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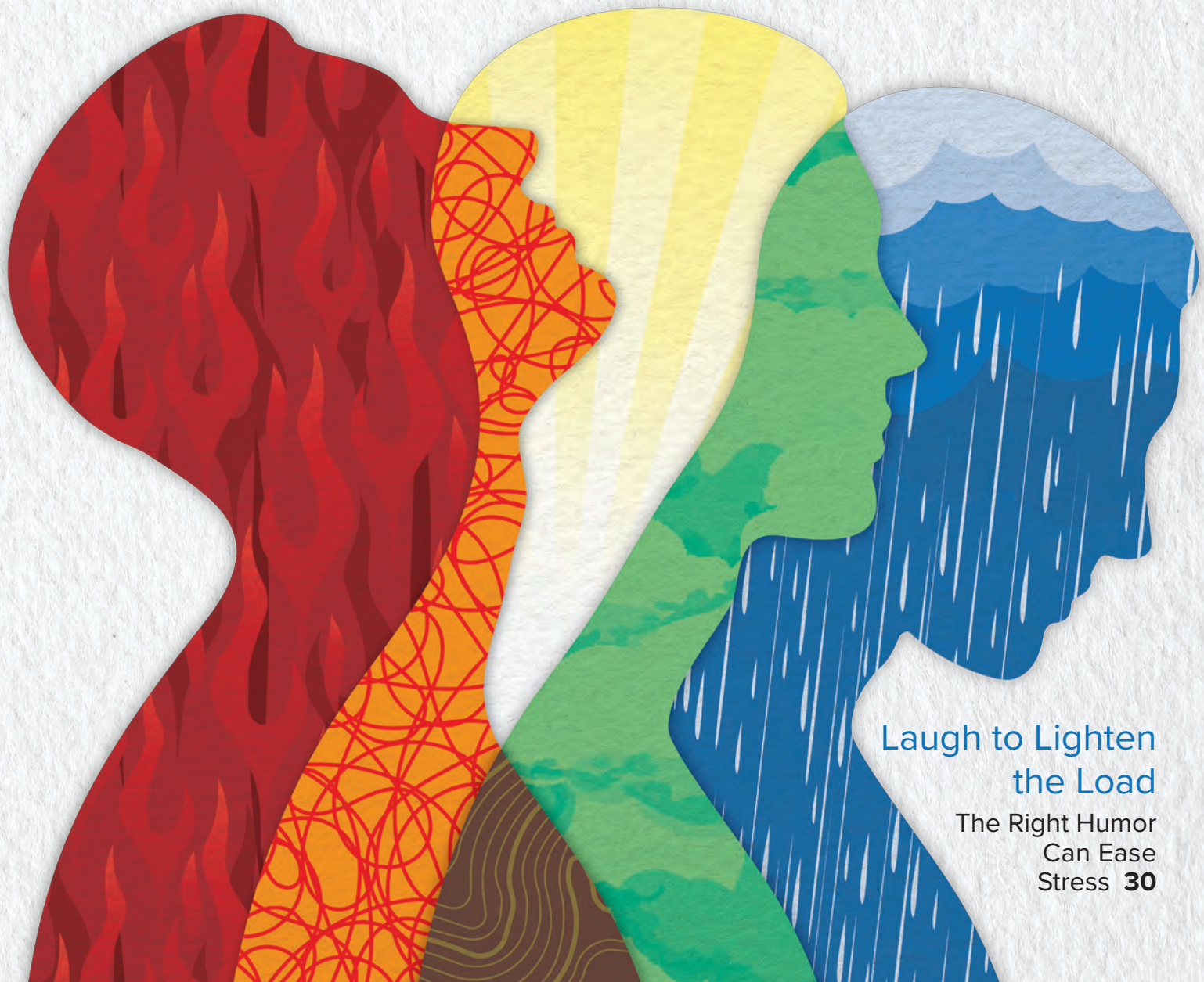
Trends® magazine

The Spectrum of Wellbeing



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Trends magazine

Vol. 39, No. 9
SEPTEMBER 2023

Trends magazine provides timely perspectives on the art and business of companion animal veterinary practice to all members of the practice team. trends.aaha.org

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features

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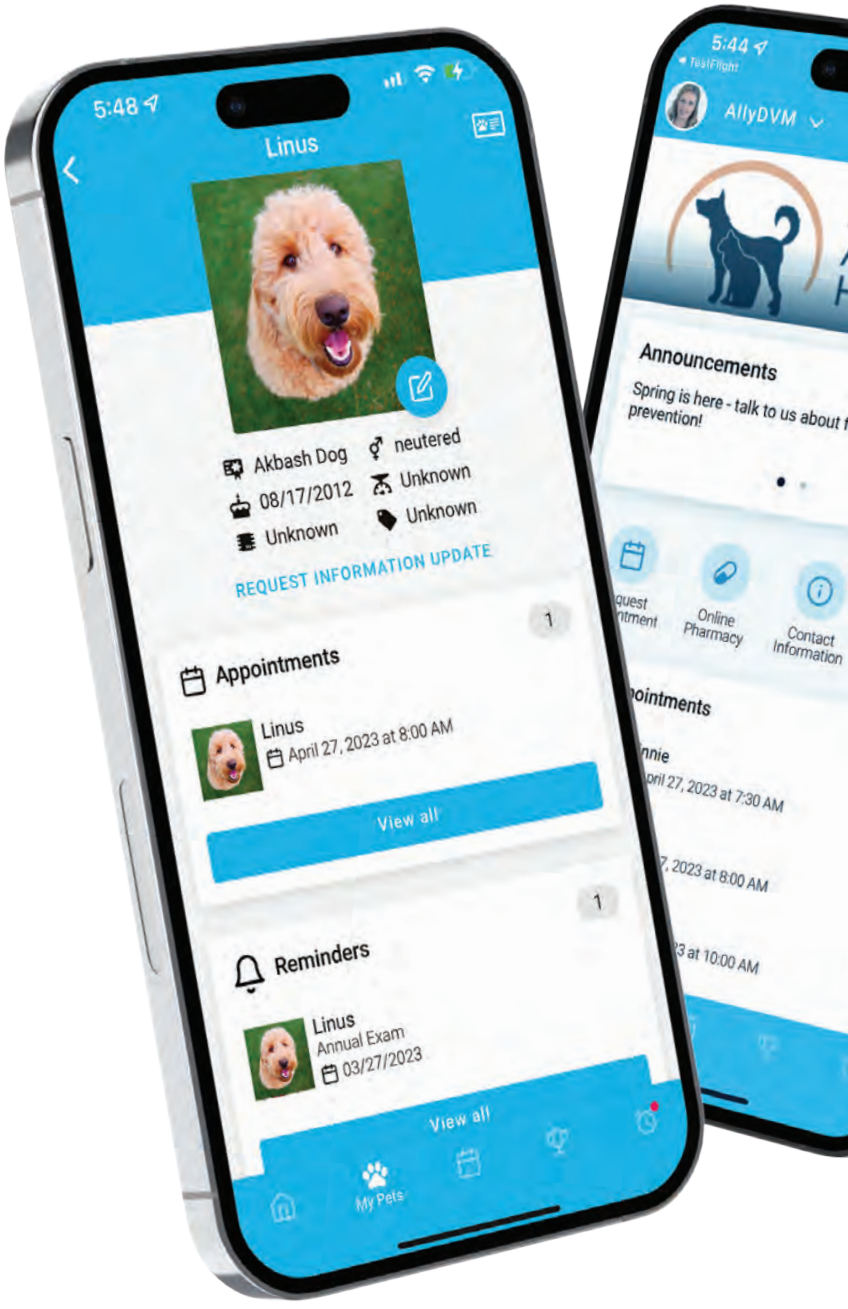

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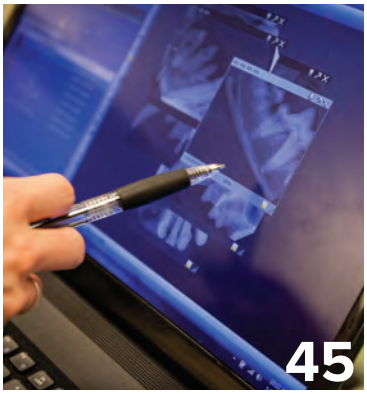

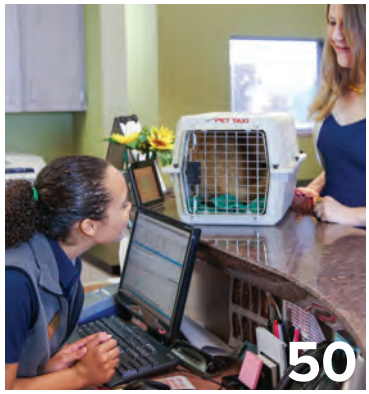

the usual

How Can a Veterinarian Add $36,000 Per Year in Profit?

Sponsored by CashDiscountProgram.com

The first business day of the month has arrived once again, and with it, a steady stream of clients enters through the front door. You are, thankfully, busier than ever healing their beloved furry friends.

But then you notice that thousands of dollars have been deducted from your bank account...again. It's a familiar but bothersome line item: Credit Card Processing Fees.

"I didn't start my own business so I could feel trapped like this." You start wondering if you have any other options.

The good news is that your practice is operating during new and exciting times with tools that enable you to keep more of your revenue in your pocket, where it belongs.

These tools are legal programs called: Cash Discount, Surcharging, or Dual Pricing. At least one of these programs is available, compliant, and allowable in your location, which means that you could dramatically increase your bottom line, and eliminate your merchant service fees, simply by implementing the program that works best for you.

What are the differences between the programs?

1. **Cash Discount Program:** Your posted price for goods and services is the higher (card) price. A discount is provided if a client pays by cash or if you accept checks.

2. **Dual Pricing:** Similar to the above and much easier to implement, two prices are presented to the client: A Cash Price and a Card Price.

3. **Surcharging:** This program is restricted in some areas and is also what people who don't understand the regulations often refer to as "illegal." Surcharging is actually legal in most states and allows a business to communicate that there is simply an additional fee added when a credit card is used. Surcharging specifically caps the fee that can be charged and does not allow any debit cards to be charged a fee.

Each program will eliminate credit card processing fees. We have repeatedly saved happy and thriving practices over $3,000 per month...that's more than $36,000 per year.

It's a no-brainer, right? Of course, until you consider the looming question: "How will my clients respond to this?"

Our experience (explained to us by Veterinarians using our programs) is that clients almost always accept the fee and will simply pay in cash if they don't. Owners prioritize their pet's health and well-being and they under-stand that these fees routinely appear in other industries.

Gas stations (see image below), hair salons, nail salons, restaurants, municipalities, and many other businesses have passed on a fee to cardholders in some way for years. Therefore your cli-ent is already paying a fee to use their card in a wide variety of places.

In addition, there is a deep trust built between you and your clients. You know the animal's history, built a relationship, and they are comfortable with you. Paying a small fee (especially one that allows your practice to thrive and offer stellar treatment) is a price they'll be more than willing to pay for using a credit card.

Tired of having thousands of dollars taken from your bank account every month? Then consider one of the pro-grams above. Savings range between 75-100% of merchant service costs. We specialize in working with Veteri-narians nationwide, and after imple-menting each program above countless times you are certain to be thrilled with the results.

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from the editor's desk

ARE YOU GOING TO AAHA CON? I will be there, talking to members and checking out the sessions, and of course soaking up the California sunshine. If you see me wandering around, please say hello and tell me how much you love *Trends*. I hope to see you there!

I have a soft spot for social workers—my dad was one for many years. And veterinary social workers are next-level superheroes. Our cover story looks at some of the advice from veterinary social workers and other wellness professionals on how to improve overall wellness for your team. Pizza parties are nice, but our experts go beyond that and offer real insights into what can really make a difference.

What do you call a veterinarian who can only work on one animal? An MD! But seriously, our other feature this month is on humor. Humor, used properly, can be a great way to lighten loads and tame tension at work. Just don't get too cheesy like I do with my dad jokes.

Since September is pain awareness month, we also have two articles on pain management. One is about taking a team-based approach to addressing pain, and the other is about managing pain in a community medicine setting. In this type of setting, your clients may be individuals who have a harder time paying for all the recommended services that your regular clients do. The article is in the form of a case study with clear steps about ways to approach this situation.

NEW! NOMINATE AN EMPLOYEE OF THE MONTH AND WIN $$$!

Now, when you enter our monthly Employee of the Month drawing, the nominator will win a $100 gift card, and the winner will receive a $400 gift card from Amazon! This is your chance to shine the spotlight on one of your best employees, and win some loot for doing so. If you don't win, don't worry, you can enter again the next month! Enter today at aaha.org/EOTM.

COMING NEXT MONTH

October is our annual Technician Issue, so we are featuring the best photos of Techs@Work contest along with the very first *AAHA Technician Utilization Guidelines*. Other tech-related articles will be on dermatology and mental health. Stay tuned!

As always, let me know what you think at trends@aaha.org.

—Ben Williams, Editor

If you have credentialed veterinary technicians in your practice, chances are they could, and want to, be doing more.

Today's veterinary practices face a number of challenges, including difficulty attracting and keeping skilled professionals, staff shortages, and professional burnout. Optimal utilization of credentialed veterinary technicians, where their education, skills, and experience are used to full potential, is a key part of addressing these challenges. The *2023 AAHA Technician Utilization Guidelines* outline steps you can take *right now* to better utilize credentialed veterinary technicians.

The 2023 AAHA Technician Utilization Guidelines *are generously supported by CareCredit, Hill's Pet Nutrition Inc., and IDEXX.*

AAHA | Guidelines

2023 AAHA Technician Utilization Guidelines

Watch for these brand-new AAHA Guidelines coming this October!

View from the Board

Take Time to Care

There is no health without mental health.
—David Satcher, former United States Surgeon General

Near the end of May was one of those days that reminded me that we all need to be connected and supportive. As Robin Williams is oft quoted as saying: "Everyone you meet is fighting a battle you know nothing about. Be kind. Always."

My outpatient leadership team asked that I help them with a difficult conversation with a newer hire who started with us in late April. For their first weeks, they were on fire, and then a switch came with illness, tardiness, and a change in their focus. The conversation was difficult not because they were a toxic personality or a bad fit for our culture but because something had changed mentally for this person from their start to now.

This is a team member who had a smile as big as the sun and was a perpetual motion machine, always helping their colleagues and keeping busy. But now they had shifted to a quiet, withdrawn demeanor. So, we gently talked to them and reviewed those changes and lapses with a focus on our concern for them. We noted their downward spiral and how it was being perceived by teammates and trainers as loss of interest and a disregard for our training process. Finally, they shared what they felt comfortable sharing about their situation.

This team member was struggling with not only their own physical health concerns from chronic disease but mentally with the stresses of a seriously ill mother, a father newly entering hospice, and being the "new kid" at work—everything clustering together. Like many of us, they were simply overwhelmed. Additionally, that common vet med personality of someone who does more to take care of others than themselves had kicked in. And, lastly, life experience has taught them that they need to do it all and that no one needed to know their personal business.

As we got toward the end of the conversation, this team member also shared that in prior veterinary assistant jobs—and even in prior workplaces that were not in vet med—they never had colleagues acknowledge them and their mental health in this way.

We as a leadership team continued to have a really open conversation about support, available resources in our area, and a plan for accommodations that might help, such as an extra break time for counseling or phone calls regarding the parents, a schedule change, and how we could flex with them. We simply showed our caring about this individual. When all was said and done, we still have an employee who is struggling with things that we cannot shoulder for them, but they are smiling again because of the knowledge of communication, connection, and collaboration at a time of struggle made them feel heard and supported.

While this team member does not have a mental illness, their mental health was suffering, and if left unacknowledged, it could have easily carried them into depression and anxiety.

This could be any of us, which is why the mental health of our colleagues needs to be and remain a priority—a pulse to be checked on, a door to remain open so everyone in our practices is acknowledged and supported. It costs us nothing to listen and be kind, but it can make such a difference.

Margot Vahrenwald DVM, is AAHA's president for 2022–2023. She owns Park Hill Veterinary Medical Center, a six-doctor small animal practice in northeast Denver.

This month in AAHA's Publicity Toolbox . . .

Here are the downloadable social media images available for AAHA-accredited members at **aaha.org/publicity** this month:

Animal Pain Awareness Month

Happy Healthy Cat Month

National Service Dog Month

National Disaster Preparedness Month

Deaf Dog Awareness Week
September 24–30

World Rabies Day
September 28

90 YEARS AAHA

2023 marks the ninetieth year of AAHA, and members are sharing some of the biggest ways AAHA has contributed to their careers. Check out some of their moving testimonials and share yours at community.aaha.org.

"I attended my first AAHA meeting in 1971, and it changed my life. Our animal clinic became AAHA accredited in 1974 and grew from a 1 doctor practice with 1 employee to 6 doctors and almost 30 employees. I then became inspired to join AAHA's team of volunteers in 1980. I am a proud supporter of AAHA and all it has meant to companion animal veterinary practices throughout its important history."

"The year I graduated from vet school, 1998, I won the AAHA medical and surgery student award. I honestly had no idea what AAHA was. They gave me a free conference ticket, and it was my first vet conference. It became my guiding light. Twenty-five years later, I have three accredited hospitals and they are still my guiding light! Thank you AAHA!"

AAHA | Community

AAHA members, add to the conversation at community.aaha.org. For help, email community@aaha.org.

notebook

Clemson Approves New College of Veterinary Medicine

Clemson University is preparing to launch the first College of Veterinary Medicine in the state of South Carolina. The Clemson University College of Veterinary Medicine plans to enroll the first students in fall 2026 with the first class of veterinarians graduating in 2030.

A release stated that the college will leverage the university's existing animal health programs and infrastructure to create a veterinary medicine workforce to fill a statewide shortage of veterinarians.

The approval of the new college follows an 18-month independent feasibility study that found:

- 33% of South Carolina counties have fewer than five veterinarians.
- 48% of the state's counties have fewer than 10 veterinarians.
- In 2022, nearly 200 South Carolina students were actively enrolled at 13 veterinary colleges outside the state.

"Veterinarians today play an increasingly important role, in addition to caring for both companion and farm animals, protecting public health, playing an essential role in food safety as well as in detection and control of zoonotic diseases," said Boyd Parr, co-chair of the Clemson College of Veterinary Medicine steering committee and retired South Carolina State Veterinarian. "This new veterinary college can produce the veterinarians and research that will contribute to a better future for our citizens and our animals."

sbrogan/E+ via Getty Images

Veterinary Supply Company Fined for Misbranded Drugs

Midwest Veterinary Supply (MVS)—a Minnesota-based company that supplies prescription drugs for animals to veterinarians, farms, feedlots, and other businesses—recently pleaded guilty to introducing misbranded drugs into interstate commerce and agreed to pay more than $10 million in criminal fines and forfeiture.

"The Department of Justice will continue to ensure that all companies follow federal laws regarding distribution of prescription drugs," United States Attorney Christopher R. Kavanaugh of the Western District of Virginia said. "In this case, millions of dollars were obtained from the illegal distribution of veterinary medicine, and, just like pharmaceuticals intended for human-use, my office will continue to hold accountable those companies and corporations that violate federal law."

As part of the plea agreement, MVS will forfeit $10.2 million of misbranded drug income and serve one year of probation. Midwest will also pay $1 million to the Virginia Department of Health Professions and a $500,000 fine.

QUOTE OF THE MONTH

"Self-care is not selfish. You cannot serve from an empty vessel."

—Eleanor Brown, author

Recreational Drugs Make ASPCA Annual List of Top Pet Toxins for the First Time

The ASPCA (The American Society for the Prevention of Cruelty to Animals) Animal Poison Control Center (APCC) recently announced its annual list of top toxins for pets.

In 2022, the APCC team assisted more than 400,000 animals from across all 50 states resulting in a nearly 5% increase in case volume when compared to 2021. For the first time ever, recreational drugs including marijuana-based drugs, hallucinogenic mushrooms, and cocaine made the list, knocking out gardening products in the tenth spot.

In 2022, the APCC team fielded nearly 11% more calls related to potential marijuana ingestion than in the previous year, and they have seen a nearly 300% increase in calls over the past five years. The cases most commonly seen at the APCC involve pets ingesting marijuana-laced baked goods which are more dangerous than ingesting plant material and can result in symptoms such as stomach upset, urinary incontinence, and ataxia.

For the first time in nearly 10 years, human medications held only one of the top two spots. While human over-the-counter medications continued to lead the list, making up nearly 17% of the APCC's total call volume last year, human prescription medications dropped to number three, and food products replaced them as number two. The ASPCA says that pet owners are more aware of the dangers of human medication exposure in pets which can lead to signs from gastrointestinal upset to kidney failure in severe cases. Protein bars, products with xylitol, and grapes and raisins continue to be the most common items in the food category.

For more information about the ASPCA Animal Poison Control Center, visit www.aspca.org/pet-care/animal-poison-control.

Elizabeth Strand, PhD, LCSW

New Center for Veterinary Social Work

The University of Tennessee College of Social Work and the College of Veterinary Medicine have established the Center for Veterinary Social Work (CVSW). In a release, the center states that it focuses on attending to the welfare of all species through excellence in global interprofessional practice.

The release states that the discipline of veterinary social work was established in 2002 by Elizabeth Strand, PhD, LCSW, the All Creatures Great and Small Endowed Clinical Associate Professor in Veterinary Social Work. This area of social work practice tends to the human needs that arise at the intersection of veterinary medicine and social work practice. The areas of veterinary social work include grief and pet loss, animal-assisted interaction, the link between human and animal violence, and compassion fatigue and conflict management.

