



# ABR

AMERICAN  
BOARD OF  
RADIOLOGY



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August 22, 2017

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Office of Nuclear Material Safety and Safeguards  
United States Nuclear Regulatory Commission  
Washington, D.C. 20555-0001

Subject: American Board of Radiology, request for additional information regarding recognition of new board certificates and modification of the current recognition of certification in diagnostic radiology.

Dear Mr. Collins,

Thank you for your letter of May, 2017 requesting additional information from the American Board of Radiology (ABR). On September 26, 2016 we requested initial NRC specialty board recognition of two ABR certification processes (certification in Nuclear Radiology and in Interventional Radiology/Diagnostic Radiology (IR/DR)). I will go point-by-point from your letter.

1. With regards to our request for initial NRC recognition of ABR's Nuclear Radiology Certificate with the "AU-eligible" designation above the seal.
  - a. We made an error in our request. We are asking for recognition for 10 CFR 35.190, 35.290, and 35.390, *not* 35.300.
- We mentioned the NRC's recognition of ABNM not because we are asking for anything tied to their processes, but to merely point out similarities between our processes and those of ABNM.
- b. We reviewed your comments about information missing from the ACGME requirements for Nuclear Radiology. The information is in the ACGME Program Requirements for Graduate Medical Education in Diagnostic Radiology in IV.A.3.b).(1).(d). However, you are correct that it does not appear to be in the Program Requirements for Nuclear Radiology. I will pass your comments on to the ACGME so that they can be sure this is explicit in their requirements. Please note that the NRC requirements stated in this section of your letter have been and are currently on the ABR website (see Attachment "NRC Information ABR website").
- c. The "examination covering the NRC-prescribed training and experience" is our board certification examination, which consists of our Core Examination (taken after 36 months of Diagnostic Radiology residency training) and the Certifying Examination (taken 15 months after the completion of residency training). Both components contain material related to nuclear radiology. The ABR Nuclear Radiology board certification examination includes more NRC content, including parenteral therapies.
- d. The "Nuclear Radiology Certificate" refers to "Nuclear Radiology Board Certification".

Valerie P. Jackson, MD, Executive Director

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- e. We agree that the ACGME requirements in Nuclear Radiology do not necessarily meet the NRC requirements. The ABR requires the training and experience listed on our website, which complies with all of the NRC regulations.
2. In the ACGME Program Requirements for Graduate Medical Education in Interventional Radiology, most of the NRC requirements are in IV.A.3.i).(3) through IV.A.3.i).(4). I will inform the ACGME that the components listed in your letter are not in their regulations so that they consider modification of their requirements. All NRC regulations are included on the ABR website (see Attachment "NRC Information ABR website").
3. ABR verification of hours earned and topics covered while participating in web-based and online training. The ABR asks for this information for each candidate in Forms A and B (see Attachment "NRC Forms A&B"). We are unaware of any DR programs that rely on web-based and online training for nuclear radiology outside of occasional supplemental material. ACGME-accredited DR programs must have adequate on-site resources so that the NRC requirements can be met in-house.
4. ABR validation process for candidates for 10 CFR 35.290, 35.392, and 35.394 for ABR IR/DR and for 10 CFR 35.190, 35.290, and 35.390 for NR candidates. The ABR requires submission of Forms A and B (see Attachment "NRC Forms A&B") by each candidate, with attestation by their residency program director and AU preceptor, in order to verify that they have had the requisite training and experience required by the NRC. The ABR performs random audits on programs.
5. We withdraw our request for removal of the 4-year limitation of the NRC Specialty Board Certification Recognition. The word "Valid" on the ABR website indicates that the individual is Board Certified. Certificates that are reported as inactive, expired, lapsed, or revoked are considered invalid certificate states. Therefore, the NRC can use the information on the ABR website to ensure that an individual is still certified.
6. We enclose updated copies of our "Nuclear Radiology Subspecialty of Diagnostic Radiology" and "Interventional Radiology/Diagnostic Radiology" certification certificates marked with "NOT VALID" (Attachment "Nuclear and IR-DR Certificate Samples with AUE").

