



SUMMER 2015 NEWSLETTER

SUMMER IS HERE!

Summer has finally arrived after a very wet spring in Colorado! This issue of the VRCC newsletter highlights our Oncology, Emergency, and Ophthalmology teams as well as upcoming events and news.

Several of our practices will be welcoming new doctors to their teams this summer including our Oncology practice who is pleased to welcome Dr. Erin Arnold, a board certified medical oncologist who will be starting in late June.

Learn more about one of our emergency veterinarians, Dr. Julie Aiello. She is the longest employed Emergency Veterinarian at VRCC and has many stories to tell! She has served clients and patients at VRCC for the last 24 years.

The Ophthalmology team discusses *Onchocerca Lupi*, a zoonotic parasite.

We have a full listing of events you'll want to review and mark on your calendar, including a continuing education gathering this fall as well as our Battle of the Vet Hospital Stars later this year.

Happy Summer!
 Your VRCC Team

STAFF HIGHLIGHT: EMERGENCY

Julie Aiello, DVM

As the longest employed Emergency Veterinarian at VRCC Veterinary Specialty & Emergency Hospital Dr. Julie Aiello has many stories to tell about the animals she has cared for and the staff she has served with for the past 24 years.



Dr. Aiello received her Doctor of Veterinary Medicine degree from Colorado State University in 1980 and spent her first 10 years as a DVM in equine and small animal practices before she transitioned to emergency medicine.

The variety and unpredictability of emergency medicine is something Dr. Aiello enjoys. No two nights are ever the same and the critical nature of some of the cases is challenging but rewarding. On the flip side it can be difficult to interact with so many emotionally charged cases where clients are faced with an unexpected illness of a loved family member along with unexpected medical bills. Additionally Dr. Aiello misses the long term relationships that are built with clients in general practice.

But the "best part of emergency medicine," relates Dr. Aiello, "are those cases that when they present seem to have little hope of a good outcome, but they survive and do really well." Those are the cases Dr. Aiello remembers and can provide many examples of.

When not at VRCC Dr. Aiello enjoys running, swimming and biking and is often up for a race or special event involving all three. She has a love for learning languages and has combined that with her love for travel with recent trips to France where she gets to practice her skills.

We love Dr. Aiello and her wealth of experience that can be counted on to provide knowledgeable, compassionate care to so many pets that are also the patients of our Denver area referring veterinary practices.

CONTINUING EDUCATION: DUALING PIANOS



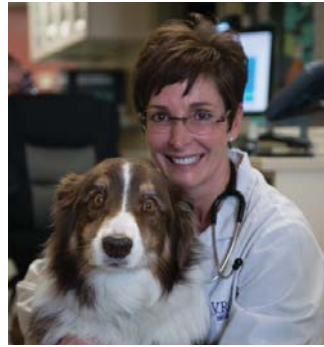
Join our VRCC Specialists at Howl at the Moon in Denver from 6pm-11pm on Tuesday, October 20th for an evening of learning, and amazing entertainment provided by the dueling pianos of Howl at the Moon. Current topics in specialty veterinary medicine will provide continuing education credits, dinner will be served, and the evening will be complete with fun, live entertainment provided by the dueling pianos! Space is limited to 150 people, and registration is a first-come, first-serve basis. As always, this CE event is FREE to attend. Additional details to come.

Contact Ruby Post, at (303) 874-2053 for questions.

SPECIALTY HIGHLIGHT: ONCOLOGY

VRCC's Oncology team, founded in 1993, has worked to help pets diagnosed with cancer achieve a greater quality of life. Dr. Robyn Elmslie (Medical Oncology), Dr. Nancy Gustafson (Radiation Oncology), and soon, Dr. Erin Arnold (Medical Oncology), are VRCC's three board certified Veterinary Oncologists. When pet owners bring in their pets to be evaluated by one of our Oncologists, a range of options is employed to ensure a correct diagnosis. These services include ultrasound, ultrasound guided aspirates and biopsies, cytology, digital radiography, CT scans, bone and soft tissue biopsies. VRCC has Antech Diagnostics laboratory on-site to immediately evaluate blood and urine samples.





Dr. Robyn Elmslie







With a reputation as a nationwide leader in Veterinary Oncologic diagnostics and treatment, VRCC Oncology is the only veterinary care facility in the Denver area that provides personalized care and attention to each patient, while offering on-site radiation treatment and chemotherapy, ultrasound, CT scan and laboratory analysis.

Offering compassion, an extensive knowledge base, and peace of mind for families whose pets have been diagnosed with cancer, VRCC's Oncology team has eased the suffering and enhanced the healing process of thousands of patients in the 22 years since inception.

Joining the Oncology team in late June of 2015 is Medical Oncologist, Dr. Erin Arnold. She attended veterinary school at North Carolina State University, and then attended Purdue University for her internship and residency in Medical Oncology. She is a board certified Medical Oncologist and has been practicing for almost 5 years. You can reach the VRCC Oncology team directly at (303) 874-2054.



CENTER NEWS & EVENTS

-  Mark your calendars! Sunday, September 13th, 2015 is the 4th Annual Battle of the Vet Hospital Stars! Registration is already FULL, but we invite you to come out and support your teams! A fundraising contest is underway - donations can be made at www.colorado.gives.org/battle2015
-  Our Ophthalmology department proudly participated in the ACVO National Service Animal Exam, providing complimentary eye exams for service dogs. We saw over 80 service dogs throughout the month of May.
-  VRCC is proud to be a sponsor of Rocky Mountain Dock Dogs this year! Their next event is at Arapahoe County Fairgrounds on July 24th.
-  VRCC Surgery and Orthopedics will be changing our mobile surgery availability from Thursdays to Wednesdays starting in June 2015. Please call us at 303-874-2073 for details.
-  We are excited to welcome several new doctors to our practices! Dr. Erin Arnold, DACVIM (Oncology) will be joining our Oncology practice starting in June. Dr. Jeremy Bachtel is starting with Dermatology & Allergy in the end of July. Additionally, our Emergency team welcomes Dr. Terri Felske in June, and Dr. Josie Mallinckrodt, DACVS, will be joining our Surgery & Orthopedics team.
-  VRCC is going digital! We will be sending out invitations to CEs, newsletters and other general info via email. If you would like to be added to our email list, please contact Ruby Post, Referral Liaison, at rpost@vrcc.com or call her at 303-874-2053.



