**Purpose**

It is the responsibility of the Surgeon to give Pathology a complete clinical history on the requisition sheet of any surgical specimen suspected or known to contain radioactive implants “seeds” and any other pertinent clinical history.

**Materials**

[EHS Radiation Safety web page](http://ehs.umich.edu/research-clinical-safety/radiation/)

[EHS Radioactive Waste web page](http://ehs.umich.edu/hazardous-waste/radioactive-waste/)

**Definitions**

***Radioactive isotopes –*** also called radioisotope, any of several species of the same chemical element with different masses whose nuclei are unstable and dissipate excess energy by spontaneously emitting radiation in the form of alpha, beta, and gamma rays.

***Brachytherapy seeds –*** treatment with ionizing radiation beads applied to the surface of the body or within the body a short distance from the area of interest.

**Procedure**

***Note: Radiation risk is not relevant for the following specimens:***

1. ***Resection or prostatectomy performed 3 years or later after implantation of brachytherapy seeds.***
2. ***Sentinel lymph nodes***

**For specimens containing brachytherapy seeds less than 3 years old:**

**1.** When a specimen is received into the department identified as containing radioactive "seeds" that are less than 3 years old, notify the Radiation Safety Service at 764-6200 during normal business hours (7:30am-4:30pm) Monday – Friday. After hours contact UMPD at 763-1131 or 911.

**2.** A radiation safety health physicist will perform a radiation survey of the specimen for the presence of radioactive material ("seeds").

**3.** The Pathology grosser while grossing the specimen will remove and dispose of the radioactive seeds so the specimens can be processed as usual after their removal. The seeds identified within prostate tissue should be removed with tweezers/small forceps, put in a small container and handed over for disposal.

**4.** In case some unexpected seeds are found during the course of grossing specimen:

1. Set them aside in a separate container with "radiation hazard" "Caution- Radioactive Material" warning label and call RSS/SMS to have them tested for radioactivity levels.

**Contacts**

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| --- | --- | --- |
| **Contact** | **Reason for Contacting** | **Phone Number** |
| EHS (Environment, Health & Safety) | Radioactive solid and liquid waste pickup | 763-4568 |
| EHS  | Main phone number/backup line | 647-1143/764-4420 |
| EHS / Radiation Safety Service | Radiological spills or questions | 764-6200 |
| Safety Management Services | Other safety questions | 764-4427 |
| Department of Public Safety | After hours radiological spills | 763-1131 or 911 |

**References**

Dugan, R.D. Radiation Safety Service OSEH - UMHS Safety Management Services. "Handling Radioactive Lymphoscintigraphy Tissues." OSEH , 29 January 2002.

Fitzgibbons, P.L. and V.A. LiVolsi. "Recommendations for Handling Radioactive Specimens Obtained by Sentinel Lymphadenectomy." *The American Journal of Surgical Pathology 24(11)* (2000): 1549-1551.

Waddington, W.A., et al. "Radiation safety of the sentinel lymph node technique." *European Journal of Nuclear Medicine Vol. 27, No.4* (April 2000).