



Usage Note 22617: Testing for a trend in proportions

Details About **Rate it**

Suppose Y indicates response or no response, and DOSE is the dose amount of a drug. You can test that the proportion of responders increases (or decreases) with dose using the Cochran-Armitage test in the FREQ, MULTTEST, or LOGISTIC procedure.

In PROC FREQ, use the TREND option in the TABLES statement to get an asymptotic test of trend as shown below. For small or sparse samples, you can request an exact test by adding the exact trend; statement. If the data set is too small or sparse to use the asymptotic test, but too large for the exact algorithm, you can request Monte-Carlo estimation of the exact p-value by adding the exact trend / mc; statement.

```
proc freq;
  tables dose*y / trend;
run;
```

In PROC MULTTEST, Y must have values 0 and 1, where 1 indicates response:

```
proc multtest;
  class dose;
  test ca(y);
run;
```

In PROC LOGISTIC, the score test in the **Testing Global Null Hypothesis: BETA=0** table is equivalent to the Cochran-Armitage test.

```
proc logistic;
  model y=dose;
run;
```

Operating System and Release Information

Product Family	Product	System	SAS Release	
			Reported	Fixed*
SAS System	SAS/STAT	All	n/a	

* For software releases that are not yet generally available, the Fixed Release is the software release in which the problem is planned to be fixed.

Type: Usage Note
Priority: low
Topic: SAS Reference ==> Procedures ==> MULTTEST
 Analytics ==> Exact Methods
 Analytics ==> Multivariate Analysis
 SAS Reference ==> Procedures ==> FREQ
 SAS Reference ==> Procedures ==> LOGISTIC
Date Modified: 2019-05-03 16:10:59
Date Created: 2002-12-16 10:56:38