

THE UNIVERSITY OF CHICAGO COMEN

DEPARTMENT OF RADIATION & CELLULAR ONCOLOGY DIVISION OF THE BIOLOGICAL SCIENCES AND THE PRITZKER SCHOOL OF MEDICINE

TEL: (312) 702-6883 . FAX: (312) 702-0610

MELVIN L. GRIEM, M.D. Professor

University of Chicago Medical Center 5841 South Maryland Avenue, Box 442 Chicago, Illinois 60637

FEB 1 7 1994

Net 30-00503

Enclosed you will find my analysis of the Dallas VA situation this final report. I have been involved with a number of inquiry into the radioactive medical studies done at the

Melvin L. Griem - Member ACMUI, NRC

Attached Form 148 - shows effort.

Report.

94-0517

NRC PEGION 10. License # 42-00220-08. IR 030-00503/93-01 page 1 "VA Med. Ctr. Dallas. TX, Review of Co-60 therapy, Pt with Kaponi's Final Report: Feb. 7, 1994 treatment is checked by Dr. Bourman. Additional notes are fractions of 200 cGy using 0.5 cm bolus. There is a

NRC REGION IV, License # 42-00220-08, IR 030-00503/93-01 page 8 VA Med. Ctr. Dallas. TX. Review of Co-60 therapy, Ft with Kaposi's tissue dose was twice the planned dose. Fortunately the team reviewed the treatment situation and corrections were previous therapy is detailed. It has the dose given at the using a 6% linear. At BUMC in Dallas the 8 Gy to both leges derived or computer calculated give the lines of equal dose treatment team did make some effort to create tissue and tumor dose uniformity by the bolus to take care of electron Consultants: A. Akanuma, J. -P. Gerard, J. -C. Horiot, N. represents a consensus of and international group of experts

NRC REGION 1V. License # 42-90220-08, IR 030-00503/93-01 page 3 v4 Med. Ctr. Dallas. IX. Review of Co-60 therapy. Pt with Kaposi's

Distribution. Likewise, there are recommendations for reporting based on the above definitions. An ICRU reference point and Reference dose is developed in the Planned Target Volume. Three levels of dose evaluation for reporting have been developed as well as complex treatment situations of adjacent and overlapping target volumes. Organs at risk and not spots are discussed. Appendix I discusses the minimum requirements for documentation and recommendations for description of technique for reporting. ICRU 50 includes references and an index.

If one considers the worse case situation that the total tissue and tomor dose is as stated in the notes supplied by Lynn Stockebrand and that the tumor dose was 2200 cGy then the effect was not adverse and in-fact the responses as stated in the notes of 3/18/92 are very satisfactory. Certainly the tolerance of the lower legs was not exceeded and did not lead to the death of the patient. Treatment with single fractions of radiation are used in this disease. See: DICC Symposium on Kaposi's Sarcoma. S. Karger (publisher) Basel. Switzerland. Fractions of 2 to 46y are also well tolerated. Kaposi's Sarcioma dose response curves are given in the DICC publication.

This form of Kaposi's Sarcona may be seen with ALDS. Visceral involvement progresses from the lower extremities to the trunk in this disease. Treatment by single fraction or large fraction reduction therapy was suggested in that symposium.

according to the record this patient had extensive disease involving the (abdominal) viscera at the time of death 2 months later.

The error occurred on the first day of treatment and probably was the result of a communication error. It was discovered before the 4th treatment was given. Such an error has occurred in the Midwest at several centers I know of. This is generally a human error and may be a misunderstanding of terms in the physician's prescription and the final plan. The use of the computer for treatment planning has minimized this type of error. Certainly the use of ICRU 50 as a method of communication between the team of radiation oncologists physicists at a center should be used. Inter-comparisons between centers likewise is facilitated.

It would seem that both the VA and the NRC should consider these new international recommendations and communicate in the reporting fashion suggested in ICRU 50.