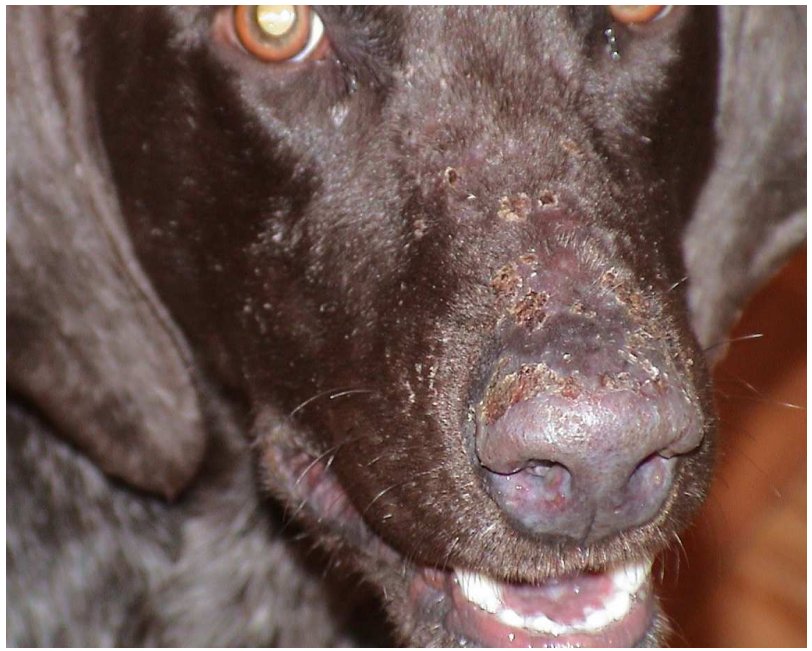
Controversies of the Canine Nasal Planum

Laboratory of Veterinary Toxicology and Pathology

University of Pennsylvania

Nasal Dermatitis

“DLE”

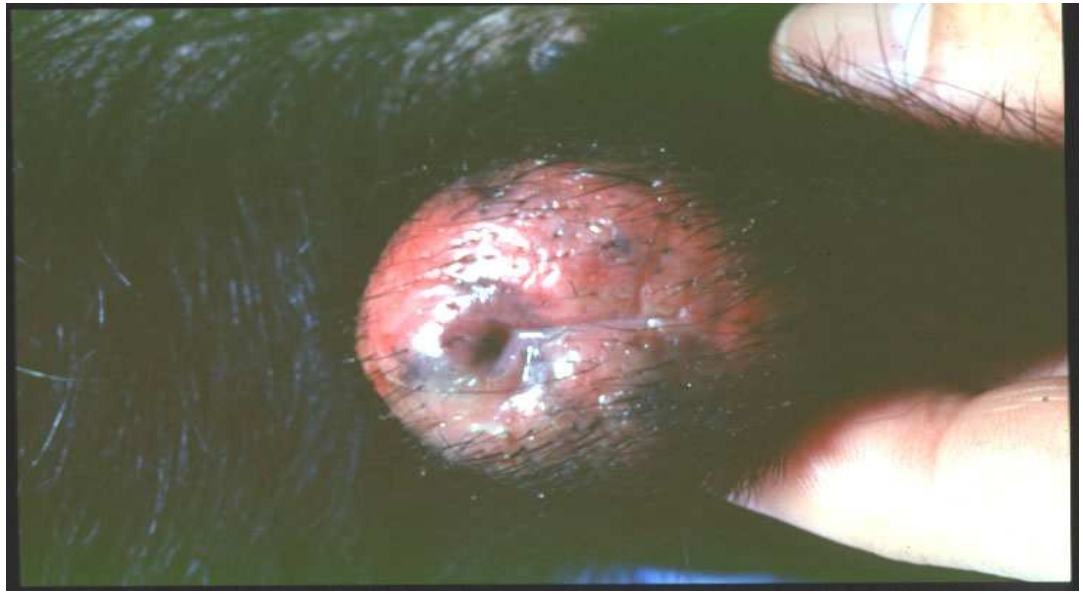


Lupoid derm of GSP

Controversies

- What is the disease “Discoid Lupus Erythematosus”?
- How accurately can we histologically differentiate DLE from pyoderma on the nasal planum?
- Does pyoderma on the nasal planum exist?

Lesions at other sites?



Are criteria well-defined ?

- Lymphocytic
- Lymphoplasmacytic
- Plasmacytic
- Interface or Not?
- Lichenoid or not?
- Role of secondary infection
- Duration/Chronicity

