

THE  
AUSTRALIAN  
**VETERINARIAN** MAGAZINE

Dog owners discover the importance of gut health p12

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A generational tail of pet ownership p32





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## THE AUSTRALIAN VETERINARIAN

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# VET SHORTAGE CRISIS CONTINUES IN NSW

## AVA CALLS FOR REGULATION OF THE WHOLE VETERINARY TEAM, NOT JUST VETERINARIANS IN ITS RESPONSE TO INQUIRY INTO VET SHORTAGE IN NSW

Source: Australian Veterinary Association

While deregulation of veterinary services may be seen as the answer to the current veterinarian shortage, the Australian Veterinary Association (AVA) believes improving regulation to include all members of the veterinary team, such as veterinary nurses is one of the strategies needed to address the challenges facing the sector.

“Rather than lowering standards of animal care to fill the gap left by too few veterinarians, we should be looking at how best to extend quality veterinary care to all animals. Strong regulation, whether it is the veterinary or animal welfare legislation, underpins animal care and welfare,” explained AVA NSW Division President, Dr Zachary Lederhose.

In its submission to the NSW Parliament Legislative Council’s Inquiry into the veterinary workforce shortage, the AVA says that current regulation is too focused solely on veterinarians, and needs to be expanded to the whole veterinary team.

“Veterinarians are governed by a strong professional and ethical code equivalent to that of the medical profession, and their

expertise and judgment underpin the community obligation to the health and welfare of animals and the maintenance of public safety,” Dr Lederhose stated.

The AVA also believes that extending regulation to other members of the veterinary practice workforce, such as veterinary nurses should be part of the response.

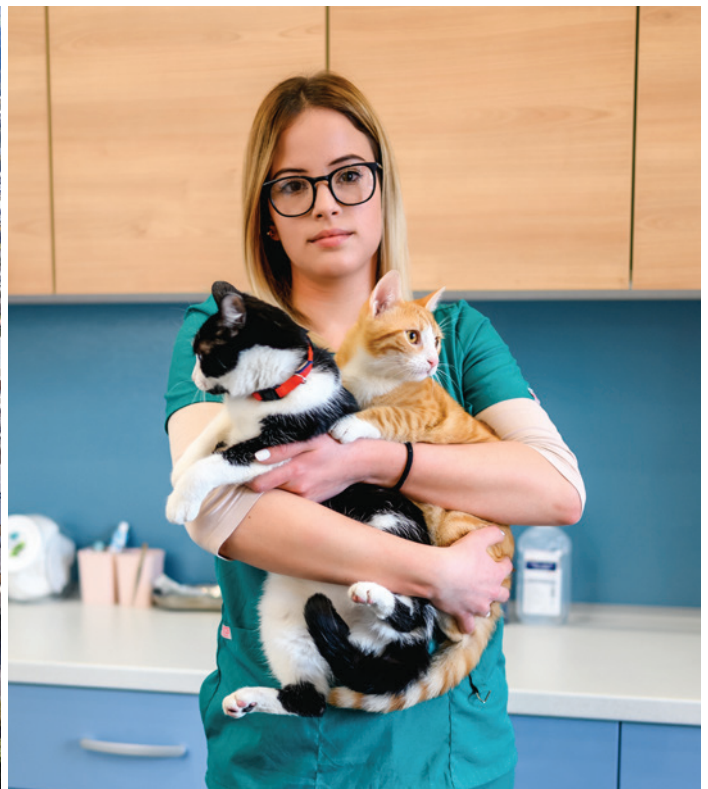
“Registration of other members of the veterinary team would increase the capacity and efficiency of the workforce by setting professional standards for working under the oversight of veterinarians,” Dr Lederhose said.

The AVA is confident that the veterinary shortage can be addressed.

“We are hopeful that outcomes of this inquiry will lead to strategies that will make NSW a sought-after destination for veterinarians, and also act as a pilot for how this issue could be addressed at a national level,” Dr Lederhose added.

**“We are hopeful that outcomes of this inquiry will lead to strategies that will make NSW a sought-after destination for veterinarians, and also act as a pilot for how this issue could be addressed at a national level,”**

*AVA NSW Division President, Dr Zachary Lederhose.*



# USE OF ANTI-MICROBIALS IN ANIMALS TRENDS DOWNWARDS

**World Organisation for Animal Health report shows promising trends in the race to fight antimicrobial resistance and preserve the efficacy of these critical medicines.**

The use of antimicrobials in animals across the world has shown an overall decrease of 27%<sup>1</sup> between 2016 and 2018, according to the data reported to the World Organisation for Animal Health (WOAH, founded as OIE).

Similar progress has been found in the use of antibiotics for growth promotion. For long a common way to enhance productivity in animals raised for human consumption, the use of antibiotics in healthy animals to boost growth is no longer a practice in nearly 70% of the reporting countries<sup>2</sup>.

Antimicrobial drugs, such as antibiotics, rank amongst humanity's most spectacular achievements. They paved the way to better living conditions for humans and animals. Yet many of these life-saving drugs are losing their efficacy against numerous microbes. The phenomenon is known as 'antimicrobial resistance'.

Partially a natural process, antimicrobial resistance can be greatly accelerated by the overuse or misuse of antimicrobials, which can exert selective pressure for pathogens with resistance traits to survive and thrive. These "superbugs" can then travel through waterways, soil and air, infecting all living beings, regardless of their species, along the way.

**Antimicrobial resistance is a silent threat to humans, animals, plants and the environment. It affects us all.**

For decades, experts have warned that antimicrobial resistance was a threat for future generations. Now it is time to further accelerate actions against this phenomenon which has already become a leading cause of death in humans. In 2019 alone, some 1.27 million people died because of antibiotic drug-resistant bacteria, according to a landmark study<sup>3</sup> published in *The Lancet*. However, the proportion of these deaths linked to antimicrobial resistance in animals still remains unclear. The phenomenon can originate in animal, human or plant populations, but then it poses a threat to all the other species. To curb it effectively, all sectors must join forces and encourage the prudent use of antimicrobials.

Recording and analysing data on antimicrobial use is critical to fully understand this multi-faceted rising danger. With the aim of monitoring trends in the animal health sector, WOAHA launched an annual data collection process in 2015. The initiative has

seen steady and increased engagement from the Members of the Organisation, who have improved their capacity to gather and provide more detailed information over time. Despite the disruptions caused by Covid-19, nearly 160 countries have participated in the last round of data collection, and some of them have also published their information on national platforms. It is to date, the most comprehensive set of information available on the use of antimicrobials in animals.

Fundamental to our global approach of data collection and evaluation of antimicrobial use in animals is to advance the One Health agenda, together with our partners. Addressing the interlinked and multi-layered challenges posed by antimicrobial resistance requires ongoing collaboration – across sectors, governments, academic disciplines, civil societies, the private sector, and the multilateral system.

"As the proportion of pathogens resistant to antimicrobials rises, the efforts of the scientific community to accelerate the development of new antibiotics and drugs to tackle 'superbugs' should redouble", said Dr Javier Yugueros-Marcos, Head of the Antimicrobial Resistance and Veterinary Products Department of the World Organisation for Animal Health. "Most importantly, we need to see greater use of alternatives such as vaccines and promote quick-wins like washing hands with soapy water, and changing clothes and boots before treating or dealing with animals."

Providing access to solid and reliable data is a strategic priority, as it helps decision-makers identify exactly where action is most urgently needed at local level, which in turn also supports the global response to antimicrobial resistance.

"We are on the right track in the animal sector – we must now seize this momentum and continue to use antimicrobials prudently if we want to preserve their efficacy for future generations" warns Dr Eloit.

**Source: World Organisation for Animal Health (WOAH)**

## References

<sup>1</sup> Based on the data reported by 72 countries to the World Organisation for Animal Health for all years between 2016 to 2018.

<sup>2</sup> 108 out of 157, 69%.

<sup>3</sup> Murray et al. 2022. [https://doi.org/10.1016/S0140-6736\(21\)02724-0](https://doi.org/10.1016/S0140-6736(21)02724-0) Source: World Organisation for Animal Health (WOAH)

**"In a world that is more globalised and interconnected than ever before, this is a positive step forward as it shows that a growing number of farmers, animal owners and animal health professionals worldwide are adapting their practices to use antimicrobials more prudently. These efforts contribute to protecting everyone's health. But much more needs to be done to preserve our therapeutic options and overcome the spread of infectious diseases.**

*Dr Monique Eloit, Director General of the World Organisation for Animal Health*

# AUSTRALIA'S ANIMAL WELFARE SYSTEM NOT FIT FOR PURPOSE: NATIONAL SURVEY REVEALS

Source: Australian Alliance for Animals

## THE AUSTRALIAN ALLIANCE FOR ANIMALS IS TODAY RELEASING THE RESULTS OF A GROUND-BREAKING NEW STUDY EXPLORING COMMUNITY EXPECTATIONS ABOUT HOW THE NATION'S ANIMAL WELFARE POLICIES ARE SET AND GOVERNED.

The nationally representative survey of over a thousand Australians was carried out by leading behaviour change research institute BehaviourWorks Australia at Monash University, and reveals that current government animal welfare policy processes are at odds with the public's expectations on a range of key measures.

Alliance for Animals' Policy Director Dr Jed Goodfellow said the survey findings should be a wakeup call for Australian governments and prompt a rethink of current arrangements.

"It's clear from these data that Australians recognise animals as sentient beings, place high regard on their welfare, and value independent and impartial oversight of animal welfare policymaking processes," Dr Goodfellow said.

Over 80% of Australians believe the final say on animal welfare policy decisions should be made by an independent and impartial authority, with more than two-thirds believing this should be an independent animal welfare agency, and only 22% supporting the current practice of allocating responsibility to departments of agriculture.

Australians place the greatest trust in animal welfare groups, animal welfare scientists and veterinary practitioners, and expect these groups to be given the most say in policy decisions that affect animals (72% and 75%, respectively), while industries and businesses that use animals (19%), political parties (10%) and retailers (6%) were trusted the least.

When it comes to policy trade-offs, 80% of Australians believe that impacts on animals should be the most important factor in animal welfare decision-making, while only 12% believe it should be the impact on industries and businesses.

"These results stand in stark contrast to current practice, where animal welfare policy decisions are overseen by departments and ministers for agriculture and routinely place the economic interests of industries over animal welfare and community concerns," Dr Goodfellow said.

"The data reveal a democratic deficiency at the heart of our animal welfare system,


"It's time we made the system more democratic for people and fairer for animals."

The Australian Alliance for Animals' #FairGoForAnimals reform platform proposes a new framework for creating a modern and contemporary animal welfare governance system that better fulfils the community's expectations.

### QUICK FACTS

- The online Qualtrics survey of 1029 Australian adults, representative of the broader Australian population by age, gender, state or territory, and location (metro vs. regional), was conducted in February-March 2023.
- The survey will be launched via an online event on Thursday 27 July 2023 at 12.30 pm. Registrations here.
- The launch will include the Alliance's animal welfare policy barometer, which assesses Australia's performance in meeting the expectations of the community revealed in the survey.
- The animal welfare policy barometer, a summary of the survey findings and an open access link to detailed technical information for researchers Scan QR Code below or visit: <http://www.allianceforanimals.org.au/animal-welfare-policy-barometer>





**“The data reveal a democratic deficiency at the heart of our animal welfare system. It’s time we made the system more democratic for people and fairer for animals.”**

Alliance for Animals’ Policy Director  
Dr Jed Goodfellow

# NO HORSEPLAY: THE ISSUE OF FERAL HORSES IN AUSTRALIAN NATIONAL PARKS

Written By: EJ Cartledge

**Feral horse populations in Australia have exploded in recent years and show no sign of slowing.**

In one count, the number of feral horses in New South Wales jumped from an estimated 14,300 in 2020 to almost 19,000 by November 2022, an increase of more than 30 per cent.

The issue has prompted some state governments to implement action plans to reduce and control the herds, though these plans are opposed by advocates who regard the horses as important to Australia's heritage.

## Environmental impact

The increase in wild brumby populations has sparked biosecurity and contamination concerns.

The horses have no natural predators in the alpine regions and can breed and expand herds relatively unchecked, while wreaking havoc on the flora and fauna native to the area.

The Invasive Species Council (ISC) named 11 native animal and 23 native plant species at risk, while the Federal Government's Threatened Species Scientific Committee warned that the brumbies could be the "crucial factor that causes final extinction" for 12 threatened species.

The current plan in NSW is to reduce the population of the feral brumbies in the national parks to 3000 by 2027.

However, the opponents of controlling the herds strongly backed the 2018 *Wild Horse Heritage Act*, which restricted the culling of wild horses in NSW in order to preserve their cultural value.

In Victoria, plans for culling have been challenged numerous times in the courts, delaying action by Parks Victoria and enabling the herd numbers to grow further.

## Staff threatened

Park rangers across both states have been on the receiving end of abuse and threats of violence, so much so that staff at the Kosciuszko National Park are advised to not wear their uniforms in public in order to avoid negative attention.

*"One such threat was a hand-delivered note to the Jindabyne National Parks office, that the office would be firebombed and hopefully all the staff would be inside when it was firebombed."*

**Kim de Govrik, Public Service Association**

The methods currently used for population control include culling – both on-ground and from helicopters – as well as other non-lethal methods, such as trapping for commercial sale, rehoming and fertility control.

The non-lethal methods, however, are much slower to show any appreciable results; some estimates predict that it will be up to 20 years before they begin to meaningfully reduce population numbers.

For the native flora and fauna it might be too late.



**"One such threat was a hand-delivered note to the Jindabyne National Parks office, that the office would be firebombed and hopefully all the staff would be inside when it was firebombed."**

*Kim de Govrik, Public Service Association*





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# NEARLY HALF OF AUSTRALIANS LET THEIR PET SLEEP WITH THEM

THEY SAY DOGS ARE MAN'S BEST FRIEND, BUT ALARMING NEW RESEARCH HAS REVEALED HOW FAR AUSSIE PET LOVERS WILL GO TO SHOW AFFECTION FOR THEIR CATS AND DOGS

- The latest research from Compare the Market found that 41.4% of Australian pet owners allow their four-legged friends to sleep in bed with them.
- Almost a third have also put off going on a holiday due to not wanting to leave their pet behind while one in four respondents used their pet to get out of social events
- Nearly a quarter (24.1%) of pet owners have not taken their pet for a check-up in the past year.

From secret smooches on the mouth to dodging social outings and even compromising where they live, the latest study shows that the love for our pets can hold no bounds. In what is sure to cause arguments for couples across the country, an alarming **41.4% of Australian pet owners admit to letting their pet sleep with them to show affection\***. A further 15.2% buy their pets Christmas presents, while 3.2% let their pets kiss them on the mouth as a sign of love.

