



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

Top 10 cancers seen in dogs

TABLE 2: Most common types of malignant and benign neoplasms in dogs recorded in the Danish Veterinary Cancer Registry

Type of neoplasm	Diagnostic method			Type (% of all neoplasms)
	Histology (% of type)	Cytology (% of type)	Other (% of type)*	
Malignant				
Adenocarcinoma	49	49	2	8
Mast cell tumour	53	44	3	7
Lymphoma	38	53	9	6
Mammary tumour, malignant	72	25	3	6
Soft tissue sarcoma	65	28	7	6
Carcinoma	54	39	7	5
Malignant melanoma	75	25	0	2
Total malignant	40	38	10	38
Benign				
Lipoma	12	84	4	11
Adenoma	59	39	2	10
Histiocytoma	47	51	3	6
Mammary tumour, benign	85	9	5	6
Papilloma	62	29	9	2
Total benign	50	45	17	45

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

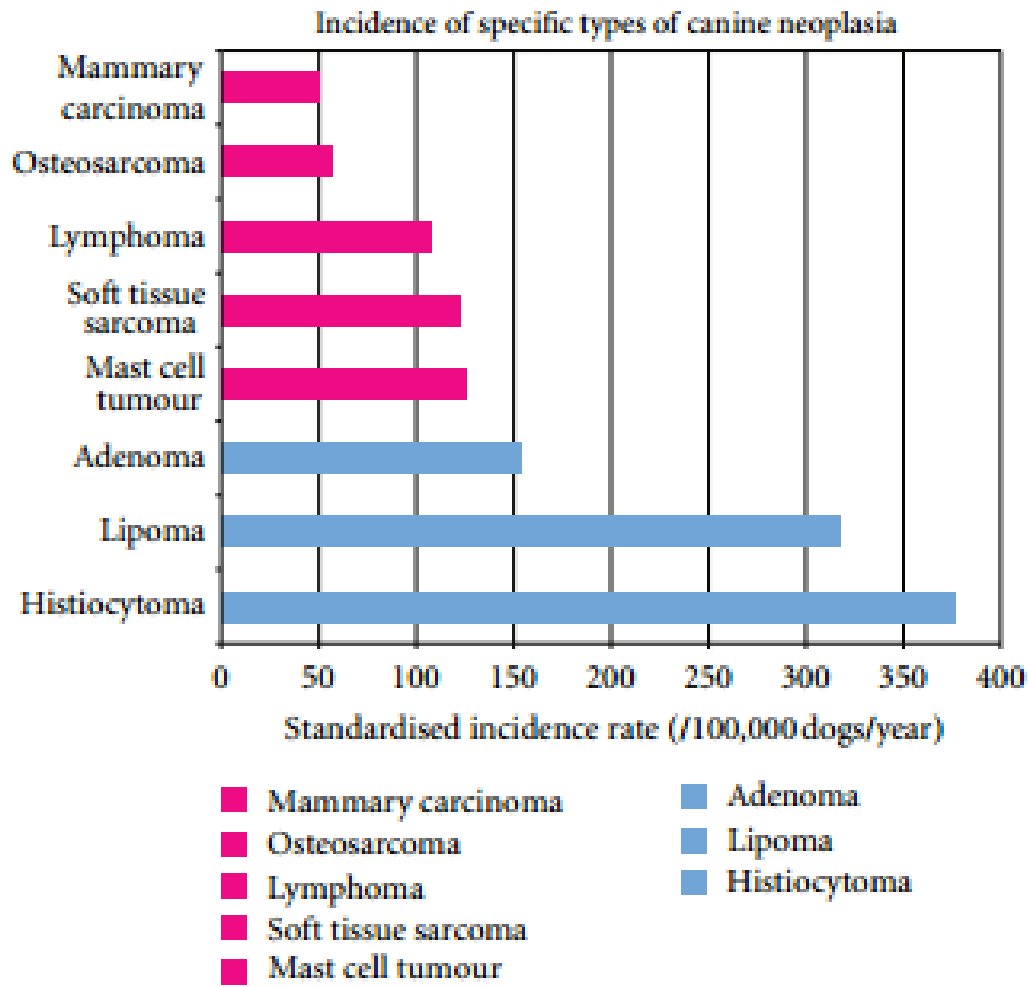
Papers

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

L. B. Bronden, S. S. Nielsen, N. Toft, A. T. Kristensen

2010

Top 10 cancers seen in dogs



