



vetted™

VetEc + VetMed, shaken not stirred

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fantastic
voyage** p 10

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radiography:**
*Still sexy after
all these years*
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WOUND CARE:
Quit scraping by
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Be a leader in
4 MINUTES
or less p 36



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Wanted: ←←
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that doesn't suck
p 6

OMG!

That's no hairball!
Handling pancreatitis in cats p 16





THIS TOPICAL IS SPOT ON

The naturally-derived ingredients help restore the skin barrier, which may help support hydration.¹

Dermoscent® Essential 6® spot-on is specially formulated with essential oils, Omega-3 and Omega-6 fatty acids and Vitamin E to help support the skin and coat health of dogs and cats.

- Helps **soothe pruritus** associated with dry, flaky skin²
- Supports **healthy coat** texture, luster and manageability³

For more information contact your Bayer Sales Representative, contact your preferred distributor or call Bayer Customer Service at 1-800-633-3796.



We've Got You Covered
Since 1976

For topical use on dogs and cats only. Do not ingest. Avoid contact with eyes. Available through licensed veterinarians.

¹ Cerrato S, Ramio-Lluch L, Fondevila D, et al. (2013). Effects of essential oils and polyunsaturated fatty acids on canine skin equivalents: skin lipid assessment and morphological evaluation. *J Vet Med*. 1-9.

² Blaskovic M, Rosenkrantz W, Neuber A, et al. (2014). The effect of a spot-on formulation containing polyunsaturated fatty acids and essential oils on dogs with atopic dermatitis. *Vet J*. 199(1):39-43.

³ Bensingor E, Nagata M, Toomet T. (2010). Preliminary multicentric open study for dermocosmetic evaluation of a spot-on formulation composed of polyunsaturated fatty acids and essential oils on domestic carnivores. *Pratique medicale et chirurgicale de l'animal de compagnie*. 45:53-57.

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April 2016

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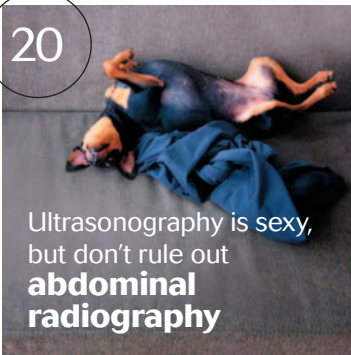
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OMG!



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Veterinary BINGO



Game your day

Turn a rough day in practice into a game of knowing winks between coworkers and find a more little energy to smile with your clients with veterinary bingo. Just mark off each of the scenarios you encounter during your workday. The first to fill a row wins! Download your own card at dvm360.com/bingo. And if you're facing a day where you're marking every square, don't fret: We have advice, solutions and ready-made tools to make sure you avoid bingo tomorrow.

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UBM



STRESS AND FELINE IDIOPATHIC CYSTITIS

Let's break the cycle together

The first nutrition clinically tested to reduce the recurrence of FIC signs, with ingredients to help manage stress



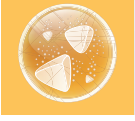
PRESCRIPTION DIET® c/d® Multicare Stress Feline



Added **L-tryptophan** and **hydrolyzed casein** to help manage stress, a known risk factor for FIC^{1,2}



Clinically tested to **reduce the recurrence of FIC signs by 89%**³



Clinically tested to **dissolve struvite stones** in as little as 7 days⁴ (Average 27 days)

For more information, talk to your Hill's Representative.

¹Pereira GG, Fragoso S, Pires E. Effect of dietary intake of L-tryptophan supplementation on multi housed cats presenting stress related behaviors, in *Proceedings*. BSAVA 2010.
²Beata C, Beaumont-Graff E, Coll V, et al. Effect of alpha-casozepine (Zylkene) on anxiety in cats. *J Vet Behav*. 2007;2(2):40-46.
³Kruger JM, Lulich JP, MacLeay JM, et al. Comparisons of foods with differing nutritional profiles for long-term management of acute nonobstructive idiopathic cystitis in cats. *J Am Vet Med Assoc*. 2015;247(5):508-517.
⁴Lulich JP, Kruger JM, MacLeay JM, et al. Efficacy of two commercially available, low-magnesium, urine acidifying dry foods for the dissolution of struvite uroliths in cats. *J Am Vet Med Assoc*. 2013;243(8):1147-1153. Average 27 days *in vivo* study in urolith forming cats.

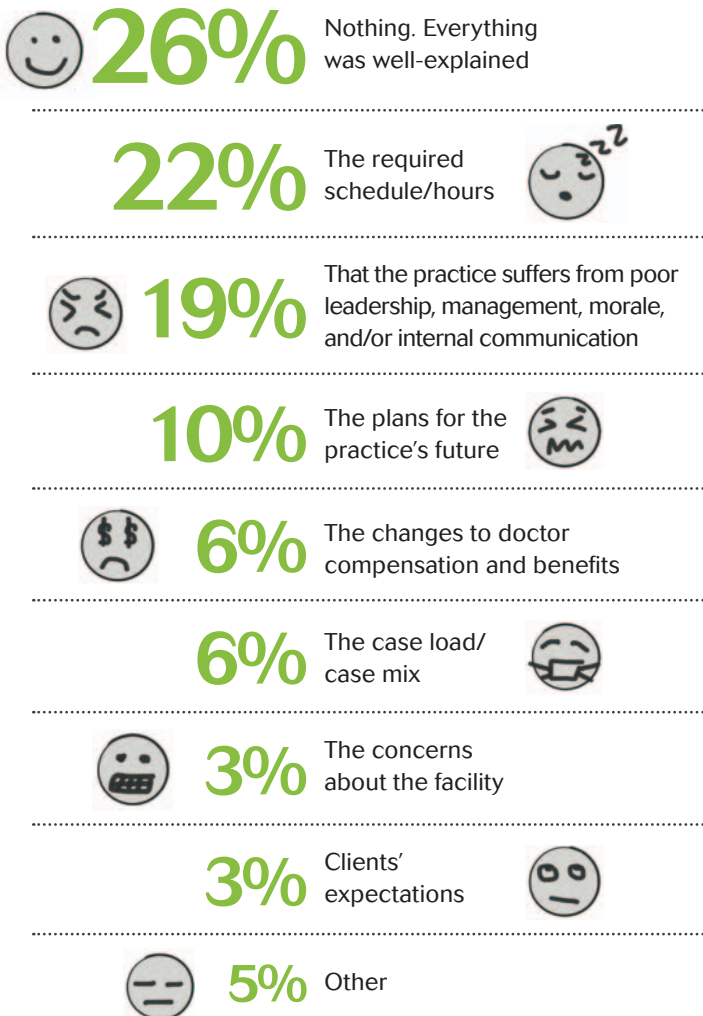


THE PICKS

(what we care about now)

Dear boss ... Why didn't you tell me?!

Data from *Benchmarks 2015: A Study of Well-Managed Practices* (Veterinary Economics and Wutchiett Tumblin and Associates) shows how associates really feel about you, your practice and their work. Here's what they wish you'd told them before they took the job:



Learn more about what associates said, including their top frustrations from the *Firstline* Career Path Study, at dvm360.com/associatesconfess.

Going ape

Great apes are targets for poachers, but in this Rwandan preserve, they're a target for better veterinary care too.

When animal-loving celebrity Jack Hanna heard that Nutramax Laboratories wanted to help animals "locally and globally," he pointed to Rwanda.

"Hanna asked if we could do something for the doctors helping the country's mountain gorillas," says Robert Devlin, executive director of Nutramax's veterinary science division. Nutramax last year sent not just money to support gorilla veterinarians' work, but a video film crew (with Devlin in tow) to see the work being done for people and animals in a country so recently ravaged by a genocidal war.

Devlin shared with us his pictures of the "Love your pet, Trust your vet" visit as well as some of the facts and stories he picked up along the way ...



"These veterinarians do amazing things, helping the local gorilla population to 500 and growing. The Gorilla Doctors get their moniker for being responsible for that growth rate, giving antibiotics and year-round care."

for gorillas



"We were told to stay at least 30 feet away, but some young gorillas would brush our legs. We still were supposed to stop and sit down. If we touched the babies, a silverback gorilla might take care of us."



"When we were anywhere near the gorillas, we were taught to make a low grunting sound to let the gorillas know we were friendly, as if to say, 'I'm not doing anything, we're all cool here.'"

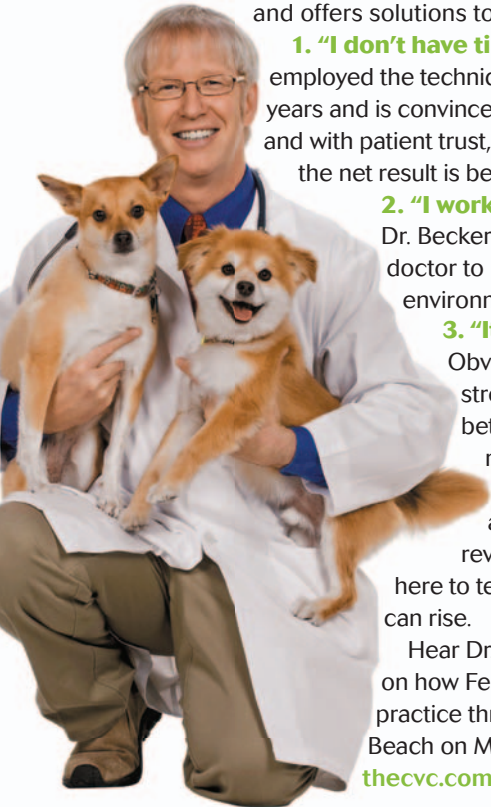


"You see similarities between us and the gorillas. Maternal instincts and caring, especially. This was a mom and her healthy baby here. But one of the doctors told us when a baby dies, some of the mothers will carry their bodies around for as long as they can. They don't want to let go."

Read more and see the rest of Devlin's photos at dvm360.com/gorillas.

Don't fear Fear Free

Associates, Dr. Marty Becker says Fear Free is for you—and offers solutions to your objections:



1. "I don't have time." Dr. Becker has employed the techniques for more than five years and is convinced that, with practice and with patient trust, it takes less time and the net result is better medicine.

2. "I work for a corporation." Dr. Becker says it takes just one doctor to lead the charge in this environment.

3. "It'll hurt production."

Obviously reducing pets' stress and practicing better medicine are noble causes, but let's get real: Will it slow appointments and hurt revenue? Dr. Becker is here to tell you that production can rise.

Hear Dr. Becker speak live on how Fear Free can help your practice thrive at CVC Virginia Beach on May 13. Learn more at thevcv.com/vb.

