



ABNM
AMERICAN BOARD of
NUCLEAR MEDICINE

Tracers

Newsletter

2022 Issue 2



Message From the Chair

Gholam Reza Berenji, MD

Chair, American Board of Nuclear Medicine

After two years of travel restrictions and limits on ...

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Executive Director's Message

George M. Segall, MD

Executive Director, ABNM

ABNM to Begin Issuing 5-Year Certificates in 2025

The impact of this change on diplomates already participating in CertLink will ...

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How I Became Interested in Nuclear Medicine



Helen R. Nadel, MD, FRCPC

Pediatric Radiologist and Nuclear Medicine Physician, Director of Division of Pediatric Nuclear Medicine, Lucile Packard Children's Hospital at Stanford, Clinical Professor of Radiology, Department of Radiology, Stanford University, Stanford, California; President-Elect, Society of Nuclear Medicine and Molecular Imaging (SNMMI); Lifetime Board Member, ABNM

My other pivotal moment was becoming a member of the...

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Message From the Associate Executive Director

Kirk A. Frey, MD, PhD

Associate Executive Director, ABNM

It is my pleasure and honor to rejoin the ABNM...

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CERTLINK

- **January 3, 2023** – CertLink and CertLink IT 4th Qtr cycle **ends**
- **January 17, 2023** – New CertLink and CertLink IT 1st Qtr cycle **begins**
- **April 3, 2023** – CertLink and CertLink IT 1st Qtr cycle **ends**
- **April 4, 2023** – New CertLink and CertLink IT 2nd Qtr cycle **begins**

CE/MOC EXAM

- **April 1, 2023** – Online application period begins for CE and MOC Examination CBT at a Pearson VUE location (selected by the applicant)
- **May 31, 2023** – **Deadline to complete AND submit an online application for CE and MOC Examination**
- **October 2-7 2023** – CE/MOC Examination Administered at Pearson Vue

IN-TRAINING EXAM

- **September 1, 2022** – In-Training (IT) Examination enrollment period **begins** for US/Canadian **AND** International Programs
- **October 31, 2022** – IT Exam enrollment period **ends**
- **January 15-28, 2023** – IT Exam administered to US/Canada Programs
- **April 23-May 6, 2023** – IT Exam administered to International Programs

Communications Committee Chair Message

K. Elizabeth Hawk, MS, MD, PhD

Communications Committee Chair, ABNM

The digital communications world is a fast-paced, rapidly changing environment...

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Maintenance of Certification (MOC) Committee Chair Message

Maria Rosana Ponisio, MD

MOC Committee Chair, ABNM

CertLink, designed to promote life-long learning by delivering questions regularly and providing...

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ABNM: Nuclear Medicine In-Training Examination Goes Virtual

Leonie Gordon, MD

J Nucl Med 2022 Apr;63(4):18N

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Recognition of the ABNM by the NRC

George M. Segall, MD

J Nucl Med 2022 Jul;63(7):19N

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EXAM INFORMATION

CERTLINK

[CertLink \(MOC\) FAQ](#)

[CertLink Participation Agreement](#)

[About CertLink In-Training \(IT\)](#)

[CertLink IT FAQ](#)

CE/MOC EXAM

[Certification and Requirements](#)

[CE Exam Application FAQ](#)

[CE Exam Schedule and Fees](#)

[Program Directors ABNM CE Exam What I Need to Do](#)

[MOC Exam FAQ](#)

[MOC Exam Schedule and Fees](#)

[MOC What I Need to Do](#)

IN-TRAINING EXAM

[ABNM 2023 IT Exam Information](#)

[ABNM 2023 IT Exam Registration Forms](#)

[ABNM IT Exam FAQ](#)

[2022 IT Exam Statistics](#)



CERTLINK PARTICIPANTS: Key points that will assist you in receiving a passing score on CertLink® and fulfilling the ABNM requirements for re-certification



Answer all questions by the deadline date for each quarter. Quarters cannot be reopened.

Don't get distracted. Questions are timed. Once you start a question, you have five minutes to submit your answer.

