

vetted™

Because practice ain't perfect.



Only **3**
things in
life are
certain ...
p 24

dvm 360
**leadership
challenge**

Every **obese
pet** is a rehab
case in the
making
p 4

5-fluorouracil:
Lifesaving,
and **deadly**
p 6

Tips: Better,
faster dermatology
exams
p 16

Divorce
and selling
a practice
p 17

Ballpark
estimates
for your **new
hospital**
p 18

MISSION:NUTRITION

Clients feeding
homemade or raw?
Drop the judgment

p 10



Bust myths
on pet food
labels ... with
Instagram **p 2**



30 YEARS

OF VETERINARY EXCELLENCE

Atlantic Coast Veterinary Conference® is celebrating 30 years this year in Atlantic City!

With over **250 sessions** and **21 hours of RACE-approved CE**, there will be something for everyone in the practice.



REGISTER TODAY AT ACVC.ORG

THE GUIDE

August 2019

**Bust myths
on pet food
labels ... with
Instagram**



2

Every **obese pet** is a rehab case in the making **pg 4**

Tips: Better, faster **derm exams** **pg 16**

Divorce and a practice sale..... **pg 17**

Ballpark estimates for your new **hospital** **pg 18**

Vetted™

Creative

Editor/Business Channel Director | **Brendan Howard**
bhoward@mmhgroup.com

Editor/News Channel Director | **Kristi Reimer Fender**
kfender@mmhgroup.com

Content Marketing Director | **Adrienne Wagner**

Associate Editorial Director | **Maureen McKinney**

Associate Content Specialist | **Katie James**

Associate Content Specialist | **Hannah Wagle**

Technical Editor | **Jennifer Vossman, RVT, CMP**

Senior Director, Digital Products | **Jessica Zemler**

Digital Design Director | **Ryan Kramer**

Content Marketing Manager | **Gabrielle Roman**

Associate Art Director | **Nichollette Haigler**

Sales

Account Manager | **Angie Homann**
913-871-3917 | ahomann@mmhgroup.com

Account Manager | **Kelly Main**
913-871-3872 | kmain@mmhgroup.com

Account Manager | **Emma Pierce**
913-871-3873 | epierce@mmhgroup.com

Account Manager | **Terry Reilly**
913-871-3871 | treilly@mmhgroup.com

Account Manager | **Yousef Elhusseini**
609-716-7777 | yelhusseini@mmhgroup.com

Sales /Project Coordinator | **Anne Belcher**
913-871-3876 | abelcher@mmhgroup.com

Books/Resource Guide Sales | **Kristina Bildeaux**
507-895-6758 | kbildeaux@mmhgroup.com

MultiMedia Healthcare LLC

President | **Tom Ehardt**

Vice President & Managing Director | **Christie McFall**

913-871-3810 | cmcfall@mmhgroup.com

Vice President, Digital Product Management | **Mark Eisler**

Creative Director | **Marnette Falley**

Medical Director | **Theresa Entriiken, DVM**

Fetch dvm360 Director | **Peggy Shandy Lane**

Business Manager | **Chris Holston**

Subscriber Services: Visit dvm360.com to request or change a subscription, or call our Customer Service Department toll-free at 888-527-7008. Reprints: Call 877-652-5295 ext. 121, or write to bkolb@wrightsmedia.com. Outside the US, UK, direct dial 281-419-5727 ext. 121. **Books and Resource Guides:** Visit industrymatter.com. **List Rental Sales:** Call Anne Belcher at 913-871-3876, or write abelcher@mmhgroup.com. **Editorial Offices:** MultiMedia Healthcare LLC, 11140 Thompson Ave., Lenexa, KS, 66049; 913-871-3800. **Websites:** dvm360.com; fetchdvm360.com

Vetted (USPS 535170, ISSN print: 2469-3987 Online: 2469-3995) is published monthly by MultiMedia Healthcare LLC, Veterinary, 325 W 1st St STE 300 Duluth MN 55802. One year subscription rates: \$60 in the United States and Possessions; \$72 in Canada and Mexico; \$97 in all other countries. Single issue orders: \$18 in the United States and Possessions; \$22 in Canada and Mexico; \$24 in all other countries. Periodicals postage paid at Duluth, MN 55806 and additional mailing offices. POSTMASTER: Please send address changes to Vetted, P.O. Box 6087, Duluth, MN 55806-6087. Canadian GST Number: R124213133RT001. Publications Mail Agreement Number: 40612608. Return undeliverable Canadian addresses to: IMEX Global Solutions, P.O. Box 25542, London, ON N6C 6B2, Canada. Printed in the U.S.A. © 2019 MultiMedia Healthcare LLC All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical including by photocopy, recording, or information storage and retrieval without permission in writing from the publisher. Authorization to photocopy items for internal/educational or personal use, or the internal/educational or personal use of specific clients is granted by MultiMedia Healthcare LLC for libraries and other users registered with the Copyright Clearance Center, 222 Rosewood Dr. Danvers, MA 01923, 978-750-8400 fax 978-646-8700 or visit <http://www.copyright.com> online. For uses beyond those listed above, please direct your written request to Permission Dept. fax 732-647-1104 or email: JFrommer@mmhgroup.com. MultiMedia Healthcare LLC provides certain customer contact data (such as customers' names, addresses, phone numbers, and e-mail addresses) to third parties who wish to promote relevant products, services, and other opportunities which may be of interest to you. If you do not want MultiMedia Healthcare LLC to make your contact information available to third parties for marketing purposes, simply call toll-free (866) 529-2922 between the hours of 7:30 a.m. and 5 p.m. CST and a customer service representative will assist you in removing your name from MultiMedia Healthcare LLC's lists. Outside the United States, please call (218) 740-6477. Vetted does not verify any claims or other information appearing in any of the advertisements contained in the publication, and cannot take responsibility for any losses or other damages incurred by readers in reliance on such content. Publisher assumes no responsibility for unsolicited manuscripts, photographs, art, and other material. Unsolicited material will not be returned. Address correspondence to Vetted, 11140 Thompson Ave., Lenexa, KS, 66049; (913) 871-3800; e-mail dvm360@mmhgroup.com. To subscribe, call toll-free 888-527-7008. Outside the U.S. call 218-740-6477.

MISSION:NUTRITION

Clients feeding
homemade
or raw?
**Drop the
judgment**



10

5-fluorouracil:
Lifesaving,
and **deadly**



6

Only **3**
things in
life are
certain ...

24



Bust myths on pet food labels ... with Instagram

Pet owners are using social sites like Instagram to gain information on how to best care for their pets. This is where you and your clinic come in. *By Shannon Newton*

Oh," your client tells you, with just a dash of superiority, "Bella only eats this brand because it has real meat and less corn. It's labeled 'gourmet,' which means it's the best."

The irony here is that your veterinary client was probably sold that brand through a sponsored ad on Instagram, where over 1 billion people scroll through each month. Now, you'll have to educate your clients on nutrition myths, and you can use the very app they're scrolling through every day to make it happen. Here's how.

Hopefully, you and your clinic have an Instagram account set up. It's super easy to do. (Pro tip: Make sure your clinic's website link is in the bio.) Now, post a photo and add a caption. We've got options for you below, but feel free to exercise your creative freedom as you see fit. Let's get to posting!

Client handout: 3 pet food myths

With so many pet food options, choosing the right diet can be tricky. Help clients with this handout (scan for a free download!)



Myth 1:

Foods labeled "premium" or "gourmet" are always better for your pet.



Caption: Insider tip: Some pet food companies call out other manufacturers for using ingredients such as corn or meat meal, knowing full well that the food's ingredients are not the critical factor. What's important are the nutrients contained in those ingredients. It's also important to know that products with these labels are not required to contain any particular type of ingredient, nor are they held to any higher nutritional standards than other complete and balanced products. Manufacturers, nutritionists and pet owners simply can't predict a food's performance based on its ingredient list because there are too many unknowns: what the exact ingredients are and where they came from, ingredient quality and consistency, how much of each ingredient is present in the food, and the effects of processing. For more info, visit the link in our bio!

Caption: Some manufacturers make unsubstantiated claims about ingredients and manipulate their ingredient lists. For example, some dry food manufacturers tout real chicken, fish or beef as their first ingredient, because the food contains more of this ingredient by weight than any other ingredient. What they don't explain is that "real meat" is mostly water weight, and when the water is removed during the manufacturing process, meat moves way down on the ingredient list. They also neglect to mention that the technical term for "real meat" is mechanically deboned meat, also known as "white slime" (we kid you not). For more information, reach out to us at the link in bio!

Myth 3:

The **order of the ingredients** is the **most important factor** in selecting your pet's diet.



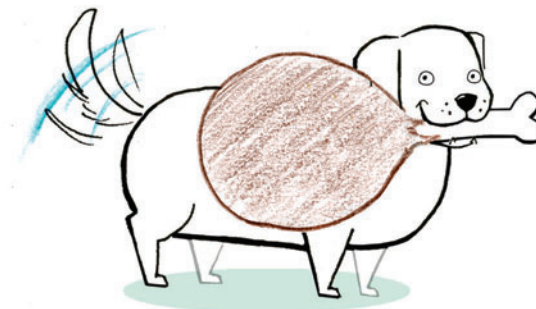
Caption: A pet food label trick that some manufacturers play is called ingredient splitting, where they list different carbohydrates separately—corn, rice, barley, wheat and oatmeal, for example—or list different forms of the same carbohydrate, such as ground wheat and wheat flour. That way, the individual carbs appear lower in the ingredient list. Doing so makes it appear as if carbohydrates are not the first ingredient. For more information, reach out to us at the link in bio!