Not only do pets rule over the hearts of their owners, but they also rule over our lifestyles, with research finding that 35.1% of pet owners' living situation was influenced by their choice of pet.

Additionally, almost a third (32.3%) of pet owners have admitted to putting off a holiday so they won't have to leave their pet behind. A fifth of pet owners disclosed that they have used their pet as a get-out-of-a-social-event card.

And while the survey data show just how much pet owners are willing to sacrifice for their pets, **it's surprising to see that almost a quarter of pet owners have not taken their pet for an annual check-up in the past year.**

Compare the Market's General Manager of General Insurance and pet insurance expert, Adrian Taylor, spoke about other ways people can look after their pets.

"Pets have now become another member of the family, with our research showing just how much time, effort and money people

HOW HAVING A PET HAS IMPACTED PEOPLE'S LIFESTYLE	% OF RESPONDENTS
Impacts living situation (location, type of property, etc)	35.1%
Puts off holidays to not leave pet(s) behind	32.3%
Used pet(s) to get out of social situations	20.1%
Taken leave from work to spend time with pet(s)	15.0%
Only goes on holidays if pet(s) can come	12.8%
Doesn't socialise/go out as much due to pet(s)	12.0%
Chosen pet(s) over partner or family members	4.6%
Put off having children to prioritise pet(s)	4.3%
Only work at jobs that allow pet(s) to come into work or WFH to spend more time with pet(s)	4.2%

are willing to spend on their pets. Yet, unlike taking ourselves or children to the GP for annual check-ups, there's a sizeable amount of pet owners who neglect to make sure that their pet is in tip-top shape," Mr Taylor said.

"These annual visits can be extremely crucial in finding any ailments early, which, if left untreated, could fester into severe diseases or pain for your pet. Getting treatment for these illnesses or injuries may also cost a lot more to treat at the later stage than if it was caught early on.

"To ensure that your pet has a great quality of life, it's better to treat your pet early for any ailments or injuries. Some levels of pet insurance may help cover a part of the overall cost for these treatments.

"There are a lot of different insurance policies out there with different levels of cover, which is why it's important to compare policies to find out what's best for you and your pampered pet."

"In some instances, you may be able to add on routine care as an optional extra which may cover a partial fee or the full amount of a routine check-up or vaccinations for your pet."

## ADRIAN TAYLOR'S TOP TIPS FOR PEOPLE CONSIDERING PET INSURANCE:

1. Be sure to read the Product Disclosure Statement (PDS) to understand the limits of the cover you are looking to buy. There may be a difference in the levels of reimbursement depending on the level of cover you're looking at as well as between brands. A variety of products cover between 70% and 90% of vet bills, however, there are products that cover less and others that cover more. For most claims you will also need to contribute the policy excess.
2. Insure your pet when they are young. Your pet insurance premiums will be lower than if you were to insure your pet at a later stage, as the older they are more likely to have pre-existing conditions that could drive up the cost to be covered.
3. When reviewing your pet insurance options, also consider if there are any types of extras that you would like your policy to include. Depending on your level of cover, you may be able to add on extras such as dental cover, routine care or even behavioural training, though this may increase the premiums that you will need to pay.



# DOG OWNERS DISCOVER THE IMPORTANCE OF GUT HEALTH

## SCRATCH, THE AUSSIE DOG FOOD COMPANY THAT PUTS DOGS AND THE PLANET BEFORE PROFIT, IS EDUCATING DOG OWNERS ABOUT THE SIGNIFICANCE OF DOG GUT HEALTH IN ITS NEW AD.

Running across BVOD channels including Foxtel GO, TenPlay, and YouTube, and supported via social, content and PR, the "Scratch Loves Your Dog's Guts" campaign aims to highlight Scratch's commitment to providing premium nutrition for dogs.

"Research has shown that 70% of a dog's immune system originates from the gut, yet many traditional dog foods fail to address this crucial aspect of canine health. We developed our new campaign to educate dog owners on the lesser-known signs of poor gut health, such as red skin, itching, and irregular bowel movements, while also shedding light on the invisible long-term effects, including early disease and cancers," commented Scratch co-founder Mike Halligan.

Scratch's three dog food recipes - Turkey, Beef & Lamb, Pasture-raised Lamb and Sensitive Kangaroo - have each been meticulously formulated to strengthen gut health and restore balance in dogs with an unbalanced gut flora. By emphasising the connection between nutrition and overall wellbeing, Scratch aims to empower dog owners to make informed choices that will positively impact the lives of their furry friends.

In a world saturated with mundane dog food advertisements, Scratch recognised the need for a fresh and engaging approach to convey the importance of gut health.

"We wanted to tackle the serious issue of gut health in a creative, captivating, and fresh manner that resonates with dog owners," said Isabelle Mason, Creative Director at Scratch. "Our goal was to make people care about something they can't see until it's too late."

The entire "Scratch Loves Your Dog's Guts" campaign was developed and executed in-house, showcasing the brand's commitment to innovation and creative excellence. The entire campaign was created for just \$15,000 proving that great marketing doesn't need to cost the earth. It made use of as many recycled materials as possible, as well as the team's creativity and papier-mache skills.

"Our campaign encapsulates the essence of Scratch as a company, celebrating wild creativity, playfulness, and a commitment to quality. From concept to production, we've poured our hearts and souls into every aspect of this campaign," Mason concluded.



# VFCA BOARD DIRECTOR CHAIRS REVIEW INTO VETERINARY EDUCATION

The report released this week by Veterinary Schools of Australia and New Zealand (VSANZ) titled 'Rethinking Veterinary Education' recognises the challenges facing the profession now and into the future such as biosecurity, disease prevention and wildlife conservation: all which will be exacerbated by climate change.

VfCA commends the report's findings and recommendations to make position changes to veterinary education and better support entry for students into this critical profession. We recognise the vital role veterinarians (and other veterinary professionals) play within their communities and across industries like farming, which will only grow as new veterinary issues emerge including impacts of climate change and environmental pollution on animal, human and ecosystem health and welfare.

We congratulate the Review Panel of eminent veterinarians, chaired by VfCA Board Director Dr Helen Scott-Orr AM PSM for their hard work. VfCA Volunteer Dr Janet Berry provided a submission on behalf of VfCA which is available at [https://www.vfca.org.au/vet\\_ed\\_review\\_submission](https://www.vfca.org.au/vet_ed_review_submission). The full report is available by scanning the QR Code.

RETHINKING VETERINARY EDUCATION



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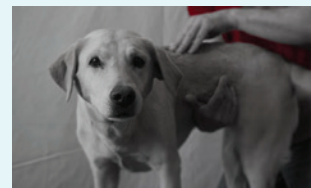
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# HUMAN MEDICINE MAY PROVIDE THE KEY TO CURING CANINE CANCER

**Cancer is the leading cause of death among dogs, with almost half of all dogs over the age of ten developing the potentially fatal disease. Between about 5% and 25% of female dogs will develop mammary cancer as they age**

A new University of Adelaide-led trial will investigate if a potential treatment for breast cancer in humans can prolong the lives of pet dogs who are diagnosed with the disease.

The FiDo (First-In-Dog) Cure for Cancer trial is an Australian first initiative and will evaluate if the estrogen-blocking medication is more effective than surgery for treating mammary cancer in canines.

“There is an urgent need for an alternative to surgery that will cure mammary cancer in dogs. For many dogs with malignant mammary cancer, the cancer has already spread to other organs by the time of diagnosis, surgery is not curative and the disease can progress rapidly,” said the University of Adelaide’s Professor Wayne Tilley, Director of the Dame Roma Mitchell Cancer Research Laboratories.

“Our aim is to develop a safe medical treatment for mammary cancer in dogs that is affordable, improves quality of life and is also effective in treating cancer that’s spread to other organs”.

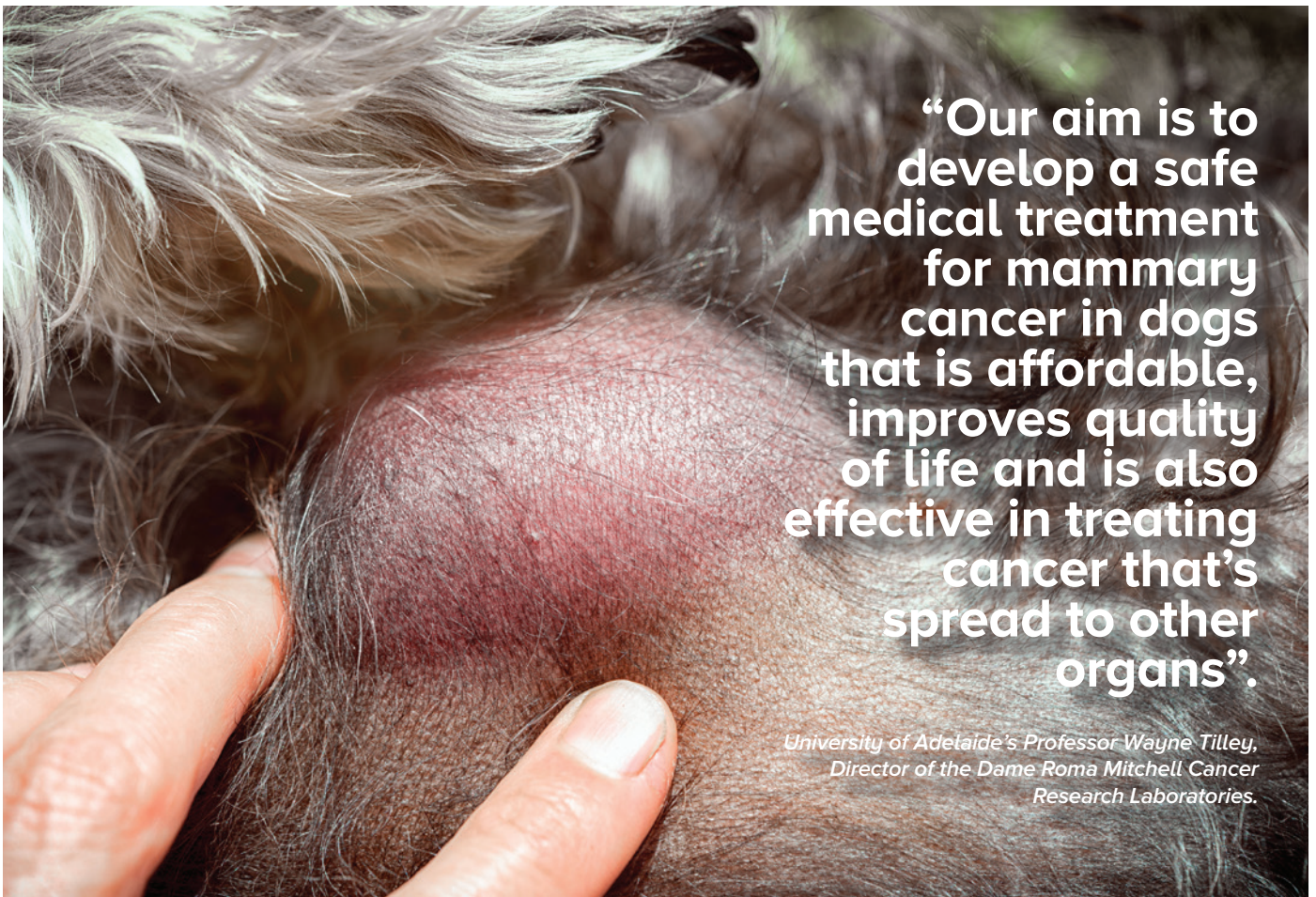
Like breast cancer in women, the growth of mammary tumours in dogs is often initiated and driven by the female sex hormone, estrogen.

Researchers will trial a new medication that blocks the cancer-fuelling actions of estrogen by targeting androgen receptors in the body.

Androgens are male sex hormones and androgen receptors (AR) govern how the body reacts to this hormone.

Previous research suggests AR could counter-act the effects of estrogen, stopping breast cancer from spreading.

“We recently published a ground-breaking study showing that drugs that activate the androgen receptor have excellent potential as an effective, well tolerated treatment for most breast cancers in women. We believe this could produce better outcomes for dogs as well,” said Professor Tilley.



**“Our aim is to develop a safe medical treatment for mammary cancer in dogs that is affordable, improves quality of life and is also effective in treating cancer that’s spread to other organs”.**

*University of Adelaide’s Professor Wayne Tilley,  
Director of the Dame Roma Mitchell Cancer  
Research Laboratories.*



Cancer is the leading cause of death among dogs, with almost half of all dogs over the age of ten developing the potentially fatal disease. Between about 5% and 25% of female dogs will develop mammary cancer as they age.

The University of Adelaide's Associate Professor Anne Peaston is a veterinary oncologist and clinical lead for the study.

"Currently, some of the medications that are prescribed to treat breast cancer in humans have toxic side effects for dogs and that's why surgery remains the preferred option for treating canine mammary cancer.

However, occasionally surgery can be debilitating and, more importantly, does not eliminate cancer cells that have already spread to other organs, which can ultimately be fatal."

The FiDo trial will be carried out in three phases. The first involves the donation of tissue for analysis following surgery. The second phase will analyse the effectiveness of androgen medication before surgery, while the third phase is a longer-term study to examine the effects of the treatment on quality of life and cancer recurrence.

"AR medication has high potential to treat the disease both in the mammary gland and elsewhere in the body.

"Importantly, the results of this study could not only benefit dogs but could also inform how best to use this treatment for women with breast cancer," said Professor Tilley.

Initially, 60 canine patients with mammary cancer are needed for the collaborative study, which is run by the Dame Roma Mitchell Cancer Research Laboratories, the School of Veterinary Sciences and vets across Adelaide.

The clinical trial is planned to commence in mid-2023.

For more information visit: <https://health.adelaide.edu.au/dame-roma-mitchell-cancer-research-laboratories/transforming-endocrine-therapy-for-breast-and-prostate-cancer/translational-research-outcomes/first>

# PET PROFESSIONALS CALLING AUSSIES TO #GETDOGTRAININGRIGHT

## CONCERNS ABOUT NETWORK 10'S NEW DOG TRAINING TV SERIES MISLEADING DOG OWNERS.

**Pet professionals calling Aussies to #GetDogTrainingRight with rewards-based behaviour training and help prevent pet surrenders. Concerns about Network 10's new dog training TV series misleading dog owners.**

With dog ownership at an all-time high, leading dog training organisation Pet Professional Guild Australia (PPGA) is encouraging dog owners to 'Get Dog Training Right' with rewards-based behaviour training and help prevent pet surrenders to already overcrowded animal shelters.

PPGA's call to #GetDogTrainingRight comes in the lead up to Network 10's upcoming Australian-based version of Dogs Behaving (Very) Badly TV series featuring controversial UK dog trainer Graeme Hall.

Mr Hall is also known as 'The Dogfather', but his teaching methods are criticised by many pet professionals across the globe as 'old-fashioned' – "using physical force, intimidation and fear to gain the wanted behaviour in troubled pets," explained PPGA President Sarah Campbell.

