

**BelAm Study of Thyroid Cancer and Other Thyroid Diseases in Belarus  
Following the Chernobyl Accident**

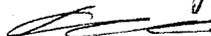
**Progress Report for Quarter Beginning 01/01/2001 and Ending 31/03/2001**

**BelAm Director**

 V.A. Stezhko

**VICE-DIRECTOR ON SCIENCE  
VICE-DIRECTOR ON CLINIC  
SCREENING CENTER**

 V.N. OSTAPENKO

 RZHEUTSKY

**QUALITY CONTROL GROUP**

 O.N. POLIANSKAJA

**DATA COORDINATING CENTER**

 N.R. LESNIKOVA

**DOZIMETRY GROUP**

 V.F. MINENKO

**EPIDEMIOLOGICAL GROUP**

 E.E. BUGLOVA

**CENTRAL LABORATORY**

 S.V. PETRENKO

## I. Executive Summary

During the quarter there were conducted 12 working meeting with the leaders of the Project Units where they reported for their activity. All scheduled measures have been performed.

The territory (raions) where the cohort subjects live has been divided between Minsk screening teams and Gomel Specialized Dispensary. In 2001 it is planed to examine 4676 subjects in the Minsk Dispensary, and 2477 subjects in the Gomel Dispensary.

There was discussed a question concerning parallel entry of data collected while examining patients and interviewing them.

Dr. Minenko and Mrs. Lesnikova were entrusted with a task to prepare justification for extra staff of operators and for purchasing computers.

A special meeting dedicated to the second screening and involving all Belarus staff was arranged and conducted. Personnel was trained and certificate.

IRB approved the Project activity. The minutes of the IRB meeting were given to Dr. Masnyk.

New variants of the Manual of Operations and study forms were printed out and given to the executives.

There were arranged trips of mobile team to Bragin, Khoiniki, Kostukovichy, Krasnopolie, Mogilev raions.

A great deal of work was done for obtaining computer equipment, ultrasound examination instruments. The equipment reached Belarus without "humanitarian aid" notice, so the customs clearance was delayed for a long period.

The work was continued in establishing partnership with ISTC. Moscow ISTC office reported that the agreement between ISTC and NCI was signed.

Together with Belarus Red Cross food gifts have been purchased and presented as a humanitarian aid to the cohort subjects. The report of their distribution for the first quarter was submitted to NCI.

Mobile screening team activity in Khoiniky raion as well as Gomel Branch activity have been inspected.

## II. Report on Tasks

### Task 1 Establish and implement a management plan and quality control procedures for the study

#### *Progress on task:*

#### *QC Group*

In the reported quarter there was performed a routine quality control of forms filling in. Quality control of forms completed in the Minsk Center was supervised by the Deputy Director on Quality Control, and in Gomel it was performed together with the expert for quality control. Quality control of filling in of epidemiological, laboratory, dosimetry forms was performed in the corresponding Units of the Project.

Quality control of filling in of clinical forms by the Gomel mobile team just started its operation could be considered as satisfactory.

By the results of review of Cytology Forms completed in the Gomel Branch a high percentage of inadequate FNA have been revealed. That is why it is reasonable to introduce express review of cytology slides which require additional express staining. Following training course cytologist of the Gomel Branch started working independently.

Repeated review of patients referral to FNA showed that physicians have accepted new criteria of referral to FNA.

During the reported quarter there was a delayed delivery of blood samples from Gomel that was resulted in impossibility of estimation of ionized calcium in a group of subjects.

**Task 2                    Select a sample of records from the dose files to establish study cohort**

**Milestone 2.3            Select the sample**

By the end of the first quarter 11,834 subjects have been enrolled to the cohort.

**Task 3                    Trace subjects to determine current address**

**Milestone 3.2            Develop methods for tracing difficult-to-locate subjects**

*Progress on task:*

*Epi Group*

In the fourth quarter 2000 a file on 404 subjects moved out from the places of residence were prepared. This file was sent to Address office of Minsk and Gomel oblasts. In the first quarter located subjects were invited to the screening.

**Milestone 3.3            Trace subjects for current address**

*Progress on task:*

*Epi Group*

During the quarter epidemiologists together with mobile team moved to the following raions : Bragin and Khoiniky (twice), Gomel oblast, Mogilev city, Kostukovichy and Krasnopolie raions, Mogilev oblast. When epidemiologist comes in field he/she visited subjects' places for verification of address, explanation and invitation to the screening. As a result of such activity the addresses have been verified for 22 subjects living in Bragin town, 11 subjects in Mogilev city, 14 subjects – in Kostukovichy town, 34 subjects – in Khoiniky town, 167 subjects were located through Bragin Central Regional Hospital, 68 – through Krasnopolie Central Regional Hospital Besides, through local medical station the addresses of 72 subjects living in Kostukovichy raion, 80 subjects living in Khoiniky raion have been verified.

*Operational difficulties encountered in accomplishing the task:*

Lack of transport for epidemiologists limits the possibility of visiting subjects' places.

