

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

NUCLEAR MEDICINE MODULE

INSTRUCTIONS:

- USE BLUE OR BLACK INK
- PRINT LEGIBLE NUMBERS AND CAPITAL BLOCK LETTERS IN THE BOXES:

1	2	3	A	B	C	D
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- MARK CHECK BOXES: RIGHT WRONG

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 radioisotope procedures to diagnose or treat diseases REGULARLY, that is, at least once a month for a year or more.

1. What year did you begin performing radioisotope procedures **REGULARLY**?

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 FIRST YEAR
2. What year did you last perform radioisotope procedures **REGULARLY**?

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 LAST YEAR

CONTINUE 

NOTIFICATION TO RESPONDENT OF ESTIMATED BURDEN

Public reporting burden for this collection of information is estimated to average 20 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. **An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.** Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to: NIH, Project Clearance Branch, 6705 Rockledge Drive, MSC 7974, Bethesda, MD 20892-7974, ATTN: PRA (0925-0405). Do not return the completed form to this address.

DIAGNOSTIC RADIOISOTOPE PROCEDURES

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

Number of Years			
1965-1979	1980-1989	1990-1999	2000-2009
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

4. For the following DIAGNOSTIC radioisotope procedures, please provide your best estimate of how many times per week you performed 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” or “less than once in 6 months,” leave the rest of the columns blank for that procedure and radionuclide.

DIAGNOSTIC PROCEDURE	RADIONUCLIDE	Never done	Less than once in 6 months	How many TIMES per WEEK did you perform these procedures in each time period?				
				1945-1964	1965-1979	1980-1989	1990-1999	2000-2009
Thyroid scan	¹³¹ I	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	¹²³ I	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	^{99m} Tc	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Thyroid uptake	¹³¹ I	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	¹²³ I	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Liver scan	¹⁹⁸ Au-Colloid.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Liver/spleen scan	^{99m} Tc-SC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Brain scan	¹³¹ I SHA.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	²⁰³ Hg.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	¹⁹⁷ Hg.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	^{99m} Tc	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Renogram	¹³¹ I-OIH.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	¹²³ I-OIH.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	^{99m} Tc	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Renal scan	²⁰³ Hg.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	¹⁹⁷ Hg.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	^{99m} Tc	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Bone scan	⁸⁵ Sr.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	^{99m} Tc	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Attachment 1B

DIAGNOSTIC PROCEDURE, cont.	RADIONUCLIDE	Never done	Less than once in 6 months	How many TIMES per WEEK did you perform these procedures in each time period?				
				1945-1964	1965-1979	1980-1989	1990-1999	2000-2009
Lung perfusion scan	¹³¹ I-MAA	<input type="checkbox"/>	<input type="checkbox"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	^{99m} Tc-MAA	<input type="checkbox"/>	<input type="checkbox"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Lung ventilation	¹³³ Xe	<input type="checkbox"/>	<input type="checkbox"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	¹²⁷ Xe	<input type="checkbox"/>	<input type="checkbox"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Bone marrow scan	¹⁹⁸ Au-Colloid	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>			
	^{99m} Tc-SC	<input type="checkbox"/>	<input type="checkbox"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	¹¹¹ In-chloride	<input type="checkbox"/>	<input type="checkbox"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Gallbladder scan	^{99m} Tc	<input type="checkbox"/>	<input type="checkbox"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Gastrointestinal	^{99m} Tc in solid meal	<input type="checkbox"/>	<input type="checkbox"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Cardiac scan	²⁰¹ Tl-chloride	<input type="checkbox"/>	<input type="checkbox"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	^{99m} Tc (1d)	<input type="checkbox"/>	<input type="checkbox"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	^{99m} Tc (2d)	<input type="checkbox"/>	<input type="checkbox"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Abscess scintigraphy	⁶⁷ Ga-citrate	<input type="checkbox"/>	<input type="checkbox"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	¹¹¹ In-leukocytes	<input type="checkbox"/>	<input type="checkbox"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	^{99m} Tc	<input type="checkbox"/>	<input type="checkbox"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Tumor localization	⁶⁷ Ga-citrate	<input type="checkbox"/>	<input type="checkbox"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	¹¹¹ In-octreotide	<input type="checkbox"/>	<input type="checkbox"/>				<input type="text"/>	<input type="text"/>
PET scan (brain)	¹⁸ F-FDG	<input type="checkbox"/>	<input type="checkbox"/>				<input type="text"/>	<input type="text"/>
PET scan (except brain)	¹⁸ F-FDG	<input type="checkbox"/>	<input type="checkbox"/>				<input type="text"/>	<input type="text"/>
	⁸² Rb-chloride	<input type="checkbox"/>	<input type="checkbox"/>				<input type="text"/>	<input type="text"/>
	¹³ N-ammonia	<input type="checkbox"/>	<input type="checkbox"/>				<input type="text"/>	<input type="text"/>
Iron metabolism	⁵⁹ Fe	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Please list other diagnostic procedures below:								
1.	DIAGNOSTIC PROCEDURE	RADIONUCLIDE		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
2.				<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
3.				<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Attachment 1B

