

Cancer: Don't miss the early signs

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20/11/2025

IDEXX

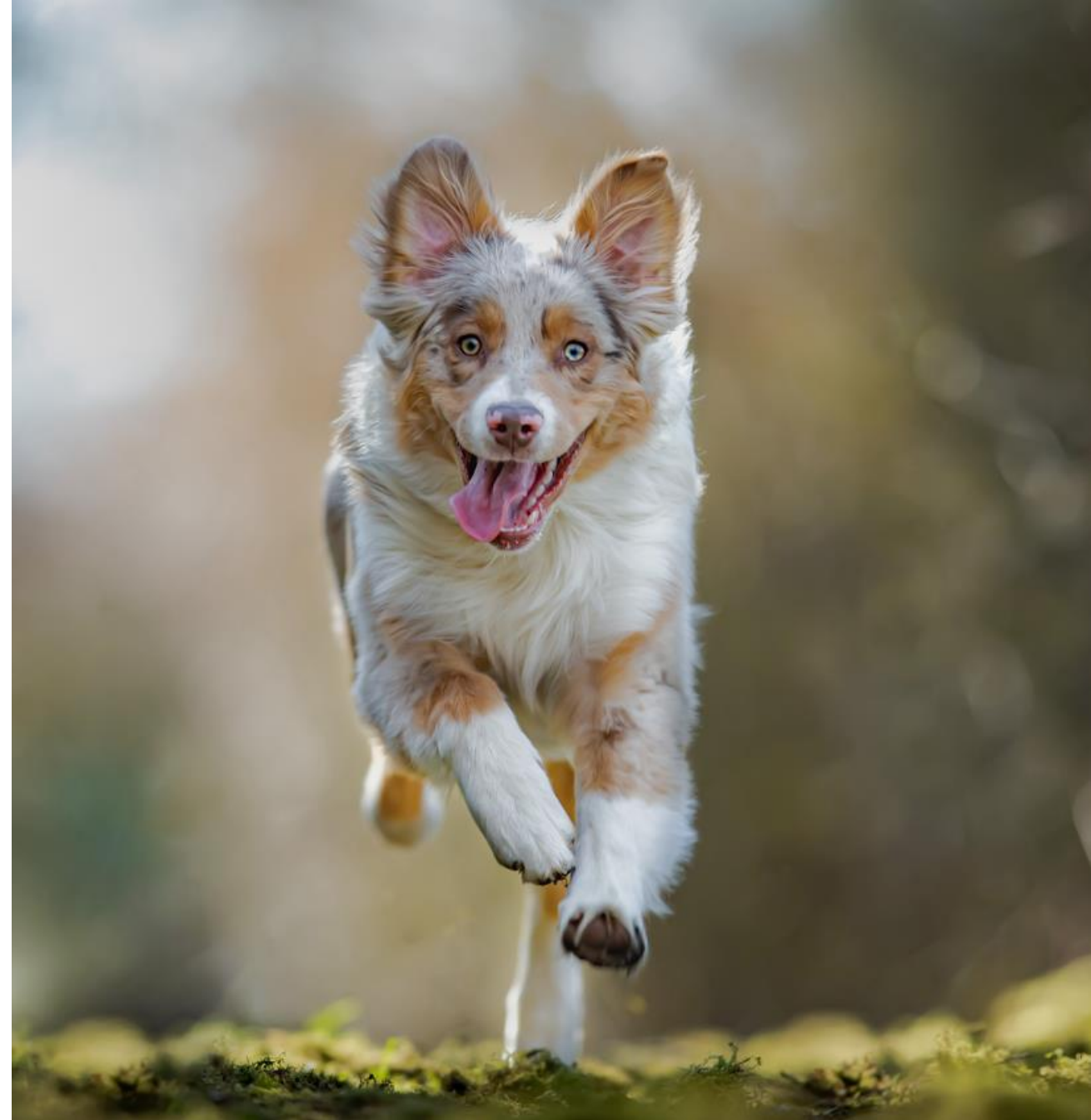
Disclosure:
Employee of IDEXX
Self-employed Anicura

The information contained herein is intended to provide general guidance only. Diagnosis, treatment, and monitoring should be patient specific and is the responsibility of the veterinarian providing primary care. (2024)



Agenda

- + Cancer in human medicine
 - + Incidence
 - + Screening
- + Cancer in dogs and cats
 - + Signalment
 - + Medical history
 - + Physical examination
 - + Clinical pathology

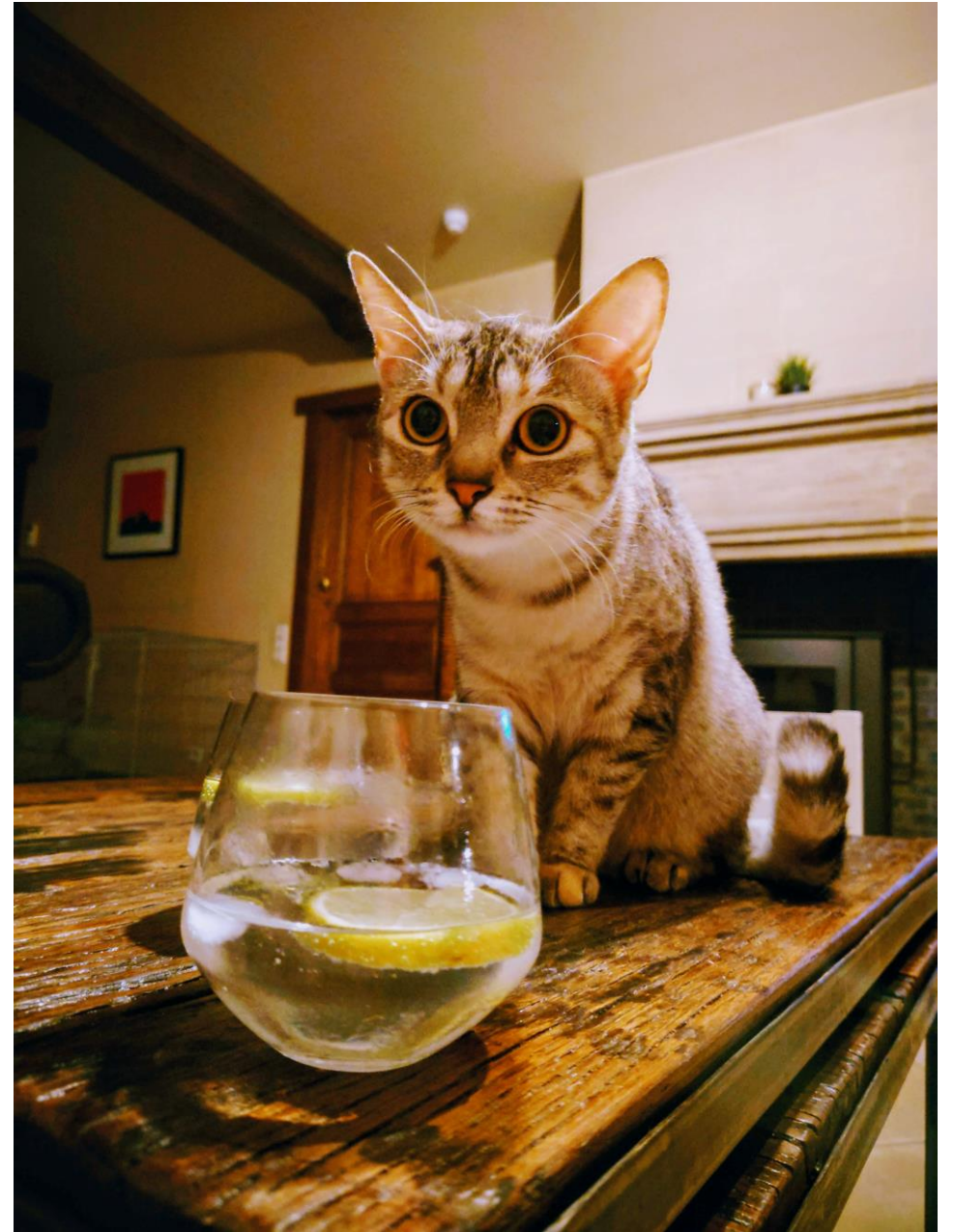


Cancer incidence UK

- + ½ people in the UK will be diagnosed with cancer in their lifetime
- + New cases/ year: 385 477
- + Breast, prostate, lung and bowel cancer > 50%
- + 45% stage 3 and 4
- + Deaths/ year: 167 142
- + Survival > 10y: 50%

<https://www.cancerresearchuk.org/health-professional/cancer-statistics-for-the-uk#heading-Four>
<https://www.wcrf.org/preventing-cancer/cancer-statistics/uk-cancer-statistics/>

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IDEXX

How to improve outcome?

