


Canine Skin Diseases: Streamlining Your Diagnosis from Top to Bottom and Nose to Tail

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Unusual Canine Skin Diseases: From Top to Bottom and Nose to Tail

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Overview




Nasal planum

Pinnal margin


Perianal area

Nails



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Overview




Nasal planum

Pinnal margin


Perianal area

Nails




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Pinnal disease




TheAnswerVet.com

Allergy ear





Not allergies



Diagnostic tool box


- History
- Overall physical examination
- Cytology
- Skin scrapings
- Bacterial culture
- Fungal culture
- CBC/Chemistry
- Thyroid panel
- Biopsy
- **Lesions can be pathognomic**

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Diseases affecting the pinnal margin + other

- Scabies
- Discoid lupus/systemic lupus
- Pemphigus complex
- Dermatomyositis
- Vasculitis
- Drug eruptions
- Solar dermatitis
- SCC



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Pemphigus foliaceus- ear



Ear Margin Seborrhea



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Pemphigus foliaceus- body



Etiology

- Idiopathic seborrheic disease
- Dogs with pendulous ears– anatomic component?
 - Dachshunds



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Diseases affecting only the pinnal margin

- Ear margin seborrhea
- Proliferative thrombovascular necrosis of the pinna
- Canine leproid granuloma
- +/- Scabies



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Clinical signs

- First:
 - Soft, greasy debris occurs along ear margins
- Chronically:
 - May become alopecic, crusted, cracked, ulcerated, and fissured
- Skin is otherwise normal



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Diagnosics

- Diagnosis=
 - Clinical signs
 - r/o infectious causes
 - Bacterial
 - Malassezia
 - Dermatophyte
 - r/o systemic seborrhheic disease
 - Hypothyroidism
 - Allergies
 - Biopsy



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Proliferative thrombovascular necrosis of the pinna



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Histopathology



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Etiology/diagnosis

- Focal vasculitis affecting the pinnal margins alone
- Begins at apex, progresses along concave pinna
- Initially thickened, alopecic → ulcers → notches



Treatment options

- Topical therapy:
 - If firmly adherent, warm water soak 1st
 - Ear margin cleansing
 - Sulfur, salicylic acid, benzoyl peroxide-containing shampoo
 - Apply moisturizer after washing
 - Vitamin A, fish oils
 - For more severe lesions:
 - Prednisone
 - Doxycycline/niacinamide
 - Pentoxifylline



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Diagnosis

- Diagnosis
 - Clinical signs ~pathognomic
 - Biopsy
- If other areas affected, systemic vasculitis is more likely



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Treatment

- Medical management aimed at vasculitis
 - Doxycycline/niacinamide
 - Atopica
 - Pentoxifylline
 - Vitamin E
- Surgery

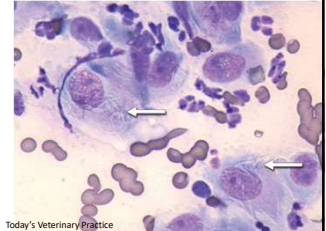


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Etiology

- Novel slow-growing Mycobacterial species
 - PCR analysis
 - Can be readily seen on cytology
 - Has never been isolated on culture
- Location on head suggests insect vector



Today's Veterinary Practice



Canine Leproid Granuloma Syndrome



Vetstream.com

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Diagnosis

- Differentials:
 - Sterile granuloma/pyogranuloma syndrome
 - Granulomas due to foreign body or other infectious agents
 - Neoplasia: MCT, histiocytic tumors, lymphoma
- Cytology
- Negative culture
- Biopsy

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Clinical Signs

- Localized nodules, usually confined to head
- Dogs are otherwise healthy
- Most cases seen in Western US and Australia
- Predisposed breeds:
 - Boxers/crosses
 - Possibly GSD



Veterinarian.com

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Treatment

- Benign monitoring:
 - Usually spontaneously resolve (1-3 months)
- Surgical excision
- If refractory:
 - rifampin and clarithromycin or doxycycline x 4-8 weeks
- Eradicate insect vectors when possible



Bunpuke.com

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Pinnal margin disease: a Shout-Out to Scabies

- Often starts on the pinnal margins
- Pinnal pedal reflex
- Skin scrapings, Sarcoptes ELISA, treatment trial



Case 1



Banjo: History

- 2 year history of alopecia trunk, limbs
- Concurrent change in skin/coat color
- 6 month history ear-oriented pruritus
- Diet trial, allergy testing, immunotherapy
- Initial improvement w/ prednisone and Apoquel, now desperately shaking head



Diagnostics- skin

- Ear cytology: NSF
- Skin cytology: NSF
- Skin scrapings: NSF
- Trichogram: increased # telogen hairs
- Clinical signs for ears ~pathognomic
- But why is he bald?



