

July 16, 2002

PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE -- PNO-IV-02-037

This preliminary notification constitutes EARLY notice of events of POSSIBLE safety or public interest significance. The information is as initially received without verification or evaluation, and is basically all that is known by the Region IV staff on this date.

**Facility**

Swedish Medical Center  
Seattle, WA  
License No.:WN-m008-1  
Washington Agreement State Licensee

**Licensee Emergency Classification**

Notification of Unusual Event  
 Alert  
 Site Area Emergency  
 General Emergency  
 Not Applicable

SUBJECT: MEDICAL MISADMINISTRATION

DESCRIPTION: On July 12, 2002, the Washington Department of Health (DOH) notified the NRC Operations Center that a medical misadministration involving the use of an Iridium 192 (Ir-192) high dose rate (HDR) unit had occurred on July 11, 2002, at a Swedish Medical Center located in Seattle, Washington.

The licensee notified the DOH on July 11, 2002, of a medical misadministration involving a patient that was underdosed from the prescribed dose for four fractions of the treatment plan. The brachytherapy application involved using an HDR brachytherapy unit, containing 122 gigabecquerels (3.3 curies) of iridium-192. Incorrect entry of catheter position/length into the treatment planning system resulted in mismatched HDR dwell time and catheter. The error was noted after the second of four planned treatments. Estimates of the actual doses already delivered indicated from 17 to 25 percent underexposure to certain target volumes and 25 to 50 percent additional exposure to adjacent normal tissue. Each of the four treatments was intended to deliver 600 centigray through three catheters with varying dwell times. In effect, two catheters were "reversed" in the planning system and a "long" dwell was used in a "short" catheter, and vice versa. At the end of the second treatment, a significant volume of the target tissue received only 900 to 1000 centigray instead of the intended 1200 centigray. The licensee determined that the overall therapy was "salvable" and by modifying subsequent treatments would be able to correct the dose to the target tissue and at the same time minimize any additional dose to the adjacent normal tissue. No adverse effects are anticipated. The licensee generates a customized plan and treatment verification flow chart under its quality assurance program for each patient. The licensee has determined that the sign-off for "number of catheters" needs to be modified to "number and labeling of catheters" as the appropriate corrective action.

NRC received notification of this occurrence by facsimile from the State of Washington at 6:20 p.m., (EDT) on July 12, 2002.

Region IV has informed NMSS, OEDO, STP, and the region's PAO and SLO.

This information has been discussed with the State and is current as of 3:45 p.m. (CDT) on July 15, 2002.

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