Both colleges will share faculty, staff, and fiscal responsibility for the creation and functioning of the Center for Veterinary Social Work. Other programs connected to the center include the College of Social Work's Program for Pet Health Equity as well as Human-Animal Bond in Tennessee, Companion Animal Initiative of Tennessee, and Shelter Medicine from the College of Veterinary Medicine.

Photo courtesy of University of Tennessee

Pet Adoption Gateway Prepares to Launch

Shelters United, a group purchasing organization that allows animal welfare groups to purchase animal care supplies and products at discounted prices, is launching a beta test for the Pet Adoption Gateway. This app and mobile-friendly website will provide pet adopters with personalized support and guidance, as well as product recommendations, during the adoption process and throughout their pet's life. In a release, the company said its goal is to ultimately keep more pets in their new homes by setting the pet adopter up for success.

"Adopters cannot take in all the information needed during the adoption process, so having an app or website to go to in their homes would be very good for them and the adopted pet," said Mark Neff, president and CEO of Forsyth Humane Society. "A resource such as this could prevent adoption returns."

When pet adopters use Pet Adoption Gateway to purchase services, veterinary consults, and supplies, the animal welfare organization that facilitated the adoption will receive a portion of the profits.

"Every year, 4 million pets are adopted from animal welfare organizations. New pet owners typically spend between $1,200 and $2,500—for a total of about $5 billion—in the first year, and none of that money goes back to the animal welfare group that did all the work to find the pet a home," said Mal Schwartz, Shelters United founder. "We're trying to help these organizations maximize their earning power from the products and services that are purchased by every new pet adopter after they leave the shelter, rescue, or foster organization."

Diversify Veterinary Medicine Coalition Partners With Chewy Health

The Diversify Veterinary Medicine Coalition (DVMC) announced that Chewy Health President Mita Malhotra will join the organization's board of directors. In a release, DVMC said that Chewy Health is the unit within Chewy that is committed to improving the health of pets via technology, resources, products, and services while aiming to make veterinarians' jobs easier. As the leader of Chewy Health, they said, Malhotra is motivated to find solutions for the current challenges facing the Black, Indigenous, and People of Color (BIPOC) veterinary community and to uncover new ways that Chewy Health can further diversify the pet health space for the benefit of pet parents and veterinary partners alike.

Coupled with a $100,000 donation from Chewy Health to the organization, the release stated, the board appointment marks an important step forward in the coalition's mission to provide opportunities for everyone to thrive and succeed.

kali9/E+ via Getty Images

Research Finds Dogs Have Better Health Outcomes With Another Animal in the Home

A release from the University of Washington states that the scientists driving the Dog Aging Project try not to make recommendations on healthy aging based on their research findings. But, they say, after parsing the data from their latest study of social determinants of longevity, one thing became too obvious to ignore: The pack is the point.

"This does show that, even for our companion dogs, having those strong social connections and social companions is important," said Brianah McCoy, a PhD candidate at Arizona State University who is one of the study's lead authors. "Overall, it's good for your dog to have social support around, in the form of other people and other dogs. Dogs are social animals, just like us, so they benefit from being around others."

The new findings are published online in the journal *Evolution, Medicine & Public Health.* The data are drawn from the 25,000 canines involved in the partnership between the University of Washington School of Medicine, the Texas A&M School of Veterinary Medicine, and more than a dozen member institutions around the nation.

Factors of social support, such as living with other dogs, were associated with better canine health when controlling for age and weight. Factors of financial and household adversity were associated with poor health and lower mobility.

"Societal inequities trickle down to our companion animals as well," said Noah Snyder-Mackler, an assistant professor in the Arizona State University School of Life Sciences, who oversaw the recent paper. "I think that's an important take home in terms of how we might develop interventions to address these inequities."

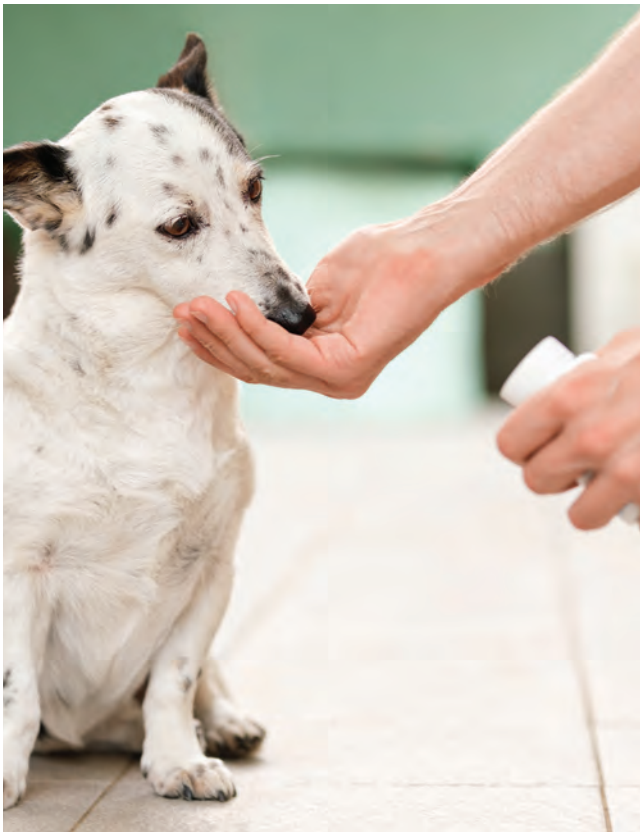
Pekic/iStock via Getty Images Plus

North American Pet Insurance Industry Surpasses $3.5B

The North American Pet Health Insurance Association (NAPHIA) recently published its 2023 State of the Industry Report. It states a 24.2% increase in premiums in 2022 compared to 2021, totaling more than 5.36 million insured pets across North America. The US experienced 22.1% growth in total insured pets over 2022.

"2022 marked a return to pre-COVID levels of growth for our industry. This steady growth is significant during a period when many North Americans were also forced to make difficult decisions on their household spending," stated NAPHIA president Rick Faucher in a release. "We're pleased that pet parents continue to recognize the value pet insurance provides, both in mitigating unexpected veterinary costs, as well as providing for their pet's ongoing health care and well-being. It's the product's strong value proposition that is driving the significant advances the North American pet insurance industry has experienced over the past five years."

The 2022 results show total premium volume in the US amounted to $3.51 billion, a 23.5% increase from 2021, NAPHIA states. To read the report, visit naphia.org.



Zoetis Announces FDA Approval of Apoquel Chewable Tablet

Zoetis Inc. announced that the US Food and Drug Administration (FDA) has approved Apoquel Chewable (oclacitinib chewable tablet) for the control of pruritus associated with allergic dermatitis and control of atopic dermatitis in dogs at least 12 months of age.

In a release, the company said that Apoquel Chewable, the first and only chewable treatment for the control of allergic itch and inflammation in dogs in the United States is expected to have comparable efficacy to original Apoquel (oclacitinib tablet) after the first dose, with a formulation that may enhance medication compliance and therefore improve outcomes for dogs.

In the US field trial, 1,662 doses of Apoquel Chewable were administered to 120 pet dogs. Apoquel Chewable tablets were administered twice daily for up to 14 days at the labeled dose range of 0.4–0.6 mg/kg with palatability assessed for the first 7 days of dosing. The study found that a total of 1,522 doses (91.6%) of Apoquel Chewable were accepted voluntarily within 5 minutes.

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Don't miss **Dr. Michele Drake's talk on September 23rd from 1:00-1:50PM** to learn all about "The 10 Steps to Attract Doctors & Staff While Building Stronger Client Relationships"

CHECK OUT WHAT OUR COMMUNITY HAS TO SAY:

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Dr. Jena Questen
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John Martin, Owner
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Our online presence has soared, and we also noticed the increased traffic to our clinic! Our appointment schedule is filled, and everyone is busier and happier as the day flies by.

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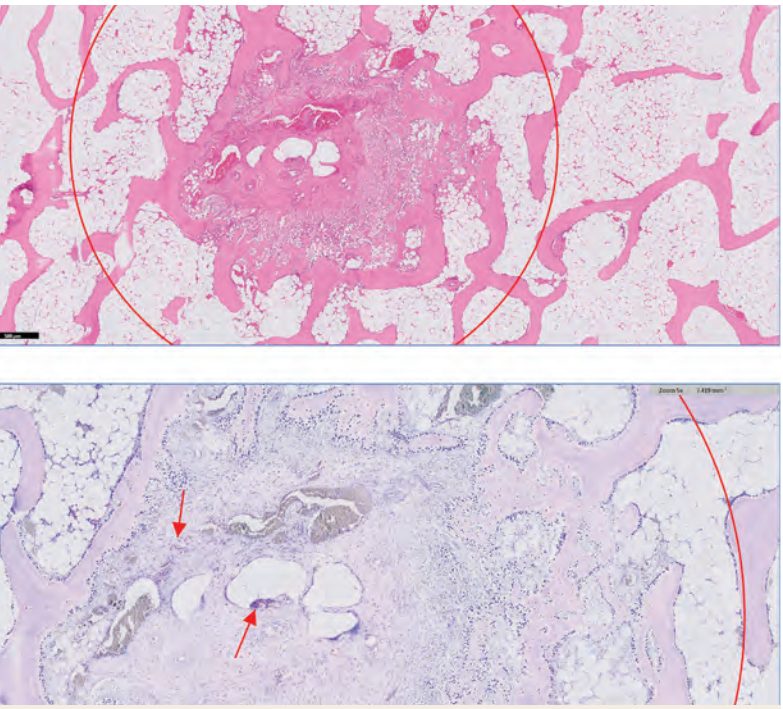
JAAHA®
JOURNAL OF THE AMERICAN ANIMAL HOSPITAL ASSOCIATION

ABSTRACTS



59.5 SEP/OCT 2023

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CASE REPORTS

Tibial Plateau and Stifle Joint Invasion with a Subcutaneous Mast Cell Tumor

Monique Triglia, Hollie Horton, Melanie Dobromylskyj, Amy Jo Ferreira, William Peter Robinson

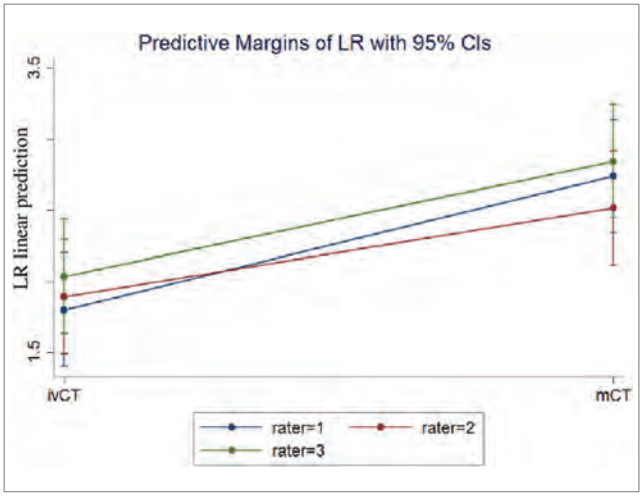
A 4 yr old female neutered Labrador retriever was referred with a history of left hind-limb lameness and an acute, nonpainful, subcutaneous mass on the medial aspect of the left stifle. Stifle radiographs and fine-needle aspirates of the soft-tissue mass performed by the referring veterinarian confirmed the presence of predominantly highly granulated mast cells, consistent with a mast cell tumor. Computed tomography demonstrated a soft-tissue mass centered on the left medial stifle, with associated joint effusion and polyostotic lytic lesions on the tibial plateau and distal patella. Ultrasound-guided aspirates of the liver, spleen, and popliteal lymph nodes were obtained to rule out further metastatic spread. Cytology of the joint fluid demonstrated a low number of well-differentiated mast cells. Surgical and oncological interventions were discussed, and full hind-limb amputation was elected. Histopathological analysis of the submitted tissues after amputation diagnosed a subcutaneous mast cell tumor with neoplastic cell infiltrate extending into sections of joint capsule and synovial membrane. Infiltration to the tibia and distal patella were suspected following the presence of mast cell clusters in both osteolytic lesions. No evidence of metastasis was identified in the popliteal lymph node. Postoperative monitoring of iliac lymph node size using ultrasound did not identify evidence of metastasis 12 mo postoperatively.

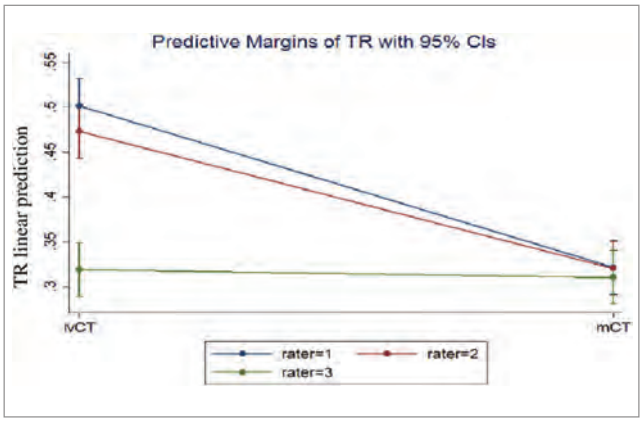
RETROSPECTIVE STUDIES

Suspected Fluoroquinolone-Induced Exacerbation of Myasthenia Gravis in Dogs

Karen Marina Hernandez Guzman, Kenneth Harkin

Acquired myasthenia gravis (MG) in dogs can present with focal or generalized weakness and is diagnosed by the presence of circulating antibodies to the acetylcholine receptor. Megaesophagus is the most common focal form of MG. Although exacerbation of MG has been associated with the use of fluoroquinolones in humans, it has not been previously described in dogs. The medical records of 46 dogs diagnosed with MG based on acetylcholine receptor antibody testing from 1997 to 2021 were retrospectively evaluated to identify any dogs who demonstrated exacerbation of MG after the administration of a fluoroquinolone. Exacerbation of MG, from focal to generalized, occurred in a median of 4.5 days after initiation of fluoroquinolone therapy in six dogs. In addition, one dog with generalized MG and megaesophagus developed pyridostigmine resistance subsequent to fluoroquinolone therapy. Marked improvement in generalized weakness was reported 36 hr after discontinuation of fluoroquinolone therapy alone in one dog and in combination with pyridostigmine in two dogs. Fluoroquinolone therapy was never stopped in three dogs who were euthanized because of severe weakness and one dog who died of respiratory arrest.





ORIGINAL STUDIES

IV Versus Myelography Computed Tomography for Thoracolumbar Intervertebral Disc Extrusion Surgical Planning in French Bulldogs

Marion Signoret, Clément Musso, Harriet Hahn, Kévin Le Boedec, Laurent Cauzinille

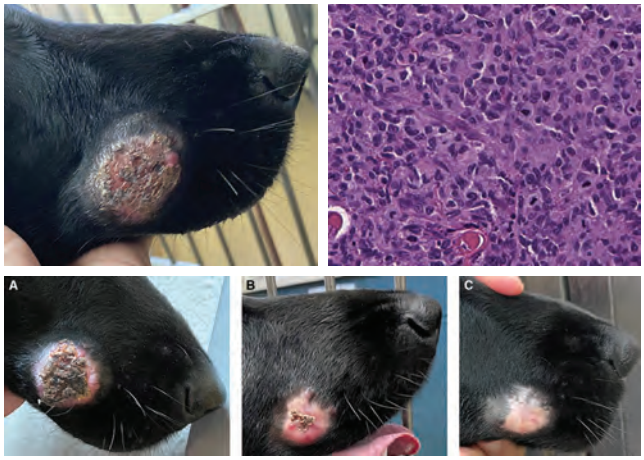
Accurate diagnostic imaging is required for surgical planning of acute thoracolumbar intervertebral disc extrusion. However, data comparing the accuracy of conventional IV contrast-injected computed tomography (CT) and myelography CT for hemilaminectomy localization and size assessment are sparse. In this study, IV contrast-injected CT and myelography CT were performed in 48 French bulldogs presenting with acute disc herniation and compared with postsurgical CT. CT images were evaluated by three raters. IV contrast-injected CT erroneously identified the compressive lesion site significantly more often than myelography CT. The length of the compressive lesion was significantly higher using myelography CT compared with conventional CT, but this did not lead to relevant consequences on the surgical opening site length. Myelography CT should therefore be recommended when thoracolumbar disc disease is suspected and multiple compressive lesions are visualized on IV-injected CT in French bulldogs.

ORIGINAL STUDIES

Tolerability of Otic Solutions Containing Different Enrofloxacin Concentrations in Dogs with Healthy Ears

Jennifer Clegg, Clarissa Souza, Bailey Brame

Otitis externa (OE) is a common disease in dogs, and topical medications are the preferred treatment. Compounded solutions of enrofloxacin are commonly used in practice to treat bacterial OE; however, the tolerability of different concentrations of this antibiotic in the ear canals of dogs has not been evaluated. The objective of this study is to determine if a higher concentration of enrofloxacin applied to the external ear canal is clinically tolerated in dogs with healthy ears. Sixteen client-owned dogs with bilateral healthy ears and no previous history of OE were enrolled. Injectable enrofloxacin 2.27% diluted with sterile sodium chloride in 1:1 (11.35 mg/mL) and 2:1 (15 mg/mL) ratios were applied into the dogs' right and left ears, respectively, *q* 12 hr for 14 days. Based on video otoscopic examination, clinical score for canine OE (OTIS3) results before application were ≤1 for all dogs. During the study and at the conclusion, all scores remained ≤2, which is considered normal. No cytologic inflammatory cells were seen in any of the dogs' ears throughout the study. Different concentrations of enrofloxacin solution applied topically were well tolerated by dogs with healthy ears and can be considered for the treatment of dogs with bacterial OE.



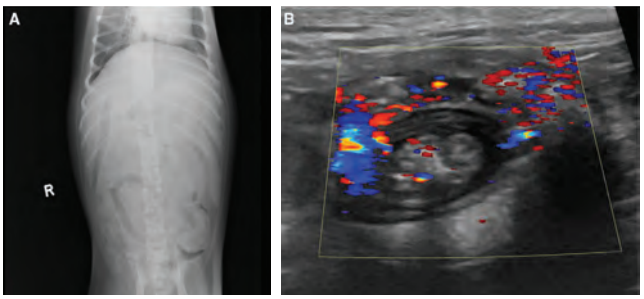
CASE REPORTS

Metastatic Cutaneous Langerhans Cell Histiocytosis in a Flat-Coated Retriever Treated with Doxorubicin and Prednisone

Christen Montesanto, Brenda Phillips, Oceane Aubry

A 2 yr old female intact flat-coated retriever dog was presented for evaluation of a histologically diagnosed cutaneous Langerhans cell histiocytosis of the muzzle with right mandibular nodal metastasis and suspected prescapular lymph node metastasis. Chemotherapy (lomustine 60 mg/m² by mouth as a single dose) and glucocorticoid therapy (prednisone ~20 mg/m² by mouth every 24 hr) were initiated. Progressive disease occurred 21 days after lomustine administration. Doxorubicin (at 30 mg/m² IV every 3 wk) was administered

as a second-line therapy. Prednisone was continued at the same dose. Partial response was noted 1 wk after initiation of doxorubicin and sustained through doxorubicin #2. Complete remission was achieved following doxorubicin #3 (63 days from the start of doxorubicin rescue therapy). Progressive disease was noted after doxorubicin #5, for a total duration of response to doxorubicin of 105 days. Further rescue treatment with vinorelbine at 15 mg/m² IV was elected. Progressive disease and clinical decline were noted 1 wk after initiation of vinorelbine. The patient was euthanized because of clinical decline 126 days after histopathologic diagnosis and 114 days after chemotherapy treatment was initiated.



CASE REPORTS

Colonic Hamartomatous Ganglioneuromatosis in a 4 Mo Old Puppy

Michael Jaffe, Kayla Alexander, Michelle Ryan, Blair Bennett, Brittany Baughman

A 4 mo old male goldendoodle puppy was evaluated for chronic hematochezia with a history of recurrent rectal prolapse and tenesmus. A colo-colonic intussusception was diagnosed via abdominal imaging. Surgery was elected to reduce the intussusception, wherein a colonic mass was discovered. Colonic resection and anastomosis was performed, and the tissues were submitted for histopathological examination. The puppy was diagnosed with colonic hamartomatous ganglioneuromatosis based on the presence of markedly hyperplastic submucosal and myenteric plexi with infiltration and expansion of the mucosa and submucosa by Schwann cells and neuronal cell bodies. Ganglioneuromatosis is a rarely reported entity in the veterinary literature, and limited clinical follow-up data is available for described cases. In humans, ganglioneuromatosis is associated with a PTEN genetic mutation, which confers increased susceptibility to the development of neoplasia of endocrine organs. Approximately 1 yr after the operation, this puppy appeared clinically normal with no abnormalities on repeated imaging. This case report describes the clinical presentation, surgical treatment, and histologic features of colonic hamartomatous ganglioneuromatosis with 1 yr postoperative clinical follow up data in a dog. Although uncommon, ganglioneuromatosis should be considered as a differential diagnosis list as a cause of gastrointestinal masses in puppies and young dogs.