Not only will this help you connect with your veterinary clients, but it will educate any pet owners who see and grow your brand in the process. Happy posting!

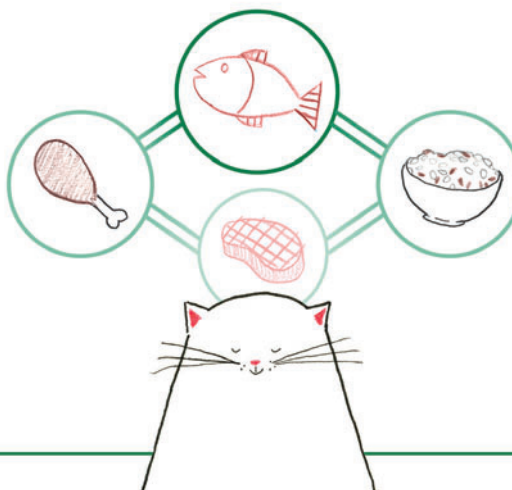
Visit dvm360.com/social for more ideas!

Myth 2:

The **best food** for your pet is one that lists **real meat** as the first ingredient.



Nutrition



Caption: With so many pet food options, choosing the right diet for your pet can be tricky. As your veterinary team, we can help you select the best foods based on knowledge of nutrition and our experience with many pets, ignoring the blizzard of marketing ploys designed to appeal to your emotional needs rather than your pet's nutritional needs. We can help you choose foods based on your pet's physical condition, lifestyle, any disease issues and other related health factors as well as on your preferences. So, before you reach for food you heard about on a commercial, talk with our veterinary team to get a recommendation tailored to the needs and preferences of both you and your pet.



Every **obese** pet is a **rehab case** in the making

The pool of potential cases for rehabilitation services in general veterinary practice is much bigger than you think, says Fetch dvm360 speaker Dr. Matthew Brunke.

When you think about rehabilitation medicine, you're forgiven for thinking it's mostly only for postsurgical, sports dog or working dog veterinary patients. Nope. Fetch dvm360 speaker Matthew Brunke, DVM, DACVSMR, CCRP, CVPP, CVA, implores you to think bigger.

"How many patients do you give carprofen to, or a joint supplement?" Dr. Brunke asks. "How many [patients] in your computer database qualify as obese?"

That's the pool of potential patients to help and the potential revenue to make.

"Those are your fundamentals," he says. Thinking that way, "most of our patients need rehab."

The extra weight could be making patients less comfortable and active. Which therefore harms the human-animal bond.

"Work on aspects of getting better mobility with your patients," he says. "Have frank and honest conver-

sations about these issues [with clients]."

Scan the code below or go to dvm360.com/obesityrehab for Dr. Brunke's pitch for this untapped market of healing patients of pain, improving their mobility and giving clients more time with their pets.





NO TIME TO WASTE WHEN CARE IS CRITICAL



NUTRITIONAL SUPPORT CAN SPEED UP RECOVERY AND IMPROVE PATIENT OUTCOMES*

Introducing the most comprehensive range of liquid diets designed for tube feeding.

✓ EASY TO USE

Start feeding in less than a minute—no mixing, reconstituting or blenderizing for NE and NG tubes

✓ INNOVATIVE CAP DESIGN

Specialized cap for quick and easy syringe withdrawal and usage

✓ CRITICAL NUTRITION

Also includes EPA+DHA and an antioxidant complex

*Brunetto MA et al. Effects of nutritional support on hospital outcome in dogs and cats. *J Vet Emerg Crit Care*. 2010; 20: 224–231. Mohr AJ et al. Effect of early enteral nutrition on intestinal permeability, intestinal protein loss, and outcome in dogs with severe parvoviral enteritis. *J Vet Int Med*. 2003; 17: 791–798.

5-fluorouracil:

Lifesaving, and deadly

This topical drug formulation used to treat human skin cancers is often fatal when ingested by dogs and cats. The worst part? Human health professionals aren't warning their patients about the danger to pets.

*By Rachel B. Song, VMD, MS, DACVIM (neurology),
Eric N. Glass, MS, DVM, DACVIM (neurology),
Marc Kent, DVM, DACVIM (neurology)*

"Stat to the lobby! Stat to the lobby! You run out to find Mr. Smith, one of your most valued clients, with

tears running down his face, holding his seizing teacup Yorkie, Minky, in his arms.

"How long has she been like this, Mr. Smith?" you ask as your technician whisks the seizing dog away to the treatment room.

"About 20 minutes. I tried to get here as fast as I

could!" Mr. Smith cries.

"Don't worry, we'll get her stabilized as best as we can," you reply as you race to treatment.

Intravenous catheter placed, you find yourself giving multiple doses of diazepam, then phenobarbital, to no avail. You give a bolus of propofol that finally stops the seizure long enough for you to talk with the client.

"Mr. Smith, what was Minky doing today? Is there anything she could have gotten into?"

Mr. Smith reaches into his pocket and pulls out a chewed tube of topical 5% 5-fluorouracil (5-FU) cream and replies, "Well, I did see that she was chewing on this earlier today, but other

You're in the middle of a busy day of appointments at your veterinary hospital when you hear the frantic voice of your receptionist paging overhead:



Figure 1. A tube of the commonly prescribed topical 5-FU cream used for many human dermatological conditions. Note the teeth marks and puncture in the tube causing the cream to ooze out from a dog chewing on the tube. The cream can be fatal upon accidental ingestion by dogs and cats.

Image courtesy of Rachel Song, VMD, MS, DACVIM (Neurology)

than that she was fine. I can't think of anything else that was different today. Please help her! She's all I've got!"

As soon as you see the tube of 5-FU cream, your heart sinks. You realize your chances of being able to help Minky and Mr. Smith today are dismal.

Putting behavior quickies into practice

5-fluorouracil is an antimetabolite chemotherapy agent available in both intravenous and topical formulations for various cancers and precancerous conditions in human medicine. 5-FU acts by binding to and inhibiting thymidylate synthase, which is normally responsible for converting deoxyuridine nucleotides to thymidine nucleotides. The inhibition of thymidylate synthase by 5-FU prevents this conversion, leading to DNA strand breaks and the eventual death of rapidly dividing cells.^{1,2}

5-FU is commonly used in human medicine to treat dermatological conditions such as epidermal neoplasms (e.g. superficial basal and squamous cell carcinomas), actinic keratosis and vitiligo.² Use of topical 5-FU in veterinary medicine is limited, primarily due to its toxicity in both dogs and cats, but rare use has been reported for the treatment of ocular neoplasms in dogs and, anecdotally, for actinic keratosis in cats.^{3,4} Exposure of dogs and cats to topical 5-FU is usually accidental, and the outcome of such exposure is often death.

Ingestion of topical 5-FU is likely to be fatal in both dogs and cats. In dogs, signs of toxicity can start within 30 minutes of ingestion, with rapid progression to seizures and death within six hours.^{5,6} The most common clinical signs following ingestion in dogs include vomiting, tremors, ataxia and seizures.^{5,7,8}



FIND WHAT YOU LOVE. LOVE WHAT YOU DO.

With more than 700 community-based animal hospitals across the U.S.—each as unique as you are—VCA has the right fit to meet your personal and professional needs.

When you make VCA your new home, you'll have access to the resources and opportunities that can only come from America's leader in veterinary care.

- Tap into the expertise of 4,500+ doctors, including more than 600 Specialists.
- Expand your medical horizons through our post-graduate Internship Program and Sponsored Residencies.
- Keep your edge—and learn some new skills—through our award-winning WOOF University™, and free full-day CE events with Specialists.
- Help make the next important medical discovery by participating in our Clinical Studies program.
- Enjoy unparalleled opportunities for transfers and career growth.
- Give back through strong Shelter partnerships and VCA Charities.
- Have brilliant, innovative idea? Develop it in our annual VCA Next competition.

To start your journey with VCA,
e-mail us at recruiting@vca.com.
Or visit us at VCAJobs.com



AT VCA ANIMAL HOSPITALS, WE CARE.

5-FU toxicity in pets

There are several possible mechanisms of neurotoxicity secondary to the ingestion of 5-FU and buildup of its metabolites. Fluoroacetic acid, a metabolite of 5-FU, inhibits aconitase, an important enzyme involved in the conversion of citrate to isocitrate in the citric acid cycle.⁹ This causes inhibition of the citric acid cycle and thus inhibition of oxaloacetate production. Without oxaloacetate, aspartate cannot be produced either, leading to failure of the urea cycle with consequent toxic hyperammonemia.¹⁰

In addition, 5-FU can prevent the conversion of thiamine to its active form of thiamine phosphate.¹¹ Lack of thiamine phosphate prevents conversion of α -ketoglutarate to succinyl-coenzyme A in the citric acid cycle, again inhibiting production of oxaloacetate and ultimately causing failure of the urea cycle.

