



Our Lady of Mercy Hospital

U.S. Highway 30 Dyer, Indiana 46311-1799 (219) 865-2141

March 30, 1987

U. S. Nuclear Regulatory Commission
Material Licensing Branch
799 Roosevelt Road
Glen Ellyn, IL 601-7

USNRC # 13-12914-01

Dear Sir:

Our Lady of Mercy Hospital is desirous of amending its radioactive materials license to allow possession of Group VI sealed sources for brachytherapy application. We request a maximum possession limit of two curies for all sources authorized in this category. In support of this request, we submit the following for your consideration.

1. The above material will be used under the supervision of Drs. Shah and Khan who are currently authorized for such procedures at St. James Hospital in Chicago Heights, IL (USNRC #12-11483-01).
2. Suppliers of the material will be an approved licensee of the commission (eg. Rad/rid, Best Industries, 3M, or Therapeutic Nuclides of Valencia, California). We will also use their disposal services.
3. All materials will be delivered to the Nuclear Medicine Dept. of our hospital in accordance with our established procedures where they will be surveyed, wipe tested, and inspected for damage. They will be stored in the shipping container in one of our lead lined storage cabinets until ready for use. In the event that at a later time we decide to maintain a permanent inventory of Cs 137 tubes, we will procure a commercially available lead lined safe which can be locked and kept in our hot lab. We further confirm that such sources will be leak tested semi-annually, inventoried quarterly, and that a usage log will be maintained. We also intend to purchase a lead lined pig for transportation of material to and from surgery or the patient's room. In our hot lab, we are already in possession of a two inch thick lead lined shadow shield behind which the physician can work when loading sources. Our survey instrumentation includes two Victoreen 740D Cutie Pie survey meters with a range of 0-25,000mR/hr.

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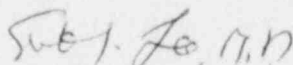
USNRC # 13-12914-01

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4. We further confirm that we will adhere to the requirements specified in Appendix L of the NRC Licensing Guide 10.8, Revision 1, October, 1980. (See attached).

Since this is a new program for us, we would appreciate your comments and suggestions. I look forward to your prompt reply.

Sincerely,



S. S. Lee, M.D.

Chairperson, Radiation Safety Committee

Enclosures: \$140 Amendment Fee
Appendix L
Nursing Instructions for Patients
Treated with Brachytherapy Sources.

Copy to: R. Buchler/Manager Imaging Services
N. Lembares/Health Physicist
File

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APPENDIX L

RADIATION SAFETY PROCEDURES FOR THERAPEUTIC USE OF SEALED SOURCES*

1. All patients treated with brachytherapy sources will be placed in a private room that has a toilet.
 2. The patient's room will be properly posted or attended in accordance with §§ 20.203 or 20.204 of 10 CFR Part 20.
 3. Surveys of the patient's room and surrounding areas will be conducted as soon as practicable after sources are implanted. Exposure rate measurements will be taken at 3 feet (or 1 m) from the patient with sources implanted, at the patient's bedside, at 3 feet (or 1 m) from the bed, and at the entrance to the room. The Radiation Safety Officer or his designee will then determine how long a person may remain at these positions and will post these times and the exposure rate at 3 feet (or 1 m) from the patient on the patient's chart.
 4. Immediately after sources are implanted, the form "Nursing Instructions for Patients Treated with Brachytherapy Sources" will be completed and attached to the patient's chart.
 5. Radiation levels in unrestricted areas will be maintained less than the limits specified in paragraphs 20.105(b)(1) and (b)(2) of 10 CFR Part 20.
 6. Nurses caring for brachytherapy patients will be assigned film or TLD badges. TLD finger badges will also be assigned to nurses who must provide extended personal care to the patient. Pocket dosimeters may be assigned in addition to a film or TLD badge.
 7. At the conclusion of treatment, a survey will be performed in accordance with paragraph 35.14(b)(5)(vii) of 10 CFR Part 35 to ensure that all sources other than permanent implants have been removed from the patient and that no sources remain in the patient's room or in any other area occupied by the patient. At the same time, all radiation signs will be removed and all film and TLD badges assigned to nurses will be collected. If the patient is to be discharged, the final survey will also include a notation on the patient's chart that the activity remaining in the patient meets conditions for release from the hospital.
 8. Instructions to Nurses
 - a. Special restrictions may be noted on the precaution sheet on the patient's chart. Nurses should read these instructions before administering to the patient. The Radiation Safety Officer should be contacted to answer any questions about the care of these patients in regard to radiation safety precautions.
 - b. Nurses should spend only the minimum time necessary near a patient for routine nursing care. Obtain and wear a film or TLD badge or a pocket chamber as instructed by the Radiation Safety Officer.
 - c. When a nurse is assigned to a therapy patient, a film or TLD badge should be obtained immediately from the Radiation Safety Officer or his designee. The badge shall be worn only by the nurse to whom it is issued and shall not be exchanged among nurses.
 - d. Pregnant nurses should not be assigned to the personal care of these patients.
 - e. Never touch needles, capsules, or containers holding brachytherapy sources. If a source becomes dislodged, use long forceps and put it in the corner of the room or in the shielded container provided; contact Radiation Therapy, the Radiation Safety Officer, or the Nuclear Medicine Department at once.
 - f. Bed bath given by the nurse should be omitted while the sources are in place.
 - g. Perineal care is not given during gynecologic treatment; the perineal pad may be changed when necessary unless orders to the contrary have been written.
 - h. Surgical dressings and bandages used to cover the area of needle insertion may be changed only by the attending physician or radiologist and MAY NOT BE DISCARDED until directed by the radiologist. Dressings should be kept in a basin until checked by the Radiation Safety Officer or his designee.
- Special orders will be written for oral hygiene for patients with oral implants.
- i. No special precautions are needed for sputum, urine, vomitus, stools, dishes, instruments, or utensils unless specifically ordered, but these items should be saved for a check with a radiation survey meter to ensure that no sources have been inadvertently displaced into them.

