

Reference Number	C-VD.1
Module Title	Veterinary Dermatology: Anatomy, Physiology and Pathology of the Skin
Category and Value	C – 10 credits
Study Hours	100

Introduction

This module is focused on veterinary dermatology and covers the topics of skin anatomy, histology and physiology, including immunology and wound healing, and pathology as relevant to the diagnosis of dermatological cases, and the evaluation of diagnostic procedures. 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 management. The candidate will be able to evaluate critically their own standards of practice and develop strategies for continuous improvement in the future.

The module is aimed at candidates interested in enhancing their knowledge and understanding of these topics within small animal dermatology and is an optional module for the RCVS Certificate in Advanced Veterinary Practice (Veterinary Dermatology)

Aims

The aim of this module is to:

1. Develop and practically apply knowledge of the structure and function of the skin, and how this is altered in disease states, to dermatological cases.
2. Enable the candidate to critically evaluate their own standards of practice and develop strategies for continuous improvement in the future.

Learning Outcomes

At the end of this module the candidate will be able to:

1. Integrate and apply advanced knowledge of skin anatomy, histology, embryology and physiology to explain normal function and pathological changes in dermatological disease.
2. Demonstrate a logical, systematic and evidence-based approach to the investigation of dermatological conditions, including appropriate diagnostic testing, sample collection, pathological evaluation and clinical reasoning.
3. Critically evaluate and apply current literature to inform clinical decision-making.
4. Critically evaluate and reflect on clinical decision-making, including recognising limitations of competence, determining appropriate referral, and identifying areas for professional development.

Module Content

1. Structure and Function of Normal Skin and Epidermal Appendages

This covers the anatomy and histology of the skin and epidermal appendages. The focus is on the interaction between structure and function and how this can be altered during disease processes.

This would include epidermal proliferation, differentiation and desquamation, in relation to their relevance to, and impact on, the common skin diseases.

2. Skin Physiology

This covers physiology relevant to dermatological structures. The focus will be on normal defence mechanisms and how these are altered in disease states, the principal defence mechanisms of the skin, both physical and humoral mechanisms, and an awareness of the innate and adaptive arms of the skin immune system. This would include:

- Skin surface protection, immunological and non-immunological.
- Inflammation and pruritus.
- Physiology of wound healing.
- Physiology of thyroid, adrenal and pituitary endocrinology as they relate to the skin in health and disease.

3. Pathology Relevant to Dermatology

This covers pathology relevant to the diagnosis of dermatological conditions. The focus will be on critical analysis of procedures, specifically the diagnostic accuracy and limitations of any diagnostic procedure. This would include:

- Surface skin and ear sampling techniques and the interpretation of cytology from common inflammatory skin diseases.
- The ability to understand how cutaneous pathology leads to the development of the skin lesions seen grossly and the difference between primary and secondary skin lesions.
- Normal versus pathogenic microbial flora of the skin and ear canal and the ability to differentiate these using in-house sampling techniques and laboratory submissions, including a basic knowledge of culture requirements.
- The appropriate tests for ectoparasites and fungal infections.
- The appropriate use of skin biopsy and the basics of dermatohistopathological reaction patterns: how to obtain a sample and the information which the pathologist can and cannot provide.
- Haematology / clinical chemistry/ urinalysis as related to skin disorders.
- Tests for endocrinological disorders affecting the skin and when they are appropriate.
- The indications for intradermal testing/ allergen specific serology/ limited antigen food trials and their limitations.
- Nutrition and the influence of diet on cutaneous disease.

Assessment Strategy

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