

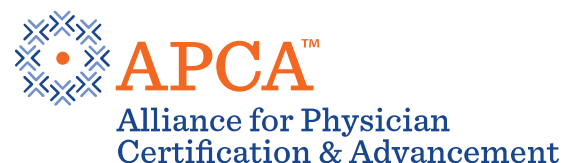


CBNC

Certification and Recertification How to Apply Guide

Certification Board of Nuclear Cardiology

CBNC.org
240-631-8151



About This Guide

This guide walks you through the application process for taking the Certification Board of Nuclear Cardiology (CBNC) certification and recertification examinations. These examinations are developed, administered and managed by CBNC Diplomates under the auspices of the Alliance for Physician Certification & Advancement™ (APCA™).

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APCA Overview

The Alliance for Physician Certification & Advancement™ (APCA™) was created to meet the needs of physicians and advanced healthcare providers. APCA is part of the nonprofit Inteleos™ family of Councils spun out of the American Registry for Diagnostic Medical Sonography® (ARDMS®).

APCA, already supporting more than 18,000 physicians worldwide, is dedicated to helping physicians and advanced healthcare providers secure certification in medical imaging and other healthcare specialties, offering outstanding customer care, and guiding simple maintenance of existing certifications.

To continue the advancement of diagnostic medical imaging and other healthcare specialties for superior patient care, APCA also offers numerous volunteer opportunities. For information on how to volunteer, visit [APCA.org/Volunteer](https://www.apca.org/Volunteer).

For more information on APCA's other certifications please visit [APCA.org](https://www.apca.org).

Specialty Examination = Certification Earned

Applying Online Is Fast, Easy and Secure

2023 Examination Dates: November 7 - December 28, 2023

Application Window Opens: May 30, 2023

Regular Application Deadline for Certification: Aug. 8, 2023

Late Application Deadline: Oct. 3, 2023

Regular Application Deadline for Recertification: Aug. 29, 2023

13th Hour Application Deadline: Oct. 17, 2023

1. Check the CBNC examination administration and application dates.

Visit CBNC.org for application window dates and more information.

2. Before beginning the online application.

Review the CBNC eligibility criteria (in this guide or at CBNC.org) to ensure you meet the requirements.

3. Visit CBNC.org. Fill out, pay for and submit your application form with supporting documents at APCA.org/MYAPCA.

As part of your application, you will be asked to acknowledge the APCA Confidentiality Agreement and Compliance policies. Review the agreements and policies at APCA.org/Compliance and check the status of your application by logging on to APCA.org/MYAPCA.

4. Review process and approval timeframe.

Applications are reviewed in the order in which they are received, as expeditiously as possible. APCA receives the majority of CBNC applications on deadline dates so turnaround can take several weeks, depending on the number received and the completeness of the application and documentation.

5. APCA emails eligible Applicants an Examination Confirmation Letter (ECL) upon approval of your application and receipt of all required supporting documentation.

ECLs may also be found by logging on to APCA.org/MYAPCA. The letter indicates the examination for which you have been approved.

A website address and toll-free number are provided so you can schedule your examination appointment with Pearson VUE. Test centers are located in the U.S., Canada and many international locations.

If you are ineligible, you will be notified of your ineligibility and the reason(s) for that determination.

7. On examination day.

CBNC examinations are administered on a computer in a secure Pearson VUE test center. Test center policies are strictly enforced so be sure to review them carefully prior to your examination appointment. Visit pearsonvue.com/APCA for details.

6. Prepare for the examination.

Review the full CBNC Content Outline and Scope of Knowledge at CBNC.org. A tutorial is also available at CCCVI.org/CBNC/Tutorial to assist you.

