RADIOGRAPHY & RADIOLOGY

Course Organiser: ME Hertridge

Lecturers: ME Hertridge, V O’Mahony, M-A Genain

Term: Michaelmas

Aims:

The radiography course is designed to teach the student a safe practical approach to veterinary radiography. The principles of radiological interpretation follow on from the ability to produce a diagnostic x-ray. This is core material, but new imaging techniques are discussed and a basic course in ultrasound is given.

Objectives:

Appreciation of safe and practical use of diagnostic radiography in veterinary practice.

Critical appraisal of radiographs for technical faults and knowledge of how to correct them.

Understanding of the basic concepts and limitations of diagnostic ultrasonography.

Lecture List:

1. Production and properties of x-rays
   MEH

2. The X-ray machine
   MEH
   Circuits and generators. Types of machine. Image intensifiers.

3. The X-ray beam
   MEH
   Geometry of the beam. Scatter, collimation, grids. Interaction of x-rays with matter.

4. Recording the image
   VO’M
   Cassette, film and screen technology. Latent image formation. Darkroom design and processing.

5. Assessment of the image
   MEH
   Image quality: contrast, resolution, geometric unsharpness, distortion.

6. Radiation safety
   M-A G
7. **Contrast techniques – 1**  
Contrast media. Contrast examinations of the alimentary tract.  

8. **Contrast techniques – 2**  

9. **Diagnostic ultrasound**  

**Practical Component:**  
The course includes 2 mornings of rotations in 4\(^{th}\) year.  
There are a further 7 practical sessions in 5\(^{th}\) year to complement the lectures on aspects of radiography. They also include normal radiographic anatomy and an introduction to radiological interpretation.  
Some aspects of radiology are included in seminars in 5\(^{th}\) year and information is consolidated in the 6\(^{th}\) year clinical rotation where radiology is included.  

**Handouts:** All lectures  

**Further reading:**  
4\(^{th}\) Ed. Bailliere Tindall.