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3 tips to repair your damaged culture

If your practice culture had a spirit animal, what would it be? At a recent Fetch dvm360 conference, Fetch speaker and *Firstline* Editorial Advisory Board member Ori Scislowicz, BS, LVT, aPHR, asked attendees to play the mascot game. (Want to play? Visit dvm360.com/positivepractice to download a free tool to try this at your own practice. Go ahead. We'll wait right here.) Using drawing space in their attendee notebooks, veterinary professionals drew the animals that best represented their practice's current culture. The results?

One attendee shared her drawing of her clinic cat Milo—19 pounds of love and affection, and loved by everyone at their practice. Another attendee drew sunshine for her practice's mascot, because she says her team finds a way to stay excited about the work they do, even on sad days.

But it was the third drawing that expresses the workplace challenge many vet professionals face: a two-headed monster. The attendee said she drew the monster because she felt like her workplace was divided, with a group who managed to stay positive and another group that didn't manage to keep out of the muck.

Does this match your practice experience? Here are a few tips to transform your team:

1. Get everyone's opinion before you make a major change. Use surveys, reviews and one-on-ones.
2. Make your change a team project.
3. Formulate expectations together, and hold each other accountable.

What does that look like? It means increased communication and support with scheduled regular check-ins with your team. The key: don't just focus on problems. It also means company-wide meetings. Scislowicz says you must give employees different outlets for their opinions, whether it's in meetings, on message boards or through anonymous surveys. Finally, don't forget the EQ—emotional intelligence. Start by learning to really listen.

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Connect with your peers
and develop more healthy
habits of self-care with us at Fetch
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Editor/News Channel Director | Kristi Reimer Fender
kristi.reimer@ubm.com

Editor/Team Channel Director | Portia Stewart
portia.stewart@ubm.com

Editor/Business Channel Director | Brendan Howard
brendan.howard@ubm.com

Editor/Medicine Channel Director | Mindy Valcarcel
mindy.valcarcel@ubm.com

Content Marketing Director | Adrienne Wagner
Senior Content Specialist | Jennifer Gaumnitz

Associate Content Specialists | Katie James, Sarah Dowdy
Assistant Content Specialist | Hannah Wagle

Technical Editor | Jennifer Vossman, RVT, CMP

Digital Content Director | Jessica Zemler

Digital Design Director | Ryan Kramer

Multimedia Producer | Troy Van Horn

Marketing Copywriters | Ericka Cherry, Gabrielle Roman
Associate Art Director | Nicholette Haigler

Sales

Sales Director | David Doherty
david.doherty@ubm.com

Account Manager | Angie Homann
angie.homann@ubm.com

Account Manager | Kelly Main
kelly.main@ubm.com

Account Manager | Emma Pierce
emma.pierce@ubm.com

Account Manager | Terry Reilly
terry.reilly@ubm.com

Account Manager | Heather Townsend
heather.townsend@ubm.com

Sales Coordinator | Anne Belcher
anne.belcher@ubm.com

UBM Animal Care

Vice President & Managing Director | Christie McFall
christie.mcfall@ubm.com

Vice President, Digital Product Management | Mark Eisler
Creative Director | Marnette Falley

Medical Director | Theresa Entriken, DVM

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UBM

THE PICKS

(what we care about now)

The rabies hall of fame:

Famous fictional lives (and deaths)

Old Yeller

Perhaps the most famous victim, the title character of *Old Yeller*, a children's novel by Fred Gipson, saves his family from a rabid wolf. The wolf bites Yeller during the battle, and Travis, the dog's young master, is forced to shoot Yeller (and break our hearts) before the virus can take hold and endanger the rest of the family.



Cujo

Like *Old Yeller*, Stephen King's *Cujo* puts the rabies victim at the center of the action. Cujo is a previously mild-mannered St. Bernard who's bitten on the nose by a rabid bat and infected, subsequently attacking and killing half the town of Castle Rock, Maine. The story was reportedly inspired by an incident in which a snarling St. Bernard lunged at King when he was taking his car to the mechanic.

Sure, you've heard of *Old Yeller*, but how about *Tea Cake*? Take a stroll through U.S. literary history to learn more about these renowned rabies cases from books, movies and television—and don't forget that World Rabies Awareness Day is Sept. 28. Read the full list of inductees to the rabies hall of fame at dvm360.com/halloffame.



Tea Cake

In Zora Neale Hurston's *Their Eyes Were Watching God*, Tea Cake is the lover of Janie, the book's main character. Tea Cake is bitten by a rabid dog while saving Janie's life during a hurricane, and Janie is eventually forced to shoot him in self-defense.

Cats take enough risks on their own.

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5 STEPS to a pitch-perfect wellness plan



By Meghann Oliver

No. 1: Change is necessary

If you assess and review all aspects of your plans at least twice a year, you might head off a problem before it arises. For example, something that worked last year may no longer be part of your medical protocol, so you'll need to adjust your wellness plan.

No. 2: Track, track, track

Am I the only one who finds joy in tracking data? I don't think anyone gets as excited as I do when I hear the word "spreadsheet." But even if you don't get all giddy at the thought of looking at numbers in cells, it's key that you track your wellness plan performance. We can't rely on anecdotal evidence when trying to implement a new service. You may feel like it's going well all you want, but how is it actually going?

No. 3: Get your team on board—no matter the plan specifics

Some folks offer discount plans. Some folks offer unlimited exams. Some folks offer monthly payments. It doesn't matter. The specifics of the plan would have been decided and discussed upon its creation and those will vary from clinic to clinic.

What does matter is that your staff has a clear understanding of the benefits of signing up for the wellness plan, so they can explain them to clients with a consistent message.

No. 4: Don't set and forget your goals

You may decide you want to sign up five or 10 patients per month. You may decide you want 10 percent of your active patients on wellness plans. You may decide you want 150 active plans at all times. Whatever you decide, stick to it.

No. 5: Delegate, delegate, delegate

You don't need to babysit every single element of your wellness plans. If you're like me, you have other things to do. Eventually, you won't need to be the one to watch the recurring payments every day to make sure they didn't decline or the one to send out letters about automatic renewals.

Read more at dvm360.com/pitchperfect.

Meghann Oliver is practice manager at Cicero Animal Clinic in Syracuse, New York.

NOT SURE WHERE TO GO NEXT?

Check out four questions to ask yourself when setting up wellness plans at dvm360.com/fourQs.

Handle concerns about the price of heartworm prevention

Money makes the world go 'round. It's also a large reason your veterinary clients won't buy the preventives their pets need. Here are some tips from the experts to explain the value to pet owners.

By Sue O'Brien

If you're like a lot of veterinarians, you probably hear "no" to your recommendations for year-round heartworm prevention on a fairly regular basis. According to experts from the American Heartworm Society (AHS), expense is one of the leading objections clients give for forgoing heartworm prevention. In this article, a

veterinarian who serves on the AHS board of directors describe how they handle some of the most commonly voiced objections to prevention.

"HEARTWORM PREVENTION IS TOO EXPENSIVE."

Pet owners who assert that heartworm prevention is a luxury they can't afford may not be aware that there are low-cost options available—or understand how much treatment may set them back if they try to skimp on prevention. Is the pet a dog, cat or ferret? If it's a dog, is it a petite terrier or a massive mastiff? Does he only need heartworm prevention or should the product protect him from fleas, ticks, heartworms and hookworms? Annual costs for clients can range from \$60 to \$250 for dogs and from \$140 to \$200 for cats and ferrets, depending on the product's spectrum and whatever promotions are available from manufacturers. Within that range, most clients can find a cost they can live with while still meeting the needs of their pet.

