SPSS Chapter 1 Example 2 – Normal Probability Plots

Is there evidence that calcium in the diet lowers blood pressure? Two groups are considered: a calcium supplement group (coded as "calcium") and a placebo group (coded as "placebo"). We want to see whether the blood pressure readings from the groups are normally distributed. Thus, we construct a normal probability plot (SPSS calls this a Q-Q Plot). The data for both groups are given below:

P29b - SPSS Data Editor

File Edit View Data Transform Statistics Graphs Utilities Window Help

1:calcium 107

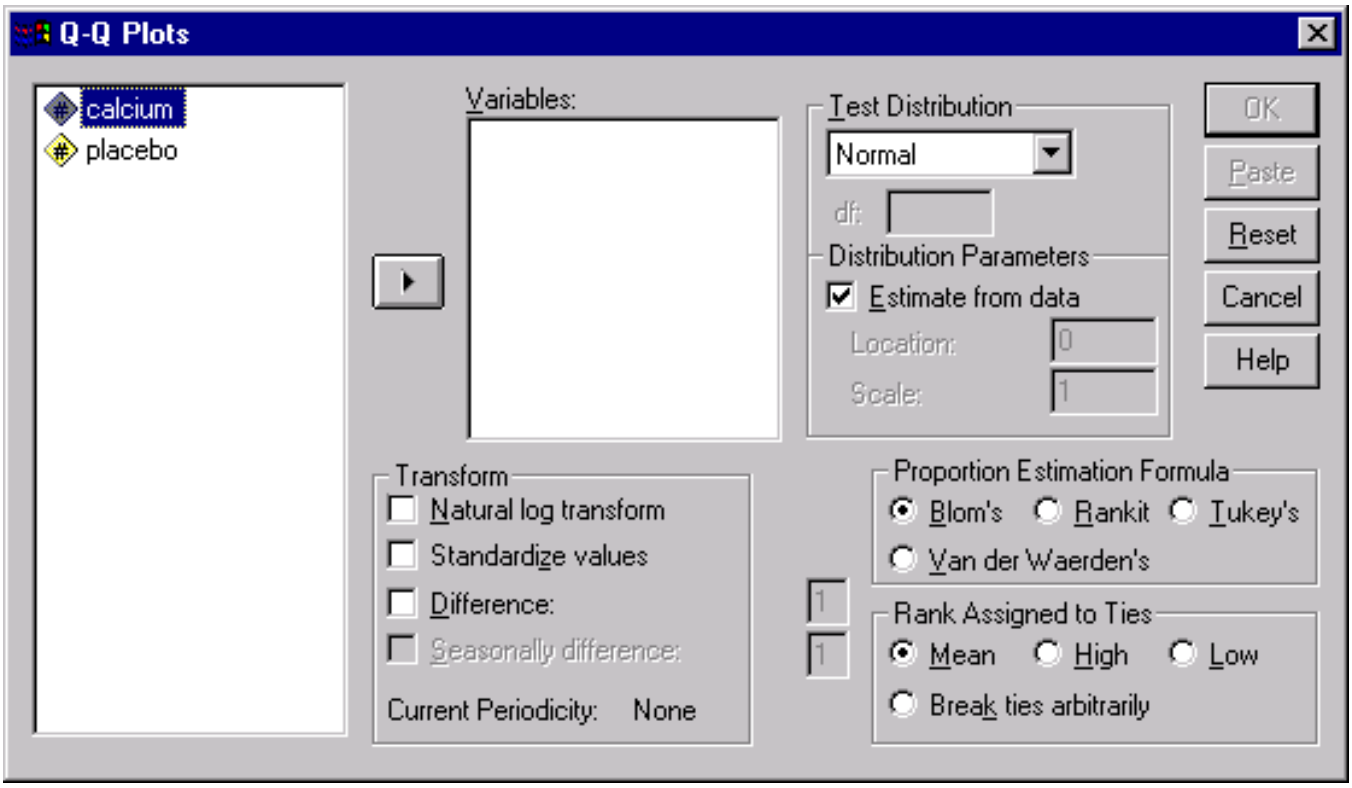
	calcium	placebo	var	var	var	var
1	107	123				
2	110	109				
3	123	112				
4	129	102				
5	112	98				
6	111	114				
7	107	119				
8	112	112				
9	136	110				
10	102	117				
11	.	130				

SPSS Processor is ready

We now produce a Q-Q (or normal probability) plot using the SPSS statistical package.

