



ARMED FORCES RADIOBIOLOGY RESEARCH INSTITUTE

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AFRI/RSD

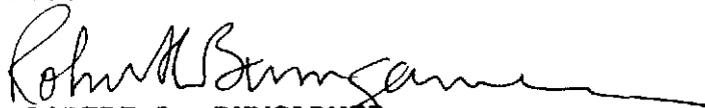
14 February 1994

MEMORANDUM FOR DIRECTOR, DOD RADIATION EXPERIMENTS COMMAND CENTER

SUBJECT: Locating Records of DoD Human Radiation Experiments

As required by Assistant to the Secretary of Defense (ASD(AE)) memorandum of 31 January 1994, the attached initial report of Human Radiation Experiments conducted by or for the Armed Forces Radiobiology Research Institute is submitted. The Command Search Coordinator is CAPT Charles B. Galley, MSC, USN. He is the Head, Radiation Sources Department and may be reached at (301) 295-1048 or telefax (301) 295-0735. His address is:

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ROBERT L. BUMGARNER
Captain, MC, USN
Director

Report on Search for Data on Human Radiation Experimentation

Part I

1. Organization: Armed Forces Radiobiology Research Institute
8901 Wisconsin Avenue
Bethesda, MD 20889-5603

Component of: Uniformed Services University of the Health
Sciences 1 Oct 1993 - present

Defense Nuclear Agency
1960 - 30 Sep 1993

2. Location of records: AFRRI library and Logistics
Department

3. Efforts to locate records:

The following files were reviewed for evidence of human
radiation experimentation:

- AFRRI Annual Historical Reports from 1964-1993
- AFRRI Scientific Reports from OCT 1965-1993
- AFRRI Technical Notes from OCT 1965-1993
- AFRRI Contractor Reports from NOV 1965-1993
- AFRRI Contracts Involving Humans/Human Tissues and Other
Human Sources 1989-1993
- DNA Acquisition Management Review of Contracts, MIPRs and
IACROs, Human Experimentation
- Review Defense Technical Information Center search 1972-
1993
- Review Defense Technical Information Center search 1943-
1972
- AFRRI Board of Governors Meeting 30 March 1961 to 1993

The following personnel were contacted and interviewed
concerning human radiation experimentation.

- Lawayne R. Stromberg, COL, MC, USA (RET) former director
- David A. Verrelli, Lt Col, MS, USAF (RET) former
dosimetrist

Several records of possible human radiation experiments

were found. They are listed below:

1. Irradiation of patients with leukemia for bone marrow transplantation.
2. Irradiation of cancer patients to determine response to varying doses of radiation.
3. Comparison of two radionuclides to determine better imaging agent for bone cancers.
4. Evaluation of pancreatic scanning.
5. Evaluation of technetium-99m minicolloid for radionuclide lymphography.
6. The effect of total body irradiation on immunologic tolerance of bone marrow and homografts of other living tissues.

1. Bone Marrow Transplantation

2. The physical irradiations were conducted at the Armed Forces Radiobiology Research Institute, Bethesda, MD from approximately August 1972 to January 1976. The medical evaluation and treatment took place at the National Naval Medical Center and the National Institutes of Health. Both of these organizations are located in Bethesda, MD.

3. The primary researchers were CAPT K. E. Sell, MC, USN from the Naval Medical Research Institute and Dr. Robert G. Graw, Jr. Senior Investigator, Hematology and Supportive Care Branch, National Cancer Institute.

4. The organizations involved were:

- Defense Nuclear Agency
- Armed Forces Radiobiology Research Institute
- Naval Medical Research and Development Command
- National Naval Medical Center
- Naval Medical Research Institute
- National Cancer Institute
- National Institutes of Health
- Surgeon General of the US Navy, Lead Agency
- Surgeon General of the US Army
- Surgeon General of the US Air Force
- National Academy of Sciences

5. There were 22 subjects. They were cancer patients being treated for leukemia by whole-body irradiation and subsequent bone marrow transplant. This procedure had been done elsewhere approximately 52 times, and was considered experimental. The data available at AFRRRI includes some of the patients' names and some of the physicians' names. The patients came from NNMC (11) and NIH/NCI (11). Some of the patients were children.

6. The experiment was one of therapeutic research involving ionizing radiation. The radiation was used to ablate the patient's bone marrow so that a bone marrow transplant could be done. The hope was that the patient would accept the donor marrow and be cured of the leukemia.

7. Records of the radiation doses and dates are available at AFRRRI. Patient care records should be available at the attending medical treatment facilities, i.e. NNMC, NIH/NCI and Albany New York. The AFRRRI records are maintained by the Cobalt Facility Director. The patient record custodian will have to be determined. Those records may be at St Louis or elsewhere.

8. The patient records are typical inpatient records for therapeutic irradiations. There should be 22 records or about 1 small box full (1.5 cubic feet).

9. None of the records are classified.

1. Metabolic Changes in Humans Following Total Body Irradiation

2. The experiment was conducted at the University of Cincinnati College of Medicine and Cincinnati General Hospital in Cincinnati, Ohio.

3. The primary researchers were Eugene L. Saenger, M.D., Edward B. Silberstein, M.D., Bernard S. Aron, M.D., Harry Horowitz, M.D., James G. Kereiakes, PhD, I-Wen Chen, PhD, Carolyn Winget, M.A., and Goldine C. Gleser, PhD.

