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|  | **FINDINGS: Statistical Analysis of Results**  The factors that appear to the most significant are family history, sun exposure, and use of aspartine so these are the ones that I am going to be doing statistical analysis on. I will be using sampling distributions of a difference between two independent sample proportions and tests of confidence to do my analysis. First I am going to give you some formulas that I used throughout the analysis for you to keep in mind.  **Formulas:**  **Mean=p1-p2**  **Standard Deviation the square root of {[p1(1-p1)/n1]+[p2(1-p2)/n2]}**  **Z Score =(x-mean)/standard deviation**  **Sun Exposure:**  **High:**  p1 (Lupus patients with high)=.54  n1 (population of Lupus patients)=67 Mean=.54-.26=.28 so **Mean=.28**  p2(Non-Lupus with high)=.26  n2(Population of Non-Lupus)=50  **Standard Deviation** the square root of (.54)(.46)/67+(.26)(.74)/50**=.0869**  What is the chance that the difference between Lupus patients with high exposure and non-Lupus people with high exposure is greater that 50%?  z-score=.5 so (.5-.28)/.0869=.575  **So there is a 57.5% probability that the difference between the two is greater than 50%.**  **95% Confidence Interval:** Standard deviation=.0869  Critical Z-Score values are +/-1.96  Difference=.54-.26=.28  **Confidence Interval:** .28+/-1.96(.0869)=.**1097-.4503**  **Now we can be 95% sure that the proportion of people of high sun exposure without Lupus is between .1097 and .4503 lower than the proportion of people of high exposure with Lupus.**  **\*These results show a somewhat significant difference among high sun exposure between people with Lupus and people without. This confirmed my hypothesis about sun exposure. I predicted that people currently with Lupus would have a higher percentage of high exposure to the sun.**  [next](http://docs.google.com/data8.html) | |
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