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MatPlotLib Homework #5 – PyMaceuticals

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

1. Of the four highlighted drugs [Capomulin, Infubinol, Ketapril, Placebo] in this particular data set, Capomulin is the outlier drug with positive responses to the volume size of tumors (tumor volume decreases as patient administers Capomulin. When administered, three remaining drugs [Infubino, Ketapil, Placebo] do nothing to mitigate tumor volume.
2. Capomulin reduces the most (or allows the least) number of sites or areas in which squamous cell carcinoma (SCC) metastasizes (survives). While the number of metastatic sites does not decrease over time when Capomulin is administered, the drug does slow the growth of metastatic cancer sites at a noticeable rate. Compared to the remaining three drugs administered, Capomulin will reduce the number of metastatic cancer sites to approximately 1 site per each 40 days the drug is administered. Conversely, Infubinol, Ketapril and Placebo drugs allow 2 metastatic cancer sites to spawn per each 40 days of administration, at the minimum.
3. Capomulin allows for the highest survival rate among test mice over a 40-day test period. Nearly 22% of test mice administered Capomulin drug survived the 40-day test period. Over the same number of days and administered the same dosage of drugs, test mice taking Infubinol, Ketapril, or Placebo had less than a 12% chance of survival.

For the reasons mentioned above, among others, Capomulin is the most effective drug to combat squamous cell carcinoma (SCC) disease.