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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**  **Use of Aspartine (Nutra-Sweet):**  p1 (Lupus patients that are users)=.88  n1 (population of Lupus patients)=67 Mean=.88-.18=.7 so **Mean=.7**  p2(Non-Lupus that are users)=.18  n2(Population of Non-Lupus)=50  **Standard Deviation** the square root of (.88)(.12)/67+(.18)(.82)/50**=.0686**  What is the chance that the difference between Lupus patients that are users and non-Lupus people who are users is greater that 75%?  z-score=.75 so (.75-.7)/.0686=.7288  **So there is a 72.88% probability that the difference between the two is greater than 75%.**  Want to find the difference if the probability of that difference is 99.98%, so has a Z score of 3.4  3.4=(x-.7)/.0686 so x=.93324  **So there is a 99.98% probability that the difference between aspartine use of Lupus patients and not Lupus patients is atleast 93.32%.**  **95% Confidence Interval:** Standard deviation=.0686  Critical Z-Score values are +/-1.96  Difference=.88-.18=.70  **Confidence Interval:** .7+/-1.96(.0686**)=.5655-.8345**  **Now we can be 95% sure that the proportion of people who use aspartine without Lupus is between .5655 and .8345 lower than the proportion of people who use aspartine with Lupus.**  **\*These results show a strongly significant difference among aspartine use between people with Lupus and people without. This confirmed my hypothesis about aspartine use. I predicted that people currently with Lupus would have a higher percentage of usage of aspartine products**  [next](http://docs.google.com/data6.html) | |
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