"We are concerned viewers will be misinformed by Mr Hall's archaic, quick-fix and aversive dog training methods," she said. "Managing dog behaviour can be a challenge but achievable with positive solutions."

Instead, the PPGA encourages dog owners to use force-free techniques, that focus on positive reinforcement and are based on canine science.

"Put simply, force-free training is rewarding the behaviours you

want in your dog rather than punishing the ones you do not want. It is the most ethical and effective method of dog training that puts the animal's welfare at the forefront," said Ms Campbell.

Since last year, the PPGA has sent letters of concern to Network 10 about using Mr Hall in the Aussie version of the TV series currently airing in the UK and on Channel 7Plus, co-signed by several leading force-free dog training bodies, animal welfare experts, professional associations and animal welfare organisations, such as Australian Veterinary Association, Delta Therapy Dogs, Companion Animal Network Australia and PetRescue.

"We are also concerned the program title Dogs Behaving Very Badly implies the dog is naughty and places the blame of the problem behaviour on the dog," said Ms Campbell. "This misconception is worrying because dogs are often either displaying normal dog behaviour or they suffer from a disorder that makes them anxious or aggressive."

Quick-fix advice misleading for viewers training their dog

The TV series' misleading 'quick fix' advice also creates unrealistic expectations among dog owner viewers, explained Ms Campbell.

"This 'quick fix' type advice often uses inhumane, outdated aversive techniques that display a limited understanding of dog behaviour, and – science tells us – does not address the underlying problem and will fail in the long term," she said.

"In reality, complex pet behaviours are not resolved easily and quickly, and may require working closely with veterinary professionals."





Aversive methods can also have long term negative effects on dogs and in many cases lead to a frustrated and distressed owner who then surrenders their animal to a shelter.

“We encourage dog owners to get dog training right with rewards-based teaching and help prevent pets from ending up in pounds and animal shelters,” she said.

Follow PPGA commentary on each episode of Dogs Behaving (Very) Badly Australia, which airs on July 13th.

Follow PPGA's Facebook page for commentary by force-free trainers on humane and lasting solutions to dog behaviour problems featured in Network 10's episodes of Dogs Behaving (Very) Badly Australia.

For advice on how you can #GetDogTrainingRight for a variety of problem dog behaviours, visit [www.ppgaaustralia.net.au](http://www.ppgaaustralia.net.au)



**“This ‘quick fix’ type advice often uses inhumane, outdated aversive techniques that display a limited understanding of dog behaviour, and – science tells us – does not address the underlying problem and will fail in the long term,”**

*PPGA President Sarah Campbell.*

# SUSPENDED JAIL TERM FOR SOUTH AUSTRALIAN WOMAN'S SHOCKING NEGLECT OF HER CHRONICALLY ILL DOG

**A 71-year-old Highbury woman who left her dog to suffer multiple medical conditions without any veterinary care and kept him living in a hole under her shed was today convicted on a charge of aggravated animal cruelty under SA's Animal Welfare Act.**

An RSPCA inspector attended at the woman's property on 12 February 2023 after a member of the public reported hearing a dog whining in apparent distress. The reporter had looked over a fence and sighted a collie-type brown dog in filthy condition and barely able to stand.

The inspector observed that the dog had heavily matted fur and a tumour on his back that was larger than a football. When trying to stand, the dog was unsteady and continuously shaking with a lack of movement in his hindquarters. The inspector also observed that the dog was shaking his head continuously and banging it into objects, which was suggestive of a neurological issue.

The defendant informed the inspector that the dog was named Muttley, that she had owned him since he was six-months-old and that he was now aged around 16. She stated that the head shaking had been going on for a couple of weeks, and that the tumour had grown significantly over that time period too.

When asked why she had not taken Muttley to a vet, the defendant said she did not have a car to take him and that, due to his age, she expected a vet to euthanase the dog, which she was not ready for. She agreed to surrender the dog to the RSPCA.

The inspector urgently rushed the dog to an emergency vet clinic. The examining vet found that Muttley had significant tumours on his hind leg and back which together weighed 1.8kg.

The vet further stated that the severity of the arthritis in the dog's front legs had caused them to fuse due to calcification of the joints. The matted and filthy coat was found to include faeces all over the animal's rear end.

The vet stated that pressure from the tumours combined with the dog's osteoarthritis would have caused the dog significant pain. Given Muttley's overwhelming health issues, the only humane option was to euthanase him.

In her record of interview with the RSPCA, the defendant stated that:

- **Muttley had last seen a vet when he was desexed at around 18-months of age**
- **She had noticed the tumour around 12 months prior to RSPCA attending**
- **She could not groom Muttley because he was wild and would bite**
- **That her partner owned a vehicle (that was parked in the driveway at the time RSPCA attended)**

In the Adelaide Magistrate's Court today, Magistrate Kate White agreed with RSPCA legal counsel Simon Perre's submissions that the neglect of Muttley was so egregious that the only appropriate penalty was a period of imprisonment. Her Honour imposed a six-weeks sentence, which was reduced to 26 days because of the defendant's early guilty plea.

Given her lack of any criminal history, her early plea, apparent contrition and that she is 71 years of age, Her Honour found reason to suspend the sentence on a \$500, 12-month Good Behaviour Bond. Orders were made for costs of \$528 to cover veterinary fees and \$358 in costs to the RSPCA, in addition to compulsory victims of crime costs.

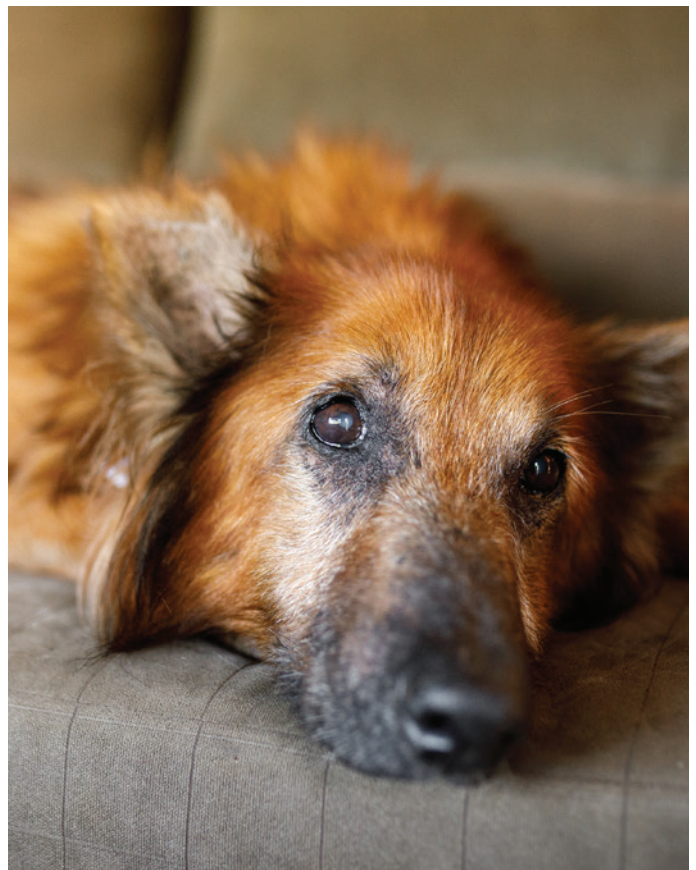
The defendant stated that she had no other pets and she is prohibited from acquiring or having custody of any animals, until further order.

In sentencing, Her Honour stated that "the Court must have regard to community expectations as well as the purposes of the legislation, which is to protect animals who have no other means to protect themselves". Her Honour told the defendant that she had avoided her responsibility to obtain the veterinary care her dog so desperately needed, and that "the dog's suffering required you to take proactive steps to relieve that suffering".

**Under SA's Animal Welfare Act, the maximum penalty for animal cruelty is \$20,000 or two years' imprisonment. For an aggravated cruelty offence, the maximum penalty is \$50,000 or four years' imprisonment.**

**RSPCA South Australia is the state's only animal welfare charity with inspectors empowered to prosecute animal cruelty under SA's Animal Welfare Act.**

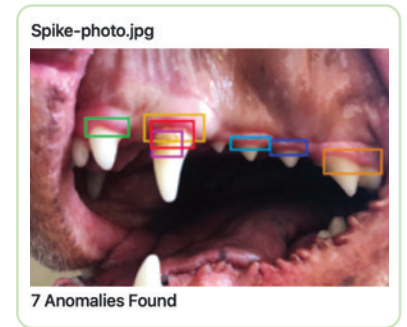
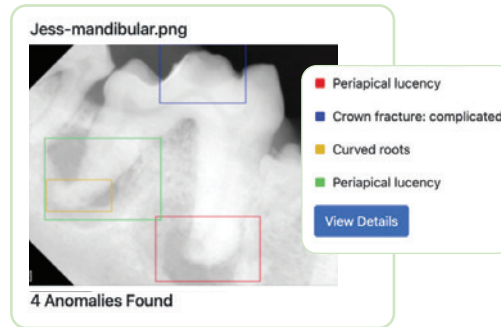
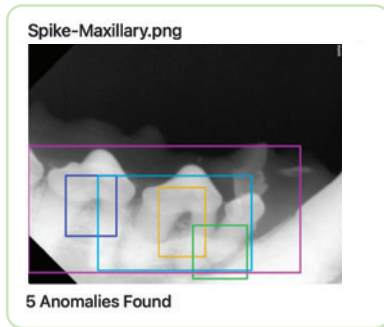
**Members of the public who witness animal cruelty or neglect are urged to immediately call RSPCA's 24-hour cruelty report hotline on 1300 477 722.**





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# THE ABCS OF VETERINARY DENTISTRY:

# J IS FOR JUVENILE FELINE HYPERPLASIC GINGIVITIS AND PERIODONTITIS

Tracey Small BA (Soc Sc), VN, Dip VN (Dentistry)  
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Registered Specialist, Veterinary Dentistry and Oral Surgery  
www.vdec.com.au

**As we move through the dental alphabet, this issue brings us to the letter J. In this article we continue our journey into the discipline of Juvenile feline hyperplastic gingivitis.**

Juvenile feline hyperplastic gingivitis is a condition that mostly affects cats<sup>1-5</sup>, though there have been some cases reported in dogs.<sup>4,5</sup> It is an inflammatory condition that affects the gingiva of young cats at the time of tooth eruption.<sup>1-5</sup> Owners often report to the clinic with their cat because they have noticed halitosis, bleeding from the gums and erythema.

Healthy gingiva is firm with a delineated coronal edge and is coral- pink in colour (Figure 1).<sup>2</sup> Young cats with juvenile feline hyperplastic gingivitis will present with severe gingival inflammation that is limited to the coronal and attached gingiva. The gingiva is oedematous that bleeds on oral examination and mastication. Inflammation does not usually include the caudal oral

mucosa<sup>1,3</sup> and there is minimal plaque and calculus present<sup>3,6</sup> with no obvious signs of pain (Figure 2).<sup>1,3,4,5</sup>

There is a proliferation of gingival cells resulting in pseudo pockets. In some cases, gingival enlargement is so extensive, it can cover the entire crown of the tooth (Figure 3). The mandibular molars tend to be the most effected.<sup>1,5</sup>

The etiology is unknown and any breed can develop this condition, however there appears to be a genetic predisposition in the Siamese, Maine Coon and Abyssinian breeds.<sup>1,5</sup>

Initially inflammation begins during tooth eruption when the young cat is approximately 6 to 8 months of age.<sup>1,5</sup> Susceptibility tends to subside when the cat is around 2 years of age.<sup>3-5</sup> With regular prophylaxis, gingivectomy to eliminate pseudopockets and rigorous home care these cats can return back to healthy periodontal structures.

However, if this condition is not treated early and aggressively then this disease quickly escalates to juvenile onset periodontitis (Figure 4) with consequential periodontal disease and early loss of teeth.<sup>1,3,4,5</sup>

Juvenile periodontitis differs from juvenile hyperplastic gingivitis on the account that it does produce excessive deposits of plaque and calculus, resulting in gingival inflammation but without the gingival enlargement.<sup>1,4,5</sup>

Consequently, periodontal disease precipitates, evident by early bone loss, periodontal pockets, gingival recession and furcation exposure.<sup>1,3,4,5</sup> Periodontitis tends to be more severe around the mandibular molars.<sup>1,2,3,5</sup>

Often these conditions are misdiagnosed as stomatitis,<sup>3</sup> and unfortunately treated as such by removing multiple teeth, termed "caudal clearance", if all premolar and molar teeth are extracted. Knowing the

Figure 1



Figure 2



clinical signs for both these conditions is imperative to plan and execute appropriate treatment or referral to a dental specialist.

Treatment begins with gathering a history from the owner, a full oral examination and finally an oral examination. The next step is to perform a full comprehensive oral health assessment and treatment under general anaesthesia, where the oral cavity and each tooth is examined and charted and full mouth radiographs are taken. Radiographs are imperative to assess the health of the periodontal structures of each tooth and evaluate any alveolar bone loss. Tooth resorption often accompanies sites where there is periodontal infection.<sup>1,4</sup> Extraction of diseased teeth may be required where significant bone loss is evident or tooth resorption is diagnosed to reduce the degree of inflammation present within the oral cavity.<sup>5</sup>

In cases where there is gingival enlargement, it is recommended to perform a gingivectomy to eliminate pseudo pockets where debris, plaque, calculus and bacteria can accumulate.<sup>1,2,4,5</sup> Bacteria within the pseudo pocket release toxins that invade and compromise the junctional epithelium which is the barrier that protects against periodontal disease.<sup>2</sup> Removing excess gingival tissue, reduces pocket depths so that plaque and bacteria cannot become trapped within the sulcus.<sup>2</sup> It is imperative that 2mm of attached gingiva is maintained after the procedure to prevent gingival recession.<sup>2,5</sup> Gingivectomy has the added benefit of enabling accessibility to the cat's teeth for the owners to perform regular oral hygiene.<sup>4,5</sup>

Prophylaxis is recommended every 3 to 6 months regardless of minimal plaque and calculus.<sup>1-5</sup> Professional cleaning regularly removes plaque and calculus not only supra gingivally but sub gingivally where

plaque and calculus deposits are more destructive. Gingival curettage must be performed on any teeth with periodontal pockets greater than 0.5mm except the canines which have a normal pocket depth of 1mm.<sup>2</sup> Lastly, teeth must be polished and flushed of all paste or pumice.

Dental charting must be documented each visit, charts provide valuable information such as historic comparisons to track if current treatment is effective based of whether the disease has progressed, maintained or improved. Findings dictate whether the treatment plan remains the same or if it needs to be amended to prevent further progression of this disease.