Shutdown of the citric acid cycle may also further inhibit the gamma-aminobutyric acid (GABA) shunt, which produces GABA, the primary inhibitory neurotransmitter in the brain, contributing to the development of seizures.^{7,9} Histological examinations of the brains of dogs experimentally administered fluoroacetic acid have revealed leukoencephalopathy in the cerebrum due to intramyelin vacuole formation.⁹

Accidental ingestion of 5-FU in pets can occur in many ways. Most commonly, pets chew and puncture the tube containing 5-FU and ingest

the medication (See Figure 1 on previous page). Additional means of exposure include licking an owner who has applied the product on themselves as directed by their physician or pharmacist and self-grooming after inappropriate topical application of 5-FU to a pet.⁵⁻⁷ Consumption of more than 43 mg/kg is uniformly fatal in dogs,⁵ but fatalities may occur at doses as low as 2.5 mg/kg.⁸ In a small patient like Minky, accidental ingestion of just 2 to 3 g of 5% 5-FU cream can be fatal.

What can be done

There is no defined effective treatment for 5-FU toxicosis in dogs and cats except palliative therapy aimed at ameliorating clinical signs. If ingestion is detected early, a veterinarian can attempt to induce emesis and then give activated charcoal orally to limit gastrointestinal absorption. Despite aggressive attempts to limit the amount of 5-FU absorbed, patients may still develop significant gastrointestinal signs, including vomiting and diarrhea, due to 5-FU's pronounced activity on rapidly dividing cell lines, such as the epithelial cells of the intestinal crypts.⁶

Unfortunately, intractable seizures that are unresponsive to typical anti-convulsant therapy occur frequently with ingestion of 5-FU. General anesthesia may be necessary to control seizures, and the patient may require mechanical ventilation and management of elevated intracranial pressure.⁷ Treatments directed at

reducing hyperammonemia (such as oral or rectal administration of lactulose) and thiamine supplementation may be helpful.

Uridine triacetate can act as a direct antidote for human patients with 5-FU toxicosis, as uridine competitively inhibits cell damage and cell death caused by fluorouracil.¹² However, this drug has not been used successfully in dogs and cats with 5-FU toxicosis and is unlikely to be administered quickly enough in veterinary patients to be effective since death can occur within hours of accidental ingestion.

Raising awareness

Despite how frequently topical 5-FU is prescribed to and used in human patients, it's rare for prescribing doctors and pharmacists to provide information about its severe toxic effects in dogs and cats.¹³ It's up to veterinarians to be well-versed in the drug's toxic effects. It is our responsibility to educate pet owners as well as physicians, pharmacists and even the pharmaceutical companies that produce 5-FU to help prevent further tragic deaths in our beloved dogs and cats.

With approximately 38% of American households owning dogs—totaling a population of 76.8 million—it's obvious that there's a substantial risk of dogs being exposed to 5-FU.¹⁴ It's interesting to note that geographical differences may exist in human use of topical 5-FU, with prescriptions more frequently given in sunny states such as Florida, given the higher rates of certain dermatological conditions in those states. Furthermore, it's been suggested that higher rates of 5-FU toxicosis in dogs and cats may also occur in those same sunny states.⁵

As the large population of baby boomers reaches retirement and many retirees move to destinations with year-round warm, sunny environments, we may see an increase in

From the comments on **dvm360.com**

"Frightening situation. Thank you for getting the word out."

5-FU is sometimes used topically for equine sarcoids, and many barns are not great about storing medications. With the number of dogs (and barn cats) roaming around, this is a risk I had not considered."

—mattdurham

the exposure of pets to 5-FU. This makes the dissemination of information and education on the toxic effects of topical 5-FU even more crucial in these states to prevent unnecessary deaths of dogs and cats.

Minky: Case outcome

As for poor Minky, the teacup Yorkshire terrier patient, you estimate based on the size of the tube and the number of punctured areas on the tube from her teeth that she ingested a minimum of 1g of 5% 5-FU. To calculate the total milligrams of 5-FU consumed, convert the percentage of drug per weight of cream into milligrams drug per grams of cream. A 5% concentration of 5-FU contains 50 mg 5-FU per 1g cream. Therefore Minky potentially ingested a minimum of 25 mg/kg dose of 5-FU.

You immediately call poison control, where they tell you the dose is well within the toxic and fatal dose ranges of 5-FU in dogs. Due to her active seizures and now sedated state, you do not think it's safe to decontaminate her stomach. Rather, you send Mr. Smith and Minky immediately to an emergency hospital for further care. Unfortunately, you receive notification from the hospital that Minky was put to sleep after three days of hospitalization because of intractable seizures and hemorrhagic diarrhea.

Consoling a devastated Mr. Smith is one of the hardest things you've ever had to do. Convincing him that he's not at fault for the loss of his beloved companion is even harder, as he sobs on your shoulder, "If only I had known!"

As you hold back your own tears, you look Mr. Smith in the eye and vow to spread awareness of the dangers of this drug to the rest of the medical and veterinary community.

References

1. Menard K, Flexner BK, Glahn A, et al. Concurrent 5-fluorouracil and carboplatin for the treatment of canine carcinomas. *Vet Comp Oncol* 2018;16:590-595.
2. Moore AY. Clinical applications for topical 5-fluorouracil in the treatment of dermatological disorders. *J Dermatol Treat* 2009;20:328-335.
3. Overton TL, Allbaugh RA, Whitley D, et al. A pulse-dose topical 1% 5-fluorouracil treatment regimen in a young dog with corneal squamous cell carcinoma. *Vet Ophthalmol* 2015;18:350-354.
4. Snively NR, Snively DA, Wilson BB. Toxic effects of fluorouracil cream ingestion on dogs and cats. *Arch Dermatol* 2010;146:1195-1196.
5. Dorman DC, Coddington KA, Richardson RC. 5-Fluorouracil toxicosis in the dog. *J Vet Intern Med* 1990;4:254-257.
6. Sayre RS, Barr, JW, Bailey M, et al. Accidental and experimentally induced 5-fluorouracil toxicity in dogs. *J Vet Emerg Crit Care* 2012;22:545-549.
7. FriedenberG SG, Brooks AC, Monnig AA, et al. Successful treatment of a dog with massive 5-fluorouracil toxicosis. *J Vet Emerg Crit Care* 2013;23:643-647.
8. Van-de-Velde M, Simpson J, Bates, N. 5-Fluorouracil ingestion in dogs (abst). *Clin Toxicol* 2018;56:477.
9. Yamashita K, Yada H, Ariyoshi T. Neurotoxic effects of α -fluoro- β -alanine (FBAL) and fluoroacetic acid (FA) on dogs. *J Toxicol Sci* 2004;29:155-166.
10. Mitani S, Kadowaki S, Komori A, et al. Acute hyperammonemic encephalopathy after fluoropyrimidine-based chemotherapy – a case series and review of the literature. *Medicine* 2017;96:22.
11. Cho IJ, Chang HJ, Lee KE, et al. A case of Wernicke's encephalopathy following fluorouracil-based chemotherapy. *J Korean Med Sci* 2009;24:747-750.
12. Ison G, Beaver JA, McGuinnWD Jr, et al. FDA approval: uridine triacetate for the treatment of patients following fluorouracil or capecitabine overdose or exhibiting early-onset severe toxicities following administration of these drugs. *Clin Cancer Res* 2016;22:4545-4549.
13. Glass EN, Song RB, Kent M. Letters to the editor: Toxicosis in dogs associated with ointments containing fluorouracil. *J Am Vet Assoc* 2019;254:787-788.
14. Burns, K. Pet ownership stable, veterinary care variable. *J Am Vet Assoc* 2019;254:181-185.

DIAGNOSTIC IMAGING SYSTEMS
 VETXRAY.COM & XRAYCATALOG.COM
 QUALITY | INTEGRITY | VALUE DIS privately owned since 1983
 Ask About Our **PRICE MATCH GUARANTEE**

DRwizrd PRO
 14" x 17" Wireless Cesium Iodide Flat Panel X-Ray System
NEW!

- Wireless 14" x 17"
- Csl - Pixel Pitch - 139 μ m
- 5 year warranty
- Integrated Dental Software

High Quality without the High Prices
ULTRA 12040HF for small animal

Double Head Probe Mini Wireless Ultrasound

ULTRA 9030HF for equine use

Under \$20k!

DRwizrdEZ **DRwizrd2.0**

Scott@VetXray.com 1.800.346.9729 www.VetXray.com

Clients feeding homemade or raw? Drop the judgment

You may not want to hear it, but clients' interest in unconventional diets isn't going away anytime soon. This veterinary nutritionist says it's time to listen to their reasons and work with them—not shut them down. *By Hilal Dogan, BVSc, CCTP*

Even though it can be frustrating to deal with the misinformation and strange nutritional questions veterinary clients bring to your exam room, simply declaring war on raw or homemade diets is not the answer, says Donna Raditic, DVM, DACVN, CVA. In a recent Fetch dvm360 conference lecture, Dr. Raditic dove deep into the raw food and homemade diet dilemmas we practitioners face daily with clients. The consensus? There is no perfect diet. The solution? Find common ground with clients and work together.

