

The Ohio State University Veterinary Medical Center

Update for Veterinarians



Veterinary Medical Center– Columbus

601 Vernon L. Tharp St. Columbus, OH 43210

Hummel & Trueman Hospital for Companion Animals:

614-292-3551

Hospital for Farm Animals and Galbreath Equine Center:

614-292-6661

Frank Stanton Veterinary Spectrum of Care Clinic

655 Vernon L. Tharp St. Columbus, OH 43210

614-292-1573

Veterinary Medical Center– Dublin

5020 Bradenton Ave. Dublin, OH 43017 **614-889-8070**

Ohio State Large Animal Services-Marysville

16410 County Home Road Marysville, OH 43040 937-642-2936

VMC Installs State-of-the-Art PET/CT

The Ohio State Veterinary Medical Center (VMC) has just installed a PET/CT (positron emission tomography/computed tomography) scanner, a state-of-the-art imaging machine and the first of its kind at the VMC.

According to **Eric Green, DVM**, professor of Radiology and Radiation Oncology and head of the Diagnostic Imaging service, the VMC will be among the few veterinary academic institutions nationwide that offer this type of advanced diagnostic tool for patients with cancer. The PET/CT machine is innovative because of its ability to help clinicians determine cancer spread with more certainty than current modalities, he says. "It's going to be enormously useful in the staging of our oncology patients."

The PET/CT machine has two imaging components: the CT component, which operates with x-rays that rotate around the patient's body, and the PET portion, which uses nuclear medicine to allow radiologists to see actual physiological changes in the body.

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From the Director



With spring at our front door, many of us are focused on renewal, growth and expansion, which in our case means opportunities for improved care and enhanced facilities.

With that in mind, we're thrilled to announce that our new PET/CT scanner will be available to patients by the end of March. This state-of-the-art imaging machine is the first of its kind at the VMC. Learn more in this issue about the advanced capabilities it offers patients and their caregivers.

We also highlight several clinical trials that are actively recruiting feline cats diagnosed with chronic kidney disease. Jessica Quimby, DVM, professor of Small Animal Internal Medicine and vice chair of Research in Clinical Sciences, provides an overview of each study and information on how your clients can access care to improve their cat's quality of life.

We hope you can take time to enjoy the spring season.

Karin Zuckerman, MHSA, MBA Assistant Dean for Clinical Programs Director, Veterinary Medical Center





THE OHIO STATE UNIVERSITY

VETERINARY MEDICAL CENTER

vmc.vet.osu.edu



State-of-the-Art PET/CT - continued from page 1

Cutting-edge reliability

Laura Selmic, DVM, professor in the Surgical Oncology service, and a member of the Translational Therapeutics Program at The OSUCCC – James, notes what makes this cutting-edge technology at Ohio State so exciting.

"This is a great opportunity for performing sensitive full-body staging for our patients with cancer," she says. "We would usually need to do multiple tests and still there would be a risk of not finding areas of spread or other problems."

However, she says, "the PET/CT offers the most comprehensive, high detail information about the patient's stage of cancer."

Dr. Green adds that as one machine, the PET/CT can more reliably map cancer, as compared with the typical tools using X-rays, ultrasound and conventional CT. To obtain a PET image, VMC specialists inject the patient with a radioactive drug, typically an analog of glucose tagged with radioactive fluorine, which is absorbed by cells with atypical metabolic activity.

Dr. Green notes that the PET machine will highlight where that radioactive material has localized. "Very frequently we know where the primary tumor is because we can either see it or the patient has a lameness attributed to it, but we don't always know where it has spread," he says.

Patient benefits

The most appropriate patient for the PET/CT would be any patient with highly metastatic cancer but unknown spread, or patients that present with what looks to be metastasis, such as an enlarged lymph node, but with an unknown origin, Dr. Green says.

Patients benefit because there is more certainty about cancer spread, which means better-informed decisions about appropriate therapy and whether or not an aggressive surgery or chemotherapy is worth the risk of potential morbidity or associated health risks, says Dr. Green.

The impact of this benefit can't be lost, he notes. "There are so many instances today where we CT patients and we find nodules in the lungs, for example, and we don't know what they are," he says.

"This new machine will help us to very easily make that determination — and that information can also provide the owners with more peace of mind."

The PET/CT is housed in a remodeled VMC large animal surgical suite and the space offers separate, isolation recovery rooms to house patients until it is safe for them to be released.



Feline Chronic Kidney Disease Trials Offer Hope

One of the most common diseases among elderly cats is feline chronic kidney disease (CKD), which can often lead to a number of concerns, including poor appetite, nausea, vomiting, and other abnormal behaviors.

If you have feline patients diagnosed with CKD, researchers at the Veterinary Medical Center, led by Jessica Quimby, DVM, PhD, professor of Small Animal Internal Medicine and vice chair of Research in Clinical Sciences, want to make you aware of several clinical trials investigating therapies to help improve the quality of life for affected cats.

