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U.S. Radiologic Technologists Study
Fourth Survey

A collaborative effort between the University of Minnesota School of Public Health, National Cancer Institute, and American Registry of Radiologic Technologists

RADIOISOTOPE PROCEDURES MODULE

Instructions:

- Use blue or black ink
- Print legible numbers: 1 2 3
- Mark check boxes: Right ☒ Wrong ☑ ❑
- Do not make any stray marks on this form. If you have comments, please write them on a separate piece of paper.

PRIVACY ACT NOTIFICATION STATEMENT
Collection of this information is authorized by The Public Health Service Act, Section 411 (42 USC 285a). Rights of study participants are protected by The Privacy Act of 1974.Please be assured that all information you provide will be kept private under the Privacy Act and will not be disclosed to anyone but the researchers conducting this study, except as otherwise required by law. Any published results from this survey will be reported in statistical summaries only and will never include a participant's name. Your participation in this study is completely voluntary and failure to answer any particular question or the information collection as a whole will not affect your future contacts with the University of Minnesota, the American Registry of Radiologic Technologists, or the National Institutes of Health.

Please fill out this module if you have ever performed or assisted with radioisotope procedures to diagnose or treat diseases REGULARLY, that is, <u>at least once a month for a year or more</u>.

Just do your best. Even if not exact, your best estimates are valuable to the study.

1. **What year did you FIRST perform or assist with radioisotope procedures REGULARLY?** ☐☐☐☐ FIRST YEAR

2. **What year did you LAST perform or assist with radioisotope procedures REGULARLY?** Enter current year if still doing procedures. ☐☐☐☐ LAST YEAR

3. **During each time period, how many YEARS did you perform or assist with DIAGNOSTIC RADIOISOTOPE procedures at least once a month?**

Number of Years				
1945-1964	1965-1979	1980-1989	1990-1999	2000-2009
☐☐	☐☐	☐☐	☐☐	☐☐

CONTINUE →

DIAGNOSTIC RADIOISOTOPE PROCEDURES

4. For the following DIAGNOSTIC radioisotope procedures, please provide your best estimate of how many times per week you performed or assisted with these procedures during each time period. If you used more than one radionuclide for a given procedure, please answer separately for each radionuclide.
NOTE: If you mark "never done," leave the rest of the columns blank for that procedure and radionuclide.

DIAGNOSTIC PROCEDURE	RADIONUCLIDE	NEVER DONE	How many TIMES per WEEK did you perform these procedures in each time period? 1945-1964	1965-1979	1980-1989	1990-1999	2000-2009
All Thyroid scans		❑					
Thyroid scan	^{131}I	❑					
	^{123}I	❑					
	^{99m}Tc	❑					
All Thyroid uptakes		❑					
Thyroid uptake	^{131}I	❑					
	^{123}I	❑					
All Liver scans		❑					
Liver scan	^{198}Au-Colloid	❑					
All Brain scans		❑					
Brain scan	^{131}ISHA	❑					
	^{203}Hg	❑					
	^{197}Hg	❑					
	^{99m}Tc	❑					
All Renal scans		❑					
Renal scan	^{203}Hg	❑					
	^{197}Hg	❑					
	^{99m}Tc	❑					
All Bone scans		❑					
Bone scan	^{85}Sr	❑					
	^{99m}Tc	❑					
All Lung perfusion scans		❑					
Lung perfusion scan	^{131}I-MAA	❑					
	^{99m}Tc-MAA	❑					

DIAGNOSTIC PROCEDURE, cont.	RADIONUCLIDE	NEVER DONE	How many TIMES per WEEK did you perform these procedures in each time period?				
			1945-1964	1965-1979	1980-1989	1990-1999	2000-2009
All Lung ventilations		❑					
Lung ventilation	^{133}Xe	❑					
	^{127}Xe	❑					
All Bone marrow scans		❑					
Bone marrow scan	^{198}Au-Colloid	❑					
	^{99m}Tc-SC	❑					
	^{111}In-chloride	❑					
All Gallbladder scans		❑					
Gallbladder scan	^{99m}Tc	❑					
All Gastrointestinal procedures		❑					
Gastrointestinal	^{99m}Tc in solid meal	❑					
All Cardiac scans		❑					
Cardiac scan	^{201}Tl-chloride	❑					
	^{99m}Tc (1d)	❑					
	^{99m}Tc (2d)	❑					
All tumor and abscess localizations		❑					
Tumor and abscess localization	^{67}Ga-citrate	❑					
	^{111}In-octreotide	❑					
All Pancreas scans		❑					
Pancreas scan		❑					
All PET scans (brain)		❑					
PET scan (brain)	^{18}F-FDG	❑					
All PET scans (except brain)		❑					
PET scan (except brain)	^{18}F-FDG	❑					
	^{82}Rb-chloride	❑					
	^{13}N-ammonia	❑					