- + Treatment advances
- + Prevention
- + Screening and early diagnosis

Disparities in Gastric Cancer Screening Worldwide

Charlene Deane^{1,2,3,*} , Orla Kelly^{2,3} and Colm O'Morain^{1,4,*} 


 **Author information**

Cancer Screening and Prevention 2024;3(3):184-190 | doi: 10.14218/CSP.2024.00008



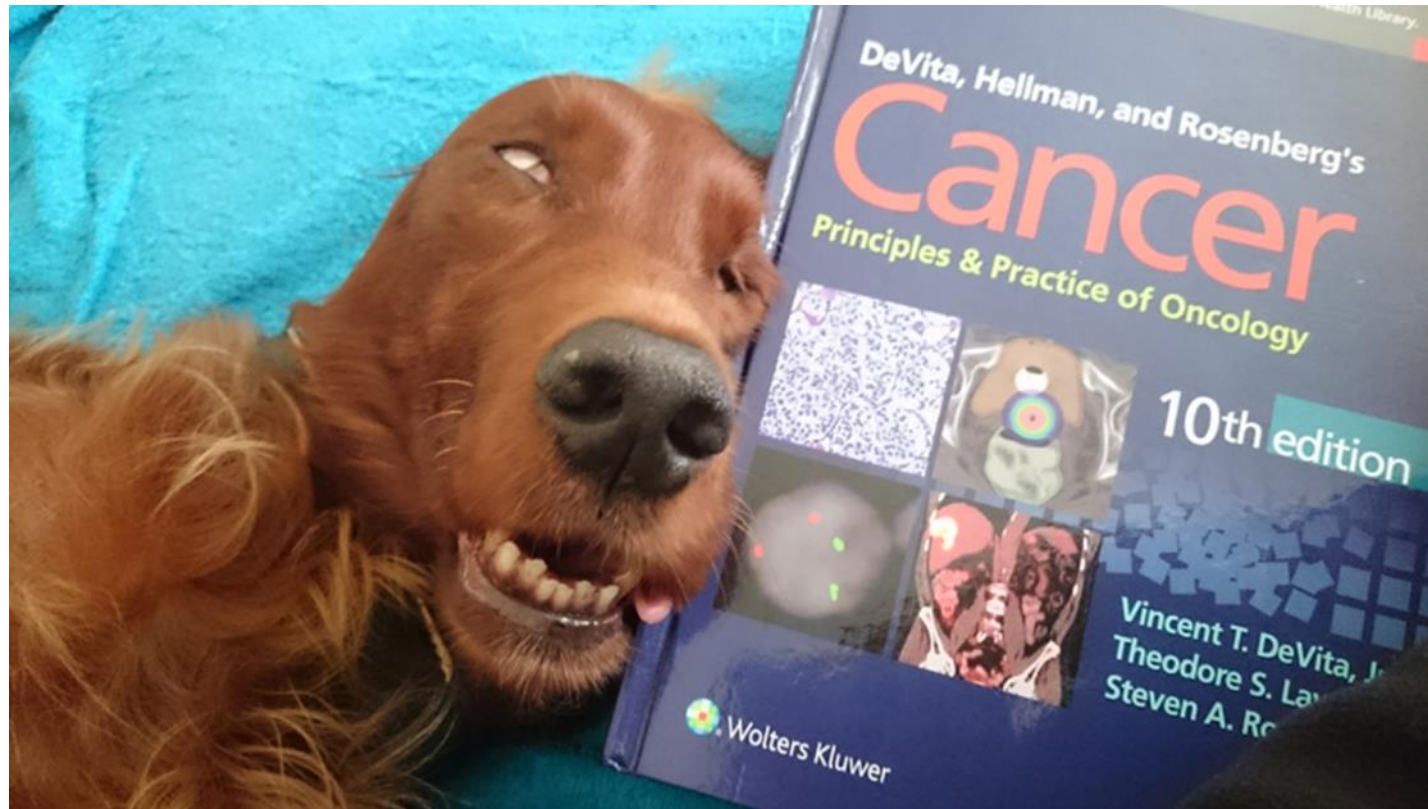
Cancer screening

- + Colon cancer
- + Breast cancer
- + Cervical cancer
- + Lung cancer

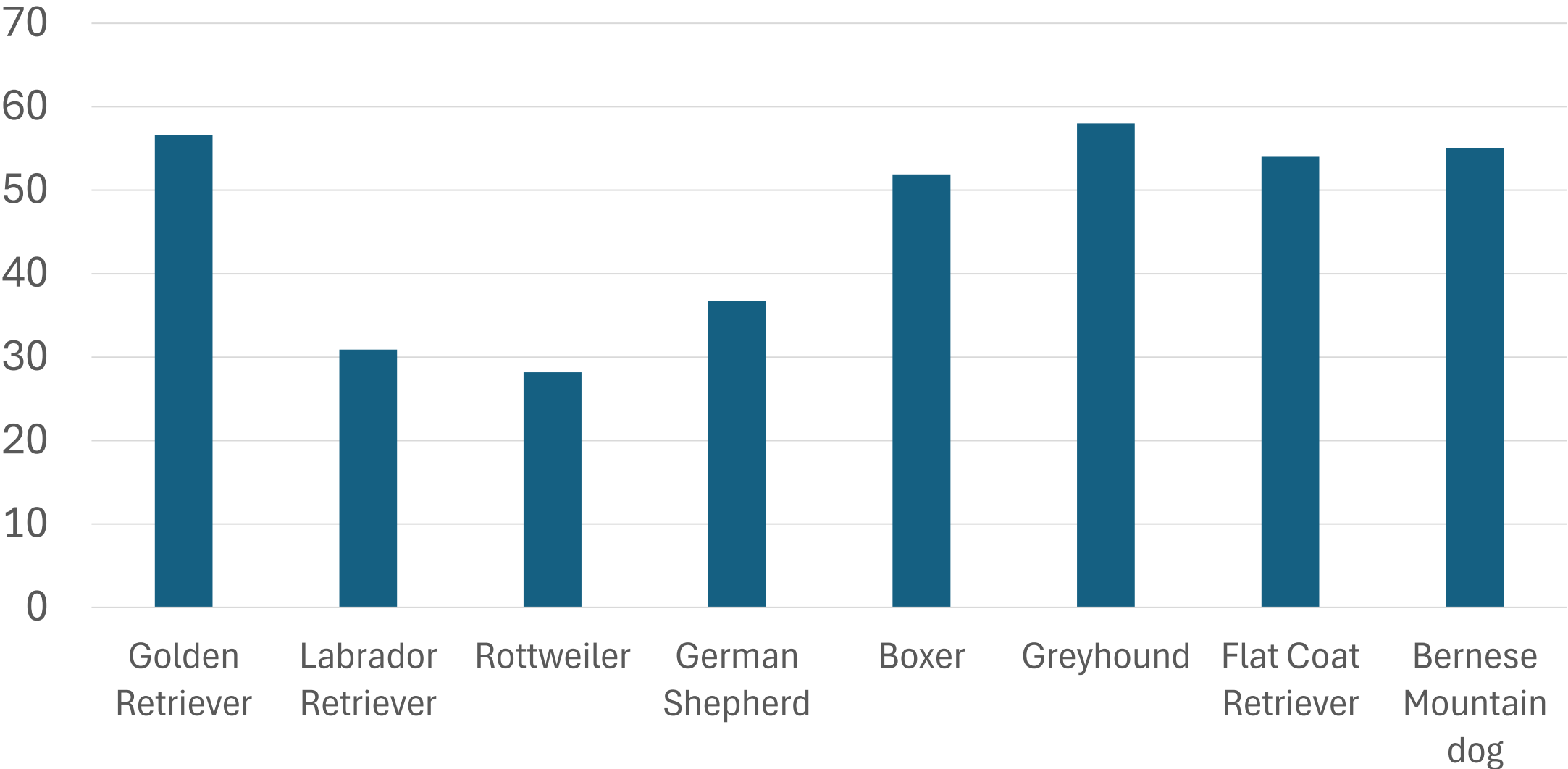


In the first phase of England's lung health Check programme, 76% of cancers were caught at an earlier stage (vs 29%)