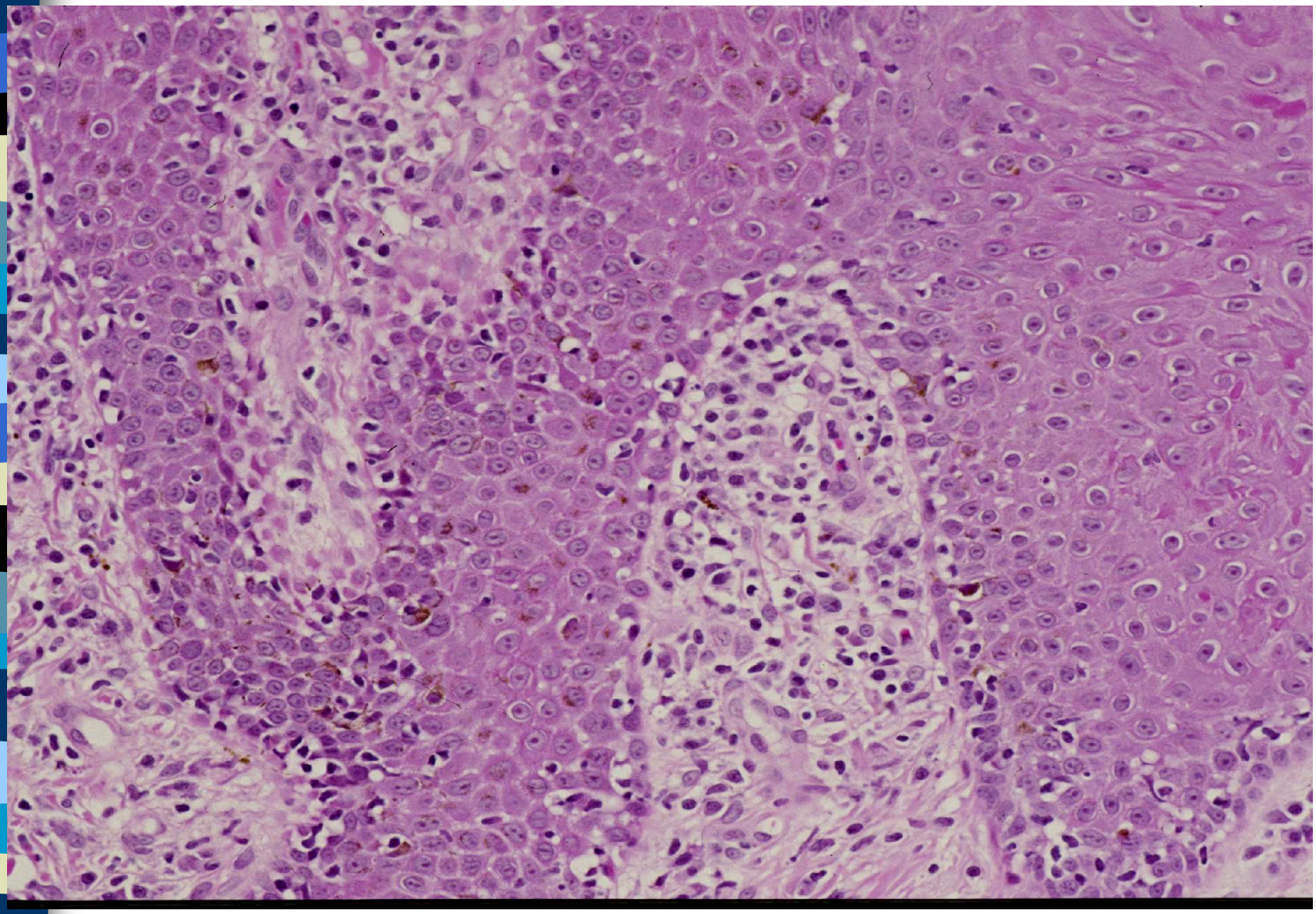
Confusing Terms

- **INTERFACE = DEJ obscured by (1) vacuolar alteration and/or (2) lichenoid cellular infiltrate**
- **INTERFACE= mild superficial, dermal infiltrate oriented tightly against and obscures DEJ (vacuolar alteration, apoptosis**
- **LICHENOID= dense, band-like infiltrate which <u>obscures DEJ</u> and associated with vacuolar alteration**
- **LICHENOID = dense, band-like infiltrate that hugs and <u>does not obscure DEJ</u>**

Vacuolar alteration/hydropic degeneration

- Lucent cytoplasmic vacuoles within basal cells
- Cytotoxic injury
- Subtle ischemic injury
- Edema/Fluid shifts
- Viral cytopathic effects, metabolic and nutritional imbalance

	DLE	MCP
Type of infiltrate	Lymph to lymphoplasmacytic	plasmacytic
DEJ obscured	yes	no
BMZ thickening	yes	no
Pigmentary incontinence	yes	yes
Vacuolar alteration/basal cell apoptosis	yes	no
Hyperplasia	yes	yes
Focal Atrophy/ squamatization	yes	no