After each prophylaxis it is recommended that SANOS be painted into the gingival sulcus to seal the subgingival line. SANOS is a hydrophilic polymer that creates a barrier, preventing anaerobic bacteria, plaque and calculus from entering into the sulcus. Due to the engineered nano-pores within the polymer, oxygen and water can pass through, promoting a healthy aerobic environment.<sup>7</sup>

Homecare is integral component to treatment. Plaque forms on the tooth within hours after brushing and irritates the gingiva causing inflammation,<sup>2</sup> therefore toothbrushing must be performed every day to control inflammation and remove plaque buildup.

Toothbrushing should be combined with the application of MAXI/GARD gel or wipes. The active formula of zinc ascorbate and taurine amino acids has been found to stimulate collagen production and aid in wound repair.<sup>8</sup> In addition, the zinc works as an antiseptic against both gram (+) and gram (-) bacteria.<sup>8</sup> Research concluded that MAXI/GARD reduced bacterial growth and in turn, plaque and gingivitis also decreased.<sup>8</sup>

Dental foods and treats can be incorporated into the home care program; however, these are secondary to brushing and MAXI/GARD as removing plaque daily is essential to reducing inflammation and periodontal disease.

Treatment can be difficult, particularly as this disease can be long term.<sup>1,3,4,5</sup> Cats can be difficult for their owners when performing oral homecare. Ideally each practice should have an assigned nurse that is dedicated to dental education. This nurse would work with clients, educating, demonstrating how to brush and administer oral gel and perform regular follow up revisits to ensure the best chance of success.

Whist it is true that these cases can be frustrating and difficult to manage. With persistence, regular prophylaxis and strict homecare symptoms can resolve and these patients can have healthy periodontal health during their adult years.<sup>1,4,5</sup>

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Figure 3



Figure 4



# PREVENTING PET DENTAL DISEASE

**IN AUSTRALIA, DENTAL DISEASE IS THE MOST COMMON HEALTH CONDITION IN PETS, WITH AS MANY AS 70% – 80% OF CATS AND DOGS HAVING DEVELOPED SOME FORM OF THE DISEASE DURING THEIR LIFETIME<sup>1</sup>.**

This August marked National Pet Dental Health Month, helping to highlight the importance of pet oral health for the happiness and wellbeing of our beloved four-legged friends.

In Australia, dental disease is the most common health condition in pets, with as many as 70% – 80% of cats and dogs having developed some form of the disease during their lifetime<sup>1</sup>. To help raise greater awareness and encourage Australians to monitor symptoms of this condition, Petstock Vet Dr. Tara Morris shares her expert advice on how to keep your pet's teeth and gums in tip-top shape.

## How do I know if my pet has dental disease?

Dental disease, specifically periodontal disease, is a progressive condition affecting your pet's gums and surrounding bone. It develops in four stages, with the initial stage being the mildest and most easily treatable. Symptoms may include bad breath, plaque and tartar buildup on the teeth, loss of appetite, difficulty chewing, eating, or bleeding gums<sup>2</sup>.

If left untreated, advanced stages of dental disease can lead to tooth loss, gum inflammation, and significant bone loss<sup>3</sup>. It's important to note that dental disease causes pain and discomfort at any stage. Seeking prompt veterinary advice and early treatment is crucial to prevent the condition from worsening.

## DENTAL HEALTH FACTS

- Dogs have 42 permanent teeth and cats have 30.
- Rabbit teeth are open-rooted and continuously grow throughout their lives.
- Aggressive chewing on hard objects is a primary cause of broken teeth in dogs like rocks.
- Providing your pet with good dental hygiene can add 2-4 years to their life.
- Pets don't tell us when their teeth hurt, animals actually hide the signs of illness or weakness

For more information on how to care for your pet's oral health, visit [www.petstock.com.au](http://www.petstock.com.au).



References: <sup>1</sup>Mäkinen, Annika & Munukka, 2019, p. 275 <sup>2</sup>RSPCA, 2022. <sup>3</sup>Mäkinen, Annika & Munukka, 2019, p. 276 <sup>4</sup>RSPCA, 2022

## HYGIENE TIP #1: START A BRUSHING ROUTINE.

Brushing your pet's teeth regularly, preferably daily or at least weekly<sup>4</sup>, is the most important way of helping to maintain their oral hygiene and prevent dental disease.

To clean your pet's teeth, make sure you invest in specialised toothbrushes specially designed for animals and are less abrasive than human brushes.

Pet-friendly toothpaste is also a must, as many human toothpastes contain xylitol — an artificial sweetener that is toxic to cats and dogs.

Other products that can be used to clean your pet's teeth include dental wipes, mouth freshening water additives, and even fresh breath foam. If you're thinking of incorporating these products into your pet's dental routine but are unsure about which products to use, speak to your local vet or head to your local Petstock store for more personalised advice.

## HYGIENE TIP #2: DENTAL TOYS AND TREATS

Not only are they delicious and fun to play with, dental toys and treats are an easy way of

helping to maintain oral hygiene. A great option to consider for pet owners who are short

on time, dental toys and treats can be given with minimal supervision, and are designed

to help remove plaque and tartar as your pets play and chew.

“Dental disease, specifically periodontal disease, is a progressive condition affecting your pet’s gums and surrounding bone. It develops in four stages, with the initial stage being the mildest and most easily treatable.”

Petstock Vet Dr. Tara Morris

## DR TARA’S TOP DENTAL HEALTH PRODUCT PICKS:




L-R: TropiClean Fresh Breath Oral Care Kit RRP:\$35.84, TropiClean Fresh Breath Dental Wipes 50pk RRP:\$29.40, TropiClean Enticers Kong Dental Ball & Smoked Beef Brisket Gel RRP:\$29.97 - \$39.97, Greenies Regular Dental Chews For Medium Dogs Treats RRP:\$ 35.98, Drool by Dr Chris Brown Cat Teeth + Breath Cat Treats 60g RRP:\$11.98

### HYGIENE TIP #3: CONSIDER A DENTAL DIET.

Aside from dental treats, a pet’s overall diet can also play a role in keeping healthy oral hygiene. Pet owners can explore specially formulated dental kibble that aids in cleaning their pet’s teeth as they eat, effectively reducing the formation of plaque and tartar. Remember that any diet changes should be gradual and must always be conducted under the guidance of a pet professional. Consult your local vet before suddenly changing your pet’s diet to improve oral hygiene.

### HYGIENE TIP #4: GETTING YOUR PET’S TEETH PROFESSIONALLY CLEANED.

There’s only so much that home cleaning, dental treats and specialised kibble can do. Once tartar has set and formed throughout the stages of dental disease, it cannot easily be removed at home and thus professional cleaning is recommended. Like humans, it is advised for pets to receive a professional dental clean once every six months to prevent general build up. As professional dental cleaning is a procedure requiring anesthesia and a prior dental check, be sure to speak to your local vet if you are considering this option.



**“Veterinary education has the highest gap of any discipline between what it costs universities to deliver and what they receive from the Commonwealth and fees to meet those costs.”**

# VETERINARY EDUCATION FACES A SUSTAINABILITY CRISIS: VSANZ REPORT

## NEW REPORT URGES COOPERATION WITHIN HIGHER EDUCATION TO FIND SOLUTIONS

**Veterinary Schools of Australia and New Zealand (VSANZ) has released 'Rethinking Veterinary Education', a landmark report calling for an overhaul in how future veterinarians are educated.**

The University of Sydney welcomes the 'Rethinking Veterinary Education' report released today by Veterinary Schools of Australia and New Zealand.

The report is the result of close cooperation between the Deans of veterinary science schools and faculties in Australasia. The last significant report into veterinary education was more than 20 years ago.

The report recognises the crisis facing the veterinary profession, particularly in terms of funding models for veterinary education; sustainability in domestic and agricultural practice; and retention in both urban and rural areas.

It also highlights the vital role that veterinary experts will play in managing the impacts of climate change, improving biosecurity and disease prevention.

Professor Jacqueline Norris, Head of School for the Sydney School of Veterinary Science, said: “Veterinary education has the highest gap of any discipline between what it costs universities to deliver their programs and what they receive from the Commonwealth and capped domestic student fees to meet those costs.

“At the University of Sydney, on average over the past four years, the annual funding gap per full-time Commonwealth-supported veterinary student has been 36 percent, or almost \$20,000 each. We know that many other universities face similar funding shortfalls in sustaining high-quality veterinary science programs in the national interest.”

Professor Norris said: “The funding shortfall facing universities with veterinary science programs – and the financial pressures on vet practitioners after graduation – mean that without structural change, there will be increasing sustainability pressures for the veterinary industry, impacting domestic pets and agricultural industries.”

The eight universities across Australia and New Zealand that supply graduates for the veterinary profession have a special role to play in suggesting solutions and addressing these matters. Professor Norris said the report is a good signal that the higher education institutions are working together to push for the type of change needed: in accreditation, admissions criteria, structural adjustment and load sharing; and in funding changes.

The report highlights the economic and mental-health pressures on veterinary practitioners after graduation and suggests measures to support the profession to become a more sustainable career option.

It also notes the evidence that suggests risk of death by suicide is increased in the veterinary profession compared to the general population.

Recommendations include new and broader pathways for entry to the profession; paid apprenticeships while studying; mandatory mentoring; and the exploration of debt relief models for people working in remote and rural Australia.

Critically, the report highlights the diverse role that vets play in the Australian economy, in our communities, and in our public health sector as 'disease spotters' at the frontline of Australia's biosecurity, in food production and for animal welfare.

Professor Norris said: “Veterinary practitioners play a vital role in our communities – but it is beyond the stereotype of James Herriot from the TV series All Creatures Great and Small. We are focused on producing highly skilled graduates that can deal with the pressures of veterinary life and be major contributors to Australia's communities, economy and public health wellbeing.”

She said that with accelerating climate change, the role of vets will become more important, not just as practitioners dealing with disease pressures on livestock and domestic pets, but as leaders in climate change research, as well.

“Anyone with a pet knows that your local vet can provide critical advice and support at times when our animals are unwell. But our expertise goes much further, such as disease prevention and early



identification of disease. This is as important for human and animal health,” Professor Norris said.

“Our researchers are working with government and public health officials in Australia and South East Asia to train animal handlers on the ground to spot the emergence of zoonotic diseases such as swine or avian influenza, coronaviruses, rabies, foot and mouth disease, or African swine fever.”

Deputy Vice-Chancellor (Education) Professor Joanne Wright said: “As a University, we are committed to supporting positive change in the education of our wonderful veterinary science students. As one of just seven universities in Australia that maintains a School of Veterinary Science, we welcome this report and reaffirm our commitment to continuing our 113-year tradition of educating the next generation of veterinary practitioners.

“However, this must be done positively in collaboration with the Commonwealth to help us address the structural financial burdens on providers of veterinary education.

“Unfortunately, changes to higher education funding introduced by the former government discourage both universities and the Commonwealth from prioritising new student places for veterinary science courses - even though the profession faces growing workforce shortages and was added to the skilled migration priority list in 2021.

“We are hopeful that the Accord Panel will have something to say on this issue when its interim report is released.”

## SOME RECOMMENDATIONS OF THE REPORT INCLUDE:

- Establishing a strategic change fund allowing for resource sharing of specialisations between the Veterinary Schools
- Increasing Commonwealth support to address the gap between costs and funding, the biggest in the higher education sector
- Improved professional support for veterinary practices to attract and retain graduates in the profession
- Extending mentoring schemes
- Broadening student input criteria
- Debt relief for vets working in rural and regional Australia through a bonding scheme





# REPORT ON ARTIFICIAL INTELLIGENCE IN VETERINARY MEDICINE CALLS FOR ACTION

**A report providing a comprehensive overview of the use and potential of artificial intelligence (AI) in veterinary medicine has been published, including calls for engagement, education and action across the industry.**

The online publication, 'Artificial Intelligence in Veterinary Medicine', produced by VetCT (a global provider of veterinary teleradiology, teleconsulting and education services) provides a foundational understanding for practitioners about the current and potential uses, benefits and risks of this rapidly developing technology. The chapters provide an introduction to AI and its uses in human medicine, small animal, farm and equine practice, radiology and veterinary education, and the potential impacts on the wellbeing and working life of veterinary teams. Results from VetCT's recent survey on the opinions of AI within the veterinary profession are included in the paper.

Julien Labruyère, Chief Innovation Officer at VetCT, says, "This is a crucial moment in the veterinary industry to ensure we have the knowledge and safeguards in place to apply AI safely,

effectively and with confidence to support good clinical practice and ultimately, improve animal welfare. This report aims to provide a firm foundation for understanding AI and stimulate discussion on how it may impact both people and animals."

The paper also calls for the development of industry-wide guidance, standards and regulations to safeguard veterinary teams and animal health and welfare as these tools are deployed, as Julien highlights; "AI development is accelerating rapidly, with global governments and industries racing to regulate to ensure the benefits outweigh the potential negative impacts of this far-reaching technology. It's vital that opinion leaders, organisations and regulators from across the veterinary world come together and develop guardrails so we can have confidence that AI tools will benefit our teams and our patients."

**The full report can be downloaded by scanning the QR code.**



Julien Labruyère, CIO and co-owner of VetCT

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# AUSTRALIA IN GLOBAL EFFORT TO ELIMINATE RABIES

**AUSTRALIA IS FOCUSED ON THE GLOBAL FIGHT AGAINST RABIES, THROUGH REGIONAL SUPPORT FOR INDONESIA, PAPUA NEW GUINEA, TIMOR-LESTE, AND THE PACIFIC.**

Zoonoses are diseases that can jump from animals to humans like rabies, Ebola, avian influenza and COVID-19. Every year at least 59,000 people die from dog-mediated rabies globally—with over 96% of human cases caused by dog bite of a rabies virus-infected dog.

Australian Chief Veterinary Officer, Dr Mark Schipp, said Australia is rabies-free, and is working with neighbouring countries to increase rabies preparedness, surveillance, diagnostic testing, and response initiatives.

“Rabies has recently emerged in parts of West Timor just to Australia’s north. The Department is working closely with neighbouring Timor-Leste—which is currently free of rabies—to help keep the disease out,” Dr Schipp said.

“Earlier this year, quarantine officers from Timor-Leste participated in a train-the-trainer program at Australia’s Biosecurity Training Centre. The training enhanced their skills to prevent diseases such as rabies entering their country—and to be prepared should any disease incursion occur.”

Australia is also providing Timor-Leste support for community awareness of rabies and has provided support for a dedicated cool room for the storage of emergency animal disease vaccines.

The Department is also providing more than \$1.2m over four years to fund a Regional Rabies Control initiative, with a focus on supporting the Government of Indonesia to implement a rabies vaccination campaign for dogs on the island of Bali.

The Department works closely with key partners including the World Organisation for Animal Health to provide canine rabies vaccines, and the Department of Foreign Affairs and Trade Centre for Health Security and the Australia-Indonesia Health Security partnership in support of the Indonesian government.

