



American College of **Veterinary** Internal Medicine

Certification Manual for Residents, Supervising Diplomates, Resident Advisors, and Program Directors

Effective July 1, 2020 – June 30, 2021

(Minor inconsistencies were found in sections 6.D.2 and 6.I.6 of the LAIM section. Those two sections were updated on June 3, 2020. For transparency, the deleted text remains in the current document and has been ~~struck out~~ in the text, so that the change is clearly visible. All LAIM Program Directors were notified that an update was made.)

The information contained in this Manual was submitted for publication on January 20, 2020 and becomes effective on July 1, 2020. It represents the current policies, procedures and requirements for individuals interested in certification by the American College of Veterinary Internal Medicine (ACVIM or the College). While a concerted effort has been made to ensure accuracy, Program Directors, Supervising Diplomates, Resident Advisors, residents, and candidates should contact the ACVIM office if questions arise. Furthermore, ACVIM policies and procedures are subject to periodic review and change. If Program Directors, Supervising Diplomates, Resident Advisors, residents, or candidates have concerns about proposed or actual changes that could impact the certification process they should contact the ACVIM Certification and Accreditation staff at the head office:

American College of Veterinary Internal Medicine

Prentice Place Suite 300
8301 East Prentice Avenue
Greenwood Village, CO 80111

Tel: (800) 245-9081 (toll free in USA and Canada)
(303) 231-9933

Fax: (303) 231-0880

Website: www.ACVIM.org

E-mail: Certification@ACVIM.org

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1 ACVIM MISSION STATEMENT

The mission of the American College of Veterinary Internal Medicine (ACVIM or the College) is to enhance animal and human health by advancing veterinary internal medicine through training, education, and discovery.

2 ACVIM VISION STATEMENT

The ACVIM advances knowledge of animal health and diseases and fosters the continued development of specialty veterinary care in cardiology, large animal internal medicine, neurology, oncology, and small animal internal medicine. To achieve these purposes, the ACVIM:

- Certifies new Diplomates by guiding training programs and ensuring fair and appropriate credentialing and examination procedures;
- Promotes and advocates ACVIM specialization to those individuals within the veterinary profession and to the animal-owning public, so that the value of certification is recognized;
- Promotes continuing education and the dissemination of knowledge in veterinary cardiology, large animal internal medicine, neurology, oncology, and small animal internal medicine through the ACVIM Forum, the *Journal of Veterinary Internal Medicine*, advanced continuing education (ACE) courses, and other means;
- Promotes the generation of new knowledge relevant to ACVIM specialties for the benefit of improved animal and human health.

3 IMPORTANT DEFINITIONS

3.A Active ACVIM Diplomate

One of four designations a Diplomate may have. An Active ACVIM Diplomate is a veterinarian who receives approval for this designation by the Board of Regents (BOR) after having fulfilled all prescribed credentials' requirements, including passing the General and Specialty Examinations, being current on annual dues and, for Diplomates certified in 2016 and later, fulfilling the requirements for Maintenance of Credentials.

A Maintenance of Credentials (MOC) program is in effect for all ACVIM Diplomates certified after January 1, 2016 and for any Diplomate certified before January 1, 2016 who volunteered to participate in MOC. Every Diplomate who completed credentials and became a Diplomate on or after January 1, 2016, is awarded a Diplomate certificate that is valid for a period of 10 years. By the end of this 10-year period, the Diplomate must have met the criteria established to maintain credentials in order to remain a Diplomate. If the Diplomate fails to meet the criteria, the certificate becomes inactive and the Diplomate is no longer recognized as a Diplomate by ACVIM. The general criteria for maintaining credentials and the specialty-specific criteria for maintaining credentials can be found at www.ACVIM.org

3.B ACVIM Associate

An ACVIM Associate is a veterinarian certified as a specialist by a non-ACVIM specialty organization such as the European College of Veterinary Internal Medicine-Companion Animal (ECVIM-CA) in a specialty which has an ACVIM equivalent. ACVIM grants certain privileges to the ACVIM Associate. However, the ACVIM Associate is subject to the following:

- Associates do not have ACVIM Diplomate status;

- In some specialties an associate may be part of a training program, e.g. as a Supervising Diplomate, Resident Advisor, etc. See each individual specialty for rules governing that specialty's permissions;
- Associates do not have the right to use the name American College of Veterinary Internal Medicine;
- Associates may not use the letters ACVIM in the individual's title;
- Associates may, however, use the ACVIM logo in association with the individual's work or associated institution;
- Associates cannot hold college-wide office within ACVIM, nor may they vote in ACVIM (college-wide or specialty) elections. In some specialties, associates may serve as members on some specialty (not college-wide) committees;
- Associates may attend specialty business meetings, when permitted by the specialty, but may not vote in those meetings;
- Associates are entitled to reduced rates for the ACVIM Forum.

See specialty requirements later in the Certification Manual for any further definition:

[Cardiology](#) – [LAIM](#) – [Neurology](#) – [Oncology](#) – [SAIM](#)

3.C American Board of Veterinary Specialties

The AVMA American Board of Veterinary Specialties (ABVS) is the umbrella organization for accrediting veterinary specialties within the United States. An ABVS-accredited specialty organization is identified as a Recognized Veterinary Specialty Organization (RVSO) and an accredited specialty is identified as a Recognized Veterinary Specialty (RVS). The ACVIM is an RVSO and all ACVIM specialties are RVSs. The ABVS is composed of:

- four voting representatives from American Veterinary Medical Association (AVMA)-recognized veterinary specialty organizations (chosen by the Veterinary Specialty Organizations Committee (VSOC), see 3.EE below);
- four voting representatives representing non-specialty AVMA members;
- one voting liaison from the Association of American Veterinary Medical Colleges;
- one voting liaison from the American Association of Veterinary State Boards;
- one voting psychometrician;
- one voting public member.

3.D Authorized Agent

The Authorized Agent (AA) is the individual with administrative responsibility at a Sponsoring Institution that must verify that the named Program Director has the authority needed and will receive the support necessary for the Residency Training Program (RTP) to succeed. The Authorized Agent may be the department head if the RTP is in a university, or an owner or officer of the company if the RTP is in a private practice. Each year, upon renewal of the RTP, the Authorized Agent must provide signed support in the form of a completed Authorized Agent letter that documents the ongoing support of each RTP.

3.E Board of Regents (BOR)

The BOR is the [governing body of the ACVIM](#). Voting members are the BOR Chair, President, President Elect, At-large Members, and Specialty Presidents.

Non-voting members include the ACVIM Chief Executive Officer (CEO), ACVIM Treasurer, ACVIM Professional Liaison, immediate Past-Chair of the BOR, Advanced Continuing Education Committee Chair, ACVIM Forum Program Chair and Co-Chair, ACVIM General Examination Committee Chair, International Credentials and Relations Committee Chair, Membership and Communications Committee Chair, Education and Research Committee chair, Co-Editors of the *Journal of Veterinary Internal Medicine*, and Specialty Presidents-Elect.

The exact composition of the BOR and its Executive Committee, along with the duties and responsibilities of the BOR and ACVIM officers is spelled out in the ACVIM's Constitution and By-laws.

3.F Candidate

A candidate is a veterinarian enrolled in an ACVIM-approved Residency Training Program (RTP) who has registered with the ACVIM. An individual remains a candidate until that person:

- 1) earns Active Diplomate status (including time between successful completion of the residency and achieving Active Diplomate Status), or
- 2) until the candidate withdraws from the RTP prior to satisfactory completion of the program, or
- 3) until the candidate is excused from an RTP prior to satisfactory completion of the program, or
- 4) until the individual fails to achieve board certification within the specified allowable candidacy period as defined in the ACVIM Certification Manual (CM) that is applicable to that candidate.

Candidates are governed by the CM rules in effect at the start of their residency with the following exceptions: if a rule eliminates or lessens a training requirement, that lessened requirement will normally apply to current candidates (exceptions will be stated at the time of any rule change). If a rule is purely procedural and does not impact residency training requirements, e.g. the date of an examination or the format of an examination, that rule becomes effective for all candidates at the time the rule is implemented, regardless of the start date of a candidate's RTP.

3.G Certification Process

The ACVIM certification process includes, but may not be limited to, the candidate's registering with the ACVIM, completing an approved RTP, successfully passing the General and Specialty Examinations, paying all associated fees, and meeting all other credentialing requirements of a specialty. The residency training requirements are defined in the Certification Manual and include certain requirements for all candidates as well as requirements specific to each individual specialty. It is incumbent on each candidate to be familiar with and complete all requirements of their specialty, and also to be familiar with and complete all requirements in Section 4 (Requirements that apply to all specialties) of this manual. The process of certification (policies and procedures), e.g. registration, examination dates, deadlines, standard logs, standard forms, etc. are provided on the ACVIM's Candidate webpages, located on the [ACVIM's Website](#). It is critical that candidates monitor this site to ensure compliance with published deadlines and that they use the most current forms.

Candidates (and their mentors) need to be familiar with both the training requirements (the CM) and the certification process (Candidate Webpage information) for a candidate's certification success.

3.H Credentials Committee

A specialty Credentials Committee (CC) evaluates a candidate's progress during the training period, including completion of any publication requirement and the candidate's examination results. The specialties of Cardiology, Neurology, Oncology, and Small Animal Internal Medicine each have a separate CC that evaluates candidate- provided documentation as well as documents from or regarding the Resident Advisor (RA) and Program Director (PD). In the specialty of Large Animal Internal Medicine, the functions of the CC are combined with those of the Residency Training Committee (RTC) into a single Residency Training/Credentials Committee (RTCC).

3.I Diplomate

A Diplomate is a member of one of the ACVIM specialties who has fulfilled all of the criteria to be an active ACVIM Diplomate at some point (synonym: board-certified). Every Diplomate has one of four designations: active, inactive, disabled, or retired.

3.J Disabled ACVIM Diplomate

An Active ACVIM Diplomate can request permanently or temporarily disabled status within ACVIM by petitioning the ACVIM office. A permanently disabled ACVIM Diplomate is "one who certifies that he/she is permanently disabled and can no longer engage in veterinary activity as a full-time occupation". A temporarily disabled ACVIM Diplomate is one who certifies that due to a temporary medical disability he/she cannot currently engage in veterinary activity as a full-time occupation (ACVIM Constitution Article V Section 9). A disabled ACVIM Diplomate has the same responsibilities and benefits as an Active Diplomate, with the exception of the following:

- The requirement to pay dues;
- The ability to vote (both College-wide or specialty);
- The ability to hold an office within ACVIM (both College-wide or specialty);
- The ability to serve as PD, RA, or Supervising Diplomate (SD) (for any specialty RTP).

After returning to full-time professional veterinary activity, temporarily disabled ACVIM Diplomates may petition the ACVIM in order to have their Active ACVIM Diplomate status restored. ACVIM confers such Active status to the Diplomate with BOR approval and payment of that year's dues. If there are fewer than 9 months remaining in the membership year, the dues will be prorated.

3.K European College of Bovine Health Management (ECBHM)

The [European College of Bovine Health Management \(ECBHM\)](#) advances herd- health-oriented bovine production management in Europe and increases the competency of those who practice in this field of veterinary medicine. ECBHM guidelines and training standards for postgraduate education and experience establish prerequisites for an individual to specialize in bovine health management, to take the examination related to bovine health management, and to receive authentication as a Specialist in Bovine Health Management. ECBHM Diplomates are eligible for Associate status within ACVIM.

3.L European College of Equine Internal Medicine (ECEIM)

The [European College of Equine Internal Medicine \(ECEIM\)](#) advances equine internal medicine in Europe and increases the competency of those who practice in this field of veterinary medicine. ECEIM Diplomates are eligible for Associate status within ACVIM.

3.M European College of Veterinary Internal Medicine - Companion Animal (ECVIM-CA)

The [European College of Veterinary Internal Medicine - Companion Animal \(ECVIM-CA\)](#) represents companion animal internal medicine specialists in Europe. The organization's mission is similar to ACVIM. It sets standards for residency training, and examines candidates. It certifies individuals post-residency and on successful completion of all certification requirements. Specialty groups within ECVIM-CA are Cardiology, Internal Medicine, and Oncology. ECVIM Diplomates are eligible for Associate status within ACVIM.

3.N European College of Veterinary Neurology (ECVN)

The [European College of Veterinary Neurology \(ECVN\)](#) certifies veterinarians as specialists in veterinary neurology. The organization furthers knowledge related to the pathogenesis, diagnosis, therapy, and control of diseases affecting the nervous system of animals. The European Board of Veterinary Specialization (EBVS) and the Royal College of Veterinary Surgeons also recognize ECVN Diplomates as specialists. ECVN Diplomates are eligible for Associate status within ACVIM.

3.O Good Standing

Candidate: Good standing means that a candidate either must be actively enrolled in an approved RTP or must have successfully completed an RTP. If a candidate leaves an RTP, either temporarily (e.g. a leave-of-absence) or permanently (e.g. dismissal or permanent withdrawal) before completing the residency, the candidate is no longer in good standing and ineligible to take any examination until that individual resumes an approved RTP (either the original or a new program) and the appropriate specialty's RTC or RTCC designates the candidate's current status as being active (good standing). If an actively enrolled resident's status changes such that the resident is no longer in good standing, the PD must notify the ACVIM of that status change within 30 days of the change in status.

Program: Good standing means that an RTP has submitted all required documents (e.g. Authorized Agent Letter, RTP renewal paperwork, etc.) to document that the RTP has the facilities and personnel required to provide residency training, has provided satisfactory evidence of compliance with requirements as stated in this Manual, and has its submissions reviewed and approved by the specialty's RTC. If deficiencies are identified in an RTP, the RTC may place the RTP on probation. If the deficiencies are severe and/or not corrected by the RTP within the deadlines set by the RTC, the RTC will notify the Board and will terminate the RTP rather than either placing it on probation or continuing probation. Each RTP will be evaluated on an annual basis to determine if it remains in good standing.

3.P Honorary Member

This recognition is for individuals who are retired or nearing retirement. The BOR may confer honorary membership on persons who contributed materially to the disciplines of veterinary internal medicine. An Honorary Member has many of the rights and privileges of an active ACVIM Member, but does not have the following responsibilities, benefits, or privileges:

- Is not required to pay dues;
- Cannot serve as PD, RA, or SD;

- Cannot vote, hold office, or attend ACVIM business meetings;
- Cannot use this recognition, nor the ACVIM name or logo, in any way that states or implies that honorary membership is a professional qualification, e.g., no “Jane Doe, DVM, ACVIM (hon)”.

Diplomates desiring to submit a nominee for consideration as an Honorary Member should present their nominee’s credentials to the president of the appropriate specialty (current presidents contact information may be found on the [ACVIM website](#)) for further consideration by the specialty’s nominating committee. Nominations approved by the specialty nominating committee should then be presented to that specialty for approval. If approved by the specialty, the nominations are presented to the BOR for final approval. Honorary Member certificates are presented at the ACVIM Forum.

3.Q Inactive Candidate

If a candidate fails to achieve Active Diplomat status within the time specified by the ACVIM Specialty under which the candidate is registered, the candidate’s status changes from active to inactive. An inactive candidate may not resubmit credentials or participate in additional examination attempts and is ineligible to become board-certified.

3.R Inactive ACVIM Diplomat

One of four designations a Diplomat may have. An inactive ACVIM Diplomat is a veterinarian who does not remain current on payment of annual dues, or who is certified on or after January 1, 2016 and fails to meet MOC program criteria. An inactive ACVIM Diplomat is subject to the following:

- May not use the name American College of Veterinary Internal Medicine;
- May not use the letters ACVIM in the individual’s title;
- May not use the ACVIM logo in association with the individual’s work or associated institution;
- Per ABVS guidelines, inactive Diplomates that lose their status due to failure of MOC may no longer claim to be board-certified specialists.

The inactive ACVIM Diplomat immediately loses the following benefits:

- The ability to serve as PD, RA, or SD (thus, although an inactive Diplomat may assist in training a resident, none of that training will be counted as official time served in training; nor may that inactive Diplomat be listed/credited in the RTP submission by a program). A Diplomat that has become inactive due to loss of their certificate (e.g. failure to meet MOC requirements) may not participate in any residency training activities;
- The right to vote, to hold office, to serve on committees, and to attend business meetings of ACVIM and their respective specialty or specialties;
- The ACVIM Diplomat discount on ACVIM Forum registration and all other ACVIM discounts;
- Access to the ACVIM’s website, along with access to all ACVIM updates and other member communications;
- The listing as an ACVIM Diplomat in the ACVIM Diplomat Directory and on VetSpecialists.com;
- Other privileges as deemed appropriate by the BOR.

Reinstatement to Active Diplomate status is contingent upon approval by the BOR, payment of all dues in arrears (to a maximum of three years), and payment of current dues in full. Reinstatement of an ACVIM Diplomate Certificate after failure to meet MOC criteria is possible by meeting all of the [requirements of the specialty MOC committee](#), in addition to the requirements stated above.

3.S Non-Traditional Residency Training Program

A non-traditional RTP is a program that is approved by a specialty's RTC or RTCC and which is intentionally non-continuous.

3.T Ombudsperson

An ombudsperson is an individual appointed by a specialty president. This individual, who is available to candidates, helps to serve as a liaison during conflicts between a candidate and either an RTP or the ACVIM. The ombudsperson provides a neutral and confidential environment in which to voice concerns. The ombudsperson advises and offers options toward resolution of a problem as the ombudsperson deems appropriate. The scope of the ombudsperson's work excludes matters relating to examinations and/or denial of credentials, which are addressed by the Appeals Committee (see [Section 4.I](#)). The ombudsperson does not engage in the arbitration process, does not offer legal advice, and does not impose sanctions on individuals or RTPs.

All specialties have assigned an ombudsperson: [Cardiology](#) – [LAIM](#) – [Neurology](#) – [Oncology](#) - [SAIM](#).

In the event that an ombudsperson is personally involved in a dispute with a resident, the ombudsperson must recuse him/herself. In such a case, the associate ombudsperson or the ACVIM Professional Liaison will serve as ombudsperson during a dispute.

3.U Professional Liaison

The Professional Liaison is an ACVIM Diplomate who serves as the ACVIM's representative to the Veterinary Specialty Organizations Committee and to the ABVS, and also oversees the activities of both the ACVIM Appeals Committee and the Constitution Committee. The Professional Liaison also performs other tasks as assigned by the Chief Executive Officer, at the request of the Executive Committee, or at the request of the Voting BOR. The Professional Liaison is a non-voting member of both the BOR and the Executive Committee of the BOR.

3.V Program Director (PD)

The PD is the individual at a Sponsoring Institution (SI) who assumes overall responsibility for the conduct and integrity of that institution's RTP. The PD for any ACVIM RTP must be an active ACVIM Diplomate (unless specifically allowed by an individual specialty, e.g. Neurology), but may not necessarily be a member of the candidate's chosen specialty. See specialty requirements later in the Certification Manual for further definition and specifications. [Cardiology](#) – [LAIM](#) – [Neurology](#) – [Oncology](#) - [SAIM](#)

3.W Residency Training Committee (RTC)

An RTC reviews documentation for all training programs submitted by institutions or practices and determines their acceptability. The RTC also specifies training criteria that must be met for certification. The specialties of [Cardiology](#), [Neurology](#), [Oncology](#), and [Small Animal Internal Medicine](#) have an RTC.

3.X Residency Training/Credentials Committee

In the Specialty of [Large Animal Internal Medicine](#), the functions of the RTC and the CC are combined into a single Residency Training/Credentials Committee (RTCC).

3.Y Residency Training Program (RTP)

The RTP is the educational experience that is provided to a resident at a Sponsoring Institution (SI) and one in which a resident must fully engage. An SI provides the RTP (with possible secondary experiences, off-site experiences, or both depending on the specialty). The PD, RA, and SDs and other specialists and individuals are involved in the training of a resident for an ACVIM specialty.

3.Z Resident

A resident is a candidate who is enrolled in an ACVIM RTP. All residents are also ACVIM candidates; however, candidacy continues after a residency is completed. Individuals remain candidates until they either withdraw or are dismissed from an RTP, they exceed the total time allowed to become Active Diplomates, or they become Active Diplomates.

3.AA Resident Advisor

A RA must be an active ACVIM Diplomate in the specialty in which the resident is training, unless specified by the relevant specialty. The RA is the primary individual who monitors the resident's progress during clinical training. Some ACVIM specialties allow ECVIM-CA Diplomates, ECVN Diplomates, or both to fulfill this role. See specialty requirements later in the Certification Manual for any further definition. [Cardiology](#) – [LAIM](#) – [Neurology](#) – [Oncology](#) - [SAIM](#)

3.BB Retired Diplomate

One of four designations a Diplomate may have. An Active Diplomate petitions the ACVIM to request Retired status within the College. The decision to grant Retired status rests with the BOR and is based on the Diplomate meeting the following two criteria:

- The Diplomate has been an Active Diplomate of ACVIM for 25 years or more, has reached the age of 65, or both;
- The Diplomate has retired from employment in which the individual's ACVIM credentials are a requirement for employment.

Income-generating professional activities that require ACVIM credentials such as part-time consulting, teaching, writing, or continuing education are acceptable provided the total annual income from these activities does not exceed the exempt amount for receiving full US Social Security retirement income for those below normal retirement age (before the individual's full retirement age as defined by US Social Security).

The following benefits and restrictions apply to a Retired Diplomate:

- Has annual membership dues waived;
- Pays reduced (Diplomate) registration fee for the ACVIM Forum (after age 65 the fee is reduced further – see [Forum Webpage](#) for the current discounted rate);
- Is listed in the ACVIM Diplomate Directory (members access only) but is not listed on [VetSpecialists.com](#); (public website)
- May not be a voting member of committees or run for office within ACVIM May not serve as PD, RA, or SD.

3.CC Sponsoring Institution

The SI is the primary facility, practice, or institution that hosts an RTP. It is best practice for every SI to have human resource policies that address issues of discrimination and harassment. These policies should provide adequate pathways for a resident to resolve concerns regarding discrimination or harassment if problems are identified.

3.DD Supervising Diplomate

An SD may be any ACVIM Diplomate, or a Diplomate of an American Veterinary Medical Association (AVMA)-recognized specialty organization, such as the American College of Veterinary Radiology or the American College of Veterinary Pathology. An SD must be in good standing within the SDs specialty organization. The SD actively contributes to a resident's clinical training and will supervise that resident's patient management during their assigned time together. In some specialties, Diplomates of the EBVS-recognized specialties from the ECVIM-CA, ECVN, ECEIM, ECBHM, and the European College of Veterinary Diagnostic Imaging (ECVDI) may serve as SDs.

An SD evaluates the resident/candidate and provides context and perspectives for those patient/client interactions to ensure safe, timely, and appropriate medical care. See the specialty requirements later in the Certification Manual for further definition: [Cardiology](#) – [LAIM](#) – [Neurology](#) – [Oncology](#) – [SAIM](#).

3.EE Veterinary Specialty Organizations Committee (VSOC)

The Veterinary Specialty Organizations Committee serves in an advisory role to the American Board of Veterinary Specialties, helps to set the standards required to become an RSVO or an RVS, and works to advance specialization in veterinary medicine. The voting membership of the Committee consists of one (1) representative (must be an AVMA member) appointed by each AVMA-recognized veterinary specialty organization (RVSO). Terms are three (3) years, and can be renewed successively, as determined by each individual RVSO. Each recognized veterinary specialty (RVS) within those RVSOs will be permitted to have 1 non-voting member who may attend or participate in, via electronic means, all meetings.

Table of Essentials

	Diplomate	Active Diplomate	ACVIM Associate	Inactive Diplomate	Disabled Diplomate	Retired Diplomate ²	Honorary Diplomate
Requirements							
Is a veterinarian	✓	✓	✓	✓	✓	✓	+/-
Has been approved by the BOR and has fulfilled all credentials requirements as described in this manual	✓	✓		✓	✓	✓	
Must pay annual dues and is current on payment of such dues	+/- ¹	✓					
Is in compliance with maintenance of credentials requirements (2016 certification and thereafter).	+/- ¹						
Privileges							
May attend the business meetings of the ACVIM and of the respective specialty	+/- ¹		✓ ³			✓	
May vote in ACVIM-associated elections	+/- ¹						
May hold college-wide office	+/- ¹						
May be a voting member of ACVIM committee	+/- ¹						
May be a Program Director, Resident Advisor, or Supervising Diplomate	+/- ¹		✓ ⁴				
Has a reduced (Diplomate) rate when registering for the ACVIM Forum	+/- ¹		✓			✓ ⁵	
Is listed as an ACVIM Diplomate Directory and on VetSpecialists.com	+/- ¹					✓	
May use the name American College of Veterinary Internal Medicine, the letters ACVIM, and the ACVIM log in his/her title and in association with his/her work	✓	✓		✓	✓	✓ ⁶	
<p>Legend: ✓ applies to the category; +/- may or may not apply to the category;</p> <p>¹ Only applies if the Diplomate has Active Diplomate Status;</p> <p>² Retired Diplomates no longer need to pay annual dues when retired, but need to have been current with dues payments up to the time of retirement;</p> <p>³ May attend Specialty business meetings, when permitted by the specialty, but may not vote in those meetings;</p> <p>⁴ In certain Specialties, check the Specialty section of the CM for confirmation;</p> <p>⁵ Rate is reduced below Diplomate rate after age 65;</p> <p>⁶ Restrictions apply regarding scope of work consistent with Retired Diplomate Status (see ACVIM website for details).</p>							

PART ONE: APPLIES TO ALL SPECIALTIES

4 Requirements for All Specialties

The Certification Manual informs residents, candidates, SDs, RAs, and PDs of the ACVIM's residency training requirements and of the certification steps for each ACVIM specialty. Information regarding dates of deadlines, examination content, registration procedures, fees, current forms, etc. is maintained on the ACVIM website rather than in the Certification Manual. Candidates should regularly check candidate webpages for any updates and/or changes in deadlines, requirements, or other matters that may affect their completion of their credentialing process. The ACVIM office does not send out notices to candidates or mentors regarding deadlines, as that information is maintained and kept current on the ACVIM's website.

An ACVIM Diplomate is a highly educated veterinary professional who has completed rigorous residency training and is certified by the ACVIM as a specialist. Residency training is an indispensable component of the transformation of a veterinarian into a specialist. Residency training is physically, emotionally, and intellectually demanding, and requires focused and committed effort on the resident's part to master their chosen discipline. The education of veterinary specialists is largely experiential and necessarily occurs within the context of an SI, with mentorship provided by the RA, SDs, and other specialists. Developing the skills, knowledge, and attitudes leading to proficiency at the level of specialty care requires the resident to assume personal responsibility for the care of individual patients/clients and to routinely seek guidance from the RA, the SDs, and any consulting specialists.

4.A Achieving Board Certification (Diplomate Status)

The process for board certification to become a Diplomate of ACVIM involves the following steps. An individual must:

- Be a graduate of a college or school of veterinary medicine that is accredited by the AVMA, or be legally qualified to practice veterinary medicine;
- Demonstrate professional behavior;
- Satisfactorily complete a one-year rotating internship in medicine and surgery, or an equivalent broad-based clinical experience;
- Satisfactorily complete an ACVIM registered RTP in the specialty for which the candidate seeks certification;
- Pass the ACVIM General Examination;
- Fulfill all credentialing requirements of the specialty for which the candidate seeks certification;
- Pass the ACVIM Specialty Examination in the specialty for which the candidate seeks certification.

4.B Summary of Procedures for all Specialties at a Glance

Registration of a resident as a candidate with ACVIM is submitted online to the ACVIM Office:

When: Within ninety (90) days of beginning the RTP

What: Online registration form and registration fee

Reviewed by: ACVIM Office

Response time: Eight (8) weeks

Application to take the ACVIM General Examination is submitted online to the ACVIM Office:

When: All components due by the date specified on the [ACVIM website](#). The deadline date will be in the year preceding the examination.

What: Online registration form, RA progress letter, two multiple-choice questions, progress record reflecting activities to that point, and examination fee payment.

Reviewed by: ACVIM Office

Response time: Thirty (30) days

Credentials for all specialties for the Specialty Examination are submitted online to the ACVIM Office:

When: All components due by the date specified on the [ACVIM website](#). The deadline date will be in the year preceding the examination

What: All components of the credentials packet and credentials fee

Reviewed by: Specialty CC or RTCC

Response time: Sixty (60) days

Registration and Fee for the Specialty Examination for all specialties are submitted online to the ACVIM Office:

When: By the date specified on the [ACVIM website](#). For most examinations, the date will be the year of the examination. For the LAIM Specialty Examination, the date will typically be the year before the examination.

What: Examination fee and previously approved credentials

Reviewed by: ACVIM Office

Response Time: Thirty (30) days

Appeals for rejection of credentials and/or examination failure are submitted online to the ACVIM Office:

When: Within thirty (30) days of results notification to the candidate

What: Brief letter summarizing the basis for the appeal

Reviewed by: ACVIM Appeals Committee

Response by: ACVIM Professional Liaison

Response time: Within thirty (30) days of receipt of appeal

4.C Special or Additional Procedures for Each Specialty

4.C.1 Cardiology

Resident Logs are submitted online to the ACVIM Office:

When: By the date specified on the [ACVIM website](#). Updated logs are due each year following the start of the residency through the end of the residency

What: Echocardiography Log, Procedures Log, and Structured Educational Experience Log

Reviewed by: Cardiology Residency Training Committee (CRTC)

Response Time: Eight (8) weeks

4.C.2 LAIM

- Clinical Writing Assessments (CWA) may be submitted on a rolling submission basis. Check the [ACVIM website](#) for specific details. See [6.1.6](#) for more details regarding the CWA.
- Publication guidelines are on the [ACVIM website](#). Proof of publication may be submitted at any time.

4.C.3 Oncology

- Publication guidelines are on the [ACVIM website](#). Proof of publication may be submitted at any time.

4.C.4 SAIM

- Unannounced audits of a resident's Journal Club log are possible.
- Publication guidelines are on the [ACVIM website](#). Proof of publication may be submitted at any time.

4.D Duration of RTP Training

Most RTPs are a minimum of three (3) years of continuous training; however, the specialty of LAIM allows approval of residencies that can be completed in two (2) years of continuous training. All specialties allow non-traditional (intentionally non-continuous) RTPs that may be a maximum of 5 years in duration. All specialties stipulate that in a non-traditional residency, all of the requirements of a traditional residency must be met in full and that all training must take place within clearly defined, continuous blocks of training time. [Cardiology](#) – [LAIM](#) – [Neurology](#) – [Oncology](#) - [SAIM](#)

4.E Time Allowed Between Successful Completion of RTP to Achieving Diplomate Status

In all cases, the maximum time allowed for completion of the board certification process is 5 years after the successful completion date of the RTP (the date on the candidate's Residency Certificate).

4.F The Certification Process

4.F.1 Registration of the Resident

A resident must register as a candidate with ACVIM using the online registration form, and pay a one-time registration fee within 90 days of beginning the RTP (e.g., by October 12 for programs that began on July 15). Registration information is posted on the ACVIM website. Registration is necessary to ensure that a resident embarks on a training program that conforms to the requirements of the specialty in which the individual wishes to become certified. Responsibility for registering is solely incumbent on the resident, with supportive information provided by the SI.

NOTE. Failure of a candidate to register, or registering after the 90-day deadline, may jeopardize the resident's certification process. Time served in the RTP before the candidate's registration may not be recognized or accepted. Time served in a program before the program's registration (see [section 4.F.2](#) below) will not count towards complete of the candidate's RTP.

The ACVIM office and the relevant RTC or RTCC evaluate the candidate's application. The candidate receives notification of status within eight (8) weeks of registration. When approved,

the candidate receives a unique identifying number that the individual uses throughout the candidate's certification process to access information, including examination results.

The Certification Manual's rules and regulations regarding residency training requirements that are in effect at the time the candidate registers apply for the duration of the candidate's certification process, unless an exception applies (see [section 3F](#)). If a candidate registers for certification in an additional specialty, the rules in effect for that specialty's residency training requirements apply for the duration of the candidate's certification process for that specialty. Policies and procedures that do not affect training requirements, e.g. registration deadlines, fees, submission forms, etc. may become effective for ALL candidates at the time the change is made and published on the ACVIM website.

The candidate must complete the registration process as a candidate before the certification process can begin. This is different from the RTP registration process, which is the registration and approval of the training program. Only the PD may complete and submit the paperwork for approval of an RTP. Before starting an RTP, the resident should verify with their RA that the PD registered the program and that the ACVIM and the appropriate specialty RTC/RTCC approved that RTP. If the RTP has not been approved at the time the candidate attempts to register, the candidate's registration will either be delayed or denied pending submission of paperwork by the RTP's PD.

If a candidate wishes to change training emphasis and become certified in a specialty other than the one for which the individual registered, the candidate must be accepted into a new training program. The candidate then notifies the ACVIM office to register in the new specialty. The appropriate RTC/RTCC rules on the acceptability of the candidate's credentials, including the relevance of any training that the candidate already completed.

If a candidate wishes to become certified in more than one specialty, the candidate must indicate that multiple registration forms are being submitted and must satisfy the requirements of each specialty. Each training program component is counted toward the requirements of one specialty only. ACVIM requires a separate registration fee for each specialty.

If a candidate wishes to change training programs but wishes to continue in the same specialty, the candidate must be accepted into a new training program. In this case, the new training program must apply for approval as a non-traditional training program for that specific candidate, even if that SI already has an approved RTP in that specialty. This is because the candidate will be participating in a unique experience in that SI, rather than the previously approved RTP. Both the appropriate RTC/RTCC and CC will rule on the acceptability of the candidate's credentials to that point, including the relevance of any training that the candidate already completed, as well as approving the newly created non-traditional program for that specific candidate.