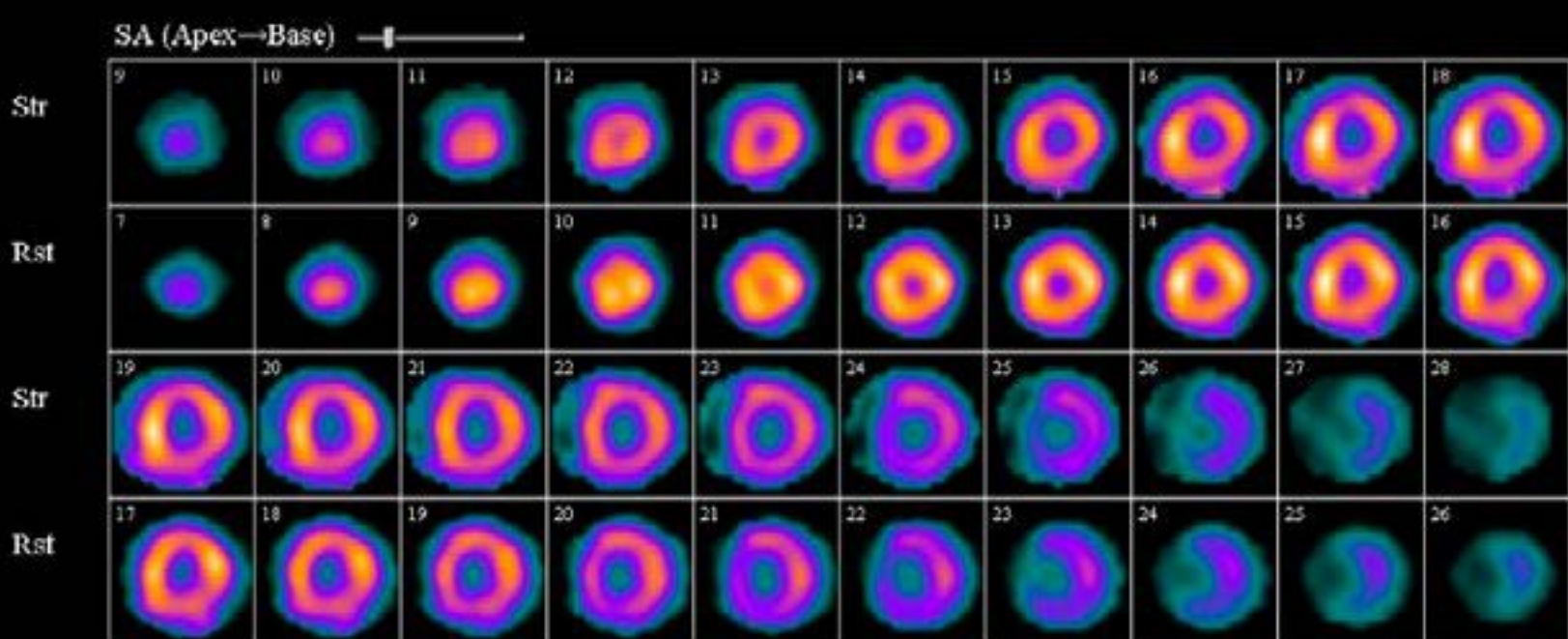
8. After the examination

Beginning in 2021, your full score report, including diagnostic information, will be provided at the test center upon completion and will be accessible via your Pearson VUE account within approximately 24 hours. Within one week of completing your examination, you will be able to see Pass or Fail results in MY APCA (APCA.org/MYAPCA). Your certification or recertification is valid for 10 years.

Shortly after your CBNC certification has been awarded, you will be mailed your certificate and information related to maintenance of certification.

Diplomates are listed in the Directory of Certificants at APCA.org/Directory.

APPLY AND MANAGE YOUR APPLICATION THROUGH [APCA.ORG/MYAPCA](https://APCA.org/MYAPCA)



About CBNC Certification and Recertification Examinations

A fundamental goal of every professional is to improve in areas of competence, quality and effectiveness. Credentialing facilitates achievement of this goal. Certification and recertification provide a mechanism to demonstrate training and/or experience and an established standard of knowledge in accordance with practice guidelines.