Meanwhile, not every owner who finds cost to be a significant hurdle is vocal about it. "When I talk about year-round prevention in the exam room, I see a lot of head nodding from my clients," says Chris Duke, DVM, of Bienville Animal Medical Center in Ocean Springs, Mississippi. "However, my staff members tell me it's not uncommon for owners to back out of the purchase once I've exited the scene."

While it can be discouraging when pet owners insist on going home with prescriptions to fill through online services, Dr. Duke is an advocate of picking his battles. "We always stress that purchasing from our hospital provides our clients with important support," he says, "but refusing to provide written prescriptions can result in client alienation. We provide a prescription as long as we have a valid doctor-client relationship and the dog has had a heartworm test in the past year. However, we specify in writing that our prescriptions are only good for U.S. products and we limit refills to the point of a new blood check."

HEARTWORM TREATMENT

medications
veterinary fees
post-treatment preventive
lab tests
x-rays

\$1,200-\$1,800*

HEARTWORM PREVENTION

12 months of heartworm prevention

\$70-\$200*



BIG pain points

Which types of products do dog owners use to manage their pets' pain—and how often do they offer it? The answers may surprise you.

The Pet Owner Paths research, sponsored by Merck, Unfenced (an animal health creative agency) and Kynetec (a market research firm), looks at the specific steps pet owners take when making decisions about their pets' health. The research was released exclusively to dvm360.

47%

of dog owners say that **degenerative joint disease or osteoarthritis** are the issues their dog suffers from that requires pain management.

The most common type of pain product used is an oral pill or tablet, although significantly more millennials use special food, alternative therapy, injections and liquids.

Millennial dog owners

Seasonally
Intermittently when signs flare up or in certain environmental conditions

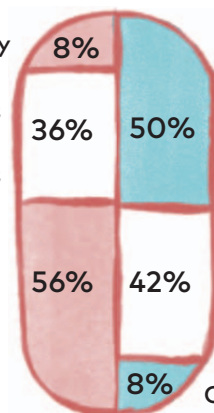
Continuously

Older dog owners

Intermittently when signs flare up or in certain environmental conditions

Seasonally

Continuously



There's a huge difference in frequency of pain management use, with millennials using products continuously and older owners using them intermittently or seasonally.



When it comes to fast relief from allergic itch without the common side effects of steroids*

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- Controls itch within 24 hours²
- Can be used long-term for maintenance therapy
- Does not interfere with diagnostic testing³

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*Common side effects of steroids include polyuria, polydipsia and polyphagia.^{4,5} Side effects of APOQUEL reported most often are vomiting and diarrhea.²

apoquel
(oclacitinib tablet)

INDICATIONS

Control of pruritus associated with allergic dermatitis and control of atopic dermatitis in dogs at least 12 months of age.

IMPORTANT SAFETY INFORMATION

Do not use APOQUEL in dogs less than 12 months of age or those with serious infections. APOQUEL may increase the chances of developing serious infections, and may cause existing parasitic skin infestations or pre-existing cancers to get worse. APOQUEL has not been tested in dogs receiving some medications including some commonly used to treat skin conditions such as corticosteroids and cyclosporine. Do not use in breeding, pregnant, or lactating dogs. Most common side effects are vomiting and diarrhea. APOQUEL has been used safely with many common medications including parasiticides, antibiotics and vaccines.

For more information, please see Brief Summary of full Prescribing Information on adjacent page.

References: 1. Gadeyne C, Little P, King VL, et al. Efficacy of oclacitinib (Apoquel®) compared with prednisolone for the control of pruritus and clinical signs associated with allergic dermatitis in client-owned dogs in Australia. *Vet Dermatol.* 2014;25(6):512-518. doi:10.1111/vde.12166. 2. Cosgrove SB, Wren JA, Cleaver DM, et al. Efficacy and safety of oclacitinib for the control of pruritus and associated skin lesions in dogs with canine allergic dermatitis. *Vet Dermatol.* 2013;24(5):479-e114. doi:10.1111/vde.12047. 3. Aleo MM, Galvan EA, Fleck JT, et al. Effects of oclacitinib and prednisolone on skin test sensitivity [abstract]. *Vet Dermatol.* 2013;24(3):297. 4. Edwards SH. *The Merck Veterinary Manual*. 11th ed. Kenilworth, NJ: Merck Sharp & Dohme Corp; 2014. <http://merckvetmanual.com/pharmacology/anti-inflammatory-agents/corticosteroids?qt=antiinflammatoryagents&alt=sh>. Accessed January 4, 2018. 5. Sousa CA. Glucocorticoids in veterinary dermatology. In: Bonagura JD, Twedt DC, eds. *Kirk's Current Veterinary Therapy*. 14th ed. St. Louis, MO: Saunders Elsevier; 2009:400-404.

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See brief summary on page 10

apoquel®

(oclacitinib tablet)

3.6 mg

5.4 mg

16 mg

Brief Summary of Prescribing Information

For oral use in dogs only

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

Indications: Control of pruritus associated with allergic dermatitis and control of atopic dermatitis in dogs at least 12 months of age.

Dosage and Administration: The dose of APOQUEL (oclacitinib maleate) tablets is 0.18 to 0.27 mg oclacitinib/lb (0.4 to 0.6 mg oclacitinib/kg) body weight, administered orally, twice daily for up to 14 days, and then administered once daily for maintenance therapy. APOQUEL may be administered with or without food.

Dosing Chart

Weight Range (in lb)		Weight Range (in Kg)		Number of Tablets to be Administered		
Low	High	Low	High	3.6 mg Tablets	5.4 mg Tablets	16 mg Tablets
6.6	9.9	3.0	4.4	0.5	-	-
10.0	14.9	4.5	5.9	-	0.5	-
15.0	19.9	6.0	8.9	1	-	-
20.0	29.9	9.0	13.4	-	1	-
30.0	44.9	13.5	19.9	-	-	0.5
45.0	59.9	20.0	26.9	-	2	-
60.0	89.9	27.0	39.9	-	-	1
90.0	129.9	40.0	54.9	-	-	1.5
130.0	175.9	55.0	80.0	-	-	2

Warnings:

APOQUEL is not for use in dogs less than 12 months of age (see **Animal Safety**).

APOQUEL is not for use in dogs with serious infections.

APOQUEL may increase susceptibility to infection, including demodicosis, and exacerbate neoplastic conditions (see **Adverse Reactions** and **Animal Safety**).

Human Warnings:

This product is not for human use. Keep this and all drugs out of reach of children. For use in dogs only. Wash hands immediately after handling the tablets. In case of accidental eye contact, flush immediately with water or saline for at least 15 minutes and then seek medical attention. In case of accidental ingestion, seek medical attention immediately.

Precautions:

APOQUEL is not for use in breeding dogs, or pregnant or lactating bitches.

The use of APOQUEL has not been evaluated in combination with glucocorticoids, cyclosporine, or other systemic immunosuppressive agents.

Dogs receiving APOQUEL should be monitored for the development of infections, including demodicosis, and neoplasia.

Adverse Reactions:

Control of Atopic Dermatitis

In a masked field study to assess the effectiveness and safety of oclacitinib for the control of atopic dermatitis in dogs, 152 dogs treated with APOQUEL and 147 dogs treated with placebo (vehicle control) were evaluated for safety. The majority of dogs in the placebo group withdrew from the 112-day study by Day 16. Adverse reactions reported (and percent of dogs affected) during Days 0-16 included diarrhea (4.6% APOQUEL, 3.4% placebo), vomiting (3.9% APOQUEL, 4.1% placebo), anorexia (2.6% APOQUEL, 0% placebo), new cutaneous or subcutaneous lump (2.6% APOQUEL, 2.7% placebo), and lethargy (2.0% APOQUEL, 1.4% placebo). In most cases, diarrhea, vomiting, anorexia, and lethargy spontaneously resolved with continued dosing. Dogs on APOQUEL had decreased leukocytes (neutrophil, eosinophil, and monocyte counts) and serum globulin, and increased cholesterol and lipase compared to the placebo group but group means remained within the normal range. Mean lymphocyte counts were transiently increased at Day 14 in the APOQUEL group.