Review Article

Breed-Predispositions to Cancer in Pedigree Dogs

Jane M. Dobson

2013

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

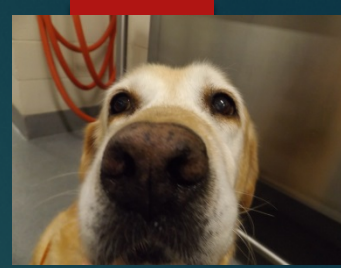
Mast Cell Tumors



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



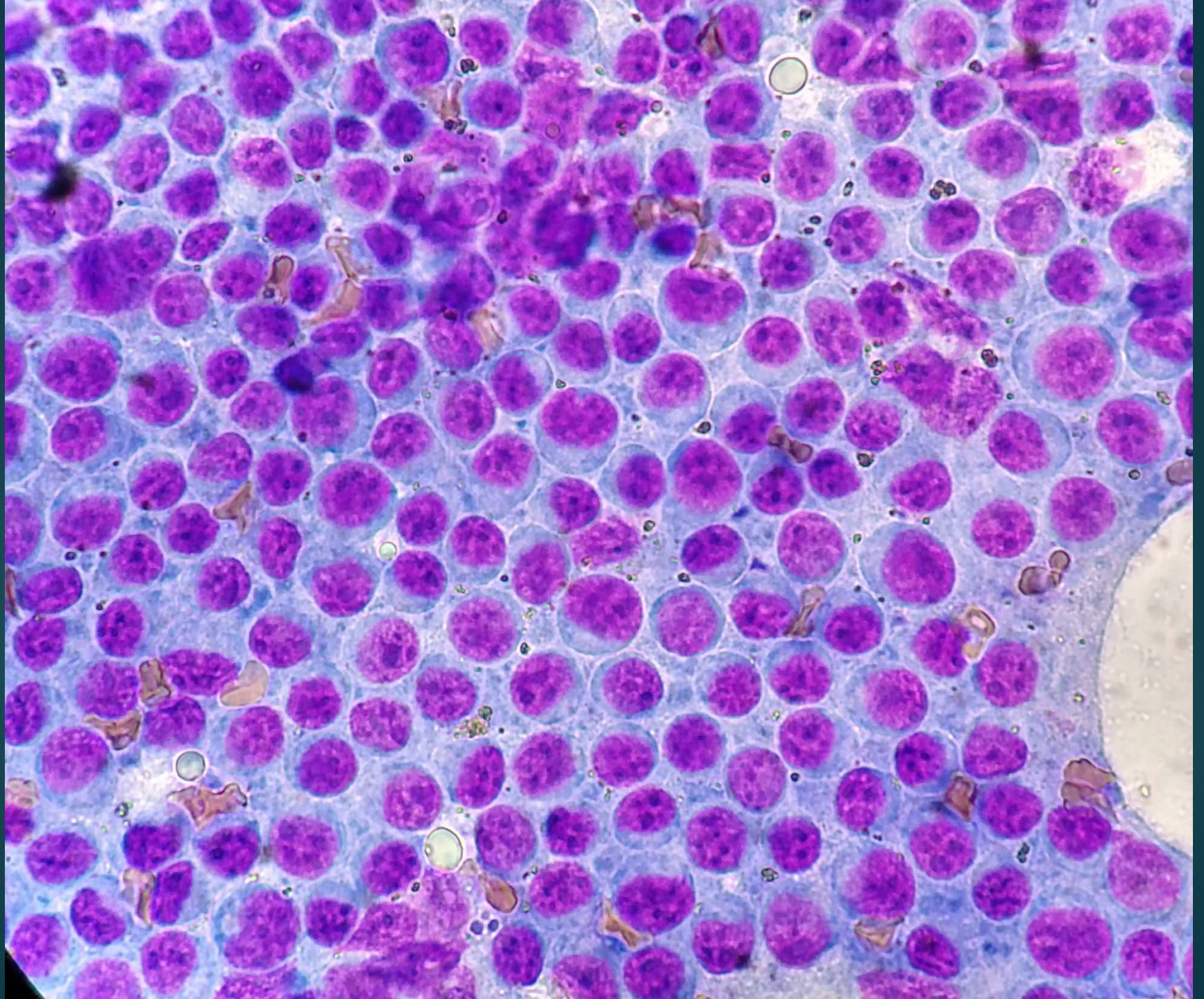
Lymphoma

- ▶ 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



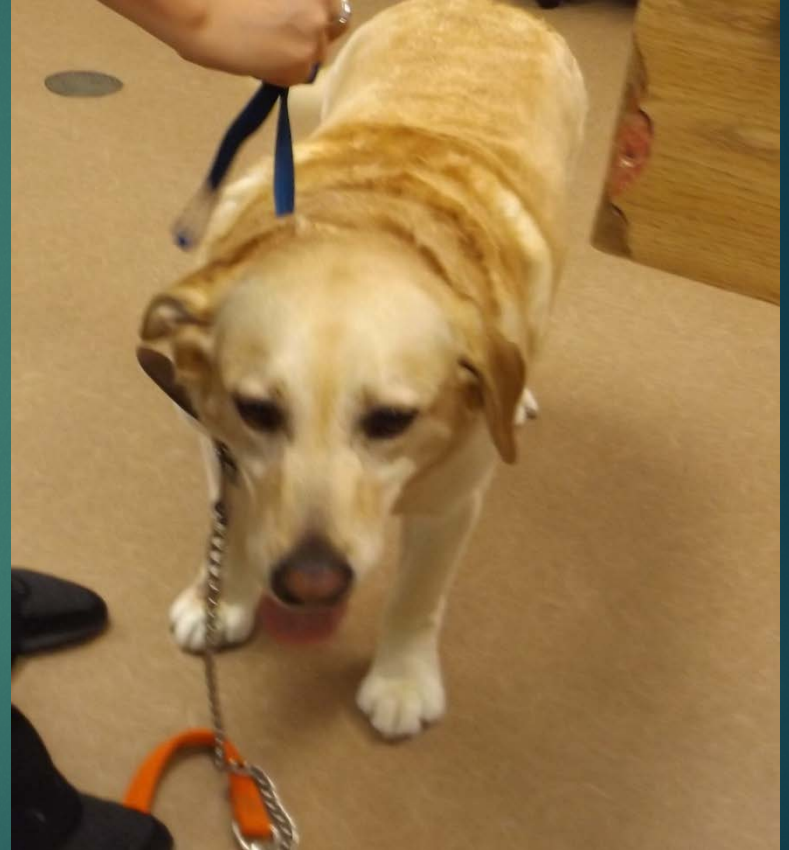




SUCCESS STORIES



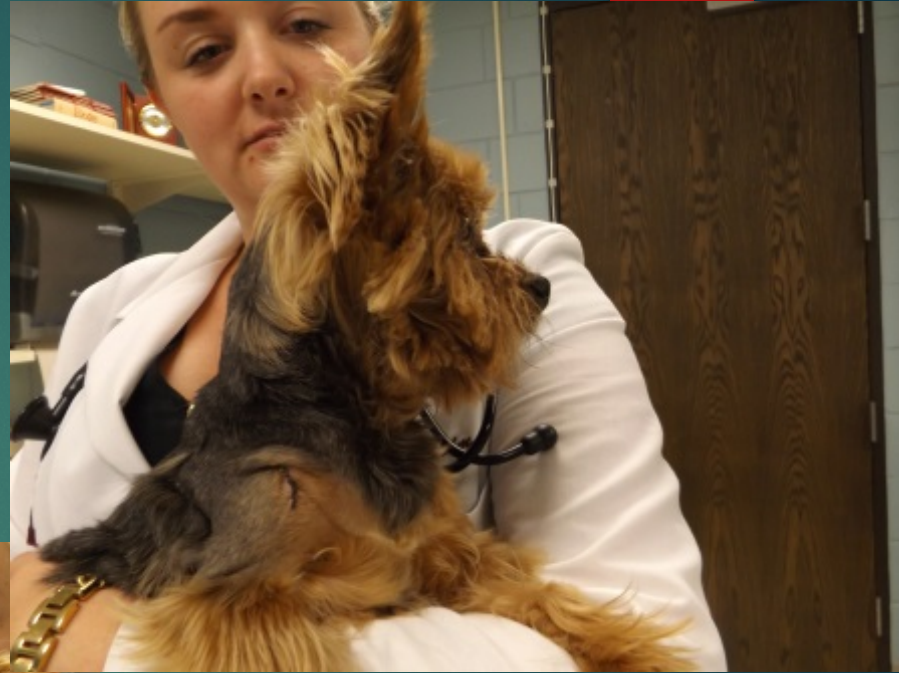
