

CT: A More Powerful Lens on Animal Illness

Veterinary Case Study: Innovative ER Vet Advocates for the Benefits of NeuroLogica VetTom-8

Jonnie Quantz, DVM

CEO and Founder
Mobile Animal CT

Introduction

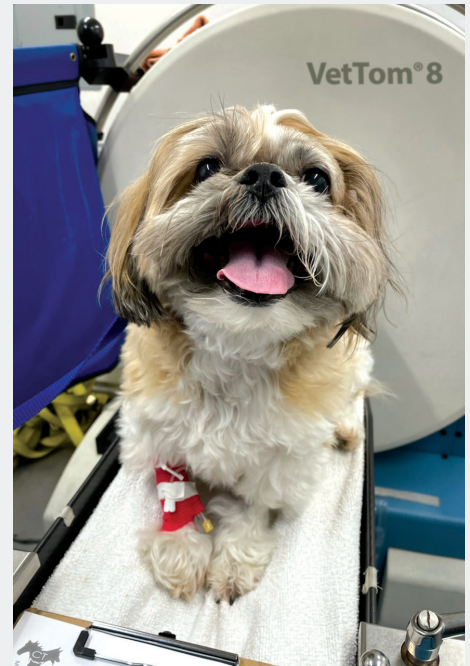
“Knowledge is power,” says Jonnie Quantz, DVM. As a highly trained veterinarian treating critically ill animals, she knows firsthand that you can never have too much information to make sound medical decisions. She is an outspoken advocate of the benefits of CT in providing that information as well as a pioneer in taking CT technology on the road to bring advanced imaging to veterinarians and their animal patients who might not otherwise experience the benefits. Her Mobile Animal Computed Tomography (MACT) service, perhaps the only one of its kind in the country today, is making CT more accessible to veterinary practices of every size and helping to bring CT into the mainstream for animal care.



Dr. Quantz stresses that to capitalize on the value of CT, veterinary practices must obtain high quality images safely, efficiently and cost-effectively. “Then, with an experienced veterinary radiologist behind them, the modality is practically magic,” she says.

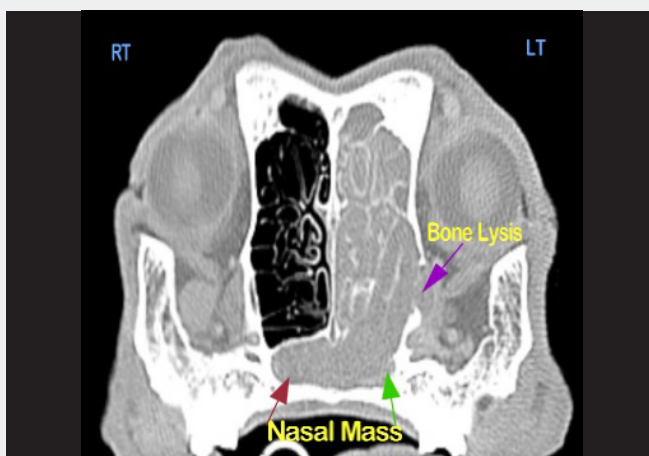
The experienced veterinarian points out that CT technology suited to the unique needs of a veterinary practice is essential. For example, it must support a broad range

of imaging applications and often the limited budgets and physical space of most animal medical practices. She notes, "I've found the NeuroLogica VetTom-8 is an excellent fit. As a mobile scanner, its compact size, flexible veterinary-specific applications, as well as reasonable purchase price and minimal siting costs make it the optimal choice for veterinary practices that need in-house CT capabilities." In addition, the VetTom-8 offers a host of unique features that enable Dr. Quantz to easily take her unit on the road wherever it needs to go.

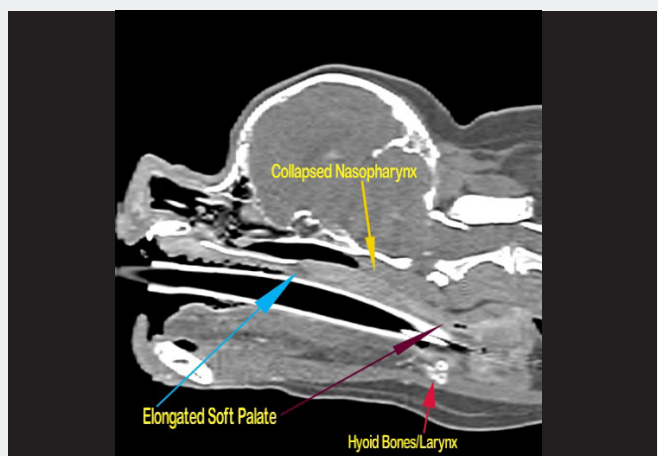


A Full Range of Animal Imaging Benefits

Highlighting the benefits of CT in animal care, Dr. Quantz says the modality is fast, efficient and can scan every animal tissue type—soft tissue, bone, nerves, vessels, fluid and air - anything that may be related to disease. With today's advanced image reconstruction, CT also offers a 3D anatomic visualization, enabling the veterinarian to see an abnormality in a broad clinical context.