Dogs that withdrew from the masked field study could enter an unmasked study where all dogs received APOQUEL. Between the masked and unmasked study, 283 dogs received at least one dose of APOQUEL. Of these 283 dogs, two dogs were withdrawn from study due to suspected treatment-related adverse reactions: one dog that had an intense flare-up of dermatitis and severe secondary pyoderma after 19 days of APOQUEL administration, and one dog that developed generalized demodicosis after 28 days of APOQUEL administration. Two other dogs on APOQUEL were withdrawn from study due to suspected or confirmed malignant neoplasia and subsequently euthanized, including one dog that developed signs associated with a heart base mass after 21 days of APOQUEL administration, and one dog that developed a Grade III mast cell tumor after 60 days of APOQUEL administration. One of the 147 dogs in the placebo group developed a Grade I mast cell tumor and was withdrawn from the masked study. Additional dogs receiving APOQUEL were hospitalized for diagnosis and treatment of pneumonia (one dog), transient bloody vomiting and stool (one dog), and cystitis with urolithiasis (one dog).

In the 283 dogs that received APOQUEL, the following additional clinical signs were reported after beginning APOQUEL (percentage of dogs with at least one report of the clinical sign as a non-pre-existing finding): pyoderma (12.0%), non-specified dermal lumps (12.0%), otitis (9.9%), vomiting (9.2%), diarrhea (6.0%), histiocytoma (3.9%), cystitis (3.5%), anorexia (3.2%), lethargy (2.8%), yeast skin infections (2.5%), pododermatitis (2.5%), lipoma (2.1%), polydipsia (1.4%), lymphadenopathy (1.1%), nausea (1.1%), increased appetite (1.1%), aggression (1.1%), and weight loss (0.7).

Control of Pruritus Associated with Allergic Dermatitis

In a masked field study to assess the effectiveness and safety of oclacitinib for the control of pruritus associated with allergic dermatitis in dogs, 216 dogs treated with APOQUEL and 220 dogs treated with placebo (vehicle control) were evaluated for safety. During the 30-day study, there were no fatalities and no adverse reactions requiring hospital care. Adverse reactions reported (and percent of dogs affected) during Days 0-7 included diarrhea (2.3% APOQUEL, 0.9% placebo), vomiting (2.3% APOQUEL, 1.8% placebo), lethargy (1.8% APOQUEL, 1.4% placebo), anorexia (1.4% APOQUEL, 0% placebo), and polydipsia (1.4% APOQUEL, 0% placebo). In most of these cases, signs spontaneously resolved with continued dosing. Five APOQUEL group dogs were withdrawn from study because of: darkening areas of skin and fur (1 dog); diarrhea (1 dog); fever, lethargy and cystitis (1 dog); an inflamed footpad and vomiting (1 dog); and diarrhea, vomiting, and lethargy (1 dog). Dogs in the APOQUEL group had a slight decrease in mean white blood cell counts (neutrophil, eosinophil, and monocyte counts) that remained within the normal reference range. Mean lymphocyte count for dogs in the APOQUEL group increased at Day 7, but returned to pretreatment levels by study end without a break in APOQUEL administration. Serum cholesterol increased in 25% of APOQUEL group dogs, but mean cholesterol remained within the reference range.

Continuation Field Study

After completing APOQUEL field studies, 239 dogs enrolled in an unmasked (no placebo control), continuation therapy study receiving APOQUEL for an unrestricted period of time. Mean time on this study was 372 days (range 1 to 610 days). Of these 239 dogs, one dog developed demodicosis following 273 days of APOQUEL administration. One dog developed dermal pigmented viral plaques following 266 days of APOQUEL administration. One dog developed a moderately severe bronchopneumonia after 272 days of APOQUEL administration; this infection resolved with antimicrobial treatment and temporary discontinuation of APOQUEL. One dog was euthanized after developing abdominal ascites and pleural effusion of unknown etiology after 450 days of APOQUEL administration. Six dogs were euthanized because of suspected malignant neoplasms: including thoracic metastatic, abdominal metastatic, splenic, frontal sinus, and intracranial neoplasms, and transitional cell carcinoma after 17, 120, 175, 49, 141, and 286 days of APOQUEL administration, respectively. Two dogs each developed a Grade II mast cell tumor after 52 and 91 days of APOQUEL administration, respectively. One dog developed low grade B-cell lymphoma after 392 days of APOQUEL administration. Two dogs each developed an apocrine gland adenocarcinoma (one dermal, one anal sac) after approximately 210 and 320 days of APOQUEL administration, respectively. One dog developed a low grade oral spindle cell sarcoma after 320 days of APOQUEL administration.

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

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

Storage Conditions:

APOQUEL should be stored at controlled room temperature between 20° to 25°C (68° to 77°F) with excursions between 15° to 40°C (59° to 104°F).

How Supplied:

APOQUEL tablets contain 3.6 mg, 5.4 mg, or 16 mg of oclacitinib as oclacitinib maleate per tablet. Each strength tablets are packaged in 20 and 100 count bottles. Each tablet is scored and marked with AQ and either an S, M, or L that correspond to the different tablet strengths on both sides.

NADA #141-345, Approved by FDA

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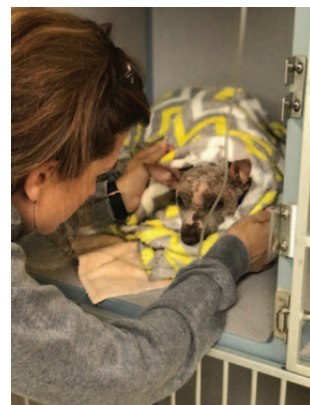
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A light in the veterinary profession

By Dani McVety, DVM

The idea of helping veterinarians feel inspired and not loathing their work, especially for students and recent grads, lights me up. I feel so blessed to have found a purpose in my own life, and helping others ignite that spark within themselves is simply incredible to me. If I could pay back my student loans in thank-you cards, I would have worked even harder, if that's possible.

Lessons from post-grad life

One thing I wish someone had taught me in vet school: If you don't gain rapport and trust with the client, they will not allow you to spend their money and act on the treatment plan we went to school to learn.

I learned from horses years ago that you cannot make anyone or anything do something they don't want to do. Forcing your way with a horse is futile, just as forcing your way with your coworkers or clients. You must all be on the same page, talk through differences and be prepared to let go of things you cannot change.

My career tip

No one really knows what they're doing, so don't feel like you're behind.

What I want to learn next

I've always wanted to learn to golf. My business partner is amazing at it, and I've honestly never tried. Especially living in Florida, this just seems like a natural thing to learn!

Listen up!

My best efficiency tip is audiobooks! You can learn a foreign language or read the *Iliad* simply by driving to work. It's amazing.



Just keep swimming

By Hannah Wagle

You've got to learn to keep your head above water. This key skill is one of the biggest factors needed to fight the compassion fatigue and burnout that weighs veterinary professionals down, according to Vets4Vets organizer Dr. Bree Montana.



THIS IS SO FETCH

Get more great tips from Dr. Bree Montana at Fetch dvm360 conference in San Diego, Dec. 13-16. To learn more or to register, visit fetchdvm360.com/sd.

In a recent Fetch dvm360 session, Bree Montana, DVM, creator of Vets4Vets, a confidential support group for veterinary professionals through the VIN Foundation, spoke on ways to combat compassion fatigue and burnout in the veterinary world.