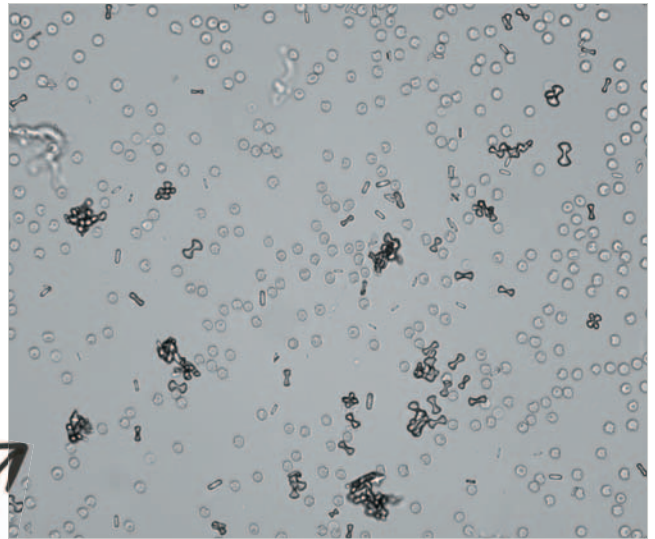


PHOTO COURTESY OF SEDIVUE DX URINE SEDIMENT ANALYZER FROM IDEXX LABORATORIES

What's up with this urine?

Which of the following does this sample contain?

- a. Struvite crystals
- b. Calcium oxalate monohydrate crystals
- c. Granular casts

Find the answer and take the rest of the quiz at dvm360.com/urinequiz.

VETERINARY POSITIONS AVAILABLE

ASSOCIATE WANTED

Progressive veterinary hospital seeks candidate to work long hours for little pay and practically no benefits. Call (555) 555-1234.

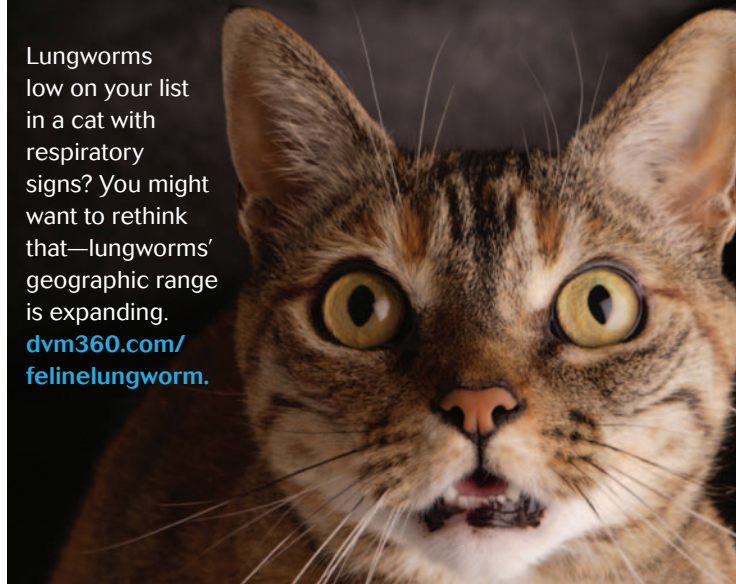
ASSOCIATE POSITION AVAILABLE

Wanted: "Associate wanted" ad that doesn't suck

When Dr. Greg Magnusson advertised for a new associate, he put his personality and practice philosophy into his ad. What does your classified say about your practice? Check out the ad here: dvm360.com/associatwanted.

Gasp! Why to worry about feline lungworms

Lungworms low on your list in a cat with respiratory signs? You might want to rethink that—lungworms' geographic range is expanding. dvm360.com/felinelungworm.



KIP KIP COMBIVA



Celebrate Combiva® II – the new lower priced alternative to Advantage® II.*

To find out more information or to order Combiva® II today,
please contact your favorite Distributor or Ceva Sales Representative.

Zoetis introduces

VANGUARD[®] cr Lyme

**BROAD COVERAGE
IS BETTER COVERAGE**

VANGUARD[®] crLyme is the first and only canine Lyme disease vaccine that helps prevent Lyme disease in dogs with two recombinant proteins: an outer surface protein A (OspA) and a chimeric protein containing antigenic material from seven common types of outer surface protein C (OspC) that have been detected in dogs infected with Lyme disease.¹ Its selective design helps provide relevant antigenic coverage, while the use of recombinant technology helps minimize extraneous proteins, resulting in a safe and low-reactive vaccine.

Prevalence of Lyme disease is increasing

Lyme disease is caused by the bacterium *Borrelia burgdorferi* and is transmitted by *Ixodes spp.* (black-legged ticks). It is the most common vector-borne disease in North America, with the prevalence continuing to increase.² The Centers for Disease Control and Prevention (CDC) estimates that over 300,000 cases of Lyme disease in humans occur annually,³ and the Companion Animal Parasite Council (CAPC) reports one in 16 dogs tested positive for Lyme disease in 2015.⁴

The CDC published a study in January 2016 noting *Ixodes spp.* are present in almost half of the counties in the U.S.⁵ The geographic spread of Lyme disease may be aided by expanding favorable tick habitats, longer transmission seasons and larger rodent host population.⁶ Moreover, the lines between urban and suburban boundaries continue to blur, and the growing popularity of pet-friendly travel has increased the risk of exposure.

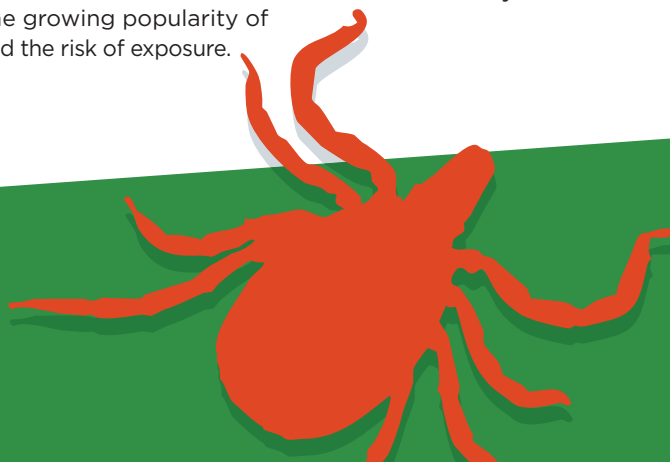
Vaccination is a critical aspect of a complete tick control plan

The CAPC advises that vaccination helps provide comprehensive protection against Lyme disease.⁴ Helping prevent canine Lyme disease with a vaccine helps reduce the possible complications associated with diagnosis and treatment since 90 percent of seropositive dogs may not show clinical signs of infection.⁷ Therefore, relying solely on parasiticides may not always lead to sufficient protection.⁸

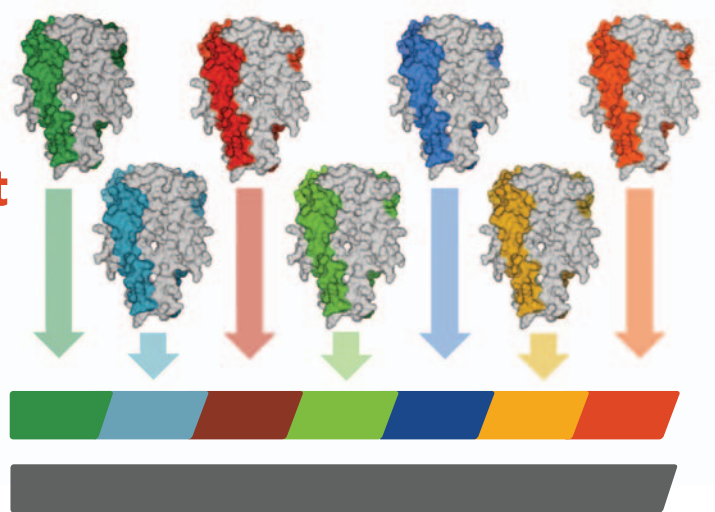
Pathogenesis and proteins

B. burgdorferi adapt to and invade a host by expressing different outer surface proteins (Osp). Two key outer surface proteins needed for infecting the host and evading the host's immune system are outer surface proteins A and C (OspA and OspC). When Lyme disease vaccination is considered, the two relevant proteins are OspA and OspC. OspA is predominantly expressed in the tick and helps the bacteria maintain residence in the tick by facilitating adherence to the epithelial cells of the midgut. As the tick feeds, the associated rise in temperature and change in pH causes the downregulation of OspA expression and the upregulation of another protein, OspC, which is required in order for the bacteria to infect a mammalian host.

When a dog has been adequately vaccinated with a Lyme disease vaccine that contains OspA antigens, the intent is that it will have sufficient circulating OspA antibodies in its blood to help kill the *B. burgdorferi* bacteria while they are still in the tick. These OspA antibodies will also help prevent transmission from the tick to the dog. Antibodies to relevant types of OspC are also critical vaccination targets as this outer surface protein is expressed early in mammalian infection. As OspC proteins are consistently expressed in the dog, they are an attractive vaccination target not only because they can help kill *B. burgdorferi* in the dog, but exposure to the bacteria also has the possibility of generating an effective memory immune response. Such a response may not be possible or as effective with OspA because its maximal expression occurs in the tick—and if expressed in the dog, it will occur at very low levels.⁹



7 types of OspC proteins commonly seen in canine Lyme infections



VANGUARD crLyme Chimeric Recombinant Technology

Discovering OspC variability

It has been known for several years that unlike OspA, which is consistently seen as a single type throughout North America, OspC has a great deal of variability. More than 30 types have been recognized in various species worldwide.¹ A 2013 publication evaluated the types of OspC present in canine tissue after infestation with wild-caught ticks. The results of this study indicated that there were 11 OspC types present in canine tissue post-infection!¹ The OspC types seen in this and other studies were carefully considered during the development of VANGUARD crLyme in order to produce a broadly protective vaccine containing OspC types relevant in canine infection.

VANGUARD crLyme and chimeric recombinant technology

Zoetis introduces VANGUARD crLyme in response to the need for a canine Lyme disease vaccine that addresses OspC variability. This next-generation vaccine includes a recombinant OspA protein and a recombinant OspC chimeric protein. VANGUARD crLyme is the first Lyme disease vaccine of its kind in the animal health industry.

Until now, it was not immunologically feasible to address OspC variability via vaccination.¹ At most, commercially available vaccines only contained one type of OspC.

Chimeric recombinant technology allows for relevant antigenic material from multiple OspC types to be combined into a single protein.

VANGUARD crLyme: The first and only chimeric recombinant Lyme disease vaccine

- Helps provide coverage to outer surface protein A (OspA), found in the tick, and multiple types of OspC commonly found in the tick and in the dog.
- Chimeric recombinant technology can help provide broad OspC coverage.
- Two recombinant proteins can help provide a safe, low-reactive vaccine.

Indication: For vaccination of healthy dogs 8 weeks of age or older as an aid in the prevention of clinical disease and subclinical arthritis associated with *B. burgdorferi*.

Administration: 1 mL subcutaneously; dogs should be administered 2 doses, 3 weeks apart; annual revaccination recommended.