CASE REPORTS

Preputial Shortening Reconstruction Surgery in a Dog with a Micropenis and Prepuce-to-Penis Size Disparity

Mengxuan Zhang, Penny J. Regier, Jackson Sanders

A 1 yr old castrated male shih tzu was referred for recurrent urinary tract infections (UTI), prostatitis, and urine dribbling that was not responsive to medical management. Physical examination and computed tomography scan revealed a micropenis with a disproportionately high prepuce-to-penis ratio. Preputial shortening with a hexagonal, full thickness preputial resection followed by preputial anastomosis was performed. The dog recovered from surgery with no complications. Urine dribbling persisted in the short-term postoperative period, but the patient achieved significant clinical improvement and resolution of his urine dribbling and recurrent UTIs at the 1 yr follow-up. In conclusion, this surgical technique was able to successfully restore quality of life in a dog with a micropenis, and preputial shortening should be considered in cases of recurrent UTIs where there is significant disparity between the size of the penis and the prepuce.

RETROSPECTIVE STUDIES

Association Between Hyperglycemia and Canine Serum Pancreatic Lipase Immunoreactivity Concentration in Diabetic Dogs

Joonseok Kim, Yeon Chae, Dohee Lee, Yoonhoi Koo, Sijin Cha, Taesik Yun, Mhan-Pyo Yang, Byeong-Teck Kang, Hakhyun Kim

It has been reported that hypertriglyceridemia can partially mediate between diabetes mellitus (DM) and pancreatitis in dogs, implying that another mediator, such as chronic hyperglycemia, might exist. Therefore, this study aimed to evaluate the relationship between hyperglycemia and serum canine pancreatic lipase immunoreactivity (cPLI) concentration in diabetic dogs. This retrospective cohort study included 26 client-owned diabetic dogs, divided according to their serum fructosamine levels (<500 µmol/L = well-controlled DM group; ≥500 µmol/L = untreated or poorly controlled DM group). Five of the 26 DM dogs (19.2%) had serum cPLI concentrations consistent with pancreatitis, among which two showed ultrasonographic evidence of pancreatitis without clinical signs. The serum cPLI concentrations (median [interquartile range]) were significantly higher in the untreated or poorly controlled group (520 µg/L [179.76–1000 µg/L]) than in the well-controlled group (77 µg/L [32.22–244.6 µg/L], $P = 0.0147$). The serum fructosamine concentration was positively correlated with the serum cPLI concentration ($r = 0.4816$; $P = 0.0127$). Multivariate analysis revealed serum triglyceride and fructosamine concentrations were associated with the serum cPLI concentration. In conclusion, this study suggests that chronic hyperglycemia may induce pancreatic inflammation in diabetic dogs; however, the clinical significance of increased cPLI concentration is unknown.

180389-001

VETMEDIN®-CA1

(pimobendan)

Chewable Tablets

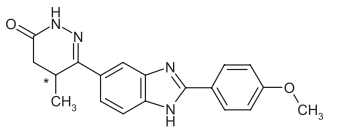
Cardiac drug for oral use in dogs only

Caution: Federal law restricts this drug to use by or on the order of a licensed veterinarian. Use only as directed.

It is a violation of Federal law to use this product other than as directed in the labeling.

Conditionally approved by FDA pending a full demonstration of effectiveness under application number 141-556.

Description: VETMEDIN-CA1 (pimobendan) is supplied as oblong half-scored chewable tablets containing 1.25 or 5 mg pimobendan per tablet. Pimobendan, a benzimidazole-pyridazinone derivative, is a non-sympathomimetic, non-glycoside inotropic drug with vasodilatative properties. Pimobendan exerts a stimulatory myocardial effect by a dual mechanism of action consisting of an increase in calcium sensitivity of cardiac myofilaments and inhibition of phosphodiesterase (Type III). Pimobendan exhibits vasodilating activity by inhibiting phosphodiesterase III activity. The chemical name of pimobendan is 4,5-dihydro-6-[2-(4-methoxyphenyl)-1H-benzimidazole-5-yl]-5-methyl-3(2H)-pyridazinone. The structural formula of pimobendan is:



Indications: VETMEDIN-CA1 (pimobendan) is indicated for the delay of onset of congestive heart failure in dogs with Stage B2 preclinical myxomatous mitral valve disease (2019 ACVIM Consensus Statement[1]).

Stage B2 preclinical myxomatous mitral valve disease (MMVD) refers to dogs with asymptomatic MMVD that have a moderate or loud mitral murmur due to mitral regurgitation and cardiomegaly.

Dosage and Administration: Always provide the Client Information Sheet to the dog owner with each prescription. VETMEDIN-CA1 should be administered orally at a total daily dose of 0.23 mg/lb (0.5 mg/kg) body weight, using a suitable combination of whole or half tablets. The total daily dose should be divided into 2 portions that are not necessarily equal, and the portions should be administered approximately 12 hours apart (i.e., morning and evening). The tablets are scored, and the calculated dosage should be provided to the nearest half tablet increment.

Contraindications: Do not administer VETMEDIN-CA1 in cases of hypertrophic cardiomyopathy, aortic stenosis, or any other clinical condition where an augmentation of cardiac output is inappropriate for functional or anatomical reasons.

Do not administer VETMEDIN-CA1 to dogs with Stage A or B1 preclinical MMVD (2019 ACVIM Consensus Statement) due to the risk of cardiac pathology associated with exaggerated hemodynamic responses to VETMEDIN-CA1.

Warnings:
User Safety Warnings: Not for use in humans. Keep this and all medications out of reach of children. Consult a physician in case of accidental ingestion by humans.

Animal Safety Warnings: Keep VETMEDIN-CA1 in a secure location out of reach of dogs, cats, and other animals to prevent accidental ingestion or overdose.

At 3 and 5 times the recommended dosage, administered over a 6-month period of time, pimobendan caused an exaggerated hemodynamic response in the normal dog heart, which was associated with cardiac pathology (See **Target Animal Safety**).

Precautions: For use only in dogs with preclinical MMVD that have a moderate or loud mitral murmur due to mitral regurgitation and cardiomegaly (Stage B2 MMVD, 2019 ACVIM Consensus Statement). A diagnosis of MMVD should be made by means of a comprehensive physical and cardiac examination which should include radiography and echocardiography.

Stage B2 cardiomegaly is diagnosed based on meeting all three of the following criteria:

• Radiographic vertebral heart score (VHS) >10.5, and

• Echocardiographic left atrium/aorta ratio (LA/Ao ratio) ≥1.6, and

• Echocardiographic left ventricular internal diastolic diameter normalized to body weight (LVIDDN) ≥1.7.

Echocardiographic examination is recommended in all cases to diagnose MMVD and confirm cardiomegaly. If therapy is initiated prior to the development of cardiomegaly, treated dogs are at risk for cardiac pathology associated with exaggerated hemodynamic responses to VETMEDIN-CA1.

If only radiographic examination is possible, cardiomegaly may be diagnosed in cases where the VHS ≥11.5 and the vertebral left atrial size (VLAS) ≥3.0[1,2]. If radiographic cardiomegaly does not meet both of these criteria, an echocardiogram should be performed prior to the initiation of therapy with VETMEDIN-CA1.

VETMEDIN-CA1 has not been evaluated in dogs receiving concomitant heart medications.

The safety of VETMEDIN-CA1 has not been established in dogs with asymptomatic heart disease caused by etiologies other than MMVD. The safe use of VETMEDIN-CA1 has not been evaluated in dogs younger than 6 months of age, dogs with congenital heart defects, dogs with diabetes mellitus or other serious metabolic diseases, dogs used for breeding, or pregnant or lactating bitches.

Adverse Reactions: In a controlled multi-center field study, 363 dogs with preclinical MMVD (Stage B2 MMVD, 2019 ACVIM Consensus Statement) received at least one dose of VETMEDIN-CA1 (n=182) or the placebo control chewable tablets (n=181) for up to 1563 days. During this long-term study, dogs were followed until the development of congestive heart failure (CHF). Adverse reactions were seen in both treatment groups with many findings associated with the progression of MMVD and comorbidities consistent with the age of the enrolled dogs.

The median time to the primary endpoint (development of left-sided CHF or cardiac death/euthanasia) was 38% longer in the VETMEDIN-CA1 group. Despite the longer duration on study, the incidence of reported adverse reactions was similar between treatment groups.

Cough was the most frequently reported adverse reaction. This clinical finding is commonly reported in cases of MMVD and the incidence was similar between treatment groups. Lethargy, inappetence, tachypnea, collapse, arrhythmia, and syncope may also be associated with the progression of MMVD and were reported in dogs receiving VETMEDIN-CA1.

Adverse reactions not related to disease progression in dogs receiving VETMEDIN-CA1 included diarrhea, vomiting, pain, lameness, arthritis, urinary tract infection, and seizure.

Mortality rate, regardless of reason, prior to CHF was similar between the VETMEDIN-CA1 and the control groups.

Contact Information: To report suspected adverse reactions, to obtain a Safety Data Sheet (SDS), or for technical assistance, contact Boehringer Ingelheim Animal Health USA Inc. at 1-888-637-4251. For additional information about reporting adverse drug experiences for animal drugs, contact FDA at 1-888-FDA-VETS or at http://www.fda.gov/reportanimalae.

Information for Dog Owners: Always provide the Client Information Sheet with each prescription and review it with the dog owner or person responsible for care of the dog. Advise dog owners about signs of disease progression and possible adverse reactions with use of VETMEDIN-CA1.

Clinical Pharmacology: Pimobendan is oxidatively demethylated to a pharmacologically active metabolite which is then conjugated with sulfate or glucuronic acid and excreted mainly via feces. The mean extent of protein binding of pimobendan and the active metabolite in dog plasma is >90%. Following a single oral administration of 0.25 mg/kg VETMEDIN-CA1, the maximal mean (± 1 SD) plasma concentrations (Cmax) of pimobendan and the active metabolite were 3.09 (0.76) ng/mL and 3.66 (1.21) ng/ mL, respectively. Individual dog Cmax values for pimobendan and the active metabolite were observed 1 to 4 hours post-dose (mean: 2 and 3 hours, respectively). The total body clearance of pimobendan was approximately 90 mL/min/kg, and the terminal elimination half-lives of pimobendan and the active metabolite were approximately 0.5 hours and 2 hours, respectively.

Plasma levels of pimobendan and active metabolite were below quantifiable levels by 4 and 8 hours after oral administration, respectively. The steady-state volume of distribution of pimobendan is 2.6 L/kg indicating that the drug is readily distributed into tissues. Food decreased the bioavailability of an aqueous solution of pimobendan, but the effect of food on the absorption of pimobendan from VETMEDIN-CA1 is unknown.

In normal dogs instrumented with left ventricular (LV) pressure transducers, pimobendan increased LV dP/dtmax (a measure of contractility of the heart) in a dose dependent manner between 0.1 and 0.5 mg/kg orally. The effect was still present 8 hours after dosing. There was a delay between peak blood levels of pimobendan and active metabolite and the maximum physiologic response (peak LV dP/dtmax). Blood levels of pimobendan and active metabolite began to drop before maximum contractility was seen. Repeated oral administration of pimobendan did not result in evidence of tachyphylaxis (decreased positive inotropic effect) or drug accumulation (increased positive inotropic effect). Laboratory studies indicate that the positive inotropic effect of pimobendan may be attenuated by the concurrent use of a β-adrenergic blocker or a calcium channel blocker.

Reasonable Expectation of Effectiveness: A reasonable expectation of effectiveness may be demonstrated based on evidence such as, but not limited to, pilot data in the target species or studies from published literature.

VETMEDIN-CA1 is conditionally approved pending a full demonstration of effectiveness.

Additional information for Conditional Approvals can be found at www.fda.gov/animalca.

A reasonable expectation of effectiveness for VETMEDIN-CA1 is based on results from a multi-site global field study. The study demonstrated a significant delay in the onset of congestive heart failure in dogs with cardiomegaly and heart murmur secondary to Stage B2 MMVD when treated with VETMEDIN-CA1 at the targeted total daily dose of 0.23 mg/lb (0.5 mg/kg) divided into two administrations approximately 12 hours apart.

A total of 363 dogs across various breeds were randomized to treatment. The resulting population evaluated for effectiveness consisted of 353 dogs receiving either pimobendan (VETMEDIN-CA1, n=178) or control product (placebo chewable tablets, n=175).

Dogs ranged between 6 and 17 years of age and weighed between 9 and 33 lbs at enrollment. Dogs were confirmed to have evidence of Stage B2 preclinical MMVD prior to enrollment, including a systolic heart murmur grade of ≥3/6 and evidence of cardiomegaly, including a VHS >10.5, and echocardiographic evidence of LA/Ao ratio ≥1.6 and LVIDDN ≥1.7.

Dogs were ineligible if they were found to have current or previous evidence of cardiogenic pulmonary edema, clinically significant tachyarrhythmias, cardiac disease other than MMVD, significant systemic disease, evidence of pulmonary hypertension (RA:RV gradient > 65 mmHg), were pregnant or lactating female dogs, or if they were treated with prohibited concomitant medications for 14 or more consecutive days.

The primary outcome evaluated was a composite of the development of left-sided CHF or cardiac-related death or euthanasia. Left-sided congestive heart failure was confirmed by radiographic evidence of cardiogenic pulmonary edema. If a dog died in the absence of evidence of a non-cardiac cause of death, prior to radiographic confirmation of pulmonary edema, it was also considered to have reached the primary endpoint. The study was designed to follow individual dogs for up to 3 years or until disease progression into CHF.

At study termination, 41.6% of the dogs in the VETMEDIN-CA1 group had reached the primary endpoint, compared to 50.3% in the control group. The median time to the primary endpoint was 1228 days in the VETMEDIN-CA1 group compared to 761 days in the control group. Thus, administration of VETMEDIN-CA1 to dogs with Stage B2 preclinical MMVD resulted in the prolongation of the preclinical period by 467 days (15.6 months) compared to dogs receiving control product.

Palatability: In a laboratory study, the palatability of VETMEDIN-CA1 was evaluated in 20 adult female Beagle dogs offered doses twice daily for 14 days. Ninety percent (18 of 20 dogs) voluntarily consumed more than 70% of the 28 tablets offered. Including two dogs that consumed only 4 and 7% of the tablets offered, the average voluntary consumption was 84.2%.

Target Animal Safety: In a laboratory study, pimobendan chewable tablets were administered to 6 healthy Beagles per treatment group at 0 (control), 1, 3, and 5 times the recommended dosage for 6 months. See the table below for cardiac pathology results. The cardiac pathology/histopathology noted in the 3X and 5X dose groups is typical of positive inotropic and vasodilator drug toxicity in normal dog hearts and is associated with exaggerated hemodynamic responses to these drugs. None of the dogs developed signs of heart failure and there was no mortality.

Incidence of Cardiac Pathology/Histopathology in the Six-month Safety Study

Severe left ventricular hypertrophy with multifocal subendocardial ischemic lesions	One 3X and two 5X dogs[a]
Moderate to marked myxomatous thickening of the mitral valves	Three 5X dogs
Myxomatous thickening of the chordae tendineae	One 3X and two 5X dogs
Endocardial thickening of the left ventricular outflow tract	One 1X, two 3X and two 5X dogs
Left atrial endocardial thickening (jet lesions) in 2 of the dogs that developed murmurs of mitral valve insufficiency	One 3X and one 5X dog
Granulomatous inflammatory lesion in the right atrial myocardium	One 3X dog

[a] Most of the gross and histopathologic findings occurred in these three dogs

Murmurs of mitral valve insufficiency were detected in one 3X (Day 65) and two 5X dogs (Days 135 and 163). These murmurs (grades II-III of VI) were not associated with clinical signs.

Indirect blood pressure was unaffected by pimobendan at the label dose (1X). Mean diastolic blood pressure was decreased in the 3X group (74 mmHg) compared to the control group (82 mmHg). Mean systolic blood pressure was decreased in the 5X group (117 mmHg) compared to the control group (124 mmHg). None of the dogs had clinical signs of hypotension.

On 24-hour Holter monitoring, mean heart rate was increased in the 5X group (101 beats/min) compared to the control group (94 beats/min). Not counting escape beats, the 3X and 5X groups had slightly higher numbers of isolated ventricular ectopic complexes (VEs). The maximum number of non-escape VEs recorded either at baseline or in a control group dog was 4 VEs/24 hours. At either Week 4 or Week 20, three 3X group dogs had maximums of 33, 13, and 10 VEs/24 hours, and two 5X group dogs had maximums of 22 and 9 VEs/24 hours. One 1X group dog with no VEs at baseline had 6 VEs/24 hours at Week 4 and again at Week 20. Second-degree atrioventricular heart block was recorded in one 3X group dog at Weeks 4 and 20, and in one dog from each of the 1X and 5X groups at Week 20. None of the dogs had clinical signs associated with these electrocardiogram changes.

Treatment was associated with small differences in mean platelet counts (decreased in the 3X and 1X groups), potassium (increased in the 5X group), glucose (decreased in the 1X and 3X groups), and maximum blood glucose in glucose curves (increased in the 5X group). All individual values for these variables were within the normal range. Three 1X and one 5X group dogs had mild elevations of alkaline phosphatase (less than two times normal).

Loose stools and vomiting were infrequent and self-limiting.

Storage Information: Store at 20° to 25°C (68° to 77°F), excursions permitted between 15° and 30°C (between 59° and 86°F).

How Supplied:
VETMEDIN®-CA1 (pimobendan) Chewable Tablets: Available as 1.25 and 5 mg oblong half-scored chewable tablets - 50 tablets per bottle.

NDC 0010-4610-01 - 1.25 mg - 50 tablets
NDC 0010-4612-01 - 5 mg - 50 tablets

References:

[1] Keene, B., et al. (2019) ACVIM consensus guidelines for the diagnosis and treatment of myxomatous mitral valve disease in dogs. *J Vet Intern Med*. 33(3):1127-1540.

[2] Malcolm, E.L. et. al. (2018) Diagnostic value of vertebral left atrial size as determined from thoracic radiographs for assessment of left atrial size in dogs with myxomatous mitral valve disease. *J AM Vet Med Assoc*. 253(8):1038-1045.

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Revised 03/2022

US-PET-0363-2022

vetmedin®-CA1

(pimobendan) CHEWABLE TABLETS

You can give your MMVD patients

more life to live

VETMEDIN®-CA1 (pimobendan) can give canines up to 15.6 more months of symptom-free life[1]

Start managing myxomatous mitral valve disease (MMVD) even earlier at Stage B2 with **VETMEDIN®-CA1 (pimobendan)**. It's conditionally approved to **delay the onset of CHF in dogs with Stage B2 preclinical MMVD.**

Give your patients more time, more moments together, and more of everything.
With early screening and VETMEDIN-CA1, more time starts now.

Scan to learn more

1. Keene, BW, Atkins, CE, Bonagura, JD, et al. ACVIM consensus guidelines for the diagnosis and treatment of myxomatous mitral valve disease in dogs. *J Vet Intern Med.* 2019; 33: 1127-1140.

IMPORTANT SAFETY INFORMATION: Adverse reactions not related to disease progressing in dogs receiving VETMEDIN®-CA1 (pimobendan) included diarrhea, vomiting, pain, lameness, arthritis, urinary tract infection, and seizure. The safe use of VETMEDIN-CA1 has not been evaluated in dogs younger than 6 months of age, dogs with congenital heart defects, dogs with diabetes mellitus or other serious metabolic diseases, dogs used for breeding, or pregnant or lactating bitches. **It is a violation of Federal law to use this product other than as directed in the labeling. Conditionally approved by FDA pending a full demonstration of effectiveness under application number 141-556.** For more information, refer to the package insert.

Boehringer Ingelheim

Beyond the EAP

Protecting the Mental Wellbeing of Yourself and Your Team in the Day-to-Day

by Jen Reeder

AFTER OVER A DECADE WORKING AS A REGISTERED VETERINARY TECHNICIAN, Kathleen Dunbar, RVT, VTS, MSW, realized she needed to make a change—not by leaving the industry, but by learning how to support it.

"What I kept noticing was the gap in meeting the human needs of the profession," she said.

So she earned a master's degree in social work, and now works as a veterinary social worker at AAHA-accredited Carnegy Animal Hospital in Halifax, Nova Scotia.

Dunbar supports the staff in a variety of ways, like lightening their "emotional load" and associated stress by leading pet loss support groups for clients and offering one-on-one counseling to those really struggling with grief or end-of-life decisions. She also offers training to staff, leads psychoeducational workshops, and offers virtual support to veterinary professionals in all four Atlantic provinces in Canada.

Demand for her services has only grown as the pandemic exacerbated longtime challenges like burnout, stress, exhaustion, perfectionism, and compassion fatigue.

"The need is definitely there, and the services need to be offered," she said. "I don't know if I'll see it in my lifetime, but I really believe that a social worker needs to be onsite at every animal hospital."

That ideal scenario isn't likely to be realized anytime soon. Meanwhile, burnout alone is

costing the industry up to two billion dollars each year in turnover and reduced hours from veterinarians and veterinary technicians, according to a study published last year titled "The Economic Cost of Burnout in Veterinary Medicine."

So what can veterinary professionals do in the day-to-day to protect and bolster the mental well-being of both their teams and themselves?

Veterinary social workers and other wellness experts have plenty of ideas.

Back to Basics

Meeting our body's most basic needs is a good place to start, according to Angie Arora, MSW, RSW, a veterinary social worker who teaches a course on "Acute Self Care" for veterinary professionals.

Angie Arora, MSW, RSW

"When your body needs to go to the bathroom, are you going? When you're feeling thirsty, are you drinking water? When you need to close your eyes for 10 seconds, are you doing it?

For most people in the profession—and we understand why—they're not," she said. "What starts to happen inside of their bodies is they're actually starting to train their brains not to trust those internal cues."

To retrain her brain to understand what her body needs is important, one recent client started keeping water bottles in multiples parts of the hospital, and snacks next to her desk. That way, even if she can't take time for lunch, she can quickly nosh on trail mix to give her sustenance when she has a minute at her computer.