4.F.2 Registration of the Residency Training Program

The ACVIM office maintains a registry of ACVIM-approved RTPs. Each year, a specialty's RTC or RTCC reviews its associated RTPs to ensure that the programs remain in good standing (see [3.O](#)). Registration materials for programs are specialty-specific and details regarding required information/online forms can be found on the ACVIM website. Program Directors for all existing RTPs must submit current year renewal information each year no later than the date specified on the [ACVIM website](#). Program Directors must always submit registration information for existing and new programs at least 90 days before the scheduled

residency start dates. Each calendar year, (current year) online forms are updated and made available to all PDs no later than the date specified on the [ACVIM website](#). Program Directors submit completed online forms via the [ACVIM website](#). The ACVIM office forwards the submitted information to the appropriate specialty RTC/RTCC for review and approval or denial. The RTC/RTCC responds within 45 days of the submission deadline or date of submission for new programs. If that review results in a program being placed on probation, the program will have 30 days to respond to the specialty RTC/RTCC with a remediation plan for correcting the deficiencies identified on review. Failure to provide such a plan is grounds for termination of an RTP. If there are severe deficiencies in an RTP which would result in a program being unable to provide the required training, an RTC may terminate a program immediately, without a probationary period.

Each RTP must register with the ACVIM before any resident begins that training program. Program registration is different than Candidate registration, which is covered in [section 4.F.1](#), above. If a candidate starts an RTP before the **program** is registered, the time spent in the RTP before that RTP is registered does not count towards completion of credentialing requirements. Neither the candidate nor the PD may accelerate the completion date of a program once that program has been approved by the RTC/RTCC.

The requirements specified in the RTP description become the official requirements for completion, even if those requirements exceed the minimum requirements stipulated in this Certification Manual. Neither a candidate nor a PD may retroactively petition for successful completion of a residency, even if the resident has met the minimum requirements of this Certification Manual, if the candidate left the program before completing all requirements of the program as previously approved.

If the candidate completes any clinical portion of the RTP at a location separate from the primary residency site, the candidate must obtain the written approval of the SD for each secondary and off-site rotation.

Documentation of this approval must be forwarded to and approved by the specialty RTC/RTCC before the start of experience at each separate location.

All programs must be completed within the timelines specified in [4.D](#) and [4.E](#) above.

4.F.3 Roles and Responsibilities

4.F.3.a. Responsibilities of the Sponsoring Institution

The SI and the PD must ensure the availability of all necessary professional, technical, and clerical personnel to best support the RTP. These resources include, but are not limited to the following:

- All ACVIM RTPs offered by the SI must be registered and approved by ACVIM;
- Residents must have ready access to specialty-specific and other appropriate reference material in print or electronic format;
- Electronic medical literature databases with search capabilities should be available. This must include access, either direct or remotely, to a veterinary or human medical library containing the textbooks and current journals the RTC/RTCC specifies;
- The SI must provide access to all required textbooks either as hard copies or as digital copies;

- The SI must ensure access to clinical pathology services that include hematologic, clinical chemistry, microbiologic, and cytologic diagnostic abilities. All clinical pathology reports must be archived and retrievable;
- The SI must ensure access to anatomic pathology services;
- All anatomic pathology reports must be archived and retrievable;
- A medical records system must be in place that allows the resident to maintain a medical record for each patient under the resident's care;
- The medical records must be retrievable within a searchable database;
- All necessary equipment for **specialty-appropriate** comprehensive imaging studies must be available (this includes access to standard radiographic equipment, ultrasonography, computed tomography, and magnetic resonance imaging as appropriate for the specialty);
- When required by a specialty, an intensive care facility must be present on the premises with qualified staffing that provides 24-hour care;
- An intensive care facility is a designated area of a hospital facility that is dedicated to the care of patients who are seriously ill or in need of continuous monitoring. The intensive care facility must be staffed by qualified veterinary technicians with direct oversight by a licensed veterinarian;
- There must be regularly-scheduled and performed didactic teaching sessions, Journal Clubs, and scientific seminars. The RA or PD must be able to provide documentation of these teaching events upon request of the RTC and/or CC;
- The PD and the RA must complete and approve semiannual written reviews of a resident's progress. Evaluated competencies should include clinical and technical skills and knowledge base. The resident must sign-off on these evaluations as documentation that the resident received the review. The resident must be provided a copy of the review for their records.

4.F.3.b Responsibilities of the Program Director

The PDs responsibilities are as follows:

- Each year, the PD certifies to the appropriate RTC or RTCC and to the ACVIM, in writing, that the PD has read the ACVIM Certification Manual and understands the PDs role in residency training;
- The PD ensures that all reports from the SI to the ACVIM are accurate, timely, and complete;
- The PD ensures that substantive changes within the RTP affecting compliance with a specialty's or the ACVIM's requirements are reported to the ACVIM and the chair of the appropriate specialty RTC/RTCC within fourteen (14) days of the changes implementation. This includes, but is not limited to, ensuring that the minimum number of SDs defined by each specialty is present within the RTP structure;
- Each year, the PD updates and reregisters each RTP with the ACVIM by the date specified on the [ACVIM website](#) to ensure that the RTP is in good standing and remains approved to train residents;
- The PD is responsible for notifying the ACVIM of any change in a resident's status within fourteen (14) days of such a status change. If the resident is placed on

probation, the required information must include the reason for probation and the date of the next scheduled resident review. If the resident is dismissed the information provided must include the effective date of dismissal. If a resident on probation is reinstated to good standing, the PD will also notify the ACVIM of that change in status within fourteen (14) days;

- Failure to submit the appropriate information by deadlines published in this Certification Manual may result in an RTP being placed on [probation](#). If the PD (whether the RTP is in good standing or on probation) does not respond to an RTC's/RTCC's request for documentation regarding the RTP within 30 days of the request, that RTP may be placed on probation, the current probation may be extended, or may be terminated. If an RTP is placed on probation or is terminated, the ACVIM notifies the PD and all residents currently in the RTP of the action against the RTP. If an RTP is terminated, it may not be renewed. A previously terminated RTP may reapply as a new RTP; however, any time served by a resident after the RTP's termination does not count towards completion of that individual's residency. Therefore, if an RTP is placed on probation prior to a new resident's start date (prior to the resident registering as a candidate), the RTP is responsible for notifying the resident of the change in the RTP's status prior to the resident beginning the residency;
- Before each new resident starts the RTP, the PD must inform the resident of the resident's obligation to read Part 1 ([Section 4](#)) of this Certification Manual, which applies to all specialties, and the section in [Part 2](#) of this Certification Manual that applies to the specialty in which the resident is to be registered;
- The PD ensures that the RTP maintains the correct ratio of Diplomates to residents as specified by a specialty;
- The PD monitors resident supervision provided by others to ensure adequacy;
- The PD monitors and ensures the quality of training activities that do not involve direct patient care such as Journal Club, didactic education, and research requirements of the specialty;
- The PD provides verification to the CC/RTCC that a candidate has completed all residency training requirements.

4.F.3.c Responsibilities of the Resident Advisor

The RA responsibilities are as follows:

- Each year, the RA certifies to the appropriate RTC/ RTCC and the ACVIM, in writing, that the RA has read the ACVIM Certification Manual and understands the RA's role in residency training;
- The RA signs all documentation verifying completion of a resident's program and provides this documentation to the PD;
- The RA contributes to a fair, respectful, and courteous atmosphere within the RTP;
- The RA is available for career counseling and clinical mentoring of the resident;
- The RA provides meaningful and direct assessments of strengths and weaknesses to the resident, in writing, at least semi-annually (Clinical Milestones: [Cardiology](#) – [LAIM](#) – [Neurology](#) – [Oncology](#) – [SAIM](#)). The resident is to sign the SIs copy of the evaluation to document that the resident has received the assessment;

- The RA supports and encourages the resident to participate in scholarly activities and guides the resident and ensures that case reports, publications, and research projects as required by the specialty are completed;
- The RA ensures that the successful resident gains competency and can perform all diagnostic and therapeutic procedures essential to the specialty;
- The RA supports and attends resident Journal Club on a regular basis.

4.F.3.d Responsibilities of an ACVIM Supervising Diplomate

SDs responsibilities include the following:

- An SD in the primary specialty ensures that the resident provides appropriate and compassionate clinical patient care;
- An SD in the primary specialty ensures that the resident gains a growing knowledge of established and evolving medical literature that is essential to the specialty;
- An SD in the primary specialty participates in clinical rounds or discussion of topical issues germane to the resident's specialty;
- An SD in the primary specialty supports and attends [resident Journal Club meetings](#);
- An SD, in supporting disciplines that are required by a specialty, provides appropriate mentoring in that supporting discipline as required by a specialty.

4.F.3.e Responsibilities of Residents

During the certification process, residents are required to:

- register with the ACVIM within 90 days of starting their RTP to become candidates;
- conduct themselves in a professional and ethical manner. Residents that fail to maintain ethical standards of conduct will be subject to disciplinary actions as described in [Section 4.G.1](#) below and may also be found in the "[Academic Misconduct Statement](#)" which is located on the candidate webpages of the ACVIM's website;
- provide competent and compassionate medical care;
- communicate effectively and honestly with the owners of their patients, with all members of the supporting medical staff, and with referring veterinarians;
- maintain timely and accurate medical records;
- be responsive to patient needs;
- respect the privacy interests of the owners of their patients;
- progress satisfactorily in their training as defined by their individual programs;
- comply with the clinic schedule provided them by their RA, including emergency duties, research time off, etc.;
- participate in scholarly activities such as seminars, didactic education, and Journal Club.

4.F.4 Supervision of the Resident

The SI must ensure that each RTP provides an appropriate level of supervision for all residents/candidates based on specialty requirements. Supervision may be direct or indirect.

Direct supervision is defined as having the SD and candidate on clinical duty together with hands-on management of cases interactively and concurrently. The SD is expected to be available for face-to-face consultation with the resident throughout the day. See specialty requirements later in this Certification Manual for any further definition: [Cardiology](#) – [LAIM](#) – [Neurology](#) – [Oncology](#) – [SAIM](#)

Indirect supervision refers to the SD being immediately available (telephone, text, email, etc.) for consultation and direct supervision when needed by the candidate. Such availability may be further defined by each specialty: [Cardiology](#) – [LAIM](#) – [Neurology](#) – [Oncology](#) – [SAIM](#)

4.F.5 Clinical Milestones

Clinical milestones are not requirements of ACVIM, but may be requirements or recommendations of a specialty ([Cardiology](#) – [LAIM](#) – [Neurology](#) – [Oncology](#) – [SAIM](#)). An RTP, RA, and a resident should use clinical milestones as guides to gauge clinical competencies and resident progress through the arc of the training program. The RTP can use each specialty's clinical milestones to identify a resident's strengths and weaknesses, and areas where the resident can improve. The RTP can also use them to decide whether to give a resident earlier leadership opportunities or privileges, whether it is appropriate to provide remediation to the resident, or whether it is necessary to dismiss the resident.

4.F.6 Training Site Locations

Training experiences may take place onsite, at a secondary site, or at an offsite location with limits dictated by some specialties. Supervision at any of these locations may be direct or indirect based on the requirements of each specialty.

4.F.6.a Onsite Training

Onsite training occurs at the SI. It can include a primary site (the site where the resident spends the greatest portion of training time) and a secondary site.

For experiences that require direct supervision, the SD and the resident must work at the same physical location (e.g. practice, teaching hospital, research laboratory) during the time of supervision. Onsite experiences may fall in either direct or indirect supervision categories.

4.F.6.b Secondary and Offsite Training

A secondary training site is a satellite clinic or educational facility at a separate location that is directly associated with the primary hospital or SI, or an independent facility for which a current and continuous relationship exists with the RTP. Offsite training occurs at a facility that is independent from the SI. Approval of training at secondary and offsite training locations must be approved prior to training taking place.

4.F.7 Research Requirements

Scientific discovery is a critical mission of ACVIM Diplomates. In recognition of this, all RTPs must include an assessable period of instruction or participation in creative scholarship that fosters appreciation of, competency in, and contribution to the knowledge base of the candidate's respective specialty. This creative scholarship also supports development of candidates as clinician scientists. Research is an essential credentialing requirement that the candidate must complete before board certification is granted. See individual specialties for elaboration on this requirement: [Cardiology](#) – [LAIM](#) – [Neurology](#) – [Oncology](#) – [SAIM](#)

4.F.8 RTP Probation

The RTC/RTCC of a specialty may place an RTP on probation. The RTP may continue to train residents during probation; however, it is subject to additional scrutiny by the specialty RTC/RTCC. While on probation, an RTP may not accept new residents into the RTP (unless the RTP can document that the resident was offered and had accepted the residency prior to the RTP having been placed on probation). If an RTP is placed on probation after a resident has been offered and accepted a position, but prior to the resident's start date, the RTP must notify the resident of the change in the RTP's status prior to the resident's start date. In such a case, the ACVIM will still allow the candidate to register, in the expectation that the RTP will mitigate the deficiencies and return to good standing.

However, acceptance of candidate registration in this circumstance is neither an assurance that the RTP will return to good standing nor an assurance that the time in training will count towards the residency requirements. Thus, it is imperative that the candidate be fully informed by the RTP of the RTP's communications with the RTC.

If, within the time specified by the specialty RTC/RTCC, the RTP does not mitigate the reasons for imposing probationary status on a training program, ACVIM will terminate the program. Triggers that may result in probationary status include but are not limited to:

Failure of an RTP to comply with all requirements by ACVIM and the individual specialties for resident training

Failure to submit the appropriate information by the deadlines published on the ACVIM website (on the candidate's webpage) or within the deadlines set by the RTC/RTCC if additional information is requested.

Failure of the PD to fill out all forms, accurately and completely, and submit them to the ACVIM office as required.

Failure to have an acceptable pass rate, as defined by each specialty, of residents taking the ACVIM General Examination, the Specialty Examination, or both over an extended period of time.

Failure to notify the ACVIM, the specialty RTC/RTCC, or both within fourteen (14) days of substantive changes to an RTP that could lead to noncompliance with the requirements of the specialty or ACVIM. Placing a resident on probation or terminating a resident will count as such a substantive change.

4.F.9 RTP Termination

The Board of Regents (BOR) may terminate any RTP after a recommendation by a specialty RTC/RTCC. Upon termination, an RTP is immediately ineligible to train residents or candidates. Termination normally follows a probationary period during which the RTP failed to satisfactorily resolve deficiencies that triggered probation. However, immediate termination of the RTP by the ACVIM without prior consideration or probation may result when the PD, RA, or any supervising individual engages in purposeful dishonesty in reporting or fails to meet any of the requirements of a specialty.

If at a later date, the terminated RTP wishes to be reinstated, the RTP may submit an RTP application to be approved as a new RTP. The new RTP submission must provide clear

documentation of what steps it implemented to correct the prior issues and how it plans to keep the corrections ongoing.

The ACVIM archives all relevant documents and notes of the RTC/RTCC pertaining to termination of an RTP. The documents are available to future RTCs/RTCCs upon request.

4.F.10 Journal Club

An organized, routinely scheduled, and documented Journal Club of at least 80 total contact hours over the course of the residency must be an integral part of all RTPs. Documentation will include dates of meetings, names of participants, and articles reviewed at each meeting. The RTC or RTCC may request the documentation from the program if there are questions during a program's review. Residents and at least one board-certified individual from any ACVIM specialty or from other specialties recognized by the American Board of Veterinary Specialties (ABVS) and/or the European Board of Veterinary Specialization (EBVS) as permitted by a specialty in this Certification Manual must attend Journal Club. Through the Journal Club, a resident sharpens critical thinking skills and increases understanding of statistical analysis of scientific data and clinical material: [Cardiology](#) – [LAIM](#) – [Neurology](#) – [Oncology](#) – [SAIM](#)

4.F.11 Training Weeks

For all ACVIM specialties, with some specific exceptions as defined by individual specialties, one week's experience is defined as a minimum of 40 hours over a contiguous seven-day period. A resident may not claim more than one week of training in any seven-day calendar week. See specialty requirements later in this Certification Manual for further definition of the 40- hour week and an explanation of any exceptions to the contiguous day requirement: [Cardiology](#) – [LAIM](#) – [Neurology](#) – [Oncology](#) – [SAIM](#)

4.F.12 Training Hours

In certain specialties, training experience for certain defined activities may be defined as Training Hours rather than a Training Week. A Training Hour is defined as one continuous hour of direct contact time with a supervising specialist in the specified training activity, e.g. clinical pathology. See [specialty requirements](#) later in this Certification Manual for further definitions of the application of Training Hours.

4.G General and Specialty Examinations

4.G.1 Examination and Credentials Expectations

All submitted credentials must accurately represent the candidate's own work. Additionally, candidates take all examinations on the honor system. Please refer to the Academic Misconduct Statement on the Candidate pages of the ACVIM website. Therefore, the following infractions by a candidate may result in disciplinary action:

- Misrepresenting any portion of their credentials;
- Receiving outside assistance on an examination (including advance notice of questions on the examination);
- Cheating on an examination;
- Misrepresenting work on an examination;
- Violating the confidentiality of an examination;

- Having behaved unethically in any other way during the credentialing or examination process.

The following disciplinary action may be taken regarding the candidate:

- Rejecting credentials;
- Receiving a failing grade on the examination in question;
- Forfeiting fees;
- Being subject to any other disciplinary action deemed appropriate by the BOR.

The disciplinary actions may include denial of permission to retake the examination in future years, loss of the ability to attain ACVIM certification, or both.

4.G.2 Special Accommodations

The ACVIM complies with the Americans with Disabilities Act of 1990, as amended by the Americans with Disabilities Act Amendment Act of 2008 (the “ADA”). Any candidate’s disability/impairment which may require special accommodation(s) in order to take an examination must complete the application form found on the [ACVIM website](#) and return it with the examination registration form by the registration deadline.

The ACVIM cannot guarantee the availability of accommodation onsite if a candidate who requires special accommodation does not request accommodation by the registration deadline. If a disability/impairment is identified after the registration deadline, the candidate must notify the ACVIM within 30 days of the diagnosis/recognition of the disability/impairment.

Accommodation cannot be granted retroactively. Therefore, if a candidate informs the ACVIM of impairment or disability after an examination has been completed, no changes can be made in that candidate’s examination results or how that candidate’s examination is graded in comparison to other candidates.

4.G.3 Scheduling the Examinations

A candidate may elect to take the General and Specialty Examinations in the same year, or may take the General and Specialty Examinations in separate years provided the following criteria are met: **A candidate must be in good standing to take either the General or the Specialty Examination.** See [section 30](#)

If a candidate leaves a program, either temporarily (e.g. a leave-of-absence) or permanently (e.g. dismissal) before completing the residency, the candidate is ineligible to take any examination until that individual resumes the training program and the appropriate specialty’s RTC or RTCC approves the candidate’s current status as being active.

Dates for each examination, registration deadlines, and steps required to submit credentials are maintained in the [Candidates’ Webpages](#) on the ACVIM website.

- A candidate may take their ACVIM General Examination for the first time provided that they will have completed at least eighteen (18) months of an approved RTP before the examination date and have met all other requirements specified by their specialty.
- A candidate wishing to take the Specialty Examination must satisfy the specialty’s examination prerequisites first: [Cardiology](#) – [LAIM](#) – [Neurology](#) – [Oncology](#) – [SAIM](#)

- A candidate may elect to take the General and Specialty examinations at the same time. In order to do so, the candidate generally must have completed at least twenty seven (27) months of an approved RTP before the examination date. Specialty requirements on credentialing vary but eligibility to take the [ACVIM General Examination](#) is the same for all specialties: [Cardiology](#) – [LAIM](#) – [Neurology](#) – [Oncology](#) – [SAIM](#)

4.G.4 Fees

Fees are associated with candidate registration, the ACVIM General Examination, specialty credentials submission, and Specialty Examinations ([Cardiology](#) – [LAIM](#) – [Neurology](#) – [Oncology](#) – [SAIM](#)). Candidates whose credentials were not previously approved and who are resubmitting credentials do not pay an additional credentials fee. Candidates whose credentials have been approved, but who are repeating all or a portion of an examination, whether the General Examination or a Specialty Examination, must pay a retake examination fee.

The BOR determines the fee amounts annually. Fees must be paid online or by other means set forth by ACVIM. The ACVIM website contains details regarding payment of the various fees, including deadlines, under individual sections dealing with each specific portion of the certification process: [Cardiology](#) – [LAIM](#) – [Neurology](#) – [Oncology](#) – [SAIM](#)

4.G.5 The ACVIM General Examination

An ACVIM committee appointed by the BOR develops the ACVIM General Examination content. Appointed members of the ACVIM General Examination Committee come from all specialties within the ACVIM. In addition, a Rating Committee for the ACVIM General Examination, under the guidance of a psychometrician, reviews and rates all new examination content for clarity and appropriateness in reflecting the knowledge a candidate should have before including items in the examination bank.

The ACVIM General Examination questions are in a multiple choice format. The examination consists of two parts: a general section for all candidates, and a large animal section or small animal section that candidates select according to their RTP, e.g. SAIM candidates will select Small Animal, LAIM candidates will select Large Animal. Cardiology, Neurology, and Oncology candidates may choose either the Small or Large Animal section. The ACVIM General Examination covers all aspects of veterinary internal medicine and must be taken and passed by all candidates seeking certification by any specialty within the ACVIM. A candidate who fails the ACVIM General Examination may retake the examination where and when it is next offered. Each part of the ACVIM General Examination is considered separately, so a candidate that passes one part but not the second is only required to retake the part that was failed.

To take the ACVIM General Examination, candidates must have completed at least 18 months of an ACVIM RTP by the time the ACVIM General Examination is taken. Detailed information regarding requirements to take the General Examination, criteria for developing and submitting the required original multiple choice examination questions, and the steps needed to apply for the examination may be found on the Candidate's Information section of the ACVIM website.

Candidates can use these links for additional information regarding the ACVIM General Examination: [Cardiology](#) – [LAIM](#) – [Neurology](#) – [Oncology](#) – [SAIM](#)

4.G.6 Specialty Credentials

Candidates must submit documentation of their credentials to ACVIM before they are eligible to take their respective Specialty Examination. The specialty CC or RTCC of the relevant specialty reviews, and accepts or rejects, the candidate's documentation.

Each specialty has established credentials requirements, some or all of which must be satisfied before the candidate may take the Specialty Examination: [Cardiology](#) – [LAIM](#) – [Neurology](#) – [Oncology](#) – [SAIM](#). There is a Specialty Examination Committee for each specialty which develops, administers, and grades its respective Specialty Examination. Each specialty also has a Specialty Rating Committee for their Specialty Examination that rates their respective examination's new content and reviews current content.

The candidate accesses application/credentials requirements from the ACVIM website: ([Cardiology](#) – [LAIM](#) – [Neurology](#) – [Oncology](#) – [SAIM](#)) It is the candidate's responsibility to review and comply with these requirements.

Deadline dates for credentials documents and the credentials fee vary between the Specialties. Appropriate dates may be found at the ACVIM website and within the application materials submitted online. ([Cardiology](#) – [LAIM](#) – [Neurology](#) – [Oncology](#) – [SAIM](#))

4.G.7 Specialty Examinations

A candidate intending to take a Specialty Examination must submit their credentials by the credentials submission deadline established by each specialty. Each candidate receives notification no later than 60 days after the submission deadline as to the acceptability of the submitted credentials and their eligibility to register and take their Specialty Examination. ([Cardiology](#) – [LAIM](#) – [Neurology](#) – [Oncology](#) – [SAIM](#)) Candidates retaking a Specialty Examination are not required to resubmit credentials, but are charged a fee for each reexamination.

THERE ARE NO EXCEPTIONS TO THE DEADLINE – CREDENTIALS PACKETS MUST BE SUBMITTED BY THE DUE DATE TO ALLOW ADEQUATE TIME FOR REVIEW BY THE RTCC OR CC. Failure to register by the appropriate deadline makes the candidate ineligible to take the Specialty Examination at its next offering. A candidate not on the list of registered candidates is not admitted to the examination.

Specific and current information about the composition and grading of each specialty's examination may be found on the candidates' pages of the ACVIM website.

4.G.8 Notification of Examination Results

Candidates in all specialties of the ACVIM are identified only by the unique identification numbers assigned to them by the ACVIM office at the time they register. The BOR approves individual candidate scores displayed only by their unique identification numbers. The notification process is the same for the ACVIM General Examination and all of the Specialty Examinations. The ACVIM General Examination Committee Chair and the respective Specialty Examination Committee Chairs notify Specialty Presidents of examination results for each specialty. Results are subsequently presented by the Examination Committee Chairs to the BOR for approval. Examination results are provided in letters that are uploaded to the

candidates' website. Once the BOR has approved the results, a message is posted on the ACVIM website providing instructions to candidates on how they may obtain their individual results. Candidates receive this written notification of their examination results within 45 days from the date of the examination.

4.G.9 Procedure for Reapplication Following Examination Failure

In order for a candidate to retake any previously failed examination (whether the ACVIM General Examination, the Specialty Examination, or both), the candidate must register online and pay the appropriate fees at the dates specified on the ACVIM website. ([Cardiology](#) – [LAIM](#) – [Neurology](#) – [Oncology](#) – [SAIM](#))

4.H Policy on Post-RTP Terminology and Specialty Title Usage

A candidate who has not completed the credentialing process and who is not an Active ACVIM Diplomate cannot use partial completion of the credentialing process as a qualification for self-promotion nor can they use the name ACVIM, the letters ACVIM, the ACVIM logo, or any other implication of achievement of some degree of specialization. Such usage is unethical and forbidden.

The ACVIM's Code of Conduct, the AVMA's Principles of Veterinary Ethics and the American Board of Veterinary Specialties' Policy Manual are quite clear that "it is unethical for veterinarians to identify themselves as members of an AVMA- recognized specialty organization if such certification has not been awarded. Only those who are board-certified may claim that status. Only those veterinarians who have been certified by an AVMA-recognized specialty organization should refer to themselves as specialists."

In the opinion of the ACVIM and the ABVS both the terms "board eligible" and "board qualified" are old and inappropriate terms regarding the certification process that are misleading and they should not be used by any veterinarian. One is either board-certified, having met all of the criteria of a particular specialty college or board, or one has no board credentials. Candidates that have successfully completed a residency training program and have received a residency certificate may identify themselves in one of two ways. They may identify themselves as "Practice Limited to" the specialty in which they were trained, e.g. Practice Limited to Oncology. They may also identify themselves as "Residency Trained in" the specialty in which they were trained, e.g. Residency Trained in Cardiology.

4.I Appeals

The Chair of the BOR appoints one ACVIM Diplomate from each specialty to serve as a voting member on the Appeals Committee. The ACVIM Professional Liaison serves as ex-officio member of this committee. When a candidate or a PD files an appeal, the Professional Liaison organizes a telephone conference call for the committee membership, led by the Committee Chair, to review the appeal and to render a decision. The committee is charged solely with determining whether the various specialty training, credentials, and examination committees followed proper administrative procedure in the decisions made. The Appeals Committee decides whether the committee(s) acted erroneously by:

- Disregarding established criteria for certification or approval;
- Failing to follow stated procedure;
- Failing to consider relevant evidence and documentation presented by the candidate.

4.I.1 Appeals Process

Either a candidate or a PD who has received a negative decision and who believes that a specialty's residency training, credentials, or examination committee failed to follow proper procedures may appeal the decision.

Appeals must be submitted to the ACVIM office in writing or [by email](#) within 30 calendar days of receipt of the decision being appealed.

- Appeals should consist of a brief letter summarizing the reason for the appeal, along with any supporting documents;
- When an appeal is received, the ACVIM's Professional Liaison notifies the Chair of the BOR, the appropriate Specialty President, the Chair of the appropriate Specialty Examination Committee and the appropriate CC or RTCC, and the members of the Appeals Committee that an appeal has been submitted, maintaining the anonymity of the appellant(s);
- The Chair of the appropriate RTC, CC, RTCC, or Examination Committee submits all data relevant to the appeal and a letter summarizing the reasons for the committee's decision to the Appeals Committee as soon as practical, so that the Appeals Committee can meet within its deadline;
- The Chair of the Appeals Committee calls a meeting, organized by the Professional Liaison, within 30 calendar days of the receipt of the appeal to review an appeal;
- The Professional Liaison notifies the Chair of the BOR, the Specialty President, and the appropriate committee chair(s) of the results of that review within 7 calendar days of the decision, maintaining anonymity of the appellant(s);
- The ACVIM Professional Liaison notifies the PD or candidate of the Appeals Committee's decision within 7 calendar days of the decision.

The Appeals Committee's decision is final and cannot be appealed within the ACVIM.

4.J ACVIM Diplomate Certificates

A candidate becomes an active ACVIM Diplomate immediately after completion and acceptance by the ACVIM of all requirements established in this Certification Manual. The ACVIM office notifies the candidate of the decision. The candidate is awarded an official ACVIM Diplomate Certificate at the next ACVIM Forum. The ACVIM office prepares these certificates and publishes lists of new ACVIM Diplomates.

4.J.1 Repossession of ACVIM Diplomate Certificates

ACVIM Diplomate Certificates always remain the property of the ACVIM and will be repossessed when one or more of the following occurs:

- The issuance of such an ACVIM Diplomate Certificate or its receipt by an ACVIM Diplomate is contrary to or in violation of any provisions of the ACVIM's Constitution and Bylaws;
- An ACVIM Diplomate fails to maintain an acceptable degree of competence in the practice of veterinary internal medicine, one of its specialties, or both;
- An ACVIM Diplomate that earned a certificate during or after 2016 fails to maintain credentials.

4.J.2 Reinstatement of ACVIM Diplomate Certificates

Reinstatement of an ACVIM Diplomate Certificate is possible with the individual meeting all of the requirements of a specialty MOC committee. Reinstatement is contingent upon the approval of the BOR, payment of all dues in arrears (to a maximum of three years), and payment of current dues in full.

4.K Maintenance of Credentials (MOC)

Each specialty has an MOC committee that evaluates and scores activities submitted by Active Diplomates towards meeting the MOC requirements of their specialty. Committee activities and requirements for each specialty's MOC may be found at [this link](#).

Failure to maintain credentials will result in loss of a Diplomate's certification as a board-certified specialist.

PART TWO: SPECIALTY-SPECIFIC REQUIREMENTS

5 Specific Requirements for the Specialty of Cardiology

The American College of Veterinary Internal Medicine (ACVIM) certifies specialists in Cardiology. Cardiologists focus on diagnosing and treating diseases of the cardiovascular system. This section of Part Two explains requirements for Cardiology Residency Training Programs (RTP), and for candidates working toward certification in this Specialty.

5.A Cardiology Residency Training Programs

The standards contained in this section of this Certification Manual are the minimum requirements for the Specialty of Cardiology. Any approved Cardiology RTP may include additional requirements above the minimum required by the CM. Those additional requirements then become part of that specific RTP. A resident in such an RTP must fulfill all the additional requirements of that RTP along with the minimum requirements in this Certification Manual prior to becoming an ACVIM Diplomate in the Specialty of Cardiology, as those additional requirements are necessary for that resident to obtain a Residency Certificate.

5.A.1 General Objectives of the Cardiology Residency Training Program

A Cardiology RTP will provide intensive training in clinical cardiology, including major responsibility for the care of patients with cardiovascular disease. An RTP will place lesser emphasis on training in internal medicine, which may be completed by having residents participate in primary patient care, attend internal medicine rounds, and/or attend medical conferences in internal medicine.

Residents will acquire a broad working knowledge of anatomy, physiology, and pathology of all body systems, and in-depth knowledge of the cardiovascular system in health and disease. Although clinical training in most programs is likely to emphasize small animal practice, knowledge of comparative cardiology across species is an expected outcome of every Cardiology RTP.

During a Cardiology RTP, residents will obtain knowledge and understanding of the following areas:

- General internal medicine;
- Physical and laboratory diagnosis, management, and prognosis of cardiovascular disease of all domestic animals;
- Basic sciences of the cardiovascular system that relate to clinical cardiology including macroscopic and microscopic anatomy, macroscopic and microscopic pathology, biochemistry, genetics/molecular biology, physiology/pathophysiology, and pharmacology/drug therapy;
- Recording and interpreting specialized cardiac diagnostic studies used in cardiovascular disease evaluation, including:
 - Electrophysiological studies – interpretation of electrocardiograms (including loop recordings, Holter monitoring, and intracardiac recordings), and cardiac pacing (including pacemaker interrogation and programming);
 - Cardiovascular sounds – auscultation and phonocardiography;

- Hemodynamics – cardiac catheterization techniques, interpretation of pressure tracings, indicator dilution studies, blood gases and oximetry, and calculation of shunt volumes/ratios based on these data;
- Cardiovascular radiography, computed tomography and cardiac magnetic resonance imaging, including angiographic and other contrast studies;
- Echocardiography - all modalities;
- Nuclear cardiology – understanding the principles of radioisotope studies of perfusion, cardiac dynamics, and shunts;
- Interventional procedures – knowledge of the anatomy, techniques, indications, and risks of interventional procedures.

