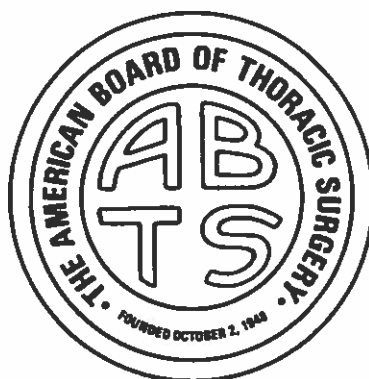


THE AMERICAN BOARD OF THORACIC SURGERY

**Subspecialty Certification in
Congenital Cardiac Surgery**

BOOKLET OF INFORMATION

2016



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AMERICAN BOARD OF THORACIC SURGERY
CONGENITAL CARDIAC SURGERY SUBSPECIALTY CERTIFICATION

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INTRODUCTION

The American Board of Thoracic Surgery (ABTS or the Board) publishes this Booklet of Information for prospective candidates for examination in the subspecialty of congenital cardiac surgery and others who are interested, to outline the rules and regulations established by the Board in conformity with its policies. This Booklet is revised annually.

A list of Diplomates of the ABTS who hold the congenital cardiac surgery subspecialty certificate will appear in The Official American Board of Medical Specialties Directory of Board Certified Medical Specialists.

Inquiries to the ABTS should be made in writing, and may be referred to one or more committees of the Board. Replies to such letters of inquiry may therefore be delayed for several weeks. Address all communications to the Executive Director:

David A. Fullerton, MD
American Board of Thoracic Surgery
633 North St. Clair Street, Suite 2320
Chicago, Illinois 60611

HISTORY

The Board of Thoracic Surgery began as an affiliate of the American Board of Surgery in 1948. In 1971, thoracic surgery became a primary board and changed its name to The American Board of Thoracic Surgery. ABTS certificates became time-limited in 1976, with recertification required within ten year intervals. The Maintenance of Certification© program replaced recertification beginning in 2008.

In April 2005, training and experience in congenital heart surgery was formally recognized by the ABTS as a subspecialty area of thoracic surgery. Edward L. Bove, MD, was appointed by the ABTS to chair an advisory committee for the development of the ABTS subspecialty certification in congenital heart surgery. In August 2006, the ABTS applied to the American Board of Medical Specialties (ABMS) and was subsequently approved to offer congenital cardiac surgery subspecialty certification. Development of the subspecialty certification requirements has been carried out in conjunction with development of program and training requirements by the Accreditation Council for Graduate Medical Education's (ACGME) Residency Review Committee for Thoracic Surgery (RRC-TS).

The ABTS is a member of the ABMS, the umbrella organization encompassing twenty-four specialties with primary Boards. The purpose of all ABMS member boards is to certify physicians who have completed appropriate ACGME-approved residency training in a specialty area, and who meet certain other established criteria, and, through their Maintenance of Certification (MOC) programs, promote lifelong learning and practice improvement. These processes have been instituted in the public interest.

PURPOSE AND FUNCTION OF THE BOARD

The primary purpose and most essential function of the ABTS is to protect the public by establishing and maintaining high standards. To achieve this objective in congenital heart surgery, the Board has established qualifications for examination and procedures for certification and Maintenance of Certification. The requirements and procedures are reviewed regularly and modified by action of the Board as necessary.

Board certification is evidence that a physician's qualifications for specialty practice are recognized by his or her peers. It is not intended to define the requirements for membership on a hospital's staff, to define the scope of specialty practice, to state who may or may not engage in the practice of the specialty, or to gain special recognition or privileges for its Diplomates. Board certification of a physician does not relieve a hospital's governing body from responsibility in determining the hospital privileges of such a specialist.

The Board does not use or sanction the terms "board eligible" or "board qualified." The Board does not consider any physician to be a candidate for examination until he or she has made formal application and has been approved and accepted for examination. Acceptance for examination acknowledges only that the candidate has successfully fulfilled the basic requirements, and does not recognize that he or she is a "specialist" in congenital heart surgery.

The ABTS does not publish a list of congenital heart surgery residency training programs, nor does it maintain a list of available openings in training programs. Institutions whose training programs are approved by the RRC-TS and accredited by the ACGME are listed in the Graduate Medical Education Directory published annually by the American Medical Association and available via the internet site www.acgme.org.

The ABTS is an active member of the ABMS. The Board functions in close cooperation with the RRC-TS, and through it, the ACGME and the Council for Medical Affairs. The Board also maintains close liaison with the Thoracic Surgery Directors Association (TSDA) and the office of the Surgical Director for Education of the Joint Council for Thoracic Surgery Education.

DEFINITION OF CONGENITAL HEART SURGERY

Congenital heart surgery encompasses the diagnosis, care, and operative treatment of structural abnormalities involving the heart and major blood vessels. Although these defects generally result from congenital malformations, they may also include acquired defects in infants and children. Congenital heart surgeons care for patients from the fetus to the adult.

CLINICAL COMPETENCE IN CONGENITAL HEART SURGERY

Clinical competence in congenital heart surgery requires factual knowledge and technical skills in the preoperative evaluation, operative management, and postoperative care of patients with congenital pathologic conditions involving cardiac structures, as well as infants and children with acquired defects of the heart and/or great vessels. Definition of the broad scope of congenital heart surgery as well as the current methods used to assess education, knowledge, and experience ensure that an individual who is certified by the ABTS has met the highest standards and qualifications.

The examination for subspecialty certification in congenital heart surgery encompasses the diagnosis and treatment of children with congenital and acquired heart disease, and patients of any age with congenital heart disease, including knowledge of normal and pathologic conditions of cardiovascular structures, and of congenital and acquired lesions (including infections, trauma, tumors, and metabolic disorders) of the heart and great vessels. Furthermore, familiarity with diagnostic procedures such as cardiac catheterization, angiography, electrocardiography, echocardiography, other imaging techniques, endoscopy, tissue biopsy, biologic and biochemical tests, and evolving techniques appropriate to the diagnosis and treatment of congenital heart diseases, is also required.

PATHWAYS TO SUBSPECIALTY CERTIFICATION

Subspecialty certification in congenital heart surgery by the ABTS may be achieved by completing one of the following two pathways and fulfillment of the other requirements that are listed.

Pathway I is available to those candidates who have trained or entered the practice of congenital cardiac surgery starting on July 1, 2008 or thereafter. The

requirements for admission into the certification process by this pathway can be found on pages 8-15.

Pathway II is for those candidates who entered congenital heart surgery training or practice at any time prior to July 1, 2008. Admission into the certification process will be based on training, current clinical experience, and professional accomplishments in the field. The requirements for admission by this pathway can be found on pages 15-19.

SUBSPECIALTY CERTIFICATION FOR CANDIDATES TRAINED BEGINNING ON OR AFTER JULY 1, 2008

The factual knowledge and technical skills necessary to treat patients with congenital heart conditions are developed in a congenital heart surgery residency program that is approved by the RRC-TS and accredited by the ACGME. The highest educational standards are best achieved in residency programs in which close supervision and instruction as well as progressive individual responsibility for operative and postoperative care are possible.

The ABTS realizes that a written examination primarily tests the acquired factual knowledge and the candidate's ability to reason. However, the limitations of an examination as the only assessment of clinical competence are well recognized. Therefore, an important part of the responsibility for determining clinical competence rests upon the Program Director of each congenital heart surgery residency. For this reason and others, only applicants who successfully complete an ACGME-accredited congenital heart surgery residency program and who are recommended by their training Program Director are considered for examination. It is during the period of the residency program that the trainee's judgment, technical skills, ability to cope with a wide variety of clinical problems, and ethical and moral character can be most accurately assessed. Thus, the endorsement of the candidate by the Program Director is required to complete eligibility for certification by the ABTS.

Currently valid primary certification by the ABTS is required for applicants for the subspecialty certificate in congenital cardiac surgery.

The route to subspecialty certification in congenital heart surgery via this pathway is as follows: successful completion of thoracic surgery residency, followed by successful completion of congenital heart surgery residency training in an ACGME-accredited program, thoracic surgery certification by the ABTS, and successful completion of ABTS CHS written and oral examinations in congenital heart surgery. These written and oral examinations are constructed and administered by the Board with consultation and assistance in developing the examinations, and in analyzing the results, obtained from content experts, psychometricians, and others. The validity and reliability of the examination process and content are scrutinized continually.

To enter the examination process, a candidate must submit an application to the ABTS that includes the specifics of the congenital heart surgical operative experience during the congenital heart surgery residency, and the attestation by signature of the Program Director indicating satisfactory performance and satisfactory completion of the congenital heart surgery residency training. Approved applicants must then achieve a passing score on both the written and oral examinations, acknowledging that the

candidate possesses sufficient training, experience and judgment necessary for competence in congenital heart surgery.

The procedures for establishing a candidate's qualifications will be reviewed periodically and revised, when appropriate, in a continuing effort to provide public assurance that congenital heart surgeons granted a subspecialty certificate by the ABTS have been adequately trained and educated in, and are competent to practice the specialty of congenital heart surgery.

GENERAL REQUIREMENTS

Subspecialty certification by the ABTS may be achieved for congenital heart surgery residents who began training on July 1, 2008 and thereafter by fulfillment of these requirements:

1. Successful completion of a full residency in congenital heart surgery in a program approved by the ACGME RRC-TS within twelve (12) consecutive months and at a single institution.
2. Operative case experience verified by the congenital heart surgery Program Director to meet or exceed currently required minimum surgical volume and index case distribution shown on page 11. All required cases must be performed within the 12 consecutive months of the residency. Cases performed outside of that designated period, even if done within the same institution, will not be counted toward eligibility.
3. Currently valid primary certification by the ABTS.
4. Good standing with the ABTS, including current with Maintenance of Certification and all dues and fees.
5. Currently registered, full, and unrestricted license to practice medicine granted by a state or other United States jurisdiction. The license must be valid at the time of application for admission to examination and maintained until the Subspecialty Certificate is granted by the ABTS. A temporary and/or limited license such as an educational, institutional, or house staff permit is not acceptable to the Board.
6. Ethical standing in the profession and a moral status in the community that are acceptable to the Board.

CONGENITAL HEART SURGERY RESIDENCY PROGRAM REQUIREMENTS

Candidates must have fulfilled and successfully completed all of the residency training requirements of an ACGME-approved congenital heart surgery training program that are in force at the time their congenital heart surgery training program begins.

Candidates for certification must complete twelve (12) consecutive months of congenital heart surgery residency training in a single program accredited by the ACGME RRC-TS. The residency Program Director must approve the application form by original signature, certifying that the candidate has satisfactorily completed the residency in congenital heart surgery, and must endorse each candidate's qualifications

by written evaluation. Supervisory congenital heart surgery faculty are also required to provide written evaluation of the candidate.

Operative case logs required for application for certification by the ABTS must be maintained on ABTS forms; ACGME logs will not satisfy this requirement.

OPERATIVE EXPERIENCE CREDIT

Full credit will be allowed for supervised operative experience in a well-organized teaching setting only when the following criteria are met:

1. The resident participates in the diagnosis, preoperative planning, surgical indications, and selection of the appropriate operation;
2. The resident performs those technical manipulations that constitute the essential parts of the operative procedure itself, under appropriate supervision in a well-organized teaching setting approved by the RRC-TS,
3. The resident is substantially involved in postoperative care.

Supervision and active participation by the congenital heart surgery faculty are required in preoperative, intraoperative, and postoperative care.

Although the Board also acknowledges that ‘first-assisting’ at operations is an important part of resident experience, particularly in complex or relatively uncommon cases, index and major cases for credit toward the ABTS application for subspecialty certification require that the resident be the primary surgeon.

OPERATIVE CASE CRITERIA

A broad education and adequate operative experience in congenital heart surgery are essential in every ACGME-approved residency program, irrespective of the area of congenital heart surgery in which a candidate may choose to practice. The operative experience requirement for the ABTS has two parts. One is concerned with the intensity or volume of cases, and the other with the distribution of cases (Index cases).

1. Surgical Volume (Intensity)

The Board’s operative experience requirements include performance of a minimum of seventy-five (75) major pediatric congenital heart operative procedures as primary surgeon during the twelve (12) months of residency training.

This guideline on intensity of cases conforms to the Program Requirements in Thoracic Surgery as published by the ACGME and the RRC-TS.

The application of any candidate whose supervised operative experience fails to meet the minimum requirement of 75 major pediatric congenital heart operations as primary surgeon will be referred to the Credentials Committee for review. Additional training time may be necessary for the candidate to meet the surgical case intensity requirement.

Repeated incidences of a program’s failure to meet operative volume requirements for its residents may be reported to the RRC-TS.

2. Index Cases (Distribution)

Index cases are full credit, primary surgeon cases only, performed during the twelve (12) months of congenital heart surgery residency training. Applicants are required to have an extensive education and adequate operative experience in sufficient

depth and breadth of the entire scope of congenital heart surgery so as to be able to practice independently after program completion. The number of index cases required to meet the minimal acceptable standards in the various areas are as follows.

INDEX CASES

Operative experience must include a minimum of 75 major pediatric congenital cases and must include at least the following minimum numbers of index cases:

- 5 Ventricular Septal Defect repairs
- 4 Atrioventricular Septal Defect repairs
- 4 Tetralogy of Fallot repairs
- 4 Arch reconstruction, including coarctation procedures
- 5 Arterial Switch, Norwood, Damus-Kaye-Stansel, Truncus Arteriosus repair [any combination to a total of at least 5]
- 5 Glenn/Fontan procedures
- 5 Systemic-to-Pulmonary Artery Shunt procedures

In order to ensure an appropriately diverse distribution of cases, the applicant's case log **cannot exceed a maximum** of the specified number for the following cases for credit toward the application requirement among the 75 major congenital cases:

- 5 Secundum Atrial Septal Defect/Patent Foramen Ovale closure procedures
- 5 Patent Ductus Arteriosus ligation and/or division
- 5 Pulmonary Artery banding
- 10 Right Ventricle-to-Pulmonary Artery Conduit insertion/replacement; Pulmonary Valve replacement
- 5 Other valve repair or replacement (patients 18 years of age or under, only)

The application from a candidate whose operative experience does not include the required number of index cases as listed will be referred to the CHS Credentials Committee for review. Additional training may be necessary for the candidate to meet the surgical case distribution requirement.

The Board recognizes that supervised operative experience in a well-organized teaching setting that is approved by the RRC-TS protects the patient, for whom the faculty surgeon has the ultimate responsibility. This supervised experience optimally prepares the candidate to begin the independent practice of congenital heart surgery after the completion of residency training. The evaluation of the candidate by the surgical faculty validates such preparation.

The ABTS CHS Credentials Committee is authorized by the Board to reject a candidate if the operative experience during the congenital heart surgery residency is considered to be inadequate in volume and/or distribution. The candidate, the Program Director, and the RRC-TS will be notified if such action is taken. If the CHS Credentials Committee finds the applicant's operative experience inadequate and additional training is required, all such additional training must be approved by the Board in advance of undertaking such training. If the Program Director determines that a resident needs additional training beyond the twelve (12) months that has been approved by the

ACGME and the RRC-TS before submitting a candidate's application, this additional training must also be approved in advance by the Board.

Even though emphasis on one or another facet of congenital heart surgery may have characterized a candidate's residency experience, the candidate is nevertheless held accountable for knowledge concerning all areas and phases of the field. The candidate should also have an in depth knowledge of the management of acutely ill patients age 18 and under in an intensive care unit setting. This requires an understanding of cardiorespiratory physiology, respirators, blood gases, metabolic alterations, cardiac output, extracorporeal membrane oxygenation, hyperalimentation, and many other areas. By virtue of the residency training in congenital heart surgery, the candidate is expected to be knowledgeable in the surgical care of critically ill pediatric and adult patients and the critical care of surgical patients.

APPLICATION INFORMATION

Before applying for examination in congenital heart surgery, prospective candidates should consider whether they are able to meet the requirements of the Board. **Applications are accepted between July 1 and August 15 of each year.**

Candidates beginning training July 1, 2013 and thereafter must apply for the subspecialty examination within one (1) year after the satisfactory completion of the congenital cardiac surgery residency training program. The Board considers "one year" to include two registration cycles. This requirement is superseded by the requirement to first achieve primary certification by the American Board of Thoracic Surgery (see below).

All candidates must meet the operative case requirements as listed in this Booklet.

Candidates are required to use the application and operative case reporting forms found on the ABTS web site at www.abts.org. The completed application must be submitted by mail, and must have original signatures and photographs. Specific formatting is required for operative case log reporting. Case logs in an unapproved format will be returned and revision requested, which must be received by the application deadline. A fee of \$50 will be assessed for returned applications. Applications must be postmarked no later than August 15. No application will be considered for the current year when postmarked after that date. Receipt of applications will be acknowledged from the Board office via email to the candidate.

Operative case logs required for application for certification by the ABTS must be maintained on ABTS forms; **ACGME logs will NOT satisfy this requirement.**

After completion by the candidate, the application is to be reviewed by the candidate's Program Director. When the Program Director has approved the application, it must be mailed to the Board office with all appropriate original signatures and inclusions (logs, signature pages, pictures etc.).

The operative case logs are considered to be the property of the resident, and are not kept in the Board office after the physician becomes certified. Each candidate should consult with his or her Program Director regarding the correct way to complete and maintain the operative case list forms.

Once an application is received by the ABTS, it is considered the official and only record. The Board assumes that the appropriate signatures authenticate the accuracy of the case lists and all other information submitted on the application, and reserves the right to seek validation of any information contained in the application. An incomplete or incorrectly completed application may delay processing for one year. Candidates are encouraged to address questions regarding the ABTS requirements to their Program Director or to the Board office.

The deadline for submitting the completed application is August 15. Failure to meet that deadline will result in a delay of one year before the candidate may be eligible for examination. Applications **postmarked** after August 15 will not be considered for this year's examination.

Candidates are notified of their eligibility for examination by mail when their application has been approved.

EXAMINATIONS

The examination process for subspecialty certification in congenital heart surgery for Pathway I candidates consists of separate written and oral examinations held at times and places determined by the Board. Information regarding the dates and locations of the examinations is published in the Journal of Thoracic and Cardiovascular Surgery and the Annals of Thoracic Surgery, as well as the Board's web site at www.abts.org.

The 2016 Part I (written) examination in congenital heart surgery will be given to approved candidates on **November 21, 2016** in electronic format at Pearson Professional Testing Centers located throughout the United States. Specific information will be provided to approved candidates.

The 2016 Part II (oral) examination in congenital heart surgery will be administered on June 9, 2016, in Chicago, Illinois. Specific information will be provided to approved candidates.

PART I (Written) EXAMINATION

The written examination in congenital heart surgery is designed primarily to assess cognitive skills. The content of this examination represents all aspects of the specialty of congenital heart surgery, including the topics of:

Septal Defects

Anomalies of Venous Connection

Anomalies of the Aorta, Aortic Arch, and Coronary Arteries

Anomalies of the Tricuspid and Mitral Valves

Anomalies of the Aortic Valve and Left Ventricular Outflow Tract

Anomalies of the Pulmonary Valve and Right Ventricular Outflow Tract

Conotruncal Anomalies

Anomalies of Atrioventricular Connection, Univentricular Heart, and

Atrial/Visceral Situs

Diseases of the Myocardium

Pre-, Intra-, and Post-Operative Evaluation and Management of Congenital Heart Disease

Acquired Cardiovascular Diseases in Infants and Children

PART II (Oral) CERTIFYING EXAMINATION

Successful completion of the Part I (written) CHS examination is a requirement for admission to the Part II (oral) CHS examination. The oral examination is designed to test the candidate's knowledge, judgment, problem-solving, and ability to correlate information in the management of clinical problems in congenital heart surgery. Candidates are expected to be proficient in all areas of congenital heart surgery. There is no application form for the Part II (Oral) examination. Candidates who are successful in the Part I (Written) examination will be sent information for subsequent Part II exams via standard US surface mail. It is the responsibility of the candidate to keep the Board informed of any change of address.

EXAMINATION SEQUENCE

Candidates beginning training July 1, 2013 and thereafter must apply for the subspecialty examination within one (1) year after the satisfactory completion of their congenital heart surgery residency. The Board considers "one year" to include two (2) registration cycles. Any candidate applying for the examination more than one year after the satisfactory completion of the congenital heart surgery residency will be considered individually by the Credentials Committee. To be eligible for the subspecialty certification process, any recommended additional training must be completed before an application can be submitted. Individual consideration will be made for candidates actively participating in the ABTS primary certification process via CHS Credentials Committee review.

After a candidate is declared eligible for the written examination (Part I) in congenital heart surgery, he or she must pass Part I within three (3) years. The candidate who successfully completes Part I of the examination then must pass Part II within the succeeding three (3) years. Candidates must become certified within a total of seven (7) years from the end of their congenital heart surgery residency.

Candidates who fail an examination (Part I or Part II) may be eligible to take the examination the following year, for a total of three (3) attempts in three (3) years for each exam.

Candidates who fail either Part I or Part II of the examination three (3) times, or do not pass either part of the examination within the allotted time period of three (3) years, will be required to complete additional congenital heart surgical training, which must be approved in advance of the additional training by the Board, before the candidate will be permitted to retake the examination. The required additional training must be completed within the succeeding two (2) year period after losing eligibility for either the Part I or Part II examination. Candidates who are participating in additional training will be considered "in training" and the Board's eligibility rule will be "on hold" until that training has been completed. Candidates who complete the required additional training must have their eligibility for examination reviewed by the Executive Director of the ABTS and/or the CHS Credentials Committee prior to being permitted to retake the examination. Once readmitted to the examination process, candidates will be given two (2) more opportunities to pass the examination (Part I or Part II) within the succeeding two (2) years.

Candidates who fail either Part I or Part II a fifth time will be required to complete another full, approved congenital heart surgery residency before they will be eligible to re-apply for examination by the Board.

PATHWAY I EXAMINATION FEES

2016 Application fee (not transferable or refundable)	\$ 500
2016 Part I (Written) CHS Examination	\$1,250
2016 Part II (Oral) CHS Examination	\$1,525

Candidates who do not appear for their scheduled examination (Part I or Part II) or who cancel less than 6 weeks prior to either examination may forfeit the examination fee.

The Board is a non-profit corporation, and the fees from candidates are used solely to defray actual expenses incurred in conducting examinations and carrying out the business of the Board. The Directors of the Board serve without remuneration.

Additional requirements and policies for all candidates for subspecialty certification continue on pages 20-22.

PATHWAY II

**IN 2015, THE AMERICAN BOARD OF THORACIC SURGERY
APPROVED THE INDEFINITE EXTENSION OF THE
AVAILABILITY OF CONGENITAL CARDIAC SURGERY
SUBSPECIALTY CERTIFICATION VIA THE SO-CALLED
“GRANDFATHER” PATHWAY**

SUBSPECIALTY CERTIFICATION FOR CANDIDATES ENTERING THE PRACTICE OF OR TRAINED IN CONGENITAL HEART SURGERY PRIOR TO JULY 1, 2008

Admission to the ABTS Congenital Heart Surgery subspecialty certification process for those who began practice prior to July 1, 2008 or whose training began prior to July 1, 2008 is based on training and current experience, case volume and distribution, primary ABTS Board certification, duration of active participation in a congenital heart surgery-related field, participation in continuing medical education, and contributions to the specialty and professional accomplishments. To be eligible, diplomates must have completed training in BOTH thoracic surgery and congenital cardiac surgery, and to have entered practice prior to July 1, 2008. Applicants are expected to conform to and maintain high moral and ethical standards.

Applications are accepted between June 1 and August 15 of the current year.

PATHWAY II GENERAL REQUIREMENTS

Subspecialty certification in congenital heart surgery by the ABTS may be achieved for surgeons who began the practice of or training in congenital heart surgery prior to July 1, 2008 by fulfillment of these requirements. The candidate must:

1. Have completed both thoracic surgery and congenital cardiac surgery training, and have entered practice prior to July 1, 2008.
2. Have achieved primary certification by the ABTS and be in current good standing with a valid certificate, current with Maintenance of Certification requirements, and current with all dues and fees.
3. Must submit an appropriately completed application and meet the requirements described therein.
4. Hold a currently registered, full and unrestricted license to practice medicine granted by a state or other United States jurisdiction. The license must be valid at the time of application for admission to examination and maintained at least until the Subspecialty Certificate is granted by the ABTS. A temporary and/or limited license such as an educational, institutional, or house staff permit is not acceptable to the Board.
5. Hold full and unrestricted inpatient hospital admitting, inpatient care, and consultative privileges in congenital heart surgery and qualifying cases are performed at an institution accredited by the JCAHO or other organization judged acceptable by the ABTS.
6. Meet the operative case criteria volume and distribution described on page 17 during each of the 2 years immediately preceding application, not including cases performed during residency training.
7. Provide evidence of participating in continuing medical education (CME), including the accumulation of at least 30 hours of Accreditation Council for Continuing Medical Education (ACCME)-approved Category I CME during each of the 2 years immediately preceding the application. At least 15 of the 30 hours each year must be in the broad category of congenital heart surgery. No more than 10 hours each year may be earned at the applicant's "home" or directly affiliated institution. No more than 10 hours each year may be credited for journal reading activities. (See additional information on page 18)
8. Provide evidence of significant contribution to the profession of congenital heart surgery, which may include affirmation from the community that the applicant is recognized as a specialist and consultant in a congenital heart surgery-related discipline, congenital heart surgical service in a medically underserved area, or service to the American Heart Association in an area of congenital heart surgery.
9. Possess an ethical standing in the profession and a moral status in the community that are acceptable to the Board.
10. Pass a closed-book, secure, written examination.

Candidates with special circumstances should include a letter of full explanation with their application for review by the ABTS CHS Credentials Committee.

PATHWAY II OPERATIVE CASE CRITERIA

A broad education and adequate operative experience in congenital heart surgery are essential, irrespective of the area of congenital heart surgery in which a candidate may choose to practice. The operative experience requirement of the ABTS has two parts. One is concerned with the intensity or volume of cases, and the other with the distribution of cases (index cases).

1. Surgical Volume (Intensity)

The Board's operative experience requirements include 75 major pediatric congenital heart operative procedures performed as an attending, primary surgeon during each of the 2 years immediately preceding the application. In this pathway, operative procedures performed during training will not apply. Teaching faculty for thoracic surgery and/or congenital heart surgery residency training programs can count "teaching" procedures for which they are the primary physician only when actively taking a resident or fellow through the procedure.

The application of any candidate whose operative experience fails to meet the requirement of 75 major congenital heart operations per year as primary surgeon will be referred to the Credentials Committee for review.

2. Index Cases (Distribution)

Index cases are full credit, primary surgeon cases only.

The application of a candidate whose operative experience does not include the required number of index cases as listed below will be sent to the Credentials Committee for review. The ABTS Credentials Committee is authorized by the Board to reject a candidate if the operative experience is considered to be inadequate in volume and/or intensity depth and/or breadth. The number of index cases required to meet the minimal acceptable standards in the various areas are shown below.

PATHWAY II INDEX CASE REQUIREMENTS

Operative experience must include a minimum of 75 major pediatric congenital cases in each of the 2 years immediately preceding the application (approximately July 1, 2011-June 30, 2013) and must reflect depth and breadth in the scope of practice.

In order to ensure an appropriately diverse distribution of cases, the applicant's case log cannot exceed (count for credit) a maximum of the specified number for the following cases in each year toward the application requirement:

- 5 Secundum Atrial Septal Defect/Patent Foramen Ovale closure
- 5 Patent Ductus Arteriosus ligation and/or division
- 5 Pulmonary Artery banding
- 10 Right Ventricle-to-Pulmonary Artery Conduit insertion/replacement;
Pulmonary Valve replacement
- 5 Other valve repair or replacement (patients 18 years of age or under, only)

PATHWAY II CONTINUING MEDICAL EDUCATION REQUIREMENTS

Each Diplomate of the ABTS applying for certification in Congenital Heart Surgery must accumulate at least 30 hours of approved continuing education in congenital heart surgery, cardiothoracic surgery, and/or general thoracic surgery in EACH of the TWO years immediately preceding the date of the application. At least 15 hours EACH year must be in specifically identified congenital heart surgery topics. The congenital cardiac surgery activities must be specifically delineated on the CME report or certificate. No more than 10 hours each year may be obtained in your own or a directly affiliated institution for activities such as M&M conferences, cardiac catheterization conferences, Grand Rounds, etc. No more than 10 hours each year may be credited for journal reading activities

Credit is allowed for ACCME Category I-approved medical educational activities, with some exceptions as noted below. Category I includes programs such as the annual meetings and postgraduate thoracic surgical programs of the major thoracic surgery associations and societies. Grand Rounds, Morbidity and Mortality (M&M) conferences, departmental conferences, echocardiography conferences, etc. are allowed only up to a maximum of 10 hours credit per year, from one institution only, and only if the institution is approved to offer ACCME Category I credit for these conferences. Written confirmation of institutional ACCME approval must accompany the application. SESATS is the only self-instructional material credit allowed, and is applicable to “general” thoracic surgery credits only. Credit for on-line courses may be accepted provided the course is approved for Category I by the ACCME and there is appropriate documentation of the Diplomate's participation. The Annals of Thoracic Surgery and the Journal of Thoracic Surgery each have at least one article per month designated for Category I CME credit. **A maximum of 10 hours' credit each year is allowable from journal reading.** Credit is not given for other journal reading, medical teaching, preparation of teaching/educational materials, publications, exhibits, presentation of papers, etc. The AMA Physician's Recognition Award is not acceptable in fulfillment of the CME credit requirement for subspecialty certification in Congenital Cardiac Surgery. Category II credits are not counted toward eligibility. **A copy of each certificate must accompany the application.**

PATHWAY II EXAMINATION

The written examination is designed primarily to assess cognitive skills. The content of the questions on this examination represents coverage of all aspects of the congenital heart surgery specialty, and is listed on page 13. Candidates who began training and entered practice prior to July 1, 2008 should apply, achieve an approved application, and sit for examination no later than 2014. Candidates who began congenital heart surgery practice or training at any time prior to July 1, 2008 and who successfully pass the ABTS written examination for Congenital Heart Surgery will not be required to take an oral examination.

The 2016 Part I (written) examination in congenital heart surgery will be given **November 21, 2016** in electronic format at Pearson Professional Testing Centers located throughout the United States. Specific information will be provided to approved candidates.

Candidates may download a paper application on the ABTS web site at www.abts.org, or may contact the Board office to have a copy sent. Specific formatting is required for operative case log reporting. Case logs in an unapproved format will be returned and revision requested, which must be received by the application deadline. Completed applications must include all appropriate original signatures and all inclusions (logs, signature pages, pictures etc.). A fee of \$50 will be assessed for applications requiring further information. Applications must be postmarked no later than August 15. No application will be considered for the current year when postmarked after that date. Receipt of applications will be acknowledged from the Board office via email to the candidate.

When an application is approved, the candidate must pass the examination within three (3) years. Candidates are allowed three (3) attempts to pass the examination within three (3) years of approval of the candidate's application. Candidates who fail an examination may be eligible to take the examination the following year without having to re-apply, for a total of three (3) attempts.

Candidates who fail the examination 3 times, or who do not pass the examination within the allotted time period, will be required to complete a congenital heart surgery educational program, which must be approved in advance by the Board, before they will be permitted to retake the examination. The extent of additional education will be determined by the Board. The required additional training must be completed within the succeeding two (2) year period after losing eligibility for the written examination. Candidates who complete the required additional training must have their eligibility for examination reviewed by the Executive Director and/or the CHS Credentials Committee. After additional training, candidates will be given two (2) more opportunities to pass the examination within the succeeding two (2) years.

Candidates who fail the examination a fifth (total) time will be required to complete an approved, full congenital heart surgery residency before they will be eligible to re-apply for examination by the Board.

PATHWAY II EXAMINATION FEES

2016 Application fee (not transferable or refundable)	\$ 500
2016 Part I (Written) CHS Examination fee.....	\$1,525

Candidates who do not appear for their scheduled examination or who cancel less than 60 days prior to the examination may forfeit their examination fee.

The Board is a non-profit corporation, and the fees from candidates are used solely to defray actual expenses incurred in conducting examinations and carrying out the business of the Board. The Directors of the Board serve without remuneration.

Additional requirements and policies continue below for all candidates for subspecialty certification.

The following requirements and policies apply to ALL CANDIDATES seeking Congenital Heart Surgery subspecialty certification:

DISABILITY

The ABTS takes particular note of the problems facing those candidates with a disability, and stands ready to alter its examination procedures in such a way that a candidate who is competent to practice congenital heart surgery has the opportunity to take the Board's examinations under circumstances that accommodate the individual's disability. Individuals requiring special consideration because of a disability should notify the Board in writing at least 60 days before the August 15 deadline for submitting an application.

APPEALS

Individuals who receive an unfavorable ruling from a committee of the Board regarding their application may appeal such determination by mailing a notice of appeal to the office of the ABTS within 45 days of the date such ruling was mailed. A copy of the appeals procedure will be mailed to the candidate at his/her request.

Individuals who are in the written examination process may only request reconsideration regarding potential fraud, misconduct or irregularities, not the content of the examination, the sufficiency or accuracy of the answers given, scoring of the examination, nor any other matter. Any individuals who wish to seek reconsideration on the basis of fraud, misconduct or irregularities may immediately upon conclusion of the written examination, and in any event no later than 7 days following the written examination, request that the Board allow him or her to retake the examination at no additional cost. Individuals in the oral examination process who believe that any of the examiners have been unfair or biased during portions of the oral examination may, immediately upon conclusion of the examination, request of the Executive Director of the Board a reexamination by another examiner using different case protocols covering similar subject matter. If the Executive Director and the other Officers determine that there are reasonable grounds, the individual shall be reexamined immediately by a Board member. In such instances, only the score given by the re-examiner will be considered.

A copy of the full ABTS Appeals Policy is also available from the Board office.

CHEMICAL DEPENDENCY

Otherwise-qualified applicants who have a history of chemical dependency that has been reported to the Board and who submit documentation suitable to the Board that their dependency has been under control for a period of at least two years may be admitted to the examination process.

For candidates who are already in the examination process and who develop a chemical dependency that becomes known to the Board, the process will be suspended until the candidate can provide documentation suitable to the Board that the condition has been under control for a period of two years. At that time, the candidate will be readmitted to the examination process. The requirement to be accepted for examination within five years of completion of an approved congenital cardiac surgery residency, or by 2014 for those trained prior to July 2008, will not be waived.

CERTIFICATION

After a candidate has met the requirements for eligibility and passed the examination(s), a certificate attesting to the candidate's qualifications in congenital heart surgery will be issued by the Board. The certificate is valid for 10 years when the certificate-holder is in compliance with Maintenance of Certification.

MAINTENANCE OF CERTIFICATION®

A valid ABTS primary certificate in thoracic surgery is required for obtaining and maintaining a valid subspecialty certificate in congenital heart surgery. Applicants who hold a subspecialty certificate in congenital heart surgery are issued certificates that are valid for 10 years from the date of initial certification, after which the certificate is no longer valid. A subspecialty certificate in congenital heart surgery can be renewed before expiration by fulfilling the requirements for congenital heart surgery Maintenance of Certification (MOC) specified by the ABTS. The congenital heart surgery MOC Booklet of Information will be provided to all subspecialty certificate holders. Although there is no additional fee for the MOC process for holders of the ABTS primary certificate in thoracic surgery, there WILL BE AN ADDITIONAL FEE for the examination portion of congenital heart surgery MOC.

DIPLOMATE ANNUAL DUES

The ABTS Annual Dues required of all Diplomates of the Board except those who are retired and/or disabled. The fee is cumulative, and a late fee applies. Diplomates must be current with the annual fee in order to participate in the MOC process. In addition, the Board will not respond to inquiries about the certification status for Diplomates who are not current with the fee. Diplomates who are not current with dues and fees are considered to be "not meeting MOC requirements."

DENIAL OR REVOCATION OF CERTIFICATE

No certificate shall be issued or a certificate may be revoked by the Board if it is determined that:

- a. the candidate for certification or Diplomate did not possess the necessary qualifications and requirements for examination, whether such deficiency was known to the Board or any Committee thereof before examination or at the time of issuance of the certificate as the case may be;
- b. the candidate for certification or Diplomate withheld information in his or her application or made a material misstatement or any other mis-

- representation to the Board or any Committee thereof, whether intentional or unintentional;
- c. the candidate for certification or Diplomate was convicted by a court of competent jurisdiction of any felony or misdemeanor involving moral turpitude and, in the opinion of the Board, having a material relationship to the practice of medicine;
 - d. the candidate for certification or Diplomate had any license to practice medicine revoked or was ever disciplined or censured by any court or other body having proper jurisdiction and authority because of any act or omission arising from the practice of medicine;
 - e. the Diplomate-holder of a subspecialty certificate does not hold a valid primary certificate in thoracic surgery for any reason; or
 - f. the candidate for certification or Diplomate had a history of chemical dependency or developed such dependency during the certification process and failed to report same to the Board.

January, 2016

APPENDIX I

American Board of Thoracic Surgery Congenital Heart Surgery Operative Log Summary

Operative experience must include a minimum of 75 major congenital cases where the applicant is acting as “primary surgeon.” In addition, to assure an appropriately diverse distribution of cases, the applicant’s case log can not exceed a maximum of the specified number of indicated cases for credit among the 75 major congenital cases. Where no minimum or maximum number is indicated, all cases that otherwise qualify are considered “for credit” toward the 75 case requirement.

ABTS Code	Open Operations for Congenital Heart Disease	Minimum Required	Maximum Allowed
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INDEX CASES

I-1	Ventricular Septal Defect repair	5	
I-2	Atrioventricular Septal Defect repair (complete)	2	
I-2	Atrioventricular Septal Defect repair (incomplete)	2	
I-3	Tetralogy of Fallot repair, with or without Pulmonary Atresia	4	
I-4	Aortic Arch Reconstruction (including Coarctation procedures)	4	
I-5	Systemic-to-Pulmonary Artery Shunt procedures	5	
I-6	Any combination of the following to a minimum total of 5	5	
I-6a	Arterial Switch procedure		
I-6b	Norwood procedure		
I-6c	Damus-Kaye-Stansel procedure		
I-6d	Truncus Arteriosus repair		
I-7	Any combination of the following Glenn/Fontan procedures to a minimum total of 5	5	
I-7a	Bidirectional Glenn/hemi-Fontan procedure		
I-7b	Fontan procedure		

OTHER MAJOR CASES

C-1	Secundum Atrial Septal Defect/Patent Foramen Ovale closure		5
C-2	Atrial Septal Defect (Primum or Sinus Venosus) closure with or without Partial Anomalous Venous Connection		
C-3	Aortopulmonary Window closure		
C-4	Double Outlet Right Ventricle repair		
C-5	Mustard or Senning procedure		
C-6	Rastelli procedure, with or without REV, Nikaidoh procedure		
C-7	Total Anomalous Venous Connection repair		
C-8	Partial Anomalous Venous Connection repair		
C-9	Pulmonary Artery unifocalization		
C-10	Conduit replacement, isolated		10
C-11	Supravalvar Aortic Stenosis repair		
C-12	Subaortic Stenosis resection; Discrete, Diffuse, Asymmetric Septal Hypertrophy		
C-13	Double Chamber Right Ventricle repair; Discrete, Muscular		
C-14	Anomalous Coronary Artery from the Pulmonary Artery repair		
C-15	Coarctation/Interrupted Aortic Arch repair, isolated		
C-16	Cor Triatriatum repair		

C-17	Atrial Septectomy		
C-18	Sinus of Valsalva Aneurysm/Fistula repair		
C-19	Pulmonary Artery Banding		
C-20	Vascular Ring division		
C-21	Transplant (specify heart, heart/lung)		
C-22	Patent Ductus Arteriosus ligation or division		5
C-23	Other Valve repair or replacement, patients 18 years or under, to a maximum total of 5 for all C-23 cases		5
C-23a	Aortic Valve repair		
C-23b	Aortic Valve replacement		
C-23c	Mitral Valve repair		
C-23d	Mitral Valve replacement		
C-23e	Tricuspid Valve repair, with or without Ebstein's Anomaly		
C-23f	Tricuspid Valve replacement		
C-23g	Pulmonary Valve repair, with or without Transannular Patch		
C-23h	Pulmonary Valve replacement		
C-24	Arrhythmia Surgery (specify) Pacemaker and ICD implantation are NOT considered "major" cases and do not count toward the case requirement		