“This project is focused on supporting Bali given increased outbreaks of the disease there and to help our friend, Indonesia, in their goal to eliminate dog-mediated human rabies in country by 2030,” said Dr Schipp.

“To date, the project has administered 200,000 doses of dog rabies vaccine, from the World Organisation for Animal Health vaccine bank, in key districts across Bali.”

The Department’s Pacific Engagement Program for Animal Health is also working closely with our partners in Pacific countries to help them retain their rabies-free status.

All these efforts support the Quadripartite mission – being the Food and Agriculture Organization of the United Nations, United Nations Environment Programme, World Health Organization and World Organisation for Animal Health, to eliminate dog-transmitted rabies globally by 2030.

“Rabies poses a threat for many countries in our region and of course to Australia. World Zoonoses Day is a timely reminder, that everybody can play a part in helping keep Australia free of rabies by following our biosecurity rules,” Dr Schipp said.



# RETIREMENT OF AUSTRALIA'S CHIEF VETERINARY OFFICER

**AS OF 1 DECEMBER 2023, AFTER A 30-YEAR TENURE WITH THE DEPARTMENT OF AGRICULTURE, FISHERIES AND FORESTRY, DR MARK SCHIPP WILL BE RETIRING FROM THE AUSTRALIAN PUBLIC SERVICE.**

Dr Schipp was appointed Chief Veterinary Officer of Australia in 2011. During his tenure he has led Australia's national responses to emergency animal disease incursions, provided global and national leadership on the threat of antimicrobial resistance (AMR), and worked to strengthen the veterinary services in Australia and countries in our region.

Dr Schipp has been instrumental in building the capacity of the Office of the Chief Veterinary Officer, with a focus on biosecurity, One Health, AMR, international engagement in the Pacific and south-east Asia, and advocacy for the veterinary profession.

Since 2012, Dr Schipp has been Australia's Delegate to the World Organisation for Animal Health (WOAH). Dr Schipp exemplifies Australia's global leadership in animal health, having been elected the President of the WOAH General Assembly for a three-year term from 2018-21, and will continue to serve on the WOAH Council as immediate past-President until May 2024.

Through his appointments, Dr Schipp saw Australia's animal health status remain free from many emergency diseases – a status

central to our access to international markets. He also worked to progress international standards to improve animal health and welfare worldwide.

Prior to his tenure as Chief Veterinary Officer, Dr Schipp was posted overseas for 6 years in Seoul, South Korea and Beijing, China. While in China he opened the Agriculture Counsellor post at the Australian Embassy in Beijing and negotiated new market access for Australian agricultural products.

The department would like to thank Dr Schipp for his incredible work improving animal health and welfare, supporting the Australian agriculture industry, and leadership in the control of transboundary animal diseases.

Until 1 December, Dr Schipp will continue in his duties as the Chief Veterinary Officer, supported by his office including Deputy Chief Veterinary Officer Dr Beth Cookson.

An external recruitment process will be undertaken to identify the next Australian Chief Veterinary Officer.

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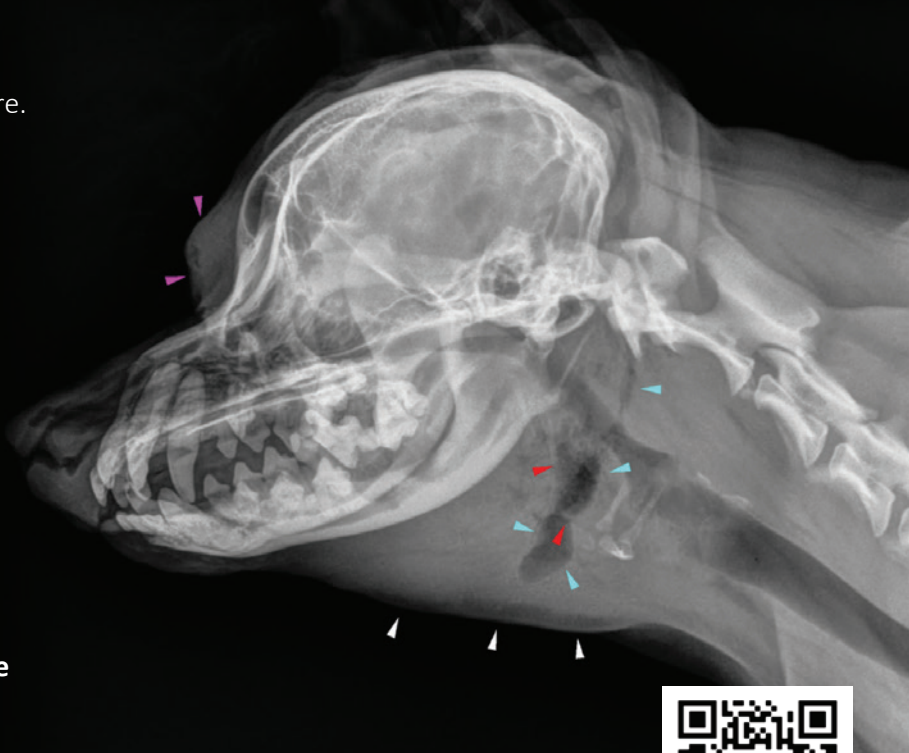
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# NEW NON-PROFIT GOES GLOBAL

## TOP VETERINARY MEDICAL LEADERS HAVE PARTNERED TO LAUNCH A NEW NONPROFIT ORGANIZATION, *BOARD OF CHIEF VETERINARY MEDICAL OFFICERS (BCVMO)*.

BCVMO is a collective of over 60 veterinary medical leaders and experts from all segments of the veterinary industry including animal health manufacturers, corporate, independent, and nonprofit hospitals, universities, shelters, and distributors. The purpose of BCVMO is to:

1. Expand care to more animals,
2. Improve the lives of the veterinary team, and
3. Serve as one cohesive medical leader voice to advocate for positive solutions.

Dr. Jimmy Barr, BCVMO Chair, shared that “we are a group of medical leaders that are committed to collaboration and moving the industry forward. This cross-banner cooperation has never happened before, and we know we will make the industry better for us all!”

BCVMO is comprised exclusively of the top veterinary medical voices across almost every segment of the animal health industry. The organization is uniquely positioned, due to the expertise and leadership roles held by the membership, to serve as a bridge between veterinary medicine and veterinary business. Most of its members serve as the leading medical voice and decision maker in their respective organizations. The dedicated executive board and membership combined represent more than 600 years of experience in the veterinary profession and span every veterinary medical specialty. And BCVMO member organizations represent tens of thousands of veterinary medical professionals and serve more than 40,000,000 pets annually.

“Our collaborative group is well positioned to address the contemporary challenges of thousands of veterinary care givers and millions of pets. We are focused on access to veterinary care,

the national shortage of veterinary care givers, and how our daily challenges impact our ability to deliver high quality care, all while fostering the wellbeing of our veterinary teams,” says Dr. Scott Schatzberg, BCVMO Vice Chair.

To learn more about BCVMO, inquire about membership or sponsorship, and subscribe for updates click the following link [www.bcvmo.org](http://www.bcvmo.org) and follow us on LinkedIn.

BCVMO is focused on sharing best practices, advocating for, and executing solutions to current challenges within our profession. BCVMO is committed to lending its expertise to identify solutions for the following four strategic pillars:

- **Advancing the Quality of Veterinary Care**
- **Evolving the Veterinary Team**
- **Advocacy for Regulatory Improvements**
- **Increase Veterinary Team Capacity**

They see these four areas as critical to ensuring the continued success of the veterinary industry, protecting the wellbeing of veterinary professionals, and ensuring that more pet owners and pets receive quality veterinary care.

Dr. Jennifer Welser, BCVMO Member at Large shared her thoughts on how the organization began, “We started meeting as a group very informally and then realized the number of people and organizations we represent, and the power of a collective voice that is much needed in our industry.”

**For more information contact: Nikkia Starks | [nikkia@bcvmo.org](mailto:nikkia@bcvmo.org)**

## THE BCVMO EXECUTIVE BOARD



**Dr. Jimmy Barr**  
DVM, DACVECC  
(Chair)



**Dr. Scott J. Schatzberg**  
DVM, PhD, DACVIM  
(Neurology)  
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# A GENERATIONAL TAIL OF PET OWNERSHIP

The differences between generations are a tail as old as time, but ahead of International Cat Day, alarming new research from Compare the Market has revealed just how different age groups are when it comes to caring for their pets.

The results? Well, according to the research, younger pet parents are more likely than older Australians to spend extra on healthcare for their furry friends.\*

The research found that Millennials are the most likely to splash the cash at vet clinics, with the largest vet bill paid by Millennials being, on average, \$2,728+. This number was almost \$700 more than the next biggest spend at the vet clinic by Gen Z. Baby Boomers, on the other hand, were a bit more subdued in spending, on average \$1,879+ for their biggest vet bill.

Generation	Biggest vet bill spend + (average)
Gen Z	\$2031
Millennials	\$2728
Gen X	\$1915
Baby Boomers	\$1879

Money aside, the research also found a distinct divide between how the lifestyles of younger and older pet owners are affected by their pets. Younger generations are more likely to admit that their pet impacts their living situation, such as their area or the type of property they reside in.

Additionally, Gen Z and Millennials are more likely to use their beloved pets as an excuse to get out of social events than their older counterparts.

On the other hand, Gen X and Baby Boomers are more likely to put off going on holidays to ensure that their pet is not left behind.

One thing that all generations could agree on was taking personal leave from their work to spend time with their pets.

Compare the Market's General Manager of General Insurance and pet insurance expert, Adrian Taylor, said it was interesting to see the role pets play in our lives.

"We can see a distinction of how different generations are impacted by pet ownership. From putting off holidays because they don't want to leave their pets behind or securing a pretty good alibi for bailing on social events, pet ownership is individualistic between the owners and their pets," Mr Taylor said. "What the findings do show is that while pets have a unique impact on their owners, people of all ages across the country have a great deal of love for their four-legged friends.

"And while there is no one-size-fits-all way of protecting your beloved pet, you can have added peace of mind by getting pet insurance. Pet insurance may not only cover you for accidental illnesses or injuries but, depending on your level of cover, could also add cover for pet dental, routine care and even behavioural management classes. These additional extras may come at an increased premium upfront, you know that your pet is covered in more circumstances."



The research also found that Gen Z was the least likely to know the breed of their pet (85.8%), while Millennials respondents were the most likely to know their pet's breed (90.6%). However, younger generations (Gen Z and Millennials) were less likely to know their pet's age than older generations (Gen X and Baby Boomers).

"It's interesting to see such a stark divide between younger and older generations about what sort of information they recall about their pet." Mr Taylor said.

"Given the rise of adopting shelter pets for younger generations, where information about the breed or the pet's age may not be as easy to come by, it's understandable why more Millennials and Gen Z pet owners may not know these facts, though it is curious to see that Millennial pet owners are the most knowledgeable on their pet's breed.

"While these basics may not affect the love you show your pet, it may be prudent to know these facts. Certain breeds, such as Persians or Pugs, may suffer or be more prone to specific hereditary diseases and illnesses. In the case of pet insurance, not knowing your pet's age or breed will not affect you taking a policy out for your pet, if there is a claim later on and the breed is recognised, your policy will be adjusted and your premium will also change as a result."

While the results show that there is a deep generational divide in how people care for their pets, there is no one perfect way to show our pets love. The best thing that can be done this International Cat Day, is to show your furry feline the love and care you usually do, and maybe an extra treat or two won't go by the wayside.

+ Prices indicated within the release have been rounded to the nearest whole dollar figure

\* Compare the Market surveyed 1,007 Australian pet owners aged 18 and over in April/May 2023

## IMPACT ON LIFESTYLE

Generation	Impacts living situation	Put off holidays	Get out of social events	Taken personal leave
Gen Z	39.0%	28.4%	28.4%	14.2%
Millennials	40.9%	30.0%	22.3%	15.8%
Gen X	31.0%	33.9%	15.5%	15.1%
Baby Boomers	30.5%	35.1%	17.9%	14.4%
Australian Average	35.1%	32.3%	20.1%	15.0%

Generation	% of respondents who don't know their pet's breed	% of respondents who don't know their pet's age
Gen Z	14.2%	4.3%
Millennials	9.4%	4.5%
Gen X	13.7%	2.2%
Baby Boomers	13.3%	2.5%
Australian Average	12.3%	3.3%



# LEADING THE CHARGE IN AFFORDABLE AND COMPREHENSIVE VETERINARY CARE

The bond between pets and their owners is unbreakable. As the number of pets continues to rise, the demand for top-notch veterinary care has reached almost unreachable levels. In response to this pressing issue, Vet1, a trailblazing veterinary equipment company, has emerged as a beacon of innovation, reshaping the landscape of veterinary care with an integrated approach that combines competitively priced products, educational videos, support and the power of social media.

At the heart of Vet1's transformative strategy is its commitment to offering a range of equipment and supplies at prices that allow clinics to stretch their budgets without sacrificing quality, Vet1 is revolutionising the way veterinary services are delivered.

This approach opens up avenues for clinics to enhance their services, from routine check-ups to advanced medical procedures, without the burden of exorbitant costs, and therefore keeping it affordable for pet owners. In partnership with this product offering, Vet1 has enlisted Tess Nolan – a passionate veterinary nurse. Tess's deep understanding of the industry has paved the way for a series of educational videos that serve as a valuable resource for clinics.

These videos delve into a myriad of topics, from advanced medical techniques to patient care strategies, arming clinics with the knowledge and expertise needed to broaden their services and support their staff. Vet1 and Tess Nolan are leveraging the reach of social networks to initiate discussions about affordable veterinary care and inspire a collective drive towards comprehensive solutions for pet owners.

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# Zinc: Plaque's natural enemy



BRUCE ADDISON, Veterinary Microbiologist • Addison Biological Laboratory, Inc.



*"Plaque forms within 24 hours, calculus within 3 days and gingivitis begins as early as 2 weeks."*

— WSAVA.org

Pet oral health care is an ongoing challenge for pet owners and veterinary teams. Periodontal disease is the number one health problem in small animal patients, according to the American Kennel Club. By age 3, more than 80 percent of dogs and cats have some form of periodontal, or gum disease. Pet owner resistance to in-clinic dental procedures that involve x-rays and anesthesia is well known.

To optimize pet health, **the starting point for comprehensive oral care must be in the home** where bad breath is the primary warning sign. Most veterinary clinic personnel miss the opportunity to educate pet owners about daily oral care and promote in-home solutions for their pets.

*Quite simply, "a chew alone won't do."*



Working with natural zinc compounds, Addison Biological Laboratory pioneered the use of a natural, zinc-based compound that is safe for daily use, inexpensive, taste-free and provides excellent pet acceptance. The unique formula works to break down plaque on contact and can be used daily without brushing.