DIAGNOSTIC PROCEDURE, cont.	RADIONUCLIDE	NEVER DONE	How many TIMES per WEEK did you perform these procedures in each time period? 1945-1964	1965-1979	1980-1989	1990-1999	2000-2009
All Iron metabolism		❑					
Iron metabolism	^{59}Fe	❑					

Please list other diagnostic procedures below:

	DIAGNOSTIC PROCEDURE	RADIONUCLIDE					
1.							
2.							
3.							

The following questions are about your work patterns and practices while performing or assisting with DIAGNOSTIC RADIOISOTOPE procedures. Please complete all questions for each time period.

	NEVER DONE	1945-1964	1965-1979	1980-1989	1990-1999	2000-2009
5a. Did you ever prepare radiopharmaceuticals for DIAGNOSTIC procedures? If NEVER DONE, go to Question 6a.	❑	❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
5b. How many TIMES per WEEK did you prepare radiopharmaceuticals?						
5c. When you prepared radiopharmaceuticals, did you use any protection? If NEVER DONE, go to Question 6a.	NEVER DONE ❑	❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
5d. Check all of the following that you typically used more than 50% of the time:						
lead shielded vial		❑	❑	❑	❑	❑
lead shielded syringe		❑	❑	❑	❑	❑
lead apron		❑	❑	❑	❑	❑
fume hood		❑	❑	❑	❑	❑
L-Block		❑	❑	❑	❑	❑
other (specify) _____		❑	❑	❑	❑	❑

	NEVER DONE	1965-1979	1980-1989	1990-1999	2000-2009
6a. Did you ever elute the Tc generator? If NEVER DONE, go to Question 7a.	❑	❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
6b. How many TIMES per WEEK did you elute the Tc generator?					
	NEVER DONE				
6c. When you eluted the ^{99m}Tc generator, did you use any radiation protection? If NEVER DONE, go to Question 7a.	❑	❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
6d. Check all of the following that you typically used more than 50% of the time:					
lead shielded vial		❑	❑	❑	❑
lead apron		❑	❑	❑	❑
fume hood		❑	❑	❑	❑
other (specify) _____		❑	❑	❑	❑

	NEVER DONE	1945-1964	1965-1979	1980-1989	1990-1999	2000-2009
7a. Did you ever inject the patient with a diagnostic radioisotope? If NEVER DONE, go to Question 8a.	❑	❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
7b. How many TIMES per WEEK did you inject patients with a radioisotope?						
	NEVER DONE					
7c. When you injected the patient, did you use any radiation protection? If NEVER DONE, go to Question 8a.	❑	❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
7d. Check all of the following that you typically used more than 50% of the time:						
lead shielded syringe		❑	❑	❑	❑	❑
lead apron		❑	❑	❑	❑	❑
other (specify) _____		❑	❑	❑	❑	❑

	NEVER DONE	1945-1964	1965-1979	1980-1989	1990-1999	2000-2009
8a. When you assisted the patients for diagnostic radioisotope examinations, did you use any radiation protection? If NEVER DONE, go to Question 9a.	❑	❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
8b. Check all of the following that you typically used or did more than 50% of the time:						
lead apron		❑	❑	❑	❑	❑
moved more than 3 feet away from patient.....		❑	❑	❑	❑	❑
other (specify) _____		❑	❑	❑	❑	❑

9a. When you imaged patients, did you use any radiation protection? If NEVER DONE, go to Question 10.

NEVER DONE	1945-1964	1965-1979	1980-1989	1990-1999	2000-2009
❑	❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes

9b. Check all of the following that you typically used or did more than 50% of the time:

lead apron	❑	❑	❑	❑	❑
moved more than 3 feet away from patient	❑	❑	❑	❑	❑
other (specify) _____	❑	❑	❑	❑	❑

THERAPEUTIC RADIOISOTOPE PROCEDURES

10. During each time period, how many YEARS did you perform or assist with THERAPEUTIC RADIOISOTOPE procedures at least once a month?

