Statistical analysis for the study of **Sedatives' Effects on Neurological Function in Patients With Eloquent Area Glioma**

April 1st, 2016

Kolmogorov-Smirnov testing will be used for evaluating if the continuous variables are having a normal distribution or not. The normally distributed data will be described as mean and standard deviation and student's t-test will be conducted to compare the mean value between glioma and control group at baseline and after the administration of medication. The non-normally distributed data will be presented as median and interquartile range (IQR), Mann-Whitney U test will be used to compare the difference between glioma and control group. For categorical variables, numbers or percentage will be described; Chi-square or fisher exact test will be used to analyze the difference between groups. Paired t-test will be used to analyze the change before and after sedation, as well as to test for the change before and after sedation reversal. Oneway ANOVA will be used to test the difference among hands in a certain time point. To analyze the time difference of completion of 9-hole peg test before and after drug administration, general linear model for repeated measures ANOVA will be used. Statistical significance will be defined as *P*-value < 0.05. Analyses will be conducted using Statistical Package for the Social Sciences (SPSS) version 17.0 (Chicago, IL, USA).