Companion Animal Research Review™

Making Education Easy

Issue 2 – 2015

In this issue:

Abbreviations used in this issue

ACVIM = American College of Veterinary Medicine
CRS = cardiorenal syndrome
CvRD = cardiovascular-renal disorders
IBD = inflammatory bowel disease
IRIS = International Renal Interest Society
IV = intravenous
NSAID = non-steroidal anti-inflammatory drug

Welcome to the second issue of Companion Animal Research Review.

We received a significant amount of positive feedback to the first edition, and we hope that this will continue to be a relevant and accessible toe-dip into the ever expanding ocean of research. I have again attempted to pull together an eclectic mix of companion animal studies that have been published in the prior 6 months. Each paper is described by a brief summary and a commentary on what I think are the salient findings, limitations, or criticisms. A lot of research cannot immediately be taken and applied in the clinic, but it is important that we are aware of the science as it develops so we can be informed early adopters of new therapies or techniques when they arrive. With that in mind, it is great to see Helen Beban's CPD record in this edition so you can easily record your efforts.

We hope you find this selection for Companion Animal Research Review stimulating reading and we welcome your feedback. The next edition will feature research conducted by practitioners and researchers in New Zealand, but please let us know if you have discovered or been involved with what you think is significant global research, and we will consider it for inclusion.

Kind regards,

Dr Nick Cave
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Companion Animal Research Review publications can be used for CPD. Please see page 6 for examples of how to record this activity.

Treatment of canine generalized demodicosis using weekly injections of doramectin: 232 cases in the USA (2002-2012)

Authors: Hutt JH et al.

Summary: This retrospective single centre study, examined the use of weekly subcutaneous injections of doramectin 0.6 mg/kg body weight for generalised demodicosis in 232 dogs. Remission occurred in 94.8% of the dogs over a mean treatment duration of 7.1 weeks. Adverse events were rare with only two (0.5%) suspected instances.

Comment: In some contrast with the paper on intestinal perforation in cats, this retrospective case series has the advantage of the brute force of numbers. The authors, based in Queensland, report the apparent response to weekly doramectin injections. The authors admirably described the reasons for exclusion of cases from their analysis, which goes some way to allay fears of bias. The absence of a description in the methods section as to how they calculated the breed relative risks, and the readers' ignorance of the nature of the veterinary practice (referral or primary), dissuades us from agreeing with the authors' arguments about the significance of breed as a risk factor in their population. The apparent overall response rate is likely to be inflated by the inclusion of young dogs, since 51% of the dogs were less than 6 months, and by the authors' own admission, a proportion of those may have spontaneously resolved anyway. When only dogs older than 4 years were considered, the response rate was a more modest 67%. However, this is by far the largest case series to report the use of doramectin for the treatment of demodicosis, and the results are encouraging. Ten of the dogs were breeds reported as having the ABCB1-1Δ polymorphism associated with increased susceptibility to abermectin neurotoxicity, and yet only one dog (a Lhasa apso) developed ataxia, which resolved after treatment cessation. Thus, in the absence of a positive or negative control group, this study is at least supportive of the claim that doramectin is well tolerated, and that it appears to be effective for generalised demodicosis.

Reference: Vet Dermatol. 2015;26(5):345-e73
Abstract

Spontaneous gastrointestinal perforation in cats: a retrospective study of 13 cases

Authors: Bernardin F et al.

Summary: This retrospective analysis of data from 13 cats diagnosed with gastrointestinal perforation between August 2010 and July 2013 examined the clinical characteristics and frequency of malignant versus non-malignant causes. Five cats had concurrent illnesses, including viral upper respiratory tract disease, pancreatitis and chronic kidney disease. Two had previously received non-steroidal anti-inflammatory drugs and four had received corticosteroids. Six cats had gastric perforations; four duodenal and three jejunal. Histopathological examination of the ulcerated intestine (n = 11) identified alimentary lymphoma in six cats and non-neoplastic lesions (lymphocytic-plasmacytic inflammatory bowel disease, necrotic suppurative enteritis) in five.

