Common Canine Cancers
Why do we care & what to look for at home

BRIAN HUSBANDS, DVM, DIPLOMATE ACVIM
ASSOCIATE CLINICAL PROFESSOR
COLLEGE OF VET MED
U OF MN
DEVOTED AMERICAN WATER SPANIEL OWNER
Why do we care?

- Leading cause of death
  - 50% of all dogs
  - Rate increases with age
- Often treatable and some can be cured if detected early
Veterinary Medical Database

- What is this?
- How is it helpful?

- Results for AWS query
  - 117 disorders in 36 AWS's
  - Few cancers reported
  - Why?
Genetics and Predisposition for Cancer
Genetics and Predisposition for Cancer

- Cocker Spaniels
  - Benign tumors – sebaceous adenoma
  - Malignant tumors – some oral cancers, mammary & anal sac cancer and lymphoma

- AWS
  - NOT SURE
Early Detection

- Small tumors = easier to treat
- May be less likely to have spread
- Given the chance, cancer will get worse

- WHY WAIT, SAMPLE/TEST NEW MASSES
## Table 2: Most common types of malignant and benign neoplasms in dogs recorded in the Danish Veterinary Cancer Registry

<table>
<thead>
<tr>
<th>Type of neoplasm</th>
<th>Diagnostic method</th>
<th>Type (% of all neoplasms)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Histology (% of type)</td>
<td>Cytology (% of type)</td>
</tr>
<tr>
<td><strong>Malignant</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adenocarcinoma</td>
<td>49</td>
<td>49</td>
</tr>
<tr>
<td>Mast cell tumour</td>
<td>53</td>
<td>44</td>
</tr>
<tr>
<td>Lymphoma</td>
<td>38</td>
<td>53</td>
</tr>
<tr>
<td>Mammary tumour, malignant</td>
<td>72</td>
<td>25</td>
</tr>
<tr>
<td>Soft tissue sarcoma</td>
<td>65</td>
<td>28</td>
</tr>
<tr>
<td>Carcinoma</td>
<td>54</td>
<td>39</td>
</tr>
<tr>
<td>Malignant melanoma</td>
<td>75</td>
<td>25</td>
</tr>
<tr>
<td>Total malignant</td>
<td>40</td>
<td>38</td>
</tr>
<tr>
<td><strong>Benign</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lipoma</td>
<td>12</td>
<td>84</td>
</tr>
<tr>
<td>Adenoma</td>
<td>59</td>
<td>39</td>
</tr>
<tr>
<td>Histiocytoma</td>
<td>47</td>
<td>51</td>
</tr>
<tr>
<td>Mammary tumour, benign</td>
<td>85</td>
<td>9</td>
</tr>
<tr>
<td>Papilloma</td>
<td>62</td>
<td>29</td>
</tr>
<tr>
<td>Total benign</td>
<td>50</td>
<td>45</td>
</tr>
</tbody>
</table>

*Other diagnostic modalities include clinical examination, flow cytometry and diagnostic imaging

**Papers**

Data from the Danish Veterinary Cancer Registry on the occurrence and distribution of neoplasms in dogs in Denmark

L. B. Branden, S. S. Nielsen, N. Toft, A. I. Kristensen

2010
Top 10 cancers seen in dogs

**Figure 1:** Incidence of specific types of canine neoplasia. From [12] (Pink bars denote malignant tumours, blue benign lesions).
Top 5 Benign Tumors Seen in Dogs

- Lipoma
- Sebaceous Adenoma
- Histiocytoma
- Mammary adenoma
- Papilloma

Benign tumors are more common
Lipoma
Sebaceous Adenoma
Histiocytoma
Top 5 malignant cancers seen in dogs

- Mast Cell Tumor - skin
- Soft Tissue Sarcoma – skin or under the skin
- Lymphoma – lymph nodes, but anywhere
- Osteosarcoma - bones
- Mammary Carcinoma – mammary tissue
Mast Cell Tumors
Mast Cell Tumors

- Most commonly affect the skin
- Can develop in other tissues
- Surgery has the potential to cure
- Some breeds are predisposed, but common in all dogs
Soft Tissue Sarcoma
Soft Tissue Sarcoma
Soft Tissue Sarcoma
Soft Tissue Sarcomas

- Most commonly affect the skin or under the skin
- Can develop in other tissues
- Surgery has the potential to cure
Lymphoma
Lymphoma

- Most often affects the lymph nodes (all lymph nodes are enlarged)
- Can affect any tissues in the body
- Treatment helps 80-90% of patients
- Cure rates are low
Lymph node locations
SUC C ESS STORIES

KODI

TUCKER
Osteosarcoma

- More common in large dogs
- Most common bone cancer
- Very painful
- Aggressive behavior – high chance of spread
Mammary Gland Cancer
Mammary Gland Cancer