MOC profile updates are a requirement for maintaining board certification. In order to prevent an interruption in your certification log into your profile annually and update the following:

Update/Confirm Contact Information

Pay MOC Invoice(s)

Update MOC Parts 1, 2 and 4



Your **ABNM profile** and your **CertLink® profile** are on **TWO** separate platforms:

Diplomates, access your **ABNM profile** at www.abnm.org/account/profile/login

Here you have access to:

- Certification information (*i.e. dates, status, etc*)
- Contact information
- MOC invoice(s)
- CME credits
- Sign up to sit MOC Exam (*up to two years prior to certification end date*)
- Practice Performance Assessment

Participating in CertLink?

Access your **CertLink profile** at:

<https://abnm.mycertlink.org/>

Here you can:

- View Dashboard (*i.e. performance, progress information, etc*)
- Complete CertLink Assessment
- Track Progress, Receive Feedback
- Submit Feedback (*i.e. general, item-specific, question content, etc*)

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[MOC](#)

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The ABNM welcomes comments from diplomates and residents regarding issues raised in this Tracers or any other issues affecting the practice of nuclear medicine or certification processes. Please email your comments to:

George M. Segall, MD
Executive Director
American Board of Nuclear Medicine
abnm@abnm.org

[Click here to download a printable PDF of this newsletter.](#)

Message from the Chair

Gholam Reza Berenji, MD – *Chair, American Board of Nuclear Medicine*

Dear ABNM Diplomates

I hope that you and your loved ones have had a safe, healthy, and restful summer. After two years of travel restrictions and limits on group activities, we welcome the gradual return to in-person family and academic engagements. In July 2022, ABNM also took advantage of the lifted restrictions and conducted the 107th Board meeting in person, which afforded us the pleasure to finally meet and greet the new board members who joined us the past two years: Drs. Ponisio, Bodei, Lai, and Osman.

Earlier this year, the FDA approval of 177Lu-PSMA, along with the nationwide expansion of PSMA imaging, have opened up exciting and momentous horizons in the practice of Nuclear Medicine. The Board is very excited about these emerging practice opportunities, which will raise interest in our field and boost recruitment.

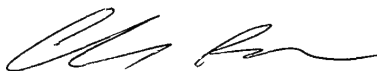
During the 107th ABNM meeting, we successfully utilized our new database, which allowed real-time assessment and editing of new questions during review sessions by exam subcommittees. This yielded better efficiency and more accurate editing on-the-fly, which immensely reduced the administrative workload for ABNM staff. Additionally, this meeting afforded the first opportunity for the newly formed exam subcommittees to meet in person and review questions. Our restructuring of exam subcommittees from 9 to 12 groups proved to be very practical and streamlined our questions review process. New to this meeting was a CertLink®-specific session to review and discuss new questions and poll all board members. This helped us provide high-quality questions for next year's longitudinal

assessments. We hope to continue similar CertLink reviews in upcoming board meetings.

During the July meeting, the Board also discussed new ABMS requirements for MOC and recertification, including necessary modifications for compliance. We will share details of these changes in the coming months.

In this year's annual reunion dinner, we celebrated the 50th anniversary of the ABNM in Vancouver. It was a well-attended event by our board members, including SNMMI leadership. ABNM staff also attended the SNMMI annual meeting and connected with participants at the ABNM exhibit hall booth. Additionally, the ABNM executive committee met with SNMMI leadership to discuss updates on CME requirements, workforce pipeline, and therapeutic training and was brought abreast of the new SNMMI initiative for the Nuclear Oncology fellowship.

In closing, I would like to thank our board members, and the ABNM Staff, Drs. Segall and Frey, Maria Watts, Patrick Murphy, and Monica Frye, for their excellent and enduring support during these challenging times. These efforts resulted in the seamless operation of ABNM in the past two years. I also take this opportunity to thank all diplomates and wish you a safe and healthy rest of the year.



Gholam Reza Berenji, MD
Chair

Executive Director's Message

ABNM to Begin Issuing 5-Year Certificates in 2025

George M. Segall, MD – *Executive Director, American Board of Nuclear Medicine*

The 24 member boards of the American Board of Medical Specialties (ABMS) adopted new standards for Continuing Certification on October 29, 2021, that become effective on January 1, 2024. They will replace the previous Standards for the ABMS Program of Maintenance of Certification (MOC) that were revised in 2015.