Cancer in dogs and cats



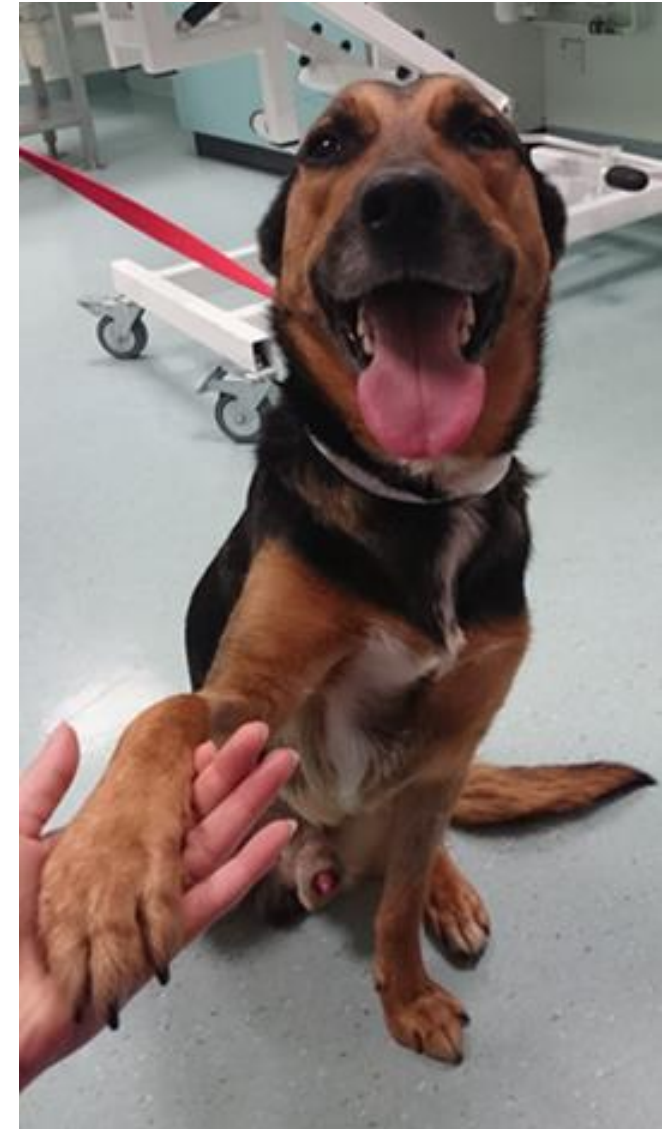
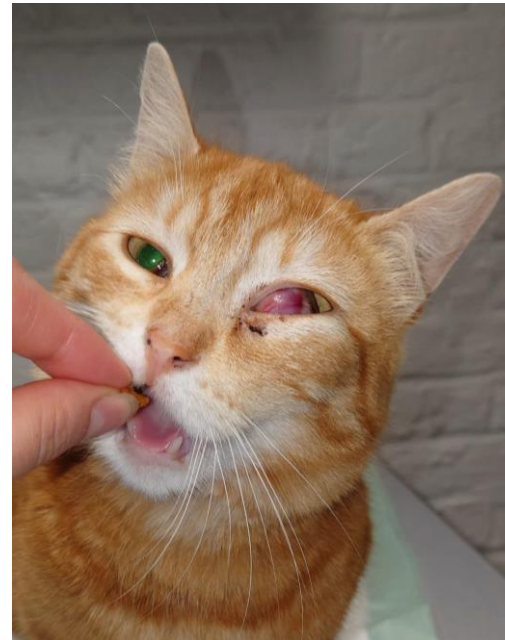
% Cancer Deaths



Craig et al, JAAHA 2001, Lord et al, JVIM 2007, Dobson et al VCO 2009, Erich et al Vet J, 2013

Screening for cancer

- + Annual vaccinations
- + Routine health checks/ wellness visits
- + Appointments for a medical problem
- + Cooperative pets

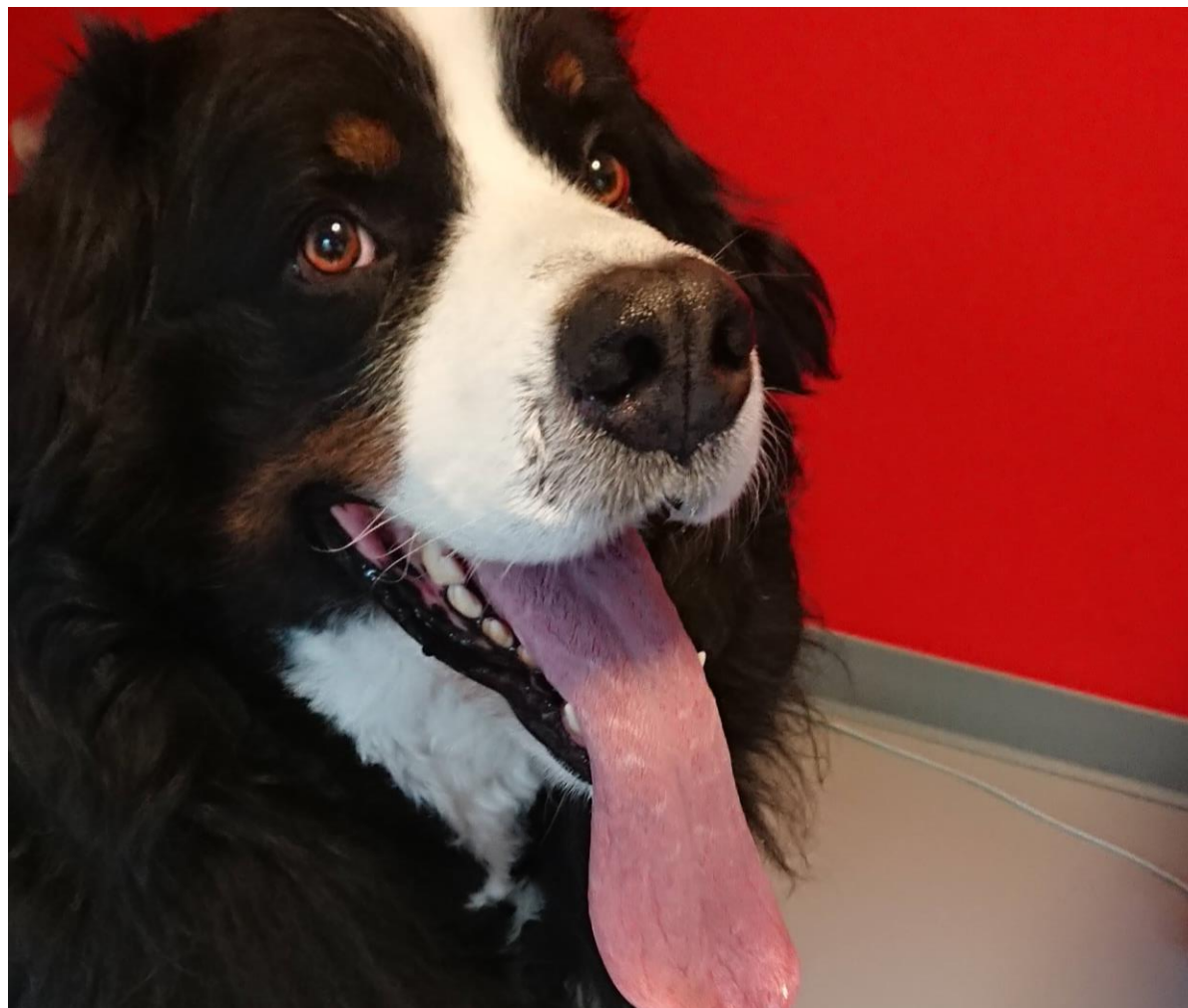


Signalment

+ Breed

+ Age

+ Hair coat colour



Signalment

+ Breed

+ Age

+ Hair coat colour



Signalment

- + Breed
- + Age
- + Hair coat colour



Medical History

- + Client questionnaire
 - + Yes and no questions
 - + Medication
 - + Lumps and bumps