Comment: Case reports and case series are inevitably, but sadly, still a dominant part of the veterinary science literature. This series of cases was collected retrospectively from a 3-year period, and few clinical prospective studies run longer than a year, though had the study been prospective, the number of included cases would have been significantly greater. Certainly a case series can facilitate the reporting of novel and especially unexpected findings. In 1960, two cases of limb aplasia were presented at a meeting of the German Paediatric Association, and the world was alerted to the teratogenic effect of thalidomide.[1] Similarly, case series can provide the basis for generating hypotheses, such as the recent serendipitous discovery of the apparent efficacy of propranolol for treating infantile haemangiomas, published as a case series in the New England Journal of Medicine.[2] However, the lack of a control group, the inability to establish a cause-effect relationship, the severe risk of reporting bias, and the danger of over-interpretation are grave risks. The biased reporting of a case series of children with autistic spectrum disorder and the exaggerated suggestion of an association with vaccination, has caused declining vaccination rates and genuine harm in the UK and perhaps elsewhere.[3] Closer to home, the case series of an apparent association between oral lysine ingestion and remission from herpes simplex zoster in humans, led to years of ineffective treatment of people and cats that continues to this day.[4] From this series of cats with gastrointestinal perforation, we have no denominator to determine the prevalence, nor information to evaluate the bias. The authors tip-toe around the suggestion of NSAIDs and corticosteroids as risk factors, whilst never really admitting the complete inability of a study such as this to evaluate any risk. Any cat presenting to a referral hospital with a history of chronic vomiting has a high likelihood of prior steroid treatment. And anorexic cats with low-grade fevers are highly likely to receive NSAIDs. Unfortunately, no hypothesis is generated, no novel findings are presented, and we are left wondering exactly what the message is. If there are any take-home messages, they might be simply that intestinal perforation can occur in cats, it is often associated with intestinal neoplasia, and that the presenting signs can be vague, with abdominal pain apparently being uncommon. Or perhaps the message really is: we need more prospective and controlled clinical trials in veterinary science.

Reference: J Feline Med Surg. 2015;17(10):873-9
Abstract

Risk factors identified for owner-reported feline obesity at around one year of age: Dry diet and indoor lifestyle

Authors: Rowe E et al.

Summary: This analysis of data from a large scale, prospective, longitudinal study of 966 cats ("Bristol Cats") aimed to identify early-life risk factors for feline overweight or obesity. In total, 7% of the cats were overweight or obese (owners report) at 12.5-13 months of age. According to owners', a dry diet was found to be the most popular among UK domestic cats. Potential explanatory variables were identified by univariate logistic regression and were included in multivariate logistic regression, which identified two independent risk factors; restricted or no outdoor access, and dry food as the only or major (>50%) food type at age 12.5-13 months.

Comment: Correlation does not prove causality. Thus spake our statistical pedagogues. All previous studies of risk factors for obesity have been cross-sectional, and the risk factors that such studies identify cannot be concluded to be causative. For instance, inactivity has been identified as a risk in several studies; but is inactivity the cause, or the effect of obesity? In this study the authors used a cat register (the "Bristol Cats" study), a longitudinal study using owner-reported data that has over 2000 registered cats, to administer an owner questionnaire at three time points up to 1 year of age of their cat. The two independent risk factors for obesity at 12 months (indoor housing and mostly dry food feeding) were significant, or near significant at 6 months. This is a strength of the study, in that the longitudinal prospective design supports causality, in this case at least for feeding mostly dry food. However, this study relied on owners determining if their cat was obese, which is notoriously inaccurate, and the true prevalence is likely to be at least twice that of the reported prevalence of 7%. If the true prevalence is much higher, then this study includes a potentially biased sample of owners, and may not even have identified true, let alone major risk factors. The authors do not provide the reader with details of the results that describe how much of the variation is explained by their statistical model, which further limits the ability to infer from these results. Nonetheless, this study supports a growing body of work that implores us to identify overweight animals early in their lives - and to intervene early. We still may not know exactly what the causative risk factors are in young animals, but we are certain of one thing: overweight young animals won't become lean unless something changes. So the next time you observe an overweight animal at time of neutering, what will you change?

