



## AUSTRALIAN AND NEW ZEALAND COLLEGE OF VETERINARY SCIENTISTS

### MEMBERSHIP GUIDELINES

#### *Veterinary Practice (Small Animal)*

#### **INTRODUCTION**

These Membership Guidelines should be read in conjunction with the *Membership Candidate Handbook*.

#### **ELIGIBILITY:**

Refer to the *Membership Candidate Handbook*.

#### **OBJECTIVES**

The key objective of Membership in this subject is to demonstrate that the candidate has the ability to integrate technical and academic knowledge into an advanced level of clinical diagnostic ability and practical acumen. As such, the candidate will have sufficient knowledge of, and experience in, the aetiology and pathophysiology of common diseases of dogs and cats and the ability to appropriately advise or undertake procedures on behalf of veterinary colleagues, not similarly qualified, on the subject of Small Animal Veterinary Practice. Membership in Veterinary Practice Small Animal is not a specialist qualification and does not infer higher qualification in a specific subject.

#### **LEARNING OUTCOMES**

For the purposes of this document, ‘Small Animals’ are defined as dogs and cats.

**Specific Objectives:** The candidate is required to have knowledge and experience in Small Animal Veterinary Practice sufficient to be recognised by colleagues as having an additional qualification. For definitions of knowledge levels please refer to the footnote “<sup>1</sup> Knowledge levels”.

**Terminology:** The term “investigation” includes appropriate evaluation of the patient and application of diagnostic tests, including pathology and imaging, and their interpretation.

The term “management” includes patient stabilization in emergency situations, pharmaceutical intervention, anaesthesia and common surgical procedures that can be performed in general practice.

## 1. Anatomy, Physiology and Pathophysiology

The candidate will have a **basic**<sup>1</sup> knowledge of the integrated and applied anatomy, physiology and pathophysiology of the following systems of small animals: musculoskeletal, gastrointestinal, cardiovascular, respiratory, genitourinary, neurological, endocrine and eye and associated structures

## 2. Preventative Health, Wellness and Nutrition

The candidate will have **sound**<sup>1</sup> knowledge of aspects of general care required for optimum canine and feline health throughout their life. This includes nutrition, vaccination, parasite control, grooming and routine veterinary procedures including, but not limited to, dental and geriatric examinations.

## 3. Therapeutics

The candidate will have a **sound**<sup>1</sup> knowledge of:

- 3.1 Current regulations that apply to drugs used in small animal practice and occupational health and safety requirements. These include, but are not limited to: drug scheduling, prescribing rights, compounding and record keeping;
- 3.2 The indications for, clinical application, potential complications and interactions of commonly used therapeutics. These include, but are not limited to: antimicrobials, anti-inflammatories, vaccines, biologics, fluid therapy, sedatives, and hormones.

The candidate will have **sound**<sup>2</sup> expertise in drug and fluid therapy calculations

## 4. Biosecurity and Infectious Diseases

The candidate will have **sound**<sup>1</sup> knowledge of:

- 4.1 Infectious diseases that are of importance to small animals in Australia and New Zealand and their management. These include, but are not limited to: parvovirus, distemper, feline leukaemia virus, feline immunodeficiency virus.

The candidate will have **basic**<sup>1</sup> knowledge of:

- 4.2 Exotic and zoonotic diseases as relevant to Australia and New Zealand. These include, but are not limited to: rabies, intestinal parasites, dermatophytosis, salmonellosis, psittacosis, toxoplasmosis.

## 5. Diagnostic Imaging

The candidate will have **sound**<sup>1</sup> knowledge of:

- 5.1 Correct radiographic technique, exposure assessment, processing and positioning and the legal requirements for image labelling and image storage of radiographs;
- 5.2 The principles of ultrasound image formation;
- 5.3 Radiation safety and the ALARA principle;
- 5.4 Indications for the use of computed tomography (CT), magnetic resonance imaging (MRI) and nuclear medicine.

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### <sup>1</sup> Knowledge Levels:

**Sound knowledge** – candidate must know all of the principles of the topic including some of the finer detail and be able to identify areas where opinions may diverge: A middle level of knowledge.

**Basic knowledge** – candidate must know the main points of the topic and the major literature.

### <sup>2</sup> Skill levels:

**Sound expertise** – the candidate must be able to perform the technique with a moderate degree of skill and have moderate experience in its application. A middle level of proficiency.

