

## Canine Oral Tumors – A Review

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**Malignant Melanoma** – most common tumor, highly metastatic to regional lymph nodes and lungs, most dogs die within one year of diagnosis regardless of therapeutic modality used.

- Therapy
  - Surgery – if complete resection, dogs will still die of metastasis
  - Radiation Therapy – High dose, coarsely fractionated therapy has been shown in two studies to induce complete remission (CR) without surgery. Dogs still die of metastasis.
  - Photodynamic Therapy
  - Cryotherapy
  - Intralesional cisplatin (50% Response) – Survival median 51 weeks
  - Gene Therapy: Still experimental, but injections of gm-csf gene and *Staphylococcal* toxin gene (lymphocyte lymphocyte recruiter) into melanomas has produced CR and partial responses.
- Prognostic Factors: < 2 cm diameter live longer – 511 days (post-surgery or post-surgery and immunotherapy). > 2 cm tumors – 164 days. Degree of pigmentation is not prognostic

**Squamous Cell Carcinoma** – intraoral location is prognostic, rostral is better than caudal, (tonsil is highly metastatic), the rate of metastases increases the more caudal in the mass.

- Therapy
  - Surgery – mandibulectomy/maxillectomy
  - Radiation -- +/- hyperthermia
  - Cryotherapy
  - Photodynamic therapy

**Fibrosarcoma** – very locally invasive, surgery often incomplete, typical recurrence within 7-12 months, and radiation postoperatively will delay recurrence.

Radiation/hyperthermia alone has produced 50% one-year disease free interval. If tumor is very anaplastic or poorly differentiated, chemotherapy (doxorubicin/dacarbazine) can be effective.

**Epulides** – all arise from periodontal ligament stroma. Do not metastasize.

- **Acanthomatous** – most invasive, bone invasion common, wide surgical excision usually curative. Orthovoltage and radiotherapy also curative (3/39 had recurrence).

In 7 of 71 irradiated dogs, a malignant tumor (SCC, OSA, FSA) formed at the irradiated site.

One report of chemotherapy in previously eradicated recurrent AE, (doxorubicin/cyclophosphamide) produced a CR. Photodynamic therapy effective (no duration of remission reported).

- **Fibromatous** – most common, usually non-invasive, occasionally cause osteolysis. Surgical excision, cryotherapy, radiotherapy effective.
- **Ossifying** – similar to fibromatous, except mineralization more typical on radiographs

**Odontogenic tumors** (ameloblastomas, odontomas) – wide surgical excision, radiotherapy was ineffective in  $\frac{3}{4}$  ameloblastomas.



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