

# Hospital for Small Animals

Radioactive iodine ( $I^{131}$ )  
treatment for cats with  
hyperthyroidism



THE UNIVERSITY of EDINBURGH  
The Royal (Dick) School  
of Veterinary Studies

# Radioactive iodine ( $I^{131}$ ) treatment for cats with hyperthyroidism

The Hospital for Small Animals is one of the few specialist centres in the UK able to offer radioiodine (or  $I^{131}$ ) therapy for the definitive treatment of hyperthyroidism (overactive thyroid gland) in cats.

In the majority of cases, this treatment provides a cure without surgery and without the need for on-going thyroid medication. Recent studies have shown that cats treated with radioiodine can live up to twice as long as cats treated only with tablets.

Giving tablets to your cat is not a cure for hyperthyroidism. These tablets suppress the production of thyroid hormone from the thyroid gland, but your cat must stay on them for the rest of their life. In some cases, this can cause serious side-effects, and giving tablets to your cat every day can be a stressful experience – both for you and your pet!

Removing the abnormal thyroid glands surgically is one option, however this requires a general anaesthetic and may sometimes affect other glands. In addition, some cats have their thyroid tissue within the chest, rather than in the neck, making surgery very complex or impossible.

Radioiodine ( $I^{131}$ ) treatment involves injecting a radioactive isotope of iodine under the skin, in much the same way as for a normal vaccine. The radioiodine is taken up by the overactive thyroid gland, and not by any other area of the body. This results in atrophy of the gland even in areas that are difficult to access.

# Radioactive iodine ( $I^{131}$ ) treatment for cats with hyperthyroidism

## **Can my cat come home immediately?**

After your cat is injected with a radioactive substance, they will continue to excrete radioactive iodine in their urine, faeces and saliva for a period of time. UK guidelines require that cats are kept within the hospital until the radiation level has fallen to an acceptable level. Although individual cats will vary, at the Hospital for Small Animals we are able to allow the majority of cats to return home within 7-10 days, which is currently one of the shortest times in the UK for any centre that offers this treatment.

## **Will my cat be well looked after during this hospital stay?**

For the first three days after the radioiodine injection your cat will be in isolation to reduce the risks to humans and other animals. During this time they will be checked several times per day by veterinary staff and will be in a comfortable cage with plenty of blankets and toys. After this time they will be moved to a ward with large walk-in kennels and will be able to receive lots of attention from the ward staff.

## **Will my cat still be radioactive at home? Is there any risk?**

The radioiodine in their body continues to disappear with time; therefore they will still be excreting tiny amounts of radioiodine in the urine, faeces and saliva. We therefore ask that you keep your cat indoors and limit physical contact between people and your cat for at least two weeks after leaving the hospital. We will also supply you with special cat litter which enables you to flush your cat's urine and faeces down the toilet. We work in close contact with our medical radiation safety advisors to ensure that each step of the treatment is safe for you, your cat, your family and our staff.

**Are there any complications associated with treatment?**

Despite our best efforts to identify underlying disease that might prevent treatment (severe heart disease, kidney disease), some cats may become ill whilst hospitalised and need further interventions or treatments.

Very rarely, some cats may develop clinical signs of an under-active thyroid gland weeks to months after radioiodine treatment. Normal function may be restored with time, but some cats may require treatment for this. Also, some cats may not respond to the radioiodine therapy. This may be because they need a higher dose than is standard, or it may be because they have a carcinoma (cancer) of the thyroid gland.

Occasionally cats may develop delayed health problems. This can include chronic kidney disease or high blood pressure after treatment, which is why we offer one month and three month check-ups to ensure they are remaining well.

**Are there any cats for which radioiodine therapy is unsuitable?**

Radioiodine therapy is not suitable for some cats with concurrent diseases such as diabetes mellitus or severe heart disease, as whilst in isolation it is not possible to give them medications for these conditions.

**What should I do if I want radioiodine treatment for my cat?**

You should ask your vet to arrange a referral with the Internal Medicine Service (Feline Medicine) of the Hospital for Small Animals, and we will contact you with an appropriate appointment.

### **What happens at the appointment?**

Your first appointment will be to carry out an assessment of your cat. Ideally your cat should still be receiving thyroid medication for this appointment. Your cat will receive a physical examination, blood and urine tests, blood pressure measurement and a heart scan to assess if there are any conditions which might prevent treatment or might need to be treated before  $^{131}\text{I}$  administration (usually heart disease, kidney disease, high blood pressure). Hyperthyroidism can mask kidney disease, so prior treatment with tablets is essential to establish whether kidney disease is present.