From there, people can learn to recognize when their body is in fight, flight, or freeze mode and act accordingly, Arora said. For instance, after an argument with a coworker, some of her clients feel their heart beating and retreat to a washroom to do squats or air box for 30 seconds to relieve the stress. Other incidents might call for a deep breath. The key is recognizing what's happening in the body, and what you might need in the moment.

Checking In

Individuals can also recognize when a colleague might need a break and check in with them, like when a client says something racist to a BIPOC member of the team. Arora noted there is a direct link between chronic stress and racial trauma, so any attempt to address equity issues in a practice will have a positive impact on employee mental health.

"Do concrete things if you have folks on your team whose communities are living through collective trauma," she advised.

For example, last year when massive floods deluged Pakistan, a practice she works with had several team members whose families lost everything. So leadership offered them breaks and covered shifts to give them time to touch base with their loved ones in Pakistan.

> "Organizational care, team care, and self-care are equally important. If we have a commitment and a buy-in at all of those levels, change is very much possible."
>
> —ANGIE ARORA, MSW, RSW

Good Practice: Stream of Consciousness Writing

Short bursts of journaling—just a few times a week for 15 minutes in the morning—can help us stay calmer during the day and help recognize our thoughts and feelings, according to Kathleen Dunbar, RVT, VTS, MSW. Using pen and paper, write whatever you're thinking of without worrying about spelling or grammar. Then rip up the paper for a cathartic release.

"If we really want to address the mental health and well-being of folks in this profession, we have to have an equal commitment of the practices starting to do things different, and individuals reaching out for the support they need to build their own capacity to respond to the stress," Arora said. "Organizational care, team care, and self-care are equally important. If we have a commitment and a buy-in at all of those levels, change is very much possible."

Phil Richmond, DVM, CAPP, CPHSA, CPPC, CCFP

It's an opinion shared by Phil Richmond, DVM, CAPP, CPHSA, CPPC, CCFP, founder of Flourishing Phoenix Veterinary Consultants and former chief medical and wellbeing officer at Veterinary United.

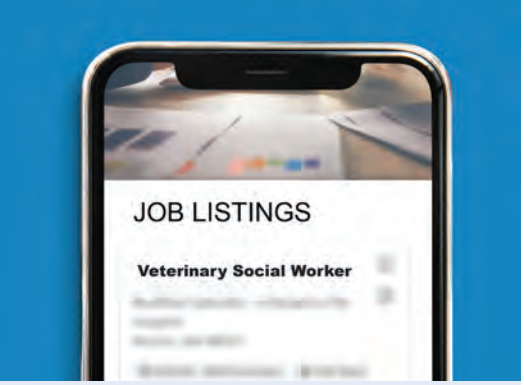
"I like to look at it from a 'me, we, and us' perspective," he said.

> "The way our minds work is that good stuff slides off of us like Teflon and the bad stuff sticks like Velcro. So we have to be really intentional about honoring the good things that happened and reflecting on those."
>
> —PHIL RICHMOND, DVM, CAPP, CPHSA, CPPC, CCFP

He likened the importance of wearing a lead vest while taking x-rays to protect from physical harm to taking steps to prevent psychological harm.

One way to do that is gathering as a team at the end of the day for the "What Went Well?" positive psychology exercise, according to Richmond.

Photo courtesy of Phil Richmond, DVM, CAPP, CPHSA, CPPC, CCFP, monkeybusinessimages/iStock via Getty Images Plus



How to Hire a Veterinary Social Worker

Augusta O'Reilly, LCSW, president of the International Association of Veterinary Social Work (IAVSW), said the field is rapidly growing.

"It's an upside to the pandemic: people realized just how important mental health is, and how they need that advocate," she said.

To hire a veterinary social worker through Indeed or LinkedIn, O'Reilly recommends using the term "veterinary social worker" rather than "therapist" or "social worker."

Additionally, IAVSW maintains a Listserv with the University of Tennessee, Knoxville's veterinary social work program to connect hiring managers with VSWs. The organization will post job listings on the Listserv and newsletter.

"The veterinary profession is one that will give and give and give," O'Reilly said. "We need to protect them. And one of the many ways to do that is by working with a veterinary social worker."

For more information, visit: veterinarysocialwork.org/jobpostings.

"You do a huddle at the end of the day and say, 'Everybody go around and share one thing that went really well and how you played a part in that happening,'" he explained. "The way our minds work is that good stuff slides off of us like Teflon and the bad stuff sticks like Velcro. So we have to be really intentional about honoring the good things that happened and reflecting on those."

Richmond is passionate about raising awareness of the value of daily self-care before reaching a crisis point based on his own experiences.

In 2008, personal issues compounded by stressors as a veterinarian led him to a point where he didn't feel like he could go on. Alcohol seemed like the only tool he had. Fortunately, his team recognized what was going on and knew about available programs.

> "I think the veterinary field is full of the most brilliant, compassionate people on the planet."
>
> —SALLY JO VANOSTRAND, LMSW

"The physician's health program helped save my life and got me into treatment," he said. "I'm alive because I was a veterinarian. I learned tools of resiliency and changing my thinking and ways of self-care. Not only did those tools help save my life, but they helped me love veterinary medicine again."

Now he's devoted to normalizing conversations about substance use disorders to decrease the stigma—he noted an estimated 12–15% of veterinary professionals will meet criteria for alcohol or substance use disorder at some point in their careers—as well as mentoring early-career veterinarians, who can face a higher risk of serious psychological distress. He serves on the advisory board for MentorVet.

"We hear about the suicide issue and we hear about the mental health challenges, but this is also a beautiful profession," Richmond said. "I want the next generation of people to be able to have healthy and happy pets, and I want the next generation of veterinary professionals to be able to have access to the tools that helped save my life."

Unique challenges can arise at different stages of a career in veterinary medicine, according to Sally Jo VanOstrand, LMSW, who started offering a pet loss support group and other veterinary social worker services in 2018 at AAHA-accredited Stack Veterinary Hospital in Syracuse, New York, which was a 2022 finalist for AAHA Practice of the Year.

For instance, some veterinarians nearing retirement might feel anxious and want to keep a foot in the door in medicine, so they might decide to work or volunteer at an animal shelter or spay/neuter clinic between travel and other leisure activities.

Image by rawpixel.com on Freepik

Signs you need to take a break soon include jaw clenching, extreme fatigue, shortness of breath, feeling like a weight is pressing down, tingly feelings in your hands, or a clenched fist.

Impending parenthood can also cause anxiety, particularly for veterinarians with workaholic tendencies trying to balance everything.

"When it comes to motherhood or fatherhood, the biggest thing that you can do to help sustain yourself is to understand that you're going to need support," VanOstrand advised. "Keep your support line open and talk to them when you need help. Even if it's 'I'm going to need somebody to pick someone up for basketball practice.'"

No matter one's age, VanOstrand recommends developing a high level of compassion while also keeping boundaries—which can be challenging when teams are short-staffed and patient loads have increased so much during the pandemic.

For instance, if a pet owner calls with an emergency but the day is entirely full, instead of simply saying "sorry" and hanging up, she suggests offering a list of other animal hospitals that might be able to help.

She also hopes veterinary professionals will practice patience with themselves while learning to recognize signs in their body that they need to take a break soon, such as jaw clenching, extreme fatigue, shortness of breath, feeling like a weight is pressing down, tingly feelings in your hands, or a clenched fist.

"This is usually a sign that you're becoming overwhelmed, and your body is telling you that you need to take a break. Step away from this and regroup," VanOstrand advised.

PeopleImages/iStock via Getty Images Plus

The break could involve stepping outside for a breath of fresh air or into a wellness center if available. Stack Veterinary Hospital's wellness area includes a zen garden, aromatherapy, and a massage chair.

"I think the veterinary field is full of the most brilliant, compassionate people on the planet," she said. "I also think that itself bears its own mental load. So learning ways and techniques to better navigate having those extra superpowers is always a good idea."

Melyssa Allen, MA, CHBC, DACLM

Melyssa Allen, MA, CHBC, DACLM, veterinary well-being coach and owner of Mind-Body-Thrive Lifestyle in Orlando, Florida, teaches an online, self-guided course called Vet Calm to improve stress resiliency. She feels caregivers in veterinary medicine excel at giving others compassion—pets, pet parents, and coworkers—but that it can be more challenging for them to silence an inner critic and offer compassion to themselves.

"Finding ways to comfort and support ourselves like we would a good friend is going to be a lot more helpful in getting through challenges in life, but also in making sustainable changes to your lifestyle as well," she shared.

She counsels clients on the "Six Pillars of Health"—physical activity, nutrition, stress management, healthy sleep, positive social connections, and avoidance of risky substances—to enhance stress resilience and reduce burnout.

Allen would also like to break the stigma around going to a therapist. She advises "shopping around" for a good fit on websites like PsychologyToday.com. Often therapists offer a free 15-minute video or phone consultation, she added.

"I know a lot of times people say you need to take care of yourself so you can take care of everyone else in your life, but truly, you just deserve to take care of yourself," she said. "I have an immense amount of gratitude for the veterinary professionals out there." ※

Award-winning journalist Jen Reeder is extremely grateful for the veterinary professionals who do so much for pets, and the wellness professionals who support them.

Photo courtesy of Jocelyn Espejo

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[1]Angus JC. Otic cytology in health and disease. VCSA. 2004;34:411-24.
[2]Elanco Animal Health. Sales data on file.

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Laugh to Lighten the Load

No Kidding, the Right Humor Can Help Ease the Stress

by Maureen Blaney Flietner

WHY DID THE VETERINARY TEAM CROSS THE ROAD?

Sorry, you will have to provide the punch line.

What? You're no comedian? Well, most of us aren't.

But, according to several sources—including veterinarians who perform comedy as a side gig—all of us can find ways to bring humor into days that can sometimes be too strained.

After all, what is humor anyway? It's not just one-liners or knock-knock jokes. According to Paul Osincup, a humor strategist, keynote speaker, and past president of the Association for Applied and Therapeutic Humor from Bozeman, Montana, it can simply be anything you find funny or amusing. It may not even evoke laughter, although it usually does.

Osincup should know. While his professional life has focused on conflict resolution, mental health, and substance abuse issues, he also performs stand-up and improv comedy. And as one who has worked with many veterinary hospitals and associations and is the husband of a veterinary oncologist, he is aware of the unique stressors experienced by veterinarians and hospital staff.

He advised that humor has a place in the veterinary workday as both a tool and an important shared social experience.

Photo courtesy of Marie Sato Quicksall, DVM, CVA

> "I feel that humor is important in veterinary medicine and can help people relate with one another, encourage team building, improve morale, and decrease stress levels."
>
> —MARIE SATO QUICKSALL, DVM, CVA

"Humor reduces hierarchical distance in organizations and makes leaders seem more approachable, confident, and competent. Humor brings people together," he said. "In fact, people who laugh together report higher levels of liking one another. Humor reduces stress. It floods our brains with a dose of happiness hormones and I literally mean D.O.S.E.—dopamine, oxytocin, serotonin, and endorphins. It also reduces the stress-causing hormone cortisol."

They Found Their Way with Humor

Andy Roark, DVM, veterinarian with the AAHA-accredited Travelers Rest Animal Hospital in South Carolina and founder of Uncharted Veterinary Conference and DrAndyRoark.com, is on the same page. He said he has always used humor to get messages heard so veterinary professionals can be happier and more effective.

Roark's Facebook page, which he says is "for those seeking happiness, humor, and (possibly) wisdom in veterinary medicine," includes such video posts as one in May urging his viewers to join his "Hope Punk Rebellion" with "tiny acts of rebellion to make someone happier, their day somewhat better, than it was before."

"Humor is a great way to speak to people and get them to listen," he noted. "As George Bernard Shaw said, 'If you want to tell people the truth, make them laugh, otherwise they'll kill you.'"

Frank Bozelka, DVM, on staff at the AAHA-accredited VCA Arboretum View Animal Hospital in Downers Grove, Illinois, was an amateur stand-up comedian until halfway through veterinary school. Since he said he tends to look for and find the humor in most situations, he went from making a few humorous educational videos on TikTok, Instagram, and Facebook to starting up a YouTube channel.

"Even if something doesn't necessarily seem funny, my mind tries to make it funny. I try to make myself smile and, if I think others will find it funny, I share my comments and thoughts to make them smile. I feel people learn best when they are having fun."

Marie Sato Quicksall, DVM, CVA, associate veterinarian at Day Road Animal Hospital, Bainbridge Island, Washington, said she is that clinic's resident prankster.

Marie Sato Quicksall started placing "googly eyes" around the hospital during COVID to bring a chuckle to the workday.

Photos courtesy of Marie Sato Quicksall, DVM, CVA

"I feel that humor is important in veterinary medicine and can help people relate with one another, encourage team building, improve morale, and decrease stress levels. As an associate, humor is one of the ways I can help positively influence morale without being the person in charge of policies and procedures."

Besides being a veterinarian with Animal Clinic of Brandon in Brandon, Florida, Dean Scott, DVM, draws comics, writes humor books, and creates song parodies and YouTube skits so that those in the profession know that "while, yes, our job deals with serious matters, there are moments of lightness, of humor, to be found."

His search for humor began in veterinary school when he discovered what he thought were absurdities in how students were taught. That led to his two-volume "Vet School Survival Guides" so others experiencing such issues don't have to feel isolated or unworthy.

That effort then morphed into a three-volume "Lighter Side of Veterinary Medicine," which he compiled for the past 30 years of his career. It was created with the "same thought. Same results. Let's use humor to deflate or mitigate the negative aspects of our profession," he said. "Humor acknowledges the hard edges of our experiences and tries to take a hammer to them to smooth them out."

Morgan McArthur, DVM, now a University of Wisconsin Extension educator in Baraboo, Wisconsin, said his varied career path has included working at a mixed animal practice in Idaho and in the pharmaceutical industry for a decade in New Zealand—which he often jokes was part of the Federal Witness Protection Program.

But it was this self-described class clown's involvement with Toastmasters that was the "most profound difference maker" for him personally. He said it helped him to develop confidence and later become a professional speaker (M2 VetSpeak Consulting) and "hire myself out as a veterinary storyteller/jester around the world."

He noted that "there is a lot of dark stuff in the veterinary profession—euthanasias, online bullying, helicopter pet parents—all of this pressure comes piling on. How do you process that? I'm a big believer that laughter is life's lubricant. We all find ourselves in tight spots. When you're in the middle of a mess, it's not always easy to laugh your way out. But in time, many bad experiences become good stories; it just takes some time to get to that space and place."

It May Be Funny to You, But...

"Humor is such an intangible thing. Like stress, it is not experienced in the same way by all people," explained Will Heckman, a former educator and police officer and now executive director of the American Institute of Stress (stress.org), Weatherford, Texas.

> "The more we look for the funny things in life, the more we will begin to see them without trying."
>
> —PAUL OSINCUP, HUMOR STRATEGIST

"Our knowledge about stress is not the same as a diagnosable problem, like anxiety or depression. You and I can be in the same situation and experiencing the same thing and we will experience stress levels and stress reactions differently because we are different people. It's just like what I find funny and what you find funny also may be different."

That's why, Heckman said, humor, especially the dark humor that comes from parts of the job that only those in the profession understand, has to be appropriate to the time and place.

"We do have to be careful when joking as to not offend the team, which can be very difficult in today's world," said Bozelka. "What you find funny, others may not. There is a very fine line between comedic gold and straight up awkward, inappropriate, and offensive comments. Start with PG material, and as the team gets to know each other they will learn how R-rated they can get with each other."

"Remember that humor alone isn't a good thing," noted Roark. "Lots of people say terribly mean things to get laughs from others. People can be cynical, toxic, and funny. Focus on being positive and happy at work in your humor, and skip chances to be funny that would tear someone else (clients, colleagues, etc.) down."

Health Tip: Exercise Your Silly Sense

If you agree with humor strategist Paul Osincup—"I don't want to get to the end and realize I was living my life as a drama when it was supposed to be a comedy"—you may want to consider these ideas from some of our sources about finding the humor in the workday and being in the right mindset to take ourselves a little less seriously.

"Recite a 'mirthful' mantra. Consider everything from movie quotes like Dr. Evil saying, 'Throw me a frickin' bone here' to song lyrics like sarcastically singing 'Everything is awesome!' from *The Lego Movie*. Come up with something that will be a reframing signal that the stress of the moment will be gotten through." —PAUL OSINCUP

"Create a staff 'mulletin' board with every staff photo given a mullet and put on a break room bulletin board to be voted on." —PAUL OSINCUP

"Stuff a humor jar with the random funny things that happen throughout a day that can be shared occasionally at morning rounds or in team meetings." —PAUL OSINCUP

"Celebrate! Recently everyone worked to throw a sweet 16 birthday party for Lily, our clinic cat, complete with balloons, decorations, food, cupcakes, catnip, and a pink dress for Lily." —MARIE SATO QUICKSALL, DVM, CVA

"Pull light-hearted pranks on the other team (which Quicksall's team began doing during the pandemic). One example: Place googly eyes around the building to startle and amuse the other team." —MARIE SATO QUICKSALL, DVM, CVA

"At the end of the day, list three good things that happened that day. It forces us to be more aware and more conscious, more intentional, about seeking the good—hunting for the good—as opposed to just marinating in misery."
—MORGAN MCARTHUR, DVM

"Have hobbies that don't have anything to do with pets or the veterinary profession. We should all have people in our lives who don't really know or care about what we do for a living. I think this is a key part of being able to detach and recharge." —ANDY ROARK, DVM

"Get to know your team. Be willing to crack jokes or make light of and poke fun at yourself and situations, even if they are a bit stressful. Positivity and negativity are both contagious, and we choose which one we bring to stressful situations."
—FRANK BOZELKA, DVM

"Create a nonjudgmental, accepting work environment, and the humor will follow because people are comfortable with each other." —DEAN SCOTT, DVM

"Keep everyone's go-to stress release snacks and drinks on hand."
—DEAN SCOTT, DVM

"Celebrate successes. Laugh together. Make it part of the workplace culture. Workplace environments that celebrate humor may have less burnout and less absenteeism."
—WILL HECKMAN

"Create an environment where people trust each other. Surround yourself with those who make you laugh. You are more likely to laugh with a friend than to laugh alone."
—CALEB WARREN, PHD

Photos courtesy of Dean Scott, DVM, Frank Bozelka, DVM, Morgan McArthur, DVM, Paul Osincup, Will Heckman

According to Caleb Warren, PhD, associate professor of marketing, University of Arizona, who has been studying humor for more than a decade, the idea that laughter—one outward sign of humor—is the best medicine is anecdotal at best since there have been few randomized controlled studies. However, he noted, there is some evidence that certain types of humor can help people recover from stressful situations and contentious interactions.

"People want to see humor as causing all of these good things," said Warren. "But it depends on how you make something funny. It would be great to have more laughter in the workplace. It's really hard to do in practice. The reason is, if you just tell people to try to be funnier, it's really difficult to be funny. The most likely outcome is that you fail and that you either annoy or offend people.

"If you can create an environment where people trust others aren't trying to put them down and aren't offended by attempts to be funny, it will be easier to create humor and laugh at it."

No Joke, You Can Learn to Find the Humor

Humor can be learned, explained Osincup. "A lot of people like the concept of using humor but think, 'I'm just not that talented.' Any comedian will tell you that it's more about consistent practice than anything.

"Humor is not a talent. Humor is a habit. Just like learning any new skill like playing a musical instrument or learning a new language, you practice, make it a habit, and build your sense of humor like a muscle. Neurons that fire together, wire together, so the more we look for the funny things in life, the more we will begin to see them without trying."

> "I'm a big believer that laughter is life's lubricant."
>
> —MORGAN MCARTHUR, DVM

Gratitude, said McArthur, can be an important factor in finding humor.

"People will say, 'Well, I'm not funny.' Veterinarians by nature are data driven, evidence based, and often relate down that scientific track. But know that we don't have to be stand-up blinking comics. A simple strategy is to adopt an attitude of gratitude. Be grateful and intentional because we can always just grizzle about the drizzle. But the drizzle is going to give you grass. Of course, that means mowing…

"We don't have to look very far to find someone who is having to acquire a taste for a fecal sandwich, right? That's why it's really important to put the brakes on at the end of day and recalibrate. We need to believe in that fuzzy little bumper sticker phrase: Have an attitude of gratitude." ※

Maureen Blaney Flietner is an award-winning freelance writer and illustrator living in Wisconsin.

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BRAVECTO (fluralaner) Chews for Dogs: The most commonly reported adverse reactions include vomiting, lethargy, diarrhea, anorexia and pruritus. In some cases, adverse events have been reported following use in breeding females. **BRAVECTO Chews** has not been shown to be effective for 12-weeks' duration in puppies less than 6 months of age. **BRAVECTO Chews** is not effective against lone star ticks beyond 8 weeks of dosing. Fluralaner is a member of the isoxazoline class. This class has been associated with neurologic adverse reactions including tremors, ataxia, and seizures. Seizures have been reported in dogs receiving isoxazoline class drugs, even in dogs without a history of seizures. Use with caution in dogs with a history of seizures or neurologic disorders. For full prescribing information, please see page 36.

SENTINEL® SPECTRUM® Chews (milbemycin oxime/lufenuron/praziquantel). Dogs should be tested for heartworm prior to use. Mild hypersensitivity reactions have been noted in some dogs carrying a high number of circulating microfilariae. Treatment with fewer than 6 monthly doses after the last exposure to mosquitoes may not provide complete heartworm prevention. For full prescribing information, please see page 37.

