Compute Odds Ratio CI

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Overview

This script takes a logistic regression results spreadsheet and calculates 90, 95 or 99% confidence intervals for the Odds Ratio.

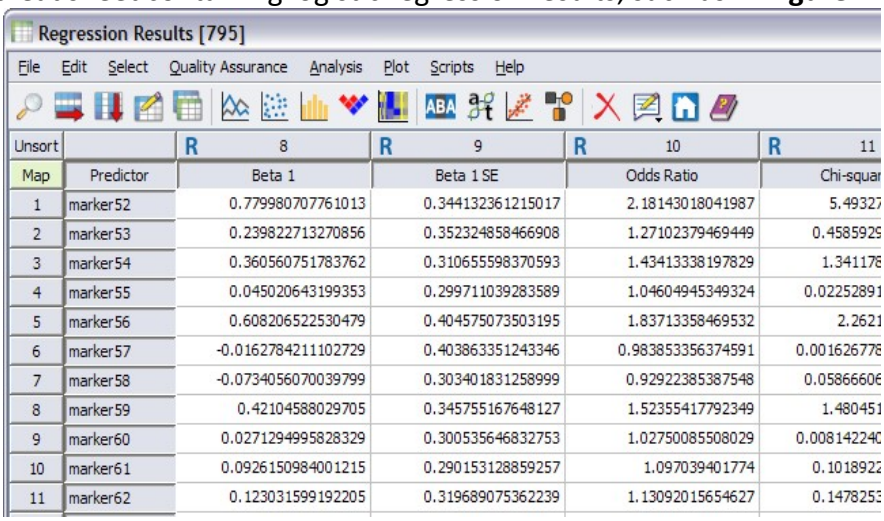
Recommended Directory Location

Save the script to the following directory:
*..**\Application Data\Golden Helix SVS\UserScripts\Spreadsheet\Numeric**

Note: The **Application Data** folder is a hidden folder on Windows operating systems and its location varies between operating systems. The easiest way to locate this directory on your computer is to open SVS and go to **Tools > Open > Open UserScripts Folder** and save the script in the **\Spreadsheet\Numeric** folder. If saved to the proper folder, this script will be accessible from the spreadsheet **Numeric** menu.

Using the Script

1. Open a spreadsheet containing logistic regression results, such as in **Figure 1**.



Unsort		R 8	R 9	R 10	R 11
Map	Predictor	Beta 1	Beta 1 SE	Odds Ratio	Chi-squar
1	marker52	0.779980707761013	0.344132361215017	2.18143018041987	5.49327
2	marker53	0.239822713270856	0.352324858466908	1.27102379469449	0.4585929
3	marker54	0.360560751783762	0.310655598370593	1.43413338197829	1.341178
4	marker55	0.045020643199353	0.299711039283589	1.04604945349324	0.02252891
5	marker56	0.608206522530479	0.404575073503195	1.83713358469532	2.2621
6	marker57	-0.0162784211102729	0.403863351243346	0.983853356374591	0.001626778
7	marker58	-0.0734056070039799	0.303401831258999	0.92922385387548	0.05866606
8	marker59	0.42104588029705	0.345755167648127	1.52355417792349	1.480451
9	marker60	0.0271294995828329	0.300535646832753	1.02750085508029	0.008142240
10	marker61	0.0926150984001215	0.290153128859257	1.097039401774	0.1018922
11	marker62	0.123031599192205	0.319689075362239	1.13092015654627	0.1478253

Figure 1: Logistic Regression results from genotypes numerically encoded in an additive model

2. Select **Numeric > Compute Odds Ratio CI**.

3. Select confidence level, see **Figure 2**, and click **OK**.

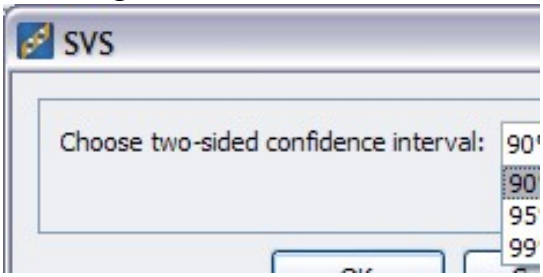


Figure 2: Confidence intervals can be computed using one of the three standard confidence levels

The resulting spreadsheet will have all of the original columns plus two additional columns for the lower and upper confidence bounds added after the Odds Ratio column. See **Figure 3**.

Regression Results plus Odds Ratio Confidence Interval - Sheet 1 [799]

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Unsort		R 9	R 10	R 11	R 12
Map	Predictor	Beta 1 SE	Odds Ratio	Lower OR CI Bound	Upper OR CI
1	marker52	0.344132361215017	2.18143018041987	1.11124530157115	4.282256
2	marker53	0.352324858466908	1.27102379469449	0.637160298338399	2.535471
3	marker54	0.310655598370593	1.43413338197829	0.78010697519023	2.636482
4	marker55	0.299711039283589	1.04604945349324	0.581343779629578	1.882224
5	marker56	0.404575073503195	1.83713358469532	0.831303256133088	4.059962
6	marker57	0.403863351243346	0.983853356374591	0.445815277151544	2.171229
7	marker58	0.303401831258999	0.92922385387548	0.512695490270061	1.684151
8	marker59	0.345755167648127	1.52355417792349	0.773651126244265	3.000341
9	marker60	0.300535646832753	1.02750085508029	0.570113184704218	1.851839
10	marker61	0.290153128859257	1.097039401774	0.621210655872667	1.937338
11	marker62	0.319689075362239	1.13092015654627	0.604375860785813	2.11620

Figure 3: The confidence bounds have been added to this spreadsheet, all original columns remain

NOTE: If the standard error is too big the lower bound will go to 0 and the upper bound will go to "?". In this case "?" represents infinity.