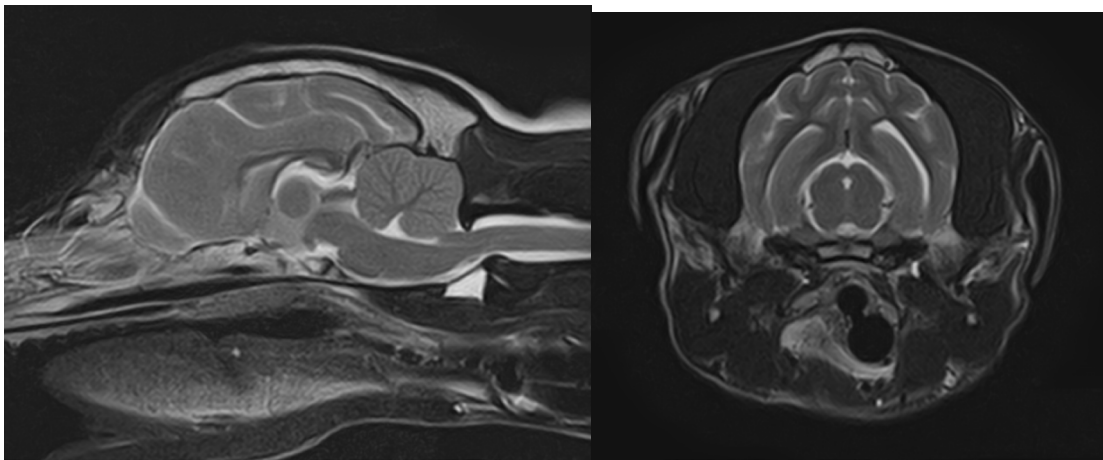


Magnetic Resonance Imaging

What is MRI?

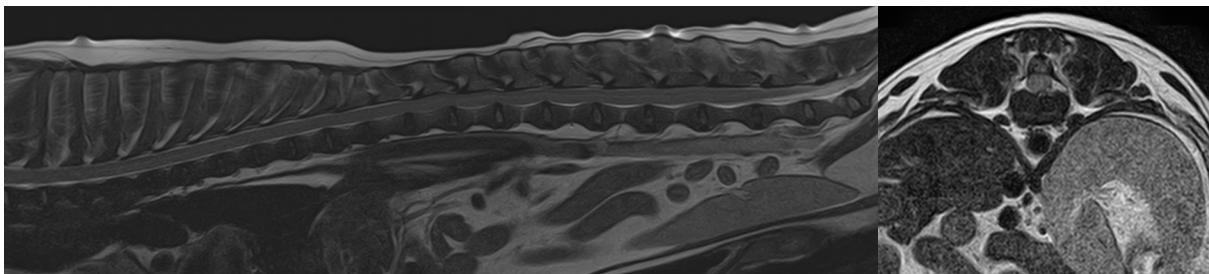
Magnetic resonance imaging, or MRI, has become increasingly popular within the veterinary sector over the past two decades after establishing itself within human medicine as a useful imaging modality for diagnostic purposes.

MRI is used in radiology to form images of anatomic structures using a combination of powerful magnetic fields, radio waves, and computing to generate these images. Powerful magnetic fields align the atoms in the body before radio frequency fields systemically alter the alignment of these magnetised atoms, and the changes in the positions of the atoms are picked up by the MRI scanner to create an image. Unlike x-ray or CT, MRI does not involve the use of harmful ionising radiation, and it produces far superior quality images of certain soft tissue structures compared to other imaging modalities.



When do we use MRI?

MRI is widely used for medical diagnosis, staging or follow-up of disease and is considered the gold standard of diagnostic imaging choice when investigating soft tissue structures such as the brain or the spinal cord. It can detect and aid the diagnosis of problems such as tumours, inflammation and herniated discs. It can also be used to diagnose musculoskeletal abnormalities such as tendon, ligament or muscular tears, although currently this is less commonly performed in the veterinary community.



What happens during an MRI?

An MRI exam takes approximately 1 hour during which the patients are monitored under general anaesthesia. The anaesthetic is monitored closely by one of our registered veterinary nurses, whilst either a technician or a vet works to acquire the images. Anaesthesia is required in our patients to minimise movement during the acquisition of the images, as even the smallest movement can result in poor images. Patients must be perfectly positioned to lie as straight as possible. Once we are happy that they are correctly positioning, our furry companions are wrapped up in blankets to maintain their body temperature during the scan, and 'Mutt Muffs' are applied to protect their ears during the noise exposure.

We sometimes use a contrast medium, called Gadolinium, to enhance the viewing of specific problems such as inflammation, tumours, or certain blood vessels.

Once the images have been obtained, a treatment plan can be created based on the results. In some instances, the images will be submitted to a team of specialists for a full imaging report.