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

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

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

Attachment 1B

	Never	1945-1964	1965-1979	1980-1989	1990-1999	2000-2009
7a. Did you ever inject the patient? If NEVER, go to Question 8a.	<input type="checkbox"/>	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes
7b. How many TIMES per WEEK did you inject patients?		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
7c. When you injected the patient, which hand did you use to hold the syringe? <input type="checkbox"/> Right <input type="checkbox"/> Left <input type="checkbox"/> It depends						

	Never	1945-1964	1965-1979	1980-1989	1990-1999	2000-2009
7d. When you injected the patient, did you use any protection? If NEVER, go to Question 8a.	<input type="checkbox"/>	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes
7e. Check all of the following that you typically used more than 50% of the time:						
lead shielded vial	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
plastic shielded syringe.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
lead shielded syringe	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
non-lead gloves.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
lead apron	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
fume hood	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
L-Block	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
other (specify) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Never	1945-1964	1965-1979	1980-1989	1990-1999	2000-2009
8a. When you handled the patients, did you use any protection? If NEVER, go to Question 9a.	<input type="checkbox"/>	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes
8b. Check all of the following that you typically used more than 50% of the time:						
lead apron	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
other (specify) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Never	1945-1964	1965-1979	1980-1989	1990-1999	2000-2009
9a. When you imaged patients, did you use any protection? If NEVER, go to Question 10.	<input type="checkbox"/>	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes
9b. Check all of the following that you typically used more than 50% of the time:						
lead apron	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
other (specify) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

THERAPEUTIC RADIOISOTOPE PROCEDURES

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

1945-1964	1965-1979	1980-1989	1990-1999	2000-2009
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

11. For the following THERAPEUTIC RADIOISOTOPE procedures, please provide your best estimate of how many times per week you performed 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” or “less than once in 6 months,” leave the rest of the columns blank for that procedure and radionuclide.

THERAPEUTIC PROCEDURE OR DISEASE	RADIONUCLIDE	Never done	Less than once in 6 months	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 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Thyroid ablation	¹³¹ I 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Follow up after thyroid cancer	¹³¹ I 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Malignant effusion	¹⁹⁸ Au-Colloid.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Bone metastases.....	¹⁵³ Sm.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
NHL, liver tumor.....	⁹⁰ Y.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Please list other therapeutic procedures below:

	THERAPEUTIC PROCEDURE	RADIONUCLIDE					
1.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
2.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
3.	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Attachment 1B

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

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

	Never	1945-1964	1965-1979	1980-1989	1990-1999	2000-2009
13a. Did you ever administer liquid ¹³¹I? If NEVER, go to Question 14a.	<input type="checkbox"/>	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes
13b. How many TIMES per WEEK did you administer liquid ¹³¹I?		<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>
13c. When you administered liquid ¹³¹I, did you use any protection? If NEVER, go to Question 14a.	<input type="checkbox"/>	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes
13d. Check all of the following that you typically used more than 50% of the time:						
lead apron		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
other (specify) _____		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Attachment 1B

	Never	1945-1964	1965-1979	1980-1989	1990-1999	2000-2009
14a. Did you ever inject the patient? If NEVER, go to Question 16a.	<input type="checkbox"/>	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes
14b. How many TIMES per WEEK did you inject patients?		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
14c. When you injected the patient, which hand did you use to hold the syringe? <input type="checkbox"/> Right <input type="checkbox"/> Left <input type="checkbox"/> It depends						
14d. When you injected the patient, did you use any protection? If NEVER, go to Question 16a.	<input type="checkbox"/>	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes
14e. Check all of the following that you typically used more than 50% of the time:						
non-lead gloves		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
lead apron		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
plastic shielded syringe.....		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
lead shielded syringe		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
other (specify) _____		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Never	1945-1964	1965-1979	1980-1989	1990-1999	2000-2009
15a. When you handled the patient, did you use any protection? If NEVER, go to Question 16.	<input type="checkbox"/>	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes
15b. Check all of the following that you typically used more than 50% of the time:						
lead apron		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
other (specify) _____		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

When performing DIAGNOSTIC or THERAPEUTIC radioisotope procedures. . .

	1945-1964	1965-1979	1980-1989	1990-1999	2000-2009
16. What percentage of the time did you wear a finger badge in each time period?	<input type="checkbox"/> Zero <input type="checkbox"/> 1-25% <input type="checkbox"/> 25-74 <input type="checkbox"/> 75-99 <input type="checkbox"/> 100	<input type="checkbox"/> Zero <input type="checkbox"/> 1-25% <input type="checkbox"/> 25-74 <input type="checkbox"/> 75-99 <input type="checkbox"/> 100	<input type="checkbox"/> Zero <input type="checkbox"/> 1-25% <input type="checkbox"/> 25-74 <input type="checkbox"/> 75-99 <input type="checkbox"/> 100	<input type="checkbox"/> Zero <input type="checkbox"/> 1-25% <input type="checkbox"/> 25-74 <input type="checkbox"/> 75-99 <input type="checkbox"/> 100	<input type="checkbox"/> Zero <input type="checkbox"/> 1-25% <input type="checkbox"/> 25-74 <input type="checkbox"/> 75-99 <input type="checkbox"/> 100
17. Did you usually wear the badge under leaded gloves?	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes