

# Vet Pulse

IMPORTANT INFORMATION FOR OUR REFERRING VETERINARIANS

## Cool Tech for Vets (and Pets)

BY Tracy Ann Raef

The list of innovative, and actually pretty amazing, technologies for everyday human use is impressive. With eye-popping new gadgets coming on the market fast enough to support upgrade purchase plans, it was just a matter of time before some of that technology would make its way into the pet world.

That time has come. Cool technology has gone to the dogs, cats, and in some cases, horses!

### Mobile ECG Device

Today's smartphones can do lots of things, including taking and sending ECG recordings. At the Lloyd Veterinary Medical Center, veterinary cardiologist Dr. Jessica Ward is using the AliveCor Veterinary Heart Monitor.

Basically, it's a mobile ECG device that consists of two metal electrodes that snaps onto the back of an iPhone. Simple to use; just wet the animal's fur with alcohol, then place the metal electrodes on either side of the heart. The device takes and records single-lead waveforms up to 30 seconds at a time.

**A. Dr. Jessica Ward uses the mobile ECG on her dog Anna in the treatment room of the hospital. Note the heart rate of: 199**



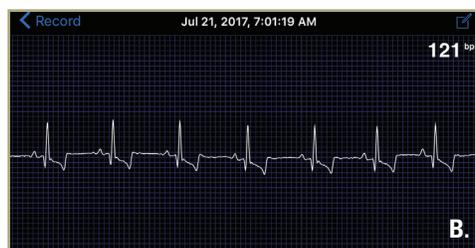
"I use the devices clinically by sending them home with clients to record heart rate and rhythm," Ward says. "It's especially helpful for patients who have arrhythmias that are made worse by the stress of being in the hospital. I want to know the rate and rhythm when the pet is relaxed in its normal environment."

In those situations, Ward provides the client with a device. The client takes recordings and emails the results to Ward who makes treatment recommendations based on those readings. Ward demonstrates the value of the mobile device with her dog, Anna. Illustration A is Anna's ECG recording at the hospital. Illustration B is the recording at home, which was a 78 BPM difference.

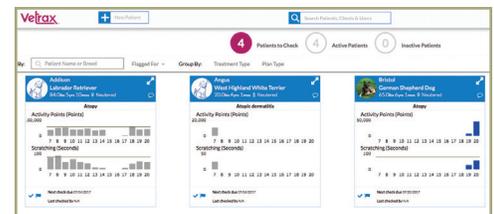
Clients can rent the device for a month from the cardiology service, but many owners prefer to buy their own.

Ward says that some general practice clinics that don't have advanced ECG devices are also using the AliveCor as their sole ECG device. "They are great for assessing heart rate and rhythm, but not good for more complex/detailed measurements of ECG," Ward said.

**B. A second reading taken the next morning at home shows Anna's resting heart rate is: 121.**



**Addison wearing Vettrax™ activity monitor.**



**Vettrax™ dashboard desktop view**

### Tracking & Monitoring

It's the latest ... tracking your health data, everything from your steps and stairs, to sleep. There's even a monitoring device for your dog to track its activity and sleep. The latest generation, though, is a cool device that veterinary dermatologist Dr. Darren Berger just got his hands on for his furry-pawed patients.

The Vettrax™ is an activity monitor with a unique capability to track scratching and head shaking through a lightweight and water-resistant sensor that attaches to the dog's collar. Berger is currently evaluating the clinical use of the monitors.

"Generally we ask clients to rate their dog's itchiness on a scale," Berger says. "There's a lot of subjectiveness depending on how 'itch-tolerant,' the client is. With the Vettrax™ itching and scratching is recorded in seconds/minutes and the data is uploaded.

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## Advancing Cancer Care: Next Step Forward

BY Tracy Ann Raef

The Lloyd Veterinary Medical Center at Iowa State University is working on plans to provide a new radiation therapy service.

“This next-generation stereotactic radiation therapy machine will give us expanded options to treat cancer in pets, in addition to current treatments such as chemotherapy and surgery,” says Dr. Chad Johannes, board-certified veterinary oncologist and internist.