Morphologic Diagnosis

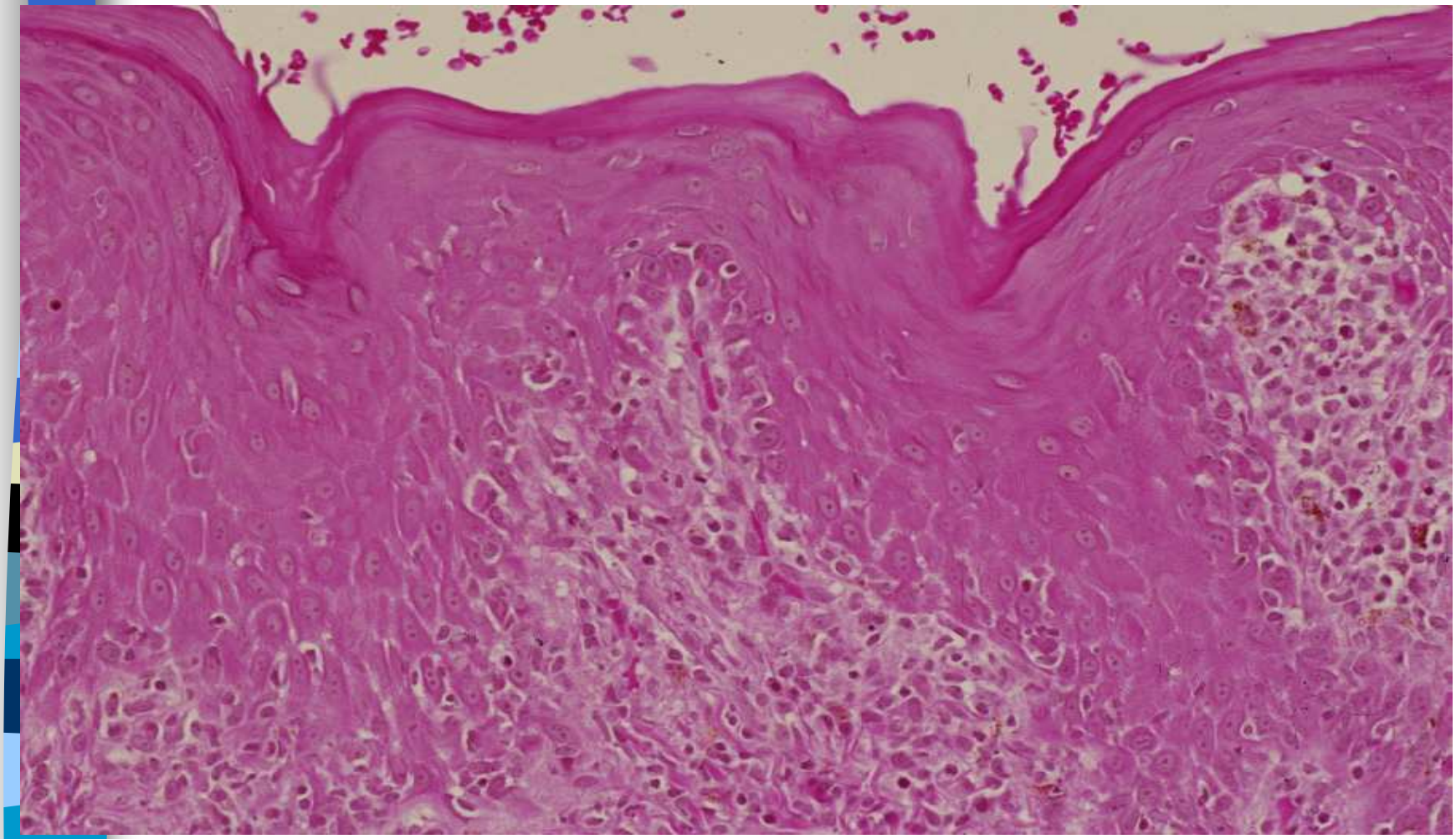
- **Chronic, superficial, hyperplastic, lymphoplasmacytic dermatitis with mild vacuolar alteration and rare apoptotic basal cells**
- **Lengthy comment**
- **Call back by clinician**

The Bottom Line

- Retrospective on the histopathology of DLE and mucocutaneous pyoderma
  - How well can we distinguish these diseases?
  - Resident blinded MHG and EAM to clinical outcome
    - 2/17 cases has a “true” interface rxn
    - 15/17- we could not predict outcome
    - Shown same cases at two readings
      - Inconsistent results b/w and amongst ourselves
- In many cases, histopathology alone cannot distinguish antibiotic responsive vs. immunomodulatory responsive nasal dermatitis (especially GSD!)

Wiemelt S, Goldschmidt M, Mauldin EA. Clinical and histopathologic features of nasal dermatitis in dogs. *Veterinary Dermatology*, 2004, 15: 341-348.

- Mucous membranes/mc junctions always react to chronic injury with lymphoplasmacytic inflammation in a “lichenoid band”
- Some cases of “DLE” may represent a general reaction pattern to injury rather than a specific autoimmune disorder
- If there is abundant surface exudate, do a fungal stain for corneophilic dermatophytes



“True” Interface Dermatitis (lupus-like)

My opinionated clinical approach

- Don’t give your pathologist headache!

  Biopsy may not a rewarding diagnostic test for localized nasal planum dermatitis (no haired skin involved) unless you suspect PF/PE, VKH, or neoplasia

- Treat empirically or based on c/s (if prior abx) for four weeks + sunscreen
  - +/- fungal culture
- If no response, use topical tacrolimus/ tet/niacinamide*
- If no response, then biopsy and expect a morph diagnosis
- **Always** treat with abx prior to bx

