The Oklahoma State University Veterinary Medical Teaching Hospital recently upgraded its diagnostic imaging equipment to include a four slice helical scanner. This improvement will benefit the patient in many ways.

“The biggest difference between this scanner and our old GE Cytec machine is that since it is a four slice CT, we can acquire four times the amount of information in less time than it took before,” explains Dr. Jason Arble, DACVR, assistant professor, Veterinary Clinical Sciences, and a board certified radiologist at the Veterinary Teaching Hospital.

Another benefit, according to Arble, is that as the patient moves through the machine, data is acquired continuously rather than having the patient and table stop while the data is acquired. This translates into much higher quality scans in much less time.

“This pelvic scan of a dog took approximately 40 seconds,” says Arble. “On the old machine it would have taken 10 to 15 minutes. The slices provided by the previous machine would also have been thicker which means much less detail. Slice thickness versus time has always been a trade off and we were much more limited with the previous equipment.”
Click here to view the 3D Pelvic Scan Video

“The software that comes with the scanner allows us to do reconstructions in other planes and build 3-D models,” continues Arble. “We can select which specific structures we look at based on how dense they are. For example, with the pelvic scan, we could look at just the bone or the entire animal including soft tissue structures and muscles around the bones.”

Arble goes on to say that the software provides the capability to do the same thing with vasculature using intravenous contrast agents. Veterinarians can look at only the blood vessels if that is what they need to focus on.

“Being able to examine one aspect of the patient is very helpful,” explains Arble. “For orthopedic work it helps determine the extent of fractures and in cancer patients it provides a detailed look at tumors.”

The new equipment also allows the Veterinary Hospital to do vascular studies. This is extremely important when working with dogs that are born with abnormal blood vessels which may bypass the liver.

“We are now able to track the flow of blood once we introduce contrast agents into the patient’s blood stream,” says Arble. “Also being able to do these things fast allows us to perform timing studies to determine how long it takes blood flow to get to a certain place.”

With the new scanner operational, the Veterinary Hospital can offer patients improved care. The equipment provides much more detailed data in less time which means animals are under anesthesia for shorter periods of time.

“Anytime you can minimize the time an animal is sedated, the better,” smiles Arble. “Having the four slice scanner is much more efficient and beneficial for our patients.”