Repeated-measures analyses of visual analog scale pain scores with a means model with SAS Proc Mixed (version 9, mixed linear models) will be used to determine differences and changes between baseline and all follow-ups. The independent variable in the repeated measures analyses is time on study (0, 1, 3, 6, 12, 24, and 36 months).   The statistical model will provide separate estimates of the VAS mean pain scores by time on study.  An unstructured variance-covariance form among the repeated measurements will be assumed for the VAS pain score outcome and estimates of the standard errors of parameters will be used to perform statistical tests and construct 95% confidence intervals. Statistical tests will be 2-sided. The model-based means are unbiased with unbalanced and missing data, so long as the missing data are non-informative (missing at random).

A statistician that works for the Emory Orthopedic and Spine Center will be assisting in data analysis.