Reference: Prev Vet Med. 2015;121(3-4):273-81
Abstract

Prevalence and underlying causes of histologic abnormalities in cats suspected to have chronic small bowel disease: 300 cases (2008-2013)

Authors: Norsworthy GD et al.

Summary: A retrospective case series aimed to establish the prevalence of histological abnormalities in 300 cats suspected, based on clinical signs (chronic vomiting, chronic small bowel diarrhoea, or weight loss) and ultrasonographic evidence of thickening of the small intestine, to have chronic small bowel disease, to identify common underlying causes, and compare methods for differentiating causes. 288 (96%) cats were diagnosed with chronic small bowel disease; 150 with chronic enteritis and 124 with intestinal lymphoma (124). Full-thickness biopsy specimens, but not ultrasonography or clinicopathologic testing alone, were useful in differentiating between intestinal lymphoma and chronic enteritis.

Comment: It is now well established that adult cats with signs of chronic gastrointestinal disease that have failed to respond to a novel or hydrolysed protein diet are extremely likely to have either IBD or lymphoma. A previous study by Zwingenberger et al. evaluated 142 cats with a history of chronic gastrointestinal disease that had both abdominal ultrasonography and full thickness intestinal biopsies.[5] The authors reported that older cats with thickening of the small intestinal muscularis layer were more likely to have lymphoma than IBD. In the study by Norsworthy et al, the authors confirmed again that IBD and lymphoma are the overwhelming majority of histological diagnoses in these cats. However, in contrast with the study by Zwingenberger et al, they did not find any association between the ultrasonographic appearance and the final histological diagnosis. Even the appearance of segmental thickening was not more associated with lymphoma than IBD. Although their inclusion criteria of requiring ultrasonographic thickening meant that they had inexplicably, yet deliberately and unjustifiably limited the study population, it still speaks against the diagnostic utility of ultrasound for this diagnostic dichotomy. And that finding was disappointing, if not surprising, because a discriminating test, even of low discriminating value, would be helpful for those owners unwilling to allow intestinal biopsy to make a diagnosis. The authors are bullish in their claims for the superiority of full thickness biopsies over endoscopy, but since they only performed surgical biopsies, no such claim or even suggestion should have been made. But should we take this study to emphasise the need for intestinal biopsy in all cases? Though it has previously been suggested that lymphoma carries a much poorer prognosis than IBD, early treatment of intestinal small cell lymphoma with prednisone and chlorambucil results in remission in nearly 100% of cases, and has a median disease-free interval of more than 2 years.[6,7] That discovery has led some to question whether intestinal biopsy can be justified at all, once other diseases are excluded. So we remain not just in a position of not having a good non-invasive discriminating test, but in a position of uncertainty as to whether having such a test would be useful at all.

Reference: J Am Vet Med Assoc. 2015;247(6):629-35
Abstract

Assessment of in vitro oxalate degradation by *Lactobacillus* species cultured from veterinary probiotics

Authors: Cho JG et al.

Summary: This *in vitro* investigation aimed to culture *Lactobacillus* spp. contained in two veterinary probiotics and measure their *in vitro* capacity for oxalate degradation. *L acidophilus, L plantarum, L casei* or *L zeae* (too closely related to differentiate) were isolated from one probiotic, and *L plantarum* from the other. 16S rDNA gene sequencing confirmed 100% species homology. A control sample of *L acidophilus* (American Type Culture Collection 53544) and *L acidophilus* from the first probiotic decreased oxalate levels by 85.3 and 161.9 mg/L. *L plantarum* samples from both probiotics decreased oxalate concentrations by 56.1 and 36.1 mg/L. *L casei* did not change oxalate concentrations.

