

Information for veterinary surgeons wishing to refer hyperthyroid cats to The Feline Centre

The Feline Centre has more than 15 years of experience treating hyperthyroid cats with radioactive iodine. It is one of a few centres able to provide this treatment, but also has the facility to treat cats with thyroid carcinoma using a high-dose protocol. All cases referred receive a thorough and detailed assessment so that an individually tailor-made treatment plan can be formulated and discussed with the owners. The decision as to whether a cat is suitable to receive radioactive iodine is made according to individual patient and owner factors. Our centre is an **ISFM gold standard Cat Friendly Cat Clinic** and our radioiodine ward has cattery style accommodation. Our service is run by two **Feline Specialists** who are passionate about treating our hyperthyroid patients.

I want to refer a cat for radioactive iodine treatment, what do I do?

In the first instance please send the cat's history and client contact details via our website, or by email to sah@langfordvets.co.uk (or by fax 01179811277) marked for the attention of the radioiodine service.

We will review the cat's history and offer your client an appointment for assessment and reserve a provisional treatment slot. Currently we are starting with a telemedicine consult (zoom or telephone call), and if there is a long waiting time before the suitability assessment visit, we may advise you of any additional recommendations for on-going treatment or monitoring before the cat comes to the Feline Centre e.g. assessment of renal function whilst the cat is on medication or dietary therapy. Cats that are unstable and cannot be medicated will be prioritised for earlier treatment dates; please just highlight this if you have concerns.

Can I discuss my patient with a clinician before arranging referral?

Of course, just send us the case details for us to read in advance and one of the feline medicine clinicians will contact you. Please also see our 'owner information regarding the radioiodine service', which may answer your query.

Why does the cat need to be assessed for suitability for radioactive iodine?

As most of the cats are senior or geriatric, co-morbid disease is common and we want to ensure that the decision to treat and hospitalise the cat for 10-14 days is appropriate. Just this year we have 'incidentally' identified several different types of neoplasia, hypertension, urinary tract infections and ureteroliths in apparently healthy cats on the basis of their assessment; all of these cats outwardly appeared well.

What does the assessment involve?

Investigations that are most commonly performed include:

- Thorough history and clinical examination through the telemedicine and initial consultation at the Feline Centre.

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- Systolic blood pressure measurement + ophthalmic examination to assess for hypertension.
- Complete haematology, serum biochemistry (including serum thyroxine levels) and urinalysis to evaluate renal function and assess for co-morbid disease that may influence treatment, if not already performed at an external laboratory within 1-2 weeks prior to assessment.
- Echocardiography to evaluate for the presence and severity of secondary cardiac disease.
- Thoracic radiographs to assess for evidence of congestive cardiac failure, and to assess for co-morbid disease that may influence treatment. These are performed if radiographs of diagnostic quality have not already been taken within 1-2 weeks prior to assessment.
- Abdominal ultrasonography to assess for co-morbid disease that may influence treatment.
- Additional diagnostics may be performed in individual cases if any abnormalities are identified following the above investigations.

Can I do the assessment?

We are more than happy to work with you to assess a cat's suitability for radioiodine, however we do request that echocardiography and abdominal ultrasound are performed by a specialist diagnostic imager. If you wish to perform some of the diagnostic tests, we will need to liaise with you and we would request the following.

- Complete haematology, serum biochemistry (including serum thyroxine levels) and routine urinalysis (including bacterial culture) performed at an external laboratory within two weeks prior to the treatment appointment (T4 will need to be repeated immediately prior to radioiodine treatment, if the cat is on medication, for dose planning).
- Thoracic (right lateral and DV) radiographs of good diagnostic quality (please email these in prior to the appointment).
- Please bear in mind that the current package cost includes subsidised charges for the medical assessment, as we would prefer to perform the evaluation at the Feline Centre, to understand the cat fully, see how the cat settles in the hospital, and meet the client in advance. The package cost includes the medical consultation with the client, complete assessment, treatment (including up to 2 weeks hospitalisation) and post-treatment evaluation. The assessment visit also gives us the opportunity to discuss radioactive iodine therapy in detail with owners.

Do hyperthyroid cats need to be off all treatment when they are assessed?

No, anti-thyroid agents or dietary therapy do not interfere with the tests performed so it is fine for the cat to stay on treatment and is actually preferable as sedation will be required for some of the imaging.

What tests shall I do before the cat is referred?

