

Magnetic Resonance Imaging

MRI studies provide cross-sectional images of body structures and have the ability to demonstrate subtle differences in contrast between soft tissues. MRI has revolutionised the diagnosis of neurological disease, and is now used routinely (as in human medicine) by veterinary neurologists to image the brain, spinal cord, nerves and adjacent structures. MRI is used commonly in our referral centre to assess:

- Epilepsy
- Inflammatory CNS disease
- Intervertebral disc disease
- Traumatic disease to the brain or spine
- Wobbler Syndrome
- Neoplastic disease

Because many diseases involve more than a single body system, integration between teams of Specialists with expertise in different areas is one of our greatest assets at Dick White Referrals. A typical example is the case of the dog or cat presented to the Otology Clinic for chronic ear disease, where investigations of the external, middle and inner ear, as well as of the brain in the immediate vicinity of the ear, will involve a dermatologist, neurologist, surgeon and radiologist.

MRI is extremely valuable as a means of staging neoplasia and, in most MRI studies, a contrast agent (gadolinium) is used intravenously to identify precisely any areas of increased vascularity and to pinpoint inflammatory or neoplastic lesions.

Our Diagnostic Imaging Unit also works closely with the Orthopaedic Specialists because MRI provides excellent images of the musculoskeletal system, and can be used to investigate structures that cannot easily be imaged with radiography, ultrasound or CT.

Ultrasound

Ultrasound has a wide range of diagnostic and therapeutic applications:

- Visualisation of muscles, tendons, eyes, blood vessels and many internal abdominal or thoracic organs
- Assessment of organ size and structure, as well as a variety of lesions
- Essential contribution to diagnosis of a number of internal medicine conditions
- Staging of neoplastic diseases
- Abscess drainage, removal of foreign bodies or injection of drugs into specific targets
- Guided procedures (eg fine needle aspirate biopsies and TruCut biopsies)

When B-mode real-time ultrasound is complemented by Doppler techniques, it can capture images and provide quantitative information about blood flow within the cardiovascular system. Echocardiography has become an indispensable tool in the diagnosis of cardiopathies, and is regularly performed by our cardiologist to assess congenital or acquired cardiac diseases.

The ultrasound facilities at Dick White Referrals consist of 2 high-end machines, both capable of providing excellent quality images of deep and superficial organs of the abdomen, thorax (including the heart), head, neck and limbs (musculoskeletal system).

Computed Radiography (CR)

Unlike traditional radiography, computed radiography (CR) is filmless, and the final radiograph is sent to a PACS server (Picture Archiving and Communication System), allowing it to be displayed immediately on high resolution computer monitors throughout the hospital for reading and editing by our Specialists.