The CBNC certification and recertification programs are committed to the certification of Nuclear Cardiology practitioners. Certification provides practice-based requirements against which members of the profession can be assessed. The purposes of the program are:

- **to establish the domain of the practice of Nuclear Cardiology for certification;**
- **to assess the level of knowledge demonstrated by Nuclear Cardiology specialists in a valid manner;**
- **to encourage professional growth in, and enhance the quality of, the practice of Nuclear Cardiology;**
- **to formally recognize individuals who meet the requirements set by CBNC; and**
- **to serve the public by encouraging quality patient care in the practice of Nuclear Cardiology.**

Candidates must pass a practice-based examination developed by experts in the field in concert with psychometric and test development experts. The examination content is based on a Practice Analysis identifying tasks performed by physicians practicing nuclear cardiology and the knowledge required to perform these tasks. This process strives to ensure the examination content accurately reflects the current practice of nuclear cardiology.

The CBNC certification and recertification examination formats are computer-based and administered at Pearson VUE test centers located throughout the U.S. and abroad. The examinations are comprised of questions with four multiple choice options, all of which may be plausible, but only one of which is the correct or best answer. Many of the questions include images and videos. Some questions are being pilot tested and will not be scored.





Prepare for your examination day

Test Center Admission and Identification

When you arrive at the test center, be prepared to:

- Check in with a test center administrator
- Present a valid photo ID
- Have your palm scanned
- Take a test-day photograph

Special Accommodations

In compliance with the Americans with Disabilities Act (ADA), APCA will provide reasonable testing accommodations for Candidates with professionally diagnosed disabilities as defined by the ADA. Visit [APCA.org/ADA](https://apca.org/ADA). Requests for ADA consideration must be made at the time of application submission.

APCA Compliance Policies and Required Review

During the online application process Applicants are required to attest to their compliance with all APCA Compliance Policies. Applicants who have legal or disciplinary matters in their past must be prepared to disclose these at the time of application and to submit a required Compliance Review fee of \$150. Please review the APCA Compliance Policies ([APCA.org/Compliance](https://apca.org/Compliance)) to learn how the policies apply to you.

Compliance Pre-application Review

APCA will conduct a “pre-application review” for a \$125 non-refundable fee for individuals who wish to determine the impact of a previous violation of APCA Compliance Policies on their eligibility to apply for CBNC certification and recertification. For more information regarding the pre-application process, visit [APCA.org/Compliance](https://apca.org/Compliance).

Be Prepared!

VIEW PEARSON VUE'S WHAT TO EXPECT VIDEO AND A PEARSON VUE PROFESSIONAL CENTER TOUR.

CBNC Certification Eligibility Criteria

Medical Licensure

MD or DO with a current, valid, unrestricted license to practice medicine in the U.S. or Canada. Applicants with a training license may apply in a Testamur status under certain conditions. If you are applying under this status, you must also submit a Letter of Good Standing from your program director.

Outside the U.S. and Canada, MD or DO degree equivalent with a current, valid, unrestricted license to practice as a physician in any country. Must include an English translation if not in English.

For details or documentation requirements visit CBNC.org.

Board Certification

At the time of application, Applicants must hold current certification in Cardiology, an ABIM Cardiology subspecialty, Nuclear Medicine or Radiology. Applicants whose board certification is from outside the U.S. or whose country does not have board certification in their specialty should visit CBNC.org for details on board certification requirements.

Fellows/Residents who have not yet taken their Cardiology, Nuclear Medicine or Radiology board may apply to sit for the CBNC examination in a Testamur status under certain conditions. For details or documentation requirements visit CBNC.org.

All eligibility requirements must be completed prior to submitting a CBNC application. Incomplete or incorrect applications will incur a \$75 penalty fee. Documentation must be in English or accompanied by a translation.

Training in Nuclear Cardiology

A. Formal Training Pathway (sole pathway effective as of 2009)

Nuclear Cardiology Training - U.S. Trained Applicants

1. Candidates must document Level 2 training in Nuclear Cardiology in accordance with ACC Core Cardiovascular Training Statement 4 Task Force 6: Training in Nuclear Cardiology (The “COCATS Guidelines,” revised in 2015). Training must occur at a center that has an ACGME- or AOA-accredited training program in Cardiovascular Disease, Nuclear Medicine or Radiology; **AND**

