Python and R code used to process, analyze and plot data is available as a series of IPython notebooks under: <LINK> and can be visualized with Notebook Viewer (<http://nbviewer.ipython.org/>).

Piecewise regression was applied [fig 1.]

Multiple regression and analysis of covariance [fig 3 and S3].

The maximal model can be described with a function: y=β0+ β1x1+…+ β13x13

y – meiotic metaphase spindle length (pole to pole or aster to aster).

Unsupervised learning and logistic regression [fig 4]

Shapiro test for normality for continuous measurement

Low rank matrix approximation was used to

Data was scaled

Kmeans clustering

Chi-square

Histograms for the groups

Measurements with associated images are also available as SQL database and can be shared upon request.