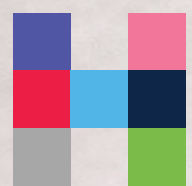


# For the best pets in the world



**hamilton**

SPECIALIST REFERRALS





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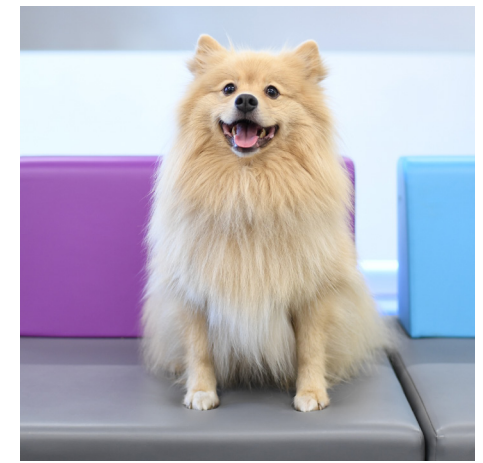
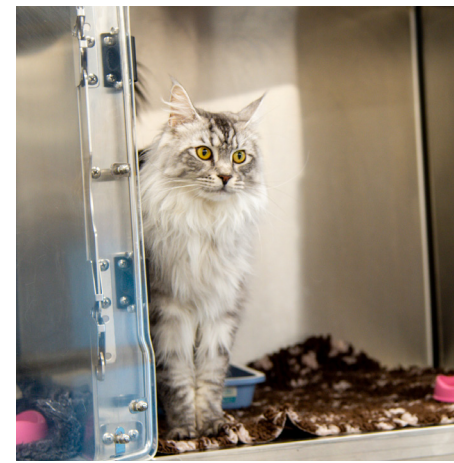
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We provide a warm and friendly service for our referring vets, their clients and the patients.”



# Welcome to Hamilton Specialist Referrals

Hamilton Specialist Referrals is dedicated to providing clinical excellence in a caring and friendly environment. We believe that our compassion for our patients should extend to our clients and team.

## OUR VALUES

We truly care about each and every animal. That compassion is evident from the first appointment, right through to the final consultation.

We make an extra effort to explain all procedures clearly and concisely so our clients feel part of the solution.

We're very appreciative of our team and we feel strongly about their right to enjoy their work. To facilitate an early and accurate diagnosis we operate sophisticated digital imaging including MRI and CT at our purpose built veterinary hospital.

We are located on the outskirts of High Wycombe, Buckinghamshire in a state-of-the-art small animal hospital, offering the latest in diagnostics, treatment and management of a range of conditions and injuries.

Our multi-disciplinary team offers a range of surgical and medical services, operational 24 hours a day, 365 days a year.

### Our key disciplines:

- Anaesthesia and analgesia
- Cardiology
- Emergency and critical care
- Imaging
- Internal medicine
- Neurology and neurosurgery
- Oncology
- Orthopaedic surgery
- Rehabilitation
- Soft tissue surgery





# OUR FACILITIES

## Spacious kennels

We are pleased to have a 'no bars' policy within our wards with all of our kennels having glass doors, including our walk in kennels.

We have installed lighting and ventilation systems that offer ambient light and regular fresh air changes in order to keep our patients calm and relaxed. We have quiet kennels for our more nervous patients and a Sonos sound system for patients that prefer to have background noise.

## Imaging suite

We have digital radiography, MRI and CT on site and available at all times.

Our Canon Medical Aquilion Lightning 16 is a 16 slice CT scanner, customised for use in small animals, and our 1.5 Tesla MRI machine has been specifically manufactured for veterinary use.

## Rehabilitation suite

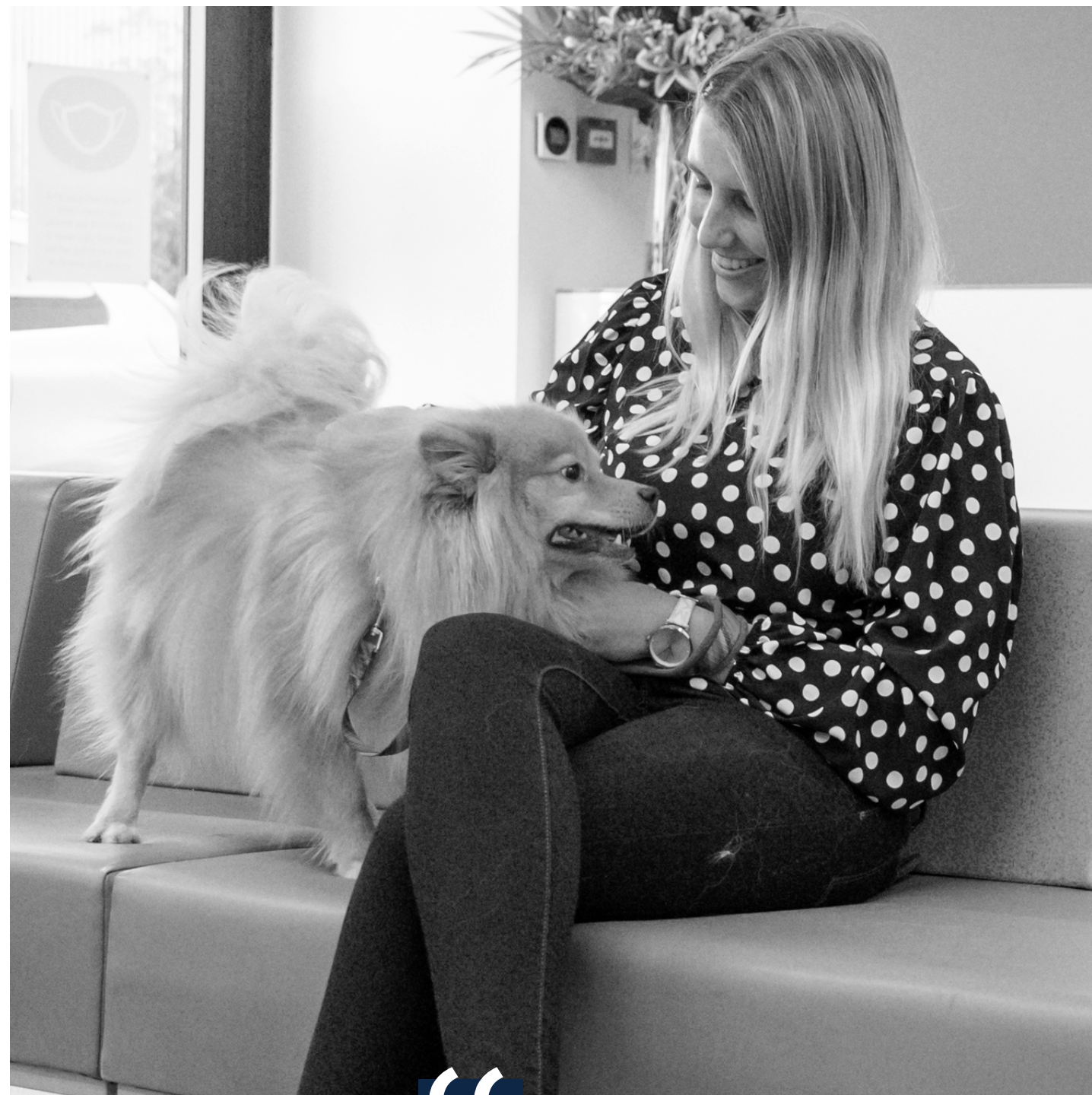
The hospital is supported by an exceptional physiotherapy and rehabilitation facility to optimise outcomes and shortened recovery times.