1 Rhodes DV, Earnhart CG, Mather TN, Meeus PE, Marconi RT. Identification of *Borrelia burgdorferi* OspC genotypes in canine tissue following tick infestation: implications for Lyme disease vaccine and diagnostic assay design. *Vet J*. 2013;198(2):412-418.

2 Lyme disease: data and statistics. Centers for Disease Control and Prevention. <http://www.cdc.gov/lyme/stats/index.html>. Accessed February 27, 2016.

3 How many people get Lyme disease? Centers for Disease Control and Prevention National Center for Emerging and Zoonotic Infectious Diseases Division of Vector-Borne Diseases. <http://www.cdc.gov/lyme/stats/humancases.html>. Accessed February 27, 2016.

4 Current advice on parasite control: vector-borne diseases – Lyme disease. Companion Animal Parasite Council. <http://www.capcvet.org/apc-recommendations/lyme-disease/>. Accessed February 27, 2016.

5 Eisen RJ, Eisen L, Beard CB. County-scale distribution of *Ixodes scapularis* and *Ixodes pacificus* (Acari: Ixodidae) in the continental United States. *J Med Entomol*. 2016;Jan 18:1-38.

6 Ogden NH, Bouchard C, Kurtenbach K, et al. Active and passive surveillance and phylogenetic analysis of *Borrelia burgdorferi* elucidate the process of Lyme disease risk emergence in Canada. *Environ Health Perspect*. 2010;118(7):909-914.

7 Littman MP, Goldstein RE, Labato MA, Lappin MR, Moore GE. ACVIM small animal consensus statement on Lyme disease in dogs: diagnosis, treatment, and prevention. *J Vet Intern Med*. 2006;20(2):422-434.

8 Stevenson B, Schwan TG, Rosa PA. Temperature-related differential expression of antigens in the Lyme disease spirochete, *Borrelia burgdorferi*. *Infect Immun*. 1995;63(11):4535-4539.

9 Wagner B, Freer H, Rollins A, et al. Antibodies to *Borrelia burgdorferi* OspA, OspC, OspF and C6 antigens as markers for early and late infections in dogs. *Clin Vaccine Immunol*. 2012;19(4):527-535.

TINY TECHNOLOGY

An imaging ally for the alimentary canal, whee!

You can view the fantastic voyage this capsule takes through your patient's GI tract.



That goes *where!*

Right now, you can get a high-resolution, 360-degree view of your canine patient's entire gastrointestinal (GI) tract, and all it takes is getting the dog to swallow a capsule. This isn't future technology, folks!

Inner space

ALICAM, from Infiniti Medical, uses ambulatory light-based imaging (ALI) inside an 11-x-33-cm capsule. Once the capsule is administered, four cameras and LED lights activate within it to capture images all the way through the GI tract. This noninvasive approach helps you narrow down your differential diagnosis list for the clinical signs of

reduced appetite, vomiting, diarrhea, food intolerance, abdominal pain, GI bleeding and more.

Alimentary, my dear

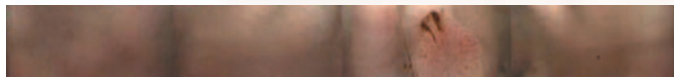
While the capsule is traveling through your patient, there is no restriction of activity—the pet can be at home or in the clinic. And once the capsule is recovered (requires a quick search through those No. 2s), a team of board-certified veterinary specialists from Infiniti Medical will analyze the data for you and deliver a comprehensive report with detailed images and clinical recommendations for treatment.



Dilated lacteals



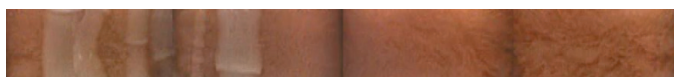
A small intestinal nodule and ulcer



A gastric polyp



An ulcerated jejunal mass



Tapeworms!

IMAGES COURTESY OF
INFINITI MEDICAL



URINARY TRACT DISEASE

Meet the only solution with
Triple Barrier Protection



**DISSOLVE
STRUVITE STONES**



**REDUCE THE RISK
OF OXALATE AND
STRUVITE STONES**



**REDUCE INFLAMMATION
FROM UTIs AND STONES**

PRESCRIPTION DIET® **c/d® Multicare Canine**

Breakthrough **Triple Barrier Protection** is shown to:

- 1 Restore and fortify GAG layer**
- 2 Reduce inflammation from UTIs and stones**
- 3 Optimize the bladder environment to prevent crystals and potential for uroliths**

Together we can now help reduce the risk of stones coming back for better days ahead.





Want a peek inside?

Take a virtual stroll through Dr. Randy Spencer's 8,740-square-foot Hospital of the Year at dvm360.com/HOYgallery.



Designing the new client experience

By Randy Spencer, DVM

I always want to keep improving—and this year they gave me an award for it (the *Veterinary Economics* 2016 Hospital of the Year award, to be exact). This was my fourth veterinary hospital project (shout-out to my 2002 Merit Award Winner in Chandler, Arizona), and my vision was to build more than a new clinic—I wanted to design a whole new experience for my clients. Here's how my team made 1st Pet Veterinary Centers in Mesa, Arizona, feel less like a medical facility and more like a hotel.

Quality isn't cheap

To create a modern, innovative, client-, pet- and team-friendly facility, we opted for quartz countertops over laminate, vessel sinks over stainless steel and skylights in the treatment room. You get what you pay for and what you pay for is fewer problems.

Redesign your lingo

Fresh titles can change the whole mood of the appointment. For example, "exam rooms" transformed into themed "pet care suites," the "reception desk" became the "concierge" and "team members" evolved into "client service associates."

Trust your team

We only recruit the best and we actually allow them to do their jobs (novel concept, right?) up to the extent of the law, of course. We treat them like experts, ask them questions, encourage them to take the lead and develop relationships with clients. This brand new hospital is kind of like my thank-you gift to them.

Don't skimp on parking

When we first took our site plan to the city the city planner tried to tell me that we had too much parking. (What?!) We researched the situation further and we didn't have *enough* parking. You can't have too much fun, chocolate or money. And you can't have too much parking.

Make your hospital a happier place for pets.

Your hospital is a safe place that's all about helping pets stay healthy. But to dogs and cats, a visit to the hospital can be stressful. Adaptil® and Feliway® are clinically proven to help reduce stress-related behaviors of dogs and cats during veterinary exams and hospitalization.¹ In fact, using Adaptil® and Feliway® in the hospital is recommended by the Fear Free™ initiative. When patients are less stressed, clients are less stressed and visits are happier for everyone.



 **FELIWAY®**

 **ADAPTIL®**

To find out how using Feliway® and Adaptil® in your hospital can help reduce the signs of stress in pets, contact your Ceva sales representative. To find out more about the Fear Free™ initiative, go to FearFreePets.com.

 /FeliwayUS

Feliway.com/US
Adaptil.com/US

 /AdaptilUS



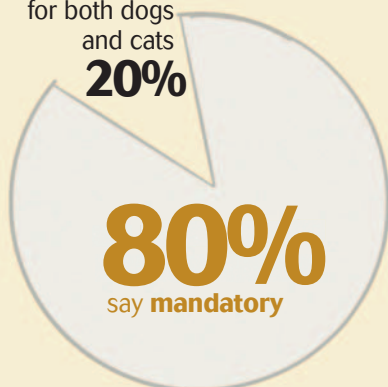
I feel your pain

Every pet deserves to be pain-free. So how do your peers handle their pain management protocols? We've got data that points to some (slightly) painful realities.



dvm360 asked: For cat and dog spays and other routine surgeries in your practice, is pain management a mandatory part of the service or an option that pet owners can accept or decline?

say **optional**
for both dogs
and cats
20%



If pain control is optional ...

only 29%
of respondents say
more than 75%

of their **cat-owning clients**
opt for pain management for
routine surgeries.

only 36%
of respondents say
more than 75%

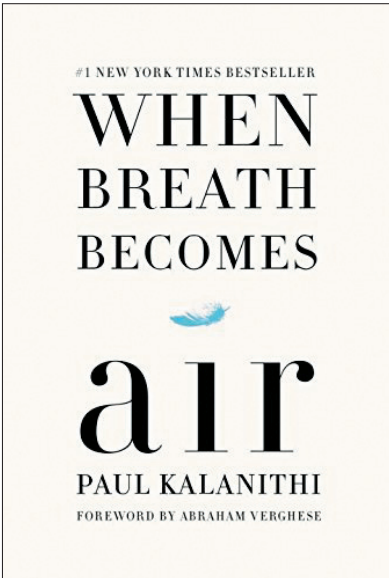
of their **dog-owning clients**
opt for pain management for
routine surgeries.

The dvm360 2015 Feline Care Study was sent by email to subscribers of *dvm360* magazine, *Vetted* and *Firstline*. The survey generated 784 responses from veterinarians, creating a margin of error of about 3 percentage points (although sample sizes—and statistical reliability—on individual questions may be lower).



PROJECT YOU

What to read, watch and skim right now.



What we're reading ...

Unlike other medical professionals, veterinarians don't have the luxury of understanding exactly what their patients are going through. And it's likely that very few human medical professionals, when given a death sentence at the apex of their career, would be able to capture the experience like Paul Kalanithi in *When Breath Becomes Air*. Kalanithi was a practicing neurosurgeon when he was diagnosed with stage IV lung cancer at age 36. He died in March 2015. His posthumously published memoir, released in January 2016, illuminates the relationship between doctor and patient, and what happens when they become one and the same.

When Kalanithi wrote to a friend about his diagnosis, he said, "It's just tragic enough and just imaginable enough." That perfectly practical yet enlightened approach to life and death is what makes *When Breath Becomes Air* such a fulfilling read. It's available on Amazon and major booksellers nationwide.



Scan to watch Adam Grant discuss giving and taking.

What we're watching ...

It may be hard to believe, but did you know that the very *worst* medical students are the ones who respond strongly affirmative to the statement "I love helping others"? It's true. Adam Grant, author, researcher, top-rated professor at Wharton and a *New York Times* writer on work and psychology, explains why those who consistently give favors are some of the least successful—and some of the most successful—in their lives and careers. Scan to watch this clip and get a glimpse of the research behind the "giver" phenomenon.

Plus, we loved ...

Less successful "givers" and successful "givers" have one difference: The ease with which the giver asks for help. When they bite off more than they can chew, less successful givers suffer in silence. Um, sound familiar? But asking for help doesn't have to be a bad thing! Some view asking for help as an admission of incompetence. But recent research from the Harvard Business School shows that when you ask for help, people may actually find you more competent, not less. This animated video from *New York* magazine's blog "The Science of Us" explains why.



You're not a failure if you ask for help, we promise! Scan the code to find out why.

That's no hairball: Pancreatitis in cats

Digest this advice on how to handle a common cat crisis.

OMG!

