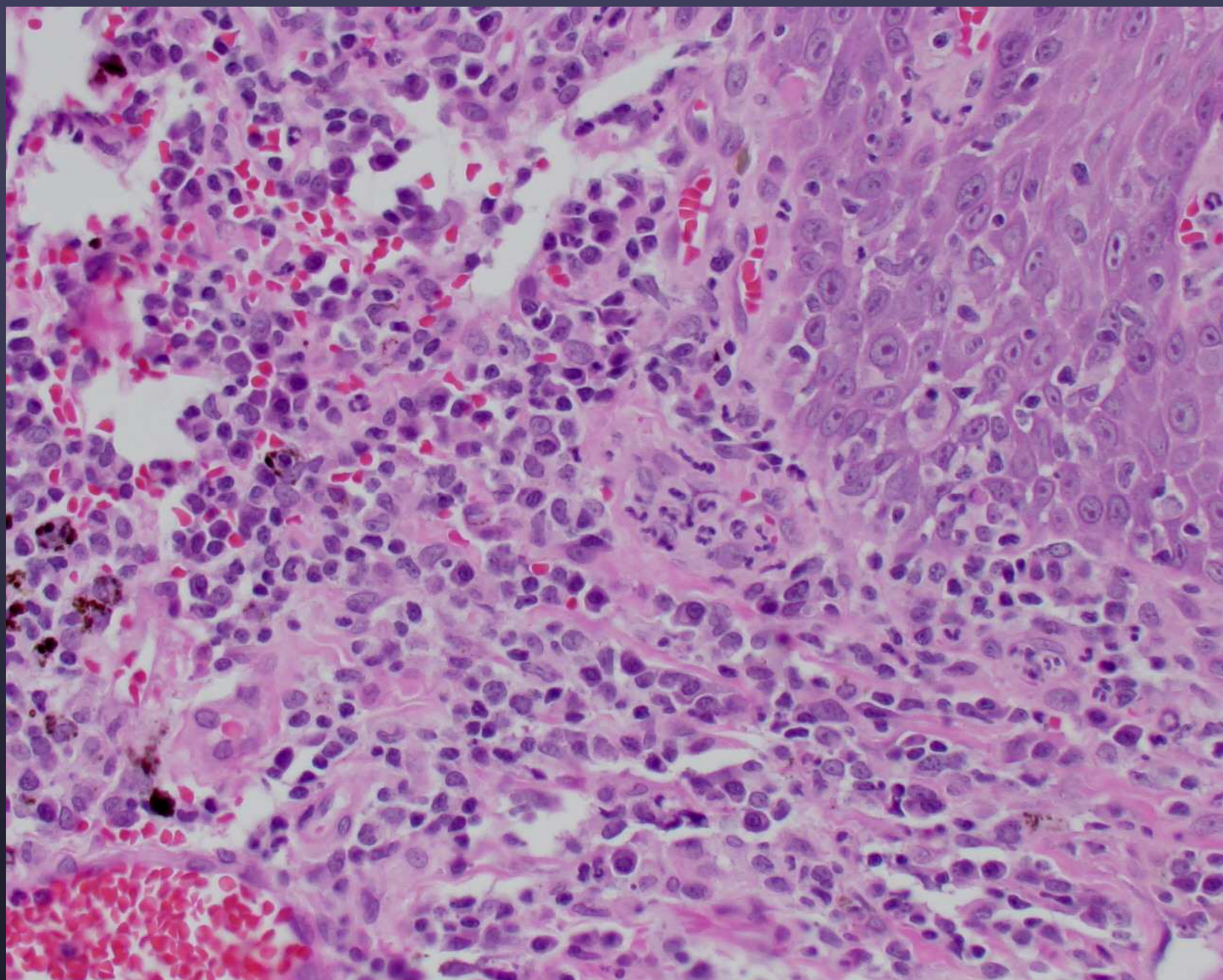