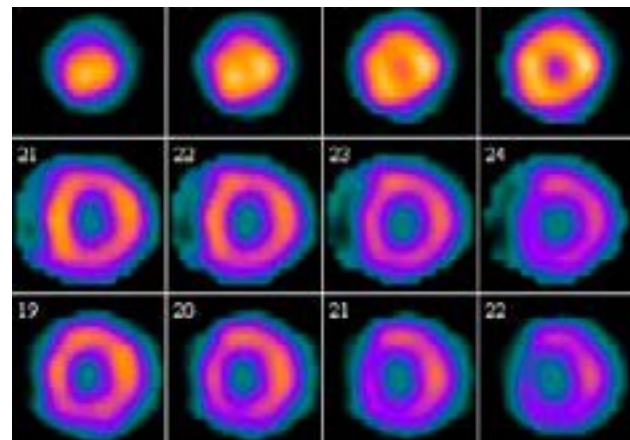
2. All Applicants must document Authorized User status OR a minimum of 80 hours of Classroom and Laboratory Training (CLT) in radiation safety that meets the NRC topic requirements. Documentation may be a copy of the facility RAM license listing the Applicant’s name OR a copy of a certificate of completion of an 80 hour CLT course that meets NRC topic requirements. Preceptors must document that training for their fellows has included hands-on experience with laboratory activities as outlined in NRC 35.290 requirements. Training, including the CLT hours, must have been taken no more than seven (7) years prior to the date of the examination for which you are applying. CLT must be repeated if seven (7) or more years have elapsed since initial CLT and Applicant is currently not an Authorized User. CLT may be taken externally from one’s training program. If CLT hours were completed directly within the fellowship program, the preceptor must state this in the preceptor letter, **AND**

3. A preceptor letter must be provided from an individual who can verify the Candidate’s total training in Nuclear Cardiology. (See templates in the Forms & Templates section at CBNC.org). The letter must document the dates of the Applicant’s training and be dated no earlier than 36 months prior to the application submission date.

A preceptor must be an Authorized User who is one of the following:

- Program Director of an accredited fellowship or residency in Cardiovascular Disease, Nuclear Medicine or Radiology.
- Director of Nuclear Cardiology laboratory at an institution with an accredited fellowship or residency in Cardiovascular Disease, Nuclear Medicine or Radiology.

If the program director is not an Authorized User, an Authorized User at the training institution must co-sign the letter to verify that the Candidate has had appropriate training in radiation safety, **AND**



4. Recentness of Training: If your Nuclear Cardiology training was completed seven (7) or more years prior to the date of the CBNC examination for which you are applying, you must also provide:

- Documentation of at least 300 cases within 24 months of application submission ([see template](#)).
- 30 hours of AMA PRA Category I CME completed within 36 months of application submission date. 15 hours must be Nuclear Cardiology specific. The other 15 hours can be from your general area of specialty. See Guidance on CME credits at [CBNC.org](#).
- Authorized User status or a certificate of completion of an 80-hour CLT course taken no more than seven (7) years prior to the date of the examination for which you are applying.

Preceptor Program Verification Requirements for Candidates Trained in the United States

CBNC requires that preceptors who write letters attesting to Level 2 Nuclear Cardiology training for Applicants have on file with the CBNC office a Program Verification document that verifies:

- the training institution's fulfillment of the current COCATS Guidelines for Nuclear Cardiology training, Level 2, **AND**
- the appropriateness of the preceptor to serve in that capacity, (i.e., is an Authorized User under NRC 35.200 uses or the Agreement State equivalent and is listed on a RAM or included under a Broad Scope license).

The Program Verification letters are generally valid for three (3) years. Visit the Preceptor Information section of [CBNC.org](#) for further details, to obtain a [Program Verification template](#), or to [utilize the search tool](#) to determine whether your preceptor or institution has a verification form on file.

Nuclear Cardiology Training - Non U.S. Trained Applicants

Training/Experience in the provision of Nuclear Cardiology Services (must be complete at the time of application). A preceptor letter must be submitted on organizational letterhead and make one of the following statements:

- The Applicant has completed training/experience in Nuclear Cardiology equivalent to ACC COCATS Guidelines for Nuclear Cardiology Training, revised 2015, Level 2 between [MM/YYYY and MM/YYYY].

OR

- The Applicant has completed training that meets the national training requirements for the independent subspecialist practice of Nuclear Cardiology in [COUNTRY] on [MM/YYYY].

If the Nuclear Cardiology training was completed seven (7) or more years prior to the date of the examination for which the Applicant is applying, the letter must also verify ongoing experience as evidenced by interpretation of a minimum of 300 cases in the preceding two (2) years.

Special Note Regarding International Applicants: Candidates who meet any criteria from outside the U.S. will receive a non-U.S. certificate when they pass the examination. These certificates are not transferable to U.S. certificates at any time. If a certified individual relocates to the U.S., and subsequently satisfies all requirements for a U.S. Candidate, he or she must retake the examination to obtain a U.S. certificate.



B. "Experience" Pathway (no new Candidates accepted; visit [CBNC.org](#) for details)

Special Note Regarding Testamur Status: Individuals who pass the CBNC examination under Testamur status have six (6) years from passing the CBNC examination to document full licensure and successful certification in Cardiology, Nuclear Medicine or Radiology in order to have their Testamur status converted to Diplomate. This certification will expire 10 years from the date of passing the CBNC examination.

Note: APCA, in its discretion, may request from you or others information concerning matters that may be relevant to eligibility for certification and certification status.

Summary of the ACC Core Cardiovascular Training Statements 4 Task Force 6: Training in Nuclear Cardiology Level 2 (The “COCATS Guidelines” revised 2015)

To review the full COCATS Guidelines, visit CBNC.org

Overview of Nuclear Cardiology Training

Training in Nuclear Cardiology at all levels should provide an understanding of the indications for specific Nuclear Cardiology tests, the safe use of radionuclides, basics of instrumentation and image processing, methods of quality control, image interpretation, integration of risk factors, clinical symptoms and stress testing and the appropriate application of the resultant diagnostic information for clinical management. Training in Nuclear Cardiology is best acquired in Accreditation Council for Graduate Medical Education (ACGME) approved training programs in cardiology, nuclear medicine or radiology. An exception to this ACGME requirement is the didactic and laboratory training in radiation safety and radioisotope handling that may be provided by qualified physicians/scientists in a non-ACGME program when such a program is not available as part of the clinical ACGME training program. For laboratories that provide training to cardiology fellows, accreditation by the Inter-societal Commission for the Accreditation of Nuclear Laboratories (ICANL) is also recommended.

Didactic, clinical case experience and hands-on training hours require documentation in a logbook¹ and having the trainee's name appear on the clinical report or having some other specific record. The hours need to be monitored and verified by the Nuclear Cardiology training preceptor.

Specialized Training - Level 2 (Minimum of 4 Months)

Fellows who wish to practice the specialty of Nuclear Cardiology are required to have at least four (4) months of training. This includes a minimum of 700 hours of radiation safety training in Nuclear Cardiology. There needs to be didactic, clinical study interpretation, and hands-on involvement in clinical cases. In training programs with a high volume of procedures, clinical experience may be acquired in as short a period as 4 months. In programs with a lower volume of procedures, a total of 6 months of clinical experience will be necessary to achieve Level 2 competency. The additional training required of Level 2 trainees is to enhance their clinical skills, knowledge, and hands-on experience in radiation safety and to qualify them to become Authorized Users of radioactive materials in accordance with the regulations of the Nuclear Regulatory Commission (NRC) and/or the Agreement States.

Didactic Program

- **Lectures and self-study.** The didactic training should include in-depth details of all aspects of the procedures listed in Table 1 (see right). This program may be scheduled over a 12- to 36-month period concurrent and integrated with other fellowship assignments. Alternatively, a fellow may choose to fulfill the advanced procedures by pursuing an additional year of fellowship dedicated to nuclear cardiology.
- **Radiation Safety.** Classroom and laboratory training needs to include extensive review of radiation physics and instrumentation, radiation protection, mathematics pertaining to the use and measurement of radioactivity, chemistry of byproduct material for medical use, radiation biology, the effects of ionizing radiation and radiopharmaceuticals. There should be a thorough review of regulations dealing with radiation safety for the use of radiopharmaceuticals and ionizing radiation and is a requirement in order to meet the NRC requirements and qualifications for becoming an Authorized User. This experience should total a minimum of 80 hours and be clearly documented.

