



# AMERICAN COLLEGE OF VETERINARY SURGEONS

## Dual Certification

### Specialty Service Training in Anesthesiology - Small Animal

Candidates for dual certification must complete 50% of the hours required in the ACVS *Residency Training Standards and Requirements* under the supervision of a Diplomate of the American College of Veterinary Anesthesia and Analgesia (ACVAA). Candidates should review the recommended objectives for this rotation with the ACVAA Diplomate.

ACVS Diplomate Name

Date training completed

I have read the current requirements and the Diplomate has accomplished the training under my supervision and has met the additional non-required objective(s) as indicated below.

Supervisor Name

Signature

Specialty Board

Date

Email

Hours of training completed

Objectives met (check all that apply):

Understand the use and mechanism of action of common anesthetic drugs. Answer accurately basic questions regarding various classes of drugs including premedicants, anesthetic induction and maintenance agents, local anesthetics, neuromuscular blocking agents, analgesics, inotropes and pressors, anticholinergics, sedatives, reversal agents, and antiarrhythmic drugs.

Demonstrate competency in placing an intravenous catheter, and discuss and describe four different sites for catheter placement.

Demonstrate the ability to successfully intubate a dog and cat without iatrogenic trauma. Through discussion or practice demonstrate ability to place a pharyngostomy tube.

Accurately assess anesthetic depth for each anesthetic agent used. Describe criteria and demonstrate ability to assess anesthetic depth for at least two anesthetic agents.

Accurately assess information obtained from an arterial catheter. Demonstrate ability to correctly connect/assemble the pressure transducer. Demonstrate ability to interpret data obtained from an arterial catheter and recommend an intervention plan.

Perform an epidural injection. Demonstrate landmarks used and technically complete an epidural injection.

Demonstrate an understanding of the utility of assisted ventilation and placement of an animal on an anesthetic ventilator. Demonstrate understanding of the basic components of an anesthetic ventilator through discussion and successfully placing a patient on a ventilator.

Demonstrate an understanding of respiratory physiology, including ventilation and gas exchange. Define minimal alveolar concentration and relationship to anesthetic requirements and discuss and interpret blood gas data.

Demonstrate an understanding of physiologic alterations. Identify causes, consequences, and treatment for common conditions including, but not limited to, hypothermia and hypertension.

Demonstrate basic understanding of an anesthesia machine. Identify a system as a breathing or non-rebreathing system, and identify basic components of the system and their role, including scavenging of anesthetic gases.

Demonstrate basic understanding of the principles of use, information provided, and interpretation of data obtained from monitoring equipment. Demonstrate understanding of the nature of the information obtained and interpret data (including graphs) from monitoring equipment including, but not limited to, (1) capnography, (2) pulse oximetry, (3) inhalant agent monitors, (4) blood pressure, and (5) electrocardiography. Understanding must be sufficient to allow management and prevention of crisis.

Demonstrate an understanding of fluid support, including fluid type and rate (includes an appreciation of the utility of continuous rate infusion compared to the bolus administration of drugs). Successfully develop and implement a fluid plan for patients (includes the ability to develop a plan demonstrating alternatives for CRI or bolus drug administration).

Demonstrate the ability to produce an anesthetic record and maintain a drug log, including legible entry and appropriate temporal entry of data into the anesthetic log.

Demonstrate understanding the physiology of pain and need for analgesia during recovery from surgery and general anesthesia. Discuss and formulate a postoperative recovery plan including anticipated need for analgesia, options for providing analgesia, and write orders to identify items to be assessed during the recovery period. The resident should demonstrate the ability to make and interpret appropriate observations during the recovery period, and have sufficient understanding of pain and analgesic agents to meet patient needs.



# AMERICAN COLLEGE OF VETERINARY SURGEONS

## Dual Certification

### Specialty Service Training in Diagnostic Imaging - Small Animal

Candidates must complete 100% of the hours required in the ACVS *Residency Training Standards and Requirements* under the supervision of a Diplomate of the American College of Veterinary Radiology. Candidates should review the recommended objectives for this rotation with the ACVR Diplomate.

ACVS Diplomate Name

Date training completed

I have read the current requirements and the Diplomate has accomplished the training under my supervision and has met the additional non-required objective(s) as indicated below.

Supervisor Name

Signature

Specialty Board

Date

Email

Hours of training completed

Objectives met (check all that apply):

Demonstrate an understanding of the normal and pathologic radiographic anatomy of the axial and appendicular skeleton. Differentiate normal and abnormal radiographic anatomy of the skeleton in dogs and cats.

Demonstrate an understanding of the normal and pathologic radiographic anatomy of the thorax to include the heart, pericardium, ribs, lungs, and pleural space. Differentiate normal and abnormal radiographic anatomy for the thoracic cavity in dogs and cats.

Demonstrate an understanding of the normal and pathologic radiographic anatomy of the abdomen to include peritoneal effusions, masses, intestinal gas patterns, organomegaly and normal abdominal organ position. Differentiate normal and abnormal anatomy of the abdominal cavity in dogs and cats.

Demonstrate an understanding of image acquisition to include proper patient positioning, understanding machine settings, evaluating initial images for proper position and technique and troubleshooting common causes of poor images. Properly position canine and feline patients and obtain diagnostic quality radiographs of the skeleton, abdominal cavity and thoracic cavity.

Demonstrate an understanding of common contrast studies used in small animal general radiology, including, but not limited to the following: contrast gastrointestinal imaging to include swallowing, the esophagus, stomach, small intestine, large intestine and contrast portography; contrast imaging of the genitourinary system to include intravenous urography, cystography, urethrography and any associated pathologic conditions related to the reproductive tract; and contrast studies of the axial spine to include myelography. Obtain diagnostic quality contrast studies in dogs and cats.