KODI

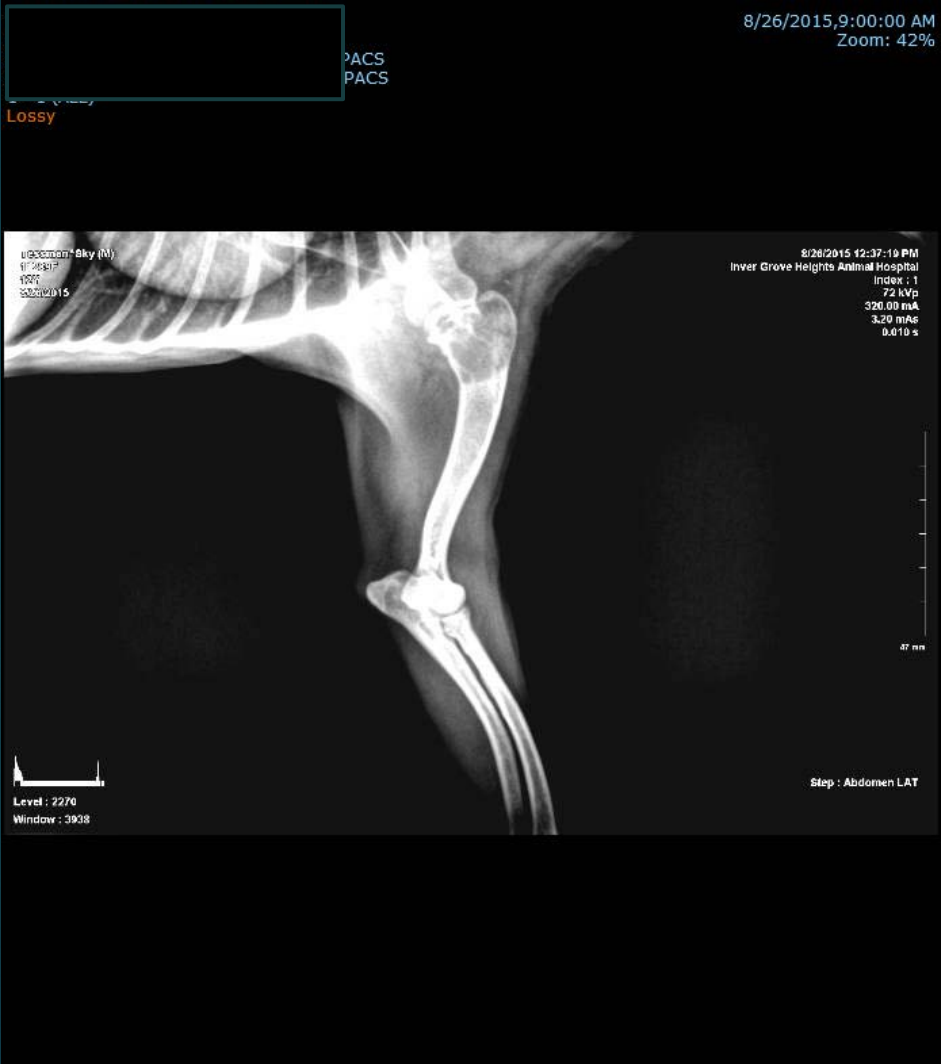


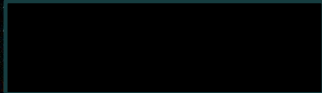
TUCKER

Osteosarcoma

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





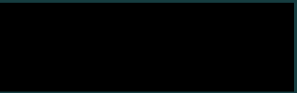


8/13/2015 3:06:00 PM
Inver Grove Heights Animal Hospital
Index : 1
75 kVp
250.00 mA
2.50 mAs
0.010 s



right
Level : 1786
Window : 2935

Step : Thorax LAT



8/13/2015 3:06:38 PM
Inver Grove Heights Animal Hospital
Index : 2
80 kVp
250.00 mA
2.50 mAs
0.010 s

