

STUDY TITLE: Randomized Clinical Trial of Erector Spinae Plane (ESP) vs. Paravertebral Nerve Blockade for Video Assisted Thoracoscopic Surgery (VATS)

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STATISTICAL ANALYSIS PLAN – 01/03/2020

Statistical Analysis Plan

The number of 80 total patients (40 in each arm) is similar to many studies that have been adequately powered to detect a clinical difference between nerve blocks. For example, Jaegar et al 2013 Volume 38 Issue 6 discovered a significant difference between muscle strength in femoral nerve versus adductor canal block with a total of 54 patients. 80 patients were chosen because we are hoping to achieve a power of 80%. Previous studies have identified mean opioid consumption in patients undergoing VATS procedure and receiving normal paravertebral nerve blocks is approximately 100mg OME. We hope in our experimental group to detect a difference in mean opioid consumption (10% or more ideally). Based on our goal power of the study, we would need a sample size of 32 patients. After surveying the volume of patients undergoing this procedure at our intended site, we deemed that it would be possible to recruit 60 patients for this study in a reasonable period of time. For parametric data we will use a t-test. For non-parametric data we will use a Mann-Whitney U Test. For categorical data we will use a chi-square test. We may use a log regression evaluation if needed. We will use repeated measures ANOVA test to compare repeated measures for each patient. Statistical data will be analyzed using SAS software.