Advances in Feline Sinonasal Neoplasia

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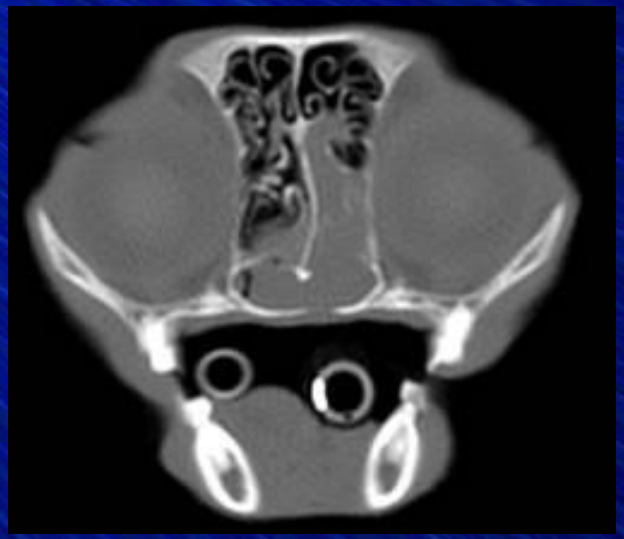
Introduction

- Sinonasal neoplasia: Etiology
  - Humans
    - EBV, smoking, occupational
  - Dogs
    - Second-hand smoke?
    - Breed
  - Cats
    - Unknown
    - Breed – Siamese
    - Chronic rhinitis?

Introduction

- Sinonasal neoplasia:
  - Uncommon in cats
    - Less than 1% of all feline cancers
  - Invasive and painful
    - Negatively impact QOL
    - Decrease sense of smell
    - Bone, CNS
  - Poor survival if untreated
    - Recent study in dogs



Introduction (cont'd)

- Feline sinonasal neoplasia
  - Carcinomas & lymphomas > sarcomas (≠ dogs!)
    - Most lymphomas are of B lymphocytes
    - Not linked to retroviral status
  - Limited information in the literature
    - ST with standard therapy
      - < 30 cases treated with megavoltage RT
    - Benefit from chemo?
    - No CT-based staging as in dogs

Clinical presentation

- Most typical signs:
  - Nasal d/c: serous, mucopurulent, epistaxis, …
  - Sneezing, stertor and other UR noises
  - Facial deformity
  - Epiphora
  - Non specific: anorexia, lethargy
- Duration of days to many months
  - Often “responded” temporarily to empirical Tx

Facial deformity - carcinoma

Facial deformity - lymphoma

Other clinical signs

- Melena
  - Epistaxis with ‘post-nasal drip’
- Exophthalmia or enophthalmia
  - Orbital involvement
- CNS signs
  - Tumor invading through cribriform plate
  - Behavior changes, seizures, …

Clinical presentation (cont'd)

- In our experience (n = 38 cats)
  - Carcinomas
    - Seen in older cats (median 13.5 years)
    - No breed or sex predisposition
    - Lead + often to epistaxis
  - Lymphomas
    - Seen in younger cats (median 11 years)
    - Possibly Siamese overrepresented
      - Sometimes very young
    - Lead + often to anorexia

Differential diagnoses

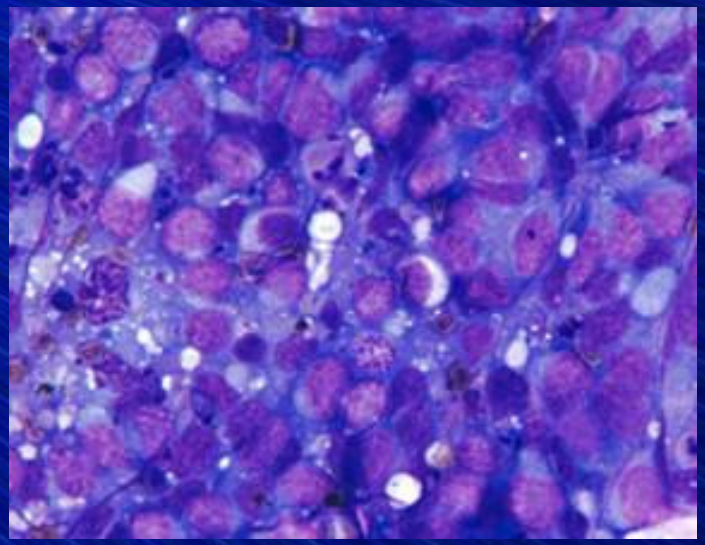
- Cryptococcosis (mucopurulent)
- Viral rhinitis (serous to mucopurulent)
- Chronic inflammatory rhinitis (serous to mucoporulent)
  - Can be fairly destructive!
- Foreign object (mucoporulent)
- Coagulation defects (epistaxis)
- Hypertension (epistaxis)