"Some compassion fatigue and burnout is still going to happen," she said in her session, "but the sooner we can recognize it, the sooner we can manage it."

Dr. Montana's first key instrument for fighting these stressors? Self-regulation.

"Self-regulation is a little complicated, but at the same time it's super-simple," Dr. Montana says. "It's the ability to shift from sympathetic to parasympathetic dominance, while remaining fully engaged in the activities of daily living."

In other words, you have two modes you can switch into in a stressful situation. Sympathetic triggers your "fight or flight" response, while parasympathetic triggers your "rest and digest" response.

"Let's say a patient comes in, the patient's crashing, and you expect this patient to be in an addisonian crisis because it's a little white dog that's had vomiting and diarrhea off and on its whole life and it looks like crap on a cracker," Dr. Montana says. "So you're looking at the blood work and the math doesn't make sense—the math doesn't say addisonian crisis."

This is when your body begins to build a response to the situation. Dr. Montana says the biggest mistake you can make here is thinking in a behavioral tunnel. Behavioral tunneling is when you fall back onto a default response to a situation and then instinctually follow that

default response from then on.

"The bloodwork says everything's normal, but you're in sympathetic mode, so you're 'fight or flight'—your body says it's got to be an Addisonian crisis and you need to start fluids and do some steroids," she says. "If you were in your parasympathetic mode, you'd be able to say, 'Well, I guess not every little white dog coming in looking like crap on a cracker is an addisonian dog, so let's look a little deeper, go back and repeat the history.'"

Behavioral tunneling can happen with any stressful situations that regularly occur. Take, for instance, that deep-chested fat spay—you know, the one that keeps you up at night?

"We'll start to melt down," Dr. Montana says. "And if we stay in melt-down mode—even if we get through the spay, the dog goes home and everything goes wonderfully—our brain is going to go back there, because our brains like what they're familiar with. So the more time you spend in sympathetic mode, the more time you're going to be doing damage to your adrenals."

This means that instead of taking a seat in the Director's chair for a project, you're stuck down in the mud trying to see clearly from that vantage point.

"We need to recognize when we're in our sympathetic mode and allow ourselves to go into parasympathetic mode," Dr. Montana says. Though it may seem difficult to dig yourself out of the trap of the sympathetic mode, Dr. Montana says all it takes is a simple body scan.

Your how-to for a quick body scan

Here's a step-by-step run-down

for a body scan when you're feeling trapped in sympathetic mode in a stressful situation. Follow these steps and feel yourself relax in real time:

- > Close your eyes.
- > Notice your breathing.
- > Relax your eyes and body and allow your breathing to get deeper.
- > Breathe in for three counts and breathe out for four.
- > Breathe in for four counts and breathe out for six.
- > Put your hand on your stomach and keep breathing in and out for twice as long, and just let your breathing flow.
- > Bring your attention down to your feet and see if they're tense. If they are, relax them. Then go to your calves, then thighs, and keep going up, relaxing each part of your body from bottom to top.
- > Repeat as needed during stressful scenarios.

Two minutes to a clearer mind

Leading the class in a group body scan during her Fetch dvm360 session, Dr. Montana proved that it takes less than two minutes to do.

"When you find yourself in a tricky situation, take a moment and do a whole body scan," she said. "Nobody can see me doing it if I relax my eyes rather than close them. But when I relax, the whole room relaxes—The team, the clients, the dogs and cats, everyone becomes calmer with me."

Dr. Montana's challenge for veterinary professionals? Identify two things that make you absolutely crazy at work, then commit to doing a full body scan during those moments for two weeks: "For me, it's courtesy progress exams that don't show up—15 minutes of my life I'll never get back!"

Cushing's confusion?

Ask a veterinary endocrinologist

You know all those questions you have about managing Cushing's disease, like what do those numbers on the low-dose dexamethasone suppression test mean? We have the answers, courtesy of Dr. David Bruyette!

By Alyson Collins

At a recent Fetch dvm360 conference, David Bruyette, DVM, DACVIM, shared his professional wisdom and characteristic wit while answering common endocrinology questions in a session especially designed to address attendee questions. Let's look into the curiosities concerning canine hyperadrenocorticism ...

What's the best test for diagnosing Cushing's disease?

"When you see that there is more than one test to diagnose a disease," Dr. Bruyette says, "it immediately tells you that all the tests suck."

According to Dr. Bruyette, there is no perfect diagnostic test for Cushing's disease. ACTH stimulation tests, low-dose dexamethasone suppression tests and urine cortisol:creatinine ratios—the three most common diagnostic tests—each have their pluses and minuses.

The urine cortisol:creatinine ratio is sensitive but not specific.

According to Dr. Bruyette, it's most useful as a tool to rule out Cushing's disease. Before treating a patient for Cushing's



disease, Dr. Bruyette recommends confirming the disease with one of the other two tests.

The advantage of the low-dose dexamethasone suppression test is that it's more sensitive than an ACTH stimulation test—80% vs. 90%, according to Dr. Bruyette. And you can differentiate between pituitary-dependent and adrenal-dependent hyperadrenocorticism about 65% of the time. However, this test takes eight hours to perform, which some pet owners don't like.

Dr. Bruyette says the main advantage of the ACTH stimulation test is that it's faster to perform than the low-dose dexamethasone suppression test—no eight-hour wait. However, there are more false negative results.

Should I use Cortrosyn or a compounded gel to stimulate the adrenals for an ACTH stimulation test?

"If you compare ACTH stimulation test results in normal dogs and cushingoid dogs and compare the gel and Cortrosyn, the results are identical," Dr. Bruyette says. "Both will stimulate the adrenals equally well. The problem comes with monitoring." The concentration of ACTH in compounded gels isn't consistent, he says, which skews monitoring results.

The bottom line from Dr. Bruyette: Either is fine for diagnosing, but for monitoring purposes, use Cortrosyn (Amphastar Pharmaceuticals).

What do the results of the low-dose dexamethasone suppression test mean?

According to Dr. Bruyette, the results may seem confusing but can be interpreted easily. He says there are three numbers to assess—the resting cortisol concentration, the four-hour cortisol concentration and the eight-hour cortisol concentration. If the patient's eight-hour concentration is higher than the laboratory's normal result (these vary by laboratory), then the patient has hyperadrenocorticism. If you see 50% suppression at any time point (four hour or eight hour), the patient has pituitary-dependent hyperadrenocorticism (PDH).

For example, a patient has a resting cortisol concentration of 10, a four-hour cortisol concentration of 4, and an eight-hour cortisol concentration of 10. If normal results at eight hours are < 2, then the patient has PDH because $10 > 2$ and there is more than 50% suppression at the four-hour time point. "This is the most common thing we see in the lab," Dr. Bruyette says. "Rapid suppression followed by escape." According to

A funny story from 'Dr. Endocrine'



David Bruyette
DVM, DACVIM

"When I applied to vet school, I didn't really grasp the whole non-cat-and-dog side of it. So as I started to go through the curriculum, I quickly tried to negotiate my way out of anything having to do with large animal. My plan failed. I think the food animal people, because of my known 'love' for the topic, had me spend more time preg checking cows than necessary. I think that was their way of saying, 'OK, you're never going to do it again, so you're gonna spend a lot of time doing it over the next eight weeks.'"

