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MEMORANDUM

DATE: January 23, 1951

REPOSITORY Records Holding Area Bldg 494

COLLECTION Protocols-Clinical

BOX No. 4

FOLDER Human Protocols 1950-1963

TO: BNL Committee on Use of Radio-active Isotopes in Human Subjects

FROM: James S. Robertson, M.D.

SUBJECT: Project H-10: Use of I-131 iodinated human iodine as a therapeutic agent

SCM-11

It is proposed that we use I-131 iodinated human iodine therapeutically in humans. This would be used under the conditions described in our requests for the use of Na-24 and I-135 therapeutically, pending the availability of I-135. Because of the longer half-life of I-131 the distribution of the irradiation will not be so favorable as for I-135. Preliminary studies with tracer amounts will be used to indicate the rate of loss of radio-activity from the fluid space into which it is injected and the rate of uptake by the thyroid.

It is estimated that it will be desirable to give radiation doses of the order of up to 2000 r to the cancer tissues involved. This will require doses of the order of 7 millicuries per liter of fluid. The calculation of this dose is based upon the assumption of an 8.0 day biological half-life and a geometry factor of 200 for the effect of gamma rays at the center of the trunk. 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.

Medical Department

JSR:ij  
cc (4) M. Fox

Approved: Lee E. Farr Lee E. Farr, M.D.

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Refs to I 135 should be I 132 JSR

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