

## VETERINARY APPLICATIONS TRAINING SERIES

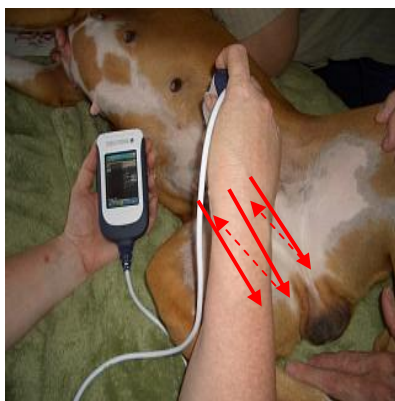
### SIGNOS LOCALIZATION FOR CYSTOCENTESIS

Signos can be used to rapidly localize the urinary bladder to provide real-time localization for cystocentesis to ensure safe and accurate needle placement.

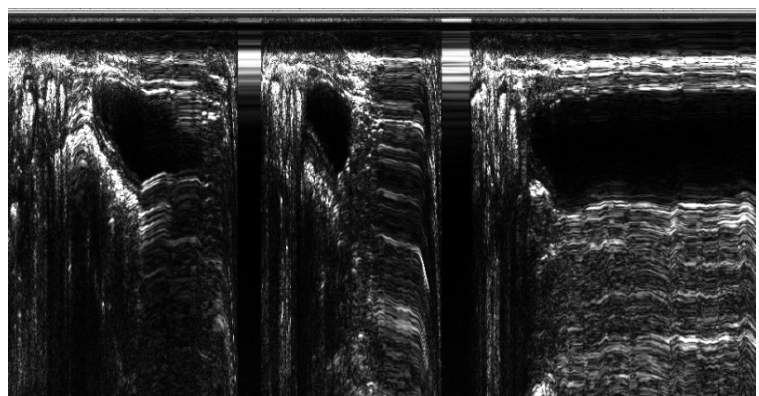
#### Procedure Outline

1. Place the animal in dorsal recumbence. If required, clip a small area of coat over the ventral pelvis to ensure good skin contact and promote asepsis. Apply alcohol to wet and cleanse the area and then apply sterile gel to ensure that there is no contamination of the urine cultures.
2. Attach the transducer to the probe that is appropriate for the size of the animal being scanned. For large animals use the 3.5MHz transducer and for small animals use the 7.5MHz transducer. Select MotionScape (M-Mode) and the scanning preset appropriate to the size of animal.
3. Attempt to palpate the bladder and localize it between your fingers.
4. If you can palpate the bladder sweep the transducer down over it to confirm.
5. If you cannot palpate the bladder perform a small grid of longitudinal sweeps over the pelvis as demonstrated in Figure A. If the bladder cannot be localized then repeat the procedure later after the bladder has had time to fill.
6. The bladder will be seen as a black (anechoic) space on the image. Once localized hold the ultrasound probe stationary over the centre of the bladder ensuring that the probe is held perpendicular to the skin surface. Figure B demonstrates the transition of the image appearance as you move from sweeping to stationary scanning. The bladder changes from being an ovoid structure on the image to a constant black band on the MotionScape trace. Your aim is to keep this black band as thick as possible to ensure you are positioned over the centre of the bladder.
7. The rulers on the left margin of the display screen indicate the depth (in centimeters) to the center of the urinary bladder.
8. The needle is then inserted percutaneously deep to the probe position to the known depth of the bladder center.

View a video clip demonstrating this clinical application at [www.signosticsmedical.com](http://www.signosticsmedical.com)



**Figure A** - The MotionScape grid of imaging sweeps used to localize the bladder



**Figure B** - The bladder changes from being an ovoid structure to a constant black band as seen on the right as you position yourself over the bladder centre.

#### DISCLAIMER

This information is intended for educational purposes and to provide instruction in the operation of your Signostics ultrasound device. The techniques and procedures described should only be performed by a qualified clinician. The applicability of these techniques and procedures should be independently verified. Use of the information contained in this document is at your own risk.