Whether you, Max or Max's mom like it or not, once pancreatitis is diagnosed and you know the zymogens in there are running amok, there is no doubt that Max is going to have to be hospitalized for treatment. But, says Elizabeth Colleran, DVM, MS, DAVBP (feline), "Get them out of the hospital as fast as you can." Meaning, get hospitalized cats home and back into their roles as loving companions for their owners as quickly as possible. How very 2016, no?

Here are her recommendations on how to accomplish that modern yet noble goal.

BUT FIRST! A QUICK TIP

To painlessly place a peripheral intravenous catheter, shave the leg, apply a topical lidocaine gel and a bio-occlusive dressing to the area, and wait 20 minutes for it to take effect before placing the catheter. Everyone—and we mean *everyone*—will thank you.

1 Gatorade ain't gonna cut it.

So now that the catheter is placed, correcting dehydration and meeting ongoing fluid requirements are in order. You're an expert at intravenous crystalloid fluid selection by now, but just remember not to choose lactated Ringer's solution

if there is evidence of liver pathology or malfunction.

Regarding electrolyte imbalances, hypokalemia is common in cats with pancreatitis. Watch for it and correct it with appropriate potassium supplementation in the intravenous fluids.

Next up, calcium. The prognosis for cats with pancreatitis is directly related to the severity and duration of hypocalcemia. "Hypocalcemia needs to be corrected with calcium gluconate in the intravenous fluids during the first 12 to 24 hours," says Dr. Colleran.



MEASURE UP

During treatment, don't forget to offer and measure the diet the cat eats at home every day. And yes, cats can swallow around the esophagostomy tube.

2 Analgesia: "My pancreas is killing me!"

There's no doubt that no animal should be in pain if we can help it. Well, these cats generally have pretty painful pancreases. Dr. Colleran is concerned that pain is very common and often unrecognized in cats. She gives an example of a 2001 paper on treating pancreatitis in cats in which there is not a single mention of pain control. That just doesn't work in today's medical climate. You must control cats' pain if you can. Traditionally feline-friendly opioids are the cornerstone of pain control and, in this condition, she says you can consider maropitant a pain medication as well.

BITTER KITTY

Dr. Colleran rarely uses tramadol because even when it is compounded well, her patients balk at its bitterness.

3 Other meds (cases where more=better)

Antiemetics. Dr. Colleran advises that you use maropitant (a neurokinin 1 receptor antagonist that blocks the action of substance P) and that if you add a 5-HT₃ blocker, such as ondansetron or dolasetron, you will get a synergistic effect on emesis.

Vitamin B₁₂. Even if you don't measure cobalamin and folate concentrations, Dr. Colleran recommends that cats with pancreatitis receive injectable B₁₂ treatment.

Antibiotics. Be aware that using antibiotics for treating pancreatitis is controversial. If you are going to use them, Dr. Colleran says cephalosporins are a good choice, as is amoxicillin (with or without enrofloxacin).

Appetite stimulation. If an appetite stimulant is needed, Dr. Colleran goes for mirtazapine.

Corticosteroids. Ah, the age-old question of whether or not to use corticosteroids. Don't discount using prednisolone in these cases because the inflammatory cascade plays an important part in chronic pancreatitis. They can be effective at stopping the process of fibrosis, which is beneficial in the long run.

Dr. Colleran thinks that prednisolone administration has "a nice effect" on some of the cats that aren't really turning around during your initial treatment.

"Sometimes cats are on this medication regimen for a really long time, but they do get better," she says. "When they are eating and start to pick up on their weight, I start to taper them off everything."

4 Adequate nutrition (remember when we used to NPO everybody?)

When managing cats with pancreatitis, up to a point, it's more important that cats eat than what they eat. Feed them quick and feed them often! It is important to place an esophagostomy tube early in the course of treatment. It's this simple: Stabilize them first, and if they are not getting better really quickly, you need to place an esophagostomy tube.

Dr. Colleran says to perform a clotting profile or administer vitamin K₁ before placing an esophagostomy tube (see "Check that vitamin K₁!", next page).



I want to ride my bicycle, I want to ride my bike

Dr. Elizabeth Colleran is the owner and hospital director of two exclusively feline practices. Prior to veterinary school, she worked in sales and marketing management for IBM, where she streamlined internal networks for Fortune 500 companies. Her passions are her crazy husband, two equally crazy Burmese cats, bicycling and Indian cuisine.

Shhh! Don't tell anyone: "I love road bicycling. When I'm biking, I ditch all my 'boss' responsibility and ride the back of our tandem with my husband (a former bike racer and accomplished pro) at the helm. I get to relax fully without having to worry about speed, gear, braking, etc. I am free to provide pedal-power and yet give up power!"

#twowheelsnoworries
#roadwarrior

CHECK THAT VITAMIN K!

A PIVKA (proteins induced by Vitamin K antagonism) test indirectly detects vitamin K deficiency, which can occur in cats with pancreatitis with concurrent hepatopathy. If the vitamin K concentration is low, Colleran says you can administer vitamin K₁ at 1 to 1.5 mg/kg subcutaneously every 12 hours for three doses before a planned invasive procedure. In conditions such as hepatic lipidosis, she often assumes the concentration will be low and won't necessarily test for deficiency before administering vitamin K₁.

Use a diet specifically formulated for recovery because these diets contain adequate amounts of protein, which is needed to heal. Feed this diet at the individually calculated amount until the esophagostomy tube is removed.

Don't remove the esophagostomy tube until a cat is ingesting an adequate amount of nutrients on its own. And sometimes you shouldn't even remove it then, says Dr. Colleran. If the cat is receiving many different medications several times a day, leaving in the esophagostomy tube can help facilitate and ensure appropriate treatment.

SOME SOUND RECOMMENDATIONS FOR THE ULTRA-MODERN PRACTICE

We'll be here all week! But really, if you want to get the latest and greatest ultrasonography products, check out dvm360.com/ultrasonography.

THROW THE DOGS A BONE

Here ya go: Scott Owens, DVM, MS, DACVIM, will present "Diagnosing and treating canine pancreatitis" at **CVC Virginia Beach** on May 15. There's still time to register—head over to thecvc.com/vb for details.

Did you HAVE to shave for that ultrasound? Learn how to use a pair of clippers.

You **need** an ultrasound machine!

To be successful, any new technology in your practice needs monetary and personal investment. Practice management consultants Bash Halow, LVT, CVPM, and Karen Felsted, CPA, MS, DVM, CVPM, are here with business and medical perspectives on the introduction of ultrasound. First, Halow says services—not products—are where it's at. He believes that if the numbers work out and the staff interest is there, ultrasound is a great option for your clinic.

OK, you've bought the gear and your team is into it. But if your customers know nothing about ultrasound—a safe bet—get them in the loop with the "what" and the "why." Dr. Felsted explains how a little education can get pet owners on board with this procedure. For more details and ideas, go to dvm360.com/ultrasound.

Stop the Pain! Be a Hero!

Your patients can't tell you where it hurts, but you understand the importance of minimizing and managing their pain.

CVC Virginia Beach offers 17 pain diagnosis and management sessions, including these led by *Robin Downing, DVM, DAAPM, DACVSMR, CVPP, CCRP.*

- They don't deserve to hurt: Fundamentals of feline pain
- Building and charging for a pain management pyramid for cats



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Hey, girl

Ultrasonography is sexy, but don't rule out abdominal radiography

If ultrasonography is the hot guy you met online, abdominal radiography is your adorable high school sweetheart. Here's why Dr. Anthony Pease thinks abdominal radiographs are still valuable. *By Julie Scheidegger*



If your veterinary clinic has an ultrasound machine, you probably think that's the go-to when you have an acute abdomen patient. I mean, "swipe right," amirite? But if you don't have this miraculous wonder of an imaging machine, don't feel guilty.

Traditional abdominal radiography is a great first modality for patients with acute abdominal pain, says Anthony Pease, DVM, MS, DACVR. Just make sure your protocol is up-to-date with these four tips to make your long-standing relationship with abdominal radiography work.

1 Three is better than two

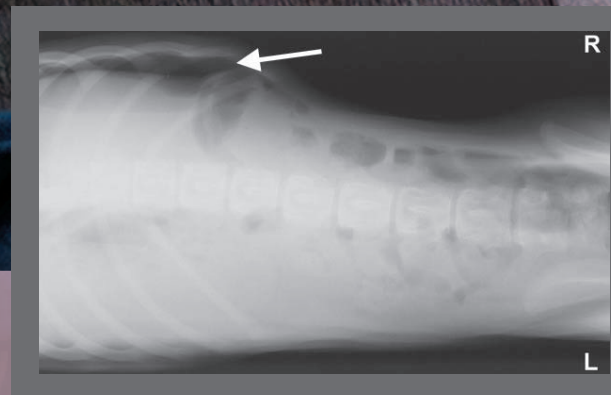
Traditionally, right lateral and ventrodorsal projections are taken when evaluating the stomach. A right lateral projection places gas in the fundus of the stomach and fluid in the pyloric antrum. And to evaluate the pylorus, a ventrodorsal projection puts fluid in the fundus and gas in the pyloric antrum. But at Michigan State University, Dr. Pease says they take three views of abdomens: a right lateral to see the fundus, a left lateral to evalu-

ate the pylorus and look for pyloric outflow obstructions, and a ventrodorsal to provide more information about the pylorus, to better evaluate the colon and to complete the three-dimensional aspect of radiography. More information is always better!

2 The guidance of the contrast (a few "highlights")

If you suspect a luminal obstruction and you don't have an ultrasound machine, don't worry. "Barium or iodinated contrast medium procedures can help you determine if the bowel wall is thick or infiltrated and let you look at overall motility or assess for a rupture," says Dr. Pease. BIG caveat: If one of these abnormalities is seen, you'd be better off performing an exploratory laparotomy rather than a contrast procedure since the contrast study takes three to six hours to complete.

Dr. Pease says barium contrast medium is the most universally used agent for gastrointestinal imaging—and it's safe. The dose is 6 to 10 ml/lb, generally administered through a gastric tube. If aspi-



rated, barium physically obstructs the airways with no inflammatory component and may cause granulomas if it leaks into the peritoneal or pleural cavity. So Dr. Pease says not to use it if you suspect a ruptured bowel or ruptured esophagus. Iodinated contrast medium is generally used intravenously but can be administered orally for these studies. Its main limitation, according to Dr. Pease, is that it has a bad taste and it is hypertonic (it will draw fluid into the bowel and will cause an inflammatory reaction if aspirated into the lungs).

3 Free gas? Where? I'm driving over ...

Pease says positional radiography can also be used to evaluate for free gas in the abdomen. Since an air-fluid interface is needed to help to see gas within the peritoneal space, a horizontal beam projection with the patient on its left side and a ventrodorsal projection will put the gas in the right lateral abdomen near the pyloric antrum. Since the pylorus is small, the gas accumulation will be identified caudal to the diaphragm.

"For a suspected gastric dilatation-volvulus (GDV), you only need to obtain a right lateral radiograph," says Dr. Pease. "Visualization of the pylorus in the craniodorsal abdomen on a right lateral radiograph is pathognomonic

>>> **Positional radiography** can be used to evaluate for free gas in the abdomen. Since an air-fluid interface is needed to help to see gas within the peritoneal space, a horizontal beam projection with the patient on its left side and a ventrodorsal projection will put the gas in the right lateral abdomen near the pyloric antrum. Since the pylorus is small, the gas accumulation will be identified caudal to the diaphragm. *(Radiograph image courtesy of Dr. Anthony Pease)*

Hot tip: Is that fluid?

Don't even bother trying to evaluate small intestinal wall thickness on survey radiographs! Since soft tissue and fluid are the same opacity, "It's impossible to know whether the structure you're seeing is a thick wall or just a combination of fluid summing with the small intestinal wall," says Dr. Pease.



for a GDV. Numerous times people have been fooled by the normal appearance of the ventrodorsal projection and missed the volvulus.”

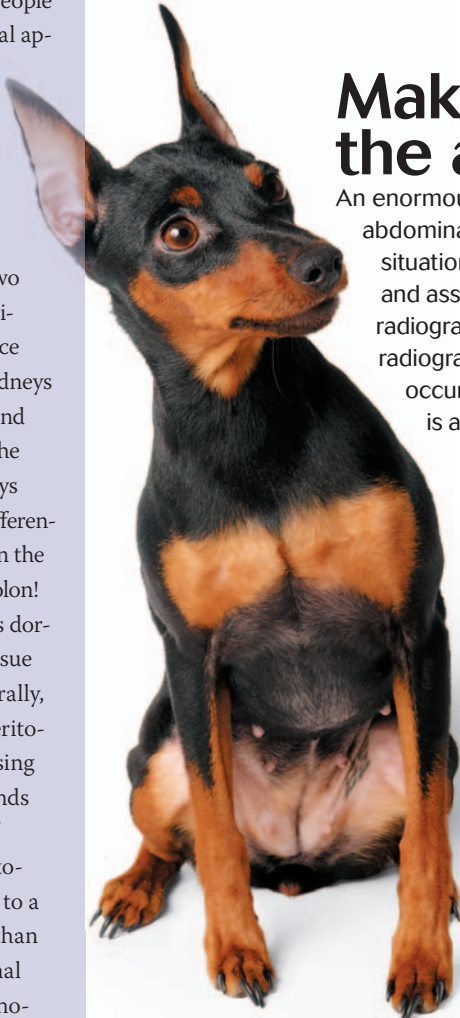
4 Look to the colon

The abdomen is divided into two spaces, peritoneal and retroperitoneal. The retroperitoneal space contains the adrenal glands, kidneys and sublumbar lymph nodes, and the peritoneal space contains the remaining organs. Dr. Pease says this will help determine the differentials for a mass or for gas within the abdomen. How? Look to the colon!

The retroperitoneal space is dorsal to the colon. So if a soft tissue mass displaces the colon ventrally, then the mass is likely retroperitoneal, indicating it is either arising from the kidneys, adrenal glands or sublumbar lymph nodes. If gas is present in the retroperitoneum, this is likely secondary to a pneumomediastinum rather than a rupture of the gastrointestinal tract or other causes of pneumoperitoneum.

A final take

“Although technology continues to evolve diagnostic methods, radiographs are still useful to determine if a surgical obstruction or mass is present—or can at least provide a general overview of the abdomen,” says Dr. Pease. “And while barium contrast medium has largely been replaced with ultrasonography or exploratory laparotomy, abdominal radiography can work with abdominal ultrasonography to augment and further characterize findings when it comes to patients with acute abdominal pain.”



SWIPE RIGHT

For these hot ticket radiography systems, that is! Get the hookup or fall in love with your perfect match at dvm360.com/radiography.



Making the call on the acute abdomen

An enormous amount of information can be obtained from an abdominal radiograph, especially in emergency/critical care situations. GI issues are a common occurrence in the ER and assessment of these cases typically involves imaging, radiographs and/or ultrasound. While obtaining abdominal radiographs is a common and somewhat uncomplicated occurrence, the interpretation of abdominal radiographs is anything but, says Seth Wallack, DVM, DACVR.

Of all the imaging modalities, radiographs are the most ubiquitous and most difficult to interpret, Dr. Wallack says. Radiographs have poor contrast and spatial resolution when compared with ultrasound and CT, but there are certain subtle radiographic principles, or roentgen findings, that should not be missed in an ER situation, he says.

Wanna get FAST-er when it comes to emergency care? Don't miss the critical care sessions at **CVC Virginia Beach** on Thursday, May 12, 2016. Critical care specialist Garrett Pachtinger, VMD, DACVECC has sessions like “The top 20 emergency medicine pearls” and “Acute abdomen and the FAST approach.” You don't want to miss it! Goto thecvc.com/vb for more details and to register now.



ER: Front to back

You'll rarely face a more panicked person than the pet owner with an emergent pet. While you're confident you'll be able to effectively triage the pet and offer the best care, are you positive you've prepared your front office team to handle the special kind of crazy that happens to pet owners when their pets' lives are in danger? The right client care can make a lasting impression, regardless of the outcome of the pet. Consider training your team with these sample cases from *The Veterinary Receptionist's Handbook*, which we've packaged into this handy team tool—scan to download it now.



TEAM TRAINING TOOL dvm360

Practice three emergency situations

Discuss each of these scenarios. Review your practice's protocols and brainstorm the correct responses for each client.

Case 1: The doctor is in

1 Your walking room is full when Mr. Ford rushes in carrying the limp form of his dog. "My dog has hit by a car!" he shouts.


2 First, don't panic. If you do, you will only increase the pet owner's fear. Stay in control and immediately take appropriate action—put your emergency plan into effect. Remember, your emergency plan will vary among hospitals. In some cases, the technician will assess the patient, and in some practices the doctor will be notified immediately. So discuss your practice's preferred policy. Here's an example emergency drill:

3 The doctor examines the pet and decides whether it needs immediate attention or is stable enough to wait a few minutes.

4 Separate the panicked owner from the pet. You might try to comfort and reassure the client in the lounge or an empty exam room, offering a drink of water or a cup of coffee. This is a good time to get the client's name and pull the pet's file for create a new case.

5 The doctor will likely be ready to give a brief status report on the pet by the time you've finalized your paperwork with the client.

Write your clinic's emergency plan here:



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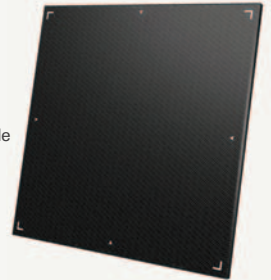
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THE RED 

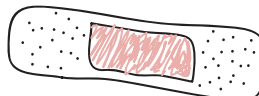
Dr. Wardlaw's recommended starting dosages (which she says will likely change as more research is published and we learn more):

ARTHRITIS

Start at 6 to 8 J/cm²
every other day for two weeks

WOUND HEALING

8 J/cm² once a day
for seven days



TENDONITIS

6 J/cm² every other
day for two weeks

Laser therapy. We don't know exactly how it works just yet, but we know it does work—just ask the technician in the laser therapy room using it on herself (shhhhh!). We still also don't really know what all it can help with, but let's see what we can find out.

How lasers (might?) work

Not to be persnickety but very few laser studies have been done in dogs and cats. The rest of the information is extrapolated from work with humans and horses. So much of the information, when applied to dogs and cats, should be considered anecdotal.

Generally, lasers are used to speed wound healing, which includes surgically induced wounds (incisions), and to decrease pain. In treating the tissue around a wound, the treatment with the laser is not doing anything new to the tissue, it is just speeding up the normal repair process. (Hint: This is why you never use lasers near neoplasia—cancer doesn't need any help speeding up!) When lasers are used to treat pain, the mechanisms by which they work are thought to be related to the inhibition of neuronal activity and potentially through endorphin release. The end result appears to be blocking pain transmission to the brain.

Dr. Wardlaw uses laser therapy for patients with osteoarthritis, tendonitis, wounds and edema. She quotes a human study on arthritis where some participants got anywhere from two months' to a year's worth of a reduction in pain from arthritis from just two weeks of laser therapy. She also sees great results with surgical and traumatic wound healing and says that you can almost watch the edema disappear from affected areas as you treat them with the laser.

Put lasers into practice

What effective treatment all boils down to is delivering the correct effective dosage to the correct area for the correct amount of treatments. Wavelength dictates how deep the penetration is—different wavelengths determine which processes occur at what tissue level. But keep in mind that some energy is lost when you encounter hair and melanin.

Let's talk diodes. The more diodes, the bigger the treatment area for a single treatment cycle. The number of diodes is part of the equation that determines how long it will take you to treat a certain area. And that matters. To you, your employees, the animal (certainly) and the owner. This is where dollars and cents come into play. How long are you going to have to pay for that trained technician (or doctor) to perform the procedure?

Keeping this in mind, financially when it comes to lasers, in general, you get what you pay for. There are inexpensive lasers out there, but it's going to take you a really long time to get an appropriate dosage, says Dr. Wardlaw. For example, if you get a weak laser with a small diode, it may take you 45 minutes to treat a 5-cm surgical incision with the correct dosage of 4 to 6 J/cm². But if you get a more powerful laser with a bigger diode, it may only take you five minutes to treat the same patient.

"The laser bottom line equals this: the differences among commercially available lasers lie only in the wavelength, power density, pulse modulation—and how cute they are," Dr. Wardlaw says.

There are two different ways to administer the dosage: You can administer it in a grid-like fashion, where the delivery is pulsatile and you treat one spot at a time. Or you can administer it in a sweeping motion, where movement is slow but constant. Dr. Wardlaw says the sweeping technique is really good for edema.

You think you know lasers? Do you really?

Did you know that laser is an acronym? Quick, what does it stand for? (No peeking.)

Light amplification by stimulated emission of radiation

But basically, a laser is any coherent beam of light. That is, the light doesn't scatter like it does with a flashlight. The overall classes of lasers are based on how likely they are to damage tissue. How cool, err, hot is that?

Lasers split off into four classes:

- > **CLASS 1** lasers are incapable of causing enough radiation to harm tissue.
- > **CLASS 2** lasers emit visible light and are potentially harmful to tissue if exposed for an extended period. Laser pointers fall into this class.
- > **CLASS 3** lasers—we're starting to get more harmful to tissue; this class has two subdivisions: 3A (visible light) and 3B (nonvisible light). Some therapeutic lasers fall in this class.
- > **CLASS 4** contains surgical and therapeutic lasers. They are nonvisible and are so intense they can start fires (don't worry, you can avoid that).



Dr. Jennifer L. Wardlaw is an ACVS board-certified veterinary surgeon and lecturer. She has a passion for soft tissue surgery,

orthopedics and physical rehabilitation (and binge-watching cartoons—we won't tell!).



Gospel, not greed

A practice management consultant tells it on the mountain: Therapy laser ain't about the money—it's about whether you're sold on the medicine.

"I would never push this kind of service on veterinarians who don't believe in its value," Bash Halow says. "Take a course. Go talk to your friends from college. See what results they're getting in practice."

Practices Halow has visited and worked with are seeing success. Best of all, therapy can be prescribed by the doctor, but technicians can manage the procedures.

"I see the value myself because it was just used on my dog," Halow says. "Because she had a growth removal and she dehiscid and the doctor used it as part of her therapy to heal."

The **geeky stuff** you need to know before you pounce on a laser purchase

When they talk about



JOULES



TIME



WAVELENGTH



FREQUENCY



POWER (WATTS)



EMISSION MODE



DOSAGE

It's referring to

The energy the laser emits

The duration of time it takes for the energy to reach the target tissue—how long does it take to treat that animal in one spot?

The depth of penetration of the laser: blue light = superficial; red = deeper; nonvisible = deeper

The number of impulses emitted per second

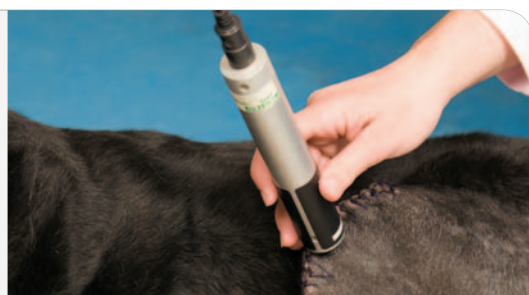
The rate at which the energy is delivered

Continuous or pulsatile

Joules/cm² << The most important thing because, like medication, the dosage needs to be adequate for treatment success

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Treating the wounded: New strategies

Whether your patient's wound scrape by with your management of healthy tissue from Emily Miller

When it comes to wound healing, while the old topical antimicrobials are still around—and will be most likely for some time—other approaches have been gaining attention recently. So do these new strategies live up to the hype? Here's a rundown.

Biosurgical débridement—AKA medical maggots!

These creepy crawlers may make your skin crawl, but they may turn out to be very beneficial in wound management, Dr. Miller says. At the moment they're being studied more in human medicine than veterinary.

Oh, honey

Some claim that honey enhances wound débridement, reduces edema (it's hypertonic to the wound, so it draws fluid out of surrounding tissues) and inflammation, promotes granulation and epithelialization, and has some antibacterial activity. Dr. Miller is reserving judgment. "There is no current data that this is doing better than other wound management strategies," she says. "It sounds great, but is it actually working? I'm not sure."

If you do use honey for treating wounds topically, Dr. Miller recommends that you stick with unpasteurized medicinal grade honey.

Gimme some sugar

Like honey, sugar's benefits seem to arise from its hypertonic character. It's purported to reduce edema, have some antibacterial properties, accelerate sloughing of any devitalized tissue and promote granulation of the wound. The main challenge? Experts recommend using a 1-cm-thick layer over the wound to be effective. Talk about messy!



Circling the drain

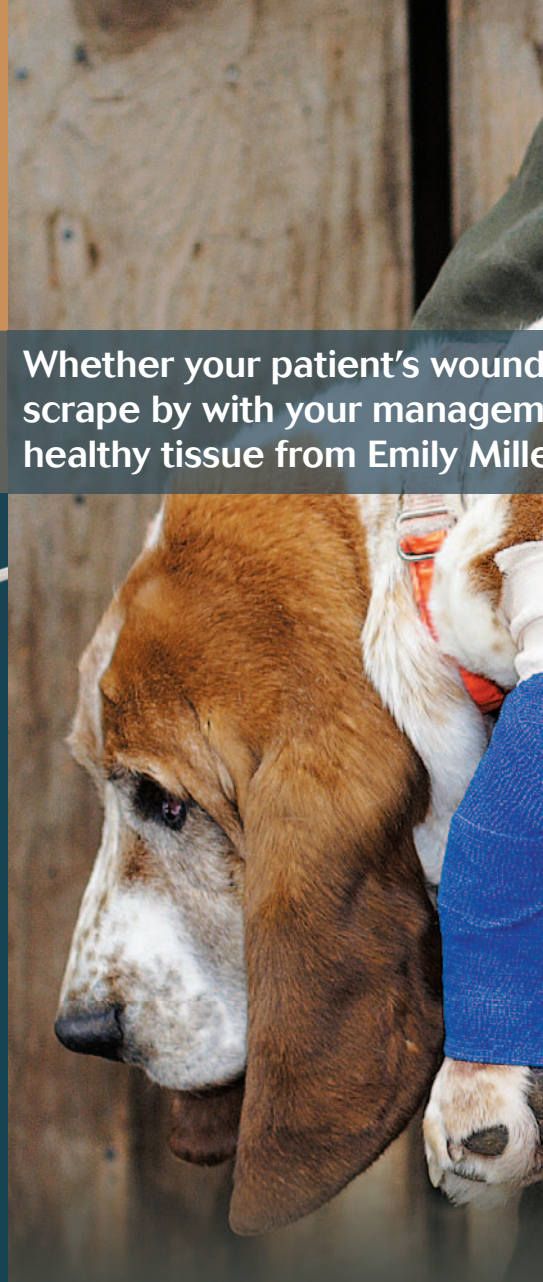
Another goal for wound-healing therapy is to provide adequate drainage. What's new here is ... are you ready for it? Vacuum-assisted drainage! This negative-pressure technique uses open-cell sterile polyurethane foam that can be trimmed to the wound size. This is then sealed to the wound with an adhesive drape to which a vacuum is attached. The vacuum-generated pressure draws the wound fluid into a reservoir.

Applying subatmospheric pressure (negative 125 mm Hg to be exact) is thought to increase blood flow to the wound tissues, increase the speed with which granulation tissue forms and reduce microorganism numbers (although this effect has not been reproduced). A significant benefit is that this method of wound treatment allows for bandage changes every two days or so, depending on how exudative the wound is.

Beyond bandaging

So what's new in bandaging? Two words: *interactive dressings*. These primary (closest to the wound) layers are semiocclusive and nonadherent. They're hydrophilic, helping create the desired moist healing environment, but can cause maceration of normal skin, so they should be applied only to the wound bed. Some can modulate cell activity and growth factor release. They are highly absorbent, which allows a longer time between bandage changes—and that's a beautiful thing. There are two getting attention right now.

Calcium alginate. Made from seaweed, calcium alginate comes in ropes





is the result of surgery or trauma, don't just
ent practices. Here's the latest on promoting
er, DVM, DACVS.

Sewing up your postop education

Help pet owners care for spay-neuter incisions at home.

The veterinary team at Seaside Animal Care in Calabash, North Carolina, uses a client handout that takes a fun approach to postop care after a spay or neuter. "We tell clients when we're reviewing discharge instructions that their pet hacked into the computer and wrote this note," says Ernest Ward Jr., DVM, founder of Seaside Animal Care. "The pet tells about what it went through, which educates clients about the procedure and builds value in what we offer," says Dr. Ward.

Preparing the handout takes the team about three minutes. They store a template for the form in a word-processing program. On the "big day" team members take a photo, place it in the document, type in the pet's name and click "print." Download the form at dvm360.com/mybigday.

and sheets for different wound types. It stimulates granulation and epithelialization. Fair warning: When it's doing its job, over time it turns into a viscous, jelly-like substance against the wound and secondary bandage layer, so it needs to be rinsed off. It can be used during inflammatory and repair phases of healing. Depending on how exudative the wound is, bandage changes should occur every one to five days.



Polyurethane foam. This material is even more absorbent than calcium alginate, is comfortable for the patient and promotes epithelialization and wound contraction. It conforms well to wounds and can be used as a filler in deep wounds. However, it can result in reduced granulation tissue formation. It also can be used in the inflammatory and repair phases of wound healing and again, depending on the amount of exudate a wound is producing, this dressing needs to be changed every three to seven days.

FROM YOUR VETERINARIAN dvm360



My big day

By fluffy melanie

Today was a very special day for me. I had an orchiectomy, or "neuter" surgery, performed by Dr. Ward at Seaside Animal Care. This will help protect me from getting prostate cancer and other bad things when I get older. My day started early when Dr. Ward and his nurses made sure I was OK to have surgery. They bandaged me carefully and then took some blood samples for tests. Dr. Ward said he would run a complete blood count (CBC) and would check for any problems that he couldn't see on my outside. It only took a second and didn't hurt at all. Next, a nurse came and put a tiny needle in my arm called a catheter and hooked it up to a machine called an infusion pump. She was very gentle, and I didn't even know what she was doing until it was over! They gave me fluids to my arm and then they gave me something that made me feel sorta sleepy. They were all very nice and kept telling me how good I was being.

Dr. Ward came and told me that I was going to get very sleepy and that when I woke up, the surgery would be over. He told me that a nurse would wash me during the surgery and computers would check my heart rate and rhythm (with an ECG machine), the oxygen levels in my blood, and how strong my pulse was (with a pulse monitor), and make sure I was breathing OK. He said I would have a breathing tube in my mouth for oxygen and something else I think he said I was (whatever) and that it might make my throat a little hoarse when I woke up. He said I would ever have any pain, since I was asleep! He gave me an anesthetic in the catheter, and I didn't want to sleep. It seemed like only a few minutes, but when I woke up, it was almost nighttime! I had a little bandage on and, boy, was I hungry! The nurse came in and asked if I was OK and wanted to know "You said I didn't have a pain since the night before. She also gave me something for any pain I might be having, though. I like really good!" Dr. Ward came in a little later to check on me, and I was getting really sleepy by then. He said the nurse called my family earlier and that they said they loved and missed me. He said I could go home tomorrow—if I promised to be good! >>>

serrymcass
Courtesy of Dr. Ernest Ward Jr., Seaside Animal Care, Calabash, North Carolina

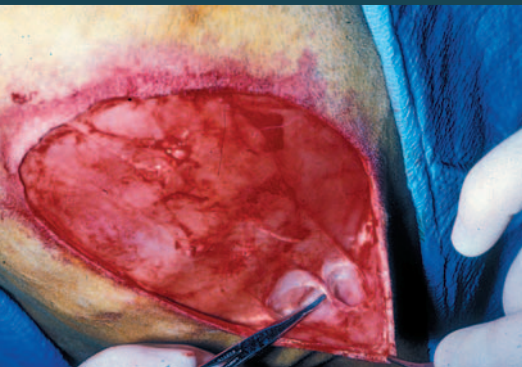


IMAGE COURTESY OF DR. STEVE SWAIM

Get great closure

When you have a funky-shaped or just downright huge wound area, visit dvm360.com/woundrepair to find a list of handy reconstruction tools—multiple punctate relaxing incisions, full-thickness mesh skin grafts, rotation skin flaps and so many more—all with step-by-step pictorial guides and videos of the procedures presented by Steven Swaim, DVM, MS.



