MEOW-NIFICENT MOUTH MISSION

Jennifer Mathis, DVM, CVPP, DAVDC

Vanessa Huizar LVT, VTS Dentistry

Feline Dental Issues

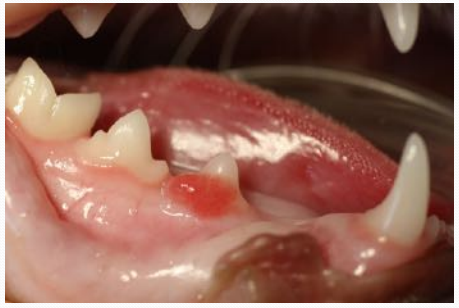
- Periodontal Disease
  - Chronic alveolitis – osteitis
- Stomatitis
- Tooth Resorption
- Miscellaneous
  - (polyps, eosinophilic granuloma, FOPS, mobile symphysis, TMJ issues etc…)

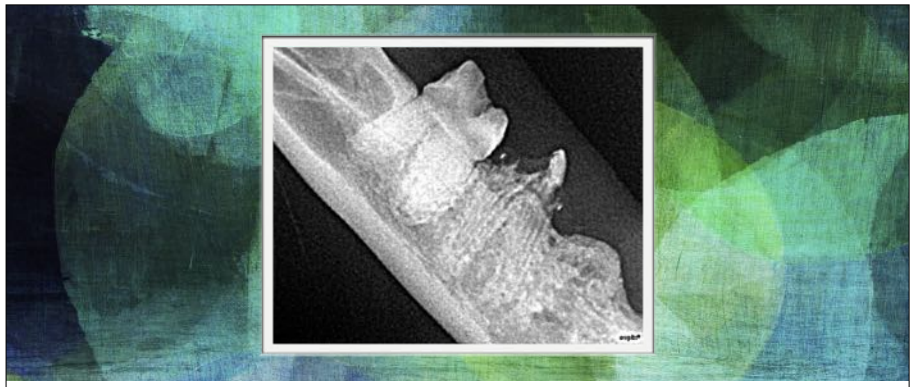
PERIODONTAL DISEASE

- Bone loss around teeth; measured radiographically to define stage.
  - Bone loss permanent
  - Gingivitis reversible
- Similar progression as in dogs
- Sulcus minimal
  - 0.5 mm normal depth
- Lower occurrence of typical periodontal disease
- Unusual manifestations of periodontitis in cats

Oral Examination

- Often challenging in some patients, especially if painful
- Evaluate
  - Calculus, plaque
  - Inflammation
  - Tooth resorption – 307/407
- Full exam – anesthesia
  - Probing
  - IMAGING

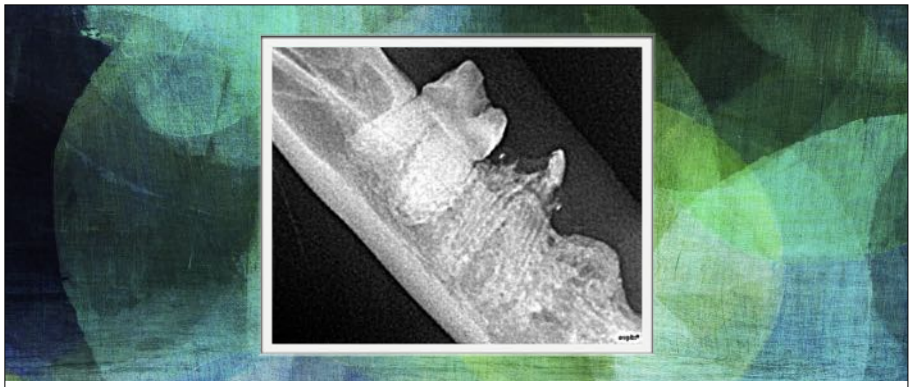




69–100% OF CATS AGE 10+

have radiographic signs of tooth resorption

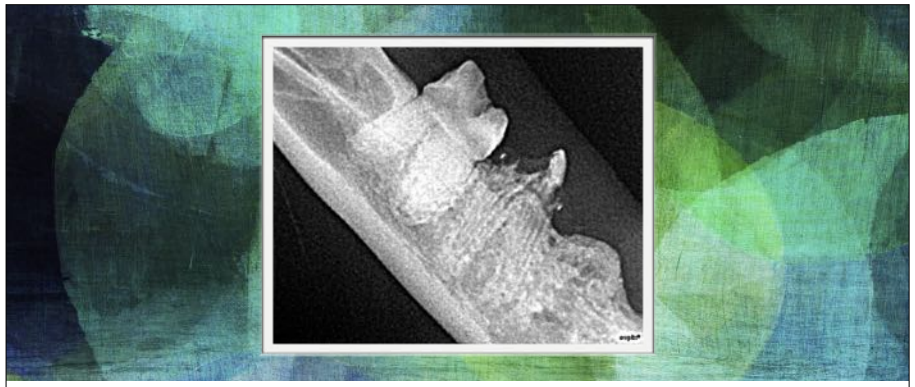
JVD Girard 2008



ONLY 19–20% ON EXAM

of the same groups had visual evidence on awake oral exams

JVD Girard 2008



SUBSTANTIAL NUMBERS MISSED

when rely only on oral exam

Feline Oral Examinations

Feline Oral Examinations

- FAS considerations

Feline Oral Examinations

- FAS considerations

0 = AU is absent
1 = AU is moderately present*
2 = AU is markedly present
• Ears facing forward
• Eyes opened
• Muzzle relaxed (round shape)
• Whiskers loose and curved
• Head above the shoulder line
• Ears slightly pulled apart
• Eyes partially opened
• Muzzle mildly tense
• Whiskers slightly curved or straight
• Head aligned with the shoulder line
*The score of 1 can be also given when there is uncertainty over the presence or absence of the AU
• Ears flattened and rotated outwards
• Squinted eyes
• Muzzle tense (elliptical shape)
• Whiskers straight and moving forward
• Head below the shoulder line or tilted down (chin towards the chest)
bit.ly/FGSfacts
FELINE GRIMACE SCALE FACT SHEET
Evangelista et al. Facial expressions of pain in cats: the development and validation of a Feline Grimace Scale. Sci Rep 9, 19128 (2019)

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WHY?
• Pain-induced behavioral changes are unique in cats and can be subtle
WHO?
• The instrument has been developed and validated to be used by veterinarians
• It is currently under testing for use by other veterinary care professionals
WHAT?
• The Feline Grimace Scale is a simple method of acute pain assessment. It is based on changes in facial expressions and can be easily and quickly performed in the clinical setting
• It differentiates painful and non-painful cats and response to analgesic treatment
WHEN?
• The FGS is used for acute pain assessment in cats with medical, surgical or oral pain, etc.
• Pain assessment should be performed as often as needed and on a case-by-case basis
HOW?
• There are five action units (AU): ear position, orbital tightening, muzzle tension, whiskers position and head position
• Each unit is scored: 0 (absent), 1 (moderately present) or 2 (present)
• The final score is calculated by the sum of scores divided by the maximum possible scores
• Analgesic treatment is suggested when the final score is 4/10 or 0.4/1.0