Our rehabilitation suite offers a large physiotherapy suite, and a hydrotherapy treadmill, which can be used dry if necessary, and we are one of only a few centres in the UK with a treadmill system that can score lameness and record improvements as the patient's rehabilitation programme progresses.

## Hospital

Our three operating theatres offer antimicrobial copper operating tables to reduce infection rates.

Our theatres are spacious and located directing off our large prep area, which has easy access to our wards, imaging suite and consult rooms. We are proud of our low infection rates and perform ongoing clinical audits and regular swabbing or MRSA.



Our clinicians are all highly experienced specialists in their field ensuring the highest standards of care for our patients.”



# Anaesthesia and Analgesia

Our anaesthesia team delivers tailor-made sedation and general anaesthesia plans for any animal requiring surgical or imaging procedures.

The aim is to achieve balanced anaesthesia for all animals, by using effective analgesia and muscle relaxation methods ranging from total intravenous anaesthesia to inhalational maintenance of anaesthesia alongside locoregional techniques.

Crucially, patient care delivered by the anaesthetist does not stop once the patient leaves the operating theatre: anaesthetists are on hand to create and adjust analgesic plans for patients on hospital wards, and for outpatients, including managing chronic osteoarthritis and neuropathic pain states.



## Theatre equipment

The practice uses state-of-the-art anaesthesia workstations fitted with integrated ventilators.

Each patient is monitored with modern human grade multiparameter monitors for any procedure they undergo, permitting us to perform the most complex cases while maximising safety.



## Neuromuscular blockade and monitoring

Neuromuscular blockade can be beneficial for enhancing surgical access during various surgeries, including ophthalmological, orthopaedic, neurosurgery and soft tissue procedures, as well as reducing pain originating from muscle contractions and spasm.

Here at HSR, we monitor any neuromuscular blockade with the Stimpod monitor, to ensure this balanced anaesthetic technique is carried out safely.

## Locoregional anaesthesia: managing pain at its source

Wherever possible, locoregional anaesthetic techniques are used to achieve balanced anaesthesia. This involves using our human standard Philips Lumify point-of-care ultrasound machine or Stimuplex nerve stimulator and is employed routinely for every orthopaedic limb and pelvic surgery, as well as major abdominal, thoracic and spinal surgery.

For complex invasive surgical procedures requiring advanced pain management techniques, epidural or wound soaker catheters are used to limit the amount of systemic medication the patient requires to be comfortable by providing on going local pain relief.



## Safety first

At HSR, we place great emphasis on patient wellbeing and safety. Safety checklists are used routinely to prepare for anaesthetics, including setting up anaesthetic workstations and other equipment, preparing for induction of anaesthesia, first incision of the surgery and cessation of surgery and recovery.

A big emphasis is placed on a team-based approach to each case, with multidisciplinary specialists, interns and nurses all contributing to planning the patient's perioperative stay at the hospital.



# Imaging

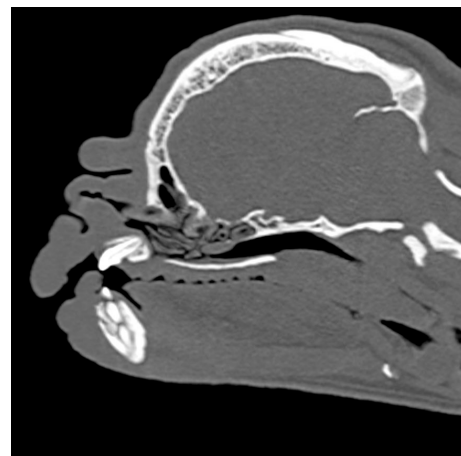
## CT

Our Canon Medical Aquilion Lightning 16 is a 16 slice CT scanner, customised for use in small animals, with a high-resolution detector incorporating the smallest elements of any CT scanner, giving slices of 0.5mm. The scanner is particularly high speed, providing fast examination times and reducing the amount of anaesthesia required.

In comparison to a conventional x-ray, which uses a fixed x-ray tube, a CT scanner uses a motorised x-ray source that shoots x-rays as it rotates around the body. Special detectors are located directly opposite the x-ray source and each time the x-ray source completes one full rotation, a computer then produces a 2D image or a 'slice' of the patient. In a 16-slice scanner there are 16 detectors and thus each revolution actually acquires 16 slices simultaneously.

