Advanced Abdominal Ultrasound Techniques and Point-of-Care Ultrasound (combined course) for the small animal practitioner - A 4-hour practical course

This course is for practitioners with a good working knowledge of basic abdominal ultrasound. Advanced abdominal ultrasound examination and POCUS techniques are essential skills for the small animal practitioner wishing to make expedient diagnoses of, *inter alia*, adrenal and pancreatic disease and in the assessment of critically ill patients. Advanced abdominal imaging and point of care imaging will be covered during an hour-long demonstration on a live dog. This will be followed by a 3-hour session during which the learning will be re-enforced, with all participants practicing the demonstrated techniques and watching colleagues practice the techniques on live dogs.

1. Advanced abdominal ultrasound

The left and right adrenal glands will be identified and the criteria for enlargement in dogs of different sizes will be discussed. The kidney resistivity index assessment through Doppler will be demonstrated. The different vessels branching off the aorta will be identified. The CVC: Aortic ratio in the assessment of volume status will be demonstrated, as well as the identification of right heart failure on hepatic ultrasound. The location of the mesenteric and ileac lymphnodes and their clinical utility will be demonstrated and discussed.
In addition, the ultrasonographic approach to ectopic ureters will be demonstrated.

2. Point-of-Care Ultrasound

An AFAST, TFAST or LUS is the first scan that should be performed in any dog presenting with a respiratory or abdominal emergency.

2a. The abdominal FAST examination (AFAST)

Indications for the AFAST
How to perform an AFAST examination

- Patient positioning and probe orientation
- Naming and order of the AFAST views

The diaphragmatic-hepatic view (DH view)

- A window into the pleural and pericardial spaces
- The DH view and preload volume status
- Anechoic fluid triangles between liver lobes
- Pitfalls, artifacts and false positives

The spleno-renal view
The cysto-colic view
The hepato-renal view
Finally, the AFAST scoring system

2b. The thoracic FAST examination (TFAST)

Indications for the TFAST
How to perform an TFAST examination

- Patient positioning and probe orientation
- Naming and order of the AFAST views
- The "gator" or "crocodile" sign
- Diagnosis of pneumothorax and the search for "lung point"

The Chest tube site (CTS)
The Pericardial site (PCS)
The Diaphragmatic-Hepatic view (DH) - in common with AFAST

2c. The VetBLUE lung ultrasound examination (LUS)

What VetBLUE can tell you
How to do a VetBLUE examination

- Patient positioning and probe orientation
- Regional examinations
  - Caudo-dorsal lung lobe region (CDLL)
  - Perihilar lung lobe region (PHLL)
  - Middle lung lobe region (MDLL)
  - Cranial lung lobe region (CRLL)
- Wet lung vs. Dry lung principle
- Ultrasound lung rocket (B-lines), A-lines and the "glide" sign
- Forms of lung consolidation
  - Shred sign
  - Tissue sign
  - Nodule sign