Diagnosis and staging

- Complete physical exam:
  - Facial symmetry
  - Eyes retropulsed in orbits
  - Regional lymph nodes
  - Oral examination
  - Signs of pain
    - Palpation, opening mouth
  - Cranial nerves
- General bloodwork and U/A

Diagnosis and staging

- Exfoliative cytology of nasal d/c or flushed material?
  - May be useful for lymphoma cryptococcosis
  - Often not rewarding

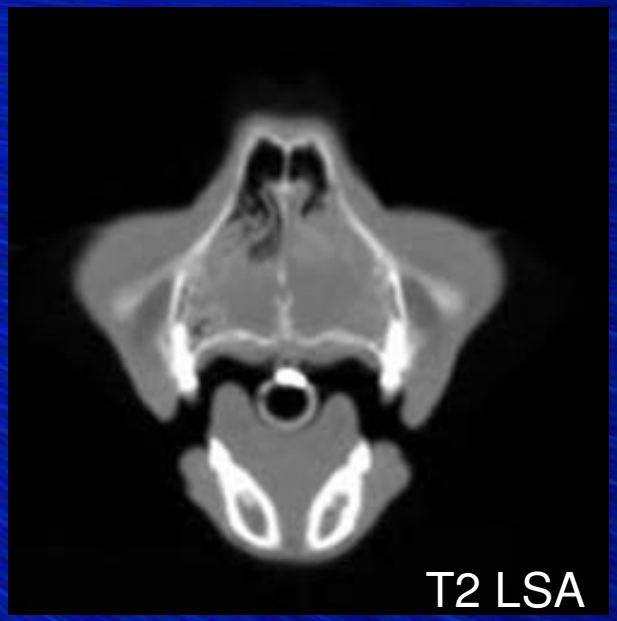


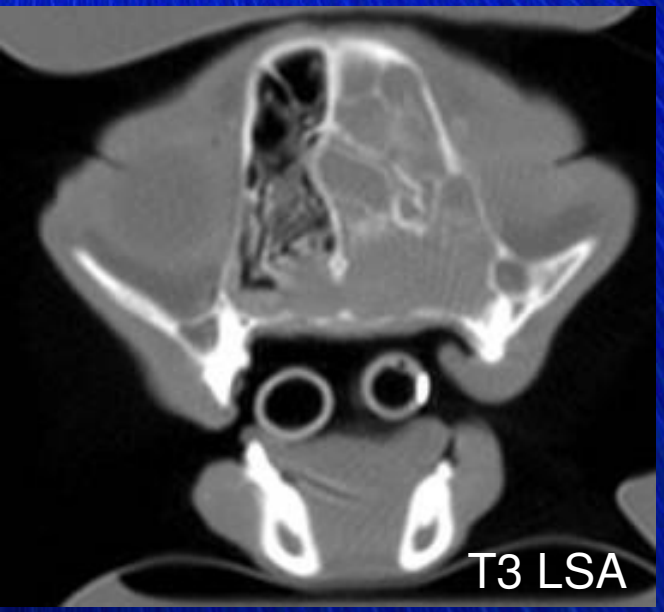
- Radiographs
  - May help – soft-tissue opacity, bone lysis
  - Bulla

