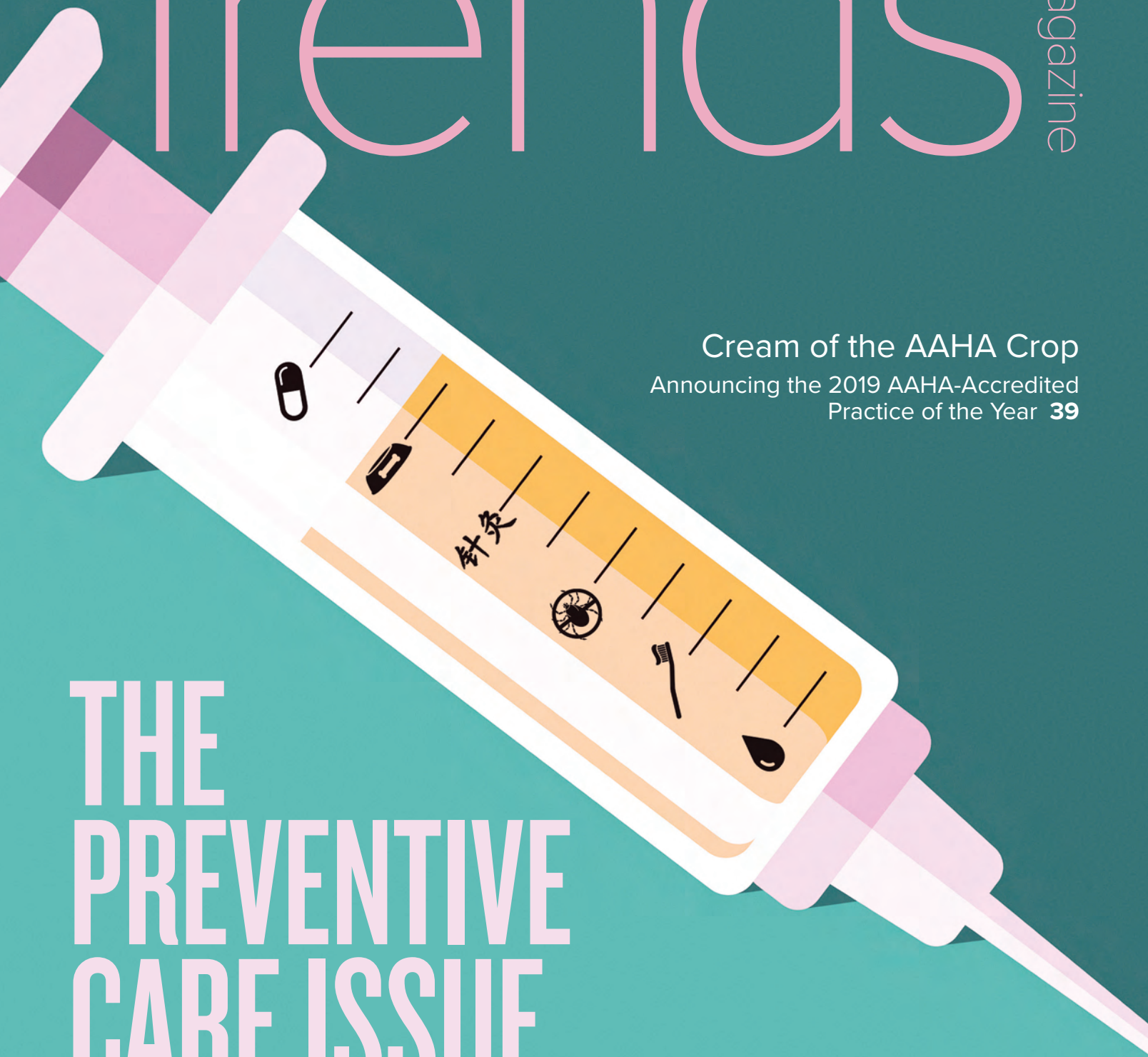
PARASITES | CLIENT REMINDERS | INTEGRATIVE CARE

AAHA

NOVEMBER 2019
trends.aaha.org

# Trends magazine




## Cream of the AAHA Crop

Announcing the 2019 AAHA-Accredited Practice of the Year **39**

# THE PREVENTIVE CARE ISSUE

## All Things Preventive

Preventive Care Virtual Roundtable **24**


# ALLYDVM Retention Calendar

## A better way to GROW your practice

ALLYDVM's Retention Calendar is a unique software tool that helps your veterinary practice schedule more appointments and gain thousands in additional revenue without any additional marketing investment.

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- ✓ The #1 flea- and tick-killing chew preferred by dogs[1]
- ✓ No second-guessing – effective when given with or without food
- ✓ A monthly routine that's easy for clients to remember

NexGard®
(afoxolaner) Chewables

*What one little chew can do*

**IMPORTANT SAFETY INFORMATION: NexGard** is for use in dogs only. The most frequently reported adverse reactions include vomiting, pruritus, lethargy, diarrhea and lack of appetite. The safe use of **NexGard** in pregnant, breeding, or lactating dogs has not been evaluated. Use with caution in dogs with a history of seizures or neurologic disorders. For more information, see the full prescribing information or visit www.NexGardClinic.com.

Boehringer Ingelheim



[1]Data on file.

# NexGard®
## (afoxolaner) Chewables

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

**Description:**
NexGard® (afoxolaner) is available in four sizes of beef-flavored, soft chewables for oral administration to dogs and puppies according to their weight. Each chewable is formulated to provide a minimum afoxolaner dosage of 1.14 mg/lb (2.5 mg/kg). Afoxolaner has the chemical composition 1-Naphthalenecarboxamide, 4-[5- [3-chloro-5-(trifluoromethyl)-phenyl]-4, 5-dihydro-5-(trifluoromethyl)-3-isoxazolyl]-N-[2-oxo-2-[(2,2,2-trifluoroethyl)amino]ethyl.

**Indications:**
NexGard kills adult fleas and is indicated for the treatment and prevention of flea infestations *(Ctenocephalides felis),* and the treatment and control of Black-legged tick *(Ixodes scapularis),* American Dog tick *(Dermacentor variabilis),* Lone Star tick *(Amblyomma americanum),* and Brown dog tick (*Rhipicephalus sanguineus*) infestations in dogs and puppies 8 weeks of age and older, weighing 4 pounds of body weight or greater, for one month. NexGard is indicated for the prevention of *Borrelia burgdorferi* infections as a direct result of killing *Ixodes scapularis* vector ticks.

**Dosage and Administration:**
NexGard is given orally once a month, at the minimum dosage of 1.14 mg/lb (2.5 mg/kg).

**Dosing Schedule:**

| Body Weight | Afoxolaner Per Chewable (mg) | Chewables Administered |
|---|---|---|
| 4.0 to 10.0 lbs. | 11.3 | One |
| 10.1 to 24.0 lbs. | 28.3 | One |
| 24.1 to 60.0 lbs. | 68 | One |
| 60.1 to 121.0 lbs. | 136 | One |
| Over 121.0 lbs. | Administer the appropriate combination of chewables | |

NexGard can be administered with or without food. Care should be taken that the dog consumes the complete dose, and treated animals should be observed for a few minutes to ensure that part of the dose is not lost or refused. If it is suspected that any of the dose has been lost or if vomiting occurs within two hours of administration, redose with another full dose. If a dose is missed, administer NexGard and resume a monthly dosing schedule.

*Flea Treatment and Prevention:*
Treatment with NexGard may begin at any time of the year. In areas where fleas are common year-round, monthly treatment with NexGard 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 control product.

*Tick Treatment and Control:*
Treatment with NexGard may begin at any time of the year (see **Effectiveness**).

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

**Warnings:**
Not for use in humans. Keep this and all drugs out of the reach of children. In case of accidental ingestion, contact a physician immediately.

**Precautions:**
Afoxolaner 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 (see **Adverse Reactions** and **Post-Approval Experience**).

The safe use of NexGard in breeding, pregnant or lactating dogs has not been evaluated.

**Adverse Reactions:**
In a well-controlled US field study, which included a total of 333 households and 615 treated dogs (415 administered afoxolaner; 200 administered active control), no serious adverse reactions were observed with NexGard.

Over the 90-day study period, all observations of potential adverse reactions were recorded. The most frequent reactions reported at an incidence of > 1% within any of the three months of observations are presented in the following table. The most frequently reported adverse reaction was vomiting. The occurrence of vomiting was generally self-limiting and of short duration and tended to decrease with subsequent doses in both groups. Five treated dogs experienced anorexia during the study, and two of those dogs experienced anorexia with the first dose but not subsequent doses.

**Table 1: Dogs With Adverse Reactions.**

| | Treatment Group | | | |
|---|---|---|---|---|
| | Afoxolaner | | Oral active control | |
| | N[1] | % (n=415) | N[2] | % (n=200) |
| Vomiting (with and without blood) | 17 | 4.1 | 25 | 12.5 |
| Dry/Flaky Skin | 13 | 3.1 | 2 | 1.0 |
| Diarrhea (with and without blood) | 13 | 3.1 | 7 | 3.5 |
| Lethargy | 7 | 1.7 | 4 | 2.0 |
| Anorexia | 5 | 1.2 | 9 | 4.5 |

[1] Number of dogs in the afoxolaner treatment group with the identified abnormality.

[2] Number of dogs in the control group with the identified abnormality.

In the US field study, one dog with a history of seizures experienced a seizure on the same day after receiving the first dose and on the same day after receiving the second dose of NexGard. This dog experienced a third seizure one week after receiving the third dose. The dog remained enrolled and completed the study. Another dog with a history of seizures had a seizure 19 days after the third dose of NexGard. The dog remained enrolled and completed the study. A third dog with a history of seizures received NexGard and experienced no seizures throughout the study.

**Post-Approval Experience (July 2018):**
The following adverse events are based on post-approval adverse drug experience reporting. 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 for NexGard:

Vomiting, pruritus, lethargy, diarrhea (with and without blood), anorexia, seizure, hyperactivity/restlessness, panting, erythema, ataxia, dermatitis (including rash, papules), allergic reactions (including hives, swelling), and tremors.

**Contact Information:**
For a copy of the Safety Data Sheet (SDS) or to report suspected adverse drug events, contact Merial at 1-888-637-4251 or www.nexgardfordogs.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/AnimalVeterinary/SafetyHealth.

**Mode of Action:**
Afoxolaner is a member of the isoxazoline family, shown to bind at a binding site to inhibit insect and acarine ligand-gated chloride channels, in particular those gated by the neurotransmitter gamma-aminobutyric acid (GABA), thereby blocking pre- and post-synaptic transfer of chloride ions across cell membranes. Prolonged afoxolaner-induced hyperexcitation results in uncontrolled activity of the central nervous system and death of insects and acarines. The selective toxicity of afoxolaner between insects and acarines and mammals may be inferred by the differential sensitivity of the insects and acarines' GABA receptors versus mammalian GABA receptors.

**Effectiveness:**
In a well-controlled laboratory study, NexGard began to kill fleas four hours after initial administration and demonstrated >99% effectiveness at eight hours. In a separate well-controlled laboratory study, NexGard demonstrated 100% effectiveness against adult fleas 24 hours post-infestation for 35 days, and was ≥93% effective at 12 hours post-infestation through Day 21, and on Day 35. On Day 28, NexGard was 81.1% effective 12 hours post-infestation. Dogs in both the treated and control groups that were infested with fleas on Day -1 generated flea eggs at 12- and 24-hours post-treatment (0-11 eggs and 1-17 eggs in the NexGard treated dogs, and 4-90 eggs and 0-118 eggs in the control dogs, at 12- and 24-hours, respectively). At subsequent evaluations post-infestation, fleas from dogs in the treated group were essentially unable to produce any eggs (0-1 eggs) while fleas from dogs in the control group continued to produce eggs (1-141 eggs).

In a 90-day US field study conducted in households with existing flea infestations of varying severity, the effectiveness of NexGard against fleas on the Day 30, 60 and 90 visits compared with baseline was 98.0%, 99.7%, and 99.9%, respectively.

Collectively, the data from the three studies (two laboratory and one field) demonstrate that NexGard kills fleas before they can lay eggs, thus preventing subsequent flea infestations after the start of treatment of existing flea infestations.

In well-controlled laboratory studies, NexGard demonstrated >97% effectiveness against *Dermacentor variabilis,* >94% effectiveness against *Ixodes scapularis,* and >93% effectiveness against *Rhipicephalus sanguineus,* 48 hours post-infestation for 30 days. At 72 hours post-infestation, NexGard demonstrated >97% effectiveness against *Amblyomma americanum* for 30 days. In two separate, well-controlled laboratory studies, NexGard was effective at preventing *Borrelia burgdorferi* infections after dogs were infested with *Ixodes scapularis* vector ticks 28 days post-treatment.

**Animal Safety:**
In a margin of safety study, NexGard was administered orally to 8 to 9-week-old Beagle puppies at 1, 3, and 5 times the maximum exposure dose (6.3 mg/kg) for three treatments every 28 days, followed by three treatments every 14 days, for a total of six treatments. Dogs in the control group were sham-dosed. There were no clinically-relevant effects related to treatment on physical examination, body weight, food consumption, clinical pathology (hematology, clinical chemistries, or coagulation tests), gross pathology, histopathology or organ weights. Vomiting occurred throughout the study, with a similar incidence in the treated and control groups, including one dog in the 5x group that vomited four hours after treatment.

In a well-controlled field study, NexGard was used concomitantly with other medications, such as vaccines, anthelmintics, antibiotics (including topicals), steroids, NSAIDS, anesthetics, and antihistamines. No adverse reactions were observed from the concomitant use of NexGard with other medications.

**Storage Information:**
Store at or below 30°C (86°F) with excursions permitted up to 40°C (104°F).

**How Supplied:**
NexGard is available in four sizes of beef-flavored soft chewables: 11.3, 28.3, 68 or 136 mg afoxolaner. Each chewable size is available in color-coded packages of 1, 3 or 6 beef-flavored chewables.

NADA 141-406, Approved by FDA

Marketed by: Frontline Vet Labs™, a Division of Merial, Inc.
Duluth, GA 30096-4640 USA

Made in Brazil.

®NexGard is a registered trademark, and
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Rev. 05/2018

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trends.aaha.org



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# features


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1. Cardholder Engagement Study Q2 2018.


AAHA2019VA

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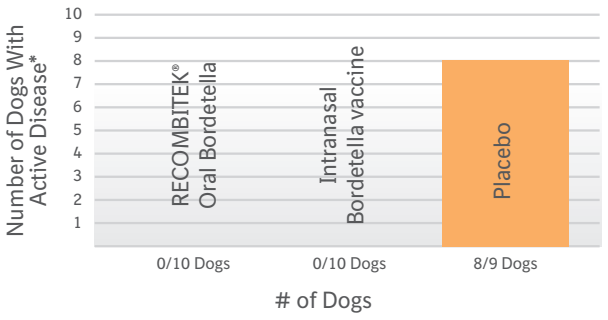


* Active disease was defined as spontaneous coughing on 2 or more consecutive days.

[1] Scott-Garrard MM, Chiang YW, David F. Comparative onset of immunity of oral and intranasal vaccines against challenge with *Bordetella bronchiseptica*. *Vet Rec.*

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# from the editor's desk

WELCOME TO THE PREVENTIVE CARE ISSUE! Like its predecessors, the Culture Issue and the Pain Management Issue, this edition of *Trends* focuses on a single theme. We handpicked a fantastic group of participants for this issue's virtual roundtable, with experts in integrative medicine, dentistry, nutrition, and more. I really like this format because it allows us to have multiple people from different backgrounds weigh in on a topic without having to gather everyone in the same physical room.

In addition to the roundtable, we have a great article on how climate change and other factors are making life more difficult for patients and doctors due to an increase in the range and activity levels of different parasites. Also included are an exploration of client reminders as a form of preventive care and a full article on integrative care (also known as complementary medicine).

Last but not least, we highlight the 2019 AAHA-Accredited Practice of the Year, Saint Francis Veterinary Center in New Jersey. All our award winners are special in their own way, but this one stood out especially because the hospital staff nominated the practice as a surprise for the practice's founder, Mark Magazu, DVM, who is retiring this year. Nice note to retire on! Congratulations also to the finalists:

- Canobie Lake Veterinary Hospital (Windham, New Hampshire)
- Ralston Veterinary Clinic (Omaha, Nebraska)
- Veterinary Center of Parker (Parker, Colorado)

And also big congratulations to the 2019 AAHA-Accredited Referral Practice of the Year: Pet Specialists of Monterey in Del Rey Oaks, California! Look for a feature article on this amazing practice in December.

NOTE: Hopefully you are enjoying our Pain Case of the Month, which highlights a challenging or unique case in the area of pain management. You may notice that there is no pain case study this month, but don't worry; it will return next month with the case of Honey, a cat who was badly burned but recovered well.

COMING NEXT MONTH: In December, we will have an executive summary of the *2019 AAHA Canine Life Stage Guidelines*, which will be released this month in *JAAHA*. We will also explore the logistics of a program that performs diagnostics on wildlife and take a deep dive into nutrition.

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

—Ben Williams, Editor


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# View from the Board

## Prevention = Health and Longevity

HELLO, EVERYBODY! I HOPE YOUR FALL SEASON IS OFF TO A GREAT START. Now is a great time to see if we all are up to date on all available resources as we forge through the school year, enter the big holidays, and, of course, approach the good old flu season. We would like to remind you of the guidelines and online resources that you have at your fingertips. Please hop online and review the *2011 AAHA/AVMA Preventive Healthcare Guidelines* at aaha.org/preventivecare. They are a wonderful tool for all of us to use as we train staff, educate clients, and sharpen our skill set in offering the best medicine and best practice to our pets and client base.

As a profession, we are taking great strides in enhancing pet wellbeing though safer practices, better vaccinations, wellness checks, pet plans, parasite preventives, multimodal pain management, and better dental care, yet there is always more room to improve. Keep building that foundation for your clients at any stage of their pets' lives. It is never too late to address preventive measures, from your initial puppy visit to the geriatric quality-of-life examination. Take the time to slow down in the exam room and show your clients how to brush their pet's teeth, how to trim their nails, and how to create distractions and provide positive reinforcement while helping the pet. Draw diagrams, offer weight-loss plans, and empower your technicians and staff to provide explanations and tutorials for clients. Our pet population will benefit greatly from preventive healthcare measures as a pathway to increase their quality of life, increase their life spans, and avoid major hurdles along the way.

While I am addressing pet wellness and preventive healthcare, I also want to shine a light on all of us in the veterinary profession. Prevention and wellness checks are equally important for us as humans. Take action to care for yourself so that you can keep showing up and clocking in to make a difference in the veterinary space. Please carve out the time and space for your own physical and any necessary medical checkups throughout the busy season. Listen to your colleagues and encourage the same healthy examples that we attempt to set for our clients. Caring for your hospital team will help keep your whole practice healthy, too. If you haven't heard of or explored some of the new offerings for our AAHA members, make sure to review our new Healthy Workplace Culture Initiative.

Check out the updated website at aaha.org to refresh your memory on all the guidelines, helpful tools, and publications and the Healthy Workplace Culture Initiative (aaha.org/culture). These resources are created and maintained for you! Check them out and reach out if you have any questions. Happy fall to you!

Caroline West Lubeck, DVM, is a former director on the AAHA board. A leader in the Colorado State University Professional Veterinary Medical Program, Lubeck served AAHA's student organization from 2010 to 2014, helping to increase student involvement and transition the AAHA Career Development Program to an online resource for veterinary students. During breaks from veterinary school, she worked as a veterinary and surgery technician in Billings, Montana, before moving into her current position at Cottage Lake Veterinary Hospital in Woodinville, Washington.