Through the use of study case files, gain an understanding and perspective of how different imaging modalities and procedures positively or negatively impact the resolution of clinical cases. Determine the most appropriate diagnostic imaging modalities for use in commonly seen clinical cases.

Participate in daily/weekly radiology rounds to include presentation of cases to students, interns and the radiology faculty. Be familiar with methods for appropriate radiographic case presentation.

Demonstrate an understanding of cross sectional imaging modalities such as CT, MRI and Ultrasound and how these modalities supplement/supplant general radiographic techniques. Recognize and properly orient MRI and CT images, be familiar with cross sectional anatomy, and recognize common abnormalities.

Demonstrate an understanding of emerging imaging modalities such as nuclear scintigraphy and PET/CT through either direct involvement with the modalities or literature review pertaining to small animal diagnostics. Demonstrate an understanding of the uses for scintigraphy, PET scans, and other emerging imaging modalities.



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### Dual Certification

### Specialty Service Training in Internal Medicine/Critical Care - Small Animal

Candidates must complete 100% of the hours required in the *ACVS Residency Training Standards and Requirements* under the supervision of a Diplomate of the American College of Veterinary Internal Medicine (ACVIM) or a Diplomate of the American College of Veterinary Emergency and Critical Care (ACVECC). Candidates should review the recommended objectives for this rotation with the ACVIM or ACVECC Diplomate.

ACVS Diplomate Name

Date training completed

I have read the current requirements and the Diplomate has accomplished the training under my supervision and has met the additional non-required objective(s) as indicated below.

Supervisor Name

Signature

Specialty Board

Date

Email

Hours of training completed

Objectives met (check all that apply):

Demonstrate skills related to general patient management. Generate (1) a problem list, (2) a differential diagnoses list, and (3) pre- and postoperative plans based on the abnormal condition and anticipated or concurrent problems.

Demonstrate adequate record keeping. Satisfactorily (1) complete a patient history form, (2) maintain a treatment sheet including monitoring parameters and therapies, and (3) maintain a communication log.

Patient triage: Appropriately prioritize the patient's abnormalities.

Physical examination: Identify a patient in shock, quantify or estimate degree of dehydration, identify abnormalities of respiration through respiratory pattern recognition and auscultation findings (examples include pneumothorax, pleural fluid, pulmonary parenchymal disease, and upper airway obstruction, and identify cardiac murmurs and arrhythmias on auscultation.

Supervise diagnostic tests: Demonstrate an understanding of common laboratory tests, including being able to successfully interpret blood gas data. Understanding of common laboratory tests includes technical skills required to obtain sample, interpretation of information obtained from diagnostic tests, and ability to use information appropriately in decision making processes.

Develop basic cytology skills: When appropriate and available, utilize the expertise of board-certified clinical pathologists. On an emergency basis such expertise may not be available, yet decisions regarding case management must be made in a timely fashion. Under such emergency circumstances, obtain the appropriate sample, prepare a slide, and evaluate a preparation to characterize a sample as normal, inflammatory, neoplastic, or septic.

Demonstrate understanding of appropriate fluid therapy: Successfully develop and implement a fluid plan for patients (includes recognition and treatment of electrolyte abnormalities and transfusion medicine and coagulation testing).

Diagnosis and treatment of shock: Identify and classify shock, recognize causes and associated disturbances, and develop a resuscitation plan.

Demonstrate understanding of and rational decision making for drug therapy. Drug classes include (1) antimicrobials, (2) analgesics, (3) antiarrhythmics, and (4) pressers and inotropes. Demonstrate an understanding of the indications for, methods of administration of, and advantages and disadvantages of commonly used drugs.

Exposure to and ability to perform various practical techniques: Demonstrate understanding of the following procedures:

- Placement of peripheral catheters and a multi-lumen intravenous catheter using the guide wire (modified Seldinger technique)
- Placing urinary catheters
- Percutaneous chest tube placement
- Emergency tracheotomy/tracheostomy
- Placement of nasal oxygen catheter/implement nasal oxygen therapy
- Basic ultrasonography to determine if abdominal/thoracic/pericardial fluid is present.
- If fluid is present, perform centesis to sample/remove fluid.
- Provide enteral and parenteral nutrition
- Obtain an arterial blood sample for blood gas analysis

Exposure to and ability to utilize various monitoring techniques: Demonstrate understanding of the following procedures:

- Techniques for monitoring and treatment of a complex critical case including physical examination, blood pressure monitoring, central venous pressure, glucose and electrolyte monitoring, fluid therapy, and other aspects of day to day care
- Pulse oximetry
- Basic ECG evaluation
- Blood pressure
- Calculation and use of small pumps for infusion of drugs or feeding
- Diagnostic tests - such as use of lactate in monitoring potentially septic patient



# AMERICAN COLLEGE OF VETERINARY SURGEONS

## Dual Certification

### Emergency Duty - Small Animal

The Diplomate should perform emergency surgery and manage emergency surgical cases in the new animal emphasis being studied. A minimum of 80 hours of emergency duty, supervised directly by an ACVS, ACVIM, or ACVECC Diplomate, must be completed. This requirement must be fulfilled under a program mutually agreeable to the ACVS and ACVIM/ACVECC Diplomates at the institution(s) involved.

ACVS Diplomate Name

Date training completed

I have read the current requirements and the Diplomate has accomplished the training under my supervision.

Supervisor Name

Signature

Specialty Board

Date

Email

Hours of training completed