The Math of Cancer: The Effects of Statistical Analysis on P-Value

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Statistics are important for identifying, diagnosing, and regulating tumors in some types of cancers. This project studied the effects of type of statistical analysis on the p-value. A data set that included GC B-Like and Activated B-Like genomic expression groups was used. The surtime was sorted between the two expressions and separated into groups of ten. The one-tailed t-test was run and the p-value recorded. Then a two-tailed was run on the same data and the p-value was recorded. Six of the ten trials of the one-tailed suggested a significant difference while only two of the two-tailed suggested a significant difference. The statistics applied to the data indicated a measureable difference between the two types of statistics. This would indicate the selection of the appropriate type of statistics would influence the identification of cancer tumors.

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