The trials include studies focused on improving gastrointestinal health, reducing uremic toxins and enhancing appetite. All of the trials are conducted on site at the VMC campus in Columbus.

"Every cat that comes into us receives a complementary assessment and evaluation to determine best recommendations for managing their disease and if a clinical trial is a good fit for them," Dr. Quimby says.



Effect of transdermal mirtazapine on quality of life for cats with CKD

This study uses the appetite stimulant Mirataz®, which is applied to the skin of the ear to address the cat's appetite and to ensure they are eating more calories. This study is meant for cats who have stable CKD, but their caregivers are concerned about their cat's appetite or weight loss and want them to eat more calories.



For this clinical trial the cat will be either randomized to a placebo or to the appetite stimulant to start, and then switched over to the other treatment. During the four-week study, client participants will complete a quality-of-life survey at various time points.

"With this clinical trial we hope to demonstrate that appetite is really important for quality of life. By improving quality of life, those cats are going to feel better despite their disease," Dr. Quimby says.

"We know from other research that appetite is an important part of quality of life as perceived by the caregiver," she says. "Our work has also shown that appetite dysregulation is probably at the heart of CKD. Using medications that can re-regulate appetite can be really helpful for these patients."

This study will enroll 20 cats over a two-year period.

Effect of Porus One® on reducing uremic toxins in cats with naturally occurring CKD

The Porus One® clinical trial aims to reduce uremic toxins that build up as kidney function declines. One of the most studied uremic toxins is indoxyl sulfate, which is a by-product of protein metabolism in the gut and is believed to contribute to the progression of CKD. Once indoxyl sulfate is absorbed into the body, it must be excreted by the kidney.

To counter that, this study involves giving the carbon-based supplement Porus One® that binds uremic toxins in the gut prior to absorption into the body. As a result, the toxin levels in the body do not build up as much and the kidney is saved the workload of excreting them.

Porus One® is a sand-like powder that is well-tolerated, and is put in the cat's food every day, Dr. Quimby says. "We do have some preliminary data that it's helpful and most cats have had no problem eating it."

The study is four months and will enroll 20 cats.

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CKD Clinical Trials - continued from page 3

The REVERSE CKD study

This is a multi-site, blinded, randomized, placebo-controlled national clinical trial to evaluate the effectiveness of a novel drug intervention for CKD that has just begun to enroll cats. The study consists of a once weekly medication that will be evaluated over the course of nine months of treatment.



Kidney Protection Blend diet for cats with CKD

This clinical trial is a new formulation of an existing diet for cats with CKD. This is a six-month study. Patients will receive a complimentary initial assessment, and the diet and all clinic visits associated with the study are paid for.

Dr. Quimby notes that the Ohio State CKD clinical trials are helpful for anyone with a cat with CKD, but especially for caregivers who have limited finances.

Refer feline CKD patients for these trials

Visit <u>u.osu.edu/felinekidneyresearch/</u> for the full range of CKD research trials offered, along with details on study eligibility and consent forms (cats must be seen at Ohio State).

Email: felineCKD@osu.edu

Welcome New Faculty



Amanda Davis, DVM, DACVO Assistant Professor – Clinical Comparative Ophthalmology

Dr. Davis joins the VMC in April after serving as an ophthalmologist at the BluePearl Hospital in Columbia, South Carolina. She received her DVM from Ohio State in 2013 and completed her ophthalmology residency in Comparative Ophthalmology at North Carolina State University in Raleigh in 2017.

She has received awards for her work in ophthalmology and has conducted research on stem cell therapy in keratitis. Her clinical interests include ocular surface and corneal disease, and she has a strong passion for teaching.



Monica Midon, DVM, M(VS), MS, DACVAA
Assistant Professor – Clinical
Anesthesiology and Pain Management
Dr. Midon joins the VMC in March
after serving as assistant professor of
Anesthesiology in the Department of Clinical
Studies at the New Bolton Center at the
University of Pennsylvania. She received her
DVM from the Universidade Federal do Rio
Grande do Sul (UFRGS) in 2012 in Brazil

and completed her residency in Anesthesiology at UNESP, Sao Paulo, in 2015, a master's degree in Anesthesiology at Universidade Estadual Julio de Mesquita Filho in 2017, and a second residency in Anesthesiology and master's degree at Auburn University in 2021. Her clinical interests focus on large animal anesthesiology.

College of Veterinary Medicine Continuing Education

Upcoming 2025 CE Events

Mar 25-27 Teays Valley/Charleston

April 1 Dayton, Miami Valley VMA

9 Toledo, Toledo VMA

26-27 WVVMA Spring meeting

May 25 Eastern Ohio, Tuscarawas VMA

> Cleveland/Akron, Cleveland Academy of Veterinary Medicine

Summer Southern Ohio VMA

Greater Columbus/5th District

For details, please visit vet.osu.edu/alumni/continuing-education

Departure

Simone March, DVM, Veterinary Radiology and Diagnostic Imaging

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