Follow these steps to produce this plot:

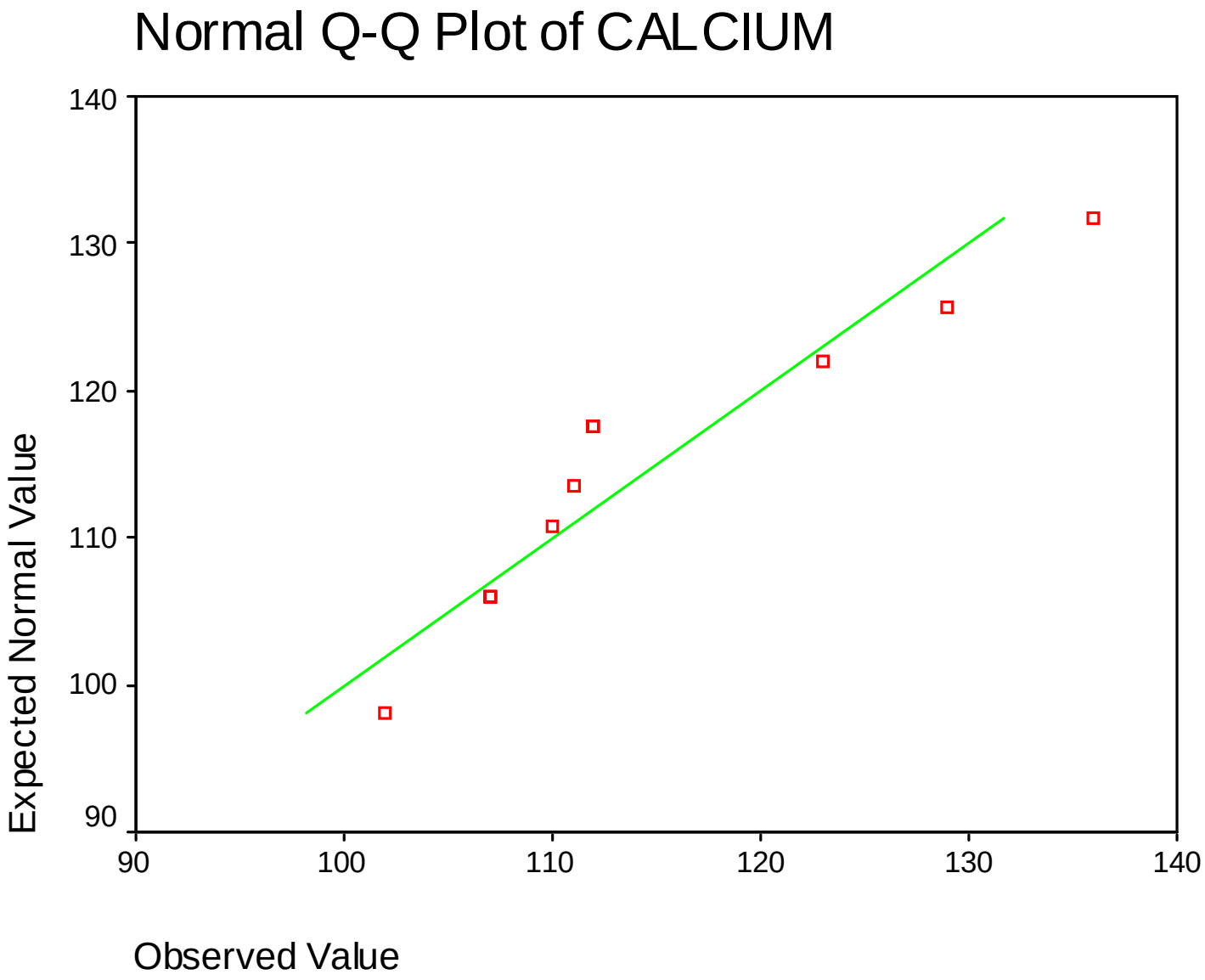
1. Click **Graphs** and click **Q-Q**. The following window will appear.

