



# CENTRAL HOSPITAL FOR VETERINARY MEDICINE

24 HOUR CARE • *We're always here*

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December 8, 2016

Ms. Betsy Ulrich  
Senior Health Physicist  
Licensing Assistance Team  
United States Nuclear Regulatory Commission, Region 1  
2100 Renaissance Boulevard, Suite 100  
King of Prussia, PA 19406-2713

License No. 06-35047-01

Docket No. 030-38622

Dear Ms. Ulrich,

The Central Hospital for veterinary Medicine is requesting an amendment to our license (#06-35047-01) as described below.

We would like to reduce the minimum hospitalization time of our feline veterinary patients from 4 days (96 hours) to 2 days (48 hours). Our current license requirement that patients measure less than 0.5mrem/hr at 1 meter prior to release will be maintained. The home care restrictions and patient follow-up currently practiced (as indicated in our license) will also be maintained. This release date would only apply to feline patients. A copy of our current homecare restrictions is included for your review.

In the period from July 15, 2013 to December 1, 2016, we have successfully treated 147 patients. Our average dose of Iodine-131 has been 4.4mCi, with a minimum dose of 2.8mCi and a maximum dose of 7.57mCi. We have been measuring patients daily starting on day 2 to assess/estimate their ability for release at 96 hours. Not all patients were measured each day. In total, 93 of 147 (63%) patients that were tested measured <0.5mrem/hr at 1 meter prior to 96 hours. Of the 92 cats measured at day 2, 40 patients (43%) measured <0.5mrem/hr at 1 meter. Of the 99 patients measured at day 3, 53 (53%) measured <0.5mrem/hr at 1 meter.

Based on estimates provided by the NRC in the past, a patient measuring 0.5mrem/hr at 1 meter would have an estimated dose of 2.4mCi of I-131 remaining in situ, but in that communication the original patient dose was not indicated. The effective (or biological) half life of I-131 in feline patients has been

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NRC/RCN1 MATERIALS-002



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estimated to be 2.54 days (1.4-3.24)<sup>1</sup>. With our average dose of 4.4 mCi/cat, the remaining dose at 48hrs is calculated at 2.55mCi, similar to your estimated remaining dose at the release rate (0.5mrem/hr at 1 meter). Given our average dose, this calculation reasonably matches our clinical observations that many patients reach the release rate by 48-72 hours.

These calculations and our clinical measurements both support the expectation that many of our feline patients should fall within the dose rate release limits well prior to 96 hours. If patients are progressing along a normal effective T1/2 curve, then a patient measuring 0.5mrem/hr at 1 meter should pose the same exposure to their human caretakers whether they are released at day 2, 3, 4 or later. Therefore, it would seem reasonable to allow them to return home earlier provided they adhere to our discharge instructions (see attached). These instructions were designed to limit owner/caretaker exposure to <2mrem/hr and <100mrem/year at the dose rate in question, and were previously approved.

Retaining patients in the hospital after they have reached the 0.5mrem/hr at 1 meter results in additional hardship on the patient and owner. These patients are often anxious and fearful, and do not eat or drink well in the hospital. This can lead to development of dehydration, GI signs such as vomiting and/or diarrhea, and can exacerbate any other medical conditions the patients may have such as diabetes, or heart or kidney disease. Allowing the patients to return to their home sooner improves their overall wellbeing, and can help avoid such complications. Early release also reduces the stress and anxiety many owners feel at being separated from their close companions. Finally, maintaining patients in the hospital results in increased staff exposure to radiation unnecessarily.

Thank you for taking this matter under consideration. If there is any additional information I can provide, please do not hesitate to contact me.

Sincerely,

Mr. Ken Aldrich,  
Chief Operating officer  
Management representative

Dr. Lance Rozear, DVM, DACVR, RSO

<sup>1</sup> Vet Rec. 2015 Jul 4;177(1):14. doi: 10.1136/vr.103029. Epub 2015 Jun 16.

## I-131 Patient discharge and home care instructions

### The Central Hospital for Veterinary Medicine

Your cat was treated with \_\_\_\_\_ mCi of radioactive iodine (I-131) at The Central Hospital for Veterinary Medicine (CHVM) on \_\_\_\_\_ for the treatment of hyperthyroidism. He/she has been housed at CHVM in a safe and secure environment while the radioactivity level has been high. Now the levels are low enough that he/she can go home to continue his/her recovery in your care.

Because your cat still has a small amount of radioactive material in his/her body, they continue to emit a low level of radiation. The level is low enough that no member of the public should be exposed to unhealthy levels of radiation (less than 100 mrem/year and less than 2 mrem per hour as defined by the Nuclear Regulatory Commission) as long as you follow the guidelines below. This radioactivity will gradually decline and will be gone about 3 weeks after you take him/her home. During this time you must follow the safety procedures listed below to minimize any risk of exposure to you or your family or others.

If you have any questions or concerns, please do not hesitate to call us here at CHVM.

