



**SOUTH  
DEVON  
REFERRALS**



**VETCT**  
CONSULTANTS IN TELEMEDICINE

## OUTPATIENT CT SERVICE

South Devon Referrals is now pleased to be offering an onsite CT service to our referring vets in partnership with a team of Diploma holding radiologists from VetCT Consultants in Telemedicine.

South Devon Referrals has invested in a Toshiba Aquilion Lightning, a brand new 16-row helical CT system. We have opted for a highly specified model with the latest advances developed in the human medical field rather than a second-hand system or a “veterinary specific” lower specified system. This brings a range of benefits to our patients, including:

- the ability to scan all body areas (including e.g. the thorax) in thin slices with shorter scan times (avoiding movement artifacts), and in extremely high quality;
- extra wide gantry bore (allowing better patient positioning even for the largest dogs);
- sophisticated processing that greatly reduces artifacts from metal implants/ microchips etc;
- advanced exposure management that produces higher quality images at lower exposure settings.



## How to refer a case for outpatient CT

The following information is for non-urgent cases (i.e. where patients are clinically stable), where an outpatient CT is requested. For urgent cases, please phone South Devon Referrals to discuss prior to referral: we are usually able to arrange same day or next day slots for urgent cases, with reports delivered within 4-6 hours.

- Once a potential case for CT scanning is identified, please complete the CT request form on our website ([www.southdevonref.co.uk](http://www.southdevonref.co.uk))
- Diploma holding radiologists from VetCT are on hand if required to confirm that CT is appropriate and provide suggested protocols.
- The referring clinician should discuss the scanning procedure and expected outcomes with the owner before referral.
- South Devon Referrals will arrange a convenient appointment time with the owner directly.
- The patient should be taken to its appointment by the owner. The patient will be admitted by nursing staff and a consent form will be completed.
- South Devon Referrals vets will review the clinical history, perform a pre-anaesthetic assessment, anaesthetise/sedate patient and complete the CT scan. The patient leaves South Devon Referrals when considered clinically suitable / convenient for owner.
- South Devon Referrals will send the images to VetCT radiologist. A copy of the original scan is provided to the referring practice on optical disc (CD or DVD).
- Reports are provided to South Devon Referrals and yourselves, according to the schedule selected at the time of referral (routine, priority, urgent). Reports are sent via email and are also available on the VetCT online platform. Images can also be obtained (DICOM format) from the online platform.
- The referring vet should explain the results to the owner and can contact reporting VetCT radiologist for additional support and advice as required. If the patient is referred to another practice then both the images and the report can be promptly forwarded as required.

## Patient selection

Patients will be scanned on an outpatient basis and therefore must be clinically stable and suitable for transport to and from South Devon Referrals and anaesthesia/sedation. Clinically unstable patients should not be considered for outpatient CT imaging unless ambulance transportation, constant veterinary supervision and access to hospital facilities can be provided: please always discuss directly with South Devon Referrals clinician before referring.

CT can be extremely helpful in the diagnosis and evaluation of certain clinical conditions. A list of suggested clinical indications is attached to assist in case selection. In addition, a Diploma-holding Specialist Radiologist can help make sure that CT is appropriate.

There are some situations where outpatient CT is not appropriate. In particular, please complete the safety section of the request form carefully. If you are uncertain of which body area requires imaging and require a specialist to localise the condition (eg. neurolocalisation), then it may be appropriate to consider full referral of the case.

## Contrast media

Contrast media is often used in CT scanning. Again, these are not suitable for all patients and the owner should be made aware of the associated risks. Please complete the safety section of the request form and read the advice carefully.

## Patient preparation

- Patients to be starved for 12 hours prior to admission if 6+ months or older
- Patients to be starved for 6 hours prior to admission if between 3 months and 6 months old
- Patients can have access to water up to 2 hours before admission
- I/v access will be required for all patients

## Responsibility for the patient

The patient remains under the care of the primary referring vet, but will temporarily become the responsibility of the South Devon Referrals vet performing anaesthesia/sedation at the scanning site during preparation, the imaging procedure and recovery.

## Expectations

Each CT examination will be followed up with a full report by the next working day after that scanning appointment. The report is written by a Diploma holding Specialist Radiologist from VetCT Consultants in Telemedicine (<http://www.vet-ct.com>). Please contact VetCT for a sample report. The report will include pertinent images and differential diagnoses.

In many cases CT can give clear and very full answers as to the pathology present, but it should be noted (and the client should be warned) that imaging may not be definitive or may even be normal. Any further intervention after imaging remains the responsibility of the primary referring vet.

## Owner discussion (notes for the referring vet practice)

It is suggested that you cover the following points:

1. **CT scanning** is widely used in veterinary patients and is generally very safe. CT does involve exposure to ionizing radiation (like X-rays) and carries associated risks. Access to the patient is also limited during the scan but they will be monitored remotely by the South Devon Referrals team. Some CT scans can be performed under sedation (depending on the body area and the clinical status of the patient), but anaesthesia is often required to ensure high quality scans. Refer to the patient preparation details.
2. **Contrast media may be used for CT.** These carry a low risk of adverse reaction (such as anaphylaxis) and are contra-indicated in patients with renal disease.
3. **IV access will be required.** The patient will therefore be clipped accordingly (usually catheters are placed in the cephalic vein).
4. **Issues associated with patient transport and recovery**
5. **Expectations** from the CT examination (see above)
6. **Costs**

## Indications for CT scanning

CT scanning is extremely useful for diagnostics, checking for metastasis and surgical planning and is useful for imaging most areas of the body.

Specific examples of indications for CT scanning are:

Head and neck	Thorax	Abdomen/Pelvis	Musculoskeletal/Spine
Nasal disease	Pleuritis	Body wall masses	Vertebral anomalies and malformations
Orbital swellings and masses	Diaphragmatic disease	Liver masses	Discospondylitis
Difficulties opening mouth	Rib masses	Portosystemic shunts	Lumbosacral disease
Facial swellings and masses	Sternal masses	Abdominal lymph nodes	Pelvic and sacral fractures
Head trauma	Pulmonary metastatic disease	Abdominal masses of unknown origin	Tarsal osteochondrosis
Dental disease	Mediastinal masses	Ectopic ureters	Bone tumours
Ear disease	Unresolved pleural effusion	Complicated or unresolved pancreatitis	Elbow dysplasia
Skull masses	Investigation of mediastinal effusion	Pancreatic masses	Angular limb deformities
Stick injuries	Investigation of pneumomediastinum	Insulinoma	
Thyroid masses	Unresolved or spontaneous pneumothorax	Adrenal masses	<b>General</b>
Neck swellings	Lung tumours	Ureteral calculi	Any oncologic disease
Interscapular fibrosarcoma	Tracheobronchial and mediastinal lymph nodes	Hydronephrosis	Metastatic screening
Brachial plexus tumours and avulsion injuries	Lung lobe torsion	Renal masses	Suspect occult infectious or neoplastic disease
	Alveolar and interstitial lung disease	Retroperitoneal effusion or masses	Draining sinus tracts
		Intrapelvic masses	Suspected foreign bodies

The material in this document is ©VetCT and/ or ©South Devon Referrals.