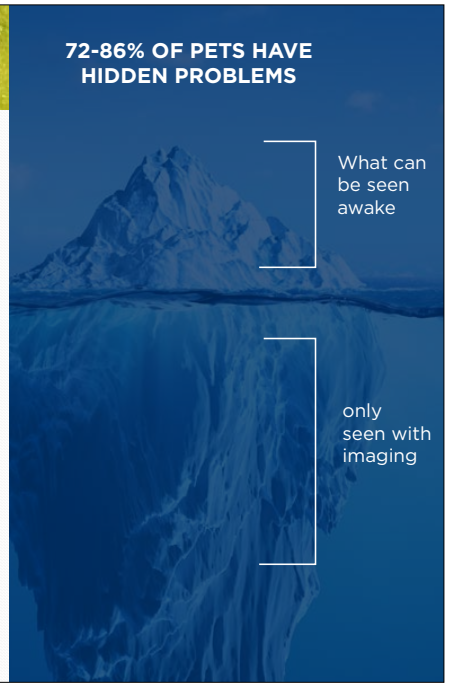
Feline Oral Examinations

- FAS considerations

bit.ly/FGSfacts

Feline Oral Examinations

- FAS considerations
- red gum margin
  - or nothing seen



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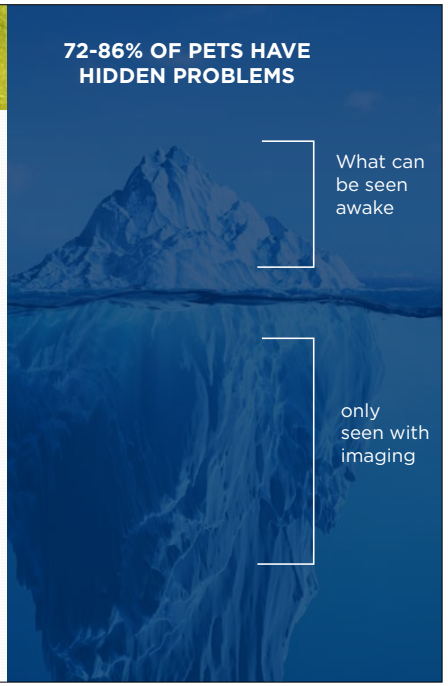
Feline Oral Examinations

- FAS considerations
- red gum margin
  - or nothing seen
- Level of calculus is not a determinant of dental disease.



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Feline Perio?

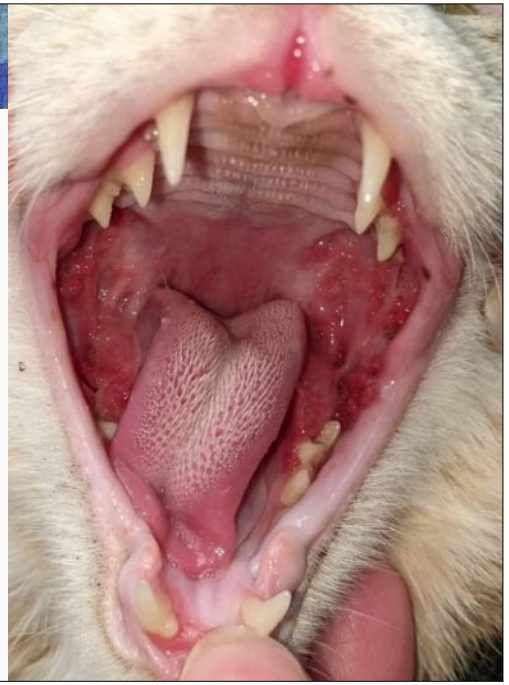
Feline Mandibular Bone Loss

- Pattern of modified vertical bone loss
  - Two 'dips'
  - At first molar, 4th premolar
- Contact/trauma from cusps of maxillary teeth
  - Upper 3rd,4th premolars
  - Tight occlusion
- Gently blunt cusps

Stomatitis

- Feline Chronic Gingivostomatitis (FCGS)
- Is there caudal mouth inflammation?
- See hand out

tooth.vet/wvc-lectures

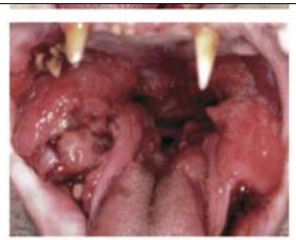


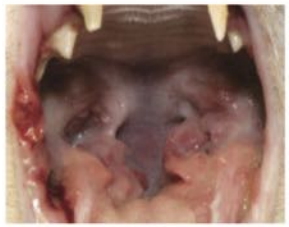
tooth.vet/wvc-lectures

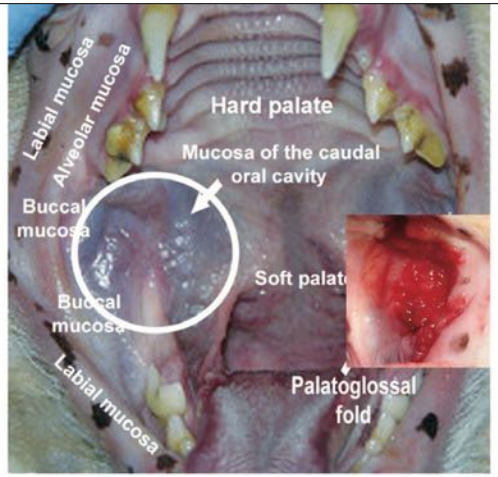
Feline Chronic Gingivostomatitis (FCGS) aka Stomatitis

Widespread oral inflammation that extends to the caudal mouth causing caudal mucositis and ulcerations

- No casual relationship with other diseases
- Multifactorial; (inappropriate response to plaque)
- Associated with immune dysfunction
- Multi-cat households are 70% more likely; (some cats just don't like "roomies")
- Not contagious







Is there caudal mouth inflammation?

Once caudal mouth inflammation has been identified, this is FCGS.