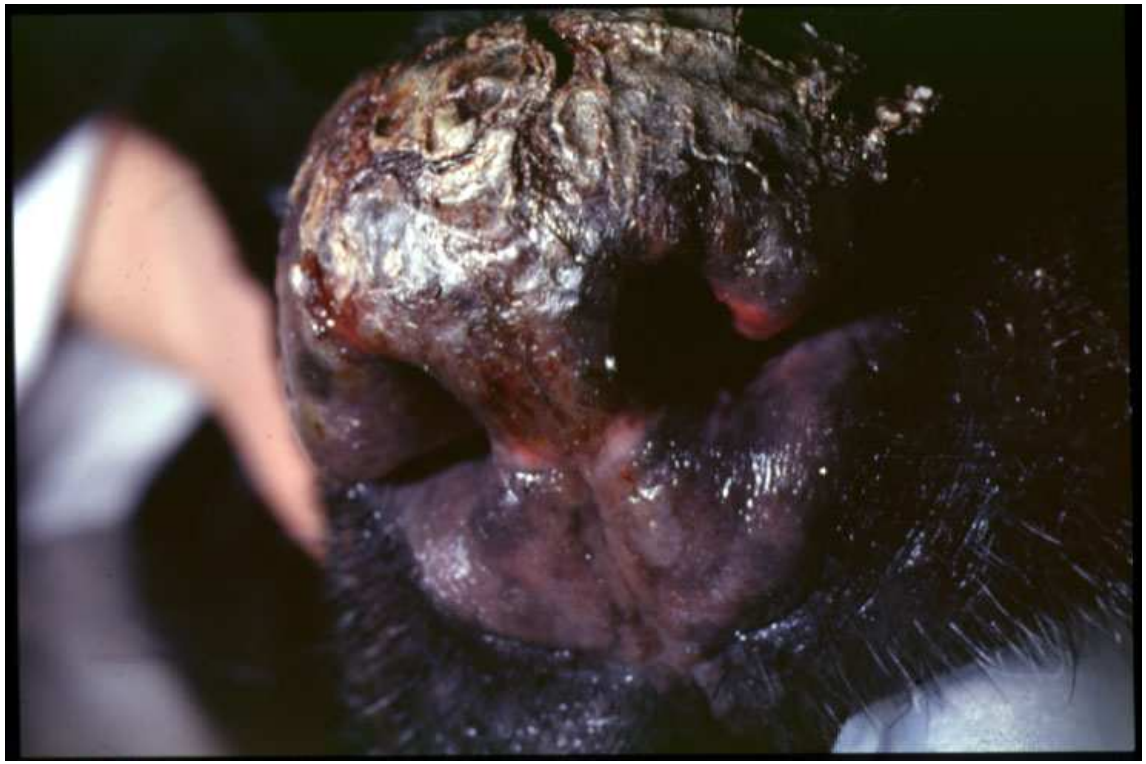
*Tetracycline may be photosensitizing

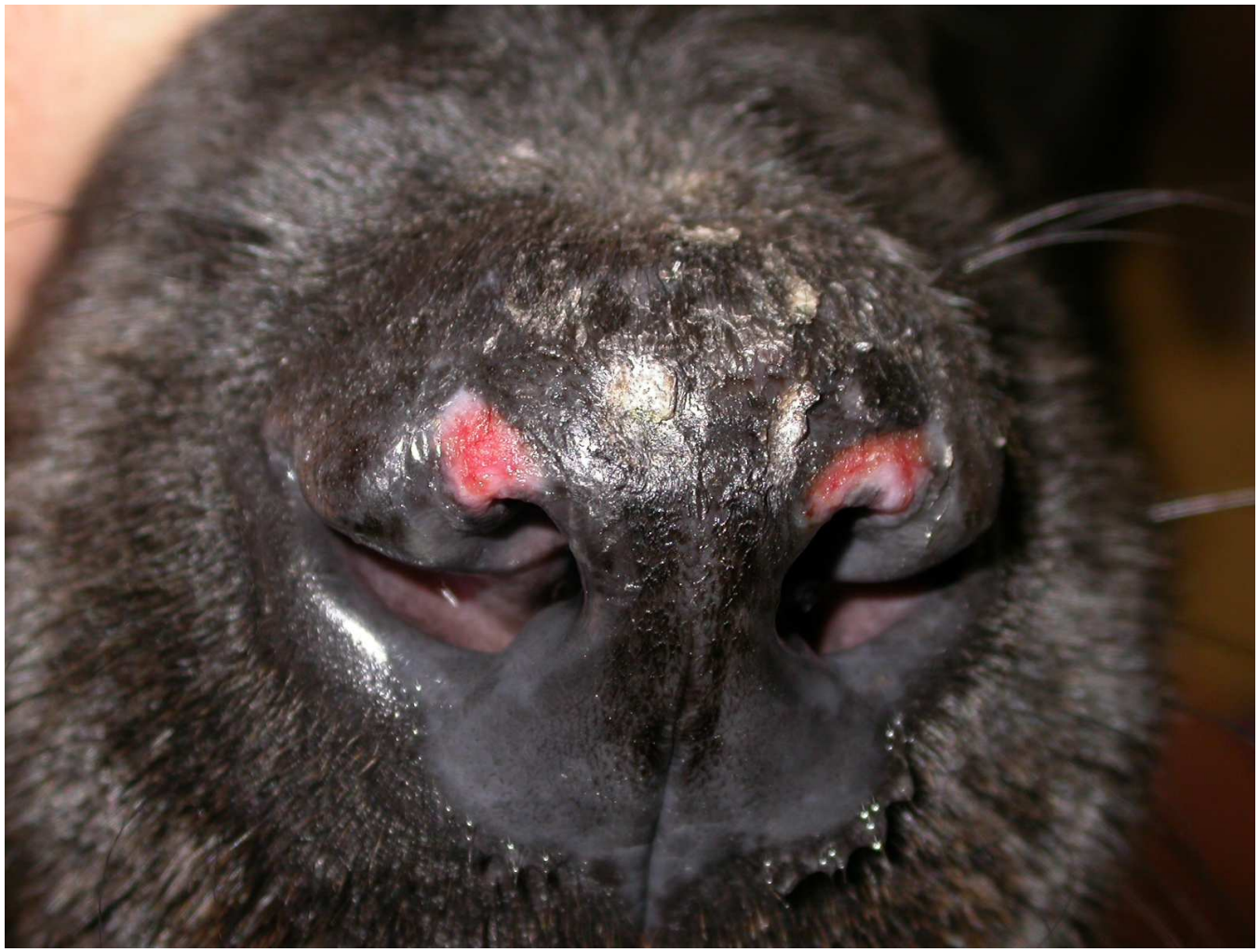
Pro-Topic® (tacrolimus ointment)

