

## **Pymaceuticals Analysis**

There are 249 mice in the pooled dataset that have been linked to squamous cell carcinoma (SCC) and have received various pharmacological therapies. These procedures enable us to evaluate the effectiveness of the Capomulin medicine of interest from Pymaceuticals.

About 51% of the mice are male, and the remaining 49% are female. Due to their reduced mean, median, variance, standard deviation, and SEM values, it is clear from the summary statistics that Capomulin and Ramicane perform better than other treatments. The box plot distribution, which shows that the final tumour volume is the smallest for mice treated with Capomulin and Ramicane, provides additional evidence for this tendency.

When employing the Capomulin regimen, we find that it takes approximately 20 days of treatment for the tumour volume (calculated in mm<sup>3</sup>) to start diminishing. The regression model also shows a significant association between the weight of the mouse and the mean tumour volume (measured in mm<sup>3</sup>). The average tumour volume rises along with the mouse's weight.