Comment: Calcium oxalate (Ca-Ox) urolithiasis in dogs is continuing to increase in incidence in this country, as well as in other regions.[8] The morbidity associated with Ca-Ox uroliths is the combination of three factors. Firstly, once precipitated, it is not possible to significantly dissolve the crystal by modification of the urine, and voiding urohydropropulsion, surgical excision, or lithotripsy are required. Secondly, unlike struvite, Ca-Ox precipitates adhere to urinary epithelial cells and are thus more likely to form nephroliths and ureteroliths, both of which can have more severe effects than bladder precipitates. Lastly, at least 50% of dogs will experience reccurrence if an appropriate diet is not fed exclusively. Except in cases of marked calciuria, the most important factor for Ca-Ox precipitation is the urinary concentration of oxalate, of which a large proportion is derived from the diet. In people, intestinal colonisation with bacteria capable of degrading luminal oxalate, such as *Oxalobacter formigenes*, is protective against Ca-Ox urolithiasis. The study by Cho et al. is the first to have evaluated commercially available probiotic strains for their ability to degrade oxalate. Their findings are both encouraging, and a sober reminder of the complexity of the world of probiosis. The major finding that some of the species of *Lactobacilli* were capable of significant oxalate degradation is encouraging, and justifies further evaluation of those species, if not those products, as adjuncts to dietary management to reduce the risk of Ca-Ox urolithiasis in at risk individuals. However, some of the species had no significant effect, and this emphasises that the term "probiotic" should be used with the same unhelpful specificity as the word "drug". When asked "do probiotics work?", you should treat that the same as the question: "Do drugs work?". Which drugs? For what? At what dose and for how long? And if you did know exactly which probiotic to use and at what dose, do you know it is in the particular product as claimed? In this study, the exact species of bacteria found in the commercial products was different to those claimed by the manufacturer, which is a common feature of veterinary probiotics.[9] Perhaps a different batch would have contained different species with no, or even better efficacy. Lastly, proof of *in vitro* efficacy is a long way from knowing if, and at what dose, oral treatment will reduce urinary oxalate concentrations. None-the-less, this study will hopefully lead to further *in vivo* studies, and in the not too distant future, we may have an effective, and long sought after adjunct to dietary therapy.

Reference: Am J Vet Res. 2015;76(9):801-6
Abstract

Cardiovascular-renal axis disorders in the domestic dog and cat: a veterinary consensus statement

Authors: Pouchelon JL et al.

Summary: The cardiorenal syndrome (CRS) Consensus Group (nine veterinary cardiologists, seven nephrologists), aimed to define, and describe the pathophysiology, diagnosis and management of dogs and cats with "cardiovascular-renal disorders" (CvRD) using formal Delphi methodology for building consensus. Thirteen candidate statements regarding CvRD in dogs and cats were tested using a modified Delphi approach, 11 achieved consensus for the definition, classification, diagnosis and management strategies of CvRD in veterinary practice, emphasising the pathological interplay between the organ systems.