- Topical tacrolimus .1% and .03%
- Discoid lupus
- Pemphigus erythematosus
- Mild perianal fistula disease

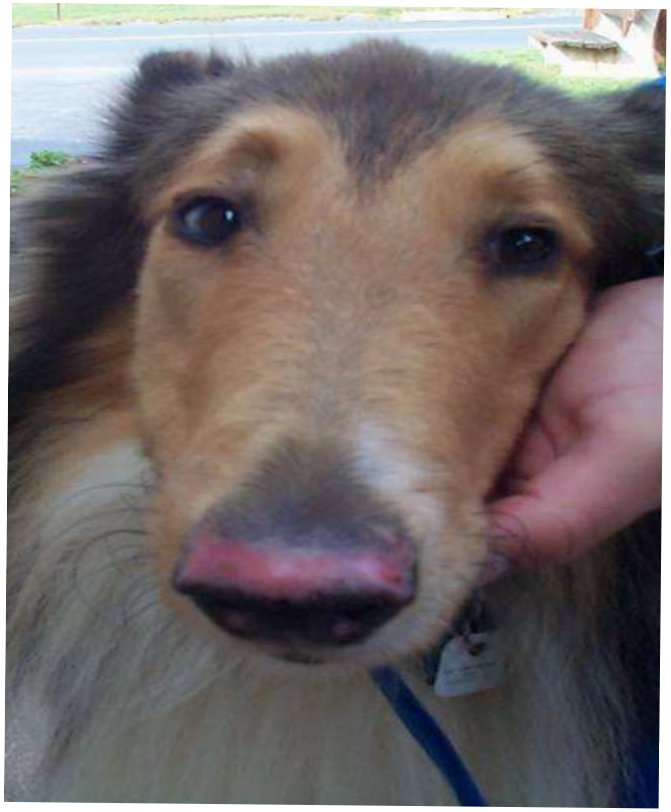
- $$ 65 for 30 g tube