Resorptive Lesions

- Replacement resorption
  - 'moth eaten,' looking like jaw
  - root resorbing
    - PDL not present
  - typically recurrent
- Inflammatory resorption
  - focal lucency
  - secondary to periodontal disease
  - incidence decreases with good dental care
- Details in next hour (10am)

Chronic Alveolitis/Osteitis

- Older cats
- Chronic osseous changes
  - osteomyeltitis
- Maxillary canines
- Large, bulbous alveolus
  - BBE
  - (buccal bone expansion)
- Extruding tooth
- Extraction

Chronic Alveolitis/Osteitis

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Feline Oral Tumors

- Distinguish from inflammatory lesions
  - Proliferative stomatitis
  - Feline Oral Eosinophilic Granuloma
  - Nasopharyngeal polyps
  - Sialocele
  - Chronic osteomyelitis/ fungal infection
  - SOPA= sopforanimals.com
- Extent of osseous changes
- Tooth displacement
- Advanced imaging ideal

Feline SCC

- Non-healing extraction site
- Refractory stomatitis

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  - Survival time, no surgery, 60 days
- Surgery should be first line for tumors
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  - Mandibulectomy in cats *Northrup JAVMA 2006*
- 43% survived 2 yrs after mandibulectomy for SCC
- 98% of cats with adverse effects in first month:
  - tongue protrusion, malocclusion, dehiscence, drooling, pain, difficulty eating or grooming
  - 76% of surviving cats had one or more of these for the rest of their life
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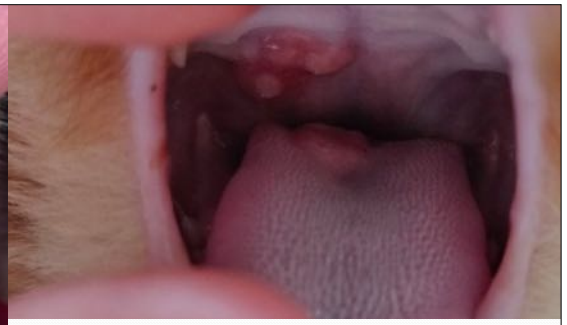
  - Maxillectomy in cats *Liptak Vet Comp Onc June 2020*
- 83% of cats survived 2 yrs or more after maxillectomy for treatment of SCC

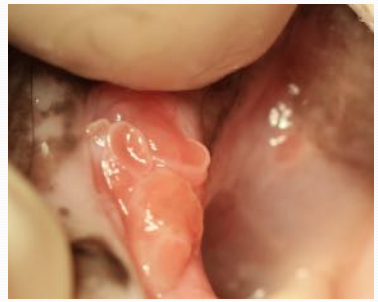


Oral Eosinophilic Granuloma

- cause unknown
  - Proliferative stomatitis?
  - SOPA: sopforanimals.com

Pyogenic Granuloma

- Most common around lower first molar
- Proliferative
- Sometimes ulcerated
- Biopsy recommended
- Extraction of opposing tooth may be needed



Nasopharyngeal Polyps

- Young cats (not always)
- Nasal discharge
- Coughing/gagging
- Arises from epithelium of tympanic bulla or eustachian tube
- Soft palate may be distended
- Use spay hook to retract edge of soft palate and dental mirror to visualize
- Traction removal via oral cavity
- Bulla osteotomy if recurrent

EPiCA ANIMAL HEALTH

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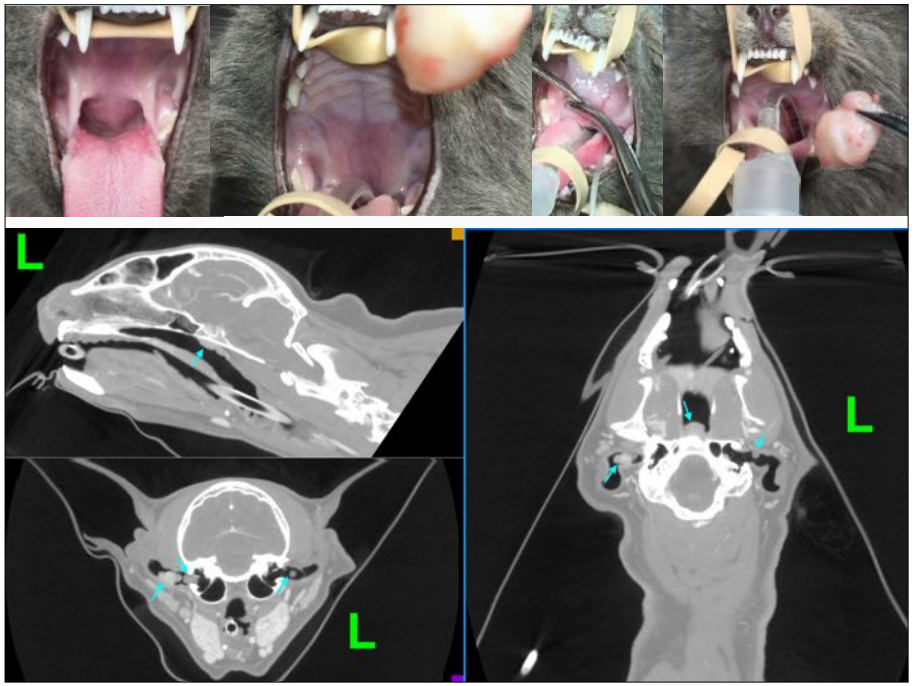
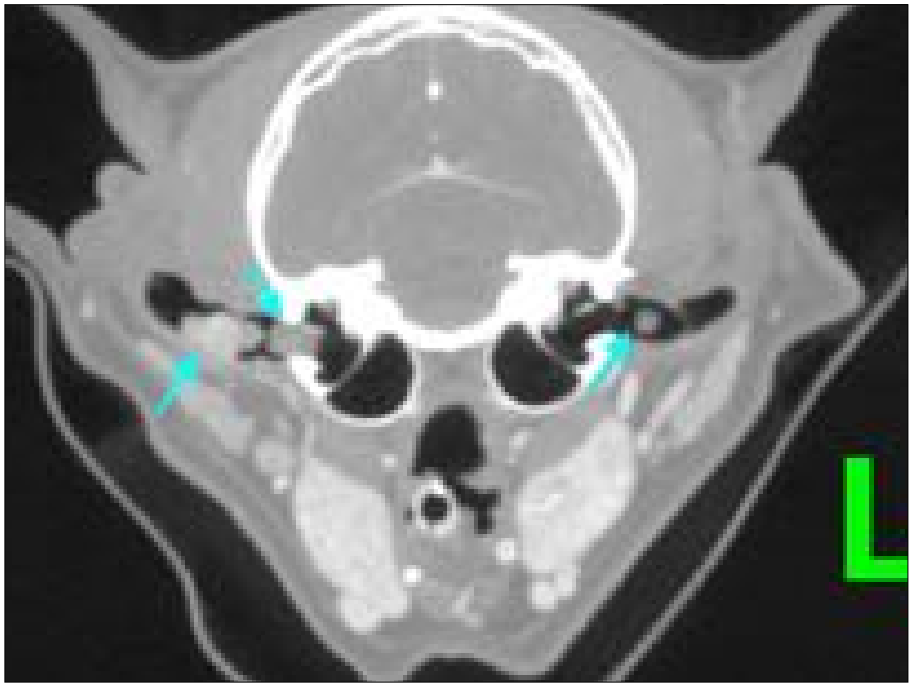