**Milestone 3.4            Trace subjects who did not respond to invitation for current address**

*Progress on task:*

*Epi Group*

Verification of addresses was made at the time of mobile team activity as it is described in i.3.3.

**Task 4                    Enroll and maintain participation of subjects in the study**

*Operational difficulties encountered in accomplishing the task:*

*Epi Group*

In the first quarter given activity was not performed because of lack of financial support.

**Task 5                    Conduct initial screening examination of subjects**

**Milestone 5.1            Develop data collection forms**

*Progress on task:*

*Data Coordinating Center*

No changes have been introduced to the forms of initial screening.

**Milestone 5.2            Staff and equip fixed center and mobile screening teams**

***Operational difficulties encountered in accomplishing the task:  
Administrative group***

Portable ultrasound instruments and computers have been transferred from customs house to RCIRME for further settling of custom formalities till getting formal permission for their utilization.

***Central Laboratory***

Because of unstable power supply in the Central Laboratory it is necessary to purchase 3 UPS: 2 – for computers and one for luminescent counter (115 VA). Additional computer is required for acceleration of data entry. Additional refrigerator with freezer is required to store samples of serum and urine as well as reagents. Automatic pipettes are required – 4 pcs.

**Milestone 5.4            Send invitation letters to schedule appointments for examination**

***Progress on task:***

***Data Coordinating Center  
Epi Group***

During the first quarter cohort subjects were examined in Minsk examining center, Gomel examining center and by mobile teams of Minsk center.

In accordance with the place of examination invitational letters to initial examination were sent to the subjects. Invitations were sent to the subjects newly located and to those who had statuses no response within a month, reserve, given preliminary consent but did not show up. The last date of invitations sent to subjects 23.03.01. Table 2 (Cycle 1) contains information of mailed letters.

**Milestone 5.5            Conduct screening examinations**

***Progress on task:***

***Central Laboratory***

In the first quarter laboratory tests were performed for 1742 cohort subjects.

Thyroglobuline tests were performed for 1591 subjects, antibodies for 568 subjects having been examined in 1999-2000. The total amount of work of the Central Laboratory in the 1-th quarter 2001 was 12,829 tests.

***Screening Center***

Distribution of examined subjects with respect to the place of examination is presented in the Table 4. As it is evident from the presented data the majority of subjects have been examined by Minsk mobile teams.

Completeness of examination is presented in Table 5. Cases when subjects miss stations of examination are very rare – about 1%.

The results of screening based on the data of preliminary endocrinology conclusion are presented in the Table 6.

In the majority of examined subjects no thyroid pathology has been revealed. Total percentage of patients having thyroid pathology was 7%.

**Milestone 5.6            Notify subjects of final screening results**

***Progress on task:***

***Data Coordinating Center***

Notifications of the screening findings in the 1 -st quarter were not sent to subjects.

**Task 6 Conduct second screening of subjects**

**Milestone 6.1 Review screening process and data collection forms, and revise as necessary**

*Progress on task:*

*Data Coordinating Center*

For the purpose of arranging for the second screening cycle the study forms were reviewed. The majority of forms have been updated. The most significant changes have been introduced to the form of Medical Interview and Final Conclusion and Recommendations. The forms for the second screening were unified. For convenience all the screening forms have been adopted to the forms used in the first screening cycle.

**Milestone 6.3 Send invitation letters to schedule appoints for examination**

*Progress on task:*

*Data Coordinating Center  
Epi Group*

Subjects examined in 1997 and did not show up in 1998, 1999 and 2000 were invited to the repeated examination. This group included people who gave preliminary consent but did not show up, could not come for different reasons, and who did not respond. Monthly invitations were sent to recall examination for medical follow up in accordance with the date scheduled by the endocrinologist during screening examination.

Given activity (invitation of subjects and tracing their showing up at repeated screening) was performed in close cooperation with Gomel Screening Center

Information of mailed letters is presented in the Table 2 (Cycle 2)

**Milestone 6.4 Conduct screening examinations**

*Progress on task:*

*Screening Center*

All in all 1056 subjects were examined repeatedly, 35 of them – in the 1-st quarter. Nodular pathology was revealed in 108 subjects (7 of them in 1-st quarter). 48 subjects had FNAs (2 of them in 1-st quarter). According to the data of cytological examination preliminary diagnosis of thyroid cancer was made to 4 patients, suspicious cancer – 3 patients.

**Milestone 6.5 Notify subjects of final screening results**

*Data Coordinating Center*

Notifications of the screening findings in the 1-st quarter were not sent to subjects.

**Task 7 Determine which subjects have developed thyroid cancer or other thyroid diseases**

**Milestone 7.2 Conduct FNA on appropriate subjects and refer appropriate subjects for surgery**

*Progress on task:*

*Screening Center*

FNA was required for 135 subjects. 47.94% of them were aspirated. Results of FNA according to the place of screening and cytology findings are presented in the Table 7.

A share of non-informative slides from the total number of aspirations was 21.3% (13/61). Profound clinical examination in the Hospital of RCIRME (Acsacovschina) was done for 44 patients, 4 of them were referred to surgery. Discrepancy in diagnoses was not found.