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Description:
Each chew is formulated to provide a minimum dose of 11.4 mg/lb (25 mg/kg) body weight.

The chemical name of fluralaner is (±)-4-[5-(3,5-dichlorophenyl) -5-(trifluoromethyl)-4,5-dihydroisoxazol-3-yl]-2-methyl-*N*-[2-oxo-2-(2,2,2-trifluoroethylamino) ethyl]benzamide.

Indications:
Bravecto kills adult fleas and is indicated for the treatment and prevention of flea infestations (*Ctenocephalides felis*), and the treatment and control of tick infestations [*Ixodes scapularis* (black-legged tick), *Dermacentor variabilis* (American dog tick), *Rhipicephalus sanguineus* (brown dog tick), and *Haemaphysalis longicornis* (Asian longhorned tick)] for 12 weeks in dogs and puppies 6 months of age and older, and weighing 4.4 pounds or greater.

Bravecto is also indicated for the treatment and control of *Amblyomma americanum* (lone star tick) infestations for 8 weeks in dogs and puppies 6 months of age and older, and weighing 4.4 pounds or greater.

Dosage and Administration:
Bravecto should be administered orally as a single dose every 12 weeks according to the **Dosage Schedule** below to provide a minimum dose of 11.4 mg/lb (25 mg/kg) body weight.

Bravecto may be administered every 8 weeks in case of potential exposure to *Amblyomma americanum* ticks (see **Effectiveness**).

Bravecto should be administered with food.

Dosage Schedule

Body Weight Ranges (lb)	Fluralaner Content (mg)	Chews Administered
4.4 – 9.9	112.5	One
>9.9 – 22.0	250	One
>22.0 – 44.0	500	One
>44.0 – 88.0	1000	One
>88.0 – 123.0*	1400	One

*Dogs over 123.0 lb should be administered the appropriate combination of chews

Treatment with Bravecto may begin at any time of the year and can continue year round without interruption.

Contraindications:
There are no known contraindications for the use of the product.

Warnings:
Not for human use. Keep this and all drugs out of the reach of children. Keep the product in the original packaging until use, in order to prevent children from getting direct access to the product. Do not eat, drink or smoke while handling the product. Wash hands thoroughly with soap and water immediately after use of the product.

Keep Bravecto in a secure location out of reach of dogs, cats, and other animals to prevent accidental ingestion or overdose.

Precautions:
Fluralaner is a member of the isoxazoline class. This class has been associated with neurologic adverse reactions including tremors, ataxia, and seizures. Seizures have been reported in dogs receiving isoxazoline class drugs, even in dogs without a history of seizures. Use with caution in dogs with a history of seizures or neurologic disorders.

Adverse events have been reported following use in breeding females. Before use in breeding female dogs, refer to Post-Approval Experience and Animal Safety sections.

Bravecto has not been shown to be effective for 12-weeks duration in puppies less than 6 months of age. Bravecto is not effective against *Amblyomma americanum* ticks beyond 8 weeks after dosing (see **Effectiveness**).

Adverse Reactions:
In a well-controlled U.S. field study, which included 294 dogs (224 dogs were administered Bravecto every 12 weeks and 70 dogs were administered an oral active control every 4 weeks and were provided with a tick collar); there were no serious adverse reactions. All potential adverse reactions were recorded in dogs treated with Bravecto over a 182-day period and in dogs treated with the active control over an 84-day period. The most frequently reported adverse reaction in dogs in the Bravecto and active control groups was vomiting.

Percentage of Dogs with Adverse Reactions in the Field Study

Adverse Reaction (AR)	Bravecto Group: Percentage of Dogs with the AR During the 182-Day Study (n=224 dogs)	Active Control Group: Percentage of Dogs with the AR During the 84-Day Study (n=70 dogs)
Vomiting	7.1	14.3
Decreased Appetite	6.7	0.0
Diarrhea	4.9	2.9
Lethargy	5.4	7.1
Polydipsia	1.8	4.3
Flatulence	1.3	0.0

In a well-controlled laboratory dose confirmation study, one dog developed edema and hyperemia of the upper lips within one hour of receiving Bravecto. The edema improved progressively through the day and had resolved without medical intervention by the next morning.

Post-Approval Experience (2022):
The following adverse events are based on post-approval adverse drug experience reporting for fluralaner. Not all adverse events are reported to FDA/CVM. It is not always possible to reliably estimate the adverse event frequency or establish a causal relationship to product exposure using these data.

The following adverse events reported for dogs are listed in decreasing order of reporting frequency:

Vomiting, lethargy, diarrhea (with and without blood), anorexia, pruritis, polydipsia, seizure, allergic reactions (including hives, swelling, erythema), dermatitis (including crusts, pustules, rash), tremors and ataxia. In some cases, birth defects (including limb deformities and cleft palate), stillbirth, and abortion have been reported after treatment of breeding females.

Contact Information:
To report suspected adverse events, for technical assistance or to obtain a copy of the Safety Data Sheet (SDS), contact Merck Animal Health at 1-800-224-5318. Additional information can be found at www.bravecto.com.

For additional information about adverse drug experience reporting for animal drugs, contact FDA at 1-888-FDA-VETS or online at http://www.FDA.gov/reportanimalae.

Clinical Pharmacology:
Peak fluralaner concentrations are achieved between 2 hours and 3 days following oral administration, and the elimination half-life ranges between 9.3 to 16.2 days. Quantifiable drug concentrations can be measured (lower than necessary for effectiveness) through 112 days. Due to reduced drug bioavailability in the fasted state, fluralaner should be administered with food.

Mode of Action:
Fluralaner is for systemic use and belongs to the class of isoxazoline-substituted benzamide derivatives. Fluralaner is an inhibitor of the arthropod nervous system. The mode of action of fluralaner is the antagonism of the ligand-gated chloride channels (gamma-aminobutyric acid (GABA)-receptor and glutamate-receptor).

Effectiveness:
Bravecto began to kill fleas within two hours after administration in a well-controlled laboratory study. In a European laboratory study, Bravecto killed fleas and *Ixodes ricinus* ticks and reduced the numbers of live fleas and *Ixodes ricinus* ticks on dogs by > 98% within 12 hours for 12 weeks. In a well-controlled laboratory study, Bravecto demonstrated 100% effectiveness against adult fleas 48 hours post-infestation for 12 weeks. In well-controlled laboratory studies, Bravecto demonstrated ≥ 93% effectiveness against *Dermacentor variabilis*, *Ixodes scapularis*, *Rhipicephalus sanguineus*, and *Haemaphysalis longicornis* ticks 48 hours post-infestation for 12 weeks. Bravecto demonstrated ≥90% effectiveness against *Amblyomma americanum* 72 hours post-infestation for 8 weeks, but failed to demonstrate ≥90% effectiveness beyond 8 weeks.

In a well-controlled U.S. field study, a single dose of Bravecto reduced fleas by ≥ 99.7% for 12 weeks. Dogs with signs of flea allergy dermatitis showed improvement in erythema, alopecia, papules, scales, crusts, and excoriation as a direct result of eliminating flea infestations.

Palatability: In a well-controlled U.S. field study, which included 559 doses administered to 224 dogs, 80.7% of dogs voluntarily consumed Bravecto within 5 minutes, an additional 12.5% voluntarily consumed Bravecto within 5 minutes when offered with food, and 6.8% refused the dose or required forced administration.

Animal Safety:
Margin of Safety Study: In a margin of safety study, Bravecto was administered orally to 8- to 9-week-old puppies at 1, 3, and 5X the maximum label dose of 56 mg/kg at three, 8-week intervals. The dogs in the control group (0X) were untreated.

There were no clinically-relevant, treatment-related effects on physical examinations, body weights, food consumption, clinical pathology (hematology, clinical chemistries, coagulation tests, and urinalysis), gross pathology, histopathology, or organ weights. Diarrhea, mucoid and bloody feces were the most common observations in this study, occurring at a similar incidence in the treated and control groups. Five of the twelve treated dogs that experienced one or more of these signs did so within 6 hours of the first dosing. One dog in the 3X treatment group was observed to be dull, inappetant, with evidence of bloody diarrhea, vomiting, and weight loss beginning five days after the first treatment. One dog in the 1X treatment group vomited food 4 hours following the first treatment.

Reproductive Safety Study: Bravecto was administered orally to intact, reproductively- sound male and female Beagles at a dose of up to 168 mg/kg (equivalent to 3X the maximum label dose) on three to four occasions at 8-week intervals. The dogs in the control group (0X) were untreated.

There were no clinically-relevant, treatment-related effects on the body weights, food consumption, reproductive performance, semen analysis, litter data, gross necropsy (adult dogs) or histopathology findings (adult dogs and puppies). One adult 3X treated dog suffered a seizure during the course of the study (46 days after the third treatment). Abnormal salivation was observed on 17 occasions: in six treated dogs (11 occasions) after dosing and four control dogs (6 occasions).

The following abnormalities were noted in 7 pups from 2 of the 10 dams in only the treated group during gross necropsy examination: limb deformity (4 pups), enlarged heart (2 pups), enlarged spleen (3 pups), and cleft palate (2 pups). During veterinary examination at Week 7, two pups from the control group had inguinal testicles, and two and four pups from the treated group had inguinal and cryptorchid testicles, respectively. No undescended testicles were observed at the time of necropsy (days 50 to 71).

In a well-controlled field study Bravecto (fluralaner) was used concurrently with other medications, such as vaccines, anthelmintics, antibiotics, and steroids. No adverse reactions were observed from the concurrent use of Bravecto with other medications.

Storage Information:
Do not store above 86°F (30°C).

How Supplied:
Bravecto is available in five strengths (112.5, 250, 500, 1000, and 1400 mg fluralaner per chew). Each chew is packaged individually into aluminum foil blister packs sealed with a peelable paper backed foil lid stock. Product may be packaged in 1, 2, or 4 chews per package.

Approved by FDA under NADA # 141-426

Distributed by:
Intervet Inc (d/b/a Merck Animal Health)
Madison, NJ 07940

Fluralaner (active ingred.) Made in Japan.
Formulated in Austria

Rev. 10/2022

375232 R4

MERCK Animal Health

MERCK
Animal Health

sentinel® spectrum® chews

(milbemycin oxime·lufenuron·praziquantel)

Caution: Federal (USA) law restricts this drug to use by or on the order of a licensed veterinarian.

Description: SENTINEL® SPECTRUM® Chews are available in four strengths in color-coded packages for oral administration to dogs and puppies according to their weight. Each chewable flavored tablet is formulated to provide a minimum of 0.23 mg/pound (0.5mg/kg) of milbemycin oxime, 4.55 mg/pound (10mg/kg) of lufenuron, and 2.28 mg/pound (5mg/kg) of praziquantel.

Milbemycin oxime consists of the oxime derivatives of 5-didehydromilbemycins in the ratio of approximately 80% A_4 ($C_{32}H_{45}NO_7$, MW 555.71) and 20% A_3 ($C_{31}H_{43}NO_7$, MW 541.68). Milbemycin oxime is classified as a macrocyclic anthelmintic.

Lufenuron is a benzoylphenylurea derivative with the following chemical composition: N-[2,5-dichloro-4-(1,1,2,3,3,3,-hexafluoropropoxy)-phenyl-aminocarbonyl]-2,6-difluorobenzamide ($C_{17}H_8Cl_2F_8N_2O_3$, MW 511.15). Benzoylphenylurea compounds, including lufenuron, are classified as insect development inhibitors (IDIs).

Praziquantel is an isoquinolone anthelmintic with the chemical name 2-(Cyclohexylcarbonyl)-1,2,3,6,7,-11b-hexahydro-4H-pyrazino[2,1-a]isoquinolin-4-one.

Indications: SENTINEL SPECTRUM Chews are indicated for the prevention of heartworm disease caused by *Dirofilaria immitis*; for the prevention and control of flea populations (*Ctenocephalides felis*); and for the treatment and control of adult roundworm (*Toxocara canis, Toxascaris leonina*), adult hookworm (*Ancylostoma caninum*), adult whipworm (*Trichuris vulpis*), and adult tapeworm (*Dipylidium caninum, Taenia pisiformis, Echinococcus multilocularis* and *Echinococcus granulosus*) infections in dogs and puppies two pounds of body weight or greater and six weeks of age and older.

Dosage and Administration: SENTINEL SPECTRUM Chews should be administerd orally, once every month, at the minimum dosage of 0.23 mg/lb (0.5 mg/kg) milbemycin oxime, 4.55 mg/lb (10 mg/kg) lufenuron, and 2.28 mg/lb (5 mg/kg) praziquantel. For heartworm prevention, give once monthly for at least 6 months after exposure to mosquitoes (see **EFFECTIVENESS**).

Dosage Schedule

Body Weight	Milbemycin Oxime per chewable	Lufenuron per chewable	Praziquantel per chewable	Number of chewables
2 to 8 lbs.	2.3 mg	46 mg	22.8 mg	One
8.1 to 25 lbs.	5.75 mg	115 mg	57 mg	One
25.1 to 50 lbs.	11.5 mg	230 mg	114 mg	One
50.1 to 100 lbs.	23.0 mg	460 mg	228 mg	One
Over 100 lbs.	Administer the appropriate combination of chewables			

To ensure adequate absorption, always administer SENTINEL SPECTRUM Chews to dogs immediately after or in conjunction with a normal meal.

SENTINEL SPECTRUM Chews may be offered to the dog by hand or added to a small amount of dog food. The chewables should be administered in a manner that encourages the dog to chew, rather than to swallow without chewing. Chewables may be broken into pieces and fed to dogs that normally swallow treats whole. Care should be taken that the dog consumes the complete dose, and treated animals should be observed a few minutes after administration to ensure that no part of the dose is lost or rejected. If it is suspected that any of the dose has been lost, redosing is recommended.

Heartworm Prevention: SENTINEL SPECTRUM Chews should be administered at monthly intervals beginning within one month of the dog's first seasonal exposure to mosquitoes and continuing until at least 6 months after the dog's last seasonal exposure (see **EFFECTIVENESS**). SENTINEL SPECTRUM Chews may be administered year-round without interruption. When switching from another heartworm preventative product to SENTINEL SPECTRUM Chews, the first dose of SENTINEL SPECTRUM Chews should be given within a month of the last dose of the former product.

Flea Treatment and Prevention: Treatment with SENTINEL SPECTRUM Chews may begin at any time of the year, preferably starting one month before fleas become active and continuing monthly through the end of flea season. In areas where fleas are common year-round, monthly treatment with SENTINEL SPECTRUM Chews should continue the entire year without interruption.

To minimize the likelihood of flea reinfestation, it is important to treat all animals within a household with an approved flea protection product, as necessary.

Intestinal Nematode and Cestode Treatment and Control: Dogs may be exposed to and can become infected with roundworms, whipworms, hookworms, and tapeworms throughout the year, regardless of season or climate. Clients should be advised of appropriate measures to prevent reinfection of their dog with intestinal parasites. Because the prepatent period for *E. multilocularis* may be as short as 26 days, dogs treated at the labeled monthly intervals may become reinfected and shed eggs between treatments.

Contraindications: There are no known contraindications to the use of SENTINEL SPECTRUM Chews.

Warnings: Not for use in humans. Keep this and all drugs out of the reach of children.

Precautions: Treatment with fewer than 6 monthly doses after the last exposure to mosquitoes may not provide complete heartworm prevention (see **EFFECTIVENESS**).

Prior to administration of SENTINEL SPECTRUM Chews, dogs should be tested for existing heartworm infections. At the discretion of the veterinarian, infected dogs should be treated to remove adult heartworms. SENTINEL SPECTRUM Chews are not effective against adult *D. immitis*.

Mild, transient hypersensitivity reactions, such as labored breathing, vomiting, hypersalivation, and lethargy have been noted in some dogs treated with milbemycin oxime carrying a high number of circulating microfilariae. These reactions are presumably caused by release of protein from dead or dying microfilariae.

Do not use in puppies less than six weeks of age.

Do not use in dogs or puppies less than two pounds of body weight.

The safety of SENTINEL® SPECTRUM® Chews has not been evaluated in dogs used for breeding or in lactating females. Studies have been performed with milbemycin oxime and lufenuron alone (see **ANIMAL SAFETY**).

Adverse Reactions: The following adverse reactions have been reported in dogs after administration of milbemycin oxime, lufenuron, or praziquantel: vomiting, depression/lethargy, pruritus, urticaria, diarrhea, anorexia, skin congestion, ataxia, convulsions, salivation, and weakness.

To report suspected adverse drug events, contact Merck Animal Health at 1-800-224-5381. For additional information about adverse drug experience reporting for animal drugs, contact FDA at 1-888-FDA-VETS or http://www.fda.gov/reportanimalae.

For technical assistance, call Merck Animal Health at 1-800-224-5318.

Information for Owner or Person Treating Animal: *Echinococcus multilocularis* and *Echinococcus granulosus* are tapeworms found in wild canids and domestic dogs. *E. multilocularis* and *E. granulosus* can infect humans and cause serious disease (alveolar hydatid disease and hydatid disease, respectively). Owners of dogs living in areas where *E. multilocularis* or *E. granulosus* are endemic should be instructed on how to minimize their risk of exposure to these parasites, as well as their dog's risk of exposure. Although SENTINEL SPECTRUM Chews were 100% effective in laboratory studies in dogs against *E. multilocularis* and *E. granulosus*, no studies have been conducted to show that the use of this product will decrease the incidence of alveolar hydatid disease or hydatid disease in humans. Because the prepatent period for *E. multilocularis* may be as short as 26 days, dogs treated at the labeled monthly intervals may become reinfected and shed eggs between treatments.

Effectiveness

Heartworm Prevention: In a well-controlled laboratory study, SENTINEL SPECTRUM Chews (*milbemycin oxime, lufenuron, praziquantel*) were 100% effective against induced heartworm infections when administered once monthly for 6 consecutive months. In well-controlled laboratory studies, neither one dose nor two consecutive doses of SENTINEL SPECTRUM Chews provided 100% effectiveness against induced heartworm infections.

Intestinal Nematodes and Cestodes Treatment and Control: Elimination of the adult stage of hookworm (*Ancylostoma caninum*), roundworm (*Toxacara canis, Toxascaris leonina*), whipworm (*Trichuris vulpis*) and tapeworm (*Dipylidium caninum, Echinococcus multilocularis, Echinococcus granulosus, Taenia pisiformis*) infections in dogs was demonstrated in well-controlled laboratory studies.

Flea Prevention and Control: In well-controlled studies, SENTINEL SPECTRUM Chews were effective in preventing flea eggs from hatching, thus providing control of the development of flea populations (*Ctenocephalides felis*).

Palatability: In a field study of 117 dogs offered SENTINEL SPECTRUM Chews, 113 dogs (96.6%) accepted the product when offered from the hand as if a treat, 2 dogs (1.7%) accepted it from the bowl with food, 1 dog (0.9%) accepted it when it was placed in the dog's mouth, and 1 dog (0.9%) refused it.

Animal Safety: In a margin of safety study, 40 ten-week-old puppies (10 per group) were administered either a sham dose (0X) or doses of 1, 3, or 5X the maximum exposure dose of SENTINEL SPECTRUM Chews once every two weeks for a total of seven treatments. Transient ataxia, lethargy, tremors, and salivation were seen in the 3X and 5X groups following each of the seven doses. Lethargy and ataxia were occasionally reported in sham-dosed (0X) and 1X dogs. Tremors were observed twice post-treatment in the 1X treatment group. Vomiting was seen in all treatment groups but at a higher incidence in the 3X and 5X groups. At the 5X dose, shallow breathing was noted in two dogs and one dog was unable to stand following two different doses. All clinical signs resolved within 24 hours.

In a second margin of safety study, 64 six-week-old puppies (16 per group) were dosed with either a sham (0X) or 1, 3, or 5X the maximum exposure dose of SENTINEL SPECTRUM Chews on days 1, 15, 29, and 43. A dose dependent increase in ataxia, decreased activity, tremors, and salivation was seen within 24 hours of treatment. Splayed hind limbs were observed once in one dog in the 5X treatment group. Vomiting was observed in the 5X treatment group.

For SENTINEL SPECTRUM Chews, the maximum exposure based on product dosing is 2.5 mg/kg for milbemycin oxime, 50.7 mg/kg for lufenuron and 25.1 mg/kg for praziquantel, which is higher than the minimum effective dose used in the safety studies for milbemycin oxime and lufenuron (see below).

Milbemycin Oxime: Two studies were conducted in heartworm-infected dogs treated with milbemycin oxime. Mild, transient hypersensitivity reactions were observed in dogs with high microfilariae counts (see **PRECAUTIONS**).

Safety studies in pregnant dogs demonstrated that doses of 0.6X the maximum exposure dose of SENTINEL SPECTRUM Chews, (1.5 mg/kg of milbemycin oxime), administered daily from mating through weaning, resulted in measurable concentrations of milbemycin oxime in milk. Puppies nursing these females demonstrated milbemycin oxime-related effects (depression, decreased activity, diarrhea, dehydration, nasal discharge). A subsequent study, which evaluated the daily administration of 0.6X the maximum exposure dose of SENTINEL SPECTRUM Chews, from mating until one week before weaning, demonstrated no effects on the pregnant females or their litters. A study, in which pregnant females were dosed once, at 0.6X maximum exposure dose of SENTINEL SPECTRUM Chews before, on the day of, or shortly after whelping, resulted in no effects on the puppies.

