

## **Ultrasound assessment of the spine before, during and after spinal manipulation**

Principal Investigator: Gregory Cramer, D.C., Ph.D.

The purpose of this study is to demonstrate the feasibility of using ultrasound to assess anatomical changes in the Z joint and surrounding tissues before, during, and after SMT of the lumbar spine. Previous work assessed changes in the Z joint before and after SMT or positioning utilizing MRI. We would like to extend the previous work by imaging soft tissue changes and/or Z joint gapping with ultrasound.

Funding: Internal