WOUND UP ON WOUND CARE

Browse the latest offerings in tissue-healing products at dvm360.com/wound-careproducts.



A fluid approach to wound fluid

Keep in mind that the goal for treating acute wounds is simple—to relieve any roadblocks to uncomplicated wound healing. In a nutshell, says Emily Miller, DVM, DACVS. “We want to do what we can to foster a happy, healthy wound environment to let this animal’s body do its normal wound-healing thing.”

More and more these days that appears to be fostering a moist wound environment in early healing. For any wound that needs it, surgical débridement is a must, but autolytic débridement has recently been gaining ground, Dr. Miller says. This is the crux of moist wound healing. It’s taking advantage of the body’s own capability to débride wounds.

No longer is wound fluid seen as the enemy. It contains endogenous enzymes that can selectively degrade necrotic tissue, inflammatory cells and phagocytes, Dr. Miller says. Cytokines and growth factors stimulate the formation of granulation tissue,

angiogenesis and reepithelialization of the wound. And wound fluid also provides an ideal environment for phagocytosis to occur by providing optimal pH and oxygen tension.

Patients that undergo autolytic débridement tend to be more comfortable at the wound site because it’s not as painful as surgical or mechanical débridement, Dr. Miller says. However, the disadvantage is significant sometimes—this is a slow process. It may take a couple of days before it becomes noticeably effective.



Dr. Emily Miller is an assistant professor of small animal surgery at the University of Missouri College of Veterinary Medicine in Columbia, Missouri. Her pet rabbit’s name is Marvin.

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Product picks

Take the pain out of pets' senior moments.

1

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Move over, Scotty! The CTX Therapy Laser combines advanced features with a redesigned approach to dosing that gives the user versatility and control over treatments. The CTX features 0.5 to 15 watts of therapeutic power and long-life battery operation, providing flexibility in both treatment applications and locations.

2

PAWS FOR APPLAUSE
Are the pooches at your practice treading too lightly? Could some rehabilitation bring a little bit of spring back to an older pet's step? The AquaPaws underwater treadmill aids rehabilitation, fitness and weight loss of dogs. Hydrotherapy helps pets recover from soft tissue trauma, surgery or chronic illness.

3

JOINT HEALTH
Dasuquin Advanced uses the avocado-soybean unsaponifiables (ASUs), glucosamine and chondroitin sulfate along with *Boswellia serrata* extract, NMXCC95 *Curcumin longa* extract, and alpha-lipoic acid to support joint health. (Don't worry, you don't need to pronounce the ingredients, just know they're in there.)

4

SLIP NOT!
No more slip slidin' through your practice. Wellness PetMat provides a non-slip solution for slippery surfaces around your clinic and in the client's home to ease painful conditions like arthritis or hip dysplasia. The mats are one-inch-thick with rounded or rectangular corners, and are antimicrobial, odor-free and nail-puncture-resistant.

3



4



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dvm360.com/rehabproducts

Nutraceuticals and supplements

dvm360.com/supplementproducts

Pet products and beds

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How to get hands-on with these products

Touch that whatchamacallit. See the endoscope in action. Feel that pet mat yourself in the CVC exhibit hall in Virginia Beach, May 13-15. Register to see the whirligigs, whiz bangs and other cool products in action at thevcv.com/vb.



HELPFUL STUFF



She's dreaming of practice ownership, but why? Could be the path to do medicine *her* way.

Practice ownership? Dream on

No, really. We can't find a practice consultant who thinks a veterinarian *can't* get money to buy or start a practice.

Now it remains a shaky idea to jump into debt because you want to "buy a job." But if you're down with learning about business ownership, here are some starting tips from Jeff Rothstein, DVM, MBA, who has parlayed 20 years' practice at buying, selling and owning veterinary practices in and around the Detroit suburbs. LET'S DO THIS!

> The price is right: Get involved in the valuation process and be sure you agree with the method of valuation and understand what your monthly obligations will be and what you can realistically expect from revenue in your first few years after buying.

> Younger the better: "Buy earlier rather than later, that is, three to five years out of practice," Dr. Rothstein says. Time goes quickly, and the sooner you're able to pay it off, the sooner you can be making a better living.

> All systems go: Dr. Rothstein says practice owners lost in the fun (and furious work) of day-to-day medicine and management can forget to look at the big numbers of their biggest business investment. Don't do that. Dr. Rothstein recommends that once you start or buy a practice, get a professional to value it at least every three years. And always be looking for future buyers.

For more tips, go to dvm360.com/dreamon.



Remain glued to your phone—in the name of helping pets!

Do you feel like your phone is an extension of your body? Can't sleep at night unless it's right next to you on the nightstand? OK, maybe not *that* far, but here are four excuses reasons to keep your phone nearby, courtesy of Mary Carr, DVM, in Lombard, Illinois.

"My smartphone is an important diagnostic tool. I use a flashlight application to check for the dazzle reflex. I use the camera to snap photos of lumps, sores or bald patches so I can show owners any changes at the next visit. I also email photos to local specialists for quick input on tricky cases. And I use the Cardalis (Ceva Animal Health) app to measure patients' respiratory rates, while the stopwatch is a handy way to measure patients' heart rates."

Don't tick people off

Ticks: these little bloodsuckers, which prey on pets and people alike, are probably a regular topic of conversation at your clinic. But what happens when your clients

start asking about their weird bulls-eye rash, flu-like symptoms or tick bites? Here's where this handout comes in. With information from the CDC, it outlines what symptoms of tickborne illness look like—so you're never caught unprepared.



Scan the code to download the handout or find it at dvm360.com/ticksymptoms.





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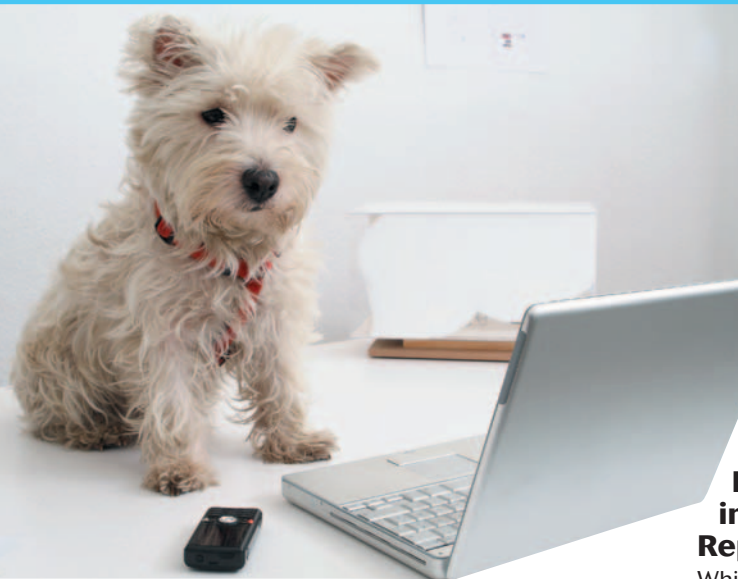
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Um, what do you mean I can't bring my dog into Banana Republic?!

While the temptation to take that adorable, new, not fully vaccinated puppy to places like pet supply stores is strong, remind pet owners that there may be better, safer places to shop with their pooch to get some early socialization. Use the handout above to help them choose places to practice the socialization exercises you recommend.

One note: Remind your clients to plan socialization with other dogs strategically and with advice from a veterinarian or your preferred veterinary behavior expert.



Scan the code to download the handout or find it at dvm360.com/socialize.

FROM YOUR VETERINARIAN dvm360

Where can I shop with my pet?

Ready for a socialization exercise? Check out these canine-friendly stores that allow you to bring your pet when you shop.



<input checked="" type="checkbox"/> Half Price Books	<input checked="" type="checkbox"/> Pottery Barn
<input checked="" type="checkbox"/> Gander Mountain	<input checked="" type="checkbox"/> Hallmark
<input checked="" type="checkbox"/> Academy	<input checked="" type="checkbox"/> Bass Pro Shops
<input checked="" type="checkbox"/> Michaels	<input checked="" type="checkbox"/> Barnes and Noble
<input checked="" type="checkbox"/> Hobby Lobby	<input checked="" type="checkbox"/> Macy's
<input checked="" type="checkbox"/> Ross	<input checked="" type="checkbox"/> Gap
<input checked="" type="checkbox"/> Sephora	<input checked="" type="checkbox"/> Old Navy
<input checked="" type="checkbox"/> Tiffany & Co.	<input checked="" type="checkbox"/> Restoration Hardware
<input checked="" type="checkbox"/> Bath and Body Works	<input checked="" type="checkbox"/> Tractor Supply Co.
<input checked="" type="checkbox"/> Home Depot	<input checked="" type="checkbox"/> The Apple Store

Note: The stores listed here have a policy to allow pets, but the final call is up to the manager of each branch. So it's a good idea to call ahead before you visit to make sure the store's manager is as dog-friendly as their corporate policy.

GETTY IMAGES/JUNOPHOTO

We know you hate the Internet. Guess what? You still have to Internet.

You've heard it a million times before. You need to meet pet owners online. (Ew, no, not like that!)

But seriously, who has time for this crap? We asked Bash Halow, BA, CVPM, LVT, partner at Halow Tassava Consulting, and he strongly recommends that you maintain and manage your online presence—no matter how simple or how complicated—with data analysis.

"At the very minimum you should understand what specific online analytic data points mean," he says. "You don't have to be an expert to improve your practice's online visibility, but understand enough about it so that you can successfully manage someone else who can."

In his session at CVC, Halow was sympathetic to the plight of harried practice owners: "I know you don't like the idea of another big 'to do' item." Learning about and implementing a new program can be time-consuming and complicated. But with change comes inspiration, and today's potential online to find and keep new clients and grow your practice is enormous.

Can't do it alone? You don't have to. Visit us at CVC Virginia Beach, Kansas City or San Diego for lively practice management courses with Bash Halow as well as interactive sessions on social media, websites and online reputation. Head to thecvc.com/vb to learn more and register.



Be a leader in 4 minutes or less

Surprise: You don't need charisma to be a great leader. Be your "authentic self" as a leader in your veterinary hospital and see what happens. (Unless your authentic self is horrible, and then watch this video to fix yourself, please.)

Our brilliant practice management contributor, Shawn McVey, lays down the laws of leadership in this clip.



Scan to watch McVey drop knowledge.



HELPFUL STUFF



Dubious pet owners? Flip some lip (and other ways to get them to say yes to dental care)

Dr. Dave Nicol has had great success getting clients to agree to dental care for their pets. Here's a hot tip from the great Scot of the veterinary world.

Show 'em the pus. Really!

It's always hard to get clients to pay for something they can't see or understand. Dr. Nicol says to flip that (pet's) lip and apply gentle pressure so clients can see blood or pus to really put things in perspective.