5.A.2 Specific Objectives of the Cardiology Residency Training Program

A Cardiology RTP will provide residents with adequate practical experience in both invasive and noninvasive cardiac diagnostic and therapeutic techniques, along with suitable clinical case experience to ensure clinical proficiency as a cardiologist. Residents will document this experience, including salient information about patients and procedures, by maintaining a log of cardiovascular procedures and a log of echocardiograms they have performed using the currently-approved forms. Residents will submit the logs to the Cardiology CC annually. The log forms can be obtained from the [ACVIM website](#) or by requesting them in writing from the ACVIM office. Residents must use the most appropriate version of the log for each year's submission. Ideally, residents would use the most current format for submitting logs. They may also use the template in use at the beginning of their program. However, they may NOT use outdated templates, i.e. templates that were replaced prior to the start of their RTP. Use of outdated log forms may result in rejection of the log by the Cardiology Residency Training Committee or Cardiology Credentials Committee.

The ACVIM Cardiology Diplomate or a Diplomate of the European College of Veterinary Internal Medicine - Companion Animal (ECVIM-CA) in Cardiology supervising a cardiovascular procedure, as defined below (5.A.3.a) will provide signed documentation of each procedure's supervision. A summary form must be included in the resident's annual submission indicating the total number of echocardiograms, as well as the type and number of all cardiovascular procedures performed. The summary form is supplemental to the echocardiography log and the cardiac procedures logs and must be submitted annually, in addition to them. The summary form can be obtained from the [ACVIM website](#) or by requesting it in writing from the ACVIM office.

5.A.3 Specific Requirements to be Fulfilled During a Cardiology Residency

Cardiovascular Procedures

Performance of at least fifteen (15) supervised cardiovascular procedures is required during the RTP. For the purpose of these guidelines, such procedures are defined as diagnostic cardiac catheterization and selective angiocardiography, balloon valvuloplasty, intravascular stenting, endomyocardial biopsy, permanent transvenous cardiac pacing, placement of Swan-Ganz catheters with subsequent hemodynamic monitoring, placement of intravascular/intracardiac occlusion devices, heartworm or intravascular foreign body extraction, transvenous electrical cardioversion of atrial fibrillation, invasive electrophysiological studies, and radiofrequency ablation. Other cardiovascular procedures may be acceptable for this requirement, but must be approved in writing by the CRTCC prior to being performed.

“Performance” of the required procedure is defined as the trainee’s active participation (i.e., primary or secondary operator) in the procedure.

Observation of the required procedures is NOT adequate to fulfill the cardiovascular procedures requirements. A primary operator is a resident with primary case responsibility, under the direct supervision of the Supervising Diplomate (SD) responsible for the procedure. The primary operator acts as the lead resident in pre-procedural case management, procedural planning, and performance of technical manipulations during the procedure, and post-procedural case management. Only one resident can receive credit as primary operator for each case. A secondary operator is a resident who actively participates in the procedure but does not meet the criteria of primary operator. If more than one resident is involved in a procedure or procedures, each resident must specify in that resident’s procedure log which portion of the procedure that individual resident performed, and in which role the resident acted. As an example, if a patient undergoes catheterization, angiography, and an interventional procedure with one resident being the primary operator for the catheterization and angiography and the other resident being the primary operator for the interventional procedure, the logs of both residents must reflect that accurately; they cannot both claim to have been the primary operator for each component of the procedure. The primary SD has the ultimate decision on how each resident was involved in the case, i.e., which resident can record which procedure in the respective resident’s procedure log, and in which role.

No one procedure type can account for more than six (6) of the fifteen (15) total procedures to fulfill this requirement. For example, a candidate may implant more than six (6) transvenous pacemakers during the residency, but only six (6) would count toward this requirement and additional procedures of other types would also be needed. Procedures that involve multiple techniques such as diagnostic catheterization, selective angiography, and an intervention (e.g. balloon valvuloplasty or coil embolization) could be counted in any one (but not more than one) category. In other words, a candidate who performed eight (8) balloon valvuloplasties could count six (6) of them as balloon valvuloplasty, and two (2) of them as diagnostic catheterizations (which would represent the eight procedures performed, six counted in one category and two in the second).

This is the minimum number of acceptable procedures and true proficiency is likely to require more than this minimum standard.

Echocardiograms

Recording and interpretation of at least five hundred (500) echocardiograms (including M-mode, 2D, and Doppler studies).

Conferences

Conferences and seminars are considered part of the structured educational experience of an RTP. These can include formal case conferences, internal medicine conferences or grand rounds, and conferences at medical schools and pediatric hospitals. The availability of [structured educational experiences](#), including conferences, will be considered by the CRTC during review of the program application.

Special Procedures

Theoretical training in the principles and application of radionuclide angiography, computed tomography angiography, magnetic resonance imaging, digital subtraction angiography, and

invasive electrophysiological testing can be beneficial. Practical training in these areas is desirable if facilities and equipment, and qualified personnel are available.

Case Management

Given a clinical case with cardiovascular disease, the candidate should be able to evaluate the patient in a logical and skillful manner. The candidate should be able to:

- Obtain and interpret the patient's history and conduct a complete physical and cardiovascular examination;
- Develop a differential diagnosis, including both etiologic and pathologic (anatomical and physiological) diagnoses;
- Suggest appropriate laboratory studies to confirm or rule out each possible diagnosis;
- Perform and interpret diagnostic studies;
- Make a presumptive or definitive diagnosis based on accumulated data;
- Outline and explain the rationale for appropriate treatment, including options and alternatives for therapy, and render a prognosis;
- Understand the principles of cardiovascular surgery and interventional cardiac catheterization (e.g. balloon valvuloplasty). Basic knowledge of how to perform surgical and interventional procedures is considered essential; the ability to perform some but not all basic interventional procedures is also essential as per cardiovascular procedure guidelines ([5.A.3](#)), but true proficiency is not considered attainable in all programs unless additional training is undertaken. Understanding the indication for these procedures, how to monitor progression of the disease if intervention is not yet indicated, when and where these procedures may be performed, and follow-up after completion of these procedures is essential even if proficiency is not attained in the performance of the particular procedure;
- Communicate clearly to the client the diagnosis, prognosis and recommended management of the patient's problem.

5.A.4 Definitions for Cardiology Residency Training Programs

5.A.4.a Cardiology Credentials Committee

The Cardiology Credentials Committee (CCC) reviews and grades all credentials submitted by candidates. The CCC also certifies that each candidate has met all the requirements for the resident's RTP and all the requirements for becoming an ACVIM Cardiology Diplomate.

5.A.4.b Cardiology Residency Training Committee

The Cardiology Residency Training Committee (CRTC) reviews and approves all new RTPs. The CRTC reviews and approves for renewal each registered RTP annually. The CRTC also reviews any significant changes in an RTP (e.g., change in PD or Resident Advisor (RA), a resident/candidate's early termination or failure to complete an RTP, alterations in program duration or content, and locations of secondary training sites), and notifies the CCC of the approved changes. The CRTC also handles questions from the residents/candidates or PDs regarding interpretation of the program guidelines.

5.A.4.c Direct Supervision

The SD and resident are participating in a clinical practice in which both the Diplomate and the resident are on the clinic floor interactively, and concurrently managing cases. The Diplomate

need not personally examine each patient seen by the resident, but must remain physically available on-site and review the case with the resident.

5.A.4.d Indirect Supervision

The SD and resident although participating in a clinical practice together, are not on the clinic floor simultaneously and so are not concurrently managing cases. To qualify as indirect supervision, the SD is required to be on-site and have face to face contact with the resident at least one hour per day for the entire week.

5.A.4.e Non-traditional Training

Defined in [Part One](#). For the Cardiology Specialty, all RTPs must meet the guidelines set forth in this document. The CRTC must approve the program before a resident/candidate begins the program.

5.A.4.f Ombudsperson

Defined in [Part One](#). Residents and candidates may contact the Cardiology ombudsperson at CardiologyOmbuds@ACVIM.org. The role of the ombudsperson is to advise and offer options toward resolution of a problem as deemed appropriate, should any arise, between residents in training and either their institutional training programs officers, supervisors, or directors or with ACVIM as an organization. All communications are held in strict confidence.

5.A.4.g Program Director

Defined in [Part One](#). For the Cardiology Specialty, the Program Director (PD) must be an ACVIM Cardiology Diplomate or an ECVIM-CA Cardiology Diplomate. If the PD is an ECVIM-CA Cardiology Diplomate, that individual must be part of an RTP located in the United States or Canada. The PD must keep the ACVIM home office and CRTC apprised of any changes to the approved RTP or changes in the status of any resident.

5.A.4.h Resident Advisor

Defined in [Part One](#). For the Cardiology Specialty, the Resident Advisor (RA) must be an ACVIM Cardiology Diplomate or an ECVIM-CA Cardiology Diplomate. If the RA is an ECVIM-CA Cardiology Diplomate, that individual must be part of an RTP located in the United States or Canada.

5.A.4.i Supervising Diplomate

Defined in [Part One](#). For the Cardiology Specialty, the Supervising Diplomate (SD) must be an ACVIM Cardiology Diplomate or an ECVIM-CA Cardiology Diplomate for all cardiology training. See [Section 3.DD](#) for rules governing Supervising Diplomates for non-cardiology, supplemental training.

5.A.4.j Training Week

Defined in [Part One](#). A Cardiology RTP must have a resident working at least 40 hours in the span of 7 days in order for it to count as one week of a residency. This time includes emergency duties and patient care on weekends. Four weeks constitute one month of training.

5.A.5 Roles and Responsibilities

5.A.5.a Environment and Supervision Required at the Sponsoring Institution

In order to become an approved RTP, the RTP must be located at a veterinary medical facility with ACVIM Cardiology Diplomate(s) and/or ECVIM-CA Cardiology Diplomate(s) and an engaged faculty/staff active in a variety of disciplines and specialties. Each RTP must be

registered with and approved by the CRTC prior to the resident beginning the RTP. Cardiology training must include [active \(direct\) supervision](#) with the resident seeing cases. Such active supervision must be provided for at least twenty-four (24) months by at least one ACVIM Diplomate in Cardiology or an ECVIM-CA Cardiology Diplomate in good standing.

Training that is not under the direct or indirect supervision of an ACVIM or ECVIM-CA Diplomate in Cardiology must be detailed in the individual resident's application and approved by the CRTC in advance of the start of the resident's program. Video or other electronic conferencing by a Cardiology Diplomate does not fulfill the requirements for either direct or indirect supervision.

The RTP must not have more than 2 residents per ACVIM or ECVIM-CA Diplomate. If a Diplomate leaves the RTP and the program has more than 2 residents per Diplomate, the CRTC must be notified and the program will go on probation.

If a PD leaves the RTP, the Sponsoring Institution (SI) must notify the CRTC of the proposed change in director at least seven days before the change occurs. Failure to do so results in the RTP being [placed on probation](#). Failure to respond satisfactorily to CRTC requests for information will result in [program termination](#). Time served by residents in an unapproved or terminated RTP cannot count toward the completion of a Cardiology residency.

5.A.5.b Responsibilities of the Program Director

The PD ensures that substantive changes within a Cardiology RTP affecting compliance with Cardiology Specialty requirements are reported to the CRTC for approval before implementing the changes. Substantive changes include the following:

- Change of SDs who are Cardiology Diplomates of the ACVIM or ECVIM-CA;
- Change of RAs;
- Addition or removal of resident (e.g., dismissal of a resident, withdrawal of a resident);
- Any change in a resident's status (e.g. the resident is placed on probation);
- Alteration of program duration (any such change would require RTC approval);
- Resident switching to or from a dual board program (this includes non- ACVIM residencies, e.g. American College of Veterinary Emergency and Critical Care);
- Resident enrolling in an institutional graduate program.

Reporting inaccuracy may result in Cardiology RTP probation ([Part 1](#) – [Part 2](#)) or [termination](#).

5.A.5.c Responsibilities of the Resident Advisor

The RA must evaluate, in writing, an assigned resident at least [semiannually](#) and discuss the results of each evaluation with the resident. The resident must sign the RAs copy of the written evaluation to indicate that the resident has received a copy of the evaluation. The RA signs and verifies all documentation related to resident/candidate completion of program requirements.

5.A.6 Required Facilities and Equipment

Diagnostic equipment and facilities must include access to laboratories for clinical pathology, microbiology, parasitology, and pathology (gross and microscopic). On- site radiography,

cardiac catheterization and angiocardiography, electrocardiography, and echocardiography are required.

Availability of facilities for other studies, including intracardiac electrophysiology, computed tomography angiography, magnetic resonance imaging, and nuclear medicine, is desirable. Facilities should be sufficient to allow for outpatient, in- hospital, and intensive patient care.

Physical and electronic library facilities that provide access to textbooks and journals in both human and veterinary medicine are mandatory (see [4.F.3.a](#)).

If the CRTC determines an RTP is deficient in providing training in any area of the program, the CRTC can require the RTP to correct the deficiency (see [5.A.10.a](#)). Failure to correct deficiencies may result in an RTP being placed on probation or, if persistent or recurrent, may result in program termination.

5.A.7 Didactic Learning Opportunities

The SI must provide residents with several didactic learning opportunities. In-depth knowledge of cardiovascular medicine, especially its basic science aspects, cannot be gained by patient care alone. Comprehensive knowledge of the field should be gained by the following structured educational experiences for learning and development.

5.A.7.a Journal Club

Residents must participate in at least 80 hours of Journal Club throughout the course of their residency. At least one ACVIM Diplomate, in any ACVIM specialty, must attend each Journal Club meeting. Residents must keep a log of Journal Club activities that includes the date, topics discussed, and those in attendance.

The log is submitted as part of the credentials packet reviewed by the CCC.

This Journal Club requirement is in addition to the 150 hours of cardiology structured educational experiences outlined below.

5.A.7.b Cardiology Structured Educational Experiences

Formal conferences (structured educational experiences) take many forms, including cardiology Journal Clubs (covered in [Section 5.A.7.a](#) above), cardiology case conferences, cardiology conferences at medical schools and pediatric hospitals, cardiology book reviews, and cardiology seminar series. These conferences are distinct from case assessment and discussion (e.g., daily case rounds) that are directed by an SD during clinical practice. The CRTC considers availability of structured educational experiences during review of an RTP's application.

At minimum, the RTP must provide educational experiences such as those listed in this section. Residents/candidates must complete 150 hours of cardiology-related education. Attendance at continuing education conferences outside of the residency training facility cannot fulfill greater than ten hours per year of structured educational experiences. These requirements are in addition to the 80 hours of Journal Club mandated in the general ACVIM guidelines and in [Section 5.A.7.a](#) above.

Residents must document participation in required structured educational experiences in the Education Log submitted annually with the Echocardiography, Cardiology Procedure and Summary Logs. The Education Log must indicate the individual structured educational

experiences, with the date, planned duration, and actual duration of each one. A copy of the Education Log can be obtained from the [ACVIM website](#). Variances of a maximum of 15% in actual structured educational time can be explained by daily circumstances (e.g., a 60-minute session that lasts only 50 minutes or less because of patient care obligations) or unforeseen circumstances (e.g., illness); a difference of >15% in delivered versus scheduled structured educational time must be rectified by the RTP and candidate.

Supervising Diplomate(s) must participate actively in structured educational activities. Residents may meet the requirement for structured educational experiences by means other than those described next. However, the CRTC must approve any deviation from these requirements in advance of the educational experience.

The types of cardiology structured educational experiences which residents may attend are:

- **Cardiology Journal Clubs:** Review and critical analysis of the cardiovascular literature is central to a Journal Club. Cardiovascular literature is broadly defined to include peer-reviewed medical, comparative, and veterinary literature;
- **Cardiology Clinical Case Conferences:** Case conferences provide a forum for thorough and detailed consideration of clinical cases. These structured activities emphasize pathophysiology, clinical presentations, interpretation of diagnostic studies, therapy, and outcome. Rounds with residents/candidates presiding over clinical cases do not meet the criteria for clinical case conferences;
- **Seminar or Lecture Series:** Seminars or lectures in cardiology presented by Diplomates or residents/candidates provide an opportunity for in-depth study of cardiovascular topics;
- **University Classes:** This is formal course work in which a resident participates and which is pertinent to the RTP. If a resident enrolls in a course that has a direct relationship to cardiology practice or research such as physiology, pathology, statistics or other related fields, the resident may log the course as part of cardiology educational experience. If a physician cardiologist or Cardiology Diplomate (ACVIM or ECVIM-CA) teaches a course, it can be used to fulfill the education requirements. If a course covers a cardiology topic, the resident may enter the full number of hours that the resident attends the course into his/her log. If the resident attends a class in a related field (e.g., statistics), and wants to use the class as cardiology educational experience for more than 10 hours per year, then the resident must submit a written description of the class to the CRTC along with the logs. If the CRTC rejects these hours, and if the SD or the resident disagrees with the CRTC's decision, then an appeal can be made to the [ACVIM Appeals Committee](#).

5.A.7.c Supplemental and Suggested Cardiology Focused Educational Experiences

Residents may also develop in-depth knowledge of the Cardiology Specialty through the following educational experiences:

Required of each resident in each RTP:

- Attend at least one ACVIM Forum;
- Develop a structured self-study program in consultation with the resident's RA. The Cardiology Specialty Examination Committee provides a comprehensive reading list, and this list should be reviewed at the start of the RTP. A self-study

program should include standard texts in veterinary and human internal medicine and cardiology, cardiovascular anatomy, physiology, pharmacology, embryology, pathology, and appropriate current and past journal articles detailing veterinary and human cardiology.

Optional for each resident in each RTP:

- Attend a cardiology-focused ACVIM Advanced Continuing Education (ACE) course;
- Examination Review Sessions.

5.A.8 Research Requirement

Residents are encouraged to participate in clinical or laboratory research projects, including project design, execution, evaluation, presentation of results as an abstract at the annual ACVIM Forum, and publication of results. Completion of this research requirement can include any of the following:

- Documented (letter from RA) submission of a prospective research grant/project pertinent to the candidate's specialty
- Acceptance and presentation at a scientific meeting of an abstract (either oral or poster) of original work
- Documented completion (letter from RA) of a prospective or retrospective research project
- Documented completion (letter from RA) of graduate course work in biostatistics, research methods, and/or research ethics
- Options that residents can do instead of a research project to fulfill the research requirement include successful completion of at least six hours of seminars or classes. These may be offered by the ACVIM, or through online courses, or at other institutions. These classes will cover subjects such as:
 - Critical evaluation of the veterinary medical/biomedical literature;
 - Grant writing;
 - Study design and participation in clinical trials.

5.A.9 Secondary Training Sites

Secondary training sites constitute Off-Site Training experiences that may be used to provide access to required procedures and to enhance training. Secondary training supervisors must be ACVIM Diplomates or ECVIM-CA Diplomates in Cardiology in good standing and are expected to provide active (direct) supervision. No more than four (4) of the required twenty-four (24) months of active (direct) supervision of clinical training can be obtained at secondary training sites.

If secondary site training experiences are used to fulfill a portion of the requirement for active (direct) clinical supervision or to complete required cardiovascular procedures, the secondary site supervisor must complete a [Cardiology Training Agreement Form](#). This form must be submitted online to and approved by the CRTC with the RTP application. The Cardiology Training Agreement Form will indicate clearly the scope and duration of the proposed training and the specific (single) trainee to which the particular agreement pertains. Upon completion of the proposed training, the original Cardiology Training Agreement Form must be updated to

describe the actual time spent with the resident and the procedures performed. Secondary site supervisors must sign all appropriate resident logs.

Secondary site experiences that are not used to partially fulfill the required active (direct) supervision of the program do not require completion of the Cardiology Training Form. Brief descriptions of these experiences should be listed in the residency application.

5.A.10 Residency Training Program Registration and Evaluation

Certification in the Cardiology Specialty requires completion of an RTP that is at least 36 months long and that must be approved by the CRTC **before** the program starts training residents/candidates.

The PD and RA in all Cardiology Residency Training Programs must either be an ACVIM (Cardiology) Diplomate or an ECVIM-CA Diplomate certified in the Specialty of Cardiology. The ratio of total cardiology residents to on-site Cardiology Diplomates who are actively involved in resident training cannot exceed 2 to 1.

Variations may be permitted by the Cardiology Residency Training Committee, but a request for a variance will require a detailed explanation from the PD to the RTC and written permission from the RTC must be granted. In general, such approval will relate to combined residency-graduate degree programs or programs that include significant resident research commitments. Any secondary site supervisor(s) must be Diplomates in their respective specialties and approved for their specific programs by the CRTC.

5.A.10.a Program Probation

The CRTC may place an RTP on [probation](#) for various reasons including:

- Increased frequency of reviews by the CRTC which fails to result in resolution of deficiencies of current residents/candidates
- Serial problems experienced by sequential residents/candidates that are of a similar nature between resident classes
- Failure to provide sufficient number of Journal Clubs or cardiology structured educational experiences
- Failure to provide direct resident/candidate supervision
- Failure to provide sufficient case experience as evidenced by resident logs
- The ACVIM office personnel compiles data for each Cardiology RTP on the number of candidates that pass the General and Specialty Examinations, and on the number of candidates that must take the examinations more than once to pass them. If an RTP has continuous issues with candidates failing to pass the examinations after two attempts, then the CRTC may place the RTP on probation. The CRTC conducts an intensive review in an attempt to identify and help the program correct the problem. If the problem cannot be resolved, and if candidates continue to have problems passing the examinations, the CRTC may [terminate the program](#).

Failure to submit the appropriate information by the deadlines published in this Certification Manual may result in the CRTC placing a Cardiology RTP on probation. While on probation, the RTP may continue to train residents, but may not accept new residents into the program.

If the PD fails to respond to CRTC requests for documentation regarding the RTP within 30 days of the request, that RTP may be placed on probation. If the PD fails to provide an acceptable response within an additional 30 days, the CRTC will terminate the RTP.

5.B Cardiology Candidate Requirements

5.B.1 Distribution of Training Time

All Cardiology RTPs are a minimum of 36 months in duration. Twenty-four (24) months of direct supervision in Cardiology is the minimum requirement for each RTP. The remainder of the 36 months could be vacation, study time for boards, research, and indirect supervised clinic time.

The number of cases seen during the training program will vary among training sites. At all training sites, the majority of case material must emphasize cardiac disorders. Emphasis should be on quality rather than quantity, although a sufficient caseload must be available to provide experience with all types of cardiovascular disease in as many different species as possible.

All residents should receive direct or indirect supervision during their residency unless the resident is spending time on vacation, study time for boards, research or supplemental experiences.

5.B.2 Supplemental experiences

Additional secondary site experiences that do not fulfill a portion of the required twenty-four months of direct supervision or the required five hundred (500) echocardiograms, 150 hours of structured educational experiences, 80 hours of Journal Club, or fifteen cardiovascular procedures are supplemental (optional) experiences and do not require documentation from Supervising Diplomates. A brief description of these supplemental experiences is asked for in the [RTP registration form](#). This is used by the CRTC for its annual review of the program.

If the resident is spending time with a physician cardiologist, this time (up to 2 weeks) can be logged as indirect supervision as long the experience is discussed/reviewed with an SD or the RA.

5.B.3 External (Affiliated) Rotations

If the PD, RA and/or CRTC deems it necessary to require one or more rotations under the direct supervision of specialists not available on site (e.g. internist, radiologist, anesthesiologist, and pathologist), then an outside rotation needs to be included in the RTP description to satisfy the requirement.

During this time, direct supervision by another specialist is required and must be documented in writing as having been completed.

5.B.4 Residency Training Interruption

Training interruptions may be unavoidable in circumstances where a resident must switch from one RTP to another to fulfill all RTP and credentialing requirements. In such cases, the CRTC must approve the new RTP before the onset of clinical training, and the CCC should be notified of the approved changes. In addition, the CCC and CRTC must each verify which portions of the training at the original RTP will be accepted as fulfilling credentialing requirements. If a resident has been placed on probation at one training site and is accepted

into an RTP at another institution (nontraditional program), the time on probation can only be counted toward the cumulative training requirements with the consent of the PD at the site that implemented probation for the resident. All such requests for approval of prior training must be reviewed and approved by both the CCC and the CRTC.

5.B.5 Consultation and Supervision

Consultation with qualified specialists, in addition to cardiologists, is an important component of an RTP. The CRTC considers the availability of board-certified specialists when evaluating residency program applications. A site that trains cardiology residents should have access to other board certified specialists or have a plan to send the resident to other locations to get this training during the course of the 3-year residency in an effort to improve the residents' general medical knowledge, to improve their ability to pass the ACVIM General Examination, and to improve their ability to manage cardiac cases that have problems with other body systems. The number of rotations will be determined by the PD in concert with the CRTC based on the individual resident's background.

The CRTC recommends that residents have the equivalent of a rotation of at least 2 weeks in duration with a board-certified specialist in each of the following: internal medicine, clinical pathology and/or gross pathology, anesthesiology, and advanced radiology training (e.g., diagnostic imaging such as CT, MRI, non-cardiac ultrasonography, etc.).

The CRTC prefers that a board-certified surgeon be onsite; however, it is not required. Telemedicine consultations are not considered adequate training for the cardiology resident in the specialties listed in the previous paragraph, unless the consult includes a detailed and complete verbal discussion of the case between the mentor, resident, and radiologist or pathologist or another specialist giving the consult. The receipt of a written diagnostic imaging or pathology report via telemedicine is not considered adequate to meet the training requirements of a resident, and neither is an interaction conducted via email; there must be one-on-one dialogue between the resident and the consultant.

If an RTP plans to provide supplemental training in internal medicine, clinical pathology, gross pathology, anesthesiology, advanced radiology, or direct supervision by other ACVIM specialties at locations other than the SI, the PD must provide letters of commitment from the offsite providers to the CRTC.

Updated letters of commitment must be submitted at annual renewal of an existing program. Additional information about secondary training sites is found in [Part One](#) of this Certification Manual and above in [Cardiology Part Two](#).

5.B.6 Resident Evaluation

Residents should receive a formal written evaluation from their RA at least semiannually. The evaluation may be completed using criteria developed by the Sponsoring Institution. The resident is to sign the RAs copy of the written evaluation, to indicate that the resident has received a copy and has reviewed it with the RA.

Consultation with the Cardiology Ombudsperson is recommended if a discrepancy exists among the PD, an SD, the RA, and a resident as to the cause for the unsatisfactory progress of the resident.

5.B.6.a Resident Logs

Residents/candidates complete the following logs to verify their fulfillment of the Cardiology RTP requirements:

- Resident log summary form;
- Echocardiography log;
- Cardiovascular Procedures log;
- Education log.

Log completion begins with the start date of the resident in the RTP and continues throughout the program. Residents must use [the logs ACVIM provides](#) to submit information to the CRTC and to the ACVIM office. The resident should verify, prior to submission, that he/she is using the most appropriate logs (either the most current or the one in place at the start of the residency).

Log entries must be typed in the proper format, and signed by the PD and the SD as instructed on the log forms. Residents submit completed logs online to the ACVIM office, according to the time-line defined on the [ACVIM website](#) by the deadline posted on the [ACVIM website](#). The exception is for the year before that individual intends to take the Cardiology Specialty Examination. In that circumstance the resident submits credentials packet, by the date specified on the [ACVIM website](#), in the year before they plan to take the Cardiology Specialty Examination. At the time of that submission, the resident submits a copy of all logs completed through the date specified on the [ACVIM website](#). They will submit their **final** log after completion of the residency (which will be after the examination). If the resident elects not to take the Cardiology Specialty Examination during the last year of residency, then the **final** log is to be submitted at the end of the residency, according to the timeline defined on the ACVIM website, which will be before their examination.

Residents must keep a log of all echocardiograms, cardiovascular procedures, and educational activities they complete. Periodically, the CRTC updates the log form templates. Residents must check the ACVIM website yearly and, where appropriate, adapt their logs accordingly for use moving forward.

Ideally, residents use the most current format for submitting logs. They may also use the template in use at the beginning of their program.

However, residents may **NOT** use outdated templates, i.e. templates that were replaced prior to the start of their RTP.

Residents should also download and use in [their log entries](#) the list of acceptable abbreviations compiled by the CRTC.

5.B.6.b Cardiology Residency Training Committee Log Review

The CRTC annually reviews first and second-year resident logs in every RTP, and third and fourth-year logs in longer RTPs. The CRTC assesses the status and accomplishments of a resident/candidate in the training program, and considers the content of the resident logs in the annual review for program renewal. If satisfactory progression is not observed, the CRTC notifies and works with the PD and RA of the RTP to ascertain why performance is not satisfactory and what to do to rectify the situation. The CRTC may approve the program depending on the degree of concern, and providing the resident/candidate and the PD give an adequate response regarding the deficiencies. If the deficiency in the progress of the resident

or if the explanation provided is unsatisfactory, the CRTC may recommend a more intensive review of the RTP (e.g., increase in the frequency of log submissions, submission of a scheduled plan for the remainder of the educational sessions for the residency, plan for additional outside rotations). After this more intensive review of the program, the CRTC may place the program on probation and indicate how that program must proceed to regain reinstatement ([Part 1](#) – [Part 2](#)). Each resident is notified no later than eight weeks after review of the logs regarding their acceptability.

5.B.6.c Cardiology Credentials Committee Log Review

During the credentials approval process the CCC reviews a resident's logs, after which the CCC Chair notifies individuals with any deficiencies in any area and indicates which action(s) the resident must take to remedy the deficiencies. After correcting the deficiencies, the resident submits a **final** log to CCC for review and completion of verification. Once verified, the CCC Chair notifies the ACVIM office the resident completed all requirements. No candidate can become a Diplomate, even if the candidate passes the General and Cardiology Specialty Exams, until the candidate has completed all requirements.

5.B.7 Publication Requirement

There is no publication requirement for the Cardiology Specialty.

5.B.8 Complaints by Residents or Candidates

Residents with complaints regarding program noncompliance, especially concerns that are not sufficiently resolved by the RTP's PD, should direct concerns in writing to the Cardiology Ombudsperson and to the current CRTC Chair. Residents can obtain the names and contact information of these individuals from the ACVIM office. A response to the complaint can be expected within four weeks. Assistance from the Cardiology Ombudsperson can also be sought for situations that are difficult to resolve. The Cardiology Ombudsperson can be contacted directly by email at CardiologyOmbuds@ACVIM.org.

5.B.9 Vacation and Study Time

The RTP sets vacation times for residents. The CRTC recommends that a resident take at least two weeks of vacation per year. The RTP also determines the amount of time off to study for the General Exam and the Cardiology Specialty Exam. The CRTC would generally like to see specific time earmarked for candidates to study for exams, with representative examples being 3-4 weeks off for the General Exam and 5-8 weeks off for the Cardiology Specialty Examination.

5.B.10 Clinical Milestones for First Year Residents

First-year residents should meet the following milestones to continue to the second year of their RTP. The CRTC considers extenuating circumstances on a case by case basis, provided the RA or the SD to whom the impacted resident is assigned submits a letter explaining the circumstances.

Because the CRTC reviews logs residents submitted by the dates specified on the [ACVIM website](#), a full year of work is not normally reviewed in a resident's first year; this will vary based on a resident's start date. Typically, a resident includes seven to eight months of first year logs. Therefore, the number of items in the log is prorated for that amount of time.

- Register with ACVIM within 90 days of beginning the RTP;

- Demonstrate competency, as determined by the RA, in cardiovascular examination and physical diagnosis;
- Demonstrate satisfactory progression in the program on semi-annual written review of the resident by the RA;
- Complete 40-50 structured educational hours, realizing that 50 hours is the goal to achieve each year of residency for a total of 150 hours at the end of three years;
- Attend 25-27 hours of Journal Club (in addition to the structured educational hours above), realizing that 20-30 hours is the goal to achieve each year for a total of at least 80 hours at the end of three years;
- Perform two to five cardiovascular procedures. Relative to second- and third- year residents, first year residents might not have the opportunity to perform as many procedures, which explains why this number is fairly low;
- Perform 100-150 echocardiograms in the first year. Because most first-year residents/candidates are learning to do echocardiograms, this number is prorated to 50-100 echocardiograms by the time of log submission on the date specified on the [ACVIM website](#);
- Determine with the RA a plan to achieve the research requirement as outlined by [Part 1](#) of this document and [above](#). This may consist of ideas for a research project and/or planned coursework to attend, depending on the option selected.

5.B.11 Clinical Milestones for Second Year Residents

Second year residents should reach the following milestones to continue to the third year of their RTP:

- Demonstrate competency, as determined by the SD and the RA, in clinical cardiology; demonstrate satisfactory progression on the RAs annual review of the resident;
- Complete 100 educational hours cumulatively, realizing that 50 hours is the goal to achieve in each year of residency for a total of 150 hours at the end of three years;;
- Attend 52-54 hours of Journal Club meetings cumulatively, realizing that 20-30 hours is the goal to achieve in each year to allow for a total of at least 80 hours at the end of three years;
- Perform additional cardiovascular procedures for a cumulative total of six to 10 procedures by the end of the second year of residency; roles as primary or secondary operator as described in [5.A.3](#);
- Perform additional echocardiograms for a cumulative total of 300-350 echocardiograms performed by the end of the second year of residency;
- Continue the plan developed to fulfill the research requirements. For example, completion of data collection in a research project or completion of coursework now or in the next 12 months.

5.B.12 Credentials Items to be Submitted for the Cardiology Specialty Examination

****Always check the ACVIM website prior to submission; this list is subject to change.****

Each resident must prepare and submit a set of questions suitable for use in future Cardiology Specialty Examinations. The intent of these questions is to demonstrate the candidate's knowledge of cardiovascular medicine and to demonstrate that individual's clarity of scientific communication. In addition, it gives residents input for future examinations. All questions must be typed in a standard word processing program. The questions and their correct answers must be referenced from the veterinary literature. No human medical journals may be used as references, unless veterinary references also exist for the same question or unless an ACVIM Cardiology Diplomate wrote the article. The candidate should not use the same references for more than one question.

