Python and R code used to process, analyze and plot data is available on [GitHub](https://github.com/emmaggie/SPINDLE_ZOO/tree/master/A_SUPPLEMENT) The IPython notebooks can be viewed with Notebook Viewer (<http://nbviewer.ipython.org/>).

**Piecewise regression** was applied [fig 1.]

Diagnose correlative variables

**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).

Given that the model explains 85% of variance, we used the

Unsupervised learning and logistic regression [fig 4]

We applied logistic regression using meiotic/mitotic

Shapiro test for normality for continuous measurement

Low rank matrix approximation was used to

Data was scaled

Kmeans clustering and GMM

Chi-square

Histograms for the groups

Caveats:

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