Some nursing puppies, at 2, 4, and 6 weeks of age, administered oral doses of 9.6 mg/kg milbemycin oxime (3.8X the maximum exposure dose of SENTINEL SPECTRUM Chews) exhibited tremors, vocalization, and ataxia. These effects were all transient and puppies returned to normal within 24 to 48 hours. No effects were observed in puppies administered 0.5 mg/kg milbemycin oxime (minimum label dose).

A rising-dose safety study conducted in rough-coated Collies resulted in ataxia, pyrexia, and periodic recumbency in one of fourteen dogs administered milbemycin oxime at 12.5 mg/kg (5X the maximum exposure dose of SENTINEL SPECTRUM Chews). Prior to receiving the 12.5 mg/kg dose on day 56 of the study, all animals had undergone a dosing regimen consisting of 2.5 mg/kg milbemycin oxime on day 0, followed by 5.0 mg/kg on day 14, and 10.0 mg/kg on day 32. No adverse reactions were observed in any of the Collies treated with doses less than 12.5 mg/kg.

Lufenuron: In a ten-month study, doses of lufenuron up to 2X the maximum exposure dose of SENTINEL SPECTRUM Chews (10 mg/kg) caused no overt toxicity. A single dose of 200 mg/kg had no marked effect on adult dogs, but caused decreased activity and reduced appetite in eight-week-old puppies. Lufenuron tablets were evaluated with concurrent administration of flea adulticides containing carbaryl, permethrin, chlorpyriphos, and cythioate. No toxicty resulted from these combinations. Lufenuron tablets did not cause cholinesterase inhibition nor did they enhance cholinesterase inhibition caused by exposure to organophoshphates.

Two laboratory and two well-controlled field studies were conducted to evaluate reproductive safety of lufenuron tablets in breeding dogs. In one of the laboratory studies, in which lufenuron was administered to Beagle dogs as three divided doses, equivalent to 17.8X the maximum exposure dose of SENTINEL SPECTRUM Chews (10 mg/kg), the ratio of gravid females to females mated was 8/8 or 100% in the control group and 6/9 or 67% in the lufenuron-treated group. The mean number of pups per litter was two animals higher in the lufenuron versus control groups and mean birth weights of pups from treated females in this study was lower than control groups. These pups grew at a similar rate to the control pups. The incidence of nasal discharge, pulmonary congestion, diarrhea/dehydration, and sluggishness was higher in the lufenuron-treated pup group than in the control pup group. The incidence of these signs was transient and decreasing by the end of lactation.

Results from three additional reproductive safety studies, one laboratory and two field studies, evaluating eleven breeds of dogs, did not demonstrate any adverse findings for the reproductive parameters measured, including fertility, pup birth weights, and pup clinical signs, after administration of lufenuron up to 1X the maximum exposure dose of SENTINEL SPECTRUM Chews. The average milk: blood concentration ratio was approximately 60 (i.e. 60X higher drug concentrations in the milk compared to drug levels in the blood of treated females). Nursing puppies averaged 8-9 times higher blood concentrations of lufenuron compared to their dams.

Storage Information: Store in a dry place at controlled room temperature, between 59° and 77°F (15-25°C).

How Supplied: SENTINEL SPECTRUM Chews are available in four strengths, formulated according to the weight of the dog. Each strength is available in color-coded packages of six chewable tablets each.

Manufactured for: Intervet Inc (d/b/a Merck Animal Health)
2 Giralda Farms
Madison, NJ 07940

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Noncompete Clauses and Veterinary Practice

"Once employers realize that they have to make a choice between a noncompete requirement and being able to hire, we'll get rid of them."

—PAUL DIAZ, VETERINARY RECRUITER

Will Proposed FTC Rule End These Common Contractual Restrictions?

by Roxanne Hawn

In summer 2022, the US Federal Trade Commission (FTC) signed a memo of understanding with the National Labor Relations Board to collaborate on efforts "to protect workers from anticompetitive, unfair, and deceptive practices." The FTC, then, voted 3–1 to publish a Notice of Proposed Rulemaking in January 2023 about banning most noncompete clauses for current workers and negating those for prior workers, with a few exceptions for certain transportation and communications industries and employers. The FTC estimates that noncompete clauses affect 18% of US workers, about 30 million people. Supporters of the ban name possible benefits such as increasing workers' earnings by nearly $300 billion and closing racial and gender wage gaps by 3.6–9.1%.

"The freedom to change jobs is core to economic liberty and to a competitive, thriving economy," said FTC Chair Lina M. Khan in a media release. "Noncompetes block workers from freely switching jobs, depriving them of higher wages and better working conditions, and depriving businesses of a talent pool that they need to build and expand. By ending this practice, the FTC's proposed rule would promote greater dynamism, innovation, and healthy competition."

In a dissenting statement, FTC Commissioner Christine S. Wilson

countered, “The proposed noncompete clause rule represents a radical departure from hundreds of years of legal precedent that employs a fact-specific inquiry into whether a noncompete clause is unreasonable in duration and scope, given the business justification for the restriction.”

The FTC extended the original public comment end date from March 10 to April 19, 2023, and received approximately 20,000 comments. Nearly 200 of the comments mention veterinary medicine. Of those, four oppose the ban—individual practitioners/practice owners in Utah and South Carolina; an attorney whose wife is a veterinarian in Florida; and one anonymous commenter. All other veterinary-related comments support the ban. Many called noncompete clauses outdated, forced, unfair, harmful, and even a threat to public health by exacerbating veterinary shortages with positions going unfilled. Some point to the oversized benefit to private equity firms taking over more practices.

Consensus from both those who support and oppose the ban is that the FTC will enact some version of the rule, likely triggering legal challenges not only to the rule itself but also to the FTC’s authority to authorize the ban in the first place based on something called “the major questions doctrine” addressed in the case West Virginia v. EPA. While waiting to see how the FTC responds to the feedback with possible revisions or limitations on the proposed ban, which may take 18 to 24 months, the debate about noncompete clauses continues.

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What’s Next?

“A limbo period. That’s exactly what I would call it,” said Arline Kline, JD, an equity partner with Akerman LLC, in the labor and employment practice group. “The final rule is going to be maybe a little bit less stringent than the one that’s proposed, but we don’t think it’s going to be that much less restrictive so that it would ward off any challenges.”

Kline also mentions potential financial, tax, and valuation implications from noncompetes that feature so-called garden leave provisions or those that add security and value for potential business sales. An understaffed or unstaffed business isn’t worth much. “Garden leave” basically means being paid a full salary not to work in the specific profession during noncompete periods, which, in some industries, last a year or two and vary in geographic footprint based on the person’s role, the community in question, and the claimed business case for the limit. These payouts typically get included as an enticement to sign the contract. If an employer paid a garden leave and that noncompete is later voided by the FTC rule, will they claw back that money? How far back will they go? And if so, how does that affect taxes and other financials for everyone involved? “It really just touches so many aspects of the life of the business [including] what the rule would do to valuations and the day-to-day running of a business,” Kline said.

If noncompetes get banned, it might also bleed into other things, including nondisclosure agreements, nondisparagement clauses, and others that sometimes serve similar purposes. “Those kinds of provisions would be subject to attack,” Kline explained, “and therein lies the rub. [The proposed rule] is just so open to interpretation that it leaves employers kind of scrambling.”

FTC Comments Supporting the Ban (Excerpts)*

"I opened my own veterinary clinic in 2015 and did not require my associate to sign one. I felt that if I had a good business environment and treated my employees fairly, they would stay. If they left and a few clients followed them, I would recover."

"As a veterinarian, my previous employer's noncompete resulted in abandonment of all my patients without an alternative solution. I was a solo practitioner, and when I turned in my notice, I was not able to provide my clients with recommendations, and the company was not able to find a replacement. This resulted in not just a loss of continuity of care but loss of *all* care within six months as the clinic ended up closing."

"I am a veterinarian and have worked close to 40 years. I have been an associate and a practice owner. I see no justification for noncompetes and, in fact, feel it harms the entire profession."

"I live in New Jersey with my family and young children, and I had to commute to Delaware and Pennsylvania for two years to be able to change jobs."

**Edited for grammar.*

How potential legal challenges pan out depends on choices to act at state or federal levels or in precise jurisdictions in specific states, where existing case law potentially supports the case being filed. For example, California, North Dakota, Oklahoma, and Washington, DC, ban noncompetes with a few exceptions. Other states, including Colorado, Illinois, Maryland, New Hampshire, Oregon, Rhode Island, Virginia, and Washington, prohibit noncompetes only for those earning less than certain financial thresholds. In most cases, veterinarians' salaries exceed those earning limits, so any state restrictions less than outright bans don't apply.

Ongoing Debates

Kline's firm typically represents employers requiring noncompete clauses rather than individuals wanting to negotiate or nix them. Sometimes, though, that means arguing against noncompetes. For example, a fertility clinic contacted Kline's team recently about hiring a physician restricted by a broad geographic noncompete from a prior employer. Even as the only IVF provider within 50 miles, they couldn't hire this doctor. Kline said, "It's a real issue. Obviously, that's the other side of the argument, representing an employer who wants to do the hiring and doesn't want to enforce that [noncompete]. It depends on every state law, so it's a different standard, depending on the state."

Longtime veterinary recruiter Paul Diaz also has spent time on both sides of this issue and now regrets the 1,100+ contracts with noncompete clauses veterinarians signed while he worked for one of the largest veterinary companies.

Reformed, Diaz now counsels all veterinarians—especially new graduates—to refuse to sign contracts with noncompete clauses. This includes increasingly broad ones stemming from consolidation. "Corporate practices [have contracts], where they will restrict you from

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working within a specific radius of your home hospital and any other hospital owned by the company," Diaz scoffed. "And you're not going to believe this one—'any hospital locations that we may own in the future. We don't even know it exists today, but if we happen to own it one day, you can't work anywhere near that one either.'"

In 2022, he helped a veterinarian end a noncompete preventing her from leaving a job where she felt trapped and even suicidal. The solution? The practice where she wanted to work paid the old one $20,000 to buy out the noncompete. Clearly, not everyone can afford to do that. But thanks to experience helping this one veterinarian, as well as other conversations Diaz called "uncomfortable" between him and at least one person with the power to end noncompete clauses for many veterinarians, Diaz concluded, "This is about revenue."

He enjoys swatting common defenses of noncompetes in veterinary medicine, including that they protect intellectual property (IP). "If you truly had intellectual property that you were trying to protect, wouldn't you want to protect it across the board outside of your community as well?" he asked. "Nobody can give me an example of some type of IP that only needs to be protected within a 20-mile radius of your hospital."

Diaz points to all the other available legal protections for IP, including patents, trademarks, copyrights, nondisclosure agreements, and so on. That's how he is protecting Offer First, a recruiting technology platform he founded. He added, "If you truly had something that improved patient outcomes or enhanced surgical procedures that decreased recovery times of an animal and you didn't share that with the industry, you're a problem. You don't belong in this industry."

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FTC Comments Opposing the Ban (Excerpts)*

"I own a small business, and I am a veterinarian. Without a noncompete clause, any veterinarian that works for me could take my clients and open a practice beside my office. The damage to my business would be catastrophic, and it may result in the loss of my business."

"I have been a veterinarian for about 40 years, and if there were no rules about noncompetition, it would have dramatically changed my approach in hiring and training new veterinarians. [...]Why would anyone teach another person the things that have made them successful if that person then takes away clients and potential income?"

"The completely predictable consequence of outlawing noncompetes in veterinary medicine is the acceleration of corporate consolidation, [...]and it will, in the long run, result in local monopolies and oligopolies of corporately owned practices after all the small local practices have been bankrupted by their associate doctors."

"There is a critical shortage of veterinarians and fierce competition to hire them. [...]Currently it is common to see signing bonuses of $50,000 to $100,000. I believe this fact clearly refutes the argument that properly crafted noncompetes limit competition and depress wages."

**Edited for grammar.*

> If noncompetes get banned, it might also bleed into other things, including nondisclosure agreements, nondisparagement clauses, and others that sometimes serve similar purposes.

Another frequent defense of noncompetes focuses on preventing clients from following associates when they go to another practice or start their own. Diaz countered, "That is what the poor business owner would say—somebody who isn't doing what they need to be doing to ensure loyalty to the brand. Because if you are relying solely on the veterinarian to establish relationships with your clients, that's your single point of failure. [Clients will think,] 'I've got no reason to stay at that building, other than the doctor. If she leaves, chances are I'm going with her, but if they did create some type of experience for me that no other practice was doing, well, chances are I'm going to stay there.'"

While garden leaves probably sound pretty good to exhausted practitioners, Diaz said those only work in professions where skills don't generally diminish over time. "Take a doctor out of the clinic for two years," he said, "and imagine how difficult it is going to be for that doctor to get back into practice. That's why garden leave is not the answer, not in any health care field. These doctors? Their skills need to be maintained, and they maintain their skills by continuing to practice."

Confluence of Critical Issues?

A veteran of the US Marine Corps, Diaz chokes up when talking about the similarities between veterans and veterinarians—namely, high suicide rates. For him, several critical veterinary issues meet at a noncompete crossroads such as veterinary shortages, educational debt, mental health struggles, and corporate consolidation. He asks why so many focus on wellness efforts that target symptoms rather than removing at least one of the causes, noncompetes.

Whether the FTC ultimately bans noncompetes in a way that affects the veterinary world or not, Diaz hopes a groundswell of individuals drives the change by simply refusing to sign contracts that feature such restrictions.

"Once employers realize that they have to make a choice between a noncompete requirement and being able to hire," Diaz predicted, "we'll get rid of them. The reason why is because the noncompete is nothing more than a mechanism for them to control a portion of the industry's revenue. [...]That noncompete tells me that I now know with reasonable assurance that you're not going to be generating revenue for my competition. [...]And that's why the corporations do not want to end this practice. It enables them to elicit control over the one individual who generates revenue in this industry."

Yet, seeing possible life-changing options to knock down debt, associates sign the deals and take the bonuses. This limits the candidate pool for other practices that end up struggling due to less than optimal staffing—leaving them vulnerable to later buyouts.

When associates do change jobs, it often requires lengthy commutes that make long days even longer and complicates responsibilities such as child care or elder care. Or, they end up uprooting everything to move to practice in another state with another noncompete clause, where the cycle continues. ※

Roxanne Hawn brings 25+ years of experience writing about veterinary topics for professionals and consumers. She writes an award-winning site called Champion of My Heart and is the author of *Heart Dog: Surviving the Loss of Your Canine Soul Mate*. Based in the Colorado Rocky Mountains, Roxanne fosters litters of puppies until old enough for adoption as well as hit-by-car dogs needing time to heal and rehab injuries.

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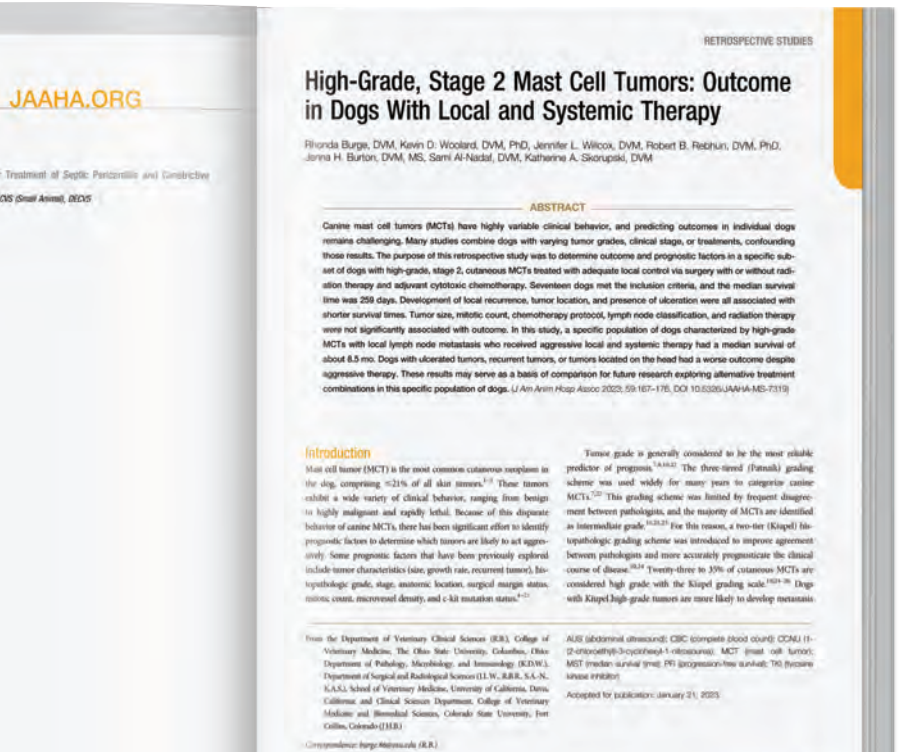
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RETROSPECTIVE STUDIES

High-Grade, Stage 2 Mast Cell Tumors: Outcome in Dogs With Local and Systemic Therapy

Rhonda Burge, DVM, Kevin D. Woolard, DVM, PhD, Jennifer L. Willcox, DVM, Robert B. Rebhun, DVM, PhD, Jonna H. Burton, DVM, MS, Sami Al-Nadaf, DVM, Katherine A. Skorupski, DVM

ABSTRACT

Canine mast cell tumors (MCTs) have highly variable clinical behavior, and predicting outcomes in individual dogs remains challenging. Many studies combine dogs with varying tumor grades, clinical stage, or treatments, confounding those results. The purpose of this retrospective study was to determine outcome and prognostic factors in a specific subset of dogs with high-grade, stage 2, cutaneous MCTs treated with adequate local control via surgery with or without radiation therapy and adjuvant cytotoxic chemotherapy. Seventeen dogs met the inclusion criteria, and the median survival time was 259 days. Development of local recurrence, tumor location, and presence of ulceration were all associated with shorter survival times. Tumor size, mitotic count, chemotherapy protocol, lymph node classification, and radiation therapy were not significantly associated with outcome. In this study, a specific population of dogs characterized by high-grade MCTs with local lymph node metastasis who received aggressive local and systemic therapy had a median survival of about 8.5 mo. Dogs with ulcerated tumors, recurrent tumors, or tumors located on the head had a worse outcome despite aggressive therapy. These results may serve as a basis of comparison for future research exploring alternative treatment combinations in this specific population of dogs. *J Am Anim Hosp Assoc* 2023; 59:167–176. DOI 10.5326/JAAHA-MS-7319

Introduction

Mast cell tumor (MCT) is the most common cutaneous neoplasm in the dog, comprising ≈21% of all skin tumors.[1–3] These tumors exhibit a wide variety of clinical behavior, ranging from benign to highly malignant and rapidly lethal. Because of this disparate behavior of canine MCTs, there has been significant effort to identify prognostic factors to determine which tumors are likely to act aggressively. Some prognostic factors that have been previously explored include tumor characteristics (size, growth rate, recurrent tumor), histopathologic grade, stage, anatomic location, surgical margin status, mitotic count, microvessel density, and c-kit mutation status.[4–17]

Tumor grade is generally considered to be the most reliable predictor of prognosis.[5,9,10,12] The three-tiered (Patnaik) grading scheme was used widely for many years to categorize canine MCTs.[7,20] This grading scheme was limited by frequent disagreement between pathologists, and the majority of MCTs are identified as intermediate grade.[5,9,10,21] For this reason, a two-tier (Kiupel) histopathologic grading scheme was introduced to improve agreement between pathologists and more accurately prognosticate the clinical course of disease.[10,14] Twenty-three to 35% of cutaneous MCTs are considered high grade with the Kiupel grading scale.[5,9,14–16] Dogs with Kiupel high-grade tumors are more likely to develop metastasis

From the Department of Veterinary Clinical Sciences (RB), College of Veterinary Medicine, The Ohio State University, Columbus, Ohio; Department of Pathology, Microbiology, and Immunology (KDW), Department of Surgical and Radiological Sciences (JLW, RBR, SA-N, KAS), School of Veterinary Medicine, University of California, Davis, California; and Clinical Sciences Department, College of Veterinary Medicine and Biomedical Sciences, Colorado State University, Fort Collins, Colorado (JHB)

AUS (abdominal ultrasound); CBC (complete blood count); CCNU (1-(2-chloroethyl)-3-cyclohexyl-1-nitrosourea); MCT (mast cell tumor); MST (median survival time); PFI (progression-free survival); TKI (tyrosine kinase inhibitor)

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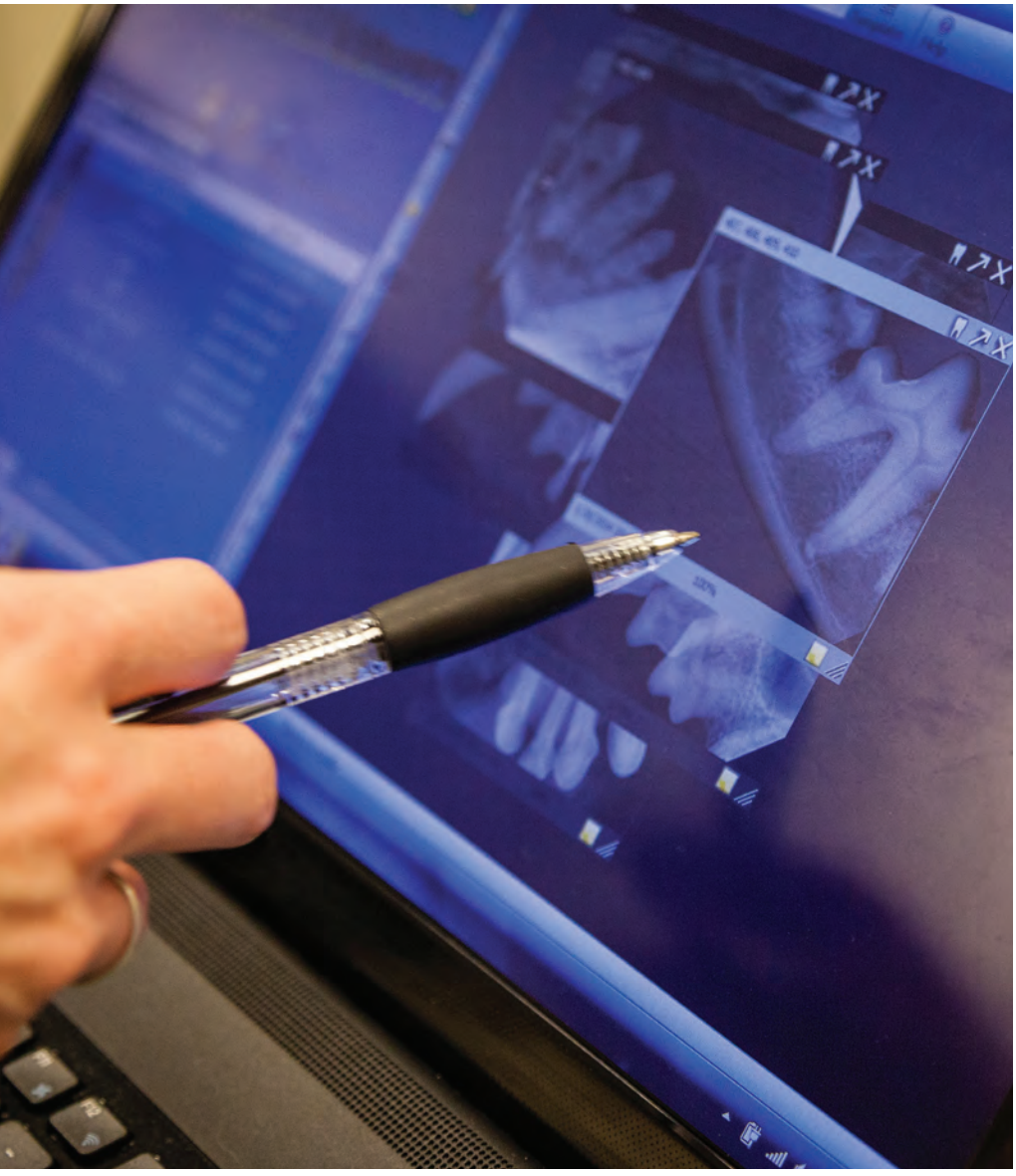

"Many clinics tell us they had no idea what they were looking at when they started using our service, but they learned case by case. After the first nine to 12 months, they stopped sending every case, and sent only the ones they had questions about."