"It's better to approach this on an educated basis and try to build trust with clients," Dr. Raditic says. "Raw and homemade diets are here to stay."

The promise (and perils) of homemade

Here are some guidelines to help you help clients who want to go

homemade with their pets' diets.

Start with the "why?" It's important to understand where your clients are coming from in their desire to feed homemade food to their pets. Dr. Raditic has talked to lots of clients who are:

- > **Worried** about processed foods being toxic because of recent pet food recalls involving melamine, pentobarbital and vitamin D. (Sometimes it helps to explain that human food gets recalled all the time.)
- > **Frustrated** by pet food labels that are difficult to understand and don't contain as much information as human food labels. A pet food label lists ingredients according to weight—this gives no information about how nutritious the food is, the quality of ingredients used or how they've been handled or processed.
- > **Treating** their pets like children.

These clients want to be more in control and extend their own attitudes about nutrition to their animals—whether that's an interest in eating organic, vegetarian or vegan.

- > **Concerned** that pet foods aren't nutritious or healthy—society and the media are telling everyone to avoid processed, packaged products and eat more whole foods and fresh ingredients.
- > **Using** homemade diets when a pet has a medical condition and a therapeutic diet isn't ideal or the pet won't eat the desired diet.

Be a partner, not an impediment.

Some clients need to be supported because they're concerned—and rightfully so. Don't be dismissive or they'll feel that you don't understand them and they can't turn to you for advice. If counseling these clients is not something you can



In *dvm360* we look at the dark side of pet nutrition (mythmongering and irrationality), the bright side (what food does for the human-animal bond), a checklist for evaluating pet food options, and a look at whether pets can eat vegan (Dr. Ernie Ward's response may surprise you!).



With all that's up and coming in the world of pet nutrition (they're feeding their pet what?!), the veterinary team could use all the help they can get. In *Firstline*, we run through nutritional support basics for hospitalized patients, talk you through how to be the best source of pet food info for your clients, and give you a few tips and tricks in between. Go to dvm360.com/missionnutrition to view our complete coverage.



PAIN MANAGEMENT • ANXIETY • HIP/JOINT PAIN • SEIZURE MANAGEMENT •
INFLAMMATION • GI TRACT ISSUES • NEURO-PROTECTANT



Full Spectrum Hemp Oil for dogs and cats that can be mixed directly on food. Made with wild alaskan salmon oil.

petreleaf.com/wholesale • wholesale@petreleaf.com • 844.646.1646

Hot cooking tips

Here are some pointers for formulating and preparing home-made pet diets.

- > Use cooked gram weights. Don't use cups as a unit of measurement, because a "cup" can vary greatly depending on how fine you cut ingredients. Cooked gram weights (you'll need a scale) is the most accurate way to measure food amounts.
- > Make large batches and freeze the food. Put the food in plastic bags and lay them flat in the freezer to save space and have portions ready to go.
- > Keep recipes on hand. Have available complete and balanced homemade diet recipes properly formulated by a nutritionist available for owners of healthy dogs and cats. If clients want more recipes or the patient has special needs, send them to a board-certified veterinary nutritionist.
- > Grind and blend the food, if possible, so pets don't pick out individual ingredients.
- > Avoid Maillard reactions by poaching ingredients, not roasting or grilling. Maillard reaction damages protein structures, which may affect essential amino acids absorption or increase antigen load in the diet.

take on, ask them to reach out to a nutritionist through ACVN.org.

Recognize the need for more nutrition information. In veterinary

"Have you ever eaten raw cookie dough? Eighty-four percent of veterinary clients feeding raw diets have a college education. They aren't stupid." —Dr. Donna Raditic

school, some of us were taught to familiarize ourselves with pet food labels so we could better advise clients. Nope, says Dr. Raditic: "Don't waste your time. They aren't comprehensive enough. You still may not know what's really in that bag of food. This is why consumer demand for transparency and improved pet food labelling is real!"

To demonstrate how unreliable labels or marketing claims can be, Dr. Raditic shares information on diet-testing studies using ELISA and PCR.¹ Over-the-counter (OTC) diets that claimed to contain venison only, for instance, included

other meat proteins such as soy, chicken and beef. In another study using PCR, many diets contained meat sources not identified on the label (due to either mislabeling or contamination).²

"They don't declare everything on the labels and legally aren't required to," she says. "Therefore, selecting between OTC diets is very difficult."

You're better off getting your clients to feed therapeutic veterinary diets or homemade diets, says Dr. Raditic. ELISA testing performed on therapeutic diets showed that they were more reliable. What they said was in the bag was in the bag.

Recognize that these clients really do want what's best for their pets. But they don't always have the knowledge to make it happen. One study showed that 90% of homemade diets on the internet were nutritionally inadequate because they were formulated incorrectly.³ Ideally, homemade diets need to be formulated by someone familiar with the pet and their nutritional needs, which is you, the veterinarian, who then can collaborate with a board-certified veterinary nutritionist.

"Carbs make Bella fat! She has to be on a grain-free diet."

"Calories are what cause pets to become overweight or obese," explained Dr. Raditic. "And whether a calorie comes from a carbohydrate or a protein—and one gram of a carbohydrate or

protein gives you four calories, and one gram of a fat gives you eight calories—it still can make the pet fat. At the end of the day, it's still a calorie."

In other words, the body doesn't label a carb calorie as bad and a protein calorie as good. A calorie is a calorie, and too many calories and not enough burning of calories (exercise) is what leads to overweight and obese pets.

However ... pet food companies aren't inherently evil.

"Pet food companies are poisoning pets and using them as pet food!"

To get everyone on the same paranoid page: Dr. Raditic shares some excerpts from Ann Martin's 1997 book, *Food Pets Die For: Shocking Facts About Pet Food*:

"'Animal protein' in commercial pet foods can include diseased meat, roadkill, and contaminated material from slaughterhouses, fecal matter, rendered felines and dogs and poultry feathers.

"The most objectionable source of protein for pet food is euthanized cats and dogs. It is not uncommon for thousands of euthanized dogs and cats to be delivered to rendering plants, daily, and thrown into the rendering vat—collars, I.D. tags, and plastic bags—to become part of this material called 'meat meal.'"

Dr. Raditic cited a 2019 study that screened 21

over-the-counter (OTC) adult canine diets marketed as limited or single protein source diets for the DNA of 10 different mammalian species.² And while the screening detected the presence of DNA from one or more species not declared on the label in all 21 diets, cats, dogs, rats and mice weren't among the detected species.

"You should be honest with clients that there is a lot of contamination in the pet food industry and that while the industry has agreed not to use dogs and cats in food, it's only an understanding. It's not illegal," Dr. Raditic said. "However, I remind clients that it's a business, and it would not make good business sense for pet food companies to harm dogs and cats. It's just common sense."



The real truth on raw

When it comes to raw, start exactly like you did with the homemade food discussion: Remember to ask clients "why?" and find out more. Find common ground, and don't get defensive or judgmental—like the veterinary students who've shadowed Dr. Raditic.

"Students can be so adversarial," she says. She hears them metaphorically "huffing and puffing," aghast that a pet owner would feed a raw diet. But take a chill pill, she tells them: Do they eat anything raw?

"Have you ever eaten

raw cookie dough?" she asked the Fetch dvm360 audience. "Eighty-four percent of veterinary clients feeding raw diets have a college education. They aren't stupid."

The fact is that there are a number of food companies with Association of American Feed Control Officials (AAFCO)-certified raw diets out there. Pet owners grav-

itate toward them because they look more like real food than kibble.

Dr. Raditic shares some of the possible advantages and disadvantages for raw pet food:

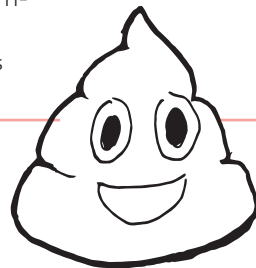
Possible pros

- > Raw foods may be more digestible and bioavailable due to less processing and often have limited ingredients, which may reduce their antigenicity.
- > They may result in less stool output, and owners often report a better coat and a healthier overall appearance.
- > Contamination can be reduced by searing or cooking the outside of meat. Also, pet owners can purchase freeze-dried raw or flash-pasteurized formulations.

Possible cons

- > Some raw diets have an AAFCO-like "statement," but this is not the same as an official AAFCO statement and can be misleading.
- > Some commercial raw diets

The proof is in the poop



How can you know if you're feeding a better diet? The proof is in the poop. "If the dog or cat has better stools, less stool volume and goes less often, you are now feeding a diet with a higher digestibility," Dr. Raditic said. For example, if you have a dog that goes from three bowel movements a day to one after changing its diet, you have improved its nutrition. Some dogs, when put on a homemade diet, will go every other day and owners may be concerned thinking their dog is constipated because having several large stools a day has somehow become tied to good health, so it's a good idea to explain this upfront.



have excess fat content, so read the label because, as you know, pets eating too much fat are at risk of weight gain or gastrointestinal upset.