**Basic expertise** – the candidate must be able to perform the technique competently in uncomplicated circumstances.

The candidate will have **basic**<sup>2</sup> expertise in the interpretation of common radiographic and ultrasound abnormalities as it pertains to sections 5-14

## **6. Cardiovascular System**

The candidate will have **sound** knowledge of the investigation, differential diagnosis, diagnosis and management of common clinical presentations of cardiovascular dysfunction including, but not limited to: syncope, exercise intolerance, murmurs and arrhythmias. Examples include but are not limited to: dilated cardiomyopathy, valvular disorders, heart block, endocarditis, heartworm and hypertrophic cardiomyopathy.

## **7. Respiratory System**

The candidate will have **sound** knowledge of

- 7.1 The investigation, differential diagnosis, diagnosis and management of common clinical presentations of respiratory dysfunction including, but not limited to: coughing, dyspnoea, nasal discharge, respiratory distress and exercise intolerance. Examples include but are not limited to: brachycephalic airway syndrome, laryngeal paralysis, infectious disease, pneumonia, dynamic airway disease, collapsing trachea and neoplasia;
- 7.2 The commonly performed surgical procedures of the upper respiratory system of small animals including indications for these surgeries, complications and their management.

## **8. Abdomen**

The candidate will have **sound** knowledge of:

- 8.1 The investigation, differential diagnosis, diagnosis and management of: vomiting, diarrhoea, abdominal pain and weight loss. Examples include but are not limited to: pancreatitis, gastric dilation and volvulus, gastroenteritis, nutrition (in health and disease), inflammatory bowel, infectious and parasitic conditions;
- 8.2 The commonly performed surgical procedures of the abdominal cavity of small animals including indications for these surgeries, complications and their management.

## **9. Genitourinary System**

The candidate will have **basic**<sup>1</sup> knowledge of:

- 9.1 The investigation, differential diagnosis, diagnosis and management of common clinical presentations of urinary tract dysfunction. Examples include but are not limited to: cystitis/urolithiasis, pyelonephritis, chronic renal failure, pyometra;
- 9.2 The commonly performed surgical procedures of the genitourinary system of small animals including indications for these surgeries, complications and their management.

## **10. Neurology**

The candidate will have **basic**<sup>1</sup> knowledge of the investigation, differential diagnosis, diagnosis and management of common clinical presentations of neurological dysfunction seen in Australia and New Zealand including but not limited to: seizures, paralysis, ataxia and cranial nerve dysfunction. Examples include but are not limited to: common toxicities, infectious disease, traumatic conditions, intervertebral disc disease, neoplasia, tick paralysis.

## 11. Endocrinology

The candidate will have **basic**<sup>1</sup> knowledge of the investigation, differential diagnosis, diagnosis and management of common endocrine diseases. Examples include but are not limited to diabetes mellitus, hyperadrenocorticism, hypoadrenocorticism, hyperthyroidism, hypothyroidism, hyperparathyroidism, hypercalcaemia of malignancy and hypocalcaemia.

## 12. Musculoskeletal

The candidate will have **sound** knowledge of:

- 12.1 The pathophysiology, investigation, differential diagnosis, diagnosis and management of common musculoskeletal diseases. Examples include but are not limited to: common fractures, growth plate injuries, common joint disorders (cranial cruciate ligament disease, patella luxation, hip and elbow dysplasia, osteochondrosis) and injuries;
- 12.2 The commonly performed surgical procedures of the musculoskeletal system of small animals including indications for these surgeries, complications and their management.

## 13. Surgical Principles

The candidate will have **sound**<sup>2</sup> expertise in surgical principles and techniques including but not limited to: wound management and healing, surgical asepsis, biopsy collection and Halsted's principles of surgical technique.

## 14. Analgesia and anaesthesia

The candidate will have **sound**<sup>1</sup> knowledge of:

- 14.1 Pain management;
- 14.2 Pre-anaesthetic assessment, sedation, local and general anaesthetic protocols and their potential complications;
- 14.3 Patient monitoring and use of equipment for general anaesthesia, resuscitation and manual ventilation;
- 14.4 Euthanasia.

## 15. Emergency and critical care

- 15.1 The candidate will have a **basic**<sup>1</sup> knowledge sufficient to provide a logical, problem-based approach to the principles of triage, recognition and understanding of the pathophysiology of shock and anaphylaxis;
- 15.2 The candidate will have a **basic**<sup>1</sup> knowledge in the assessment, monitoring and management of common emergency cases. Examples include, but are not limited to: collapse, respiratory distress, abdominal distension/pain, vomiting, stranguria, seizures, trauma, hyperthermia, ingestion of common toxins, envenomation.