There is no proprietary information to report in accordance with 10 CFR 2.390, "Public inspections, exemptions, or requests for withholding".

As you know, we will be issuing our first Interventional Radiology/ Diagnostic Radiology certification certificates in October, 2017 and hope that we can achieve NRC recognition for that certificate before then. It is important to remember that IR/DR training is exactly the same as for DR for the first three years, with the same examination structure. The only difference is the focus on IR during the final years of residency. We greatly appreciate your assistance in this process. Please let me know if you have questions or need more information.

Sincerely,



Valerie P. Jackson, MD, FACR  
Executive Director



**American Board of Radiology — Program Director Attestation**

**COMPLIANCE WITH NRC TRAINING AND EXPERIENCE REQUIREMENTS**

**Forms A and B must be submitted after completion of your NRC training and experience.**

More information can be found at the following link:

<http://www.nrc.gov/reading-rm/doc-collections/cfr/part035/part035-0290.html>

Resident Name	Program Name	Program #	
		YES	NO
By the time of the ABR Certifying Examination, this applicant will have successfully completed the hours of training and experience as outlined in 10 CFR 35.290, 35.392, and 35.394.		<input type="checkbox"/>	<input type="checkbox"/>
This applicant has taken part in ≥ 3 cases of oral administration of sodium iodide therapy ≤ 33 mCi.		<input type="checkbox"/>	<input type="checkbox"/>
This applicant has taken part in ≥ 3 cases of oral administration of sodium iodide therapy > 33 mCi.		<input type="checkbox"/>	<input type="checkbox"/>
This applicant's log of these therapy experiences (date, dosage, and preceptor attestation) is attached.		<input type="checkbox"/>	<input type="checkbox"/>
I attest that the work experience cited above for § 35.290 was completed under the supervision of an Authorized User (AU) who meets the requirements under relevant sections of § 35.290 or equivalent Agreement State requirements.		<input type="checkbox"/>	<input type="checkbox"/>
I attest that the work experience cited above for § 35.392 was completed under the supervision of An Authorized User (AU) who meets the requirements under § 35.390, 35.392 or 35.394, or equivalent Agreement State requirements.		<input type="checkbox"/>	<input type="checkbox"/>
I attest that the work experience cited above for § 35.394 was completed under the supervision of an Authorized User (AU) who meets the requirements under § 35.390 or 35.394, or equivalent Agreement State requirements.		<input type="checkbox"/>	<input type="checkbox"/>

Diagnostic Radiology or  
Interventional Radiology  
Residency Program Director  
(Print Name)

Program Director  
(Signature)

Date

**Form B**  
**Sodium Iodide I-131 Therapy Experience Log**

_____ Resident Name	_____ Program Name	_____ Program #
------------------------	-----------------------	--------------------

**Date of Administration**      **Dosage Administered**      **Preceptor (AU) Print & Sign Name**

≤ 33 mCi

1. \_\_\_\_\_      \_\_\_\_\_

\_\_\_\_\_ **Print Name**

\_\_\_\_\_ **Sign Name**

2. \_\_\_\_\_      \_\_\_\_\_

\_\_\_\_\_ **Print Name**

\_\_\_\_\_ **Sign Name**

3. \_\_\_\_\_      \_\_\_\_\_

\_\_\_\_\_ **Print Name**

\_\_\_\_\_ **Sign Name**

**Date of Administration**      **Dosage Administered**      **Preceptor (AU) Print & Sign Name**

> 33 mCi

1. \_\_\_\_\_      \_\_\_\_\_

\_\_\_\_\_ **Print Name**

\_\_\_\_\_ **Sign Name**

2. \_\_\_\_\_      \_\_\_\_\_

\_\_\_\_\_ **Print Name**

\_\_\_\_\_ **Sign Name**

3. \_\_\_\_\_      \_\_\_\_\_

\_\_\_\_\_ **Print Name**

\_\_\_\_\_ **Sign Name**

The preceding ABR forms do not need to be completed for a candidate to take the ABR exams, including the nuclear radiology sections of the Core and Certifying Exams and the Radioisotope Safety Exam (RISE). The forms serve to document completion of the required training and work experience, and they allow the candidate who passes the RISE to receive Authorized User (AU)-eligible designation on his or her certificate.