Nicol is a veterinarian, entrepreneur, writer and practice management consultant based in Sydney. (Innovative and international thinking. Need we say more?)

Scan to watch Dr. Dave Nicol's advice now.



My kitten is cute, but I'm exhausted

Kittens can be adorable, insane bundles of energy come nighttime. Veterinary behaviorist Dr. John Ciribassi discusses tips for clients exhausted by their new pals.

>>> Ignore attention-demanding behavior. Advise owners that it would be a mistake to get up and feed the cats or give them attention—this just reinforces the problem.

>>> Kitty Kongs placed around the home can also minimize the need to bug the owners in the morning.

>>> Owners can set an alarm clock for a morning wake-up, starting at a time before the cat typically wakes them up. When the

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alarm goes off, they can feed the cat or give it some attention. They can repeat this for a few mornings and then gradually move the alarm's timing later and later (30-minute increments



Scan the code or go to dvm360.com/4am for more behavior tips.

would be a good goal) until they reach the time they actually want to get up. This way, the kittens associate getting up with the sound of the alarm—and not random activities by the owners—as a possible indicator of their waking.

8 tips to catify your cat housing

Use these ideas from Heather Lewis, AIA, to help your feline friends stay calm (and safe, and even sane) when they stay with you. Some don't cost a dime or require any changes to your housing. And some require a little more. Dare to dream, people!

1. Not the ground floor

If you have the choice between a cage that's low and a cage that's high, pick the high one. Cats like to be up. (Photo courtesy of Morningside Animal Hospital.)



2. The sweet smell of home

Encourage pet owners to bring in a blanket or some other personal item from home that smells sweetly of security. (Photo courtesy of Cary Street Veterinary Hospital.)



GETTY IMAGES



3. An end to the staring contest

If your cat wards line both sides of a room facing each other, look for a creative way to block the view. You could pull in a screen or hang a hospital grade curtain. Maybe install a fish tank. (Can't blame us for dreaming cat dreams.) Also—avoid realistic images of cats on the walls for the same reasons. *(Photo courtesy of Veterinary Medical Center of St. Lucie County.)*



4. A little decor

Find someone with sewing skills to make little curtains that can attach with Velcro to horizontal cage bars. When you have a cat that's freaking out, a little curtain to hide behind can be just the shelter he or she needs to calm down. *(Photo courtesy of Heather Lewis.)*



5. A quiet upgrade

Many manufacturers now offer cage upgrades that minimize the noise of the latch. Check into options for your existing cages. *(Photo courtesy of The Mason Co.)*



6. A realignment

If your cages have vertical bars, consider replacing them with doors that have horizontal bars, which give your cat visitors an unobstructed view out. *(Photo courtesy of Snyder Manufacturing.)*



7. Better, bigger digs

Housing that gives each cat more room really does make a difference in the level of stress your feline visitors experience. New condos that take this thinking into account offer each cat a space that's about 30 inches square rather than 18 inches square, which used to be standard. Also, keep in mind that cats prefer matte finishes to shiny finishes in their surroundings. *(Photo courtesy of Olde Town Pet Resort.)*



8. Your brilliant idea

We know you're looking for ways to keep cats happier in their housing. Send us your "cut the cat fear" idea (and a pic) and we'll share it! Email dvm360@advanstar.com or scan the code to send your idea.



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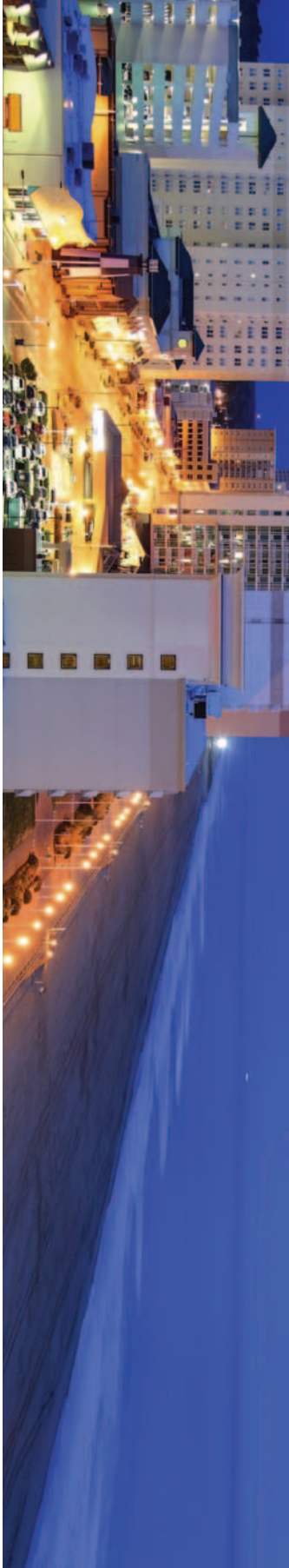
Heather Lewis, AIA, NCARB, is a partner at Animal Arts, an architecture firm in Boulder, Colorado. She's a lighting geek and a (seriously) devoted advocate of minimizing pets' stress and anxiety during their veterinary visits. She has designed practices and shelters that range in size from 1,200 square feet to 110,000 square feet. During grad school (as a break from "architorture") she trained miniature horses to pull carts! #awwww



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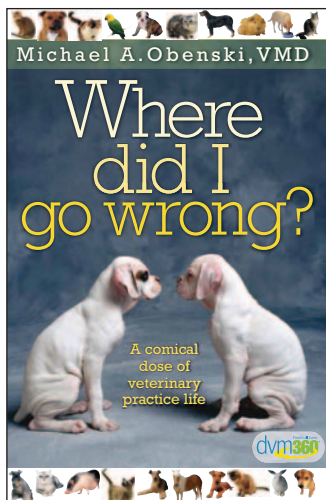
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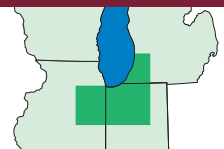
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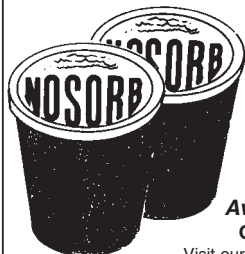
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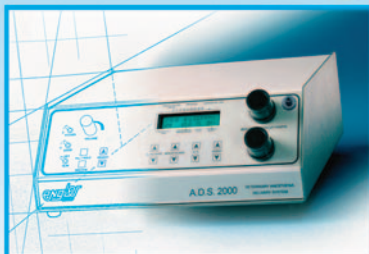
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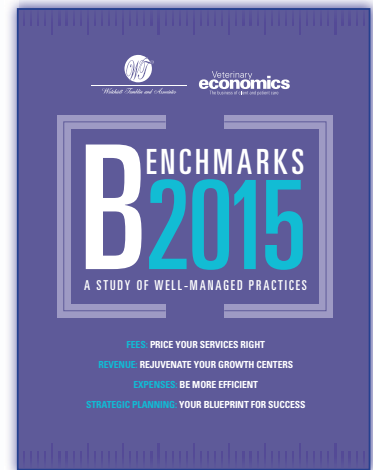
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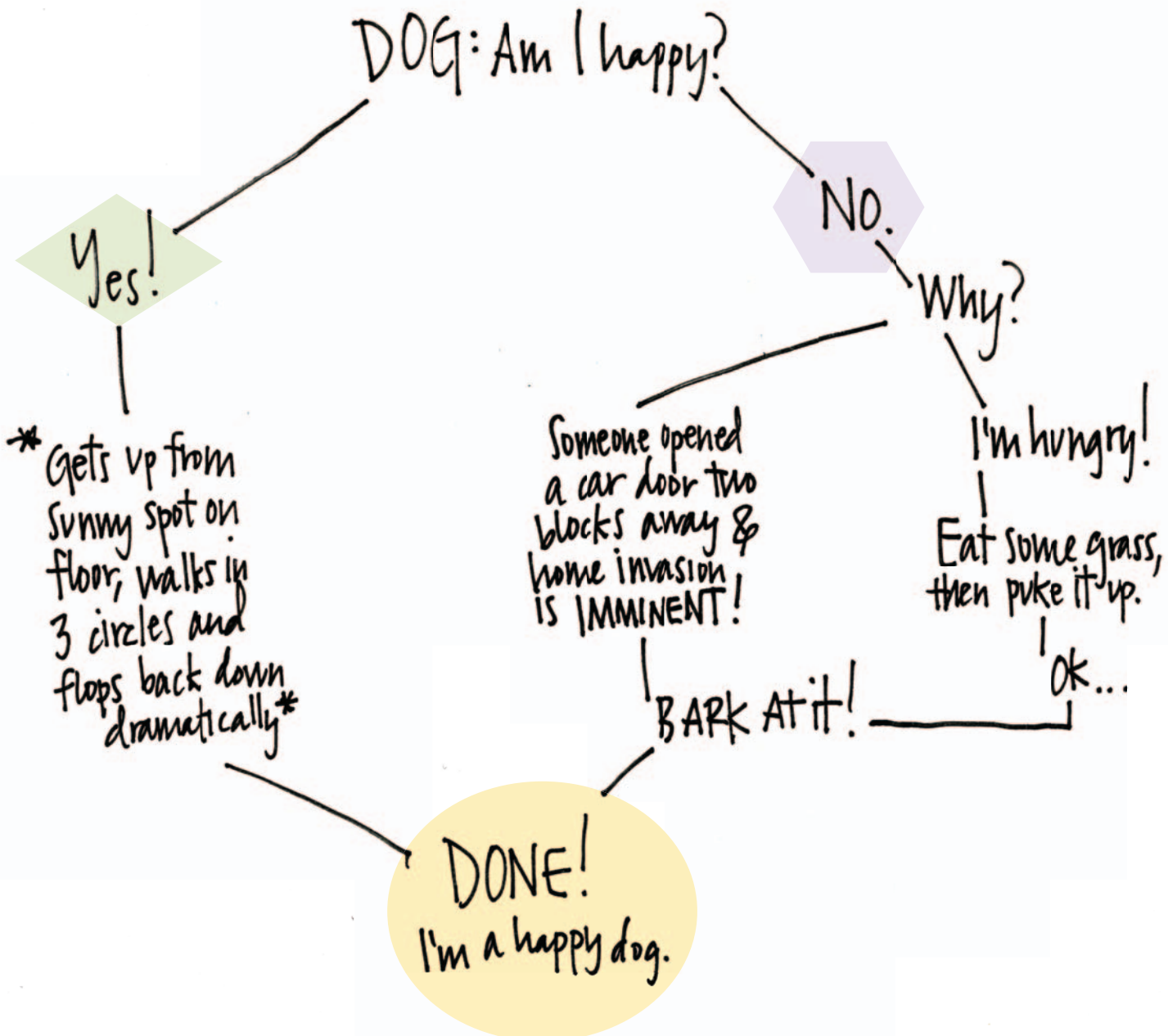
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