Hospital	Event Number: 42850
Rep Org: PENNSYLVANIA HOSPITAL Licensee: PENNSYLVANIA HOSPITAL Region: 1 City: PHILADELPHIA State: PA County: License #: 37-06864-06 Agreement: N Docket: NRC Notified By: LEONARD SHABASON HQ OPS Officer: JEFF ROTTON	Notification Date: 09/20/2006 Notification Time: 12:56 [ET] Event Date: 05/19/2006 Event Time: [EDT] Last Update Date: 09/20/2006
Emergency Class: NON EMERGENCY 10 CFR Section: 35.3045(a)(1) - DOSE <> PRESCRIBED DOSAGE	Person (Organization): JAMES TRAPP (R1) CINDY FLANNERY (NMSS)

Event Text

MEDICAL EVENT INVOLVING UNDERDOSE DUE TO POSSIBLE PATIENT INTERVENTION

On May 19, 2006 an elderly patient was framed and imaged for the treatment of a single large metastatic lesion. The measurements indicated that there would be a "collision" between the anterior left post and the gamma knife helmet. The neurosurgeon who was responsible for the patient decided that it would be in the best interest of the patient to remove the anterior left pin and post rather than having to re-frame and re-image the patient. After the left post was removed the other pins were checked to confirm that the frame was still firmly attached to the patient. In the middle of the first of nine shots, the patient became very agitated and her body was observed to shift. The patient's head is not observable with either of the closed circuit TV cameras when the patient is in treatment position. The treatment was halted after the first shot to examine the patient and found that she was not held in place by the pins. The patient's neurosurgeon immediately spoke with the patient's daughter to explain what had happened and they decided to reschedule the treatment for the following week. On May 26, 2006, the patient was treated to a dose of 18 Gy to a volume of about 6.5 cc. If the patient was in one position during the shot delivered on May 19, the delivered dose is estimated to be 6 Gy to a volume of about 0.6 cc. There is no way of knowing the exact position of the patient's head during this 3.86 minute treatment. At the end of the shot, it was observed that her head was at the correct level but that her head may have dropped down. This would have resulted in a dose delivered anterior to the lesion. Since dose homogeneity is not important for gamma knife treatment and the volume in question is a small fraction of the volume prescribed treatment volume and the position was uncertain, the dose from May 19 was not considered for the treatment of May 26. The area of the patient's brain that could have received unintended incorrect dose did not include an area that would be detrimentally affected by the dose given.

A "Medical Event" may indicate potential problems in a medical facility's use of radioactive materials. It does not necessarily result in harm to the patient.