



Clinical Trials Office Update by Melissa Weber

The Clinical Trials Office (CTO) in the College of Veterinary Medicine assists clinicians in the design, execution and evaluation of veterinary clinical studies using client-owned animals with full disclosure and approval by the owners. Many of the studies being conducted in the college examine the use of new diagnostic tests and the efficacy of emerging treatments for a variety of cancers. Benefits of participation include access to leading-edge therapies to improve the diagnosis, treatment, quality of life, and outcome. Two current trials being conducted are evaluating different aspects of canine osteosarcoma, the most common form of bone cancer in dogs.

Dr. Val Samii, associate professor of radiology and diagnostic imaging in the Department of Veterinary Clinical Sciences, is working with Master of Science candidate and radiology resident Dr. Ketaki Karnik on "Accuracy of CT in Determining Lesion Size in Canine Osteosarcoma of the Appendicular Skeleton." The goal is to document a better way to estimate the size of a lesion in an affected bone.

"Typically, we overestimate the size of a lesion," Dr. Samii explained. The protocol of the study includes making a CT scan through affected bone pre- and post-intravenous contrast administration. Once the limb has been amputated, the exact length of the lesion can be documented. "Accurately determining the extent of diseased bone is of importance

when removing all but disease-free portions of bone (as is done in limb spare procedures), and also in serial monitoring of response of diseased bone to chemotherapy or radiation therapy when amputation is not performed," she added.

Dr. Melanie McMahon, oncology resident and Master of Science candidate in the Department of Veterinary Clinical Sciences is working with Dr. Cheryl London, associate professor of oncology and director of the CTO, to study the "Clinical Evaluation of Combined Carboplatin/ Gemcitabine in the Treatment of Canine Osteosarcoma." The standard of care with a diagnosis of osteosarcoma continues to be a combination of amputation and chemotherapy. Despite amputation of the affected limb and the administration of chemotherapy (carboplatin, cisplatin, and/or doxorubicin) most dogs will die of tumor spread to the lungs or other organs within two years following diagnosis.



Dr. Val Samii



Dr. Cheryl London

Studies in the laboratory have demonstrated that: a new chemotherapy agent, gemcitabine, has activity against canine OSA tumor cell lines and when gemcitabine is combined with carboplatin, the killing of OSA tumor cell lines is significantly enhanced. Carboplatin and gemcitabine have been used extensively in combination for the treatment of human cancers including pancreatic adenocarcinoma, ovarian and non-small cell lung, and more recently, the two drugs have been administered together to dogs with a variety of cancers. Early work in dogs indicates that the combination of carboplatin and gemcitabine is well tolerated. This study is evaluating the apparent synergistic response of the combination of two chemotherapy drugs in creating a disease-free interval and improved survival rate. The goal of a 52-dog enrollment in the study is predicted to create a one-year survival rate of 66 percent.

There are many other ongoing and future clinical trials at the Veterinary Hospital. Please visit the website regularly to become familiar with and remain aware of the many clinical trials that may be of benefit to your veterinary patients.

vet.osu.edu/ClinicalTrials.htm



Bosha Beats the Odds

Nine-year-old Bosha is a retired racing Greyhound from Lebanon, PA, near Hershey. Bosha was referred to the Veterinary Hospital about four years ago after he was diagnosed with osteosarcoma. Our clinic is known for our Greyhound Health and Wellness program, which provides care for the special health needs of Greyhounds. After Bosha had his leg amputated, he was enrolled in the Suramin and Adriamycin clinical trial. Bosha traveled with his "mom", Barbara Heisey, to Columbus every other weekend for a total of

five chemo treatments and now returns every three months for check-ups. His mom Barbara is thrilled to report that he recently celebrated his four year anniversary as a cancer survivor and continues to live no differently on three legs than he did with four. Bosha is a celebrity in the world of osteosarcoma because life expectancy after diagnosis can be as short as three months. He also illustrates the idea of "translational cancer therapy." This novel chemotherapy treatment went from test tube, to rats, to dogs with cancer and is now part of standard chemotherapy protocols.