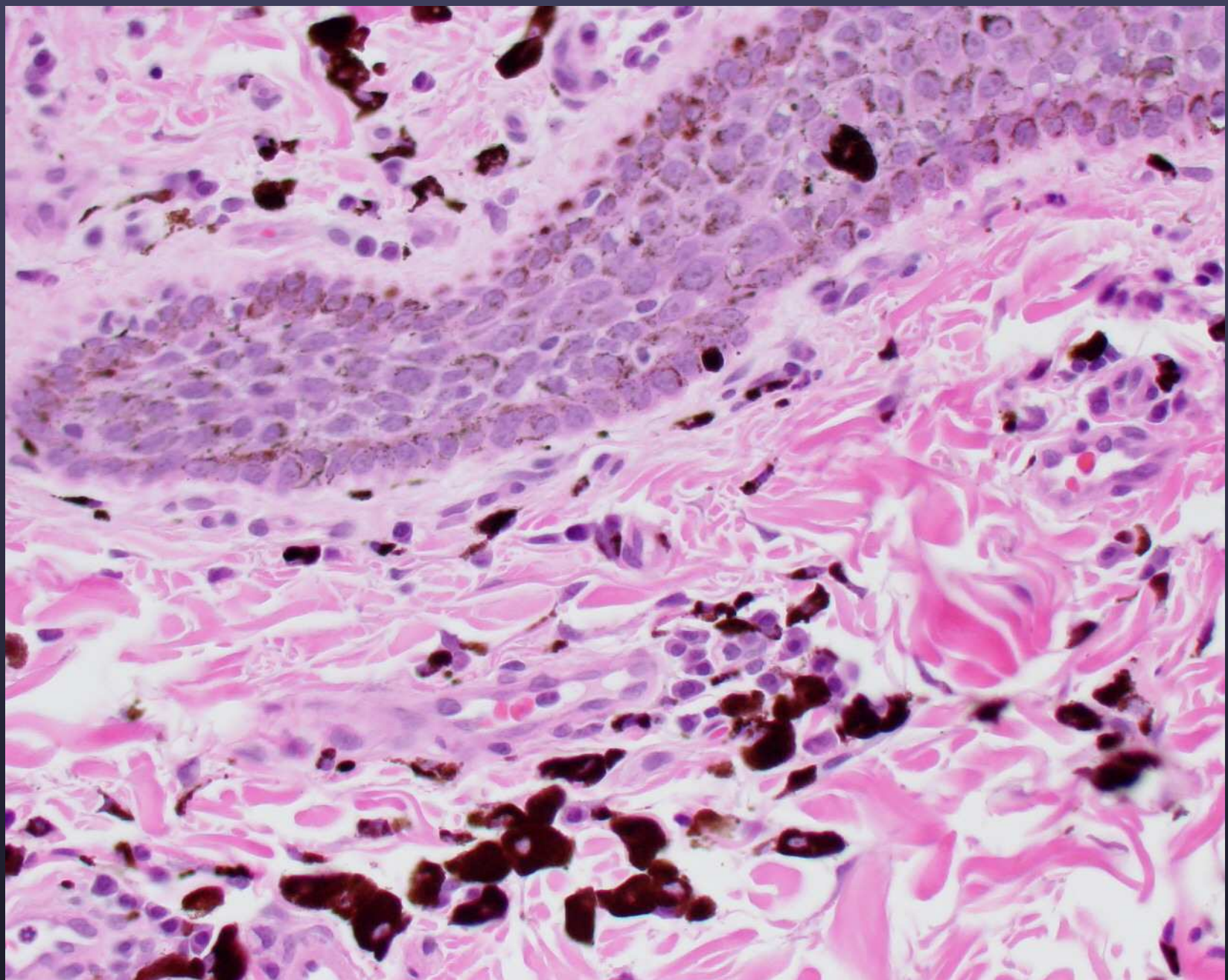


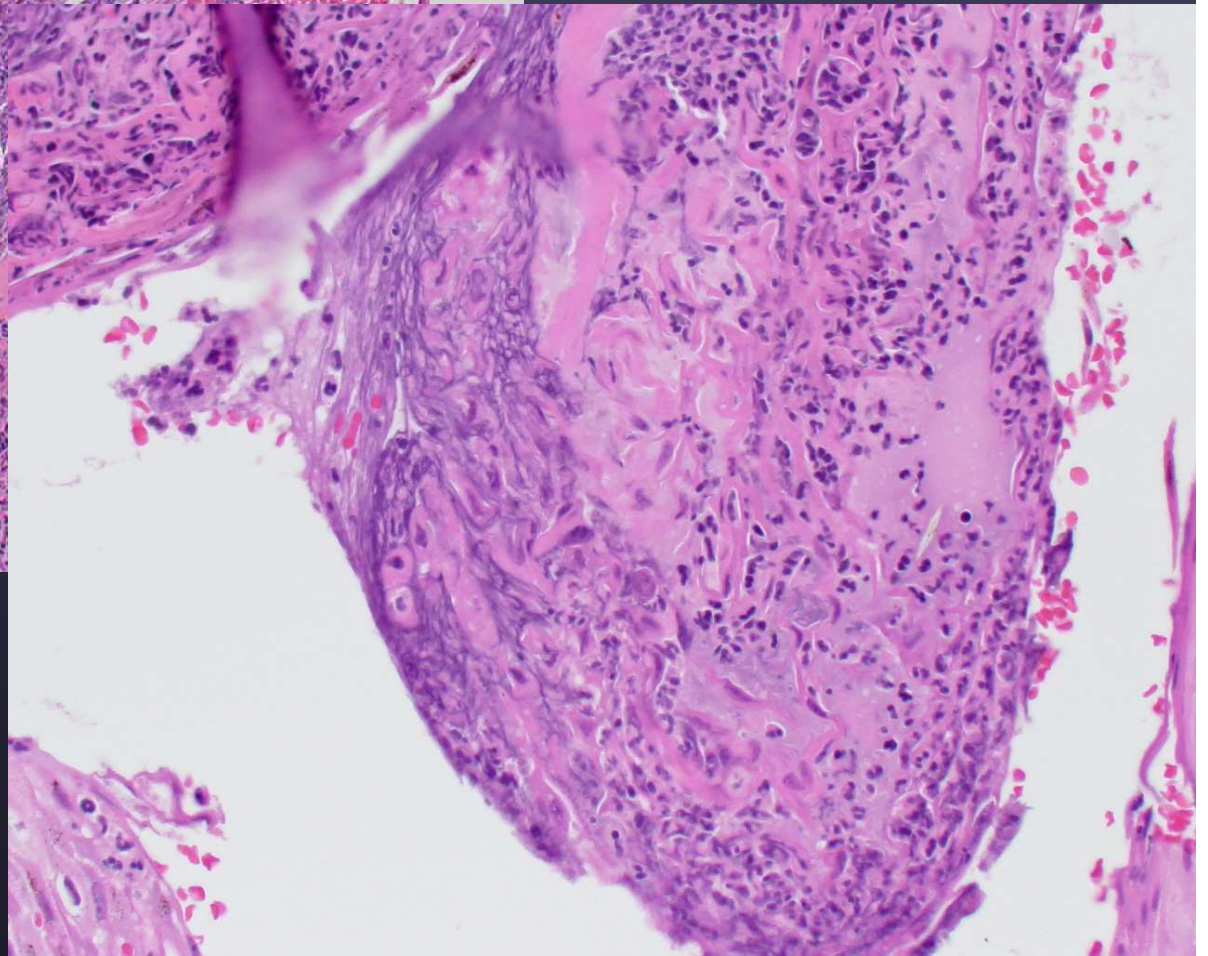
