

your own SD ranges, so that you can see quickly if the results you subsequently obtain are acceptable statistically or not. When we apply the ranges we have worked out to the first set of figures, we should find that about 68% (approximately 2/3rds) of results are inside the range between 121.3 and 125.3

In fact, 75% of the 20 results (15 of them) are inside the +/- 1 SD range.

The number of results inside the range of +/- 2 SDs should ideally be 95%, or 19 out of 20. If we look at the above chart, 95% of results should be between 119.3 and 127.3. In fact that is exactly what we find, 19 out of 20 results are indeed inside the +/- 2 SD range.

**CPD Questions: NB Select the answer which you think is best**

1. Any Reference Range calculated to describe the range inside which a “normal” patient’s result must include two sorts of variation, the natural biological variation seen in patients, plus the analytical variation seen with all measurement systems.  
A) True  
B) False
  
2. How many decimal places should you use for the SDs used to prepare the Levey-Jennings Chart?  
A) Four  
B) Two  
C) One more than reported on patient samples
  
3. How many results on your Levey-Jennings Chart should be within the range of +/- 2 SDs around the mean?  
A) 68%  
B) 95%  
C) 100%

Before commenting on the figures and ranges, let’s see what happens to when we exclude the outlier. We already know that the mean and SD for the trimmed data are 123.0 and +/- 1.5, so that the Levey-Jennings chart now looks like this.