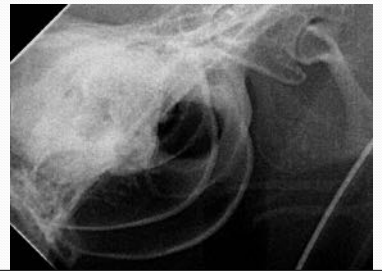


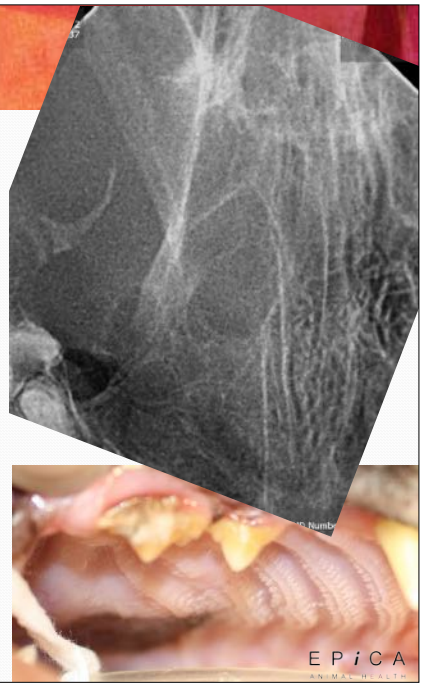
Miscellaneous

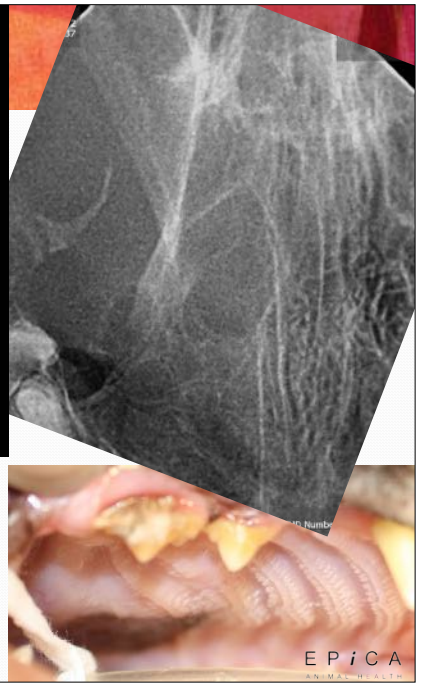
- 'Snorking'
- Palatal ulceration
- FOPS
- Mandibular symphysis laxity
- Open mouth jaw locking

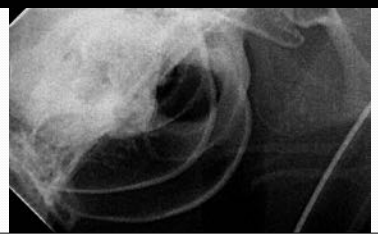
Nasal Evaluation

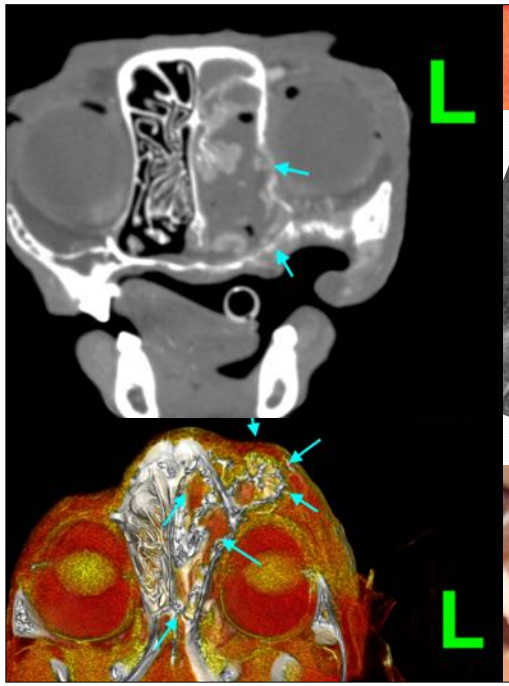
- Nasal intraoral films
- Advanced imaging
- R/O dental issues
- Image sinuses, bullae

