

New imaging suites offer more diagnostic capabilities for animal health

May 11 2010, by Amy Patterson Neubert

(PhysOrg.com) -- Veterinarians in the Purdue University School of Veterinary Medicine now have the ability to look for causes of lameness, neurological disorders and other conditions in horses thanks to new imaging equipment in the Veterinary Teaching Hospital.

"Purdue will be using the first equine-capable, high-field-strength, [magnetic resonance imaging](#) unit in Indiana," said Mimi Arighi, associate professor and director of the Veterinary Teaching Hospital. "The MRI is instrumental in diagnosing a variety of conditions, many of which cannot be detected using other forms of diagnostic imaging, in small and large animals. This machine and its new suite, as well as the new adjacent computed tomography suite, allows us to improve the care we provide animals."

The new suites are within the Veterinary Teaching Hospital building, which is located at 625 Harrison St. The MRI suite, which is more than 1,100 square feet, provides plenty of room to maneuver the patient and accommodate anesthesia equipment and personnel. Previously, patients had to be moved to a freestanding unit adjacent to the hospital.

"The MRI uses strong magnetic fields and radiofrequency pulse to produce images with superior soft tissue contrast and excellent detail," said James Naughton, a clinical assistant professor of radiology. "This [imaging technology](#) will facilitate the diagnosis of cancer and developmental and inflammatory disease of the brain, skull and spinal column in animals of all sizes. We also will be able to assess the extent

of soft tissue disease and cancer for surgical and radiation therapy planning and treatment. It also will be used in the diagnosis of disease in the head and lower limbs of large animals, most commonly the horse."

Currently the diagnostic imaging section performs about 17 small animal MRIs per month, and it is expected that four large animals will be scanned each month. Large animals receiving an MRI must be anesthetized and placed on a non-magnetic table that has been specially designed and built for animals that weigh more than 500 pounds. The same services can be offered for cattle, sheep, goats, pigs, llamas and alpacas. The GE 1.5 Tesla instrument is identical to those used in human applications and was paid for out of the hospital's operating budget.

The new multi-slice computed tomography unit, a recent donation from St. Elizabeth Regional Health, allows faster scanning of patients and increases the diagnostic information obtained during certain types of scans. It is one of only three such machines in Indiana, and more than 240 animals are scanned on the machine annually. This new suite is 707 square feet.

The CT unit, also commonly used for human patients, creates detailed cross-sectional images of soft tissue and bone, which is helpful in locating and diagnosing internal injuries and conditions. The images can be reconstructed to make three-dimensional graphics that can aid in surgery and can be used to map the location of tumors for surgical removal as well as radiation therapy.

Provided by Purdue University

Citation: New imaging suites offer more diagnostic capabilities for animal health (2010, May 11) retrieved 11 May 2024 from <https://phys.org/news/2010-05-imaging-diagnostic-capabilities-animal-health.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.