From the generated figures, one observation that can be made is that the relationship between the average tumor volume and the weight of the mouse is linear. This is demonstrated by the correlation coefficient that was calculated in the Correlation and Regression section of the homework. The correlation coefficient measures the strength of the relationship between two variables and ranges from -1.0 to 1.0. A correlation coefficient value of -1.0 demonstrates a perfect negative correlation, while one of 1.0 demonstrates a perfect positive correlation. For the relationship between the average tumor volume and mouse weight, the correlation coefficient was found to be approximately 0.842. This value shows that the relationship between the average tumor volume and mouse weight is positively correlated; this means that the two variables tend to move in the same direction. This positive correlation between the average tumor volume and mouse weight is further demonstrated in the final plot of the homework. As the mouse weight increases, the average tumor volume also increases. Additionally, the line of regression that was generated points to the two variables as being positively correlated.

Another observation is that the effectiveness of the Capomulin regimen cannot be outrightly be determined. For some mice, their tumor volume decreased as time passed. One example of this is Mouse x401. However, for other mice, their tumor volume increased as time passed while on the regimen. An example of this is Mouse i557. The variability in the effect of Capomulin on tumor volume demonstrates that this regimen cannot be stated as an effective treatment for squamous cell carcinoma.

A final observation is the final tumor volumes for mice on the Ceftamin regimen is more spread out than those mice on Capomulin, Ramicane, or Infubinol regimens. The greater spread in the final tumor volums for mice on the Ceftamin regimen is seen in the box-and-whisker plot generated in the homework. The spread of the final tumor volumes can be seen in the length of the rectangular box in a box-and-whisker plot. The longer the box is, the more greatly spread out the data is. This demonstrates that the Ceftamin final tumor volumes vary greatly.