important safety information: The most commonly reported adverse reactions include vomiting, decreased appetite, diarrhea, lethargy, polydipsia, and flatulence. BRAVECTO Chews for Dogs have not been shown to be effective for 12-weeks’ duration in puppies less than 6 months of age. BRAVECTO Chews are not effective against lone star ticks beyond 8 weeks of dosing. Fluralaner is a member of the isoxazoline class. This class has been associated with neurologic adverse reactions including tremors, ataxia, and seizures. Seizures have been reported in dogs receiving isoxazoline class drugs, even in dogs without a history of seizures. Use with caution in dogs with a history of seizures or neurologic disorders. Please see full product information on reverse.


*BRAVECTO Chews for Dogs kills fleas, prevents flea infestations, and kills ticks (black-legged tick, American dog tick, and brown dog tick) for 12 weeks. BRAVECTO Chews also kills lone star ticks for 8 weeks.
Flavored chews for dogs.

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

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

The chemical name of fluralaner is (S)-4-[3-(3,5-dichlorophenyl)-5-(trifluoromethyl)-4,5-dihydroisoxazole-3-yl]-2-methyl-4-[2-oxo-2-(2,2,2-trifluoroethoxyamino)ethyl]benzamide.

Indications:
Bravecto kills adult fleas and is indicated for the treatment and prevention of flea infestations (Ctenocephalides felis), and the treatment and control of tick infestations (Ledecki scapularis (black-legged tick), Dermacentor variabilis (American dog tick), and Rhizophus 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.

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

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

Bravecto should be administered with food.

Dosage Schedule

<table>
<thead>
<tr>
<th>Body Weight Ranges (lb)</th>
<th>Fluralaner Content (mg)</th>
<th>Chews Administered</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.4 – 9.9</td>
<td>112.5</td>
<td>One</td>
</tr>
<tr>
<td>&gt;9.9 – 22.0</td>
<td>250</td>
<td>One</td>
</tr>
<tr>
<td>&gt;22.0 – 44.0</td>
<td>500</td>
<td>One</td>
</tr>
<tr>
<td>&gt;44.0 – 88.0</td>
<td>1000</td>
<td>One</td>
</tr>
<tr>
<td>&gt;88.0 – 123.0*</td>
<td>1400</td>
<td>One</td>
</tr>
</tbody>
</table>

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

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

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

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

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

Precautions:
Fluralaner is a member of the isoxazoline class. This class has been associated with neurologic adverse reactions including tremors, ataxia, and seizures. Seizures have been reported in dogs receiving isoxazoline class drugs, even during concurrent use with other medications.

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

Adverse Reactions:
In a well-controlled U.S. field study, which included 294 dogs (224 dogs were administered Bravecto every 12 weeks and 70 dogs were administered an oral active control every 4 weeks and were provided with a tick collar), there were no serious adverse reactions. All potential adverse reactions were recorded in dogs treated with Bravecto over a 1282-day period and in dogs treated with the active control group over an 84-day period. The most frequently reported adverse reaction in dogs in the Bravecto and active control groups was vomiting.

<table>
<thead>
<tr>
<th>Adverse Reaction (AR)</th>
<th>Bravecto Group: Percentage of Dogs with the AR During the 182-Day Study (n=224 dogs)</th>
<th>Active Control Group: Percentage of Dogs with the AR During the 84-Day Study (n=70 dogs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vomiting</td>
<td>7.1</td>
<td>14.3</td>
</tr>
<tr>
<td>Decreased Appetite</td>
<td>6.7</td>
<td>0.8</td>
</tr>
<tr>
<td>Diarrhea</td>
<td>4.9</td>
<td>2.9</td>
</tr>
<tr>
<td>Lethargy</td>
<td>5.4</td>
<td>7.1</td>
</tr>
<tr>
<td>Polydipsia</td>
<td>1.8</td>
<td>4.3</td>
</tr>
<tr>
<td>Flatulence</td>
<td>1.3</td>
<td>0.9</td>
</tr>
</tbody>
</table>

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

Post Approval Experience (2019):
The following adverse events are based on post-approval adverse drug experience reporting. Not all adverse events are reported to FDA/AVM. 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 Bravecto:
Vomiting, lethargy, diarrhea (with and without blood), anorexia, pruritis, polydipsia, seizure, allergic reactions (including hives, swelling, erythema), dermatitis (including crusts, pustules, rash), tremors and ataxia.

Contact Information:
For a copy of the Safety Data Sheet (SDS) or to report suspected adverse drug events, 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 http://www.fda.gov/AnimalVeterinary/SafetyHealth.

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

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

Effectiveness:
Bravecto began to kill fleas within two hours after administration in a well-controlled laboratory study. In a European laboratory study, Bravecto killed fleas and reduced the numbers of five fleas and reduced the numbers of five fleas and reduced the numbers of five fleas and reduced the numbers of five fleas and reduced the numbers of five fleas within 12 hours for 12 weeks. In a well-controlled laboratory study, Bravecto demonstrated 99% effectiveness against adult fleas 48 hours post-infestation for 12 weeks. In well-controlled laboratory studies, Bravecto demonstrated 99% effectiveness against Amblyomma americanum ticks 72 hours post-infestation for 8 weeks, but failed to demonstrate ≥90% effectiveness beyond 8 weeks.

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

Prolonged: In a well-controlled U.S. field study, which included 159 dogs dosed administered to 224 dogs, 80.7% of dogs voluntarily consumed Bravecto within 5 minutes, an additional 12.5% voluntarily consumed Bravecto within 5 minutes when offered with food, and 6.8% refused the dose or required forced administration.

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

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

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

There were no clinically-relevant, treatment-related effects on the body weights, food consumption, reproductive performance, semen analysis, litter data, gross necropsy (adult dogs) or histopathology findings (adult dogs and puppies). One adult male treated dog suffered a seizure during the course of the study (46 days after the third treatment). Abnormal salivation was observed on 17 occasions: in six treated dogs (11 occasions) after dosing and four control dogs (6 occasions). The following abnormalities were noted in 7 pups from 2 of the 10 dams in only the treated group during gross necropsy examination: limb deformity (4 pups), enlarged heart (2 pups), enlarged spleen (3 pups), and cleft palate (2 pups). During veterinary examination at 7 weeks, two pups from the control group had inguinal testicles, and two and four pups from the treated group had inguinal and cremasteric testicles, respectively. No undescended testes were observed at the time of necropsy (days 50 to 71).

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

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

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

Approved by FDA under NADA # 141-426

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

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

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*Assessment was conducted by IDEXX® and leveraged veterinary clinic PIMS transaction level data for 2019. This analysis included data from approximately 7,000 U.S. clinics that had consistent data from 2017 to 2019. To be included, patients needed to have at least one parasiticide transaction in the baseline year (2018). The analysis was limited to loyal patients, where loyalty was defined as having one flea/tick control brand during the full three-year period. The average number of months of NexGard purchased per year was 6.64, compared to 6.69 for BRAVECTO. This analysis overestimates the duration of efficacy for BRAVECTO. For comparison purposes, each BRAVECTO chew was assessed as providing three months of flea & tick protection versus the labeled 12-week coverage for fleas and three species of ticks, and 8-week coverage for Lone Star ticks.

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

**NexGard® (afoxolaner) is FDA-approved to prevent Lyme infections** by killing black-legged ticks.

- It’s **safe for puppies** as young as 8 weeks, weighing as little as 4 pounds.
- The savory, beef-flavored chew was **designed with compliance in mind**:
  - **NexGard is a leader in average number of months of flea and tick control** purchased per patient per year.¹
  - **More NexGard users purchased a full 12 months** of flea and tick protection than users of any other flea and tick chew.²

**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 NexGardClinic.com.*

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Brief Summary: Before using NexGard® (afoxolaner) Chewables, please consult the product insert, a summary of which follows.

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

Description: NexGard is a soft chewable 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).

Indications: NexGard kills adult fleas and is indicated for the treatment and prevention of flea infestations (Ctenocephalides felis), and the treatment and control of Aedes scapularis, Dermacentor variabilis, Amblyomma americanum, and 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 infestations as a direct result of killing lindes 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). See full product insert for dosing table and details.

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

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.

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 815 treated dogs (815 administered afoxolaner, 206 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.

Table 1: Dogs with Adverse Reactions

<table>
<thead>
<tr>
<th>Treatment Group</th>
<th>Adverse Reaction</th>
<th>N1 (%) (N=415)</th>
<th>N2 (%) (N=200)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vomiting (with and without blood)</td>
<td>17</td>
<td>4.1</td>
<td>25</td>
</tr>
<tr>
<td>Dry/Frisky Skin</td>
<td>13</td>
<td>3.1</td>
<td>2</td>
</tr>
<tr>
<td>Diarrhea (with and without blood)</td>
<td>13</td>
<td>3.1</td>
<td>7</td>
</tr>
<tr>
<td>Lethargy</td>
<td>7</td>
<td>1.7</td>
<td>4</td>
</tr>
<tr>
<td>Anorexia</td>
<td>5</td>
<td>1.2</td>
<td>9</td>
</tr>
</tbody>
</table>

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.

Effectiveness: See full product insert for details regarding Effectiveness.

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 for a total of six treatments. 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, no adverse reactions were observed from the concomitant use of NexGard with other medications.

Contact Information: For a copy of the Safety Data Sheet (SDS) or to report suspected adverse drug events, contact Boehringer Ingelheim Animal Health USA Inc. at 1-888-637-4251. For additional information about adverse drug experience reporting for animal drugs, contact FDA at 1-888-FDA-VETS or www.fda.gov/reportanimalae.

For a copy of the Safety Data Sheet (SDS) or to report suspected adverse reactions related to NexGard with other medications.

The following adverse reactions are based on post-marketing experience data.動物 may be of interest to you. If you do not want MultiMedia Animal Care, LLC to make your contact information available to such third parties, please contact MultiMedia Animal Care, LLC to make your contact information available to other organizations which may be of interest to you. dvm360 does not verify any claims or other information appearing in any of the advertisements contained in the publication, and cannot take responsibility for any losses or other damages incurred by readers in reliance on such content. dvm360 does not verify any claims or other information appearing in any of the advertisements contained in the publication, and cannot take responsibility for any losses or other damages incurred by readers in reliance on such content.

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Welcome to a newly redesigned dvm360®! Sometimes a change is needed, and it can be a good thing. Therefore, we are excited to introduce our readers to a more colorful and digestible magazine that will leave you wanting more. Art Director Wassana Techadilok has used her creative expertise to build an innovative appearance that readers will find inviting. The new look incorporates more images and a pleasing color palette that differentiates between departments while embracing the standard of quality readers have come to expect.

Additionally, in March, we are recognizing Pet Poison Prevention Awareness Month by focusing on some of the toxicology myths in pet care. Veterinary professionals may know the truths behind these myths, but we remind readers to educate clients with good information. In the article on page 33, Renee Schmid, DVM, DABVT, DABT, senior veterinary toxicologist at Pet Poison Helpline, helps to debunk some widely accepted untruths regarding pet toxins.

We also included in this month’s issue a printed version of Medical World News® (MWN), an MJH Life Sciences® web channel that features a variety of health care media brands, including dvm360®. The channel consists of interviews, discussions, and lifestyle news with veterinarians and other industry professionals. Appearing on page 60, the March MWN article captures some discussion about traditional marketing methods vs digital campaigns.

dvm360® also kicked off 2 recognition programs for veterinary professionals and their practice facilities. First, the Veterinary Heroes™ program is seeking peer nominations in 12 categories that include nutrition (sponsored by Blue Buffalo) and emergency medicine (sponsored by Clevor®). Nominations are due by April 30, 2022. The nomination form and additional details can be found at https://event.dvm360.com/d/n8q4x7. Second, this year’s Hospital Design Competition has launched, with entries due by May 15, 2022. A complete list of nomination criteria and competition rules are at dvm360.com/hospital-design-awards. (No purchase necessary.)

And don’t forget about the first Fetch dvm360® Conference of 2022, to be held in Charlotte, North Carolina (April 22-24). View meeting details and register at https://dvm360.com/ fetch22-charlotte. Please take some time to look through this month’s dvm360® issue. Email news@dvm360.com to let us know what you think about the new look.

—Mike Hennessy Jr
President & CEO,
MJH Life Sciences®
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Lights, camera, action! Welcome to dvm360 LIVE!™

My parents told me that I was born with a microphone and always had a fondness for animals. That sounds about right. As I have traveled through my career as a small animal private practitioner, I realized that every interaction and experience was a genuine performance. Clients are expecting me to deliver an award-winning performance regardless of the news that I deliver to them. I tell my colleagues that when they open the exam room door, they are “live in 3-2-1” as I count them down. Medicine in general, regardless of species, is an art. It’s truly a delicate performance of balancing the science with the bedside manner so that compliance and communication are in check.

Because many of you are speakers in the veterinary industry, you also understand the art of a lecture. Whether you are lecturing at a veterinary institution or facilitating a discussion at a continuing education conference, you are providing a performance that you hope is impactful, memorable, and authentic. Having lectured for many years as an adjunct professor for veterinary assistant and nursing students, I always enjoyed that creative autonomy we have as speakers. It sets the stage for education to be delivered with humor, fun, and memories.

Social media is another fantastic way of setting the stage for delivering education and humor in an innovative way. I enjoy following you and learning about incredible cases and innovative technology and laughing at your fantastic creativity. I can’t think of another fun way of learning and connecting to our colleagues, students, and pet parents than in the world of social media. As both a TikTok creator (@dr.adamchristman52) and Instagrammer (adam_christman), I truly took my love for education and creativity to a whole new level for my personal journey. Connecting with you and our pet parents has been incredible.

So, let’s recap the ways in which we learn and enjoy receiving content:
1. Exam rooms and veterinary hospital (check)
2. Lecturing in person and in the virtual setting (check)
3. The social media space (check).

Are we at dvm360® missing anything else? Oh, that’s right! A talk show!

We are proud to be rolling out dvm360 LIVE!™ What better way to showcase our profession by having you and our industry leaders on the show? This half-hour web-based show will feature many of you who are doing outstanding work in the profession.

You all are welcome to be a guest. We have a state-of-the-art recording studio at our dvm360® headquarters in Cranbury, New Jersey, where we will showcase the advancements of veterinary medicine and the fantastic talent within our profession. And we will be sure to do so with humor and fun, with me as the host. If you are interested in being a guest on our show, feel free to email me at achristman@mjhlifesciences.com.

Let’s show the world how awesome our profession is! I’m looking forward to seeing you on the show.

—Adam Christman, DVM, MBA

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Wildlife & Diversity

Zoo Atlanta mourns passing of Aldabra giant tortoise

Zoo Atlanta announced the death of Patches—a female Aldabra giant tortoise—on February 5, 2022. Although her exact age was unknown, she was thought to have been in her 70s or 80s.

“We are very saddened by the loss of Patches. She was a wonderful link for so many people to the fascination of reptiles and to the key role that tortoises play in their ecosystems wherever they are found,” said Jennifer Mickelberg, PhD, vice president of Collections and Conservation, in a press release.

“It is not difficult to make connections with an animal such as a gorilla or a giant panda or a giraffe. Some people find it more challenging to connect with reptiles, which makes Patches’ legacy all the more extraordinary. She had a personality on par with her size, and she will be dearly missed,” she added.

The Animal Care and Veterinary teams had been nursing the tortoise recently after noticing changes in her behavior and physical condition (ie, lethargy, fluid buildup, lack of appetite, and weakness). When a CT scan uncovered various health problems, including a large mass in her body cavity, the teams decided to euthanize her because they were concerned about her quality of life.

According to the release, a necropsy will be completed by the University of Georgia Zoo and Exotic Animal Pathology Service at UGA’s College of Veterinary Medicine.

Patches arrived at Zoo Atlanta in 1994 and was a resident for almost 28 years. During her time there, she acquainted innumerable zoo members and guests with her fascinating species.

Zoo Atlanta houses 2 other Aldabra tortoises, male Shuffles and female Corky, both also thought to be in their 70s to 80s. Aldabra tortoises are the oldest animals at the zoo; however, Patches was considered middle-aged for her species, which can live more than 100 years.

Surpassed in size only by their Galápagos cousins, Aldabra male tortoises weigh an average of 300 lb and females about 200 lb. They are currently classified as vulnerable and can be found only on the Aldabra Atoll, a UNESCO World Heritage Site, in the Indian Ocean off the coast of East Africa.

References available online at dvm360.com

PrideVMC spotlights supporters of Gender Identity Bill of Rights

In June 2021, the Pride Veterinary Medical Community (PrideVMC) published the Gender Identity Bill of Rights (GIBOR) to address inequality and inequity in the veterinary industry. Now PrideVMC is celebrating the individuals and organizations that have signed GIBOR.

According to a PrideVMC press release, 384 individuals and 59 groups have shown their support, including:

• The first person to sign: Andrew Peregrine, PhD, DVM, BVMS, DipEVPC, DipACVM (he/his/him)
• The first organization/workplace to sign: Whispering Pines Pet Clinic, Magalia, California
• Groups within the community of affinity organizations: Association of Asian Veterinary Medical Professionals, Australian Rainbow Veterinary Association, BlackDVM Network, British Veterinary Ethnicity & Diversity Society, British Veterinary LGBT+, Latinx VMA, Multicultural Veterinary Medical Association, National Association for Black Veterinarians, Native American Veterinary Association, Pride Student Veterinary Medical Community (PrideSVMC), and Women’s Veterinary Leadership Development Initiative
• PrideVMC partners that have signed as of February 8, 2022: Boehringer Ingelheim, Ethos Veterinary Health, and Simply Done Tech Solutions
• Veterinary schools and related entities that have signed as of today: Atlantic Veterinary College, University of Prince Edward Island; College of Veterinary Medicine, University of Minnesota; Colorado State University DVM Program; University of Arizona College of Veterinary Medicine Diversity, Equity & Inclusion program; University of California Davis Veterinary Medical Center; and University of Minnesota CVM Diversity, Equity and Inclusion Committee

PrideVMC urges all members of the veterinary profession to acknowledge the existence, humanity, and worth of transgender, nonbinary, and gender nonconforming people in the field. In addition, it asks you to show your support by completing the GIBOR signatory form.

The Gender Diversity Guide—a follow-up implementation guide—is expected to be published later in 2022. All of those that sign and commit to the bill of rights will be offered access to the manual.

References available online at dvm360.com

PrideVMC is calling on all members of the veterinary profession to recognize the existence, humanity, and worth of transgender, nonbinary, and gender nonconforming people. To support PrideVMC’s Gender Identity Bill of Rights, go to pridevmc.org.
Guarantee compliance and make ear infections easier

Treat your patients’ most common otitis externa infections with one dose administered by you.

SAVE THE DAY. USE CLARO® FOR YOUR MOST COMMON OTITIS CASES.

Claro® is indicated for the treatment of otitis externa in dogs associated with susceptible strains of yeast (Malassezia pachydermatis) and bacteria (Staphylococcus pseudintermedius).

CAUTION: Federal (U.S.A.) law restricts this drug to use by or on the order of a licensed veterinarian. PRECAUTIONS: For use in dogs only. Do not use in cats (see POST APPROVAL EXPERIENCE). CLARO® has been associated with rupture of the tympanic membrane. Reevaluate the dog if hearing loss or signs of vestibular dysfunction are observed during treatment. Signs of internal ear disease such as head tilt, vestibular signs, ataxia, nystagmus, facial paralysis, and keratoconjunctivitis sicca have been reported (see POST APPROVAL EXPERIENCE) with the use of CLARO®. Wear eye protection when administering CLARO®. (see Human Warnings, PRECAUTIONS, POST APPROVAL EXPERIENCE).

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CLARO® (florfenicol, terbinafine, mometasone furoate)

Otic Solution for use in dogs only

Do Not Use in Cats.

Antibacterial, antifungal, and anti-inflammatory

For Use in Dogs Only

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

DESCRIPTION: CLARO® contains florfenicol, 1.4 mg/mL terbinafine, 0.9 mg/mL terbinafine hydrochloride, and 2.2 mg/mL mometasone furoate. The active ingredients are racemic mixtures of the S-enantiomers of florfenicol, terbinafine, and mometasone furoate. The inactive ingredients include purified water, propylene carbonate, propylene glycol, ethyl alcohol, and polyethylene glycol.

INDICATIONS: CLARO® is indicated for the treatment of otitis externa in dogs associated with susceptible strains of yeast (Malassezia pachydermatis) and bacteria (Staphylococcus pseudintermedius).

DOSEAGE AND ADMINISTRATION: CLARO® should be administered by veterinary personnel.

Use eye protection when administering CLARO® (see Human Warnings, PRECAUTIONS, POST APPROVAL EXPERIENCE).

Splatter may occur if the dog shakes its head following administration. Persons near the dog during administration should also take steps to avoid ocular exposure.

Shake before use.

1. Verify the tympanic membrane is intact prior to administration. (see CONTRAINDICATIONS, PRECAUTIONS, POST APPROVAL EXPERIENCE).

2. Administer one dose (1) dropperette per affected ear.

3. Remove single dose dropperette from the package.

4. Turn the cap over and push the other end of the cap onto the tip of the dropperette.

5. Gently massage the base of the ear to allow distribution of the solution.

6. Insert the cap pointed end of the dropperette into the affected external ear canal and squeeze to instill the entire contents (1 mL) into the affected ear.