- > The calcium-to-phosphorus ratio can be high or even off, so caution against raw diets for dogs with orthopedic diseases or growing animals (you're looking for 1:1 or 1.4:1 calcium to phosphorus).

Inevitably, you're going to face that veterinary client whose dog with a food allergy or chronic gastrointestinal problem switched from processed food to raw food and saw a "miracle" change. This could simply be a result of increased nutrient bioavailability and reduced antigenicity, and this probably could've been achieved with homemade as well.

Recommend that your clients read what experts at the Centers for Disease Control and Prevention have to say on the topic, especially with regard to food safety for meals prepared at home.

Hilal Dogan, BVSc, CCTP, practices medicine in Denver, Colorado. She started the Veterinary Confessionals Project as a senior veterinary student at Massey University in New Zealand.

References

1. Raditic DM, Remillard RL, Tater KC. ELISA testing for common food antigens in four dry dog foods used in dietary elimination trials. *J Anim Physiol Anim Nutr* 2011;95(1):90-97.
2. Pagani E, Soto Del Rio MLD, Dalmasso A, et al. Cross-contamination in canine and feline dietetic limited-antigen wet diets. *BMC Vet Res* 2018;14(1):283.
3. Stockman J, Fascetti AJ, Kass PH, et al. Evaluation of recipes of home-prepared maintenance 424 diets for dogs. *J Am Vet Med Assoc* 2013;242:1500-1505.

Additional reading

<https://www.cdc.gov/healthypets/publications/pet-food-safety.html>

Benefits, potential missteps and best practices for *homemade* pet diets

Benefits

- > Clients know exactly what their pet's eating.
- > Pets won't poop as much (but you may need to warn owners so they don't worry); the majority of the nutrients are being absorbed because homemade diets have higher digestibility.
- > Some animals with chronic gastrointestinal issues or multiple chronic disease states do better on homemade diets.
- > Therapeutic food-allergy diets use a novel protein or novel carbohydrate as therapy, and homemade diets can function in the same way.
- > Preparing and serving a homemade diet makes some pet owners happy they can help their pet in this way.

Potential drawbacks

- > Homemade diets can be unbalanced and even harmful if formulated incorrectly.
- > They can cost more.
- > Clients may change a formulation without consulting an expert (for example, replacing olive oil with coconut oil)—a process called "client drift."
- > There are no food trials or nutritional AAFCO analysis reports to help guide feeding decisions.

Best practices

- > Have a board-certified veterinary nutritionist formulate recipes or learn how so you can advise your own clients.
- > Homemade diet instructions should guide the client how to prepare the recipe in batches that can be frozen to save time and money.
- > Combine diets by making one-half or one-quarter of a pet's calories homemade and the remaining calories from a veterinary therapeutic diet. (And now your client has dry or canned food on hand if they run out of homemade.)
- > If clients don't want to go all homemade but still want to feed some fresh foods, give them permission to use fruit as treats or to add veggies to usual meals. Provide lists of fresh food options that can be safely added to usual diets. Clients feeding a homemade diet should have routine physical examinations with full blood and urine testing every six months. Use these visits to review the homemade diet and to prevent client drift.
- > You can send out your client's homemade diet for nutritional analysis by an independent lab.

Tips: Better, *faster* derm exams

By Kate Boatright, VMD

Veterinary dermatologist Darren Dell, DVM, DACVD acknowledges that there are much stricter time constraints on general practice appointments than he experiences in a referral setting, but he encourages veterinarians to go slow and listen to their patients' body language. Because dermatology is rarely a life-or-death situation, it's okay to skip some parts of the examination, such as taking a temperature, Dr. Dell says.

Here are Dr. Dell's top tips for successful dermatology examinations:

- > **Use treats to introduce yourself,** distract pets during the examination and reward appropriate behavior. Have a variety of treats available, including some hypoallergenic ones.
- > **Save the uncomfortable or obvious problem area(s) for last.** Dr. Dell encourages practitioners to tell the client they want to examine these areas last to avoid missing important information that can be found elsewhere in the exam due to becoming hyper-focused on the obvious problem.
- > **In cases where there are no obvious problem areas,** examine the paws and ears last because these are common sensitive areas for many patients.
- > **Don't be afraid to postpone part of the examination** for the patient's benefit. When obvious discomfort or pain exists, such as in otitis externa cases, it is better to treat the pain and recheck in a few days once the patient is comfortable. Don't look at an exam as a win or lose situation, Dr. Dell said. Taking a step back and managing patient comfort with pain or anti-anxiety medications will prevent injury and avoid creating a bad association for the patient between ear handling and pain, thus making treatment more difficult for the client.
- > **In cases where postponement is not an option,** consider a short-acting injectable sedation.
- > **Use medications for anxiety to help prevent damaging the relationship** between the pet and either the owner or veterinarian. Dr. Dell commonly reaches for trazodone and gabapentin and sometimes asks clients to give these medications prior to at-home treatment as well as appointments. He compares the use of these drugs with sedation dentistry to help clients understand the benefit in managing the patient's anxiety.



Client communication tip for food allergy follow-up appointments

It's always difficult to determine the best way to recommend and then charge for rechecks and not have clients balk. We asked Karen Felsted, CPA, MS, DVM, CVPM, her thoughts specifically on food allergy trial rechecks, which she thinks should be charged no differently than anything else.

"Rechecks are tricky because we don't do a good enough job educating why the recheck is necessary," says Dr. Felsted. "The term 'recheck' means nothing to pet owners. What you need to say is, 'We need to have Fluffy back in two weeks to see her ears and skin and make sure the food trial is making a difference.'"

For more tips, techniques and resources, head over to dvm360.com/dermatology.



Divorce

and a practice sale

A veterinary hospital caught in a practice-owner divorce: Here's how we weathered that storm. *By Shannon Newton*

In 2013, our veterinary practice owner at the time graduated with a nonveterinary advanced degree and was doing a lot of public speaking, our part-time doctor was growing her client base and we were seeing good year-over-year growth. Then, in the span of a few months in 2015, our practice owner took a job in industry and put the practice up for sale. Then, we found out that the practice owner was getting divorced and that his ex-wife (also a veterinarian) would take over the business until it sold, although she wouldn't be seeing patients.

Whoa.

Clients were worried. Our staff wanted to jump ship. And the new boss had owned an equine practice but had never practiced small-animal medicine or managed a small-animal hospital.

Little did any of us know we'd be in this difficult holding pattern for almost three years.

I saw my main challenge as keeping our staff intact, so clients would see the same friendly faces

each time they visited while things played out in divorce court. I really didn't have to offer any incentives. I also assured the team that I was sticking things out with them and that they would be the first to know if I felt things weren't looking good for the future.

We have an "open book" policy at the practice, so every team member knows the financial status of our hospital at all times. We have weekly meetings so that we can vote on changes in protocols and air any concerns we have.

I also lead my team with empathy. I know that if something's going on with them personally, they aren't doing their best at work. Self-care and family come first, because you can really burn out in this field. It's extremely important to take time for yourself, so I encourage team members to take a longer lunch or a day off if I see they need it.

My second-hardest task was helping the ex-wife define her role as a would-be nonpracticing practice owner while she worked to

acquire the practice in the divorce settlement. I helped the new owner see that we should stop making rapid changes so that the staff could ease into new ownership. We both worked to keep the drama out of the veterinary clinic and focused on providing healthcare in our loving, upscale environment.

These are all the reasons I think our staff stuck around. The whole staff also truly believes that we practice some of the best veterinary medicine around and didn't want to see Southpark perish. When everyone in the group buys into the mission statement, you're a stronger force.

Southpark happily survived three years of being for sale (including an offer from a competitor who wanted to fold our practice into his) and being the object of a legal tug-of-war.

Shannon Newton is office manager at Southpark Veterinary Hospital in Broken Arrow, Oklahoma. She was also a finalist in the 2018 dvm360/VHMA Practice Manager of the Year contest.



Ballpark estimates for your new hospital

Use this equation to estimate general costs for your new building or leasehold. *By Hannah Wagle, Associate Content Specialist, Katie James, Associate Content Specialist*

Crunching numbers have you screaming obscenities at your calculator? Yeah, we get it. That's why we put together this step-by-step method for estimating building costs for a new freestanding veterinary practice.

(Or skip to the bottom of this article to calculate costs for a leasehold.)

1.

Make a list of every room that you need with the exception of the treatment area.

2.

Assign sizes to each of the rooms on your list. Remember, you're ballparking here. So if you're off a foot or two, it's not the end of the world. Just plow forward. To get you started, you could put your exam rooms on the list at 10 feet by 10 feet (100 square feet)

3.

to work with some round numbers. Make a list of every treatment and induction station that you need.

4.

Assign each treatment station a size of 10 feet by 12 feet, or 120 square feet.

5.