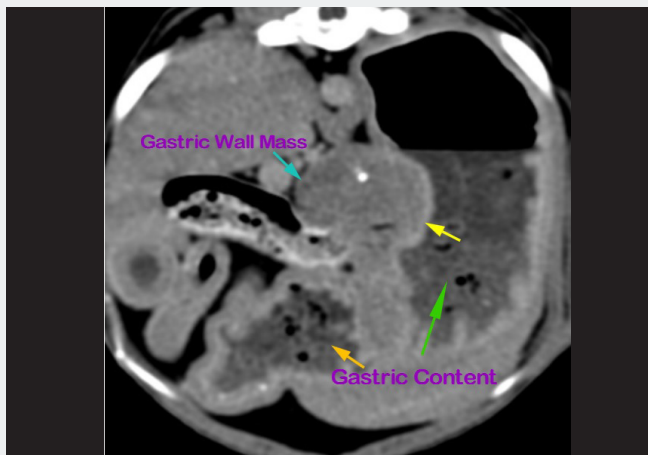
Neoplasia



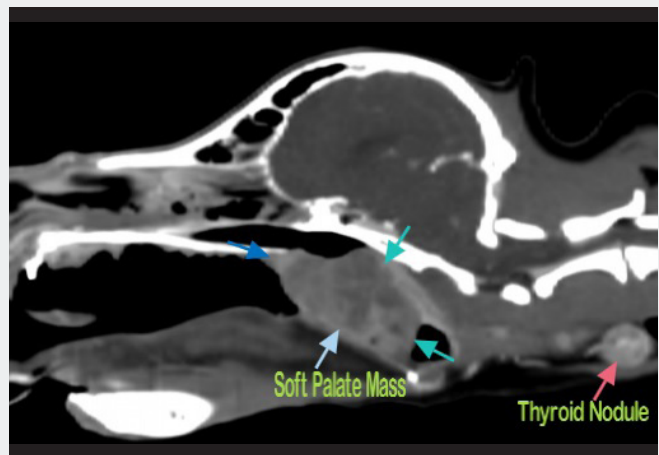
Congenital (elongated soft palate with upper airway obstruction sequelae)

By contrast, x-ray, the staple in imaging in veterinary practices today, suffers from limitations as a two-dimensional modality best suited for imaging bony anatomical structures, restricting its clinical usefulness. Ultrasound may be a step up but requires an experienced ultrasound technician onsite, is limited by body conformation, fraught with artifacts (bone and air), and limited to a very small field of view.

Dr. Quantz illustrates the benefits of CT: “In the vet world, we have a lot of head issues. With traditional imaging modalities, the head and skull are a black box,” she says. “You just cannot see inside. But CT visualizes soft tissue, eyes, ears, nose, turbinates, structures in the larynx, as well as fine bony detail. That allows us to see, understand and treat disease more precisely.”