Candidates who fulfill all the requirements listed on Form A and Form B, and who pass all their ABR exams, including the RISE, will receive an ABR certificate that contains the additional designation "AU-eligible." This means that the diplomate is eligible through the ABR pathway to be approved by the NRC or an Agreement State as an AU of unsealed byproduct material applicable to medical use for imaging and localization studies, as well as for oral administration of sodium iodide I-131. NRC approval is obtained upon written application to the NRC/Agreement State and also requires submission of an NRC preceptor form, which has been completed and signed by the preceptor who must be an AU. The forms are available on the NRC website.

For International Medical Graduates (IMGs) seeking ABR board certification via the Alternate Pathway program, the preceding ABR forms must be submitted six months before the Certifying Exam. Form A should be signed by the department chair, and Form B should be signed by the AU preceptor.

## Initial Certification for Diagnostic Radiology

# Compliance with NRC Regulations

Last verified on June 19, 2017

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## Training in Nuclear Radiology

### NRC FAQs

The U.S. Nuclear Regulatory Commission (NRC) has established guidelines for physicians who wish to achieve the status of Authorized User (AU) of unsealed byproduct material (radionuclides). The ABR is committed to compliance by:

1. providing information about the required components of training and experience;
2. requiring from program directors a written attestation that the proper training has been given and a case log of sodium iodide I-131 therapy work experience that has been supervised and attested to by appropriate AU-preceptor(s); and
3. testing knowledge of the required subjects.

The ABR requires a resident training program to fulfill the NRC requirements for training and experience of radiology residents, as does the Diagnostic Radiology Residency Review Committee (see reference to these requirements below). The ABR endeavors to have residents meet those requirements within the context of an overall balanced radiological curriculum and with a set of didactic, laboratory, and clinical experiences in nuclear radiology that ensure safe and effective use of radionuclides by board-certified radiologists. The ABR believes these items are important components of a responsible education for radiologists and that they

contribute to the safety of medical practice in ways broadly supported by organized medicine, regulators, and the public.

## NRC Training and Experience Requirements

Candidates seeking certification in diagnostic radiology or must meet the specific training and experience requirements described in 10 CFR 35.290 (c)(1)(i), (c)(1)(ii), and (c)(3); 10 CFR 35.392 (c)(1), (c)(2), and (c)(3); and 10 CFR 35.394 (c)(1) and (c)(2). Radiation safety, radionuclide handling and quality control, and related topics specified in 10 CFR 35.290, 10 CFR 35.392, and 10 CFR 35.394 must be covered.

Detailed information regarding 10 CFR 35.290, 35.392, and 35.394 may be found via the NRC Electronic Reading Room, which provides access to the NRC Regulations, Frequently Asked Questions, and other pertinent references. That information is [available here](#).

Specifically, each candidate for AU status through the ABR pathway must have completed a minimum of 700 hours of training and experience in imaging and localization studies, which must include 80 hours of classroom and laboratory training in basic radionuclide handling techniques applicable to both the medical use of unsealed byproduct material for imaging and localization studies and the medical use of sodium iodide I-131 for procedures requiring a written directive. In addition, each candidate must also meet the training and experience requirements specified in §35.392 and §35.294 for medical uses of sodium iodide I-131 ( $\leq 33$  mCi and  $> 33$  mCi, respectively) requiring a written directive. The training and experience must include, at a minimum, the following:

Classroom and laboratory training (minimum of 80 hours, or 200 hours for nuclear radiology) under the direction of an Authorized User in the following areas:

1. Radiation physics and instrumentation
2. Radiation protection
3. Mathematics pertaining to the use and measurement of radioactivity
4. Chemistry of by-product material for medical use
5. Radiation biology

Work experience for imaging and localization studies (§35.290) under the supervision of a preceptor AU who meets the requirements in §35.57, §35.290, or §35.290(c)(1)(ii)(G), or equivalent Agreement State requirements, involving the following:

1. Ordering, receiving, and unpacking radioactive materials safely and performing the related radiation surveys
2. Performing quality-control procedures on instruments used to determine the activity of dosages and performing checks for proper operation of survey meters
3. Calculating, measuring, and safely preparing patient or human research subject dosages
4. Using administrative controls to prevent a medical event involving the use of unsealed by-product material
5. Using procedures to safely contain spilled radioactive material and using proper decontamination procedures
6. Administering dosages of radioactive drugs to patients or human research subjects

7. Eluting generator systems appropriate for preparation of radioactive drugs for imaging and localization studies, measuring and testing the eluate for radionuclidic purity, and processing the eluate with reagent kits to prepare labeled radioactive drugs
8. Residents must demonstrate hands-on work experience when they perform the supervised work experience requirements. Observation alone is not sufficient.

Work experience for the oral administration of sodium iodide I-131 (§35.392 and §35.394) requiring a written directive: Experience under §35.392 must be obtained under the supervision of an AU who meets the requirements in §35.390, 35.392, 35.394, or equivalent Agreement State requirements. A supervising AU who meets the requirements in §35.390 (b) must also have experience in the oral administration of sodium iodide I-131, for which a written directive is required. This work experience must involve the following:

1. Ordering, receiving, and unpacking radioactive materials safely and performing the related radiation surveys
2. Performing quality control procedures on instruments used to determine the activity of dosages and performing checks for proper operation of survey meters
3. Calculating, measuring, and safely preparing patient or human research subject dosages
4. Using administrative controls to prevent a medical event involving the use of unsealed byproduct material
5. Using procedures to safely contain spilled radioactive material and using proper decontamination procedures
6. Administering to patients or human research subjects dosages that include at least three cases involving the oral administration of  $\leq 33\text{mCi}$  and three cases involving the administration of  $>33\text{ mCi}$  of sodium iodide I-131

## Authorized User (AU)-eligible Designation

### Sodium iodide I-131 case experience documentation

1. Regarding §35.392, the ABR requires that candidates must have completed a minimum of three cases that involve administration of  $\leq 33\text{ mCi}$  of I-131 for therapy under a preceptor Authorized User (AU) who meets the requirements in §35.390, 35.392, 35.394, or equivalent Agreement State requirements. A supervising AU who meets the requirements in §35.390 (b) must also have experience in the oral administration of sodium iodide  $^{131}\text{I}$  for which a written directive is required. A logbook of these therapies must be kept by the resident and submitted to the ABR in the format given below.
2. Regarding §35.394, the ABR requires that candidates must have completed a minimum of three cases that involve the administration of  $> 33\text{ mCi}$  of I-131 for therapy under a preceptor AU who meets the requirements in §§35.57, 35.390, 35.394, or equivalent Agreement State requirements. A supervising AU who meets the requirements in §35.390(b) must also have experience in administering dosages as specified in §35.390(b)(1)(ii)(G)(2). A logbook of these therapies must be kept by the resident and submitted to the ABR in the format given below.



# Forms to Be Submitted to the ABR

Two forms are available to document compliance with and completion of the required NRC/Agreement State training and experience. Both completed forms must be submitted on behalf of each candidate for the candidate to be eligible for an ABR Diagnostic Radiology Certificate with the *Authorized User (AU)-eligible* designation.