# AAHA MEETINGS AND EVENTS

## Indispensable Associate: Professional Skills Workshop

November 18—Union City, California
December 17—Glendale, Arizona

## AAHA@VMX

January 18–22 | Orlando, Florida

## AAHA@WVC

February 16–19 | Las Vegas, Nevada

## Veterinary Management Institute

Fort Collins, Colorado
First session: February 13–15
Second session: June 18–20
Third session: November 19–21

## Connexity by AAHA

September 30–October 3
Denver, Colorado

**To register for a learning program and learn more about AAHA's upcoming events, visit aaha.org.**

**AAHA PRESS**
**BLACK FRIDAY SALE**
November 29 | aaha.org/store

**AAHA-ACCREDITED MERCHANDISE**
**CYBER MONDAY SALE**
December 2 | aaha.org/store

## CE Highlight of the Month: Veterinary Management Institute

**Transform Your Management Skills, Career, and Practice**

Do your goals include helping your practice thrive, improving your management skills, or growing your career? The Veterinary Management Institute (VMI) can give you the tools to do just that.

Brought to you by AAHA and the Colorado State University College of Business, VMI's executive-level, veterinary-specific management program provides a unique opportunity for you to learn and grow with your colleagues through real-world veterinary case studies, interactive breakout sessions, and dynamic group discussions and lectures.

With the perfect combination of online and in-person learning led by accomplished, expert learning facilitators, you'll walk away with skills you can implement immediately to gain a competitive advantage while earning 63 CVPM-qualified CE hours in person and up to 21 additional CVPM-qualified CE hours in self-paced online sessions.

VMI is designed to evolve with our ever-changing industry, which means you'll develop the skills you need to:

- Create a positive, uplifting work environment.
- Gain a competitive edge and grow your practice.
- Improve communication and handle difficult conversations with ease.
- Increase employee retention and satisfaction.
- Invest in yourself and embrace excellence with VMI.

The next in-person session will be held in Fort Collins, Colorado, February 13–15.

Learn more about the program and enroll at aaha.org/vmi. Register by January 15 to save $500.

## Compliance Made Easy: The *2019 AAHA Canine Life Stage Guidelines*

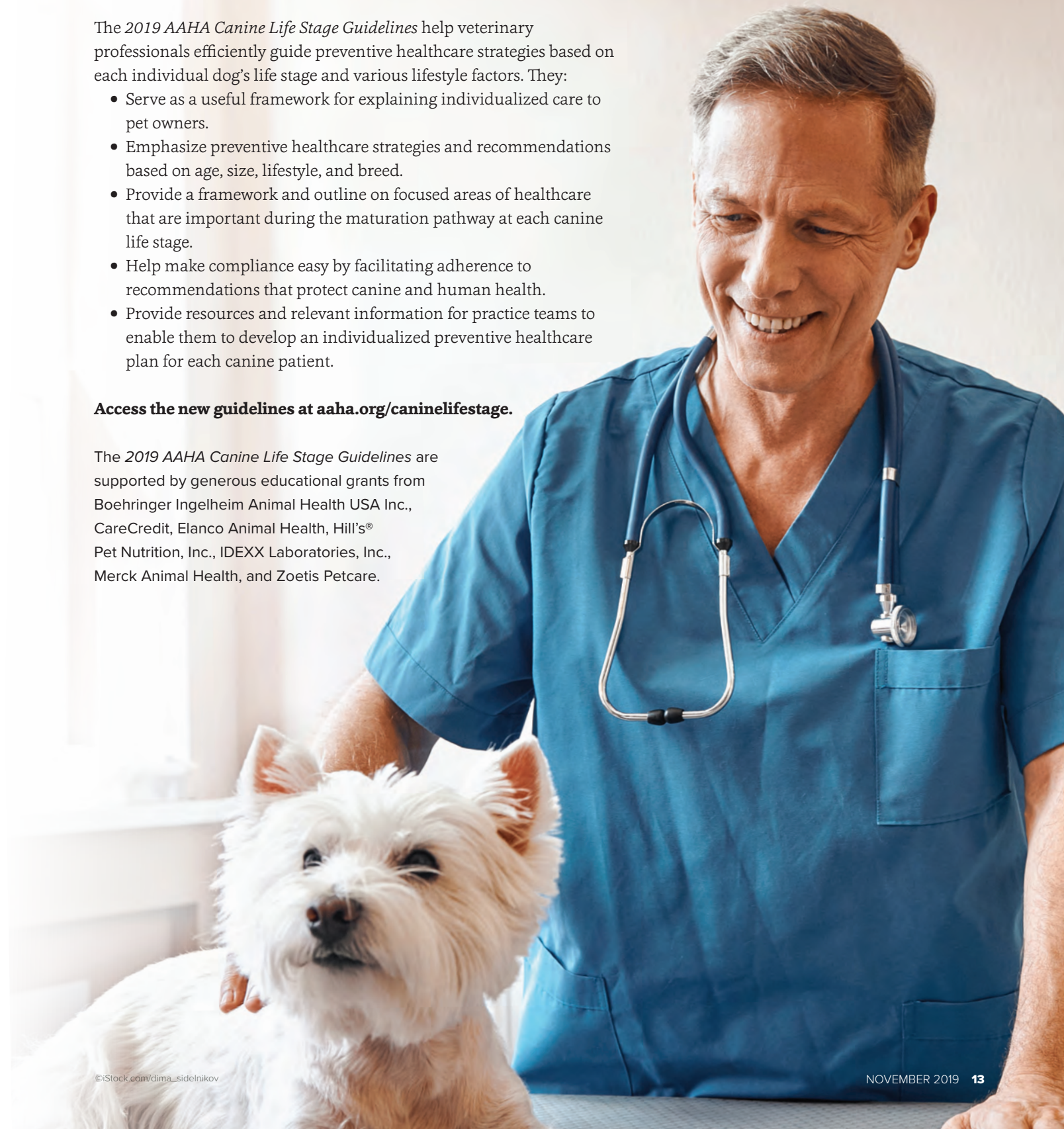
Treating your patients as individuals is what you do best. By taking into consideration their age, breed, environment, and activity level, you and your team can tailor the care you provide each patient. However, this can be time consuming and labor intensive.

The *2019 AAHA Canine Life Stage Guidelines* help veterinary professionals efficiently guide preventive healthcare strategies based on each individual dog's life stage and various lifestyle factors. They:

- Serve as a useful framework for explaining individualized care to pet owners.
- Emphasize preventive healthcare strategies and recommendations based on age, size, lifestyle, and breed.
- Provide a framework and outline on focused areas of healthcare that are important during the maturation pathway at each canine life stage.
- Help make compliance easy by facilitating adherence to recommendations that protect canine and human health.
- Provide resources and relevant information for practice teams to enable them to develop an individualized preventive healthcare plan for each canine patient.

**Access the new guidelines at aaha.org/caninelifestage.**

The *2019 AAHA Canine Life Stage Guidelines* are supported by generous educational grants from Boehringer Ingelheim Animal Health USA Inc., CareCredit, Elanco Animal Health, Hill's® Pet Nutrition, Inc., IDEXX Laboratories, Inc., Merck Animal Health, and Zoetis Petcare.



## Congratulations to the AAHA-Accredited Practice of the Year Finalists!

Learn more about these outstanding practices below and turn to page 39 for more on the 2019 AAHA-Accredited Practice of the Year Award winner.

**Canobie Lake Veterinary Hospital**
**Windham, New Hampshire | canobievet.com**
As a family-owned business, Canobie Lake Veterinary Hospital knows what it means to care for families by caring for their pets. The practice takes pride in their AAHA accreditation and dedication to the highest standards in veterinary medicine, as well as their focus on education and training for doctors and team members. Their mission includes leading pets down the road to wellness while providing clients with peace of mind. They gladly welcome dogs, cats, birds, and exotic pets.

**Ralston Veterinary Clinic**
**Omaha, Nebraska | ralstonvet.com**
Ralston Veterinary Clinic believes in providing excellent medical care in a healing environment with compassionate and knowledgeable team members. Their mission is to provide superior pet healthcare and caring attention to every family member, every time. They are proud to be AAHA accredited, which, to their team, means holding the practice and the care they provide to the highest standards in veterinary care.

**Veterinary Center of Parker Inc. (VCPI)**
**Parker, Colorado | vcparker.net**
Veterinary Center of Parker Inc. is driven by "The Three C's": care, comfort, and concern. This guides their treatment of pets along with how they interact with their human companions. Among the practice's other goals are to be honest and professional, make no promise they cannot keep, create realistic expectations, be open minded, and provide education to ensure clients are treated fairly. VCPI is also proud to be an AAHA-accredited veterinary center dedicated to providing the highest level of veterinary medicine along with friendly, compassionate service.

DEAR AAHA

## Can CT Machines Be Repurposed for Dental Radiographs?

*Dear AAHA,*

*Our practice is considering purchasing a CT machine for performing dental X-rays, rather than buying a dental radiograph unit, since we can use a CT machine for multiple purposes. Any advice?*

*—Imaging in Indianapolis*

Dear Imaging in Indianapolis,

Computed tomography (CT) machines do take fantastic images and work well for dental procedures, but you should consider comparing the radiation exposure levels between these two machines. While we often focus on protecting our team from excessive radiation exposure, we tend to think less often about the overall amount of radiation and exposure each patient receives.

CT machines emit a powerful dose of radiation. One CT scan can expose a human patient to as much radiation as 200 chest X-rays,* or the amount most people would be exposed to from natural sources over the course of seven years. You can imagine how that would translate to small-animal patients. While a CT machine will work for dental radiographs, consider the radiation before making your final decision.

—AAHA's Member Experience Team

*"The Surprising Dangers of CT Scans and X-Rays," *Consumer Reports*, January 27, 2015, consumerreports.org.

**Have a question you'd like AAHA to answer? Email us at dearaaha@aaha.org.**


## Innovation and Inspiration at Connexity

The second Connexity by AAHA meeting, held in September in Indianapolis, Indiana, was once again an extraordinary experience unlike any other meeting in the veterinary realm. Starting each day with an inspiring keynote speaker set the tone for guests to make real changes and rethink how they run their practices. Master classes offered guests the opportunity to fully immerse themselves in a variety of topics, while smaller breakout sessions enabled guests to participate in interactive learning experiences. AAHA's own Heather Loenser, DVM, wrapped up each day by "weaving together" the key concepts from that day's sessions, so guests could confidently return to their practices armed with essential takeaways and practical tips.

Guests learned how to improve the quality of life for patients, clients, their teams, and themselves. They also received a deep dive into such culture-related topics as aligning their practice with their purpose and creating an attractive workplace that superstar employees are drawn to—and want to remain at—as well as practical topics like creating a digital marketing strategy. RACE-approved scientific sessions were also popular. It was a great start toward AAHA's foray into additional scientific topics at Connexity 2020. Each guest also received an interactive notebook, a unique accountability tool that followed them throughout their experience to ensure they retained everything they absorbed while in Indy.

In addition to the instructional sessions, incredible conversations happened at Connexity. Guests had the opportunity to meet with experts one on one in the Human Library to get personalized consulting on such topics as business best practices, data and digital trends, telehealth, and burden transfer. Plus, there were many opportunities for members to connect with one another to share their struggles and successes and bond with their AAHA community.

Guests also got to have some fun—and give back. One group made a difference by volunteering their time to help serve local people experiencing homelessness. Many others spent time walking shelter dogs and participating in puppy yoga. They let their worries go and enjoyed the Indianapolis Children's Museum with themed food and drinks. And AAHA Advantage members attended their annual appreciation dinner and won some great prizes.

Connexity 2019 surpassed expectations in every way. See more Connexity success stories and keep tabs on Connexity 2020 updates (and register!) at **aaha.org/connexity.**

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# notebook

## Mice's and Bats' Brains Sync Up

The journal *Science* says that researchers know that when animals are together, their brain activity aligns. Now, two new studies published in the journal *Cell* provide details about how animals' synced brains might influence social behavior.

*Science* reports that in one study, researchers used neural implants to monitor a pair of Egyptian fruit bats in a dark chamber for more than an hour as they groomed themselves, fought, rested, and performed other behaviors. The brain activity of the two bats was highly coordinated. When one bat's neural activity oscillated in a fast rhythm, for example, the other bat's brain was likely to do the same thing. When the bats were separated into two chambers in the same room, this correlated activity fell away, suggesting that the bats had to be sharing the same social context for their brains to link up. A similar result came from a study in mice. As with the bats, when two mice were separated, their brain activity was no longer coupled, researchers report.

This neural synchrony might underpin some social behaviors, such as grooming or fighting. Just before bats interacted, their brain activity became more coordinated. Brain synchrony also appeared to be a factor in contests of dominance between mice. A pushier mouse's behavior was more likely to spark brain coordination than a meeker mouse's actions, researchers found.

## AVMA Conducts Veterinarian Census

The American Veterinary Medical Association (AVMA) Veterinary Economics Division recently conducted an analysis of more than 113,000 US veterinarians, roughly three-quarters of them AVMA members. The census, which revealed a variety of information about industry and practice trends and changing demographics, was done to provide information that would help policy makers improve their workforce planning and address issues such as veterinarian shortages and high educational debt among veterinarians, said Frederic B. Ouedraogo, PhD, lead author on the report and assistant director of economics in the AVMA Veterinary Economics Division.

Among the census findings:

- Millennials, born between 1981 and 1996, represent 39% of veterinarians, while baby boomers represent 33%, and members of Generation X represent 25%.
- Out of all veterinarians, 21.3% identified themselves as practice owners in 2018, and 29.3% identified themselves as associates.
- Women represent 61.7% of veterinarians, continuing a long-term gender shift.
- Among veterinarians age 75 or younger, the number in emergency and critical care—both specialists and nonspecialists—increased 133.5% from 2008 to 2013 and 63.3% from 2013 to 2018.
- The number in all types of referral or specialty practice increased 98.4% from 2008 to 2013 and 49.1% from 2013 to 2018.
- In 2018, the US population of veterinarians who were 65 years old or younger was 102,000, a 30% increase from 2007. More than 3,000 veterinarians graduated from the 30 US veterinary colleges in 2018, and approximately 750 US citizens graduate from foreign veterinary colleges every year.

For additional information and analysis, access the report at avma.org.

## Tax Exemption and Overtime Changes in 2020

The Internal Revenue Service is releasing a redesigned 2020 W-4 form that will take effect January 1, 2020. The redesigned form no longer uses the concept of withholding allowances, which was previously tied to the amount of the personal exemption. Beginning in 2020, new employees and any employees hired before 2020 who wish to adjust their withholding are required to use the redesigned form.

Another change for employees and employers is that the Department of Labor proposed new compensation guidelines regarding Fair Labor Standards Act overtime pay for salaried workers. Under current law, which has been in place since 2004, employees with a salary below $455 per week ($23,660 annually) must be paid overtime if they work more than 40 hours per week. Workers making at least this salary level may be eligible for overtime based on their job duties. This proposal would boost the standard salary level to $679 per week (equivalent to $35,308 per year). Above this salary level, eligibility for overtime varies based on job duties.


## FDA Grain-Based Diet Investigation Update

In July 2018, the US Food and Drug Administration (FDA) announced that it was investigating a potential link between heart disease in dogs and the consumption of grain-free pet food. The announcement said, in part, "We are concerned about reports of canine heart disease, known as dilated cardiomyopathy (DCM), in dogs who ate certain pet foods containing peas, lentils, and other legumes or potatoes as their main ingredients." The FDA recently released an update on its investigation, identifying 16 brands of dog food that had the most frequently reported cases of DCM.

QUOTE OF THE MONTH

*"Success is not final; failure is not fatal: It is the courage to continue that counts."*

—Winston S. Churchill

Between January 1, 2014, and April 30, 2019, the FDA received 524 reports of DCM. Approximately 222 of these were reported between December 1, 2018, and April 30, 2019, after the FDA called for veterinarians to submit cases of diagnosed DCM for review. Since then, the FDA's Center for Veterinary Medicine has collaborated with several sectors of the animal health world to collect and evaluate information about those reported DCM cases and the diets pets ate before becoming ill.

A key partner in the investigation is the Veterinary Laboratory Investigation and Response Network, a collaboration of government and veterinary diagnostic laboratories.

Most dogs in the US have been eating pet food without apparently developing DCM. It's not known how commonly dogs develop DCM, but the increase in reports to the FDA signals a potential increase in cases of DCM in dogs who are not genetically predisposed.

A genetic predisposition for DCM is typically seen in large- and giant-breed dogs, such as Great Danes,

Newfoundlands, Irish wolfhounds, Saint Bernards, and Doberman pinschers. The disease is less common in small- and medium-breed dogs, except American and English cocker spaniels. However, recently reported atypical cases have included golden and Labrador retrievers, a whippet, a shih tzu, and mixed breeds. Early reports from the veterinary cardiology community indicate that the dogs in those cases consistently ate foods containing peas, lentils, other pulses (legume seeds), or potatoes as primary ingredients in their main source of nutrition. The length of time they were on those diets ranged from months to years.

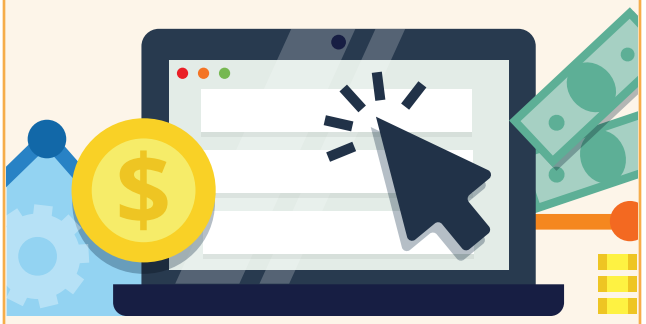
The investigation remains ongoing.

## Dogs Receives Heart Ablation

Ruby, a miniature dachshund suffering from ventricular tachycardia, had been hospitalized 18 times for the condition before being treated at the Cornell University Hospital for Animals. During each occurrence of tachycardia, Ruby's heart rate would reach a startling 350 beats per minute. Medication had been effective for only a few weeks at a time, and it was determined that surgery was the dog's best chance for treatment.

Veterinarians at Cornell performed radiofrequency catheter ablation, with cardiologist and adjunct professor Roberto Santilli, DVM, PhD, and section chief of cardiology and associate professor in the Department of Clinical Sciences Romain Pariaut, DVM, DACVIM, DECVIM-CA, ablating 42 spots on Ruby's tiny heart. The hours-long procedure went smoothly, and the hospital plans to recheck Ruby every year to ensure that she's doing well.

A one-year-old German shepherd dog, Rex, was successfully treated with an ablation procedure at the same facility. In honor of his successful recovery, the owners partnered with the school's cardiology team to create the Henry and Karen Silverman Initiative to Advance Treatment of Canine Arrhythmias, housed within the university. Their intention is to further the study, diagnosis, and treatment of arrhythmias in dogs as well as to educate pet owners and veterinarians about these treatments for heart rhythm disorders.



## Online Ad Spending

Zenith Media (zenithmedia.com) reports that internet advertising is set to cross the 50% milestone as a proportion of global ad spending for the first time in 2019. The company's quarterly adspend forecast also states that online video and social media are predicted to enjoy double-digit growth rates of 18% and 17%, respectively, through to 2021. Paid search ads are forecast to grow 7% by 2021, while classifieds are expected to contract by 1.6%.

NADA 141-426, Approved by FDA

# BRAVECTO® (FLURALANER)

Flavored chews for dogs.

**BRIEF SUMMARY (For full Prescribing Information, see package insert)**

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

**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), and *Rhipicephalus sanguineus* (brown dog 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.

**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.

**Precautions:**
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.

**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.

For technical assistance or to report a suspected adverse drug reaction, 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/AnimalVeterinary/SafetyHealth.

**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.

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

Made in Austria

154545 R1

NADA 141-459, Approved by FDA

# BRAVECTO®

(fluralaner topical solution) for Dogs

**BRIEF SUMMARY (For full Prescribing Information, see package insert)**

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

**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), and *Rhipicephalus sanguineus* (brown dog 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.

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

**WARNINGS**

**Human Warnings:**
Not for human use. Keep this and all drugs out of the reach of children. **Do not contact or allow children to contact the application site until dry.** 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. Avoid contact with skin and eyes. If contact with eyes occurs, then flush eyes slowly and gently with water. **Wash hands and contacted skin thoroughly with soap and water immediately after use of the product.**

The product is highly flammable. Keep away from heat, sparks, open flame or other sources of ignition.