7. Keep the applicator needle on the dropperette.

8. Twist the cap away from the dropperette.

9. Gently massage the base of the affected ear to ensure that the ears are dry.

10. Repeat with other ear as prescribed.

CLARO® is not approved for use in cats. The adverse events reported are presented below in decreasing order of reporting frequency: Ear irritation and redness have been reported. Exposure occurred when the dog shook its head following application of CLARO®. Skin irritation has also been reported. In dogs, the adverse events reported are presented below in decreasing order of reporting frequency: Ear discharge, head shaking, ataxia, internal ear disorder (head tilt and vestibular), dermatitis, dizziness, pruritus, peri-auricular and/or ear pain, keratoconjunctivitis sicca, vestibulopathy, corneal ulcer, cranial nerve disorder (facial paralysis), tympanic membrane rupture. CLARO® is not approved for use in cats. The adverse events reported following extra-label use in cats are presented below in decreasing order of reporting frequency: Allergic, anemia, internal ear disorder (head tilt and vestibular), tremor, lethargy, pruritus, ocular pain, conjunctivitis, ear pain, and ocular discharge. (see POST APPROVAL EXPERIENCE). Owners should be informed that splatter may occur if the dog shakes its head following administration of CLARO® which may lead to ocular exposure. Eye injuries, including corneal ulcers, have been reported in humans and dogs associated with head shaking and splatter following administration. Owners should be informed to avoid ocular exposure (see PRECAUTIONS, POST APPROVAL EXPERIENCE).

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Purina and RedRover bestow
30th Purple Leash Project grant

The latest Purple Leash Project grants from Purina and RedRover will support domestic violence shelters in Oklahoma, Ohio, Pennsylvania, Rhode Island, and Virginia to encourage survivors with pets to flee abuse.

According to a company press release, the funds will help domestic violence shelters make pet-friendly renovations and provide resources to help survivors feel more comfortable leaving abusers because they will not have to leave pets behind.

The following shelters will use the grants to fund projects and services according to their needs:

• Family Violence Prevention Center of Greene County, in Greene County, Ohio, will receive $46,055 to build onsite kennels and a fenced-in play area outdoors.

The remaining funds will go toward pet and laundry supplies and air purifiers for bedrooms and dog rooms.

• Services to Abused Families, in Culpeper, Virginia, will receive $7,950 to update its barn so that it can house dogs and cats and to build a pet bathing station.

• Sojourner House, in Providence County, Rhode Island, will receive $21,800 to house pets at 1 of its 3 shelters and to foster care through the Rhode Island Society for the Prevention of Cruelty to Animals. The remaining funds will go to veterinary care, food, pet deposits, and transportation.

• The Spring in Tulsa County, Oklahoma, will receive $10,000 to build kennels, a visitation area, and an outdoor play area. The remaining funds will go toward a new HVAC system.

• YWCA of Bradford, in McKean County, Pennsylvania, will receive $19,000 to renovate a building for pets to live in so that owners can be close to and care for their animals while survivors who are allergic may be given shelter.

With this latest round of funding, Purina has awarded 30 grants totaling more than $500,000 to domestic violence shelters across the US.

Since the inception of the Purple Leash Project in 2019, the company has donated more than $1million and is partnering with RedRover to help ensure that at least 25% of domestic violence shelters are pet-friendly by 2025, according to the release. (c)

References available online at dvm360.com

dvm360.com
Call to revamp veterinary oaths focuses on mental wellness
By Julia Burke, Assistant Editor

The Galaxy Vets health care system has proposed an update to the veterinarian oath that involves adding a commitment to attend to personal health and mental well-being. The company called upon the American Veterinary Medical Association (AVMA), the National Association of Veterinary Technicians in America, and other regulatory authorities in the veterinary field worldwide to take action.

According to a Galaxy Vets press release, this revision would be similar to an amendment made by the World Medical Association in the Declaration of Geneva (“The Modern Hippocratic Oath”) taken by physicians: I will attend to my own health, well-being, and abilities in order to provide care of the highest standard.

Alyssa Mages, BS, CVT, cofounder of a company that provides training and inspiration to veterinary professionals, shared her thoughts regarding this proposed update in an email to dvm360®. “Our profession [comprises] incredible human beings who, while all different, are united in [their] love and compassion for animals, and yet we don’t extend that compassion to ourselves,” Mages wrote.

“This profession is demanding—of our time, our intelligence, our energy... We have given our word, our oath to veterinary medicine. It is high time we extend that same honor to ourselves. For if we truly value our life, we must first value our own,” she added.

Recent research conducted by Veterinary Integration Solutions and Galaxy Vets has revealed the prevalence of burnout in the veterinary field, with a 9.4% increase in burnout levels between 2020 and 2021. One AVMA study showed that 44% of veterinarians have considered leaving the industry, a 38% increase during that same period, and another study indicated that 1 in 6 veterinarians has considered suicide during their career.

Quincy Hawley, DVM, cofounder of a well-being resource for veterinary professionals, believes that revising the oaths for veterinarians and veterinary technicians would be a great action for the industry to take.

“While the revisions are long overdue, they are also arriving at the perfect time,” he said in an email to dvm360®. “I don’t expect that the revision to the oath will magically resolve the challenge of veterinary burnout and well-being, but I do expect that veterinary professionals who take the revised oath will feel more comfortable about prioritizing their well-being after reciting it.”

Galaxy Vets noted the significant advancements that medical organizations have been making to support emotional well-being. However, company representatives said they feel it is time that the veterinarian oath reflects that support. Especially with the current workforce crisis, it is important that the oath address the mental health challenges confronting modern veterinary professionals and the negative ramifications these can have on their health and ability to offer high-quality patient care, the company noted.

“With this revision, we are giving veterinary professionals official permission to prioritize, cultivate, and maintain their health and well-being while also emphasizing the idea that these actions will enhance the quality of our patient care and the excellence of our client service, and ultimately, the advancement of the human-animal bond and society in general,” Hawley stated.

“I’m very optimistic about the state of well-being for the entire global veterinary community. It’s grand acts such as changing the veterinary oath that give me great confidence to continue with my optimism as strides to help the veterinary profession reach a stage of greater completeness,” he concluded.

The open letter can be viewed and signed at https://links.galaxyvets.com/oaths.

App is capturing animal health data
By Phil Tucak, BVMS, BSc

In Australia’s remote Aboriginal and Torres Strait Islander communities, a new mobile app—the Animal Management in Rural and Remote Indigenous Communities (AMRRIC) app—is helping veterinarians, rangers, and animal management workers capture animal health data to improve community health, biosecurity, and disease surveillance.

The app has a vet mode and a census mode, and can be used without an internet connection. When back within internet range, it can be synced to a centralized database, a critical functionality for animal management workers in remote communities.

Data collected with the app are being used to inform the design and delivery of local government animal management programs and animal welfare responses associated with natural disasters. The app also provides dog population data during disease outbreaks.

“Recent animal disease events, including the outbreak of Ehrlichia canis, which has devastated dog populations in many remote communities across Northern Australia, and the threat of incursions of exotic diseases such as rabies and African swine fever emphasizes the urgent need for improved animal biosecurity data capture in remote indigenous communities,” said Bonny Cumming, a veterinarian and program manager, AMRRIC.

“The AMRRIC app is able to produce a biosecurity snapshot, and when the app is repeatedly used for data collection, this allows for [the] monitoring of morbidity and mortality trends within these populations.”

Online resource for finding a credentialed dog breeder
By Phil Tucak, BVMS, BSc

Australian veterinarian Imogen Tomlin-Game, BVSc, partnered with former marketing executive Nathan Olivieri and software engineer Adelaine Ho to create RightPaw, an online resource that makes finding the right dog simpler and safer.

RightPaw has created a database of veterinary-approved dog breeders who have passed the company’s independent verification process. The website allows potential pet owners to browse through and apply to those verified dog breeders when they are looking to purchase a puppy. Visit therightpaw.com for more information.

References available online at dvm360.com
Diet considerations play a vital role in managing a condition that has a large impact on a dog’s well-being. 

by Michael A. Rossi, DVM, MNS, DACVD
CAFR can manifest at any age. Recently published data indicate that the average age at onset was approximately 3 years. Dogs diagnosed with food-induced AD tended to be younger (<1 year) or older (>6 years) than those with aeroallergen-induced AD. It should be noted that the age of onset ranged from less than 1 to 13 years of age. Approximately 40% of affected patients present before the age of 1 year. There is no known strong sex predilection for dogs with CAFR. Although any breed may be affected, the condition appears to be more common in German shepherds, Labrador retrievers, and West Highland white terriers.

The most common clinical sign seen with canine CAFR is a nonseasonal pruritus—more than 90% of affected dogs experience it. In some intense cases, the pruritus may not respond to anti-inflammatory doses of glucocorticoids. The veterinary clinician should keep in mind that pruritus can manifest in several ways, including excessive grooming, licking, rubbing, and head shaking. Many patients will experience a generalized pruritus, but specific areas, such as the paws, ventrum, or ears, may be focal points of discomfort.

In addition to generalized pruritus, 10% to 20% of canine patients affected with CAFR develop systemic signs, with diarrhea being the most common. Other clinical signs include vomiting, increased flatulence, tenesmus, and increased bowel movements. Additionally, secondary infections with both bacteria and yeast are common in these patients due to the self-trauma and overcolonization of these microorganisms.

When CAFR is suspected, a detailed discussion with the pet owner should include information about the diagnostics needed to confirm the condition. The gold standard in diagnosing CAFR is a limited ingredient or hydrolyzed diet trial followed by a positive provocation challenge. This may be difficult for some pet owners as these diets can be more expensive than the regular diet. The majority of dogs should be fed this strict dietary regimen for up to 8 weeks to assess the full benefit; no unauthorized treats or human food should be given. Although home-cooked diet trials are a possibility as long as the owner is counseled on nutritional balance, it is highly recommended that only commercially available veterinary therapeutic diets be used. There have been data indicating that over-the-counter diets may contain unintentionally added proteins that are not listed in the ingredient list, such as chicken.

Some commercially available veterinary therapeutic diet options for dermatological conditions include: BLUE Natural Veterinary Diet HF, BLUE Natural Veterinary Diet NP, Royal Canin Ultamino, Royal Canin Selected Protein PR, Hill’s z/d, Hill’s d/d Potato & Salmon, Purina Pro Plan HA Hydrolyzed (chicken flavor), and Rayne Clinical Nutrition Kangaroo-MAINT with Chickpea. (See Table 1)

There is still much that is unknown about CAFR, and it remains the center of a considerable amount of research. It is imperative that the veterinary clinician remember to develop a treatment plan for the patient that centers on the prevention of flares. No plan is perfect, and CAFR flares should be anticipated. The pet owner should be counseled on the expected flares and how to control them without panic. The goal in managing CAFR is to improve the quality of life for the canine patient and prevent the human-animal bond.

Table 1. Therapeutic Dermatological Diet Options for Dogs

<table>
<thead>
<tr>
<th>Dry formulas</th>
<th>Protein source(s)</th>
<th>Protein level g/100 kcal</th>
<th>Ratio of omega-6 to omega-3 fatty acids</th>
<th>EPA + DHA level g/100 kcal</th>
<th>Nutritional statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLUE Natural Veterinary Diet HF</td>
<td>Hydrolyzed salmon, pea protein</td>
<td>7.2</td>
<td>1.2:1</td>
<td>0.12</td>
<td>Adult maintenance</td>
</tr>
<tr>
<td>BLUE Natural Veterinary Diet NP</td>
<td>Alligator, pea protein</td>
<td>6.3</td>
<td>1.2:1</td>
<td>0.16</td>
<td></td>
</tr>
<tr>
<td>Royal Canin Ultamino</td>
<td>Hydrolyzed poultry by-products aggregate</td>
<td>4.6</td>
<td>5:1</td>
<td>0.05</td>
<td>Adult maintenance</td>
</tr>
<tr>
<td>Royal Canin Selected Protein PR</td>
<td>Rabbit meal, hydrolyzed soy, potato protein</td>
<td>5.6</td>
<td>2.7:1</td>
<td>0.05</td>
<td>Adult maintenance</td>
</tr>
<tr>
<td>Hill’s z/d</td>
<td>Hydrolyzed chicken liver</td>
<td>4.9</td>
<td>8.1</td>
<td>Not reported</td>
<td>Adult maintenance</td>
</tr>
<tr>
<td>Hill’s d/d Potato &amp; Salmon</td>
<td>Salmon, potato protein</td>
<td>4.7</td>
<td>4.1</td>
<td>Not reported</td>
<td></td>
</tr>
<tr>
<td>Purina Pro Plan HA Hydrolyzed (chicken flavor)</td>
<td>Hydrolyzed soy, hydrolyzed chicken, hydrolyzed chicken liver</td>
<td>5.3</td>
<td>32:1</td>
<td>0</td>
<td>Adult maintenance</td>
</tr>
<tr>
<td>Rayne Clinical Nutrition Low Fat Kangaroo-MAINT With Chickpea</td>
<td>Kangaroo, potato protein, pea protein</td>
<td>9.4</td>
<td>Not reported</td>
<td>0</td>
<td>Adult maintenance</td>
</tr>
</tbody>
</table>

References:

Note: Nutritional statements are based on the product guide from the respective company and may vary with different formulations.

Eye examinations should neither be complicated nor expensive

The ins and outs of performing ophthalmic examinations, including tips on the required equipment, observation, and techniques

An ophthalmic examination should not be a scary experience for any animal. Although the interpretation of the findings may sometimes be challenging, the examination itself follows a logical, anatomical order. Furthermore, it does not require expensive equipment. In fact, the most important items required are nonophthalmic in nature: a room that can be darkened; a strong source of focal light, such as a Finoff transilluminator; and a magnifying loupe. You will need an ophthalmoscope to examine the patient’s fundus and a tonometer to diagnose and monitor glaucoma and uveitis in patients. Other than that, all you need is a couple of test strips (Schirmer tear test strips to measure tear production or fluorescein stain to diagnose corneal ulcers), a couple topical solutions (topical anesthesia and tropicamide solution to dilate the pupil), and fine forceps and/or swabs to evert the eyelids.

Remember that, as with any other system and organ, one should pay particular attention to the patient’s signalment. Numerous ocular diseases may be breed- or age-related, particularly in dogs. Because many eye disorders may be manifestations of systemic or neurological diseases, a general history should be taken, and a comprehensive physical and neuro-ophthalmic examination should be conducted.

**OBSERVATION**

Patients should be observed as they walk into the room because it is an unfamiliar space that may highlight visual deficits that can be evaluated later. Look at the patient from a distance without touching it (as this may cause squinting) and ask yourself the following:

- Are both eyes open normally? Is there squinting or excessive blinking, indicating pain?
- Are the eyes of normal size and position? Determine whether the eye is protruding (exophthalmos) or enlarged (buphthalmos) (Figure 1), and whether the pupils are of equal size.
- Determine whether eyelid conformation is normal. Do you detect eyelid inversion (entropion) or eversion (ectropion), usually of the lower lid (Figure 2)? Is there visible prolapse of the upper or third eyelid?
- Is there evidence of discharge? If so, what is its nature?

The orbital area should then be palpated to detect fractures, abnormal swellings, etc. Use the opportunity to press on the globe through the upper lid. This serves both as a retropulsion test, which indicates the presence of a mass behind the globe (Figure 1), and to proptose the third eyelid, allowing for inspection of its outer surface. Remember that this is not an effective way of evaluating intraocular pressure.

Grossly inspect the eyelids. Carefully examine the skin and look for discharge and signs of dermatological disorders such as dermatitis, alopecia, scaling, swelling, crusting, and ulceration. Slightly evert the eyelids to visualize the conjunctiva lining the lids and the 2 puncta. Use the opportunity to test the blink reflex in response to touching the skin around the eye. Continue by examining the conjunctiva lining the globe and the surface of the cornea.

**TESTING VISION AND PUPILLARY LIGHT REFLEXES**

Assessment of vision and the pupillary light reflex (PLR), and the workup of a blind patient are described in detail in the February 2020 issue of this publication. Briefly, vision is usually evaluated by evoking the menace response with a threatening wave of the hand and observing a blinking response. Remember that this is a cortical response, not a reflex. Therefore, it may be absent in young animals. Additional reasons for a negative response include the patient’s mental state and facial nerve paralysis (to be ruled out by testing the blinking reflex).
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The test may also be affected by false positives. So, be sure to cover the eye not being tested, as it may trigger a response (Figure 3), and avoid touching the eyelashes/hair of the patient or generating air currents. This can be achieved by making the threatening gesture behind a clear plastic shield.

Vision can also be assessed using an obstacle course. You should be consistent in the obstacle course you construct, and make sure it can be navigated by healthy animals. Test the patient in light and dim conditions, as this may aid in the detection of hereditary outer retinal degeneration, which in the early stages often affects night vision.

Next, dim the lights and observe the dilation of both pupils. Use a dim light and stand at a distance so you can visualize both pupils simultaneously, using the tapetal reflection. The tapetal reflection also serves to highlight any ocular opacities (by means of retroillumination), particularly in the lens or vitreous. Finally, use a bright light to evoke the PLR. If one of the pupils does not react to light or if it cannot be visualized (eg, in cases of severe corneal edema or hyphema), the consensual PLR should be checked. Alternatively, check the dazzle reflex. Like the PLR, this is a subcortical reflex and is observed as a bilateral, partial blink in response to a bright light (Figure 4).

**EXAMINING THE OUTER SURFACES OF THE EYE**

The rest of the exam is performed in the dark, using magnification and a focal light source, as the anterior structures of the eye are examined in an anatomical order.

Begin by evaluating the eyelids, carefully observing the eyelid margin. In a healthy animal, you should see the entire margin in close contact with the globe. Lack of contact may be due to ectropion (drooping lid).

On the other hand, if you cannot see the margin, or parts of it, the lid may be everted (entropion) (Figure 2). Eyelash abnormalities may be better visualized if the lid is slightly retracted. Aberrant dark eyelashes can then be highlighted against the background of the white conjunctiva. Surgical treatment of eyelid diseases is discussed in the November 2020 issue of this publication.

Next, examine the conjunctiva lining the inner aspect of the eyelids and globe for change in color, congestion, edema, prominent vessels, masses, thickening, discharge, moistness, or subconjunctival hemorrhage (Figure 5). Don’t forget the conjunctiva lining the third eyelid. The outer aspect of the third eyelid may be examined by pressing on the globe, causing third eyelid elevation. The inner aspect of the third eyelid margin may be examined after application of topical anesthetic and eversion of the lid with forceps. Look for foreign bodies or hyperplasia of lymphatic follicles.

Finally, examine the cornea. Normally, the cornea is smooth and transparent. Note decreased transparency due to edema, pigmentation, vascularization, cellular infiltration, lipid or mineral deposition, or fibrosis (Figure 6). Look for surface irregularities caused by ulceration, perforation and iris prolapse, granulation tissue, or corneal bullae. Estimate the corneal diameter. An enlarged diameter suggests glaucoma, whereas a reduced diameter indicates a phthihsical or microphthalmic eye.

**INTRAOCULAR EXAMINATION**

In healthy eyes, the aqueous humor should be clear. Look for any opacities or masses, such as blood, fibrin, hypopyon, aqueous flare, luxated lens, persistent pupillary membranes, iris cysts, or vitreous strands (Figure 7). Also evaluate the depth of the anterior chamber (best visualized from the side), as it may be increased or decreased in various intraocular diseases.

Next, look for alterations in pupil shape, which may be due to iris adhesions, atrophy, hypoplasia, or coloboma. Changes in the color of the pupil may indicate cataract, vitreous/retinal hemorrhage, or retinal detachment. The size of the pupil may be altered in uveitis, glaucoma, and retinal or neurological diseases. Continue by examining the surface of the iris for any masses or changes in color. These may be due to inflammation, hemorrhage, or neoplasia (Figure 8). Fluttering of the iris may indicate lens luxation.

Following pupil dilation, the lens should be evaluated for any opacities (ie, cataracts), using direct illumination and retroillumination. Remember that in older dogs, nuclear sclerosis is often mistaken for cataract. Retroillumination can help distinguish between the two. Also look for early signs of lens luxation, such as an aphakic crescent or vitreous in the anterior chamber.

**OPHTHALMOSCOPY**

Clinicians usually dread this part of the examination most. Part of the reason undoubtedly stems from the large range of normal variations in the appearance of the canine (and, to a lesser extent, the feline) fundus. Admittedly, if you are not in the habit of examining fundi, you will find it difficult to diagnose abnormalities. Therefore, you should make a habit of examining—however briefly—the fundus of every patient you see. Clients will appreciate the extra touch, and you will gain the required proficiency.

Because of the high cost of an indirect ophthalmoscope, only a direct ophthalmoscope is available in many general practices. This instrument provides a high magnification (x16 in an average dog). The unfortunate consequence of the high magnification is a small viewing field (4°), which extends the time required to examine the entire fundus. However, monocular direct ophthalmoscopy may be obtained using a bright light source and a handheld lens (20D-30D), facilitating a rapid examination of the entire fundus. >>
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**Ophthalmology**

**INDICATIONS:**

**IMOXI™ Topical Solution for Dogs is indicated for the prevention of heartworm disease caused by Dirofilaria immitis and the treatment of Dirofilaria immitis circulating microfilariae in heartworm-positive dogs. IMOXI™ Topical Solution for Dogs kills adult flies and is indicated for the treatment of fly infestations (Clinocyphalid flies). IMOXI™ Topical Solution for Dogs is indicated for the treatment and control of sarcocystis mange caused by Sarcoptes scabiei var. canis. IMOXI™ Topical Solution for Dogs is also indicated for the treatment and control of the following intestinal parasites species: Hookworms (Ancylostoma caninum) and Uncinaria stenocephala, Intestinal Stage: Adult, Immature Adult and Fourth Stage Larvae, Roundworms (Toxocara canis), Intestinal Stage: Adult and Fourth Stage Larvae, Intestinal Strongyloides (Toxascaris leonina), Intestinal Stage: Adult, Roundworms (Toxascars suis), Intestinal Stage: Adult.