Add the square footages of all the rooms and treatment stations. Then multiply the entire list by 1.5 to get total estimated square footage. (Just as a point of comparison, the average size of winners in the 2019 dvm360 Hospital Design Competition was about 7,000 and the smallest was 2,100 square feet.) Note: This factor (1.5) is greater than an architect would use to make the same calculation, but you may not know exactly how big a room really needs to be—and people tend to underestimate. It's

6.

better to be on the higher end for your early estimates. Now that you have a good guess at square footage for your project, multiply that number by a sample cost per square foot to estimate the construction costs of the project. Keep in mind, the cost per square foot can really vary depending on your region, the materials you pick, your labor costs and so on. So you'll really need to talk with an architect to refine your budget. But

7.

at this stage, let's use \$300 per square foot. Bad news: You're not done. Beyond construction costs, you'll need to pay financing costs and professional fees; buy equipment and furnishings; and set aside some funds for contingencies. A rough rule of thumb is that these costs will run about 35 percent of the construction costs. So multiply your total construction costs by 1.35 and you'll have your ballpark project costs.

Don't worry, we didn't forget you key players going the route of the leasehold. Here's your step-by-step process.

1. Follow steps 1 - 5 above to determine the estimated square footage of your new practice space. 2. Leaseholds cost less per square foot. So multiply your total square feet by \$140 per square foot to get an estimated build-out cost.

Add 35 percent to cover additional costs like financing, equipment and furnishings, and other non-construction costs.



DENTAL



We make dentals easier.

Heal Extraction Sites 30-50% Faster • Help Prevent Oronasal Fistulas

Do you want to:

- fill the void
- encourage rapid healing
- promote healthy bone growth
- provide antimicrobial benefits
- prevent fistulas from forming

Request your FREE sample today!
Call 888.289.1890 or
Visit www.avalonmed.com



Avalon Medical
Innovative Veterinary Surgical Products

MOBILE VETERINARY

“Take care of the little things and the big things take care of themselves.”



La Boit
Specialty Vehicles Inc.

800-776-9984 www.laboit.com

DIGITAL X-RAY

Complete Package

\$495mo / \$29,995.00

- Generator
- Table
- Software
- Computer
- DR Digital X-Ray

vetdigitalxray.com
209-626-1404
5-Year Warranty



vetdigitalxray.com

Portable - Wireless
DR Digital X-Ray
For Mobile or Equine Vets

\$595.mo

\$34,995



SUPPLEMENTS

Pala-Tech™
LABORATORIES

FELINE

CANINE



Tricky Treats™

(All Natural Treat to Hide Medications)

- Packaged for the veterinary clinic.
- NOW labeled for use in dogs and cats!
- Safe for use in all pets – hydrolyzed proteins and no corn, wheat or soy.
- Simplify inventory - only two flavors...
Roasted Chicken and Grilled Duck.

Request a FREE sample of each flavor at
www.palatech.com/trickytreats





SHOWCASE | dvm360.com/products

VISION SUPPLEMENT

Ocu-GLOTM Vision Supplement



FETCH Special!
LEADING VETERINARY VISION SUPPLEMENT
BUY ONE BOTTLE OF OCU-GLOTM AND RECEIVE OCU-GLO PBTM FREE*



See the difference!

- + GLO - Grape Seed Extract, Lutein, and Omega-3 Fatty Acids.
- + Formulated by board certified veterinary ophthalmologists.

ANIMAL NECESSITY[®]
AnimalNecessity.com | 1.800.721.1310

Visit our
Fetch booth #540
for this special Fetch BOGO offer!

* For each bottle of Ocu-GLOTM 90 Count purchased, receive 1 free box of Ocu-GLO PBTM.
Limit 12 boxes. Valid until 8/31/19. Call 1.800.721.1310 to place your order.



Join the pack!

Get instant updates on critical
developments in veterinary
medicine, business and news
by following dvm360.



facebook.com/dvm360

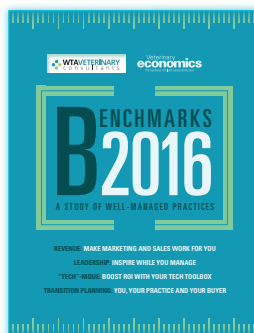
twitter.com/dvm360

Search for the company name you see in each of the ads in this section for FREE INFORMATION!

be like
the best.



**Imitation is sincere flattery.
It's also best for business.**



Veterinary Economics and Wutchiett
Tumblin and Associates are back with their
one-of-a-kind study.

Benchmarks 2016 spotlights increasing
revenue, fusing leadership and management,
taking advantage of technology, and
preparing for transition — helping set the
standard for practices to emulate.

Go to industrymatter.com/benchmarks
or call 1-800-598-6008





DENTAL PRODUCTS

EXOTIC CATS:

Dr. Clayne White, Bayview Animal Hospital –UT
"... has avoided anesthesia induced scaling for four years on exotic cats, including Siberian Tigers & Black Panthers!"

SEE FULL STORY & VIDEO:
petzlife.com/bigcats

DOGS, CATS, HORSES AND DOLPHINS

Use daily directly on animal's gum line to support overall oral health



BENEFITS



No brushing required



Helps reduce inflammation



Veterinarian formulated



Breaks down and removes tartar & plaque from teeth

PROVEN. PROFESSIONAL. ORAL CARE.



VetLife

Visit Us! www.vetzlife.com
 888.453.4682



100% MONEY BACK GUARANTEE



Made in USA
 With Globally Sourced Ingredients

Search for the company name you see in each of the ads in this section for **FREE INFORMATION!**



ANESTHESIA EQUIPMENT

BLUEPRINT FOR BREATHING
Anesthesia made simple... **A.D.S. 2000**
Proudly made in the U.S.A.



Revolutionary Veterinary Breakthrough

- Anesthesia Machine (Positive Pressure)
- Electronically microprocessor controlled
- Delivery & Ventilation for small animal use
- Automatically sets breathing parameters
- Very affordable and easy to use
- Just connect to vaporizer & Oxygen
- Two year parts & labor warranty
- Lifetime loaner service

6 Hour Battery backup providing portability and protection

engler
engineering corporation
In Business Since 1964

1099 East 47th Street - Hialeah, Florida 33013 USA
800-445-8581 - FAX 305-685-7671
www.englerusa.com

ARCHITECTS/BUILDERS

ANIMAL ARTS
architecture
animals
people

800.332.4413
www.animalarts.com

ARCHITECTS/BUILDERS

Specializing in Veterinary Architecture

tc ARCHITECTS

tcarchitects.com
430 Grant Street
Akron, Ohio 44311
(330) 867-1093



PET ID PRODUCTS

MICROCHIPS ONLY \$9.95
FREE LIFETIME REGISTRATION



ISO Compliant
134.2 kHz freq.

Readable by **ANY**
Universal Scanner

www.911PetChip.com
(818) 445-3022 / jon@911petchip.com

TAGS

TAGS

- Available in Colored Aluminum, Brass or Stainless Steel
- Multiple Heart Shapes

\$10 Off
your order of 1,000 or more Rabies Tags
Mention Coupon
Code: **VETTED19**

Call us at:
859-261-6000



NB National Band & Tag Company
INTERNATIONAL IDENTIFICATION INC.
Family Operated Since 1902

tags@nationalband.com
www.nationalband.com

Just visit **dvm360.com/products**



Join the pack!

Get instant updates on critical developments in veterinary medicine, business and news by following dvm360.



facebook.com/dvm360

twitter.com/dvm360



DIAGNOSTIC TESTING

NOSORB™



Easy Urine Collection from Cats

- Nonabsorbent cat litter
- Comes in urine cup
- Easily dispensed or used in hospital
- Clients love it
- Inexpensive, bulk 5lb. tub with scoop
- Readily accepted by cats
- Inert—will not affect test results
- Recommended and used by Veterinary urologists at many Veterinary teaching hospitals

Available through your Veterinary Distributor, or contact:
CATCO, 140 SE 23rd St., Cape Coral, FL 33990 for information

Visit our Web Site at [HTTP://www.bpsom.com/catco/catco.htm](http://www.bpsom.com/catco/catco.htm) for distributor information.

MEDICAL EQUIPMENT

6 YEAR WARRANTY



6 year warranty
on Son-Mate II



Optional

Son-Mate II Scaler / Polisher
Sale Price \$ 1,825



A.D.S. 2000 Anesthesia Machine / Ventilator
Sale Price \$ 5,795



**Tri-Mate (3 units in 1)
Scaler / Polisher / Electrosurge**
Sale Price \$2,755

engler
engineering
corporation



Proudly made
in the U.S.A.

IN BUSINESS SINCE 1964

6 year warranty on Son-Mate
1 year warranty on Scale-Aire
2 year warranty on A.D.S. 1000



Engler Scale-Aire

High Speed Veterinary Dental Air Unit

- 360,000 RPM high speed drill
- 20,000 RPM low speed H.P.
- Built in 25K ultrasonic scaler
- Auto-tune circuitry
- Air water syringe
- On-Demand Compressor (MF)
- H-Frame mobile stand
- Built in water reservoir
- Switching power supply
- Automatic handpiece activators
- Lifetime loaner service
- Proudly made in the USA

NEW
\$4275



1099 East 47th Street - Hialeah, Florida 33013 USA

800-445-8581 / FAX 305-685-7671

www.englerusa.com / www.engler411.com

PRACTICES FOR SALE OR LEASE

NATIONAL

FREE Practice Appraisal from an Accredited CBI with your practice listing. Appraisal in just 3 weeks! Call Rebecca Robinson, CBI at 912-268-2701/ Hello@practicesalesadvisors.com.