**Precautions:**
For topical use only. Avoid oral ingestion. Use with caution in dogs with a history of seizures. Seizures have been reported in dogs receiving fluralaner, even in dogs without a history of seizures. 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.

**Adverse Reactions:**
In a well-controlled U.S. field study, which included a total of 165 households and 321 treated dogs (221 with fluralaner and 100 with a topical active control), there were no serious adverse reactions.

**Percentage of Dogs with Adverse Reactions in the Field Study**

| Adverse Reaction (AR) | Bravecto Group: Percent of Dogs with the AR During the 105-Day Study (n=221 dogs) | Control Group: Percent of Dogs with the AR During the 84-Day Study (n=100 dogs) |
|---|---|---|
| Vomiting | 6.3% | 6.0% |
| Alopecia | 4.1% | 2.0% |
| Diarrhea | 2.7% | 11.0% |
| Lethargy | 2.7% | 2.0% |
| Decreased Appetite | 1.4% | 0.0% |
| Moist Dermatitis/Rash | 0.9% | 0.0% |

In the field study, two dogs treated with Bravecto with no prior history of seizures each experienced a seizure. One dog had two seizures a day apart about 18 days after its first dose. The dog was started on antiepileptic medication and had no additional seizures during the study. A second dog had a seizure 76 days after its first dose and 3 days after starting fluoxetine for separation anxiety. The fluoxetine was discontinued and the dog experienced no additional seizures during the study. One dog treated with Bravecto was observed by the owner to be off balance for about 30 minutes five days after its first dose and had no similar observations after the second dose. One dog with a history of seizures had a seizure the day after the second dose of the active control.

In two well-controlled laboratory dose confirmation studies, one dog developed mild to moderate redness, flaking, crusts/scabs and alopecia at the treatment site from Day 1 through 14 after application of Bravecto on Day 0, and one dog developed self-limiting generalized erythema (possible allergic reaction) one day after treatment with Bravecto.

In a European field study in cats, there were three reports of facial dermatitis in humans after close contact with the application site which occurred within 4 days of application.

For technical assistance or to report a suspected adverse drug reaction, 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/AnimalVeterinary/SafetyHealth.

**How Supplied:**
Bravecto is available in five strengths for use in dogs (112.5, 250, 500, 1000, and 1400 mg fluralaner per tube). Each tube is packaged individually in a pouch. Product may be supplied in 1 or 2 tubes per carton.

Distributed by:
Intervet Inc (d/b/a Merck Animal Health)
Madison, NJ 07940
Made in the USA.

Rev. 9/16


155586 R4

NADA 141-459, Approved by FDA

# BRAVECTO®

(fluralaner topical solution) for Cats

**BRIEF SUMMARY (For full Prescribing Information, see package insert)**

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

**Indications:**
Bravecto kills adult fleas and is indicated for the treatment and prevention of flea infestations (*Ctenocephalides felis*) and the treatment and control of *Ixodes scapularis* (black-legged tick) infestations for 12 weeks in cats and kittens 6 months of age and older, and weighing 2.6 pounds or greater.

Bravecto is also indicated for the treatment and control of *Dermacentor variabilis* (American dog tick) infestations for 8 weeks in cats and kittens 6 months of age and older, and weighing 2.6 pounds or greater.

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

**WARNINGS**

**Human Warnings:**
Not for human use. Keep this and all drugs out of the reach of children. **Do not contact or allow children to contact the application site until dry.** 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. Avoid contact with skin and eyes. If contact with eyes occurs, then flush eyes slowly and gently with water. **Wash hands and contacted skin thoroughly with soap and water immediately after use of the product.**

The product is highly flammable. Keep away from heat, sparks, open flame or other sources of ignition.

**Precautions:**
For topical use only. Avoid oral ingestion. Use with caution in cats with a history of neurologic abnormalities. Neurologic abnormalities have been reported in cats receiving Bravecto, even in cats without a history of neurologic abnormalities. Bravecto has not been shown to be effective for 12-weeks duration in kittens less than 6 months of age. Bravecto is not effective against *Dermacentor variabilis* ticks beyond 8 weeks after dosing. The safety of Bravecto has not been established in breeding, pregnant and lactating cats.

**Adverse Reactions:**
In a well-controlled U.S. field study, which included a total of 161 households and 311 treated cats (224 with fluralaner and 87 with a topical active control), there were no serious adverse reactions.

**Percentage of Cats with Adverse Reactions (AR) in the Field Study**

| Adverse Reaction (AR) | Bravecto Group: Percent of Cats with the AR During the 105-Day Study (n=224 cats) | Control Group: Percent of Cats with the AR During the 84-Day Study (n=87 cats) |
|---|---|---|
| Vomiting | 7.6% | 6.9% |
| Pruritus | 5.4% | 11.5% |
| Diarrhea | 4.9% | 1.1% |
| Alopecia | 4.9% | 4.6% |
| Decreased Appetite | 3.6% | 0.0% |
| Lethargy | 3.1% | 2.3% |
| Scabs/Ulcerated Lesions | 2.2% | 3.4% |

In the field study, two cats treated with fluralaner topical solution experienced ataxia. One cat became ataxic with a right head tilt 34 days after the first dose. The cat improved within one week of starting antibiotics. The ataxia and right head tilt, along with lateral recumbency, reoccurred 82 days after administration of the first dose. The cat recovered with antibiotics and was redosed with fluralaner topical solution 92 days after administration of the first dose, with no further abnormalities during the study. A second cat became ataxic 15 days after receiving its first dose and recovered the next day. The cat was redosed with fluralaner topical solution 82 days after administration of the first dose, with no further abnormalities during the study.

In a European field study, two cats from the same household experienced tremors, lethargy, and anorexia within one day of administration. The signs resolved in both cats within 48-72 hours.

In a European field study, there were three reports of facial dermatitis in humans after close contact with the application site which occurred within 4 days of application.

For technical assistance or to report a suspected adverse drug reaction, 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/AnimalVeterinary/SafetyHealth.

**How Supplied:**
Bravecto is available in three strengths for use in cats (112.5, 250, and 500 mg fluralaner per tube). Each tube is packaged individually in a pouch. Product may be supplied in 1 or 2 tubes per carton.

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159363 R3

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BRAVECTO®
(FLURALANER)
CHEW OR TOPICAL SOLUTION


# Pet owners already have a lot to remember. Give them one less thing to forget.

**Protect your patients from fleas & ticks for up to 12 weeks* with BRAVECTO®**

## Ask your Merck Animal Health Rep about BRAVECTO or Visit Bravectovets.com

*BRAVECTO kills fleas and prevents flea infestations for 12 weeks. **BRAVECTO Chew** and **BRAVECTO Topical Solution for Dogs** kill ticks (black-legged tick, American dog tick, and brown dog tick) for 12 weeks and also kill lone star ticks for 8 weeks. **BRAVECTO Topical Solution for Cats** kills ticks (black-legged tick) for 12 weeks and American dog ticks for 8 weeks.

**IMPORTANT SAFETY INFORMATION:** BRAVECTO has not been shown to be effective for 12-weeks' duration in puppies or kittens less than 6 months of age. **BRAVECTO Chew:** The most common adverse reactions recorded in clinical trials were vomiting, decreased appetite, diarrhea, lethargy, polydipsia, and flatulence. BRAVECTO is not effective against lone star ticks beyond 8 weeks of dosing. **BRAVECTO Topical Solution for Dogs:** The most common adverse reactions recorded in clinical trials were vomiting, hair loss, diarrhea, lethargy, decreased appetite, and moist dermatitis/rash. BRAVECTO is not effective against lone star ticks beyond 8 weeks of dosing. For topical use only. Avoid oral ingestion. Use caution in dogs with a history of seizures. Seizures have been reported in dogs receiving fluralaner, even in dogs without a history of seizures. **BRAVECTO Topical Solution for Cats:** The most common adverse reactions recorded in clinical trials were vomiting, itching, diarrhea, hair loss, decreased appetite, lethargy, and scabs/ulcerated lesions. BRAVECTO is not effective against American dog ticks beyond 8 weeks of dosing. For topical use only. Avoid oral ingestion. The safety of BRAVECTO has not been established in breeding, pregnant and lactating cats. Use with caution in cats with a history of neurologic abnormalities. Neurologic abnormalities have been reported in cats receiving BRAVECTO, even in cats without a history of neurologic abnormalities. **See full Prescribing Information on adjacent page.**


# 2019 PREVENTIVE CARE VIRTUAL ROUNDTABLE



**Narda Robinson, DVM, DO, MS, FAAMA**

Narda Robinson is a leading authority on scientific integrative medicine. In 1998, Robinson launched Colorado State University's (CSU) first integrative medicine service and for eight years directed CSU's Center for Comparative and Integrative Pain Medicine. Robinson now teaches through CuraCore Vet and CuraCore Med as founder and president.

Robinson holds a Bachelor of Arts degree from Harvard University/Radcliffe College, a doctorate in osteopathic medicine from the Texas College of Osteopathic Medicine, and a doctorate in veterinary medicine and master's degree in biomedical sciences from the CSU College of Veterinary Medicine and Biomedical Sciences. She is a fellow within the American Academy of Medical Acupuncture (AAMA). She also serves on the American Board of Medical Acupuncture, the board-certifying organization for physician medical acupuncturists, and the AAMA Board of Directors.

### Julie Miles, DVM

Julie Miles graduated from The Ohio State University in 2006. Miles spent two and a half years working in private practice, then joined Lighthouse Veterinary Personnel Services in 2009, where she worked as a relief veterinarian and manager for five years. In 2014, she opened Compassionate Care Animal Hospital, which has grown into a two-doctor practice.

Her professional interests include feline medicine, dentistry, and client communications. She and her husband have two boys, Henry and Evan.

### Link Welborn, DVM, DABVP

Link Welborn is a diplomate of the American Board of Veterinary Practitioners; certified in canine and feline practice; the owner of five AAHA-accredited hospitals in Tampa, Florida; and an AAHA past president.

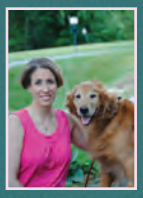
Welborn has been a member of the *AAHA Canine Vaccination Guidelines* Task Force since its inception in 2002 and has served as chair since 2010.

In additional to his clinical focus, he has a strong interest in practice management and the economics of the veterinary profession. He is president of Veterinary Study Groups, the umbrella organization for the more than 50 Veterinary Management Groups, and is past chair of the American Veterinary Medical Association (AVMA) Veterinary Economics Strategy Committee.

Link has received the AVMA President's Award, the AAHA Practitioner of the Year Award, the University of Florida College of Veterinary Medicine Alumni Achievement Award, the Florida Veterinary Medical Association Veterinarian of the Year Award, and the first AAHA Dedicated Service Award in 2018.

### Jan Bellows, DVM, DAVDC, DABVP (Canine and Feline Specialties)

Jan Bellows is in private practice in Weston, Florida. He is a frequent national and international lecturer on topics related to companion animal dentistry. He is a past president of the American Veterinary Dental College and is currently the president of the Foundation for Veterinary Dentistry. He is a coauthor of the 2010, 2013, and 2019 *AAHA Dental Guidelines for Dogs and Cats* and the author of the books *Feline Dentistry* (2010) and *Small Animal Dental Equipment, Materials and Techniques, Second Edition* (2019).



### Dawn Brooks, DVM

Dawn Brooks has been an associate at AAHA-accredited Countryside Veterinary Hospital in Chelmsford, Massachusetts, for the past 20 years and chief of staff for the past 6 years. Countryside received the inaugural AAHA-Accredited Practice of the Year Award in 2010 and has been a leader in the New England area for setting high standards for veterinary care. In addition to having a strong focus on pet wellness, she has a passion for teaching her clients about nutrition and how to make healthy diet choices. In 2010, she was honored to be on the panel of authors for the *AAHA Nutritional Assessment Guidelines for Dogs and Cats*. She lives in Massachusetts and shares her home with three dogs, Miller, Chase, and Shelby; and her cat, Veronica.

### Jinelle A. Webb, DVM, DACVIM (SAIM), DVSc, MSc

Jinelle A. Webb obtained board certification with the ACVIM (SAIM) in 2005. She started the internal medicine service at AAHA-accredited Mississauga Oakville Veterinary Emergency Hospital in Oakville, Ontario, where she remains today as medical director and in clinical practice. Webb has continued teaching veterinary students, interns, and residents along with maintaining a role in clinical research, publishing, and lecturing. Webb's main research interests include investigating the use of laboratory testing and imaging modalities in the detection of occult disease, developing novel approaches to internal medicine procedures, and investigating ways to reduce the invasiveness of procedures.

### Nan Boss, DVM

Nan Boss is owner of the AAHA-accredited Best Friends Veterinary Center in Grafton, Wisconsin. She was a member of the *2011 AAHA/AVMA Preventive Healthcare Guidelines* Task Force and is the author of *Educating Your Clients from A to Z* (AAHA Press, 2011).

THE DEFINITION OF PREVENTIVE CARE HAS GREATLY EXPANDED in recent years. In the past, preventive care consisted mainly of annual exams and routine vaccinations. But with vast improvements in veterinary medical science, many conditions and diseases can be detected early, treated, and sometimes prevented.

We've assembled an esteemed group of consultants, practitioners, and specialists to participate in this virtual roundtable discussion on preventive care.

Similar to our Pain Management Virtual Roundtable in the March 2019 issue, this is a "virtual" roundtable because all our respondents were asked and responded to questions over email instead of gathering in a room together. Responses have been edited for length.

## How Do You and Your Team Define Preventive Care?

**Narda Robinson, DVM, DO, MS, FAAMA:** For the past few years, I have been teaching full time. As such, my "team" consists of a community of my peers, colleagues, and staff spanning the human-veterinary spectrum. Our concept of preventive care tends to have a more expansive reach than most. That is, in addition to promoting annual evaluations, proactive and prophylactic care such as regular dental checkups and interventions, appropriate and responsible vaccinations, client education, and more, we firmly believe that each examination should also include an assessment for pain and any functional, behavioral, or emotional changes.

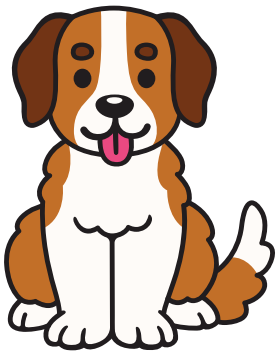
Furthermore, our preferred pain assessments don't involve what many learned in school—i.e., forced and frequently uncomfortable passive range-of-motion exams of the neck, limbs, and back. Instead, they focus on gentle yet telling and adept myofascial evaluations. I instruct my students to make it feel like a massage to the extent possible, receiving feedback from the patient about tissue texture, tension, heat, and tenderness. I encourage them to observe how their patients move—at their own pace—and interact with family members. We can glean abundant information just from observing an animal either at home or at the clinic.

We advocate for the (re)introduction of an expanded physical and functional examination into veterinary healthcare. When we assess animals for the early signs of orthopedic and neurologic ailments, we can prevent potentially catastrophic or life-threatening diseases such as spinal cord injury and cranial cruciate ligament disease. While these conditions may themselves not threaten the life of an animal, the cost of surgery as the reflexive recommendation of many practitioners could rapidly outstrip a client's ability to pay and raise the specter of euthanasia. By identifying musculoskeletal and spinal problems early, we can begin a discussion with clients on how to strengthen the back or limbs, change exercise patterns, and implement an integrative medical or rehabilitation routine that allows the body to recover instead of continue along a pathologic vector.

**Julie Miles, DVM:** For my team, we define preventive care as any diagnostic test or standard of care that we can use to help identify early disease or risk factors a pet might have for disease. Our ultimate goal is to try to identify disease or risk factors as soon as possible so that we can offer an intervention or treatment when it is more likely to be effective and extend a pet's life.

**Link Welborn, DVM, DABVP:** My team and I define preventive care as all of the services and products that have the potential to prevent or detect problems before signs develop that a pet owner might observe. This includes everything from lifestyle vaccinations and comprehensive year-round parasite control to PennHIP screening for hip dysplasia.

**Jan Bellows, DVM, DAVDC, DABVP:** Preventive care is anything a client can do to help decrease the plaque accumulation on teeth with the ultimate goal of creating a healthy mouth without odor or disease. This can be accomplished best with twice-daily toothbrushing.



Other forms of preventive care include oral wipes, gels, chews, water additives, and diets.

**Dawn Brooks, DVM:** The process of preventive care includes the steps we take to stay healthy (human or animal), such as specific vaccines to prevent disease, products to help prevent parasitic infections (and possible secondary diseases those insects may carry), or choosing the best diet to support a healthy lifestyle or to prevent or treat disease when possible. The actual preventive care plan should vary based on the needs, and risks, of a particular patient and should aim to minimize risks as much as current technology and medical advances allow.

**Jinelle A. Webb, DVM, DACVIM (SAIM), DVSc, MSc:** Preventive healthcare is the promotion of a healthy lifestyle and detection of occult disease, which should prompt intervention when indicated, thereby allowing for the healthiest life span possible for a pet. The implementation of preventive healthcare in a practice requires thorough and ongoing communication with the pet's family and needs to be embraced by all clinic personnel to be successful.

**Nan Boss, DVM:** Preventive care is all about risk assessment. We ask, "What health risks does this pet have because of its species, age, breed, lifestyle, or conformation?" Then we set about trying to minimize those risks. Think beyond vaccinations and heartworm testing and talk to your clients about DNA testing, preanesthesia ECG screening, stomach tacking, and soft palate resection.

We also need to look ahead and think about what the pet will need in a year or two or three. It takes multiple repetitions of a topic for clients to remember and act on our recommendations. Our goal is to start talking about long-term care needs early on, so by the time the pet needs to have her teeth cleaned or have senior screening done, the pet owner has heard about the service multiple times and is prepared to let us do it. Waiting to talk about periodontal disease until the teeth are already infected is reactive instead of proactive.

## Why Should Practices Value Preventive Care?

**NR:** The type of preventive care that a bond-centered, patient-focused practice builds engenders lifelong relationships with families, including their animal(s). This leads to a higher quality of care that invites opportunities for dialogue with clients about any behavioral or physical problems that might be popping up or changes in the household about which one or more family members are concerned.

In this way, the veterinarian becomes acquainted with the social fabric in which the animal is living, opening avenues for instituting preventive care by removing emotional, environmental, physical, and other stressors that could lead to disease, destructive outcomes, and possibly the death of the animal.

**JM:** I think the most important reason is that most clients really want to know the information that preventive care is able to provide. They want to know that their pet is healthy and what they can do to keep them healthy. Our clients are constantly searching for the best diet, the best supplement, the next best thing to keep their pets healthy. Why would we not offer something that can make such a big difference in the long-term health of their pet? One of the biggest things that struck me when we started implementing our preventive care program was how thankful so many of clients were that we were offering preventive care bloodwork. As pets become more and more important in our lives and our families, our clients want to know that they are doing everything they can to keep their pets healthy. When we start to have conversations with clients about monitoring their pet's health more closely and what that means, they are thrilled that they can have concrete information about

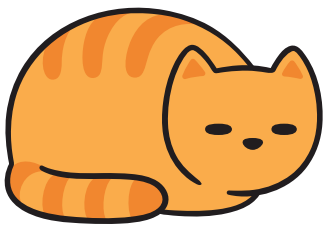
their pet's health. Being able to provide this helps bond the kind of clients we want to our practice, and that is a huge value to the overall health of our practice.

**LW:** Preventive care provides win-win benefits with healthier pets, happier pet parents, and a less stressful practice workplace. It is also a good investment for the clients of practices relative to the cost of treating illness that can be prevented entirely or at least minimized through intervening after early detection.

**JB:** It's the right thing to do. We spend a good portion of our day caring for disease. It would be much better for all parties (the client, the patient, and the hospital) to prevent disease—less pain and greater patient and client appreciation.