right

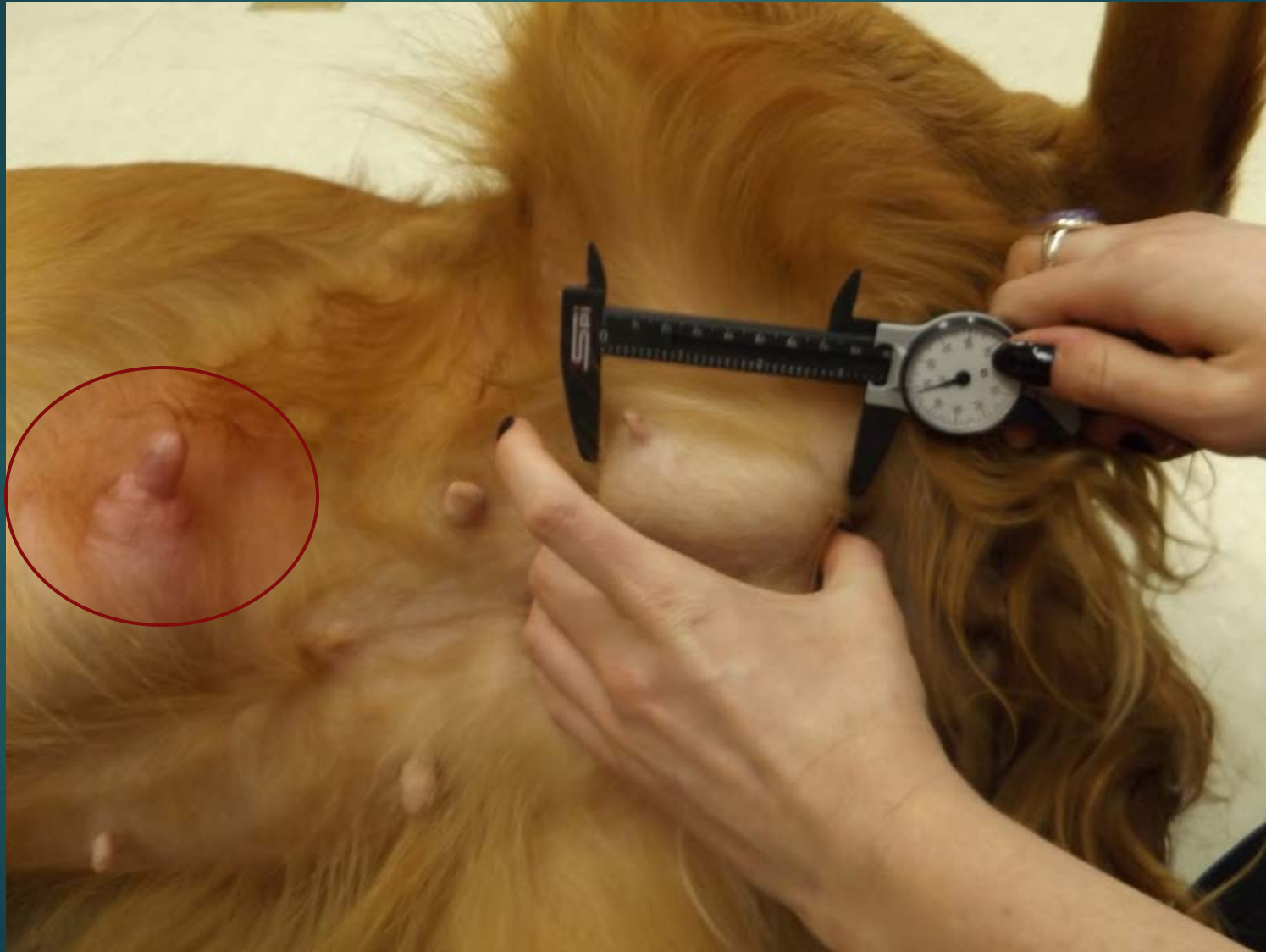


right
Level : 1786
Window : 2935

Step : Thorax VD



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

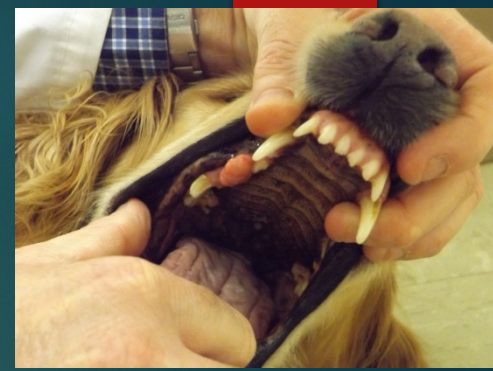
Top 10 Warning Signs of Cancer

- ▶ 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

