



National Institutes of Health  
National Cancer Institute  
Bethesda, Maryland 20892

April 6, 2001

Barrett N. Fountos  
U.S. Department of Energy  
Office of International Health Programs, EH-63/270CC  
19901 Germantown Road  
Germantown, MD 20874-1290

Dear Mr. Fountos:

Enclosed please find the Scientific and Management Progress Report for the time period 1 November 2000 to 31 January 2001 for the Chernobyl Research Program. I am also enclosing the most recent quarterly reports from the project Directors in Ukraine and Belarus, as well as the most recent quarterly report from Columbia University. I apologize for the lateness of this report; however, as usual I have been away on official travel for the studies during the months of February and March. Please feel free to contact me if you have any questions regarding this report.

Sincerely,

A handwritten signature in black ink, appearing to read "Terry L. Thomas".

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Chernobyl Research Program  
SCIENTIFIC AND MANAGEMENT PROGRESS REPORT  
1 November 2000 to 31 January 2001

Submitted by:

Terry L. Thomas, Ph.D.

Date:

03 April 2001

I. Progress on "Epidemiologic Studies of Radiation Induced Thyroid Disease in Belarus (BelAm Thyroid Project) and Ukraine (UkrAm Thyroid Project)

A. BelAm Thyroid Project

The goal of a minimum of 12,000 subjects was nearly achieved by 31 December 2000, with a total of 10,392 subjects enrolled and screened for the first time. Among these subjects, 49 malignant thyroid neoplasms and 9 benign thyroid neoplasms were newly diagnosed. More than half of the subjects were screened at the fixed center in Minsk, while 9 percent were seen at the fixed center in Gomel, and 36 percent were examined by mobile teams. Data entry is from 89% to 95% complete for most of the data collection forms for subjects who have been screened; however, there is a backlog in final summary forms due to previous delays in the delivery of reagents to the laboratory. The reagent problem was resolved, laboratory forms have been completed and keyed for 91 percent of the subjects, and it is anticipated that most of the backlog in the final endocrine summary forms will be reduced during the next quarter. The second screening cycle is scheduled to begin at the beginning of April, and no further recruitment efforts will be made at that point in time even if the total number of subjects falls short of the original goal, because all potentially eligible individuals with known addresses have already been contacted more than one time.

In order to be able to provide funds to reimburse study participants for their travel expenses in reaching the screening sites, a contract was awarded to the Belarusian Red Cross to manage these funds and provide quarterly allocations to the project agent for purchase of food items and other necessities (equivalent to US \$5 for each subject). The distribution of food packages was begun in January 2001, however, it is too early to assess whether this will have any affect on the response rate.

B. UkrAm Thyroid Project

The goal of a minimum of 12,000 subjects was reached in mid-December 2000, with 13,259 subjects recruited and examined in the first screening cycle. New Years cards were mailed to each subject in January 2001 along with a letter describing the progress of the study and notifying subjects that they would be contacted within the next two years to schedule

their second screening examination. About 25 percent of the subjects were examined in the fixed center in Kiev, while 75 percent were examined by mobile teams. As of 30 November 2000, 20 newly diagnosed thyroid carcinomas were identified in the study cohort; there were 8 benign thyroid neoplasms. The backlog in data entry has been eliminated.

### C. Other Progress

The second annual Tri-National meeting was held in Rockville, MD in November 2001. Goals of this tri-national meeting and workshops included the following: reach consensus on several critical technical issues; begin planning for re-screening training sessions; finalize modifications to the operations manuals for subsequent screening cycles; and finalize modifications to forms for subsequent screening cycles. The issue of developing a publication policy for the projects was raised and discussed by participants in the joint sessions as well as in the breakout sessions. The 5-day meeting included a one-day workshop on measurement of iodine nutrition status of the cohorts and a one-day working session to finalize the modifications to the operations manuals and to develop unified forms for the study. During the month of December 2000, the operations manuals and unified forms were finalized. A major accomplishment was the consensus reached on the criteria for fine needle aspiration and for the diagnosis of thyroid conditions, which will be used by both arms of the study. Both arms of the study will use the same unified forms for recording data during the second and subsequent screening cycles.

In December 2000, an interviewer training session was held in Kiev to train interviewers to conduct a pre-test of the new unified dosimetry questionnaire. The pre-tests were conducted during the second and third weeks of December. Results of the pre-tests were used to finalize the questionnaire. A three-day training session was held in each country during the first two weeks in February 2001. All study staff attended a required session on the ethical treatment of human subjects. Individual sessions were conducted for interviewer training, laboratory staff training, and clinical staff training. These individual sessions involved review and re-training in the basic operations of the study, and instruction in the administration and completion of the new unified forms and questionnaires. The training sessions were jointly chaired by members of the American research team and their Ukrainian/Belarusian counterparts.

A joint dosimetry meeting was held in December 2000. The Ukrainian and Belarusian dosimetry teams, together with their Russian colleagues, are now working together to solve problems of common interest. These problems include: (1) the estimation of the thyroid volumes of the subjects at the time of the accident, (2) the gathering of environmental and human radiation data that could help in the estimation of thyroid doses received by the subjects, and (3) the assessment of the uncertainties attached to the thyroid dose estimates. Interviews during the second screening in Belarus and Ukraine will be conducted with the same dosimetry questionnaire, and plans are being made to use the same methods and models for the thyroid dose estimation.

II. Progress on "Study of Leukemia, Lymphoma, and Related Disorders in Ukrainian Clean-up Workers Following the Chornobyl Accident"

Site visits were made by members of the U.S. research team in December 2000 and February 2001 to review progress on the study; to provide consultation on development of the data management section of the operations manual, quality control of the abstracting, data entry processes, and routine editing procedures; and to assist in the development of the hematology section of the operations manual. As of 31 December 2000, a total of 14,323 admissions for leukemia and ancillary diagnoses were abstracted from hospital records in the study Oblasts.

Efforts are being made to validate the newly proposed method of dose reconstruction, called RADRUE. For that purpose, the doses received by 50 Ukrainian liquidators will be estimated using EPR and RADRUE. In addition, the contribution of dental x rays to the EPR doses has been investigated and found to be more substantial than anticipated. Also, the archives of the Ministry of Defense are actively searched in order to obtain information on the military liquidators that is not available in the Chernobyl State Registry.

III. The quarterly progress report for each project is enclosed.