Radiation therapy and surgery are both treatments for solid tumors; while radiation has the additional advantage of controlling long-term tumor growth and also providing pain relief.

Stereotactic radiation therapy is a non-invasive, non-surgical treatment that delivers high doses of precisely focused radiation to the tumor, with minimal damage to nearby tissue. It is typically delivered in one to four treatments, representing an 80-95 percent reduction in treatment sessions over standard therapy.

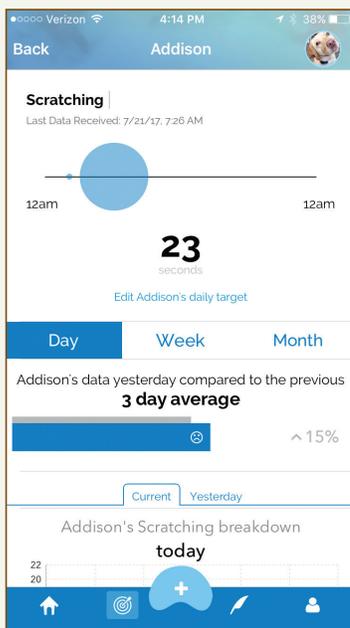
“Patients typically experience very manageable side effects and a good quality of life with this treatment, often returning to normal activities immediately after treatment,” says Johannes.

Construction will begin in the fall with anticipated opening of the radiation therapy service in spring 2018.

### SRT is an option for treatment of:

- Pituitary tumors
- Inoperable brain tumors
- Osteosarcomas
- Nasal tumors
- Many solid tumors including skin, oral

### Cool Tech Continued from page 1



### Vetrax™ dashboard mobile app view

Through an app on my computer, I can see how many minutes a day a patient is itching and/or scratching.”

Currently, Berger is getting an idea of what the baseline threshold range might be to determine whether the patient needs treatment. For patients who need treatment, Berger sees the Vetrax™ as a useful tool to evaluate the effectiveness of treatment regimens.

## Building Skills One Student at a Time

BY Tracy Ann Raef

The college's Clinical Skills Laboratory opened in May of 2015 in a cavernous room where the life-sized Holstein dystocia simulator could clearly be seen among the initial stock of models and equipment. Two years later, the room is packed, with a long list of supporting cast members joining Frosty, the Holstein. What all of these models have in common are the ability to help veterinary students refine a variety of clinical and technical skills.

Starting in the first year, veterinary students receive enhanced skills training for anatomy and surgery courses in the lab; while second- and third-year students come to the lab to use the anesthesia simulator, and further improve surgical skills. During the fourth-year rotations, students are often in the lab, improving skills and practicing new ones, as well as skills review.

“The lab provides opportunities to integrate hands-on learning throughout the four-year curriculum, to instill competency and improve effectiveness and efficiency before the students are working with live patients,” said Dr. Frank Cerfogli, coordinator of the Clinical Skills Laboratory.

Some of the new models recently added to the lab this spring/summer include:

- A “Jill of all trades” horse model that has several capabilities, including reproduction tract/palpation and GI/colic simulations; and provides access to practice intramuscular injections and jugular venipuncture
- Canine/feline intubation simulators
- Dermal lesion/multi-layer/cyst-abscess tissue biopsy and mass removal simulators
- Canine urinary catheterization simulator
- Spay/neuter surgery instrument kit

“Many alumni who come through the lab during a tour are just blown away by the realism of some of the models and simulators,” Cerfogli said. “Often the comments are: Wish I'd had this when I was in school.”

In a couple of years, Cerfogli says he's positive he'll have alumni come through saying: “I'm glad I had this lab when I was in school.”



## New Clinicians



### Dr. Margaret Musser

**Small Animal Oncology**

Dr. Musser has joined the hospital's oncology team. She is a graduate of the University of Illinois College of Veterinary Medicine. Musser completed a rotating internship in small animal veterinary medicine at VCA West Los Angeles before beginning her residency in medical oncology at North Carolina State University. She is a diplomate of the American College of Veterinary Internal Medicine (Oncology). Previously, she was a medical oncologist at two busy private practices.



