

Cutaneous oncology

Introduction to tumors

Tumors

- In decreasing order of prevalence:
 - Skin and soft tissue
 - mammary gland
 - haematopoietic and lymphoproliferative
 - urogenital
 - endocrine
 - gastroenteric – oropharinx

Incidence and prevalence

- Up to >20% of death are linked to tumors in dogs
- 6x more common in dogs than in cats
- Tumors peak age: 6-14 y

Skin tumors

- Cutaneous tumors peak age : 10.5 y (dogs); 12 y (cats)
- Breeds over-represented: boxers, Scottish terriers, Persians, siamese
- Purebred dogs and cats have 2-fold higher incidence of malignant tumours (all tumors)

Most common skin neoplasia

- **Dogs:**

- lipoma,
- sebaceous gland hyperplasia,
- mast cell tumor,
- histiocytoma
- papilloma (squamous papilloma and fibropapilloma)

- **Cats:**

- basal cell tumor,
- squamous cell carcinoma,
- mast cell tumor,
- fibrosarcoma

Skin tumors

Dogs versus Cats

- **Dogs:**
- Skin is the most common site (30%)
- benign (75%) > malignant (25%)
- 55% mesenchimal,
- 40% epithelial
- 5% melanocytic

- **Cats:**
- Skin is the second most common (20%, first lymphoid).
- malignant (75%) > benign (25%)
- 50% epithelial
- 48% mesenchimal
- 2% melanocytic

Epithelial tumors

- dogs:
 - Hepathoid gland adenoma (27%)
 - Sebaceous adenoma (12%)
 - Trichoepithelioma (12%)
 - Trichoblastoma (11%)

- cats:
 - Trichoblastoma (34%)
 - Squamous cell carcinoma (23%)

Mesenchimal and round cell tumors

- dogs:
 - Histiocytoma (24%)
 - Mast cell tumour (20%)
 - Lipoma (16%)
 - Sheath tumour (haemangiopericytoma) (14%)

- cats:
 - Fibrosarcoma (36%)
 - Mast cell tumour (20%)
 - Lipoma (16%)

Anatomical distribution and age

- Anatomical distribution:
 - Trunk 30%
 - Head and neck 20%
 - Extremities 20%
 - Perianal area 9%
 - Tail 4%
- Age:
 - 2 months to 19 years
 - Mean age of 10
 - Odds of tumour malignancy increases by a factor of 1.1 per year

Characteristics of malignancy

- Sudden onset
- Rapid growth
- Infiltration (-> ! mortality !)
- Recurrence
- Metastasis (-> ! mortality !)

Cutaneous tumors

- **Epithelial tumors:** originate from the keratinocytes of epidermis and Hair follicle
- **Mesenchymal tumors:** cells of the dermis or subcutis (vessels, fat, fibrous tissue, muscles, nervous system)
- **Round cells tumors** arise from cells (mast cells, melanocytic, histiocytic, lymphocytic and plasmacytic cells) that reside in the epidermis and dermis