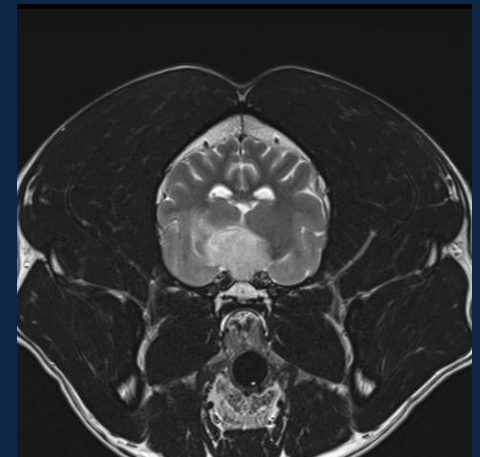
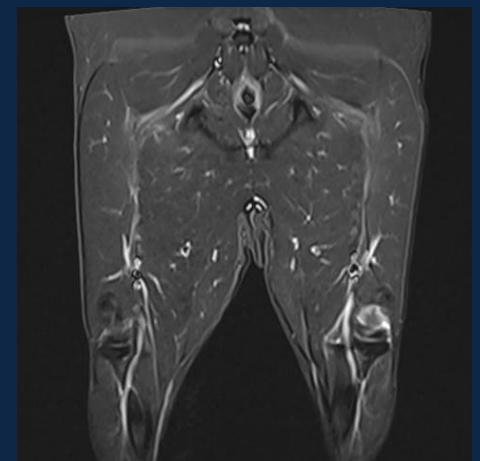
CT is invaluable in orthopaedics and at Hamilton Specialist Referrals we routinely use CT scanning in the assessment of elbow dysplasia and specifically with regard to the diagnosis fragmentation of the coronoid process (FCP). CT is also the gold standard for the diagnosis of humeral intercondylar fissures, a commonly seen problem in Spaniels and Labradors.

Individual images can also be 'stacked' together by the computer to generate a 3D image of the patient. These reconstructed 3D images can then be rotated and be viewed from any angle. They, in turn, can be used to make custom implants and cutting guides using sophisticated computer software and 3D printing technology.



CT is most effective for:

- Assessment of complex anatomic areas such as the skull or spine
- Planning of complex fracture repair
- Investigation of diseases of the thorax and abdomen, as the rapid acquisition of the images negates the movement artefact that would occur during an MRI scan



## MRI

Magnetic resonance imaging (MRI) uses a strong, static magnetic field and radio waves to produce detailed images of the inside of the body by aligning the usually randomly-orientated atomic nuclei of hydrogen atoms in the patient's body.

A radio frequency (RF) pulse is then applied, forcing the spinning hydrogen protons to wobble. Once the RF pulse is turned off, the wobbling of the hydrogen protons generates a small electrical signal.

The signal is detected by RF coils, which need to be positioned as close to the anatomical area of interest as possible.

The rate at which the protons return to their equilibrium state distinguishes different bodily tissues.

At HSR we have a 1.5 Tesla MRI machine specifically manufactured for use in animals. We use high-field MRI, because it has stronger magnets and a higher field strength produces much better images and offers far better resolution and clarity. Aside from the obvious benefits with regard to image quality, high-field MRI is much quicker than low field counterparts. Most low fields scan take over an hour to complete whereas the time for a high field is much less than half of this.

MRI is most effective for:

- Diagnosis of spinal cord compression and spinal cord injury
- Brain tumours
- Tendon and ligament injuries
- Investigation of seizures
- Vestibular problems
- Neck and back pain
- Nasal discharge





We combine traditional values with efficient, modern treatments.”

# Internal medicine

Internal medicine deals with the prevention, diagnosis, and treatment of acute and chronic internal diseases, including those of:

- The gastrointestinal tract and pancreas
- The liver
- The respiratory system
- The endocrine system (hormones)
- The kidneys and urinary tract
- The blood and circulatory system

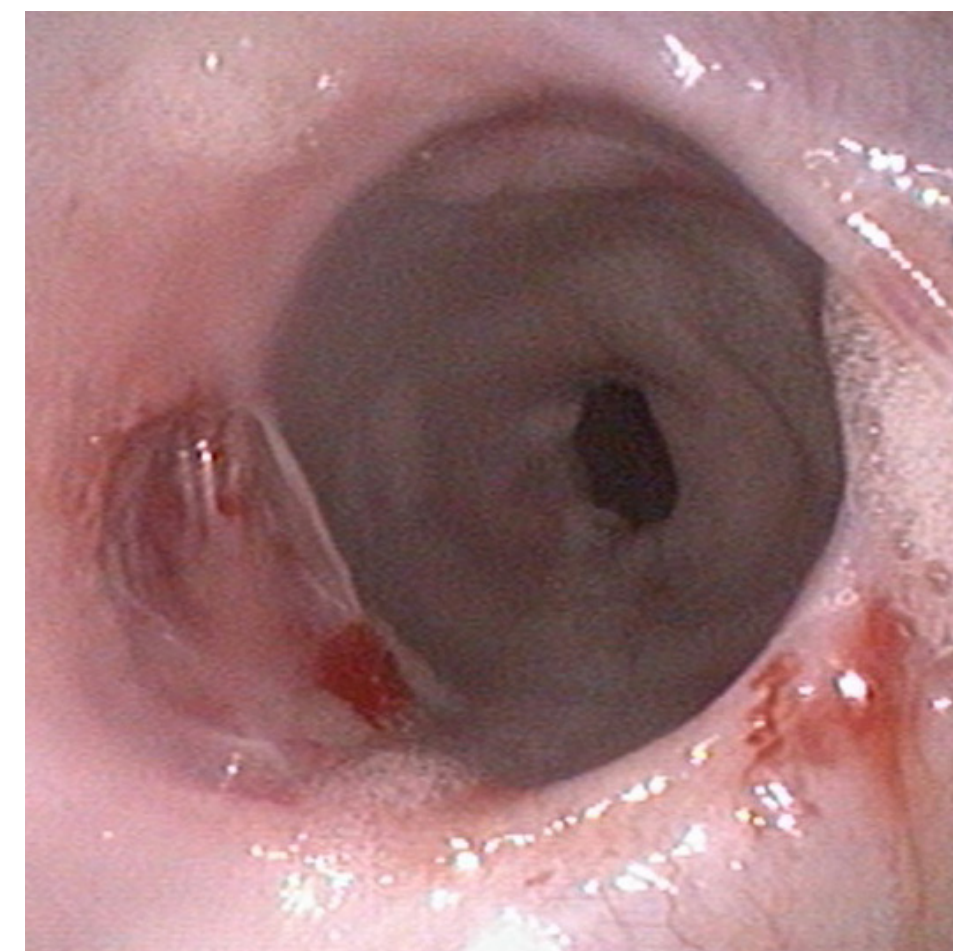
Internal medicine patients present with a wide variety of clinical signs including:

- vomiting
- diarrhoea
- excessive drinking
- abnormal urination
- weight loss
- sneezing
- coughing
- bleeding
- fever

The key tools for an internal medic include a deep willingness to listen, an obsession for details and the understanding and usage of further methods of investigations like radiographs, ultrasound, CT/MRI and endoscopic procedures of the lung, nose, throat and gastrointestinal tract.