**DB:** Our priority should always focus on wellness; extending the life expectancy and quality of life of our patients has immeasurable benefits for both them and their family. Preventive vaccinations can reduce the risk of long-term health concerns, such as Lyme disease (which is common in our area). Preventive dental care can help avoid progressive periodontal disease, which presents a risk to the pet's overall health and to their quality of life. Regular blood screens can help us identify health issues early, when intervention may be more useful and less involved for the client. We can do so much more to help our patients if we are being proactive versus reactive.

**JAW:** There is evidence that preventive healthcare, when implemented in a careful and thoughtful manner and tailored to each pet, can improve quality and length of life. Most clients are willing to pursue preventive healthcare practices if they are educated about the goal. Committing a practice to implementation of quality preventive medicine shows clients that the practice is concerned about all aspects of their pet's health, ensuring that their healthy longevity is the top priority. Although there is financial commitment required by clients in pursuing preventive healthcare, it may reduce costs in the future by delaying or preventing disease processes.



**NB:** What are we here for if not to help our patients lead longer, healthier lives? Just because veterinary school is taught entirely from a disease treatment perspective instead of a prevention one doesn't mean we have to spend our careers with that point of view. I love surgery and would happily spend all day in the surgery room, but I figured out pretty early in my career that I could save far more lives by teaching my clients about weight management than with my brilliant, life-saving splenectomy technique.

Prevention not only is better medicine but also brings a lot of money into my practice. From a business standpoint, it's one of the smartest things you can do. More than 20% of my practice income is from laboratory testing. Every test you do that catches a disease process early is an opportunity to deliver additional services to that patient. I would much rather make money on disease treatment and monitoring than on euthanasia and cremation!

## How Has the Realm of Preventive Care Evolved Since You Have Been in Practice?

**NR:** The growing presence of integrative medicine and rehabilitation has changed the nature and outlook of veterinary medicine in a number of ways. While some integrative medicine and rehabilitation practitioners are limiting their scope to postsurgical management, an increasing number of forward-thinking veterinarians are questioning the need for surgery for conditions such as intervertebral disk disease and cranial cruciate ligament injury, seeing how well many patients do without invasive approaches. As such, we recognize the need for a careful physical assessment that identifies changes in muscle tone, function, and comfort as well as neurologic engagement as an added component of preventive

veterinary care. There's much more to the prevention and treatment of disease than we learned in school, and my personal belief is that veterinary schools should update their curricula to present more nonsurgical, science-based, integrative, and rehabilitative methods in orthopedic, neurologic, and primary care courses.

**JM:** When I first graduated 13 years ago, there wasn't much discussion about preventive care bloodwork. We were doing a good job of recommending annual heartworm testing and offering presurgical bloodwork if a client wanted it, but I don't remember discussing the importance of checking bloodwork annually. Presurgical ECGs were not standard for most clinics, and I think that we are starting to recognize that they can be a powerful tool to screen for patients who might be at risk for anesthesia.

**LW:** When I entered practice more than 35 years ago, preventive care was limited to a daily heartworm preventive and what we now refer to as core vaccinations. Preventive care today is much more effective and comprehensive. Even so, decades from now, we will surely look back and marvel at the advances in preventive care when compared with our capabilities today.

**JB:** Preventive care was virtually unheard of when I graduated veterinary school in 1975. Since the establishment of the Veterinary Oral Health Council in 1997, preventive oral products that are accepted by the council can be trusted when used as directed to help decrease the accumulation of plaque and tartar.

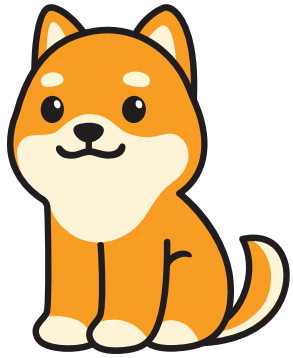
**DB:** So much more is available to us—better vaccines, more thorough point-of-care testing, improved quality of therapeutic diets—that we have the tools and resources to better help our clients. Even more important, there has been a shift in the consumer's perspective—our clients want the best preventive care possible and are willing to take and implement our recommendations. In my first decade of practice, we had to work hard to explain the importance of year-round heartworm prevention, educate our clients as to the dangers of leptospirosis and Lyme disease so they would trust us to add these vaccines to their pet's preventive care routine, and beg for fecal samples for parasite screening. While we do have many of these challenges ongoing in our practice, we have many more pet parents who are expecting these recommendations, and our level of compliance has improved dramatically.

## Preventive or Preventative?

Which way is correct? Well, it's really a "to-may-to," "to-mah-to" kind of thing. Both terms are real words and are acceptable in English-language usage. *Trends* uses the term "preventive." But go ahead and say it the other way if you prefer; both words are in the dictionary and mean the same thing.

**JAW:** Historically, routine healthcare appointments were dictated by need for vaccination, with less emphasis placed on the overall health of a pet and the detection of occult disease. With a larger proportion of pets being kept in more protective environments, and increased attention prioritized to the clinical status of an outwardly healthy pet, our pets are living longer lives. Maintaining a high quality of life in the aging pet population requires attention to subtle changes in health and the potential for utilization of screening tests to detect occult processes.

**NB:** I certainly see more wellness testing being done than when I was first in practice, but I think most practices could be doing much more. I had to write all my own client education materials on preventive care topics because there was so little available, and that hasn't changed all that much. We still tend to approach practice from a treat-a-disease standpoint instead of a prevent-and-treat-early standpoint.



DNA test panels are available that screen for 150 different canine genetic diseases, but I've never had

records faxed to me from another practice where this testing has been done. I don't even see Wisdom panels, MDR-1, or von Willebrand disease DNA testing being done by other veterinarians. I've never had a Great Dane owner come to me whose previous veterinarian talked to them about GDV and stomach tacking. Even basic things like *Bordetella* vaccination and annual stool testing are being missed. Though more is available for us to utilize for better patient care, I don't feel like we are doing a good job of taking advantage of it.

### What Has Led to the Increased Awareness of the Importance of Preventive Healthcare in Veterinary Medicine?

**LW:** To a large extent, financial incentives have driven the increased awareness of the importance of preventive healthcare in veterinary medicine. Veterinary pharmaceutical and pet nutrition companies increase their earnings by developing new preventive care products, practices benefit financially as well since providing preventive care is so much more efficient than caring for preventable illnesses, and consumers of veterinary products save money by preventing expensive healthcare problems.

**JB:** Clients desire methods to keep their dogs and cats healthy, but they really desire sweet-smelling breaths. Prevention of plaque and tartar becomes one of the most important proactive duties a loving pet owner can do to help their pet live a great life.

**DB:** I believe this shift is due, in large part, to the mission of our profession to educate our clients and provide the best medicine possible to our patients. We now see the next generation of our patron families coming to us expecting a level of medicine their families have been actively participating in for the past 10–15 years. Our younger clients are savvy and seeking information from many outlets when obtaining a pet and are hearing over and over that preventive medicine is important. Our message is not only being heard, it is drowning out older information floating around that vaccines pose health risks or that heartworm preventives will make your pet sick. Thankfully, our collective voices are changing the paradigm of preventive care, and our clientele is ready for us to offer the next best thing to help their pets stay healthy.

**JAW:** Preventive healthcare is an expanding field in both human and veterinary medicine. People have exposure to increasing education regarding the importance of preventive medicine for themselves and their family, and this extends to their pets. There is an increased awareness that maintaining the health of a family pet involves much more than a yearly vaccine appointment and heartworm/flea/tick prophylaxis.

**NB:** There has always been a trickle of articles and lectures on wellness and prevention in veterinary magazines and journals, including *Trends*. There is also more wellness being taught in veterinary schools than there used to be, but there are still a lot of internists who insist that there is no value in wellness screening. Corporations like Banfield have also been drivers in wellness care. AAHA's standards are wonderful for accredited hospitals, but that doesn't extend to the thousands of practices that are not accredited. It's been slow going. I wish I had access to statistics on wellness and prevention 30 years ago compared with today. There has probably been more progress than I know.

To some extent, the clients have been driving veterinarians to step up their game by asking for better preventive care. I had a new client come in two weeks ago with a soft-coated wheaten terrier. Soft-coated wheaten terriers are prone to glomerulonephropathy, which is diagnosed with a urine protein test. I was pretty happy to see that blood testing and urine screening had been done by the client's previous veterinarian. I almost never see that. Most of our new patients need vaccines that the previous veterinarian didn't recommend; Lyme disease, leptospirosis, and *Bordetella* often have never even been discussed with clients. I don't see nutritional recommendations or dental grading, and stool tests often

are not current either. So much lost income as well as health consequences for all those pets!

I think one of the things that holds us back is how veterinary conferences are structured. As with veterinary school educations, the tracks at meetings are all disease or problem based, taught by the same specialists who teach in the schools. There is no wellness track. Wellness is relegated to the management track. Most DVMs spend more than 90% of their CE in medicine, not management.

Unlike in a disease-based system, where you can learn about a new drug or technique and implement it on your own, for a wellness program you need client education, team training, and project management. You also have to get buy-in from the practice owner(s). You can't really sell the heck out of senior screens on your own while your boss doesn't do the same. A lot of new graduates come out expecting to be able to do more preventive care but are squelched by the environments they find themselves in once in practice.

### What Challenges Do You Face in Implementing Preventive Care with Your Team? With Your Clients?

**NR:** The main challenge in implementing the type of preventive veterinary care that our science-based integrative medical and rehabilitation programs advocate is education—teaching clients, support staff, veterinarians, veterinary students, and veterinary school faculty how to find and address somatic and visceral maladaptations early and safely, incorporating rational and evidence-informed integrative medicine as first-line care.

**JM:** For my clinic, getting each staff member to have the discussion with each client every time they come in for an annual wellness exam is the most important piece of our success, and it is our biggest challenge. Some days it is much easier than others. Constantly reminding our staff how important it is that we talk about it every time is key. We have checklists to remind staff to have the discussion with clients. We have an incentive program that rewards staff when we reach certain goals. We discuss cases with abnormal findings and celebrate when we can intervene in a pet's life and make a significant difference in the outcome of their disease. For clients, I really focus on educating them about the importance of preventive care, and I take the attitude that this is a long-term educational campaign. I don't expect every client to say yes; in fact, I expect most to say no initially. But my goal is to have the conversation every time, offer handouts every time, and eventually they will get to yes. If we start talking to a pet owner at that first annual appointment when their pet is one year old, then hopefully they will have heard the message enough to realize that this is important by the time the pet is three or four. So again, the challenge is to have the conversation every visit, every year.

**LW:** Comprehensive preventive care is wonderful, but it can be complicated and confusing for practice team members to understand and communicate to pet owners. The Law of Initiative Fatigue states that when the number of initiatives increases while time, resources, and emotional energy are constant, then each new initiative—no matter how well conceived or well intentioned—will receive fewer minutes, dollars, and ounces of emotional energy than its predecessors. With a dizzying array of preventive care products and services being advanced by companies, initiative fatigue is a real problem within many practices.

Time and money are the biggest challenges we face in implementing preventive care protocols today. Everyone is busy with lots of distractions, which makes breaking through to communicate the importance of preventive care difficult at times. Consumers appropriately expect a high level of value as well. Perception of value can be influenced by conflicting messages from outside the practice.

**DB:** Our practice mantra is to "do what is best for the pet." If we believe that we are making recommendations that are at the highest level we can offer our pets, our team members have the confidence to say to our clients, "Yes, this is the best." However, as with most practices, cost is always a monumental factor in whether a client takes our recommendations. We do our best to educate our clientele, make these same recommendations at each and every visit, and provide concrete and tangible reasons as to why these recommendations will benefit their pets. Persistence and consistent messaging are important for the client to feel that we really believe in what we are doing, that it is worth the cost, and when it is not economically feasible for someone, we will find a way to tailor what that client can afford to do for that pet at that moment.

**JAW:** Preventive healthcare requires a proactive approach from all team members and a unified communication system for clinic protocols. Methods for the detection of occult disease can be perceived both by clients and veterinary team members as having a financial motive for the clinic rather than the goal of improving pet health. Support can be found by directing clients and veterinary team members to the increasing information available detailing the benefits of a proactive approach to pet health, both through the veterinary scientific literature and through many other forms of education, such as informative websites and literature written specifically for pet owners.

**NB:** Patience, positive reinforcement, and actively managing the changes you are trying to make will get you where you want to go. It's always tough to make changes. It's human nature to resist doing things a new way. The emphasis always should be on how the change will benefit the patients. Our team members don't go into veterinary medicine to get rich; they are here because they love the animals we see every day. Focus on that and how your changes will help your patients lead longer or healthier lives. My team members are proud of what we do and the fact that we provide better care than our neighboring clinics.

### What Are Some Actions That Veterinary Practices Can Take Right Now to Bolster Their Preventive Care Services?

**NR:** Learn or relearn the art of the physical evaluation, complete with a myofascial examination that informs

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the practitioner about the general state of wellbeing of the animal and highlights areas of somatic or visceral dysfunction that warrant further inspection, whether through imaging, bloodwork, more tailored analyses, etc.

**JM:** As the sole owner in my practice, I get very overwhelmed with creating the protocols and getting things off the ground any time I want to implement something new. For many of us, starting a new program is so stressful, but my biggest piece of advice is to pick one thing that you want to focus on and build from that. If you aren't already requiring presurgical bloodwork for all surgeries, start there or with requiring annual heartworm testing. Once you get your clients and staff to accept that these things are important, then layer in more things. If you already do those things, consider adding in presurgical ECGs or offering annual preventive bloodwork. For me, the hardest part is getting codes set up in my practice management system and setting prices. Getting clients to agree to preventive care services is actually the easy part, as most of them are glad we offer these services to keep their pets as healthy as possible.

**LW:** Practice leaders can help team members and pet owners understand how to prioritize preventive care and create clear messages for both of these groups. This is made more challenging by the reality that these priorities can vary from one pet to another.

**JB:** (1) Stress oral prevention during the twice-a-year wellness visits, (2) show clients how to either brush their pet's teeth or use cotton swabs or wipes to decrease daily plaque accumulation, and (3) schedule monthly or quarterly no-fee dental progress visits to monitor how clients are doing in controlling plaque and tartar.

**DB:** My recommendation is to reach for the current industry standards—where the message you give your clients will be the message they hear if they visit another practice down the street (year-round heartworm prevention, year-round tick prevention, annual fecal parasite screening, and preventive nutrition choices such as low-calorie food choices for weight management). Teach your team to provide a consistent message, from the minute your client care specialists book the appointment to the appointment itself, when veterinary technicians reinforce those messages before and after your time with the client, etc. Pick one or two ways you can improve your level of recommendations, and believe in those choices, that they are important, that they will have a beneficial impact for that pet, and that you can make those recommendations to each pet at every visit.

**JAW:** Depending on the clinic's current preventive medicine protocols, it can be as simple as shifting the goal of annual examinations from vaccination and flea/tick/heartworm testing and prophylaxis to the evaluation of the overall health of a pet. Practices can start with basic written protocols that ensure that all team members are educated in how to assess the health of a pet and how to effectively communicate the importance of preventive medicine with pet owners. Having educational material available in the waiting area and exam room can encourage an open dialogue between the pet owner and all team members.

**NB:** Be consistent. We should be talking to every client at every wellness visit about the topics we feel are important for their pets' health as well as sending every pet owner home with good written materials. The more haphazard or random we are with recommendations and compliance, the fewer patients will be helped. A patient should never receive a greater or lesser level of care simply because one doctor saw them and not another or because we had a busier or slower appointment schedule that day. Preload educational materials into every patient file and use them consistently.

## What Role Does X Play in Preventive Care?

### X = Complementary Medicine

**NR:** Complementary (now more commonly referred to as "integrative") medicine can be highly effective when instituted early. All too often, conventional practitioners have waited until "nothing more can be done" to refer for medical acupuncture, massage, photomedicine, or

rehabilitation, when the disease has progressed to a less readily reversible state. I understand why some veterinarians would be reluctant to refer to integrative medical providers if they are concerned about the latter practicing "woowoo." However, the only types of integrative approaches I advocate and practice are based on sound, scientific mechanisms of action and evidence of safety and effectiveness.

### X = Business Strategy

**JM:** Offering preventive care is an excellent way to increase your clinic revenue, but the best thing about it is that it drives business from services that really help benefit our patients. When we identify a significant abnormality on preventive care screening, it almost always drives further diagnostics and treatments. Sometimes, that is just rechecking bloodwork in one to two months to see if the change is a trending in a certain direction or resolving, and other times it leads to additional lab work, radiographs, ultrasounds, etc. All of it drives revenue, but to me it is the best revenue we can generate, as it leads to diagnosing and treating disease and hopefully ultimately extends the length and quality of a pet's life.

### X = Vaccinations

**LW:** In many ways, vaccinations are the cornerstone of preventive care. William Foege, MD, MPH, former director of the Centers for Disease Control and Prevention and the person credited with devising the global strategy that led to the eradication of smallpox, has rightly described vaccines as "the tugboats of preventive health" in that vaccinations maneuver the immune system to achieve disease protection. This is just as true for pets as it is for people.

### X = Dental Care

**JB:** Within a few days, plaque hardens to tartar, which creates a rough surface for more plaque to accumulate, often leading to gingivitis and periodontal disease. Starting with a clean mouth

is most helpful to decrease the accumulation of plaque. Extracting mobile teeth and teeth affected with advanced periodontal disease before urging preventive care is highly recommended.

### X = Nutrition and Weight Management

**DB:** Here comes my soapbox! Think about our choices as people; we choose fast food, fried food, and high-calorie desserts, and as a result, we are plagued by high blood pressure, high cholesterol levels, weight problems, and diabetes! If we could have a personal chef, wouldn't we all eat better and be healthier as a result? We wouldn't end up buying the junkiest food at the grocery store or struggling to make a healthy meal after a long day of juggling work and family; we would be presented with a delicious, healthy meal that we would enjoy thoroughly and—voila—we could stay on track! Now think about your pet; if we could be that personal chef for them and provide them with a yummy, healthy food, and a healthy portion, why wouldn't we want to? Weight problems are at the root of many evils in pets, and if we do not teach our clients that they control what goes in their pet and how those choices will affect their longevity and, more importantly, their quality of life someday, we are missing a huge opportunity to help our patients.

### X = AAHA's Guidelines

**JAW:** Many veterinary clinics do not have a formal system for implementation of preventive care into their practice. The AAHA guidelines are a wealth of information that aid in the formation of, or expansion of, a clinic preventive medicine policy. They are an excellent educational resource for the entire veterinary team regardless of their level of knowledge in the field of preventive medicine.

## If You Could Wave a Magic Wand and Get 100% Compliance from Your Clients on One Area of Preventive Care, What Would It Be, and Why?

**NR:** Learn about science-based integrative medicine and find a practitioner who knows how to fully examine an animal without causing pain or fear so that they can identify problems early and offer you a full spectrum of treatment options, including those that are nonsurgical or noninvasive when appropriate.

**LW:** In some areas there is a tendency to take rabies vaccination and disease control for granted, but last year we had nine cases of feline rabies in the county in which I practice, and worldwide an estimated 100 children die from rabies each day. Accordingly, I would wave a magic wand to achieve 100% compliance with rabies vaccination.

**JB:** Only use Veterinary Oral Health Council–accepted products because they have evidence-based proven efficacy.

**DB:** Nutrition! In today's day and age, with the overabundance of marketing and poor quality control in the pet food industry, having my clients choose a food that has been designed under the oversight of board-certified veterinary nutritionists is my biggest win. Good nutrition is the foundation for a long and healthy life.

**JAW:** I would love to see 100% of clients embrace the concept of preventive care; therefore the area where I would love to see 100% compliance is in entering a preventive medicine program. I find that the biggest hurdle to implementing effective preventive healthcare within a veterinary clinic is getting past a client's skepticism of the motives for the evaluation of their healthy pet. Compared with earning your client's trust that the goal of preventive healthcare is truly to improve healthy longevity in their pet, developing and implementing the protocols needed is easy.