Any changes in attitude or behaviour?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Has your pet been interacting with other pets and the family?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Has your pet's appetite increased or decreased since your last visit?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Any problems chewing or swallowing?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Has there been any vomiting?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Any diarrhoea, constipation, straining or blood in the faeces?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Has your pet's drinking changed since your last visit?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Does your pet wet the house or bed or need to go out at night?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Have you noticed any blood or discolouration in the urine?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Have you noticed any discharge from the eyes, nose or vagina?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Any coughing, sneezing or difficulty breathing?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Have you seen any new lumps or bumps?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Has your pet lost or gained weight?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Does your pet rest and sleep well?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Do you think your pet has any pain or discomfort?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Has your pet been keen and able to exercise or play since your last visit?	<input type="checkbox"/> Yes <input type="checkbox"/> No

Medical history

- + Decreased energy
- + Decreased exercise tolerance
- + Muscle weakness
- + Decreased appetite
- + Weight loss
- + Vocalising
- + Frequent panting



- + Lumps and bumps
- + PU/PD
- + Seizures
- + Vulvar discharge
- + Dysphonia
- + GI signs
- + Lameness
- + Losing a nail
- + Swollen digit

Weight loss

+ Appetite

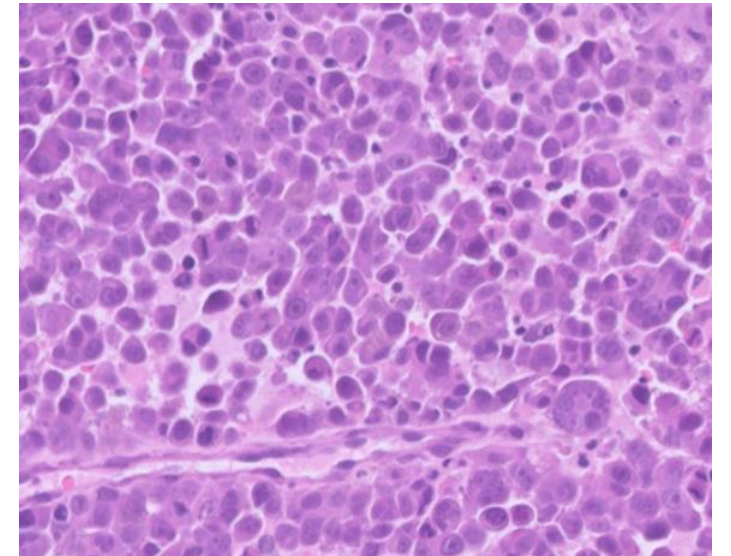
+ Intake

+ Diet



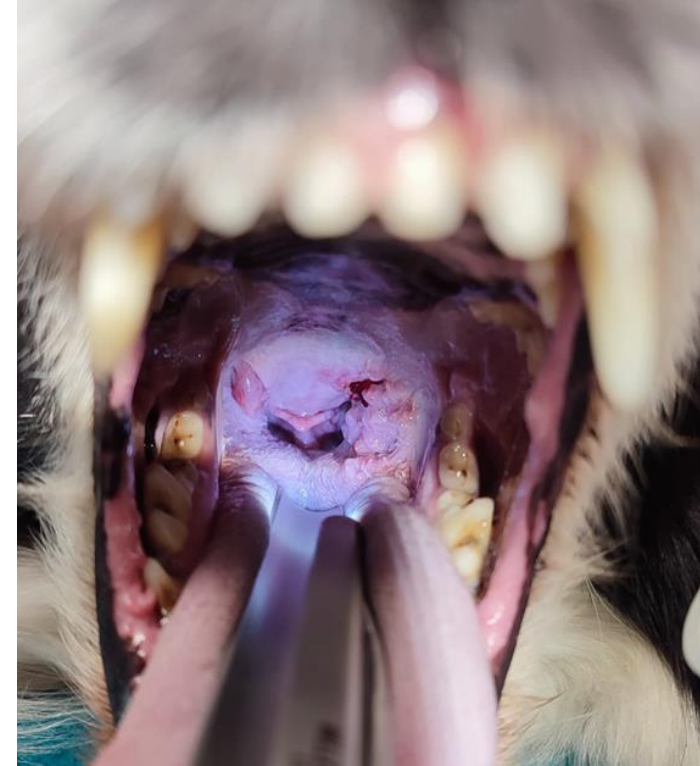
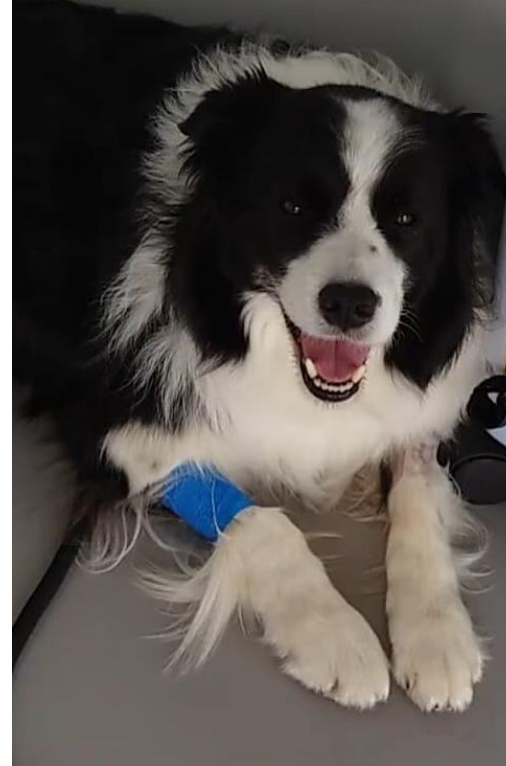
Oral tumours

- + Blood on a toy
 - + Crooked teeth or displaced teeth
 - + Mass
 - + Ulcerated area
 - + Halitosis
 - + Changes in chewing
 - + Eating more slowly
 - + Drooling
 - + Yelping
 - + Pawing
- + Decreased appetite
 - + Tooth loss

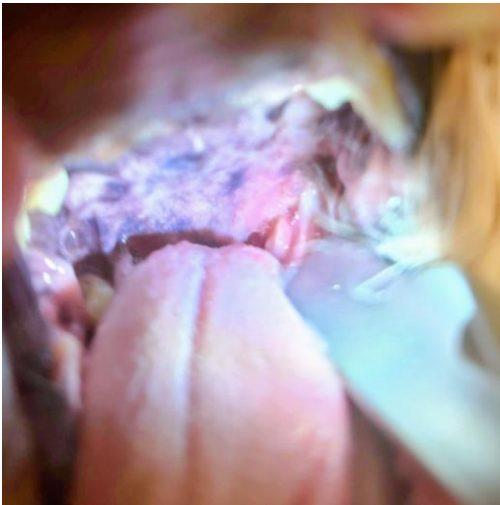


Border Collie, 10y MN

- + Retching/coughing
- + Bloodwork unremarkable
- + Chest radiographs unremarkable
- + Increased salivation
- + Slow eating
- + Dysphonia



- + Median survival time
 - + Lymph node metastasis 126 days
 - + Lymph node clear 381 days



> [J Vet Intern Med.](#) 2023 Jan;37(1):247-257. doi: 10.1111/jvim.16623. Epub 2023 Jan 27.

Tonsillar carcinoma in dogs: Treatment outcome and potential prognostic factors in 123 cases

Elisabetta Treggiari¹, MacKenzie A Pellin², Giorgio Romanelli¹, Gianluca Maresca¹, Irina Gramer^{3,4}, Andrew D Yale³, Evi Pecceu⁵, Matteo Pignanelli⁶, Juan Borrego⁷, Katarzyna Purzycka⁸, Davide Berlato⁹

Affiliations + expand

PMID: 36705533 PMCID: PMC9889721 DOI: 10.1111/jvim.16623

> [Vet Radiol Ultrasound.](#) 2018 Jan;59(1):54-63. doi: 10.1111/vru.12561. Epub 2017 Sep 19.