#### Household safety procedures

- Keep your cat in his/her carrier until you get home.
- Your cat must be kept strictly indoors for 3 weeks to minimize exposure to other people, pets and wildlife and so you can closely monitor his/her treatment response.
- Your cat must be isolated to one quiet room in your house for the first week. This should not be an occupied bedroom, a frequented bathroom or other high-traffic room. After the first week, your cat may be given access to the remainder of the home.
- Keep your cat off the counters to prevent the contamination of food-preparation surfaces for 3 weeks. If this is not possible, make sure you clean any surfaces thoroughly before food preparation.
- Please **do not kiss your cat and avoid contact with your face for 3 weeks**. Radioactive material is excreted in the cat's saliva, which is then deposited onto its fur when they groom. This material is easily absorbed orally, and we do not want you or anyone else becoming contaminated.
- Wash your hands thoroughly after any contact with your cat, its food/water dishes and toys.
- No one under the age of 12 should be allowed to have access to your cat or the room in which it is isolated for the first week, and should avoid close contact (within 3 feet) for the subsequent 2 weeks.
- Pregnant women or women who are breastfeeding should not be allowed near the cat or the contaminated litter or bedding (within 3 feet) for 3 weeks.
- Personal contact should be restricted at first, but can be gradually increased over time based on the following
  - Week 1
    - Close contact (within one foot) such as petting must be avoided completely
    - **Do not** hold the cat or allow it to sit in your lap.
    - The cat **may not** sleep in a bed with a person
    - Maintain a distance of more than 3 feet from your pet

- Week 2
  - Petting is allowed, but should be limited to 20 minutes per day
  - Wash hands after any direct contact
  - **Do not** hold the cat or allow it to sit in your lap
  - The cat **may not** sleep in a bed with a person
  - At all other times maintain a distance of more than 3 feet
- Week 3
  - Petting is unrestricted
  - Wash hands after any direct contact
  - Lapttime/holding should be limited to 30 minutes per day
  - The cat **may not** sleep in a bed with a person
- For 3 weeks, you should use plastic litter pan liners and flushable litter, and you should flush all waste. You should wear protective gloves while cleaning the litter and wash your hands thoroughly afterwards. After this 3 weeks, take any residual litter and double bag it. Leave it in an isolated corner of the garage or basement for another 2 weeks, then discard into the trash. Most landfills do not allow the disposal of low-level radioactive materials, and have sensitive equipment to detect its presence. To avoid being fined, please be sure to follow the above guidelines.
- All cleaning rags, rubber gloves and other discarded material used to clean the animal's litter box or contaminated surroundings (for example if they vomit or eliminate outside the litter box) should be treated as if they are contaminated as well, and kept with the bagged contaminated litter and held for the additional 2 weeks.
- After 3 weeks, you may return to your normal household routine.

#### Medical issues

- If you have any concerns about your pet's response to the therapy or any other issues that develop during this period, please contact us at CHVM or your regular veterinarian as soon as possible.
- If your pet requires medical attention, we recommend that you bring him/her back to CHVM during their radioactive period. Our facilities are designed to safely house/hospitalized radioactive patients and our staff is trained to handle their special needs. If you return, please call ahead of time so that we may prepare for your arrival.
- If your cat requires medical attention and you wish to take him/her back to your regular vet during this time, call them first and explain the situation. Make sure you bring these instructions to give to your veterinarian. They can contact Dr. Harley or Dr. Rozear at CHVM for more information and safety instructions.
- Remember to keep your cat in his/her carrier at all times during transport.

I understand that my pet is being discharged from the hospital with residual amounts of radioactive materials, and that there is the potential for radiation exposure to me, my family and members of the public. I further understand that these instructions/restrictions are designed to minimize exposure and to keep any potential exposure within the safe limits as defined by the Nuclear Regulatory Commission. I understand these instructions, and all questions I have regarding these instructions have been explained to me in a satisfactory manner. I agree to follow the instructions in this document fully.

\_\_\_\_\_ Date:  
Owner/primary caretaker

\_\_\_\_\_ Date:  
Radiation safety officer or Authorized user



**ACKNOWLEDGEMENT - RECEIPT OF CORRESPONDENCE**

<b>Name and Address of Applicant and/or Licensee</b>  Kenneth Aldrich Chief Operating Officer The Central Hospital for Veterinary Medicine, Inc. 4 Devine Street North Haven, Connecticut 06473	<b>Date</b> December 21, 2016
	<b>License Number(s)</b> 06-35047-01
	<b>Mail Control Number(s)</b> 592591
	<b>Licensing and/or Technical Reviewer or Branch</b> Medical Branch

This is to acknowledge receipt of your:  Letter and/or  Application Dated: December 8, 2016

The initial processing, which included an administrative review, has been performed.  
 Amendment  Termination  New License  Renewal

There were no administrative omissions identified during our initial review.

This is to acknowledge receipt of your application for renewal of the material(s) license identified above. Your application is deemed timely filed, and accordingly, the license will not expire until final action has been taken by this office.

Your application for a new NRC license did not include your taxpayer identification number. Please complete and submit NRC Form 531, Request for Taxpayer Identification Number, located at the following link: <http://www.nrc.gov/reading-rm/doc-collections/forms/nrc531.pdf>  
Follow the instructions on the form for submission.

The following administrative omissions have been identified:

Your application has been assigned the above listed MAIL CONTROL NUMBER. When calling to inquire about this action, please refer to this control number. Your application has been forwarded to a technical reviewer. Please note that the technical review, which is normally completed within 180 days for a renewal application (90 days for all other requests), may identify additional omissions or require additional information. If you have any questions concerning the processing of your application, our contact information is listed below:

**Region I**  
**U. S. Nuclear Regulatory Commission**  
**Division of Nuclear Materials Safety**  
**2100 Renaissance Boulevard, Suite 100**  
**King of Prussia, PA 19406-2713**  
**(610) 337-5260, (610) 337-5313,**  
**(610) 337-5398, (610) 337-5239**