Matplotlib—Challenge

Observations on clinical trials of anti-cancer pharmaceuticals on mice:

1. The first line plot illustrates that Capomulin yields the greatest reduction of tumor volume (mm3) over 45 days, while Infubinol, Ketapril, and Placebo yields an increase of tumor volume. Moreover, Ketapril performs worse than the placebo whereas Infubinol performs marginally better. Results for all drugs have similar standard error values, meaning similar range in uncertainty.
2. The second line plot demonstrates that metastatic sites increase for all drugs; however, Capomulin shows the slowest rate of growth of number of metastatic sites. It is possible that it slows down metastasis though might not stop it. Ketapril performs the worst when compared to placebo: at 45 days, its rate of growth of metastatic sites converges with the placebo plot.
3. The third plot shows that the number of mice decrease under all drugs but Capomulin has the most number of surviving mice at 45 days, outperforming other drugs by 10 mice. Ketapril is outperformed by Placebo.

Overall, Capomulin outperforms the other drugs with the highest rate of tumor volume reduction, greatest slowdown of metastasis, and highest survival rate. Ketapril has the worst performance compared to other drugs and to placebo.