**Daniel M. Jones**

**Rice Data Analytics BootCamp**

Homework Unit #5

Pymaceuticals

**You must include a written description of three observable trends based on the data.**

1. Capomulin resulted in the best response over the 45 days of treatment. The total percentage of tumor volume decreased 45% over the full 45 days, while Infubinol and Ketapril both had tumor increases over the full 45 days, 46% and 57%, respectively.
2. Infubinol and Ketapril both resulted in performance in line with the placebo. This would indicate that they added very little if any benefit to reducing tumor volume. Also, in the case of Ketapril, it is possible that Ketapril actually caused tumor volume to increase, as the placebo resulted in a 51% increase in tumor volume while Ketapril resulted in a 57% increase in tumor volume over the full 45 days of treatment.
3. While all 3 drugs and the placebo all had similar trends for both how the number of metastatic (cancer spreading) sites changes over time for treatment, uptrend, and the number of mice still alive through the course of treatment (survival rates), downtrend, Capomulin had the best performance results for both (metastatic site changes and survival rate). For the number of metastatic (cancer spreading) sites changes over treatment time, Infubinol performed the 2nd best, Ketapril performed 3rd best, and the placebo had the worst performance. For survival rates, Ketapril and the placebo, both, ended with the same number of surviving mice at the end of the 45 day treatment. Infubinol performed the worst.