Internal medicine specialists have been trained additionally in non-invasive procedures like performing endoscopies, cytology of internal organs, bone marrow sampling, diagnostic imaging, and other minimally invasive therapies and diagnostics.

Hamilton Specialist Referrals offers a multi-disciplinary service with our internal medicine team working alongside imaging, surgery, anaesthesia, cardiology and highly skilled veterinary nursing teams to ensure the most favourable outcome possible for your patients.





# Neurology

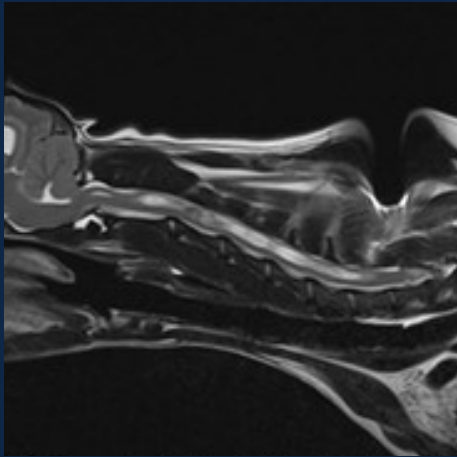
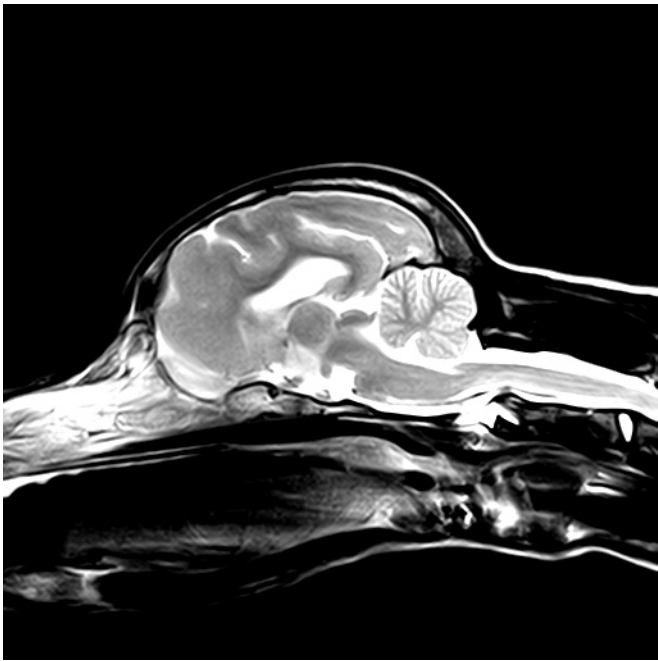
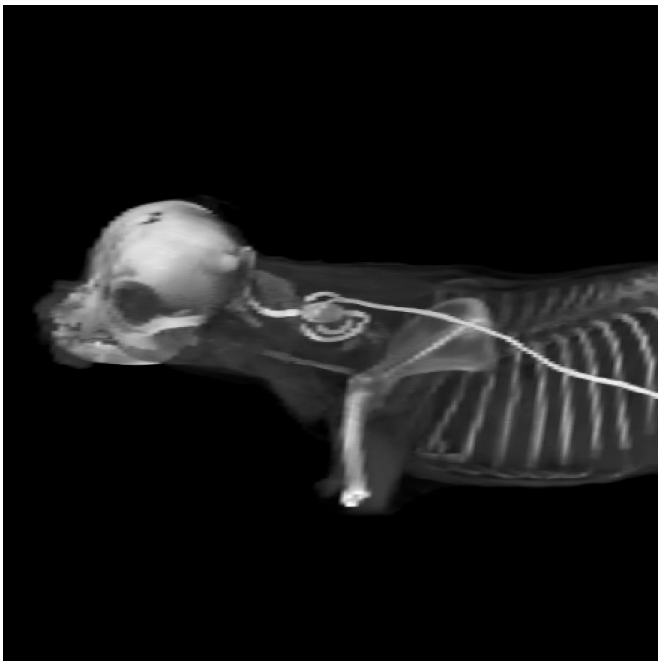
Our neurology team offer the most advanced investigation and treatment options available for neurosurgical and neurological referral cases.

We have a number of investigative capabilities at Hamilton Specialist Referrals to diagnose conditions of the brain, spine and nerves, including MRI, CT, digital radiography and electrodiagnostic techniques.

Palliative care, surgery or radiation are the three chief treatments offered. It is important to obtain a diagnosis in order to give the best advice to the client on how to manage their pet's health.

We investigate and treat a number of conditions/ diseases of the central and peripheral nervous system, including:

- Changes in behaviour
- Cognitive dysfunction syndrome ("senility")
- Movement disorders
- Inflammatory diseases of the brain and spinal cord (meningitis, encephalitis, myelitis)
- Hydrocephalus
- Seizures
- Brain tumours
- Vestibular syndrome
- Facial paralysis
- Intervertebral disc disease ("slipped disc")
- Syringomyelia
- Vertebral malformations
- Neuromuscular diseases (polyneuropathies, myasthenia gravis, myositis)
- Head trauma
- Spinal fractures



## SPINAL DISEASES AND INJURIES

The most common neurosurgical procedures performed at Hamilton Specialist Referrals (HSR) are in the treatment of diseases and injuries of the spine that result in compression of the spinal cord and/or the associated nerve roots. Such cases present with varying degrees of pain, weakness and incoordination.

Our spinal surgeons have vast expertise in performing decompressive hemilaminectomy and ventral slot in the treatment of disc extrusions of the thoracolumbar and cervical spine respectively.

We also perform complex spinal surgeries in small breeds including the treatment of spinal deformities and diverticuli in brachycephalic breeds, and the treatment of atlantoaxial subluxation in toy breeds. Partial lateral corpectomy for the treatment of thoracolumbar intervertebral disc protrusions is also available.

Conditions treated include:

- Spinal fractures/ malformations
- Wobbler syndrome
- Cervical and thoracolumbar disc protrusion or extrusion
- Lumbosacral disease



# Oncology

Since its opening in April of this year, our Oncology service has welcomed referrals of pets with suspected or confirmed cancer. We offer optimal care with a focus on quality of life, selecting from a variety of diagnostic and treatment options.