Nasal Dermatitis

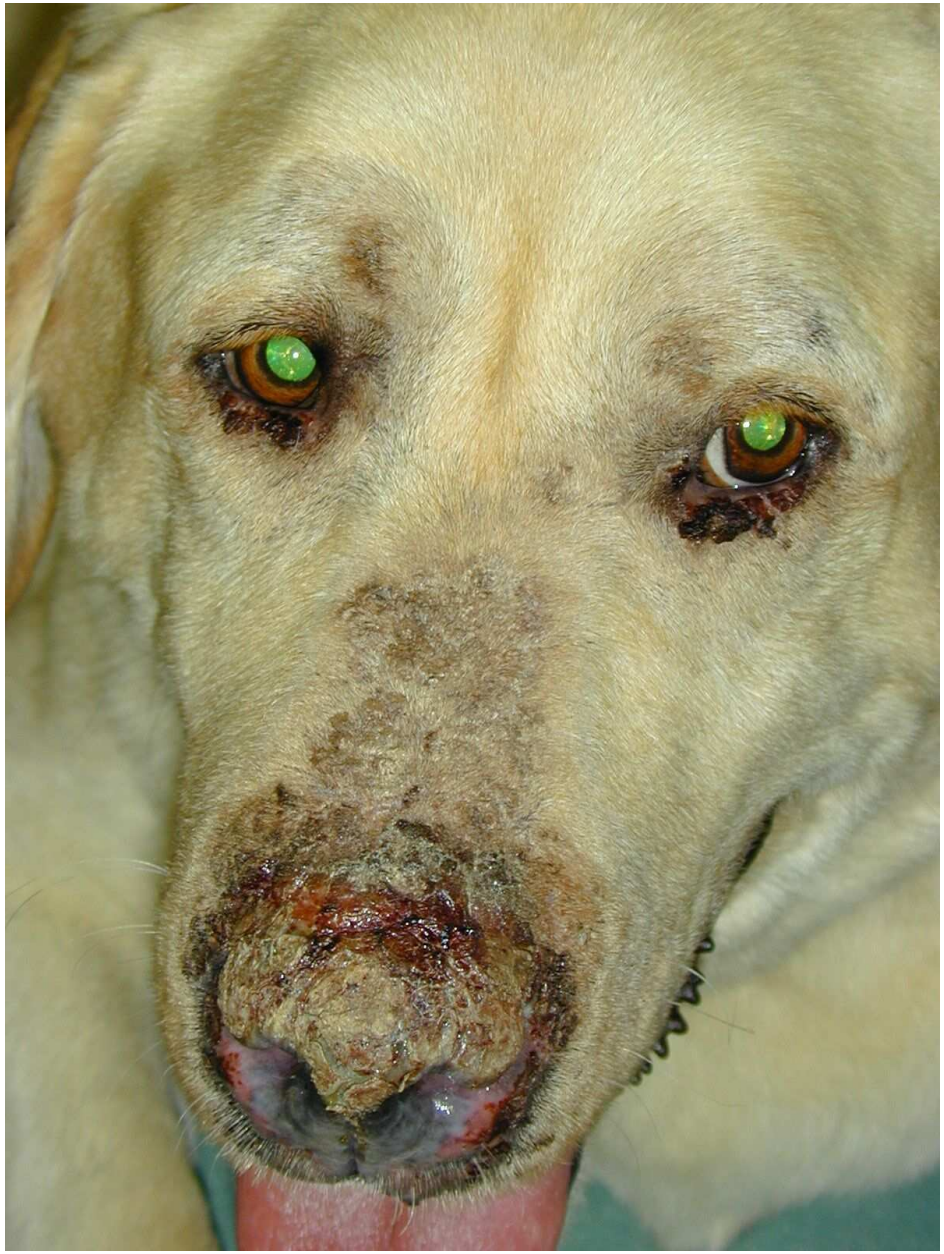




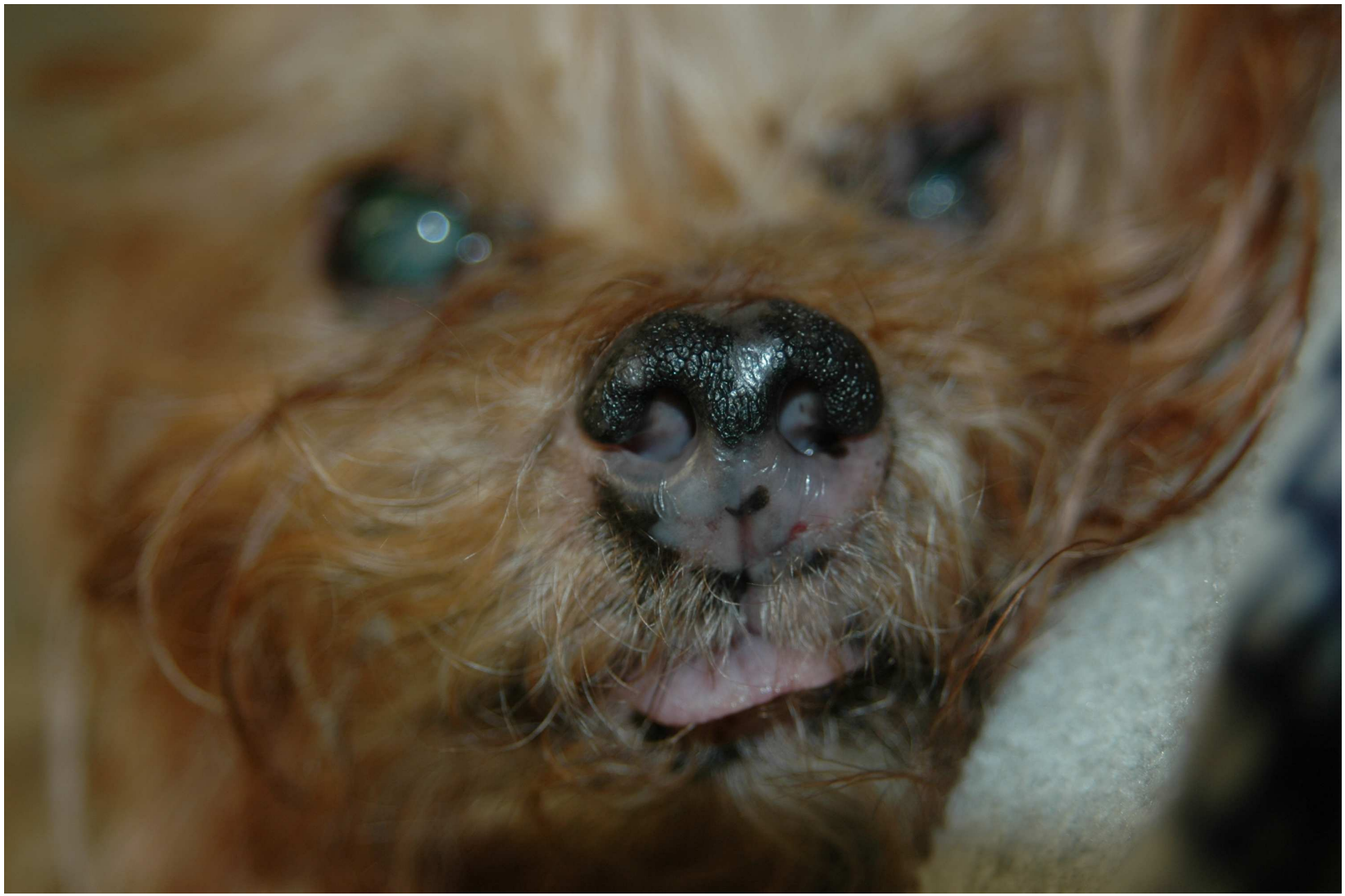
GSD nasal dermatitis- note the symmetrical erosions