If no concurrent diseases are identified, an appointment will then be scheduled for the treatment, approximately two weeks after the initial consultation, to allow the radioactive iodine to be ordered.

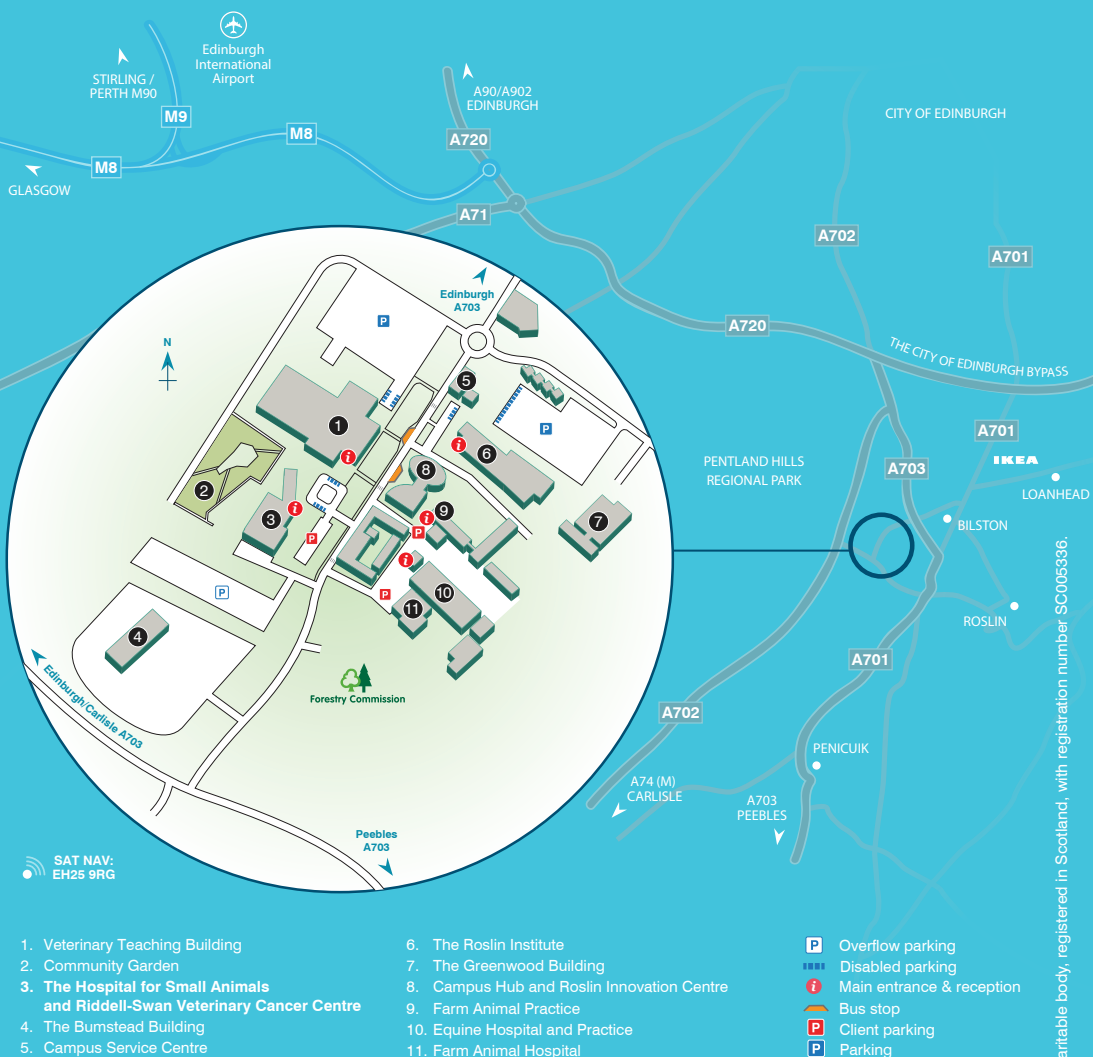
**Your cat should have not received any thyroid medication for at least five days before the 'treatment appointment'!**



## The Feline Clinic

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As part of The University of Edinburgh, the Hospital of Small Animals is a not-for-profit organisation.