Frequent cases referred to Oncology include:

- Mast cell tumours
- Lymphoma
- Sarcomas
- Apocrine gland of the anal sac adenocarcinomas
- Feline injection site sarcomas
- Osteosarcoma
- Urothelial carcinoma (formerly transitional cell carcinoma of the bladder/prostate)
- As well as those with a suspicion of an underlying but elusive tumour

For pets referred pre-/mid-investigation, we can offer to complete the characterisation of their tumour while maintaining a budget for subsequent therapeutic options, with on-site access to:

- 1.5T high-field MRI
- 16 slice CT
- Ultrasonography
- Force plate analysis
- Laboratory facilities
- Expertise in molecular diagnostic and monitoring tools

For pets referred to us with an already comprehensive investigation, we will recommend the most effective treatments selecting from:

- Specialist surgery, including limb salvage and reconstructive techniques
- Radiation therapy
- Chemotherapy, including maximum tolerated dose, metronomic, and intracavitary options
- Immunotherapy
- Receptor tyrosine kinase inhibitor therapy
- Palliative care, including physiotherapy
- ...for most pets we design bespoke combinations of the above with appropriate monitoring

For pets receiving chemotherapy, there is no one size fits all approach. Even for patients with similar diagnosis and disease burdens, we tailor treatment and monitoring plans in line with each client's preferences. Dr Elders, our Diplomate Oncology Specialist, will see each patient personally, and suggest which treatment options to pursue for the best outcomes, based on previous research. Dr Elders is supported by our dedicated interns and nurses in delivering superlative care.

We also offer a shared care scheme, in which we can see Oncology patients intermittently for those selected chemotherapy agents you might prefer not to handle in your hospital, while you continue to deliver the bulk of therapy locally using the chemotherapy agents you stock.

For pets on chemotherapy protocols we deliver consistent care through either very brief while you wait chemotherapy outpatient appointments which maximise our patients' time at home, as well as day patient drop off appointments for clients who are busiest during office hours.

Although recently established, our Oncology service is very strongly integrated with our other specialist services. Pets referred to Oncology can also benefit from fully rounded care plans shaped by our diplomates in surgery, imaging, internal medicine, neurology, cardiology and anaesthesiology working co-operatively.

For referrals or case discussion, contact us at [oncology@hamiltonspecialists.vet](mailto:oncology@hamiltonspecialists.vet) or 01494578566





# Orthopaedics

Hamilton Specialist Referrals (HSR) was founded as an Orthopaedics and Neurosurgical hospital and now boasts one of the most experienced and comprehensive orthopaedic services in the UK today. All five of our orthopaedic surgeons are ECVS Diplomates and RCVS Recognised Specialists and are supported by highly experienced teams of nurses and physiotherapists.

One of our key values is to always provide clear and honest communication. We work hard on providing a truly exemplary service for our patients and their owners.

We explain to owners the exact nature of their pet's condition and always discuss the most appropriate investigations based on a detailed clinical examination. We see a wide variety of cases ranging from subtle lameness investigations through to complex polytrauma cases.

We have all the latest technologies to assist us in diagnosis and treatment, including HD arthroscopy, digital radiography, a 1.5T high-field MRI and 16 slice CT scanner. We also routinely use computerised gait analysis, which can be invaluable in cases with subtle abnormalities or in cases with multiple limb problems.



We are happy to see any trauma case and deal with a wide variety of fractures and ligamentous injuries as promptly as possible. In addition to trauma cases, a large part of our caseload is elective surgery. Common cases for our orthopaedic specialists include:

## Cranial cruciate ligament rupture

This is the most common cause of hindlimb lameness in dogs, irrespective of breed. We perform tibial plateau levelling osteotomy (TPLO) on these cases and have treated cases from 2kg to over 100kg, as well as many cats.

We have extensive experience in this procedure and perform several hundred TPLOs annually. Our outcomes are excellent and we will soon be providing a surgical guarantee for TPLO cases, given our confidence in the procedure.

## Patellar luxation

Although a relatively straightforward issue to identify, this can be a complex condition to manage.

There is no 'one size fits all' solution and we employ a range of different procedures, ranging from simple trochleoplasty to complex limb alignment surgery. Each patient has treatment carefully tailored to its unique needs.

## Elbow dysplasia

This is the most common cause of forelimb lameness in dogs, and we offer a full range of options to owners from arthroscopic surgery, modifying osteotomy procedures up to and including joint replacement.

We are currently conducting a clinical trial into the use of stem cells and platelet rich plasma in advanced cases of degenerative joint disease, with encouraging results thus far.