Addison's neutralized zinc is a combination of select amino acids and zinc. Taurine and zinc gluconate form a complex bond that inhibits the precipitation of zinc in the neutral pH (6.7 – 7.0) range. In this narrow pH range, an oral zinc preparation delivers increased bioavailability that ensures its duration of effect and efficacy.

*"Zinc is well documented to tie up sulfur compounds in the oral cavity which are a primary cause of bad breath, the first signal of impending dental disease."* — Bruce Addison, Veterinary Microbiologist, President and Founder

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# THE PEACE BEHIND SAYING GOODBYE AT-HOME

**YOUR VETERINARY CLINIC IS THE PLACE YOU WANT TO BE IF YOUR PET HAS A TREATABLE DISEASE OR NEEDS A REGULAR CHECKUP. BUT WHAT HAPPENS WHEN AGE OR A TERMINAL DIAGNOSIS TAKES OVER? WHAT HAPPENS WHEN YOUR PET IS BEYOND A CURE?**

Palliative care refers to the ideals of ensuring patient comfort even if curative care is no longer possible, providing access to individualised age-appropriate health care and supporting families through the difficulties of end-of-life decision making. Palliative care is something that more and more families are turning to in an effort to ensure their pets quality of life is well managed, even when the end is near. Often this is care that can be, at least in part, delivered in the home by a dedicated Palliative Care team.

Dr Ashlee from Sunset Vets Palliative and End of Life Care (Sunset Vets) is a Canberra based Veterinarian who works specifically with pets approaching the end of their life. A powerhouse in the industry, she is one of a small number of Australian Vets who hold a IAAHPC Certification (International Association for Animal Hospice and Palliative Care) in addition to her Veterinary qualifications.

“Palliative medicine is quite a new field of focus in the Veterinary world, but it’s one that allows me the luxury to provide a level of care where I can build relationships with my patients as well as my clients”, said Dr Ashlee.

“I studied at James Cook University and originally worked in General Practice before joining Sunset Vets. During my time in clinic, I saw a lot of older patients and performed euthanasia’s. But, in a ten-to-15-minute time slot, I felt like I was unable to provide the level of care that I wanted to. The luxury of providing

at-home end-of-life care, whether it be palliative or euthanasia, is that I can take my time. I can build relationships and develop trust and connection with my patient and with the family. It’s how end-of-life care should be managed.”

Because palliative medicine is relatively new within the Veterinary industry; it’s also unfortunately one that can be misunderstood. It is sometimes assumed that palliative care delays the inevitable and potentially cause unnecessary suffering. But this couldn’t be further from the truth.

“Palliative care is so important,” Dr Ashlee explains. “Pets are notorious for hiding their pain, and they suffer through it. In General Practice it’s common to see a euthanasia patient who’s been struggling with unmanaged pain for years. Palliative medicine can help manage that pain and improve a pet’s quality of life. I want to increase awareness and education on palliative medicine so pets can be comfortable during their final years.”

It’s this mentality, alongside her impressive experience and qualifications that makes Dr Ashlee so loved by her Canberra clients, both human and animal alike. And palliative care for Dr Ashlee, is as much about the owners, as it is about the pet.

“Owners are actually very involved in palliative care,” explains Dr Ashlee. “it’s empowering for a loving owner to be involved and actively do things that support their beloved pet’s well-being.

“I had a patient I only recently said goodbye to; a beautiful



Labrador named Star. Star presented with quite common old age symptoms as well as a back leg that was partially paralysed and was affecting her ability to walk. Because she had stomach issues and was unable to tolerate certain medication, we had to think outside the box regarding her oral medication plan, and we had to monitor this very closely. I worked with her owner to adjust her diet to include supplements for joint support, and we tried quite a few mobility aid options before we finally found something that worked for her - a special paint for her pawpads that increased grip. This allowed her to walk with more confidence. She had long-term monthly injectable arthritis medication to help control her pain given that we were limited in what we could give her orally. These combined changes made quite the impact; Star was comfortable and her pain was well managed. She was my palliative patient for a year and a half and along with improving her quality of life I was really able to build a connection with her and her family. It's such a gift to earn the love and trust of an animal, but it does make it even more heartbreaking when it's time to say goodbye."

The decision to say goodbye is one that is usually agreed upon in advance. This is because palliative care is unique and open discussion is encouraged so a plan is in place which all parties are comfortable with.

"The benefit of palliative care is that it's tailored to each family. One of the first things we do on an initial visit is discuss the end and put parameters in place so we know when a palliative patient will become a euthanasia patient," said Dr Ashlee. "Our goal is comfort; we do not want to extend an animal's life if they are uncomfortable and unhappy."

Sunset Vets is spread across four states and is a dedicated palliative and euthanasia service. This means, although palliative care is the why behind Sunset Vets; compassionate, at-home euthanasia is one of the more common services provided. And saying goodbye isn't easy. Even when it's done every day.

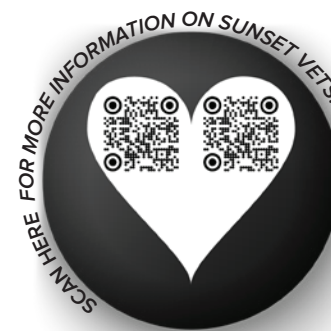
"If people are crying, I'm going to be crying," says Dr Ashlee.

"It's easy to feel the sadness and the grief of others, and it can get very emotional. But as the Vet, it's not my grief to own. Families grieve because there's love and memories. And they deserve to feel their emotions as raw and devastating as it can be to witness. And it breaks my heart. But I do find positives in the peace I bring by providing euthanasia in the comfort of their own home.

"When the time has come to say goodbye, a pet is old and sore. They're scared and they feel vulnerable and while clinics are incredible and they're the place you want to be when something is treatable, it's not home, and it's not as comfortable. Knowing I'm taking that stress away from a beautiful pet who already doesn't feel well, brings me peace and comfort. And that's something I hold onto when a goodbye is particularly tough."

And so when asked what she wished owners knew more about when it comes to end-of-life care, Dr Ashlee said.

"Changes due to old age are normal. But they can still have a big impact on quality of life, and how enjoyable those final years will be. We're not going to cure old age, but there's plenty we can do to make them comfortable and manage these changes. If I can impact even one person to consider palliative care, I'm happy. I want pets to be comfortable in their final years, that's why I do what I do."



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# CASE STUDY: 16.5 YO MALE ENTIRE WELSH CORGI SHOWING NON-PRODUCTIVE RETCHING FOR 3 HOURS.

*Species: Canine*  
*Breed: Welsh Corgi (Cardigan)*  
*Sex: Male Entire*  
*Age: 16.5 years*

## Clinical History:

He is showing non-productive retching. This has been going on for the past 3 hours.

## Anatomic regions: Abdomen

### Details of study and technical comments:

A radiographic study of the abdomen is presented for evaluation.

The study consists of right and left lateral views as well as a ventrodorsal view.

### Diagnostic interpretation:

#### ABDOMEN:

There is reduced abdominal serosal contrast with effacement of visceral margins and visceral crowding secondary to marked gastric distention.

The gastric silhouette is markedly distended with gas and all is malpositioned: The pyloric antrum (PA) is positioned dorsally and rightward relative to the gastric body (GB) and fundus. At the level of the lower oesophageal sphincter, there is focal narrowing/cinching (orange arrows). The duodenum contains a small volume of gas and is dorsally positioned (yellow arrows).

The visible margins of the spleen are caudally displaced (dark blue arrows).

Multiple mineral foci overlie the region of the left renal pelvis (light blue arrows). A smoothly marginated mineral focus (pink arrow) overlies the area of the right renal pelvis, proximal ureter or gastric silhouette. A mineral focus overlies the urinary bladder (purple arrows).

Multifocal spondylosis deformans is present in the lumbar vertebral column without evidence of fracture, luxation or osteolysis.

Bronchial wall distinction is in the caudal lung fields.



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**Conclusions:**

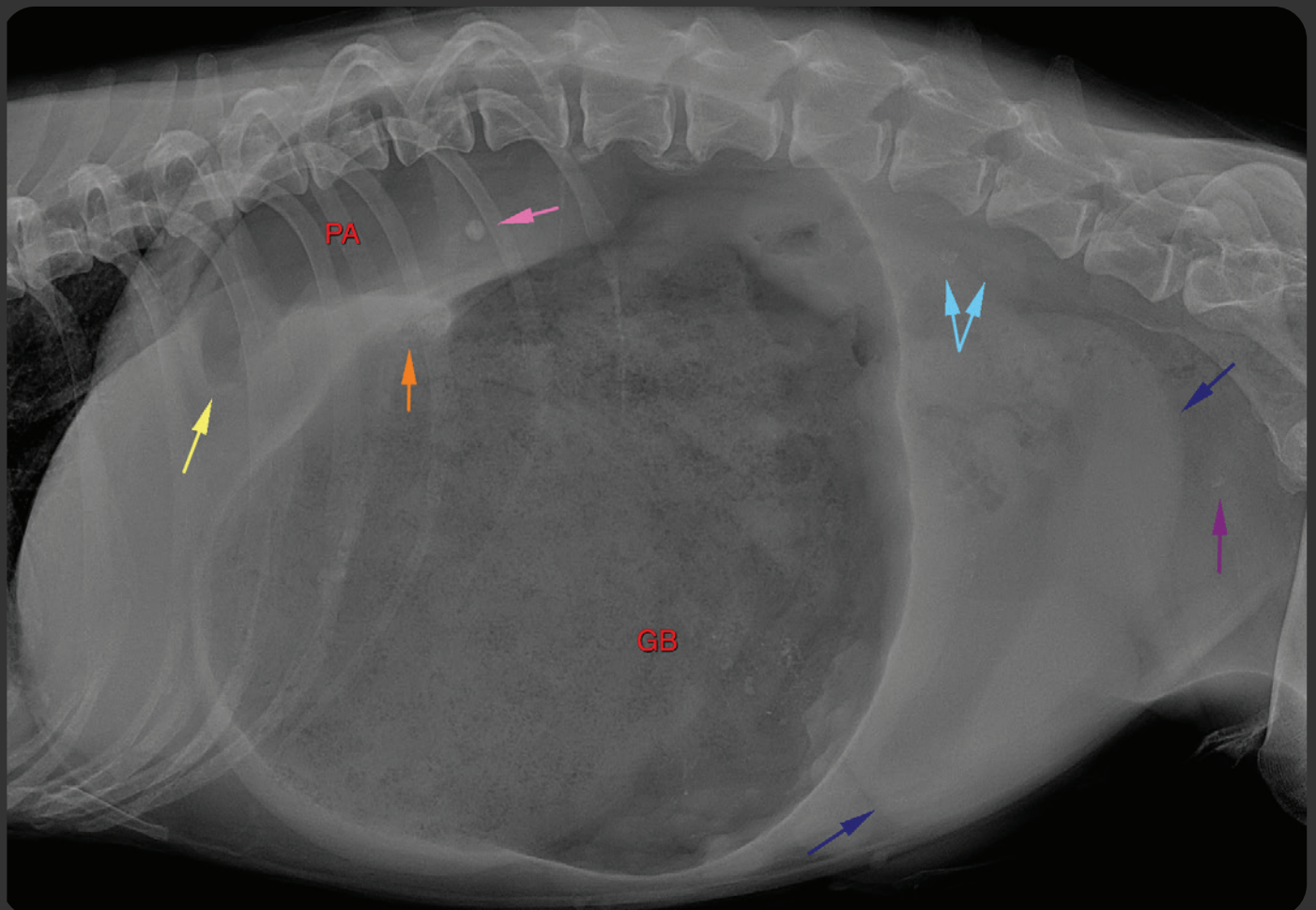
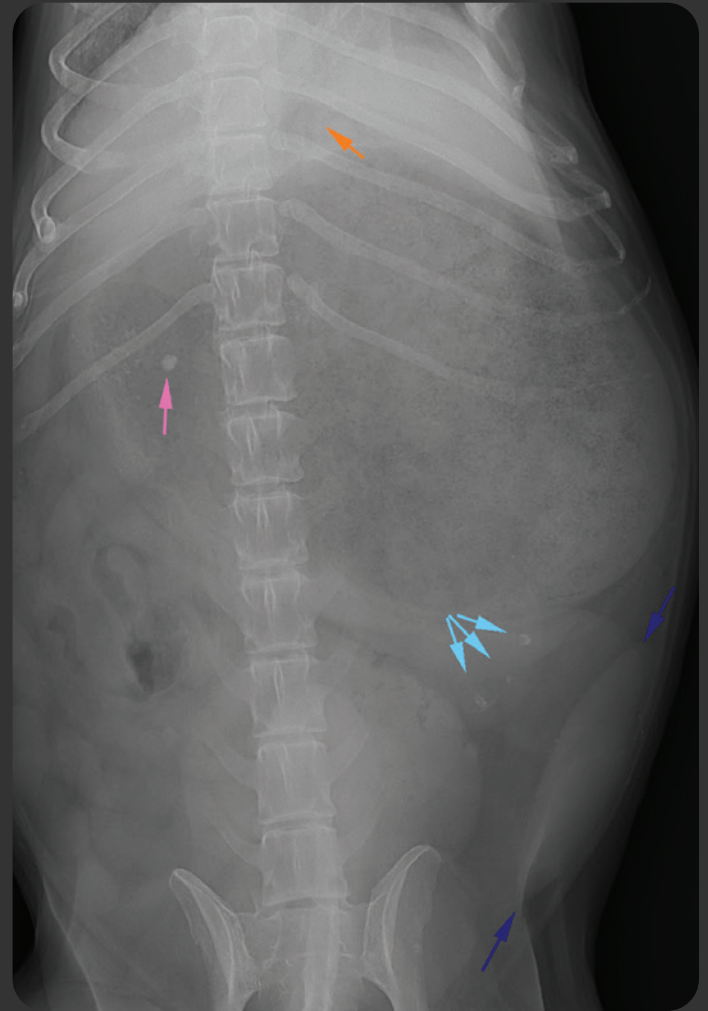
- The bronchial changes may be indicative chronic lower airway inflammation (i.e bronchitis +/- fibrosis).
- Gastric malpositioning is consistent with gastric dilatation with volvulus.
- Secondary splenic malpositioning.
- Low volume peritoneal effusion. Likely haemorrhagic/serosanguineous fluid.
- Multifocal urinary calculi involving renal, +/- ureter, and bladder.

**Additional comments:**

The gastric malpositioning is pathognomonic for gastric dilatation with volvulus (GDV). The most common rotation is a counterclockwise 270°. The spleen travels with the greater curvature of the stomach due to the connection of the short gastric arteries. Progressive gastric distention, secondary to occlusion of the oesophagus and duodenum, results in compression of the caudal vena cava and reduced venous return.