1. ABR Form A (Program Director Attestation)
2. ABR Form B (Candidate <sup>131</sup>I Case Log)

[Download printable forms in .pdf format](#)

## ABR Form A – Program Director Attestation

This form is intended to assure the ABR (and, thus, the NRC) that each individual candidate has completed the required training. The program director must submit an attestation form. There should not be blanket approval of a resident class because the training and experience in NRC-related aspects of nuclear radiology may vary within the group. The decision to provide attestations should be individualized and linked to completion of the NRC curriculum by individual residents.

Under no circumstances should program directors designate as NRC-compliant a candidate who has not completed the full course of study mandated in the NRC curriculum for authorized users. False attestation of completion of training for NRC-noncompliant residents would jeopardize the reputation and integrity of the residency program, the ABR, and the Residency Review Committee (RRC) and would threaten the relationship among these organizations and the NRC.

The ABR reserves the right to audit the manner in which the residents completed the curricular requirements. Whether or not a resident completes the full NRC-mandated curriculum, the resident must have completed 16 or more clinical weeks of nuclear medicine during the four years of training as required by the Diagnostic Radiology RRC and will be responsible to answer NRC-related questions on all ABR examinations. Time away (e.g., vacations, AIRP, etc.) cannot be counted toward the 16-week requirement in nuclear radiology.

## ABR Form B – Candidate I-131 Case Log

Because of HIPAA concerns, no data that might identify a patient are to be included on Form B. Please note that participation in three sodium iodide I-131 administrations in each of the two categories is required. Because patients requiring sodium iodide I-131 therapy in amounts  $\leq 33$  mCi and  $> 33$  mCi present in very different clinical settings and to assure clinical experience with both levels of sodium iodide I-131 administration, each set of three cases must be discrete and listed in the proper category. Thus, administered amounts of sodium iodide I-131 in each category,  $\leq 33$  mCi and  $> 33$  mCi, must actually be within the appropriate category in the case log. Administered activity  $> 33$  mCi of sodium iodide I-131 cannot be used in the category designated for  $\leq 33$  mCi of sodium iodide I-131, or vice versa.

Both Form A and Form B are to be submitted by the program director prior to a resident's graduation.

## ABR Examinations and the NRC Curriculum

The NRC/Agreement States accept ABR certification as evidence that a practitioner is properly trained to safely and effectively use radioactive materials in nuclear radiology. Content addressing safety and the handling of radionuclides as specified by the NRC-required curriculum is embedded in the ABR examinations leading to initial certification in diagnostic radiology, including the Core and Certifying examinations.

A candidate's performances on the NRC-related portions of the Core and Certifying examinations jointly comprise the Radioisotope Safety Exam (RISE). The results of the RISE will be determined after a candidate successfully completes and passes the Certifying Examination.

The ABR recommends that all residency programs ensure that their training in nuclear radiology is compliant with all the elements listed by the NRC and on the ABR website. In this way, all residents will be well prepared and qualified to take the NRC-related portions of the ABR exams, and also will be well prepared to provide nuclear radiology services safely and effectively.

## The ABR AU-eligible Designation

The preceding ABR forms do not have to be completed for a resident to take the ABR exams. Timely submission of the ABR forms, however, documents completion of the required NRC training and allows candidates who fulfill all the requirements listed above on Forms A and B and who pass all their ABR exams, including the RISE content, to receive an ABR certificate that contains the additional designation of *AU-eligible*. This designation will appear near the left lower corner of the certificate.

If Forms A and B are not completed and submitted to the ABR for a candidate, *AU-eligible* certificate designation will not be possible, even though the NRC-required training and experience may have been completed, and the examinations passed by the candidate.

An *AU-eligible* certificate indicates that the diplomate has fulfilled all the training and experience requirements of the NRC/Agreement State and has passed all the ABR examinations. It means that the diplomate is eligible through the ABR board certification pathway to be approved by the NRC/Agreement State as an Authorized User (AU) of medical radionuclides for imaging and localization studies, and for oral administration of sodium iodide I-131 in amounts  $\leq 33$  mCi and  $> 33$  mCi requiring a written directive. Such a person can apply to the NRC/Agreement State for Authorized User status, which allows the diplomate to be listed on the institutional or practice site license and to oversee the safe and effective medical uses of radionuclides.

