

Reference Number	C-VC.2
Module Title	Cardiovascular Diagnostics
Category and Value	C – 10 credits
Study Hours	100

Introduction

This module on Cardiovascular Diagnostics can be taken from a small animal or large animal perspective and will cover the approach to diagnosis in veterinary patients presenting with cardiovascular disorders, including the appropriate selection and interpretation of diagnostic tests and techniques. This module will extend and consolidate clinical knowledge and skills gained at undergraduate level, to allow application of this knowledge to the initial assessment of patients and their subsequent diagnostic investigations. The candidate will be able to critically evaluate their own standards of practice and develop strategies for continuous improvement in the future.

This is an optional module for those wishing to obtain a Certificate in Advanced Veterinary Practice (Veterinary Cardiology).

Aims

The aim of this module is to:

1. Increase the student's depth of knowledge and understanding of the diagnostic tools available in the investigation of disorders of the cardiovascular systems of veterinary species.
2. Develop the student's knowledge and understanding of how alterations in the results of diagnostic investigations allow a diagnosis to be reached.

Learning Outcomes

1. Critically evaluate the various diagnostic options available for the investigation of the cardiac patient including performing a thorough clinical examination of the cardiac patient.
2. Perform cardiovascular investigation according to standard protocols in order to safeguard the patient and make valid and repeatable conclusions.
3. Apply clinical reasoning skills and evidence-based medicine in the diagnostic approach to cardiac cases.
4. Critically appraise the literature relevant to clinical cases in the topics covered and how the literature can be used to inform practice.
5. Critically reflect on the appropriate cases for onward referral.

Module Content.

Clinical examination of patients with presenting signs consistent with cardiovascular disease

Principles of triage and identification of cardiac failure and shock

Decision-making regarding the most suitable diagnostic approaches to each individual patient, including consideration of initial stabilisation to ensure patient safety.

Acquisition and critical interpretation of standard diagnostic investigations pertinent to cardiovascular patients:

- Electrocardiography – acquiring a trace, minimising artefacts, analysis of rate, rhythm and any conduction abnormalities,
- Ambulatory electrocardiography, Holter devices, event recorders and patient-side monitors – indications for use and interpretation
- Blood pressure measurement – invasive versus non-invasive options and their pros and cons
- Radiography – acquiring and interpreting views relevant to cardiac patients
- Advanced imaging – principles of modalities such as CT, angiography and cases where their use would be beneficial
- Echocardiography – acquisition, interpretation and measurements of the standard 2-D and M-mode cardiac views; alterations due to the most common cardiac conditions; indications for, and acquisition of Doppler readings, overview of when more advanced echocardiographic techniques may be indicated e.g. contrast echocardiography using agitated saline
- Non-cardiac ultrasound – evaluation of the lungs, pleural space and vasculature
- Laboratory testing – indications for and interpretation of haematological, biochemical, electrolyte, blood gas and biomarker measurements

Application and integration of the results of the clinical examination and diagnostic investigations to clinical cases in order to reach a diagnosis

Assessment Strategy

Module providers are responsible for deciding on assessment strategies and methods, subject to accreditation by RCVS.