

UNIVERSITY OF CINCINNATI
RADIATION SAFETY COMMITTEE
POLICY STATEMENT 97-1
(Revision 1)

Policy Concern: This policy concerns the release of permanent implant patients from radiological controls and precautions. It specifically addresses those permanent implant patients who are required to remain under hospital care for reasons other than 10 CFR 35.75 restrictions.

Policy Implementation: The Radiation Safety Officer is directed to implement this policy upon approval by the Radiation Safety Committee. All necessary procedure changes and instructions to implement this policy must be approved by the Radiation Safety Officer.

Discussion: Currently, the regulations are not specific as to when the requirements of 10 CFR 35.410 and .415 can be removed for a permanent implant patient kept in the hospital for other medical reasons.

Permanent implant patients will normally have radiation levels at one meter which are below the release criteria of 10 CFR 35.75 immediately after the implant operation is completed. Typically, prostate implant patients go home the day of the implant. They remain under radiological controls until the Foley bag is removed because radioactive seeds may be discharged during this time.

Permanent brain implant patients are often hospitalized for several days to weeks and may be transferred to areas of the hospital where caregivers are not trained to the requirements of 10 CFR 35.410. If the patient is under radiological controls caregivers must be trained to 10 CFR 35.410 requirements. Because of the diverse and large number of caregivers who may be involved with the brain implant patients, it is difficult to certify every individual who provides care. This can put the University in violation of regulations each time an untrained individual cares for the patient still designated as under the controls of 10 CFR 35.415.

Dr. B. Aron requested permanent implant patients be released from radiological controls immediately after the implant operation thus releasing caregivers from the training requirements of 10 CFR 35.410. A written regulatory interpretation received by the Indiana University Medical School and discussions with NRC Region III personnel revealed that it would be acceptable to release permanent implant patients from radiological controls if there is documentation the home instructions required by 10 CFR 35.415(a)(5) are given to the patient, the patient meets the release requirements of 10 CFR 35.75, and safety instructions are placed in the patient's chart for use by caregivers.

A revision to 10 CFR 35 will become effective on May 29, 1997. The revision makes it more explicit that the regulatory interpretation received by Indiana University Medical School is correct. The revision should, at most, only cause minor administrative changes. The policy is written to encompass these changes when they become effective.

Revision 1: In 1998, the state of Ohio obtained agreement state status, with the Ohio Department of Health (ODH) the regulatory agency. In 2005, the ODH enacted regulations/rules specific for the medical use of radioactive material. The rules are listed in Ohio Administrative Code (OAC) chapter 3701:1-58 and are equivalent to the NRC regulations. In 2006, University Hospital separated from the University of Cincinnati. It was at the University Hospital that most permanent

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implants were performed. In 2012, the Radiation Safety Officer noted this policy had not been updated to reflect the changes and submitted a revision for RSC review and approval.

Policy Statement: Permanent implant patients who must remain under confinement for medical reasons, but meet the release requirements of OAC 3701:1-58-30, may be released from radiological controls by the Radiation Safety Office upon completion of the permanent implant operation under the following conditions:

1. The release criteria of OAC 3701:-58-30 have been met.
2. There is no apparatus attached to the patient that experience indicates could release a radioactive seed from the implant site or if a fluid drainage tube is in place near the implant site, a physician has certified in the patient's chart or on other documentation that the tubes are not directly from the implant site and it is unlikely a seed would be released through the tube.
3. There is documentation the patient instructions required by OAC 3701:1-58-30 have been given to the patient.
4. General instructions approved by the Radiation Safety Officer have been placed in the patient's chart.

Initial policy approved by the Radiation Safety Committee on March 25, 1997. Revision 1 approved by the Radiation Safety Committee on November 14, 2012.

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GENERAL INSTRUCTIONS FOR THE CARE OF
PATIENTS WITH PERMANENT RADIATION SOURCE IMPLANTS

Patient Name: _____

1. This patient has received a permanent implant of radioactive sealed sources in the _____.
2. These radioactive sources, commonly called "seeds", provide a significant radiation dose to the surrounding tissue inside the patient's body. However most, if not all, of the radiation is absorbed by the patient's body. This has been verified by a measurement with a radiation survey meter.
3. There is no radioactive contamination problem associated with this patient. Surveys performed after the implant verified none of the sealed sources were damaged during the implantation.
4. The radioactive "seeds" have the appearance of a small piece of lead from a mechanical pencil. Specifically, they are 0.8 mm (0.03 inches) in diameter and 4.5 mm (0.2 inches) long.
5. There is very little chance that a radioactive "seed" will be released from the permanent implant. However, if a "seed" or something that appears to be a "seed" is discovered, immediately page the Radiation Safety On-call Technician and Radiation Oncology. **DO NOT TOUCH THE SEED OR ALLOW ANYONE ELSE TO TOUCH THE SEED.**
6. If a procedure must be performed in the area of the implant, contact Radiation Oncology and the Radiation Safety On-Call Technician.
7. If the patient has a medical emergency, contact Radiation Oncology and the Radiation Safety On-Call Technician. **EMERGENCY MEDICAL CARE SHOULD BE GIVEN WITHOUT CONCERN FOR THE RADIATION. IF MEDICAL PROCEDURES ARE PERFORMED NEAR THE IMPLANT SITE BE ALERT FOR RADIOACTIVE SEEDS. DO NOT TOUCH OR HANDLE THE SEEDS WITH YOUR HANDS.**
8. If you do not understand these instructions or have any questions or concerns, contact the Radiation Safety Officer.

	Pager	Office
Radiation Oncology	513-590-5555	513-584-4775
Radiation Safety Officer	513-249-6833	513-558-4110
Radiation Safety On-call Technician	513-249-6812	513-558-4110