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Recheck 8 weeks



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Diagnostics- general

- Chem panel:
 - ALP 4668
 - ALT 347
 - GGT 49
- CBC:
 - 17.9k WBC, 14k neutrophils
 - 597k platelets
- ACTH stim= iatrogenic Cushing's



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Treatment plan

- Stop "allergy pills"
 - Prednisolone 30 mg SID
 - Apoquel 16 mg SID
- Start doxycycline 5 mg/kg po BID
- Niacinamide 500 mg po TID
- Pentoxifylline 15 mg po TID
- Vitamin E



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Diseases affecting the nasal planum + other

- Systemic lupus
- Pemphigus complex
- Vasculitis
- Drug eruptions
- Neoplasia
- Uveodermatologic syndrome
- Vitiligo

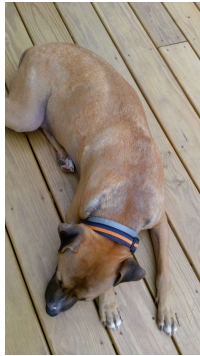


Veterinarymedicine.dvm360.com

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8 months later

Managed long-term on
Pentoxifylline 15 mg/kg
PO TID and Vitamin E



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Diseases affecting the nasal planum alone

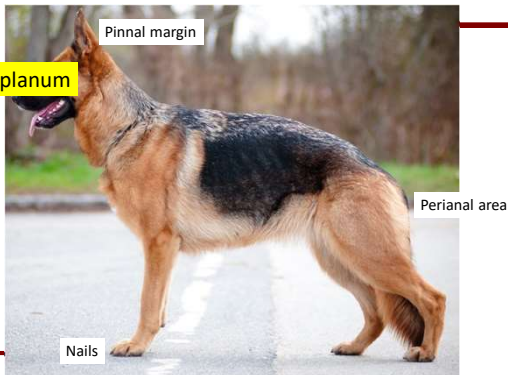
- Proliferative arteritis of the nasal philtrum
- Discoid Lupus Erythematosus
- Mucocutaneous pyoderma



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Overview

Nasal planum



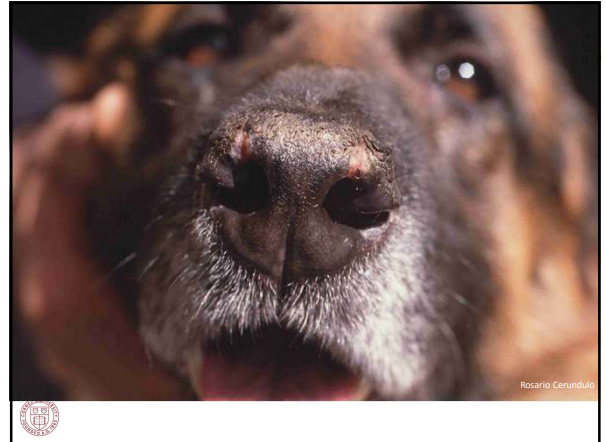
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Proliferative arteritis of the nasal philtrum

- Saint Bernards, occasionally others including Newfoundland, Giant Schnauzers
- Onset 2-6 years
- Well-demarcated linear or oval ulcer
 - Long axis parallel to lip
 - Remain confined to philtrum



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Diagnosis

- Lesion in affected breed ~pathognomic
- Biopsy

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Biopsy of GSD nasal arteritis

Peter Roland

Proliferative Arteritis of the Dorsal Alar Fold

- Anecdotally, adult GSDs predisposed
- Similar histopathology to philtrum

Peter Roland

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Intimal proliferation

Peter Roland

Treatment- Step 1

- Stop any hemorrhage



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DLE vs MCP



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Discoid lupus erythematosus (DLE)

- Aka cutaneous lupus erythematosus
- Presumed immune-mediated disease
- No systemic signs, but can infrequently involve other cutaneous areas
 - Ears
 - Periocular area
 - Very rare: footpads, perianal
- Exacerbated/induced by UV light



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Treatment– Step 2

- Medical management aimed at vasculitis:
 - Anti-inflammatory prednisone
 - Doxycycline + niacinamide
 - Atopica
 - Pentoxifylline
 - Vitamin E
- Refractory cases: Surgical excision
- As cases stabilize: topical tacrolimus



