

## RCVS CertAVP Module Template

<b>Reference Number</b>	C-SAM.7
<b>Module Title</b>	Small Animal Neurological Medicine - Neurological disorders affecting dogs and cats
<b>Category and Value</b>	C – 10 credits
<b>Study Hours</b>	100

**Introduction**

This module is focused on your knowledge and understanding of clinical neurology, including relevant neuroanatomy and neurophysiology.

This module is aimed at candidates interested in enhancing their knowledge and understanding of these topics within small animal medicine neurology and is an optional free choice module for candidates wishing to obtain a Certificate in Advanced Veterinary Practice (Small Animal Medicine).

For a designated Certificate in Advanced Veterinary Practice (Small Animal Medicine) you must complete modules, Small Animal Medicine modules 8, 9 and 10, a fourth free choice 10 credit module and an RCVS synoptic assessment.

**Aims**

The aim of this module is to ensure that you gain a thorough knowledge of the most common examples of neurological disease occurring in dogs and cats.

You should be able to carry out a neurological examination and to demonstrate an ability to localise lesions within the nervous system, establish protocols for diagnostic work-ups and understand the factors that allow the neurologist to give guidance on prognosis and potential treatments. It is understood that you will not necessarily see all of the potential conditions, and that cases will often require referral for complete investigation. The emphasis should be on the ability to demonstrate a sound clinical reasoning approach to neurological problems in small animals.

You should be able to outline appropriate treatment strategies and possess knowledge of alternative approaches to management where appropriate, although experience of neurosurgery is not required.

**Learning Outcomes**

At the end of the module, candidates will be able to:

1. Explain the relevant pathophysiology of the most common neurological diseases in dogs and cats.

2. Describe the clinical presentation of the common neurological conditions affecting dogs and cats.
3. Formulate an appropriate diagnostic plan for investigation of neurological presentations, using a problem-based approach to clinical reasoning.
4. Review and constructively appraise current literature on neurological disease, to enable candidates to determine its relevance to their current practice.
5. Utilise understanding of evidence-based veterinary medicine and clinical reasoning skills to devise practical treatment protocols for their patients.
6. Propose appropriate strategies for communicating with owners in their practice circumstances in order to achieve optimal results for neurological cases.
7. Recognise which neurology cases are unusual, as well as those that require referral for specialist investigation and treatment.

## **Module Content**

### **1. Neuroanatomy and Neurophysiology**

- Clinically relevant anatomy of the central and peripheral nervous systems.
- Basic histology of nervous system tissues and associated cells (e.g. functional significance of the difference between grey and white matter)
- Basic neurophysiology including transmission of the impulse, the synapse and the properties of the other excitable cells (e.g. muscle fibres).

### **2. Neuropathology**

- Pathogenesis in the context of common diseases affecting the nervous system.
- Common pathological processes in neurological disease.

### **3. Diagnosis of neurological disease**

- Evaluation and recognition of the importance of clinical history (onset and progression of signs) and signalment.
- Clinical and full neurological examination – including accurate neuroanatomical localisation of neurological lesions based on examination findings.
- Clinical reasoning and problem solving in neurological disease: constructing a prioritised list of differential diagnoses based on sound clinical history-taking and examination skills
- Laboratory analyses of blood and cerebrospinal fluid.
- Appropriate use of imaging in diagnosis; familiarity with myelography, CT scanning and MRI scanning.
- Applications of electrodiagnostic procedures in neurology.

### **4. Clinical neurology**

- Neurological diseases in dogs and cats, including inherited (genetic), degenerative, metabolic, neoplastic, inflammatory, traumatic and vascular conditions.
- Knowledge of diseases or conditions elsewhere in the body which may be responsible for neurological dysfunction, or, alternatively, may result from a primary lesion in the nervous system, e.g. pituitary macroadenoma.

- Establishment of treatment and management regimes for neurological patients, including the indications for physiotherapy and hydrotherapy.

#### **5. Neurosurgery**

- Key concepts regarding basic neurosurgical procedures (indication, complications) – candidates are not expected or required to be performing neurosurgery.
- The special nursing, handling and rehabilitation requirements of the neurological patient.

#### **6. Medical management**

- The significance of the blood-brain barrier in neuropharmacology.
- Therapeutic protocols for individual patients and rational choice of drugs.
- Use of drug monitoring in neurological disease.
- Long and short-term side-effects and drug interactions in clinical neurology.

#### **Assessment Strategy**

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