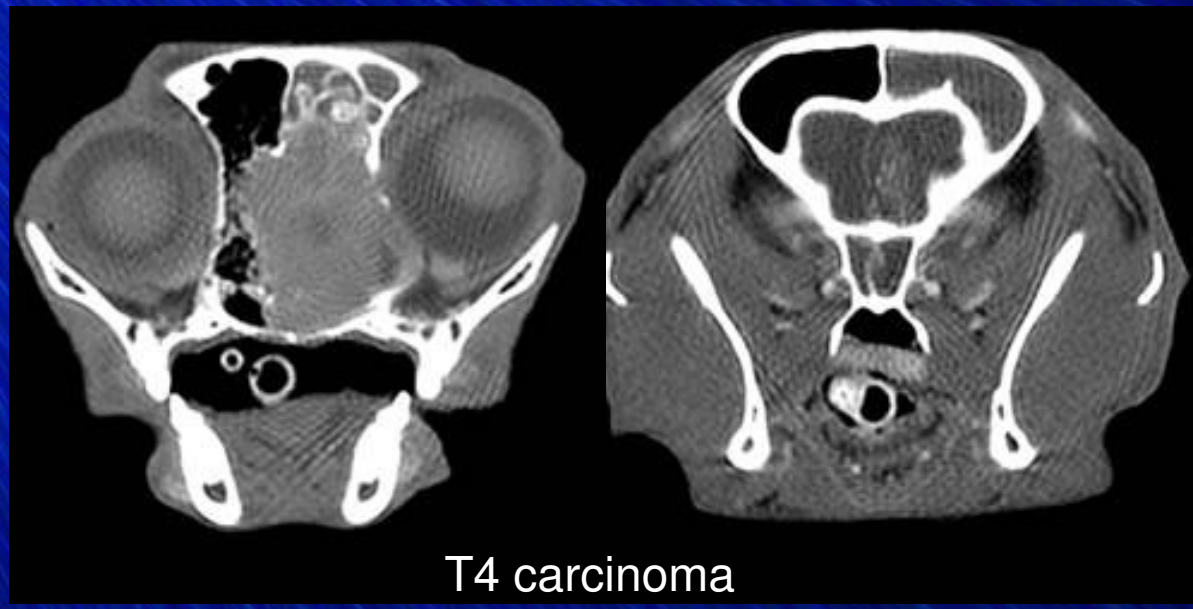
Diagnosis and staging

- Definitive = histopathology
  - Biopsy techniques
- Advanced imaging – CT or MRI
  - Better detail
  - RT planning
  - No recognized staging system in cats
- Rhinoscopy?
  - Biopsy size

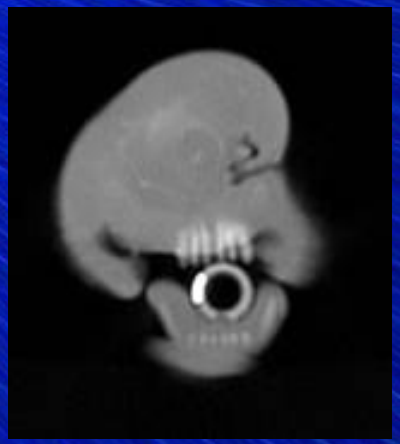
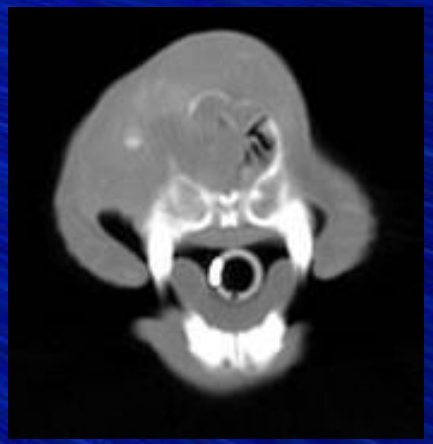

T1 CSA

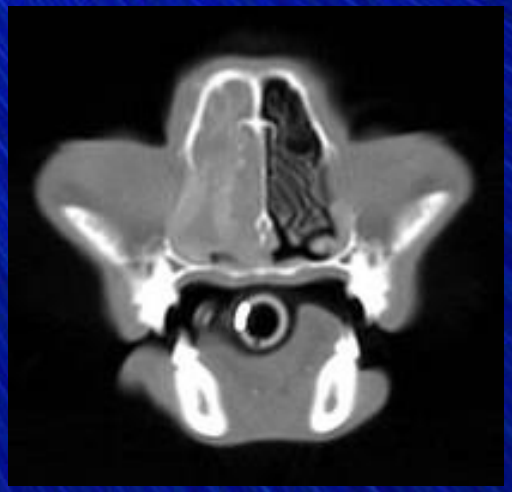

T2 LSA


T3 LSA


T4 carcinoma

Physical exam *vs.* CT:
Sugar's lymphoma




Diagnosis and staging (cont'd)