The new standards support physicians' continuing professional development, as well as maintain the social contract between the medical profession and the public to improve the quality, safety, and value of health care. The new standards also address the concerns of physicians about single point-in-time, high-stakes recertification examinations, and the requirement for practice improvement activities that did not recognize what physicians were already doing.

The new standards require ABMS member boards to determine at intervals no longer than five years whether a diplomate is meeting continuing certification requirements to retain certification. Currently, boards make recertification decisions anywhere between 3 and 10 years.

The ABNM began issuing time-limited certificates in 1992. Current certificates expire 10 years after their issue date. Diplomates who opt to take the MOC examination are allowed to take the examination up to 2 years before their

certificates expire, meaning that diplomates can go 12 years before their next examination.

Medical knowledge and technology advance very rapidly. In the last 5 years, for example, the U.S. Food and Drug Administration approved 6 diagnostic radiopharmaceuticals and 2 therapeutic radiopharmaceuticals. The 24 ABMS member boards agreed to a uniform recertification cycle of 5 years to assure the public that certification means diplomates are keeping up with advances in their specialties.

Beginning with the ABNM certification examination in October 2025, new diplomates will be issued certificates that expire in 5-years (December 31, 2030). Current diplomates with certificates expiring on December 31, 2025, will receive new certificates that expire in 5 years if they meet all the continuing certification requirements.

The impact of this change on diplomates already participating in CertLink will be minimal. Diplomates participating in CertLink will answer the same number of questions each year. Diplomates who opt to take the recertification examination instead of participating in CertLink will need to pass the examination every 5 years instead of every 10 years to maintain their certification, so they are encouraged to enroll in CertLink after passing their next examination.

Message From the Associate Executive Director

Kirk A. Frey, MD, PhD – *Associate Executive Director, American Board of Nuclear Medicine*

It is my pleasure and honor to rejoin the ABNM, now in the position of Associate Executive Director, in support of the Director and 3 additional full-time staff members responsible for all Board activities. My prior experience as an ABNM Director was several years ago (2008-2014). Many aspects of Board work are familiar and relatively unchanged, however, there are new and exciting innovations and improvements since my prior experiences.

Of greatest potential impact is the development and implementation of the CertLink® program supporting Part 3 of our required ABMS MOC program. This program is now fully active and is subscribed by approximately 1,250 of our active diplomates. ABNM has now delivered 162 question items since the hard launch in April 2018.

While the initial roll-out of the program is finished, CertLink is not a “final product”. We will continue to monitor system performance, review comments and concerns raised by participating diplomates, and make improvements to the program.

There are several issues raised by CertLink participants that are relatively independent of specific items.

Most commonly these relate to challenges with image display and review and to the desire to re-review questions and images as part of the item feedback display. Regarding the former issue, ABNM will re-emphasize image clarity in question presentations. The CertLink examination environment does not offer a “zoom” function, as was present in an earlier released version. However, diplomates can achieve a similar enlargement of displayed images by increasing magnification in the overall display port settings. Instructions for this function are (or will be) provided in the FAQ section of the CertLink information section at login. The frequent requests for review of the questions and images at the item response feedback level are currently under exploration by the Board. If feasible, this functionality may be added in future question releases.

Another level of feedback from ABNM diplomates is reflected by relatively item-specific observations, including

concerns about the possibility of additional correct responses, concerns about the evidence-basis of the correct response and critique, as well as the overall relationship of question topics to individual diplomate's ongoing clinical practice experience. These are important issues and the ABNM oversight approach includes a review of each comment offered by a participant. In instances where there is an unanticipated valid concern about the structure of the item, it may be deleted from final scoring – these items will not influence to the overall diplomate score for determination of successful completion of MOC Part 3.

In addition, ABNM reviews the psychometric performance of each question and considers deletion from scoring of items that do not support the overall validity of the CertLink assessment.