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Seeing signs

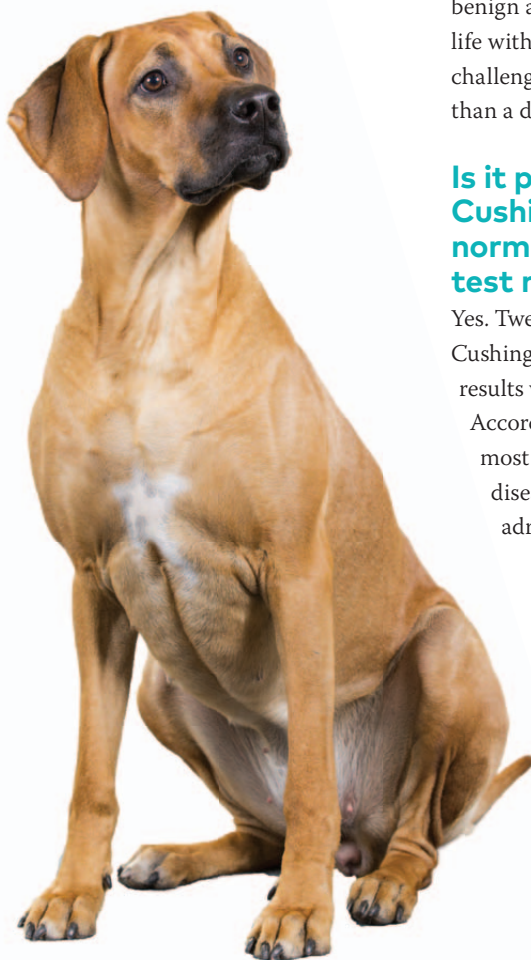
"In our hospital, when an animal has indications that make us think Cushing's is a reasonable possibility, we use the low dose dexamethasone suppression (LDDS) test to diagnose typical Cushing's disease," says Jim Kramer, DVM, CVPM, a practice owner in Nebraska. Along with LDDS, they will often also do ultrasound evaluations of the adrenal glands. (Psst—are you one of those vets who gets frustrated when you feel like you're not a wizard at every task? See our sidebar on ultrasound.)

The reality of Cushing's disease can be tough on pet owners. Early signs may push loving but frustrated clients to contemplate finding the dog a new home. "The dog urinates all over the house. It may be losing its hair," Dr. Kramer says. "The human-animal relationship can start to erode."

However, if clients have observed the signs that something's amiss, they're more likely to comply with your diagnostic recommendations. "By the time we're testing for Cushing's disease, which usually affects older dogs, most clients have already approved testing for other problems," Dr. Kramer says. "They've got some investment in solving the dog's problems."

Dr. Bruyette, the eight-hour cortisol concentration went back up because the dog cleared the dexamethasone from its system, most likely indicating it had had PDH for a while.

If there isn't 50% suppression, the hyperadrenocorticism may have an adrenal cause, but not necessarily. More diagnostic tests would be needed to determine the cause.



Why would an owner want to differentiate between pituitary- and adrenal-dependent hyperadrenocorticism?

Because the prognosis is different, says Dr. Bruyette.

"I usually tell owners of dogs with pituitary-dependent Cushing's disease that's being treated that their dogs will live a normal lifespan unless they develop a macroadenoma, which occurs in about 15% of these patients," Dr. Bruyette says.

Unfortunately, about 50% of adrenal tumors causing Cushing's disease are malignant, and these dogs have a life expectancy of < 1 year. Dogs with benign adrenal tumors can live a normal life with treatment but it's often more challenging to manage them medically than a dog with PDH.

Is it possible for a dog with Cushing's disease to have normal ACTH stimulation test results?

Yes. Twenty percent of dogs with Cushing's disease will have normal results with an ACTH stimulation test.

According to Dr. Bruyette, the patient is most likely still in the early stages of the disease process and hasn't developed adrenal hyperplasia yet.

Can a dog with Cushing's disease have normal results with a low-dose dexamethasone suppression test?

Yes. Dr. Bruyette says that although this test is more sensitive than the ACTH stimulation test, 10% of dogs with Cushing's disease will have normal results with a low-dose dexamethasone suppression test.

What should I do if I suspect the patient has Cushing's disease but the results from the ACTH stimulation test or low-dose dexamethasone suppression test are normal?

According to Dr. Bruyette, you have three options: 1. Wait and see if the disease progresses. 2. Retry the test. 3. Perform the alternative test (perform a low-dose dexamethasone test if you previously performed an ACTH stimulation test and vice versa).

Dr. Bruyette says that the deciding factor is probably how severe the clinical signs are. If they aren't bothering the

pet owner and aren't affecting the dog's quality of life, wait.

Why do some dogs not respond to trilostane therapy?

"It has to be given with food to be absorbed," says Dr. Bruyette. So if a patient isn't responding, verify with the owners that they always give it with food.

"But even when fed, some dogs don't absorb it," Dr. Bruyette says. "We've had dogs that didn't respond, and we've measured the trilostane in their blood and it's not there. If you get trilostane into the blood, it works because it blocks the synthesis of cortisol."

It's important that clients give the medication with food each day, including the day they have the ACTH stimulation test performed. Some owners and vets will mistakenly fast the dog the day of the test and give the trilostane on an empty stomach, which can dramatically alter the test results. Also, variation in clinical response and ACTH stimulation test results can be seen with dogs on compounded trilostane versus Vetoryl (Dechra), so switching to the name brand preparation would be a good idea if

inadequate control of Cushing's is present. If the pet is clinically not responding and the ACTH stimulation test indicates inadequate adrenal suppression, the dose and/or frequency of administration of trilostane may need to be adjusted.

My patient has Cushing's disease but it's largely asymptomatic. Should I treat it?

"I say don't treat," Dr. Bruyette says. "It could be months or years before that patient is symptomatic."

According to Dr. Bruyette, the benefit of treating an asymptomatic patient is that the disease is in the early stage, so you might keep it from getting worse. However, all treatment has a risk-benefit ratio. The risks are the possible adverse effects and the cost. In an asymptomatic patient, there is no benefit. "Since the patient is already asymptomatic," Dr. Bruyette says, "it will either stay asymptomatic or get worse."

Alyson Collins is a freelance writer in Olathe, Kansas, and a former editor at dvm360 magazine. Her interests include (in no particular order) amusement parks, chocolate, her three kids, politics, and Harry Potter.

Hey! You don't have to be a specialist to use ultrasound.



Veterinarians are notoriously driven individuals who master countless systems, tools and procedures throughout the clinic. But, of course, no one can be a wizard at every task—a fact that is vexing to some practitioners.

For example, Fetch dvm360 conference speaker

Rachel Pollard, DVM, PhD, DACVR, says she often sees veterinarians become frustrated by performing ultrasound because they expect to be able to function with the same proficiency as their specialist colleagues. According to Dr. Pollard, this unfair fixation doesn't do DVMs

any favors, but those who can cut themselves some slack and focus on what they can do have the right idea.

"They're able to make the bulk of the really relevant diagnoses without feeling like they have to be able to perform at a specialist's level," she says.

What to do when the opioid bubble BURSTS

Fear of human drug abuse has affected our work in veterinary hospitals. Here are some alternatives to opioids you should use whether or not we ever get our preferred pain relief drugs back.

*By Michael Petty, DVM, CVPP, CVMA,
CCRT, CAAPM*



Once again, veterinary medicine has been left in the lurch as the availability of opioids has withered due to a DEA-mandated decrease in their production. Although the DEA's intentions are good in trying to reduce the access to these addictive drugs, this move has the appearance of shorting the veterinary profession while our human anesthesiologists get to treat their patients as usual. We're forced to rely on veterinary-label opioids still available to us. But a shortage like this is a great time to consider other pain treatments and how they fit into your practice now—or even in a future of plentiful opioids.

We can survive this and any future shortage by using the opioids available to us—namely, butorphanol and the brand name buprenorphine product, Simbadol. Why are these opioids still available? Thankfully, Zoetis has a license to produce these products for veterinary use. This means they have not been subject to the decreased production affecting those opioids that are human generics.