- 50% are benign and 50% can behave more aggressively
- Potential to spread/metastasize
- Dogs with smaller tumors have better outcomes
Top 10 Warning Signs of Cancer

- Abnormal swellings or lumps that continue to grow
- Sores that do not heal
- Weight loss
- Loss of appetite
- Bleeding or persistent discharge
- Strong persistent odor
- Difficulty eating/swallowing
- Loss of stamina
- Persistent limping
- Difficulty breathing, urinating, or defecating
Top 10 Warning Signs of Cancer

- Abnormal swellings or lumps that continue to grow
- Sores that do not heal
- Weight loss
- Loss of appetite
- Bleeding or persistent discharge
- Strong persistent odor
- Difficulty eating/swallowing
- Loss of stamina
- Persistent limping
- Difficulty breathing, urinating, or defecating
Top 10 Warning Signs of Cancer

- Abnormal swellings or lumps that continue to grow
- Sores that do not heal
- Weight loss
- Loss of appetite
- Bleeding or persistent discharge
- Strong persistent odor
- Difficulty eating/swallowing
- Loss of stamina
- Persistent limping
- Difficulty breathing, urinating, or defecating
Top 10 Warning Signs of Cancer

- Abnormal swellings or lumps that continue to grow
- Sores that do not heal
- Weight loss
- Loss of appetite
- Bleeding or persistent discharge
- Strong persistent odor
- Difficulty eating/swallowing
- Loss of stamina
- Persistent limping
- Difficulty breathing, urinating, or defecating
Top 10 Warning Signs of Cancer

- Abnormal swellings or lumps that continue to grow
- Sores that do not heal
- Weight loss
- Loss of appetite
- Bleeding or persistent discharge
- Strong persistent odor
- Difficulty eating/swallowing
- Loss of stamina
- Persistent limping
- Difficulty breathing, urinating, or defecating
Top 10 Warning Signs of Cancer

- Abnormal swellings or lumps that continue to grow
- Sores that do not heal
- Weight loss
- Loss of appetite
- Bleeding or persistent discharge
- Strong persistent odor
- Difficulty eating/swallowing
- Loss of stamina
- Persistent limping
- Difficulty breathing, urinating, or defecating
Top 10 Warning Signs of Cancer

- Abnormal swellings or lumps that continue to grow
- Sores that do not heal
- Weight loss
- Loss of appetite
- Bleeding or persistent discharge
- Strong persistent odor
- Difficulty eating/swallowing
- Loss of stamina
- Persistent limping
- Difficulty breathing, urinating, or defecating
Top 10 Warning Signs of Cancer

- Abnormal swellings or lumps that continue to grow
- Sores that do not heal
- Weight loss
- Loss of appetite
- Bleeding or persistent discharge
- Strong persistent odor
- Difficulty eating/swallowing
- Loss of stamina
- Persistent limping
- Difficulty breathing, urinating, or defecating
Top 10 Warning Signs of Cancer

- Abnormal swellings or lumps that continue to grow
- Sores that do not heal
- Weight loss
- Loss of appetite
- Bleeding or persistent discharge
- Strong persistent odor
- Difficulty eating/swallowing
- Loss of stamina
- Persistent limping
- Difficulty breathing, urinating, or defecating
Top 10 Warning Signs of Cancer

- Abnormal swellings or lumps that continue to grow
- Sores that do not heal
- Weight loss
- Loss of appetite
- Bleeding or persistent discharge
- Strong persistent odor
- Difficulty eating/swallowing
- Loss of stamina
- Persistent limping
- Difficulty breathing, urinating, or defecating
Top 10 Warning Signs of Cancer

- Abnormal swellings or lumps that continue to grow
- Sores that do not heal
- Weight loss
- Loss of appetite
- Bleeding or persistent discharge
- Strong persistent odor
- Difficulty eating/swallowing
- Loss of stamina
- Persistent limping
- Difficulty breathing, urinating, or defecating
Top 10 Warning Signs of Cancer

- Abnormal swellings or lumps that continue to grow
- Sores that do not heal
- Weight loss
- Loss of appetite
- Bleeding or persistent discharge
- Strong persistent odor
- Difficulty eating/swallowing
- Loss of stamina
- Persistent limping
- Difficulty breathing, urinating, or defecating
In addition

- Intact females OR those spayed after 2-3 heat cycles
  - Feel all mammary tissue once a month
- Look in the mouth
- All dogs over 7 years
  - At annual veterinary visits, ask to have a rectal exam performed
  - Nobody likes having this done…but early detection!!
Other things to consider

- Clinical trials
- Pet Insurance
- Consider a veterinary registry for AWS
Cancer Research

- NATIONAL
  - Morris Animal Foundation
  - AKC/Canine Health Foundation
  - ACVIM Foundation
  - Veterinary Cancer Society
- Locoregional
  - Modiano Lab
  - Others dependent on location
Thank you to Mary Kangas!!

- I would not be an AWS fan today without her!
Questions