**Milestone 7.3 Provide final diagnosis after surgery**

*Progress on task:*

*Screening Center*

5 subjects had surgeries, 4 of them for thyroid cancer and 1 subject – for follicular tumor of non-specified grade of malignancy. Pathomorphological conclusion was received for all patients including one conclusion on subject with thyroid cancer having had repeated surgery. There was a discrepancy in the diagnosis: follicular tumor of non-specified grade of malignancy (Oncopathology Center) vs. hyperplastic nodule (Project Pathologist)

**Milestone 7.5 Complete laboratory tests for subjects examined**

*Central Laboratory*

Laboratory tests for examined subjects were performed in accordance with Operations Manual. When necessary and in accordance with endocrinology summary repeated laboratory tests were performed. Blood and urine samples are kept frozen for unlimited period of time. Endocrinologist is immediately informed of obtained findings.

**Milestone 7.6 Complete final endocrine summary for each subject**

*Progress on task:*

*Screening Center*

Final summary was completed for 8664, including 244 subjects in the 1-st quarter. Distribution of patients considering their diagnoses is presented in the Table 9.

All in all 57 subjects having thyroid cancer have been revealed, including 53 in the 1-st screening cycle and 4 in the second

**Milestone 7.7 Conduct expert reviews of ultrasound findings**

*QC Group*

*Progress on task:*

expert reviews of ultrasound findings were not conducted

**Milestone 7.8 Conduct expert reviews of cytology for subjects who had FNA**

*Progress on task:*

*QC Group*

Expert reviews of cytology for subjects who had FNA were not performed

**Milestone 7.9 Conduct expert reviews of pathologic material for subjects who had surgery**

*Progress on task:*

*QC Group*

Expert reviews of pathologic material were not performed

**Task 8 Develop data management system and key enter data collected for the study**

**Milestone 8.1 Design computer database to store data**

*Progress on task:*

*Data Coordinating Center*

DCC group continued developing software for invitation of cohort subjects for 2-nd screening cycle. It was considered that subjects younger 18 years of age at the time of the screening should be examined once a year and older subjects – once two years. A possibility was implemented for inviting subjects in accordance with the screening cycle and the place of examination. Changes have been introduced to the structure of epidemiology DB in accordance with the schedule of invitation for the second screening. Also changes have been introduced to the software for entry of Contact Forms, generation of Registration Logs, printing out of bar-code labels. As far as the final variant of Pathomorphology. Form was adopted a software for data entry of this form has been updated.

Software has been designed and tested for entry of new variants of screening forms. By the results of its testing given software has been updated. Installation of the software in Minsk and Gomel Screening Centers is scheduled for April 200 1.

**Milestone 8.2          Develop coding manual and data documentation**

*Progress on task:*

*Data Coordinating Center*

In the first quarter further development of coding manual was continued. Changes were introduced in accordance with the updated variants of the screening forms and the results of contact with subjects.

**Milestone 8.3          Key enter information from data collection forms**

*Progress on task:*

*Data Coordinating Center*

Key enter information from data collection forms was made in all the Project Units. Data collected in Minsk Screening Center and in field by mobile team were entered by operators of this center. Laboratory data from the Central Laboratory and were entered in the Central Laboratory. DCC personnel transferred data from the Project Units to DCC once a week. Data collected in Gomel Screening Center was key entered to the DB in DCC. Forms of FNA, cytology, hospitalization forms, laboratory results of Gomel screening center were entered in the DCC. Also DCC started entering data from the form of pathomorphologic examination. Epi Group filled in and entered Initial Abstract Form (demography) and Contact Form.

Table 10 presents the outcome of data entry.

*Operational difficulties encountered in accomplishing the task:*

*Data Coordinating Center*

Amount of entered information in the Central Laboratory was limited by one PC. To improve this process additional PC is required.

**Milestone 8.4          Conduct routine batch edits of data base**

*Progress on task:*

*Data Coordinating Center*

Routine batch edits of data base includes the following operations:

- Find duplicates through DB of direct measurements, epidemiology DB and dosimetry interview
- Edit for records of repeated visit within initial type of visit
- Edit for records of initial visit within repeated visit or recall visit for medical reasons
- Edit for antipathy of information concerning passing through examining stations indicated in the control form and records in the DB reflecting examination at these stations for a specified visit.

- Edit for correspondence of nodules number and sizes indicated in the ultrasound examination form and preliminary summary at screening
- Edit for correspondence of nodules number and sizes indicated in the forms of preliminary and final summary
- Edit for missing hospitalization forms in case of referral from the screening center
- Weekly edits for completeness of keyed forms for specified visit.
- Edits for completeness and correctness of records.

**Milestone 8.5            Develop tables and reports necessary to monitor study progress**

*Progress on task:*

Given activity was not performed in the first quarter.

**Task 9            The estimation of individual thyroid doses for members of the cohort**

See the report of dosimetry group.

**Task 10            Conduct analyses of data**

Preliminary data analysis of TSH estimation in blood serum was conducted.