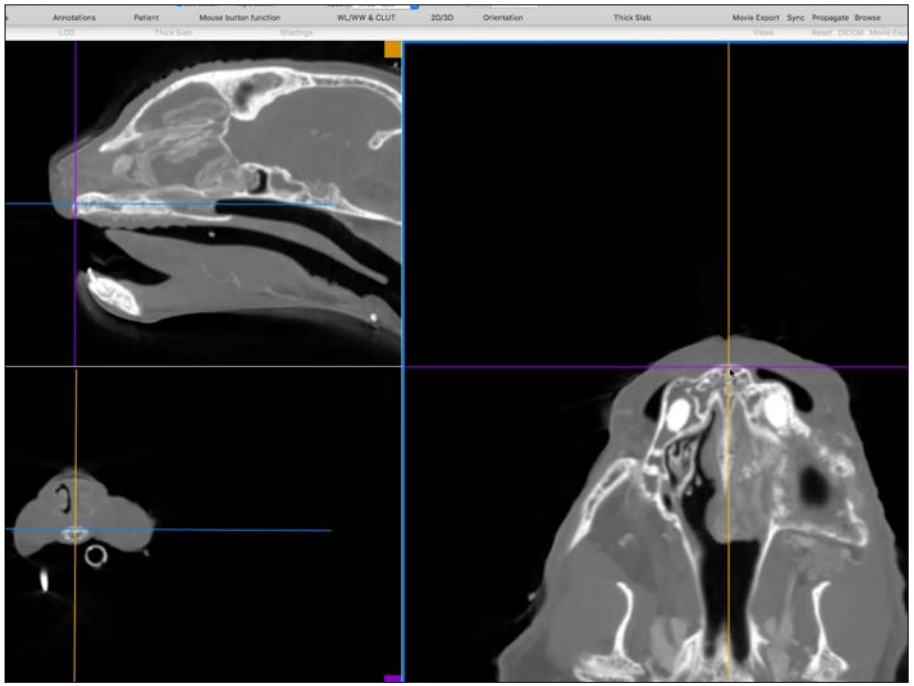


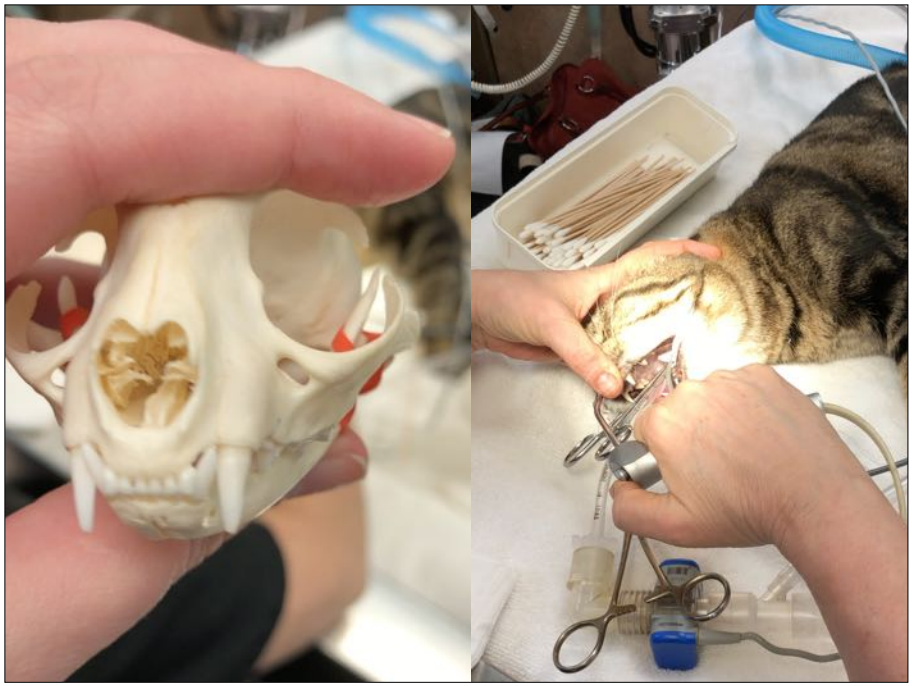


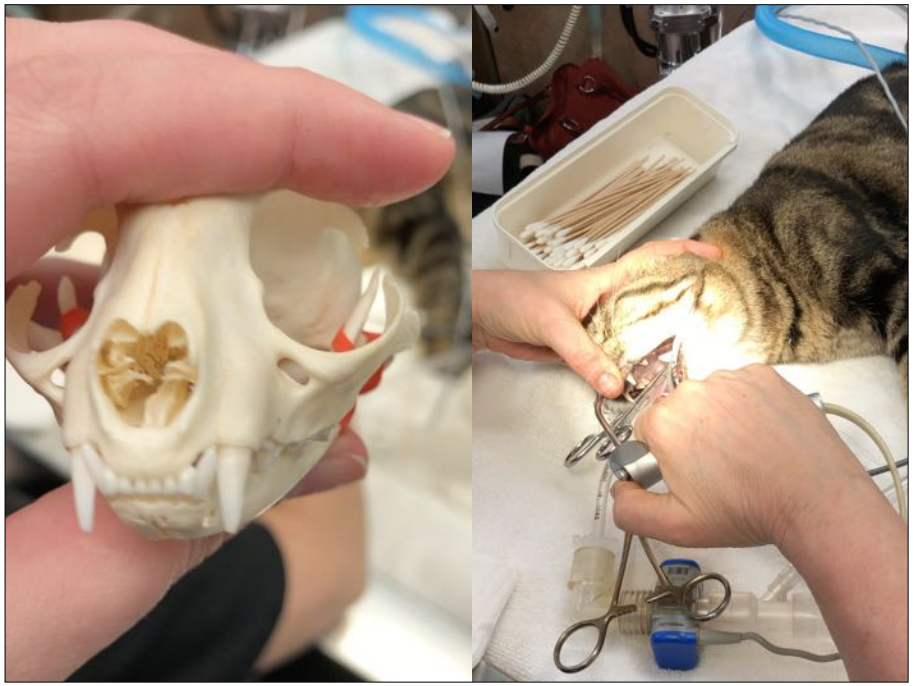


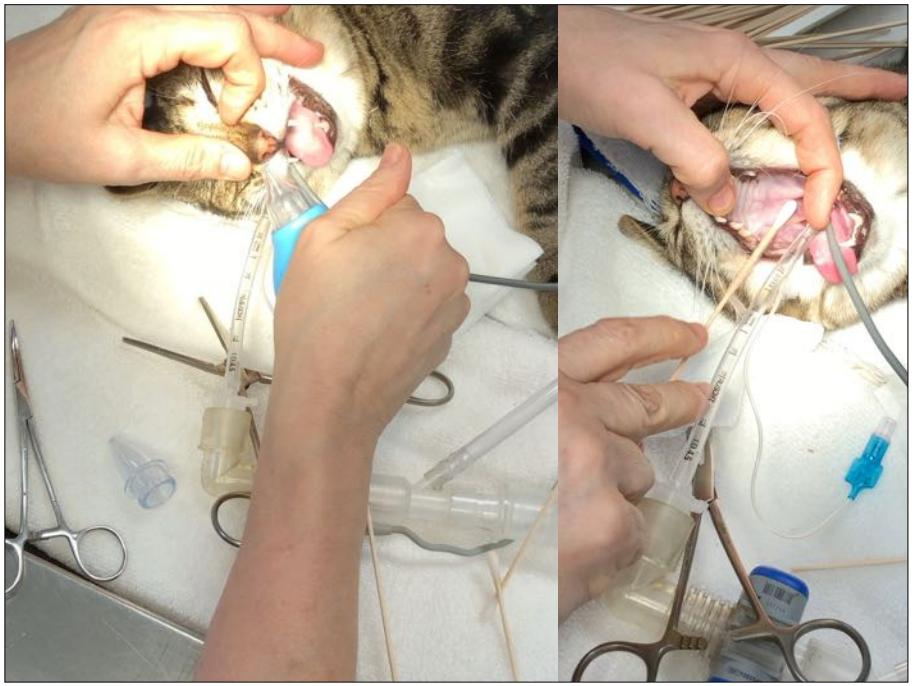





Annotations
Patient
Mouse button function
WL/WW & CLUT
2D/3D
Orientation
Thick Slab
Movie Export
Sync
Propagate
Browse







Palatal Ulceration

- Intermittent hemorrhage
- No visible injury
- Ulceration in region of palatal artery
- Excessive grooming, allergies

Feline Orofacial Pain Syndrome (FOPS)

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- Maladaptive pain which is characterized by an abnormal or excessive response to non or minimally painful stimulus
  - analogous to trigeminal neuralgia in humans
- No neurological signs, motor issues, or sensory deficits
  - Unilateral
  - Pawing at the mouth, exaggerated licking/chewing
  - Mutilation of the tongue, lips, and oral mucosa

