Title of the study: The Pull Test To Determine Responders To Subacromial Injection In Patients With Shoulder Impingement

Trial registration: NCT02686671

Date: September 10, 2019

The study took place at Advanced Physical Therapy of Alaska facilities in Anchorage, Alaska.

Statistical Analysis

Data were analyzed using SPSS software (version 20.0). Descriptive statistics were used to record demographic characteristics, Numeric Pain Rating Scale (NPRS) and Shoulder Pain and Disability Index (SPADI) scores.

Inter-examiner **reliability** was assessed using kappa and percent agreement. **Friedman test, with Wilcoxon signed-ranks test** for pairwise comparisons, was used to determine if SPADI (total) score and average NPRS demonstrated significant changes over time. Effect size (r) was calculated to determine the magnitude of the difference for each pairwise comparison. Mean differences (Mann-Whitney) in average NPRS and SPADI (total) score for positive and negative Pull Test groups were analyzed for follow- up periods. Effect size estimates of variance (r2) were calculated to identify the percentages of variability in the dependent variables (SPADI, NPRS) explained by each Pull Test group.

Fisher's exact test was calculated to evaluate dichotomous variable association, including clinical test outcomes, gender, and hand dominance, with SPADI (total) score one-week and six-week post-CSI. **Univariate regression** was used to determine if demographics, clinical variables and clinical tests were predictive of successful response one-week and six-week post-CSI ($p \leq .200$). Sensitivity, specificity, positive and negative predictive values, positive and negative likelihood ratios, and odds ratios were calculated for shoulder clinical tests.