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BROOKHAVEN NATIONAL LABORATORY

MEMORANDUM

DATE: January 23, 1951

REPOSITORY Records Holding Area Bldg 444
COLLECTION Protocols - Clinical
BOX No. 4
FOLDER Human Protocols 1950-1963

TO: BNL Committee on Use of Radioactive Isotopes in Human Subjects

FROM: James S. Robertson, M.D.

SUBJECT: Project H-6: Use of I-132 iodinated albumin as a therapeutic agent in humans

It is proposed that we use I-132 iodinated albumin as a therapeutic agent in humans under conditions similar to those described in our request for use of Sodium 24 therapeutically. A method for binding iodine to human albumin is available and this would be used to carry activity to malignant tissues bathed by ascitic or similar fluids. The attachment of the I-132 to albumin will delay its entry into the circulation. Because of this and the short (2.4 hours) half life of this isotope, most of the radiation will be delivered within the cavity in which it is injected. For the same reasons, the radiation received by the thyroid is easily kept within tolerance limits.

It is estimated that it will be desirable to give radiation doses of the order of up to 2000 r to the tumor.

The decay scheme of I-132 is not well established. On the basis of the data presently available[1], it is estimated that to give an irradiation of 2000 r will require 220 mc/liter of fluid. The irradiation of the blood-forming tissues will be kept below 100 r and when treatment of the thyroid is not involved, radiation to this gland will be kept below 250 r.

[1] Nuclear Data, National Bureau of Standards Circular 499, September 1, 1950.

Medical Department

JSR:ij
cc (L) M. Fox

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