* Be sure to submit complete responses to Items 20a through 20f in addition to referencing procedures in Appendix L.

- j. All bed linens must be checked with a radiation survey meter before being removed from the patient's room to ensure that no dislodged sources are inadvertently removed.
- k. These patients must stay in bed unless orders to the contrary are written. In any event, patients will remain in their assigned rooms during the treatment period.
- l. Visitors will be limited to those 18 years of age or over unless other instructions are noted on the precaution sheet on the patient's chart.
- m. Visitors should sit at least 3 feet (or 1 m) from the patient and should remain no longer than the time specified on the form posted on the patient's door and on his chart.
- n. No nurse, visitor, or attendant who is pregnant should be permitted in the room of a patient while brachytherapy sources are implanted in the patient. Female visitors should be asked whether they are pregnant.

o. Emergency Procedures

- (1) If an implanted source becomes loose or separated from the patient, or
- (2) If the patient dies, or
- (3) If the patient requires emergency surgery, immediately call _____

Telephone No. (days) _____

(nights) _____

- p. At the conclusion of treatment, call the Radiation Safety Officer to (1) survey the patient and room, (2) count the radiation sources to be sure that all temporary implants have been removed prior to discharging the patient, and (3) record a summary of the final survey results on the patient's chart. If any permanent implants are to remain in the patient, the Radiation Safety Officer will brief the patient on precautions for minimizing radiation exposure to others after discharge from the hospital.

NURSING INSTRUCTIONS FOR PATIENTS TREATED WITH BRACHYTHERAPY SOURCES

Patient's Name: _____

Room Number: _____ Physician's Name: _____

Isotope and Activity: _____

Date and Time of Administration: _____

Date and Time Sources Are To Be Removed: _____ Isotope: _____

Bedside

Exposure Rates in mR/hr

3 feet from bed

10 feet from bed

(Comply with all checked items.)

- _____ 1. Wear film or TLD badge.
- _____ 2. Wear pocket chambers for supplementary personnel monitoring of individual tasks.
- _____ 3. Wear rubber gloves.
- _____ 4. Tag the following objects and fill out the tag:

_____ door _____ chart
 _____ bed _____ wrist
- _____ 5. Place laundry in linen bag and save.
- _____ 6. Housekeeping may not enter the room.
- _____ 7. Visiting time permitted: _____
- _____ 8. Visitors must remain _____ from patient.
- _____ 9. Patient may not leave the room.
- _____ 10. Patient may not have visitors.
- _____ 11. Patient may not have pregnant visitors.
- _____ 12. Patient may not have visitors under 18 years of age.
- _____ 13. Patient must have a private room.
- _____ 14. A dismissal survey must be performed before the patient is discharged.

- _____ 15. All items must remain in the room until approved for disposal by the Radiation Safety Officer or his designee.
- _____ 16. Contact the Radiation Safety Office when temporary sources (nonpermanent implants) are removed to perform a survey to be sure all sources are removed from the patient, to do a physical source count, and to be sure no sources remain in the room.
- _____ 17. Contact the Radiation Safety Office when the patient is discharged to survey the room prior to its assignment to another patient.
- _____ 18. Other instructions.

RSO

Name

On-duty/Off-duty Telephone Numbers

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