—BROOK NIEMIEC, DVM, DADVC

Teleradiology can improve your skills while boosting client confidence

By Brook Niemiec, DVM, DADVC

Veterinary dentistry is rapidly becoming more common and accepted as clients become more educated about the best care for their pets. Which means adding or improving on your dental diagnostic imaging is not only good medicine, it's also economically beneficial.

It has been well established that dental and oral imaging is the single most important way to improve dental diagnoses. For example, nearly one-fourth of uncomplicated crown fractures of maxillary fourth premolars in dogs are, in fact, nonvital. Since this is a condition seen daily in general practice, imaging allows for diagnosis and treatment.

Furthermore, imaging speeds up procedures. Images are required for determining the suitability of crown amputation for feline tooth resorption, and they can help avoid iatrogenic issues—most importantly, pathologic mandibular fractures.

A Radiology Revolution

Digital dental radiology has revolutionized veterinary dentistry in many ways. First, the ability to retake mistakes has led to shorter anesthesia times. Next, the larger format and ability to improve images—either manually or via the preselected filters (algorithms)—markedly improves diagnostic yield.

However, the ability to electronically transfer images is potentially its

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greatest asset. These can be for clients' records, a new family vet, collaboration with a specialist, or telemedicine.

Telemedicine and teleradiology have been around for decades, first on the human full-body side and then in veterinary medicine. It is almost standard of care in many clinics to have all studies reviewed by a radiologist. In our dental practice, this is still routinely done; however, on same-day cases, our anesthesiologist is a great backup for chest films.

But while most veterinarians think nothing of sending out a thoracic or abdominal image, they very rarely send out dental studies. This is despite the fact that we spend weeks in vet school learning how to read full-body images but get hardly any instruction in dental radiology.

Not Good Enough

I believe there are two main reasons for this: First, teleradiology is rare in human dentistry [although it is changing with Cone Beam CT (CBCT) scans; see sidebar]. Therefore, clients are not used to having a "dental radiology report" for themselves, let alone their pets. A key difference, though, is that human dentists are extensively trained in reading dental radiographs.

I feel that, while veterinary dentistry has made great strides over the last few decades, it is still commonly undervalued. When this is combined with the fact that untreated and undertreated dental disease almost never results in obvious clinical signs, we fall into "It's good enough."

But clearly, it's not. As a Veterinary Dentist™, I get many reports from general practitioners that are, quite frankly, completely off-base.

- We see a large number of teeth that were extracted but were normal radiographically (and clinically per the dental chart) but were deemed nonvital due to a mental foramen or a "chevron" effect.
- We have also seen many cases of improperly performed crown amputation.
- Finally, a lot of undiagnosed pathology is corrected later at our clinic.

The More You Do It, the Better You Get

Reading dental radiographs is a lot of learning by experience. Textbooks and CE courses, either in person or online, are very helpful, but not all cases can be demonstrated in these modalities. It's just like cat spays—remember how long the first one took? The more you do it, the easier it becomes, and the better and faster you get.

I compare extractions to learning guitar. When visitors come to our classes or our clinic (all are welcome to shadow us), they are amazed at how quick I am at extractions. Well, yes, I am fast, and it's because I've done more than 200,000 in my career. I compare that to the awe I experienced when I first started lessons with my guitar instructor who had been practicing for 30 years.

Veterinary dentists are uniquely suited to reading dental radiographs because it's what we do all day, every day. If it's not what you do all day, every day, and you're working on improving your radiograph reading skills, consider how teleradiology services could help you build proficiency and competence.

Increasing Your—and Your Clients'—Confidence

Teleradiology will greatly improve your diagnostic ability and increase your confidence in your dental recommendations, but you may not be the only one benefitting: One frequently overlooked aspect of teleradiology is that it is, in essence, a second opinion.

In our practice, we see many clients who have refused extractions at their primary vet because they want to know if there are options to save the teeth that were recommended to be extracted. Commonly, we agree with the referring vet—and the client then schedules the extractions.

However, if the GP had a report from a telemedicine service (see STAT reads below) at the outset, the pet could have been spared the second anesthesia and the client would have saved the cost. That being said, there are many cases where advanced procedures could save a tooth, which underlines the value of consultation.

Conversely, we have clients who come to us after the extractions have been performed at their family vet and are upset that they consented to the care. Even when extractions were the best treatment option, a wedge has been driven between the practice and the client. A report from a telemedicine site to back up the practice's treatment recommendation would have alleviated this issue completely.

Worse, of course, is when we disagree with the therapy and feel that a tooth could have been salvaged, in which case a teleradiology consultation would've been even more useful.

The Next Generation of Veterinary Dental Imaging

Challenge

The biggest limitation of dental radiology is that it is a two-dimensional image of a three-dimensional space. This means that the buccal and lingual/palatal aspects of the teeth are not easily interpreted due to the superimposed tooth. This is where Cone Beam CT (CBCT) scans come in.

	Standard CT	CBCT
What it's good at	Standard CT units have been improving their resolution for years and are very good at diagnosing maxillofacial disease.	Where CBCT really outperforms dental radiographs is in maxillofacial trauma and oncology cases. The 3-D imaging allows for precise margin determination as well as detailing the extent of the fractures.
Limitations	In general, the place that I find the most pathology that is not seen on dental radiographs are the palatal aspect of the maxillary canines and the maxillary molars of dogs. Using CBCT, I have found numerous infections and significant furcation exposure with no dental radiographic signs and, in some cases, no easily identified clinical ones. In addition, our clinic has found several incipient neoplasia and cysts, allowing for earlier therapy.	Downsides to CBCT include some required adjustments to workflow—and there's also the cost.
Cost	The cost of a standard CT unit is significant, but that does not include the expense of lead shielding required.	A new unit runs just over $200,000 with annual maintenance fees. In a multidoctor practice, this should be paid off relatively quickly, as long as there is a dental commitment in the practice. Some companies have human maxillofacial radiologists on staff to help, but even as veterinary dentists, we still use radiologists for many CBCT cases. While CBCT is new and perceived to be very expensive, it is likely the future of dental and maxillofacial imaging.
Radiation	The special shielding required makes it necessary to move the patient to the unit. While this is standard for conventional surgery, it is less practical for veterinary dentistry, particularly in a general practice setting.	CBCT uses lower radiation and is faster than standard CT, but due to the acquisition technique that allows this, there is some loss of detail, especially soft tissue (although this is being improved in newer units). This allows the unit to be brought to the patient in most cases, with some shielding adjustments.
Staff time	Traditional CT scans can take up to 15 minutes, and typically require a dedicated room, as well as robust radiation shielding. (Of course, anesthesia is also a factor in both cases).	Each scan takes about 90 seconds (typically five to seven minutes total with positioning and "scout" images), which means it can be faster than dental radiology.

An Educational Bonus

A final and underappreciated benefit of dental teleradiology is education.

In the almost 15 years that our telemedicine service has been around, many clinics have learned how to read their own films. Many clinics tell us they had no idea what they were looking at when they started using our service, but they learned case by case. After the first 9 to 12 months, they stopped sending every case and sent only the ones they had questions about.

Not only do these practitioners gain skills in reading films, but the reading dentist also provides invaluable information on treatment options. This is helpful not only for the patient in question but also for future ones with a similar condition. Learning the latest in veterinary dentistry is just an additional benefit.

Common Challenges (and Solutions)

Implementing teleradiology is a fairly straightforward process. Most major diagnostic laboratories have a Veterinary Dentist™ on staff, and there are several veterinary dental–specific options as well.

Four Steps to Using a Teleradiology Service

1. **Pick your service** and work with their IT department to determine the flow of the submission.
2. **Upload images.** Once the submission process is set up, upload the images and submit the history to the telemedicine service. *(Please do not do this with a pet under anesthesia.)*
3. **Export the report.** This can be tricky—see above.
4. **Review the report.** When the report is received, the clinician can go over the report with the client or consult with a specialist to determine the best care.

Veterinary dental teleradiology and CBCT represent the state of the art in imaging for our dogs and cats. Utilizing this technology will greatly improve diagnostic yield and, thus, patient outcome; and incorporating teleradiology consultations will also boost the veterinary team's confidence in reading radiographs and recommending therapy.

When you also take the time to properly educate pet owners about the value these services represent to their beloved pets, they'll happily pay the cost, leading to healthy patients and loyal clients. ※

Teleradiology Troubleshooting

Challenge	Solution
Exporting images. This is the one sticking point with dental teleradiology—exporting the images out of the system can be a challenge.	Work with your dental software company to determine the easiest method to do this. ***You can find instructions on exporting from the most common systems at vdspets.com.***
Turnaround time. The other challenge with dental teleradiology is that typical turnaround time for dental radiology is 24 hours, but it can take even longer. This means that the information is not available in real time, meaning a staged anesthesia is required. While this is recommended by some dentists, in my opinion, it should be reserved for long cases—over three hours, generally speaking.	Real-time care is critical for pets under anesthesia. **VetDentalRad.com offers STAT readings.** When a study is sent in STAT, a Board-Certified Veterinary Dentist™ will be on the phone with the clinician within 20 minutes to talk through each tooth and how to treat it. A written report will be created within 24 hours.
Time to obtain diagnostic images. Obtaining diagnostic dental images can be a lengthy endeavor, but this should not be the case. Full-mouth dental radiographs should not take more than 7 minutes in a cat and 15 minutes in a large dog. If your staff is taking longer, training should be performed.	Most radiology companies have technicians who can be hired for a half-day to do training. There are also training centers all over the country, as well as meetings like AAHACon in San Diego, where I'll be leading a special session. (Go to **aaha.org/aahacon** for more on that.)

Brook Niemiec, DVM, DADVC, is recognized internationally as one of the leading authorities in veterinary dentistry. He is a 1994 graduate of the University of California Davis School of Veterinary Medicine and a board-certified specialist in veterinary dentistry in both the American and European Veterinary Dental Colleges (AVDC) as well as a fellow in the Academy of Veterinary Dentistry (AVD). He is one of about 10 veterinarians worldwide to hold all three of these certificates. He is a past president of the AVD, as well as the AVDC delegate to the World Small Animal Veterinary Association (WSAVA).

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Pain Management Is a Team Sport

Everyone in the Practice Can Play a Role

by Kate Boatright, VMD

CSRs play a key role in starting the conversation about patient pain, and their role in pain management can start even before a patient enters the hospital.

"Do you think my pet is in pain?" is a common question from concerned pet owners. A pain-free life is a priority for pet families, yet many do not recognize the subtle signs of pain their pets display. The prevention and management of pain in veterinary patients is a core responsibility that should be shared by all members of the veterinary team.

"Recognizing and treating pain is vital for patient care, quality of life, and our obligation as veterinary professionals," said Alison Gottlieb, CVT, VTS (ECC) Elite FFCP, LSHC-S, of Hickory Veterinary and Specialty Hospital.

Creating a Team that Prioritizes Pain Management

The development of a written pain management plan is a great starting place for veterinary clinics. This plan "needs to include everyone using a consistent species-specific pain scale, implementing a pet-owner pain assessment scale, and written protocols for multimodal pain treatment for acute, chronic, and surgical conditions," says Jennifer F. Johnson, VMD, CVPP. It is important to recognize that there are different types of pain that require different assessments, interventions, and client education. The *2022 AAHA Pain Management Guidelines for Dogs and Cats* provide a resource for veterinary teams who are looking to maximize their pain management strategies.

All team members should understand the importance of pain management and receive training on how to recognize pain in patients and talk about pain with pet owners. Regardless of their position, every individual should feel comfortable discussing concerns for patient pain with the attending veterinarian to ensure that nothing gets missed. "The entire [veterinary] team needs to be on board for analgesia to get to our patients," said Gottlieb. "The most important part is ensuring everyone agrees relieving pain is the focal point of patient care."

Client Service Representatives: Eyes and Ears in the Waiting Room

Client service representatives (CSRs) play a key role in starting the conversation about patient pain, and their role in pain management can start even before a patient enters the hospital. As the team members who are fielding phone calls and other communications, they should be aware of both obvious and subtle signs of pain that owners might describe when they call with a question or to make an appointment. If a CSR recognizes a client's concern as a possible sign of pain, they should encourage the owner to schedule an appointment for a full evaluation and discussion with the doctor. If clients are calling in with postoperative concerns, the CSR should listen for reports of signs that might be due to pain, determine if the owner is giving postoperative medications as prescribed, and pass the concern off to a credentialed veterinary technician or veterinarian for follow-up.

For clients who are coming to an appointment for pain assessment or mobility concerns, CSRs can suggest that the client record videos of their pet during their daily life so that the veterinarian can see the animal's behavior in their home environment.

> "I often learn a great deal about canine pain while spending time in the waiting room."
>
> —ALISON GOTTLIEB, CVT, VTS (ECC) ELITE FFCP, LSHC-S

This can be an especially powerful tool for pain evaluation in cats, as they often will not walk around the examination room during an appointment. CSRs can also send pain assessments to owners prior to the appointment or provide them upon arrival at the clinic. These tools should be utilized for any patient presenting with a pain or mobility concern and for patients at higher risk of osteoarthritis, such as senior pets or pets with known orthopedic disease.

Finally, CSRs are often the first team members to see a patient arriving at the clinic. Gottlieb noted, "I often learn a great deal about canine pain while spending time in the waiting room." How patients move in and out of the building and move from a sitting or lying position to standing can demonstrate evidence of pain. "Ensuring CSRs have the knowledge to pick up on these signs greatly improves the team dynamic," said Gottlieb. They should make other members of the veterinary team aware of their observations, as patient behavior may change in the examination room or treatment area.

Veterinary Assistants: Managing Pain in the Exam Room

Veterinary assistants should feel comfortable recognizing signs of pain in patients as well, both while observing or handling them and obtaining a history. Observing how a patient moves when bringing them from the waiting area into an examination room offers an initial evaluation. Assistants should be empowered to be proactive about patient comfort in the exam room. For instance, if they note that a dog is

having trouble getting up or slipping on the floor, they can provide a rug or other surface with more traction to help ensure patient comfort and prevent exacerbation of pain.

When taking a history, assistants should ask specific questions about mobility and potential subtle signs of pain, such as changes in appetite, sleeping habits, litterbox use, aggression, and other behaviors. They should feel comfortable sharing their observations of the patient and any "red flags" in the history with the attending veterinarian.

Finally, the way veterinary assistants handle patients can also help to both detect and manage pain. "Knowing proper handling for patients with chronic pain will provide a much better patient experience," said Gottlieb. Assistants should be trained in various handling techniques so that they are comfortable restraining and handling patients in a way that is as pain-free as possible.

"Recognizing pain while handling patients…and bringing it to the technicians' or doctor's attention is the slam dunk for the team," continued Gottlieb. Assistants should be keenly aware of a patient's reaction to being handled in a certain way, placed in a particular position, or palpated on a specific part of their body.

Credentialed Veterinary Technicians: Pain Sentinels for Patients

Both the veterinarian and veterinary technician oaths include language around the relief of animal suffering, of which pain is a key contributing factor. Johnson advocates for "constant communication between CrVTs and veterinarians. Vets need to trust the nursing staff to evaluate pain and plan treatments accordingly."

Credentialed veterinary technicians (CrVTs) are highly educated professionals who often "have more patient and owner contact [than veterinarians], which is essential for recognizing and educating on pain," said Gottlieb. They are the ones observing and monitoring surgical patients, attending to basic needs during hospitalization, and administering most treatments. A validated pain assessment tool should be used by all CrVTs and veterinarians caring for patients to ensure continuity of care and rapid detection of a change in pain status.

When taking a history, assistants should ask specific questions about mobility and potential subtle signs of pain, such as changes in appetite, sleeping habits, litterbox use, aggression, and other behaviors.

"Hospitals need to train CrVTs and allow them the autonomy to make treatment decisions based on changes found with patient comfort," said Johnson. A treatment plan developed by a veterinarian could include PRN orders for pain medication if the comfort status of a patient changes, especially if a veterinarian is not always immediately available to approve a medication. "I need to be able to communicate and collaborate with the doctor on a pain plan to meet [the patient's] needs and follow-up if additional analgesia or anxiolytics are needed," said Gottlieb.

Another powerful tool in pain management is the ability to anticipate pain and pre-emptively manage it. CrVTs should feel comfortable having a conversation with their doctors about the potential for pain and asking if pain medications should be prescribed. This can be especially important for preoperative patients and outpatients with conditions that are not always thought of as painful, such as neoplasia or dermatitis.

CrVTs should also be utilized heavily in client education about pain management strategies. They often have more time than the veterinarian to discuss specific ways to handle a painful pet at home, review medication instructions, and discuss monitoring for changes in patient status that may indicate uncontrolled pain. Scheduling surgical or hospitalization discharges with a CrVT can help to assure owners of patients at risk for acute pain are well prepared. The same CrVT could be tasked with making a follow-up call in a day or two to see how the patient is doing and ask questions of the client to assess the pet at home.

Clients: Pain Evaluation Starts at Home

The final member of the pain management team is the client. These individuals are in the best position to monitor response to treatment and detect changes in the patient that may indicate new or worsening pain. It is the duty of the veterinarian and their team to provide clients with the education and tools they need to carry out this critical role. "The more pet owner education that team members can provide, the better," said Johnson.

Acute pain is more readily recognized by pet owners in the home environment and may prompt them to schedule a veterinary visit. Chronic pain is often more difficult to detect, as pets do not display the same signs as for acute pain, such as a nonweight bearing lameness or vocalization. "Often, pet owners do not recognize that their pet is in pain

Roles and Responsibilities of Each Team Member

CSRs

- Provide clients with pain assessment tools and ask them to complete prior to appointment
- Recognize signs of pain and anxiety in patients entering the clinic and in the waiting room
- Recognize signs of pain that owners may be reporting during phone calls or when making follow-up calls after a visit
- Inform the doctor and/or CrVT managing the case about observations and concerns

Veterinary Assistants

- Handle patients in a way that minimizes pain and anxiety
- Recognize signs of pain that owners may report when taking history
- Recognize signs of pain and anxiety in the exam room, treatment area, hospital wards, etc.
- Communicate your observations and concerns to the rest of the team

CrVTs

- Constant monitoring for hospitalized and surgical patients for signs of pain and anxiety
- Owner education

Veterinarians

- Prescribe pain medications
- Discuss nonpharmaceutical options for pain relief with clients
- Educate clients about signs of pain, both acute and chronic

Management Team

- Ensure the team has the resources they need
- Provide time for team training on pain assessment and management
- Encourage team members to obtain CE in pain assessment and management through webinars and conferences

because they are wagging their tail or still running around the yard," said Johnson. Pet owners often miss subtle behavior changes that are indicative of pain—such as the fact that their cat no longer sleeps in their preferred spot on the windowsill, or their dog goes more slowly up and down the stairs. Often, these behavior changes are attributed to "normal" aging.

"Pet-owner pain assessments are critical to use," said Johnson. Both Gottlieb and Johnson recommend the use of the Feline Grimace Scale app for monitoring pain in cats. "Cat owners are often surprised to see the facial expressions and how they are key to recognition of pain," said Johnson.