Computed tomographic appearance of canine tonsillar neoplasia: 14 cases

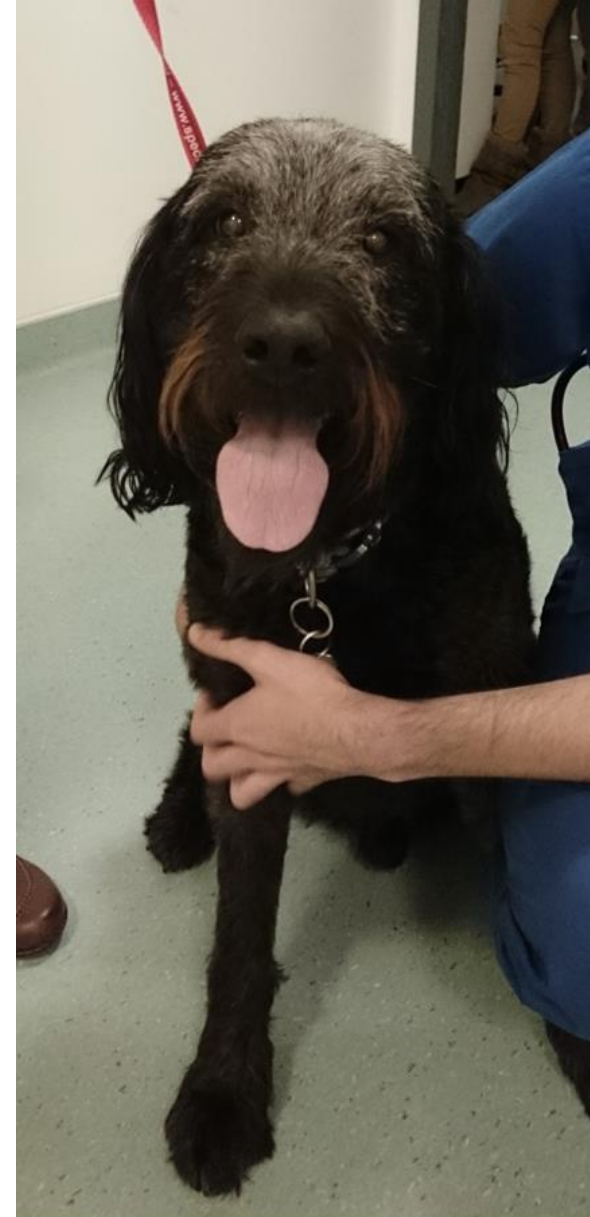
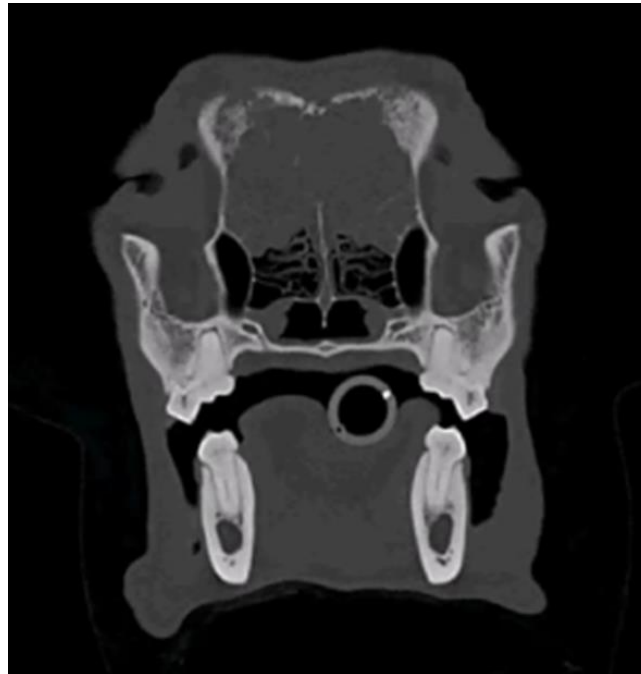
Florence Thierry¹, Maurizio Longo¹, Evi Pecceu¹, Davide D Zani², Tobias Schwarz¹

Affiliations + expand

PMID: 28929544 DOI: 10.1111/vru.12561

Labradoodle 9y MN

- + Head shy, for 7 months
- + No improvement on NSAIDs, antibiotics
- + No abnormalities on rhinoscopy



➤ [Vet Radiol Ultrasound. 2009 May-Jun;50\(3\):330-5. doi: 10.1111/j.1740-8261.2009.01545.x.](#)

Prognostic significance of tumor histology and computed tomographic staging for radiation treatment response of canine nasal tumors

William M Adams ¹, Miriam M Kleiter, Donald E Thrall, Julia M Klauer, Lisa J Forrest, Tracy A La Due, Thomas C Havighurst

Affiliations + expand

PMID: 19507402 DOI: [10.1111/j.1740-8261.2009.01545.x](#)

- + Unilateral intranasal involvement without bone destruction beyond the turbinates
 - + MST 23.4 m
- + Cribriform plate involvement
 - + MST 6.7 months

Polyuria/polydipsia

- + Many tumour types
- + Many different mechanisms
- + True PU/PD?

French Bulldog 9y FN

- + Mast cell tumour
- + PU/PD



Physical examination

- + Same order
- + Template
- + Document normal values



Anicura Dierenartsencentrum Hond en Kat, Deinze

Mental status



- + 10 FN Border Terrier
- + Chronic retching/gagging

Skin

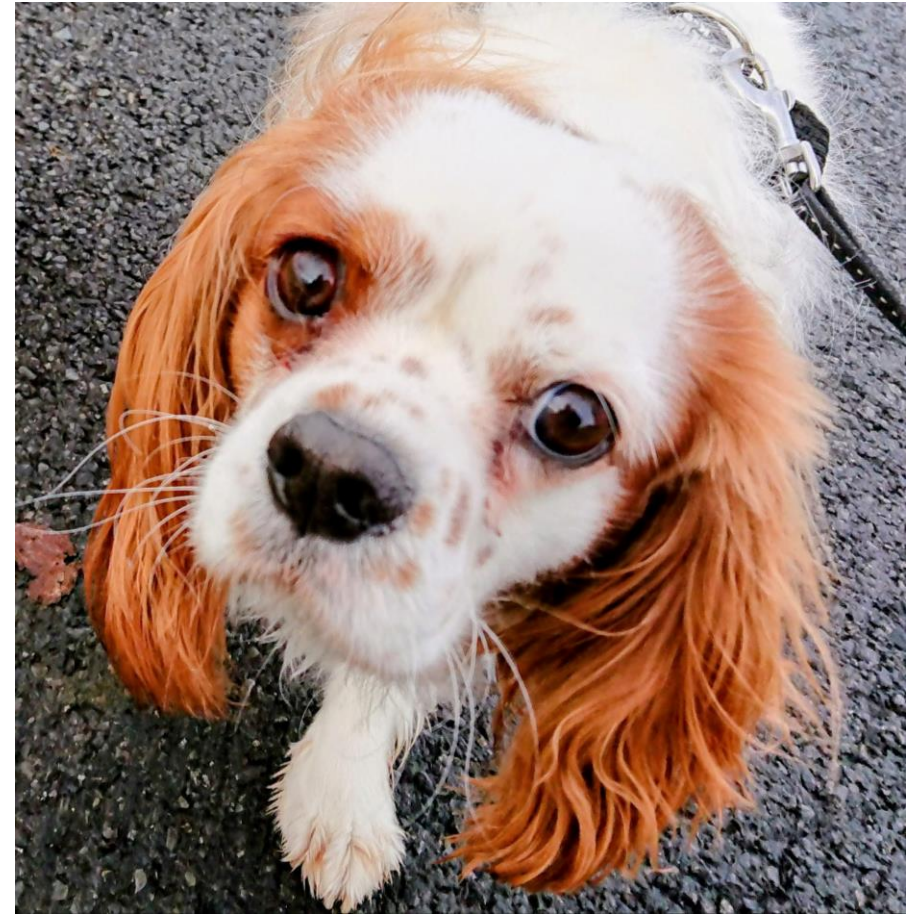
+ Paraneoplastic

+ Neoplasia



Oral exam

- + Lift the lips
- + Inspect teeth
- + Open mouth
- + Back of the throat
- + Tongue
- + Video/photograph
- + Lighting
- + Tonsils?