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DLE clinical signs

- Initial clinical sign =
 - DEPIGMENTATION
- Then = loss of normal cobblestone architecture
- Then = erythema, scaling
- Chronic = erosions, ulcerations, crusting
- Location =
 - Often 1st at dorsal mucocutaneous junction between haired skin and nasal planum
 - Or ventral/medial alar folds
 - Eventually extends up dorsal muzzle



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Early lesion



Diagnosis

- Dx:
 - Clinical diagnosis appropriate if mild and local
 - + no response to antibiotics
 - Bx if more severe, refractory



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Treatment

- Immunomodulatory/immunosuppressive treatment
 - Short course prednisone or topical steroids
 - Doxycycline/niacinamide
 - Vitamin E
 - Atopica or topical tacrolimus
 - **Antibiotics if indicated**



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Snow nose and collie nose

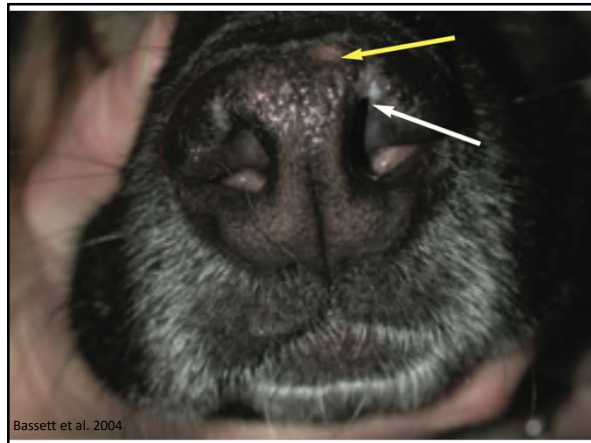
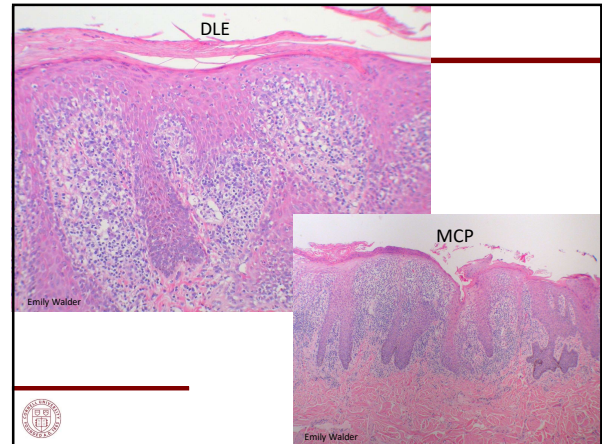
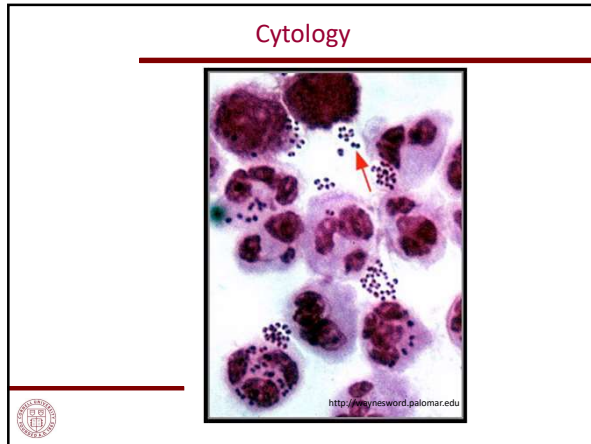


Mucocutaneous pyoderma (MCP)

- Unknown etiology
- Often limited to the nasal planum
 - Also perioral, periocular, perivulvar
- GSDs/x predisposed
- Early lesions: erythema, swelling and crusting.
- Chronic:
 - depigmentation
 - fissures
 - erosions
- Antibiotic responsive (though often recurrent)



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MCP vs DLE

Veterinary Dermatology 2004, 15, 341–348

A retrospective study comparing the histopathological features and response to treatment in two canine nasal dermatoses, DLE and MCP