In business with butorphanol

Butorphanol is an opioid with extremely short pain-relieving actions, sometimes as little as 15 minutes, but with a longer sedating action. This sedation has led to confusion about the actual duration of pain-relieving properties. On top of this, it's not a "strong" opioid and is insufficient for any procedure that is more than mildly painful. This narrows the opportunities where butorphanol may be used, but in

the right circumstances it can do an adequate job and keep you from using stronger opioids you've got left in stock, saving them for more painful procedures.

Consider the use of butorphanol alone or combined with dexmedetomidine for short and mild to moderately painful procedures, such as expressing infected anal sacs, removing a torn dewclaw or taking hip radiographs of an arthritic dog. Remember, though, that the 15-minute window inherent in the drug may prevent you from even getting local anesthetics on board before the butorphanol wears off.

Bust out the buprenorphine

Buprenorphine is considered a moderate-strength opioid, which can be adequate for all but the most painful of procedures. Although licensed for use in cats as a 24-hour subcutaneous injection for the relief of pain, buprenorphine in the form of Simbadol can be used like generic buprenorphine at the usual intramuscular (IM) dose of 0.02 mg/kg in both our canine and feline patients. Do not use the label dose intramuscularly as it is only intended for the subcutaneous route.

Simbadol is a high-concentration buprenorphine that, when administered to cats subcutaneously as directed on the label, will have duration of action of 24 hours. Simbadol is not a sustained-release formulation. Given at the lower IM dose to either dogs or cats, Simbadol will last roughly six hours. Given this way, Simbadol is less expensive than the human buprenorphine preparations. I was recently discussing this with

Jeff Ko, DVM, DACVA, a professor of anesthesiology at Purdue University, and he said, "I have been using Simbadol in all routes in both dogs and cats. The routes are IV, IM, subcutaneous (SC) and oral transmucosal (OTM). It's basically six times cheaper than human buprenorphine on a per-mg basis."

Look at local anesthetics

Of course, local anesthetics should be the cornerstone of any surgical procedure and should be used wherever practical. Locals are the only analgesic we have—everything else we use is hypodalgesic. This means they have the potential to stop 100% of nociceptive pain, and you can easily learn the techniques for line blocks, dental blocks, testicular blocks, locoregional blocks and epidurals. For some procedures, you can avoid the use of opioids if adequate local techniques are employed.

Thanks to Aratana Therapeutics, we also have the use of Nocita, the 72-hour extended-release bupivacaine. This drug means that we can do away with the lengthy hospitalizations necessary for animals with pain that's controlled with a constant rate infusion of opioids and other medications. Although Nocita is only licensed for use with cruciate surgery, I've successfully used it in any surgery where I previously used regular bupivacaine.

Opt for other drugs

Dexmedetomidine and ketamine.

Other drugs to consider—alone or in combination with opioids—are the usual "doggy and kitty magic" formulations that contain

Are you missing opioids? Consider these tips

"We have very good anesthesia protocols and became dependent on hydromorphone. When that became unavailable, we switched to morphine and were seeing less effect. Then that became unavailable, and we switched to buprenorphine for a few weeks. Eventually, our distributor was able to find another source for hydromorphone and our surgery patients are having a much smoother recovery postop."

—Andy Rollo, DVM, Walnut Lake Animal Hospital, West Bloomfield, Michigan

"Early this year, our team met with a board-certified veterinary anesthesiologist to formulate a plan of action and new protocols to accommodate our ever-changing supply options and needs for our patients. Just in the past few months, we've transitioned from morphine to hydromorphone to fentanyl surgical protocols for painful procedures. In addition to different opioid options, we've formulated conjunctive protocols that include but are not limited to anxiolytic agents, alpha-2 adrenergics, benzodiazepines and more to reduce pain in other ways where these drugs are tolerated.

"Admittedly this has been a bit of a challenge, as getting used to new drugs and how our patients react to them is a learning process. We are committed to our patients and trying to be patient as there are sure to be more changes to come."

—Kaylee Long, DVM, Dunckel Veterinary Hospital, Davison, Michigan

dexmedetomidine and ketamine. Both of these drugs have analgesic properties and greatly enhance opioids' ability to treat pain when used in combination. When they're appropriate, nonsteroidal anti-inflammatory drugs (NSAIDs) can be a powerful painkiller in the immediate postoperative period. Also consider the use of gabapentin before and after surgery; although there are no great veterinary studies of its use in the perioperative period, gabapentin's mode of action suggests it may slow or stop the development of postsurgical neuropathic pain.

Maropitant. There's some evidence that this drug—marketed under the brand name Cerenia (Zoetis) to treat vomiting—has pain-relieving properties, but the evidence doesn't support its use as a standalone pain medication. However, vomiting is a dreaded event for animals. When given prior to surgery, maropitant can stop the emesis associated with opioids and anesthesia, and in some cases stop the associated nausea. Use it as an antiemetic, and if it contributes to pain control, that's a bonus.

Make nice with nonpharmaceutical alternatives

Nonpharmaceutical options exist for all of us, even if we don't have special training.

Cryotherapy. This is the No. 1 easiest thing to do. One study showed that one or two 15-minute icings can lessen pain for up to 24 hours. There are freezer gel packs available that remain

pliable when frozen, and there are many "slushy" formulations to buy on the Internet. Avoid the use of frozen peas, which is an emergency home remedy and not adequate for the level of icing we need for our patients.

Compression. Adding this to the icing enhances pain relief. This can be done with the above by adding an Ace bandage over the ice pack. There are also devices that incorporate both icing and compression, such as Companion's Cold Compression Wrap designed for veterinary use.

Therapy laser. This can reduce pain by speeding up the healing process and reducing inflammatory agents. Be careful about using it over an area infused with a local anesthetic, as the resulting increase in circulation can disperse the local anesthetics and work at cross-purposes with them. Only use the laser once the anticipated duration of action of the local anesthetic has passed. Note: No one knows the effect a laser will have on Nocita, so don't use the laser at all until the fourth day after administration.

Pain evaluations. Employing the use of validated acute pain evaluations, such as the Glasgow forms developed by Newmetrica, helps us observe and treat pain as it develops. It's much easier to treat a developing pain issue than to chase after it once it has reached a higher level. Intervention with something like a microdose of dexmedetomidine may be all it takes to keep pain from reaching a critical state. And you can only know to do that if you're looking for it.

Tissue handling. Employ good techniques while performing invasive procedures. Keep incisions as small as possible. Be considerate about the awkward body positions we put patients in during surgery, especially in our geriatric patients, to avoid a source of nonsurgical pain during the recovery period. Acute pain on top of chronic pain is always worse than acute pain by itself.

Nursing care. Keeping an animal clean, warm and dry in a quiet environment improves the recovery experience. Interact with your patients before, during and after recovery, so they're less scared and stressed. Those are factors that contribute to pain felt during recovery.

My hope for the future? We see more veterinary-label opioids like Zoetis' Simbadol and Torbutrol—opioids that wouldn't be subject to the vagaries of human generic suppliers. In the meantime, brush up on your local anesthetic techniques and get familiar with the other pharmaceutical and nonpharmaceutical pain treatments mentioned above.

Michael Petty, DVM, CVPP, CVMA, CCRT, CAAPM, owns Arbor Pointe Veterinary Hospital in Canton, Michigan.



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Hospital design

Why your **landscaping** matters

Signage and porches help with curb appeal for your practice. And don't neglect Mother Nature's contribution in grass, flowers and other greenery.



McGregor Boulevard Veterinary Clinic in Fort Myers, Florida, drew from local foliage for their landscaping, including royal palm trees and other native plants.

PHOTO COURTESY OF STUART GOBEY, ISLAND STUDIO PHOTOGRAPHY

Pause on your way into your hospital and look around. Do you like what you see? Are the bushes by the door thriving, or are they starting to look like a Charlie Brown Christmas tree because they've been peed on so often?