The directions contained in the [Guidelines for Cardiology Credentials](#) are the most updated directions. They supersede the following requirements for question preparation, if a conflict exists between the two. The CCC reviews and grades the set of questions a resident prepares and submits based on content, level of difficulty, references, and clarity of graphics. A score of 0 to 5 will be assigned to the submitted questions, and this score will constitute 5% of the total score for the Cardiology Specialty Examination. The required materials that must be submitted with the credentials application include:

- Five (5) multiple-choice questions that follow the [American Board of Internal Medicine guidelines](#) for writing examination questions. Questions must be from at least four of the subcategories designated by capital letters in the [Cardiology Subject Category Study Outline](#). No more than two questions can address a single subcategory. The subject category and subcategory must be clearly indicated for each question;
- Three (3) essay questions. The questions may relate to any three different categories in the Cardiology Subject Category Study Outline. The subject categories may include those addressed by the candidate's multiple choice questions. The subject category and subcategory must be clearly identified. A suitable answer must accompany each question. This answer must be referenced;
- Three (3) high quality, publishable electrocardiograms (ECGs), each of which allows a candidate to evaluate it within two to three minutes. An ECG may be obtained from any species, other than humans. Questions and referenced answers regarding the interpretation of the ECG must accompany the submission. The ECGs should be submitted as high quality digital images (dpi of 300 or higher is recommended). ECGs should be optimized for amplitude and paper speed where possible;
- Three (3) questions with accompanying answers that require the interpretation of submitted graphic material, such as (but not limited to) radiographs, cardiac catheterization data, ultrasound exams, gross or microscopic pathology, or other special studies. These still graphics must be of publishable quality. Images should be 300 dpi or higher to ensure publishable quality. Images where color is important should be provided as color images. A single image sufficient to make a diagnosis is preferred. If a single image is insufficient to allow a diagnosis, then it is strongly recommended that each image submission consists of no more than two parts (i.e., image #1A and image #1B);
- A single high quality (at least 300dpi) digital video recording of an echocardiogram, or an angiogram or other fluoroscopic procedure. This is to be accompanied by a description of the findings and an appropriate question regarding the submission with an accurate answer(s) to the question proposed. Multiple recordings are unacceptable for submission in this section; however, an edited compilation of several echocardiographic views from a single patient's examination that is contained in a single clip (i.e. a video montage) is acceptable. The

candidate should ensure that a diagnosis can be made using a single digital video loop. The image and diagnosis should be referenced as described above;

- A single case study with multiple high-quality images or videos, such that multiple questions/answers about the case can be developed. The ideal submitted case should have some complexity and should not be a “simple” case (e.g., a congenital case with more than 1 defect might be a possibility for submission). A submitted case study would need to have a minimum of 3 of the diagnostic tests, but more than 3 of the following is acceptable and strongly encouraged. The 3 diagnostic tests can be comprised of a heart sound recording or phonocardiogram, ECG, thoracic radiographs, diagnostic echocardiogram (multiple loops and stills), angiogram, pressure tracings, or other forms of imaging or diagnostics (computed tomography, magnetic resonance imaging, oximetry, EP study). The candidate should submit a minimum of 3 questions that can be answered from these case materials, including the diagnosis, and the answer to the questions should be referenced as described above;
- A letter signed by the candidate's RA and the candidate stating that the candidate did not have any direct help in preparing the questions must accompany the set of questions;
- Three (3) letters of reference from cardiology associates with whom the candidate has worked during the training program. At least one must be from either an ACVIM Cardiology Diplomate or an ECVIM-CA Cardiology. It is preferred that a second reference also come from either an ACVIM Cardiology Diplomate or an ECVIM-CA Cardiology and the third from an ACVIM Diplomate certified in the Specialty of Small Animal Internal Medicine or Large Animal Internal Medicine. Each referee must submit the reference letter or form as directed in the credentials packet;
 - An [application](#) must be completed and fees paid online;
 - Candidates must submit their **final**, updated Echocardiography, Cardiovascular Procedures and Education Logs and a completed Summary Form to the [ACVIM office](#) as soon as they have completed any deficiencies as identified by the CCC. Logs need to be submitted and approved by the CCC prior to the time the resident finishes the residency. Failure to complete the deficiencies and have the logs reviewed and approved by the CCC will result in the candidate not being awarded Diplomate status.

5.B.12.a Procedures for Submitting Credentials

****Always check the ACVIM website prior to submission; this process is subject to change.****

Candidates may [submit complete credentials packet](#) and the credentials fee online to the ACVIM office to the attention of the CCC Chair **following completion of 27 months of the residency**. If an individual is ACVIM board- certified in a different specialty and is participating in an ACVIM registered Cardiology RTP, that individual may submit credentials within the final 12 months of the Cardiology RTP. Applicant instructions, specific Specialty Examination details and instructions for meeting the credentials requirements are available on the [ACVIM website](#) or by request in writing from the ACVIM office. If a resident has any questions regarding the application process, that individual should request clarification in writing from the CCC Chair before the submission deadline.

A candidate who intends to take the Cardiology Specialty Examination must submit credentials for the Cardiology Specialty Examination so that the ACVIM office receives the credentials packet no later than the date specified in the [ACVIM website](#) of the year preceding the year in which the candidate intends to take the examination. Each candidate is notified no

later than 60 days after the submission deadline regarding the acceptability of the submitted credentials packet for the Cardiology Specialty Examination.

Inadequate attention to detail or fundamental errors or omissions may cause the entire application to be rejected.

Residents who submit credentials packets by the date specified on the [ACVIM website](#) in one year do not submit their logs to the CRTC on the date specified on the ACVIM Website the following year. [See the website](#) for specific details for each year of residency.

The candidate must meet or surpass the following requirements toward receiving board certification in cardiology:

- Complete 150 structured educational hours;
- Complete 80 Journal Club hours (not included in the 150 hours above);
- Complete 15 catheterization procedures;
- Complete 500 echocardiograms;
- Complete the research requirement.

If the resident fails to complete or surpass these requirements by the date specified on the [ACVIM website](#) of the year that individual submits the credentials packet, the CCC identifies deficiencies. The CCC requests that the resident resubmit the applicable logs after correcting the deficiencies for final approval before the resident finishes the RTP. Once the CCC has determined that all deficiencies have been completed, the CCC Chair will notify the ACVIM office that the resident has completed all requirements.

Failure to correct the deficiencies and have logs reviewed and approved by the CCC results in the resident not being awarded Diplomate status. The resident is ineligible to receive board certification until all requirements are completed, even if that individual successfully passes the General and Specialty Examinations.

5.B.13 Specialty Examination Registration and Fee

Once the credentials required to take the Specialty Examination are submitted, candidates may register for the Cardiology Specialty Examination and pay the fee online to the ACVIM office by the date specified on the [ACVIM website](#) of the year that they intend to take the examination. Candidates taking or retaking the Cardiology Specialty Examination must complete an application and pay online by the date specified on the [ACVIM website](#) of the year they plan to take the examination. Candidates can expect a response to their requests to take the Specialty Examination within 30 days of applying.

5.B.14 Cardiology Specialty Examination Content and Format

****Always check the Candidate's Webpage information on the ACVIM website; the examination format is subject to change. Any changes will be reflected in the current examination blueprint.****

The Cardiology Specialty Examination consists of six parts taken over two days. The subjects covered in the examination are listed in the Cardiology Category Study Outline, which candidates can obtain from the [ACVIM website](#), or by request from the ACVIM office. No special equipment is required for the examination.

However, examinees may bring calipers, a calculator, and a watch without Wi-Fi, cellular data, or data/digital memory capabilities to assist them in evaluating some material and monitoring time spent on various portions of the examination. The score given by the CCC to the credentials packet submitted by the candidate will comprise 5% of the candidate's final score.

The remaining 95% of the score is generated from the following six examination parts which include:

- Multiple choice questions (20-25%)
 - Covers all aspects of basic and clinical sciences related to cardiovascular medicine.
- Essay questions (18-25%)
 - Covers basic and clinical sciences related to cardiovascular medicine.
- Case studies (20-25%)
 - Consists of clinical patient studies, including radiographs and other noninvasive and invasive examinations (ECG, echocardiograms, hemodynamics, etc.).
- Cardiac anatomy and pathology (8-12%)
 - Covers macroscopic anatomy, microscopic anatomy, cytology, radiographs, static angiograms, and M-mode echocardiograms, etc.
- Physiologic recordings (15-20%)
 - Consists of electrocardiograms, electrophysiological studies, phonocardiograms, static spectral and color flow Doppler echocardiograms, hemodynamic studies, pacemaker interrogations, special studies including computed tomography or magnetic resonance imaging, audio recordings (heart sounds), etc.
- Videos (8-12%)
 - Consists of real-time recordings of patient examinations; may include noninvasive (M-mode, 2-dimensional, Doppler echocardiograms, transesophageal echocardiograms, etc.) and invasive studies (angiograms, etc.).

A candidate must pass the entire examination with a total score of 70% or better. No specific score on individual parts of the examination is required. For the multiple-choice part, the pass point is determined using either the modified Angoff method or statistical equating, whichever method is determined to be most appropriate by the ACVIM's psychometricians. The candidate's raw score is scaled where the minimum passing score equals 70% of the points available for this part of the examination. The total score an examinee achieves is comprised of this scaled score and the raw scores of the other examination sections.

A [blueprint of the Cardiology Specialty Examination](#) is posted on the ACVIM website at least 60 days before the examination date.

5.C Maintenance of Credentials (MOC)

The [Cardiology Maintenance of Credentials \(MOC\) Committee](#) (see also [Part 1](#)) maintains a list of acceptable continuing education experiences and their associated points that count toward renewal of Cardiology Credentials by ACVIM.

6 Specific Requirements for the Specialty of Large Animal Internal Medicine

The American College of Veterinary Internal Medicine (ACVIM) certifies specialists in Large Animal Internal Medicine (LAIM). Large animal internists focus on treating diseases of the internal systems in horses, cattle, sheep, goats, camelids, and pigs. This section of Part Two explains requirements for LAIM residency training programs (RTP), and for residents and candidates working toward certification in this specialty.

6.A Large Animal Internal Medicine Residency Training Programs

The RTP is the foundation for ACVIM training of future Diplomates in LAIM. All of the general requirements for residents and residency training found in Part One of this Certification Manual must be met in addition to the specific LAIM requirements contained in this section. Any individual approved RTP may include additional requirements above the minimum required by the CM. Those additional requirements then become part of that specific RTP. A resident in such an RTP **must** fulfill all the additional requirements of that RTP along with the minimum requirements in this Certification Manual in order to complete that residency.

A LAIM RTP ensures residents provide primary patient care to which they are capable based on their level of training. They manage cases in all facets of veterinary internal medicine, including clinical pathology, pathology, radiology, ultrasonography, advanced imaging, and endoscopy.

6.B Process for Achieving ACVIM LAIM Diplomate Status

At a minimum, achievement of LAIM Diplomate status requires that residents meet the following criteria:

- Successfully complete an ACVIM RTP in LAIM;
- Attain a passing score on the ACVIM General Examination;
- Attain a passing score on the LAIM Specialty Examination;
- Complete the publication requirement for the Specialty of LAIM as specified in this section of the Certification Manual and in the [LAIM information packet](#) in effect the year the resident started their RTP;
- Complete the case writing assignments as specified in this Certification Manual in effect the year the resident started their RTP;
- Receive verification that the LAIM RTCC certifies the credentials submitted by the resident are complete and meet all requirements;
- Residents have a maximum of five (5) years from the end date of their RTP to become board-certified or their status changes from active to inactive.

6.C General Objectives of the LAIM Residency Training Program

6.C.1 Patient Care and Technical Skill

A LAIM RTP will meet objectives related to patient care and technical skill so that upon successful completion of the RTP, residents will be able to do the following:

- Design a comprehensive diagnostic and treatment plan for either one animal or for a group of animals as appropriate for the circumstances;
- Design a plan to relieve the pain and suffering of patients;
- Provide emergency and intensive care for patients;
- Competently employ all medical, diagnostic, and treatment procedures considered essential in the LAIM job/task analysis.

6.C.2 Knowledge of Large Animal Internal Medicine

A LAIM RTP will meet objectives related to large animal internal medicine so that upon successful completion of the RTP, residents will be able to do the following:

- Demonstrate in-depth knowledge of large animal medical diseases, etiology, epidemiology, pathophysiology, immunology, pathology and therapy;
- Demonstrate competency in the problem-oriented approach to patient diagnosis that includes:
 - Collecting signalment and history;
 - Performing a thorough physical examination;
 - Developing an appropriate problem list;
 - Listing differential diagnoses for the identified problems;
 - Knowing which follow-up procedures or tests are required to rule in or out each of the differential diagnoses (e.g., laboratory tests and imaging);
- Demonstrate knowledge of the disposition of drugs used to treat a food animal including the potential for adulteration of the food supply, and know how to mitigate the potential for residues in meat and milk;
- Demonstrate a working knowledge of the Animal Medicinal Drug Use Clarification Act;
- Design and implement disease prevention and biosecurity protocols.

6.C.3 Teaching Skills and Lifelong Learning

A LAIM RTP will meet objectives related to teaching skills and lifelong learning so that upon successful completion of the RTP, residents will be able to do the following:

- Demonstrate effective clinical teaching/instructional skills that result from participating regularly in ward rounds, giving seminars to veterinary students, supervisors or resident peers, and being involved in other educational endeavors;
- Evaluate and assimilate scientific evidence as a life-long learner to continually improve patient care.

6.C.4 Interpersonal and Communication Skills

A LAIM RTP will meet objectives related to interpersonal and communication skills so that upon successful completion of the RTP, residents will be able to do the following:

- Use skills for clearly communicating with clients, students, colleagues, staff, and the public;
- Clearly articulate findings in writing as demonstrated by medical record-keeping, patient discharge summaries, and peer-reviewed publications.

6.C.5 Professionalism

A LAIM RTP will meet objectives related to professionalism so that upon successful completion of the RTP, residents will be able to do the following:

- Demonstrate professionalism including tact and diplomacy, composure under pressure, initiative, organization, and receptiveness toward guidance;
- Demonstrate compassion and practice excellent patient care while adhering to ethical principles.

6.C.6 Scholarly Activities

A LAIM RTP will meet objectives related to scholarly activities so that upon successful completion of the RTP, residents will be able to do the following:

- Extend their knowledge of the basic principles of research for testing hypotheses and answering clinically important questions;
- Understand the principles of evidence-based medicine;
- Participate regularly in critical review of the LAIM literature (Journal Club);
- Participate in scholarly activities e.g. research projects and peer-reviewed publication;
- Present their findings at scientific meetings.

6.D Definitions for LAIM Residency Training Programs

6.D.1 LAIM Residency Training and Credentials Committee

The LAIM Residency Training and Credentials Committee (LAIM RTCC) establishes the standards for LAIM RTPs, determines the equivalency of accredited training programs, and oversees RTP registration and resident credentialing. The LAIM RTCC reviews all RTP registration requests. The LAIM RTCC must approve all new and continuing RTP requests before the RTP begins training residents to ensure that any time a resident serves in the RTP counts towards meeting training and credentialing requirements. The LAIM RTCC also reviews and approves credentials packets submitted by candidates. If a candidate desires to change RTPs, the RTCC will be responsible for determining what portions of training (if any) may be carried over to the new program. They will also be responsible for approving the new program, as a transfer automatically results in the resident moving into a non-traditional program.

6.D.2 LAIM Clinical Writing Assessment Documentation Committee (CWAD)

The Clinical Writing Assessment (CWA) requirement now replaces the previous case report requirement for all residents. Although an exercise similar to case reports and also designed to develop/improve resident written communication skills, the CWA will not be scored as passing or failing. The CWA requirement will be satisfied when the resident completes two case management documents that meet the requirements of his/her specific RTP. Once deemed acceptable by the Resident Advisor (RA) or Supervising Diplomate (SD), CWA documents must be submitted to the ACVIM office. The CWA documents will undergo assessment by members of the CWAD committee, who will make brief comments and give an overall quality assessment (exceptional, acceptable, and developing). ~~These comments will be returned to the residents and their RA within 90 days of submission.~~ The LAIM credentials packet provides more detailed guidelines for preparing and submitting CWA documents. The CWAD Committee consists of two subcommittees, one that will review CWA relevant to equine practice and one that will review CWA relevant to food animal practice.

6.D.3 Non-traditional Training

Defined in [Part One](#). For the Specialty of LAIM, it is possible to achieve certification in a non-traditional RTP. The Sponsoring Institution (SI) must provide thorough justification for a non-traditional RTP to the LAIM RTCC, including:

- Details of how all training requirements of a traditional RTP will be satisfied, including training that may occur at multiple sites;

- Documentation that training will occur in blocks of no less than two consecutive weeks per block;
- Documentation by the PD, RAs, and SDs that training occurred as specified;
- Requests for approval of a nontraditional RTP must be submitted to the RTCC at least 90 days in advance of a resident start date. The LAIM RTCC must approve the program before a candidate can receive credit for time spent in a non-traditional RTP.

For all RTPs, the maximum length of the training period is five (5) years and the total time period to achieve Diplomate status after successful completion of all RTPs may not exceed five (5) years

6.D.4 Ombudsperson

Defined in [Part One](#). Residents may contact the LAIM Ombudsperson at LAIMOmbudsperson@ACVIM.org to discuss any questions or concerns that may arise during (or after) their RTPs. All communications are held in strict confidence.

6.D.5 Training Week and Training Hour

Defined in [Part One](#). Time must be accrued in Training Weeks for all RTP activities except for imaging and pathology. For training in imaging and pathology, time may be accrued in Training Hours (See [6.D.5](#) below).

6.E Roles and Responsibilities of the Sponsoring Institution

6.E.1 Documentation and Verification

Described in [Part One](#) under Registration of the Residency Training Program. Failure to respond to LAIM RTCC requests for information may result in program probation or in program termination.

6.E.2 Facilities and Equipment

The SI must ensure the primary training site or hospital has the following:

- Standard ultrasonographic radiographic, electrocardiographic, and endoscopic equipment;
- Ability to provide resident instruction in ultrasonography, endoscopy, blood pressure measurement, and electrodiagnostics by appropriate specialists;
- Clinical pathology services, including CBC, serum chemistries, blood gases, urinalysis, cytology, parasitology, microbiology, and endocrinology. If these services are not available through the primary training site or hospital, the SI must have arrangements with local or regional laboratories to provide these services;
- A 24-hour emergency and intensive care facility with adequate staffing as allowed by state practice acts.

Access to magnetic resonance imaging, computed tomography, and nuclear medicine is highly recommended, but is not required.

6.E.3 Didactic Learning Opportunities

The SI must provide residents with the following didactic learning opportunities:

- Formal conferences: residents are expected to attend conferences in LAIM and related disciplines during the residency. Examples include clinicopathologic conferences or seminars in internal medicine and related disciplines. Conferences given within a veterinary practice or hospital or at a medical school or medical teaching hospital are also acceptable. Currently, there is no formal requirement to document attendance at these conferences. The resident is required to give a formal presentation at such a conference at least once per year and documentation of these presentations must be included in the LAIM credentials packet. A presentation at a regional, state, or national meeting may also fulfill this requirement; a copy of the program must be included in the LAIM credentials packet if the presentation is being counted towards the training requirement;
- Continuing education conferences: residents must attend at least one major state, regional, national, or international veterinary medical or human medical continuing education conference during their residency. Documentation of attendance at the conference must be included in the LAIM credentials packet.

Residents are strongly encouraged to give a scientific presentation at a national meeting at least once during the RTP.

Formal review/examination preparation sessions: a LAIM RTP must provide intensive review sessions or courses for residents on topics covered in the [General and Specialty Examinations](#). The resident must attend at least 80 hours of such review sessions or courses during the RTP. Attending daily clinical rounds does not fulfill this requirement. This requirement can be met in part by attending an ACVIM advanced continuing education (ACE) course or an [ACVIM Forum](#) or other conferences/meetings, including online programs.

6.E.4 Supporting Disciplines Required

The SI ensures at least one board-certified radiologist, one board-certified clinical pathologist, one board-certified anatomic pathologist, one board-certified neurologist, and one board-certified cardiologist are available for direct or interactive remote consultation with residents. For fulfillment of the 40 hours of required training with a board-certified radiologist and 40 hours of required training with a board-certified pathologist, these hours must be spent in face-to-face consultation either in defined blocks of time or during the course of case management. For these two requirements, the definition of Training Hours ([4.F.12](#)) rather than Training Weeks ([4.F.11](#)) may apply.

6.E.5 Secondary and Off-Site Training Sites

If adequate personnel or facilities are unavailable for all required resident training at the primary training site, the PD must make arrangements at a secondary or off-site training location to fulfill all requirements. The LAIM RTCC must approve all secondary training and off-site experiences before residents participate in external rotations that contribute to the minimum training requirements of the program.

6.F Responsibilities of the Program Director

Defined in [Part One](#). For the specialty of LAIM, the PD must be an ACVIM LAIM Diplomate. When an SI has more than one LAIM RTP, one PD can be responsible for all RTPs of the SI. There can also be a unique PD for each RTP (typically one PD for a Food Animal RTP and another PD for an Equine RTP); however, there will not be more than one PD for each RTP.

Examples of information that a PD must report to the LAIM RTCC:

- Changes (addition or deletion) in supervisory personnel such as having too few RAs or SDs for the number of residents in the RTP. *No program may have more than three (3) residents for each RA that is listed in the RTP description;*
- For programs placed on probation, the PD must provide the LAIM RTCC with an updated plan for what will happen to any current residents if no resolution occurs within a 12-month probation period. During that period, the PD provides written updates every three months to the LAIM RTCC on what is being done to correct the program deficiencies. If the deficiencies are not resolved within the 12-month probation period, the LAIM RTCC may terminate the program;
- Alteration of program duration (any proposed alteration must be approved by the RTCC prior to implementation);
- A resident transferring from one program to another (any proposed transfer requires prior review and approval by the RTCC);
- A resident either being placed on probation or being dismissed from the program;
- A resident beginning another RTP;
- A resident enrolling in an institutional graduate program.

At the time of annual program renewal, PDs and RAs may be asked to verify resident activities.

If the PD, regardless of RTP standing, fails to acknowledge LAIM RTCC's request for documentation regarding the RTP within 14 days of the request or fails to provide requested documentation within 30 days of the request, the LAIM RTCC will place the RTP on probation. Failure to comply with LAIM RTCC requests or recommendations in a timely manner while on probation may lead to program termination.

6.G Responsibilities of the Supervising Diplomate

Defined in [Part One](#). For the Specialty of LAIM, the SD regularly reviews, generally on a daily basis, the medical care of patients assigned to a resident. The SD conducts these reviews face-to-face with the resident. Consultation with other qualified individuals is encouraged; however, it does not replace the regular reviews with a LAIM SD. During after-hours periods (evenings and weekends) the SD should also be available for phone discussion/consultation on care of patients assigned to a resident.

6.H Responsibilities of the Resident Advisor

Defined in [Part One](#). For the Specialty of LAIM, the RA must be an ACVIM LAIM Diplomate. An RA may not be the primary advisor for more than three residents concurrently. The RA must also be actively involved as an SD for the residents and be substantially involved in the clinical supervision of assigned residents.

The RA monitors the progress of residents and ensures all [clinical milestones](#) are achieved in a timely manner. The RA must provide each resident with at least two comprehensive written performance evaluations per year and the results of these evaluations must be shared in person with the resident. Residents should also receive a copy of the written evaluations and the resident is to sign the SIs copy of the evaluation to document that the resident has received the assessment.

6.1 Responsibilities of Residents

6.1.1 Patient Care

Residents must actively participate in patient management, including initial evaluation, diagnostic test selection and interpretation, case management and decision-making, client (owner) communication, appropriate follow-up, and prompt professional communication with referring veterinarians. An ACVIM SD or other approved specialists must directly supervise and review case management.

Residents must maintain complete medical records for all patients. These records must be retrievable and searchable.

6.1.2 Journal Club

The goal of Journal Club is to foster critical thinking and improve the resident's understanding of scientific and clinical data, including statistical analysis. Residents must participate in at least 80 hours of Journal Club throughout their residency. Journal Club typically consists of a one hour period of protected time at which at least one ACVIM LAIM Diplomate or supporting specialist must be in attendance, unless extenuating circumstances develop. Specialists in other disciplines, including statistics, should also be invited to attend.

Residents are encouraged to keep a log of Journal Club activities that includes the date, journal articles discussed, and attendance.

6.1.3 Clinical Case Conferences (Rounds)

During LAIM clinical training involving patient management, residents must attend and participate in daily (weekday) clinical rounds with at least one LAIM SD present. In an RTP where veterinary students are integral to and participating in hospital activities, residents should lead rounds discussions at least once weekly (with a SD present).

6.1.4 External (Affiliated) Rotations

Residents may participate in external rotation(s) during LAIM clinical training that is not specified in the RTP registration document. However, the PD or the RA must request approval for these rotation(s) from the LAIM RTCC before the resident starts the formal rotation for the rotation to count as part of the 104 weeks of clinical training described under [Distribution of Time in Training](#).

6.1.5 Case Reports (No longer applicable)

Residents that previously had the option to complete case reports no longer have that option. They must now complete Clinical Writing Assessments (see [section 6.1.6](#) below).

6.1.6 Clinical Writing Assessment*

* The CWA, combined with a revision of the Patient Management section to the Case Management section of the LAIM Specialty Examination, replaced case reports for residents starting RTPs after June, 2018. For candidates that started their RTPs before June, 2018, three options are available (until October 1, 2020):

- 1) If a candidate does not have a passed case report, they will no longer be allowed to submit case reports - they will be required to complete the CWA and take the new Case Management section of the LAIM Specialty Examination (starting in 2019);
- 2) If a candidate has had one case report passed, they can elect to complete additional case reports and take the new Case Management section of the LAIM Specialty

Examination. If a candidate fails to have a second case report pass during this 2 year period, they will transition to the CWA (required to complete one CWA, not two);

- 3) If a candidate has fulfilled the case report requirement with two passed case reports and is taking the examination (either first time or repeat) they will take the new Case Management section of the LAIM Specialty Examination.

NOTE: If a candidate has already passed the old Patient Management section of the LAIM Specialty Examination but have not completed the case report requirement, they are not required to complete the new Case Management section of the LAIM Specialty Examination.

The purposes of the CWA are to:

- verify that the resident has been working in the area of LAIM;
- demonstrate the resident's ability to use medical principles in the diagnosis, treatment and prevention of animal disease;
- display the resident's ability to communicate medical observations and data to colleagues in a clear, concise, and organized written manner.

The CWA requirement is both a training exercise and an assessment tool. It is expected that residents will learn and benefit from the experience by reviewing cases in depth and communicating their thought processes in a clear and professional manner. Through a back and forth-writing process with one or more internal reviews by their RA and/or SDs, residents are expected to improve their written communication skills by developing concise and organized writing skills. Additionally, the CWA is used for assessment of the resident's ability to reach an acceptable level of expertise in written communication of medical principles in the diagnosis, treatment and prevention of animal disease.

Each resident must write two CWA documents to be eligible for certification. After the internal review process has been completed, CWA documents can be submitted to ACVIM on the dates specified on the [ACVIM website](#). A rolling submissions cycle is now used, rather than an annual dual deadline. Once submitted, the CWA documents will undergo assessment by two external reviewers, who will make brief comments and give a quality assessment. These comments will be returned to the residents and their RA within 90 days of submission. Once returned to the resident, the document can be reformatted for submission for publication if the case is unique enough to warrant publication as a case report.

Specific directions for CWA case selection and formatting are available from the [ACVIM website](#) or upon request from the ACVIM office.

6.1.7 Publication Requirement

As part of the requirement for a resident to become board-certified in LAIM, that individual must publish at least one first author scientific manuscript relevant to LAIM in a refereed scientific, medical, or veterinary medical journal. The purpose of the publication requirement is to ensure that candidates demonstrate skill in written scientific medical communication, in particular that they display the ability to organize scientific data, communicate these data accurately in writing, and are capable of discussing the scientific findings in the context of the current medical literature. Ideally, the manuscript documents a completed laboratory or clinical investigative research project undertaken during the RTP. Retrospective studies and comprehensive reviews may also be acceptable. Manuscripts that were published within the three (3) years before the resident's start date may also be submitted to the LAIM RTCC for

consideration toward fulfillment of the publication requirement. The resident must submit to the LAIM RTCC Chair in writing any questions concerning the acceptability of a publication before submitting the publication as part of the LAIM credentials packet.

The manuscript must be written in English and published in a refereed journal. A refereed journal is one governed by policies and procedures established and maintained by an active editorial board that requires critical review and approval of papers submitted by at least one recognized authority on the manuscript's subject. Mainstream journals of major disciplines are acceptable, providing they adhere to the principles of peer review, and providing the manuscript's subject is in the field of LAIM.

A resident may submit a published scientific manuscript or a copy of the final acceptance notification from the journal editor to the ACVIM office at any time after the resident successfully registers and enrolls in an approved LAIM RTP.

An accepted manuscript is not required before the resident takes the LAIM Specialty Examination. However, the resident is strongly encouraged to meet this requirement before taking the examination.

Each resident must submit an electronic copy of one published or accepted manuscript with the resident as first author, relevant to the discipline of LAIM that demonstrates critical thinking and expertise in LAIM. If the manuscript has not been published, then the resident must submit an electronic copy of the accepted manuscript and acceptance notification. Otherwise, the publication will not be considered by the LAIM RTCC. The manuscript must be accepted for publication no more than five (5) years after the resident completes their RTP.

The ACVIM Board of Regents (BOR) adopted a standard definition of a manuscript accepted for publication. A manuscript is deemed as accepted for publication when the corresponding author receives one of the following:

- An email from the official email address of the journal or a letter on the journal's letterhead from the editor stating that the manuscript has been accepted for publication.
- An email from the official email address of the journal or a letter on the journal's letterhead from the editor stating that all reviewers have approved the manuscript for publication and the manuscript awaits editing before publication.
- A galley proof of the manuscript with an email from the official email address of the journal or a cover letter from the editor on the journal's letterhead stating that the manuscript is scheduled for publication.

A notice from an editor that states the corresponding author must address reviewer comments, no matter how minor, is considered unacceptable for credentialing purposes. Such a notice implies final review of the manuscript is incomplete and that it has not yet been accepted.

The LAIM RTCC determines relevance of the manuscript to the topic of LAIM by assessing whether it meaningfully impacts the scientific understanding of a subject relevant to LAIM, or the diagnosis or management of a clinical condition by a specialist in LAIM. The manuscript should demonstrate the proficiency of the resident in understanding scientific method and study design including statistics, and in conducting a comprehensive literature review. **The LAIM RTCC [Publication Requirement Guidelines](#) contains current information on**

factors the LAIM RTCC considers in assessing the quality of a manuscript. As Publication Requirements are certification policies, not residency training requirements, they may change during a residency. As such, **every resident and RA should check the most current Publication Requirements Guidelines before submitting a paper for publication, to ensure that it will be acceptable to the LAIM RTCC.** A publication is subject to the Guidelines in effect at the time the article was submitted to the journal. If Guidelines changed after submission of the manuscript, the candidate can provide proof of submission date to ensure that the original guidelines will be used in evaluation of the submission.

If a resident is unsure whether a response from a journal is final acceptance, then that individual should petition the LAIM RTCC Chair in writing for a determination.

Due to variability in editorial quality and process and due to the proliferation of online journals, the LAIM RTCC must approve all journals not listed on the [Acceptable Journal List](#) used to meet the publication requirement by a resident, preferably before the resident submits the manuscript for publication. The LAIM [Publication Requirement Guidelines](#) contain details on the LAIM RTCC journal review process and a list of acceptable journals. Residents seeking approval of a journal not on the [Acceptable Journal List](#) must provide documentation as described in the [Publication Requirement Guidelines](#) to the RTCC. The LAIM RTCC reviews and may update the Acceptable Journal List annually based on changes in journal availability, editorial process, and impact factor.

Book chapters and conference proceedings are not acceptable to fulfill the publication requirement. Case reports, clinical vignettes, short communications, brief communications, and serial features (e.g., ECG of the Month, Drug Topic of the Month) are also unacceptable.

If the resident fails to complete the publication requirement within the stated time, that individual's status changes from active to inactive and he/she is no longer eligible to become board-certified.

6.J LAIM Residency Training Program Registration and Evaluation

6.J.1 Program Registration

An RTP must be registered with the ACVIM and approved by the LAIM RTCC before accepting residents for training. In addition to the specialty specific section of this Certification Manual, each approved RTP must comply with all requirements as specified in [Part One](#) of this Certification Manual. RTP registration forms are available on the [ACVIM website](#).

6.J.2 Program Probation

Defined in [Part One](#). Consistent poor performance (low certification rate) or negative feedback provided to the Ombudsman or other LAIM Diplomates may lead to an investigation of the program that could ultimately result in probation.

In addition, failure to submit RTP documents, failure to respond to requests for additional information from the RTCC in a timely manner, or failure to meet the requirements of the CM for a valid residency may result in a program either being placed on probation or terminated.

6.K Distribution of Time in Training

An approved LAIM RTP must have a minimum duration of 104 weeks and the SI must have at least two ACVIM Diplomates, one of whom must be an ACVIM LAIM Diplomate.

No program may have more than three (3) residents for each RA that is listed in the RTP.