Comment: I still cringe when I recall killing a lovely Jack Russell with a combination of congestive heart failure and renal azotaemia during my medicine residency. The dog died with some assistance from the fatal combination of ignorance, arrogance, and an overzealous desire to do things. Though mostly, it was just ignorance. I admit to also cringing when I read of another consensus statement from the esteemed ACVIM. Veterinary science is characterised more by what is not known and what has only been shown once, than by what is known with a high degree of confidence. Thus consensus statements risk being viewed with greater authority than the evidence on which they ostensibly sit justifies. The term "cardiorenal syndrome (CRS)" has been borrowed from human medicine, and the relevance of the term in dogs and cats is completely unknown. So it was heartening that the first act of the "CRS Consensus Group" was to abandon the term, and replace it with "cardiovascular-renal disorders (CvRD)", recognising that they are not a single clinical syndrome. Strong consensus was reached on the appropriate management of congestive heart failure, the need to manage more than just the venous congestion, and the importance of optimising blood pressure. Good consensus was reached on a series of rather discursive and almost verbose definitions of the pathophysiology of CvRD. Good consensus was also reached around statements endorsing the importance of thoracic and renal imaging for diagnostic evaluation, and the IRIS staging for kidney disease was similarly endorsed. And whilst it was surprising that there was no consensus for supporting classification schemes for grading cardiac disease, it was not surprising that there was little appetite for the currently available serum biomarkers. This is a lengthy and only occasionally enlightening read, which if nothing else, may serve to encourage more research into the area. Perhaps the greatest achievement of such a statement, is that it highlights the importance of not forgetting one organ system when managing disease in the other. Which is something I wish I had considered when managing that Jack Russell.

Reference: J Small Anim Pract. 2015;56(9):537-52
Abstract

Impact of the canine double-deletion β1 adrenoreceptor polymorphisms on protein structure and heart rate response to atenolol, a β1-selective β-blocker

Authors: Meurs KM et al.

Summary: This study examined the effect of two deletion polymorphisms in the canine adrenoreceptor 1 (*ADRB1*) gene on the predicted protein structure and the heart rate response to 14-21 days of atenolol therapy (1 mg/kg orally every 12 hours) in 11 healthy adult dogs with *ADRB1* deletions and seven without the deletions. The protein structure of *ADRB1* was predicted by computer modelling to be altered by the deletions. Minimum, average and maximum heart rates of dogs with deletions were lower than those of control dogs and the average heart rates were significantly lower.

Comment: Sometimes when scanning the literature, the title of an article is so intriguing it seems to leap out at you like a dolphin from a wave, exciting your frontal lobe with the tingling promise of new knowledge or understanding. This was not one of those. But sometimes the mental discipline of reading outside one's immediate zone of interest does you yeoman's service. Genetic variants (polymorphisms) in genes that encode for proteins that are the site of action of drugs can cause large variations in the clinical efficacy of the drug between individuals. The gene *ADRB1* encodes for the β1 adrenergic receptor, and specific polymorphisms in this gene in humans affect the resting heart rate, affect outcome in congestive heart failure, and determine the sensitivity to and efficacy of treatment with β-blockers. Previously, these authors have shown that at least three different variants can be found in dogs (double, single, and no deletion).[10] In this paper, the authors demonstrate that in a small sample of dogs, the double deletion variant is associated with a lower heart rate than dogs without the deletion. There was a trend for the dogs with the double deletion to have a blunted response to atenolol treatment, but either that was due to chance or insufficient dog numbers to detect a true difference. Whatever the significance is of this individual gene polymorphism on disease and treatment, this paper is a harbinger of future studies that will deepen our understanding of the individual variation in response to medication. This paper also serves to remind us not to be surprised at the heterogeneity of responses to therapy, and to be humbled by the enormity of what we have yet to learn. And whilst the time when medication is individualised based on a patient's specific genotype may be over the horizon and out of sight, you can already hear it coming.

Reference: Pharmacogenet Genomics 2015;25(9):427-31
Abstract

Quantitation of the regional lymph node metastatic burden and prognosis in malignant mammary tumors of dogs

Authors: de Araújo MR et al.

Summary: In order to estimate the effect on overall survival of regional lymph node status and their morphologic and morphometric features, 161 lymph nodes from 97 female dogs with malignant mammary gland tumors were analysed. Estimated mean survival time was shorter in dogs with metastasis than those with metastasis-free (negative lymph nodes assessed by immunohistochemistry analysis for cytokeratin AE1/AE3) regional lymph nodes, indicating a direct relationship between the number of affected lymph nodes and shorter survival time. Histological analysis indicated survival rates were reduced in animals with macrometastases and isolated tumor cells, areas of metastasis >20.11 mm² or metastatic diameters >7.32 mm.