FL NEW! HIALEAH- Panda Animal Clinic- Priced reduced- \$800K. Leased Facility.

FL NEW! MIAMI- Under-Contract! Grossing \$1.3Million.

FL NEW! SOUTH FLORIDA- Grossing \$1Million+ \$172 ATC. Owner Willing to Stay On.

FL NEW! NORTH MIAMI- Siegel-TLC Animal Clinic- Grossing \$750K+, Leased Facility.

NC Under-Contract! WINSTON SALEM Area- Grossing \$2Million! AAHA Accredited.

NC Under-Contract! LUMBERTON AREA- Grossing approximately \$1.5M. Well-equipped.

NC Under-Contract! HIGH POINT- Grossing \$800K. \$154 ATC. Owner Willing to Stay On.

NC SOLD! CLINTON- Tram Road Animal Hospital! Grossing \$600K.

TN SOLD! KNOXVILLE Area- Grossing Approx. \$1Million. Commercial Location.

TN Under-Contract! EASTERN TN - Grossing \$1.4Million. AAHA Accredited.

TX WOODLANDS Area- Corporate Sale, Multiple Practices, Grossing \$3.3Million!

TX NEW! ROTAN Veterinary Hospital. Grossing \$600K, with no practice website in place!

SC SOLD! GREENVILLE Area- Prime Commercial Area, 3,000SF Facility.

GA ROME Area- New Website! Spacious Facility. Practice & RE Offered.

GA NEW! COLUMBUS AREA- Grossing \$1Million. Commercial Location.

CA NEW! EAST OF OAKLAND- Grossing \$1.2Million with steady year over year growth!

NY NEW! SOUTHERN NY - \$115 AT. Solo-Doctor. Practice & RE Offered.

WI MILWAUKEE- Well-Equipped AAFP Practice. Grossing \$850K. Owner Willing to Stay On.

NM PRICE REDUCTION! Santa Fe- Seller Motivated!

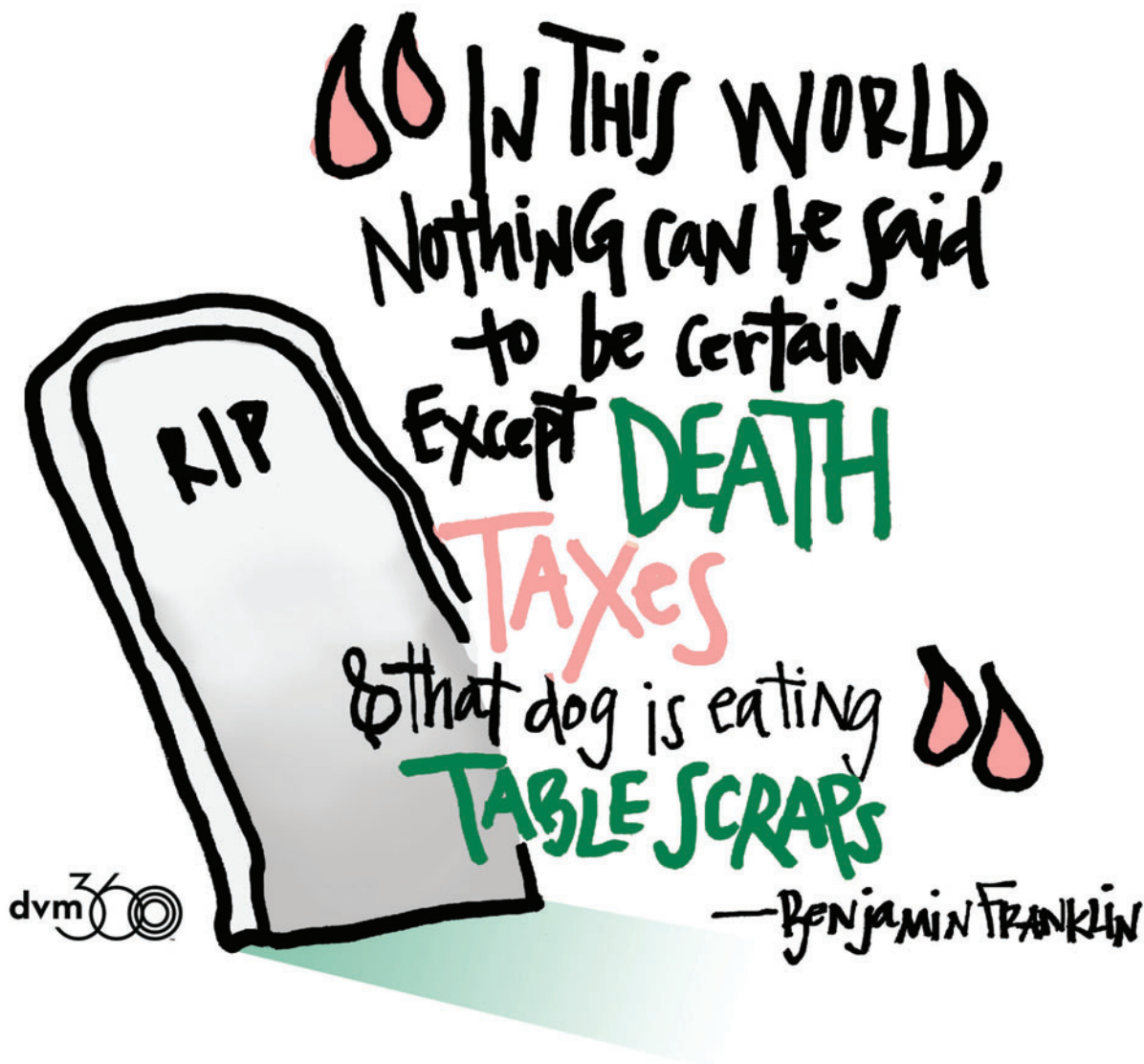


**Get more product
information online**

Researching a purchase? dvm360.com offers hundreds more product listings. Just visit dvm360.com/products



VISIT DVM360.COM/PRODUCTS



So, we might have added that last part in, but let's call a spade a spade: You can almost always bet that as a veterinary professional, you're not getting the full story about what a pet is eating. In this issue of *Vetted*, we've implored you to drop the judgment and be open to clients who may have different takes on pet food, with the goal of building a bond that helps ensure the pet is getting the right nutrition—no matter what. But we hope to get a little chuckle out of you here, because we realize you want to die a little inside every time you hear that the 40-lb pug in exam room three is *by no means* fed the occasional French fry from the table.



30 YEARS

OF VETERINARY EXCELLENCE

Atlantic Coast Veterinary Conference® is celebrating 30 years this year in Atlantic City!

With over **250 sessions** and **21 hours of RACE-approved CE**, there will be something for everyone in the practice.



REGISTER TODAY AT ACVC.ORG

Over 35 Years of Quality and Innovation, Now Available to Your Veterinary Practice

Havel's Inc. has a variety of veterinary products for your practice. Our affordable echogenic needles, developed by Hakko Medical for use during Ultrasound Guided Procedures, use Corner Cube Reflectors (CCR) or Micro Laser Etching (MLE) to reflect sound waves back to the transducer to illuminate the needle and improve success rates. Havel's also has a large selection of quality surgical blades and sutures at competitive prices. Please call today for your free samples.

Get a free sample today:

John Barrett

1-800-638-4770, ext. 13

jbarrett@havel.com



CCR®

See the needle, see the target and improve your success rate.



Havels.com

vetted™

Because practice ain't perfect.

We've got 'em
COVERED...

with broad-spectrum coverage, inside and out


Credelio
(lotilaner)

 **INTERCEPTOR**
PLUS
(milbemycin oxime/praziquantel)



Elanco

A portfolio of protection from common parasites

ECTOPARASITES



Fleas



Ticks

Credelio
(lotilaner)

ENDOPARASITES



Tapeworms



Heartworm



Intestinal Parasites

INTERCEPTOR
PLUS
(milbemycin oxime/praziquantel)



Clients can save big when they purchase both Credelio and Interceptor Plus, and we support your clinic with the useful tools you need. See back cover to learn more.

Indications

Credelio kills adult fleas and is indicated for the treatment of flea infestations (*Ctenocephalides felis*) and the treatment and control of tick infestations [*Amblyomma americanum* (lone star tick), *Dermacentor variabilis* (American dog tick), *Ixodes scapularis* (black-legged tick) and *Rhipicephalus sanguineus* (brown dog tick)] for one month in dogs and puppies 8 weeks of age and older, and weighing 4.4 pounds or greater.

Important Safety Information

The safe use of Credelio in breeding, pregnant or lactating dogs has not been evaluated. Use with caution in dogs with a history of seizures. The most frequently reported adverse reactions are weight loss, elevated blood urea nitrogen, excessive urination, and diarrhea. Please see brief summary on side back cover for full prescribing information.

Indications

Interceptor Plus is indicated for the prevention of heartworm disease caused by *Dirofilaria immitis*, and for the treatment and control of adult roundworm (*Toxocara canis*, *Toxascaris leonina*), adult hookworm (*Ancylostoma caninum*), adult whipworm (*Trichuris vulpis*), and adult tapeworm (*Taenia pisiformis*, *Echinococcus multilocularis*, *Echinococcus granulosus*, and *Dipylidium caninum*) infections in dogs and puppies two pounds of body weight or greater and six weeks of age and older.