### **III. Work Planned for the Next Two Quarters**

#### **Task 1 Establish and implement a management plan and quality control procedures for the study**

**Milestone 1.1** Weekly meetings with the group leaders to discuss the progress of the Project, and their reflection in the minutes.

**Milestone 1.2** Administrative support of cohort maintenance.

**Milestone 1.3.**Coordination between Belarus and U.S. participants with respect to all activities of the Project.

**Milestone 1.4** Prepare materials for publication in newspapers and radio broadcasting aimed at Project promotion in mass media.

**Milestone 1.5** Conduct routine procedures of quality control in Minsk and Gomel examining centers and prepare reports of quality control

#### **Task 3 Trace subjects to determine current address**

**Milestone 3.2** Develop methods for tracing difficult-to-locate subjects

Work out a strategy for locating subjects moved to another place of residence for follow up examination. Necessity for such activity will be estimated basing on the results of contacts with subjects starting 2-nd quarter 200 1

**Milestone 3.3** Trace subjects for current address

2-nd quarter 2001 – continue verifying addresses through visiting subjects' places and through local medical stations.

**Milestone 3.4** Trace subjects who did not respond to invitation for current address

2-nd quarter 2001. – continue explanatory activity among subjects and invitation to the repeated screening, verifying addresses through visiting subjects' places and through local medical stations.

Во II квартале 2001г. – продолжение проведения разъяснительной работы и приглашения на обследование, а также уточнение адресов ВО время подворных обходов и через ФАПы (при необходимости: для тех, КТО Не откликнулся на приглашение на последующее обследование).

#### **Task 4 Enroll and maintain participation of subjects in the study**

If financial support will be available, issue informational booklet and send it to the cohort subjects in the middle of 200 1.

#### **Task 5 Conduct first screening examination of subjects**

**Milestone 5.2** Staff and equip fixed center and mobile screening teams

#### **Task 6 Conduct second screening examination of subjects**

**Milestone 6.1**            **Review screening process and data collection forms, and revise as necessary**

**Milestone 6.2**            **Staff and equip fixed center and mobile screening teams**

**Milestone 6.3**            **Send invitation letters to schedule appointments for examination**

2-nd quarter 2001 – sending informational letters to repeated screening examination in accordance with the schedule of invitation for 2001 as it is mentioned in the Protocol.

**Milestone 6.4**            **Conduct screening examinations**

**Milestone 6.5**            **Notify subjects of final screening results**

In case of enough expenditures (paper, envelopes) notify subject of screening findings monthly.

**Task 7**                    **Determine which subjects have developed thyroid cancer or other thyroid diseases**

**Milestone 7.1** **Develop criteria for FNA**

It is planned to use FNA criteria developed for the 2-nd screening cycle.

**Milestone 7.2**            **Conduct FNA on appropriate subjects and refer appropriate subjects for surgery**

**Milestone 7.3**            **Provide final diagnosis after surgery**

**Milestone 7.4**            **Complete laboratory tests for subjects examined**

It is planned to complete laboratory tests for examined subjects in accordance with Operations Manual.

**Milestone 7.5**            **Complete final endocrine summary for each subject**

**Milestone 7.6**            **Conduct expert reviews of ultrasound findings**

Conduct expert review of all new cancer cases, selectively nodular goiter cases and ultrasound thyroid images without pathology.

**Milestone 7.7**            **Conduct expert reviews of cytology for subjects who had FNA**

**Task 8**                    **Develop data management system, and key enter data collected for the study**

**Milestone 8.1**            **Design computer data base to store data**

Update and test software for key entry of screening forms in accordance with changes introduced to the forms of data collection for the 2-nd cycle. Install this software in all the Project Units dealing with data entry including Gomel examining center.

**Milestone 8.2**            **Develop coding manual and data documentation**

To introduce changes to the structure of data in accordance with the changes to the forms of the second cycle. Update coding manual. Work out manual for data management.

**Milestone 8.3**            **Key enter information from data collection forms**

Conduct training for operators introducing them changes to software of data entry. Provide data entry with minimal delay.

**Milestone 8.4 Conduct routine batch edits of data base**

Update software for routine batch edits in accordance with updated structure of data. Conduct routine batch edits of data base on a regular base.

**Milestone 8.5 Develop tables and reports necessary to monitor study progress**

Update software for generating of tables and reports necessary to monitor study progress in accordance with introduced changes to the DB structure on occasion of 2-nd screening cycle. Update software for generating of quarter reports.