Bosha, Barbara Heisey and Dr. Guillermo Couto

Veterinary Hospital Update

At The Ohio State University

Comprehensive, Cutting-Edge Cancer Care with Comfort and Compassion

by Kristine McComis

When an animal with cancer comes through the doors of the Ohio State Veterinary Hospital, a multidisciplinary team of clinicians and support staff are ready to offer the best progressive treatment available in veterinary medicine. We work collaboratively with owners and caretakers along with referring veterinarians who play an integral role in diagnosis, therapy and recovery of their patients. The Veterinary Hospital's large network of board-certified faculty specialists provides expertise in medical, radiation, and surgical oncology with the support of numerous other clinical specialists including diagnostic imaging, anesthesiology and pain management, cytology, hematology, histopathology, internal medicine, and critical care.

Our facility houses a linear accelerator for delivery of radiation therapy that accommodates both large animal patients (farm animals and horses) as well as companion animal patients such as dogs and cats. Ohio State is unique in our ability to conduct clinical and translational medicine investigations ("research bench to patient"), which provides us with the latest knowledge and cutting-edge therapies in cancer treatment. Clients have the option to enroll their pets in clinical trials, which gives them the opportunity to undergo exciting new therapies which will help future oncology patients live longer, fuller lives. (See the clinical trials update in this newsletter) As part of the College of Veterinary Medicine's ongoing research into developing new prevention and treatment strategies, the Tissue Bank (Biospecimen Repository) collects samples of tumors and normal tissue from dogs and cats, and stores these tissues under controlled conditions for future use by multiple investigators.

Imaging services include digital radiology, ultrasonography, nuclear scintigraphy and a

new eight-slice computed tomography (CT and MRI). The Veterinary Hospital houses its own clinical pathology laboratories, which include clinical chemistry, cytology, and hematology. Board-certified veterinary pathologists and technicians analyze samples from multiple species daily using state of the art automated equipment to provide timely and accurate diagnoses.



Some of the members of the multi-disciplinary oncology team.

The orthopedics and soft tissue surgery team, as well as the ancillary service of anesthesia play a vital role in the care of a cancer patient, from performing biopsies to excising tumors. The hospital's 24/7 Emergency and Critical Care service allows for emergency admissions and around-the-clock monitoring of cancer patients. The Veterinary Hospital's extensive approach to treating cancer and hematologic disease in animals includes the Comparative Oncology Signature program, which connects faculty, staff, and students from all departments in the College, across the University (James Comprehensive Cancer Center and Solove Research Institute) and within the Columbus community (Nationwide Children's Hospital) who have an interest in advancing cancer diagnostics and therapeutics in animals and

people, with the goal of improving patient outcome.

We also make extensive use of The Ohio State University Wright Center of Innovation in Biomedical Imaging, which houses both a 7- and 3-Tesla MRI magnet, which is used extensively for our companion animal patients for diagnostic purposes, and it is also used for research. These partnerships further the advancements in both human medicine and veterinary medicine.

Our veterinarians understand the stress and emotion that a client faces when their pet is diagnosed with cancer. After a thorough explanation of treatment options, we will develop a plan that fits the needs and comfort level of the patient and the owner. Our

Honoring the Bond program, led by an experienced and highly skilled licensed social worker, offers the additional resources and support that our clients may need when they face difficult end-of-life decisions for their beloved family pet.

Ohio State Veterinary Hospital is the only facility in Central Ohio that offers such a breadth and depth of services, years of experience, quality of care, and leading-edge medical science to treat cancer in companion, equine, and farm animals. This team approach and wealth of resources may extend an animal's survival and quality of life to several more months or even several more years.

To make an appointment or learn more about our comprehensive services for animals with cancer, please call 614-292-3551. More information can be found regarding our Oncology & Hematology service, Equine Radiation Oncology, and Diagnostic Imaging Services at the Veterinary Hospital's homepage, as well as information on other aspects of our comprehensive services related to the care of cancer patients (vet.osu.edu/hospital.htm).

Veterinary Hospital
601 Vernon L. Tharp St.
Columbus, OH 43210

614-292-3551 Companion Animal
614-292-6661 Farm Animal and Equine