Neoplasia

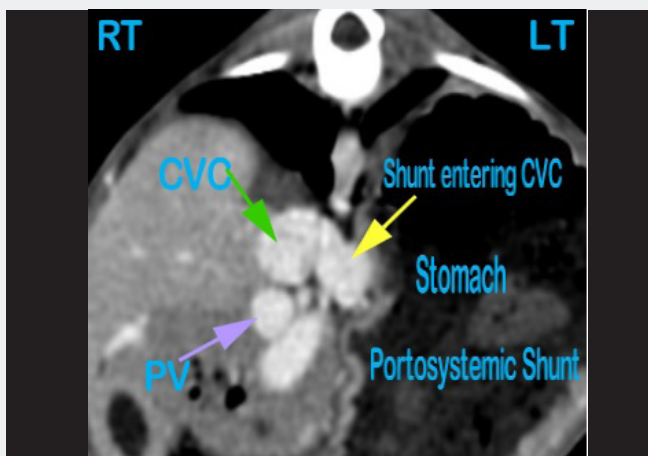


Neoplasia

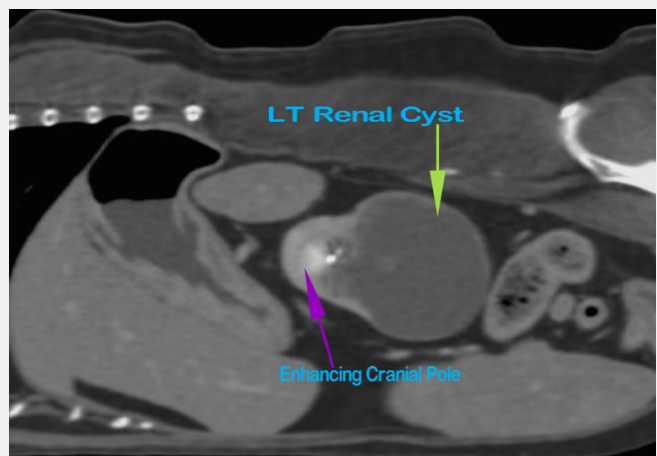
For example, chronic nasal discharges and nosebleeds are common in animals and can result from a range of underlying conditions. A CT will quickly help determine whether the cause is a fungal infection, potentially cancerous mass, an immune-mediated issue, or other medical condition. With this information, the problem can be effectively treated. Additionally, many dogs are prone to chronic ear diseases, and likewise CT images help pinpoint the cause and appropriate therapy.

Animals also are known to swallow a range of unusual—and often dangerous—foreign objects. Traditional diagnosis and foreign body tracking involves ingestion of a contrast material, followed by hours of x-ray imaging to visualize the object as it moves through the digestive system. In just five minutes, CT provides a clear-cut assessment of the situation, allowing the veterinarian to determine the etiology and location of the problem, and decide if surgery or medical management is the best treatment.

In a full range of applications, just as CT benefits human diagnostics, it similarly benefits members of the animal world. It can easily identify masses anywhere, vascular anomalies (like a portosystemic shunt), musculoskeletal disease, neurologic disease, embolic disease (PTE), ectopic ureters, foreign bodies, lung lobe torsions, dental disease, IVDD – virtually disease in any part of the body. It also is an important tool for veterinarians in surgical planning.



Vascular anomaly - PSS (portosystemic shunt)



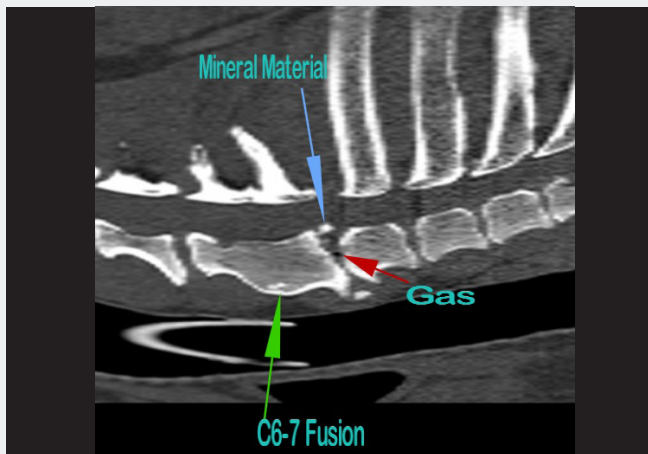
Renal Cyst

Dr. Quantz cites a dramatic case in point. A veterinarian utilized her MACT service for more detailed information before sending her Labrador patient to a surgeon for ongoing care. An extremely large liver mass had been diagnosed through ultrasound.

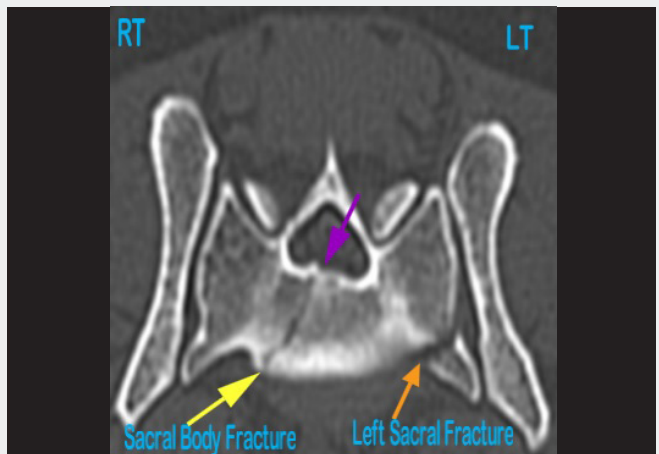
Was this mass operable? Were blood transfusions likely to be required? The subsequent CT image found the tumor actually originated as a tiny stalk attachment to the colon. Suddenly the diagnosis went from a likely fatal condition to one that could be treated through the veterinarian's own hospital. The mass was removed successfully by a veterinary surgeon.



