

How to recalculate limits on Life QI

You are now aware of how to create a personal project, a measure, a chart, how to add data onto Life QI and how to set a baseline. But as you continue to add data to your chart, you may begin to see some special cause because of testing your improvement ideas.

At ELFT, we only recalculate limits on SPC charts when there is a shift in the data – where there are six (run chart) or eight (control chart) data points consecutively above or below the centre line.

Please note that the process of recalculating limits is the exact same for both run charts and control charts. For this guide, we will be using a control chart in screenshots.

The starting point for this guide is after a chart has been created with data added in and a baseline has been set. If you are unsure how to do this, please refer to our other guides.

The data used in the screenshots below is dummy data. You may be using different data when practicing this, but **the steps are the exact same!**

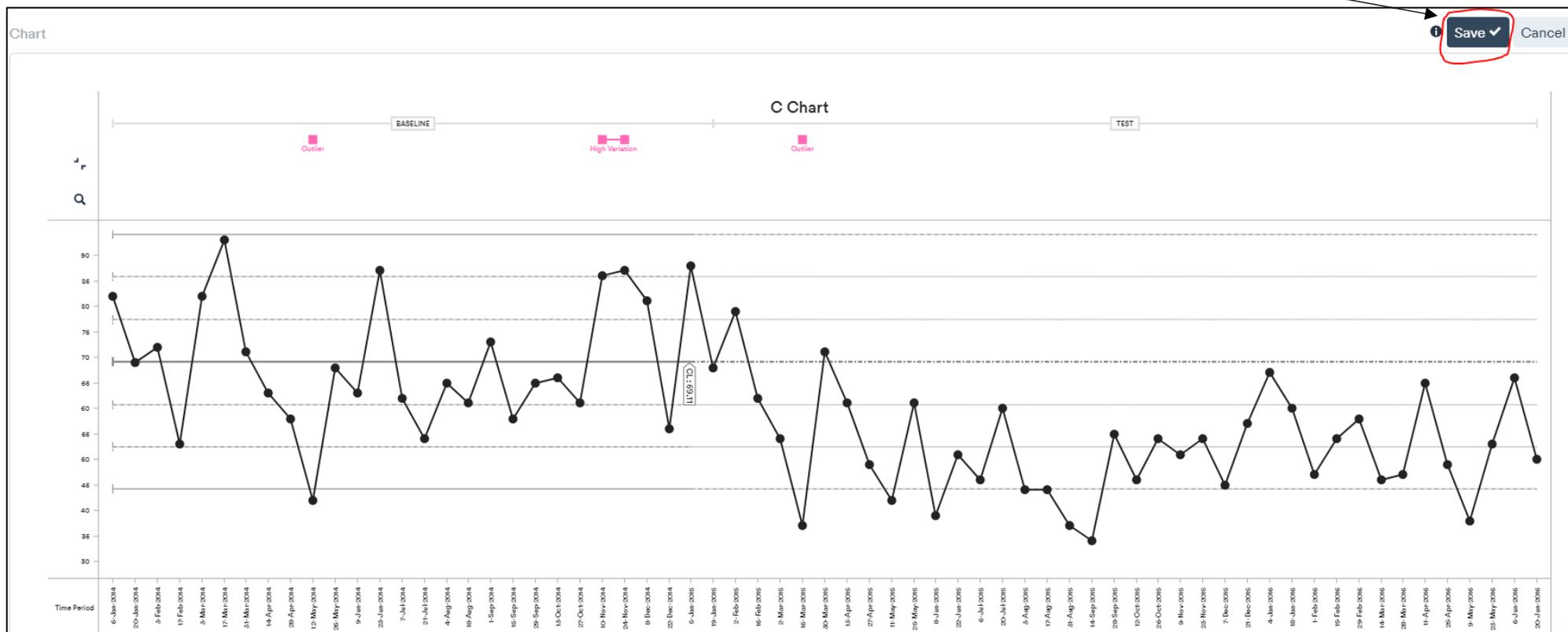


1. If you are not logged in, log in and navigate to your Life QI project and to the chart that you have created
2. Open the chart and click on “edit”. This will allow you to manipulate the chart (as well as add on additional data)
3. Check that a baseline has been set on the chart. If not, set the baseline
4. When we want to recalculate control limits, we need to click on the first data point of the shift. Doing so will give us the options (circled in red) seen in the screenshot below:



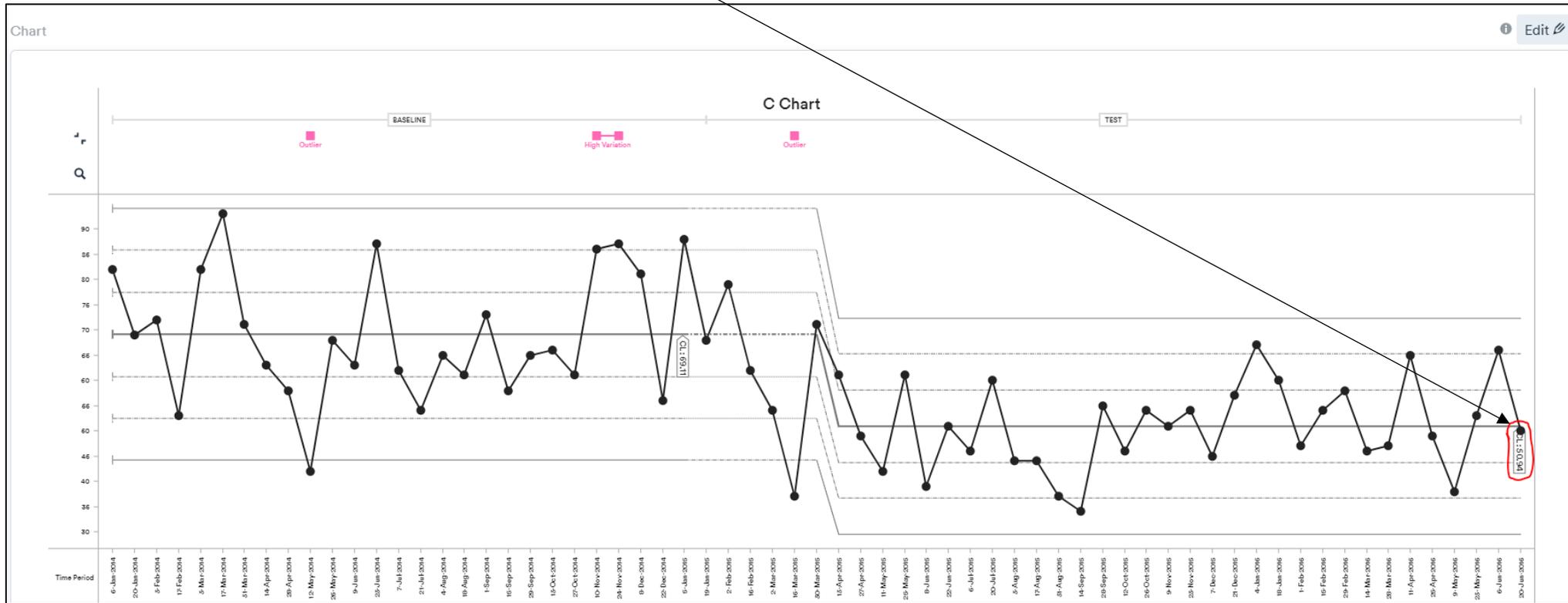
5. You will then need to click on ‘Recalculate Control Limits’ (circled in blue)

6. After clicking on this, you will see that most of the pink icons on the chart have disappeared (in the screenshot below, your data will vary, and this may not always be the case). **Next you will need to click on 'save' and then close and re-open the chart:**



7. After re-opening the chart, you will notice some differences:

- You will see that the centre line has been recalculated alongside the upper and lower control limits
- you will also see that there is now a label on the last data point, showing the value of the centreline, like how it shows when you set a baseline.



8. Most people think that this is the end of the process. That is incorrect. There are a few more steps.

9. Right now, the new centreline (after recalculating) is using all 32 data points in determining the values of the limits. What we need to do now is to set it to only use eight data points, in accordance with the rules of interpreting control charts.

10. To do this, we need to select the eighth data point (after pressing edit), counting from the first where the new centreline starts.