**CONTRAINDICATIONS:** Do not administer this product orally. (See WARNINGS)

**WARNINGS:**

**IMOXI™ Topical Solution for Dogs:** For the first 36 hours after application: Ensure that dogs cannot lick the product from application sites on themselves or other treated dogs, and separate treated dogs from one another and from other pets to reduce the risk of accidental ingestion. Ingestion of this product by dogs may cause serious adverse reactions including depression, salivation, dilated pupils, incoordination, panting, and generalized muscle tremors. In avermectin sensitive dogs, the signs may be more severe and may include coma and death.

Some dogs are more sensitive to avermectin due to a mutation in the MDRI gene. Dogs with this mutation may develop signs of severe avermectin toxicity if they ingest this product. The most common breeds associated with this mutation include Collies and Cocker spaniels.

Although there is no specific antagonist for avermectin toxicity, even severely affected dogs have completely recovered from avermectin toxicity with intensive veterinary supportive care.

**IMOXI™ Topical Solution for Cats:** Do not use on skin less than 9 weeks of age or less than 2 lbs. body weight. **HUMAN WARNINGS:** Not for human use.

**CAUTION:** Do not administer IMOXI™ Topical Solution for Dogs containing moxidectin to cats.

**ANCILLARY TESTS:**

- Intraocular pressure should be measured in every case of suspected glaucoma or uveitis. Glaucoma is discussed in the September 2021 issue of this publication.
- Dry eye, or keratoconjunctivitis sicca, is diagnosed using the Schirmer tear test, which is discussed in the April 2021 issue of this publication (Figure 6).
- Every red or painful eye should be stained with fluorescein to diagnose corneal ulcers.
- Bacteriology, mycology, and cytology samples are collected when indicated. The first 2 should be taken before any drops are put in the eye, as solutions frequently contain preservatives.
- Test for nasolacrimal patency by observing the passage of fluorescein from the eye to the nose by cannulating the nasolacrimal system or by contrast radiography.
- Ultrasound is used to image the retrobulbar area when an orbital tumor or abscess is suspected (Figure 1).
- It is also used when the posterior segment cannot be examined because of hyphema or cataract. CT and MRI techniques may be used in certain cases.
- Additional tests, including electroretinography (recording the electrical responses of the retina to flashes of light to determine retinal function) and gonioscopy (evaluation of the iridocorneal angle as part of the diagnosis of glaucoma) are available in referral centers.

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**Figure 7**

Hyphema due to Ehrlichia canis infection leads to loss of aqueous humor transparency.

**Figure 8**

Heterochromia iridis, or a multicolored iris, is a normal congenital variation, but in some patients, changes in iris color may indicate inflammation or neoplasia.

**Figure 9**

Lipemia retinalis. The color cream of the blood vessels indicates this dog is suffering from systemic hypertiglyceridemia and led to the diagnosis of Cushing syndrome.

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**Although the interpretation of the findings may sometimes be challenging, the examination itself follows a logical, anatomical order.”**

—Ron Ofri, DVM, PhD, DECVO

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**Ophthalmoscopy should be conducted in a dark room, following dilation of the pupil. First evaluate the tapetal reflection from a distance to detect any opacities of the lens or vitreous. Once you are focused on the fundus, look for changes in the tapetum, nontapetum, blood vessels, and optic disc (Figure 9).**

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**Photo Credit:** The Veterinary Ophthalmology Service, Hebrew University of Jerusalem
How much do you really know about feline parasites?  

Put your parasitology chops to the test with these 11 questions.  

by Matt McGlasson DVM, CVPM

Many feline parasites are only a nuisance, but many can be life-threatening or have serious public health implications. With prevalence rates as high as 45% in some populations and some gastrointestinal parasites transmissible to humans, parasitology is not a topic that can be taken lightly. Below are 11 questions that will reactivate your knowledge and perhaps challenge your preconceived notions. Assess these parasitology pearls.

1. The cat is a dead-end or atypical host for heartworms.  
True—Cats are not a preferred host for heartworms. Therefore, infected cats may have only 1 or 2 adult worms in their bodies, and sometimes no heartworms reach the adult stage. This often makes diagnosis difficult, but it is important to note that even immature worms can cause significant illness, such as Heartworm Associated Respiratory Disease (HARD).

2. Cats can spontaneously clear heartworm infection.  
True—Because the cat is an atypical host, many heartworms do not reach maturity inside cats. However, immature worms can cause permanent damage. HARD can lead to coughing, wheezing, and other respiratory symptoms. Histopathologic lesions, most notably occlusive medial hypertrophy of the small pulmonary arterioles, are evident even in cats that clear the infection.

3. Serious clinical signs of heartworm infection occur only when adult worms die in an infected cat.  
False—Clinical signs occur in cats at 2 distinct stages: when juvenile heartworms arrive in the pulmonary vasculature, 3 to 4 months after infection, causing acute inflammation, and when adult heartworms begin to die. Degenerating heartworms lead to pulmonary thromboembolism and acute inflammation, often causing fatal lung injury.

4. No drug has been approved for the treatment of heartworm infection in cats.  
True—Melarsomine, the drug approved for adulticide therapy in dogs, is not safe for cats. Thus, prevention of infection is critical.
5. Because cats are considered to be at lower risk for HARD than dogs, the American Heartworm Society does not recommend chemoprophylaxis in cats.  

   False—AHS recommends monthly prevention for all domestic cats in any area where heartworms are endemic in dogs.1 NB: Canine heartworm infection has been diagnosed in all 50 states.

6. Topical moxidectin is approved for the prevention of feline heartworms.  

   True—A monthly topical application of moxidectin has been approved as a safe and effective way to prevent feline heartworm infection. A monthly application of IMOXI Topical Solution for Cats (imidacloprid + moxidectin) offers internal and external parasite prevention.

7. Unlike in dogs, roundworm and hookworm infections in cats are not considered zoonotic.  

   False—Feline roundworms and hookworms are zoonotic. In humans, roundworms can cause visceral and ocular larva migrans, and hookworms can cause cutaneous larva migrans.1,2

8. The flea is the most common external parasite in cats.  

   True—Flea infestation is still very common in cats and can lead to life-threatening anemia, especially in kittens, severe dermatological disease, and tapeworm (Dipylidium caninum) infection. The cat flea, Ctenocephalides felis, can also transmit Rickettsia typhi, Rickettsia felis, Bartonella henselae, Mycoplasma spp (formerly Hemobartonella spp), Yersinia pestis (plague), and Francisella tularensis (tularemia).4,5

9. One pregnant flea on a cat can lead to a severe infestation in the home.  

   True—a single flea can typically lay at least 20 eggs every 24 hours, half of which will also be females and thus lead to more than 20,000 adults in 2 months. The Companion Animal Parasite Council recommends that cats be treated with flea control products year round throughout their lives to prevent infestations on pets and in the home.4,5

10. Otodectes cynotis (ear mites) are a significant ectoparasite only in stray and free-roaming cats.  

   False—Studies have shown that up to 25% of pet cats4 are infested with the Otodectes cynotis species. Although most cats show clinical signs, up to 10% harbor subclinical infections.4,6,7

11. Nothing can prevent heartworms, roundworms, hookworms, fleas, and ear mites in cats.  

   False—IMOXI Topical Solution for Cats (imidacloprid + moxidectin) is a once-a-month topical solution that can prevent these pests in cats and kittens 9 weeks and older that weigh at least 2 lbs.

Wrapping it up  
How did it go? Although internal and external parasites are a major concern for cat owners, these questions hopefully served as a timely refresher that will help you make the best recommendations for feline patients.

References
Is aging a disease?

Understanding the process of growing older can help veterinarians better manage age-associated conditions.

How often do we see patients with treatable conditions that owners do not recognize as problems—or choose not to treat because the patient is geriatric? We all have heard the rationalization “Well, he’s just slowing down.” Or “He’s just getting old.” Many veterinarians may also routinely ignore mild symptoms or laboratory abnormalities in geriatric patients that they would investigate or treat in younger patients.

UNDERSTANDING AGING

There are several conceptual frameworks used to understand aging. One characterizes aging as a normal and inevitable aspect of the life cycle and distinguishes normal aging from the symptoms of age-related diseases. This approach emphasizes healthy aging, maintaining optimal function and quality of life, defined in terms relative to the age of the individual.

Proponents of this framework recognize that aging is associated with a progressive loss of function and resilience and an increased risk of disease and death. However, they emphasize differentiating normal physical changes that occur with age from those that represent disease. In this approach, normal health is relative to age, and what may be seen as pathological or unacceptable in a young animal may be viewed as age-appropriate in an older dog or cat. Although a decline in activity level, a loss of lean body mass, or mild clinical laboratory abnormalities might be signs of disease in the young, these changes are considered normal in geriatric...
individuals and may not trigger diagnostic or treatment interventions. Most veterinarians using this approach would not go so far as clients sometimes do in ignoring truly deleterious changes associated with age. Normal changes that adversely affect comfort and function are managed palliatively to preserve well-being as long as possible. Proponents recommend screening efforts and intervention when abnormalities cross the often-indistinct threshold between normal aging and disease. However, this view of aging does promote greater acceptance of the purportedly inevitable decline in function and resilience that comes with age, and it is predominantly reactive and palliative rather than preventive. Another perspective is that aging itself is a disease, a constellation of biological processes and their clinical outcomes that should be diagnosed, treated, and, if possible, prevented like any other illness. We explore the arguments for classifying aging as a disease in the context of the upcoming World Health Organization’s 11th International Statistical Classification of Diseases and Related Health Problems. Proponents of this viewpoint maintain that treatment and prevention of individual age-associated diseases may not be as effective at extending life span or health span (the period of healthy life) as directly targeting aging. If there is an identifiable set of common mechanisms behind age-associated diseases, wouldn’t we be more successful at preserving health by addressing them all rather than accepting some as symptoms of normal aging and treating others as pathological?

The advantage of this view is that it encourages investigating and manipulating the fundamental mechanisms of aging to mitigate their effect on health and well-being. The disadvantage is that we seldom have sufficient knowledge or tools to do this effectively in a clinical setting. There is also a risk of pathologizing minor changes in geriatric patients that can lead to overdiagnosis and overtreatment.

As both a clinician and someone involved in aging research, I lean toward a pragmatic middle ground between these views, understanding aging as the single greatest modifiable risk factor for many superficially dissimilar age-related diseases. Aging is a ubiquitous process consisting of identifiable, evolutionarily conserved mechanisms that occur in all individuals. It is the root cause of many diseases, but it has a variable and often extended latency to clinical manifestations. The specific diseases that eventually emerge differ between populations and individuals owing to a complex interaction of factors.

The greatest improvements in health and longevity will come from understanding and manipulating the core mechanisms of aging well before clinical disease develops. However, while we develop the necessary tools to accomplish this, we must strike a balance between palliating the impacts of aging on comfort and function and not subjecting our geriatric patients to excessive or unproven interventions. The concept of healthy aging is clinically useful, but we should not overlook the importance of treating the root causes of age-associated physical decline and ultimately preventing many of the clinical problems we now view as either normal aging or as age-associated disease.

Traditional medical training emphasizes detection and treatment of extant disease more strongly than prevention. Even when we act prophylactically, we often focus our efforts narrowly on specific diseases, overlooking the underlying mechanistic connections between them. As research evidence elucidating the mechanisms of aging grows, we must shift our practices away from a reactive and narrow focus on age-associated diseases and toward a broader emphasis on preventing the global biological processes that lead to age-related degeneration.

Although there is much work to do to develop clinical therapies directly targeting aging, there are interventions veterinarians can recommend now that can slow age-related changes and mitigate their effect on health. The most significant of these is weight management.

HOW OBESITY COMPOUNDS THE EFFECTS OF AGING

There is ample evidence in humans, lab animals, and companion dogs that obesity shortens life and accelerates aging, producing many of the same metabolic abnormalities and diseases associated with aging. The metabolic dysfunction associated with obesity is remarkably similar to that which develops in normal aging, and the obesity phenotype may effectively be a form of accelerated aging. Another well-demonstrated method of slowing the aging phenotype may effectively be a form of preventive strategies throughout the life cycle to slow aging and mitigate the negative impact it can have on health and well-being. Efforts such as the Golden Retriever Lifetime Study by the Morris Animal Foundation and the Dog Aging Project at the University of Washington illustrate how understanding the need to investigate aging and age-related disease can generate useful scientific evidence, and significant enthusiasm among veterinarians and pet owners.

CONCLUSIONS

The semantic and philosophical debates over whether aging should be called a disease are unlikely to be resolved anytime soon. However, the pragmatic view that aging is the most important risk factor for many diseases allows both prudent clinical management of age-related changes in health and the development and implementation of interventions directly targeting aging. Veterinarians can use this to promote healthy lifestyle interventions such as optimal weight management and increased physical exercise, and encourage pet owners to think proactively about aging and not to give up on useful diagnostic and treatment interventions in senior pets. We can have the best of both perspectives, maximizing function and comfort in geriatric patients now and preparing for a future in which many of their ailments can be prevented.

References available online at dvm360.com.
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¹ 1,2
³ 3

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any veterinarians specializing in canine osteoarthritis (OA) believe patients could have experienced better treatment outcomes if they had been referred earlier, according to findings from research conducted by Exubrion Therapeutics. Study participants reported that most patients with canine elbow OA were referred when the patient is at a moderate to severe stage of the condition, which they considered to be too late.1

According to the American College of Veterinary Internal Medicine, OA affects approximately 25% of dogs and is the most common form of canine arthritis. This chronic joint disease leads to pain and limb dysfunction and is characterized by the loss of joint cartilage, thickening of the joint capsule, and new bone formation around the joint.2

John “Jay” Donecker, chief veterinary officer at Exubrion, explained that the nearly 1 in 4 dogs with OA2 experiences pain, lameness, limping, limited movement, and a poor quality of life. “Earlier referrals for many of these canine patients could result in less pain and better quality of life for these beloved pets,” said Donecker, in an organizational press release.1

In 2021, investigators surveyed 68 veterinary specialists who routinely received referrals from general practitioners for canine patients with lameness and pain due to OA. Sixty-six of the 68 participants reported that they believe early intervention slows disease progression, reducing the severity of elbow OA.1

According to the release, the primary reason given for the lower success of late-stage referrals was that “the joint’s structural changes are too significant and have progressed too far.”1

**Creating Awareness**

The findings also showed that veterinary specialists would like general practitioners to be better able to recognize the early signs of OA via radiography and to better understand the early treatment options and their value.1 Finally, 71% of participants reported that treating inflammation early is very important in controlling elbow OA.1

“Beyond encouraging earlier referrals, we want to help general practitioners by providing tools and information to help with elbow OA diagnosis and treatment options,” explained Donecker. Exubrion recently launched a new website, k9elbowroom.com, to provide clinicians with tools to address the condition early and successfully.

Additionally, the website offers an overview of the inflammatory cycle, videos on how to diagnose elbow OA, information on new treatment options, and the opportunity to share cases.

**Treatment Options**

Weight management and regular moderate exercise can improve joint health, according to VCA Animal Hospitals. Veterinarians can provide guidance to clients about the length of walks for pets with OA as well as acceptable walking surfaces and offer advice about exercises that target and strengthen certain muscle groups.3

Another treatment option is therapeutic radiation, tin-117m, for reducing inflammation in the elbow joint. A liquid injectable veterinary device developed by Exubrion (Synovetin OA) can administer this therapy in a minimally invasive way.4

Matt Brunke, DVM, DACVSMR, CCRP, CVPP, CVA, CCMT, medical director of Veterinary Surgical Centers in northern Virginia, has treated more than 50 dogs with this medical radiotherapeutic. According to Brunke, the therapy reduces the inflammation and pain of OA for up to a year.1

Medications, nutraceuticals, and supplements may also provide pain relief for these animals.3 One example is an anti-inflammatory supplement developed by Lintbells that promotes joint and cartilage health in dogs of all sizes and breeds. This supplement (YuMOVE Soft Chews) contains green-lipped mussels, which are rich in omega-3, as an active ingredient.5

In an article for VCA Animal Hospitals3, Krista Williams, DVM, BS, and Robin Downing, DVM, CVPP, CCRP, DAAPM, recommend that clients use drug products only as instructed or labeled and consult veterinarians about any adverse effects from medications. Pet parents should also discuss with veterinarians the potential use of OTC supplements to ensure they meet the patient’s specific needs and do not interact with its other medications.3
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Managing difficult dermatological cases in pets

Dealing with a patient that is constantly itching, licking, or shaking its head can be frustrating. Here are some helpful ways to manage these difficult cases.

When it comes to difficult dermatology cases, owners are usually looking for an immediate and permanent fix. As veterinarians, we wish there were a “magic shot” that would offer relief to our patients and make our clients happy. However, before we reach for the imaginary magic shot, we must make sure to go back to the basics in terms of diagnosis and treatment.

It is easy to fall into the same conversations by offering medications such as lokivetmab (Cytopoint; Zoetis) and oclacitinib (Apoquel; Zoetis) for immediate relief, but we cannot forget to start at the beginning. Some owners walk into our exam rooms saying that they have tried everything. Sometimes this is true, but this is often not the case. We must remember to start with obtaining a thorough history. Begin by asking simple, open-ended questions that can sometimes lead to an easy diagnosis or direct us to diagnostics that are needed to help treat these cases.

Once you feel comfortable with the obtained history, you should next perform a thorough exam using an otoscopic examination. Remember, the ears are an extension of the skin. During the physical exam, you should start mentally creating a list of recommendations that include the basics, such as ear cytology, skin scrape, skin cytology, and/or tape preparations. These simple diagnostics can give us immediate answers to underlying issues. Furthermore, keep in mind that not all dermatology cases are secondary to allergies. Any case with chronic skin changes should have complete blood work with thyroid testing and urinalysis performed to rule out underlying endocrine issues.

Although in-house testing is relatively simple, quick, and less expensive, further diagnostics are needed to help determine the best course of treatment. There are several different types of cultures that can be used to identify specific microbial pathogens. For instance, dermatophyte test medium fungal cultures are used to isolate and identify dermatophyte organisms. Bacterial and fungal cultures are essential for prescribing appropriate topical and/or oral medications. Generally, any deep cellulitis-like lesions and/or draining tracts should be cultured for bacterial and fungal organisms. Aside from cultures, there are cases where we can obtain a lot of information from skin biopsies.

To improve diagnostic accuracy for the dermatopathologist, it is best to take 3 to 5 samples from a variety of lesions. Do not completely shave or aseptically prep the area. Use a 6-mm or 8-mm punch biopsy, rotate the punch biopsy tool in one direction to get the best cut, and be gentle—no crushing—with tissue forceps when transferring the sample to the formalin jar. Other diagnostics to consider are allergy testing, trichograms, polymerase chain reaction assays, or immunohistochemistrys.

Because owners are looking for an immediate solution to their pets’ itching, lokivetmab and oclacitinib can be great medications to use while waiting for laboratory results. Oral antibiotics have the potential to create bacterial-resistant infections, we must be cautious with immediately prescribing oral antibiotics. We often forget that there are excellent topical medications, such as shampoos, mousse, wipes, and sprays, on the market that can help manage these cases while we wait for culture results. There are many benefits with the use of topical medications, which include physically removing allergens, reducing bacterial and yeast populations, repairing epidermal barrier defects, and antipruritic effects of cool water on hot, inflamed skin when bathing.

For patients in whom parasites and external causes have been ruled out, an elimination diet trial can be helpful. A proper food trial will be successful only if owners understand their pets must strictly adhere to the specific elimination diet. You will need to select a limited ingredient or hypoallergenic diet based on the diet history and the preferences of clients and patients. If a patient was given access to any other food or treats, the trial must start over. This includes rawhides, chew toys, flavored chewable medications, vitamins, and treats. An elimination diet trial for 8 weeks should be long enough for most patients that have a cutaneous adverse food reaction.

It can be easy to get tunnel vision when trying to diagnose and treat these cases, and we may forget there are specialists we can reach out to. Patients with skin conditions may be referred to a dermatologist at any time. If owners are willing to consult with a dermatologist, remember to contact their office before you refer the patient so you can discontinue medications that can interfere with diagnostics they would like to pursue. If owners decline a consult with a dermatologist or there is not one in your area, utilize teleconsultation.

In the end, we will not be successful with treating these [dermatology] cases if we do not take the time to educate clients.”

—Ciara Vollaro, DVM
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INDICATION
Galliprant is an NSAID that controls pain and inflammation associated with osteoarthritis in dogs.

IMPORTANT SAFETY INFORMATION
Not for use in humans. For use in dogs only. Keep this and all medications out of reach of children and pets. Store out of reach of dogs and other pets in a secured location in order to prevent accidental ingestion or overdose. Do not use in dogs that have a hypersensitivity to grapiprant. If Galliprant is used long term, appropriate monitoring is recommended. Concomitant use of Galliprant with other anti-inflammatory drugs, such as COX-inhibiting NSAIDs or corticosteroids, should be avoided. Concurrent use with other anti-inflammatory drugs or protein-bound drugs has not been studied. The safe use of Galliprant has not been evaluated in dogs younger than 9 months of age and less than 8 lbs (3.6 kg), dogs used for breeding, pregnant or lactating dogs, or dogs with cardiac disease. The most common adverse reactions were vomiting, diarrhea, decreased appetite, and lethargy. For full prescribing information see Galliprant package insert.


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GALLIPRANT® (grapiprant tablets)

For oral use in dogs only

20 mg, 60 mg and 100 mg flavored tablets

A prostaglandin E₂ (PGE₂) EP₄ receptor antagonist; a non-cyclooxygenase inhibiting, non-steroidal anti-inflammatory drug

Caution:

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

Before using Galliprant, please consult the product insert, a summary of which follows:

Indication:

GALLIPRANT (grapiprant tablets) is indicated for the control of pain and inflammation associated with osteoarthritis in dogs.