Veterinary architect and HospitalDesign360 conference speaker Heather Lewis, AIA, NCARB, of Animal Arts in Boulder, Colorado, explains why your landscaping and initial impression are so important: "Free-standing hospitals need some sort of curb appeal—landscaping or a porch or a welcoming element. We don't plan out hospitals in parking lots anymore. It's about client experience, and they have lots of choices. Always keep curb appeal in mind. You always want to give a good first impression."

Check out these photos for exterior inspiration.



The exterior of Door County Veterinary Clinic in Sturgeon Bay, Wisconsin, features an exercise path. "It gives clients a place to walk pets to relieve anxiety if they have to wait, and staff can walk on breaks too," practice owner Jordan Kobilca, DVM, says.

PHOTO COURTESY OF CATHY CARTER, FOTOSOLD



Eden Veterinary Clinic in Eden, New York, is in a residential area, and the practice owner's home is on the same property—so home-like architecture is a winner. This includes a cozy front porch clients can relax on.

PHOTO COURTESY OF ABBY BLASKOVICH, TERWISSCHA CONSTRUCTION



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HELPFUL STUFF

Photobiomodulation facts and functions

It's more commonly known as laser therapy. Let's take a look at what we currently know about how it can help many of your veterinary patients.

By Matthew Brunke, DVM, DACVSMR, CCRP, CVPP, CVA



The terminology can get quite confusing. "Cold lasers," "therapy lasers," "low-level lasers"—which do we choose? Photobiomodulation (PBMT) is defined as "nonthermal interaction of monochromatic radiation with a target site." This just became a searchable term on PubMed recently, so there's still a lot of variation and confusion. It can be utilized for a wide variety of cases, making it a feasible and profitable part of practice.

Photobiomodulation as a

standalone therapy

Examples of diagnoses that could benefit from PBMT treatment as a sole treatment modality include surgical incisions, wounds, lick granulomas, osteoarthritis and tail pull injuries.

Photobiomodulation in conjunction with a rehabilitation program

PBMT represents only one element of comprehensive rehabilitation. While treatment can be safely and effectively combined with other modalities and integrated easily

with other treatment approaches, it's important to prioritize the sequence of application with other modalities.

Proper rehabilitation starts with pain management. Regardless of the injury, no patient will be able to return to function through strength training, and maintain that outcome, if it is painful. PBMT therapy is, in my opinion, an extremely valuable modality to achieve the goals of the clinician, the client and the patient. Read more on the particulars of PBMT at dvm360.com/PBMT.

Fear Free leads to lower relinquishment rates

Concrete results speak to the power of positive training in the clinic.

Theresa DePorter, DVM, ECAWB, DACVB, a Detroit-area veterinarian, spent years studying trends relating to pets adopted from a local shelter, by examining relinquishment rates before

and after her clinic started offering classes with positive training with a Fear Free component for puppy owners.

Scan the QR code to hear Fear Free founder and Fetch dvm360 conference speaker

Marty Becker, DVM, discuss Dr. DePorter's findings.

"Two years later, 93 percent of the pets adopted from the shelter that went through the class were still in the home," he says.





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Team activity: veterinary crossword

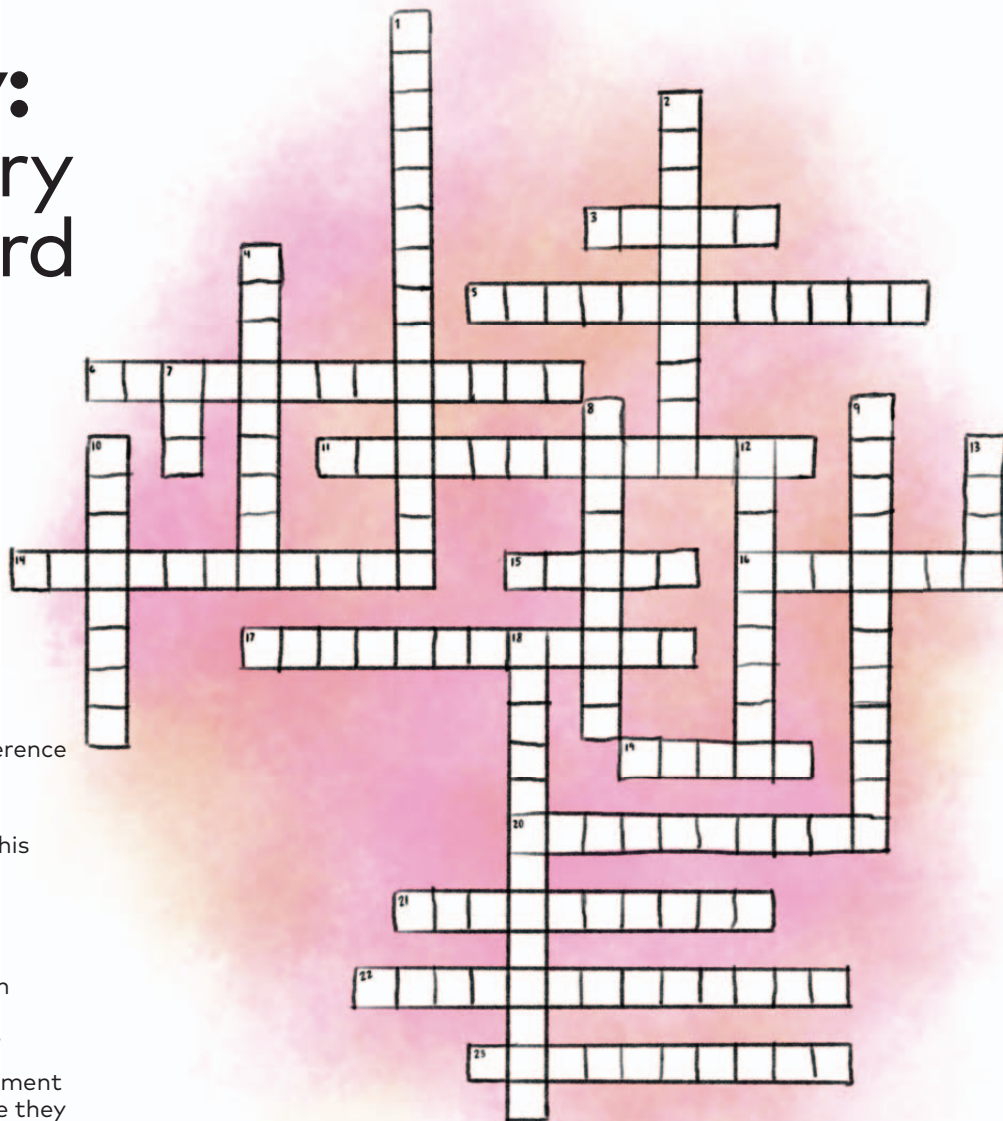
Do you know who "America's Veterinarian" is? Then you've got at least one answer to this crossword puzzle.

Across

3. The best veterinary conference on the planet
5. Hairball
6. Primary risk factors for this disease are small breed, unvaccinated, and urban environment
11. Wrote a rap song about Dexdomitor and put it on YouTube
14. "America's Veterinarian"
15. Client can't afford treatment for _____ because they spent all their money on buying the puppy
16. Otitis _____
17. Term of endearment for a female client who hoards cats
19. "Don't worry, doc, he never _____ anyone."
20. The scent you don't want to bring home from work with you, but you invariably do. Dangit.
21. Our *favorite* dog trainer ;-)
22. Infectious disease guy with great hair from Colorado State
23. Client comes in with a labrahuskiecorgipoo. You put it in as a _____.