## 16. Ophthalmology

The candidate will have **basic**<sup>1</sup> knowledge of

- 16.1 The investigation, differential diagnosis, diagnosis and management of common clinical presentations of ocular dysfunction including, but not limited to: acute blindness, blepharospasm, ocular discharge, masses in the ocular region, and changes in appearance of the cornea and lens. Examples include but are not limited to: corneal ulceration, keratopathies, uveitis, cataracts, nuclear sclerosis, lens luxation, glaucoma, retinal degeneration, Horner's syndrome and ocular neoplasia.

16.2 The commonly performed surgical procedures of the eye (e.g. temporary tarsorrhaphy, conjunctival flaps, enucleation) and associated structures of small animals including indications for these surgeries, complications and their management.

## **17. Dermatology**

17.1 The candidate will have **basic**<sup>1</sup> knowledge of the investigation, differential diagnosis, diagnosis and management of common clinical presentations of skin disease including, but not limited to: pruritus, alopecia, erosion/ulceration, nodular and claw abnormalities and otitis externa. Examples include but are not limited to: allergic (flea bite hypersensitivity, cutaneous adverse food reactions, atopic dermatitis, contact irritant); infectious (bacterial, fungal); parasitic skin disease (demodicosis/sarcoptes infestation); endocrine disorders (hypothyroidism, hyperadrenocorticism, hyperoestrogenism; immune mediated (pemphigus foliaceus, lupoid nasal dermatitis) and common cutaneous neoplastic diseases.

17.2 The pharmacology and pharmacokinetics of commonly used drugs and therapeutic products used in veterinary dermatology.

## **18. Small Animal Dentistry and Oral Surgery**

The candidate will have **basic**<sup>1</sup> knowledge of

18.1 The investigation, differential diagnosis, diagnosis and management of common clinical presentations of dental and oral disease including, but not limited to: dysphagia, halitosis, gingivitis, and abnormal appearance or masses of the teeth, gums and oral cavity;

18.2 Routine dental examination, homecare management and dental instrumentations and their indications for use;

18.3 The commonly performed surgical procedures of the oral cavity and associated nerve blocks, including indications for these surgeries, complications and their management.

## **19. Small Animal Oncology**

The candidate will have **basic**<sup>1</sup> knowledge of:

19.1 The aetiopathogenesis, epidemiology, pathology, differential diagnosis, diagnosis, treatment, and management options available for common oncologic diseases of small animals. This includes, but is not limited to: lymphoma, osteosarcoma, melanoma, haemangiosarcoma, mast cell tumours and soft tissue sarcomas;

19.2 Chemotherapeutics regarding toxicity, side effects, in addition to the safety of the patient, medical personnel and patient caregivers.

## **20. Small Animal Behaviour**

The candidate will have **basic**<sup>1</sup> knowledge of:

20.1 Behavioural development and learning;

20.2 Behaviour in the clinical environment including stress minimisation;

20.3 The investigation, differential diagnosis and management of common clinical presentations of behavioural disorders including, but not limited to: anxiety disorders, reactivity and executive dysfunction.

## 21. Animal Welfare

The candidate will have **sound**<sup>1</sup> knowledge of the concepts of animal welfare and its application to veterinary practice. This includes but is not limited to: abnormal behaviour related to housing/husbandry/adverse states, the human-animal bond, veterinary ethics, animal welfare legislation and scientific approaches to animal welfare including the Five Freedom/Domain Model.

## 22. Clinical assessment and communication

The candidate will have **sound**<sup>1</sup> knowledge to:

- 22.1 Integrate these skills to provide high quality care for patients with the most efficient use of resources in a manner that is responsive to the owner's needs and wishes;
- 22.2 Communicate effectively with clients and peers;
- 22.3 Recognise when referral to a specialist for additional diagnostic investigations is indicated.

## RECOMMENDED READING LIST

The candidate is expected to read widely within the discipline, paying particular attention to areas not part of their normal work experiences. This list of books and journals is intended to guide the candidate to some core references and other source material. Candidates also should be guided by their mentors. Due to the broad nature of this examination it is not expected that the candidate has covered the entire content of these textbooks but should understand the common conditions described therein. *The list is not comprehensive and is not intended as an indicator of the content of the examination.*