## Arthroscopy

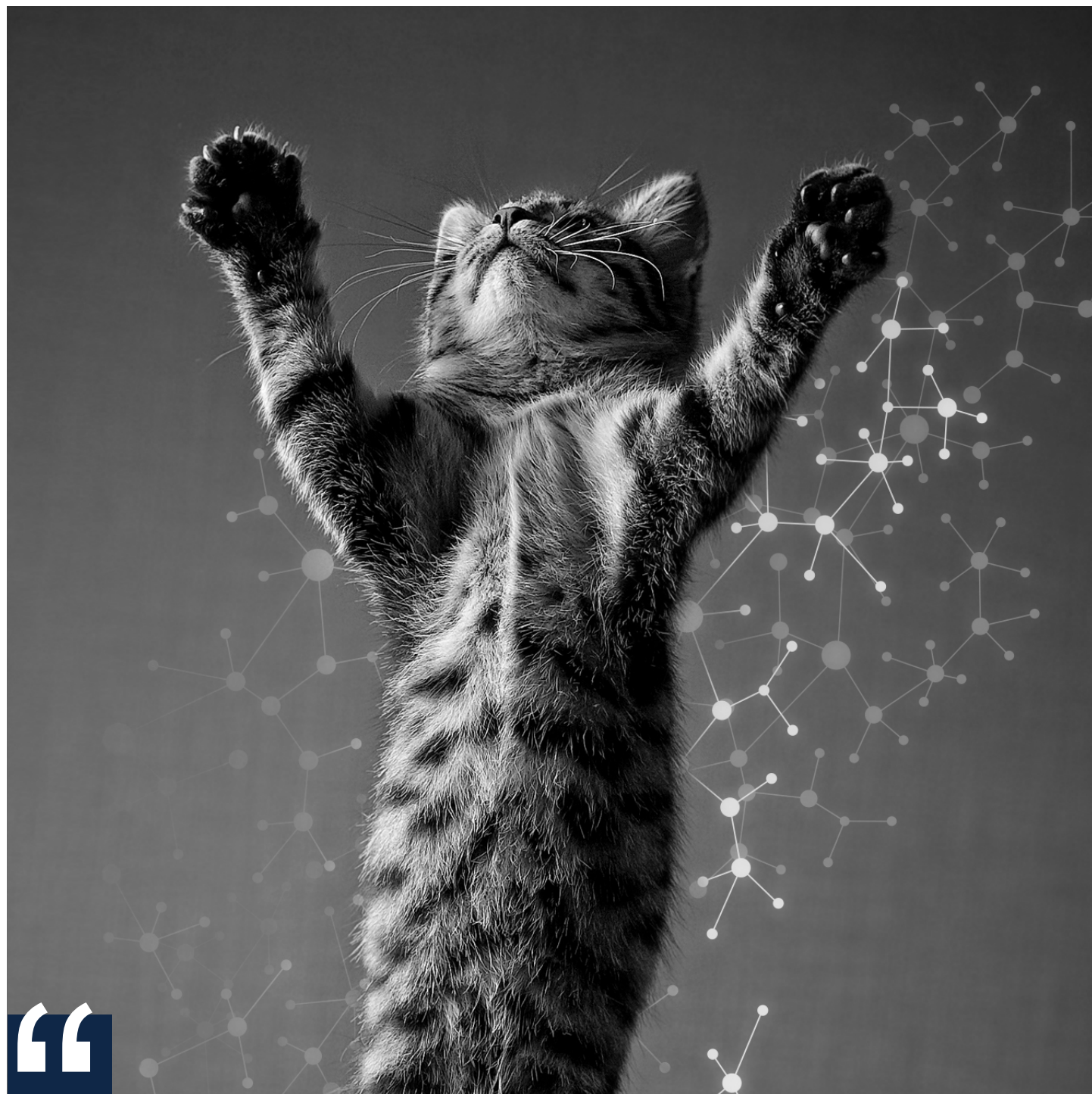
We have a highly advanced HD arthroscopy system at HSR. We most commonly perform arthroscopy in the elbow, but this technique can be invaluable in investigating and treating injuries and diseases of the shoulder. Less commonly we also perform stifle, hip and hock arthroscopy.

## Joint replacement

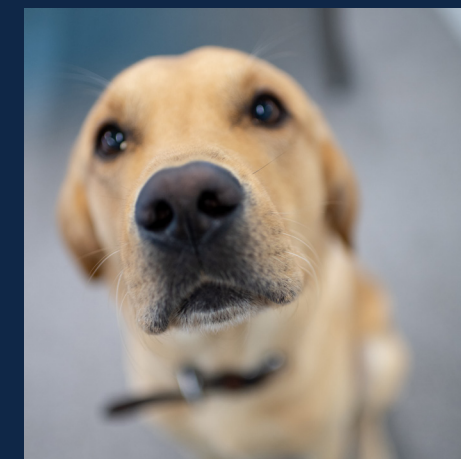
Total hip replacement (THR) is one of the most complex veterinary orthopaedic procedures, which requires specialised equipment and advanced training in the technique. HSR is a high-volume centre for THR and we have extensive experience treating not only in medium and large breed dogs, but also dogs as small as 2kg and even a number of cats.

Although uncommon, we also offer joint replacement of the stifle, elbow and hock joints.





We have a strong focus on providing a personal and reassuring client experience from first contact through to discharge. Excellent clinical care delivered in a friendly and supportive manner is paramount to our entire team.”



As well as offering an unrivalled level of expertise for routine orthopaedic surgery, other specific procedures include:

- **SynACART™ Synthetic osteochondral grafting** - for the treatment of osteochondrosis dissecans (OCD) lesions. These resurfacing procedures have revolutionised the treatment of OCD lesions and we have used these extensively in the shoulder, elbow and stifle.
- **Regenerative Medicine** – the term regenerative medicine refers to the use of concentrated platelet rich plasma and stem cells. We have a wealth of experience in the use of these novel modalities for the treatment of osteoarthritis and a variety of soft tissue injuries.
- **Limb Deformity Correction** – we use custom-made 3D guides to allow for precise realignment based on computer assisted (CAD) surgical planning.
- **Limb Sparing Surgery** – we have performed excision of bone tumours with the application of custom-made titanium implants for cases with primary bone tumours.
- **Spinal Fusion** – our orthopaedic teamwork hand in hand with our Neurology team in cases that require complex spinal fusion. We use CAD assisted 3D printed guides to allow for optimal implant placement and have successfully operated on a dog with atlantoaxial subluxation weighing 1kg, one of the smallest cases ever reported!

We provide a very prompt free radiographic reporting service for our referring practices but are happy to discuss cases by phone if you prefer. With our strength in depth, and our unique offering of weekend appointments for routine cases, we can provide the smoothest and rapid return to normal for patients and clients alike.



# Rehabilitation Services

At Hamilton Specialist Referrals (HSR), our objective is to return our patients to their optimal function as quickly as possible, whether that be a walk around the park or challenging for certificates in international competition.

As is the gold standard in human medicine and in professional sport, a well-structured physiotherapy and rehabilitation programme provides patients with the best chance of making a full and speedy recovery.

Our highly experienced team of physiotherapists and hydrotherapists provide every patient with an individually tailored recovery programme.

Services offered include:

- Hydrotherapy
- Veterinary physiotherapy
- Rehabilitation exercises
- Laser therapy
- Shockwave therapy
- Gait analysis

## Hydrotherapy

At Hamilton Specialist Referrals, we use our aquatic treadmill for hydrotherapy sessions and often use toys to motivate and stimulate, and alternating treadmill speeds and water heights to provide extra resistance or buoyancy.

