## Statistical Methods/Data Analysis

Tumour area calculation, modifying variables and eye outcomes will be summarized using descriptive statistics, see data collection sheet in Appendix A.

See specific steps for calculating the RAI are as follows:

Step1: Calculate the area and quantify the area covered by the turmour and vitreous seeds.

Step 2: Assess whether if the optic nerve is covered by using a customized optic nerve detector tool and measuring the coverage percent of the optic nerve. The development of this tool will be done using python, leveraging python libraries: TensorFlow, OpenCV, Numpy, and SciKit-Learn.

Step 3: Conduct similar processes for the macula and assess its coverage by tumour.

Step 4: Visualization of the results above will be displayed via d3.js

Statistical clustering methods such as random forest will also be used to predict similar clusters of patients based on demographics, and to assess which variables are the most determinant of outcomes. Correlation calculation will be conducted via python, SciKit-Learn and SPSS.