1945-1964	1965-1979	1980-1989	1990-1999	2000-2009

11. For the following THERAPEUTIC RADIOISOTOPE procedures, please provide your best estimate of how many <u>times per week</u> you performed or assisted with these procedures, with the specific radioisotope listed, during each time period. If you used more than one radioisotope for a given procedure, please include in the section below.

NOTE: If you mark "never done," leave the rest of the columns blank for that procedure and radionuclide.

THERAPEUTIC PROCEDURE OR DISEASE	RADIONUCLIDE	NEVER DONE	How many TIMES per WEEK did you perform these procedures in each time period? 1945-1964	1965-1979	1980-1989	1990-1999	2000-2009
Hyperthyroidism	^{131}I	❑					
Thyroid ablation	^{131}I	❑					
Follow up after thyroid ablation	^{131}I	❑					
Malignant effusion	^{198}Au-Colloid	❑					
Bone metastases	^{153}Sm	❑					
Non-Hodgkin's lymphoma or liver tumor	^{90}Y	❑					

Please list other therapeutic radioisotope procedures or disease below:

	THERAPEUTIC PROCEDURE OR DISEASE	RADIOISOTOPE					
1.							
2.							
3.							

The following questions are about your work patterns and practices while performing or assisting with THERAPEUTIC RADIOISOTOPE procedures. Please complete all questions for each time period.

	NEVER DONE	1945-1964	1965-1979	1980-1989	1990-1999	2000-2009
12a. Did you ever prepare radiopharmaceuticals for THERAPEUTIC procedures? If NEVER DONE, go to Question 13a.	❑	❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
12b. How many TIMES per WEEK did you prepare radiopharmaceuticals?		☐☐	☐☐	☐☐	☐☐	☐☐
12c. When you prepared radiopharmaceuticals, did you use any radiation protection? If NEVER DONE, go to Question 13a.	NEVER DONE ❑	❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
12d. Check all of the following that you typically used more than 50% of the time:						
lead shielded vial		❑	❑	❑	❑	❑
lead shielded syringe		❑	❑	❑	❑	❑
lead apron		❑	❑	❑	❑	❑
fume hood		❑	❑	❑	❑	❑
L-Block		❑	❑	❑	❑	❑
other (specify) _____		❑	❑	❑	❑	❑

	NEVER DONE	1945-1964	1965-1979	1980-1989	1990-1999	2000-2009
13a. Did you ever administer oral ^{131}I? If NEVER DONE, go to Question 14a.	❑	❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
13b. How many TIMES per WEEK did you administer oral ^{131}I?		☐☐	☐☐	☐☐	☐☐	☐☐
13c. When you administered oral ^{131}I, did you use any radiation protection? If NEVER DONE, go to Question 14a.	NEVER DONE ❑	❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
13d. Check all of the following that you typically used more than 50% of the time:						
lead apron		❑	❑	❑	❑	❑
other (specify) _____		❑	❑	❑	❑	❑

	NEVER DONE	1945-1964	1965-1979	1980-1989	1990-1999	2000-2009
14a. Did you ever inject the patient with a therapeutic radioisotope? If NEVER DONE, go to Question 15a.	❑	❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
14b. How many TIMES per WEEK did you inject patients with the radioisotope?		☐☐	☐☐	☐☐	☐☐	☐☐

	NEVER DONE	1945-1964	1965-1979	1980-1989	1990-1999	2000-2009
14c. When you injected the patient with the radioisotope, did you use any radiation protection? If NEVER DONE, go to Question 15a.	❑	❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
14d. Check all of the following that you typically used more than 50% of the time:						
lead apron		❑	❑	❑	❑	❑
lead shielded syringe		❑	❑	❑	❑	❑
other (specify) _____		❑	❑	❑	❑	❑

	NEVER DONE	1945-1964	1965-1979	1980-1989	1990-1999	2000-2009
15a. When you assisted the patient for therapeutic radioisotope procedures, did you use any radiation protection? If NEVER DONE, go to Question 16.	❑	❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes	❑ No ❑ Yes
15b. Check all of the following that you typically used or did more than 50% of the time:						
lead apron		❑	❑	❑	❑	❑
moved more than 3 feet away from patient		❑	❑	❑	❑	❑
other (specify) _____		❑	❑	❑	❑	❑

Thank you!

OFFICE USE ONLY

❑A ❑B ❑C ❑D ❑E