Interpretation of Clinical Cases

Fellows should participate in the interpretation of all Nuclear Cardiology imaging data for a minimum of four (4) months training period. It is imperative that the Fellows have experience in correlating catheterization or CT angiographic data with radionuclide-derived data in a minimum of 30 patients. A teaching conference in which the Fellow presents the clinical material and Nuclear Cardiology results is an appropriate forum for such an experience. A total of 300 cases should be interpreted under preceptor supervision, from direct patient studies.

¹ Note: These logbooks are not to be submitted with the CBNC application.

Hands-on Experience

• **Clinical cases.** Fellows acquiring Level 2 training should have hands-on supervised experience in a minimum of 30 patients: 25 patients with myocardial perfusion imaging and five (5) patients with radionuclide angiography. Such experience should include pretest patient evaluation, radiopharmaceutical preparation (including experience with relevant radionuclide generators and CT systems), performance of studies with and without attenuation correction, administration of the dosage, calibration and setup of the gamma camera and CT system, setup of the imaging computer, processing the data for display, interpretation of the studies and generating clinical reports.

• **Radiation safety work experience.** Level 2 trainees must acquire 620 hours of work experience inclusive of radiation safety (in addition to the 80 hours of classroom and laboratory experience)² during training in the clinical environment where radioactive materials are being used. This training should³ take place under the supervision of an Authorized User who meets the NRC requirements of Part 35.290 or Part 35.290(c)(ii)(G) and 35.390 or the equivalent Agreement State requirements, and must include the following:

- a) Ordering, receiving and unpacking radioactive materials safely and performing the related radiation surveys;
- b) Performing quality control procedures on instruments used to determine the activity of dosages and performing checks for proper operation of survey meters;
- c) Calculating, measuring and safely preparing patient or human research subject dosages;
- d) Using administrative controls to prevent a medical event involving the use of unsealed byproduct material;
- e) Using procedures to safely contain spilled radioactive material and using proper decontamination procedures;
- f) Administering dosages of radioactive material to patients or human research subjects; and
- g) Eluting generator systems appropriate for preparation of radioactive drugs for imaging and localization studies, measuring and testing the eluate for radionuclide purity, and processing the eluate with reagent kits to prepare labeled radioactive drugs.

Additional Experience

The training program for Level 2 training must also provide experience in computer methods for analysis. This should include perfusion and functional data derived from thallium or technetium agents and ejection fraction and regional wall motion measurements from radionuclide angiographic studies.

Table 1: Classification of Nuclear Cardiology Procedures and Skills

A. Procedures in which competency should be achieved during Level 2 training

1. Myocardial perfusion imaging
 - a. SPECT, with or without attenuation correction
 - b. ECG-gated perfusion images
 - c. Stress protocols (exercise and pharmacologic)
 - d. Viability assessment using SPECT and/or PET
2. Radionuclide angiography
3. Use of methods for acquisition, reconstruction, and quantitative analysis of images
4. Appropriate radiation safety and quality improvement programs
5. Use of radiation monitoring instruments

B. Procedures in which medical knowledge should be demonstrated and achievement of competency may be accomplished during or after fellowship

1. PET myocardial perfusion imaging
2. Myocardial blood flow quantification
3. Cardiac planar imaging
4. Hybrid PET/CT and SPECT/CT
5. Myocardial innervation
6. Myocardial metabolism

² This is a prerequisite for CBNC - Radiation safety work experience must total 620 hours inclusive of radiation safety (plus the 80 hours of classroom and laboratory) totaling 700 hours.

³ This is a prerequisite for CBNC - Radiation safety work experience must take place under an Authorized User who meets the NRC requirements of Part 35.290 or Part 35.290(c)(ii)(G) and 35.390 or the equivalent Agreement State requirements, and must include (a) through (g) as described above.

To view a copy of the complete COCATS Guidelines for Training in Nuclear Cardiology, visit CBNC.org.