Feline Orofacial Pain Syndrome (FOPS)

Feline Orofacial Pain Syndrome (FOPS)

- 88% of 113 cats Burmese, ages 0.5 to 20 yrs (avg age 7)
  - Mean time between episodes is 2 yrs
  - 16% triggered by tooth eruption, but resolved at full dentition
- Treatments performed:
  - Oral treatment aligned with coexisting dental disease
  - Phenobarbital: 88% of treated cats improved
  - Diazepam: 86% of treated cats improved
  - Neither NSAIDs, antibiotics, nor opioids were effective
  - Consider multimodal therapy for neuropathic pain; gabapentin, amitriptyline

Mandibular Symphysis

- Once considered the most common osseous fracture in cats
- Some are mobile (no history of trauma)
  - Watch for physiologic laxity
- Circumferential wiring
- Figure 8 wiring ?
- Splint
- Don't tighten excessively
  - Cause base narrow canines

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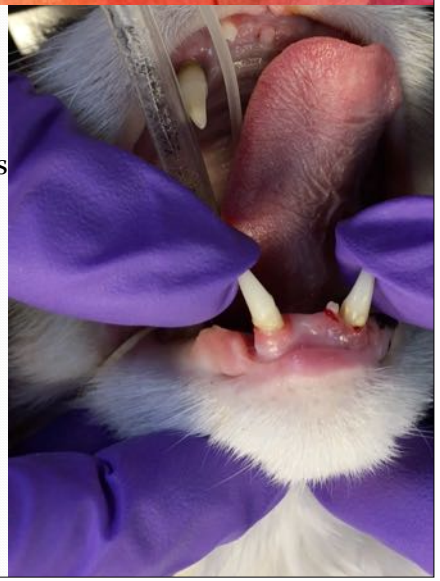
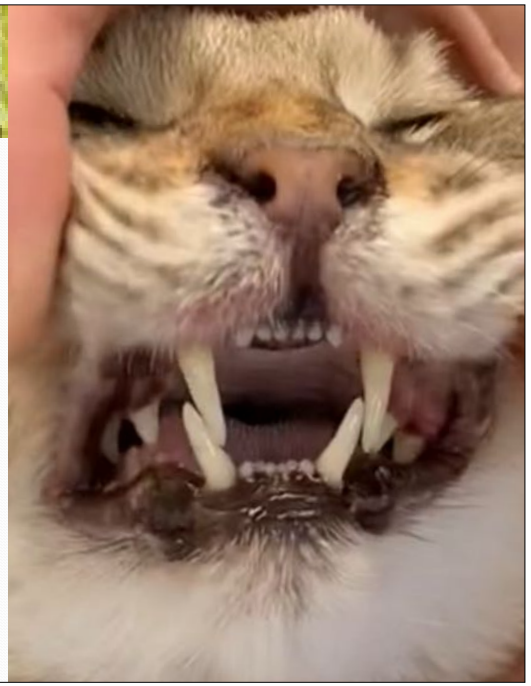


Osseous

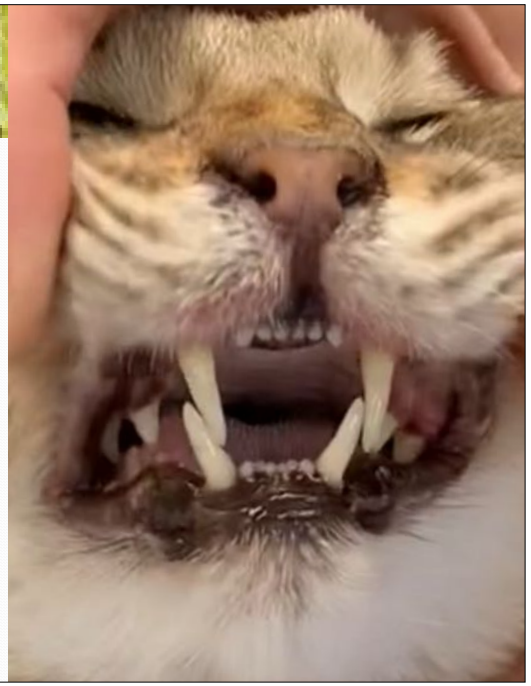
- Determine extent
  - May be multiple; bilateral
  - Always evaluate TMJ
- Mandibular muscle forces
  - Favorable/unfavorable
- OCCLUSION!!!!!
  - Even a slight discrepancy, esp. distal, can significantly change ability to close mouth!
  - Any interference will decrease stability
  - May need pharyngotomy tube - transmylohyoid approach

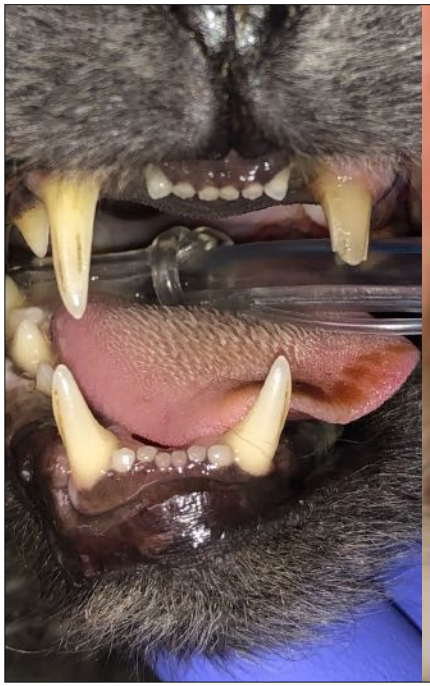
Cannot close mouth; mandibles shifted

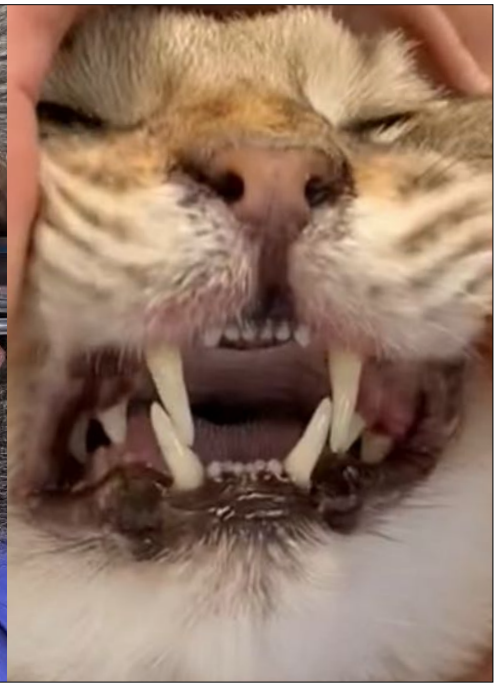


Cannot close mouth; mandibles shifted

- Caudal mandibular fracture?
- TMJ luxation?
- Chronic alveolitis?