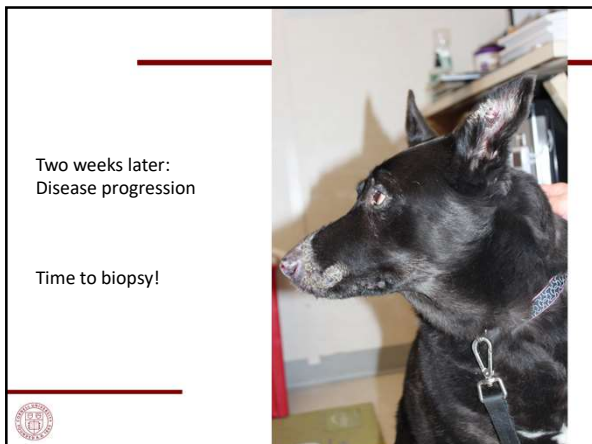
S. P. WIEMELT*, M. H. GOLDSCHMIDT†, J. S. GREEK‡, J. G. JEFFERS§, A. P. WIEMELT¶ and E. A. MAULDIN†

- Retrospective study of nasal lesions and histopathology (15 cases)
- Antibiotic-responsive (MCP) and immunomodulatory-responsive cases indistinguishable on biopsy

Case 2: Layla

- 5 year old SF GSD/X
- 6 month history of waxing and waning crusting skin lesions
- 1st: Junction between haired muzzle and nasal planum
 - No response to cephalexin x 4 weeks
 - Then treated for presumed DLE with steroids, partial response
- Then: perioral, periocular, concave pinna
- Severe PU/PD on steroids

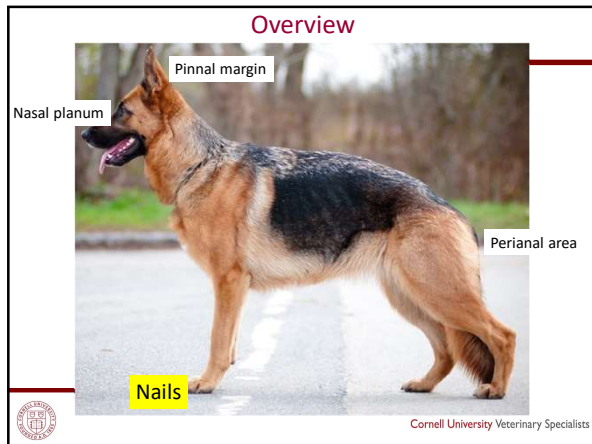
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Layla: diagnosis and treatment

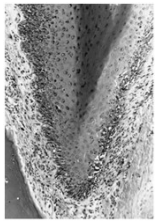
- Bx: consistent with pemphigus erythematosus
- Crossover disease between pemphigus foliaceus and DLE
- Tx:
 - Avoid sun exposure
 - If mild:
 - Doxycycline/niacinamide
 - Topical tacrolimus
 - Layla's case, with progressive dz:
 - Short course methylprednisolone
 - Azathioprine

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SLO: etiology


- Poorly understood
- Immune-mediated disease or reaction pattern
 - Inflammation in nail bed leading to nail abnormalities
- Biopsy findings not specific to SLO



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Diseases affecting the nail beds


- Nails + other body sites:
 - Vasculitis
 - Drug eruption
 - Leishmaniasis
 - Pemphigus vulgaris
 - SLE
- One/few nails only:
 - Trauma
 - Dermatophytosis
 - Bacterial infection
 - Neoplasia: SCC, Melanoma



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Clinical signs


- Young to middle aged
- Large breed dogs– GSDs, Rottweilers, Labs– may be predisposed, but seen in many breeds
- Often rapid progression to affect all nails
- Otherwise healthy



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Diseases affecting ALL nails on ALL digits only


- Symmetric lupoid onychitis/onychodystrophy (SLO)



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Acute clinical signs

- 1st Clinical signs:
 - Onychalgia (pain) → lameness, foot licking
 - Oncholysis (nail splitting)
 - Onychomadesis (sloughing off of nails)



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With chronicity

- Regrown nails are brittle, crumbly, misshapen



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Overview



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Diagnosis

- Clinical signs ~pathognomic
- Bacterial and fungal cultures if nailbed infection
- Biopsy: P3 amputation-- usually dewclaw
 - Sloughed claws don't have nailbed



Cultures indicated!