Neoplasia



Intervertebral disc disease



Trauma (sacral fractures)

Experiencing the Need Firsthand

Trained in veterinary emergency and critical care, Dr. Quantz became a staunch advocate for CT based on her experience in two specialty and emergency animal hospitals she founded almost 20 years ago in CA. Without CT onsite, she had been referring animals to other distant facilities with the modality. But, like other veterinarians, she found many of her patients simply never returned. Also at times she was unable to take advantage of CT for her most critically ill patients because transporting them offsite posed a major risk to their already precarious health. After experimenting

with various solutions for over 9 years, she decided to purchase her own CT scanner.

“I assumed the only financially acceptable units would be single slice CTs made for human imaging,” Dr. Quantz says. “Then I found the NeuroLogica VetTom-8, an eight-slice helical CT that I could purchase for about the same price as an old human relic. I did, and never looked back. Having a CT scanner in your hospital is priceless.”



In addition to being a boon to patient care, the CT helped her practice treat new and more complex cases she might otherwise have had to send elsewhere. “I discovered that the return-on-investment is not only the scan itself, but the more complex care enabled by the scan,” she says.

Going Mobile

However, with only five or six scans a week, Dr. Quantz’s CT sat idle for the majority of the day. When her operations officer suggested taking it mobile and servicing the imaging needs of other practices, she was intrigued. Less than six months later, Dr. Quantz had designed a road-ready, fully outfitted CT truck and launched an imaging service—complete with optional anesthesia capabilities, trained imaging technicians and liaisons with experienced veterinarian radiologists.

Today she services veterinary practices throughout most of AZ and in CA from the Central Coast through LA and the OC, east to the Inland Empire and south to San Diego. “Our client veterinarians manage many aspects of the process themselves,”

she says. “While providing all the required technology and human infrastructure, we function as an integral part of their practices. A great CT machine is a vital part of the mix. That’s what NeuroLogica does for us. It keeps us up and running.”

Perhaps surprisingly, MACT also scans for large specialty practices equipped with their own CTs. “For critical patients, getting as close to the point of care as possible is important,” she emphasizes. “The NeuroLogica VetTom-8 can be offloaded from our trucks and wheeled exactly where needed. In that case, no patient bedside monitors and devices must be removed. Even our CT trucks can often get closer to a sick animal than stationary in-house equipment that may be a significant distance from the patient care areas.”



“We’ve also developed a lot of specialized imaging techniques over the years,” she explains. “The quality of the scan makes me very proud of my team and what we do.”

Given her passion for CT and success of her mobile business, Dr. Quantz now devotes herself to animal imaging full time, after selling both her hospitals three years ago. She also spends time counseling veterinarians on bringing CT into their own practices as well as on helping more ambitious imagers launch mobile imaging services similar to MACT.

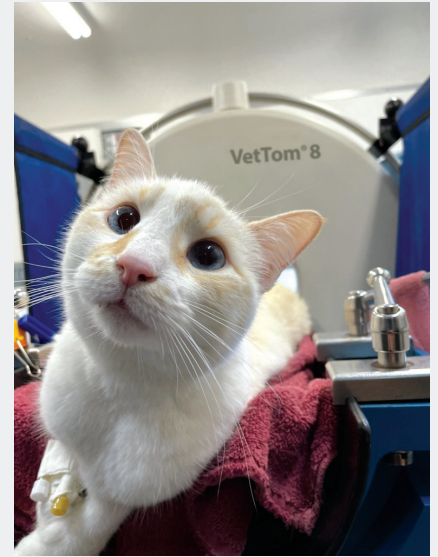
Putting it All Together

Dr. Quantz sums up her perspective on imaging, “Clearly, in-house CT imaging offers numerous advantages for those that can support it. But a partnership with a mobile service is also win-win and can level the playing field for small practices.” Smaller

practices, she explains, can leverage the same depth of information obtained through CT as a large practice to help clients make the best decisions possible about healthcare for their animals. “If they can support it later,” she adds, “a practice can add their own CT.”

NeuroLogica Vet CT in a Class by Itself

When asked for a scanner recommendation, Dr. Quantz always suggests the VetTom-8. In addition to delivering outstanding image quality, it is self-shielded and does not require a dedicated imaging suite or electrical upgrade beyond 110 volts. It can even be pushed up against a wall for storage, if needed. As a practice grows, the scanner can be moved to another location without expensive re-installation. “The VetTom-8 also is rugged and long lasting,” she says. “NeuroLogica continues to improve the software. The company also has the best technical and service crew I have ever had the pleasure of working with. If a problem does occur, they usually can diagnose and get the device up and running remotely. I have always felt like a respected member of the Neurologica team and been treated with appreciation and professionalism.” Dr. Quantz believes that as the number of mobile CTs increase, veterinarians are going to start paying more atten-



tion to the modality. Young veterinarians are learning about it in school. CT is proving to be an invaluable diagnostic tool in veterinary medicine and is poised to take off in mainstream practice.

