

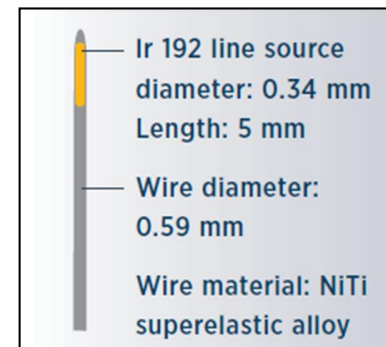


# **Source Tracking for Category 3 Sources Impact on Medical Use**

Susan M. Langhorst, Ph.D.  
ACMUI Radiation Safety Officer  
ACMUI Commission Meeting  
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# Category 3 Sources Used in Medicine

- Radiation therapy HDR (10 CFR 35.600)
- Ir-192; 74 day half-life; 10-11 Ci receipt



# HDR Medical Uses

- Internal radiation therapy
- Delivers radiation from HDR source placed close to, or inside, the tumor
- Types of cancer treatments include breast, esophagus, gynecologic, head and neck, lung, prostate, rectum, and skin (~33,000 in 2010)

# HDR Ir-192 Source Replacement

- 74 day half-life
- Source replacement due to:
  - Decay of source activity
  - Number of source cable runs
- Replacement about every 1 to 3 months

# HDR Ir-192 Shipments

- HDR vendor ships replacement source to their customer licensee
- HDR vendor arranges for service engineer to perform source exchange and return shipment of old source

# Impact of NSTS Tracking on HDR Ir-192 Use

- HDR licensee new reporting responsibilities
  - Estimated 1,100 HDR licensees
  - Estimated 75% of HDR licensees have no Category 1 or 2 sources
- Increased costs from HDR vendor to cover new reporting responsibilities

# Need to Track HDR Ir-192 Sources?

- HDR licensee will have only 1 to 2 sources per HDR unit at any given time
- HDR vendor maintains tracking information for all its customer licensees

# Questions about NSTS Tracking of HDR Ir-192 Sources

- Is the NSTS and staff capable of handling the significant increase in reporting?
- Would the HDR vendor need to verify their customer's license and vice versa for each source exchange?



# Questions about NSTS Tracking of HDR Ir-192 Sources [cont.]

- Are the LVS and WBL ready to support this effort?
- Are Agreement State programs ready to support this effort?

# Incorporating Category 3 Sources in 10 CFR 37 Security Requirements

- Existing control and reporting requirements in 10 CFR 20 provide robust security for Category 3 sources
- Would inclusion of Category 3 sources overwhelm the Part 37 security program and potentially diminish Category 1 and 2 source security?

# Acronyms

- ACMUI – Advisory Committee on Medical Uses of Isotopes
- CFR – Code of Federal Regulations
- Ci – curies
- HDR – high dose remote afterloader
- Ir-192 – iridium-192
- LVS – License Verification System

## **Acronyms [cont.]**

- NSTS – National Source Tracking System
- WBL – Web-Based Licensing System