**Task 9 The estimation of individual thyroid doses for members of the cohort**

**Milestone 9.1 Conduct personal interviews for all subjects screened in the Project. Quality control of interview.**

**Milestone 9.2 Enter to the data base information from the interviews. Quality control of data entry.**

**Milestone 9.3 Continue entering initial dosimetric information for Mogilev oblast to the dosimetry DB.**

**Milestone 9.4 Work out dosimetry section of Operations Manual: "Description of Administrative File"**

**Milestone 9.5 Design software for data entry of new questionnaire**

*Table 1. Results of Contacts with Subject for Screening Cycle 1 (Baseline Examination Only)*

	Selection I (Record Selected = 19735)			Selection II (Record Selected = 19453)			Total (Record Selected = 39188)		
	Cumulative Total		Change Since Previous Quarter	Cumulative Total		Change Since Previous Quarter	Cumulative Total		Change Since Previous Quarter
	#	%	#	#	%	#	#	%	#
<b>Duplicate Record Found</b>	20		0	48		0	68		0
<b>Total Subjects</b>	19715	100.0	0	19405	100.0	0	39120	100.0	0
<b>Address Found</b>	13210	67.00	29	10225	52.69	85	23435	59.91	114
<b>Emigrated to Another Country</b>	343	1.74	0	74	0.38	0	417	1.07	0
<b>Deceased</b>	55	0.28	0	42	0.22	1	97	0.25	1
<b>Not Found</b>	6107	30.98	-29	9058	46.68	-86	15165	38.77	-115
<b>Not Found</b>	0	0.00	0	6	0.03	0	6	0.02	0

**Definitions:**

**Cumulative Total** - the cumulative total up to the ending date on the title page of this report

**Selection I** - the first 19735 subjects who were originally selected from the dose files

**Selection II** - the remaining subjects in the dose files who were selected at the end of 1999

**Address Found** - a current address has been found using at least one of the tracing sources

**Not Found** - a current address or vital status was unknown by all of the tracing sources

**Ineligible** - subjects age at time of accident was determined to be out of the range

Table 2. Results of Contacts with Subjects for Screening Cycle 1 (Baseline Screening Examination Only\*\*)

	Selection I (Records Selected = 19735)			Selection II (Records Selected = 19453)			Total (# of Records = 39188)		
	Cumulative Total		Change Since Previous Quarter	Cumulative Total		Change Since Previous Quarter	Cumulative Total		Change Since Previous Quarter
	#	%	#	#	%	#	%	#	
Address Found	13210		29	10225		85	23435		114
Invitation Sent	20626		2596	13541		3197	34167		5793
First Invitation	12965	100.0	23	9410	100.0	76	22375	100.0	99
Accepted	3589	27.68	2	3015	32.04	8	6604	29.52	10
Refused	23	0.18	0	17	0.18	0	40	0.18	0
Did Not Respond	7648	58.99	12	5322	56.56	9	12970	57.97	21
Incorrect Address	959	7.40	0	487	5.18	5	1446	6.46	5
Temporarily Absent	505	3.90	0	247	2.62	1	752	3.36	1
Outstanding	61	0.05	61	35	0.37	35	41	0.18	41
Other	235	1.81	3	287	3.05	18	522	2.33	21
Subsequent Invitation	7661	100.00	2573	4131	100.00	3121	11792	100.00	5694
Accepted	1465	19.12	214	606	14.67	213	2071	17.56	427
Refused	39	0.51			0.85			0.63	
Did not respond	4110	53.65	1285	1544	37.38	1460	5654	47.95	2745
Incorrect address	410	5.35		266	6.44	63	676	5.73	118
Temporarily Absent	182	2.38	29	56	1.36	51	238	2.02	80
Outstanding	824	10.76	824	1121	27.14	1121	1945	16.49	1945
Other	631	8.24	150	503	12.18	196	1134	9.62	346

**Definitions:**

**Cumulative Total** - the cumulative total up to the ending date on the title page of this report

**Selection I** - the first 19735 subjects who were selected from the dose files

**Selection II** - the remaining subjects in the dose files who were selected at the end of 1999

**Temporarily Absent** - subject is in the military, prison, school, hospital, or on vacation and is temporarily away from his/her permanent address

**Subsequent Invitation** - an invitation was previously sent to a subject and they refused, didn't respond, or the address was incorrect; a second or subsequent invitation was sent, possibly with additional information or corrected address (this should be the total number of subjects to whom at least one additional invitation has been sent)

**Outstanding** - Letter was sent to subject less than one month ago

\*\* A separate table should be prepared for the second screening examination

Table 2. Results of Contacts with Subjects for Screening Cycle 2

	Selection I (Records Selected = 19735)			Selection II (Records Selected = 19453)			Total (Record Selected = 39188)		
	Cumulative Total		Change Since Previous Quarter	Cumulative Total		Change Since Previous Quarter	Cumulative Total		Change Since Previous Quarter
	#	%	#	#	%	#	#	%	#
Address Found	13210		29	10225		85	23435		114
Invitation Sent	2388		265	192		80	2580		345
Second Invitation	1617	100.0	76	147	100.0	55	1764	100.0	131
Accepted	633	39.15	9	70	47.62	10	703	39.85	19
Refused	2	0.12	0	0	0.00	0	2	0.11	0
Did Not Respond	836	51.70	21	31	21.09	8	867	49.15	29
Incorrect Address	11	0.68	0	1	0.68	0	12	0.68	0
Temporarily Absent	66	4.08	4	5	3.40	0	71	4.02	4
Outstanding	33	2.04	32	24	16.33	24	57	3.23	56
Other	36	2.23	10	16	10.88	13	52	2.95	23
Subsequent Invitation	771	100.00	189	45	100.00	25	816	100.00	214
Accepted	280	36.32	16	12	26.67	5	292	35.78	21
Refused	0	0.00	0	0	0.00	0	0	0.00	0
Did not Respond	295	38.26	60	14	31.11	6	309	37.87	66
Incorrect Address	14	1.82	2	0	0.00	0	14	1.72	2
Temporarily Absent	24	3.11	8	2	4.44	0	26	3.19	8
Outstanding	70	9.08	70	4	8.89	4	74	9.07	74
Other	88	11.41	33	13	28.89	10	101	12.38	43