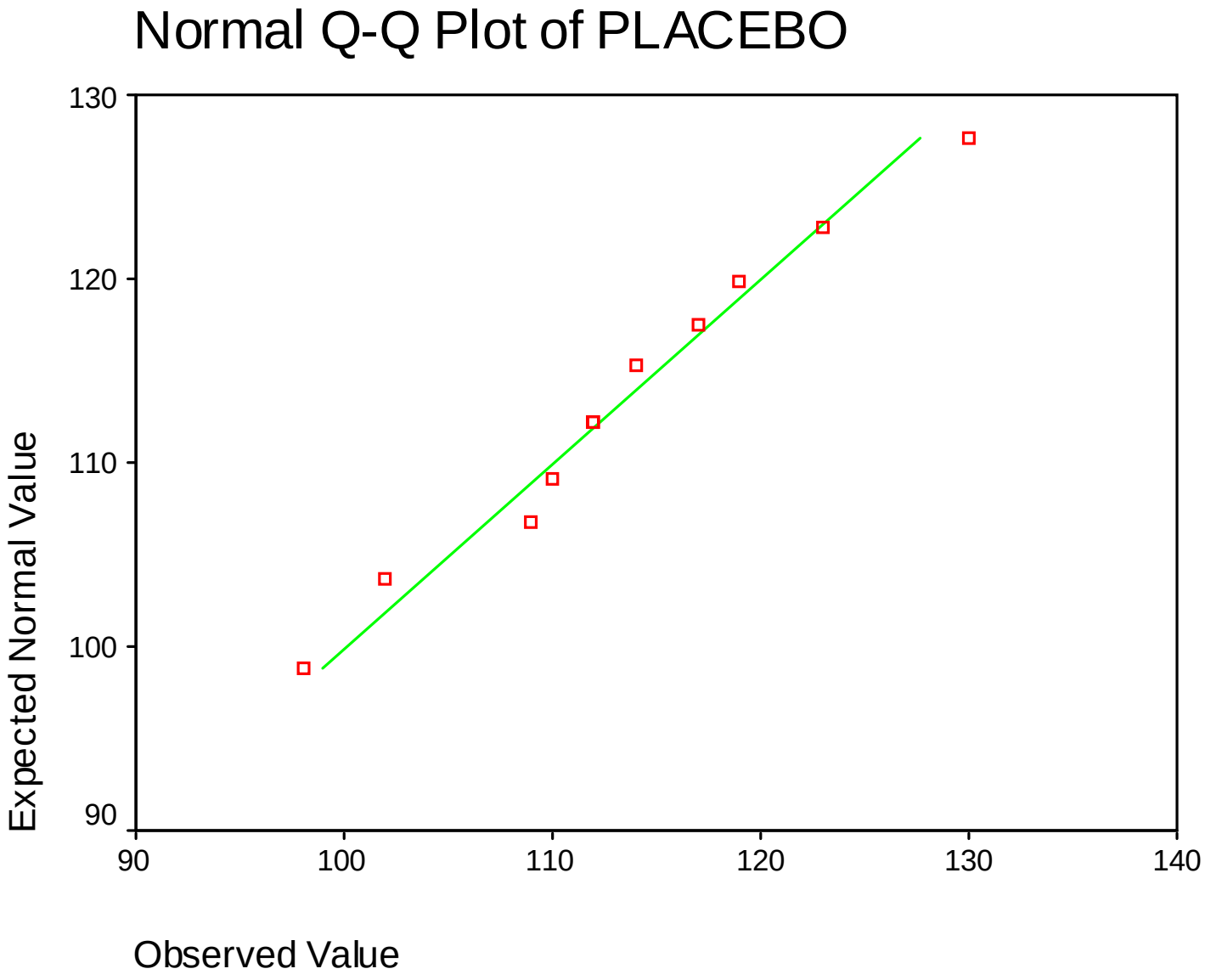


2. Click the ▸ button and "**calcium**" will appear in the box entitled ***Variables***. Click "**placebo**" and click the ▸ button and "**placebo**" will appear in the box entitled ***Variables***.

3. Click **OK**.

The SPSS output for this example of a Normal Quantile Plot is as follows:


Normal Q-Q Plot of CALCIUM
Expected Normal Value
Observed Value
140
130
120
110
100
90
90
100
110
120
130
140



Both calcium and placebo groups seem to have data that come from a normal distribution.