Diplomates should recognize that the intent of the CertLink program is to provide a summative assessment of ability for part 3 recertification, but equally importantly, to provide a formative basis for continued learning in Nuclear Medicine and Molecular Imaging (NM/MI). Many diplomates practice in a sub-specialized aspect of NM/MI (*e.g.*, pediatrics, cardiovascular, etc.), but will need to remain aware of overall innovations in the entire field. ABNM certification is not limited to any of our sub-specializations. Certification and continued certification should support a diplomate's cognitive mastery of the entire field. To this end, each CertLink item is accompanied by a descriptive critique and literature citation(s) providing an entry to further learning and understanding of new aspects of clinical NM/MI.

In summary, I am enthusiastic to again engage in the work of ABNM and our diplomates. We intend to continue to improve our services in support of our diplomates, our patients, and the overall healthcare environment.



Kirk A. Frey, MD, PhD
Associate Executive Director

How I Became Interested in Nuclear Medicine

Helen R. Nadel, MD, FRCPC – *Pediatric Radiologist and Nuclear Medicine Physician, Director of Division of Pediatric Nuclear Medicine, Lucile Packard Children's Hospital at Stanford, Clinical Professor of Radiology, Department of Radiology, Stanford University, Stanford, California; President-Elect, Society of Nuclear Medicine and Molecular Imaging (SNMMI); Lifetime Board Member, ABNM*

So how did I end up with a 40-year career in medicine and particularly pediatric nuclear medicine? It was and still is stimulated by people. From a very memorable high school biology teacher in my hometown of Winnipeg, Manitoba, Canada where I attended medical school, to a rotating internship at Toronto General Hospital, I planned on becoming a General Practitioner. In my second month of my internship in Toronto, I was assigned to a month of Radiology. After that month I decided to change my focus to radiology from family medicine and entered a 4-year specialty residency in radiology which included several months of training in nuclear medicine. It was fascinating to see one memorable dual-trained radiologist and nuclear medicine physician navigate the anatomic and functional studies to learn how combining the information of these studies added to patient management.

Further in my residency training, there was very strong Pediatric Nuclear Medicine at the Hospital for Sick Children under the guidance of Dr. David Gilday* (first Canadian lifetime ABNM member, *deceased) and Dr. Judith Ash who showed me how nuclear medicine could benefit children. By the time I completed my 5 years of radiology training and pediatric radiology fellowship, I had spent 12 months rotating in nuclear medicine and was hired as a pediatric radiologist and head of the division of pediatric nuclear medicine at British Columbia Children's Hospital in Vancouver. I subsequently completed an additional year of training in nuclear medicine at the University of British Columbia and became certified in nuclear medicine by ABNM and the Royal College of Physicians and Surgeons of Canada.

Through attendance at both didactic courses and SNMMI annual meetings and chapter/regional meetings, I met, was guided, and mentored by many pioneers in Pediatric Nuclear Medicine including Drs Jim Conway, Massoud Majd, Ted Treves, John Miller, and Gerry Mandel. My involvement in initially the Pediatric Nuclear Medicine club of the SNMMI and then the Pediatric Imaging Council, started me on my SNMMI path to a leadership position with opportunities to learn and teach nuclear medicine

and become an advocate for all parts of our specialty to help improve patient care.

My peds nuc med cohort of friends and colleagues from early meetings (and to this day) became Drs. Meg Parisi, Barry Shulkin, Mike Gelfand and in Vancouver, Dr. Moira Stilwell. Attending the SNMMI meetings led to meeting international nuclear medicine colleagues, becoming involved with IAEA, and having nuclear medicine friends/colleagues from North America, South America, Europe, Australia, Africa, and Asia.

Two more pivotal events helped mold me in my practice of nuclear medicine. One was a chance meeting at Uluru (Ayers Rock) Australia at the time of the WFNMB meeting in 1994, my meeting with Ignac and Coral Fogelman. That began a more than 20-year friendship and collaboration with Ignac until his untimely death in 2016. He was the Professor of Nuclear Medicine at Guy's and St. Thomas Hospital, London, a renaissance man, brilliant scientist, clinician, teacher, and friend. He was the author of many textbooks and atlases still in use in many departments. I would spend time in London each year learning PET from him for 12+ years before I ever had access to PET technology.