Commonly peritoneal effusion is identified secondary to extravasation of fluid or rupture of small vessels.

GDV constitutes a surgical emergency with complications including gastric necrosis, splenic infarction, and thromboembolic disease.



# LOUIE THE BEAGLE SURPASSES ONE YEAR ON MPL

## KEY POINTS

- Patient in canine trial surpasses 365 days with stable disease and continued excellent Quality of Life (QoL)
- MPL extends survival three-fold, to a median of 150 days, while maintaining QoL
- PharmAust's commercial strategy aimed at bridging the options of standard-of-care with chemotherapy is on target



PharmAust Limited (ASX: PAA & PAAO), a clinical-stage biotechnology company, is pleased to announce a significant milestone for a patient in the Phase 2 trial for the treatment of canine B-cell Lymphoma with Monepantel (MPL).

## Louie surpasses one year on MPL

B-cell Lymphoma in dogs has a poor prognosis. Unfortunately, without treatment, many types of lymphoma are fatal within a few weeks. In cases, the veterinarian may advise palliative care (steroid drugs) to reduce symptoms and possibly extend the survival time for a few weeks. However, even though chemotherapy can offer extended survival (typically around 12 months), it is only palliative and often results in an unacceptable adverse events profile and substantial costs.

PharmAust's commercial strategy is to take the middle ground in the treatment of B-cell Lymphoma which is achieved by inducing stable disease for 4-6 months with minimal side effects, so that the family and the dog can enjoy the limited time together.

In PharmAust's current Phase 2 study, a 13-year-old Beagle "Louie", has surpassed 365 days (one year) as a result of being treated solely with MPL, and showing no side effects while his Quality of Life (QoL) remains excellent. Louie was diagnosed with Progressive Disease (PD) at the end of his 28-day trial and despite this poor prognosis, Louie has achieved > 365 days of good quality of life. Thus, it appears that dogs given MPL + prednisolone (or, in Louie's case, MPL on its own) after the 28-day trial period are living three times longer than expected with good quality of life and no chemotherapy-related side effects.

Louie's owner Iain Gibson said Louie still enjoys his walks and "can still manage a decent pace" while sniffing everything in his path,

"Mealtimes are Louie's favourite part of the day and his second favourite thing is cuddles," said Mr Gibson. "Louie also attends doggy daycare two days a week and loves to chill out with his "pack" at home, quite happy doing nothing as long as he has someone to do nothing with."

The Gibson family felt very fortunate the MPL trial was available at the time Louie became ill.

"The trial is 100% the best decision that we could have made for Louie. He deserved a break after the other issues with his knees and spleen he's had over the years. We've so enjoyed this extra time we've had with Louie and hoping that his eventual passing won't be quite so painful as a result of this extra time," said Mr Gibson.

The life expectancy of dogs with B-cell Lymphoma, treated with the standard of care (palliative steroid therapy) typically provides for 42-56 days of survival in association with progression. The combination of MPL with prednisolone has extended median survival to these pet dogs of 150 days. More importantly, owner surveys from dogs in the trial indicate an excellent QoL score feedback.

MPL is already approved for veterinary use for a different indication in food-chain animals. PharmAust is endeavouring to repurpose MPL as a safe and effective cancer treatment without the associated side effects of chemotherapy.



Principal Investigator Dr Kim Agnew stated: “Despite Louie being with Progressive Disease at Day 28, the ongoing MPL therapy has helped to stabilise further development of the lymphoma since that time. The tumour development slowed and, despite Louis still having evidence of lymphoma, his energy and quality of life remain excellent.”

**Testimonial from Louie’s owner**

Louie is a 13-year-old Beagle and has been a beloved family pet for over 10 years. He’s a very happy dog, loves people, other dogs and life in general.

After Louie had been with us for a couple of years, he had knee issues and had to have both cruciate ligaments operated on. When he was 9 years old, he got sick at Christmas time and ended up having a benign growth and his spleen removed.

In June 2022, we took him to see our local vet as we found some lumps in his neck. Louie was diagnosed with lymphoma and given 4-8 weeks to live.

We were given a couple of treatment options including chemotherapy or steroids. Chemo wasn’t an option for us, and we didn’t like the sound of the side effects of large doses of steroids. For one thing, making a Beagle even more hungry than usual would have been a challenge.

Our vet told us about a drug trial that would possibly suit Louie if we were interested. An appointment was made to take Louie to Veterinary Specialists Aotearoa (VSA) in Auckland for an initial assessment. At the end of the initial visit, we were given an initial prescription of Monepantel and an appointment for a follow up visit in 2 weeks.



Louie took the Monepantel tablets for those 2 weeks with no side effects and just carried on with the normal life of a 12-year-old Beagle. At the 2-week check-up, it was found that Louie’s lymph nodes had shrunk 20% and there were no side effects from the drug.

Louie has had several follow up visits to VSA and at the last check-up, the size of his lymph nodes that can be easily measured have hardly changed since the 2-week measurements were taken.

Louie has continued taking the Monepantel; we are now 12 months on from the initial diagnosis and Louie is still going strong. He’s still enjoying a good quality of life and fingers crossed he still has a little while left yet.

The Monepantel has been a great treatment for Louie as it has extended his life well beyond the initial prognosis with no side-effects and has maintained his quality of life.

**Ease of home therapy to help oral therapeutics gain traction**

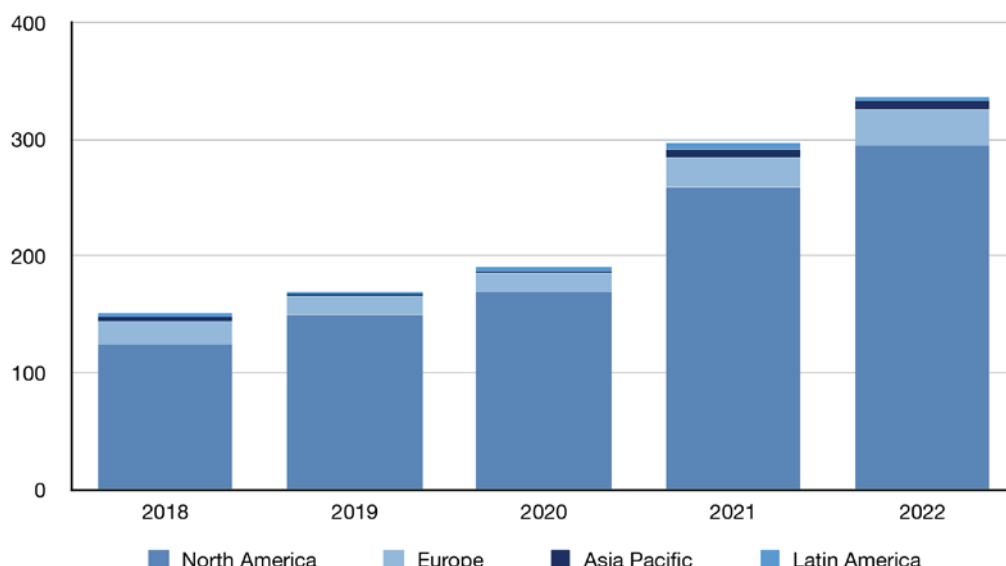
Pet cancer therapeutics market from the oral route of administration segment is projected to reach a valuation of more than USD 359 million by 2032. Notable developments in oral medicines due to their clinical benefits, including the ease & comfort of home therapy and fewer clinic visits, are bolstering segment expansion. In a recent instance, in May 2022, the FDA granted conditional approval to Laverdia-CA1 or Verdinexor tablets, the first chemotherapy pills for dogs with lymphoma. These pills can induce apoptosis and enrich the antiproliferation of cancer cells for chemotherapeutic agents.

**Growing lifespan for dogs to accelerate demand for cancer therapeutics**

By species, the pet cancer therapeutics market from the dogs segment exceeded USD 352 million in 2022 on the account of the rising penetration and spike in the occurrences of feline cancer. Moreover, risk factors related to in-breeding and non-purebred dogs have escalated the chances of tumors and lymph. In a recent 2022, the result highlighted improved lifespan of dogs as one of the major reasons for early signs of cancers due to the natural selection of protected pets with enhances medicines and cures for illnesses. It is also concluded that the increasing population of old dogs has increased the cancer ratio worldwide.

*Source: PharmAust Limited*

**GLOBAL PET CANCER THERAPUTICS MARKET, BY REGION, 2018-2022 (USD MILLION)**



# PRECISION TECHNOLOGY, MACHINE LEARNING LEAD TO EARLY DIAGNOSIS OF CALF PNEUMONIA

## WEARABLE SENSORS, AUTOMATIC FEEDERS YIELD CLUES ABOUT ONSET OF BOVINE RESPIRATORY DISEASE

Monitoring dairy calves with precision technologies based on the 'internet of things,' or IoT, leads to the earlier diagnosis of calf-killing bovine respiratory disease, according to a new study. The novel approach -- a result of crosscutting -- will offer dairy producers an opportunity to improve the economies of their farms, according to researchers.

Monitoring dairy calves with precision technologies based on the "internet of things," or IoT, leads to the earlier diagnosis of calf-killing bovine respiratory disease, according to a new study. The novel approach -- a result of crosscutting collaboration by a team of researchers from Penn State, University of Kentucky and University of Vermont -- will offer dairy producers an opportunity to improve the economies of their farms, according to researchers.

This is not your grandfather's dairy farming strategy, notes lead researcher Melissa Cantor, assistant professor of precision dairy

science in Penn State's College of Agricultural Sciences. Cantor noted that new technology is becoming increasingly affordable, offering farmers opportunities to detect animal health problems soon enough to intervene, saving the calves and the investment they represent.

IoT refers to embedded devices equipped with sensors, processing and communication abilities, software, and other technologies to connect and exchange data with other devices over the Internet. In this study, Cantor explained, IoT technologies such as wearable sensors and automatic feeders were used to closely watch and analyze the condition of calves.

Such IoT devices generate a huge amount of data by closely monitoring the cows' behavior. To make such data easier to interpret, and provide clues to calf health problems, the researchers adopted machine learning -- a branch of artificial



intelligence that learns the hidden patterns in the data to discriminate between sick and healthy calves, given the input from the IoT devices.

"We put leg bands on the calves, which record activity behavior data in dairy cattle, such as the number of steps and lying time," Cantor said. "And we used automatic feeders, which dispense milk and grain and record feeding behaviors, such as the number of visits and liters of consumed milk. Information from those sources signaled when a calf's condition was on the verge of deteriorating."

Bovine respiratory disease is an infection of the respiratory tract that is the leading reason for antimicrobial use in dairy calves and represents 22% of calf mortalities. The costs and effects of the ailment can severely damage a farm's economy, since raising dairy calves is one of the largest economic investments.

"Diagnosing bovine respiratory disease requires intensive and specialized labor that is hard to find," Cantor said. "So, precision technologies based on IoT devices such as automatic feeders, scales and accelerometers can help detect behavioral changes before outward clinical signs of the disease are manifested."

In the study, data was collected from 159 dairy calves using precision livestock technologies and by researchers who performed daily physical health exams on the calves at the University of Kentucky. Researchers recorded both automatic data-collection results and manual data-collection results and compared the two.

In findings recently published in IEEE Access, a peer-reviewed open-access scientific journal published by the Institute of Electrical and Electronics Engineers, the researchers reported that the proposed approach is able to identify calves that developed bovine respiratory disease sooner. Numerically, the system achieved an accuracy of 88% for labeling sick and healthy calves.

Seventy percent of sick calves were predicted four days prior to diagnosis, and 80% of calves that developed a chronic case of the disease were detected within the first five days of sickness.

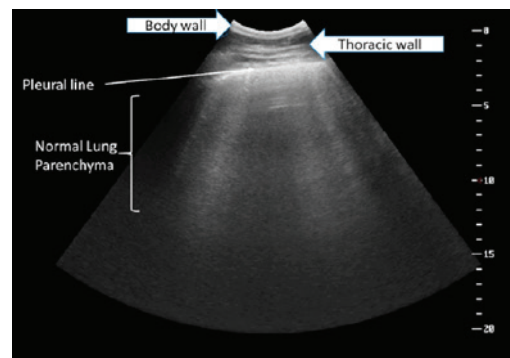
"We were really surprised to find out that the relationship with the behavioral changes in those animals was very different than animals that got better with one treatment," she said. "And nobody had ever looked at that before. We came up with the concept that if these animals actually behave differently, then there's probably a chance that IoT technologies empowered with machine learning inference techniques could actually identify them sooner, before anybody can with the naked eye. That offers producers options."

**Reference**

Penn State. "Precision technology, machine learning lead to early diagnosis of calf pneumonia: Wearable sensors, automatic feeders yield clues about onset of bovine respiratory disease." ScienceDaily. ScienceDaily, 14 July 2023.

**Source:** Penn State. **Original written by** Jeff Mulhollem. **Note:** Content may be edited for style and length.

Contributing to the research were: Enrico Casella, Department of Animal and Dairy Science, University of Wisconsin-Madison; Melissa Cantor, Department of Animal Science, Penn State University; Megan Woodrum Setser, Department of Animal and Food Sciences, University of Kentucky; Simone Silvestri, Department of Computer Science, University of Kentucky; and Joao Costa, Department of Animal and Veterinary Sciences, University of Vermont.



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# A GOOD LIFE *Deserves* A GOOD END

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## MELBOURNE VETERINARIAN DR AMANDA TENNE TALKS ACUPUNCTURE IN ANIMALS AND HOW TO SAY A GENTLE GOODBYE AT-HOME

No longer are pets restricted to the backyard with interactions built on the occasions we walk outside. No. Now pets are a cherished part of the family. They sit on our couch, sleep at our feet, and in many cases are considered our surrogate children.

Which makes it all the more difficult when the time comes to say goodbye.

The Veterinarians at Sunset Vets Palliative and End of Life Care (Sunset Vets) work specifically with senior or terminal cats and dogs providing palliative and end of life care. Dr Amanda Tenne, who has been a Veterinarian for 25 years, is one such Melbourne Vet who combines extensive experience with traditional Chinese medicine for her palliative patients.

A relatively new field in the Australian Veterinary industry, palliative care refers to the ideals of ensuring patient comfort even if curative medicine is no longer possible, providing access to individualised age-appropriate health care and supporting families through the difficulties of end-of-life decision making. For Dr Amanda, working in the palliative care field is an honour.

“It’s a really special time to be allowed into a pet’s life,” said Dr Amanda. “You don’t become a Vet unless you care about animals. And being allowed to care and support a patient and their family at the end is such an honour.”