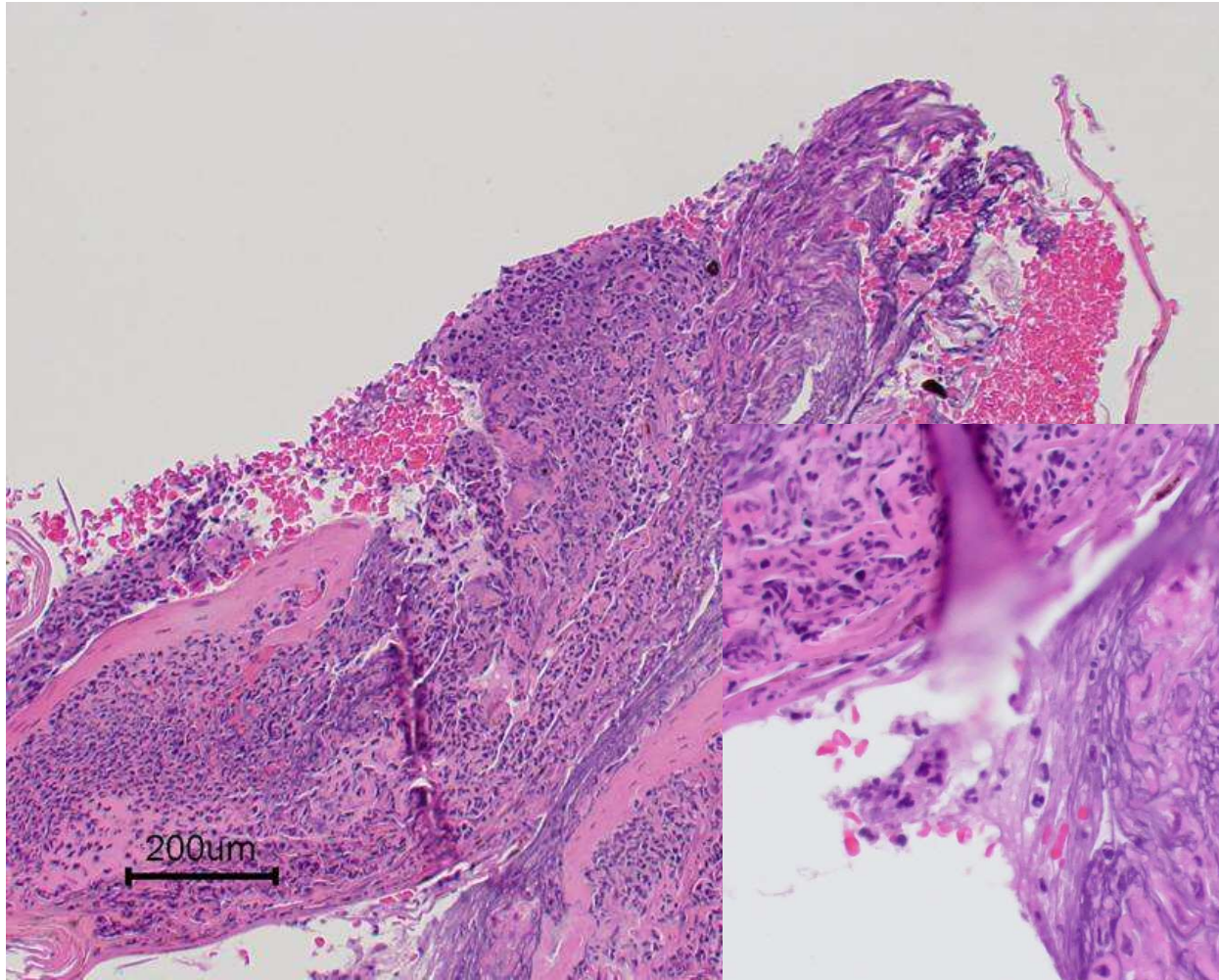