11. When you select the eighth data point, you will see the below options:



12. We would then need to click on “End Limit Recalculation” (circled in red)

13. You may then see another warning, like on the right. Click on “Ok” to proceed

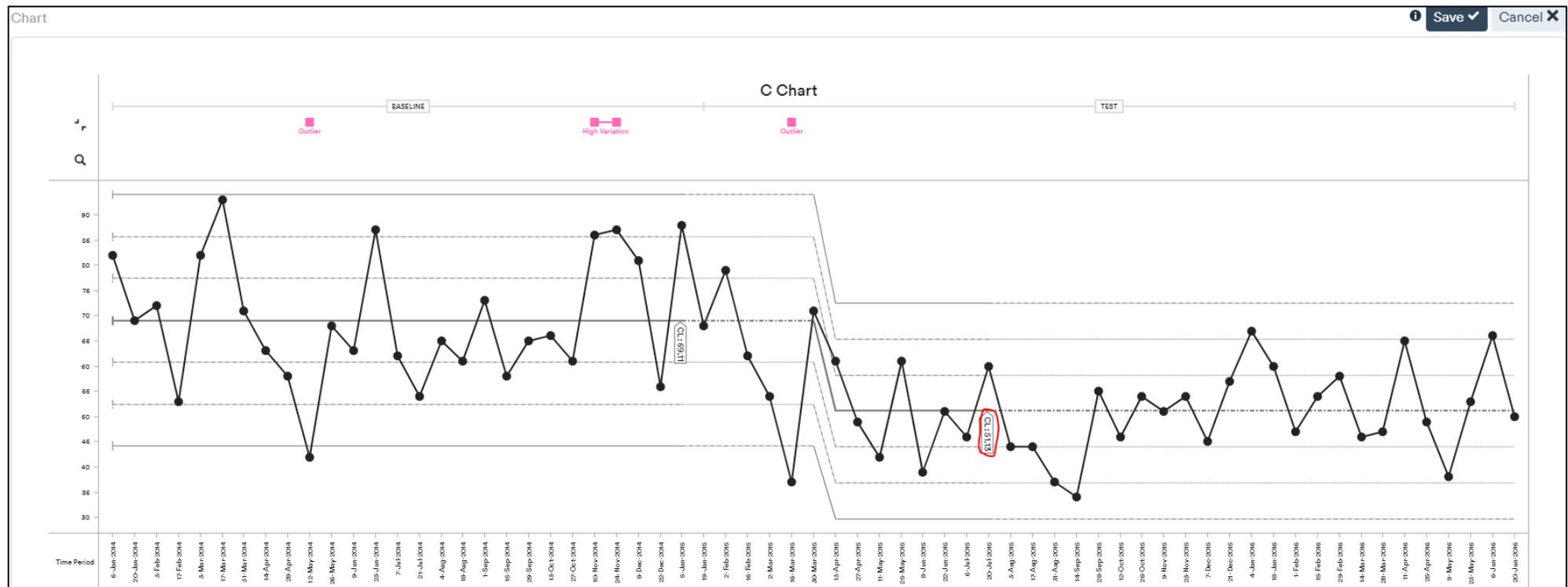
You may not have enough datapoints to provide effective control limits, try collecting data for longer before recalculating.

Are you sure you wish to recalculate regardless?

14. After doing that, you will once more need to click save and then close and re-open the chart.

15. Upon re-opening the chart, you will see some changes:

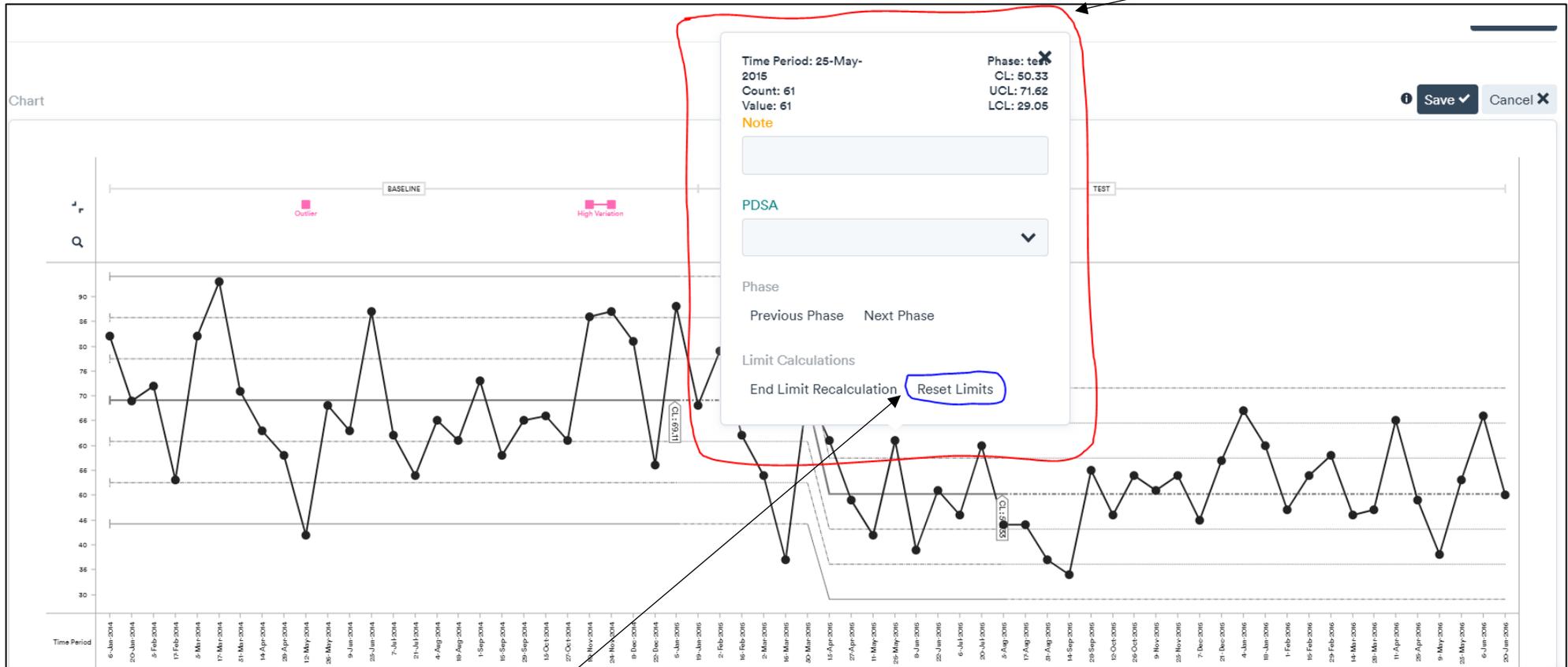
- The label of the chart (in red in the below screenshot) has now moved, and the value has changed
- The centre line up until the label is solid and then it becomes dashed as it is extended across the rest of the data to see whether there are any special cause present after the recalculaton of the limits