**Definitions:**

**Cumulative Total** - the cumulative total up to the ending date on the title page of this report

**Selection I** - the first 19735 subjects who were selected from the dose files

**Selection II** - the remaining subjects in the dose files who were selected at the end of 1999

**Temporarily Absent** - subject is in the military, prison, school, hospital, or on vacation and is temporarily away from his/her permanent address

**Subsequent Invitation** - an invitation was previously sent to a subject and they refused, didn't respond, or the address was incorrect; a second or subsequent invitation was sent, possibly with additional information or corrected address (this should be the total number of subjects to whom at least one additional invitation has been sent)

**Outstanding** - Letter was sent to subject less than one month ago

Table 3. Results of Previous Contact with Subjects Who Were Screened in Screening Cycle I (Baseline Examination Only)

	Selection I (Records Selected = 19735)			Selection II (Records Selected = 19453)			Total (Record Selected = 39188)		
	Cumulative Total		Change Since Previous Quarter	Cumulative Total		Change Since Previous Quarter	Cumulative Total		Change Since Previous Quarter
	#	%		#	%		#	%	
Total Who Came to Screening Examination	7299	100.0	704	4535	100.0	743	11834	100.0	1447
Accepted Invitation	6328	86.70	257	3440	75.85	330	9768	82.54	587
Refused Invitation	0	0.00	0	1	0.02	1	1	0.01	1
Did Not Respond	675	9.25	324	823	18.15	300	1498	12.66	624
Other	256	3.51	123	256	5.64	110	512	4.33	233

**Definitions:**

**Cumulative Total** - the cumulative total up to the ending date on the title page of this report

**Selection I** - the first 19735 subjects who were selected from the dose files

**Selection II** - the remaining subjects in the dose files who were selected at the end of 1999

**Table 4. Place of Screening for Subjects Who Were Screened in Screening Cycle 1 (Baseline Examination Only)**

	Selection I (Records Selected = 19735)			Selection II (Records Selected = 19453)			Total (Record Selected = 39188)		
	Cumulative Total		Change Since Previous Quarter	Cumulative Total		Change Since Previous Quarter	Cumulative Total		Change Since Previous Quarter
	#	%		#	%		#	%	
Total Who Came to Screening Examination	7299	<b>100.0</b>	704	4535	<b>100.0</b>	743	11834	<b>100.0</b>	1447
Examined at Fixed Center in Minsk	3839	52.60	140	2322	51.20	223	6161	52.06	363
Examined at Fixed Center in Gomel	594	8.14	183	647	14.27	181	1241	10.49	364
Examined by Minsk Mobile Team	2743	37.58	281	1528	33.69	301	4271	36.09	582
Examined by Gomel Mobile Team	100	1.37	100	39	0.85	39	139	1.17	139
Other*	23	0.32	0	0	0.00	0	23	0.19	0

**Definitions:**

**Cumulative Total** - the cumulative total up to the ending date on the title page of this report

**Selection I** - the first 19735 subjects who were selected from the dose files

**Selection II** - the remaining subjects in the dose files who were selected at the end of 1999

\* cohort subjects, examined in the dispensary of radiation medicine, but not by the personnel of the Project.

**Table 5. Status of Screening Activities for Subjects Who Were Screened in Screening Cycle 1 (Baseline Examination Only)**

	Selection I (Records Selected = 19735)			Selection II (Records Selected = 19453)			Total (Record Selected = 39188)		
	Cumulative Total		Change Since Previous Quarter	Cumulative Total		Change Since Previous Quarter	Cumulative Total		Change Since Previous Quarter
	#	%	#	#	%	#	#	%	#
Total Who Came to Screening Examination	7299	<b>100.0</b>	704	4535	<b>100.0</b>	743	11834	<b>100.0</b>	1447
Subject had Complete Screening Examination	7202	98.67	700	4476	98.70	734	11678	98.68	1434
Subject Missed at Only One Station	67	0.92	3	55	1.21	8	122	1.03	11
Subject Missed Blood Draw Only	13	0.18	0	11	0.24	1	24	0.20	1
Subject Missed Urine Collection Only	29	0.40	1	31	0.68	1	60	0.51	2
Subject Missed Dosimetry Interview Only	2.5	0.34	2	13	0.29	6	38	0.32	8
Subject Missed Only One Other Station	<b>0</b>	0.00	0	<b>0</b>	0.00	0	<b>0</b>	0.00	0
Subject Missed More than One Station	30	0.41	1	4	0.09	1	34	0.29	2