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It is not essential for you to have performed any specific investigations prior to referral. We do like to check the cat's renal parameters whilst it is euthyroid, if possible, so that we can assess for unmasking of renal disease as well as to monitor for any side effects of medical therapy (e.g. hepatopathy or cytopenias). It would therefore be very helpful to receive copies of any follow-up bloods to see the cat's urea and creatinine values (and urine specific gravity), when the cat has a normal thyroxine level. Identification of chronic kidney disease (IRIS Stage I or II) does not preclude the cat from having treatment and equally, if renal function cannot be assessed in advance of radioiodine (e.g. if stabilisation is proving difficult), it also does not mean we cannot treat the cat.

What treatment options might be discussed with the client?

Following our assessment, a treatment plan is made for the cat in consultation with the client. The four major treatment options may be discussed with owners:

- Medical management using anti-thyroid agents such as carbimazole and methimazole or dietary therapy with Hill's y/d may be advisable if significant co-morbid disease has been identified.
- Surgical thyroidectomy may be advised if the cat has significant cardiac disease (i.e. evidence of congestive heart failure) and medication or dietary treatment is not tolerated.
- Radioactive iodine therapy (^{131}I).
 - At this point the patient's treatment date will be confirmed (usually for 4-5 weeks later)
 - Medication will be continued unless contraindicated; cats that have experienced adverse effects of anti-thyroid medication will be given priority over less urgent cases on the waiting list.
 - ^{131}I treatment requires patients to be off all oral antithyroid agents (carbimazole/methimazole) for 7 days before treatment; we will instruct the client when to stop treatment (cardiac medications and antihypertensive medications are fine; in very exceptional cases we will advise regarding a shorter or no withdrawal period for anti-thyroid medications).
 - We will advise regarding discontinuing dietary therapy and transdermal methimazole on an individual case basis.

How long will the cat stay in the hospital for?

- This depends on the dose of radioiodine administered. The cats are housed in cattery style accommodation in our radioiodine wards.

Cats receiving a standard dose (111MBq) are now routinely hospitalised in the radioiodine ward for 7days after receiving radioiodine.

- Cats receiving an intermediate dose (150-300MBq) currently stay in the radioiodine ward for 10days
- Cats receiving carcinoma doses (900-1100MBq) on average need to be hospitalised in the radioiodine ward for four-seven weeks depending on their radioactivity levels

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- For all cats there are certain handling restrictions for four weeks after their injection of radioiodine: the cat must be kept indoors, not be exposed to pregnant or breast-feeding women or young children (<12yrs), and owners are advised to minimise very close contact (e.g. not more than 10mins/day of the cat sitting on the owner's lap, keep cat outside of the bedroom when occupied). Waste handling precautions are required for 5 weeks after the treatment has been given (emptying litter trays wearing gloves, double bagging litter and placing directly into outdoor waste bins).
- Despite owners often feeling concerned regarding leaving their cat, in our experience many opt to leave the cat for the entire period when there are handling precautions, despite the cat being able to leave earlier! As our hospital accommodation is cattery style pens, it can often reassure clients to know that if the cat has ever coped with a trip to a cattery, then the stay at Langford will be similar once the treatment has been given.

Can the assessment and treatment be performed in the same visit?

We do not routinely do this as we need to order radioiodine at least one week in advance of the planned treatment date and frequently identify issues that need resolving before the cat has radioiodine (e.g. treatment of hypertension). In exceptional circumstances we can arrange to book the cat for assessment 9-10 days in advance, allowing time to do the assessment and book the cat's iodine delivery. We will happily board the cat in the interim period after the assessment has been completed (however additional boarding costs will be incurred). Please speak to us if you have a client that may need to request this.

What follow-up is required?

We usually ask for the cat to be reassessed at your clinic four weeks after discharge specifically to check.

- General physical examination
- T4 +/- TSH
- Renal biochemistry
- Urinalysis
- Blood pressure

The main purpose of this check is to determine where the T4 level has dropped to (many will be transiently hypothyroid and some cats will have a delayed response to radioiodine), to check for unmasking of chronic kidney disease or development of hypertension. We ask, if possible, that the T4 is measured at the Langford Veterinary Diagnostic laboratory to enable direct comparison to the result before discharge and we will then discuss further treatment or monitoring. The maximal effect in some cats occurs over 6 months; we like to follow all of the cats where possible and are keen to discuss progress and results with you at any point. Once the cat is euthyroid three-six monthly senior/geriatric checks including T4 measurement are advised as routine.

Please see our 'Owner FAQ' information sheet for additional information.

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