

C-VDI.3 Small Animal Diagnostic Imaging – Soft Tissue

Credits: 10 (100 hours)

Provider: Veterinary Postgraduate Unit – Institute of Veterinary Science

RCVS Content Covered

The following outlines the modular content as set out by the RCVS.

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

- Recognise **faults due to defects in processing** and film handling, and deficiencies in film identification; recognise problems relating to density, contrast and sharpness, due to inadequate radiographic procedure; and recognise, from films, deficiencies in radiation safety procedures.
- Recognise and describe **normal radiographic anatomy** – candidates should possess a detailed knowledge of the normal radiographic anatomy of the dog and cat and of their variations with breed and age. In other species a knowledge compatible with current use would be expected.
- Apply the **principles of radiological interpretation** – the recognition of tissue types; formation of shadowgraphs; effects of superimposition and multiple shadows. Changes in opacity, size, shape, position and function of organs. The use of simple positional and contrast aids to elucidate radiographic problems. The applications of these basic principles to the evaluation of radiological signs in relation to soft tissue problems in small animals.
- Understand the **principles and apply diagnostic ultrasonography** in veterinary practice – physical principles of ultrasound; image production; display modes; artefacts; normal ultrasound appearance of major organs (heart, liver, kidney, spleen, bladder, prostate and uterus); recognition of major alterations to the normal architecture of these organs and the possible diagnostic significance of these changes.

Aim of the Module

The aim of this module is to develop a logical, systematic and reasoned approach to small animal soft tissue diagnostic imaging as part of their overall investigation of a case in a practice environment;

To 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 the module, candidates should be able to:

1. demonstrate ability to apply the principles of radiological interpretation to the evaluation of radiological signs in relation to clinical problems in small animal soft tissue cases;
2. develop the skills and knowledge in order to apply diagnostic techniques appropriately as part of the overall investigation of a case;
3. develop the ability to critically appraise their current diagnostic imaging technique, and to improve on their technique with experience;
4. critically evaluate the literature in order that evidence based medicine underpins their decision making processes.

Module Structure

The syllabus will be divided into 4 study units

Study Unit 1 Abdomen and gastrointestinal system

Normal radiographic and ultrasound anatomy of the abdomen and gastrointestinal tract.

Recognising and interpreting the diagnostic radiological features of the more commonly encountered clinical conditions affecting the abdominal cavity, including liver, pancreas, spleen, pharynx, oesophagus and gastrointestinal tract.

The indications and application of contrast media and advanced imaging modalities in the evaluation of abdominal disease.

Study Unit 2 Urogenital system

Normal radiographic and ultrasound anatomy of the urogenital system.

Recognising and interpreting the diagnostic radiological features of the more commonly encountered clinical conditions affecting the kidneys, ureters, bladder, and the male and female genital organs.

The indications and application of contrast media and advanced imaging modalities in the evaluation of conditions involving the urogenital system.

Study Unit 3 Cardiovascular system

Normal radiographic anatomy of the cardiovascular system.

Recognising and interpreting the diagnostic radiological features of the more commonly encountered clinical conditions affecting the heart and blood vessels.

The indications and fundamentals of echocardiography.

Study Unit 4 Respiratory system

Normal radiographic anatomy of the respiratory system.

Recognising and interpreting the diagnostic radiological features of the more commonly encountered clinical conditions affecting the trachea, pleural cavity and thoracic wall, mediastinum, diaphragm and lungs.

Assessment Strategy

Portfolio of cases (50 case log book), 3 x reflective case reports (1500 words each), 1 x short answer question and/or MCQ test and 1 x journal critique/journal club presentation (pass/fail).

PLEASE NOTE: It is your responsibility to ensure that you have access to sufficient appropriate cases where you were the primary decision maker to produce adequate material for the module. This may not be possible with some internship positions. You must also be aware of any limitations of your facilities that may make the accumulation of appropriate cases difficult or impossible.