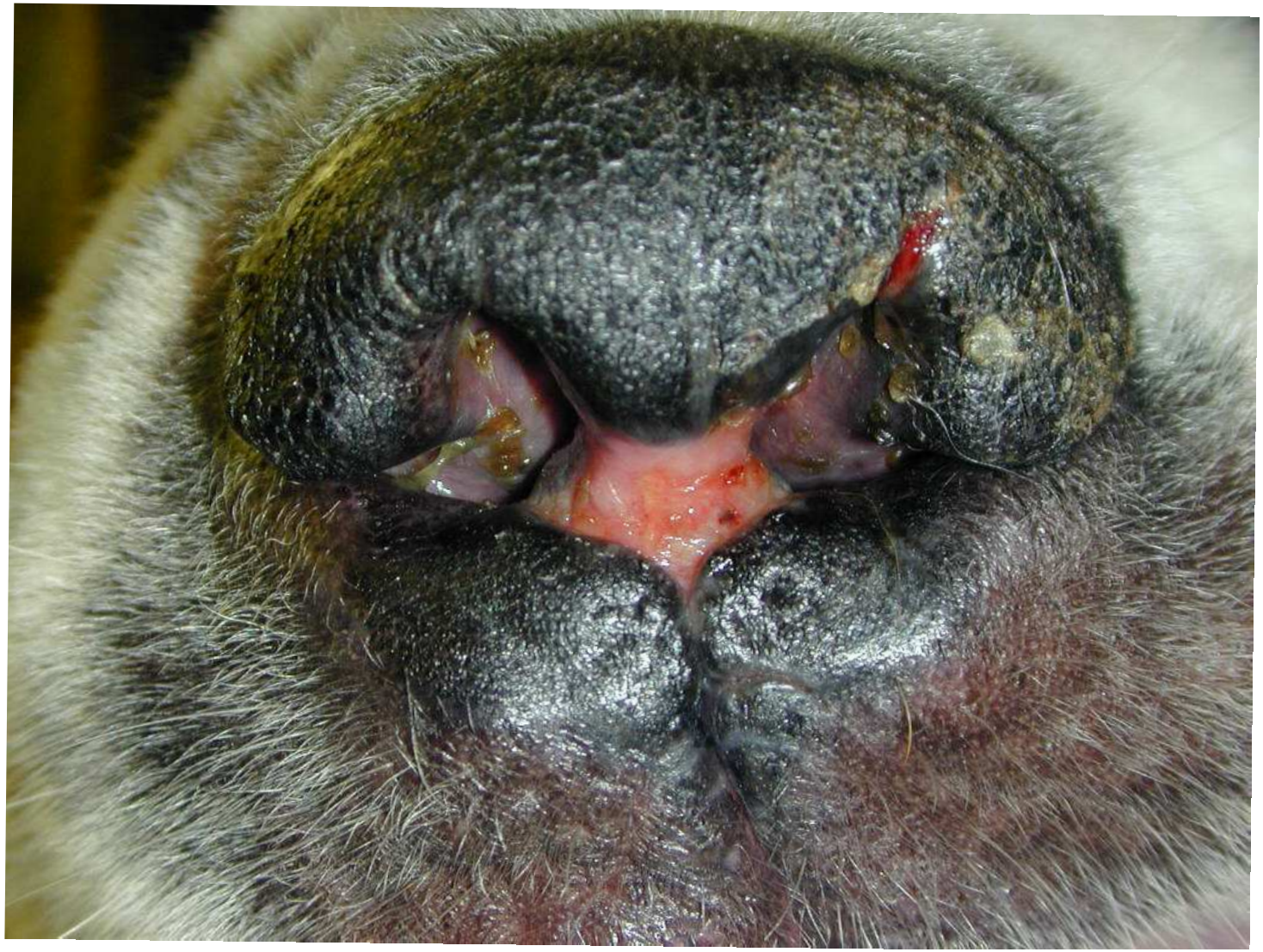
“True” canine discoid lupus-like disease



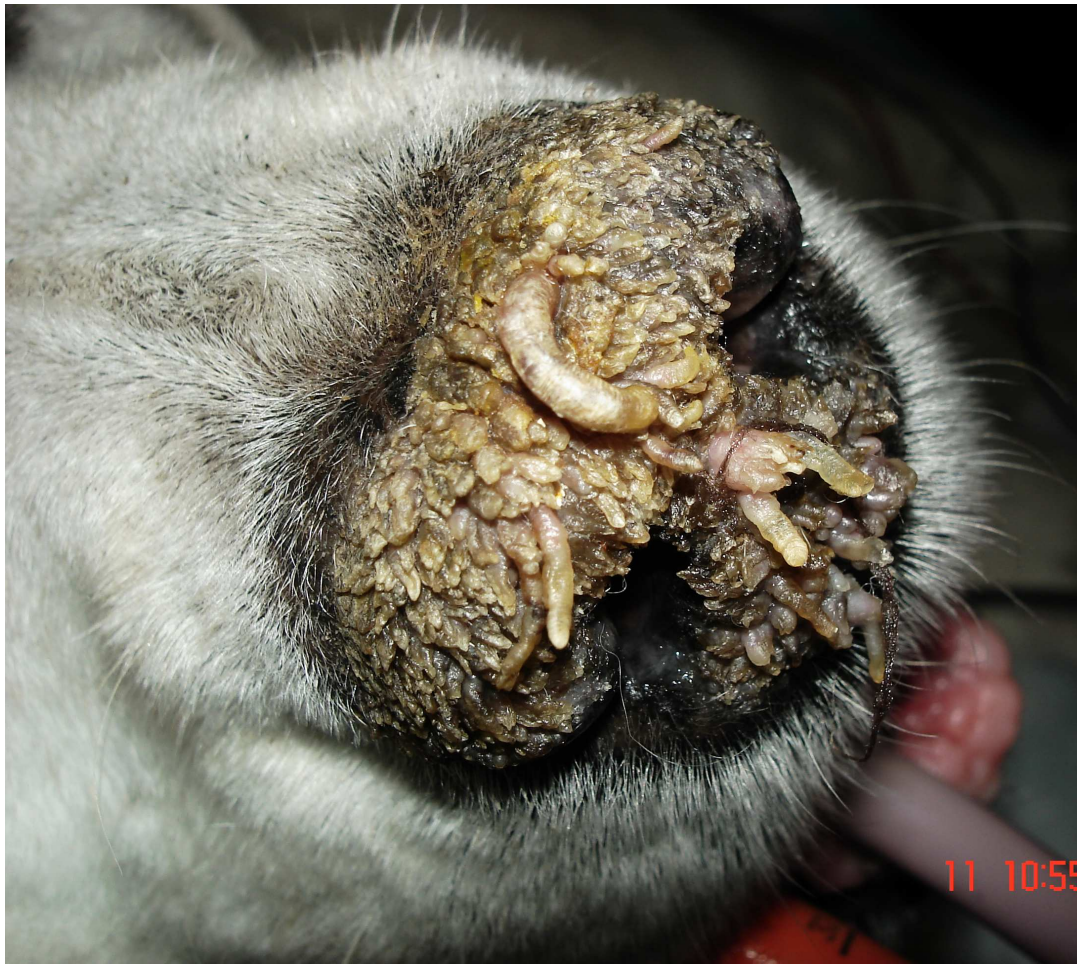
Biopsy this case!