Authorized User status is obtained upon written application to the NRC/Agreement State and also requires submission of an NRC preceptor form that has been completed and signed by the preceptor, who must be an AU. The forms are available on the NRC website.

ABR diplomates who do not have the designation *AU-eligible* on their certificates may apply to the NRC/Agreement State for status as an AU via the NRC's alternate pathway, but they will be required to provide detailed information to the NRC about their relevant training and experience.

[Previous: Board Eligibility](#)

[Back to Overview](#)

# The American Board of Radiology

Organized through the cooperation of the  
American College of Radiology, the American Roentgen Ray Society,  
the American Radium Society, the Radiological Society of North America,  
the Section on Radiology of the American Medical Association,  
the American Society for Radiation Oncology, the Association of University Radiologists,  
the American Association of Physicists in Medicine, and the Society of Interventional Radiology,  
the American Board of Radiology hereby certifies that

**John Doe, MD**

Has pursued an accepted course of graduate study and clinical work; has met certain standards  
and qualifications, including passing the examinations conducted under the authority of  
the American Board of Radiology, demonstrating to the satisfaction of the Board qualification  
to practice; and is therefore awarded the Board's certification in

**Nuclear Radiology**  
Subspecialty of  
**Diagnostic Radiology**

Ongoing validity of this certificate is contingent upon  
meeting the requirements of Maintenance of Certification.

This diplomate of the American Board of Radiology  
is permitted to use the **DABR** mark to signify this certification.

Nuclear and IR/DR  
Certificate Samples  
with AWE

**NOT VALID**

All Eligible



Certificate No. 00000

*Milton J. DiBartola, MD*  
President

*[Signature]*  
Secretary-Treasurer

*[Signature]*  
Executive Director

**DABR**



Effective: September 1, 2016

# The American Board of Radiology

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American College of Radiology, the American Roentgen Ray Society,  
the American Radium Society, the Radiological Society of North America,  
the Section on Radiology of the American Medical Association,  
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the American Board of Radiology, demonstrating to the satisfaction of the Board qualification  
to practice; and is therefore awarded the Board's certification in

**Interventional Radiology/Diagnostic Radiology**

All Eligible



Certificate No. 00000

Ongoing validity of this certificate is contingent upon  
meeting the requirements of Maintenance of Certification.

This diplomate of the American Board of Radiology  
is permitted to use the **DABR** mark to signify this certification.

*Milton J. DiBartolomeo, MD*  
President

*[Signature]*  
Secretary-Treasurer

*[Signature]*  
Executive Director

**DABR**



Effective: September 1, 2016

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AMERICAN BOARD OF RADIOLOGY  
5441 E WILLIAMS CIRCLE

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ACTWGT: 0.50 LB  
CAD: 108108802/WSX12600

TUCSON, AZ 85711  
UNITED STATES US

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TO DANIEL COLLINS  
U.S. NUCLEAR REGULATORY COMMISSION  
11555 ROCKVILLE PIKE

549J1577E104C

ROCKVILLE MD 20852

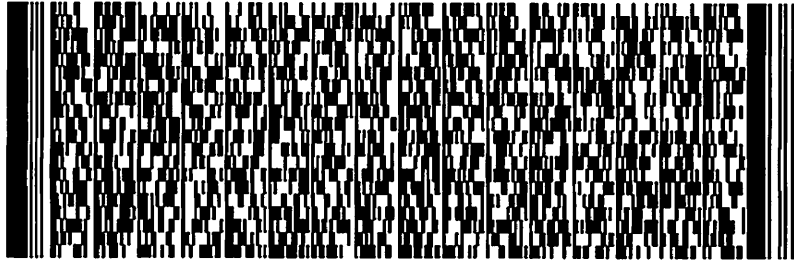
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