Dosage and Administration:

Always provide “Information for Dog Owners” Sheet with prescription.

Use the lowest effective dose for the shortest duration consistent with individual response.

The dose of GALLIPRANT (grapiprant tablets) is 0.9 mg/lb (2 mg/kg) once daily.

Only the 20 mg and 60 mg tablets of GALLIPRANT are scored. The dosage should be calculated in half tablet increments. Dogs less than 8 lbs. (3.6 kgs) cannot be accurately dosed.

The 100 mg tablet is not scored and should not be broken in half.

See product insert for complete dosing and administration information.

Contraindications:

GALLIPRANT should not be used in dogs that have a hypersensitivity to grapiprant.

Warnings:

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

For use in dogs only. Store GALLIPRANT out of reach of dogs and other pets in a secured location in order to prevent accidental ingestion or overdose.

Precautions:

The safe use of GALLIPRANT has not been evaluated in dogs younger than 9 months of age and less than 8 lbs (3.6 kg), dogs used for breeding, or in pregnant or lactating dogs.

Adverse reactions in dogs receiving GALLIPRANT may include vomiting, diarrhea, decreased appetite, mucoid, watery or bloody stools, and decreases in serum albumin and total protein.

If GALLIPRANT is used long term appropriate monitoring is recommended.

Concurrent use with other anti-inflammatory drugs has not been studied. Concomitant use of GALLIPRANT with other anti-inflammatory drugs, such as COX-inhibiting NSAIDs or corticosteroids, should be avoided. If additional pain medication is needed after a daily dose of GALLIPRANT, a non-NSAID/ non-corticosteroid class of analgesic may be necessary.

The concomitant use of protein-bound drugs with GALLIPRANT has not been studied. Commonly used protein-bound drugs include cardiac, anticonvulsant and behavioral medications.

Drug compatibility should be monitored in patients requiring adjunctive therapy. Consider appropriate washout times when switching from one anti-inflammatory to another or when switching from corticosteroids or COX-inhibiting NSAIDs to GALLIPRANT use.

The use of GALLIPRANT in dogs with cardiac disease has not been studied.

Adverse Reactions:

In a controlled field study, 285 dogs were evaluated for safety when given either GALLIPRANT or a vehicle control (tablet minus grapiprant) at a dose of 2 mg/kg (0.9 mg/lb) once daily for 28 days. GALLIPRANT-treated dogs ranged in age from 2 yrs to 16.75 years. The following adverse reactions were observed.

Table 1. Adverse reactions reported in the field study.

<table>
<thead>
<tr>
<th>Adverse reaction*</th>
<th>GALLIPRANT (grapiprant tablets) N = 141</th>
<th>Vehicle control (tablets minus grapiprant) N = 144</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vomiting</td>
<td>24</td>
<td>9</td>
</tr>
<tr>
<td>Diarrhea, soft stool</td>
<td>17</td>
<td>13</td>
</tr>
<tr>
<td>Anorexia, inappetence</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>Lethargy</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Buccal ulcer</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Immune mediated</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>hemolytic anemia</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Dogs may have experienced more than one type or occurrence during the study.

GALLIPRANT was used safely during the field studies with other concurrent therapies, including antibiotics, parasiticides and vaccinations.

To report suspected adverse drug events and/or to obtain a copy of the Safety Data Sheet (SDS) or for technical assistance, call 1-888-545-5973.

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

Information for Dog Owners:

Owners should be advised of the potential for adverse reactions and be informed of the clinical signs associated with drug intolerance. Adverse reactions may include vomiting, diarrhea, decreased appetite, and decreasing albumin and total protein. Appetite and stools should be monitored and owners should be advised to consult with their veterinarian if appetite decreases or stools become abnormal.

Effectiveness:

Two hundred and eighty five (285) client-owned dogs were enrolled in the study and evaluated for field safety. GALLIPRANT-treated dogs ranging in age from 2 to 16.75 years and weighing between 4.1 and 59.6 kgs (9 – 131 lbs) with radiographic and clinical signs of osteoarthritis were enrolled in a placebo-controlled, masked field study. Dogs had a 7-day washout from NSAID or other current OA therapy. Two hundred and sixty two (262) of the 285 dogs were included in the effectiveness evaluation. Dogs were assessed for improvements in pain and function by the owners using the Canine Brief Pain Inventory (CBPI) scoring system. A statistically significant difference in the proportion of treatment successes in the GALLIPRANT group (63/131 or 48.1%) was observed compared to the vehicle control group (41/131 or 31.3%). GALLIPRANT demonstrated statistically significant differences in owner assessed pain and function. The results of the field study demonstrate that GALLIPRANT, administered at 2 mg/kg (0.9 mg/pound) once daily for 28 days, was effective for the control of pain and inflammation associated with osteoarthritis.

Storage Conditions:

Store at or below 86° F (30° C)

How Supplied:

20 mg, 60 mg and 100 mg flavored tablets in 7, 30 and 90 count bottles

NADA 141-455, Approved by FDA

Manufactured for:

Elanco US Inc.

Greenfield, IN 46140

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November 2018
Quashing common toxicology myths

Veterinary toxicologists debunk misconceptions about pet poisons.

By Julia Burke, Assistant Editor

The third week of March is National Poison Prevention Week, so we are addressing common myths about toxins that may lead pet parents down the wrong path when caring for their fur babies.

Renee Schmid, DVM, DABVT, DABT, a senior veterinary toxicologist at Pet Poison Helpline, told us about a dog that had been given too much hydrogen peroxide after ingesting motor oil. Although the compound is often used to induce emesis in dogs, there is a maximum amount that should not be exceeded, she said.

In this case, the cure was worse than the disease: “The motor oil wasn’t going to be a large issue other than potential stomach upset or aspiration if vomiting occurred, but the hydrogen peroxide amount was excessive, and [the pet was] at high risk of developing gastritis and stomach ulcerations. So the pet had to go . . . [for] veterinary care because of the hydrogen peroxide, as opposed to the motor oil,” she explained, adding that such accidents are common in cases of poisoning, when people panic as they rush to do what they think is best for their pet.

That is why she and her colleagues are eager to highlight a few myths about poisons, including those surrounding:

**POINSETTIAS**

**MYTH:** Poinsettias are extremely toxic to pets.

**FACT:** Poinsettias are only mildly toxic to pets.

“The milky sap [of these plants] causes gastrointestinal upset but that’s really all; it’s not life-threatening,” Schmid pointed out. “An animal might have an episode or 2 of vomiting, but it isn’t going to be a big issue.”

The Poison Control Center of the American Society for the Prevention of Cruelty to Animals (ASPCA) also downplays the danger of poinsettias. They irritate the stomach and mouth but are “generally overrated in toxicity,” the center says on its website.
**Emetics**

**MYTH:** When a pet ingests something it “shouldn’t have,” it must vomit it, regardless of what that something may be.

**FACT:** Certain items should be allowed to pass through the pet’s gastrointestinal tract.

According to Schmid, toxic products that should not be vomited include motor oil, brake fluid, and corrosive products like oven and toilet bowl cleaners, among others.

**Salt**

**MYTH:** Salt may be used as an emetic.

**FACT:** Salt is toxic to pets, so if given in the amount often required to make an animal vomit, it can be harmful.

The ASPCA warns that large amounts of salt can cause excessive thirst, urination, and even sodium ion poisoning. In addition to not using salt to induce vomiting, the organization suggests not giving pets snacks like potato chips, popcorn, and pretzels.

**Lilies**

**MYTH:** All lilies are toxic to cats.

**FACT:** Although many plants have “lily” in their name, only true lilies (in the genus *Lilium*) and daylilies (*Hemerocallis*) cause renal toxicity and can lead to kidney failure in cats.

The whole plant in these genera—the stem, leaves, flowers, pollen, even the vase water—is dangerous for felines. Dogs that eat lilies, on the other hand, may experience a minor stomach upset but won’t develop kidney failure, according to the FDA.³

“Peruvian lilies, which are [in the genus] *Alstroemeria*, peace lilies, lily of the valley, and other plants with lily in the name can [also] potentially have other [unpleasant] effects,” Schmid said.

**Human products**

**MYTH:** Human products are safe for animals.

**FACT:** Human products are often unsafe for animals.

“A lot of people will . . . give their . . . medication to their pet[s] thinking that it’s just as safe as it would be [for humans]. Sometimes that’s true, but a lot of times it isn’t, especially when you think about pain medications like ibuprofen, naproxen, or acetaminophen,” Schmid explained. “A lot of those things . . . really have a narrow margin of safety in animals.”

**WHAT MAKES A MYTH?**

The internet plays a major role in the spread of inaccurate information about toxins because online “anything gets picked up and can just spread like wildfire,” Schmid said. “One wrong word, 1 wrong statement can really spread nationally and even internationally. It can really be difficult then to . . . repair that misinformation.”

Moreover, well-intentioned pet owners and veterinarians may also be responsible for misconceptions. They may see a specific outcome and mention it to a friend, who then mentions it to someone else and so on, and the story becomes distorted along the way.

“Something [else that] can happen, and we probably see [it] a lot more frequently with pet owners, is that they . . . make an inaccurate correlation: This happened to my friend’s Labrador, which means any Labrador that gets into this particular product is going to have the same effect,” she observed.

According to Schmid, pet parents should remember that “the dose makes the poison” and take into account “the amount [the pet] got into [and] the type of animal [it is] and [that] a lot of different things come into play. That’s probably my biggest thought on why these myths keep carrying over for years and years.”

**WHAT’S THE SOLUTION?**

Because many everyday items can harm companion animals, it is important to tell clients that pet-proofing their homes is an important step in preventing poisoning and that they should store cleaning products, medications, and other potential toxins in hard-to-reach places. According to the Drake Center for Veterinary Care, this is particularly important when people are welcoming home a new animal that will naturally be curious and want to sniff and taste its new environment.² They should also reevaluate the safety of their house and garage every year so that they remain pet-friendly.

Schmid also suggested that veterinary professionals let clients know where they can find reliable information, like the poison list available on Pet Poison Helpline’s website. Other poison control centers, various university websites and publications for veterinary professionals, also have information on this subject.

**REFERENCES**


**JUST DROP IT.**

**Clevor®**
(ropinirol ophthalmic solution)

When dogs eat something potentially poisonous or harmful, you need to act quickly. Clevor is a selective emetic with a fast onset of action and short duration of vomiting. A convenient, single-use dropper provides one injectionless treatment for a dog.

**Clevor - a new way to induce emesis in dogs.**

**CLEVOR®** is a trademark of Orion Corporation Orion Pharma. It is developed and manufactured by Orion Corporation Orion Pharma and distributed by Vetoquinol USA, Inc. under license from Orion Corporation Orion Pharma.

**CLEVOR®** is indicated for the induction of vomiting in dogs.

**IMPORTANT SAFETY INFORMATION:** Do not use in dogs with central nervous system depression or seizures. Do not use in cases of ingestion of sharp foreign objects, corrosive agents (acids or alkalis), volatile substances or organic solvents. CLEVOR® should not be administered in cases with corneal ulceration, ocular irritation, or ocular injury. Do not use when there is a known sensitivity to ropinirole or the inactive ingredients. **ADVERSE REACTIONS MAY INCLUDE:** Transient mild or moderate hyperemia of the eye, ocular discharge, protrusion of the 3rd eyelid and blepharospasm, transient mild lethargy and increased heart rate. Not recommended for use in breeding, pregnant or lactating dogs. CLEVOR® has not been evaluated in dogs with heart or liver impairments or dogs younger than 4.5 months or less than 4 pounds. Dopamine antagonists, neuroleptics and other medicines with antiemetic properties may reduce the effectiveness of ropinirole. CLEVOR® should be administered by a veterinary professional. Gloves and protective eyewear should be worn when administering. Not for use in humans. Keep out of reach of children.

For additional product safety information, see brief on following page or visit: https://www.vetoquinolusa.com/clevor-info
Feline lymphoma: diagnosis and treatment

An experienced clinician discusses the road to success when the diagnostic path is unclear.

Lymphoma is the most common cancer in cats, and it is most frequently located in the gastrointestinal tract. Its clinical signs can be vague and include vomiting, diarrhea, weight loss, and inappetence. If an abdominal mass is palpable, it may guide subsequent diagnostic tests. However, not every case is straightforward. Distinguishing high-grade from low-grade lymphoma—and low-grade lymphoma from lymphocytic-plasmacytic enteritis (inflammatory bowel disease [IBD])—can be a challenge. Nonetheless, understanding the disease process can minimize both time to diagnosis and cost.

LOW-GRADE LYMPHOMA

Likely underdiagnosed in cats, low-grade alimentary lymphoma (LGAL), also known as small cell lymphoma, has an indolent course and a slow progression. Owners typically report chronic clinical signs (at a median of 6 months) that may intermittently respond to supportive medications. Results of the physical exam may be normal, or abdominal palpation may reveal either diffuse intestinal thickening (a “ropy” sensation) or an abdominal mass. Initial recommendations are routine blood work, including evaluation for hypocalbaminemia, which in our experience was present in 79% of cats. Cobalamin is absorbed by the ileum in cats affected by diffuse disease, and the half-life of cobalamin is reduced in cats with gastrointestinal disease. If blood work is normal or palpable abnormalities are present, an abdominal ultrasound exposure occurs and show the package insert or label to the physician. Exposure to this drug may cause adverse reactions such as headache, nausea, vomiting, dizziness, orthostatic hypotension, and weakness. Avoid contact with the product if pregnant, planning to become pregnant, or breast-feeding, as exposure has been shown to have adverse effects on embryo-fetal development based on rodent studies.

Internal Safety Warnings:
This product should be administered by veterinary personnel.

Dosing Instructions:
Administer the appropriate number of eye drops topically according to Table 1. The number of eye drops administered corresponding to body weight results in a target dose of 3.75 mg/mL (dose band 2.7 - 5.4 mg/mL). If the dog does not vomit within 20 minutes of the first dose, then a second dose may be administered.

Dogs Administration
4 - 11.1 lbs (1.8 - 5 kgs), 1 drop. Example: 1 drop into each eye.
11.2 - 22.1 lbs (5.1 - 10 kgs), 2 drops. Example: 1 drop into each eye.
22.2 - 44.1 lbs (10.1 - 20 kgs), 3 drops. Example: 2 drops in one eye and 1 drop in the other eye.
44.2 - 77.2 lbs (20.1 - 35 kgs), 4 drops. Example: 2 drops in each eye.
77.3 - 132.3 lbs (35.1 - 60 kgs), 6 drops. Example: an initial dose of 2 drops in each eye, followed 2 minutes later by 1 drop in each eye.
132.4 - 220.5 lbs (60.1 - 100 kgs), 8 drops. Example: an initial dose of 2 drops in each eye, followed 2 minutes later by 2 drops in each eye.

Wear gloves and protective eye wear when handling or administering this product to prevent accidental exposure.

ADVERSE REACTIONS:
Safety was evaluated during a field study that enrolled 132 dogs (106 in the CLEVOR group and 32 in the vehicle control group).

CLEVOR was administered as drops into the eyes at the dose as directed by the dosage table (see DOSAGE AND ADMINISTRATION). The following adverse reaction occurred in a number of dogs exhibiting ocular, systemic, and clinical pathology adverse reactions.

Animal Safety Warnings:
This product should be administered by veterinary personnel.

WARNINGS:
For ophthalmic use in dogs only (ropinirole ophthalmic solution)
CLEVOR® (ropinirole ophthalmic solution) is a dopamine agonist. Ropinirole is a dopamine agonist. The safe use of CLEVOR has not been evaluated in pregnant, planning to become pregnant, or breast-feeding females. As exposure has been shown to have adverse effects on embryo-fetal development based on rodent studies.

CONTRAINDICATIONS:
Do not use in dogs with central nervous system depression or seizures.
Do not use in cases with corneal ulceration, conjunctival swelling, scratching/rubbing of eyes, corneal ulceration and corneal fluorescent uptake without corneal ulceration. Systemic organ system were lethargy, tachycardia (>160 beats per minute), vomiting duration longer than one hour, salivation, trembling, diarrhea or soft stool, anxiety and borborygms. Clinical pathology organ system were crystalluria, pyuria, increased liver enzymes, decreased blood glucose and increased prothrombin time.

To report suspected adverse events call 1(800) 835-9496, for technical assistance or to obtain a copy of the SDS, contact Vetoquinol USA, Inc. at 1(800) 267-5707 or www.vetoquinolusa.com.

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

刷written by
Angela Taylor, DVM, MVM, FHEA, PgC, DACVIM (Oncology)

Taylor graduated magna cum laude from the University of Georgia College of Veterinary Medicine. Following a small animal medicine and surgery internship at the Animal Medical Center in New York, she underwent oncology training at the Royal Veterinary College (UK) and received a master's degree with merit and ACVIM diploma credentials. She was a faculty member with the RVC’s Oncology Service and worked in private practice in New York, before joining the team at Mount Laurel Animal Hospital.

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Front Royal, TX (USA) 76137 1 (800) 267-5707 www.vetoquinolusa.com

Approved by FDA under NADA # 141-534

ACHEA, PgC, DACVIM (Oncology)
is indicated. Sonographic findings typically reveal mild to moderate diffuse circumferential thickening of the small intestinal muscularis propria layer and/or mesenteric lymphadenopathy.1 Notably, intestinal wall layering is nearly always preserved. However, the appearance of the intestinal tract may be normal. Hepatomegaly or hypoechoic echotexture of the liver may also be present. In one study, liver involvement was found in 53% of cats with LGAL.1

If lymphadenopathy is present, fine-needle aspiration cytology can be performed. LGAL is characterized by a predominant population of small lymphocytes. The challenge then is to distinguish it from IBD. Because ultrasonic features, clinical signs, and cytology results are often identical in both conditions, an owner who desires a definitive diagnosis should be encouraged to pursue histopathologic testing, although polymerase chain reaction for antigen receptor rearrangement (PARR) on the cytology samples can be useful to reach a diagnosis.

The gold standard for LGAL detection is a full thickness surgical biopsy. However, an endoscopic biopsy, which requires only partial thickness samples and is both less invasive and expensive, can often yield a diagnosis. If results are equivocal, PARR clonality testing can be performed. Although mature T cells form IBD and most LGAL lesions, a neoplastic population undergoes clonal rearrangement, whereas an IBD cell population remains polyclonal. PARR detects lymphoma in 68% to 90% of cases, so a negative PARR result does not rule out lymphoma.2-4 PARR can be run on cytologic or histopathologic specimens.

When it comes to treatment, differentiating between the diseases is of less importance. Initial recommendations for IBD are fecal testing (or deworming), reducing allergen exposure with recommendations for IBD are fecal testing (or deworming), reducing allergen exposure with corticosteroids, and NSAIDs. If peritoneal effusion is confirmed, it should be sampled. A septic abdomen will require emergent surgical debulking of a discrete mass prior to a course of chemotherapy, the median survival time was nearly 14 months.5 Two small studies evaluated abdominal radiation in cats with HGAL, one concurrent with CHOP and another at relapse. Some cats experienced durable remissions.6-11 Further investigations are warranted to evaluate the roles of these modalities for this disease.

Feline patients with lymphoma can have variable clinical presentations, but the history, physical exam, and ultrasound findings can be predictive of type (LGAL or HGAL) and help guide further tests. Given that the treatment recommendations for IBD and LGAL are similar, extended diagnostic testing can be minimized if owners do not wish to pursue costly or invasive procedures in lieu of treatment. Although LGAL is a responsive cancer with a good long-term prognosis, further studies are needed to improve HGAL outcomes.6

References available online at dvm360.com.
SSRI/SNRI toxicity: what you need to know
An expert outlines the risks and treatments.

BACKGROUND & PATHOPHYSIOLOGY

Elective serotonin reuptake inhibitors (SSRIs) and serotonin norepinephrine reuptake inhibitors (SNRIs) are commonly prescribed antidepressants in the US (see Table), and companion animals, especially cats, frequently ingest them. Venlafaxine (Effexor), which inhibits the reuptake of both serotonin and norepinephrine, is one of the top medications cats ingest. Thus, it is vital that we recognize these intoxications and treat them appropriately.

Serotonin is found in receptors of various subtypes throughout the body, especially the brain (neurons), gastrointestinal (GI) tract, and vasculature, where it acts as a vasoconstrictor. After being released by neurons, serotonin may be reabsorbed by them or broken down by monoamine oxidases (MAOs). MAO inhibitors prevent the breakdown of serotonin, and both SSRIs and SNRIs prevent its reuptake. MAO inhibitors can also cause toxicity in dogs and cats with clinical signs similar to those of SSR1 and SNRI toxicity. However, most veterinarians report the latter toxicity, probably owing to the omnipresence of these drugs.

SSRI/SNRI ingestion can be subclinical. Only 25% of the 313 calls made by dog owners to the Pet Poison Helpline between 2005 and 2010 concerned symptomatic animals. There were no significant differences in sex, age, and breed between symptomatic and asymptomatic dogs. It was difficult to determine what the toxic dose was, however, because there can be a significant overlap between the amount ingested by symptomatic and asymptomatic animals.

Just 10 mg/kg of sertraline (Zoloft), the most commonly prescribed SSRI in the US, is believed to cause clinical signs in dogs. Similarly, 25% percent of cat owners who called an animal poison control center between 2004 and 2010 reported symptomatic animals. The main difference between cats and dogs is that the former are more likely to ingest venlafaxine (Effexor) and fluoxetine (Prozac).

Because most SSRI and SNRI receptors are found in the central nervous system (CNS), GI tract, and blood vessels, the clinical signs of toxicity with these drugs are neurological, gastrointestinal, and cardiovascular. CNS depression, agitation, tremors, and seizures are the most common signs of toxicity in cats and dogs. Hypertension is also possible in both species owing to serotonin’s vasoconstrictive effects.

In severe cases of toxicity, cats and dogs may develop serotonin syndrome (SS), a potentially life-threatening condition that has been better defined in people. For a diagnosis of human SS, one algorithm requires a combination of known or suspected serotoninergic drug ingestion plus a combination of tremors, hyperreflexia, spontaneous muscle contractions, muscle rigidity, elevated body temperature, ocular flutter, sweating, and agitation. These signs are collectively known as extrapyramidal signs or drug-induced movement disorder.

HISTORY & PRESENTATION

Dogs and cats often have a history of serotoninergic drug ingestion or some of the associated clinical signs without a witnessed ingestion. When ingestion is unconfirmed, it may help to ask owners about the medications their pets might have accessed and even request that they contact a person who may still be in their home to check for evidence of ingestion.

The time to onset (TTO) of clinical signs in dogs can range from 15 minutes to 24 hours, with a median of 2 hours. In cats, TTO is between 1 and 6 hours. What and how much is ingested, including food, also affects TTO.

The most frequent clinical signs in both dogs and cats are central nervous system (CNS) depression, vomiting, hypersalivation, and diarrhea. In some cases, CNS stimulation—tremors, hyperesthesia, or seizures—may occur. And there may be other clinical signs if the animal has also ingested other medications.

DIAGNOSTIC FINDINGS

Serotonin and norepinephrine act as vasoconstrictors and can result in hypertension. Blood pressure should be evaluated in all patients with confirmed or suspected SSRI/SNRI ingestion. Severe hypertension can lead to hyphema, retinal hemorrhage, retinal detachment, and blindness. Thus, an eye exam should be performed in patients with hypertension. An electrocardiogram may reveal sinus tachycardia, which itself may be caused by serotonin, hypovolemia, or a combination thereof. In addition, hypertension...
can result in ventricular tachycardia and ventricular premature complexes.

Blood work in patients with SSRI/SNRI intoxication is nonspecific. Vomiting and diarrhea can cause hypo- 
chloremia, hypokalemia, hyponatremia, and hypernatremia. Hypovolemia may result in prerenal azotemia and/or hypoconcentration marked by increased 
hematocrit and total protein concentration. Likewise, there are no specific imaging findings associated 
with SSRI/SNRI intoxication, although foal wrappings may be visible on abdominal radiographs. Chest X-rays 
should also be taken because the risk of aspiration pneumonia is high.

DECONTAMINATION

Emesis can minimize the absorption of toxins, but its effectiveness depends on when it is induced. In 
general, it should be induced within 1 hour of inges-
tion, although it may sometimes be of benefit up to 4 
hours after ingestion. The longer the time between 
ingestion and emesis, of course, the more toxin will be 
absorbed. Emesis induction should not be performed in patients with CNS depression because of the 
danger of aspiration.

Emesis is most commonly brought about with intra-
venous apomorphine at a dose of 0.03 mg/kg. With 
ingestion of a substance that has the potential to cause 
CNS depression, an FDA-approved product with 
selectivity for dopamine D2-type receptors such as 
ropinirole, may be a preferable choice vs apomorphine.

Inducing emesis in cats may be more difficult. Dexmedetomidine is the best option, and although the 
ideal dose and route of administration have not yet been established, 7 to 10 µg/kg intramuscularly is 
suggested. Activated charcoal can be administered 
to cats with normal mentation at a dose of 2 to 5 g/ 
kg. It is better to use products containing sorbitol, a 
cathartic that can decrease toxin absorption and 
increase evacuation time. Repeat dosing of activated 
charcoal has not been shown to reduce absorption, 
but it has not been investigated thoroughly.

TREATMENT

Cyproheptadine, a direct serotonin antagonist, is indi-
cated in cases of suspected serotonin syndrome and 
can also be considered in any SSRI/SNRI intoxication 
case. Dogs should receive 1.1 mg/kg and cats, a total 
of 2 to 4 mg. Cyproheptadine (crushed and mixed 
with saline) may be administered every 4 to 6 hours 
orally or rectally. It is very helpful for patients with 
protracted vomiting or neurologic impairment.

Symptomatic care is of the utmost importance. Many intoxicated patients experience significant fluid 
loss owing to vomiting, diarrhea, and hypersaliva-
tion or to the sorbitol found in activated charcoal.
Hypovolemia may be treated with isotonic crystalloid 
fluids as boluses of 10 to 20 ml/kg over a period of 15 
minutes. For dehydration, the dose of crystalloid solu-
tions should be calculated according to the formulas 
shown in the Figure.

Vomiting can be treated with an antiemetic like 
maropitant (1 mg/kg IV or SQ q24h), ondansetron 
(0.2 to 1 mg/kg IV q8-12h), or a combination 
thereof. If patients continue to vomit despite treat-
ment and experience CNS depression, intubation 
may be required to protect the airway. Suctioning 
of the oral cavity should be performed as needed in 
these patients.

SSRI/SNRI toxicity causes diarrhea because these 
agents stimulate the enteric nervous system. Diarrhea 
should be addressed by replenishing fluid levels. 
Antibiotics like metronidazole are not indicated and 
can contribute to gut dysbiosis.

Hypertension can result in ocular, cardiac, renal, 
and cerebral damage and should be treated, espe-
ially when systolic pressure is > 180 mm Hg. Oral 
amlopidine at doses of 0.05 to 0.2 mg/kg in dogs 
and a total of 0.625 to 1.25 mg in cats may be given 
to animals able to take medications by mouth. 
Otherwise, or if hypertension is severe (systolic 
blood pressure > 200 mm Hg), antihypertensives like 
hydralazine should be administered intravenously at 
0.25 to 2 mg/kg q12h. If hypertension occurs along 
with tachycardia, beta blockers like propranolol (0.04 
to 0.1 mg/kg IV q8-12h in dogs and 0.02 to 0.06 
mg/kg IV q8-12h in cats) can reduce heart rate and 
blood pressure.

Seizures can be treated with benzodiazepines 
(diapiram or midazolam at 0.5 mg/kg IV) and leve-
tiracetam (30 to 60 mg/kg IV followed by 30 mg/kg 
IV q8h). If seizures recur, a constant rate infusion of 
a benzodiazepine may be required. In severe refractory 
cases, phenobarbital or propofol may be necessary.

PROGNOSIS AND SUMMARY

Clinical signs do not typically persist beyond 24 to 
36 hours, and the long-term prognosis is excellent. 
Factors affecting recovery include aspiration pneu-
monia, severe seizures (resulting in brain injury), and 
severe hypertension (resulting in end organ damage). 
SSRI/SNRI ingestion requires a visit to a veteri-
nary emergency room for prompt assessment and 
decontamination. Educating owners—especially cat 
owners—about the risks of medication ingestion may 
help prevent these toxicities.

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drug reaction that may result from therapeutic medication use, self-poisoning, or 
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Figure. Formula for Fluid Maintenance 
Over 24 Hours

Dogs: 60 ml/kg/day + (% dehydration x body weight in kg) + estimated ongoing daily fluid losses 
(from diarrhea, vomiting, hypersalivation)

Cats: 40-50 ml/kg/day + (% dehydration x body weight in kg) + estimated ongoing 
daily fluid losses (from diarrhea, vomiting, hypersalivation)

These formulas are only estimations. Fluids should be adjusted according to the 
needs of individual patients after serial reassessment.
A general practitioner’s guide to prescribing for behavior

When prescribing medications for behavioral conditions, veterinarians must decide whether the condition necessitates medical intervention, how frequently the medication needs to be given, and what medication is best for the patient.

IS MEDICATION INDICATED?

The first question Pachel recommended veterinarians ask themselves is: Will this patient or diagnosis likely benefit from the inclusion of medication with the treatment plan? When determining the answer to this question, Pachel encouraged practitioners to consider whether the patient can be managed with changes in the environment, exercise, or training interventions. For those behaviors that are natural for the species, such as scratching or climbing in cats, it is important to communicate with clients about normal expectations for their pet.

For some behaviors, psychotropic medications are needed. Behaviors that may benefit from psychotropic medications include those that are fear or anxiety based or due to impulsivity and high levels of arousal. Some types of aggression, compulsive disorders, and urine marking may also benefit from medication. Pachel reminded practitioners that "behavioral medications should always be prescribed within a treatment plan that includes safety and management recommendations as well as behavior modification strategies.”

CHOOSING THE BEST APPROACH TO MEDICATION USE

Once the decision is made to add a prescription medication, the frequency of use and goals of treatment should be discussed. Medications can be used daily for maintenance, situationally for stressful events, or both. When determining whether maintenance or situational use is best, the specific triggers for the behavior as well as the frequency and predictability with which they are encountered should be considered.

Behaviors with multiple triggers or those that are difficult to identify, avoid, predict, or occur frequently will likely benefit from daily medication. Consider a pet with separation anxiety whose owners work outside the home. Because of the frequency of the trigger, the pet will benefit most from a maintenance medication plan. On the other hand, behaviors with triggers that are easily identified, predictable, or infrequent, situational medications may be sufficient, such as anxiety during travel or fear-based aggression displayed during veterinary visits or grooming.

CLIENT EDUCATION AND MANAGING EXPECTATIONS

Clients should be carefully counseled about what to expect with each medication prescribed, especially regarding how...
quickly the medication is expected to take effect and potential adverse effects. For most maintenance medications, full efficacy will take 3 to 6 weeks to reach due to the medications needing to build up to sustained blood levels. Dosing adjustments will be made slower for these medications because of this. For some medications, adverse effects may occur before treatment effects are observed.

Situational medications have a more rapid onset of action and shorter duration, allowing dosage adjustments to be performed during a shorter trial period. The onset may vary in different pets, so test doses may be needed to determine the effect in each individual patient. Because of their short duration of action, many of the medications used situationally are not as effective for maintenance use, as achieving appropriate and consistent blood levels is challenging.

When combining medications for situational and maintenance use, Pachel reminded practitioners to review medication combinations for potential drug interactions and dangerous adverse effects. Medications that impact serotonin levels can lead to serotonin syndrome, either when multiple medications with similar actions are used or high doses of a single medication are used. Clinical signs of serotonin syndrome may include diarrhea, mydriasis, tachycardia, fever, hyperreflexia, seizures, agitation, disinhibition of behavior, paradoxical excitation, and excitement.

**INTRODUCTION TO PSYCHOTROPIC MEDICATIONS**

When prescribing a psychotropic medication, veterinarians should consider which neurotransmitter is targeted and what the desired treatment impact is. Many maintenance medications alter serotonin levels to produce their results, whereas situational medications may vary more widely in their targets.

**MAINTENANCE MEDICATIONS**

Medications that work best for maintenance include the selective serotonin reuptake inhibitors (SSRIs) and the tricyclic antidepressants (TCAs). The SSRIs fluoxetine, paroxetine, sertraline, and the TCA, clomipramine, are the most supported by data in veterinary patients and are the best options for first-line therapy, according to Pachel.

Fluoxetine is one of the most well-known SSRIs. It is often used for impulsive behaviors and those that are anxiety based. It has a larger potential to affect patient appetite, leading to anorexia and hyporexia, than other SSRIs. Paroxetine is used in similar situations as fluoxetine but has a higher anticholinergic adverse effect profile. Sertraline is likely better suited for use in cases of social anxiety than behaviors that are based on impulsivity and is the SSRI with the least incidence of adverse effects.

Clomipramine is an older-generation TCA that affects both serotonin and norepinephrine. Of the TCAs available, it is the most selective for serotonin but does have a potential for anticholinergic adverse effects.

Behaviors with multiple triggers or those that are difficult to identify, avoid, predict, or occur frequently will likely benefit from daily medication.

**SITUATIONAL MEDICATIONS**

Medications best for situational use have a more rapid onset and shorter duration of action than those used for maintenance. These medications include the following:

- Benzodiazepines (eg, alprazolam): This is a large group of medications that are rapid in onset and variable in duration of action. The largest potential adverse effects include potential disinhibition of behavior, paradoxical excitation, and appetite stimulation.
- Trazodone: A serotonin antagonist and reuptake inhibitor (SARI) used as a sleep aid with dose-dependent sedation. The medication has minimal effect on the cardiovascular system and its use is well documented in veterinary patients.
- α₂ agonists: Clonidine primarily affects norepinephrine and the sympathetic nervous system and can cause bradycardia and hypotension. Sileo is another example, which is labeled for canine noise aversion and delivered transmucosally.
- Acepromazine: A phenothiazine antipsychotic that, although commonly used historically, creates sedation without significant anxiolysis. It can also cause ataxia, significant hypotension, and has variable impact and duration between patients.

**ADJUNCTIVE MEDICATIONS**

Finally, Pachel discussed 3 additional medications that can be used adjunctively with other behavior medications. These medications include the following:

- Gabapentin: This can be used situationally, such as a previsit pharmaceutical for feline veterinary examinations, or as a maintenance medication. There is a wide dose range, but it is generally well tolerated.
- Buspirone: This alters serotonin levels but works through different mechanisms than SSRIs or SARIs. It generally has faster onset than SSRIs and is often nonsedating.
- Amitriptyline: This is another TCA selective for norepinephrine. This has a slight effect on serotonin and can be used both adjunctively and stand-alone. Anticholinergic adverse effects are common and may have an impact on chronic pain.

**TAKE-HOME POINTS**

Creating a behavior treatment plan for patients in general practice requires practitioners to carefully consider the behavior of concern, the triggers for that behavior, and the client’s expectations. In some cases, behavioral medications may not be necessary with appropriate environmental modifications, training programs, or enrichment activities. If a medication is deemed appropriate, it is important to counsel clients on the expected time to medication onset, duration of effect, and potential adverse effects.
The ABCs of hospital design

Learn the 3 principles that drive money-making practices.

Veterinarians spend considerable amounts of time explaining health conditions and care to clients so that they can succeed with their pets. Clients may perform some of the medical chores, like administering insulin, but the clinicians teach them how to do it. They provide expert information, so clients can make good decisions about the well-being of their companion animals. This relationship is analogous to that of veterinary architects and their clients, the practice owners. Architects execute the design and coordinate construction, involving clients only when it comes to selecting the equipment, reviewing the plans, and the like. They provide expert information so practice owners can decide how best to make their hospitals efficient and effective. Here are the 3 essential elements of great hospital design.

START WITH A FABULOUS FLOOR PLAN

This may seem obvious, but you’d be surprised by how often poor designs are built. It is the client’s responsibility to give the architect a list of the hospital’s requirements: how many exam rooms and procedure spaces are required, how should they relate to one another, etc. One could, for example, say, “I need radiology to be near both the surgery and the exam spaces.” But the requirements must be in line with the available budget. Then it’s up to the architect to lay out a plan that accommodates the owner’s requests within the given space. Below is some guidance to ensure a fabulous floor plan.

- Choose an architect who is a good listener.
- Select one who knows how a veterinary space works (a veterinary architect) or is willing to learn: from online plans and by spending a lot of time with the owner. It takes commitment to finesse a specialty plan like a veterinary hospital.
- Do not lay out the plan alone, as much as you may be tempted to do so. Only professionals are familiar with all the nuances of building codes and requirements, such as hallway widths and American with Disabilities Act accessibility standards. What owners can do, however, is tell architects that they want a south-facing porch off the break room, for instance, or a north-facing surgery with high windows.
- Take the time to get it right. Don’t spend hundreds of thousands of dollars on a plan you don’t love. It usually takes at least 3 iterations before a veterinary plan will work. This may be frustrating, especially if the timeline is tight, but it is absolutely worth it.

FOCUS ON MONEY-MAKING SPACES

It is more difficult to make a living than it used to be. Therefore, when building or remodeling, owners must focus on money-making spaces. This does not preclude them from designing a beautiful hospital or creating a great...
place to work. It merely means that money-making spaces are the most important. Here are 4 useful tips:

- You can never have too many exam rooms! Maximize their number and reduce the waiting areas whenever possible. It is much better to be seeing clients than to have them waiting in the lobby.
- If the owner can embrace the idea of single-door exam rooms, many more exam rooms can be placed in the plan because such rooms take up less space than those with 2 doors, which require another hallway.
- Forgo the palatial office you had in 1985. Of course, it is vital to have quiet places to work and make phone calls, but there are newer, more space-efficient options. One is a glassed-in (“fishbowl”) workstation adjacent to the treatment area. For additional privacy, build a phone booth or two. These are popular for video calls and seminars because they offer a semiclosed, less distracting environment.
- Expand or capture a service that promises additional revenue. A good example is a dental space. Given that these procedures aerosolize bacteria, it is best to perform them away from surgery prep in a dedicated area with its own airflow.

**DESIGN AROUND A CENTRAL IDEA OR VISION**

This is a terrific way to make a hospital design truly special. Go beyond “providing quality care.” Differentiate your practice by adopting concepts like the following.

**Transparency**

The PARC, in Fort Worth, Texas, broke the mold by creating “the first open kitchen in veterinary medicine.” This approach requires that veterinarians and technicians use Fear Free techniques and be tidy as well as kind because the whole hospital is visible! Transparency makes this practice unique, and it allowed the architects to do something new with the design.

**Pets as family**

This is the philosophy of Fetch Specialty & Cancer Veterinary Centers, in Bonita Springs, Florida, and it guided their hospital design, allowing architects and owners to create spaces that support the vision, including a comfortable, welcoming porch for clients to wait in. When beginning to construct or to renovate a hospital, remember these essential building blocks: a great floor plan, a money-making design, and a central idea. They are the foundation of a successful veterinary hospital.

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What’s the endgame of veterinary social media? From a practice perspective, it is to convert followers into clients, according to Adam Christman, DVM, MBA, chief veterinary officer of dvm360. Social media can be a loaded topic, Christman explained during his presentation at the 2021 Fetch dvm360 Conference in San Diego, California. Some veterinary professionals feel that social media gives them an edge at positioning their practice in the community. Others consider it a waste of time and valuable resources, and many still have no idea where to begin. But given that social media is not going away anytime soon, veterinary professionals would be wise to embrace it and use it to their advantage, Christman pointed out.

However, there’s more to social media success than simply posting fun, educational content, said Christman. There are various platforms to contend with, each with its own considerations, as well as questions of scheduling and pacing.

So how do veterinary professionals capitalize on social media success and use it to attract new clients? With more than 630,000 followers on TikTok and 52,500 on Instagram, Christman loves to engage with fellow pet parents and veterinary professionals across all social media platforms. During his talk, he had these points to share.

1. IT ALL STARTS WITH THE WEBSITE

“Your nucleus is your website. That’s your core. Make sure it’s strong,” he said, adding that a practice’s website should be the primary target of social media and calls to action. Social media should drive potential clients to the clinic’s site, so they can become new or repeat clients. The website should be mobile friendly because many people are browsing with their phones, and the About Us and Our Services sections are critical. The former should tell a relevant and compelling story, he said, and the latter should always be up-to-date.

Harness the power of the various platforms to convert followers into clients

By Bob Alaburda, Senior Editor

Demystifying social media: 4 tips to build an online community

So how do veterinary professionals capitalize on social media success and use it to attract new clients? With more than 630,000 followers on TikTok and 52,500 on Instagram, Christman loves to engage with fellow pet parents and veterinary professionals across all social media platforms. During his talk, he had these points to share.

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Revolt® (selamectin) Topical Parasiticide for Dogs and Cats

**DESCRIPTION:**
Revolt® (selamectin) Topical Parasiticide is available as a colorless to yellow, ready to use solution in single dose tubes for topical (dermal) treatment of dogs six weeks of age and older and cats eight weeks of age and older. The content of each tube is formulated to provide a minimum of 2.7 mg/ml (mg/kg) of body weight of selamectin. The chemical composition of selamectin is C27H34ClN2O9 (222.6 g/mol). It is a macrocyclic lactone.

**INDICATIONS:**
Revolt is recommended for use in dogs six weeks of age or older and cats eight weeks of age and older for the following parasites and indications:

**Dogs:**
- Revolt kills adult fleas and prevents flea eggs from hatching for one month and is indicated for the prevention and control of flea infestations (Ctenocephalides felis), prevention of heartworm disease caused by Onchocerca vortex, and the treatment and control of ear (Uropilchus spp.) infestations.
- Selamectin is also indicated for the treatment and control of roundworm (Toxocara canis) and intestinal hookworm (Ancylostoma tubaeformis) infestations in cats.

**WARNINGS:**
Not for human use. Keep out of the reach of children.

In humans, Revolt may be irritating to skin and eyes. Reactions such as local itching, and skin redness have been reported in humans in rare instances. Individuals with known hypersensitivity to Revolt should use the product with caution or consult a health care professional. Revolt contains isopropyl alcohol and the preservative butylated hydroxytoluene (BHT). Wash hands after use and wash off any product in contact with the skin immediately with soap and water. If contact with eyes occurs, then flush eyes copiously with water. In case of ingestion by a human, contact a physician immediately.

The safety data sheet (SDS) provides more detailed occupational safety information. To report suspected adverse drug events, for technical assistance or to obtain a copy of the SDS, contact Aurora Pharmaceutical at 1-800-357-1256 or www.aurorapharmaceutical.com for additional information about adverse drug experience reporting for animal drugs, contact FDA at 1-888-FDA-VETS or online at www.fda.gov/reportanimalae.

Flammable - Keep away from heat, sparks, open flames or other sources of ignition.

Do not use in sick, debilitated or underweight animals (see SAFETY).

**PRECAUTIONS:**
Prior to administration of Revolt, dogs should be tested for existing heartworm infections. At the discretion of the veterinarian, infected dogs should be treated to remove adult heartworms. Revolt is not effective against adult heartworms. While the number of circulating microfilariae may decrease following treatment, Revolt is not effective for microfilariae clearance.

Hypersensitivity reactions have not been observed in dogs with positive heartworm infections administered three times the recommended dose of selamectin. Higher doses were not tested.

**REVERSE EFFECTS:**
Pre-approval clinical trials:
Following treatment with selamectin, transient local alopecia with or without intransigence at or near the site of application was observed in approximately 1% of 691 treated cats. Other signs observed rarely (<0.5% of 1743 treated dogs and dogs) included urticaria, lesions on diathema with or without blood, anemia, lethargy, salivation, tachypnea, and muscle tremors.

Post approval-effectiveness:
In addition to the aforementioned clinical signs that were reported in pre-approval clinical trials, there have been reports of pruritus, urticaria, erythema, ataxia, fever, and rare reports of death. There have also been rare reports of seizures in dogs (see WARNINGS).

**DOSAGE:**
The recommended dosage is 2.7 mg selamectin per pound (6 mg/kg) of body weight.

**ADMINISTRATION:**
Administer the entire contents of a single dose tube to two tubes used as combination for dogs weighing over 130 pounds of Revolt topically in accordance with the following tables. (See ADMINISTRATION for the recommended treatment intervals.)

**For cats over 22 lbs use the appropriate combination of tubes:**
- For dogs under 10 lbs use the appropriate combination of tubes.

**SAFETY:**
- Safety studies have been conducted in >100 different pure and mixed breeds of dogs and cats and over 15 different pure and mixed breeds of cats. Revolt is not recommended for use in cats and dogs aged 8 weeks of age or younger, and neurontic-sensitive cats. A cat, estimated to be 5–6 weeks old (9.5 kg), died 1/2 hours after receiving a single treatment of selamectin at the recommended dose. The kitten displayed clinical signs which included muscle spasm, salivation, and neurologic signs. The kitten was a stray with no known history and was malnourished and underweight (see WARNINGS).

**STORAGE CONDITIONS:** Store below 30°C (86°F).

**HOW SUPPLIED:** Available in eight separate dosage strengths for dogs and cats of different weights (see DOSAGE) for Revolt for puppies and kittens available in cartons containing 5 single dose tubes. Revolt for dogs and cats is available in cartons containing 3 or 6 single dose tubes.

**ADMINISTRATION:**
A veterinarian or veterinary technician should demonstrate or instruct the pet owner regarding the appropriate technique for applying Revolt topically to dogs and cats prior to first use.

While holding the tube at an upright position, twist the cap to break the seal. The cap will remain on the tube. To administer the product, part the hair or the skin at the base of the animal at the base of the shoulder blades to the skin is visible. Place the tip of the tube on the skin and squeeze the tube 3 to 4 times to empty its entire contents directly onto the skin in one spot. Keeping the tube upright, drag it away from the liquid and lift to remove. Check the tube to ensure that it is empty.

Do not manipulate the product into the skin. Due to alcohol content, do not apply to broken skin. Avoid contact between the product and fibers. Do not applyRevolt® to the eyes or close to the edge of the water. Bathing or shampooing the dog 2 hours after treatment will reduce the effectiveness of Revolt against fleas or heartworm. Bathing or shampooing the cat 2 hours after treatment will not reduce the effectiveness of Revolt against fleas. Stiff hair, clumping of hair, or a slight powdery residue may be observed at the treatment site in some animals. These effects are temporary and do not affect the safety or effectiveness of the product. Discard empty tubes in your ordinary household refuse.

**Flaea Control in Dogs and Cats**
For the prevention and control of flea infestations, Revolt should be administered at monthly intervals throughout the flea season, starting one month before fleas become active. In controlled laboratory studies >98% of fleas were killed within 36 hours. Results of clinical field studies using selamectin monthly demonstrated >90% control of flea infestations within 30 days of the first dose. Dogs and cats treated with selamectin, including those with existing flea allergies, showed improvement in clinical signs associated with fleas as a direct result of decreasing the fleas from the animals and their environment.

If the dog or cat is already infested with fleas when the first dose of Revolt is administered, adult fleas on the animal will kill and no viable fleas hatch from eggs after the first administration. However, an environmental infestation of flea eggs may persist for a short time after beginning treatment with Revolt because of the delay between adult flea population from eggs through to adults. The recommended minimum dose is 2.7 mg selamectin per pound (6 mg/kg) of body weight.

**Heartworm Prevention in Dogs and Cats**
For the prevention of heartworm disease, Revolt must be administered on a monthly basis. Revolt may be administered year round or at least once within one month after the animal’s first exposure to mosquitoes and monthly thereafter until the end of the mosquito season. The final dose must be given within one month after the last exposure to mosquitoes. If a dose is missed and a monthly interval between dosing is exceeded then immediate administration of Revolt and resumption of monthly dosing will minimize the opportunity for the development of adult heartworms. When replacing another heartworm preventive product a heartworm disease prevention program, the first dose of Revolt must be given within a month of the last dose of the former medication.

Selamectin, the active ingredient in Revolt, is a macrocyclic lactone compound. These compounds effectively prevent the development of microfilariae in adult heartworms (<100% in dogs), however, if first administered >2 months after exposure to infective larvae. Thus, in heartworm-endemic regions, delaying initiation of heartworm prevention using Revolt beyond 2 months of first exposure to infective vectors may reduce the risk of heartworm infections. If the dose is missed, the next dose should be administered as soon as possible. Revolt would be necessary to confirm negative heartworm status.

If the discretion of the veterinarian, cats ≥4 months of age may be treated to determine the presence of existing heartworm infections before beginning treatment with Revolt. Cats already infected with adult heartworms can be given Revolt monthly to prevent further proliferation.

**Ear Mite Treatment in Dogs and Cats**
For the treatment of ear mite (O. cuniculi) infestations in dogs and cats, Revolt should be administered once as a single topical dose. A second monthly dose may be required in some cases. Monthly use of Revolt will control any subsequent subcutaneous mite infestation because, by the difficulty in finding sarcopsic mange mites on skin scrapings, effectiveness assessments also were based on resolution of clinical signs. Resolution of the pruritus associated with the mite infestation was observed in approximately 50% of the 10 dogs after the first treatment and in approximately 60% of the 10 dogs after the second monthly treatment.

**Tick Control in Dogs**
For the control of tick (Dermacentor variabilis) infestations in dogs, Revolt should be administered on a monthly basis. In heavy tick infestations, complete efficacy may not be achieved after the first dose. In these cases, one additional dose may be administered two weeks after the previous dose, with monthly dosing continued thereafter.

**Nematode Treatment in Cats**
For the treatment and control of internal hookworms (A. tubaeformis) and roundworms (T. cati) infections, Revolt should be applied once as a single topical dose.

**SAFETY:**
- Selamectin has been tested only in >100 different pure and mixed breeds of dogs and cats and over 15 different pure and mixed breeds of feline, canine, equine, and bovine species. However, we recommend the treatment of animals weighing >2 months of age and older, and neurontic-sensitive cats. A cat, estimated to be 5–6 weeks old (9.5 kg), died 1/2 hours after receiving a single treatment of selamectin at the recommended dose. The kitten displayed clinical signs which included muscle spasm, salivation, and neurologic signs. The kitten was a stray with no known history and was malnourished and underweight (see WARNINGS).

**DOGS:** In safety studies, selamectin was administered at 1, 5, 10, and 20 times the recommended dose to six-week-old puppies, and no adverse reactions were observed. The safety of selamectin administered orally was also tested in case of accidental oral ingestion. Oral administration of selamectin at the recommended topical dose in 5–10-month-old beagles did not cause any adverse reactions. In a preclinical study selamectin was dosed orally to neurontic-sensitive cats. Oral administration of 5, 7.5, 10, and 15 mg/kg in this dose escalating study did not cause any adverse reactions; however, eight hours after ingestion 5 mg/kg orally, one neurontic-sensitive cat became ataxic for several hours, but did not show any other adverse reactions after receiving subsequent doses of 10 and 15 mg/kg orally. In a topi

**STORAGE CONDITIONS:** Store below 30°C (86°F).

**HOW SUPPLIED:** Available in eight separate dosage strengths for dogs and cats of different weights (see DOSAGE) for Revolt for puppies and kittens available in cartons containing 5 single dose tubes. Revolt for dogs and cats is available in cartons containing 3 or 6 single dose tubes.

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Let’s get social
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Christman also emphasized the importance of paying attention to staff bias and photos because nothing will turn off a client faster than asking about pets from the website only to discover they are deceased. “At my hospital, we had a client that came because one of our technicians had a Great Dane,” Christman explained. “The Great Dane passed away 2 years ago, and we never updated the website. She was livid.”

Christman said pet owners pay particular attention to this information and often make their hospital choice based on the doctor’s pets. Because of this, it’s critical that all these sections are written and contain current information.

Finally, the website should act as a gateway to the practice’s social media channels to promote a “virtuous cycle” of social engagement and website visits. Include links only to the social media pages on which your practice is active.

2. ENGAGE WITH FACEBOOK AND FIND A COMMUNITY

Once you have a well-designed, up-to-date website, it’s time to engage with social media.

“You have to find content that resonates on Facebook,” Christman said. “Every day we always do something great: celebrating a win, a new employee, a birthday, or a patient that’s surviving chemo and doing great.”

The goal of engagement is to generate clicks on the clinic’s website. Content that is shared drives the most website traffic, he explained, followed by comments and likes. With that in mind, it tends to be more valuable for a practice to post interesting content and information that link back to its site, rather than simply commenting and answering questions all day. Discussion is valuable, as well, but weigh the time investment accordingly.

Christman also recommended joining Facebook groups relevant to the practice, such as veterinary job boards, interesting cases, and technician groups, which are a great way to connect with the community and serve as a source of ideas for the practice’s own content.

He told a story about a group that came together and found a home for a dog by sharing a post more than 600 times in just 2 hours. “That’s the beauty of social media,” Christman said. “These are feel-good stories.” And people want to share feel-good stories, which drive engagement. He pointed out.

3. STAY TRUE TO YOUR BRAND AND MAKE USE OF HASHTAGS (#) AND TAGGING (@) ON INSTAGRAM

“Do not go by the likes, the comments, the followers... Stay true to who you are,” advised Christman.

Doing so is important because much of social media is dominated by algorithms that determine who sees what. Making off-topic posts or going outside the practice’s wheelhouse in pursuit of likes will only throw off the algorithm. Posts that are relevant to the practice help put its content in front of the people who really want to see it and who will be the biggest supporters of that content.

Christman also recommended asking for information about pet social media on new client intake forms and having a social media area in the clinic. Those strategies will wow patients and help draw out “your biggest cheerleaders,” who can amplify your message online.

Animals are stars on Instagram, so it’s no surprise that many pet owners are active on it. Although it is a social sharing platform like Facebook, Instagram has its own quirks and nuances that require attention. Christman shared the value of using the symbol to “tag” a company, person, or organization on a post. When you do, they are notified of your post.

He illustrated the value of tagging others with this example: “If you’re posting a cute new puppy photo, you better make sure you ask the owner their Instagram username and mention them. The pet owner will be ecstatic to post and share that photo and [will] ultimately turn into one of your biggest cheerleaders for the practice.”

Another important Instagram symbol is the hashtag (#), which is a great way to expand the practice’s Instagram audience and reach more people. Using a hashtag on a post gets it in front of everyone who follows that topic. This makes the post visible to more people and especially to the kind of person who is interested in that topic.

Christman recommended avoiding hashtags that have millions of followers, such as #dog or #cat. Because these topics are so broad, “as soon as you post something, it’s gone,” he explained, adding that finding relevant hashtags with only hundreds or thousands of followers will drive better engagement, although it may take time to identify those hashtags.

4. GET ON TIKTOK

“I think TikTok is the strongest social media platform that ever existed on the planet,” Christman said.

He noted that the key to success on TikTok is to remember to keep it succinct. TikTok is a video platform where practices can share educational content via videos that are up to 10 minutes long.

Christman mentioned how one of his videos went viral and was earning him more than 1000 followers every 3 minutes. TikTok’s algorithm can reach users who are very interested in veterinary content, and because users are highly engaged, the right post has the potential to explode in popularity, he said.

To make a well-received TikTok video, Christman offered this tip: “You have 3 seconds to nail it. In those first 3 seconds, you have to put the word ‘you’ in it. Why is that so important? Because when I say ‘you,’ all of a sudden, you’re like, ‘He’s talking to me through the camera lens!’”

As he wrapped up his presentation, Christman urged veterinary professionals not to be afraid to dip their toes into social media and harness the engagement it can provide. These tips and tricks are a starting point that veterinary professionals can use to begin their foray into social media.
Demystifying mental health services

The quest for emotional well-being doesn’t have to be undertaken alone.

Fear of the unknown stops many of us, including veterinary professionals, from seeking mental health services. Although both internal hesitation and the external stigma attached to these services have started to decline, many people still find it difficult to take the first step on the path to self-care. Sheding mental health services have started to decline, many people still find it difficult to take the first step on the path to self-care. Sheding light on the unknown is the best way to eliminate the fear and illuminate the path.

MY JOURNEY

As someone who has used mental health services for many years, I am a great advocate of the different options available. I began my journey in my early 20s, taking advantage of cognitive behavioral therapy and prescription drugs, among other alternatives. I have worked with different types of professionals over the years, spending the most time with a favorite social worker. I have also visited offices once and never returned because I was exploring what was best for me, even in terms of cost and driving time (those things truly do matter).

After overcoming certain challenges, I weaned myself off medication and worked on developing what I call my mind and body. I have had people who guided me. Connection may enhance the quality of your life; it may transform it—or even save it. I had people who guided me. Connection may enhance the quality of your life; it may transform it—or even save it.

A PARTNERSHIP

There are mental health services for every person and every need. They can be used as maintenance, like automotive tune-ups, or in times of crisis or of aimless wandering through confusing chapters of one’s life. They can be used as maintenance, like automotive tune-ups, or in times of crisis or of aimless wandering through confusing chapters of one’s life. There are practices, treatments, and approaches that influence one’s frame of mind but don’t come directly under the umbrella of mental health.

When we begin to acknowledge that we are multidimensional—and face mental, emotional, physical, and social stress or disease—everything changes for the better. We are no longer taking a fragmented approach to health. When we begin to acknowledge that we are multidimensional—and face mental, emotional, physical, and social stress or disease—everything changes for the better. We are no longer taking a fragmented approach to health.

Find someone you can connect with, a person who gets you and vice versa. My favorite social worker understood me in a way nobody else did. She got me through some tough times when I was too depressed to drive to see her.

Find that person. Find people who approach life, health, and well-being the way you do. When I was ready to change what wasn’t working and build the skills to safely let go of the meds, I had people who guided me. Connection may enhance the quality of your life; it may transform it—or even save it.

After all, as a clinician you will have the quality-of-life conversation with their clients thousands of times in your career. How many times have you had that conversation with yourself?

—Renee Machel

written by

Renee Machel

Machel is a nationally recognized well-being speaker, certified life coach, RYT 200 yoga instructor, and mindfulness and meditation guide. As the cofounder of Get MotiVETed, she aims to provide a positive impact on people’s well-being and enhance the culture within organizations of vetmed. She has spent 20 years in the veterinary industry as a hospital leader and technician.

—Renee Machel

There are mental health services for every person and every need.
Controls Pain to Help Post-Op Return to Function

Canine CCL** and feline onychectomy patients can recover comfortably even after going home.

Indications
For single-dose infiltration into the surgical site to provide local postoperative analgesia for cranial cruciate ligament surgery in dogs. For use as a peripheral nerve block to provide regional postoperative analgesia following onychectomy in cats.

Important Safety Information
NOCITA is for use in dogs and cats only. Do not administer concurrently with bupivacaine HCl, lidocaine or other amide local anesthetics. The safe use of NOCITA in dogs and cats with cardiac disease or with hepatic or renal impairment has not been evaluated. The safe use in dogs or cats younger than 5 months of age, that are pregnant, lactating, or intended for breeding has not been evaluated. The most common adverse reactions in dogs were discharge from incision, incisional inflammation and vomiting. The most common adverse reactions in cats were elevated body temperature and infection or chewing/licking at the surgical site. Please see accompanying brief summary for product safety information.

*In a field trial, Nocita reduced the need for post-op rescue pain treatment with opioids

**Cranial cruciate ligament

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NOCITA®
(bupivacaine liposome injectable suspension)

13.3 mg/mL
For local infiltration injection in dogs only
for use as a peripheral nerve block in cats only
Local anesthetic
Single use vial

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

Before using this product, please consult the Product Insert, a summary of which follows:

DOG Indication:
For single dose infiltration into the surgical site to provide local postoperative analgesia for cranial cruciate ligament surgery in dogs.

CAT Indication:
For use as a peripheral nerve block to provide regional postoperative analgesia following onychectomy in cats.

DOG Dosage and Administration:
NOCITA is for single dose administration only. A dose of 5.3 mg/kg (0.4 mL/kg) is administered by infiltration injection into the tissue layers at the time of incisional closure for dogs. A single dose administered during surgical closure may provide up to 72 hours of pain control.

CAT Dosage and Administration:
NOCITA is for administration only once prior to surgery. Administer 5.3 mg/kg per forelimb (0.4 mL/kg per forelimb), for a total dose of 10.6 mg/kg (4 mL/kg) at a 4-point nerve block prior to onychectomy. Administration prior to surgery may provide up to 72 hours of pain control.

Contraindications:
Do not administer by intravenous or intra-arterial injection. If accidental intravascular administration occurs, monitor for cardiovascular (dysrhythmias, hypotension, hypertension) and neurologic (tremors, ataxia, seizures) adverse reactions. Do not use for intra-articular injection. In humans, local anesthetics administered into a joint may cause chondrolysis.

Warnings:
Not for use in humans. Keep out of reach of children. NOCITA is an amide local anesthetic. In case of accidental injection or accidental topical exposure, contact a physician and seek medical attention immediately. Wear gloves when handling vials to prevent accidental topical exposure.

Precautions:
Do not administer concurrently with bupivacaine HCl, lidocaine or other amide local anesthetics. A safe interval from time of bupivacaine HCl, lidocaine or other amide local anesthetic administration to time of NOCITA administration has not been determined. The toxic effects of these drugs are additive and their administration should be used with caution including monitoring for neurologic and cardiovascular effects related to toxicity.

The safe use of NOCITA in dogs or cats with cardiac disease has not been evaluated.

The safe use of NOCITA in dogs or cats with hepatic or renal impairment has not been evaluated. NOCITA is metabolized by the liver and excreted by the kidneys.

The ability of NOCITA to achieve effective anesthesia has not been studied. Therefore, NOCITA is not indicated for pre-incisional or pre-procedural loco-regional anesthetic techniques that require deep and complete sensory block in the area of administration.

The safe use of NOCITA in dogs for surgical procedures other than cranial cruciate ligament surgery has not been evaluated.

The safe use of NOCITA in cats for surgical procedures other than onychectomy has not been evaluated.

The safe use of NOCITA has not been evaluated in dogs or cats younger than 5 months old.

The safe use of NOCITA has not been evaluated in dogs or cats that are pregnant, lactating or intended for breeding.

DOG Adverse Reactions:
Field safety was evaluated in 123 NOCITA treated dogs. The most common adverse reactions were discharge from incision (3.9%), incisional infection (2.4%), and vomiting (2.4%).

Field safety was evaluated in 120 NOCITA treated cats. The most common adverse reactions were elevated body temperature (6.7%), surgical site infection (3.3%), and chewing/licking of the surgical site (3.3%).

Storage Conditions:
Unopened vials should be stored refrigerated between 36° F to 46° F (2° C to 8° C) for up to 30 days in sealed, intact (unopened) vials. Do not re-refrigerate. Do Not freeze.

How Supplied:
13.3 mg/mL bupivacaine liposome injectable suspension in 10 mL or 20 mL single use vial. 10 mL supplied in 4-vial carton. 20 mL supplied in a single vial carton and 4-vial carton.

NADA 141-461, Approved by the FDA
US Patent: 8,182,835; 8,834,921; 9,205,052

Manufactured for: Aratana Therapeutics, Inc., Leawood, KS 66211
NOC-0088-2 August 2018

An insider’s view on selling to a corporate group
An expert explains what to look for and what to ask before the sale.

Congratulations on owning and operating a successful veterinary practice! It has paid well, provided employment for the community, and offered much-needed animal care. Blood, sweat, and tears are etched into its walls, along with numerous thank-you cards from clients. The practice’s fledging days—when hours were long, margins razor-thin, and staff minimal—have given way to years of multimillion-dollar revenue and healthy profits for the owner. The business has sustained clinicians, their families, and the team as a whole. It’s important to handle the next phase with care.

Headhunters will be knocking at the door, calling nonstop, and sending postcards. They will most likely represent a corporate group that is looking for its next acquisition. They will have titles such as business development or acquisition teams, but make no mistake, they are paid to find veterinary practices of a certain size and with a certain bottom line to buy and add to a corporate group. Although it’s flattering to receive such attention, don’t forget that this interest is purely financial. There is little concern for legacy or hospital culture. Before signing a letter of intent or speaking in depth to any of these groups, one should consider many factors.

There are estimated to be more than 25,000 veterinary hospitals in the US, most of which treat pets and companion animals. Veterinary groups, also known as aggregators or consolidators, own and operate approximately 10% of these practices and they appear to be most interested in companion animal general practice. However, some purchase only specialty hospitals and/or emergency departments. There are also groups that will buy mixed and large animal practices. Since the late 1990s, the aggregator’s prime
WHERE DOES THE MONEY COME FROM?