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Diseases affecting the perianal area + other

- Mucocutaneous pyoderma
- Drug eruptions
- Pemphigus complex
- Neoplasia
- SLE
- Mucocutaneous lupus



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Treatment

- Treatment/prevention of secondary nail bed infection crucial– can be severe
- Good nail care
- Mild cases: omega 3/6 fatty acids, biotin, pentoxifylline
- Moderate cases: Doxycycline/niacinamide
- Severe cases: Atopica, Azathioprine
- Flares: short course prednisone
- Rarely recommended: Onychectomy



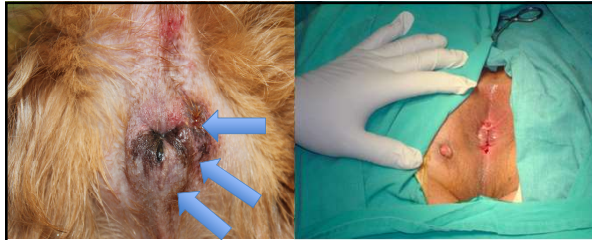
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Diseases affecting the perianal area alone

- Anal sacculitis/anal sac abscesses
- Perianal tumors
- **Perianal fistulas**



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Perianal fistulas **Fistulizing Crohn's Disease (CD)**

- Immune-mediated disease
- Recurrent fistulas in the perianal area
- Likely genetic predisposition- GSD
- Proposed inappropriate immune response: Commensal organisms of fecal flora or skin



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Treatment

- Short course prednisone
- Antibiotics if indicated
- Treatment of choice= Atopica
 - 7-10 mg/kg/d
 - Save cost with azoles
- Topical tacrolimus
- Surgery generally not appropriate



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Diagnosis

- Ddx anal sacculitis
- Clinical findings and history
- Catheterize
- Biopsy



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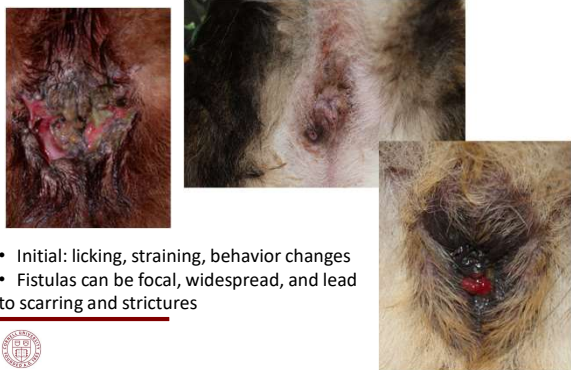
Future treatment: Stem cell therapy

2 X 10⁷ hESC/10 mL injected in and around the fistulas

Closed with fibrin glue (Evice[®])



Clinical signs



- Initial: licking, straining, behavior changes
- Fistulas can be focal, widespread, and lead to scarring and strictures



MSCs and Crohn's Disease

- Several recent CD clinical trials:
 - evaluated intralesional injection of MSCs
 - some have had encouraging results

GUT
An International Journal of Gastroenterology and Hepatology
Current TOC | Instructions for authors

Autologous bone marrow-derived mesenchymal stromal cells in the treatment of fistulising Crohn's disease

Rachele Ciccocioppo,¹ Maria Ester Bernardo,^{2,3} Adele Sgarella,⁴ Rita Maccario,^{2,5} Maria Antonietta Avanzini,² Cristina Ubezio,¹ Antonella Minelli,⁶ Costanza Alvisi,⁷ Alessandro Vanoli,⁸ Fabrizio Calliada,⁹ Paolo Dionigi,⁴ Cesare Perotti,¹⁰ Franco Locatelli,³ Gino Roberto Corazza¹

Gut 2011;60:788–798. doi:10.1136/gut.2010.214841



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Ferrer et al. 2016

Research Article

For reprint orders, please contact: reprints@futuremedicine.com

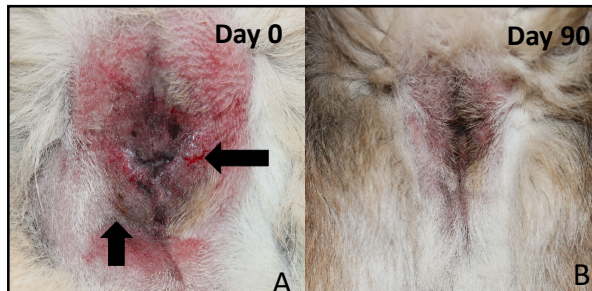


Treatment of perianal fistulas with human embryonic stem cell-derived mesenchymal stem cells: a canine model of human fistulizing Crohn's disease



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Questions?



- 6/6 dogs had complete remission
- Mean CsA dose (3.59 mg/kg/q24h) significantly lower than day 0 dose (8.22 mg/kg/q24h) ($P= 0.036$)



Next Step

- Last phase of clinical trials prior to release to market
- Hopefully at CUVS next spring



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