Case 10

Species: CORVINE Breed: GORM SHOP Sex: MALE Birthdate: 5/28/01

Biopsy Specimen: ✓

Necropsy Specimen:

Cytology Specimen:

CASE HISTORY:

Cracked Chapped fissured lips - esp commensurate since 11/04.

12/19/05 leg fold dermatitis

3/5/07 leg fold fissures along lips hyperkeratosis
nasal planum & junctions/ulcers

GROSS APPEARANCE: See Photos - (Fissured lips, Nose: hyperkeratosis, nose)

Number of Lesions: multiple Size: 1-5mm Duration: 2 yrs Growth Rate: ✓

Treatment: Topical ointment Neomycin & Corticosteroids

PREVIOUS BIOPSIES (Provide number): (3)

TENTATIVE CLINICAL DIAGNOSIS: Sporr

LOCATION OF BIOPSIES: Nose, Anal fold & lip

TISSUE SUBMITTED:

Entire Specimen ☐ Wedge ☐ Tru-Cut ☐ Punch ☐ Frag ☐ Endoscopic ☐ Other ☐

Sample Type: Mass ☐ Organ ☐ Necropsy specimen ☐

Case 10: Dx

- Plasmacytic superficial dermatitis with pigmentary incontinence with regional lymphocytic exocytosis, focal erosion and crusting- lip and haired skin (nasal region)- canine.

- DDX: Discoid lupus, mucocutaneous pyoderma/lip fold pyoderma
- Nasal planum/nonhaired skin has limited means to respond to various types of injury; always consider antibiotic therapy prior to biopsy procedure; histopathologic changes do not always predict response to treatment
- See *Nasal Planum Disorders* in this lecture series for further information