

## CLINICAL APPLICATIONS TRAINING SERIES

### SIGNOS AS A BIOFEEDBACK TOOL IN CORE STABILITY RETRAINING

**Signos** provides a simple and reliable device to facilitate real-time observation of *transversus abdominus (TA) muscle* contraction. Signos can play an important part in core stability re-training by providing immediate biofeedback for both the patient and therapist.

#### Procedure Outline

1. Attach the 7.5MHz ultrasound transducer to the ultrasound probe. Select MotionScope (M-mode) and the *core stability* preset. Connect the display unit to a remote screen with the USB cable provided such that the patient has a ready view of the image.
2. The scan position is 4cm superior to the ASIS of the iliac rest with the ultrasound probe orientated perpendicular to the skin as shown in Figure A below.
3. Localise the *transversus abdominus (TA) muscle* by at first sweeping in a panoramic fashion across the skin. TA is the deepest of the three abdominal wall muscle layers.
4. Fix the probe position over the thickest part of the TA muscle, the MotionScope trace will produce a real-time chart recording of changing abdominal wall muscle thickness.
5. Explain to the patient the appearance of a good TA contraction (thickening of the TA muscle layer). Ask the patient to perform a contraction. Use the device to obtain immediate feedback on which contraction method is best for each patient.

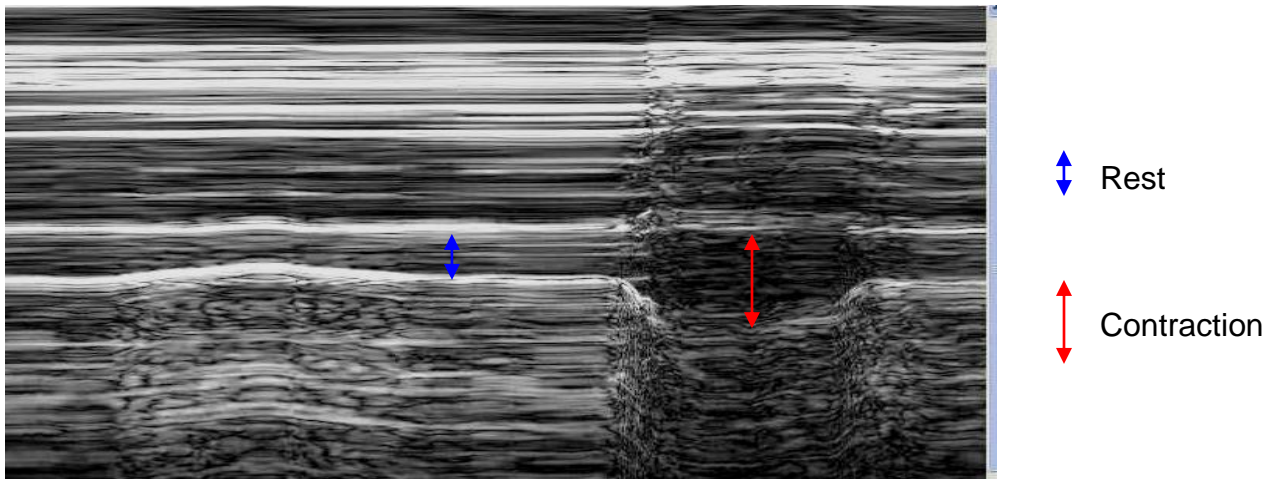
View a video clip demonstrating this clinical application at [www.signosticsmedical.com](http://www.signosticsmedical.com)



**Figure A-** Scan position and transducer orientation for the best views of the *transversus abdominus muscle*.



**Figure B-** Panoramic image used to identify the anatomy



**Figure C-**MotionScape imaging gives a real-time demonstration of TA muscle contraction and therefore instant biofeedback for both the patient and therapist

The device can also be used for biofeedback purposes in shoulder rehabilitation work and to observe diaphragmatic movement for the respiratory therapist.



**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 within this document is at your own risk.