My other pivotal moment was becoming a member of the board of the ABNM in 2010. I became the fourth pediatric person to be a member of the ABNM board after David Gilday, Jim Conway, Ted Treves, and Barry Shulkin. Through my being an ABNM board member I have made so many lifelong friends, colleagues, mentors. I would however be remiss if I did not mention my mentor, sponsor, colleague, and friend George Segall. In the twilight of my career, he has given me encouragement to start a new chapter here at Stanford. He has introduced me to a wonderful group of friends here in Northern California, and he and his wife Shelly have opened their home to me, my husband Tevy, and my daughters Frani and Daniella. My Pediatric Radiology and Nuclear Medicine colleagues here at Stanford and globally are why I am still interested in nuclear medicine. It's all about the people.

Communications Committee Chair Message

K. Elizabeth Hawk, MS, MD, PhD – *Communications Committee Chair, American Board of Nuclear Medicine*

As we navigate this next phase of the COVID-19 pandemic, we are beginning to gather more, and cautiously see a return of more in-person interactions. However, over the course of the past couple of years, we have all begun to embrace digital means of communication in new and exciting ways to maintain and deepen both personal and professional communications.

As we continue to navigate this together, the ABNM Communications Committee continues to develop ways of communication to best serve our diplomates. We hope to provide the most up-to-date information related to the certification/maintenance of certification processes. We also hope to build an online communication community that allows connections and interactions amongst our diplomats.

In addition to our Tracers newsletter, we disseminate information across a variety of social media platforms, including LinkedIn, Twitter, and Facebook. Take a moment to check out and follow our accounts. We would be so delighted to connect with you across the digital spaces.

Communication is always richer and more effective when there is interaction. Please interact with, message, and tag

our accounts so that we can continue to connect with each of you in a meaningful way.

If there is a social media platform, we are not yet present on, that you feel would provide a place of meaningful interaction, or the most convenient place to access information, please do not hesitate to let us know.

The digital communications world is a fast-paced, rapidly changing environment. We realize that each of you consumes information differently in a way that is most comfortable for you. Your communications Committee is here to serve you. Please let us know how you would prefer to receive up-to-date information from us.

There is no doubt that Nuclear Medicine has a bright future. Our trainees and newest diplomates will be the future leaders that continue our time-honored practice. If you have ideas for how we can evolve to effectively communicate to our newest members of the ABNM community, please reach out and let us know. Our hope is that we can offer a range of different types of communication for all of our ABNM members.

MOC Committee Chair Message

Maria Rosana Ponisio, MD – *MOC Committee Chair, American Board of Nuclear Medicine*

The ABNM Certification and Maintenance of Certification (MOC) programs aim to foster excellence in patient care and thus improve the health of our communities. Through the certification and MOC processes, the ABNM strives to encourage and support continuing education in the practice of nuclear medicine, thereby providing a framework to assist its diplomates in their pursuit of lifelong learning and self-assessment.

The Certification and MOC programs assure patients, payors, and the general public that ABNM diplomates maintain and continually improve their knowledge and practice and provide for compliance with State Medical Licensing Board and hospital requirements. The MOC program is tailored to our diplomates' training and emphasizes updating "core" nuclear medicine evidence-based knowledge in a continuous format.

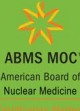
The In-Training Examination (IT Eexam) for 2022 had 159 participants, of which 127 resided in the United States (mean

percent correct score of 70%) and 32 international (mean percent correct score of 57%), in Kuwait, Singapore, and South Africa.

The ABNM MOC offers the traditional maintenance of certification examination and a web-based longitudinal assessment of knowledge for continuing board certification, CertLink®. Diplomates are strongly encouraged to participate in CertLink, designed to promote life-long learning by delivering questions regularly and providing immediate feedback on submitted answers. Furthermore, the diplomate can track their performance and progress over time and compare themselves with their peers. The ABNM, in conjunction with the iTS team, has launched the upgraded platform, CertLink 2.0, which will include enhancements to logging in, the dashboard, and answering questions. For example, based on user feedback, refreshing the browser page while answering a question will no longer automatically score the question incorrectly.