If a resident is unable to participate in the RTP continuously, then the time in training must be arranged in blocks of time of no less than 2 weeks each with a minimum of 12 weeks of training in any calendar year. The maximum duration of an RTP is five (5) years.

6.K.1 Intensive Clinical Training in LAIM

At least 52 weeks of the RTP must consist of intensive clinical training in LAIM, and additional weeks spent in LAIM training are desirable. During this time, the resident must be under direct supervision of one or more ACVIM LAIM SDs.

6.K.2 Clinical Training in Other Specialties

At least 16 additional weeks of clinical training must occur under direct supervision of one or more SDs who are ACVIM Diplomates or ACVIM Associate Members (e.g. ECEIM Diplomates). At least 6 of these weeks must be under the supervision of Diplomates other than the primary SDs, which can include ACVIM Diplomates in SAIM, Cardiology, Neurology, Oncology or additional ACVIM LAIM Diplomates or Associate Members (different from the SDs supervising the 52 weeks if the RTP has less than two ACVIM LAIM Diplomates or Associate Members) at either the primary or other sites.

6.K.3 Additional Clinical Training in LAIM or Related Fields

An additional 36 weeks should consist predominantly in LAIM or related fields, not necessarily under the direct supervision of an ACVIM Diplomate. This may include rotations in related clinical fields such as dermatology, ophthalmology, surgery, theriogenology, emergency medicine and critical care, clinical nutrition, clinical pharmacology, or anesthesiology.

Some of these 36 weeks may also include non-clinical responsibilities such as writing, research, teaching, attendance at scientific meetings, study time for examinations, and vacation. However, no more than 2 weeks (10 business days) of vacation per year can be counted toward these 36 weeks. The required experiences in radiology and pathology can also be counted within these 36 weeks.

6.K.3.a Diagnostic Imaging Training

During the residency, the resident must spend the equivalent of at least 80 hours (the equivalent of two full training weeks) training in diagnostic imaging. A minimum of forty (40) hours must be in direct contact with a board-certified veterinary radiologist interpreting radiographs, learning and evaluating the results of special imaging techniques, and attending radiology rounds and/or seminars. The other forty (40) hours of diagnostic imaging during the residency must be spent being directly trained in ultrasonographic imaging either by a board-certified radiologist and/or by one or more LAIM Diplomate(s) with advanced skills in ultrasonography. The Diagnostic Imaging Training may be accrued as Training Hours rather than Training Weeks.

6.K.3.b Pathology Training

During the residency, the resident must spend the equivalent of at least 40 hours in direct contact with a board-certified veterinary clinical pathologist or anatomic pathologist. The training includes evaluating clinical pathologic findings, performing necropsy examinations, reviewing cytology preparations and biopsies, and attending clinical pathologic conferences or seminars. These hours may be accrued as Training Hours.

6.K.4 Research, Scholarly Activity, and Study Time

At least 12 weeks of the RTP must be allocated for research and scholarly activity in the pursuit of publication.

Residents are encouraged to participate in clinical or laboratory research projects, including the design, execution, evaluation, presentation of an abstract at the annual ACVIM Forum, and publication. Completion of this research requirement can include any of the following:

- Documented (letter from RA) submission of a prospective research grant/project pertinent to LAIM;
- Acceptance and presentation at a scientific meeting of original scientific work as an abstract (either oral or poster) or research report;
- Documented completion (letter from RA) of a prospective or retrospective research project;
- Documented completion (letter from RA) of graduate course work in biostatistics, research methods, and/or research ethics;
- Options that residents can do instead of a research project that fulfill the research requirement include:
 - Successful completion of at least 6 hours of seminars or classes, offered by ACVIM or through online courses/other institutions and covering subjects such as:
 - Evaluation of the veterinary medical/biomedical literature;
 - Grant writing;
 - Study design and participation in clinical trials.

Documentation of the completion of at least one of the above activities is required as part of completion of the Residency Training Overview form that is submitted as a component of the credentials packet.

At least four (4) weeks (preferably without emergency duty) of study time must be allocated to the resident to prepare for the ACVIM General Examination. An additional minimum of four (4) weeks (preferably without emergency duty) of study time must be allocated to prepare for the LAIM Specialty Examination. Study time should be scheduled to precede an examination date by as much time as is practical.

6.K.5 Vacation

Vacation time varies between SIs, but no more than 6 weeks in total can be included in the 36 weeks detailed in [6.K](#) for 3-year RTPs and no more than 4 weeks in total can be included in the 36 weeks detailed in [6.K](#) for 2-year RTPs.

6.L Clinical Milestones

6.L.1 First Year Residents

By the end of the first year, residents must meet the following clinical milestones:

- Register with ACVIM within 90 days of beginning the RTP;
- Complete online learning objectives or webinar series on the following:
 - Understanding the [credentialing process](#);
 - Selecting and writing a [CWA](#).

6.L.2 Second Year Residents

By the end of the second year, residents should meet the following clinical milestones:

- Submit at least one CWA;
- Complete at least one (1) training week equivalent of 40 training hours of the [diagnostic imaging requirements](#).
- Complete one training week equivalent of 40 training hours of the [pathology requirement](#).
- Take the ACVIM General Examination (strongly recommended);
- Submit credentials packet after completing at least 20 months of the RTP.

6.L.3 Third Year Residents

By the end of the third year, residents should meet the following clinical milestones:

- Submit a second CWA;
- Complete the remaining training week equivalent of 40 training hours of the diagnostic imaging requirements;
- Submit a manuscript (strongly recommended) to a peer reviewed journal for consideration as a [publication](#);
- Take the LAIM Specialty Examination (strongly recommended).

6.M Resident Evaluation

RTPs are responsible for conducting performance evaluations (verbal and written) of each candidate every 6 months, preferably including feedback from all SDs and other supervisors who have overseen training in the preceding 6 months.

Evaluations should include a rubric that measures various aspects of clinical performance, teaching ability (when applicable), communication skills, and scholarly activity as well as progress towards Clinical Milestones. The resident must sign the RAs copy of the written evaluation to document that the RA has reviewed the evaluation with the resident and provided the resident with their own copy of the evaluation. The LAIM RTCC may request copies of these evaluations during a program review.

RAs must also ensure that residents who have completed 6 months or more of their program and have not/are not submitting their credentials submit Annual Progress Reports to ACVIM by the required deadline.

6.M.1 Resident Case Logs

Residents are encouraged to keep a log of their cases for presentation to their RAs and to other SDs during a progress review.

6.M.2 Resident Procedure Logs

Residents are encouraged to keep a log of all procedures they complete for presentation to their RAs and other SDs during a progress review.

6.M.3 Education Logs

Residents are encouraged to keep a log of all seminars and didactic lectures they attend for presentation to their RAs and other SDs during a progress review. Each log entry should include the seminar or lecture date, topic, and presenter.

6.N Residency Training Interruption

In some circumstances, a resident may need to take a leave of absence, which prevents that individual from successfully completing an RTP on time. In such cases, the LAIM RTCC must be contacted in order to approve an extension of the RTP. When residency training resumes, training must be accomplished in blocks of at least two (2) consecutive weeks, with at least 12 weeks of training completed in each calendar year. When a leave of absence is necessary, the resident has a maximum of five (5) years from the end of successful completion of the RTP to achieve board certification in LAIM.

Training interruptions may also occur if a resident must switch from one RTP to another to fulfill all RTP and credentialing requirements. In such cases, the following steps must be taken:

- A new training program must be identified and that RTP's PD must submit a proposal for a non-traditional RTP for that resident to the LAIM RTCC;
- The resident must reregister with ACVIM in the new RTP;
- The LAIM RTCC must approve the new RTP before the onset of clinical training.

6.O ACVIM General Examination

6.O.1 ACVIM General Examination Registration and Fee

Defined in [Part One](#).

6.P Credentials Submission and LAIM Specialty Examination

6.P.1 Procedures for Submitting Credentials

****Always check the ACVIM website prior to submission; this process is subject to change.****

The information listed in this section provides an overview of the procedures for submitting credentials. Specific guidelines are in the [LAIM credentials information packet](#). Because application requirements change periodically, candidates must be certain that they are using the most current application and credentials packet. If a candidate has any questions regarding the application process, he/she should request clarification in writing from the ACVIM office or from the LAIM RTCC Chair before the submission deadline.

Candidates may submit the completed credentials packet and credentials fee online to the [ACVIM office](#) following completion of 20 months of the residency. The LAIM RTCC evaluates submitted credentials packets for completeness and accuracy.

A candidate who intends to take the LAIM Specialty Examination must submit credentials for the LAIM Specialty Examination so that the ACVIM office receives the credentials packet no later than the date specified on the [ACVIM website](#) in the year preceding that examination date. **THERE ARE NO EXCEPTIONS TO THIS DEADLINE – CREDENTIALS PACKETS MUST BE SUBMITTED ON THE DUE DATE TO ALLOW ADEQUATE TIME FOR REVIEW BY THE RTCC.** Each resident or candidate is notified no later than 60 days after the submission deadline regarding the acceptability of the credentials packet as a prerequisite for the LAIM Specialty Examination. All candidates must submit the current standard LAIM application form, along with the other required documents.

They must carefully follow the instructions provided in the credentials packet. Inadequate attention to detail may cause the entire credentials packet to be rejected.

6.P.2 Credentials Items to Submit

****Always check the ACVIM website prior to submission; this list is subject to change.****

Candidates must include the following items in their credentials packets and submit them online to the ACVIM office by the date specified on the [ACVIM website](#) of the year preceding the date of the special examination (**it is the candidate's responsibility to submit all credential items before the deadline as late applications will not be reviewed**):

- The completed credentials LAIM Specialty Examination application packet as described in the [LAIM information packet](#);
- The completed current standard specialty application form;
- One peer-reviewed published manuscript, manuscript and acceptance letter from a journal, or a signed "letter of understanding" stating that a publication and documentation of its acceptance will be submitted upon acceptance of a publication by a journal;
- Reference forms or letters;
- Applicants must have three references that meet the criteria specified on the candidate's webpage of the ACVIM's website for acceptable referees and submission format;
- A letter from the RA verifying satisfactory progress in the training program.

6.P.3 Evaluation of Credentials for LAIM Specialty Examination

The ACVIM office and the LAIM RTCC review all candidate credentials packets.

A reviewer assigned by the LAIM RTCC evaluates and rates a candidate's credentials as acceptable or unacceptable. The reviewer records the evaluation results on a standard form, which the ACVIM office retains. The LAIM RTCC chair compiles the reviewer's comments about whether or not a candidate's credentials packet is complete and acceptable. The LAIM RTCC notifies candidates regarding acceptance or rejection of their credentials within 60 days of the deadline for credentials submission.

Conditional acceptance of credentials may be attained if a candidate has not met the publication requirement, the case report/CWA requirement, or both. With conditional acceptance, the candidate may take the LAIM Specialty Examination. However, the candidate cannot achieve Diplomate status or receive a certificate until that individual completes the approved RTP, and fulfills the publication and case report/CWA requirements.

6.P.4 LAIM Specialty Examination Registration and Fee

Once credentials are approved, candidates may register for the LAIM Specialty Examination and pay the fee online by the date specified on the [ACVIM website](#) of the year preceding the examination date. Late registration and fee payment will result in the candidate being unable to sit the examination that year. Also, see [Part One](#) for procedures common to all candidates.

6.P.5 LAIM Specialty Examination Content and Format

****Always check the ACVIM website, as the examination format is subject to change. Any changes will be reflected in the current examination blueprint.****

The current LAIM Specialty Examination consists of three sections that cover all aspects of LAIM. The sections are:

- Section One - Multiple choice questions on mechanistic/basic knowledge from current text and journal articles.
- Section Two - Multiple choice questions on case-based knowledge from current text and journal articles.
- Section Three - Case management questions that test the candidate's ability to diagnose, treat and develop prevention strategies for large animal diseases.

The LAIM Specialty Examination is graded in sections. A candidate must pass each section of the examination to become certified. Candidates that do not pass all sections on the first examination attempt need only retake the failed section(s) on a subsequent examination attempt(s).

A blueprint of the LAIM specialty examination is posted on the [ACVIM website](#) at least 60 days before the examination date. More specific information on grading the examination is provided in the instructions distributed to candidates taking the examination at least 60 days before the examination date.

6.Q Maintenance of Credentials (MOC)

The [LAIM Maintenance of Credentials \(MOC\) Committee](#) maintains a list of [acceptable continuing education experiences](#) and their associated points that count toward renewal of LAIM credentials by ACVIM.

6.R Online Exit Interview Survey

Within 90 days of completing an RTP, residents are strongly encouraged to fill out [an online survey](#) regarding the quality of their training experience.

Responses are shared with the appropriate PD with the goal of providing important feedback regarding their RTP. Data, held strictly confidential, [will be published](#) as five-year rolling average score per surveyed category calculated for each RTP and will be released every three (3) years to ensure anonymity of candidates that completed smaller programs.

7 Specific Requirements for the Specialty of Neurology

The American College of Veterinary Internal Medicine (ACVIM) certifies Specialists in Neurology. This section of Part Two explains requirements for Neurology Residency Training programs (RTPs), and for residents and candidates working toward certification in this specialty.

7.A Process for Achieving ACVIM Neurology Diplomate Status

At a minimum, achievement of Neurology Diplomate status requires that residents meet the following criteria:

- Successful completion of an ACVIM registered and approved Neurology RTP;
- Attain a passing score on the ACVIM General Examination;
- Receive verification from the Neurology Credentials Committee (Neurology CC) that the credentials submitted by the resident for the neurology specialty are complete and meet all requirements;
- Attain a passing score on the Neurology Specialty Examination;
- A resident has a maximum of eight (8) years from starting a traditional three (3) year RTP without interruption or seven (7) years from starting a traditional two year RTP without interruption to achieve board certification in neurology. If an individual fails to become board-certified within seven or eight years, that person's status changes from active to inactive. An inactive candidate may not resubmit credentials or participate in additional examination attempts and is [ineligible to become board-certified](#). For candidates with interrupted (non-contiguous) residencies, the rules for completion of training and completion of the certification process, as stated in [Sections 4.D](#) and [4.E](#) in this manual, apply.

7.B Neurology Residency Training Programs

A Neurology RTP is more than completing the requirements contained in this section of this Certification Manual. It embodies the spirit inherent to training highly capable neurologists whose capabilities build upon those of their mentors. ACVIM expects Neurology RTPs to be cohesive, integrated, stable, ongoing programs that continually raise the standards in veterinary neurology.

The standards contained in this section of this Certification Manual are the minimum requirements for the Specialty of Neurology. Any individual approved Neurology RTP may also include additional requirements above the minimum required by the CM. Those additional requirements then become part of that specific RTP. A resident in such an RTP must fulfill all the additional requirements of that specific RTP, along with the minimum requirements in this Certification Manual, in order to complete the residency and receive a Residency Certificate.

7.B.1 Neurology Residency Training Program Objectives

A Neurology RTP will provide intensive training in clinical neurology, internal medicine, neurosurgery, imaging, clinical pathology, emergency medicine, critical care, anesthesiology, anatomy, pathology, and physiology. In addition, the Neurology RTP will ensure that resident will have obtained the following upon completion of their training:

- Skills to care for patients with neurological diseases;
- Broad working knowledge of anatomy, physiology, and pathology for all body systems;
- In-depth knowledge of the effects of neurological disorders on the patient;

- Proficiency in clinical neurology by exposure to a sufficient number and variety of cases representing all facets of neurology in a hospital equipped for the practice of veterinary neurology;
- Exposure to basic science and clinical research;
- Training in internal medicine to ensure that resident develop an understanding of common medical problems and are competent in their clinical management;
- Understanding of the fundamentals and applications of diagnostic methods including, but not limited to, hematology, clinical pathology, cytology, radiography, myelography, computerized tomography (CT), magnetic resonance imaging (MRI), electrodiagnostic techniques (e.g., electromyography, motor and sensory conduction studies, spinal cord and brain evoked potentials, late waves and repetitive nerve stimulation, electroencephalography (EEG)), immunology, gross and microscopic neuropathology, muscle and nerve biopsy techniques, immunopathology, and gross and surgical pathology as related to the nervous system;
- In-depth knowledge of treatment methods including pharmacotherapy, chemotherapy, radiation therapy, immunotherapy, surgery, and awareness of important investigational methods of therapy;
- Awareness and understanding of the importance of neurological diseases in food and fiber animal and common laboratory species, in addition to companion animals (dogs, cats, and horses);
- Exposure to clinical trial design and implementation.

7.B.2 Neurosurgical Procedures and Techniques

A Neurology RTP may elect to offer additional training in neurosurgical procedures and techniques beyond the 50 required hours of training. A Neurology RTP that offers additional neurosurgical training will ensure that upon completion, residents will have obtained the following:

- Broad working knowledge of surgical anatomy, physiology, and pathology of the nervous system;
- In-depth knowledge of the effects on patients of disorders that have neurosurgery as a treatment option;
- Proficiency in clinical neurosurgery by exposure to a sufficient number and variety of cases representing all facets of neurosurgery in a hospital equipped for the practice of veterinary neurology and neurosurgery;
- Awareness of and ability to complete the neurosurgical log.

7.C Definitions for Neurology Residency Training Programs

7.C.1 Non-traditional Neurology Residency Training Program

Non-traditional RTPs must satisfy all training requirements of traditional Neurology RTPs. The only allowable exception is the training may occur in non-contiguous blocks of time over an extended period. If the 96-week clinical training program is not contiguous, the resident must complete the residency in blocks of time with each block being no less than four weeks in length, and complete a minimum of 20 weeks (5 blocks) of training per year for those portions of training which must be completed in Training Weeks, rather than Training Hours. The training period may not exceed a total of five (5) years (see [Sections 4.D](#) and [4.E](#) above).

7.C.2 Ombudsperson

Defined in [Part One](#). For the Specialty of Neurology, the ombudsperson is available to residents still in training and to candidates that have completed training but have not achieved Diplomate status. Resident may contact the Neurology Ombudsperson with any questions and concerns they have about their residency experience. The ombudsperson may provide advice and assistance with these issues. Resident and candidates can contact the ombudsperson at neurologyombuds@ACVIM.org.

All communications are held in strict confidence.

7.C.3 Program Director

Defined in [Part One](#). For the Specialty of Neurology, the Program Director (PD) must have been board certified for a minimum of five years, either in any ACVIM specialty or by the European College of Veterinary Neurology (ECVN) prior to becoming a PD. In addition, the PD must have had at least three years of experience training residents prior to becoming a PD.

7.C.4 Resident Advisor

For the Specialty of Neurology, each Resident Advisor (RA) must be active in the practice of neurology and must maintain clinical competency in the field. The RA must be either an ACVIM Neurology Diplomate or an ECVN Diplomate. The RA is actively involved as a Supervising Diplomate (SD) and is substantially involved in the clinical supervision of assigned resident advisees. The RA must have been board- certified in neurology for at least one year before becoming an RA. Each RA advises and supervises no more than two residents at one time.

7.C.5 Supervising Diplomate

Defined in [Part One](#). For the Specialty of Neurology, each supervising SD in neurology training must be active in the practice of neurology and must maintain clinical competency in the field. The SD for neurology training must be either an ACVIM Neurology Diplomate or an ECVN Diplomate. See Section [3.DD](#) above for rules governing Supervising Diplomates for non-neurology, supplemental training.

7.C.6 Traditional Neurology Residency Training Program

A traditional Neurology RTP is a multiyear postgraduate training program under the supervision of a PD, RA, and SD. The length of a Neurology RTP ranges from two to three years. The program entails a minimum of 96 weeks of supervised clinical training, at least 75 weeks of which is comprised of clinical neurology.

7.C.7 Training Week

A directly or indirectly supervised training week is defined as a minimum of four (4) ten-hour days or five (5) eight-hour days to account for forty (40) hours per week. Training must occur in blocks of time that consist of 4 or 5 consecutive days (one full week); partial weeks or individual days may not be added together to meet this requirement, except as specified in 7.C.8 below.

7.C.8 Training Hour

For the purpose of meeting the specified training time in specified fields or activities (i.e. clinical pathology, imaging, neurosurgery, neuropathology, electrodiagnostics, and emergency) time will be defined as Training Hours, rather than Training Weeks. A Training

Hour will be defined as a minimum of one continuous hour of direct contact time with a supervising specialist while engaged in that field/activity, with the exception of electrodiagnostics and neurosurgery. In electrodiagnostics and neurosurgery, where time is determined by the length of the procedure, credit for time may be earned in contiguous 15-minute blocks, with four (4) blocks equaling one (1) Training Hour.

7.D Roles and Responsibilities

7.D.1 Responsibilities of the Sponsoring Institution

7.D.1.a Documentation and Verification

Described in Part One under [Registration of the Residency Training Program](#).

7.D.1.b Facilities and Equipment

The supervising institution (SI) must ensure the primary training site or hospital has the following facilities and equipment:

- Radiographic, ultrasonographic, and electrocardiographic equipment (onsite access to MRI, CT, and nuclear medicine is highly recommended but is not required)
- Electrodiagnostic equipment for nerve stimulation and electromyography (onsite access to EEG is highly recommended but is not required)
- Clinical pathological services, including CBC, serum chemistries, blood gas analysis, urinalysis, cytology, parasitology, microbiology, and endocrinology. If these capabilities are unavailable within the hospital, then the SI must make arrangement with local or regional laboratories
- Surgical facilities
- A veterinary medical library that contains the textbooks and current journals the Neurology RTC specifies

7.D.1.c Didactic Learning Opportunities

The SI provides the resident with the following didactic learning opportunities:

- Formal conferences
 - Residents must attend formal teaching conferences, resident seminars, grand rounds sessions, medicine Journal Clubs, neurobiology classes, etc. Residents must participate in these activities an average of four times per month, regardless of their duty status;
 - Conferences given within a veterinary practice or hospital or at a medical school or medical teaching hospital are acceptable. The RTP application should include the format and schedule of these conferences and presentations;
 - The resident must give at least three (3) presentations at a formal conference during their residency. A presentation may be given at least once per year or may consist of giving more than one presentation in any given year. Documentation of these presentations must be included in the resident's neurology credentials submission. A presentation at a regional (e.g. the Midwest Veterinary Conference or the Mid-Atlantic Veterinary Conference), state, or national meeting may substitute for this presentation; a copy of the program must be included in the neurology credentials packet of the resident;
 - Electronic /Online / Digital opportunities (seminars, conferences, neurology specific continuing education, neuropathology courses, Journal Club conferences, etc.) may be utilized as preapproved by the Neurology RTC. The

format and schedule of these conferences and presentations should be included in the written proposal to the Neurology RTC

- Continuing education conferences
 - Residents must attend at least one state, regional, national, or international veterinary medical or human medical continuing education conference (ACVIM Neuroscience Course (Brain Camp) would qualify) during their residency. Documentation of attendance at the conference must be included in the neurology credentials packet of the resident.
- Formal examination review sessions
 - A Neurology RTP must provide at least 40 hours per year of intensive formal review sessions for resident on topics covered in the [General and Specialty Examinations](#). Attending daily clinical rounds does not meet this requirement. The requirement could be met in part by attending an [ACVIM Advanced Continuing Education \(ACE\) course](#), the ACVIM Neuroscience Course (Brain Camp), or an [ACVIM Forum](#). A Neurology RTP must provide [a listing](#) of these formal reviews to the Neurology RTC in their annual update for their continued approval an RTP.

7.D.1.d Neurology Diplomates

The SI must provide the resident with the onsite presence of any combination of at least two ACVIM or ECVN Neurology Diplomates with full-time clinical responsibilities.

7.D.1.e Supporting Disciplines Required

The SI ensures resident have daily access to consultation with board- certified specialists in Internal Medicine, Oncology, Cardiology, Surgery, Ophthalmology, Emergency Medicine, Critical Care, Nutrition, Anesthesiology, Clinical and Anatomic Pathology, and Diagnostic Imaging.

The SI ensures that resident have access to a board-certified veterinary clinical pathologist and anatomic pathologist for evaluation and consultation, at least by timely phone calls, about clinical material submitted.

The SI ensures that during the course of the residency, residents will have at least 50 hours each of direct contact with a board-certified anatomic pathologist, clinical pathologist, and radiologist to facilitate the required supported discipline-specific training. These contact hours are defined as Training Hours ([4.F.12](#))

7.D.1.f Secondary Training Sites

If the SI schedules training at secondary training sites during the RTP, the provider(s) of this training must submit training agreement forms to the Neurology RTC. These forms must accompany the Neurology RTP registration form for each new program request and for each annual renewal of registration. Each form must specify the number of weeks scheduled and the rotation time requirement satisfied at the secondary training site. If, for example, a resident has a clinical pathology rotation at another institution, the supervising clinical pathologist at that institution must provide a signed statement confirming the name of the resident, rotation duration and proposed dates, and the institution with which the resident is affiliated.

A secondary training site may not provide either of the two full-time ACVIM or ECVN Neurology Diplomates required onsite. Additional information about training sites is found in [Part One](#) of this Certification Manual.

7.D.2 Responsibilities of the Program Director

A SI may have only one Neurology PD. In Neurology the PD may be a Diplomate of an ACVIM specialty other than neurology. The PD remains current on residency training requirements outlined in this Certification Manual. The PD maintains the highest integrity in representing the SIs Neurology RTP.

The PD must report substantive changes within a Neurology RTP affecting compliance with Specialty of Neurology requirements to the Neurology RTC Chair within 14 days. This must be done in writing through the ACVIM office before the changes are made to ensure they are acceptable to the Neurology RTC. The time between changes made in the RTP and Neurology RTC approval does not count toward residency completion by a resident.

Substantive changes include, but are not limited to, the following:

- Changes (addition or deletion) in supervisory personnel such as having too few RAs or SDs for the number of residents in the RTP;
- The PD must provide the Neurology RTC with an updated plan for any current residents if no resolution occurs within a 12-month probation period. During that period, the PD provides written updates every three months to the Neurology RTC on what is being done to correct the deficiencies. If the deficiencies are not resolved within the 12-month probation period, the Neurology RTC may terminate the program;
- Alteration of program duration (this must be approved by the RTC before it can be implemented);
- A resident transferring from one program to another (such transfers involve review by both the Neurology CC and the Neurology RTC to ensure appropriate transfer of credit);
- A resident either being placed on probation or being dismissed from the program;
- A resident beginning another RTP (for a second neurology residency, this would require approval by the RTC, as it would entail transitioning to a non-traditional program);
- A resident enrolling in an institutional graduate program.

At the time of annual program renewal, PDs and RAs may be asked to verify resident activities. Activities include, but are not limited to:

- Satisfactory clinical training;
- Interaction with consultants;
- Documentation of study and education participation.

If adequate personnel or facilities to fulfill requirements involving anatomic or clinical pathology, radiology, imaging, or direct supervision in other specialties are unavailable onsite, the PD must make special arrangements at other facilities for a resident to fulfill all deficiencies. The Neurology RTC must approve such arrangements in advance. Letters of commitment for the provision of offsite training must be submitted when requesting approval

of a new program. Updated letters of commitment must be submitted at annual renewal of an existing program.

The PD ensures signed letters of commitment of required time for secondary training sites are submitted annually with application for program renewal.

Specialists with whom the resident has trained must provide the PD or the RA with documentation of these interactions.

The Neurology RTC can request further information or documentation from the PD, RA, and SD at any time, if such information is deemed necessary to verify that residency training is occurring as described in the [neurology program description form](#). Reporting inaccuracy may result in the Neurology RTP probation or termination.

7.D.3 Responsibilities of the Resident Advisor

The RA must be a full-time, onsite ACVIM Neurology Diplomate or a full-time, onsite ECVN Diplomate with clinical responsibilities. Although no restriction exists regarding the number of RAs within a neurology program, a RA may not train more than two residents concurrently. The RA, with appropriate input from PD and all SD, must evaluate an assigned resident at least once every six months and discuss the result of each evaluation with the resident. The RA is encouraged to use the [clinical milestones](#) found later in this section to aid in assessment of resident strengths and deficiencies, and to monitor the success of the RTP.

The RA completes an evaluation form that is posted on the [ACVIM website](#) for each assigned resident. It is permissible to use other evaluation forms if that is the preference of the RA. The RA must have the resident sign the RA's copy of the written evaluation as documentation that the resident received a copy of the evaluation and that it was discussed with the resident.

The RA also ensures that the resident receives directly supervised, in-person training from board-certified specialists as described in the [Distribution of Time in Training section](#) later in this section. Telephone or electronic consultations are not considered adequate for these training purposes.

These experiences should occur in full training weeks as part of the 24 weeks devoted to training in allied specialties as defined in specific clinical rotations found under [Distribution of Time in Training section](#).

The RA and the assigned resident must document that training occurred as specified. The RA signs and verifies all documentation related to resident's completion of program requirements. The RA provides copies of resident evaluations to the PD who provides them to the Neurology RTC if requested. The purpose of Neurology RTC review is to allow the RTC, the PD, RA, and the resident to identify and correct any programmatic issues that might place a program in jeopardy of suspension.

7.D.4 Responsibilities of the Supervising Diplomate

The maximum number of neurology residents that a SD may routinely supervise at any one time is two. The SD may directly or indirectly supervise the resident. Direct supervision requires the SD to be on clinics with the resident. Indirect supervision does not require the SD to be on clinics with the resident. During indirect supervision, the SD must be in contact in person with the resident at least one hour each day. Review of patient care performance by the resident should be conducted directly between the SD and the resident. Contact between the SD and the resident exclusively by telephone or computer is unacceptable.

The SD ensures resident have daily access to consultation with board- certified specialists in Internal Medicine, Oncology, Cardiology, Surgery, Ophthalmology, Emergency Medicine, Critical Care, Nutrition, Anesthesiology, Clinical and Anatomic Pathology, and Imaging.

7.D.5 Responsibilities of Resident

Resident can access registration forms, lists of approved traditional RTPs, and specialty credentials packets from the [ACVIM website](#), or request them from the ACVIM office. Completed applications and credentials packets are to be submitted online via the ACVIM website. Resident may contact the Neurology RTC Chair to ensure their programs are in compliance with ACVIM and the requirements of the Specialty of Neurology.

7.D.5.a Patient Care

Residents must actively participate in management of small and large animal neurology patients. This includes receiving patients, supervising daily patient care, coordinating neurology clinical teaching, providing optimal client service, communicating with clients (owners), and engaging in appropriate follow-up and professional communication with referring veterinarians. An RA or SD must directly supervise and review case management.

The number of cases a resident sees depends on the species, the kinds of problems, and the depth of study required. Emphasis should be on quality of cases rather than on quantity of cases.

Residents have primary responsibility for their cases. They maintain complete medical records for all patients. The problem-oriented veterinary medical record system is strongly encouraged. Records must be retrievable and searchable.

7.D.5.b Journal Club

Resident must participate in at least 80 hours of Journal Club throughout their residency. At least one board-certified neurologist must attend each Journal Club meeting. Resident must keep a log of Journal Club activities that includes the date, topics discussed, and those in attendance. The log is to be submitted as part of a resident's credentials review.

7.D.5.c Clinical Case Conferences (Rounds)

During neurology clinical training, residents must attend and participate in daily patient-oriented rounds with at least one neurology SD present. In an RTP where veterinary students and interns are integral to and participating in hospital activities, residents should be encouraged to supervise cases and lead rounds discussions with a SD present until the SD deems a resident capable of leading student rounds independently.

7.E Neurology Residency Training Program Registration and Evaluation

Each RTP, whether traditional or non-traditional must [register with ACVIM](#) and be approved prior to a resident beginning their training. Completed and submitted registration forms must include information about personnel (names of RAs and SDs), facility and equipment available to support the resident training.

The designated PD must submit a completed RTP registration form online for review by the Neurology RTC by the date specified on the [ACVIM website](#). The Neurology RTC either approves the program or provides details of those deficiencies that must be corrected before the program can be approved. At the time of registration, the PD must provide a written plan for allowing resident to continue their training should the RTP be terminated for any reason.

Each year, the PD must update and reregister the neurology RTP to ensure each program remains approved and in good standing to train residents in neurology.

7.E.1 Program Probation

Failure to submit the appropriate information by the deadlines published in this Certification Manual may result in a Neurology RTP being [placed on probation](#). While on probation, the RTP may continue to train residents, but may not accept new resident(s) into the program.

If the PD fails to respond to Neurology RTC requests for documentation regarding the RTP within 30 days of the request, that RTP may be placed on probation. If the PD fails to provide an acceptable response within an additional 30 days, the Neurology RTC will terminate the RTP.

7.E.2 Program Termination

A terminated residency training program may not be renewed. However, a previously terminated program may reapply as a new program. Time served by resident in a terminated RTP cannot count toward the completion of a neurology residency. If severe deficiencies (e.g. loss of all neurologists) are identified in a program, that program may be terminated without having first being placed on probation.

7.E.3 Notifications

If the Neurology RTC places an RTP on probation or terminates the program, ACVIM notifies the PD and all resident currently in the program.

7.E.4 Acceptable Neurology RTPs

A list of current Neurology RTC approved residency training programs is available on the [ACVIM website](#) or upon request from the ACVIM office.

7.E.5 Distribution of Time in Training

An approved Neurology RTP is at least 104 weeks in length in a traditional two-year RTP or 156 weeks in length in a traditional three-year RTP and entails at least 96 weeks of supervised clinical training. Non-traditional Neurology RTPs or Neurology RTPs that are interrupted must be completed a maximum period of five years beginning with the first day of the residency.

Intensive Clinical Training in Neurology

At least 75 of the 96 weeks must consist of clinical neurology service rotations. A resident is assigned to a clinical neurology service. The resident provides patient care during these rotations. (link to Patient Care under Responsibilities of Resident) The 75 weeks includes no less than 50 weeks of direct supervision by a SD. The 75 weeks may also include up to 25 weeks of indirect supervision (face to face contact at least four days per week) between the resident and the SD. A resident may spend up to 25 weeks of the 75 weeks managing a clinical neurology service.

Academic degree programs (master's or doctorate) cannot be substituted for intensive clinical training in neurology.

Clinical Training in Other Fields

Because neurology is a multimodal discipline, residents must receive additional clinical training under direct supervision of the affiliated board- certified specialist in the fields of radiology, clinical pathology, anatomic pathology, and emergency medicine. Additionally,

specific training in neurosurgery, electrodiagnostic testing, and neuropathology (anatomic pathology) are required. The required rotations are as follows:

Imaging

- Residents must spend at least 50 hours in direct contact time with a board-certified veterinary radiologist interpreting images, learning and evaluating the results of special imaging techniques, and attending radiology rounds or seminars – this time may be completed in Training Hours, rather than Training Weeks (See [4.F.12](#) above).

Clinical pathology

- Residents must spend at least 50 hours in direct contact time with a board-certified veterinary clinical pathologist or anatomic pathologist with experience in clinical pathology evaluating clinical pathologic findings, attending clinicopathological conferences, and examining surgical sections– this time may be completed in Training Hours, rather than Training Weeks (See [4.F.12](#) above).

Neuropathology

- Residents must spend at least 50 hours in the review of veterinary neuropathology with a board-certified anatomic pathologist through lecture series, in seminars, or in a formal training program – this time may be completed in Training Hours, rather than Training Weeks (See [4.F.12](#) above).

Neurosurgery

- Residents must spend at least 50 hours participating in veterinary neurosurgical procedures – this time may be completed in Training Hours, rather than Training Weeks (See [4.F.14](#) above). There are certain specific areas, e.g. electrodiagnostics and nerve biopsies, where the training hours may be acquired in blocks of quarter hours (15-minute increments).

Electrodiagnostics

- Residents must spend at least 50 hours participating, reviewing, evaluating, and interpreting different aspects of electrodiagnostics; including, but not limited to, electroencephalography, electromyography, motor and sensory nerve conduction study, and evoked potentials – this time may be completed in Training Hours (including quarter hour increments), rather than Training Weeks (See [4.F.12](#) above).

Emergency clinic

- Resident must participate in emergency service on a rotational basis; cases seen may be limited to neurology – this time may be completed in Training Hours, rather than Training Weeks (See [4.F.12](#) above).

This contact may occur either at the primary training site or at a secondary training site. The SI provides in the written program proposal to the Neurology RTC the names of the SDs involved, their areas of specialization, and details about the anticipated professional interaction.

For each offsite rotation for clinical training in other fields, a resident obtains written approval from the RA to which that individual is assigned and ensures the Neurology RTC receives documentation of the approval.

Research and Scholarly Activity

A resident is expected to participate in a laboratory or clinical investigative research project during the Neurology RTP. The resident must complete a basic science or clinical research project that follows the scientific method approach and receives approval by the RA. Suitable projects can be retrospective or prospective in nature. A letter from the RA is required to document satisfactory completion of the project before certification is awarded.

Unsupervised Time

At least eight weeks of a neurology residency may include unsupervised time that is considered a part of the RTP. The following qualify as unsupervised time for resident:

- Attendance at continuing education meetings related to neurology;
- Uncompromised time to study for examinations;
- A minimum of 4 continuous weeks of protected study time must be allocated to the resident for preparation for the ACVIM General Examination and an additional minimum of 4 weeks of continuous protected time for the Specialty Examination (for a minimum of 8 weeks of protected study time). Protected and uninterrupted study time should be scheduled to precede the examination date as much as is practical;
- Independent study (external rotations in other hospitals or laboratories);
- Vacation time during a residency should be a minimum of 2 weeks per year of RTP time that is independent of protected study time.

7.F Clinical Milestones for First Year Neurology Residents

7.F.1 Patient Care

First year residents must meet the following milestones related to patient care to continue to second year of RTP:

- Provide patient care that is compassionate, appropriate, and effective;
- Demonstrate comprehensive history taking and physical examination skills
- Demonstrate the ability to evaluate and prioritize data into a problem list and formulate a diagnostic plan with some supervision;
- Assess daily patient progress accurately, and perform appropriate and timely follow-up of diagnostic tests and interventions;
- Have daily communication with the supervising attending veterinarian, including attending daily service and house officer rounds;
- Demonstrate effective communication skills accompanied by respectful and professional behavior in all interactions with patients, owners, referring veterinarians, and colleagues.

7.F.2 Medical Knowledge

First year residents must meet the following milestones related to medical knowledge to continue to second year of RTP:

- Demonstrate acceptable knowledge about established and evolving biomedical and clinical sciences, apply this knowledge to patient care;
- Have basic knowledge of pathophysiology, pharmacology, and clinical disease states;
- Demonstrate an analytical approach to clinical situations;

- Demonstrate self-directed learning and reading of pertinent medical literature;
- Participate in organized educational activities designed to develop or expand medical knowledge base and to teach analytical thinking and problems solving such as:
 - Attending daily clinical service and house officer rounds when on neurology clinical service;
 - Attending scheduled Journal Club and structured learning activities such as departmental seminars, morbidity and mortality rounds, and other related sessions;
 - Attending rounds when rotating through internal medicine other specialty services (i.e., Cardiology, Oncology, Critical Care, etc.);
 - Attending rounds specific to any service or specialty rotation in which the resident participates (e.g., diagnostic imaging, clinical pathology, or other activities related to the neurology residency training program).

7.F.3 Learning and Improvement

First year residents must meet the following milestones related to learning and improvement to continue to second year of RTP:

- Investigate and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices because of these activities;
- Demonstrate a willingness to acknowledge and to learn from errors;
- Participate in didactic rounds, daily house officer rounds, Journal Club, and other performance improvement activities (see Medical Knowledge), including presentation of ACVIM review topics and presentation in Journal Club at least five times per year;
- Use available medical databases or evidence-based medicine resources to support clinical decision making;
- Participate in the clinical training (case supervision, daily ward rounds, etc.) of students, interns, and other health care professionals as applicable;
- Demonstrate an interest in and ability to participate in various didactic learning opportunities;
- Assist in clinical teaching of veterinary students, externs and interns (if applicable), and other house officers, including providing feedback to these individuals regarding performance, knowledge, medical record keeping, and patient care as applicable.

7.F.4 Interpersonal and Communication Skills

First year residents should meet the following milestones related to interpersonal and communication skills to continue to second year of RTP:

- Demonstrate interpersonal and communication skills that result in effective information exchange and engagement with owners and professional associates;
- Develop language and documentation skills (e.g., succinct and comprehensive case presentations, progress notes, and comprehensive patient care plans) as they progress in training;
- Provide efficient, but comprehensive information exchange with colleagues, health care professionals, and owners;
- Develop effective listening skills;

- Establish professional and ethically sound relationships with owners and referring veterinarians.

7.F.5 Professionalism

First year residents must meet the following milestones related to professionalism to continue to second year of RTP:

- Demonstrate a commitment to carrying out professional responsibilities, adhering to ethical principles, and possessing sensitivity to cultural differences and preferences;
- Demonstrate respect, compassion, and integrity in all interactions with patients, owners, colleagues, and other health care professionals;
- Maintain a professional appearance;
- Demonstrate a commitment to ethical principles pertaining to confidentiality of patient information and informed consent;
- Demonstrate commitment to professional responsibility in completing all medical records in a timely fashion;
- Begin to develop skills in conflict resolution.

7.F.6 Clinical Research

First year residents must meet the following milestones related to research and publication productivity to continue to second year of RTP:

- Identify a research study under the supervision of their Resident Advisor (RA) or a Supervising Diplomate (SD) during the first six months of residency, and prepare a detailed research proposal by the end of the first year;
- Assist research mentor in study design, literature review, grant preparation (if applicable), and submission of selected research projects;
- Comply with the ethical principles of research and actively participate in writing an animal care and use protocol (if applicable).

7. G Clinical Milestones for Second and Third Year Neurology Residents

7.G.1 Patient Care

Second year residents must meet the following milestones related to patient care to continue to third year of RTP:

- Fulfill all requirements expected of a first year resident;
- Formulate independent diagnostic and therapeutic plans with the supervision of an attending veterinarian;
- Coordinate patient care among all members of the health care team;
- Counsel and educate owners and referring veterinarians;
- Develop competence in performing the core procedural skills essential to the practice of neurology.

7.G.2 Medical Knowledge

Second year residents must meet the following milestones related to medical knowledge to continue to third year of RTP:

- Fulfill all requirements expected of first year resident;

- Develop a deeper understanding of disease states and their management;
- Continue to develop skills in critical assessment, reading, and interpretation of the medical literature with application to patient care;
- Apply knowledge of study designs and statistical methods to the appraisal of clinical studies (i.e., skills emphasized in clinical rotations and rounds discussions).

7.G.3 Learning and Improvement

Second year residents must meet the following milestones related to practice-based learning and improvement to continue to third year of RTP:

- Fulfill all requirements expected of a first year resident;
- Develop competence in educating owners;
- Facilitate the learning of students and interns (if present), other residents, and other health care professionals.

7.G.4 Interpersonal and Communication Skills

Second year residents should meet the following milestones related to interpersonal and communication skills to continue to third year of RTP:

- Continue interpersonal and communication skills developed as first year resident;
- Develop effective negotiation and leadership skills that facilitate conflict avoidance and resolution.

7.G.5 Professionalism

Second year residents should meet the following milestone related to professionalism to continue to third year of RTP:

- Continue to refine and demonstrate professionalism skills developed as first year resident.

7.G.6 Clinical Research and Publication

Second year residents must meet the following milestone related to clinical research and publication to continue to third year of RTP:

- Fulfill all requirements expected of a first year resident;
- Initiate study implementation, including active participation in patient recruitment and sample collection, data analysis, and manuscript preparation;
- Maintain focus on study completion and troubleshoot any problems that may arise with mentor(s);
- Research productivity can, for example, be demonstrated by having a published abstract, conference presentation, or accepted peer-reviewed publication. Research productivity needs to be completed to the RAs satisfaction with appropriate input from the research mentor. The specialty of Neurology does not have a formal publication requirement.

7.H Resident Evaluation

The RA and PD, or the SI Residency Training Committee, review the progress of all residents for the duration of the program, and provide written evaluation to the resident. Residents are evaluated by the RA on the criteria listed in [Neurology Clinical Milestones](#). Evaluation occurs at least every six months for the duration of the RTP. The RA maintains a copy of each review until a candidate

receives board certification. The RA should have the resident sign the RAs copy of the written evaluation, as documentation that the resident has received a copy and that the results of the evaluation were discussed with the resident.

Residents initiate and maintain an annual report of their activities and credentials (see [neurology credentials information packet](#)) for the duration of their residencies. Each annual report includes the weekly schedule of activities and summary of their schedule for the year. The resident and the RA must sign each report. Residents retain the original reports and update the progress reports in their entirety every 12 months. The PD and the RA receive a copy of the credentials report. A list of required submissions, along with the procedures for submitting training documents, is provided on the candidates' webpage on the ACVIM website. If deficiencies are found in a resident's activities, they will be notified of their deficiencies. If the deficiencies are not corrected, it may result in the resident not being allowed to take their specialty examination during their 3rd year of training.

Resident and their RA document that training occurred as specified. RAs ensure that resident submit annual reports of their progress to the Neurology RTC by the date specified on the [ACVIM website](#) following the end of each year of residency and upon completion of the program. In addition, resident must submit the annual program reports to the Neurology RTC by the date specified on the [ACVIM website](#) of the year before the date the resident plans to take the Neurology Specialty Examination. The appropriate SD signs off on this report. The report follows the standardized spreadsheet format found on the [ACVIM website](#). The resident submits this information via the website for review by the Neurology RTC. The resident ensures that their RAs keep these standardized evaluations on file in case the Neurology RTC requests the information.

7.1 Residency Training Interruption

Training interruptions may be unavoidable in circumstances where a resident must switch from one RTP to another to fulfill all RTP and credentialing requirements. In such cases, the following steps must be taken:

- A new training program must be identified
- The Neurology RTC must approve the new RTP before the onset of clinical training
- The resident must reregister with ACVIM in the new RTP
- The resident must complete training in continuous blocks of time once training resumes

In some circumstances, a resident may need to take a leave of absence, which prevents that individual from completing the traditional RTP on time. When a leave of absence is necessary, the resident has a maximum of four years if enrolled in a traditional two-year RTP or five years if enrolled in a traditional 3-year RTP to achieve board certification.

Residents in interrupted programs when actively engaged in the residency must attend full time in no less than of 20 weeks of training in any calendar year.

Training must occur in 5 blocks of time with four continuous weeks in each block for those portions of the residency that must be completed in Training Weeks (see Section [4.F.11](#)). Blocks may run consecutively or be separated, but each block must be 4 weeks in length.

In some cases, a resident may complete a portion of training at another approved RTP or research unit/mentor. In those cases, the second RTP or the research unit/research mentor is considered a secondary training site. The Neurology RTC must approve that relationship as part of the RTP submission, along with all appropriate supporting documents from the primary training site.

7.J Neurology Credentials for the Specialty Examination

Candidates must include the following credential items in their Neurology Specialty Examination applications:

- The completed credentials specialty examination application packet as described in the [neurology information packet](#)

7.J.1 Procedures for Submitting Credentials

****Always check the ACVIM website prior to submission; this process is subject to change.****

The information listed in this section provides an overview of the procedures for submitting credentials. Specific guidelines are in the [neurology credentials information packet](#). Because application requirements change periodically, candidates must be sure they are using the most current application and credentials packet. If a candidate has any questions regarding the application process, that individual should request clarification in writing from the Neurology RTC chair or from the ACVIM office before the submission deadline.

Residents must be registered in an approved traditional or non-traditional RTP and be trained under the supervision of a RA before submission of their credentials application packet.

Candidates certified in the ACVIM specialties of Large Animal Internal Medicine (LAIM), Small Animal Internal Medicine (SAIM), Cardiology, or Oncology who aspire to become Neurology Diplomates must complete a minimum of a 75-week Neurology RTC-approved neurology RTP. They must receive training under the supervision of a RA.

Candidates may submit complete credentials packets and the credentials fee online to the ACVIM office **following completion of a two-year residency, after 22 months of a three-year residency**, or after the equivalent time in any other approved residency provided these candidates are in the final year of that program. Candidates in approved non-traditional residencies may submit completed credentials packets and fees following completion of equivalent time, provided it is in the final year of the program.

If an individual is ACVIM board-certified in a specialty other than neurology and is participating in an ACVIM registered neurology residency, that individual may submit credentials within the final 12 months of the Neurology RTP. The Neurology RTC evaluates submitted credentials packets for completeness and accuracy.

A candidate who intends to take the Neurology Specialty Examination must electronically submit credentials including letters of reference for the Neurology Specialty Examination so that the ACVIM office receives the credentials packet no later than the date specified on the [ACVIM website](#) of the year preceding that examination date. Materials are forwarded to the Neurology Credentials Committee chair. Each candidate is notified no later than 60 days after the submission deadline regarding the acceptability of the submitted credentials packet for the Neurology Specialty Examination. All candidates must submit the current standard neurology application form along with the other required documents. They must carefully follow the instructions provided in the credentials packet as inadequate attention to detail may cause the entire application to be rejected.

7.J.2 Credentials Items to be Submitted

****Always check the ACVIM website prior to submission; this is only a partial list and is also subject to change.****

Candidates must include all items that are specified on the Candidate's Webpage on the ACVIM website to have a complete credentials packet. The Resident's Report of Annual Progress form will provide much of the required information and so must be filled out completely and accurately:

- The completed application form;
- An updated curriculum vitae;
- Letters documenting successful completion of rotations outside the SI, if applicable. The person from the outside facility who had oversight of an applicable rotation must sign the letter;
- Reference forms or letters;
- Candidates must have three associates with whom they have worked in their training program submit either an ACVIM [Neurology Referee Form](#) or a letter of reference, which may be used in lieu of the form. At least one reference must be from the RA who supervised the major part of the resident's training. The reference forms or letters and copies are forwarded as directed in the credentials packet. The candidate ensures the reference letters arrive at the ACVIM office by the date specified on the [ACVIM website](#) of the year before that the candidate intend to take the examination.

7.J.3 Evaluation of Credentials for the Neurology Specialty Examination

The ACVIM office and the Neurology Residency Credentials Committee (RCC) review all candidate applications and credentials packets. A reviewer assigned by the Neurology RCC evaluates and rates a candidate's credentials as acceptable or unacceptable. The reviewer records the evaluation results on a standard form, which the ACVIM office retains. The Neurology RCC Chair compiles the reviewer's evaluation comments for unsuccessful candidate's credentials. The ACVIM office sends the compiled comments to the candidate.

The ACVIM office notifies candidates regarding acceptance or rejection of their credentials within 60 days of the deadline for credentials submission. Candidates can expect a response to their requests to take the Neurology Specialty Examination within 30 days of applying.

7.J.4 Neurology Specialty Examination Registration and Fee

Once credentials are approved, candidates may register for the Neurology Specialty Examination and pay the fee online to the ACVIM office by the date specified on the [ACVIM website](#) in the year before that they intend to take the examination. Candidates retaking all or part of the Neurology Specialty Examination must pay online by the date specified on the [ACVIM website](#) of the year they plan to take the examination.

7.J.5 Neurology Specialty Examination Content and Format

****Always check the ACVIM website; the examination format is subject to change.*

*Any changes will be reflected in the current examination blueprint.****

The Neurology Specialty Examination consists of five sections that cover all aspects of neurology. A candidate must pass all sections of the examination to become certified.

The first section is a comprehensive examination composed of multiple-choice questions on aspects of all areas of neurology.

The remaining four sections require candidates to interpret actual case materials presented as images in various formats, specimens, imaging modalities, electrodiagnostic results, or videographic recordings:

- Neuroimaging
- Neuropathology
- Electrophysiology
- Clinical cases

ACVIM Neurology Diplomates use an examination rating process to establish the pass score for all sections of the examination. Each section is graded separately. Candidates that do not pass all sections on the first attempt need only retake the failed sections.

A blueprint of the Neurology Specialty Examination is posted on the ACVIM website at least 60 days before the [examination date](#). More specific information on grading the examination is provided in the instructions distributed to candidates taking the examination at least 60 days before to the examination date.

7.K ACVIM Diplomate Certification

Defined in [Part One](#).

7.L Maintenance of Credentials

The [Neurology Maintenance of Credentials \(MOC\) Committee](#) maintains a list of acceptable continuing education experiences and their associated points that count toward renewal of neurology credentials by ACVIM. This information is available on the ACVIM website.

7.M Online Exit Interview Survey

After completing an RTP (new Diplomate or candidate), you are strongly encouraged to fill out an online survey regarding the quality of the training experience within 90 days of completion of the RTP.

Responses are shared with the appropriate PD with the goal of providing important feedback regarding their residency training. Data, held strictly confidential annually, [will be published](#) as five-year rolling average score per surveyed category calculated for each RTP and will be released every three years to ensure anonymity of candidates that completed smaller programs.

8. Requirements for the Specialty of Oncology

The American College of Veterinary Internal Medicine (ACVIM) offers certification of specialists in Oncology. The residency training program (RTP) is the foundation of training for ACVIM Diplomates in Oncology. This section of Part Two explains requirements for oncology RTPs, and for residents and candidates working toward certification in this specialty.

8.A Abbreviations

CC: Credentials Committee

PD: Program Director RA: Resident Advisor

RTC: Residency Training Committee

RTP: Residency Training Program

SD: Supervising Diplomate

SI: Sponsoring Institution

8.B List of Required Specialty of Oncology Forms

[Oncology RTP Registration Form](#) [Standardized Weekly Spreadsheet](#)

[Standardized Resident Evaluation Form](#) [Credentials Packet](#)

[Specialty Credentials Application Form](#) [ACVIM Oncology Reference Form](#)

[Application to take the Specialty of Oncology Examination](#)

[List of reading / study resources for the Specialty of Oncology Examination](#)

[Blueprint for the Oncology Specialty Examination](#) (60 days before the Examination date)

8.C Process for Achieving ACVIM Oncology Diplomate Status

At a minimum, achievement of ACVIM Oncology Diplomate status (“Board Certification”) requires that candidates meet the following criteria:

- [Register with the ACVIM](#) at the start of their Residency Training Program (RTP);
- Successfully complete an approved ACVIM RTP in Oncology. The resident should complete the entire RTP within three years, but under extenuating circumstances (a non-traditional RTP may be approved by the RTC), within a maximum period of five years beginning with the first day of the residency; (see [Sections 4.D](#) and [4.E](#) above);
- Submit [annual reports](#) of their progress in the RTP;
- Register with the ACVIM to take the [ACVIM General Examination](#) (after a minimum of 18 months of the RTP is completed);
- Attain a passing score on the ACVIM General Examination;
- Register with the ACVIM to take the [ACVIM Specialty of Oncology Examination](#);
- Submit Credentials for evaluation by the Specialty of Oncology CC;
- Attain a passing score on the ACVIM Specialty of Oncology Examination;
- Complete the publication requirement for the Specialty of Oncology as specified in the Certification Manual version that was in effect the year the resident started their RTP. Although the publication requirement is specific to the year that a resident begins their RTP, there may be procedural changes that become effective during a residency. Those procedural changes, which may include updates in the approved journal list, are in effect

from the date of approval. So, all residents/candidates should verify that they are following the most current procedures prior to submission of their publication to a journal;

- Receive Specialty of Oncology CC certification that the credentials submitted by the candidate are complete and meet all requirements.

If a candidate fails to complete the board certification process within eight years of starting their continuous three year traditional RTP or within five years from the end date of a non-traditional residency, that person's status changes from active to inactive. The candidate may not resubmit credentials or participate in additional examination attempts and becomes ineligible to become board-certified (See [sections 4.D](#) and [4.E](#) above).

8.D Annual Report during the RTP

Residents are required to submit an annual report of their progress for evaluation by the CC, consisting of a record of completed weeks with each requirement signed by the appropriate SD. A [standardized spreadsheet](#) will be provided for this purpose by the CC. The RA must keep the residents standardized schedule forms on file (forms available on the [ACVIM website](#)) should the information be requested by the CC.

8.E Registering for the ACVIM General Examination

The application (including examination questions, application document, and supporting RA letter) must be submitted online to the ACVIM office before the date specified on the [ACVIM website](#) of the year preceding the exam. The ACVIM office reviews all of the application materials and notifies the candidate of status within 30 days of the submission deadline.

8.F Procedures for Submitting Credentials for the Specialty Examination in Oncology

****Always check the ACVIM website prior to submission, as this process is subject to change.****

Because application requirements change periodically, candidates must be sure they are using the most current application and credentials packet when submitting their registration form. The residency training requirements in effect at the beginning of a residency will remain in effect for the duration of each candidate's RTP, there may be changes in specific forms, dates of submission of information, fees, etc. that will take place during an RTP and that will be effective for all residents/candidates at the time of implementation. If there are any questions regarding the application process, the candidate should request clarification in writing from the Oncology CC chair or the ACVIM office before the submission deadline.

Residents may submit credentials in the final twelve (12) months of their program.

Candidates must submit credentials (including reference letters) to the ACVIM office by the date specified on the [ACVIM website](#) of the year before they will attempt the ACVIM Specialty Examination in Oncology. (See also: [Part 1 – ACVIM website](#)).

8.F.1 Credential Items to be Submitted

****Always check the ACVIM website prior to submission, as this list is subject to change.****

The following must be included in the [application](#) to be submitted online:

- The completed [application form](#) & credentials fee;
- A copy of the resident's first author publication or signed letter from an CC approved journal indicating full acceptance;
- An updated curriculum vitae;

- Letters documenting successful completion of rotations at facilities other than the SI (if applicable). These letters must be signed by the SD who was responsible for oversight of the rotation;
- Reference forms or letters: Applicants must have three associates with whom they have worked in their training program submit either an [ACVIM Oncology Referee Form](#) or a letter of reference. At least one reference letter must be from an ACVIM Diplomate certified in the Specialty of Oncology. The reference forms or letters should be forwarded as directed in the credentials packet;
- A complete weekly record of the candidate's RTP contact time, including Journal Club and rounds schedules. This should be complete and include any previously submitted Annual Reports.

8.F.2 Evaluation of Credentials for Specialty Examination in Oncology

The ACVIM office and the Oncology CC review all applications and credentials packets. The candidate credentials will be evaluated and rated as acceptable or unacceptable by the CC. The CC reviewers will record the evaluation on a standard form that will be retained by the ACVIM office. Reviewer comments will be compiled by the Chair of the CC and sent by the ACVIM office to each unsuccessful candidate. The ACVIM office will notify the candidate of the acceptance or denial of his/her credentials within sixty (60) days of the deadline for submission of credentials.

8.F.3 Registration and Fee for Taking the Specialty Examination in Oncology

Once credentials are approved, residents may register for the Specialty Examination in Oncology. Candidates attempting or re-attempting all or part of the Specialty Examination in Oncology must pay online by the date specified on the [ACVIM website](#) of the year they plan to take the examination. Candidates will receive confirmation or denial of eligibility to sit the exam within 30 days.

8.F.4 The Specialty Examination in Oncology Content and Format

****Always check the ACVIM website, as the examination format is subject to change. Any changes will be reflected in the current examination blueprint.****

The Specialty Examination in Oncology consists of two sections that cover all aspects of oncology and that are graded separately. The sections are:

- Basic Science
 - Multiple choice questions on aspects of basic science relevant to oncology
- Applied Clinical
 - Multiple choice questions on aspects of applied science relevant to oncology
- Multiple choice questions on clinical application and patient management

The scores for these two Clinical parts are combined for a final grade.

In the Applied Clinical Section, case histories are used to present diagnostic and therapeutic problems. Interpretation of clinical pathology, diagnostic imaging, and cytology images is required. Problem solving is emphasized.

The examination includes all aspects of oncology with special emphasis on medical oncology, but will include questions related to radiation oncology, surgical oncology, and tumor biology. A current list of [reading/study resources](#) is available for candidates.

An examinee must pass each section of the Specialty of Oncology Examination. Failure of one, or both, section(s) of the examination will require retaking and passing the failed section(s). Once a section of the Oncology Specialty Examination has been passed, it does not need to be retaken.

A blueprint for the Specialty of Oncology Examination will be posted on the [ACVIM website](#) at least 60 days prior to the examination date.

8.F.5 Publication Requirement

To become board-certified in the Specialty of Oncology, the candidate must have a minimum of one [publication](#) in print or accepted for publication in a refereed scientific journal. The subject of the paper must be in the field of veterinary oncology. A literature review or a case report does not qualify. The candidate must be the first author and a copy of the publication must be submitted electronically with the rest of the required credentials.

The publication must be written in English (or a translation provided) and be in a refereed scientific, medical or veterinary medical journal. A refereed journal is one that is governed by policies and procedures established and maintained by a standing editorial board which requires critical review of all papers and approval by at least one recognized authority on the subject.

Book chapters or conference proceedings do not fit these criteria. Acceptable Journals adhere to the principles of peer review and are MEDLINE® indexed.

Published manuscripts that were used to meet the credentialing requirements of other ACVIM specialties cannot be used to meet the oncology requirements. However, the candidate may use an otherwise acceptable manuscript that is based on work completed during programs other than their oncology residency, including, but not limited to internships, non-ACVIM residencies, MS, and PhD programs. Manuscripts from previous programs must be published within five (5) years (either direction) of the candidate's oncology residency start date.

For the purposes of meeting the credentialing requirements of the Specialty of Oncology, an article is deemed as accepted for publication when the author has received one of the following:

- A letter, on the journal's letterhead, or electronic communication from the editor stating that the article has been accepted for publication;
- A letter, on the journal's letterhead, or electronic communication from the editor stating that the article has been approved for publication by all reviewers and is now only awaiting editing prior to publication;
- A galley proof of the article with a cover letter from the editor, on the journal's letterhead or an electronic communication stating that the article is scheduled for publication.

The article and acceptance letter or electronic communication (if the article has not yet gone to print) should be sent electronically to the ACVIM. Any letter or communication from an editor that states there are reviewer comments to be addressed, no matter how minor the comments, will be considered unacceptable for credentialing purposes as that letter implies final review by the reviewers has not been completed.

If a candidate is unsure if a response from a journal is considered as "final acceptance," the Chair of the CC should be petitioned in writing. A minimum of six (6) weeks may be needed for the CC to respond to a request for clarification.

An accepted publication is not required to take the Oncology Specialty Examination; however, the Certification process is not complete until acceptance of publication is documented. The publication must be in print, online, or accepted with no revisions required before the candidate will receive a Diplomate certificate.

8.G The Residency Training Program

8.G.1 Oncology Residency Training Committee

The Oncology Residency Training Committee (Oncology RTC) consists of at least five members appointed by the specialty president and is responsible for monitoring the satisfactory progress of all residents and compliance with CM requirements for all RTPs in the Specialty of Oncology.

The Oncology RTC expects RTPs to be cohesive, integrated, stable, ongoing programs that continually raise the standards in oncology, while training highly capable oncologists whose capabilities build upon those of their mentors.

8.G.2 Acceptable Oncology RTPs

A listing of the current Oncology RTPs approved by the RTC is available from the [ACVIM website](#) or upon request from the ACVIM office.

8.G.3 Correspondence and Inquiries

Registration forms, lists of approved Oncology residencies, and Specialty credentials packets are [available online](#) or by request from the ACVIM office. Residents may contact the Chair of the RTC to ensure that their program is in compliance with the ACVIM and the Specialty of Oncology requirements.

8.G.4 Institutional Requirements for Approved Oncology Residency Training Programs

- Oncology RTPs are a minimum of three (3) years;
- There must be a minimum of two ACVIM Oncology Diplomates with clinical SD responsibility at the primary training site of the residency for an Oncology residency to be approved or to maintain approval (annual renewal of the residency);
- There shall be no more than two Oncology residents per ACVIM Oncology Diplomate (full time employees) in an RTP;
- It is essential that the resident have face-to-face contact, in person (video conferencing is not acceptable as face to face contact) with their SD in the Specialty of Oncology. The definitions of Direct and Indirect Supervision are found in [Part One](#).

8.G.5 Objectives of the Residency Training Program

- To provide intensive training in oncology, including major responsibility for the care of patients with neoplastic disease. During training the resident should acquire a broad working knowledge of anatomy, physiology, and pathology of all body systems, and in-depth knowledge of the effects of cancer on the tumor-bearing host;
- To ensure that the resident will acquire proficiency in oncology by exposure to a sufficient number and variety of cases representing all facets of oncology in a hospital equipped for a specialty practice of Oncology;
- To ensure that the resident will acquire a comprehensive understanding of safe handling of chemotherapy agents in veterinary practice;

- To provide experience and training sufficient for the resident to understand the fundamentals and applications of diagnostic methods including hematology, blood chemistry and urinalysis, surgical pathology, cytopathology, radiology and other imaging methods and immunology;
- To provide experience and training sufficient for the resident to gain in- depth knowledge of cancer treatment methods including surgery, chemotherapy, radiation therapy, cryosurgery, and immunotherapy and be aware of important investigational methods of therapy;
- Although clinical training will, in most cases, emphasize small companion animals, the resident should gain awareness and understanding of the important neoplastic diseases in other domestic species and common laboratory animals;
- To provide designated time for residents to gain experience in the following:
 - Basic science and/or clinical research as part of a residency-based project;
 - Clinical trial design and implementation.

8.G.6 Clinical Milestones for First Year Oncology Residents

- Basic understanding of cancer biology, chemotherapeutics, and cancer patient care;
- Ability to effectively manage clinical aspects of internal medicine and oncology patients;
- Understand safe handling practices for chemotherapy in veterinary oncology practice to a level sufficient to inform other clinicians and support staff;
- Ability to effectively co-manage radiation oncology and surgical oncology patients with their respective specialty clinicians;
- Communicate effectively and clearly to build rapport and trust with clients and referring veterinarians;
- Become highly skilled in working collaboratively with clients regarding treatment options including palliative therapies and euthanasia;
- Ability to perform a literature search and review;
- Develop an idea for investigation, design a research project, obtain funding if necessary and begin investigational procedures.

8.G.7 Clinical Milestones for Second Year Oncology Residents

- Attain an advanced understanding of cancer biology, chemotherapy, radiation therapy, immunology and cancer patient care;
- Become highly skilled in referring veterinarian and client communication skills, including client grief counseling;
- Understand study design and read, understand and critique published clinical studies;
- Develop a basic understanding of grant design and writing, and public speaking;
- Give a scientific presentation to professional peers;
- Continue progression with a research project;
- Take and pass the ACVIM General Examination.

8.G.8 Clinical Milestones for Third Year Oncology Residents

- Develop a more advanced understanding of cancer biology, chemotherapy, radiation therapy, immunology and have become proficient at their application to patient care;

- Develop advanced public presentation skills;
- Ability to communicate in a work setting with challenging individuals in a manner that supports the best possible outcome for the oncology patient;
- Well-developed understanding of study design and ability to read, understand and critique published studies;
- Complete a research project with data collection and analysis and prepare a manuscript for publication;
- Take and pass the Specialty Examination in Oncology;
- Publish a manuscript that is accepted by the Oncology CC.

8.H Distribution of Time in Training

An approved RTP requires a minimum of 108 weeks of clinical training following at least one year of training (internship or equivalent) in general medicine and surgery.

The resident should complete the entire RTP within three years, but under extenuating circumstances and with RTC approval, within a maximum period of five years from the start of the residency. Part-time RTPs in Oncology will not be approved, although in exceptional circumstances a non-traditional RTP may be approved which will consist of non-contiguous blocks of full-time training (see [Sections 4.D](#) and [4.E](#) above and [8.T](#) below).

8.I Training Week

A directly or indirectly supervised work week is defined as a minimum of four, ten- hour days or five, eight-hour days to account for the 40 hours per calendar week.

Training must occur in a minimum of two-week blocks, [except where specified](#).

8.J Patient Care

The resident will actively participate in the management of oncology patients, including patient receiving, diagnostic testing, patient management and decision-making, client communication, appropriate follow-up and professional communication with the referring veterinarian. Patient management should be supervised and be reviewed by the SD.

8.K Clinical Case Conferences (Rounds)

While on clinic duty, residents are required to participate in daily patient-oriented rounds with the appropriate SD.

8.L Intensive Clinical Training in Oncology

Academic degree programs (MS or PhD) cannot be substituted for intensive clinical training.

A minimum of seventy-four (74) weeks must involve intensive training in oncology supervised by ACVIM board-certified Diplomate(s) in the Specialty of Oncology.

These 74 weeks are comprised of Direct supervision for a minimum of 50 weeks and Indirect supervision for an additional number of weeks to [total 74 weeks](#) under an Oncology SD.

8.M Clinical Training in Other Specialties

Because oncology is a multimodal discipline, the resident must also have clinical training under the direct supervision of SDs in other disciplines. This contact may occur at a secondary training site;

however, in the written program proposal to the Oncology RTC the SI must provide the names of the SDs involved, their areas of specialization, and details about the anticipated professional interaction.

A minimum of 32 weeks must be spent actively receiving patients in affiliated rotations or meeting requirements through rounds. During that time, the resident must be under the direct supervision of the affiliated board-certified specialist and must participate in the affiliated specialty to the level at which they are capable. For each off-site rotation included in the 32 weeks of clinical training in other specialties, the resident should obtain written approval from their RA, who will forward documentation of this approval to the RTC.

8.M.1 Required Affiliated Rotations

Radiation Oncology

- At least eight weeks (completed in blocks of at least two weeks) of direct supervision with a veterinary radiation oncologist to develop an understanding of clinical management of patients receiving radiation therapy, radiation planning, dosimetry and physics related to clinical radiation therapy.

Clinical Pathology

- Two weeks (40 hours) of clinical pathology; this may be met through weekly/biweekly rounds. To satisfy this requirement, the resident may accumulate Training Hours (see 4.F.14 above) with 40 Training Hours being equal to one Training Week.

Surgical Pathology

- Two weeks (40 hours) of surgical pathology; this may be met through weekly/biweekly rounds. To satisfy this requirement, the resident may accumulate Training Hours (see 4.F.14 above) with 40 Training Hours being equal to one Training Week.

Diagnostic Imaging

- Two weeks of diagnostic imaging with direct supervision by a board-certified radiologist in addition to any interactions during case rounds – This requirement may NOT be satisfied by accumulation of Training Hours, it requires two (2) formal Training Weeks.

Small Animal Internal Medicine

- Four weeks with direct supervision by an ACVIM Small Animal Internal Medicine (SAIM) Diplomate.

8.M.2 Other Rotations

Fourteen (14) additional weeks of other rotations with an ACVIM Diplomate in the Specialty of Oncology, or training under the supervision of a member of an American Board of Veterinary Specialties (ABVS) or European Board of Veterinary Specialisation (EBVS) approved specialty (such as, but not limited to, the American College of Veterinary Radiology, the American College of Veterinary Radiology (Radiation Oncology), European College of Veterinary Neurology, the American College of Veterinary Pathology, ACVS, or ACVECC) may also occur during these 14 weeks.

With the exception of clinical and surgical pathology, all of the affiliated rotations must be completed in two (2) week blocks, unless there are extenuating circumstances (such as illness or family emergency), and the exceptions are approved by the Oncology RTC. In this case, specifically approved one week blocks would be acceptable.

If a resident is board-certified in one of the required affiliated specialties, they are not required to complete additional directly supervised time in that specialty. For example, a SAIM Diplomate is not required to complete additional rotations in small animal internal medicine as part of an Oncology residency. Instead, the resident spends four weeks of directly supervised time receiving patients in one or more of the other approved affiliated rotations.

For each off-site rotation to be included in the 32 weeks of clinical training in other specialties, the resident should obtain written approval from their Resident Advisor (RA), who will forward documentation of this approval to the RTC.

8.N Unsupervised Time

Six weeks of an oncology residency may include unsupervised time. Attendance at continuing education meetings related to oncology, uncompromised time to study for examinations and independent study are categorized as unsupervised time that may be considered part of the residency training.

8.O Research

The resident is expected to actively participate in a laboratory or clinical investigative research project during the residency. A minimum of eight weeks (320 hours) of an oncology residency should be dedicated to this aspect of training.

Research time should be scheduled as either weekly time (hours per week) or in blocks of time sufficient to complete the research, perform data analysis and prepare a manuscript for publication by the third year of their residency (see Recommended Milestones). This experience must be documented, with dates, and signed by the SD.

8.P Journal Club

An organized and routinely scheduled [Journal Club](#) of at least 80 hours over the course of the RTP must be an integral part of all RTPs. Journal Club must be attended and supervised by a SD. The RTP application requires a schedule of proposed Journal Club for Oncology RTC approval and the RTC may ask for documentation that Journal Club actually met, e.g. dates and articles discussed, if there are questions raised during a program's annual evaluation.

The purpose of the Journal Club is to provide structured learning time and to facilitate the residents' abilities to critique and appraise peer-reviewed, evidence-based publications that pertain to aspects of veterinary oncology. This may take the form of reviewing a single publication, or a group of publications in one aspect of veterinary oncology. Supervision by the SD is important to guide critical evaluation of each journal article. One suggested approach is to:

- provide a description of the study (identifying the research question and or problem);
- evaluate the literature review/introduction for completeness;
- describe and evaluate the appropriateness of study design used to evaluate the research question, the effectiveness of the sample size and the statistical methods used;
- review the results of the research and comment about the appropriateness of the authors interpretations of those results;
- discuss how the publication may change the approach to the disease or process and how the results may lead to new questions or research.

8.Q Seminar or Lecture Series and Formal Conferences

Residents must attend formal teaching conferences in oncology and related disciplines throughout the residency. Unless these are formal lectures or classes, an Oncology SD supervises the conferences; these should occur an average of four times per month. Examples of these are clinical pathology conferences, resident seminars, and grand rounds sessions, Journal Clubs, and tumor biology classes. Conferences given within a veterinary practice or hospital or at a medical school or medical teaching hospital are acceptable. The RTP application includes the format and schedule of these conferences and presentations for Oncology RTC approval.

The resident must give a formal presentation at such a conference at least once per year. Documentation of these presentations must be included in the oncology credentials packet of the resident. A presentation at a regional, state, or national meeting may substitute for this presentation; a copy of the program must be included in the oncology credentials packet of the resident.

8.R Continuing Education Conferences

Residents must attend at least one state, regional, national, or international veterinary or human medical continuing education conference during their residency. Documentation of attendance at the conference must be included in the oncology credentials packet of the resident/candidate.

8.S Formal Examination Review Sessions

An Oncology RTP must provide at least 40 hours per year of intensive formal review sessions for residents/candidates on topics covered in the general and specialty examinations. Attending daily clinical rounds does not meet this requirement. The requirement could be met in part by attending an ACVIM course, by attending an ACVIM Forum, or formal resident review sessions at a Veterinary Cancer Society Annual Meeting. An oncology RTP must provide annual documentation of these formal reviews to the Oncology RTC.

8.T Non-Traditional Training Programs

It is possible to achieve certification in the Specialty of Oncology in a non-traditional RTP, but all of the training requirements of a traditional residency must be satisfied. Thorough justification must be made for a non-traditional residency to be approved by the Oncology RTC, and the training period may not exceed 5 consecutive years. If the 108-week clinical training program is not continuous, it must be arranged in blocks of time no less than 2 weeks of full-time training per block with a minimum of 20 weeks per year. Non-traditional residency RTPs must be submitted by the PD to the Oncology RTC for approval at least 90 days in advance of the residency start date. The candidate resident and his/her PDs, RAs, and SDs are responsible for documenting that the training has occurred as specified. If a residency occurs at multiple sites, all training requirements for both direct and indirect supervision, as well as requirements for rounds and conferences, equipment, and staffing must be met at each site. Such programs will be required to provide lists of SDs and schedules of conferences in which the resident participates for each site.

Candidates have up to five (5) years after successful completion of a non-traditional residency to complete the certification process. Failure to complete the certification process within 5 years will result in that individual's status changes from active to inactive and is no longer eligible to become board-certified (see [Sections 4.D](#) and [4.E](#) above).

8.U Responsibilities of the Sponsoring Institution

8.U.1 Documentation and Verification

Outlined in [Part One](#). Specific to Oncology, the Sponsoring Institution should fulfill the following criteria.

8.U.2 Facilities and Equipment

The resident must have routine on-site access to adequate diagnostic facilities including standard radiographic, ultrasonographic, electrocardiographic, and endoscopic equipment. Access to nuclear medicine, computerized tomography (CT) or magnetic resonance imaging (MRI) is strongly recommended, although it is not required to be on-site.

The resident must have access to a facility which provides radiation therapy and to a veterinary radiation oncologist who is board-certified in Radiation Oncology for the required 8 weeks of supervised training.

The resident must have access to 24-hour emergency and critical care facilities on-site. A board-certified veterinary clinical pathologist or anatomic pathologist and a fully equipped clinical laboratory facility should be routinely available for evaluation of and consultation about clinical material submitted, at a minimum for timely phone consultation. In addition, there should be at least eighty (80) hours of direct contact with a board-certified pathologist to facilitate the required training in diagnostic clinical cytology, and a minimum of eighty (80) hours of direct contact with a board-certified pathologist to facilitate the required training in surgical histopathology. The resident should have access to a veterinary medical library with on-line searching capacity and, at a minimum, access to all textbooks and full text access to all journals on the current examination committee reading list.

8.U.3 Supporting Disciplines Required

There must be an ACVIM SAIM Diplomate with $\geq 50\%$ FTE at the primary training site of the residency for an Oncology RTP to be approved or to maintain approval (annual renewal of the residency). There must be an ACVS Surgery Diplomate with $\geq 50\%$ FTE at the primary training site of the residency for an Oncology RTP to be approved or to maintain approval (annual renewal of the residency).

8.V Responsibilities of the Program Director

8.V.1 Oncology Residency Training Program Registration and Evaluation

The PD must be an ACVIM Diplomate, although it is not required that the PD be a Diplomate in the Specialty of Oncology. Each Oncology RA and SD in Medical Oncology must be an ACVIM Diplomate in Oncology. The PD must submit a completed [Oncology RTP Registration Form](#) to the ACVIM office for review by the [Specialty of Oncology RTC](#) by the date specified on the [ACVIM website](#) of each year. The Oncology RTC will approve the program or provide details of those deficiencies that must be corrected before the program is approved.

As part of the RTP registration, the PD must provide a written plan for allowing residents to continue their training should the RTP be placed on probation, or terminated for any reason.

Each year, the PD must [update and re-register](#) each RTP to ensure each program remains approved and in good standing to train residents/candidates in oncology.

8.V.2 Resident Evaluation

The RA and PD, or Residency Training Committee at the SI will review the progress of all residents for the duration of the program, and provide written evaluation to the residents. Resident evaluation occurs no less frequently than every six months. See more to follow under Responsibilities of Resident Advisor. The RA must have the resident sign the RA's copy of the written evaluation to confirm that the resident received a copy of the evaluation and had the opportunity to discuss it with the RA (or SI Residency Training Committee). The Oncology CC may ask for copies of these evaluations if there are questions raised during a program's annual review.

8.V.3 Program Probation

Failure of the PD to submit the appropriate information regarding their RTP (whether the program is in good standing or on probation) to the RTC within 30 days of the deadlines published in this Certification Manual may result in a program being placed on [probation](#). While on probation the RTP may continue to train residents, but will not be able to accept any new residents.

If the program is on probation, and the PD does not respond to the RTC's request for documentation regarding their residency within 30 days, the RTP can be [terminated](#).

8.V.4 Program Termination

If a program is terminated, it may not be renewed. A previously terminated program may re-apply as a new program; however, any time served by a resident after the program was terminated will not count towards completion of his or her residency. In rare circumstances; if, during a review, a program is found to have serious deficiencies that prevent a resident receiving adequate training or supervision, that program may be terminated immediately, without having first been placed on probation.

8.V.5 Substantive changes to an RTP

Substantive changes to an RTP that could lead to non-compliance with the requirements of the Specialty of Oncology or ACVIM, which will result in probation must be reported to the Oncology RTC within fourteen (14) days. Such changes include (but are not limited to):

- Having too few ACVIM Oncology Diplomates for the number of residents being trained;
- If there are too few ACVIM Oncology Diplomates for the number of residents being trained; the PD will provide the RTC an updated plan for residents currently in training. Unless a new permanent ACVIM Oncology Diplomat is hired full-time, probation will continue. A suitable RTC- approved resolution that will allow probation to continue would be for the resident to fulfill training at another site (see RTC approval of [secondary training site](#), or for an RTC-approved ACVIM Oncology Diplomat locum to provide training within the probation period. During that period, the PD will provide written updates to the RTC in regards to correcting the deficiencies every three (3) months;
- If locum-training is substituted, probation will continue, and the resident teaching experience of the locum should be detailed and submitted to the Oncology RTC;
- If the deficiency is not resolved to the RTC's approval, the RTP will be terminated by the RTC;
- Having no SAIM Diplomat at the primary training site;

- Having no ACVS Diplomate at the primary training site;
- If one or more of the supporting specialists (listed above) are not at the primary training site; the RTP will be placed on probation for the remainder of the training period for all residents currently in training. During that period, the PD will provide written updates to the RTC in regards to correcting the deficiencies every 3 months. If the deficiency is not resolved at the end of remainder of the training period of all current residents, the RTP will be terminated by the RTC. If a program is placed on probation or terminated, ACVIM will notify the PD and all residents currently in the program of the action against the program;
- In addition, the PD must report the following events to ACVIM, if they occur, within 14 days of their occurrence:
 - A resident transferring from one program to another (such transfers require review and approval by both the Oncology RTC and CC prior to their occurrence);
 - A resident either being placed on probation or being dismissed from the program;
 - A resident beginning another RTP;
 - A resident enrolling in an institutional graduate program.

At the time of annual program renewal, PDs and RAs may be asked to verify resident activities.

8.W Responsibilities of the Resident Advisor

The Resident Advisor (RA) is an ACVIM Oncology Diplomate responsible for the resident during their RTP. An individual RA may not train more than two oncology residents concurrently. The RA may also be an SD and/or the PD. The RA signs and verifies all documentation related to a resident's completion of program requirements.

In conjunction with the PD, the RA must periodically evaluate the resident (a minimum of once every six (6) months) and discuss the results of those evaluations with the candidate. The RA is encouraged to use the [Oncology Milestones](#) as an aid in assessment of the strengths and deficiencies of the resident as well as to monitor the success of the RTP. The RA maintains a copy of each review until a candidate receives full board certification, and should be prepared to submit those copies to the CC, if requested. The resident will sign the RAs copy of the written review, as documentation that they have been informed of the results of the review.

In addition to the above evaluations, for each resident the RA will complete the ACVIM standardized annual [Resident Evaluation Form](#) that is available from the ACVIM website. The RA will provide copies of resident evaluations to the PD who provides them to the Oncology CC, if requested. The purpose of the evaluation by the CC is to allow the CC, the PD, and the resident to identify and correct programmatic problems before they would place a program in jeopardy of probation or termination.

RAs inform the residents to submit [annual reports](#) of their progress to the Oncology CC by the date specified on the [ACVIM website](#) following the end of each year of residency and upon completion of the program.

8.X Responsibilities of the Supervising Diplomate

The SD for oncology training must be an ACVIM Oncology Diplomate. The SD for all supplemental training should be an ABVS-approved or EBVS-approved board-certified specialist, but not necessarily an ACVIM Oncology Diplomate. The SD in the discipline oversees the activities of the resident during each rotation, (for example the ACVR radiologist during the imaging rotation is considered the SD). An SD in supplemental rotations must have full-time status during the period of supervision, even if they have a less than 100% FTE the remainder of their time at the SI.

Residency training in oncology requires the onsite presence of at least two full-time ACVIM Oncology Diplomates with clinical responsibility for the RTP to be approved or to maintain approval at annual renewal of the program. These individuals will be the SDs in Oncology.

The SD ensures that the resident receives [directly supervised, in-person training](#) from board-certified specialists in radiation oncology, clinical pathology, diagnostic imaging, surgical pathology, small animal internal medicine, small animal soft-tissue surgery, and small animal emergency and critical care. These experiences should occur as defined in specific clinical rotations found under [Distribution of Time in Training](#).

Direct supervision requires the SD to be on clinics with the resident for clinical rotations, e.g. clinical and surgical pathology are the exceptions. Review of patient care performance by the resident should be conducted directly between the SD and the resident. Contact between the SD and the resident by telephone or computer is unacceptable.

Indirect supervision is only acceptable by an ACVIM Oncology SD as defined above.

In addition, Journal Club must be attended and supervised by a SD.

8.Y Responsibilities of Residents

Residents can access registration forms, lists of approved traditional residency training programs, examination information and specialty credentials packets [online](#), or from the ACVIM office. Residents may contact the Oncology RTC to ensure their programs are in compliance with ACVIM and the Specialty of Oncology requirements.

Residents and their RA document that training occurred as specified. Residents must initiate and maintain an [annual report](#) of their progress and submit that report online for the Oncology CC by the date specified on the [ACVIM website](#) following the end of each year of residency. The resident and the RA must sign each report.

Residents retain the original reports and update the progress reports in their entirety every 12 months. In addition, upon completion of the program residents must submit the annual program reports to the Oncology CC by the date specified on [ACVIM Website](#) of the year before the date the resident or candidate plans to take the [Specialty of Oncology Examination](#). The report follows the standardized spreadsheet format found on the [ACVIM website](#). The resident submits a copy to the ACVIM website for the Oncology CC. Residents ensure that their RA keeps these standardized evaluations on file in case the Oncology CC requests the information.

8.Y.1 Off-site Rotations

For each off-site rotation included in the 32 weeks of clinical training in other specialties, the resident should obtain written approval from their RA, who will forward documentation of this approval to the CC.

8.Y.2 Residency Training Interruption

Training interruptions may be unavoidable in circumstances where a resident must switch from one RTP to another to fulfill all RTP and credentialing requirements. In such cases, the following steps must be taken:

- A new training program must be identified;
- The Oncology RTC must approve the new RTP before clinical training begins;
- The resident must re-register with ACVIM in the new RTP;
- The resident must complete training in continuous blocks of time once training resumes.

In some circumstances, a resident may need to take a leave of absence, which prevents that individual from completing the RTP in three years.

However, when actively engaged in the residency, the resident must attend full time. The residency must be completed in contiguous blocks of 20 weeks of training in any calendar year. When a leave of absence is necessary and approved by the RTC, the resident has a maximum of five years from the end of the RTP to achieve board certification in oncology (see [Sections 4.D](#) and [4.E](#) above).

8.Y.3 Secondary Training Site

In some cases, a resident may complete a portion of training at another approved RTP or at a separate research facility, which is considered a secondary training site. The Oncology RTC must approve that relationship as part of the RTP submission, along with all appropriate supporting documents from the primary and secondary training sites.

8.Z Maintenance of Credentials (MOC)

The Specialty of Oncology MOC Committee maintains a list of acceptable [continuing education experiences](#) and their associated points that count toward re-credentialing by ACVIM. This information is available on the ACVIM's website.

8.AA Frequently Asked Questions for ACVIM Oncology Residency Training Programs & Board Certification

What is the difference between direct supervision and indirect supervision?

With direct supervision, the SD must be on clinics with the resident. With indirect supervision, the SD does not need to be on clinics with the resident but must have at least one hour of in-person contact time (not by telephone or computer) with the resident each day (either 4 or 5 days per week).

What procedures should be followed if a resident is going to modify their program, change from one program to another, or if the faculty members associated with the program change?

Any change in the RTP must be brought to the attention of the Oncology RTC in writing, before the changes are made to ensure that the proposed changes are acceptable. Any proposed changes should be submitted to the RTC through the ACVIM Central Office. Significant changes could include, but are not limited to, transferring from one program to another, alterations in program duration, changes in supervising personnel (additions/deletions), beginning another residency training program, or enrolling in an institutional graduate program. If changes are not approved by the RTC prior to the changes in the program, the time between the start of the change and approval of the revised program will not count towards a candidate's residency.

How many residents can be in a residency training program at any given time?

The RA is an ACVIM board-certified Diplomate in the specialty that the resident is seeking certification in who is responsible for signing all documentation and verifying the completion of the program requirements for that resident. There is no restriction on the number of RAs that a program can have but each RA can be responsible for a maximum of two residents (i.e. two residents for each Oncology Diplomate).

What needs to be done to gain approval of off-site rotations?

A letter of support needs to be submitted by the SD of that off-site rotation to the RTC at the time the program is being approved AND during the annual update (this step is often overlooked and causes delays in program renewals and approvals).

Each letter of support should specify the number of weeks scheduled at the site and the rotation requirement that is satisfied. This letter needs to be submitted as part of the application process for a new program and re-submitted each year with the program renewal application. For example, if a resident is doing a clinical pathology rotation at another institution, the clinical pathologist should sign a letter confirming the name of the candidate, duration and proposed dates of the rotation, and their institutional affiliation.

When can a publication be considered as accepted?

The CC may approve a publication in press (not yet published but accepted for publication) when there is a letter from the editor on the journal's letterhead or an electronic communication that states that the article has been accepted for publication, or has been approved by all reviewers and is only waiting for editing prior to publication, or when there is a galley proof with a letter or electronic communication from the editor stating the article is scheduled for publication.

9 Specific Requirements for the Specialty of Small Animal Internal Medicine

The American College of Veterinary Internal Medicine (ACVIM) certifies specialists in Small Animal Internal Medicine (SAIM). Small animal internists focus on systemic diseases and diseases of internal organs in dogs and cats. This section of Part Two explains requirements for SAIM residency training programs (RTP), and for residents and candidates working toward certification in the Specialty of SAIM.

9.A Small Animal Internal Medicine Residency Training Programs

The RTP is the foundation for ACVIM training of future Diplomates in SAIM. The components of a SAIM RTP are:

- Sponsoring Institution (SI)
- Program Director (PD)
- Resident Advisors (RAs)
- Other Supervising Diplomates (SDs)
- Residents

The standards contained in this section of the Certification Manual are the minimum requirements for the SAIM specialty. An individual approved RTP may include additional requirements that then become part of that specific RTP. A resident must fulfill all the additional requirements that are part of their approved RTP along with the minimum requirements in this document to successfully complete their residency.

An SAIM residency embodies more than fulfilling the requirements in this document. The SAIM Residency Training Committee (RTC) expects RTPs to be cohesive, integrated, stable, and ongoing programs that continually raise the standards in SAIM, while training highly capable internists whose capabilities build upon those of their mentors.

At a minimum, achievement of SAIM Diplomate status requires that candidates meet the following criteria:

- The candidate successfully completes an ACVIM approved RTP in SAIM;
- The candidate attains a passing score on the ACVIM General Examination;
- The candidate attains a passing score on the SAIM Specialty Examination;
- The candidate completes the publication requirement for the SAIM specialty as specified in this [Certification Manual](#) and in the [SAIM Information Packet](#) that were in effect the year the candidate started his/her residency program;
- The SAIM Credentials Committee (CC) certifies that the credentials submitted by the candidate for the SAIM specialty are complete and meet all requirements.

The candidate has a maximum of eight (8) years from starting a continuous three (3) year RTP to achieve board certification in SAIM. In circumstances of an [interrupted program](#), the resident has a maximum of five (5) years from the end date of the resident's RTP to become board-certified. Residents also have up to five (5) years from the end date of a non-traditional residency to achieve board certification (see [Sections 4.D](#) and [4.E](#) above). If a candidate fails to become board-certified within the specified time, the candidate's status changes from active to inactive.

The inactive candidate may not resubmit credentials or participate in additional examination attempts and is ineligible to become board-certified.

Residency training in SAIM requires the equivalent onsite presence of at least two full-time ACVIM SAIM Diplomates; or the presence of at least one full-time ACVIM SAIM Diplomate and at least

one full-time ECVIM-CA Diplomate. The two full-time Diplomates need not be present onsite simultaneously at all times. No RTP should be deliberately designed without the equivalent of two full-time Diplomates being present onsite at the primary location. It is acceptable and often beneficial that multiple SAIM or ECVIM-CA onsite Diplomates contribute to a combined training time that equals at least two full-time Diplomates.

A SAIM residency must take place at a specialty clinical facility where the resident provides primary patient care appropriate to that individual's level of training; and where the resident manages cases involving all facets of SAIM including, but not limited to, clinical pathology, pathology, all forms of diagnostic imaging, critical care, and endoscopy. Medical care of each patient under the resident's care must be reviewed at least once a day by the SD. Review of the resident patient care performance should be conducted directly between the SD and the resident.

9.A.1 General Objectives of the SAIM Residency Training Program

- All residents will participate in the emergency service on a rotating basis. The RTP will describe the nature of these rotations on the RTP description submission form;
- Where applicable, the RTP will encourage residents to participate in clinical teaching (case supervision, daily rounds, etc.) of interns, veterinary students, or veterinary technician students;
- Where applicable, residents will be involved in classroom and laboratory teaching;
- Where applicable, residents will prepare and deliver continuing education seminars and participate in scientific meetings;
- Where applicable, residents in conjunction with the SD will guide and oversee interns, veterinary students, or veterinary technician students in the operation of the specialty clinics. This will include supervising interns and students in the operation of the hospital emergency service;
- Residents will gain a comprehensive understanding of pathophysiology as it relates to SAIM;
- Residents will develop and promote interest in and understanding of the SAIM specialist's role as a clinician scientist;
- Residents will receive instruction and experience in research, publication, communication, and education.

9.A.2 Specific Objectives of the SAIM Residency Training Program

- An RTP must provide a well-rounded experience and caseload with direct supervision;
- An RTP must provide rotations other than Internal Medicine rotations supervised by board-certified ACVIM specialists other than SAIM, by European College of Veterinary Internal Medicine-Companion Animal (ECVIM-CA) specialists other than Internal Medicine, or by European College of Veterinary Neurology (ECVN) specialists so that residents receive mentored training in all ACVIM specialties (See [9.C.1.d](#)). This will enhance the training experience, and will provide residents with opportunities to work one-on-one with board-certified specialists in areas outside of SAIM;
- An RTP must provide diagnostic imaging and clinical pathology training. This will include at least two weeks of instruction under the direct supervision of a board-certified veterinary radiologist in diagnostic imaging (one week each in diagnostic ultrasound and in diagnostic radiology), and one week of instruction in clinical

pathology under the direct supervision of a board-certified clinical pathologist. This training must be done in dedicated training weeks in addition to being integrated into the overall RTP. The goal for this training is for the resident to fully immerse themselves in the discipline being studied;

- Residents will participate in Diplomate-attended Journal Clubs and Clinico-pathology conferences (as identified in the literature, the **clinicopathological conference** primarily relies on case method of teaching medicine. It is a teaching tool that illustrates the logical, measured consideration of a differential diagnosis used to evaluate patients. Cases that are unusual presentations of common diagnoses or typical presentations of unusual diagnoses make the best cases for CPC presentation. Cases for such a conference must be relevant, solvable, and should be open to discussion);
- The RTP will keep records of dates and articles reviewed that may be requested for review by the RTC if there are questions during a program's annual review;
- An RTP will develop a resident's clinician-scientist skills through activities such as Diplomate-attended Journal Clubs, research projects participation, mentored grant-writing, and publication of peer-reviewed manuscripts;
- An RTP will provide and require resident participation in preparation and presentation of formal talks in continuing education and scientific presentation styles.

9.B Definitions for SAIM Residency Training Programs

9.B.1 Non-Traditional Training

Defined in [Part One](#). For the Specialty of SAIM, non-traditional training programs are discouraged, but it is possible to achieve board certification by successfully completing a non-traditional RTP. The Sponsoring Institution (SI) must provide thorough justification and a comprehensive plan for a non-traditional training residency to the SAIM RTC, including:

- How all requirements for a traditional RTP in SAIM will be met during the non-traditional RTP including:
 - onsite full time supervision by two (2) ACVIM Diplomates or one ACVIM and one (1) ECVIM-DA Diplomate at the SI,
 - supporting disciplines and facilities and equipment required onsite at the SI,
 - didactic learning opportunities,
 - research and scholarly activities,
 - vacation, release time for General and SAIM Specialty Examinations and Journal Club;
- If any training that may occur at secondary sites, their locations, schedules of attendance by the resident and letters from all SDs at the SI and all secondary training sites must be provided confirming their commitment to the non-traditional RTP;
- Commitments that training that occur in non-contiguous blocks of time occur in no less than two continuous weeks of time for each training period during the non-traditional RTP;
- Residents and their Program Directors (PD), RAs, and SDs must document that training occurred as specified;

- Request for approval of a non-traditional RTP must be submitted at least 90 days in advance of a residency's start date. The SAIM RTC must approve the program in advance;
- The total time allowed to complete a non-traditional residency must not exceed five (5) years;
- The total time period to achieve Diplomate status after successful completion of the non-traditional RTP may not exceed five (5) years;
- Any changes to the non-traditional RTP that deviates from the training schedule of the approved plan for the RTP must be reported to the SAIM RTC within 14 days.

9.B.2 Ombudsperson

Defined in [Part 1](#). Candidates and residents may contact the SAIM Ombudsperson at SAIMOmbudsperson@ACVIM.org. All communications are held in strict confidence.

9.B.3 Program Director

Defined in [Part 1](#). In the Specialty of SAIM each SI has to name one PD for the SAIM RTP. The PD must meet [SD requirements](#) below and must be an ACVIM-SAIM Diplomate. The PD must have been board-certified for at least four years and must have at least three years of experience training residents. The requirement of three years of experience training residents will be waived for the first three years of a new RTP, however the PD must still have been board certified a minimum of four years. If a qualified PD leaves the RTP, the SAIM RTC together with ACVIM will place the RTP on probation until the RTP employs another qualified PD full-time.

9.B.4 Resident Advisor

Defined in [Part 1](#). In the Specialty of SAIM, the RA must meet SD requirements for the SAIM portion of training. The RA must also be actively involved as a SD and is substantially involved in the clinical supervision of assigned residents. The RA must be board-certified by ACVIM - SAIM for at least two years, and must have at least one year of experience training residents. The requirement of three years of experience training residents will be waived for the first three years of a new RTP. Each RA advises and supervises no more than two residents at any one time.

9.B.5 Supervising Diplomate

Defined in [Part 1](#). In the Specialty of SAIM, all SDs for the SAIM component of training must be a board-certified specialist by either ACVIM (SAIM) or ECVIM – CA (Internal Medicine), must be active in the practice of SAIM and must maintain clinical competency in the field. For supplemental training, the SD must be a board-certified specialist as identified in Section [9.A.2](#) above.

9.C Roles and Responsibilities

9.C.1 Responsibilities of the Sponsoring Institution

9.C.1.a Documentation and Verification

The PD must submit a completed [RTP Registration Form](#) online to the ACVIM office for review by the SAIM RTC by the date specified on the [ACVIM website](#). The SAIM RTC either approves the program or provides details of those deficiencies that must be corrected before the program can be approved. The SAIM RTC must approve an RTP before the RTP accepts residents for training.

If a PD plans to leave the RTP, the SI must notify the SAIM RTC Chair of the proposed change in directors at least seven days before the change occurs. Failure to do so may result in the RTP being placed on probation. Failure to respond to SAIM RTC requests for information will result in program suspension or termination. Time served by residents in an unapproved or suspended RTP cannot count toward the completion of an SAIM RTP.

9.C.1.b Facilities and Equipment

The SI must ensure the primary training site or hospital has the following capabilities:

- State of the art ultrasonographic, radiographic, electrocardiographic, and endoscopic equipment;
- Laboratory facilities for performing CBC, serum chemistries profiles, blood gas analysis, urinalysis, cytology, parasitology, microbiology, and endocrinology. If these facilities and capabilities are unavailable through the hospital, then the SI must make arrangement with local or regional laboratories;
- A 24-hour intensive care facility;
- Access to computed tomography;
- Access to magnetic resonance imaging and nuclear medicine is highly recommended, but is not required.

The SI must also ensure residents [receive instruction](#) in ultrasonography, echocardiography, and endoscopy by appropriate board-certified specialists.

9.C.1.c Didactic Learning Opportunities

The SI must provide residents with the following didactic learning opportunities: formal conferences, continuing education conferences, and formal examination review sessions.

Residents must attend weekly formal conferences in small animal internal medicine and related disciplines. Examples of these are clinicopathologic conferences or seminars. Conferences given within a veterinary practice or hospital or at a medical school or medical teaching hospital are acceptable. The resident must give a formal presentation at such a conference at least once per year. Documentation of these presentations must be included in the resident's Credentials Packet. A presentation at a regional, state, or national meeting may substitute for this presentation; a copy of the program must be included in the resident's Credentials Packet.

Residents must attend at least one state, national, or international veterinary medical or human medical continuing education conference during their residency. Documentation of attendance at the conference must be included in the Credentials Packet. A SAIM RTP must provide at least 40 hours per year of intensive formal review sessions for residents on [topics covered](#) in the [General and SAIM Specialty Examinations](#). A SAIM RTP must provide [annual documentation](#) of these formal reviews to the SAIM CC. Attending daily clinical rounds does not meet this requirement, although structured courses and seminars may. If adequate formal review sessions are not available on-site, a resident may meet this requirement in part by attending an ACVIM [advanced continuing education \(ACE\) course](#), an [ACVIM Forum](#), or another high quality continuing education meeting (with prior approval by the SAIM CC).

9.C.1.d Supporting Disciplines Required

The SI must ensure residents have daily access to consultation with board- certified specialists in clinical pathology, imaging, and surgery. Consultation with these disciplines may

be provided via telephone, email, or by other electronic means. If board-certified specialists in Cardiology, Neurology, and Oncology are not present full time, then an acceptable alternative would be for the resident to train in at least two of these specialties at secondary training sites with board-certified specialists for a minimum of 4 weeks in each of the specialties selected over the course of the residency as described in [sections 9.C.2](#) and [9.F.2](#). These formal rotations must be completed in defined training periods of at least two continuous weeks each and the resident must have primary case responsibility.

The presence of at least one full time on-site board certified veterinary surgeon at the primary training site is required.

9.C.1.e Secondary Training Sites

If the RTP schedules training at secondary training sites during the residency, the provider(s) of this training must training agreement form(s) with the SAIM RTP Registration Form for each new program request and at each annual renewal of registration.

If adequate personnel or facilities to fulfill requirements involving clinical pathology, basic imaging, ultrasonography, or direct supervision in other ACVIM specialties are unavailable onsite at the SI, the PD must make special arrangements at other facilities for a resident to fulfill all requirements. The SAIM RTC must approve such arrangements in advance of the resident's training at that secondary site. Training Agreement Forms for the provision of offsite training must be submitted when requesting approval of a new program. Updated forms must be submitted at the time of annual renewal of an existing program. A secondary training site may not provide either of the two full-time ACVIM SAIM or ECVIM-CA (SAIM) Diplomates being required onsite. Additional information about training sites can be found in [Part One](#), above.

9.C.2 Responsibilities of the Program Director

Only individuals who are SAIM Diplomates may serve as a PD for residents in SAIM. PDs may not simultaneously serve as the PD for another ACVIM specialty while serving as a SAIM PD. There may not be more than one PD for SAIM residents at a SI.

The PD ensures that substantive changes within an SAIM RTP affecting compliance with SAIM specialty requirements must be reported to the Chair of the SAIM RTC within 14 days of such a change. Substantive changes include the following:

- Change of SDs;
- Change RA;
- Addition or removal of a resident (e.g., dismissal, withdrawal, or transfer of a resident between programs); transfer between programs requires review and approval of the proposed transfer by both the SAIM RTC and CC prior to the transfer occurring;
- Alteration of program duration;
- Resident switching to or from a dual specialty training program;
- Resident enrolling in an institutional graduate program;
- Addition or removal of any secondary site training experience. Addition of secondary sites must be accompanied by letters of commitment from the experience providers.

At the time of annual program re-approval, PDs and RAs may be asked to verify resident activities. Activities include, but are not limited to, satisfactory clinical training, interaction with

consultants, documentation of training in diagnostic imaging and clinical pathology, and documentation of study and education participation.

The PD is responsible for ensuring that the resident receives directly supervised, in-person training from board-certified specialists in at least two of these disciplines: Oncology, Cardiology, or Neurology. (See [section 9.F.2](#) below) Telephone or electronic consultation is not considered adequate for training purposes.

The PD ensures that signed letters of commitment for required time for secondary site training are submitted annually with the application for program renewal. Specialists with whom the resident has trained must provide the PD or the RA with documentation of this interaction.

The SAIM RTC can request further information or documentation from the PD, RA, and/or a SD at any time, if such information is deemed necessary to verify that residency training is occurring as described in the [SAIM Program Description Form](#). Reporting inaccuracy may result in SAIM RTP probation or termination.

9.C.3 Responsibilities of the Resident Advisor

The RA is responsible for meeting with the resident semi-annually to provide performance evaluations, ensure satisfactory progress in the RTP, and provide general mentorship and support for the resident. The maximum number of residents that a RA may routinely supervise at any one time is two. The RA should provide a written evaluation to the resident. The RA should have the resident sign the RA's copy of the written evaluation to document that the resident received a copy of the evaluation and had the opportunity to discuss the evaluation with the RA. If there are questions during a program's annual review, copies of these evaluations may be requested by the SAIM RTC.

9.C.4 Responsibilities of the Supervising Diplomate

Review of the resident patient care performance is the responsibility of the SD and should be conducted directly between the SD and the resident.

9.C.5 Responsibilities of Residents

9.C.5.a Patient Care

Residents must actively participate in patient management, including receiving, selection, performance, and diagnostic test interpretation; patient management and decision-making; client communication; appropriate follow-up; and prompt professional communications with referring veterinarians. An ACVIM or ECVIM-CA SD must directly supervise and review case management.

Residents must maintain complete medical records for all patients in their care. The problem-oriented veterinary medical record system is strongly encouraged. Medical records must be retrievable and searchable.

9.C.5.b Journal Club

Residents must participate in at least 80 hours of Journal Club throughout their residency. At least one specialist recognized by the American Board of Veterinary Specialties (ABVS) or a Diplomate of the ECVIM-CA must attend each Journal Club.

Residents must keep a log of Journal Club activities that includes the date, article titles and the identity of the specialist in attendance. The log is to be submitted as part of credentials

that are reviewed by the SAIM CC. Journal Club logs will be randomly audited by the SAIM CC when a resident's credentials are submitted.

9.C.5.c Clinical Case Rounds

During SAIM clinical training, residents must attend and participate in daily clinical rounds with at least one SAIM SD present. In an RTP where veterinary students are integral to and participating in hospital activities, residents should, if possible, lead rounds discussions an average of once weekly (over the course of the entire RTP) with a SD present until the SD deems a resident capable of leading student rounds independently.

9.C.5.d Publication Requirement

The purpose of the publication requirement in SAIM is to ensure that residents develop adequate skills in written scientific medical communication. In particular, the publication requirement's goal is to ensure that residents display an ability to organize scientific data, communicate these data in writing accurately, and that they are capable of discussing scientific findings in a way that promotes the generation and dissemination of knowledge that advances animal and human health. This goal is frequently achieved through education, discovery and contributing to scientific medical literature.

A resident may meet the publication requirement anytime during the RTP or within five calendar years of completing the RTP. The resident must meet the publication requirement before being awarded board certification. If the resident fails to complete the publication requirement within the stated time, that individual's status changes from active to inactive. In addition, the resident is no longer eligible to become board-certified.

A resident may submit an appropriate published scientific article or an appropriate manuscript accompanied by a copy of the final acceptance letter from the journal editor to the ACVIM office at any time after the resident successfully registers and enrolls in an approved SAIM RTP. Manuscripts that were published within three years before the residency's start date may be submitted to the SAIM CC for consideration toward fulfillment of the publication requirement.

An accepted manuscript is not required before the resident or candidate takes the SAIM Specialty Examination. However, the resident or candidate is strongly encouraged to meet this requirement before taking the examination. The SAIM CC must accept one publication before granting certification to a resident or candidate. The resident or candidate should electronically send the following documentation to the ACVIM:

- The published article;
- The acceptance letter **on letterhead** from the journal (if the article has not been published);
- A copy of the email from the SAIM CC accepting the publication;
- Any supporting documentation required by the SAIM Information Packet from the SAIM CC;
- The ACVIM BOR has adopted a standard definition of an article accepted for publication. An article is deemed as accepted for publication when the author (resident/candidate) receives one of the following:
 - An email from the official email address of the journal or a letter on the journal's letterhead from the editor stating that the article has been accepted for publication

- An email from the official email address of the journal or a letter on the journal's letterhead from the editor stating that all reviewers have approved the article for publication and the article is awaiting editing before publication
- A galley proof of the article with an email from the official e-mail address of the journal or a cover letter from the editor on the journal's letterhead stating that the article is scheduled for publication.

A notice from an editor that states the resident or candidate must address reviewer comments, no matter how minor, is considered unacceptable for credentialing purposes. Such a notice implies final review of the article is incomplete.

If a resident or candidate is unsure whether a response from a journal reflects the final acceptance of the article, that individual should petition the chair of the SAIM CC in writing. Response to a resident or candidate's request for clarification can take six weeks or longer.

Each resident and candidate must submit one article for publication, with the resident or candidate as first author, relevant to the SAIM discipline that demonstrates critical thinking and expertise in SAIM. The article must be accepted for publication no more than five years after the resident completes the RTP. In extraordinary circumstances, the resident or candidate may file a petition with the SAIM CC containing detailed justification for requesting an extension of this deadline.

The resident or candidate must write the article in English that is published in a refereed scientific medical or veterinary medical journal. A refereed journal is one governed by policies and procedures established and maintained by an active editorial board that requires critical review and approval of articles submitted by at least one recognized authority on the article's subject.

Due to variability in editorial quality and process and the proliferation of online journals, the SAIM CC must approve all journals used to meet the publication requirement before assessment of manuscripts acceptability. **The [SAIM Publication Requirements Guidelines](#) contains details on the SAIM CC journal review process and a list of acceptable journals.** The SAIM CC updates the Acceptable Journal List annually based on changes in journal availability, editorial process, and quality of review.

If a candidate elects to publish a manuscript in a journal that is not currently on the Acceptable Journal List, it is the **candidate's responsibility** to submit the following to the Chair of the Credentials Committee to request journal approval:

- Evidence that the journal is Medline indexed;
- A letter from the editor which outlines the review process in detail. If the letter does not adequately document to the CC that the peer review is acceptable, the journal will be rejected without further review;
- Justification by the candidate, as to how the content previously published in the candidate's selected journal has advanced the discipline of Small Animal Internal Medicine.

This process is described in the [Publication Requirements Guidelines](#). The resident or candidate must seek approval for journals not on the current Acceptable Journal List before the SAIM CC assesses the resident or candidate's manuscript, and preferably before the resident/candidate submits the article for publication. It may take up to 8 weeks for the CC to rule on whether a journal is acceptable.

The publication guidelines in effect at the time an article is submitted for publication are the guidelines that must be followed by a resident/candidate. It is the candidate's responsibility to ensure that they are following the most current guidelines, which are available on the ACVIM's website.

The SAIM CC determines the relevance of the article to the topic of small animal internal medicine by assessing whether it meaningfully impacts the scientific understanding of a subject relevant to small animal internal medicine, or is relevant to the diagnosis or management of a clinical condition by a specialist in SAIM. It is highly recommended that residents/candidates publish on topics that clearly fall under SAIM (such as endocrinology, nephrology, immunology, infectious disease, etc.) and not under other ACVIM specialties of Cardiology, Neurology, Oncology, or Large Animal Internal Medicine (LAIM). If there is any question concerning the appropriateness of any research project from which a publication will follow to meet the SAIM publication requirement, the RA and the resident/candidate should contact the SAIM CC prior to the start of the project. If the resident/candidate's article focuses on a topic relevant to SAIM and also to another specialty, then that individual must provide written documentation to the SAIM CC to show that the manuscript's primary focus is related to SAIM.

The manuscript should demonstrate proficiency in understanding the scientific method and study design (including statistical analysis), and in conducting a comprehensive literature review. The SAIM CC [Publication Requirement Guidelines](#) contains current information on factors the SAIM CC considers in assessing acceptability of a manuscript in meeting the publication requirement and is available on the ACVIM website.

Book chapters and conference proceedings do not meet the criteria to fulfill the publication requirement. Clinical vignettes and serial features (e.g., ECG of the Month, Drug Topic of the Month) are not acceptable. The SAIM CC chair may accept a Short Communication, provided it demonstrates the necessary qualities as described in the SAIM CC [Publication Requirement Guidelines](#).

To fulfill the publication requirement, case reports must clearly indicate the novel nature of the disease or condition being reported, indicate how reporting the case might alter conventional diagnosis or treatment of the condition, or indicate how reporting the case might advance the fundamental understanding of the disease. When submitting a review article for consideration, the author must include a letter indicating how the report fulfills these same criteria. The SAIM CC reserves the right to reject case reports and review articles that fail to meet these standards, even if they are published in an acceptable journal.

Documentation of manuscript acceptance by the SAIM CC is required before a resident or candidate's credentials are considered complete. The resident or candidate must submit in writing any questions concerning the acceptability of a publication to the Chair of the SAIM CC before submitting the SAIM Credentials Packet.

9.D SAIM Residency Training Program Registration and Evaluation

Certification in the Specialty of SAIM requires completion of an RTP that is approved by the SAIM RTC. The SAIM RTC must approve an SAIM RTP before the program starts training residents.

A resident's RA must document that training has occurred as specified. RAs ensure that residents submit documentation to the SAIM RTC by the date specified on the [ACVIM website](#) and upon completion of the program.

9.D.1 Resident Evaluation

Residents should be evaluated based on the criteria listed in [Clinical Milestones](#) found later in this section. A generic evaluation form is available on the ACVIM website if an RA desires to use it, but it is not mandatory to use this form. Evaluation of a resident should occur at least every six (6) months.

The RA should have the resident sign the RAs copy of the written evaluation to document that the resident received a copy of the evaluation and had the opportunity to discuss the evaluation with the RA. If there are questions during a program's annual review, copies of these evaluations may be requested by the SAIM RTC.

9.D.2 Resident Case Logs

Residents are encouraged to keep a log of their cases for presentation to their RAs and to other SDs during a progress review.

9.D.3 Resident Procedure Logs

Residents are encouraged to keep a log of all procedures they completed for presentation to their RAs and other SDs during a progress review.

9.D.4 Education Logs

Residents are encouraged to keep a log of all seminars and didactic lectures they attended for presentation to their RAs and other SDs during a progress review. Each log entry should include the seminar or lecture date, topic, and presenter.

9.E Residency Training Interruption

Training interruptions may be unavoidable in circumstances where a resident must switch from one RTP to another to fulfill all RTP and credentialing requirements. In such cases, the following steps must be taken:

- A new training program must be identified;
- The SAIM RTC and the SAIM CC must approve the new RTP before the continuation of clinical training;
- The resident must reregister with ACVIM in the new RTP;
- The resident must complete training in continuous blocks of time once training resumes.

In some circumstances, a resident may need to take a leave of absence for personal health or profound family requirements that prevents that individual from completing the RTP in three years. However, when actively engaged in the residency, the resident must be full time and participate in at least 20 weeks of training in any calendar year that is provided in at least two continuous weeks each. When a leave of absence is necessary, the resident has a maximum of five years from the end of the RTP to achieve board certification in SAIM (see [Section 4.D](#) and [4.E](#)).

In some cases, a resident may complete a portion of training at another approved RTP or research unit or with a different mentor. In those cases, the second RTP or the research unit/research mentor is a secondary training site. The SAIM RTC must approve that relationship as part of the RTP submission, along with all appropriate supporting documents from the primary training site.

9.F Distribution of Time in Training

An approved SAIM RTP is at least 156 weeks in duration. Within a SAIM RTP, each resident must complete sixty-eight (68 weeks) of intensive clinical training in SAIM and sixteen (16) weeks of clinical training in other specialties, with the remaining seventy-two (72) weeks divided among additional clinical training in SAIM and related fields, research, attendance at continuing education or specialty meetings, preparation for the General and SAIM Specialty examinations and vacation. Residents who complete a traditional three year RTP without interruption have a maximum period of eight years beginning with the first day of the residency to achieve Diplomate status.

9.F.1 Intensive Clinical Training in SAIM

At least sixty-eight (68) of those 156 weeks of a SAIM RTP must consist of intensive clinical training in SAIM. However, additional weeks spent in SAIM are desirable and should be scheduled as described in [section 9.F.3](#). During this time, the resident is either under shared supervision of the equivalent of at least two full-time onsite ACVIM SAIM Diplomates, or under shared supervision of at least the equivalent of one full-time onsite ACVIM SAIM Diplomate and one full-time onsite ECVIM-CA Diplomate. Training with the SDs should be balanced so that substantially more scheduled training with one Diplomate and less scheduled training with another Diplomate does not occur.

9.F.2 Clinical Training in Other Specialties

At least 16 additional weeks must consist of **clinical** training under **direct supervision** of one or more SDs in the other specialties such as Anesthesiology, Cardiology, Critical Care, Dentistry, Dermatology, Neurology Oncology (medical or radiation), Ophthalmology, or surgery, either at the primary training site or at a secondary training site. These Diplomates may be certified by ACVIM, or by the American Board of Veterinary Specialties (ABVS) approved specialties, or approved European Board of Veterinary Specialization recognized certification entities. A maximum of two secondary training site rotations is allowable for meeting clinical training in other specialties. These formal rotations on a specialty service must be completed in defined training periods of at least two continuous weeks each and the resident must have primary case responsibility.

9.F.2.a Other ACVIM Specialties

At least 8 of these 16 weeks must be in 2 of the following 3 ACVIM Specialties (Cardiology, Neurology, and/or Oncology). Each of these rotations must consist of a minimum of 4 weeks and must be met by contiguous 2 week blocks (i.e., the resident may train 4 contiguous weeks or 2 rotations each consisting of 2 contiguous weeks for each elected specialty). These rotations must be under **Direct Supervision of the supervision Diplomate**. Telephone or electronic communication is not considered adequate for training purposes. See [sections 9.C.1.d](#) and [9.C.2](#) above.

9.F.2.b Non-ACVIM Specialties

For ABVS or EBVS recognized specialty training in non-ACVIM specialties, each rotation must consist of a minimum of 2 contiguous weeks of training.

9.F.3 Additional Clinical Training in SAIM or Related Fields, Research/Scholarly Activity, Exam Preparation and Vacation

The remaining 72 weeks of training should consist predominantly of clinical training in SAIM or related fields, research/scholarly activity, preparing for the General and SAIM Specialty examinations, and vacation. Clinical training during this period is not necessarily under direct supervision of an ACVIM or ECVIM Diplomate. Clinical training during this 72-week period

should occur with the resident actively participating in assigned clinical rotations in the ABVS recognized specialties such as Anesthesiology, Surgery, Cardiology, Neurology, Dentistry, Emergency and Critical Care, Radiation Oncology, Dermatology, Clinical Nutrition, or Clinical Pharmacology. No more than a total of 16 weeks of this time may be spent on rotations in any one of the related fields during the RTP. There is no maximum number of weeks a resident can spend on SAIM provided that the resident meets the minimum requirements for SAIM and related fields of study. This training time may be under direct or indirect supervision of a specialist in fields related to SAIM. Direct participation in and responsibility for patient care by SAIM residents in these rotations is required. This training should not take place during time scheduled for research, examination preparation, or vacation.

Within these 72 weeks, the resident must spend the equivalent of at least 80 hours (two full training weeks) in direct contact time with a board-certified veterinary radiologist. One of these full training weeks of 40 hours should be spent interpreting radiographs, learning and evaluating the results of special imaging techniques (other than ultrasonography), and attending radiology rounds or seminars. The second full training week of forty 40 hours of training in ultrasonography must entail direct contact time with a board- certified radiologist. This training should emphasize abdominal ultrasonography; it must include hands on performance of abdominal ultrasonography on clinical cases, and theoretical training in the principles and application of ultrasonography. This is the minimum requirement for training in ultrasonography. It is recognized that true proficiency in this diagnostic technique requires more than this minimum training standard.

During the RTP and within these 72 weeks, the resident must have at least 40 hours (one training week) of direct contact time with a board-certified veterinary clinical pathologist or anatomic pathologist (ACVP or ECVP) evaluating clinical pathologic findings, and reviewing cytologic and/or histologic specimens.

9.F.4 Research and Scholarly Activity

Time allocated to research or to attend scientific meetings should be taken during the 72-week period, not during the initial 68 weeks allocated to SAIM or during the 16 weeks allocated to intensive study in related fields.

At least 12 weeks over the three-year residency must be allocated for research and scholarly activity ideally in the pursuit of a publication.

Successful completion of any one of the options listed below will satisfy the requirements for research by SAIM residents (see [Section 4.F.7](#)):

- Successful completion of at least six hours of seminars or classes offered at the ACVIM Forum, as on-line courses, or at other facilities and recognized by the ACVIM and covering the following subjects:
 - Critical evaluation of the veterinary medical/biomedical literature;
 - Grant-writing;
 - Study design and participation in clinical trials;
- Documented (by a letter from the RA) submission of a grant proposal;
- Acceptance and presentation at a scientific meeting of an abstract (either oral or poster) of original work;
- Documented completion (by a letter from the RA) of a prospective research project pertinent to SAIM;

- Documented completion (by a letter from the RA) of a retrospective research project pertinent to SAIM;
- Documented completion (by a letter from the RA) of graduate coursework in biostatistics, research methods, and/or research ethics.

9.F.5 Protected Study Time for the General and SAIM Specialty Examinations

In addition to the 12 weeks of research and scholarly time, an additional minimum period of at least four continuous weeks of protected and uninterrupted study time must be allocated to the candidate to prepare for the ACVIM General Examination. A further additional minimum of four continuous weeks of protected and uninterrupted study time must be allocated to prepare for the SAIM Specialty Examination. Protected and uninterrupted study time should be scheduled to precede the respective examination date as much as is practical. During study time, residents should still attend Journal Club, seminars and didactic learning opportunities as they arise. Time allocated for exam preparation should be taken during the 72-week period, not during the initial 68 weeks allocated to SAIM or during the 16 weeks allocated to intensive study in related fields.

9.F.6 Vacation and Personal Time

A resident should take vacation over the three-year residency that is totally separate from other activities and requirements. Vacation time should be scheduled within the 72 weeks of additional clinical training. Total vacation time is at least six weeks over three years that is best allocated at two continuous weeks each year. However, at the request of a resident, vacation time may be arranged differently. Vacation must never be required to be used as a release from clinical obligations in order to prepare for the ACVIM General Examination or the SAIM Specialty Examination. An RTP is expected to provide reasonable accommodation for a resident's medical needs, e.g., doctor's appointments, etc.

9.G Clinical Milestones for First Year SAIM Residents

9.G.1 Expectations Regarding Patient Care

- Residents must provide patient care that is compassionate, appropriate, and effective;
- Residents must develop comprehensive history taking and physical exam skills;
- Residents must demonstrate the ability to evaluate and prioritize data into a problem list and formulate a diagnostic plan with some supervision;
- Residents must be able to assess daily patient progress accurately and perform appropriate and timely follow-up of diagnostics tests and interventions;
- Residents must have daily communication with the SD including attending daily service and house officer rounds;
- Residents must develop effective communication skills accompanied by respectful and professional behavior in all interactions with owners, referring veterinarians, staff, and colleagues.

9.G.2 Expectation Regarding Medical Knowledge

- Residents must demonstrate acceptable knowledge about established and evolving biomedical and clinical sciences and be able to apply this knowledge to patient care;
- Residents must have a basic knowledge of pathophysiology, pharmacology, and clinical disease states;

- Residents must demonstrate a compassionate and analytical approach to clinical situations;
- Residents must demonstrate self-directed learning and reading of the pertinent medical literature;
- Residents must participate in organized educational activities designed to develop or expand their medical knowledge base and to learn analytical thinking and problem solving skills such as:
 - Attending daily clinical service and house officer rounds when on SAIM clinical service;
 - Attending scheduled Journal Club and structured learning activities such as departmental seminars, morbidity and mortality rounds, and other related sessions;
 - Participating in clinical service and house officer rounds when rotating through SAIM or other specialty services (e.g. Cardiology, Neurology, Oncology, Critical Care, etc.);
 - Participating in rounds specific to any service or specialty rotation in which the resident participates in (e.g., diagnostic imaging, clinical pathology, or other activities related to the SAIM training program).

9.G.3 Expectations Regarding Learning and Improvement

- Residents must be able to assess and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices because of these activities;
- Residents should demonstrate a willingness to acknowledge and to learn from errors;
- Residents must participate in didactic lectures, daily house officer rounds, Journal Club, and other performance improvement activities (see expectations regarding medical knowledge), including presentation of ACVIM review topics and in Journal Club at least five (5) times per year;
- Residents must use available medical data bases or evidence-based medicine resources to support clinical decision making;
- Residents must demonstrate an interest in and ability to participate in a variety of didactic learning opportunities;
- Residents must assist in clinical teaching of veterinary students, externs, interns (if applicable), and other house officers including providing feedback to these individuals regarding performance, knowledge, medical record keeping, and patient care as applicable.

9.G.4 Expectations Regarding Interpersonal and Communication Skills

- Residents should demonstrate strong interpersonal and communication skills that result in effective information exchange and engagement with owners and professional associates;
- Residents should develop stronger language and documentation skills (e.g., succinct and comprehensive case presentations, progress notes, and comprehensive patient care plans as they progress in training);
- Residents should provide efficient, but comprehensive information exchange with colleagues, health care professionals, and owners;

- Residents should develop effective listening skills;
- Residents should establish professional and ethically sound relationships with owners and referring veterinarians.

9.G.5 Expectations Regarding Professionalism

- Residents must demonstrate a commitment to carrying out professional responsibilities, adhering to ethical principles, and possessing a sensitivity to cultural differences and preferences;
- Residents must demonstrate respect, compassion, and integrity in all interactions with patients, owners, colleagues, and other health care professionals;
- Residents must maintain a professional appearance;
- Residents must demonstrate a commitment to ethical principles pertaining to confidentiality of patient information and informed consent;
- Residents must demonstrate commitment to professional responsibility in completing all medical records in a timely fashion;
- Residents must begin to develop skills in conflict resolution.

9.G.6 Expectations Regarding Clinical Research and Publication Productivity

- Residents must demonstrate an initiative to identify, participate, and complete a clinical research study for publication under the supervision of their RA or SD;
- Residents should select a clinical research project of interest (preferably a prospective project) in collaboration with at least one SAIM mentor. Project selection should be made during the first six months of the residency program. Preparation of a detailed research proposal (written in grant format if applicable) is expected by the end of that time;
- Residents should assist in study design, literature review, and grant preparation and submission (if applicable) of the selected clinical research project in collaboration with a research mentor;
- Residents must comply with the ethical principles of research and actively participate in writing an animal care and use protocol (if applicable).

9.H Clinical Milestones for Second and Third Year SAIM Residents

9.H.1 Expectations Regarding Patient Care

- Second and third year residents must continue to fulfill all requirements expected of first year residents;
- Second and third year residents must formulate independent diagnostic and therapeutic plans with the supervision of an attending veterinarian;
- Second and third year residents must coordinate patient care among all members of the health care team;
- Second and third year residents must counsel and educate owners and referring veterinarians;
- Second and third year residents must develop competence in performing the core procedural skills essential to the practice of SAIM.

9.H.2 Expectations Regarding Medical Knowledge

- Second and third year residents must continue to fulfill all requirements expected of first year residents;
- Second and third year residents must develop a deeper understanding of disease states and their management;
- Second and third year residents must further develop skills in critical assessment, reading, and interpretation of the medical literature with application to patient care;
- Second and third year residents must apply knowledge of study design and statistical methods to the appraisal of clinical studies (i.e., skills emphasized in clinical rotations and rounds discussions).

9.H.3 Expectations Regarding Practice-Based Learning and Improvement

- Second and third year residents must continue to fulfill all requirements expected of first year residents;
- Second and third year residents must continue developing competence in educating owners;
- Second and third year residents must facilitate the learning of students and interns (if present), other residents, and other health care professionals.

9.H.4 Expectations Regarding Interpersonal and Communication Skills

- Second and third year residents should continue interpersonal and communication skills developed as first year residents;
- Second and third year residents should develop effective negotiation and leadership skills that facilitate conflict avoidance and resolution.

9.H.5 Expectations Regarding Professionalism

- Second and third year residents should continue to refine and demonstrate professionalism skills developed as first year residents.

9.H.6 Expectations Regarding Clinical Research and Publication

- Second and third year residents must fulfill all requirements expected of first year residents;
- Second and third year residents should initiate study implementation, including active participation in patient recruitment and sample collection, data analysis, and manuscript preparation;
- Second and third year residents should maintain focus on study completion and troubleshoot any problems that may arise with their mentor(s);
- Second and third year residents should demonstrate their research productivity by having a published abstract, conference presentation, and accepted peer-reviewed publication.

9.I Procedures for Submitting Credentials for the SAIM Specialty Examination

****Always check the ACVIM website prior to submission, as this process is subject to change.****

Candidates may submit the completed credentials packet and the credentialing fee online to the [ACVIM office](#) following completion of 22 months of the three-year residency. If an individual is ACVIM board-certified in a different specialty and is participating in a SAIM RTP, that individual

may submit credentials within the final 12 months of the SAIM training program. The SAIM CC evaluates submitted credentials packets for completeness and accuracy.

The information listed in this section provides an overview of the procedures for submitting credentials. Specific guidelines are in the SAIM [Credentials Information Packet](#) online including examples of correctly completed forms and a video covering the correct way to submit credentials. Because application requirements change periodically, candidates must be certain that they are using the most current application and credentials packet. If a candidate has any questions regarding the application process, that individual should request clarification in writing from the chair of the SAIM CC before the submission deadline.

A candidate who intends to take the SAIM Specialty Examination must submit credentials for the SAIM Specialty Examination no later than the date specified on the [ACVIM website](#) of the year preceding that examination date. Each candidate is notified no later than 60 days after the submission deadline regarding the acceptability of the submitted credentials packet for the SAIM Specialty Examination. All candidates must submit online the current standard SAIM application form along with the other required documents. They must carefully follow the instructions provided in the credentials packet. Inadequate attention to detail will cause the entire application to be rejected. A resident/candidate with rejected credentials is not eligible to take the SAIM Specialty Examination. A resident/candidate may correct the identified deficiencies and resubmit credentials prior to the date specified on the ACVIM Website for that examination cycle or wait and resubmit credentials the following year. Resubmitted credentials are subject to [an additional fee](#).

Although acceptance of an article for publication is not required before taking the SAIM Specialty Examination, the candidate is strongly encouraged to meet this requirement for certification before taking the examination. The candidate will not be eligible to receive board certification until all requirements have been completed, even if that individual successfully passed the SAIM Specialty Examination.

9.J SAIM Specialty Examination

Candidates must include the following credential items in their SAIM Specialty Credentials Application (**always check the ACVIM website, as this list is subject to change**):

- The completed credentials SAIM Specialty Examination application packet as described in the [SAIM Information Packet](#);
- The letter of understanding (which documents awareness of the publication requirement), or a copy of an approved publication with a copy of the acceptance email from the SAIM CC;
- A letter from the RA verifying satisfactory progress in the training program;
- Payment of the examination and credentials fees online.

9.J.1 SAIM Specialty Examination Registration and Fee

Once credentials are approved, candidates may register for the SAIM Specialty Examination and pay the fee online by the date specified on the [ACVIM website](#). Deadlines are typically the year before the year in which the candidate intends to take the examination, so they must check the website on a regular basis to ensure that they meet their deadlines. Eligible Candidates taking or retaking all or part of the SAIM Specialty Examination must pay fees online by the date specified on the [ACVIM website](#) of the year they plan to take the examination. The ACVIM office verifies eligibility to sit the exam. Candidates can expect confirmation of payment/registration within 30 days of registration.

9.J.2 SAIM Specialty Examination Content and Format

****Always check the ACVIM website; the examination format is subject to change.*

*Any changes will be reflected in the current examination blueprint.****

The SAIM Specialty Examination consists of three sections that cover all aspects of small animal internal medicine:

Section One: Small Animal Written

- Essay/short answer questions related to SAIM
- Graded independently

Section Two: Medical Literature

- Multiple choice questions on the current literature pertaining to the practice of SAIM
- Graded independently

Section Three: Case Materials (consists of two parts)

Parts A and B are each graded as independent sections

- Part A –
Patient Management: This part covers patient management related to the practice of small animal internal medicine. The patient management section is designed to test the candidate's clinical judgment, diagnostic acumen, and therapeutic decision-making skills in a multiple-choice format. Radiographs and other diagnostic images, photographs, ECGs, echocardiograms, etc. may be incorporated into the case materials.
- Part B –
Knowledge and Problem-Solving: This part consists of case-based multiple choice questions designed to test knowledge and problem-solving skills related to SAIM.

A resident or candidate must pass each section of the examination to become-certified. Candidates that do not pass all sections on the first attempt only need retake failed sections. In this examination format, the scores of Parts A and B in Section 3 are graded with an individual grade for each Part. If a resident or candidate fails either part of Section 3, the individual only needs to retake that failed portion.

A blueprint of the SAIM Specialty Examination is posted on the [ACVIM website](#) at least 60 days before the examination date. More specific information on grading the examination is provided in the instructions distributed to candidates taking the examination at least 60 days before to the examination date.

9.K Maintenance of Credentials

The SAIM MOC Committee maintains a list of [acceptable continuing education experiences](#) and their associated points that count toward renewal of SAIM credentials by ACVIM. The MOC requirements are posted on the ACVIM's website.

9.L Online Exit Interview Survey

After completing the RTP, a candidate is strongly encouraged to fill out an [online survey](#) regarding the quality of the training experience. New Diplomates are contacted and asked to participate after becoming board-certified.