### Dr. Katarzyna Dembek

**Equine Medicine & Field Services**

Dr. Dembek is a clinician in equine internal medicine and equine field services. She is a diplomate of the American College of Veterinary Internal Medicine. Dembek joins us from The Ohio State University, where she completed a residency in equine internal medicine and earned her PhD in equine endocrinology. Prior to Dembek's tenure at The Ohio State University, she spent a number of years in various practice and internship programs in Saudi Arabia, Ireland, and Poland.

## New Residents



### Erika Berger

**Oncology**

*The Ohio State University, DVM*



### Paul Merkatoris

**Large Animal Surgery**

*University of Wisconsin, DVM*



### Shelley Chi

**Anesthesiology**

*National Chung Hsing University in Taiwan, DVM*



### Shane Murphy

**Cardiology**

*University of Missouri, DVM*



### Braidee Foote

**Ophthalmology**

*University of California, Davis, DVM*



### Libby Schmitt

**Small Animal Surgery**

*Iowa State University, DVM*



### Elle Donnini

**Small Animal Internal Medicine**

*Virginia-Maryland College of Veterinary Medicine, DVM*



### Robin White

**Radiology**

*Iowa State University, DVM*



### Ellen Heinrich

**Small Animal Internal Medicine**

*Kansas State University, DVM*

## New Hospital Relations Coordinator Joins Staff

BY **Tracy Ann Raef**



The Lloyd Veterinary Medical Center welcomes Brian Rowe-Barth who joined the staff in July as the hospital relations coordinator.

Rowe-Barth's primary role will be supporting the patient-centered service mission of the hospital. He'll work with referring veterinarians and clients to facilitate patient referrals, meet special needs, and resolve concerns or issues about patient care.

Rowe-Barth comes to Iowa State with experience in leading and managing customer service centers and building and enhancing customer relations.

"Brian is a tremendous addition to our staff, and will serve as an additional point of contact for our referring veterinarians," said Dr. Tom Johnson, Director of Hospital Operations.



## COME SEE US AT OUR BOOTH!

- **Central Veterinary Conference (Booth 641)**  
August 26-27, 2017
- **Iowa VMA (Booth 12)**  
September 21-22, 2017
- **Nebraska VMA**  
January 25-27, 2018
- **Minnesota VMA**  
February 15-17, 2018

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[vetmed.iastate.edu/VetPulse](http://vetmed.iastate.edu/VetPulse)

## IOWA STATE UNIVERSITY Lloyd Veterinary Medical Center

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### PRACTICE TIP

## Keep Calm and Carry On: Making the Case for Routine BP Measurements in Healthy Cats

BY Tracy Ann Raef

Hypertension is a frequent complication of diseases seen commonly in the aging cat. Left undetected and untreated, hypertension can lead to retinal detachment and blindness, progression of kidney disease, and cardiac and neurologic complications.

Unfortunately, measuring blood pressure in a cat can be frustrating and it is sometimes difficult to interpret the results due to various factors that have the potential to influence readings obtained. Because blood pressure measurement is so important in older cats but has the potential to be challenging, Dr. Laura Van Vertloo, veterinary internist at Lloyd Veterinary Medical Center, recommends incorporating routine blood pressure measurement into the wellness exam of all senior cats. At the very least, all cats with known illnesses predisposing to hypertension should have blood pressure monitoring as a standard of care.



“This benefits the patient as it may allow detection of hypertension prior to the development of a serious complication but it also allows the medical team to build their expertise in blood pressure monitoring by making it part of the routine,” Van Vertloo says. All practices that see small animal patients should have at least one type of blood pressure monitor. A Doppler unit costs about \$600-\$900 and can be a good investment if practitioners incorporate blood pressure monitoring into the senior wellness exam.

### BLOOD PRESSURE TIPS

- Take the reading in the exam room when the patient is in its most relaxed state prior to physical exam or other manipulation; if that’s with the owner’s hand on it, that’s okay.
- Keep records of cuff size, appendage used, and patient position to minimize variability.