Important Safety Information

Treatment with fewer than 6 monthly doses after the last exposure to mosquitoes may not provide complete heartworm prevention. Prior to administration of Interceptor Plus, dogs should be tested for existing heartworm infections. The safety of Interceptor Plus has not been evaluated in dogs used for breeding or in lactating females. The following adverse reactions have been reported in dogs after administration of milbemycin oxime or praziquantel: vomiting, diarrhea, depression/lethargy, ataxia, anorexia, convulsions, weakness, and salivation. Please see brief summary on side back cover for full prescribing information.

Credelio™ (lotilaner)

Chewable Tablets

For oral use in dogs

Caution:

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

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

Indications:

CREDELIO kills adult fleas and is indicated for the treatment of flea infestations (*Ctenocephalides felis*) and the treatment and control of tick infestations [*Amblyomma americanum* (lone star tick), *Dermacentor variabilis* (American dog tick), *Ixodes scapularis* (black-legged tick) and *Rhipicephalus sanguineus* (brown dog tick)] for one month in dogs and puppies 8 weeks of age and older, and weighing 4.4 pounds or greater.

Dosage and Administration:

CREDELIO is given orally once a month, at the minimum dosage of 9 mg/lb (20 mg/kg). See product insert for complete dosing and administration information.

Contraindications:

There are no known contraindications for the use of CREDELIO.

Warnings:

Not for human use. Keep this and all drugs out of the reach of children.

Precautions:

The safe use of CREDELIO in breeding, pregnant or lactating dogs has not been evaluated. Use with caution in dogs with a history of seizures (see **Adverse Reactions**).

Adverse Reactions:

In a well-controlled U.S. field study, which included 284 dogs (198 dogs treated with CREDELIO and 86 dogs treated with an oral active control), there were no serious adverse reactions.

Over the 90-day study period, all observations of potential adverse reactions were recorded. Reactions that occurred

at an incidence of 1% or greater are presented in the following table.

Dogs with Adverse Reactions in the Field Study

Adverse Reaction (AR)	CREDELIO Group: Number (and Percent) of Dogs with the AR (n=198)	Active Control Group: Number (and Percent) of Dogs with the AR (n=86)
Weight Loss	3 (1.5%)	2 (2.3%)
Elevated Blood Urea Nitrogen (BUN)	2 (1.0%)*	0 (0.0%)
Polyuria	2 (1.0%)*	0 (0.0%)
Diarrhea	2 (1.0%)	2 (2.3%)

*Two geriatric dogs developed mildly elevated BUN (34 to 54 mg/dL; reference range: 6 to 31 mg/dL) during the study. One of these dogs also developed polyuria and a mildly elevated potassium (6.5 mEq/L; reference range: 3.6 to 5.5 mEq/L) and phosphorous (6.4 mg/dL; reference range: 2.5 to 6.0 mg/dL). The other dog also developed a mildly elevated creatinine (1.7 to 2.0 mg/dL; reference range: 0.5 to 1.6 mg/dL) and weight loss.

In addition, one dog experienced intermittent head tremors within 1.5 hours of administration of vaccines, an ear cleaning performed by the owner, and its first dose of CREDELIO. The head tremors resolved within 24 hours without treatment. The owner elected to withdraw the dog from the study.

In an Australian field study, one dog with a history of seizures experienced seizure activity (tremors and glazed eyes) six days after receiving CREDELIO. The dog recovered without treatment and completed the study. In the U.S. field study, two dogs with a history of seizures received CREDELIO and experienced no seizures throughout the study.

In three well-controlled European field studies and one U.S. laboratory study, seven dogs experienced episodes of vomiting and four dogs experienced episodes of diarrhea between 6 hours and 3 days after receiving CREDELIO.

To report suspected adverse events, for technical assistance or to obtain a copy of the Safety Data Sheet (SDS), contact Elanco US, Inc. at 1-888-545-5973. For

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

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

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

The safety of INTERCEPTOR PLUS has not been evaluated in dogs used for breeding or in lactating females. Studies have been performed with milbemycin oxime alone (see

ANIMAL SAFETY.

Adverse Reactions

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

To report suspected adverse drug events, contact Elanco US Inc. at 1-888-545-5973 or the FDA at 1-888-FDA-VETS.

For technical assistance call Elanco US Inc. at

1-888-545-5973.

Information for Owner or Person Treating Animal:

Echinococcus multilocularis and *Echinococcus granulosus* are tapeworms found in wild canids and domestic dogs.

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

Effectiveness

Heartworm Prevention:

In a well-controlled laboratory study, INTERCEPTOR PLUS was

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

Effectiveness:

In well-controlled European laboratory studies, CREDELIO began to kill fleas four hours after administration or infestation, with greater than 99% of fleas killed within eight hours after administration or infestation for 35 days. In a well-controlled U.S. laboratory study, CREDELIO demonstrated 100% effectiveness against adult fleas 12 hours after administration or infestation for 35 days.

In a 90-day well-controlled U.S. field study conducted in households with existing flea infestations of varying severity, the effectiveness of CREDELIO against fleas on Days 30, 60 and 90 compared to baseline was 99.5%, 100% and 100%, respectively. Dogs with signs of flea allergy dermatitis showed improvement in erythema, papules, scaling, alopecia, dermatitis/pyodermitis and pruritus as a direct result of eliminating fleas.

In well-controlled laboratory studies, CREDELIO demonstrated > 97% effectiveness against *Amblyomma americanum*, *Dermacentor variabilis*, *Ixodes scapularis* and *Rhipicephalus sanguineus* ticks 48 hours after administration or infestation for 30 days. In a well-controlled European laboratory study, CREDELIO started killing *Ixodes ricinus* ticks within four hours after administration.

Storage Information:

Store at 15-25°C (59-77°F), excursions permitted between 5 to 40°C (41 to 104°F).

How Supplied:

CREDELIO is available in five chewable tablet sizes for use in dogs: 56.25, 112.5, 225, 450, and 900 mg lotilaner. Each chewable tablet size is available in color-coded packages of 1 or 6 chewable tablets.

NADA #141-494, Approved by the FDA

Manufactured for:

Elanco US Inc
Greenfield, IN 46140 USA

Credelio.com

Credelio, Elanco and the diagonal bar logo are trademarks of Eli Lilly and Company or its affiliates.

PA209456X_BrS1

P2a



Interceptor™ Plus (milbemycin oxime/praziquantel)

Caution

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

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

Indications

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

Dosage and Administration

INTERCEPTOR PLUS should be administered orally, once every month, at the minimum dosage of 0.23 mg/lb (0.5 mg/kg) milbemycin oxime, and 2.28 mg/lb (5 mg/kg) praziquantel. For heartworm prevention, give once monthly for at least 6 months after exposure to mosquitoes (see **EFFECTIVENESS**). See product insert for complete dosing and administration information.

Contraindications

There are no known contraindications to the use of INTERCEPTOR PLUS.

Warnings

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

Precautions

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

Prior to administration of INTERCEPTOR PLUS, dogs should be tested for existing heartworm infections. At the discretion of the veterinarian, infected dogs should be treated to remove adult heartworms. INTERCEPTOR PLUS is not effective against

100% effective against induced heartworm infections when administered once monthly for 6 consecutive months. In well-controlled laboratory studies, neither one dose nor two consecutive doses of INTERCEPTOR PLUS provided 100% effectiveness against induced heartworm infections.

Intestinal Nematodes and Cestodes Treatment and Control:

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

Palatability

In a field study of 115 dogs offered INTERCEPTOR PLUS, 108 dogs (94.0%) accepted the product when offered from the hand as if a treat, 1 dog (0.9%) accepted it from the bowl with food, 2 dogs (1.7%) accepted it when it was placed in the dog's mouth, and 4 dogs (3.5%) refused it.

Storage Information

Store at room temperature, between 59° and 77°F (15-25°C).

How Supplied

INTERCEPTOR PLUS is available in four strengths, formulated according to the weight of the dog. Each strength is available in color-coded packages of six chewable tablets each. The tablets containing 2.3 mg milbemycin oxime/22.8 mg praziquantel or 5.75 mg milbemycin oxime/57 mg praziquantel are also available in color coded packages of one chewable tablet each.

Manufactured for:

Elanco US Inc.
Greenfield, IN 46140, USA

Product of Japan

NADA #141-338, Approved by FDA

Interceptor, Elanco and the diagonal bar logo are trademarks of Eli Lilly and Company or its affiliates.



PA100648X_BrS1

P1c

We've got you **COVERED...**

with the resources and in-clinic tools you need

Visit ElancoResources.com to download materials for use in your clinic.



Credelio
(lotilaner)

INTERCEPTOR
PLUS
(milbemycin oxime/praziquantel)

Credelio, Interceptor, Elanco and the diagonal bar logo are trademarks of Elanco or its affiliates.
© 2019 Elanco or its affiliates. PM-US-19-0548

See summary on inside the cover.

Elanco