Hydrotherapy in warm water helps to improve:

- Range of movement around painful joints
- Muscular strength and tone
- Limb proprioception and co-ordination
- Balance
- General fitness and cardiovascular stamina

Conditions treated using hydrotherapy:

- Relief of pain, swelling and stiffness
- Cruciate ligament injuries and post-operative recovery
- Hip dysplasia – especially useful for young dogs who are restricted to lead exercise
- Elbow dysplasia – especially useful for young dogs who are restricted to lead exercise
- Arthritis – reduced pain and increased mobility
- Spinal injuries
- CDRM – chronic degenerative radiculomyelopathy
- Cardiovascular fitness (heart and lungs)
- Recovering from injuries – soft tissue and neurological damage
- Obesity (weight loss in conjunction with diet)
- Mental wellbeing
- Pre- and post-operative conditioning by muscle strengthening maintenance and restoration



## Veterinary Physiotherapy

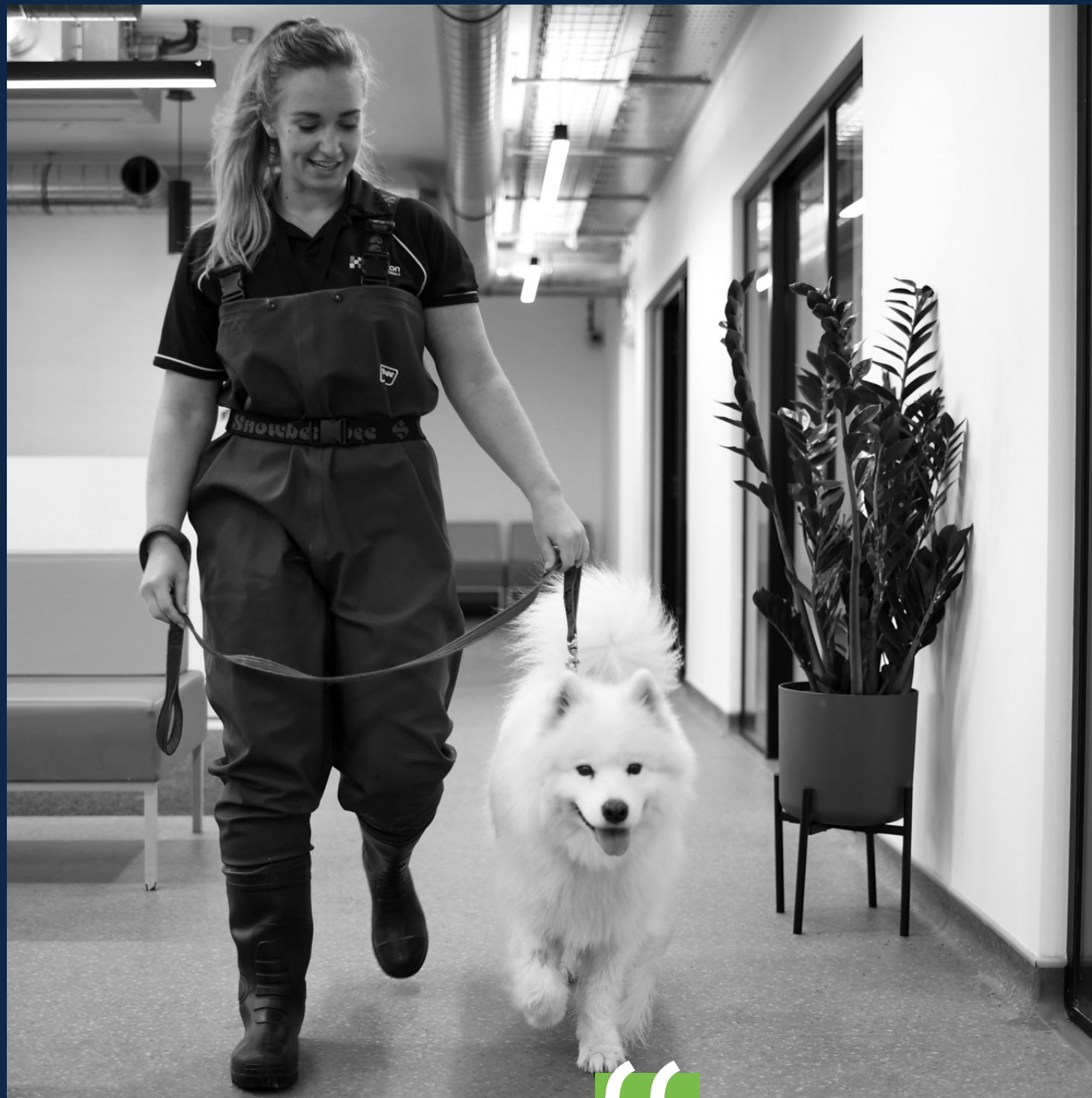
Using information from our team of surgeons as our starting point, we evaluate each pet, administer the most appropriate treatment and give owners advice and training so that they can support and maintain our treatment programme.

Veterinary physiotherapy can be used after surgery, after injury and for pre-surgical conditioning. It helps manage pain, maintains and rebuilds muscle mass, improves mobility and joint function, improves strength and balance, helps with weight control and improves overall quality of life.

Conditions treated using veterinary physiotherapy include:

- Cranial cruciate ligament
- Hip replacement
- Elbow replacement
- Spinal surgery
- Nerve damage
- Luxating patella
- Arthritis
- Neurological conditions
- Chronic degenerative radiculomyelopathy (CDRM)
- Central nerve lesions head trauma/insult
- Spinal cord injuries/conditions
- Hansen type i and ii
- Fibrocartilaginous emboli (FCE)
- Peripheral nerve lesions
- Cardiovascular conditions
- Obesity
- Hip and elbow dysplasia (abnormal development of the hips/elbows)
- Muscle weakness/wastage





