

UNIVERSITY OF ILLINOIS AT URBANA - CHAMPAIGN

Veterinary Teaching Hospital

Owner Guidelines for I-131 Therapy

What is Iodine 131 therapy?

I-131 therapy is one of the simplest, safest and most effective methods of treating feline hyperthyroidism. In addition, patients treated with I-131 therapy have a longer median survival time than patients treated with methimazole alone.¹ I-131 therapy involves a single injection of radioactive iodine; the I-131 is carried to the abnormal thyroid tissue that is present in the gland or elsewhere and destroys that tissue. The I-131 does not affect other tissues in the body. Some is then excreted by the kidneys.

What are the requirements to be a candidate for I-131 therapy?

The patient must be diagnosed with hyperthyroidism based on the combination of clinical signs and an elevated T4 level. At the time of diagnosis, a chemistry panel and urinalysis should also be performed to evaluate kidney function. The next requirement is that the patient first be treated with methimazole until their serum T4 level is down to a normal range. At that time, a repeat chemistry panel and urinalysis are repeated to assess renal function. If renal function has deteriorated, that cat may not be a good candidate for this therapy since adverse kidney effects may be following. This cat, therefore, should be maintained on methimazole supplementation with careful monitoring. The benefit of this approach is that if the patient's kidney disease continues to deteriorate, the methimazole therapy can be discontinued.

1) Milner, R.J., Channell, C.D., Levy, J.K, & Schaer, M. (2006). Survival times for cats with hyperthyroidism treated with iodine 131, methimazole or both: 167 cases (1996-2003). JAVMA, Vol 228 (4), pgs 559-63

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General criteria for I-131 therapy

- Diagnosis of hyperthyroidism
- Treated medically for 3 months with methimazole achieving a T4 level in the normal range
- No change/deterioration in kidney function noted before or after treatment
- No concurrent conditions that would make isolation contraindicated

Cats meeting these criteria are considered good candidates. Some cats not meeting these criteria may still be treated on a case by case basis with owner consent following full discussion of heightened risk of treatment. For some cats, additional diagnostics may be recommended before treatment.

What is the cost for I-131 therapy at the U of I? Approximately \$1,400

How long is the patient required to be isolated and what are the details of the treatment?

State law requires that cats be isolated for a minimum of 6 days after treatment (e.g., treated on Wednesday, home on Monday). Some patients may be required to stay longer; this is something that cannot be predicted. Cats hospitalized in isolation are checked twice daily and routine care is provided. There is a low risk that a medical problem could occur and could go untreated. Owners are allowed to bring food and other personal items, but these items and any excess food cannot be returned.

What happens after the patient goes home?

State regulations require that we advise that for two weeks after the patient is discharged, special precautions must be taken at home since your cat may still be excreting low levels of radioactive iodine. Pregnant women and people under the age of 18 should have NO contact with the patient for two weeks. Persons over the age of 45 years should stay 6 feet or further from the cat, except for brief periods. Other people in the household should have very limited contact with the patient for the two weeks after; this includes having the cat sleep in a different room, not letting the cat on your lap and not allowing the pet near food preparation areas. Hands should always be washed after interaction, cleaning food dishes and the litter pan. The cat should not be allowed outside during this time.

What follow-up testing is needed?

While I-131 therapy is very effective and in most cases a cure for hyperthyroidism, <5% cats will require a second treatment. The thyroid level generally normalizes within a few weeks after treatment. To assess kidney function as well as the thyroid level, a chemistry profile with a T4 should be performed approximately one month after the treatment. Very rarely, some cats will become hypothyroid and may require supplementation after the treatment. The follow-up testing does not have to be performed at the University of Illinois.