Comment: About half of all tumours in bitches are mammary tumours, and of those, approximately half are malignant. For years, researchers have attempted to identify the best prognostic indicators including clinical, histological, molecular, and genetic factors. Studies have varied in their findings, and tumour size, histological type, histological grade, and lymph node status have all been shown in various studies to be associated with survival duration post operatively. In the study by de Araújo et al., the authors hypothesised that a careful evaluation of the regional lymph nodes might be a better prognostic indicator, similar to the utility of sentinel lymph nodes in human mammary carcinoma. In support of their hypothesis, there was an association between survival and several regional lymph node parameters. However, although the authors reach strong conclusions about the value of regional lymph node evaluation, it is uncertain how confident we can be. In a previous similarly sized study, regional lymph node metastasis was found to be strongly associated with survival in univariate analysis, but in the multivariate analysis, it was not significantly associated with survival.[11] Thus, other factors associated with the nodal metastasis explained the association; possibly tumour type (e.g. sarcoma), or the percentage of cells dividing within the tumour. In the study by de Araújo et al., they did not conduct multivariate analysis, which means there might be a significant confounding factor that creates the appearance of predictive value. For instance, there could be a strong association between tumour type and metastasis, and thus it is the tumour type rather than the nodal metastasis that is determinative. On that basis, the value of determining nodal metastasis might not be as high as they suggest.

Reference: J Vet Intern Med. 2015;29(5):1360-7
Abstract

Experimental model for peanut allergy by epicutaneous sensitization in atopic beagle dogs

Authors: Marsella R

Summary: This study in five atopic and five normal Beagles assessed whether they could be sensitised by 8 weeks of peanut paste applied epicutaneously and whether subsequent dermatitis flare-ups could be elicited by epicutaneous and oral challenges. Pruritic erythematous macules and papules developed in the area of paste application in all atopic dogs and two control dogs. Total clinical scores (Canine Atopic Dermatitis Extent and Severity Index Score) differed between groups, and an ANOVA indicated group ($p = 0.0139$), time ($p < 0.0001$) and group x time interactions ($p = 0.0067$). After oral challenge, pruritic dermatitis developed in all atopic dogs within 15 min and peaked one hour after ingestion, while after epicutaneous challenge, macules and papules developed at the application site in all atopic dogs and in one control dog. Allergen-specific IgE was detected in the serum of all of the atopic dogs and two of the control dogs, and the number of IgE-positive cells in skin biopsies was significantly higher in atopic than control dogs ($p = 0.033$).

Comment: Images of Beagles smeared with peanut butter may be something you'd find during a dubious and rather niche internet search, but this study provides evidence to support one of the most interesting hypotheses of the aetiology of food allergic dermatitis in recent years. It has previously been assumed that sensitisation to food allergens occurs through the intestinal tract, and that the aberrant immunological event occurs within the intestinal mucosa. What is lacking in that assumption, is the ability to explain how a loss of mucosal tolerance to an ingested antigen can result in cutaneous food hypersensitivity, rather than clinical signs of gastrointestinal disease. What explains those cases where only the skin is affected? More recently, the now widely accepted hypothesis is that sensitisation to the food proteins actually occurs through the dermis itself. Sensitisation through the dermis has been demonstrated in mice, and can lead to local, and even systemic IgE production resulting in allergen-primed mast cells in the dermis and other tissues.[12] Oral feeding of the allergen can then produce cutaneous signs, or even systemic anaphylaxis.[13] A pre-requisite for this to occur is the lack of oral exposure prior to epicutaneous sensitisation, whereby the induction of oral tolerance lessens, or may even prevent dermal sensitisation.[14] Likewise, small doses of food allergen applied to a disrupted or abnormally permeable dermis can prevent the development of normal oral tolerance when that food is subsequently ingested in mice.[14] The study by Marsella et al. is the first to show the same response in dogs, and gives further support to the hypothesis that cutaneous food hypersensitivity is a cutaneous allergy, and not an oral allergy, even though clinical signs are elicited following ingestion. It may also explain the close clinical association between atopic dermatitis and cutaneous food hypersensitivity. And if cutaneous food hypersensitivity is due to cutaneous sensitisation, it opens the intriguing possibility that strategies employing the induction of oral tolerance, such as gradual oral reintroduction of the offending allergen, might be successful therapeutic approaches.