### Suggested textbooks<sup>3</sup>

1. Nelson RW, Couto CG. Small Animal Internal Medicine (5<sup>th</sup> Ed), Mosby, 2013
2. Veterinary Surgery Small Animal. Johnston S, Tobias K; (2<sup>nd</sup> Ed) Saunders, 2017.
3. Textbook of Veterinary Diagnostic Radiology (6<sup>th</sup> Edn), 2013, by Donald E Thrall. Elsevier Saunders, Missouri.
4. Maggs DJ, Miller PE, Ofri R. Slatter's Fundamentals of Veterinary Ophthalmology (6<sup>th</sup> Ed), Elsevier, 2017.
5. Miller W, Griffin C, Campbell K. Muller and Kirk's Small Animal Dermatology (7<sup>th</sup> Ed), Saunders, 2012
6. Appleby MC, Mench JA, Olsson IAS, Hughes BO. Animal Welfare (2<sup>nd</sup> Ed), CAB International, 2011
7. Holmstrom SE. Veterinary Dentistry: A Team Approach (2<sup>nd</sup> Ed), Elsevier, 2012
8. Houpt KA. Domestic Animal Behavior for Veterinarians and Animal Scientists (5<sup>th</sup> Ed). Wiley Blackwell, 2010
9. Withrow SJ, Page R, Vail DM. Small Animal Clinical Oncology (5<sup>th</sup> Ed), 2013

### Additional reading material

#### Textbooks

1. Ettinger SJ, Feldman EC, Cote E. Textbook of Veterinary Internal Medicine (8<sup>th</sup> Ed), Elsevier, 2016

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<sup>3</sup> **Textbook definitions**

**Suggested textbook** – candidates should own or have ready access to a copy of the book and have a basic knowledge of the contents with a sound knowledge required only for the subjects specified in the guidelines.

**Additional references** – candidates should have access to the book and have a basic knowledge of the contents

**Additional Reading Materials** - These are conference proceedings, other non-refereed publications and other journals that would offer some information in the subject area including differing points of view but are not required reading.

2. Silverstein D. Small Animal Critical Care Medicine (2<sup>nd</sup> Ed), Elsevier, 2012
3. Boothe DM. Small Animal Clinical Pharmacology and Therapeutics (2<sup>nd</sup> Ed), Elsevier, 2011
4. Zachary JF, McGavin MD. Pathologic Basis of Veterinary Disease (5<sup>th</sup> Ed), Elsevier, 2012.
5. Hovda L, Brutlag A, Poppenga RH, Peterson K. Blackwell's Five-Minute Veterinary Consult Clinical Companion: Small Animal Toxicology (2<sup>nd</sup> Ed), Wiley Blackwell, 2016
6. Macintire DK, Drobatz KJ, Haskins SC, Saxon WD. Manual of Small Animal Emergency and Critical Care Medicine (2<sup>nd</sup> Ed), Iowa State University Press, 2012

#### Journals

Candidates in this subject may find useful material in the list of following journals; however, access to these journals is not required to pass at membership level.

- Australian Veterinary Journal
- Australian Veterinary Practitioner
- New Zealand Veterinary Journal /Veterinary Quarterly
- Compendium of Continuing Education
- Veterinary Clinics of North America – Small Animal Practice
- Journal of the American Veterinary Medical Association
- Journal of Small Animal Practice
- Journal of the American Hospital Association
- Veterinary Surgery

#### Other resources

IVIS website

## EXAMINATIONS

The Membership examination has **two separate components**:

1. **Written Examination** (*Component 1*)  
**Written Paper 1** (Two hours): Principles of Veterinary Practice (Small Animal)  
**Written Paper 2** (Two hours): Applied Veterinary Practice (Small Animal)
2. **Oral Examination** (*Component 2*)  
**Oral** (1 hour)

### Written Examination

The written examination will comprise of two, separate two-hour written papers completed on the same day. There will be an additional 15 minutes perusal time for each paper, during which no writing in answer booklets is permitted. Each written examination will be worth a total of 120 marks.

Paper 1 will assess the principles of veterinary practice and be comprised of eight (8) questions of 15 marks each. Paper 2 will assess the application of these principles and be comprised of four (4) questions of 30 marks each. There is no choice of questions in either paper. Marks allocated to each question and to each subsection of questions will be clearly indicated on the written paper.

### Oral Examination

This examination further tests the candidate's achievement of the learning outcomes during a face-to-face assessment with the Examiners. The duration of the examination is approximately 45-60 minutes. Images, video clips, radiographs, ultrasound images or clips, clinical pathology results and relevant material are likely to be used during this examination. The aim of the examination is to assess the candidate's diagnostic ability, communication skills, problem solving skills and capability to apply the principles of small animal veterinary practice to clinical scenarios.

Four (4) to six (6) cases will be presented with supporting questions asked verbally in a face-to-face setting. The oral examination is worth a total of 120 marks with each case allocated 20 to 30 marks.



## **FURTHER INFORMATION**

For further information contact the College Office

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