CBNC Recertification Eligibility Criteria

Certification in Nuclear Cardiology

Applicants must, at the time of application, have successfully passed the CBNC certification examination no earlier than eight (8) years prior to application. Candidates may sit for the examination in any (or all) of years eight (8), nine (9) or ten (10) of his/her ten-year certification period. If a Diplomate does not succeed in passing the recertification examination by the date of the expiration of his or her ten-year certification period, he or she will no longer be certified and CBNC's online verification service will display his/her certification as expired.

Please note: Individuals whose certification has expired may sit for the recertification examination in any given year provided they meet all the eligibility requirements in the year of application. Certifications will not be back-dated; there will simply be a time gap shown between certifications.

Reinstatement Fee for Lapsed Diplomates

Former diplomates whose certification status has lapsed may apply for recertification by meeting the eligibility requirements.

Upon passing the examination, a one-time fee of \$250 will be assessed in order to be reinstated.

Medical Licensure

Applicants must, at the time of application submission, hold a current, unconditional, unrestricted license to practice medicine and must provide a copy of the current licensure with the expiration date visible.

Continuing Medical Education in Nuclear Cardiology

Candidates must submit documented evidence of 30 hours of AMA PRA Category I Continuing Medical Education (CME) credit completed within 36 months of application submission. Of the total, a minimum of 15 hours must be Nuclear Cardiology-specific; up to 15 hours may be in the Applicant's other area(s) of specialty (e.g., general cardiology, echo, nuclear medicine, etc.). Acceptable documentation includes certificates of completion or other record provided by the activity sponsor and must include the topic(s) and date(s) of completion. A list of courses or topics alone is not sufficient to qualify as documented evidence. CME credit must be complete at the time of application submission.

Non-U.S. Applicants must conform to the above, except that the activities are not required to be AMA PRA Category 1 CME. Contact CBNC staff with questions. Consult CBNC's website for more information and examples of what can be used to meet this requirement. CBNC will make the final determination regarding what can be counted toward the CME criterion.

Candidate Attestation

Candidates must include a signed statement attesting to their ongoing practice and/or teaching in Nuclear Cardiology during their certification period. The attestation must be on appropriate letterhead. (See sample letter in the Recertification section of [CBNC.org](https://www.cbnc.org).)

Candidates who have not engaged in Nuclear Cardiology practice or teaching during their certification period should contact CBNC staff for instructions. Ongoing experience and documentation are required to become eligible.

Fees and Online Resources

Visit **CBNC.org** for information on submitting documentation and fees.

Examination Fees

Regular Fee

Late Fee (by 10/3)

13th Hour (by 10/17)

Refund Amount (by 10/27)

Multimodality discount if certified by CBCCT or CBCMR

Incomplete/Incorrect Application Fee

Certification

\$1,095 (by 8/8)

\$1,295

\$2,200

\$795

\$50

\$75

Recertification

\$800 (by 8/29)

\$1,000

\$1,575

\$525

\$50

\$75

Apply Early!

You'll Improve Your
Chances of Obtaining
Your Preferred Test
Center Location and
Appointment Time.

Applications must be submitted by **11:59 pm Eastern Time on the date listed above to receive that fee. The application window will close at 11:59 pm Eastern Time on October 17, 2023. No exceptions.**

APCA and the CBNC do not discriminate against any person on the basis of age, gender, sexual orientation, race, religion, national origin, medical condition, physical disability or marital status.

Additional Resources

Visit and bookmark **CBNC.org** to find the following:

- How to Apply for an Examination
- How to Prepare for an Examination
- How to Schedule an Examination
- Examination Content Outline and Scope of Knowledge
- CBNC Practice Test
- CBNC Tutorial
- Sample Questions
- Scoring Information
- CBNC Rules and Policies
- CBNC Eligibility Details and Documentation Templates
- CME Requirements Guidance
- Compliance and Legal Information
- Preceptor Guidance



APCA and the CBNC reserve the right to make changes in policies and procedures from year to year, including eligibility requirements and fees.

Information in this "How to Apply Guide" supersedes the information in any prior edition or Candidate Bulletin. Earlier versions of this publication may contain outdated information.

Learn more at

CBNC.org • 240-631-8151 • CBNC@Inteleos.org