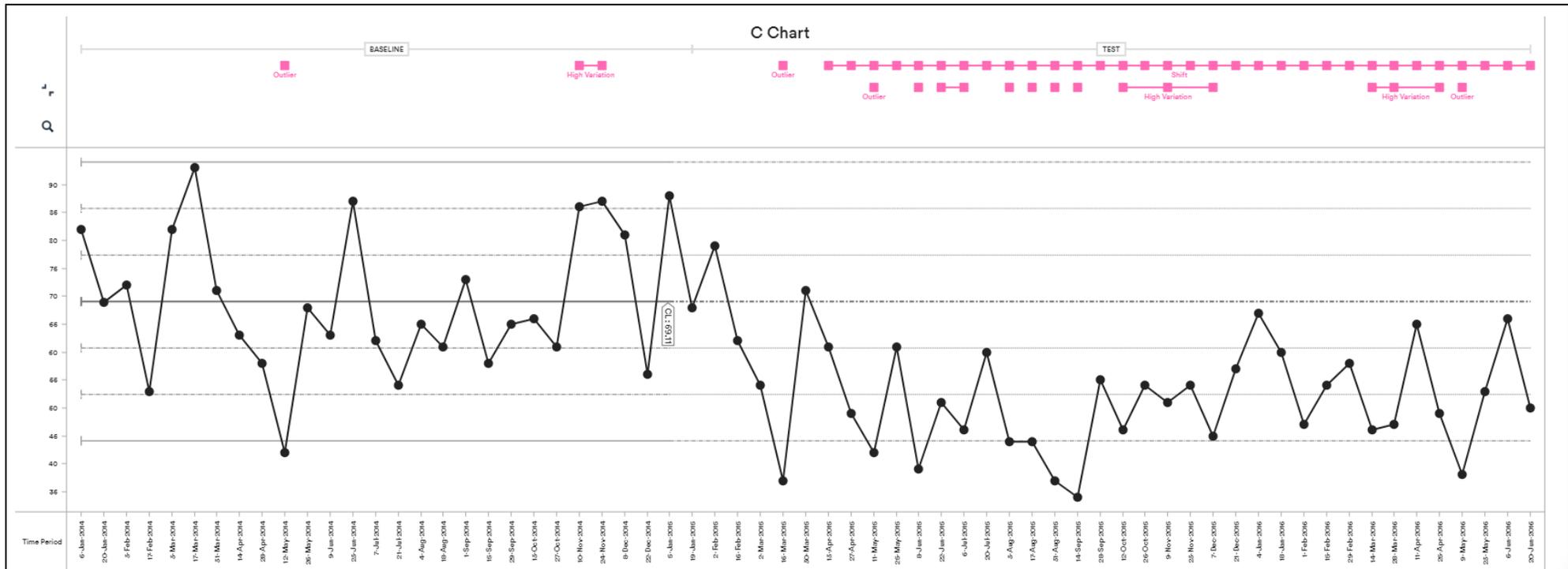
16. Congratulations, you have now recalculated limits on your Life QI chart! **Again, please note that the same steps are applicable for setting the baseline for run charts!**

What if you accidentally select the wrong number of data points when recalculating limits?

17. Let's pretend that in the above chart, I had accidentally selected nine data points instead of eight when recalculating limits (the below screenshot has been edited to have nine data points instead of eight).
18. In this situation, all you need to simply do is to click on any of the nine data points and you will see the below options (circled in red):



19. You then need to click on 'Reset limits' (circled in blue) and this will reset the chart to how it was before you started to recalculate the limits, as seen in the below screenshot:



20. You would then need to follow steps 4 to 15 once more, to recalculate the limits correctly.