Reference: Exp Dermatol. 2015;24(9):711-2
Abstract

Independent commentary by Nick Cave.

Nick Cave is a Senior Lecturer in small animal medicine and nutrition at Massey University. He holds a BVSc from Massey, a Masters in Veterinary Science, a PhD in nutrition and immunology from the University of California, Davis, and is a diplomate of the American College of Veterinary Nutrition. He is a founding member of the WSAVA Global Nutrition Committee, and a founding board member for the Massey University Working Dog Centre.

FOR FULL BIO CLICK HERE

Speed of dog adoption: Impact of online photo traits

Authors: Lampe R and Witte TH

Summary: This US study examined how different characteristics in online photos of young and adult black Labrador Retriever mixed breed dogs affected the speed of adoptions. A subjective global photo quality measure had the highest association with time-to-adoption. Speed of adoption was also positively associated with direct canine eye contact, the dog standing up, an appropriately sized photo, an outdoor location and a non-blurry image.

Comment: I do not espouse a digital existence, and "twiddle", "bumbler" and "sit on my facebook" are anathema to me. However, many clinics now have a significant online presence, and use public websites and social media for communicating and building relationships with their clients. Amongst the pantheon of specific goals that can be met through the digital domain, rehoming of animals is a noble one. According to the 2014 RNZSPCA annual report, nearly 49,000 animals passed through SPCA centres alone. Add to that the numbers of animals handled by council pounds, rescue shelters, and veterinary clinics, and the total is deeply concerning. There are no figures in NZ of what proportion are successfully rehomed, but in the US, it is estimated that 2.5% of the total dog population are euthanised through shelters.[15] Of those that require adoption, admittedly few are held and rehomed by veterinary clinics, but we are often highly motivated to be successful when we do so, and knowing what influences success is at least of interest. Previous research in the US has shown that dogs that are entire, black or brindle, and old, are significantly less likely to be adopted from shelters.[16] But the study from Lampe and Witte might be the first to evaluate the influence that the characteristics of online images of animals has on their likelihood of being rehomed. The study evaluated images posted on websites in the US used to advertise dogs for rehoming, and compared image characteristics with the time to adoption. The researchers selected young black Labradors or Labrador-cross dogs as their study group to eliminate variation from dog-specific parameters such as breed or colour, and because they had been identified as a type of dog that is difficult to rehome. Although there were differences between old and young dogs as to what was effective, there was no characteristic that was positive for one and negative for the other. Aside from the photo characteristics mentioned in the abstract, it was very clear that having a human in the photo holding the animal significantly decreased the chance of rehoming. Whether it is heart-warming or slightly worrying, it seems that humans are either a distraction, or positively off-putting for people open to having their heart strings pulled.

Reference: J Appl Anim Welf Sci. 2015;18(4):343-54
Abstract

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Using Research Review Abstracts for CPD Points

Helen Beban, Professional Adviser
Veterinary Council of New Zealand

Reading relevant veterinary articles, particularly when we have an unusual case, is part of our daily practice as veterinarians. Few of us record this activity as CPD but it is a valuable way to keep current and can become part of your CPD record.

I have used some of the Companion Animal Research Review abstracts as examples to show how you can easily record such activity if you would like this to contribute to your requirement for CPD.

All you have to do is to have a record of the activity and a few sentences about what you learnt and how this impacts your practice as a veterinarian. This is called a reflective record.

This system allows you to use this activity if you want to support points towards your CPD requirement as Self Directed Learning (SDL).

