Urdiales, Dennys

June 5, 2023

In this study I will be comparing the performance of Pymaceuticals’ drug of interest, Capomulin, against the other treatment regimens. In this data set the mouse metadata and the study results have been combined. When creating a summary statistics dataframe, it shows that Capomulin and Ramicane act as similar drugs. They both contained a lower mean tumor volume, an acceptable smaller variance under 25%, a smaller standard deviation, and sem when being compared to the other drugs that were used which contained higher values. Capomulin and Ramicane also had higher # of observed timepoints that were over 200 compared to the rest of the drugs which was under 200.

In this data it can be observed that 51% of the mice observed were male while 49% was female. When observing the tumor volume vs. time point for mouse l509 while on Capomulin it can be concluded that there is an increase in the tumor volume between 0-20 days of observation but then a gradual decrease with minimal increases during 20-40 days of observation at about 35 days dropping at the smallest tumor volume observed. When observing the mouse weight vs. tumor volume for mice taking Capomulin it can be concluded that the average tumor volume was greater, and the weight of the mouse was greater. While mice with smaller weight size had smaller tumor volumes. When observing the correlation and regression of the weight of the mice vs. the observed tumor volume it can be conclude that there is a positive correlation with a good regression of 0.84.