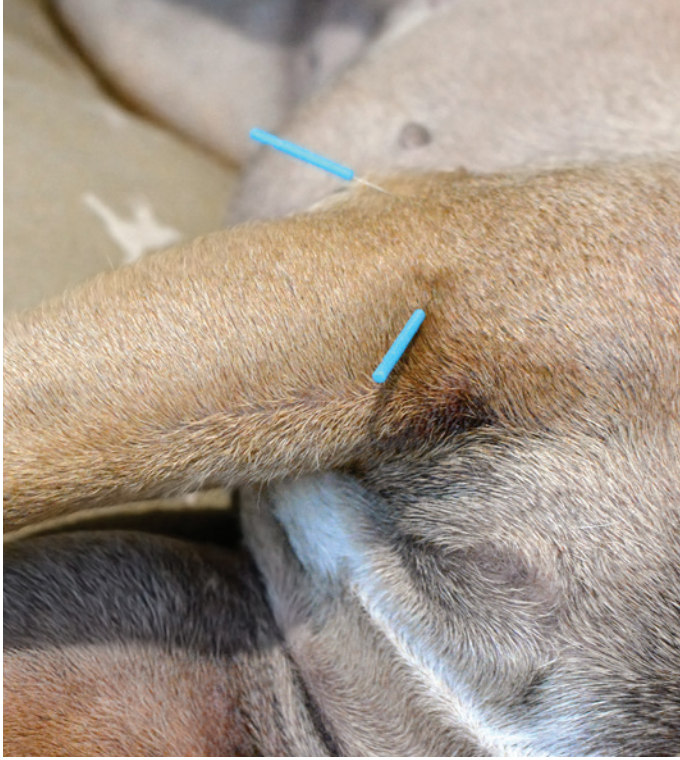
Dr Amanda who has had a rich and extensive career working throughout Australia and the United Kingdom combined her interest in acupuncture with her love of Veterinary medicine and completed a Graduate Diploma of Veterinary Acupuncture through the College of Integrated Veterinary Therapies (CIVT) in addition to her Veterinary qualifications.

“I do acupuncture for palliative and geriatric patients with the goal to keep pets comfortable and happy for as long as possible. It’s something that pet owners don’t always know is an option for their pet,” Dr Amanda explained.

“Similar to human healthcare, acupuncture for pets can relieve pain, nausea and pressure, assist in the health care of chronic illnesses, reduce blood pressure and so much more. It’s particularly helpful for senior cats with kidney deficiencies.”

When asked how acupuncture is performed on animals, Dr Amanda explained that each pet is different and about 70 per cent respond to the treatment.





“When you acupuncture an animal, you need to work with them”, Dr Amanda explained. They all react in different ways. Sometimes they move away, sometimes they eat or sleep through the whole treatment, and sometimes they shake all the needles off. It creates changes in their body, but I find that once they’re used to it, they look forward to it. I won’t know if an animal will respond to acupuncture until they’ve tried it, and I work with owners to grade the pain points before and after treatment to see if we’re getting the desired response. Acupuncture is delivered in conjunction with conventional Veterinary treatment options and always in-line with what the owner wants.”

Sunset Vets expanded into Melbourne earlier this year and this now sees Dr Amanda and other Melbourne based Veterinarians deliver palliative care and compassionate euthanasia in the home environment. Something that makes all the difference to Dr Amanda.

“Providing end of life care in the home alleviates a great deal of stress for the pet and the owner. I gave a beautiful patient her wings recently; and providing this service at home allowed this cat to remain in her favourite spot on the couch, next her favourite person, dozing in the sun. I was able to complete the entire euthanasia with her curled up in an environment that she loved and was comfortable in which is just so respectful to the patient”.

Although euthanasia is a big part of end-of-life care, palliative care is often an important life phase before the final decision is made. The Veterinarians at Sunset Vets work closely with families and primary care veterinarians to build a health care plan unique to their pet. Care plans consider the pets wellbeing, environmental supports, emergency plan and financial factors with the patient’s quality of life at the heart of every decision made.

“Whether it be a palliative care appointment or euthanasia; delivering these services in the home often makes the process quite peaceful and can sometimes help ease a family’s grief at this difficult time,” said Dr Amanda.

But processing grief is something that doesn’t always come easy for clients or for the Vets delivering the treatment. The heartbreak families experience through the process of palliative care or euthanasia can be debilitating. This is why Sunset Vets offer free professional counselling for those struggling with loss or end-of-life decisions.

“The fact that Sunset Vets offers free counselling is so, so important,” Dr Amanda said. “To me, it was the missing piece in euthanasia and palliative care.

“As a vet you can’t not feel. The day you stop caring should be the day you walk away from medicine.

“Each experience is different and the grief our clients feel is sometimes palpable which of course affects us. But along with that sadness, you feel honoured.

## Background

Sunset Vets Palliative and End of Life Care (Sunset Vets) is a dedicated palliative care and euthanasia service helping families to access specialised end-stage care at home.

Launched in 2014, Sunset Vets is founded by Dr Jackie Campbell, Australia’s first Internationally Certified Palliative Care Veterinarian (CHPV). Delivered nationally through a team of mobile veterinarians, Sunset Vets operates exclusively in the palliative and end of life care space and provides expert at-home care to pets during their final stages of life whilst supporting families through the difficulty of end-of-life decision making.

Sunset Vets work in partnership with primary care veterinary clinics and services are available seven days a week by appointment. Many patients are geriatric or face a terminal diagnosis.

*“A good life deserves a good end, and it is such an honour to be trusted enough to alleviate suffering and help a beloved member of a family move on.”*

Dr Amanda Tenne with dog



# FULL YEAR TRADING UPDATE, EXPANSION INTO AUSTRALIA AND UK ACQUISITIONS

CVS, the UK quoted veterinary group and a leading provider of integrated veterinary services, issued the following update on trading for the financial year ended 30 June 2023 ("FY23"). The Group expects to announce its FY23 preliminary results on 21 September 2023.

The Group is also pleased to announce its entry into the Australian veterinary services market. CVS's expansion into Australia is in accordance with its growth objectives, outlined in the five-year plan at the Group's Capital Markets Day in November 2022, to execute on scalable international consolidation opportunities, subject to maintaining its disciplined acquisition criteria. Having explored a number of new potential markets, the Board has identified Australia as particularly attractive given the relatively low levels of corporate consolidation, favourable market dynamics and strong similarities with the UK, including highly trained veterinary surgeons, shared language and culture, and the Group's experience with UK vets working between Australia and the UK.

## FY23 Financial Highlights

- Continued organic revenue growth with a 7.3% increase in like-for-like sales<sup>2</sup> (FY22: 8.0%), consistent with the Group's organic revenue growth ambition of between 4% and 8%;
- Adjusted EBITDA<sup>3</sup> margins also expected to be within our stated ambition of margins between 19% to 23%;
- FY23 adjusted EBITDA<sup>3</sup> expected to be comfortably in line with market expectations;

- Continued investment in our facilities and equipment to support growth, with total capital expenditure of c.£46m (FY22: £24.5m), within the Group's capital expenditure ambition of £30m to £50m investment per annum;
- Investment of c.£55m in 11 practice acquisitions (comprising 16 practice sites) (FY22: £8.4m in three practice acquisitions (comprising three practice sites)), in line with the guidance of £50m+ investment per annum;
- Leverage<sup>5</sup> comfortably less than 1.0x at 30 June 2023 (30 June 2022: 0.40x) well below our stated target of less than 2.0x leverage. This reflects strong EBITDA growth and continued operating cash conversion, partly offset by an increase in drawn debt to fund growth investment in capital expenditure and acquisitions;
- Further increase in membership of our preventative healthcare scheme, Healthy Pet Club to 489,000 members (30 June 2022: 470,000);
- 6.5% increase in the average number of vets employed in FY23 reflecting a further reduction in attrition and a record graduate vet intake.

## FY23 Performance

The Board is pleased to report the Group delivered strong high single-digit revenue growth for the full year. Like-for-like sales for the financial year increased by 7.3% (FY22: 8.0%), at the upper end of the Group's ambition of like-for-like growth between 4% and 8%. We continue to see resilience in the veterinary sector, with membership of our Healthy Pet Club preventative healthcare scheme increasing in the year by 19,000 members

(an increase of 4.0%) to 489,000 (30 June 2022: 470,000 members).

The Group expects to report adjusted EBITDA<sup>3</sup> for FY23 comfortably in line with market expectations, notwithstanding increased utility costs and other inflationary pressures.

Adjusted EBITDA<sup>3</sup> margin is expected to be within the range of 19% to 23%, reflecting our continued focus on the provision of high quality clinical care across our integrated veterinary services platform.

In accordance with our five-year plan, we have increased investment in our practice facilities, clinical equipment and technology in support of future growth. Total capital expenditure was c.£46m (FY22: £24.5m), in line with the £30m to £50m per annum ambition. We completed 21 practice refurbishment and projects in the financial year and our new practice management system is now being trialled in the UK.

This investment was funded from a combination of cash generated from our operations and additional drawing under our bank facilities which were successfully refinanced in February 2023, with margins on these facilities remaining unchanged. Net bank borrowings<sup>4</sup> increased as at 30 June 2023 to £74.1m (31 December 2022: £57.6m, 30 June 2022: £36.0m). The Group expects to report leverage<sup>5</sup> comfortably below 1.0x as at 30 June 2023 (30 June 2022: 0.40x).

We continue to focus on the recruitment, retention and development of our highly skilled and dedicated colleagues. We employed an average of 6.5% more vets in FY23 vs FY22 reflecting a further reduction in attrition and a record graduate vet intake.

"I am delighted to announce the continued growth of CVS in the financial year ended 30 June 2023 and our entry into the Australian veterinary services market. At our Capital Markets Day in November 2022, we set out our plans and ambition to double Adjusted EBITDA over the next five years through a continued focus on organic growth and through acquisitions in the UK and overseas. Our entry into the Australian market is consistent with these plans and we are excited by the opportunity. I am delighted to welcome the teams at McDowall Vets, Northgate Veterinary Surgery & St Vincent Vets, Warner Vet and Southside Animal Hospital in Australia, and those of East of England Veterinary Specialists, Brunswick Place Veterinary Clinic and Riverside Veterinary Practice in the UK to the CVS Group."

*Richard Fairman, CEO;*



"The announcement of this strong trading update, and our entry into the Australia market represents more good news for CVS. Having worked as a vet in Australia earlier in my career, I know well their high standards of clinical care, and the dedication of highly talented veterinary professionals that work there. As a company dedicated to giving the best possible care to animals, I see a fantastic opportunity for us to enter this growing market, with low levels of corporate consolidation, and execute our vision of being the veterinary company people most want to work for. I have spent time in Australia over the last 12 months, including meeting some fantastic veterinary practices, and it is clear we have a significant opportunity. With the four outstanding practices that are joining us, and a strong pipeline of further acquisition opportunities, I am excited to build a significant CVS business in Australia with the same culture and values that have brought us success in the UK."

*Ben Jacklin, Deputy CEO stated;*

### Australian acquisitions

On 10 July 2023, the Group signed four separate sale and purchase agreements for the conditional acquisitions of four independent small animal first opinion veterinary practices in Australia (comprising six sites) namely:

- McDowall Veterinary Practice, a nine-vet single site practice in McDowall, Brisbane, Queensland;
- Northgate Veterinary Surgery and St Vincents Vets, a five vet two site practice in Brisbane, Queensland;
- Warner Vet, a four-vet single site practice in Cashmere, Queensland; and
- Southside Animal Hospital, a six vet two site practice in Sydney, New South Wales.

On 26 July 2023, the Group completed the acquisitions of McDowall Veterinary and Warner Vet Practices with the remaining two acquisitions expected to be completed shortly.

Combined initial consideration for the completed acquisitions and the two pending acquisitions is A\$31.9m (c.£16.8m) settled / to be settled in cash. In addition, each acquisition is also subject to market-standard performance based contingent consideration, which will (if achieved) be settled in cash.

These four acquisitions are the first of a number of planned Australian practice acquisitions which CVS expects to announce in the coming months. The Group has identified a strong pipeline of opportunities and a number of non-binding indicative offers have been accepted for further practice acquisitions. The Group's focus will be on acquisition opportunities in major urban conurbations, including Sydney, Melbourne, Brisbane, Perth, Canberra, Newcastle and Adelaide.

The Group has established an Australian-based senior management team to support acquired practices and continue to develop the pipeline of new acquisition opportunities. This team includes a highly experienced operations director with seven years' service at CVS on secondment from our UK veterinary practice division, and an acquisitions director with extensive experience of the Australian veterinary market. Members of the CVS executive committee will continue to spend appropriate time in Australia to support the establishment of our new operations.

The Group expects gradually to benefit from additional advantages of scale as it further expands in Australia, including improved drug purchasing terms, revenue growth and margin enhancement with a focus on high quality clinical care and developing a market leading employee experience.

### Additional UK acquisitions

The Group is also pleased to announce the acquisition of a further three veterinary practices (comprising five practice sites) in the UK in the financial year to 30 June 2023 for combined consideration of c.£20m, namely:

- East of England Veterinary Specialists, a single site small animal specialist referral practice in Wimpole, Cambridgeshire;
- Brunswick Place Veterinary Clinic, a single site small animal first opinion practice in Basingstoke, Hampshire; and
- Riverside Veterinary Practice, a three-site small animal first opinion practice near Edinburgh in West Lothian, Scotland.

Including these acquisitions, the Group completed 11 practice acquisitions (comprising 16 practice sites) in the financial

year to 30 June 2023 for combined consideration of c.£55m.

The consideration for the completed acquisitions was fully satisfied in cash from the Group's existing funding resources, with the Group's leverage<sup>5</sup> remaining below 1.0x post these acquisitions, retaining significant headroom for further growth.

### Outlook

Whilst the Board remains mindful of the uncertain economic outlook, the veterinary market continues to show resilience with ongoing demand for the Group's services. With the growth delivered in the financial year to 30 June 2023, ongoing investment in delivering further organic growth and recent acquisitions in the UK and Australia, the Group remains well placed to deliver further increases in shareholder value.

The Board would like to acknowledge and thank all CVS colleagues for their continued dedication and commitment in delivering the best possible care to animals.

The Group expects to announce its preliminary results on Thursday, 21 September 2023.

### Notes

1. Numbers included are unaudited.
2. Like-for-like sales shows revenue generated from like-for-like operations compared to the prior year, adjusted for the number of working days. For example, for a practice acquired in September 2021, revenue is included from September 2022 in the like-for-like calculations.
3. Adjusted EBITDA (earnings before interest, tax, depreciation and amortisation) is profit before tax adjusted for interest (net finance expense), depreciation, amortisation, costs relating to business combinations and exceptional items. Adjusted EBITDA is an alternative performance measure and is defined in note 1 of the 2022 Annual Report.
4. Net bank borrowings is drawn bank debt less cash and cash equivalents.
5. Leverage on a bank test basis is net bank borrowings divided by 'Adjusted EBITDA', annualised for the effect of acquisitions, deducting costs relating to business combinations and adding back share option costs, on an accounting basis prior to the adoption of IFRS 16.

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