4. The organizations involved were:

University of Cincinnati College of Medicine
Cincinnati General Hospital
Defense Nuclear Agency
Armed Forces Radiobiology Research Institute
Army Medical Research Laboratory

5. There were 88 human subjects involved. Eighty five were adult with far advanced cancer and 3 were children (ages 9,13,17) with Ewing's sarcoma. All were medical patients and should have medical records at the treating facility. The majority of the patients were black.

6. These studies were designed to obtain new information about the metabolic effects of total body and partial body irradiation so as to have a better understanding of the acute and subacute effects of irradiation in the human.

7. Some information such as case history and exposure data are available in the reports issued on the experiments. Definitive identification and treatment data is available at the Cincinnati General Hospital. The record custodian is Dr. Eugene L. Saenger at the University of Cincinnati College of Medicine.

8. There are 88 records of medical diagnosis and treatment on the patients. There are other records on testing done during the experiment, i.e. IQ testing.

9. None of these records are classified.

1. Comparison of technetium-99m polyphosphate and strontium-85 for skeletal imaging in patients with metastatic disease.
2. The experiment was conducted at Bowman Gray School of Medicine, Winston-Salem, North Carolina. The work was done approximately June 1973.
3. The primary researchers were J.S. Stevenson and C.D. Maynard.
4. The organizations involved in the experiment were the Armed Forces Radiobiology Research Institute and Bowman Gray School of Medicine.
5. Seventy-five medical patients were involved in the experiment. These people had known metastatic disease. The information at AFRRRI does not include names or other identifying information.
6. The experiment was conducted to compare the bone scanning agents strontium-85 and technetium-99m. It was discovered that technetium-99m gave better bone scans with less time involved, less dose to the patient and actually detected a greater number of lesions. The experiment falls under the category of therapeutic research involving radiation, as it was designed to produce a better diagnostic scanning agent.
7. The patient records are in the archives of the Bowman Gray School of Medicine, Winston-Salem, North Carolina.
8. The records are routine medical charts with data on the person's condition and results of the test scans. There should be one per person or 75 records.
9. The data for this experiment are not classified.

1. Basic Principles of Pancreatic Scanning
2. The experiment took place at the Bowman Gray School of Medicine, Winston-Salem, North Carolina in the 1972-1973 time frame.
3. The primary researchers were J.S. Stevenson and C.D. Maynard.
4. The organizations involved in the research were the Armed Forces Radiobiology Research Institute and the Bowman Gray School of Medicine. The lead agency was the Armed Forces Radiobiology Research Institute.
5. Eighty patients were evaluated. All were medical patients being evaluated or treated for pancreatic cancer.
6. The experiment was conducted to evaluate the efficacy of pancreatic scanning by radionuclide administration. Patients were told to fast for 12 hours and then administered 120 - 250 μCi of Se^{75} seleno-methionine intravenously. The experiment falls under the category of therapeutic research involving radiation, as it was designed to evaluate and if possible, improve pancreatic scanning.
7. The records of the patient related information are at the Bowman Gray School of Medicine.
8. There are 80 patient records covering their evaluation, treatment and scan administration and results.
9. The data for this experiment are not classified.

1. Technetium-99m Minicolloid for Radionuclide Lymphography
2. This experiment took place at Walter Reed General Hospital, Washington, DC in 1972-1973 time frame.
3. The primary researchers are G.L. Dunson, J.H. Thrall, J.S. Stevenson and S.M. Pinsky.
4. The organizations involved with this experiment are the Armed Forces Radiobiology Research Institute and the Walter Reed General Hospital.
5. There were 7-8 human subjects used in this experiment. There is no indication of their status as to military or civilian. No status such as patient or volunteer is reported.
6. The experiment consisted of an injection of technetium-99m "minicolloid" which was administered in the webbing between the toes and allowed to circulate in the body. A comparison of quality of radiographs, patient dose, waiting time and migration of the colloid was conducted to determine which agent was better, i.e. a commercially available one or the technetium-99m minicolloid. The experiment falls under the category of therapeutic research involving radiation, as it was designed to compare and evaluate which scanning agent was better.
7. Patient records are held by Walter Reed General Hospital, Washington, DC.
8. The records consist of patient records and scan data.
9. The data for this experiment are not classified.

1. The effect of total body irradiation on immunologic tolerance of bone marrow and homografts of other living tissue.
2. The experiment was conducted at Baylor University College of Medicine, Houston, Texas. The period of the experiment was approximately 1953 - 1963. Further record review will pinpoint the actual dates.
3. The primary researcher was Vincent P. Collins, M.D., Professor of Radiology, Baylor University College of Medicine.
4. The organizations involved were:

Baylor University College of Medicine
Defense Atomic Support Agency
5. There were 112 patients with disseminated cancer receiving therapeutic total body irradiation for relief of symptoms. The treating facility maintained records of diagnosis and treatment.
6. This work is characterized by the use of radiation for treatment with data maintained reported on side effects.
7. The records are held by the Baylor University College of Medicine. They are maintained by Dr. Vincent P. Collins.
8. The records are patient care records for therapeutic radiation treatments and should have a volume of several cubic feet.
9. None of the records are classified.