Although it may not matter who the buyer is—money is money, after all—keep in mind that a veterinary practice is a valued part of its community, local economy, and veterinary ecosystem. It requires ownership that will retain this service and culture. A private equity firm may be a family business, an investment company, or a foreign-owned entity. Often, they will have several companies in their portfolio with veterinary practices being but one. Again, the veterinary space is now attractive and the incursion into the profession is based primarily on monetary considerations. These entities come with little or no veterinary management experience. Frequently, none of their board members have ever set foot inside a veterinary facility. Why does this matter? It is important to have veterinarians on the board to make the operational and strategic decisions that will affect the operations of their practices. These individuals should have hospital-level knowledge, a history of leadership within the industry, and business and management acumen. The board will control the business via the CEO. Decisions pertaining to veterinary medicine should be made at least in part by people from the veterinary industry, preferably veterinarians.

ASK LOTS OF QUESTIONS

Practice owners will be asked a lot of questions during the acquisition process. They should, in turn, ask corporations just as many questions. Typically, the business development team will be the primary contact. However, if they do not give satisfactory answers, ask to meet the chief operating officer. There should be no barriers to accessing the information needed to make an informed decision.

Additional questions may come up; write them down and ask. Remember, the business development team is trying to satisfy its quota, receive a location bonus, and meet the board’s annual growth expectations. Practice owners are selling their equity, in most cases, to realize the equity in their business, secure their retirement, and—most importantly—ensure their legacy of lifelong pet care in the community.

LOOKING AHEAD

The veterinary industry is at an inflection point. Will it continue to allow corporations to swallow a profession that for years has been successfully managed by compassionate veterinarians, or will DVMs assert and insert themselves into the process? I believe this is a question that needs to be answered and answered quickly. However, it is important to remember that aggregators and corporations are here to stay and will help veterinary medicine reach more pets. But veterinary professionals must be diligent and deliberate to ensure that the relationship between hospitals and corporate entities is mutually beneficial. 

References available online at dvm360.com

Here are a few questions to ask:

1. Who will make the final decisions about the hospital’s operations and medical standards after the sale is completed?

2. Is there a chief medical officer or veterinary medical operator who will work closely with the hospital? Will medical decisions or any decision that affects hospital operations be made jointly with hospital and medical leadership? Will they be made by veterinarians rather than non-DVMs?

3. Are the services of the veterinary leader and “chief of staff” valued and needed? How long will their services be required? How will they be compensated?

4. If the seller wishes to step down from leadership, how will a replacement be chosen?

5. How will DVMs be compensated? How will the team be paid? Will their compensation remain the same or increase after the sale, annually, or upon a work anniversary? What benefits will they have? What happens to accumulated paid time off or accrued vacation?

6. For what processes—human resources, payroll, marketing, ordering, facility upkeep, website, and social media management—will the new owners be responsible?

7. Will the hospital leadership have input into what marketing offers are made to clients? Will clinicians be obliged to participate in “free visits for life” campaigns or year-round discounts? Most groups have marketing campaigns that apply to all their locations, whether or not the hospital needs help to grow.

8. Will the practice management software be changed? If so, what support and training will be available during the transition? What are the expectations for income generation during a PIMs change?

9. Will the practice owner continue as landlord if they own the building? If so, negotiate the rent and lease separately.

written by
Pamela Hale, DVM, MBA
Hale is chief medical officer at Destination Pets. She graduated from the Tuskegee University College of Veterinary Medicine and earned her MBA from St. George’s University. She is also a member of the American Veterinary Medical Association (AVMA) and Georgia Veterinary Medical Association, and serves on the dean’s council for Tuskegee University College of Veterinary Medicine and the AVMA Professional Liability Insurance Trust.

target has been the practice with 3 or more DVMs, over $1.5 million in gross revenue, and at least a double-digit bottom line.

Most of these corporations are owned or backed by private equity funds. It is difficult to determine how many of these groups exist, but it is estimated that well over 100 groups own 4 or more veterinary clinics in the US. Although most work to acquire existing practices, some open new facilities, which are built with identical footprints and offer limited services like vaccines, routine in-house labs, treatment of mild illnesses, and some elective surgeries.

Why is the veterinary business suddenly the investors’ delight? For many years, veterinary medicine was seen as a less lucrative industry. Roughly 30% of this income, the industry has realized the equity in their business, secure their retirement, and—most importantly—ensure their legacy of lifelong pet care in the community.
Corporate practices offer unique opportunities for your career

Take advantage of mentors and rapidly growing teams to move up the ladder

Corporate or group-owned practices have not always gotten the best rap from the veterinary profession, which historically has prided itself on being independent and, in general, has not been overly trustful of corporate ownership.

Thirty-five years ago, Veterinary Centers of America began buying animal hospitals. By 2017, group ownership was relatively common, with more than 10% of general companion animal practices and 40% to 50% of referral practices belonging to a group.1 Since the first acquisition of a practice by a veterinary consolidator in 1987, there now are more than 60 groups of consolidators.2,3 That number appears to keep growing.

I’ll admit that I’m one of the odd ones who graduated from veterinary school believing that multipractice ownership would be beneficial to the profession. For the most part, corporate practices have faced an uphill battle for acceptance within the greater veterinary community.

However, the reality is that these groups are bringing much-needed capital to the industry. Many veterinary facilities are outdated and not professionally designed as hospitals. And with shifts in populations over the past few decades, there is a need for new practices in some of the areas more recently developed. State-of-the-art equipment is also needed, and financially it makes the most sense to house it in facilities with larger revenues.

These are all areas in which the larger veterinary groups can have an impact on the profession. However, I believe their impact on mentorship and career opportunities is even more important.

MENTORSHIP AND TRAINING

New and recent graduates value mentorship. Most leave school with minimal real practice and surgical experience.

According to The Mentor Coach Foundation, mentees are promoted 5 times more often than individuals without mentors.

written by

Jeff Rothstein, DVM, MBA
Rothstein is a founder and copresident of Mission Veterinary Partners, headquartered in Novi, Michigan, which operates more than 250 veterinary hospitals in more than 30 states. He is a frequent presenter at veterinary conferences and veterinary schools and can be contacted at jeff.rothstein@mvetpartners.com.
A MODERN WAY TO LOOK AT RECOVERY CARE.

See the benefits of addressing acute surgical pain with a long-acting local anesthetic.

Maintaining a pet’s longevity and quality of life can sometimes require surgical intervention. All surgeries result in some degree of tissue trauma and associated pain.¹

While pain can be controlled in the clinic, there is a need to provide analgesia for pain relief through the critical 72-hour postoperative period, especially once patients return home, which is typically within 24 to 48 hours after surgery.

Beyond the ethical obligation to minimize pain and suffering, unmanaged pain delays healing and return to function and can lead to chronic, maladaptive pain.¹ Additionally, effective pain management creates a better client experience.

The role of local anesthetics in perioperative pain control.

“The task force supports the International Veterinary Academy of Pain Management position that, because of their safety and significant benefit, local anesthetics should be utilized, insofar as possible, with every surgical procedure.”

— American Animal Hospital Association

Local anesthetics (LAs) are one of the most effective means of preventing transduction and transmission of pain signals,² in part, because LAs are the only class of drug can render complete analgesia¹. Previous formulations LAs have some limitations, primarily their relatively short duration of action (less than eight hours).

Raising the standard of care with long-acting analgesia.

NOCITA™ (bupivacaine liposome injectable suspension) is the only long-acting, local anesthetic that controls post-op pain with one dose for up to 72 hours so that pain and dysphoria don’t have to be part of the postoperative experience.*

• Extended duration of action assists in preventing analgesic gaps in the critical first 72 hours
• Offers a long acting non-narcotic alternative to traditional post-op pain management
• Controls pain to help post-op return to function

What makes NOCITA™ different?

The extended-release bupivacaine technology used in NOCITA™ consists of multivesicular liposomes composed of hundreds of thousands of chambers encapsulating aqueous bupivacaine. The liposomes are microscopic structures designed such that bupivacaine is gradually released from vesicles over a period of time.

• Liposomes do not diffuse readily from where they are deposited.
• Bupivacaine diffuses locally into surrounding tissues as it is gradually released from individual liposome vesicles.

Recovery care begins with NOCITA™

Now you can effectively control your canine CCL** and feline onychectomy patients’ postoperative pain with the only FDA-approved long-acting local anesthetic that helps them recover comfortably even after going home.

Contact your Elanco representative or call 1-800-633-3796 to learn more.

Indications For single-dose infiltration into the surgical site to provide local postoperative analgesia for cranial cruciate ligament surgery in dogs. For use as a peripheral nerve block to provide regional postoperative analgesia following onychectomy in cats.

Important Safety Information NOCITA is for use in dogs and cats only. Do not administer concurrently with bupivacaine HCl, lidocaine or other amide local anesthetics. The safe use of NOCITA in dogs and cats with cardiac disease or with hepatic or renal impairment has not been evaluated. The safe use in dogs or cats younger than 5 months of age, that are pregnant, lactating, or intended for breeding has not been evaluated. The most common adverse reactions in dogs were discharge from incision, incisional inflammation and vomiting. The most common adverse reactions in cats were elevated body temperature and infection or chewing/licking at the surgical site.

Please see accompanying brief summary for product safety information.

*In a field trial, Nocita reduced the need for post-op rescue pain treatment with opioids.
**Cranial cruciate ligament.

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This is mainly due to 4-year programs that struggle to teach all that is needed to be successful in practice today. Additionally, most schools lack the resources to provide comprehensive training in all areas of practice. It is also important to keep in mind that medical doctors typically proceed on to internships and residencies before entering practice, whereas many veterinary graduates do not.

Mentorship is critical because it is the gateway to a successful career in veterinary medicine for the whole team, not just the veterinarian. Well-structured mentorship and training programs for the entire team, top to bottom, are key to a well-managed practice.

The goal of all new team members should be to receive as much training as possible during the first 2 to 3 years in practice. This often involves working long hours and taking advantage of all educational opportunities. The goal for new doctors during this time frame is to become proficient medically, surgically, and at communicating with clients because the foundation built in these early years typically defines much of your practice career. The same applies to veterinary nurses, technicians, assistants, and receptionists. Become an expert at your job, and once you have mastered the basics, you can take on more responsibilities at the clinic.

ARGUING THE BUSINESS

Arguably, the most important benefits that hospital networks offer are new career opportunities and professional growth, something we should all applaud. For too long, the hallmark of this profession has been long hours, low pay, and few benefits in a physically demanding and stressful environment, with little chance for career growth.

Recently, I heard a nurse say to a new nurse she was mentoring, “I love what I do, but this is a dead-end job, and that’s why so many of us leave the veterinary profession.” Sadly, there is some truth to those words. Fortunately, the industry is undergoing a paradigm shift, and there is a great need for upper-level talent at the various veterinary groups.

As practice groups grow—and many grow rapidly—they need experienced teams to fill new positions. For example, when they get to 10 practices, they need an operations manager and a medical director to oversee these clinics. When they get to 50 practices, they may need a regional operations supervisor and a regional medical director, and the trend continues as they add more locations.

At this size, it may be time to add a practice software specialist for the different information management systems and staff to handle purchasing, inventory control, and marketing. Although outside expertise can be hired, many jobs are filled from the talent pool at existing hospitals or from other hospitals that cannot offer the same positions or compensation.

This hiring trend is commonplace within veterinary organizations. A practice manager who has excelled is promoted to regional operations manager and now oversees 8 to 12 locations. In tandem, a team member who has long wanted a chance to be a manager is promoted from a front desk lead or a lead nurse to fill that manager position.

On the doctor side, this process is similar. For example, a seller relinquishes being the medical director, and an associate takes on that role. And maybe the seller takes on a leadership role within the group. The bottom line is that a tremendous amount of opportunity is created, and the demand is great.

This process is extremely important as it breathes new life into the practice environment. Instead of topping out and burning out, now there are many opportunities for upward mobility. This is not all about money, which is also important, but about achieving one’s full potential and changing things up a bit. The group practice environment is very interactive and social, and over time it may lead to less burnout, less compassion fatigue, and a better work-life balance, which are all important.

ESTABLISHING A CAREER PATH

Although many individuals may be content with their role at a practice for years to come, there are likely just as many who want a change and a chance to grow. Some ways to making this happen are:

- Decide what your career goals are—what you want to be doing 3 and 5 years from now—and make a road map of how you will achieve your objectives.
- At performance evaluations, share your aspirations and ask about opportunities to grow into roles that will support those aspirations. Supervisors are not mind readers. They need to know your goals and what will keep you happy and motivated.
- Strive to excel at your current position and display a positive attitude. Hard work and a job well done are often rewarded with new responsibilities and promotions.
- Stay involved and participate in group functions and meetings. Showing you care and have leadership qualities will make you stand out.
- Be flexible! When opportunity knocks, be available. It may not be the exact job you are looking for, but you may find that it’s a great fit or a good stepping-stone. For example, maybe you want to be a manager, but the only position available is in another state. If feasible, take it; this type of flexibility shows you’re motivated and may allow you to grow quickly into new opportunities within your company.
- Seek training in areas you want to pursue in the future. Also consider communications classes that focus on writing and public speaking. In more advanced roles, you will need to be a good communicator, and that applies to everyone from practice managers to CEOs.
- Put yourself out there, participate, volunteer, get noticed, think big, and take some risks. As the Bob Dylan song goes, “When you ain’t got nothing, you got nothing to lose.”

CONCLUSION

Not everyone has the desire to move up the totem pole, and that is fine. But for those who are motivated to advance and excel, this is a golden age in veterinary practice. The opportunities for career growth are almost unlimited.
At Suveto, our sole purpose is to support and empower the veterinary industry and the people creating its future. Whether you’re in school and looking to network, hunting for the perfect job, ready to start your own practice or searching for the right partner for what’s next, we’re here to help make it happen. Let’s Vet Together. Suveto.com
**Virtual wellness checkup app**
During 30-minute virtual consultations, veterinarians offer clients custom recommendations and guidance to ensure the well-being of their companion animals. The 5 areas covered are oral health, skin and coat, ears and rear, food and fun, and movement and mobility. FirstVet’s licensed veterinarians provide pet parents with information and peace of mind.

[firstvet.com/us/healthy-pet-checkup](firstvet.com/us/healthy-pet-checkup)

**Orthopedic bed for large dogs**
Made in the US with a proprietary blend of triple-layer OrthoMedic foam, Big Barker canine beds can support more than 300 lbs and prevent dogs from hitting the floor, thus protecting their joints from painful pressure points. Available in large, extra-large, and giant, they offer dogs ample space to stretch out.

[bigbarker.com](bigbarker.com)

**Veterinary school admissions app**
Now available for prevet students, Time2Track helps streamline the veterinary school application process by tracking, documenting, and sharing relevant experience hours for you. It tracks progress over time and offers reports, charts, and graphs. It also protects data from getting lost with secure cloud-based storage. Available for iOS and Android devices.

[time2track.com/vmcas](time2track.com/vmcas)

**DIGITAL TOOLS FOR PRACTICE MANAGEMENT AND OPERATIONS, PLUS PET SUPERFOODS**

**Virtual veterinary telemedicine platform**
This telehealth platform offers members 24/7 video and phone access to licensed veterinary professionals. It is ideal when you need advice on pet parenting and quality of life, or need guidance on preventive medicine. Virtual Vet does not offer formal diagnoses or prescriptions.

[dialcare.com/virtual-vet](dialcare.com/virtual-vet)

**Cloud-based practice management software**
ezyVet allows practices to save time, expand their business, and provide excellent customer service. It automates manual processes so you can prioritize and improve your bottom line and attract and retain clients. It features solutions tailored to a variety of practices: general, equine, university, mobile-operated, emergency, specialty, corporate group, and production animal practice. You can integrate ezyVet to all your business partners, tools, and software. Plus, the company offers comprehensive onboarding and 24/7 customer support and protects your organization’s information.

[ezyvet.com](ezyvet.com)

**Pet food made with insect protein**
This line of pet food harnesses the nutritional benefits of insect protein. Every topper and treat is hypoallergenic and made from whole-food superfoods. In addition to original dog treats, there are recipes formulated to address specific functional needs: health aid topper, digestive aid topper, and skin and coat topper. Neo Bites also aims to improve environmental health as they claim insects produce virtually no greenhouse gases.

[eatneobites.com](eatneobites.com)
main squeeze

We love pets. They give us everything they’ve got, every day, come what may. Which is why their health and happiness matter so much. We get it. That’s why we’re here.

In neighborhoods and nationwide, Banfield Pet Hospital delivers customized, wellness-driven care built on experience, science, and unconditional love for pets.

Our mission: A BETTER WORLD FOR PETS. Join us.

Scan the QR code to learn more.
The 4 I’s of quality improvement in veterinary medicine

Banfield Pet Hospital’s chief medical officer offers practical steps to pursuing quality improvement in your practice.

written by
MOLLY MCALLISTER, DVM, MPH

McAllister leads the Veterinary function of Banfield Pet Hospital and is driven by her passion for preventive health and the development of future leaders in the veterinary profession. As chief medical officer, she ensures the culture, strategy, talent, and tools are in place to consistently deliver excellence in high-quality medicine at Banfield hospitals. Her top priorities are to continually advance medical quality across Banfield, to promote inclusive health and wellbeing for veterinary professionals, and to advance a future for the veterinary profession that centers on the human-animal bond.

McAllister is the board president for the newly formed Diversity Veterinary Medicine Coalition, board secretary for the Human Animal Bond Association, and a board member of Pet Peace of Mind. She has a veterinary medical degree from Oregon State University’s College of Veterinary Medicine and a master’s degree in Public Health from the University of Minnesota.

Quality improvement (QI) in veterinary medicine is a systematic effort to improve delivery of care to patients. It often entails instituting systems-based improvements and standardizing processes to reduce variation and achieve predictable results. Continuously analyzing and seeking to enhance performance leads to better outcomes that benefit pets, people, and practices alike.

Opportunities for QI may present after adverse events, although mortality rates associated with anesthesia were comparable with or lower than those ever recorded at Banfield, helping to protect the lives of dogs and cats and between 0.5% and 2% for sick animals.5 We focused on anesthesia, one of the highest-risk services in practices alike. Enhance performance leads to better outcomes that benefit pets, people, and practices alike. Continuously analyzing and seeking to improve delivery of care to patients.

After identifying a QI opportunity, investigate the root causes, introduce best practices, and involve the whole team—not just a subset of the team—offering regular opportunities for QI across Banfield, to promote inclusive health and wellbeing for veterinary professionals, and to advance a future for the veterinary profession that centers on the human-animal bond. McAllister is the board president for the newly formed Diversity Veterinary Medicine Coalition, board secretary for the Human Animal Bond Association, and a board member of Pet Peace of Mind. She has a veterinary medical degree from Oregon State University’s College of Veterinary Medicine and a master’s degree in Public Health from the University of Minnesota.

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written by
MOLLY MCALLISTER, DVM, MPH

McAllister leads the Veterinary function of Banfield Pet Hospital and is driven by her passion for preventive health and the development of future leaders in the veterinary profession. As chief medical officer, she ensures the culture, strategy, talent, and tools are in place to consistently deliver excellence in high-quality medicine at Banfield hospitals. Her top priorities are to continually advance medical quality across Banfield, to promote inclusive health and wellbeing for veterinary professionals, and to advance a future for the veterinary profession that centers on the human-animal bond.

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Here we outline a 4-part framework for pursuing QI, where each component starts with an “I”: identify opportunities, investigate root causes, introduce best practices, and involve the team. We also describe how we applied the 4 Is in a case study.

IDENTIFY OPPORTUNITIES

Opportunities for QI may present after adverse events, or you can proactively identify aspects of your practice that could be safer or more efficient. Banfield’s Domains of Quality (Figure 1) articulate the elements of quality care we try to achieve. Adapted from the Agency for Healthcare Research and Quality, and first created by the National Academy of Medicine, this framework is used by Banfield Pet Hospital to assess quality care. Ask yourself whether your practice could better model one of them. Compare your practice performance with your ideal standards to identify any gaps.

INVESTIGATE ROOT CAUSES

After identifying a QI opportunity, investigate the factors that contribute to the problem, otherwise known as the root causes. Various approaches can be used in root cause analysis, including the 5 Whys. This exercise begins by stating the problem and asking why it occurs. The answer is the topic of the next “why?” and so on, drilling down until the root causes are revealed. For a printable, full-size 5 Whys worksheet, visit banfieldexchange.com/VET-Report.

INTRODUCE BEST PRACTICES

A useful counterpart to the 5 Whys are the 5 Hows, which is a similar iterative exercise to tease out steps to mitigate the root causes of a problem. Mitigation efforts can include changes to processes, structures, training, culture, or reporting. Seek evidence from the literature or your own practice to distinguish which potential steps are most appropriate for your QI initiatives.

INVOLVE THE TEAM

Make sure your team is aware of and comfortable with the best practices or mitigation steps to be implemented and understand the whys behind them. Daily huddles with the whole team—not just a subset of the team—offer regular opportunities to discuss new opportunities and ongoing QI initiatives. Identify quality champions on your team who might be willing to lead QI initiatives themselves.

PUTTING THE 4 I’S INTO PRACTICE

Identify opportunities

We focused on anesthesia, one of the highest-risk services in a veterinary practice. Rates of anesthesia-related mortality have been reported to be between 0.1% and 0.2% in healthy dogs and cats and between 0.5% and 2% for sick animals. A 2017 Banfield study demonstrated that Banfield’s mortality rate associated with anesthesia was comparable with or lower than mortality rates previously reported in the industry. Although mortality rates associated with anesthesia were already low, we felt a responsibility to patients and clients to dig deeper and uncover information that could potentially further reduce the mortality rate.

