

## Radioiodine Therapy I-131 for Cats

The Veterinary Imaging Services (VIS) provides iodine-131 treatment (I-131) for cats suffering from hyperthyroidism and thyroid carcinomas as an alternative to thyroid gland surgery. Radioiodine therapy is the least invasive, safest and most effective way to treat hyperthyroidism in cats. It avoids the inconvenience of daily oral administration and side effects associated with anti-thyroid drugs (such as Methimazole), as well as the risks and postoperative complications associated with anesthesia and surgical thyroidectomy.

More than 95% of cats will be cured by a single injection. Cats that still have elevated thyroid levels after I-131 treatment can be safely treated a second time if the thyroid levels remain high at least six months after the first injection. A very small percentage of cats may become permanently hypothyroid after I-131 treatment and will need to be on a thyroid supplement lifelong.

The I-131 is absorbed and metabolized by the hyperactive thyroid tissue only (even ectopic tissue) and destroys the abnormal hyperfunctioning thyroid cells. The normal cells are suppressed by the hyperactive tissue; therefore they don't uptake the I-131 and are spared. The I-131 does not travel more than 3 mm in tissue so adjacent structures are not affected. Normal thyroid levels are usually reached within 1-3 months post-treatment.

### Radioiodine Procedures

#### Pre-Referral Data

A thorough physical exam, complete bloodwork including complete blood count (CBC), chemistry, T4, 2 view thoracic radiographs and a urinalysis will be required within one month of admission. If any underlying cardiac abnormalities are detected, further workup of these patients by means of electrocardiography (ECG) or echocardiography (EKG) may be necessary. Cats with renal failure or other chronic illnesses may not be the best candidates for I-131. If I-131 treatment is absolutely necessary, these patients should be stabilized as much as possible prior to treatment. In this way we hope to avoid complications during hospitalization following the I-131 treatment. PLEASE NOTE THAT THYROID MEDICATIONS SHOULD BE STOPPED AT LEAST 2 WEEKS BEFORE THE I-131 TREATMENT DATE AS WELL AS THE PATIENT BEING OFF THE HILLS Y/D DIET FOR A MINIMUM OF 8 WEEKS.

#### Procedure

Our protocol includes an imaging study of the thyroid prior to the I-131 therapy. Not only will the scintigraphic study confirm the diagnosis of hyperthyroidism in cats that do not have a palpable thyroid nodule, but also in those cats that have had a relapse of hyperthyroidism after thyroidectomy. It will also evaluate for the possibility of ectopic thyroid tissue. The scintigraphic study is usually done under sedation.



The I-131 is administered as a subcutaneous injection. Due to the radioactive nature of the I-131, the patient is obligated to remain within the state-approved shielded facility at all times during the established days of hospitalization (approximately five nights).

Safety regulations do not allow any visitors in the treatment/housing area. Patients will be monitored daily and owners updated on a daily basis on the status of their pet by a technician. The referring veterinarian will receive a notification upon release of the patient.

#### Post-Treatment Procedures (at home)

At the time of release, the radiologist will meet with the owner and explain the post-treatment procedures. For the first two weeks following treatment:

1. Limit close contact (holding close to your own neck, sleeping next to) with your cat to a maximum of 30 minutes per day per person.
2. Keep your cat indoors. Scoop urine and fecal clumps from the litter box twice daily. Use a flushable litter (We will provide one 10 lb. bag) and flush all clumps down the toilet, or keep all waste in a double-lined trash bag that can be disposed of after 80 days. If flushing the waste, be sure to avoid splashing and make sure the litter goes down after flushing.
3. Always wear latex gloves (VIS will provide) when handling your cat's waste products, bodily fluids and when cleaning the litter box.
4. Place gloves and any objects that have been in contact with your cat's urine or feces in a double-lined garbage bag in a remote area of the house away from children and other animals
5. Keep minors (those under 18 years old) and pregnant women from coming into contact with (and being at least 3 feet away from) your cat or its waste products. THIS INCLUDES WHEN TRANSPORTING YOUR CAT HOME AFTER THE I-131

Keep your cat in a carrier during any transport to avoid contamination of your vehicle by your cat's urine or feces. After this two week period, you and your cat can resume normal activities and you may stop flushing waste products.

#### Follow-up with referring veterinarian

Normal thyroid levels are usually reached between one and three months (sometimes up to six months) post-treatment. More than 95% of cats will be cured by a single injection. The remaining small percentage of cats can be treated a second time safely if the thyroid levels remain high six months after the injection. Follow-up kidney values and T4 levels at 1, 3, 6, and 12 months are recommended. This can easily be done at the family veterinarian's clinic.

## Frequently Asked Questions

### **What exactly is going to happen to my cat while he or she is at VIS?**

On the day of your pet's arrival, a small injection of I-131 will be given under the skin. The following days your cat will not experience any discomfort secondary to the treatment. The room is well-ventilated with continual background music played for your cat's enjoyment. There is no physical or psychological side effects to the treatment.

### **Does it require general anesthesia?**

Both the thyroid scan and treatment are normally done under sedation, but not general anesthesia. General anesthesia may be used if the patient is fractious or uncooperative.

### **Can I visit my cat?**

Due to the radiation levels, you are not able to visit your cat while he or she is staying with us.

### **How long is my cat going to stay at your facility?**

The State of Illinois has new regulations regarding the release of "animals that have received I-131 Treatments": your cat will be ready to go home when his/her radiation level will be less than 0.25mR/hr at 1 foot. We estimate it will take approximately 5 nights, but in some rare cases, maybe longer.

### **I have multiple animals in the house; do I need to be concerned about them?**

It is fine for the animals to all share the same water dish, food bowls, and litter box. If several cats share the same litter box, you must use flushable litter and treat all the urine and feces as if they came from the cat treated.

### **Do I need to worry about the radiation?**

All of us are exposed to radiation in our daily lives. The earth, air, and water we drink all contain small amounts of background radiation. There is not any proven evidence that has established an increase in either human diseases or harmful effects when cumulative exposures are 10 times that of background radiation. Therefore, the very low dose of radiation you will receive when caring for your cat can be compared to a few months of our background radiation.

### **Do I need to wear gloves to pet my cat?**

Not unless there is a chance that your cat has inadvertently soiled its coat with urine or feces.

### **What if my cat vomits within the first two weeks he/she is at home?**

If your cat vomits, wear the latex gloves and clean up the vomitus with any cleaning agent you normally use. If you use toilet paper, flush everything down the toilet. If you use a cloth towel or paper towels, you will need to hold onto these towels in a separate, double-lined, garbage bag. After the 2-week period, you can throw it out in the garbage or wash it with your laundry.

### **Is the bedding, couch, carpet, etc. that my cat sleeps on going to become contaminated?**

No, providing that he or she has not urinated, defecated, or vomited on anything.

### **How soon will my cat begin to gain weight and be back to her/his old self?**

This varies; Some owners see changes in their cat's weight and behavior immediately while for others it may take up to 6 months.



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