# Matplotlib Analyses

1. Upon first glance, one of the more apparent trends is the effectiveness of the drugs tested. Looking at the summary table alone, you can see only two drugs showed a positive result in the overall health of the mice: Capomulin and Ramicane. This shows both drugs had a drop in tumor size over the 45 day period.
2. When comparing the plotted data, something worth noting is the difference in effectiveness of a given drug (tumor response and metastatic spread plots) comparative to the mice mortality rates (survival percentage plot). For example, while the drug Propriva did not show the highest tumor and metastatic site growth, it showed the greatest death toll. Something else in the drug’s makeup could be radically affecting the heath of the subjects. While there is a positive correlation in tumor growth and mortality rate, it is prudent to take into consideration other factors the drugs could be having on the health of the mice.
3. Along that same vein, our data shows that assuming just because a drug is going to be administered doesn’t mean the results of said drug will have a positive impact on the mouse’s health in comparison to no drug at all. Several drugs surpassed both the Placebo’s mortality rate and tumor growth at the end of the 45 day period. Observing the data in the overall tumor growth by drug, Ketapril had a 6% higher tumor growth over the testing period. This could lead to the conclusion that some drugs might not only be negatively impacting the mice’s health, but could possibly be supplementing tumor growth.