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SNMMI Newsline

ABNM: Nuclear Medicine In-Training Examination Goes Virtual

Leonie Gordon, MB ChB - Associate Executive Director, American Board of Nuclear Medicine

Reprinted with Permission J Nucl Med. 2022, 63 (4) 18N

In 2022, in keeping with the commitment to serve well our trainees and their valued residency programs, the American Board of Nuclear Medicine (ABNM) offered residents remote virtual in-training testing. In order to achieve this and update our virtual presence in testing, ABNM chose a vendor that offers a complete online solution for the management, delivery, and reporting of assessment programs. The vendor has led the industry with innovations in secure internet testing. ABNM migrated all its secure testing databases to the new vendor over several months, and this created a state-of-the-art online item-banking system. It runs on major browsers both for Windows and Mac and offers extensive configuration options.

The ABNM successfully delivered its in-training examination (ITE) as a remote computer-based exam during January 2022. Resident participation in the ITE fulfills Accreditation Council for Graduate Medical Education nuclear medicine training program requirements for summative assessment. The ITE also benchmarks individual resident scores for all residency levels. It offers residents an opportunity to evaluate their knowledge and to improve identified weaknesses prior to taking the ABNM certifying examination.

ABNM recognized that the logistics for programs and residents would be different for a virtual examination. New graphics were created (<https://www.abnm.org/2022-ite-announcement>). The board expected the examination to be proctored at local sites and held a proctor/virtual examination training webinar prior to administration of the examination. For those unable to attend the session or who wanted a refresh, the webinar was recorded and is available on YouTube (<https://www.youtube.com/watch?v=kd3aa8JDnNg>). As expected with any remotely delivered exam, a few candidates experienced connectivity and software issues. ABNM staff members were available to troubleshoot and help trainees with these issues. Test results are being validated through third-party psychometric analysis, and the data will be used for optimally accurate benchmarking.

Candidates expressed appreciation for the ability to take the exam at their local sites, which eliminated the need for exposure to groups of people during the COVID-19 pandemic. The length of time the examination was available online to programs and residents was also increased to overcome pandemic-related challenges. Although the ABNM prepared candidates well for the computer-based examination, concern was expressed about access to the exam and unfamiliarity with the exam screens. A help button was available during the exam on all computer screens to answer many questions, but some candidates did not avail themselves of this feature and did not realize that methods were available to zoom, adjust contrast, and scroll through images.

The ABNM hopes to have the ITE results available within 2 months and will include teaching key points for questions residents did not answer correctly. These will be included in the results correspondence, and the hope is that it will offer an opportunity to evaluate their knowledge and identify areas of deficiency relative to peers at the same level of training. In addition, ABNM has developed Certlink-in-Training, which provides residents the opportunity to participate in continuous online learning, as well as an opportunity for maximizing test preparation. Certlink questions have key points, critiques, and annotated references. ABNM hopes the ITE and participation in Certlink-in-Training will maximize opportunities for future testing preparation, including secure examinations. Certlink-related tutorials are available at: <https://www.abnm.org/certlink-training-tutorial-video-series/>.

ABNM will continue to offer the ITE virtually, with enrollment in September through October 2022 with the same device preparation. The ITE for U.S. and Canadian programs will be given in January 2023.



Leonie Gordon, MD

SNMMI Newsline

Recognition of the ABNM by the NRC

George M. Segall - Executive Director, American Board of Nuclear Medicine

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Certification by the American Board of Nuclear Medicine (ABNM) is recognized by the U.S. Nuclear Regulatory Commission (NRC) as meeting the training and experience requirements to be an authorized user of byproduct material for medical use. The last time the ABNM's certification process was reviewed by the NRC was in 2005, following publication of the final rule 10 CFR Part 35, "Medical Use of Byproduct Material Recognition of Specialty Boards," defining the criteria such boards must meet before they could be recognized by the NRC or Agreement States (*Fed Reg.* 2005;70:16335). On January 11, 2021, the NRC Office of Nuclear Medicine Safety and Safeguards published Office Procedure 70-03, "Procedures for Recognizing, Monitoring, and Terminating Certification Process of Specialty Boards," Section 3.1, "Monitoring Continued Satisfaction of Recognition Requirements." The purpose was to provide "increased clarity" for the NRC on monitoring for continued satisfaction of the recognition criteria, guidance for determining whether NRC recognition should be terminated, and guidance for maintaining NRC-recognized board certifications on the NRC public website.