**Definitions:**

**Cumulative Total** - the cumulative total up to the ending date on the title page of this report

**Selection I** - the first 19735 subjects who were selected from the dose files

**Selection II** - the remaining subjects in the dose files who were selected at the end of 1999

**Table 6. preliminary Results of Screening Examination for Subjects Who Were Screened in Screening Cycle 1 (Baseline Examination Only - from the preliminary endocrine summary completed on the day of the examination)**

	Selection I (Records Selected = 19735)			Selection II (Records Selected = 19453)			Total (Record Selected = 39188)		
	Cumulative Total		Change Since Previous Quarter	Cumulative Total		Change Since Previous Quarter	Cumulative Total		Change Since Previous Quarter
	#	%	#	#	%	#	#	%	#
Total Who Came to Screening Examination	7299	<b>100.0</b>	704	4535	<b>100.0</b>	743	11834	<b>100.0</b>	1447
1. No Thyroid Abnormalities (Follow in 2 Years)	4933	67.58	647	3061	67.50	677	7994	67.55	1324
2. Subject Has Single or Multiple Nodules	471	06.45	0	295	06.50	1	766	06.47	1
2.1 At least 1 nodule > 10 mm	177	02.42	0	78	01.72	0	255	02.15	0
2.2 At least 1 nodule > 5 mm but none > 10 mm	261	03.58	0	185	04.08	1	446	03.77	1
2.3 No nodules > 5 mm	33	00.45	0	32	00.71	0	65	00.55	0
3. Parathyroid Dysfunction (Yes or Suspicion)	27	00.37	1	6	00.13	1	33	00.28	2
4. Lymphadenopathy	355	04.86	25	93	02.05	10	448	03.79	35
5. Other Thyroid Abnormality	1584	21.70	0	944	20.82	0	2528	21.36	0
6. History of Thyroid Surgery Prior to Screening	55	00.75	2	9	00.20	0	64	00.54	2
6.1 Thyroid Cancer	45	00.62	2	4	00.09	0	49	00.41	2
6.2 Thyroid Adenoma	10	00.14	0	5	00.11	0	15	00.13	0
7. Insufficient Information to Complete Preliminary Summary	0	<b>0.00</b>	0	0	<b>0.00</b>	0	0	<b>0.00</b>	0

**Definitions:**

**Selection I** - the first 19735 subjects who were selected from the dose files

**Selection II** - the remaining subjects in the dose files who were selected at the end of 1999

**Cumulative Total** - the cumulative total up to the ending date on the title page of this report

**Total Subjects Screened** - total number of subjects who came to the first screening examination

**History of thyroid cancer prior to screening** - subject was diagnosed/treated for thyroid cancer before coming to the first screening examination

**Table 7. Fine Needle Aspiration Results from Screening Cycle I (Baseline Examination Only)**

	Cumulative Total		Change Since Previous Quarter
	#	%	#
<b>Subject requested for FNA</b>	655	100.0	135
Subject was screened at Minsk Fixed Center	351	53.59	64
Subject was screened at Gomel Fixed Center	143	21.83	42
Subject was screened by Minsk Mobile Team	153	23.36	21
Subject was screened by Gomel Mobile Team	8	01.22	8
<b>Subject has NOT undergone FNA</b>	341	52.06	74
Subject was screened at Minsk Fixed Center	150	22.90	25
Subject was screened at Gomel Fixed Center	85	12.98	28
Subject was screened by Minsk Mobile Team	100	15.27	15
Subject was screened by Gomel Mobile Team	6	00.92	6
<b>Subject HAS undergone FNA</b>	314	47.94	61
1 FNA positive or suspicious for cancer	51	07.79	4
2 FNA positive or suspicious for neoplasm	39	05.95	13
3 FNA not suspicious for neoplasm	150	22.90	31
4 Sample(s) Inadequate for Diagnosis	74	11.30	13

**Definitions:**

**Cumulative Total** - the cumulative total up to the ending date on the title page of this report

Table 8. *Laboratory Tests Processed*

	Cumulative Total		Chang Since Previous Quarter
	#	%	#
<b>1. Blood Samples Received</b>	10692	100.0	493
<b>1.1 Blood Samples Processed for TSH</b>	10490	98.11	455
<b>1.1.1 Blood Samples Processed for Free T4</b>	613	5.73	1
<b>1.2 Blood Samples Processed for anti TPO</b>	10490	98.11	455
<b>1.2.1 Blood Samples Processed for anti Tg</b>	10491	98.12	455
<b>1.3 Blood Samples Processed for Tg</b>	10265	96.01	455
<b>1.4 Blood Samples Processed for Ca<sup>++</sup></b>	8750	81.84	455
<b>1.4.1 Blood Samples Processed for PTH</b>	3	0.03	0
<b>2. Urine Samples Received</b>	10473	100.00	642
<b>2.1 Urine Samples Processed</b>	10450	99.78	642