Down

1. If you can't find a fork to eat your lunch with, use a _____ instead.
2. One thing a veterinary hospital cannot live without
4. National veterinary palliative care business owned by two boss ladies
7. Worst breed to trim nails
8. Funny vet with a southern accent who wears a cone of shame
9. The biggest thing a new veterinary school graduate owns
10. The trademarked name of low-stress handling
12. "Gosh, doc, that sounds _____. How much is this going to cost?"
13. Largest association of veterinarians in the United States
18. Another word for roundworm in dogs that is way too technical



Across: 3. Fetch, 5. Trichobezoar, 6. Leptospirosis, 11. Tasha McNeerney, 14. Marty Becker, 15. Parvo, 16. Externa, 17. Crazy cat lady, 19. Bites, 20. Anal glands, 21. Michael Loppin, 23. Cesar Milan, 22. Infectious disease guy with great hair from Colorado State, 23. Client comes in with a labrahuskiecorgipoo. You put it in as a _____.

Vets Against Insanity



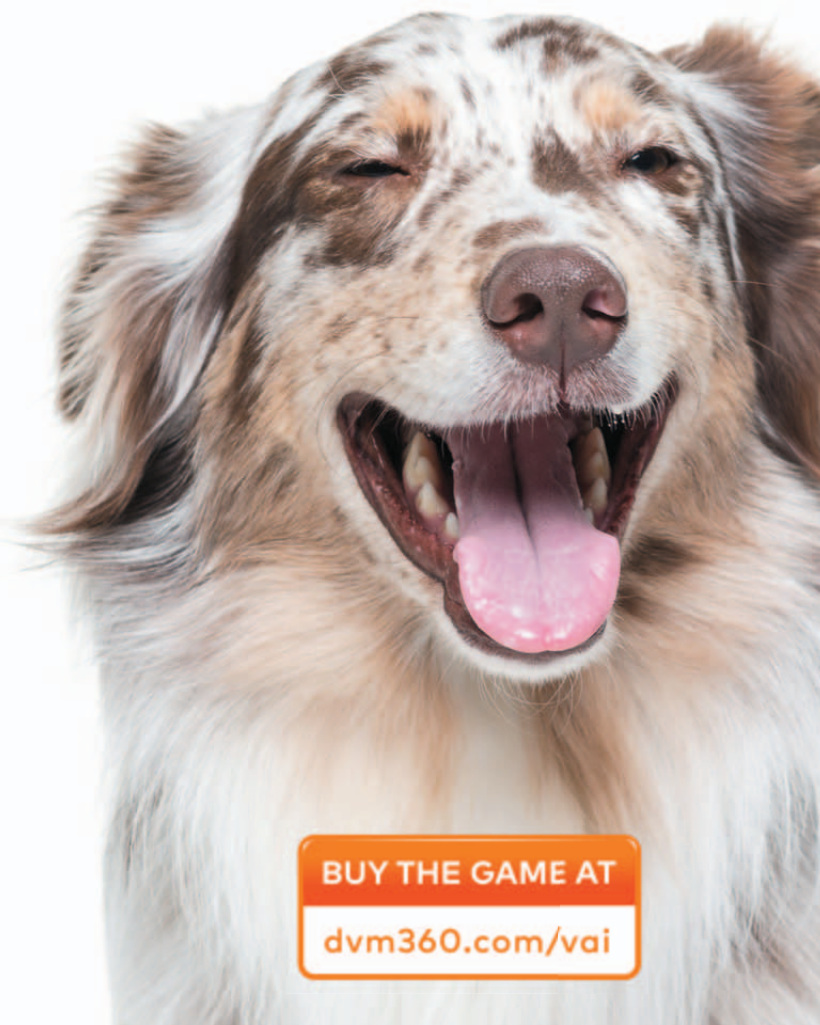
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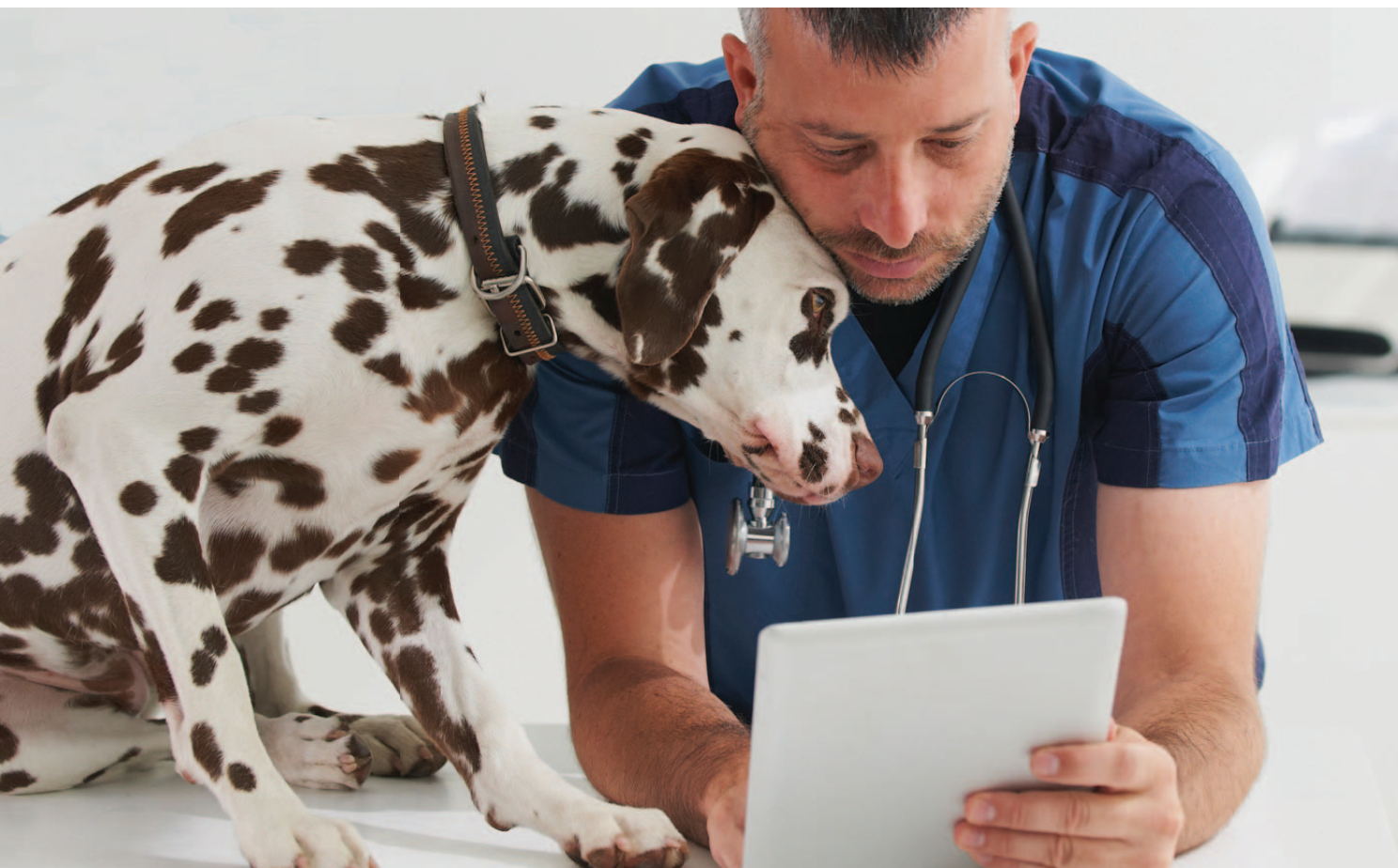


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1. Path To Purchase Research, Veterinary Category, conducted on behalf of CareCredit by Rothstein Tauber, Inc., 2016.

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