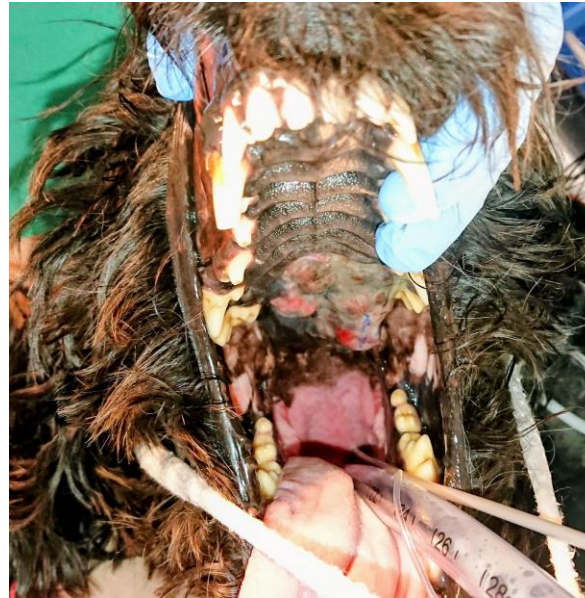
Oral tumours

Oral melanoma

- < 2 cm 630 d
- 2-4 cm 240d
- > 4 cm 173 days

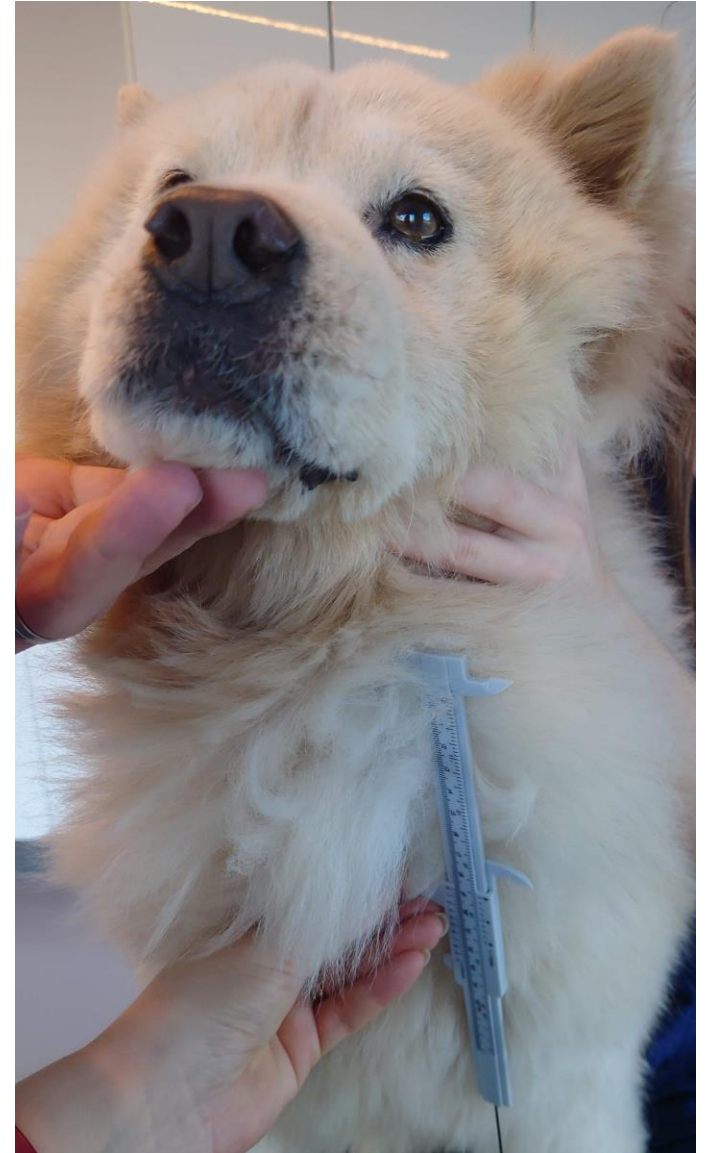
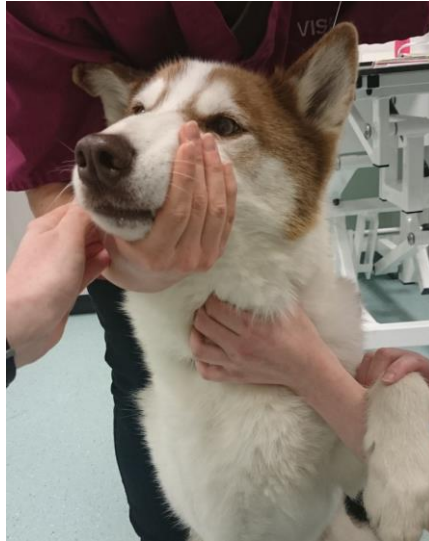
Tongue tumours

