

Radioactive Iodine Therapy

Information and Instructions for Referring Veterinarians

Required Diagnostics:

- Routine diagnostic testing is essential prior to the referral.
- We require an accurate clinical assessment and comprehensive bloodwork.
- Given that most candidates tend to be seniors, we need to identify any other comorbidities prior to treatment.
- Certain health conditions can exclude the cat to receive treatment
- Cats must be stable, as they will remain in the Radioactive Iodine facility room and cannot be removed until below the set radiation limits, thus making emergency care difficult to provide if not stable.

Reference Total T4 Requirements:

- T4 levels must be quantitative (Reference Lab only- IDEXX or AVC) and taken prior to treatment when the cat is off thyroid medication.
- *This bloodwork must be sent out for proper testing. In clinic machines despite being supplied by Idexx do not offer the same quantitative measurement.*
- Cats must not be on Methimazole (Felimazole) when this test is performed.
- Discontinuing medication will be advised in the consultation, as is based on specific timing pending treatment date

- **Other suggested tests, based on individual cases:**
- Cardiac Ultrasound or Thoracic Radiographs, especially if severely hyperthyroid, clinically significant heart disease, or long-standing hyperthyroidism (>1 year since diagnosis)
- Electrocardiogram if severely hyperthyroid, marked tachycardia, arrhythmia, or other signs of heart disease
- Full body survey Radiographs if any other disease is suspected based on examination or bloodwork results
- ProBNP blood work pending certain heart murmurs

Once reviewed, if the cat is an acceptable candidate, we will set up a consultation appointment with the client closer to the anticipated treatment date. If we require additional information, we will contact you directly.

Conditions That May Exclude Cats as Suitable Candidates for Radioactive Iodine Therapy

A cat must be stable prior to being admitted for radioactive iodine therapy, as we cannot easily provide emergency care while they are radioactive. Cats with clinically significant cardiovascular, renal, gastrointestinal, endocrine or neurologic disease can potentially not be good candidates for this treatment. Considering the length of time required in the facility room after the radioactive iodine treatment is administered.

Please discuss any concerns you may have about your patient with us prior to referral.

Suitable Candidates Temperament and Behavior to consider

As we know cats can exhibit many behaviors when in hospital and when out of their typical environment. If the cat is characterized with a temperament that makes it very challenging to handle, and even unmanageable to perform an examination without sedatives/medication, this could potentially deem the cat not a suitable candidate. Not only can it be stressful for the cat but it can pose a high risk for the trained team members and Doctor, especially when they are radioactive and exhibit extreme defense reactions.

Release Criteria for Cats Treated with Radioactive Iodine Therapy

Cats are required to remain hospitalized until they are below the regulated radiation limit deemed by the Canadian Nuclear Safety Commission. Cats will still be excreting a small amount of radioactive iodine at the time of discharge, mainly in urine and feces. Clients will receive instructions on proper handling of their cats for the first 2 weeks after release from the hospital, including avoiding prolonged close contact with the cat and special handling of the litter.

Follow-up After Treatment

We will send you an email within a few days of the patient's discharge, providing the medical record with the date of treatment and discharge. We suggest you examine the cat and re-check T4 and renal levels 6 weeks after discharge.

- If T4 remains high at this point, please contact us for further directive
- Additional tests such as serum chemistry or urinalysis may be helpful to identify the development of other issues such as renal disease. We would appreciate you sending us follow-up lab work for our files to allow us to monitor the efficacy of treatment

Possible Complications After Radio-Iodine Treatment

- **Persistence of Hyperthyroidism** – Literature suggests < 3% of cats will remain hyperthyroid after treatment, and require re-treatment. If the cat is still hyperthyroid 3 months after treatment, we will re-treat at no cost to the client.
- **Development of Hypothyroidism** (< 3% of cats) – If thyroid levels are persistently low AND the cat shows clinical signs of hypothyroidism, thyroxine supplementation will be required.
- **Development of Renal Disease** – Borderline renal dysfunction may worsen after therapy, with the development of azotemia and overt renal disease. This is caused by a fall in renal blood flow and glomerular filtration rate when cats return to normal cardiovascular status. In some cats, untreated hyperthyroidism can mask pre-existing renal disease by increasing blood flow to kidneys. This can

occur regardless of the treatment method; radio-iodine is no more likely to cause this effect than treatment with methimazole or surgical thyroidectomy. If renal disease does not develop, it is not caused by the radio-iodine itself.

Treating the cat for 1-2 months with methimazole, then assess kidney function with bloodwork and urinalysis is ideal. If this goes well, it does not mean the cat will not develop renal disease, but it does decrease the risk.

- **Regrowth of Thyroid Tumour** – In rare cases, cats who have been treated and returned to normal thyroid status can become hyperthyroid again – these cats have actually regrown thyroid tumour tissue, which is not a treatment failure. These cats can be re-treated, but the cost is not covered under the original treatment price.

Please be assured we will take care of your patient and client, and we ensure the clients receive daily updates on their cat while in hospital. We will provide care that is needed while cats are hospitalized, but will not provide any additional follow-up care without your consent.

We will always refer clients back to their referring veterinarian after treatment.

Thank you for your consideration in referring your patient to us for radioactive iodine treatment.