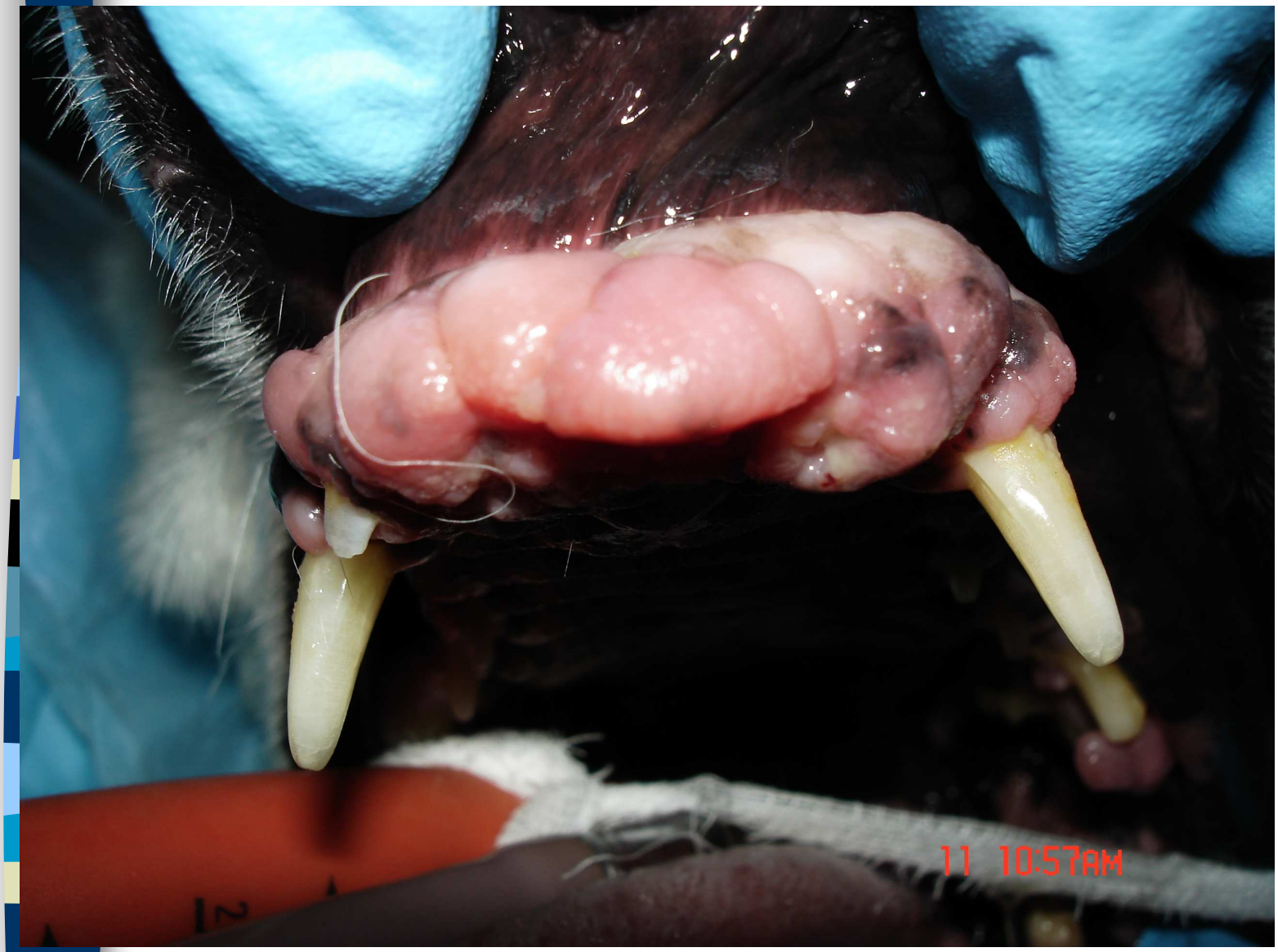
Epitheliotropic LSA



St Bernard nasal arteritis



Cyclosporine-associated hyperkeratosis



Cyclosporine-associated gingival hyperplasia