- < 2 cm MST 818d
- > 2cm MST 207d



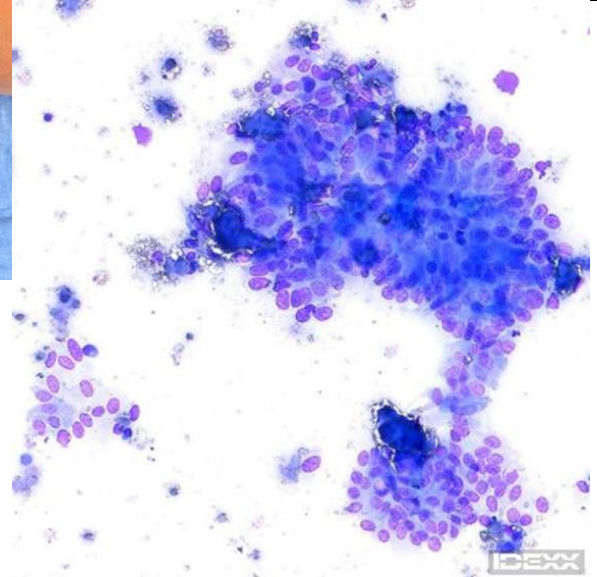
Palpation neck

- Cats
- Dogs



Dachshund, 9y FN

- Unilateral anal sac mass
- No clinical signs
- Anal sac adenocarcinoma



< 2.5 cm MST 1205 days

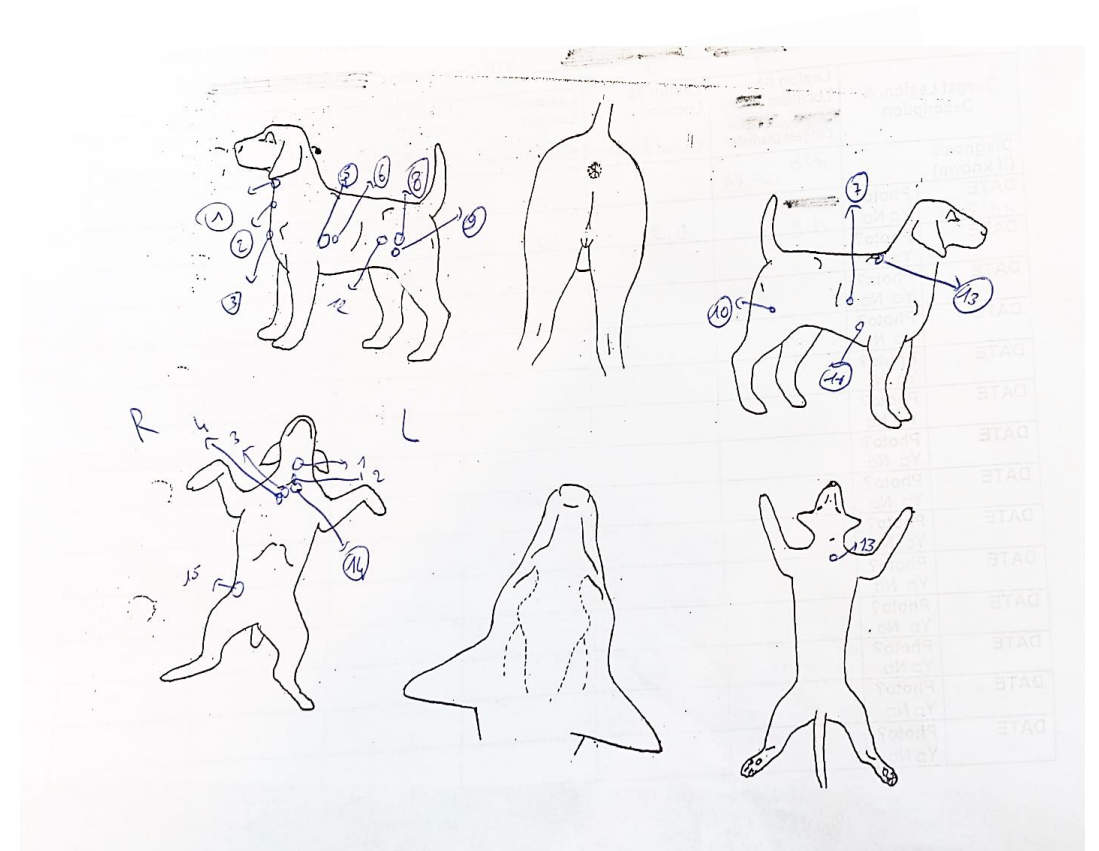
> 2.5 cm MST 755 days

Lumps and bumps

Target lesion and description	Lesion 1 SC mobile Location L ventral neck Diameter	Lesion 2 cut, ulcerated Location L mid neck Diameter	Lesion 3 SC Location L thoracic ulat Diameter	Lesion 4 Location Diameter	Lesion 5 Location Diameter	Lesion 6 Location Diameter	Vet initials
Diagnosis	FNA MCT	FNA inflammatory cell	FNA lipoma				
Date 12/6/2025	2.3 cm	0.7 cm	1.8 cm				EP
Date 12/9/2025	"	0.8 cm	1.7 cm				EP
Date							



- Body map
- Callipers
- Longest diameter or volume
- Under tension
- Sample every lump



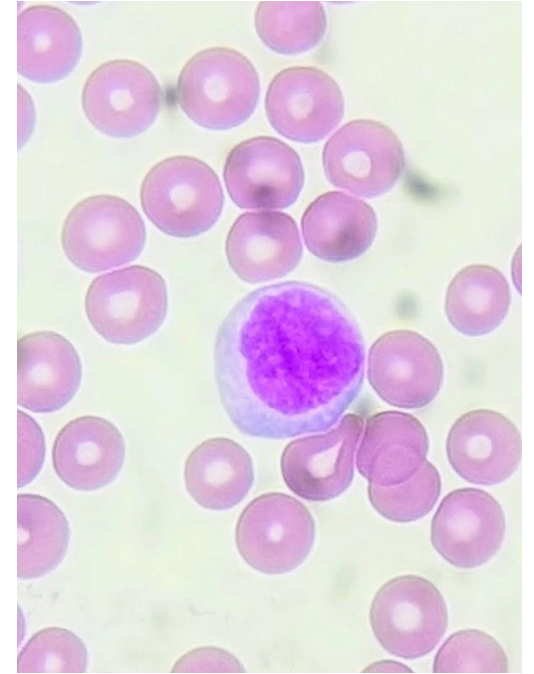
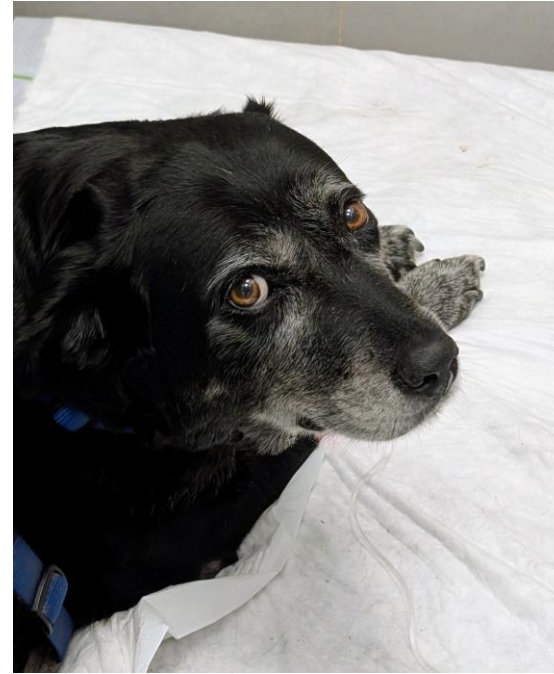
Mammary glands



12y FE Labrador cross

- + Multicentric lymphoma stage V
- + Neutropenia, lymphocytosis
- CHOP chemotherapy

After third chemo dose:
Pyrexia, lethargy, anorexia



Clinical pathology



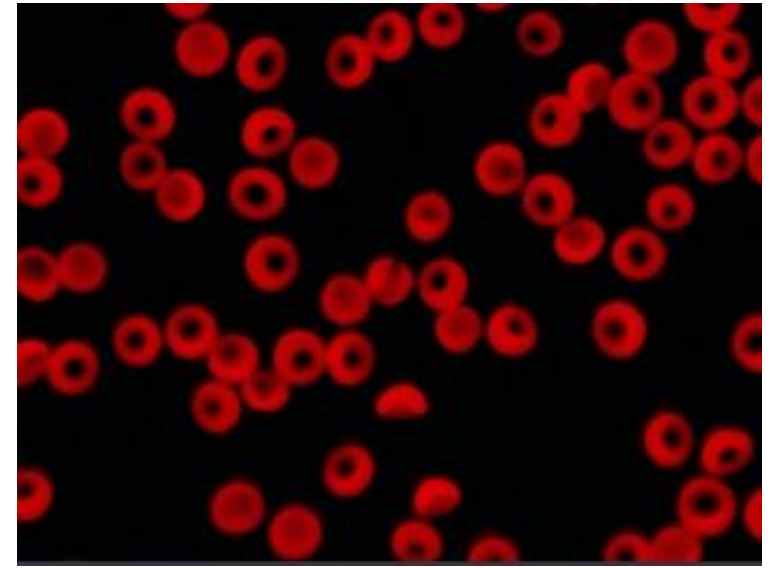
Haematology

+ Anemia

+ Erythrocytosis

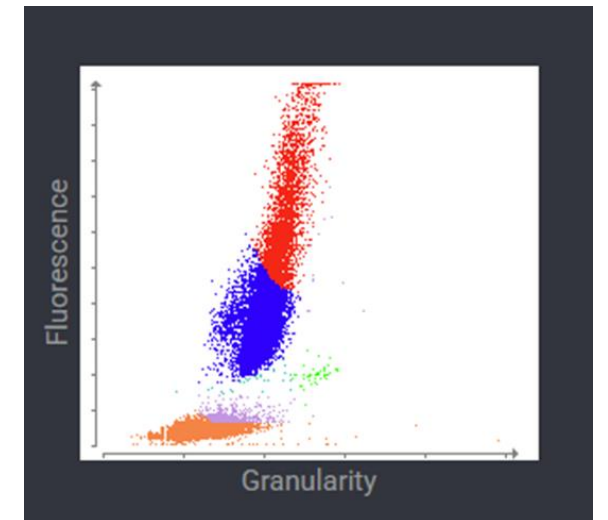
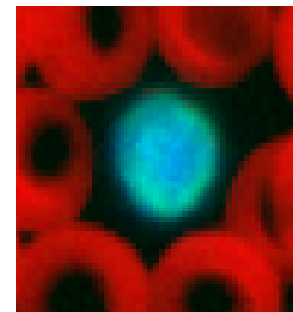
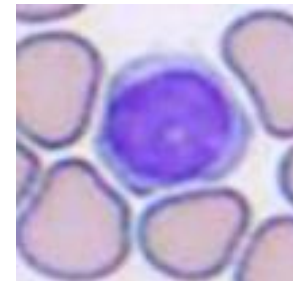
+ Thrombocytopenia

+ Thrombocytosis



Haematology

- + Neutropenia
- + Neutrophilia
- + Eosinophilia
- + Monocytosis
- + Lymphocytosis