VRCC Oncology Clinical Trial - Currently Enrolling!

Efficacy of TANOVEA (Rabacfosadine for Injection) and Doxorubicin in Dogs with B cell Lymphoma

Patient Entry Criteria:

Dogs with flow cytometry confirmed B-cell lymphoma are eligible for this study. Dogs must undergo some diagnostic testing prior to starting the study to ensure that they are eligible, including blood work (complete blood count, chemistry profile), urinalysis and chest X-rays. Dogs must have good function of liver and kidneys, have acceptable blood cell counts, and be free of severe underlying disease. Patients are not eligible if they have been treated with steroids of any form within the past 60 days or recently treated with chemotherapy. Supplements may not be given while in the study.

Treatment Protocol:

Patients who enter the study are treated with chemotherapy every 21 days alternating between Tanovea and doxorubicin, for a total of 3 doses of each chemotherapy drug.

Financial Incentive:

The study will cover the costs of the Tanovea, blood tests and recheck examinations throughout the 18 week study period. Recheck examinations every 4 months after the completion of chemotherapy are also free of charge.

The VRCC Oncology department offers clinical trials for the treatment of canine mast cell tumors, osteosarcoma, bladder TCC, hemangiosarcoma and others. Please contact the Oncologists at VRCC to discuss clinical criteria for participation.

Please call us at 303-874-2054 for more information or to set up an appointment.

CASE STUDY: OPHTHALMOLOGY

Onchocerca Lupi - A Brief Report

By: Matt Chavkin, DVM, MS, Diplomate AVCO

I will never forget the first time that I incised an episcleral nodule in a dog and found coiled white nematodes. It was 2011 and *Onchocerca lupi* was not even on my list of differentials for the dog referred to me for oral antibiotic-unresponsive orbital swelling with episcleral nodules. I have been a veterinary ophthalmologist since 1994, so I had purged my parasitology textbook from my library sometime during the Clinton years. It was just as well, because there was no information about *Onchocerca lupi* in any of the



Episcleral nodules due to *Onchocerca lupi*

parasitology textbooks from that time. Like me, you probably have not learned much about canine eye worms.

Life Cycle. Since 1991, case series reports from clinical veterinarians, pathologists and parasitologists have detailed canine *Onchocerca lupi* infestation characterized by variable orbital swelling and pain. Endemic areas have been identified in Greece, Turkey, Portugal and more recently in the Four Corners of the Southwestern United States. Male and female adult worms find each other in a dog's episcleral tissues, mate and produce microfilaria that leave the orbit and travel through the skin primarily of the head and back. A currently unidentified fly ingests the microfilaria during a blood meal. Inside the fly, *O. lupi* transforms through larval stages L1-L3. After biting another dog,

O. lupi larvae differentiate into male and female nematodes and migrate to the episcleral tissues to complete the life cycle. The life cycle is similar to canine heartworm probably because *Dirofilaria immitis* and *Onchocerca lupi* belong to the same family of filaria.

Clinical Disease. The adult *Onchocerca lupi* is a coiled white thread-like nematode with the larger female worms suspected to be up to 20 cm in length. This is an estimate given that no one has extracted a large female worm intact. Clinical disease is related to inflammation around adult worms in the orbit. For reasons that are poorly understood, some dogs have no apparent orbital inflammation while others have severe orbital swelling, pain, decreased ocular retropulsion and exophthalmos. Many occult *Onchocerca* infestations are revealed only after a dog is treated with melarsamine for *Dirofilaria immitis*. Older dogs have more severe orbital infestations with nematodes located deep in the orbit sometimes adherent to the fascial tissues around the optic disk.

Prevalence. Since that first dog with *Onchocerca* presented to me in 2011, we have definitively diagnosed or suspected *O. lupi* infestation in 15 dogs. All of the dogs originated in the Farmington, New Mexico area and were transported to the Denver area for adoption. Earlier this year, I examined 29 young dogs presented to shelters for routine spay/neuter in Farmington and Aztec, New Mexico and found episcleral granulomas with nematodes in 3 dogs and microfilaria in a skin snip biopsy from one of the dogs with episcleral nematodes.

Zoonotic Potential. Sporadic cases of human infestation with *O. lupi* have been reported worldwide from all areas

where *O. lupi* is endemic in dogs. In 2013, a 22-month-old child from Arizona recovered after surgical extraction of a gravid female *O. lupi* nematode from around her cervical spinal cord.

Diagnosis. Currently, episcleral biopsy is necessary for definitive diagnosis. Serologic testing is unavailable, skin snip biopsy for microfilaria is unreliable and microfilaria are not found in the bloodstream.

Treatment. There is no universally accepted treatment. We are currently treating dogs with daily doxycycline for 3 months, monthly ivermectin for 6 months and oral and topical corticosteroids as needed. Because of the zoonotic potential, lifelong heartworm preventative is indicated. Melarsamine injection and surgical excision may be considered, but carry a complication risk that is unnecessary for the majority of patients.



Onchocerca lupi adult worms in an episcleral nodule