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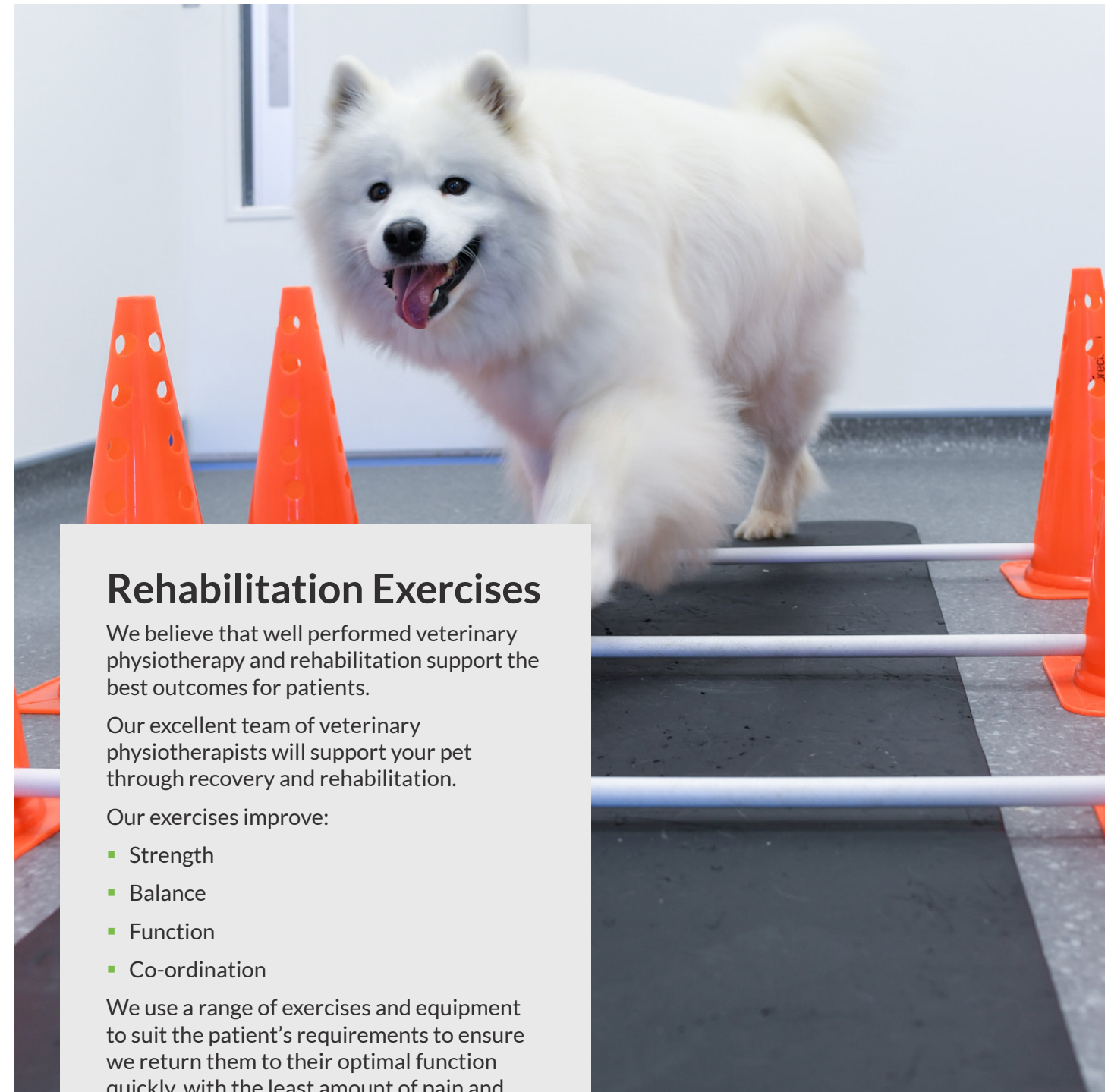
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## Gait Analysis

We use gait analysis to observe, measure and record an animal's gait pattern (way of walking).

Analysing a succession of recordings means we can empirically see how gait changes pre- and post-surgery, or the effects of our rehabilitative treatments.

We use state-of-the-art pressure pads and cameras to record and monitor physical changes in the patient, helping to pin-point the problem areas, measure recovery and establish the optimum time for returning to full activity.



## Rehabilitation Exercises

We believe that well performed veterinary physiotherapy and rehabilitation support the best outcomes for patients.

Our excellent team of veterinary physiotherapists will support your pet through recovery and rehabilitation.

Our exercises improve:

- Strength
- Balance
- Function
- Co-ordination

We use a range of exercises and equipment to suit the patient's requirements to ensure we return them to their optimal function quickly, with the least amount of pain and fewest adaptive changes possible.



# Soft tissue surgery

The Soft Tissue Surgery Service at Hamilton Specialist Referrals works hard to ensure a holistic approach to all cases. We pride ourselves on meeting the needs of referring vets, patients and their owners.

We can offer a comprehensive approach to a range of different cases; from the simple to those that require a multi-disciplinary approach.

We are more than happy to offer advice to referring vets about management of cases – please send through an email and we will get back to you to discuss any questions you may have about the referral process or in working up your own cases in house.

The service works closely with our team of anaesthesia specialists, imaging specialists and nurses to ensure the patient has a smooth journey through the treatment process. We can offer a comprehensive surgical referral service, including:

- **Hepatobiliary surgery:** Portosystemic shunts, liver tumours, extrahepatic biliary obstruction, liver biopsies
- **Gastrointestinal surgery:** Intestinal Foreign bodies, septic peritonitis, tumour resection, pancreatic surgery
- **ENT Surgery (Ears, Nose and Throat):** BOAS (brachycephalic obstructive airway) surgery, stick injuries, salivary mucocoeles, TECA/LBO, rhinoscopy, aural and ocular surgery
- **Genitourinary Surgery:** Urethral trauma, minimally invasive cystotomy, SUBs, urogenital neoplasia
- **Oncological Surgery**
- **Thoracic Surgery:** pyothorax, PDAs, lung lobectomies, chylothorax
- **Skin and reconstruction Surgery:** wound management, VAC wound dressings and wound clinics



With COVID restrictions lifting we will be opening our hospital to regular evening CPD events. Keep up to date with your RCVS CPD requirements and come meet the team to discuss management options for simple and complex cases – we even offer a delicious Pizza dinner to attendees. Please keep an eye on our social media pages for update or contact us for a list of upcoming events.

**If you have a complex case or just need to discuss your decision making please get in touch. Jane Ladlow and Ben Mielke are more than happy to help if they can.**





## NON-EMERGENCY REFERRALS

Can be made via email or phone

**[info@hamiltonspecialists.vet](mailto:info@hamiltonspecialists.vet)**  
or **01494 578566**

We will require you to email the clinical history, any relevant images and ideally a very brief reason for referral

## EMERGENCY REFERRALS

Must be made via phone

**01494 578566**

Please provide as much information as possible over the phone and where possible please email over any images and history



**hamilton**