Module 05 Lesson 02
VoiceThread: Probability Explained
Transcript

The red portion under the curve represents the 95% of the data that fall within the null hypothesis. The portion on the tails (black dashed boxes) represents the 5% of the data that do not fall within the null hypothesis.

Thus, if the p value is equal to or less than 0.05, you would reject the null hypothesis and accept the alternative hypothesis that samples are different with regard to the outcome.

If on the other hand the p value is equal to or greater than 0.05, you would accept the null hypothesis and conclude that the treatment or the predictor variable had no effect on the outcome.

The concept of the p value may seem a little abstract at the moment but it will become clearer in its use as you move on. But in general, you use the p value to test your hypothesis, so, if the probability associated with an inferential statistic is equal to or less than 0.05, then the result is said to be significant at the 0.05 level.

While 95% is generally acceptable in biological research, medical research generally uses a 99% (or 0.01) probability value, where the risk of getting a result by chance is only 1 out of 100. It is not too difficult to see why this is the case when you are dealing with potential fatal disease diagnoses and treatments etc.