

Hospital	Event Number: 43746
Rep Org: KARMANOS CANCER CENTER Licensee: KARMANOS CANCER CENTER Region: 3 City: DETROIT State: MI County: License #: 21-04127-06 Agreement: N Docket: NRC Notified By: JOE RAKOWSKI HQ OPS Officer: MARK ABRAMOVITZ	Notification Date: 10/25/2007 Notification Time: 11:40 [ET] Event Date: 10/24/2007 Event Time: 14:00 [EDT] Last Update Date: 10/26/2007
Emergency Class: NON EMERGENCY 10 CFR Section: 35.3045(a)(1) - DOSE <> PRESCRIBED DOSAGE	Person (Organization): DAVID HILLS (R3) GREG MORELL (FSME)

Event Text

GAMMA KNIFE TREATMENT TO WRONG SIDE OF BRAIN

"On October 24, 2007, a medical event occurred at Leksell Gamma Knife facility which resulted in the total dose delivered differing from the prescribed dose by more than 20%.

"1. Licensee's name: Karmanos Cancer Center.

"2. Name of prescribing physician: [DELETED]

"3. Brief description of the event:

"Due to a left - right reversal of the treatment planning MRI images, the patient's left side was targeted and treated rather than the right side. The error resulted in an 18 mm shift of isocenter across midline of the brain. The collimator diameter selected for the treatment was 18 mm, thus resulting in some overlap of the delivered 50% isodose volume with the correct intended target lesion volume. The event resulted in approximately 7% of the lesion volume receiving the prescribed dose of 18 Gy to the 50% isodose, rather than the preferred 95% of the lesion volume.

"4. Why the event occurred:

"During the pre-treatment setup and simulation MRI imaging, a 'feet first' scan technique was used with the patient positioned in the MRI scanner head first. This had the effect of reversing the axial images left to right. The standard of practice in gamma knife radiosurgery is to position the patient in the MRI scanner head first, and to use the 'head first' scan technique. The gamma knife authorized medical physicist (AMP) failed to recognize the scanning error when importing the MRI images into the Gamma Knife treatment planning computer, and subsequently registered them as head first. This resulted in the wrong side of the patient being targeted and treated, i.e. the left cerebellum was targeted and treated rather than the right cerebellar lesion.

"5. The effect on the individual who received the administration:

"To be determined.

"6. What actions have been taken or are planned to prevent recurrence:

"For all future gamma knife cases, left/right alignment of the MRI images will be inspected by the AMP by using the Leksell anterior face plate with fiducial markers visible in the MRI images. A Gamma Knife MRI protocol will be written and posted in the MRI department and in the Gamma

Knife suite. The protocol will clearly indicate the patient and scan orientation required for Gamma Knife planning and delivery, which are patient on table head first, with head first scanning protocol.

"7. Certification that the licensee notified the individual, and if not, why not:

"The referring neurosurgeon will be notified this evening after he finishes with surgery."

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.

* * * UPDATE AT 08:13 ON 10/26/2007 FROM GREG MORELL TO MARK ABRAMOVITZ * * *

This event has been reviewed and determined to be a reportable medical event.