**NB:** Dentistry, though most of what we do for dental health is more treatment than prevention. There is nothing sadder than sending a pet home with infected teeth while knowing the client will never let us take care of the problem. It's like sending the pet home dragging a broken leg behind them that the owner refuses to fix. Dental disease is painful, debilitating, and life shortening. If we could clean every pet's teeth before periodontal disease sets in and take care of every cat's tooth resorption as soon as we recognize it, our patients' lives would be so much better. ※

## 10 Additional Ways to Boost Preventive Care Compliance

Packed with credible, expert advice, the Preventive Care Brochure set (press.aaha.org) reinforces your recommendations on common preventive care topics.

**Brief Summary of Prescribing Information**

# Cerenia®
## (maropitant citrate)
## Injectable Solution

**Antiemetic**

*For subcutaneous or intravenous injection in dogs and cats*

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

**INDICATIONS:**

**Dogs:** CERENIA (maropitant citrate) Injectable Solution is indicated for the prevention and treatment of acute vomiting in dogs.

**Cats:** CERENIA (maropitant citrate) Injectable Solution is indicated for the treatment of vomiting in cats.

**DOSAGE AND ADMINISTRATION:**

Use of refrigerated product may reduce the pain response associated with subcutaneous injection.

**Dogs:**
**For Prevention and Treatment of Acute Vomiting in Dogs:**

**Dogs 2-4 Months of Age:** Administer CERENIA Injectable Solution subcutaneously at 1 mg/kg (0.45 mg/lb) equal to 0.1 mL/kg (0.1 mL/2.2 lb) of body weight once daily for up to 5 consecutive days.

**Dogs 4 months of Age and Older:** Administer CERENIA Injectable Solution intravenously over 1-2 minutes or subcutaneously at 1 mg/kg (0.45 mg/lb) equal to 0.1 mL/1 kg (1 mL/22 lb) of body weight once daily for up to 5 consecutive days.

In dogs that are actively vomiting, it is recommended to initiate treatment with CERENIA Injectable Solution. Thereafter, CERENIA Tablets may be used for the prevention of acute vomiting at 2 mg/kg once daily. (See CERENIA Tablets package insert for complete prescribing information).

**For Prevention of Vomiting in Dogs 4 months of Age and Older Caused by Emetogenic Medications or Chemotherapeutic Agents:** Administer CERENIA Injectable Solution intravenously over 1-2 minutes or subcutaneously at 1 mg/kg (0.45 mg/lb) of body weight one time, 45-60 minutes prior to use of emetogenic medications or chemotherapeutic agents.

**Cats:**

**For Treatment of Vomiting in Cats 4 Months of Age and Older:** Administer CERENIA Injectable Solution intravenously over 1-2 minutes or subcutaneously at 1 mg/kg (0.45 mg/lb) equal to 0.1 mL/kg (0.1 mL/2.2 lb) of body weight once daily for up to 5 consecutive days.

The underlying cause of acute vomiting should be identified and addressed in dogs and cats that receive CERENIA Injectable Solution. If vomiting persists despite treatment, the case should be re-evaluated.

**WARNINGS:** Not for use in humans. Keep out of reach of children. In case of accidental injection or exposure, seek medical advice. Topical exposure may elicit localized allergic skin reactions in some individuals. Repeated or prolonged exposure may lead to skin sensitization. In case of accidental skin exposure, wash with soap and water. CERENIA is also an ocular irritant. In case of accidental eye exposure, flush with water for 15 minutes and seek medical attention.

In puppies younger than 11 weeks of age, histological evidence of bone marrow hypocellularity was observed at higher frequency and greater severity in puppies treated with CERENIA compared to control puppies. In puppies 16 weeks and older, bone marrow hypocellularity was not observed (see **ANIMAL SAFETY**).

**PRECAUTIONS:**

The safe use of CERENIA Injectable Solution has not been evaluated in dogs or cats with gastrointestinal obstruction or that have ingested toxins.

Use with caution in patients with hepatic dysfunction because CERENIA Injectable Solution is metabolized by CYP3A, CYP2D15 (dogs) and CYP1A (cats) enzymes (see **Pharmacokinetics**). The influence of concomitant drugs that may inhibit the metabolism of CERENIA Injectable Solution has not been evaluated. CERENIA Injectable Solution is highly protein bound. Use with caution with other medications that are highly protein bound. The concomitant use of CERENIA Injectable Solution with other protein bound drugs has not been studied in dogs or cats. Commonly used protein bound drugs include NSAIDs, cardiac, anticonvulsant, and behavioral medications. Drug compatibility should be monitored in patients requiring adjunctive therapy.

The safe use of CERENIA Injectable Solution has not been evaluated in dogs or cats used for breeding, or in pregnant or lactating bitches or queens.

**ADVERSE REACTIONS:**

**DOGS:**

In a US field study for the prevention and treatment of vomiting associated with administration of cisplatin for cancer chemotherapy, the following adverse reactions were reported in 77 dogs treated with CERENIA Injectable Solution at 1 mg/kg subcutaneously or 41 dogs treated with placebo:

**Frequency of Adverse Reactions by Treatment**

| Adverse Reaction | Placebo (n=41) | | CERENIA (n=77) | |
|---|---|---|---|---|
| | # dogs | % occur | # dogs | % occur |
| Diarrhea | 1 | 2.4 | 6 | 7.8 |
| Anorexia | 0 | 0 | 4 | 5.2 |
| Injection site reaction (swelling, pain upon injection) | 0 | 0 | 3 | 4 |
| Lethargy | 1 | 2.4 | 2 | 2.6 |

The following adverse reactions were reported during the course of a US field study for the prevention and treatment of acute vomiting in dogs treated with 1 mg/kg CERENIA Injectable Solution subcutaneously and/or CERENIA Tablets at a minimum of 2 mg/kg orally once daily for up to 5 consecutive days:

**Frequency of Adverse Reactions by Treatment**

| Adverse Reaction | Placebo (n=69) | | CERENIA (n=206) | |
|---|---|---|---|---|
| | # dogs | % occur | # dogs | % occur |
| Death during study | 4 | 5.8 | 10 | 4.9 |
| Euthanized during study | 0 | 0 | 2 | 1 |
| Diarrhea | 6 | 8.7 | 8 | 3.9 |
| Hematochezia/bloody stool | 5 | 7.2 | 4 | 1.9 |
| Anorexia | 2 | 2.9 | 3 | 1.5 |
| Otitis/Otorrhea | 0 | 0 | 3 | 1.5 |
| Endotoxic Shock | 1 | 1.4 | 2 | 1 |
| Hematuria | 0 | 0 | 2 | 1 |
| Excoriation | 0 | 0 | 2 | 1 |

Other clinical signs were reported but were <0.5% of dogs.

Adverse reactions seen in a European field study included ataxia, lethargy and injection site soreness in one dog treated with CERENIA Injectable Solution.

**Post-Approval Experience (Rev. 2015)**

The following adverse events are based on post-approval adverse drug experience reporting. 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 for CERENIA Injectable Solution: Pain/vocalization upon injection, depression/lethargy, anorexia, anaphylaxis/anaphylactoid reactions (including swelling of the head/face), ataxia, convulsions, hypersalivation, tremors, fever, dyspnea, collapse/loss of consciousness, recumbency, injection site reactions (swelling, inflammation) and sedation.

Cases of death (including euthanasia) have been reported.

**CATS:**

The following adverse reactions were reported during the course of a US field study for the treatment of vomiting in cats treated with 1 mg/kg CERENIA Injectable Solution subcutaneously once daily for up to five consecutive days:

**Frequency of Adverse Reactions by Treatment**

| Adverse Reaction | Placebo (n=62) | | CERENIA (n=133) | |
|---|---|---|---|---|
| | # cats | % occur | # cats | % occur |
| Moderate Response to Injection[1,2] | 1 | 1.6 | 30 | 22.6 |
| Significant Response to Injection[1,3] | 1 | 1.6 | 15 | 11.3 |
| Fever/Pyrexia | 2 | 3.2 | 2 | 1.5 |
| Dehydration | 0 | 0 | 3 | 2.3 |
| Lethargy | 0 | 0 | 2 | 1.5 |
| Anorexia | 0 | 0 | 1 | 0.8 |
| Hematuria | 0 | 0 | 1 | 0.8 |
| Hypersalivation | 0 | 0 | 1 | 0.8 |
| Injection site swelling | 1 | 1.6 | 0 | 0 |

[1] The clinician observed and graded each cat's response to injection.
[2] Cat objected to the injection by retreating and vocalizing
[3] Cat objected to the injection by retreating, hissing, scratching, and vocalization

**Post-Approval Experience (Rev. 2015)**

The following adverse events are based on post-approval adverse drug experience reporting. 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 cats are listed in decreasing order of reporting frequency for CERENIA Injectable Solution: Depression/lethargy, anorexia, hypersalivation, pain/vocalization upon injection, dyspnea, ataxia, fever, recumbency, vomiting, panting, convulsion, and muscle tremor.

Cases of death (including euthanasia) have been reported.

To report suspected adverse events, for technical assistance or to obtain a copy of the SDS, contact Zoetis Inc. at 1-888-963-8471 or www.zoetis.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/AnimalVeterinary/SafetyHealth.

**STORAGE CONDITIONS:** CERENIA Injectable Solution should be stored at controlled room temperature 20-25°C (68-77°F) with excursions between 15-30°C (59-86°F). After first vial puncture, CERENIA Injectable Solution should be stored at refrigerated temperature 2-8°C (36-46°F). Use within 90 days of first vial puncture. Stopper may be punctured a maximum of 25 times.

**HOW SUPPLIED:** CERENIA Injectable Solution is supplied in 20 mL amber glass vials. Each mL contains 10 mg of maropitant as maropitant citrate.

Approved by FDA under NADA # 141-263

zoetis

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Zoetis Inc.
Kalamazoo, MI 49007

Revised: March 2019

4019387A&P

Cerenia®
maropitant citrate

# When patients are back in business, your staff is, too

## Using CERENIA injectable perioperatively is good for dogs—and your practice

### Benefits to your patients

Help ease a dog's recovery by adding CERENIA to your perioperative protocol, to prevent vomiting and enable a quick return to normal feeding.[1]

### Benefits to your practice

A third of practice owners reported the impact of cleaning up after patients that vomit.[2] With CERENIA, less cleaning can mean more time for patient care, leading to greater dog owner satisfaction.[3]


**"Happier patients, happier clients, a happier team!"**
– Dr. Sue Ettinger, DVM, DACVIM (oncology)

An expert panel recommends the use of CERENIA.
Download your copy at **www.RelievePOV.com**

**IMPORTANT SAFETY INFORMATION:** Use CERENIA Injectable subcutaneously for acute vomiting in dogs 2 to 4 months of age or either subcutaneously or intravenously in dogs 4 months of age and older. Safe use has not been evaluated in cats and dogs with gastrointestinal obstruction, or those that have ingested toxins. Use with caution in dogs with hepatic dysfunction. Pain and vocalization upon injection is a common side effect. In people, topical exposure may elicit localized allergic skin reactions, and repeated or prolonged exposure may lead to skin sensitization. **See Brief Summary of Prescribing Information,** on adjacent page.

**References: 1.** Ramsey D, Fleck T, Berg T, et al. Cerenia prevents perioperative nausea and vomiting and improves recovery in dogs undergoing routine surgery. *Intern J Appl Res Vet Med*. 2014;12(3):228-237. **2.** Data on file. Cerenia Quick Poll Infographic. 2017 Zoetis Inc. **3.** Data on file. Rethinking Perioperative Vomiting in Dogs Proceedings. April 2019 Zoetis Inc.



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*(phenylpropanolamine hydrochloride extended-release tablets)*

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**PROIN ER™**

*(phenylpropanolamine hydrochloride extended-release tablets)*

**IMPORTANT SAFETY INFORMATION:** For oral use in dogs only. Not for human use. Keep out of reach of children. If accidentally ingested by humans, contact a physician immediately.

The most commonly reported side effects were vomiting, loss of appetite, diarrhea, excessive salivation, agitation, tiredness, vocalization, confusion, increased water consumption, weight loss, weakness, fever, panting, and reversible changes in skin color (flushing or bright pink). Abnormal gait, seizures or tremors, as well as liver enzyme elevations, kidney failure, blood in urine and urine retention have been reported. In some cases death, including euthanasia has been reported. Sudden death was sometimes preceded by vocalization or collapse.

Instances of dogs chewing through closed vials of PROIN® and eating the vial contents have been reported, in some cases resulting in overdose. Keep the product in a secured storage area out of the reach of pets in order to prevent accidental ingestion or overdose, as dogs may willingly consume more than the recommended dosage of PROIN® Chewable Tablets or PROIN ER™ tablets. Contact your veterinarian immediately if the dog ingests more tablets than prescribed or if other pets ingest PROIN Chewable Tablets or PROIN ER tablets.

PROIN and PROIN ER may cause elevated blood pressure and should be used with caution in dogs with pre-existing heart disease, high blood pressure, liver disease, kidney insufficiency, diabetes, glaucoma, and other conditions associated with high blood pressure. Dogs may transition from PROIN Chewable Tablets to PROIN ER without a break in administration. However, do not alternate PROIN ER with PROIN Chewable Tablets because the effectiveness and safety of interchangeable use have not been evaluated.

The safe use of PROIN and PROIN ER in dogs used for breeding purposes, during pregnancy or in lactating bitches, has not been evaluated. Contact your veterinarian if you notice restlessness or irritability, loss of appetite, the incontinence persists or worsens, or any other unusual signs. See prescribing information for complete details regarding adverse events, warning and precautions or visit prnpharmacal.com.



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AAHA ACCREDITED
Practice of the Year
1st Place 2019

# Numero Uno

## Saint Francis Veterinary Center Named 2019 AAHA-Accredited Practice of the Year

by Jen Reeder

INDUSTRIALIST J. PAUL GETTY ONCE SAID, "The employer generally gets the employees he deserves." That seems to be the case with Mark Magazu, DVM, founder of AAHA-accredited Saint Francis Veterinary Center in Woolwich Township, New Jersey.

As the 2019 Connexity by AAHA conference commenced in Indianapolis in September, he had no idea that his employees had secretly applied for AAHA-Accredited Practice of the Year. The hospital came in second twice in the past, for general practice in 2012 and referral practice in 2014. Magazu felt it might be self-aggrandizing to apply a third time.

But his staff wanted to honor the 65-year-old veterinarian's legacy and asked for permission to pursue the award from the hospital's leadership, including his son, Mark Magazu II, MPA, JD, president and CEO. Naturally, his son said yes, touched that they wanted to do something so special for his father.

"Dad believes in a simple truth: if you can help the people and communities around you to rise up, they will raise you up in return," Magazu II said. "It is a perpetual

Photos courtesy Saint Francis Veterinary Center

investment of compassion and purpose in those around us, which pays off in truly remarkable ways."

Indeed, that simple truth led to something remarkable: Saint Francis Veterinary Center was named the 2019 AAHA-Accredited Practice of the Year.

At time of writing, the practice was a finalist but not the declared winner. Magazu II said that if Saint Francis Veterinary Center won, his father's first reaction would probably be "a feeling of intense pride in his team."

"He would undoubtedly believe the honor is theirs, not his," he said. "It would be almost poetic if he were to receive this honor at this very moment, as his career winds down after more than 30 years leading our team."

## "Mr. AAHA"

Magazu II referred to his father as "Mr. AAHA" because his father is so passionate about the importance of AAHA accreditation and achieving AAHA standards each day at the practice.

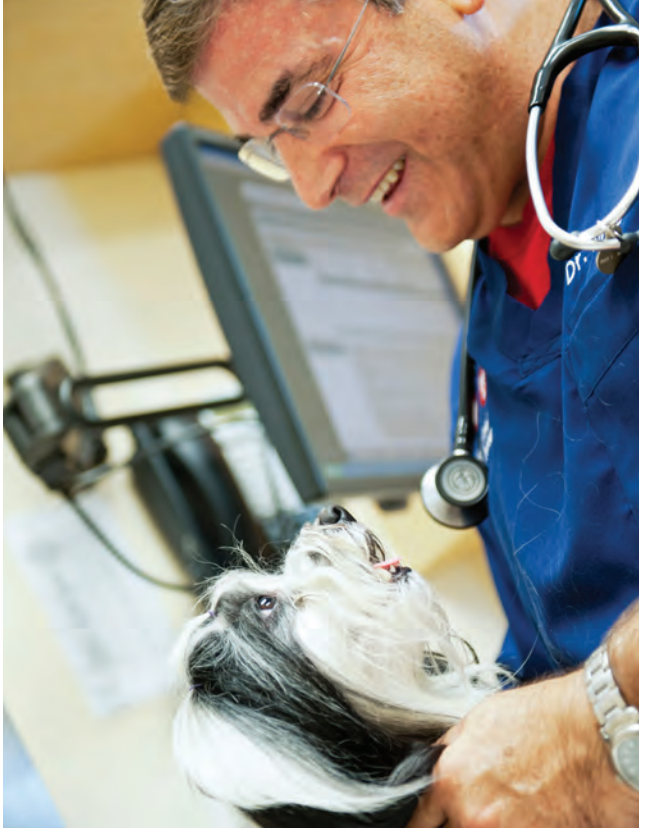
"AAHA accreditation is who we are—we are the AAHA standards," he said. "As Dad always says, 'These standards keep our profession among the most respected in the world.'"

The 2019 AAHA-Accredited Practice of the Year had humble beginnings. The senior Magazu, who earned his veterinary degree in Italy after studying at the United States Military Academy at West Point, opened Swedesboro Animal Hospital in 1986 with the help of his wife and their four children, Mark, Matthew, Michelle, and Melissa.

"We took over a run-down TV repair shop in a town of 400 homes and turned it into the first veterinary clinic in the community," Magazu recalled.

The town continued to grow, and in 1992, Magazu built a new hospital next door to their home to meet the community's needs. That year, the practice achieved AAHA accreditation.

"He felt that AAHA accreditation would set the foundations of excellence and integrity upon which that growth would occur," Magazu II said. "And there can be no doubt that AAHA accreditation over 25 years has guided our practice and our growth in every way over the years since."



"As Dad always says, 'These standards keep our profession among the most respected in the world.'"

—MARK MAGAZU II, ON AAHA'S STANDARDS

The hospital expanded to add the Tri-State Animal Emergency Center, and around 2013, in the midst of yet another expansion, the family consolidated both practices under the name Saint Francis Veterinary Center. Magazu said Saint Francis of Assisi is very special to the family as both the patron saint of Italy and of animals; Magazu and both of his sons share the middle name "Francis."

Magazu said the mission of the practice is embodied by a quote from Saint Francis of Assisi: "Start by doing what's necessary, then do what's possible, and suddenly, you're doing the impossible."

Today, Saint Francis Veterinary Center occupies 10,000 square feet and boasts 13 veterinarians and a team of 75 total employees who serve more than 25,000 patients each year. It was New Jersey's first certified level II 24-hour emergency practice, is an American Association



Photo courtesy Saint Francis Veterinary Center

of Feline Practitioners–certified Cat Friendly Practice, and received a Certificate of Special Senate Recognition in 2013 from United States Senator Bob Menendez for "innovative veterinary care and outstanding contributions to the community."

"But at our core, we simply strive to live up to Dad's example and do the best we can for every person and patient who comes through our door," Magazu II said. "The greatest fortune of my life has been to have my dad and mom as our bosses. Above all else, I learned from them that kindness and understanding can, in fact, be successful elements of a thriving business. You don't need to sacrifice one for the other, and that is very fulfilling."

Melissa Magazu, professional development manager at the practice, also feels grateful to have worked in the family business, starting with collecting and folding newspapers for kennels when she was nine years old. She said she grew up idolizing everything her dad stood for.

"He taught me the definition of honest, hard work," she said. "Dad worked hard every day under three core values: pride, honor, and dignity. . . . I admire the man he is and all he believes in."

Israel Thompson, director of strategic initiatives, said he's proud to work with Magazu and some of his children, as well as the entire team, which he said is a great strength of the practice.

"They all love what they do and work as hard as they can to live [up] to the vision and mission of the hospital, Magazu, and Saint Francis," he said.