The ABNM received a letter on March 15, 2022, asking for confirmation that the ABNM continues to satisfy the recognition criteria for specialty board certification processes. The letter explained that the NRC was contacting all its recognized specialty boards per the procedure published in the preceding year. As part of the review, the NRC staff was evaluating the board's publicly available website for changes that could affect recognition of the board's certification process. The letter also noted that subsequent reviews will be performed on a 5-year basis.

The NRC review of the ABNM website is still underway. The ABNM has responded with proposed changes clarifying the training and work experience required for certification that conform to NRC rules to be an authorized user uses of byproduct material under 10 CFR 35.190 Training for uptake, dilution, and excretion studies; 10 CFR 35.290 Training for imaging and localization studies; and 10 CFR 35.390 Training for use of unsealed byproduct material for which a written directive is required.

Under 10 CFR 35.390, training and experience must include a minimum of 700 hours, all of which are applicable to the medical use of unsealed byproduct material requiring a written directive, including a minimum of 200 hours of classroom and laboratory training in accordance with 10 CFR 35.390(b), and supervised work experience. The 200 hours of classroom and laboratory training must include:

- Radiation physics and instrumentation;
- Radiation protection;
- Mathematics pertaining to the use and measurement of radioactivity;
- Chemistry of byproduct material for medical use; and
- Radiation biology.

Classroom and laboratory training may be obtained using a variety of instructional methods (including online training) as

long as the specific clock hour requirements are met and each matter relates to radiation safety and safe handling of byproduct material for the uses for which authorization is requested. Reviewing case histories or interpreting scans may not be counted toward the minimum 200 hours of required classroom and laboratory training in radiation safety and handling of byproduct material.

Supervised work experience must include:

- Ordering, receiving, and unpacking radioactive materials safely and performing the related radiation surveys;
- Performing quality control procedures on instruments to determine the activity of dosages and performing checks of proper operation of survey meters;
- Calculating, measuring, and safely preparing patient and human research subject dosages;
- Using administrative controls to prevent a medical error involving the use of unsealed byproduct material;
- Using procedures to contain spilled byproduct material and proper decontamination procedures; and
- Administering dosages of radioactive drugs to patients and human research subjects involving a minimum of 300 hours each of the following categories:
 - Oral administration of ≤ 1.22 GBq (33 mCi) of sodium ^{131}I , for which a written directive is required;
 - Oral administration of > 1.22 GBq (33 mCi) of iodine ^{131}I ; and
 - Parenteral administration of any radioactive drug that contains a radionuclide that is primarily used for its α emission, β radiation characteristics, α radiation characteristics, or photon energy < 150 keV, for which a written directive is required.

Physicians in training may not dedicate all of the supervised work experience time specifically to these subjects and will be attending to other clinical matters involving medical use of the material under the supervision of an authorized user (e.g., reviewing case histories or interpreting scans). This type of supervised work experience may be counted toward the supervised work experience to obtain the 700 total hours of training.

For 10 CFR 35.290, *additional* work experience is required for eluting generator systems appropriate for preparing radioactive drugs for imaging and localization studies, testing and testing the eluate for radionuclidic purity, and testing the eluate with reagent kits to prepare labeled radiopharmaceuticals.

The training and experience described here also must meet the requirements of 10 CFR 35.190.

Experience for 10 CFR 35.190, 10 CFR 35.290, 10 CFR 35.390 must be obtained under the supervision of an authorized user for the same type of procedures.

The ABNM will update its website with this information to ensure that the NRC continues to recognize its certification process.

2022 In-Training Examination (ITE) Statistics



2022 In-Training (IT) Examination