Bloods biochemistry:

- + Elevated liver enzymes
 - + Hepatocellular carcinoma
 - + Lymphoma, histiocytic sarcoma
- + Hypoglycemia
 - + Insulinoma
 - + Lots of other cancer types
- + Azotemia
 - + Lymphoma, bilateral renal carcinoma
 - + Multiple myeloma
 - + Hypercalcemia



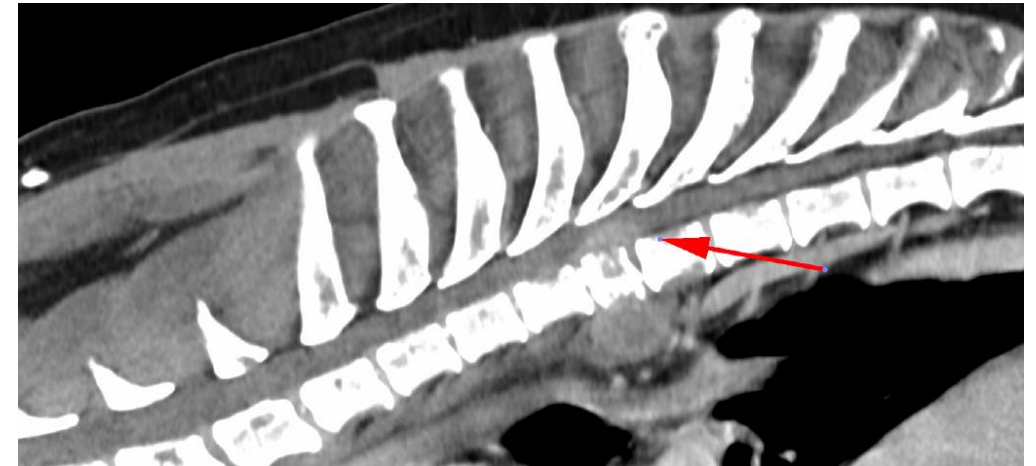
12 y old male neutered Labrador

- + Reduced appetite and weight loss
- + Bloods: **hypercalcemia**, mild azotaemia
- + Imaging: enlarged sublumbar lymph nodes (LN)
- + FNA LNs: carcinoma (likely anal sac)
- + Rectal exam: primary anal sac tumour
- + PU/PD for 6 months
- + 2 procedures for ruptured cruciate ligaments

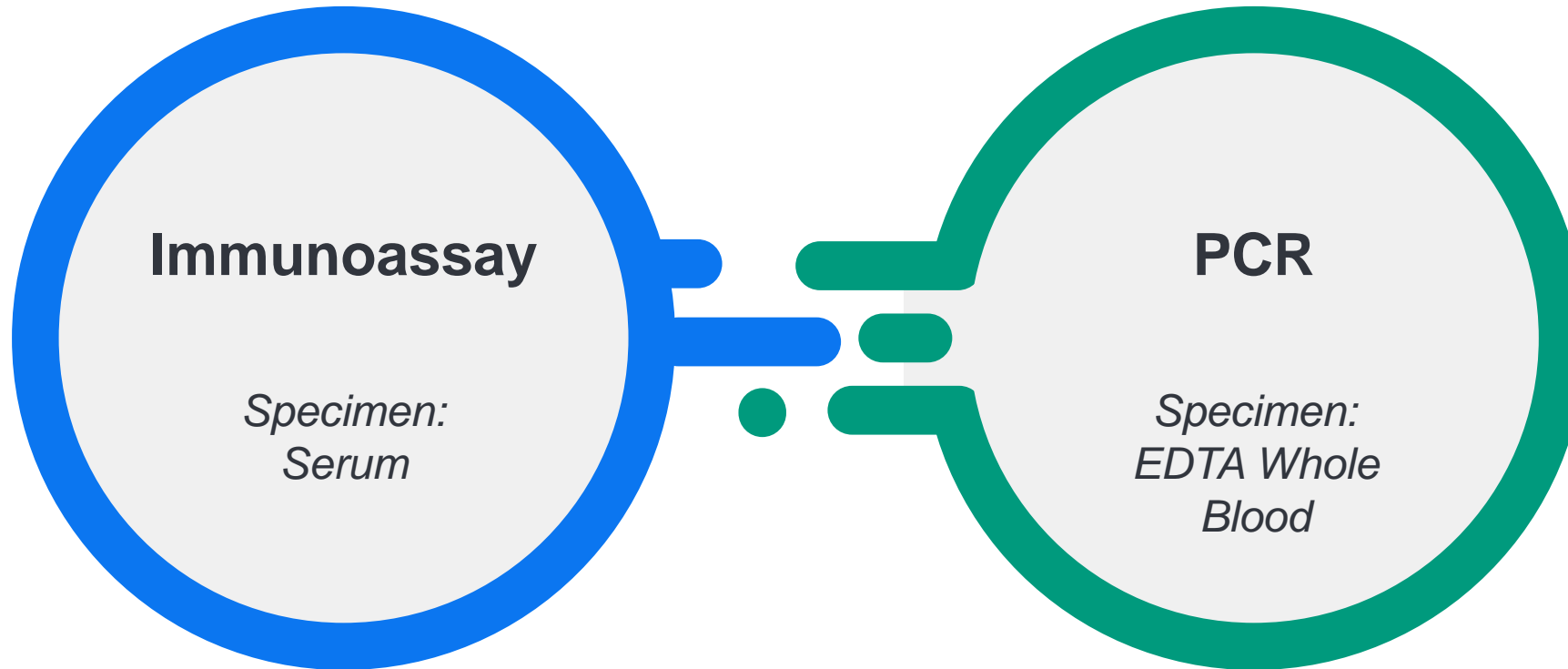


Cross breed, 8y FN

- + **Hyperglobulinemia** for over 1 year (now 82.2 g/L)
- + Splenomegaly for over 6 months
- + Hyporexia and mild lethargy for 1 week
- + Hind limb paralysis 1 day earlier
- + Moderate thrombocytopenia, neutropenia



IDEXX Cancer Dx:



What does this mean for the patient?
An **accurate, affordable, and efficient** way to support a clinical diagnosis of lymphoma in the clinic earlier.

79%/99%¹
sens/spec

2-3 day^{*}
Turn-around time

*Turnaround time in Canada is 2–4 days.

Courtesy of Dr Dana Connell

Reference

1. Data on file at IDEXX Laboratories, Inc. Westbrook, Maine USA: Data based on testing performed at IDEXX Reference Laboratories in North America between November 1, 2024, and December 6, 2024. *Analysis Report: IDEXX Cancer Dx Validation, 100282* [008_CancerDx-Validation-Report-2.Rmd].

Cancer Dx can be used in both sick and well patients

SICK PATIENTS



- + **Clinical signs suggestive of lymphoma**
- + **Part of diagnostic work-up**

WELL PATIENTS



- + **Screened based on population risk factors (no clinical signs)**
- + **At-risk dog breeds and older animals**

Urinalysis

+ BRAF as screening?



> [Front Oncol.](#) 2022 Nov 11;12:1011969. doi: 10.3389/fonc.2022.1011969. eCollection 2022.

Identification of a naturally-occurring canine model for early detection and intervention research in high grade urothelial carcinoma

Deepika Dhawan¹, José A Ramos-Vara^{2 3}, Sagar M Utturkar³, Audrey Ruple^{3 4}, Sarah A Tersey⁵, Jennifer B Nelson⁵, Bruce R Cooper⁶, Hock Gan Heng¹, Elaine A Ostrander⁷, Heidi G Parker⁷, Noah M Hahn⁸, Larry G Adams¹, Christopher M Fulkerson^{1 2}, Michael O Childress^{1 2}, Patty L Bonney¹, Christine Royce¹, Lindsey M Fourez¹, Alexander W Enstrom¹, Lisbeth A Ambrosius¹, Deborah W Knapp^{1 3}

Early diagnosis / screening to improve outcome

- + Signalment
 - + Avoid tunnel vision
- + Medical history
 - + Consider forms
- + Physical examination
 - + Rectal exam
 - + Palpation neck, mammary glands
 - + Body maps
- + Clinical pathology
 - + BRAF not a screening tool



Questions?