Thompson leads the practice's social media outreach, which includes nearly 20,000 Facebook followers. He encourages the team to capture and share meaningful moments with patients and clients on Instagram and plans Facebook posts for specials and holidays. He said part of the social media strategy is to help clients understand what goes on behind the scenes when their pet is out of the room for testing or other procedures.

"Social medial helps in this as well as showcases our teams and the different things we see to help educate our clients," he explained. "We also use it as a tool for feedback from clients and the community."

> "Start by doing what's necessary, then do what's possible, and suddenly, you're doing the impossible."
>
> —SAINT FRANCIS OF ASSISI

## Community Spirit

Giving back to the community is a huge part of the culture at Saint Francis Veterinary Center. Through the K9 Heroes Total Health Program, about 75 handlers of police and service dogs receive steep discounts.

The program helped a police dog in training named Kimber who needed knee surgery before she even graduated; without it, the police department would have lost their recruit. But Saint Francis provided knee surgery and stem cell therapies that healed her knee. Now Kimber is a narcotics-detection dog in Atlantic City.

The practice also nurtures young talent and cowrote and coteaches the animal science program at the local high school. As part of the program, students spend 10 practicum hours at the animal hospital. Each year, four students also receive a $1,000 scholarship to work at the practice.

"There are some [who] have stayed on to work with us because we also pay 100% of college tuition for anybody on our staff who wants to get their associate's degree and become a certified veterinary technician," Magazu II, shared. "That's the kind of thing that benefits everybody."

Veterinary assistant Julia Morris has worked at Saint Francis Veterinary Center for more than a year and said it's an excellent place to work. She plans to go to veterinary school in the future and is grateful for the opportunities the practice offers.

"I am able to learn and see new things every day, and I am so thankful that someone of my young age is given the chance to do what I do," she said. "The practice is really strong in its versatility and diversity of focuses and abilities. We have the emergency critical care unit, general practice, boarding, surgery, rehabilitation, ophthalmology, and more. It is also impressive how each section of the hospital communicates effectively and works together to make everything cohesive at all times."

"Each section of the hospital communicates effectively and works together to make everything cohesive at all times."

—JULIA MORRIS, VETERINARY ASSISTANT

Sydney Melis, referral coordinator, said she's proud to be part of a staff that "will go above and beyond to take care of pets." It's a sentiment echoed by Vlora Karpuzi, a veterinary assistant.

"I am proud of the quality of care we provide to our patients. We always put our patients and clients first," Karpuzi said. "At Saint Francis, we pay attention to every little detail to ensure safety and quality of treatment for everyone involved."

Karpuzi said Saint Francis Veterinary Center offers dog training classes and daycare to patients, which shows that the practice recognizes the importance of the behavioral and mental wellbeing of pets, not just physical health. She also admires the strong communication between members of the team and clients so they can give the best possible care when they take their pets home.

"Our communication skills allow the client to bring Saint Francis home with them," she said.

Prioritizing the client experience and practicing top-notch medicine helped build a loyal clientele. Loraine Young said she's taken her dogs and cats to the practice for more than 30 years because the team, led by Magazu, treats her pets the way a doctor in human medicine would care for a child.

"Whatever they say, I trust their judgment," she said. "They're very knowledgeable and take very good care of the animals."

In addition to the practice's high level of medical care and the team's genuine compassion for animals, Young likes that the waiting room is designed to provide a bit of privacy for pets while they wait for appointments and that animals seem comfortable while recovering from surgery.

"I think they've thought of everything," she said.

Recently, Young's six-year-old dachshund, Andy, suddenly couldn't use his back legs. The lovable dog was essentially paralyzed from intervertebral disk disease. But Magazu thought they could help him with spinal cord surgery, which would cost thousands of dollars.

Fortunately, Saint Francis Veterinary Center offers the Be My Angel Veterinary Fund, which provides free services for pet owners in need. Under the program, Saint Francis sent CAT scans of Andy's spine to the Health Design Lab at Thomas Jefferson University in Philadelphia to develop a 3D rendering with multiple cross sections, so the surgeon was able to plan the surgery with pinpoint precision beforehand.

"To me, it was a miracle that Andy would have a chance at normal health again," Young said. "At six years old, I really did not want to give up. Now he's wagging his tail and beginning to get motor function back into his hind legs, which is amazing."

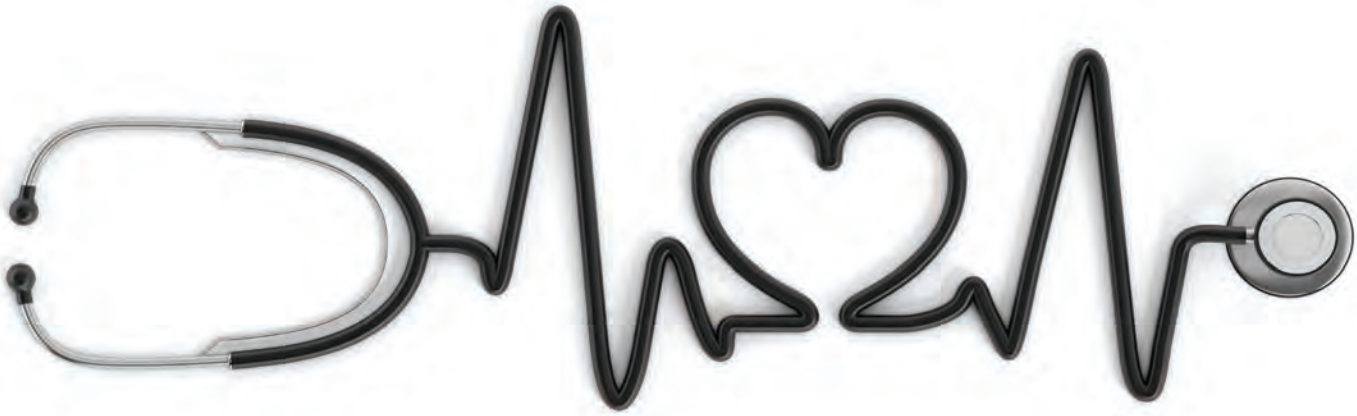
She's incredibly grateful to Magazu and Saint Francis Veterinary Center for helping Andy and all the pets she's had over the years and recommends the practice to other animal lovers because it's so outstanding.

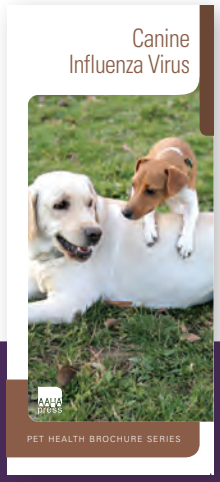
"They've set the bar high for themselves, and they meet those standards."

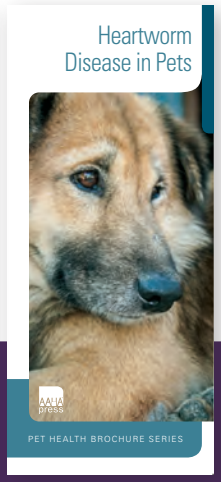
For more information, visit saintfrancis.org. ※

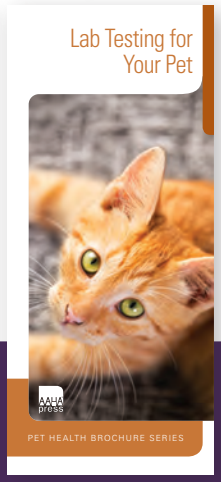
Freelance journalist Jen Reeder is an award-winning member of the Dog Writers Association of America and the Cat Writers' Association.

Photo courtesy Saint Francis Veterinary Center



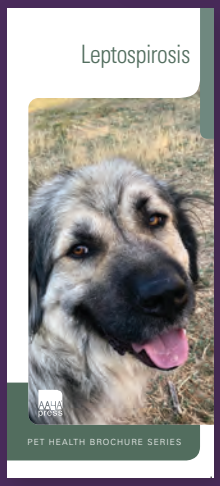


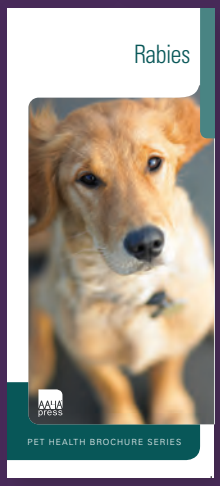




# You understand the importance of **preventive care**. AAHA does, too.

## Communication Is Key!



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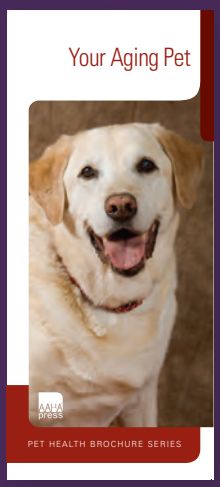


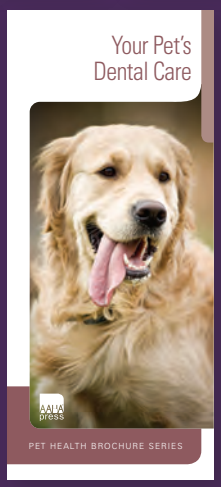



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AAHA press

# The Unforgettable Veterinary Practice

> "Everyone likes to think only the millennials live on digital devices, but the fastest-growing demographic with smartphone adoption is the 55- to 65-year-old demographic."
>
> —STACEE SANTI, DVM, FOUNDER AND CEO OF VET2PET

## How to Create Standout Reminders to Increase Preventive Care Compliance and Revenue

by Sarah Rumple

**Fergus and Katie were six weeks old** when Karyn Gavzer and her partner adopted the orange tabbies from a local shelter in 2017.

"Life has never been the same since they came into our lives," Gavzer said as one of the cats curled up behind her on her chair, forcing her to the edge of it. "They own us. They absolutely own us."

Fergus, one of Karyn Gavzer's adopted orange tabby cats. (Courtesy of Karyn Gavzer)

After working in the veterinary industry for many years, Gavzer understands the importance of regular preventive care for Fergus and Katie. Now, as a retiree and full-time "cat mom," she also understands how pet owners feel when they receive preventive care reminders from their veterinary healthcare team.

"I'm on my cell phone all the time, so I never miss a text," Gavzer said. "I absolutely, hands down, would prefer text reminders from my veterinarian."

Gavzer isn't alone. According to research conducted by Pew Research Center in February 2019, 81% of Americans own a smartphone, which is up from just 35% in 2011. And numerous sources report that text message open rates are as high as 98%, while email open rates hover around 20%.

But many clients still appreciate a personalized postcard or email reminder, and application (app) push notifications branded to the veterinary practice are increasingly popular as consumers stay tethered to their smartphones. With so many reminder options, what is a veterinary practice to do? How can you ensure your reminders stand out and move your clients to action?

## Ask for Your Clients' Communication Preferences

"If you want to be the best you can be, you have to customize your reminders as much as you can," said Natalie Marks, DVM, CVJ, medical director of AAHA-accredited Blum Animal Hospital in Chicago, Illinois. "Even though it's a little more work, it's important to ensure you understand the preferences of clients."

At Blum Animal Hospital, pet owners are asked their communication preferences on all new-client paperwork, and client care specialists confirm those preferences at each wellness visit. The hospital uses ALLYDVM for their reminders, and Marks notes a "night-and-day difference in regards to compliance and keeping scheduled appointments" since switching to the platform approximately five years ago.

Most reminder services allow practices to customize the ways different clients receive reminders, so take that extra step to ask their communication preferences and show you're paying attention to the details.

## Use Various Reminder Methods That Complement Each Other

While knowing your clients' communication preferences is important, Paul Hall, MS, MBA, president of Boomerang Communications, believes that you should cover all your bases when it comes to reminders.

"The greatest gains we see with practices is when they add printed reminders after they have been sending only electronic reminders, like email, text, and mobile app push notifications," explained Hall. "Printed reminders reach clients who aren't opening and clicking on electronic reminders."

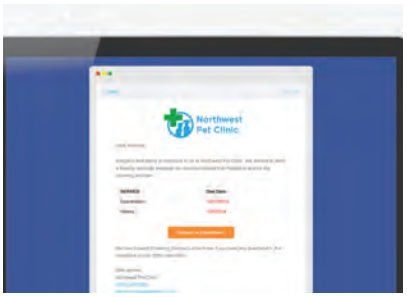
When print, email, and text reminders arrive within a few days of each other, it helps to keep the reminder at the top of the client's mind, Hall said. And 44.8% of his company's first attempts to remind are leading to appointments.

"My mom is 86, and she's a great pet owner. But she doesn't use her computer, and she doesn't have a smartphone. When her postcard comes in the mail, she puts her cat in the car and she goes to the vet," said Debbie Boone, CVPM, president of 2 Manage Vets Consulting. "If we don't send at least one postcard out, I think we're going to lose some people."

Boone, who travels often and receives more than 100 emails every day, also likes to receive postcard reminders.

"They still have a place. People receive a lot of digital correspondence, and reminders can get buried," Boone explained.

Boone also thinks that apps with push notifications are a great tool for reminding clients on smartphones, and Stacee Santi, DVM, founder and CEO of Vet2Pet, agrees.



VitusVet reminders reach clients on their smartphones, in their inboxes, and in their mailboxes. (Photos courtesy of Mark Olcott)

> "One reminder is not going to work. Life is busy, and people have a whole lot of commitments and a whole lot of stuff to do."
>
> —DEBBIE BOONE, CVPM, PRESIDENT OF 2 MANAGE VETS CONSULTING

"Everyone likes to think only the millennials live on digital devices, but the fastest-growing demographic with smartphone adoption is the 55- to 65-year-old demographic," said Santi.

Vet2Pet reminders are sent via push notifications through the app, and they are meant to complement email and postcard reminders sent through other platforms. They are branded to the practice and are personalized with the pet's name. Santi reported that after a practice uses the app for 12 months, an average of 25% of the practice's active client base will download the app. By month 24, that number doubles to 50%.

And because practices aren't charged for data usage with push notifications like they may be with text messaging, Santi said they're an affordable way for veterinarians to stay connected to clients via their smartphones.

Margot Vahrenwald, DVM, owner and medical director of AAHA-accredited Park Hill Veterinary Medical Center in Denver, Colorado, typically sends personalized reminders using a combination of methods based on owner preferences, but she's noticing an increase in clients asking for text message notifications.

"People are living on their smartphones, and they want instant communication at their fingertips," Vahrenwald said. "Many of our clients are cognizant of the environment, too, so they appreciate switching to electronic reminders. But there are still some clients who want postcards—it's all about individual preference."

## Make It Easy for the Pet Owner

If your client receives a reminder that their cat is due for a wellness exam, how do they book the appointment? If they have to pick up the phone and call your practice, you may be losing business. Mark Olcott, DVM, MBA, cofounder and CEO of VitusVet, has aimed to bring the convenience of Amazon to client experiences with veterinary hospitals through his VitusVet communication platform.

"What's the genius of Amazon? It's not the low prices—it's the radical convenience and simplicity," explained Olcott. "One of the big barriers that practices face now is that almost all the revenue has to come through the telephone. Modern consumers don't want to call you to make an appointment. That's a friction point. They want simple and easy, and they want to be able to do it where and when it's convenient for them."

When a client receives a digital reminder from your practice, they should have the ability to schedule or confirm an appointment, or refill a prescription, digitally—without making a phone call.

"It's about making it easy for your clients to do business with you," Olcott said.

According to Olcott, 50% of the texts sent through VitusVet turn into appointments, and practices are experiencing a 50% reduction in their postcard expenses and a 17% increase in bookings.

"There is a whole additional practice inside your database," said Olcott. "You could double your revenue if it was just 30% easier to do business with you."

## Make Reminders Visual

Do your reminders include paragraphs of copy? Generic images? If so, it's time to take a look at marketing trends and modernize your communications.

"You don't need to have paragraphs of copy on a postcard or email. People aren't reading it. Your message is getting lost in all that verbiage. So, pick the points, make them stand out, keep the graphics real and cute, and drop everything else. Then, provide a call to action

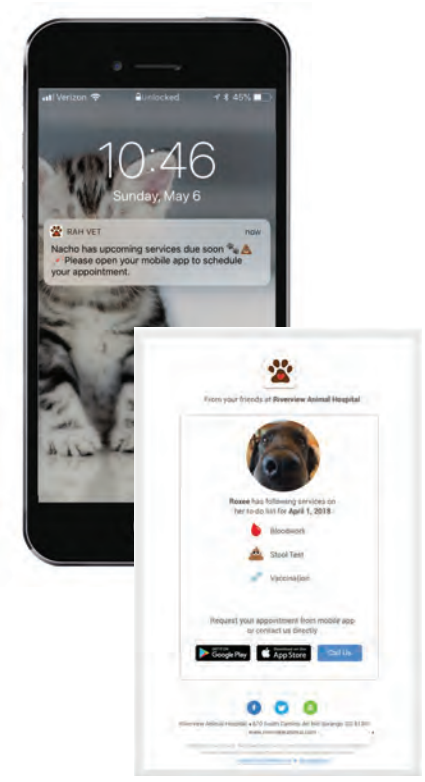
that everyone can understand," explained Santi.

Santi, who founded Vet2Pet in 2013 after building and utilizing the platform for three years at AAHA-accredited Riverview Animal Hospital in Durango, Colorado, makes reminders even more visual by adding fun emojis.

"If a pet is due for a heartworm test, there will be a mosquito emoji. If it's a blood test, it's a syringe emoji," explained Santi.

## Educate Clients and Provide Relevant Information

If you're sending reminders telling pet owners that they're late or they've missed an appointment, it's time to get more creative.




Vet2Pet incorporates fun emojis to help reminders stand out. (Photos courtesy of Stacee Santi)

"It's like they're criticizing me," Gavzer said. "Like they're telling me I'm a bad pet owner because I'm late booking an appointment."

Boone recommends using stories and statistics to move your clients to action. And she says it's helpful to focus on the human family members when appropriate.

"What's in it for the humans in the house? There are cases in the US where children have been blinded by parasites that they have contracted from family pets because they're out playing in the yard in contaminated soil and they get roundworms," explained Boone. "When you tell people that story, the compliance rate goes up. It's not only about the pet—it's about the whole family. Humans are the deciders."

Marks agrees, and the team at Blum Animal Hospital sends personalized and educational email blasts (e-blasts) to clients when appropriate. An example was an e-blast about a study from The Ohio State University on leptospirosis that identified Chicago as a hotspot for the disease.

"We told clients about the study and recommended that they talk to their veterinarian about the vaccine if their dog wasn't vaccinated," explained Marks. "Clients were so appreciative. They felt informed. We need to be ahead of our clients in our area of expertise."

Santi's Vet2Pet has the ability to target clients with breed-specific information. If your practice often sees Labrador and golden retrievers with hypothyroidism, you can include the risks and symptoms of the condition in your wellness reminders to clients who own Labrador and golden retrievers, which will make the reminder feel highly personalized and relevant to the client.

"Practices are almost overly concerned about being annoying when it comes to reminding and marketing themselves," said Santi. "It's only annoying if your content is irrelevant. If your content is good, clients will appreciate it."

## Remind at the Right Frequency

For 19 years, Boone was the hospital administrator at Cobb Animal Clinic in Greensboro, North Carolina. There, the protocol was to send three reminders. The first would be sent about three weeks before the pet was due, and that typically received a 50% response. For those who didn't respond, a second reminder was sent two weeks after the pet was due, and about 20% of owners would respond. The third reminder was sent one month after the pet was due, and about 13% of owners would respond to that.

"I go into practices now that will send out a single reminder," said Boone. "It might be digital, but one reminder is not going to work. Life is busy, and people have a whole lot of commitments and a whole lot of stuff to do."

Vahrenwald has found that frequent reminders have worked well for her clients.

"If owners have provided us with [an] email, they'll get an email reminder three weeks prior to their due date. For those who didn't, they'll get a postcard," explained Vahrenwald.

"Then we have a two-week reminder that's a quick little email, and then the owners who have elected to allow us to text them will receive a text reminder a week before."

If a pet is past due, Vahrenwald's practice sends an email two weeks after the pet is past due, a text three weeks after, and a postcard four weeks after.

## Forward-Book Appointments

It's much easier to remind clients and ask them to confirm appointments that have been made already than it is to remind them to schedule a new appointment.