See the VCNZ website for templates for activity and reflective records http://www.vetcouncil.org.nz/contProfDevel.php

NZVA members can use MyCPD to record SDL and write reflective statements.

The records can be submitted to VCNZ if you are chosen as part of a CPD audit.

CPD Activity Record

Name		Time span of plan		Main area of practice	

Activity No.	Date	Provider (where relevant)	Type and description of CPD Activity	Area/s of practice	Assessment	Evidence	Hours	Points		
								Collegial	CVE	Self-directed
								Min 15	Min 15	
1	20 October 15	Companion Animal Research Review	Read article abstract and summary by Nick Cave. Demodicosis	Companion animal	None	Reflective Record	0.5			0.25
2	20 October 15	On line search	Read article abstract. Demodicosis	Companion animal	None	Reflective Record	0.5			0.25
3	20 October 15	Companion Animal Research Review	Read article abstract and summary by Nick Cave. Online photos and adoption	Companion animal	None	Reflective Record	0.5			0.25
4	20 October 15	Companion Animal Research Review	Read article abstract and summary by Nick Cave. Chronic small bowel disease - biopsies, treatment	Companion animal	None	Reflective Record	0.5			0.25

Reflective Record

Activity No. (from Activity Summary)	Topic or publication details and/or CPD objectives	Learning outcomes (What I learnt or delivered)	Impact (How this has or may benefit my work)
1	Hutt JH et al. Treatment of canine generalized demodicosis using weekly injections of doramectin in the USA (2002-2012). Vet Dermatol. 2015;26(5):345-e73	Weekly subcut Dectomax at 0.6 mg/kg was effective and safe. Remission rates high (95%); over mean treatment duration was 7.1 weeks. If only look at adults then remission 67%. Only two suspected adverse reactions (0.5%) – ataxia which resolved after treatment stopped.	Study had large numbers (232) over many years (2002 -2012). Good results. Continue to use Dectomax for canine demodicosis.
2	Johnstone IP. Doramectin as a treatment for canine and feline demodicosis. Australian Veterinary Practitioner. 2002;32;98-1023	Another study smaller numbers (23 dogs and 3 cats). Same dose 0.6 mg/kg weekly subcut. Median time until skin scrapes negative 8 weeks (range 5-20 weeks). All responded and went into remission. Some dogs needed monthly injections to remain in remission. No systemic side effects seen.	Reinforces USA study. Consider monthly injections if dog initially goes into remission then skin scrapes become positive. Need to continue monitoring even if appear to be resolved.
3	Lampe R and Witte TH. Speed of dog adoption: impact of online photo traits. J Appl Anim Welf Sci. 2015:18(4):343-54	High quality photos ideally outdoors, dog standing up, no people in the image and direct dog eye-contact resulted in faster adoption in a US study. Standardised for black Labrador or Labrador-cross dogs similar age.	Will pass this information onto the local animal shelter next time I talk to them.
4	Norsworthy GD et al. Prevalence and underlying causes of histologic abnormalities in cats suspected to have chronic small bowel disease: 300 cases (2008-2013). J Am Vet Med Assoc. 2015;237(6):629-35	96% (288) of the cats with clinical signs of chronic vomiting, chronic small bowel diarrhoea, or weight loss were found to have chronic small bowel disease (150 with chronic enteritis and 124 with intestinal lymphoma). Ultrasound was not effective at distinguishing between IBD and intestinal lymphoma. Required full thickness intestinal biopsy.	Cats with signs of chronic vomiting, diarrhoea and weight loss that do not respond to a treatment trial with a novel or hydrolyzed protein diet are likely to have IBD or lymphoma. Ultrasound not useful to distinguish. Need biopsy. Reinforce to clients whose cats have diagnosis of small cell lymphoma that treatment with pred and chlorambucil can be effective (if treated early remission in nearly 100% cases and median disease-free interval of more than 2 years).