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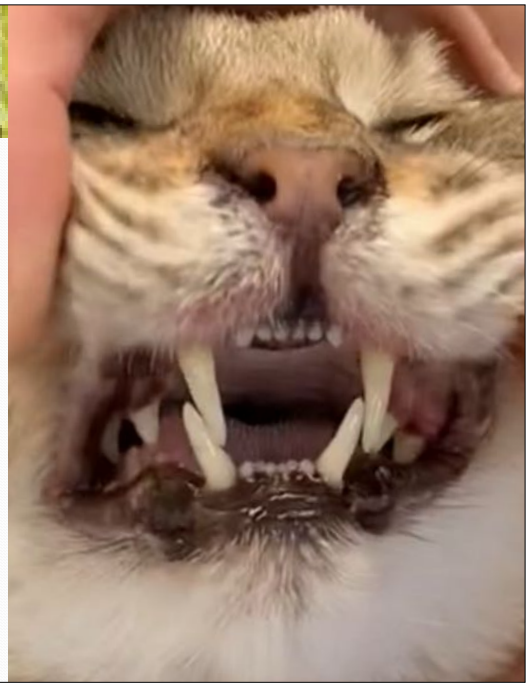
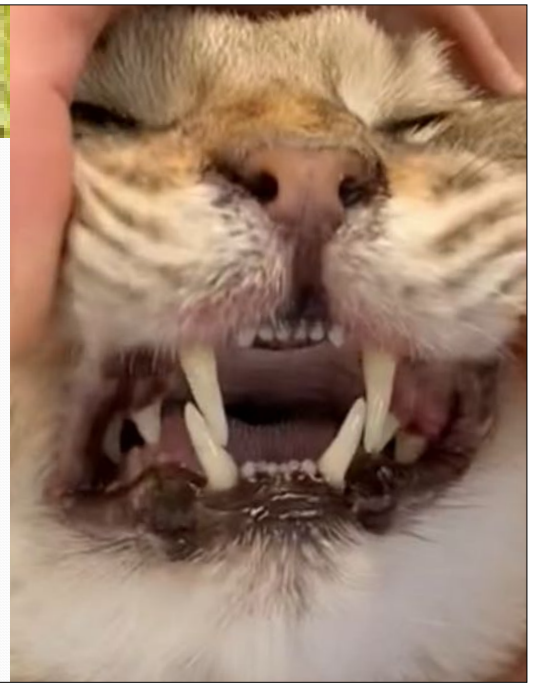


Cannot close mouth; mandibles shifted

- Pain? Which side?
- Chronic alveolitis? - exam can open mouth



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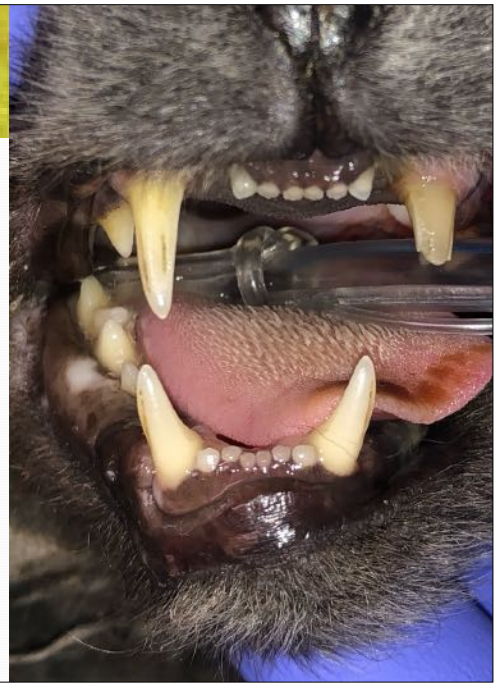
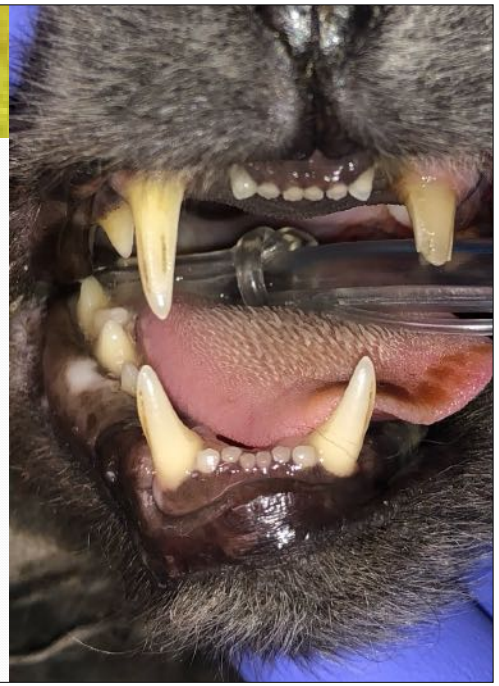