"As an industry, we've missed the boat when it comes to forward-booking. Dentists have been doing it for decades," said Marks. "At Blum, we try to do it with every appointment."

Many practices have had trouble forward-booking because of doctor scheduling, staff training, or client pushback, but Vahrenwald says these hurdles can be overcome. Her practice has gone back to the drawing board to rewrite the process and train the team effectively, and her practice management software is helping.

"Our software is set to have a pop-up when the client care specialist is checking out that says, 'Next appointment to be scheduled in . . . ,' and they can choose a medical progress exam, a 12-month exam, or a 6-month exam," said Vahrenwald.

As a pet owner, Gavzer is a fan of forward-booking as well. "I would like to have an appointment when I leave and know when I'm supposed to come back again. I don't care if it's a year in advance, I just want to know I have an appointment," she said.

"There are still some clients who want postcards—it's all about individual preference."

——MARGOT VAHRENWALD, DVM, OWNER AND MEDICAL DIRECTOR OF AAHA-ACCREDITED PARK HILL VETERINARY MEDICAL CENTER

When appointments are forward-booked, confirmation reminders should be sent at least two weeks before the appointment so clients can reschedule if needed.

## Additional Reminder Tips

**Personalize:** Whether you're calling clients or sending postcards, texts, emails, or push notifications, every reminder should be personalized to the pet and client.

**Be consistent:** Boone says that practices should set standards so the whole team is on the same page when it comes to remindable services. "There should be a consistent message about everything from how often vaccines are supposed to be given to how many times pets should come in per year to what preventive products we recommend," she said.

**Refresh often:** "If you haven't looked at your reminders in the last two years, you need to look at them. Update the graphics. Do you think the pet owner likes getting the same postcard and email graphic every time for all their pets? No. Keep it fresh," said Santi.

**Improve the client experience in your practice:** Are you a client service–oriented practice? If clients don't have great experiences in your practice, they won't come back, no matter how great your reminder system is, said Olcott. ※

Sarah Rumple is an award-winning veterinary writer and editor living in Denver, Colorado. She is the owner of Rumpus Writing and Editing. Check out her website at rumpuswriting.com.

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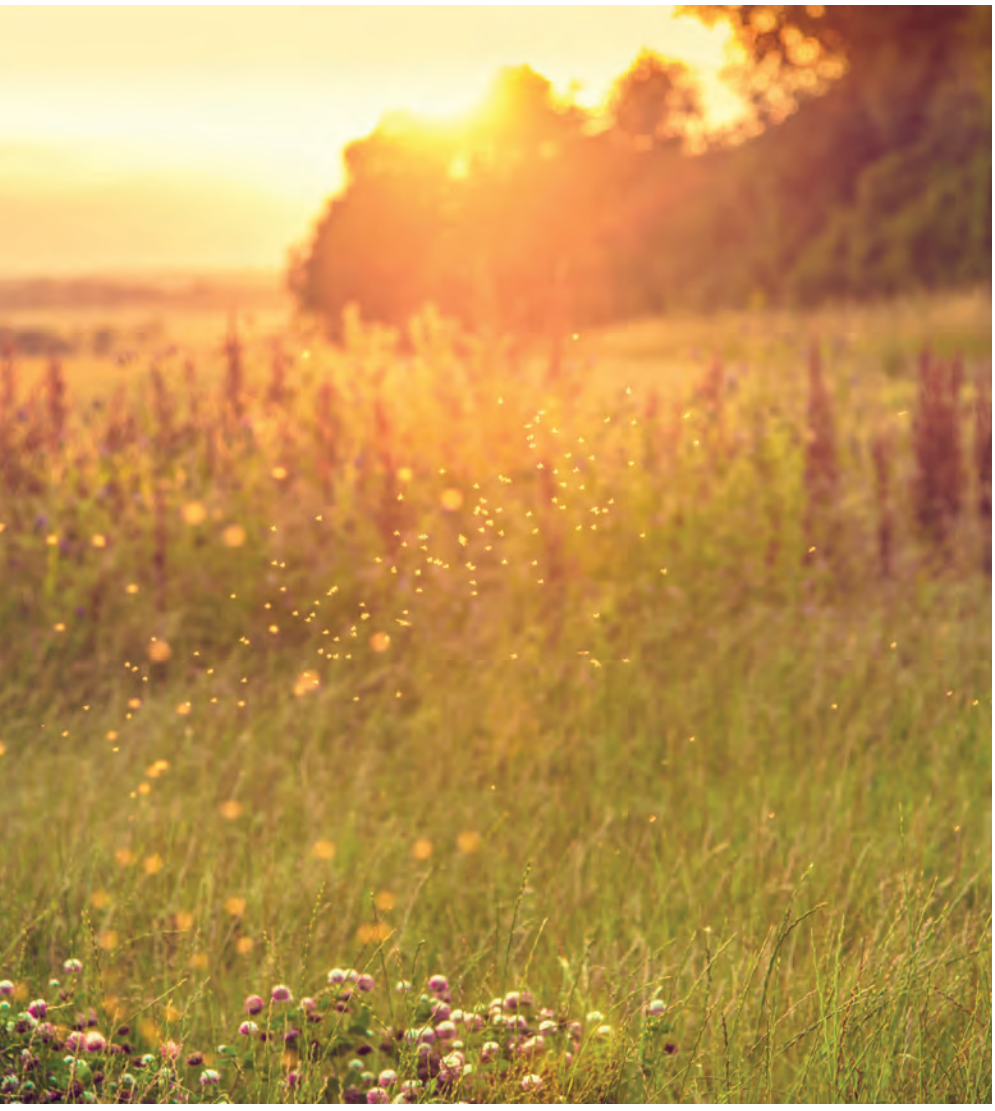
# Parasites Are on the Move

## Are You and Your Clients Ready?

by Maureen Blaney Flietner



To say a warmer world is a sicker world "paints the situation with too broad a brush."

—RICHARD OSTFELD, PHD

**As pet parasite problems pop up all over,** experts suggest that everyone needs to up their game on what's happening.

But what is happening? Is global warming the cause? Global temperatures in 2018 were "only" 1.5 degrees Fahrenheit warmer than the 1951 to 1980 mean.

"A degree or two doesn't sound like a lot of global warming," said Katharine Hayhoe, PhD, a climate scientist and professor at Texas Tech University in Lubbock, Texas. "Over the course of a single day, temperatures go up and down by a lot more than one or two degrees. So, what's the big deal?

"Here's the difference: We aren't talking about the temperature of a certain place at a specific time. We are talking about the long-term average temperature of the entire planet, which, over human timescales, is as stable as that of the human body.

"Think of your body temperature or that of your pet's. Then imagine it goes up nearly two degrees Fahrenheit—as the temperature of the earth already has. You start to feel it: You're overheated, achy, tired. Your pet gets lethargic and stops eating. It's because we're running a fever. And that's exactly what's happening with the earth."

So are changing weather patterns the reason for parasite movement?

## Many Factors

"It's complicated," said Susan Paskewitz, PhD, chair of the Department of Entomology and director of the Upper Midwestern Center of Excellence for Vector-Borne Disease at the University of Wisconsin–Madison.

"There is clear indication that blacklegged ticks are moving into colder areas, such as Canada, as a result of warming climate. It is also reasonable to assume that the lone star tick range is restricted by climate and that movement north may be a result of warming," she said. "But in the Upper Midwest and eastern United States, we are also seeing the blacklegged tick move south, so clearly climate isn't the whole story."

Paskewitz said she sees the recovery of formerly deforested areas now regaining their white-tailed deer populations as playing a role.

And though it may seem counterintuitive, increasing rainfalls flush stormwater management systems and usually reduce mosquito populations, explained Paskewitz. In contrast, drought can increase certain mosquito species, such as the ones that transmit West Nile virus, by increasing the proportion of habitats that hold stagnant, foul water.

"Complicated" also was the response of Richard Ostfeld, PhD, disease ecologist with the Cary Institute of Ecosystem Studies in Millbrook, New York.

To say a warmer world is a sicker world "paints the situation with too broad a brush," said Ostfeld, who codirects The Tick Project (tickproject.org) with Felicia Keesing, PhD, of Bard College in Annandale-on-Hudson, New York. The five-year study is testing whether neighborhood-based environmental interventions can prevent Lyme and other tick-borne diseases.

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> "In the past, we never saw heartworm. Maybe one or two cases a year."
>
> —JACQUELYN SCHULTZ, OYSTER RIVER VETERINARY HOSPITAL

Ostfeld would add that, at least for Lyme disease, 19 years of collected data there indicate that fragmented forests with high rodent densities and low numbers of resident foxes, opossums, and raccoons play a role.

What a warming climate does for ticks, he explained, is allow them more time to find hosts, survive, and maintain viability. With mosquitoes, it depends on the species and location. Certain populations, such as the tiger mosquito, benefit from warmer temperatures, which allow them to move north and northeast.

But that's not all.

## Hitching a Ride

Another change has emerged: animal transport.

**More people are now traveling with their pets.** According to the 2019–2020 National Pet Owners Survey, 45% of dog owners now take their dogs with them on the road when traveling for at least two nights. A quick online search found several hotel chains catering to pets and their owners.

**More rescue pets are being transported between states and brought in from other countries.** In April 2019, the American Society for the Prevention of Cruelty of Animals (ASPCA) announced that its national Animal Relocation Program had transported its 100,000th homeless animal from 16 states to shelters across 30 states since the program launched in 2014.

According to its website, it currently relocates more homeless animals

than any other organization—usually moving animals from southern to northern states where they have a greater chance of being adopted. In 2018 alone, the ASPCA moved 40,314 animals across the country to find new homes.

## In the Hospitals

What are veterinary hospitals seeing?

"In the past, we never saw heartworm. Maybe one or two cases a year," said Jacquelyn Schultz, general manager at Oyster River Veterinary Hospital in Lee, New Hampshire. "I was running two hospitals in 2018, one in Maine and one in New Hampshire. At both hospitals, we're now seeing an increase, at least four cases at each.

"Throughout the years, positive heartworm cases were always southern rescue dogs. After [Hurricane] Katrina, there was an influx of southern dogs shipped to New England. We had to set up new heartworm testing protocols with those particular dogs in mind," she explained. "This year we saw two or three local-born dogs show up positive for heartworm."

Schultz noted that the hospital is seeing "a lot more" tick-borne diseases, now has to handle the once-unusual task of pulling ticks off pets throughout the winter, and has seen the arrival of new ticks, such as the lone star.

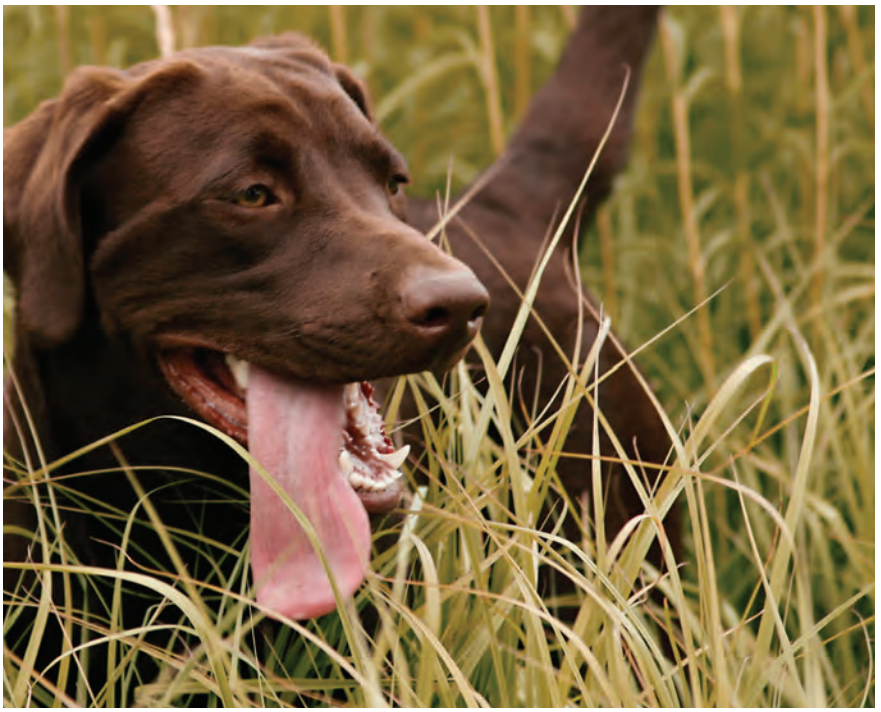
"We have changed our heartworm testing protocol and are educating the clients a lot more about the increase in cases," said Schultz. "We have always recommended a 4Dx test due to the prevalence of tick-borne diseases but have added a longer discussion on heartworm and its effects."

Since the summer of 2018, pet owners in Calgary, Alberta, Canada, have been bringing in five times as many ticks as they used to, said Amy Matchett-Waterhouse, DVM, medical director and co-owner of AAHA-accredited VCA Canada Dalhousie Varsity Animal Hospital. The five-doctor hospital does not identify ticks but sends them to the provincial lab in Edmonton, which only lets them know if the ticks are *Ixodes* because the lab is screening for Lyme disease.

Matchett-Waterhouse admitted she has heard rumors at area veterinary meetings that more southern ticks have arrived in the area but has no personal experience with them. The hospital, she said, relies on the *Worms and Germs Blog* (wormsandgermsblog.com) by Scott Weese, DVM, DVSc, DACVIM, and the University of Guelph Centre for Public Health and Zoonoses in Ontario for information pertaining to parasite prevalence in Canada.

At AAHA-accredited Mt. McKinley Animal Hospital in Fairbanks, Alaska, Krislyn DeLeon, DVM, reported that a lot of people there travel with their pets seasonally and with the military.

"In our area, the interior, we have not seen an increase in the incidence of ticks and heartworm (and fleas, for that matter) in pets who live here full time. The pets who have been diagnosed with heartworm disease at our hospital are pets who have traveled



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"One Asian longhorned tick coming to Colorado on a pet might not seem like a problem. The issue is that females of that tick don't need a male to reproduce."

—THOMAS MATHER, PHD

or relocated from the lower 48 states. The dogs who have been diagnosed with ticks have been exposed at boarding facilities where dogs new to the area were infested with ticks and exposed other local dogs."

AAHA-accredited Fredonia Animal Hospital in Fredonia, New York, had its first encounter with a lone star tick last May, according to Sharon Redfield, practice manager.

"It was on a local dog. Fully fed, it had fallen on the dog's foot during an exam. We had never seen one before and were not aware of any reported in the area. The dog and its owners had not traveled," she said.

While familiar with blacklegged and brown dog ticks, she said, the hospital had no protocol established for the lone star.

Now, she said, "it's here. It's on our radar. We have to educate ourselves and our clients."

The hospital has changed its protocol and recommendations for tick products and is making clients aware of tick safety through social media posts.

How did Redfield discover the tick was a lone star?

The self-described "tick nerd," former science teacher, and mother of three boys said she submitted photos to the TickEncounter website.

## Identify and Locate

TickEncounter (tickencounter.org) and the Companion Animal Parasite Council (CAPC; capcvet.org) are two online resources that can help.

TickEncounter, operated by the University of Rhode Island Center for Vector-Borne Diseases, offers not only educational articles but also a free service called TickSpotters. That crowdsourced tick survey tool sources information on tick encounters from around North America and provides users with tailored risk-assessment reports.

Those who submit a tick photo and complete the submission form will be helping researchers track tick trends, explained Thomas Mather, PhD, director and University of Rhode Island professor. Usually within 24 hours of submission, TickSpotters responds by email with an ID confirmation, risk assessment, and best next actions. Sometimes people even learn that their "tick" is actually a tick lookalike, such as a spider beetle or a weevil.

The tool has brought in lots of information, ranging from the movements of blacklegged ticks as they spread across Michigan to the fact that while adult ticks are typically found on human victims in about a day, it typically takes 3.5 days for people to find the tick on a dog after it is engorged and pops through the dog's fur.

Using the power of the crowd, TickSpotters is tracking the invasion of new species. Last summer, said Mather, the center received six requests in three weeks to help identify what turned out to be the Asian longhorned tick.

"TickSpotters have reported two new host records for this tick: an unhealthy gosling at a New York City rehabilitation hospital and a small flock of backyard chickens in Pennsylvania. Yes, most people think chickens eat ticks," said Mather. "But with the Asian longhorned tick, the ticks are eating chickens."

CAPC, founded in 2002 to increase awareness of the threat parasites present to pets and family members, is another resource.

Besides educational articles and videos, its Parasite Prevalence Maps show the proportion of pets who test positive for a given infection using available assays. The data can help veterinarians better understand the prevalence of parasites in a given practice area.

CAPC tracks more than a dozen factors, including temperature and precipitation, noted Robert Lund, PhD, a professor at Clemson University and CAPC board member. But what was a surprise, he said, was that "prevalence history is a better predictor of future prevalence than all of the other climate and economic factors that we look at."

## Season and Region

Your clients may be thinking that tick season is over because they can't see any. But the ticks may be in their larval stage.

"Each stage of each species of tick has its own active season," said Mather. "When the season for American dog ticks may be waning, the adult blacklegged ticks may be getting more active. It also depends on where you are in the country."

In addition, he said, different stages in a tick's life can affect humans and pets, such as dogs, differently. Most

people get Lyme disease from a blacklegged tick in the nymph stage. But dogs are more likely to get the disease from the adult-stage tick.

The same type of tick in different parts of the country can be more or less likely to be infected, he noted. In the North, 40% to 60% of blacklegged ticks carry Lyme disease, while in the South, the percentage is closer to 2% to 5%.

Traveling with pets can put them at different risks. Mather gave the example of an Asian longhorned tick reported in Colorado. It turned out to have been brought there from New Jersey when a man took his dog along on a trip to visit family.

"One Asian longhorned tick coming to Colorado on a pet might not seem like a problem," said Mather. "The issue is that females of that tick don't need a male to reproduce. They lay fertile eggs. That will allow this tick to spread more easily."

## Takeaway Message

"Veterinarians need to start changing how they talk with their clients. They need to ask more leading questions," advised Craig Prior, BVSc, CVJ, past president of CAPC. He offered these examples:

- Instead of asking if a patient is an indoor or outdoor pet, ask how much time the pet spends outside with daily exercise, visits to neighbors, and potty trips.
- When talking about parasites, ask the client what they know about one parasite or another.
- Ask clients what they are currently using for flea, tick, and heartworm preventives and when they last gave or applied it.
- Ask clients what their tolerance is for fleas and ticks.
- If clients don't know what they are using, help them understand.

"Many veterinarians do not like to make a recommendation—they don't want to feel like a salesman—but clients come to them for a recommendation. If they want a choice, they can go to PetSmart. But they come to us because they want a recommendation on how to protect their families and their pets," said Prior.

Don't carry five different heartworm or six different flea preventives. Keep a limited inventory, or you will confuse your clients and staff. One or two of each is all you need.

"In my clinic, I carried one for dogs and one for cats. One oral, one topical, and one collar for flea and tick [prevention]. We made a recommendation: 'This is best in class.' That's what veterinarians should be doing."

"The bottom line," said Prior, "is that parasites are dynamic, adaptable, and ever changing. The veterinary community needs to approach it as a one-health message: If you protect your pet, you are protecting your family. No home is safe." ※

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

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# Is It Time to Add Integrative Medicine to Your Practice?

"Adding integrative medicine to my practice has allowed me to help animals whom I could not help with conventional medicine alone. It has been worth it."

—NANCY T. PETERSON, DVM, CCRT, CVA, CVSMT, OWNER OF AAHA-ACCREDITED INGERSOLL ANIMAL HOSPITAL

## Alternative Therapies Can Complement Preventive Care Measures

by Paula Fitzsimmons

**With more people seeking complementary treatment options** for their pets, you may be considering integrative medicine for your practice. If so, you likely have questions. *Can I incorporate integrative medicine into my practice and still be taken seriously by my peers? Will my clients approve? What type of training is involved? Do complementary treatments actually work?*

The veterinarians interviewed for this article said integrative medicine has improved their ability to provide optimal patient care. "Adding integrative medicine to my practice has allowed me to help animals whom I could not help with conventional medicine alone. It has been worth it," said Nancy T. Peterson, DVM, CCRT, CVA, CVSMT, owner of AAHA-accredited Ingersoll Animal Hospital in Des Moines, Iowa. They also reported professional and personal benefits, such as increased work flexibility and a renewed outlook regarding the future of veterinary medicine.