Once pain is recognized by pet owners, veterinarians can discuss the various options for multimodal pain management that are available. Johnson notes that it is important to make pet owners aware that pain management means more than just prescribing narcotics. The best pain management integrates both pharmaceutical and nonpharmaceutical interventions to maximize patient comfort.

Collaboration Improves Patient Outcomes

It is essential that the team advocate for patient comfort throughout outpatient visits and inpatient stays. It is important to remember that pain exists in many forms and is not isolated to the postoperative period, trauma patients, or those with osteoarthritis. Patients with pancreatitis, severe dental disease, corneal ulcers, and many preoperative patients are experiencing pain in the hospital as well. Team members should be trained to be alert for signs of pain in all patients and perform a pain evaluation, regardless of the patient's reason for entering the hospital.

"[Keep] pain in mind with every diagnostic test and potential treatment," recommended Gottlieb. Even a diagnostic procedure as routine as venipuncture could become painful for a patient depending on how they are restrained and handled. CSRs and assistants should alert CrVTs and veterinarians to signs of pain in a patient and ensure that the patient is handled in a way that minimizes pain. It is also important to remember that there are many pain management tools that are nonpharmaceutical, such as warm compresses, padded bedding, and cold laser therapy, that can be employed for patients during their stay.

"Everyone needs to be on the 'same page' where the culture of the practice places an emphasis on pain management for superior outcomes," said Johnson. "Every small animal general practice can benefit from making pain management a priority. Your patients will heal faster after surgery, you will recognize fewer complications, and you will create better long-term outcomes for patients with chronic pain." ※

Create a brighter tomorrow for companion animals and build a future where pain has no place in the lives of our patients. Stay a step (or several) ahead of pain. The AAHA Pain Management Guidelines Certificate provides a comprehensive dive into effective multimodal approaches focusing on preemptive and proactive treatments with excellent team coordination. Visit aaha.org/certificates for more information.

Kate Boatright, VMD, is a small animal veterinarian, speaker, and author in western Pennsylvania. She graduated from the University of Pennsylvania in 2013 and has worked in rural small animal general practice and emergency clinics ever since. She is passionate about inciting positive change in the profession through mentorship, advocating for spectrum of care, and servant leadership in organized veterinary medicine.

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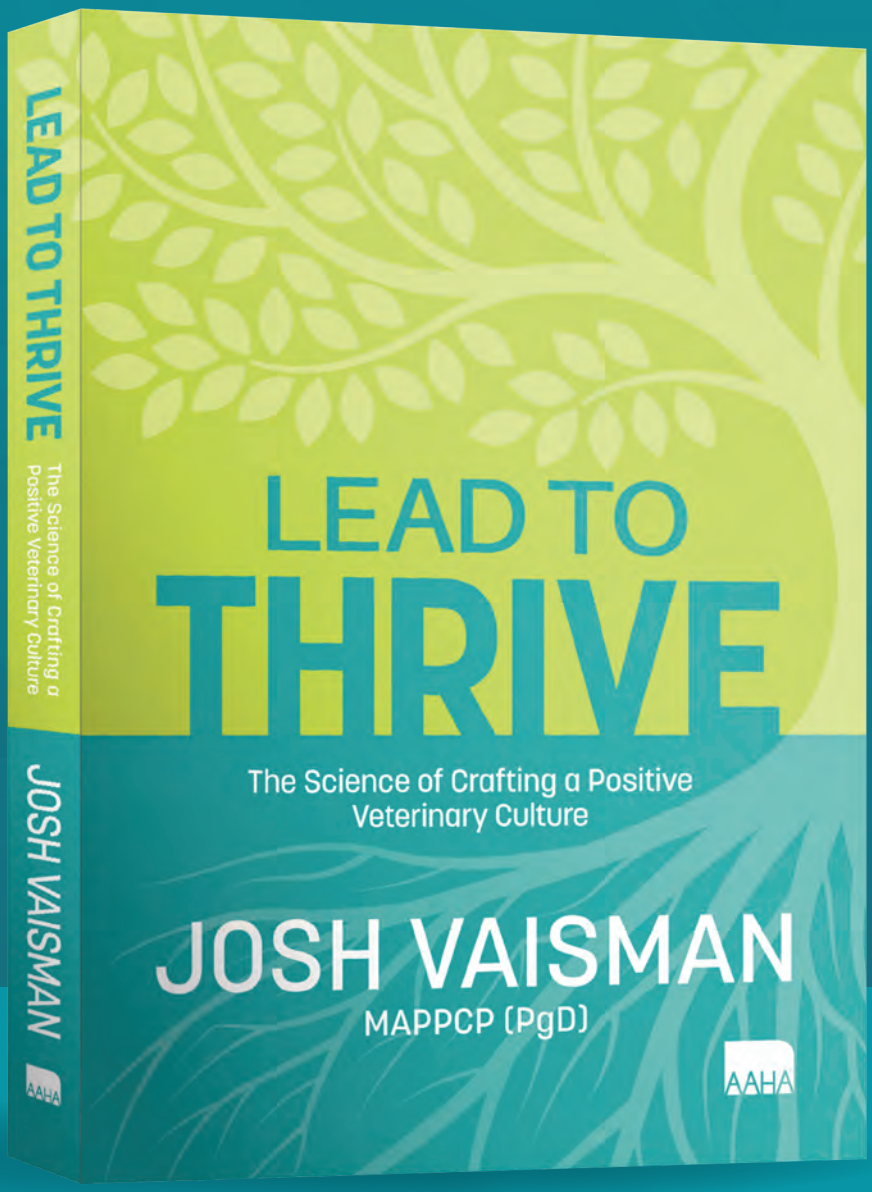

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Stress First Aid for Veterinary Teams

A Chat with Melyssa Allen, MA, CHWC, DACLM

Interview by Katie Berlin, DVM

The concept of first aid has become such a part of life that it seems unimaginable not to have some essential tools on hand in case a minor injury or illness threatens to turn major. Melyssa Allen, MA, CHWC, DACLM, aims to make first aid for stress just as second-nature for veterinary professionals. Allen describes the Stress First Aid framework, first developed for the US military and now available for health care workers, and why it should be part of every veterinary practice, just like antihistamines, Band-Aids, and an eye wash station.

Katie Berlin: Can you tell us about Stress First Aid?

Melyssa Allen: Stress First Aid is a framework that was created by doctors, including Patricia Watson, PhD, [from whom] I learned how to facilitate. She and her colleague, Dr. Richard Westphal, created this program originally to serve the Navy and the Marine Corps to provide a model of peer support, provide some common language, and start the conversation about how to talk about these stress reactions and stress injuries. So it was originally developed for military populations, but there have been different iterations that have risen from this framework to serve other high-stress occupations. [They wanted to make sure] it was freely accessible to anyone who might need it.

Stress First Aid helps people start to recognize and identify stress injuries and reactions in themselves and in others, and then have a model of self-care actions and peer, leadership, and co-worker support to help ingrain this into the culture of different industries.

As you're learning about Stress First Aid, you're probably going to think, "Oh, well, I already do some of that stuff," and chances are you've found ways of mitigating some stress reactions either in yourself or in others. But Stress First Aid provides more of a comprehensive and flexible framework. I think that's the part I like about it the most too. You have to find what works best for you in whatever it is you're trying to do in life, especially when it comes to behavior change and trying to establish new habits.

So first of all, [you've got to learn to recognize] where your stress is at certain points in time and think about it from a first aid model. When you're getting trained in administering physical first aid, you can typically see there's an injury that needs to be addressed or someone is unconscious on the floor, and that's when your training kicks in. So what's usually the first thing that you have to do? You have to check and make sure that the scene is safe, but then you also have to recognize what's going on.

There is a stress continuum from green to yellow to orange to the red zone. Sometimes it's hard to verbalize what it is you're feeling at a certain time, so the stress continuum kind of breaks it down. Green is where you are functioning optimally. Yellow is where maybe there's something a little off, something stuck with you or somebody kind of irritated you that day, but it's not having a significant impact on your wellbeing or your performance. The orange and red zones are where that starts to show up. And at any point in time, you can fluctuate between the green to the red zone and back again, within the span of a day or even a few hours.

It's really a tool to help you better identify and recognize, "Where am I right now?" Because that's what's going to inform what kind of action you take, and it can also help you recognize that in other people too... This framework can even come in handy when dealing with clients that are experiencing stress arousal and injury.

With regular first aid, there's usually a physical injury that you can see with your eyeballs. You can't really see that with a stress injury, right? It's invisible and you either have to ask people the right questions or check in on that with yourself.

With stress injuries, there are usually four different categories that come up. And as I'm going through these, you'll probably be like, "Yep, check, been there. Like maybe I'm there right now."

The first one is trauma, because in your roles, you're going to experience some level of trauma in some way, shape, or form. When it comes to traumatic injuries, it is going to be subjective to each person, just like stress is also subjective. It's our perception of a certain experience. Two people could be involved in a car accident and one could walk away just a little shaken up, but the other person could walk away and potentially develop something like posttraumatic stress disorder. It is going to be a unique and individual experience for everyone. But then there are also instances in which it's more of a collective experience.

The second one is loss. So that's a grief injury—something that we all experienced during COVID especially, whether it was loss of life, loss of opportunities to travel or have celebrations, loss of jobs. There are so many instances where loss can show up.

> "There is a stress continuum from green to yellow to orange to the red zone."
> —MELYSSA ALLEN, MA, CHWC, DACLM

Evgeny Gromov/iStock via Getty Images Plus

The third one is inner conflict, and this is where moral injury comes in. And that's where you are seeing things that go against your moral compass, but maybe there's no opportunity for you to act in alignment with your values.

And then the last one I'm sure we're all familiar with: it's wear and tear. So it's that fatigue injury. It's that accumulation of stress over time that just wears and tears you down. So those are the four different categories of stress injuries, and that can be helpful when it comes to trying to conceptualize and identify what your stress is.

KB: Trauma, for sure, and grief, I feel like we sometimes put in a separate category from the wear and tear and the inner conflict—because wear and tear and inner conflict, that's all day, every day in vet med. We have to work with other humans that make decisions or create the conditions we have to work under. So there's very little control sometimes and that's very hard.

It took me a while to realize that what we go through on a daily basis [in vet med] really is trauma and produces a lot of grief. Because, like you said, I think of a car accident, I think of war, I think of cancer. I think of trauma as being these enormous events, and that I don't have a right to think about things I go through as trauma if they're not those events.

And the same goes for grief. I heard a lot of conversations about this during the height of the pandemic where people were talking about grief and people would feel bad for not being able to go to a Taylor Swift concert when other people were dying. I heard an expert say that grief is grief, and the physical and emotional sensations are the same whether it's due to this cause or this cause. Is that something that this framework helps us discuss and talk about, or is that something that you come into the framework having done a little bit of work to realize? Because there are a lot of people listening who are like, "I don't go through trauma," but we do.

MA: I think that's one of the first big barriers. We don't want to admit it to ourselves because it might be stigmatized as a weakness if you've experienced trauma. And even with grief, we run into this phenomenon called *comparative suffering*, where we minimize our own experiences because we think someone out there has it worse than we do. Stress First Aid helps you to recognize what's going on for you with your stress and then, from there, be able to take self-care actions to support yourself through whatever it is that you're experiencing—and even provide some coworker support if you notice changes in their behavior or if someone comes to you for help.

The meat and potatoes of Stress First Aid is the Seven Cs model, which walks you through the action steps that you take when there's a stressor that's been experienced. And whether you found it traumatic or not, if you notice you are off or you're just feeling kind of funky, you can use this model to provide support for yourself, but you also have to be willing to support yourself through that too. And I know that there are some people out there who really want to take the "suck it up, buttercup" mentality, but it's only going to do you more damage over time because our body responds differently to stress when we interpret that stress differently.

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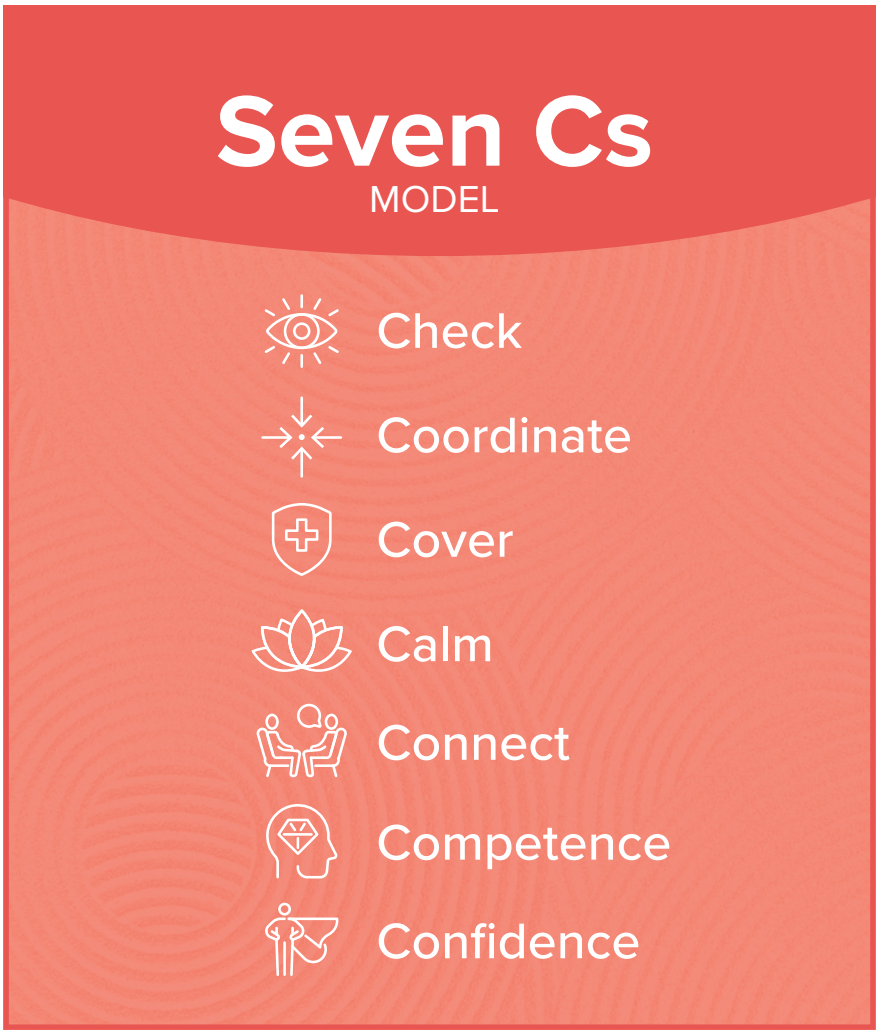
> "Even with grief, we run into this phenomenon called comparative suffering, where we minimize our own experiences because we think someone out there has it worse than we do."
>
> —MELYSSA ALLEN, MA, CHWC, DACLM



The first C is *check*. It's such an important step because it shows up throughout the entire seven Cs model. Check and the second step, coordinate, are constantly present throughout that entire cycle.

And as much as we would love for it to go in a nice little circle, that's usually not how it happens. Life is not as linear as we would like. That's where you have to be flexible, use this as an informed model to really tackle some of these things, and just do the best you can. I think that's one of the things I want people to walk away with; maybe you don't have training in mental health but you don't need it to be able to support someone and yourself in a way that shows you care.

So the second C, *coordinate*, refers to coordinating some sort of action. Do you need to coordinate follow-up resources for this person? Do you need to coordinate that next level of care? Especially if someone comes up to you saying that they're in danger or someone else is in danger, that's when you really need to focus on what needs to happen to keep everyone safe. And that's the third C, which is *cover*—ensuring everyone is safe or getting them to a place where they can be safe, whatever that might look like.

And once they or you are somewhere safe, the fourth C is *calm*. This is where finding strategies to help down-regulate your nervous system a little bit—you're not going to feel totally zen and completely relaxed, I think that's a little unrealistic to expect—but it's about finding some different strategies to help you feel grounded and secure and to help at least calm your physiological response. So that's going to be deep breathing, grounding practices, like 5-4-3-2-1: Find five things that you can see in this room, listen for four sounds, find three things you can feel, two things that you can smell, and one thing you can taste, and walk through the senses to bring you back to the present moment.

That's one of the fastest ways to help ourselves get out of that state of fight or flight, because when we deep breathe all the way into the belly, it tickles our vagus nerve.

The [fifth C] is *connect*, connecting to social support, whether that's professional support like seeking therapy services, connecting with groups that are going through similar challenges like peer support groups, or if you're in the workplace and you are concerned about someone going home, making sure that they're connected to people who care about them after they leave.

Number six is *competence*. If you mess up in the workplace, your ego takes a hit and then you beat yourself down when you've already fallen, and it doesn't really help you get out

of that. So instead of trying to take on something that maybe you're just learning, try to go back to skills you have mastered. Things that you're confident you're not going to mess up. That's going to help restore your belief in yourself and soothe that bruised ego a bit, and you're going to start feeling like you can take on hard things again.

That's when we come to [number seven,] *confidence*—being able to restore your self-esteem, restore your hope. You're able to take on challenges again without kind of going into that negative spiral.

So those are the seven Cs of Stress First Aid. Allow yourself to practice different ways for yourself, for your teams, for your coworkers, to help create this flexible model of how to approach stress injuries and reactions in a way that is supportive. And ultimately the hope is for Stress First Aid to become ingrained within a workplace setting so that it's second nature, and it helps to break the stigma around these conversations.

One of the ways I've seen it used is people doing a pulse check on their units. One of my favorite instances of this was a big whiteboard with different colored sticky notes, and people could go pick up a sticky note and slap it where they felt they were on the stress continuum for the day, so you could get a visual of where the team was.

And if there's a lot of orange, a lot of red that you're seeing, maybe you're able to call a quick group together to ask, "What do we need?" Like a practice manager saying, "What can I do to support you all? Maybe let's just all take a breath together. Let's order some pizza."

KB: What do you think we in vet med can learn from the work that's being done in human health care and the adoption of frameworks like Stress First Aid?

MA: I think it's going to provide a more robust approach to providing the support that's necessary. It's really about exploring [available resources] and knowing your teams and asking, "Is this something they would find beneficial?" If you have a team that's maybe a little skeptical about things like this, just introduce it and say, "What do you all think about this?" And if your clinic is pretty crispy and burnt out, you're probably going to get a bunch of eye rolls. But that could be the clinic that needs it the most. [And you can] plant those seeds and let people know this is available; keep it visible. [Hang it] somewhere that people can seek it out when they need it most.

KB: Do you have a plan to develop this for the veterinary community specifically?

MA: Yes, Dr. Watson and I are seeking funding to develop a veterinary-specific Stress First Aid kit and to be able to host focus groups with veterinary professionals to have relevant examples that really speak to the population it's being delivered to. While there are a lot of parallels with human health care, there are also so many unique instances.

KB: If you could put a Post-It on the bathroom mirror of every veterinary professional so that they would see it when they get up in the morning, what would it say?

MA: It would say, "Remember to be kind to yourself, because if being hard on yourself worked, it would've already worked by now." ※

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The Stress First Aid information, including a booklet for health professionals, is found here: ptsd.va.gov/professional/treat/type/stress_first_aid.asp.

Melyssa Allen, MA, DACLM, is a board-certified lifestyle medicine professional with a background as an animal trainer, fitness instructor, and mental health counselor. She received her bachelor's degrees in biology and psychology and her master's in clinical psychology from the University of Central Florida. Melyssa is passionate about helping veterinary professionals implement positive lifestyle habits as a veterinary well-being coach with her company, Mind-Body-Thrive Lifestyle. Find Melyssa on her website, veterinary-wellbeing.com, on Instagram @veterinary_wellbeing, on the Veterinary Teams Living Well Facebook group, and on Insight Timer (which you can use for FREE: insighttimer.com/mindbodythrive).

Katie Berlin, DVM, CVA, is AAHA's Director of Content Strategy.

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Ericka Ivey

Practice Manager

All for Pets Veterinary Clinic

Cabot, Arkansas

Year started in vet medicine: **2013**

Years with practice: **9**

Nominated by: **Katy Sala, Client Service Coordinator**

AAHA MEMBER

Employee of the Month

Why Is Ericka So Awesome?

Ericka is so comical and witty that there's never a dull moment around her. She shows great determination in her life and profession. Ericka is a true inspiration to all that know her.

How Does She Go Above and Beyond?

Ericka is an advocate for all employees at All for Pets. She leads by example and remains compassionate towards others in difficult situations. She never gives up and is always looking to better the staff, the practice, and herself. Her most recent endeavor is working toward earning her CVPM certification.

In Her Own Words

Why do you love your job: I have always had a passion for veterinary medicine. Becoming a practice manager has given me a sense of purpose that I can be an advocate for animals and our employees. Not everyone can say that they enjoy coming to work every day, but I can. I have gained a family at All for Pets and couldn't be more thankful.

Pets at home: I have a four-year-old black cat named Hoyt. He loves to play with the laser pointer, chase ice cubes, and parkour!

What brought you to the profession: When I was in junior high, we had to do a presentation for a future career choice. Naturally, I chose the veterinary field. I was able to job shadow for a day at All for Pets Veterinary Clinic and knew from that moment this is what I wanted to do. Fast forward to years later, I started working at All for Pets in 2014 and became the Practice Manager of the very clinic I shadowed at when I was 13 years old. It has been a full circle moment for me!

Hobbies outside of work: I love to go fishing, working in my garden, and spending time with my family and friends.

Favorite TV show: My favorite show is *Love Island!*

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