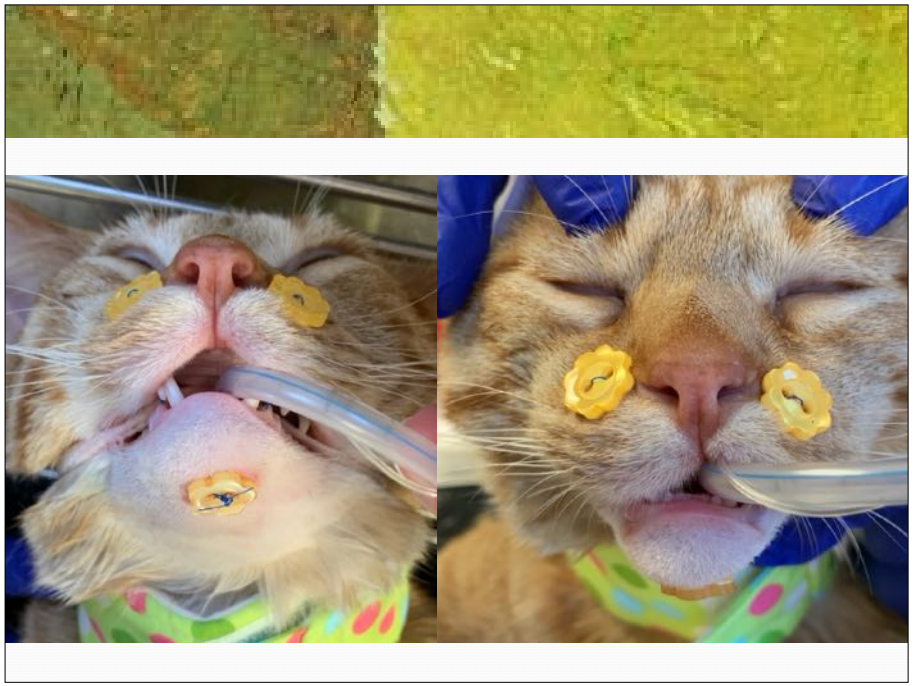
Mandibles shifted

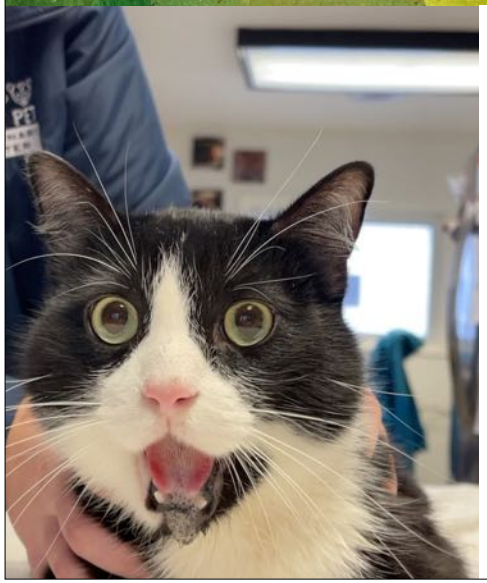
- Towards:
  - TMJ or caudal MN FX
  - ventral lux (uncommon)
- Away:
  - Dorsal TMJ lux



TMJ injury repair choice

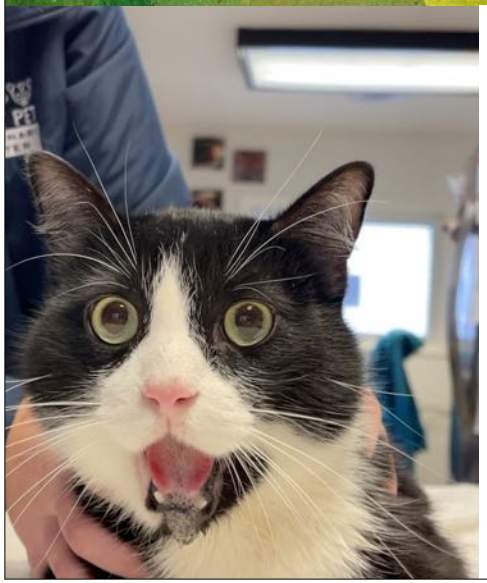
- Labial buttons
  - Two maxillary
  - One mandibular – ventral midline





Flaring of Coronoid Process

- No trauma history
- Mouth locked open
- Under sedation, able to open mouth further, and reduce flare with pressure on bulge
- Laxity in TMJ allows lateral movement/flare



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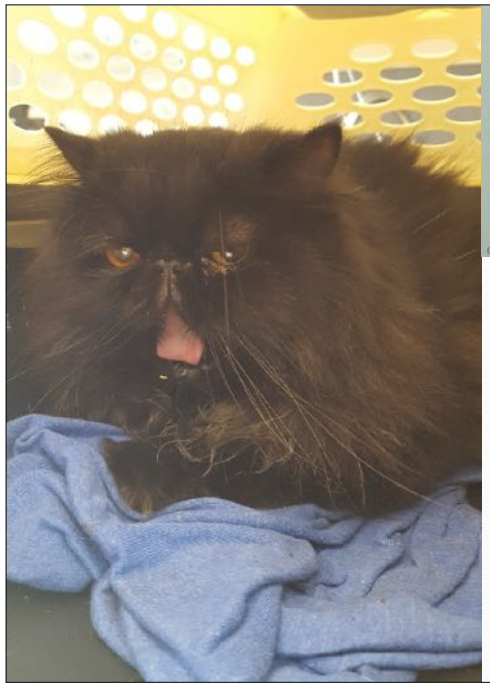
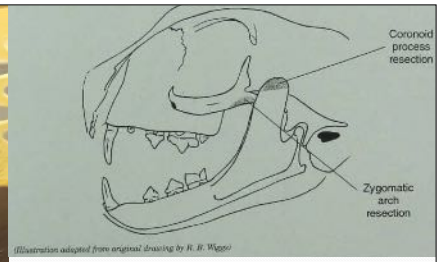
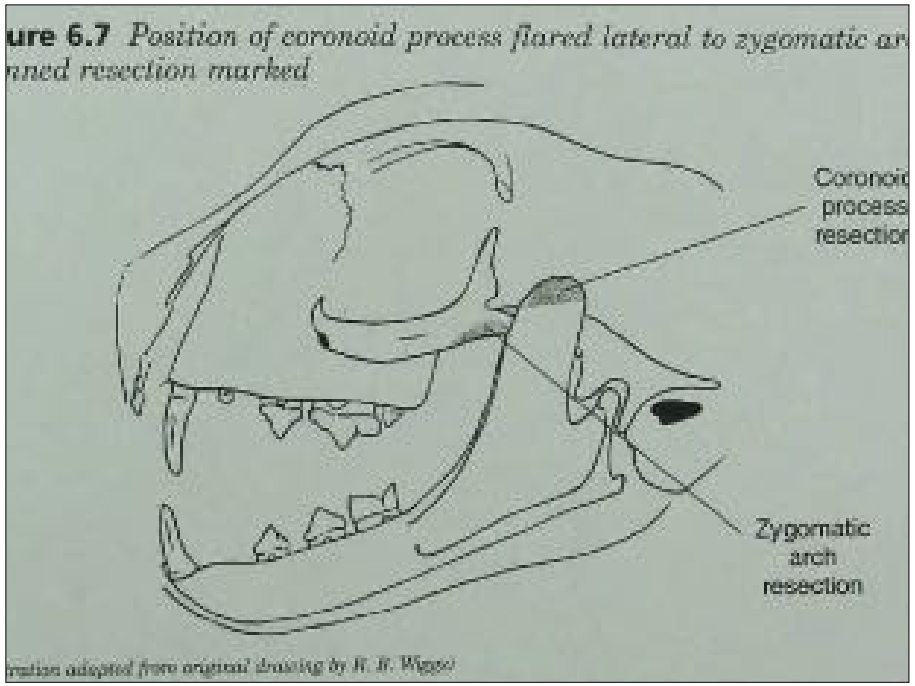
- Under sedation, able to open mouth further, and reduce flare with pressure on bulge
- Laxity in TMJ allows lateral movement/flare





Coronoid Flare Treatment

- Can't stabilize TMJ
- Remove chance of locking
  - Resection dorsal portion of coronoid process
  - Resection ventral portion of zygomatic arch



Challenges of Feline Dentistry

- Cats can be unique
- Unusual presentations
- Challenging to manage
- Only 30 teeth to treat
- While they may not thank you, their owners will!

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THANK YOU

We welcome your questions and feedback.
ce@tooth.vet