Read on as they share insights into their practices, shatter myths about integrative veterinary medicine, and offer guidance for when you're ready to take the next step.

## What Integrative Medicine Is (and Isn't)

Integrative veterinary medicine is often mistaken for alternative medicine, or it's dismissed as pseudoscience. It's very much a science-based discipline, said Narda G. Robinson, DVM, DO, MS, FAAMA, president and CEO of CuraCore Integrative Medicine and Education Center, based in Fort Collins, Colorado. "Our motto is, 'No woo-woo.' So no crystals, no homeopathy, no mystical energies swirling around the body."

It's also not a replacement for mainstream veterinary medicine. Instead, it combines the best conventional modalities (such as surgery and pharmaceuticals) with those offered by complementary medicine. For example, "In my practices, I complement traditional medical modalities with therapeutic, science-derived nutritional therapies; evidence-based nutraceuticals; and physical medicine, which includes medical acupuncture, medical massage, chiropractic adjustment, and the gamut of physical rehabilitation techniques," said Robin Downing, DVM, MS, DAAPM, DACVSMR, CVPP, CCRP, hospital director at the AAHA-accredited Downing Center for Animal Pain Management in Windsor, Colorado.

While complementary modalities are typically not accepted as part of mainstream veterinary medicine, definitions are subject to change. For example, "Acupuncture went from experimental method only to being practiced by a small group of veterinarians to its present state, where some veterinary teaching hospitals include it as part of their treatments," said Nancy Scanlan, DVM, CVA, MS, executive director of the American Holistic Veterinary Medical Foundation.

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## Integrative Veterinary Medicine Is About Digging Deeper

Its focus is on healing the whole patient rather than just treating symptoms. "Integrative medicine requires a hands-on approach and builds stronger bonds between people, animals, and their veterinarian," said Robinson.

While integrative veterinarians do indeed treat symptoms using conventional methods, they also examine causes of those symptoms. "It means looking at all the details that contribute to an animal's health, wellness, and longevity. It means asking open-ended questions in the exam room and then listening to the answers. It means opening our eyes, ears, and hands to look beyond the presenting complaint," said Downing.

Take, for example, a dog who presents with an ear infection. While integrative veterinarians may treat the symptoms with conventional medicine, "we're probably going to be thinking about the foods that go into the dog's diet, environmental allergens and potential allergy triggers that go into the body, and how that can be contributing to problems with the skin," said Patrick Mahaney, VMD, CVA, CVJ, and owner of California Pet Acupuncture and Wellness Inc. in Los Angeles, California.

## Tips for Getting Started with Integrative Veterinary Medicine

### Go Slowly

Start by deciding which services you'd like to add, offered Downing. "Rather than be frustrated and immobilized by all the available options, choose a single addition to what you already provide. Then get educated about that option."

Downing came from a traditional veterinary background when she started practicing 33 years ago. "I kept an open mind coupled with a healthy dose of skepticism and added, piece by piece, to the services and treatments I was able to deliver to my patients. It didn't happen all at once, and I haven't stopped adding, as new science brings new tools to our profession."

### How to Decide Which Modality Is Right for You

If you're not sure where to start, subscribe to the quarterly American Holistic Veterinary Medical Association (AHVMA) journal and attend the annual AHVMA conference, recommended Scanlan. "Go to the introductory sessions, which give an overview of the most popular modalities."

### Reach Out to Colleagues

"If there is an integrative practitioner in the area, take them to lunch and ask them about both their certifications and also how practice management has changed for them," said Scanlan.

Robinson is available to help answer questions at narda@curacore.org. "Full disclosure: We have an 'integrative medicine first' approach to medicine called PRIMA, which stands for the 'Pain, Rehabilitation, and Integrative Medicine Advantage.'"

Looking beyond symptoms can reduce the need for unnecessary treatments as well as improve an animal's quality of life. When a dog was referred to Downing for a wheelchair fitting, she probed and discovered that he couldn't walk because of excruciating back pain. "We worked him up, treated his obesity with a nutrogenomically driven nutrient profile, managed his hypothyroidism, and took a multimodal approach to his profound generalized pain. Lo and behold, he not only didn't need a wheelchair, he was restored to a lifestyle he had lost years before."

## Access to More Treatment Options

Integrative medicine gives veterinarians access to a more diverse menu of treatment tools. "Integrative medicine is used in our practice as part of a multimodal approach to therapy. For example, if the dog with degenerative osteoarthritis who is on multiple oral medications still can't walk down the stairs, we can offer other options for therapy," said Peterson.

Additionally, complementary modalities are often associated with fewer side effects and can potentially replace invasive procedures. "Methods such as medical acupuncture, medical massage, and integrative rehabilitation involve gentle and insightful informed palpation, deriving information from a hands-on physical evaluation that not only assesses organ function and body condition but tunes into areas of pain and stiffness in a therapeutic, nonpainful, fear-free manner," said Robinson.

Having more treatment options also means being able to rely solely on conventional medicine if the situation requires it. Peterson admitted that integrative medicine is not appropriate for every patient. "We offer it as an alternative when it is felt to benefit the patient to complement the conventional treatments. If a client is not open to the therapy, we move on to other options."

## Disease Prevention Is Key

Disease prevention is preferable "so that the body continually stays healthy instead of bouncing from problem to problem and dealing with the problems once they arrive," said Mahaney. All veterinarians, whether integrative or conventional, advocate for disease prevention. They may educate their clients on such factors as proper nutrition, exercise, safety, and a toxic-free environment.

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"Where an integrative practitioner would play a role in preventive care is by helping to ensure that an animal has access to the aforementioned conditions but also taking a proactive approach to find dysfunction early, well before it becomes disease," explained Robinson.

A well-balanced patient is better able to use his own innate healing process,

said Peterson. "For instance, an agility dog getting routine veterinary spinal manipulative therapy to help minimize the risk of injury or the obese diabetic cat who, with nutritional therapy and routine exercise in the underwater treadmill, has lost weight is more mobile and no longer needs insulin."

## Public Interest Is Growing

Scanlan said the AHVMA and its foundation receive phone calls almost weekly from someone seeking an integrative veterinarian and that "many of our graduates who own practices find that they become so busy that they are hiring new members sooner than they expected."

Scanlan said that when she practiced full time, her waiting list was about four to six months. "I had a much smaller waiting list when I was just doing conventional medicine. I had many more referrals from other veterinarians as well as from clients."

Other integrative veterinarians reported similar results.

"My integrative approach to clinical medicine has definitely differentiated my practice in a very crowded marketplace," said Downing.

"We routinely have clients seeking a veterinarian who offers integrative medicine. Some are clients who routinely receive complementary medicine for themselves with positive results and are now seeking similar treatment for their pets," said Peterson.

"I have many clients who drive two hours or more to get to my practice. When I travel, often people are very interested in what I do. One client told me they get these therapies for themselves and are so excited to be able to get them for their dog," said Janet Varhus, DVM, MS-TCVM, owner of the AAHA-accredited Animal Care Center in Poncha Springs, Colorado.

## Attitudes Within the Veterinary Community Are (Slowly) Shifting

Some of that increased interest is occurring at veterinary schools, said Robinson. "More and more, we are hearing from student integrative medicine clubs that they would like to pursue medical acupuncture education during their school years so that they are more desirable as candidates, and also so that they will have the skills to practice veterinary medicine in the way that they see fit. We also have people enroll in our programs who have become disillusioned with veterinary medicine and the limitations of drugs and surgery, especially for older animals."

In her 20 years as a faculty member at the Colorado State University College of Veterinary Medicine and Biomedical Sciences, Robinson saw what she described as a "vibrant enthusiasm among students and clients to find ways to restore function

and alleviate disease and discomfort more safely and effectively."

It's not just better patient outcomes that have helped create the attitude shift. Veterinarians are reporting personal and professional benefits, too. "I would have probably burned out in this profession if I had not started down the road of complementary medicine. Seeing patients headed down a road of illness and not being able to change that is what started me into acupuncture," said Varhus.

Peterson echoed a similar sentiment: "Having a client call to report that their dog just walked around the park when they hadn't been able to for years is extremely rewarding."

Integrative medicine also offers alternatives to working in traditional practices. "So many veterinarians are becoming acquainted with the joys of a home- or barn-visit type of practice. This type of work offers immense flexibility and the opportunity for an incredible work-life balance with little overhead and staff," said Robinson.

## Yet Hesitation Still Exists

Despite shifting attitudes, skepticism is still prevalent within the veterinary community. For reluctant veterinarians, Scanlan may attempt trigger point therapy on their neck and shoulder areas if they're open to it. "We may agree to disagree, or they may start referring to me. Occasionally they get training in a complementary method themselves."

Other veterinarians, she said, are adamantly opposed to it. "They are dedicated to exposing as a quack anyone who does anything that is not taught in veterinary schools. They do not accept complementary medicine research results."

Some of this reluctance may be a result of overwhelming, and sometimes conflicting, information. "They may be intimidated by the idea of digging below the surface of marketing materials in order to mine the data (or lack thereof) to support specific products or technologies," said Downing.

Kathy Boehme, DVM, CCVHM, CVFT, of AAHA-accredited Drake Center for Veterinary Care in Encinitas, California, understands the reluctance. "We're in a profession that's all about evidence-based medicine. There is a lot of evidence for herbs being efficacious, but [the studies are] all performed in other countries, which we look at with a skeptical eye."

Robinson approaches this roadblock by discussing the science behind integrative medicine. "So many in our profession have heard [of] practitioners that approach integrative treatments from a metaphysical standpoint, such as Chinese medicine, that it's a turnoff. Fortunately, more are learning that one can approach these therapies entirely scientifically."

## Making an Investment in Your Career

Whether you decide to become a fully integrative practice or want to simply add a couple of complementary modalities, there is an education requirement. How much time you need to invest depends on which modalities you're interested in. For example, "acupuncture, veterinary spinal manipulative therapy, and veterinary rehabilitation can be several-months–to–a-year commitments in each area. It is a time and financial commitment but one I felt was very worthwhile," said Peterson.

Boehme's practice employs two veterinarians certified in acupuncture, which she said required years

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of training. “There’s all kinds of levels you can be trained at, but they are boarded in acupuncture. I am boarded in herbal medicine. I took my course through CIVT (the College of Integrative Veterinary Therapies offers online courses). It’s an integrative medicine–based course in Australia, and it took me three years (while working) to get through herbology.”

There’s also a financial investment. While individual course prices vary, Robinson said a complete course of study—that includes medical acupuncture, botanical medicine, laser and light-emitting diode therapy, medical massage, and integrative rehabilitation—ranges from about $18,000 to $22,000. She sees it as an investment, however.

“Considering the increased earning potential for a practice and the ‘happiness quotient’ of practicing in a bond-centered, patient-centered practice, along with the influence this has on the clinic environment as a whole, the investment delivers multifaceted returns.”

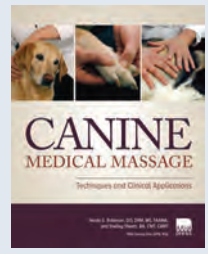
Equipment costs are minimal when compared with those of surgical- and pharmacy-based hospitals, added Robinson. “The costs for acupuncture needles and electroacupuncture devices are low. Photomedicine devices range from several hundred to tens of thousands of dollars that can be financed. Rehabilitation equipment is relatively inexpensive, and no one needs to start with an underwater treadmill; this can come with time, if desired. Botanical consulting simply involves educating clients about the risks and benefits of herbal medicine. Medical massage might call for a massage table, but most of us prefer to treat small animals at floor level with a soft pad.”

Wherever you are in your journey with integrative medicine, veterinarians recommend approaching it critically, but with an open mind. For these veterinarians, integrative medicine has been a game changer, both professionally and personally. And, as Robinson said, “Integrative medicine provides a long-overdue culture shift.” ※

Paula Fitzsimmons is a writer and journalist who writes extensively about pets as they intersect with topics such as health, nutrition, technology, and lifestyle. Her client list includes names such as PetMD.com, PetCoach, chewy.com, LuckyVitamin, and *Prevention* magazine.

## Not Sure Where to Start with Complementary Services?

Check out *Canine Medical Massage: Techniques and Clinical Applications* (press.aaha.org) for science-based training on treatment techniques, sample sequences, and more.

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# in the community

## Passion Meets Community

by M. Carolyn Miller, MA

If you scan the website of AAHA-accredited practice Brook Farm Veterinary Center in Patterson, New York, you start to see a theme in its community service. That theme is education. But that's not surprising given that hospital director Evan Kanouse Jr., son of Brook Farm's practice owners, medical director Evan Kanouse Sr., DVM, and finance director Pat Kanouse, has a passion for learning.

In addition to his hospital duties, Kanouse Jr. is a local educator. He teaches children in the community and is also a guest lecturer at the State University of New York at Delhi, where he discusses internship skills with first- and second-year veterinary technology students. It was only natural for him to apply his knowledge and passion to Brook Farm's community service projects.

One such project is the Veterinary Summer Camp, a four-week immersive experience for children ages 9 to 11 held each July. (The program was initiated in 2015 and almost immediately had a waiting list of 50 families.) Children learn about veterinary medicine and infection control and diagnose cases. They also create wildlife habitats, identify paw prints, and learn about animal communication and what AAHA accreditation means.

"Our Veterinary Summer Camp is the only program of its kind in the area," Kanouse Jr. said. "While a nominal fee is charged to cover supplies, numerous spots are also reserved each year for children of families experiencing financial hardship, for whom the fee is waived."

Brook Farm also began partnering with the local 4-H chapter in October 2016. For eight weeks, participants attend once-weekly sessions to learn more about veterinary medicine and take part in activities similar to the summer camp but with more depth. For instance, students learn about suturing by using a needle and string to suture a banana.

Kanouse Jr. has also initiated an innovative approach to educating Brook Farm's clients about pet health. "We found

Campers do rounds with Brook Farm medical staff. (Courtesy of Brook Farm Veterinary Center)

that it was difficult to get pet owners to read literature that we handed out during appointments," he said. "[The literature] would often get forgotten about or not [be] handed out at all." So Kanouse Jr., with his team, developed a series of self-paced online courses, which launched in the spring of 2019.

"Our courses contain information that would typically be delivered in handouts and brochures," said Kanouse Jr. "The courses act as a single resource, and course content is communicated via information, pictures, videos, and more, all designed to keep the clients' attention." Brook Farm's administrative staff works with its veterinarians to gather and organize the content.

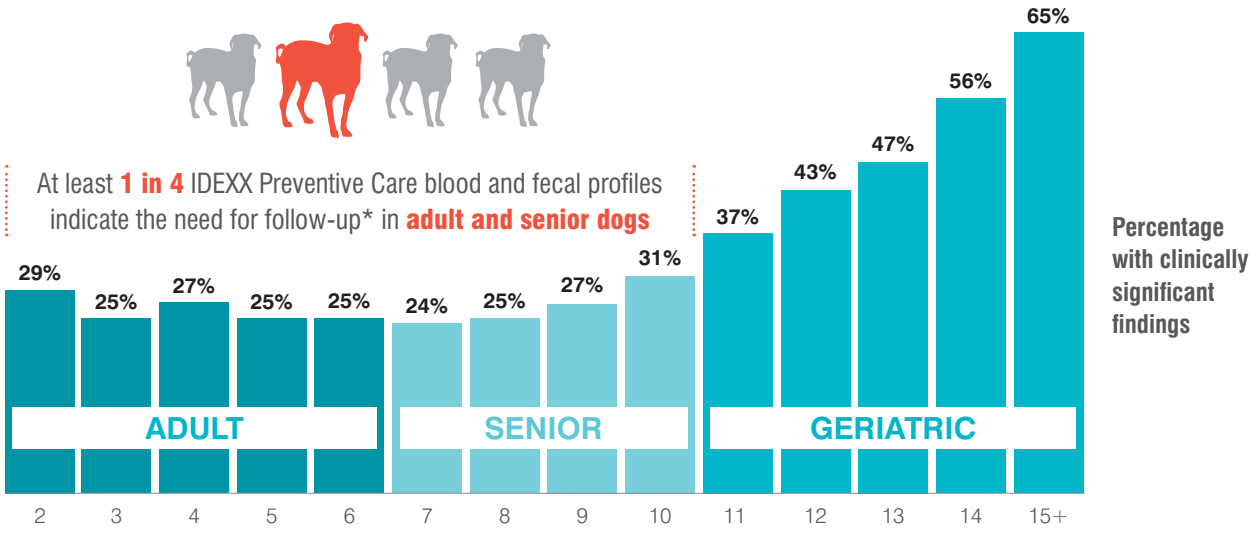
Clients are pointed to a specific course after an appointment. "When a patient receives screening for tick-borne diseases, for example, they are automatically emailed a link to access the related course on our website," said Kanouse Jr. "The same will be done with other types of visits. For instance, a diabetes diagnostic code will trigger an email to the pet owner providing them with a course related to proper nutrition, administering insulin, monitoring blood glucose levels, and more." ※

M. Carolyn Miller, MA, is a senior instructional designer who loves the idea of education as a community service.

ADVERTORIAL

# New evidence supports the value of preventive care profiles on all adult dogs

## Preventive care profiles aren't just for senior and geriatric patients




### Dogs as young as 2 years of age had clinically significant findings based on results of preventive care bloodwork and fecal testing[1]

Of the nearly 30,000 canine profiles included in this analysis, there was little variation in the rate of clinically significant findings between adult dogs and senior dogs.

The study was based on an analysis of IDEXX Preventive Care profiles (including the following categories: Chem 22 including the IDEXX SDMA® Test, IDEXX CBC testing with reticulocyte parameters, the Lab 4Dx® Plus Test, and Fecal Dx® antigen testing) run as part of wellness visits. While the number of clinically significant findings for each of these testing categories varied by age, all categories were important for adult, senior, and geriatric dogs.

### These results are similar to a previous analysis that included cats as young as 2 years[2]

The previous analysis from more than a quarter of a million wellness visits that included a chemistry profile with an IDEXX SDMA® Test and a CBC, revealed significant findings required follow-up in:

**1 in 7** adults (cats aged 2–8 years; dogs aged 3–6 years)
**1 in 5** seniors (cats aged 9–13 years; dogs aged 7–10 years)
**2 in 5** geriatrics (cats aged 14+ years; dogs aged 11+ years)

### Routine preventive care testing has distinct medical benefits

There is ample evidence to support routine preventive care visits that include diagnostic testing. Results of routine bloodwork and fecal testing help veterinarians detect diseases and conditions, leading to earlier interventions that help patients of all ages live healthy lives for as long as possible. Once a veterinarian has baseline values, she/he can monitor trends and, if necessary, create individualized treatment plans. If no abnormality is detected, veterinarians and staff can—and should—celebrate the good news with clients. By communicating the value of every test result, practices reinforce the importance of routine wellness checks and the central role that clients play in the health of their pet. It's a win-win!

Review preventive care data and case studies at **idexx.com/1in4**

*Due to "clinically significant findings," which would indicate the need for follow-up, further consideration, or a change in action by the clinician. Clinical significance based on rules determined by an IDEXX veterinarian panel.

**References**

1. Data based on analyses of **29,795** canine wellness profiles (Chem 22 including IDEXX SDMA® Test, IDEXX CBC testing with reticulocyte parameters, the Lab 4Dx® Plus Test, and Fecal Dx® antigen testing) associated with wellness visits; testing performed at IDEXX Reference Laboratories on July 13, 2016–February 28, 2019. Represented U.S. regions by proportion of included profiles: Northeast (32.0%), South (41.3%), Midwest (17.4%), West (7.6%), and region not reported (1.7%).

2. Data on file at IDEXX Laboratories, Inc. Westbrook, Maine USA.

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