**Definitions:**

**Cumulative Total** - the cumulative total up to the ending date on the title page of this report

**Samples Received** - the number of subjects for whom samples have been received by the laboratory

**Samples Processed** - the number of subjects for whom each specific laboratory analyses has been completed

Table 9. Final Endocrine Summary Results \*

	Selection I			Selection II			Total		
	Cumulative Total		Change Since Previous Quarter	Cumulative Total		Change Since Previous Quarter	Cumulative Total		Change Since Previous Quarter
	#	%		#	%		#	%	
<b>Total Subjects Screened</b>	7299		704	4535		743	11834		1447
<b>Final Endocrine Summary Report Completed</b>	5421	100.0	106	3243	100.0	138	8664	100.0	244
<b>1. No thyroid abnormality (Follow in 2 years)</b>	3485	64.29	91	2043	63.00	114	5528	63.80	205
<b>2. Thyroid abnormality (ICD-9 Code)</b>	1936	35.71	15	1197	36.91	24	3133	36.16	39
<b>2.1 Malignant neoplasm of thyroid gland (193)</b>	45	00.83	3	11	00.34	0	56	00.47	3
<b>2.2 Benign neoplasm of thyroid gland (226)</b>	9	00.17	0	0	00.00	0	9	00.08	0
<b>2.3 Simple and unspecified goiter (240.9)</b>	1298	23.94	4	780	24.05	6	2078	23.98	10
<b>2.4 Nontoxic nodular goiter (241)</b>	307	05.66	4	200	06.17	8	507	05.85	12
<b>2.4.1 Uninodular (241.0)</b>	215	03.97	3	140	04.32	5	355	04.10	8
<b>2.4.2 Multinodular (241.1)</b>	92	01.70	1	60	01.85	3	152	01.75	4
<b>2.5 Thyrotoxicosis with or without goiter (242)</b>	25	00.46	0	29	00.89	0	54	00.62	0
<b>2.5.1 Toxic diffuse goiter (242.0)</b>	7	00.13	0	7	00.22	0	14	00.16	0
<b>2.5.2 Toxic uninodular goiter (242.1)</b>	0	00.00	0	0	00.00	0	0	00.00	0
<b>2.5.3 Toxic multinodular goiter (242.2)</b>	0	00.00	0	0	00.00	0	0	00.00	0
<b>2.5.4 Thyrotoxicosis without goiter (242.4 - 242.9)</b>	18	00.33	0	22	00.68	0	40	00.46	0
<b>2.6 Hypothyroidism (244)</b>	5	00.09	0	4	00.12	0	9	00.10	0
<b>2.7 Other Thyroid Disorders (237.4,245, 246)</b>	282	05.20	7	175	05.40	10	457	05.27	17
<b>2.7.1 Autoimmune thyroiditis (245.2)</b>	94	01.73	1	59	01.82	2	153	01.77	3
<b>3. Hyperparathyroidism (252.0)</b>	0	00.00	0	0	00.00	0	0	00.00	0
<b>4. Hypercalcemia (275.42)</b>	70	01.29	1	95	02.93	6	165	01.90	7
<b>Subject Has Been Notified of Examination Results</b>	0	0.00	0	0	00.00	0	0	0.00	0

**Definitions:**

**Selection I** - the first 19,000 subjects who were selected from the dose files

**Selection II** - the remaining subjects in the dose files who were selected at the end of 1999

**Cumulative Total** - the cumulative total up to the ending date on the title page of this report

**Total Subjects Screened** - total of the number of subjects who came to the first screening examination

**Final Endocrine Summary/Pathology Completed** -the total number of subjects for whom the final endocrine summary report has been completed, and Hospitalization Form (if applicable) and Pathology Form (if applicable) have been completed

\* Results from final endocrine summary after all laboratory testing is complete and pathology reports obtained (for subjects with FNA/surgery) - Do not include thyroid abnormalities or malignancies diagnosed prior to the first screening

Table 10. Data Management

	Cumulative Total		Change Since Previous Quarter
	#	%	#
<b>Total Subjects Screened</b>	11834	100.0	1447
<b>Screening Forms Key Entered</b>	11087	93.69	1150
<b>Dosimetry Questionnaires Key Entered</b>	10456	88.36	726
<b>Urine Processing Forms Key Entered</b>	10541	89.07	647
<b>Blood Processing Forms Key Entered</b>	10598	89.56	455
<b>Final Endocrine Summary Forms Key Entered</b>	8390	70.90	218
<b>FNA Results Forms Key Entered</b>	458	3.87	57
<b>Pathology Forms Key Entered</b>	0	0.00	0
<b>Initial Abstract Forms Key Entered</b>	23980		34
<b>Hospital Clinic Forms Key Entered</b>	515		16
<b>Hospital Oncopathology Forms Key Entered</b>	125		12

**Definitions:**

**Cumulative Total** - the cumulative total up to the ending date on the title page of this report

**Current Quarter** - total number for this quarter beginning and ending with the dates on the front page of this report

**Total Subjects Screened** - total of the numbers of subjects screened in Screening Cycle 1

**Screening Forms Key Entered** - total number of subjects for whom all forms filled out on the day of screening (from registration through preliminary endocrine summary) have been key-entered