- Blind biopsies
  - After advanced imaging
- Regional lymph node evaluation
- Chest radiographs
- Bloodwork, U/A, abdominal U/S
- Retroviral status?
- Extranasal disease is rare

Therapy and prognosis

- Surgery?
  - Select cases
  - Ventral *vs.* dorsal rhinotomy
    - Ventral = well tolerated
  - Generally not used alone
    - One study (*CVJ* 2006)
    - Only 5 cats with neoplasia
    - Good survival with Sx

Therapy and prognosis (cont'd)

- Radiation therapy
  - Few published studies
    - Totaling only 28 cases (megavoltage)
    - Median ST 12-14 months
  - Unpublished – our experience
    - 37 cats with sinonasal tumors
    - 18 carcinomas, 16 lymphomas, 3 sarcomas
    - 3 cats had rhinotomies
    - Most treated with fractionated protocols

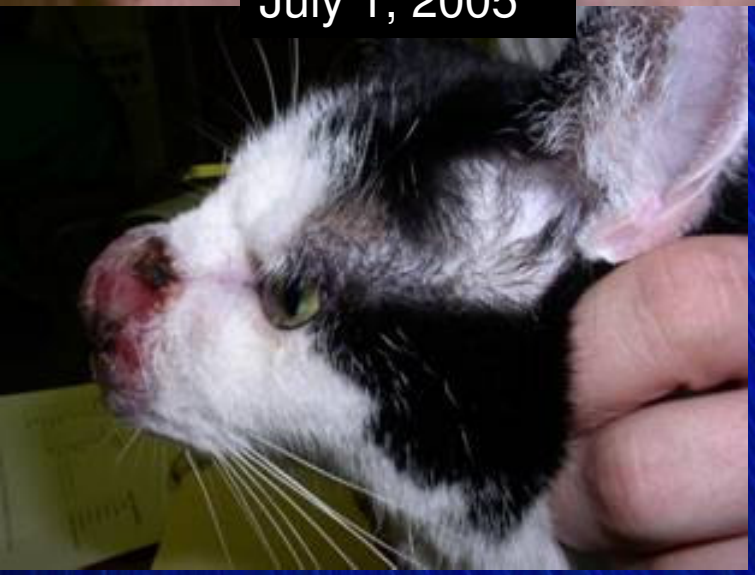
Therapy – RT (cont'd)

- Our experience (cont'd)
  - Most cats did not receive chemotherapy
  - Over 20 months median ST for LSA and carcinomas
  - Very good response in sarcomas (n = 3)
- Benefit of adding chemo?

- Other study on > 100 cats with lymphoma
  - RT is what helps most for survival
  - Less than 5% fail at other sites
  - Chemo may not make big difference?

Pre *vs.* post RT

July 1, 2005



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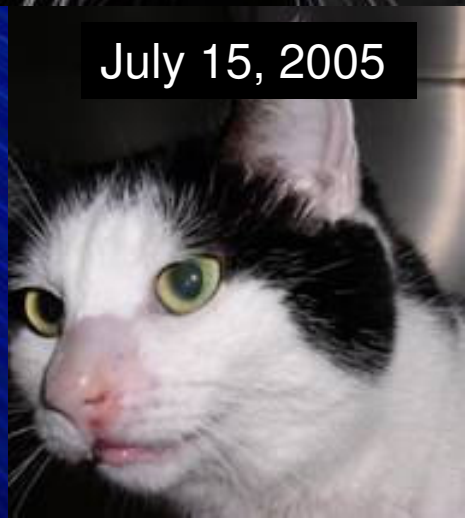

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Therapy and prognosis

- Chemotherapy?
  - Benefit uncertain
  - Only for lymphoma?
    - As sole therapy, ST of few Months typically reported

Palliative & supportive therapy

- Decreased QOL from nasal congestion, pain, decreased appetite, impaired breathing.
  - Nutritional intake
    - Feeding tubes if needed before/during RT
  - Analgesic therapy
    - Oral (various), transmucosal, IV, bisphosphonates
  - Antibiotic therapy – chronic rhinitis post RT
    - Azithromycin, others

Conclusions
Feline Sinonasal Neoplasia

- Not very common
- May take a long time before Dx
- Most common are LSA and carcinomas
- Good response to RT
  - Fair prognosis (12-20 months)
- True benefit of chemo unknown

Questions?