



## VETERINARY VOICE: Tips of the Trade

### Magnetic Resonance Imaging (MRI)

**What is MRI?**

MRI is a non-invasive, highly sensitive diagnostic imaging modality. MRI uses a large magnetic field and radiofrequency pulses to detect pathologic changes in tissues of the body.

Until the mid-1990s, MRI was a poorly understood, exclusive and cost-prohibitive imaging modality in veterinary medicine.

**What are the indications for MRI?**

MRI is primarily used for CNS (brain and spinal cord) imaging in both human and veterinary medicine. MRI is much more sensitive to intracranial lesions than CT. MRI of the spine avoids the risks associated with myelography.

Non-CNS imaging of the head (i.e. retrobulbar disease, masticatory myositis, oropharyngeal foreign bodies, salivary mucoceles) is also valuable. Musculoskeletal, abdominal, thoracic, and tumor imaging are becoming more common in veterinary medicine, and are being offered at VSCT.

**What are the benefits and risks of MRI?**

The benefits of MRI greatly outweigh the risks.

There is no ionizing radiation, which benefits both patients and technical staff. The soft tissue contrast resolution is superior to all other imaging modalities, making subtle lesions more obvious as well as more accurately determining the extent of lesions (i.e. for surgical planning).

**Questions?**

**Radiology Expert:  
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MS, DACVR**

The Veterinary Specialty Center of Tucson has a board-certified radiologist available to consult about radiographs and to perform inpatient and outpatient ultrasound, CT scans, MRI and I-131 treatment during the weekdays. He is also on call to provide consultations to VSCT emergency doctors and to perform emergency procedures, such as ultrasonography, for patients seen by the VSCT emergency service. Board-certified radiologists have four additional years of training after veterinary school and are certified by the American College of Veterinary Radiology to assure competency in advanced veterinary diagnostic imaging.