Investigate root causes

Root causes of anesthesia mortality were identified by reviewing available literature and performing our own internal analysis on data from our medical records.

Introduce best practices

We established evidence-based medical quality care standards to mitigate the risk factors we identified, consisting of clinical essentials and best practices. These resources helped our associates operationalize the standards for procedures, equipment, and communication.

Involving the team

We devised a robust communication plan to disseminate the quality standards and expectations for their implementation to our teams. We also set up an annual quality audit program to investigate compliance with the standards and identify ongoing areas of opportunities for continuous improvement. Job aids were regularly reviewed and discussed with the teams to keep everyone up-to-date on recommended practices.

OUTCOME

After applying the 4 Is framework, we have seen a consistent, durable, and ongoing decrease in anesthesia-related mortality. At the end of 2021, we had the lowest anesthesia mortality rate ever recorded at Banfield, helping to protect the lives of hundreds of pets since the start of the program.

The principles and concepts behind QI and the approaches mentioned are available in more detail in the full report, “Implementing Safety and Quality Improvements in Veterinary Medicine.” This report is the latest in the series of Banfield’s Veterinary Emerging Topics (VET) reports, created in partnership with the North American Veterinary Community. VET reports combine the power of data with open, solution-based dialogue to help improve patient outcomes.

REFERENCES

Forty years ago, when veterinary practices wanted to market their services, they purchased advertisements in phone books, tried to get their message across on radio and television stations, and sought word-of-mouth recommendations. With the rise of social media, marketing looks a lot different today than it used to. But has the time come to drop traditional marketing and focus only on attracting clientele through TikTok videos and other social media platforms?

During a recent segment of Second Opinion for Medical World News®, Steve Dale, CABC, a longtime radio host in Chicago, Illinois, and Bill Schroeder, senior vice president of InTouch Practice Communications, explained the differences between marketing strategies and highlighted the pros and cons of each.

DIGITAL AND TRADITIONAL MARKETING

According to Dale and Schroeder, traditional marketing is the way society has always done its marketing—offline—whereas digital is anything that is done online. “[Traditional marketing] can be the yellow pages. But traditional marketing is also using traditional media [like] a newspaper...as well as television and radio,” Dale said. “It is not only advertising...it’s getting your name out there in other ways.”

In this sense, traditional marketing might be effective, but only to a certain extent and based on the clientele. Practices that are still employing traditional—and only traditional—marketing risk losing potential clients. Schroeder explained some methods that worked in the past will not work on younger clients today, such as phone book advertisements.

On the digital side of marketing, Schroeder believes that it is not a battle between traditional and digital, but more of a question of how they can work together to reach as many people as possible. He gave the example of the rise in QR code use as a result of the COVID-19 pandemic. By combining a traditional way of marketing, printed flyers, and a digital way, such as QR codes, practices can reach a wide variety of people at the same time instead of targeting only one section of the market.

“I am a big fan of traditional...because I believe many people have abandoned it. I think that they should turn around, at least from the practice side, where they would say, ‘OK, I want to focus all my efforts on digital, or things like that,’ and they create this wide-open lane for practices,” Schroeder said. “You have this medium out there that has always been tried-and-true for reaching a really good segment of our communities, and with that comes an opportunity. I believe the magic happens when you marry digital and traditional marketing.

CONCLUSIONS

Although different, the 2 strategies are working together, Dale and Schroeder believe. This partnership is a good way for practice to reach as many potential new clients as possible. “There are more choices, and you are not going to get the audience you might have [gotten] 40 years ago because there weren’t [all these] choices, but that does not mean [traditional marketing] is any less important,” Dale said. “It is still a way to reach a lot of people at once and to get messages across that, at the end of the day, help pets and help you promote you and your practice.”

To watch the full segment, scan the QR code or visit Medical World News® at www.medicalworldnews.com/view/second-opinion-marketing-for-your-practice
dvm360® is proud to announce that nominations are open for the second annual Veterinary Heroes™ awards, which highlights those who are going above and beyond to elevate veterinary medicine.

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*Nomination Deadline: April 30, 2022

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Using empathy statements to put stressed-out clients at ease

Kindness is the best defense against negative emotions.

In these trying times, it is vital to treat everyone with kindness. When faced with others' negative emotions and behaviors, it can be easy to become defensive or return the negativity. However, it's important to remember the gravity of the situation others are facing and that one cannot know what someone else has experienced during the pandemic. That grumpy client may have lost his or her job, had a loved one affected by COVID-19, or gone through the other hardships that have befallen so many over the past 2 years and counting. Everyone's resolve has been tested, and it can be a challenge to find the strength to take the high road in a difficult situation, but the one thing everyone can aim to achieve every day is to show kindness.

External problems weigh on clients' shoulders and pile up, with something as simple as a sick pet causing all their fears and emotions to come crashing down. In these scenarios, anxious clients need their veterinary professionals to remain steadfast. Some require guidance: “My dog has been up all night with vomiting and diarrhea—is this an emergency?” Others need help solving a problem: “Why was I charged twice for this medication?” Their circumstances may be different, but they all need empathy. They need practitioners to infuse their emails, chats, and social media responses with words that show everyone in the clinic understands what they are feeling. They need reassurance that the people they rely on for their beloved pets' health care can see things from their point of view and, most importantly, that they truly care.

Empathy is not easy. Some frontline client service representatives may not be sure how to show empathy or even resist doing so. They may feel it is risky because of a misguided belief that it implies that they agree with the client's complaint. Client service representatives have been feeling bruised and battered, and even the most empathetic employees struggle when they are overburdened.

THE DIRECT APPROACH

Here is a list of easy, empathetic responses with which to address the concerns of clients. This cheat sheet can help employees practice empathy, without having to invest emotional energy investment on figuring out what strategy to employ.

1. No, I get it. I would be upset, too.
2. I realize how complicated it is to...
3. I can imagine how frustrating that would be.
4. That would be disappointing, especially when [paraphrase the client’s point of view or efforts].
5. We want to understand what happened just as much as you do.
6. I can see why that made you angry.
7. This situation is unacceptable to us, too.
8. If I were in your situation, I would feel the same way you do.
10. If I were in your situation, I would be asking the same questions.

THE INDIRECT APPROACH

Sometimes it's difficult to empathize because the client's emotions are way over the top or their argument is just plain wrong. These situations may call for indirect empathy that focuses on the client's behavior, such as their willingness to follow up, instead of the accuracy of their complaint.

1. I can understand why you have followed up on this issue.
2. I do realize that the [e.g., “check-out”] process can be time-consuming.
3. It certainly makes sense that you contacted us again to ask about this.
4. I'm so glad you let us know about this.

THE SHORT-AND-SWEET APPROACH

With empathy, a little goes a long way. The important thing is to recognize when the client is stressed-out or unhappy and acknowledge it. Expressing one of these short sentiments is often enough to make a person feel heard.

1. Oh, no!
2. That's not right!
3. That's not what we like to hear!
4. We've let you down, and we never want to do that.
5. Yikes! That's not how we want our customers to feel.

A KEY EMPATHY STRATEGY

Mirror the client’s words back to them. If they complain that the wait time for the emergency department is ridiculous, the response should include the word ridiculous. For example: “I understand, Mr Client, that the wait seems ridiculous. However, look on the bright side: Since pets are seen in the order of most critical to most stable, Fluffy is healthy enough to wait with you and doesn’t have to be rushed in.” Reusing the client’s words demonstrates that the staff member has carefully listened to the complaint and empathizes with their feelings. It is impossible to expect everyone at the clinic to truly empathize with every client who walks through the door, but it is possible for every client to feel that they are being heard. When clients feel understood, the well-being and satisfaction of the people on both sides of the front desk.

Although sincere empathy comes from the heart, practical expressions of empathy in client service situations can come from a prepared list of statements like the one above.
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Be curious, not judgmental.” It doesn’t matter that the origin of that dictum is unknown; if it is put into practice, it can be life-changing. Judgment closes the door to progress; curiosity opens it.

The past couple of years have been difficult as the veterinary industry has faced numerous challenges: volatile owners, overwhelmed hospitals, and high veterinarian burnout and staff turnover. Rushing to judgment is a protective mechanism, but it solves nothing.

Embracing curiosity is the key to health, happiness, and success—for you, your hospital, and the industry as a whole.

PRACTICING CURIOSITY FOR MENTAL AND PHYSICAL WELL-BEING

The first dog I spayed as a vet was a deep-chested German shepherd. I had performed one such surgery in veterinary school, but this one was different: It was so much harder to visualize things! Eventually, I tied off the first pedicle and moved on to the second. My relief, however, turned to horror when I found a suture knot nowhere near where it should have been. Thankfully, another vet was available to help, but the experience left me feeling ashamed and inadequate, like a complete fraud.

This incident happened primarily because it is more difficult to see tissue and organs in deep-chested dogs. That fact led me to discover the Miller knot. I realized just how much tension you can—and should—use to cut through fat. Instead of letting self-judgment paralyze me, I used my curiosity to move forward and become a better surgeon. I never made the same mistake again.

Although imposter syndrome stuck with me for a long time, curiosity eventually helped me overcome it. When I looked at the facts, I realized that there was more proof that I belonged than that I didn’t.

PRACTICING CURIOUSITY IN THE WORKPLACE

Choosing curiosity is key to solving problems, boosting morale, and making your practice more successful. Recently, a hospital owner told me that the best thing a practice can do to improve general well-being is to fire its most negative employee.

That may seem like the simple solution, but letting a “toxic” employee go without asking any questions eliminates the possibility for clarity and growth. The negative person may be the canary in the coal mine, the one who is saying what everyone else is thinking. Ask yourself:

• How is morale at the hospital?
• Are there valid complaints I can address?
• How can I have a productive, nonjudgmental discussion with staff members?

In some cases, firing a negative employee may be the answer, but until you get to the root of the negativity you won’t know whether you’re missing an opportunity to grow.

These days, walk-ins are commonplace. Often, however, there is a disconnect between what the manager thinks can be accomplished and what the rest of the team thinks. The fear of judgment—of not seeing enough cases, not being good enough, not helping a patient in need—and the urge to please frequently lead people to say yes when they desperately want to say no. This can result in inferior care, longer waits, and a defeated team. How can boundaries be established that support the well-being of everyone?

When we understand the reasons behind workplace disagreements, we can discuss how to go about taking the well-being of all parties into consideration while still delivering excellent care.

PRACTICING CURIOUSITY WITH CLIENTS

It can be hard to resist making assumptions about people. I once had a visit from a woman whose dog was overdue for everything. She seemed abrasive and declined all but the bare necessities—no preventatives. It is easy to adopt a judgmental attitude in such cases: “Clearly, she doesn’t care.”

During the examination, however, I started a conversation and found out that the client’s husband had just passed away. The dog was his, and he always took care of everything. The woman had no idea what prevents the animal had received and was overwhelmed emotionally and financially. If I had decided she was uncaring, I would have done her and her pet a disservice. She needed guidance, and together, we came up with a plan that worked for her and her dog.

There’s nothing more disruptive than clients who call at the last minute, demand to be seen immediately, and are rude to everyone. If judgments start flying, no one will be satisfied, regardless of the outcome. Stay curious and ask questions:

• Is this person worried about her pet or dealing with other stressors?
• Can I help them understand why they can’t be seen right away?
• How can I help the staff deal with these clients without feeling personally attacked?

When clients complain about prices, get curious:

• Are they comparing our prices to what they pay for their own insured health care?
• Do they know about pet insurance?
• How can I help them understand the value of our services?
• Are they worried about money or their pets?

Embracing curiosity leads to more honest and constructive conversations and makes for a healthier workplace, improved patient care, and better educated, more satisfied clients. Try it in your personal life: Driving home and get cut off? Let go of the anger and ponder what’s going on with the other driver. Isn’t that less unpleasant? ☛

IndeVets
written by Amelia Knight Pinkston, VMD, cVMA, INHC

Pinkston is a graduate of Wheaton College, University of Pennsylvania School of Veterinary Medicine, and the Institute of Integrative Nutrition. She is certified in veterinary medical acupuncture through CuraCore.
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Rosenberg’s response

I must admit I fall into the senior category in this dilemma. This is not a discussion about newer medical approaches vs older techniques and remedies. The approach to medical and surgical treatment of a pet patient should be a cooperative exercise between the pet owner and veterinarian. The age of a pet, the financial situation of an owner, and the comfort level of the veterinarian with a treatment procedure all go into a final treatment decision.

I think we can all agree veterinary medicine is a combination of science and art. Clinical instinct and sound scientific principles are the formula for successful animal care. The artful component of veterinary medicine should be respected, as well as successful treatment plans by vintage veterinarians.

Dilemma: sometimes old is just fine

Clinton Animal Hospital is a community institution. For 40 years, if you owned a dog or cat, you could bet they were patients at the Clinton Animal Hospital. The veterinarians working at the clinic were truly a diverse group—3 recent graduates, 3 veteran practitioners, and 2 veterinarians—who had logged over 30 years at the clinic. In theory, this diverse group of practitioners should provide a mixture of experience, mentoring, and newer approaches to the practice of veterinary medicine. In practice, that was not always the case. The veterinarians often had some clashes when it came to newer approaches to treating pets vs tried-and-true long-time diagnostics and therapies.

In a recent staff meeting, the doctors aired their grievances concerning the varied treatment approaches to some common medical maladies. When a dog presented with otitis, the newer practitioners would examine the ears and, when indicated, do an ear swab cytology and, if necessary, a culture. Having seen thousands of patients with otitis, one of the senior practitioners approached things differently. His experience allowed him to examine the ear, observe the debris, and identify the odor as a classic yeast otitis. Both approaches to this common problem resulted in highly successful outcomes. However, another treatment approach also ruffled some feathers. Oftentimes, dogs were presented with small papillomas, skin tags, and epithelial growths. The estimates and expectations developed by the younger staff included presurgical bloodwork, appropriate sedation or anesthesia, chest radiographs (if indicated by the history), and postoperative pain medications. If the growths were clearly papillomas, skin tags, or other obvious benign eruptions, one of the senior vets practiced a different approach. He opted for local lidocaine-based infiltration and a minimal excision wound with hemostasis provided by silver nitrate, cautery, or a couple of sutures.

Clients were often thrilled with this option—but administrators, not so much. This procedure approach was a lot less costly. These varying approaches by the doctors triggered a discussion with the professional staff led by the hospital director. Some staff clinicians felt these shortcut approaches did not meet the current standard-of-care guidelines. The clinicians who utilized these techniques disagreed. They believed that a licensed veterinarian had broad discretion in approaching medical and surgical issues if there was full disclosure of these approaches with the pet owners.

Ultimately, it was determined that every staff veterinarian had the right to use their judgment when treating patients if there was an informed discussion with the pet owner. On occasion, a client would ask about a varied approach to a pet care problem. For example, a client may ask why the previous doctor treated this issue differently. The response to such a question should be both honest and ethical. The explanation should mention that there are varied approaches to similar medical issues and that each doctor is acting in a medically sound fashion, with the best interest of the pet as a priority. Interestingly enough, the staff meeting was not contentious. Rather, it was an opportunity for veterinarians to share and learn from one another. A combination of tried and true as well as things that are new is the formula for excellent veterinary medical care.

Editor’s note: All names and businesses in this dilemma case are fictitious, but the scenario is based on real occurrences.

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Surviving Burnout

An inspiring veterinary technician takes practical steps to overcome burnout and thrive once again in animal health care.
Veterinary medicine is currently awash in negative news. And it is important that the industry not sweep problems under the rug. Its challenges must be discussed, addressed and, if possible, solved. On the other hand, if we focus only on the negatives, we may become blind to the profession’s many positives.

Although I am passionate about the field and about my work as a registered veterinary technologist, I experienced burnout 6 years into my career. And I did what many others do and walked away from it. A number of different factors led to my burnout, but the question I want to answer is: If my job caused me so much harm that I needed 18 months to heal, why would I ever consider returning to it?

The short answer is that this profession is very fulfilling. We advocate for animals and communicate with them at their level. We help people. We strengthen the human-animal bond. We teach the next generation. Working elsewhere—away from peers, patients, and the industry—was not an option that would have offered me long-term professional satisfaction. Once I had recovered, I yearned to return.

Nevertheless, the idea of going back was initially terrifying. How could I be sure that I wouldn’t step right back into the same challenges that had first caused burnout? My journey was sometimes rocky, but I have learned that prioritizing my well-being allows me to offer better care to patients. I enjoy sharing my path to recovery with others to spread awareness, empowerment, self-acceptance, and sharing my path to recovery with others to spread awareness, empowerment, self-acceptance, and sharing my path to recovery with others to spread awareness, empowerment, self-acceptance, and personal success. Here is what I did to return to the industry and still maintain my health.

1. STEPPING AWAY

First, I had to allow myself to step away from my career. I had to accept that it was unhealthy. This was the most difficult part of the journey and caused me to grieve for what felt like a personal loss. But once I had taken this step, my healing began, and alternate doors opened.

2. CONSIDERING LIFESTYLE VERSUS CAREER

I love my career as much as I love my personal lifestyle. Choosing between them felt impossible and was the reason I remained in an untenable situation for so long, feeling trapped. To get better, I needed to look at myself as a whole person. I was much more than a technologist. Should I remain in my hometown or pursue a career elsewhere? By deciding to stay in a small community with limited professional options, I chose the more difficult path. But as I diversified and succeeded, I was happy to realize that not all challenges are limitations.

3. EXPLORING OPPORTUNITIES

What can we do when there are no obvious career paths in our community? Ignore the doubts and make success happen anyway. But remember that it may be necessary to redefine your definition of success. Giving yourself the space to consider alternative paths without first having all the answers is investing in your self-belief and self-care.

4. REMEMBERING WHY I ENTERED VETERINARY MEDICINE

Helping animals matters a great deal to me. I am proud to belong to this profession and to make a difference for pets and their owners. When my choices felt limited, I reflected on what I had been excited about when I began training. For me, the science itself and the fulfillment of helping animals were driving forces. Remembering this gave me hope that I would find the best way of returning to the field.

5. IDENTIFYING MY CORE VALUES

Who am I? Who am I not? These are important questions whose answers can help you pinpoint current and next steps. What are my limits? What are my drivers? As I thought about these things, I began to better understand myself and my professional goals. Knowing this helped me discover the career and culture that suited me best.

6. ESTABLISHING BOUNDARIES

Understanding myself means that I know when to say yes and when not to. I have control of my boundaries, and that is empowering. Boundary setting doesn’t have to be inflexibility, but I encourage everyone to prioritize personal boundaries, followed by those of colleagues and then the business.

7. CREATING PERSONAL CONTROL WITH POSITIVE SOLUTIONS

I am a solution-focused person, but I am only one person. I alone cannot and will not solve the challenges facing veterinary medicine. Alone, none of us will. But rather than deciding there was nothing I could do, I chose to take action. By prioritizing my health, then thinking outside the box, I found my solution within the wealth of options available in the field: I started a locum RVT business. Although self-employment carries its own risks, it does allow me to control my schedule and protect my boundaries.

8. INFORMING OTHERS

My experience with burnout is not unique. But I am not an expert in mental health, a trained counselor, or a psychologist. I don’t have all the answers. What I do have is my voice. Knowledge is power; by sharing my story, I hope others can find solutions without having to undergo burnout themselves.

9. BEING COMPASSIONATE

Veterinary medicine is both rewarding and challenging. First and foremost, I am choosing to move forward with compassion for myself, my colleagues, patients, and clients. Listening actively and leading with kindness fills me with more positive energy, which in turn I am able to share.

10. TAKING CONTROL

I don’t in any way wish to imply that self-care and burnout prevention or recovery are the responsibility of the individual alone. Industry challenges require industry solutions; workplaces should not be a source of pain for any professional. However, I found that waiting for solutions to come my way was crippling my career and damaging my health. I had a light-bulb moment when I realized that I didn’t have to wait for bigger, perhaps slower, changes to come from the industry. I could, in fact, take control of my choices and make positive changes myself. It is important for me to share this epiphany with anyone who needs to hear it.

TAKEAWAYS

There is no single way to survive burnout or manage a career. By sharing my story, I hope to offer relatable steps that encourage others. I have not only charted my own healthy return to veterinary medicine but now can also support others on their journey. Although industry challenges continue to be addressed from the top down, I find it empowering to know that I have the ability to inspire change from the ground up. If I can do it, we all can. I am excited and hopeful for the next chapter in a field that has so much to offer.
Fish oil is a popular and safe supplement that has been used for many years in humans and in animals. The supplement can help pets needing anti-inflammatory support for medical problems, as well as those with skin diseases (eg, allergic skin problems), heart disease, and cancer. Fish oil also is often prescribed for pets with kidney disease to slow down the progression of the disease.

Pets with arthritis that take fish oil supplements may benefit from reduced inflammation and pain and may be able to reduce or eliminate their need for nonsteroidal anti-inflammatory drugs. Fish oil also supports a normal nervous system and may be helpful for pets with reduced cognitive function. Fish oil can reduce blood triglyceride and C-reactive protein levels. In general, fish oil is helpful for any pets that need reduced levels of inflammation in their bodies.

Because of its low-calorie count, fish oil supplementation is unlikely to contribute to weight gain. Since commercial pet foods often contain increased levels of omega-6 fatty acids, which can contribute to inflammation and health problems, many doctors recommend fish oil (omega-3) supplementation instead for all pets, even those eating a homemade or raw diet.

There is a wide variety of quality among fish oil supplements, so please use a product we’ve prescribed for the best results. Although we don’t expect adverse effects to occur, remember that any medication or supplement may cause them in an individual patient, although adverse effects are much less likely to occur with supplements than with conventional medications.
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