University of Cincinnati
Medical Center

College of Medicine

Division of Radiation Oncology
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November 2, 1984

U.S. Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, Illinois 60137

RE: Iodine 125 Contamination incident at University of Cincinnati Medical Center

Dear Mr. Axelson:

As noted in Appendix E (see copy below) J.H., a 25-year-old white female with the diagnosis of malignant brain tumor received a brain implant consisting of high activity iodine 125 seeds on 8/27/84.

When it was noted that there was iodine leakage a conference was held between Drs. Bernard S. Aron and Peter Ho. It was felt that because of the significant medical problem, recurrent malignant brain tumor, that the patient's implant should be continued to achieve full dose. This was felt medically to be of primary importance, far over shadowing the effects of iodine 125 irradiation of the thyroid gland.

In summary, the decision to continue the implant was a medical decision based on the patient's undergoing a treatment for a recurrent malignant brain tumor.

Sincerely yours,

Bernard S. Aron, M.D., FACR
Director, Division of Radiation Oncology

BSA/jr

encl. Appendix E

Appendix E

Radiation Oncology 9/12/84

Dictation of report of an incident regarding iodine leakage from an afterloading radioactive implant in the brain of patient J.H.

J.H. is a 25 year old white female who has a diagnosis of malignant brain tumor and who received 5000 rads external radiation therapy to the right frontal parietal area completed in November, 1980. Most recently patient had recurrence of the tumor and biopsy on June 18, 1984 showed glioblastoma multiforme a highly malignant brain tumor. Since that time patient has deteriorated somewhat and the last hope for her would be a brain implant as she cannot receive further external radiation therapy because of the previous dose. The brain implant consisting of high activity I-125 seeds total of 8 seeds in two catheters were inserted on 8/27/84 without any problems. This procedure was to deliver 6000 rads to the tumor volume in the brain. The instruments prior to loading and afterloading were checked for iodine contamination and was reportedly clean by Radiation Safety. An incidental iodine leak was discovered in the brachytherapy storage room several days later which was persumably from these high activity iodine seeds. The patient was later checked for radiation exposure and was found to have an estimated dose in the thyroid of 2087 rads. In view of her diagnosis and situation of recurrent malignant tumor for which the survival after two years is reportedly closer to 0%. We feel that this dose to the thyroid may cause some hypothyroidism in this patient which can be handled with exogenous thyroid replacement but would not cause harm to her overall condition.

Peter Ho, M.D.

/pb