Pymaceuticals, Inc. is a new pharmaceutical company specializing in anti-cancer medications. As the senior data analyst for the company, I compared the performance of Pymaceuticals drug Capomulin against other drugs in the industry.

I initially reviewed the data for 249 mice and quickly noted that it included a mouse in the data multiple times. So, I removed the extra mouse, bringing the total down to 248. After reviewing the data on the tumor volume, I found the following:

1. 51% of the mice were male, and 49% were female
2. The treatment followed ten drugs over 45 days.
3. The drug Ketapril presented the least favorable outcome as the tumor volume numbers were the highest throughout the treatment period.
4. Capomulin showed a strong performance over the treatment period; however, the drug Ramicane provided the best overall success with the tumor.
5. Outlier: A mouse that received treatment with Infubinol for 31 days had a tumor volume of 36.32
   1. Note that the average tumor volume for Infubinol is 52.88

While looking deeper into the Capomulin drug, we found that it outperformed 90% of the other drugs tested. Furthermore, we also found that as the mouse weight increased, the tumor volume also increased.

I decided to dive deeper into Capomulin by randomly picking a mouse (Mouse ID: l509) that has used the drug. The tumor volume started at 45, and within 20 days, it increased to 48. However, there was a significant decrease at 23 days, and the tumor volume remained steady until another massive reduction 11 days later. The performance showed a positive outlook for the drug Capomulin.

After reviewing the data and seeing all the drug regimens, it is safe to say that two drug regimens produce positive results overall. With the findings of this study, I see that people will have a fighting chance at reducing skin cancer with drug regimens from Capomulin & Ramicane, so long as they maintain a healthy weight.